DAHROUGE GEOLOGICAL CONSULTING LTD.

2012, 2013, AND 2014 EXPLORATION OF THE ELDOR PROPERTY, NORTHERN QUEBEC

Geographic Coordinates:

56°49'30" N to 57°02'00" N

68°12'30" W to 68°30'30" W

NTS Sheets:

24C/15, 24C/16, and 24F/01

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF ABBREVIATIONS

Definition	Abbreviation
Activation Laboratories Ltd.	Actlabs
Billion years ago	Ga
°C	Degrees Celsius
Centimetre	cm
Certified Reference Material	CRM
Commerce Resources Corp.	Commerce
Condor Consulting Inc.	Condor
Coordinate System	NAD84 Zone 19
Counts Per Second	CPS
Dahrouge Geological Consulting Ltd.	Dahrouge
Digital Elevation Model	DEM
Eldor Property	Property
Eldor Resources Ltd.	Eldor Resources
Example	e.g.
Fluorine	F
Fluorspar	CaF2
Fugro Airborne Surveys Ltd.	Fugro
Geological Survey of Canada	GSC
Global Positioning System	GPS
Heavy Rare Earth Element (Tb, Dy, Ho, Er, Tm, Yb, Lu, Y)	HREE
Heavy Rare Earth Oxide (Tb, Dy, Ho, Er, Tm, Yb, Lu, Y)	HREO
Hectare	ha
Inductively Coupled Plasma Mass Spectrometry	ICP-MS
In other words	i.e.
International Union of Geological Sciences	IUGS
Kilometre	km
Micrometre	µm
Middle Rare Earth Element (Sm, Eu, Gd)	MREE
Middle Rare Earth Oxide (Sm, Eu, Gd)	MREO
Million tonnes	Mt
Million years ago	Ma
Ministère des Ressources naturelles et de la Faune	MRNF
Metre	m
(MREO+HREO) / TREO x 100	%MH-T
Nanotesla	nT
National Instrument 43-101	NI 43-101
Net Profit Interest	NPI
Net Smelter Royalty	NSR
Niobium	Nb
Parts Per Million	ppm
Per cent	%
Preliminary Economic Assessment	PEA
Pre-feasibility Study	PFS
Quality Assurance / Quality Control	QA/QC
Radioactivity / Radiometric	RA
Rare Earth Element	REE
Specific Gravity	SG
Southeastern Churchill Province	SECP
Tantalum	Ta
Tonnes	t
Total Rare Earth Oxide (La, Ce, Nd, Pr, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Y)	TREO
Universal Transverse Mercator	UTM

Unocal Canada Ltd.	Unocal
Virginia Mines Inc.	Virginia
Weight	Wt.
X-Ray Fluorescence	XRF

1. SUMMARY

From the start of the reporting period herein up until April 2nd, 2013, the Eldor Property was comprised of 404 mineral claims, totaling 19,006.52 hectares (ha). On April 2nd, 2013 seven additional mineral claims were acquired for a total of 411 mineral claims (19336.24 ha). As of the date of this report, the seven mineral claims acquired on April 2nd, 2013 have since lapsed, with the Property currently consisting of 404 claims, totaling 19,006.52 ha. It is anticipated additional claims may be allowed to lapse in the near-term along the edges of the Property where mineral resource potential is considered low.

The Property is situated approximately 130 km south of Kuujjuaq, directly adjacent to the western shore of Lac Le Moyne, and is accessible only by float- or ski-equipped fixed wing aircraft, or helicopter. Commerce Resources Corp. (Commerce) of Vancouver, BC, holds 100% interest in the entire claim block.

The Property is considered prospective for tantalum, niobium, phosphate, fluorspar, and rare earth element (REE) mineralization. Mineralization is hosted within a carbonatite intrusive complex (Eldor Complex) and is thought to be comprised of at least four phases. The carbonatite is geologically situated within the central Labrador Trough, at the contact between meta-volcanics to the west and Proterozoic gneisses to the east.

This assessment report describes the exploration work completed at the Eldor Property during the 2012, 2013, and 2014 field seasons, and includes data compilation for the work reporting period of May 13, 2012 through September 30th, 2014. Work consisted of prospecting and rock sampling, regional mapping, limited soil sampling, NQ diameter diamond drilling, Ashram outcrop bulk sampling, as well as camp and trail upgrades.

Continued environmental, metallurgical, hydrogeological, and geotechnical work was also completed on the Property during the period, focusing on the Ashram Rare Earth Deposit. In addition, a Preliminary Economic Assessment (PEA) of the Ashram Rare Earth Deposit was released on July 5th, 2012 (effective date). Following the release of the PEA, Commerce retained Roche Ltd. to carry-out a Pre-feasibility Study for the Ashram Project, incorporating all studies relating to the Ashram Rare Earth Deposit. This work is only briefly discussed herein with no assessment claimed over the period for this work.

The field work for the reporting period was based out of a camp (Camp Valcourt), adjacent to the southern end of a small lake (Fox Lake) within claim 2118787. All field exploration was conducted by Dahrouge Geological Consulting Ltd. (Dahrouge) of Edmonton, AB, on behalf of Commerce. Field and camp support was via float/ski-equipped fixed wing aircraft from Kuujjuaq or Schefferville in addition to helicopter based on and/or off-site.

Over the course of the 2012, 2013, and 2014 field seasons (reporting period of May 13th, 2012 to September 30th, 2014), exploration expenditures totalled $5,067,950.32. This breaks down to $1,843,988.96 in 2012, $1,917,316.45 in 2013, and $1,306,644.91 in 2014.

All engineering, environmental, metallurgical, geotechnical, or hydrogeological expenditures relating to the advancement of the Ashram Rare Earth Project (i.e. Pre-feasibility Study) for the reporting period are NOT claimed for assessment, and thus, not included in the aforementioned totals, nor detailed herein.

1.1. 2012, 2013, AND 2014 EXPLORATION

During the 2012, 2013, and 2014 exploration programs, prospecting resulted in a total of 112 rock samples, 2 soil samples and 496 prospecting points, with the majority from 2012. A regional mapping program was also undertaken in 2012, in order to gain a better understanding of the regional structures and geology.

In order to move forward with metallurgical work on the Ashram Deposit, it was necessary to obtain a bulk sample ranging between 30 to 50 tonnes. Three large outcrops on the Ashram Peninsula were selected as collection sites. In total, approximately 50 tonnes of rock was collected from the three sites, of which approximately 32 tonnes was shipped out of camp to Hazen Research Inc. of Colorado, USA, where the metallurgical program continues to advance.

No drilling was completed in 2012; however, drilling was carried-out in 2013 and 2014. The 2013 exploration program (summer) included 12 drill holes for a total of 1176.96 m, with 812 samples submitted for analysis. The 2014 exploration program (winter-spring) included 12 drill holes for a total of 1556.61 m, with 1096 samples submitted for analysis. Drilling focused primarily on infill of the Ashram Deposit, in order to increase resource confidence from the current inferred category to indicated/measured categories within the proposed open-pit as outlined in the PEA.

Drilling was successful in extending the deposit to the northwest with mineralized Carbonatite encountered at surface. The drilling campaign also aided in the further delineation of the MHREO Zone. All drill holes were deliberately ended below the base of the anticipated pit shell, each ending in mineralization.

The D5 CAT was used throughout the program to create trails, drill pads, and move the drill. This resulted in a significant reduction in cost as helicopter support was not required to move the drill from site to site.

The trail that connects Camp Valcourt to the Ashram Deposit was maintained and improved throughout the exploration programs. The blasting crew that was used for the bulk sample collection in 2012 was also utilized to level several locations on the main trail. Numerous boardwalks and bridges were also built over wet and swampy locations to avoid vehicle rutting.

Improvements to camp include the installation of a centralized fueling system for the heating stoves in camp, as well as a centralized fueling station for ATVs and related equipment. Both camp improvements have significantly reduced the risk of spills and improved the environmental standing of the overall camp.

1.2. RECOMMENDATIONS

The Ashram Deposit remains the principle asset on the Eldor Property and its advancement continues to distinguish it from its peers. The ongoing development of the Ashram Deposit, towards a Pre-feasibility Study, is strongly recommended.

In terms of additional REE potential, although REE mineralization is prevalent on the Property, it is highly unlikely that a mineralized body exists that would rival the Ashram Deposit in terms of grade/tonnage/distribution. For this reason, no further regional exploration for REEs is recommended on the Property; this focus should remain on the advancement of the Ashram Deposit.

In terms of Nb-Ta potential, there continues to exist a high possibility for discovery of a Nb-Ta mineralized body of significant grade and tonnage on the Property. High grade Nb-Ta mineralization continues to be sampled each program in new areas of the Property, and numerous targets remain to be drill tested. Going forward, it is recommended that the principle Nb-Ta areas

of focus be the Southeast, Northwest, and southern Miranna areas. Of additional note, is the potential for significant phosphate mineralization along with the Nb-Ta. Any additional mineralization discoveries (namely Nb-Ta-Phosphate) of significance would be of great mutual benefit in terms of development potential (i.e. in combination with the Ashram deposit).

The Miranna Area is considered to host a high priority Nb-Ta target for drill testing. A small follow-up prospecting program is recommended to identify the boulder source of the large circular magnetic high (approximately 300 m diameter), and spot in drill holes.

The Northwest Area requires compilation and interpretation of data gathered in the area, from 2007 through 2013, for an overall assessment of potential. A follow-up trenching and drill program should be considered for the top ranked targets. The drill results to date (drilled only in 2008) do not adequately explain the magnitude and extent of the Nb-Ta geochemical and radiometric (uranium) anomalies that are indicated to be sourced in this area. There is good potential for a significant discovery in this area.

Continued exploration, including drilling, is recommended in the Southwest Area as the 2008 and 2010 drill results were highly encouraging. Data should be reviewed and evaluated to determine if it is sufficient to produce a maiden Nb-Ta resource for the Property.

The PANDS Area requires additional evaluation for Ta potential (primary) and Nb potential (secondary). Trenching, and potentially drilling (if trenching positive), are recommended to better evaluate the mineralized outcrop present in the area.

No further work is recommended on the ridge that runs along the northwestern margin of the complex. Mineralization potential is low.

2. INTRODUCTION

During May 2008, Commerce Resources Corp. (Commerce) acquired eight claims, located in northern Quebec, from Virginia Mines Inc. (Virginia). The eight claims were originally staked, via map designation, in April of 2001. From May 2007 through February 2010, an additional 394 claims were acquired, with 7 claims subsequently acquired on April 2nd of 2013.

From the start of the reporting period herein up until April 2nd, 2013, the Eldor Property was comprised of 404 mineral claims, totaling 19,006.52 hectares (ha). On April 2nd, 2013 seven additional mineral claims were acquired for a total of 411 mineral claims (19,336.24 ha). As of the date of this report, the seven mineral claims acquired on April 2nd, 2013 have since lapsed, with the Property currently consisting of 404 claims, totaling 19,006.52 ha. It is anticipated additional claims may be allowed to lapse in the near-term along the edges of the Property where mineral resource potential is considered low.

Since acquisition in 2007, Commerce has retained the services of Dahrouge Geological Consulting Ltd. (Dahrouge) to conduct mineral exploration on the Property. This assessment report describes the exploration work completed at the Eldor Property during the 2012, 2013, and 2014 field seasons, and includes data compilation for the work reporting period of May 13, 2012 through September 30th, 2014. Work consisted of prospecting and rock sampling, regional mapping, limited soil sampling, NQ diameter diamond drilling, Ashram outcrop bulk sampling, as well as camp and trail upgrades.

Continued environmental, metallurgical, hydrogeological, and geotechnical work was also completed on the Property during the period, focusing on the Ashram Rare Earth Deposit. In addition, a Preliminary Economic Assessment (PEA) of the Ashram Rare Earth Deposit was released on July 5th, 2012 (effective date). Following the release of the PEA, Commerce retained Roche Ltd. to carry-out a Pre-feasibility Study for the Ashram Project, incorporating all studies relating to the Ashram Rare Earth Deposit. This work is only briefly discussed herein with no assessment claimed over the period for this work.

Darren L. Smith, M.Sc., P.Geol., (Special Authorization #223 with the OGQ) was the lead geologist and Project Manager during the 2012, 2013, and 2014 exploration programs.

3. PROPERTY DESCRIPTION AND LOCATION

The Eldor Property is located in the Nunavik territory of the Province of Québec, approximately 130 km south of the community of Kuujjuaq (Figure 3-1). The Property is situated about longitude 68°24'0" west and latitude 56°56'0" north at its centre and covers portions of NTS map sheets 24C15, 24C16, and 24F01. The Property area extends approximately 17.5 km in an east-west direction and 24 km in a north-south direction, and is only accessible by float or ski-equipped plane, helicopter, and by snowmobiles during winter months.

For the reporting period herein, prior to April 2nd 2013 the Eldor Property (the 'Property') comprised 404 mineral claims, totaling 19,006.52 hectares (ha), while post April 2nd, 2013 the Property comprised 411 claims totalling 19,336.24 ha. Since this time the 7 claims acquired on April 2nd, 2013 have lapsed, and as the date of this report the Property consists of 404 mineral claims, totaling 19,006.52 ha.

Figure 3-2 shows the claims that comprise the Property during the 2012, 2013, and 2014 exploration and reporting period, with a detailed claim listing in Appendix 1.

Of the claims comprising the Property during the reporting period, 8 claims were acquired in May 2007 by a purchase agreement with Virginia. Another 396 claims were acquired by online map staking between May 2007 and October 2010 with an additional 7 claims acquired in 2013. The 7 claims acquired in 2013 have since lapsed.

The original eight claims acquired from Virginia are subject to a 1% NSR royalty in favour of Virginia and a 5% NPI royalty in favour of two individuals. Commerce has the right to buy back the 5% NPI royalty in consideration of $500,000. The Ashram Rare Earth Deposit is not situated within the original Virginia claims, and is not subject to any royalties.

The Property was acquired in order to cover the postulated extent of the Eldor Carbonatite Complex. Niobium, tantalum, and REEs are the main commodities of economic interest with phosphate, and fluorspar secondary targets.

Figure 3-1 Location Map

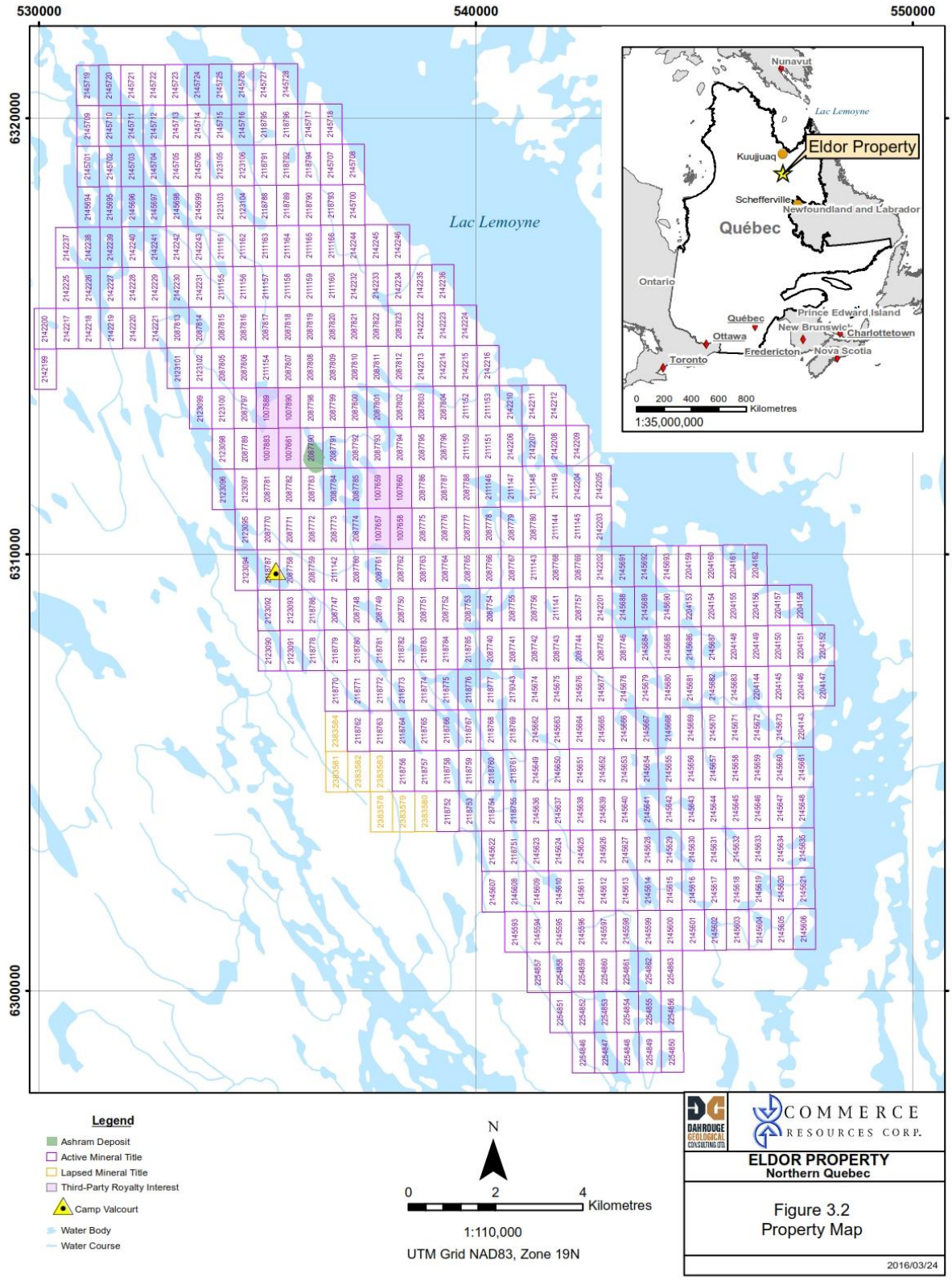

Figure 3-2 Property Map

3.1. EXPENDITURES

Over the course of the 2012, 2013, and 2014 field seasons (reporting period of May 13th, 2012 to September 30th, 2014), exploration expenditures totalled $5,067,950.32. This breaks down to $1,843,988.96 in 2012, $1,917,316.45 in 2013, and $1,306,644.91 in 2014.

All engineering, environmental, metallurgical, geotechnical, or hydrogeological expenditures relating to the advancement of the Ashram Rare Earth Project (i.e. Pre-feasibility Study) for the reporting period are NOT claimed for assessment, and thus, not included in the aforementioned totals, nor detailed herein.

Each assessment term comprises 2 years with a renewal fee required ($123.12 per claim as of the date of this report) in addition to the required work expenditures for that term. Renewal fees, akin to rental fees, must be paid independently of exploration expenditures, and thus, cannot be satisfied with excess work expenditure credits.

As of the date of this report, the original 8 claims are in their eighth assessment term, 84 claims are in their fifth assessment term, 274 claims are in their fourth assessment term, and 38 claims are in their third assessment term.

A listing of expenditures for the 2012, 2013, and 2014 exploration and reporting period are in Appendices 2, 3, and 4, respectively.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

4.1. ACCESSIBILITY

Due to the large number of lakes and streams, and the Property's remoteness, helicopters and fixed-wing aircraft provide the only practical access to the Property area. The Property may be accessed in the winter months by snowmobile; however, this is impractical for exploration purposes.

4.2. CLIMATE

The climate is sub-arctic continental with average temperatures ranging from -25°C in January to +12°C in July for the nearest community of Kuujjuaq. The average annual precipitation in the region is ~54 cm with ~252 cm of snow (CantyMedia, 2014). Lake freeze-up generally begins in late October and ice break-up usually occurs around the end of May to early June.

4.3. LOCAL RESOURCES AND INFRASTRUCTURE

The regional resources regarding labour force, supplies and equipment are challenging due to the remoteness of the Property. The nearest communities are Kuujjuaq, located 130 km north with a population of 2,375 (Canada 2011 Census), and Schefferville (including the nearby First Nations community of Kawawachikamach) situated approximately 250 km southeast with a population of about 213 (Canada 2011 Census). Both communities are serviced by a regional airport, float plane base, and helicopter base.

Kuujjuaq is the administrative centre for the Nunavik region of Quebec and also the most practical staging area for exploration of the Property. First Air offers the only daily direct flight between Montreal and Kuujjuaq, with Air Inuit also offering flights to and from Kuujjuaq from neighbouring communities, as well as Montreal. In addition, cargo ships arrive in Kuujjuaq, via Ungava Bay, several times during the summer to offload supplies to the region. Kuujjuaq has no sea port facilities and water is shallow near the community; therefore, cargo boats (sealift) must unload onto barges at Mackay's Island (on the Koksoak River) located approximately 35 km northeast of Kuujjuaq; the barges then transport the cargo down the Koksoak River to Kuujjuaq.

Schefferville is the northern terminus of the Tshiuetin railway (formerly operated by the Quebec North Shore & Labrador), which connects to Labrador City through to Sept-Iles in the south. The

rail-line is an attractive option for transporting heavier equipment; however, inclement weather and political blockages occasionally suspend its viability.

No permanent access road has been built on the Property although a primary exploration access trail connects the main camp (Camp Valcourt) to the Ashram Deposit and is passable by quad and side-by-side all-terrain vehicles

Exploration work on the Property is staged from Camp Valcourt, located on the south end of Fox Lake within claim 2118787 (535400E, 6309600N - NAD83, Z19). The camp may be open year-round, is equipped with core logging and sampling facilities, and has the capacity to host up to 35 people. The drill core archive for the Property is stored at the camp.

4.4. PHYSIOGRAPHY

The Property is characterised by a rolling hill topography manifested by glacial drumlins and eskers. This area topography is draped in a veil of glacial till with less than one to up to ten metres of cover locally. As such, outcrop exposure is rare; however, surface and subsurface boulders are abundant. Ice direction is estimated to have advanced from a generally southern direction (310°-330°).

Drainage in the area, typical of the transitional taiga to tundra regions, is northward toward Ungava Bay by way of small creeks and local poorly drained swampy areas connecting to larger lakes and major rivers.

The vegetation is generally forest-covered in the central portion of the Property, populated mainly by black spruce and tamarack trees, with generally barren areas occurring in the more elevated southern part of the Property. Willow and alder shrubs, often densely populated, also occur in low-lying areas throughout the Property.

5. HISTORY

5.1. REGIONAL GOVERNMENT SURVEYS

Several regional surveys have been conducted in the area of the Property by the Geological Survey of Canada (GSC) and the Ministère des Ressources naturelles et de la Faune (MRNF). Between the 1950s and the 1970s, different authors from the GSC and the MRNF conducted regional geological surveys in the New Quebec Orogen at varying scales, from 4 miles per inch (1:253,440) to 1 mile per inch (1:63,360). In 1979, a compilation of the various geological surveys conducted in the area was completed (Dressler & Ciesielski, 1979). Since the end of the 1970's, only a few localised and more detailed geological surveys were completed by the MRNF.

The geological syntheses reported by the MRNF for the area since the 1990's include a 1:250,000 scale map of the mineral occurrences of the New Quebec Orogen (Avramtchev et al., 1990), a preliminary lithotectonic and metallogenic synthesis at a 1:500,000 scale (Bandyayera et al., 2002), and more recently, a complete lithotectonic and metallogenic synthesis of the New Quebec Orogen (Clark & Wares, 2006).

In addition to regional geological surveys, a stream sediment geochemical survey was completed in 1974 (Dressler B., 1974), followed by a regional lake sediment geochemical survey in 1987 (Beaumier, 1987).

5.2. MINERAL EXPLORATION WORK

The Eldor Carbonatite was discovered during the course of a regional exploration program for uranium by Eldor Resources Ltd. (Eldor Resources) in the early 1980s. In 1981, the company performed a regional lake water and sediment sampling program in the northern part of the Labrador Trough. In the area of the carbonatite, several lakes returned anomalous values of uranium. Eldor Resources performed a rapid ground check of the anomalous area and found it to be underlain by carbonatite rocks. They subsequently acquired an exploration permit for the area in January, 1982.

In 1982, a 982 line-km airborne radiometric survey was flown over the area of lakes with anomalous uranium values. The survey detected numerous radiometric anomalies in the area of what is now known as the Eldor Carbonatite.

In 1983, Eldor Resources followed up the airborne anomalies with a prospecting program. During the program, many of the anomalies were explained, using a scintillometer in hand-dug pits or trenches, or by radioactive carbonatite outcrops or boulders. The samples collected returned anomalous thorium values with some of the samples returning up to 7% Nb, 0.18% Ta, and 4% total lanthanides. A reconnaissance geological mapping survey was also conducted in the area of the newly discovered carbonatite (Meusy et al., 1984); (Lafontaine, 1984).

Unocal Canada Ltd. (Unocal) performed a three-person examination of the property for 5 days in 1985 (Knox, 1986). They collected additional samples for analysis and petrographic study, and conducted magnetic and radiometric geophysical orientation surveys, as well as an orientation soil geochemical survey. Although Unocal confirmed the high values reported by Eldor Resources and found additional Nb-Ta occurrences, the property was considered too remote to be potentially economic at the prevailing commodity prices and eventually lapsed.

Virginia staked claims over the Eldor Carbonatite in 2001, attracted by the high Ta values that had been reported by Eldor Resources in 1983. Virginia revisited the areas where Eldor Resources had reported their high Nb-Ta values and re-sampled the occurrences. Their work was done by a pair of two person geological/prospecting teams working for four days each. In general the Virginia work confirmed the Eldor Resources' values (as the Unocal work had); however, no further work was completed on the property (Demers & Blanchet, 2001).

In April of 2007, Commerce learned of the high Ta values associated with the Eldor Carbonatite at a technical meeting in Calgary, AB. Commerce optioned eight claims from Virginia, which were originally staked in April of 2001, and subsequently staked the carbonatite and its immediate environs. In the months following the initial property acquisitions, Commerce proceeded to acquire, via map designation, an additional 357 mineral claims bringing the total land package to more than 17,000 ha.

During the summer of 2007, Dahrouge Geological Consulting Ltd. (Dahrouge), on behalf of Commerce, conducted an exploration program consisting of prospecting and rock sampling, soil sampling, and ground scintillometer and magnetic surveys. In addition, Tundra Airborne Surveys of Toronto, ON was contracted to fly a fixed wing aeromagnetic-radiometric-VLF-EM survey over the Eldor Property, with data interpreted by Abitibi Geophysics of Val-d'Or, QC. (Smith et al., 2008)

In 2008, Dahrouge, on behalf of Commerce, conducted an exploration program on the Property consisting of prospecting and rock sampling, regional soil sampling, ground geophysics, trenching, and diamond drilling. A total of 5,482.29 metres of drilling was completed over 26 holes in three areas of the Property (Star Trench, Northwest, and Southeast). Highlights from the 2008 drilling program are as follows:

Star Trench Area: EC08-025 - 4.37 m grading 597 ppm Ta_2O_5, 0.31% Nb_2O_5, and 16.6% P_2O_5

Northwest Area: EC08-008 - 46.88 m grading 0.46% Nb_2O_5

Southeast Area: EC08-015 - 26.10 m grading 0.55% Nb_2O_5, including 10.64 m of 0.78% Nb_2O_5

EC08-015 - 25.38 m grading 281 ppm Ta_2O_5, 0.40% Nb_2O_5, and 8.8% P_2O_5

Fifteen trenches were completed and sampled on the Property to assist with drill targeting. Ground geophysics consisted of magnetic and scintillometer surveys. The soil sampling program significantly extended the 2007 regional grid with samples collected at 50 m intervals along 1 km-spaced lines. Extensive prospecting and rock sampling throughout the Property was also completed.

Overall, the 2008 program was successful in identifying significant niobium, tantalum, phosphate, and fluorspar mineralization on the Property.

In 2009, Dahrouge, on behalf of Commerce, completed a relatively small exploration program with field work consisting of prospecting and additional sampling of 2008 drill core not collected during the 2008 program. Additional work was completed in the office and consisted of air-photo interpretation and re-interpretation of the 2007 airborne geophysical survey data. The most significant result from the 2009 exploration program was the discovery of REE mineralization in outcrop on the Ashram Peninsula, highlighting the exploration potential for REEs on the Property. Of the ~70 rock samples collected in the Ashram area, more than half returned TREO greater than 1%, with the best sample grading more than 3% TREO (Smith & Peter-Rennich, 2010).

In response to the discovery of the REE mineralized outcrop at Ashram, Dahrouge, on behalf of Commerce, initiated an aggressive exploration program in 2010. Work consisted of prospecting,

mapping, rock and soil sampling, a ground magnetic and radiometric (RA) survey, trenching (soil stripping), diamond drilling, Property wide satellite image acquisition, and mineralogical studies.

A total of 5,389.98 m was drilled over 21 holes in four areas (Ashram, Southeast, Star Trench, and MC Exposure), with a focus on Ashram. The drilling was highlighted by the discovery hole at Ashram (EC10-027), providing confirmation of REE mineralization to significant depths. Additional highlights of the 2010 drill program include:

Ashram Area: EC10-027 (discovery hole) - 215.30 m grading 1.72% TREO and 3.5% F, including 29.48 m of 2.07% TREO and 4.0% F

EC10-045 - 309.18 m grading 1.99% TREO and 2.6% F, including 172.89 m of 2.30% TREO or 53.39 m of 2.51% TREO

EC10-047 – 119.31 m grading 1.63% TREO at 14.6% MH-T, including 61.19 m of 1.41% TREO at 19.1% MH-T (middle + heavy REO as a percentage of TREO)

Southeast Area: EC10-033 - 74.25 m grading 0.57% Nb_2O_5, 145 ppm Ta_2O_5, 8.9% P_2O_5, and 0.47% TREO.

EC10-040 - 5.84 m grading 1.09% Nb_2O_5, 46 ppm Ta_2O_5, 9.8% P_2O_5, and 0.55% TREO

Based on the results from the 2010 drill program at Ashram, a NI 43-101 compliant initial inferred mineral resource estimate of 117 Mt at 1.76% TREO was completed by SGS Geostat of Montreal and released March 6th, 2011.

In addition to diamond drilling, six trenches were excavated and sampled to assist with drill targeting, and a ground magnetic and radiometric survey was completed at the Star Trench Area. The 2008 regional soil grid was expanded with an additional 684 samples collected on 500 m to 1,000 m spaced lines. A smaller, and more tightly spaced, soil grid of 123 samples was also completed at the Triple D area with a further 28 off-grid soil samples collected over the Property. High resolution satellite imagery was acquired over the entire Property and extensive prospecting (782 observations) and rock sampling (298 samples) throughout the Property was also completed.

Due to the success of the 2010 exploration program, Dahrouge, on behalf of Commerce, initiated two follow up drill campaigns (winter and summer) in 2011. Work consisted of prospecting, mapping, rock and soil sampling, trenching (soil stripping), a ground gravity and magnetic survey (Ashram), a bathymetric survey (Centre Pond), a complex wide airborne gravity and magnetic survey, diamond drilling, infill satellite image acquisition, and mineralogical studies.

A total of 13,776.32 m was drilled over 41 holes in four areas (Ashram, Triple D, Beckling, and West Rim), with a focus on Ashram. This included 3,656.42 m over 8 holes during the winter program, and 10,119.90 m over 33 holes during the summer program. The main objective for both exploration programs was to further delineate the Ashram Deposit through step out drilling as well as test other promising REE targets (Triple D, Beckling, and West Rim). The 2011 drill program was highly successful, resulting in the considerable expansion of the Ashram Rare Earth Deposit and MHREO zone (zone enriched in medium and heavy REE). Highlights from the 2011 drill program include:

Ashram Area: EC11-048 - 586.06 m grading 2.10% TREO and 2.3% F, including 36.99 m of 3.00% TREO and 2.3% F

EC11-076A – 176.43 m grading 1.56% TREO at 12.3% MH-T

In addition to diamond drilling, 10 trenches were excavated and sampled to assist with drill targeting. Geophysical work included a ground gravity and magnetic survey over the Ashram Deposit as well as an Eldor Complex wide airborne gravity and magnetic survey. A bathymetric survey was also performed on Centre Pond. An extensive soil sampling program was completed with 1686 samples collected on 200 m spaced lines over four main grids (Miranna, Beckling, MC Exposure, and West Rim) and 10 samples collected off-grid. Additional satellite imagery was acquired, infilling locations that could not be imaged in 2010. Extensive prospecting (509 observations) and rock sampling (323 samples) was also completed throughout the Property.

Overall the 2011 program was successful and proved the extent and significance of the Ashram REE Deposit. Additional REE mineralization was discovered on the Property but was dwarfed by that of the Ashram Deposit. Exploration during 2011 focused heavily on delineating REE mineralization with very little exploration for Nb-Ta completed.

6. GEOLOGICAL SETTING

6.1. REGIONAL GEOLOGY

The Eldor Property is located in the Paleoproterozoic New Quebec Orogen (also known as the 'Labrador Trough' or 'Fosse du Labrador'), which is interpreted to be the western margin of the Southeastern Churchill Province (SECP). The New Quebec Orogen is bound to the west by the Archean Superior Province, to the south by the Proterozoic Grenville Province, and extends as far as Ungava Bay to the north. To the east, the New Quebec Orogen is in contact with a composite terrain of the SECP named the Core Zone, composed of Archean and Paleoproterozoic lithologies (James et al., 2003); (Clark & Wares, 2006). The regional geology is set out in Figure 6-1.

The New Quebec Orogen is interpreted to be an early Proterozoic (Aphebian) fold and thrust belt with an age of 2.17 to 1.87 Ga. The older stratigraphic and structural subdivision of the New Quebec Orogen outlined three supracrustal belts defined as 1) a western foreland, parauthochthonous to allochthonous "miogeosynclinal" belt composed mainly of platform sediment rocks; 2) a central foreland, allochthonous "eugeosynclinal" belt composed mainly of greenschist facies, deeper-water environment, volcano-sedimentary rocks intruded by numerous gabbro sills; and 3) an eastern allochthonous belt marking the beginning of the hinterland and composed of amphibolite facies rocks.

The recent interpretation defines the New Quebec Orogen as three cycles of sedimentation and volcanism, which make up the Kaniupiskau Supergroup. The cycles thicken eastwards and are separated from each other by erosional unconformities. The first two cycles are volcano-sedimentary in nature with an emplacement age, via U-Pb dating, of between 2.17 and 2.14 Ga and between 1.88 and 1.87 Ga respectively. Overlying this sequence is a syn-orogenic suite of meta-sedimentary rocks that form the third cycle. The belt is subdivided into eleven lithotectonic zones separated by major thrust faults.

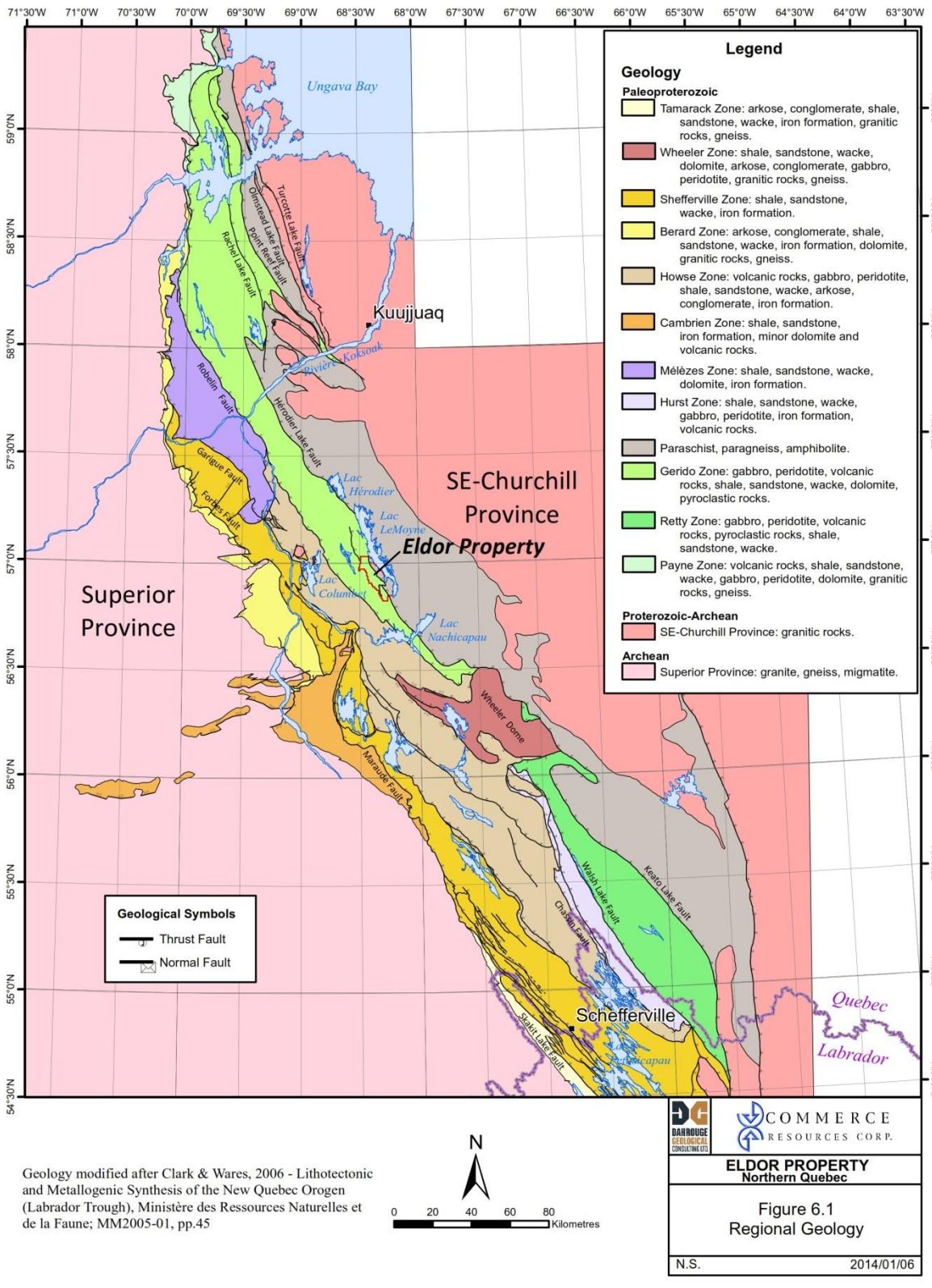

Figure 6-1 Regional Geology

The first cycle of the belts formation was prompted by continental rifting, followed by passive continental margin development, further rifting, and finally the re-establishment of the platform. A period of 175 Ma years or greater followed with relatively little tectonic activity resulting in non-deposition and erosion.

The second cycle is characterized by deposition of sedimentary sandstones, etc. and turbidites within a high energy environment. During this period the central part of the trough was intruded by several tholeiitic, ultra-mafic sills known as the 'Montagnais Sills'. Near the end of this cycle, the Le Moyne Intrusion (Eldor Carbonatite) was emplaced, intruding basaltic to rhyolitic volcanic rocks. It is the only sizeable, relatively deep level carbonatite so far recognized in the area (Knox, 1986). There is no direct dating on the Eldor Carbonatite Complex; however, the older age constraint of the complex is thought to be 1874±3 Ma (Wright et al., 1998).

The third cycle occurred between 1.82 and 1.77 Ga and consisted of molasse type sedimentation on the margin of the Superior Province.

In general, metamorphic grade increases from west to east across the orogeny. The foreland passes from sub-greenschist to upper greenschist facies and the hinterland from upper greenschist, amphibolite and/or granulite facies (Clark & Wares, 2006). The carbonatite suite of rocks has undergone greenschist facies metamorphism. The Eldor Complex and its surrounding rocks, were deformed during the Hudsonian Orogeny along with the rocks of the Kaniapiskau Supergroup (Birkett & Clark, 1991).

6.2. PROPERTY GEOLOGY

The Eldor Property is situated within the central portion of the New Quebec Orogen, straddling two lithotectonic zones that are separated by a major thrust fault. To the east is the SC Zone, comprised of Proterozoic paraschist, paragneiss, and amphibolites; to the west is the Gerido Zone, comprised of the Le Moyne Group, Doublet Group, and the Le Moyne Intrusion, also known as the Eldor Carbonatite (Figure 6-2 and Figure 6-3).

The Doublet Group rocks are older and underlay the Le Moyne Group rocks. They consist of mafic pyroclastics, basalts, dolomites, and gabbros. The Le Moyne Group consists of volcanic and sedimentary rocks of the Douay Formation (rhyolites, rhyodacites, felsic tuffs, dolomites, shales, and pelites), and the sedimentary Aulneau Formation (conglomerate, mudstones, dolomite, and

dolomite tuff), and include mafic pyroclastics coeval with the Le Moyne Intrusion. Lastly, the Eldor Carbonatite ('Le Moyne Intrusion'), a sub-volcanic carbonatite intrusion and the youngest unit, was emplaced within the Le Moyne Group. Local structure and geology indicate that volcanism was violent and may have occurred in a shallow-water environment.

The carbonatite complex has been mapped as intrusive (massive and brecciated ultramafic) with marginal extrusive equivalents interpreted to be a possible volcanic apron. This notion of extrusive carbonatite components is still a matter of debate (Clark & Wares, 2006).

Historic exploration of the Eldor Carbonatite has shown it to have an elliptical shape with approximate dimensions of 7.3 km long by 3 km wide (Sherer, 1984). More recently, Clark and Wares (2006) suggested a carbonatite extent of almost double, at 15 km long by 4 km wide. Emplacement occurred near the end of the second cycle of the belt's formation, approximately 1.88 to 1.87 Ga (U-Pb dating). Multiple carbonatite intrusive events are believed to have occurred during emplacement of the Eldor Complex, with calcio-carbonatite, magnesio-carbonatite, and ferro-carbonatite present.

The geology of the Eldor Carbonatite is very complex, with several lithological subdivisions proposed/identified (Wright et al., 1998) and separate eruptive centres postulated (Demers & Blanchet, 2001). Simplistically, the Eldor Complex can be separated into three major divisions: early, mid, and late-stage carbonatite. The mid-stage carbonatite is most closely related to tantalum-niobium mineralization (pyrochlore, columbite) while the late-stage carbonatite crosscuts all earlier phases and is the primary host to the REE mineralization observed at the Ashram Deposit.

The carbonatite is thought to have undergone minimal weathering, mainly due to the sub-arctic climate, with glaciation thought to be the major eroding force. Only a thin veil of overburden covers the complex, with fresh rock being encountered essentially at the soil-rock interface. This geological history prevented the formation of the deep lateritic weathering profile that sometimes proves problematic in rare earth deposits due to rare earth mineral re-crystallization etc.

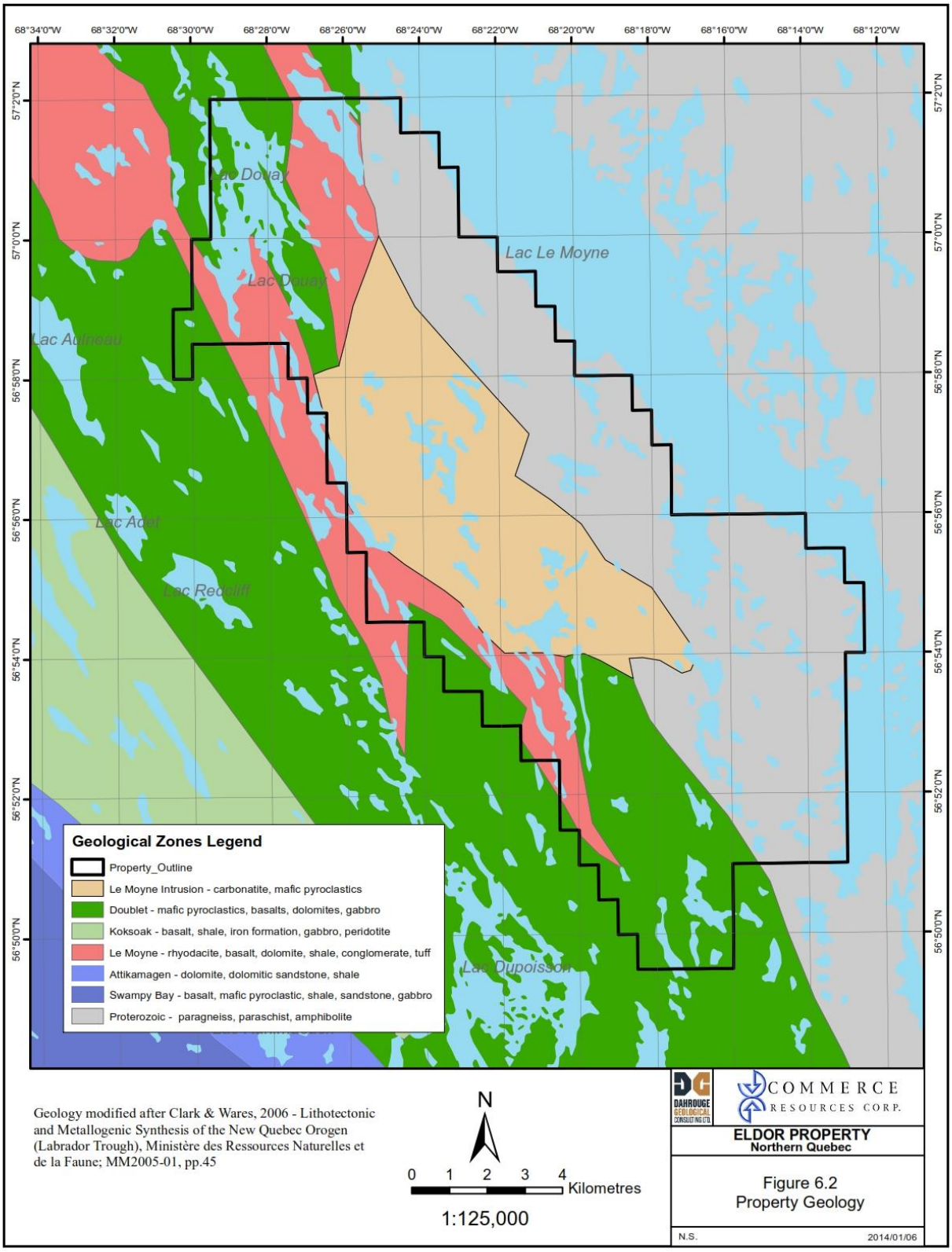

Figure 6-2 **Property Geology** **(modified from Clark and Wares, 2006)**

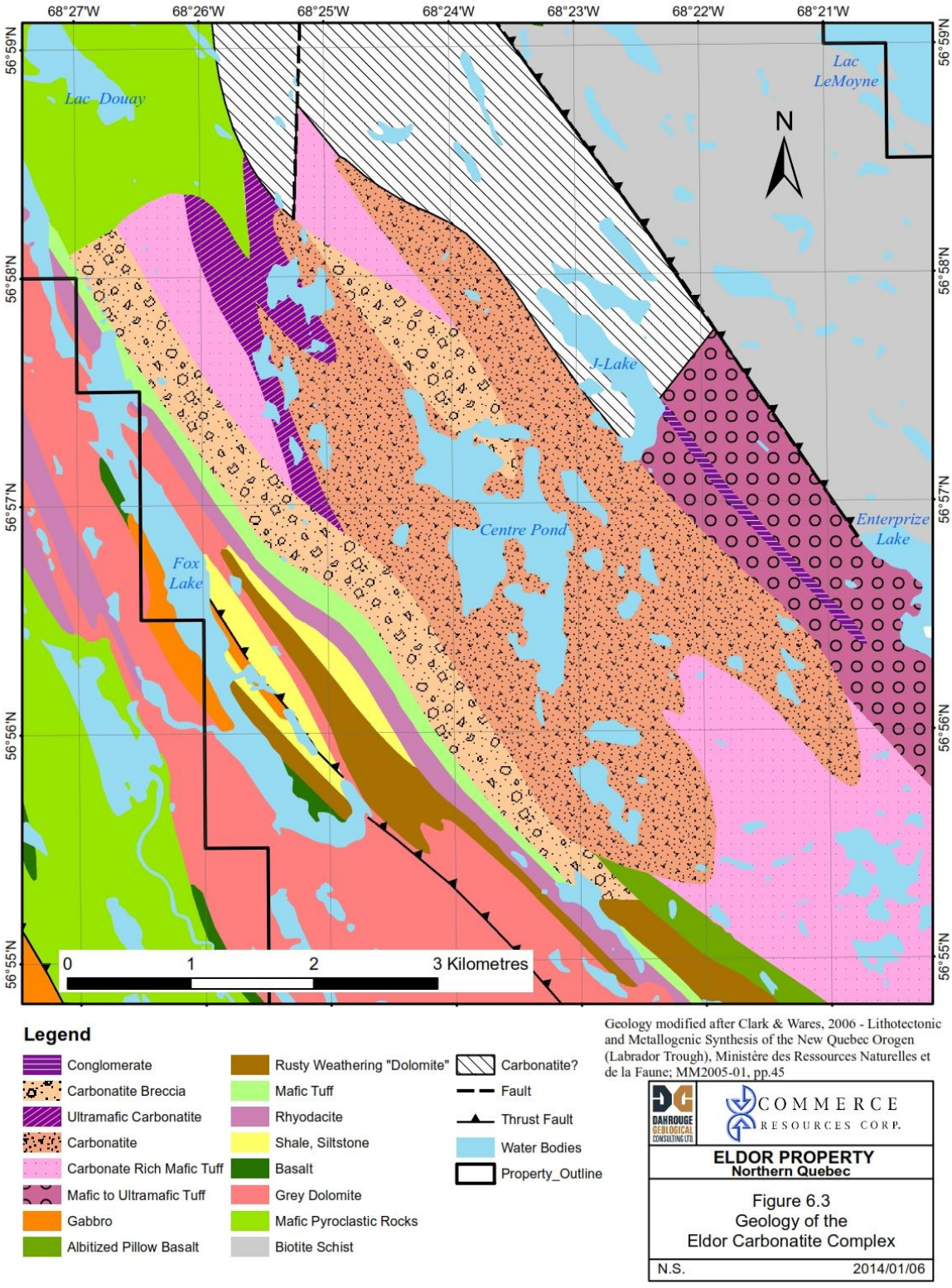

Figure 6-3 **Eldor Carbonatite Complex Geology** **(modified from Clark and Wares, 2006)**

6.3. PROPERTY MINERALIZATION

The primary targeted commodities of exploration on the Eldor Property are niobium-tantalum and rare earth element deposits associated with the carbonatite. Secondary targets include phosphate (apatite) and fluorine ('fluorite' or 'fluorspar'), which tend to occur with the primary commodities of interest. Carbonatites have been defined in several ways; a detailed review of the methodologies and arguments is presented in (Mitchell R.H., 2005). However, for the purposes of this report they are defined, according to the IUGS system, as igneous rocks containing more than 50% carbonate minerals by volume, with less than 20 wt.% SiO_2 (Le Maitre R.W., 2002). Geochemical classification (calcio, magnesio, ferro) follows that presented in (Woolley & Kempe, 1989).

Niobium and tantalum mineralized bodies are thought to be formed by primary igneous concentrations of the minerals pyrochlore, columbite, and others located in geochemically enriched phases of a carbonatite intrusion. Primary niobium-tantalum deposits tend to run parallel to the mineral banding in the host carbonatite. Mineralized bodies are characterized by an increased concentration of non-carbonate minerals, as well as increased quantities of actinide elements (uranium and thorium). This results in mineralized zones that tend to be more radioactive than the unmineralized wall rocks. Niobium-tantalum mineralization often occurs in calcio to magnesio phases, in the middle stages of carbonatite emplacement, with earlier-stage carbonatite often barren.

Rare earth element deposits tend to be associated with the final phases of intrusion/veining of a carbonatite complex and are often located near the centre of carbonatite/alkaline complexes. Typically, the highly oxidized nature of the late carbonatite phases makes these areas magnetic lows. Geochemically, these deposits tend to occur in the magnesio to ferro phases, with the ferro phases typically representing the latest stages of emplacement. Rare earth mineralization may occur in a wide variety of minerals in this type of geological environment. The rare earth minerals are typically non-silicate, and light and middle rare earth enriched, with rare earth phosphate and fluorocarbonate minerals common (e.g., monazite, bastnaesite). It is highly unusual for carbonatites to display heavy rare earth enrichment; however, it has been known to occur under specific conditions (e.g. Ashram).

7. 2012 EXPLORATION

Exploration of the Eldor Property was completed by Dahrouge, on behalf of Commerce, from April through October of 2012. Work consisted of prospecting, rock sampling, regional and complex mapping, trench reclamation, camp and trail maintenance, and collection of bulk sample material from Ashram Deposit outcrop. No drilling or geophysical surveys were completed in 2012.

The main objectives of the 2012 program were to geologically map the carbonatite complex, explore in detail the West Rim / Northwestern Margin areas, and collect a bulk sample of outcropping Ashram Deposit for metallurgical studies.

In addition, several studies were completed on the Ashram Deposit culminating in the release of a mineral resource estimate update and Preliminary Economic Assessment (PEA).

A summary of work completed in 2012 is listed below in Table 7-1 with the Property's exploration areas shown in Figure 7-1.

Table 7-1 Summary of the 2012 Exploration & Activities

Exploration Type	Units
Prospecting Rocks	97 samples
Prospecting Observation Points	496 stations
Geological Mapping	Regional, Complex
Outcrop Bulk Sample Collection	~50 t (~32 t shipped off site)
Trench Reclamation	1
Exploration Access Trail	Maintenance, Improvements
Ashram Project Advancement	Resource Update & PEA

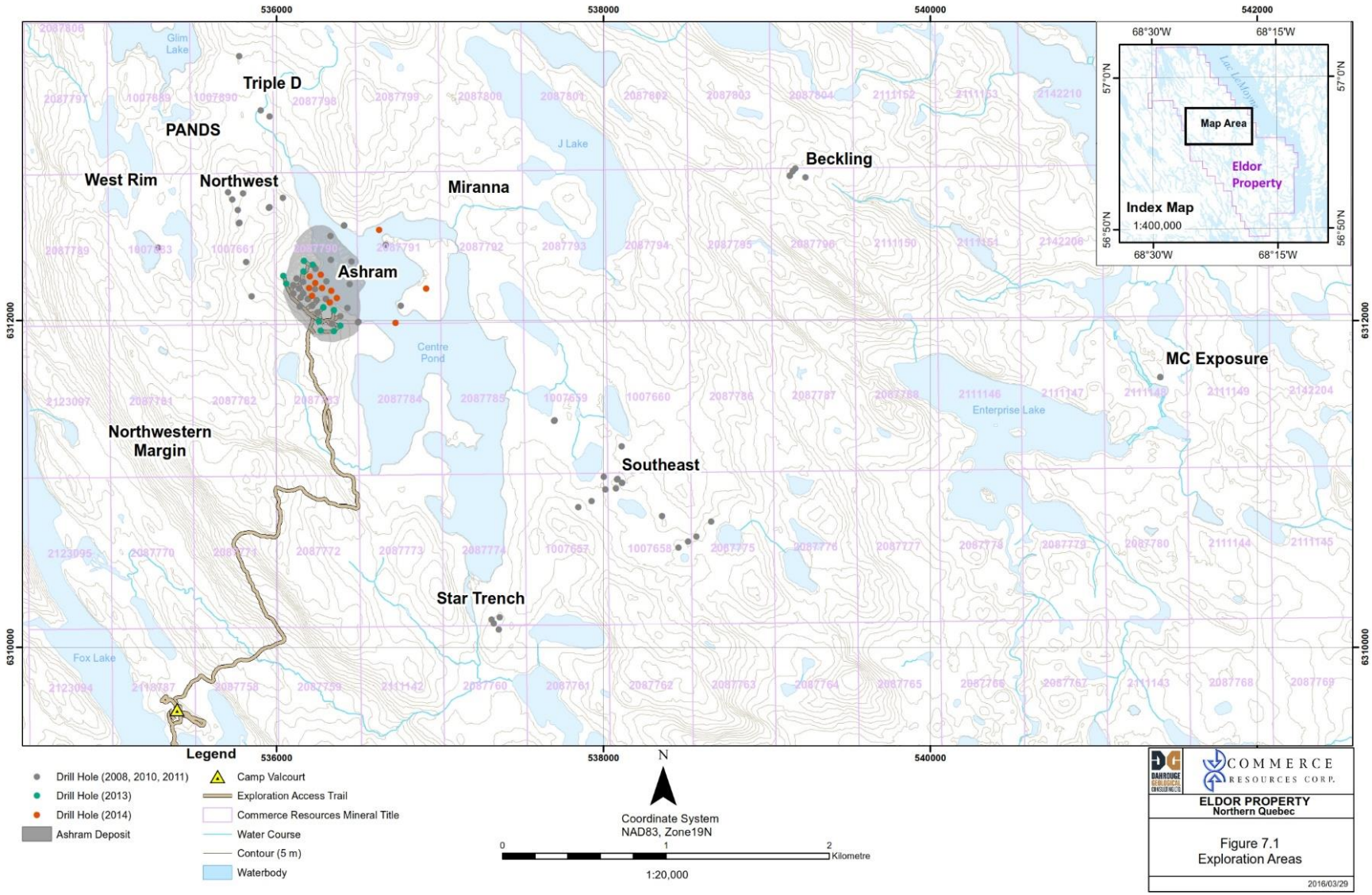

Figure 7-1 Eldor Property Exploration Areas

7.1. 2012 PROSPECTING AND ROCK SAMPLING

During the summer and fall of 2012, ground exploration was conducted over select areas of the Eldor Property, and included prospecting and sampling of potentially mineralized outcrop and boulders. The lack of onsite helicopter availability limited regional prospecting and resulted in a focus on the West Rim and Northwestern Margin areas due to proximity to the main trail and camp.

A RS-121 Gamma-Ray Super Scintillometer and RS-125 Gamma Ray Spectrometer/Scintillometer were used to help locate mineralized sub-crop and boulders. Radioactivity, as assessed with a scintillometer, is an excellent method of prospecting for Nb-Ta-REE mineralization.

The main focus of the prospecting program was to further delineate the northwestern margin of the carbonatite contact with the country rocks. Most of the prospecting was carried out along a northwest-southeast trending ridge where relatively abundant outcrop was present. All identified outcrops were assigned a lithology and mapped using GPS tracks and/or sketched.

Collected rock samples were described, placed in pre-labeled clear plastic bags, had their CPS recorded, and were sealed with a plastic zip tie. Samples were shipped to Activation Laboratories Ltd. (Actlabs) in Ancaster, ON by way of float plane to Kuujjuaq, air cargo to Montreal, and truck to Ancaster. Rock samples were analyzed for major, base, and trace elements (Code 8-REE package by ICP and ICP-MS), Nb-Ta (Code 8 by XRF), and Au (Code 1A2 by fire assay).

A total of 97 rock samples were collected and assayed from outcrop and boulders. Of the samples collected, 87 were from outcrop, 5 were from boulders, and 5 could not be confidently categorized as either. The majority of samples collected were described as meta-basalts (non-carbonatite), while only a few samples collected were carbonatite, the target host lithology for mineralization (Nb-Ta-REE-P-F).

No significant mineralization of interest was returned from the analytical results: Nb_2O_5 ranged from nil to 0.26%; Ta_2O_5 from nil to 0.006%; TREO up to 0.85%; P_2O_5 up to 2.07%; and F up to 1.4%.

In addition to the rock samples, 496 prospecting stations were recorded identifying sample and structure measurement locations, radioactive anomalies, and other pertinent geological and/or project related observations. A high of 2,200 CPS was noted.

The majority of the prospecting observations were collected during the regional and complex wide mapping program (Section 7.2). No new zone with mineralization of interest was identified during the 2012 field program.

Rock sample locations with select analytical values, as well as prospecting data, are presented in Figure 7-2, and Figure 7-3a and Figure 7-3b. Prospecting rock sample locations and descriptions are in Appendix 5a, with corresponding analytical certificates in Appendix 5b. Prospecting point locations and descriptions are in Appendix 6. Nomenclature is in Appendix 11.

Figure 7-2 **2012 and 2013 Rock Sample Data**

Figure 7-3a **2012 Prospecting Data (Property-wide)**

Figure 7-3b **2012 Prospecting Data (Centre Pond)**

7.2. 2012 REGIONAL & COMPLEX MAPPING

As part of the exploration program, from August through September 2012, a regional mapping project was undertaken across the Eldor Property. The program was carried out over a period of two months, with helicopter support. The program was designed to improve the geological understanding of the Property and the regional structures that exist within the Eldor Carbonatite Complex. Geologist Jens Rößiger was retained for the mapping project.

Rößiger, along with a geologist from Dahrouge, collected numerous measurements and prospecting points across the Property and subsequently compiled a report (Appendix 7) along with an accompanying geologic map (Figure 7-4) and cross section (Figure 7-5).

Additional mapping, on both a Property and deposit wide (Ashram) scale, is still warranted in order to gain further understanding of the structures and geology in the area, as well as to integrate all data collected to date into a complete geological model of the Eldor Carbonatite Complex.

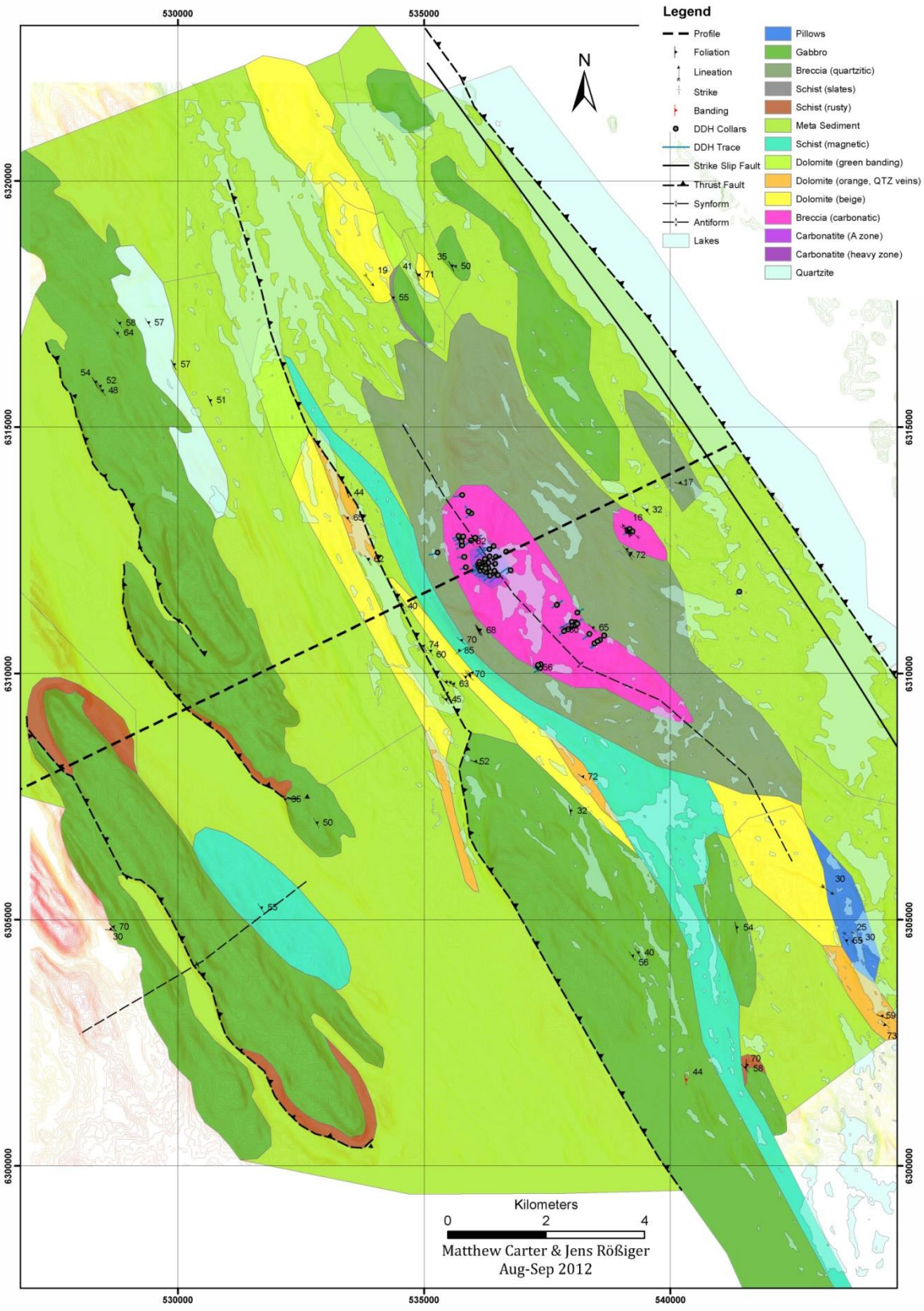

Figure 7-4 2012 Regional Geology Map (J. Rößiger)

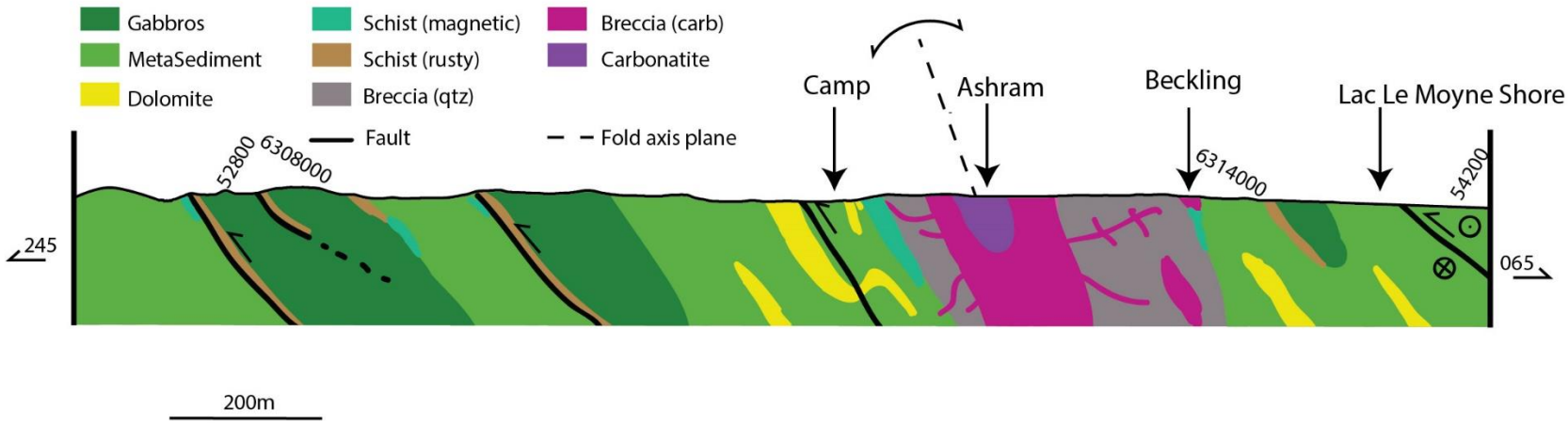

Figure 7-5 2012 Regional Geology Cross-section (J. Rößiger)

7.3. 2012 BULK SAMPLE COLLECTION

During the summer of 2012, a crew from Forage Dynami-Tech of Quebec City, QC was mobilized to site with the primary purpose of blasting a section of outcrop exposed near the southern end of the Ashram Deposit. The blasting was required in order to collect a bulk sample of mineralized material for metallurgical studies.

The work was completed at three outcrop locations (BS0C1, BSOC2, and BSOC3) with an estimated 100 tonnes of material blasted into sizes small enough to be easily handled and bagged by hand for shipment. Material was collected in rice bags and assigned a colour unique to the site they were collected from. In addition, two composite random grab samples were collected from each site and sent to Activation Laboratories Ltd. (Actlabs) for analysis of major, base, and trace elements (Code 8-REE package by ICP and ICP-MS), as well as fluorine (Code 4F-F package by Fusion Specific Ion Electrode-ISE).

Of the estimated 100 tonnes of available material, a total of approximately 50 tonnes was collected and heli-transported to camp and stored under shelter from the elements. Of this estimated 50 tonnes, approximately 31 tonnes was transported in 2012 by float plane to Kuujjuaq, palleted, and shipped south by sealift to a storage facility in Montreal. During October of 2013, an additional approximately 1 tonne was shipped to Montreal for storage in the same manner, leaving an estimated 18 tonnes remaining at camp in storage.

The blast site was partially reclaimed with the exposure covered under heavy duty tarps and monitored with the expectation of future collection.

The bulk sample site locations are presented in Figure 7-6 and Appendix 8a. Photos pre- and post-blasting of the bulk sample sites, as well as sample collection, are presented in Figure 7-7, Figure 7-8, Figure 7-9, and Figure 7-10. The analytical certificate for the bulk sample site random grab samples is presented in Appendix 8b.

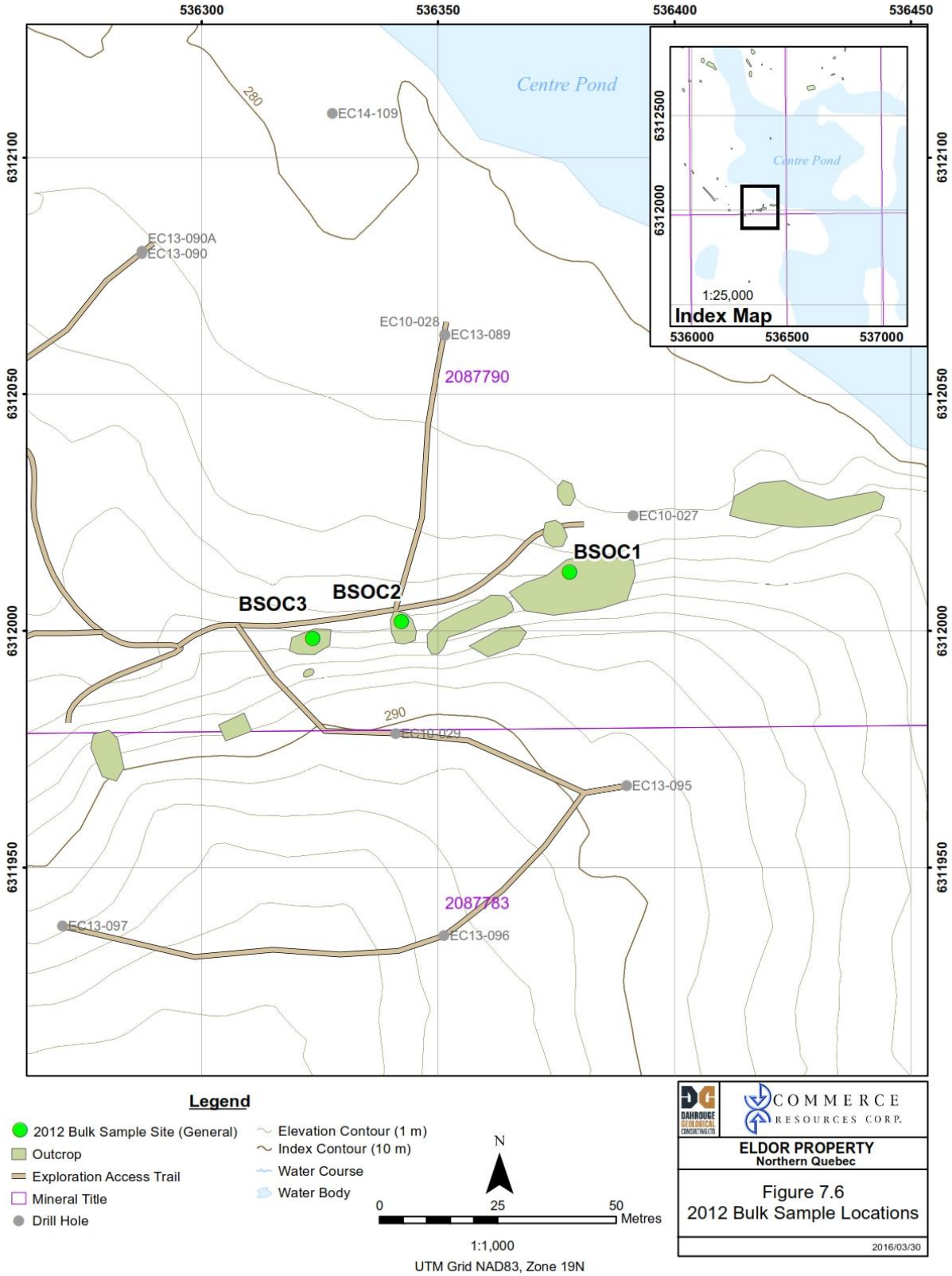

Figure 7-6 2012 Bulk Sample Sites

Figure 7-7 Bulk Sample Site Pre-blasting

Figure 7-8 Bulk Sample Site Post-blasting

Figure 7-9 Bulk Sample Collection

Figure 7-10 Bulk Sample Bags

7.4. 2012 TRENCH RECLAMATION

No trenching was completed in 2012; however, one trench was reclaimed (TR08-002). As in prior years, reclamation was completed by filling in the existing trench with the same soil that had been removed, allowing for natural re-vegetation with no seeding.

Based on ongoing documentation of previously reclaimed trenches, natural re-vegetation is strongly indicated to be the best approach. To the knowledge of the author, no northern seed mix exists for the Property's environment.

All Property trenches, along with their status, are presented in Figure 7-11.

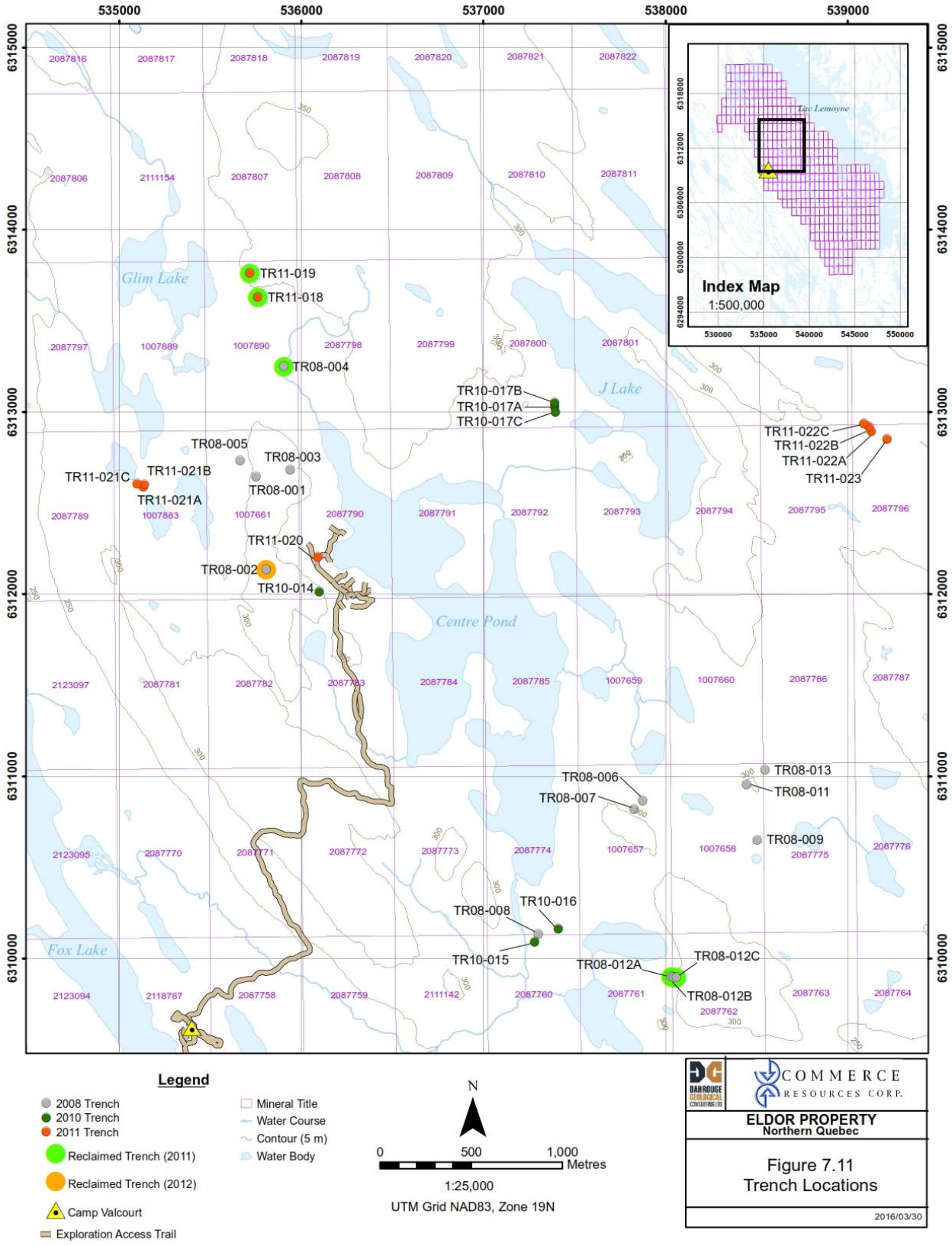

Figure 7-11 Trench Locations

7.5. 2012 EXPLORATION ACCESS TRAIL

In 2011, with authorizations in place, approximately 6.9 km of exploration access trails was constructed, extending from camp to Centre Pond (Ashram Deposit). Approximately 2.0 km of these trails were decommissioned at the end of 2011, with wooden planks (used for crossings) and/or culverts removed, and trails left to naturally re-vegetate.

No additional trails where constructed in 2012, leaving approximately 4.9 km of active trails on the Property, including those in camp. However, during 2012, access trails were improved with emplacement of additional crossings/culverts and blasting of outcrop at five locations in order to improve the trail gradient. The blasting was completed by Forage Dynami-Tech of Quebec City, QC as they were already on-site for the bulk sample collection program.

At the end of the 2012 field season, the trail included 20 crossings (ranging from 5 to ~151 m in length, with an average of ~37 m) over intermittent streams, swampy areas, or areas prone to rutting. A total of 10 culverts were used to allow the natural drainage to remain uninterrupted as best practical.

The exploration access trails present on the Property at the end of the 2012 field season, along with crossings/culverts and blast sites, are noted in Figure 7-13. A picture of a swamp crossing is shown in Figure 7-12.

Figure 7-12 Crossing, made of wooden planks, over swampy area at start of main trail

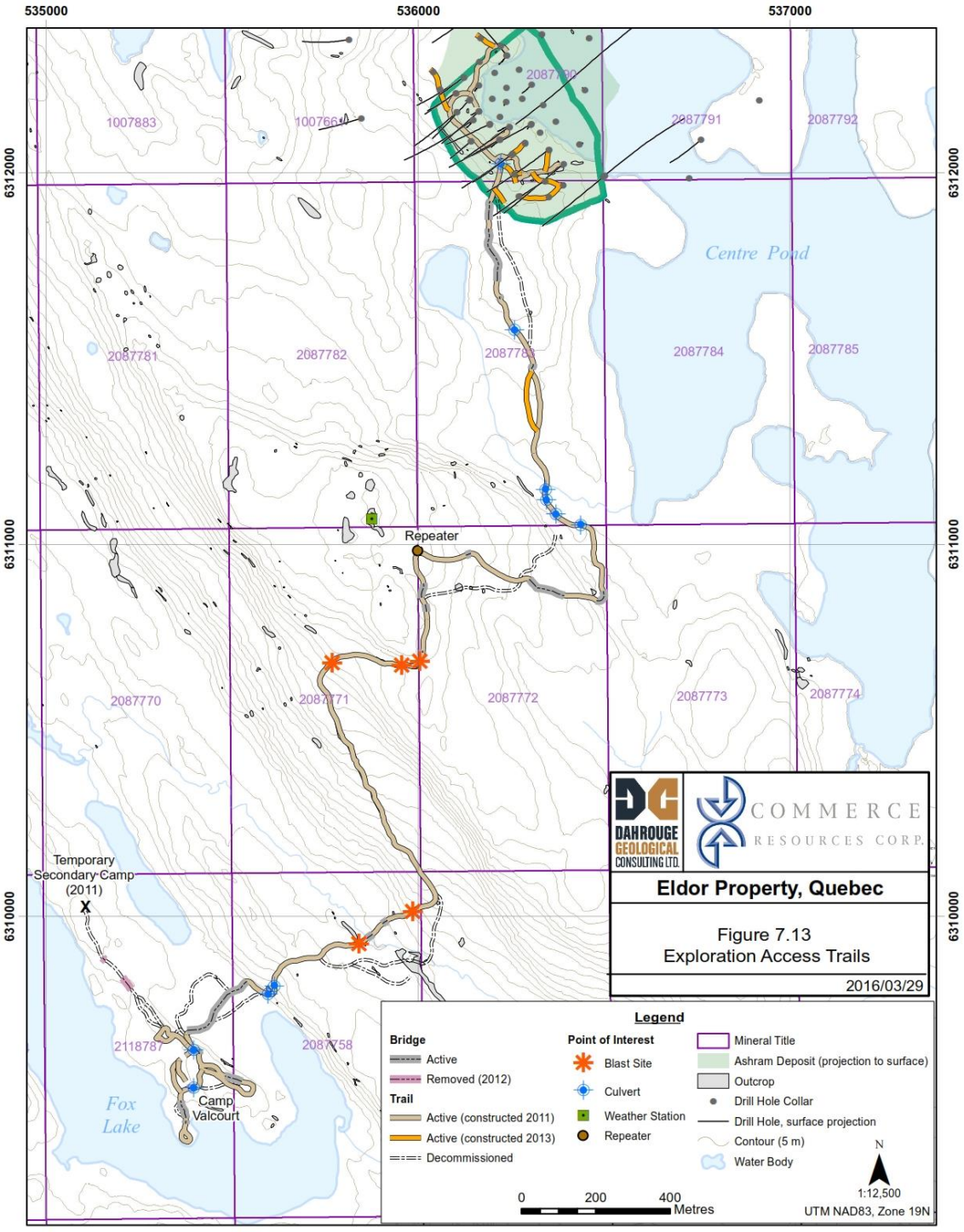

Figure 7-13 Exploration Access Trails

7.6. ASHRAM DEPOSIT AND PROJECT ADVANCEMENT

A significant milestone was achieved in the advancement of the Ashram Rare Earth Deposit and associated studies (collectively termed the "Ashram Project"), with the release in 2012 of a mineral resource estimate update as well as a Preliminary Economic Assessment (PEA), completed in accordance with NI 43-101.

All engineering, environmental, metallurgical, geotechnical, or hydrogeological expenditures relating to the advancement of the Ashram Rare Earth Project (i.e. PEA or PFS) for the reporting period are NOT claimed for assessment, and thus, not included in the aforementioned totals of exploration expenditures, nor detailed herein.

The publically disclosed documents (news releases and 43-101 reports) may be found online through the filing system known as the System for Electronic Document Analysis and Retrieval (SEDAR) or the Commerce Resources Corp.'s website (www.commerceresources.com).

For completeness, the mineral resource estimate for the Ashram Rare Earth Deposit, at a cut-off grade of 0.25% TREO, is presented below in Table 7-2. The Ashram Deposit is a light rare earth deposit; however, it was discovered to host a significant enrichment in the middle and heavy rare earth elements that is unique among its peers in development, as well as producing mines.

Table 7-2 2012 Mineral Resource Estimate for the Ashram Rare Earth Deposit

Category	Tonnage (t)	TREO (%)
Measured	1,590,000	1.77
Indicated	27,670,000	1.90
Inferred	219,800,000	1.90

The PEA (effective date of July 5th, 2012), which incorporates the 2012 resource estimate, indicates potential economic viability for the project to produce rare earth elements, and concluded the project to be sufficiently positive to proceed to the Pre-feasibility Study level of evaluation.

Immediately following the release of the PEA, Commerce engaged Roche Ltd. to complete a PFS on the Ashram Project, which remains ongoing as of the date of this report.

As part of the Pre-feasibility Study, a surface water sampling program was completed during the summer as part of an ongoing, multi-year program of monitoring surface water quality in the vicinity of the deposit and projected infrastructure. Additionally, a fish sampling and habitat study, as well as a hydrology study were completed over the same period.

Disclosure

Results of the Preliminary Economic Assessment (PEA) represent forward-looking information. This economic assessment is by definition preliminary in nature and it includes inferred mineral resources that are considered too speculative to have the economic considerations applied to them, that would enable them to be categorized as mineral reserves. There is no certainty that the PEA will be realized. Mineral resources are not mineral reserves as they do not have demonstrated economic viability.

8. 2013 EXPLORATION

Exploration of the Eldor Property was completed by Dahrouge, on behalf of Commerce, from February through September of 2013. Work consisted of prospecting, rock sampling, select soil sampling, diamond drilling (NQ), trail maintenance and minor additional access construction. No geophysical work was completed in 2013.

The main objectives of the 2013 program were to further delineate the extent of REE mineralization at the Ashram Deposit, and to further evaluate the Nb potential of the Miranna Area.

In addition, development of the Ashram Project was continued with collection of environmental and geotechnical field data.

A summary of work completed in 2013 is listed below in Table 8-1 with the Property's exploration areas shown in Figure 7-1.

Table 8-1 Summary of the 2013 Exploration & Activities

Exploration Type	Units
Drilling (NQ)	12 holes (1176.96 m)
Prospecting Rocks	15 samples
Soils (Off-grid)	2 samples
Exploration Access Trails	+0.84 km
Ashram Project Advancement	PFS related studies

8.1. 2013 PROSPECTING AND ROCK SAMPLING

During the summer and fall of 2013, ground exploration was conducted over select areas of the Eldor Property. This included prospecting and sampling of potentially mineralized outcrop and boulders. The prospecting program was small and focused on the PANDS Showing (immediately southeast of Glim Lake) where anomalous Ta-Nb-REE mineralization was discovered in outcrop in 2011, as well as the Miranna Area where Nb-Ta mineralized boulders were found.

A RS-121 Gamma-Ray Super Scintillometer and RS-125 Gamma Ray Spectrometer/Scintillometer were used to help locate mineralized sub-crop and boulders. Radioactivity, as assessed with a scintillometer, is an excellent method of prospecting for Nb-Ta-REE mineralization.

Collected rock samples were described, placed in pre-labeled clear plastic bags, had their CPS recorded, and were sealed with a plastic zip tie. Samples were shipped to Activation Laboratories Ltd. (Actlabs) in Ancaster, ON by way of float plane to Kuujjuaq, air cargo to Montreal, and truck to Ancaster. Rock samples were analyzed for major, base, and trace elements (Code 8-REE package by ICP and ICP-MS), Nb-Ta (Code 8 by XRF), Au (Code 1A2 by fire assay), and fluorine (Code 4F-F package by Fusion Specific Ion Electrode-ISE).

A total of 15 rock samples were collected and assayed from outcrops and boulders. Of the samples collected, 8 were from boulders, 6 were from outcrop, and 1 sample could not be confidently categorized as either. All of the samples collected were carbonatite, which is the target host lithology for mineralization (Nb-Ta-REE-Phospate-Fluorspar).

Analytical results returned 0.02 to 1.94% Nb_2O_5; 0.0015 to 0.122% Ta_2O_5; up to 1.03% TREO; up to 15.8% P_2O_5; and up to 1.4% F.

The majority of samples (eight) were collected from the Miranna Area where prior exploration work had identified potential for high-grade Nb-Ta mineralization. Even though only minimal prospecting was carried out in the area, the samples collected yielded highly encouraging results, with four samples exceeding 1% Nb_2O_5 (peak of 1.94%), and three samples exceeding 0.05% Ta_2O_5 (peak of 0.122%). The Nb-Ta mineralization was also accompanied by strong phosphate mineralization (exceeding 9.0% P_2O_5), as well as potentially significant REE mineralization (~0.30 to 0.45% TREO) with enrichment in the middle and heavy REEs (~10 to 14% MH-T).

Several rocks samples were collected from the PANDS Area (adjacent to the southeast of Glim Lake). Samples collected in 2011 suggested Nb, Ta, and REE mineralization potential; however, none of the samples collected in 2013 returned mineralization of significance. A peak of 0.2% Nb_2O_5 and 0.53% TREO, respectively, was returned; however, one sample did return 0.034% Ta_2O_5 and 12.3% P_2O_5.

Select rock samples from 2013 prospecting program are listed in Table 8-2.

Table 8-2 Select Mineralized Rock Samples Collected in 2013

Sample ID	Exploration Area	Source	Nb_2O_5 (%)	Ta_2O_5 (%)	TREO (%)	P_2O_5 (%)
118004	PANDS	Outcrop	0.20	0.034	0.25	12.3
118010	Miranna	Boulder	1.57	0.122	0.46	10.6
118013	Miranna	Boulder	0.96	0.079	0.45	9.9
118014	Miranna	Boulder	1.94	0.038	0.40	9.9

Rock sample locations displaying Nb_2O_5, Ta_2O_5, and TREO analytical results, as well as prospecting data, are presented in Figure 7-2, Figure 7-3a and Figure 7-3b. Prospecting rock sample locations and descriptions are in Appendix 5a, with corresponding analytical certificates in Appendix 5b. Nomenclature is in Appendix 11.

8.2. 2013 TRENCH MONITORING

No trenching or trench reclamation was completed in 2013. However, several trenches where visited throughout the program to monitor re-vegetation of the sites, and in each case, it was evident that this was occurring as expected.

All Property trenches, along with their status, are presented in Figure 7-11.

8.3. 2013 EXPLORATION ACCESS TRAIL

In 2013, an additional ~0.84 km of exploration trails were constructed for drill site access in the vicinity of the Ashram Deposit. No trail decommissioning was completed in 2013, leaving approximately 5.74 km of exploration access trails active at the end of the program.

Maintenance of the trails throughout the program included the use of wood chips for grooming, produced from an onsite wood chipper, as well as the extension of three crossings on the main trail.

The exploration access trails present on the Property as of the end of the 2013 field season, along with pertinent attributes, are noted in Figure 7-13.

8.4. 2013 SOIL SAMPLING

Although soil sampling was not part of the 2013 program scope, two off-grid soil samples were collected during prospecting. Both samples were collected from TR10-017A (Miranna Trench) and confirmed prior sampling analytical results.

Soil sample locations, displaying Nb_2O_5, Ta_2O_5, and TREO analytical results, are presented in Figure 8-1, with descriptions in Appendix 9a, and corresponding analytical certificates in Appendix 9b. Nomenclature is in Appendix 11.

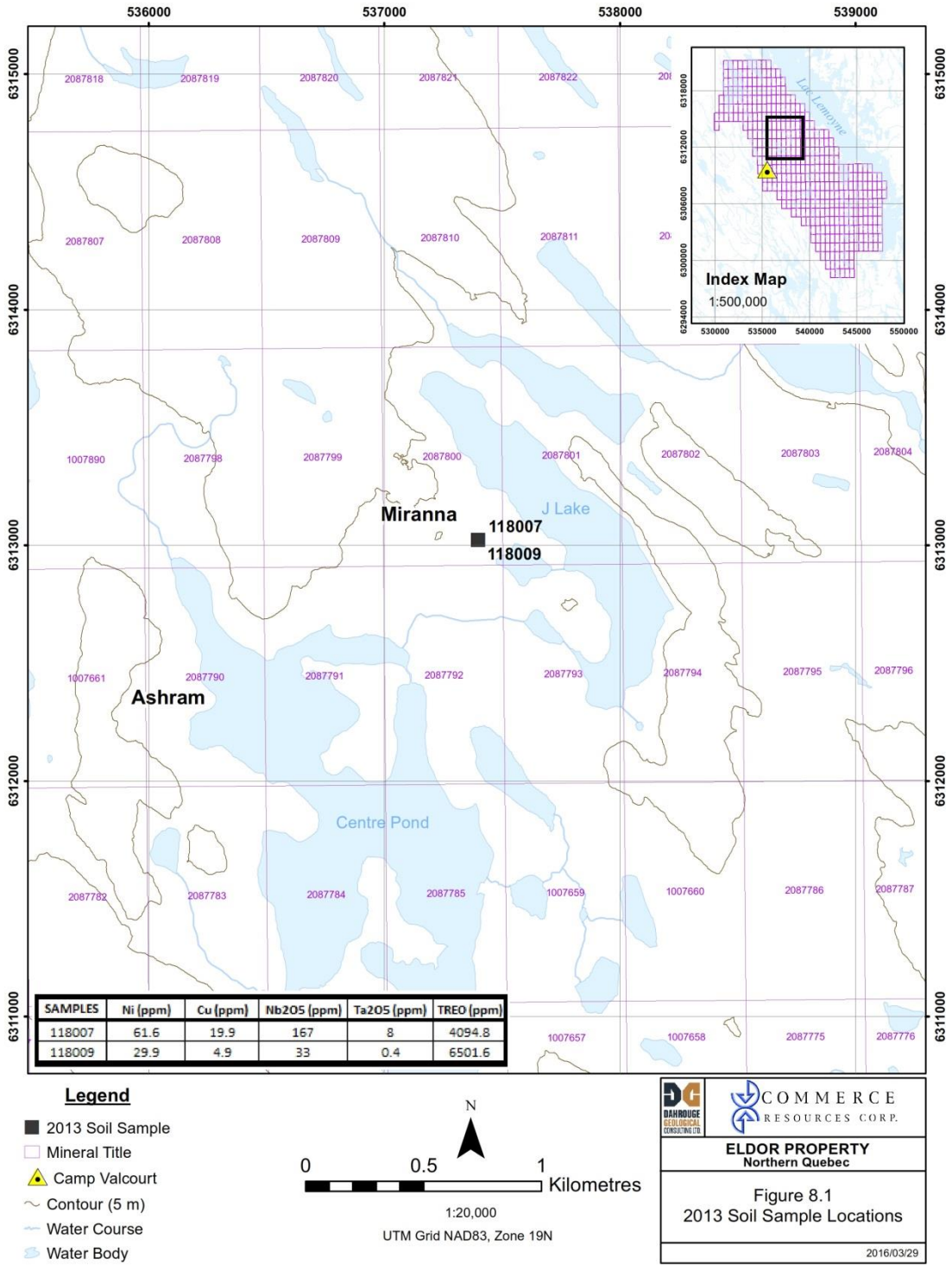

Figure 8-1 2013 Soil Sample Data

8.5. 2013 DIAMOND DRILLING (ASHRAM DEPOSIT)

The diamond drilling program in 2013 was performed from late July through August, 2013, with a total of 1,176.96 m (NQ) over 12 holes completed.

Bodnar Drilling Ltd. of Ste Rose du Lac, MB, was contracted to complete the work. A Zinex A5, with a capability of drilling NQ core to depths of approximately 700 m was utilized for the program. The drill had remained on site following the completion of the 2011 diamond drill program in anticipation of future work.

All drilling was completed as land-based infill and step-out holes at the Ashram Deposit, within the anticipated pit-shell as defined in the Preliminary Economic Assessment (PEA). Therefore, all drill holes were terminated within a pre-determined depth range below the pit-shell for the purposes of the ongoing Pre-feasibility Study.

Holes were located based on a 50 x 50 m grid overlay of the known deposit as best practical so to incorporate the previously completed drilling. The main objectives of drilling were to upgrade the inferred mineral resources to the indicated and/or measured categories, as well as further delineate the extent of REE mineralization at the deposit. A D5 CAT on-site was used to prep access and mobilize the drill from site to site.

The 2013 drill program was highly successful, resulting in an expansion of the Ashram Deposit by approximately 60 m to the northwest and the discovery of REE mineralized material at surface within the pit-shell, where waste rock had been modelled.

The 2013 drilling was concentrated over two areas of the deposit; the northwest (5 holes), and the southeast (7 holes).

The holes in the northwest portion of the deposit (EC13-087, 091, 092, 093, and 094) all collared in REE mineralization with overburden ranging from approximately 1.0 to 4.2 m. Strong REE mineralization was intersected in each hole including 2.27% TREO over 60 m in EC13-087, and 2.00% TREO over 129 m in EC13-091. The intersections expanded the deposit mineralization over 60 m further to the northeast.

All seven holes completed at the southeastern end of the deposit (EC13-088, 089, 090, 090A, 095, 096, and 097) collared in mineralization that continued over their entire lengths, apart from minor

glimmerite occurrences. Overburden thickness ranged from 2.90 to 8.00 m. Strong REE mineralization was intersected in each hole including 2.06% TREO over 92 m in EC13-088, and 2.15% TREO over 61 m in EC13-089. Further, significant middle and heavy rare earth oxide (MHREO) enrichment near-surface continued to be encountered, highlighted by EC13-090A with 31 m of 1.51% TREO at 12.4% MH-T.

Drill core was transported back to camp by a Side-by-Side, along the exploration access trail at the end of each shift, where it was logged; sample marked based on mineralogy, lithology, and radioactivity; and then cut in half with a wet tile saw. One half of each core sample was collected for analysis and the other was left in the core box for reference.

Industry standard QA/QC protocols were followed and included insertion of quartz blanks, Certified Reference Materials (CRMs), and duplicates into the sample batches submitted for analysis at a rate of 4-5%. Approximately 5% of the samples were sent for check assay at a secondary lab. No significant issues or cause for concern was discovered based on analysis of QA/QC results.

All drill core samples were shipped to Activation Laboratories Ltd. (Actlabs) in Ancaster, ON by way of float plane to Kuujjuaq, air cargo to Montreal, and truck to Ancaster. Samples were analyzed for major, base, and trace elements (Code 8-REE package by ICP and ICP-MS) and fluorine (Code 4F-F by Ion Electrode-ISE). No gold or Nb-Ta analysis was completed as prior drilling indicated a poor potential for significant mineralization in these elements. A total of 812 drill core samples were analyzed.

Drill hole geological logs are in Appendix 10a with drill core sample analytical certificates in Appendix 10b. A listing of drill core samples collected is in Appendix 10c. Drill hole attributes with mineralized intervals are summarized in Appendix 10d, nomenclature is presented in Appendix 11 and drill hole locations are plotted in Figure 8-2.

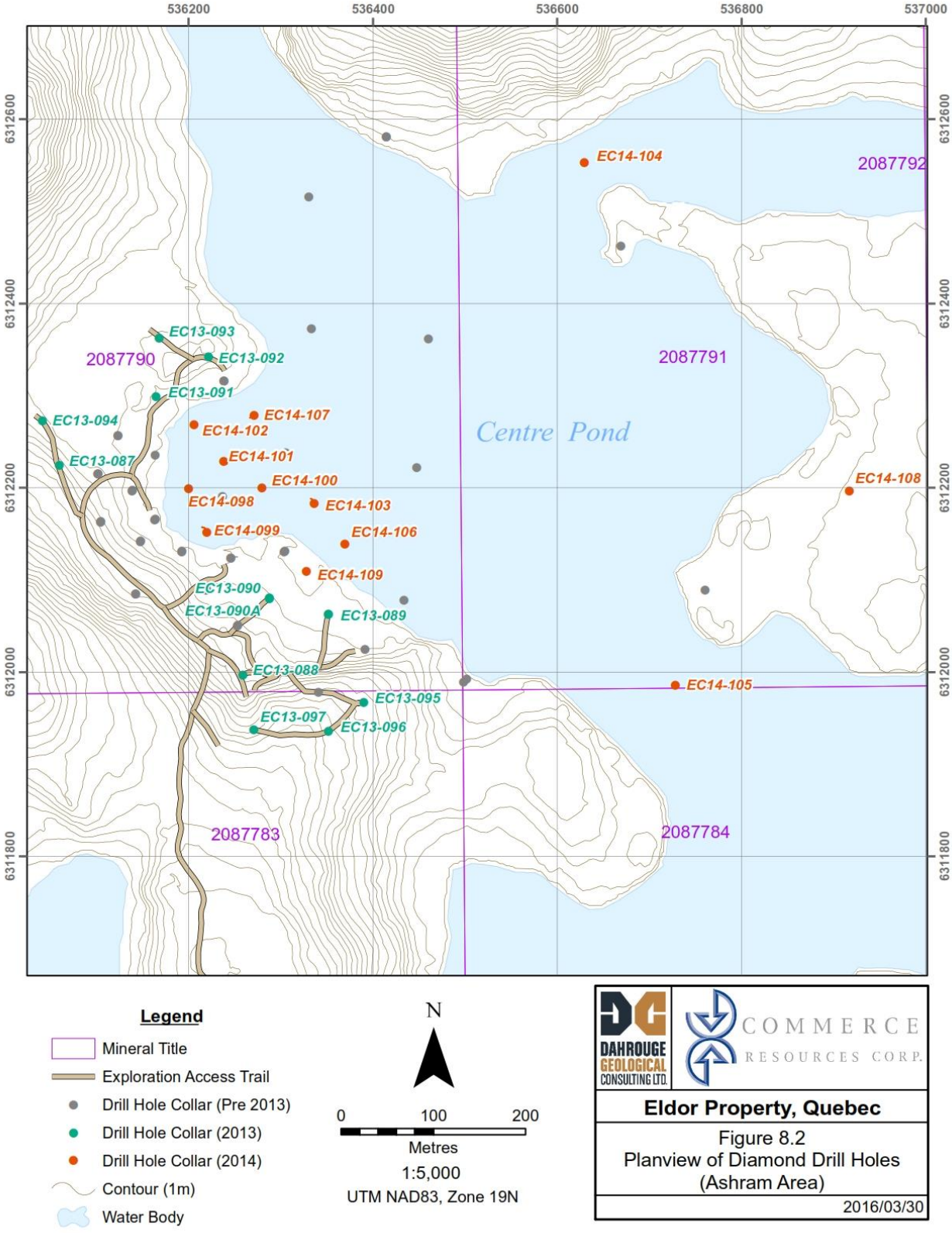

Figure 8-2 2013 and 2014 Drill Hole Collars

8.6. ASHRAM DEPOSIT AND PROJECT ADVANCEMENT

All engineering, environmental, metallurgical, geotechnical, or hydrogeological expenditures relating to the advancement of the Ashram Rare Earth Project (i.e. PEA or PFS) for the reporting period are NOT claimed for assessment, and thus, not included in the aforementioned totals of exploration expenditures, nor detailed herein. However, for completeness, a brief description of these activities follows where applicable.

With the completion in 2012 of a Preliminary Economic Assessment (PEA) on the Ashram Deposit, all programs completed since this time have been in support of the ongoing Pre-feasibility Study (PFS).

In Q1 2013, a terrestrial mammal survey was completed for the project and focused on four blocks of area, roughly equally spaced, from the Property to Ungava Bay. The objective of the study was to characterize the diversity, abundance, and habitat preferences of small and large mammal species observed on the Property, along the projected haul road route, and the proposed docking/barge facility.

A surface water sampling program was completed during the summer as part of an ongoing, multi-year program of monitoring surface water quality in the vicinity of the deposit and projected infrastructure.

In other work, several test pits (4) were completed over the deposit to assess soil characteristics, as well as thermistors were installed down two drill holes (EC13-089 and 091) to record temperature gradients. Further, slug tests were completed in six drill holes to assess hydrogeology characteristics.

9. 2014 EXPLORATION

Exploration of the Eldor Property was completed by Dahrouge, on behalf of Commerce, through September 2014, including field data compilation. Work consisted of a small-scale diamond drill (NQ) program. No prospecting, rock sampling, soil sampling, mapping or geophysical work was carried out during this program. Also, no new access trails were constructed.

The main objective of the 2014 program was to increase the confidence level of existing resources from the current inferred category to the indicated and/or measured categories by drilling holes over Centre Pond.

Table 9-1 Summary of the 2014 Exploration & Activities

Exploration Type	Units
Drilling (NQ)	12 holes (1556.61 m)
Exploration Access Trail	Maintenance, Improvements
Ashram Project Advancement	PFS related studies

9.1. 2014 DIAMOND DRILLING (ASHRAM DEPOSIT)

The diamond drilling program was performed during March to May of 2014, with a total of 1,556.61 m (NQ) over 12 holes completed.

Bodnar Drilling Ltd. of Ste Rose du Lac, MB, was contracted to complete the work. A Zinex A5, with the capability of drilling NQ core to depths of approximately 700 m was utilized for the program. The drill had remained on site following the completion of the 2013 diamond drill program in anticipation of future work.

Drilling was completed as lake-based and land-based infill and geotechnical holes. Nine of the 12 holes were drilled for infill purposes with all but one infill hole drilled on Centre Pond. All infill holes were terminated at predefined depths below the proposed pit-shell bottom, for the purpose of the ongoing PFS. Three of the 12 holes were drilled for geotechnical purposes; 2 were drilled on Centre Pond and 1 was drilled on land. These holes were shallow and drilled to assist with the

evaluation of the proposed dyke location. Data collected from these geotechnical holes included soil type, depth to bedrock, and the assessment of bedrock type and competency.

Holes were located based on a 50 x 50 m grid overlay of the known deposit as best practical so to incorporate the previously completed drilling. The main objectives of drilling were to upgrade the inferred mineral resources to the indicated and/or measured categories. A D5 CAT on-site was used to prep access and mobilize the drill from site to site.

The 2014 drill program was highly successful, returning well mineralized intervals as well as extending the MHREO Zone further east and to depth. Drill hole attributes and mineralized intervals are summarized in Appendices 10d.

The nine infill holes drilled within the defined extent of the Ashram Deposit, collared in mineralization that continued over their entire lengths, apart from minor glimmerite occurrences. Overburden ranged from 0.88 to 11.28 m. Strong mineralization was intersected in each hole including 2.13% TREO over 173 m in EC14-099, 2.01% TREO over 81 m in EC14-099 and 1.97% TREO over 162 m in EC14-101. In addition, significant middle and heavy rare oxide (MHREO) enrichment near-surface continued to be encountered, highlighted by EC14-100 with 49 m of 1.47% TREO at 11.6% MH-T and EC14-103 with 42 m of 1.60% TREO at 12% MH-T.

Drill core was transported back to camp by a Side-by-Side at the end of each shift, where it was logged; sample marked based on mineralogy, lithology, and radioactivity; and cut in half with a wet tile saw. One half of each core sample was collected for analysis and the other was left in the core box for reference.

Industry standard QA/QC protocols were followed and included insertion of quartz blanks, Certified Reference Materials (CRMs), and duplicates into the sample batches submitted for analysis at a rate of 4-5%. Approximately 5% of the samples were sent for check assay at a secondary lab. No significant issues or cause for concern was discovered based on analysis of QA/QC results.

All drill core samples were shipped to Activation Laboratories Ltd. (Actlabs) in Ancaster, ON by way of float plane to Kuujjuaq, air cargo to La Grande (LG2), and truck to Ancaster. Samples were analyzed for major, base, and trace elements (Code 8-REE package by ICP and ICP-MS) and fluorine (Code 4F-F by Ion Electrode-ISE). No gold or Nb-Ta analysis was completed as prior drilling

indicated a poor potential for significant mineralization in these elements. A total of 1096 drill core samples were analyzed.

Drill hole geological logs are in Appendix 10a with drill core sample analytical certificates in Appendix 10b. A list of drill core samples collected is in Appendix 10c. Drill hole attributes with mineralized attributes are summarized in Appendix 10d, nomenclature is presented in Appendix 11 and drill hole locations are plotted in Figure 8-2.

9.2. ASHRAM DEPOSIT AND PROJECT ADVANCEMENT

Various studies were advanced including metallurgical, mineralogical, geotechnical, hydrogeological, and environmental aspects of the project. All of the related expenditures to the aforementioned, for the reporting period herein, are NOT claimed for assessment, and thus, not included in the aforementioned totals of exploration expenditures, nor detailed herein.

This work will be detailed in the Pre-feasibility (PFS) upon its completion. As of the date of this report, the PFS remains ongoing.

10. DISCUSSION, INTERPRETATION, AND RECOMMENDATIONS

The 2012 through 2014 exploration of the Eldor Property focused on five main areas: Ashram, east of West Rim ("Northwestern Margin" of complex), Miranna, PANDS, and the overall Eldor Carbonatite Complex. The main objective was to further the understanding of mineralization potential of these areas and to gain a better geological understanding of the complex.

In terms of REE potential, although REE mineralization is prevalent on the Property, it is highly unlikely that a mineralized body exists that would rival the Ashram Deposit in terms of grade, tonnage, or REE distribution. For this reason, no further exploration for REE mineralization on the Property is recommended; the REE focus should be solely on the advancement of the Ashram Deposit.

In terms of Nb-Ta potential, there exists a strong possibility that a Nb-Ta mineralized body of significant grade exists on the Property. High grade Nb-Ta mineralization continues to be sampled each program in new areas of the Property and numerous targets remain to be drill tested. Going forward, it is recommended the principle areas of focus be the Southeast, Northwest, and Miranna areas. Of additional note, is the potential for significant phosphate mineralization occurring with the Nb-Ta mineralization.

The summarized results and recommendations for the 2012 through 2014 target areas (Ashram, Miranna, Northwest Margin and PANDS), along with supporting figures are discussed below (Figure 10-1, Figure 10-2, Figure 10-3 and Figure 10-4).

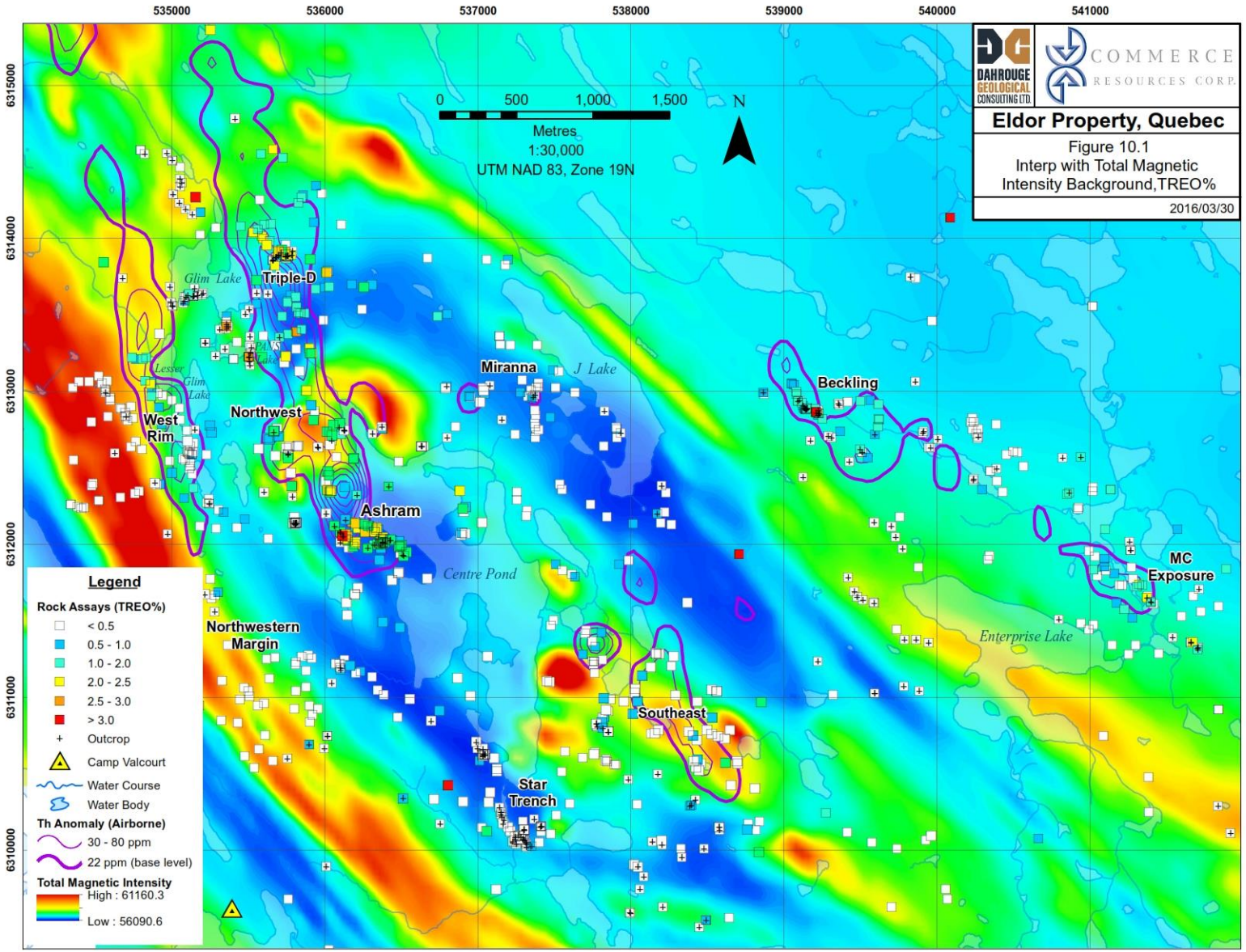

Figure 10-1 Interpretation with Total Magnetic Intensity Background (TREO)

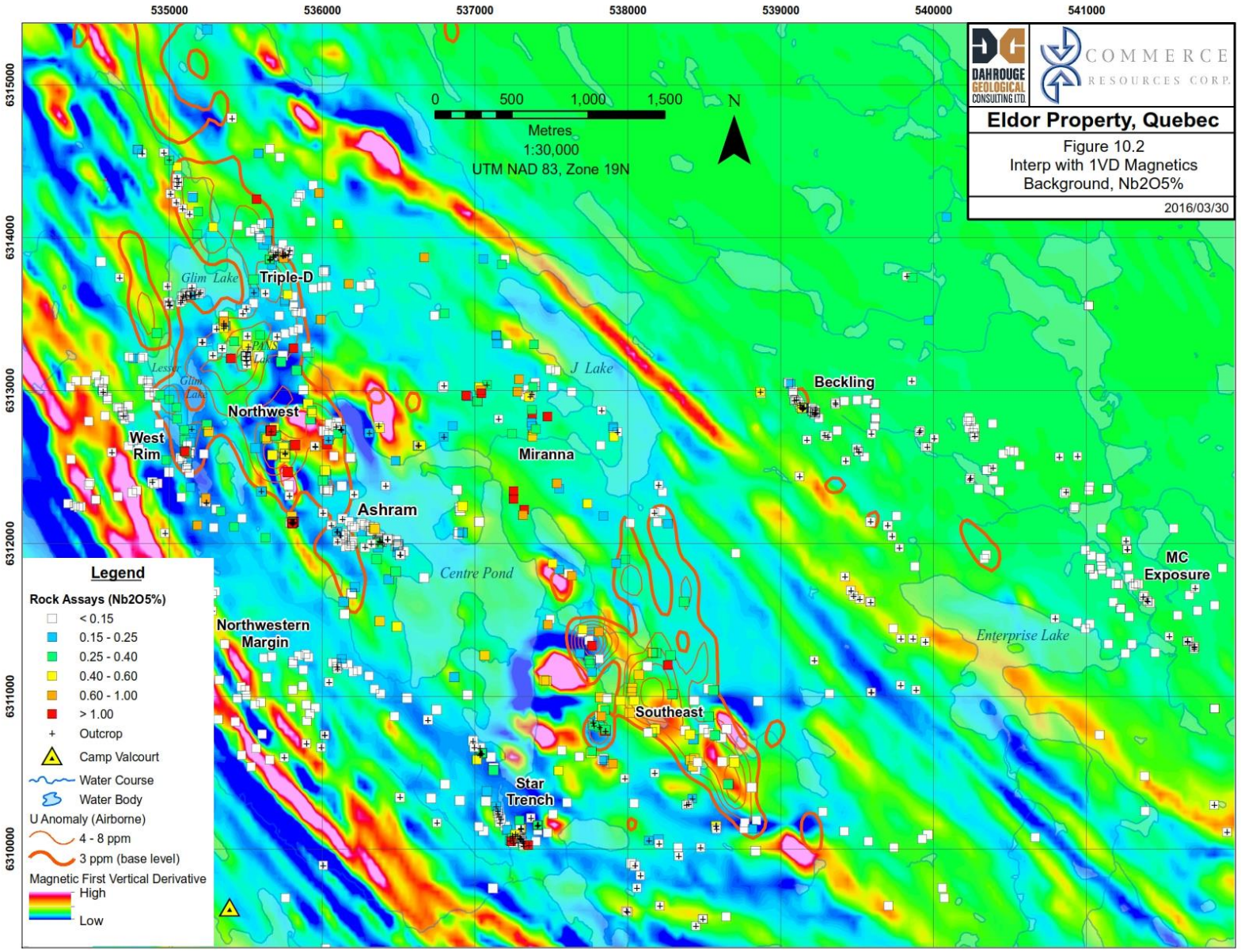

Figure 10-2 Interpretation with 1VD Magnetics Background (Nb_2O_5)

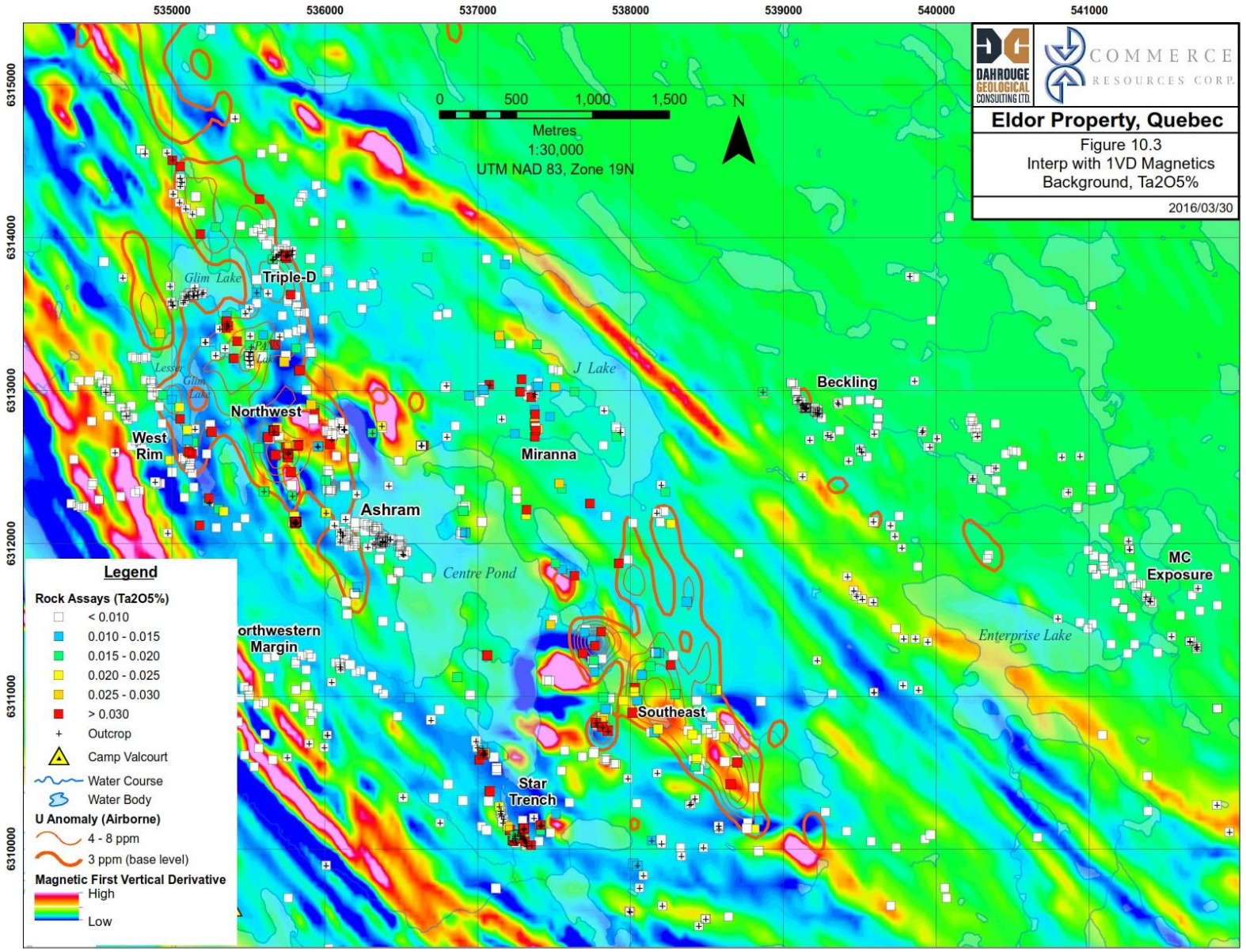

Figure 10-3 Interpretation with 1VD Magnetics Background (Ta_2O_5)

10.1. ASHRAM RARE EARTH DEPOSIT

The Ashram Rare Earth Deposit was discovered in late 2009, and subsequently drilled in 2010 (3,313 m over 12 holes), 2011 (12,379 m over 33 holes), 2013 (1,177 over 12 holes) and 2014 (1,557 m over 12 holes). An initial resource was completed in 2011 with a resource update and Preliminary Economic Assessment (PEA) completed in 2012. A Pre-feasibility Study (PFS) on the project was initiated in Q2 2012 and, as the date of the report, is ongoing.

The Ashram Deposit, and the numerous studies relating to its development (Ashram Project), are largely summarized in the 2012 Preliminary Economic Assessment (Gagnon et al., 2012) and 2010-2011 Work Report (Smith, Schmidt, & Carter, 2014). A good summary overview of the deposit's geologic setting, mineralogy, and geometry may be found in these reports.

No drilling was completed in 2012; however, drilling was completed in 2013 and 2014. This work was highly successful in further delineating the deposit and expanded the REE mineralization a further 60+ m to the northwest, re-affirmed the large extent of middle and heavy rare earth oxide enrichment (extended the zone east and to depth), and discovered REE mineralized material at surface (under minor overburden) where waste rock had been modelled.

Additional infill drilling will be required to complete the drill plan grid laid out, as well as geotechnical and hydrogeological studies as required for the ongoing PFS. This work, as well as that required for the continued development of the Ashram Deposit towards PFS, is strongly recommended.

10.2. MIRANNA AREA

During prospecting of the Miranna Area in 2010 and 2011, several Nb-Ta mineralized boulders were discovered with one grading 0.83% Nb_2O_5, 0.04% Ta_2O_5, and 0.49% TREO.

Follow-up ground work to identify the source of these previously discovered mineralized boulders, was carried out during the summer of 2013. Although only eight samples were collected (all of boulders), significant Nb-Ta-Phosphate mineralization was returned, and a mineralized boulder train with nearby source interpreted from the data. It is possible that the source of this mineralization is from the Southeast Area where strong Nb-Ta-Phosphate mineralization is known.

However, the Miranna Area's mineralized boulders are, in general, more mineralized than that of the Southeast Area.

Alternatively, the source is more likely associated with a magnetic high in the vicinity of the boulder train. The interpreted apex of this mineralized boulder train coincides with a circular magnetic high anomaly, which is located directly north of the Southeast Area and adjacent to the eastern shore of Centre Pond. Given that the strongest Nb mineralized boulder samples are associated with the occurrence of magnetite, it is postulated that this is the source.

The circular magnetic high does lack a pronounced Nb or Ta anomaly from a tightly spaced soil sampling program completed in 2011; however, this may be explained by the unusually deep overburden in the area (~3 m), noted at the Miranna Trenches, which may effectively mask any bedrock signature.

The Miranna Target is presented visually in Figure 10-4 and is considered a high priority target for drill testing. As the circular magnetic high anomaly is ~300 m in diameter, a small follow-up prospecting program is recommended to further narrow in on the boulder source and to spot initial drill holes.

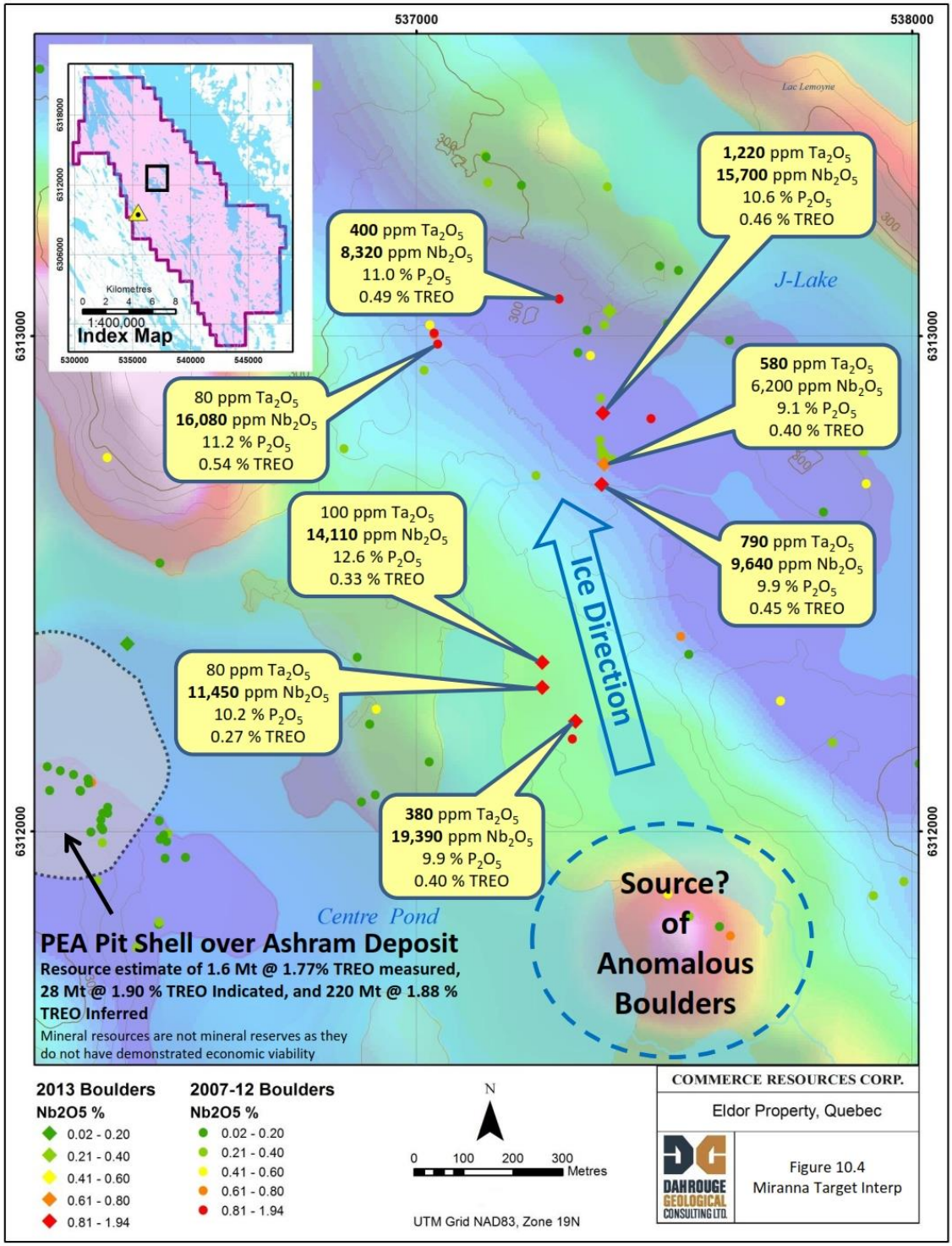

Figure 10-4 Miranna Nb-Ta-Phosphate Mineralized Boulder Train and Postulated Source

10.3. NORTHWESTERN MARGIN

Apart from the regional and complex wide mapping program, prospecting in 2012 focused on the northwest margin of the complex. The objective was to better define and evaluate the geological contact between the carbonatite and country rock.

Based on field notes, and incorporation of data from the complex wide mapping program by J. Rößiger (Section 7.2), it is concluded that a meta-sedimentary rock type (magnetite schist) dominates the northwestern margin of the complex and forms the higher elevation along the main ridge in the area.

The contact of the main carbonatite body and non-carbonatite country rock appears to coincide well with the main ridge, which is also well pronounced in regional magnetic data. Carbonatite dykes are observed cutting though this ridge; however, they are generally small in size.

No further work is recommended on the ridge that runs along the northwestern margin of the complex. Mineralization potential is low.

10.4. PANDS AREA

The PANDS Area was first visited in 2011 and was found to host significant outcrop, which is unusual for the Property. Two samples of outcrop collected returned 2.32% and 2.97% TREO respectively, with a third sample of outcrop returning 0.41% Nb_2O_5 and 0.066% Ta_2O_5. In addition, one boulder sample collected returned 3.94% Nb_2O_5 and 0.251% Ta_2O_5.

The presence of REE mineralization in outcrop was concluded to be relatively limited in scale and interpreted to be dykes off of the main Ashram mineralized body. Although the REE mineralization was strong, it was at 2.0% to 3.4% MH-T, and thus, it is very LREE enriched compared to the Ashram Deposit. Therefore, the area was not considered a priority for additional REE focused exploration. The presence of the strong Ta mineralization in outcrop was of main interest for follow-up.

No work was completed in 2012; however, the area was again briefly visited in 2013. Of the five samples collected, one sample re-affirmed the presence of significant Ta mineralization in outcrop (0.34% Ta_2O_5).

The PANDS Area requires additional evaluation for Ta potential (primary) and Nb potential (secondary). Trenching, and potentially drilling (if trenching results are positive), are recommended to better evaluate the mineralized outcrop present in the area.

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12. AUTHOR'S STATEMENT OF QUALIFICATIONS

I, Darren L. Smith, am a geological consultant for Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. I obtained a B.Sc. in geology (2004) and a M.Sc. in geology (2006) from Carleton University, Ottawa and have been working in the field of geology since graduation. I am registered as a Professional Geologist with the Association of Professional Engineers Geoscientists of Alberta (M87868).

During the reporting period covered in the work report titled "2012, 2013, and 2014 Exploration of the Eldor Property, Northern Quebec", I held a Special Authorization (#223) with the Ordre des Géologues du Québec (OGQ). As of the date of this letter, my application for a Geologist Permit (Formulaire A-4) had been received by the OGQ and is expected to be granted May 11th, 2016.

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APPENDIX 1: MINERAL CLAIM LISTING

Appendix 1: Mineral Claim Listing

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
1	1007657	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.04	Commerce Resources Corporation (18766) 100 %
2	1007658	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.04	Commerce Resources Corporation (18766) 100 %
3	1007659	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.03	Commerce Resources Corporation (18766) 100 %
4	1007660	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.03	Commerce Resources Corporation (18766) 100 %
5	1007661	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.02	Commerce Resources Corporation (18766) 100 %
6	1007883	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.02	Commerce Resources Corporation (18766) 100 %
7	1007889	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.01	Commerce Resources Corporation (18766) 100 %
8	1007890	Active	24C16	CDC	11/04/2001	13/05/2016	7	47.01	Commerce Resources Corporation (18766) 100 %
9	2087740	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
10	2087741	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
11	2087742	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
12	2087743	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
13	2087744	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
14	2087745	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
15	2087746	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.07	Commerce Resources Corporation (18766) 100 %
16	2087747	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
17	2087748	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
18	2087749	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
19	2087750	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
20	2087751	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
21	2087752	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
22	2087753	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
23	2087754	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
24	2087755	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
25	2087756	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
26	2087757	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.06	Commerce Resources Corporation (18766) 100 %
27	2087758	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
28	2087759	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
29	2087760	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
30	2087761	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
31	2087762	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
32	2087763	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
33	2087764	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
34	2087765	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
35	2087766	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
36	2087767	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
37	2087768	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
38	2087769	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.05	Commerce Resources Corporation (18766) 100 %
39	2087770	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
40	2087771	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
41	2087772	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
42	2087773	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
43	2087774	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
44	2087775	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
45	2087776	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
46	2087777	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
47	2087778	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
48	2087779	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
49	2087780	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.04	Commerce Resources Corporation (18766) 100 %
50	2087781	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
51	2087782	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
52	2087783	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
53	2087784	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
54	2087785	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
55	2087786	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
56	2087787	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
57	2087788	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.03	Commerce Resources Corporation (18766) 100 %
58	2087789	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
59	2087790	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
60	2087791	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
61	2087792	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
62	2087793	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
63	2087794	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
64	2087795	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
65	2087796	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.02	Commerce Resources Corporation (18766) 100 %
66	2087797	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
67	2087798	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
68	2087799	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
69	2087800	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
70	2087801	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
71	2087802	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
72	2087803	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
73	2087804	Active	24C16	CDC	30/05/2007	13/05/2016	4	47.01	Commerce Resources Corporation (18766) 100 %
74	2087805	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
75	2087806	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
76	2087807	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
77	2087808	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
78	2087809	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
79	2087810	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
80	2087811	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
81	2087812	Active	24C16	CDC	30/05/2007	13/05/2016	4	47	Commerce Resources Corporation (18766) 100 %
82	2087813	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
83	2087814	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
84	2087815	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
85	2087816	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
86	2087817	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
87	2087818	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
88	2087819	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
89	2087820	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
90	2087821	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
91	2087822	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
92	2087823	Active	24C16	CDC	30/05/2007	13/05/2016	4	46.99	Commerce Resources Corporation (18766) 100 %
93	2111141	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
94	2111142	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
95	2111143	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
96	2111144	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.04	Commerce Resources Corporation (18766) 100 %
97	2111145	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.04	Commerce Resources Corporation (18766) 100 %
98	2111146	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
99	2111147	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
100	2111148	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
101	2111149	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
102	2111150	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
103	2111151	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
104	2111152	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
105	2111153	Active	24C16	CDC	25/07/2007	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
106	2111154	Active	24C16	CDC	25/07/2007	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
107	2111155	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
108	2111156	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
109	2111157	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
110	2111158	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
111	2111159	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
112	2111160	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
113	2111161	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
114	2111162	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
115	2111163	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
116	2111164	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
117	2111165	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
118	2111166	Active	24C16	CDC	25/07/2007	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
119	2118751	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
120	2118752	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
121	2118753	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
122	2118754	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
123	2118755	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
124	2118756	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
125	2118757	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
126	2118758	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
127	2118759	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
128	2118760	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
129	2118761	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
130	2118762	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
131	2118763	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
132	2118764	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
133	2118765	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
134	2118766	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
135	2118767	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
136	2118768	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
137	2118769	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
138	2118770	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
139	2118771	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
140	2118772	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
141	2118773	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
142	2118774	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
143	2118775	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
144	2118776	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
145	2118777	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
146	2118778	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
147	2118779	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
148	2118780	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
149	2118781	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
150	2118782	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
151	2118783	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
152	2118784	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
153	2118785	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
154	2118786	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
155	2118787	Active	24C16	CDC	22/08/2007	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
156	2118788	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
157	2118789	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
158	2118790	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
159	2118791	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
160	2118792	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
161	2118793	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
162	2118794	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
163	2118795	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
164	2118796	Active	24F01	CDC	22/08/2007	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
165	2123090	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
166	2123091	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
167	2123092	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
168	2123093	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
169	2123094	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
170	2123095	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.04	Commerce Resources Corporation (18766) 100 %
171	2123096	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
172	2123097	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
173	2123098	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
174	2123099	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
175	2123100	Active	24C16	CDC	21/09/2007	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
176	2123101	Active	24C16	CDC	21/09/2007	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
177	2123102	Active	24C16	CDC	21/09/2007	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
178	2123103	Active	24F01	CDC	21/09/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
179	2123104	Active	24F01	CDC	21/09/2007	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
180	2123105	Active	24F01	CDC	21/09/2007	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
181	2123106	Active	24F01	CDC	21/09/2007	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
182	2142199	Active	24C15	CDC	25/01/2008	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
183	2142200	Active	24C15	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
184	2142201	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
185	2142202	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
186	2142203	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.04	Commerce Resources Corporation (18766) 100 %
187	2142204	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
188	2142205	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.03	Commerce Resources Corporation (18766) 100 %
189	2142206	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
190	2142207	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
191	2142208	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
192	2142209	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.02	Commerce Resources Corporation (18766) 100 %
193	2142210	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
194	2142211	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
195	2142212	Active	24C16	CDC	25/01/2008	13/05/2016	3	47.01	Commerce Resources Corporation (18766) 100 %
196	2142213	Active	24C16	CDC	25/01/2008	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
197	2142214	Active	24C16	CDC	25/01/2008	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
198	2142215	Active	24C16	CDC	25/01/2008	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
199	2142216	Active	24C16	CDC	25/01/2008	13/05/2016	3	47	Commerce Resources Corporation (18766) 100 %
200	2142217	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
201	2142218	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
202	2142219	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
203	2142220	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
204	2142221	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
205	2142222	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
206	2142223	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
207	2142224	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.99	Commerce Resources Corporation (18766) 100 %
208	2142225	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
209	2142226	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
210	2142227	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
211	2142228	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
212	2142229	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
213	2142230	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
214	2142231	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
215	2142232	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
216	2142233	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
217	2142234	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
218	2142235	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
219	2142236	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.98	Commerce Resources Corporation (18766) 100 %
220	2142237	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
221	2142238	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
222	2142239	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
223	2142240	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
224	2142241	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
225	2142242	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
226	2142243	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
227	2142244	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
228	2142245	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
229	2142246	Active	24C16	CDC	25/01/2008	13/05/2016	3	46.97	Commerce Resources Corporation (18766) 100 %
230	2145593	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
231	2145594	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
232	2145595	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
233	2145596	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
234	2145597	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
235	2145598	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
236	2145599	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
237	2145600	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
238	2145601	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
239	2145602	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
240	2145603	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
241	2145604	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
242	2145605	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
243	2145606	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.14	Commerce Resources Corporation (18766) 100 %
244	2145607	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
245	2145608	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
246	2145609	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
247	2145610	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
248	2145611	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
249	2145612	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
250	2145613	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
251	2145614	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
252	2145615	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
253	2145616	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
254	2145617	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
255	2145618	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
256	2145619	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
257	2145620	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
258	2145621	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.13	Commerce Resources Corporation (18766) 100 %
259	2145622	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
260	2145623	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
261	2145624	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
262	2145625	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
263	2145626	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
264	2145627	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
265	2145628	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
266	2145629	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
267	2145630	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
268	2145631	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
269	2145632	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
270	2145633	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
271	2145634	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
272	2145635	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.12	Commerce Resources Corporation (18766) 100 %
273	2145636	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
274	2145637	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
275	2145638	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
276	2145639	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
277	2145640	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
278	2145641	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
279	2145642	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
280	2145643	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
281	2145644	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
282	2145645	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
283	2145646	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
284	2145647	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
285	2145648	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.11	Commerce Resources Corporation (18766) 100 %
286	2145649	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
287	2145650	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
288	2145651	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
289	2145652	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
290	2145653	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
291	2145654	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
292	2145655	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
293	2145656	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
294	2145657	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
295	2145658	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
296	2145659	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
297	2145660	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
298	2145661	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.1	Commerce Resources Corporation (18766) 100 %
299	2145662	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
300	2145663	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
301	2145664	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
302	2145665	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
303	2145666	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
304	2145667	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
305	2145668	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
306	2145669	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
307	2145670	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
308	2145671	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
309	2145672	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
310	2145673	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.09	Commerce Resources Corporation (18766) 100 %
311	2145674	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
312	2145675	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
313	2145676	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
314	2145677	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
315	2145678	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
316	2145679	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
317	2145680	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
318	2145681	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
319	2145682	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
320	2145683	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
321	2145684	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
322	2145685	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
323	2145686	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
324	2145687	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.07	Commerce Resources Corporation (18766) 100 %
325	2145688	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
326	2145689	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
327	2145690	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.06	Commerce Resources Corporation (18766) 100 %
328	2145691	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
329	2145692	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
330	2145693	Active	24C16	CDC	28/03/2008	13/05/2016	3	47.05	Commerce Resources Corporation (18766) 100 %
331	2145694	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
332	2145695	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
333	2145696	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
334	2145697	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
335	2145698	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
336	2145699	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
337	2145700	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.96	Commerce Resources Corporation (18766) 100 %
338	2145701	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.94	Commerce Resources Corporation (18766) 100 %
339	2145702	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
340	2145703	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
341	2145704	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
342	2145705	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
343	2145706	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
344	2145707	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
345	2145708	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.95	Commerce Resources Corporation (18766) 100 %
346	2145709	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
347	2145710	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
348	2145711	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
349	2145712	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
350	2145713	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
351	2145714	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
352	2145715	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
353	2145716	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
354	2145717	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %
355	2145718	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.93	Commerce Resources Corporation (18766) 100 %

Appendix 1: (continued)

Count	Title No	Title Status (as of Rept Date)	NTS Sheet	Type of Title	Date of Registration	Expiry Date	No. of Renewals	Area (Ha)	Titleholder (Name, Number and Percentage)
356	2145719	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
357	2145720	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
358	2145721	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
359	2145722	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
360	2145723	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
361	2145724	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
362	2145725	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
363	2145726	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
364	2145727	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
365	2145728	Active	24F01	CDC	28/03/2008	13/05/2016	3	46.92	Commerce Resources Corporation (18766) 100 %
366	2179343	Active	24C16	CDC	12/02/2009	13/05/2016	3	47.08	Commerce Resources Corporation (18766) 100 %
367	2204143	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.09	Commerce Resources Corporation (18766) 100 %
368	2204144	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.08	Commerce Resources Corporation (18766) 100 %
369	2204145	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.08	Commerce Resources Corporation (18766) 100 %
370	2204146	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.08	Commerce Resources Corporation (18766) 100 %
371	2204147	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.08	Commerce Resources Corporation (18766) 100 %
372	2204148	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.07	Commerce Resources Corporation (18766) 100 %
373	2204149	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.07	Commerce Resources Corporation (18766) 100 %
374	2204150	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.07	Commerce Resources Corporation (18766) 100 %
375	2204151	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.07	Commerce Resources Corporation (18766) 100 %
376	2204152	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.07	Commerce Resources Corporation (18766) 100 %
377	2204153	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
378	2204154	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
379	2204155	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
380	2204156	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
381	2204157	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
382	2204158	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.06	Commerce Resources Corporation (18766) 100 %
383	2204159	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.05	Commerce Resources Corporation (18766) 100 %
384	2204160	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.05	Commerce Resources Corporation (18766) 100 %
385	2204161	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.05	Commerce Resources Corporation (18766) 100 %
386	2204162	Active	24C16	CDC	02/02/2010	13/05/2016	2	47.05	Commerce Resources Corporation (18766) 100 %
387	2254846	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.18	Commerce Resources Corporation (18766) 100 %
388	2254847	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.18	Commerce Resources Corporation (18766) 100 %
389	2254848	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.18	Commerce Resources Corporation (18766) 100 %
390	2254849	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.18	Commerce Resources Corporation (18766) 100 %
391	2254850	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.18	Commerce Resources Corporation (18766) 100 %
392	2254851	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.16	Commerce Resources Corporation (18766) 100 %
393	2254852	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.16	Commerce Resources Corporation (18766) 100 %
394	2254853	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.16	Commerce Resources Corporation (18766) 100 %
395	2254854	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.16	Commerce Resources Corporation (18766) 100 %
396	2254855	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.16	Commerce Resources Corporation (18766) 100 %
397	2254856	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.17	Commerce Resources Corporation (18766) 100 %
398	2254857	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
399	2254858	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
400	2254859	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
401	2254860	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
402	2254861	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
403	2254862	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
404	2254863	Active	24C16	CDC	20/10/2010	13/05/2016	2	47.15	Commerce Resources Corporation (18766) 100 %
405	2383578	Lapsed	24C17	CDC	02/04/2013	01/04/2015	0	47.11	Commerce Resources Corporation (18766) 100 %
406	2383579	Lapsed	24C18	CDC	02/04/2013	01/04/2015	0	47.11	Commerce Resources Corporation (18766) 100 %
407	2383580	Lapsed	24C19	CDC	02/04/2013	01/04/2015	0	47.11	Commerce Resources Corporation (18766) 100 %
408	2383581	Lapsed	24C20	CDC	02/04/2013	01/04/2015	0	47.10	Commerce Resources Corporation (18766) 100 %
409	2383582	Lapsed	24C21	CDC	02/04/2013	01/04/2015	0	47.10	Commerce Resources Corporation (18766) 100 %
410	2383583	Lapsed	24C22	CDC	02/04/2013	01/04/2015	0	47.10	Commerce Resources Corporation (18766) 100 %
411	2383584	Lapsed	24C23	CDC	02/04/2013	01/04/2015	0	47.09	Commerce Resources Corporation (18766) 100 %

APPENDIX 2: 2012 EXPENDITURE LISTING

Pages(s) retirée(s) - Information non pertinente
Irrelevant page(s) have been withdrawn

APPENDIX 3: 2013 EXPENDITURE LISTING

Pages(s) retirée(s) - Information non pertinente
Irrelevant page(s) have been withdrawn

APPENDIX 4: 2014 EXPENDITURE LISTING

Pages(s) retirée(s) - Information non pertinente
Irrelevant page(s) have been withdrawn

APPENDIX 5A: 2012 AND 2013 ROCK SAMPLE LOCATIONS AND DESCRIPTIONS

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
109950	2012	OCRR12-20	536382	6311019	Outcrop	Grab	400	para-Gn?	f.g., dk br-gy to blk, mass, wk fol, py (v.f.g., diss), sul (minor), non-magnetic, qtz (minor, vnlets, throughout)	OC - moss-covered, dk gr-gy, steep-dipping, competent, ang, 400 CPS max	2-Jul-12
109951	2012	OCRR12-21	536342	6311050	Outcrop	Grab	400	para-Gn?	f.g., gy to lt ol-gy, wk fol, bnd?, bt (abnt), fsp-qtz? (common), sul (minor, f.g.), non-magnetic, leucosomes present	small competent ang OC exposures along 1.5 m high x 5 m long section of steep hillside	2-Jul-12
109952	2012	OCRR12-22	536306	6311136	Outcrop	Grab	500	dol-Carb (BD zone)	f.g. to m.g., tan to lt gy to w, mass, dol (>90%), bsn (1%, diss), min (brick r, mod diss, throughout), sul (5%, patches, diss, throughout)	heavily moss- and veg-covered OC > 10 m long x 3 m high at base of hill, well jointed	2-Jul-12
109953	2012	OCRR12-24	536233	6311169	Outcrop	Grab	380	dol-Carb	f.g. to m.g., lt gy to tan to lt ol-gy to ol-gy to pale gr, mass, bnd? (few pcs), brc?, sul (f.g., layers (vns?), diss), bt? (layers, blk)	dol-Carb with ibd Gn?, OC - mass, v. brc locly, ang, jointed, 2 x 5 m vert	2-Jul-12
109954	2012	OCRR12-25	536201	6311160	Outcrop	Grab	300	calc-Sil?	v.f.g. to m.g., dk b-gy to ol-gy to tan, dol (matrix), amph (needles up to 5 mm long, xtls, throughout)	OC - mass, 3 m vert covering 10 x 15 m area, blocky, lithos incl dol-Carb? (mass, m.g., tan, dol . 90%) and calc-Sil? (minor dol in matrix)	2-Jul-12
109956	2012	OCRR12-26	536132	6311215	Outcrop	Grab	400	dol-Carb	v.f.g. to f.g., dk b-gy to ol-gy, dyke, sul (abnt, diss, throughout), granitic xenoliths (4 cm dia)	well-jointed dol-Carb dyke with numerous entrained lithos, granitic xenoliths to 4 cm across, gaps in joints may indicate some slumping	2-Jul-12
109957	2012	RR12-27	536067	6311221	Outcrop?	Grab	300	dol-Carb?	f.g. to m.g., br-gy to br ol-gy, mass, dol, qtz (mod, vnlets), sul (mod, diss throughout, vnlets)	OC - similar to OC of sample 109956, ang blocks, possibly shifted, tan	2-Jul-12
109958	2012	OCRR12-28	535913	6311255	Outcrop	Grab	550	dol-Carb	f.g. to m.g., lt gy to lt ol-gy to ol-gy, mass, fl (common, blebs, vnlets), sul (minor, vns)	OC - wthd tan	2-Jul-12
109959	2012	OCRR12-30	535671	6311263	Outcrop	Grab	170	metabasalt (Phyl)	v.f.g. to f.g., dk gy to dk gr to blk, mod fol, sul (abnt, diss, v.f.g.), non-magnetic	two NE facing rock faces ~ 10 m apart, sampled face is 2 m high x >5 m long, sub-vert dip	2-Jul-12
109960	2012	OCRR12-31	535618	6311253	Outcrop	Grab	-	dol-Carb	f.g. to m.g., lt gy to cr w to tan to pale gr, mass, suc, qtz (common vns, up to 1 cm wide, abnt blebs), bio (abnt blebs, minor vns), sul (minor vnlets)	OC - w lichen covered, exposed due to small 50 cm vert graben?	2-Jul-12
109961	2012	RR12-33	535637	6311123	Outcrop?	Grab	-	-	v.f.g. to f.g., gy to dk b-gy to dk gy to blk, sul (abnt, f.g., mostly py, diss), dol (minor, in matrix), qtz (minor, blebs, vns, throughout)	0.5 m high x < 10 m long step	2-Jul-12
109962	2012	OCRR12-01	535954	6310925	Outcrop	Grab	200	Greenschist metabasalt	v.f.g. to f.g., dk gy to dk gr, mod sub-vert fabric, homo cleavage, qtz (minor vns with sul), chl-amph?-alb?, cc(minor, locly)	GPS loc at S end of small (<1 m in size) group of well fractured OCs forming a rough semi-circle, opening to the west, surrounding a bushy knoll, OCs extend for ~20 m	1-Jul-12
109963	2012	OCRR12-02	535897	6310945	Outcrop	Grab	170	Greenschist metabasalt	v.f.g. to f.g., dk b to gr-gy to dk gy, wthd - ox, sul(py-po, f.g., diss), qtz (mod to abnt vns), amph, alb, dol-cc? (minor), bio?, epd?	flat-lying OC (no vert relief), ~5 x 3 m in size	1-Jul-12
109964	2012	OCRR12-03	535900	6310841	Outcrop	Grab	170	metabasalt	v.f.g., dk b-gy, wthd - og, ox, mod to str sub-vert fabric, softer, sul (diss, po), dol-cc (minor), bio-amph-alb?, serp (chl), wkly magnetic	flat-lying lichen-covered OC, 2nd fol 304/69	1-Jul-12
109965	2012	OCRR12-05	535919	6310887	Outcrop	Grab	280	metabasalt?	v.f.g., dk b-gy, hydrothermal brc, mass, vns (abnt, xcut, fl)	heavily brc flat-lying OC	1-Jul-12
109966	2012	OCRR12-06	535798	6310924	Outcrop	Grab	160	metabasalt	v.f.g., dk gy, qtz (vns, pods), sul (diss), bio	flat-lying OC	1-Jul-12
109967	2012	OCRR12-09	535808	6311045	Outcrop	Grab	175	metabasalt (Phyl)	f.g. to v.f.g., dk gy, as 109966, mod fol, silky lustre, >> bio, qtz (blebs, common)	flat-lying OC between pts C3A and C3B on Main CAT3 OC	1-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
109968	2012	OCRR12-10	535874	6311068	Outcrop	Grab	270	metabasalt	similar to 109967, fracs (abnt), vns (abnt, xcut)	OC is 10 m wide here between pts C3C and C3D on Main CAT3 OC	1-Jul-12
109969	2012	OCRR12-11	535876	6311173	Outcrop	Grab	-	meta-Sed	f.g., dk gy and og, wk fol, bio-alb-fsp-amph?, py (diss), wkly magnetic locly	open area, good OC exposure 20 x 20 m (GPS track), more OC ~30-40 m NNW	1-Jul-12
109970	2012	OCRR12-13	535807	6311215	Outcrop	Grab	270	metabasalt	v.f.g., dk gy, mass, mod-str fol (within fracs), gal (euh, diss, 1-2 mm xtls)	two small OC's along top of hill, small vert relief, more OC ~10-20 m downslope	1-Jul-12
109971	2012	OCRR12-14	535810	6311229	Outcrop	Grab	480	metabasalt	v.f.g. to f.g., dk gy with pale gr patches, mass, fl (patches locly), vnlets (xcut), bio (blebs, patches)	OC > 1 m at base of hill, abnt veg	1-Jul-12
109972	2012	OCRR12-16	535846	6311265	Outcrop	Grab	330	metabasalt	v.f.g., dk b-gy, bio (abnt patches), felsic vns, cc (minor, in matrix), sul (minor, diss), non-magnetic	blocky OC downslope from 109971	1-Jul-12
109973	2012	OCRR12-17	535891	6311278	Outcrop	Grab	450	metabasalt	v.f.g. to f.g., dk gy-blk to blk, mass, slight fol, amph-fsp-chl?, sul (mod, f.g., diss, xcut vnlets), bio (abnt, throughout, xcut vnlets), epd? (ol-gr, blebs, patches)	OC (described as dol-Carb in fieldbook but assay sample description indicates non-carb) ~1 m high, tan-br-gy, dominantly dol, sul (diss), blocky, mass	1-Jul-12
109974	2012	OCRR12-18	536093	6311218	Boulder	Grab	500	Carb?	f.g, pk, mass, bnd (gr, late-stage vns?), dominantly dol, sul (minor)	One of many bldr piles along N-facing slope, v. ang bldrs	1-Jul-12
109975	2012	S-14	536127	6311244	Boulder	Grab	1000	Carb	f.g., dk b-gy to gy, late-stage Carb, sul (mod, f.g., diss, patches), mod rxn to HCl, non-magnetic	buried bldr found due to high scint reading	1-Jul-12
111451	2012	OCDH12-1	535659	6310583	Outcrop	Grab	100	metabasalt?	v.f.g. to f.g., dk gy to dk b-gy, ox, v. wk fol, fsp (mod, vns, blebs), mag (10-20%, euh), bt, mod magnetic	OC ~2 m high (two ~1-m steps) extending 5 - 7 m along N-S trending cliff	3-Jul-12
111452	2012	OCDH12-5	535537	6310538	Outcrop	Grab	250	metabasalt?	f.g., lt b-gy to gy to dk gy and tan to og, mass, v. wk fol, fsp (blebs, pods) > bio?, mag (5%, 1-2 mm xtls, diss throughout), magnetic	lrg N-S trending OC along steep (~80 deg) dropoff, 4 m high x 10 m long,	3-Jul-12
111453	2012	OCDH12-6	535473	6310615	Outcrop	Grab	250	metabasalt	v.f.g. to f.g., dk gr to gy-gr to ol-gr, mass, silky sheen, chl-amph-fsp?, bio (few vnlets), non-magnetic	small, blocky NW-SE trending OC, 0.5 m high x 2 m long, along shallow slope of hillside, well hidden by peat moss	3-Jul-12
111454	2012	OCDH12-7	535568	6310663	Outcrop	Grab	100	metabasalt (Phyl)	v.f.g. to f.g., gy-gr to dk gr to dk gy-gr, wk-mod fol, qtz (vn, 3 cm thick), mag (5-10%, phenos, euh, up to 3 mm across, ox cubes throughout), amph-chl-py, slightly magnetic	blocky scattered N-S trending OC's (some may be float), OC area is ~15 m long x 10 m upslope	3-Jul-12
111455	2012	OCDH12-14	535608	6310755	Outcrop	Grab	-	Basalt?	v.f.g. to f.g., dk gy to dk b-gy, ox, mass, slightly fol, met lustre, fsp (abnt, blebs, amygdules), bio-amph-chl?, magnetic	lrg NW-SE trending OC, 2.5 m high x 15 m long, at steep dropoff of hill, other OC benches extend downslope for 20-25 m	3-Jul-12
111456	2012	OCDH12-16	535431	6310835	Outcrop	Grab	100	Basalt?	v.f.g. to f.g., dk gy to dk b-gy to b-gy, mass, v. wk fol, mag (v.f.g., xtls, diss throughout), amph (xtls), bio (diss throughout), fsp (matrix, blebs, minor vns & vnlets)	NW-SE trending OC along hillside, 0.5 m high x 15 m long, NW end trends downhill	3-Jul-12
111457	2012	OCDH12-18	535321	6310850	Outcrop	Grab	-	metabasalt	v.f.g. to f.g., b-gy to gy to gr, mass, v. wk fol, amph-chl, mag (10%, f.g., diss), bio (v.f.g., diss), fsp (blebs, patches)	lrg, slightly blocky NW-SE trending OC, ~4 m high x ~20 m long	3-Jul-12
111458	2012	OCDH12-20	535444	6310989	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., gr, mod fol, amph-chl-bio, fsp (blebs, patches, up to few cm's), wkly magnetic	small NW-SE trending OC, 0.5 m high x 4-5 m long	3-Jul-12
111459	2012	RR12-38	535600	6310959	Boulder	Grab	1200	dol-Carb?	v.f.g. to m.g., dk b-gy to dk gy, qtz (abnt, vns throughout), sul (abnt, diss throughout), dol (in matrix), alb?, non-magnetic	partly buried ang bldr	4-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
111460	2012	OCRR12-39	535560	6310944	Outcrop	Grab	190	metabasalt (Phyl)	v.f.g. to f.g., gr-gy to ol-gy, slightly fol, irreg text, sul (abnt, f.g., diss), mag (xtls to 1 mm, diss throughout), bio, fsp (blebs, grains, randomly diss), qtz (vns), cc (in matrix)	OC, 1 m high x 6 m long, on steep section of hill, second OC bench? lower down	4-Jul-12
111461	2012	OCRR12-41	535506	6311009	Outcrop	Grab	400	para-Gn? / Basalt	v.f.g. to f.g., dk gy to dk b-gy, irreg text, slightly fol, qtz (abnt, blebs, vns), fsp (abnt, blebs, vns), dol? (clsts, patches, in matrix), bio? (abnt), sul (abnt, vnlets, f.g., diss, stringers, throughout)	lrg competent vert OC, 3 m high x 10 m long	4-Jul-12
111462	2012	OCRR12-42	535498	6311045	Outcrop	Grab	150	para-Gn or metabasalt (Phyl)	v.f.g. to m.g., dk b-gy to gr-gy, mod fol, bio, fsp (blebs, pods, throughout), sul (f.g., diss throughout)	lrg OC face, 3 m high x 5 m long, continues 20 m N (where RA increases to 320 CPS), many bldrs and OC? below on steep slope	4-Jul-12
111463	2012	OCRR12-43	535470	6311061	Outcrop	Grab	200	para-Gn or metabasalt (Phyl)	v.f.g. to f.g., tan-og and gy to dk b-gy to dk gy, mod fol, qtz?+fsp (blebs, patches, bnds, throughout), sul (gy, met, bnds, diss, vnlets, throughout), bio (patches, bnds, throughout), mag	OC, 1 m high x 6 m long, continues >15 m N	4-Jul-12
111464	2012	OCRR12-44	535327	6311107	Outcrop	Grab	90	metabasalt (Phyl)	v.f.g. to f.g., gy to dk b-gy to dk gr-gy, mod fol, silky lustre, mag (diss, throughout), bio-chl-amph, sul (diss, throughout), qtz/fsp (pods, blebs, bnds, common, throughout), no cc, magnetic	OC, 2 m high x 10 m long, below flat area on hill at top of next descent	4-Jul-12
111465	2012	OCRR12-47	535156	6311061	Outcrop	Grab	245	Basalt	v.f.g. to f.g., gy to med b-gy to dk b-gy, mass, homo, v. wk fol, chl-amph, bio & sul? (f.g., patches, blebs), qtz+fsp (blebs), mag (mod), non-magnetic	v. lrg, mass, competent, hard OC, see GPS track, some lichen	4-Jul-12
111466	2012	OCRR12-49	535118	6311124	Outcrop	Grab	330	Basalt	v.f.g. to f.g., dk b-gy to gy-blk, mass, irreg frac, amph-chl-bio, mag (abnt, f.g., diss), sul (f.g., diss throughout), qtz+fsp (minor, blebs)	lrg N-S trending cliff OC, 2 m high x >25 m long, v. competent	4-Jul-12
111467	2012	OCRR12-51	535177	6310945	Outcrop	Grab	300	metabasalt (Phyl)	sample E of ctc: v.f.g. to f.g., lt gy to b-gy to dk b-gy, mod fol, sul (minor, f.g., diss, throughout), bio (minor, blebs, patches, scattered throughout), fsp+qtz (few, blebs)	lrg well-exposed OC essentially continuous from OCRR12-50, Carb dyke? (Marble bnd??, m.g., qtz), 50 cm thick intruding? at W end of OC, sharp ctc, good planar fol / bedding	4-Jul-12
111468	2012	OCRR12-51	535177	6310945	Outcrop	Grab	300	Carb?	sample W of ctc: Carb dyke?, f.g. to m.g., lt gy to lt pk-gy to p-gy, mass, dol (abnt, vns, blebs, patches, throughout), phl+bio (abnt, patches, blebs), sul (minor, diss), qtz (common)	lrg well-exposed OC essentially continuous from OCRR12-50, Carb dyke? (Marble bnd??, m.g., qtz), 50 cm thick intruding? at W end of OC, sharp ctc, good planar fol / bedding	4-Jul-12
111469	2012	OCRR12-65B	535257	6311649	Outcrop	Grab	480	pseudo-Glim?	f.g., dk br-gy, mass to wk fol, brc text, matrix (blk-gy, met, bio-sul-mag), alb? (tan, grains up to few mm's, diss)	E-facing 1.5 m high OC (330 CPS) with og-br Carb? Dyke (480 CPS, dol, up to 3 cm thick) cutting vertically through middle	5-Jul-12
111470	2012	OCRR12-66	535280	6311668	Outcrop	Grab	750	Glim?	f.g., gy to dk gy, met, mass, irreg text, brc text locly, Carb dykes? (wthd out, og, xcut, up to 2 cm thick)	E-facing OC, 2 m high x 5 m long, rough surface, abnt veg, many bldrs at base	5-Jul-12
111471	2012	111471	535302	6311686	Boulder	-	2200	dol-Carb	m.g. to c.g., gy and gr, wthd - dk r-br crust up to 1 cm, mass	bldr field, sub-ang bldrs up to 1 m in size, higher BG CPS	5-Jul-12
111472	2012	OCRR12-71	534482	6312401	Outcrop	Grab	95	metabasalt (Phyl)	v.f.g. to f.g., gr-gy to gr, mod fol, crenulated, sparkly sheen, chl-trem? (mica?) (common, pbls), phl, mag (5%, diss), qtz (vns, pods, locly, follow fol), cc (itsl), epd	well-exposed v. lrg flat OC, up to 1.5 m high (mostly near E end), common w lichen	11-Jul-12
111473	2012	111473	534475	6312386	Outcrop	Grab	-	metabasalt (Phyl)	f.g. to v.f.g., gr, less fol and crenulated than 111472, epd (abnt), less mag than sample 111472	-	11-Jul-12
111474	2012	OCRR12-74	534381	6312244	Outcrop	Grab	300	-	f.g., dk gy, wthd - r-gy, hard, competent, mass, homo, fsp-qtz, sul (common, diss), no carbonate, strict cleavage/planar surf's with no preferential direction, breaks into blocks	essentially continuous OC from OCRR12-73, good exposure up to 15 m high along N-facing hill, sampled due to possible litho change from metabasalt (Phyl)	11-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
111475	2012	OCRR12-75	534407	6312237	Outcrop	Grab	-	metabasalt (Phyl)	similar to sample 111512, f.g., gr, fol (wavy, crenulated), fsp (abnt, lt gy, blebs, pods), unkn min (gr)	area of gradational ctc? on OC	11-Jul-12
111476	2012	OCRR12-19	536474	6310872	Outcrop	Grab	-	para-Gn?	v.f.g., dk b-gy to dk gy-blk, competent, fol, bio (abnt), sul (tr, diss)	-	1-Jul-12
111477	2012	OCRR12-76	534338	6312264	Outcrop	Grab	-	Qtz vn	qtz vn (common, xcut, up to 4 cm thick), xcut through marble	-	11-Jul-12
111478	2012	OCRR12-76	534338	6312264	Outcrop	Grab	-	Marble?	f.g., tan to lt gy, dol, mass, homo, suc, bt-sul (common, random vnlets, bnds, throughout), qtz vns (common)	-	11-Jul-12
111479	2012	OCRR12-81B	534733	6312639	Outcrop	Grab	150	meta-Sed? (Phyl / Scht)	f.g. to m.g., dk gy-br with cream-coloured pockets, mod-str fol (wavy), bio (>50%, layers, stringers), fsp (pods, up to 2 cm), sul (diss)	better OC exposure than OCRR12-81, 1 m high x 5 m long, reduced exposure continues 10 m N	12-Jul-12
111480	2012	OCRR12-82	534581	6312836	Outcrop	Grab	130	meta-Sed? (Phyl)	f.g., dk br-gy, mod-str fol (defined by bio dominant layers), fsp (pockets), sul (locly, diss, patches)	flat-lying OC, 1 m high, good exposure on W and N faces	12-Jul-12
111481	2012	111481	534708	6312812	Outcrop	Grab	110	meta-Sed? (Phyl / Scht)	f.g., dk gy and cr, wk-mod fol (wavy), bio (layers weave through rock), sul (diss), mag (minor), cc (itsl), dol (blebs?)	near S end of lrg N-S trending cliff OC, steep to vert face ~ 5 m high, 20 m high at sample loc about half way up	12-Jul-12
111482	2012	111482	534695	6312841	Outcrop	Grab	130	meta-Sed? (Phyl)	v.f.g. to f.g., dk b-gy to gy-blk, str fol (planar), bio (abnt), sul (diss), fsp (bnds, blebs), slightly magnetic	near base of same OC as 111480 and 111481	12-Jul-12
111483	2012	111483	534693	6312861	Outcrop	Grab	100	Phyl	v.f.g. to f.g., dk gy to blk, well fol (wavy), bio (v. abnt, throughout), sul, mag?, fsp (minor), wkly magnetic	same OC as 111480-82	12-Jul-12
111484	2012	111484	534669	6312889	Outcrop	Grab	-	meta-Sed (Phyl)	v.f.g. to f.g., dk b-gy to gy-blk, mod fol (wavy), v. silky lustre, bio (abnt, throughout), sul (diss), fsp (bnds, blebs, common, throughout), fsp, slightly magnetic	~20 m from N end of same OC as 111480-83, <2 m high, sample site is 20 m west at 10-15 m high vert face	12-Jul-12
111485	2012	111485	534660	6312891	Outcrop	Grab	-	Phyl	v.f.g. to f.g., lt gy-gr to gy-gr, well fol, chl-serp?-bio, no felsics	OC exposures on steep slope, none extensive, no good cliffs	12-Jul-12
111486	2012	OCRR12-84	534577	6313069	Outcrop	Grab	250	Phyl	v.f.g. to f.g., dk br-gy to b-gy, mod-str fol (planar, homo), bio (abnt, throughout), sul-mag, v. few felsic vnlets	multiple OC's not well exposed, but likely continuous	12-Jul-12
111487	2012	111487	534522	6313098	Outcrop	Grab	90	metabasalt (Phyl)	v.f.g. to f.g., lt gy to dk b-gy to gy-blk, well fol, comp bnd, bio (abnt, throughout), fsp (bnds, blebs, throughout), mag (abnt, 10%, bnds, xtls, 1-2 mm, diss)	small OC, <2 m high, on steep slope	13-Jul-12
111488	2012	OCRR12-92	534457	6313065	Outcrop	Grab	100	metabasalt (Phyl)	v.f.g. to f.g., lt b-gy to b-gy, mass, well fol, bio (abnt, patches, throughout), fsp (blebs, thin bands), amph (minor, blk acicular xtls ~4 mm long, diss, throughout), fsp+qtz (lt gy-cr, patches), mod magnetic	small lichen-covered OC, other subcrop likely extends 20 m S and 5 m W	13-Jul-12
111489	2012	OCRR12-93	534391	6313064	Outcrop	Grab	110	metabasalt (Phyl) or para-Gn	v.f.g. to f.g., lt b-gy to b-gy to cr, mod fol (comp bnd), bio (abnt, 30-40%, throughout, follows bnd), fsp (blebs, bnds, throughout), mag (few, euh, xtls, 1-4 mm, diss)	W face of N-S trending OC, 1 m vert x 10 m long	13-Jul-12
111490	2012	RR12-95	534352	6313025	Outcrop?	Grab	180	Gr?	v.f.g. to f.g.,lt gy to cr to b-gy to br-gy, mass, v. wk fol, sul? (v.f.g., b-gy, patches up to few cm's, sharp borders, blebs, bnds), sul (mod, f.g., diss), bio (minor, throughout), fsp (bnds, blebs, throughout), fsp (20%), qtz, non-magnetic	blocky, ang bldr?, 2 m high x 10 m long	13-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
111491	2012	OCRR12-96	534474	6312798	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., lt gy to gy to cr-br to dk b-gy to b-gy, wk-well fol, locly mass, mag (common, 1 mm xtls, diss, throughout), fsp (common, bnds, blebs), bio (abnt, throughout), alb (abnt), sul (common)	poorly exposed OC, 1 m step x 10 m long	13-Jul-12
111492	2012	OCRR12-102B	536025	6309353	Outcrop	Grab	330	metabasalt? (Phyl)	v.f.g, dk b-gr-gy, fissile, str fol, bio-amph?-chl?-sul?, cc (abnt, 25%, itsl, bnds < 2 mm)	well-exposed OC, 3 m high x few m SE, almost continuous OC from OCRR12-102	14-Jul-12
111501	2012	OCDH12-22	535364	6311341	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., dk b-gy to b-gy, mod fol, bio (abnt, minor vnlets), phl? (abnt, throughout), sul (minor, diss), mag (1-2 mm xtls, diss, throughout), dol (matrix, mod HCl rxn)	roughly circular 20 m dia flat moss-covered OC, no vert relief	5-Jul-12
111502	2012	OCDH12-25	535133	6311177	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., dk b-gy to b-gy, well fol, silky lustre, bio-chl (abnt, throughout), sul (minor, f.g., diss), qtz (blebs with pressure shadows evident), mod magnetic	small roughly circular 4 m dia OC under uprooted tree	5-Jul-12
111503	2012	OCDH12-27	535094	6311167	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., b-gy, mod fol, mag (scattered 1 mm xtls, diss, throughout), bio? (abnt, blebs, patches), dol? (minor, v. wk HCl rxn when powdered), mod-str magnetic	OC along hillside, 1.5 m high x 10-15 m long	5-Jul-12
111504	2012	OCDH12-28	535019	6311186	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., b-gy to lt gy-gr, well fol, amph (gr, xtls < 1 mm), chl-fsp	lrg flat NW-SE oriented OC along base of hill, >100 m long x 10-15 m wide, sample is ~25 m from NW end, 0.75 m dyke? (sample 111505) xcuts sample	5-Jul-12
111505	2012	OCDH12-28	535019	6311186	Outcrop	Grab	-	dyke?	f.g. to m.g., lt gy to lt pk-gy, dol? (mod HCl rxn when powdered), sul (abnt, f.g., diss, vnlets), non-magnetic	possible 0.75 m dyke? or other litho, xcuts sample 111504	5-Jul-12
111506	2012	DH12-32	535162	6311590	Boulder?	Grab	-	Glim? or Phyl?	v.f.g. to f.g., dk b-gy to blk, well fol, interlayered bio (v. abnt, bnds) and fsp (abnt, bnds), non-magnetic	bldr?, 0.5 m high x 2 m long, exposed under tree roots	5-Jul-12
111507	2012	RR12-69	534923	6312393	Boulder	Grab	1300	dol-Carb?	v.f.g. to f.g., maroon-p to p-gy, mass, vitreous lustre, dol-cc (str HCl rxn when powdered), qtz vns (few, 3 mm thick), sul? (minor, f.g.), non-magnetic	along well-veg <1 m high dropoff, ang bldrs (subcrop?) cover 3 x 3 m area	11-Jul-12
111508	2012	OCDH12-35	534900	6312390	Outcrop	Grab	-	metabasalt? (Phyl)	v.f.g. to f.g., dk b-gy to dk gy-blk, mod fol, dol? (matrix, mod HCl rxn when powdered), bio (abnt, vnlets, throughout), fsp (blebs, bnds, throughout), sul (abnt, diss, py, chp), non-magnetic	small NNE-SSW trending OC, 1 m high x 4 m long, at slope break on hill, small possibility that it's a bldr	11-Jul-12
111509	2012	OCDH12-36	534786	6312350	Outcrop	Grab	-	metabasalt? (Phyl)	v.f.g., b-gy to dk b-gy, well fol, silky lustre, ox, mod magnetic	lrg flat N-S trending OC at top of hill, 10 m wide x 20 m long (see GPS track)	11-Jul-12
111510	2012	OCDH12-37	534758	6312334	Outcrop	Grab	-	metabasalt? (Phyl)	v.f.g., br-gy to cr-w, mod fol, mag (mod, 1-2 mm xtls, diss, throughout), gal?-bornite? (xtls), sul (abnt, f.g., diss), fsp (abnt, blebs, bnds), bio? or sph? (vnlets, blebs), dol (matrix)	N-S trending OC, 1 m high x 10 m long, on side of hill	11-Jul-12
111511	2012	OCDH12-39	534664	6312308	Outcrop	Grab	-	Phyl	v.f.g. to f.g., b-gy to dk b-gy, mod-str fol, silky lustre, bio-phl? (mod-abnt, throughout), sul (mod, f.g., diss), mag? (few 1 mm xtls, diss, throughout), mod-str magnetic	small flat-lying moss-covered OC along slight slope of hill	11-Jul-12
111512	2012	OCRR12-72	534520	6312287	Outcrop	Grab	140	metabasalt (Phyl)	v.f.g. to f.g., b-gy to dk b-gy to cr-w, mod-str fol, mag (abnt, 1 mm xtls, diss), bio-phl? (abnt, throughout), sul (mod-abnt, patches, throughout), epd? (lt-dk layers), mod-str magnetic	E end of lrg flat OC similar to OCRR12-71	11-Jul-12
111513	2012	OCRR12-72	534520	6312287	Outcrop	Grab	100	metabasalt (Phyl)	v.f.g. to f.g., lt cr-gy to lt b-gy, wk-mod fol, silky lustre, amph-epd-chl, mag (abnt, diss), sul (minor, v.v.f.g., diss), str magnetic	lrg flat OC similar to OCRR12-71	11-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
111514	2012	OCRR12-73	534424	6312243	Outcrop	Grab	300	metabasalt (Phyl)	v.f.g. to f.g., lt b-gy to dk b-gy, mod fol, vesicular in spots, bio (mod, f.g., vnlets, bnds), sul? (sparse, f.g., diss, xtls), mag (euh, xtls up to 2 mm, clustered locly, diss), non-magnetic	lrg N-S trending OC, 4 m high face, abnt ang bldrs in area	11-Jul-12
111515	2012	OCDH12-42	534357	6312553	Outcrop	Grab	-	Phyl	v.f.g. to f.g., gy-gr to dk gy, mod-str fol, silky lustre, chl-bio (abnt, throughout), epd? (small patches), sul? (sparse, f.g., xtls, diss), str magnetic	circular 10 m dia flat OC, 0.5 m high	11-Jul-12
111516	2012	RR12-78	535629	6312037	Boulder?	Grab	600	Glim	dk b-gy to gy-blk, brc, chaotic, dol-Carb (cr-w clsts up to 4 cm throughout, mass, homo), bio (dominant, f.g.), py (diss), sul (few, f.g., diss), non-magnetic	two NE facing OC's, 4 m high, in side of hill, top is covered	12-Jul-12
111517	2012	OCDH12-43	534803	6312622	Outcrop	Grab	-	metabasalt? (Phyl)	v.f.g. to f.g., dk b-gy to gy-blk, wk-mod fol, dol (matrix), bio (abnt, throughout), fsp (mod, blebs, bnds, throughout), sul (sparse, f.g., diss), py (euh, xtls)	E-W trending OC along hillside, 1.5 m high x 15 m long	12-Jul-12
111518	2012	OCDH12-44	534762	6312675	Outcrop	Grab	-	metabasalt? (Phyl) or dol-Carb? or Glim?	v.f.g. to f.g., dk b-gy to gy-blk, mod fol, cc, sul? or Carb? (abnt, diss, xtls with met vitreous lustre), bio (abnt, throughout), mod magnetic	N-S trending OC along steep dropoff on hillside, 2-3 m high over multiple steps x >10 m long	12-Jul-12
111519	2012	OCDH12-45	534744	6312826	Outcrop	Grab	-	Glim?	v.f.g. to f.g., dk b-gy to dk gy to blk, well fol, bio (layers, abnt to >50%), fsp (ibd with bio-rich layers), wkly magnetic	N-S trending OC, 0.5 m high x 15 m long, near top of hill	12-Jul-12
111520	2012	OCDH12-47	534733	6312900	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., dk b-gy to cr-w, well fol, bio (abnt, blk, bnds, blebs), fsp (abnt, cr-w, bnds, blebs), dol? (v. minor, matrix), wkly magnetic	small N-S trending flat-lying moss-covered OC, 5 m wide x 10 m long	12-Jul-12
111521	2012	OCRR12-89B	534597	6312944	Outcrop	Grab	125	para-Gn? (Phyl)	f.g., dk gy and cr-og, mod fol (not uniform), bio (layers wrap elliptical leucosome pods of fsp+qtz, follow fol), sul (minor)	vert face of OC, >2 m high, steep slopes below and above	13-Jul-12
111522	2012	111522	534596	6312957	Outcrop	Grab	250	metabasalt (Phyl)	v.f.g. to f.g., dk b-gy to cr-w, well fol (planar), bio (abnt, throughout), fsp (abnt, bnds, blebs, throughout), mag (abnt, 1-2 xtls, diss), felsics (minor), str magnetic	4 m vert OC face	13-Jul-12
111523	2012	OCRR12-89C	534567	6313001	Outcrop	Grab	130	metabasalt (Phyl)	v.f.g. to f.g., b-gy to dk b-gy to dk gy, mod-well fol, silky lustre, bio (abnt, throughout), fsp (few, small, pods, blebs, throughout), sul (diss), mod magnetic	rough, bumpy vert OC face, 4 m high, steep slopes below and above	13-Jul-12
111524	2012	OCRR12-89D	534562	6313014	Outcrop	Grab	600	Carb dyke? Glim? Marble?	v.f.g. to m.g., dk b-gy to blk to cr-w with dk br bnds, wthd - (ox, or-r), mass, chaotic, loosely fol, dol (dominant, patches up to several cm's), bio (15%, patches, thin oriented layers), alb? (minor, gy, hard, f.g.), non-magnetic	OC similar height to that at sample 111523, wthd - og, higher RA	13-Jul-12
111525	2012	OCRR12-91	534541	6313054	Outcrop	Grab	145	metabasalt (Phyl)	v.f.g., lt b-gy to b-gy, mass to mod fol, fsp (dominant), bio? (minor-mod, patches, blebs), mag (abnt, 10%), cc (late vnlets, f.g.), trem?, str magnetic	N end? of OCRR12-90	13-Jul-12
113851	2012	OCDH12-48	535759	6309682	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to m.g., dk b-gy, mass, wk fol, fsp (minor, bnds, blebs, throughout), non-magnetic	mostly moss-covered OC near top of hill, 2 m dropoff x 10-15 m long	14-Jul-12
113852	2012	OCRR12-105	535604	6309038	Outcrop	Grab	70	metabasalt (Phyl)	v.f.g. to f.g., b-gy to gy-gr, mod-well fol, sul (mod, v.f.g., diss, throughout), fsp (minor, few, blebs), trem-actinolite (abnt, clusters locly, xtls up to 4 mm, intermixed calc-Sil pods), non-magnetic	NW-SE trending, SW-facing OC ridge, 2 m high x 20 m long face x 5 m wide on lichen-covered top	14-Jul-12
113853	2012	OCDH12-55	535220	6308892	Outcrop	Grab	-	dol-Carb dyke? or Marble	v.f.g. to f.g., lt gy to lt ol-gy to lt br-gy, dol-cc (f.g., dominant), qtz vns (few), bio (few, patches), sul (sparse, f.g., diss)	long, narrow, resistant, NW-SE trending OC ridge, 6 m wide x 1.5 m high x 25 m long	14-Jul-12
113854	2012	OCDH12-54	536093	6309274	Outcrop	Grab	-	metabasalt (Phyl)	v.f.g. to f.g., b-gy to dk b-gy, mod-well fol, silky lustre, bio (mod-abnt, throughout), fsp (few, blebs), mag (few small xtls), non-magnetic	lrg well-exposed OC in middle of hill, trending with topo, 3 m high x 15 m long	14-Jul-12

Appendix 5a: 2012 and 2013 Rock Sample Locations and Descriptions

Sample	Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Source	Sample Type	Max CPS	Litho Prelim	Description	Notes	Date Collected
113855	2012	OCDH12-59	535208	6308812	Outcrop	Grab	-	Qtz vn	w to gy-w, multiple vns (up to 10 cm wide, hardness = 7, concoidal frac)	roughly circular 15 m dia OC, 4 m high, host rock is Marble	14-Jul-12
118001	2013	-	535664	6312734	Subcrop	Grab	9000	Carb	f.g., lt gy, mass, suc, fl, py, phl?	Center of Trench TR08-005, No waypoint found so coordinates taken from center of trench where the sample was allegedy collected	24-Aug-13
118002	2013	118002	535553	6313645	Outcrop	Grab	2200	dol-Carb	mass, py, fl, pych, phl, met dk gy min (not mag), hairline fl vnlts with py (tr)	Eastern shore of Glim Lake	25-Aug-13
118003	2013	118003	535552	6313573	Unknown	Grab	-	dol-Carb	m.g., non mineralized, xtln	Not anomalously RA, near sample 118002	25-Aug-13
118004	2013	118004	535368	6313424	Outcrop	Grab	2200	Carb	dk, dense, bnds defined by dk mica-mag, fine Glim patches	Small section within large OC	25-Aug-13
118005	2013	118005	535510	6313360	Outcrop	Grab	-	dol-Carb	m.g., mass, w, phl	-	25-Aug-13
118006	2013	118006	535504	6313537	Outcrop	Grab	-	dol-Carb	m.g., mass, pale pk, dol, py (tr), fl, cc dykes (broken, 1-2 mm)	-	25-Aug-13
118008	2013	-	537390	6313050	Boulder	Grab	2250	Carb	f.g., suc, fl, py, phl, phase 3	In trench wall (TR10-017B), not decomposed at all, 30 cm x 30 cm x 10 cm	28-Aug-13
118010	2013	118010	537376	6312844	Boulder	Grab	5600	Carb	m.g., w, xtln, py, fl, phl, other mins (minor, patchy)	Patch of RA Carb boulders, many other boulders in soil sample pit, large, ang	28-Aug-13
118011	2013	118011	537378	6312759	Boulder	Grab	1450	Carb	f.g., cr, mass, xtln, py, phl (v thin streaks), other mins (rare)	Four large boulders of same composition, > 1 m max size	28-Aug-13
118012	2013	118012	537379	6312741	Boulder	Grab	5100	Carb	m.g., mass, suc patches, xtln, py, phl	40 cm x 30 cm x 10 cm thick (paving stone) boulder, ang	28-Aug-13
118013	2013	118013	537374	6312700	Boulder	Grab	5800	Carb	f.g., suc, py, mag, phl, pych (diss, 0.5 mm), cc phenos	40 cm x 40 cm x 10 cm, ang	28-Aug-13
118014	2013	118014	537321	6312222	Boulder	Grab	4600	Carb	f.g., w, streaks (rich, minor), py, phl, pych, clb?	50 cm x 40 cm x 10 cm, large, flat, ang, edge of wet ground	28-Aug-13
118015	2013	118015	537254	6312290	Boulder	Grab	4700	cc-Carb	mag rich, ±py, py (abnt)	Three tabular large boulders in same pit, too big to dig out	28-Aug-13
118016	2013	118016	537254	6312341	Boulder	Grab	3250	cc-Carb	m.g., mag rich, py, pych	1+ m x 1+ m x 0.3+ m, v. large, ang, v. similar to 118015	28-Aug-13
118017	2013	118017	536416	6312378	Outcrop	Chip	-	Carb	m.g., w, py (tr), fl	Island in Centre Pond	28-Aug-13

APPENDIX 5B: 2012 AND 2013 ROCK SAMPLE ANALYTICAL CERTIFICATES

Quality Analysis ... *Innovative Technologies*

Date Submitted: 24-Oct-12
Invoice No.: A12-11800
Invoice Date: 23-Nov-12
Your Reference: 20007

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

98 Rock samples were submitted for analysis.

The following analytical packages were requested:

REPORT **A12-11800**

Code 1A2 Au - Fire Assay AA
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-Nb2O5 - XRF Option XRF
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	F	Nb2O5	Ta2O5	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.003	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30
Analysis Method	FA-AA	FUS-ISE	FUS-XRF	FUS-XRF	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
109950	< 5	1.37	0.035	< 0.003	39.09	7.40	11.87	0.168	12.58	7.21	2.67	6.31	1.931	2.07	9.40	100.7	32	65	258	1050	53	420	10	190
109951	5	1.11	0.021	< 0.003	33.06	6.16	10.77	0.213	13.72	9.55	2.12	5.53	1.420	0.02	17.67	100.2	30	45	221	1330	58	640	30	180
109952	< 5	0.05	0.006	< 0.003	0.88	0.21	4.94	0.671	18.00	28.31	0.04	0.08	0.027	0.02	44.82	98.00	24	1	35	20	1	< 20	< 10	70
109953	< 5	0.61	0.028	< 0.003	8.51	2.15	6.73	0.961	15.58	23.47	0.17	1.80	0.203	0.41	36.71	96.69	27	20	86	140	8	40	30	390
109954	< 5	0.71	0.042	< 0.003	15.87	3.58	8.83	0.435	13.97	20.18	0.22	3.33	1.001	0.29	29.86	97.57	25	25	136	400	32	200	90	400
109955	< 5	0.07	< 0.003	< 0.003	99.12	0.09	0.40	0.014	0.24	0.43	0.02	0.02	0.005	< 0.01	0.65	101.0	< 1	< 1	6	30	< 1	< 20	< 10	< 30
109956	< 5	0.48	0.029	< 0.003	24.46	5.16	10.52	0.548	10.34	17.35	0.20	4.65	0.753	0.18	24.31	98.48	25	3	99	300	91	450	190	290
109957	< 5	0.42	0.067	< 0.003	31.10	8.23	12.76	0.231	6.77	11.77	0.67	7.34	2.436	0.19	18.13	99.63	41	12	316	840	60	320	60	140
109958	< 5	0.24	0.021	< 0.003	9.34	2.57	9.01	0.537	12.30	24.32	0.13	2.23	0.240	0.16	36.96	97.79	21	1	100	150	9	60	< 10	170
109959	< 5	0.61	0.014	< 0.003	35.08	11.27	12.20	0.208	6.91	10.18	2.05	4.34	2.684	0.60	14.75	100.3	25	18	332	60	47	70	210	80
109960	< 5	0.41	0.012	< 0.003	10.30	2.64	11.32	0.690	13.48	22.25	0.18	1.92	0.641	0.14	34.67	98.23	27	3	150	20	16	30	10	220
109961	40	0.37	0.036	< 0.003	13.04	3.75	11.52	0.501	12.27	21.34	0.06	3.12	0.935	0.49	31.72	98.74	24	14	242	30	16	30	50	200
109962	< 5	0.48	0.013	< 0.003	38.18	11.95	13.10	0.210	5.66	8.47	3.02	3.52	2.675	0.40	12.41	99.59	27	15	303	90	39	70	230	80
109963	6	0.29	0.013	< 0.003	40.09	11.35	10.36	0.154	6.44	8.01	3.97	3.01	2.406	0.36	12.32	98.46	29	9	278	310	39	120	150	100
109964	< 5	0.48	0.009	< 0.003	37.92	11.78	10.73	0.140	6.57	8.55	4.41	2.79	2.686	0.31	13.15	99.04	25	6	300	160	30	80	140	100
109965	6	0.61	0.035	< 0.003	41.62	12.75	8.56	0.251	5.39	8.40	3.57	5.34	3.046	0.63	11.39	100.9	39	15	295	190	32	80	170	90
109966	< 5	0.33	0.008	< 0.003	41.79	13.15	12.23	0.180	6.13	6.20	4.71	3.47	2.989	0.37	9.40	100.6	27	22	315	70	36	80	170	90
109967	9	0.24	0.010	< 0.003	40.81	11.84	10.40	0.169	7.11	8.34	4.16	3.10	2.627	0.19	11.37	100.1	30	36	302	180	35	100	160	110
109968	< 5	0.24	0.013	< 0.003	42.84	14.12	12.28	0.162	4.51	7.05	5.31	2.73	2.700	0.62	7.46	99.78	18	8	239	140	38	80	120	130
109969	< 5	0.20	0.016	< 0.003	43.97	14.64	11.79	0.148	4.57	6.84	5.34	2.55	2.806	0.72	6.59	99.96	16	5	219	70	37	60	130	130
109970	7	0.33	0.011	< 0.003	41.56	12.19	14.73	0.176	4.47	7.09	2.35	4.98	3.411	0.35	8.44	99.75	29	11	367	60	45	50	190	140
109971	6	0.33	0.041	0.003	38.35	12.50	10.13	0.170	4.76	9.31	2.44	6.32	2.488	0.83	12.65	99.96	21	15	225	170	33	90	110	110
109972	< 5	0.39	0.054	< 0.003	30.84	6.89	10.47	0.284	8.20	12.80	1.14	5.53	1.692	0.03	19.79	97.66	37	20	344	720	48	310	90	170
109973	< 5	0.83	0.036	< 0.003	35.08	7.30	11.60	0.233	9.60	10.14	3.30	4.89	1.877	0.81	14.32	99.16	34	23	288	870	50	380	60	180
109974	< 5	0.15	0.028	< 0.003	0.83	0.13	5.48	0.549	16.06	28.49	0.04	0.11	0.023	1.41	42.82	95.95	12	1	57	< 20	5	< 20	< 10	150
109975	< 5	0.07	0.190	< 0.003	34.95	9.80	6.29	0.294	6.03	11.83	0.35	8.37	3.069	0.03	18.21	99.23	32	3	235	110	11	< 20	50	140
111451	< 5	0.12	0.004	< 0.003	44.72	13.59	12.83	0.139	3.63	5.83	6.10	1.92	3.973	0.46	6.33	99.53	25	3	290	50	55	60	90	100
111452	< 5	0.39	0.007	< 0.003	38.13	11.93	11.37	0.163	6.13	8.91	3.77	4.09	3.047	1.45	11.22	100.2	18	4	100	< 20	22	< 20	10	210
111453	< 5	< 0.01	0.023	< 0.003	63.36	16.15	4.42	0.052	0.83	1.36	5.32	5.96	0.858	0.10	1.83	100.2	6	4	24	< 20	2	< 20	< 10	70
111454	< 5	0.11	0.007	< 0.003	45.22	13.32	13.72	0.162	4.99	5.15	2.88	2.49	3.979	0.52	7.21	99.63	24	3	369	< 20	49	30	80	150
111455	< 5	0.04	0.004	< 0.003	42.97	12.01	12.53	0.188	5.21	7.35	6.13	0.99	2.462	0.24	10.90	101.0	21	1	230	140	38	70	50	70
111456	< 5	0.10	0.010	< 0.003	42.68	14.49	16.57	0.113	3.46	4.48	4.20	3.21	4.072	0.54	6.70	100.5	18	4	261	50	40	60	40	100
111457	< 5	0.14	0.011	< 0.003	51.16	14.87	9.51	0.120	2.77	5.45	4.67	3.46	2.785	1.07	4.77	100.6	16	4	210	20	27	30	40	190
111458	< 5	0.04	0.005	< 0.003	39.44	11.70	10.60	0.228	7.13	8.85	5.30	0.84	2.476	0.43	13.31	100.3	22	2	191	90	44	80	30	80
111459	< 5	0.40	0.036	< 0.003	12.89	1.94	11.58	0.688	11.86	22.95	0.53	0.90	0.302	1.66	32.51	97.81	20	3	184	20	12	20	< 10	290
111460	< 5	0.52	0.039	< 0.003	35.07	9.49	11.33	0.202	6.74	13.00	1.59	3.93	2.460	0.28	16.46	100.6	27	20	315	160	31	90	100	70
111461	< 5	0.39	0.034	< 0.003	24.70	7.22	9.03	0.193	10.05	16.28	1.14	4.72	1.627	0.29	24.51	99.78	25	11	171	190	36	90	40	60
111462	< 5	0.37	0.008	< 0.003	37.27	11.00	12.77	0.198	7.07	9.23	4.91	2.12	2.551	0.88	12.93	100.9	21	6	263	140	39	90	120	80
111463	< 5	0.28	0.014	< 0.003	37.92	11.13	11.07	0.117	5.35	9.37	2.17	6.26	2.703	0.14	14.37	100.6	22	9	299	300	33	100	40	50
111464	< 5	0.07	0.003	< 0.003	50.85	13.77	12.29	0.088	3.85	3.00	5.85	2.22	2.830	0.37	4.66	99.78	21	2	227	360	52	170	30	100
111465	< 5	0.02	0.018	< 0.003	62.63	17.34	3.60	0.025	0.36	0.43	3.88	9.84	0.848	0.13	0.76	99.84	2	5	34	< 20	2	< 20	< 10	50
111466	< 5	0.26	0.014	< 0.003	50.65	14.81	9.06	0.066	2.56	3.82	0.38	11.87	2.838	1.07	2.77	99.90	13	4	138	30	6	< 20	< 10	190
111467	< 5	0.03	0.023	< 0.003	64.20	12.61	3.84	0.093	1.34	2.47	2.15	7.74	0.733	0.10	4.01	99.29	5	2	50	60	2	< 20	< 10	80
111468	< 5	0.14	0.005	< 0.003	11.66	3.07	6.50	0.284	13.46	23.72	0.19	2.51	0.656	0.10	36.14	98.28	13	4	55	70	6	< 20	< 10	50
111469	< 5	0.41	0.052	< 0.003	39.40	11.90	10.72	0.183	6.32	7.98	1.85	7.46	3.064	0.05	11.63	100.6	22	62	224	110	30	60	160	130
111470	< 5	0.42	0.042	0.003	40.73	11.79	12.91	0.295	5.16	5.97	4.27	3.86	3.374	0.21	10.09	98.67	34	5	356	50	34	30	190	220
111471	6	0.02	0.003	< 0.003	0.94	0.26	43.02	2.887	7.28	8.00	0.02	0.16	0.018	0.30	34.24	97.13	8	< 1	33	40	22	< 20	10	680
111501	< 5	0.42	0.014	0.003	42.41	13.31	12.81	0.209	5.52	5.35	5.16	2.98	3.127	0.31	8.41	99.61	27	23	338	90	32	60	210	90
111502	< 5	0.08	0.003	< 0.003	46.45	13.57	17.94	0.122	4.52	1.78	3.83	2.24	4.356	0.36	3.90	99.08	28	1	390	50	53	50	100	160
111503	< 5	0.36	0.019	< 0.003	51.91	15.59	9.81	0.060	2.53	2.84	0.18	10.41	2.409	0.69	3.01	99.44	11	5	147	30	9	< 20	30	120
111504	< 5	0.26	0.017	< 0.003	59.16	16.99	6.85	0.013	1.99	0.24	2.07	8.25	2.661	0.21	1.58	100.0	15	14	289	240	5	30	< 10	30
111505	< 5	0.10	< 0.003	< 0.003	11.86	3.35	5.18	0.147	14.36	23.58	1.32	0.99	1.072	0.09	36.61	98.55	12	1	102	130	3	< 20	< 10	30

Analyte Symbol	Au	F	Nb2O5	Ta2O5	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.003	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30
Analysis Method	FA-AA	FUS-ISE	FUS-XRF	FUS-XRF	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
111506	< 5	0.28	0.005	0.003	38.63	6.73	8.21	0.142	9.74	11.53	1.96	2.46	1.312	0.17	18.12	98.99	30	4	194	1070	37	190	60	60
111507	< 5	0.05	0.005	< 0.003	1.00	0.11	40.66	3.205	7.50	12.30	0.02	0.07	0.022	0.17	33.34	98.38	9	< 1	54	30	21	< 20	< 10	1070
111508	8	0.30	0.081	< 0.003	29.85	8.62	16.70	0.492	5.90	8.66	0.67	6.98	2.798	0.14	17.19	97.98	24	15	332	50	39	40	170	370
111509	< 5	0.09	0.011	< 0.003	54.75	16.63	10.25	0.074	1.86	0.91	2.18	5.80	1.876	0.49	3.35	98.19	22	18	476	20	15	< 20	70	50
111510	7	0.04	0.007	< 0.003	28.94	8.37	12.50	0.387	6.98	14.00	3.67	1.97	2.223	0.50	19.77	99.30	18	1	234	40	28	30	120	60
111511	< 5	0.09	0.006	< 0.003	41.79	13.02	11.96	0.218	4.05	6.83	5.53	1.72	3.827	0.40	9.83	99.19	22	3	344	< 20	37	20	80	100
111512	< 5	0.10	0.007	< 0.003	40.85	11.67	15.72	0.187	4.19	6.45	1.26	4.19	3.618	0.40	9.19	97.72	25	5	229	210	38	60	< 10	120
111513	< 5	0.05	< 0.003	< 0.003	53.90	12.68	18.89	0.057	2.11	0.79	2.31	3.18	4.348	0.36	1.95	100.6	24	4	356	60	26	40	10	80
111514	12	0.18	0.006	< 0.003	46.98	15.50	11.58	0.093	2.13	2.12	2.71	7.57	5.458	0.60	3.28	98.02	24	7	340	120	27	60	10	170
111515	< 5	0.07	0.005	< 0.003	44.01	14.50	20.97	0.104	6.15	1.13	2.99	1.56	5.034	0.42	3.57	100.4	31	2	478	40	58	40	310	170
111516	< 5	1.21	0.264	0.006	19.10	5.15	14.75	0.378	11.25	18.62	0.10	4.27	0.817	0.87	22.50	97.80	9	14	125	100	17	40	20	150
111517	11	0.43	0.031	0.004	39.62	12.37	11.88	0.190	5.88	7.14	3.54	4.79	3.243	0.24	10.88	99.76	27	46	310	130	30	60	360	110
111518	25	0.09	0.024	< 0.003	35.10	6.93	9.54	0.289	9.17	14.73	3.21	0.82	0.975	0.25	16.64	97.65	35	5	178	450	35	150	640	60
111519	< 5	0.18	0.017	< 0.003	40.82	10.30	8.67	0.181	7.86	8.14	4.37	2.15	2.317	0.13	13.14	98.08	33	20	236	800	54	190	90	140
111520	8	0.03	< 0.003	< 0.003	31.15	7.13	8.42	0.202	8.18	15.10	3.86	0.34	1.727	0.31	22.26	98.67	18	1	149	870	32	200	60	70
111472	< 5	0.03	0.003	< 0.003	48.18	9.96	13.44	0.357	3.14	5.89	3.74	1.40	3.657	0.36	8.27	98.40	23	2	315	< 20	20	< 20	160	50
111473	8	0.11	0.010	< 0.003	47.30	15.17	16.08	0.086	2.95	2.12	1.82	4.94	3.911	0.47	4.26	99.10	35	6	329	500	34	80	20	160
111474	< 5	0.04	0.026	< 0.003	63.46	16.08	3.56	0.030	0.43	0.64	2.81	9.82	0.826	0.12	1.07	98.84	4	2	22	20	< 1	< 20	60	60
111475	< 5	0.63	0.026	< 0.003	42.63	14.07	8.29	0.136	4.65	9.02	0.69	9.58	1.587	0.43	9.31	100.4	23	7	77	< 20	10	< 20	40	180
111476	< 5	0.37	0.015	< 0.003	42.09	12.74	10.87	0.162	5.24	7.79	4.78	3.46	2.950	0.35	7.90	98.33	32	12	321	140	33	80	190	120
111477	< 5	0.01	0.006	< 0.003	53.98	1.27	3.22	0.111	7.16	13.19	0.30	0.54	0.430	0.11	19.61	99.91	9	1	52	50	3	< 20	< 10	40
111478	< 5	0.25	0.007	< 0.003	8.87	2.42	6.19	0.168	15.13	24.76	0.47	1.38	0.448	0.10	38.23	98.17	11	1	50	30	8	20	< 10	50
111479	< 5	0.16	0.004	< 0.003	32.97	5.71	7.83	0.180	12.02	14.00	1.35	2.46	1.074	0.19	21.62	99.41	26	6	149	820	31	180	20	60
111480	< 5	0.09	0.004	< 0.003	43.72	13.04	15.36	0.176	3.47	4.36	5.60	2.70	3.900	0.87	5.32	98.52	16	5	298	30	40	40	40	130
111481	< 5	0.06	0.004	< 0.003	28.79	6.69	7.25	0.184	10.36	16.73	3.19	0.88	1.369	0.25	23.82	99.52	21	1	121	470	27	120	60	40
111482	< 5	0.14	0.010	< 0.003	42.27	10.52	10.13	0.105	9.29	6.56	3.71	2.90	2.269	0.08	10.81	98.65	33	8	216	830	47	180	70	90
111483	22	0.18	0.004	< 0.003	38.74	8.69	12.20	0.107	13.87	7.10	2.14	3.94	1.788	0.01	12.16	100.7	28	2	259	640	53	210	110	110
111484	< 5	0.07	0.020	< 0.003	21.04	4.10	9.71	0.457	13.08	20.21	1.23	1.14	0.729	0.10	26.95	98.74	25	2	136	290	27	90	50	70
111485	< 5	0.08	0.004	< 0.003	44.28	9.89	11.65	0.101	10.40	8.90	3.77	0.97	2.110	0.38	7.99	100.4	32	2	247	740	49	230	50	70
111486	< 5	0.11	< 0.003	< 0.003	42.58	12.07	13.70	0.119	7.91	4.11	3.87	3.71	3.417	0.23	7.07	98.77	24	8	341	50	45	60	150	140
111487	< 5	0.13	0.009	< 0.003	39.18	11.44	11.17	0.212	5.52	7.59	5.48	1.92	3.576	0.25	11.58	97.91	20	3	273	50	49	60	120	150
111488	< 5	0.16	< 0.003	< 0.003	43.54	12.77	13.81	0.143	7.09	3.53	5.14	3.34	3.320	0.10	5.87	98.64	19	3	334	80	43	60	110	130
111489	< 5	0.19	< 0.003	< 0.003	43.44	12.32	14.69	0.159	7.56	3.37	4.56	3.69	3.637	0.03	6.05	99.50	23	2	298	70	57	110	200	150
111490	< 5	< 0.01	0.008	< 0.003	47.55	12.48	13.27	0.239	3.04	4.54	4.75	4.14	3.313	0.02	7.28	100.6	23	5	350	60	33	50	180	90
111491	< 5	0.10	< 0.003	< 0.003	40.76	10.95	10.53	0.202	6.26	8.68	5.40	1.21	2.735	0.47	12.70	99.90	22	4	216	80	35	40	50	70
111492	< 5	0.24	0.051	< 0.003	25.07	7.31	12.21	0.250	5.31	22.95	0.47	0.59	3.704	1.68	18.13	97.68	17	8	294	70	51	40	80	190
111521	6	0.17	0.007	< 0.003	39.23	11.66	11.84	0.155	6.19	7.48	5.09	2.24	3.202	0.33	11.19	98.62	20	5	278	40	34	40	50	110
111522	< 5	0.26	0.008	< 0.003	34.29	12.55	18.61	0.107	7.35	5.40	2.59	5.09	3.724	0.21	8.86	98.77	24	7	374	50	55	50	180	200
111523	< 5	0.27	0.007	< 0.003	41.82	12.25	14.69	0.116	6.45	4.69	4.31	3.62	3.641	0.13	7.64	99.36	24	63	322	50	47	50	110	140
111524	< 5	0.07	0.033	< 0.003	15.63	4.58	7.12	0.276	12.98	21.23	1.35	1.88	1.390	0.08	32.31	98.84	22	13	128	30	15	30	< 10	170
111525	< 5	0.07	< 0.003	< 0.003	41.14	11.78	12.44	0.234	4.64	7.93	6.17	0.94	3.561	0.39	10.89	100.1	21	4	272	50	44	40	100	110
113851	< 5	0.27	0.064	< 0.003	32.43	7.67	6.35	0.303	6.97	16.17	1.51	2.03	3.356	1.75	20.38	98.93	33	16	331	460	57	120	40	200
113852	< 5	< 0.01	0.003	< 0.003	28.01	19.02	5.87	0.132	0.42	32.25	0.07	0.29	0.090	0.03	14.57	100.7	8	< 1	445	< 20	3	< 20	< 10	< 30
113853	< 5	0.01	0.005	< 0.003	7.07	0.85	0.87	0.032	16.75	29.33	0.21	0.27	0.047	0.04	42.88	98.35	2	< 1	14	< 20	< 1	< 20	< 10	< 30
113854	< 5	0.14	0.033	< 0.003	13.09	2.67	6.93	0.420	3.85	38.15	0.02	0.13	1.358	1.12	32.23	99.98	10	2	135	40	13	< 20	60	70
113855	< 5	< 0.01	< 0.003	< 0.003	85.14	0.40	0.43	0.014	1.79	5.78	0.18	0.02	0.019	0.04	6.76	100.6	< 1	< 1	6	30	< 1	< 20	< 10	< 30

Analyte Symbol	Ga	Ge	As	Rb	Sr	Y	Zr	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	2	2	4	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
109950	13	2	9	123	509	121	214	11	1.0	< 0.2	5	< 0.5	3.9	265	< 0.4	38.6	97.0	13.6	65.4	30.9	13.7	43.4	6.5	31.1
109951	11	2	< 5	79	418	39	193	45	0.8	< 0.2	5	< 0.5	1.5	185	< 0.4	42.5	82.4	9.48	41.1	14.5	5.45	15.7	2.3	11.4
109952	4	1	< 5	< 2	2313	26	9	8	< 0.5	< 0.2	< 1	< 0.5	< 0.5	93	< 0.4	346	762	91.3	347	59.4	16.7	38.2	3.1	10.4
109953	21	4	13	33	2144	42	70	42	< 0.5	< 0.2	4	< 0.5	0.5	423	< 0.4	1770	3420	379	1350	190	39.8	69.7	4.1	14.3
109954	14	2	13	72	2737	38	182	18	0.7	< 0.2	6	< 0.5	0.9	223	< 0.4	722	1340	145	515	74.4	17.8	35.6	2.8	11.0
109955	< 1	1	< 5	< 2	39	< 2	5	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	10.3	19.8	2.20	7.9	1.2	0.28	0.7	< 0.1	0.2
109956	20	3	28	50	827	41	28	75	< 0.5	< 0.2	4	< 0.5	0.7	334	< 0.4	1030	2090	225	761	94.8	22.0	44.9	3.7	13.6
109957	13	2	11	106	665	31	67	5	< 0.5	< 0.2	16	< 0.5	0.5	289	< 0.4	31.9	80.6	11.4	50.7	11.4	3.48	9.6	1.4	7.5
109958	8	1	< 5	14	1514	46	18	9	< 0.5	< 0.2	1	< 0.5	< 0.5	173	< 0.4	455	917	110	429	82.5	23.2	53.2	4.7	16.5
109959	17	1	< 5	76	583	31	307	2	1.1	< 0.2	2	< 0.5	3.2	795	< 0.4	35.0	77.7	9.56	38.5	8.6	2.62	7.4	1.2	6.4
109960	10	2	5	36	1252	123	71	10	< 0.5	< 0.2	2	< 0.5	1.6	289	< 0.4	630	1040	108	393	85.5	25.2	64.3	7.2	32.6
109961	11	1	< 5	37	1337	43	99	52	< 0.5	< 0.2	4	< 0.5	1.4	529	< 0.4	523	897	93.2	331	48.9	11.5	25.8	2.5	11.1
109962	18	1	< 5	67	409	29	186	8	0.5	< 0.2	2	< 0.5	3.2	921	< 0.4	41.7	88.0	10.4	41.8	8.9	2.83	7.9	1.2	6.5
109963	17	2	< 5	65	393	28	283	< 2	1.2	< 0.2	2	< 0.5	5.0	776	< 0.4	34.4	72.3	8.69	34.1	7.1	2.33	6.3	1.0	5.9
109964	16	2	< 5	58	482	20	225	< 2	3.3	< 0.2	2	0.6	6.0	776	< 0.4	38.9	86.4	10.3	40.8	7.9	2.40	6.0	0.8	4.2
109965	18	2	< 5	71	554	39	162	11	< 0.5	< 0.2	3	< 0.5	1.3	976	< 0.4	108	198	21.2	78.8	13.8	4.42	11.8	1.7	9.1
109966	18	2	< 5	68	348	24	275	< 2	0.9	< 0.2	2	< 0.5	7.8	710	< 0.4	41.1	89.0	10.7	42.6	8.2	2.34	6.3	0.9	5.0
109967	16	2	< 5	62	362	37	394	< 2	1.6	< 0.2	2	< 0.5	5.0	998	< 0.4	35.9	74.2	8.74	33.8	6.8	2.31	6.9	1.2	7.3
109968	22	1	< 5	58	602	35	357	< 2	1.3	< 0.2	3	< 0.5	4.6	1132	< 0.4	77.6	160	18.1	68.2	13.2	4.09	10.6	1.5	7.9
109969	22	2	< 5	58	620	32	373	< 2	1.6	< 0.2	3	< 0.5	5.6	1483	< 0.4	79.1	159	18.0	66.6	12.1	3.48	9.1	1.2	6.6
109970	20	2	< 5	91	484	37	231	3	0.6	< 0.2	3	< 0.5	6.1	1262	< 0.4	41.2	88.5	10.8	44.1	9.6	3.00	8.9	1.4	7.8
109971	19	2	12	94	868	52	210	28	< 0.5	< 0.2	4	< 0.5	2.6	1287	< 0.4	63.7	131	15.6	60.0	14.1	4.75	13.1	2.0	11.0
109972	14	1	9	74	727	46	612	20	2.8	< 0.2	35	< 0.5	1.5	489	< 0.4	18.2	42.5	5.88	26.7	8.2	3.14	9.4	1.6	9.2
109973	11	2	13	92	691	68	176	4	< 0.5	< 0.2	7	< 0.5	4.3	175	< 0.4	128	254	30.2	119	29.8	9.69	26.5	3.5	16.9
109974	12	3	11	< 2	1335	82	27	7	< 0.5	< 0.2	< 1	< 0.5	< 0.5	45	< 0.4	846	1800	203	772	113	27.8	61.5	6.6	26.7
109975	24	1	< 5	62	628	15	22	29	< 0.5	< 0.2	28	< 0.5	< 0.5	233	< 0.4	163	358	43.4	161	20.5	4.50	9.8	1.0	4.3
111451	22	2	< 5	51	370	63	273	< 2	0.9	< 0.2	3	< 0.5	1.4	344	< 0.4	61.0	141	19.1	84.9	17.7	5.16	16.3	2.5	14.2
111452	18	2	< 5	128	473	50	217	< 2	0.6	< 0.2	2	< 0.5	1.3	278	< 0.4	67.9	145	18.6	77.3	16.1	5.14	14.3	2.0	10.7
111453	33	2	< 5	102	104	84	764	< 2	3.0	< 0.2	8	< 0.5	< 0.5	371	< 0.4	134	273	30.0	109	19.8	3.70	15.3	2.4	14.3
111454	23	2	< 5	47	376	27	324	4	1.0	< 0.2	3	< 0.5	0.7	933	< 0.4	52.4	109	13.4	55.7	10.4	3.06	7.8	1.1	5.9
111455	15	1	< 5	20	509	14	169	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	149	< 0.4	38.7	80.5	9.46	36.6	6.7	2.11	4.9	0.6	3.2
111456	31	2	< 5	61	308	31	215	< 2	< 0.5	< 0.2	3	< 0.5	0.9	1383	< 0.4	47.9	103	12.2	47.5	9.3	2.67	7.6	1.1	6.2
111457	28	2	< 5	78	196	49	374	2	1.3	< 0.2	3	< 0.5	1.1	1400	< 0.4	82.9	181	22.2	90.4	17.5	5.58	14.5	1.9	10.5
111458	16	1	< 5	14	371	18	175	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	272	< 0.4	37.9	77.8	9.23	36.3	6.8	2.23	5.5	0.8	3.9
111459	9	2	< 5	22	1679	122	202	26	0.6	< 0.2	7	< 0.5	0.9	135	< 0.4	662	1180	125	440	72.9	20.5	50.5	6.2	30.6
111460	15	2	< 5	67	562	36	182	< 2	< 0.5	< 0.2	1	< 0.5	3.3	920	< 0.4	25.6	55.7	7.21	30.9	8.4	2.96	9.0	1.4	7.7
111461	12	1	< 5	56	807	31	166	< 2	< 0.5	< 0.2	3	< 0.5	2.2	242	< 0.4	167	337	40.9	152	23.1	5.92	13.4	1.5	7.1
111462	15	2	< 5	46	597	27	283	< 2	0.8	< 0.2	1	< 0.5	5.5	324	< 0.4	38.9	81.9	10.2	41.1	8.4	2.88	7.3	1.1	6.1
111463	15	1	< 5	57	402	19	182	< 2	< 0.5	< 0.2	1	< 0.5	1.6	364	< 0.4	35.6	74.1	8.82	33.8	6.5	1.95	5.1	0.8	4.1
111464	17	2	< 5	44	201	15	209	3	< 0.5	< 0.2	1	< 0.5	0.6	428	< 0.4	51.8	112	13.1	51.6	8.9	2.72	6.4	0.8	4.0
111465	39	2	< 5	127	41	37	208	< 2	< 0.5	< 0.2	9	< 0.5	< 0.5	257	< 0.4	140	282	32.1	113	17.9	3.51	12.2	1.6	8.7
111466	20	2	< 5	212	237	52	214	3	< 0.5	< 0.2	4	< 0.5	0.9	1107	< 0.4	73.1	163	20.8	84.6	15.5	4.63	12.6	1.8	10.0
111467	24	2	< 5	109	138	50	466	3	2.4	< 0.2	8	< 0.5	< 0.5	149	< 0.4	140	266	29.1	98.9	15.0	3.19	10.6	1.6	9.7
111468	6	< 1	< 5	38	600	24	61	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	186	< 0.4	21.9	46.0	5.15	19.8	3.9	1.16	3.6	0.6	3.9
111469	16	2	< 5	85	373	48	181	< 2	0.8	< 0.2	2	1.3	5.3	747	< 0.4	57.7	126	15.6	60.7	14.8	5.18	13.9	2.0	10.6
111470	21	2	5	56	339	120	449	19	2.1	< 0.2	10	0.6	3.2	665	< 0.4	317	583	64.8	242	46.6	14.1	34.6	4.9	26.8
111471	20	9	31	< 2	321	97	31	9	< 0.5	0.2	< 1	< 0.5	< 0.5	100	0.7	214	1820	455	2380	339	65.5	102	8.6	31.1
111501	19	2	< 5	61	329	26	287	< 2	1.2	< 0.2	3	< 0.5	8.0	720	< 0.4	58.1	132	16.9	66.6	11.4	3.43	7.8	1.1	5.7
111502	24	2	< 5	45	111	24	272	< 2	1.0	< 0.2	3	< 0.5	1.1	363	< 0.4	36.6	86.2	11.0	45.2	9.4	2.87	6.9	1.0	5.6
111503	33	2	< 5	153	154	56	274	< 2	1.0	< 0.2	5	< 0.5	0.7	744	< 0.4	126	267	33.7	129	22.0	5.66	15.0	2.1	11.7
111504	33	3	< 5	198	27	48	535	< 2	2.3	< 0.2	7	< 0.5	1.3	837	< 0.4	113	239	26.9	98.3	16.9	3.51	11.6	1.8	9.8
111505	6	< 1	< 5	22	429	17	76	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	77	< 0.4	17.6	37.8	4.23	16.4	3.3	0.85	2.9	0.5	2.8

Analyte Symbol	Ga	Ge	As	Rb	Sr	Y	Zr	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	2	2	4	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
111506	10	2	< 5	41	457	12	104	< 2	< 0.5	< 0.2	< 1	< 0.5	2.8	227	< 0.4	96.4	168	17.2	57.2	7.4	1.92	4.2	0.5	2.9
111507	21	7	29	< 2	329	101	21	15	< 0.5	0.2	< 1	< 0.5	< 0.5	36	3.7	243	2230	475	2090	231	44.4	64.2	6.5	29.2
111508	15	1	8	56	448	51	142	2	0.6	< 0.2	8	< 0.5	0.8	247	< 0.4	90.4	257	37.5	170	40.7	10.1	22.5	2.7	12.5
111509	36	3	< 5	70	88	32	311	< 2	1.3	< 0.2	6	< 0.5	1.0	1457	< 0.4	145	301	35.6	142	27.2	7.68	17.3	1.9	8.6
111510	13	1	< 5	16	822	16	250	< 2	1.0	< 0.2	1	< 0.5	< 0.5	1147	< 0.4	30.6	72.7	9.34	37.8	6.4	1.93	4.5	0.6	3.4
111511	21	2	< 5	24	476	20	239	< 2	0.8	< 0.2	2	< 0.5	< 0.5	1145	< 0.4	36.2	81.1	10.2	40.3	7.7	2.47	5.9	0.8	4.5
111512	20	2	< 5	70	426	34	160	< 2	< 0.5	< 0.2	2	< 0.5	0.7	1104	< 0.4	47.4	104	13.3	53.7	10.9	3.38	8.6	1.3	7.3
111513	27	2	< 5	45	91	24	247	< 2	1.0	< 0.2	4	< 0.5	< 0.5	1325	< 0.4	28.9	66.2	7.23	31.1	6.2	1.95	5.5	0.9	4.6
111514	24	2	< 5	129	138	31	284	< 2	1.0	< 0.2	3	< 0.5	1.1	633	< 0.4	59.0	127	16.1	64.2	12.2	3.55	9.0	1.3	6.9
111515	26	2	< 5	31	90	20	297	< 2	1.3	< 0.2	3	< 0.5	< 0.5	578	< 0.4	37.3	86.7	11.3	46.7	9.7	2.93	7.4	1.0	5.2
111516	11	2	< 5	114	789	27	176	< 2	0.6	< 0.2	13	< 0.5	2.2	1116	< 0.4	189	391	44.9	158	22.7	5.85	12.0	1.4	6.5
111517	16	2	< 5	64	478	36	284	< 2	0.9	< 0.2	2	< 0.5	2.4	1404	< 0.4	50.9	110	14.2	62.1	15.2	4.67	11.2	1.5	7.6
111518	14	3	< 5	15	779	25	205	34	0.9	< 0.2	2	< 0.5	0.9	412	< 0.4	521	923	99.0	338	45.6	7.47	22.2	2.1	8.4
111519	16	2	< 5	46	582	48	221	< 2	1.0	< 0.2	1	< 0.5	1.7	526	< 0.4	39.5	77.4	9.40	36.5	7.5	2.77	7.6	1.5	9.7
111520	9	1	< 5	7	610	12	141	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	46	< 0.4	22.9	47.3	5.82	23.5	4.6	1.64	3.9	0.5	2.6
111472	20	2	< 5	26	276	20	310	< 2	1.3	< 0.2	4	< 0.5	< 0.5	604	< 0.4	29.6	67.2	8.62	35.6	7.4	2.23	6.1	0.9	4.5
111473	31	3	< 5	91	203	24	292	< 2	1.4	< 0.2	3	< 0.5	0.8	1600	< 0.4	69.5	142	16.6	63.9	11.3	3.51	8.6	1.2	5.8
111474	33	2	< 5	145	52	61	463	< 2	2.1	< 0.2	8	< 0.5	< 0.5	331	< 0.4	133	266	29.9	106	17.7	3.50	12.8	2.0	11.9
111475	27	3	< 5	180	593	70	568	5	2.6	< 0.2	8	< 0.5	2.0	593	< 0.4	116	248	28.4	106	18.6	4.91	12.9	2.1	12.5
111476	17	2	< 5	65	336	55	239	< 2	0.8	< 0.2	2	< 0.5	3.6	653	< 0.4	38.9	86.4	10.8	45.3	13.8	5.67	17.3	2.7	13.4
111477	2	< 1	< 5	7	384	11	46	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	61	< 0.4	7.5	15.8	1.85	7.1	1.7	0.57	1.5	0.3	1.7
111478	4	< 1	< 5	40	617	17	74	< 2	< 0.5	< 0.2	< 1	< 0.5	0.6	70	< 0.4	13.2	28.4	3.20	12.6	2.5	0.78	2.3	0.4	2.8
111479	8	1	< 5	39	683	12	74	< 2	< 0.5	< 0.2	< 1	< 0.5	2.4	602	< 0.4	82.2	140	14.4	48.5	6.3	1.62	3.8	0.5	2.6
111480	21	2	< 5	37	542	26	379	< 2	1.6	< 0.2	3	< 0.5	1.2	404	< 0.4	34.4	85.2	10.4	44.5	9.9	3.15	7.7	1.0	5.6
111481	7	< 1	< 5	16	791	14	115	< 2	< 0.5	< 0.2	< 1	< 0.5	0.6	291	< 0.4	22.7	46.3	5.74	23.2	4.6	1.74	4.0	0.6	2.9
111482	14	2	< 5	55	393	14	177	< 2	0.6	< 0.2	2	< 0.5	2.3	617	< 0.4	62.3	122	13.9	50.6	8.8	2.36	5.9	0.7	3.5
111483	15	2	< 5	70	398	5	115	< 2	< 0.5	< 0.2	< 1	< 0.5	2.8	262	< 0.4	17.3	36.0	4.28	16.6	2.9	0.77	1.9	0.2	1.4
111484	11	2	< 5	20	1181	14	117	3	< 0.5	< 0.2	< 1	< 0.5	0.9	275	< 0.4	340	604	65.3	224	30.4	4.43	12.8	1.0	3.8
111485	12	2	< 5	16	401	11	131	< 2	< 0.5	< 0.2	< 1	< 0.5	0.8	169	< 0.4	25.9	55.5	6.96	28.2	5.2	1.82	4.0	0.5	2.9
111486	21	2	< 5	56	538	23	340	< 2	1.7	< 0.2	2	< 0.5	3.8	792	< 0.4	43.7	93.1	11.6	46.9	9.2	2.88	7.3	1.0	5.4
111487	21	2	< 5	34	458	16	257	< 2	1.2	< 0.2	2	< 0.5	2.6	269	< 0.4	38.6	82.0	9.96	38.9	6.8	2.08	5.1	0.7	3.5
111488	22	3	< 5	82	335	8	191	< 2	0.6	< 0.2	1	< 0.5	2.6	406	< 0.4	30.8	71.2	8.93	36.7	6.1	1.60	4.0	0.5	2.2
111489	24	3	< 5	89	331	8	158	< 2	0.6	< 0.2	2	< 0.5	1.8	242	< 0.4	37.7	83.1	9.64	39.1	6.4	1.70	4.0	0.5	2.5
111490	21	3	< 5	17	552	13	405	< 2	4.6	< 0.2	3	1.0	< 0.5	297	< 0.4	27.4	57.2	7.63	31.9	5.8	1.73	4.1	0.6	3.1
111491	18	2	< 5	30	728	23	389	< 2	4.1	< 0.2	2	< 0.5	0.7	209	< 0.4	35.8	83.4	11.4	48.9	9.7	2.85	7.5	1.0	5.3
111492	17	2	< 5	23	1031	64	443	6	4.8	< 0.2	5	< 0.5	1.6	723	< 0.4	344	631	68.4	239	38.3	10.4	25.6	3.1	15.5
111521	21	2	< 5	44	636	27	326	< 2	3.2	< 0.2	3	0.7	2.3	239	< 0.4	37.0	81.0	10.4	44.2	9.1	2.68	7.3	1.1	6.1
111522	27	3	< 5	92	477	24	356	< 2	3.1	< 0.2	3	0.6	3.4	728	< 0.4	42.2	95.2	11.7	46.9	9.0	2.59	6.9	1.0	5.6
111523	26	3	< 5	74	366	20	284	< 2	2.3	< 0.2	3	0.5	4.2	484	< 0.4	46.7	102	13.1	53.1	10.4	2.73	6.9	0.9	4.7
111524	9	1	< 5	19	1896	49	176	< 2	1.0	< 0.2	4	< 0.5	0.7	146	< 0.4	253	510	62.9	239	34.3	8.09	17.0	2.2	10.6
111525	19	2	< 5	24	439	27	246	< 2	1.5	< 0.2	3	0.6	2.0	167	< 0.4	41.5	92.1	11.9	49.1	9.5	2.88	7.7	1.0	6.0
113851	19	1	43	44	435	78	393	5	3.8	< 0.2	9	< 0.5	0.6	2154	< 0.4	321	581	64.2	234	38.8	9.90	27.9	3.4	17.9
113852	42	5	7	5	1170	12	11	< 2	< 0.5	< 0.2	2	1.7	< 0.5	277	< 0.4	8.9	16.5	1.88	7.0	1.5	1.30	1.2	0.2	1.5
113853	1	< 1	< 5	5	219	2	12	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	39	< 0.4	3.0	5.9	0.72	2.6	0.5	0.21	0.4	< 0.1	0.3
113854	8	1	< 5	7	1599	46	196	< 2	1.2	< 0.2	2	< 0.5	0.6	92	< 0.4	199	368	40.7	147	22.9	6.42	15.9	2.0	10.3
113855	< 1	< 1	< 5	< 2	78	2	7	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	2.3	4.7	0.57	2.0	0.4	0.15	0.4	< 0.1	0.4

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
109950	4.8	9.7	1.13	5.8	0.75	3.9	6	1.1	10	32.3	0.4	741
109951	1.7	3.3	0.37	1.8	0.27	4.1	4	0.6	12	26.7	< 0.1	1190
109952	1.2	2.3	0.22	1.3	0.23	< 0.2	< 1	< 0.1	10	20.4	0.2	1170
109953	1.6	3.1	0.32	2.0	0.34	1.1	< 1	0.1	19	76.1	0.7	1270
109954	1.5	3.1	0.37	2.2	0.36	2.6	3	0.3	19	62.6	0.6	807
109955	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 1	< 0.1	< 5	0.8	< 0.1	187
109956	1.6	3.1	0.34	1.9	0.30	0.6	< 1	0.3	62	43.7	0.6	1150
109957	1.3	3.1	0.40	2.5	0.40	2.2	29	0.4	13	10.6	< 0.1	554
109958	2.1	4.2	0.44	2.8	0.45	0.3	< 1	< 0.1	17	84.3	3.9	1180
109959	1.2	3.3	0.44	3.0	0.49	5.4	35	0.3	6	9.6	0.5	436
109960	5.1	11.4	1.34	7.6	1.08	1.4	7	< 0.1	11	62.4	0.2	303
109961	1.7	4.2	0.53	3.1	0.48	2.2	5	< 0.1	14	60.5	0.7	834
109962	1.2	3.0	0.43	2.8	0.42	4.8	7	0.3	< 5	10.6	0.5	874
109963	1.2	3.1	0.44	2.8	0.45	7.2	9	0.1	< 5	9.2	0.5	888
109964	0.7	2.0	0.30	1.9	0.31	4.5	16	0.6	< 5	5.0	0.8	1020
109965	1.6	4.0	0.53	3.4	0.56	3.6	14	0.3	5	18.9	0.3	1160
109966	0.9	2.5	0.36	2.4	0.39	5.3	8	0.2	< 5	5.5	0.3	341
109967	1.4	4.0	0.59	3.9	0.60	7.7	4	< 0.1	< 5	8.7	0.2	808
109968	1.4	3.6	0.50	3.2	0.51	7.1	< 1	0.1	10	13.2	1.3	665
109969	1.2	3.2	0.46	2.8	0.47	7.3	< 1	< 0.1	8	12.2	1.3	1120
109970	1.4	3.7	0.52	3.2	0.49	5.2	5	0.4	6	8.8	0.8	564
109971	2.1	5.5	0.75	4.9	0.76	4.3	45	0.9	8	25.7	1.0	1340
109972	1.7	4.7	0.62	3.8	0.59	8.9	13	0.7	26	20.5	0.2	1100
109973	2.7	5.9	0.71	4.2	0.59	4.1	3	0.2	7	17.6	0.2	972
109974	3.6	7.4	0.79	4.0	0.53	0.6	< 1	< 0.1	10	47.5	0.9	1750
109975	0.7	1.5	0.19	1.3	0.23	0.5	17	0.4	53	12.1	0.3	384
111451	2.7	6.7	0.80	4.3	0.60	6.5	3	< 0.1	< 5	10.1	0.7	599
111452	1.9	4.9	0.66	4.0	0.64	5.4	30	< 0.1	< 5	6.6	1.2	349
111453	2.9	8.3	1.27	8.5	1.38	17.0	< 1	< 0.1	< 5	18.8	2.3	415
111454	1.0	2.8	0.40	2.4	0.36	7.3	4	< 0.1	< 5	4.1	0.6	1140
111455	0.6	1.6	0.21	1.3	0.20	3.6	2	< 0.1	< 5	4.3	0.3	588
111456	1.2	3.2	0.48	3.1	0.49	5.3	5	< 0.1	< 5	5.6	0.7	1650
111457	2.0	5.2	0.72	4.6	0.68	8.8	13	< 0.1	< 5	5.5	1.0	1090
111458	0.7	1.9	0.26	1.6	0.23	3.9	< 1	< 0.1	8	3.0	0.5	701
111459	4.9	11.3	1.30	7.2	0.98	4.1	< 1	< 0.1	18	138	3.5	423
111460	1.5	3.7	0.51	3.2	0.47	4.5	17	< 0.1	< 5	11.6	0.3	785
111461	1.2	3.3	0.48	3.1	0.49	3.6	14	< 0.1	8	38.7	2.3	786
111462	1.1	2.7	0.39	2.4	0.35	5.4	8	< 0.1	< 5	6.9	0.4	1010
111463	0.8	2.1	0.29	2.0	0.31	4.2	22	< 0.1	< 5	7.7	0.2	1220
111464	0.7	1.8	0.23	1.4	0.21	4.5	< 1	< 0.1	< 5	3.7	0.5	572
111465	1.5	3.9	0.52	3.1	0.48	5.2	2	< 0.1	5	13.6	1.3	991
111466	2.0	5.4	0.77	5.0	0.79	4.5	16	< 0.1	5	12.7	1.2	451
111467	1.9	5.7	0.85	5.5	0.88	11.2	12	0.4	5	21.6	2.5	1140
111468	0.8	2.4	0.38	2.4	0.39	1.5	8	0.1	6	2.8	0.3	1100
111469	1.7	4.3	0.57	3.3	0.49	5.2	20	0.5	7	16.9	0.1	488
111470	4.4	11.2	1.40	8.2	1.09	8.1	29	0.4	58	79.0	0.3	526
111471	3.6	6.7	0.63	2.8	0.33	0.4	< 1	< 0.1	70	368	0.2	1050
111501	1.0	2.7	0.37	2.5	0.38	6.0	18	0.2	< 5	10.5	0.3	553
111502	1.0	2.5	0.34	2.1	0.30	6.4	2	< 0.1	< 5	3.6	0.6	583
111503	2.0	6.0	0.89	5.4	0.82	5.1	36	0.2	9	22.4	1.3	395
111504	1.8	5.3	0.77	5.0	0.77	11.6	8	0.2	< 5	14.0	0.8	664

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
111505	0.6	1.6	0.23	1.4	0.23	1.5	6	< 0.1	< 5	1.4	0.3	567
111506	0.5	1.3	0.17	1.0	0.16	2.2	5	0.1	< 5	2.1	0.2	484
111507	4.1	8.4	0.81	3.7	0.42	0.4	< 1	< 0.1	35	296	0.3	670
111508	2.0	4.8	0.58	3.3	0.46	4.0	20	0.3	16	43.1	0.8	1250
111509	1.2	2.9	0.37	2.2	0.32	7.3	8	0.1	< 5	27.7	0.4	293
111510	0.6	1.7	0.25	1.6	0.26	4.0	4	< 0.1	< 5	2.3	0.7	1110
111511	0.8	2.2	0.30	1.8	0.27	5.8	5	< 0.1	< 5	2.6	0.4	582
111512	1.3	3.6	0.51	3.1	0.48	3.7	4	< 0.1	7	13.6	0.7	930
111513	0.9	2.3	0.31	1.9	0.28	6.6	1	< 0.1	< 5	3.7	0.6	328
111514	1.2	3.2	0.44	2.8	0.43	7.2	15	0.1	< 5	5.6	0.6	609
111515	0.8	2.2	0.28	1.7	0.27	7.3	2	< 0.1	< 5	3.5	0.7	860
111516	1.0	2.5	0.32	2.0	0.31	2.3	2	0.3	15	15.2	15.4	951
111517	1.4	3.6	0.50	3.2	0.48	6.2	26	0.3	< 5	15.6	0.2	477
111518	1.1	2.6	0.33	2.1	0.33	4.7	2	< 0.1	23	86.6	0.4	569
111519	1.8	4.8	0.63	3.5	0.49	4.8	7	< 0.1	6	10.2	0.2	364
111520	0.5	1.2	0.16	1.0	0.15	3.2	5	< 0.1	8	2.3	0.7	388
111472	0.8	2.3	0.31	1.9	0.28	6.7	< 1	< 0.1	< 5	3.3	0.6	519
111473	1.0	2.4	0.33	2.0	0.29	6.1	4	< 0.1	< 5	5.1	0.5	331
111474	2.3	6.7	0.99	6.3	0.99	11.2	9	0.1	5	18.9	1.1	1600
111475	2.6	7.8	1.24	8.4	1.32	9.6	30	0.2	12	37.2	1.8	1300
111476	2.2	5.3	0.68	4.1	0.56	5.1	1	0.6	7	14.6	0.4	1080
111477	0.4	1.2	0.19	1.2	0.20	1.0	3	< 0.1	< 5	2.7	0.4	517
111478	0.6	1.9	0.30	2.1	0.35	1.3	2	< 0.1	< 5	2.2	0.2	761
111479	0.4	1.1	0.15	1.0	0.15	1.5	5	< 0.1	< 5	1.8	0.1	476
111480	0.9	2.6	0.39	2.5	0.38	7.2	10	< 0.1	< 5	3.0	0.3	1070
111481	0.5	1.3	0.19	1.3	0.21	2.1	3	< 0.1	5	2.5	1.7	680
111482	0.6	1.6	0.22	1.4	0.24	4.0	3	< 0.1	7	10.2	0.2	596
111483	0.2	0.7	0.10	0.7	0.10	2.6	< 1	0.2	< 5	1.2	0.2	992
111484	0.6	1.6	0.23	1.6	0.27	1.7	< 1	< 0.1	6	34.5	1.5	1850
111485	0.5	1.2	0.16	0.9	0.14	2.9	53	< 0.1	< 5	2.1	0.8	462
111486	0.9	2.6	0.35	2.2	0.33	6.8	4	< 0.1	< 5	8.6	0.5	483
111487	0.6	1.7	0.24	1.5	0.23	5.5	5	< 0.1	< 5	3.8	0.5	461
111488	0.4	1.0	0.13	0.8	0.14	5.0	4	< 0.1	< 5	3.2	0.4	1070
111489	0.4	1.0	0.15	1.0	0.16	4.4	6	0.1	< 5	1.7	0.3	935
111490	0.6	1.5	0.20	1.2	0.18	7.9	57	0.2	< 5	5.6	0.2	811
111491	0.9	2.3	0.33	2.1	0.33	6.3	8	0.1	< 5	2.7	0.7	1040
111492	2.5	6.3	0.78	4.2	0.62	7.3	7	0.2	45	41.3	9.1	425
111521	1.0	2.8	0.40	2.4	0.35	5.9	21	0.2	6	3.9	0.7	943
111522	1.0	2.5	0.36	2.2	0.33	6.8	27	0.4	< 5	4.9	0.3	849
111523	0.8	2.3	0.31	1.9	0.28	5.9	15	0.3	< 5	6.5	0.3	1010
111524	2.0	5.0	0.63	3.6	0.51	2.3	8	0.1	12	46.8	1.3	1240
111525	1.0	2.8	0.40	2.4	0.35	6.0	15	< 0.1	< 5	5.3	0.8	1090
113851	2.9	7.2	0.91	4.9	0.68	8.6	5	0.2	14	34.8	6.4	696
113852	0.4	1.2	0.20	1.5	0.26	0.4	1	< 0.1	13	0.3	0.2	1130
113853	< 0.1	0.1	< 0.05	0.1	< 0.04	0.3	1	< 0.1	< 5	0.8	0.2	1080
113854	1.7	4.3	0.54	3.1	0.44	3.1	1	< 0.1	15	18.4	4.4	607
113855	< 0.1	0.2	< 0.05	0.2	< 0.04	< 0.2	< 1	< 0.1	< 5	0.4	< 0.1	851

Quality Control

Analyte Symbol	Au	F	Nb2O5	Ta2O5	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.003	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30
Analysis Method	FA-AA	FUS-ISE	FUS-XRF	FUS-XRF	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas				0.295																				
TAN-1 Cert				0.288																				
NIST 694 Meas					11.44	1.90	0.75	0.013	0.33	42.69	0.87	0.55	0.118	30.22					1663					
NIST 694 Cert					11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740					
DNC-1 Meas					46.64	18.36	9.99	0.146	9.90	11.43	1.90	0.23	0.482	0.07			31		158	270	58	250	100	70
DNC-1 Cert					47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148.0	270.000	57.0	247.000	100.0	70.0
GBW 07113 Meas		0.13			72.25	12.97	3.23	0.141	0.14	0.60	2.48	5.41	0.284	0.05			5	4	5					
GBW 07113 Cert		0.130			72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00					
SCO-1 Meas		0.08																						
SCO-1 Cert		0.08																						
LKSD-3 Meas																					31	50	30	
LKSD-3 Cert																					30.0	47.0	35.0	
BE-N Meas			0.015																					
BE-N Cert			0.015																					
DR-N Meas		0.05																						
DR-N Cert		0.0500																						
UB-N Meas		< 0.01																						
UB-N Cert		0.00950																						
W-2a Meas		0.02			52.54	15.46	10.81	0.167	6.23	11.13	2.23	0.62	1.076	0.12			35	< 1	280					
W-2a Cert		0.0205			52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262					
SY-4 Meas					49.77	19.78	6.08	0.106	0.49	8.19	6.92	1.65	0.286	0.13			1	3	11					
SY-4 Cert					49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0					
CTA-AC-1 Meas																							60	30
CTA-AC-1 Cert																							54.0	38.0
BIR-1a Meas					47.42	15.75	11.07	0.171	9.44	13.46	1.80	0.02	0.967	< 0.01			44	< 1	338	370	54	170	130	
BIR-1a Cert					47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas				0.009																				1050
ZW-C Cert				0.010																				1050
VS-N Meas			0.099	0.094																				
VS-N Cert			0.10	0.098																				
NCS DC70014 Meas																					24	70	2580	7400
NCS DC70014 Cert																					26.2	70.9	2600.00	7400.00
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				30	3	< 20	1010	100
NCS DC70009 (GBW07241) Cert																				30	3.7	2.8	960.000	100.000
SGR-1b Meas		0.19																						
SGR-1b Cert		0.1960																						
OREAS 100a (Fusion) Meas																					16		170	
OREAS 100a (Fusion) Cert																					18.1		169	
OREAS 101a (Fusion) Meas																					46		430	
OREAS 101a (Fusion) Cert																					48.8		434	
JR-1 Meas																				< 20	< 1	< 20	< 10	< 30
JR-1 Cert																				2.83	0.83	1.67	2.68	30.6
CDN-GS-P3C Meas	278																							
CDN-GS-P3C Cert	263.00																							
CDN-GS-P3C Meas	243																							
CDN-GS-P3C Cert	263.00																							
CDN-GS-P3C Meas	258																							

Quality Control

Analyte Symbol	Au	F	Nb2O5	Ta2O5	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.003	0.003	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30
Analysis Method	FA-AA	FUS-ISE	FUS-XRF	FUS-XRF	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
CDN-GS-P3C Cert	263.00																							
CDN-GS-P3C Meas	250																							
CDN-GS-P3C Cert	263.00																							
CDN-GS-1L Meas	1100																							
CDN-GS-1L Cert	1160.00																							
CDN-GS-1L Meas	1120																							
CDN-GS-1L Cert	1160.00																							
CDN-GS-1L Meas	1130																							
CDN-GS-1L Cert	1160.00																							
109959 Orig	< 5																							
109959 Dup	< 5																							
109964 Orig		0.46	0.009	< 0.003	38.27	11.86	10.75	0.141	6.61	8.60	4.46	2.82	2.700	0.31	13.15	99.67	25	6	304	150	30	80	140	90
109964 Dup		0.49	0.009	< 0.003	37.56	11.71	10.72	0.139	6.53	8.50	4.37	2.76	2.672	0.31	13.15	98.41	25	6	297	160	31	80	140	100
109964 Orig		0.49																						
109964 Dup		0.50																						
109969 Orig	< 5																							
109969 Dup	< 5																							
111454 Orig	< 5																							
111454 Dup	< 5																							
111456 Orig		0.10	0.011	< 0.003	42.70	14.45	16.48	0.113	3.46	4.47	4.18	3.20	4.084	0.53	6.70	100.4	18	4	262	50	40	70	40	100
111456 Dup		0.10	0.008	< 0.003	42.65	14.52	16.66	0.112	3.46	4.48	4.21	3.21	4.059	0.55	6.70	100.6	18	4	261	50	40	50	40	100
111466 Orig		0.27	0.014	< 0.003	50.72	14.82	9.04	0.066	2.56	3.81	0.38	11.90	2.836	1.07	2.77	99.98	13	4	139	30	6	20	< 10	190
111466 Dup		0.26	0.015	< 0.003	50.59	14.79	9.07	0.066	2.56	3.83	0.38	11.84	2.839	1.08	2.77	99.82	13	4	138	30	6	< 20	< 10	190
111469 Orig	< 5																							
111469 Dup	< 5																							
111508 Orig	5																							
111508 Dup	10																							
111510 Orig		0.04	0.005	< 0.003	29.07	8.41	12.58	0.389	7.02	14.06	3.68	1.97	2.245	0.49	19.77	99.69	18	1	234	40	29	40	120	60
111510 Dup		0.04	0.008	< 0.003	28.81	8.33	12.42	0.385	6.94	13.94	3.65	1.97	2.201	0.50	19.77	98.91	18	1	234	40	28	30	120	60
111513 Orig	< 5	0.05	< 0.003	< 0.003	53.90	12.68	18.89	0.057	2.11	0.79	2.31	3.18	4.348	0.36	1.95	100.6	24	4	356	60	26	40	10	80
111513 Split	< 5	0.05	0.005	< 0.003	54.25	12.73	19.10	0.057	2.10	0.81	2.28	3.11	4.248	0.35	1.95	101.0	24	4	357	60	26	30	10	80
111478 Orig		0.24	0.008	< 0.003	8.87	2.41	6.12	0.168	15.01	24.78	0.47	1.39	0.443	0.10	38.23	98.00	11	1	50	30	8	20	< 10	50
111478 Dup		0.25	0.005	< 0.003	8.86	2.43	6.25	0.168	15.25	24.74	0.47	1.38	0.453	0.11	38.23	98.34	11	1	50	30	8	20	< 10	50
111484 Orig	10																							
111484 Dup	< 5																							
111489 Orig		0.19	< 0.003	< 0.003	43.21	12.47	14.64	0.159	7.50	3.36	4.54	3.66	3.640	0.03	6.05	99.26	23	2	296	70	57	110	200	150
111489 Dup		0.19	< 0.003	< 0.003	43.67	12.18	14.74	0.159	7.61	3.39	4.57	3.71	3.634	0.03	6.05	99.74	24	2	301	70	57	110	200	150
111522 Orig	< 5	0.26	0.008	< 0.003	34.29	12.55	18.61	0.107	7.35	5.40	2.59	5.09	3.724	0.21	8.86	98.77	24	7	374	50	55	50	180	200
111522 Split	< 5	0.27	0.007	< 0.003	34.80	12.76	18.88	0.107	7.39	5.45	2.63	5.16	3.782	0.20	8.86	100.0	24	7	380	50	57	50	190	210
111522 Orig	< 5																							
111522 Dup	< 5																							
Method Blank	< 5																							
Method Blank	< 5																							
Method Blank	< 5																							
Method Blank	< 5																							
Method Blank	< 5																							
Method Blank	< 5																							
Method Blank																				< 20	< 1	< 20	< 10	< 30
Method Blank		< 0.01																						
Method Blank		< 0.01																						
Method Blank			< 0.003	< 0.003																				
Method Blank		< 0.01																						
Method Blank		< 0.01																						
Method Blank		< 0.01																						
Method Blank		< 0.01																						
Method Blank		< 0.01																						

Quality Control

Analyte Symbol	Ga	Ge	As	Rb	Sr	Y	Zr	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	2	2	4	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas					145	15	35							105					4.9		0.59			
DNC-1 Cert					144.0	18.0	38							118					5.20		0.59			
GBW 07113 Meas					41	44	390							500										
GBW 07113 Cert					43.0	43.0	403							506										
SCO-1 Meas																								
SCO-1 Cert																								
LKSD-3 Meas			28	72				< 2					2.3			47.2	87.0		41.3	7.5	1.41			4.7
LKSD-3 Cert			27.0	78.0				2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90
BE-N Meas																								
BE-N Cert																								
DR-N Meas																								
DR-N Cert																								
UB-N Meas																								
UB-N Cert																								
W-2a Meas					200	18	88							175										
W-2a Cert					190	24.0	94.0							182										
SY-4 Meas					1191	113	538							343										
SY-4 Cert					1191	119	517							340										
CTA-AC-1 Meas																2190	3330		1140	164	46.7	125	14.4	
CTA-AC-1 Cert																2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas	15				110	13	14							8		0.6	1.9		2.3	1.0	0.52	1.8		
BIR-1a Cert	16				110	16	18							6		0.63	1.9		2.5	1.1	0.55	2.0		
NCS DC86312 Meas																2360	180		1590			225	34.5	184
NCS DC86312 Cert																2360.000	190.000		1600.000			225.0	34.6	183.00
ZW-C Meas	99			8490																				
ZW-C Cert	99			8500																				
VS-N Meas																								
VS-N Cert																								
NCS DC70014 Meas	24							270	16.7			180			80.3	44.9	86.7	9.97	37.9	7.7	1.73	7.2	1.2	6.4
NCS DC70014 Cert	25.2							270	16.7			180.000			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	17	11	69	507						1.3	1700		43.4			22.7	56.3	7.39	30.7	12.0		14.1	3.1	19.8
NCS DC70009 (GBW07241) Cert	16.5	11.2	69.9	500.00						1.3	1701.000		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
SGR-1b Meas																								
SGR-1b Cert																								
OREAS 100a (Fusion) Meas								22								254	454	43.8	141	22.8	3.60		3.5	21.6
OREAS 100a (Fusion) Cert								24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas								20								804	1380	127	387	49.7	8.18		5.5	31.1
OREAS 101a (Fusion) Cert								21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	16			245					< 0.5	< 0.2	3		20.9		0.5	20.1	48.0	5.95	23.9	5.9	0.28	5.5	1.1	6.2
JR-1 Cert	16.1			257					0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69
CDN-GS-P3C Meas																								
CDN-GS-P3C Cert																								
CDN-GS-P3C Meas																								
CDN-GS-P3C Cert																								
CDN-GS-P3C Meas																								

Quality Control

Analyte Symbol	Ga	Ge	As	Rb	Sr	Y	Zr	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	1	5	2	2	2	4	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
CDN-GS-P3C Cert																								
CDN-GS-P3C Meas																								
CDN-GS-P3C Cert																								
CDN-GS-1L Meas																								
CDN-GS-1L Cert																								
CDN-GS-1L Meas																								
CDN-GS-1L Cert																								
CDN-GS-1L Meas																								
CDN-GS-1L Cert																								
109959 Orig																								
109959 Dup																								
109964 Orig	16	1	< 5	57	485	20	226	< 2	3.3	< 0.2	2	0.7	6.0	785	< 0.4	37.8	87.1	10.4	41.3	7.7	2.39	5.9	0.8	4.2
109964 Dup	17	2	< 5	58	480	20	223	< 2	3.3	< 0.2	2	0.6	6.0	767	< 0.4	39.9	85.6	10.3	40.4	8.1	2.41	6.1	0.8	4.2
109964 Orig																								
109964 Dup																								
109969 Orig																								
109969 Dup																								
111454 Orig																								
111454 Dup																								
111456 Orig	31	2	< 5	61	308	31	215	< 2	0.5	< 0.2	3	< 0.5	0.9	1381	< 0.4	47.2	102	12.1	47.4	9.3	2.66	7.7	1.1	6.1
111456 Dup	31	2	< 5	61	309	31	215	< 2	< 0.5	< 0.2	3	< 0.5	0.9	1385	< 0.4	48.6	105	12.2	47.6	9.3	2.69	7.6	1.1	6.2
111466 Orig	20	2	< 5	214	234	52	216	3	< 0.5	< 0.2	4	< 0.5	0.9	1110	< 0.4	72.3	162	20.7	84.9	15.5	4.59	12.5	1.8	10.0
111466 Dup	20	2	< 5	210	240	52	212	3	< 0.5	< 0.2	4	< 0.5	0.9	1104	< 0.4	74.0	164	20.9	84.3	15.4	4.67	12.7	1.8	10.0
111469 Orig																								
111469 Dup																								
111508 Orig																								
111508 Dup																								
111510 Orig	13	1	< 5	16	824	16	251	< 2	0.9	< 0.2	1	< 0.5	< 0.5	1150	< 0.4	30.8	73.4	9.41	37.8	6.3	1.91	4.5	0.6	3.4
111510 Dup	13	1	< 5	16	821	16	250	< 2	1.1	< 0.2	1	< 0.5	< 0.5	1144	< 0.4	30.4	72.0	9.28	37.7	6.5	1.96	4.5	0.6	3.5
111513 Orig	27	2	< 5	45	91	24	247	< 2	1.0	< 0.2	4	< 0.5	< 0.5	1325	< 0.4	28.9	66.2	7.23	31.1	6.2	1.95	5.5	0.9	4.6
111513 Split	27	2	< 5	45	92	23	268	< 2	1.0	< 0.2	4	< 0.5	< 0.5	1321	< 0.4	29.5	67.0	7.18	32.2	6.3	1.97	5.4	0.9	4.6
111478 Orig	4	< 1	< 5	40	611	17	73	< 2	< 0.5	< 0.2	< 1	< 0.5	0.6	69	< 0.4	13.0	28.0	3.13	12.4	2.5	0.77	2.2	0.4	2.8
111478 Dup	4	< 1	< 5	40	623	17	74	< 2	< 0.5	< 0.2	< 1	< 0.5	0.6	70	< 0.4	13.4	28.7	3.28	12.7	2.5	0.79	2.3	0.4	2.8
111484 Orig																								
111484 Dup																								
111489 Orig	24	3	< 5	89	329	8	157	< 2	0.5	< 0.2	2	< 0.5	1.8	240	< 0.4	37.7	83.3	9.35	38.9	6.5	1.69	4.0	0.5	2.5
111489 Dup	24	3	< 5	89	332	8	158	< 2	0.6	< 0.2	2	< 0.5	1.8	243	< 0.4	37.7	82.9	9.94	39.3	6.3	1.70	4.1	0.5	2.4
111522 Orig	27	3	< 5	92	477	24	356	< 2	3.1	< 0.2	3	0.6	3.4	728	< 0.4	42.2	95.2	11.7	46.9	9.0	2.59	6.9	1.0	5.6
111522 Split	27	3	< 5	91	498	24	363	< 2	2.3	< 0.2	3	< 0.5	3.5	754	< 0.4	42.2	94.9	11.8	47.4	9.1	2.65	6.7	1.0	5.4
111522 Orig																								
111522 Dup																								
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank	< 1	< 1	< 5	< 2				< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
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Method Blank																								

Quality Control

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas										913	
DH-1a Cert										910	
TAN-1 Meas											
TAN-1 Cert											
NIST 694 Meas											
NIST 694 Cert											
DNC-1 Meas				2.0							
DNC-1 Cert				2.0							
GBW 07113 Meas											
GBW 07113 Cert											
SCO-1 Meas											
SCO-1 Cert											
LKSD-3 Meas				2.6	0.39		< 1			10.7	4.4
LKSD-3 Cert				2.70	0.400		2.00			11.4	4.60
BE-N Meas											
BE-N Cert											
DR-N Meas											
DR-N Cert											
UB-N Meas											
UB-N Cert											
W-2a Meas											
W-2a Cert											
SY-4 Meas											
SY-4 Cert											
CTA-AC-1 Meas				10.8	1.07	1.3				23.1	4.1
CTA-AC-1 Cert				11.4	1.08	1.13				21.8	4.4
BIR-1a Meas				1.6					< 5		
BIR-1a Cert				1.7					3		
NCS DC86312 Meas	35.7	96.3	14.4	87.5	12.1					25.5	
NCS DC86312 Cert	35.70	96.2	15.1	87.79	11.96					23.6	
ZW-C Meas						9.7	323	35.7	80		
ZW-C Cert						9.7	320	34	80		
VS-N Meas											
VS-N Cert											
NCS DC70014 Meas	1.3	3.5	0.54	3.4	0.50				27200		
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50				27200.00		
NCS DC86316 Meas						707					
NCS DC86316 Cert						712					
NCS DC70009 (GBW07241) Meas	4.2	12.4	2.25	15.7	2.20		2200			28.2	
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9	2.4		2200.00			28.3	
SGR-1b Meas											
SGR-1b Cert											
OREAS 100a (Fusion) Meas	4.7	13.7	2.25	14.5	2.09					51.2	133
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26					51.6	135
OREAS 101a (Fusion) Meas	6.4	18.5	2.94	18.4	2.44					36.3	423
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66					36.6	422
JR-1 Meas		3.9	0.70	5.0	0.71	4.6		1.6	19	27.3	9.0
JR-1 Cert		3.61	0.67	4.55	0.71	4.51		1.56	19.3	26.7	8.88
CDN-GS-P3C Meas											
CDN-GS-P3C Cert											
CDN-GS-P3C Meas											
CDN-GS-P3C Cert											
CDN-GS-P3C Meas											

Quality Control

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
CDN-GS-P3C Cert											
CDN-GS-P3C Meas											
CDN-GS-P3C Cert											
CDN-GS-1L Meas											
CDN-GS-1L Cert											
CDN-GS-1L Meas											
CDN-GS-1L Cert											
CDN-GS-1L Meas											
CDN-GS-1L Cert											
109959 Orig											
109959 Dup											
109964 Orig	0.7	2.0	0.30	1.9	0.31	4.5	16	0.6	< 5	4.9	0.8
109964 Dup	0.7	2.0	0.30	2.0	0.32	4.6	16	0.6	6	5.1	0.8
109964 Orig											
109964 Dup											
109969 Orig											
109969 Dup											
111454 Orig											
111454 Dup											
111456 Orig	1.2	3.2	0.50	3.1	0.49	5.3	5	< 0.1	< 5	5.5	0.7
111456 Dup	1.2	3.3	0.47	3.2	0.48	5.3	5	< 0.1	< 5	5.8	0.6
111466 Orig	2.0	5.4	0.78	5.0	0.78	4.6	18	< 0.1	5	12.8	1.2
111466 Dup	1.9	5.3	0.77	5.0	0.80	4.5	14	< 0.1	5	12.7	1.2
111469 Orig											
111469 Dup											
111508 Orig											
111508 Dup											
111510 Orig	0.6	1.7	0.25	1.6	0.26	3.9	4	< 0.1	< 5	2.3	0.6
111510 Dup	0.6	1.8	0.26	1.7	0.26	4.0	4	< 0.1	< 5	2.2	0.7
111513 Orig	0.9	2.3	0.31	1.9	0.28	6.6	1	< 0.1	< 5	3.7	0.6
111513 Split	0.8	2.3	0.31	1.9	0.28	6.7	1	< 0.1	< 5	3.8	0.6
111478 Orig	0.6	1.8	0.29	2.1	0.35	1.3	2	< 0.1	< 5	2.2	0.2
111478 Dup	0.6	1.9	0.30	2.1	0.35	1.4	2	< 0.1	< 5	2.2	0.2
111484 Orig											
111484 Dup											
111489 Orig	0.4	1.0	0.15	1.0	0.16	4.3	6	0.1	< 5	1.7	0.4
111489 Dup	0.4	1.0	0.15	1.0	0.16	4.4	6	0.1	< 5	1.7	0.3
111522 Orig	1.0	2.5	0.36	2.2	0.33	6.8	27	0.4	< 5	4.9	0.3
111522 Split	1.0	2.6	0.36	2.2	0.32	6.8	20	0.4	< 5	4.7	0.4
111522 Orig											
111522 Dup											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											
Method Blank											

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11637
Invoice Date: 15-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

15 Rock samples were submitted for analysis.

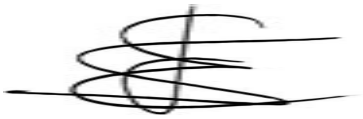
The following analytical packages were requested:

Code 1A2 Au - Fire Assay AA
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code 8-XRF Assay Package Fusion-XRF

REPORT **A13-11637**

Notes:
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3
Total includes all elements in % oxide to the left of total.
Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Activation Laboratories Ltd. Report: A13-11637

Analyte Symbol	Au	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FA-AA	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
118001	< 5	1.30	4.37	0.43	6.99	0.378	7.07	36.75	0.06	0.31	0.274	15.84	22.10	94.57	32	27	125	< 20	14	30	< 10	170	30	6
118002	< 5	0.47	3.24	0.40	8.66	0.520	12.34	30.96	0.03	0.33	0.100	6.02	34.89	97.49	15	3	45	< 20	10	< 20	< 10	110	9	1
118003	< 5	0.26	3.34	0.74	8.31	0.860	11.59	25.76	0.03	0.65	0.059	2.37	37.74	91.45	11	< 1	36	< 20	8	< 20	< 10	110	21	2
118004	< 5	1.03	2.90	0.25	12.58	0.763	7.63	34.34	0.04	0.15	0.116	12.31	25.87	96.96	42	5	58	< 20	14	< 20	100	330	12	2
118005	< 5	0.28	1.37	0.35	7.60	0.632	14.48	28.30	0.02	0.30	0.021	1.76	40.87	95.71	15	1	38	< 20	9	< 20	< 10	270	13	2
118006	< 5	0.45	10.88	0.91	7.05	0.326	12.63	27.51	0.04	0.80	0.153	3.53	34.41	98.23	17	7	41	< 20	7	< 20	< 10	80	16	2
118008	6	0.77	0.65	0.20	6.91	0.483	13.69	32.04	0.06	0.11	0.027	5.00	38.01	97.19	15	15	117	< 20	4	< 20	< 10	90	12	2
118010	< 5	1.10	2.87	0.83	8.01	0.351	10.78	32.00	0.11	0.56	0.336	10.63	23.97	90.46	40	7	195	< 20	19	30	< 10	400	10	2
118011	< 5	0.39	0.51	0.16	6.69	0.448	14.00	30.74	0.03	0.10	0.043	4.10	39.22	96.03	16	3	85	< 20	6	< 20	< 10	80	10	2
118012	< 5	0.81	0.68	0.19	6.08	0.425	12.26	34.09	0.05	0.11	0.158	9.08	33.15	96.27	35	4	154	< 20	11	< 20	< 10	210	16	3
118013	< 5	0.75	2.89	0.86	5.57	0.374	10.71	34.49	0.07	0.66	0.189	9.87	29.69	95.37	53	16	153	< 20	10	< 20	< 10	190	18	3
118014	< 5	0.91	0.68	0.20	5.67	0.502	11.66	35.08	0.04	0.06	0.068	9.87	30.86	94.69	15	6	62	< 20	5	< 20	30	220	16	3
118015	< 5	1.19	4.90	0.23	27.37	0.687	6.92	29.77	0.04	0.06	0.140	10.16	15.79	96.06	36	2	281	< 20	13	< 20	< 10	310	14	3
118016	< 5	1.39	4.15	0.25	28.26	0.451	5.16	31.03	0.06	0.10	0.166	12.62	12.60	94.85	25	4	306	< 20	14	< 20	< 10	270	15	3
118017	< 5	0.24	0.46	0.03	4.02	1.036	17.20	28.61	0.02	0.02	0.004	0.81	44.06	96.27	15	2	15	< 20	< 1	< 20	< 10	470	42	7

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4		2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
118001	18	7	2590	235	744		9	39.4	< 0.2	16	0.8	< 0.5	193	< 0.4	1060	2820	333	1340	217	54.8	121	14.7	65.5	10.2
118002	6	3	1407	122	143		3	7.4	< 0.2	2	< 0.5	< 0.5	109	< 0.4	356	748	85.7	326	58.8	16.5	43.4	6.0	29.6	4.9
118003	8	6	1834	33	47		13	4.0	< 0.2	1	< 0.5	< 0.5	63	< 0.4	1510	2110	184	560	62.9	14.5	28.9	2.7	10.6	1.5
118004	8	5	2087	104	571		5	13.3	< 0.2	30	< 0.5	< 0.5	108	< 0.4	403	870	102	414	72.0	18.9	48.0	5.8	25.4	4.1
118005	< 5	6	1852	42	31		18	2.8	< 0.2	2	< 0.5	< 0.5	93	0.5	810	1300	126	413	50.6	11.5	24.2	2.8	11.9	1.9
118006	6	11	837	80	232		< 2	4.0	< 0.2	3	< 0.5	< 0.5	56	< 0.4	721	1350	140	492	70.5	17.7	44.2	5.4	23.5	3.5
118008	7	< 2	796	84	194		< 2	3.0	< 0.2	2	< 0.5	< 0.5	48	< 0.4	419	1050	122	469	72.3	17.7	41.1	5.0	23.0	3.6
118010	12	5	1626	171	1127		< 2		< 0.2	22	0.9	< 0.5	188	< 0.4	524	1760	213	857	154	39.0	88.0	11.4	52.3	7.8
118011	7	< 2	657	92	127		< 2	1.3	< 0.2	1	< 0.5	< 0.5	56	< 0.4	365	929	116	441	70.7	18.1	40.7	5.9	26.6	4.2
118012	12	< 2	1179	123	562		< 2	6.5	< 0.2	12	< 0.5	< 0.5	158	< 0.4	555	1470	199	773	123	30.3	66.5	8.2	35.0	5.2
118013	12	6	1447	112	731		< 2	6.5	< 0.2	10	< 0.5	< 0.5	159	< 0.4	627	1740	227	864	130	30.7	64.4	7.8	33.4	5.0
118014	13	< 2	1603	148	423		< 2	11.1	< 0.2	17	< 0.5	< 0.5	159	< 0.4	549	1520	188	707	112	28.7	62.5	8.0	33.6	5.3
118015	16	< 2	3164	64	561		< 2	5.7	< 0.2	24	< 0.5	< 0.5	334	< 0.4	382	1050	136	524	79.6	19.2	41.1	4.9	20.1	3.0
118016	21	3	3382	82	882		< 2	8.9	< 0.2	26	< 0.5	< 0.5	564	< 0.4	480	1270	164	634	95.5	23.3	49.3	5.6	24.6	3.7
118017	20	< 2	1779	58	57		< 2	0.6	< 0.2	< 1	< 0.5	< 0.5	63	< 0.4	1790	4090	515	1960	213	40.3	66.1	4.9	18.1	2.1

Analyte Symbol	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Ta2O5	Nb2O5	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	Kg
Detection Limit	0.1	0.05	0.1	0.04	0.2		1	0.1	5	0.1	0.1	0.003	0.003	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF	FUS-XRF	none
118001	23.0	2.67	13.6	1.68	7.5		8	0.2	237	1070	179	0.048	1.144	1.47
118002	11.1	1.25	6.6	0.85	1.7		3	< 0.1	125	95.9	56.5	0.013	0.181	2.69
118003	3.2	0.36	1.9	0.27	0.6		2	< 0.1	26	37.3	6.7	0.003	0.101	0.935
118004	9.0	0.99	5.0	0.64	12.5		5	< 0.1	61	77.2	190	0.034	0.200	0.690
118005	4.1	0.45	2.4	0.32	0.6		11	< 0.1	53	57.8	20.0	0.003	0.092	0.945
118006	7.7	0.86	4.7	0.57	2.9		4	< 0.1	12	43.3	12.4	0.003	0.051	0.375
118008	8.4	0.92	5.0	0.64	1.5		2	< 0.1	27	284	40.0	0.013	0.396	0.655
118010	16.9	1.88	9.5	1.16	11.3		14	0.3	1010	2790	691	0.122	1.570	1.78
118011	8.7	0.93	4.8	0.59	1.3		2	< 0.1	22	202	15.8	0.008	0.263	0.620
118012	11.3	1.27	7.1	0.87	6.7		5	< 0.1	250	1150	268	0.058	0.616	1.37
118013	11.1	1.24	6.8	0.85	5.6		5	0.2	278	1590	416	0.079	0.964	1.61
118014	11.4	1.29	6.7	0.84	7.9		12	< 0.1	13	2220	39.1	0.038	1.939	0.660
118015	6.6	0.71	3.6	0.47	4.3		< 1	< 0.1	19	959	18.6	0.008	1.145	1.44
118016	8.0	0.86	4.5	0.57	4.7		< 1	< 0.1	26	1200	10.3	0.010	1.411	1.03
118017	4.3	0.53	3.6	0.52	0.7		< 1	< 0.1	18	53.7	0.2	< 0.003	0.020	1.25

Quality Control

Analyte Symbol	Au	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FA-AA	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas		3.09	11.14	1.89	0.73	0.010	0.34	42.96	0.87	0.54	0.118	30.18					1659							
NIST 694 Cert		3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas		3.10																						
NIST 694 Cert		3.2																						
DNC-1 Meas			46.93	18.54	9.75	0.147	9.90	11.36	1.91	0.22	0.482	0.07			31		158	270	57	250	100	70		
DNC-1 Cert			47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas			72.59	12.91	3.13	0.139	0.14	0.60	2.49	5.43	0.284	0.05			5	4	< 5							
GBW 07113 Cert			72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		90	31	50				
LKSD-3 Cert																		87.0	30.0	47.0				
OKA-2 Meas																								
OKA-2 Cert																								
AC-E Meas																								
AC-E Cert																								
W-2a Meas			52.80	15.63	10.67	0.166	6.25	11.09	2.21	0.62	1.090	0.14			35	< 1	278	90	41	70	110	80	17	2
W-2a Cert			52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas			49.79	20.49	6.20	0.108	0.50	8.10	6.92	1.65	0.288	0.14			1	3	7							
SY-4 Cert			49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																								
CTA-AC-1 Cert																								
BIR-1a Meas			48.03	15.60	11.21	0.173	9.54	13.44	1.82	0.02	0.976	0.03			43	< 1	342	370	53	170	130	80	15	
BIR-1a Cert			47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																						1050	98	
ZW-C Cert																						1050.000	99	
NCS DC70014 Meas																			25	70	2590	7400	25	
NCS DC70014 Cert																			26	70	2600	7400	25.2	
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																					990	100	17	11
NCS DC70009 (GBW07241) Cert																					960	100	16.5	11.2
OREAS 100a (Fusion) Meas																			17		170			
OREAS 100a (Fusion) Cert																			18.1		169			
OREAS 101a (Fusion) Meas																			49		440			
OREAS 101a (Fusion) Cert																			48.8		434			
JR-1 Meas																				< 20		30	17	
JR-1 Cert																				1.67		30.6	16.1	
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SX18-01 Meas																								
SX18-01 Cert																								
SX18-04 Meas																								
SX18-04 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
OxD108 Meas	408																							

Quality Control

Analyte Symbol	Au	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	ppb	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FA-AA	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
OxD108 Cert	414.000																							
118008 Orig		0.76	0.64	0.20	6.85	0.480	13.61	31.79	0.06	0.11	0.026	4.98	38.00	96.75	15	15	116	< 20	4	< 20	< 10	90	12	2
118008 Dup		0.77	0.67	0.20	6.96	0.486	13.78	32.28	0.06	0.11	0.027	5.02	38.03	97.62	15	16	117	< 20	4	< 20	< 10	90	12	2
118012 Orig	< 5																							
118012 Dup	< 5																							
118017 Orig		0.24	0.47	0.03	4.09	1.050	17.44	29.06	0.02	0.02	0.005	0.83	44.10	97.12	16	2	14	< 20	< 1	< 20	< 10	480	43	7
118017 Dup		0.24	0.45	0.03	3.96	1.022	16.97	28.16	0.02	0.02	0.004	0.78	44.02	95.42	15	2	15	< 20	< 1	< 20	< 10	470	41	7
Method Blank																		< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank		< 0.01																						
Method Blank	< 5																							
Method Blank																								
Method Blank		< 0.01																						

Quality Control

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
TAN-1 Meas																								
TAN-1 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas			142	16	34								105					5.0		0.57				
DNC-1 Cert			144.0	18.0	38								118					5.20		0.59				
GBW 07113 Meas			40	45	391								501											
GBW 07113 Cert			43.0	43.0	403								506											
LKSD-3 Meas		73					< 2					2.4			49.8	94.4		42.6	7.7	1.41			4.8	
LKSD-3 Cert		78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90	
OKA-2 Meas																								
OKA-2 Cert																								
AC-E Meas																								
AC-E Cert																								
W-2a Meas			197	19	84		< 2	< 0.5					174	< 0.4		24.8		12.7	3.3	1.07		0.6	3.7	0.8
W-2a Cert			190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760
SY-4 Meas			1199	114	541								342											
SY-4 Cert			1191	119	517								340											
CTA-AC-1 Meas															2140	3320		1100	161	44.3	117	14.3		
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9		
BIR-1a Meas			108	14	15								7					2.3	1.1	0.50	1.9			
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0			
NCS DC86312 Meas															2400	189		1590			232	34.5	184	35.7
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183	36
ZW-C Meas												260												
ZW-C Cert												260												
NCS DC70014 Meas							270	17.1			180			80.3	43.3	85.1			7.4		6.7	1.2		1.2
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0			8.0		7.4	1.1		1.3
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	77	503							1.3	1700		43.2			23.9	60.1	7.42	30.2	11.9		14.1	3.3	19.9	4.2
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5
OREAS 100a (Fusion) Meas							26								266	483	45.2	143	23.1	3.49		3.7	21.5	4.7
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81
OREAS 101a (Fusion) Meas							21								803	1410	129	386	48.8	7.86			30.3	6.4
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06			33.3	6.46
JR-1 Meas		252				14		< 0.5	< 0.2	3		21.0		0.6	21.3	50.8	5.96	23.0	5.7	0.29	5.5	1.0	6.0	
JR-1 Cert		257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69	
NCS DC86318 Meas															1970	423	719	3300	1710	19.0	2070	472	3070	561
NCS DC86318 Cert															1960	430	740	3430	1720	18.91	2095	470	3220	560
SX18-01 Meas																								
SX18-01 Cert																								
SX18-04 Meas																								
SX18-04 Cert																								
SARM 3 Meas						979																		
SARM 3 Cert						978																		
USZ 42-2006 Meas															21400	28500	2350	6450	537	87.8				
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22				
OxD108 Meas																								

Quality Control

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
OxD108 Cert																								
118008 Orig	7	< 2	785	84	194		< 2	3.2	< 0.2	2	< 0.5	< 0.5	47	< 0.4	413	1030	120	466	70.8	17.5	40.6	5.0	22.9	3.6
118008 Dup	6	< 2	806	85	194		< 2	2.9	< 0.2	3	< 0.5	< 0.5	48	< 0.4	424	1070	124	472	73.9	18.0	41.7	5.0	23.2	3.7
118012 Orig																								
118012 Dup																								
118017 Orig	20	< 2	1803	59	59		< 2	0.6	< 0.2	< 1	< 0.5	< 0.5	65	< 0.4	1840	4230	529	2020	219	41.3	68.9	5.1	18.7	2.2
118017 Dup	19	< 2	1755	57	54		< 2	0.5	< 0.2	< 1	< 0.5	< 0.5	62	< 0.4	1730	3950	501	1900	207	39.2	63.4	4.7	17.4	2.1
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Ta2O5	Nb2O5
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Detection Limit	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.003	0.003
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF	FUS-XRF
DH-1a Meas										910			
DH-1a Cert										910			
TAN-1 Meas												0.306	
TAN-1 Cert												0.288	
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas			2.0										
DNC-1 Cert			2.0										
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas			2.7	0.40		0.7					4.5		
LKSD-3 Cert			2.70	0.400		0.700					4.60		
OKA-2 Meas										28700			
OKA-2 Cert										28900.000			
AC-E Meas													0.015
AC-E Cert													0.016
W-2a Meas		0.37	2.1				< 1	< 0.1			0.5		
W-2a Cert		0.380	2.10				0.300	0.200			0.530		
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas			10.7	1.04						23.4	4.0		
CTA-AC-1 Cert			11.4	1.08						21.8	4.4		
BIR-1a Meas			1.7										
BIR-1a Cert			1.7										
NCS DC86312 Meas	96.5	14.3	87.6	12.2									
NCS DC86312 Cert	96.2	15.1	87.79	11.96									
ZW-C Meas						85.0	336	34.8					
ZW-C Cert						82	320	34					
NCS DC70014 Meas	3.3	0.57	3.3	0.47					27200				
NCS DC70014 Cert	3.5	0.57	3.3	0.50					27200				
NCS DC86316 Meas					712								
NCS DC86316 Cert					712								
NCS DC70009 (GBW07241) Meas	12.6	2.36	15.7	2.20			2200	3.1		30.0			
NCS DC70009 (GBW07241) Cert	13.4	2.2	14.9	2.4			2200	1.8		28.3			
OREAS 100a (Fusion) Meas	13.9	2.34	15.0	2.05						52.6	137		
OREAS 100a (Fusion) Cert	14.9	2.31	14.9	2.26						51.6	135		
OREAS 101a (Fusion) Meas	18.5	2.95	18.0	2.44						37.2	421		
OREAS 101a (Fusion) Cert	19.5	2.90	17.5	2.66						36.6	422		
JR-1 Meas	3.9		4.8	0.69	4.5	1.8		1.6	20	28.3	9.3		
JR-1 Cert	3.61		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88		
NCS DC86318 Meas	1640	273	1810	256									
NCS DC86318 Cert	1750	270	1840	260.0									
SX18-01 Meas												0.005	0.683
SX18-01 Cert												0.005	0.695
SX18-04 Meas												0.007	1.304
SX18-04 Cert												0.005	1.32
SARM 3 Meas													
SARM 3 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
OxD108 Meas													

Quality Control

Analyte Symbol	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Ta2O5	Nb2O5
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Detection Limit	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.003	0.003
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-XRF	FUS-XRF
OxD108 Cert													
118008 Orig	8.1	0.89	5.0	0.64	1.6		2	< 0.1	26	279	39.5	0.013	0.392
118008 Dup	8.6	0.95	4.9	0.63	1.5		2	< 0.1	28	290	40.5	0.012	0.400
118012 Orig													
118012 Dup													
118017 Orig	4.5	0.54	3.7	0.53	0.7		< 1	< 0.1	18	56.0	0.2	< 0.003	0.019
118017 Dup	4.2	0.52	3.5	0.51	0.7		< 1	< 0.1	18	51.5	0.2	< 0.003	0.021
Method Blank	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1		
Method Blank													
Method Blank													
Method Blank												< 0.003	< 0.003
Method Blank													

APPENDIX 6: 2012 PROSPECTING POINT LOCATIONS AND DESCRIPTIONS

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	2	534578	6312981	-	2087797	Rocks	-	-	meta-Volc	-	-	-
2012	4	535851	6310695	-	2087771	Rocks	-	-	qtzdol	-	-	3-Aug-12
2012	8	535925	6309994	-	2087758	Rocks	Outcrop	-	-	-	-	3-Aug-12
2012	10	535804	6310700	-	2087771	Rocks	-	-	Shale	-	-	3-Aug-12
2012	78	535122	6309014	-	2123092	Rocks	-	-	Shale	br-gy wthg dol, qtz vn (fol)	All the way from the lakeshore is same dol, here the prominent ridge from yesterday is visible, striking 327, maybe offset 2 m towards the upper part, qtz vn (082/62 (fol), 2nd set 239/55(?, fol), 067/65 (frac))	3-Aug-12
2012	79	535121	6309894	-	2118787	Rocks	-	-	Shale	cc (vns or small dykes), little bit brc, folding? in meta-Volc	Since the boat landing only meta-Volc along the track	3-Aug-12
2012	82	535134	6310460	-	2087770	Rocks	-	-	meta-Volc	f.g., dk gy, fol, slates	-	3-Aug-12
2012	83	534991	6310569	-	2087770	Rocks	Outcrop	-	-	-	Nice fol of the slate unit outcropping surf, on top some bldrs laying around (dol like on the other side of the lake)	3-Aug-12
2012	86	534551	6311373	-	2123097	Rocks	Outcrop	-	Shale	folds visible	Nice slaty OC at lake shore, see sketch in field book, 247/150 (fold axis), 357/30 (limb1), 317/58 (limb2), 332/55 or 337/80 (fold axis plane)	-
2012	87	534646	6311214	-	2123097	Rocks	Outcrop	-	meta-Volc	-	meta-Volc ridge, probably some flt around which offsets the slates to the NE	3-Aug-12
2012	88	534615	6311261	-	2123097	Rocks	Outcrop	-	meta-Sed	-	flt which offsets the northern slaty bit to the E, possible fol in the meta-Volcs 352/30	3-Aug-12
2012	89	534620	6311283	-	2123097	Rocks	Outcrop	-	meta-Volc	-	Strike of the slaty unit	3-Aug-12
2012	90	534997	6310629	-	2087770	Rocks	-	-	meta-Volc	pretty wthd	On top	4-Aug-12
2012	91	535120	6310492	-	2087770	Rocks	-	-	Carb	bio-qtz	-	4-Aug-12
2012	92	535306	6310168	-	2087770	Rocks	-	-	meta-Volc	cc (vns), inclusions (brc?)	PIC 00285	4-Aug-12
2012	93	535592	6309502	-	2087758	Rocks	-	-	meta-Volc	dol (br, small blob)	br dol on the Clark and Wares map: in the field there is only a small blob of that, everything else is meta-Sed / Volc	6-Aug-12
2012	96	536374	6312022	-	2087790	Culture	Bulk Sample	-	Shale	gr, fl, A-zone xcut vns of Fe-Carb	Bulk sample site, 047/76 (frac) in Carb, 327/70 (second set), 137/45 (third set), 117/30 (frac along cliff side in one direction)	6-Aug-12
2012	97	535862	6310351	-	2087771	Rocks	Outcrop	-	meta-Sed	-	Fold OC on the trail up to Ashram, 20>137 (fold axis), 307/55 (limb1), 327/65 (limb2), sinistral strain markers?	6-Aug-12
2012	100	535415	6309495	-	2118787	Rocks	Outcrop	-	meta-Sed	fol?, mafic, amph (srp, chl), sul, cc (little, HCl rxn)	metabasalt or Slate unit in parts, looks fol, OC striking the usual way	6-Aug-12
2012	101	535452	6309482	-	2118787	Rocks	Outcrop	-	meta-Sed	-	Same as last, partly nice foliation (msmt), not super trustworth, a bit complicated OC	6-Aug-12
2012	103	535610	6309439	-	2087758	Rocks	Outcrop	-	meta-Volc	fol, cc (vns)	Similar to last, shows fol, cc vns in between the form slikensides (plane of sks measured)	6-Aug-12
2012	105	535588	6309456	-	2087758	Rocks	-	-	meta-Volc	f.g., no HCl rxn	-	-
2012	106	535588	6309527	-	2087758	Rocks	-	-	meta-Volc	f.g., no HCl rxn	-	6-Aug-12
2012	107	535502	6309616	-	2118787	Rocks	Outcrop	-	meta-Sed	f.g., cc (little, along cracks?)	Small OC along ridge, strike 317, face strike 297, might have shifted a bit	6-Aug-12
2012	108	535472	6309615	-	2118787	Rocks	Outcrop	-	meta-Sed	-	Similar to last, fol of lrg outcropping face	6-Aug-12
2012	110	535654	6309762	-	2087758	Rocks	-	-	meta-Sed	fol (little), cc (vns)	cc vning starts to strengthen	6-Aug-12
2012	111	535690	6309718	-	2087758	Rocks	-	-	meta-Volc	fol (visible), micas	No cc at all, more similar to the slaty unit	6-Aug-12
2012	112	535768	6309663	-	2087758	Rocks	Outcrop?	-	meta-Volc	brc?, dol (HCl rxn after scratch), dol dyke in meta-Sed?, brc material between more mass material	bldr / OC which looks more like it was brc	-

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	113	535775	6309657	-	2087758	Rocks	Outcrop?	-	meta-Volc	cc (vns), qtz (vns, orientated)	Similar to last, looks more like some Scht	6-Aug-12
2012	114	536148	6308024	-	2118778	Rocks	-	-	qtzdol	-	Several frac msmts (347/35, 033/85, 327/55, 207/80, 303/60, 287/60, 007/89, 017/87, 217/90, 287/43, (129/33?), 217/55)	6-Aug-12
2012	115	536050	6308221	-	2118778	Rocks	Outcrop	-	meta-Sed	-	Possible float?, finer grained meta-Volc than on top of the hill, other msmt 357/83)	-
2012	117	536004	6308366	-	2123093	Rocks	Boulder	-	carb	-	Looks like a clst in a shear zone, there is more fol material around this bldr	-
2012	118	535478	6308647	-	2123092	Rocks	-	-	carb	dol (blob), no real visible fol, qtz (few, vns, visible)	-	8-Aug-12
2012	121	539124	6312873	-	2087796	Rocks	Outcrop	-	meta-Sed	Fe-ox? on wthd crusts, sheared-brc, bio?	Beckling OC	-
2012	122	539087	6312938	-	2087804	Rocks	Outcrop	-	carb	shear lineation on fl "layer" between cbnt clsts	2nd lineation 13/319	8-Aug-12
2012	123	539213	6312868	-	2087796	Rocks	-	-	qtzdol	brc, bio-Fe (between layers)	In general everything is striking the usual (~ 307)	8-Aug-12
2012	124	539212	6312855	-	2087796	Rocks	Outcrop	-	meta-Sed	shear lineation	-	8-Aug-12
2012	125	539221	6312854	-	2087796	Rocks	-	-	qtzdol	qtz (vns, associated with fl), Carb (host rock)	-	8-Aug-12
2012	126	539216	6312849	-	2087796	Rocks	-	-	-	dol clsts (qtz-dol, possibly dk mica) with bio-qtz "vns" fracs-joints in between (doesn't look much sheared)	407 showing ctc between bigger clsts, 408 surf between the two clsts	8-Aug-12
2012	127	539213	6312843	-	2087796	Rocks	-	-	qtzdol	shear, qtz (blob, lrg), bio, Carb	Big qtz blob in bio material in addition to Carb, might have been a big vn which formed its own clst during the shearing, qtz vning before the shearing?	8-Aug-12
2012	130	539128	6312526	-	2087796	Rocks	-	-	meta-Sed	-	Shearing 16/325 (lineation), 319/65 (possible fol)	-
2012	131	539185	6312465	-	2087796	Rocks	Boulder	-	Qtz brc	-	bldr with nice shear zone structures along qtz vns	8-Aug-12
2012	132	539210	6312446	-	2087796	Rocks	Outcrop	-	meta-Sed	dol-Carb (dk blk) + possible qtz (w) + micas (blk) on shear plane?	Same stuff as 55, on nice ridge line overlooking Lac Le Moyne, fol is hard to measure	8-Aug-12
2012	133	539186	6312404	-	2087796	Rocks	Outcrop	-	-	cc (HCl rxn), micas, qtz	Shear fol plane, altogether it looks more like a meta-Sed	8-Aug-12
2012	135	539103	6312028	-	2087796	Rocks	-	-	Qtz brc	f. brc, mag? (f.g. material, some g. (see sketch in field book)), r min (filled little holes), clsts of more fol material between c.g. material, clsts have similar size	-	8-Aug-12
2012	136	539399	6311919	-	2087787	Rocks	Outcrop	-	meta-Sed	-	Little rnd glacial scratched OC, no HCl rxn, no mag, looks in general similar to last OC, shows more fol instead of brc	10-Aug-12
2012	137	539654	6311796	-	2087788	Misc	-	-	-	-	Stream that has a strange gr colour, rusty wthr around it, vegetation seems to stop	10-Aug-12
2012	138	539783	6311625	-	2087788	Rocks	Boulder	-	moynesed	qtz (vns), mag-sul,	Next to lake on W shore, similar to 59, there seems to be lrgr clsts however, brc bldrs coming down the mountain, possibly mag ridge	-
2012	139	539528	6313322	-	2111152	Rocks	Outcrop	-	-	shear fol, fsp (c.g.), qtz (grains and smaller cc-filled "holes"), mafic mins (f., in between), sketch in fieldbook	-	10-Aug-12
2012	140	539696	6313465	-	2111152	Rocks	Boulder	-	moynesed	-	bldr of sheared country rock in the field, contains clsts that definitely support the shear zone theory, some look like they've got pressure shadows	10-Aug-12
2012	141	540205	6313876	-	2142216	Rocks	Outcrop	-	magsed	shear fol, fsp or qtz, cc-dol (small HCl rxn), gr mins (amph, act), str fol mostly accommodated by micas,	Different metamorphic grade to the E?	-
2012	143	540335	6314837	-	-1	Rocks	-	-	magsed	-	Sample location of the gr mica min	15-Aug-12
2012	144	539961	6315272	-	2142224	Rocks	-	-	Scht	-	Some fol Scht as we found on the way to the lake and along the shore	15-Aug-12
2012	160	535939	6309955	-	2087758	Rocks	Outcrop	-	Scht	mag (xtls), magnetic, fol?	-	15-Aug-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	161	535963	6309908	-	2087758	Rocks	-	-	Scht	mag (xtls), magnetic	-	15-Aug-12
2012	162	535958	6309911	-	2087758	Rocks	Outcrop	-	Shale	ctc between more mass and more sheared material?, magnetic?, og and gy "cbnt materials" ibdg?	-	15-Aug-12
2012	163	535893	6309843	-	2087758	Rocks	Outcrop	-	dol-Carb	-	dol /Sltst buried under Esker	15-Aug-12
2012	164	536199	6310504	-	2087772	Rocks	Boulder	-	Shale	dol Sltst, qtz (in center of vn)	The whole track from the last wpt to that one is buried under Esker seds. No OC found, just bldrs. This is also a bldr which shows probable hy-therm vn precipitation.	-
2012	166	536144	6310882	-	2087772	Rocks	-	-	qtzdol	shaly, deformed fol, qtz (competent layer boudinaged to clst while mica layer formed fol), vns? or ibd of siliceous w material (competent, brc or broken off during shearing)	317/327 (strike), metamorph overprint or hy-therm activity also affected nearby rocks	17-Aug-12
2012	167	536012	6310972	-	2087772	Rocks	-	-	dol-Carb	brc, shear?, sub-rnd clsts (late brittle stage?)	-	-
2012	168	535459	6309833	-	2118787	Rocks	Outcrop	-	magsed	good fol, micas visible	Slates along the little side track, probably once clay	-
2012	169	535771	6310010	-	2087758	Rocks	Outcrop	-	qtzdol	dol-Sltst - og wthd, 8 m thick layer, qtz (big vns), dk gy layers (HCl rxn when scratched)	qtz vns strike 057, steep dip ~ perpendicular to fol, ridge dips E, dol-sltst same dip on both sides?, one layer? 317/70, deformed or ibd of clay rich layers?, similar to OC 70	17-Aug-12
2012	170	535982	6310018	-	2087758	Rocks	Outcrop	-	magsed	looks like ibdg between magnetic material and og wthg cbnt / dol / Sltst (fol)	Start of magnetic high?	-
2012	171	535720	6310471	-	2087771	Rocks	Outcrop	-	magsed	-	Steep step down, looks like the ridge dips to the W here, not clear whether this is fol or just the face?	28-Aug-12
2012	172	535935	6310007	-	2087758	Rocks	Outcrop	-	magsed	ibd during deposition? (doesn't look like folding), p mins (inside, qtz?)	"Fourth" dol ridge OC coming from camp	-
2012	174	528636	6304816	-	-1	Rocks	Outcrop	-	meta-Volc	f.g., dk gr, brc wthd, possible fol, shear plane?, magnetic, clsts more mag than mtx, no magnetic g. visible	Looks similar to the magnetic ridge, uphill more fol section 317/55 (bldr?)	-
2012	175	528674	6304845	-	-1	Rocks	-	-	-	brc, magnetic	-	28-Aug-12
2012	176	528699	6304862	-	-1	Rocks	Outcrop	-	meta-Volc	Scht - fol, magnetic	Doesn't show any qtz veins yet	28-Aug-12
2012	180	544163	6294956	-	-1	Rocks	Outcrop	-	meta-Volc	gr, fol, alt, w clsts, r-rusty patches (wthd py?)	On ridge top	-
2012	181	544135	6294631	-	-1	Rocks	Outcrop	-	meta-Volc	deformed, sheared	Looks similar to E of Ashram	28-Aug-12
2012	182	543787	6293803	-	-1	Rocks	Outcrop	-	meta-Volc	f.g., gr, meta-Volc? (< fol)	On the way from last OC: f.g., gr, fol (maybe meta-Volc), then: siliceous dol (og) with qtz veins on top	28-Aug-12
2012	183	543774	6293796	-	-1	Rocks	Outcrop	-	meta-Volc	Scht - gr, fol	fol in same rock type	28-Aug-12
2012	184	544138	6293710	-	-1	Rocks	-	-	-	v.f.g, lt gr, v. mass	Volc origin?, ltr than typical gr, little bit of deformation fol	-
2012	185	544198	6293413	-	-1	Rocks	Outcrop	-	-	f.g., dk gr, fol, py (rusty bits)	On little nob on track back, mass ridge of similar material, impossible to sample, here is similar to material E of camp on first ridge	-
2012	186	544140	6293209	-	-1	Rocks	-	-	-	f.g., gr, mica (ltr g.), amph?	meta-Sediment / Volc	-
2012	205	528339	6315923	-	-1	Rocks	Outcrop	-	-	ibdg and shearing of br layers	More detailed sketch in field book	31-Aug-12
2012	206	528428	6315833	-	-1	Rocks	Outcrop	-	-	Meta-Sed - fol, brc / siliceous dol - br wthd, mtx (some deformed)	br unit not itd but of hy-therm origin, shearing-deformation probably also plays a big parts	31-Aug-12
2012	207	528476	6315747	-	-1	Rocks	Outcrop	-	-	Scht - magnetic	Not very trustworthy coliation, seems to be E of the brc part	1-Sep-12
2012	208	528614	6315758	-	-1	Rocks	Outcrop	-	-	gr, mass, volc	No clear fol,OC seems to show a wk fol similar to regional, also glacier striation	-
2012	209	535769	6310689	-	2087771	Rocks	Outcrop	-	-	bio (fol-bndg, blk layers), qtz-fsp (more abnt layers)	-	1-Sep-12
2012	212	528813	6317104	-	-1	Rocks	Outcrop	-	-	Schst - bio (abnt), qtz (abnt), fol (in parts, other parts more qtz vn)	Looks similar to the blasted steep part along the track, more bio, less qtz, not aligned with regional	1-Sep-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	213	528833	6317114	-	-1	Rocks	Outcrop	-	-	f.g., gr, chl, magnetic	After bio-qtz Scht, right next to the magnetic part to the E there is the coarser grained, gr unit which is not magnetic and shows lrgr micas (similar to 199B?)	1-Sep-12
2012	214	528785	6316956	-	-1	Rocks	-	-	-	f.g., gr, similar to 210 but better fol	-	1-Sep-12
2012	215	528784	6316917	-	-1	Rocks	Outcrop	-	-	Volc - f.g., gr, fol, cc (clsts), not mag	-	-
2012	218	529408	6317128	-	-1	Rocks	Outcrop	-	-	Qtzite - dk gy, slct (v. abnt), mica (abnt, layers, ibd, fol), dol (clst, siliceous, br, wthg, in between mica layers), mica layers seem to bend around (vn or dyke before deformation?)	-	1-Sep-12
2012	221	529936	6316275	-	-1	Rocks	Outcrop	-	-	Scht - gr, fol, mica (c.g.), clsts?, parts less gr, more gy, probably less mica and more qtz	Similar to last OC 128	2-Sep-12
2012	223	530667	6315547	-	2142217	Rocks	Outcrop	-	-	f.g., gr, fol, pretty homo, non magnetic	Similar to the last Ocs	-
2012	226	532510	6314307	-	-1	Rocks	Outcrop	-	Shale	f.g., not as gr as last Oc, more gy, fol (gr), more mass, qtz (vns, lower content in mtx), wk-mod magnetism, forms ridge	-	2-Sep-12
2012	229	534061	6318336	-	2123103	Rocks	Outcrop	-	-	bg, gy, qtz vns	Similar to 228, however qtz veins are visible in OC on top of hill, glaciated surf	2-Sep-12
2012	237	533909	6317956	-	2145699	Rocks	Outcrop	-	-	dol, qtz (vns)	Lineation on qtz vns in dol	-
2012	239	534379	6317634	-	2123103	Rocks	Outcrop	-	-	f.g., dk gy, well fol (waving), breaking in sheets, mica + clay mins, w-y precipitation on top	Slaty unit also seen along the lake shore of Fox lake, no sulfuric smell, little crenulation, cleavage 016/16?	-
2012	243	534769	6317290	-	2111162	Rocks	-	-	-	gr-Shst (chloritic Scht?) - m.g. (2 3 mm), fol, qyz, dkr gr mins (amph?), cc (little HCl rxn), polished surf	-	-
2012	245	534887	6318095	-	2123104	Rocks	Outcrop	-	-	bio + chl + phl (layer, shear horizon?), dol (on top, fol? with qtz vns)	Looks like a shear plane in dol	2-Sep-12
2012	246	534915	6318100	-	2123104	Rocks	Outcrop	-	-	fol? in dol, qtz (vns)	-	2-Sep-12
2012	248	535645	6318271	-	2118789	Rocks	Outcrop	-	-	f.g., dk gr, cc? (wthd out g.?, holes in rock), similar to f.g. mag unit without mag	Looking S, unit forms steep cliff on top of hill, looks deformed but no clear trend of fol visible, similar text as rocks S of Beckling	-
2012	253	537868	6316986	-	2142245	Rocks	-	-	-	Scht - f.g. (1 mm), gr, magnetic, well fol in parts, chl (pretty mass) in other parts, amph-mica-fsp?	-	3-Sep-12
2012	254	538150	6317133	-	2142246	Rocks	-	-	-	f.g., gr, fracs throughout, amph-mica-fsp, dol (fracs filled, og wthg), cc?, non magnetic,	-	3-Sep-12
2012	258	539242	6304273	-	2118752	Rocks	Outcrop	-	-	-	Cliff surf, looks like it could be the fol, basically same rocktype as last OC on top of ridge	3-Sep-12
2012	259	539355	6304338	-	2118752	Rocks	-	-	-	Schst - f.g., fol, between two more blocky mass lenses?	Further downhill: 360/40 (slumped?) on top amph+fsp+qtz+chl (gr, w)	4-Sep-12
2012	266	541363	6304844	-	2145649	Rocks	-	-	-	gr-Scht - m.g. (2 mm), cc (clsts), on top / mica-plag?, amph (gr), qtz (vns), cc (on joint and some in mtx), dyke (xcut fol and folded material, dyke has a clst and fol bends around), more mass below fol part	fol, slumped?, folded?, 338/60 (limb), 055/48 (second limb), 40/058 (hinge)	4-Sep-12
2012	268	541395	6304894	-	2145649	Rocks	-	-	-	-	Orientation of dyke, 1121: looks like concentration of shear bnds between more competent parts (bldr, pillows?), 1122: dyke.	-
2012	271	542809	6305811	-	2145665	Rocks	Outcrop	-	-	Scht - f.g., gr, amph-qtz, plag?, micas (w, clearly visible, in parts chl?), looks more mass than fol, overlying dol (bg-gy)	On top of 270, seems to form the top of the plateau because outcropping in 272 as well	4-Sep-12
2012	272	542886	6305606	-	2145665	Rocks	Outcrop	-	-	-	Same as 271	4-Sep-12
2012	273	543227	6305576	-	2145666	Rocks	Outcrop	-	-	micas (gr, w), amph, plag, qtz (linear, elongated blobs), HCl rxn, non magnetic	Similar to last, cliff facing W, elongation of qtz minerals measured as lineation, might have slumped a bit	-
2012	274	543505	6305454	-	2145653	Rocks	Boulder	-	-	gr-Scht - deformed, basalt? (elongated pillows)	bldrs look like they have been deformed almost linearly, boundary of pillows wthrs easier than core of pillow	-

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	276	543822	6304630	-	2145654	Rocks	Outcrop	-	-	f.g., gr, pillow? (looks elongated in one direction)	Lineation of the piece of rock along shore of lake, OC?, lineation is similar to last OC	5-Sep-12
2012	278	543650	6304611	-	2145640	Rocks	Outcrop	-	-	-	See 279	-
2012	279	543588	6304578	-	2145640	Rocks	Outcrop	-	-	Scht - f.g., gr, fol, qtz (vn), irregular	Looks like the same Scht in the 3 spots, qtz vn sample	-
2012	286	545605	6305114	-	2145657	Rocks	-	-	-	f.g. br-gr, qtz, amph, plag, mica, br min (cc?), cbnt (og) between gr-Scht pillow layer, parasitic folding? in shear zone, huge crenulation	322/78 (limb 1), 022/16 (limb 2), 19/150 (axis); 130 at folds in perpendicular xcut ; 130 on horizontal plane, 360/53 (cleavage), 135/67 (fol); 052/19 (min lineation), 300/42 (fol), 340/52 (cleavage); 344/27 (fol), 350/59 (cleavage), 040/09 (lineation)	5-Sep-12
2012	287	544308	6303054	-	2145629	Rocks	Outcrop	-	-	Scht - f.g., gr, fol, mica (mostly), cc qtz (mostly), dol qtz (og wthg vns, surrnd by more schisty material), pillows?	19/094? (lineation), magnetic country rock strongly mingled with og cbnt, 328/73 (fol)	5-Sep-12
2012	288	544352	6302855	-	2145629	Rocks	Outcrop	-	-	ibdg of cbnt (og, wthd) and qtz-rich material (magnetic, folded), qtz (vns)	-	5-Sep-12
2012	289	540377	6301426	-	-1	Rocks	-	-	-	gr (typical), w text, elongated in one direction, qtz-plag-amph, mica (gr, platy?), Fe-ox (rusty), sul (in places), elongated mins, holes (result of missing cc?)	Strike the general direction, gets more schisty in places	-
2012	290	540564	6301624	-	-1	Rocks	Boulder	-	-	-	Slaty patch, probably outcropping underneath but wthd colluvium part, could also be a bldr that curmbled to pieces	-
2012	291	540456	6301835	-	2145607	Rocks	-	-	-	-	Similar to 289	-
2012	292	540332	6301755	-	-1	Rocks	Outcrop	-	-	-	Could be layering of the rocks, 340/65? (fol/cleavage)	6-Sep-12
2012	293	541567	6302050	-	2145609	Rocks	Outcrop	-	-	f.g. (< 1 mm), gr, mass (in most places), amph-qtz-cc, mica (chl)	-	6-Sep-12
2012	294	541530	6302003	-	2145609	Rocks	Outcrop	-	-	Fe-oc crusts (stronger), w crusts, non magnetic, no cc	Further down the slope to W, str fol and alt of 316/70, possibly same rock type	7-Sep-12
2012	299	537869	6310725	-	1007657	Rocks	Boulder	-	-	"ibdg" of cbnt (og) and basaltic material (f.g., gr, magnetic), cc (holes on wthd surf)	-	-
2012	302	535783	6312312	-	1007661	Rocks	Outcrop	-	-	brc, bio (clsts) surrnd by qtz of cc, Scht mtx (gr), ibdg of dol (og) and bio-qtz material?	brc along small cliff face, 282/75 (fracs)	7-Sep-12
2012	305	532231	6307474	-	-1	Rocks	-	-	-	m.g. (2 - 3 mm), gr, w, mass, gabbro text, amph?-plag?, qtz (vns), non magnetic, no cc	On top of hill	7-Sep-12
2012	306	532185	6307449	-	-1	Rocks	Outcrop	-	-	some parts have y, rusty crust (py?),	Below 305, looks like a slaty OC below the mass basalt / gabbro material, 330/35 (fol), 30/056? (lineation, perpendicular?), the rusty layer seems to tr down the W hillside and continues in the northern ridge just above tree tops, ~ 270/35? (layer)	-
2012	307	531213	6305722	-	-1	Rocks	Outcrop	-	-	f.g., gr, mass, material, basaltic?,	~ 310-320 (strike where measurable)	7-Sep-12
2012	308	531902	6305197	-	-1	Rocks	Outcrop	-	-	Schst - f.g., gr, mag (in parts)	Similar green schist to last OC, 320/330? (strike), outcropping in Esker?	7-Sep-12
2012	309	531706	6305251	-	-1	Rocks	Outcrop	-	-	Schst - f.g., gr, mass, fol, broken up, magnetic,	315 (strike), small ridge in between two swamps, Scht looks like it is better fol here however still pretty mass, clsts (or lichen?), 326/55? (fol)	7-Sep-12
2012	310	531599	6305254	-	-1	Rocks	Boulder	-	-	rusty crust, sul (many)	-	7-Sep-12

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2012	311	531274	6305372	-	-1	Rocks	-	-	-	m.g. (2 -3 mm), gr, w, mass, gabbro, qtz (vns), no fol, no cc	Same as 305	7-Sep-12
2012	313	531036	6304600	-	-1	Rocks	-	-	-	coarser g., gr, more w than previous parts?	Ridge seems to drain to E, last ridge where we started seemed to train W, mineral lineation seems to strike 310	7-Sep-12
2012	316	532804	6302231	-	-1	Rocks	-	-	-	coarser g., more w, plag?, non magnetic, non calcitic	-	7-Sep-12
2012	317	532848	6302123	-	-1	Rocks	Outcrop	-	-	-	Joints in similar rock type	-
2012	318	533305	6301021	-	-1	Rocks	Boulder	-	-	cbnt (og, wthd)	-	8-Sep-12
2012	319	533672	6300533	-	-1	Rocks	Outcrop	-	-	gr, rusty, y, v. wthd, Fe?, sulfur?	Looks like S fabric / C fabric on a lrgr scale, on top mass blocks, 270/30, 266/30 (C bnds), 308/70, 312/74 (S bnds), 142/73 (fold cleavage)	8-Sep-12
2012	320	532831	6306974	-	-1	Rocks	Outcrop	-	-	typical finer g. (1 - 2 mm), w and gr mtx, fol?, sul (some)	Rest of the rock on the ridge looks mostly mass, E of landing area looked slaty	8-Sep-12
2012	321	534371	6307030	-	-1	Rocks	Boulder	-	-	magnetic	bldrs close to lake shore, all the way down from the ridge not much OC, at the beginning most of the rocks looked f.g. with the gr, w mtx, further down only bldrs, most of them same text, no real OC anymore	8-Sep-12
2012	323	535874	6306723	-	-1	Rocks	Outcrop	-	-	slate? (lower part) - gy / basaltic unit (upper part) - f.g., gr, mass, no lrg fol, sone joints (not v. regular)	Slate 350/40	10-Sep-12
2012	326	536554	6306656	-	2118770	Rocks	-	-	-	Scht - gr, fol (not as much), pretty mass (in general), non magnetic	±310 (strike)	10-Sep-12
2012	327	536452	6306259	-	-1	Rocks	Outcrop	-	-	basaltic, mass	OC around here on the ridge top	10-Sep-12
2012	330	537454	6306899	-	2118771	Rocks	-	-	-	m.g., gr, w, quite mass, qtz-plag-cc-amph-chl	-	10-Sep-12
2012	332	538015	6306931	-	2118772	Rocks	-	-	-	dol (bottom) - og, wthd, qtz (vns, also bigger ones) / Volc basaltic unit (on top) - gr-w, r mins (wthg, py?)	The og unit looks like either a clst or a dyke, but further (20m) it looks like the og unit shows some thickness	-
2012	333	537956	6306997	-	2118772	Rocks	-	-	-	Looks like bio (clsts, ol, gr (chl wthg?)) inside dol (og)	Looks like it either formed during hydrothermal activity or it was replaced partly brecciated	-
2012	335	538080	6307017	-	2118773	Rocks	Boulder	-	-	Volc basaltic unit (on top) - mass / (bottom) - rusty (in parts, sul?), more deformed, slaty, pretty wthd	No real OC	-
2012	337	537988	6307215	-	2118772	Rocks	Outcrop	-	-	slaty unit - gr, rusty (in parts), well fol, good cleavage	Under the mass Volc part, 350/32 (fol), slumped?	11-Sep-12
2012	339	538233	6307909	-	2118782	Rocks	Outcrop	-	-	dol (og, wthd), qtz (abnt, vns)	No gr bndg in the dol and more qtz vns than the last OC, 050 (marks strike), 300 (fol? strike), 20 m further N the gr Volcs, basalt again with only a small 5 cm wide dyke of og dol xcut, Volcs 306/72? (lt fol)	-
2012	340	536109	6310893	-	2087772	Rocks	Outcrop	-	-	alb-phl-qtz-cc brc	To the WSW it looks coarser g. and contains more cc, to the ENE it gets finer g. and more rnd and less HCl rxn, 334/67? (elongation plane), f.g. material is magnetic, some clsts	12-Sep-12
2012	343	536179	6310873	-	2087772	Rocks	Outcrop	-	-	Mbl - gr bnds, blasted	Several small ridges closeby?	-
2012	344	536142	6310886	-	2087772	Rocks	Outcrop	-	-	phl-alb, cc (not much, little HCl rxn), strongly fol (in places), w material (clsts, more vn-like structure, magnetic in parts), qtz (some), fsp (some)	blk and w material on old track, blk is apparently not bio if related to Glim, 328/72, 320/75, 327/78 (fol)	12-Sep-12

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2012	358	533453	6313675	-	2123099	Rocks	-	-	-	Scht - gr, v. fol / dol - f.g., og, bg, y, gy, lt og wthd, HCl rxn, interlayer between gr mica material and og-bg dol material	og dol on W shore, E shore looks like gr schisty material, lake ~ 20m wide, Schist 340/44, mica shows crenulation, looks similar to the Schist towards Lac Le Moyne, also folding	12-Sep-12
2012	359	533453	6313159	-	2123099	Rocks	Outcrop	-	-	dol - y, og, deformed, fol, qtz (vns)	Looks like the foliation is steepening	-
2012	362	533867	6312320	-	-1	Rocks	Outcrop	-	-	dol - gy-y, og-bg wthd, more mass than sheared, micas (bright, along planes), qtz (vns, some)	Doesn't look v. sheared, more mass	14-Sep-12
2012	363	533867	6312320	-	-1	Rocks	Outcrop	-	-	Volc - f.g., gr, fsp? (w clsts), mica? (blk clsts), gr mtx (no clsts), holes (along water), blobs (w, above water ctc)	Seems to form the W side of the island	15-Sep-12
2012	366	537345	6310280	-	2087774	Rocks	Boulder	-	-	SS? - qtz (abnt small vns), dol (bg,og, clsts), more clsts	Sketch in fieldbook.	5-Jul-12
2012	367	535999	6309883	-	2087758	Rocks	Outcrop	-	-	dol - og, ibdg / Mdst? - v. gr, layers, v. close to sediments layer, partly magnetic, mag (small xtls) / dol SS - og wthd, shows layering, around	OC along old trail, v.gr layers from Robs sample	11-Jul-12
2012	369	536021	6309881	-	2087759	Rocks	Outcrop	-	-	dol - og wthd / Mdst-Volcs - f.g., gr, somehow ibd	OC face oriented almost perpendicular to the layers, ~ 060 (OC strike), ~ 325 (layers strike), in general the OC is composed of dol (related to Carb?) and Mdst-Volcs ibd, more detailed description in fieldbook and an OC video and pics	12-Jul-12
2012	111471	535302	6311686	-	2087781	Rocks	Boulder	2200	dol-Carb	-	-	12-Jul-12
2012	111482	534695	6312841	-	2087789	Rocks	-	-	-	-	-	12-Jul-12
2012	111483	534693	6312861	-	2087789	RA Reading	-	100	-	-	-	13-Jul-12
2012	111484	534669	6312889	-	2087789	RA Reading	-	110	-	-	-	13-Jul-12
2012	111487	534522	6313098	-	2087797	RA Reading	-	90	-	-	-	4-Aug-12
2012	111522	534596	6312957	-	2087797	Rocks	-	250	-	-	-	16-Aug-12
2012	1150Cps	536124	6311244	-	2087783	RA Reading	-	1150	-	-	-	20-Sep-12
2012	BEAR	535429	6309709	-	2118787	Rocks	-	-	g-Scht	-	-	10-Aug-12
2012	BECKLING	539158	6312911	-	2087796	Rocks	-	-	Shale	-	-	15-Aug-12
2012	BOULDERMC12-01	540286	6313973	-	2142216	Rocks	Boulder	-	g-Scht	c.g., pale gr, lt gy-gr wthd, amph? (blk, suh grains), cc-chl	7 x 7 x 3 m bldr, recessive, +ve wthg ibds	12-Oct-12
2012	BOULDERMC12-02	536196	6310870	-	2087772	Rocks	Boulder	-	-	dull br-gy	Dislodged from CAT push E-NE of OCMC12-35	12-Oct-12
2012	Bs1	536377	6312012	Ashram	2087790	Culture	Bulk Sample	-	Carb	-	~ 22.5 m3 blasted	4-Aug-12
2012	Bs2	536341	6312003	Ashram	2087790	Culture	Bulk Sample	-	Carb	-	~ 15 m3 blasted	4-Aug-12
2012	Bs3	536324	6311997	Ashram	2087790	Culture	Bulk Sample	-	Carb	-	~ 4 m3 blasted	4-Aug-12
2012	CORE LIBRARY	535381	6309524	-	2118787	Culture	Core Library	-	-	-	-	21-Sep-12
2012	CORE SHACKS	535364	6309539	-	2118787	Culture	Core Shack	-	-	-	-	21-Sep-12
2012	Blast5	536005	6310688	Ashram	2087772	Culture	Blast Site	-	-	-	Source of GPS wpt data not found	20-Sep-12
2012	Blast4	535956	6310677	Ashram	2087771	Culture	Blast Site	-	-	-	Source of GPS wpt data not found	20-Sep-12
2012	Blast3	535769	6310684	Ashram	2087771	Culture	Blast Site	-	-	-	Source of GPS wpt data not found	20-Sep-12
2012	Blast2	535986	6310014	Ashram	2087758	Culture	Blast Site	-	-	-	Source of GPS wpt data not found	20-Sep-12
2012	Blast1	535841	6309927	Ashram	2087758	Culture	Blast Site	-	-	-	Source of GPS wpt data not found	20-Sep-12
2012	Sandpit	536332	6311212	-	2087783	Culture	Sand Pit	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 1	535397	6309539	-	2118787	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 2	535396	6309640	-	2118787	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 3	535596	6309791	-	2087758	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	Culvert 4	535613	6309813	-	2087758	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 5	536437	6311053	-	2087783	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 6	536369	6311081	-	2087783	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 7	536344	6311120	-	2087783	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 8	536343	6311149	-	2087783	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 9	536259	6311577	-	2087783	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	Culvert 10	536222	6312024	-	2087790	Culture	Culvert	-	-	-	Position adjusted to match satellite image (trails)	-
2012	DOCK	535384	6309397	-	2118787	Culture	Dock	-	-	-	-	6-Sep-12
2012	Drillhose	536084	6312936	-	2087798	Culture	Hose	-	-	-	-	6-Sep-12
2012	ET1	535770	6312646	-	1007661	Culture	Trench	-	-	bio material - not v. regular, qtz / cbnt material - big clsts, separated from bio material / cc? (probably, in many places)	Long trench in good shape, 310? (strike where measurable), looks like dol / cbnt materials are eiter mingling while in a honey-like composition or hy-therm replacement	6-Sep-12
2012	ET10	538025	6309913	-	2087761	Culture	Trench	-	-	bright colours, bg, sul? (few, blk dots)	Trench is basically filled in, only one piece of carbonate might actually be outcropping	6-Sep-12
2012	ET11	537413	6310166	-	2087774	Culture	Trench	-	-	lrg cbnt clst in between more bio-rich material	In general the trench is in good shape, filled with water on one end 295 (strike)	6-Sep-12
2012	ET2	535798	6312139	-	1007661	Culture	Trench	-	-	cbnt (og wthd), bio material (blk, in between)	Parts of the trench are under water, other parts are covered in moss, 340 (strike where measurable)	6-Sep-12
2012	ET3	535955	6312682	-	1007661	Culture	Trench	-	-	cc (w, bldrs) within mag (blk-gy) / dol-Carb - gy, xtls (bit of og wthg)	Is quite collapsed already, heli pad nearby	6-Sep-12
2012	ET4	535668	6312727	-	1007661	Culture	Trench	-	-	cbnt - clsts, abnt, fl?) / cbnt material - og wthd / bio material - blk, not much, mostly in f. bnds withing the og cbnt / Carb - brc	Is kind of in good shape, some sections seem to looks similar to the og material in the N, 330? (strike)	6-Sep-12
2012	ET5	537878	6310890	-	1007657	Culture	Trench	-	-	Carb - on a few OCs / bio material - 1 OC, blk, abnt	Quite a lot of trenches, dug in a star-like pattern in all directions, in pretty bad shape, only a few carb OCs can still be seen - 305? (strike), another OC shows bio material (abnt in the last trench), same as OC on old trail from last stint?	6-Sep-12
2012	ET6	537827	6310820	-	1007657	Culture	Trench	-	-	Carb - y to gr, brc, fl-bio, big clsts	Trench uphill, lower part pretty bad, almost a little stream, upper part in much better shape, 320? (elongation strike), no confident dip measurable, fl seems to start, less bio visible	6-Sep-12
2012	ET7	537295	6310126	-	2087760	Culture	Trench	-	-	cbnt - lrg clsts / bio-mica material - blk, fol?, qtz, cbnt clsts srrnd by bio-mica material, bio and Carb seem intermingled in a few spots / dol? - og wthd, ibd with bio Scht	Trenches are in resonable shape, water, mud, moss covering quite a bit of the outcropping rocks, 330 (strike), 060/56, 032/62 (bending around clsts?)	6-Sep-12
2012	ET8	538503	6310648	-	1007658	Culture	Trench	-	-	Carb? - qtz-fsp, sul (some), amph?, HCl rxn when smashed	Quite broken down, only a few spots on the ground with outcropping rock, more or less granitic looking-rock, doesn't really scratch iron, only a bit (almost no qtz?)	6-Sep-12
2012	ET9	538442	6310938	-	1007658	Culture	Trench	-	-	bio material - blk, fol, cbnt, mtx / various clsts - magnetic Scht to cbnt material, gr clsts (wthd basalty material), some elongated clsts	Trench still seems to be in good shape, strike is quite confident, dip not as much, if there was min or vn growth in the clsts it seems to stop at the clst boundary where visible	6-Sep-12
2012	FUEL CACHE	535412	6309595	-	2118787	Culture	Fuel Cache	-	-	-	-	2-Jul-12
2012	Gn Bldrs	536239	6311182	-	2087783	Rocks	Boulder	-	Gn	-	-	31-Aug-12
2012	Gn bldrs2	536155	6311204	-	2087783	Rocks	Boulder	450	Gn	-	-	20-Sep-12
2012	Gn Bldrs3	536084	6311221	-	2087783	Rocks	Boulder	450	Gn	-	-	16-Aug-12
2012	HELI	537853	6316954	-	2142245	Culture	HeliDrop	-	-	-	-	20-Sep-12
2012	HELIPAD	535551	6309543	-	2087758	Culture	HeliDrop	-	-	-	-	8-Aug-12
2012	KITCHEN	535374	6309628	-	2118787	Rocks	-	-	meta-Sed	-	-	2-Aug-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	LANDFILL	535320	6309687	-	2118787	Culture	Land Fill	-	-	-	-	6-Aug-12
2012	MCOC12-06	535876	6309870	-	2087758	Rocks	-	-	meta-Sed?	prominent qtz vns, recessive mtx	-	6-Aug-12
2012	MCOC12-16	534630	6311162	-	2123097	Rocks	-	-	Phyl / metabasalt	-	-	3-Jul-12
2012	MCOC12-23B	535684	6309708	-	2087758	Rocks	-	-	Phyl / metabasalt	-	-	3-Jul-12
2012	MCOC12-27	535479	6308646	-	2123092	Rocks	-	-	Phyl / metabasalt	-	-	3-Jul-12
2012	OCDH12-1	535659	6310583	-	2087771	Rocks	Outcrop	100	Phyl / metabasalt	v.f.g.-f.g., dk b gy to dk gy, oxidizes when wthd, bio-mag, fsp (mod, vns-blebs), mod magnetic	OC along cliff side, steep drop off at OC, OC runs approx N-S, about 5 - 7m long, stepped OC, 1 m high and 1 m more stepped on top of it	3-Jul-12
2012	OCDH12-10	535657	6310858	-	2087771	Rocks	Outcrop	190	Phyl / metabasalt	v.f.g.-f.g., med gy to gr gy, chl-amph-fsp, mag (f.g., xtls, 5-10%, throughout)	v. small OC, trends 4 m NW-SE, 0.25 m high, continues ~ 10 m to the N	3-Jul-12
2012	OCDH12-11	535615	6310887	-	2087771	Rocks	Outcrop	130	Phyl / metabasalt	Same as the previous sample	Small circular OC, blocky, on fairly steep slope, ~ 5 m long to NW-SE and 3 m up the hill	3-Jul-12
2012	OCDH12-14	535608	6310755	-	2087771	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk gy to dk b gy, slight fol, mag (diss, throughout), fsp (abnt, blebs, throughout), bio-amph-chl?, oxidizes	320/77 (NE, fol), lrg OC at steep drop off on hill, 15 m long trends NW-SE, goes downslope for 15 m, OC spans for 20 - 25 m on lower sections	3-Jul-12
2012	OCDH12-15	535454	6310841	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., gy gr to gr, fol, amph-chl (mainly)	336/70 (NE, fol), OC at 2m drop off on hill, OC 1m high, ~15m long at NW-SE trend	3-Jul-12
2012	OCDH12-16	535431	6310835	-	2087770	Rocks	Outcrop	100	Phyl / metabasalt	v.f.g.-f.g., dk b gy to b gy, mass to wk fol, mag (v.f.g., xtls, diss, throughout), amph (xtls, visible), bio (diss, throughout), fsp? (vnlets-blebs, minor)	OC along hill side, ~ 15 m in length, curves slightly downhil on NW side, trends NW-SE, 0.5 m high	3-Jul-12
2012	OCDH12-17	535383	6310815	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	gr	Small OC in shallow part of hill, ~ 3 m along NW-SE trend	3-Jul-12
2012	OCDH12-18	535321	6310850	-	2087770	Rocks	Outcrop	250	Phyl / metabasalt	v.f.g.-f.g., b gy to med gy, v. wk fol to mass, amph-chl (mainly), mag (f.g. diss), bio (v.f.g. diss), fsp (minor, patches-blebs)	310/65 (NE, fol), lrg OC trends NW-SE ~ 40 m, 4 - 5 m high, slightly blocky, corresponds to lrg hill drop off	3-Jul-12
2012	OCDH12-18B	535296	6310877	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	-	End of OCDH12-18	3-Jul-12
2012	OCDH12-19	535307	6310880	-	2087770	Rocks	Outcrop	175	Phyl / metabasalt	gr, fol, mag	310/70 (NE, fol), lrg-tall OC, 5 - 6 m high, trends NW-SE ~ 20 m long, similar to previous sample	3-Jul-12
2012	OCDH12-2	535642	6310569	-	2087771	Rocks	Outcrop	75	Phyl / meta-Sed	v.f.g.-f.g., dk b gy to dk gy, oxidizes when wthd, mag (xtls, abnt, 1 - 2 mm), fsp (abnt, < ~ 10 cm, pods-blebs)	OC runs ~ N to S, 10 m long, OC is ~ < 2 m high, has a stepped effect as well	5-Jul-12
2012	OCDH12-20	535444	6310989	-	2087770	Rocks	Outcrop	80	Phyl / metabasalt	v.f.g. to f.g., gr, fsp (lrg blebs)	Small OC, 4 - 5 m long along NW-SE, 0.5 m high, similar to the previous sample	5-Jul-12
2012	OCDH12-21	535484	6310979	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	gr	2 m high OC, ~ 20 m long trending NW-SE, similar to the previous sample	5-Jul-12
2012	OCDH12-22	535364	6311341	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy-b gy,bio (abnt, throughout), phl? (abnt, throughout), sul (minor, diss), mag (1 - 2 mm, xtls, diss, throughout), dol (in mtx), bio (vnlets, minor)	311/73 (NE, fol), lrg spread out OC, mainly covered in moss, flat part of hill so no height, somewhat circular shape (20 x 20 m)	5-Jul-12
2012	OCDH12-23	535269	6311248	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., b gy to lt gr gy, mod fol, amph-chl-fsp (main mins), bio (abnt, throughout), phl (abnt, throughout), non magnetic	322/75 (NE, fol), v. small OC on 1m drop off on hill, almost completely covered with moss, 1 m high, ~ 4 - 5m long, trends along topography	5-Jul-12
2012	OCDH12-24	535173	6311186	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk gr gy to b gy, well fol, sul (abnt, diss, throughout), bio (abnt, throughout), qtz (resistant, rnd, blebs), mod magnetic	v. small questionable OC, very blocky, not trustworthy for msmt, 0.5 m high, 2 - 3 m long, under a tree (in with roots)	5-Jul-12
2012	OCDH12-25	535133	6311177	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., lt b gy to med b gy, well fol, bio (abnt, throughout), chl (abnt, throughout), qtz (blebs with pressure shadows visible), silky lustre, mod magnetic	330/79 (NE, fol), small OC found under up-rooted tree, fairly flat area so no height to OC, somewhat circular (4 m x 4 m)	5-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCDH12-26	535114	6311160	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to gr gy, well fol, bio (abnt, blebs), sul? (abnt, blebs), silky lustre, mod magnetic	No trustworthy msmts, small OC in amongst trees, ~ 1m high, curved shape with concave side towards NW, ~ 5 m long	5-Jul-12
2012	OCDH12-27	535094	6311167	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy, mod fol, mag (xtls, 1mm, diss, throughout), bio? (abnt, blebs-patches), dol (minor, in mtx?), mod to str magnetic	mod size OC ~ 10 - 15 m long x 1.5 m high, along hillside, only ~ 20 m from OCDH12-26	3-Jul-12
2012	OCDH12-28	535019	6311186	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	111504 - v.f.g.-f.g., b gy-lt gr gy, well fol, amph (gr, xtls, 1 mm), chl / 111505 - f-m.g., lt gy-lt ol gy, dol (mod), sul (abnt, f.g., vnlets)	ctcs between changing lithos present, ibd? dyke? as # 111505 is only in a 0.75 m bnd, lrg OC spanning for ~ 100 m at bottom of hill, 320/86 (fol)	5-Jul-12
2012	OCDH12-29	534847	6311480	-	2123097	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy, mod to well fol, bio (abnt, throughout), phl? (abnt, throughout), mag (few, diss, xtls), slight magnetic character	Small rnd 6 m x 6 m OC at base of hill, ~ 0.5 m high, steps up out of swampy area	5-Jul-12
2012	OCDH12-3	535552	6310547	-	2087771	Rocks	Outcrop	150	Phyl / metabasalt	f.g., dk gr gy to mod gr gy, wk to mod fol, chl-amph	OC at base of steep cliff, 3 - 4 m high, exposure runs ~ 15 m N-S, OC has flat face, 2-311 (inter lin), ~ 311/40 (fol)	5-Jul-12
2012	OCDH12-30	534790	6311544	-	2123097	Rocks	Outcrop	-	Phyl / metabasalt	-	lrg OC that runs along topography, 1.5 - 2m high, spans for ~ 15 to 20 m, similar to the previous sample	5-Jul-12
2012	OCDH12-31	534962	6311607	-	2123097	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., b gy to dk b gy, bio (abnt, throughtout), phl (abnt, throughtout), chl (abnt, throughtout), sul (minor, diss), non magnetic, silky lustre	Small OC that runs along topography, along steep side of the hill, ~ 1 m high, surrnd by trees-shrubs, ~ 10 m long	11-Jul-12
2012	OCDH12-33	535211	6311605	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., b gy to dk b gy, well fol, mag (mod-abnt, xtls, diss, throughout), sul (minor, diss), bio? (few, vnlets), mod magnetic character	OC at top of hill, mostly covered by moss (lots of subcrop), only small section exposed, ~ 10 m NW-SE by 5 m NE-SW	11-Jul-12
2012	OCDH12-34	535301	6311534	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to med b gy, oxidizes when wthd, more mass than previous samples, qtz (mod, vns), bio (mod, throughout)	Small circular OC at top of hill, ~ 5 m x 5 m	11-Jul-12
2012	OCDH12-35	534900	6312390	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to dk gy blk, mod fol, dol (in mtx), bio (abnt, vnlets-patches),fsp (blebs-bnds, throughout), sul (abnt, diss), non magnetic	Small OC ~ 1 m high x ~ 4 m long trending along topography (N to S), small chance just a lrg bldr, 335/80 (fol, not totally trustworthy)	11-Jul-12
2012	OCDH12-36	534786	6312350	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g., med b gy to dk b gy, well fol, oxidizes when wthd, mod magnetic character, silky lustre	344/83 (NE, fol), lrg, flat lying OC on shallow slope on hill, OC has no height, mostly covered by moss, oval shape to it, ~ 20 m N to S and 10 m E to W	11-Jul-12
2012	OCDH12-37	534758	6312334	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g., med b gy to cr w, mod fol, mag (1 - 2 mm, xtls, diss, mod), gal?, bor?, sul (abnt, f.g., diss), fsp (abnt, blebs-bnds), bio or sph? (mod, blebs)	OC at ~ 1 m drop off on side of hill (1 m high), ~ 10 m long trending with topography (~ N to S)	3-Jul-12
2012	OCDH12-38	534746	6312331	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	-	Small OC ~ 0.5 m high, ~ 10 m trending along topography, only ~ 15 m downhill from OCDH12-37, stepped (steps down for 10 m), similar to the previous	11-Jul-12
2012	OCDH12-39	534664	6312308	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to dk b gy, mod to str fol, bio (mod-abnt), phl? (mod-abnt), sul (mod, f.g., diss), mag? (few, xtls, 1 mm), silky lustre, mod to str magnetic	Small OC, ~ 2.5 m high, flat lying against slope in hill, mostly covered by moss, ~ 4 m trending along topography	11-Jul-12
2012	OCDH12-4	535583	6310558	-	2087771	Rocks	Outcrop	-	Phyl / metabasalt	-	Blocky OC, 1.5 m high, runs 3 - 5 m N-S, same as the previous sample	11-Jul-12
2012	OCDH12-40	534598	6312286	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	-	Small OC that corresponds to 0.5 m drop off on hill side, mostly buried by moss and trees, ~ 10 m long trending ~ N to S or along topography, similar to the previous sample	12-Jul-12
2012	OCDH12-41	534563	6312284	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to dk b gy, well fol, sul (minor, diss), bio (abnt, throughout, silky lustre), mod magnetic,	Small rnd OC at shallow slope in hill, no height (along ground), ~ 10 m by 10 m big, mostly subcrop, covered lrgly by 2 inches of moss	12-Jul-12
2012	OCDH12-42	534357	6312553	-	2123098	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., gy gr to dk gr, mod to str fol, chl (abnt), bio (abnt), epd? (in small patches), sul? (sparse, f.g.), str magnetism, silky lustre	Small circular OC, ~ 10 m by 10 m, found in amongst bldr field (trustworthy as OC?), but fol msmts align with previous ones, 324/72 (fol)	12-Jul-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCDH12-43	534803	6312622	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to gy blk, wk to mod fol, bio (abnt, throughout), dol (in mtx), fl (bnds-blebs, mod), sul (sparse, f.g., diss, euh py xtls)	Long OC ~ 15 m long trends (E to W) or along topography, corresponds to a 1.5 m steep drop in hill (1.5 m high)	12-Jul-12
2012	OCDH12-44	534762	6312675	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to gy blk, mod fol, cc, bio (abnt, throughout), sul? (diss, xtls, vitreous lustre), mod magnetism	Stepped OC with 2 shelves, alongside steep drop off in hill side, 2 - 3 m high, trends along topography, ~ 30 m long	12-Jul-12
2012	OCDH12-45	534744	6312826	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to dk gy to blk, well fol, bio (abnt to a majority), fl (bnds-blebs), bio (rich layers), wk magnetism	OC is ~ 0.5 m high, runs ~ 15 m N to S, corresponds to a little drop off near top of hill	14-Jul-12
2012	OCDH12-46	534744	6312881	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	-	Small oval OC at top of hill, ~ 10 m x 8 m with the long section trending N to S, similar to the previous sample (OCDH12-45)	14-Jul-12
2012	OCDH12-47	534733	6312900	-	2087797	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., dk b gy to cr w to blk, well fol, bio (abnt, blebs-bnds), fl (abnt, bnds-blebs), dol (minor, in mtx), slight magnetism	Small, flat lying OC, mainly covered by moss, trends with topo ~ N to S, 10 m long x 5 m wide, mostly subcrop due to moss	14-Jul-12
2012	OCDH12-48	535759	6309682	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., wk fol, dk b gy, fl (few, blebs-bnds), non magnetic	OC near top of hill, corresponds to steep 2 m drop off, lrgly covered by moss, ~ 10 to 15 m long along topography	3-Jul-12
2012	OCDH12-49	535764	6309663	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	-	lrg OC, ~ 30 m long, more prominant in some spots then others, few m covered by moss, 2 m high, similar to the previous sample	14-Jul-12
2012	OCDH12-49B	535779	6309637	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	-	End of OCDH12-49	14-Jul-12
2012	OCDH12-5	535537	6310538	-	2087771	Rocks	Outcrop	250	Phyl / metabasalt	v.f.g.-f.g., lt b gy to med gy, fsp (blebs-pods), mag (1 - 2 mm, xtls, diss, throughout), bio (minor)	lrg OC along steep ~ 80 dgr drop off, 10 m long ~ N-S, 4 m high	14-Jul-12
2012	OCDH12-50	535811	6309605	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to dk b gy, v. wkly fol to mass, sul (mod, v.f.g., diss, throughout), fl (few, blebs), non magnetic	Small OC near top of hill, curved moon shape to it, ~ 4 m long, ~ 1.5 m high	14-Jul-12
2012	OCDH12-51	535841	6309557	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to b gy, mod fol, bio (mod, throughout), fl (few, blebs), bio + qtz vns (minor), silky lustre	Small OC at top of hill, ~ 10 m long trending with topography, up to 2 m high at maximum	14-Jul-12
2012	OCDH12-52	535902	6309475	-	2087758	Rocks	Outcrop	-	Mbl	v.f.g.-f.g., med b gy to dk b gy, mod fol, bio (mod), mag? (few, small, xtls), non magnetic, mod silky lustre	OC mainly covered by moss and vegetation, ~ 10 m long, trending with topo, ~ 1.5 m high, 316 / 71 (NE, fol)	14-Jul-12
2012	OCDH12-53	535976	6309425	-	2087758	Rocks	Outcrop	-	Mbl	-	OC at top of hill, nearly completely covered by moss, ~ 10 m long trending with topo, ~ 2 m high at its maximum, better exposure for 10 m S, similar to the previous sample	14-Jul-12
2012	OCDH12-54	536093	6309274	-	2087759	Rocks	Outcrop	-	Mbl	v.f.g.-f.g., med b gy to dk b gy, mod to well fol, bio (mod-abnt, throuhgout), fl (few, blebs), silky lustre, non magnetic	lrg ~ 3 m high OC in middle of hill, ~ 15 m long trending with topography, nice exposed face, not much moss cover	14-Jul-12
2012	OCDH12-55	535220	6308892	-	2123092	Rocks	Outcrop	-	Mbl	v.f.g. to f.g., lt gy to lt ol gy to lt br gy, dol (f.g.), cc (f.g.), qtz (few, vns), bio (in few patches)	Long ridge-like OC, more prominent-resistant than surrounding rock, trends NW to SE, long and narrow ridge, ~ 6 m wide x < 1.5 m high x ~ 25 m long	14-Jul-12
2012	OCDH12-57	535161	6308884	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g. to f.g., lt br gy to lt b gy, mass, bio (some, in patches), v. xtln	lrg OC on slope of hill, ~ 3 - 4 m high, ~ 20 m long trending with topography	3-Jul-12
2012	OCDH12-58	535159	6308856	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	qtz (vng, intense)	Small, 1 m high, 15 m long, trends with topography, similar to the previous sample	14-Jul-12
2012	OCDH12-59	535208	6308812	-	2123092	Rocks	Outcrop	-	Mbl	qtz (vn)	Heaved off OC, gigantic bldr pile leading up to actual OC, OC ~ 4 m high, circular shape due to bldr pile, ~ 15 m by 15 m, similar to the previous	14-Jul-12
2012	OCDH12-6	535473	6310615	-	2087770	Rocks	Outcrop	250	Mbl	v.f.g.-f.g., gy gr to ol gr, bio? (few, vnlets), chl-amph-bio-fsp, silky lustre (bio?), non magnetic	Small OC hidden by moss, trends NW-SE for ~ 2 m, 0.5 m high, OC is blocky	14-Jul-12
2012	OCDH12-60	535271	6308551	-	2123092	Rocks	Outcrop	-	Mbl	v.f.g.-f.g., dk b gy, well fol, bio (abnt, throughout), slaty (breaks into paper-thin sheets), v. silky lustre	Small OC, 5 m long trending with topo, ~ 1 m high, found under tree root, mostly covered by vegetation	14-Jul-12
2012	OCDH12-61	535284	6308553	-	2123092	Rocks	Outcrop	-	Mbl	v.f.g.-f.g., med b gy, mass, qtz (abnt, vns)	lrg 3 m high OC, trends along topo for ~ 25 m	14-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCDH12-62	535451	6308650	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., med b gy to lt br gy, mass, qtz (abnt, vns)	Small rnd OC on hillside, ~ 1 m high x 4 x 4 m	3-Jul-12
2012	OCDH12-63	535457	6308658	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., lt b gy to lt br gy, oxidizes to or when wthd, mass, qtz (abnt, lrg vns, throughout)	3 m high OC, mainly covered in moss, ~ 10 m long trending with topography	3-Jul-12
2012	OCDH12-64	535458	6308667	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., lt b gy to lt br gy, mass, qtz (lrg, abnt, vns, throughout)	3 m high OC at base of hill, lake is ~ 15 m away, OC is ~ 15 m long trending NW to SE along topography	3-Jul-12
2012	OCDH12-7	535568	6310663	-	2087771	Rocks	Outcrop	100	meta-Sed	v.f.g.-f.g., gy gr to dk gy gr, slightly fol, mag (oxidized, euh, xtls, throughout, ~ 10%), amph (abnt), chl (abnt), py? (minor)	320/67 (NE, fol,)blocky OC, some areas float possibly?, trends ~ N-S, ~ 15 m by 10 m up the hill	2-Aug-12
2012	OCDH12-8	535627	6310720	-	2087771	Rocks	Outcrop	90	meta-Sed	v.f.g.-f.g., gy gr to med gy, mod fol, bio-fsp-chl-amph, silky lustre, wk to no magnetism	OC forms circular shape, OC blocky, not trustworthy for msmt,10 m by 10 m lrg, stepped up for 3 m	2-Aug-12
2012	OCDH12-9	535704	6310774	-	2087771	Rocks	Outcrop	190	meta-Sed	v.f.g.-f.g., med gy to gr gy, fol, mag, bio (in small blebs-patches-vnlets)	305/75 (NE, fol), lrg OC trending NW-SE, ~ 25 m in length but extends ~ 20 m to the SE, second bench up the hill, ~ 1.5 - 2 m high	2-Aug-12
2012	OCMC12-01	535546	6309826	-	2087758	Rocks	Subcrop	-	meta-Sed?	-	OC 4 x 3 m	2-Aug-12
2012	OCMC12-02	535602	6309798	-	2087758	Rocks	Outcrop	-	Qtz vn / meta-Sed	gr-gy, blk horizons	lrg subcrop on hill, 20 x 20 m	2-Aug-12
2012	OCMC12-03	535651	6309878	-	2087758	Rocks	Outcrop	-	meta-Sed?	cc (vn), small brc zones	-	2-Aug-12
2012	OCMC12-04	535851	6309932	-	2087758	Rocks	Outcrop	-	calc-Sil	lt gr-gy	-	2-Aug-12
2012	OCMC12-05	535821	6309957	-	2087758	Rocks	Outcrop	-	meta-Sed?	qtz (vn, throughout)	OC 2 m high x 50 m long	3-Aug-12
2012	OCMC12-07	535884	6309960	-	2087758	Rocks	Outcrop	-	meta-Volc / meta-Sed	meta-Volc? - dk gr-gy / Mbl - lt pk, chl?, dol? (gr, stringers), fl?	ctc between meta-Volc and Mbl	2-Aug-12
2012	OCMC12-08	535929	6309991	-	2087758	Rocks	Outcrop	-	meta-Volc?	-	-	3-Aug-12
2012	OCMC12-09	535859	6310356	-	2087771	Rocks	Outcrop	-	meta-Volc?	folded	-	3-Aug-12
2012	OCMC12-10	535800	6310696	-	2087771	Rocks	Outcrop	-	meta-Volc?	brc bands within country rock, clsts (blk, ang to sub-rnd)	-	3-Aug-12
2012	OCMC12-11	535127	6309010	-	2123092	Rocks	Outcrop	-	dolostone	og-br wthd, chl, qtz (vns and vnlets, common)	Primary set of qtz vns	3-Aug-12
2012	OCMC12-11	535127	6309010	-	2123092	Rocks	Outcrop	-	dolostone	og-br wthd, chl, qtz vns and vnlets (common)	Secondary set of qtz vns	3-Aug-12
2012	OCMC12-12	534877	6310214	-	2123095	Rocks	Outcrop	-	meta-Volc	f.g., gr-blk, cc (vn, c.g., xltn)	OC trends 350	3-Aug-12
2012	OCMC12-13	535137	6310455	-	2087770	Rocks	Outcrop	-	meta-Sed?	Sltst?, gy	-	3-Aug-12
2012	OCMC12-14	534991	6310570	-	2087770	Rocks	Outcrop	-	Shale / Sltst	dk gy, fis	-	6-Aug-12
2012	OCMC12-15	534637	6310769	-	2123095	Rocks	Outcrop	-	Shale / Sltst	dk gy, fis	-	6-Aug-12
2012	OCMC12-16	534629	6311162	-	2123097	Rocks	Outcrop	-	meta-Volc	-	OC ridge trends 340, 6 m high x 50 m long	-
2012	OCMC12-17	534552	6311371	-	2123097	Rocks	Outcrop	-	Shale / Sltst / Slate	dk gy, rusty br wthd, parasitic folds, crenulation cleavage	OC is 50 x 30 m	6-Aug-12
2012	OCMC12-18	535419	6309493	-	2118787	Rocks	Outcrop	-	metabasalt	f.g., lt gr-gy, dull gr-gy wthd, wk-mod fol, phl-fsp-chl-amph-cc, sul (trace)	-	6-Aug-12
2012	OCMC12-18B	535456	6309481	-	2118787	Rocks	Outcrop	-	metabasalt	More mass than OCMC12-18, fol ibds	Continuous OC from OCMC12-18	6-Aug-12
2012	OCMC12-18C	535470	6309479	-	2118787	Rocks	Outcrop	-	metabasalt	wk fol, cc (trace), br wthg vescicles	Continuous OC from OCMC12-18B	6-Aug-12
2012	OCMC12-19	535607	6309435	-	2087758	Rocks	Outcrop	-	metabasalt	dk gy, gy-br wthd, wk-mod fol, cc (vn, minor), qtz + fsp (grains, +ve relief), cc?, some recessive mtx	Sks on flt surf, similar to OCMC12-18, 18B, 18C	6-Aug-12
2012	OCMC12-20	535616	6309456	-	2087758	Rocks	Outcrop	-	Mbl	dol Mbl - dk gy, earthy og-br wthd, mass, cc (vn), minor clsts-grains	OC ridge - 3 m high x 20 m long	6-Aug-12
2012	OCMC12-21	535500	6309597	-	2118787	Rocks	Outcrop	-	metabasalt	f.g., dk gy, dull gy wthd, cc (forms disturbed planes-sks between mtx-gdmass)	Same as OCMC12-19	6-Aug-12
2012	OCMC12-21B	535478	6309609	-	2118787	Rocks	Outcrop	-	metabasalt	-	Continuation of OCMC11-21, same as OCMC12-21	6-Aug-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCMC12-22	535622	6309765	-	2087758	Rocks	Outcrop	-	metabasalt	f.g., lt gr-gy, dull gr-gy wthd, wk-mod fol, phl-fsp-chl-amph-cc, sul (trace)	Slumped OC	6-Aug-12
2012	OCMC12-23	535668	6309727	-	2087758	Rocks	Outcrop	-	Slate	dk gy, rusty og-br wthd, fis	Poor exposure, slumped OC	6-Aug-12
2012	manual wpt OCMC12-23B	535684	6309708	-	2087758	Rocks	Outcrop	-	Slate	-	Continuation of OCMC12-23	6-Aug-12
2012	OCMC12-24	536155	6308016	-	2118778	Rocks	Outcrop	-	meta-Volc	m.g.-c.g., pale gr, gy wthd, chl-fsp-qtz-amph, sul (trace)	Mass ridge OC S of camp for ~ 100 m, 30 x 70 m	8-Aug-12
2012	OCMC12-25	536065	6308251	-	2118778	Rocks	Outcrop	-	metabasalt	f.g., gy-br wthd, wk fol, qtz (vn, trace), amygdules (br wthg)	-	8-Aug-12
2012	OCMC12-26	535549	6308573	-	2123093	Rocks	Outcrop	-	meta-Sed	-	-	8-Aug-12
2012	OCMC12-27	535479	6308646	-	2123092	Rocks	Outcrop	-	Mbl?	dol Mbl - f.g.-m.g., y-gy, og-br wthd, qtz (vn and vnlets, abnt, xcut)	-	8-Aug-12
2012	OCMC12-28	539168	6312682	Beckling	2087796	Rocks	Outcrop	-	Carb	phl-dol Carb - f.g., y-gy, dk og-br wthd, phl + dol (stringers), qtz (vns, rare, xcut), HCl rxn	OC is 2 x 2 m in face of small well vegetated ridge	8-Aug-12
2012	OCMC12-29	539148	6312599	-	2087796	Rocks	Outcrop	-	meta-Sed?	f.g.-m.g., gy, br wthd, cc (in mtx), qtz (minor), bio-phl, sul (trace)	-	8-Aug-12
2012	OCMC12-30	539130	6312525	-	2087796	Rocks	Outcrop	-	meta-Sed?	gy, br wthd, cc (in mtx), qtz (few, bnds), bio, sul (trace)	Heavy cover along ridgeline	10-Aug-12
2012	OCMC12-31	539211	6312445	-	2087796	Rocks	Outcrop	-	meta-Sed?	-	Continuation of OCMC12-30, now forms top of ridge 100 m long x 40 m high	10-Aug-12
2012	OCMC12-32	539078	6312032	-	2087796	Rocks	Outcrop	-	WR Brc	phl-bio-cc-cbnt mtx, clsts (siliceous, ol-gy), sul (trace)	mass ridge OC > 100 m long, small cave here	15-Aug-12
2012	OCMC12-33	539536	6313318	-	2111152	Rocks	Outcrop	-	Phyl?	ibd, schs unit, chl, other sections brc with sub-ang to rnd clsts (cc-qtz-fsp, minor bio)	50 x 5 x 10 m OC face along ridge, ibd unit	31-Aug-12
2012	OCMC12-34	539743	6315105	-	2142224	Rocks	Outcrop	-	Gr?	lt gy to gy, blk to gy wthd, qtz-fsp-bio mtx, fsp (clsts, w)	lrg 50 m long x 10 m high OC face along ridge	31-Aug-12
2012	OCMC12-35	536140	6310884	-	2087772	Rocks	Outcrop	-	Scht	ibd?, mass br wthg and recessive gy wthg schs unit, schs unit contains (rip-up?) clsts of mass unit	Exposed in old CAT push	31-Aug-12
2012	OCMC12-36	526811	6316184	-	-1	Rocks	Outcrop	-	meta-Sed?	f.g., gy-gr, gy wthd, wk fol, bio-phl-chl	lrg ridge trends NNW	31-Aug-12
2012	OCMC12-37	527015	6316033	-	-1	Rocks	Outcrop	-	meta-Sed?	Same litho as OCMC12-36, mod fol, abnt c.g. elongated rnd clsts	Ridge OC trending 330 deg continuous from OCMC12-36	31-Aug-12
2012	OCMC12-38	527667	6316120	-	-1	Rocks	Outcrop	-	metabasalt	f.g., gy-gr, lt gy wthd, mass, qtz-epd?-chl-plag?	Ridgeline OC	31-Aug-12
2012	OCMC12-38B	527656	6316021	-	-1	Rocks	Outcrop	-	metabasalt	-	Continuation of ridge OCMC12-38	31-Aug-12
2012	OCMC12-39	528204	6315828	-	-1	Rocks	Outcrop	-	metabasalt	cc (minor)	10 x 3 m exposure on ridge top, similar to OCMC12-38 and OCMC12-38B	31-Aug-12
2012	OCMC12-40	528322	6315945	-	-1	Rocks	Outcrop	-	Brc	br wthd mtx (f.g., gy, dol, qtz (minor), cc (minor)), gy wthd clsts (mass, v.c.g., ang, mins (v.f.g., silicone?, prominent wthg))	Small ridge	31-Aug-12
2012	OCMC12-41	528449	6317343	-	-1	Rocks	Outcrop	-	g-Scht	gr-gy, gy wthd, fol, cc-chl-bio-fsp?	OC on ridge top	1-Sep-12
2012	OCMC12-41B	528746	6317087	-	-1	Rocks	Outcrop	-	g-Scht	Some horizons with mag (f.g., suh, grains)	Almost continuous OC exposure from OCMC12-41, same as OCMC12-41	1-Sep-12
2012	OCMC12-41C	528786	6316914	-	-1	Rocks	Outcrop	-	g-Scht	rare clsts - lt pk-beige, cc (Mbl?), amph (f.g., suh, blk or gr), rnd	Same as OCMC12-41 and 41B	1-Sep-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCMC12-42	529409	6317125	-	-1	Rocks	Outcrop	-	-	v.f.g., gy-blk to gr-gy, gy to blk wthd, wk fol, mass, clsts (Si-Carb (dol), rare, og wthd)	OC on small ridge	1-Sep-12
2012	OCMC12-43	529935	6316276	-	-1	Rocks	Outcrop	-	-	v.f.g.-f.g., gr-gy to gy-blk, gr to gr-blk wthd, mod fol, micaceous (chl)	lrg ridge top OC exposure, similar to OCMC12-42	1-Sep-12
2012	OCMC12-44	532323	6314645	-	-1	Rocks	Outcrop	-	Mbl	f.g., lt ol-gy, gy to blk wthd, mass to wk fol, HCl rxn on powdered surf (dol)	lrg cliff face	1-Sep-12
2012	OCMC12-45	532456	6314748	-	2142221	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g.-f.g., lt gr, gy wthd, mag-cc-chl, silky sheen	Slumped OC face	1-Sep-12
2012	OCMC12-46	534071	6315093	-	2087815	Rocks	Outcrop	-	brc	blk wthd, brc with clsts (c.g. to v.c.g., sub-ang to rnd, elongation and strain shadows), zones of min pits, dol (xcut, vns or clsts?, lt ol gy, og wthd), mtx - no vns, bio-alb?-cbnt-qtz?	Ridge cliff face	1-Sep-12
2012	OCMC12-47	534116	6318420	-	2123103	Rocks	Outcrop	-	Mbl	f.g.-m.g., lt gy, dk gy wthd, mass, dol, qtz (minor), no visible vns or prominent joints	Small OC on side of ridge	2-Sep-12
2012	OCMC12-48	533827	6318080	-	2145699	Rocks	Outcrop	-	Mbl	f.g., lt gy, gy to dk gy wthd, mass dol, qtz vns (few, x-cut)	OC along ridge top	2-Sep-12
2012	OCMC12-49	534380	6317603	-	2123103	Rocks	Outcrop	-	Shale	shale / slate distinctive marker unit, rusty wthd, well fol with development of cleavage, some faces have earthy y precipitate	Exposed in cliff face, same as OCMC12-17	2-Sep-12
2012	OCMC12-50	534435	6317620	-	2123104	Rocks	Outcrop	-	meta-Volc	m.g.-c.g., pale gr, pk-gy wthd, plag-bio-chl-amph?, qtz (minor), sul (trace)	Small exposure on ridge top	2-Sep-12
2012	OCMC12-51	534592	6318446	-	2123104	Rocks	Outcrop	-	Mbl	f.g., lt gy to lt ol-gy, dk gy wthd, mass, dol-bio, qtz (minor), unkn min (bright gr)	OC as base of small rise	2-Sep-12
2012	OCMC12-52	534770	6318283	-	2123104	Rocks	Outcrop	-	metabasalt	f.g.-m.g., pale gr to dk gr, dk gy to lt br wthd, mod fol, chl-fsp, cc (minor), amph (minor)	OC exposure along lakeshore, polished surf	2-Sep-12
2012	OCMC12-53	534915	6318087	-	2123104	Rocks	Outcrop	-	Mbl	f.g., lt gy to lt ol-gy, dk gy wthd, mass, dol-sul-qtz-bio, msc - ser?, schs ibds	OC forms lrg ridge / cliff, fol has variable dip from 50 - 70 deg	2-Sep-12
2012	OCMC12-54	535577	6318272	-	2118789	Rocks	Outcrop	-	metabasalt	f.g.-m.g., gy-gr, beige to lt br wthd, mod fol, chl-qtz-fsp-cc-bio-sul	Exposure on side of ridge	2-Sep-12
2012	OCMC12-55	536965	6317148	-	2142244	Rocks	Outcrop	-	metabasalt	f.g., dk gy-gr, dk gy wthd, mass, chl-bio-amph?-fsp-qtz?-cc	Exposed in ridge face	2-Sep-12
2012	OCMC12-56	537299	6316844	-	2142244	Rocks	Outcrop	-	mafic - ultramafic	f.g.-m.g., dk gy-gr, blk to b-gy wthd, mass, amph?-bio-fsp?, srp or asbestiform amph on joint planes, wkly magnetic	Mass ridge exposure	2-Sep-12
2012	OCMC12-57	538119	6317214	-	2142246	Rocks	Outcrop	-	metabasalt	f.g.-m.g., pale gy-gr, dk gy to blk wthd, wk fol, amph-bio-chl-fsp	Ridge exposure ~ 500 m W of Lac LeMoyne	2-Sep-12
2012	OCMC12-58	538958	6303960	-	-1	Rocks	Outcrop	-	meta-Volc	f.g., dk gr-gy, gr-gy wthd, mass, clsts (ang to sub-rnd, c.g., qtz-fsp), mtx (chl?-fsp-amph?)	Exposure along edge of ridge	3-Sep-12
2012	OCMC12-59	539106	6304334	-	2118752	Rocks	Outcrop	-	metabasalt	f.g.-m.g., dk gr, gy to dk gy wthd, mass, chl-fsp-qtz-epd?, trem - act	Ridge top exposure	3-Sep-12
2012	OCMC12-60	539362	6304339	-	2118752	Rocks	Outcrop	-	metabasalt	f.g., pale gr, gy to dk gy wthd, mass, ch- fsp-amph	Ridge top exposure	3-Sep-12
2012	OCMC12-61	539607	6304195	-	2118752	Rocks	Outcrop	-	-	f.g., gy-gr, gy to dk gy wthd, mass, chl-amph?-qtz-fsp, cc (in some joints)	Ridge top exposure	3-Sep-12
2012	OCMC12-62	539725	6304109	-	2118753	Rocks	Outcrop	-	-	f.g., gy-gr, gy to dk gy wthd, mass, chl-amph?-qtz-fsp, cc (in some joints)	Ridge top exposure	3-Sep-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCMC12-63	540025	6304035	-	2118753	Rocks	Outcrop	-	Mbl	f.g., lt gy to y-gy, og wthd, mass, dol with xcut qtz vns, homo except for vns and schistose ibds (Mdst?)	Exposure along ridge, similar to numerous bldrs observed throughout property	3-Sep-12
2012	OCMC12-64	540248	6304333	-	2118754	Rocks	Outcrop	-	metabasalt	f.g., gy-gr, dk gy to blk wthd, wk fol, chl-cc-bio-fsp-qtz-amph?	Ridge top exposure	3-Sep-12
2012	OCMC12-65	540837	6305065	-	2118761	Rocks	Outcrop	-	-	f.g., gy-gr, gy wthd, wk fol, chl-cc-amph?-qtz-fsp, cc (trace, on joints)	Ridge top exposure	3-Sep-12
2012	OCMC12-66	541366	6304844	-	2145649	Rocks	Outcrop	-	metabasalt	f.g.-m.g., lt gr to dk gr, dk gy to blk wthd, wk fol to mass, cc-chl-bio?-amph-fsp	lrg ridge exposure, abnt OC	3-Sep-12
2012	OCMC12-67	542467	6306611	-	2145676	Rocks	Outcrop	-	Mbl	f.g., y-gy to lt ol-gy, bg wthd, mass, dol, qtz (minor)	Exposure on hillside with thick undergrowth	4-Sep-12
2012	OCMC12-68	542831	6305844	-	2145665	Rocks	Outcrop	-	Mbl	f.g., y-gy to lt ol-gy, bg wthd, mass, dol, qtz (minor)	OC forms prominent ridge	4-Sep-12
2012	OCMC12-69	543221	6305569	-	2145666	Rocks	Outcrop	-	metabasalt	f.g., gr-gy, gy to dk gy wthd, wk fol, chl-bio-cc-qtz-fsp	Exposure along small ridge top	4-Sep-12
2012	OCMC12-70	533770	6300582	-	-1	Rocks	Outcrop	-	meta-Volc	rusty wthd fol unit in ctc with meta-Volc (mass), sul (mass horizons throughout)	-	10-Sep-12
2012	OCMC12-71	538072	6307430	-	2118782	Rocks	Outcrop	-	Mbl	f.g., gy to pk-gy, mass, dol, calc-Sil? (emerald gr, platy), qtz (minor)	-	10-Sep-12
2012	OCMC12-72	533235	6313611	Fox Lake shoreline	-1	Rocks	Outcrop	-	Mbl	f.g., y-gy, og wthd, dol with x-cut qtz vns, dol (mainly), qtz (minor), sul (trace)	Along shoreline	12-Sep-12
2012	OCMC12-73	533281	6313638	Fox Lake shoreline	-1	Rocks	Outcrop	-	Phyl	v.f.g.-f.g., pale gr, gy-blk wthd, fol-crenulated, chl, silky texture	Along shoreline	12-Sep-12
2012	OCMC12-74	533877	6312350	Fox Lake shoreline	-1	Rocks	Outcrop	-	Mbl	f.g., y-gy to dk gy, og to gy wthd, mass, all dol, qtz (trace), xtln	Small island OC in Fox Lake	12-Sep-12
2012	OCMC12-75	534533	6311299	Fox Lake shoreline	2123097	Rocks	Outcrop	-	slate	py (cubes, euh)	Same rusty wthd slate as OCMC12-17	12-Sep-12
2012	OCMC12-76	536004	6309870	-	2087758	Rocks	Outcrop	-	Mbl	ibd dol (lt og-br wthd), chl Phyl (gr-bg wthd)	Subcrop exposed in old CAT push	14-Sep-12
2012	OCRR12-01	535954	6310925	-	2087771	Rocks	Outcrop	200	Phyl / metabasalt	v.f.g.-f.g., dk gy to dk gr, mod fabric cleaves homo, qtz (minor, vns, sul-chl-amph-alb?, cc (minor)	Small OCs surrounding knoll, all < 1 m, well hidden by vegetation, difficult to tell orientation due to fracs-shifting, ~ 294/86 NE, OCs in semicircle to N then W from this station for ~ 20 m	1-Jul-12
2012	OCRR12-02	535897	6310945	-	2087771	Rocks	Outcrop	170	Phyl / metabasalt	v.f.g.-f.g., dk b-gr gy to dk gy, amph-alb (mainly), sul (diss, py, po), qtz (mod-abnt, vns), dol (minor), cc? (minor), bio?-epd?	Flat lying OC, 5 x 3 m	1-Jul-12
2012	OCRR12-03	535900	6310841	-	2087771	Rocks	Outcrop	170	Phyl / metabasalt	v.f.g., dk b-gy, og wthd, amph-alb?-bio, sul (diss), srp - chl?, cbnt (minor), wkly magnetic, mod subvert fabric, softer	Flat lying lichen-covered OC, 304/69 (NE, fol)	1-Jul-12
2012	OCRR12-04	535926	6310877	-	2087771	Rocks	Outcrop	150	Phyl / metabasalt	v.f.g., dk gy, mass, wk fol, cc (pbl, diss, euh, < 2 mm, 5 - 10%)	More flat lying OC, similar to OCRR12-03	1-Jul-12
2012	OCRR12-05	535919	6310887	-	2087771	Rocks	Outcrop	280	Phyl / metabasalt	v.f.g., mass, heavily brc, vns xcut (abnt, including fl), hy-therm influence	Flat lying OC	1-Jul-12
2012	OCRR12-06	535798	6310924	-	2087771	Rocks	Outcrop	160	Phyl / metabasalt	v.f.g., dk gy, qtz (pods-vns), sul (diss), bio, wk subvertical fabric	Flat lying OC, no og ox, ~ 320 (fabric striking)	1-Jul-12
2012	OCRR12-07	535778	6310957	-	2087771	Rocks	Outcrop	-	Phyl / metabasalt	-	Small surf OC, mod fabric ~ 305 (subvert, fabric striking), similar to OCRR12-06	1-Jul-12
2012	OCRR12-08	535785	6311039	-	2087771	Rocks	Outcrop	120	Phyl / metabasalt	dk gy-gr, cc (minor), py (diss)	CAT 3 flat OC 2 x 4 m, wk fabric ~ 300 (fabric striking)	1-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCRR12-09	535808	6311045	-	2087771	Rocks	Outcrop	175	Phyl / metabasalt	f.g.-v.f.g., dk gy, mod fol, bio (abnt), qtz (blebs, common), sheen	Between wpts C3A and C3B on Main CAT 3 OC, sample 109967 taken here, fol ranges from 284 - 308 deg / 79 NE	1-Jul-12
2012	OCRR12-10	535874	6311068	-	2087782	Rocks	Outcrop	270	Phyl / metabasalt	mod fol, abnt xcut fracs-vns	Main CAT 3 OC between wpts C3C and C3D, ~ 3 m wide at this point, 285 - 305 deg / 74 (NE, fol), similar to OCRR12-08 and -09	1-Jul-12
2012	OCRR12-100	535684	6309706	-	2087758	Rocks	Outcrop	190	Phyl / metabasalt	v.f.g., dk b-gr-gy, locly rusty orange, finely laminated, fis, mass sections locly are heavily wthd, rusty, crumbly	3m cliff, subcrop prob continues the length of steep hill, 298/09 (NE, fol) (shifted?)	14-Jul-12
2012	OCRR12-101	535832	6309548	-	2087758	Rocks	Outcrop	250	Phyl / metabasalt	v.f.g. , dk b-gr-gy, platy/fis, str fol, slate	2 x 5 m stepped OC, 343/67 (NE, fol)	14-Jul-12
2012	OCRR12-101B	535828	6309561	-	2087758	Rocks	Outcrop	-	Phyl / metabasalt	c.g., slate / Phyl	Couple steps above and similar to OCRR12-101, lrg planar surfs, no shifting	14-Jul-12
2012	OCRR12-101C	535834	6309560	-	2087758	Rocks	Outcrop	205	Phyl / metabasalt	good fol	few steps above and similar to OCRR12-101B, continues ~ 10 m E, similar to OCRR12-101B	14-Jul-12
2012	OCRR12-102	536012	6309378	-	2087758	Rocks	Outcrop	215	Phyl / metabasalt	v.f.g., dk gr-b-gy, str fol, v. fis, cc (abnt, itsl, minor bands 25%)	Moss-covered stepped OC < 3 m high, face more competent than OCRR12-101C, similar to previous	14-Jul-12
2012	OCRR12-102B	536025	6309353	-	2087759	Rocks	Outcrop	330	Phyl / metabasalt	dk gr-b-gy, fis (locly), str fol, cc (abnt, itsl, minor bnds, 25%), slate-Phyl	Almost continuous OC exposure from OCRR12-102, better exposure < 3 m high, continues few m SE	14-Jul-12
2012	OCRR12-103	536074	6309301	-	2087759	Rocks	Outcrop	320	Phyl / metabasalt	-	OC 3 m high x 10 m SE trending, some vegetation cover, visible fol, similar to OCRR12-102B	14-Jul-12
2012	OCRR12-104	535936	6308980	-	2123093	Rocks	Outcrop	100	Phyl / metabasalt	f.g., lt gr to lt gy, mod fol, amph (trem, act), chl, py (minor, diss)	2.5 m high vertical OC face NW facing, some bldrs broken off, subcrop and OC trable uphill, 305/64 (NE, fol), lrg crevasses uphill may indicate OC has shifted slightly	14-Jul-12
2012	OCRR12-105	535604	6309038	-	2123093	Rocks	Outcrop	70	Phyl / metabasalt	f.g., gr-lt gy, mod fol, mass 'calc-Sil' sections with trem + act (xtls < 1cm, cc 30%, crumbly)	Elongated ridge OC, 2 m high x 20 m NW x 5 m wide, exposure faces SW, lichen cover on top, 309/59 (NE, fol), some shifting	14-Jul-12
2012	OCRR12-106	535258	6308727	-	2123092	Rocks	Outcrop	60	Mbl	f.g., w-tan,mass, suc text, qtz (common, random vns xcut), dol + cc (99%)	rnd competent OC, mostly moss-covered, subcrop trable for several m, exposure 3 x 3 m facing W	14-Jul-12
2012	OCRR12-107	535231	6308727	-	2123092	Rocks	Outcrop	350	Phyl / metabasalt	v.f.g., dk b-gr-gy, str fol, uniform, fis, cc (itsl, 20%)	Cliff OC, 2 m high x 8 m long, 331/44 (NE, fol)	14-Jul-12
2012	OCRR12-108	535237	6308655	-	2123092	Rocks	Outcrop	290	Phyl / metabasalt	v.f.g., gr-silver, str fol, platy, fis	2.5 m high OC, steep, dense vegetation, series of cliff OC continue uphill, similar to prev	14-Jul-12
2012	OCRR12-108B	535243	6308651	-	2123092	Rocks	Outcrop	-	Phyl / metabasalt	-	Almost continuous from OCRR12-108, better exposed cliffs, > 15 m vert overall with slight benches formed, ~ 10 m wide here, same as OCRR12-108	14-Jul-12
2012	OCRR12-109	535255	6308658	-	2123092	Rocks	Outcrop	300	Mbl / Phyl	Mbl - f.g., lt gy, br wthd, mass, competent, cc, qtz (vns) / Phyl - v.f.g., dk b-gy, str fol, planar, fis, cc (itsl)	Sharp ctc, > 5 m of Mbl above metabasalt, continue uphill exposure from OCRR12-108B, Mbl forms competent rnd OC	14-Jul-12
2012	OCRR12-11	535876	6311173	-	2087782	Rocks	Outcrop	-	Phyl / meta-Sed	f.g., dk gy and og, wkly fol, wkly magnetic, bio (abnt), fsp (abnt), amph?, py (diss), no cc	Open area with good OC exposure, > 20 x 20 m, more OC ~ 30 - 40 m NW	1-Jul-12
2012	OCRR12-110	535275	6308660	-	2123092	Rocks	Outcrop	-	Mbl	-	5 x 10 m elliptical area	14-Jul-12
2012	OCRR12-111	535308	6308672	-	2123092	Rocks	Outcrop	-	Mbl	qtz (vns)	8 m long N pointing arrowhead-shaped OC, 5 m wide at S end, 0.5 m high, lichen covered	14-Jul-12
2012	OCRR12-111B	535367	6308722	-	2123092	Rocks	Outcrop	-	Mbl	-	Almost continuous OC throughout area, series of hommocky ridges < 1 m high, most with OC exposures facing WNW	14-Jul-12
2012	OCRR12-112	535398	6308751	-	2123092	Rocks	Outcrop	100	Mbl	f.g., white-tan, br wthd, mass, fairly competent, cc (95%), qtz (abnt, vns, barren, white, xtls, < 1 m thick, random), xtln	v. lrg OC, E side of hill, some places 10 m high cliff, similar to prev	14-Jul-12
2012	OCRR12-12	535827	6311134	-	2087782	Rocks	Outcrop	200	Phyl / meta-Sed	dk gy, bt	Flat OC over 10 x 30 m area, same rock as OCRR12-11	1-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCRR12-13	535807	6311215	-	2087782	Rocks	Outcrop	270	Phyl / meta-Sed	v.f.g., dk gy, mass, gal? (diss, 1 - 2 mm, euh, silver xtls)	Couple small OC along top of hill, more 10 - 20 m downhill, mod-str fol 322/subvert (shifted?)	1-Jul-12
2012	OCRR12-14	535810	6311229	-	2087782	Rocks	Outcrop	480	dol-Carb?	f.g.-v.f.g., dk gy, pale gr patches, mass, fl (patches, locly, xcut vnlets)	Base of hill, > 1 m OC, abnt vegetation	1-Jul-12
2012	OCRR12-15	535829	6311248	-	2087782	Rocks	Outcrop	250	dol-Carb?	f.g.-m.g., dk gr gy, dk gy mtx, mass, r-br min (clsts), cc (minor, itsl), sul (diss)	More OC going downhill, frost heaving	1-Jul-12
2012	OCRR12-16	535846	6311265	-	2087782	Rocks	Outcrop	330	dol-Carb?	v.f.g.-f.g., dk b-gy, bio (patches and strings, common), sul, felsic vns	More blocky OC downhill	1-Jul-12
2012	OCRR12-17	535891	6311278	-	2087782	Rocks	Outcrop	450	dol-Carb?	f.g., tan-br-gy, mass, dol (dominantly), sul (diss)	OC ~ 1 m high, blocky, mass	1-Jul-12
2012	OCRR12-18	536093	6311218	-	2087783	Rocks	Outcrop	500	dol-Carb	f.g., p, mass, bnds (gr, late stage?), dol (dominantly), sul (minor)	Abnt ang bldr piles (subcrop nearby)	1-Jul-12
2012	OCRR12-19	536474	6310872	-	2087772	Rocks	Outcrop	-	para-Gn?	v.f.g., dk gy-blk, competent, bio (abnt), sul (trace, diss)	OC at corner in trail to Ashram	1-Jul-12
2012	OCRR12-20	536382	6311019	-	2087772	Rocks	Outcrop	400	para-Gn?	v.f.g., v. dk gr-gy-black, mass (wk fol?), sul (diss)	A few competent ang exposures with nearby ang bldrs (calved?), steep section of abandoned trail, 8 m x 5 m triangular OC, steep dipping	2-Jul-12
2012	OCRR12-21	536342	6311050	-	2087772	Rocks	Outcrop	400	para-Gn?	f.g., dk gy, wk fol-bndg?, bio (abnt), fsp (common, qtz?)	1.5 m high x 5 m long, small OCs sticking out of hill, ang competent rock	2-Jul-12
2012	OCRR12-22	536306	6311136	-	2087783	Rocks	Outcrop	500	dol-Carb	f.g.-m.g., tan, mass, dol (> 90%), bsn (diss, 1%), sul (patches, locly, 5%)	Jointed up OC > 10 m long heavily disguised by moss and vegetation	2-Jul-12
2012	OCRR12-22B	536299	6311140	-	2087783	Rocks	Outcrop	550	dol-Carb	slight pale gr tinge, blocky	Continuous from OCRR12-22	2-Jul-12
2012	OCRR12-23	536279	6311163	-	2087783	Rocks	Outcrop	500	para-Gn	dk gy and tan, bio (abnt), fsp (abnt, leucosome blebs)	3 x 3 m vertical exposure, continues 20 - 30 m to SSE and N, unit in ctc with and overlies (SW of) Carb, ctc runs ~ N-S	2-Jul-12
2012	OCRR12-24	536233	6311169	-	2087783	Rocks	Outcrop	380	dol-Carb	m.g., tan-pale gr, mass, gneiss? (ibd, locly, v.brc), sul (abnt, blk layers, late sul vns?), bio?	Vertical OC 2 x 5 m, ang, jointed	2-Jul-12
2012	OCRR12-25	536201	6311160	-	2087783	Rocks	Outcrop	300	calc-Sil	m.g., tan, mass, dol (> 90%), sul (dk gy, patches), amph (euh, clusters and f.g. mush), mixed lithos again	lrg vertical OC, 3 x 10 m, blocky	2-Jul-12
2012	OCRR12-26	536132	6311215	-	2087783	Rocks	Outcrop	400	dol-Carb dyke	dyke entraining many lithos, Gr xenoliths	Small hidden OC, looks like bldrs but pretty solid, ang broken-jointed rock with gaps	2-Jul-12
2012	OCRR12-28	535913	6311255	-	2087782	Rocks	Outcrop	550	dol-Carb	f.g.-m.g., tan, mass, fl (vnlets), sul (vns)	Looks more like OC than prev stations-bldr patches	2-Jul-12
2012	OCRR12-29	535900	6311243	-	2087782	Rocks	Outcrop	550	dol-Carb	m.g., tan, mass, fl (minor)	lrg OC cliff face, > 4 m high x 20 m, calving slightly, similar to prev	2-Jul-12
2012	OCRR12-30	535671	6311263	-	2087782	Rocks	Outcrop	170	Phyl / metabasalt	v.f.g.-f.g., dk gy-dk gr, mod fol, sul (diss)	Couple rock faces ~ 10 m apart, both facing NE, subvertical dip	2-Jul-12
2012	OCRR12-31	535618	6311253	-	2087782	Rocks	Outcrop	-	dol-Carb	f.g.-m.g., tan-pale gr, mass, qtz vns, common), sul, suc text	Small OC underlying area of w lichen, found at small offset - ground opens up 50 cm exposing rock	2-Jul-12
2012	OCRR12-34	535699	6310810	-	2087771	Rocks	Outcrop	200	Phyl / metabasalt	f.g., gr, fol, wkly magnetic, diss sul, qtz + fsp (abnt blebs and leucosome pods with p shadows)	4 x 5 m, stepped with bldrs at base, blocky, heavy vegetation	4-Jul-12
2012	OCRR12-35	535669	6310812	-	2087771	Rocks	Outcrop	100	Phyl / metabasalt	-	Small OC, flat-flush with suf, 2 x 1 m, 311/73 (fol), similar to prev	4-Jul-12
2012	OCRR12-36	535639	6310885	-	2087771	Rocks	Outcrop	180	Phyl / metabasalt	fsp (abnt, blebs), sul (diss), wkly magnetic	Small OC barely penetrates vegetation, 50 cm high x 3 m, similar to prev	4-Jul-12
2012	OCRR12-37	535628	6310954	-	2087771	Rocks	Outcrop	190	Phyl	f.g., med gy and r, fol but competent, sul (diss), increased fsp	Small flat surf OC, 2 x 3 m area, fairly moss-covered, slightly different than prev	4-Jul-12

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Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCRR12-39	535560	6310944	-	2087771	Rocks	Outcrop	190	Phyl / metabasalt	f.g., gr-gy, irregular text, sul (abnt, diss), mag (abnt, diss), bio (abnt, diss), fsp (grains randomly diss), qtz (vns), cc (in mtx)	1 x 6 m OC with another bench lower down	4-Jul-12
2012	OCRR12-40	535526	6310975	-	2087771	Rocks	Outcrop	170	Phyl / metabasalt	-	Fairly continuous OC since previous station, heavy vegetation, steep, similar to prev	4-Jul-12
2012	OCRR12-41	535506	6311009	-	2087771	Rocks	Outcrop	400	para-Gn	fsp (clsts and patches), bio + sul (abnt, strings throughout), irregular text	lrg vertical OC, 3 x 10 m, competent	4-Jul-12
2012	OCRR12-42	535498	6311045	-	2087782	Rocks	Outcrop	320	para-Gn	f.g.-m.g., mod fol, fsp + bio (dominantly), sul	lrg OC, many bldr-OC?, just below here, steep, this face 3 x 5 m, continues 20 m to N, cps increases, 311/83 (fol)	4-Jul-12
2012	OCRR12-43	535470	6311061	-	2087781	Rocks	Outcrop	200	para-Gn	cr-og and gy, mod compositional fol, fsp (+ qtz?), bio + sul (gy metallic, bnds), magnetic	1 x 6 m long OC, continues 15 m to N	4-Jul-12
2012	OCRR12-44	535327	6311107	-	2087781	Rocks	Outcrop	90	Phyl / metabasalt	f.g., dk gy-gr sheen, amph-bio-chl, fsp (occasional, blebs-bnds), magnetic, no cbnt	OC 2 x 10 m, just below flat area and at top of next descent - ctc?	4-Jul-12
2012	OCRR12-45	535290	6311098	-	2087781	Rocks	Outcrop	140	Phyl / metabasalt	v.f.g.-f.g., gr, mod fol, amph-chl-fsp?-sul, mag (minor)	Small, flush to surf, 2 x 2 m along surf, 320 deg strike	4-Jul-12
2012	OCRR12-46	535194	6311062	-	2087781	Rocks	Outcrop	130	Phyl / metabasalt	f.g., gr sheen, mod-str fol, sul (abnt), bio (abnt), cbnt (minor), fsp (bands and pods, locly), no magnetism	Small concealed OC, moss-covered, couple lrgr benches just below 2 m high	4-Jul-12
2012	OCRR12-47	535156	6311061	-	2087781	Rocks	Outcrop	425	Phyl / metabasalt	v.f.g,-f.g., med gy, mass text but still fol overall, homo, bio-sul, mag (mod)	v.lrg OC, competent, hard, mass, lichen cover, 311/65 (fol)	4-Jul-12
2012	OCRR12-49	535118	6311124	-	2087781	Rocks	Outcrop	330	Phyl / metabasalt	f.g., dk gy, mass, mag (abnt, diss), fsp (blebs), fracs (not cleave) when broken	lrg cliff OC, 2 m high vertical, runs 25 m to Nand S, v. competent	4-Jul-12
2012	OCRR12-50	535175	6310996	-	2087770	Rocks	Outcrop	300	Phyl / metabasalt	f.g., lt gy, homo, suc text, mass, alb (dominant?), sul (strings locly and diss), v. hard	lrg OC at base of hill, 3 m high on E side, competent, wthrs more rnd than ang, lrg amount of OC continues to S-SSE (essentially continuous)	4-Jul-12
2012	OCRR12-51	535177	6310945	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	m.g., mod foln, calc-Sil (layers, locly) / Mbl - cr-og, qtz	lrg OC continuation, at W end vertical and good fol-bedding, > 50 cm Mbl? with sharp ctc at 313/69 (NE, follows fol), same as previous	4-Jul-12
2012	OCRR12-52	535197	6310906	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	f.g., gy, mass, good fol, homo, sul (diss)	More continuous OC, 318/86 (NE, fol), same as previous	4-Jul-12
2012	OCRR12-53	535243	6310859	-	2087770	Rocks	Outcrop	-	Phyl / metabasalt	-	End of continuous OC, same as previous	4-Jul-12
2012	OCRR12-54	535381	6310765	-	2087770	Rocks	Outcrop	-	Phyl / meta-Sed	f.g., lt gy-br, wk fol, wkly magnetic, wk HCl rxn	lrg OC with lichen cover, subvertical at W rnds to flat on top, 15 x 8 m elliptical area	4-Jul-12
2012	OCRR12-55	535509	6311201	-	2087782	Rocks	Outcrop	180	Phyl / meta-Sed	f.g., br-gy and cr-og, wk fol, cbnt (mod), sul (abnt), bio (patches and strings), locly appears brc with fsp (grains)	OC in flat area, rises < 1m, 331/78 (NE, fol), wpts 55B and C are extensions of this	5-Jul-12
2012	OCRR12-55B	535508	6311142	-	2087782	Rocks	Outcrop	-	Phyl / meta-Sed	-	Continuous with OCRR12-55, as OCRR12-55	5-Jul-12
2012	OCRR12-55C	535509	6311234	-	2087782	Rocks	Outcrop	-	Phyl / meta-Sed	-	Continuous with OCRR12-55, as OCRR12-55	5-Jul-12
2012	OCRR12-56	535110	6311289	-	2087781	Rocks	Outcrop	80	Phyl / metabasalt	f.g., gr, mod fol, amph-chl	1 m tall step, poorly exposed OC, couple small exposures < 5 m	5-Jul-12
2012	OCRR12-57	535001	6311332	-	2087781	Rocks	Outcrop	60	Phyl / metabasalt	f.g., gr sheen, mod fol, bio (some)	1 m vert OC, 5 m long, camouflaged with moss, broken off bldrs resting just below, OC surf perfectly flat (hard to break, good for msmt) 325/66 NE, same as previous	5-Jul-12
2012	OCRR12-58	535040	6311361	-	2087781	Rocks	Outcrop	105	Phyl / metabasalt	f.g., gr, mod fol, mag (10%, str magnetic character), amph-chl-bio-epd?	Similar small OC bench, 1 x 3 m, good planar fol surf 313/66 (NE, fol), similar to previous	5-Jul-12
2012	OCRR12-59	535003	6311374	-	2087781	Rocks	Outcrop	110	Phyl / metabasalt	f.g., gr, mod fol, mag (10%)	Small multi-stepped OC, all < 50 cm tall, similar to previous	5-Jul-12

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2012	OCRR12-60	534964	6311373	-	2123097	Rocks	Outcrop	110	Phyl / metabasalt	f.g., gr sheen, mod fol, ambl-fsp, mag (10%)	Stepped OC similar to previous, more rock	5-Jul-12
2012	OCRR12-61	534934	6311374	-	2123097	Rocks	Outcrop	130	Phyl / metabasalt	f.g., gr sheen, mod fol, mag (coarser xtls)	Good OC at base of hill, 2 x 5 m, continues to N, abnt lichen coverage, similar to prev	5-Jul-12
2012	OCRR12-61B	534907	6311410	-	2123097	Rocks	Outcrop	-	Phyl / metabasalt	-	-	5-Jul-12
2012	OCRR12-62	534905	6311460	-	2123097	Rocks	Outcrop	-	Phyl / metabasalt	f.g., gr sheen, mod fol, chl? (increased, softer and lter)	Small OC, exposure 1 x 1 m but shape of rock below vegetation trable for several m	5-Jul-12
2012	OCRR12-63	535008	6311528	-	2087781	Rocks	Outcrop	220	Phyl / meta-Sed	f.g., gy and cr, mod fol, bio + fsp (dominant), mag (consistent throughout, 5%)	OC 1.5 m tall, vertical face with planar surf good fol, many lrg bldrs below approaching OC, 359/68 (E, bedding)	5-Jul-12
2012	OCRR12-64	535191	6311615	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	f.g., gr sheen, mod fol, fsp (grains and blebs, common, diss), mag (mod)	Flat OC, decent exposure, no msmt but similar strike to previous	5-Jul-12
2012	OCRR12-65	535236	6311648	-	2087781	Rocks	Outcrop	230	Phyl / metabasalt	f.g., gr, mod fol	Flat surf exposure, blocky, small crevasse will allow fol msmt, 334/88 (NE, fol)	5-Jul-12
2012	OCRR12-65B	535257	6311649	-	2087781	Rocks	Outcrop	480	Glim?	f.g., dk gy-br, mass, almost brc text, bio + sul + mag (metallic gy mtx), alb (tan, grains), dyke (vertically xcut OC, og, Carb?)	OC reemerges, vertical face 2 m high, E facing, sharp scint response (highest at og dyke)	5-Jul-12
2012	OCRR12-66	535280	6311668	-	2087781	Rocks	Outcrop?	750	Glim?	f.g., gy, metallic, mass, irregular text, fracs irregular, no good cleavage planes, brc text locly, Carb? dykes (wthd out)	E-facing OC?, 2 m high x 5 m wide, may be lrg pile of bldrs, rough surf, well vegetated, many bldrs at base, similar to OCRR12-65B	5-Jul-12
2012	OCRR12-67	535128	6311782	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	f.g., gr sheen, mod fol, bio (locly)	Flat surf OC, 2 m wide here, continues for > 10 m to S and widens, ~ 340/subvert (fol)	5-Jul-12
2012	OCRR12-67B	535105	6311756	-	2087781	Rocks	Outcrop	-	Phyl / metabasalt	-	-	5-Jul-12
2012	OCRR12-68	535129	6311684	-	2087781	Rocks	Outcrop	-	Phyl / meta-Sed	f.g., dk gy-br and cr (blebs), metallic, mod fol, bio-fsp (qtz?), mag (common)	Cliff OC, vertical face, 2 m high x 8 m long, blocky competent, 330/80 (NE, fol)	5-Jul-12
2012	OCRR12-70	534577	6312533	-	2087789	Rocks	Outcrop	120	Phyl / metabasalt	v.f.g, dk gr, mod foln, mag (< 5%), sul ? (depressions left by, wthd out), sheen-sparkly	v. small OC, hidden by vegetation, 50 cm x 2 m	11-Jul-12
2012	OCRR12-71	534482	6312401	-	2087789	Rocks	Outcrop	95	Phyl / metabasalt	v.f.g., gr, mod fol, mag (diss, 5%), chl-mica? (common), qtz (vns-pods, locly, follow fol), locly more crenulated with chl-trem? (pbl, clear-lt gr), sheen-sparkly	v. lrg OC, flat area, OC has relief < 1.5 m locly (along E end), also less fol sections with increase epd and less mag, 355/70 (E, fol)	11-Jul-12
2012	OCRR12-72	534520	6312287	-	2087789	Rocks	Outcrop	140	Phyl / metabasalt	f.g., lt gr-gy, wkly fol, amph-epd-chl, mag (diss, abnt)	lrg OC, similar to previous	11-Jul-12
2012	OCRR12-73	534424	6312243	-	2123098	Rocks	Outcrop	300	Phyl / metabasalt	f.g.-v.f.g., gr, mod fol, mag (diss-clustered locly, euh, xtls, < 2 mm)	lrg OC vertical face, 4 m tall with limb extending N, rock continues for a long time just below surf to the S, lots of ang bldrs, vertical face has abnt vesicles and channels, 330/57 NE	11-Jul-12
2012	OCRR12-74	534381	6312244	-	2123098	Rocks	Outcrop	380	Phyl / metabasalt	f.g., gy, r wthd, mass, homo, blocky, hard, competent, sul (common), diss, fsp + qtz (dominant), no cbnt	Continous OC from OCRR12-73, good exposure, along hill facing N, < 15 m high	11-Jul-12
2012	OCRR12-74B	534358	6312245	-	2123098	Rocks	Outcrop	350	Phyl / metabasalt	f.g., gy-tan, hard, competent, mass	Continuous with OCRR12-74, as OCRR12-74	11-Jul-12
2012	OCRR12-75	534407	6312237	-	2123098	Rocks	Outcrop	-	Phyl / metabasalt	fol with blebs	Continuous with OCRR12-73 and -74, gradational ctc zone?, slightly different litho than either OCRR12-73 or OCRR12-74 and -74B	11-Jul-12
2012	OCRR12-76	534338	6312264	-	2123098	Rocks	Outcrop	-	Mbl	f.g., tan-lt gy, mass, homo, suc text, bio + sul (common, vnlets, random orientations), qtz (common, xcut vns, < 3 cm, w, random orientations, minor sul within)	Continuous OC, litho change here, ctc at 76B 317/77 NE (flt?)	11-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCRR12-76B	534353	6312239	-	2123098	Rocks	Outcrop	-	Mbl	r wthd (subvertical planes), Mbl to W, mag Phyl (basalt?) in centre (Myl?), bnds-vns (leuco, parallel to fabric)	Continuous with OCRR12-73 to -76, flt? contact?	11-Jul-12
2012	OCRR12-77	534976	6312270	-	1007883	Rocks	Outcrop	-	Phyl / meta-Sed	v.f.g.-f.g., gy, mod fol, sul (diss), mag (diss), rusty wthg along fracs	Flat OC 5 x 3 m	11-Jul-12
2012	OCRR12-79	535246	6312281	-	1007883	Rocks	Outcrop	1200	dol-Carb / Glim	blocky, fl (trace, locly), sul?	3 m high x 10 m long to SE, SW-facing vertical face, visited in 2011 by MC and AK	12-Jul-12
2012	manual wpt near OCRR12-79	535255	6312297	-	1007883	Rocks	Outcrop	1200	-	-	Nose of OCRR12-79, 5 m high x 10 m wide, OC axis trends SE into topo	12-Jul-12
2012	OCRR12-80	534822	6312587	-	2087789	Rocks	Outcrop	250	Phyl / meta-Sed	f.g., dk gy-br and cr, mod fol, bt + sul (layers), fsp (pods and bnds), mag (diss, 5%)	Small hidden OC, flat, 1 x 1 m area, moss-covered	12-Jul-12
2012	OCRR12-81	534731	6312610	-	2087789	Rocks	Outcrop	100	Phyl / meta-Sed	f.g., mod fol, bio (layers and strings, dominant), sul, fsp (pockets and bnds), chl (minor, patches, locly), more chaotic text	2 m vert rise in topo, running N-S, crevasse on top with more expoure, cont to 81B (better exposure), similar to previous	12-Jul-12
2012	OCRR12-81B	534733	6312639	-	2087789	Rocks	Outcrop	150	Phyl / meta-Sed	bio (abnt, 50%)	Much better exposure of OCRR12-81, > 1 m high x 5 m wide	12-Jul-12
2012	OCRR12-82	534581	6312836	-	2087789	Rocks	Outcrop	130	Phyl / meta-Sed	f.g. , dk gy-br, minor cr, mod-str consistent fol, bio (layers, dominant, define foln), sul (diss and patches), fsp (pockets, scattered)	1 m tall OC, flat on top, good exposure N and W faces, fol fairly homo not as wavy as previous, 004/55 E (fol)	12-Jul-12
2012	OCRR12-83A	534717	6312806	-	2087789	Rocks	Outcrop	110	Phyl / meta-Sed	f.g., dk gy and cr, wk-mod fol (wavy), bio (layers weave, sheen), sul (diss), mag (minor), cc (itsl), dol (blebs?)	Start of lrg OC running 100's of metres N, description is ~ 10 m N of wpt (5 m high subvertical face)	12-Jul-12
2012	OCRR12-83B	534703	6312831	-	2087789	Rocks	Outcrop	-	Phyl / meta-Sed	-	Continuous OC from OCRR12-83A, > 20 m high, subvertical cliff face, wpt is halfway up face, same as OCRR12-83A	12-Jul-12
2012	OCRR12-83C	534695	6312890	-	2087789	Rocks	Outcrop	-	Phyl / meta-Sed	mod fol, bio (less), fsp (more)	Continuous OC from OCRR12-83A, < 2 m high, subvertical cliff face, OC continues for another 20 m, same as OCRR12-83A	12-Jul-12
2012	OCRR12-83D	534596	6312978	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	-	Less exposed, still steep but no good cliff OCs, same as OCRR12-83A	12-Jul-12
2012	OCRR12-83E	534649	6312940	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	-	Continuous? from OCRR12-83D	12-Jul-12
2012	OCRR12-83F	534637	6312935	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	-	Continuous? from OCRR12-83D	13-Jul-12
2012	OCRR12-84	534577	6313069	-	2087797	Rocks	Outcrop	250	Phyl / meta-Sed	v.f.g., dk gy, mod-strong fol, homo, felsics (v. few), bio-sul-mag, planar	More OC, likely continuous but less exposure	12-Jul-12
2012	OCRR12-85	534642	6313053	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	f.g., dk gy-br and cr, mod foln, bio + fsp (layers), sul? (diss)	Small OC, vertical face, only lichen cover, 330/82 (NE, fol)	12-Jul-12
2012	OCRR12-86	534706	6312933	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	v.f.g., dk gy, mod fol (planar), sul, felsics (reduced)	OC < 2 m high x > 50 m long	12-Jul-12
2012	OCRR12-87	534909	6312666	-	2087789	Rocks	Outcrop	330	Phyl / meta-Sed	rusty wthg crust, bio + fsp (layers), sul (minor)	Hidden OC, 2 m steep face, vegetation covered, 348/60 (NE fol)	12-Jul-12
2012	OCRR12-88	534688	6312711	-	2087789	Rocks	Outcrop	-	Phyl / meta-Sed	f.g., dk gy, fol, bio (layers, define fol), fsp (wthrs orange)	Stepped OC, benches < 1 m each, continues 20 m N-S, heavy vegetation cover, 342/68 (NE, fol)	13-Jul-12
2012	OCRR12-89A	534587	6312921	-	2087797	Rocks	Outcrop	-	Phyl / meta-Sed	-	Start of lrg OC, lower part of steep section	13-Jul-12
2012	OCRR12-89B	534597	6312944	-	2087797	Rocks	Outcrop	125	para-Gn?	f.g., dk gy and cr-og, mod fol (not uniform, mix of oriented bio and compositional bndg), bio layers wrap leuco pods (elliptical, follow fol, fsp + qtz)	More significant OC section here, > 2 m vertical face, steep slope above and below	13-Jul-12
2012	OCRR12-89C	534567	6313001	-	2087797	Rocks	Outcrop	130	Phyl / meta-Sed	f.g., dk gy, mod fol, less bio, sul (diss), fsp + qtz (pods, common, small)	4 m vertical OC here, more OC above and below, steep, rough and bumpy wthd face	13-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	OCRR12-89D	534562	6313014	-	2087797	Rocks	Outcrop	600	Glim / carb	f.g.-m.g., cr with dk br bands, chaotic text, loosely fol, bio (thin oriented layers, not uniform, ~ 15%), dol (dominant), alb? (minor, gy, f.g., hard), mass text where no bio present	Next good exposure has litho change, og wthg surf, mass, higher RA, Carb dyke?, visible ctc 2 m N of wpt, bio layers balled around 'intruding Carb' (distorted fol), Carb section 8 m long	13-Jul-12
2012	OCRR12-91	534541	6313054	-	2087797	Rocks	Outcrop	145	meta-Sed	v.f.g., gy, mod fol, locly text appears mass (reduced bio), fsp (mostly), mag (abnt, 10%), cc (vnlets (late, f.), bio? (minor), trem?	Continuing along steep hill, return to meta-Sed	13-Jul-12
2012	OCRR12-91B	534533	6313073	-	2087797	Rocks	Outcrop	130	meta-Sed	locly v.f.g., mass, str fol, bio (more), fsp (+ qtz?, pods, cr-og)	Continuous OC from OCRR12-91, 4-5 m vert face, smooth faces	13-Jul-12
2012	OCRR12-91C	534514	6313127	-	2087797	Rocks	Outcrop	-	para-Gn?	f.g., gy and cr, mod fol, bio, fsp (compositional bndg), mag (mod)	End of continuous OC, hill shallows out, 1.5 m high, blocky	13-Jul-12
2012	OCRR12-92	534457	6313065	-	2123100	Rocks	Outcrop	100	Phyl / metabasalt	wk fol, blk patches (layers) with amph (acidular, xtls only seen locly, mostly v.f.g.), fsp + qtz patches (layers, lt gy-cream) in between, mag (mod)	Small exposure, subcrop likely extends 20 m S and 5 m W, covered in white lichen	13-Jul-12
2012	OCRR12-93	534391	6313064	-	2123100	Rocks	Outcrop	110	Phyl / para-Gn	f.g., dk gy and cr, mod fol (compositional bndg and oriented bio), bio (30-40%), mag (minor, euh, < 1 mm)	1 m vertical face at W end, runs 10 m N-S	13-Jul-12
2012	OCRR12-94	534374	6313046	-	2123100	Rocks	Outcrop	170	Phyl / meta-Sed	reduced comp bndg, bio + mag (increased)	2 m vertical face x 30 m long trending NW, 340/76 (NE, fol), similar to OCRR12-93	13-Jul-12
2012	OCRR12-96	534474	6312798	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	f.g., lt-med gy-cr-br, wkly fol, locly mass text, bio (minor), sul (common), mag (common), alb (abnt)	1 m high x 10 m, well hidden	13-Jul-12
2012	OCRR12-97	534395	6312731	-	2123098	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g., gr, mod-str fol, cc (itsl, 5 - 10%), amph-chl, py (diss, euh cubes < several mm, commonly rusted-wthd out), dol? (abnt, euh, rhomb, diss, br, vitreous, pbl), basalt (vesicular patches preserved locly)	lrg OC devoid of vegetation, 5 - 6 m high x 70 m N-S, abnt lrg ang bldr-OC sections calved off sit at base of OC	13-Jul-12
2012	OCRR12-98	534480	6312723	-	2087789	Rocks	Outcrop	-	Phyl / metabasalt	v.f.g., gr, wk-mod fol, amph-chl-srp?, bio (diss)	1 x 5 m OC with block sitting in front (slumped off)	13-Jul-12
2012	OCRR12-99	534651	6312719	-	2087789	Rocks	Outcrop?	-	Phyl / metabasalt	v.f.g.-f.g., gy-gr, mass, cbnt? (og wthd pbl), py (rusted)	Pile of bldrs, subcrop below	13-Jul-12
2012	OCRR-71A	534435	6312493	-	2123098	Rocks	Outcrop	-	Phyl / metabasalt	-	Continuous with OCRR12-71?	11-Jul-12
2012	Quad	535825	6311134	-	2087782	Culture	Quad	-	-	-	-	5-Jul-12
2012	REPEATER	535999	6310983	-	2087772	Culture	Repeater	-	-	-	-	21-Sep-12
2012	RR12-27	536067	6311221	-	2087783	Rocks	Boulder	300	Carb?	m.g., tan, mass, dol, qtz (vnlets)	OC?, ang bldrs, maybe shifted, similar to OCRR12-26	2-Jul-12
2012	RR12-32	535527	6311230	-	2087782	Rocks	Outcrop?	-	Phyl / metabasalt	f.g., sul	OC?, couple of pcs of rock on slightly elevated area	2-Jul-12
2012	RR12-33	535637	6311123	-	2087782	Rocks	Outcrop?	-	Phyl / metabasalt	gy-blk, sul (abnt), dol (minor, in mtx)	Possible OC, 0.5 m high step in topo for ~ 10 m	2-Jul-12
2012	RR12-38	535600	6310959	-	2087771	Rocks	Boulder	1200	dol-Carb?	f.g.-m.g., dk gy, sul (abnt), dol (mtx), qtz-alb?	Buried bldr, ang	4-Jul-12
2012	RR12-48	535110	6311057	-	2087781	Rocks	Outcrop?	300	Phyl / metabasalt	f.g., b-gy, fairly mass, amph-bio?-fsp, qtz (vns), non magnetic	lrg flat OC, < 1 m high in spots, similar to OCRR12-47	4-Jul-12
2012	RR12-69	534923	6312393	-	2087789	Rocks	Boulder	1300	Carb?	f.g.-m.g., gy-br-r, mass, dol, sph (patches)	3 m x 3 m area of ang blocks (subcrop?) along small < 1 m dropoff	11-Jul-12
2012	RR12-78	535629	6312037	-	1007661	Rocks	Outcrop?	600	Glim brc	Glim (mtx) - dk br-blk, chaotic, brc, bio, py (diss) / Carb (pockets-clsts) - f.g., cr-tan, mass, homo, dol (dominant), up to few cm's pockets, sub-rnd	bldr? or OC? (more likely), well-vegetated hillside with a couple of NE-facing rock faces, overall 4 m high	12-Jul-12
2012	RR12-95	534352	6313025	-	2123100	Rocks	Boulder	180	Gr?	f.g., gy and cr, hetero, mass, blocky,no good fol, sul? (gy patches < few cm's locly, sharp ctcs), fsp (20%), qtz, sul (diss)	2 m x 10 m exposure (bldr?), lots of bldrs approaching from N, ang	13-Jul-12
2012	S-14	536127	6311244	-	2087783	Rocks	Boulder	1000	Carb	late-stage	buried bldr?	1-Jul-12

Appendix 6: 2012 Prospecting Locations and Descriptions

Year Collected	WPT	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	General Location	Claim	Observation Type	Subtype	MAX CPS	Tentative Litho	Description	Comments	Date Collected
2012	SECONDARY CAMP	535102	6310020	-	2118787	Culture	Secondary Camp	-	-	-	-	20-Sep-12
2012	WPMC12-01	535917	6309975	-	2087758	Rocks	Outcrop?	-	-	-	-	15-Aug-12

APPENDIX 7: 2012 REGIONAL GEOLOGY MAPPING REPORT (J. RÖßIGER)

MAPPING REPORT OF THE ELDOR AREA AROUND THE ASHRAM DEPOSIT

1 GEOLOGY

Data collected during the field program suggests that the property has been affected by a regional-scale thrust fault; this thrust fault is interpreted to lie at the eastern edge of the property trending northwest – southeast through Lac Le Moyne or paralleling Le Moyne's shoreline. The traverse east across the property toward the western shore of Lac Le Moyne is marked by subtle yet distinct lithologic changes in certain lithologic units; these changes are most notably observed in the schists and include the development of a stronger shear foliation as well as the alignment of micaceous planes parallel to the shear plane. Competent grains within the schists were also observed to form clasts; unfortunately a definite sense of shear could not be determined, although it should be noted that pressure shadows were observed in outcrop behind these clasts. A mineralogical change in the schists is the development of a coarse-grained, dark green to black, bladed to radial, subhedral amphibole that is most likely actinolite. The presence of a coarse-grained amphibole could imply that this particular species are porphyroblasts formed during a regional metamorphic event. It is important to note however that these 'porphyroblasts' were not observed to have any preferred orientation, however they were also dominantly observed on a plane parallel to the schistosity and it is possible that a mineral lineation could exist in the plane perpendicular to the schistosity. If no lineation exists in the plane perpendicular to the schistosity then this implies that the actinolite formed after the peak deformational event possibly due to deeper/hotter material that got overthrusted, causing a regional/contact metamorphic overprint. The general dip of the foliation appears to shallow moving eastward toward Lac Le Moyne, whereas western sections of the property have steeper foliation dip angles between 70° - 80°. The general trend appears to be that the foliation dip angles are steeper west of the Eldor Carbonatite and shallower to the east. In both cases however the dip direction is consistent and roughly parallel to the strike of the Labrador Trough.

Further interpretation suggests that the Eldor Carbonatite could either be situated in a large, overturned anticline which would correspond to the observed shallowing of the foliation to the East and steeper foliations to the West. However this model assumes that the carbonatite body would have a pre or syn-deformational emplacement. If that were the case then the carbonatite could have been a more competent lithology in contrast to the surrounding sediments. It is possible that the carbonatite could have acted as a clast during deformation and the country rocks were moved around and over the carbonatite 'clast'. Regardless of the timing of the carbonatite's emplacement relative to a major deformational event, features within the carbonatite still suggest a later strike-slip movement. Lineations measured around the carbonatite have very shallow dips which could correspond to lateral movement. However, as lineation measurements further away from the carbonatite are ambiguous these shallow dipping lineations could also be the result of post tectonic expansion. The dominant impression derived from most of the rocks and outcrops is that they experienced a substantial magnitude of strain; textures from a gneissose unit surround the carbonatite imply a gamma magnitude of ~10. Overall most of the rocks look like they experienced a lot of strain. Textures from the gneiss surrounding the carbonatite suggest a gamma of at least around 10. The gneiss and the more siliceous breccia surrounding the carbonatite could have a similar origin because their composition seems to be not that far apart and they also seem to stand in direct contact with

each other. It would also be possible that the silicious breccia and the carbonatite could have been implaced during the same time. It is very well possible that both were part of the same melt. Since carbonate and siliceous melts are not very well mixable they could have formed separate bodies during emplacement. Some textures in the rocks also suggest that the surrounding rocks were deeply buried during emplacement because they hint that the wall rock must have been hot.

1.1 COUNTRY ROCKS

Country rocks around the carbonatite appear to consist of several sedimentary and intrusive layers. Shearing and thrusting from a major deformational event have essentially overprinted all earlier structural fabrics, this, in combination with limited outcrop exposure makes it difficult to decipher whether the sedimentary and intrusive layers are simply interbeded or isoclinally folded. If the layers are in fact folded, then this could represent larger-scale parasitic folding or sheath folding along the shear zone. Sheath folding however doesn't normally occur with such regular intervals as those observed at the Eldor property and then there is a question of whether it would be possible at such a scale. Limbs of different dip were not clearly observed as either the outcrop extent did not permit it or the measurements were very similar which could only be explained by isoclinal folding. Alternatively the similar dips observed on the limbs may be the result of overprinting from the shearing and thrusting event. The overall composition of the rocks, in combination with historic work, imparts that the property was an ocean floor and basin setting. The western part of the property appears to be dominated by prominent ridge-forming gabbros with minimal outcrop exposure in the valleys between. Occasionally however, these valleys have exposures of highly deformed schistose units that can be observed in direct contact with massive, undeformed gabbroic units. This relationship suggests that the schistose units likely acted as some sort of sliding surface and the multiple gabbro ridges are in fact several thrustings of the same unit. Parts of this schistoseunit are also magnetic due to varying abundances of modal magnetite, that is interpreted to be of metamorphic origins because of its idiomorphic shape and random orientation. Aside from this there are very few observable differences in the schistose units in the western sections of the property.

Eastern sections of the property and the area around the carbonatite host lithologies that are not noted in the west. The concept is that the western portions of the property are dominated by sediments that were deposited over an ophiolite sequence. At some localities interbedding between sedimentary carbonates and other sediments or volcanic units is clearly observed while at others, carbonates are incorporated as clasts in what could be turbidites. Whether these layers do in fact represent turbidites or in some places we clearly see the interbedding between carbonates and more greenish looking sediments or even volcanic units. We also observed turbeditic layers where one layer of carbonate incorporated clasts of the sedimentary layer. Whether those layers really represent turbedites or if they've formed in another way was not clearly visible. Some fining up sequence was visible, however in places it also looked like the clasts were fining up in both directions. The whole outcrop face looked like some transgression sequence. Thicker carbonate sequences graded into thicker sedimentary sequences. In places we also observed sandstones. Then closer to the gneiss and later the carbonatite these sedimentary units start to contain Magnetite. Maybe because of the heat from the intrusions? Carbonate melt itself is probably not that how but if both rock types were really part of the same melt then the temperature had to be higher. On the magnetic survey map it could very well display as some reaction horizon around the intrusion. However the strong magnetic signal is also continuing away from the intrusion. While we still find Gabbro like rocks in the Eastern part of the area they are not as prominent as in the Western part. To the South however we clearly identified layers of weathered pillow basalts. They are in contact with carbonates and also Gabbro like rocks.

1.1.1 META-SEDIMENTS

This layer is basically the host rock of all other country rocks. All the rocks which couldn't be identified otherwise were classified as meta-sediment. Usually rocks in this unit show a moderate to high amount of strain. However most of the time no clear sense of shear was visible which would be an indicator that the major component of the thrust was a pure shear component or the viscosity contrast between the clasts and the surrounding material was not high enough. Generally the amount of foliation formation and the massive overprint in the whole area wouldn't be an indicator for that. Around the Beckling area but also in other outcrops mostly on the Eastern side of the carbonatite shearing lineation could be clearly measured and identified. In that area the dip is quite shallow with 16° in direction 348. That probably means that at least the last part of the thrusting was a more strike slip oriented movement. Since the lineation is dipping to the North it would suggest that the strike slip movement was dextral with a small thrusting component still present. No clasts to verify that assumption could be found in outcrop. However some samples were taken which could be turned into thin sections to continue structural analysis on a smaller scale. The sediments themselves are composed of micas, chlorite, quartz, feldspar and also calcitic minerals. Based on observations with the handlense this calcitic mineralization is mostly concentrated on small joints or veins. It could have been some sort of impregnation during the formation of the carbonatite or remobilization of calcitic/dolomitic material. As already mentioned it is not totally clear from outcrop whether the sediments actually were affected by some larger scale folding which, after the thrusting, is present as some kind of isoclinal folding or if there are several inter-beddings. Personally I think whichever is true basically doesn't change the evolution much. It is clear however that there has been inter-bedding of the sediments with several dolomite cycles. This could have been sea level changes during deposition. In distal units during high sea level probably more clayish material got deposited while more proximal to the shore calcitic/dolomitic units were precipitated from the sea water. Since all of the sedimentary units are probably more than 2Ga old this would have been non biotic precipitation. During low sea levels the same distal units could have been affected by calcitic/dolomitic precipitation while the clay deposition was shifted even further outwards. The proximal units during that time probably were affected by terrestrial sand/siltstone deposition. This could have also happened very close to the shore line. On some weathering surfaces in these units it also almost looks like some cross bedding (DSC00318) was present which is an indicator for either terrestrial or shoreline deposition. To make sure it is actually cross bedding and no foliation development during shearing or a strange weathering feature one has to analyse this outcrop and probably other more detailed. Other units that are inter bedded in the sediments are more massive, medium grained volcanic units which probably have intruded into the sediments as sills. They seem to be more competent than the sediments because wherever they are encountered they don't show much evidence of deformation or shearing. They mainly seem to form rigid blocks in the sheared or deformed sediments.

1.1.1.1 META-VOLCANICS

As already mentioned in the last part of this report, the meta-volcanics seem to form former sills within the meta-sediments. Due to deformation they now mostly form more competent ridges with higher elevation or resistance to weathering than the surrounding meta-sediments. Their general composition seems to be medium to fine grained with many mafic minerals. However feldspar is also present. There are also green minerals which are not all the time only chlorite. My best guess at the moment would be that there are some green amphiboles or Epidot in the volcanics. They barely show any kind of deformation. Sometimes a bit of foliation development is visible in outcrop. Mostly the bulk material however looks pretty much massive without even elongation of the minerals.

They have not been drawn separately on the map because the resolution required would have been too detailed. The main difference seems to be less shearing and more resistance to weathering.

1.1.1.2 SCHIST (MAGNETIC)

As described before it is very hard to distinguish these rocks from the other meta-sediments without a magnet. Sometimes they look a bit different, but then the other sediments also show variations. The main difference is that they contain Magnetite in different sizes. Sometimes these layers are too thin in width to be drawn on the map. On the profile we exaggerated their actual size greatly to show certain spots of occurrence which at least seem to have their location in regard to the nearest shear zone in common.

1.1.1.3 SCHIST (RUSTY)

This unit was only discovered in the south west right underneath the Gabbro ridge. From the helicopter we were able to trace it along the ridges. It seems to follow the Gabbro and might have acted as some sort of slip layer for the thrust faults. Main difference to the other meta sediments in outcrop was the weathering colour which made them look brown and rusty. Maybe later on during some hydrothermal event these slip layers acted as pathways for a fluid containing iron which impregnated them with new minerals. They are also heavily foliated and have gone through quite some strain.

1.1.1.4 SCHIST (SLATES)

Another part of the meta-sediments which looks like it has been a clay stone before deformation. It shows a very grey colour and fine foliation. Most of the outcrops are too thin to be highlighted on the map. One big one was drawn however. There are other ones along the lake. Most of them contain a high amount of sulphur which produces a characteristic odour during drying with heat. Also there are many pyrites to be found in these layers with variable sizes. Many of them are idiomorphic however and probably grew during deformation and metamorphosis.

1.1.1.5 QUARTZITE

In the north western part of the area a very siliceous rock type has been found which has not been seen in other parts of the area yet. However other than that the source might have been a possible sandstone no further examination has been made. During that daytrip we wanted establish a quick line profile in the northwest and marked that rock type to possibly come back later. It might be related to the meta-sediments with clearly more quartzitic content.

1.1.2 DOLOMITE-SILTSTONE (ALL FORMS)

This unit is also interbedded with the meta-sediments. In part of the property, for example along the track between the first ridge and the magnetic ridge, on both sides of the river outcrops with the typical orange weathering quartzitic dolomite can be found. It usually contains a lot of quartz veins with their opening direction more or less perpendicular to the shear zone foliation. Which could mean that σ^3 would have been the opening direction during deformation. Some veins also follow the foliation direction, most of them however seem to be perpendicular to it. The dolomitic bodies often look like they have experienced some stress. Some layers within them show quite clear foliation signs. Some quartz veins are actually folded. The whole body is usually traversed with joints in different directions. Along certain outcrops it looks like there was some composition change during deposition of the sediments because the orange weathering dolomite grades into a similar but more greyish weathering one. On a freshly cut surface it looks like the grey part is more coarsely grained than the orange part. The orange part is also less resistant to weathering since the grey parts are usually less weathered. The dolomitic part also seems to

grade into the magnetite sediments at the beginning of the second ridge. Thin layered inter bedding can be observed there.

1.1.3 GABBRO

These rocks are mostly undeformed and massive. They form the ridges in the area and show the typical white/green texture. Sometimes they are finer grained, sometimes coarser grained. Instead of a Gabbro one might also think of it as some sort of amphibolite.

1.1.4 PILLOW BASALTS

In a small part of the area to the south the pillow basalts were identified because of their glassy crust which is less resistant to weathering and therefore the weathered surface of this rock type shows a clear feature of deeply weathered spaces between the elongated remains of the deformed pillow basalts. They definitely were deformed.

1.1.5 GNEISS

This unit seems to form the outer rim of the complex. Sometimes it clearly shows deformation textures of high strain with large feldspars and quartz grains which would suggest a magmatic origin. Sometimes it looks more brecciated. Maybe there is some relation to the siliceous breccias.

On the map only the breccia (quartzitic) has been drawn. A clear relation between the two units could not be established in some outcrops they seem to be related to each other. Maybe the breccia (quartzitic) evolved from this gneiss due to hydrothermal brecciation and siliceous overprint?

1.2 BRECCIAS

1.2.1 BRECCIA (CARBONATIC)

This breccia seems to surround the carbonatite complex. It is definitely more broken up than rocks from the A or B zone. Probably it got affected by the deformation more than the internal zones. Also possible would be hydrothermal brecciation by some late stage fluid.

1.2.2 BRECCIA (QUARTZITIC)

This breccia might be related to the gneiss. In parts it looks like the siliceous content has been removed from the rocks and mostly the micas are left. (First outcrop wash?). Aplitt veins or small dykes can be seen in that rock type. In other parts it looks like that could be the removed siliceous content which got brecciated. If it really was a combined melt of siliceous and carbonate material it could also be possible that parts of the siliceous melt were more concentrated in silica than other parts.

1.3 CARBONATITE (ALL FORMS)

In the carbonatite no consistent structures could be observed. Many different generations of melt, dykes, veins seem to crosscut internally. However they rarely seem to be oriented parallel or at a certain angle. Also in drill core no consistent picture could be observed. I doubt that

oriented drill core would yield more information since the precipitation didn't seem to be structurally controlled.

2 STRUCTURES

2.1 FAULTS

2.1.1 THRUSTS

Since to the West we have several ridges and all of them seem to show the same sequence of massive Gabbro like rocks on top and strongly deformed rocks underneath we assumed that these ridges are a result of repeated thrusting. Further East around Fox lake we assumed that there is another Thrust which possibly divides the meta-sedimentary sequence to the East from the more Ophiolitic sequence to the West. At the Eastern end of the property we are assuming Lac Le Moyne is tracing the location of the main thrust of the area while the others are more like splays. **Of course all the thrusts are not exactly located on one line they are broader zones which can focus in thinner bands in some areas and also broaden up in other areas**. Basically the whole area can be regarded a big shear zone.

2.1.2 STRIKE SLIP

Since we saw evidence in the field that there also was some strike slip like movement or the main thrusting event was a combination of both at least around the carbonatite we also drew another fault to the East. However this one is clearly not focused on one area it more broadly affected the whole area like a big shear-zone.

2.2 FOLDS

2.2.1 ANTICLINE

The anticline drawn through the carbonatite complex is not very clear. We definitely see some shallowing up to the East compared to steeper structures to the West of the carbonatite. However that could also be produced by the carbonatite acting as a more rigid clast and the sediments were thrusted around and over this big clast. That would also be in favour of the rock types in the area. They don't clearly show the typical fold like duplication. However because rocks around the complex show textures which only form due to large strain amounts (gamma > 10) it could also be that the magnetic sediments on the Eastern side are sheared off for example.

2.2.2 SYNCLINE

There is also a small syncline to be found on the map. It is not very important and probably also formed during shearing or strike-slip movement. I only drew it at that location because the iron rich schist underlying the Gabbro like rocks on that ridge seems to dip to the North in at the southern end and they looked like they dip to the South at the northern end. Also the magnetic part between the two ridges only shows a small magnetic high on the survey which is not very continuous. This fold probably doesn't have a large impact on the deposit since it seems to stop at the next ridge already. Also it seemed to be a weak fold.

3 PROFILE

The profile shows some features that have not been marked on the map. Especially the fault and thrust lines are also drawn in a way which might be seen as incorrect because no displacement has been drawn on units cut by the thrust lines.

First: units that are not drawn on the map except in the larges location is the “Schist (magnetic)”. It also occurs in other locations but the occurrences are so small that the map is not detailed enough to support their representation. However in the profile I resorted to exaggeration in other places to highlight the point that these magnetic Schists often occur in similar places in regard to either the nearest shear zone or the nearest location of the rusty Schists.

Second: The fault and thrust lines… Most of them, but especially the one which strikes through Fox lake close to the camp cannot be seen as thin lines where all displacement took place. Most of the rocks in this area look like they behaved ductile to a certain extent during deformation and though the thrust lines are much broader. Especially the one close to the camp might be at least a hundred meters wide in places. I didn’t draw any displacement on the dolomite cut by the fault in the profile because I thought of them as more competent clasts in the large shear zone during deformation. They probably formed small folds instead of displacement as seen in the profile.

4 MAP

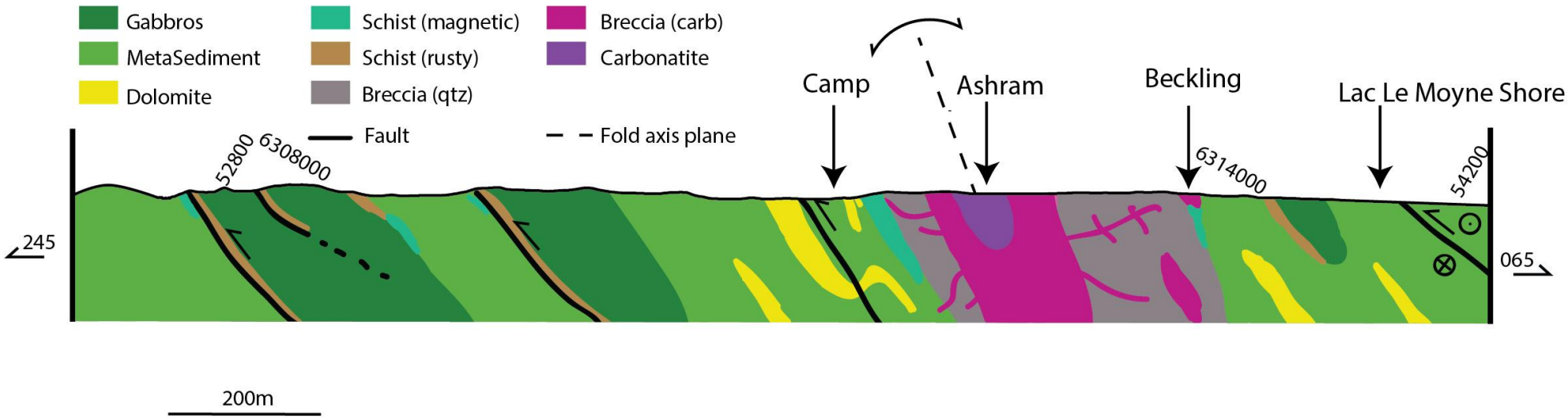
About the map there is one point I’d like to mention. Because of the scale and also the time frame to finish it, it was not possible to go into detail too much. That is especially visible with the three different Dolomite units. They have a different look in outcrop, however on the map it looks like they form rectangular blocks with sharp boundaries. That is not the case of course. They probably fade into each other. These sharp rectangular boundaries are also visible with some other units. In reality all of them are much smoother of course. We resorted to this because of the limited time available.

NUMÉRIQUE

Page(s) de dimension(s) hors standard numérisée(s) et positionnée(s) à la suite des présentes pages standard

DIGITAL FORMAT

Non-standard size page(s) scanned and placed after these standard pages


Gabbros
MetaSediment
Dolomite
Schist (magnetic)
Schist (rusty)
Breccia (qtz)
Fault
Breccia (carb)
Carbonatite
Fold axis plane
Camp
Ashram
Beckling
Lac Le Moyne Shore
52800
6308000
6314000
54200
245
065
200m

APPENDIX 8A: 2012 BULK SAMPLE SITE ATTRIBUTES

Appendix 8a: 2012 Bulk Sample Site Attributes

Year	Exploration Area	Site ID	Site Location (Approx. Centre Point)		Approx. Amount of Materail Collected (tonnes)	Analyzed Samples (Random Grab)
			Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)		
2012	Ashram	BSOC1	536376	6312010	29.5	113858, 113859
2012	Ashram	BSOC2	536342	6312001	15.4	113860, 113861
2012	Ashram	BSOC3	536323	6312000	5.8	113862, 113863

APPENDIX 8B: 2012 BULK SAMPLE ANALYTICAL RESULTS

Quality Analysis ... *Innovative Technologies*

Date Submitted: 17-Sep-12
Invoice No.: A12-10250
Invoice Date: 01-Oct-12
Your Reference: ELDOR

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

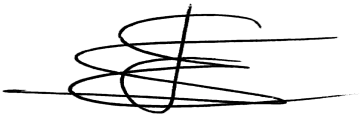
6 Rock samples were submitted for analysis.

The following analytical packages were requested: Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)

REPORT **A12-10250**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

Activation Laboratories Ltd. Report: A12-10250

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5	2
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
113858	1.24	0.14	9.48	1.387	12.98	30.71	0.02	0.03	0.185	0.84	35.13	92.11	53	29	71	< 20	4	< 20	< 10	1040	44	7	26	< 2
113859	0.75	0.09	10.88	1.644	13.54	29.20	0.01	0.03	0.279	0.79	35.38	92.60	57	20	85	< 20	5	< 20	< 10	1250	47	7	28	< 2
113860	1.10	0.10	9.74	1.404	12.88	30.65	0.01	0.04	0.099	1.04	33.21	90.28	48	32	64	< 20	4	< 20	< 10	1120	55	8	28	< 2
113861	0.52	0.11	11.51	1.614	12.78	28.59	0.01	0.03	0.129	0.99	34.82	91.11	53	17	73	< 20	5	< 20	< 10	1010	46	7	27	< 2
113862	1.57	0.10	11.18	1.783	12.85	28.64	0.02	0.05	0.362	0.52	33.43	90.50	43	20	63	< 20	7	< 20	< 10	1140	59	8	30	< 2
113863	1.23	0.07	10.42	1.627	13.73	27.57	< 0.01	0.04	0.200	0.83	35.71	91.43	54	18	70	< 20	7	< 20	< 10	1100	58	9	37	< 2

Analyte Symbol	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
113858	2903	362	61	709	4	0.8	< 0.2	16	< 0.5	< 0.5	460	1.9	3960	6700	665	2180	275	68.7	185	19.2	91.7	13.5	33.7	4.09
113859	2979	355	58	779	5	0.6	< 0.2	19	< 0.5	< 0.5	526	1.8	4490	7470	722	2300	299	78.2	203	20.7	92.7	12.9	31.7	3.71
113860	2958	380	68	243	3	0.6	< 0.2	12	< 0.5	< 0.5	425	1.5	5400	8800	814	2460	273	66.1	172	17.9	83.7	13.9	34.9	4.10
113861	2677	360	59	312	3	< 0.5	< 0.2	17	< 0.5	< 0.5	380	2.4	4000	7300	722	2210	257	62.9	162	17.9	85.3	13.7	33.2	3.79
113862	2974	303	36	1360	2	< 0.5	< 0.2	27	< 0.5	< 0.5	1454	1.2	6060	9980	918	2630	279	64.1	152	15.1	71.3	11.1	28.1	3.18
113863	3097	316	56	1000	3	< 0.5	< 0.2	25	0.6	< 0.5	621	2.3	5500	9860	974	3020	342	78.5	169	17.0	77.2	12.0	30.7	3.44

Analyte Symbol	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	F
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
Detection Limit	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ISE
113858	22.8	3.02	1.5	0.2	11	< 0.1	33	355	0.1	6.45
113859	21.1	2.74	1.4	< 0.1	7	< 0.1	30	379	0.1	5.58
113860	22.3	2.84	1.5	0.2	2	< 0.1	28	324	< 0.1	7.21
113861	19.9	2.50	1.3	1.4	3	< 0.1	26	412	0.8	5.48
113862	17.1	2.15	1.0	0.2	11	< 0.1	8	350	< 0.1	6.16
113863	18.6	2.47	1.3	0.1	8	< 0.1	12	399	0.1	3.46

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	1	1	5	20	1	20	10	30	1	1	5	2	2
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas		11.06	1.90	0.74	0.013	0.35	44.33	0.89	0.56	0.116	30.26			1668										
NIST 694 Cert		11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2			1740										
DNC-1 Meas		46.86	18.57	9.74	0.146	9.95	11.10	1.87	0.23	0.474	0.04	31		156	270	58	250	100	70					145
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070	31		148.0	270.000	57.0	247.000	100.0	70.0					144.0
GBW 07113 Meas	0.13	72.61	13.02	3.21	0.143	0.14	0.56	2.42	5.41	0.286	0.05	5	4	7										41
GBW 07113 Cert	0.130	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500	5.00	4.00	5.00										43.0
SCO-1 Meas	0.08																							
SCO-1 Cert	0.08																							
LKSD-3 Meas																31	50	30				27	72	
LKSD-3 Cert																30.0	47.0	35.0				27.0	78.0	
DR-N Meas	0.05																							
DR-N Cert	0.0500																							
UB-N Meas	< 0.01																							
UB-N Cert	0.00950																							
W-2a Meas	0.02	52.63	15.52	10.55	0.165	6.15	10.72	2.17	0.62	1.059	0.12	35	< 1	278										197
W-2a Cert	0.0205	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130	36.0	1.30	262										190
SY-4 Meas		49.77	21.12	6.17	0.106	0.50	7.92	7.08	1.68	0.289	0.11	1	3	9										1196
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131	1.1	2.6	8.0										1191
CTA-AC-1 Meas																		60						
CTA-AC-1 Cert																		54.0						
BIR-1a Meas		48.08	15.60	11.38	0.171	9.53	13.12	1.81	0.02	0.975	< 0.01	44	< 1	340	380	54	170	130		15				110
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021	44	0.58	310	370	52	170	125		16				110
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																			1050	98				
ZW-C Cert																			1050	99				
NCS DC70014 Meas																25	70	2590	7400	25				
NCS DC70014 Cert																26.2	70.9	2600.00	7400.00	25.2				
NCS DC70009 (GBW07241) Meas															30	3	< 20	1000	100	16	11	70	503	
NCS DC70009 (GBW07241) Cert															30	3.7	2.8	960.000	100.000	16.5	11.2	69.9	500.00	
SGR-1b Meas	0.19																							
SGR-1b Cert	0.1960																							
OREAS 100a (Fusion) Meas																17		170						
OREAS 100a (Fusion) Cert																18.1		169						
OREAS 101a (Fusion) Meas																46		430						
OREAS 101a (Fusion) Cert																48.8		434						
JR-1 Meas																	< 20		30	17		18	249	
JR-1 Cert																	1.67		30.6	16.1		16.3	257	
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
113863 Orig	3.47	1.24	0.06	10.49	1.640	13.79	27.66	< 0.01	0.04	0.202	0.84	54	18	70	< 20	7	< 20	< 10	1100	58	9	37	< 2	3136
113863 Dup	3.45	1.22	0.07	10.36	1.614	13.67	27.49	< 0.01	0.04	0.198	0.82	53	17	71										3059
113863 Orig	3.44																							
113863 Dup	3.54																							
Method Blank															< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5	< 2	
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control																									
Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	1	1	5	20	1	20	10	30	1	1	5	2	2
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.1
Analysis Method	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas	15	36						0.9		106		3.6			4.8		0.59							2.0
DNC-1 Cert	18.0	38						0.96		118		3.6			5.20		0.59							2.0
GBW 07113 Meas	43	410								501														
GBW 07113 Cert	43.0	403								506														
SCO-1 Meas																								
SCO-1 Cert																								
LKSD-3 Meas				< 2	2.3				2.3			47.1	87.3		43.3	7.9	1.41			4.9				2.7
LKSD-3 Cert				2.00	2.70				2.30			52.0	90.0		44.0	8.00	1.50			4.90				2.70
DR-N Meas																								
DR-N Cert																								
UB-N Meas																								
UB-N Cert																								
W-2a Meas	19	90								173														
W-2a Cert	24.0	94.0								182														
SY-4 Meas	109	581								350														
SY-4 Cert	119	517								340														
CTA-AC-1 Meas												2250	3380		1160	168	45.5	135	15.1					11.2
CTA-AC-1 Cert												2176	3326		1087	162	46.7	124	13.9					11.4
BIR-1a Meas	13	15						0.5		8					2.7	1.1	0.52	1.9						1.7
BIR-1a Cert	16	18						0.58		6					2.5	1.1	0.55	2.0						1.7
NCS DC86312 Meas												2320			1560			221	34.2	183	35.6	96.1	14.4	87.5
NCS DC86312 Cert												2360.000			1600.000			225.0	34.6	183.00	35.70	96.2	15.1	87.79
ZW-C Meas			200																					
ZW-C Cert			198																					
NCS DC70014 Meas				270	16.8			180			80.3	42.8	82.4	10.1	38.0	7.8	1.67	7.4	1.2	6.5	1.3	3.4	0.53	3.4
NCS DC70014 Cert				270	16.7			180.000			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5	0.57	3.3
NCS DC70009 (GBW07241) Meas						1.3	1710		43.3			23.9	59.0	8.12	32.4	12.6		15.2	3.4	21.5	4.5	13.4	2.38	16.3
NCS DC70009 (GBW07241) Cert						1.3	1701.000		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4	2.2	14.9
SGR-1b Meas																								
SGR-1b Cert																								
OREAS 100a (Fusion) Meas				22								243	434	44.7	143	23.0	3.49	21.3	3.6	22.1	4.8	14.1	2.32	14.9
OREAS 100a (Fusion) Cert				24.1								260	463	47.1	152	23.6	3.71	23.6	3.80	23.2	4.81	14.9	2.31	14.9
OREAS 101a (Fusion) Meas				20								745	1280	122	367	47.6	7.54			30.7	6.3	18.4	2.86	17.7
OREAS 101a (Fusion) Cert				21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5	2.90	17.5
JR-1 Meas			14	3	< 0.5	< 0.2	3	1.3	20.9		0.5	19.4	45.5	5.93	23.4	5.9	0.28	5.5	1.0				0.72	4.8
JR-1 Cert			15.2	3.25	0.031	0.028	2.86	1.19	20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01				0.67	4.55
NCS DC86318 Meas												2000	421	738	3270	1670	18.8	2220	486	3110	568	1670	271	1760
NCS DC86318 Cert												1960	430	740	3430	1720	18.91	2095	470	3220	560	1750	270	1840
SARM 3 Meas			979																					
SARM 3 Cert			978																					
USZ 42-2006 Meas												20900	28000	2280	6200	504	84.9							
USZ 42-2006 Cert												21100	27600	2300	6500	539	87.22							
113863 Orig	318	57	1000	3	< 0.5	< 0.2	25	0.6	< 0.5	629	2.3	5500	9860	974	3020	342	78.5	169	17.0	77.2	12.0	30.7	3.44	18.6
113863 Dup	313	54								613														
113863 Orig																								
113863 Dup																								
Method Blank			< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.1
Analysis Method	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS

Method Blank

Quality Control

Analyte Symbol	Lu	Hf	Ta	W	Tl	Pb	Th	U	LOI	Total
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Detection Limit	0.04	0.2	0.1	1	0.1	5	0.1	0.1		0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP
DH-1a Meas							921			
DH-1a Cert							910			
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas										
DNC-1 Cert										
GBW 07113 Meas										
GBW 07113 Cert										
SCO-1 Meas										
SCO-1 Cert										
LKSD-3 Meas	0.41		0.7				10.5	4.7		
LKSD-3 Cert	0.400		0.700				11.4	4.60		
DR-N Meas										
DR-N Cert										
UB-N Meas										
UB-N Cert										
W-2a Meas										
W-2a Cert										
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas	1.14	1.4	2.6				23.1	4.4		
CTA-AC-1 Cert	1.08	1.13	2.65				21.8	4.4		
BIR-1a Meas						< 5				
BIR-1a Cert						3				
NCS DC86312 Meas	12.0						25.0			
NCS DC86312 Cert	11.96						23.6			
ZW-C Meas		9.4	81.0	320						
ZW-C Cert		9.7	82	320						
NCS DC70014 Meas	0.48					27200				
NCS DC70014 Cert	0.50					27200.00				
NCS DC70009 (GBW07241) Meas	2.31			2200			30.4			
NCS DC70009 (GBW07241) Cert	2.4			2200.00			28.3			
SGR-1b Meas										
SGR-1b Cert										
OREAS 100a (Fusion) Meas	2.08						50.4	144		
OREAS 100a (Fusion) Cert	2.26						51.6	135		
OREAS 101a (Fusion) Meas	2.41						36.0	419		
OREAS 101a (Fusion) Cert	2.66						36.6	422		
JR-1 Meas	0.71	4.4	1.9	2	1.6	18	26.3	9.5		
JR-1 Cert	0.71	4.51	1.86	1.59	1.56	19.3	26.7	8.88		
NCS DC86318 Meas	251									
NCS DC86318 Cert	260.0									
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
113863 Orig	2.47	1.3	0.1	8	< 0.1	12	399	0.1	35.71	91.67
113863 Dup									35.71	91.20
113863 Orig										
113863 Dup										
Method Blank	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1		
Method Blank										
Method Blank										

Quality Control

Analyte Symbol	Lu	Hf	Ta	W	Tl	Pb	Th	U	LOI	Total
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Detection Limit	0.04	0.2	0.1	1	0.1	5	0.1	0.1		0.01
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP

Method Blank

APPENDIX 9A: 2013 SOIL SAMPLE LOCATIONS AND DESCRIPTIONS

Appendix 9a: 2013 Soil Sample Locations and Descriptions

Sample	Year Collected	Expl_Grid	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Depth (m)	Material	Wet*	Colour	Size	Sorting	Clast characteristics			Organics	Date	CPS	Comments
											Abundance	Shape	Size (cm)		dd/mm/yy		
118007	2013	Off-Grid (Miranna)	537361	6312978	-	soil	-	med rd-br	-	-	none	-	-	-	28-Aug-13	2150	RA soil
118009	2013	Off-Grid (Miranna)	537361	6312978	-	soil	-	-	-	-	some	-	-	-	28-Aug-13	-	soil and decomposed boulders, see Miranna trench loc?, old flag (samples: 28158, 59, 60, 61 and 67)

APPENDIX 9B: 2013 SOIL SAMPLE ANALYTICAL CERTIFICATES

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11638
Invoice Date: 11-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

2 Soil samples were submitted for analysis.

The following analytical packages were requested:

Code 1A2 Au - Fire Assay AA
Code UT-6 Total Digestion ICP & ICP/MS
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11638**

Notes:
If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

Analyte Symbol	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se	Zn
Unit Symbol	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1	0.2
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
118007	14.2	1.27	1.09	3.83	1.22	12.9	1.0	382	78.9	3740	6.86	0.4	20	61.6	15.6	6.5	7.3	3.34	0.82	45.2	32.5	0.17	5.6	328
118009	0.8	0.13	6.30	0.43	0.39	23.2	1.1	217	26.6	3850	5.65	< 0.1	< 10	29.9	19.8	1.6	9.0	0.25	0.07	24.6	43.1	0.21	6.3	237

Analyte Symbol	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.2	0.1	0.2	1	0.1	0.1	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
118007	9.6	10.4	39.5	149	> 1000	29	117	1.7	0.4	3	< 0.1	< 0.1	481	620	1490	189	712	> 100	96.6	10.5	46.7	19.9	2.5	1.7
118009	2.0	11.4	6.3	186	> 1000	5	23.2	1.9	0.3	2	< 0.1	< 0.1	78	1100	2500	300	1060	> 100	127	12.9	56.6	4.9	3.8	2.3

Analyte Symbol	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Received Weight	Au
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	Kg	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01		5
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	none	FA-AA
118007	7.3	1.0	6.3	0.6	< 0.001	0.42	99.4	34	167	56.4	0.0721	4.45	0.05	0.916	< 5
118009	10.2	1.5	0.3	1.7	< 0.001	0.26	166	40	> 200	56.1	0.0049	4.18	0.08	0.894	< 5

Quality Control

Analyte Symbol	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Hg	Ni	Er	Be	Ho	Ag	Cs	Co	Eu	Bi	Se	Zn
Unit Symbol	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	10	0.5	0.1	0.1	0.1	0.05	0.05	0.1	0.05	0.02	0.1	0.2
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	9.8	0.05	0.22	2.10	0.06	0.87	2.4	82	19.3	800	23.2	0.5	3300	42.6		0.8		31.7	2.71	8.3	0.61	1320	16.4	829
GXR-1 Cert	8.20	0.0520	0.217	3.52	0.050	0.960	3.30	80.0	12.0	852	23.6	0.960	3900	41.0		1.22		31.0	3.00	8.20	0.690	1380	16.6	760
GXR-1 Meas																								
GXR-1 Cert																								
DH-1a Meas																								
DH-1a Cert																								
GXR-4 Meas	14.7	0.54	1.87	6.84	3.12	1.07	< 0.1	93	51.0	148	3.04	1.3		46.6		2.3		3.59	2.65	15.7	1.55	19.7		85.2
GXR-4 Cert	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30		42.0		1.90		4.00	2.80	14.6	1.63	19.0		73.0
GXR-4 Meas																								
GXR-4 Cert																								
SDC-1 Meas	44.4	1.63	1.10	8.53	2.74	1.14	< 0.1	83	57.6	885	4.88	1.3		41.0	4.0	3.2	1.4	0.31	4.23	20.4	1.69	0.30		129
SDC-1 Cert	34.00	1.52	1.02	8.34	2.72	1.00	0.0800	102.00	64.00	880.00	4.82	8.30		38.0	4.10	3.00	1.50	0.0410	4.00	18.0	1.70	2.60		103.00
SDC-1 Meas	44.4	1.63	1.10	8.53	2.74	1.14	< 0.1	83	57.6	885	4.88	1.3		41.0	4.0	3.2	1.4	0.31	4.23	20.4	1.69	0.30		129
SDC-1 Cert	34.00	1.52	1.02	8.34	2.72	1.00	0.0800	102.00	64.00	880.00	4.82	8.30		38.0	4.10	3.00	1.50	0.0410	4.00	18.0	1.70	2.60		103.00
GXR-6 Meas	50.6	0.12	0.67	> 10.0	1.88	0.21	< 0.1	186	78.9	1050	5.70	2.9		28.8		1.2		0.43	4.37	15.4	0.71	0.20	1.0	151
GXR-6 Cert	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30		27.0		1.40		1.30	4.20	13.8	0.760	0.290	0.940	118
GXR-6 Meas																								
GXR-6 Cert																								
SAR-M (U.S.G.S.) Meas	38.7	1.28	0.53	6.32	2.75	0.65	5.2	68	86.4	5080	3.23			49.8		3.0		4.31		12.2		1.91	< 0.1	1100
SAR-M (U.S.G.S.) Cert	27.4	1.140	0.50	6.30	2.94	0.61	5.27	67.2	79.7	5220	2.99			41.5		2.20		3.64		10.70		1.94	0.39	930.0
SAR-M (U.S.G.S.) Meas	38.7	1.28	0.53	6.32	2.75	0.65	5.2	68	86.4	5080	3.23			49.8		3.0		4.31		12.2		1.91	1.1	1100
SAR-M (U.S.G.S.) Cert	27.4	1.140	0.50	6.30	2.94	0.61	5.27	67.2	79.7	5220	2.99			41.5		2.20		3.64		10.70		1.94	0.39	930.0
DNC-1a Meas	6.3							157	164					314						64.9	0.60			80.6
DNC-1a Cert	5.20							148.00	270					247						57.0	0.59			70.0
DNC-1a Meas	6.3							157	164					314						64.9	0.60			80.6
DNC-1a Cert	5.20							148.00	270					247						57.0	0.59			70.0
OxD108 Meas																								
OxD108 Cert																								
SBC-1 Meas	223						0.4	228	111			3.6		100	4.3	3.9	1.5		8.79	25.6	2.10	0.78		237
SBC-1 Cert	163.0						0.40	220.0	109			3.7		82.8	3.80	3.20	1.40		8.2	22.7	1.98	0.70		186.0
SBC-1 Meas	223						0.4	228	111			3.6		100	4.3	3.9	1.5		8.79	25.6	2.10	0.78		237
SBC-1 Cert	163.0						0.40	220.0	109			3.7		82.8	3.80	3.20	1.40		8.2	22.7	1.98	0.70		186.0
118009 Orig	0.8	0.13	6.13	0.42	0.38	22.8	1.1	212	25.7	3770	5.51	< 0.1	< 10	29.1	19.4	1.3	8.8	0.26	0.07	24.1	42.3	0.14	6.2	232
118009 Dup	0.8	0.13	6.47	0.44	0.40	23.6	1.2	223	27.5	3920	5.79	< 0.1	< 10	30.8	20.3	2.0	9.3	0.23	0.08	25.1	44.0	0.27	6.4	241
Method Blank	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	< 1	< 0.01	< 0.1	< 10	< 0.5	< 0.1	< 0.1	< 0.1	< 0.05	< 0.05	< 0.1	< 0.05	< 0.02	< 0.1	< 0.2
Method Blank																								
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Quality Control

Analyte Symbol	Ga	As	Rb	Y	Sr	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd	Tb	Dy	Cu	Ge	Tm
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.2	0.1	0.2	1	0.1	0.1	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	8.3	413	2.8	29.7	278	23	0.9	16.7	0.8	29	28.3	8.6	728	7.5	14.8		8.2	2.7	4.2	0.8	5.0	1070		0.4
GXR-1 Cert	13.8	427	14.0	32.0	275	38.0	0.800	18.0	0.770	54.0	122	13.0	750	7.50	17.0		18.0	2.70	4.20	0.830	4.30	1110		0.430
GXR-1 Meas																								
GXR-1 Cert																								
DH-1a Meas																								
DH-1a Cert																								
GXR-4 Meas	15.4	107	129	15.0	219	48	9.5	312	0.2	7	4.4	0.6		60.9	110		42.6	6.5	5.1	0.6	3.2	6390		0.2
GXR-4 Cert	20.0	98.0	160	14.0	221	186	10.0	310	0.270	5.60	4.80	0.970		64.5	102		45.0	6.60	5.25	0.360	2.60	6520		0.210
GXR-4 Meas																								
GXR-4 Cert																								
SDC-1 Meas	21.1	1.1	126	35.9	181	49	7.3	< 0.1		2	0.2		715	43.3	90.0		41.7	8.3	7.6	1.2	7.1	32.4		0.6
SDC-1 Cert	21.00	0.220	127.00	40.0	180.00	290.00	21.00	0.250		3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70	30.00		0.65
SDC-1 Meas	21.1	1.1	126	35.9	181	49	7.3	< 0.1		2	0.2		715	43.3	90.0		41.7	8.3	7.6	1.2	7.1	32.4		0.6
SDC-1 Cert	21.00	0.220	127.00	40.0	180.00	290.00	21.00	0.250		3.00	0.54		630	42.00	93.00		40.00	8.20	7.00	1.20	6.70	30.00		0.65
GXR-6 Meas	27.0	326	82.3	13.8	41.2	106	4.7	2.1	< 0.1	1	2.2	< 0.1	1530	14.0	36.7		13.2	2.7	2.6	0.4	2.7	73.9		0.3
GXR-6 Cert	35.0	330	90.0	14.0	35.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97	0.415	2.80	66.0		0.0320
GXR-6 Meas																								
GXR-6 Cert																								
SAR-M (U.S.G.S.) Meas	14.9	41.5	135	35.6	155		24.9	11.9	1.0	3	6.1	0.6	877	59.5	118							356		
SAR-M (U.S.G.S.) Cert	17	38.8	146	28.00	151		29.9	13.1	1.08	2.76	6.0	0.96	801	57.4	122.0							331		
SAR-M (U.S.G.S.) Meas	14.9	41.5	135	35.6	155		24.9	11.9	1.0	3	6.1	0.6	877	59.5	118							356		
SAR-M (U.S.G.S.) Cert	17	38.8	146	28.00	151		29.9	13.1	1.08	2.76	6.0	0.96	801	57.4	122.0							331		
DNC-1a Meas				17.6	146	41					0.8		119	4.0			5.0					105		
DNC-1a Cert				18.0	144.0	38.000					0.96		118	3.6			5.20					100.0		
DNC-1a Meas				17.6	146	41					0.8		119	4.0			5.0					105		
DNC-1a Cert				18.0	144.0	38.000					0.96		118	3.6			5.20					100.0		
OxD108 Meas																								
OxD108 Cert																								
SBC-1 Meas	25.6	29.8	147	35.4	185	134	16.3	2.4		4	1.1		882	54.2	110	14.3	52.1	10.3	9.3	1.4	7.7	33.6		0.6
SBC-1 Cert	27.0	25.7	147	36.5	178.0	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10	31.0		0.56
SBC-1 Meas	25.6	29.8	147	35.4	185	134	16.3	2.4		4	1.1		882	54.2	110	14.3	52.1	10.3	9.3	1.4	7.7	33.6		0.6
SBC-1 Cert	27.0	25.7	147	36.5	178.0	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5	1.20	7.10	31.0		0.56
118009 Orig	1.9	11.0	6.3	182	> 1000	5	20.9	1.9	0.3	2	< 0.1	< 0.1	77	1090	2470	296	1040	> 100	124	12.7	55.4	4.8	3.7	2.2
118009 Dup	2.0	11.8	6.4	189	> 1000	5	25.5	1.9	0.3	2	< 0.1	< 0.1	80	1110	2530	304	1070	> 100	130	13.2	57.8	4.9	3.8	2.3
Method Blank	< 0.1	< 0.1	< 0.2	< 0.1	< 0.2	< 1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1
Method Blank																								
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Quality Control

Analyte Symbol	Yb	Lu	Ta	W	Re	Tl	Pb	Sc	Th	U	Ti	P	S	Au
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	ppb
Detection Limit	0.1	0.1	0.1	0.1	0.001	0.05	0.5	1	0.1	0.1	0.0005	0.001	0.01	5
Analysis Method	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP	TD-ICP	FA-AA
GXR-1 Meas	2.0	0.3	< 0.1	133		0.43	728	1	2.5	31.0		0.059	0.25	
GXR-1 Cert	1.90	0.280	0.175	164		0.390	730	1.58	2.44	34.9		0.0650	0.257	
GXR-1 Meas								2				0.060	0.26	
GXR-1 Cert								1.58				0.0650	0.257	
DH-1a Meas									> 200	2120				
DH-1a Cert									910	2629				
GXR-4 Meas	1.0	0.2	0.6	33.7		3.63	55.5	8	20.5	5.6		0.129	1.75	
GXR-4 Cert	1.60	0.170	0.790	30.8		3.20	52.0	7.70	22.5	6.20		0.120	1.77	
GXR-4 Meas								8				0.131	1.79	
GXR-4 Cert								7.70				0.120	1.77	
SDC-1 Meas	3.2		0.4	0.2		0.73	27.4	17	11.9	2.8	0.323	0.058	0.07	
SDC-1 Cert	4.00		1.20	0.800		0.70	25.00	17.00	12.00	3.10	0.606	0.0690	0.0650	
SDC-1 Meas	3.2		0.4	0.2		0.73	27.4	17	11.9	2.8	0.116	0.053	0.07	
SDC-1 Cert	4.00		1.20	0.800		0.70	25.00	17.00	12.00	3.10	0.606	0.0690	0.0650	
GXR-6 Meas	1.7	0.3	0.2	0.8		2.61		28	5.4	1.5		0.037	0.02	
GXR-6 Cert	2.40	0.330	0.485	1.90		2.20		27.6	5.30	1.54		0.0350	0.0160	
GXR-6 Meas								29				0.036	0.02	
GXR-6 Cert								27.6				0.0350	0.0160	
SAR-M (U.S.G.S.) Meas				7.1		3.12		9	18.8	4.5	0.315	0.065		
SAR-M (U.S.G.S.) Cert				9.78		2.7		7.83	17.2	3.57	0.38	0.07		
SAR-M (U.S.G.S.) Meas				7.1		3.12		9	18.8	4.5	0.261	0.055		
SAR-M (U.S.G.S.) Cert				9.78		2.7		7.83	17.2	3.57	0.38	0.07		
DNC-1a Meas	1.8							31						
DNC-1a Cert	2.0							31						
DNC-1a Meas	1.8							33						
DNC-1a Cert	2.0							31						
OxD108 Meas														399
OxD108 Cert														414.000
SBC-1 Meas	3.4	0.6	1.0	1.7		1.10	42.3	22	16.3	6.0				
SBC-1 Cert	3.64	0.54	1.10	1.60		0.89	35.0	20.0	15.8	5.76				
SBC-1 Meas	3.4	0.6	1.0	1.7		1.10	42.3	22	16.3	6.0				
SBC-1 Cert	3.64	0.54	1.10	1.60		0.89	35.0	20.0	15.8	5.76				
118009 Orig	10.0	1.4	0.4	1.7	< 0.001	0.26	162	40	> 200	56.5	0.0050	4.15	0.08	< 5
118009 Dup	10.5	1.5	0.3	1.8	< 0.001	0.27	170	41	> 200	55.6	0.0047	4.22	0.08	< 5
Method Blank	< 0.1	< 0.1	< 0.1	< 0.1	< 0.001	< 0.05	< 0.5	< 1	< 0.1	< 0.1	< 0.0005	< 0.001	< 0.01	
Method Blank								< 1			0.0007	< 0.001	< 0.01	
Method Blank								< 1			< 0.0005	< 0.001	< 0.01	
Method Blank								< 1			0.0006	< 0.001	< 0.01	
Method Blank								< 1			0.0064	< 0.001	< 0.01	
Method Blank								< 1			0.0038	< 0.001	< 0.01	
Method Blank								< 1			0.0014	< 0.001	< 0.01	

APPENDIX 10A: 2013 AND 2014 DRILL HOLE GEOLOGICAL LOGS

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536059.21	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	28-Jul-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312224.82	**Rig Type:**	Zinex A5	**Date Completed:**	1-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	Handheld GPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.05 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	85.14 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	N. Schmidt		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	2.91	OVB	-	**ovb** fl dol-Carb cobbles/bldrs.			3.00 6.00 9.00 12.00	250 260 300 325
2.91	27.20	dol-Carb	A/B-T	**fl dol-Carb** colour- lt ol-gy (5Y 6/1) to ol-gy (5Y 4/1). mineralogy - dol 95%. f.g., anh; fl 5%, f.g., anh; lim trace, f.g., anh; mnz trace, f.g., anh; py trace, f.g., anh; qtz trace, f.g., anh; REflc trace, f.g., anh. 2.91 to 27.20 m - hetero, common x-cut v.f.g. lt ol-gy to ol-gy dol-Carb dykes, fl throughout occurs in wispy bnds, small patches and/rare blebs very dusky p (5P 2/2), very dk lim (5R 2/6) throughout as frac infill and small vnlets. ctc at 27.20 m → decrease in fl content. more homo. 2.91 to 20.42 m - lim abnt as coating on fracs, few small vnlets, few mm sized vugs ± lim. 3.20 to 3.81 m - dense fl patches forming wk bnds. 4.15 m - py filled vug with oxidized rim. 5.80 to 12.96 m - few mm sized stylolites with lim coating. 9.44 to 11 m - decrease in fl, 1-2% fl. 11.87 to 12.40 m - sub-vertical frac with lim coating.		2.91 to 14.17 m - hetero, mottled, psd-brc text. 14.47 to 27.20 m - psd-brc, bnded.	15.00 18.00 21.00 24.00 27.00 30.00 33.00 36.00 39.00 42.00 45.00 48.00 51.00 54.00 57.00 60.00	400 390 460 575 650 460 370 350 400 345 300 250 280 320 270 300

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				14.47 to 15.85 m - mod to str bndg, psd-brc with dol grains (2-5 mm, very lt gy (N7) sub-rnd), common fl in bnds with itsl mnz. 14.47 to 17.50 m - bndg at 35-40° TCA. 16.25 to 16.62 m - increase in fl, patches/blebs forming wk bnds, itsl mod r-br (10R 4/6) mnz, few vugs with lim coating. 17.10 to 17.33 m - abnt x-cut v.f.g. dol-Carb dykes (5-10 mm, lt ol-gy (5Y 5/2). 20.25 to 22.55 m - bndg at 20-30° TCA. 21.08 to 21.30 m - lrg x-cut dol-Carb dyke @ 25° TCA, wkly layered, rimmed with lim, small < 1 mm stylolites present within dyke, few very lt gy dol grains (1-2 mm). 23.62 to 23.86 - 2 x-cut dol-Carb dykes (lt ol-gy, v.f.g.). 21.75 to 21.85 m - few <1 to 2 mm qtz vnlets. 23.80 m - ~ 5 cm fl patch with itsl mod r-br (10R 4/6) mnz/REflc?. 23.86-25.12 m: bnding shallows to ~10-15° TCA. Psd brc with dol grais (1-5 mm) forming bnds, fl common in bnds with trace itsl mnz. 23.86 to 27.20 m - bndg at 10-15° TCA. 26.05 to 27.03 m - common x-cut dol-Carb dykes 1-10 cm in size (lt ol-gy, v.f.g). 25.85 to 26.70 m - lim coating on fracs and mm sized vugs.			63.00	300
							66.00	510
							69.00	650
							72.00	430
							75.00	330
							78.00	420
							81.00	450
							84.00	390
27.20	48.15	dol-Carb	A/B-T	**dol-Carb** colour - lt ol-gy (5Y 5/2) to ol-gy (5Y 4/1). mineralogy - dol 95%, f.g., anh; fl 3%, f.g., anh; ap 2%, f.g., anh; qtz trace, f.g., anh; mnz trace, f.g., anh; lim trace, f.g., anh; py trace, f.g., anh; phl trace, f.g., anh; chl trace, f.g., anh.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				27.20 to 48.15 m - hetero few x-cut dol-Carb dykes (lt ol-gy (5Y 5/2) to gy (N5), v.f.g.), dusky p fl (5P 2/2) throughout as small blebs with few localized lrg patches, common brittle qtz/fl vns, stylolites present throughout, trace lim as frac infill, small (< 1 mm to 2 mm) sul vnlets throughout. 27.20 to 36.43 m - mottled, psd-brc. from 36.43 to 41.09 m - brc to psd-brc, locly patchy. 41.09 to 48.15 m - mottled, psd-brc, locly wk bndg. 27.45 to 33.18 m - lim coating on frac surfaces and vugs. 30.87 to 31.23 m - sub-vertical dol-Carb dyke? (1 mm thick) with fl ± sul along itsl margins, x-cut by another dol-Carb dyke @ 31.10 m (~ 1 mm thick). 31.62 m - well developed stylotite. 31.98 m - sul vnlets (py, micro-sul) x-cut by v.f.g. dol-Carb dyke (15 mm, lt ol-gy (5Y 5/2), rimmed by fl ± lim in areas). 33.11 to 33.50 m - abnt vn/vnlets of qtz ± fl, micro-sul vnlets and ap vnlets. 34.49 m - bnd of micro-sul? and py (~ 5 mm thick). 34.91 to 35.00 m - x-cut dol-Carb dyke (f.g., med gy (N5), with itsl micro-sul/py). 36.30 to 36.47 m - x-cut brcd dol-Carb dykes ~ 80 mm, clst of dol (very lt gy (N8), sub-rnd to sub-ang) and ap (2-10 mm), phl?/ chl? vnlets through, stylolites at margins trace sul, fl. 36.47 to 37.07 m - hetero, brc, dol-Carb clsts (irregular to sub-rnd, 2-15 mm) in dol-Carb mtx (v.f.g., itsl ap). few frac-rel qtz vnlets in interval. 37.50 to 37.90 m - colour change to med dk gy (due to micro-sul), few x-cut dol vnlets ± fl (1-2 mm, w (N9). 37.90 to 39.45 m - abnt fl in patchy bnds up to 6 cm with trace itsl mnz?				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				39.45 to 40.75 m - abnt vnlets and mm sized vugs/pockets infilled with phl/chl? ± sul. some vnlets appear stylolitic. 41.22 to 41.70 m - wk bndg ~ 30° TCA. 41.76 to 41.95 m - sub-vertical vnlet lim < 1 mm in size with blebs/pockets of fl along vnlet up to 5 mm. 42.00 to 42.21 m - psd-brc with cr, dol grains (up to 4 mm, sub-rnd). 42.35 to 44.35 m - abnt pockets (3 mm to 3 cm, med to dk gy) and abnt vnlets of sul, chl and phl? with itsl ap, pale p (5P 6/2) fl surrounding some pockets. 44.04 m - ap clst of ~ 35 mm. 45.95 to 46.20 m - lrg lim coating frac @ ~ 25° TCA, rimmed with w (N9) dol, either side of frac is chaotic with abnt stylolitic vnlets of phl, chl? and sul (py and micro-sul), follow general orientation of frac at 25° TCA. ap present as clst (up to 15 mm) and itsl. lim infills vugs and pockets surrounding frac. 46.40 to 47.85 m - abnt frac-rel fl vnlets ± qtz. 46.92 to 47.15 m - few ~ 1 cm pockets/patches of fl with itsl mnz? (dk r-br, 10R 3/4).				
48.15	63.07	dol-Carb	A/B-T	**fl dol-Carb** colour - lt ol-gy (5Y 5/2) to y-gy (5Y 7/2). mineralogy - dol 92%, f.g., anh; fl 7%, f.g., anh; mnz 1%, f.g., anh; py trace, f.g., anh; REflc trace, f.g., anh; qtz trace, f.g., anh; amph trace, f.g., anh; chl trace, f.g., anh; ap trace, f.g., anh; lim trace, f.g., anh.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				mod to str bndg throughout unit, perv very dusky p (5P 2/2) to pale p (5P 6/2) fl occurs as blebs/small patches forming bands, abnt brittle frac vnlets of fl ± qtz, abnt patches of y-gy (5Y 7/2) carbonates ± mnz, few x-cut dol-Carb dykes (lt ol-gy, v.f.g.) , few py pockets/vnlets. ctc @ 48.15 m - increase in fl content, more developed bndg, lighter colour. 48.15 to 63.07 m - mod to str bndg, blebby, locly psd-brc/mottled. 48.15 to 63.07 m - mod to str bndg, blebby, locly psd-brc/mottled. 47.85 to 49.06 m - abnt fl as blebs and frac infill, very wk bndg. 48.30 m - 10 mm v.f.g. lt ol-gy (5Y 5/2) dol-Carb dyke. 49.02 m - 20 mm v.f.g. lt ol-gy dol-Carb dyke. 49.55 to 49.63 m - vugs/pockets infilled with chl and sul. 49.63 to 51.45 m - mod bnds @ ~ 30° TCA. 49.63 m - bndg becomes str, minor to trace fl as blebs forming bnds @ 30° TCA. 50.70 to 50.80 m - abnt mm sized vugs with lim infill. 51.45 m - increase in fl content as blebs/small patches forming bnds. bndg becomes more prominent with increase in fl. 51.45 to 63.07 m - bndg becomes str @ 20-30° TCA. 51.56 to 53.98 m - patches of fl (up to 4 cm) with itsl REflc/mnz?. 51.78 to 54.50 m - bnded psd-brc, dol grains (sub-rnd, very lt gy (N7), 2-10 mm) in mtx of dol-Carb and blebby fl.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				54.96 m - lim coated frac. 55.13 m - sub-vertical frac infilled sul (mostly py) at 15° TCA. 55.30 to 56.75 m - abnt fl, becomes more gy-r-p (5RP 4/2) in colour, potentially due to itsl REflc? 56.80 to 57.00 m - mm sized pockets of b-gr amph?, ap present in vnlets and itsl in dol-Carb. 57.20 to 59.75 m - change in colour to y-gy (5Y 7/2) due to itsl mnz ± carbonates, colour change causes rock to appear mottled. 59.12 m - x-cut dol-Carb dyke, (v.f.g., lt ol-gy) with abnt vnlets of sul? within. 59.75 to 60.00 m - blebs of b-gr amph?. 59.75 to 62.50 m - abnt very dusky p (5P 2/2) fl blebs/ wispy bnds with itsl REflc. psd-brc with dol grains (very lt gy (N7), sub-rnd, 2-5 mm). increase in frac-rel fl vnlets in interval ± qtz with chaotic orientation. 61.47 m - 10 cm qtz vn with itsl pale r-br (10R 5/4) min? and b-gr amph?. 62.08 m - x-cut dol-Carb dyke (~ 30 mm, lt ol-gy (5Y 5/2), v.f.g.). 62.50 to 63.02 m - bnded. 62.70 m - lim present on fracs / mm sized vugs.				
63.07	85.14	dol-Carb	B	**dol-Carb, (B variable?)** colour - lt ol-gy (5Y 5/2) to lt gy (N7).				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				mineralogy - dol 99%, f.g., anh; fl 1%, f.g., anh; mnz trace, f.g., anh; py trace, f.g., anh; lim trace, f.g., anh; qtz trace, f.g., anh; mag trace, f.g., suh; sul trace, f.g., anh; ap trace, f.g., anh. fairly homo, minor very dusky p (5P 2/2) fl throughout as blebs, abnt x-cut dol-Carb dykes (lt ol-gy (5Y 5/2), v.f.g, some layered), common stylolitic vnlets present throughout, lim common as frac/vug infill coating, areas of y-gy carbonates ± mnz?, trace blebs of b-gr amph seen throughout, few frac-rel fl vnlets ± qtz. 63.07 m - ctc, decrease in fl, lighter colour, no bndg. 63.07 to 63.09 m -2 cm bnd of dk r-br (10R 3/4) to dusky br (5YR 2/2) Fe-ox, extreme effervescence to HCl, cc?, vuggy, possible FZ, brcd and chaotic in proximity to bnd. 63.09 to 63.80 m - brc and mottled text, dol clsts (2-20 mm, sub-ang to sub-rnd) in dol-Carb mtx (v.f.g.), some clsts have stylolitic margins. 62.50 to 78.65 m - mottled, locl blebby text. 63.17 to 68.05 m - abnt fracs, 1 mm sized vugs with very dk r (5R 2/6) lim, stylolitic lim vnlet at 63.17 m. 66.07 m - x-cut dol-Carb dyke (lt ol-gy (5Y 5/2), v.f.g, 25 mm, layered with fl?, trace lim at margins of dyke. 66.50 to 67.25 m - mottled/ blebby text with very dusky p (5P 2/2) fl blebs and b-gr amph blebs, dol gdmass is lighter in colour (lt gy (N7)) with y-gy carbonates ± mnz throughout, interval seems like more "typical" B zone. 69.02 to 69.73 m - long sub-parallel dol-Carb dyke (v.f.g., 5-20 mm thick, layered with fl, lim, and py) mag xtls found on margin of dyke at 69.25 m and 69.47 m. 69.88 to 70.40 m - long sub-parallel dol-Carb dyke (v.f.g., lt ol-gy, ~ 15 mm thick). layered with micro-sul?. vuggy zone at end of dyke ~ 70.35 m with py and mag infill.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				70.80 m - dol-Carb dyke (v.f.g., lt ol-gy, rimmed with lim, 20 mm). 70.92 to 71.23 m - blebby fl with itsl py and po?. 71.13 to 71.60 m - sub-parallel vnlets of micro-sul? and fl. appears stylolitic in areas. 73.30 to 73.37 m - lim present as frac coating and vug infill. 74.30 m - dol-Carb dyke? with abnt itsl ap (f.g. lt ol-gy), dkr gy areas with itsl micro-sul?. 76.70 to 77.30 m - common blebby fl with y-gy (5Y 7/2) carbonates ± mnz?. 78.65 to 85.14 m - more abnt med dk gy (N4) patches due to increase in micro-sul?, ap? increase in number of brittle frac vnlets of fl and qtz. locl brc with dol-Carb clsts (sub-ang, 2-20 mm, lt gy (N7)) in lt ol-gy dol-Carb mtx. mottled will locl brc/psd-brc. 79.02 to 84.30 m - several fracs with med y-br (10YR 5/4) lim? infill. 82.10 to 82.29 m - abnt brittle frac qtz vnlets (1-4 mm with rare fl). 84.25 m - 20 mm lt ol-gy (5Y 5/2) dol-Carb? dyke, with itsl ap, micro-sul vnlets at margins. 84.67 m - x-cut dol-Carb? dyke with itsl micro-sul (v.f.g., med gy (N5)). EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536258.73	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	1-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6311996.52	**Rig Type:**	Zinex A5	**Date Completed:**	2-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	30 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	5.18 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	97.48 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	M. Carter		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	5.18	OVB	-	**ovb** dominantly un-mineralized dol-Carb with few phl strings ± sul; few very small qtzite frags.			6.00	400
							9.00	500
							12.00	800
							15.00	740
5.18	42.43	dol-Carb	A	**fl dol-Carb** colour - lt ol-gy (5Y 6/1), ol-gy (5Y 4/1). mineralogy - dol 94%, f.g., anh; fl 5%, f.g., anh; py 1%, f.g., suh; phl trace, f.g., anh; mnz trace, v.f.g., anh; qtz trace, v.f.g., anh; lim trace, v.f.g., anh; ap trace, v.f.g., anh. 5.18 to 42.43 m - hetero unit, common to abnt x-cut late-stage ol-gy (5Y 3/2, 5Y 4/1) dykes ± zonations. very dusky p (5P 2/2) fl occurs as wispy bnds on diss patches, rarely as dense patches and brittle frac vnlet infill. sparse hydrothermal qtz fl pockets ± dusky dol rim throughout unit. lim occurs throughout unit as frac coating and infill in rare mm vugs. ap occurs as diss patches throughout unit. 5.18 to 28.62 m - hetero, overprinted, psd-brc ± schl. 28.62 to 42.43 m - psd-brc. 5.52 m - 2 cm mod br (5YR 3/4) wthd Carb bnd at ~ 40° TCA, closed frac at center of bnd. 5.67 to 21.58 m - abnt hydrothermal qtz fl pockets ± f.g. dusky dol rim; frequency decreases as depth increases. pockets in the upper part of the interval rarely contains v.f.g., soft and y-gr (10GY 6/4) amorphous chl?. 9.31 to 10.87 m - brittle frac fl vnlets over interval.			18.00	1100
							21.00	720
							24.00	730
							27.00	700
							30.00	700
							33.00	800
							36.00	750
							39.00	430
							42.00	470
							45.00	640
							48.00	690
							51.00	670
							54.00	540

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
							57.00	470
				9.79 to 11.92 m - dk r-br (10R 3/4) lim staining and frac coating over interval; common lim infilled mm vugs. undulating c.g. cc vn paralleling CA from 9.79 to 10.43 m.			60.00	500
							63.00	530
				13.42 to 14.23 m - lenses of med ol-br (5Y 4/4) to ol-gy (5Y 3/2) F-Carb → heavy bearing?			66.00	400
							69.00	420
				14.80 to 37.12 m - abnt x-cut ol-gy (5Y 3/2) Carb dykes; common bndg/zonation of dykes. rare stylolitic margins. zoned dykes may be distorted by overprinting of later qtz-fl hydrothermal vns and pockets.			72.00	520
							75.00	620
				20.42 to 21.53 m - brittle frac fl vnlets at 70° TCA.			78.00	680
							81.00	780
				25.27 to 25.35 m - x-cut ol-gy (5Y 4/1) zoned Carb dyke at 37 ° TCA, qtz-phl-py stringer at center of dyke.			84.00	780
							87.00	720
				26.82 to 42.43 m - very dk r (5R 2/6) to dk r-br (10R 3/4) lim coating/infill common on frac surfaces. sparse stylolites and patches of lim filled mm vugs. very rare patches of v.f.g. med r-og (10R 6/6) min → alt fl?.			90.00	680
							93.00	740
				28.50 m - patches of bleached? f.g. gy-y dol-Carb.			96.00	600
							87.00	720
				28.62 m - transition to dominantly psd-brc text.			90.00	680
							93.00	740
				29.36 m - transect of py and chl? vnlet.			96.00	600
				30.00 m - appearance of gy-og (10YR 7/4) dol mottles.				
				31.08 to 31.24 - patch of gy-og dol mottles ± mm vugs ± lim infill.				
				32.80 to 33.04 m - x-cut f.g. med ol-br (5Y 4/4) to ol-gy (5Y 4/1) Carb dyke at 30° TCA.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				33.75 to 36.54 m - x-cut brc frac fl vnlets ± qtz. brittle frac fl vnlets dominantly at 70° TCA. 35.96 to 37.11 m - abnt x-cut f.g. med ol-br to ol-gy Carb dykes. 38.08 to 38.94 m - mm lim filled vugs and lim frac infill. 39.88 to 42.43 m - bnds of gy-og (10YR 7/4) to very pale og (10YR 8/2) f.g. to m.g. anh to suh dol porphyroclasts? porphyroblasts? with itsl f.g. anh fl. 40.44 to 40.86 m - x-cut med ol-br (5Y 4/4) f.g. Carb dyke. 42.26 to 42.41 m - patches of v.f.g. gy-gr (10G 4/2) F-Carb? itsl to dol porphyroclasts? 42.43 m -gradational ctc, colour lightens, appearance of "B-Zone" characteristics.				
42.43	83.41	dol-Carb	A/B-T	**dol-Carb** colours - ol-gy (5Y 4/1), pale ol (10Y 6/2). mineralogy - dol 97%, f.g., anh; fl 3%, f.g., anh; py trace, f.g., suh; qtz trace, v.f.g., anh; mnz trace, v.f.g., anh; lim trace, v.f.g., anh. 42.43 to 83.41 m - unit is dominantly psd-brc though locl sections appears mass or have brcd zones. segments of the unit have "B-Zone" colourations → y-gy (5Y 8/4, 5Y 7/2). brittle frac fl vnlets ± qtz are common throughout; rare hydrothermal qtz-fl pockets ± f.g. drusy dol rim. common lim coatings or infill on frac surfaces and notable degree in frequency of x-cut Carb dykes. stylolites throughout unit though frequency varies locly. fl occurs as brittle frac infill, diss patches, and rare wispy bnds. 44.40 to 44.49 m - x-cut? y-gy (5Y 7/2) Carb dyke with stylolitic margins and w (N9) ang to sub-rnd f.g. to m.g. dol clsts? hydrothermal fl qtz pockets at 44.49 m dyke margin.		42.43 to 50.83 m - psd-brc.		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				45.14 to 50.20 m - abnt brittle frac fl vnlets ± qtz, amph → arfvedsonite? vnlets jog between brittle frac sets. brittle frac fl vnlets at 65-80° TCA. 45.94 m - v.f.g. dusky r (5R 3/4) itsl lim patch. 48.33 to 48.43 m - bnd of brc dol-Carb with m.g. to c.g. ang to sub-ang clsts. 50.83 to 56.50 m - hydrothermal brc throughout interval; common fl-qtz pockets ± drusy f.g. dol rim. rare chl? → v.f.g. gy-gr (5G 5/2) associated with qtz-fl pockets. locl development of colloform/crustiform textures around brcd dol-Carb clasts. brittle frac fl vnlets ± qtz throughout interval. locl altn of very dusky p (5P 2/2) fl to med pk (5P 7/4) or lt r (5R 6/6) colouration. stylolites common. 50.83 to 59.67 m - brittle frac fl vnlets at 45-60° TCA.. 55.50 to 59.67 m - increased fl content, ~ 7% v.f.g. fl occurring as perv patches and brittle frac infill. 56.64 to 56.71 m - brcd x-cut dol-Carb dyke → locl fl vnlet stockwork. 59.73 to 60.07 m - vuggy dol-cc-lim vn x-cut at 15° TCA. euh dol rhombs coating in lim occupy most vugs, possible siderite. 59.73 to 67.08 m - common stylolites over interval; fl virtually occurs as brittle frac fill only. interval has lt ol-gy (5Y 5/2) to y-gy (5Y 7/2) colouration and chl? coating on some frac surfaces. rare empty mm vugs. 66.00 to 67.40 m - brittle frac fl vnlets at 45-60° TCA. 67.08 to 72.35 m - core has "B-Zone" characteristics → y-gy (5Y 7/2) to lt ol-gy (5Y 5/2) colouration, psd-brc text, patchy fl. 67.40 to 70.50 m - brittle frac vnlets at 60-70° TCA.		50.83 to 56.50 m - hydro-thermal brc. 56.50 to 59.67 m - psd-brc. 59.57 to 67.08 m - mass. 67.08 to 72.35 m - psd-brc.		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				71.05 to 71.21 m - x-cut Carb dykes, minor dk r-br (10R 4/6) lim altd dyke?71.16 to 71.19 m - contains f.g. to m.g. anh to suh dol phenos? in carbonate gdmass/mtx. 72.24 to 73.68 m - bnds of f.g. to c.g. ang Carb brc in v.f.g. carbonate mtx ± py, lim, fl, chl. brc zones occur proximal to lim coated fracs ± fl. 72.24 to 75.29 m - lim coated frac undulating? in and out of the core axis plane. brcd margins developed along frac from 72.24 to 73.68 m - movement along surface. undulating frac parallel to CA, brcd margins → possible FZ. 75.29 to 83.41 m - lim coated frac surfaces, vuggy zones over interval ± lim infill or very rare chl. common stylolites. 76.00 to 77.00 m -brittle frac fl vnlets at 55-65° TCA. 76.50 m - ~ 1 cm chl pockets. 80.00 to 81.17 m - brittle frac fl vnlets at 70° TCA. 80.33 to 80.58 m - hydrothermal qtz-fl pockets ± f.g. drusy dol rim. 81.50 to 82.00 m - lim coated fracs, abnt mm vugs with lim infill. 83.41 m - gradational ctc, increasing fl content, increasing RA, transition to brc text.		72.35 to 83.41 m - mass.		
83.41	97.48	dol-Carb	A	**fl dol-Carb** colour - ol-gy (5Y 4/1), lt ol-gy (5Y 6/1). mineralogy - dol 92%, f.g., ang; fl 7%, v.f.g., anh; py 1%, f.g., suh; qtz trace, v.f.g., anh; mnz trace, v.f.g., anh; chl trace, f.g., anh; lim trace, v.f.g., anh; ap trace, v.f.g., anh.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				83.41 to 97.48 m - brcd unit; unit consists of f.g. to v.f.g. brcd Carb clst in v.f.g. fl carbonate mtx ± other accessory mins. brittle frac fl vnlets ± qtz throughout with varied angles TCA and development of locl stockworks. common hydrothermal qtz-fl pockets throughout ± f.g. drusy dol rim and rare f.g. gy-gr (5G 5/2) chl. few x-cut ol-gy to lt ol-gy Carb dykes and these dominantly occur as brcd frags in mtx. rare v.f.g. dk r-br (10R 4/6) lim coating on frac surfaces. common stylolites throughout → x-cut core and developed at some clst margins. unit appears to be a brcd variation on A-Zone. dominant set of brittle frac fl vnlets at 45-60° TCA. 86.00 to 86.14 m - lim infilled vuggy zone. 92.33 m - ~3 cm hydrothermal qtz-fl-chl ± py pockets, fl rims on dol xtls at pocket margins. 95.50 to 96.00 m - abnt hydrothermal qtz-fl pockets ± chl ± f.g. drusy dol rim; development of locl hydrothermal brcs. 97.15 m - gy-og-pk (5YR 7/2) ap clst?. EOH				

OGQ #223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536351.42	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	2-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312062.56	**Rig Type:**	Zinex A5	**Date Completed:**	4-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	30 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	6.10 m	**Note:** all A zone.	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	152.55 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	7.97	OVB	-	**ovb**			7.97	1210
				0.00 to 4.60 m - no core.			17.50	1050-1200
				4.60 to 7.97 m - Carb cobbles and bldrs.			17.50 - 39.25	650-800
7.97	39.25	dol-Carb	A	**fl dol-Carb**	13.00 m - fol 25° TCA		39.25 - 46.80	830-950
				lt br-gy with dk p clots and streaks. this interval is dominated by plastic brc text with at least 3 generations of Carb. all are composed of f.g., equant carbonate mins, with variable locly abnt fl and lesser py.	24.50 m - fol 42° TCA.		46.80 - 52.50	850-950
				fl is most abnt in the earliest phase, present as ameboid blobs, shr-textured streaks and deformed blobs. py is closely associated with fl-rich areas mostly anh but locly as cubes (i.e. 23.95 m). interval avg ± 7% fl. fl decreases slightly downwards. later Carb consist of v.f.g., med ol-gy thin dykelets and mass text f.g., lt coloured accessory-poor Carb with some p fl as in frac infills. the earliest fl-rich place shows plastic - shr texts, whereas the late Carbs exhibit more brittle ones. lower ctc set at end of rel abnt fl, abrupt to gradational.	26.80 m - fol 50° TCA.		52.50 - 61.00	950-1050
39.25	46.80	dol-Carb	A	**dol-Carb**			61.00 - 71.00	850-950

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy to med ol-br-gy. this interval is composed of relatively mass, f.g., suc Carb with minor dk p fl. the fl occurs as irregularly distributed m.g. disseminations and shr-textured finestreaks. compared with the unit above this interval is fl poor, without the brc text. again there are at least 3 generations of Carb, but ctc look intrusive, not brcd. med to dk br zone; relatively late brc with abnt, late, bnded v.f.g. ol carbonate dyke material 40.07 to 41.30 m. the relatively fl-rich patches (and common) are in the earliest generation Carb, have shr text (ex. 42.10 m).	27.30 m - fol 34° TCA.		71.00 - 72.50	1050
46.80	152.55	dol-Carb	A	**fl-rich dol-Carb**	42.10 m - fol 52° TCA.		72.50- 89.00	770-850
				lt to med ol-gy with dk p patches. overall the entire interval consist of Carb, consisting of f.g. equant suc carbonate mins with variable quantities of dk p fl and minor, patchy py. there are three major Carb! the earliest is the richest in fl and best REE (mnz?). in this phase the fl is present as broken large masses, vns, patches, streaks and m.g. diss. the fl is often ilk with carbonate and py and may contain euh carbonate fine phenos.	58.30 m - fol 52° TCA.		89.00 - 95.50	1000-1075
				this phase is present as "clsts" within the main phase most evidenced by the cutoff of fl-rich zones. the ctc frac are intrusive. it appears that the fl-phase is slightly coarser grained than the later one. the texts of the carbonate mins are very similar. the second phase is typically mass with relatively minor, diss p fl, including bits ripped from the earliest phase.	59.70 m - fol 48° TCA.		95.50 - 103.00	850-950
				the relationship between the first (earliest) two phases is confused by the fact that they are plastically deformed together.	60.75 m - fol 43° TCA.		103.00 - 122.00	1100-1250
				the third and latest phase is relatively minor, late thin (<1.5 cm) v.f.g. bnded ol carbonate dykes. these may be wavy deformed or locly brcd but post date the majority of the plastic deformation.	63.80 m - fol 45° TCA		122.00 - 133.00	1400-1700
				sub-zones: 46.80 to 58.00 - mod fl, swirly text, rel abnt late dykes; 58.00 to 65.50 m - mod fl, mod fol; 65.50 to 86.75 m - mod fl, chaotic text; 86.75 to 93.90 m - poor fl, poor fol; 93.90 to 101.00 - poor fl, dk, f.g.; 101.00 to 110.65 m - mod fl, mass; 110.65 to 140.45 m - mod fl, dk, swirly; 140.45 to 152.55 m - abnt fl, c. text, poorly bnded.	65.25 m - fol 48° TCA.		133.00 - 139.00	1650-1250

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				46.80 to 58.00 m - streaky thin fl zone, abnt late bnded Carb to 6 cm, low angle TCA. sul and fl at 49.50 to 49.85 m, 52.50 to 52.60 m, 54.75 to 55.05 m. 58.00 to 65.50 m - locly well fol, shr textured, fl-rich from 58.00 to 58.40 m, 59.55 to 59.70 m, 60.60 to 60.80 m, 63.65 to 64.00 m. overall fl poor 65.30 to 65.50 m, lt gy, some fine fl streaks and disseminations. 65.50 to 86.75 m - chaotic text. alternates between fl-rich and fl-poor sections. fl-rich sections 10-50 cm long, fl present as contorted shear bnds, mainly lesser c. disseminations and broken mass chunks. mod fl overall, fl bnds non fl 3-2. occasional late ol dykes, often gently folded. ctc between fl and non fl sharp but irregular. definitely intrusive non - fl Carb younger and slightly greener material, hetero in detail but homo overall. 85.75 to 93.90 m - fl-poor sections, same text as above but fewer fl-rich sections. fl-rich 86.85 to 87.15 m, 87.45 to 87.55 m, 88.90 to 89.15 m, 91.60 to 91.80 m. again there are contorted shear bnds. late dykes present, up to 3 <m thick, generally folded, locly brc (i.e. 92.30 to 92.60 m). minor late tension frac and fine vugs, filled with p fl. 93.90 to 101.10 m - fl poor sections; very similar to above except far more increased abundance of late bnded f.g. to v.f.g. lt ol Carb dykes up to 7 cm thick. ctcs at low angles 10-30° TCA, often sub-parallel to fabric in WR. the few fl-rich sections look "bleached". the "clst- like" nature of the sections rich in fl is especially well displayed. dkr coloured (med ol gy) at 96.90 to 97.75 m, 99.40 to 100.00 m. 101.10 to 110.65 m - fl-poor, although more than above. similar text to last two intervals. fl-rich sections again appear to be frags of contorted shear bndg. major zones 102.40 to 102.90 m, 103.05 to 103.40 m, 105.15 to 105.33 m, 106.35 to 106.45 m, 108.35 to 108.45 m, other weaker zones. occasional late Carb dykes less than above. texts are swirly. fl-poor Carb is f.g. suc carbonate min with minor f.g., broken fl pieces and fine py.			139.00 - 152.55	700-800

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				110.65 to 122.15 m - overall mass mod fl, lt gy. fl somewhat patchy concentrations look like "deformed" c. disseminations. dramatically more early fl than above, much less fl-poor #2 Carb, in detail-texts quite hetero - "mushy" fl ± 10% overall. no hint of shr bndg text. lower ctc set at darkening of colour (med ol-gy) and increase in RA. 122.15 to 140.05 m - sub-interval characterized by slightly dkr colour, especially at top, still med fl, less than above, increases irregularly downwards in interval. fl present as fine diss, variably deformed semi to mass cm vns and c., irregular masses (1-2 cm). overall texts much more vn-like than shear bnded. Carb texts swirly, locly vaguely bnded (i.e. 132.90 m). rare thin (<1 cm) late v.f.g. Carb dykes. fl increases in abundance below 133.50 m and becomes "chunkier". lower ctc set at end of dkr colour-gradational fl masses, have some co-crystallized carbonate, anh py and very fine r-br "tendrils" surrounding Carb appears micro-prtc. 140.05 to 152.55 m - lt gy, fl-rich dol-Carb. fl present in two habits 1) fine frags and pieces without py often diss in vague bnds and 2) less abnt coarser. clots and steaks. type 1) appears to increase downwards. the fl and overall texts are not as "spectacular" as above. some of the 2) patches contain ameboid, cr cm-scale carbonate patches, especially below 149.00 m. bnded late Carb ol dyke 144.70 to 145.40 m, 25° TCA at base, cut by un-bnded late dyke. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536287.32	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	4-Aug-13	**Downhole Survey:**	No
Expl. Area:	Ashram	**Northing (m):**	6312079.71	**Rig Type:**	Zinex A5	**Date Completed:**	4-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Partial Pull	**Survey Interval:**	
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	6.10 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**	320°	**Core size:**	NQ	**End of Hole:**	7.62 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	7.62	OVB	-	**ovb** no core. hole abandoned at 7.62 m due to drilling error. no core. EOH				

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536287.44	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	5-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312080.18	**Rig Type:**	Zinex A5	**Date Completed:**	6-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	40 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	7.32 m	**Note: All Azone + interval MHREO**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	160.63 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	7.00	OVB	-	**ovb** 0.00 to 4.00 m - no core. 4.00 to 7.00 m - Carb bldrs recovered. mostly A zone type.			7.00 - 22.50 22.50 - 29.00	750-850 1050-1150
7.00	17.40	dol-Carb	A	**wthd fl dol Carb** lt gy to dirty lt br and dk p ltly to mod affected by surficial wthg. interval composed of f.g., suc textured carbonate mins with mod amount of purple fl. fl as ribbony streaks, heavy diss patches, deformed thin vns and rare, late void and tension frac fillings. texts chaotic, psd-brc. the earlier fl rich Carb is locly intruded and frag-ed by later ol, fl-poor Carb, then cut by 0.5-3 cm sub-planar v.f.g. ol Carb dykelets. the surficial wthg in manifest by patches of dirty br stain and coatings on fracs and some bleaching of carbonate (16.0-16.70 m). core blocky 7.00 to 8.20 m, 15.00 to 17.40 m. base of interval set at end of wthg effects.			29.00 - 33.00 33.00 - 37.00 37.00 - 49.00 49.00 - 59.50 59.50 - 109.50	1250-1400 1500-1700 1850-2000 2000-2250 1400-1200
17.40	160.63	dol-Carb	A	**fg dol-Carb with variable fl content**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt to med ol-gy. this unit consists of f.g. mass, suc dol-Carb. the interval is a complex interplay between intrusive carbonate of at least 3 phases. the earliest is rich in dk p fl and the carbonate mins are distinctly whiter than later phases. the fl occurs as clumpy m.g. heavy disseminations, dfmd vns and semi-mass chunks, and irregular small patches. the texts are irregular to chaotic due to deformation-plastic flow? and intrusion and fragmentation by the middle stage Carb. the early stage fl Carb is now present as segments blocks, xenoliths? from 1 cm to max 50 cm long. the middle stage Carb is relatively fl-poor, what fl there is, is present as fine broken frags and lines of fine disseminations, possible small frags of the early fl. other than this fl and minor f.g. py the middle stage Carb is completely mass and fractureless, it is distinctly more gr-ol than the early phase.			109.50 - 116.00	1500-1600
				the proportion of middle stage to early stage Carb is the chief variable in this hole, dividing the interval into relatively fl rich and poor sections. fl rich sections: 17.40 to 19.10 m, 37.05 to 40.70 m, 74.95 to 84.00 m, 91.00 to 97.30 m, 103.30 to 104.50 m, 109.30 to 114.5 m, 126.35 to 131.00 m, 144.00 to 147.10 m, 152.20 to 158.90 m. the intervening fl-poor sections have similar texts, jst less of the early fl-rich patches.			116.00 - 123.00	1000-1200
				there is a late stage of fl deposition, usually minor, consisting of fl ± carbonate infilling of brittle structures, small vugs and tension fracs.			123.00 - 160.63	900-1000
				the late phase of Carb intrusion is a v.f.g, often bnd ol-gr Carb dykelets. these are generally narrow (0.5-3 cm) with sharp ctcs and may be gently folded.				
				37.05 to 40.65 m - zone of brittle dfmn. high density of short fracs with displacement. two generations, last with wash of fl, much intervened by late Carb dyke.				
				43.10 to 44.60 m - mass, f.g. homo med br Carb. slightly magnetic, wk brittle fracd. both ctcs sharp, upper 36° TCA, lower 18° TCA. locly a lt br ± 1700 c/s. no visible fl, even on fracs. similar zones - 49.85 to 50.40 m, 51.35 to 52.20 (str magnetic), 53.00 to 53.35 m, 64.35 to 64.50 m, 71.25 to 71.40 m (all have sharp ctcs).				
				40.65 to 54.10 m - med to wk brittle fracg without displacement.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				56.30 to 60.60 m - slightly wthd, core blocky (10 cm lengths), top and base have early hem staining, core fits poorly together (slightly grinding). core contains numerous late carbonate vnlets -> multiple generations. fl present but not abnt. core lost 57.00 to 57.23 m. mod wthd, vuggy, punky patches: 62.00 to 62.25 m, 62.45 to 63.10 m, 65.75 to 66.10 m, 68.70 to 69.20 m. carbonate removal, dirty r stain. Frac controlled surficial wthd zones. zone rich in late v.f.g. carbonate dykelets 56.60-66.00 m up to 4 cm thick. 75.30 to 75.50 m, 75.90 to 76.00 m - str fl-rich patches. dfmd shr text. 83.00 to 83.50 m - psd-brc, rnded cr Carb "clsts" (pebbles) and p fl clsts in fragmented textured med ol-gr carbonate. ctcs sharp, 30° TCA, pebble dyke? 85.25 to 86.45 m - zone rich in fl-filled late, brittle fracs. 86.90 to 87.40 m - sheeted late carbonate dykelets 40%. 93.05 to 93.45 m - 10 cm wide (15° TCA) early frac zone with sinistral displacement some of the fracs late dykelet-filled. 95.55 to 106.50 m - zone with high abundance of late, v.f.g., bnded Carb dykelets, low angle (< 30°) TCA. mostly 2-4 cm thick, one is 9 cm (101.40 m). bndg in shaded of ol and br. also anomalous late brittle fracg, low angle ones are filled with dykelet material, high angle ones show offset (i.e. 98.40 m). 113.00 m - relatively thick (5 cm) thinly bnded late dyke. 118.60 to 120.30 m - zone rich in late fl vug infilling 3-10 mm, angular outlines, randomly oriented ± 5% overall. fl-Carb-py bnded vns 128.80 to 129.05 m, 22° TCA , 2 parallel 2 cm vns, separated by 1 cm.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				below 130.15 m - the Carb is lighter coloured, has significantly fewer late Carb dykelets, is somewhat rich on clotty fl and is more homo overall. still chaotic textured. late brc vein 139.80 m, 2-3 cm thick, 27° TCA, with angular Carb clsts in med ol-gr Carb mtx. early, dfmd but unbroken fl vn (2 cm, 75° TCA) at 144.05 m. very fl-poor sections - 40.65 to 49.00 m, 70.70 to 71.70 m, 79.95 to 81.45 m, 88.55 to 89.10 m, 89.40 to 90.95 m, 97.30 to 102.30 m, 107.75 to 109.40 m, 123.00 to 124.20 m, 141.10 to 142.60 m, 142.75 to 144.00 m, 147.10 to 148.15 m, 149.75 to 152.20 m. the only structure present in this hole, other than the late frac zones are the bndg in the late dykes. this bndg is parallel to the dyke walls, 90+% of these dykes are between 0-30° TCA. shr fol of the fl-rich patches is virtually absent in this hole. this is the least fl rich A zone DDH I have logged. 37.00 to 67.50 m -this zone is very complex (fracd, ctsc, wthd zones, MHREO dykes) and could represent a long lived structural corridor. EOH	155.40 m - fol 5° TCA.			

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536167.68	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	11-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312362.71	**Rig Type:**	Zinex A5	**Date Completed:**	12-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	2.13 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	105.77 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	2.50	OVB	-	**ovb**			2.50 - 12.75	400-500
				75 cm A-Zone type bldrs recovered.			12.75 - 16.00	600-700
2.50	24.20	dol-Carb	A	**streaky text, fl-rich dol-Carb**			16.00 - 24.00	400-450
				lt gy to lt ol-gy. the interval is bnded throughout. bnds mostly defined on fl content. the fl-rich bnds are composed of sub mm thick fl streaks alternating with mm or less bnds of lt gy dol. this bndg is variably dfmd, slightly wavy and often with a shr text. these fl enriched bnds (20-50% fl) are 1-15 cm thick. the other bands are lt ol-gy, they are composed of f.g. to v.f.g. equant, suc dol grains with very few if any accessory mins. this phase is clearly intrusive into the earlier, fl-rich Carb phase, although now they are bnded together, implying post intrusion co-dfmn. fl-Carb intrusion-dfmn-intrusion of later Carb along dfmn planes - confirming dfmn. the latest intrusion phase visible is an un-dfmd series of late, ol, v.f.g. Carb dykes ± 2 to 5 cm thick which clearly x-cut the early dfmn. these constitute ± 1% or less of the interval. note the interval is variably effected by surficial wthg effects, never str.	6.15 m - bndg 33° TCA. 10.00 m - bndg 39° TCA.		24.00 - 50.00	290-350
				fl-rich sections decrease in abundance below 13.50 m. str early frac and locl brc 18.00 to 24.20 m, as well late fracg, intensity increases downwards. later Carb y-gr (lt) 5.35 to 6.50 m. relatively fl-poor at 14.50 to 17.15 m, 18.00 to 20.65 m, 21.25 to 23.55 m. base of interval (30 cm) dk gr, very str fracg. base of interval set at onset of cr, xtln Carb, ctc fracd.	14.10 m - bndg 56° TCA. 21.80 m - bndg 34° TCA.		50.00 - 54.50	400-450
24.20	47.90	dol-Carb	BD	**completely mass xtln m.g. dol-Carb**			54.50 - 95.50	310-370

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				gy-w, this interval is composed of mass, m.g. xtln (clear-glassy) dol. the unit is often coloured along late fracs, contains xenoliths or is surficially stained or is brc, but the un-affected rock is w. few if any accessory mins. there are many of these "coloured" grains giving the interval a "dirty" look. this Carb is occasionally v.f.g., often bnded late fine Carb dykes up to 5 cm thick, always at very low angles (<25°) TCA. lower ctc set at increase in foreign included rock types and structures.			95.50 - 105.60	200-250
				mod fracd and intruded by r f.g. carbonate, locly making igneous brc 26.55 to 27.25 m. ctcs sharp, 30.85 - 31.10 m, 41.95 to 42.85 m, 43.25 to 43.70 m (wk). have tailing ± core parallel fl-lined fracs; 29.90 to 30.85 m, 31.40 to 31.50 m, 32.95 to 33.30 m, 33.40 to 34.20 m, 34.75 to 34.85 m. late Carb pebble dyke: 41.20 to 41.35 m rnd Carb frag, early fl-rich and late 5-10 m in mass f.g carbonate.	47.90 m - ctc 22° TCA.			
				relatively undisturbed - 24.20 to 26.50 m, 36.00 to 41.20 m, 44.80 to 46.75 m.				
47.90	54.65	dol-Carb	BD	**vnd, fracd altd m.g. xtln dol-Carb**				
				cr, r, dk p-gy, med br. this interval is a continuation of the one above with much more "activity". the m.g. mass, lt gy Carb is cut by frac zone vns, pebble dykes. less than 10% is unaffected. lower ctc set at end of late tectonic activity. most vns, dykes, fracs etc are at very low angles TCA (<25°).	49.00 m - bndg 0° TCA.			
				48.70 to 50.15 m - well bnded (5° TCA at top, 35° at base).				
				47.95 to 48.15 m, 50.90 to 51.60 m - clot of og-r min.				
				52.80 to 53.05 m - mass diffuse edge patches REflc mins?.				
				54.25 to 54.55 m - fl-Carb-py-mag vn, 2 cm thick. core parallel, very magnetic.				
54.65	66.70	dol-Carb	BD	**frac and vnd, mass m.g. xtln dol**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				fresh rock in gy-w, however much of interval is coloured by vng and frac fill, mostly in shades of br. all these frac are at very low angles TCA (<20°). the Carb is virtually accessory min free, mass, m.g., xtln. 55.10 to 55.40 m - late, v.f.g. ol Carb dykes, 2 cm thick, 15° TCA. 64.55 to 64.80 m - late, v.f.g. ol Carb dykes, 2 cm thick, 20° TCA. 62.60 to 62.95 m - late, v.f.g. ol Carb dykes, 2 cm thick, 20° TCA. 58.00 to 58.50 m - mod late fracd, random. 58.50 to 58.70 mm - streaky pale r, 10° TCA REflc mins? 3.5 cm thick. 61.10 to 61.55 m -streaky pale r, 10° TCA REflc mins? 3 cm thick dyke. 61.80 to 63.00 m - core parallel, diffuse frac and brc unfill and vns. 63.15 to 63.65 m - Carb pebble dyke. diffuse rnd ± 3-6 mm Carb frags in lt br f.g. carbonate. ctc fracd, irregular. 65.55 to 65.85 m - late, almost core parallel frac zone. overall a zone of late ± core parallel vns, thin dykes and fracg, all sub-vertical. a long lived conduit. base of interval set at onset fl-rich patches, gradational.	58.80 m - bndg 12° TCA.			
66.70	95.75	dol-Carb	A/B-T	**patchy fl-rich f.g. dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol-gy to p. this interval consist of patches/frags of fl-rich, dfmd early Carb surrounded by f.g. mottle text, occasional poor f.g. Carb. the fl-rich phase is composed of elongate flecks and blebs of fl (sub-mm), usually aligned crudely, in lt gy carbonate with minor py. the patches are typically in the 5-10 cm range and constitute ± 25% overall of the interval. the ol-gy Carb is mass overall. it is composed of f.g. to v.f.g equant suc (non-xtln) Carb with trace py. p fl not abnt in this phase, occurring as uncommon diffuse v.f.g. diss patchy and isolated c.g. this Carb clearly intrudes the fl-rich one, and has been wkly dfmd along with it. the latest Carb phase is occasionally thin v.f.g. ol Carb dykes, ± 2 cm, at low angles TCA. 69.10 to 69.65 m - thick late v.f.g. Carb dyke, ctc 20° TCA. 69.65 to 70.85 m - Carb pebble dyke, 40% ± 5 m rnd Carb clsts in dull dk r-br carbonate mtx, ctc 25° TCA. 73.45 to 75.10 m - FrZ intruded by late v.f.g. Carb, 30-40% late Carb. 76.75 to 79.75 m - 30% late Carb. 73.60 to 76.60 m, 82.30 to 85.70 m - relatively fl-rich. 82.20 to 82.30 m - pebble Carb dyke. lower ctc sharp, wavy, lightly shrd.	76.30 m - bndg 21° TCA. 79.90 m - bndg 31° TCA. 90.60 m - bndg 32° TCA. 95.75 m - ctc 25° TCA.			
95.75	105.77	Glim	-	**f.g. mass phl-dol rock** very dk gr-br. interval consists of fairly homo, completely mass rock consisting of 1 mm w dol rnd pheno (5-15%) in a f.g. mtx of phl(?) and dol, minor py. the only significant variable is the percentage of phenos. the interval is fracd throughout, majority are at low angles TCA and many of these are sks, well polished. this unit appears to be a dyke of some kind. not intruded by late phases.		95.75-105.77 m massive.		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				97.75 to 98.75 m, 103.90 to 104.30 m, 105.05 to 105.30 m, 95.75 to 96.00 m, and 96.60 to 96.70 m - str fracd, core rubble, lost core. 104.00 to 104.3 m - 10% phenos, 60% phl, 30% gdmass dol. highly frac f.g. Carb. only 1/2 of the core, ctc 0° TCA. xenolith? 105.00 to 105.15 m - c.g. cubic py 10% 105.15 to 105.60 m - xenolith? Carb, v.f.g. mod fracd, could be late Carb dyke. 105.75 m - definite late Carb intrusive dyke, 2 cm thick, ctc 25° TCA. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536221.37	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	9-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312341.96	**Rig Type:**	Zinex A5	**Date Completed:**	10-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	30 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	2.74 m	**Note:** all A zone with MHREO	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	82.04 m	interval	
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	1.00	OVB	-	**ovb**			1.00-30.50	650-800
				no core			30.50-34.20	800-900
1.00	12.15	dol-Carb	-	**Carb clst brc (A-Zone?)**			34.20 - 38.75	1200-1600
				med ol-gy. interval consist of Carb clsts 1 mm - 15 cm in a f.g., granular Carb mtx. clsts are ang, not orientated. larger clsts tend to be early stage, fl-bearing Carb, most smaller ones f.g. to v.f.g. and featureless, avg clst size increases downwards. brc hard , barely scratches with knife. brc mtx f.g. ol-gy, mass, granular + 15%, brc well packed, suc text like late Carb. minimally magnetic, no surficial wthg effects, lower ctc set at end of brc. brc intruded by late, v.f.g. Carb dykelets. massive.			38.75-50.00	600-700
12.15	34.15	dol-Carb	A	**mod dfmd poorly bnd fl-rich dol-Carb**				
				lt to med ol-gy with lt br zones. in this interval the texts are quite variable, mod dfmd. overall interval is poorly bnded with bnds in the 10 cm range. locly dfmd nodular, shr lam, early frac, dfmd and mass. fl is found as early dfmd vns, lining early fracs, in streaky patches, heavily diss in irregular bnds. no semi mass blocks, fl, abundance for A-zone is avg. more hetero than usual, and slightly dkr. base of interval set at onset of br alt.	19.50 m - comp bndg 56° TCA.		50.00 - 61.50	550-600
				21.60 to 21.90 m - core parallel late frac zone.	24.50 m - comp bndg 49° TCA.		61.50 - 82.04	450-500

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				14.70 to 15.60 m - relatively mass med ol-gy. low fl. 20.15 to 21.25 m, 26.45 to 57.15 m - relatively fl-rich. 21.25 to 30.50 m - becomes ltr coloured. this zone is less dfmd, more homo, and the carbonate min often display a m.g. to c.g nodular text and a gr-tan colour. late Carb un-dfmd brc (like 1.00 ti 12.15 m); 28.00 to 28.30 m, 28.85 to 29.15 m, 29.50 to 29.70 m, 30.45 to 32.75 m. more Carb mtx-rich than above and mtx locly finer grained. interval cut by occasional late, v.f.g., un-dfmd Carb dykelets 2-3 cm thick, along <30° TCA.	32.30 m - comp bndg 51° to TCA.			
34.15	38.82	dol-Carb	-	**f.g. mass brittle fracd Carb dyke and adjacent altd Carb (MHREO?)** med to dk ol-gy to br. mass. this interval consists of two components. the first is intrusive Carb, this rock is f.g. mass and finely prtc, it consists of xltn suh carbonate (f.g.) in a finer grained xtln carbonate mtx, suh py mod abnt. this rock is mod brittle fracd, random, the rock forms dykes on mm to 10 cm scale intruding, and altg the WR. the WRs are dfmd early Carb, slightly fracd and altd to med br hues. py is introduced along with minor mag. no visible addition of fl. both the intrusive rock and the adjacent altd rocks are strly RA and med to wkly magnetic. the alt affects the late v.f.g. Carb dykelets, so is very late. 34.20 to 35.50 m, 36.75 to 38.70 m - mostly altd WR.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
38.82	70.65	dol-Carb	A	**fl-rich, variably bnded dol-Carb**	39.40 m - comp bndg 25° TCA.			
				mainly lt ol-gy. this is the "normal" A-zone, interval consists of finely bnded layers of fl-rich and relatively fl-poor Carb. at top (38.82 to 50.40 m) the bndg is virtually planar. the fl-rich are thinly lam, with vague appearance of shr-plastic flow. the carbonate in these is lt gy. the adjacent fl-poor layers are internally mass and ol-gy.	44.60 m - comp bndg 42° TCA.			
				below 50.40 m bndg still present but it is disrupted by early fine brittle fracturing. also the amount of fl-rich bnds decreases dominantly. the texts here are more chaotic-dfmd.	47.15 m - comp bndg 33° TCA.			
				lower ctc set at end of fl-rich bnds is gradational.	51.20 m - comp bndg 30° TCA.			
				43.15 to 44.10 m, 48.90 to 49.90 m - relatively fl-poor.	55.80 m - comp bndg 56° TCA.			
				44.85 m - colour darkens.	61.50 m - comp bndg 30° TCA.			
				46.00 to 49.95 m - late fracs (with displacement) appear, interval hetero in detail, homo overall.	62.90 m - comp 43° TCA.			
				52.50 to 54.75 m - nodular text appears, due to str early fracg.	67.01 m - comp bndg 43° TCA.			
				below 59.15 m - early brittle frac dfmn begins to decrease.				
				61.45 to 61.60 m - late, core normal, fl-filled fracs.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				below 62.00 m - fl abundance decreases. below 64.30 m - colour lightens to lt gy.				
70.65	77.35	dol-Carb	-	**mass to slightly swirly f.g. dol-Carb (A-Zone?)** pale cr-gr, interval very mass, composed of f.g. eqgr suc carbonate. trace accessory py. fl present in interval as scattered fine grains (clst), early frac fills, f.g. diss, patches. one lrg semi mass clst 8 cm x 3 cm (76.80 m). this interval looks like a long section of the late Carb seem in the A zone, without the early fl-rich frags. rather homo throughout. 72.25 to 72.90 m - abnt early fracturing with fl lining. 76.50 to 76.57 m - joint fl shr bnds.				
77.35	82.04	dol-Carb	A	**fl bnded dol-Carb** lt gy and lt y-gr streaky fl-rich bnds 5-20 cm thick alternate with suc f.g. accessory poor carbonate. this Carb is more y than usual. the fl-rich bnded sections are typical of the A-Zone. the only "non A-Zone" thing is the late Carb colour. the y-gr Carb clearly intrudes the fl-rich gy one. it is also much less dfmd. 79.13 to 79.33 m - thick late v.f.g. bnded Carb dyke, undfmd. EOH	78.30 m - comp 41° TCA. 80.65 m - comp bndg 37° TCA.			

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536167.68	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	11-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312362.71	**Rig Type:**	Zinex A5	**Date Completed:**	12-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	2.13 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	105.77 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	2.50	OVB	-	**ovb**			2.50 - 12.75	400-500
				75 cm A-Zone type bldrs recovered.			12.75 - 16.00	600-700
2.50	24.20	dol-Carb	A	**streaky text, fl-rich dol-Carb**			16.00 - 24.00	400-450
				lt gy to lt ol-gy. the interval is bnded throughout. bnds mostly defined on fl content. the fl-rich bnds are composed of sub mm thick fl streaks alternating with mm or less bnds of lt gy dol. this bndg is variably dfmd, slightly wavy and often with a shr text. these fl enriched bnds (20-50% fl) are 1-15 cm thick. the other bands are lt ol-gy, they are composed of f.g. to v.f.g. equant, suc dol grains with very few if any accessory mins. this phase is clearly intrusive into the earlier, fl-rich Carb phase, although now they are bnded together, implying post intrusion co-dfmn. fl-Carb intrusion-dfmn-intrusion of later Carb along dfmn planes - confirming dfmn. the latest intrusion phase visible is an un-dfmd series of late, ol, v.f.g. Carb dykes ± 2 to 5 cm thick which clearly x-cut the early dfmn. these constitute ± 1% or less of the interval. note the interval is variably effected by surficial wthg effects, never str.	6.15 m - bndg 33° TCA. 10.00 m - bndg 39° TCA.		24.00 - 50.00	290-350
				fl-rich sections decrease in abundance below 13.50 m. str early frac and locl brc 18.00 to 24.20 m, as well late fracg, intensity increases downwards. later Carb y-gr (lt) 5.35 to 6.50 m. relatively fl-poor at 14.50 to 17.15 m, 18.00 to 20.65 m, 21.25 to 23.55 m. base of interval (30 cm) dk gr, very str fracg. base of interval set at onset of cr, xtln Carb, ctc fracd.	14.10 m - bndg 56° TCA. 21.80 m - bndg 34° TCA.		50.00 - 54.50	400-450
24.20	47.90	dol-Carb	BD	**completely mass xtln m.g. dol-Carb**			54.50 - 95.50	310-370

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				gy-w, this interval is composed of mass, m.g. xtln (clear-glassy) dol. the unit is often coloured along late fracs, contains xenoliths or is surficially stained or is brc, but the un-affected rock is w. few if any accessory mins. there are many of these "coloured" grains giving the interval a "dirty" look. this Carb is occasionally v.f.g., often bnded late fine Carb dykes up to 5 cm thick, always at very low angles (<25°) TCA. lower ctc set at increase in foreign included rock types and structures.			95.50 - 105.60	200-250
				mod fracd and intruded by r f.g. carbonate, locly making igneous brc 26.55 to 27.25 m. ctcs sharp, 30.85 - 31.10 m, 41.95 to 42.85 m, 43.25 to 43.70 m (wk). have tailing ± core parallel fl-lined fracs; 29.90 to 30.85 m, 31.40 to 31.50 m, 32.95 to 33.30 m, 33.40 to 34.20 m, 34.75 to 34.85 m. late Carb pebble dyke: 41.20 to 41.35 m rnd Carb frag, early fl-rich and late 5-10 m in mass f.g carbonate.	47.90 m - ctc 22° TCA.			
				relatively undisturbed - 24.20 to 26.50 m, 36.00 to 41.20 m, 44.80 to 46.75 m.				
47.90	54.65	dol-Carb	BD	**vnd, fracd altd m.g. xtln dol-Carb**				
				cr, r, dk p-gy, med br. this interval is a continuation of the one above with much more "activity". the m.g. mass, lt gy Carb is cut by frac zone vns, pebble dykes. less than 10% is unaffected. lower ctc set at end of late tectonic activity. most vns, dykes, fracs etc are at very low angles TCA (<25°).	49.00 m - bndg 0° TCA.			
				48.70 to 50.15 m - well bnded (5° TCA at top, 35° at base).				
				47.95 to 48.15 m, 50.90 to 51.60 m - clot of og-r min.				
				52.80 to 53.05 m - mass diffuse edge patches REflc mins?.				
				54.25 to 54.55 m - fl-Carb-py-mag vn, 2 cm thick. core parallel, very magnetic.				
54.65	66.70	dol-Carb	BD	**frac and vnd, mass m.g. xtln dol**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				fresh rock in gy-w, however much of interval is coloured by vng and frac fill, mostly in shades of br. all these frac are at very low angles TCA (<20°). the Carb is virtually accessory min free, mass, m.g., xtln. 55.10 to 55.40 m - late, v.f.g. ol Carb dykes, 2 cm thick, 15° TCA. 64.55 to 64.80 m - late, v.f.g. ol Carb dykes, 2 cm thick, 20° TCA. 62.60 to 62.95 m - late, v.f.g. ol Carb dykes, 2 cm thick, 20° TCA. 58.00 to 58.50 m - mod late fracd, random. 58.50 to 58.70 mm - streaky pale r, 10° TCA REflc mins? 3.5 cm thick. 61.10 to 61.55 m -streaky pale r, 10° TCA REflc mins? 3 cm thick dyke. 61.80 to 63.00 m - core parallel, diffuse frac and brc unfill and vns. 63.15 to 63.65 m - Carb pebble dyke. diffuse rnd ± 3-6 mm Carb frags in lt br f.g. carbonate. ctc fracd, irregular. 65.55 to 65.85 m - late, almost core parallel frac zone. overall a zone of late ± core parallel vns, thin dykes and fracg, all sub-vertical. a long lived conduit. base of interval set at onset fl-rich patches, gradational.	58.80 m - bndg 12° TCA.			
66.70	95.75	dol-Carb	A/B-T	**patchy fl-rich f.g. dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol-gy to p. this interval consist of patches/frags of fl-rich, dfmd early Carb surrounded by f.g. mottle text, occasional poor f.g. Carb. the fl-rich phase is composed of elongate flecks and blebs of fl (sub-mm), usually aligned crudely, in lt gy carbonate with minor py. the patches are typically in the 5-10 cm range and constitute ± 25% overall of the interval. the ol-gy Carb is mass overall. it is composed of f.g. to v.f.g equant suc (non-xtln) Carb with trace py. p fl not abnt in this phase, occurring as uncommon diffuse v.f.g. diss patchy and isolated c.g. this Carb clearly intrudes the fl-rich one, and has been wkly dfmd along with it. the latest Carb phase is occasionally thin v.f.g. ol Carb dykes, ± 2 cm, at low angles TCA. 69.10 to 69.65 m - thick late v.f.g. Carb dyke, ctc 20° TCA. 69.65 to 70.85 m - Carb pebble dyke, 40% ± 5 m rnd Carb clsts in dull dk r-br carbonate mtx, ctc 25° TCA. 73.45 to 75.10 m - FrZ intruded by late v.f.g. Carb, 30-40% late Carb. 76.75 to 79.75 m - 30% late Carb. 73.60 to 76.60 m, 82.30 to 85.70 m - relatively fl-rich. 82.20 to 82.30 m - pebble Carb dyke. lower ctc sharp, wavy, lightly shrd.	76.30 m - bndg 21° TCA. 79.90 m - bndg 31° TCA. 90.60 m - bndg 32° TCA. 95.75 m - ctc 25° TCA.			
95.75	105.77	Glim	-	**f.g. mass phl-dol rock** very dk gr-br. interval consists of fairly homo, completely mass rock consisting of 1 mm w dol rnd pheno (5-15%) in a f.g. mtx of phl(?) and dol, minor py. the only significant variable is the percentage of phenos. the interval is fracd throughout, majority are at low angles TCA and many of these are sks, well polished. this unit appears to be a dyke of some kind. not intruded by late phases.		95.75-105.77 m massive.		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				97.75 to 98.75 m, 103.90 to 104.30 m, 105.05 to 105.30 m, 95.75 to 96.00 m, and 96.60 to 96.70 m - str fracd, core rubble, lost core. 104.00 to 104.3 m - 10% phenos, 60% phl, 30% gdmass dol. highly frac f.g. Carb. only 1/2 of the core, ctc 0° TCA. xenolith? 105.00 to 105.15 m - c.g. cubic py 10% 105.15 to 105.60 m - xenolith? Carb, v.f.g. mod fracd, could be late Carb dyke. 105.75 m - definite late Carb intrusive dyke, 2 cm thick, ctc 25° TCA. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536041.00	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	13-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312272.55	**Rig Type:**	Zinex A5	**Date Completed:**	14-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.05 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	69.20 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	1.60	OVB	-	**Ovb**			1.65 - 20.60	400-475
				a few Carb bldrs recovered at base.			20.60 - 35.50	350-450
1.60	30.58	dol-Carb	A	**fl-rich, f.g. generally bnded dol-Carb**				
				lt gy and lt ol-gy with dk p patches. the interval consists of two rock suites; one, a lt gy f.g. suc Carb with locly abnt dk p fl. the fl occurs as irregular grains and thin (±1 mm) streaks, concentrated in bnds 3-8 cm thick. the fl is up to 50% of such bndg. this bndg is often disrupted by dfmn, particularly early fracg with small movement. also interrupted by intrusion of the 2nd suite. the second rock suite is a Carb of similar carbonate grain size, with a suc text. this Carb is lt ol-gy and is virtually accessory min free. this late Carb can include fine clsts of fl and indeed xenoliths of the earlier suite. this late Carb is inter-bnded for the most part, but is locly transgressive. these two rock suits are dfmd together by shr plastic flow (?) and fracg, the earlier suite appears as well to have been dfmd earlier. the latest intrusive phase is manifest by thin (2-4 cm) sharp sided v.f.g. ol-gr Carb dykes, one can say every 2-3 m or so. sharp x-cut relationships dykes always at low angles TCA (<30°).	6.00 m - bndg 18° TCA.	1.60 - 30.58 m bnded	35.50 - 45.50	300-350
				base of interval set at end of abnt fl bnds, gradational.	8.40 m - bndg 28° TCA.		45.50 - 69.20	275-325
				3.40 to 6.15 m, 7.25 to 9.00 m, 10.45 to 11.95 m, and 17.40 to 22.40 m - fl relatively abnt.	11.70 m - bndg 34° TCA.			
				below 22.40 m - fl abundance significantly less.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				15.10 m - v.f.g. fl-Carb-py-mag bnded dyke, 4 cm thick, dyke 30° TCA.	18.10 m - bndg 32° TCA.			
				18.00 to 22.45 m - quite well bnded, 24° TCA.	21.15 m - bndg 46° TCA.			
				23.35 to 23.55 m - relatively thick, late, v.f.g. Carb dyke, banded at margins, dyke 46° TCA.	27.80 m - bndg 37° TCA.			
				below 24.25 m incidents of early fracs increases, badly disrupting the bndg, culminating in Carb brc at 29.40 to 30.15 m.				
30.58	42.58	dol-Carb	-	**mass to patchy, f.g. dol-Carb (B-Zone?)** lt to med ol-gy. this unit is composed of mass f.g. suc text dol-Carb. this Carb is very similar to the second rock suite in the interval above. the unit is vaguely colour mottled. contained within are diffuse edged diss patches rich in fl, below 35.20 m. these are not in bnds as above and not dfmd. downwards in this interval the colour lightens. this interval is not bnded except at very base. 35.25 to 38.20 m and 39.95 to 40.95 m - fl patch rich areas. 41.45 to 41.65 m - surficial wthg stain. 41.95 to 42.00 m - y-br mod late fracd. 42.00 to 42.25 m - bnded, defined by colour variations, bndg at 40° TCA. lower ctc set at increase in grain size of Carb and appearance r-og bnds.				
42.58	69.20	dol-Carb	BD	**m.g. mass xtln dol-Carb with streaky bndg**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				very lt gy to lt br. this unit is composed of m.g. xtln eqgr dol, trace of f.g. py. the Carb appears completely un-dfmd, except for late fracg. the characteristic of this unit is a perv thin bndg, coloured bnds a few mm thick alternate with twice the thickness of un-coloured dol. the bnds maybe og-r, dull r, p or dk gy, the latter two colours more associated with late fracg. the bndg is always at very low angles to core axis quite, often core parallel. the r colour is due to v.f.g. "furry" streaks of REflcs, the origin of these appears igneous, as they are not structural and certainly not due to vng. other than the streaky bndg the interval is relatively featureless. some zones of mod late fracg.	49.50 m - bndg 6° TCA.	42.58-69.20 m streaky bnded.		
				bndg disrupted - 52.40 to 54.65 m late fracg, 66.80 to 69.20 str brittle fracg.	59.50 m - bndg 6° TCA.			
				no late dykes in this interval.	65.50 m - bndg 2° TCA.			
				EOH				

OGQ #223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536389.85	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	15-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6311967.27	**Rig Type:**	Zinex A5	**Date Completed:**	17-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087783	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	40 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.05 m	**Note:** all A-Zone except for dol-phl dyke.	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	133.28 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	4.56	OVB	-	**ovb** 1 m of Carb bldrs recovered.			4.56 - 10.00 10.00 - 60.00	700-800 800-900
4.56	74.47	dol-Carb	A	**locly bnded, variably dfmd fl dol-Carb** lt ol-gy with lt gy patches. the interval consist f.g. eqgr, suc Carb of two types, gy and fl-rich and ol and accessory poor. here this distinction is more difficult to make. in this suc dol mtx are bodies of dk p fl.	17.60 m - bndg/ streaking 20° TCA.		60.00 - 84.00	650-750
				the fl is present as m.g. diss patches to 10 cm bndg parallel streak like diss, manically contorted semi mass bodies, less heavily diss bnds. all of this fl bodies show evidence of dfmn and intrusion by the late ol Carb. the good, shr type bndg of the early Carb is never present here - this A zone is not as dfmd as most others.	36.00 m - bndg/ streaking 15° TCA.		84.00 - 102.00	925-1025
				the late Carb is ol-gy, f.g. suc and virtually accessory mineral free, except for fl, seemingly, inherited from the earlier Carb phase. this Carb intrudes the earlier fl-bearing core in an intimate fashion, fingers. there has been slight post late Carb dfmn.	47.20 m - bndg/ streaking 34° TCA.		102.00 - 109.00	800-900
				the latest Carb intrusive event is thin (1-6 cm) ol-gy, v.f.g. mass to bnded accessory free Carb. these dykes are slightly wavy, with sharp sides, much less dfmd, the vast majority are at low angle TCA (<30°).	50.10 m - bndg/ streaking 31° TCA.		109.00 - 116.00	600-700

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				overall this interval maybe hetero in detail but it is remarkably homo overall. the proportion of fl and late dykes doesn't very much on a 2-3 m core interval. lower ctc set at beginning of definite decrease in fl abundance. 4.80 to 5.05 m - late brc, well packed f.g. Carb and fl clsts ang to rnd. less than 10% mtx. slightly surface wthd br hue to 9.50 m. top ctc 46° TCA, lower 31° TCA. 20.1 to 20.50 m, 26.15 to 26.30 m, 44.35 to 44.65 m - thick late v.f.g. Carb dykes, 12° TCA. 15.20 to 36.25 m, 65.90 to 69.70 m - late Carb dykes relatively abnt. 56.40 to 59.30 m - relatively fl-poor. the overall homogeneity and lack of fol/bndg in this interval, compared with other A-Zone intersection, is striking.	65.90 m - bndg/ streaking 28° TCA.		116.00 - 121.00 121.00 - 133.20	300-350 650-750
74.47	96.97	dol-Carb	A	**mass to streaky fl dol-Carb** lt ol-gy. this interval is similar to the one above, with significantly less fl. fl is present as clots, early frac fills and diffuse streaks. the text is mass to vaguely streaky. this interval contains significantly fewer late, v.f.g. ol Carb dykes. mass. 75.95 to 78.00 m, 80.05 to 80.75 m, 92.00 to 92.35 m - relatively fl-rich sections. fl-rich patches may contain trace to minor pyrite (anh), square to equant y-cr mineral and/or a dk r-br v.f.g. mineral most often ilk with the fl.	80.25 m - bndg/ streaking 28° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				83.28 to 83.40 m, 90.20 to 90.35 m - late, un-dfmd brc zone; ang to sub-rnd Carb clst 0.5 mm to 2 cm in a v.f.g. pale p Carb mtx.	91.00 m - bndg/ streaking 10° TCA.			
				95.66 to 96.08 m - late, open space (v.f.g.) fillings. vugs lined with w Carb then filled with mass fl.				
				lower ctc set at increase in abundance of fl.				
96.97	115.96	dol-Carb	A	**mass to locly streaky fl dol-Carb**				
				lt ol-gy. similar text to the unit above with somewhat more fl. still not as much fl as 14.50 to 74.47 m. the Carb composed of f.g. eqgr suc dol, with accessory fine py. fl occurs as fine dots, streaky disseminations and rare mm thin bnds, the latter are almost always sub parallel TCA. overall the interval is quite homo. mass.	102.30 m - bndg/ streaking 5° TCA.			
				96.97 to 97.85 m, 101.45 to 102.35 m, 111.60 to 103.90 m - relatively fl-rich sections.				
				108.15 to 109.85 m - relatively abnt late Carb dykes.				
				lower ctc set at sharp change in rock type.				
115.96	121.87	Glim	-	**mass f.g. prtc dol phl dyke**				
				very dk gr-gy. interval composed of a f.g. mass un-orientated mix of w dol and dk gr phl. the central part of the interval (116.10 to 118.70 m) is prtc containing equant, rnd, zoned dol pheno (after fsp?). in the relatively c.g. centre the proportions appear to be 60% dol, 40% phl. the finer grained margins may be richer in dol. this interval contains abnt ± core parallel late brittle, irregular fracs, whose surfaces are often polish/sks. sometimes with py on them. this unit is almost identical with the unit at the very bottom of EC13-093. mass.	115.96 m - ctc, sharp 10° TCA			
					121.87 m - ctc, sharp ±70° TCA.			
121.87	133.28	dol-Carb	A	**streaky-featured, f.g. fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy and lt ol-gy. this interval is very similar to 14.50 to 74.47 m. fl mod abnt (10-15% ?) as diss patches, early frac fills and m.g. clsts. interval composed of two Carb, an early, lt gy f.g. fl-rich phase and a late f.g. ol-gy accessory mineral-poor phase, along with even later dykes of v.f.g. ol Carb dykes. the first two phases are dfmd, here mostly by movement along early irregular fracs. where relatively str the early frac dfmn results in quite chaotic text. bndg/shr bndg is very poorly develop, other than in the late, v.f.g. Carb dykes. 127.10 to 127.22 m - brc, result of str early fracg. 131.65 to 133.28 m - abnt late, v.f.g., bnded Carb dykes. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536351.26	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	17-Aug-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6311935.59	**Rig Type:**	Zinex A5	**Date Completed:**	18-Aug-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087783	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	30 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.66 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	93.71 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	3.20	OVB	-	**ovb**			3.02 - 9.20	550-600
				a sample of Carb bldrs recovered.			9.20 - 19.50	500-550
3.20	14.63	dol-Carb	A	**str dfmd, fl dol-Carb**			19.50 - 32.50	550-600
				lt to med ol-gy. this interval is composed of two intermixed Carbs. the earlier one tends to be lt gy, f.g. and contains locly abnt p fl and traces of f.g. anh py. the dol is f.g. eqgr. this earliest Carb is strly dfmd, texts often chaotic. cut and dfmd by early fracs, plastically shrd, mottled or with rolled nodular texts. fl occurs as mm clots and ilk (with dol) irregular patches (± 5 cm). the late Carb is ol-gy, f.g. and appears to be almost accessory min free. it is composed of f.g., eqgr suc dol. it intrudes and often frags the earlier Carb. the late Carb is often mass or colour mottled. it has been dfmd but not as intensely as the earlier Carb. the latest phase is post dfmn, sub planar v.f.g. ol Carb dykes, most often in the 2-3 cm range. all are cut by rare (in this interval) late fracs (brittle). lower ctc set at end of prominent fl.	19.25 m - bndg 28° TCA.		32.50 - 42.00	600-700
				6.00 to 6.20 m, 11.00 to 13.65 m - major fl concentration. outside of these fl abundance low, 1-2%.			42.00 - 49.00	700-850
14.63	52.25	dol-Carb	-	**mod to str dfmd f.g. dol-Carb**				
				lt gy and med gy. these again appear to be two ages of Carb (and a minor late third). the earliest phase is lighter coloured and more dfmd. both are f.g. Carb.			49.00 - 58.30	480-520

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				the earlier Carb is dfmd especially at top (14.63 to 29.00 m) into nodules, rnd to amoeboid aggregates 5 mm to 4 cm diameter. these may be clumped together (i.e.25.50 m) or partially separated by the late Carb. the early Carb is further segmented by late fracg and intrusion by the late v.f.g. Carb phase.			58.30 - 65.50	450-550
				the late phase is more homo, although it as well is late fracd and intruded. at the top the dfmn texts are complex - interplay of early and late, brittle and ductile. below 29.00 m the visible dfmn decreases as does the proportion of the earlier Carb phase, which is virtually done below 38.50 m.			65.50 - 79.00	550-650
				the lower part of the interval is mass to swirly text, coloured mottled, much more homo looking.			79.00 - 93.70	350-450
				lower ctc set at appearance of mod abnt fl.				
				15.40 to 17.35 m - late core parallel FZ. intruded by late, v.f.g. Carb.				
				23.20 to 26.25 m - major early nodular text.				
				18.20 to 20.15 m, 21.05 to 21.80 m, 26.90 to 28.15 m - heavily intruded by late v.f.g. Carb. other lesser zones				
				46.55 to 47.00 m - slightly more dfmd.				
				49.00 to 50.00 m - late frac with w cc filling ± p fl.				
				42.00 to 49.00 m - the RA zone is the least dfmd, appears to be pure late stage Carb.				
52.25	58.27	dol-Carb	A	**str dfmd f.g., fl-rich dol-Carb**				
				lt ol grey (slightly y) to lt gy. this is a f.g. eqgr Carb with quite abnt fl (15-25%). the fl is patchy, highly dfmd patches, streaks and early vns. in one spot mod bnded. the later Carb here has a y hue not seen before.	57.30 m - bndg 27 ° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				52.25 to 52.53 m, 52.88 to 53.50 m, 54.73 to 55.70 m, 56.80 to 58.27 m - major fl concentration.				
58.27	81.40	dol-Carb	A	**dfmd f.g. dol-Carb**				
				shades of lt to dk ol-gy. the interval is composed of f.g. eqgr accessory poor Carb. the later phase. the interval is much dfmd, messily by brittle fracs. at the top the brittle fracs core often intruded by late v.f.g. dk Carb, forming an igneous brc. often accompanied by py.	63.70 m - bndg 14° TCA.			
				towards the base below 77.00 m the unit darkens, due to v.f.g. mod diss fl and some coarser fl bndg (A-Zone style). above, fl rarely present, never even mod attendance. broken patches of earlier non fl Carb in abundance down to 71.40 m, only occasional below. late, v.f.g. ol Carb dykes present. not abundant but thicker than normal (±5 cm). bndg 3° TCA.				
				this interval strly resembles 14.63 to 52.25 m.				
				59.00 to 61.30 m - coarse fl scattered dots, less than 1%.				
				63.77 to 64.65 m - shr text dfmd early Carb.				
				77.40 to 78.55 m - mod streaky fl.				
				66.80 to 68.20 m - dk ol-gy v.f.g. fl with some fl streaks at top.				
				68.30 to 71.35 m - str Carb filled brittle frac.				
				58.27 to 59.80 m, 73.30 to 74.95 m, 75.85 to 77.00 m - somewhat lighter coloured.				
81.40	93.71	dol-Carb	-	**mod dfmd f.g. fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				Carb composed of f.g. eqgr suc dol. trace f.g. anh py. fl is common throughout. the most abnt type is med p and forms diffuse edged diss patches and lesser crude bnds. the other type is A-Zone fl, it is dk p broken frags, streaks in dfmd zones. the first fl type is spatially associated with pale y-gr f.g. Carb, where as the second is associated with f.g. ol-gy Carb with lt gy patches. dfmn is manifest as movement on early fracs, streaky plastic shr bndg, nodular text. it appears that the dk fl rocks are more dfmd than the med p ones.	82.60 m - bndg 5° TCA.			
				this interval shares affinities with the B-Zone (y pale fl, less dfmd) and A-Zone (ol-gy, dk fl, more dfmd).	90.10 m - bndg 17° TCA.			
				81.40 to 85.70 m, 88.45 to 90.10 m, 92.10 to 93.70 m - B-Zone type sections.				
				85.70 to 88.45 m, 90.10 to 92.10 m - A-Zone type sections.				
				interval cut by late, v.f.g. often thinly bnded Carb dykes almost un-dfmd. these are much more abnt in A-Zone type sections.				
				93.00 m - late fl vn, 6 mm thick, vn 4° TCA.				
				at top of B zone section contains abnt fl.				
				EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536270.57	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Aug-19-13	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6311937.63	**Rig Type:**	Zinex A5	**Date Completed:**	Aug-20-13	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087783	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Not Pulled	**Survey Interval:**	30 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.05 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	56.34 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	3.35	OVB	-	**ovb**			3.42-12.50	450-500
				60 cm of Carb bldrs recovered.			12.50 - 26.50	300-400
3.35	13.50	dol-Carb	-	**f.g. mass to streaky, fracd dol-Carb (A-Zone?)**				
				v.f.g. blk xenolith. dirty lt to med ol-gy. the interval is composed of f.g. suc text Carb. locly appears streaky text with some fl, nowhere abnt. at top mostly mass. the Carb is strongly fracd, especially below 6.00 m, fracg early and late. late fracs often lined by blk, v.f.g. nodular very dk p fl with py - quite abnt locly. pyrite, often euh is common. the interval also contains xenoliths of a f.g. to v.f.g. gr-blk rock phl-cc (fizz). margins (in carbonate) contain f.g. fl vnlets and phl vnlets.			26.50 - 29.50	600-700
				3.50 to 3.60 m (f.g. alb rock with thin phl rims), 4.83 to 4.90 m (f.g. phl, many marginal vnlets), 6.22 to 7.55 m (mass, v.f.g. phl-cc rock), 8.55 to 8.70 m (f.g. alb-phl-cc rock) phl reaction rims) - xenoliths.			29.50 - 33.00	800-900
				slight fracd 8.20 to 9.70 m (late), 10.20 to 10.65 (early), 12.80 to 13.50 (late).				
				interpretation: this rock looks like lean fl A-Zone based on early dfmn texts and fl habit.			33.00 - 42.00	550-700
				lower ctc set at change in rock type.			42.00 - 44.00	400-500
13.50	26.35	Glim	-	**f.g. to v.f.g. mass phl-dol rock**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				gr-blk. rock composed of f.g. to v.f.g. phl and dol (no fizz). scattered within are bnds, clots and large euh xtls of py, irregularly distributed. the relatively coarser-grained sections are finely prtc dol, equant, rnd. in general the edges of the intervals are v.f.g., but these are variations. no thin vnlets intrude this rock, except at fl vn (14.55 m).			44.00 - 47.50	350-450
				16.20 to 16.75 m - Carb Glim brc, f.g. ol Carb with small Glim frags brcd in a v.f.g., blk mtx, strange texts. some cc in Carb.			47.50 - 53.00	1000-1350
				18.60 to 20.10 m - dfmd mass f.g. lt ol-gy dol-Carb. upper 55 cm brcd in similar style to 16.20 to 16.75 m.			53.00 - 56.30	700-800
				18.50 m - the phl-dol rock contains 2 small rnd dol-Carbs, unmistakable xenoliths proving this rock is intrusive.				
				23.25 to 24.04 m - early frac dfmd ol -gy fl dol-Carb. slightly phlogopitized on margins. one late brc patch with v.f.g. blk, micaceous infill. lower ctc irregular, ± 55° TCA, upper very undular. there are probably a four separate dykes of this rock, separated by the brcd Carb units. this is confirmed by the distribution of the f.g. prtc and v.f.g. types.				
				20.25 to 23.45 m, 24.40 to 25.15 m - not late brittle fracg, 15° and 65° TCA.				
				upper and lower ctcs obscured by broken core.				
26.35	39.00	dol-Carb	A	**dfmd text f.g. fl dol-Carb**				
				med to lt ol-gy. this interval is composed of f.g. suc dol-Carb. texts are very hetero but dfmd. early fracg, swirly-chaotic; dfmd nodular. overall mass. fl (dk p) is a common accessory min. it is present hetero as diss patches (1-3 cm), infilling early brc, thin streaks and heavily diss c.g. patches. the colour lightens irregularly downwards. py a common trace min, more in some late fracs. interval cut by rare planar 1 cm v.f.g. Carb dykes.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				30.50 to 31.00 m - phl-dol dykes, same as 13.50 to 26.35 m. heavy euh phl margins in Carb.				
				29.22 to 29.36 m - brc, ang cm scale locl Carb frags in v.f.g. blk mtx.				
				34.10 to 34.20 m - brc, locl Carb frags in w carbonate.				
				36.40 to 37.45 m - near core parallel fine comp bndg with fl streaks.				
				lower ctc at gradational lightening of colour.				
39.00	47.72	dol-Carb	-	**f.g. dfmd text fl dol-Carb**				
				lt ol-gy. compared with above, this unit is lighter coloured and contains significantly less fl.				
				f.g. suc, accessory mineral poor Carb. text dfmd swirly, streaky, mottled. accessory fl not abnt, occurs as m.g. clots, wk v.f.g. disseminations, early frac fills and more concentrated streaks.				
				overall text is hetero, but interval fairly homo overall.				
				40.60 to 41.85 m, 45.75 to 46.20 m - late, core normal, brittle frac, filled with fl.				
				40.20 to 40.53 m, 44.50 to 44.80 m - late frac, core rubbly.				
47.72	49.14	dol-Carb	A	**f.g. dol-Carb with mass f.g. mag Carb dykes. (MHREO)**				
				dk br-gr. interval consist of f.g. dol-Carb as above, heavily brittle fracd and intruded by a f.g. mass dol-py-fl(?)-mag Carb. high RA. locly the host rock is finely brcd (mm) and soaked with late Carb. hard to sag where intrusion stops and altn begins.				
49.14	56.34	dol-Carb	A	**swirly dfmd f.g. fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				med ol-gy. the Carb is composed of fine suc dol with accessory fl and minor py. the Carb displays highly dfmd texts, overall appearance of colour mottling and early frac dfmn. fl present as linings in early FrZs, patchy or swirly small, fine disseminations and late open space filling (with py). 49.22 to 50.00 m - c.g. qtz-Carb-fl vn, 1.5 cm thick y buff euh carbonate lines vn walls with lesser fl clear glass spiraly infills, 6° TCA. contains v.c.g. mol and sph. 51.45 to 51.90 m - brittle late, core parallel FrZ infilled with fl, some pre fl w Carb on walls. 52.40 to 52.80 m - str early frac, almost brc. 54.35 to 54.65 m nearly Carb, bleached. 55.38 to 56.34 m - patchy brc infilled with w carbonate, clsts ang. no banding. 53.45 to 53.95 m - dk gr. late fracg infilled with sooty blk v.f.g micaceous infill with euh py. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536199.89	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 03, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312199.18	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 07, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	3.66 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	194.16 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Durante		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	4.92	OVB	-	**ovb**			4.92	900
4.92	87.00	dol-Carb	A	**fl dol-Carb**			8.00	1300
				lt ol-gy (5Y 5/2). ol-gy (5Y 4/1).			11.00	950
				mineralogy - dol, 92%; fl, 7%; sul (py), 1%; mnz, trace; qtz, trace; amph, trace; ap, trace.			14.00	800
				f.g.to v.f.g. lt ol-gy to ol-gy with y-gy patches, psd-brcd Carb. overall texturally hetero but psd-brc generally. perv fl throughout (vnlets, stringers, patches, frac-fill), overall 8% but locly up to 40%. finely diss py throughout dol-Carb mtx, and rare qtz pockets (usually associated with fl). multiple overprinting generations present and chemical variations in dol create a mottled appearance locly. rare v.f.g. lt y-gy (5Y 7/2) to ol-gy (5Y 3/2) x-cut dykes at varying angles TCA but often shallow - sometimes have stylolitic boundaries. locl stylolitic zones throughout, usually in more strongly brcd areas and fl pockets. locld sections of brittle fracs - fl filled, rare hem altn on frac surfaces.			16.65 (ap clst)	1100
				7.84 to 7.70 m - strongly brc dol-Carb bnd with sub-ang to ang dol csts (max 0.5 cm) with perv fl disseminations and stringers in dkr gr-gy mtx → CPS jump to 1100 CPS, v.f.g. REflc? finely diss py and locl more xtln patches.			19.47	1700
				8.50 to 9.38 m - elevated CPS (~1400), subtly dkr gy mtx - v.f.g. REflc?			19.50	1650
				9.84 to 9.92 m - large ~7 cm diameter oval-like pk-y ap clsts with digested boundaries. very perv fl throughout - no jump in CPS.			22.00	1300

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				10.18 to 10.45 m - v.f.g. y-gy, mottled, faintly psd-brc dol-Carb dyke? fl boundaries.			26.52	1050
				11.65 to 11.68 m - dk br-gr xtln dol-Carb mtx with ~1450 CPS count - MHREO v.f.g. enrichment?			28.00	750
				14.28 to 16.37 m - dk ol-gy to br-gr, extremely mottled, dol-Carb mtx with ~1400-1600 CPS. → MHREO v.f.g. enrichment? str perv fl with few fl pockets with drusy dol rims and vnlets. modly-str stylolitic.			29.57	900
				16.65 m to 16.71 m - large pk-gr ap clst with digested boundaries - granitoid host? stylolites x-cut and surround clst. v.f.g. gr xtln patches throughout with v.f.g. rare br-r disseminations throughout (REflc?).			31.00	950
				17.00 to 19.00 m - core is very broken or rubbly, evident core loss. FrZ/FZ?			38.00	1000
				19.45 to 19.49 m - very dk p to blk fl-REflc ? pocket. finely diss suls throughout with pk-br hues surrounding fl. → 1700 CPS			40.00	800
				after 23.65 m - dol-Carb gradually transitions into a ltr gy mtx in comparison to dk ol-gy from above. this coincides with a slight drop in CPS.			43.00	700
				26.36 to 26.65 m - abnt fl (up to 60% locly) bnds/vnlets/pockets with subtle pk-br hue around and within clsts (REflc) - no significant CPS jump. minor-rare hem filled fracs at end, mnz?			47.00	1050
				26.60 to 41.25 m - minor to mod hem-lim filled fracs and sylolites at random orientations and are also commonly boundary-fill along x-cut dykes. infills very minor, mm scale micro-vugs as well. these fracs appear to be late phase as they x-cut all other texts.			53.00	1050
				36.79 to 42.00 m - wk and subtle brittle fracs at varying orientations but in general between 30-45° TCA. from 39.45 to 39.47 m - very str brittle frac text at 34° TCA. no significant offset portrayed. further down interval, "fracs" seem to carry a stylolitic nature to them at more shallow angles TCA (20° TCA).			60.00	1000
				42.00 to 42.60 m - very str schlieren text within Carb of fl vnlets, gives core bnded look at 35° TCA. pk-r hue around fl (REflc?) and x-cut gr-y dol-Carb dyke at end with same orientation.			63.00	1000

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				40.45 to 40.55 m - minor zone of dk gr-blk-br reccessive vugs with phl ? and chl ? infill.			66.00	850
				43.46 to 62.20 m - in general this interval has less perv/dominant fl and more "homo" appearance to it. dol-Carb still has mottled appearance due to chemical variations, but structural features (fracs) are rare and stylolites less abnt. fl overall has speckled appearance, still x-cut dykes (rare) and random bnds of psd-brc but schlieren text is absent - wk in interval. v.f.g. suls (py) diss throughout. schlieren texts become more common in last ~2.25 m.			67.35	1050
				49.71 to 50.75 m - very subtle r-br hues throughout dol-Carb, appears just to be wthd suls.			72.00	1250
				57.00 to 65.90 m - mod to abnt x-cut y-gy v.f.g. dol-Carb dykes often have mineralized fl pathways along margins and often within giving dykes a layered appearance. ctcs of dykes are wavy and irregular and are of varying widths (up to 3.5 cm wide). this interval also coincides with elevated fl content (up to 10%) and more strongly psd-brc/ctsc texts.			74.00	1200
				63.81 m - ~1 cm wide qtz pocket with drusy dol rim, no fl content, few wthd sul around - within v.f.g. dol-Carb dyke.			77.00	1075
				64.17 to 65.90 m - str brc-ctsc texts. very hetero and complex-multiple overprinting textures - locl siliceous character to sections ?. mod-str ctcs (dykes) enclose this interval.			80.00	1200
				66.88 m - ~2 cm irregular r-br clst with drusy dol rims and mm-scale qtz pockets. diss sul pockets (mm-scale) as well. hem? - very hard and v.f.g.			83.00	1100
				67.22 to 67.54 m - strongly brcd dol-Carb dyke with digested clsts of dol and ap within as well as common fl patches and vnlets. slight pk-br hue within fl-mnz? x-cut by later phase v.f.g. dol-Carb dyke. clsts rnd-ang, up to ~2 cm wide.			86.00	700
				68.72 to 77.00 m - common and consistent ~2-5 mm wide dol "bnds" x-cut at same angle (25-35° TCA), angles get slightly shallow down interval (in general).			87.00	950

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				75.19 to 80.07 m - abnt x-cut late stage dol-Carb dykes, wavy to irregular ctc with common fl vnlets/disseminations throughout and concentrated on boundaries. rare stylolites associated with y-br dykes. these dykes are extremely mottled and appear to overprint everything except dol bndg.				
				81.65 to 85.90 m - minor hem filled fracs, micro-vugs, vnlets, very minor dissseminations. see hem coating on broken planes and often associated with fl patches ?. hem is more r. (aside: r-br v.f.g., hard min assocaited with fl patches may not be hem, but a siliceous alteration of fl. few ap clusters around more strongly brc fl patches - qtz flooding?)				
				85.90 to 87.10 m - str psd-brc/ctsc texts with extreme hetero nature. few stylolites and x-cut dol-Carb dykes, could potentially be minor qtz flooding? br hues throughout, chemical variation or REflc? locld patches/clsts of ap only visible under UV.			89.00	650
				starting at ~87.48 m - dol-Carb appears to take on a more pale ol (10Y 6/2) to y-gy (5Y 7/6), bruennerite? slight drop in CPS as well, starting to get into A-B transition?, gradational ctc into A-B transition.			90.00	775
87.00	194.16	dol-Carb	A/B-T	**fl dol-Carb (A-B transitional zone)**			94.00	850
				mineralogy - dol, 93%; fl, 6%; suls, 1%; mnz, trace; ap, trace; amph, trace; qtz, trace; phl, trace.			95.00	1075
				v.f.g. pale ol (10Y 6/2) to y-gy (5Y 7/6) dol-Carb variations start to show up (bruennerite?) and become prominent down hole. general overall drop in CPS coincides with these sections. fl content is slightly less prominent but still exists as patches, vnlets, disseminations, frac fill, and late hydrothermal pockets. seems to be a slightly higher qtz content in this zone, but still trace overall (as vnlets, frac fill, pockets). textually, this unit is still extremely hetero but overall psd-brc. multiple overprinting events evident, including late phase v.f.g. dol-Carb dykes (rare overall, locly common) and common brittle frac features. wk-mod schlieren texts. suls diss throughout but rare <1 cm pockets throughout. rare blk stylolites and wisps around late dol-Carb dykes and str fl mineralization - phl ?. this unit, and the "A-Zone" described above, gradually transition in and out of one another,making this a transitional zone.			96.50	1300

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				89.00 to 93.57 m - overprinting textures are absent-rare, with one late phase dk gr-gy irregular dol-Carb dyke. lack of overprinting makes the core appear "homo" but Carb is still mottled due to chemical variations. a wk schlieren text is present with fl mineralization (diss, small vnlets and smudges). rare 2 mm qtz vnlet present, wkly stylolitic.			97.00	1250
				93.73 to 93.91 m - few phl (br-blk) patches (<1 cm) and stringers along fl vnlet and frac margins, irregular.			98.00	1350
				94.30 to 96.00 m - abnt v.f.g. gr-gy highly irregular late phase dol-Carb dykes x-cut, no orientation useful, often have f.g. diss fl giving slightly layered text. few stylolitic boundaries and rare qtz vnlets (1-2 mm) within interval. few offsetting (2-3 mm) fracs present ~ perpendicular TCA.			99.00	1100
				96.52 to 99.50 m - mod brittle fracs with qtz-fl infill evident, 38° TCA. around ~97.00 m, multiple directions of fracs, appears to have been some stress compensation. qtz pockets with drusy dol rim present, qtz flooding event? locly 2-3% qtz. along qtz vnlets and fracs, trace honey-br f.g. diss min, CPS jump - mnz? trace ap present under UV.			99.50	1075
				97.69 to 98.45 m - dol-trem-qtz vn. trem is dusky b (5PB 3/2), soft, asbestos-like, and fibrous needle-like? vn is textually complex, evident siliceous influence/flooding with fracs x-cut. along fracd planes, f.g. diss honey-br y and r br (REflc, mnz) present, CPS jump, up to 1% locly. ctcs are sharp but irregular. some c.g. honey br needle-like min (rt?) along ctc boundaries (trace). few sph patches around siliceous sections. qtz vn displays brc text overall, and xtln-brittle qtz fracs throughout vn.			101.00	875
				98.93 to 99.41 m - strongly brcd dol-Carb dyke ?, very subtle and irregular ctcs. dol clsts are sub-rnd to ang (1 mm-1.5 cm) with common blk micro fracs/vnlets x-cut and weaving in and out of clsts. dol-Carb mtx is mottled, common blk patches/clsts of phl (?-soft), stringers/fracs often coming off these clsts. diss sul throughout and evident siliceous influence (especially before and after interval - flooding event). minor qtz pockets with drusy dol rim, which is why i'm not sure this is a dyke.			105.00	800

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				103.00 to 103.69 m - large, v.f.g., mottled y-gy dol-Carb dyke with fl diss throughout, and in layers cutting approximately parallel TCA. brittle fracs x-cut and offset dyke 1-2 mm, highly irregular ctc and hetero texts.			106.00	775
				104.71 to 105.12 m - 98% dol, mottled due to chemical variations and minor diss fl (2%) and vnlets. dol is lt y-gy breunnerite?			106.60	775
				106.57 to 106.68 m - strongly psd-brc dol-Carb with wk schlieren overprint. dol clsts are sub-ang to ang (max 1 cm) with dkr (fl?) vnlets weaving around clsts.	107.74 m - stylolite 17° TCA, ~20 cm long.		109.75	1000
				108.90 to 110.00 m - similar but brc text is not as str, fl exists in patches as well. v.f.g. br mineral interval diss in dol-Carb mottles (wthd sul? REflc? - too f.g., slight CPS jump).			110.00	825
				110.00 to 110.97 m - texturally, strongly hetero and fl-rich (25% locly) - schlieren, brc, ctsc and x-cut/overprinting texts all common. fl exists as patches/pockets, vnlets, frac and disseminations.			110.50	1100
				last overprinting phase appears to be v.f.g. gr-gy dol-Carb vnlets. down interval fl becomes less abnt overall and appears dominantly as disseminations. siliceous influence as rare qtz vnlets and clsts are cloudy gy (trace) with subtle drusy dol rim, no ap present though. last 10 cm shows consistent fl-filled brittled fracs at 28° TCA.			112.00	875
				111.19 to 117.90 m - wk-mod brittle frac zone - fill.aside, 111.91to 111.76 m → str consistently spaced x-cut dol-Carb dykes, v.f.g. gr-gy with diss sul throughout. dykes ~0.2 to 1.5 cm wide, spaced ~1.5 to 3 cm apart at 30° TCA. brittle fracs at similar orientation to dykes in this interval.	111.30 m - dol-Carb dyke 35° TCA.		117.00	675
				rare phl patches and qtz pockets within brittle frac zone. fracs less abnt down interval. high variation: 112.39 m - 50° TCA (brittle frac); 112.90 m - 54° TCA; 113.44 m - 38° TCA and 29° TCA (2 generations? 2 planes of wkness?); 114.10 m - 44° TCA (brittle frac); 114.73 m - 48° TCA; 115.40 m - 46° TCA; 115.58 m - 79° TCA; 116.42 m - 60° TCA; 117.60 m - 40° and 22° TCA.			122.00	575

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				116.05 to 124.19 m - fl-rich interval; 10-12% overall but up to 40% locly - mostly as vnlets and disseminations, but also as patches, fracs fiill. shows wk schlieren text but overall psd-brc to ctsc. dol-Carb mtx is extremely mottled between A and B type Carb.			123.50	925
				125.86 to 125.88 m - pure qtz vn - fracd at 47° TCA.			127.00	725
				127.45 to 131.10 m - ctc are arbitrary but overall more siliceous interval (vnlets, pockets, in mtx - flooding event) - brittle fracd from 128.75 to 129.08 m at 50° TCA.			130.00	1150
				129.79 to 130.76 m - dk gy (N3) to ol-gy (5Y 4/1) f.g., brcd and strongly micro-fracd dol-Carb ?. margins are digested and therefore ctcs are subtle. diss fl with pk-br hue throughout (MHREO enrichment ?). very hard and siliceous (wkly siliceous). ap-rich (~5% locly). in middle of interval, brc is very str but "micro" brc - dol has been digested and is softer with same recessive wthg causing few vugs (fsp?). minor Fe-staining on surface (hem?), when tested with acid, faint egg odor is released - sph? 5 cm fl bnd at end with diss sul. 45° TCA brittle frac.			130.90	750
				130.76 to 148.30 m - common hem coating on fracs and vug infill. at 134.11 m, sul-rich bnd with c.g. suls (py) almost completely wthd, r rust left behind. wthd diss sul sometimes leave micro vugs behind. aside, CPS overall is ~900 but jumps up to 1250 locly, f.g. REflc in br hues as described? concentrated around vnlets and fracs?			134.00	800
				136.60 to 136.75 m - almost completely hematized section with open vugs abnt (vugs connected but largest ~1 cm), when acid put on core, gives off str odour - py, sph? wk qtz fracs/vns. also in this interval is abnt sul disseminations (py, po) up to 1% locly. core is magnetic - where suls are coarser grained (eg. 136.95 to 138.54 m). c.g. cubic blk mineral present that is strongly magnetic, mag? ilm?, exists as solo clsts and fine vnlets.			137.00	1000
				137.00 m - ~0.5 cm clst of dk gy-blk ilm - ang. suls are often wthd and give subtle br hue locly.			141.00	775
				137.66 m - ~4 cm wide bnd of c.g. suls and ilm? mag?, strongly magnetic, micro-fracd at 60° TCA. magnetic material is from 130.76 to 143.28 m, ctcs are arbitary, v.f.g. in mtx.			143.00	1100

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				137.94 to 146.09 m, 147.19 to 149.54 m - brittle frac zones.			147.00	775
				139.76 to 140.10 m - highly concentrated fl-filled vnlets ~1 mm wide. subtle en echelon? nature to them at 58° TCA.			150.00	440
				141.38 to 141.83 m - highly concentrated fl-filled with later phase qtz? vnlets showing minimum offset. fracs at 57° TCA.			151.50	400
				142.70 m - frac at 54° TCA, 2 generations of fl frac, slight offset shown.			154.00	450
				144.16 m - frac 67° TCA.			157.00	450
				144.80 m - frac 70° TCA.			160.80	550
				147.00 to 147.68 m - abnt micro-fracs in siliceous lt ol-gy interval, dominant set appears to be at 58° TCA.			162.00	425
				148.80 m - frac 60° TCA.			164.40	425
				149.54 m - frac 68° TCA.			168.00	350
				148.71 to 152.40 m - B-Zone with higher fl (10% overall, up to 30% locly). fl mostly diss and fine vnlets with wk-mod schlieren text. dol-Carb is brcd with sub-rnd to sub-ang w-cr dol clsts (1 mm to 1.2 cm wide). diss suls throughout, rare v.f.g. x-cut y-br dol-Carb dykes. B-Zone continues but fl content decreases. rare stylolites throughout. from here on out we start to see higher proportion of B-Zone rather than A-Zone. still too high fl content to be considered just B-zone. high proportion of breunnerite evident.	153.00 m - stylolite 53° TCA.		168.25	475
				155.28 to 162.57 m - same as 148.71 to 152.71 m except abnt x-cut dol-Carb dykes and slightly stronger brc texts locly. dykes often run close to parallel with CA, 17° TCA. common diss suls throughout, faint br hues, up to 1%. multiple overprinting texts even over top dol-Carb dykes including sul-filled fracs/stylolites and qtz vnlets. 160.77 m - qtz vnlt at 47° TCA and 160.90 m - sul-filled frac at 45° TCA, both x-cut by dol-Carb dyke.			172.00	450
							178.00	480

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				160.77 to 160.82 m - fl-rich, sul-rich, brc interval/bnd that is x-cut by dol-Carb dyke; 7% sul, 10% fl, 83% dol; non magnetic, just f.g. to c.g. py. faint honey br hue around fl-mnz? wthd sul?, too f.g. to tell. dol-Carb dyke that x-cut this patch is brc with w dol clsts ~2 mm wide avg, sub-ang, xtln.	161.50 m - dol-Carb dyke 22° TCA.		182.00	450
				163.68 to 176.74 m - same as 148.71-152.40m, but very strong brcd texts locly. overall, core looks more hetero because of strength of texts. psd-brc with wk-mod schlieren overprint and dol-Carb is y-gy (5Y 7/2) and mottled. still x-cut dol-Carb dykes but less abnt. diss suls and as vnlets/wk. stylolites and frac infill. dol clsts 1 mm to 1.5 cm, w, xtln, sub-ang to rnd. at 164.83 m, subtle v.f.g. b mineral that seems to be overprinted by dol-Carb phase, too f.g. but within mtx possible amph? within fl patches, lt br-pk altn? associated locly (str at 164.26 to 164.45 m). no significant CPS jump and core doesn't appear to have much siliceous influence, mnz?, v.f.g. 166.81 m - sul-filled vnlet ?/frac, 35° TCA.	166.70 m - bndg/schlieren 50° TCA.		185.00	425
							188.00	425
				note; these texts occur downhole but much less frequently and less str. fl content decreases as well.			190.00	475
							192.00	345
				168.13 to 168.32 m - strongly brcd dol-Carb dyke; mtx is br-y (v.f.g. mnz) with common w xtln dol clsts and f.g. cr-y-br ap clsts; sub-rnd to sub-ang with 3 mm avg. few bio patches/clsts with common stringers weaving between clsts. diss sul throughout (up to 5% ap).			194.00	390
				177.70 to 180.08 m - f.g., dusky b mineral diss throughout dol mtx, softer than dol and occurs (not always) around fl patches and diss suls, amph?, trace overall.				
				180.26 m - frac at 19° TCA.				
				182.15 m to 188.84 m - str brittle frac zone overprinting everything - all fracs fl filled, consistent overall: 182.28 m - 56° TCA, 183.14 m - 56° TCA, 184.12 m - 54° TCA, 185.05 m - 36° TCA, 186.43 m - 43° TCA, 187.35 m - 52° TCA (qtz filled).				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				186.90 to 194.16 m - v.f.g. lt ol-gy (5Y 5/2) and pale ol (10Y 6/2) dol-Carb. v. hetero and str texts prevalent throughout - but overall str psd-brc and str schlieren text. rare x-cut dol-Carb dykes but high fl content (8-10%), mostly diss and vnlets that appear to be 'smeared' across dol-Carb. common diss suls throughout. brc strength varies but irregular dol clsts, sub-ang to sub-rnd often surrounds fl patches as drusy rim. in str schlieren sections (last ~2.5 m strongest) dol clsts are elongated along 'smears'. dol-Carb mtx takes on a more y-gy appearance downhole. trace fibrous b-gr amph at 193.33 m. fl patches that are smeared have pk hue, altn product? rare brittle fracs a qtz vnlets. schlieren overall is <20° TCA (wk bedding planes?). 192.39 m - brittle frac at 56° TCA. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536219.59	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 08, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312151.91	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 11, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	4.27 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	192.02 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	5.10	OVB	-	**ovb**			5.00-31.00	1000-1100
				no core			31.00 - 42.00	1100-1300
5.10	36.90	dol-Carb	A	**fl-rich, mod dfmd dol-Carb**				
				med ol-gy and lt gy p streaks. Carb f.g.,carbonate-fl, minor py, f.g. r mineral and f.g. equant cr mineral clusters. completely dfmd texts chaotic. fl occurs as semi-mass patches (with minor py), streaks and coarse disseminations and late frac fillings. fl ± 15% overall. the interval texts are complex. fl zones often have a poorly to mod developed fine shr text whereas the adjacent fl-poor areas are mass to blotchy colour mottled. the Carb x-cuts the large fl patches. the interval is cut by occasional sinuous to planar thin ol Carb dykelets 0.5 to 3.0 cm thick, 0-40° TCA. these are often bnded (finely). this interval is very hetero in detail but rather homo overall.	6.30 m - shr bndg 54° TCA.		42.00 - 74.00	1350-1650
					13.75 m - shr bndg 54° TCA.			
				lower ctc abrupt, below is less dfmd and less flouritic.	20.00 m - shr bndg 57° TCA.		74.00 - 101.50	1300-1000
				27.85 to 29.20 m - br-ol, relatively mass, fl-poor zone. wk fracd minor f.g., diss fl, more than usual f.g. py. not anomalously RA. non magnetic.	24.20 m - shr bndg 68° TCA.		101.50 - 120.00	950-800
				thicker late, bnded v.f.g. Carb dykes: 6.10 m (3.5 cm), 10.75 m (1.5 cm), 16.25 m (2.0 cm, 5° TCA), 19.65 m (2.5 cm, 27° TCA), 23.80 m (11 cm, 28° TCA), 30.95 m (5 cm, 21° TCA). many smaller ones.	30.55 m - shr bndg 36° TCA.		120.00 - 124.50	950-1100
				9.90 to 11.90 m, 14.00 to 16.40 m, 19.50 to 20.15 m, 23.85 to 24.25 m, 30.50 to 32.50 m - relatively rich in fl, other narrower zones.	33.30 m - shr bndg 66° TCA.		124.50 - 131.00	850-950

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
36.90	60.60	dol-Carb	A-lean	**mass to swirly text, relatively fl-poor f.g. dol Carb**				
				lt ol-gy. carbonate, minor fl, trace py. fl present as f. disseminations (patchy), thin dfmd streaks and frac fillings, both early and late ± 2-3% overall. the Carb is swirly to colour mottled text, in shades of ol-gy. texts are plastic. locl wk plastic shr text. overall much more mass than above, significantly less dfmd looking (not due to lack of fl). late thin Carb dykes present, but less abnt than above.	47.25 m - shr bndg 55° TCA.		131.00 - 144.00	1000-1250
				42.15 m - Carb brc dyke, ang to sub-rnd clsts, 1 mm to 2 cm, in f.g. fl-rich mtx. 5 cm thick, 20° TCA.	50.00 m - shr bndg 39° TCA.		144.00 - 159.00	900-1000
				49.45 to 52.60 m, 56.60 to 58.50 m - dk coloured, med br-gy. also both are wkly fol.			159.00 - 173.00	1100-1350
				45.35 to 46.10 m, 46.85 to 47.80 m, 55.20 to 55.50 m - relatively fl-rich.	58.15 m - shr bndg 47° TCA.		173.00 - 192.00	950-1150
				lower ctc of interval set at slight increase in dfmn, and fl content and lightening of colour.				
60.60	75.70	dol-Carb	A	**mod dfmd fl dol-Carb**				
				lt br-ol-gy, colour darkens somewhat downwards. Carb text shows mod plastic to plastic-brittle dfmn, swirly-mottled with patches of poor shr bndg. mostly mass fl present as fine to coarse, patchy disseminations, dfmd thin streaks and rare semi-mass frags 5-10% overall. the fl content increases irregularly downwards. late, v.f.g Carb dykes are relatively rare and thin, more common below 71.35 m.	61.90 m - shr bndg 55° TCA.			
				60.60 to 62.60 m, 71.00 to 71.70 m, and 72.30 to 75.70 m - relatively fl-rich.	65.60 m - shr bndg 58° TCA.			
				lower ctc set at decrease in fl content.				
75.70	101.00	dol-Carb	A-lean	**swirly dfmd, fl-poor dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy to lt br-ol-gy. Carb is composed of f.g., anh, suc text carbonate minerals, eqgr ± 1% diss, suh f.g. py. fl (dk p) present as fine patchy anh diss grains, diss patches and hairline streaks. rare late frac filling. below 94.50 m fl more abnt and more concentrated. overall 2-5% fl. overall this interval is mass. in detail the Carb displays complex plastic dfmn texts, swirly, psd-brc, rare thin shr bnds. overall the interval is pretty homo, except below 95.40 m (see above). late, most often bnded v.f.g. Carb dykelets, less than 3 cm thick, present but uncommon, low angles TCA. lower ctc set at lightening of colour, lessening of dfmn and appearance of fl "chunks". 81.00 to 81.70 m - cr, fine nodular text, cr nodules 90% in fl mtx.				
101.00	143.45	dol-Carb	A-lean	**dfmd dol-Carb with fl patches and chunks.** lt gy to ol-gy with br patches. rock composed of f.g. to v.f.g. anh, suc carbonate with ± 1% f.g. py (coarser than carbonate). overall slightly finer grained than above. fl present as wk, f.g. diss. also as coarse, very irregular distributed chunks and dfmd coarsely diss fl patches. outside of these patches and chunks, the interval is rather fl-poor. the Carb, outside of the fl-rich areas, is only wkly dfmd, significantly less than above, slightly swirly to mass. areas of vague, diffuse colour bndg common, on 5-10 cm scale is shades of lt gy, ol and br. 101.00 to 101.10 m, 110.25 to 110.85 m, 126.20 to 126.70 m, and 130.60 to 130.70 m - zones rich in fl "chunks". 111.60 to 114.20 m, 116.15 to 117.70 m, 125.20 to 127.30 m - zones rich in fl-rich patches. below 125.20 m - the overall amount of fl increases. areas with lt br colour diffuse bnds and patches: 102.00 to 109.50 m, 111.20 to 117.25 m, and 141.50 to 143.45 m. in this areas the Carb appears less dfmd and finer grained. least dfmd 116.60 to 125.25 m, 127.00 to 133.70 m, 139.20 to 143.45 m. late thin v.f.g. Carb dykelets are rare, and confined to more dfmd areas.	112.90 m - shr bndg 52° TCA. 128.80 m - shr bndg 47° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set at increase in plastic dfmn and downwards, increase in brittle dfmn and late fracg.				
143.45	159.55	dol-Carb	-	**mod dfmd fl dol-Carb (A/B Trans?)** lt ol-gy and p. the Carb is the same as above (140.30 to 143.45 m). 5-15 cm lengths, rich in fl alternating with fl poor zones. often with br hue. the Carb is composed of f.g. suc text Carb, minor f.g. py. p fl occurs in heavily diss bnds 5-25 cm long (30% fl) separated by br-gy f.g. Carb veining with m.g. fl clots. fl bnds 30%? ctcs between bnds abrupt, fl-rich bnds intruded by fl-poor. interval is mod dfmd, manifested by blotchy colour mottling, no shr bndg, swirly. late, fl lined fracs appear about 146.00 m and increases in abundance in base, nowhere strong. earlier brittle fracg, non-planar appears about 157.00 m transitional to below. top to 152.20 m - rare late, v.f.g. Carb dykelets present. 154.10 to 154.20 m - py-mag-fl filled irregular fracs. 147.00 to 148.40 m, 151.60 to 153.50 m - relatively fl-rich. because of the bnded nature of the fl concentrations, the interval 140.30 to 159.55 m could be considered A/B-T (dfmd). lower ctc gradational, set at onset of late, brittle brcn.				
159.55	192.02	dol-Carb	A	**brcd mass dol-Carb** lt med gy to ol-gy. this interval consists of poorly sorted ang to sub-rnd clsts of f.g. Carb, cemented by f.g. fl-rich Carb. clsts 0.5 mm to 25+ cm (most 1-5 cm). the clsts are unoriented and not visibly altered. overall brc mtx poor ± 15%. brc cut by v.f.g. late Carb dykelets, but rare late dykes cut. the mtx is distinctly p, rich in v.f.g. fl, also rich in py than the clsts. the brc clsts all appear to be A-Zone type lithologies, including dfmd fl patches, probably the brc clsts are near in-situ. non magnetic throughout, ex. 191.35 to 191.55 m where the brc is cut by the fl-py fracs.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				cant see any systematic variation in brc clst grain size. overall quite homo. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536279.59	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 11, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312199.55	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 13, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	9.75 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	194.16 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	11.28	OVB	-	**ovb**			11.00 - 25.00	700-800
				bldrs recovered up to 50 cm, all of locl Carb. ctc could be 11.20 m. no core to 4.80 m.			25.00 - 35.00	1100-1300
11.28	39.10	dol-Carb	-	**relatively wkly dfmd fl dol-Carb (A-lean?)**				
				lt to ol-gy, locly br, with p streaks. the Carb, where not fl bearing is composed of f.g., anh eqgr, suc text Carb with traces of sub f.g. py. fl (dk p) occurs, irregularly distributed throughout as dfmd patches (cm-scale) ilk with carbonate lining early fracs, early dfmd ± 1 cm vns and diss fine clots. the patches are most commonly 3-10 cm, these occasionally show fine irregular lams, dfmd, resembling shr bndg. texts vary from completely mass in areas where fl is absent, to swirly text due to dfmn. the longest fl patches appear to be xenoliths in the Carb. overall this interval is rather fl-poor for the A-Zone. overall not strongly dfmd.	31.80 m - shr bndg 62° TCA.		35.00 - 53.00	1400-1550
				15.85 to 16.60 m, 17.80 to 18.05 m, 21.80 to 22.10 m, 27.45 to 28.05 m, 29.30 to 29.50 m, 34.55 to 34.90 m, 36.85 to 37.75 m - fl-rich areas, other narrower zones.	34.75 m - shr bndg 33° TCA.		53.00 - 68.50	1600-1800
				lower ctc sharp, intrusive? 41° TCA. ctc cut and displaced by healed frac. RA increases below. late f.g. little dfmd Carb dykelets present throughout, less than 25° TCA. often bnded 0.5 to 2.0 cm thick.			65.00	1850
39.10	52.35	dol-Carb	A	**wkly altd? mod dfmd fl dol-Carb (A-lean?)**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				br-ol-gy, med br. this interval appears text similar to the one above, except that the colours are distinctly more br and muted (fl less p-blk, the carbonate minerals are still f.g. and suc, however they locly appear less homo, as if slightly rxtld especially downwards in interval). also there is a definite increase in the amount of f.g. py, compared with interval above.	50.20 m - shr bndg 34° TCA.		69.00	1950
				near the lower ctc thin ill-defined vnlets of later clear carbonate appear.			68.50 - 80.00	1600-1750
				no visible MHREO style intrusions. late bnded, f.g. Carb dykes present. some are definitely un-altd, some may be. interval "just looks altd". this interval appears slightly less flouritic than above, fewer and smaller f.g. clots.			80.00 - 87.70	180-2100
				39.10 to 39.90 m, 41.50 to 42.00 m, 48.55 to 49.45 m, 51.70 to 52.35 m - dkr br (more altd).			81.70	2350
				amount of late Carb thin dykes increases downwards.			87.70 - 99.50	1200-1400
				lower ctc set at first appearance of MHREO-type intrusion?				
52.35	56.85	dol-Carb	A	**f.g. mass, fracd Carb, intrudes altd, dfmd fl dol-Carb (MHREO)**				
				lt br and br-ol-gy. this interval consist of two lithotypes. the latter is a mass f.g., micro-prtc Carb. it lends to be finely fracd but otherwise un-dfmd. ctcs are sharp but irregular. trace py main accessory, possibly some v.f.g. mica? the older litho type is the same as the interval above, swirly dfmd, altd fl dol-Carb, fl present as streaks, diss patches early frac fills and rare semi-mass chunks. the fl is dk p almost blk, unlike top of this hole. this older litho type contains mass, fl-poor areas which when altd resemble the late Carb, but retain their suc text carbonate minerals. trace of diss f.g. py.	53.55 m - shr bndg 40° TCA.		99.50 - 107.50	1300-1400
				52.35 to 52.50 m, 52.80 to 53.20 m, 54.50 to 54.60 m, 56.20 to 56.85 m - late br intrusive.			100.00	1800
				53.65 to 53.90 m - abnt fl patch. RA 1900 CPS.			107.50 - 111.00	1450-1550

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set at last MHREO intrusion. all rocks cut by thin (1 to 2 cm) bnded f.g. Carb dykes.			111.00 - 118.00	1000-1200
56.85	72.65	dol-Carb	A	**altd mod dfmd fl dol-Carb (MHREO?)**				
				lt to med br-ol-gy. the Carb is composed of f.g. eqgr suc carbonate, trace euh py and fine flecks of dull very dk fl. fl also occurs as highly dfmd masses and streaks and in rare shr bnds. text swirly dfmd and dfmn due to movement along early fracs. some fl-poor sections are almost mass. below 64.50 m late, un-dfmd slightly in fracs appear filled with dk p fl. these x-cut everything in the late, bnded, v.f.g Carb dykelets. nowhere abnt.			118.00 - 124.50	850-1000
				69.85 to 70.15 m, 71.60 to 72.00 m - Carb pebble dyke brc. these consist of a very mtx poor aggregate of locl and w xtln and other exotic Carb clsts including many rich in ap.			124.50 - 135.00	1400-1750
				lower ctc set at onset of overall mass character.			125.50	1450
				58.65 to 59.20 m (early), 60.85 to 61.50 m, 63.45 to 63.70 m - fl-rich area			129.50	1800
							135.00 - 139.00	1150-1250
				MHREO intrusions: 68.55 to 68.80 m (1750 CPS), 70.15 to 70.25 m (1670 CPS).			139.00 - 164.00	1200-1400
				64.55 to 65.40 m - abnt late fracs, almost brc, fl filled maximum 1950 CPS.			164.00 - 168.50	1400-1460
				numerous late, bnded low angle v.f.g. Carb dykes. here thicker than avg zone 5 + cm thick. overall less altd than above, but more late, brittle dfmn. pale amber qtz filled vug. wall lined with large fl studded dol xtls, max 4 cm thick.			168.50 - 173.00	1150-1300
72.65	87.95	dol-Carb	A-lean	**mod altd, variable dfmd fl dol-Carb with small MHREO intrusions (MHREO?)**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt br-ol-gy and med gy-br. most of the interval is composed of rocks fl-poor, semi-mass to swirly text f.g. dol-Carb. fl present as m.g. disseminations in xenoliths, coarse streaks and early frac fillings. this Carb has a muted look, as though it has been altd, slightly br hue. this early dfmd Carb is cut by small bodies of med gy-br, f.g. micro-prtc mass Carb with minor py ± small mag phenos. these bodies often have frac controlled irregular ctcs. both of these rock types are cut by late, often bnded low angles TCA f.g. ol Carb dykes.	89.15 m - shr bndg 77° TCA.		173.00 - 184.50	950-1050
				late mass Carb intrusions: 76.45 to 76.65 m (1500 CPS), 76.98 to 77.08 m (mag, 1550 CPS), 77.25 to 77.50 m (1600 CPS), 81.57 to 81.78 m (2200 CPS), 76.45 to 76.65 (much broken up 1650 CPS).			184.50 - 194.16	750-900
				81.12 to 81.25 m, 81.80 to 82.15 m, 83.05 to 83.20 m, 87.00 to 87.35 m - fl-rich patches (early).				
				overall interval only slightly late fracd. base of interval set at lessening of altn.				
87.95	110.50	dol-Carb	-	**variably altd, richer fl-poor dol-Carb (A-lean?)**				
				lt ol-gy to br-ol-gy. this interval consists of variably dfmd f.g. suc Carb with patches of zones richer in p fl. the dfmn is manifest by swirly text, early frac movement. mass locly, especially where fl is absent. the interpreted altn is manifest by a subtle "browning" of the colour, a mixing of the texts and a subtle darkening of the fl. this altn increases downwards in the interval. unlike the interval above, the late un-dfmd f.g. Carb dykes are much less common here and thinner (± 1 cm). also less common here is late brittle fracg.	93.70 m - shr bndg 56° TCA.			
				89.10 to 90.00 m, 91.00 to 91.65 m, 101.35 to 101.50 m, 102.10 to 102.25 m - fl-rich sections (early).				
				other than altn, this unit is pretty homo.				
				87.95 to ± 92.00 m, 102.20 to 103.60 m - essentially un-altd.				
				99.65 to 102.00 m, 105.75 to 107.20 m - most altd (br) sections.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				100.20 m - RA hot spot (1800 CPS), thin late py-fl vnlet in altd zone.	102.40 m - shr bndg 66° TCA.			
				base of interval set at str decrease in altn.				
110.50	124.40	dol-Carb	A	**variably dfmd fl dol-Carb**				
				lt ol-gy to br-ol-gy. the Carb is composed of anh, suc f.g. Carb with the rarest trace of f.g. py. fl common, diss small flecks with more py, and in more major zones semi mass 5-10 cm chunks, m.g. diss patches, thin streaks. more fl than in intervals above. Carb text swirly, psd-nodular, early frac dfmd, with a little shr bndg. possibly some minor altn (br hues).				
				110.65 to 111.55 m, 112.10 to 112.95 m - brc, ang clsts to 2 cm in ± 50% Carb mtx. Clsts show preferred orientation near margins.	112.00 m - shr bndg 40° TCA			
				114.05 to 115.25 m - fl-rich (chunks and early frac fills).	115.65 m - shr bndg 56° TCA			
				120.10 to 121.10 m - fl-rich, (highly dfmd shr bnds).	118.25 m - shr bndg 57° TCA			
				111.90 to 113.85 m, 118.40 to 120.15 m, 121.55 to 122.50 m, 122.85 to 123.30 m - br (slightly altd?).	122.55 m - shr bndg 60° TCA			
				lower ctc set at increase in br colours and RA.				
124.40	135.97	dol-Carb	A	**altd (?) mod dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt br-ol-gy to gy-br. this interval is composed of f.g. suc Carb with typical A-Zone texts and composition (fl-rich). the colours, however are br hued, sometimes with the barest hint of y. the text are dominated by early frac dfmn movement along early, now dfmd, frac lined with p fl resulting in a chaotic jumble. late, un-dfmd, f.g. Carb dykelets are rare and relatively thin (1 cm or less). not a lot of late fracg. fl mostly as early frac lining and dfmd diss patches. pretty homo distributed. the br altn varies in intensity somewhat, strongest at base. invisible MHREO style intrusions. interval is quite homo overall. base of interval set at ends of br colouration.				
135.97	165.75	dol-Carb	A-lean	**dfmd relatively fl-poor dol-Carb** lt ol-gy. this interval (as do all A-Zone intervals) is composed of two Carbs. both are composed of f.g. eqgr anh, suc clear carbonate. the earlier phase is volumetrically the lesser, is much richer in dk p fl and typically lt gy. the fl is present in shr bnds, in concentrated m.g. diss patches and narrow semi-mass "chunks" (broken early veins?). this earlier phase is distinguished and intruded by the late, which is much poorer in f.g. (fine disseminations zone) and has a gr (ol) colour. the only accessory mineral is trace f.g. py. thus the early, fl-rich phase occurs as xenoliths in the later. the relative proportions of the two determine the fl content. in this interval the earlier is relatively minor, str fl concentrations are not common. after intrusion the rock was multi-phase dfmd. earlier phases of dfmn appear more plastic, later ones involve movement along early fracs, often with the introduction of films of fl. the dfmn here results in swirly chaotic texts. the early fl concentrations are practically disaggregated by intrusion and frac dfmn, whereas in detail the unit is very hetero, overall it is quite homo. 149.18 to 149.25 m - late, un-dfmd pebble brc, 60% sub, 5 mm w Carb rnd clst in gy f.g. Carb mtx. 141.30 to 142.25 m, 144.80 to 145.15 m, 147.45 to 147.55 m, 155.85 to 156.50 m - relatively fl-rich sections. late f.g. thin (0.5-2 cm), un-dfmd ol carbonate dykelets present throughout ± 1-2%. low angles TCA (less than 25°). overall dfmn intensity appears to decrease a little downwards.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set at increase in fl content.				
165.75	194.16	dol-Carb	A	**dfmd fl dol-Carb.** lt ol-gy with lt gy. locly slightly br overprint. interval very similar compositionally and texturally to above, except for increase in fl content. this increase occurs in the greater abundance of concentrated fl patches, semi-mass chunks and early vns and m.g to c.g. diss. all are the early Carb. fl especially abnt below 187.00 m. 170.00 to 187.00 m - the interval is relatively fl-poor (similar to 135.97 to 165.75 m), here the texts are dominated by brittle fracs. in the fl-rich areas above and below are swirly mere plastic. 189.90 to 190.30 m - brc, pressed together (virtually no mtx) large (2-5 cm) Carb clst. some clearly exotic, pk ap clst abnt. also 191.25 to 191.65 m, again with large (7 cm) ap f.g. clst and others. 189.70 m (5 cm), 193.70 m (5 cm) - thick early mass p fl vns. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536237.96	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 13, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312228.44	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 16, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Partial Pull	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	12.19 m	**Note: lost casing in hole.**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	172.53 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	10.06	OVB	-	**ovb**			0.00 - 48.00	1000-1300
				0 .00 to 4.30 m - no core			13.30	1600
				4.30 to 10.06 m - A-Zone type Carb bldrs recovered. some bldrs approach 1 m thick.			48.00 - 62.50	900-1000
10.06	27.45	dol-Carb	A-lean	**slightly dfmd relatively fl-poor dol-Carb**				
				lt ol-gy Carb composed of f.g. (locly v.f.g.) eqgr anh suc carbonate with a trace of f.g. py. the chief accessory mineral is dk p fl. it occurs lining early fracs, isolated dots and in rare concentrated patches in carbonate and a f.g. br min. these concentrated patches appear to be xenoliths. texts vary from mass to dfmd along the early fracs. the earlier fl-rich Carb xenoliths are more dfmd, mottled, swirly flow-bnded. the late event is the intrusion of thinly bnded f.g. suc ol-gr Carb dykes, little if any dfmd. these vary from 3 mm to 12 cm thick and lie at low angles TCA (35° or less).			62.50 - 75.30	800-900
				26.90 to 27.12 m (12 cm thick), 22.15 to 22.35 m (6 cm) - thick late bnded Carb f.g. dykes. these are some earlier thin Carb dykes which are un-bnded, lt gr and slightly dfmd.	28.90 m - shr bndg 41° TCA.		75.30 - 89.00	900-1000
				19.85 to 20.05 m - late brc, large, exotic clsts are white xtln carbonate and occasional ap-rich clsts.	36.50 m - shr bndg 52° TCA.		89.00 - 96.00	850-950
				lower ctc gradational and somewhat arbitrary. below slightly darker coloured and increased fl content.	38.90 m - shr bndg 41° TCA.		95.30	1150
27.45	53.15	dol-Carb	A	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt to med lt ol-gy. this interval similar to the one above except that the "xenoliths" of the earlier Carb with the increased content of dfmd fl are much more abnt. the Carb is still f.g. and suc but the texts are much more plastic, swirly, mottled and psd shr bnded. dfmn hits a maximum about 37 m and decreases in intensity somewhat from there. below 48.70 m the dfmn is significantly less, the colour lightens and mass sections appear.	44.40 m - shr bndg 41° TCA.		96.00 - 121.25	550-650
				late, f.g., ol bnded, un-dfmd Carb dykes present again at low angles TCA, as low as zero°. one (32.50 to 32.85 m) is 20 cm thick, most are ± 1 to 2 cm.			121.25 - 127.50	750-850
				45.75 to 46.15 m - late dykes, 80% lt cr 2 mm carbonate modules well packed with itsl lt gr v.f.g. Carb.	50.60 m - shr bndg 40° TCA.		127.50 - 133.00	900-1050
				lower ctc gradational, decreases fl content.	52.95 m - shr bndg 44° TCA.		133.00 - 137.50	800-900
				33.90 to 34.10 m - brc dyke, 3 cm thick 20° TCA 80% of clst rich in f.g. ap, some f.g. w xtln Carb.	54.75 m - shr bndg 47° TCA.		137.50 - 150.00	650-750
53.15	63.60	dol-Carb	A-lean	**wkly dfmd fl-poor dol-Carb**				
				lt ol-gy. f.g. suc Carb with trace py, fl present as sparse, diss clots, rare broken semi-mass chunks, shr bnded patches. overall this interval is fl-poor. much of this interval is texturally mass. fl-rich areas are slightly swirly to finely bnded. the top and bottom of this interval are the most fl-rich.	62.35 m - shr bndg 36° TCA.		150.00 - 160.00	1000-1100
				± 1% late bnded f.g. Carb dykelets 0-35° TCA. one 2 cm dyke runs along for 88 cm.	76.20 m - shr bndg 42° TCA.		160.00 - 172.53	600-750
				lower limit of interval set at gradational increase in fl-content.	90.70 m - shr bndg 62° TCA.			
63.60	114.70	dol-Carb	A	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol-gy with dk p. very similar to 27.45 to 53.17 m. again this interval is a f.g. eqgr suc textured Carb with trace py. fl occurs in weakly diss and in concentrated patches. in these patches the carbonate is lt gy, not ol. the patches have been intruded by the ol Carb, and many if not all could be xenoliths. the fl-rich patches are more dfmd than the surrounding ol Carb. texts in the fl-rich areas are swirly, early frac-dfmd to shr bnded. some mass fl chunks and streaks also present. texts in the ol Carb are mass to gently swirly. the degree of overall dfmn is not high. late low angle bnded Carb dykes present less than 1%. 64.00 to 66.25 m, 68.75 to 72.50 m, 74.20 to 75.5 m, 88.05 to 89.30 m, 94.45 to 97.20 m - relatively fl-poor sections. no other vns, dykes or brc. 112.25 to 112.55 m - late, bnded dykelet swarm, 33° TCA.	94.40 m - shr bndg 58° TCA.			
114.70	121.47	dol-Carb	A-lean	**slightly dfmd relatively fl-poor dol-Carb** lt ol-gy. mass to colour mottled with swirly fl-rich patches. Carb composed of eqgr f.g. anh carbonate with trace py. colour mottled in shades of ol-gy. fl-poor overall. fl occurs as streaky diss patches - xenoliths. late f.g. un-dfmd Carb dykelets present but uncommon and thin. interval fairly homo overall.	115.80 m - shr bndg 34° TCA.			
121.47	172.53	dol-Carb	A	**variably dfmd fl dol-Carb (A-lean?)** lt ol-gy with dk p patches. this interval consist of ol-gy to anh Carb with trace fl. where fl-free this Carb is mass and/or slightly colour mottled. set in the ol Carb are patches richer in fl. in these patches the fl is associated with lt gy carbonate. also present are traces of a r-br v.f.g. mineral (a carbonate?) and a fine equant, dull y mineral. these fl rich patches display a much higher degree of (plastic?) dfmn: swirly; shr like fine bndg and streaks; early frac dfmn; broken early vns ("chunks"). differences in carbonate colour, fl abundance, degree of dfmn and geological relationships strly suggest the dfmd fl-rich patches are xenoliths in the later, accessory mineral-poor ol Carb. 128.30 to 131.25 m, 140.50 to 145.00 m, 147.90 to 156.30 m, 165.20 to 168.80 m - relatively fl-poor sections (dominated by ol Carb). many shorter sections.	137.15 m - shr bndg 55° TCA. 141.90 m - shr bndg 55° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				semi mass fl "chunks" 121.80 to 122.00 m, 122.35 to 122.60 m (py-rich), 126.35 m (3 cm), 142.45 to 142.50 m, 143.45 (3 cm). late, f.g., thin bnded, thin Carb dykes present throughout, but nowhere abnt. 143.80 m - large, w fluorescent clst segmented (intruded) by ol Carb, ap clst? now xenolith, so very early. 149.90 to 150.25 m - late brc patch, well packed, mtx is dk gr, v.f.g. Carb. clsts of locl disseminations infilled with w carbonate. EOH	146.60 m - shr bndg 30° TCA.			

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536205.72	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 16, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312268.53	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 18, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Partial Pull	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	6.10 m	**Note: contains two potential**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	136.00 m	**MHREO zones.**	
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A.Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	7.35	OVB	-	**ovb**			7.30 - 25.00	500-600
				0.00 to 6.30 m - no core			25.00-39.40	1000-1250
				6.30 to 7.35 m - locl Carb bldrs recovered.			33.55	1350
7.35	24.80	dol-Carb	A	**dfmd fl dol-Carb**				
				lt ol-gy and p. Carb is composed of f.g. eqgr, anh suc dol with a trace of accessory f.g. py. p fl present throughout but irregularly distributed. it occurs as mm thick streaks and diss bnds, lining fracs both early and late, in concentrated diss patches and in semi-mass streaks (cm) and dfmd patches, 5-10% overall. the interval displays a range of texts. most prominent is a mm to 1 cm scale irregular bndg, in patches, usually outlined by fl. also, more commonly streaky, and texts derived by dfmn along early fracs. areas also with concentrations of non-frac fl tend to be associated with lt gy coloured carbonate, where as fl-poor areas are ol-gy. the former are definitely intruded by the later and thus there are two ages of Carb, the earlier being fl-rich and more dfmd.	8.00 m - shr bndg 55° TCA.		39.40 - 44.30	1000-850
				8.75 to 10.15 m, 12.95 to 13.85 m, 18.25 to 21.25 m, 22.50 to 23.75 m - relatively fl-poor areas.	10.60 m - shr bndg 46° TCA.		44.30 - 49.30	1000-1200
				late, f.g. to v.f.g. un-dfmd ol Carb dykes present throughout. typically 0.3 to 2 cm thick, they lie at low angles (0-35°) TCA. ± 1-2% overall.	16.10 m - shr bndg 46° TCA.		49.30 - 55.30	900-1000
				lower ctc set at darkening of colour and presence of first MHREO-style Carb intrusions. late frac (more str) increases below 20.50 m.			55.30 - 62.00	800-950

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
24.80	48.05	dol-Carb	A	**variably br (altd?) dfmd fl Carb (MHREO)**				
				intruded by mass py br Carb. br-ol-gy and med to dk gy-br. the "host rock is dfmd p fl dol-Carb, very similar to the interval above. near to the late Carb this rock contains more late fracg and acquires a br hue in varying intensity. also the pre-existing fl appears darker and the Carb appears locly slightly rxtld and with an increase in f.g. py content. the late, mass, br Carb is slightly coarser grained (still f.g.), dol more xtln and contains a few % py, wk diss fl and mag. this Carb occurs as mass dykes, but also as irregular, almost vn like small bodies, distributed irregularly.	30.90 m - shr bndg 37° TCA.		62.00 - 79.50	950-1000
				24.80 to 24.87 m, 25.40 to 28.55 m, 39.23 to 39.28 m, 40.05 to 40.25 m, 44.30 to 45.60 m, 46.50 to 46.55 m - late py-mag-fl Carb. probably other small bodies present.	34.90 m - shr bndg 33° TCA.		79.50 - 83.50	800-950
				24.80 to 28.55 m, 32.20 to 33.70 m, 36.60 to 37.50 m, 40.35 to 41.75m, 44.30 to 48.05 m - mod altd zones.	43.60 m - shr bndg 31° TCA.		83.50 - 90.20	600-700
				25.10 to 25.30 m, 28.80 to 30.75 m - (intermittent) late open vugs and fracs, lined with w cc and infilled with p fl.			90.20 - 100.50	800-950
				the earlier Carb is cut by numerous late, bnded low angle TCA ol Carb dykes, especially between the two major late Carb bodies.			100.50 - 107.75	1050-1250
				lower ctc set at end of br coloration.				
48.05	53.80	dol-Carb	A	**dfmd fl Carb**				
				lt ol-gy and p. very similar to 7.35 to 28.80 m. f.g., anh suc Carb with trace py. fl (dk p) present as thin, streaky bnds, overall dfmd patches and chunks and some diss patches and streaks. all of these are mod dfmd. texts swirly, streaky, with significant early frac dfmn. again the fl concentrations associated with lt gy carbonate and the fl gy carbonate zones are much more dfmd than then ol-gy later Carb. overall this interval is quite fl-rich. late Carb dykes to 4 cm thick, 1-2% of interval.	50.25 m - shr bndg 49° TCA.		107.75 - 122.00	700-800

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set at dramatic reduction in fl content.			122.00 - 127.30	500-600
				51.10 to 52.35 m - most fl-rich.				
53.80	73.10	dol-Carb	A-lean	**dfmd fl-poor dol-Carb**				
				lt ol-gy. this interval, like those above, consist of Carb composed of f.g., suc dol with trace py. unlike above the amount of dk p fl is much lower, less than 1/3 compared with 48.05 to 53.80 m. fl occurs as mm thin streaks, rare diss patches, and lining early fracs. text are mass, streaky and colour mottled. much less dfmd looking than above, due to relative lack of early fl-rich Carb.	56.10 m - shr bndg 49° TCA.		127.30 - 136.00	300-450
				59.05 to 59.15 m, 61.60 to 61.90 m - some short sections of lt gr Carb.	60.25 m - shr bndg 52° TCA.			
				65.95 to 66.30 m - late x-cut brc dyke, ang mm to 1 cm locl Carb clsts in med brc v.f.g Carb mtx.	71.90 m - shr bndg 47° TCA.			
				late f.g. Carb dykes present, they are relatively thin (less than 1 cm).				
				55.90 to 57.75 m, 62.40 to 63.05 m, 70.50 to 72.50 m - relatively fl-rich.				
				lower ctc set at increase in fl content.				
73.10	101.02	dol-Carb	A	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol-gy and p. typical A-Zone Carb composed of f.g. eqgr, suc text dol xtls with trace f.g. py. p fl irregularly distributed throughout. it is present as patches of thin shr bnds, early frac fillings, semi-mass chunks and dfmd bnds, concentrated disseminations; and isolated disseminations. all the patches contain fl with lt gy carbonate and are much dfmd, especially relative to adjacent ol Carb. the fl rich patches are earlier and are intruded by, and xenoliths in, the later ol Carb. late, f.g. un-dfmd Carb dykelets present but not common. these are often bnded and at low angles TCA 0.50 to 3 cm thick.	82.40 m - shr bndg 45° TCA.			
				74.00 to 76.90 m, 77.90 to 80.15 m, 80.20 to 82.35 m, 85.20 to 86.10 m, 89.90 to 91.00 m, 95.15 to 96.35 m, 99.55 to 100.70 m - relatively fl-poor.	92.65 m - shr bndg 55° TCA.			
				76.75 to 77.90 m - pebble dyke, rnd cr clsts in f.g. Carb mtx.				
101.20	108.90	dol-Carb	A	**mass f.g. dol-Carb intrudes dfmd fl dol-Carb (MHREO)**				
				med to dk gy-br. the intrusive Carb is completely mass. it is composed of f.g. dol, crystalline. it is micro-prtc, perhaps 15% of the rock is euh dol phenos (still f.g.). unlike the intrusion in the interval 24.80 to 48.05 m, these are relatively accessory mineral free,much less py, no visible fl, mag only present very locly. most are non magnetic. these intrusions are med to dk br.	96.50 m - shr bndg 41° TCA.			
				103.05 to 104.20 m, 104.35 to 105.75 m, 105.85 to 107.65 m, 108.80 to 108.90 m - late, mass br Carb.	99.30 m - shr bndg 45° TCA.			
				101.20 to 103.05 m, 107.65 to 108.40 m - br altd A-Zone Carb.	100.85 m - shr bndg 55° TCA.			
				106.30 m - one late dyke seen cutting late mass Carb.				
				102.10 to 102.70 m, 103.00 to 103.30 m - late brittle fracs, filled with w carbonate.				
				lower ctc set at end of late mass Carb intrusion and br colours.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
108.90	126.55	dol-Carb	A	**dfmd fl dol-Carb** lt ol-gy. f.g. suc Carb with trace py, contains patches streaks and zones rich in p fl. these fl-rich areas especially are dfmd, chopped up on a small scale by movement along early fracs. text are swirly, streaky, and mottled to frac dfmd. the fl-rich sections are intruded by the f.g. ol Carb. below 121.20 m - the degree of dfmn lessens somewhat and the colour lightens. A/B-T?, still has A-Zone text. 109.55 to 109.95 m, 112.10 to 112.95 m, 118.45 to 118.70 m - fl-rich "chopped up" areas (early fact dfmn). other narrower intervals. 120.00 to 120.23 m - brc, ang clsts, apparently locly derived in a p-gy f.g. mtx. clsts not well sorted. late f.g., un-dfmd ol Carb dykes present 0.3 to 3 cm thick at low angles TCA. often bnded, 1-2% overall. 113.90 to 114.55 m, 114.90 to 115.65 m - med br colour overprint. 114.00 to 114.13 m - altn? contains large py patch. 113.95 to 114.25 m - some MHREO style Carb "vns". lower ctc abruptly gradational. downwards of A-Zone style dfmn and rapid increase in y lt br colours.	111.25 m - shr bndg 59° TCA. 118.60 m - shr bndg 47° TCA.			
126.55	136.00	dol-Carb	B	**crudely bnded fl dol-Carb (A/B-T ?)**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt y-br and lt gy and p. the Carb is composed of f.g., water clear dol. there is a range of grain sizes (all f.g.) and the dol has a more crystalline aspect than A-Zone Carb. accessory py is significantly more abnt and coarser grained than in the A-Zone. the bndg alternates y to br, fl-poor, mass text Carb with bnds of f.g. to m.g. diss fl. bnd ctcs are neither sharp nor regular: and there is a xenolithic look to some (most?) of the fl concentrations. A-Zone deformation text continue spottily into this interval (see shr bnded xenolith at 128.85 m).	128.80 m - shr bndg 50° TCA.			
				below 134.25 m - the Carb turns ol-gy and slightly. A-Zone style dfmn texts appear. sort of an A-B hybrid. also here, late, f.g., un-dfmd Carb dykes appear.	134.25 m - shr bndg 40° TCA.			
				EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536336.13	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 18, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312182.62	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 20, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	13.72 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	157.58 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	17.27	OVB		**ovb**			17.27-23.20	700-800
				0.00 to ~3.50 m - no recovery			23.20 - 30.00	800-900
				~3.50 to 17.27 m - cobbles and bldrs recovered, up to 1 m.			30.00 - 50.50	1000-1200
17.27	22.70	dol-Carb	A	**dfmd fl dol-Carb**			42.50	1330
				lt gy and lt ol-gy. Carb composed of f.g. anh, eqgr suc dol with traces of f.g. py. dk p fl present throughout, mainly associated with lt gy early Carb. diss patches, semi-mass 1 cm dfmd bnds, early and late frac linings. interval is early plastic dfmd, mottled, streaky chaotic texts. significant late fracg with some movement.	20.15 m - bndg 43° TCA.		50.50 - 61.00	1150-1300
				below 21.20 m - a patchy br overprint appears, altn? perky, surficially wthd 21.65 to 22.70 m, 50 cm core loss.			61.00 - 68.00	1400-1700
				lower ctc set at onset of med br colouration, gradational.			63.40	1800
22.70	61.00	dol-Carb	A	**lt br altd dfmd fl Carb (A (alt))**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				med gy to br. thins interval has the texts of the A-Zone dfmd fl dol-Carb. xenoliths of early fl Carb sections streaky to swirly texts. the main difference, other than the br colour overprint, is a marked increase in late fracg. the fracs are apparently random and often have minor movement along them. extension fracs, very locly culminate in brc. here and there, the fracg creates open space; which is filled by med, br, f.g. py Carb (MHREO intrusive). these infillings are max 1 cm thick and sporadically distributed. alt (br colour) gradually increases down hole, quite wk at top.	27.25 m - bndg 44° TCA.		68.00 - 71.00	1200-1400
				22.93 to 24.00 m, 30.65 m (1 cm), 32.30 m (1 cm), 55.75 to 55.85 m - pebble brc dyke, rnd carbonate clsts, max 8 mm in ol v.f.g. Carb mtx.	34.60 m - bndg 51° TCA.		71.00 - 73.50	1000-1200
				22.90 to 24.10 m, 36.50 to 38.50 m, 40.65 to 44.20 m, 55.75 to 58.55 m - zones rich in late v.f.g. Carb dykes.			73.50 - 82.00	900-1100
				the MHREO intrusives are like fingers, intruding and infilling the late fracs locly, in areas of max dilutions see 55.70 m.			82.00 - 92.60	800-1000
				late, often bnded f.g. ol Carb dykes common, often concentrated in zones. there are later than the alternation and fracg. same age as pebble dykes. even at the base of this interval there are sections of core which are essentially un-altd (see 59.00 m).			92.60 - 97.00	1000-1200
				lower ctc set at increase in altn intensity, gradational.			97.00 - 107.40	1150-1350
61.00	68.35	dol-Carb	A	**mod to slightly dfmd fl Carb (A (alt), MHREO)**				
				med to dk gy-br. the Carb is slightly rxltd where altd (short almost un-altd sections still present) and the amount of f.g. py increases. other than this the typical A zone texts are still present, muted by the mod, colour overprint. late, brittle fracg common to abnt. strongest altn 63.35 to 64.05 m, also strongest RA. degree of altn appears related to late frac density. again small vns and frac fillings of MHREO Carb present throughout. no large bodies. most concentration in high RA zone. lower ctc set at lessening of altn/ med br colour, gradational.			107.40 - 114.00	1400-1600
68.35	73.35	dol-Carb	A	**slightly altd, dfmd fl dol-Carb (A (alt), MHREO?)**			114.00 - 119.70	1500-1650

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt to med gy-br. again typical A-Zone dfmd fl Carb texts are overprinted by late frac and br colouration. significantly less late fracg than above. can't see any MHREO style Carb. occasional late, f.g., un-dfmd ol Carb dykes. there the late frac (and vns) filled by dk fl. lower ctc set at end of significant br altn.			121.40	2050
73.35	92.20	dol-Carb	A-lean	**late fracd, dfmd fl-poor dol-Carb**			134.00	2450
				br lt ol-gy. Carb composed of f.g. suc dol with trace py. this interval seems to be relatively poor. original texts are partially obscured by late fracg with minor displacement. the resulting mix of early and late dfmn yields chaotic texts. dk p fl present in early diss patches, early streaks. late frac, vn and brc infill. throughout interval is a hint of br colouration, wk altn, somewhat patchy.	85.90 m - bndg 28° TCA.		119.70 - 130.70	1600-2000
				74.05 to 74.75 m (fl patchy), 74.83 to 74.95 m, 77.75 to 77.93 m, 78.35 to 79.05 m, and 81.75 to 82.10 m - fl mtx brc.			135.30	2470
				84.30 m to 84.46 m - fl mtx brc, non mag (includes MHREO intrusive patch).			130.70 - 146.90	1000-2100
				late Carb dykes cut everything. lower ctc set at and of br colour.			146.90 - 157.58	1300-1600
92.20	101.90	dol-Carb	A-lean	**dfmd, fl-poor dol-Carb**				
				lt ol-gy. typical f.g. suc text, mass Carb with trace py. fl present throughout, irregularly distributed. overall fl-poor. fl in dfmd shr streaks, v.f.g. diss patches, early cm vns, early concentrated diss patches. texts are mass (fl-poor areas), streaky and irregular bnded. late, bnded, un-dfmd f.g. ol Carb dykes present, some quite thick (up to 8 cm). interval quite homo. lower ctc set at increase in fl content.	90.20 m - bndg 66° TCA.			
101.90	108.70	dol-Carb	A	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy and lt ol-gy. f.g. mass, suc dol-Carb with lt fl in streaky patches and disseminations, mod dfmd. there fl-rich areas are patches of heavily diss and dfmd. fl overall med to str. 105.60 m - large, f.g. ap-rich clst, 6 cm long, a xenolith in ol Carb. late f.g. to v.f.g. ol Carb dykes common, 5% overall > 1cm. overall text swirly-chaotic. no significant late fracg. lower ctc set at lowering of fl content and slightly darkening of colour.				
108.70	135.75	dol-Carb	A-lean	**slightly, alt? dfmd fl-poor dol-Carb** slightly br to med ol-gy. Carb is composed of f.g. eqgr, anh dol with trace f.g. diss py. fl present but not abnt, rare diss patches in early xenoliths and lining early and late fracs. rare brc infill and in late cc vns. overall fl-poor. texts are mass, slightly swirly and colour mottled, not strly dfmd. late fracg present, but generally wk. often slightly displacement. locly culminates in late no mtx brc. frac lined with fl. late v.f.g ol Carb dykelets present 1-2% overall. 125.25 to 133.05 m - w cc vn frags. frags float in the ol Carb. some vns are semi-intact, broken by late fracs. perhaps 1% overall. 128.60 to 128.85 m - sinuous cc fl vns. 131.65 to 131.85 m - epithermal, bnded, fl-rich interval. 133.40 to 133.55 m - intrudes early w cc vn frags. 121.10 to 121.30 m - late, frac dfmd, cc fl vn with fl infilling fracs. virtually no early fl Carb xenoliths below 116.90 m. lower ctc set at lightening of colour and increase on fl content.	135.20 m - bndg 37° TCA			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
135.75	157.58	dol-Carb	-	**dfmd fl dol-Carb** lt gy and lt ol-gy. this interval contains roughly equal proportions of the early lt gy Carb and later ol Carb. the earlier Carb is relatively wkly dfmd and relatively less fl content. the fl is present as diss streaks and patches. no highly concentrated areas. relative to usual, fl fairly evenly distributed and the interval is quite homo. no significant late frac or vns. late, un-dfmd low angles TCA f.g. Carb dykelets present but not common. less than 1%. 151.10 m to 151.90 m - early frac brc, no mtx frac lined / infilled with p fl. EOH	148.30 m - bndg 37° TCA. 155.25 m - bndg 28° TCA.			

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536629.62	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 21, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312552.69	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 21, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087791	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	10 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	5.18 m	**Note: retaining dyke test hole.**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	20.70 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A.Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	4.91	OVB	-	**ovb** 0.00 to 1.70 m - ice. 1.70 to 2.51 m - m.g.sand. dk gy-br. upper 1/3 (recovered) is m.g. sand, 75% qtz, 25% f.g. blk rocks frags. well sorted and sub-ang. lower 2/3 (recovered) is c.g. to v.c.g. sand, 75% qtz, 25% blk rock frags (a few large pebbles, to 1 cm). sub-ang. 2.51 to 4.91 m - pebbles and cobbles. ang to sub-rnd. mostly f.g. dk gy, mass volcanic rocks. a few carbonated cobbles 0.5 to 2 cm. 2 large ones (5 cm) at very base. at very top is a 5 cm very dk gy-br clay bnd 37 cm of pebbles and cobbles recovered.			4.90-15.50 15.50-20.70	210-270 180-200
4.91	15.53	cc-Carb	-	**mag-phl cc Carb** cr. well bnded in shades of gy. composed of m.g. xtln w translucent cc. diss ± 1 mm phenos of mag, phl and py. their abundance varies inversely with the degree of bndg. bndg is on a cm scale and fairly planar. appears to be primary (flow bndg). patches of late gy lined fracs. 9.03 to 9.12 m, 9.48 to 9.53 m, 12.98 to 13.11 m, 13.37 to 13.40 m - Glim xenoliths. roughly aligned parallel with bndg. 6.24 to 6.32 m, 14.20 m (3 cm) - late, ol-gr, v.f.g. Carb dykes.	8.20 m - flow bndg 59° TCA. 10.10 m - flow bndg 46° TCA 12.10 m - flow bndg 51° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc sharp, intrusive.				
15.53	20.70	Glim	-	**Glim with cc Carb vns** dk gy-br. the interval is composed of f.g. "gdmass" of un-orientated phl and cc. in this are set pbls of v.c.g. phl up to 1 cm long. the Glim contains minor to 2% py. cutting the Glim are vns of w cc. these lie in all orientations. also present are much thicker dykes of cc Carb. 16.50 to 16.64 m, 16.77 to 16.94 m, 19.49 to 19.62 m - Carb dykes. in increases in the concentration of cc vnlets downwards. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536728.19	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 21, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6311985.45	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 21, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087791	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	10 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	9.14 m	**Note: retaining dyke test hole.**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	23.72 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	8.05	OVB	-	**ovb** 0.00 to 5.10 m - no core. 5.10 to 6.95 m - sandy mud. dk br-gy, gritty mud. 6.95 to 8.05 m - organic mud. very dk br-gy. not silty at all, semi gelatinous. high organic content.			8.08 - 23.72	200-300
8.05	23.72	dol-Carb	-	**m.g. xtln dol Carb (BD ?? no REE min)** while the Carb is composed of well crystallized w glassy dol, noticeable accessory or trace minerals. the Carb is cut by a myriad of late, brittle fracs in every orientation. the fracs are stained in shades of br and gy. the Carb is also intruded by med ol-gy v.f.g. Carb dykes at all angles TCA, also by earlier f.g. py-fl phyric dol-Carb. all this fracg and intrusion has coloured the majority of the interval in br and gy. the style of fracg resembles that which and I have seem in the B-D zone. also the Carb is the same, however there is no hint of REE minerals here. larger late, ol v.f.g. Carb dykes 13.45 to 13.59 m, 16.98 to 17.36 m (almost core parallel), 23.25 to 23.85 m. the entire interval avgs 10-15% late v.f.g. Carb dykes. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536369.75	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 22, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312138.51	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 23, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	9.14 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	139.29 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	8.86	OVB	-	**ovb** 0.00 to ~4.00 m - no recovery. ~4.00 to 8.86 m - bldrs and large cobbles recovered, all Carb.			8.86 - 26.50 26.50 - 51.00	550-700 700-850
8.86	30.25	dol-Carb	A	**dfmd fl dol Carb** lt ol-gy with lt gy patches. the Carb is a f.g. eqgr aggregate of suc textural dol, with trace py. dk p fl occurs throughout irregularly distributed. in this interval fl occurs as dfmd, streaky masses and diss patches, associated with the lt gy Carb, and lining early and late fracs. distinctive about this unit is small, straight sided "flecks" ± 5 mm which are fl infilling small voids caused by slight movement along late fracs. early, dfmd fl not abnt here. texts show evidence of dfmn along early and late fracs. areas of later ol Carb are more mass in appearance. 15.05 to 15.65 m - pebble dyke brc. sub-rnd mm to 1 cm Carb clsts in f.g. Carb mtx. ctcs sharp. some large clsts to 5 cm. late f.g. un-dfmd, often bnd Carb dykes mash throughout. un-dfmd, lower angles TCA, are 2%. lower ctc set at gradational increase in early fl content.	18.75 m - shr bndg 21° TCA.		51.00 - 57.00 57.00 - 60.00 60.00 - 65.00 65.00 - 78.00	1200-1400 1400-1600 1300-1400 1100-1300
30.25	47.55	dol-Carb	A	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol-gy and lt gy. this interval is very similar to above but with more dfmd, early fl patches. fl present as chaotic dfmn (by early fracs) diss patches and dfmd streaky shr bnds. overall the interval is strly dfmd. text are streaky to chaotic. late v.f. bnded ol Carb dykes common and relatively thick up to 15 cm, 10-15% overall. the late fl frac fills and clots are much less common here, compared with above, essentially generally below 39.50 m.	34.80 m - shr bndg 34° TCA.		78.00 - 86.50	950-1100
				36.75 to 38.85 m, 45.20 to 47.15 m - relatively fl-poor intervals (excluding late Carb dykes).			86.50 - 87.50	1450-1650
				it appears that the interval darkens slightly downwards.			87.50 - 100.00	1000-1200
				46.20 m - pebble dyke xenolith in late Carb dyke (10 cm long).			100.00 - 118.50	850-1000
				lower ctc set at darkening of colour, (gradational).			118.50 - 124.00	750-850
47.55	70.25	dol-Carb	A	**br dfmd fl dol-Carb (A (alt?))**				
				br-ol-gy. compositionally and textually this unit is virtually identical to the one above. the main difference is that in this interval the rock is overprinted by br color. this is mostly manifest by the fl. above the fl is often vibrant p whereas here it is dull and dker almost blk. also the texts here are more muted in appearance, as if seen through mylar. again the fl is concentrated in early, dfmd streaky zones, broken thin vns and frags.	40.25 m - shr bndg 27° TCA.		124.00 - 129.00	700-800
				below 63.20 m - the intensity of dfmn seems to decrease somewhat and the colour begins to lighten.	54.25 m - shr bndg 13° TCA.		129.00 - 135.00	650-750
				57.15 to 60.30 m - dkest br, there is no obvious origin of the br overprint i.e. no obvious increase in late fracg.			135.00 - 139.29	800-900
				47.55 to 49.55 m, 54.80 to 56.10 m, 66.10 to 67.20 m - relatively fl-poor areas.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				late f.g. bnded Carb present throughout, but less abnt than above and generally thinner ± 5% overall?				
				below 51.00 m - the intensity of the early frac dfmn decreases.				
				47.55 to 50.20 m - brc, ang Carb frags, orientated in a f.g. ol-gy Carb mtx, most clsts 1 mm to 1 cm, occasional 5 cm clsts.				
				some voids infilled with p fl.				
				lower ctc set at lightening of colour, decrease in dfmn and early fl content.				
70.25	97.15	dol-Carb	A-lean	**dfmd fl-poor dol-Carb**				
				lt ol-gy. Carb is composed of f.g. suc anh dol with trace of f.g. py. seems locly slightly re-crystallized in fine patches. overall this interval is relatively fl-poor. fl occurs in scattered, dfmd diss patches, 10 cm or less, these look like xenoliths. some fl lines early fracs. very little late frac or vn fl. much of the interval is mass or colour mottled. fl-rich areas are more strly dfmd, streaky, swirled. locl patches of late frac dfmn. again these more dfmd patches appear to be xenoliths in the f.g. ol Carb (see 95.25 m for example). late f.g., ol Carb dykes again present 5-10% overall?.	64.60 m - shr bndg 37° TCA.			
				86.80 to 87.50 m - RA zone, max 1700 CPS, patchy rxtld, relatively abnt py r-br (non-surficial) staining along in fracs. med br overall colour. MHREO?.	77.25 m - shr bndg 25° TCA.			
				86.80 to 87.50 m, 89.20 to 89.50 m - br altd.	89.70 m - shr bndg 26° TCA			
				73.70 to 74.50 m, 77.10 to 78.80 m, 81.30 to 82.15 m, 84.15 to 84.60 m, 89.60 to 90.35 m, 94.05 to 96.10 m - relatively fl-rich.				
				90.88 to 91.02 m - patch of ap-rich xenoliths. largest is a ovoid, 6 cm long. composed of cr, skeletal textural ap blades in dol with p fl, tr py and hem? found in early frac ol Carb (originally a dyke?).				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set and increase in fl abundance. 77.15 to 77.75 m - surficial wthd zones, lim staining emanates off 20° TCA frac.				
97.15	139.29	dol-Carb	A	**dfmd fl dol-Carb** lt ol-gy with lt gy patches. the Carb is composed of f.g., anh equigranular dol with trace fl and py. often present are small non-planar fracs, lined with fl or phl? fl is present throughout the interval, mostly associated with the lt gy, earlier Carb. fl occurs as highly dfmd patches and streaks, scattered small xenoliths, broken and rotated early vn pieces lining abnt early fracs. most of the dfmn is caused very slight movement on str early fracs, highly irregular, without preferred orientation. the resulting texts are chaotic and culminate in mtx-less brc. in adjacent areas of the ol Carb the text are swirly, colour mottled. no early fracg to speak of. in detail this interval is very hetero, overall it is quite homo. overall p fl content is mod.	104.00 m - shr bndg 43° TCA.			
				below 129.00 m - the degree of dfmn decreases somewhat.	115.75 m - shr bndg 49° TCA.			
				late, bnded, f.g. un-dfmd ol Carb dykes present. usually 3 cm or less thick 0-45° TCA. some to 8 cm. cut all rock, are themselves un-dfmd and un-fracd.	119.30 m - shr bndg 27° TCA.			
				102.35 to 102.42 m - pebble dyke brc. 111.00 to 111.13 m - carbonate vn br, frac zone with movement. late. 114.00 to 114.75 m - zone with late, fl filled tension gash fracs 44° TCA. abnt ang blk ap 122.35 to 123.15 m, 123.50 to 124.00 m, ang p blk clst in brc, clsts 3-7 cm, p. they occur with other non-fluorescent ones in a late f.g. ol Carb dyke (2 separate dykes). these p-blk clsts have a Carb text and contain pk ap. the actual intrusions are 122.35 m (27° TCA) to 123.20 m, 123.43 to 124.10 m.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				129.35 to 130.65 m - fluorescent ap clst brc. almost all clsts fluoresce w to blk. mtx is v.f.g. ol carbonate. again this is a xenolith-rich Carb intrusion. 138.55 m - pale Carb (fl) vn with water-clear qtz core, 3.5 cm thick. EOH				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536271.00	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 24, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312278.63	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 25, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	7.01 m	**Note:**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	154.53 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	7.43	OVB	-	**ovb** 0.00 to ~5.70 m - no recovery. ~5.70 to 7.43 m - Carb bldrs recovered.			2.30 - 7.50 7.50 - 18.10 18.10 - 21.00	550-650 700-850 950-1025
7.43	49.57	dol-Carb	A	**dfmd fl dol-Carb** lt ol-gy with gy patches. all Carb (except he late dykes) are composed of f.g. anh eqgr suc text dol with trace py. dk p fl is present throughout but irregularly distributed. most of the fl is associated with the lt gy Carb. the fl visually defines a streaky irregular bndg. fl is small flecks aligned in the bndg, some mass ± 5 mm bnds, sometimes broken by early fracg. fl also present as late frac fills and rare vns. there are two Carbs, an early lt gy, dfmd, fl-rich one and a later, very fl-poor, relatively un-dfmd ol-gy one. the former display shr like f. bndg, areas broken and dfmd by early fracg and swirly texts. the later ol Carb is often mass or swirly colour mottled. late, often bnded, ol, un-dfmd Carb dykes present throughout from a few mm to 10 cm thick. these always lie at low angles (0-35°) TCA. 7.45 to 9.35 m, 13.00 to 18.00 m, 22.25 to 23.90 m, 30.10 to 34.20 m, 39.20 to 42.20 m - relatively fl-poor areas. no brc.	10.70 m - shr like bndg 33° TCA. 20.35 m - shr like bndg 40° TCA. 24.00 m - shr like bndg 39° TCA. 32.75 m - shr like bndg 30° TCA. 38.40 m - shr like bndg 35° TCA.		21.00 - 30.00 30.00 - 34.50 34.50 - 40.00	850-950 750-850 550-700

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lower ctc set at decrease in overall fl content gradational.	49.50 - shr like bndg 47° TCA.		40.00 - 45.50	850-1050
							45.50 - 69.20	550-650
49.57	67.87	dol-Carb	A-lean	**dfmd fl-poor dol-Carb**				
				lt ol-gy. this unit is very similar to above, with the relative proportions of the ol and lt gy Carb changed; this interval contains a much higher proportion of the later, ol Carb. the earlier, fl-rich Carb still displays thin bnded shr dfmd texts. the overall texts are swirly to vaguely streaky bnd. late Carb dykes again present, relatively un-common.	53.75 m - shr like bndg 40° TCA.		69.20 - 73.00	650-800
				56.20 to 56.80 m - ap clst brc dyke,. ± 10° TCA, brc consists of sub-rnd clsts of locl ol Carb, as well as w m.g. xtln Carb. these are in various stages of altn. fluorescent ap has replaced the clsts to various degrees, from ap rims to almost complete replacement. the w, xtln Carb clsts seem more resistant and clsts near the walls of the dykes are less altd. mtx is f.g., ol Carb. the replacement by ap is not psd-morphic, the original suc text is replaced by a xtln one, another 55.00 to 55.07 m, 61.55 to 61.70 m.	57.50 m - shr like bndg 43° TCA.		73.00 - 83.20	850-1000
				54.30 to 54.75 m - relatively fl-rich.	61.75 m - shr like bndg 52° TCA.		83.20 - 88.50	1100-1300
				lower ctc set at increase in fl content.	65.50 m - shr like bndg 55° TCA.		88.50 - 96.00	1000-1150
67.87	73.05	dol-Carb	A	**dfmd fl, dol-Carb**				
				lt gy and lt ol-gy. virtually identical to 7.45 to 49.57 m. shr bndg is even more pronounced, only seriously disrupted below 70.60 m. fl present in 0.5 to 2 cm streaks in bndg, broken early vns and, dfmd, diss patches, all associated with early lt gy Carb. the "shr bndg looks like plastic dfmn. some of the gy Carb is rolled up into 5 mm "balls", in bnds. "slung of pearls".	67.90 m - shr bndg 41° TCA.		96.00 - 100.50	1050-1200

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				71.80 to 72.60 m - relatively fl-poor.	70.50 m - shr bndg 44° TCA.		100.50 - 120.00	850-1000
				late Carb f.g. dykes present ± 5% overall?			120.00 - 123.00	650-800
				lower ctc set at decrease in fl content.				
73.05	89.62	dol-Carb	A-lean	**dfmd relatively fl-poor dol-Carb**				
				lt ol-gy. interval consists mostly of the late ol-gy, fl-poor Carb. it is composed of f.g. and, eqgr dol with trace py. it contains patches of fl-rich earlier lt gy Carb which appears to be more dfmd, streaky, early frac, dfmd bnded. the ol Carb is mass to colour mottled. everything is cut by late, planar, fl filled fracs (locly) and late f.g. ol Carb dykes.	84.20 m - shr bndg 42° TCA.		123.00 - 126.50	850-1000
				75.60 to 75.90 m - brc dyke: mostly locl clsts, one ap one. v.f.g. ol Carb mtx.			126.50 - 154.53	650-850
				78.50 to 79.10 m, 85.10 to 85.80 m - relatively fl-rich, other shorter sections.				
				89.35 to 89.60 m - w Carb filled late fracs, open space filling.				
				lower ctc set at increase of fl.				
89.62	100.48	dol-Carb	A	**dfmd fl dol-Carb**				
				lt ol-gy and lt gy. the fl rich, generally lt gy sections are quite dfmd, streaky, segmented by early fracg and ol Carb intrusion. frags and mass dk p fl common, broken early vns?. this interval is quite homo overall. amount of fl increases downwards. late, often think bnded f.g. Carb dykes present, generally thin 0.5 to 3 cm ± 5%. lower ctc set at lower dfmn intensity and a lightening if colour.	93.75 m - shr bndg 49° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
100.48	125.82	dol-Carb	A	**dfmd fl dol Carb**				
				lt ol-gy. this interval is very similar to the one above with lower intensity dfmn, which decreases further downwards. fl dfmn, is patchy. fl present as ameboid cm patches, concentrated streaky patches. dfmd shr text zones. downwards shr bnded sections dominate, less dfmd. the fl-poor ol Carb is colour mottled to mass, lt definitely intrudes the fl-rich lt gy Carb.	101.65 m - shr bndg 57° TCA.			
					110.65 m - shr bndg 54° TCA.			
				105.70 to 108.65 m - fl-rich, strongly dfmd (as above), dfmd shr textd.	112.60 m - shr bndg 48° TCA.			
				108.65 to 111.20 m, 113.30 to 114.00 m, 117.35 to 118.05 m - relatively fl-poor.	117.85 m - shr bndg 48° TCA.			
				lower ctc set at slight decrease in fl content.	121.10 m - shr bndg 50° TCA.			
125.82	154.53	dol-Carb	A	**dfmd fl-poor dol-Carb (A-lean locly)**				
				lt ol-gy and lt gy. this interval contains two main Carb rocks. both are composed of f.g., anh, eqgr dol with trace py. the earlier Carb is lt gy, p fl-rich and is mod dfmd. the dfmn here takes the form of a fine shr-style bndg, variably displaced by closely spaced irregular early fracs. this dfmd early Carb is intruded by a later phase which is ol gy, fl-poor and manifests a much lesser degree of dfmn. the earlier Carb locly appears to be as xenoliths in the later. the later Carb is usually mass or vaguely colour mottled. the patches of earlier, lt gy Carb vary from a few cm to 50 cm+ long. this interval is only wkly dfmd, less than the interval above.	126.25 m - shr bndg 42° TCA.			
					132.70 m - shr bndg 53° TCA.			
				124.90 to 126.55 m, 138.65 to 139.00 m - relatively fl-rich sections.	136.75 m - shr bndg 39° TCA.			

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				151.50 to 154.30 m - late sub planar, fl filled late fracs, ± 70° TCA, nowhere str.	142.30 m - shr bndg 40° TCA.			
				141.50 m - dol-fl v.c.g. qtz vn core parallel.	145.75 m - shr bndg 42° TCA.			
				142.78 to 143.00 m - ap clst brc dyke. consists of rnd clsts 1 mm to 3 cm of locl Carb and ap. some of the Carb clsts are rimmed by ap. mtx is f.g. Carb. this brc dyke is cut by late f.g. Carb dykelet.	154.20 m - shr bndg 80° TCA.			
				E.O.H				

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536916.99	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 25, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312196.29	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 26, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087791	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	10 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	1.52 m	**Note: on land dyke test hole.**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	17.63 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	1.44	OVB	-	**ovb** 0.00 to 0.88 m - f.g. sand, med br, 5-10% clay. one 3 cm interbed of silty clay. lake sediment. 0.88 to 1.44 m - cobbles and bldrs, very dk volcanic clsts, max 5 cm.				
1.44	5.25	dol-Carb	BD	**crudely bnded REflc dol-Carb** streaky cr and lt gy-br. Carb composed of m.g. xtln dol with trace f.g. py. Carb has a nodular text, "nodules" of cr Carb separated by thin (max 1 cm) br coloured irregular bnds richer in py with band of REflc (str pk colour). the crude bndg produced is ± 70° TCA. above 2.75 m the interval is pale og-pk, completely mass f.g. dol-Carb, xtln almost without visible accessory minerals. 4.70 to 5.05 m - dyke. med gy, mass, f.g. suc Carb with up to 10% f.g. accessory py. dyke is mod bleached at upper ctc. lower ctc 60° TCA. lower ctc set at onset of brc texts.				
5.25	12.45	dol-Carb	BD	**dol-Carb brc** cr to med br. interval consists of ang to sub-rnd clsts, 5 mm to 12 cm, of cr and dull og m.g., mass, xtln Carb in a mtx of lt gy br f.g. xtln Carb. brc mtx supported without preferred orientation. the dull og Carb clsts tend to be the larger ones. brc is mass.				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				10.55 to 11.50 m - brc is intruded by v.f.g., ol Carb dyke. the dyke appears to be at a very low angle TCA. lower fracd. lower ctc set at end of brc.				
12.45	17.63	dol-Carb	BD	**dyke-rich REflc Carb** cr-lt r to med gy-br. the "base" Carb is cr gy. it is a m.g. xtln dol-Carb. this Carb is bnded at low angles TCA. the bnds consist of the cr dol-Carb alternating with v.f.g. r bnds containing floating ± 5 mm suh dol xtls. the f.g. r "mtx" is presumed rich in v.f.g. REflc minerals. however only 60% of the interval looks like this. 30% of the interval is dykes of mass. f.g., med gy Carb with considerable accessory f.g. py. the REflc bnds are up to 10 cm true thickness. EOH	13.70 m - REflc bndg 47° TCA. 17.25 m - REflc bndg 33° TCA.			

OGQ # 223

GEOLOGICAL DRILL LOG

Property:	Eldor Property	**Easting (m):**	536327.67	**Drill Company:**	Bodnar Drilling Ltd.	**Date Started:**	Apr 26, 2014	**Downhole Survey:**	Yes
Expl. Area:	Ashram	**Northing (m):**	6312109.29	**Rig Type:**	Zinex A5	**Date Completed:**	Apr 27, 2014	**Survey Tool:**	EZ-Trac (MS)
Claim No:	2087790	**Coordinate System:**	NAD 83, Zone 19	**Rod type:**	10 foot	**Casing Status:**	Pulled	**Survey Interval:**	20 feet
NTS:	24C16	**Collar Survey Method:**	DGPS	**Hole type:**	Diamond drill	**Casing Depth:**	6.71 m	**Note: on land dyke test hole.**	
Owner:	Commerce Resources Corp.	**Spotted Azimuth:**		**Core size:**	NQ	**End of Hole:**	154.29 m		
Operator:	Dahrouge Geological Consulting Ltd.	**Spotted Inclination:**	-90°	**Core storage:**	Camp Valcourt	**Logged By:**	A. Knox		

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
0.00	4.30	OVB	-	**ovb** 0.00 to 4.30 m - no recovery. 4.30 to 9.40 m - Carb bldrs and cobbles. along with one 13 cm length of m.g. sand.			9.40 - 42.50 42.50 - 45.50 45.50 - 59.00	1000-1200 1200-1400 1000-1200
9.40	20.97	dol-Carb	A	**slightly dfmd fl dol-Carb** lt ol gy and lt gy. this interval contains two Carbs plus a late dyking phase. the earlier two phases are composed of f.g. eqgr - anh (suc) dol with trace f.g. py. the earlier Carb is lt gy and rich in dk p fl. associated with the fl is a cr-y equant f.g. mineral and a v.f.g. r-br mineral. the fl occurs as broken "chunks," heavy diss and dfmd streaks and thin bnds. below 18.40 m large ang chunks, up to 16 cm are present. the early Carb is strongly dfmd by early fracg intrusion by late Carbs and late brittle fracg and brcn, producing chaotic texts. early Carb occurs in zones 5-50 cm long, always bounded by the ol Carb. the lt ol gy Carb intrudes the lt gy, fl-rich ore. it is very fl-poor and appears much less dfmd. it is cut and displaced by late fracs and fl-mtx brc zones. the latest event is thin f.g. to v.f.g. ol Carb dykes which are here not common.			59.00 - 71.10 77.40 71.10 - 88.00 88.00 - 93.00 93.00 - 96.50	800-950 1650 1200-1350 1700-1900 2000-2300

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				12.95 to 13.05 m - late fl mtx brc, 60% very dk fl.			96.50-102.00	1400-1700
				18.40 to 20.85 m - large "chunks" of semi-mass early fl. Largest 28 cm long. Cut by late Carb dykes. Lower ctc set at end of str dfmd and slight decrease in fl content.			102.00 - 110.30	1200-1450
20.97	56.92	dol-Carb	A	**dfmd fl dol-Carb**				
				lt ol gy and lt gy. this interval contains the same two Carbs as above, but is much less dfmd. the early Carb patches are strongly early frac-line dfmd but not late fracd. the fl is generally in fine flecks. some of the early fl Carb frags are obviously xenoliths in the later ol Carb. early Carb sections 5 cm to 1 m, all are bounded or intruded by the later ol Carb. fl content decreases irregularly downwards.			110.30 - 113.50	1400-1600
				the later ol Carb is again fl-poor and mass to slightly swirly textd. sections of only late ol Carb are short, max 40 cm.			113.50 - 119.50	1300-1500
				late, bnded v.f.g. much more common here than above. they are up to 10 cm thick, more often 0.5 to 5 cm. all are at low angles TCA (0-40°). abundance of these decreases downwards ± 20 % at top, 1-2% at base.			119.50 - 127.00	1000-1200
				43.95 to 44.13 m - zone with very coarse, euh py, associated with irregular ol Carb intrusion.			127.00 - 133.20	1100-300
				50.88 to 51.15 m - c.g. pebble dyke. clsts are mostly rnd w carbonate 1 to 5 mm. lesser fl clsts and cr-gr fluorescent clsts. the latter occur in all degrees of replacement, from ap rims to complete replacement.			133.20 - 138.00	1400-1600
				the mtx is f.g. Carb, which wkly fluoresces. fluids from the mtx/Carb altg zone of clst?			138.00 - 142.00	1100-1300
				base of interval set at further slight decrease in dfmn and fl content.			142.00 - 154.29	900-1100
56.92	71.66	dol-Carb	A	**slightly dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt ol gy with lesser lt gy. rock types as above, but the proportion of later lt ol gy Carb increased. texts in the early, lt gy fl-rich Carb, streaky-diss. some early fracture dfmn less str then above. here the early Carb patches are more obviously xenoliths. the late ol Carb is mass to colour-mottled. trace f.g. py and fl flecks. lt intrudes clearly the fl-rich Carb. late v.f.g. ol Carb dykes present. 6.92 to 59.60 m, 60.55 to 61.45 m, 67.05 to 71.66 m - relatively fl-poor. no late brc vns. late fracs filled with w Carb, 64.45-65.15 m, irregular, random orientation. lower ctc set at increase in fl content.				
71.66	88.98	dol-Carb	A	**dfmd fl-rich dol-Carb** lt ol gy and lt gy. Carb composed of f.g. eqgr - suc dol with trace py. again two Carb phases present. the earlier, lt gy fl-rich phase is present as mod dfmd patches. these are locly streaky fine bnded, but most often chopped up by movement along early fractures. later Carb sections mass to colour mottled. length of text sections of later Carb increases below 80.50 m. other than a mod decrease in fl ctc downwards this interval is overall homo. despite the fine scale hetero. late f.g., bnded thin Carb dykes present. these post-date all dfmn, relatively uncommon above 81.50 m, many more below 40° TCA or less. 87.75 to 88.05 m, 88.15 to 88.70 m - frac displaced w Carb vns (intruded by post dfmd bnded Carb fl vn 4 cm thick).				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				77.40 m - small clot of MHREO Carb. 86.25 to 86.45 m - pebble dyke, sharp irregular ctcs ± 30° TCA. dyke is 20% 5 mm rnd clsts, non fluorescent. dyke contains a large WR xenolith which is rimmed and veined by fluorescent material (ap!). the f.g. mtx in the dyke is also fluorescent. lower ctc set at str reduction in fl, onset of mass. character br colours and str increase in RA.				
88.98	99.47	dol-Carb	-	**br altd (?) dfmd fl dol-Carb with f.g. mass mag dol-Carb dykes (MHREO?)** the "base" rock is similar to the latter half of the interval, relatively mass, fl-poor, f.g. suc dol- Carb with trace py. mostly the later ol gy Carb. the texts are partially obscured by a br altn (?). the Carb is slightly rxtld and cut by fracs and thin vnlets of xtln f.g. carbonate, relatively rich in py. more substantial dyke-like intrusions of mass f.g. xtln Carb found in the heart of that zone (92.25 to 95.95 m). these intrusions are med br mass f.g. xtln. they are often micro-prtc (dol). contain locly abnt mag, fl and/or py. these intrusions are most often finely fracd. here these late Carb intrusions vary from hairline to max 40 cm long. 92.25 to 92.32 m, 93.46 to 93.87 m, 94.43 to 94.61 m, 95.64 to 95.72 m - late mag Carb (MHREO) intrusions, other smaller ones. below 96.30 m altn lessens. 93.54 m - fine, equant y-og glassy xtls, diss in MHREO Carb with abnt mag pheno. lower ctc set at end of visible br altn.				
99.47	116.34	dol-Carb	-	**dfmd fl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy and lt ol gy. this interval contains two generations of Carb. the other is lt gy, fl-rich. it is composed of f.g. suc dol with trace py. dk p fl occurs as flecks and semi - mass bnds with a shr bnded text to finely streaky. this shr bnded text is locly disrupted by early fracg but the original streaky text is recognizable throughout. the intervals of this early Carb are 5 to 55 cm long. the later ol Carb is f.g. suc as well. it is very fl-poor and is mass to swirly textd. lt intrudes the earlier carbonate on all scales. all are cut by un-dfmd v.f.g. thin ol Carb dykes. here they are thin (max 30 m), not common and low angle TCA. below ± 106.50 m - dfmn of the early fl-rich Carb patches increases. no late vns or brcs. overall homo. lower ctc set at decrease in fl ctc.				
116.34	133.44	dol-Carb	A-lean	**dfmd relatively fl-poor dol-Carb** lt ol gy. this contains the same two Carbs as the rest of this hole. however, the later, ol gy Carb is much more abnt. patches of the earlier fl-rich Carb are small (less than 10 cm) and relatively infrequent. smaller fl clst xenoliths are more common (see 123.60 m). late f.g. Carb dykes uncommon and thin. late dol-fl vn at 119.35 m, includes brittle frac, 2.5 cm thick. fracd dol vn 126.70 m, 3 cm thick. the assays in this interval should be very homo, as the distribution of fl is. lower ctc set at increase in early fl content.				
133.44	154.29	dol-Carb	A	**dfmd dl dol-Carb**				

FROM (m)	TO (m)	ROCK TYPE	PROVISIONAL ZONE	DESCRIPTION	STRUCTURE	TEXTURE	RADIOACTIVITY	
							DEPTH (m)	CPS
				lt gy and lt ol gy. many more fl-rich early Carb patches here than in the interval above and they are longer. most of the fl is in semi-mass "chunks", with less in streaks and concentrated disseminations. this preponderance of "chunks" is unusual. below 149.40 m there are no chunks and much less fl overall. longest "chunk" 13 cm. the later lt ol gy Carb is mass to slightly fracd - quite un-dfmd. 133.65 to 138.80 m, 139.15 to 140.65 m, 141.20 to 144.65 m - relatively fl poor. above 148.60 m the distribution of fl is very un-homo. below is more dfmd. broken w dol vn 135.25 m, 4 cm thick. 145.35 to 145.8 m, 146.85 to 147.35 m - very fl-rich. late f.g. ol Carb dykelets, thin, not common. EOH				

APPENDIX 10B: 2013 AND 2014 DRILL CORE SAMPLE ANALYTICAL CERTIFICATES

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11626
Invoice Date: 28-Nov-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

69 Rock samples were submitted for analysis.

The following analytical packages were requested:

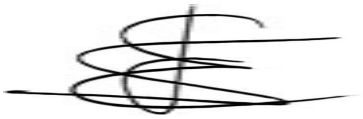
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11626**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133001	5.91	1.53	0.03	6.42	1.329	12.95	31.83	0.02	0.03	0.120	1.36	35.91	91.52	29	10	48	< 20	8	< 20	< 10	1150	69	9	29
133002	3.56	4.00	0.03	6.49	1.357	13.80	29.54	0.01	0.04	0.092	1.12	37.13	93.61	33	12	44	< 20	2	< 20	< 10	850	76	9	31
133003	5.55	3.23	0.02	6.71	1.486	13.27	31.98	0.02	0.03	0.141	1.52	35.67	94.08	35	8	46	< 20	2	< 20	< 10	1260	78	10	31
133004	6.07	2.62	0.02	6.56	1.417	13.23	32.32	0.02	0.02	0.507	1.29	35.96	93.96	31	7	88	< 20	3	< 20	< 10	750	69	9	28
133005	3.76	1.89	0.03	5.89	1.175	14.38	31.42	0.02	0.05	0.025	2.67	37.18	94.72	31	9	34	< 20	3	< 20	< 10	360	77	10	32
133006	3.45	1.59	0.06	6.44	1.278	15.01	30.14	0.02	0.06	0.079	1.28	39.34	95.30	35	14	54	< 20	2	< 20	< 10	250	68	10	31
133007	1.56	1.47	0.04	7.03	1.400	15.27	29.24	0.02	0.04	0.041	1.23	40.63	96.42	42	9	47	< 20	2	< 20	< 10	250	70	10	29
133008	3.07	1.70	0.02	6.20	1.272	14.67	29.31	0.02	0.03	0.020	0.79	39.40	93.42	38	12	38	< 20	3	< 20	< 10	240	71	9	27
133009	3.54	1.45	0.03	8.54	1.907	14.09	28.96	0.02	0.02	0.021	0.88	38.61	94.54	37	8	47	< 20	3	< 20	< 10	1080	78	8	26
133010	5.66	5.42	0.03	7.55	1.373	12.94	30.05	0.02	0.03	0.049	0.91	34.94	93.33	35	14	39	< 20	3	< 20	< 10	230	67	9	27
133011	4.14	2.12	0.03	7.70	1.385	13.61	29.87	0.02	0.03	0.073	1.24	37.89	93.96	49	10	57	< 20	3	< 20	< 10	460	81	10	30
133012	2.05	0.66	0.03	8.29	1.349	14.28	29.08	0.02	0.02	0.088	0.64	40.34	94.81	53	5	75	< 20	6	< 20	< 10	720	56	8	25
133013	2.86	1.59	0.04	8.66	1.363	13.98	29.38	0.02	0.05	0.194	0.66	39.27	95.20	54	8	92	< 20	6	< 20	< 10	410	53	8	25
133014	4.40	1.68	0.02	8.89	1.324	13.14	30.80	0.03	0.02	0.107	1.78	36.78	94.57	54	6	81	< 20	5	< 20	< 10	460	64	8	27
133015	4.36	1.27	0.03	8.48	1.282	13.02	30.70	0.03	0.03	0.105	2.11	36.91	93.95	54	6	78	< 20	5	< 20	< 10	500	68	9	28
133016	3.80	0.90	0.02	12.39	1.749	12.70	27.24	0.02	0.02	0.283	1.70	36.36	93.38	46	6	101	< 20	8	< 20	< 10	1460	67	9	30
133017	5.27	2.57	0.02	9.75	1.712	12.63	28.87	0.01	0.02	0.042	0.94	36.20	92.77	41	7	65	< 20	4	< 20	< 10	1300	71	8	25
133018	7.95	2.60	0.02	8.91	1.481	11.73	31.90	0.01	0.02	0.046	0.64	33.35	90.71	44	8	71	< 20	4	< 20	< 10	1290	81	9	30
133019	1.42	2.16	0.02	10.84	1.609	14.21	26.17	0.01	0.02	0.037	0.57	39.87	95.53	42	9	73	< 20	3	< 20	< 10	490	61	8	24
133020	0.66	1.17	0.04	10.26	1.415	14.92	25.30	0.02	0.04	0.038	0.95	40.88	95.05	55	7	60	< 20	4	< 20	< 10	420	70	10	31
133021	2.04	1.30	0.04	8.93	1.353	15.00	27.87	0.02	0.04	0.022	1.39	39.71	95.67	46	11	47	< 20	5	< 20	< 10	430	69	8	29
133022	2.51	4.14	0.05	6.60	1.077	14.01	27.91	0.03	0.07	0.027	2.16	37.14	93.20	46	21	47	< 20	4	< 20	< 10	220	77	10	31
133023	3.27	4.35	0.04	6.53	1.218	14.23	28.67	0.03	0.06	0.028	1.37	37.72	94.24	40	28	40	< 20	3	< 20	< 10	480	70	9	28
133024	< 0.01	98.87	0.08	0.82	0.012	0.11	0.21	0.02	0.02	0.002	0.02	0.12	100.3	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	3	1	< 5
133025	1.82	14.82	2.57	12.74	0.140	0.49	26.20	0.95	1.01	0.144	17.86	8.50	85.41	17	14	156	20	30	70	100	600	227	25	175
133026	5.18	1.58	0.03	11.67	1.371	13.06	27.20	0.02	0.04	0.218	0.87	36.25	92.32	38	11	89	< 20	9	< 20	< 10	630	72	9	30
133027	2.53	0.51	0.07	8.38	1.502	14.07	28.93	0.02	0.09	0.103	1.29	38.98	93.95	44	15	64	< 20	5	< 20	< 10	630	70	8	27
133028	2.89	0.25	0.03	9.69	1.689	13.37	28.79	0.02	0.04	0.390	2.50	37.52	94.31	53	7	122	20	7	< 20	< 10	690	77	10	31
133029	2.69	0.85	0.06	8.47	1.446	13.34	28.69	0.03	0.09	0.263	2.52	37.15	92.90	62	7	117	< 20	8	< 20	< 10	590	89	11	36
133030	< 0.01	98.50	0.06	0.91	0.014	0.12	0.24	0.02	< 0.01	0.001	0.04	0.14	100.1	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	3	1	< 5
133031	0.25	2.46	0.09	8.62	1.552	14.61	26.48	0.07	0.10	0.347	1.52	39.65	95.50	61	9	128	< 20	10	< 20	< 10	440	54	8	26
133032	0.90	0.32	0.03	9.62	1.593	14.67	27.34	0.02	0.03	0.233	1.54	40.43	95.83	54	4	103	< 20	7	< 20	< 10	340	55	8	25
133033	0.32	1.36	0.07	9.78	1.555	14.32	25.25	0.03	0.09	0.143	1.37	39.88	93.85	46	8	102	< 20	8	< 20	< 10	440	60	8	26
133034	0.28	0.54	0.08	9.61	1.515	14.62	26.52	0.02	0.09	0.192	1.91	40.15	95.26	51	9	105	20	8	< 20	< 10	540	56	8	26
133035	0.65	0.76	0.12	9.69	1.479	14.30	26.19	0.02	0.13	0.268	1.29	39.83	94.07	54	8	108	< 20	12	< 20	< 10	380	59	8	29
133036	6.69	0.42	0.04	7.78	1.521	13.13	30.95	0.02	0.04	0.041	0.95	37.40	92.29	44	4	61	< 20	4	< 20	< 10	1000	84	10	30
133037	6.32	0.44	0.09	9.12	1.713	12.68	30.54	0.02	0.10	0.043	0.90	35.65	91.28	41	6	70	< 20	5	< 20	< 10	1100	86	10	31
133038	8.72	0.38	0.08	8.91	1.690	12.47	31.63	0.02	0.08	0.071	0.77	35.27	91.36	41	5	81	< 20	6	< 20	< 10	810	78	9	31
133039	4.55	3.53	0.04	7.05	1.586	13.67	29.51	0.03	0.05	0.022	0.61	37.29	93.39	40	6	68	< 20	2	< 20	< 10	310	74	9	29
133040	9.91	1.79	0.04	8.63	1.669	12.10	31.81	0.02	0.04	0.025	0.80	33.70	90.62	46	5	55	< 20	5	< 20	< 10	1340	103	12	36
133041	8.93	3.85	0.03	8.16	1.582	11.66	31.32	0.02	0.04	0.024	1.19	32.04	89.91	48	7	50	< 20	4	< 20	< 10	1150	92	10	31
133042	8.73	3.51	0.03	7.24	1.447	12.42	32.00	0.03	0.03	0.021	0.95	33.55	91.21	50	8	54	< 20	3	< 20	< 10	640	83	10	31
133043	11.7	5.45	0.03	6.48	1.324	10.70	34.89	0.03	0.04	0.032	1.31	29.39	89.67	53	8	55	< 20	4	< 20	< 10	970	92	10	30
133044	6.87	3.89	0.03	6.93	1.437	12.89	29.59	0.03	0.04	0.011	1.23	35.31	91.37	47	6	44	< 20	3	< 20	< 10	600	89	10	30
133045	5.27	2.10	0.03	7.42	1.483	13.48	29.09	0.03	0.03	0.015	0.98	37.17	91.83	49	6	46	< 20	3	< 20	< 10	640	74	9	26
133046	10.4	5.21	0.03	6.45	1.413	11.57	32.53	0.04	0.03	0.022	1.49	31.77	90.56	50	6	45	< 20	2	< 20	< 10	690	75	8	26
133047	8.28	2.15	0.03	6.88	1.503	12.19	32.18	0.03	0.04	0.101	1.30	33.98	90.40	59	7	62	< 20	2	< 20	< 10	760	79	9	27
133048	3.45	0.57	0.09	8.96	1.848	13.32	30.27	0.03	0.08	0.195	1.57	37.66	94.60	79	6	96	< 20	5	< 20	< 10	400	64	10	26
133049	0.03	98.22	0.06	0.90	0.019	0.09	0.29	0.02	< 0.01	0.002	0.02	0.15	99.78	< 1	< 1	< 5	80	2	< 20	< 10	< 30	3	1	< 5
133050	6.37	20.91	3.16	28.43	2.454	7.10	17.19	0.33	1.37	1.483	0.56	12.79	95.76	22	14	161	170	29	80	30	1430	51	8	25
133051	0.36	1.21	0.05	7.60	1.217	15.41	27.81	0.02	0.07	0.064	1.34	41.53	96.33	49	14	51	< 20	4	< 20	< 10	200	38	6	21
133052	0.23	0.90	0.04	7.89	1.264	15.48	27.49	0.03	0.03	0.055	1.45	41.07	95.71	52	12	65	< 20	6	< 20	< 10	130	38	6	23

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133053	2.01	1.77	0.03	7.14	1.156	14.67	28.91	0.03	0.02	0.040	1.57	40.41	95.77	44	10	56	< 20	1	< 20	< 10	220	38	7	20
133054	0.22	1.30	0.05	8.04	1.250	14.99	27.11	0.03	0.05	0.086	0.85	42.13	95.88	52	18	78	< 20	2	< 20	< 10	120	38	6	20
133055	0.11	0.19	0.03	10.03	1.439	14.86	27.01	0.02	0.02	0.147	0.84	41.36	95.94	53	6	86	< 20	8	< 20	< 10	890	57	10	33
133056	0.49	0.54	0.02	7.66	1.162	15.07	27.13	0.02	0.03	0.130	1.08	41.41	94.24	49	8	83	< 20	5	< 20	< 10	220	69	9	32
133057	0.20	2.99	0.04	6.74	1.147	15.43	26.90	0.03	0.06	0.052	1.48	40.62	95.49	43	14	56	< 20	3	< 20	< 10	110	61	8	26
133058	0.16	1.05	0.05	7.34	1.149	15.20	27.36	0.03	0.04	0.146	1.52	41.02	94.90	46	10	81	< 20	5	< 20	< 10	150	50	8	29
133059	0.37	3.11	0.03	7.64	1.180	14.47	26.79	0.04	0.03	0.093	1.83	39.13	94.33	48	5	77	< 20	6	< 20	< 10	520	51	8	28
133060	0.33	2.99	0.03	9.41	1.334	14.07	25.93	0.04	0.02	0.122	1.59	38.77	94.30	48	5	94	< 20	9	< 20	< 10	420	52	8	30
133061	0.39	4.55	0.03	6.22	1.048	15.31	27.21	0.06	0.03	0.038	1.70	39.38	95.59	51	10	55	< 20	5	< 20	< 10	560	37	6	23
133062	1.80	4.88	0.03	4.80	0.899	13.78	28.31	0.04	0.03	0.028	3.34	36.68	92.81	57	10	57	< 20	5	< 20	< 10	160	33	6	21
133063	0.82	0.48	0.05	5.87	1.221	14.36	30.53	0.04	0.05	0.136	5.06	38.07	95.88	49	7	78	< 20	< 1	< 20	< 10	180	68	10	30
133064	0.43	0.62	0.04	6.80	1.304	15.72	28.27	0.03	0.04	0.121	1.06	42.29	96.28	55	7	60	< 20	1	< 20	< 10	240	55	9	26
133065	1.11	0.27	0.03	5.90	1.113	13.57	32.49	0.05	0.03	0.084	6.94	36.24	96.71	50	6	66	< 20	1	< 20	< 10	360	49	8	24
133066	0.15	0.25	0.03	6.39	1.112	15.63	27.57	0.03	0.03	0.276	1.48	41.58	94.37	72	6	117	< 20	4	< 20	< 10	620	54	8	30
133067	0.45	0.27	0.03	6.37	1.059	15.08	28.45	0.03	0.03	0.129	2.58	40.13	94.15	45	4	71	< 20	3	< 20	< 10	470	44	8	25
133068	< 0.01	99.14	0.05	1.05	0.013	0.07	0.17	0.01	< 0.01	0.001	0.01	0.01	100.5	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	3	1	< 5
133069	1.85	14.95	2.56	13.07	0.144	0.48	26.68	0.96	1.02	0.148	18.87	8.64	87.52	18	15	158	< 20	31	70	100	580	228	27	176

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133001	< 2	2207	209	92	362	3	1.5	< 0.2	8	< 0.5	< 0.5	252	0.8	5240	8950	911	3040	354	77.9	137	13.0	54.9	7.7	17.1
133002	< 2	2091	208	46	305	4	1.2	< 0.2	7	< 0.5	< 0.5	313	0.6	5860	9800	941	3180	374	85.1	152	14.7	55.7	7.7	17.5
133003	< 2	1809	235	75	310	< 2	1.2	< 0.2	8	< 0.5	< 0.5	351	0.6	6010	10300	1020	3330	395	88.8	163	16.0	63.1	8.7	19.6
133004	< 2	2052	220	54	780	13	1.0	< 0.2	14	< 0.5	< 0.5	358	0.6	4860	8420	825	2800	336	74.2	136	13.4	54.4	7.9	16.9
133005	< 2	2631	262	62	222	14	1.0	< 0.2	3	< 0.5	< 0.5	342	< 0.4	5840	9480	936	3290	425	96.5	173	17.7	73.8	10.2	21.0
133006	< 2	2408	239	38	252	9	0.9	< 0.2	4	< 0.5	< 0.5	265	0.8	4990	8800	900	3210	427	98.6	173	17.3	67.4	9.1	19.1
133007	< 2	2529	225	40	333	10	0.7	< 0.2	4	< 0.5	< 0.5	248	0.9	4500	8200	868	3120	394	86.6	160	16.2	64.1	8.5	18.3
133008	< 2	2644	193	34	171	10	0.5	< 0.2	3	< 0.5	< 0.5	629	< 0.4	5490	9110	874	2960	377	85.9	156	15.2	56.1	7.4	15.7
133009	< 2	2517	180	23	77	3	0.5	< 0.2	2	< 0.5	< 0.5	739	< 0.4	6130	10700	962	2780	289	68.5	129	13.1	50.2	6.9	14.9
133010	< 2	2142	196	41	610	50	0.9	< 0.2	8	< 0.5	< 0.5	331	< 0.4	5160	8600	828	2760	336	76.3	139	13.3	51.9	7.2	16.1
133011	< 2	2268	194	41	639	5	0.8	< 0.2	8	< 0.5	< 0.5	230	0.5	6330	10600	1010	3170	367	81.8	152	15.2	54.1	6.9	15.5
133012	< 2	1994	175	18	697	7	0.5	< 0.2	9	< 0.5	< 0.5	176	< 0.4	3500	6850	729	2550	299	64.6	116	11.6	46.2	6.3	13.7
133013	< 2	2165	167	23	893	5	< 0.5	< 0.2	16	< 0.5	< 0.5	218	0.4	3380	6280	659	2340	286	62.1	109	11.0	43.6	5.7	12.9
133014	< 2	1983	220	40	1130	17	0.6	< 0.2	11	< 0.5	< 0.5	145	< 0.4	4400	7770	783	2650	297	62.8	115	11.9	50.5	7.6	17.4
133015	< 2	2078	228	44	1130	19	0.6	< 0.2	11	< 0.5	< 0.5	139	< 0.4	4610	8070	823	2840	314	65.1	119	12.2	53.3	7.9	18.6
133016	< 2	2249	182	32	571	10	0.7	< 0.2	21	< 0.5	< 0.5	348	1.0	3250	7630	847	2820	299	61.8	110	10.8	43.6	6.1	14.1
133017	< 2	2222	191	29	113	7	< 0.5	< 0.2	5	< 0.5	< 0.5	178	0.4	5140	9250	847	2510	271	60.7	112	11.9	50.2	7.1	15.1
133018	< 2	1873	200	15	169	7	< 0.5	< 0.2	8	< 0.5	< 0.5	172	0.5	6030	10400	959	2960	337	74.2	141	13.9	54.9	7.2	14.8
133019	< 2	1949	183	19	144	16	< 0.5	< 0.2	7	< 0.5	< 0.5	313	< 0.4	4480	7690	741	2490	299	65.5	116	11.3	46.7	6.6	14.5
133020	< 2	1983	223	27	241	18	0.7	< 0.2	7	< 0.5	< 0.5	275	1.0	5090	8500	848	2950	354	75.0	133	13.1	54.1	7.8	17.4
133021	< 2	2425	226	57	114	17	0.8	< 0.2	6	< 0.5	< 0.5	278	0.8	5860	9570	912	2980	321	67.9	115	12.0	51.6	8.0	18.3
133022	< 2	2657	299	83	509	17	0.9	< 0.2	8	< 0.5	< 0.5	352	< 0.4	6240	9810	934	3110	355	75.9	137	14.9	65.6	10.1	24.7
133023	< 2	2605	254	55	226	10	0.7	< 0.2	5	< 0.5	< 0.5	2127	< 0.4	5360	8900	859	2880	321	70.6	128	13.7	59.4	9.0	21.1
133024	< 2	7	< 2	13	< 1	< 2	1.1	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	12.1	20.9	2.07	6.9	0.8	0.17	0.4	< 0.1	0.3	< 0.1	0.1
133025	35	20640	899	215	17	34	2.9	< 0.2	1	5.7	1.9	935	8.3	18000	27900	2510	7800	847	201	341	36.0	152	24.9	63.2
133026	< 2	1718	245	28	865	8	0.7	< 0.2	15	< 0.5	< 0.5	3018	0.6	5600	9440	917	3030	356	78.9	157	16.7	69.9	9.7	20.7
133027	< 2	2115	241	47	588	9	0.7	< 0.2	8	< 0.5	< 0.5	1708	0.4	5330	8680	841	2720	299	65.7	122	13.6	60.5	8.7	19.3
133028	< 2	2196	297	24	568	8	0.5	< 0.2	14	< 0.5	< 0.5	201	< 0.4	6250	10400	1010	3250	424	101	191	21.4	83.9	10.9	22.0
133029	< 2	2096	254	31	745	7	0.6	< 0.2	14	< 0.5	< 0.5	168	0.7	7400	12200	1110	3570	434	98.7	181	17.6	72.0	9.6	20.0
133030	< 2	9	< 2	7	< 1	< 2	1.1	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	17.7	30.3	2.98	9.9	1.1	0.29	0.5	< 0.1	0.3	< 0.1	< 0.1
133031	2	1806	231	38	366	5	0.7	< 0.2	12	< 0.5	< 0.5	175	0.5	3300	6420	702	2600	355	80.4	146	15.0	62.4	8.7	18.2
133032	< 2	1834	198	38	257	3	< 0.5	< 0.2	9	< 0.5	< 0.5	134	< 0.4	3420	6420	692	2490	317	71.2	129	12.8	52.1	7.2	15.1
133033	2	2016	164	60	213	6	0.6	< 0.2	5	< 0.5	< 0.5	208	< 0.4	4640	7650	736	2550	295	63.4	114	11.3	44.5	6.1	12.5
133034	2	2088	195	63	535	2	0.6	< 0.2	7	< 0.5	< 0.5	195	0.4	3410	6590	712	2550	320	71.9	131	13.5	52.7	7.3	15.5
133035	3	1934	193	27	381	5	< 0.5	< 0.2	10	< 0.5	< 0.5	225	0.7	3550	6730	718	2660	355	79.3	149	15.3	57.9	7.5	15.8
133036	< 2	1853	137	17	219	14	< 0.5	< 0.2	3	< 0.5	< 0.5	150	< 0.4	6590	10700	1010	3240	356	72.8	124	10.5	37.4	4.7	10.1
133037	2	1853	140	36	185	19	< 0.5	< 0.2	3	< 0.5	< 0.5	212	0.4	6410	10600	969	3060	359	79.9	140	11.9	40.7	5.1	10.5
133038	< 2	1922	141	27	302	14	< 0.5	< 0.2	5	< 0.5	< 0.5	200	< 0.4	6200	9880	903	2890	352	76.5	135	11.7	39.0	4.9	10.3
133039	< 2	2073	132	15	56	3	1.0	< 0.2	2	< 0.5	< 0.5	305	< 0.4	5360	9210	886	2900	314	65.2	107	9.0	34.2	4.4	9.5
133040	< 2	1759	140	22	58	18	0.5	< 0.2	2	< 0.5	< 0.5	176	0.5	8390	13000	1180	3740	419	87.7	156	12.6	41.7	4.9	10.0
133041	< 2	2115	142	52	45	80	0.9	< 0.2	2	< 0.5	< 0.5	196	< 0.4	7900	12200	1080	3290	357	74.0	128	11.2	38.3	4.9	11.3
133042	< 2	2140	132	23	52	19	< 0.5	< 0.2	2	< 0.5	< 0.5	257	< 0.4	6620	10300	959	3090	353	73.6	124	10.0	34.7	4.3	9.6
133043	< 2	1919	139	34	53	36	0.6	< 0.2	2	< 0.5	< 0.5	213	< 0.4	8110	12100	1060	3290	356	75.4	125	10.3	35.9	4.5	10.1
133044	< 2	2392	119	27	43	26	< 0.5	< 0.2	1	< 0.5	< 0.5	243	< 0.4	7520	11600	1040	3220	330	68.2	113	9.6	32.1	4.0	8.2
133045	< 2	2122	121	24	41	7	< 0.5	< 0.2	2	< 0.5	< 0.5	242	< 0.4	5670	9470	913	2840	304	64.5	109	9.4	33.4	4.3	9.2
133046	< 2	2005	142	49	62	26	0.6	< 0.2	2	< 0.5	< 0.5	178	< 0.4	5950	9530	895	2870	330	69.8	118	9.7	36.1	4.8	10.8
133047	< 2	2046	125	45	164	6	0.6	< 0.2	5	< 0.5	< 0.5	211	< 0.4	6160	9950	921	2960	328	68.0	117	9.4	32.1	4.1	9.3
133048	< 2	1845	148	79	510	56	14.9	< 0.2	10	< 0.5	< 0.5	147	0.5	5480	9350	929	3050	337	69.8	122	9.9	39.7	5.0	12.9
133049	< 2	16	4	10	< 1	< 2	1.2	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	51.3	81.2	7.70	22.6	2.4	0.54	1.0	< 0.1	0.4	< 0.1	0.1
133050	26	3162	891	216	370	54	1.8	< 0.2	43	< 0.5	< 0.5	14020	3.3	2570	4740	547	2230	484	133	304	41.5	200	30.5	70.9
133051	< 2	2551	166	95	121	41	0.8	< 0.2	4	< 0.5	< 0.5	174	0.5	1790	4240	516	2040	294	64.3	111	10.3	40.9	5.8	14.0
133052	< 2	2391	153	100	65	68	1.1	< 0.2	4	< 0.5	< 0.5	150	0.5	1640	4050	505	1990	276	61.5	100	9.2	35.6	5.2	13.1

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133053	< 2	2244	182	62	58	59	< 0.5	< 0.2	4	< 0.5	< 0.5	135	< 0.4	1680	4260	542	2180	298	65.9	115	10.6	43.6	6.3	14.9
133054	< 2	2202	151	74	145	102	0.8	< 0.2	6	< 0.5	< 0.5	174	0.5	1630	4010	493	1890	255	56.9	102	9.6	37.3	5.4	12.7
133055	< 2	2254	165	43	186	236	0.7	< 0.2	14	< 0.5	< 0.5	156	1.1	2130	5540	722	3090	489	105	176	13.9	47.8	5.6	11.7
133056	< 2	2555	198	75	211	78	0.7	< 0.2	12	< 0.5	< 0.5	145	0.4	5400	8520	836	2990	389	84.3	149	13.4	51.5	7.1	16.3
133057	< 2	2601	149	112	147	111	0.9	< 0.2	3	< 0.5	< 0.5	171	< 0.4	4610	7510	729	2520	301	65.0	112	9.7	36.9	5.1	12.0
133058	< 2	2484	150	106	150	164	1.1	< 0.2	6	< 0.5	< 0.5	144	0.5	2730	5330	608	2390	342	73.7	122	10.2	36.6	4.9	11.7
133059	< 2	2311	196	142	169	115	1.2	< 0.2	6	< 0.5	< 0.5	119	0.6	3120	5950	658	2540	356	79.1	133	12.1	48.0	7.0	15.9
133060	< 2	2209	180	140	192	167	1.1	< 0.2	9	< 0.5	< 0.5	116	1.1	2570	5380	631	2490	346	74.1	129	11.4	43.5	6.0	14.3
133061	< 2	2834	183	114	56	109	1.1	< 0.2	2	< 0.5	< 0.5	154	< 0.4	1730	4120	500	1980	282	62.9	107	10.3	43.1	6.5	15.5
133062	< 2	2994	170	131	72	86	1.1	< 0.2	2	< 0.5	< 0.5	163	< 0.4	1540	3560	434	1650	204	45.2	83.0	8.7	38.5	5.7	13.6
133063	< 2	2833	222	32	174	20	< 0.5	< 0.2	5	< 0.5	< 0.5	233	< 0.4	4510	8200	859	3060	407	89.8	162	15.6	59.5	7.8	16.9
133064	< 2	2359	154	17	150	23	< 0.5	< 0.2	6	< 0.5	< 0.5	186	< 0.4	2980	6160	706	2690	383	81.5	140	12.1	42.4	5.6	12.5
133065	< 2	3623	285	55	183	44	< 0.5	< 0.2	5	< 0.5	< 0.5	145	< 0.4	2210	4860	581	2290	379	94.6	183	20.9	80.5	10.5	22.1
133066	< 2	2639	143	22	135	117	< 0.5	< 0.2	9	< 0.5	< 0.5	153	< 0.4	3270	6080	675	2570	372	84.9	145	12.7	42.3	5.2	10.5
133067	< 2	3113	153	35	182	20	< 0.5	< 0.2	5	< 0.5	< 0.5	133	< 0.4	1770	4450	576	2440	394	93.7	168	14.6	48.2	5.8	11.6
133068	< 2	8	< 2	6	< 1	< 2	0.9	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	7.9	16.0	1.79	6.6	0.9	0.26	0.4	< 0.1	0.2	< 0.1	< 0.1
133069	35	20900	913	231	12	35	2.8	< 0.2	< 1	5.8	1.8	943	9.2	18000	28100	2520	7960	879	202	352	35.5	157	25.1	63.1

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133001	2.02	10.8	1.30	1.5	< 0.1	4	0.3	30	135	< 0.1	3.58
133002	1.92	10.4	1.21	0.8	< 0.1	2	0.1	26	126	< 0.1	3.67
133003	2.20	11.7	1.46	1.2	< 0.1	2	< 0.1	16	122	< 0.1	3.35
133004	1.98	10.2	1.23	1.0	< 0.1	4	< 0.1	16	123	< 0.1	3.68
133005	2.33	11.8	1.35	1.2	< 0.1	2	< 0.1	22	134	< 0.1	3.88
133006	2.12	10.4	1.17	0.7	< 0.1	2	< 0.1	28	159	0.1	3.52
133007	1.97	10.4	1.25	0.8	< 0.1	2	< 0.1	37	152	0.2	3.57
133008	1.70	9.1	1.07	0.7	< 0.1	1	< 0.1	19	150	< 0.1	3.28
133009	1.76	9.1	1.12	0.6	< 0.1	1	< 0.1	30	287	< 0.1	3.48
133010	1.85	9.7	1.20	0.9	< 0.1	4	< 0.1	17	196	< 0.1	3.83
133011	1.77	9.4	1.21	0.9	< 0.1	3	< 0.1	35	170	0.2	3.68
133012	1.59	8.9	1.14	0.5	< 0.1	4	< 0.1	34	163	0.3	3.54
133013	1.52	8.5	1.08	0.5	0.2	4	< 0.1	24	205	0.2	3.69
133014	2.13	12.3	1.56	0.8	< 0.1	6	< 0.1	23	128	0.2	1.61
133015	2.25	12.7	1.66	0.9	< 0.1	6	< 0.1	25	138	0.1	1.62
133016	1.64	9.5	1.21	0.7	< 0.1	2	< 0.1	28	337	< 0.1	2.97
133017	1.69	8.4	1.04	0.6	< 0.1	1	< 0.1	17	355	< 0.1	3.50
133018	1.64	8.4	0.99	0.5	< 0.1	1	< 0.1	20	291	< 0.1	3.55
133019	1.63	8.7	1.01	0.5	< 0.1	1	< 0.1	23	214	< 0.1	3.38
133020	2.00	11.0	1.34	0.7	< 0.1	1	< 0.1	57	239	< 0.1	3.27
133021	2.24	12.1	1.60	1.0	< 0.1	< 1	< 0.1	32	198	< 0.1	3.88
133022	3.02	16.0	2.02	1.4	0.3	4	< 0.1	24	190	0.1	3.05
133023	2.50	12.9	1.61	1.1	< 0.1	1	< 0.1	19	167	< 0.1	3.49
133024	< 0.05	0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	0.9	< 0.1	0.405
133025	8.09	45.5	6.26	3.2	< 0.1	4	2.1	872	154	191	0.0250
133026	2.21	11.7	1.37	0.7	< 0.1	5	0.3	18	128	0.1	3.74
133027	2.21	11.8	1.50	0.9	0.3	2	0.2	26	156	0.4	3.70
133028	2.27	12.0	1.52	0.9	< 0.1	4	< 0.1	36	193	0.1	3.56
133029	2.16	11.4	1.51	0.9	< 0.1	4	< 0.1	96	214	0.2	2.52
133030	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	1.0	< 0.1	0.400
133031	2.02	11.1	1.32	0.9	< 0.1	4	< 0.1	37	160	0.3	3.55
133032	1.71	9.2	1.14	0.9	< 0.1	3	< 0.1	27	144	0.2	3.73
133033	1.41	7.4	0.97	1.1	< 0.1	2	< 0.1	31	110	0.1	3.98
133034	1.75	9.7	1.24	1.1	< 0.1	4	< 0.1	33	128	0.2	3.32
133035	1.73	9.8	1.23	0.7	< 0.1	3	0.1	38	168	0.6	3.64
133036	1.18	7.1	0.97	0.4	< 0.1	1	< 0.1	48	105	0.1	3.92
133037	1.29	8.1	1.08	0.7	< 0.1	< 1	0.1	62	128	< 0.1	1.93
133038	1.26	7.9	1.03	0.6	< 0.1	2	0.1	66	116	0.1	1.54
133039	1.17	6.8	0.94	0.4	< 0.1	< 1	< 0.1	32	81.2	< 0.1	3.69
133040	1.22	7.0	0.96	0.6	< 0.1	< 1	< 0.1	90	144	< 0.1	4.05
133041	1.37	8.5	1.24	0.9	< 0.1	< 1	< 0.1	45	144	< 0.1	4.08
133042	1.16	7.0	0.98	0.5	< 0.1	< 1	< 0.1	62	105	< 0.1	3.43
133043	1.27	7.8	1.08	0.7	< 0.1	2	0.2	53	94.7	< 0.1	3.87
133044	0.93	5.2	0.72	0.5	< 0.1	< 1	< 0.1	45	97.9	< 0.1	3.71
133045	1.06	6.3	0.82	0.5	< 0.1	< 1	< 0.1	38	109	< 0.1	4.18
133046	1.27	7.6	1.05	0.9	< 0.1	< 1	< 0.1	49	117	< 0.1	2.81
133047	1.13	7.1	1.01	0.7	< 0.1	1	< 0.1	55	94.9	< 0.1	2.81
133048	1.47	8.9	1.31	1.4	0.7	25	0.3	80	159	0.3	3.95
133049	< 0.05	0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	1.1	< 0.1	0.400
133050	8.94	48.4	5.88	4.7	3.3	26	0.3	564	890	2.5	0.0250
133051	1.60	9.7	1.34	1.3	< 0.1	1	< 0.1	14	211	0.2	3.28

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133052	1.60	9.4	1.29	1.3	< 0.1	< 1	< 0.1	17	213	< 0.1	4.05
133053	1.73	9.4	1.29	0.9	< 0.1	< 1	< 0.1	17	227	< 0.1	3.35
133054	1.66	10.1	1.37	1.0	< 0.1	< 1	0.1	23	248	0.1	3.99
133055	1.42	8.5	1.18	0.8	< 0.1	1	0.1	93	479	< 0.1	3.85
133056	1.89	11.2	1.56	1.2	< 0.1	< 1	< 0.1	30	338	0.2	3.16
133057	1.49	8.9	1.23	1.5	< 0.1	< 1	0.1	12	169	0.1	3.28
133058	1.47	8.6	1.19	1.4	< 0.1	< 1	0.2	18	212	0.3	3.15
133059	1.92	11.1	1.53	1.9	< 0.1	< 1	0.1	57	238	0.1	1.35
133060	1.76	10.9	1.53	2.0	< 0.1	< 1	0.1	69	241	0.1	1.41
133061	1.92	11.0	1.48	1.5	< 0.1	< 1	< 0.1	69	167	< 0.1	2.51
133062	1.71	9.5	1.36	1.7	< 0.1	< 1	< 0.1	13	102	< 0.1	2.99
133063	1.89	11.0	1.46	0.7	< 0.1	1	< 0.1	15	218	0.2	4.05
133064	1.54	9.2	1.24	0.5	< 0.1	1	< 0.1	16	184	0.6	3.91
133065	2.64	15.1	1.96	1.1	< 0.1	1	< 0.1	19	206	0.3	3.49
133066	1.28	7.7	1.05	0.4	< 0.1	3	0.1	18	206	0.1	3.09
133067	1.43	8.8	1.14	0.7	< 0.1	< 1	< 0.1	14	174	0.2	2.88
133068	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	0.9	< 0.1	0.400
133069	7.99	45.9	6.37	3.5	< 0.1	4	2.0	1050	163	186	0.0250

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.08	11.39	1.93	0.75	0.013	0.34	43.90	0.88	0.54	0.118	30.19					1663								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.08																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.19																							
NIST 694 Cert	3.2																							
DNC-1 Meas		47.12	18.34	9.84	0.146	9.93	11.23	1.90	0.22	0.466	0.07			31		157	270	58	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		73.01	13.42	3.25	0.143	0.15	0.60	2.60	5.52	0.288	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	30	50					
LKSD-3 Cert																	87.0	30.0	47.0					
W-2a Meas		52.50	15.57	10.75	0.166	6.31	10.75	2.21	0.60	1.081	0.13			35	< 1	280	100	43	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.77	20.12	6.11	0.106	0.50	8.03	6.86	1.60	0.282	0.14			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																					40			
CTA-AC-1 Cert																					38.0			
BIR-1a Meas		48.18	15.63	11.35	0.171	9.45	13.18	1.84	0.02	0.955	0.02			44	< 1	338	370	53	170	130		16		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1040	95		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				980	100	17	11	73
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		430				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20			17		
JR-1 Cert																			1.67			16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133015 Orig	4.58	1.28	0.03	8.50	1.292	13.13	30.80	0.03	0.03	0.105	2.12	36.91	94.21	55	7	79	< 20	5	< 20	< 10	490	67	9	28
133015 Dup	4.14	1.27	0.03	8.46	1.273	12.91	30.59	0.03	0.03	0.104	2.10	36.91	93.69	54	6	78	< 20	6	< 20	< 10	510	69	9	28
133030 Orig	< 0.01	98.50	0.06	0.91	0.014	0.12	0.24	0.02	< 0.01	0.001	0.04	0.14	100.1	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	3	1	< 5
133030 Split	< 0.01	98.43	0.07	0.93	0.014	0.12	0.24	0.02	< 0.01	0.001	0.02	0.15	100.00	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	3	1	< 5
133030 Orig	0.01																							
133030 Split	0.01																							
133032 Orig	0.93	0.33	0.04	9.70	1.618	14.86	27.59	0.02	0.03	0.236	1.56	40.43	96.42	55	4	103	20	7	< 20	< 10	360	53	8	26
133032 Dup	0.87	0.31	0.03	9.53	1.568	14.48	27.09	0.02	0.03	0.231	1.51	40.43	95.25	53	4	102	< 20	7	< 20	< 10	330	56	8	24
133042 Orig	8.16	3.50	0.03	7.18	1.430	12.34	31.74	0.03	0.03	0.021	0.94	33.55	90.79	50	8	54	< 20	3	< 20	< 10	640	85	10	32

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133042 Dup	9.30	3.52	0.03	7.30	1.464	12.49	32.25	0.03	0.03	0.022	0.96	33.55	91.64	50	8	54	< 20	3	< 20	< 10	640	82	10	31
133051 Orig	0.36	1.21	0.05	7.60	1.217	15.41	27.81	0.02	0.07	0.064	1.34	41.53	96.33	49	14	51	< 20	4	< 20	< 10	200	38	6	21
133051 Split	0.34	1.44	0.05	7.59	1.198	15.39	28.08	0.02	0.07	0.062	1.21	41.72	96.85	48	14	51	< 20	4	< 20	< 10	180	38	6	20
133057 Orig	0.19	3.02	0.04	6.81	1.158	15.55	27.14	0.03	0.06	0.053	1.50	40.62	96.00	43	14	56	< 20	3	< 20	< 10	110	61	8	26
133057 Dup	0.22	2.95	0.04	6.68	1.137	15.31	26.65	0.03	0.05	0.052	1.46	40.62	94.99	42	14	56	< 20	3	< 20	< 10	110	61	8	27
133060 Orig	0.33	2.99	0.03	9.41	1.334	14.07	25.93	0.04	0.02	0.122	1.59	38.77	94.30	48	5	94	< 20	9	< 20	< 10	420	52	8	30
133060 Split	0.35	3.02	0.03	9.44	1.338	14.45	26.33	0.04	0.03	0.122	1.68	38.75	95.24	50	6	95	< 20	9	< 20	< 10	370	49	8	29
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	14	33								103					5.0		0.58					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		43	46	390								514												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.3			49.9	95.0		43.3	7.8	1.44			4.9		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
W-2a Meas	19	197	18	85		< 2	< 0.5					171	< 0.4		25.2		13.1	3.3	1.08		0.6	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1196	116	542								338												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3300		1100	163	44.3	116	14.4			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	13	14								7					2.4	1.1	0.52	1.8				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	188		1590			232	34.5	184	35.7	96.4
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											256													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	43.2	86.4		36.5	7.5		6.8	1.1	6.1	1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0		39.9	8.0		7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700	2.9	43.0			23.3	60.1	7.44	30.5	12.1		14.1	3.3	20.3	4.2	12.5
NCS DC70009 (GBW07241) Cert	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas														264	486	45.6	147	23.7	3.57		3.6	22.2	4.7	13.9
OREAS 100a (Fusion) Cert														260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								815	1440	128	394	50.2	7.89		5.4	31.2	6.4	18.6
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	249				14		< 0.5	< 0.2	3		20.9		0.6	21.4	51.2	5.90	23.5	5.8	0.27	5.5	1.1	6.2		
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		
NCS DC86318 Meas														1960	420	739	3300	1710	18.9	2130	465	3050	550	
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21800	29300	2390	6590	547	89.2					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133015 Orig	< 2	2084	229	44	1100	18	0.6	< 0.2	11	< 0.5	< 0.5	141	< 0.4	4570	8040	812	2780	310	64.4	117	12.2	52.5	7.7	18.2
133015 Dup	< 2	2073	228	44	1160	19	0.6	< 0.2	11	< 0.5	< 0.5	138	0.4	4650	8090	833	2890	317	65.9	120	12.3	54.2	8.0	19.1
133030 Orig	< 2	9	< 2	7	< 1	< 2	1.1	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	17.7	30.3	2.98	9.9	1.1	0.29	0.5	< 0.1	0.3	< 0.1	< 0.1
133030 Split	< 2	9	< 2	6	< 1	< 2	1.4	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	17.5	28.8	2.78	10.1	1.1	0.29	0.5	< 0.1	0.3	< 0.1	< 0.1
133030 Orig																								
133030 Split																								
133032 Orig	< 2	1865	201	39	260	4	< 0.5	< 0.2	9	< 0.5	< 0.5	136	< 0.4	3340	6270	683	2460	318	69.7	127	12.6	51.5	7.2	15.1
133032 Dup	< 2	1803	195	38	254	3	< 0.5	< 0.2	9	< 0.5	< 0.5	132	< 0.4	3500	6560	701	2520	315	72.6	131	13.1	52.7	7.2	15.1
133042 Orig	< 2	2109	130	23	51	20	< 0.5	< 0.2	2	< 0.5	< 0.5	256	< 0.4	6520	10100	930	2980	339	71.3	120	10.0	33.1	4.2	9.4

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133042 Dup	< 2	2172	134	23	52	19	< 0.5	< 0.2	2	< 0.5	< 0.5	259	< 0.4	6720	10500	988	3200	368	75.8	127	10.1	36.2	4.5	9.8
133051 Orig	< 2	2551	166	95	121	41	0.8	< 0.2	4	< 0.5	< 0.5	174	0.5	1790	4240	516	2040	294	64.3	111	10.3	40.9	5.8	14.0
133051 Split	< 2	2488	158	91	114	35	1.0	< 0.2	4	< 0.5	< 0.5	170	0.6	1750	4250	519	1990	280	62.9	113	10.3	40.2	5.7	13.7
133057 Orig	< 2	2626	150	113	145	110	1.0	< 0.2	4	< 0.5	< 0.5	173	< 0.4	4620	7590	733	2530	301	64.8	112	9.6	37.0	5.1	11.9
133057 Dup	< 2	2576	148	111	149	111	0.8	< 0.2	3	< 0.5	< 0.5	170	< 0.4	4590	7440	726	2500	301	65.2	112	9.7	36.7	5.1	12.0
133060 Orig	< 2	2209	180	140	192	167	1.1	< 0.2	9	< 0.5	< 0.5	116	1.1	2570	5380	631	2490	346	74.1	129	11.4	43.5	6.0	14.3
133060 Split	< 2	2202	184	145	186	159	1.1	< 0.2	8	< 0.5	< 0.5	118	0.8	2570	5350	629	2490	347	74.1	125	11.3	43.1	6.1	14.4
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									934	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		1.9								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.6					4.6
LKSD-3 Cert		2.70	0.400		0.700					4.60
W-2a Meas	0.37	2.0				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.5	1.05						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.7	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.5	335	33.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.54	3.2	0.46					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.33	15.6	2.22			2200			29.8	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.33	14.8	2.11						53.1	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	17.9	2.48						37.3	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.7	0.68	4.5	1.8		1.6	20	28.3	9.1
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	279	1760	250							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133015 Orig	2.21	12.6	1.64	0.9	< 0.1	6	< 0.1	25	134	0.1
133015 Dup	2.28	12.7	1.69	0.9	< 0.1	6	< 0.1	25	141	0.1
133030 Orig	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	1.0	< 0.1
133030 Split	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	1.0	< 0.1
133030 Orig										
133030 Split										
133032 Orig	1.68	9.2	1.14	0.8	< 0.1	3	< 0.1	28	144	0.2
133032 Dup	1.73	9.2	1.14	0.9	< 0.1	3	< 0.1	27	143	0.2
133042 Orig	1.14	6.8	0.96	0.5	< 0.1	< 1	< 0.1	61	100	< 0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133042 Dup	1.17	7.2	0.99	0.5	< 0.1	< 1	0.1	63	109	< 0.1
133051 Orig	1.60	9.7	1.34	1.3	< 0.1	1	< 0.1	14	211	0.2
133051 Split	1.67	9.6	1.34	1.2	< 0.1	< 1	0.1	13	213	0.2
133057 Orig	1.46	9.0	1.25	1.5	< 0.1	< 1	0.1	12	170	0.1
133057 Dup	1.52	8.8	1.22	1.5	< 0.1	< 1	0.1	12	169	0.1
133060 Orig	1.76	10.9	1.53	2.0	< 0.1	< 1	0.1	69	241	0.1
133060 Split	1.77	10.6	1.49	1.9	< 0.1	< 1	0.1	57	238	0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11627
Invoice Date: 09-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

75 Rock samples were submitted for analysis.

The following analytical packages were requested:

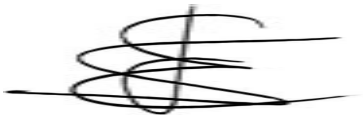
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11627**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133070	3.72	1.73	0.06	10.03	1.266	13.15	28.03	0.02	0.04	0.229	0.98	37.95	93.49	58	81	73	< 20	4	< 20	< 10	710	64	8	24
133071	7.84	0.44	0.05	7.24	1.082	13.43	33.39	0.02	0.04	0.130	0.92	36.35	93.09	46	35	64	< 20	2	< 20	< 10	430	72	8	26
133072	3.43	0.57	0.07	9.36	1.314	13.87	28.96	0.02	0.07	0.161	0.83	39.02	94.23	49	17	75	< 20	5	< 20	< 10	360	63	8	25
133073	3.88	0.38	0.06	9.81	1.326	13.63	29.07	0.02	0.05	0.150	0.91	39.14	94.54	50	13	75	< 20	4	< 20	< 10	360	72	9	28
133074	1.83	0.50	0.08	16.23	2.231	12.69	22.83	0.02	0.05	0.233	0.75	38.54	94.15	42	15	86	< 20	8	< 20	< 10	840	57	8	26
133075	2.60	0.19	0.06	13.79	1.905	13.42	25.70	0.02	0.04	0.068	0.88	38.87	94.94	48	16	67	< 20	5	< 20	< 10	750	65	9	27
133076	2.90	0.28	0.06	20.67	2.797	11.60	21.20	0.02	0.02	0.133	0.90	37.27	94.95	47	25	77	< 20	8	< 20	< 10	1040	51	8	24
133077	3.82	0.44	0.11	14.10	1.747	12.54	26.75	0.02	0.08	0.107	0.93	37.11	93.92	62	38	80	< 20	7	< 20	< 10	1200	63	9	27
133078	4.76	1.09	0.06	11.23	1.521	13.13	27.93	0.02	0.05	0.142	0.91	37.60	93.68	57	28	78	< 20	4	< 20	< 10	790	62	9	25
133079	< 0.01	99.40	0.05	0.96	0.015	0.08	0.22	0.02	< 0.01	< 0.001	< 0.01	0.08	100.8	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	2	1	< 5
133080	4.37	0.60	0.08	12.65	1.600	13.13	28.10	0.02	0.06	0.124	0.76	37.63	94.74	51	23	75	< 20	5	< 20	< 10	1250	55	8	24
133081	4.42	0.78	0.06	12.06	1.648	12.71	28.48	0.02	0.05	0.124	1.01	37.16	94.10	59	22	87	< 20	5	< 20	< 10	990	63	8	26
133082	3.46	2.41	0.09	8.18	1.272	13.84	29.07	0.04	0.09	0.226	1.42	37.66	94.30	51	30	81	< 20	5	< 20	< 10	330	66	8	26
133083	4.67	1.65	0.08	10.69	1.487	13.03	28.35	0.04	0.07	0.203	1.09	36.50	93.19	55	28	87	< 20	4	< 20	< 10	920	75	11	32
133084	3.44	1.78	0.07	11.32	1.569	13.20	26.47	0.03	0.06	0.155	0.96	37.73	93.35	57	23	81	< 20	7	< 20	< 10	790	75	12	34
133085	4.70	2.85	0.07	9.42	1.317	13.51	29.76	0.04	0.07	0.100	1.61	36.11	94.87	54	29	65	< 20	5	< 20	< 10	530	57	9	27
133086	3.85	1.32	0.08	10.16	1.369	14.13	28.66	0.02	0.07	0.091	0.89	37.97	94.75	49	37	62	< 20	8	< 20	< 10	410	50	8	25
133087	3.87	1.09	0.06	11.50	1.548	13.96	26.05	0.02	0.06	0.136	0.88	38.06	93.38	45	36	68	< 20	6	< 20	< 10	590	62	9	28
133088	1.26	1.41	0.08	8.88	1.371	14.51	26.98	0.03	0.06	0.131	1.56	39.52	94.54	52	52	71	< 20	6	< 20	< 10	280	84	12	36
133089	2.47	0.66	0.05	11.11	1.570	14.01	26.73	0.02	0.05	0.273	1.17	38.98	94.62	57	34	99	< 20	6	< 20	< 10	870	86	12	36
133090	1.92	0.82	0.06	10.66	1.536	14.10	26.93	0.02	0.05	0.125	1.12	39.50	94.92	57	34	79	< 20	5	< 20	< 10	780	83	11	35
133091	3.60	1.24	0.07	9.33	1.338	13.71	29.05	0.03	0.07	0.196	1.66	38.19	94.87	61	23	90	< 20	5	< 20	< 10	440	87	12	36
133092	4.29	0.80	0.06	11.33	1.526	12.74	27.45	0.02	0.06	0.177	0.96	37.33	92.46	49	20	85	< 20	5	< 20	< 10	1020	83	11	32
133093	2.34	0.74	0.06	11.37	1.461	14.09	25.99	0.03	0.04	0.101	0.78	40.05	94.71	58	15	100	< 20	5	< 20	< 10	730	56	9	26
133094	4.53	0.98	0.07	8.25	1.244	13.57	30.12	0.02	0.07	0.150	1.21	37.72	93.39	56	31	91	< 20	4	< 20	< 10	410	92	12	37
133095	3.54	1.43	0.05	8.44	1.361	13.78	28.55	0.02	0.06	0.121	1.39	38.04	93.25	51	26	75	< 20	4	< 20	< 10	730	84	11	33
133096	4.13	1.22	0.07	11.33	1.671	13.25	26.60	0.03	0.06	0.536	1.04	37.33	93.13	48	28	111	< 20	5	< 20	< 10	960	93	13	37
133097	3.22	1.23	0.06	9.78	1.580	13.89	27.58	0.03	0.07	0.207	1.04	38.59	94.04	51	22	92	< 20	5	< 20	< 10	870	74	10	29
133098	1.89	1.72	0.08	8.42	1.394	14.39	27.56	0.03	0.09	0.218	0.99	39.86	94.75	56	21	93	< 20	5	< 20	< 10	460	64	10	28
133099	< 0.01	99.35	0.04	0.95	0.013	0.09	0.25	0.01	< 0.01	0.001	0.03	0.14	100.9	< 1	< 1	< 5	130	< 1	< 20	< 10	< 30	2	1	< 5
133100	6.51	20.61	3.10	28.28	2.461	7.05	17.81	0.31	1.33	1.506	0.56	13.15	96.17	21	13	160	160	28	80	30	1430	56	10	28
133101	3.23	1.57	0.06	8.43	1.276	14.01	29.01	0.03	0.07	0.239	0.95	38.63	94.28	53	24	88	< 20	4	< 20	< 10	400	76	11	31
133102	2.89	3.31	0.13	9.45	1.302	13.96	27.33	0.05	0.16	0.156	0.87	37.82	94.54	49	25	84	< 20	6	< 20	< 10	310	69	11	31
133103	1.58	2.15	0.08	8.93	1.335	14.58	26.81	0.05	0.09	0.105	1.18	39.67	94.98	50	17	75	< 20	5	< 20	< 10	350	75	12	34
133104	3.07	1.70	0.16	9.23	1.390	14.09	27.11	0.03	0.21	0.256	1.10	38.55	93.81	44	25	81	< 20	4	< 20	< 10	570	83	12	34
133105	2.59	2.14	0.12	8.96	1.303	14.32	27.69	0.05	0.13	0.214	0.92	38.89	94.74	41	24	81	< 20	3	< 20	< 10	410	77	10	29
133106	3.27	1.48	0.04	7.50	1.183	14.83	28.77	0.03	0.05	0.140	1.05	39.63	94.69	42	17	68	< 20	3	< 20	< 10	190	90	12	33
133107	2.81	1.27	0.08	9.60	1.293	14.04	27.64	0.02	0.09	0.190	1.08	38.92	94.24	45	19	71	< 20	3	< 20	< 10	600	91	11	32
133108	9.73	2.46	0.09	9.35	1.141	12.22	30.28	0.03	0.11	0.114	1.53	33.33	90.66	39	19	56	< 20	5	< 20	< 10	260	122	13	37
133109	3.77	1.47	0.09	6.76	1.013	14.35	29.87	0.02	0.11	0.099	1.20	38.58	93.56	45	20	48	< 20	3	< 20	< 10	140	94	11	32
133110	2.96	0.76	0.08	7.67	1.164	14.54	29.07	0.02	0.08	0.238	1.07	39.81	94.50	42	12	62	< 20	3	< 20	< 10	200	90	11	29
133111	0.26	0.62	0.08	7.02	1.204	15.69	26.86	0.02	0.06	0.152	1.24	41.90	94.85	46	13	62	< 20	3	< 20	< 10	190	105	14	38
133112	0.25	0.74	0.09	8.19	1.297	15.24	26.95	0.02	0.07	0.323	0.94	41.72	95.58	39	11	79	< 20	4	< 20	< 10	270	61	9	36
133113	0.38	0.66	0.07	9.24	1.483	14.70	27.25	0.02	0.06	0.239	0.75	41.63	96.11	42	10	76	< 20	4	< 20	< 10	510	82	11	32
133114	2.61	4.12	0.07	9.78	1.293	13.80	26.26	0.07	0.08	0.204	0.75	37.81	94.24	44	16	65	< 20	4	< 20	< 10	270	85	11	31
133115	1.84	15.06	2.58	12.94	0.143	0.49	26.82	0.94	1.01	0.147	18.95	8.52	87.61	18	15	156	< 20	32	70	110	610	282	34	180
133116	2.72	2.73	0.09	7.32	1.235	15.32	28.40	0.04	0.09	0.127	0.73	39.40	95.49	40	21	53	< 20	2	< 20	< 10	210	49	8	32
133117	2.54	2.16	0.06	7.15	1.240	15.22	28.17	0.04	0.07	0.155	0.78	40.09	95.14	45	20	60	< 20	2	< 20	< 10	180	68	10	29
133118	2.94	1.66	0.07	7.80	1.320	15.20	28.53	0.03	0.08	0.310	1.05	39.90	95.96	55	16	66	< 20	2	< 20	< 10	230	75	11	29
133119	2.82	1.56	0.06	8.35	1.351	14.36	28.13	0.03	0.08	0.330	1.23	38.91	94.39	52	17	71	< 20	4	< 20	< 10	160	93	12	37
133120	1.92	1.43	0.10	10.50	1.526	14.59	26.46	0.03	0.11	0.124	0.96	39.49	95.33	57	17	64	< 20	4	< 20	< 10	420	84	12	34
133121	2.06	2.14	0.27	8.57	1.285	14.44	27.42	0.03	0.30	0.049	1.16	38.96	94.63	64	44	57	< 20	4	< 20	< 10	240	83	12	33

Activation Laboratories Ltd. Report: A13-11627

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133122	1.24	0.97	0.12	8.09	1.321	14.69	28.23	0.03	0.10	0.123	1.60	40.29	95.56	59	36	62	< 20	3	< 20	< 10	200	83	12	34
133123	0.98	0.59	0.11	7.76	1.295	14.86	27.56	0.03	0.08	0.114	1.34	41.07	94.80	60	25	72	< 20	4	< 20	< 10	200	95	12	35
133124	< 0.01	97.34	0.05	0.77	0.011	0.11	0.19	0.01	< 0.01	0.002	0.03	0.11	98.63	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	2	1	< 5
133125	6.40	20.51	3.04	27.91	2.408	7.04	17.48	0.32	1.33	1.462	0.56	12.82	94.88	22	13	156	160	27	80	30	1360	58	10	29
133126	2.71	1.05	0.07	7.33	1.235	14.19	29.57	0.03	0.05	0.146	1.30	39.33	94.30	51	19	77	< 20	3	< 20	< 10	200	80	11	32
133127	0.56	0.68	0.10	8.23	1.356	14.45	26.96	0.02	0.06	0.077	1.20	41.18	94.33	54	14	73	< 20	5	< 20	< 10	410	75	10	28
133128	2.35	0.75	0.08	8.99	1.409	13.78	29.28	0.02	0.05	0.098	0.90	39.72	95.07	52	15	71	< 20	4	< 20	< 10	520	75	10	29
133129	1.26	1.52	0.06	9.65	1.528	13.34	27.73	0.02	0.04	0.136	0.90	40.11	95.04	53	10	81	< 20	8	< 20	< 10	330	80	12	33
133130	1.59	0.47	0.06	8.81	1.531	13.19	27.23	0.02	0.04	0.137	0.77	40.41	92.68	48	20	72	< 20	5	< 20	< 10	1020	96	12	35
133131	5.08	1.07	0.06	9.41	1.409	12.97	29.85	0.03	0.05	0.134	0.94	36.76	92.68	51	19	79	< 20	4	< 20	< 10	810	87	11	31
133132	3.14	1.41	0.05	13.93	1.811	12.57	26.21	0.03	0.04	0.539	0.69	36.91	94.19	57	14	144	< 20	6	< 20	< 10	1070	70	11	29
133133	6.43	2.73	0.15	11.00	1.449	12.32	28.59	0.04	0.14	0.160	0.91	34.09	91.58	55	22	83	< 20	5	< 20	< 10	990	78	10	28
133134	6.01	3.22	0.18	10.99	1.451	12.18	27.20	0.04	0.17	0.146	0.94	34.13	90.65	54	24	79	< 20	5	< 20	< 10	1050	79	10	28
133135	4.35	5.22	0.09	10.02	1.387	12.79	27.69	0.06	0.08	0.208	0.81	35.44	93.79	50	25	88	< 20	5	< 20	< 10	1070	64	9	26
133136	6.28	3.19	0.12	8.92	1.233	12.62	30.85	0.05	0.11	0.161	0.99	34.70	92.93	50	23	77	< 20	5	< 20	< 10	790	75	10	28
133137	< 0.01	97.93	0.03	0.78	0.013	0.11	0.23	0.01	< 0.01	< 0.001	< 0.01	0.12	99.24	< 1	< 1	< 5	90	< 1	< 20	< 10	< 30	< 1	1	< 5
133138	4.71	5.18	0.22	9.37	1.270	12.02	28.27	0.04	0.21	0.184	1.20	34.26	92.23	47	24	82	< 20	5	< 20	< 10	910	65	9	34
133139	3.97	5.16	0.17	9.62	1.261	12.62	28.37	0.05	0.15	0.305	1.46	35.13	94.29	56	20	97	< 20	5	< 20	< 10	920	69	9	34
133140	4.92	3.05	0.10	9.28	1.448	12.52	28.56	0.03	0.10	0.136	0.89	35.96	92.08	44	17	70	< 20	3	< 20	< 10	1440	75	10	28
133141	3.78	2.12	0.12	9.08	1.531	12.91	29.47	0.02	0.11	0.190	0.79	37.31	93.64	42	13	69	< 20	4	< 20	< 10	1140	82	10	29
133142	4.97	4.97	0.16	9.75	1.290	11.75	29.58	0.03	0.14	0.175	0.89	34.73	93.46	47	12	76	< 20	6	< 20	< 10	1130	70	10	28
133143	< 0.01	93.27	0.03	0.64	0.012	0.06	0.09	0.01	< 0.01	< 0.001	< 0.01	-0.04	94.09	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	1	< 5
133144	1.83	14.87	2.55	12.72	0.139	0.48	26.85	0.92	0.97	0.146	18.63	8.41	86.68	18	14	153	20	32	70	100	610	280	32	174

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133070	< 2	3075	303	58	723	4	0.6	< 0.2	25	< 0.5	< 0.5	317	1.1	4500	7240	710	2420	308	74.4	146	16.9	74.1	10.7	22.1
133071	< 2	3001	287	49	253	2	< 0.5	< 0.2	12	< 0.5	< 0.5	196	0.8	5360	8740	831	2700	321	75.5	144	16.0	66.7	9.9	21.9
133072	< 2	2774	286	49	668	4	< 0.5	< 0.2	17	< 0.5	< 0.5	255	0.7	4610	7700	763	2560	335	80.8	159	17.5	72.9	10.4	21.6
133073	< 2	2487	296	45	729	6	< 0.5	< 0.2	16	< 0.5	< 0.5	210	1.1	5160	8400	801	2710	362	88.8	177	19.3	78.3	10.9	22.9
133074	< 2	2065	247	47	537	6	< 0.5	0.2	22	< 0.5	< 0.5	179	2.1	3620	6240	682	2550	350	81.8	158	17.2	66.7	9.0	19.3
133075	< 2	2420	266	50	307	5	< 0.5	< 0.2	11	< 0.5	< 0.5	162	1.5	4050	6960	739	2670	364	86.0	163	17.4	70.6	9.5	19.4
133076	< 2	1856	244	54	507	5	0.7	0.3	20	< 0.5	< 0.5	123	4.0	2640	5150	615	2410	329	75.0	140	15.6	61.2	8.3	18.1
133077	< 2	2475	338	58	404	5	< 0.5	< 0.2	15	< 0.5	< 0.5	322	1.8	4010	7320	755	2650	388	95.1	193	20.7	85.8	11.5	23.9
133078	< 2	2525	396	62	440	3	0.7	< 0.2	14	< 0.5	< 0.5	373	1.1	3630	6690	704	2520	352	84.2	166	20.0	86.6	12.9	27.9
133079	< 2	7	3	6	< 1	< 2	0.9	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	8.5	15.5	1.75	6.5	1.0	0.22	0.4	< 0.1	0.2	< 0.1	< 0.1
133080	< 2	2707	286	47	338	3	0.5	< 0.2	16	< 0.5	< 0.5	264	2.3	3110	6210	661	2350	350	86.0	174	19.7	75.1	9.8	20.7
133081	< 2	2521	359	60	395	3	0.5	< 0.2	16	< 0.5	< 0.5	252	2.0	4040	7480	765	2660	375	94.5	192	22.0	93.9	12.8	26.6
133082	< 2	2754	387	77	901	3	0.6	< 0.2	19	< 0.5	< 0.5	340	0.6	4720	7990	785	2670	351	86.9	172	21.2	93.9	14.2	31.1
133083	< 2	2523	389	61	627	3	0.8	< 0.2	19	< 0.5	< 0.5	342	0.8	4770	8210	825	2840	398	98.2	194	22.4	96.7	14.1	30.4
133084	< 2	2544	370	55	705	4	0.9	< 0.2	17	< 0.5	< 0.5	348	1.7	4430	7990	839	3010	422	103	205	23.1	97.6	13.8	28.4
133085	< 2	2995	413	86	633	3	1.2	< 0.2	10	< 0.5	< 0.5	318	1.3	3330	6110	649	2400	326	79.2	162	20.7	95.4	14.8	33.4
133086	< 2	2643	326	66	332	6	0.9	< 0.2	9	< 0.5	< 0.5	364	0.7	2610	5330	600	2220	321	78.3	151	18.5	77.5	11.5	25.2
133087	< 2	2578	314	60	520	3	0.8	< 0.2	11	< 0.5	< 0.5	376	0.8	3630	6460	683	2460	337	82.0	156	18.8	76.2	11.0	23.6
133088	< 2	2706	290	88	446	3	0.9	< 0.2	12	< 0.5	< 0.5	443	0.7	5510	9340	924	3180	391	88.5	168	18.5	75.7	10.7	23.7
133089	< 2	2583	289	64	644	2	0.7	< 0.2	24	< 0.5	< 0.5	367	1.5	5400	9250	944	3250	432	98.7	184	19.8	78.1	10.5	22.3
133090	< 2	2579	291	64	640	2	0.7	< 0.2	13	< 0.5	< 0.5	363	1.0	5460	9200	912	3170	413	97.6	187	20.1	78.3	10.8	23.8
133091	< 2	2669	397	73	872	3	0.9	< 0.2	16	< 0.5	< 0.5	407	1.1	5800	9640	955	3300	415	101	213	24.8	105	15.1	31.8
133092	< 2	2691	299	44	432	< 2	0.7	< 0.2	14	< 0.5	< 0.5	329	1.3	5400	9280	903	3050	448	109	206	21.9	81.1	10.8	23.4
133093	< 2	2562	302	50	584	< 2	0.6	< 0.2	11	< 0.5	< 0.5	265	1.1	2950	5710	642	2380	351	86.2	167	18.8	75.2	10.6	22.8
133094	< 2	2762	342	84	645	2	0.9	< 0.2	12	< 0.5	< 0.5	345	0.6	6340	9970	938	3140	375	88.1	171	20.0	80.1	11.5	25.5
133095	< 2	2585	297	81	452	13	0.8	< 0.2	10	< 0.5	< 0.5	438	0.6	5400	9220	887	2980	371	83.7	157	17.0	70.1	10.4	23.0
133096	< 2	2445	281	55	1060	< 2	0.7	< 0.2	35	< 0.5	< 0.5	409	1.6	5650	9750	941	3090	396	92.7	169	17.3	67.7	9.7	20.3
133097	< 2	2389	292	69	622	< 2	0.7	< 0.2	17	< 0.5	< 0.5	512	0.6	3940	7640	773	2580	331	77.7	147	16.8	67.3	10.0	23.4
133098	< 2	2595	251	58	635	< 2	0.6	< 0.2	19	< 0.5	< 0.5	570	1.0	3210	6450	684	2440	328	75.8	145	15.4	63.0	8.8	18.5
133099	< 2	9	< 2	5	< 1	3	0.8	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	11.8	21.6	2.15	7.7	1.0	0.25	0.4	< 0.1	0.3	< 0.1	< 0.1
133100	27	3129	872	213	397	52	2.0	< 0.2	42	< 0.5	0.5	13700	3.1	2570	4730	532	2220	467	131	302	42.2	190	31.4	74.7
133101	< 2	2595	297	54	732	< 2	0.6	< 0.2	21	< 0.5	< 0.5	405	0.5	4530	8180	856	2980	378	87.7	172	18.8	77.0	10.9	23.7
133102	4	2439	303	74	943	< 2	0.7	< 0.2	20	< 0.5	< 0.5	431	0.7	4260	7520	787	2860	377	85.9	168	18.9	77.4	10.9	23.7
133103	2	2657	282	61	517	2	0.6	< 0.2	12	< 0.5	< 0.5	334	0.8	4320	7710	813	2970	390	89.9	170	17.8	75.1	10.3	22.6
133104	5	2912	304	63	757	3	< 0.5	< 0.2	37	< 0.5	< 0.5	455	0.6	5110	8620	866	3010	405	94.7	194	20.5	80.3	10.9	23.8
133105	3	3116	253	70	699	5	0.8	< 0.2	20	< 0.5	< 0.5	425	0.9	4820	7840	772	2560	351	82.0	161	17.3	64.5	8.9	18.9
133106	< 2	3044	241	43	468	3	< 0.5	< 0.2	14	< 0.5	< 0.5	283	< 0.4	6340	9720	903	3030	361	79.0	148	15.6	61.1	8.5	18.3
133107	< 2	2602	258	64	351	< 2	< 0.5	< 0.2	17	< 0.5	< 0.5	315	< 0.4	6190	10000	918	2960	360	82.3	156	16.6	65.0	9.1	20.6
133108	2	2718	278	92	211	3	0.7	< 0.2	12	< 0.5	< 0.5	311	0.5	9800	13300	1100	3230	339	80.2	157	17.0	64.7	9.1	20.2
133109	2	2581	260	96	183	3	0.8	< 0.2	8	< 0.5	< 0.5	295	< 0.4	7300	10400	904	2740	301	72.9	140	16.3	64.2	9.1	18.6
133110	< 2	2585	216	70	291	6	0.6	< 0.2	13	< 0.5	< 0.5	232	0.5	6690	9780	865	2660	286	67.1	133	14.6	56.9	7.6	15.6
133111	< 2	2621	257	94	189	3	0.9	< 0.2	12	< 0.5	< 0.5	199	< 0.4	7400	11400	1060	3480	415	97.5	189	20.4	73.6	9.6	19.7
133112	< 2	2990	217	64	278	< 2	14.3	< 0.2	29	7.1	< 0.5	213	1.0	5580	9090	866	2950	387	92.3	179	17.5	69.1	8.7	16.9
133113	< 2	2554	191	47	197	< 2	0.6	< 0.2	17	< 0.5	< 0.5	224	0.9	4800	8420	826	2820	385	89.9	165	16.1	56.7	7.1	14.7
133114	< 2	2623	219	43	277	< 2	0.6	< 0.2	14	< 0.5	< 0.5	284	0.7	5590	8660	830	2770	343	81.3	157	15.7	56.8	7.6	16.4
133115	36	20580	909	211	21	32	3.0	< 0.2	< 1	5.3	1.8	936	7.5	17900	28700	2590	8010	852	195	356	37.0	150	24.2	60.2
133116	< 2	2708	237	48	273	< 2	14.2	< 0.2	14	7.1	< 0.5	342	0.8	4170	7270	746	2560	301	69.3	141	15.2	62.6	8.5	17.7
133117	< 2	2650	235	43	354	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	322	< 0.4	4160	7240	739	2550	317	76.8	147	16.1	60.9	8.7	18.2
133118	< 2	2731	217	78	610	< 2	0.8	< 0.2	22	< 0.5	< 0.5	270	< 0.4	4740	8030	788	2720	311	70.9	137	14.8	56.9	7.8	16.3
133119	< 2	2775	246	94	870	2	1.0	< 0.2	29	< 0.5	< 0.5	294	< 0.4	5970	9390	897	3020	352	81.3	158	16.8	64.0	8.6	18.6
133120	2	2835	243	57	347	< 2	0.6	< 0.2	14	< 0.5	< 0.5	320	0.8	5220	8730	864	2990	413	98.1	191	19.7	68.9	8.7	19.2
133121	7	2931	266	73	252	3	0.7	< 0.2	7	< 0.5	< 0.5	698	0.6	4420	7630	808	2800	383	93.8	189	19.2	68.9	9.1	19.1

Activation Laboratories Ltd. Report: A13-11627

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133122	2	2845	254	98	311	2	1.0	< 0.2	9	< 0.5	< 0.5	487	0.8	5150	8380	818	2780	349	79.5	158	17.5	64.4	9.0	19.6
133123	< 2	2473	309	126	274	2	1.1	< 0.2	9	< 0.5	< 0.5	306	0.4	6140	9480	889	2980	344	79.7	168	20.3	78.7	11.2	24.3
133124	< 2	8	< 2	10	8	3	0.6	< 0.2	4	< 0.5	< 0.5	< 3	< 0.4	10.9	17.9	1.80	6.5	0.8	0.20	0.4	< 0.1	0.2	< 0.1	< 0.1
133125	26	3098	866	205	381	51	2.1	< 0.2	43	< 0.5	< 0.5	13650	2.8	2530	4670	528	2170	459	127	297	38.5	187	31.2	72.8
133126	< 2	2638	381	92	258	3	0.7	< 0.2	10	< 0.5	< 0.5	246	0.6	4450	8110	825	2910	406	99.7	199	24.1	94.4	13.5	29.7
133127	< 2	2711	289	77	225	3	0.8	< 0.2	8	< 0.5	< 0.5	284	1.4	4340	7620	765	2650	357	86.2	171	19.3	76.6	10.7	23.8
133128	< 2	2547	296	96	270	< 2	0.8	< 0.2	10	< 0.5	< 0.5	256	0.6	4230	7610	770	2690	370	88.2	172	18.5	74.4	10.6	23.9
133129	< 2	2091	294	75	317	4	0.5	< 0.2	13	< 0.5	< 0.5	262	1.6	4570	8160	843	2970	420	99.3	191	19.9	76.5	10.7	23.0
133130	< 2	2288	242	33	319	2	< 0.5	< 0.2	12	< 0.5	< 0.5	484	0.6	5350	9440	916	3000	415	96.6	181	18.9	68.7	9.4	21.2
133131	< 2	2691	312	82	407	< 2	0.7	< 0.2	14	< 0.5	< 0.5	469	0.6	5610	9230	874	2910	382	89.5	172	18.2	70.8	10.2	22.6
133132	< 2	2343	298	45	911	4	< 0.5	0.2	33	< 0.5	< 0.5	429	2.9	3850	6990	715	2590	412	97.2	187	19.3	71.5	9.6	21.8
133133	3	2655	363	101	404	3	0.9	< 0.2	14	< 0.5	< 0.5	537	0.8	4770	8140	778	2530	328	80.2	159	18.7	75.8	11.5	25.8
133134	4	2596	354	95	377	3	0.8	< 0.2	16	< 0.5	< 0.5	588	1.1	4770	8230	792	2590	342	81.3	161	18.4	73.8	10.9	25.6
133135	< 2	2899	301	72	550	< 2	0.5	< 0.2	19	< 0.5	< 0.5	479	0.9	3650	6620	671	2250	317	78.1	156	17.4	69.7	9.9	21.4
133136	3	2915	321	98	582	2	0.7	< 0.2	16	< 0.5	< 0.5	531	0.8	4530	7650	749	2510	323	77.3	152	16.9	72.0	10.4	22.9
133137	< 2	10	< 2	< 4	14	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	15.0	25.5	2.43	8.2	1.1	0.23	0.5	< 0.1	0.2	< 0.1	< 0.1
133138	6	2465	313	111	380	2	0.8	< 0.2	17	< 0.5	< 0.5	611	1.3	3540	6540	666	2300	314	74.4	142	16.6	69.0	10.6	24.7
133139	4	2901	327	108	678	2	0.9	< 0.2	24	< 0.5	< 0.5	426	0.8	3810	6800	689	2350	310	77.7	149	17.6	75.7	11.6	26.2
133140	3	2796	294	108	274	< 2	0.8	< 0.2	12	< 0.5	< 0.5	351	0.8	4390	7660	744	2420	312	76.1	154	17.6	70.6	10.2	23.4
133141	3	2650	228	68	266	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	3523	0.6	4610	8900	839	2680	311	72.4	136	13.9	57.5	8.4	19.5
133142	3	2494	246	99	635	2	0.8	< 0.2	18	< 0.5	< 0.5	670	1.4	4040	7500	754	2540	343	80.7	152	16.3	63.6	8.8	18.9
133143	< 2	7	< 2	< 4	14	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	7.1	12.2	1.29	4.1	0.6	0.12	0.2	< 0.1	0.1	< 0.1	< 0.1
133144	35	20610	911	229	19	32	2.9	< 0.2	< 1	5.3	1.8	897	7.9	18500	29700	2640	8120	907	209	373	39.7	155	25.0	61.3

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133070	2.74	15.3	2.08	1.2	< 0.1	6	< 0.1	57	457	0.1	3.58
133071	2.57	14.4	1.84	1.1	< 0.1	3	< 0.1	30	288	< 0.1	3.62
133072	2.57	14.4	1.81	1.1	< 0.1	4	0.1	33	324	< 0.1	3.58
133073	2.53	13.7	1.73	1.0	< 0.1	4	< 0.1	43	287	0.2	3.43
133074	2.12	11.7	1.42	1.0	< 0.1	4	< 0.1	142	448	0.1	2.93
133075	2.06	11.8	1.47	1.1	< 0.1	2	< 0.1	74	384	0.1	3.23
133076	2.05	11.2	1.47	1.0	< 0.1	3	< 0.1	317	496	< 0.1	4.10
133077	2.79	15.7	2.03	1.3	< 0.1	3	0.1	71	700	< 0.1	3.74
133078	3.42	18.7	2.38	1.4	< 0.1	3	< 0.1	37	459	< 0.1	3.78
133079	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	1.4	< 0.1	0.405
133080	2.32	13.0	1.70	1.1	< 0.1	3	< 0.1	42	595	< 0.1	4.22
133081	2.99	16.4	2.08	1.3	< 0.1	3	< 0.1	42	563	< 0.1	3.88
133082	3.70	19.5	2.42	1.6	< 0.1	7	< 0.1	25	284	0.1	3.79
133083	3.44	19.4	2.31	1.6	< 0.1	6	0.3	72	369	< 0.1	3.66
133084	3.25	18.2	2.35	1.6	< 0.1	4	0.2	68	465	< 0.1	3.84
133085	4.03	22.6	2.93	2.0	< 0.1	4	0.2	33	360	< 0.1	3.77
133086	3.15	17.0	2.20	1.5	< 0.1	2	0.2	50	462	0.1	3.66
133087	2.83	15.2	1.89	1.4	< 0.1	3	0.2	65	335	< 0.1	3.58
133088	2.70	14.0	1.71	1.6	< 0.1	5	0.1	32	289	0.2	3.78
133089	2.61	14.5	1.82	1.3	< 0.1	5	0.1	48	472	< 0.1	1.74
133090	2.60	14.3	1.78	1.4	< 0.1	3	< 0.1	45	436	< 0.1	1.75
133091	3.72	19.8	2.56	1.7	< 0.1	5	< 0.1	31	384	0.1	3.61
133092	2.51	14.2	1.80	1.2	< 0.1	3	0.1	74	490	0.1	3.63
133093	2.67	15.1	1.93	1.2	< 0.1	3	0.1	111	518	0.1	3.73
133094	3.06	18.0	2.29	1.7	< 0.1	3	0.1	38	338	0.1	3.70
133095	2.91	15.7	1.99	1.6	< 0.1	3	< 0.1	56	306	< 0.1	3.64
133096	2.37	13.2	1.69	1.3	< 0.1	10	< 0.1	70	364	< 0.1	3.70
133097	2.74	14.8	1.86	1.4	< 0.1	4	< 0.1	43	329	0.1	3.58
133098	2.12	12.6	1.69	1.2	< 0.1	3	0.1	55	305	0.1	3.63
133099	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.1	< 0.1	0.405
133100	8.93	47.0	5.77	4.9	3.1	26	0.3	586	852	2.5	0.0250
133101	2.73	14.7	1.94	1.3	0.3	4	0.1	35	324	< 0.1	3.69
133102	2.80	15.4	1.98	1.5	0.3	4	0.2	67	319	0.1	3.82
133103	2.58	13.9	1.80	1.4	< 0.1	3	0.2	68	412	0.1	3.68
133104	2.69	13.9	1.75	1.5	< 0.1	3	0.2	73	362	< 0.1	3.58
133105	2.16	11.6	1.41	1.4	< 0.1	4	0.2	73	310	0.2	3.70
133106	2.09	11.2	1.35	1.1	< 0.1	3	< 0.1	29	191	< 0.1	3.55
133107	2.22	12.1	1.62	1.3	< 0.1	3	< 0.1	30	232	< 0.1	3.64
133108	2.16	12.0	1.52	1.6	< 0.1	1	0.1	19	308	< 0.1	3.71
133109	2.10	11.8	1.50	1.7	< 0.1	< 1	< 0.1	14	281	< 0.1	3.80
133110	1.79	10.1	1.28	1.4	< 0.1	2	< 0.1	21	222	0.1	3.19
133111	2.04	11.2	1.38	1.7	< 0.1	1	< 0.1	20	220	< 0.1	3.34
133112	1.71	9.3	1.25	1.1	0.2	26	< 0.1	24	297	< 0.1	3.52
133113	1.57	9.0	1.18	1.0	< 0.1	2	< 0.1	30	365	0.1	3.44
133114	1.81	10.3	1.30	1.0	< 0.1	2	< 0.1	41	288	< 0.1	3.97
133115	8.03	47.4	6.15	3.4	< 0.1	5	2.1	903	158	185	0.0250
133116	2.03	11.3	1.47	1.0	0.3	25	< 0.1	27	211	< 0.1	1.87
133117	1.99	10.6	1.36	1.1	< 0.1	2	0.2	26	244	< 0.1	1.66
133118	1.87	11.0	1.42	1.3	< 0.1	3	0.1	25	257	< 0.1	3.69
133119	1.99	11.5	1.47	1.6	< 0.1	5	0.1	24	272	< 0.1	3.78
133120	2.02	11.6	1.47	1.2	< 0.1	1	0.2	34	475	0.1	3.52

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133121	2.13	12.2	1.52	1.3	< 0.1	1	0.4	23	423	< 0.1	3.57
133122	2.11	12.0	1.53	1.6	0.1	2	0.2	24	329	0.2	3.39
133123	2.85	15.7	1.98	2.0	< 0.1	1	0.1	18	299	< 0.1	3.79
133124	< 0.05	< 0.1	< 0.04	< 0.2	2.7	11	< 0.1	< 5	1.9	< 0.1	0.405
133125	8.77	47.2	5.80	4.9	3.0	26	0.4	559	872	2.5	0.0250
133126	3.43	17.9	2.21	1.7	< 0.1	2	0.2	27	371	< 0.1	3.55
133127	2.61	14.2	1.80	1.5	< 0.1	1	0.2	27	433	0.1	3.69
133128	2.69	15.3	1.94	1.6	< 0.1	2	< 0.1	20	426	0.1	3.55
133129	2.79	14.9	1.87	1.3	< 0.1	2	< 0.1	34	629	0.4	2.41
133130	2.43	13.5	1.68	0.9	< 0.1	2	< 0.1	26	388	0.1	2.64
133131	2.89	16.6	2.10	1.4	< 0.1	2	< 0.1	39	365	0.1	3.65
133132	2.69	14.5	1.81	1.0	< 0.1	6	< 0.1	119	477	0.1	3.73
133133	3.07	17.5	2.26	1.7	< 0.1	2	0.2	92	420	< 0.1	1.78
133134	3.07	17.6	2.22	1.6	< 0.1	2	0.3	118	422	0.1	1.74
133135	2.63	13.9	1.72	1.3	< 0.1	3	0.1	138	467	< 0.1	3.51
133136	2.77	15.3	1.94	1.7	< 0.1	3	0.1	85	389	0.1	3.69
133137	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.9	< 0.1	0.405
133138	3.03	17.0	2.13	1.7	< 0.1	2	0.3	134	439	0.1	3.68
133139	3.21	18.0	2.20	1.8	0.6	5	0.3	110	462	0.8	3.91
133140	2.91	16.6	2.08	1.9	< 0.1	3	0.1	143	394	< 0.1	2.95
133141	2.22	12.6	1.59	1.3	< 0.1	3	0.1	49	309	< 0.1	2.91
133142	2.15	12.2	1.59	1.7	< 0.1	4	0.1	37	424	0.2	2.84
133143	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.0	< 0.1	0.405
133144	8.12	47.5	6.31	3.4	< 0.1	4	2.0	959	156	189	0.0250

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.08	11.39	1.93	0.75	0.013	0.34	43.90	0.88	0.54	0.118	30.19					1663								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.36	11.27	1.91	0.75	0.013	0.35	43.50	0.88	0.56	0.119	30.17					1664								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.19																							
NIST 694 Cert	3.2																							
DNC-1 Meas		47.12	18.34	9.84	0.146	9.93	11.23	1.90	0.22	0.466	0.07			31		157	270	58	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
DNC-1 Meas		46.82	18.35	9.75	0.147	10.03	11.30	1.90	0.22	0.490	0.08			31		157								
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148								
GBW 07113 Meas		73.01	13.42	3.25	0.143	0.15	0.60	2.60	5.52	0.288	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
GBW 07113 Meas		70.51	12.76	3.20	0.139	0.14	0.60	2.45	5.39	0.282	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	30	50					
LKSD-3 Cert																	87.0	30.0	47.0					
W-2a Meas		52.50	15.57	10.75	0.166	6.31	10.75	2.21	0.60	1.081	0.13			35	< 1	280	100	43	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
W-2a Meas		52.57	15.45	10.61	0.166	6.25	10.91	2.21	0.62	1.088	0.16			35	< 1	278								
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262								
SY-4 Meas		49.77	20.12	6.11	0.106	0.50	8.03	6.86	1.60	0.282	0.14			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
SY-4 Meas		49.77	20.27	6.22	0.107	0.50	7.93	6.97	1.67	0.286	0.14			1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																					40			
CTA-AC-1 Cert																					38.0			
BIR-1a Meas		48.18	15.63	11.35	0.171	9.45	13.18	1.84	0.02	0.955	0.02			44	< 1	338	370	53	170	130		16		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16		
BIR-1a Meas		47.70	15.73	11.20	0.173	9.57	13.34	1.80	0.02	0.981	0.04			44	< 1	341								
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310								
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1040	95		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				980	100	17	11	73
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		430				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20			17		
JR-1 Cert																			1.67			16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 42-2006 Cert																								
133071 Orig	7.38	0.44	0.05	7.24	1.081	13.35	33.29	0.02	0.04	0.130	0.92	36.35	92.92	45	35	63	< 20	2	< 20	< 10	420	72	8	26
133071 Dup	8.30	0.44	0.05	7.24	1.084	13.50	33.48	0.02	0.04	0.130	0.93	36.35	93.25	46	35	64	< 20	2	< 20	< 10	430	72	8	25
133082 Orig	3.42	2.39	0.09	8.18	1.268	13.85	29.10	0.04	0.09	0.225	1.43	37.66	94.32	51	30	81	< 20	4	< 20	< 10	330	65	8	25
133082 Dup	3.50	2.43	0.09	8.17	1.277	13.83	29.05	0.04	0.09	0.227	1.41	37.66	94.27	51	30	81	< 20	5	< 20	< 10	330	66	8	26
133097 Orig	3.00	1.23	0.06	9.80	1.588	13.89	27.62	0.03	0.07	0.208	1.04	38.59	94.11	51	22	92	< 20	5	< 20	< 10	870	74	10	29
133097 Dup	3.43	1.22	0.06	9.75	1.573	13.90	27.54	0.03	0.07	0.207	1.03	38.59	93.98	51	22	93	< 20	5	< 20	< 10	870	75	11	30
133099 Orig	< 0.01	99.35	0.04	0.95	0.013	0.09	0.25	0.01	< 0.01	0.001	0.03	0.14	100.9	< 1	< 1	< 5	130	< 1	< 20	< 10	< 30	2	1	< 5
133099 Split	< 0.01	98.91	0.05	0.94	0.014	0.09	0.26	0.01	< 0.01	0.002	0.01	0.09	100.4	< 1	< 1	< 5	120	< 1	< 20	< 10	< 30	2	< 1	< 5
133125 Orig	6.39	20.74	3.06	28.17	2.428	7.05	17.61	0.32	1.35	1.489	0.56	12.82	95.59	22	13	156	160	28	80	40	1400	60	10	29
133125 Dup	6.40	20.28	3.03	27.65	2.389	7.04	17.35	0.31	1.32	1.435	0.55	12.82	94.17	21	13	156	150	26	80	30	1320	56	10	28
133140 Orig	4.87	3.04	0.11	9.28	1.447	12.49	28.55	0.03	0.10	0.136	0.90	35.96	92.05	44	17	71	< 20	3	< 20	< 10	1460	75	10	28
133140 Dup	4.97	3.05	0.10	9.28	1.449	12.54	28.57	0.03	0.10	0.137	0.89	35.96	92.11	44	17	70	< 20	3	< 20	< 10	1420	76	10	27
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	14	33								103					5.0		0.58					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
DNC-1 Meas		145	16	34								105												
DNC-1 Cert		144.0	18.0	38								118												
GBW 07113 Meas		43	46	390								514												
GBW 07113 Cert		43.0	43.0	403								506												
GBW 07113 Meas		41	43	382								499												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.3			49.9	95.0		43.3	7.8	1.44			4.9		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
W-2a Meas	19	197	18	85		< 2	< 0.5					171	< 0.4		25.2		13.1	3.3	1.08		0.6	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
W-2a Meas		198	18	84								174												
W-2a Cert		190	24.0	94.0								182												
SY-4 Meas		1196	116	542								338												
SY-4 Cert		1191	119	517								340												
SY-4 Meas		1199	112	549								349												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3300		1100	163	44.3	116	14.4			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	13	14								7					2.4	1.1	0.52	1.8				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
BIR-1a Meas		108	14	15								7												
BIR-1a Cert		110	16	18								6												
NCS DC86312 Meas														2400	188		1590			232	34.5	184	35.7	96.4
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											256													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	43.2	86.4		36.5	7.5		6.8	1.1	6.1	1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0		39.9	8.0		7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700	2.9	43.0			23.3	60.1	7.44	30.5	12.1		14.1	3.3	20.3	4.2	12.5
NCS DC70009 (GBW07241) Cert	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas														264	486	45.6	147	23.7	3.57		3.6	22.2	4.7	13.9
OREAS 100a (Fusion) Cert														260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								815	1440	128	394	50.2	7.89		5.4	31.2	6.4	18.6
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	249				14		< 0.5	< 0.2	3		20.9		0.6	21.4	51.2	5.90	23.5	5.8	0.27	5.5	1.1	6.2		
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		
NCS DC86318 Meas														1960	420	739	3300	1710	18.9	2130	465	3050	550	
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21800	29300	2390	6590	547	89.2					

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133071 Orig	< 2	2971	286	48	262	2	< 0.5	< 0.2	12	< 0.5	< 0.5	197	0.7	5310	8700	831	2700	319	74.9	145	16.3	67.6	10.0	21.9
133071 Dup	< 2	3031	288	51	244	2	< 0.5	< 0.2	13	< 0.5	< 0.5	195	0.8	5420	8780	832	2690	323	76.2	143	15.8	65.7	9.8	21.9
133082 Orig	< 2	2728	387	76	900	3	0.5	< 0.2	19	< 0.5	< 0.5	339	0.7	4720	7960	784	2670	350	86.8	170	21.1	93.8	14.2	31.0
133082 Dup	< 2	2780	388	77	901	3	0.6	< 0.2	19	< 0.5	< 0.5	341	0.5	4730	8020	786	2670	352	87.1	173	21.4	94.1	14.2	31.3
133097 Orig	< 2	2389	292	69	615	< 2	0.8	< 0.2	17	< 0.5	< 0.5	510	0.6	3930	7600	757	2560	332	77.5	144	16.5	67.1	10.1	22.5
133097 Dup	< 2	2390	291	69	629	< 2	0.6	< 0.2	18	< 0.5	< 0.5	513	0.6	3960	7690	790	2610	330	77.9	149	17.1	67.5	10.0	24.3
133099 Orig	< 2	9	< 2	5	< 1	3	0.8	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	11.8	21.6	2.15	7.7	1.0	0.25	0.4	< 0.1	0.3	< 0.1	< 0.1
133099 Split	< 2	10	2	7	< 1	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	12.6	22.4	2.33	8.0	1.0	0.27	0.5	< 0.1	0.2	< 0.1	< 0.1
133125 Orig	26	3099	877	206	389	51	2.3	< 0.2	44	< 0.5	0.5	13840	2.9	2500	4640	525	2160	449	125	298	39.2	187	30.8	71.8
133125 Dup	25	3098	856	205	373	50	1.9	< 0.2	41	< 0.5	< 0.5	13470	2.7	2570	4690	531	2180	469	129	297	37.9	188	31.6	73.7
133140 Orig	3	2796	293	108	281	< 2	0.9	< 0.2	12	< 0.5	< 0.5	351	0.9	4340	7590	732	2400	312	76.2	151	17.1	68.7	10.1	23.1
133140 Dup	2	2796	295	109	268	< 2	0.7	< 0.2	12	< 0.5	< 0.5	351	0.6	4440	7730	757	2440	312	76.1	157	18.0	72.5	10.3	23.8
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									934	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		1.9								
DNC-1 Cert		2.0								
DNC-1 Meas										
DNC-1 Cert										
GBW 07113 Meas										
GBW 07113 Cert										
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.6					4.6
LKSD-3 Cert		2.70	0.400		0.700					4.60
W-2a Meas	0.37	2.0				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
W-2a Meas										
W-2a Cert										
SY-4 Meas										
SY-4 Cert										
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.5	1.05						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
BIR-1a Meas										
BIR-1a Cert										
NCS DC86312 Meas	14.3	87.7	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.5	335	33.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.54	3.2	0.46					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.33	15.6	2.22			2200			29.8	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.33	14.8	2.11						53.1	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	17.9	2.48						37.3	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.7	0.68	4.5	1.8		1.6	20	28.3	9.1
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	279	1760	250							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 42-2006 Cert										
133071 Orig	2.58	14.5	1.86	1.1	< 0.1	3	< 0.1	28	289	< 0.1
133071 Dup	2.57	14.2	1.82	1.0	< 0.1	3	< 0.1	31	288	< 0.1
133082 Orig	3.70	19.3	2.40	1.6	< 0.1	7	< 0.1	25	284	0.1
133082 Dup	3.71	19.6	2.44	1.6	< 0.1	6	< 0.1	25	285	0.1
133097 Orig	2.68	14.3	1.82	1.4	< 0.1	4	< 0.1	42	327	0.1
133097 Dup	2.79	15.3	1.90	1.4	0.2	4	< 0.1	45	331	0.1
133099 Orig	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.1	< 0.1
133099 Split	< 0.05	< 0.1	< 0.04	< 0.2	0.1	2	< 0.1	< 5	1.1	< 0.1
133125 Orig	8.82	48.0	5.80	4.9	2.9	25	0.3	556	869	2.5
133125 Dup	8.71	46.4	5.80	4.9	3.0	26	0.4	561	876	2.6
133140 Orig	2.87	16.3	2.01	1.8	< 0.1	3	0.1	145	392	< 0.1
133140 Dup	2.96	17.0	2.15	2.0	< 0.1	3	0.1	141	395	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11628
Invoice Date: 11-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

116 Rock samples were submitted for analysis.

The following analytical packages were requested:

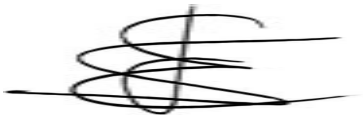
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11628**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Activation Laboratories Ltd. Report: A13-11628

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133145	4.20	2.23	0.14	14.88	2.047	11.26	23.38	0.04	0.07	0.176	0.84	34.97	90.03	60	14	67	< 20	7	< 20	< 10	1430	24	4	13
133146	7.27	3.11	0.06	18.85	2.057	10.23	23.89	0.02	0.03	0.343	0.86	31.30	90.73	52	17	61	< 20	12	< 20	< 10	1400	29	5	14
133147	3.72	2.06	0.06	14.09	1.578	12.70	26.05	0.03	0.05	0.191	1.62	36.13	94.56	69	13	71	< 20	7	< 20	< 10	1030	24	4	11
133148	3.09	3.56	0.06	11.95	1.354	12.30	27.38	0.05	0.04	0.205	2.56	35.48	94.92	83	17	74	< 20	5	< 20	< 10	870	21	4	12
133149	3.60	1.73	0.12	14.32	1.604	12.56	25.94	0.03	0.07	0.180	1.77	36.03	94.36	62	14	56	< 20	8	< 20	< 10	1080	25	4	13
133150	5.52	1.58	0.07	13.01	1.495	12.41	27.46	0.02	0.05	0.270	0.74	35.23	92.33	42	13	47	< 20	9	< 20	< 10	1030	21	3	10
133151	7.90	1.14	0.10	15.57	1.707	11.24	27.32	0.02	0.08	0.669	0.89	32.44	91.19	40	15	70	< 20	10	< 20	< 10	1170	26	4	14
133152	7.46	0.65	0.04	13.74	1.596	11.92	28.53	0.01	0.02	0.334	0.62	34.05	91.51	45	14	58	< 20	8	< 20	< 10	1080	26	4	11
133153	2.48	6.88	0.12	8.01	0.994	12.65	26.32	0.02	0.08	0.125	0.80	36.60	92.61	42	9	57	< 20	5	< 20	< 10	720	21	4	12
133154	4.73	2.80	0.12	9.01	1.217	12.65	28.65	0.03	0.10	0.167	1.01	36.08	91.82	53	15	67	< 20	6	< 20	< 10	960	26	4	12
133155	3.59	0.76	0.09	10.21	1.343	12.94	28.38	0.02	0.04	0.271	1.09	37.35	92.50	50	10	78	< 20	7	< 20	< 10	840	25	4	13
133156	5.05	0.52	0.07	10.68	1.361	12.90	29.44	0.02	0.06	0.222	0.76	37.06	93.08	52	11	77	< 20	7	< 20	< 10	800	27	4	13
133157	6.74	1.97	0.07	10.28	1.343	12.25	30.52	0.03	0.06	0.373	1.70	33.95	92.53	67	15	88	< 20	6	< 20	< 10	930	27	5	14
133158	2.25	1.03	0.10	11.84	1.622	13.90	26.74	0.02	0.07	0.137	1.25	38.53	95.24	63	11	78	< 20	7	< 20	< 10	940	26	4	14
133159	3.69	1.88	0.08	8.47	1.313	13.53	28.65	0.03	0.09	0.098	1.62	36.89	92.66	54	11	60	< 20	6	< 20	< 10	930	32	5	15
133160	2.52	1.83	0.14	9.81	1.506	13.75	27.18	0.04	0.16	0.318	1.01	38.29	94.03	58	17	87	< 20	7	< 20	< 10	960	23	4	13
133161	4.23	1.24	0.07	10.33	1.565	13.37	27.67	0.02	0.07	0.185	0.72	37.54	92.77	50	13	71	< 20	6	< 20	< 10	770	30	5	13
133162	4.09	1.19	0.07	10.43	1.601	13.45	27.83	0.02	0.06	0.288	0.83	37.38	93.14	49	12	81	< 20	5	< 20	< 10	1020	32	5	15
133163	4.52	0.64	0.05	9.52	1.377	13.41	29.09	0.02	0.04	0.110	0.77	37.41	92.45	50	11	64	< 20	6	< 20	< 10	710	29	5	15
133164	3.58	1.26	0.06	7.77	1.275	13.21	28.46	0.02	0.06	0.177	1.13	37.81	91.23	50	12	73	< 20	5	< 20	< 10	710	32	5	15
133165	3.78	1.48	0.05	9.05	1.326	13.75	28.39	0.03	0.05	0.140	1.13	37.86	93.26	55	12	77	< 20	6	< 20	< 10	860	29	5	15
133166	4.70	2.75	0.05	8.50	1.206	13.06	29.52	0.05	0.05	0.228	1.92	35.69	93.01	59	17	78	< 20	6	< 20	< 10	810	29	5	14
133167	3.06	1.72	0.07	9.45	1.295	12.74	29.86	0.04	0.05	0.351	3.34	36.12	95.03	63	16	90	< 20	6	< 20	< 10	650	29	5	16
133168	3.83	2.52	0.07	10.29	1.325	13.85	27.64	0.04	0.07	0.157	1.50	36.74	94.19	62	16	86	< 20	6	< 20	< 10	850	30	5	13
133169	1.30	1.06	0.07	8.51	1.200	13.21	27.93	0.04	0.05	0.402	2.65	38.58	93.69	64	11	89	< 20	6	< 20	< 10	480	25	5	17
133170	3.16	1.18	0.05	7.97	1.336	14.27	29.47	0.02	0.05	0.325	1.14	38.75	94.58	63	14	110	< 20	5	< 20	< 10	660	33	5	17
133171	5.12	1.84	0.06	8.14	1.325	13.64	30.07	0.03	0.06	0.108	1.41	36.34	93.02	58	17	90	< 20	5	< 20	< 10	680	31	5	15
133172	4.72	1.91	0.05	9.66	1.392	13.52	28.03	0.03	0.04	0.098	0.89	36.86	92.50	54	15	77	< 20	6	< 20	< 10	1120	27	4	13
133173	4.23	0.55	0.05	10.76	1.430	13.36	27.77	0.02	0.04	0.179	0.83	37.56	92.56	56	16	84	< 20	6	< 20	< 10	1310	32	5	15
133174	< 0.01	98.71	0.06	0.55	0.008	0.06	0.24	0.02	< 0.01	0.002	0.04	0.00	99.69	< 1	< 1	< 5	70	< 1	< 20	30	< 30	< 1	2	< 5
133175	6.38	20.69	3.10	28.15	2.414	6.90	17.42	0.31	1.32	1.468	0.57	12.22	94.56	21	13	152	170	30	70	30	1370	26	4	13
133176	6.66	0.85	0.04	10.47	1.560	12.36	30.11	0.03	0.03	0.127	1.16	34.96	91.70	60	17	85	< 20	5	< 20	< 10	1100	29	5	14
133177	4.52	2.30	0.07	11.58	1.733	12.78	26.95	0.02	0.05	0.083	1.00	35.79	92.36	65	15	72	< 20	6	< 20	< 10	1540	29	5	14
133178	4.72	4.02	0.09	12.61	1.738	11.91	25.73	0.04	0.08	0.396	1.56	33.54	91.71	62	14	95	< 20	7	< 20	< 10	1320	27	5	13
133179	4.56	1.52	0.11	15.65	1.715	12.27	24.46	0.04	0.08	0.250	0.78	35.36	92.23	65	16	87	< 20	10	< 20	< 10	1400	26	5	14
133180	6.89	1.52	0.07	13.10	1.582	11.74	27.86	0.02	0.05	0.146	1.29	33.95	91.34	63	21	80	< 20	7	< 20	< 10	1220	28	4	13
133181	5.92	2.49	0.07	11.37	1.746	12.69	28.33	0.04	0.05	0.132	1.52	34.74	93.17	60	18	77	< 20	5	< 20	< 10	1070	27	4	12
133182	4.15	1.02	0.05	10.24	1.899	13.38	28.33	0.03	0.04	0.099	0.91	37.67	93.66	65	13	86	< 20	5	< 20	< 10	1210	28	5	13
133183	4.74	0.51	0.09	8.52	1.356	13.17	30.57	0.03	0.07	0.090	1.67	36.90	92.98	58	16	85	< 20	5	< 20	< 10	1090	30	5	17
133184	4.64	1.38	0.08	8.88	1.364	13.45	29.35	0.04	0.07	0.080	1.12	37.01	92.82	54	31	77	< 20	5	< 20	< 10	1630	28	4	13
133185	2.98	1.35	0.08	9.22	1.433	13.44	26.93	0.03	0.07	0.080	1.30	38.23	92.16	53	20	74	< 20	5	< 20	< 10	1090	32	5	15
133186	3.61	1.52	0.06	9.46	1.533	13.71	27.58	0.03	0.07	0.099	1.59	37.05	92.70	60	35	77	< 20	6	< 20	< 10	1220	33	5	15
133187	4.72	3.06	0.06	8.01	1.302	13.28	30.16	0.05	0.05	0.144	2.42	34.98	93.54	57	28	71	< 20	5	< 20	40	490	29	5	14
133188	4.84	2.62	0.04	7.81	1.278	13.13	30.37	0.04	0.05	0.131	2.79	34.88	93.13	55	28	71	< 20	5	< 20	< 10	500	31	5	14
133189	3.94	1.41	0.09	9.26	1.504	13.45	28.87	0.04	0.09	0.217	1.33	37.15	93.42	63	18	81	< 20	5	< 20	< 10	1030	29	5	14
133190	3.22	1.73	0.15	8.91	1.384	13.86	27.94	0.06	0.16	0.184	0.80	38.30	93.47	74	15	68	< 20	6	< 20	< 10	900	24	5	12
133191	5.25	0.46	0.06	10.30	1.575	13.12	29.87	0.02	0.05	0.210	0.85	36.80	93.30	59	11	69	< 20	6	< 20	< 10	1070	28	5	15
133192	5.04	0.62	0.07	12.20	1.703	13.12	28.36	0.02	0.05	0.248	0.43	36.73	93.56	56	10	69	< 20	7	< 20	< 10	1080	27	5	14
133193	6.28	0.49	0.13	10.54	1.630	12.81	30.30	0.02	0.10	0.190	1.00	35.42	92.63	67	15	77	< 20	6	< 20	< 10	1100	31	5	15
133194	5.46	0.37	0.11	8.93	1.395	13.63	31.05	0.02	0.08	0.253	1.07	36.73	93.64	61	13	69	< 20	6	< 20	< 10	890	28	4	16
133195	5.09	0.58	0.09	8.96	1.348	13.68	30.59	0.03	0.07	0.142	0.69	37.33	93.52	54	10	63	< 20	6	< 20	< 10	980	27	4	16
133196	4.26	0.67	0.07	12.02	1.650	13.13	27.33	0.03	0.04	0.133	0.83	36.90	92.79	65	10	68	< 20	7	< 20	< 10	1330	26	4	14

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133197	5.74	0.71	0.11	10.53	1.586	12.99	28.90	0.02	0.09	0.087	1.12	36.02	92.17	59	11	54	< 20	5	< 20	< 10	1290	34	5	13
133198	7.06	0.86	0.06	7.01	1.253	12.91	32.27	0.03	0.05	0.041	1.13	35.56	91.19	56	12	60	< 20	3	< 20	< 10	1000	30	5	13
133199	< 0.01	97.87	0.03	0.69	0.009	0.06	0.23	< 0.01	< 0.01	0.001	0.03	0.03	98.96	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	< 1	1	< 5
133200	1.84	15.27	2.63	13.13	0.144	0.50	26.89	0.97	1.02	0.148	19.62	8.20	88.52	18	15	155	< 20	33	70	100	630	90	14	136
133201	5.33	1.96	0.08	7.46	1.134	13.15	31.22	0.06	0.08	0.110	2.41	35.26	92.91	71	11	73	< 20	4	< 20	< 10	490	27	5	12
133202	7.33	2.33	0.04	9.44	1.455	12.39	30.41	0.03	0.04	0.097	1.12	33.88	91.23	69	11	52	< 20	6	< 20	< 10	1360	33	5	14
133203	4.36	1.85	0.05	11.65	1.727	13.26	27.22	0.03	0.04	0.161	0.82	36.76	93.58	73	11	66	< 20	6	< 20	< 10	1270	28	5	11
133204	4.60	2.09	0.07	10.96	1.627	12.91	27.61	0.03	0.06	0.136	1.01	36.14	92.63	78	11	68	< 20	7	< 20	< 10	1310	33	5	14
133205	7.26	3.96	0.10	10.16	1.504	12.25	28.61	0.04	0.09	0.159	1.23	33.11	91.22	73	16	66	< 20	5	< 20	< 10	770	29	5	12
133206	4.92	2.20	0.07	7.56	1.247	12.63	30.06	0.04	0.07	0.085	3.06	34.49	91.52	72	9	66	< 20	4	< 20	< 10	880	38	6	16
133207	6.38	4.45	0.07	6.63	1.203	11.94	32.02	0.05	0.08	0.064	4.34	31.47	92.32	57	15	56	< 20	2	< 20	< 10	1260	33	5	13
133208	4.11	2.47	0.16	10.52	1.468	13.38	27.79	0.06	0.16	0.069	1.18	36.29	93.55	71	14	77	< 20	6	< 20	< 10	1300	30	5	13
133209	2.95	0.64	0.08	10.71	1.475	13.55	26.93	0.02	0.06	0.096	0.69	39.00	93.25	63	9	77	< 20	6	< 20	< 10	820	28	5	14
133210	6.61	0.43	0.10	10.23	1.208	13.06	30.81	0.02	0.09	0.125	0.83	35.75	92.66	58	14	88	< 20	5	< 20	< 10	1480	27	4	12
133211	6.06	1.30	0.07	9.27	1.249	12.11	31.22	0.04	0.06	0.109	2.81	33.83	92.06	53	12	68	< 20	5	< 20	< 10	1230	31	5	13
133212	4.27	0.81	0.18	11.38	1.351	13.02	28.56	0.02	0.16	0.121	1.36	36.68	93.64	62	15	87	< 20	5	< 20	< 10	930	24	4	11
133213	6.52	0.42	0.10	10.09	1.196	12.73	29.93	0.03	0.09	0.116	0.84	35.48	91.01	56	12	86	< 20	5	< 20	< 10	1440	26	4	11
133214	6.96	0.45	0.12	9.84	1.203	12.74	30.87	0.02	0.09	0.092	0.70	35.73	91.86	58	11	69	< 20	4	< 20	< 10	1050	23	4	10
133215	3.04	0.91	0.12	13.36	1.529	13.44	26.13	0.03	0.09	0.151	0.68	38.11	94.55	69	11	98	< 20	7	< 20	< 10	1290	24	4	13
133216	2.31	0.91	0.08	13.26	1.674	13.66	25.74	0.03	0.07	0.144	0.78	38.39	94.73	75	7	80	< 20	8	< 20	< 10	770	26	5	13
133217	0.97	0.73	0.07	11.40	1.579	14.11	26.24	0.03	0.07	0.184	0.48	40.42	95.32	87	5	72	< 20	7	< 20	< 10	1310	22	4	11
133218	1.05	1.13	0.13	16.17	1.970	12.99	23.08	0.03	0.13	0.231	0.46	37.95	94.27	77	7	99	< 20	10	< 20	< 10	980	22	4	12
133219	6.44	0.94	0.05	13.51	1.849	12.10	26.07	0.04	0.05	0.381	0.14	34.23	89.37	57	14	74	< 20	9	< 20	< 10	1050	30	5	15
133220	2.04	0.52	0.05	13.96	1.975	13.24	25.42	0.02	0.04	0.277	0.49	39.19	95.20	59	8	77	< 20	7	< 20	< 10	1270	22	4	11
133221	2.94	1.22	0.05	17.02	2.017	12.94	22.34	0.05	0.05	0.313	0.57	36.92	93.51	53	12	67	< 20	12	< 20	< 10	2000	20	4	10
133222	2.15	1.43	0.09	14.62	1.926	12.23	23.01	0.07	0.09	0.203	0.98	37.05	91.70	60	12	73	< 20	9	< 20	< 10	1430	23	4	11
133223	2.52	1.94	0.08	14.22	2.041	12.19	24.74	0.06	0.08	0.332	0.73	36.77	93.19	54	10	76	< 20	9	< 20	< 10	1460	23	4	11
133224	< 0.01	99.15	0.03	0.73	0.019	0.09	0.22	0.01	< 0.01	0.002	0.03	0.05	100.3	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	< 1	1	< 5
133225	6.23	20.67	3.08	27.80	2.390	7.00	17.48	0.31	1.32	1.460	0.56	12.33	94.39	21	13	153	170	30	70	30	1450	26	5	13
133226	2.79	0.49	0.06	12.53	1.883	12.85	26.68	0.03	0.03	0.349	0.42	38.61	93.92	46	8	77	< 20	7	< 20	< 10	1030	22	4	10
133227	7.38	0.89	0.07	13.23	2.273	11.31	28.01	0.02	0.04	0.254	0.40	32.96	89.46	35	22	60	< 20	8	< 20	< 10	1880	28	4	12
133228	7.81	1.20	0.08	9.79	1.718	12.15	31.65	0.03	0.07	0.196	0.79	33.52	91.20	47	20	62	< 20	4	< 20	< 10	1220	26	4	10
133229	5.70	0.79	0.05	11.29	1.831	12.51	29.13	0.03	0.05	0.167	0.32	35.83	91.99	50	12	68	< 20	6	< 20	< 10	1160	26	4	10
133230	5.09	0.55	0.06	13.10	1.561	12.44	27.51	0.03	0.04	0.237	0.54	36.34	92.41	61	12	84	< 20	6	< 20	< 10	1040	77	11	27
133231	5.31	0.70	0.08	10.80	1.545	13.05	29.11	0.03	0.06	0.099	0.87	36.83	93.17	64	12	63	< 20	4	< 20	< 10	1290	78	11	29
133232	2.93	1.09	0.07	17.49	2.098	11.80	23.05	0.02	0.05	0.144	0.78	36.81	93.40	52	10	71	< 20	8	< 20	< 10	1130	66	11	28
133233	2.51	1.54	0.07	15.95	2.151	12.03	24.26	0.04	0.06	0.147	1.34	36.60	94.19	53	9	72	< 20	8	< 20	< 10	990	63	11	28
133234	2.76	1.45	0.05	14.24	1.732	12.76	24.77	0.04	0.06	0.224	0.33	37.64	93.28	49	14	76	< 20	9	< 20	< 10	820	68	11	26
133235	2.83	2.37	0.15	26.80	2.666	9.60	17.61	0.03	0.10	0.314	0.38	30.74	90.76	46	7	85	< 20	11	< 20	20	3780	66	13	32
133236	5.94	1.74	0.06	18.19	2.252	10.56	25.13	0.03	0.03	0.225	0.15	34.02	92.39	50	8	69	< 20	9	< 20	< 10	2210	77	13	34
133237	2.29	0.83	0.10	23.55	2.505	10.71	19.54	0.02	0.07	0.329	0.36	36.39	94.40	52	5	79	< 20	11	< 20	< 10	1840	57	11	26
133238	2.59	0.81	0.10	23.32	2.517	10.81	19.97	0.02	0.08	0.360	0.33	36.21	94.53	52	6	80	< 20	11	< 20	< 10	1970	58	11	26
133239	3.37	1.26	0.13	13.66	1.537	12.15	27.36	0.04	0.11	0.429	1.32	36.01	94.00	86	9	97	< 20	6	< 20	< 10	960	61	11	29
133240	0.82	3.35	0.29	28.28	2.530	9.73	16.28	0.04	0.24	0.278	1.37	31.24	93.63	54	5	89	< 20	14	< 20	< 10	1080	51	12	30
133241	2.73	2.12	0.17	19.19	2.054	11.01	22.30	0.07	0.15	0.285	0.87	32.25	90.48	78	7	98	< 20	14	< 20	10	1950	67	13	35
133242	7.26	2.90	0.29	16.41	1.752	9.65	28.50	0.09	0.26	0.970	2.37	28.54	91.74	77	8	119	< 20	8	< 20	< 10	1240	72	13	32
133243	1.94	2.59	0.21	17.06	1.928	12.14	24.05	0.06	0.19	0.166	0.97	36.08	95.45	80	6	80	< 20	11	< 20	< 10	1030	61	11	29
133244	4.50	3.00	0.06	28.02	3.111	8.73	17.02	0.03	0.03	0.136	0.95	31.93	93.02	43	7	55	< 20	15	< 20	< 10	2220	78	15	39
133245	3.80	2.23	0.04	23.99	2.988	10.23	19.85	0.03	0.03	0.106	0.85	34.01	94.35	54	6	56	< 20	11	< 20	< 10	1650	76	13	33
133246	5.16	0.62	0.04	19.46	2.442	10.76	24.54	0.06	0.03	0.187	1.32	33.81	93.28	66	7	67	< 20	8	< 20	< 10	1240	61	10	26
133247	3.26	0.71	0.13	19.74	2.350	10.73	23.94	0.03	0.11	0.115	0.88	34.59	93.31	43	5	93	< 20	9	< 20	< 10	1970	78	14	35
133248	2.64	3.02	0.09	26.30	2.906	10.16	17.81	0.02	0.07	0.150	0.48	34.26	95.27	38	5	73	< 20	13	< 20	< 10	1900	72	16	40

Activation Laboratories Ltd. Report: A13-11628

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133249	0.03	99.00	0.04	1.09	0.032	0.14	0.29	0.01	< 0.01	0.002	0.02	0.21	100.8	< 1	< 1	5	100	< 1	< 20	< 10	< 30	< 1	1	< 5
133250	6.26	20.75	3.08	28.31	2.420	7.15	17.55	0.31	1.34	1.525	0.57	12.16	95.16	21	13	151	160	28	70	40	1460	62	11	28
133251	7.97	0.53	0.06	11.67	1.739	11.81	30.74	0.02	0.05	0.198	0.58	33.91	91.31	48	9	74	< 20	6	< 20	< 10	1800	91	12	31
133252	5.93	0.72	0.07	12.34	1.976	12.85	29.35	0.04	0.07	0.112	0.49	35.48	93.48	52	16	70	< 20	5	< 20	< 10	1020	77	12	30
133253	4.53	1.41	0.07	13.51	2.123	12.86	27.10	0.06	0.06	0.108	0.34	36.40	94.04	53	22	64	< 20	6	< 20	< 10	1220	77	12	29
133254	7.12	1.18	0.05	10.46	1.684	12.16	29.92	0.05	0.06	0.100	0.90	34.26	90.81	47	20	58	< 20	4	< 20	< 10	1020	93	12	29
133255	3.83	0.26	0.06	15.85	2.240	12.23	25.34	0.02	0.05	0.032	0.23	36.70	93.00	58	13	65	< 20	6	< 20	< 10	2040	82	13	33
133256	5.73	1.50	0.10	10.50	1.724	12.31	29.70	0.03	0.09	0.085	0.52	35.36	91.91	51	13	70	< 20	5	< 20	< 10	1650	90	13	32
133257	5.70	0.65	0.17	8.89	1.587	13.52	30.99	0.02	0.12	0.071	0.81	36.53	93.35	48	12	64	< 20	3	< 20	< 10	1020	84	11	29
133258	5.30	1.58	0.07	9.44	1.606	12.69	29.34	0.03	0.07	0.053	1.01	35.52	91.41	46	12	57	< 20	4	< 20	< 10	1750	91	12	30
133259	1.84	0.74	0.17	13.26	1.701	12.85	26.21	0.03	0.12	0.112	1.09	37.88	94.15	56	5	88	< 20	7	< 20	< 10	1060	33	6	18
133260	3.86	1.79	0.26	10.89	1.385	12.49	29.02	0.02	0.19	0.209	1.21	35.77	93.23	40	5	86	< 20	6	< 20	20	950	80	12	32

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133145	< 2	1802	225	32	308	9	0.9	0.2	17	< 0.5	< 0.5	364	2.1	3410	6600	685	2510	386	87.9	161	16.3	58.6	7.3	15.3
133146	< 2	1608	339	29	803	< 2	1.0	0.3	35	< 0.5	< 0.5	494	2.1	4360	8070	818	2850	423	104	207	24.0	91.3	12.3	26.3
133147	< 2	2548	441	64	298	< 2	1.1	0.2	16	< 0.5	< 0.5	367	2.0	3590	6720	688	2520	407	107	224	28.0	113	15.5	31.9
133148	< 2	3045	678	61	411	< 2	1.2	0.2	25	< 0.5	< 0.5	371	3.2	2810	5570	602	2310	397	107	234	34.1	158	24.1	52.4
133149	< 2	2524	379	55	441	< 2	1.1	0.2	18	< 0.5	< 0.5	356	1.1	3710	6840	677	2410	362	91.5	184	23.1	94.8	13.4	28.4
133150	< 2	2429	176	40	668	< 2	0.8	< 0.2	18	< 0.5	< 0.5	262	1.0	3700	6470	610	2050	270	63.8	118	11.8	44.1	5.8	11.5
133151	< 2	2110	231	29	1010	< 2	0.8	< 0.2	27	0.6	< 0.5	365	1.7	4320	7650	724	2400	310	72.3	137	15.2	58.3	7.9	16.2
133152	< 2	2148	216	27	636	< 2	0.8	< 0.2	20	< 0.5	< 0.5	241	1.5	4410	7780	740	2480	324	74.5	135	14.5	54.4	7.2	14.8
133153	< 2	2282	249	60	496	13	0.9	< 0.2	13	0.5	< 0.5	250	1.0	3360	5880	570	1990	267	65.5	131	16.8	67.2	9.0	18.8
133154	2	2359	331	60	636	25	0.9	< 0.2	15	< 0.5	< 0.5	312	0.8	4320	7480	713	2490	349	84.9	163	20.7	84.3	11.8	24.9
133155	< 2	2370	312	40	775	18	0.8	< 0.2	20	< 0.5	< 0.5	202	0.4	4110	7180	701	2490	360	87.8	171	20.6	81.2	11.3	24.1
133156	< 2	2293	294	27	938	4	< 0.5	< 0.2	21	0.5	< 0.5	242	0.7	4250	7590	744	2640	366	87.5	170	20.1	79.1	10.8	21.1
133157	< 2	2679	319	43	1220	11	0.6	< 0.2	25	< 0.5	< 0.5	273	0.8	4640	7920	758	2630	380	94.4	184	21.2	81.5	10.9	23.6
133158	< 2	2278	304	44	503	39	0.7	< 0.2	12	< 0.5	< 0.5	253	0.9	3740	7000	716	2690	402	97.3	183	21.0	81.2	10.9	22.9
133159	< 2	2425	345	56	691	13	0.7	< 0.2	12	< 0.5	< 0.5	353	0.7	5840	9670	907	3150	399	92.9	174	20.9	85.6	12.4	27.4
133160	3	2467	263	32	514	14	0.7	< 0.2	24	< 0.5	< 0.5	403	2.3	2950	6300	702	2600	342	79.6	152	17.2	72.7	9.9	21.3
133161	< 2	2266	311	22	843	7	0.7	< 0.2	21	< 0.5	< 0.5	264	0.6	4700	8580	849	2960	388	89.6	168	20.0	78.3	11.2	23.8
133162	< 2	2290	305	25	725	7	< 0.5	< 0.2	29	< 0.5	< 0.5	230	0.8	4890	9010	889	3060	396	89.6	168	19.5	75.4	10.4	21.9
133163	< 2	2267	303	26	641	3	0.5	< 0.2	16	< 0.5	< 0.5	247	0.6	5170	9130	890	3110	415	94.4	175	20.2	79.0	11.0	25.1
133164	< 2	2329	302	32	623	6	0.7	< 0.2	20	< 0.5	< 0.5	470	< 0.4	5220	9150	870	3070	387	89.4	167	19.7	79.8	11.1	24.5
133165	< 2	2252	376	44	712	9	0.6	< 0.2	18	< 0.5	< 0.5	496	0.6	4430	8170	812	2930	401	94.1	178	22.1	89.2	13.0	27.3
133166	< 2	2874	404	56	673	3	0.8	< 0.2	19	< 0.5	< 0.5	396	< 0.4	5020	8630	795	2680	370	92.5	190	23.9	101	14.6	30.1
133167	< 2	2876	715	28	483	4	< 0.5	< 0.2	27	0.8	< 0.5	368	0.4	4340	8210	819	2990	473	130	299	40.9	189	27.8	57.6
133168	< 2	2591	416	46	387	4	0.7	< 0.2	15	< 0.5	< 0.5	297	0.9	5240	8760	831	2920	430	109	221	26.5	108	15.1	32.2
133169	< 2	2623	524	22	220	3	< 0.5	< 0.2	19	0.8	< 0.5	228	0.5	3190	6580	719	2800	453	118	249	31.6	144	20.0	38.8
133170	< 2	2753	379	41	804	7	0.6	< 0.2	28	0.6	< 0.5	353	0.6	5320	9250	883	3080	416	103	202	24.9	98.0	13.5	28.5
133171	< 2	2649	409	63	418	6	0.6	< 0.2	13	< 0.5	< 0.5	375	0.6	5470	9180	856	2850	361	87.9	176	22.9	96.3	14.2	30.4
133172	< 2	2574	336	43	521	4	0.5	< 0.2	14	< 0.5	< 0.5	278	0.8	4590	7780	738	2580	349	84.5	167	20.6	82.9	11.8	25.9
133173	< 2	2501	318	25	750	4	< 0.5	< 0.2	18	< 0.5	< 0.5	305	0.9	5100	8780	830	2910	431	106	195	21.9	82.3	10.9	23.2
133174	< 2	8	< 2	14	< 1	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	10.0	18.2	1.79	5.7	0.9	0.19	0.5	< 0.1	0.2	< 0.1	< 0.1
133175	24	3026	885	228	333	54	1.9	< 0.2	41	< 0.5	< 0.5	13530	2.9	2620	4860	532	2220	483	133	313	45.1	204	33.2	77.5
133176	< 2	2569	320	40	289	7	0.5	< 0.2	15	< 0.5	< 0.5	296	1.1	4760	8530	829	2920	409	102	197	22.2	81.9	11.1	23.0
133177	< 2	2360	284	31	199	11	0.8	< 0.2	12	< 0.5	< 0.5	341	3.6	3970	7560	768	2740	382	91.4	169	19.1	72.1	9.3	19.7
133178	< 2	2382	358	49	661	6	0.8	< 0.2	25	< 0.5	< 0.5	328	1.7	4330	7820	757	2600	369	93.1	185	22.7	90.2	12.5	27.4
133179	< 2	2313	243	36	447	2	0.9	0.2	20	< 0.5	< 0.5	365	1.8	3770	6970	696	2490	388	94.1	176	19.3	66.1	8.1	16.9
133180	< 2	2527	351	42	250	4	0.8	< 0.2	18	< 0.5	< 0.5	358	3.0	4500	8100	773	2620	371	94.4	195	23.9	91.4	12.4	25.7
133181	< 2	2661	373	51	187	4	1.0	< 0.2	17	< 0.5	< 0.5	356	1.0	4110	7590	743	2560	327	78.3	158	20.9	90.3	13.2	30.8
133182	< 2	2709	347	21	151	7	0.6	< 0.2	10	< 0.5	< 0.5	324	2.5	4180	8230	821	2880	390	95.3	197	24.5	97.1	13.1	26.8
133183	< 2	2658	360	47	479	9	0.6	< 0.2	13	< 0.5	< 0.5	293	1.2	4860	8700	853	3010	400	95.5	193	22.8	96.0	13.7	27.7
133184	< 2	2915	367	43	449	4	0.7	< 0.2	13	< 0.5	< 0.5	492	1.3	4350	7350	692	2320	315	78.1	159	19.8	85.9	12.5	28.6
133185	< 2	2595	390	45	470	2	0.8	< 0.2	12	< 0.5	< 0.5	380	1.0	5200	9290	906	3190	425	105	211	25.0	106	14.9	33.3
133186	< 2	2689	399	66	409	5	0.9	< 0.2	11	< 0.5	< 0.5	483	1.7	6090	10200	960	3270	416	99.8	206	27.1	109	15.2	33.5
133187	< 2	3107	392	92	636	3	1.1	< 0.2	13	< 0.5	< 0.5	405	0.5	5380	8890	817	2720	339	80.4	169	21.3	93.0	13.7	32.0
133188	< 2	3113	387	92	573	2	1.3	< 0.2	13	< 0.5	< 0.5	426	0.9	5840	9660	883	2920	361	85.7	190	23.7	103	15.1	34.1
133189	< 2	2743	362	49	619	< 2	0.8	< 0.2	17	< 0.5	< 0.5	484	1.3	4790	8520	828	2870	397	98.3	216	26.1	107	14.7	29.7
133190	4	2652	296	28	496	14	0.7	< 0.2	17	< 0.5	< 0.5	566	2.2	3670	6670	667	2400	342	84.7	187	22.3	89.4	12.3	26.1
133191	< 2	2687	333	32	513	13	0.9	< 0.2	15	< 0.5	< 0.5	368	1.7	4520	8330	806	2770	369	91.8	200	24.6	94.7	12.4	25.5
133192	< 2	2660	414	22	519	4	0.7	< 0.2	18	< 0.5	< 0.5	339	1.6	4200	7790	764	2640	387	97.6	216	26.7	112	16.3	33.3
133193	2	2465	410	34	392	5	0.8	< 0.2	18	< 0.5	< 0.5	326	1.3	5190	9260	894	3070	418	105	232	28.5	117	15.9	31.6
133194	< 2	2713	343	37	599	3	0.8	< 0.2	16	< 0.5	< 0.5	322	0.9	4810	8270	788	2640	342	82.9	177	21.8	90.6	12.8	26.9
133195	< 2	2570	238	19	701	5	0.6	< 0.2	11	< 0.5	< 0.5	268	1.1	4440	7990	780	2690	344	77.5	152	16.3	64.5	8.8	18.8
133196	< 2	2387	278	38	446	5	0.9	< 0.2	12	< 0.5	< 0.5	242	1.1	4190	7590	739	2550	340	80.4	166	18.8	76.1	10.4	21.3

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133197	< 2	2450	342	51	266	< 2	0.9	< 0.2	8	< 0.5	< 0.5	305	0.9	5960	10100	931	3000	378	89.3	184	23.0	94.6	13.0	27.8
133198	< 2	2614	394	27	258	3	0.5	< 0.2	8	< 0.5	< 0.5	469	< 0.4	5140	8960	850	2900	376	90.0	190	23.8	101	14.5	30.3
133199	< 2	6	3	5	< 1	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	10.1	18.6	1.82	5.6	0.7	0.18	0.4	< 0.1	0.2	< 0.1	0.1
133200	34	20840	920	233	9	30	3.7	< 0.2	1	7.2	1.8	949	8.2	18500	29200	2630	8070	867	196	358	38.0	159	25.9	62.4
133201	< 2	2781	539	73	354	< 2	1.2	< 0.2	13	< 0.5	< 0.5	366	< 0.4	4360	7690	756	2680	361	89.4	203	28.6	135	20.4	44.4
133202	< 2	2468	445	48	255	< 2	0.7	< 0.2	10	< 0.5	< 0.5	381	0.5	6180	10000	866	2710	320	75.9	166	22.6	106	16.4	36.7
133203	< 2	2551	351	24	333	< 2	0.6	< 0.2	14	< 0.5	< 0.5	490	1.0	4910	8690	820	2730	346	83.4	182	22.4	95.7	13.5	28.2
133204	< 2	2416	387	44	374	< 2	0.9	< 0.2	15	< 0.5	< 0.5	425	0.6	5690	9810	908	3040	386	93.1	202	25.1	105	14.9	30.5
133205	< 2	2280	406	113	275	2	1.5	< 0.2	14	< 0.5	< 0.5	406	1.6	5600	8900	812	2700	322	72.8	150	20.7	93.4	14.6	32.5
133206	< 2	3127	430	91	363	3	1.1	< 0.2	12	< 0.5	< 0.5	349	0.9	6870	11300	1050	3510	425	95.0	195	23.9	102	15.9	35.8
133207	< 2	3468	428	112	85	5	1.3	< 0.2	7	< 0.5	< 0.5	358	0.6	7140	11100	936	2870	329	76.9	164	20.4	93.0	15.4	38.7
133208	3	2404	325	53	163	3	1.0	< 0.2	11	< 0.5	< 0.5	359	1.3	4720	8130	777	2690	391	98.5	202	24.4	89.9	12.5	26.4
133209	< 2	2541	308	23	156	16	0.6	< 0.2	12	< 0.5	< 0.5	249	1.1	4230	7810	799	2910	436	105	216	24.6	95.4	12.5	25.6
133210	< 2	2948	476	34	204	< 2	0.6	< 0.2	13	< 0.5	< 0.5	296	1.2	4500	7850	733	2460	348	88.4	188	23.5	107	16.5	37.2
133211	< 2	3091	399	49	280	< 2	0.7	< 0.2	11	< 0.5	< 0.5	335	1.0	5160	8990	844	2860	368	87.1	174	21.2	95.7	14.7	35.2
133212	4	2869	425	39	315	< 2	0.7	< 0.2	14	< 0.5	< 0.5	612	1.0	3370	6580	683	2500	361	87.3	181	22.2	98.5	14.8	33.9
133213	< 2	2880	449	32	233	< 2	0.8	< 0.2	12	< 0.5	< 0.5	284	1.0	4580	8000	750	2520	351	88.9	195	23.5	106	16.3	36.3
133214	< 2	2624	416	35	174	2	0.7	< 0.2	11	< 0.5	< 0.5	305	0.7	3520	6210	605	2120	304	74.6	158	19.8	93.3	14.2	33.4
133215	< 2	2643	340	30	468	5	0.9	< 0.2	20	< 0.5	< 0.5	329	1.9	3440	6620	681	2490	377	90.6	186	20.9	87.3	12.5	27.3
133216	< 2	2392	390	41	601	7	0.8	< 0.2	17	< 0.5	< 0.5	331	1.1	4100	7280	727	2630	372	88.2	191	22.6	101	14.7	32.1
133217	< 2	2173	278	21	262	2	0.7	< 0.2	19	< 0.5	< 0.5	594	0.8	2760	5750	625	2410	333	77.4	159	18.4	78.8	11.3	23.2
133218	3	2219	216	22	261	3	0.7	0.2	25	< 0.5	< 0.5	551	1.5	2750	5570	616	2440	346	74.5	145	16.1	61.3	8.6	18.6
133219	< 2	2823	232	12	1290	25	< 0.5	< 0.2	55	< 0.5	< 0.5	7205	2.2	4980	8350	801	2850	387	85.2	161	17.3	61.6	8.3	18.0
133220	< 2	2409	329	20	527	< 2	0.8	< 0.2	25	< 0.5	< 0.5	568	1.4	2750	5720	638	2450	362	88.8	194	22.0	89.8	12.5	26.1
133221	< 2	2140	308	27	738	2	0.6	< 0.2	46	< 0.5	< 0.5	932	2.8	2210	4960	560	2130	302	71.9	153	18.8	80.6	11.4	24.7
133222	< 2	2201	408	20	536	2	0.5	< 0.2	33	< 0.5	< 0.5	1458	4.0	2690	5810	634	2380	345	83.8	184	24.5	109	15.9	33.7
133223	< 2	2340	447	18	672	< 2	0.6	< 0.2	23	< 0.5	< 0.5	1084	3.1	2970	6380	679	2430	335	81.1	178	23.2	110	17.0	37.1
133224	< 2	18	5	5	< 1	2	0.6	< 0.2	< 1	< 0.5	< 0.5	10	< 0.4	24.4	49.7	5.15	16.9	2.6	0.59	1.3	0.2	0.8	0.1	0.2
133225	25	3082	880	234	345	47	2.3	< 0.2	42	< 0.5	< 0.5	13590	2.8	2640	4900	533	2220	475	131	316	43.6	208	34.3	81.1
133226	< 2	2190	295	11	749	< 2	< 0.5	< 0.2	25	< 0.5	< 0.5	392	2.2	2680	5790	617	2240	293	64.8	133	16.6	71.5	11.0	24.6
133227	< 2	2690	351	19	392	5	0.7	< 0.2	15	< 0.5	< 0.5	2681	6.5	4350	8440	816	2700	317	72.1	157	20.5	85.8	13.0	28.2
133228	< 2	3214	434	24	354	4	0.5	< 0.2	11	< 0.5	< 0.5	1204	3.4	4790	8300	765	2440	287	67.7	154	22.2	96.9	15.1	33.6
133229	< 2	2884	394	17	337	4	< 0.5	< 0.2	11	< 0.5	< 0.5	732	3.3	4140	7650	727	2360	283	67.9	151	20.6	92.0	14.1	30.4
133230	< 2	2954	449	29	484	< 2	0.6	< 0.2	23	< 0.5	< 0.5	415	1.7	4970	8070	784	2630	383	97.4	199	23.9	104	15.1	31.9
133231	< 2	3105	430	30	291	< 2	0.5	< 0.2	10	< 0.5	< 0.5	521	1.5	4490	7920	769	2570	371	94.4	190	22.4	92.6	13.8	29.7
133232	< 2	2371	304	22	413	2	0.6	0.3	24	< 0.5	< 0.5	303	2.9	3780	6610	692	2560	362	82.7	152	16.9	69.7	10.2	22.3
133233	< 2	2256	379	28	723	< 2	0.7	0.3	25	< 0.5	< 0.5	568	2.1	3100	5930	650	2520	400	97.9	183	19.4	86.8	12.7	26.5
133234	< 2	2243	320	25	732	2	< 0.5	< 0.2	19	< 0.5	< 0.5	354	0.7	3530	6610	683	2420	444	108	205	22.2	82.8	11.2	23.1
133235	2	1681	482	23	797	3	0.6	0.3	44	< 0.5	< 0.5	471	2.5	2570	5940	703	2740	548	129	245	28.4	113	16.5	34.9
133236	< 2	2139	336	11	635	17	0.6	0.2	32	< 0.5	< 0.5	206	10.5	3030	7690	876	3060	483	114	205	21.2	80.1	10.9	22.9
133237	< 2	1836	245	13	744	4	< 0.5	0.3	40	< 0.5	< 0.5	211	2.6	2470	5280	604	2390	448	98.4	168	16.5	63.3	8.6	17.8
133238	< 2	1857	243	12	817	5	0.6	0.3	47	< 0.5	< 0.5	217	3.0	2390	5300	603	2320	419	92.1	164	16.3	59.5	8.1	17.2
133239	< 2	2666	448	40	910	4	0.9	0.2	42	< 0.5	< 0.5	332	1.7	3070	5800	630	2350	437	108	207	23.7	101	15.3	33.6
133240	5	2060	339	30	291	9	0.7	0.3	85	< 0.5	< 0.5	476	2.5	2020	4190	547	2540	492	111	200	22.2	86.8	12.0	25.0
133241	3	2042	429	25	757	23	0.8	0.3	49	< 0.5	< 0.5	304	3.3	3150	6390	742	2910	505	125	241	25.5	102	14.2	30.1
133242	5	2612	614	35	1820	10	1.0	0.2	88	< 0.5	< 0.5	467	3.1	2950	6360	732	2760	440	104	209	27.4	126	20.1	46.4
133243	4	2203	321	35	576	7	0.8	0.2	37	< 0.5	< 0.5	320	2.6	3020	5880	672	2520	372	82.7	149	16.5	71.0	10.8	25.3
133244	< 2	1643	536	25	229	12	0.7	0.3	51	< 0.5	< 0.5	155	8.4	1900	6470	913	3610	459	99.0	193	22.9	108	17.3	42.2
133245	< 2	1825	452	18	211	18	0.6	0.2	26	< 0.5	< 0.5	169	6.3	2610	6930	840	3020	415	94.0	180	20.9	92.0	14.3	33.8
133246	< 2	2268	494	24	276	12	0.7	< 0.2	22	< 0.5	< 0.5	131	3.3	2820	6070	671	2390	350	88.4	181	24.3	112	17.5	39.2
133247	2	2320	624	27	586	32	1.1	< 0.2	47	< 0.5	< 0.5	171	6.6	3120	7320	870	3130	431	99.4	203	28.8	138	22.3	51.9
133248	< 2	1505	681	23	464	17	0.9	0.2	83	< 0.5	< 0.5	152	7.6	1810	6160	869	3600	551	118	230	29.5	140	22.0	49.7

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133249	< 2	25	6	6	< 1	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	33.3	75.2	8.03	26.8	3.8	0.92	2.1	0.3	1.3	0.2	0.5
133250	26	3125	885	216	381	53	2.9	< 0.2	44	< 0.5	0.5	13700	3.0	2580	4800	550	2220	474	130	301	39.6	189	30.8	74.0
133251	< 2	3095	383	19	470	14	0.7	< 0.2	28	< 0.5	< 0.5	200	2.5	4660	9550	937	2880	311	72.4	143	17.5	78.3	12.1	28.7
133252	< 2	3097	310	26	479	2	< 0.5	< 0.2	16	< 0.5	< 0.5	937	1.8	4050	7490	783	2670	334	77.5	152	16.5	67.0	10.1	24.8
133253	< 2	2634	306	17	620	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	1224	1.9	4090	7560	784	2760	377	88.6	168	19.7	75.2	10.0	22.9
133254	< 2	2974	375	26	570	< 2	0.7	< 0.2	15	< 0.5	< 0.5	875	1.0	5560	9210	861	2750	330	79.7	158	18.4	83.8	12.3	29.3
133255	< 2	2742	477	15	82	< 2	0.8	0.2	9	< 0.5	< 0.5	300	2.4	3950	8230	880	3030	424	108	212	25.2	114	16.3	36.4
133256	< 2	2625	434	19	426	7	0.7	< 0.2	14	< 0.5	< 0.5	381	1.1	5100	9280	888	2910	366	83.2	160	19.4	91.2	14.3	34.0
133257	2	2935	328	25	558	7	0.6	< 0.2	15	< 0.5	< 0.5	458	0.7	5220	8750	826	2680	335	79.9	154	16.7	70.1	10.5	24.1
133258	< 2	2859	283	21	314	7	0.5	< 0.2	6	< 0.5	< 0.5	365	0.5	5750	9590	876	2790	335	76.9	147	14.9	60.2	9.0	21.8
133259	2	2338	409	35	439	30	1.4	< 0.2	18	1.3	< 0.5	206	1.5	4770	8350	848	2990	428	99.4	190	22.0	98.2	14.4	31.7
133260	3	2177	368	24	588	15	0.6	< 0.2	21	< 0.5	< 0.5	306	1.2	4580	8140	833	2790	380	88.3	168	17.9	75.9	11.2	25.5

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133145	1.78	10.6	1.48	0.7	0.2	5	0.2	340	865	0.1	4.11
133146	2.84	14.3	1.92	1.1	< 0.1	10	0.1	288	931	0.1	4.96
133147	3.49	20.1	2.72	1.3	< 0.1	5	0.1	321	947	< 0.1	3.74
133148	5.83	32.4	4.48	1.7	< 0.1	4	0.1	445	969	< 0.1	3.78
133149	3.16	17.8	2.40	1.4	< 0.1	5	0.2	258	730	0.2	2.89
133150	1.23	6.9	0.99	0.8	< 0.1	8	0.1	143	425	0.1	2.55
133151	1.72	9.2	1.17	0.9	< 0.1	13	0.2	223	464	0.1	3.55
133152	1.57	8.9	1.19	0.8	< 0.1	9	< 0.1	175	509	< 0.1	3.64
133153	2.05	11.9	1.53	1.3	< 0.1	5	0.3	168	304	0.2	3.53
133154	2.69	14.4	2.06	1.5	< 0.1	6	0.3	167	388	0.3	3.52
133155	2.58	13.6	1.72	1.1	< 0.1	9	0.1	168	438	0.3	3.71
133156	2.32	12.1	1.64	0.9	< 0.1	8	0.1	98	421	0.2	3.68
133157	2.64	15.8	2.16	1.3	0.1	16	0.1	124	505	0.2	3.66
133158	2.61	14.6	1.86	1.1	< 0.1	6	0.2	334	543	0.3	3.66
133159	3.24	17.4	2.23	1.3	< 0.1	6	0.2	130	396	0.2	3.66
133160	2.48	13.4	1.77	0.9	< 0.1	8	0.3	263	515	0.5	3.58
133161	2.69	14.5	1.88	0.8	< 0.1	9	0.2	133	401	0.2	1.79
133162	2.52	13.7	1.74	0.9	< 0.1	9	0.1	156	391	0.2	1.76
133163	2.65	14.2	1.77	0.9	< 0.1	7	< 0.1	76	387	0.2	3.61
133164	2.69	14.4	1.83	1.0	< 0.1	8	< 0.1	66	286	0.1	3.59
133165	3.22	17.9	2.37	1.3	< 0.1	7	< 0.1	79	298	0.1	3.57
133166	3.59	19.7	2.60	1.5	< 0.1	10	< 0.1	61	367	< 0.1	1.84
133167	6.20	32.4	4.00	1.9	< 0.1	13	< 0.1	100	618	0.2	4.22
133168	3.62	19.2	2.45	1.4	< 0.1	6	0.1	117	551	< 0.1	3.82
133169	4.09	22.2	2.74	1.4	< 0.1	14	0.1	92	424	0.2	3.68
133170	3.19	18.6	2.36	1.2	< 0.1	15	0.1	85	375	0.1	3.63
133171	3.53	19.7	2.65	1.6	< 0.1	5	< 0.1	87	362	< 0.1	3.18
133172	3.02	17.0	2.22	1.1	< 0.1	5	< 0.1	158	372	0.1	3.00
133173	2.57	14.2	1.89	0.9	< 0.1	9	< 0.1	166	533	< 0.1	3.74
133174	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.1	< 0.1	0.405
133175	9.16	48.7	6.01	5.2	1.4	25	0.4	608	923	2.7	0.0250
133176	2.74	15.6	2.11	1.1	< 0.1	5	< 0.1	189	579	< 0.1	2.19
133177	2.27	13.4	1.86	1.0	< 0.1	3	0.2	416	618	< 0.1	1.66
133178	3.10	17.5	2.37	1.2	< 0.1	7	0.2	198	570	< 0.1	3.74
133179	1.83	10.4	1.42	1.1	0.3	4	0.3	349	728	0.4	3.70
133180	2.94	17.2	2.21	1.3	< 0.1	4	0.2	267	722	0.2	3.47
133181	3.56	19.9	2.63	1.3	< 0.1	4	0.1	174	503	< 0.1	3.88
133182	2.95	15.6	2.13	1.1	< 0.1	3	0.2	256	578	< 0.1	3.64
133183	3.16	17.2	2.39	1.3	< 0.1	4	0.2	193	413	0.1	3.63
133184	3.08	17.4	2.34	1.3	< 0.1	4	0.2	245	441	0.1	3.63
133185	3.60	19.4	2.59	1.4	< 0.1	3	0.1	176	565	< 0.1	3.59
133186	3.58	19.3	2.60	1.6	< 0.1	3	0.2	226	494	< 0.1	3.79
133187	3.66	19.7	2.68	1.6	< 0.1	5	0.1	70	310	< 0.1	1.30
133188	3.91	21.4	2.89	1.7	< 0.1	5	0.1	83	317	< 0.1	1.11
133189	3.39	18.6	2.53	1.3	< 0.1	6	0.2	179	506	0.1	3.67
133190	2.85	15.7	2.02	1.0	< 0.1	3	0.4	177	522	0.2	2.56
133191	2.87	16.2	2.21	1.1	< 0.1	4	0.2	153	450	0.1	3.74
133192	3.73	19.0	2.42	1.1	< 0.1	5	0.2	167	596	0.1	3.74
133193	3.60	20.6	2.76	1.4	< 0.1	4	0.3	192	544	0.1	3.49
133194	3.05	16.9	2.24	1.1	0.3	4	0.3	101	364	0.3	3.79
133195	2.14	11.0	1.51	0.8	0.1	5	0.3	148	240	0.2	2.47

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133196	2.41	13.6	1.87	1.1	0.5	3	0.2	204	399	0.4	2.90
133197	3.04	17.0	2.27	1.3	< 0.1	3	0.2	192	398	< 0.1	3.44
133198	3.45	18.0	2.50	1.0	< 0.1	3	0.1	92	337	0.1	3.67
133199	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.0	< 0.1	0.400
133200	8.37	48.6	6.55	3.5	< 0.1	5	2.4	905	156	202	0.0250
133201	5.07	27.2	3.52	1.8	< 0.1	3	0.2	104	380	0.2	2.46
133202	4.12	21.7	2.89	1.4	< 0.1	2	0.1	134	403	< 0.1	3.69
133203	3.01	16.4	2.18	0.9	< 0.1	3	0.1	216	441	< 0.1	3.84
133204	3.37	18.3	2.49	1.2	0.1	8	0.2	191	471	0.1	2.70
133205	3.78	21.1	2.84	2.0	< 0.1	3	0.2	260	365	< 0.1	2.44
133206	4.05	22.2	2.96	2.0	< 0.1	3	0.1	194	378	< 0.1	4.28
133207	4.57	24.4	3.42	2.0	< 0.1	2	0.1	171	255	< 0.1	3.11
133208	2.96	16.7	2.40	1.3	1.1	2	0.3	243	434	0.8	3.77
133209	2.81	15.7	1.99	0.9	< 0.1	2	0.2	188	516	< 0.1	3.72
133210	4.29	24.0	3.22	1.2	< 0.1	3	0.2	226	538	< 0.1	3.50
133211	4.13	22.5	2.91	1.2	< 0.1	3	< 0.1	151	447	0.1	3.98
133212	4.03	22.2	2.93	1.2	< 0.1	2	0.3	204	574	0.2	2.23
133213	4.19	22.8	2.99	1.2	< 0.1	3	0.2	226	544	< 0.1	2.15
133214	3.99	22.4	2.89	1.2	< 0.1	2	0.2	189	364	< 0.1	3.86
133215	3.00	16.4	2.22	1.0	< 0.1	4	0.2	395	587	0.1	3.92
133216	3.62	19.4	2.58	1.3	< 0.1	5	0.1	260	413	0.1	3.97
133217	2.58	14.5	1.85	0.9	< 0.1	4	0.1	309	360	< 0.1	2.87
133218	2.08	11.9	1.55	0.8	< 0.1	4	0.2	375	406	0.1	3.53
133219	2.10	11.8	1.49	0.8	< 0.1	15	0.2	231	536	< 0.1	2.87
133220	3.06	17.3	2.17	1.1	< 0.1	7	0.1	325	532	< 0.1	4.30
133221	2.84	16.0	2.15	1.0	< 0.1	7	0.2	457	516	< 0.1	4.09
133222	3.71	20.0	2.52	1.1	< 0.1	4	0.2	420	584	< 0.1	4.09
133223	4.28	21.6	2.73	1.1	< 0.1	6	0.2	313	526	0.2	4.47
133224	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	4.0	< 0.1	0.400
133225	9.60	50.6	6.43	5.6	1.6	27	0.4	529	883	2.7	0.0250
133226	2.81	14.5	1.81	0.7	< 0.1	10	0.1	237	351	0.1	3.12
133227	3.14	16.3	2.10	0.9	< 0.1	8	0.2	400	520	< 0.1	3.83
133228	3.89	21.0	2.71	1.0	< 0.1	6	0.2	213	543	< 0.1	4.01
133229	3.55	18.2	2.32	0.9	< 0.1	4	0.1	227	569	0.2	4.01
133230	3.64	20.0	2.43	1.5	< 0.1	6	0.3	221	760	0.1	4.45
133231	3.55	19.4	2.41	1.3	< 0.1	3	0.2	227	628	< 0.1	4.07
133232	2.65	14.0	1.67	0.9	< 0.1	4	0.2	544	512	< 0.1	4.20
133233	3.22	17.0	1.95	1.2	< 0.1	5	0.2	369	485	0.2	4.22
133234	2.54	14.1	1.95	1.2	< 0.1	7	< 0.1	155	434	0.2	2.93
133235	3.76	19.8	2.12	1.5	< 0.1	7	0.2	1610	1060	< 0.1	4.08
133236	2.64	14.1	1.84	1.0	< 0.1	6	0.2	668	1500	0.1	4.07
133237	2.05	12.2	1.61	0.9	< 0.1	5	0.2	312	840	0.3	2.08
133238	2.06	12.1	1.53	0.8	0.1	5	0.1	366	828	0.3	1.86
133239	4.06	21.7	2.66	1.4	0.9	7	0.1	214	670	4.0	3.59
133240	2.81	16.2	1.99	1.4	< 0.1	4	0.2	470	839	0.7	3.94
133241	3.58	20.2	2.48	1.4	< 0.1	8	0.3	341	1460	1.3	3.35
133242	5.62	31.0	3.73	1.8	0.3	13	0.3	317	1050	1.2	1.93
133243	3.11	17.4	2.21	1.2	0.5	4	0.3	273	609	1.3	3.81
133244	4.68	24.5	2.95	1.4	< 0.1	2	0.4	666	1090	< 0.1	4.12
133245	4.00	20.5	2.42	1.2	< 0.1	2	0.3	471	980	< 0.1	4.03
133246	4.46	23.6	2.82	1.4	< 0.1	4	0.1	291	912	< 0.1	2.65

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133247	5.69	29.3	3.54	1.8	< 0.1	4	0.4	673	1120	< 0.1	3.72
133248	5.50	27.4	3.06	1.8	< 0.1	4	0.4	615	1460	< 0.1	4.22
133249	0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	11.1	< 0.1	0.400
133250	9.06	48.9	5.91	5.7	2.8	26	0.4	573	882	2.7	0.0250
133251	3.37	18.2	2.33	1.2	< 0.1	5	0.3	238	650	< 0.1	4.02
133252	3.09	18.1	2.25	1.1	0.3	4	0.2	167	411	0.4	3.66
133253	2.57	14.8	1.83	1.0	0.8	5	0.2	205	430	0.5	1.86
133254	3.47	19.7	2.53	1.2	< 0.1	5	< 0.1	179	348	< 0.1	2.32
133255	4.33	24.5	2.95	1.4	< 0.1	1	0.1	391	745	< 0.1	2.00
133256	3.97	21.5	2.55	1.2	0.8	4	0.1	266	346	0.5	4.39
133257	2.85	16.5	1.99	1.1	1.3	4	0.1	131	248	0.7	3.74
133258	2.66	15.5	1.93	0.9	0.5	3	< 0.1	139	239	0.3	3.53
133259	3.58	19.4	2.40	1.1	1.1	6	0.2	281	486	0.7	3.23
133260	2.88	16.7	1.93	1.0	4.0	6	0.1	197	411	2.2	3.75

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.06	11.36	1.89	0.75	0.013	0.35	43.72	0.87	0.55	0.117	30.20					1665								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.13																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.03																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.99	18.57	9.86	0.147	10.02	11.21	1.91	0.23	0.478	0.07			31		156	270	57	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.78	13.07	3.21	0.139	0.15	0.61	2.46	5.38	0.288	0.05			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.43	15.39	10.67	0.166	6.34	10.84	2.20	0.62	1.075	0.15			35	< 1	278	90	43	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.77	20.69	6.17	0.107	0.51	7.93	6.97	1.67	0.292	0.13			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																					40			
CTA-AC-1 Cert																					38.0			
BIR-1a Meas		47.93	15.58	11.22	0.171	9.63	13.31	1.81	0.02	0.973	0.04			44	< 1	342	370	53	160	130	70	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1100	106		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2600	7400	24		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				960	100	16	11	73
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		430				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20			17		
JR-1 Cert																			1.67			16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133159 Orig	3.67	1.90	0.09	8.57	1.327	13.68	28.97	0.03	0.09	0.099	1.64	36.89	93.29	54	11	61	< 20	6	< 20	< 10	920	32	5	16
133159 Dup	3.72	1.86	0.08	8.37	1.300	13.39	28.33	0.03	0.09	0.097	1.59	36.89	92.03	53	11	58	< 20	6	< 20	< 10	940	33	5	14
133176 Orig	6.68	0.85	0.04	10.50	1.562	12.27	29.93	0.03	0.03	0.127	1.16	34.96	91.45	59	17	85	< 20	5	< 20	< 10	1080	29	5	14
133176 Dup	6.65	0.84	0.05	10.45	1.559	12.46	30.29	0.03	0.03	0.127	1.16	34.96	91.95	60	17	85	< 20	5	< 20	< 10	1110	29	5	14
133186 Orig	3.62	1.53	0.06	9.42	1.530	13.65	27.49	0.03	0.07	0.099	1.59	37.05	92.51	60	34	78	< 20	6	< 20	< 10	1210	32	5	15
133186 Dup	3.60	1.51	0.06	9.50	1.537	13.77	27.67	0.03	0.07	0.099	1.58	37.05	92.88	60	35	77	< 20	6	< 20	< 10	1230	33	5	15
133194 Orig	5.46	0.37	0.11	8.93	1.395	13.63	31.05	0.02	0.08	0.253	1.07	36.73	93.64	61	13	69	< 20	6	< 20	< 10	890	28	4	16

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133194 Split	5.42	0.41	0.10	8.87	1.369	13.58	30.85	0.02	0.08	0.247	1.10	36.50	93.12	61	14	68	< 20	4	< 20	< 10	860	85	12	33
133201 Orig	5.38	1.97	0.08	7.47	1.131	13.16	31.22	0.06	0.07	0.110	2.42	35.26	92.96	71	12	74	< 20	4	< 20	< 10	500	27	5	13
133201 Dup	5.28	1.95	0.08	7.44	1.137	13.13	31.21	0.06	0.08	0.111	2.39	35.26	92.85	71	11	72	< 20	4	< 20	< 10	480	27	5	12
133204 Orig	4.60	2.09	0.07	10.96	1.627	12.91	27.61	0.03	0.06	0.136	1.01	36.14	92.63	78	11	68	< 20	7	< 20	< 10	1310	33	5	14
133204 Split	4.64	2.17	0.08	10.77	1.624	12.76	27.41	0.03	0.07	0.135	1.01	36.16	92.22	76	11	70	< 20	5	< 20	< 10	1250	93	13	33
133218 Orig	1.05	1.14	0.13	16.21	1.977	13.20	23.17	0.03	0.13	0.230	0.46	37.95	94.63	78	8	98	< 20	10	< 20	< 10	990	22	4	12
133218 Dup	1.04	1.12	0.12	16.13	1.964	12.78	22.99	0.03	0.12	0.232	0.46	37.95	93.90	77	7	99	< 20	9	< 20	< 10	960	22	5	12
133229 Orig	5.64	0.78	0.05	11.26	1.830	12.53	29.10	0.03	0.05	0.168	0.31	35.83	91.94	50	12	68	< 20	6	< 20	< 10	1120	25	4	10
133229 Dup	5.75	0.80	0.05	11.31	1.833	12.49	29.15	0.03	0.05	0.166	0.33	35.83	92.04	50	12	69	< 20	6	< 20	< 10	1190	26	4	11
133234 Orig	2.76	1.45	0.05	14.24	1.732	12.76	24.77	0.04	0.06	0.224	0.33	37.64	93.28	49	14	76	< 20	9	< 20	< 10	820	68	11	26
133234 Split	2.78	1.48	0.06	14.45	1.761	12.87	25.21	0.04	0.06	0.226	0.32	37.54	94.02	51	14	77	< 20	9	< 20	< 10	810	67	11	28
133244 Orig	4.50	3.00	0.06	28.02	3.111	8.73	17.02	0.03	0.03	0.136	0.95	31.93	93.02	43	7	55	< 20	15	< 20	< 10	2220	78	15	39
133244 Split	4.20	3.17	0.05	29.38	3.260	8.69	16.34	0.03	0.03	0.130	0.96	31.98	94.02	44	6	58	< 20	15	< 20	< 10	2060	68	14	33
133244 Orig	4.46	3.01	0.06	28.03	3.113	8.72	17.08	0.03	0.03	0.136	0.95	31.93	93.10	44	7	55	< 20	15	< 20	< 10	2240	78	15	38
133244 Dup	4.54	2.99	0.06	28.00	3.109	8.74	16.96	0.03	0.03	0.136	0.95	31.93	92.93	42	7	55	< 20	15	< 20	< 10	2210	77	15	40
133260 Orig	3.86	1.79	0.26	10.89	1.385	12.49	29.02	0.02	0.19	0.209	1.21	35.77	93.23	40	5	86	< 20	6	< 20	20	950	80	12	32
133260 Split	4.01	1.81	0.25	11.03	1.409	12.42	29.45	0.02	0.19	0.206	1.26	35.82	93.87	41	5	86	< 20	6	< 20	20	970	81	12	30
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		144	16	33								106					4.9		0.60					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		41	47	402								501												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	74					< 2			1		2.4			48.1	92.1		42.5	7.8	1.42			4.9		
LKSD-3 Cert	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas	19	197	20	84	8	< 2	< 0.5					174	< 0.4		24.7		12.8	3.3	1.08		0.7	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0	7.90	0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1201	121	527								346												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3320		1100	161	44.3	120	14.8			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		110	14	15								8					2.5	1.1	0.54	1.8				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	186		1590			230	34.3	184	35.7	96.5
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas																								
ZW-C Cert																								
NCS DC70014 Meas						270	16.7			180			80.3	43.2	85.0		36.2	7.5	1.63	6.8	1.1	6.1	1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0		39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	501							1.3	1700		43.2			23.0	58.9	7.56	31.2	12.1		14.3	3.3	20.5	4.2	12.5
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						27								264	478	44.6	144	23.5	3.55		3.6	21.8	4.8	14.0
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								797	1390	125	380	48.0	7.76			30.2	6.2	18.4
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5
JR-1 Meas	251				15	3	< 0.5	< 0.2	3		20.9		0.6	20.7	49.7	5.92	22.8	5.7		5.4	1.0	6.2		3.9
JR-1 Cert	257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69		3.61
NCS DC86318 Meas														1980	428	719	3300	1730	19.2	2070	469	2870	563	1680
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					983																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21600	29200	2370	6530	536	88.5					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133159 Orig	< 2	2451	349	58	704	12	0.7	< 0.2	12	< 0.5	< 0.5	357	0.5	5900	9720	911	3160	399	93.4	174	20.7	85.3	12.3	27.0
133159 Dup	< 2	2399	341	55	677	13	0.7	< 0.2	12	< 0.5	< 0.5	349	1.0	5790	9610	903	3130	398	92.5	174	21.1	85.8	12.4	27.8
133176 Orig	< 2	2575	316	39	291	7	0.5	< 0.2	14	< 0.5	< 0.5	299	0.9	4690	8490	831	2920	410	102	195	21.8	80.1	10.7	22.0
133176 Dup	< 2	2563	324	41	287	7	0.6	< 0.2	15	< 0.5	< 0.5	293	1.3	4830	8570	827	2910	408	101	200	22.7	83.8	11.4	24.0
133186 Orig	< 2	2690	399	65	401	5	0.9	< 0.2	11	< 0.5	< 0.5	481	1.7	6130	10300	963	3270	416	99.4	206	27.2	111	15.7	34.6
133186 Dup	< 2	2687	399	67	418	5	0.9	< 0.2	10	< 0.5	< 0.5	485	1.6	6050	10200	956	3280	416	100	206	27.1	108	14.8	32.3
133194 Orig	< 2	2713	343	37	599	3	0.8	< 0.2	16	< 0.5	< 0.5	322	0.9	4810	8270	788	2640	342	82.9	177	21.8	90.6	12.8	26.9

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133194 Split	< 2	2704	350	35	588	4	0.7	< 0.2	15	< 0.5	< 0.5	324	0.7	4950	8550	838	2810	355	86.3	174	20.6	85.0	11.7	25.0
133201 Orig	< 2	2766	539	74	356	2	1.3	< 0.2	14	< 0.5	< 0.5	366	0.5	4350	7620	751	2660	359	88.2	201	29.1	134	20.2	44.0
133201 Dup	< 2	2795	539	73	352	< 2	1.1	< 0.2	13	< 0.5	< 0.5	365	< 0.4	4370	7760	761	2710	364	90.7	204	28.1	137	20.6	44.8
133204 Orig	< 2	2416	387	44	374	< 2	0.9	< 0.2	15	< 0.5	< 0.5	425	0.6	5690	9810	908	3040	386	93.1	202	25.1	105	14.9	30.5
133204 Split	< 2	2344	384	44	378	< 2	0.6	< 0.2	14	< 0.5	< 0.5	437	1.0	5700	9780	929	3130	398	94.7	193	23.0	99.7	13.6	29.1
133218 Orig	3	2215	217	21	264	3	0.6	0.2	26	< 0.5	< 0.5	551	1.4	2730	5520	612	2460	352	76.1	148	16.4	61.3	8.5	18.3
133218 Dup	3	2222	215	23	258	3	0.8	0.2	25	< 0.5	< 0.5	551	1.5	2770	5620	620	2420	339	73.0	143	15.8	61.3	8.7	18.9
133229 Orig	< 2	2876	395	17	342	4	0.5	< 0.2	11	< 0.5	< 0.5	732	3.6	4160	7710	735	2380	287	69.3	157	22.5	95.4	14.5	30.4
133229 Dup	< 2	2891	393	17	332	4	< 0.5	< 0.2	11	< 0.5	< 0.5	733	2.9	4120	7580	719	2350	279	66.5	146	18.7	88.5	13.6	30.4
133234 Orig	< 2	2243	320	25	732	2	< 0.5	< 0.2	19	< 0.5	< 0.5	354	0.7	3530	6610	683	2420	444	108	205	22.2	82.8	11.2	23.1
133234 Split	< 2	2255	324	24	750	2	< 0.5	< 0.2	19	< 0.5	< 0.5	374	1.2	3560	6620	691	2460	443	110	208	21.6	82.6	10.8	22.0
133244 Orig	< 2	1643	536	25	229	12	0.7	0.3	51	< 0.5	< 0.5	155	8.4	1900	6470	913	3610	459	99.0	193	22.9	108	17.3	42.2
133244 Split	< 2	1572	542	24	223	10	0.6	0.3	56	< 0.5	< 0.5	150	8.5	1790	6010	850	3320	444	97.8	189	23.1	108	17.1	40.0
133244 Orig	< 2	1627	538	25	234	12	0.7	0.3	50	< 0.5	< 0.5	157	8.5	1910	6500	924	3640	467	100	196	23.3	109	17.6	42.5
133244 Dup	< 2	1660	534	25	223	12	0.7	0.3	51	< 0.5	< 0.5	153	8.2	1880	6430	902	3570	451	97.9	189	22.4	107	17.1	41.8
133260 Orig	3	2177	368	24	588	15	0.6	< 0.2	21	< 0.5	< 0.5	306	1.2	4580	8140	833	2790	380	88.3	168	17.9	75.9	11.2	25.5
133260 Split	3	2137	372	23	585	16	0.7	< 0.2	21	< 0.5	< 0.5	314	1.2	4450	7920	799	2700	370	85.9	164	17.3	72.9	10.7	25.8
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									917	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.8	0.40		0.6					4.6
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28500	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1				< 1	0.1		2.6	0.5
W-2a Cert	0.380	2.10				0.300	0.200		2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.7	1.06							4.2
CTA-AC-1 Cert		11.4	1.08							4.4
BIR-1a Meas		1.7		0.6						
BIR-1a Cert		1.7		0.60						
NCS DC86312 Meas	14.3	87.6	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					82.1	328	33.5			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.58	3.3	0.48					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.33	15.8	2.25			2200			30.5	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.39	15.1	2.10						53.6	139
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.91	17.8	2.43						36.8	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas	0.73	4.7	0.69	4.5	1.8		1.6	20	28.2	9.2
JR-1 Cert	0.67	4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	267	1780	254							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133159 Orig	3.21	16.8	2.21	1.3	< 0.1	6	0.2	120	392	0.2
133159 Dup	3.27	18.0	2.25	1.3	< 0.1	5	0.2	140	399	0.2
133176 Orig	2.67	15.2	2.11	1.1	< 0.1	5	0.1	181	574	< 0.1
133176 Dup	2.82	16.1	2.12	1.1	< 0.1	5	< 0.1	196	585	< 0.1
133186 Orig	3.63	19.8	2.67	1.6	< 0.1	3	0.2	225	491	< 0.1
133186 Dup	3.52	18.8	2.54	1.5	< 0.1	3	0.2	227	497	< 0.1
133194 Orig	3.05	16.9	2.24	1.1	0.3	4	0.3	101	364	0.3

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133194 Split	2.98	16.8	2.12	1.4	0.4	4	0.1	96	381	0.3
133201 Orig	4.96	27.0	3.50	1.7	< 0.1	2	0.3	107	377	0.2
133201 Dup	5.18	27.5	3.54	1.8	< 0.1	3	0.2	102	382	0.2
133204 Orig	3.37	18.3	2.49	1.2	0.1	8	0.2	191	471	0.1
133204 Split	3.15	17.7	2.28	1.5	0.2	3	0.1	212	496	0.2
133218 Orig	2.03	11.5	1.53	0.7	< 0.1	4	0.2	376	413	0.1
133218 Dup	2.14	12.3	1.56	0.9	< 0.1	4	0.2	375	400	0.1
133229 Orig	3.59	18.1	2.31	0.9	< 0.1	4	0.1	243	587	0.1
133229 Dup	3.52	18.3	2.32	0.9	< 0.1	4	0.1	211	550	0.2
133234 Orig	2.54	14.1	1.95	1.2	< 0.1	7	< 0.1	155	434	0.2
133234 Split	2.44	13.7	1.80	1.1	< 0.1	7	< 0.1	155	444	0.1
133244 Orig	4.68	24.5	2.95	1.4	< 0.1	2	0.4	666	1090	< 0.1
133244 Split	4.78	24.4	2.92	1.6	< 0.1	2	0.3	698	1020	< 0.1
133244 Orig	4.75	24.4	2.97	1.4	< 0.1	2	0.4	683	1110	< 0.1
133244 Dup	4.61	24.5	2.94	1.4	< 0.1	2	0.4	650	1070	< 0.1
133260 Orig	2.88	16.7	1.93	1.0	4.0	6	0.1	197	411	2.2
133260 Split	2.94	16.0	1.91	1.1	3.7	6	0.2	195	410	2.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11629
Invoice Date: 11-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

126 Rock samples were submitted for analysis.

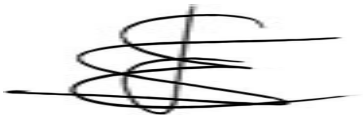
The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11629**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133261	4.64	1.50	0.05	15.61	1.853	12.09	25.36	0.02	0.04	0.289	0.82	35.88	93.52	57	10	65	< 20	16	< 20	< 10	1110	64	9	24
133262	5.08	2.05	0.05	11.44	1.570	12.66	28.74	0.03	0.05	0.399	1.44	35.57	93.99	61	13	60	< 20	5	< 20	< 10	830	74	10	27
133263	3.70	1.96	0.05	11.92	1.609	12.81	27.27	0.03	0.06	0.399	1.34	36.78	94.22	62	12	62	< 20	5	< 20	< 10	900	72	10	25
133264	4.61	2.82	0.09	12.32	1.621	12.43	27.13	0.02	0.07	0.304	1.09	35.71	93.60	54	14	53	< 20	5	< 20	< 10	1110	67	9	24
133265	4.31	1.55	0.06	11.35	1.449	12.54	28.02	0.03	0.05	0.233	1.30	36.74	93.32	72	10	65	< 20	5	< 20	< 10	690	59	8	22
133266	3.40	0.55	0.05	12.78	1.610	13.23	27.55	0.02	0.04	0.112	0.88	38.30	95.13	61	8	71	< 20	4	< 20	< 10	1080	67	9	24
133267	3.53	1.64	0.04	14.63	1.728	12.69	26.12	0.02	0.03	0.394	0.49	37.49	95.28	55	8	64	< 20	7	< 20	< 10	680	62	9	23
133268	4.77	1.29	0.06	12.64	1.460	11.90	28.54	0.02	0.04	0.486	0.70	36.24	93.38	53	8	71	< 20	4	< 20	< 10	650	65	9	24
133269	6.54	1.23	0.05	11.08	1.455	12.09	30.46	0.02	0.04	0.066	0.97	35.33	92.80	50	9	48	< 20	3	< 20	< 10	1540	64	8	21
133270	4.79	1.06	0.07	12.45	1.556	12.59	28.40	0.02	0.04	0.333	0.82	36.47	93.81	57	7	62	< 20	6	< 20	< 10	970	68	10	25
133271	4.75	1.92	0.06	15.78	1.768	12.02	25.30	0.03	0.05	0.261	0.84	35.44	93.46	59	11	64	< 20	8	< 20	< 10	1080	62	9	24
133272	3.68	1.56	0.06	15.88	1.860	12.11	24.30	0.02	0.05	0.448	0.80	36.31	93.40	56	10	76	< 20	7	< 20	< 10	1120	64	10	25
133273	4.40	1.70	0.09	15.13	1.828	12.07	25.83	0.03	0.08	0.317	1.03	36.18	94.29	65	13	75	< 20	7	< 20	< 10	1050	74	11	27
133274	3.84	1.60	0.06	14.19	1.839	12.17	26.56	0.02	0.05	0.343	0.87	36.81	94.51	62	11	73	< 20	6	< 20	< 10	830	72	10	26
133275	3.64	1.21	0.09	15.43	1.951	12.77	26.42	0.02	0.07	0.379	0.77	36.87	95.96	68	11	83	< 20	8	< 20	< 10	1290	21	4	11
133276	5.39	2.70	0.05	13.45	1.752	11.45	27.13	0.03	0.04	0.509	0.53	35.06	92.71	59	11	85	< 20	5	< 20	< 10	1180	69	10	24
133277	4.20	1.12	0.05	14.60	1.811	12.15	27.11	0.03	0.04	0.378	0.26	36.94	94.48	65	8	80	< 20	8	< 20	< 10	1190	62	9	25
133278	6.15	1.66	0.05	17.17	2.063	10.83	25.98	0.02	0.03	0.470	0.44	34.43	93.15	57	9	84	< 20	7	< 20	< 10	1440	68	10	26
133279	5.31	0.75	0.06	13.56	1.678	12.07	27.60	0.02	0.06	0.345	0.55	36.10	92.79	59	9	75	< 20	7	< 20	< 10	1270	80	11	30
133280	3.58	0.98	0.07	15.66	2.008	12.32	25.16	0.03	0.07	0.438	0.67	37.13	94.52	64	8	86	< 20	6	< 20	< 10	1130	70	11	27
133281	4.12	0.91	0.11	14.38	1.779	12.16	25.84	0.03	0.12	0.462	1.19	36.18	93.16	65	12	81	< 20	8	< 20	< 10	1100	74	10	27
133282	4.21	1.24	0.06	15.18	1.970	12.19	26.20	0.03	0.07	0.287	0.80	36.42	94.44	70	10	80	< 20	5	< 20	< 10	1280	68	10	26
133283	5.19	0.55	0.05	16.64	2.084	11.09	25.77	0.02	0.03	0.652	0.64	35.33	92.87	66	6	97	< 20	6	< 20	< 10	1280	63	10	26
133284	3.94	0.43	0.07	16.39	1.928	12.23	25.61	0.02	0.07	0.425	0.31	37.21	94.68	69	8	90	< 20	6	< 20	< 10	1220	69	11	27
133285	4.52	2.11	0.07	16.36	1.868	11.12	24.79	0.03	0.07	0.333	0.44	35.59	92.78	66	8	83	< 20	7	< 20	< 10	1460	65	10	26
133286	2.50	0.68	0.08	12.38	1.444	12.06	28.59	0.02	0.07	0.263	0.39	39.59	95.57	76	6	103	< 20	4	< 20	< 10	710	53	9	23
133287	0.08	98.87	0.04	0.89	0.018	0.09	0.21	< 0.01	< 0.01	0.002	< 0.01	0.11	100.2	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	2	2	< 5
133288	6.07	21.30	3.09	28.59	2.407	7.08	17.53	0.32	1.34	1.469	0.57	12.88	96.58	22	13	164	160	27	80	30	1340	53	9	23
133289	2.75	0.96	0.15	15.20	1.593	11.60	27.17	0.03	0.11	0.480	1.54	37.16	95.99	85	8	122	< 20	6	< 20	< 10	800	52	9	22
133290	0.69	2.72	0.11	31.27	2.838	9.60	12.30	0.04	0.07	0.369	0.71	34.73	94.76	56	9	102	< 20	24	< 20	< 10	2790	49	10	27
133291	3.98	0.64	0.12	15.20	1.524	11.57	27.54	0.03	0.10	0.331	1.01	36.73	94.80	88	7	97	< 20	6	< 20	< 10	970	53	9	23
133292	4.65	0.51	0.11	14.92	1.503	11.33	28.31	0.02	0.09	0.314	0.69	36.52	94.30	86	6	95	< 20	6	< 20	< 10	1090	52	9	22
133293	2.32	0.70	0.14	16.81	1.566	11.45	24.27	0.04	0.09	0.833	0.38	37.59	93.87	82	7	136	< 20	11	< 20	< 10	1060	53	8	22
133294	1.34	0.85	0.08	17.34	1.520	11.59	24.51	0.03	0.05	0.463	1.00	38.78	96.20	88	6	117	< 20	7	< 20	< 10	800	47	9	22
133295	6.17	0.90	0.10	17.99	1.669	10.13	26.78	0.02	0.06	0.629	0.39	34.29	92.96	80	6	112	< 20	8	< 20	< 10	1080	62	10	25
133296	5.54	2.17	0.20	27.64	2.185	8.26	20.68	0.05	0.12	0.383	1.43	31.36	94.47	71	6	94	< 20	13	< 20	< 10	1120	38	8	21
133297	1.24	3.57	0.08	46.73	3.618	5.26	7.90	0.03	0.02	0.316	1.40	30.39	99.31	33	2	123	< 20	18	< 20	< 10	1780	32	9	22
133298	5.21	1.22	0.14	18.87	1.678	10.28	26.42	0.04	0.09	0.305	0.63	34.83	94.51	94	6	104	< 20	7	< 20	< 10	1130	50	9	23
133299	4.20	2.44	0.06	23.45	2.192	9.49	21.36	0.02	0.05	0.220	0.85	34.45	94.59	62	7	71	< 20	9	< 20	< 10	1030	39	8	19
133300	4.30	1.51	0.11	24.99	2.354	9.67	20.70	0.02	0.09	0.478	0.40	34.59	94.92	71	7	97	< 20	11	< 20	< 10	880	52	9	22
133301	4.02	2.70	0.12	22.59	2.140	9.99	21.79	0.02	0.09	0.390	0.44	34.81	95.08	84	8	108	< 20	11	< 20	< 10	1030	56	10	26
133302	4.81	1.35	0.14	22.69	2.016	9.59	24.01	0.02	0.09	0.301	0.80	34.16	95.16	82	15	99	< 20	10	< 20	< 10	440	51	9	24
133303	4.82	1.22	0.07	25.63	2.404	9.07	21.72	0.02	0.03	0.183	0.91	33.95	95.20	69	8	83	< 20	11	< 20	< 10	1020	48	8	22
133304	7.49	1.88	0.11	20.80	2.098	9.28	26.65	0.02	0.06	0.186	1.08	31.88	94.05	77	14	87	< 20	11	< 20	< 10	1540	64	11	28
133305	5.76	1.22	0.08	22.65	1.926	9.12	26.56	0.02	0.05	0.090	1.46	31.91	95.10	70	13	83	< 20	9	< 20	< 10	940	61	10	26
133306	3.76	1.46	0.09	16.58	1.922	9.77	28.07	0.02	0.05	0.160	0.84	35.72	94.70	67	7	91	< 20	8	< 20	< 10	370	72	11	32
133307	4.47	0.69	0.06	20.31	2.246	10.46	24.69	0.02	0.04	0.181	0.36	35.89	94.95	63	8	78	< 20	11	< 20	< 10	1030	63	10	26
133308	3.15	0.78	0.08	15.48	2.195	11.37	26.08	0.02	0.06	0.183	0.36	37.73	94.32	71	8	86	< 20	7	< 20	< 10	1270	76	11	29
133309	4.41	0.85	0.07	15.78	2.226	11.44	27.37	0.02	0.06	0.130	0.47	36.28	94.70	59	8	78	< 20	6	< 20	< 10	1440	70	10	25
133310	4.18	0.69	0.11	14.07	1.957	11.43	28.20	0.03	0.09	0.081	1.35	36.06	94.07	66	8	64	< 20	8	< 20	< 10	980	80	11	30
133311	0.67	0.55	0.13	9.38	1.484	13.39	26.48	0.02	0.11	0.062	1.10	40.79	93.50	64	6	55	< 20	11	< 20	20	750	92	12	32
133312	2.89	1.19	0.11	12.01	1.651	12.72	28.39	0.02	0.08	0.096	0.63	38.40	95.28	65	7	79	< 20	6	< 20	< 10	720	78	10	27

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133313	3.42	1.43	0.04	16.70	2.259	11.85	24.63	0.02	0.03	0.082	0.14	36.92	94.10	48	6	72	< 20	7	< 20	< 10	1610	77	11	26
133314	3.39	1.69	0.05	18.17	2.310	11.45	22.86	0.02	0.03	0.084	0.16	36.64	93.47	45	7	70	< 20	8	< 20	< 10	1320	72	11	28
133315	3.91	1.61	0.06	14.11	2.173	11.85	27.02	0.02	0.03	0.114	0.22	36.93	94.14	53	6	79	< 20	6	< 20	< 10	1810	78	11	29
133316	5.90	3.36	0.08	13.15	2.083	10.88	28.40	0.02	0.05	0.186	0.31	34.57	93.08	53	6	87	< 20	7	< 20	< 10	850	88	12	31
133317	9.23	6.76	0.10	10.69	1.393	9.87	30.21	0.04	0.10	0.064	1.23	29.55	90.00	57	10	61	< 20	7	< 20	< 10	1960	105	12	33
133318	0.82	3.25	0.88	13.53	1.749	12.60	23.33	0.05	0.53	0.148	1.12	37.21	94.39	69	7	93	< 20	11	< 20	< 10	1110	70	10	33
133319	1.98	3.22	0.62	16.69	2.224	11.47	22.83	0.12	0.28	0.268	0.42	36.83	94.98	66	6	110	< 20	8	< 20	< 10	1360	59	10	27
133320	2.74	3.25	0.91	13.85	1.643	11.85	25.26	0.16	0.47	0.252	1.19	35.51	94.34	64	10	108	< 20	8	< 20	< 10	1080	62	10	29
133321	3.61	1.24	0.13	15.69	1.892	11.86	24.81	0.03	0.11	0.082	0.57	37.14	93.55	60	9	88	< 20	7	< 20	< 10	1280	68	10	27
133322	4.55	0.49	0.10	15.95	2.257	11.71	25.90	0.02	0.08	0.117	0.64	35.98	93.27	60	6	89	< 20	8	< 20	< 10	1850	77	12	32
133323	4.44	1.08	0.27	10.59	1.326	11.66	31.25	0.05	0.22	0.176	5.42	32.72	94.75	56	9	79	< 20	5	< 20	< 10	730	55	9	25
133324	0.02	99.34	0.05	0.95	0.016	0.06	0.16	< 0.01	< 0.01	0.002	< 0.01	-0.02	100.6	< 1	< 1	6	90	< 1	< 20	< 10	< 30	< 1	1	< 5
133325	1.75	15.03	2.53	12.95	0.141	0.47	26.51	0.94	0.99	0.148	19.45	8.69	87.86	18	14	156	20	33	60	110	640	275	31	183
133326	3.73	0.90	0.04	20.07	2.604	10.85	22.54	0.02	0.03	0.103	0.50	36.29	93.95	51	5	84	< 20	8	< 20	< 10	1860	71	13	32
133327	1.70	0.77	0.07	21.88	2.881	11.60	19.56	0.02	0.06	0.069	0.65	37.85	95.40	61	5	93	< 20	8	< 20	< 10	1610	71	13	34
133328	6.49	0.91	0.20	15.79	2.286	10.60	28.08	0.02	0.19	0.099	0.65	33.53	92.36	46	5	81	< 20	8	< 20	< 10	2030	69	11	29
133329	4.14	0.55	0.08	23.30	2.373	10.03	21.48	0.03	0.07	0.126	0.88	34.93	93.85	57	5	90	< 20	9	< 20	< 10	1550	58	10	26
133330	4.45	0.53	0.06	11.88	1.651	11.56	29.89	0.04	0.07	0.148	2.74	35.36	93.92	64	8	94	< 20	5	< 20	< 10	1060	95	13	35
133331	3.80	0.41	0.05	12.27	1.876	11.81	28.35	0.02	0.05	0.195	0.55	37.38	92.95	65	4	99	< 20	5	< 20	< 10	1140	99	13	34
133332	4.80	1.43	0.05	12.57	1.810	11.71	29.01	0.03	0.05	0.223	0.74	36.28	93.90	56	8	86	< 20	6	< 20	< 10	1100	90	13	32
133333	5.06	1.12	0.05	13.31	1.778	10.88	28.15	0.03	0.05	0.160	1.26	35.22	92.00	62	8	82	< 20	5	< 20	< 10	1190	102	14	36
133334	5.12	0.90	0.07	15.88	1.927	11.14	26.55	0.03	0.06	0.138	0.44	35.32	92.46	59	6	81	< 20	8	< 20	< 10	1610	76	10	27
133335	3.20	3.40	0.18	14.79	1.711	11.78	26.25	0.03	0.12	0.200	0.89	36.20	95.56	63	8	104	< 20	9	< 20	< 10	1120	70	10	28
133336	4.25	1.04	0.34	15.61	1.933	11.37	25.88	0.04	0.11	0.153	0.77	35.68	92.93	64	11	81	< 20	7	< 20	< 10	1800	80	11	27
133337	1.75	2.12	0.07	16.43	1.793	12.27	23.95	0.04	0.06	0.101	1.12	37.18	95.13	84	8	90	< 20	8	< 20	< 10	1240	72	10	27
133338	3.13	3.33	0.13	14.22	1.678	12.02	26.05	0.05	0.09	0.174	0.99	36.23	94.96	72	15	97	< 20	8	< 20	< 10	1330	74	11	28
133339	2.86	2.52	0.12	13.21	1.618	11.98	25.79	0.05	0.10	0.177	0.98	36.98	93.52	74	12	98	< 20	7	< 20	< 10	1250	78	11	29
133340	2.45	4.56	0.07	16.73	1.674	11.97	22.92	0.06	0.06	0.159	0.68	36.35	95.25	80	12	104	< 20	9	< 20	< 10	990	78	11	28
133341	4.54	0.76	0.03	15.77	1.896	11.70	26.27	0.03	0.03	0.179	0.83	36.11	93.58	70	11	87	< 20	8	< 20	< 10	1560	79	10	27
133342	5.32	2.29	0.06	16.09	1.735	10.55	26.36	0.03	0.04	0.257	1.39	33.80	92.60	74	9	97	< 20	9	< 20	< 10	1520	81	11	30
133343	3.14	1.80	0.42	15.14	1.834	12.01	25.88	0.02	0.09	0.247	0.61	36.76	94.82	71	6	101	< 20	8	< 20	< 10	940	74	11	27
133344	5.59	0.47	0.03	18.17	2.107	10.88	25.61	0.02	0.03	0.162	0.80	34.70	92.99	62	7	84	< 20	8	< 20	< 10	1600	76	10	27
133345	4.31	0.34	0.06	14.51	1.762	12.01	27.81	0.02	0.05	0.279	0.84	36.78	94.46	80	10	103	< 20	6	< 20	< 10	1350	73	10	26
133346	4.09	1.15	0.06	19.46	2.310	11.14	23.50	0.03	0.04	0.223	1.04	35.44	94.38	80	10	89	< 20	8	< 20	< 10	1640	80	12	30
133347	9.91	1.07	0.07	11.84	1.758	10.85	32.51	0.04	0.07	0.175	0.42	32.01	90.81	64	13	85	< 20	5	< 20	< 10	1590	86	12	30
133348	7.62	0.28	0.10	16.60	2.248	10.68	28.25	0.02	0.05	0.089	0.95	32.91	92.17	69	12	69	< 20	8	< 20	< 10	2620	87	15	37
133349	0.02	97.48	0.04	0.91	0.015	0.08	0.17	< 0.01	< 0.01	0.002	0.02	0.04	98.77	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	< 1	1	< 5
133350	1.77	15.25	2.65	13.21	0.143	0.50	27.14	0.96	1.03	0.149	19.46	8.63	89.12	18	14	156	20	33	70	110	650	279	35	193
133351	5.05	0.23	0.08	18.02	2.588	10.94	25.41	0.03	0.03	0.224	0.96	34.99	93.51	70	8	89	< 20	6	< 20	< 10	1590	79	13	31
133352	2.96	0.69	0.22	21.17	2.414	10.98	21.80	0.02	0.09	0.252	0.90	36.31	94.85	65	8	90	< 20	9	< 20	< 10	2010	58	11	27
133353	2.32	0.39	0.12	22.16	2.506	11.23	20.50	0.01	0.06	0.153	0.56	37.26	94.96	51	5	67	< 20	8	< 20	< 10	2240	60	10	26
133354	6.42	0.93	0.23	8.42	1.071	13.31	32.87	0.03	0.21	0.189	0.88	35.91	94.05	62	19	75	< 20	4	< 20	< 10	1510	72	11	27
133355	4.68	0.43	0.12	11.17	1.424	12.66	29.54	0.02	0.10	0.245	1.20	36.80	93.70	59	10	81	< 20	4	< 20	< 10	1860	74	11	28
133356	5.26	0.12	0.05	12.67	1.547	11.77	29.18	0.03	0.03	0.141	1.16	36.17	92.87	62	10	95	< 20	6	< 20	< 10	1590	88	13	32
133357	3.29	0.37	0.08	11.99	1.626	11.83	29.49	0.04	0.04	0.199	3.46	35.85	94.97	63	9	107	< 20	4	< 20	< 10	1160	93	15	36
133358	2.71	1.83	0.11	8.60	1.347	11.03	32.24	0.05	0.06	0.529	6.71	33.12	95.63	43	7	111	< 20	3	< 20	< 10	580	95	17	42
133359	3.06	2.21	0.12	10.69	1.456	11.75	29.43	0.04	0.08	0.134	4.05	34.95	94.92	48	11	93	< 20	4	< 20	< 10	750	94	16	39
133360	5.05	0.71	0.04	12.17	1.472	12.66	28.13	0.02	0.05	0.107	0.81	36.61	92.77	47	13	79	< 20	4	< 20	< 10	1340	112	14	35
133361	4.36	1.54	0.16	14.84	1.739	12.20	25.69	0.03	0.15	0.208	0.77	34.87	92.21	45	19	77	< 20	9	< 20	< 10	1840	92	13	35
133362	3.55	1.14	0.05	15.72	1.907	12.17	24.63	0.02	0.03	0.126	0.72	36.97	93.48	48	9	78	< 20	6	< 20	< 10	1530	86	12	31
133363	4.84	0.67	0.05	12.47	1.888	12.62	29.44	0.02	0.03	0.103	0.95	36.51	94.76	45	9	72	< 20	5	< 20	< 10	1230	91	12	30
133364	3.11	0.40	0.07	14.27	2.119	12.20	25.99	0.02	0.05	0.138	0.76	37.66	93.69	45	7	79	< 20	5	< 20	< 10	1290	77	12	32

Activation Laboratories Ltd. Report: A13-11629

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133365	3.13	0.52	0.07	14.36	2.116	12.43	26.40	0.02	0.05	0.156	0.77	37.49	94.40	47	8	86	< 20	6	< 20	< 10	1260	73	12	30
133366	4.21	0.09	0.04	14.75	2.278	12.27	27.11	0.02	0.02	0.069	0.67	36.89	94.22	44	6	58	< 20	5	< 20	< 10	1600	93	15	37
133367	2.81	0.37	0.04	13.07	2.165	13.26	27.09	0.02	0.03	0.065	0.76	38.22	95.10	50	5	60	< 20	6	< 20	< 10	1580	85	13	34
133368	4.00	0.77	0.08	10.29	1.594	13.55	30.47	0.04	0.05	0.061	1.74	37.22	95.88	61	9	67	< 20	4	< 20	< 10	670	80	12	29
133369	2.25	0.53	0.06	9.17	1.436	14.27	29.30	0.03	0.05	0.088	1.64	39.37	95.96	61	7	68	< 20	3	< 20	< 10	740	98	14	34
133370	4.04	0.63	0.12	11.25	1.532	13.51	28.96	0.03	0.10	0.098	1.11	37.30	94.64	57	9	68	< 20	5	< 20	< 10	850	99	13	34
133371	0.58	0.56	0.18	12.52	1.645	12.78	26.30	0.03	0.07	0.141	2.13	38.81	95.17	60	4	89	< 20	10	< 20	< 10	740	64	11	32
133372	0.76	1.10	0.37	10.27	1.323	13.73	29.27	0.04	0.11	0.147	2.73	38.71	97.81	55	6	87	< 20	9	< 20	< 10	640	68	11	32
133373	4.28	0.18	0.06	13.45	2.145	12.50	28.46	0.02	0.03	0.105	0.43	37.50	94.88	58	7	73	< 20	5	< 20	< 10	1720	87	13	33
133374	0.02	98.00	0.04	0.72	0.015	0.09	0.24	0.01	< 0.01	0.001	0.02	0.23	99.38	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	< 1	< 5
133375	6.12	20.54	3.12	28.37	2.450	7.17	17.95	0.32	1.43	1.539	0.57	12.17	95.64	22	13	159	160	27	70	30	1410	61	11	27
133376	5.38	0.37	0.07	12.64	2.045	11.73	29.01	0.02	0.03	0.065	0.73	35.73	92.44	57	6	62	< 20	7	< 20	< 10	2300	96	14	36
133377	2.80	0.24	0.08	10.73	1.775	13.33	28.49	0.02	0.04	0.041	0.90	38.89	94.53	70	6	73	< 20	4	< 20	< 10	1640	85	13	32
133378	2.60	1.14	0.07	12.62	2.087	12.63	26.35	0.02	0.03	0.076	0.69	38.24	93.95	64	5	75	< 20	5	< 20	< 10	2040	82	12	33
133379	1.40	1.17	0.06	14.38	2.138	12.66	24.08	0.02	0.02	0.132	0.40	39.22	94.26	63	5	78	< 20	5	< 20	< 10	2140	76	11	29
133380	2.55	4.37	0.09	16.82	2.099	11.40	23.91	0.03	0.04	0.152	1.26	35.79	95.96	59	5	78	< 20	7	< 20	< 10	1610	66	10	25
133381	4.37	0.16	0.04	13.16	2.036	12.46	27.89	0.02	0.01	0.119	0.24	37.74	93.87	57	7	62	< 20	6	< 20	< 10	2310	90	12	29
133382	3.82	0.13	0.04	10.23	1.827	13.22	29.32	0.02	0.02	0.077	0.19	39.17	94.23	58	4	55	< 20	5	< 20	< 10	2030	82	11	28
133383	2.88	0.76	0.09	9.71	1.654	13.20	29.32	0.02	0.07	0.055	0.96	39.16	95.00	55	6	60	< 20	5	< 20	< 10	1460	82	11	29
133384	4.03	0.51	0.15	8.44	1.306	13.45	29.79	0.02	0.12	0.072	1.18	38.29	93.33	49	7	78	< 20	3	< 20	< 10	1060	93	14	34
133385	2.89	0.29	0.06	16.59	2.035	12.26	24.14	0.03	0.03	0.043	1.10	37.59	94.16	44	7	65	< 20	5	< 20	< 10	1310	88	14	34
133386	2.02	1.80	0.13	18.86	1.877	11.34	22.24	0.03	0.07	0.049	1.71	36.51	94.61	48	5	75	< 20	7	< 20	< 10	1240	98	16	40

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133261	< 2	2332	336	39	698	< 2	0.6	0.2	21	< 0.5	< 0.5	207	1.2	4320	7700	785	2790	419	109	217	25.2	90.4	11.3	21.0
133262	< 2	2781	283	68	903	< 2	0.7	< 0.2	25	< 0.5	< 0.5	217	1.1	5420	9050	914	3150	405	97.6	189	20.8	80.0	9.6	19.4
133263	< 2	2744	267	60	963	< 2	< 0.5	< 0.2	25	< 0.5	< 0.5	211	0.9	5390	9190	919	3180	409	98.6	185	20.4	77.0	9.4	18.8
133264	< 2	2669	272	42	769	3	0.5	< 0.2	24	< 0.5	< 0.5	266	1.2	4570	8160	827	2830	370	87.5	167	18.6	73.1	9.1	17.4
133265	< 2	2558	321	60	636	2	< 0.5	< 0.2	18	< 0.5	< 0.5	201	0.8	3940	7130	739	2620	357	85.4	159	19.1	79.4	10.8	22.5
133266	< 2	2385	303	30	323	2	< 0.5	< 0.2	12	< 0.5	< 0.5	182	0.9	4520	8310	854	2960	367	82.7	155	19.0	79.9	10.9	21.5
133267	< 2	2458	347	14	814	< 2	< 0.5	< 0.2	27	< 0.5	< 0.5	191	1.2	3960	7180	739	2590	351	84.5	160	19.8	85.4	12.0	23.2
133268	< 2	2458	270	21	958	2	< 0.5	< 0.2	27	< 0.5	< 0.5	190	1.3	4310	7680	800	2790	376	87.9	158	16.8	68.2	9.1	18.2
133269	< 2	2349	266	22	212	3	< 0.5	< 0.2	7	< 0.5	< 0.5	177	1.1	4380	7790	768	2550	288	61.5	107	12.6	56.4	8.2	17.4
133270	< 2	2349	274	25	863	3	< 0.5	< 0.2	18	< 0.5	< 0.5	179	1.0	4490	8040	854	3030	439	102	195	20.5	71.6	9.0	18.3
133271	< 2	2230	299	27	854	2	< 0.5	0.2	20	< 0.5	< 0.5	216	1.5	4200	7460	763	2700	436	113	220	23.9	80.8	10.0	20.6
133272	< 2	2063	270	27	913	5	< 0.5	0.2	29	< 0.5	< 0.5	194	1.7	4360	7940	825	2900	440	109	202	21.2	79.2	10.0	20.0
133273	< 2	2198	335	41	830	4	< 0.5	0.2	26	< 0.5	< 0.5	235	2.4	4610	8420	875	3070	464	117	231	25.7	91.5	11.9	23.1
133274	< 2	2030	235	26	736	2	< 0.5	0.2	24	< 0.5	< 0.5	219	1.2	3990	7570	815	2950	432	103	200	20.7	69.1	8.1	16.0
133275	< 2	2199	257	28	726	3	< 0.5	0.2	24	< 0.5	< 0.5	247	2.3	3570	6810	720	2650	404	98.2	201	21.4	75.7	9.5	19.1
133276	< 2	1957	211	21	893	7	< 0.5	0.2	29	< 0.5	< 0.5	202	2.1	4280	7640	800	2860	409	98.1	183	18.4	59.9	7.2	15.3
133277	< 2	2378	213	9	854	6	< 0.5	0.3	23	< 0.5	< 0.5	239	2.0	3470	6770	728	2660	416	105	200	19.2	60.7	7.0	14.0
133278	< 2	1997	319	10	728	3	< 0.5	0.3	25	< 0.5	< 0.5	204	2.5	3540	6720	731	2650	409	102	205	22.5	82.5	10.8	21.7
133279	< 2	2133	280	10	696	11	< 0.5	0.2	20	< 0.5	< 0.5	219	1.5	4330	7820	822	2900	428	103	202	21.4	72.1	9.0	17.4
133280	< 2	2229	294	20	826	13	< 0.5	0.2	24	< 0.5	< 0.5	220	2.0	3900	7260	797	2930	428	103	204	21.5	77.9	10.3	19.8
133281	2	2403	256	43	721	40	< 0.5	0.2	24	< 0.5	< 0.5	241	2.2	4780	8080	814	2910	427	105	200	20.8	72.1	8.6	15.5
133282	< 2	2249	372	30	704	10	< 0.5	0.2	20	< 0.5	< 0.5	194	2.6	3920	7390	779	2770	427	112	230	27.6	98.9	12.9	29.5
133283	< 2	1998	512	15	1100	5	< 0.5	0.3	37	< 0.5	< 0.5	148	2.7	3180	6610	745	2790	498	137	301	37.7	141	18.7	34.7
133284	< 2	2103	410	13	936	9	< 0.5	0.3	26	< 0.5	< 0.5	195	1.8	3840	7180	779	2890	488	124	254	28.1	105	14.3	27.3
133285	< 2	1965	395	13	692	6	< 0.5	0.3	22	< 0.5	< 0.5	176	2.2	3840	7340	776	2900	505	131	257	27.8	102	13.2	25.1
133286	< 2	2008	372	20	772	9	< 0.5	< 0.2	26	< 0.5	< 0.5	153	0.8	2390	5090	584	2260	392	106	211	24.0	87.4	12.6	26.5
133287	< 2	11	2	< 4	2	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3	< 0.4	15.8	28.7	3.04	10.6	1.7	0.34	0.8	< 0.1	0.3	< 0.1	< 0.1
133288	25	3117	929	222	403	56	1.4	< 0.2	45	< 0.5	0.5	13670	3.3	2520	4690	541	2260	482	132	294	41.2	193	31.8	74.3
133289	3	2007	525	34	858	11	< 0.5	0.2	44	< 0.5	< 0.5	216	1.3	2480	5160	590	2310	427	116	245	30.9	123	17.6	36.1
133290	< 2	1029	457	28	361	38	< 0.5	0.4	40	< 0.5	< 0.5	163	6.5	1890	4370	602	2660	493	132	278	34.1	128	16.7	30.9
133291	2	2054	531	28	733	6	< 0.5	0.2	32	< 0.5	< 0.5	208	1.6	2740	5510	603	2340	459	129	275	35.2	135	18.0	39.9
133292	< 2	1954	539	27	716	7	< 0.5	0.3	31	< 0.5	< 0.5	185	1.7	2610	5120	570	2220	427	120	260	33.8	132	18.2	35.4
133293	2	1678	550	65	1140	20	< 0.5	0.3	66	< 0.5	< 0.5	175	2.4	2690	5080	551	2090	392	112	256	35.0	145	20.1	41.1
133294	< 2	1801	499	25	511	9	< 0.5	< 0.2	36	< 0.5	< 0.5	128	1.3	2010	4260	514	2150	462	125	259	33.4	132	17.5	33.9
133295	< 2	1660	457	12	936	8	< 0.5	0.2	57	< 0.5	< 0.5	164	1.9	3240	6160	666	2520	458	119	241	29.4	112	14.9	29.0
133296	2	1438	633	24	598	9	< 0.5	0.3	68	< 0.5	< 0.5	217	3.7	1550	3260	421	2000	507	138	295	37.9	153	21.4	42.8
133297	< 2	722	403	8	366	4	< 0.5	0.5	43	< 0.5	< 0.5	60	6.1	564	2180	400	2110	468	117	238	28.9	110	14.1	25.8
133298	< 2	1603	729	25	547	< 2	< 0.5	0.3	45	< 0.5	< 0.5	182	1.1	2140	4610	548	2350	543	149	311	39.4	169	24.4	47.9
133299	< 2	1509	441	13	414	< 2	< 0.5	0.3	54	< 0.5	< 0.5	145	1.3	1510	3430	454	1970	382	102	221	27.1	121	15.6	28.4
133300	2	1441	799	25	758	< 2	< 0.5	0.3	62	< 0.5	< 0.5	172	1.4	2180	4760	564	2250	458	133	310	45.1	200	27.8	54.4
133301	2	1555	653	23	596	3	< 0.5	0.3	56	< 0.5	< 0.5	195	2.4	2290	5150	625	2510	595	183	388	42.7	171	22.4	44.2
133302	< 2	1602	558	24	508	5	< 0.5	0.3	58	< 0.5	< 0.5	219	3.5	2010	4660	569	2280	487	140	299	35.7	140	19.1	38.4
133303	< 2	1617	437	16	260	4	< 0.5	0.3	27	< 0.5	< 0.5	114	2.8	2270	4860	563	2200	464	130	260	30.7	116	15.5	30.4
133304	< 2	1949	493	17	276	4	< 0.5	0.3	57	< 0.5	< 0.5	188	3.2	3130	6530	734	2760	516	136	289	33.2	131	17.0	33.3
133305	< 2	2133	392	40	239	11	0.6	0.2	21	< 0.5	< 0.5	157	2.4	3320	6210	685	2550	413	99.3	197	24.8	99.7	13.2	26.2
133306	< 2	1966	506	31	318	12	< 0.5	0.3	29	< 0.5	< 0.5	138	16.9	3490	7070	809	3080	501	124	250	28.3	120	16.7	35.2
133307	< 2	2031	395	13	320	14	< 0.5	0.3	32	< 0.5	< 0.5	140	2.9	3100	6100	683	2450	388	95.7	190	23.4	95.9	13.4	27.4
133308	< 2	2252	471	16	409	6	< 0.5	0.3	29	< 0.5	< 0.5	175	2.4	3820	7530	828	2970	439	106	218	27.9	117	17.1	35.7
133309	< 2	2253	311	18	181	28	< 0.5	< 0.2	13	< 0.5	< 0.5	171	2.6	3600	7030	759	2620	362	83.7	155	18.2	70.9	10.1	22.0
133310	< 2	2275	495	31	316	10	0.6	< 0.2	18	< 0.5	< 0.5	206	2.8	4390	8380	881	3020	413	98.8	195	26.1	110	14.7	36.9
133311	2	2338	307	49	298	7	0.5	< 0.2	10	< 0.5	< 0.5	226	2.4	4900	9160	922	2970	360	82.3	160	18.8	74.2	10.6	23.9
133312	< 2	2255	325	30	372	8	< 0.5	< 0.2	15	< 0.5	< 0.5	222	1.5	4040	7680	816	2820	370	85.4	167	19.1	74.6	10.5	23.4

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133313	< 2	2224	337	8	153	14	< 0.5	< 0.2	11	< 0.5	< 0.5	1257	3.9	3440	7690	829	2720	349	86.5	178	20.8	85.0	11.3	24.7
133314	< 2	2042	416	11	156	13	< 0.5	< 0.2	11	< 0.5	< 0.5	1236	4.1	3330	7240	801	2780	390	97.2	201	25.5	105	14.8	30.0
133315	< 2	2287	320	11	214	16	0.5	< 0.2	14	< 0.5	< 0.5	552	6.6	3120	7530	846	2830	352	80.8	158	18.9	73.6	10.3	22.0
133316	< 2	1836	304	11	314	24	< 0.5	< 0.2	16	< 0.5	< 0.5	853	6.7	3760	8390	894	2950	336	77.1	149	17.4	70.1	10.0	21.0
133317	< 2	1977	259	38	316	65	0.6	< 0.2	9	< 0.5	< 0.5	289	1.4	6910	11000	1010	3160	389	83.0	145	14.8	54.7	7.6	17.4
133318	10	1993	323	51	314	42	0.7	< 0.2	24	< 0.5	< 0.5	1080	2.0	3590	6710	736	2650	358	80.8	151	17.8	71.8	10.6	25.5
133319	5	1662	354	11	445	16	< 0.5	< 0.2	26	< 0.5	< 0.5	586	4.4	2150	5180	625	2370	353	87.2	169	20.2	80.5	11.4	24.7
133320	9	2163	419	24	597	26	< 0.5	< 0.2	28	< 0.5	< 0.5	809	3.2	2480	5430	630	2320	344	88.3	189	23.9	98.6	14.0	30.6
133321	2	2022	332	20	194	18	0.5	< 0.2	14	< 0.5	< 0.5	243	2.9	3360	6610	716	2500	357	85.8	174	20.9	81.5	10.9	24.0
133322	< 2	1961	343	20	203	32	< 0.5	< 0.2	13	< 0.5	< 0.5	200	9.7	3240	7490	886	3110	374	85.9	162	19.2	77.5	10.9	24.4
133323	4	3662	586	94	620	16	1.2	< 0.2	17	< 0.5	< 0.5	344	1.9	2530	5240	585	2130	316	78.7	160	22.7	111	18.4	44.1
133324	< 2	8	3	11	2	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	3	< 0.4	12.5	25.6	2.91	11.3	1.5	0.42	0.9	< 0.1	0.5	< 0.1	0.2
133325	35	20580	946	228	19	33	3.2	< 0.2	2	5.7	1.8	907	9.9	18700	29300	2650	8350	910	205	367	38.8	154	24.4	60.0
133326	< 2	1597	603	22	160	24	0.8	< 0.2	11	< 0.5	< 0.5	132	8.0	2040	6330	859	3280	426	99.1	197	27.2	124	19.9	46.7
133327	< 2	1660	484	21	125	11	0.7	< 0.2	10	< 0.5	< 0.5	167	7.4	1760	5960	877	3400	419	92.0	180	24.4	109	16.3	36.3
133328	4	2098	304	15	235	37	1.1	< 0.2	12	< 0.5	< 0.5	299	6.1	2160	6390	796	2780	329	74.3	142	17.2	69.2	10.0	21.9
133329	< 2	1684	370	13	425	22	< 0.5	0.2	23	< 0.5	< 0.5	251	2.8	2510	5170	616	2400	401	93.1	180	21.1	86.0	12.3	27.3
133330	< 2	2504	395	21	557	13	0.5	< 0.2	36	< 0.5	< 0.5	230	1.0	5310	9740	1000	3470	471	108	200	21.5	84.6	12.0	27.9
133331	< 2	1890	373	12	537	10	0.6	< 0.2	38	< 0.5	< 0.5	200	1.4	5140	9310	965	3320	472	110	211	22.9	83.9	11.6	26.6
133332	< 2	1936	469	16	618	8	< 0.5	< 0.2	64	< 0.5	< 0.5	235	1.4	4820	8780	892	3060	431	101	197	23.9	101	14.8	32.7
133333	< 2	2125	427	10	582	4	< 0.5	< 0.2	35	< 0.5	< 0.5	241	1.0	5480	10000	1010	3420	455	105	198	23.4	94.6	13.6	30.0
133334	< 2	1837	423	18	292	5	< 0.5	< 0.2	15	< 0.5	< 0.5	219	1.5	4150	7570	762	2560	369	92.5	193	23.8	96.1	13.9	31.0
133335	2	1959	420	25	489	7	0.6	< 0.2	22	< 0.5	< 0.5	275	1.5	3450	6560	690	2420	367	94.6	193	23.6	93.8	13.3	29.7
133336	2	1937	462	17	381	6	< 0.5	< 0.2	26	< 0.5	< 0.5	313	2.0	4170	7690	780	2620	407	108	218	25.6	104	15.3	33.8
133337	< 2	2310	369	15	211	6	< 0.5	< 0.2	12	< 0.5	< 0.5	194	1.2	3730	7140	753	2600	375	92.4	187	21.9	87.4	12.1	26.9
133338	< 2	2006	395	18	554	5	< 0.5	< 0.2	24	< 0.5	< 0.5	327	1.2	3690	7080	742	2580	396	102	212	26.4	95.7	13.0	28.4
133339	< 2	2075	391	19	520	6	0.6	< 0.2	23	< 0.5	< 0.5	316	1.2	3800	7120	752	2600	399	103	214	25.9	101	13.9	30.6
133340	< 2	2128	441	25	305	< 2	0.7	< 0.2	24	< 0.5	< 0.5	289	1.7	3860	7180	745	2490	374	97.8	212	26.5	101	13.9	31.7
133341	< 2	2366	349	19	270	4	< 0.5	< 0.2	20	< 0.5	< 0.5	215	1.8	3990	7630	777	2560	378	95.4	198	23.6	88.5	11.6	26.1
133342	< 2	1991	503	67	468	2	1.0	0.2	35	< 0.5	< 0.5	223	1.6	4130	7780	807	2780	431	110	229	28.0	119	17.1	38.4
133343	< 2	1777	360	16	722	6	< 0.5	< 0.2	28	< 0.5	< 0.5	274	0.8	3520	6890	743	2600	384	93.2	193	23.1	90.4	12.8	28.2
133344	< 2	2158	558	19	383	5	0.5	0.2	11	< 0.5	< 0.5	164	1.4	4090	7260	712	2440	383	98.6	208	28.2	121	18.3	40.9
133345	< 2	2293	522	22	844	5	< 0.5	< 0.2	25	< 0.5	< 0.5	210	1.5	3960	7110	712	2390	385	105	222	29.5	118	17.3	37.8
133346	< 2	2005	640	29	482	6	0.7	0.3	19	< 0.5	< 0.5	187	3.6	3780	7440	811	2860	431	114	238	32.5	150	22.2	48.5
133347	< 2	2519	487	14	393	13	0.6	< 0.2	27	< 0.5	< 0.5	242	6.6	4390	8640	906	2990	386	96.4	196	25.0	106	15.7	36.3
133348	< 2	2219	621	22	142	5	0.7	< 0.2	12	< 0.5	< 0.5	212	14.1	3270	8390	1020	3690	461	106	210	28.3	134	20.8	46.0
133349	< 2	8	3	6	3	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	11.6	22.4	2.42	8.5	1.3	0.30	0.7	< 0.1	0.4	< 0.1	0.1
133350	36	20970	948	232	10	34	3.1	< 0.2	< 1	6.2	1.8	943	10.1	18500	29100	2710	8450	918	206	352	36.2	155	24.4	59.1
133351	< 2	2110	487	16	311	7	0.7	< 0.2	18	< 0.5	< 0.5	164	8.0	2940	7410	876	3080	390	90.2	176	23.6	107	16.3	36.7
133352	2	1714	502	23	698	13	0.6	0.2	34	< 0.5	< 0.5	267	6.6	2100	5170	658	2570	410	97.2	187	24.2	111	17.0	37.5
133353	< 2	1767	392	19	346	6	< 0.5	0.3	20	< 0.5	< 0.5	194	2.4	2710	5740	634	2370	392	91.6	174	21.1	94.9	13.9	30.7
133354	4	1950	528	27	559	9	0.6	< 0.2	31	< 0.5	< 0.5	311	1.8	4250	7450	755	2600	358	89.5	176	24.1	119	18.3	40.9
133355	2	2014	511	30	442	10	0.6	< 0.2	22	< 0.5	< 0.5	209	2.7	3590	7040	763	2740	389	96.0	183	25.4	114	17.3	39.7
133356	< 2	2409	643	19	390	13	0.5	< 0.2	15	< 0.5	< 0.5	137	2.4	4920	8940	911	3200	467	117	244	31.5	139	20.9	48.1
133357	< 2	2949	600	46	618	9	0.8	< 0.2	21	< 0.5	< 0.5	179	3.0	4220	8560	972	3530	521	127	245	30.8	135	20.2	46.0
133358	< 2	3178	736	76	451	< 2	1.1	< 0.2	24	< 0.5	< 0.5	224	1.4	3710	8460	1010	3980	597	148	287	35.7	163	25.8	58.8
133359	< 2	2776	784	33	471	5	0.5	< 0.2	16	< 0.5	< 0.5	246	1.2	4310	8590	961	3660	527	127	244	30.6	151	25.1	62.6
133360	< 2	2830	342	19	471	15	< 0.5	< 0.2	34	< 0.5	< 0.5	196	1.5	7500	11400	1050	3380	427	94.6	166	17.6	75.4	11.0	26.5
133361	3	2632	363	19	973	11	< 0.5	< 0.2	19	< 0.5	< 0.5	397	1.7	5520	8810	871	3060	422	97.1	175	19.4	80.1	11.7	25.7
133362	< 2	2466	424	24	967	17	0.5	0.2	23	< 0.5	< 0.5	172	2.0	4480	8050	843	3010	447	106	202	23.0	96.3	14.2	32.2
133363	< 2	2636	398	18	678	10	< 0.5	< 0.2	16	< 0.5	< 0.5	174	1.4	4640	8800	866	2810	336	79.0	157	18.8	80.2	12.4	29.9
133364	< 2	2288	409	19	552	13	0.5	< 0.2	38	< 0.5	< 0.5	153	4.1	3170	6900	788	2870	383	88.5	170	21.2	89.7	13.9	33.4

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133365	< 2	2326	433	22	557	12	0.6	< 0.2	27	< 0.5	< 0.5	159	3.6	3210	6770	789	2880	394	91.5	178	21.6	97.2	14.9	35.3
133366	< 2	2412	350	22	227	20	0.5	< 0.2	14	< 0.5	< 0.5	169	6.4	3750	8090	947	3370	411	89.1	158	17.0	74.7	11.3	26.9
133367	< 2	2697	322	13	338	35	0.5	< 0.2	10	< 0.5	< 0.5	159	5.3	3420	7760	897	3150	373	82.7	150	16.4	70.2	10.5	24.2
133368	< 2	2670	451	45	324	30	0.9	< 0.2	10	< 0.5	< 0.5	173	1.8	4190	7410	787	2760	368	87.0	165	20.0	88.0	14.0	35.6
133369	< 2	2556	468	28	658	12	< 0.5	< 0.2	11	< 0.5	< 0.5	185	0.7	5430	9380	952	3340	437	102	199	23.1	104	15.7	37.3
133370	< 2	2307	404	41	604	14	0.6	< 0.2	11	< 0.5	< 0.5	245	1.4	5400	8950	893	3120	416	98.3	198	22.6	92.7	12.7	27.1
133371	< 2	2268	576	25	192	8	0.6	< 0.2	24	< 0.5	< 0.5	206	1.7	2280	5250	648	2570	432	111	233	30.8	134	20.3	47.9
133372	2	2490	649	27	186	12	< 0.5	< 0.2	17	< 0.5	< 0.5	306	2.0	2750	5940	694	2710	415	104	213	29.5	138	22.1	53.4
133373	< 2	2284	387	12	233	3	0.5	< 0.2	13	< 0.5	< 0.5	149	7.0	3340	8170	912	3080	375	86.8	175	21.0	87.7	12.5	28.7
133374	< 2	16	4	< 4	10	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	10.8	23.0	2.66	10.0	1.6	0.41	0.9	0.1	0.6	0.1	0.2
133375	27	3095	909	225	376	53	2.0	< 0.2	44	< 0.5	< 0.5	13570	3.1	2540	4660	537	2250	481	129	296	39.6	188	30.2	72.3
133376	< 2	2224	469	14	115	4	< 0.5	< 0.2	6	< 0.5	< 0.5	170	4.5	3390	8870	996	3360	391	87.2	162	19.3	90.9	14.6	34.4
133377	< 2	2514	437	22	98	< 2	0.6	< 0.2	7	< 0.5	< 0.5	227	3.9	3950	8070	869	2990	394	95.9	191	23.7	102	14.9	33.3
133378	< 2	2194	319	13	137	3	< 0.5	< 0.2	8	< 0.5	< 0.5	155	3.4	3380	7970	876	2870	331	76.9	147	17.5	71.9	10.3	23.3
133379	< 2	2110	278	10	163	3	< 0.5	< 0.2	10	< 0.5	< 0.5	146	5.1	2750	7090	799	2740	312	69.6	126	14.0	61.4	9.3	21.2
133380	< 2	2159	438	38	267	8	0.7	0.2	18	< 0.5	< 0.5	180	3.5	2670	6010	639	2230	350	90.1	189	24.3	103	14.5	31.4
133381	< 2	2064	394	7	129	4	< 0.5	0.2	9	< 0.5	< 0.5	113	2.3	3780	8270	848	2660	316	77.0	165	20.8	89.5	12.6	27.3
133382	< 2	2268	426	8	138	< 2	< 0.5	< 0.2	8	< 0.5	< 0.5	134	2.6	3710	8090	824	2590	301	77.0	169	22.3	99.7	14.0	28.5
133383	< 2	2626	412	19	253	7	< 0.5	< 0.2	13	< 0.5	< 0.5	225	1.7	3740	7440	772	2530	316	75.5	154	21.7	96.1	13.7	30.3
133384	2	2429	561	34	239	14	0.6	< 0.2	14	< 0.5	< 0.5	308	1.1	4460	8450	887	3110	391	89.7	180	25.4	120	18.9	41.1
133385	< 2	2495	617	21	102	6	< 0.5	< 0.2	10	< 0.5	< 0.5	133	1.4	3900	7790	843	3120	473	109	222	29.7	143	20.9	43.2
133386	< 2	1983	679	26	433	23	< 0.5	0.2	42	< 0.5	< 0.5	207	1.9	4520	8380	923	3550	576	132	252	35.7	166	24.6	53.2

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133261	2.18	12.1	1.44	1.1	< 0.1	10	0.3	144	624	< 0.1	3.81
133262	1.85	10.8	1.49	1.4	0.3	11	0.2	159	494	0.1	1.83
133263	1.84	10.4	1.43	1.2	0.4	11	0.1	169	491	0.1	1.75
133264	1.83	10.8	1.32	1.1	0.2	9	0.1	143	434	< 0.1	4.01
133265	2.49	14.1	2.00	1.3	0.1	8	< 0.1	74	429	0.1	4.17
133266	2.25	12.2	1.54	1.1	< 0.1	6	< 0.1	70	542	0.1	3.97
133267	2.39	12.3	1.50	0.9	0.1	12	< 0.1	104	504	0.3	3.36
133268	1.85	9.7	1.27	0.7	0.2	15	< 0.1	123	417	0.4	3.25
133269	1.80	9.2	1.22	0.7	< 0.1	3	< 0.1	109	326	0.1	3.17
133270	1.97	11.1	1.38	0.8	0.2	12	< 0.1	110	454	0.1	3.91
133271	2.27	11.7	1.43	1.0	0.2	10	< 0.1	150	657	< 0.1	4.14
133272	2.07	10.8	1.33	1.0	0.2	13	< 0.1	165	586	< 0.1	3.78
133273	2.44	13.3	1.60	1.2	0.1	9	0.1	199	817	0.2	3.88
133274	1.73	10.3	1.29	0.9	0.2	9	< 0.1	168	644	0.1	3.81
133275	2.09	11.3	1.44	0.9	0.1	9	0.2	196	717	0.2	3.72
133276	1.69	9.9	1.22	0.8	0.3	13	< 0.1	245	490	0.1	3.52
133277	1.63	9.1	1.16	0.7	0.4	10	< 0.1	210	646	0.2	4.14
133278	2.34	12.1	1.42	0.9	0.1	9	< 0.1	297	739	0.2	3.79
133279	1.87	10.7	1.28	0.8	0.2	7	< 0.1	212	621	0.1	2.61
133280	2.19	12.2	1.45	0.9	< 0.1	9	< 0.1	282	601	< 0.1	3.42
133281	1.72	10.4	1.34	1.1	0.1	8	0.1	307	615	< 0.1	3.04
133282	2.62	14.0	1.70	1.1	< 0.1	7	0.1	441	810	0.1	3.95
133283	3.45	17.7	1.98	1.4	< 0.1	14	< 0.1	392	1170	< 0.1	2.48
133284	2.89	15.2	1.80	1.1	< 0.1	17	0.1	331	939	< 0.1	3.83
133285	2.67	14.4	1.74	1.1	0.2	7	0.1	440	1040	0.2	2.94
133286	2.93	15.9	1.89	1.0	2.9	6	< 0.1	167	842	1.7	3.24
133287	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	3.0	< 0.1	0.400
133288	9.03	47.1	5.87	5.1	3.2	27	0.3	592	873	2.5	0.0250
133289	3.95	21.4	2.60	1.5	2.3	10	0.2	257	1060	4.6	2.91
133290	3.05	15.7	1.87	1.3	1.9	6	0.3	1020	1490	3.1	4.35
133291	3.77	20.3	2.48	1.6	2.9	7	0.2	318	987	1.6	1.60
133292	3.74	19.3	2.31	1.5	3.0	6	0.2	344	923	1.6	1.52
133293	4.13	21.1	2.42	1.9	5.6	14	0.2	347	937	6.4	3.68
133294	3.57	19.8	2.44	1.4	0.8	9	0.1	302	1060	1.7	3.64
133295	3.08	16.8	2.06	1.2	1.5	12	< 0.1	311	1040	0.8	3.25
133296	4.36	23.2	2.73	1.7	1.8	6	0.2	526	1400	0.9	2.50
133297	2.77	13.9	1.65	1.2	< 0.1	3	0.1	944	1460	0.2	2.81
133298	5.06	26.1	3.08	1.8	1.2	5	0.1	288	1360	0.8	1.89
133299	2.90	14.3	1.72	1.3	1.0	4	< 0.1	239	963	0.6	3.08
133300	5.41	23.6	2.69	2.0	1.2	8	0.1	252	1080	0.9	3.81
133301	4.46	21.5	2.48	1.8	1.0	6	0.1	174	1450	0.7	2.79
133302	4.15	21.7	2.60	1.5	1.2	8	0.1	28	1120	0.9	2.43
133303	3.20	16.8	2.10	1.1	0.4	4	0.2	26	1030	0.2	3.58
133304	3.59	19.0	2.47	1.3	0.3	5	0.2	33	1230	0.2	3.68
133305	2.80	15.5	1.94	1.2	0.1	3	0.1	39	865	0.2	3.24
133306	3.88	19.9	2.36	1.4	0.5	4	0.1	42	1040	0.4	2.65
133307	2.93	15.6	1.97	0.9	0.4	4	< 0.1	90	699	0.2	3.74
133308	3.94	20.5	2.45	1.2	0.8	4	< 0.1	53	689	0.4	2.52
133309	2.55	14.2	1.76	0.7	< 0.1	2	< 0.1	141	557	< 0.1	3.44
133310	4.17	23.1	2.82	1.3	< 0.1	3	0.1	127	668	0.2	3.86
133311	2.84	16.3	2.14	1.2	0.1	2	< 0.1	30	434	0.3	2.20

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133312	2.74	16.0	2.09	1.0	0.7	3	< 0.1	47	491	0.4	3.45
133313	2.64	14.6	1.86	0.8	< 0.1	2	< 0.1	111	701	< 0.1	1.86
133314	3.29	17.0	2.27	1.0	< 0.1	2	< 0.1	99	801	0.1	1.90
133315	2.60	15.0	1.82	0.8	0.8	3	< 0.1	267	708	0.5	3.31
133316	2.54	14.2	1.80	0.7	1.3	4	< 0.1	65	631	0.8	2.21
133317	2.13	12.8	1.73	0.9	0.4	4	< 0.1	81	511	0.1	2.00
133318	3.05	17.7	2.34	1.2	1.2	4	0.4	267	525	2.5	3.92
133319	2.79	15.9	2.07	0.8	2.2	4	0.4	453	723	1.1	3.94
133320	3.43	19.2	2.42	1.2	4.3	4	0.4	294	675	1.9	3.84
133321	2.73	16.0	1.96	1.0	0.2	2	0.2	285	742	0.1	2.47
133322	2.74	15.3	1.96	0.9	0.9	2	0.2	510	724	0.4	3.91
133323	5.43	29.3	3.44	1.8	5.6	3	0.3	159	569	3.3	2.47
133324	< 0.05	< 0.1	< 0.04	0.3	< 0.1	< 1	< 0.1	< 5	3.7	< 0.1	0.400
133325	8.08	47.7	6.41	3.8	< 0.1	5	2.2	1110	169	199	0.0250
133326	5.28	27.9	3.20	1.3	< 0.1	3	0.5	687	958	0.1	1.41
133327	4.18	21.7	2.68	1.1	< 0.1	2	0.4	693	940	< 0.1	2.04
133328	2.47	13.5	1.67	0.7	0.3	13	0.4	748	689	0.2	2.72
133329	3.35	20.2	2.50	0.9	0.7	4	0.3	504	743	0.4	2.95
133330	3.53	20.7	2.69	1.0	0.5	4	0.1	166	598	0.2	3.94
133331	3.19	18.9	2.43	1.0	0.4	4	0.1	353	498	0.2	3.89
133332	4.04	23.3	2.96	1.2	1.0	5	0.1	304	642	0.4	4.01
133333	3.53	19.7	2.51	1.0	0.1	4	< 0.1	277	748	< 0.1	4.01
133334	3.49	19.6	2.41	1.1	< 0.1	2	0.2	350	627	< 0.1	3.96
133335	3.45	19.7	2.44	1.2	2.7	4	0.2	417	679	3.4	2.56
133336	3.89	21.7	2.78	1.1	1.8	3	0.2	427	785	1.0	4.08
133337	3.02	16.7	2.22	0.9	< 0.1	2	0.1	301	737	0.1	4.03
133338	3.19	18.0	2.24	1.1	2.1	4	0.2	228	587	1.0	1.66
133339	3.33	18.8	2.31	1.3	2.3	5	0.1	229	597	1.1	1.48
133340	3.74	21.7	2.79	1.3	< 0.1	3	0.1	211	813	< 0.1	4.14
133341	2.88	16.3	2.09	1.0	< 0.1	5	< 0.1	345	729	< 0.1	3.44
133342	4.18	24.0	3.07	1.9	1.1	5	0.1	321	902	0.6	3.13
133343	3.26	18.8	2.36	1.1	3.9	5	0.1	148	581	2.0	3.54
133344	4.64	25.7	3.03	1.4	< 0.1	5	< 0.1	398	583	< 0.1	3.92
133345	4.19	22.6	2.79	1.4	1.5	8	< 0.1	314	755	0.8	3.70
133346	5.22	26.6	3.25	1.8	< 0.1	5	0.3	470	882	0.1	3.99
133347	4.31	22.5	2.79	1.3	0.8	4	0.3	500	587	0.5	3.69
133348	5.16	27.8	3.38	1.6	< 0.1	2	0.4	924	1020	< 0.1	3.01
133349	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	3.3	< 0.1	0.400
133350	7.88	46.5	6.32	4.0	< 0.1	5	2.2	1070	164	199	0.0300
133351	4.32	24.0	2.86	1.3	0.1	4	0.5	634	867	0.2	3.08
133352	4.38	24.7	3.12	1.3	3.5	5	0.4	686	776	1.6	4.03
133353	3.47	19.7	2.47	1.2	0.4	4	0.2	346	735	0.3	3.90
133354	4.65	25.5	3.20	1.5	< 0.1	5	0.4	216	670	0.2	2.82
133355	4.51	24.6	3.12	1.6	< 0.1	5	0.2	356	724	0.2	4.52
133356	5.73	31.4	3.75	1.7	< 0.1	4	0.1	240	467	0.1	3.62
133357	5.35	29.8	3.77	1.9	0.5	5	< 0.1	287	504	0.6	3.70
133358	6.98	38.7	4.64	2.5	< 0.1	10	< 0.1	135	441	1.8	3.58
133359	7.81	44.0	5.43	2.0	0.1	5	0.1	186	386	0.5	3.47
133360	3.17	17.4	2.16	1.1	< 0.1	5	< 0.1	211	444	< 0.1	3.03
133361	3.01	16.5	1.94	1.1	0.3	10	0.2	456	592	< 0.1	4.20
133362	3.59	20.0	2.39	1.3	< 0.1	9	0.1	377	889	0.1	3.66

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133363	3.67	20.3	2.44	1.1	< 0.1	7	< 0.1	267	625	< 0.1	3.80
133364	3.90	20.9	2.51	1.2	< 0.1	5	0.2	424	615	0.2	1.97
133365	4.23	22.3	2.60	1.3	< 0.1	5	0.2	355	610	0.2	1.75
133366	3.11	16.5	1.95	1.0	< 0.1	2	0.2	404	662	< 0.1	3.88
133367	2.84	15.3	1.84	0.9	< 0.1	3	0.2	359	647	< 0.1	3.79
133368	4.48	24.9	3.16	1.4	0.1	2	0.1	160	396	0.2	3.84
133369	4.37	24.7	3.06	1.4	< 0.1	6	< 0.1	132	523	0.3	3.96
133370	3.28	18.6	2.33	1.5	0.3	11	0.2	177	592	0.3	3.96
133371	5.47	29.7	3.62	1.6	< 0.1	4	0.3	216	544	2.3	4.17
133372	6.31	33.2	3.98	1.9	< 0.1	3	0.3	293	466	2.0	3.86
133373	3.50	20.7	2.58	1.1	0.1	5	0.2	527	731	0.1	3.89
133374	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.9	< 0.1	0.400
133375	8.65	47.8	5.87	5.7	3.0	28	0.3	597	868	2.6	0.0250
133376	4.20	23.7	2.93	1.1	< 0.1	2	0.2	373	677	< 0.1	3.88
133377	3.99	22.5	2.85	1.4	< 0.1	< 1	0.2	332	690	< 0.1	3.87
133378	2.70	14.8	1.75	0.9	0.2	2	0.2	265	451	0.2	3.86
133379	2.51	13.8	1.71	0.8	< 0.1	5	0.2	422	472	< 0.1	3.03
133380	3.52	19.8	2.42	1.4	1.0	3	0.2	372	552	0.6	3.51
133381	3.04	16.7	2.11	1.0	< 0.1	2	< 0.1	253	496	< 0.1	4.08
133382	3.24	17.4	2.09	1.2	< 0.1	2	< 0.1	273	479	< 0.1	4.03
133383	3.30	17.7	2.16	1.3	1.1	1	0.2	190	429	1.0	3.87
133384	4.82	25.3	2.98	1.7	1.8	1	0.2	140	391	1.2	3.75
133385	4.52	23.0	2.73	1.7	< 0.1	< 1	0.1	320	547	< 0.1	2.78
133386	5.34	25.8	2.71	2.1	< 0.1	2	0.3	363	694	0.2	2.86

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.06	11.36	1.89	0.75	0.013	0.35	43.72	0.87	0.55	0.117	30.20					1665								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.08																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.99	18.57	9.86	0.147	10.02	11.21	1.91	0.23	0.478	0.07			31		156	270	57	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.78	13.07	3.21	0.139	0.15	0.61	2.46	5.38	0.288	0.05			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.43	15.39	10.67	0.166	6.34	10.84	2.20	0.62	1.075	0.15			35	< 1	278	90	43	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.77	20.69	6.17	0.107	0.51	7.93	6.97	1.67	0.292	0.13			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																					40			
CTA-AC-1 Cert																					38.0			
BIR-1a Meas		47.93	15.58	11.22	0.171	9.63	13.31	1.81	0.02	0.973	0.04			44	< 1	342	370	53	160	130	70	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1050	101		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2600	7400	24		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC70009 (GBW07241) Meas																				960	100	16	11	73
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		430				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20			17		
JR-1 Cert																			1.67			16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133275 Orig	3.65																							
133275 Dup	3.40																							
133292 Orig	4.60	0.51	0.10	15.03	1.511	11.39	28.36	0.02	0.09	0.315	0.70	36.52	94.55	86	6	96	< 20	6	< 20	< 10	1080	51	9	23
133292 Dup	4.71	0.50	0.11	14.81	1.495	11.26	28.27	0.02	0.09	0.313	0.68	36.52	94.06	85	6	94	< 20	6	< 20	< 10	1090	52	8	22
133302 Orig	4.83	1.35	0.13	22.76	2.025	9.59	24.06	0.02	0.09	0.303	0.79	34.16	95.29	82	15	99	< 20	10	< 20	< 10	440	50	10	25
133302 Dup	4.79	1.35	0.14	22.61	2.008	9.58	23.97	0.02	0.09	0.300	0.80	34.16	95.02	82	15	100	< 20	10	< 20	< 10	440	52	9	23
133317 Orig	9.20	6.70	0.10	10.67	1.383	9.81	30.05	0.04	0.10	0.064	1.22	29.55	89.68	57	10	62	< 20	7	< 20	< 10	1970	105	12	32
133317 Dup	9.26	6.81	0.10	10.71	1.402	9.93	30.37	0.04	0.10	0.063	1.24	29.55	90.32	58	10	60	< 20	6	< 20	< 10	1950	105	13	34
133334 Orig	5.12	0.88	0.07	15.84	1.924	11.07	26.45	0.03	0.06	0.139	0.45	35.32	92.22	59	6	81	< 20	9	< 20	< 10	1620	77	10	28
133334 Dup	5.11	0.93	0.07	15.92	1.931	11.22	26.65	0.03	0.06	0.137	0.43	35.32	92.71	59	6	80	< 20	8	< 20	< 10	1590	74	10	27
133345 Orig	4.31	0.35	0.06	14.48	1.759	11.99	27.77	0.02	0.05	0.277	0.83	36.78	94.37	80	9	104	< 20	6	< 20	< 10	1350	74	10	27

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133345 Dup	4.32	0.32	0.06	14.54	1.766	12.03	27.86	0.02	0.05	0.280	0.85	36.78	94.56	80	10	103	< 20	6	< 20	< 10	1350	72	10	26
133360 Orig	5.03	0.70	0.04	11.98	1.449	12.50	27.74	0.02	0.05	0.107	0.80	36.61	92.00	47	13	79	< 20	4	< 20	< 10	1360	114	14	36
133360 Dup	5.08	0.71	0.04	12.35	1.495	12.83	28.52	0.02	0.05	0.106	0.82	36.61	93.55	48	13	79	< 20	4	< 20	< 10	1330	109	13	35
133377 Orig	2.80	0.23	0.08	10.79	1.787	13.47	28.91	0.02	0.04	0.041	0.91	38.89	95.17	70	6	74	< 20	4	< 20	< 10	1630	83	12	31
133377 Dup	2.80	0.24	0.08	10.66	1.762	13.19	28.07	0.02	0.04	0.041	0.89	38.89	93.89	70	5	71	< 20	4	< 20	< 10	1650	87	13	33
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		144	16	33								106					4.9		0.60					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		41	47	402								501												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	74					< 2					2.4			48.1	92.1		42.5	7.8	1.42			4.9		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas	19	197	20	84	8	< 2	< 0.5					174	< 0.4		24.7		12.8	3.3	1.08		0.7	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0	7.90	0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1201	121	527								346												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3320		1100	161	44.3	120	14.8			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		110	14	15								8					2.5	1.1	0.54	1.8				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	186		1590			230	34.3	184	35.7	96.5
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											265													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	43.2	85.0		36.2	7.5	1.63	6.8	1.1	6.1	1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0		39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5
NCS DC70009 (GBW07241) Meas	501							1.3	1700		43.2			23.0	58.9	7.56	31.2	12.1		14.3	3.3	20.5	4.2	12.5
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas														264	478	44.6	144	23.5	3.55		3.6	21.8	4.8	14.0
OREAS 100a (Fusion) Cert														260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								797	1390	125	380	48.0	7.76			30.2	6.2	18.4
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5
JR-1 Meas	251				15	3	< 0.5	< 0.2	3		20.9		0.6	20.7	49.7	5.92	22.8	5.7		5.4	1.0	6.2		3.9
JR-1 Cert	257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69		3.61
NCS DC86318 Meas														2010	429	736	3360	1760	19.3	2060	479	3030		
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220		
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														22100	29500	2410	6640	553	90.6					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133275 Orig																								
133275 Dup																								
133292 Orig	< 2	1969	536	27	731	7	< 0.5	0.3	31	< 0.5	< 0.5	184	1.7	2600	5070	565	2220	429	121	263	33.5	131	18.2	35.0
133292 Dup	2	1939	543	27	701	7	< 0.5	0.3	31	< 0.5	< 0.5	186	1.7	2620	5170	574	2220	424	119	256	34.0	133	18.2	35.8
133302 Orig	< 2	1617	558	25	514	5	< 0.5	0.3	59	< 0.5	< 0.5	219	3.8	2020	4680	569	2300	491	139	300	36.3	141	19.3	39.0
133302 Dup	< 2	1586	558	24	501	5	< 0.5	0.3	57	< 0.5	< 0.5	218	3.2	2000	4640	568	2260	482	140	297	35.2	140	18.9	37.7
133317 Orig	< 2	1953	257	38	313	64	0.6	< 0.2	9	< 0.5	< 0.5	286	1.4	6930	11000	1000	3120	383	81.9	143	14.8	53.9	7.5	17.1
133317 Dup	< 2	2001	260	37	320	67	0.5	< 0.2	9	< 0.5	< 0.5	292	1.4	6900	11000	1010	3200	396	84.2	146	14.9	55.5	7.7	17.7
133334 Orig	< 2	1842	422	17	297	5	< 0.5	< 0.2	14	< 0.5	< 0.5	219	1.4	4120	7470	758	2550	369	92.6	192	23.9	96.2	13.9	30.9
133334 Dup	< 2	1832	424	19	287	5	< 0.5	< 0.2	15	< 0.5	< 0.5	220	1.6	4180	7660	766	2560	369	92.5	193	23.7	96.0	13.9	31.1
133345 Orig	< 2	2292	522	23	850	5	< 0.5	0.2	25	< 0.5	< 0.5	211	1.4	4000	7180	728	2430	394	107	227	29.7	121	17.5	38.4

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133345 Dup	< 2	2293	521	22	837	5	0.5	< 0.2	25	< 0.5	< 0.5	209	1.6	3910	7050	697	2350	377	103	218	29.3	115	17.1	37.1
133360 Orig	< 2	2817	335	20	479	15	< 0.5	< 0.2	35	< 0.5	< 0.5	195	1.4	7510	11400	1050	3390	428	94.7	168	17.6	75.3	10.9	25.4
133360 Dup	< 2	2844	350	19	462	15	< 0.5	< 0.2	34	< 0.5	< 0.5	198	1.6	7490	11400	1050	3370	425	94.5	163	17.6	75.6	11.2	27.6
133377 Orig	< 2	2500	442	21	98	< 2	0.5	< 0.2	7	< 0.5	< 0.5	237	4.0	4010	8090	869	3010	398	96.7	193	23.8	101	15.0	33.2
133377 Dup	< 2	2528	433	24	98	< 2	0.7	< 0.2	7	< 0.5	< 0.5	218	3.9	3890	8040	869	2970	391	95.2	189	23.7	103	14.9	33.3
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									938	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.8	0.40		0.6					4.6
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									29000	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1				< 1	0.1		2.6	0.5
W-2a Cert	0.380	2.10				0.300	0.200		2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.7	1.06							4.2
CTA-AC-1 Cert		11.4	1.08							4.4
BIR-1a Meas		1.7		0.6						
BIR-1a Cert		1.7		0.60						
NCS DC86312 Meas	14.3	87.6	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					83.4	339	34.5			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.58	3.3	0.48					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC70009 (GBW07241) Meas	2.33	15.8	2.25			2200			30.5	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.39	15.1	2.10						53.6	139
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.91	17.8	2.43						36.8	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas	0.73	4.7	0.69	4.5	1.8		1.6	20	28.2	9.2
JR-1 Cert	0.67	4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas										
NCS DC86318 Cert										
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133275 Orig										
133275 Dup										
133292 Orig	3.65	19.0	2.29	1.5	3.1	6	0.2	331	934	1.6
133292 Dup	3.84	19.6	2.33	1.5	3.0	6	0.2	357	911	1.5
133302 Orig	4.27	21.6	2.58	1.5	1.2	8	0.1	30	1120	0.9
133302 Dup	4.03	21.9	2.61	1.5	1.2	7	0.1	27	1120	0.9
133317 Orig	2.11	12.5	1.72	0.9	0.4	5	< 0.1	77	509	0.1
133317 Dup	2.14	13.0	1.74	0.9	0.4	3	< 0.1	85	513	0.1
133334 Orig	3.47	20.0	2.37	1.1	< 0.1	2	0.1	348	621	< 0.1
133334 Dup	3.51	19.2	2.44	1.0	0.1	2	0.2	351	632	< 0.1
133345 Orig	4.18	22.9	2.86	1.4	1.4	8	< 0.1	299	762	0.8

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133345 Dup	4.19	22.3	2.72	1.4	1.5	8	< 0.1	328	748	0.8
133360 Orig	3.06	16.7	2.12	1.1	< 0.1	4	< 0.1	208	438	< 0.1
133360 Dup	3.28	18.1	2.20	1.1	< 0.1	5	< 0.1	214	450	< 0.1
133377 Orig	4.07	22.8	2.86	1.4	< 0.1	1	0.2	328	696	< 0.1
133377 Dup	3.92	22.3	2.85	1.4	< 0.1	< 1	0.1	335	684	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11630
Invoice Date: 10-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

108 Rock samples were submitted for analysis.

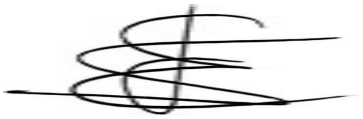
The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11630**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133387	1.69	2.97	0.13	15.97	2.238	12.53	21.83	0.06	0.07	0.503	1.69	36.17	94.14	40	10	95	90	119	110	< 10	1200	60	9	26
133388	5.35	2.99	0.08	13.03	2.155	11.91	25.43	0.03	0.03	0.095	0.55	35.02	91.34	28	13	54	< 20	13	< 20	< 10	1940	76	12	31
133389	4.48	1.20	0.11	12.32	1.955	12.44	27.08	0.04	0.06	0.088	0.62	37.05	92.95	32	8	54	< 20	6	< 20	< 10	1600	72	10	27
133390	3.16	1.54	0.19	9.56	1.365	13.70	26.96	0.08	0.13	0.119	1.47	38.37	93.49	50	16	58	< 20	4	< 20	< 10	850	64	9	25
133391	4.68	2.45	0.10	8.87	1.184	13.65	27.71	0.07	0.08	0.101	0.69	37.75	92.64	57	18	65	< 20	8	< 20	< 10	530	64	9	25
133392	5.19	2.21	0.12	10.96	1.344	13.19	28.44	0.06	0.15	0.249	1.78	35.18	93.69	63	23	83	< 20	5	< 20	< 10	730	65	10	26
133393	4.64	1.61	0.11	12.67	1.610	12.52	26.08	0.05	0.13	0.202	1.15	35.93	92.05	50	15	69	< 20	5	< 20	< 10	1050	79	11	27
133394	4.75	0.93	0.16	16.49	1.711	11.63	24.66	0.02	0.17	0.324	0.86	34.64	91.61	44	10	92	< 20	14	< 20	< 10	760	69	11	28
133395	3.94	1.88	0.33	24.03	2.204	9.73	22.40	0.03	0.35	0.532	2.34	29.34	93.15	44	10	150	< 20	16	< 20	< 10	770	68	12	34
133396	0.57	2.47	0.21	22.56	2.618	9.95	20.14	0.02	0.20	0.302	1.74	31.78	91.98	39	5	109	< 20	12	< 20	< 10	820	71	13	34
133397	0.60	2.40	0.46	37.97	3.870	7.74	11.35	0.03	0.42	0.339	2.43	27.20	94.20	25	8	178	< 20	15	< 20	< 10	790	37	10	27
133398	1.14	2.33	0.22	27.76	3.412	10.49	14.23	0.03	0.22	0.394	1.28	33.69	94.06	31	9	110	< 20	12	< 20	< 10	1940	63	14	37
133399	1.85	14.78	2.51	12.83	0.142	0.48	26.80	0.91	0.96	0.143	19.11	8.38	87.05	18	14	155	< 20	31	70	100	600	277	32	184
133400	< 0.01	98.93	0.05	1.18	0.019	0.06	0.18	0.02	< 0.01	0.002	0.01	0.35	100.8	< 1	< 1	< 5	120	< 1	< 20	< 10	< 30	< 1	< 1	< 5
133401	4.40	3.07	0.05	14.65	2.237	12.12	24.66	0.05	0.05	0.068	0.36	35.54	92.85	36	12	64	< 20	8	< 20	< 10	1770	78	12	29
133402	5.93	4.41	0.04	12.62	2.053	11.00	26.58	0.06	0.04	0.073	0.94	33.50	91.31	40	15	56	< 20	6	< 20	< 10	1290	71	9	24
133403	5.03	2.40	0.04	9.16	1.898	12.42	29.60	0.05	0.05	0.075	0.46	36.32	92.46	37	12	51	< 20	3	< 20	< 10	1040	74	9	23
133404	1.06	2.35	0.37	27.13	3.172	10.11	17.55	0.03	0.40	0.129	0.79	28.67	90.69	29	8	115	< 20	15	< 20	< 10	1690	65	11	29
133405	6.27	1.47	0.14	12.88	2.124	11.30	29.37	0.03	0.15	0.060	1.01	33.06	91.61	33	8	69	< 20	6	< 20	< 10	1480	86	10	27
133406	6.08	2.63	0.15	12.59	1.962	11.24	27.74	0.03	0.19	0.073	0.92	33.12	90.65	38	11	62	< 20	6	< 20	< 10	1630	92	11	30
133407	3.79	1.41	0.05	13.19	2.368	12.20	25.86	0.04	0.06	0.087	0.41	36.95	92.63	36	9	61	< 20	5	< 20	< 10	1500	78	11	27
133408	5.20	3.34	0.13	11.40	1.961	12.22	27.47	0.06	0.18	0.056	0.67	35.18	92.66	46	14	54	< 20	4	< 20	< 10	730	76	11	26
133409	2.69	2.50	0.15	20.62	2.434	11.35	21.03	0.02	0.16	0.113	0.49	32.70	91.55	32	8	76	< 20	13	< 20	< 10	1280	59	9	27
133410	2.41	4.10	0.44	28.63	2.875	10.67	16.06	0.04	0.60	0.245	0.44	30.45	94.54	27	19	137	< 20	12	< 20	< 10	1840	52	9	23
133411	3.54	1.14	0.08	15.75	2.416	12.80	24.47	0.02	0.09	0.138	0.38	36.90	94.19	32	9	70	< 20	7	< 20	< 10	2350	69	11	28
133412	4.61	1.40	0.06	12.74	1.987	12.50	27.69	0.04	0.05	0.043	1.40	35.97	93.87	42	15	53	< 20	6	< 20	< 10	1660	68	9	24
133413	4.81	3.36	0.05	14.10	2.201	11.35	26.06	0.06	0.04	0.090	1.02	33.52	91.85	28	12	57	< 20	9	< 20	< 10	1700	69	10	25
133414	5.27	2.51	0.04	17.13	2.550	11.18	24.26	0.03	0.06	0.340	0.45	33.86	92.42	29	9	85	< 20	10	< 20	< 10	1620	73	10	28
133415	3.14	3.14	0.09	23.40	3.224	11.21	18.11	0.03	0.10	0.148	1.22	33.79	94.48	25	7	69	< 20	14	< 20	< 10	1490	72	12	31
133416	3.19	2.24	0.13	16.33	2.524	12.26	24.28	0.02	0.16	0.166	0.40	35.82	94.32	26	11	65	< 20	9	< 20	< 10	1290	69	10	25
133417	3.09	1.40	0.22	23.74	2.195	10.33	20.48	0.02	0.24	1.048	0.89	32.14	92.70	38	13	200	< 20	13	< 20	< 10	1110	65	10	26
133418	0.02	97.70	0.04	1.20	0.029	0.09	0.17	0.01	< 0.01	0.002	0.01	0.06	99.32	< 1	< 1	< 5	90	< 1	< 20	< 10	< 30	2	1	< 5
133419	4.76	0.74	0.10	12.47	1.703	11.39	28.50	0.03	0.11	0.119	3.15	34.45	92.78	36	14	58	< 20	6	< 20	< 10	1000	72	11	27
133420	4.20	1.13	0.09	13.90	2.012	12.07	26.30	0.03	0.11	0.072	1.37	35.72	92.80	34	16	62	< 20	8	< 20	< 10	1290	76	11	28
133421	3.39	1.46	0.07	15.68	1.992	12.76	23.75	0.04	0.08	0.064	0.75	37.20	93.83	41	15	69	< 20	7	< 20	< 10	1500	60	9	23
133422	2.91	2.49	0.11	12.49	1.569	12.76	25.42	0.06	0.12	0.065	1.51	36.58	93.18	56	14	80	< 20	7	< 20	< 10	1170	63	10	25
133423	4.15	1.38	0.15	14.09	1.626	12.47	26.33	0.05	0.19	0.081	1.49	35.08	92.94	46	14	85	< 20	9	< 20	< 10	1170	77	11	27
133424	< 0.01	99.32	0.04	0.73	0.016	0.08	0.16	0.01	< 0.01	< 0.001	0.02	0.21	100.6	< 1	< 1	< 5	120	< 1	< 20	< 10	< 30	2	1	< 5
133425	6.07	20.41	3.05	27.44	2.336	6.82	17.16	0.31	1.28	1.435	0.56	12.68	93.47	22	13	158	170	29	80	30	1440	57	10	25
133426	1.50	1.70	0.17	14.81	1.919	12.83	24.36	0.05	0.21	0.079	1.83	36.41	94.36	44	12	80	< 20	7	< 20	< 10	930	54	7	19
133427	3.94	1.58	0.06	14.11	1.959	11.96	25.45	0.04	0.06	0.073	1.45	35.88	92.62	43	9	71	< 20	8	< 20	< 10	1110	75	11	28
133428	2.13	1.11	0.05	33.23	3.893	9.16	12.37	0.02	0.01	0.068	1.73	33.83	95.49	27	3	62	< 20	15	< 20	< 10	990	48	11	29
133429	4.39	1.54	0.08	11.22	1.864	12.71	27.93	0.03	0.06	0.041	0.97	36.77	93.21	38	15	50	< 20	7	< 20	< 10	1290	72	11	28
133430	3.89	2.28	0.05	14.71	2.191	12.37	25.18	0.02	0.04	0.081	0.82	36.26	94.00	31	14	58	< 20	7	< 20	< 10	1470	69	11	28
133431	3.48	3.70	0.05	10.19	1.763	12.82	27.36	0.04	0.04	0.044	0.60	37.07	93.69	31	13	45	< 20	5	< 20	< 10	790	83	12	31
133432	6.72	4.14	0.07	9.14	1.721	11.34	31.82	0.02	0.05	0.034	1.10	33.38	92.82	30	21	45	< 20	4	< 20	< 10	1330	90	12	30
133433	5.80	4.41	0.06	10.98	1.940	11.65	28.65	0.02	0.05	0.070	0.94	33.82	92.61	28	16	43	< 20	6	< 20	< 10	1560	81	10	27
133434	6.17	6.37	0.07	8.67	1.580	11.68	29.65	0.03	0.06	0.052	1.48	33.03	92.67	37	27	41	< 20	4	< 20	< 10	1090	85	11	29
133435	5.40	4.57	0.05	8.00	1.300	12.76	29.55	0.03	0.04	0.077	0.97	35.74	93.08	33	19	46	< 20	2	< 20	< 10	800	64	9	24
133436	6.91	5.80	0.04	7.54	1.292	12.32	31.14	0.04	0.03	0.036	0.83	33.26	92.32	34	12	38	< 20	3	< 20	< 10	710	92	13	33
133437	3.01	4.19	0.05	7.76	1.467	14.02	28.38	0.03	0.04	0.033	0.86	37.75	94.57	38	11	36	< 20	3	< 20	< 10	470	86	12	31
133438	3.31	5.71	0.04	6.78	1.341	13.31	29.87	0.04	0.04	0.062	0.99	35.76	93.94	33	19	40	< 20	2	< 20	< 10	540	91	13	32

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133439	4.39	4.54	0.05	6.61	1.351	13.41	29.80	0.03	0.04	0.057	0.88	36.41	93.16	33	16	37	< 20	3	< 20	< 10	460	86	12	32
133440	4.66	2.87	0.04	6.68	1.400	14.99	33.16	0.03	0.04	0.128	1.21	37.46	98.00	38	15	52	< 20	2	< 20	< 10	700	99	15	35
133441	3.50	3.85	0.05	6.26	1.302	13.36	30.29	0.03	0.07	0.075	2.57	36.24	94.09	39	24	45	< 20	2	< 20	< 10	570	103	16	39
133442	6.61	1.73	0.06	5.68	1.207	13.11	33.25	0.02	0.06	0.026	1.07	36.04	92.24	33	14	31	< 20	1	< 20	< 10	580	92	14	34
133443	4.67	2.69	0.04	6.13	1.268	13.71	30.55	0.02	0.05	0.046	1.09	37.30	92.89	32	11	29	< 20	3	< 20	< 10	420	97	13	32
133444	5.38	2.16	0.04	7.12	1.420	13.70	31.90	0.02	0.06	0.093	0.74	36.29	93.55	33	13	42	< 20	3	< 20	< 10	630	83	12	31
133445	3.76	1.72	0.07	8.55	1.525	13.77	29.06	0.02	0.10	0.186	0.79	37.09	92.89	30	11	54	< 20	6	< 20	< 10	790	116	16	40
133446	0.81	1.99	0.07	30.39	3.650	10.35	12.26	0.01	0.06	0.331	0.43	35.54	95.08	17	4	78	< 20	12	< 20	< 10	950	52	12	30
133447	10.1	1.74	0.08	11.28	1.839	10.45	32.73	0.02	0.09	0.083	0.89	29.53	88.73	28	15	52	< 20	6	< 20	< 10	2310	97	16	42
133448	6.33	2.58	0.03	11.99	2.063	11.83	29.26	0.02	0.03	0.060	0.81	33.45	92.11	29	10	44	< 20	7	< 20	< 10	1310	87	13	35
133449	0.03	98.99	0.05	1.24	0.035	0.12	0.23	0.01	< 0.01	0.003	0.01	0.11	100.8	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	2	1	< 5
133450	1.72	14.79	2.58	12.95	0.145	0.47	26.48	0.93	1.00	0.146	19.19	8.37	87.06	18	15	157	< 20	32	70	100	590	267	33	182
133451	2.47	2.61	0.04	24.03	3.435	10.84	18.00	0.01	0.02	0.142	0.30	35.13	94.55	24	4	71	< 20	10	< 20	< 10	1670	63	12	32
133452	4.01	1.38	0.09	14.97	2.464	12.24	25.51	0.02	0.10	0.091	0.61	35.53	93.00	33	7	63	< 20	8	< 20	< 10	2200	85	13	33
133453	2.29	2.62	0.18	13.06	2.030	12.88	25.01	0.02	0.22	0.177	0.80	35.88	92.87	30	9	55	< 20	6	< 20	< 10	1400	91	14	34
133454	2.87	1.63	0.09	10.39	1.693	13.61	28.37	0.03	0.09	0.076	1.00	36.85	93.82	33	16	56	< 20	7	< 20	< 10	1240	24	4	11
133455	4.48	1.69	0.08	7.59	1.392	13.98	29.70	0.03	0.10	0.035	0.94	37.66	93.24	36	21	37	< 20	5	< 20	< 10	940	30	5	14
133456	4.34	1.53	0.05	8.25	1.526	13.68	29.04	0.02	0.06	0.044	0.84	37.26	92.32	30	14	41	< 20	5	< 20	< 10	1390	32	5	14
133457	3.35	1.53	0.05	10.86	1.892	13.39	26.42	0.02	0.05	0.084	0.43	37.89	92.84	30	9	57	< 20	5	< 20	< 10	1570	30	5	13
133458	5.00	3.72	0.06	10.41	1.710	12.49	28.76	0.03	0.07	0.108	0.57	35.25	93.32	24	12	54	< 20	6	< 20	< 10	1200	29	4	13
133459	4.13	2.22	0.06	11.18	1.764	12.67	28.44	0.02	0.05	0.073	0.69	35.88	93.04	27	10	52	< 20	6	< 20	< 10	1610	26	4	11
133460	6.73	1.08	0.05	11.58	1.745	12.10	29.90	0.02	0.05	0.141	0.56	34.06	91.27	26	12	63	< 20	6	< 20	< 10	1710	31	5	14
133461	5.17	1.27	0.05	11.76	1.786	12.55	27.30	0.02	0.06	0.094	0.38	35.47	90.74	27	12	48	< 20	5	< 20	< 10	1500	30	5	14
133462	4.07	2.07	0.04	12.05	1.968	12.24	26.64	0.02	0.04	0.081	0.38	36.30	91.82	26	8	49	< 20	5	< 20	< 10	1130	25	4	11
133463	2.81	1.10	0.03	15.12	2.404	12.78	24.02	0.02	0.04	0.073	0.36	37.16	93.10	25	6	47	< 20	7	< 20	< 10	1330	29	5	14
133464	3.85	2.15	0.05	18.94	2.518	11.21	22.96	0.01	0.04	0.167	0.70	34.09	92.85	24	9	65	< 20	7	< 20	< 10	1190	18	3	9
133465	4.19	2.38	0.04	18.99	2.550	11.29	22.52	0.02	0.04	0.166	0.46	33.83	92.28	24	9	62	< 20	8	< 20	< 10	1380	23	4	12
133466	5.11	2.74	0.08	12.50	2.112	12.05	26.66	0.02	0.09	0.045	1.08	33.65	91.03	24	13	45	< 20	7	< 20	< 10	1170	42	7	18
133467	5.40	6.88	0.09	11.20	1.812	11.68	25.40	0.03	0.11	0.109	1.05	32.87	91.21	29	14	51	< 20	7	< 20	< 10	1780	34	5	14
133468	4.07	2.34	0.05	11.49	1.826	13.31	26.95	0.02	0.05	0.033	0.66	36.82	93.57	30	10	35	< 20	5	< 20	< 10	2050	31	5	12
133469	3.30	1.37	0.10	11.19	1.842	13.19	26.11	0.02	0.10	0.033	1.24	38.06	93.26	31	12	42	< 20	4	< 20	< 10	1290	28	5	14
133470	7.08	2.62	0.06	8.05	1.210	12.58	31.31	0.03	0.09	0.026	1.26	33.97	91.21	28	18	36	< 20	3	< 20	< 10	690	37	6	15
133471	3.92	2.01	0.13	10.98	1.726	13.03	27.59	0.03	0.16	0.064	0.99	36.31	93.02	33	22	46	< 20	6	< 20	< 10	830	36	6	16
133472	2.92	1.54	0.13	9.88	1.507	14.22	27.63	0.03	0.20	0.098	1.30	38.07	94.59	39	42	63	< 20	7	< 20	< 10	710	34	6	16
133473	0.84	1.48	0.06	8.31	1.299	14.18	28.90	0.03	0.07	0.126	2.82	39.25	96.54	48	21	85	< 20	8	< 20	< 10	490	17	3	11
133474	0.19	99.87	0.04	0.71	0.012	0.09	0.19	0.01	< 0.01	< 0.001	0.02	0.03	101.0	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	2	1	< 5
133475	5.93	21.15	3.11	28.65	2.416	7.02	17.45	0.32	1.31	1.472	0.54	12.34	95.78	21	13	164	160	28	30	30	1450	27	5	14
133476	1.60	2.30	0.09	8.48	1.386	13.80	26.94	0.04	0.12	0.090	1.88	38.68	93.82	51	30	78	< 20	5	< 20	< 10	700	26	5	13
133477	5.11	3.11	0.07	8.97	1.564	12.58	29.49	0.04	0.08	0.120	1.50	35.24	92.77	47	28	63	< 20	5	< 20	< 10	850	33	6	14
133478	3.25	1.64	0.04	10.38	1.607	12.19	25.20	0.02	0.05	0.097	1.51	36.94	89.69	41	25	67	< 20	7	< 20	< 10	890	27	5	13
133479	10.2	2.65	0.05	8.15	1.222	12.13	34.56	0.02	0.07	0.068	0.77	30.11	89.80	25	36	39	< 20	7	< 20	< 10	1030	25	3	10
133480	3.50	2.18	0.07	8.75	1.593	13.19	27.52	0.03	0.05	0.081	1.35	37.67	92.49	41	16	59	< 20	5	< 20	< 10	1060	28	5	12
133481	5.26	3.40	0.05	8.22	1.428	12.81	29.79	0.04	0.06	0.039	1.38	35.03	92.24	41	22	53	< 20	3	< 20	< 10	860	32	5	14
133482	4.67	1.74	0.06	7.57	1.373	13.86	30.61	0.03	0.10	0.062	1.13	37.05	93.57	38	37	47	< 20	4	< 20	< 10	800	33	5	14
133483	3.01	2.71	0.04	7.16	1.394	13.49	29.69	0.02	0.03	0.044	1.19	37.66	93.40	34	18	45	< 20	4	< 20	< 10	1050	24	3	9
133484	3.57	2.97	0.05	7.05	1.452	13.75	29.97	0.02	0.07	0.058	1.78	37.16	94.34	40	21	50	< 20	4	< 20	< 10	720	31	5	15
133485	5.26	1.09	0.07	8.53	1.464	12.98	30.32	0.02	0.10	0.059	1.51	35.38	91.52	40	19	46	< 20	6	< 20	< 10	960	30	5	15
133486	2.78	1.95	0.05	8.10	1.371	13.93	28.22	0.02	0.07	0.056	0.95	38.17	92.89	40	22	42	< 20	6	< 20	< 10	720	32	5	16
133487	5.07	0.78	0.04	9.55	1.667	13.79	31.42	0.02	0.04	0.041	0.70	37.27	95.32	32	12	34	< 20	6	< 20	< 10	1130	34	6	16
133488	4.53	1.03	0.04	10.47	1.711	12.94	29.28	0.02	0.05	0.051	0.53	37.30	93.42	35	10	42	< 20	6	< 20	< 10	780	31	5	15
133489	2.30	0.58	0.01	29.78	3.957	9.89	14.03	0.02	< 0.01	0.093	0.45	33.75	92.58	20	3	72	< 20	20	< 20	< 10	1500	19	5	15
133490	2.39	0.63	0.04	9.74	1.402	14.33	28.00	0.02	0.04	0.087	0.56	39.32	94.16	33	15	50	< 20	7	< 20	< 10	590	30	6	15

Activation Laboratories Ltd. Report: A13-11630

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133491	2.52	0.65	0.03	9.23	1.392	14.07	28.31	0.01	0.04	0.102	0.60	39.06	93.49	32	14	48	< 20	6	< 20	< 10	590	31	5	15
133492	4.17	3.05	0.03	10.62	1.534	14.26	29.71	0.02	0.03	0.068	0.44	36.60	96.36	35	22	52	< 20	7	< 20	< 10	1080	35	6	16
133493	5.31	2.75	0.02	8.10	1.414	13.07	30.07	0.01	0.03	0.056	0.33	36.27	92.13	30	17	38	< 20	3	< 20	< 10	1200	35	5	14
133494	3.79	4.07	0.04	7.32	1.352	13.62	28.99	0.02	0.05	0.052	0.55	37.48	93.54	36	23	43	< 20	4	< 20	< 10	950	34	6	14

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133387	< 2	2008	501	47	408	14	0.5	< 0.2	39	< 0.5	< 0.5	279	6.0	2490	5620	675	2470	350	90.6	187	26.6	126	19.2	40.2
133388	< 2	1854	448	28	274	6	< 0.5	< 0.2	10	< 0.5	< 0.5	317	7.6	2400	7290	870	3010	339	74.3	141	18.7	97.2	16.4	36.8
133389	< 2	2021	366	52	197	6	0.6	< 0.2	9	< 0.5	< 0.5	234	2.6	2980	7380	791	2620	304	67.7	128	16.0	77.4	12.9	30.1
133390	3	2607	314	95	363	9	0.9	< 0.2	13	< 0.5	< 0.5	263	2.3	3540	6580	684	2380	351	80.7	147	15.5	66.6	10.4	25.0
133391	< 2	2015	297	32	451	4	< 0.5	< 0.2	13	< 0.5	< 0.5	365	1.0	3340	6180	648	2310	355	83.1	152	15.2	62.9	9.7	23.2
133392	3	2326	644	76	1020	5	0.8	< 0.2	29	< 0.5	< 0.5	405	1.0	3230	6010	648	2370	406	104	225	29.3	137	22.3	51.8
133393	3	2165	410	64	565	6	0.5	< 0.2	19	< 0.5	< 0.5	307	1.6	4950	8150	819	2850	422	99.1	186	21.2	91.3	14.2	32.1
133394	4	1859	361	59	969	8	0.6	< 0.2	34	< 0.5	< 0.5	333	1.2	3580	6450	674	2510	430	96.9	178	19.1	79.6	11.8	27.2
133395	8	2007	443	58	956	5	0.7	0.3	51	< 0.5	< 0.5	404	2.5	2980	5720	673	2840	538	118	225	24.1	99.2	14.6	32.8
133396	5	1885	450	23	521	5	0.6	0.3	16	< 0.5	< 0.5	287	2.6	3190	6420	737	3010	518	115	212	24.8	111	16.6	38.7
133397	11	1341	357	28	334	< 2	0.8	0.3	30	< 0.5	< 0.5	554	3.4	531	2180	450	2270	393	82.5	153	18.2	82.9	12.2	24.8
133398	5	1351	421	21	301	< 2	1.3	0.3	37	< 0.5	< 0.5	356	7.1	1140	4840	777	3470	531	109	194	22.1	102	15.8	36.3
133399	35	20280	907	230	22	33	3.7	< 0.2	< 1	5.7	1.7	900	8.6	18100	28700	2520	7760	873	202	356	34.8	149	24.2	60.9
133400	< 2	7	2	33	9	6	0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	11.0	21.5	2.54	9.9	1.7	0.35	0.7	< 0.1	0.4	< 0.1	0.2
133401	< 2	1936	309	18	142	19	0.5	< 0.2	21	< 0.5	< 0.5	737	3.1	2950	7950	874	2860	308	63.7	117	12.9	62.2	10.1	23.3
133402	< 2	1837	337	26	130	< 2	0.8	< 0.2	10	< 0.5	< 0.5	1429	4.3	3350	7130	717	2280	259	56.5	107	13.0	63.2	11.0	27.6
133403	< 2	2131	370	25	337	3	0.6	< 0.2	7	< 0.5	< 0.5	1496	0.7	4310	8350	767	2220	232	51.3	97.1	12.9	68.8	12.2	29.3
133404	9	1480	208	51	322	< 2	0.8	0.3	10	< 0.5	< 0.5	657	1.7	2400	5860	709	2590	330	67.6	117	11.6	48.8	7.1	16.2
133405	3	2111	403	29	580	< 2	0.6	< 0.2	11	< 0.5	< 0.5	840	1.1	4270	9300	877	2610	288	64.5	124	16.3	81.3	14.2	33.9
133406	4	2066	400	23	265	2	0.5	< 0.2	11	< 0.5	< 0.5	1298	1.5	4530	9450	904	2720	303	66.5	129	15.9	76.7	13.4	32.7
133407	< 2	1962	464	16	230	< 2	< 0.5	< 0.2	9	< 0.5	< 0.5	2504	2.3	2880	7860	870	2710	278	59.2	112	15.9	92.4	16.2	38.7
133408	4	2134	421	31	200	< 2	0.6	< 0.2	9	< 0.5	< 0.5	745	1.0	3620	7560	781	2520	306	64.2	113	13.9	74.4	13.9	35.5
133409	4	1643	430	32	414	5	0.6	< 0.2	21	< 0.5	< 0.5	462	2.0	2360	5440	617	2180	290	67.6	135	17.2	88.2	15.1	36.9
133410	13	1388	372	24	528	< 2	1.6	0.3	38	< 0.5	< 0.5	909	6.3	1690	4390	529	2040	302	62.0	113	14.0	75.0	14.0	34.6
133411	2	1795	354	28	282	< 2	0.7	< 0.2	11	< 0.5	< 0.5	284	3.2	2470	7330	907	3150	351	70.8	134	14.8	73.5	12.6	30.6
133412	< 2	2118	330	56	169	4	0.9	< 0.2	8	< 0.5	< 0.5	436	1.6	3380	7550	806	2600	271	57.1	108	12.9	65.9	11.9	29.5
133413	< 2	1886	355	28	441	6	0.5	< 0.2	14	< 0.5	< 0.5	1022	2.0	3240	7590	828	2770	306	66.9	136	16.1	78.7	13.6	32.3
133414	< 2	1530	364	21	614	16	0.6	< 0.2	18	< 0.5	< 0.5	662	3.2	3510	8030	871	2900	345	78.5	152	17.0	77.4	13.0	31.5
133415	2	1389	266	21	337	9	0.7	< 0.2	12	< 0.5	< 0.5	329	4.1	2460	7210	915	3250	389	84.4	154	14.5	61.1	9.4	24.1
133416	4	2154	270	17	452	6	< 0.5	< 0.2	12	< 0.5	< 0.5	317	1.8	2920	7360	823	2690	305	65.0	121	12.9	58.2	9.5	23.6
133417	6	1733	377	44	1190	4	1.0	0.2	68	< 0.5	< 0.5	485	4.9	3410	6980	731	2540	536	122	209	20.3	89.4	14.5	34.7
133418	< 2	12	< 2	< 4	24	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	21.6	54.6	6.41	21.2	2.7	0.58	1.1	0.1	0.6	< 0.1	0.2
133419	3	2575	440	63	1050	5	0.9	< 0.2	25	< 0.5	< 0.5	363	1.5	4160	7660	789	2720	447	108	207	22.6	96.9	15.7	36.7
133420	3	2263	314	36	490	7	0.5	< 0.2	22	< 0.5	< 0.5	507	2.8	3890	8210	889	2970	367	82.7	158	17.5	75.5	11.8	28.5
133421	< 2	1927	280	34	189	11	0.6	< 0.2	17	< 0.5	< 0.5	374	2.2	2900	6210	678	2410	323	69.0	126	13.6	60.6	9.6	23.6
133422	3	2490	303	49	419	< 2	0.7	< 0.2	14	< 0.5	< 0.5	335	1.1	3300	6530	705	2530	351	76.7	150	16.4	70.4	10.6	25.4
133423	4	2227	288	65	680	3	0.8	< 0.2	16	< 0.5	< 0.5	391	1.0	4690	8130	795	2650	332	70.1	132	14.1	61.0	9.6	24.2
133424	< 2	11	< 2	< 4	17	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	20.7	45.0	4.93	16.3	1.9	0.43	0.8	< 0.1	0.4	< 0.1	0.1
133425	27	3024	872	223	390	54	1.9	< 0.2	45	< 0.5	0.5	13290	2.8	2510	4640	536	2260	489	133	315	45.0	210	34.6	81.3
133426	5	2408	252	57	416	2	0.7	< 0.2	10	< 0.5	< 0.5	405	0.9	3240	5690	572	1900	245	54.6	106	12.2	55.2	8.8	21.9
133427	< 2	2110	351	40	478	< 2	0.6	< 0.2	12	< 0.5	< 0.5	285	1.5	4530	8290	816	2780	375	86.1	168	18.6	80.5	12.7	30.3
133428	< 2	1191	251	34	223	3	0.7	0.3	19	< 0.5	< 0.5	135	4.2	1290	3740	597	2700	391	81.9	155	15.6	62.9	8.8	20.8
133429	< 2	2204	312	41	259	8	< 0.5	< 0.2	10	< 0.5	< 0.5	367	6.0	3490	7140	795	2760	330	72.1	145	15.9	71.2	11.1	26.4
133430	< 2	2114	579	45	183	19	0.7	< 0.2	13	< 0.5	< 0.5	501	2.9	2940	6790	786	2800	371	83.8	181	25.1	129	22.1	51.2
133431	< 2	1934	429	24	143	7	< 0.5	< 0.2	17	< 0.5	< 0.5	452	0.6	4270	8270	876	3070	369	81.1	159	18.4	87.4	15.1	36.9
133432	< 2	2054	380	24	309	3	< 0.5	< 0.2	12	< 0.5	< 0.5	812	0.6	5090	9610	932	2950	322	68.4	138	15.8	73.5	13.0	33.1
133433	< 2	2332	355	30	189	6	< 0.5	< 0.2	12	< 0.5	< 0.5	501	2.0	4400	8270	814	2510	263	56.8	115	14.4	74.3	12.6	30.6
133434	< 2	2255	376	56	152	4	0.6	< 0.2	6	< 0.5	< 0.5	471	1.3	5690	9230	846	2720	326	74.6	157	19.0	83.5	13.0	31.0
133435	< 2	2534	337	46	138	4	0.6	< 0.2	9	< 0.5	< 0.5	411	0.7	3560	6120	621	2180	294	66.8	134	15.7	70.5	11.3	27.0
133436	< 2	2127	289	29	94	11	< 0.5	< 0.2	7	< 0.5	< 0.5	352	0.6	5420	9080	883	3050	406	88.3	164	16.3	65.9	9.7	22.8
133437	< 2	2194	265	22	95	8	< 0.5	< 0.2	7	< 0.5	< 0.5	440	0.7	4750	8200	843	3010	393	84.7	162	16.9	66.0	9.5	21.1
133438	< 2	2057	315	33	141	10	< 0.5	< 0.2	12	< 0.5	< 0.5	956	< 0.4	5010	8620	881	3160	432	95.5	182	18.8	77.6	11.1	24.8

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133439	< 2	2060	300	33	131	10	< 0.5	< 0.2	10	< 0.5	< 0.5	709	0.6	4940	8460	857	3010	412	90.1	170	17.6	72.0	10.7	23.7
133440	< 2	2345	343	36	258	7	< 0.5	< 0.2	14	< 0.5	< 0.5	411	< 0.4	5360	9340	966	3420	437	94.0	186	18.9	77.8	11.2	25.3
133441	< 2	2487	355	51	205	3	0.5	< 0.2	10	< 0.5	< 0.5	351	0.5	5540	9780	1010	3670	500	112	206	21.1	83.0	12.2	27.1
133442	< 2	1968	311	39	99	8	0.6	< 0.2	4	< 0.5	< 0.5	277	< 0.4	5300	9170	931	3240	416	90.2	171	17.7	71.6	10.6	25.0
133443	< 2	2274	275	26	172	16	< 0.5	< 0.2	6	< 0.5	< 0.5	418	< 0.4	6220	9730	912	2940	342	74.7	149	16.1	66.6	9.9	21.5
133444	< 2	2282	227	25	263	28	< 0.5	< 0.2	10	< 0.5	< 0.5	442	< 0.4	4810	8250	810	2810	359	77.9	147	14.7	56.1	7.9	17.8
133445	< 2	2593	330	21	449	19	< 0.5	< 0.2	17	< 0.5	< 0.5	700	0.9	6600	10900	1070	3650	459	103	208	22.0	91.9	12.4	24.3
133446	< 2	1106	346	12	297	< 2	0.7	0.3	20	< 0.5	< 0.5	529	6.3	670	3290	604	2770	384	79.6	160	18.5	87.0	13.8	29.7
133447	< 2	2509	358	26	169	7	1.1	< 0.2	8	< 0.5	< 0.5	435	10.5	3120	8540	1070	3940	470	96.5	186	19.7	85.8	12.4	25.9
133448	< 2	2306	417	25	129	10	0.7	< 0.2	6	< 0.5	< 0.5	387	10.1	3880	8100	912	3220	397	86.7	176	21.2	95.0	14.8	34.4
133449	< 2	15	4	5	11	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	12	< 0.4	21.4	51.7	6.68	25.5	3.9	0.84	1.5	0.2	0.8	0.1	0.3
133450	35	20780	914	213	13	33	3.4	< 0.2	< 1	6.4	1.9	915	9.7	17700	27400	2510	7930	873	197	371	37.9	159	25.6	64.5
133451	< 2	1479	368	14	260	< 2	1.2	0.4	10	< 0.5	< 0.5	445	8.4	1460	5250	741	2920	394	85.0	166	18.9	88.4	14.2	32.2
133452	2	2256	384	22	168	3	1.0	0.2	8	< 0.5	< 0.5	826	7.8	2770	8160	934	3060	342	77.2	162	20.3	92.9	14.7	32.7
133453	5	2611	349	25	325	7	1.1	< 0.2	10	< 0.5	< 0.5	844	3.2	4320	8700	935	3340	436	95.4	191	21.6	95.3	14.1	32.1
133454	2	2845	288	33	223	11	0.6	< 0.2	11	< 0.5	< 0.5	767	2.7	4780	8880	853	2830	361	85.4	169	19.6	75.8	10.8	24.2
133455	2	2908	298	49	259	22	1.2	< 0.2	8	< 0.5	< 0.5	772	2.1	4840	8930	867	2830	345	76.5	159	18.2	76.9	11.5	26.4
133456	< 2	2835	330	45	183	7	0.9	< 0.2	9	< 0.5	< 0.5	671	1.8	5070	9930	982	3080	356	82.4	177	21.4	87.2	13.0	29.0
133457	< 2	2373	374	32	165	7	1.0	< 0.2	11	< 0.5	< 0.5	1098	1.8	4740	9160	891	2710	305	71.1	163	22.6	102	15.9	33.4
133458	< 2	2550	238	31	185	24	1.0	< 0.2	13	< 0.5	< 0.5	661	1.9	4420	8850	852	2590	264	55.8	113	13.9	59.5	9.1	19.9
133459	< 2	2331	319	29	151	10	0.5	< 0.2	8	< 0.5	< 0.5	1520	1.4	5100	9510	914	2910	339	76.1	152	18.5	78.8	11.7	27.4
133460	< 2	2789	333	32	297	8	1.2	< 0.2	17	< 0.5	< 0.5	965	1.9	5020	9320	910	2880	382	81.3	165	18.4	75.8	11.8	27.6
133461	< 2	2625	297	18	208	16	0.8	< 0.2	10	< 0.5	< 0.5	889	2.0	4740	9020	921	3060	382	80.8	161	18.0	72.4	10.7	23.7
133462	< 2	2260	296	14	180	9	0.9	< 0.2	10	< 0.5	< 0.5	718	2.8	3530	7200	714	2290	264	57.8	122	15.5	71.0	11.4	25.5
133463	< 2	2100	385	18	245	11	0.9	< 0.2	11	< 0.5	< 0.5	1644	3.0	3540	8000	877	2890	338	71.9	151	19.6	92.3	15.1	33.1
133464	< 2	1791	477	32	370	6	0.7	0.2	14	< 0.5	< 0.5	1424	1.5	2960	6270	613	2140	394	91.4	178	21.6	101	17.6	42.4
133465	< 2	1808	520	30	427	6	1.1	0.2	15	< 0.5	< 0.5	1382	2.6	3040	6320	632	2220	424	91.3	182	22.6	108	19.2	45.1
133466	< 2	2455	279	38	337	15	1.2	< 0.2	9	< 0.5	< 0.5	1787	7.2	5730	12200	1280	4050	400	76.7	144	15.2	64.2	9.9	21.8
133467	2	2208	230	44	286	87	1.2	< 0.2	16	< 0.5	< 0.5	2646	4.4	5750	10500	993	3050	337	66.5	125	13.3	52.2	7.6	17.8
133468	< 2	2324	220	26	125	15	0.8	< 0.2	7	< 0.5	< 0.5	987	0.9	5230	9740	909	2660	265	53.8	103	11.9	48.9	7.7	17.9
133469	2	2429	290	31	106	11	0.8	< 0.2	7	< 0.5	< 0.5	730	1.4	4370	8180	807	2650	295	61.9	130	15.8	68.2	10.8	24.8
133470	< 2	2783	333	29	190	26	0.6	< 0.2	6	< 0.5	< 0.5	559	0.8	7330	11600	1060	3360	420	89.9	178	19.2	78.1	11.5	26.5
133471	4	2867	378	47	436	7	0.9	< 0.2	14	< 0.5	< 0.5	2207	2.3	6260	10900	1040	3270	398	88.5	186	22.7	92.3	14.0	30.5
133472	5	2566	284	43	633	25	0.8	< 0.2	12	< 0.5	< 0.5	939	1.4	5870	10000	1010	3390	417	86.6	170	18.5	77.2	11.2	23.9
133473	< 2	2371	618	40	177	19	0.5	< 0.2	9	< 0.5	< 0.5	409	0.9	2360	5410	613	2420	384	101	235	34.2	159	24.0	51.1
133474	< 2	8	< 2	< 4	3	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	11.2	20.9	2.13	7.6	1.2	0.24	0.5	< 0.1	0.3	< 0.1	< 0.1
133475	27	3023	921	230	391	53	1.8	< 0.2	43	< 0.5	1.0	13480	3.2	2550	4830	543	2260	482	124	314	44.6	203	33.3	77.9
133476	3	2460	307	50	416	8	0.8	< 0.2	10	< 0.5	< 0.5	493	1.2	3810	7250	747	2660	350	74.2	155	17.0	74.4	11.3	25.9
133477	< 2	2377	272	59	333	10	0.8	< 0.2	11	< 0.5	< 0.5	630	1.0	5060	9350	925	3040	378	79.0	157	16.0	65.5	10.0	21.8
133478	< 2	2391	311	43	494	36	0.9	< 0.2	11	< 0.5	< 0.5	1458	1.1	3830	7420	735	2510	342	75.0	154	18.0	75.7	11.5	25.3
133479	< 2	3022	237	46	314	10	0.6	< 0.2	7	< 0.5	< 0.5	3408	1.0	5430	9400	869	2750	292	62.9	120	13.3	52.8	7.6	17.2
133480	< 2	2436	318	34	366	7	0.6	< 0.2	8	< 0.5	< 0.5	846	0.9	4230	8610	871	2830	344	77.9	174	21.2	87.9	12.8	27.1
133481	< 2	2488	265	68	236	8	0.8	< 0.2	6	< 0.5	< 0.5	666	0.6	5400	9420	923	2980	372	79.7	152	15.8	61.3	8.9	20.3
133482	2	2523	242	53	304	11	0.7	< 0.2	7	< 0.5	< 0.5	872	0.5	5710	9840	942	2990	343	70.6	132	14.0	56.0	8.4	18.8
133483	< 2	2418	245	45	245	6	0.5	< 0.2	5	< 0.5	< 0.5	1807	0.5	5100	9040	835	2670	314	70.4	141	16.0	61.5	9.1	19.7
133484	< 2	2582	243	44	297	7	0.7	< 0.2	7	< 0.5	< 0.5	2395	0.7	4780	9300	943	3080	373	77.7	153	15.7	61.8	8.8	19.3
133485	2	2423	263	46	310	11	0.6	< 0.2	7	< 0.5	< 0.5	3004	0.9	4900	8920	884	2920	361	78.4	163	17.5	66.0	9.4	20.7
133486	< 2	2305	250	33	522	7	< 0.5	< 0.2	9	< 0.5	< 0.5	3757	0.5	5340	9270	906	2960	366	79.9	162	17.5	66.7	9.3	18.7
133487	< 2	2578	236	20	314	7	< 0.5	< 0.2	10	< 0.5	< 0.5	2940	2.9	5100	9790	990	3220	389	82.1	167	18.3	70.7	9.4	17.6
133488	< 2	2234	263	14	219	6	< 0.5	< 0.2	11	< 0.5	< 0.5	1661	2.2	4540	8720	891	2930	380	81.8	171	18.8	72.9	9.9	19.2
133489	< 2	683	396	11	255	2	1.1	0.6	46	< 0.5	< 0.5	734	4.6	930	3090	536	2740	490	97.4	196	21.5	90.9	14.6	32.9
133490	< 2	2384	263	26	626	13	0.6	< 0.2	14	< 0.5	< 0.5	625	1.3	4630	8550	879	3020	411	87.3	176	18.9	73.0	10.4	22.1

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133491	< 2	2416	258	24	748	12	< 0.5	< 0.2	15	< 0.5	< 0.5	747	0.8	4590	8520	874	2990	401	85.0	166	18.2	69.4	10.0	20.7
133492	< 2	2545	313	21	480	7	< 0.5	< 0.2	13	< 0.5	< 0.5	770	0.5	5970	10400	997	3200	398	87.4	183	21.3	85.3	12.1	24.5
133493	< 2	2618	212	20	204	5	< 0.5	< 0.2	6	< 0.5	< 0.5	517	0.6	6040	10300	969	3050	356	75.7	150	16.3	60.1	8.0	16.0
133494	< 2	2368	237	25	368	7	< 0.5	< 0.2	7	< 0.5	< 0.5	736	0.5	5680	10300	993	3210	390	83.4	169	17.9	68.1	9.4	19.2

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133387	3.89	18.6	2.00	2.0	0.2	24	0.3	550	472	0.2	2.80
133388	3.83	17.7	1.93	1.2	< 0.1	3	0.1	279	593	0.1	3.75
133389	3.40	16.2	1.78	1.2	< 0.1	1	< 0.1	166	488	0.1	3.41
133390	2.93	15.6	1.86	1.5	< 0.1	2	< 0.1	177	314	0.2	3.30
133391	2.77	14.3	1.65	0.9	< 0.1	3	< 0.1	91	272	0.3	2.31
133392	5.62	27.7	3.17	1.9	0.2	5	0.1	138	413	0.4	3.63
133393	3.50	17.7	2.07	1.4	0.2	2	0.1	206	491	0.3	3.66
133394	3.08	15.8	1.70	1.2	0.5	4	0.1	207	626	0.4	3.06
133395	3.61	18.3	2.06	1.4	< 0.1	4	0.2	365	885	0.4	1.97
133396	4.25	23.1	2.54	1.1	< 0.1	3	0.2	427	835	0.5	2.10
133397	2.59	13.6	1.60	0.9	< 0.1	2	0.3	379	793	0.1	3.36
133398	3.82	20.0	2.10	1.2	< 0.1	2	0.4	861	1110	< 0.1	2.55
133399	7.89	45.8	6.12	3.4	< 0.1	5	2.3	1010	153	183	0.0250
133400	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	0.3	11	3.2	< 0.1	0.400
133401	2.70	13.6	1.53	0.7	< 0.1	1	0.2	256	670	< 0.1	3.88
133402	3.39	18.2	2.04	0.8	< 0.1	< 1	0.2	382	540	< 0.1	3.65
133403	3.40	16.5	1.83	0.8	< 0.1	1	< 0.1	118	415	< 0.1	2.95
133404	1.82	9.0	1.02	0.8	< 0.1	2	0.2	297	591	0.1	1.40
133405	4.03	19.8	2.20	1.0	< 0.1	2	< 0.1	111	585	0.1	2.27
133406	3.81	19.5	2.28	0.9	< 0.1	< 1	0.1	210	703	< 0.1	3.11
133407	4.62	22.2	2.43	1.0	< 0.1	< 1	< 0.1	216	588	< 0.1	3.86
133408	4.32	21.8	2.49	0.9	< 0.1	< 1	< 0.1	155	513	< 0.1	3.58
133409	4.06	19.7	2.21	1.1	< 0.1	2	0.1	242	472	< 0.1	3.55
133410	4.18	20.8	2.25	0.9	< 0.1	2	0.4	758	558	0.2	3.10
133411	3.37	16.1	1.81	0.9	< 0.1	2	0.3	322	693	< 0.1	3.69
133412	3.64	18.6	2.23	1.3	< 0.1	2	0.2	203	508	< 0.1	3.82
133413	3.78	18.0	1.99	1.0	< 0.1	3	0.2	244	466	< 0.1	3.68
133414	3.68	17.4	1.86	0.9	< 0.1	3	0.2	195	587	< 0.1	3.54
133415	2.58	13.0	1.52	0.8	< 0.1	2	0.2	262	680	0.1	2.91
133416	2.73	13.8	1.52	0.7	< 0.1	2	0.1	132	524	< 0.1	2.55
133417	4.31	22.1	2.49	1.5	< 0.1	9	0.3	464	869	0.2	1.58
133418	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	5.9	< 0.1	0.400
133419	4.67	24.3	2.77	1.8	< 0.1	4	0.1	221	668	0.2	2.22
133420	3.38	17.8	2.05	1.2	< 0.1	3	0.2	198	587	0.2	3.90
133421	2.86	15.0	1.80	1.0	< 0.1	2	0.2	207	514	0.1	3.88
133422	3.05	16.5	2.00	1.2	0.2	2	0.2	150	478	0.3	2.69
133423	3.00	16.4	2.05	1.2	0.4	2	0.1	83	322	0.3	3.96
133424	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	3.3	< 0.1	0.400
133425	9.55	50.7	6.20	5.3	3.1	27	0.4	561	890	2.7	0.0250
133426	2.89	15.5	1.87	1.1	0.7	2	0.2	84	253	0.6	4.25
133427	3.54	19.1	2.21	1.2	0.2	2	0.1	172	457	0.4	4.64
133428	2.49	11.7	1.39	0.9	< 0.1	2	0.2	519	713	0.3	2.24
133429	3.01	15.4	1.75	1.1	< 0.1	1	0.2	219	399	0.2	3.88
133430	5.44	24.5	2.49	1.6	< 0.1	1	0.1	238	671	0.1	4.22
133431	4.25	20.3	2.13	1.1	< 0.1	< 1	< 0.1	113	297	< 0.1	3.80
133432	4.22	20.7	2.19	1.0	0.2	2	< 0.1	126	376	0.2	3.91
133433	3.63	17.2	1.84	1.0	< 0.1	2	< 0.1	297	367	0.1	3.46
133434	3.97	20.1	2.36	1.4	< 0.1	< 1	0.1	87	343	< 0.1	3.32
133435	3.50	18.7	2.13	1.2	< 0.1	1	< 0.1	101	295	0.1	3.43
133436	2.71	14.1	1.61	0.9	< 0.1	< 1	< 0.1	80	231	< 0.1	3.44
133437	2.38	12.3	1.40	0.8	< 0.1	< 1	< 0.1	49	194	< 0.1	3.29

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133438	2.88	15.1	1.76	1.1	< 0.1	1	< 0.1	39	198	< 0.1	1.44
133439	2.75	14.2	1.55	1.0	< 0.1	< 1	< 0.1	39	180	< 0.1	1.66
133440	2.86	14.8	1.65	1.1	< 0.1	1	< 0.1	37	188	0.1	3.19
133441	3.17	16.6	1.91	1.3	< 0.1	1	< 0.1	40	221	0.2	2.29
133442	2.85	14.7	1.70	1.2	< 0.1	< 1	< 0.1	30	148	< 0.1	3.18
133443	2.44	12.8	1.49	1.0	< 0.1	< 1	< 0.1	33	132	0.2	3.30
133444	2.02	10.5	1.21	0.9	< 0.1	1	< 0.1	31	168	< 0.1	3.10
133445	2.60	13.0	1.42	1.1	< 0.1	2	< 0.1	59	313	0.2	3.05
133446	2.98	13.6	1.37	0.9	< 0.1	2	0.2	582	757	< 0.1	2.79
133447	2.81	14.2	1.62	1.1	< 0.1	2	0.2	510	719	0.2	3.11
133448	3.76	18.2	2.06	1.1	< 0.1	3	0.1	227	488	0.1	3.01
133449	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	7.8	< 0.1	0.380
133450	8.24	48.0	6.35	3.5	< 0.1	5	2.2	1030	158	183	0.0250
133451	3.33	15.2	1.60	0.9	< 0.1	1	0.6	696	652	< 0.1	2.04
133452	3.53	16.7	1.85	1.2	< 0.1	1	0.3	505	651	< 0.1	3.19
133453	3.33	15.6	1.70	1.2	< 0.1	1	0.3	272	523	0.2	3.62
133454	2.77	13.4	1.53	1.2	0.2	2	0.2	165	381	< 0.1	4.09
133455	3.13	16.0	1.85	1.2	< 0.1	2	0.2	83	284	0.1	3.55
133456	3.20	15.8	1.81	1.1	< 0.1	2	0.2	98	296	0.1	2.52
133457	3.49	16.1	1.75	1.1	< 0.1	2	0.3	136	353	< 0.1	3.55
133458	2.27	10.8	1.23	0.8	< 0.1	2	0.2	105	317	< 0.1	3.61
133459	3.03	15.1	1.73	1.2	< 0.1	< 1	0.1	114	356	< 0.1	3.74
133460	3.11	15.3	1.69	0.9	< 0.1	2	0.3	140	488	< 0.1	2.37
133461	2.51	11.9	1.28	0.7	< 0.1	2	0.2	110	396	0.1	2.33
133462	2.84	12.9	1.43	0.7	< 0.1	2	0.3	134	375	< 0.1	2.49
133463	3.59	15.9	1.68	0.8	< 0.1	2	0.4	184	506	< 0.1	2.38
133464	4.91	23.2	2.56	1.2	< 0.1	2	0.1	297	785	0.2	1.40
133465	5.18	23.4	2.43	1.0	< 0.1	3	0.9	368	788	0.2	1.20
133466	2.55	12.3	1.40	0.9	< 0.1	2	0.5	203	611	0.2	2.86
133467	2.03	10.4	1.29	1.0	< 0.1	2	0.3	134	517	< 0.1	2.98
133468	2.14	10.8	1.28	0.6	< 0.1	1	0.2	91	318	< 0.1	3.56
133469	2.93	15.0	1.82	0.7	< 0.1	1	0.4	174	336	0.2	3.50
133470	3.01	15.0	1.74	0.8	< 0.1	2	0.2	85	279	< 0.1	2.15
133471	3.40	16.4	1.85	1.1	< 0.1	3	0.3	109	430	0.2	2.85
133472	2.51	12.1	1.39	0.9	< 0.1	3	0.3	132	245	0.2	3.41
133473	5.61	27.1	3.10	1.9	< 0.1	2	< 0.1	144	288	0.2	3.54
133474	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.0	< 0.1	0.400
133475	9.04	45.8	5.51	4.3	3.1	26	1.3	575	893	2.7	0.0250
133476	3.03	15.7	1.87	0.9	< 0.1	3	0.3	136	216	0.2	3.53
133477	2.59	13.5	1.58	1.0	< 0.1	2	0.3	117	221	< 0.1	3.29
133478	2.71	13.1	1.50	0.9	< 0.1	2	0.3	131	263	0.2	3.79
133479	1.83	8.8	1.13	1.1	< 0.1	1	0.1	103	195	< 0.1	3.63
133480	2.71	12.4	1.39	0.8	< 0.1	2	0.2	88	327	0.1	3.41
133481	2.27	11.6	1.40	1.0	< 0.1	1	0.2	93	241	0.1	3.59
133482	2.20	11.7	1.37	0.9	< 0.1	2	0.1	41	171	< 0.1	3.42
133483	2.22	11.3	1.38	0.9	0.3	1	< 0.1	20	167	< 0.1	3.38
133484	2.18	10.8	1.28	0.8	< 0.1	2	< 0.1	25	190	< 0.1	3.56
133485	2.33	11.5	1.41	0.9	< 0.1	2	< 0.1	39	218	< 0.1	3.51
133486	2.00	9.8	1.14	0.7	< 0.1	3	< 0.1	21	166	< 0.1	3.56
133487	1.76	8.2	0.89	0.7	< 0.1	1	0.2	67	291	< 0.1	3.45
133488	1.82	8.6	0.96	0.5	< 0.1	5	0.3	122	351	0.3	3.44

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133489	3.47	16.0	1.74	0.7	< 0.1	2	1.8	796	701	0.1	2.66
133490	2.34	11.3	1.26	0.7	< 0.1	4	< 0.1	43	257	0.2	2.16
133491	2.28	11.0	1.23	0.7	< 0.1	3	< 0.1	34	257	0.2	1.96
133492	2.50	11.9	1.32	0.7	< 0.1	2	0.2	69	218	< 0.1	3.43
133493	1.59	7.4	0.87	0.5	< 0.1	1	0.1	45	196	< 0.1	2.33
133494	2.01	9.6	1.09	0.7	< 0.1	2	< 0.1	44	260	< 0.1	2.64

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.06	11.39	1.93	0.75	0.013	0.34	43.90	0.88	0.54	0.118	30.19					1663								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.08																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.19																							
NIST 694 Cert	3.2																							
DNC-1 Meas		47.12	18.34	9.84	0.146	9.93	11.23	1.90	0.22	0.466	0.07			31		157	270	58	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		73.01	13.42	3.25	0.143	0.15	0.60	2.60	5.52	0.288	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	30	50					
LKSD-3 Cert																	87.0	30.0	47.0					
W-2a Meas		52.50	15.57	10.75	0.166	6.31	10.75	2.21	0.60	1.081	0.13			35	< 1	280	100	43	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.77	20.12	6.11	0.106	0.50	8.03	6.86	1.60	0.282	0.14			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																					40			
CTA-AC-1 Cert																					38.0			
BIR-1a Meas		48.18	15.63	11.35	0.171	9.45	13.18	1.84	0.02	0.955	0.02			44	< 1	338	370	53	170	130		16		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1040	95		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				980	100	17	11	73
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		430				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20			17		
JR-1 Cert																			1.67			16.1		
NCS DC86318 Meas		64.61	13.65	2.30	0.056	0.09		0.59	5.49	0.173	0.02													
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020													
SARM 3 Meas																								
SARM 3 Cert																								
USZ 44-2007 Meas																								
USZ 44-2007 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133399 Orig	1.85	14.79	2.50	13.13	0.142	0.48	26.92	0.91	0.95	0.144	19.02	8.38	87.36	18	14	156	20	31	70	100	600	275	32	178
133399 Dup	1.85	14.77	2.52	12.54	0.141	0.48	26.68	0.92	0.97	0.142	19.20	8.38	86.74	17	14	155	< 20	32	70	100	610	280	32	191
133410 Orig	2.42	4.10	0.45	28.72	2.882	10.68	16.08	0.03	0.60	0.248	0.45	30.45	94.69	27	19	139	< 20	12	< 20	< 10	1830	52	10	22
133410 Dup	2.40	4.10	0.44	28.54	2.868	10.65	16.05	0.04	0.59	0.242	0.42	30.45	94.39	27	19	136	< 20	12	< 20	< 10	1840	52	9	23
133425 Orig	6.05	20.44	3.05	27.36	2.328	6.81	17.13	0.31	1.29	1.438	0.56	12.68	93.40	22	13	158	170	29	80	30	1440	57	10	25
133425 Dup	6.10	20.38	3.04	27.52	2.344	6.82	17.18	0.31	1.28	1.431	0.56	12.68	93.55	22	13	159	160	29	80	30	1430	57	10	25
133436 Orig																	< 20	3	< 20	< 10	710	92	13	33

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133436 Split	6.20	5.76	0.06	7.18	1.224	12.59	30.39	0.05	0.04	0.034	0.96	33.48	91.77	36	12	40	< 20	3	< 20	< 10	810	36	6	15
133453 Orig	2.29	2.63	0.18	13.10	2.040	13.01	25.17	0.02	0.22	0.178	0.81	35.88	93.25	30	9	55	< 20	6	< 20	< 10	1430	92	14	34
133453 Dup	2.29	2.60	0.18	13.01	2.021	12.75	24.84	0.02	0.22	0.177	0.79	35.88	92.50	30	9	55	< 20	6	< 20	< 10	1370	90	13	33
133468 Orig	4.05	2.37	0.06	11.54	1.842	13.47	27.16	0.02	0.05	0.033	0.67	36.82	94.05	30	10	34	< 20	5	< 20	< 10	2080	32	5	13
133468 Dup	4.09	2.32	0.04	11.45	1.809	13.16	26.75	0.02	0.05	0.032	0.65	36.82	93.10	30	10	36	< 20	5	< 20	< 10	2030	30	4	11
133485 Orig	5.33	1.07	0.07	8.55	1.470	13.03	30.33	0.02	0.10	0.058	1.52	35.38	91.61	40	19	46	< 20	6	< 20	< 10	970	30	5	15
133485 Dup	5.19	1.10	0.07	8.52	1.457	12.92	30.30	0.02	0.10	0.059	1.49	35.38	91.42	40	19	45	< 20	6	< 20	< 10	960	30	5	15
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	14	33								103					5.0		0.58					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		43	46	390								514												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.3			49.9	95.0		43.3	7.8	1.44			4.9		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
W-2a Meas	19	197	18	85		< 2	< 0.5					171	< 0.4		25.2		13.1	3.3	1.08		0.6	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1196	116	542								338												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3300		1100	163	44.3	116	14.4			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	13	14								7					2.4	1.1	0.52	1.8				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	188		1590			232	34.5	184	35.7	96.4
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											256													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	43.2	86.4		36.5	7.5		6.8	1.1	6.1	1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0		39.9	8.0		7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700	2.9	43.0			23.3	60.1	7.44	30.5	12.1		14.1	3.3	20.3	4.2	12.5
NCS DC70009 (GBW07241) Cert	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas														264	486	45.6	147	23.7	3.57		3.6	22.2	4.7	13.9
OREAS 100a (Fusion) Cert														260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								815	1440	128	394	50.2	7.89		5.4	31.2	6.4	18.6
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	249				14		< 0.5	< 0.2	3		20.9		0.6	21.4	51.2	5.90	23.5	5.8	0.27	5.5	1.1	6.2		
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		
NCS DC86318 Meas			17120											1960	420	739	3300	1710	18.9	2130	465	3050	550	
NCS DC86318 Cert			17010											1960	430	740	3430	1720	18.91	2095	470	3220	560	
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 44-2007 Meas			1136	15570																				
USZ 44-2007 Cert			1102	15800																				
USZ 42-2006 Meas														21800	29300	2390	6590	547	89.2					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133399 Orig	35	20240	913	230	25	35	3.3	< 0.2	1	5.6	1.8	894	7.4	18000	28500	2530	7790	883	204	357	35.7	152	24.6	62.0
133399 Dup	35	20320	901	230	19	32	4.2	< 0.2	< 1	5.8	1.7	906	9.8	18300	28900	2520	7740	862	201	355	34.0	147	23.7	59.8
133410 Orig	13	1397	373	24	532	< 2	1.4	0.3	38	< 0.5	< 0.5	914	6.5	1670	4370	525	2020	298	60.7	113	14.3	73.5	13.9	33.6
133410 Dup	13	1380	371	24	524	< 2	1.8	0.3	37	< 0.5	< 0.5	904	6.1	1700	4410	533	2050	306	63.2	114	13.7	76.5	14.0	35.6
133425 Orig	27	3019	872	224	394	53	2.0	< 0.2	45	< 0.5	0.6	13310	2.9	2530	4660	537	2270	493	133	317	45.6	214	34.6	79.3
133425 Dup	27	3030	872	223	386	54	1.9	< 0.2	44	< 0.5	0.5	13280	2.7	2490	4620	535	2250	485	133	312	44.3	206	34.5	83.2
133436 Orig	< 2				94	11	< 0.5	< 0.2	7	< 0.5	< 0.5		0.6	5420	9080	883	3050	406	88.3	164	16.3	65.9	9.7	22.8

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133436 Split	< 2	2185	298	26	90	9	< 0.5	< 0.2	6	< 0.5	< 0.5	383	0.8	6180	10500	1030	3490	457	93.9	181	18.5	72.3	10.4	24.4
133453 Orig	5	2629	351	28	329	7	1.1	< 0.2	10	< 0.5	< 0.5	849	2.8	4350	8620	938	3340	436	95.2	192	21.8	96.1	14.2	32.0
133453 Dup	5	2593	346	23	321	7	1.0	< 0.2	9	< 0.5	< 0.5	839	3.6	4300	8770	933	3340	437	95.6	189	21.3	94.4	14.0	32.2
133468 Orig	< 2	2350	223	27	127	15	0.8	< 0.2	7	< 0.5	< 0.5	999	1.0	5290	9870	924	2720	272	54.5	103	11.9	49.6	7.7	18.2
133468 Dup	< 2	2297	217	24	124	15	0.7	< 0.2	7	< 0.5	< 0.5	975	0.8	5170	9600	894	2610	257	53.0	104	11.8	48.1	7.6	17.6
133485 Orig	2	2428	263	46	309	11	0.6	< 0.2	7	< 0.5	< 0.5	3017	0.9	4830	8800	878	2900	360	77.5	158	16.7	64.2	9.1	20.0
133485 Dup	2	2418	263	47	311	11	0.7	< 0.2	7	< 0.5	< 0.5	2991	1.0	4970	9040	891	2940	363	79.4	168	18.2	67.9	9.7	21.5
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									934	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		1.9								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.6					4.6
LKSD-3 Cert		2.70	0.400		0.700					4.60
W-2a Meas	0.37	2.0				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.5	1.05						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.7	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.5	335	33.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.54	3.2	0.46					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.33	15.6	2.22			2200			29.8	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.33	14.8	2.11						53.1	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	17.9	2.48						37.3	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.7	0.68	4.5	1.8		1.6	20	28.3	9.1
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	279	1760	250							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 44-2007 Meas										
USZ 44-2007 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133399 Orig	7.76	46.0	6.18	3.5	< 0.1	5	2.2	933	155	186
133399 Dup	8.03	45.7	6.05	3.3	< 0.1	4	2.5	1090	151	179
133410 Orig	4.13	20.6	2.23	0.8	< 0.1	2	0.4	753	551	0.1
133410 Dup	4.23	21.1	2.27	0.9	< 0.1	2	0.5	763	565	0.2
133425 Orig	9.62	52.0	6.36	5.5	3.1	27	0.4	567	891	2.6
133425 Dup	9.47	49.4	6.04	5.2	3.2	27	0.4	555	890	2.7
133436 Orig	2.71	14.1	1.61	0.9	< 0.1	< 1	< 0.1	80	231	< 0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133436 Split	2.80	13.9	1.59	0.7	< 0.1	< 1	0.2	75	243	< 0.1
133453 Orig	3.30	15.8	1.69	1.3	< 0.1	1	0.3	272	525	0.1
133453 Dup	3.36	15.4	1.71	1.1	< 0.1	1	0.3	272	521	0.2
133468 Orig	2.13	11.0	1.30	0.6	< 0.1	1	0.2	93	324	< 0.1
133468 Dup	2.15	10.5	1.27	0.6	< 0.1	1	0.2	88	312	< 0.1
133485 Orig	2.25	11.3	1.38	0.8	< 0.1	2	0.1	40	215	< 0.1
133485 Dup	2.40	11.7	1.45	0.9	< 0.1	1	< 0.1	37	220	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11631
Invoice Date: 11-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

68 Rock samples were submitted for analysis.

The following analytical packages were requested:

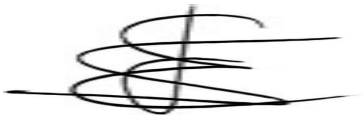
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11631**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Nd/Ce interference on Ga/Ge

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133495	1.07	18.10	0.31	6.22	0.869	11.98	23.54	0.04	0.07	0.109	1.00	32.97	95.19	31	27	65	< 20	4	< 20	< 10	340	10	2	15
133496	1.24	14.64	0.18	8.17	1.198	12.55	24.85	0.03	0.10	0.133	1.16	34.36	97.38	41	17	78	< 20	5	< 20	< 10	610	14	3	15
133497	0.68	19.23	0.22	6.00	0.889	12.99	24.24	0.02	0.07	0.115	1.12	33.45	98.35	32	22	66	< 20	3	< 20	< 10	220	26	5	20
133498	3.83	6.76	0.14	9.26	1.631	12.76	27.33	0.03	0.06	0.124	0.78	35.98	94.85	41	20	77	< 20	4	< 20	< 10	910	17	3	13
133499	0.01	99.35	0.05	0.62	0.011	0.13	0.24	< 0.01	< 0.01	0.001	< 0.01	0.21	100.6	< 1	< 1	5	90	< 1	< 20	< 10	< 30	< 1	1	< 5
133500	1.90	15.07	2.56	12.52	0.143	0.47	26.67	0.95	1.02	0.144	19.12	8.27	86.93	18	14	154	20	32	70	100	620	88	14	157
133501	2.47	10.73	0.17	10.53	1.375	12.27	24.88	0.03	0.08	0.135	1.01	34.55	95.76	42	19	85	< 20	7	< 20	< 10	690	19	4	17
133502	2.37	11.59	0.24	11.14	1.422	11.05	21.92	0.03	0.08	0.139	0.90	33.23	91.75	39	16	82	< 20	6	< 20	< 10	780	18	4	13
133503	2.29	11.71	0.16	12.72	1.583	11.63	22.48	0.03	0.08	0.154	0.91	34.13	95.60	43	14	86	< 20	7	< 20	< 10	830	19	4	14
133504	1.45	13.59	0.19	14.36	1.745	10.89	19.74	0.04	0.12	0.144	0.87	32.77	94.46	45	13	86	< 20	8	< 20	< 10	890	19	4	12
133505	5.64	3.45	0.08	15.79	2.171	12.01	23.65	0.02	0.04	0.124	0.77	34.92	93.05	53	17	71	< 20	7	< 20	< 10	1680	25	5	15
133506	5.52	3.52	0.08	10.08	1.445	12.55	28.19	0.03	0.05	0.135	0.69	35.52	92.29	47	15	57	< 20	3	< 20	< 10	850	27	5	15
133507	2.99	6.65	0.10	22.27	2.828	10.55	17.43	0.02	0.05	0.171	0.78	33.71	94.55	43	12	78	< 20	13	< 20	< 10	1650	22	5	16
133508	3.10	3.22	0.06	12.45	1.783	12.71	24.88	0.02	0.06	0.206	1.16	36.27	92.82	50	15	72	< 20	6	< 20	< 10	1220	28	5	15
133509	2.58	3.97	0.08	12.45	1.734	13.11	24.31	0.03	0.05	0.138	0.85	37.34	94.07	51	9	63	< 20	7	< 20	< 10	960	25	6	18
133510	4.36	3.69	0.08	9.46	1.388	13.13	28.15	0.04	0.06	0.194	0.72	36.17	93.07	52	12	56	< 20	5	< 20	< 10	680	27	5	16
133511	2.27	3.69	0.06	12.93	1.827	12.62	24.57	0.04	0.06	0.444	1.76	35.97	93.98	58	6	77	< 20	6	< 20	< 10	1250	80	13	29
133512	2.01	4.07	0.08	12.57	1.752	12.36	23.27	0.04	0.08	0.200	2.01	35.77	92.19	58	7	55	< 20	6	< 20	< 10	1030	36	6	17
133513	2.95	1.96	0.06	7.06	1.143	13.94	28.89	0.04	0.07	0.064	2.41	38.11	93.74	66	10	62	< 20	3	< 20	< 10	720	30	6	16
133514	4.19	2.44	0.06	9.40	1.362	12.67	28.22	0.04	0.06	0.101	1.58	35.60	91.55	46	16	68	< 20	6	< 20	< 10	970	28	5	18
133515	5.20	2.06	0.09	9.63	1.414	13.34	29.18	0.04	0.07	0.081	1.08	36.14	93.12	46	17	69	< 20	6	< 20	< 10	970	29	5	16
133516	2.68	3.54	0.05	7.84	1.175	14.49	27.37	0.02	0.03	0.021	0.56	38.24	93.35	38	21	57	< 20	3	< 20	< 10	390	64	10	21
133517	2.52	6.84	0.11	14.15	1.626	12.74	21.78	0.04	0.11	0.115	0.59	35.53	93.64	47	15	78	< 20	8	< 20	< 10	760	29	5	15
133518	2.78	6.80	0.09	8.37	1.176	13.67	26.02	0.03	0.09	0.079	0.74	36.67	93.76	41	17	65	< 20	6	< 20	< 10	320	31	6	16
133519	2.31	7.21	0.09	10.88	1.484	13.05	23.67	0.04	0.09	0.328	0.69	35.59	93.12	42	18	92	< 20	5	< 20	< 10	810	29	5	16
133520	3.75	6.22	0.08	8.76	1.234	13.32	25.73	0.04	0.08	0.130	0.86	35.61	92.06	44	18	73	< 20	5	< 20	< 10	730	32	5	15
133521	3.84	6.87	0.09	11.09	1.533	12.24	24.38	0.04	0.07	0.338	0.72	33.97	91.35	38	19	96	< 20	6	< 20	< 10	880	27	5	15
133522	3.70	4.51	0.13	18.65	2.175	10.66	22.98	0.04	0.10	0.566	1.07	32.18	93.05	38	21	140	< 20	10	< 20	< 10	1150	25	5	17
133523	0.46	5.92	0.04	39.22	4.319	6.88	7.11	0.02	< 0.01	0.159	1.14	31.35	96.17	18	4	81	20	20	< 20	< 10	1960	17	6	18
133524	0.02	99.19	0.05	0.99	0.016	0.07	0.15	0.01	< 0.01	0.001	< 0.01	-0.03	100.4	< 1	< 1	7	60	< 1	< 20	< 10	< 30	< 1	1	< 5
133525	6.27	20.67	3.06	27.90	2.394	7.05	17.63	0.30	1.34	1.485	0.57	12.02	94.43	21	13	158	170	30	70	30	1480	26	5	16
133526	0.82	5.24	0.10	32.82	3.670	8.35	10.69	0.02	0.05	0.534	1.74	31.43	94.66	21	5	131	< 20	18	< 20	< 10	2030	19	6	17
133527	0.99	3.07	0.06	28.81	3.421	10.48	12.96	0.02	0.03	0.188	0.88	34.56	94.46	21	7	96	< 20	14	< 20	< 10	1940	21	6	17
133528	3.06	3.02	0.08	15.18	2.027	12.10	22.18	0.04	0.06	0.160	1.04	35.45	91.34	42	18	79	< 20	7	< 20	< 10	990	27	5	15
133529	7.82	2.65	0.05	7.86	1.238	12.36	31.03	0.02	0.04	0.097	0.52	33.84	89.71	23	20	52	< 20	5	< 20	< 10	1140	27	5	16
133530	10.3	3.08	0.04	5.76	1.015	11.17	33.44	0.02	0.03	0.105	0.90	30.35	85.90	27	23	53	< 20	4	< 20	< 10	1580	79	10	26
133531	4.57	2.20	0.06	8.65	1.236	13.33	29.16	0.04	0.07	0.118	1.16	36.28	92.29	45	17	77	< 20	6	< 20	< 10	820	26	5	14
133532	2.64	2.56	0.04	7.25	1.166	13.54	28.79	0.02	0.05	0.240	0.96	37.19	91.82	32	17	73	< 20	4	< 20	< 10	650	28	5	14
133533	3.85	2.28	0.03	8.93	1.404	13.16	27.74	0.01	0.03	0.216	0.18	37.29	91.27	26	13	58	< 20	4	< 20	< 10	620	30	5	15
133534	3.48	3.18	0.05	8.83	1.440	13.17	27.46	0.02	0.05	0.225	0.41	36.39	91.23	28	18	53	< 20	3	< 20	10	910	36	6	16
133535	1.63	2.23	0.05	10.78	1.621	13.83	24.50	0.02	0.05	0.635	0.12	39.24	93.07	26	11	92	< 20	5	< 20	< 10	1150	28	5	14
133536	2.84	2.40	0.06	10.14	1.405	13.42	26.99	0.02	0.07	0.112	0.47	37.80	92.90	28	16	63	< 20	6	< 20	< 10	800	25	5	14
133537	2.62	1.75	0.05	8.27	1.268	13.25	28.34	0.03	0.10	0.110	2.42	36.45	92.03	38	32	63	< 20	5	< 20	20	690	27	5	17
133538	3.74	1.82	0.04	10.34	1.593	14.35	26.44	0.03	0.12	0.066	0.85	36.83	92.47	38	45	49	< 20	6	< 20	< 10	960	27	5	14
133539	3.79	2.19	0.04	10.20	1.515	13.56	25.77	0.03	0.13	0.069	1.16	35.97	90.64	40	52	49	< 20	5	< 20	< 10	940	27	5	14
133540	4.42	2.41	0.04	9.62	1.540	14.38	27.49	0.06	0.15	0.039	1.38	35.78	92.88	51	81	43	< 20	3	< 20	20	1160	29	5	14
133541	4.89	2.93	0.04	8.76	1.597	13.37	28.09	0.06	0.13	0.038	2.14	34.50	91.65	52	70	43	< 20	4	< 20	< 10	1080	29	5	13
133542	1.22	2.63	0.08	9.59	1.320	14.22	25.93	0.02	0.15	0.243	1.10	39.33	94.60	37	44	75	< 20	5	< 20	< 10	370	28	5	16
133543	2.50	2.66	0.32	12.57	1.912	12.21	26.68	0.02	0.27	0.111	2.94	34.71	94.40	43	17	65	< 20	5	< 20	< 10	700	48	9	22
133544	1.78	1.17	0.11	11.54	1.447	13.34	27.31	0.03	0.11	0.138	2.37	37.05	94.62	46	20	97	< 20	6	< 20	< 10	570	48	8	19
133545	2.26	1.44	0.06	10.46	1.414	14.25	27.88	0.03	0.06	0.183	1.32	38.80	95.89	44	9	130	< 20	9	< 20	< 10	500	24	5	14
133546	0.47	2.10	0.12	12.11	1.435	14.24	24.65	0.04	0.13	0.175	1.22	39.45	95.67	47	10	126	20	11	< 20	< 10	700	24	5	14

Activation Laboratories Ltd. Report: A13-11631

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133547	0.44	1.59	0.06	10.42	1.478	14.22	27.31	0.04	0.07	0.216	2.68	39.08	97.15	56	8	132	< 20	8	< 20	< 10	500	24	5	14
133548	0.28	0.95	0.06	11.04	1.464	14.31	25.87	0.02	0.06	0.163	0.85	41.03	95.82	45	8	127	< 20	7	< 20	< 10	460	51	9	21
133549	1.19	0.50	0.05	8.39	1.328	15.40	28.26	0.02	0.06	0.109	0.62	41.48	96.21	43	11	114	< 20	7	< 20	10	400	21	4	14
133550	0.02	96.56	0.04	0.79	0.024	0.18	0.36	0.01	< 0.01	0.002	0.02	0.32	98.31	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	1	1	< 5
133551	1.82	15.17	2.53	12.89	0.144	0.48	26.94	0.94	1.02	0.146	19.72	8.22	88.21	18	14	153	< 20	32	60	100	620	89	14	150
133552	1.21	0.94	0.04	6.84	1.280	15.42	29.29	0.02	0.04	0.112	0.56	41.46	95.99	41	11	107	< 20	5	< 20	< 10	240	56	10	23
133553	2.18	3.55	0.08	11.58	1.581	15.19	26.89	0.03	0.04	0.153	0.87	39.00	98.98	41	20	94	< 20	8	< 20	170	480	22	5	46
133554	2.67	2.52	0.04	9.43	1.455	14.23	27.75	0.05	0.06	0.189	1.83	37.70	95.26	46	31	91	< 20	5	< 20	< 10	600	27	5	15
133555	0.67	1.87	0.05	10.71	1.559	14.61	26.34	0.04	0.05	0.246	1.36	39.86	96.69	45	18	110	< 20	7	< 20	< 10	590	22	5	14
133556	1.16	1.72	0.04	10.04	1.495	13.85	26.94	0.04	0.05	0.187	2.68	38.03	95.07	46	20	86	< 20	7	< 20	< 10	710	23	5	14
133557	1.95	2.30	0.04	10.34	1.554	14.55	28.17	0.04	0.06	0.747	1.41	38.58	97.79	50	32	196	< 20	9	< 20	< 10	780	25	5	22
133558	6.21	1.58	0.02	10.18	1.544	12.68	29.13	0.04	0.04	0.152	1.34	34.16	90.88	42	25	78	< 20	6	< 20	< 10	870	31	5	14
133559	5.09	2.46	0.05	11.28	1.631	12.62	28.38	0.04	0.07	0.066	1.30	33.51	91.40	50	21	85	< 20	9	< 20	< 10	1030	29	6	14
133560	0.72	0.38	0.03	36.75	3.796	9.95	9.21	0.01	< 0.01	0.536	0.52	32.60	93.79	25	2	343	20	15	< 20	< 10	1050	16	6	13
133561	5.22	1.95	0.04	9.55	1.633	13.23	29.69	0.03	0.04	0.023	0.90	35.84	92.94	49	10	61	< 20	4	< 20	< 10	550	25	5	13
133562	4.21	1.99	0.04	6.58	1.298	14.79	30.43	0.03	0.07	0.027	1.07	37.86	94.19	54	24	59	< 20	4	< 20	< 10	490	25	5	14

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133495	< 2	2737	183	70	324	12	2.2	< 0.2	9	1.1	< 0.5	316	0.7	1400	2750	289	1050	154	38.3	78.9	9.9	43.7	6.6	15.3
133496	2	2487	243	59	423	10	1.9	< 0.2	13	1.0	< 0.5	370	0.7	1980	3830	400	1450	207	50.8	104	12.9	57.9	8.9	19.6
133497	< 2	2985	180	82	314	10	1.2	< 0.2	10	< 0.5	< 0.5	306	1.0	1500	2780	306	1080	155	38.2	84.9	10.2	46.8	7.1	16.1
133498	< 2	2681	209	42	311	8	1.8	< 0.2	12	0.8	< 0.5	331	0.9	2910	5100	488	1600	197	46.2	94.2	11.5	50.5	7.5	17.4
133499	< 2	7	2	< 4	4	5	< 0.5	< 0.2	5	< 0.5	< 0.5	< 3	< 0.4	3.6	6.3	0.69	2.2	0.3	0.07	0.2	< 0.1	0.1	< 0.1	< 0.1
133500	35	20490	921	218	9	34	4.5	< 0.2	1	6.3	1.8	938	7.8	17200	27600	2590	8060	871	199	333	35.5	160	25.3	61.9
133501	< 2	2556	250	48	386	11	2.0	< 0.2	14	1.0	< 0.5	426	1.3	3300	5650	552	1940	269	63.3	129	15.0	64.1	9.3	19.8
133502	< 2	1857	252	48	403	7	1.9	< 0.2	17	0.9	< 0.5	423	2.0	2910	5280	539	1940	274	65.4	133	15.6	66.5	9.3	19.3
133503	< 2	2013	261	54	416	7	1.7	< 0.2	16	0.9	< 0.5	388	2.0	2880	5280	548	2020	290	69.3	137	16.5	71.2	9.9	20.6
133504	2	1794	252	58	405	8	1.8	< 0.2	16	0.8	< 0.5	434	2.8	2910	5360	570	2120	309	73.8	146	17.3	69.7	9.7	19.8
133505	< 2	2023	234	47	175	< 2	1.8	0.2	13	0.7	< 0.5	341	2.1	4000	7240	721	2560	348	76.9	143	14.0	55.0	7.7	16.3
133506	< 2	2352	202	51	170	< 2	1.4	< 0.2	12	0.6	< 0.5	336	0.7	5030	8320	772	2570	299	64.6	116	11.3	47.1	6.7	14.8
133507	< 2	1495	172	47	256	4	1.3	0.3	16	0.7	< 0.5	289	4.8	2880	5770	678	2700	372	80.9	146	13.2	49.3	6.2	13.3
133508	< 2	2188	230	52	418	4	1.5	< 0.2	22	0.6	< 0.5	333	2.5	4770	8070	789	2740	349	76.8	142	14.7	59.4	8.2	17.3
133509	< 2	1943	206	41	364	< 2	1.3	< 0.2	12	< 0.5	< 0.5	257	1.5	3800	7250	782	2960	406	90.1	161	14.3	55.2	7.2	15.7
133510	< 2	2078	220	48	639	< 2	1.4	< 0.2	14	0.6	< 0.5	304	1.0	4490	7970	791	2800	380	84.9	156	14.4	54.6	7.2	15.3
133511	< 2	2048	219	62	886	< 2	0.7	< 0.2	36	< 0.5	< 0.5	282	3.0	5170	9860	1070	3600	385	79.5	152	14.6	57.8	7.9	16.0
133512	< 2	2076	221	108	572	2	1.7	< 0.2	15	< 0.5	< 0.5	263	2.2	6870	10900	1000	3270	368	76.2	134	13.4	53.8	7.5	16.8
133513	< 2	2586	305	83	634	3	1.3	< 0.2	8	< 0.5	< 0.5	397	0.9	5210	8860	852	2920	361	82.1	155	16.9	71.5	10.2	22.0
133514	< 2	2622	293	35	504	4	1.0	< 0.2	12	< 0.5	< 0.5	5574	1.0	5150	8670	805	2770	352	79.0	153	17.6	75.8	10.8	23.4
133515	< 2	2730	259	32	401	4	1.0	< 0.2	10	< 0.5	< 0.5	6143	1.0	5320	8840	822	2780	349	78.2	148	15.9	65.9	9.1	19.2
133516	< 2	3163	224	22	82	3	< 0.5	< 0.2	7	< 0.5	< 0.5	10780	0.7	5190	8100	806	2740	338	78.5	165	17.6	63.7	8.5	17.4
133517	2	2153	233	33	312	4	1.1	< 0.2	16	< 0.5	< 0.5	5080	2.4	5260	8540	822	2860	376	84.1	157	16.9	66.7	8.7	17.2
133518	< 2	2543	252	32	225	5	0.9	< 0.2	9	< 0.5	< 0.5	3815	0.4	5880	9300	857	2920	352	77.6	140	15.0	64.5	9.0	18.3
133519	< 2	2625	294	46	785	5	1.3	< 0.2	27	0.7	< 0.5	8071	0.7	4700	8500	832	2820	351	81.0	159	17.4	75.2	10.9	22.7
133520	< 2	2769	286	34	549	5	0.9	< 0.2	12	< 0.5	< 0.5	7082	0.5	6170	9440	836	2680	313	72.7	144	16.2	70.2	10.4	22.3
133521	< 2	2726	408	43	790	5	0.9	< 0.2	25	< 0.5	< 0.5	6708	1.6	4770	8130	774	2650	337	79.6	167	21.0	100	15.1	33.1
133522	2	2266	557	46	1170	3	1.0	0.3	52	0.6	< 0.5	679	2.6	3870	6830	697	2700	521	126	261	31.3	138	20.4	42.3
133523	< 2	776	262	28	218	< 2	0.7	0.5	28	< 0.5	< 0.5	658	6.2	584	2690	539	2940	551	116	206	19.0	75.4	9.6	18.8
133524	< 2	8	< 2	< 4	10	3	< 0.5	< 0.2	4	< 0.5	< 0.5	22	< 0.4	10.0	16.9	1.77	6.0	0.9	0.22	0.5	< 0.1	0.3	< 0.1	< 0.1
133525	25	3008	895	224	388	52	2.1	< 0.2	44	0.6	0.5	13630	3.1	2570	4750	530	2210	470	130	319	44.8	210	34.2	79.5
133526	< 2	1364	311	38	317	< 2	0.9	0.5	43	< 0.5	< 0.5	1234	10.2	647	3390	621	3110	515	108	207	21.7	93.5	12.2	24.4
133527	< 2	1437	348	20	251	< 2	0.8	0.4	25	< 0.5	< 0.5	3139	11.5	776	4210	687	3050	423	90.5	177	21.3	97.4	13.5	24.4
133528	< 2	2401	356	30	329	< 2	0.7	< 0.2	13	< 0.5	< 0.5	11230	1.3	3740	7620	772	2590	324	75.6	153	19.6	96.6	14.1	26.8
133529	< 2	2885	268	23	440	9	0.5	< 0.2	9	< 0.5	< 0.5	10360	0.4	4660	8180	758	2460	289	62.3	112	12.7	56.7	8.7	21.7
133530	< 2	3278	343	30	322	5	< 0.5	< 0.2	8	< 0.5	< 0.5	9227	< 0.4	6660	10700	995	2930	307	70.9	144	17.0	78.8	12.7	27.8
133531	< 2	3018	292	56	851	3	0.6	< 0.2	12	< 0.5	< 0.5	1117	0.5	4580	7770	733	2470	300	69.3	131	14.5	65.9	10.3	24.8
133532	< 2	2618	306	29	799	3	< 0.5	< 0.2	14	< 0.5	< 0.5	12930	< 0.4	4260	8000	807	2910	382	87.8	176	19.6	80.7	11.7	24.9
133533	< 2	2255	197	16	626	3	< 0.5	< 0.2	14	< 0.5	< 0.5	12890	< 0.4	4930	8850	856	2900	371	83.2	142	13.2	50.7	6.5	13.7
133534	< 2	2414	204	22	827	4	< 0.5	< 0.2	13	< 0.5	< 0.5	10370	< 0.4	6420	11200	1020	3220	382	86.9	156	14.2	55.5	7.2	15.1
133535	< 2	2171	233	13	897	3	< 0.5	< 0.2	27	< 0.5	< 0.5	5788	0.8	4220	7990	801	2870	411	98.2	192	19.3	72.6	9.2	18.6
133536	< 2	2146	251	16	928	5	< 0.5	< 0.2	13	< 0.5	< 0.5	7798	1.0	3520	6880	724	2760	421	99.4	191	19.1	72.7	9.4	18.6
133537	2	2637	319	39	645	7	0.9	< 0.2	13	< 0.5	< 0.5	8808	0.7	4330	8390	830	3010	408	101	202	22.2	86.7	12.1	26.7
133538	2	2657	217	39	432	3	0.9	< 0.2	10	< 0.5	< 0.5	7721	1.0	5120	9050	823	2780	349	78.5	146	14.8	57.4	7.9	17.0
133539	3	2597	214	44	477	3	0.8	< 0.2	11	< 0.5	< 0.5	6740	1.1	4840	8560	778	2670	336	76.1	139	13.8	53.2	7.2	16.2
133540	3	2724	243	59	240	< 2	1.0	< 0.2	7	< 0.5	< 0.5	3968	1.3	5770	9770	849	2800	336	77.6	154	15.9	61.9	8.7	19.5
133541	3	3064	257	81	87	6	1.2	< 0.2	6	< 0.5	< 0.5	3832	2.8	5230	9450	837	2750	322	74.9	152	16.7	66.9	9.4	20.3
133542	3	2766	241	46	409	5	0.8	< 0.2	15	< 0.5	< 0.5	915	0.7	5530	9150	804	2730	329	73.6	134	14.6	62.8	9.0	18.8
133543	7	2195	269	54	352	3	< 0.5	< 0.2	9	< 0.5	< 0.5	1241	2.1	2440	5240	652	2540	350	79.8	162	17.8	69.1	10.0	20.6
133544	3	2240	291	75	518	< 2	0.6	< 0.2	14	< 0.5	< 0.5	711	0.7	3130	5870	654	2460	318	73.4	148	16.6	71.0	10.4	22.0
133545	< 2	2051	241	56	690	3	0.8	< 0.2	13	< 0.5	< 0.5	310	0.5	4060	7290	700	2560	366	82.0	149	15.0	61.0	8.2	17.6
133546	3	1857	259	43	527	< 2	0.7	< 0.2	8	< 0.5	< 0.5	377	0.5	3550	6990	706	2610	357	81.4	154	16.9	70.3	9.8	19.5

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133547	< 2	2222	397	69	378	< 2	0.8	< 0.2	9	< 0.5	< 0.5	287	0.5	2980	6680	720	2780	400	97.5	206	25.3	107	14.8	30.3
133548	< 2	1797	257	36	543	< 2	< 0.5	< 0.2	12	< 0.5	< 0.5	295	< 0.4	3280	6190	674	2470	326	77.5	166	18.6	74.2	10.3	21.2
133549	< 2	1827	233	18	471	8	< 0.5	< 0.2	8	< 0.5	< 0.5	391	0.4	3240	6450	656	2500	353	82.8	158	16.0	63.9	8.8	18.3
133550	< 2	25	4	< 4	11	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	13	< 0.4	41.6	81.1	8.53	31.9	4.5	1.04	2.0	0.2	0.9	0.1	0.3
133551	34	20450	937	212	10	30	3.6	< 0.2	< 1	6.4	1.8	925	8.6	18400	30300	2720	8200	875	200	335	35.4	159	25.7	65.3
133552	< 2	1839	238	16	704	5	< 0.5	< 0.2	14	< 0.5	< 0.5	1007	0.5	3280	6140	694	2530	323	76.4	155	16.1	64.4	9.0	16.6
133553	< 2	2052	244	38	632	9	1.3	< 0.2	29	1.3	< 0.5	1620	7.4	3580	6800	677	2510	350	80.3	152	15.8	65.7	9.0	17.6
133554	< 2	2393	272	71	818	< 2	1.1	< 0.2	13	< 0.5	< 0.5	665	0.6	4840	8590	797	2830	382	90.3	176	18.9	73.8	10.1	20.5
133555	< 2	2054	281	55	382	2	1.0	< 0.2	11	< 0.5	< 0.5	508	0.7	2740	6310	691	2700	381	88.8	174	19.4	79.4	10.9	21.8
133556	< 2	2608	253	68	365	< 2	0.8	< 0.2	11	< 0.5	< 0.5	586	0.4	3480	6930	698	2640	371	86.6	171	18.8	72.9	9.4	18.8
133557	< 2	2080	281	42	917	3	0.8	< 0.2	48	< 0.5	< 0.5	626	0.8	4110	7760	760	2850	431	102	200	22.5	85.2	10.9	21.3
133558	< 2	2244	229	54	419	3	0.7	< 0.2	12	< 0.5	< 0.5	642	0.5	6220	10100	878	2990	390	90.7	182	19.8	69.3	8.3	16.0
133559	< 2	2827	224	61	174	< 2	0.9	< 0.2	8	< 0.5	< 0.5	897	1.3	5580	9310	842	2920	385	90.8	181	19.1	69.0	8.4	15.4
133560	< 2	769	284	22	372	< 2	1.9	0.7	26	< 0.5	< 0.5	1051	9.0	915	2400	435	2600	450	90.4	177	20.0	83.4	11.1	20.8
133561	< 2	2623	227	62	160	6	1.0	< 0.2	5	< 0.5	< 0.5	2393	< 0.4	4680	8100	740	2540	311	70.4	138	15.4	60.6	8.0	16.2
133562	< 2	2422	417	41	181	6	0.8	< 0.2	4	< 0.5	< 0.5	626	0.4	4340	7930	767	2760	348	80.9	170	23.0	102	15.1	31.4

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133495	1.79	10.1	1.26	1.2	2.0	5	0.5	68	225	1.3	3.06
133496	2.39	13.3	1.67	1.4	1.0	5	0.6	124	290	0.9	3.33
133497	1.79	10.0	1.29	1.6	2.3	3	0.3	49	229	1.4	3.27
133498	1.94	10.8	1.45	1.0	0.7	5	0.4	140	297	0.5	3.28
133499	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	4	< 0.1	< 5	1.1	< 0.1	0.400
133500	8.09	46.6	6.31	3.3	< 0.1	7	2.4	1020	159	205	0.0250
133501	2.27	12.2	1.61	1.1	1.1	5	0.7	181	366	0.8	3.33
133502	2.10	11.5	1.43	1.4	0.2	6	0.5	216	343	0.3	3.51
133503	2.17	11.7	1.48	1.3	0.1	5	0.4	224	429	0.3	2.21
133504	2.06	11.1	1.43	1.5	< 0.1	5	0.4	254	464	0.2	2.72
133505	1.94	11.1	1.42	1.1	< 0.1	4	0.2	295	515	< 0.1	1.77
133506	1.77	10.1	1.32	1.1	< 0.1	4	< 0.1	162	257	< 0.1	2.17
133507	1.57	8.4	1.11	1.1	< 0.1	4	0.3	421	538	< 0.1	3.69
133508	1.99	11.1	1.47	1.2	< 0.1	5	0.2	290	410	0.1	3.87
133509	1.78	10.1	1.34	1.0	< 0.1	5	0.2	223	475	0.1	3.91
133510	1.85	10.5	1.37	1.1	< 0.1	6	< 0.1	180	298	0.1	3.98
133511	1.87	10.0	1.36	1.4	0.2	6	< 0.1	244	385	0.4	4.07
133512	2.03	11.2	1.51	1.9	0.1	5	0.1	263	262	0.1	4.01
133513	2.56	14.6	1.89	1.5	< 0.1	6	< 0.1	146	283	0.2	3.80
133514	2.67	14.2	1.75	1.0	0.2	5	0.1	214	271	0.2	1.80
133515	2.28	12.3	1.55	0.9	< 0.1	4	0.1	208	260	0.2	1.85
133516	1.98	10.6	1.31	0.8	< 0.1	1	< 0.1	119	481	< 0.1	4.06
133517	1.82	9.9	1.20	1.0	< 0.1	3	0.3	320	519	< 0.1	3.95
133518	1.99	10.5	1.34	1.1	< 0.1	3	0.2	106	337	< 0.1	3.91
133519	2.45	12.9	1.65	1.2	0.2	6	0.2	147	425	0.3	4.09
133520	2.55	13.1	1.64	1.1	< 0.1	4	0.2	132	278	0.1	3.78
133521	3.58	18.0	2.18	1.6	< 0.1	4	0.2	274	479	0.2	4.04
133522	4.42	23.0	2.80	1.9	< 0.1	6	0.3	586	1520	0.2	1.73
133523	2.09	11.1	1.39	1.0	< 0.1	2	0.4	1350	1290	0.1	3.63
133524	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	3.2	< 0.1	0.380
133525	9.40	50.2	6.14	5.4	3.1	28	0.4	575	860	2.6	0.0250
133526	2.43	12.2	1.44	1.2	< 0.1	3	0.5	1320	1200	< 0.1	3.91
133527	2.45	11.5	1.36	1.0	< 0.1	3	0.4	1110	1290	< 0.1	2.41
133528	2.91	15.9	2.09	1.2	< 0.1	3	0.2	123	685	< 0.1	3.26
133529	2.56	13.7	1.72	0.8	0.1	3	0.1	82	280	0.2	3.55
133530	3.21	16.9	2.19	1.1	< 0.1	2	< 0.1	84	223	< 0.1	2.78
133531	3.01	17.4	2.22	1.3	< 0.1	5	0.1	79	271	0.1	1.63
133532	2.93	16.0	1.96	1.0	< 0.1	4	< 0.1	72	232	0.1	3.98
133533	1.66	9.0	1.08	0.7	< 0.1	3	< 0.1	85	319	< 0.1	3.48
133534	1.75	9.6	1.25	0.8	< 0.1	3	< 0.1	121	345	< 0.1	3.44
133535	1.97	10.6	1.25	0.8	< 0.1	5	< 0.1	212	456	0.1	3.30
133536	2.08	12.0	1.49	0.9	< 0.1	4	< 0.1	278	422	0.1	3.50
133537	3.29	19.1	2.45	1.3	< 0.1	3	0.2	132	280	0.2	3.15
133538	1.99	11.9	1.57	1.0	< 0.1	2	0.2	201	260	< 0.1	1.65
133539	1.96	11.4	1.48	1.1	< 0.1	2	0.2	201	277	< 0.1	1.58
133540	2.32	13.5	1.88	1.3	< 0.1	2	0.2	191	206	< 0.1	3.37
133541	2.43	14.1	1.95	1.6	< 0.1	1	0.1	198	373	< 0.1	3.38
133542	2.13	11.1	1.34	1.1	< 0.1	3	0.2	31	264	0.1	2.92
133543	2.29	12.9	1.68	1.2	0.2	1	0.4	163	405	0.2	2.80
133544	2.56	14.7	1.97	1.4	< 0.1	3	0.2	82	194	< 0.1	3.22
133545	1.97	11.2	1.48	1.2	< 0.1	5	< 0.1	89	172	0.2	3.22

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133546	2.25	12.5	1.64	1.1	< 0.1	4	0.2	97	179	0.4	2.88
133547	3.44	18.9	2.51	1.5	< 0.1	4	0.1	115	248	0.2	3.13
133548	2.22	12.4	1.58	1.0	< 0.1	2	< 0.1	38	166	0.2	3.33
133549	1.93	10.6	1.29	0.7	< 0.1	3	< 0.1	65	148	0.3	3.41
133550	< 0.05	0.1	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	2.5	< 0.1	0.400
133551	8.29	47.2	6.55	3.4	< 0.1	5	2.4	1020	152	201	0.0250
133552	1.88	10.4	1.24	0.7	< 0.1	2	< 0.1	88	143	0.2	2.52
133553	1.99	10.8	1.28	1.0	< 0.1	3	0.1	236	175	0.1	3.78
133554	2.33	12.8	1.66	1.5	< 0.1	22	< 0.1	128	176	< 0.1	3.15
133555	2.34	11.8	1.52	1.4	< 0.1	4	0.1	160	203	0.2	3.43
133556	2.10	11.5	1.57	1.3	< 0.1	3	< 0.1	117	232	0.1	3.40
133557	2.16	11.6	1.41	1.2	< 0.1	5	< 0.1	159	278	0.1	3.11
133558	1.76	9.6	1.24	1.2	< 0.1	2	< 0.1	188	248	< 0.1	2.51
133559	1.69	9.7	1.26	1.2	< 0.1	11	< 0.1	323	342	< 0.1	2.84
133560	2.17	11.7	1.49	1.0	< 0.1	3	0.3	1390	830	< 0.1	0.915
133561	1.78	9.5	1.30	1.3	< 0.1	1	< 0.1	92	157	< 0.1	1.97
133562	3.44	17.6	2.22	1.3	< 0.1	1	< 0.1	122	202	< 0.1	2.37

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.12	11.35	1.91	0.75	0.011	0.35	43.21	0.88	0.56	0.118	30.14					1663								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.06																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.14																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.97	18.27	9.74	0.147	10.01	11.36	1.91	0.22	0.480	0.07			31		158	270	58	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		70.77	12.98	3.20	0.139	0.14	0.60	2.47	5.37	0.283	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	30	40					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.35	15.79	10.72	0.168	6.25	11.04	2.19	0.62	1.092	0.19			35	< 1	278		45	70	110	80	18	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.76	20.19	6.18	0.107	0.51	7.97	6.95	1.67	0.285	0.13			< 1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																				60	40			
CTA-AC-1 Cert																				54.0	38.0			
BIR-1a Meas		47.96	15.39	11.27	0.173	9.57	13.45	1.81	0.02	0.960	0.03			44	< 1	341	370	54	170	130	70	16		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1060	99		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	60	2600	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																		3		970	100	16	11	73
NCS DC70009 (GBW07241) Cert																		3.7		960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		420				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		30	16		
JR-1 Cert																			1.67		30.6	16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133509 Orig	2.76	4.01	0.08	12.59	1.756	13.34	24.61	0.03	0.05	0.140	0.87	37.34	94.83	51	10	65	< 20	7	< 20	< 10	960	25	5	17
133509 Dup	2.39	3.92	0.08	12.31	1.712	12.88	24.02	0.03	0.05	0.136	0.84	37.34	93.31	50	9	62	< 20	7	< 20	< 10	960	26	6	19
133526 Orig	0.84	5.29	0.10	32.95	3.677	8.35	10.73	0.02	0.05	0.530	1.73	31.43	94.86	21	5	131	< 20	17	< 20	< 10	2010	18	7	17
133526 Dup	0.80	5.19	0.09	32.69	3.662	8.36	10.66	0.02	0.04	0.537	1.76	31.43	94.45	21	5	130	< 20	18	< 20	< 10	2050	19	6	17
133536 Orig	3.06	2.41	0.06	10.07	1.397	13.44	26.94	0.02	0.08	0.112	0.47	37.80	92.80	28	16	63	< 20	6	< 20	< 10	780	25	5	14
133536 Dup	2.62	2.40	0.06	10.20	1.412	13.40	27.05	0.02	0.07	0.112	0.48	37.80	93.00	28	16	62	< 20	6	< 20	< 10	830	25	5	14
133544 Orig	1.78																							

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133544 Split	1.83	1.14	0.11	11.44	1.460	13.56	27.61	0.03	0.12	0.141	2.40	37.01	95.02	47	21	97	< 20	8	< 20	< 10	590	21	4	13
133551 Orig	1.80	15.19	2.52	12.82	0.143	0.48	26.86	0.95	1.02	0.148	19.71	8.22	88.06	18	14	153	< 20	32	50	100	630	88	15	145
133551 Dup	1.83	15.15	2.54	12.96	0.145	0.49	27.02	0.94	1.01	0.145	19.73	8.22	88.35	18	14	153	< 20	33	60	100	620	90	14	155
133562 Orig	4.21	1.99	0.04	6.58	1.298	14.79	30.43	0.03	0.07	0.027	1.07	37.86	94.19	54	24	59	< 20	4	< 20	< 10	490	25	5	14
133562 Split	4.18	1.93	0.04	6.44	1.253	14.37	30.08	0.03	0.07	0.026	1.03	37.83	93.11	54	24	59	< 20	3	< 20	< 10	510	26	5	13
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		144	16	33								105		3.7			5.0		0.59					
DNC-1 Cert		144.0	18.0	38								118		3.6			5.20		0.59					
GBW 07113 Meas		41	46	383								502												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.3				85.1		42.1	8.0	1.40			4.8		
LKSD-3 Cert	78.0					2.00					2.30				90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas	20	198	20	83		< 2	< 0.5				0.9	172	< 0.4	10.1	22.1		12.6	3.2	1.07		0.6	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0		0.600	0.0460				0.990	182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1199	116	550								347												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2200	3350		1110	161	44.2	119	14.8			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		109	15	14								8		0.7	2.0		2.3	1.0	0.50	2.0				
BIR-1a Cert		110	16	18								6		0.63	1.9		2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2360	172		1580			230	34.3	183	35.6	96.1
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											263													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	41.9	81.2	9.76	37.6	7.8		6.9	1.1	6.2	1.2	3.4
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0		7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700		44.4			22.1	55.7	7.43	30.4	12.0		14.5	3.3	20.9	4.4	13.0
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						23								248	445	44.1	145	23.5	3.59		3.6	22.3	4.8	14.3
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						20								783	1350	126	385	50.0	7.87		5.6	32.1	6.7	19.3
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	250				14	3	< 0.5	< 0.2	3		20.9		0.6	19.5	46.0	5.84	23.1	5.7		5.4	1.0	6.1		
JR-1 Cert	257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69		
NCS DC86318 Meas														1940	416	711	3380	1790	19.9	2170	475	3040	564	1620
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					981																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21500	29300	2410	6600	547	90.0					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133509 Orig	< 2	1959	209	41	363	< 2	1.3	< 0.2	12	0.6	< 0.5	261	1.6	3800	7240	779	2960	404	90.0	163	14.6	55.2	7.2	15.5
133509 Dup	< 2	1927	203	40	365	2	1.3	< 0.2	12	< 0.5	< 0.5	253	1.4	3800	7270	784	2970	407	90.1	159	14.1	55.2	7.2	15.9
133526 Orig	< 2	1355	313	37	304	< 2	0.8	0.5	42	< 0.5	< 0.5	1245	9.6	643	3370	617	3080	511	108	207	21.7	93.8	12.3	25.9
133526 Dup	< 2	1374	310	39	331	< 2	0.9	0.5	45	< 0.5	< 0.5	1224	10.7	652	3420	624	3130	518	109	206	21.7	93.2	12.0	22.9
133536 Orig	< 2	2159	250	16	925	5	< 0.5	< 0.2	13	< 0.5	< 0.5	7791	1.1	3530	6860	727	2750	421	99.3	188	18.9	71.4	9.3	18.0
133536 Dup	< 2	2134	253	16	931	5	< 0.5	< 0.2	13	< 0.5	< 0.5	7804	1.0	3510	6900	721	2760	421	99.5	195	19.4	74.1	9.6	19.2
133544 Orig																								

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133544 Split	3	2186	301	75	548	2	1.1	< 0.2	11	< 0.5	< 0.5	711	0.6	3240	6390	647	2400	319	75.4	152	17.6	74.9	10.9	23.9
133551 Orig	34	20530	939	209	11	29	3.2	< 0.2	< 1	6.1	1.8	926	8.1	18300	30100	2710	8170	868	199	336	35.3	159	25.9	66.6
133551 Dup	34	20370	936	216	10	31	4.0	< 0.2	1	6.6	1.8	924	9.0	18500	30400	2720	8240	881	200	334	35.5	159	25.6	64.0
133562 Orig	< 2	2422	417	41	181	6	0.8	< 0.2	4	< 0.5	< 0.5	626	0.4	4340	7930	767	2760	348	80.9	170	23.0	102	15.1	31.4
133562 Split	< 2	2345	413	43	185	6	0.6	< 0.2	4	< 0.5	< 0.5	620	0.5	4350	7910	753	2710	337	79.0	165	21.9	98.9	14.7	30.3
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									925	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.7					4.3
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									29300	
OKA-2 Cert									28900.000	
W-2a Meas	0.39	2.1	0.31		0.5	< 1	< 0.1	10	2.6	0.5
W-2a Cert	0.380	2.10	0.330		0.500	0.300	0.200	9.30	2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		11.0	1.11						23.5	
CTA-AC-1 Cert		11.4	1.08						21.8	
BIR-1a Meas		1.7						< 5		
BIR-1a Cert		1.7						3		
NCS DC86312 Meas	14.3	87.2	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					82.0	329	33.9			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.56	3.4	0.49					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.41		2.26			2200			30.1	
NCS DC70009 (GBW07241) Cert	2.2		2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.40	15.1	2.10						52.9	135
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.99	18.7	2.51						37.1	422
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.7	0.69	4.3	1.8		1.6	18	27.4	8.7
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	278	1760	261							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133509 Orig	1.74	10.0	1.31	1.0	< 0.1	7	0.2	227	472	0.1
133509 Dup	1.82	10.2	1.37	1.0	0.1	4	0.2	220	478	0.2
133526 Orig	2.50	12.2	1.43	1.3	< 0.1	3	0.5	1250	1200	< 0.1
133526 Dup	2.36	12.1	1.45	1.2	< 0.1	3	0.5	1380	1200	< 0.1
133536 Orig	1.99	11.7	1.46	0.9	< 0.1	4	< 0.1	288	419	0.1
133536 Dup	2.17	12.4	1.52	0.9	< 0.1	4	< 0.1	267	426	0.1
133544 Orig										

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133544 Split	2.76	15.2	1.97	1.6	< 0.1	4	0.2	81	205	< 0.1
133551 Orig	8.28	47.4	6.58	3.4	< 0.1	5	2.2	975	153	201
133551 Dup	8.30	47.0	6.51	3.5	< 0.1	5	2.5	1060	151	201
133562 Orig	3.44	17.6	2.22	1.3	< 0.1	1	< 0.1	122	202	< 0.1
133562 Split	3.39	17.6	2.28	1.3	< 0.1	< 1	< 0.1	122	196	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11632
Invoice Date: 25-Nov-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

80 Rock samples were submitted for analysis.

The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11632**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133563	1.66	1.77	0.20	12.13	1.766	12.62	25.12	0.04	0.25	0.226	2.30	35.38	91.80	58	14	97	< 20	9	< 20	< 10	610	26	5	14
133564	4.78	0.50	0.06	11.69	1.745	13.38	27.82	0.03	0.06	0.170	0.55	36.38	92.38	57	8	76	< 20	7	< 20	< 10	920	30	5	14
133565	5.38	2.46	0.04	6.50	1.299	13.78	31.43	0.03	0.04	0.056	0.78	36.39	92.81	50	11	62	< 20	3	< 20	< 10	280	70	10	24
133566	5.38	1.27	0.05	7.34	1.373	14.16	31.63	0.03	0.06	0.066	0.92	36.86	93.76	48	12	53	< 20	5	< 20	< 10	590	28	5	13
133567	4.84	0.88	0.09	7.26	1.421	13.98	30.32	0.02	0.12	0.103	0.77	37.00	91.97	54	16	72	< 20	4	< 20	< 10	700	29	5	14
133568	5.07	1.05	0.06	7.56	1.330	13.51	30.09	0.03	0.07	0.170	0.76	36.50	91.12	45	13	72	< 20	7	< 20	< 10	950	30	5	15
133569	5.22	0.96	0.06	8.47	1.461	13.73	30.68	0.03	0.06	0.293	0.70	36.49	92.94	45	11	93	< 20	7	< 20	< 10	880	27	5	15
133570	6.64	1.78	0.04	8.95	1.694	12.49	30.89	0.02	0.05	0.059	0.69	33.97	90.64	40	13	74	< 20	5	< 20	< 10	1340	35	5	14
133571	3.98	2.57	0.08	13.02	1.789	12.32	26.31	0.03	0.07	0.231	1.09	35.50	93.00	47	11	129	< 20	10	< 20	< 10	1060	26	4	13
133572	1.61	1.74	0.05	16.55	2.197	12.66	21.93	0.02	0.05	0.342	0.81	37.87	94.22	39	9	153	20	13	< 20	< 10	1250	24	5	14
133573	1.29	1.41	0.05	17.03	2.589	12.53	22.53	0.02	0.03	0.214	0.87	38.05	95.34	32	5	116	< 20	10	< 20	< 10	1480	25	5	17
133574	0.14	96.37	0.04	1.46	0.108	0.52	1.09	0.01	< 0.01	0.012	0.06	0.26	99.94	2	< 1	6	130	< 1	< 20	50	60	3	2	14
133575	6.04	20.71	3.07	28.16	2.446	6.96	17.87	0.31	1.33	1.466	0.58	12.04	94.95	22	13	158	160	29	60	30	1430	25	5	14
133576	3.24	3.24	0.15	13.08	2.092	12.33	25.33	0.03	0.20	0.175	1.86	34.82	93.29	37	25	95	< 20	9	< 20	< 10	1170	22	5	14
133577	1.28	1.08	0.08	5.67	1.103	15.93	29.42	0.02	0.11	0.053	1.29	41.24	95.99	47	19	44	< 20	3	< 20	< 10	530	36	6	16
133578	0.64	1.42	0.09	5.91	1.019	16.22	28.32	0.03	0.14	0.079	0.93	41.95	96.12	56	29	51	< 20	2	< 20	< 10	400	36	6	17
133579	0.36	1.56	0.08	6.69	1.039	15.24	28.07	0.03	0.09	0.115	1.60	40.37	94.90	56	10	72	< 20	5	< 20	< 10	560	45	8	22
133580	0.72	1.23	0.05	5.61	0.840	13.92	28.63	0.04	0.03	0.090	3.75	38.88	93.06	46	4	54	< 20	3	< 20	< 10	200	39	7	19
133581	1.30	0.66	0.02	6.95	0.935	13.58	30.83	0.03	< 0.01	0.232	4.33	37.84	95.42	50	3	89	< 20	3	< 20	< 10	350	42	7	19
133582	0.15	0.93	0.05	3.71	0.764	18.78	28.66	0.02	0.04	0.022	0.29	44.35	97.64	22	4	15	< 20	2	< 20	< 10	100	14	2	7
133583	0.39	0.93	0.04	3.09	0.692	18.27	29.80	0.03	0.03	0.024	1.66	43.38	97.94	19	5	14	< 20	< 1	< 20	< 10	120	12	2	5
133584	1.10	1.90	0.30	3.53	0.682	15.68	28.12	0.03	0.36	0.042	3.24	39.39	93.30	25	22	18	< 20	3	< 20	< 10	110	17	3	7
133585	0.83	0.65	0.04	3.62	0.702	15.77	33.87	0.05	0.03	0.071	6.94	37.43	99.17	23	7	26	< 20	2	< 20	< 10	80	19	4	9
133586	0.70	0.21	0.05	4.04	0.793	15.94	32.48	0.05	0.04	0.048	5.61	38.69	97.94	30	7	35	< 20	2	< 20	< 10	220	24	4	11
133587	1.23	0.50	0.04	3.29	0.675	15.49	33.21	0.05	0.03	0.040	6.40	37.50	97.23	22	3	24	< 20	1	< 20	< 10	100	23	4	10
133588	0.91	0.87	0.03	3.72	0.769	17.86	30.73	0.03	0.02	0.098	1.56	42.60	98.28	24	4	33	< 20	1	< 20	< 10	370	18	3	8
133589	0.08	0.39	0.02	3.87	0.754	18.54	28.63	0.02	0.01	0.220	0.09	45.07	97.63	23	2	53	< 20	< 1	< 20	< 10	140	12	2	< 5
133590	0.06	0.38	0.02	4.21	0.788	18.75	28.86	0.02	0.01	0.037	0.10	45.09	98.27	26	1	15	< 20	1	< 20	< 10	240	14	2	5
133591	0.07	0.36	0.03	4.33	0.798	18.98	29.03	0.03	0.01	0.028	0.08	45.10	98.78	26	1	17	< 20	1	< 20	< 10	230	13	2	< 5
133592	0.11	0.83	0.02	3.07	0.656	19.33	29.03	0.02	0.01	0.010	0.08	45.51	98.56	16	1	9	< 20	< 1	< 20	< 10	60	4	< 1	< 5
133593	0.08	0.71	0.04	3.20	0.703	19.57	29.02	0.03	0.03	0.016	0.13	45.35	98.80	17	3	12	< 20	< 1	< 20	< 10	80	7	1	< 5
133594	0.10	2.69	0.09	3.22	0.691	19.03	28.30	0.04	0.06	0.022	0.17	44.10	98.44	17	3	12	< 20	< 1	< 20	< 10	130	11	2	< 5
133595	0.41	1.52	0.10	4.89	0.851	16.57	29.82	0.04	0.08	0.059	2.74	41.07	97.74	34	3	35	< 20	3	< 20	< 10	130	24	4	10
133596	0.62	1.04	0.05	3.93	0.769	15.68	32.03	0.05	0.03	0.019	5.44	38.43	97.46	31	3	20	< 20	2	< 20	< 10	150	30	5	13
133597	0.35	1.48	0.02	4.22	0.781	17.18	28.95	0.03	0.02	0.039	1.80	41.74	96.27	24	3	21	< 20	4	< 20	< 10	110	18	3	8
133598	0.05	0.38	0.02	3.58	0.782	19.14	28.64	0.02	0.02	0.023	0.08	45.33	98.02	15	2	12	< 20	2	< 20	< 10	50	5	< 1	< 5
133599	< 0.01	99.82	0.04	0.78	0.014	0.07	0.17	< 0.01	< 0.01	< 0.001	0.01	-0.01	100.9	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	< 1	< 1	< 5
133600	1.76	14.57	2.55	13.03	0.142	0.47	27.04	0.90	0.97	0.148	18.45	8.00	86.28	17	14	151	< 20	31	60	100	570	216	26	143
133601	0.29	1.17	0.03	4.96	0.940	16.59	29.36	0.03	0.01	0.383	1.92	41.39	96.77	36	3	90	< 20	4	< 20	< 10	230	24	4	14
133602	0.89	0.77	0.03	3.49	0.767	14.87	32.48	0.05	0.02	0.030	6.08	37.44	96.03	28	3	20	< 20	3	< 20	< 10	80	25	5	12
133603	0.56	0.79	0.04	4.22	0.868	16.16	30.95	0.04	0.02	0.037	3.69	40.10	96.90	35	3	27	< 20	4	< 20	< 10	180	33	6	16
133604	0.53	20.34	0.04	5.44	0.790	12.20	23.68	0.02	0.03	0.106	1.43	32.17	96.23	27	4	62	< 20	6	< 20	< 10	100	43	8	20
133605	0.51	2.73	0.03	5.64	0.950	15.05	30.92	0.03	0.02	0.047	3.83	38.71	97.96	43	4	47	< 20	4	< 20	< 10	320	41	7	18
133606	0.58	2.92	0.09	9.86	1.071	13.57	28.72	0.09	0.07	0.090	4.82	33.77	95.07	51	6	58	< 20	6	< 20	10	500	32	6	17
133607	0.40	1.20	0.02	4.36	0.751	16.40	31.09	0.03	0.01	0.038	3.43	40.68	98.02	27	2	28	< 20	2	< 20	< 10	140	17	3	7
133608	0.53	1.31	0.04	3.59	0.679	16.47	31.48	0.04	0.03	0.041	4.44	39.76	97.89	25	4	23	< 20	1	< 20	< 10	70	16	3	7
133609	0.19	1.48	0.02	4.05	0.738	17.80	29.51	0.03	0.01	0.048	1.33	43.14	98.17	28	3	28	< 20	2	< 20	< 10	120	16	3	8
133610	0.74	1.12	0.03	4.38	0.717	15.69	31.66	0.05	0.01	0.073	4.60	39.20	97.51	31	4	41	< 20	3	< 20	< 10	100	25	5	13
133611	0.97	1.00	0.02	4.01	0.713	15.81	31.80	0.05	0.01	0.039	4.41	39.44	97.30	27	6	28	< 20	2	< 20	< 10	70	23	4	10
133612	0.60	1.83	0.03	4.28	0.746	16.75	29.65	0.03	0.02	0.121	2.09	41.31	96.87	33	5	41	< 20	2	< 20	< 10	160	26	5	12
133613	0.54	2.27	0.03	5.48	0.879	15.83	29.45	0.03	0.02	0.036	2.33	40.26	96.62	41	6	43	< 20	3	< 20	< 10	210	33	6	15
133614	0.28	1.15	0.03	5.41	0.899	16.90	28.76	0.02	0.02	0.063	0.97	42.82	97.05	41	6	50	< 20	3	< 20	< 10	380	29	4	10

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133615	0.32	1.44	0.04	5.67	0.889	15.96	28.26	0.02	0.02	0.063	1.29	42.05	95.71	43	5	50	< 20	3	< 20	< 10	430	32	5	12
133616	0.39	0.49	0.03	5.17	0.899	17.01	30.11	0.04	0.02	0.048	2.09	42.03	97.94	35	3	38	< 20	4	< 20	< 10	150	24	4	11
133617	2.68	1.26	0.05	4.99	1.033	16.12	30.69	0.02	0.03	0.032	0.73	40.83	95.80	37	5	40	< 20	3	< 20	< 10	250	47	8	19
133618	3.32	1.21	0.06	4.10	0.939	16.42	31.95	0.03	0.04	0.024	1.44	40.15	96.37	39	10	43	< 20	1	< 20	< 10	130	37	6	14
133619	1.04	5.23	0.06	5.09	0.975	14.84	29.59	0.03	0.05	0.053	3.41	37.45	96.76	34	7	54	< 20	4	< 20	< 10	280	44	7	18
133620	1.25	2.50	0.06	5.66	1.010	15.30	29.51	0.03	0.06	0.045	2.22	39.75	96.14	44	6	51	< 20	4	< 20	< 10	480	22	4	13
133621	0.39	2.69	0.09	5.48	1.027	16.92	28.30	0.02	0.09	0.034	1.30	41.29	97.25	50	13	46	< 20	4	< 20	< 10	130	24	4	13
133622	0.48	0.62	0.07	6.12	1.136	16.78	28.43	0.02	0.04	0.033	0.82	42.17	96.24	42	5	53	< 20	5	< 20	< 10	290	23	4	11
133623	1.90	2.32	0.06	5.07	1.060	16.84	29.76	0.02	0.05	0.025	0.53	41.00	96.74	39	10	51	< 20	4	< 20	< 10	520	16	3	9
133624	0.02	97.57	0.04	0.90	0.011	0.11	0.17	0.01	< 0.01	< 0.001	< 0.01	0.00	98.83	< 1	< 1	< 5	90	< 1	< 20	< 10	< 30	< 1	1	< 5
133625	6.01	20.93	3.08	28.38	2.425	7.03	17.80	0.32	1.35	1.448	0.57	11.83	95.15	21	13	161	170	30	70	40	1490	25	4	12
133626	2.19	3.35	0.05	5.06	0.964	15.43	29.04	0.03	0.04	0.095	1.08	38.99	94.13	46	13	62	< 20	4	< 20	< 10	930	26	4	13
133627	1.18	0.42	0.05	5.52	1.088	16.33	29.25	0.02	0.05	0.025	0.93	42.09	95.78	33	6	49	< 20	5	< 20	< 10	470	17	3	9
133628	1.39	2.21	0.04	5.11	1.137	16.28	30.19	0.02	0.04	0.033	1.66	40.79	97.54	39	8	49	< 20	3	< 20	< 10	220	17	3	8
133629	1.91	3.79	0.04	5.00	1.060	15.13	30.11	0.03	0.06	0.026	2.71	38.11	96.07	32	8	39	< 20	4	< 20	< 10	80	24	4	11
133630	2.25	2.18	0.06	5.55	1.131	14.95	29.67	0.02	0.09	0.033	2.29	38.17	94.15	39	11	54	< 20	4	< 20	< 10	90	32	5	13
133631	2.93	1.60	0.03	6.19	1.206	15.10	30.63	0.02	0.03	0.039	1.11	39.27	95.22	31	7	42	< 20	5	< 20	< 10	120	19	3	10
133632	1.61	2.47	0.03	7.25	1.337	13.60	26.12	0.02	0.04	0.040	1.08	39.66	91.65	36	11	50	< 20	6	< 20	< 10	340	25	3	12
133633	1.45	2.23	0.06	8.81	1.581	14.84	27.82	0.03	0.04	0.034	1.88	39.46	96.79	40	7	59	< 20	5	< 20	< 10	560	27	4	12
133634	0.89	5.78	0.13	9.05	1.399	14.33	24.10	0.02	0.13	0.037	1.69	37.61	94.27	52	10	60	< 20	10	< 20	< 10	890	41	5	28
133635	1.11	1.31	0.04	7.83	1.403	15.48	26.88	0.02	0.05	0.024	1.28	40.71	95.04	66	11	62	< 20	5	< 20	< 10	330	33	4	13
133636	0.46	4.27	0.07	9.17	1.468	14.92	26.12	0.02	0.05	0.038	0.77	40.11	97.00	50	11	63	< 20	4	< 20	< 10	1210	52	8	22
133637	0.87	2.44	0.04	12.66	1.918	14.72	24.09	0.03	0.04	0.017	0.72	39.63	96.30	49	6	63	< 20	10	< 20	< 10	880	19	2	54
133638	1.71	1.85	0.04	10.70	1.653	14.47	26.44	0.03	0.03	0.028	0.83	39.80	95.87	50	8	55	< 20	12	< 20	< 10	540	21	3	61
133639	2.49	1.62	0.02	9.60	1.527	14.54	27.73	0.02	0.03	0.026	0.92	39.42	95.44	52	8	54	< 20	11	< 20	< 10	530	23	4	56
133640	2.01	1.80	0.08	13.71	2.071	12.84	25.16	0.02	0.05	0.081	1.49	37.59	94.89	45	6	79	< 20	12	< 20	< 10	1070	25	4	53
133641	1.42	34.53	13.77	11.58	0.354	9.50	7.66	0.10	6.00	1.525	0.46	12.77	98.27	32	38	225	< 20	38	60	< 10	210	21	2	33
133642	1.06	40.41	16.22	12.35	0.165	8.94	2.88	0.15	7.45	1.729	0.28	7.22	97.81	26	31	248	< 20	53	50	50	160	19	2	21

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133563	6	2191	242	80	461	46	1.0	< 0.2	15	< 0.5	< 0.5	1042	1.0	4100	7680	712	2450	297	65.7	122	13.4	54.8	8.2	18.2
133564	< 2	2340	190	25	312	101	0.7	< 0.2	13	< 0.5	< 0.5	761	1.7	5690	9520	835	2810	349	75.8	143	13.1	47.6	6.2	12.9
133565	< 2	2178	192	48	416	3	< 0.5	< 0.2	7	< 0.5	< 0.5	1136	< 0.4	5390	8760	847	2790	295	60.9	118	12.0	47.5	7.0	15.6
133566	< 2	2277	203	69	246	24	0.8	< 0.2	4	< 0.5	< 0.5	472	< 0.4	5270	9060	814	2730	318	68.9	130	13.0	51.9	7.3	16.6
133567	3	2355	219	158	404	3	1.3	< 0.2	7	< 0.5	< 0.5	524	< 0.4	5670	9630	859	2850	362	82.1	157	15.7	59.6	7.9	17.4
133568	< 2	2091	165	29	537	15	< 0.5	< 0.2	11	< 0.5	< 0.5	942	0.6	5630	9540	875	2990	383	84.1	151	12.8	46.1	5.7	11.7
133569	< 2	2093	158	32	649	29	< 0.5	< 0.2	16	< 0.5	< 0.5	644	0.7	5170	8860	800	2760	363	79.1	144	12.6	42.3	5.4	10.9
133570	< 2	2253	179	44	197	8	< 0.5	< 0.2	5	< 0.5	< 0.5	2301	0.4	7990	12300	979	2940	329	73.7	144	13.6	49.7	6.5	14.5
133571	< 2	1890	177	46	718	25	< 0.5	< 0.2	18	< 0.5	< 0.5	586	0.6	4490	7990	715	2370	301	68.5	131	13.4	50.1	6.4	14.0
133572	< 2	1826	174	41	549	< 2	0.7	0.2	27	< 0.5	< 0.5	368	1.5	3950	7380	718	2580	361	82.1	161	14.7	53.8	6.7	13.4
133573	< 2	1854	176	39	482	2	0.6	0.2	16	< 0.5	< 0.5	248	3.7	3340	7290	782	2870	355	76.8	137	12.1	47.7	6.2	12.4
133574	< 2	96	11	< 4	25	7	< 0.5	< 0.2	3	< 0.5	< 0.5	77	1.8	153	305	34.2	130	17.7	3.71	7.1	0.8	3.0	0.4	1.0
133575	25	3077	902	210	387	50	1.9	< 0.2	43	< 0.5	0.5	13490	3.3	2610	5000	526	2230	482	131	324	45.7	215	35.2	80.9
133576	5	2388	273	92	422	2	1.0	< 0.2	13	< 0.5	< 0.5	450	2.6	2620	6150	682	2570	320	67.8	131	14.4	64.7	9.8	20.7
133577	3	2715	213	168	327	29	1.1	< 0.2	6	< 0.5	< 0.5	261	1.2	1880	4270	534	2050	284	65.5	124	13.1	54.2	7.9	17.1
133578	4	2609	146	77	255	17	< 0.5	< 0.2	9	< 0.5	< 0.5	404	0.6	1810	4220	534	2100	288	62.2	108	10.2	37.5	5.3	11.3
133579	2	2438	166	52	158	47	< 0.5	< 0.2	8	< 0.5	< 0.5	442	0.6	2200	5050	632	2500	354	79.5	150	13.9	46.8	6.1	12.6
133580	< 2	2510	244	41	176	28	< 0.5	< 0.2	5	< 0.5	< 0.5	1274	0.5	2020	4450	541	2100	332	82.9	163	16.9	62.4	8.6	18.5
133581	< 2	2590	229	61	274	15	< 0.5	< 0.2	13	< 0.5	< 0.5	1140	0.6	2130	4730	572	2240	361	91.3	187	19.1	65.6	8.6	17.6
133582	< 2	4668	64	16	137	3	< 0.5	< 0.2	1	< 0.5	< 0.5	146	< 0.4	868	1710	202	752	120	29.7	56.8	5.5	19.1	2.5	5.2
133583	< 2	5269	121	30	181	6	< 0.5	< 0.2	1	< 0.5	< 0.5	144	< 0.4	706	1380	165	631	101	27.1	56.8	7.0	30.9	4.5	10.2
133584	8	4153	253	28	218	3	< 0.5	< 0.2	2	< 0.5	< 0.5	359	< 0.4	733	1710	227	909	145	39.4	87.6	12.5	61.1	9.6	21.7
133585	< 2	4573	438	70	163	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	147	0.5	806	2030	270	1100	186	51.8	125	20.5	108	17.9	40.1
133586	< 2	4272	450	45	167	2	< 0.5	< 0.2	2	< 0.5	< 0.5	181	< 0.4	1100	2620	343	1360	212	58.6	143	22.9	116	18.7	41.6
133587	< 2	4337	467	59	280	3	< 0.5	< 0.2	2	< 0.5	< 0.5	165	< 0.4	1180	2510	307	1190	196	56.7	136	21.5	114	18.6	40.0
133588	< 2	4090	167	26	189	3	< 0.5	< 0.2	3	< 0.5	< 0.5	160	< 0.4	845	1940	245	974	159	42.0	84.5	10.2	42.0	6.1	14.1
133589	< 2	5446	50	12	246	6	< 0.5	< 0.2	9	< 0.5	< 0.5	117	< 0.4	822	1450	156	545	88.3	22.7	43.8	4.1	13.9	1.8	3.8
133590	< 2	5493	79	15	128	6	< 0.5	< 0.2	2	< 0.5	< 0.5	176	< 0.4	751	1500	174	659	115	29.6	57.8	6.0	21.3	2.9	6.5
133591	< 2	5463	72	12	66	5	< 0.5	< 0.2	1	< 0.5	< 0.5	103	< 0.4	686	1350	158	581	99.2	25.5	49.2	4.9	17.1	2.3	5.3
133592	< 2	5871	39	11	107	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	75	< 0.4	198	406	49.9	200	40.0	10.6	21.4	2.3	8.8	1.3	3.0
133593	< 2	6401	50	19	234	9	< 0.5	< 0.2	2	< 0.5	< 0.5	93	< 0.4	465	802	86.7	305	55.3	14.6	30.8	3.3	12.8	1.8	4.3
133594	< 2	6081	54	27	204	9	< 0.5	< 0.2	2	< 0.5	< 0.5	99	< 0.4	788	1290	132	455	74.1	19.1	36.9	3.8	13.8	1.9	4.0
133595	< 2	4720	215	67	147	5	< 0.5	< 0.2	3	< 0.5	< 0.5	186	< 0.4	1160	2550	314	1210	185	46.3	98.2	13.2	56.4	8.0	17.2
133596	< 2	4539	422	58	163	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	199	< 0.4	1300	2990	385	1520	245	65.3	147	22.0	104	16.2	34.1
133597	< 2	5115	292	27	162	3	< 0.5	< 0.2	2	< 0.5	< 0.5	143	< 0.4	745	1780	234	956	170	48.3	106	15.5	71.8	11.2	23.4
133598	< 2	6620	26	6	58	7	< 0.5	< 0.2	1	< 0.5	< 0.5	121	< 0.4	242	453	53.6	224	52.1	13.9	26.1	2.4	7.6	1.0	1.8
133599	< 2	21	3	8	5	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	8.2	16.3	1.85	6.9	1.1	0.27	0.6	< 0.1	0.4	< 0.1	0.1
133600	35	20290	918	235	11	31	2.8	< 0.2	< 1	6.0	1.8	890	8.5	17900	28500	2550	7750	861	200	374	38.3	165	27.1	67.0
133601	< 2	4604	248	33	174	5	< 0.5	< 0.2	9	< 0.5	< 0.5	232	< 0.4	1240	2680	325	1260	199	51.2	110	14.5	65.0	9.6	19.6
133602	< 2	4540	627	55	188	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	288	< 0.4	1050	2640	344	1420	241	70.2	171	28.9	164	27.3	59.6
133603	< 2	3930	362	37	176	8	< 0.5	< 0.2	2	< 0.5	< 0.5	396	< 0.4	1750	3620	435	1710	264	65.8	138	18.8	90.3	14.4	31.5
133604	< 2	1938	183	38	180	2	< 0.5	< 0.2	6	< 0.5	< 0.5	269	< 0.4	1830	4500	570	2280	349	80.0	147	14.2	49.4	6.7	13.8
133605	< 2	2902	265	53	118	60	< 0.5	< 0.2	3	< 0.5	< 0.5	196	0.4	1920	4430	537	2050	305	74.6	149	16.8	67.5	10.0	22.0
133606	< 2	3329	278	80	138	6	< 0.5	< 0.2	16	< 0.5	< 0.5	151	0.8	1370	3310	421	1710	293	73.2	149	17.5	71.4	10.6	22.9
133607	< 2	4515	117	40	154	3	< 0.5	< 0.2	3	< 0.5	< 0.5	108	< 0.4	745	1710	218	867	144	36.5	73.7	7.9	29.7	4.1	9.3
133608	< 2	4787	167	48	188	4	< 0.5	< 0.2	2	< 0.5	< 0.5	147	< 0.4	706	1640	212	854	143	37.3	80.5	10.2	44.7	6.5	14.8
133609	< 2	4041	103	34	152	10	< 0.5	< 0.2	3	< 0.5	< 0.5	119	< 0.4	729	1700	223	889	144	37.0	73.7	7.8	28.8	4.0	8.9
133610	< 2	3979	207	72	206	6	< 0.5	< 0.2	4	< 0.5	< 0.5	136	< 0.4	1010	2540	339	1390	222	58.2	124	14.8	55.6	7.7	17.4
133611	< 2	4195	182	51	264	< 2	< 0.5	< 0.2	3	< 0.5	< 0.5	127	< 0.4	873	2280	309	1230	196	50.1	105	12.3	47.6	6.6	15.4
133612	< 2	3172	159	28	217	10	< 0.5	< 0.2	6	< 0.5	< 0.5	360	0.4	1100	2670	346	1420	218	51.9	101	11.2	42.3	5.8	12.7
133613	< 2	2993	187	33	199	4	< 0.5	< 0.2	6	< 0.5	< 0.5	253	< 0.4	1630	3550	439	1700	256	61.9	128	13.7	50.7	6.9	14.4
133614	< 2	3477	116	25	184	4	< 0.5	< 0.2	6	< 0.5	< 0.5	157	< 0.4	1650	3130	359	1300	192	46.3	91.9	9.3	32.4	4.2	9.1

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133615	< 2	3367	137	29	190	4	< 0.5	< 0.2	6	< 0.5	< 0.5	150	< 0.4	1810	3460	387	1430	213	51.7	104	10.7	38.4	4.8	10.1
133616	< 2	4196	139	43	169	2	< 0.5	< 0.2	3	< 0.5	< 0.5	126	< 0.4	1000	2510	331	1320	205	49.0	98.1	10.7	39.4	5.3	12.0
133617	< 2	2387	144	36	221	5	< 0.5	< 0.2	3	< 0.5	< 0.5	150	< 0.4	2250	5070	613	2410	324	72.6	129	12.1	40.2	5.1	10.7
133618	< 2	2439	182	194	108	7	1.0	< 0.2	2	< 0.5	< 0.5	177	< 0.4	1740	3980	494	1880	246	53.8	106	11.2	44.9	6.5	13.7
133619	< 2	3011	176	57	277	10	< 0.5	< 0.2	4	< 0.5	< 0.5	206	< 0.4	2240	4770	573	2210	328	78.8	160	15.9	52.6	6.5	13.5
133620	< 2	2670	177	63	295	31	2.0	< 0.2	4	< 0.5	< 0.5	257	< 0.4	3400	6910	711	2730	401	94.6	172	17.0	55.1	6.6	13.5
133621	2	2784	132	186	215	57	1.4	< 0.2	4	< 0.5	< 0.5	228	< 0.4	4590	7910	736	2660	328	69.5	115	10.4	35.8	4.7	10.5
133622	< 2	3078	139	91	240	24	0.8	< 0.2	4	< 0.5	< 0.5	203	0.8	4070	7120	674	2460	334	76.0	139	12.6	41.4	5.0	9.4
133623	< 2	2715	159	60	257	7	0.7	< 0.2	4	< 0.5	< 0.5	481	0.4	2020	4670	512	2020	260	57.8	108	11.3	41.8	5.7	11.7
133624	< 2	9	< 2	< 4	2	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	7.6	14.3	1.53	5.6	0.7	0.17	0.3	< 0.1	0.1	< 0.1	< 0.1
133625	26	3050	910	228	392	53	1.4	< 0.2	44	< 0.5	< 0.5	13540	3.1	2640	5130	538	2290	494	136	321	44.9	214	36.0	85.2
133626	< 2	2392	209	228	747	8	1.5	< 0.2	10	< 0.5	< 0.5	213	0.7	4930	8420	762	2600	296	63.9	116	13.0	52.0	7.5	17.8
133627	< 2	3676	119	128	440	6	1.0	< 0.2	4	< 0.5	< 0.5	212	0.6	3080	5490	517	1860	256	60.1	116	10.9	36.0	4.5	9.6
133628	< 2	2621	166	141	345	4	1.0	< 0.2	3	< 0.5	< 0.5	122	< 0.4	2270	5020	546	2170	298	68.2	129	13.1	47.1	6.3	13.9
133629	< 2	2439	180	218	543	< 2	1.5	< 0.2	4	< 0.5	< 0.5	137	< 0.4	5460	8720	792	2870	369	78.2	144	13.6	49.6	7.2	17.0
133630	< 2	2594	210	273	330	< 2	1.9	< 0.2	4	< 0.5	< 0.5	183	< 0.4	7640	11700	975	3240	374	80.6	155	15.3	57.1	8.1	18.2
133631	< 2	2297	143	121	293	2	0.9	< 0.2	4	< 0.5	< 0.5	138	< 0.4	3310	6130	603	2240	296	63.1	116	10.8	38.2	5.3	12.0
133632	< 2	2127	120	93	318	12	0.7	< 0.2	7	< 0.5	< 0.5	212	0.8	5640	8970	778	2550	284	59.3	114	10.5	34.9	4.6	9.8
133633	< 2	2186	101	196	382	17	1.1	< 0.2	7	< 0.5	< 0.5	217	0.5	5680	9630	833	2650	249	48.7	88.1	8.5	27.6	3.5	8.1
133634	3	2267	122	138	267	4	1.1	< 0.2	7	< 0.5	< 0.5	304	0.9	10400	15400	1210	3550	314	63.0	116	11.8	37.7	4.6	10.5
133635	< 2	2396	97	79	222	5	0.6	< 0.2	7	< 0.5	< 0.5	310	< 0.4	7560	12000	989	3100	287	55.3	99.4	9.5	31.1	3.7	7.8
133636	< 2	2426	111	64	157	28	0.6	< 0.2	6	< 0.5	< 0.5	215	0.4	3820	6270	628	2120	258	57.2	114	10.9	36.2	4.2	8.5
133637	< 2	2003	90	43	328	22	< 0.5	< 0.2	5	< 0.5	< 0.5	237	0.6	3870	6540	567	1870	206	41.7	77.4	7.4	25.2	3.3	7.5
133638	< 2	2430	108	51	535	55	< 0.5	< 0.2	7	< 0.5	< 0.5	207	1.5	3760	7020	682	2470	306	63.6	110	10.0	32.8	4.1	9.0
133639	< 2	2450	116	50	469	32	0.6	< 0.2	7	< 0.5	< 0.5	205	0.7	4100	7460	691	2410	280	57.3	100.0	9.1	31.5	4.1	9.4
133640	< 2	2579	133	38	586	26	0.7	< 0.2	9	< 0.5	< 0.5	246	3.0	4280	8080	770	2790	340	69.7	124	11.3	37.7	4.7	10.2
133641	118	912	52	97	224	5	0.7	< 0.2	3	< 0.5	4.6	2954	< 0.4	954	1580	142	467	58.6	13.7	28.4	3.2	12.9	1.9	4.8
133642	161	198	22	138	95	5	0.8	< 0.2	3	< 0.5	6.6	3795	< 0.4	45.7	83.9	8.78	34.2	5.9	1.57	3.8	0.7	3.9	0.9	2.5

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133563	2.28	13.3	1.76	1.5	< 0.1	2	0.2	124	253	0.3	3.40
133564	1.48	8.8	1.14	0.7	< 0.1	2	0.2	167	288	< 0.1	3.44
133565	1.81	9.9	1.25	1.0	< 0.1	1	< 0.1	79	106	0.1	3.32
133566	1.95	11.5	1.44	1.5	< 0.1	1	< 0.1	109	177	< 0.1	2.98
133567	2.16	12.3	1.64	2.7	< 0.1	2	0.2	78	199	0.2	2.77
133568	1.31	7.5	1.00	0.7	< 0.1	3	0.1	121	232	0.2	1.48
133569	1.22	7.1	0.92	0.8	< 0.1	3	0.1	115	218	0.1	1.39
133570	1.58	8.8	1.14	1.1	< 0.1	2	< 0.1	103	181	< 0.1	3.54
133571	1.53	9.0	1.18	1.1	0.6	3	0.2	117	267	0.4	3.47
133572	1.47	8.4	1.13	1.2	< 0.1	4	0.2	235	335	0.1	3.70
133573	1.34	7.8	1.01	0.9	< 0.1	4	0.2	443	458	0.1	3.05
133574	0.10	0.5	0.06	< 0.2	< 0.1	< 1	< 0.1	54	24.2	< 0.1	
133575	9.57	51.3	6.28	5.5	3.1	27	0.4	614	862	2.7	0.205
133576	2.49	13.4	1.74	1.6	< 0.1	2	0.2	287	393	< 0.1	2.90
133577	2.06	11.7	1.58	2.2	< 0.1	< 1	0.3	77	142	0.1	3.30
133578	1.41	8.3	1.07	1.1	< 0.1	< 1	0.2	78	169	< 0.1	3.49
133579	1.42	8.9	1.17	0.9	< 0.1	< 1	0.2	103	216	0.1	3.52
133580	2.14	12.5	1.64	0.9	< 0.1	< 1	< 0.1	18	157	0.3	2.28
133581	2.15	13.4	1.71	1.2	< 0.1	2	< 0.1	25	186	0.4	1.67
133582	0.60	3.5	0.47	0.3	< 0.1	< 1	< 0.1	9	89.2	< 0.1	3.07
133583	1.21	7.0	0.88	0.6	< 0.1	< 1	< 0.1	7	79.4	< 0.1	3.29
133584	2.53	14.2	1.82	0.8	< 0.1	< 1	< 0.1	10	106	0.1	1.72
133585	4.85	25.9	3.22	1.6	< 0.1	< 1	< 0.1	37	140	0.2	3.13
133586	4.61	25.2	3.12	1.4	< 0.1	< 1	< 0.1	50	162	< 0.1	3.52
133587	4.47	22.5	2.70	1.5	< 0.1	< 1	< 0.1	19	123	< 0.1	3.42
133588	1.60	8.2	1.03	0.6	< 0.1	< 1	< 0.1	26	95.5	< 0.1	3.43
133589	0.47	2.9	0.39	0.3	< 0.1	< 1	< 0.1	24	82.5	< 0.1	3.36
133590	0.79	4.5	0.57	0.3	< 0.1	< 1	< 0.1	36	160	< 0.1	1.67
133591	0.66	4.0	0.55	0.3	< 0.1	< 1	< 0.1	34	131	< 0.1	1.63
133592	0.38	2.6	0.38	< 0.2	< 0.1	< 1	< 0.1	9	44.3	< 0.1	3.25
133593	0.56	3.6	0.52	0.3	< 0.1	< 1	< 0.1	10	67.1	< 0.1	3.48
133594	0.52	3.6	0.51	0.4	< 0.1	< 1	< 0.1	19	83.7	0.1	3.61
133595	2.01	11.4	1.40	1.2	0.2	< 1	< 0.1	27	150	0.8	3.64
133596	3.98	21.1	2.61	1.5	< 0.1	< 1	< 0.1	35	147	0.1	3.55
133597	2.59	13.5	1.62	0.9	< 0.1	< 1	< 0.1	18	96.7	< 0.1	3.51
133598	0.22	1.4	0.20	< 0.2	< 0.1	< 1	< 0.1	5	36.5	< 0.1	2.18
133599	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.1	< 0.1	
133600	8.66	51.1	6.70	3.6	< 0.1	4	2.1	981	150	186	0.205
133601	2.17	11.9	1.49	0.9	< 0.1	< 1	0.3	41	154	0.1	3.33
133602	6.71	34.3	4.25	1.8	< 0.1	3	< 0.1	27	145	0.2	3.62
133603	3.79	20.6	2.51	1.2	< 0.1	< 1	< 0.1	44	143	0.2	3.58
133604	1.60	9.4	1.27	0.9	0.8	< 1	< 0.1	39	79.1	0.4	2.27
133605	2.65	15.4	2.06	1.1	< 0.1	< 1	< 0.1	65	197	0.1	2.81
133606	2.80	17.0	2.32	1.5	< 0.1	< 1	< 0.1	142	352	< 0.1	3.35
133607	1.13	7.0	1.00	0.7	< 0.1	< 1	< 0.1	45	111	0.1	2.28
133608	1.79	11.2	1.58	0.9	< 0.1	< 1	< 0.1	39	107	0.3	3.40
133609	1.15	7.6	1.17	0.7	< 0.1	< 1	< 0.1	32	96.6	0.3	3.63
133610	2.14	13.9	2.00	1.4	< 0.1	< 1	< 0.1	38	117	0.2	3.66
133611	1.82	12.1	1.72	1.0	< 0.1	< 1	< 0.1	15	88.8	0.2	2.59
133612	1.52	10.1	1.42	0.6	< 0.1	< 1	< 0.1	51	115	0.2	2.80
133613	1.76	12.2	1.72	0.9	0.1	< 1	< 0.1	60	185	0.2	2.89

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133614	1.10	7.1	1.03	0.6	< 0.1	< 1	< 0.1	36	149	0.2	1.63
133615	1.24	8.2	1.13	0.7	< 0.1	< 1	< 0.1	49	177	0.1	1.71
133616	1.36	8.6	1.15	0.9	< 0.1	< 1	< 0.1	33	93.8	0.4	4.09
133617	1.25	7.8	1.03	0.8	< 0.1	< 1	< 0.1	29	83.2	0.1	3.02
133618	1.83	12.0	1.74	2.7	< 0.1	< 1	< 0.1	17	77.4	< 0.1	2.58
133619	1.65	11.1	1.51	1.1	0.3	< 1	< 0.1	33	136	0.2	3.02
133620	1.54	10.5	1.42	1.2	0.3	< 1	0.1	42	161	0.2	3.90
133621	1.22	7.8	1.17	2.4	< 0.1	1	0.2	25	101	< 0.1	3.32
133622	1.08	6.7	0.91	1.4	< 0.1	< 1	< 0.1	21	180	0.2	3.05
133623	1.30	7.8	1.10	1.0	< 0.1	< 1	< 0.1	35	121	< 0.1	3.01
133624	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	0.6	< 0.1	
133625	10.1	54.2	6.50	5.3	3.3	27	0.5	570	912	2.6	0.205
133626	2.15	12.9	1.79	3.0	< 0.1	3	0.3	34	221	0.1	2.96
133627	1.14	7.4	1.07	1.6	< 0.1	5	< 0.1	83	94.9	0.2	3.59
133628	1.71	10.3	1.44	1.9	< 0.1	1	< 0.1	33	83.7	0.1	3.30
133629	2.14	12.8	1.70	2.9	< 0.1	2	< 0.1	31	73.6	< 0.1	3.59
133630	2.36	13.7	1.94	3.3	0.1	< 1	< 0.1	29	125	0.2	3.37
133631	1.52	9.1	1.23	1.5	< 0.1	< 1	< 0.1	40	135	< 0.1	3.41
133632	1.28	7.5	1.01	1.2	< 0.1	< 1	< 0.1	43	168	< 0.1	3.73
133633	1.09	6.6	1.02	2.1	< 0.1	1	< 0.1	58	125	< 0.1	3.58
133634	1.27	7.1	1.04	1.8	< 0.1	< 1	< 0.1	164	167	< 0.1	2.44
133635	0.96	5.5	0.76	1.1	< 0.1	< 1	< 0.1	73	142	< 0.1	3.77
133636	0.93	5.7	0.76	1.0	< 0.1	< 1	< 0.1	59	189	0.2	3.54
133637	0.94	5.5	0.72	0.8	< 0.1	< 1	< 0.1	73	110	0.1	3.53
133638	1.15	7.0	0.90	1.1	< 0.1	4	0.1	205	386	< 0.1	1.16
133639	1.22	7.2	1.00	1.0	< 0.1	2	0.1	160	269	< 0.1	1.13
133640	1.26	7.6	0.99	0.9	< 0.1	2	0.3	484	306	0.1	3.13
133641	0.61	3.6	0.51	2.6	2.2	4	1.9	13	54.3	0.6	2.49
133642	0.37	2.5	0.38	3.3	2.4	4	2.8	< 5	6.0	0.7	2.42

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.16	11.35	1.91	0.75	0.011	0.35	43.21	0.88	0.56	0.118	30.14					1663								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.06																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.14																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.97	18.27	9.74	0.147	10.01	11.36	1.91	0.22	0.480	0.07			31		158	270	58	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		70.77	12.98	3.20	0.139	0.14	0.60	2.47	5.37	0.283	0.04			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	30	40					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.35	15.79	10.72	0.168	6.25	11.04	2.19	0.62	1.092	0.19			35	< 1	278		45	70	110	80	18	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.76	20.19	6.18	0.107	0.51	7.97	6.95	1.67	0.285	0.13			< 1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																				60	40			
CTA-AC-1 Cert																				54.0	38.0			
BIR-1a Meas		47.96	15.39	11.27	0.173	9.57	13.45	1.81	0.02	0.960	0.03			44	< 1	341	370	54	170	130	70	16		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1060	99		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	60	2600	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																		3		970	100	16	11	73
NCS DC70009 (GBW07241) Cert																		3.7		960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		48		420				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		30	16		
JR-1 Cert																			1.67		30.6	16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133565 Orig	5.38	2.48	0.04	6.55	1.306	13.84	31.13	0.03	0.05	0.057	0.79	36.39	92.66	50	11	63	< 20	3	< 20	< 10	290	70	10	24
133565 Dup	5.38	2.44	0.04	6.46	1.292	13.72	31.73	0.03	0.04	0.056	0.78	36.39	92.97	49	11	61	< 20	3	< 20	< 10	280	71	10	24
133576 Orig	3.25	3.20	0.15	12.94	2.069	12.15	25.10	0.03	0.20	0.176	1.82	34.82	92.65	36	25	94	< 20	9	< 20	< 10	1170	22	5	14
133576 Dup	3.23	3.27	0.15	13.21	2.115	12.50	25.55	0.03	0.20	0.174	1.90	34.82	93.93	37	26	96	< 20	9	< 20	< 10	1160	23	5	14
133591 Orig	0.06	0.37	0.03	4.33	0.799	19.04	29.02	0.03	0.01	0.029	0.09	45.10	98.84	26	1	15	< 20	1	< 20	< 10	230	13	2	< 5
133591 Dup	0.07	0.36	0.03	4.33	0.798	18.93	29.04	0.02	0.01	0.028	0.08	45.10	98.73	26	1	18	< 20	1	< 20	< 10	240	13	2	< 5
133592 Orig	0.11	0.83	0.02	3.07	0.656	19.33	29.03	0.02	0.01	0.010	0.08	45.51	98.56	16	1	9	< 20	< 1	< 20	< 10	60	4	< 1	< 5

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133592 Split	0.10	0.97	0.05	3.09	0.666	19.38	29.47	0.02	0.03	0.013	0.09	45.52	99.30	17	2	9	< 20	< 1	< 20	< 10	70	2	< 1	< 5
133608 Orig	0.52	1.26	0.04	3.55	0.675	16.28	31.51	0.04	0.03	0.040	4.40	39.76	97.58	25	4	23	< 20	1	< 20	< 10	70	16	3	7
133608 Dup	0.53	1.35	0.05	3.64	0.684	16.66	31.45	0.04	0.03	0.042	4.49	39.76	98.19	26	4	22	< 20	1	< 20	< 10	80	16	3	7
133612 Orig	0.60	1.83	0.03	4.28	0.746	16.75	29.65	0.03	0.02	0.121	2.09	41.31	96.87	33	5	41	< 20	2	< 20	< 10	160	26	5	12
133612 Split	0.57	1.90	0.04	4.30	0.745	16.95	30.19	0.03	0.03	0.131	2.13	41.81	98.27	33	5	41	< 20	3	< 20	< 10	190	11	2	8
133619 Orig	1.07	5.21	0.06	5.07	0.971	14.74	29.55	0.03	0.05	0.053	3.41	37.45	96.59	34	7	55	< 20	4	< 20	< 10	280	44	8	18
133619 Dup	1.02	5.24	0.06	5.10	0.978	14.93	29.64	0.03	0.05	0.053	3.41	37.45	96.93	34	7	52	< 20	4	< 20	< 10	280	44	7	17
133622 Orig	0.48	0.62	0.07	6.12	1.136	16.78	28.43	0.02	0.04	0.033	0.82	42.17	96.24	42	5	53	< 20	5	< 20	< 10	290	23	4	11
133622 Split	0.47	0.61	0.07	6.03	1.118	16.62	28.05	0.02	0.04	0.033	0.82	42.15	95.57	41	5	49	< 20	5	< 20	< 10	290	21	4	11
133634 Orig	0.92	5.77	0.14	9.03	1.395	14.25	24.04	0.02	0.13	0.037	1.68	37.61	94.10	52	10	60	< 20	10	< 20	< 10	890	42	5	29
133634 Dup	0.86	5.78	0.12	9.07	1.402	14.42	24.15	0.03	0.13	0.036	1.69	37.61	94.44	52	10	60	< 20	10	< 20	< 10	880	41	5	28
133642 Orig	1.06	40.41	16.22	12.35	0.165	8.94	2.88	0.15	7.45	1.729	0.28	7.22	97.81	26	31	248	< 20	53	50	50	160	19	2	21
133642 Split	1.08	40.38	16.75	12.38	0.164	8.94	2.88	0.15	7.46	1.766	0.29	7.15	98.30	26	31	244	< 20	55	60	50	160	19	2	22
133642 Orig	1.10	40.25	16.10	12.37	0.165	8.89	2.87	0.15	7.44	1.714	0.28	7.22	97.46	26	31	247	< 20	53	50	50	160	19	2	23
133642 Dup	1.03	40.58	16.35	12.33	0.164	9.00	2.90	0.15	7.46	1.744	0.28	7.22	98.17	26	32	249	< 20	53	50	50	160	19	2	20
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		144	16	33								105		3.7			5.0		0.59					
DNC-1 Cert		144.0	18.0	38								118		3.6			5.20		0.59					
GBW 07113 Meas		41	46	383								502												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.3				85.1		42.1	8.0	1.40			4.8		
LKSD-3 Cert	78.0					2.00					2.30				90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas	20	198	20	83		< 2	< 0.5				0.9	172	< 0.4	10.1	22.1		12.6	3.2	1.07		0.6	3.8	0.8	
W-2a Cert	21.0	190	24.0	94.0		0.600	0.0460				0.990	182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1199	116	550								347												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2200	3350		1110	161	44.2	119	14.8			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		109	15	14								8		0.7	2.0		2.3	1.0	0.50	2.0				
BIR-1a Cert		110	16	18								6		0.63	1.9		2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2360	172		1580			230	34.3	183	35.6	96.1
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											263													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	41.9	81.2	9.76	37.6	7.8		6.9	1.1	6.2	1.2	3.4
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0		7.4	1.1	6.7	1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700		44.4			22.1	55.7	7.43	30.4	12.0		14.5	3.3	20.9	4.4	13.0
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						23								248	445	44.1	145	23.5	3.59		3.6	22.3	4.8	14.3
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						20								783	1350	126	385	50.0	7.87		5.6	32.1	6.7	19.3
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	250				14	3	< 0.5	< 0.2	3		20.9		0.6	19.5	46.0	5.84	23.1	5.7		5.4	1.0	6.1		
JR-1 Cert	257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69		
NCS DC86318 Meas														1940	416	711	3380	1790	19.9	2170	475	3040	564	1620
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					981																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21500	29300	2410	6600	547	90.0					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133565 Orig	< 2	2199	194	49	419	3	0.6	< 0.2	7	< 0.5	< 0.5	1144	< 0.4	5380	8800	847	2800	294	60.4	116	11.7	46.6	7.0	15.6
133565 Dup	< 2	2158	190	47	414	3	< 0.5	< 0.2	7	< 0.5	< 0.5	1128	< 0.4	5390	8720	847	2790	296	61.4	120	12.2	48.4	6.9	15.5
133576 Orig	5	2363	270	90	430	2	0.9	< 0.2	13	< 0.5	< 0.5	449	3.0	2630	6200	690	2600	325	68.8	133	14.5	65.1	9.8	20.8
133576 Dup	5	2413	276	93	415	2	1.0	< 0.2	13	< 0.5	< 0.5	451	2.1	2610	6110	674	2550	315	66.8	130	14.4	64.3	9.7	20.6
133591 Orig	< 2	5468	72	12	66	5	< 0.5	< 0.2	1	< 0.5	< 0.5	103	< 0.4	692	1360	157	581	99.4	25.6	49.5	4.9	17.1	2.3	5.3
133591 Dup	< 2	5459	72	11	65	5	< 0.5	< 0.2	1	< 0.5	< 0.5	103	< 0.4	680	1340	158	580	99.0	25.5	49.0	4.9	17.2	2.4	5.4
133592 Orig	< 2	5871	39	11	107	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	75	< 0.4	198	406	49.9	200	40.0	10.6	21.4	2.3	8.8	1.3	3.0

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133592 Split	< 2	5945	37	11	109	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	84	< 0.4	185	399	47.4	205	41.5	11.3	22.1	2.3	8.7	1.3	3.1
133608 Orig	< 2	4715	163	46	173	4	< 0.5	< 0.2	2	< 0.5	< 0.5	142	< 0.4	697	1620	205	829	139	36.7	78.3	10.0	43.5	6.5	14.9
133608 Dup	< 2	4859	172	49	202	4	< 0.5	< 0.2	2	< 0.5	< 0.5	152	< 0.4	716	1660	219	878	148	38.0	82.7	10.5	46.0	6.5	14.6
133612 Orig	< 2	3172	159	28	217	10	< 0.5	< 0.2	6	< 0.5	< 0.5	360	0.4	1100	2670	346	1420	218	51.9	101	11.2	42.3	5.8	12.7
133612 Split	< 2	3262	155	26	241	12	< 0.5	< 0.2	7	< 0.5	< 0.5	294	0.4	1040	2840	334	1440	225	54.3	105	11.4	42.9	5.9	12.7
133619 Orig	< 2	2996	175	57	282	10	< 0.5	< 0.2	4	< 0.5	< 0.5	207	< 0.4	2210	4740	573	2210	328	78.4	160	16.1	53.5	6.5	13.2
133619 Dup	< 2	3027	176	58	272	10	< 0.5	< 0.2	4	< 0.5	< 0.5	206	< 0.4	2270	4810	572	2210	328	79.2	160	15.7	51.7	6.5	13.7
133622 Orig	< 2	3078	139	91	240	24	0.8	< 0.2	4	< 0.5	< 0.5	203	0.8	4070	7120	674	2460	334	76.0	139	12.6	41.4	5.0	9.4
133622 Split	< 2	3045	139	89	246	24	< 0.5	< 0.2	4	< 0.5	< 0.5	202	0.8	4180	7200	678	2490	339	76.9	142	13.1	41.7	5.1	10.0
133634 Orig	3	2274	122	136	266	4	1.1	< 0.2	8	< 0.5	< 0.5	305	0.9	10400	15500	1220	3570	313	62.2	114	11.5	37.6	4.7	10.7
133634 Dup	3	2261	123	139	269	4	1.0	< 0.2	7	< 0.5	< 0.5	304	0.9	10300	15300	1200	3540	314	63.9	118	12.1	37.9	4.5	10.3
133642 Orig	161	198	22	138	95	5	0.8	< 0.2	3	< 0.5	6.6	3795	< 0.4	45.7	83.9	8.78	34.2	5.9	1.57	3.8	0.7	3.9	0.9	2.5
133642 Split	162	199	22	136	97	6	0.6	< 0.2	3	< 0.5	6.9	3780	< 0.4	49.0	88.5	9.31	35.2	6.1	1.73	4.1	0.7	4.4	0.9	2.7
133642 Orig	160	200	22	139	95	5	0.9	< 0.2	3	< 0.5	6.7	3778	< 0.4	46.5	85.1	8.80	33.5	5.8	1.61	3.9	0.7	4.0	0.9	2.5
133642 Dup	161	196	22	137	95	5	0.7	< 0.2	3	< 0.5	6.5	3811	< 0.4	44.8	82.7	8.75	35.0	6.0	1.54	3.7	0.7	3.9	0.8	2.5
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									925	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.7					4.3
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									29300	
OKA-2 Cert									28900.000	
W-2a Meas	0.39	2.1	0.31		0.5	< 1	< 0.1	10	2.6	0.5
W-2a Cert	0.380	2.10	0.330		0.500	0.300	0.200	9.30	2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		11.0	1.11						23.5	
CTA-AC-1 Cert		11.4	1.08						21.8	
BIR-1a Meas		1.7						< 5		
BIR-1a Cert		1.7						3		
NCS DC86312 Meas	14.3	87.2	12.1							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					82.0	329	33.9			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.56	3.4	0.49					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.41		2.26			2200			30.1	
NCS DC70009 (GBW07241) Cert	2.2		2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.40	15.1	2.10						52.9	135
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.99	18.7	2.51						37.1	422
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.7	0.69	4.3	1.8		1.6	18	27.4	8.7
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	278	1760	261							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133565 Orig	1.80	10.0	1.26	1.0	< 0.1	1	< 0.1	77	105	0.1
133565 Dup	1.83	9.9	1.24	0.9	< 0.1	1	< 0.1	81	106	0.1
133576 Orig	2.49	13.1	1.72	1.6	< 0.1	2	0.2	308	401	< 0.1
133576 Dup	2.49	13.6	1.75	1.6	< 0.1	2	0.2	266	385	< 0.1
133591 Orig	0.65	3.9	0.54	0.3	< 0.1	< 1	< 0.1	32	131	< 0.1
133591 Dup	0.67	4.1	0.55	0.3	< 0.1	< 1	< 0.1	37	131	< 0.1
133592 Orig	0.38	2.6	0.38	< 0.2	< 0.1	< 1	< 0.1	9	44.3	< 0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133592 Split	0.41	2.6	0.36	0.2	< 0.1	< 1	0.1	10	42.1	< 0.1
133608 Orig	1.79	10.8	1.52	0.9	< 0.1	< 1	< 0.1	38	104	0.3
133608 Dup	1.80	11.6	1.64	0.9	< 0.1	< 1	< 0.1	41	109	0.3
133612 Orig	1.52	10.1	1.42	0.6	< 0.1	< 1	< 0.1	51	115	0.2
133612 Split	1.63	9.8	1.35	0.7	< 0.1	2	< 0.1	50	108	0.2
133619 Orig	1.65	11.0	1.53	1.1	0.3	< 1	< 0.1	30	138	0.2
133619 Dup	1.65	11.2	1.50	1.1	0.3	< 1	< 0.1	35	135	0.2
133622 Orig	1.08	6.7	0.91	1.4	< 0.1	< 1	< 0.1	21	180	0.2
133622 Split	1.14	6.9	0.97	1.3	< 0.1	< 1	< 0.1	24	178	0.2
133634 Orig	1.26	7.4	1.07	1.9	< 0.1	< 1	< 0.1	160	163	< 0.1
133634 Dup	1.28	6.7	1.00	1.7	< 0.1	< 1	< 0.1	167	170	< 0.1
133642 Orig	0.37	2.5	0.38	3.3	2.4	4	2.8	< 5	6.0	0.7
133642 Split	0.44	2.9	0.40	3.6	2.6	4	2.8	< 5	6.6	0.7
133642 Orig	0.37	2.5	0.36	3.2	2.4	4	2.7	< 5	6.0	0.7
133642 Dup	0.38	2.5	0.39	3.3	2.4	3	2.8	< 5	6.0	0.7
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11633
Invoice Date: 25-Nov-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

54 Rock samples were submitted for analysis.

The following analytical packages were requested:

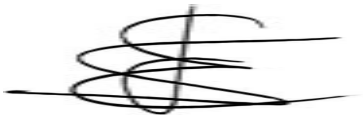
Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11633**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133643	5.47	1.71	0.03	10.86	1.615	12.11	29.43	0.02	0.03	0.144	1.06	35.18	92.19	38	9	84	< 20	9	< 20	< 10	830	59	8	22
133644	9.75	3.85	0.04	10.60	1.678	11.02	32.46	0.03	0.04	0.035	0.73	32.15	92.63	41	9	59	< 20	6	< 20	< 10	650	50	6	17
133645	5.75	1.67	0.03	11.84	1.871	11.71	28.40	0.02	0.03	0.509	0.43	35.01	91.52	61	9	93	< 20	6	< 20	< 10	550	65	8	24
133646	8.35	1.79	0.03	7.58	1.396	12.20	32.70	0.03	0.04	0.049	0.78	33.40	89.99	58	14	67	< 20	3	< 20	< 10	1090	76	9	26
133647	7.32	0.30	0.05	7.62	1.407	12.48	32.61	0.02	0.06	0.022	1.04	35.18	90.80	67	13	60	< 20	5	< 20	< 10	970	77	9	26
133648	4.25	0.46	0.11	9.40	1.568	12.68	30.05	0.02	0.10	0.208	1.63	36.86	93.09	67	6	104	< 20	7	< 20	< 10	530	63	9	24
133649	< 0.01	99.72	0.07	1.06	0.015	0.03	0.09	0.02	0.02	0.003	0.02	-0.14	100.9	< 1	< 1	< 5	130	< 1	< 20	< 10	< 30	< 1	1	< 5
133650	6.03	20.59	3.09	28.61	2.495	7.03	18.02	0.31	1.32	1.498	0.57	11.58	95.12	22	13	159	180	29	70	30	1430	52	9	25
133651	6.02	2.07	0.08	7.84	1.231	12.15	31.32	0.04	0.08	0.093	2.47	34.05	91.41	67	10	76	< 20	5	< 20	< 10	390	88	11	29
133652	4.97	4.96	0.04	8.82	1.288	12.09	29.99	0.06	0.05	0.082	3.43	32.64	93.46	52	15	69	< 20	4	< 20	< 10	640	74	9	26
133653	3.10	2.87	0.08	11.21	1.351	13.03	26.80	0.07	0.10	0.282	1.36	36.10	93.25	57	9	134	< 20	8	< 20	< 10	410	62	9	26
133654	1.22	0.55	0.12	9.25	1.315	13.54	26.72	0.03	0.11	0.400	1.28	39.22	92.53	57	5	136	< 20	11	< 20	< 10	250	49	7	22
133655	1.45	1.11	0.10	8.59	1.331	13.65	28.20	0.04	0.12	0.232	2.91	38.37	94.64	56	9	101	< 20	5	< 20	< 10	390	63	9	24
133656	1.68	0.93	0.10	10.35	1.542	14.18	27.52	0.03	0.13	0.177	1.58	39.14	95.68	59	10	98	< 20	6	< 20	< 10	320	57	9	23
133657	8.50	1.14	0.03	8.76	1.558	11.82	32.73	0.03	0.04	0.138	1.75	32.77	90.76	42	12	67	< 20	3	< 20	< 10	720	84	10	27
133658	7.78	2.56	0.04	8.12	1.588	11.81	33.18	0.03	0.05	0.124	1.98	32.42	91.91	44	11	84	< 20	3	< 20	< 10	750	84	10	27
133659	6.54	0.83	0.04	8.40	1.445	12.77	32.70	0.02	0.05	0.157	1.29	35.29	92.98	45	11	87	< 20	6	< 20	< 10	370	65	9	25
133660	2.10	0.47	0.07	9.76	1.517	14.39	29.30	0.02	0.07	0.129	1.44	39.26	96.40	57	10	97	< 20	5	< 20	< 10	320	61	10	27
133661	2.09	0.46	0.07	8.02	1.433	14.88	29.02	0.02	0.07	0.331	0.72	40.49	95.51	44	9	136	< 20	5	< 20	< 10	260	50	8	22
133662	3.25	0.72	0.07	6.96	1.325	14.28	30.79	0.02	0.10	0.059	1.38	38.75	94.46	47	13	67	< 20	4	< 20	< 10	300	54	8	23
133663	2.86	1.95	0.05	5.44	1.238	15.26	31.17	0.03	0.09	0.041	2.11	38.54	95.91	38	17	49	< 20	2	< 20	< 10	80	37	6	17
133664	3.03	1.68	0.05	5.44	1.241	15.31	32.29	0.03	0.09	0.054	2.54	38.07	96.80	37	18	51	< 20	2	< 20	< 10	100	40	6	19
133665	2.96	1.05	0.18	5.79	1.093	15.47	30.46	0.03	0.21	0.074	1.30	39.38	95.03	42	11	62	< 20	3	< 20	< 10	70	57	8	23
133666	1.63	1.23	0.23	5.87	1.040	14.31	29.84	0.04	0.26	0.080	3.84	37.28	94.02	46	11	57	< 20	4	< 20	< 10	90	48	8	23
133667	0.74	0.29	0.05	7.33	1.223	14.92	28.38	0.02	0.05	0.070	1.73	41.25	95.31	49	5	62	< 20	4	< 20	< 10	230	52	10	26
133668	0.78	0.33	0.04	7.17	1.258	15.88	28.90	0.02	0.04	0.053	0.80	41.77	96.25	53	6	64	< 20	4	< 20	< 10	170	57	10	27
133669	0.65	0.83	0.04	6.25	1.265	16.15	28.04	0.02	0.05	0.059	0.73	41.86	95.29	45	14	65	< 20	5	< 20	< 10	600	63	10	26
133670	2.00	2.34	0.04	5.61	1.014	16.13	29.82	0.03	0.04	0.066	0.39	41.10	96.60	38	11	60	< 20	2	< 20	< 10	330	39	7	20
133671	0.66	1.91	0.05	6.78	1.235	15.74	27.93	0.02	0.06	0.072	0.40	42.17	96.35	41	9	63	< 20	2	< 20	< 10	390	46	8	23
133672	3.97	0.50	0.06	5.07	1.019	14.89	32.73	0.03	0.08	0.070	2.51	38.15	95.11	46	9	69	< 20	1	< 20	< 10	220	79	13	37
133673	1.22	0.66	0.09	4.85	0.956	17.25	29.31	0.02	0.11	0.030	0.47	42.76	96.50	39	14	58	< 20	2	< 20	< 10	490	61	10	28
133674	< 0.01	99.45	0.06	0.94	0.014	0.08	0.28	0.02	0.01	< 0.001	0.02	-0.05	100.8	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	< 1	1	< 5
133675	1.68	14.83	2.57	12.92	0.143	0.49	27.03	0.92	0.99	0.145	18.81	7.87	86.72	18	15	155	< 20	29	60	100	550	249	30	170
133676	0.54	0.53	0.07	5.73	1.050	15.71	28.91	0.02	0.08	0.049	1.49	42.23	95.87	45	10	54	< 20	6	< 20	< 10	260	54	9	26
133677	0.66	0.19	0.04	4.39	0.793	15.78	32.00	0.04	0.03	0.071	4.61	39.64	97.59	33	3	38	< 20	2	< 20	< 10	110	29	6	20
133678	0.54	0.38	0.09	4.35	0.767	16.14	30.55	0.04	0.06	0.043	3.50	40.26	96.19	28	4	29	< 20	3	< 20	< 10	110	27	5	19
133679	0.61	0.32	0.08	4.36	0.764	14.81	31.44	0.05	0.05	0.037	5.64	38.11	95.67	30	3	29	< 20	3	< 20	20	120	26	5	17
133680	0.54	0.16	0.04	4.54	0.790	15.31	31.73	0.05	0.02	0.070	5.24	38.71	96.67	35	4	37	< 20	2	< 20	< 10	250	31	6	25
133681	0.72	0.54	0.11	3.35	0.703	14.86	32.93	0.08	0.06	0.047	7.04	37.16	96.89	29	3	25	< 20	< 1	< 20	< 10	100	29	6	16
133682	0.47	1.84	0.08	3.72	0.735	16.69	30.19	0.04	0.07	0.026	2.79	41.32	97.49	27	3	23	< 20	1	< 20	< 10	50	27	5	16
133683	0.67	0.41	0.04	4.34	0.837	15.95	31.12	0.04	0.03	0.099	3.70	40.48	97.05	33	3	47	< 20	2	< 20	< 10	130	30	6	19
133684	0.42	2.27	0.05	5.37	0.896	15.56	29.35	0.03	0.04	0.093	2.20	40.74	96.61	39	4	59	< 20	3	< 20	< 10	370	43	8	26
133685	0.72	1.23	0.04	3.75	0.769	16.68	29.33	0.03	0.03	0.035	1.86	42.48	96.23	25	3	28	< 20	2	< 20	< 10	100	31	6	16
133686	0.52	0.49	0.04	3.10	0.732	16.52	32.48	0.05	0.03	0.019	5.43	39.59	98.47	23	2	17	< 20	< 1	< 20	< 10	110	29	5	15
133687	0.24	1.11	0.05	4.33	0.884	17.72	29.15	0.03	0.04	0.035	1.13	42.99	97.45	35	4	32	< 20	3	< 20	< 10	520	41	7	23
133688	0.47	3.28	0.07	3.62	0.702	15.73	30.15	0.05	0.05	0.040	4.44	38.58	96.73	24	3	25	< 20	2	< 20	< 10	110	29	6	21
133689	0.35	3.88	0.07	3.86	0.748	16.39	29.55	0.04	0.05	0.037	2.64	40.17	97.45	25	3	27	< 20	2	< 20	< 10	130	33	6	21
133690	0.35	6.24	0.06	3.78	0.725	15.68	28.40	0.04	0.05	0.131	2.70	38.80	96.61	24	3	44	< 20	2	< 20	< 10	90	33	6	22
133691	0.40	2.61	0.10	3.96	0.800	15.77	29.34	0.04	0.09	0.245	3.01	40.27	96.22	27	3	74	< 20	2	< 20	< 10	150	39	6	21
133692	0.78	0.48	0.06	3.50	0.712	17.11	30.35	0.05	0.05	0.020	2.09	42.57	96.98	20	3	21	< 20	1	< 20	< 10	60	24	4	13
133693	0.45	0.60	0.13	4.96	0.805	17.07	30.24	0.04	0.11	0.042	1.71	42.53	98.23	28	4	38	< 20	3	< 20	< 10	230	33	6	19
133694	0.57	1.03	0.08	4.23	0.765	16.84	29.91	0.04	0.07	0.028	1.91	42.37	97.27	23	4	28	< 20	2	< 20	< 10	110	28	5	15

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133695	0.29	0.58	0.05	5.15	0.868	16.56	28.99	0.03	0.04	0.039	1.15	43.10	96.55	30	4	35	< 20	3	< 20	< 10	270	42	7	22
133696	0.18	0.39	0.05	4.54	0.944	18.03	28.96	0.02	0.04	0.038	0.13	44.54	97.69	32	5	33	< 20	4	< 20	< 10	120	38	6	21

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133643	< 2	1888	153	46	454	76	1.2	< 0.2	12	< 0.5	< 0.5	458	0.6	4620	7460	737	2360	259	53.2	97.4	9.0	36.7	5.2	10.9
133644	< 2	1762	174	52	309	38	1.1	< 0.2	7	< 0.5	< 0.5	367	< 0.4	3750	6300	606	1860	185	37.8	69.6	7.3	33.0	5.3	13.1
133645	< 2	1778	125	21	1680	52	1.0	< 0.2	17	< 0.5	< 0.5	1405	0.6	4840	7820	758	2510	281	56.5	98.3	8.2	31.6	4.2	9.5
133646	< 2	2597	144	30	199	8	0.9	< 0.2	5	< 0.5	< 0.5	5886	0.9	6120	9510	874	2710	309	64.9	115	10.1	35.0	4.7	10.5
133647	< 2	2184	184	47	190	21	0.8	< 0.2	3	< 0.5	< 0.5	1148	0.4	6010	9490	897	2730	298	62.7	111	10.2	40.5	6.0	13.8
133648	2	2135	159	37	714	19	0.7	< 0.2	13	< 0.5	< 0.5	777	< 0.4	4110	6920	703	2380	279	59.1	109	10.2	39.5	5.5	11.7
133649	< 2	5	3	13	< 1	5	1.0	< 0.2	< 1	1.3	< 0.5	8	< 0.4	7.7	12.9	1.20	3.8	0.5	0.11	0.1	< 0.1	< 0.1	< 0.1	< 0.1
133650	28	3092	885	219	388	52	1.5	< 0.2	44	< 0.5	0.5	13480	2.4	2550	4580	528	2190	462	128	310	42.3	200	33.5	76.3
133651	< 2	2317	233	135	263	50	1.4	< 0.2	7	< 0.5	< 0.5	400	< 0.4	7510	10800	993	3110	353	75.3	141	13.2	51.0	7.8	19.2
133652	< 2	2511	244	71	297	24	0.9	< 0.2	7	< 0.5	< 0.5	319	0.6	6160	9360	873	2770	322	71.1	137	13.8	52.1	8.0	18.5
133653	< 2	1919	196	45	575	9	0.8	< 0.2	18	< 0.5	< 0.5	1217	0.4	4370	7240	750	2560	313	66.4	121	11.7	45.6	6.8	15.1
133654	3	1934	191	51	364	4	0.7	< 0.2	17	< 0.5	< 0.5	400	0.5	2700	5140	574	2090	272	60.5	114	11.8	46.7	6.9	15.8
133655	3	2278	180	138	292	4	1.2	< 0.2	11	< 0.5	< 0.5	1410	0.5	3640	6410	684	2380	281	58.3	107	9.9	41.1	6.3	15.4
133656	3	2009	163	96	306	3	0.9	< 0.2	10	< 0.5	< 0.5	1160	0.5	3230	6060	661	2320	278	56.4	103	9.7	39.6	5.9	13.3
133657	< 2	2195	137	48	262	5	0.6	< 0.2	9	< 0.5	< 0.5	3084	< 0.4	6300	9550	870	2670	297	60.9	111	9.6	33.1	4.5	10.3
133658	< 2	1970	137	51	261	10	0.7	< 0.2	10	< 0.5	< 0.5	947	< 0.4	6300	9430	865	2700	303	64.6	120	10.3	34.4	4.7	10.7
133659	< 2	1895	145	72	400	41	0.8	< 0.2	13	< 0.5	< 0.5	818	0.5	4440	7160	707	2370	289	61.9	113	9.4	33.7	4.7	11.0
133660	< 2	2337	214	74	461	27	0.9	< 0.2	12	< 0.5	< 0.5	324	0.8	3680	6450	683	2470	338	78.4	149	14.6	56.1	7.9	16.6
133661	< 2	2044	198	86	482	29	1.0	< 0.2	20	< 0.5	< 0.5	549	< 0.4	2540	4970	559	2050	271	61.0	115	12.1	47.4	7.0	14.9
133662	2	2500	191	89	321	13	1.0	< 0.2	7	< 0.5	< 0.5	565	0.8	3330	5870	623	2210	275	60.8	115	11.4	42.8	6.3	14.5
133663	< 2	2674	161	77	516	4	0.7	< 0.2	5	< 0.5	< 0.5	366	< 0.4	1800	3860	461	1750	232	52.8	101	9.9	38.3	5.6	12.8
133664	2	2808	175	86	521	5	0.9	< 0.2	6	< 0.5	< 0.5	385	< 0.4	2120	4140	487	1820	241	54.8	104	10.4	40.1	5.9	13.2
133665	6	3178	156	33	524	19	< 0.5	< 0.2	6	< 0.5	< 0.5	339	< 0.4	3560	5840	602	2200	299	68.4	134	12.5	42.7	5.7	11.6
133666	7	3677	262	85	236	22	1.0	< 0.2	4	< 0.5	< 0.5	331	< 0.4	2160	4440	518	2040	329	83.7	174	18.8	68.9	9.7	20.6
133667	< 2	2648	226	50	170	47	0.6	< 0.2	10	< 0.5	< 0.5	266	0.6	2240	4970	595	2300	351	84.4	170	16.6	58.3	8.2	17.6
133668	< 2	2549	201	29	146	37	0.5	< 0.2	6	< 0.5	< 0.5	355	0.8	2510	5230	617	2390	353	84.6	168	16.2	55.1	7.4	15.4
133669	< 2	2274	156	29	196	45	< 0.5	< 0.2	5	< 0.5	< 0.5	496	0.9	2670	5920	687	2460	319	71.7	141	12.9	43.5	5.6	12.4
133670	< 2	2229	180	24	131	46	< 0.5	< 0.2	5	< 0.5	< 0.5	618	< 0.4	1420	3500	463	1870	281	62.9	119	11.7	44.0	6.4	13.8
133671	< 2	2265	162	20	161	67	< 0.5	< 0.2	6	< 0.5	< 0.5	1195	< 0.4	2000	4450	549	2150	328	72.8	137	12.1	43.2	5.8	12.0
133672	< 2	1939	192	58	360	22	0.6	< 0.2	5	< 0.5	< 0.5	287	< 0.4	3450	7700	937	3590	477	98.6	176	15.7	53.2	6.8	14.1
133673	3	2202	130	9	184	93	< 0.5	< 0.2	3	< 0.5	< 0.5	518	< 0.4	2930	5780	660	2500	337	72.1	130	11.3	37.2	4.6	8.1
133674	< 2	8	< 2	8	< 1	4	0.6	< 0.2	< 1	1.2	< 0.5	5	< 0.4	5.4	11.1	1.22	4.5	0.7	0.13	0.3	< 0.1	0.1	< 0.1	< 0.1
133675	34	20290	911	216	14	31	3.1	< 0.2	1	7.4	1.9	913	6.4	18200	28800	2550	7670	853	198	372	39.4	155	25.7	62.3
133676	< 2	2558	151	23	136	53	0.6	< 0.2	4	< 0.5	< 0.5	377	< 0.4	2340	5280	629	2450	340	76.5	145	13.4	44.7	5.7	11.6
133677	< 2	3964	208	79	225	< 2	0.8	< 0.2	4	< 0.5	< 0.5	450	< 0.4	1080	2630	351	1480	254	68.6	152	17.4	63.0	8.2	16.4
133678	< 2	3931	154	56	211	< 2	0.7	< 0.2	3	< 0.5	< 0.5	361	< 0.4	1020	2360	307	1230	202	54.8	123	13.6	44.8	5.6	11.2
133679	< 2	4039	184	67	202	< 2	0.5	< 0.2	3	< 0.5	< 0.5	219	< 0.4	986	2330	306	1240	215	61.2	136	15.8	53.4	6.8	14.6
133680	< 2	3815	363	42	144	3	0.6	< 0.2	3	< 0.5	< 0.5	254	0.4	1290	2880	368	1460	268	76.2	190	25.7	108	15.4	32.2
133681	< 2	4233	297	63	178	< 2	0.6	< 0.2	2	< 0.5	< 0.5	204	< 0.4	1140	2680	354	1440	268	78.2	180	23.3	94.1	12.5	27.1
133682	< 2	3688	155	42	172	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	185	< 0.4	1010	2510	338	1350	225	59.2	123	13.7	46.9	5.9	11.7
133683	< 2	3378	191	40	156	3	< 0.5	< 0.2	4	< 0.5	< 0.5	238	< 0.4	1180	2770	363	1470	231	60.3	127	15.1	55.5	7.5	16.7
133684	< 2	3036	166	36	166	3	< 0.5	< 0.2	5	< 0.5	< 0.5	207	< 0.4	1850	3950	483	1890	296	73.4	154	15.1	50.3	6.2	12.7
133685	< 2	3522	131	30	147	< 2	0.7	< 0.2	3	< 0.5	< 0.5	174	< 0.4	1230	2930	384	1570	252	64.0	122	12.1	38.8	4.9	10.3
133686	< 2	4413	200	47	104	< 2	0.5	< 0.2	1	< 0.5	< 0.5	161	< 0.4	1040	2600	353	1460	251	71.2	146	17.3	60.2	7.8	15.9
133687	< 2	3061	144	23	108	2	< 0.5	< 0.2	3	< 0.5	< 0.5	182	< 0.4	1880	4100	496	1910	279	66.3	122	11.7	38.6	5.0	10.7
133688	< 2	3685	195	51	128	< 2	0.6	< 0.2	2	< 0.5	< 0.5	226	< 0.4	1220	2780	367	1530	280	76.6	156	16.9	60.1	7.6	15.1
133689	< 2	3573	163	41	103	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	239	< 0.4	1340	3060	399	1650	282	72.8	143	14.8	49.9	6.3	12.5
133690	< 2	3316	156	39	106	< 2	< 0.5	< 0.2	4	< 0.5	< 0.5	179	< 0.4	1320	3000	390	1590	277	75.1	147	15.8	51.5	6.3	12.0
133691	< 2	3080	185	45	180	< 2	< 0.5	< 0.2	7	< 0.5	< 0.5	191	< 0.4	1560	3670	474	1870	289	74.9	153	16.9	56.3	7.2	14.0
133692	< 2	4149	133	35	122	2	< 0.5	< 0.2	3	< 0.5	< 0.5	126	< 0.4	955	2260	300	1180	176	45.5	94.7	10.3	36.0	4.8	10.0
133693	3	3561	166	49	92	< 2	0.5	< 0.2	3	< 0.5	< 0.5	178	< 0.4	1430	3250	411	1620	249	63.8	122	13.1	44.8	6.0	12.3
133694	< 2	3812	147	35	184	< 2	0.5	< 0.2	3	< 0.5	< 0.5	192	< 0.4	1070	2640	354	1410	211	55.3	111	12.2	41.2	5.3	10.8

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133695	< 2	2967	133	32	91	< 2	< 0.5	< 0.2	3	< 0.5	< 0.5	217	< 0.4	2060	4070	493	1880	263	62.9	119	11.7	38.2	4.7	9.6
133696	< 2	3367	98	8	178	3	< 0.5	< 0.2	3	< 0.5	< 0.5	233	< 0.4	1670	3670	452	1750	230	50.1	85.8	7.9	26.1	3.4	7.5

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133643	1.33	7.6	1.00	0.9	< 0.1	4	0.3	27	188	0.2	3.48
133644	1.69	9.5	1.30	1.0	< 0.1	3	0.2	20	136	0.4	2.17
133645	1.15	6.9	0.90	0.5	< 0.1	7	0.1	34	156	0.1	3.70
133646	1.29	7.7	1.01	0.6	< 0.1	2	< 0.1	20	158	< 0.1	3.95
133647	1.74	10.3	1.39	0.9	< 0.1	2	0.1	29	177	< 0.1	2.40
133648	1.47	8.8	1.14	0.7	0.5	4	0.2	32	146	0.3	3.70
133649	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	3	< 0.1	< 5	0.4	< 0.1	
133650	9.31	50.4	6.02	5.1	2.7	28	0.3	545	825	2.6	0.205
133651	2.47	14.2	1.97	2.0	< 0.1	3	0.2	37	269	0.2	3.66
133652	2.32	12.7	1.68	1.2	< 0.1	3	< 0.1	42	232	< 0.1	3.92
133653	1.73	9.3	1.16	0.9	< 0.1	5	< 0.1	32	225	0.2	4.05
133654	1.95	11.0	1.37	1.0	< 0.1	5	0.1	27	165	0.5	3.70
133655	1.89	11.1	1.41	1.7	< 0.1	3	< 0.1	31	186	0.2	2.70
133656	1.67	9.4	1.22	1.3	< 0.1	3	< 0.1	18	251	0.2	2.91
133657	1.30	7.7	1.01	0.8	< 0.1	3	< 0.1	23	146	< 0.1	5.03
133658	1.36	8.0	1.05	0.8	< 0.1	2	< 0.1	22	117	< 0.1	3.66
133659	1.28	7.4	0.95	1.0	< 0.1	3	< 0.1	31	158	0.1	3.86
133660	1.86	10.1	1.23	1.2	0.8	3	0.1	40	307	0.6	2.76
133661	1.72	9.6	1.16	1.3	< 0.1	5	< 0.1	33	164	0.3	3.49
133662	1.69	9.4	1.18	1.2	< 0.1	2	< 0.1	44	177	0.1	3.64
133663	1.53	8.7	1.17	1.1	< 0.1	3	< 0.1	18	78.2	< 0.1	1.77
133664	1.55	9.0	1.21	1.1	< 0.1	3	< 0.1	16	78.1	< 0.1	1.84
133665	1.30	7.7	0.97	0.7	0.5	2	0.1	16	143	0.3	3.41
133666	2.42	13.9	1.71	1.4	< 0.1	2	0.2	20	179	0.5	3.28
133667	2.06	11.5	1.45	0.9	< 0.1	1	< 0.1	44	239	0.2	3.47
133668	1.77	10.0	1.26	0.8	< 0.1	1	< 0.1	36	270	< 0.1	3.69
133669	1.36	7.8	1.01	0.6	< 0.1	< 1	< 0.1	98	206	0.2	3.82
133670	1.53	8.8	1.14	0.6	< 0.1	1	< 0.1	55	191	< 0.1	3.61
133671	1.43	8.5	1.09	0.5	< 0.1	1	0.1	66	234	< 0.1	4.07
133672	1.68	10.5	1.35	1.0	0.1	2	< 0.1	46	133	0.2	2.32
133673	0.95	5.8	0.68	0.4	< 0.1	1	0.2	37	134	< 0.1	3.43
133674	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	0.6	< 0.1	
133675	8.24	48.4	6.32	3.4	< 0.1	5	2.1	953	154	189	0.205
133676	1.36	8.0	1.01	0.6	< 0.1	2	0.4	29	175	0.2	3.10
133677	1.93	11.6	1.53	1.4	< 0.1	2	< 0.1	22	152	0.2	2.95
133678	1.31	8.6	1.12	1.0	< 0.1	1	< 0.1	10	92.5	0.4	3.22
133679	1.56	9.4	1.25	1.1	< 0.1	1	< 0.1	13	109	0.3	3.55
133680	3.64	20.5	2.54	1.4	< 0.1	2	< 0.1	89	202	0.3	3.06
133681	3.10	18.5	2.39	1.5	< 0.1	2	< 0.1	32	156	0.2	3.21
133682	1.34	8.7	1.14	0.9	< 0.1	< 1	< 0.1	7	90.8	0.2	3.32
133683	1.88	11.5	1.47	1.0	< 0.1	2	< 0.1	39	115	0.2	3.49
133684	1.41	9.2	1.27	0.8	< 0.1	1	< 0.1	77	187	0.2	3.36
133685	1.20	8.1	1.15	0.7	< 0.1	2	0.1	30	102	0.1	3.17
133686	1.82	11.2	1.47	1.0	< 0.1	2	< 0.1	26	102	0.1	3.13
133687	1.20	7.5	1.01	0.5	< 0.1	2	< 0.1	76	128	0.2	2.65
133688	1.63	10.0	1.30	1.1	< 0.1	2	0.1	45	140	0.2	1.59
133689	1.46	8.8	1.13	0.8	< 0.1	2	< 0.1	48	134	0.2	1.45
133690	1.38	8.3	1.10	0.9	< 0.1	2	< 0.1	24	97.5	0.1	3.42
133691	1.62	9.7	1.25	1.0	< 0.1	2	< 0.1	34	103	0.2	2.57
133692	1.17	7.0	0.90	0.7	< 0.1	1	< 0.1	16	71.7	0.2	3.03
133693	1.40	8.0	1.08	1.0	< 0.1	2	< 0.1	47	140	0.4	3.31

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133694	1.28	7.5	0.98	0.8	< 0.1	2	< 0.1	22	111	0.2	3.42
133695	1.13	7.0	0.90	0.8	< 0.1	2	< 0.1	52	141	0.2	3.65
133696	0.89	5.3	0.74	0.2	< 0.1	1	< 0.1	26	75.6	0.2	3.73

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.09	11.14	1.89	0.73	0.010	0.34	42.96	0.87	0.54	0.118	30.18					1659								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.10																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.93	18.54	9.75	0.147	9.90	11.36	1.91	0.22	0.482	0.07			31		158	270	57	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.59	12.91	3.13	0.139	0.14	0.60	2.49	5.43	0.284	0.05			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.80	15.63	10.67	0.166	6.25	11.09	2.21	0.62	1.090	0.14			35	< 1	278	90	41	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.79	20.49	6.20	0.108	0.50	8.10	6.92	1.65	0.288	0.14			1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																								
CTA-AC-1 Cert																								
BIR-1a Meas		48.03	15.60	11.21	0.173	9.54	13.44	1.82	0.02	0.976	0.03			43	< 1	342	370	53	170	130	80	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1050	98		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				990	100	17	11	77
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		49		440				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		30	17		
JR-1 Cert																			1.67		30.6	16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133657 Orig	8.74	1.16	0.03	8.85	1.573	11.90	33.00	0.03	0.04	0.139	1.75	32.77	91.24	43	13	67	< 20	3	< 20	< 10	710	84	10	27
133657 Dup	8.26	1.13	0.03	8.67	1.543	11.74	32.46	0.03	0.03	0.136	1.75	32.77	90.28	42	12	68	< 20	3	< 20	< 10	730	84	10	27
133672 Orig	3.97	0.50	0.06	5.07	1.019	14.89	32.73	0.03	0.08	0.070	2.51	38.15	95.11	46	9	69	< 20	1	< 20	< 10	220	79	13	37
133672 Split	3.53	0.50	0.06	4.96	1.012	14.68	32.41	0.02	0.07	0.069	2.49	38.27	94.55	46	9	69	< 20	1	< 20	< 10	230	83	14	38
133674 Orig	< 0.01	99.61	0.06	0.93	0.014	0.07	0.24	0.01	0.01	< 0.001	0.03	-0.05	100.9	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	< 1	1	< 5
133674 Dup	< 0.01	99.28	0.06	0.95	0.014	0.09	0.31	0.02	0.01	< 0.001	0.02	-0.05	100.7	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	< 1	1	< 5
133674 Orig	< 0.01																							
133674 Dup	< 0.01																							
133684 Orig	0.43	2.29	0.05	5.37	0.895	15.61	29.30	0.03	0.04	0.093	2.19	40.74	96.61	39	3	59	< 20	3	< 20	< 10	360	42	7	26

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133684 Dup	0.41	2.26	0.05	5.38	0.896	15.51	29.40	0.03	0.04	0.093	2.20	40.74	96.61	39	4	60	< 20	3	< 20	< 10	380	44	8	26
133692 Orig	0.78	0.48	0.06	3.50	0.712	17.11	30.35	0.05	0.05	0.020	2.09	42.57	96.98	20	3	21	< 20	1	< 20	< 10	60	24	4	13
133692 Split	0.83	0.48	0.06	3.59	0.727	17.47	31.17	0.04	0.05	0.020	2.15	42.53	98.30	21	3	22	< 20	1	< 20	< 10	60	26	4	14
133696 Orig	0.18	0.39	0.05	4.54	0.944	18.03	28.96	0.02	0.04	0.038	0.13	44.54	97.69	32	5	33	< 20	4	< 20	< 10	120	38	6	21
133696 Split	0.20	0.40	0.05	4.48	0.925	17.42	28.11	0.02	0.05	0.038	0.12	44.57	96.18	31	5	32	< 20	4	< 20	< 10	120	37	6	21
133696 Split	0.20	0.40	0.05	4.48	0.925	17.42	28.11	0.02	0.05	0.038	0.12	44.57	96.18	31	5	32	< 20	4	< 20	< 10	120	37	6	21
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	16	34								105					5.0		0.57					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		40	45	391								501												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	73					< 2					2.4			49.8	94.4		42.6	7.7	1.41			4.8		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		197	19	84		< 2	< 0.5					174	< 0.4		24.8		12.7	3.3	1.07		0.6	3.7	0.8	
W-2a Cert		190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1199	114	541								342												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3320		1100	161	44.3	117	14.3			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	14	15								7					2.3	1.1	0.50	1.9				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	189		1590			232	34.5	184	35.7	96.5
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											260													
ZW-C Cert											260													
NCS DC70014 Meas						270	17.1			180			80.3	43.3	85.1			7.4		6.7	1.2		1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0			8.0		7.4	1.1		1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700		43.2			23.9	60.1	7.42	30.2	11.9		14.1	3.3	19.9	4.2	12.6
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						26								266	483	45.2	143	23.1	3.49		3.7	21.5	4.7	13.9
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								803	1410	129	386	48.8	7.86			30.3	6.4	18.5
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5
JR-1 Meas	252				14		< 0.5	< 0.2	3		21.0		0.6	21.3	50.8	5.96	23.0	5.7	0.29	5.5	1.0	6.0		3.9
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		3.61
NCS DC86318 Meas														1970	423	719	3300	1710	19.0	2070	472	3070	561	1640
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21400	28500	2350	6450	537	87.8					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133657 Orig	< 2	2213	138	50	259	5	0.8	< 0.2	8	< 0.5	< 0.5	3119	< 0.4	6230	9450	862	2610	291	60.1	110	9.3	32.8	4.5	10.5
133657 Dup	< 2	2177	135	47	264	5	0.5	< 0.2	9	< 0.5	< 0.5	3048	< 0.4	6380	9650	879	2730	303	61.7	113	9.9	33.3	4.5	10.2
133672 Orig	< 2	1939	192	58	360	22	0.6	< 0.2	5	< 0.5	< 0.5	287	< 0.4	3450	7700	937	3590	477	98.6	176	15.7	53.2	6.8	14.1
133672 Split	2	1933	187	56	361	23	0.7	< 0.2	5	< 0.5	< 0.5	284	< 0.4	3520	7800	923	3700	483	103	172	15.0	51.5	6.6	13.6
133674 Orig	< 2	8	< 2	9	< 1	4	0.5	< 0.2	< 1	1.1	< 0.5	4	< 0.4	5.7	11.3	1.28	4.6	0.7	0.14	0.3	< 0.1	0.1	< 0.1	< 0.1
133674 Dup	< 2	8	< 2	8	< 1	4	0.8	< 0.2	< 1	1.2	< 0.5	6	< 0.4	5.1	10.9	1.16	4.3	0.7	0.13	0.2	< 0.1	0.1	< 0.1	< 0.1
133674 Orig																								
133674 Dup																								
133684 Orig	< 2	3027	167	36	183	3	< 0.5	< 0.2	5	< 0.5	< 0.5	207	< 0.4	1890	3990	489	1900	299	74.1	154	15.1	50.2	6.3	12.8

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133684 Dup	< 2	3045	166	35	148	3	< 0.5	< 0.2	5	< 0.5	< 0.5	207	< 0.4	1820	3900	478	1870	293	72.7	154	15.0	50.4	6.1	12.5
133692 Orig	< 2	4149	133	35	122	2	< 0.5	< 0.2	3	< 0.5	< 0.5	126	< 0.4	955	2260	300	1180	176	45.5	94.7	10.3	36.0	4.8	10.0
133692 Split	< 2	4159	137	34	132	3	< 0.5	< 0.2	3	< 0.5	< 0.5	125	< 0.4	993	2390	312	1260	188	48.2	97.0	11.0	37.5	5.0	10.6
133696 Orig	< 2	3367	98	8	178	3	< 0.5	< 0.2	3	< 0.5	< 0.5	233	< 0.4	1670	3670	452	1750	230	50.1	85.8	7.9	26.1	3.4	7.5
133696 Split	< 2	3319	98	9	180	3	< 0.5	< 0.2	2	< 0.5	< 0.5	229	< 0.4	1650	3580	445	1730	224	49.1	83.4	7.5	25.4	3.3	6.9
133696 Split	< 2	3319	98	9	180	3	< 0.5	< 0.2	2	< 0.5	< 0.5	229	< 0.4	1650	3580	445	1730	224	49.1	83.4	7.5	25.4	3.3	6.9
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									910	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.7					4.5
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28700	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.7	1.04						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.6	12.2							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.0	336	34.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.57	3.3	0.47					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.36	15.7	2.20			2200	3.1		30.0	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200	1.8		28.3	
OREAS 100a (Fusion) Meas	2.34	15.0	2.05						52.6	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	18.0	2.44						37.2	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.8	0.69	4.5	1.8		1.6	20	28.3	9.3
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	273	1810	256							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133657 Orig	1.31	7.7	0.99	0.7	< 0.1	4	< 0.1	22	146	< 0.1
133657 Dup	1.29	7.7	1.03	0.8	< 0.1	2	< 0.1	24	145	< 0.1
133672 Orig	1.68	10.5	1.35	1.0	0.1	2	< 0.1	46	133	0.2
133672 Split	1.63	10.2	1.30	1.2	0.1	2	< 0.1	51	134	0.2
133674 Orig	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	3	< 0.1	< 5	0.6	< 0.1
133674 Dup	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	2	< 0.1	< 5	0.6	< 0.1
133674 Orig										
133674 Dup										
133684 Orig	1.39	9.1	1.27	0.8	< 0.1	2	< 0.1	79	186	0.2

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133684 Dup	1.43	9.3	1.26	0.8	< 0.1	1	< 0.1	74	187	0.2
133692 Orig	1.17	7.0	0.90	0.7	< 0.1	1	< 0.1	16	71.7	0.2
133692 Split	1.23	7.0	0.94	0.7	< 0.1	2	< 0.1	17	75.1	0.2
133696 Orig	0.89	5.3	0.74	0.2	< 0.1	1	< 0.1	26	75.6	0.2
133696 Split	0.83	5.2	0.70	0.2	< 0.1	2	< 0.1	27	73.9	0.2
133696 Split	0.83	5.2	0.70	0.2	< 0.1	2	< 0.1	27	73.9	0.2
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11634
Invoice Date: 25-Nov-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

99 Rock samples were submitted for analysis.

The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11634**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133697	4.16	2.40	0.18	15.72	2.276	11.37	24.76	0.03	0.07	0.199	1.37	34.26	92.65	69	17	92	< 20	7	< 20	< 10	1200	58	8	22
133698	6.81	2.46	0.06	14.11	2.249	11.27	26.51	0.03	0.04	0.144	0.43	32.63	89.93	57	20	70	< 20	7	< 20	< 10	1330	73	9	26
133699	< 0.01	99.39	0.04	0.68	0.010	0.07	0.14	< 0.01	< 0.01	< 0.001	0.02	0.05	100.4	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	< 1	1	< 5
133700	5.76	20.80	3.10	28.47	2.475	7.00	17.85	0.31	1.33	1.494	0.55	12.61	95.98	22	13	160	160	28	80	30	1420	57	9	26
133701	7.76	1.97	0.04	12.63	1.972	11.57	28.59	0.04	0.03	0.248	0.35	32.98	90.42	68	18	98	< 20	6	< 20	< 10	1520	76	9	26
133702	7.94	2.21	0.04	9.90	1.667	12.15	31.06	0.04	0.05	0.131	0.28	33.34	90.87	69	20	83	< 20	4	< 20	< 10	1120	83	10	28
133703	6.12	0.48	0.06	13.21	1.961	11.99	27.89	0.02	0.04	0.121	0.36	35.38	91.54	56	14	87	< 20	6	< 20	< 10	1130	65	8	25
133704	6.37	0.47	0.04	11.75	2.113	12.26	30.03	0.03	0.04	0.142	0.40	34.90	92.18	60	16	92	< 20	6	< 20	< 10	1560	67	7	21
133705	7.59	1.24	0.06	11.14	1.976	11.84	29.99	0.03	0.05	0.120	0.46	33.75	90.67	63	19	79	< 20	5	< 20	< 10	1450	76	9	25
133706	5.56	0.65	0.10	10.54	1.535	12.95	29.38	0.02	0.09	0.102	0.50	35.94	91.81	65	16	78	< 20	5	< 20	< 10	1260	70	8	24
133707	5.02	0.34	0.05	11.85	2.223	12.85	28.04	0.03	0.04	0.215	0.42	36.44	92.49	66	10	81	< 20	6	< 20	< 10	1580	84	9	26
133708	4.93	2.40	0.03	10.33	1.986	12.68	27.18	0.03	0.05	0.101	0.33	35.91	91.03	58	21	64	< 20	5	< 20	< 10	1370	72	8	22
133709	3.85	0.91	0.04	12.76	2.238	13.23	26.49	0.03	0.05	0.097	0.45	37.18	93.47	68	13	92	< 20	5	< 20	< 10	1270	62	8	22
133710	7.90	3.89	0.05	8.94	1.556	12.37	31.15	0.05	0.06	0.133	0.41	33.07	91.69	59	20	73	< 20	5	< 20	< 10	900	82	10	25
133711	4.37	1.24	0.04	12.54	2.007	12.95	26.72	0.03	0.05	0.247	0.34	36.79	92.95	54	13	94	< 20	6	< 20	< 10	1250	72	9	27
133712	5.53	0.78	0.06	11.28	1.728	13.14	28.74	0.03	0.06	0.123	0.50	36.07	92.51	67	18	85	< 20	6	< 20	< 10	1390	72	9	26
133713	5.65	1.36	0.08	12.10	1.884	12.66	28.13	0.03	0.08	0.112	0.59	35.33	92.36	51	26	65	< 20	5	< 20	< 10	1310	75	8	22
133714	5.29	1.25	0.09	12.53	1.932	12.97	27.69	0.03	0.08	0.115	0.58	35.88	93.14	51	19	68	< 20	5	< 20	< 10	1370	79	9	23
133715	5.15	0.73	0.03	12.12	1.968	12.70	27.61	0.02	0.03	0.187	0.31	36.39	92.10	45	10	69	< 20	6	< 20	< 10	1250	71	8	22
133716	6.09	0.78	0.03	13.54	1.933	12.53	27.21	0.03	0.04	0.312	0.56	35.17	92.14	54	16	86	< 20	6	< 20	< 10	1410	66	8	23
133717	6.26	1.50	0.03	9.22	1.490	12.59	29.35	0.03	0.05	0.161	0.29	34.83	89.55	43	21	61	< 20	4	< 20	< 10	1500	83	9	24
133718	4.37	0.47	0.08	11.86	1.703	13.49	27.91	0.02	0.08	0.127	0.56	37.22	93.54	57	14	83	< 20	6	< 20	< 10	1410	72	9	26
133719	5.36	1.16	0.05	11.34	1.624	13.23	28.52	0.03	0.05	0.107	0.30	36.41	92.82	53	16	79	< 20	5	< 20	< 10	1090	78	9	31
133720	6.22	0.91	0.05	13.16	1.746	12.05	27.36	0.03	0.06	0.125	0.51	34.70	90.70	64	15	92	< 20	6	< 20	< 10	1210	76	10	27
133721	4.74	0.58	0.03	11.69	1.736	12.83	28.21	0.02	0.03	0.080	0.28	37.09	92.58	48	9	67	< 20	5	< 20	< 10	1330	74	9	27
133722	6.65	0.68	0.04	10.27	1.618	12.58	30.31	0.02	0.04	0.088	0.34	35.19	91.17	49	14	70	< 20	5	< 20	< 10	1270	86	10	29
133723	4.78	1.14	0.06	13.42	2.008	12.84	26.43	0.03	0.05	0.138	0.32	35.97	92.39	55	13	79	< 20	6	< 20	< 10	1510	76	10	27
133724	< 0.01	97.85	0.04	0.69	0.010	0.05	0.10	< 0.01	< 0.01	< 0.001	0.02	0.01	98.78	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	< 1	< 5
133725	1.71	14.91	2.57	12.74	0.140	0.45	26.97	0.93	0.99	0.145	18.40	8.55	86.80	16	15	155	20	33	60	110	630	274	35	189
133726	6.25	1.02	0.03	14.10	2.076	11.80	26.95	0.03	0.03	0.138	0.29	34.68	91.14	60	14	76	< 20	7	< 20	< 10	1890	76	11	28
133727	6.29	2.05	0.04	11.58	1.694	12.79	28.76	0.04	0.04	0.150	0.40	35.09	92.63	62	16	73	< 20	5	< 20	< 10	1350	83	11	28
133728	6.94	1.80	0.05	11.79	1.808	12.22	28.28	0.03	0.06	0.131	0.38	34.36	90.91	51	18	74	< 20	5	< 20	< 10	1110	86	11	28
133729	6.51	1.69	0.04	8.46	1.360	13.15	30.39	0.04	0.06	0.102	0.68	35.20	91.18	66	25	76	< 20	3	< 20	< 10	1020	91	12	29
133730	6.20	2.64	0.04	12.32	1.562	11.79	28.44	0.05	0.04	0.084	1.08	33.55	91.59	64	13	76	< 20	6	< 20	< 10	750	72	10	26
133731	4.74	2.09	0.05	11.63	1.502	12.81	27.80	0.05	0.05	0.118	0.73	36.00	92.81	64	16	86	< 20	6	< 20	< 10	1090	76	10	26
133732	4.60	1.36	0.07	13.43	1.816	12.18	26.39	0.06	0.04	0.125	0.57	35.86	91.90	80	11	85	< 20	7	< 20	< 10	1440	76	12	30
133733	4.37	0.68	0.06	9.05	1.392	14.07	30.00	0.05	0.05	0.131	0.44	38.44	94.36	62	10	65	< 20	3	< 20	< 10	910	67	10	25
133734	1.38	0.75	0.08	10.86	1.480	13.78	26.24	0.03	0.09	0.137	0.50	40.18	94.12	64	10	98	< 20	7	< 20	< 10	840	68	11	29
133735	3.23	0.27	0.06	12.78	1.543	12.98	27.06	0.02	0.05	0.154	0.49	38.68	94.08	54	9	89	< 20	6	< 20	< 10	860	44	8	21
133735A	2.91	0.87	0.20	12.63	1.702	12.64	25.95	0.11	0.07	0.158	0.50	38.15	92.99	74	11	102	< 20	6	< 20	< 10	970	73	12	30
133736	3.51	0.94	0.05	9.69	1.512	14.13	28.77	0.04	0.05	0.138	0.63	38.69	94.64	63	15	91	< 20	5	< 20	< 10	900	68	11	30
133737	5.29	1.14	0.09	12.46	1.832	12.04	27.42	0.04	0.09	0.101	0.62	34.71	90.54	60	14	107	< 20	7	< 20	30	1480	78	11	32
133738	6.14	1.51	0.05	10.62	2.143	12.01	29.26	0.04	0.06	0.093	0.64	33.99	90.41	56	12	84	< 20	5	< 20	< 10	1760	81	10	26
133739	6.13	1.31	0.08	10.24	2.109	11.71	28.83	0.03	0.09	0.163	0.75	33.92	89.23	53	10	89	< 20	4	< 20	< 10	1540	88	10	26
133740	6.59	1.56	0.09	10.92	2.189	11.88	28.98	0.04	0.10	0.144	0.80	33.16	89.85	54	11	88	< 20	5	< 20	< 10	1450	93	10	25
133741	6.08	0.70	0.08	10.09	2.082	12.04	29.39	0.03	0.08	0.207	0.70	34.33	89.73	60	8	90	< 20	6	< 20	< 10	1700	91	10	28
133742	5.57	0.62	0.06	11.20	2.227	12.87	28.63	0.03	0.07	0.154	0.48	35.65	92.00	65	12	83	< 20	5	< 20	< 10	1610	82	9	25
133743	5.71	1.10	0.09	14.23	2.157	11.81	25.66	0.04	0.09	0.256	0.51	32.66	88.60	54	16	111	< 20	10	< 20	< 10	1590	74	10	27
133744	7.86	1.57	0.07	8.86	2.147	11.21	28.12	0.05	0.13	0.136	0.65	31.27	84.22	54	28	78	< 20	2	< 20	< 10	1620	94	9	24
133745	8.24	0.91	0.05	10.75	2.103	11.98	29.35	0.04	0.08	0.132	0.75	32.59	88.74	57	27	79	< 20	4	< 20	< 10	1000	85	11	27
133746	3.26	0.90	0.07	9.51	2.128	11.72	31.29	0.02	0.03	0.195	0.92	29.89	86.67	56	24	71	< 20	15	< 20	10	1550	66	8	23
133747	7.34	1.40	0.05	8.37	1.913	12.68	30.61	0.05	0.08	0.134	0.85	34.01	90.15	60	19	93	< 20	1	< 20	< 10	1060	88	10	25

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133748	4.72	0.75	0.04	10.19	1.912	12.81	28.40	0.03	0.05	0.182	0.59	36.43	91.38	62	15	101	< 20	7	< 20	< 10	1100	81	10	27
133749	0.02	99.02	0.03	0.64	0.012	0.06	0.15	< 0.01	< 0.01	0.001	0.01	0.50	100.5	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	< 1	1	< 5
133750	6.19	20.71	3.08	28.37	2.476	7.06	17.98	0.31	1.32	1.503	0.57	12.58	95.96	22	14	163	170	29	80	40	1430	64	12	29
133751	3.96	0.69	0.07	10.72	1.738	13.33	27.59	0.03	0.10	0.187	0.90	37.39	92.75	68	18	105	< 20	5	< 20	< 10	1030	86	12	29
133752	3.45	0.66	0.08	13.10	1.849	13.61	26.45	0.03	0.09	0.465	0.94	36.44	93.71	61	15	115	< 20	6	< 20	< 10	1020	71	10	26
133753	7.11	1.26	0.07	10.56	1.664	12.61	29.81	0.04	0.08	0.191	0.88	34.20	91.37	60	17	107	< 20	5	< 20	< 10	1030	83	11	28
133754	4.69	1.02	0.07	11.06	1.695	13.27	28.09	0.03	0.09	0.244	1.38	36.11	93.06	62	15	116	< 20	5	< 20	< 10	840	99	13	34
133755	4.27	0.50	0.09	14.53	1.897	12.69	25.93	0.02	0.08	0.172	1.00	34.96	91.87	58	13	104	< 20	11	< 20	< 10	1110	28	5	18
133756	5.87	0.47	0.08	10.87	1.489	12.61	30.19	0.02	0.08	0.092	0.83	34.86	91.59	44	15	80	< 20	7	< 20	< 10	1140	71	10	28
133757	4.75	0.29	0.05	9.90	1.398	13.02	29.71	0.02	0.05	0.072	0.86	36.69	92.06	43	11	78	< 20	5	< 20	< 10	1060	68	10	27
133758	1.99	0.67	0.04	14.16	1.983	13.05	25.43	0.03	0.04	0.091	1.15	37.91	94.54	49	9	111	< 20	7	< 20	< 10	1360	70	11	29
133759	1.76	0.62	0.07	10.96	1.412	13.59	27.73	0.03	0.08	0.083	1.18	38.97	94.73	56	13	110	< 20	9	< 20	< 10	910	59	10	28
133760	2.74	0.35	0.05	16.26	1.777	12.50	23.67	0.03	0.03	0.115	0.67	37.43	92.89	59	11	106	< 20	8	< 20	< 10	1690	25	4	16
133761	5.03	0.89	0.07	15.29	1.918	12.11	25.94	0.03	0.06	0.184	0.60	34.71	91.80	58	12	98	< 20	7	< 20	< 10	1270	75	11	31
133762	4.09	0.41	0.05	15.62	2.120	12.03	25.46	0.02	0.04	0.111	0.54	35.73	92.15	53	13	99	< 20	8	< 20	< 10	1550	81	12	31
133763	2.94	0.66	0.10	10.02	1.370	11.56	30.08	0.05	0.11	0.180	5.76	32.62	92.51	54	13	84	< 20	6	< 20	< 10	910	23	4	16
133764	3.23	0.91	0.12	10.48	1.512	11.45	30.33	0.05	0.14	0.191	5.47	33.08	93.73	53	18	80	< 20	6	< 20	< 10	820	65	10	25
133765	2.23	0.37	0.05	13.93	1.874	11.83	26.50	0.04	0.04	0.107	2.66	36.03	93.42	61	11	89	< 20	9	< 20	< 10	1110	73	11	28
133766	1.87	0.38	0.04	13.50	1.785	11.78	26.86	0.04	0.03	0.135	2.71	36.30	93.55	65	9	101	< 20	9	< 20	< 10	1230	77	12	30
133767	3.59	0.99	0.10	10.87	1.223	12.13	27.49	0.04	0.10	0.137	2.61	35.47	91.15	38	15	80	< 20	7	< 20	< 10	640	57	10	25
133768	8.16	1.10	0.07	15.41	1.833	10.60	29.39	0.04	0.05	0.143	2.16	30.83	91.63	58	18	70	< 20	8	< 20	< 10	1230	81	11	33
133769	3.56	2.77	0.05	23.57	2.298	10.60	18.55	0.03	0.04	0.161	0.48	33.85	92.39	49	7	94	< 20	12	< 20	< 10	1820	71	13	31
133770	3.51	1.21	0.07	12.78	1.541	10.25	22.76	0.03	0.06	0.157	1.18	35.13	85.17	52	12	79	< 20	6	< 20	< 10	1360	61	9	23
133771	3.16	1.26	0.05	20.37	2.118	10.81	21.35	0.04	0.04	0.198	1.07	34.24	91.54	48	12	85	< 20	14	< 20	< 10	1070	60	11	27
133772	5.31	0.88	0.06	13.24	1.565	12.55	24.96	0.04	0.06	0.111	0.15	35.02	88.63	37	15	53	< 20	11	< 20	< 10	1300	89	12	30
133773	4.77	1.17	0.04	15.36	1.801	12.87	24.57	0.03	0.04	0.093	0.37	35.71	92.08	50	14	72	< 20	11	< 20	< 10	1000	82	12	30
133774	0.02	97.45	0.03	0.46	0.019	0.10	0.22	< 0.01	< 0.01	0.002	0.02	0.06	98.36	< 1	< 1	< 5	< 20	< 1	< 20	< 10	< 30	1	1	< 5
133775	1.85	15.17	2.51	13.00	0.140	0.48	25.85	0.91	0.93	0.142	18.76	8.39	86.29	16	13	155	20	34	70	120	630	282	38	194
133776	2.12	0.44	0.03	17.04	1.824	13.03	23.22	0.02	0.03	0.257	0.64	37.76	94.30	54	7	110	< 20	13	< 20	< 10	860	58	10	28
133777	2.84	1.32	0.03	15.44	1.967	12.53	24.38	0.03	0.02	0.115	1.53	36.89	94.25	42	11	86	< 20	8	< 20	10	970	52	8	19
133778	1.90	0.81	0.04	14.69	1.820	12.84	25.04	0.03	0.04	0.198	1.53	37.97	95.02	48	10	101	< 20	9	< 20	< 10	770	44	7	18
133779	4.16	1.55	0.04	13.93	1.739	12.69	25.31	0.02	0.03	0.117	0.34	36.84	92.61	49	13	83	< 20	10	< 20	< 10	1240	72	11	27
133780	5.88	2.57	0.06	13.99	1.732	11.55	26.05	0.03	0.04	0.124	0.89	33.67	90.70	50	18	80	< 20	8	< 20	< 10	1680	76	11	28
133781	4.36	2.04	0.03	11.86	1.793	12.53	25.32	0.03	0.02	0.058	0.40	36.08	90.15	39	16	62	< 20	5	< 20	< 10	1460	70	9	21
133782	2.93	0.63	0.04	10.59	1.506	13.12	26.81	0.02	0.03	0.093	0.37	38.43	91.63	47	17	85	< 20	5	< 20	< 10	760	68	10	28
133783	1.10	37.18	14.30	10.70	0.243	6.70	8.77	3.14	3.99	1.450	0.21	12.79	99.47	26	18	228	< 20	37	60	40	140	15	2	12
133784	0.51	35.04	14.48	13.27	0.240	7.20	7.83	2.01	4.00	1.665	0.25	13.51	99.47	31	33	251	< 20	36	50	10	90	15	1	23
133785	0.73	35.63	15.01	13.11	0.245	7.30	7.41	2.29	4.37	1.672	0.27	12.43	99.74	34	31	255	< 20	36	60	20	170	18	2	21
133786	2.54	2.53	0.21	13.32	1.670	12.62	25.66	0.04	0.11	0.168	1.56	36.04	93.92	59	11	102	< 20	10	< 20	10	970	70	11	62
133787	1.59	1.71	0.16	9.58	1.178	9.72	23.03	0.03	0.10	0.238	3.21	34.26	83.21	47	12	101	< 20	7	< 20	< 10	1220	69	11	46
133788	1.82	2.03	0.27	12.16	1.462	11.83	26.44	0.03	0.17	0.295	3.44	34.70	92.82	56	16	118	< 20	10	< 20	< 10	1440	84	12	52
133789	3.76	1.67	0.10	12.42	1.520	10.31	22.89	0.02	0.04	0.175	0.65	35.32	85.12	46	21	90	< 20	9	< 20	< 10	1370	59	9	29
133790	2.69	2.18	0.25	12.16	1.744	13.13	25.90	0.02	0.16	0.172	1.69	36.61	94.02	71	18	104	< 20	7	< 20	< 10	1060	73	11	29
133791	3.69	2.20	0.11	12.60	1.754	12.75	25.21	0.03	0.09	0.219	0.42	36.33	91.71	58	12	84	< 20	8	< 20	< 10	720	72	11	27
133792	0.33	3.26	0.11	11.53	1.485	12.43	25.32	0.03	0.07	0.323	2.59	37.90	95.03	69	5	108	< 20	7	< 20	< 10	470	59	11	28
133793	3.67	1.37	0.11	14.25	1.753	12.40	24.53	0.02	0.09	0.234	0.35	36.00	91.11	67	9	87	< 20	11	< 20	< 10	1380	72	11	27
133794	1.99	0.72	0.07	14.64	1.797	13.29	24.82	0.03	0.05	0.234	0.41	38.74	94.80	81	10	97	< 20	7	< 20	< 10	880	60	10	25

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133697	< 2	2390	295	76	508	19	0.7	0.2	24	< 0.5	< 0.5	1784	1.3	3660	5940	605	2070	267	62.3	123	14.3	63.3	10.5	25.3
133698	< 2	2543	299	25	359	96	< 0.5	< 0.2	21	< 0.5	< 0.5	5196	2.7	4860	7440	697	2300	282	62.9	123	13.8	57.7	9.6	23.8
133699	< 2	4	< 2	7	5	< 2	0.8	< 0.2	< 1	1.3	< 0.5	< 3	< 0.4	2.8	5.7	0.61	2.2	0.3	0.10	0.2	< 0.1	0.1	< 0.1	< 0.1
133700	26	3110	888	219	363	50	1.6	< 0.2	45	< 0.5	0.5	13290	2.4	2560	4730	546	2300	472	130	306	40.9	195	32.6	75.1
133701	< 2	2904	249	30	594	32	< 0.5	< 0.2	26	< 0.5	< 0.5	3315	1.7	4750	7840	793	2680	328	73.2	137	14.5	56.2	8.4	20.7
133702	< 2	3207	255	27	399	34	< 0.5	< 0.2	14	< 0.5	< 0.5	4273	1.2	5140	8180	784	2570	294	64.9	126	13.5	53.1	8.1	22.1
133703	< 2	2699	250	33	272	30	< 0.5	< 0.2	13	< 0.5	< 0.5	521	1.5	4220	6760	675	2300	291	66.3	126	14.0	55.3	8.3	19.4
133704	< 2	2778	263	37	302	8	< 0.5	< 0.2	14	< 0.5	< 0.5	387	1.5	4740	7500	686	2080	230	55.1	114	14.5	60.6	9.1	21.3
133705	< 2	2959	302	35	388	10	< 0.5	< 0.2	15	< 0.5	< 0.5	1141	1.5	4550	7540	732	2340	255	59.0	119	15.0	64.4	10.1	23.2
133706	2	3006	280	54	249	7	0.5	< 0.2	11	< 0.5	< 0.5	459	0.9	4500	7150	691	2240	263	59.0	122	14.7	62.0	10.1	25.4
133707	< 2	2727	238	34	368	6	< 0.5	< 0.2	15	< 0.5	< 0.5	456	0.7	5330	8890	828	2480	249	54.4	107	12.1	50.2	8.3	22.1
133708	< 2	2959	233	23	254	5	< 0.5	< 0.2	9	< 0.5	< 0.5	2860	0.8	5160	7640	699	2170	229	51.0	101	12.0	51.5	8.4	20.5
133709	< 2	3183	285	40	232	7	0.5	< 0.2	12	< 0.5	< 0.5	1348	1.6	4030	6600	635	2050	263	63.0	129	15.2	62.5	9.8	24.1
133710	< 2	3308	352	34	274	49	< 0.5	< 0.2	12	< 0.5	< 0.5	2607	0.8	6030	8570	782	2520	309	67.5	127	14.6	63.8	11.2	28.7
133711	< 2	2887	255	36	445	70	< 0.5	< 0.2	21	< 0.5	< 0.5	602	1.1	4580	7340	748	2610	348	75.9	140	14.3	53.8	8.5	21.4
133712	< 2	3701	413	50	221	65	0.7	< 0.2	10	< 0.5	< 0.5	653	1.6	5090	7750	738	2460	316	73.7	146	17.5	81.8	14.3	37.4
133713	< 2	2952	320	51	243	6	0.5	< 0.2	9	< 0.5	< 0.5	687	1.0	5490	8410	753	2270	253	58.4	114	13.5	59.7	10.7	27.9
133714	< 2	3003	323	53	225	6	< 0.5	< 0.2	9	< 0.5	< 0.5	497	0.8	5360	8310	750	2250	252	58.6	119	14.1	59.3	10.6	27.2
133715	< 2	2890	324	26	510	9	< 0.5	< 0.2	11	< 0.5	< 0.5	872	0.8	5150	7850	694	2090	241	57.4	115	14.8	63.5	10.5	26.3
133716	< 2	3089	392	38	695	30	0.6	< 0.2	20	0.5	< 0.5	3081	1.4	4220	6790	669	2270	288	65.1	129	15.9	73.6	12.9	33.5
133717	< 2	3429	368	38	404	5	0.5	< 0.2	11	< 0.5	< 0.5	10500	0.5	6480	9220	786	2350	253	55.6	111	14.5	69.1	12.6	33.8
133718	< 2	3122	362	59	341	10	0.5	< 0.2	16	< 0.5	< 0.5	393	0.9	5090	7980	765	2470	313	75.9	148	17.4	74.7	12.8	31.1
133719	< 2	3248	370	29	253	6	< 0.5	< 0.2	16	< 0.5	< 0.5	1077	0.6	5740	8660	804	2550	315	75.9	150	18.2	76.6	12.9	31.7
133720	< 2	2758	436	43	241	7	0.5	< 0.2	14	< 0.5	< 0.5	497	1.0	5500	8690	819	2680	352	87.2	183	22.6	97.5	15.5	37.3
133721	< 2	2819	427	25	488	5	< 0.5	< 0.2	14	< 0.5	< 0.5	470	0.7	4460	7630	747	2470	310	78.5	171	23.1	103	15.9	35.5
133722	< 2	3113	382	24	284	14	< 0.5	< 0.2	10	< 0.5	< 0.5	4132	1.1	5450	8540	814	2660	327	77.9	157	18.8	79.1	13.3	32.5
133723	< 2	2680	316	21	255	10	< 0.5	< 0.2	14	< 0.5	< 0.5	3165	2.7	4430	7780	782	2600	312	71.6	148	17.1	71.0	11.1	27.6
133724	< 2	7	< 2	5	7	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	11	< 0.4	8.5	14.0	1.40	4.4	0.6	0.13	0.3	< 0.1	0.1	< 0.1	< 0.1
133725	36	20560	925	216	8	33	3.1	< 0.2	2	6.9	1.8	907	6.3	17600	27200	2510	7620	856	196	347	35.3	154	24.6	62.9
133726	< 2	2795	374	26	279	7	0.8	< 0.2	15	< 0.5	< 0.5	4442	3.1	4060	7500	774	2530	308	71.0	141	17.4	81.9	12.9	29.0
133727	< 2	3033	366	30	278	28	0.8	< 0.2	14	< 0.5	< 0.5	3689	< 0.4	5300	8150	766	2430	303	66.4	126	13.6	63.7	11.4	32.6
133728	< 2	2817	286	34	304	29	0.6	< 0.2	13	< 0.5	< 0.5	4594	1.0	5670	8570	814	2560	302	65.1	122	12.3	56.4	9.3	25.9
133729	< 2	3657	324	59	279	18	0.8	< 0.2	10	< 0.5	< 0.5	4816	0.6	6120	9220	860	2710	314	68.4	133	14.2	65.4	11.0	31.4
133730	< 2	2875	373	51	236	23	0.6	< 0.2	14	< 0.5	< 0.5	1646	0.5	4390	6980	679	2250	305	70.2	142	17.0	79.1	13.1	35.2
133731	< 2	2750	372	34	739	17	0.6	< 0.2	21	< 0.5	< 0.5	1657	0.6	4660	7170	688	2260	305	72.3	145	16.5	75.6	12.3	34.1
133732	< 2	2702	340	31	291	37	0.6	< 0.2	16	< 0.5	< 0.5	2250	1.2	3980	7270	761	2690	374	82.0	161	17.9	80.9	12.0	27.8
133733	< 2	3025	374	33	574	5	0.6	< 0.2	13	< 0.5	< 0.5	327	0.5	4050	6540	664	2190	272	62.6	129	15.5	74.1	13.1	32.5
133734	2	2681	377	31	356	10	< 0.5	< 0.2	17	< 0.5	< 0.5	412	0.7	3430	6220	684	2430	347	85.5	182	22.2	95.4	14.5	34.4
133735	< 2	2425	309	26	594	23	< 0.5	< 0.2	17	< 0.5	< 0.5	415	0.9	2110	4100	488	1800	292	70.4	139	15.3	67.1	10.9	27.3
133735A	< 2	2897	352	26	343	9	0.5	< 0.2	15	< 0.5	< 0.5	1037	0.9	3660	6430	695	2420	331	79.5	165	19.4	82.7	12.4	29.5
133736	< 2	3515	327	68	440	21	0.7	< 0.2	15	< 0.5	< 0.5	1791	0.9	3430	6130	652	2310	312	69.7	138	15.7	73.0	11.6	28.5
133737	2	2917	357	54	337	13	0.7	< 0.2	16	< 0.5	< 0.5	949	1.3	4540	7430	722	2320	302	73.2	159	19.4	84.8	12.7	30.4
133738	< 2	2767	265	62	316	11	0.7	< 0.2	10	< 0.5	< 0.5	743	0.7	5130	8080	736	2140	221	50.0	110	13.5	61.2	9.3	22.9
133739	< 2	2653	236	67	241	6	0.8	< 0.2	12	< 0.5	< 0.5	999	0.6	5850	8800	754	2090	213	48.9	104	12.9	55.0	8.1	19.5
133740	< 2	2711	248	75	239	9	0.6	< 0.2	11	< 0.5	< 0.5	1247	0.7	6180	9170	781	2180	218	49.5	105	13.2	56.0	8.5	20.2
133741	< 2	2769	224	52	304	10	0.6	< 0.2	12	< 0.5	< 0.5	1446	0.7	6000	9370	813	2300	226	51.5	105	12.1	51.8	7.6	17.8
133742	< 2	2771	232	33	218	13	0.5	< 0.2	9	< 0.5	< 0.5	4551	0.8	5080	7810	698	2050	219	50.9	106	12.2	52.4	7.7	18.8
133743	2	2803	219	43	351	13	0.6	< 0.2	14	< 0.5	< 0.5	12250	0.8	4150	6780	660	2140	272	62.7	130	13.7	53.5	7.4	17.3
133744	3	2967	192	36	394	< 2	0.6	< 0.2	10	< 0.5	< 0.5	28180	0.7	6910	9510	766	2040	206	50.3	106	13.3	50.1	6.7	15.4
133745	< 2	3031	225	49	286	11	1.4	< 0.2	9	< 0.5	< 0.5	15200	0.6	5520	8310	749	2260	254	57.2	114	12.5	53.7	7.5	18.5
133746	< 2	3101	226	85	290	36	5.9	< 0.2	11	2.4	< 0.5	21680	1.2	7030	10200	831	2280	216	49.2	111	14.2	62.6	8.7	19.9
133747	< 2	3110	218	58	302	4	0.7	< 0.2	8	< 0.5	< 0.5	13900	< 0.4	6290	8720	754	2230	241	53.7	111	12.4	52.8	7.3	16.9

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133748	< 2	3159	250	46	292	161	0.9	< 0.2	12	< 0.5	< 0.5	6109	1.2	5090	7960	722	2290	291	67.1	144	16.4	63.2	8.9	20.5
133749	< 2	10	< 2	< 4	8	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	71	< 0.4	17.5	25.9	2.39	6.5	0.8	0.17	0.4	< 0.1	0.2	< 0.1	< 0.1
133750	27	3032	888	219	364	54	2.1	< 0.2	44	< 0.5	0.5	13560	2.2	2540	4680	540	2220	477	129	317	41.9	201	33.0	77.4
133751	2	3040	245	79	505	23	0.8	< 0.2	16	< 0.5	< 0.5	699	0.7	5370	8120	763	2460	313	72.7	150	16.5	63.7	8.8	20.5
133752	2	2768	208	96	732	11	1.0	< 0.2	23	< 0.5	< 0.5	532	0.7	4110	6640	669	2220	291	67.1	131	13.4	52.7	7.5	17.3
133753	< 2	2957	254	82	457	31	0.9	< 0.2	13	< 0.5	< 0.5	489	0.8	5450	7910	735	2360	293	66.7	139	14.9	58.8	8.6	20.5
133754	< 2	2972	292	94	725	13	1.1	< 0.2	22	< 0.5	< 0.5	338	0.7	6070	8990	850	2760	354	83.0	171	18.7	73.9	10.5	24.2
133755	< 2	2552	312	99	592	31	1.1	< 0.2	19	0.7	< 0.5	347	1.3	4200	7010	687	2320	330	80.3	175	19.9	81.2	11.3	25.9
133756	< 2	2942	265	116	328	29	1.1	< 0.2	11	< 0.5	< 0.5	315	1.0	3990	6460	642	2110	273	64.2	132	14.1	58.9	8.6	20.5
133757	< 2	2916	253	112	284	20	1.0	< 0.2	9	< 0.5	< 0.5	219	0.8	3670	6180	629	2100	273	64.5	135	15.0	61.1	8.8	19.7
133758	< 2	2457	292	81	431	10	0.9	< 0.2	13	< 0.5	< 0.5	227	0.9	3330	6540	712	2510	329	76.6	162	19.8	81.5	11.0	24.4
133759	2	2539	341	62	363	15	0.6	< 0.2	13	< 0.5	< 0.5	336	0.8	2380	4900	566	2080	288	67.9	147	18.8	83.7	12.4	28.5
133760	< 2	2402	294	58	325	6	0.8	< 0.2	22	0.7	< 0.5	193	1.8	3020	5970	629	2220	337	82.5	185	21.4	82.6	10.5	23.8
133761	< 2	2370	315	41	419	15	0.6	< 0.2	16	< 0.5	< 0.5	201	0.9	4030	6780	692	2320	319	77.0	171	20.2	82.5	11.2	24.2
133762	< 2	2694	300	36	299	19	0.5	< 0.2	16	< 0.5	< 0.5	192	1.4	3900	7060	722	2390	317	74.2	151	17.5	72.7	10.3	23.1
133763	3	4009	512	93	522	12	1.4	< 0.2	27	0.7	< 0.5	314	1.6	2770	5500	572	1920	243	59.9	135	21.1	112	18.5	46.0
133764	4	3786	471	89	500	11	0.9	< 0.2	20	< 0.5	< 0.5	363	0.8	2790	5480	588	1990	240	58.0	134	19.7	101	17.1	43.1
133765	< 2	2973	387	61	387	77	0.8	< 0.2	15	< 0.5	< 0.5	248	0.9	3350	6140	663	2300	291	66.5	143	18.3	86.4	13.8	34.5
133766	< 2	3060	486	43	305	19	< 0.5	< 0.2	15	< 0.5	< 0.5	218	0.7	3540	6750	715	2490	322	74.6	160	22.0	107	17.7	45.7
133767	2	2302	437	58	438	14	0.9	< 0.2	22	< 0.5	< 0.5	311	1.1	2750	5380	581	2030	283	69.2	140	18.0	86.5	14.6	37.7
133768	< 2	2566	504	74	544	18	1.1	< 0.2	25	< 0.5	< 0.5	256	1.9	4300	7840	806	2670	361	86.2	194	23.3	105	16.5	39.8
133769	< 2	1709	269	49	466	41	0.8	0.2	31	< 0.5	< 0.5	484	3.2	3200	6520	742	2660	383	90.4	173	18.0	68.8	9.3	20.9
133770	< 2	2504	280	49	602	31	0.7	< 0.2	20	< 0.5	< 0.5	637	1.0	3380	6130	628	2060	263	65.0	126	14.6	65.1	10.1	24.6
133771	< 2	2232	304	32	407	42	0.7	< 0.2	23	< 0.5	< 0.5	9386	2.7	2530	5560	641	2280	310	74.3	148	16.5	71.8	10.9	25.3
133772	< 2	2797	279	19	395	16	< 0.5	< 0.2	13	< 0.5	< 0.5	11010	1.2	6160	9340	854	2670	317	69.6	127	13.1	61.5	9.6	21.5
133773	< 2	2638	310	32	428	6	0.6	< 0.2	14	< 0.5	< 0.5	3055	1.1	5500	8360	783	2500	296	66.6	125	13.9	63.5	10.5	26.8
133774	< 2	18	3	< 4	9	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	27.9	52.9	5.61	18.9	2.7	0.59	1.2	0.1	0.6	< 0.1	0.2
133775	36	20180	881	217	14	34	2.9	< 0.2	1	7.3	1.8	908	6.9	18200	28000	2580	7680	859	204	374	37.4	157	25.0	61.1
133776	< 2	2819	247	31	454	11	0.8	< 0.2	24	< 0.5	< 0.5	844	1.2	3250	5890	623	2190	304	71.7	131	14.5	60.7	8.9	20.3
133777	< 2	3026	323	34	517	3	0.6	< 0.2	17	< 0.5	< 0.5	1197	0.5	2840	5220	537	1700	207	50.3	103	13.7	67.9	11.2	26.8
133778	< 2	2694	381	42	394	2	0.9	< 0.2	19	< 0.5	< 0.5	928	0.7	1990	4000	442	1510	209	52.8	122	17.1	82.4	13.1	31.3
133779	< 2	2717	329	24	503	2	< 0.5	< 0.2	14	< 0.5	< 0.5	464	0.6	4250	7340	738	2400	282	65.5	128	15.8	74.1	11.6	25.5
133780	< 2	2700	425	45	475	4	0.6	< 0.2	19	< 0.5	< 0.5	4863	1.0	4870	8210	775	2430	293	74.0	151	19.4	88.0	13.8	33.2
133781	< 2	2919	295	20	188	6	< 0.5	< 0.2	6	< 0.5	< 0.5	12440	< 0.4	4910	7710	675	1930	201	49.4	99.9	12.4	62.3	10.3	23.7
133782	< 2	3100	257	16	500	4	< 0.5	< 0.2	11	< 0.5	< 0.5	7804	< 0.4	4020	6940	698	2330	281	65.9	122	12.8	57.0	9.0	20.8
133783	83	508	20	98	61	< 2	0.8	< 0.2	2	< 0.5	2.4	3259	< 0.4	85.2	149	15.2	50.0	7.6	2.26	5.1	0.8	4.0	0.8	2.1
133784	72	496	19	119	70	< 2	1.0	< 0.2	3	< 0.5	2.6	4681	< 0.4	43.0	77.3	8.30	29.7	5.8	1.89	4.2	0.8	4.6	0.9	2.5
133785	81	604	27	92	84	< 2	0.7	< 0.2	3	< 0.5	2.6	5103	< 0.4	216	345	33.9	106	16.0	4.34	9.8	1.3	6.7	1.2	3.2
133786	3	2769	343	30	573	10	< 0.5	< 0.2	18	0.6	< 0.5	517	0.8	4050	7140	723	2420	310	75.0	144	17.0	78.0	12.2	29.7
133787	2	3136	445	39	291	10	< 0.5	< 0.2	26	< 0.5	< 0.5	540	0.6	3940	6960	700	2310	291	71.9	148	20.3	99.4	17.2	44.1
133788	4	3572	515	46	288	14	0.5	< 0.2	30	0.8	< 0.5	930	0.4	5080	8720	853	2760	337	82.4	174	23.0	117	20.0	50.0
133789	< 2	2362	250	31	549	14	< 0.5	< 0.2	18	< 0.5	< 0.5	573	1.4	3360	5860	580	1910	244	60.0	121	13.6	59.5	8.9	19.9
133790	4	3268	366	145	462	6	1.3	< 0.2	14	< 0.5	< 0.5	730	0.9	4480	7400	728	2400	312	77.0	159	19.7	90.2	13.9	32.2
133791	2	2504	297	24	606	4	< 0.5	< 0.2	18	< 0.5	< 0.5	1369	0.6	4530	7560	738	2390	276	62.9	119	14.2	63.4	10.2	25.0
133792	< 2	2564	474	38	250	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	422	0.5	2560	5470	648	2440	333	82.0	170	22.0	108	18.0	42.4
133793	< 2	2264	312	21	873	8	< 0.5	< 0.2	17	< 0.5	< 0.5	542	0.6	4170	7280	726	2340	265	62.2	129	15.7	69.7	10.4	24.4
133794	< 2	2264	329	17	585	3	< 0.5	< 0.2	25	< 0.5	< 0.5	432	0.6	3190	6050	651	2250	291	72.8	149	18.3	78.0	11.8	28.4

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133697	3.35	18.8	2.43	1.4	1.4	5	0.3	257	515	0.7	3.31
133698	3.30	18.8	2.34	0.8	< 0.1	5	0.3	368	474	< 0.1	3.62
133699	< 0.05	< 0.1	< 0.04	< 0.2	0.4	3	< 0.1	< 5	2.3	0.2	
133700	9.02	48.9	5.91	5.2	2.6	27	0.3	567	833	2.5	0.205
133701	2.82	17.3	2.27	0.9	< 0.1	9	0.1	241	498	0.1	3.45
133702	3.00	18.8	2.41	0.8	< 0.1	6	0.1	179	371	< 0.1	3.80
133703	2.50	15.5	1.92	0.8	< 0.1	4	0.2	315	478	< 0.1	3.88
133704	2.67	15.3	2.01	1.0	< 0.1	4	0.1	222	414	< 0.1	3.54
133705	2.90	16.0	2.05	1.0	< 0.1	4	0.1	225	500	< 0.1	3.73
133706	3.30	19.0	2.47	1.1	< 0.1	3	0.2	219	437	0.1	3.70
133707	2.94	16.8	2.22	0.8	< 0.1	4	0.1	174	401	< 0.1	3.52
133708	2.80	15.9	2.09	0.8	< 0.1	4	0.1	260	393	< 0.1	3.94
133709	2.97	17.1	2.19	1.0	< 0.1	3	0.2	275	442	< 0.1	3.68
133710	3.46	18.6	2.22	1.0	< 0.1	3	0.2	147	384	< 0.1	3.80
133711	2.85	16.0	1.95	1.0	< 0.1	4	0.3	253	545	< 0.1	3.72
133712	4.91	26.5	3.24	1.3	< 0.1	3	0.3	265	573	< 0.1	3.81
133713	3.55	19.1	2.32	1.1	0.2	5	0.3	230	392	0.2	1.77
133714	3.46	18.9	2.27	1.1	< 0.1	2	0.3	219	400	0.1	1.76
133715	3.13	16.4	1.89	0.8	< 0.1	5	0.1	194	459	< 0.1	3.62
133716	4.08	22.8	2.71	1.2	< 0.1	7	0.1	311	456	< 0.1	3.38
133717	3.78	19.3	2.35	1.1	< 0.1	4	< 0.1	118	436	< 0.1	3.33
133718	4.01	21.9	2.68	1.4	< 0.1	3	0.3	272	534	< 0.1	3.38
133719	3.94	21.4	2.61	1.1	< 0.1	3	0.4	138	470	< 0.1	3.55
133720	4.32	23.4	2.79	1.4	0.2	3	0.2	282	723	0.1	3.54
133721	3.87	19.9	2.34	1.3	< 0.1	4	0.1	197	649	< 0.1	3.31
133722	3.62	18.7	2.20	1.0	< 0.1	3	0.1	224	431	< 0.1	3.60
133723	3.22	17.3	2.13	0.9	< 0.1	5	0.1	329	527	< 0.1	3.53
133724	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.3	< 0.1	
133725	8.34	48.3	6.37	3.5	< 0.1	6	2.5	1040	153	182	0.205
133726	3.41	17.0	2.01	1.1	< 0.1	4	0.6	296	533	< 0.1	3.38
133727	4.42	24.3	2.91	0.8	< 0.1	5	0.2	108	424	< 0.1	3.22
133728	3.49	19.3	2.39	0.9	< 0.1	4	0.3	185	374	< 0.1	3.57
133729	4.24	23.8	2.97	1.4	< 0.1	4	0.2	140	315	< 0.1	3.41
133730	4.85	27.3	3.33	1.3	< 0.1	4	0.1	167	454	< 0.1	3.38
133731	4.61	25.3	3.06	1.2	< 0.1	6	0.1	199	539	0.1	3.47
133732	3.43	19.1	2.34	1.1	< 0.1	4	0.1	195	449	< 0.1	3.20
133733	4.21	22.3	2.75	1.1	< 0.1	5	< 0.1	125	293	< 0.1	3.34
133734	4.08	21.7	2.59	1.3	< 0.1	6	0.2	191	494	0.2	3.31
133735	3.57	19.8	2.38	1.0	< 0.1	6	0.1	270	493	0.2	3.23
133735A	3.52	19.3	2.36	1.1	< 0.1	5	0.1	154	533	< 0.1	3.44
133736	3.63	21.1	2.70	1.5	< 0.1	5	0.2	165	362	< 0.1	3.33
133737	3.60	20.2	2.57	1.5	0.4	4	0.3	219	560	0.6	3.43
133738	2.90	16.6	2.14	1.3	0.3	3	0.2	148	368	0.2	3.53
133739	2.36	13.5	1.70	1.3	0.1	3	0.2	141	341	< 0.1	1.91
133740	2.49	14.1	1.80	1.5	0.1	3	0.2	142	347	0.1	1.57
133741	2.20	12.9	1.70	1.1	0.9	3	0.2	180	404	0.8	3.40
133742	2.27	12.9	1.69	0.9	< 0.1	2	0.2	232	357	< 0.1	3.30
133743	2.14	12.7	1.67	1.0	< 0.1	5	0.2	213	412	< 0.1	3.42
133744	1.92	11.1	1.43	0.9	< 0.1	6	0.2	210	227	< 0.1	3.43
133745	2.38	12.8	1.67	1.1	< 0.1	4	0.1	151	335	0.1	3.38
133746	2.37	14.1	1.89	1.5	0.3	12	< 0.1	7	277	< 0.1	2.27

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133747	2.05	12.1	1.67	1.2	< 0.1	4	< 0.1	94	192	< 0.1	3.27
133748	2.46	14.4	1.84	1.2	< 0.1	5	0.2	219	364	< 0.1	3.12
133749	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.3	< 0.1	
133750	9.41	50.5	6.01	5.6	2.0	27	0.3	570	860	2.6	0.205
133751	2.63	16.1	2.09	1.4	0.2	5	0.2	190	439	0.2	3.44
133752	2.28	14.3	1.83	1.6	0.5	6	0.3	200	424	0.3	3.26
133753	2.61	15.2	2.00	1.4	< 0.1	6	0.2	187	333	< 0.1	3.19
133754	3.13	19.0	2.46	1.9	< 0.1	7	0.2	180	388	< 0.1	3.32
133755	3.14	18.2	2.37	1.5	< 0.1	6	0.3	161	442	0.1	3.40
133756	2.67	15.9	2.07	2.0	< 0.1	3	0.3	183	368	0.1	2.86
133757	2.60	15.8	2.02	1.8	0.4	2	0.3	134	325	0.7	2.66
133758	2.91	16.5	2.08	1.6	< 0.1	3	0.2	195	395	0.2	3.36
133759	3.49	20.3	2.52	1.5	< 0.1	4	0.3	154	281	0.2	3.26
133760	2.77	15.8	2.08	1.1	< 0.1	4	0.2	248	449	< 0.1	3.44
133761	2.73	14.9	1.89	1.4	< 0.1	5	0.4	207	560	< 0.1	3.54
133762	2.87	16.4	2.07	1.2	< 0.1	5	0.3	252	612	< 0.1	3.70
133763	5.75	33.8	4.28	1.6	< 0.1	6	0.6	153	390	0.2	1.56
133764	5.56	31.9	3.97	1.9	< 0.1	5	0.6	117	403	0.2	1.74
133765	4.59	27.4	3.44	1.4	< 0.1	20	0.3	168	513	0.1	2.41
133766	5.70	31.6	3.98	1.6	< 0.1	5	0.2	136	553	0.2	2.81
133767	5.11	29.8	3.79	1.5	< 0.1	5	0.5	191	407	0.2	3.19
133768	5.04	29.7	3.76	2.0	< 0.1	6	0.3	211	756	0.1	2.12
133769	2.37	13.9	1.77	1.4	< 0.1	3	0.2	354	642	< 0.1	2.31
133770	2.98	16.7	2.16	1.3	< 0.1	45	0.2	163	459	0.1	3.35
133771	3.03	16.9	2.09	1.0	< 0.1	5	0.1	303	672	< 0.1	3.77
133772	2.44	13.3	1.62	0.9	< 0.1	3	0.1	156	513	< 0.1	3.87
133773	3.22	17.9	2.18	1.2	< 0.1	3	< 0.1	154	404	< 0.1	3.71
133774	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	9	5.1	< 0.1	
133775	8.47	48.8	6.50	3.9	< 0.1	5	2.1	1010	144	182	0.205
133776	2.46	14.3	1.79	0.9	< 0.1	5	0.4	128	426	0.3	3.65
133777	3.16	17.8	2.22	1.0	< 0.1	4	0.1	121	377	< 0.1	3.88
133778	3.75	19.9	2.48	1.3	< 0.1	9	0.2	67	335	0.2	3.78
133779	2.76	14.3	1.68	1.2	< 0.1	5	< 0.1	96	332	0.1	3.62
133780	3.92	20.0	2.44	1.5	< 0.1	4	< 0.1	175	445	0.1	3.92
133781	2.68	13.5	1.60	0.9	< 0.1	5	< 0.1	85	263	< 0.1	4.07
133782	2.44	13.3	1.59	0.8	< 0.1	4	< 0.1	56	271	0.1	4.82
133783	0.32	2.0	0.29	2.3	2.0	7	1.2	14	8.9	0.7	3.37
133784	0.39	2.5	0.36	2.7	2.3	4	1.1	15	6.4	0.7	3.69
133785	0.44	2.7	0.36	2.4	2.4	3	1.3	21	23.0	0.5	3.39
133786	3.54	19.8	2.47	1.2	< 0.1	19	0.3	242	369	0.2	6.34
133787	5.51	29.4	3.41	1.5	< 0.1	5	0.3	339	351	0.2	1.71
133788	6.34	33.4	3.93	1.7	< 0.1	9	0.3	343	436	0.3	2.01
133789	2.29	12.9	1.56	1.0	0.7	4	0.2	189	330	0.4	3.76
133790	3.79	21.2	2.74	2.8	1.0	4	0.3	155	427	0.7	3.79
133791	2.99	16.4	1.97	0.9	< 0.1	5	0.1	96	354	0.1	3.73
133792	5.27	28.1	3.40	1.5	< 0.1	5	0.1	66	359	0.3	3.56
133793	2.93	16.3	1.95	1.1	0.2	4	0.1	148	371	0.2	2.42
133794	3.42	19.0	2.34	1.0	< 0.1	5	< 0.1	134	496	0.2	3.10

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.04	11.14	1.89	0.73	0.010	0.34	42.96	0.87	0.54	0.118	30.18					1659								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.09																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.10																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.93	18.54	9.75	0.147	9.90	11.36	1.91	0.22	0.482	0.07			31		158	270	57	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.59	12.91	3.13	0.139	0.14	0.60	2.49	5.43	0.284	0.05			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.80	15.63	10.67	0.166	6.25	11.09	2.21	0.62	1.090	0.14			35	< 1	278	90	41	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.79	20.49	6.20	0.108	0.50	8.10	6.92	1.65	0.288	0.14			1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																								
CTA-AC-1 Cert																								
BIR-1a Meas		48.03	15.60	11.21	0.173	9.54	13.44	1.82	0.02	0.976	0.03			43	< 1	342	370	53	170	130	80	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1050	98		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				990	100	17	11	77
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		49		440				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		30	17		
JR-1 Cert																			1.67		30.6	16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133713 Orig	5.62	1.35	0.08	12.02	1.872	12.55	27.97	0.03	0.08	0.110	0.59	35.33	91.99	50	26	64	< 20	5	< 20	< 10	1310	75	8	22
133713 Dup	5.69	1.37	0.09	12.18	1.895	12.78	28.28	0.03	0.08	0.114	0.58	35.33	92.73	51	27	66	< 20	5	< 20	< 10	1300	75	8	22
133726 Orig																	< 20	7	< 20	< 10	1890	76	11	28
133726 Split	6.30	1.03	0.04	14.42	2.050	12.12	26.10	0.03	0.02	0.137	0.28	34.39	90.60	62	13	80	< 20	6	< 20	< 10	1880	78	12	28
133738 Orig	5.97	1.48	0.05	10.48	2.114	11.85	28.88	0.04	0.06	0.091	0.64	33.99	89.68	56	12	82	< 20	5	< 20	< 10	1750	80	9	26
133738 Dup	6.32	1.53	0.05	10.76	2.172	12.16	29.64	0.04	0.06	0.094	0.65	33.99	91.15	57	12	85	< 20	6	< 20	< 10	1770	82	10	27
133755 Orig	4.26	0.48	0.09	14.77	1.927	12.96	26.18	0.02	0.08	0.173	1.00	34.96	92.64	59	13	106	< 20	12	< 20	< 10	1110	28	5	17

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133755 Dup	4.28	0.52	0.09	14.28	1.866	12.42	25.68	0.02	0.08	0.172	1.00	34.96	91.09	57	13	102	< 20	11	< 20	< 10	1120	29	5	18
133766 Orig	1.89	0.38	0.04	13.44	1.780	11.67	26.95	0.04	0.03	0.136	2.71	36.30	93.48	65	9	101	< 20	9	< 20	< 10	1260	78	12	31
133766 Dup	1.85	0.37	0.04	13.55	1.789	11.89	26.78	0.04	0.03	0.135	2.71	36.30	93.62	65	9	100	< 20	8	< 20	< 10	1190	75	11	30
133781 Orig	4.24	2.04	0.03	11.91	1.801	12.49	25.33	0.03	0.02	0.058	0.40	36.08	90.18	39	16	63	< 20	5	< 20	< 10	1450	71	9	21
133781 Dup	4.47	2.04	0.03	11.81	1.785	12.57	25.31	0.03	0.02	0.057	0.40	36.08	90.12	39	17	62	< 20	5	< 20	< 10	1470	68	9	21
133794 Orig	1.99	0.72	0.07	14.64	1.797	13.29	24.82	0.03	0.05	0.234	0.41	38.74	94.80	81	10	97	< 20	7	< 20	< 10	880	60	10	25
133794 Split	1.96	0.71	0.06	14.36	1.772	13.12	24.91	0.03	0.05	0.235	0.41	38.67	94.34	80	9	96	< 20	7	< 20	< 10	860	61	11	26
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	16	34								105					5.0		0.57					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		40	45	391								501												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	73					< 2					2.4			49.8	94.4		42.6	7.7	1.41			4.8		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		197	19	84		< 2	< 0.5					174	< 0.4		24.8		12.7	3.3	1.07		0.6	3.7	0.8	
W-2a Cert		190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1199	114	541								342												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3320		1100	161	44.3	117	14.3			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	14	15								7					2.3	1.1	0.50	1.9				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	189		1590			232	34.5	184	35.7	96.5
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											260													
ZW-C Cert											260													
NCS DC70014 Meas						270	17.1			180			80.3	43.3	85.1			7.4		6.7	1.2		1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0			8.0		7.4	1.1		1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700		43.2			23.9	60.1	7.42	30.2	11.9		14.1	3.3	19.9	4.2	12.6
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						26								266	483	45.2	143	23.1	3.49		3.7	21.5	4.7	13.9
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								803	1410	129	386	48.8	7.86			30.3	6.4	18.5
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5
JR-1 Meas	252				14		< 0.5	< 0.2	3		21.0		0.6	21.3	50.8	5.96	23.0	5.7	0.29	5.5	1.0	6.0		3.9
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		3.61
NCS DC86318 Meas														1970	423	719	3300	1710	19.0	2070	472	3070	561	1640
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21400	28500	2350	6450	537	87.8					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133713 Orig	< 2	2907	315	49	239	6	0.5	< 0.2	9	< 0.5	< 0.5	677	0.7	5510	8400	756	2270	254	58.6	112	13.7	59.5	10.6	27.6
133713 Dup	< 2	2998	324	52	247	6	0.5	< 0.2	10	< 0.5	< 0.5	697	1.4	5470	8430	750	2270	252	58.3	115	13.3	59.9	10.8	28.2
133726 Orig	< 2				279	7	0.8	< 0.2	15	< 0.5	< 0.5		3.1	4060	7500	774	2530	308	71.0	141	17.4	81.9	12.9	29.0
133726 Split	< 2	2731	368	22	308	8	< 0.5	< 0.2	14	< 0.5	< 0.5	4623	2.8	4310	8050	824	2690	318	73.3	148	18.1	82.8	12.9	29.9
133738 Orig	< 2	2732	262	61	319	11	0.6	< 0.2	10	< 0.5	< 0.5	731	0.8	5130	8150	745	2180	226	50.7	113	13.5	63.2	9.4	23.4
133738 Dup	< 2	2803	268	63	314	11	0.7	< 0.2	10	< 0.5	< 0.5	754	0.7	5120	8000	728	2100	217	49.3	107	13.5	59.2	9.2	22.3
133755 Orig	< 2	2559	313	102	595	31	1.1	< 0.2	18	0.7	< 0.5	355	1.1	4190	6930	682	2320	329	80.6	173	19.4	79.4	10.9	25.4

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133755 Dup	< 2	2545	312	95	590	31	1.0	< 0.2	20	0.7	< 0.5	339	1.4	4220	7100	691	2320	331	80.1	178	20.4	83.0	11.6	26.4
133766 Orig	< 2	3043	485	43	312	19	0.5	< 0.2	15	< 0.5	< 0.5	217	0.6	3540	6730	717	2490	320	74.6	162	22.2	108	17.8	46.2
133766 Dup	< 2	3078	486	42	298	18	< 0.5	< 0.2	15	< 0.5	< 0.5	219	0.7	3540	6770	714	2490	325	74.7	157	21.7	107	17.7	45.2
133781 Orig	< 2	2939	294	20	190	6	< 0.5	< 0.2	6	< 0.5	< 0.5	12370	0.6	4950	7810	681	1950	202	49.4	99.9	12.6	61.8	10.4	24.1
133781 Dup	< 2	2899	295	20	186	6	< 0.5	< 0.2	6	< 0.5	< 0.5	12500	< 0.4	4880	7610	669	1920	199	49.4	99.9	12.3	62.8	10.2	23.4
133794 Orig	< 2	2264	329	17	585	3	< 0.5	< 0.2	25	< 0.5	< 0.5	432	0.6	3190	6050	651	2250	291	72.8	149	18.3	78.0	11.8	28.4
133794 Split	< 2	2271	326	17	583	4	< 0.5	< 0.2	26	< 0.5	< 0.5	417	1.0	3100	5890	639	2210	288	70.8	146	17.5	76.2	11.6	27.4
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									910	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.7					4.5
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28700	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.7	1.04						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.6	12.2							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.0	336	34.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.57	3.3	0.47					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.36	15.7	2.20			2200	3.1		30.0	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200	1.8		28.3	
OREAS 100a (Fusion) Meas	2.34	15.0	2.05						52.6	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	18.0	2.44						37.2	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.8	0.69	4.5	1.8		1.6	20	28.3	9.3
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	273	1810	256							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133713 Orig	3.54	19.2	2.34	1.1	0.2	7	0.3	217	387	0.2
133713 Dup	3.56	19.0	2.31	1.2	0.2	3	0.3	243	396	0.1
133726 Orig	3.41	17.0	2.01	1.1	< 0.1	4	0.6	296	533	< 0.1
133726 Split	3.51	17.8	2.13	1.2	< 0.1	3	< 0.1	294	508	< 0.1
133738 Orig	2.99	17.0	2.23	1.4	0.3	3	0.2	151	374	0.2
133738 Dup	2.82	16.1	2.05	1.3	0.3	3	0.2	145	362	0.2
133755 Orig	3.05	17.8	2.35	1.5	< 0.1	6	0.3	156	438	0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133755 Dup	3.23	18.5	2.40	1.5	< 0.1	6	0.3	166	447	0.1
133766 Orig	5.72	31.5	4.01	1.5	< 0.1	5	0.2	135	554	0.2
133766 Dup	5.69	31.8	3.95	1.6	< 0.1	5	0.1	136	552	0.2
133781 Orig	2.70	13.5	1.59	0.9	< 0.1	8	< 0.1	93	261	< 0.1
133781 Dup	2.66	13.5	1.61	0.9	< 0.1	2	< 0.1	78	265	< 0.1
133794 Orig	3.42	19.0	2.34	1.0	< 0.1	5	< 0.1	134	496	0.2
133794 Split	3.33	18.4	2.28	0.9	< 0.1	5	< 0.1	143	499	0.2
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11635
Invoice Date: 25-Nov-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

46 Rock samples were submitted for analysis.

The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11635**

Notes:
Total includes all elements in % oxide to the left of total.

Footnote: High Ce/Nd interference on Ga/Ge

CERTIFIED BY :

Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133795	1.90	17.20	5.80	8.84	1.179	11.72	19.26	1.73	1.71	0.713	0.80	27.18	96.11	43	15	122	< 20	20	30	20	580	64	9	25
133796	2.66	4.86	1.49	9.54	1.384	13.52	24.15	0.46	0.53	0.239	0.98	35.41	92.58	47	9	88	< 20	8	< 20	< 10	630	84	11	29
133797	1.48	40.40	14.54	12.09	0.515	7.15	5.96	3.34	4.94	1.605	0.32	7.63	98.49	28	27	230	< 20	45	70	50	320	24	3	6
133798	3.62	5.30	1.54	10.99	1.468	13.30	24.75	0.34	0.83	0.280	1.08	32.91	92.78	42	6	88	< 20	12	< 20	30	1170	93	12	30
133799	0.01	98.16	0.55	0.55	0.019	0.11	0.23	0.04	0.05	0.011	0.04	0.11	99.87	< 1	< 1	< 5	30	12	< 20	< 10	< 30	2	1	< 5
133800	5.84	20.75	3.08	28.29	2.358	6.94	17.63	0.31	1.33	1.521	0.55	12.47	95.22	22	12	160	170	30	80	150	1450	57	11	28
133801	4.90	3.99	1.14	9.09	1.324	12.47	26.45	0.07	0.89	0.243	0.94	32.58	89.18	52	8	87	< 20	9	< 20	< 10	980	75	11	26
133802	2.62	0.98	0.21	14.68	2.136	13.69	23.28	0.02	0.21	0.200	0.54	36.99	92.95	50	9	83	< 20	6	< 20	< 10	990	58	9	22
133803	1.66	1.13	0.20	18.32	2.589	12.90	19.86	0.02	0.17	0.213	0.31	36.64	92.37	47	7	88	< 20	10	< 20	20	1490	78	12	31
133804	0.67	2.15	0.58	15.75	2.409	10.89	23.14	0.04	0.43	0.173	3.25	34.14	92.94	58	8	94	< 20	10	< 20	20	1370	66	11	29
133805	1.85	28.72	8.58	16.65	0.748	10.24	9.82	1.54	4.32	1.757	0.36	13.34	96.07	41	32	258	< 20	56	70	60	960	29	4	13
133806	2.33	24.11	6.52	15.26	0.987	12.34	12.59	0.19	4.67	1.657	0.79	16.95	96.07	42	31	214	< 20	28	60	< 10	890	28	3	8
133807	2.09	35.08	7.50	16.60	0.604	11.49	7.68	0.20	5.31	2.421	0.54	10.63	98.05	46	37	296	< 20	49	70	80	950	25	3	8
133808	2.07	5.78	1.01	12.40	1.881	13.00	24.10	0.03	0.79	0.197	0.58	34.83	94.61	50	12	97	< 20	9	< 20	20	1570	61	8	22
133809	0.97	41.17	15.46	12.72	0.307	8.03	4.06	3.26	5.24	1.706	0.32	6.79	99.07	33	24	265	< 20	37	50	30	290	24	3	5
133810	0.90	38.87	15.28	11.65	0.292	7.79	5.43	3.08	5.21	1.566	0.26	8.40	97.83	32	24	256	< 20	33	50	10	190	19	2	< 5
133811	1.82	5.72	1.91	15.93	1.607	12.33	21.35	0.36	0.82	0.305	0.45	33.30	94.07	47	13	136	< 20	18	20	60	1910	48	7	27
133812	1.38	34.69	11.53	13.96	0.559	9.99	7.53	2.66	4.25	1.662	0.29	11.49	98.61	49	28	282	< 20	39	60	30	610	20	2	10
133813	2.12	30.46	8.01	17.77	0.620	11.44	8.84	0.52	4.90	2.304	0.43	12.41	97.69	65	43	340	< 20	45	80	30	930	23	2	9
133814	1.50	3.25	0.22	13.32	2.414	12.16	23.84	0.02	0.21	0.128	0.24	34.56	90.35	38	9	70	< 20	8	< 20	< 10	2520	96	10	28
133815	1.12	2.77	0.20	13.69	2.460	12.36	24.04	0.02	0.20	0.122	0.22	35.14	91.22	38	9	71	< 20	9	< 20	< 10	2230	89	11	28
133816	2.81	3.51	0.22	13.22	2.384	11.75	24.40	0.02	0.22	0.157	0.21	33.83	89.94	37	9	78	< 20	8	< 20	< 10	2480	86	9	25
133817	3.34	3.15	0.18	13.21	2.393	12.23	25.54	0.03	0.19	0.123	0.24	34.46	91.77	37	17	88	< 20	6	< 20	10	2220	82	10	27
133818	7.16	29.80	5.91	14.35	0.612	11.14	14.61	0.05	4.99	2.289	0.43	11.07	95.25	41	28	160	< 20	44	70	520	920	24	2	6
133819	2.42	3.06	0.31	17.40	2.519	11.21	22.53	0.03	0.29	0.205	0.53	33.14	91.22	40	11	107	< 20	11	< 20	20	1280	67	10	29
133820	3.75	1.33	0.26	18.87	2.466	11.19	23.12	0.03	0.21	0.433	0.84	33.44	92.19	50	9	110	< 20	9	< 20	10	1790	90	12	30
133821	7.65	0.42	0.09	9.91	1.549	12.31	31.36	0.02	0.06	0.221	0.55	34.50	90.99	43	11	83	< 20	8	20	20	1510	108	13	34
133822	5.01	2.54	0.19	10.48	1.605	13.12	28.55	0.02	0.19	0.115	0.84	35.28	92.92	45	11	63	< 20	6	< 20	< 10	1340	100	12	32
133823	2.05	1.87	0.28	18.94	2.580	12.20	22.40	0.02	0.25	0.161	0.28	36.60	95.57	36	8	90	< 20	9	< 20	< 10	950	54	8	22
133824	< 0.01	98.06	0.03	0.52	0.010	0.08	0.15	< 0.01	< 0.01	< 0.001	< 0.01	0.22	99.07	< 1	< 1	< 5	20	< 1	< 20	< 10	< 30	< 1	1	< 5
133825	1.65	15.35	2.55	13.15	0.139	0.47	27.01	0.94	0.96	0.143	19.50	8.07	88.30	17	14	159	< 20	29	60	100	620	248	30	164
133826	3.65	3.18	0.69	14.66	2.166	12.08	25.15	0.02	0.49	0.157	0.32	34.46	93.37	42	7	96	< 20	12	< 20	10	700	74	10	28
133827	3.65	4.92	0.09	9.29	1.650	13.68	27.49	0.02	0.10	0.044	1.29	35.90	94.46	41	14	56	< 20	5	< 20	< 10	290	80	10	26
133828	2.61	2.53	0.32	11.85	1.787	13.69	26.20	0.02	0.35	0.089	0.82	36.65	94.30	45	15	76	< 20	7	< 20	< 10	560	71	9	26
133829	1.45	2.21	0.21	9.23	1.485	14.94	26.98	0.02	0.22	0.074	1.07	39.61	96.05	48	13	65	< 20	3	< 20	< 10	190	69	10	26
133830	1.63	2.48	0.15	9.14	1.402	14.86	26.66	0.02	0.16	0.049	1.43	39.04	95.39	50	9	61	< 20	3	< 20	< 10	180	68	10	28
133831	0.92	2.92	0.06	11.74	1.799	15.11	23.81	0.02	0.08	0.070	1.41	39.18	96.20	47	12	67	< 20	6	< 20	< 10	440	66	10	28
133832	0.48	0.45	0.07	21.29	2.548	13.88	18.58	< 0.01	0.07	0.149	0.51	39.40	96.95	41	6	94	< 20	10	< 20	< 10	610	45	7	20
133833	0.51	0.56	0.14	34.09	3.564	10.30	12.31	< 0.01	0.08	0.083	0.40	34.89	96.41	26	4	72	< 20	15	< 20	< 10	1350	35	8	22
133834	0.15	6.14	0.07	24.44	3.003	10.64	14.57	0.01	0.02	0.170	0.34	34.40	93.82	33	2	77	< 20	14	< 20	< 10	6240	52	10	24
133835	0.88	1.85	0.07	31.76	3.388	9.96	13.16	< 0.01	0.02	0.099	0.38	35.43	96.13	29	3	78	< 20	17	< 20	< 10	1950	40	8	23
133836	3.44	1.24	0.34	16.48	2.044	11.91	23.67	0.01	0.26	0.136	0.37	35.63	92.11	40	7	73	< 20	17	< 20	< 10	1680	68	11	31
133837	2.64	2.88	0.62	32.82	3.128	8.63	14.24	0.02	0.42	0.146	0.84	31.69	95.44	33	4	86	< 20	15	< 20	< 10	1460	47	10	25
133838	2.66	2.47	0.74	12.99	1.587	13.24	26.10	0.02	0.56	0.153	0.43	36.16	94.46	50	6	74	< 20	8	< 20	< 10	890	57	9	24
133839	0.72	0.31	0.04	16.97	1.891	13.64	22.36	0.01	0.02	0.160	0.56	39.16	95.12	43	5	83	< 20	8	< 20	< 10	940	63	9	26
133840	1.02	0.31	0.04	16.97	1.885	12.41	20.38	< 0.01	0.02	0.194	0.50	38.52	91.24	40	4	88	< 20	8	< 20	< 10	870	50	8	23

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133795	38	1863	146	59	341	109	0.7	< 0.2	9	0.9	0.8	1587	1.2	3700	6090	596	1960	229	49.8	89.9	8.9	34.9	4.9	11.6
133796	15	2707	186	70	595	60	0.7	< 0.2	13	< 0.5	< 0.5	733	0.5	6210	9150	844	2640	309	68.2	126	11.5	44.1	6.2	14.6
133797	121	236	58	100	181	3	0.9	< 0.2	6	< 0.5	2.5	8646	< 0.4	692	998	94.6	273	32.9	8.29	17.4	2.1	10.4	1.8	5.0
133798	22	2509	182	67	482	76	0.7	< 0.2	11	1.0	< 0.5	954	1.2	6390	9300	834	2510	282	66.1	123	11.3	42.3	5.8	13.3
133799	< 2	22	3	9	11	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	10	< 0.4	36.5	55.2	5.26	16.4	2.0	0.41	0.8	< 0.1	0.4	< 0.1	0.2
133800	27	3034	874	216	364	54	2.0	< 0.2	55	< 0.5	0.5	13270	2.1	2550	4650	545	2170	464	133	305	40.5	199	32.4	77.0
133801	24	2607	215	71	864	58	0.6	< 0.2	15	0.5	0.5	1268	0.4	4960	7960	743	2290	268	64.4	128	13.1	51.4	7.3	17.0
133802	5	2387	195	37	736	34	1.9	< 0.2	17	0.5	< 0.5	372	1.1	5070	8200	786	2570	307	66.8	130	12.2	50.4	6.9	15.6
133803	4	2280	168	20	409	16	< 0.5	< 0.2	17	< 0.5	< 0.5	560	1.0	4210	7990	817	2710	322	71.2	130	11.2	42.4	5.7	12.7
133804	12	2426	375	33	151	4	< 0.5	< 0.2	7	0.5	< 0.5	1117	0.9	2390	6490	769	2610	326	82.6	188	23.6	105	14.9	32.0
133805	119	871	63	107	251	3	0.9	< 0.2	24	2.5	3.1	8902	< 0.4	508	1230	159	550	64.6	15.0	27.6	3.1	13.6	2.2	5.5
133806	128	954	103	109	211	10	1.6	< 0.2	25	1.0	3.1	7796	0.4	703	1330	143	506	67.8	16.4	35.7	4.8	23.5	3.9	9.7
133807	143	613	53	146	265	< 2	2.4	< 0.2	33	1.8	3.5	8885	< 0.4	436	780	78.2	253	34.6	8.08	18.6	2.6	12.1	2.0	5.3
133808	21	2346	165	42	527	12	1.3	< 0.2	13	1.1	0.5	1360	1.1	3370	6410	615	1930	216	47.6	88.6	9.3	40.0	5.9	13.5
133809	130	238	34	93	226	< 2	1.4	< 0.2	7	1.3	3.5	10710	< 0.4	450	876	84.9	263	31.9	7.19	15.0	1.8	8.2	1.4	3.8
133810	124	260	29	107	101	< 2	1.4	< 0.2	3	0.7	3.3	9099	< 0.4	154	284	30.4	104	14.6	3.15	8.8	1.2	6.3	1.1	3.1
133811	23	3513	194	50	314	< 2	1.0	< 0.2	13	1.5	0.6	1850	0.9	2590	4920	489	1670	208	47.7	103	11.6	49.9	7.2	16.9
133812	117	419	36	115	110	< 2	1.4	< 0.2	21	4.4	3.3	12660	< 0.4	229	418	40.6	127	16.4	3.72	10.4	1.5	7.9	1.3	3.7
133813	144	772	42	153	179	< 2	1.9	< 0.2	26	2.7	3.7	10170	< 0.4	273	557	56.0	171	22.4	5.25	12.6	1.9	10.4	1.9	4.8
133814	5	2780	125	28	298	2	0.9	0.2	17	< 0.5	< 0.5	1952	0.9	5450	10800	966	2830	257	51.0	83.8	7.7	31.8	4.3	9.4
133815	4	2811	121	25	265	3	0.7	< 0.2	14	< 0.5	< 0.5	2115	1.3	5420	10700	1010	3000	271	53.6	92.2	8.3	33.9	4.5	9.6
133816	5	2678	144	26	298	< 2	0.7	< 0.2	11	< 0.5	< 0.5	1712	0.6	5370	10400	936	2690	252	52.4	91.2	9.0	38.2	5.2	11.3
133817	4	2884	170	33	220	12	1.1	< 0.2	14	0.7	< 0.5	3696	1.8	4850	9480	897	2720	269	56.9	101	10.4	43.8	6.1	14.0
133818	133	1052	55	140	145	< 2	1.6	< 0.2	15	0.7	3.4	8551	< 0.4	235	563	63.9	220	26.0	5.46	12.2	1.3	6.3	1.1	2.9
133819	7	2074	162	27	509	211	1.8	< 0.2	24	1.0	< 0.5	561	7.4	3170	7040	771	2730	325	66.2	116	11.0	41.8	5.6	12.5
133820	5	2412	207	50	858	66	1.8	0.2	27	0.9	< 0.5	419	3.5	5890	9450	911	3010	365	80.2	150	15.4	59.0	7.7	16.8
133821	< 2	2773	235	44	779	59	1.1	< 0.2	29	1.2	< 0.5	332	1.2	8410	12300	1090	3280	385	85.8	170	17.1	67.7	8.8	18.0
133822	4	2489	204	60	626	127	1.4	< 0.2	25	0.9	< 0.5	503	1.9	8030	12000	1050	3160	332	71.1	132	12.7	55.3	7.6	16.5
133823	6	1882	126	19	362	222	0.8	< 0.2	21	1.2	< 0.5	371	1.7	3030	5490	564	2000	250	50.7	92.7	8.8	32.3	4.3	9.3
133824	< 2	5	< 2	< 4	4	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	7.8	14.0	1.39	4.4	0.6	0.12	0.2	< 0.1	< 0.1	< 0.1	< 0.1
133825	35	20420	917	243	15	33	4.2	< 0.2	1	7.1	1.9	927	8.7	18500	29400	2640	8330	904	205	367	39.1	176	28.3	68.5
133826	11	2296	142	24	323	145	1.0	< 0.2	13	0.7	< 0.5	932	0.9	3710	7500	778	2490	317	64.3	117	10.2	38.3	5.0	10.6
133827	2	2611	209	167	782	80	1.7	< 0.2	11	0.7	< 0.5	248	0.7	6420	9380	829	2580	306	67.6	134	13.2	54.4	7.5	18.3
133828	8	2738	173	67	332	66	1.1	< 0.2	17	1.6	< 0.5	419	1.5	4380	7820	769	2490	298	65.7	121	11.7	48.5	6.7	15.4
133829	5	2575	210	136	369	40	1.7	< 0.2	10	1.0	< 0.5	280	0.5	4550	7310	707	2400	313	71.5	141	13.3	55.2	7.9	18.0
133830	3	2585	208	119	471	43	1.6	< 0.2	9	0.5	< 0.5	239	0.6	4070	6740	684	2380	316	71.9	139	13.9	54.3	7.6	17.2
133831	< 2	2270	175	81	513	43	1.4	< 0.2	11	< 0.5	< 0.5	216	0.9	4290	6870	671	2400	348	74.6	138	12.5	48.5	6.4	13.9
133832	< 2	1996	125	29	147	67	0.9	< 0.2	15	0.9	< 0.5	178	1.2	2920	4770	471	1740	273	58.4	105	9.2	34.8	4.5	9.8
133833	< 2	1178	86	23	154	200	0.8	0.3	13	1.2	< 0.5	136	5.4	838	2680	442	2040	282	54.2	90.1	7.4	26.3	3.1	6.8
133834	< 2	1284	89	10	171	359	2.1	0.7	16	1.1	< 0.5	149	32.3	1880	4390	576	2420	337	66.1	113	8.1	28.0	2.9	5.9
133835	< 2	1104	97	19	170	401	1.0	0.4	35	1.5	< 0.5	101	4.7	1380	3190	462	2150	322	61.5	105	8.6	30.4	3.5	7.3
133836	6	1978	137	34	184	914	0.9	0.2	73	2.0	< 0.5	494	3.2	3840	6780	726	2720	367	75.3	130	10.7	36.3	4.3	9.1
133837	10	1281	147	22	144	192	0.6	0.4	40	2.1	< 0.5	931	2.2	2080	3750	472	2190	398	81.2	147	13.3	43.2	5.1	10.1
133838	13	2083	156	25	257	74	0.5	< 0.2	16	1.2	< 0.5	899	0.5	3270	5810	595	2220	353	76.0	136	11.9	42.7	5.5	11.2
133839	< 2	2164	158	42	172	219	1.0	< 0.2	17	1.3	< 0.5	142	1.1	3700	6110	627	2250	327	70.3	136	13.2	45.1	5.7	12.3
133840	< 2	1870	139	39	230	242	0.6	< 0.2	18	1.4	< 0.5	127	1.3	2850	5000	526	1980	287	61.8	116	10.4	38.3	4.8	10.4

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133795	1.41	7.9	1.01	1.2	0.2	2	0.9	123	177	0.4	3.55
133796	1.82	10.4	1.32	1.4	< 0.1	4	0.6	130	270	0.2	2.76
133797	0.63	3.8	0.57	2.3	2.1	7	3.9	11	23.3	0.8	2.88
133798	1.59	9.1	1.14	1.2	< 0.1	3	1.0	266	250	0.2	2.95
133799	< 0.05	0.2	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	2.4	< 0.1	
133800	9.33	50.2	6.03	5.6	2.0	35	0.4	544	785	2.6	0.205
133801	2.02	11.6	1.47	1.5	< 0.1	5	0.7	89	316	0.2	2.79
133802	1.80	10.3	1.34	1.0	< 0.1	6	0.2	161	330	< 0.1	3.35
133803	1.49	8.7	1.21	0.8	< 0.1	4	0.2	351	448	< 0.1	3.45
133804	3.77	21.5	2.69	1.5	< 0.1	2	0.4	365	488	0.3	0.755
133805	0.72	4.6	0.66	2.6	1.9	< 1	3.7	44	137	0.9	3.47
133806	1.18	6.8	0.92	2.4	1.2	3	3.7	48	121	0.7	4.41
133807	0.71	4.2	0.63	3.0	2.6	3	4.9	15	38.6	0.8	4.59
133808	1.56	9.1	1.17	0.8	< 0.1	4	1.2	316	343	0.3	2.86
133809	0.48	2.8	0.41	2.3	2.8	3	4.2	35	55.5	0.9	2.90
133810	0.42	2.9	0.41	2.3	2.4	3	4.1	34	18.1	0.6	3.91
133811	2.11	12.6	1.69	1.0	0.2	3	1.1	954	301	0.7	2.03
133812	0.55	3.6	0.55	2.5	1.8	2	3.8	17	23.0	0.6	2.80
133813	0.67	4.2	0.61	3.4	2.7	2	4.1	14	33.6	0.9	2.61
133814	1.13	6.4	0.88	0.5	< 0.1	4	0.7	85	376	< 0.1	1.45
133815	1.15	6.6	0.94	0.5	< 0.1	4	0.3	85	394	< 0.1	1.46
133816	1.34	7.2	0.98	0.5	< 0.1	4	0.2	64	389	< 0.1	3.66
133817	1.66	8.9	1.19	0.6	< 0.1	3	0.2	133	430	< 0.1	3.65
133818	0.40	2.7	0.40	3.0	1.8	4	3.2	9	45.1	0.7	1.26
133819	1.52	9.1	1.21	0.6	< 0.1	5	0.8	344	632	0.1	3.79
133820	1.87	10.7	1.38	1.0	< 0.1	6	0.5	440	557	< 0.1	4.08
133821	2.04	11.4	1.51	1.1	< 0.1	15	3.1	133	460	< 0.1	4.02
133822	1.97	10.4	1.38	1.1	< 0.1	5	0.9	151	395	< 0.1	3.51
133823	1.17	7.0	0.91	0.4	< 0.1	3	0.7	218	480	< 0.1	3.51
133824	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.3	< 0.1	
133825	8.95	50.7	6.79	3.7	< 0.1	7	2.3	959	152	194	0.205
133826	1.32	7.7	1.00	0.7	< 0.1	3	0.8	59	638	0.1	2.34
133827	2.19	12.8	1.68	2.3	< 0.1	7	0.4	40	255	< 0.1	2.78
133828	1.85	10.4	1.31	1.1	< 0.1	3	0.4	44	328	0.1	2.85
133829	2.15	12.4	1.61	1.9	< 0.1	3	0.3	41	235	< 0.1	3.38
133830	2.02	11.4	1.44	1.5	< 0.1	4	0.2	36	220	0.1	3.29
133831	1.60	9.0	1.14	1.2	< 0.1	7	0.1	197	222	< 0.1	2.22
133832	1.15	6.7	0.88	0.5	< 0.1	3	0.2	247	281	< 0.1	1.86
133833	0.85	4.8	0.62	0.4	< 0.1	2	0.4	710	634	< 0.1	3.49
133834	0.71	4.2	0.57	0.3	< 0.1	2	2.8	5430	569	< 0.1	2.09
133835	0.91	5.4	0.70	0.4	< 0.1	2	0.8	645	752	< 0.1	3.87
133836	1.04	6.5	0.87	0.6	< 0.1	11	1.1	280	694	< 0.1	3.64
133837	1.15	6.9	0.91	0.5	< 0.1	2	1.6	751	946	< 0.1	3.62
133838	1.26	7.4	0.94	0.5	< 0.1	2	1.7	272	568	< 0.1	2.20
133839	1.38	8.0	1.07	0.7	< 0.1	3	0.5	331	421	< 0.1	0.940
133840	1.22	7.2	0.89	0.7	< 0.1	4	0.4	386	402	< 0.1	1.02

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.08	11.14	1.89	0.73	0.010	0.34	42.96	0.87	0.54	0.118	30.18					1659								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.12																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.04																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.10																							
NIST 694 Cert	3.2																							
DNC-1 Meas		46.93	18.54	9.75	0.147	9.90	11.36	1.91	0.22	0.482	0.07			31		158	270	57	250	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.59	12.91	3.13	0.139	0.14	0.60	2.49	5.43	0.284	0.05			5	4	< 5								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.80	15.63	10.67	0.166	6.25	11.09	2.21	0.62	1.090	0.14			35	< 1	278	90	41	70	110	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.79	20.49	6.20	0.108	0.50	8.10	6.92	1.65	0.288	0.14			1	3	7								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																								
CTA-AC-1 Cert																								
BIR-1a Meas		48.03	15.60	11.21	0.173	9.54	13.44	1.82	0.02	0.976	0.03			43	< 1	342	370	53	170	130	80	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1050	98		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		25	70	2590	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas																				990	100	17	11	77
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		49		440				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		30	17		
JR-1 Cert																			1.67		30.6	16.1		
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133805 Orig	1.87	28.70	8.57	16.58	0.744	10.20	9.80	1.54	4.31	1.738	0.36	13.34	95.88	41	32	258	< 20	56	70	60	960	29	4	13
133805 Dup	1.83	28.75	8.59	16.73	0.751	10.28	9.84	1.54	4.32	1.775	0.35	13.34	96.26	41	32	258	< 20	57	70	60	970	29	4	13
133820 Orig	3.73	1.33	0.26	19.00	2.485	11.17	23.32	0.03	0.21	0.437	0.84	33.44	92.52	50	9	112	< 20	9	< 20	10	1760	86	12	30
133820 Dup	3.77	1.32	0.26	18.75	2.446	11.20	22.93	0.03	0.22	0.429	0.84	33.44	91.86	50	9	109	< 20	9	< 20	10	1830	94	12	31
133824 Orig	< 0.01	98.06	0.03	0.52	0.010	0.08	0.15	< 0.01	< 0.01	< 0.001	< 0.01	0.22	99.07	< 1	< 1	< 5	20	< 1	< 20	< 10	< 30	< 1	1	< 5

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133824 Split	< 0.01	97.39	0.03	0.50	0.010	0.08	0.15	< 0.01	< 0.01	< 0.001	< 0.01	0.06	98.23	< 1	< 1	< 5	20	< 1	< 20	< 10	< 30	< 1	1	< 5
133837 Orig	2.60	2.89	0.63	33.03	3.145	8.72	14.31	0.02	0.42	0.147	0.84	31.69	95.83	33	4	88	< 20	15	< 20	< 10	1470	48	10	25
133837 Dup	2.67	2.87	0.62	32.62	3.110	8.54	14.17	0.02	0.42	0.145	0.84	31.69	95.05	33	4	85	< 20	15	< 20	< 10	1460	47	10	25
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		142	16	34								105					5.0		0.57					
DNC-1 Cert		144.0	18.0	38								118					5.20		0.59					
GBW 07113 Meas		40	45	391								501												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	73					< 2					2.4			49.8	94.4		42.6	7.7	1.41			4.8		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		197	19	84		< 2	< 0.5					174	< 0.4		24.8		12.7	3.3	1.07		0.6	3.7	0.8	
W-2a Cert		190	24.0	94.0		0.600	0.0460					182	0.0300		23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1199	114	541								342												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2140	3320		1100	161	44.3	117	14.3			
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124	13.9			
BIR-1a Meas		108	14	15								7					2.3	1.1	0.50	1.9				
BIR-1a Cert		110	16	18								6					2.5	1.1	0.55	2.0				
NCS DC86312 Meas														2400	189		1590			232	34.5	184	35.7	96.5
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											260													
ZW-C Cert											260													
NCS DC70014 Meas						270	17.1			180			80.3	43.3	85.1			7.4		6.7	1.2		1.2	3.3
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0			8.0		7.4	1.1		1.3	3.5
NCS DC86316 Meas																								
NCS DC86316 Cert																								
NCS DC70009 (GBW07241) Meas	503							1.3	1700		43.2			23.9	60.1	7.42	30.2	11.9		14.1	3.3	19.9	4.2	12.6
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						26								266	483	45.2	143	23.1	3.49		3.7	21.5	4.7	13.9
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								803	1410	129	386	48.8	7.86			30.3	6.4	18.5
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06			33.3	6.46	19.5
JR-1 Meas	252				14		< 0.5	< 0.2	3		21.0		0.6	21.3	50.8	5.96	23.0	5.7	0.29	5.5	1.0	6.0		3.9
JR-1 Cert	257				15.2		0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69		3.61
NCS DC86318 Meas														1970	423	719	3300	1710	19.0	2070	472	3070	561	1640
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														21400	28500	2350	6450	537	87.8					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133805 Orig	119	862	63	108	253	3	0.9	< 0.2	24	2.5	3.1	8901	< 0.4	509	1230	159	554	64.8	15.1	27.7	3.1	13.9	2.2	5.6
133805 Dup	120	880	63	107	249	3	0.9	< 0.2	25	2.5	3.1	8903	< 0.4	506	1220	160	546	64.3	15.0	27.5	3.1	13.3	2.1	5.4
133820 Orig	5	2415	205	50	824	65	1.9	0.2	27	0.9	< 0.5	418	3.3	5870	9490	901	2990	363	80.4	149	15.7	59.1	7.6	16.6
133820 Dup	5	2409	208	49	891	68	1.6	0.2	27	0.8	< 0.5	421	3.7	5910	9420	920	3030	366	80.0	152	15.1	59.0	7.8	17.0
133824 Orig	< 2	5	< 2	< 4	4	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	7.8	14.0	1.39	4.4	0.6	0.12	0.2	< 0.1	< 0.1	< 0.1	< 0.1

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133824 Split	< 2	5	< 2	< 4	4	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	8.0	13.6	1.41	4.4	0.5	0.11	0.2	< 0.1	< 0.1	< 0.1	< 0.1
133837 Orig	10	1288	148	18	147	196	0.7	0.4	40	2.1	< 0.5	935	2.0	2080	3750	475	2190	397	81.3	150	13.8	43.4	5.1	10.3
133837 Dup	10	1274	146	26	142	188	0.6	0.4	40	2.0	< 0.5	928	2.4	2090	3750	469	2180	400	81.2	143	12.7	42.9	5.0	9.9
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									910	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.7	0.40		0.7					4.5
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28700	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1				< 1	< 0.1			0.5
W-2a Cert	0.380	2.10				0.300	0.200			0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.7	1.04						23.4	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.7								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.6	12.2							
NCS DC86312 Cert	15.1	87.79	11.96							
ZW-C Meas					85.0	336	34.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.57	3.3	0.47					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC86316 Meas				712						
NCS DC86316 Cert				712						
NCS DC70009 (GBW07241) Meas	2.36	15.7	2.20			2200	3.1		30.0	
NCS DC70009 (GBW07241) Cert	2.2	14.9	2.4			2200	1.8		28.3	
OREAS 100a (Fusion) Meas	2.34	15.0	2.05						52.6	137
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.95	18.0	2.44						37.2	421
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.8	0.69	4.5	1.8		1.6	20	28.3	9.3
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	273	1810	256							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133805 Orig	0.74	4.5	0.66	2.6	1.9	1	3.5	43	138	0.9
133805 Dup	0.71	4.6	0.66	2.7	1.9	< 1	4.0	46	136	0.9
133820 Orig	1.85	10.6	1.37	1.0	< 0.1	6	0.5	429	552	< 0.1
133820 Dup	1.88	10.7	1.39	1.0	< 0.1	6	0.4	451	562	< 0.1
133824 Orig	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.3	< 0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133824 Split	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.4	< 0.1
133837 Orig	1.18	6.9	0.93	0.5	< 0.1	2	1.5	740	940	< 0.1
133837 Dup	1.11	6.9	0.88	0.6	< 0.1	2	1.6	762	951	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11636
Invoice Date: 17-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

78 Rock samples were submitted for analysis.

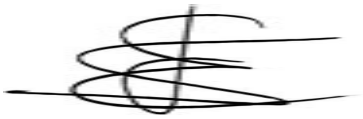
The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11636**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133841	0.33	0.47	0.05	9.38	1.037	13.62	23.66	0.03	0.04	0.075	1.01	39.32	88.69	46	3	66	< 20	8	< 20	< 10	710	12	3	13
133842	0.73	0.81	0.07	7.96	1.190	15.94	26.94	0.03	0.07	0.130	0.26	41.93	95.32	58	6	72	< 20	5	< 20	< 10	560	12	3	10
133843	1.76	0.54	0.12	9.35	1.591	14.17	26.93	0.07	0.03	0.113	0.56	39.76	93.24	79	5	77	< 20	6	< 20	< 10	870	23	4	16
133844	1.18	1.33	0.06	7.48	1.364	14.21	26.58	0.04	0.04	0.103	0.62	40.74	92.57	66	6	62	< 20	5	< 20	< 10	610	19	4	14
133845	1.92	1.22	0.08	7.04	1.425	14.68	27.81	0.06	0.03	0.114	0.49	40.56	93.51	73	6	67	< 20	6	< 20	< 10	850	25	4	15
133846	0.37	0.63	0.06	7.16	1.363	15.42	27.48	0.03	0.06	0.038	0.41	42.61	95.26	55	5	51	< 20	3	< 20	< 10	230	13	3	8
133847	5.90	2.25	0.06	6.95	1.449	13.65	30.12	0.04	0.06	0.051	0.50	36.63	91.76	49	12	48	< 20	2	< 20	< 10	1030	27	4	13
133848	7.13	2.71	0.07	7.66	1.407	13.09	30.03	0.05	0.05	0.063	0.46	34.31	89.91	48	15	53	< 20	5	< 20	< 10	990	29	4	15
133849	< 0.01	98.38	0.04	0.44	0.009	0.08	0.16	< 0.01	< 0.01	< 0.001	< 0.01	0.07	99.20	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	1	1	< 5
133850	6.36	20.75	3.06	28.40	2.359	7.02	17.55	0.31	1.33	1.460	0.56	12.29	95.08	21	12	160	160	30	70	30	1450	27	5	15
133851	1.66	1.09	0.09	7.15	1.324	14.86	26.53	0.03	0.09	0.047	0.47	40.80	92.49	56	9	60	< 20	3	< 20	< 10	450	19	3	10
133852	0.42	0.42	0.05	8.00	1.544	16.11	27.06	0.03	0.06	0.045	0.32	42.39	96.03	56	5	54	< 20	3	< 20	< 10	770	16	3	10
133853	0.47	0.31	0.06	7.54	1.415	15.20	28.11	0.03	0.06	0.071	1.77	40.95	95.51	63	5	63	< 20	4	< 20	< 10	850	20	4	12
133854	0.28	0.22	0.05	4.87	0.806	12.17	22.84	0.03	0.04	0.047	2.00	40.90	83.97	40	4	39	< 20	2	< 20	< 10	260	11	2	6
133855	0.33	0.25	0.06	9.86	1.212	14.31	26.49	0.04	0.04	0.113	2.84	38.48	93.70	57	5	70	< 20	6	< 20	< 10	740	15	3	12
133856	0.48	0.33	0.08	6.80	0.944	14.67	29.28	0.05	0.06	0.111	4.97	38.06	95.35	57	4	63	< 20	2	< 20	< 10	350	12	3	9
133857	0.66	0.31	0.07	5.58	0.807	13.73	30.88	0.06	0.06	0.112	7.09	36.19	94.88	52	3	52	< 20	2	< 20	< 10	280	13	3	9
133858	0.40	0.26	0.06	6.61	0.974	14.87	29.26	0.05	0.05	0.136	3.88	38.84	94.98	62	3	64	< 20	4	< 20	< 10	410	14	3	11
133859	0.45	0.40	0.09	5.70	0.917	15.32	30.15	0.05	0.08	0.125	4.44	39.40	96.67	52	3	56	< 20	1	< 20	< 10	100	11	2	7
133860	0.60	0.52	0.11	7.74	0.922	13.31	28.94	0.06	0.10	0.113	5.82	34.05	91.68	55	4	59	< 20	6	< 20	< 10	390	15	4	14
133861	0.29	0.17	0.04	7.40	1.228	15.04	27.83	0.04	0.03	0.094	2.26	40.34	94.46	65	4	59	< 20	4	< 20	< 10	700	16	3	10
133862	0.33	0.17	0.05	7.07	1.138	15.08	28.45	0.05	0.03	0.101	2.78	39.83	94.74	63	4	58	< 20	3	< 20	< 10	510	15	3	10
133863	0.33	0.11	0.03	6.63	1.095	15.61	29.51	0.05	0.02	0.082	3.09	40.35	96.58	65	4	57	< 20	3	< 20	< 10	430	17	3	10
133864	0.51	0.21	0.05	5.67	0.903	14.97	30.72	0.05	0.04	0.070	5.23	37.87	95.79	50	3	49	< 20	3	< 20	< 10	330	14	3	9
133865	0.65	0.64	0.05	5.75	0.953	16.16	28.11	0.04	0.05	0.089	1.63	41.63	95.10	54	5	56	< 20	2	< 20	< 10	370	14	3	8
133866	0.35	0.18	0.04	7.98	1.102	15.69	27.44	0.03	0.03	0.129	1.26	41.75	95.63	53	5	73	< 20	5	< 20	< 10	510	17	3	13
133867	0.14	0.17	0.04	8.05	1.196	16.35	26.51	0.02	0.04	0.145	0.42	42.49	95.43	42	5	60	< 20	5	< 20	< 10	650	15	3	10
133868	0.25	0.19	0.04	6.67	1.025	16.16	28.07	0.04	0.04	0.129	1.52	42.06	95.94	43	5	65	< 20	3	< 20	< 10	310	13	2	8
133869	0.27	0.13	0.03	8.62	1.204	15.03	27.17	0.04	0.02	0.162	2.17	40.51	95.10	52	5	73	< 20	5	< 20	< 10	620	17	3	10
133870	0.44	0.24	0.05	5.25	0.863	14.96	28.45	0.04	0.05	0.094	3.58	39.64	93.22	42	5	58	< 20	4	< 20	< 10	330	14	3	11
133871	0.67	0.22	0.04	8.82	1.152	15.00	27.25	0.04	0.04	0.093	2.25	38.68	93.57	57	7	76	< 20	9	< 20	< 10	690	19	4	14
133872	0.22	0.18	0.04	11.28	1.327	14.81	25.57	0.03	0.03	0.148	0.67	40.72	94.80	70	11	80	< 20	9	< 20	< 10	900	43	9	25
133873	0.84	0.75	0.03	8.46	1.284	11.98	29.57	0.07	0.01	0.149	6.85	34.11	93.27	67	4	76	< 20	6	< 20	< 10	720	20	4	14
133874	< 0.01	99.08	0.04	1.03	0.022	0.15	0.29	0.02	0.02	0.002	0.03	0.03	100.7	< 1	< 1	< 5	30	2	< 20	< 10	< 30	< 1	1	< 5
133875	1.69	15.19	2.57	12.83	0.136	0.47	25.51	0.93	0.96	0.145	18.56	8.09	85.40	17	13	155	20	35	80	110	660	101	15	163
133876	0.85	0.68	0.03	7.60	1.130	13.10	29.65	0.06	0.02	0.097	5.72	35.92	94.01	59	4	64	< 20	6	< 20	< 10	460	19	4	14
133877	0.91	0.20	0.04	9.31	1.261	12.83	28.01	0.06	0.02	0.106	4.85	36.14	92.82	68	8	69	< 20	6	< 20	20	810	20	5	17
133878	0.88	0.15	0.03	8.46	1.460	13.82	28.01	0.04	0.02	0.117	2.75	38.51	93.38	83	7	71	< 20	9	< 20	< 10	890	24	4	14
133879	0.72	0.15	0.04	8.21	1.242	12.16	29.31	0.06	0.02	0.118	6.83	33.84	91.99	59	7	66	< 20	13	< 20	< 10	790	21	4	17
133880	0.56	0.24	0.06	10.02	1.314	13.87	26.94	0.03	0.04	0.089	1.71	39.07	93.39	55	4	56	< 20	9	< 20	< 10	970	20	4	16
133881	0.63	0.22	0.05	6.53	0.833	14.67	29.53	0.05	0.04	0.097	4.16	38.66	94.85	43	3	53	< 20	6	< 20	< 10	350	17	4	14
133882	0.64	0.31	0.06	9.32	1.513	13.93	27.12	0.03	0.06	0.087	2.62	37.77	92.82	59	7	55	< 20	6	< 20	< 10	860	64	10	30
133883	2.64	0.90	0.04	6.48	1.542	15.07	29.07	0.04	0.04	0.078	0.89	39.58	93.74	65	10	58	< 20	2	< 20	< 10	870	53	8	21
133884	1.03	1.34	0.05	6.00	1.550	14.13	28.92	0.04	0.07	0.032	3.64	38.38	94.16	51	8	49	< 20	2	< 20	< 10	500	49	9	20
133885	3.33	1.03	0.06	6.48	1.417	14.49	29.14	0.04	0.07	0.078	0.76	38.55	92.12	52	10	52	< 20	3	< 20	< 10	1140	59	8	20
133886	1.26	0.26	0.03	6.58	1.257	12.83	24.14	0.01	0.04	0.043	0.66	40.35	86.20	38	7	52	< 20	3	< 20	< 10	1110	52	7	20
133887	2.13	0.23	0.03	7.22	1.449	14.70	27.95	0.02	0.03	0.047	0.75	39.81	92.22	44	5	55	< 20	5	< 20	< 10	1170	59	9	22
133888	5.65	3.36	0.05	6.67	1.354	13.62	29.18	0.09	0.08	0.040	0.82	34.14	89.41	44	11	47	< 20	4	< 20	< 10	860	77	10	24
133889	1.19	1.46	0.03	5.88	1.151	16.26	27.49	0.03	0.04	0.025	0.47	41.58	94.42	44	8	45	< 20	3	< 20	< 10	560	52	9	23
133890	0.35	1.25	0.02	5.94	1.196	16.54	27.82	0.02	0.02	0.034	0.85	42.38	96.08	51	5	58	< 20	3	< 20	< 10	310	48	10	23
133891	0.93	0.34	0.02	6.33	1.244	16.25	27.91	0.02	0.03	0.067	0.72	42.16	95.09	41	7	54	< 20	5	< 20	< 10	760	54	10	27
133892	0.64	0.43	0.07	5.74	1.047	14.17	30.30	0.04	0.06	0.056	5.18	37.87	94.96	39	4	65	< 20	3	< 20	< 10	530	49	10	23

Activation Laboratories Ltd. Report: A13-11636

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133893	1.33	0.66	0.05	4.69	0.916	14.43	30.88	0.04	0.06	0.058	5.26	37.50	94.54	42	9	52	< 20	3	< 20	< 10	260	52	10	24
133894	0.47	0.30	0.05	5.95	1.055	13.93	28.26	0.04	0.05	0.079	4.09	38.87	92.68	47	5	61	< 20	3	< 20	< 10	380	41	8	20
133895	0.39	0.16	0.04	10.13	1.509	14.04	25.47	0.03	0.02	0.103	1.16	39.75	92.41	58	5	80	< 20	5	< 20	< 10	1090	53	10	26
133896	0.22	0.12	0.03	7.12	1.079	16.78	27.21	0.02	0.02	0.066	0.51	43.04	96.00	43	6	48	< 20	3	< 20	< 10	470	26	6	14
133897	0.16	0.16	0.03	6.08	0.988	16.25	27.14	0.03	0.02	0.089	1.15	42.43	94.38	42	6	53	< 20	4	< 20	< 10	430	25	5	14
133898	0.34	0.22	0.05	7.27	1.202	14.53	28.75	0.04	0.04	0.135	3.49	39.17	94.89	53	6	89	< 20	4	< 20	< 10	530	42	9	23
133899	< 0.01	99.72	0.05	0.72	0.016	0.11	0.21	0.01	0.01	0.001	0.03	0.03	100.9	< 1	< 1	7	30	< 1	< 20	< 10	< 30	< 1	1	< 5
133900	5.87	20.74	3.03	28.44	2.349	6.95	17.67	0.30	1.31	1.480	0.55	12.11	94.93	21	12	157	160	28	60	30	1320	48	10	22
133901	0.43	0.26	0.04	5.12	1.010	15.28	29.78	0.04	0.04	0.062	3.97	39.54	95.14	37	6	47	< 20	4	< 20	< 10	300	30	7	19
133902	0.27	0.11	0.02	6.37	1.100	15.65	27.19	0.02	0.02	0.067	1.25	41.72	93.52	48	6	61	< 20	8	< 20	< 10	630	31	7	21
133903	1.82	0.49	0.04	7.14	1.187	15.27	28.15	0.02	0.05	0.062	1.12	40.08	93.61	50	8	66	< 20	3	< 20	< 10	680	50	9	21
133904	1.26	0.78	0.03	8.45	1.438	15.03	25.83	0.02	0.05	0.093	0.89	40.21	92.82	53	9	68	< 20	3	< 20	< 10	1010	61	10	22
133905	2.99	1.60	0.07	6.07	1.116	13.87	25.85	0.05	0.12	0.111	1.16	37.59	87.60	42	20	59	< 20	3	< 20	< 10	1140	71	10	23
133906	1.12	0.45	0.03	10.49	1.505	15.24	25.01	0.02	0.04	0.100	1.03	39.98	93.90	57	12	79	< 20	3	< 20	< 10	780	47	9	21
133907	0.01	97.80	0.03	0.84	0.018	0.16	0.30	0.01	0.01	< 0.001	0.03	0.14	99.33	< 1	< 1	< 5	50	3	< 20	< 10	< 30	< 1	1	< 5
133908	1.68	15.16	2.49	12.79	0.137	0.46	25.67	0.93	0.95	0.146	18.37	8.40	85.49	16	13	156	20	33	80	110	610	208	29	151
133909	3.18	1.07	0.04	4.36	1.002	16.18	29.32	0.03	0.07	0.069	0.63	40.26	93.03	42	21	43	< 20	< 1	< 20	< 10	470	33	7	16
133910	3.26	1.36	0.05	4.52	1.031	16.70	28.91	0.03	0.13	0.045	0.66	40.10	93.53	39	46	45	< 20	< 1	< 20	< 10	410	37	7	17
133911	2.75	1.20	0.06	3.96	0.907	16.03	30.08	0.03	0.11	0.035	1.72	39.50	93.64	32	23	40	< 20	< 1	< 20	< 10	160	38	8	19
133912	1.61	0.37	0.04	8.18	1.311	15.49	26.47	0.02	0.05	0.066	0.68	40.37	93.04	50	17	66	< 20	3	< 20	< 10	680	47	8	20
133913	0.77	0.89	0.08	5.97	1.163	16.83	26.80	0.02	0.14	0.058	1.28	41.64	94.88	42	32	51	< 20	< 1	< 20	< 10	480	49	9	21
133914	0.95	1.29	0.10	6.19	1.177	16.80	26.89	0.03	0.20	0.055	1.24	41.08	95.06	43	51	47	< 20	3	< 20	< 10	620	52	10	26
133915	2.23	1.91	0.04	6.21	1.128	15.94	27.29	0.04	0.15	0.045	2.37	37.97	93.09	36	74	47	< 20	1	< 20	< 10	540	44	8	18
133916	1.76	0.64	0.03	8.12	1.334	15.23	26.71	0.02	0.05	0.040	1.15	38.89	92.21	41	17	61	< 20	4	< 20	< 10	870	57	9	24
133917	0.49	0.19	0.03	4.51	0.974	17.44	29.06	0.02	0.03	0.072	1.29	42.64	96.26	40	6	58	< 20	3	< 20	< 10	570	36	8	20
133918	1.76	0.20	0.02	3.94	0.974	17.26	29.37	0.02	0.02	0.033	0.73	42.03	94.60	46	12	41	< 20	< 1	< 20	< 10	630	47	9	20

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133841	< 2	3877	345	42	117	17	0.9	< 0.2	11	< 0.5	< 0.5	156	1.9	1260	2750	313	1230	207	53.1	116	15.5	73.8	12.4	31.0
133842	< 2	3794	211	35	292	31	0.6	< 0.2	10	< 0.5	< 0.5	191	1.4	1570	3300	356	1300	193	47.9	104	12.5	51.9	7.7	18.2
133843	< 2	2352	289	46	257	23	0.6	< 0.2	9	< 0.5	< 0.5	155	1.1	3100	5900	613	2180	299	69.9	149	16.5	66.5	10.2	24.2
133844	< 2	2309	230	23	380	43	0.5	< 0.2	10	< 0.5	< 0.5	201	2.7	2140	4590	503	1820	248	55.2	112	12.2	50.5	8.1	20.0
133845	< 2	2175	227	33	310	70	0.7	< 0.2	13	< 0.5	< 0.5	250	1.5	3290	6270	644	2260	286	62.7	124	12.6	47.8	7.9	21.7
133846	< 2	2697	152	16	146	25	< 0.5	< 0.2	5	< 0.5	< 0.5	297	0.6	1140	2780	332	1340	217	51.9	104	10.2	38.5	6.0	14.4
133847	< 2	2390	248	48	200	58	0.6	< 0.2	6	< 0.5	< 0.5	546	1.0	4270	7340	699	2260	242	50.3	106	12.6	53.6	8.6	23.0
133848	< 2	2510	270	52	140	122	0.7	< 0.2	11	< 0.5	< 0.5	405	3.1	4630	7990	743	2350	239	49.6	107	12.9	57.4	9.7	25.6
133849	< 2	7	< 2	< 4	< 1	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	10.4	16.3	1.42	4.7	0.5	0.11	0.2	< 0.1	0.1	< 0.1	< 0.1
133850	26	3006	872	219	366	51	1.7	< 0.2	42	< 0.5	< 0.5	13250	3.1	2560	4700	518	2160	459	128	320	43.4	213	35.2	83.5
133851	2	2819	183	47	469	16	< 0.5	< 0.2	12	< 0.5	< 0.5	431	0.7	2570	4840	492	1730	218	48.6	95.8	10.8	44.5	7.2	18.3
133852	< 2	2745	169	29	170	65	< 0.5	< 0.2	9	< 0.5	< 0.5	376	1.9	1690	3790	417	1520	211	49.3	102	11.1	44.1	6.5	15.8
133853	< 2	2472	322	64	123	194	0.8	< 0.2	7	< 0.5	< 0.5	275	1.7	2100	4690	535	2030	293	72.7	153	18.8	81.6	12.7	29.1
133854	< 2	2564	277	41	87	29	< 0.5	< 0.2	5	< 0.5	< 0.5	137	0.8	1050	2380	277	1100	173	44.2	106	14.8	67.8	11.0	25.5
133855	< 2	2926	522	69	121	23	0.8	< 0.2	7	< 0.5	< 0.5	203	1.3	1460	3410	391	1490	252	73.4	190	26.6	131	20.6	46.7
133856	< 2	3708	543	109	97	7	0.9	< 0.2	5	< 0.5	< 0.5	252	0.7	994	2390	296	1250	251	75.5	195	26.9	127	20.7	49.1
133857	< 2	4055	568	275	175	8	2.0	< 0.2	4	< 0.5	< 0.5	161	0.6	1130	2720	330	1390	266	74.8	186	25.1	124	21.4	53.3
133858	< 2	3560	301	169	111	13	1.2	< 0.2	5	< 0.5	< 0.5	151	0.6	1260	3090	371	1510	249	62.7	138	16.5	68.7	11.2	26.9
133859	< 2	4370	377	179	147	5	1.1	< 0.2	7	< 0.5	< 0.5	165	0.4	919	2230	273	1140	202	53.4	124	17.7	79.4	13.1	31.0
133860	2	3698	573	160	196	16	1.0	< 0.2	5	< 0.5	< 0.5	233	0.9	1430	3450	410	1680	299	80.4	195	26.9	135	22.2	54.0
133861	< 2	2740	276	96	88	20	0.8	< 0.2	7	< 0.5	< 0.5	180	1.4	1490	3730	441	1700	246	57.7	126	14.8	64.1	10.2	23.5
133862	< 2	3051	338	97	78	15	0.7	< 0.2	5	< 0.5	< 0.5	245	1.0	1380	3420	402	1560	237	58.0	134	16.7	78.3	12.5	29.7
133863	< 2	3141	418	46	94	12	0.5	< 0.2	4	< 0.5	< 0.5	231	0.6	1800	3900	438	1660	255	65.7	157	20.7	97.8	16.3	38.7
133864	< 2	3448	426	122	84	15	0.9	< 0.2	2	< 0.5	< 0.5	162	0.5	1270	3120	376	1560	263	68.5	158	21.0	102	17.1	41.8
133865	< 2	3437	218	64	138	14	0.6	< 0.2	8	< 0.5	< 0.5	243	0.5	1670	3510	392	1500	221	55.4	123	14.0	56.9	8.6	19.9
133866	< 2	3001	234	70	107	27	0.6	< 0.2	10	< 0.5	< 0.5	221	0.8	1820	4070	452	1730	266	67.9	150	15.9	64.0	8.9	18.2
133867	< 2	3486	148	36	112	62	0.5	< 0.2	9	< 0.5	< 0.5	188	1.7	1730	3680	394	1430	206	50.3	107	11.8	43.8	5.9	12.6
133868	< 2	3568	235	50	218	12	< 0.5	< 0.2	7	< 0.5	< 0.5	172	0.6	1200	2760	321	1240	197	51.0	115	13.6	57.3	8.9	20.8
133869	< 2	3103	356	55	83	12	< 0.5	< 0.2	6	< 0.5	< 0.5	217	0.6	1960	4120	453	1710	264	67.4	155	17.8	82.6	13.0	31.1
133870	< 2	3617	347	100	96	14	0.8	< 0.2	5	< 0.5	< 0.5	169	0.5	1340	3120	369	1470	228	58.5	133	18.0	82.0	13.4	31.2
133871	< 2	3025	293	158	136	37	1.2	< 0.2	5	< 0.5	< 0.5	204	1.1	2010	4550	519	1990	277	63.9	141	16.7	69.7	11.0	26.4
133872	< 2	2970	210	56	308	13	< 0.5	< 0.2	11	< 0.5	< 0.5	142	1.2	2000	4370	491	1870	299	73.9	167	16.0	56.0	7.4	16.7
133873	< 2	3190	807	105	127	28	1.1	< 0.2	8	< 0.5	< 0.5	154	0.8	1770	4450	544	2220	369	102	265	37.9	187	30.7	70.5
133874	< 2	24	5	7	13	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	11.6	24.8	2.72	10.0	1.6	0.40	1.0	0.1	0.7	< 0.1	0.3
133875	37	20460	900	215	10	36	2.8	< 0.2	< 1	7.7	1.9	917	9.9	17900	28600	2580	8020	857	199	380	36.1	155	25.0	63.9
133876	< 2	3239	628	104	168	13	0.9	< 0.2	8	< 0.5	< 0.5	130	1.0	1790	4400	528	2170	346	90.4	211	29.1	143	23.7	59.8
133877	< 2	3073	568	104	162	15	0.9	< 0.2	11	< 0.5	< 0.5	125	1.7	2030	5010	601	2430	376	94.5	205	25.5	128	20.6	50.6
133878	< 2	2862	439	55	170	22	0.7	< 0.2	10	< 0.5	< 0.5	189	1.7	2940	6350	678	2450	331	82.0	187	23.3	110	16.8	36.1
133879	< 2	3207	765	86	115	21	1.1	< 0.2	5	< 0.5	< 0.5	179	1.7	2100	5210	601	2330	365	101	261	38.5	194	31.4	73.0
133880	< 2	3167	258	69	133	25	0.8	< 0.2	6	< 0.5	< 0.5	142	1.9	2200	5030	546	1990	287	70.5	149	17.1	65.7	9.9	22.5
133881	< 2	2949	430	63	118	26	0.6	< 0.2	5	< 0.5	< 0.5	247	1.4	1720	4100	478	1900	299	76.8	175	22.7	105	16.6	37.7
133882	< 2	3021	320	63	165	10	0.6	< 0.2	10	< 0.5	< 0.5	283	1.5	3440	6910	670	2230	295	72.9	164	17.7	74.7	11.2	25.4
133883	< 2	2844	219	88	147	7	2.7	< 0.2	8	0.5	< 0.5	579	1.1	4560	7950	757	2480	286	60.9	92.6	10.7	49.5	7.8	19.5
133884	< 2	3011	204	105	131	9	2.3	< 0.2	5	< 0.5	< 0.5	3068	1.6	3280	6790	732	2620	333	75.9	124	13.1	52.7	7.2	17.1
133885	< 2	2713	177	69	115	6	2.6	< 0.2	7	0.5	< 0.5	355	0.7	5120	8620	803	2540	270	57.2	88.8	9.7	39.5	5.8	13.6
133886	< 2	2234	143	65	93	39	2.6	< 0.2	6	< 0.5	< 0.5	276	1.4	3940	7000	663	2130	255	56.7	95.4	9.2	37.2	5.1	12.0
133887	< 2	2550	159	66	122	40	2.2	< 0.2	6	< 0.5	< 0.5	306	1.3	4490	8290	812	2540	286	60.2	95.3	9.6	40.2	5.5	12.1
133888	< 2	2667	213	82	134	25	2.5	< 0.2	7	< 0.5	< 0.5	1149	0.7	6490	10400	957	2870	289	57.2	87.3	9.9	45.8	6.9	16.3
133889	< 2	2661	194	40	116	19	1.9	< 0.2	5	0.6	< 0.5	723	0.7	3770	6860	713	2530	320	68.6	111	11.9	49.3	6.9	14.0
133890	< 2	2823	199	26	123	11	2.0	< 0.2	4	< 0.5	< 0.5	440	< 0.4	2430	5390	660	2690	384	83.2	131	12.5	52.3	7.1	14.2
133891	< 2	2650	195	57	271	16	< 0.5	< 0.2	7	< 0.5	< 0.5	227	0.7	2720	5430	581	2230	316	70.4	141	12.8	51.0	7.1	15.6
133892	< 2	3269	248	419	105	5	5.6	< 0.2	4	0.6	< 0.5	371	0.5	2490	5640	680	2710	414	96.3	160	15.7	60.0	8.6	19.3

Activation Laboratories Ltd. Report: A13-11636

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133893	< 2	3167	285	191	198	20	3.0	< 0.2	5	0.5	< 0.5	340	< 0.4	2780	6090	723	2870	439	106	183	18.1	72.1	10.3	24.0
133894	< 2	3538	406	110	86	12	2.0	< 0.2	4	< 0.5	< 0.5	598	0.6	2320	4860	566	2250	367	95.3	188	23.6	106	16.1	35.3
133895	< 2	2943	283	88	137	18	2.5	< 0.2	11	< 0.5	< 0.5	138	1.0	3320	6890	755	2700	367	86.1	163	19.0	77.4	10.9	23.1
133896	< 2	4273	169	30	113	12	2.0	< 0.2	7	0.5	< 0.5	140	< 0.4	1430	3070	377	1480	262	63.3	119	11.2	44.7	6.1	13.8
133897	< 2	4209	195	57	110	28	2.0	< 0.2	5	0.6	< 0.5	201	< 0.4	1390	2950	350	1370	247	64.5	126	13.2	52.5	7.4	16.0
133898	< 2	3519	323	158	83	26	2.3	< 0.2	8	0.6	< 0.5	183	0.5	2260	5000	578	2270	365	90.6	173	18.9	81.2	11.8	26.3
133899	< 2	17	< 2	11	< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	< 3	< 0.4	13.4	28.6	3.17	11.0	1.5	0.43	0.9	< 0.1	0.4	< 0.1	0.1
133900	27	2995	859	219	355	54	3.3	< 0.2	46	0.8	0.5	13240	2.3	2560	4750	542	2300	487	133	328	42.2	206	34.1	77.8
133901	< 2	3357	287	141	93	77	2.0	< 0.2	3	< 0.5	< 0.5	250	< 0.4	1500	3540	444	1860	314	77.1	151	17.3	70.9	10.6	24.0
133902	< 2	3001	258	46	127	50	1.9	< 0.2	5	0.7	< 0.5	269	0.4	1730	3880	468	1900	338	87.8	173	18.8	77.2	10.4	21.0
133903	< 2	2943	252	169	212	19	2.6	< 0.2	6	0.5	< 0.5	400	< 0.4	3810	6620	680	2350	291	66.9	118	13.4	61.0	8.8	19.7
133904	< 2	2843	234	139	235	36	2.6	< 0.2	8	< 0.5	< 0.5	332	0.7	4670	8000	781	2590	318	70.4	121	13.4	57.1	8.3	20.3
133905	3	3109	231	173	158	44	2.9	< 0.2	7	0.5	< 0.5	789	1.1	6540	10200	944	3030	341	72.6	117	12.7	54.7	8.2	18.9
133906	< 2	3085	312	161	216	9	3.1	< 0.2	11	0.5	< 0.5	769	0.8	2860	5850	649	2470	353	81.9	154	18.7	79.1	11.7	25.3
133907	< 2	18	3	8	14	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	11.9	22.0	2.24	7.6	1.0	0.25	0.5	< 0.1	0.3	< 0.1	0.1
133908	36	20170	900	213	10	34	4.4	< 0.2	1	6.5	1.8	919	6.4	17900	28200	2540	7780	856	196	372	36.3	151	24.3	61.4
133909	2	3196	260	217	344	3	3.2	< 0.2	6	< 0.5	< 0.5	981	0.4	1800	4280	512	1990	254	53.7	92.4	11.2	55.7	9.1	22.4
133910	4	3335	225	122	155	3	1.4	< 0.2	4	< 0.5	< 0.5	1362	< 0.4	2100	4560	525	2030	270	56.7	95.1	10.7	50.8	8.0	19.7
133911	3	3464	215	153	84	8	2.0	< 0.2	3	< 0.5	< 0.5	868	< 0.4	1710	4320	550	2290	327	70.6	118	12.0	49.8	7.5	18.2
133912	< 2	3858	238	56	219	3	1.4	< 0.2	10	< 0.5	< 0.5	3351	0.9	3370	6200	651	2360	331	75.8	142	16.3	62.9	8.7	19.2
133913	4	3523	368	132	131	< 2	1.9	< 0.2	7	< 0.5	< 0.5	925	0.6	2710	5850	675	2640	382	93.5	179	22.2	99.9	14.5	32.1
133914	5	3498	354	147	107	< 2	1.2	< 0.2	7	< 0.5	< 0.5	1032	0.8	2420	5150	561	2120	300	74.4	171	20.9	87.4	12.6	25.4
133915	5	3910	315	225	113	< 2	2.9	< 0.2	7	< 0.5	< 0.5	2616	0.7	3230	5780	617	2320	309	71.8	128	15.7	76.6	12.1	26.8
133916	< 2	3134	190	90	280	4	1.5	< 0.2	6	< 0.5	< 0.5	5825	0.8	3990	7050	720	2540	378	88.9	145	12.4	47.1	6.3	14.1
133917	< 2	3399	191	70	163	9	1.3	< 0.2	5	< 0.5	< 0.5	1431	< 0.4	1940	4240	499	2070	358	87.8	150	12.9	52.2	7.0	15.1
133918	< 2	3298	245	143	104	< 2	1.3	< 0.2	4	< 0.5	< 0.5	1745	< 0.4	2560	5410	631	2430	304	66.4	122	13.2	61.2	9.5	20.9

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133841	3.97	22.4	2.96	1.0	< 0.1	< 1	0.4	312	346	0.5	3.20
133842	2.32	12.5	1.58	0.8	< 0.1	2	0.4	258	323	0.1	3.40
133843	2.95	17.4	2.26	1.0	< 0.1	1	0.2	158	372	< 0.1	3.57
133844	2.63	15.6	1.98	0.6	< 0.1	2	0.2	173	256	< 0.1	2.27
133845	3.11	18.5	2.45	0.8	< 0.1	2	0.2	132	268	< 0.1	3.32
133846	2.02	11.9	1.47	0.5	< 0.1	< 1	0.2	72	147	< 0.1	2.23
133847	3.04	18.2	2.46	1.1	< 0.1	5	0.2	114	230	< 0.1	2.94
133848	3.73	23.0	3.03	1.3	< 0.1	3	0.4	176	241	< 0.1	3.01
133849	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	3	< 0.1	< 5	0.8	< 0.1	0.400
133850	9.99	54.6	6.64	5.3	2.1	37	0.4	551	889	2.6	0.0250
133851	2.59	15.9	2.17	1.0	< 0.1	1	0.3	66	174	0.1	2.09
133852	2.09	11.5	1.45	0.7	< 0.1	1	0.2	201	207	0.2	3.04
133853	3.44	19.3	2.43	1.4	< 0.1	2	0.3	163	254	0.2	3.24
133854	3.10	17.4	2.19	0.9	< 0.1	1	0.2	59	185	< 0.1	3.14
133855	5.46	29.3	3.88	1.8	< 0.1	2	0.3	187	365	0.1	3.17
133856	6.02	34.4	4.40	1.8	< 0.1	2	0.2	125	275	0.2	3.35
133857	7.01	41.6	5.61	3.2	< 0.1	1	0.1	97	278	0.2	3.18
133858	3.52	21.1	2.81	2.0	< 0.1	2	0.1	99	265	0.1	3.31
133859	3.90	23.3	3.10	2.1	< 0.1	2	0.1	67	192	0.2	2.56
133860	6.79	39.0	5.09	2.6	< 0.1	2	0.3	93	328	0.2	3.67
133861	3.00	17.7	2.45	1.2	< 0.1	2	0.1	118	294	< 0.1	1.56
133862	3.84	22.5	3.04	1.5	< 0.1	2	< 0.1	103	283	< 0.1	1.55
133863	4.80	27.5	3.65	1.2	< 0.1	1	< 0.1	85	310	< 0.1	3.16
133864	5.29	30.5	4.09	1.8	< 0.1	1	0.1	99	267	< 0.1	3.18
133865	2.41	14.3	1.93	1.1	< 0.1	3	0.1	71	211	< 0.1	3.28
133866	2.17	12.7	1.74	1.2	< 0.1	2	0.1	67	300	0.3	3.46
133867	1.43	7.9	1.02	0.8	< 0.1	10	0.2	139	274	< 0.1	3.41
133868	2.52	14.1	1.81	0.8	< 0.1	3	< 0.1	79	217	0.2	3.29
133869	3.77	21.4	2.86	1.1	< 0.1	29	< 0.1	120	356	< 0.1	3.39
133870	3.90	22.5	2.93	1.6	< 0.1	5	0.1	89	211	0.1	3.28
133871	3.45	20.3	2.71	2.2	< 0.1	2	0.2	152	278	< 0.1	3.34
133872	2.00	12.3	1.64	1.2	< 0.1	3	0.1	244	464	0.1	1.53
133873	8.87	49.6	6.46	2.2	< 0.1	4	< 0.1	171	529	< 0.1	1.88
133874	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	4.1	< 0.1	0.400
133875	8.40	50.9	7.04	3.3	< 0.1	4	2.5	1020	164	205	0.0250
133876	7.52	43.7	5.71	2.1	< 0.1	3	0.2	144	403	< 0.1	3.38
133877	6.27	35.0	4.69	2.0	< 0.1	2	0.1	222	517	< 0.1	3.40
133878	4.44	24.4	3.21	1.3	< 0.1	3	0.1	180	450	< 0.1	2.25
133879	8.45	46.8	5.96	2.2	< 0.1	4	0.2	152	464	0.3	2.31
133880	2.75	17.0	2.26	1.1	< 0.1	2	0.2	225	396	0.2	2.26
133881	4.73	26.2	3.36	1.3	< 0.1	2	0.2	156	344	< 0.1	3.36
133882	3.14	17.9	2.39	1.2	< 0.1	< 1	0.1	157	419	< 0.1	1.71
133883	2.71	17.0	2.45	1.5	< 0.1	5	0.2	128	216	< 0.1	2.72
133884	2.15	12.7	1.80	1.3	< 0.1	4	0.2	123	160	< 0.1	2.30
133885	1.74	10.1	1.55	1.1	< 0.1	5	0.1	119	201	< 0.1	2.73
133886	1.49	8.2	1.16	1.0	< 0.1	4	0.1	190	234	< 0.1	1.18
133887	1.58	9.2	1.27	1.1	< 0.1	3	0.1	476	253	< 0.1	1.28
133888	2.15	11.9	1.68	1.2	< 0.1	4	< 0.1	65	178	< 0.1	3.27
133889	1.59	9.1	1.16	0.8	< 0.1	3	< 0.1	109	153	< 0.1	2.86
133890	1.61	8.9	1.14	0.6	< 0.1	4	< 0.1	67	203	< 0.1	3.38
133891	1.73	9.7	1.18	1.1	< 0.1	< 1	< 0.1	124	202	< 0.1	3.44

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133892	2.58	15.4	2.15	4.1	< 0.1	4	< 0.1	124	222	< 0.1	3.02
133893	3.01	16.8	2.15	2.2	< 0.1	4	< 0.1	74	164	< 0.1	3.88
133894	4.11	22.8	2.74	1.6	< 0.1	4	< 0.1	111	291	< 0.1	2.72
133895	2.87	15.2	1.93	1.5	< 0.1	3	0.1	286	461	< 0.1	3.55
133896	1.63	8.4	1.05	0.6	< 0.1	3	< 0.1	117	272	< 0.1	2.99
133897	1.85	10.5	1.31	0.8	< 0.1	5	< 0.1	115	259	< 0.1	2.66
133898	3.03	17.3	2.19	1.8	< 0.1	6	< 0.1	146	345	< 0.1	3.08
133899	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.8	< 0.1	0.440
133900	9.35	49.9	6.14	5.2	1.9	32	0.4	595	830	2.6	0.0250
133901	2.88	16.0	1.99	1.6	< 0.1	4	0.1	103	237	< 0.1	3.42
133902	2.30	11.8	1.42	0.9	< 0.1	10	0.1	184	310	< 0.1	3.12
133903	2.41	13.6	1.83	2.3	< 0.1	4	0.1	94	241	< 0.1	3.35
133904	2.29	13.4	1.82	2.0	< 0.1	19	0.1	141	285	< 0.1	3.33
133905	2.36	13.6	1.83	2.5	< 0.1	4	0.2	146	219	< 0.1	3.38
133906	3.09	17.4	2.32	2.4	< 0.1	5	0.1	188	457	< 0.1	3.98
133907	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.5	< 0.1	0.440
133908	8.05	46.4	6.40	3.1	< 0.1	6	2.1	1020	153	186	0.0250
133909	3.05	17.9	2.38	3.0	< 0.1	5	0.4	113	194	< 0.1	2.37
133910	2.37	13.5	1.80	1.7	< 0.1	180	0.2	98	155	< 0.1	3.26
133911	2.20	13.0	1.70	1.8	< 0.1	12	0.1	74	96.3	< 0.1	3.28
133912	2.09	12.1	1.56	1.0	< 0.1	4	< 0.1	205	275	< 0.1	3.49
133913	3.41	16.3	2.04	2.0	< 0.1	3	0.1	133	240	0.1	1.46
133914	2.73	14.5	1.85	2.3	< 0.1	< 1	0.2	122	225	< 0.1	1.67
133915	3.17	17.4	2.34	3.1	< 0.1	4	0.1	122	138	< 0.1	3.45
133916	1.71	9.2	1.21	1.2	< 0.1	3	< 0.1	235	191	< 0.1	3.31
133917	1.67	8.8	1.10	0.9	< 0.1	3	< 0.1	103	198	0.2	2.13
133918	2.47	14.6	2.04	2.0	< 0.1	2	< 0.1	72	208	< 0.1	2.80

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.13	11.51	1.87	0.73	0.012	0.34	42.71	0.86	0.54	0.117	30.20					1655								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
NIST 694 Meas	3.17																							
NIST 694 Cert	3.2																							
NIST 694 Meas	3.04																							
NIST 694 Cert	3.2																							
DNC-1 Meas		47.07	18.58	9.97	0.147	10.15	11.46	1.92	0.22	0.478	0.07			31		158	270	57	260	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.13	12.94	3.19	0.140	0.14	0.61	2.46	5.40	0.283	0.03			5	4	6								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.81	15.54	10.76	0.166	6.28	11.04	2.26	0.64	1.062	0.13			36	< 1	281	100	44	70	100	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.60	20.31	6.15	0.107	0.50	8.14	6.88	1.65	0.285	0.13			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																				60				
CTA-AC-1 Cert																				54.0				
BIR-1a Meas		48.07	15.49	11.40	0.173	9.50	13.60	1.79	0.02	0.969	0.02			43	< 1	345	370	54	170	130	70	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1030	97		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		26	70	2600	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC70009 (GBW07241) Meas																		4		980	100	17	11	72
NCS DC70009 (GBW07241) Cert																		3.7		960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		47		410				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		< 30	17		15
JR-1 Cert																			1.67		30.6	16.1		16.3
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133855 Orig	0.34	0.25	0.07	10.00	1.229	14.54	26.87	0.04	0.04	0.116	2.89	38.48	94.54	58	5	70	< 20	6	< 20	< 10	740	15	3	12
133855 Dup	0.33	0.24	0.06	9.72	1.195	14.08	26.10	0.04	0.04	0.110	2.79	38.48	92.86	56	5	69	< 20	6	< 20	< 10	740	15	3	13
133872 Orig	0.22	0.18	0.04	11.42	1.354	15.10	26.02	0.03	0.03	0.151	0.68	40.72	95.73	72	11	80	< 20	9	< 20	< 10	920	44	9	26
133872 Dup	0.22	0.17	0.04	11.13	1.300	14.53	25.11	0.03	0.03	0.145	0.66	40.72	93.86	69	11	80	< 20	9	< 20	< 10	890	43	9	25
133882 Orig	0.63	0.32	0.06	9.28	1.503	13.80	27.03	0.03	0.06	0.086	2.60	37.77	92.55	59	7	55	< 20	6	< 20	< 10	850	63	10	30
133882 Dup	0.66	0.29	0.06	9.35	1.524	14.07	27.20	0.03	0.06	0.089	2.63	37.77	93.08	59	7	56	< 20	7	< 20	< 10	880	65	10	31
133890 Orig	0.35	1.25	0.02	5.94	1.196	16.54	27.82	0.02	0.02	0.034	0.85	42.38	96.08	51	5	58	< 20	3	< 20	< 10	310	48	10	23
133890 Split	0.33	1.22	0.02	5.84	1.170	15.98	27.59	0.02	0.02	0.033	0.84	41.85	94.59	50	5	58	< 20	4	< 20	< 10	280	48	10	24
133901 Orig	0.43	0.26	0.04	5.12	1.010	15.28	29.78	0.04	0.04	0.062	3.97	39.54	95.14	37	6	47	< 20	4	< 20	< 10	300	30	7	19

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133901 Split	0.44	0.25	0.04	5.09	1.011	15.11	29.88	0.04	0.04	0.063	3.94	39.16	94.62	38	6	49	< 20	4	< 20	< 10	300	32	7	19
133914 Orig	0.93	1.30	0.10	6.11	1.162	16.60	26.55	0.03	0.20	0.055	1.22	41.08	94.40	43	50	46	< 20	2	< 20	< 10	620	51	9	25
133914 Dup	0.96	1.29	0.10	6.27	1.191	17.00	27.23	0.03	0.21	0.055	1.26	41.08	95.72	44	51	48	< 20	3	< 20	< 10	620	53	10	26
133918 Orig	1.76	0.20	0.02	3.94	0.974	17.26	29.37	0.02	0.02	0.033	0.73	42.03	94.60	46	12	41	< 20	< 1	< 20	< 10	630	47	9	20
133918 Split	1.76	0.19	0.02	3.87	0.958	17.08	28.73	0.02	0.03	0.032	0.74	41.92	93.59	45	12	41	< 20	< 1	< 20	< 10	620	45	9	19
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							
Method Blank	< 0.01																							
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		145	15	34								106		3.9			5.2		0.59					
DNC-1 Cert		144.0	18.0	38								118		3.6			5.20		0.59					
GBW 07113 Meas		41	46	405								498												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.4			48.3	91.4		43.4	8.0	1.43		0.9	5.1		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		197	19	88		< 2	< 0.5					177	< 0.4	10.4	23.1		12.3	3.4	1.06		0.7	3.8	0.8	
W-2a Cert		190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1203	116	522								344												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2160	3320		1110	164	44.4	125				
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124				
BIR-1a Meas		106	13	15								7					2.4		0.52	1.9				
BIR-1a Cert		110	16	18								6					2.5		0.55	2.0				
NCS DC86312 Meas														2380	181		1580			226	33.9	183	35.5	95.8
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											265													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	44.0	85.9	9.77	37.7	7.9	1.64	7.1	1.2	6.5	1.3	3.6
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5
NCS DC70009 (GBW07241) Meas	506							1.3	1700		44.7			23.6	59.9	7.63	31.7	12.9		15.1	3.5	22.7	4.7	13.6
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						24								262	473	45.0	148	24.0	3.62		3.8	23.0	5.0	14.5
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								803	1400	128	395	50.9	8.14		5.9	33.0	6.6	19.2
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	247					3	< 0.5	< 0.2		1.3	21.0		0.6	20.4	48.4	5.83	23.3	5.9	0.28		1.1			
JR-1 Cert	257					3.25	0.031	0.028		1.19	20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30		1.01			
NCS DC86318 Meas														1950	422	728	3400	1730	18.8	2070	478	2980	561	1560
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														20900	28300	2300	6440	527	86.7					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133855 Orig	< 2	2960	531	68	125	23	0.8	< 0.2	7	< 0.5	< 0.5	205	1.3	1500	3530	403	1540	262	76.1	195	27.4	135	21.2	47.8
133855 Dup	< 2	2893	513	69	116	22	0.8	< 0.2	8	< 0.5	< 0.5	200	1.3	1420	3280	378	1450	242	70.7	184	25.8	128	20.0	45.6
133872 Orig	< 2	3028	215	56	300	13	< 0.5	< 0.2	11	< 0.5	< 0.5	145	1.2	2040	4460	503	1930	308	76.3	171	16.4	57.2	7.7	17.4
133872 Dup	< 2	2911	206	55	316	13	0.6	< 0.2	11	< 0.5	< 0.5	139	1.2	1960	4280	480	1800	289	71.6	164	15.6	54.8	7.2	16.0
133882 Orig	< 2	3006	319	63	163	10	0.6	< 0.2	10	< 0.5	< 0.5	281	1.6	3400	6810	659	2200	290	72.4	162	17.5	73.6	11.1	24.9
133882 Dup	< 2	3036	321	63	168	10	0.6	< 0.2	10	< 0.5	< 0.5	285	1.4	3470	7020	680	2260	299	73.4	167	17.9	75.9	11.3	26.0
133890 Orig	< 2	2823	199	26	123	11	2.0	< 0.2	4	< 0.5	< 0.5	440	< 0.4	2430	5390	660	2690	384	83.2	131	12.5	52.3	7.1	14.2
133890 Split	< 2	2727	197	27	141	11	0.6	< 0.2	4	< 0.5	< 0.5	437	< 0.4	2350	5310	662	2760	384	81.3	138	13.6	54.0	7.3	14.9
133901 Orig	< 2	3357	287	141	93	77	2.0	< 0.2	3	< 0.5	< 0.5	250	< 0.4	1500	3540	444	1860	314	77.1	151	17.3	70.9	10.6	24.0

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133901 Split	< 2	3410	291	144	94	75	2.2	< 0.2	3	< 0.5	< 0.5	245	< 0.4	1530	3620	463	1880	316	78.7	151	16.8	70.1	10.6	23.3
133914 Orig	5	3451	352	145	106	< 2	1.2	< 0.2	6	< 0.5	< 0.5	1021	0.7	2450	5140	564	2130	303	75.6	171	21.1	87.8	12.8	26.0
133914 Dup	5	3545	357	150	108	< 2	1.1	< 0.2	7	< 0.5	< 0.5	1044	0.8	2400	5160	558	2110	297	73.1	170	20.7	86.9	12.5	24.9
133918 Orig	< 2	3298	245	143	104	< 2	1.3	< 0.2	4	< 0.5	< 0.5	1745	< 0.4	2560	5410	631	2430	304	66.4	122	13.2	61.2	9.5	20.9
133918 Split	< 2	3280	243	141	97	< 2	1.9	< 0.2	3	< 0.5	< 0.5	1727	< 0.4	2600	5520	638	2430	302	67.2	119	13.5	61.4	9.8	21.6
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								
Method Blank																								
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									918	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.9	0.42		0.7					4.5
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28200	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1			0.5	< 1	< 0.1	10	2.4	0.5
W-2a Cert	0.380	2.10			0.500	0.300	0.200	9.30	2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.9	1.13						22.7	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.8								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.1	12.0						24.9	
NCS DC86312 Cert	15.1	87.79	11.96						23.6	
ZW-C Meas					83.1	329	34.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.59	3.5	0.49					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC70009 (GBW07241) Meas			2.33			2200			29.7	
NCS DC70009 (GBW07241) Cert			2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.41	15.2	2.14						51.0	135
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.96	18.6	2.49						35.9	422
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.6	0.71	4.2	1.8		1.6	20	26.6	8.9
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	272	1740	259							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133855 Orig	5.61	30.4	4.07	1.8	< 0.1	2	0.3	189	377	0.1
133855 Dup	5.31	28.2	3.69	1.8	< 0.1	2	0.3	185	353	0.1
133872 Orig	2.05	12.6	1.67	1.3	< 0.1	3	0.1	244	479	0.1
133872 Dup	1.96	12.1	1.62	1.2	< 0.1	3	0.1	245	449	0.1
133882 Orig	3.07	17.6	2.34	1.2	< 0.1	< 1	0.1	150	410	< 0.1
133882 Dup	3.21	18.1	2.43	1.3	< 0.1	1	0.1	164	428	< 0.1
133890 Orig	1.61	8.9	1.14	0.6	< 0.1	4	< 0.1	67	203	< 0.1
133890 Split	1.59	8.9	1.12	0.7	< 0.1	2	< 0.1	78	202	< 0.1
133901 Orig	2.88	16.0	1.99	1.6	< 0.1	4	0.1	103	237	< 0.1

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133901 Split	2.85	15.7	1.97	1.6	< 0.1	2	0.1	102	232	< 0.1
133914 Orig	2.77	14.7	1.84	2.4	< 0.1	< 1	0.2	120	227	< 0.1
133914 Dup	2.68	14.4	1.85	2.3	< 0.1	< 1	0.2	123	224	< 0.1
133918 Orig	2.47	14.6	2.04	2.0	< 0.1	2	< 0.1	72	208	< 0.1
133918 Split	2.52	14.7	2.03	1.9	< 0.1	2	< 0.1	75	209	< 0.1
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										
Method Blank										
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 25-Sep-13
Invoice No.: A13-11639
Invoice Date: 18-Oct-13
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

5 Rock samples were submitted for analysis.

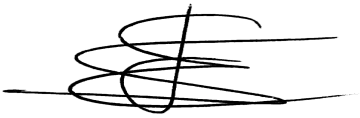
The following analytical packages were requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A13-11639**

Notes:
Total includes all elements in % oxide to the left of total.

CERTIFIED BY :



Emmanuel Eseme , Ph.D.
Quality Control

ISO/IEC 17025
SCC Accredited
LAB 266
LAB 266
Accrédité CCN

ACTIVATION LABORATORIES LTD.

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Activation Laboratories Ltd. Report: A13-11639

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133919	0.97	40.21	15.54	11.53	0.217	8.30	3.99	1.15	6.65	1.641	0.25	8.13	97.60	26	28	248	< 20	45	50	40	170	17	2	7
133920	0.88	39.82	15.53	10.91	0.256	7.98	4.84	1.43	6.23	1.572	0.24	9.03	97.84	27	33	234	< 20	36	50	10	120	15	2	< 5
133921	0.94	39.18	15.34	11.79	0.243	8.41	4.97	1.32	6.45	1.622	0.24	9.07	98.63	29	36	245	< 20	39	50	< 10	140	16	2	< 5
133922	0.97	43.35	14.60	7.57	0.303	6.93	7.09	4.24	2.75	1.699	0.55	10.98	100.1	33	9	252	< 20	22	30	< 10	260	23	2	< 5
133923	0.48	1.47	0.40	9.23	1.393	12.70	28.97	0.03	0.20	0.307	3.98	35.86	94.54	53	4	122	< 20	8	< 20	< 10	590	64	9	23

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133919	152	213	22	117	63	3	1.4	< 0.2	4	< 0.5	5.3	4212	< 0.4	45.6	81.2	8.62	31.9	5.7	1.41	4.0	0.7	4.0	0.8	2.3
133920	138	176	23	110	46	4	1.3	< 0.2	4	< 0.5	4.5	4951	< 0.4	41.3	74.9	7.90	29.6	5.5	1.36	4.2	0.7	3.9	0.8	2.4
133921	141	217	23	113	50	3	1.3	< 0.2	4	< 0.5	4.2	6051	< 0.4	43.5	78.6	8.48	31.5	5.6	1.33	4.1	0.7	3.9	0.8	2.4
133922	66	618	56	124	445	7	< 0.5	< 0.2	24	< 0.5	2.7	2043	< 0.4	1140	1610	148	431	43.3	10.3	21.9	2.7	12.7	2.1	5.1
133923	5	2602	259	69	262	37	1.0	< 0.2	13	< 0.5	< 0.5	302	0.8	3910	7000	739	2580	325	75.3	160	19.0	73.5	9.8	19.6

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133919	0.38	2.4	0.37	2.7	2.2	4	2.5	6	5.5	0.7	3.46
133920	0.37	2.5	0.37	2.4	2.1	3	2.9	< 5	5.0	0.7	4.03
133921	0.37	2.5	0.40	2.6	2.2	5	3.2	< 5	5.0	0.8	3.73
133922	0.66	4.4	0.61	3.1	2.6	11	1.5	7	26.7	0.7	2.13
133923	2.22	12.7	1.68	1.5	< 0.1	3	0.2	26	293	0.4	1.41

Quality Control

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1	5
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas	3.13	11.51	1.87	0.73	0.012	0.34	42.71	0.86	0.54	0.117	30.20					1655								
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740								
DNC-1 Meas		47.07	18.58	9.97	0.147	10.15	11.46	1.92	0.22	0.478	0.07			31		158	270	57	260	100	70			
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70			
GBW 07113 Meas		72.13	12.94	3.19	0.140	0.14	0.61	2.46	5.40	0.283	0.03			5	4	6								
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00								
LKSD-3 Meas																	90	31	50					
LKSD-3 Cert																	87.0	30.0	47.0					
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		52.81	15.54	10.76	0.166	6.28	11.04	2.26	0.64	1.062	0.13			36	< 1	281	100	44	70	100	80	17	2	
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00	
SY-4 Meas		49.60	20.31	6.15	0.107	0.50	8.14	6.88	1.65	0.285	0.13			1	3	8								
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0								
CTA-AC-1 Meas																				60				
CTA-AC-1 Cert																				54.0				
BIR-1a Meas		48.07	15.49	11.40	0.173	9.50	13.60	1.79	0.02	0.969	0.02			43	< 1	345	370	54	170	130	70	15		
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16		
NCS DC86312 Meas																								
NCS DC86312 Cert																								
ZW-C Meas																					1030	97		
ZW-C Cert																					1050.000	99		
NCS DC70014 Meas																		26	70	2600	7400	25		
NCS DC70014 Cert																		26	70	2600	7400	25.2		
NCS DC70009 (GBW07241) Meas																		4		980	100	17	11	72
NCS DC70009 (GBW07241) Cert																		3.7		960	100	16.5	11.2	69.9
OREAS 100a (Fusion) Meas																		17		170				
OREAS 100a (Fusion) Cert																		18.1		169				
OREAS 101a (Fusion) Meas																		47		410				
OREAS 101a (Fusion) Cert																		48.8		434				
JR-1 Meas																			< 20		< 30	17		15
JR-1 Cert																			1.67		30.6	16.1		16.3
NCS DC86318 Meas																								
NCS DC86318 Cert																								
SARM 3 Meas																								
SARM 3 Cert																								
USZ 42-2006 Meas																								
USZ 42-2006 Cert																								
133921 Orig	0.93	38.85	15.39	11.67	0.242	8.30	4.98	1.30	6.35	1.605	0.24	9.07	97.97	29	35	242	< 20	39	60	< 10	140	16	2	< 5
133921 Dup	0.96	39.52	15.29	11.92	0.244	8.52	4.96	1.34	6.56	1.639	0.24	9.07	99.30	29	36	248	< 20	39	50	< 10	140	16	2	< 5
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1	< 5
Method Blank	< 0.01																							

Quality Control

Analyte Symbol	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																								
DH-1a Cert																								
NIST 694 Meas																								
NIST 694 Cert																								
DNC-1 Meas		145	15	34								106		3.9			5.2		0.59					
DNC-1 Cert		144.0	18.0	38								118		3.6			5.20		0.59					
GBW 07113 Meas		41	46	405								498												
GBW 07113 Cert		43.0	43.0	403								506												
LKSD-3 Meas	72					< 2					2.4			48.3	91.4		43.4	8.0	1.43		0.9	5.1		
LKSD-3 Cert	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90		
OKA-2 Meas																								
OKA-2 Cert																								
W-2a Meas		197	19	88		< 2	< 0.5					177	< 0.4	10.4	23.1		12.3	3.4	1.06		0.7	3.8	0.8	
W-2a Cert		190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60	0.760	
SY-4 Meas		1203	116	522								344												
SY-4 Cert		1191	119	517								340												
CTA-AC-1 Meas														2160	3320		1110	164	44.4	125				
CTA-AC-1 Cert														2176	3326		1087	162	46.7	124				
BIR-1a Meas		106	13	15								7					2.4		0.52	1.9				
BIR-1a Cert		110	16	18								6					2.5		0.55	2.0				
NCS DC86312 Meas														2380	181		1580			226	33.9	183	35.5	95.8
NCS DC86312 Cert														2360	190		1600			225.0	34.6	183	36	96.2
ZW-C Meas											265													
ZW-C Cert											260													
NCS DC70014 Meas						270	16.7			180			80.3	44.0	85.9	9.77	37.7	7.9	1.64	7.1	1.2	6.5	1.3	3.6
NCS DC70014 Cert						270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7	1.3	3.5
NCS DC70009 (GBW07241) Meas	506							1.3	1700		44.7			23.6	59.9	7.63	31.7	12.9		15.1	3.5	22.7	4.7	13.6
NCS DC70009 (GBW07241) Cert	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7	4.5	13.4
OREAS 100a (Fusion) Meas						24								262	473	45.0	148	24.0	3.62		3.8	23.0	5.0	14.5
OREAS 100a (Fusion) Cert						24.1								260	463	47.1	152	23.6	3.71		3.80	23.2	4.81	14.9
OREAS 101a (Fusion) Meas						21								803	1400	128	395	50.9	8.14		5.9	33.0	6.6	19.2
OREAS 101a (Fusion) Cert						21.9								816	1396	134	403	48.8	8.06		5.92	33.3	6.46	19.5
JR-1 Meas	247					3	< 0.5	< 0.2		1.3	21.0		0.6	20.4	48.4	5.83	23.3	5.9	0.28		1.1			
JR-1 Cert	257					3.25	0.031	0.028		1.19	20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30		1.01			
NCS DC86318 Meas														1950	422	728	3400	1730	18.8	2070	478	2980	561	1560
NCS DC86318 Cert														1960	430	740	3430	1720	18.91	2095	470	3220	560	1750
SARM 3 Meas					979																			
SARM 3 Cert					978																			
USZ 42-2006 Meas														20900	28300	2300	6440	527	86.7					
USZ 42-2006 Cert														21100	27600	2300	6500	539	87.22					
133921 Orig	143	214	22	111	49	3	1.2	< 0.2	4	< 0.5	4.2	5933	< 0.4	44.6	79.7	8.45	31.5	5.4	1.30	4.0	0.7	3.8	0.8	2.4
133921 Dup	140	220	23	114	50	3	1.3	< 0.2	5	< 0.5	4.2	6169	< 0.4	42.4	77.5	8.51	31.6	5.7	1.36	4.2	0.7	4.0	0.8	2.4
Method Blank	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																								

Quality Control

Analyte Symbol	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas									918	
DH-1a Cert									910	
NIST 694 Meas										
NIST 694 Cert										
DNC-1 Meas		2.0								
DNC-1 Cert		2.0								
GBW 07113 Meas										
GBW 07113 Cert										
LKSD-3 Meas		2.9	0.42		0.7					4.5
LKSD-3 Cert		2.70	0.400		0.700					4.60
OKA-2 Meas									28200	
OKA-2 Cert									28900.000	
W-2a Meas	0.37	2.1			0.5	< 1	< 0.1	10	2.4	0.5
W-2a Cert	0.380	2.10			0.500	0.300	0.200	9.30	2.40	0.530
SY-4 Meas										
SY-4 Cert										
CTA-AC-1 Meas		10.9	1.13						22.7	4.0
CTA-AC-1 Cert		11.4	1.08						21.8	4.4
BIR-1a Meas		1.8								
BIR-1a Cert		1.7								
NCS DC86312 Meas	14.3	87.1	12.0						24.9	
NCS DC86312 Cert	15.1	87.79	11.96						23.6	
ZW-C Meas					83.1	329	34.8			
ZW-C Cert					82	320	34			
NCS DC70014 Meas	0.59	3.5	0.49					27200		
NCS DC70014 Cert	0.57	3.3	0.50					27200		
NCS DC70009 (GBW07241) Meas			2.33			2200			29.7	
NCS DC70009 (GBW07241) Cert			2.4			2200			28.3	
OREAS 100a (Fusion) Meas	2.41	15.2	2.14						51.0	135
OREAS 100a (Fusion) Cert	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	2.96	18.6	2.49						35.9	422
OREAS 101a (Fusion) Cert	2.90	17.5	2.66						36.6	422
JR-1 Meas		4.6	0.71	4.2	1.8		1.6	20	26.6	8.9
JR-1 Cert		4.55	0.71	4.51	1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	272	1740	259							
NCS DC86318 Cert	270	1840	260.0							
SARM 3 Meas										
SARM 3 Cert										
USZ 42-2006 Meas										
USZ 42-2006 Cert										
133921 Orig	0.36	2.4	0.37	2.6	2.1	3	3.1	< 5	5.0	0.8
133921 Dup	0.37	2.5	0.42	2.7	2.3	7	3.3	< 5	5.0	0.8
Method Blank	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank										

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03176 (i)
Invoice Date: 12-Dec-14
Your Reference: ASHRAM-BATCH #1

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

151 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03176 (i)**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133926	5.82	1.66	0.40	14.44	1.717	10.29	27.58	0.11	0.07	0.446	1.91	33.78	92.41	51	9	102	< 20	7	< 20	< 10	1440	24	3
133927	2.57	2.04	0.26	16.19	1.785	11.06	25.26	0.08	0.04	0.243	1.46	36.22	94.64	60	8	88	< 20	10	< 20	< 10	1370	19	3
133928	2.81	1.78	0.22	17.79	2.087	10.82	23.69	0.03	0.04	0.134	1.19	36.45	94.22	58	6	79	< 20	9	< 20	< 10	1500	26	5
133929	5.22	0.62	0.13	14.68	1.846	11.13	27.67	0.04	0.04	0.283	1.07	35.70	93.21	62	8	82	< 20	6	< 20	< 10	1100	24	4
133930	2.27	3.48	0.22	21.21	2.215	10.68	21.02	0.05	0.09	0.367	0.98	35.99	96.31	61	10	83	< 20	10	< 20	30	1170	23	4
133931	2.99	2.43	0.17	24.82	2.356	9.86	19.19	0.06	0.03	0.211	0.78	35.32	95.22	60	7	74	< 20	13	< 20	< 10	1350	21	4
133932	3.36	3.67	0.24	30.83	2.767	8.61	16.14	0.11	0.05	0.184	1.98	32.32	96.90	49	5	64	< 20	14	< 20	< 10	1560	21	3
133933	3.01	2.62	0.12	30.92	2.535	8.44	15.36	0.05	0.02	0.042	0.85	33.79	94.75	44	4	48	< 20	13	< 20	< 10	1760	21	4
133934missing																							
133935	< 0.01	98.13	0.18	1.31	0.024	0.09	0.21	0.08	0.03	0.003	< 0.01	0.17	100.2	< 1	< 1	5	110	< 1	< 20	< 10	< 30	< 1	2
133936	5.02	2.16	0.21	22.37	2.236	9.90	22.07	0.03	0.13	0.123	1.11	33.59	93.93	53	12	57	< 20	11	< 20	< 10	1590	23	4
133937	1.71	1.32	0.13	15.71	1.733	12.06	23.74	0.02	0.04	0.097	0.65	38.32	93.83	63	13	70	< 20	9	< 20	< 10	870	22	5
133938	6.73	0.44	0.11	9.27	1.389	12.46	31.09	0.04	0.05	0.097	0.59	36.38	91.93	50	11	53	< 20	5	< 20	< 10	1480	31	5
133939	4.30	1.69	0.09	10.56	1.475	12.69	28.05	0.03	0.05	0.077	0.70	37.37	92.77	52	10	51	< 20	7	< 20	< 10	1160	33	6
133940	4.80	1.71	0.10	10.30	1.439	12.38	28.28	0.03	0.06	0.086	0.71	36.72	91.80	51	9	53	< 20	7	< 20	< 10	1130	35	5
133941	5.43	1.34	0.14	10.57	1.553	12.54	28.49	0.05	0.07	0.075	0.62	36.88	92.32	48	9	52	< 20	5	< 20	< 10	1100	33	6
133942	11.3	1.37	0.08	9.18	1.335	11.05	33.34	0.03	0.05	0.094	0.56	32.04	89.14	42	13	44	< 20	5	< 20	< 10	1740	35	8
133943	6.27	1.19	0.09	11.21	1.734	12.17	29.17	0.03	0.05	0.130	0.59	35.95	92.32	48	10	52	< 20	5	< 20	< 10	950	28	4
133944	5.79	1.09	0.09	10.14	1.516	12.62	28.30	0.03	0.05	0.112	0.66	37.05	91.64	55	9	48	< 20	4	< 20	< 10	960	31	5
133945	4.93	1.59	0.08	14.06	1.968	12.31	26.77	0.03	0.05	0.134	0.83	36.12	93.92	46	10	53	< 20	5	< 20	< 10	1220	27	4
133946	5.11	1.68	0.21	12.84	1.756	11.76	27.75	0.08	0.07	0.159	1.41	35.67	93.39	49	9	61	< 20	5	< 20	< 10	660	29	5
133947	2.96	2.01	0.18	12.64	1.597	12.04	26.24	0.07	0.06	0.163	0.96	37.57	93.53	49	7	57	< 20	6	< 20	< 10	720	27	5
133948	4.28	4.57	0.54	11.85	1.570	11.33	26.37	0.20	0.13	0.148	1.29	34.94	92.92	52	9	59	< 20	6	< 20	< 10	910	31	6
133949	0.04	97.81	0.06	0.64	0.022	0.35	0.67	0.03	< 0.01	0.005	0.02	0.78	100.4	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	2	2
133950	6.61	21.02	3.04	28.02	2.353	7.09	17.67	0.31	1.32	1.464	0.54	12.37	95.19	21	13	158	170	29	50	30	1490	27	4
133951	5.45	3.68	0.54	10.56	1.466	11.57	27.74	0.21	0.13	0.119	0.79	34.75	91.54	52	9	54	< 20	5	< 20	< 10	500	28	4
133952	4.92	1.97	0.14	10.81	1.612	12.49	28.24	0.04	0.05	0.139	0.64	37.11	93.24	50	10	58	< 20	5	< 20	< 10	580	27	4
133953	7.22	2.39	0.15	9.90	1.475	11.76	29.66	0.04	0.04	0.085	0.96	34.40	90.87	48	10	49	< 20	5	< 20	< 10	890	28	4
133954	3.88	3.25	0.22	9.64	1.372	11.76	28.11	0.04	0.07	0.334	2.28	35.55	92.65	57	7	72	< 20	4	< 20	< 10	450	27	5
133955	4.69	2.66	0.21	10.89	1.548	12.06	28.98	0.04	0.13	0.385	1.18	35.88	93.95	57	7	71	< 20	5	< 20	< 10	1420	29	5
133956	4.26	4.07	0.10	12.11	1.465	10.15	27.27	0.04	0.04	0.139	3.30	32.84	91.54	63	7	68	< 20	6	< 20	< 10	1040	27	5
133957	1.36	1.61	0.13	9.87	1.250	12.77	27.23	0.04	0.03	0.141	1.29	39.59	93.95	67	6	84	< 20	5	< 20	20	550	25	5
133958	2.77	2.66	0.15	13.45	1.504	12.21	26.30	0.04	0.04	0.353	0.73	37.49	94.92	53	6	92	< 20	7	< 20	< 10	1350	25	5
133959	2.16	2.07	0.29	9.97	1.234	12.55	28.45	0.10	0.08	0.468	2.44	37.30	94.96	58	6	97	< 20	5	< 20	< 10	1030	27	6
133960	1.80	2.38	0.24	9.56	1.167	12.37	27.59	0.07	0.08	0.561	2.20	37.46	93.68	58	6	102	< 20	5	< 20	< 10	1000	26	5
133961	2.42	2.01	0.07	14.49	1.556	12.00	25.37	0.03	0.03	0.423	0.76	37.49	94.23	52	5	115	< 20	8	< 20	< 10	1480	28	5
133962	2.58	1.93	0.12	12.10	1.322	12.35	27.37	0.03	0.02	0.239	0.89	38.01	94.39	52	5	77	< 20	9	< 20	< 10	710	23	4
133963	2.86	3.42	0.47	10.93	1.249	12.36	27.31	0.19	0.11	0.300	0.64	37.68	94.65	46	5	80	< 20	7	< 20	< 10	800	21	4
133964	2.62	0.81	0.22	11.78	1.473	12.29	27.17	0.05	0.12	0.368	0.93	38.28	93.49	43	6	79	< 20	5	< 20	< 10	790	26	5
133965	3.23	1.48	0.27	16.74	1.908	11.60	23.94	0.11	0.09	0.110	0.74	36.87	93.85	43	6	61	< 20	7	< 20	< 10	830	31	6
133966	3.84	0.97	0.11	17.38	1.895	11.51	23.92	0.04	0.03	0.147	0.54	36.60	93.14	46	9	63	< 20	7	< 20	< 10	1180	25	5
133967	5.21	2.81	0.23	12.82	1.507	11.71	27.82	0.06	0.11	0.174	1.35	34.95	93.55	52	11	69	< 20	8	< 20	< 10	870	26	5
133968	5.14	2.24	0.36	18.54	1.852	11.31	23.83	0.15	0.10	0.396	0.72	34.97	94.48	48	10	99	< 20	9	< 20	< 10	1260	20	3
133969	3.97	2.47	0.07	9.56	1.214	13.03	28.33	0.02	0.06	0.167	0.93	37.25	93.11	50	12	62	< 20	4	< 20	< 10	940	22	4
133970	6.11	2.08	0.11	11.07	1.293	12.36	28.59	0.03	0.07	0.146	0.90	35.36	92.02	51	14	58	< 20	5	< 20	< 10	970	21	3
133971	5.08	2.36	0.29	12.04	1.425	12.44	27.49	0.13	0.11	0.459	0.85	35.27	92.86	49	12	76	< 20	5	< 20	< 10	830	23	4
133972	1.17	3.59	0.14	11.63	1.480	12.36	26.77	0.03	0.08	0.443	1.72	37.66	95.89	58	40	99	< 20	5	< 20	< 10	750	22	4
133973	4.05	1.07	0.08	10.92	1.396	13.01	27.84	0.03	0.06	0.070	0.86	37.20	92.56	50	9	55	< 20	5	< 20	< 10	950	26	4

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133974	< 0.01	98.89	0.11	1.34	0.019	0.07	0.19	0.05	0.01	0.002	0.03	0.09	100.8	< 1	< 1	< 5	50	< 1	< 20	10	< 30	1	1
133975	1.88	14.49	2.50	12.54	0.137	0.48	26.48	0.93	1.01	0.144	18.71	7.95	85.36	17	14	154	20	32	70	110	630	105	20
133976	1.58	0.94	0.08	11.52	1.500	13.33	26.48	0.02	0.05	0.061	0.97	39.82	94.77	51	8	59	< 20	7	< 20	< 10	850	38	10
133977	1.62	1.21	0.07	18.18	2.130	12.42	21.74	0.02	0.03	0.072	0.58	38.06	94.53	51	8	60	< 20	10	< 20	< 10	1980	21	4
133978	5.85	1.92	0.19	13.47	2.004	11.72	26.79	0.05	0.04	0.041	0.39	35.24	91.85	42	11	46	< 20	6	< 20	< 10	2750	26	5
133979	3.98	1.51	0.08	12.97	2.013	12.52	27.67	0.03	0.03	0.042	0.45	37.04	94.35	49	10	49	< 20	6	< 20	< 10	1930	25	4
133980	4.61	1.03	0.08	14.94	2.039	12.50	26.75	0.03	0.03	0.075	0.21	37.08	94.76	51	11	57	< 20	6	< 20	< 10	1380	22	4
133981	3.95	1.68	0.06	16.65	2.073	11.80	25.09	0.03	0.03	0.065	0.46	35.94	93.87	48	27	50	< 20	6	< 20	< 10	650	21	3
133982	6.92	2.05	0.05	13.47	1.803	11.62	27.57	0.03	0.03	0.048	0.84	34.24	91.74	52	18	48	< 20	5	< 20	< 10	960	25	3
133983	3.65	3.23	0.13	12.55	1.861	12.99	27.63	0.03	0.03	0.055	0.86	37.09	96.46	57	11	58	< 20	5	< 20	< 10	1120	24	4
133984	4.20	2.13	0.08	13.19	1.872	12.68	27.27	0.03	0.03	0.091	0.75	36.49	94.62	49	11	63	< 20	4	< 20	< 10	1100	26	4
133985	3.39	1.15	0.14	9.90	1.592	12.95	27.89	0.04	0.04	0.068	0.85	38.00	92.63	47	9	63	< 20	4	< 20	< 10	1010	26	5
133986	1.79	0.77	0.10	10.65	1.655	13.30	27.24	0.03	0.03	0.079	0.94	39.56	94.35	56	9	67	< 20	4	< 20	< 10	790	22	3
133987	5.79	0.79	0.11	7.65	1.389	12.94	30.68	0.05	0.04	0.078	1.03	36.88	91.65	53	10	73	< 20	2	< 20	< 10	1010	28	5
133988	0.05	97.79	0.14	0.68	0.029	0.24	0.57	0.07	0.02	0.002	0.02	0.60	100.2	1	< 1	< 5	50	< 1	< 20	< 10	< 30	1	2
133989	4.68	1.74	0.20	7.15	1.193	12.91	30.06	0.04	0.05	0.060	1.87	36.63	91.89	54	10	64	< 20	3	< 20	< 10	640	22	4
133990	3.98	2.55	0.27	7.28	1.190	12.96	30.00	0.05	0.06	0.057	1.86	36.58	92.86	51	10	63	< 20	3	< 20	< 10	520	20	3
133991	6.18	1.52	0.06	7.73	1.457	13.09	30.92	0.03	0.03	0.036	0.87	36.69	92.43	46	11	45	< 20	2	< 20	< 10	1020	24	4
133992	4.20	2.07	0.08	6.72	1.229	13.97	30.48	0.03	0.04	0.036	0.96	38.05	93.67	49	11	54	< 20	2	< 20	< 10	450	26	4
133993	2.51	1.59	0.13	8.56	1.477	13.56	28.89	0.03	0.05	0.046	1.05	39.17	94.55	58	7	59	< 20	5	< 20	< 10	790	34	8
133994	5.27	1.50	0.13	8.11	1.415	12.66	30.26	0.05	0.04	0.084	0.92	36.44	91.60	56	27	53	< 20	4	< 20	< 10	1160	28	4
133995	4.99	0.49	0.11	11.95	1.836	12.04	27.42	0.03	0.03	0.116	0.70	36.76	91.49	50	10	61	< 20	6	< 20	< 10	1370	24	4
133996	0.97	3.61	0.56	9.41	1.349	13.52	26.83	0.22	0.17	0.082	0.69	39.15	95.60	52	7	55	< 20	5	< 20	< 10	990	23	3
133997	0.38	4.16	0.29	11.09	1.133	12.80	23.21	0.16	0.20	0.132	1.60	37.27	92.04	75	10	112	< 20	5	< 20	< 10	1780	43	8
133998	0.40	2.84	0.49	9.91	0.948	13.16	23.91	0.06	0.36	0.167	2.16	36.71	90.72	36	12	94	< 20	9	< 20	< 10	2370	50	10
133999	< 0.01	99.12	0.07	0.93	0.019	0.13	0.29	0.04	0.01	0.001	0.01	0.15	100.8	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	1	1
134000	6.04	20.87	3.04	28.03	2.300	6.89	17.66	0.30	1.30	1.445	0.56	12.24	94.63	21	13	159	170	29	60	30	1460	23	4
134001	0.95	3.52	1.00	9.67	1.068	13.23	25.24	0.23	0.47	0.228	1.66	36.10	92.41	64	12	94	< 20	25	< 20	< 10	1760	28	5
134002	5.51	1.80	0.66	8.46	1.092	12.92	29.35	0.04	0.13	0.178	0.97	35.54	91.15	52	9	70	< 20	9	< 20	< 10	1320	26	4
134003	6.51	0.87	0.17	7.67	1.185	12.62	31.64	0.04	0.08	0.076	0.91	35.72	90.98	53	10	58	< 20	4	< 20	< 10	820	25	4
134004	4.59	0.54	0.09	10.61	1.376	12.88	28.46	0.03	0.04	0.063	0.68	37.76	92.52	56	8	62	< 20	5	< 20	< 10	1690	20	3
134005	3.48	1.08	0.08	8.02	1.210	13.47	29.47	0.03	0.05	0.067	1.32	38.14	92.93	52	9	68	< 20	4	< 20	< 10	640	26	4
134006	4.04	1.73	0.18	7.46	1.225	14.00	30.03	0.06	0.08	0.060	0.91	38.34	94.08	54	9	65	< 20	4	< 20	< 10	770	25	4
134007	4.37	1.25	0.15	8.79	1.419	13.32	29.60	0.05	0.06	0.063	1.17	36.96	92.83	52	8	62	< 20	4	< 20	< 10	800	33	6
134008	0.60	2.38	0.12	10.93	1.465	12.00	22.47	0.03	0.05	0.082	0.76	39.51	89.80	47	6	71	< 20	6	< 20	< 10	770	21	3
134009	5.15	1.95	0.11	8.37	1.263	12.90	29.84	0.03	0.05	0.076	1.21	35.97	91.78	48	9	67	< 20	3	< 20	< 10	870	31	5
134010	5.71	2.16	0.21	8.50	1.282	12.79	29.77	0.08	0.08	0.082	1.14	35.82	91.90	47	10	68	< 20	3	< 20	< 10	800	30	5
134011	2.97	0.93	0.12	8.48	1.272	13.45	27.82	0.03	0.07	0.054	0.79	38.97	92.00	49	8	65	< 20	5	< 20	< 10	700	25	4
134012	4.14	2.22	0.14	7.90	1.269	13.40	29.38	0.04	0.09	0.060	0.97	37.35	92.82	52	11	61	< 20	4	< 20	< 10	780	24	5
134013	3.25	0.49	0.11	6.73	1.275	14.48	29.34	0.03	0.09	0.033	1.18	39.40	93.14	52	10	62	< 20	2	< 20	< 10	710	30	8
134014	6.18	1.18	0.31	6.67	1.129	13.04	31.17	0.13	0.11	0.048	1.04	36.09	90.91	45	11	56	< 20	2	< 20	< 10	830	27	6
134015	11.1	0.67	0.14	6.56	1.109	11.95	35.48	0.05	0.07	0.060	1.05	32.69	89.85	33	16	50	< 20	< 1	< 20	< 10	1210	39	8
134016	7.30	0.68	0.18	6.35	1.113	13.02	33.10	0.04	0.12	0.060	1.24	34.91	90.83	35	15	58	< 20	3	< 20	< 10	1420	31	6
134017	8.26	0.24	0.08	6.65	1.126	12.59	33.42	0.03	0.04	0.071	0.97	35.30	90.53	37	8	68	< 20	1	< 20	< 10	1100	28	7
134018	4.70	1.02	0.08	6.24	1.132	13.96	30.93	0.03	0.04	0.035	1.09	37.96	92.53	32	11	64	< 20	< 1	< 20	< 10	360	30	7
134019	4.45	0.35	0.12	6.64	1.086	13.86	29.90	0.03	0.05	0.072	0.78	38.68	91.57	36	9	67	< 20	3	< 20	50	750	26	7
134020	2.12	1.53	0.20	6.74	1.116	14.39	27.89	0.04	0.07	0.062	0.90	40.03	92.97	38	8	68	< 20	3	< 20	< 10	500	25	6
134021	4.64	0.82	0.21	7.00	1.080	13.35	28.86	0.03	0.16	0.094	1.21	37.36	90.18	39	6	65	< 20	6	< 20	< 10	630	31	7
134022	2.87	0.39	0.11	7.91	1.193	13.78	28.27	0.04	0.07	0.096	0.89	39.43	92.19	45	3	80	< 20	4	< 20	< 10	760	29	7
134023	2.31	2.36	0.67	8.51	1.185	13.56	27.23	0.15	0.35	0.183	0.88	38.15	93.22	49	7	90	< 20	8	< 20	< 10	420	28	7

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134024	0.03	98.07	0.08	0.88	0.028	0.25	0.57	0.04	0.01	0.002	0.02	0.76	100.7	1	< 1	< 5	70	< 1	< 20	20	< 30	1	2
134025	1.92	14.74	2.57	12.76	0.140	0.46	26.74	0.93	1.02	0.145	18.97	8.19	86.65	16	14	155	< 20	33	60	110	630	105	20
134026	6.88	4.20	1.26	6.19	0.632	9.16	35.91	0.23	0.52	0.482	10.54	23.44	92.57	32	9	72	< 20	8	< 20	< 10	150	10	3
134027	2.16	1.28	0.29	8.99	1.251	13.29	27.73	0.03	0.18	0.122	1.91	37.53	92.60	41	6	87	< 20	8	< 20	< 10	420	23	5
134028	1.20	1.08	0.25	11.91	1.407	13.35	25.44	0.04	0.16	0.123	0.92	39.51	94.17	40	6	83	< 20	8	< 20	< 10	710	21	6
134029	2.23	3.53	0.20	7.35	1.180	13.79	27.42	0.05	0.18	0.109	2.01	37.41	93.22	46	10	65	< 20	5	< 20	< 10	420	33	7
134030	3.04	4.50	0.17	7.00	1.139	13.41	27.31	0.05	0.17	0.060	1.90	36.38	92.09	46	10	63	< 20	4	< 20	< 10	500	34	7
134031	1.91	2.03	0.38	11.30	1.436	13.31	26.84	0.04	0.33	0.074	1.00	37.71	94.45	52	14	70	< 20	7	< 20	< 10	600	28	7
134032	0.37	2.22	0.30	15.60	1.791	11.21	24.33	0.03	0.24	0.085	0.88	33.39	90.08	54	4	56	< 20	7	< 20	< 10	840	31	9
134033	2.51	0.92	0.11	15.47	1.979	11.76	25.02	0.03	0.07	0.045	0.72	36.78	92.92	47	3	52	< 20	7	< 20	< 10	1470	24	6
134034	1.50	1.90	0.15	13.84	2.043	12.04	24.53	0.03	0.11	0.243	0.50	36.49	91.88	43	4	64	< 20	5	< 20	< 10	1160	22	5
134035	3.22	1.22	0.10	18.78	2.055	11.42	23.46	0.03	0.05	0.105	0.61	36.27	94.08	43	6	59	< 20	8	< 20	< 10	1360	21	6
134036	4.25	2.89	0.12	10.31	1.350	11.85	27.00	0.05	0.08	0.135	0.65	36.07	90.52	48	6	53	< 20	5	< 20	20	910	24	6
134037	4.30	1.01	0.08	7.97	1.246	12.99	29.75	0.03	0.07	0.087	0.95	37.45	91.63	45	6	48	< 20	3	< 20	< 10	720	28	6
134038	3.85	0.99	0.12	10.71	1.750	12.47	27.51	0.02	0.10	0.238	0.66	37.67	92.23	39	7	64	< 20	3	< 20	< 10	930	25	6
134039	4.62	0.56	0.12	9.38	1.350	12.88	29.58	0.02	0.10	0.085	1.16	36.73	91.97	26	7	46	< 20	5	< 20	< 10	810	27	6
134040	4.88	3.00	0.18	8.08	1.169	13.54	29.03	0.08	0.10	0.039	1.01	36.36	92.57	24	12	32	< 20	4	< 20	< 10	790	26	5
134041	4.41	3.27	0.08	7.11	1.260	13.73	29.35	0.03	0.06	0.020	1.18	36.51	92.60	26	10	24	< 20	3	< 20	< 10	1060	28	6
134042	4.21	2.39	0.09	7.74	1.347	13.47	28.62	0.02	0.08	0.028	1.10	37.01	91.92	27	12	31	< 20	4	< 20	< 10	840	27	6
134043	1.00	2.24	0.26	7.85	1.342	14.32	27.18	0.07	0.16	0.049	1.42	39.84	94.74	29	11	45	< 20	5	< 20	< 10	600	27	7
134044	1.75	4.86	0.22	7.94	1.336	13.22	26.56	0.07	0.12	0.046	1.32	37.80	93.49	26	9	42	< 20	4	< 20	< 10	600	27	7
134045	7.42	3.10	0.13	8.07	1.337	12.01	30.10	0.03	0.09	0.037	1.42	33.21	89.52	28	8	41	< 20	5	< 20	< 10	1400	35	8
134046	4.79	1.76	0.14	8.43	1.427	13.07	29.28	0.03	0.10	0.075	1.19	35.63	91.13	29	8	41	< 20	5	< 20	< 10	1400	31	6
134047	6.61	1.40	0.07	9.37	1.488	12.31	29.59	0.03	0.05	0.052	1.15	34.45	89.96	26	27	33	< 20	5	< 20	< 10	1240	31	7
134048	3.20	3.92	0.17	9.03	1.532	12.97	27.57	0.07	0.10	0.043	1.03	36.26	92.69	33	10	37	< 20	4	< 20	< 10	1060	27	6
134049	0.03	98.35	0.06	0.90	0.026	0.21	0.51	0.10	< 0.01	0.002	0.02	0.47	100.7	< 1	< 1	< 5	120	< 1	< 20	< 10	< 30	2	2
134050	5.71	20.80	2.98	27.52	2.346	6.95	17.39	0.30	1.31	1.444	0.54	12.79	94.38	21	13	158	180	30	90	40	1540	24	6
134051	4.59	0.96	0.10	7.17	1.345	13.77	29.80	0.03	0.07	0.047	1.63	37.12	92.03	32	9	32	< 20	4	< 20	< 10	1460	29	6
134052	1.01	2.04	0.12	8.12	1.474	14.68	27.25	0.03	0.10	0.057	1.61	39.56	95.05	31	8	38	< 20	4	< 20	< 10	690	30	7
134053	3.94	4.62	0.19	7.58	1.334	12.88	26.92	0.09	0.10	0.032	1.92	35.28	90.94	24	18	31	< 20	3	< 20	< 10	910	28	6
134054	2.79	3.74	0.16	9.19	1.416	12.74	27.02	0.04	0.09	0.081	1.12	36.86	92.45	28	9	53	< 20	6	< 20	30	840	33	7
134055	2.87	3.47	0.23	9.01	1.322	13.15	27.33	0.04	0.17	0.106	0.96	37.30	93.07	28	10	50	< 20	7	< 20	< 10	780	22	5
134056	2.40	1.51	0.28	9.73	1.358	13.23	25.89	0.04	0.18	0.116	2.06	37.08	91.46	30	6	51	< 20	7	< 20	< 10	650	24	5
134057	2.24	2.98	0.24	9.28	1.358	13.53	25.29	0.08	0.13	0.139	1.44	38.23	92.70	32	10	57	< 20	7	< 20	< 10	680	22	5
134058	2.05	2.10	0.25	8.56	1.315	13.39	26.06	0.04	0.10	0.074	1.90	37.88	91.67	26	9	41	20	6	< 20	< 10	760	27	6
134059	1.56	1.60	0.10	10.00	1.478	13.37	24.29	0.03	0.06	0.076	1.72	39.06	91.78	29	7	42	< 20	6	< 20	< 10	680	22	5
134060	1.99	1.88	0.10	10.41	1.541	13.39	27.07	0.03	0.06	0.091	2.15	38.05	94.76	30	7	46	< 20	6	< 20	20	770	33	7
134061	2.77	2.13	0.25	8.94	1.424	13.02	24.45	0.10	0.12	0.075	1.41	37.96	89.88	27	8	44	< 20	6	< 20	< 10	680	25	5
134062	2.25	1.90	0.06	11.36	1.756	13.64	24.69	0.02	0.05	0.038	0.88	38.65	93.05	27	7	41	< 20	4	< 20	< 10	1100	22	4
134063	5.32	1.27	0.10	9.04	1.408	13.49	26.58	0.03	0.11	0.071	1.20	36.77	90.09	27	9	45	< 20	4	< 20	< 10	670	26	5
134064	4.29	2.81	0.12	9.73	1.517	13.33	25.68	0.09	0.12	0.051	1.29	36.20	90.94	32	12	44	< 20	4	< 20	< 10	890	27	6
134065	1.10	3.03	0.18	9.28	1.548	14.50	25.96	0.07	0.16	0.043	1.15	39.21	95.14	28	11	36	< 20	5	< 20	< 10	530	36	8
134066	1.83	2.62	0.11	8.70	1.385	13.74	25.35	0.03	0.11	0.029	1.26	38.68	92.00	25	9	33	< 20	4	< 20	< 10	560	24	5
134067	5.22	1.65	0.08	8.56	1.580	13.48	28.07	0.03	0.08	0.023	1.19	37.08	91.82	21	11	21	< 20	2	< 20	< 10	800	24	5
134068	5.70	1.32	0.12	7.95	1.568	13.19	30.05	0.03	0.12	0.025	1.14	35.49	91.01	19	8	31	< 20	3	< 20	< 10	860	28	5
134069	2.72	2.72	0.25	9.63	1.562	13.99	27.81	0.05	0.21	0.087	1.03	36.41	93.76	27	6	53	< 20	5	< 20	< 10	630	27	5
134070	6.20	2.25	0.12	8.60	1.365	12.75	29.29	0.04	0.12	0.101	0.88	34.70	90.21	31	12	40	< 20	4	< 20	< 10	1030	25	5
134071	6.27	1.54	0.06	9.79	1.646	12.82	28.73	0.03	0.06	0.081	1.06	35.35	91.17	31	11	48	< 20	4	< 20	< 10	1300	26	5
134072	6.31	2.11	0.08	9.62	1.624	12.48	28.42	0.03	0.08	0.083	1.18	34.44	90.14	29	11	40	< 20	6	< 20	< 10	1430	29	5
134073	3.95	1.28	0.11	9.88	1.555	13.44	26.88	0.05	0.06	0.099	1.01	37.48	91.85	25	8	41	< 20	6	< 20	< 10	880	21	4

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134074	0.04	96.92	0.07	0.81	0.025	0.21	0.46	0.03	0.01	0.002	0.02	0.40	98.96	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	3	1
134075	1.85	14.42	2.54	12.63	0.141	0.48	26.51	0.91	1.00	0.145	18.74	8.56	86.08	16	14	154	20	33	70	110	650	103	20
134076	5.56	4.34	0.08	8.30	1.472	12.79	27.94	0.05	0.06	0.038	1.01	35.21	91.29	20	14	22	< 20	2	< 20	< 10	1040	27	5

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133926	12	2	2061	874	82	1040	5	0.7	0.2	38	< 0.5	0.7	126	1.9	3300	6890	699	2330	347	98.7	249	39.2	202
133927	9	< 2	2143	463	55	622	15	< 0.5	0.3	31	< 0.5	0.8	139	1.9	2200	4840	535	1960	318	82.1	180	23.0	107
133928	11	< 2	1731	604	41	470	16	< 0.5	0.2	33	< 0.5	0.6	129	3.3	2860	6590	743	2730	408	98.3	212	27.4	136
133929	9	< 2	1961	353	30	696	18	< 0.5	< 0.2	28	< 0.5	0.6	135	1.9	3300	6610	681	2320	325	83.3	178	19.9	82.9
133930	8	< 2	1492	475	25	621	10	< 0.5	0.3	37	< 0.5	< 0.5	231	1.7	2580	5700	651	2430	400	113	255	29.8	120
133931	9	< 2	1468	314	25	465	24	< 0.5	0.3	37	< 0.5	< 0.5	82	4.0	2030	4760	564	2230	376	95.1	202	20.9	80.1
133932	8	< 2	1494	397	30	262	68	< 0.5	0.3	42	< 0.5	0.6	51	4.8	1390	4040	515	2170	431	109	234	25.1	100
133933	7	< 2	1110	281	25	114	25	< 0.5	0.5	39	< 0.5	0.6	49	2.7	1410	3940	520	2280	503	129	259	24.1	80.4
133934missing																							
133935	< 5	< 2	7	2	7	2	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	9.9	22.1	2.46	8.7	1.7	0.47	1.1	0.1	0.4
133936	7	3	1657	494	43	266	18	< 0.5	0.3	28	< 0.5	0.5	265	2.3	2380	5340	608	2320	401	105	234	27.5	117
133937	12	< 2	2065	358	43	273	15	< 0.5	0.2	29	< 0.5	< 0.5	209	2.3	2240	4600	528	1930	314	77.9	172	20.6	88.2
133938	11	< 2	2596	333	34	599	40	< 0.5	< 0.2	50	< 0.5	0.7	205	1.6	4830	9070	899	2960	354	82.2	165	17.0	74.9
133939	11	< 2	2332	338	33	629	22	< 0.5	< 0.2	27	< 0.5	0.7	182	0.6	5640	10100	949	2990	367	87.7	177	19.2	81.4
133940	13	< 2	2298	355	28	727	24	< 0.5	< 0.2	35	< 0.5	0.6	202	0.6	5840	10400	971	3090	380	91.3	186	19.7	85.4
133941	13	< 2	2160	410	32	652	23	< 0.5	< 0.2	28	< 0.5	< 0.5	199	1.9	5350	9850	965	3200	424	108	230	25.2	100
133942	19	< 2	2368	306	74	646	21	< 0.5	< 0.2	50	< 0.5	< 0.5	272	2.8	4540	8810	935	3170	390	90.3	183	18.2	76.0
133943	9	< 2	2133	326	31	731	10	< 0.5	< 0.2	18	< 0.5	< 0.5	203	1.4	3930	7620	772	2620	342	82.7	172	18.3	72.6
133944	14	< 2	2185	364	29	879	10	< 0.5	< 0.2	17	< 0.5	< 0.5	202	0.9	5070	9330	896	2940	386	95.1	201	21.9	88.3
133945	9	< 2	2075	331	37	710	9	< 0.5	< 0.2	18	< 0.5	< 0.5	190	1.8	4060	7510	740	2570	366	89.7	186	19.6	77.2
133946	10	< 2	2104	372	23	949	9	< 0.5	< 0.2	22	< 0.5	< 0.5	221	1.4	3890	7800	833	3040	444	105	216	22.7	89.3
133947	9	< 2	1912	328	26	862	7	< 0.5	< 0.2	22	< 0.5	< 0.5	175	0.8	3650	7250	765	2760	397	92.2	188	19.8	79.6
133948	10	< 2	1913	402	40	824	7	< 0.5	< 0.2	21	< 0.5	< 0.5	206	0.9	4710	8690	856	2970	428	103	212	22.5	92.4
133949	< 5	< 2	19	3	76	29	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	30.3	61.1	6.75	23.5	3.1	0.82	1.7	0.2	0.8
133950	10	24	3032	870	222	404	50	0.9	< 0.2	46	< 0.5	< 0.5	13430	2.5	2670	5070	551	2200	451	127	315	44.1	207
133951	9	< 2	2032	328	36	582	7	< 0.5	< 0.2	18	< 0.5	< 0.5	182	1.0	4710	8270	777	2540	362	91.2	191	20.1	78.6
133952	9	< 2	1805	336	29	671	6	< 0.5	< 0.2	26	< 0.5	< 0.5	194	0.5	4180	7950	767	2540	343	87.0	185	20.0	80.8
133953	8	< 2	2146	338	54	601	6	< 0.5	< 0.2	17	< 0.5	< 0.5	183	0.4	4740	8500	790	2500	308	74.9	160	18.0	75.2
133954	10	< 2	1833	400	82	905	3	< 0.5	< 0.2	32	< 0.5	< 0.5	228	0.7	3820	7500	773	2750	390	97.2	211	24.1	97.9
133955	13	< 2	1929	449	58	912	3	< 0.5	0.3	41	< 0.5	< 0.5	270	1.1	4350	8240	808	2660	379	104	243	29.1	114
133956	13	< 2	2180	493	110	861	< 2	< 0.5	0.2	24	< 0.5	< 0.5	209	0.9	3340	7180	782	2900	466	123	277	33.1	131
133957	13	< 2	2320	603	42	428	< 2	< 0.5	< 0.2	18	< 0.5	< 0.5	208	< 0.4	3090	6720	745	2840	502	143	347	43.7	173
133958	11	< 2	1640	524	31	805	14	< 0.5	0.3	30	< 0.5	< 0.5	167	0.8	4010	7150	705	2520	424	123	301	42.0	165
133959	12	< 2	2182	429	55	833	2	< 0.5	< 0.2	26	< 0.5	< 0.5	248	0.6	3490	7330	802	3030	464	118	260	31.4	125
133960	12	< 2	2156	403	44	888	< 2	< 0.5	< 0.2	28	< 0.5	< 0.5	258	0.6	3480	7190	773	2890	453	116	258	30.8	124
133961	12	< 2	1656	582	30	851	< 2	< 0.5	0.3	33	< 0.5	< 0.5	118	1.3	4220	7860	784	2830	489	140	336	42.7	167
133962	8	< 2	2407	235	36	555	3	< 0.5	< 0.2	16	< 0.5	< 0.5	140	1.1	2820	6210	648	2240	325	84.2	184	20.0	71.3
133963	7	< 2	2325	343	37	757	2	< 0.5	< 0.2	21	< 0.5	< 0.5	164	0.7	2920	5830	602	2120	321	86.5	201	25.4	102
133964	10	< 2	1666	835	44	823	4	< 0.5	< 0.2	35	< 0.5	< 0.5	218	0.6	3720	7300	755	2770	471	138	345	48.7	231
133965	13	< 2	1690	529	31	833	3	< 0.5	0.3	16	< 0.5	< 0.5	146	0.8	5250	8990	883	3160	513	134	299	37.1	153
133966	10	< 2	1686	524	23	853	8	< 0.5	0.2	20	< 0.5	< 0.5	134	0.9	3740	6740	680	2500	429	115	260	32.5	135
133967	11	< 2	2111	507	47	1090	6	< 0.5	< 0.2	24	< 0.5	< 0.5	228	0.5	3940	7210	730	2600	400	102	227	28.3	123
133968	7	< 2	1796	522	40	943	< 2	< 0.5	0.3	28	< 0.5	< 0.5	180	1.3	2670	5150	546	2120	387	101	224	28.2	122
133969	13	< 2	2710	510	40	577	4	< 0.5	< 0.2	13	< 0.5	< 0.5	239	0.4	4880	8130	801	2710	386	98.6	217	27.0	115
133970	11	< 2	2611	521	46	567	3	< 0.5	< 0.2	13	< 0.5	< 0.5	267	0.5	4390	7360	715	2410	347	93.1	210	27.8	118
133971	11	< 2	2187	465	37	1290	< 2	< 0.5	< 0.2	24	< 0.5	< 0.5	224	0.4	4670	8050	787	2660	378	96.7	214	26.5	111
133972	13	< 2	2152	621	39	326	2	< 0.5	< 0.2	21	0.6	< 0.5	209	0.7	3000	6510	748	2880	470	125	289	38.3	162
133973	12	< 2	2489	449	33	1030	7	< 0.5	< 0.2	15	< 0.5	< 0.5	218	0.5	5530	9260	873	2840	411	107	234	26.5	107
133974	< 5	< 2	7	2	8	45	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	11.4	20.5	2.14	7.3	1.1	0.29	0.7	0.1	0.5

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133975	152	34	20100	896	221	25	32	1.8	< 0.2	< 1	6.6	1.8	902	7.7	18500	29600	2660	8110	844	196	353	35.9	165
133976	20	< 2	2170	573	28	498	14	< 0.5	< 0.2	14	< 0.5	< 0.5	221	0.9	3450	6590	725	2610	390	101	211	27.4	126
133977	12	< 2	1864	594	23	434	12	< 0.5	0.4	38	< 0.5	< 0.5	149	5.7	2900	6480	769	2930	506	146	341	41.4	166
133978	14	< 2	2378	746	22	642	5	< 0.5	0.3	9	< 0.5	< 0.5	226	11.1	2960	8450	1020	3460	449	133	327	43.7	183
133979	13	< 2	2234	859	31	207	6	< 0.5	< 0.2	7	< 0.5	< 0.5	198	3.1	3350	8100	853	2700	342	97.7	245	39.0	194
133980	10	< 2	2425	436	15	172	3	< 0.5	0.2	11	< 0.5	< 0.5	230	1.2	3500	7080	725	2350	308	77.7	172	22.0	98.0
133981	10	< 2	2499	587	29	148	3	< 0.5	< 0.2	12	< 0.5	< 0.5	1881	0.4	3480	6760	688	2330	371	95.2	209	26.7	125
133982	11	< 2	2679	452	34	271	21	< 0.5	< 0.2	21	< 0.5	< 0.5	282	1.2	4490	8140	819	2680	326	75.7	155	18.3	85.9
133983	12	< 2	2221	420	45	382	42	< 0.5	< 0.2	16	< 0.5	< 0.5	197	2.3	3860	7490	810	2820	333	74.0	150	17.0	78.0
133984	13	< 2	2248	406	29	407	24	< 0.5	< 0.2	18	< 0.5	< 0.5	205	1.4	4480	8380	887	3040	385	87.0	173	19.5	82.9
133985	14	< 2	2365	500	31	541	21	< 0.5	< 0.2	15	< 0.5	< 0.5	213	1.2	4420	8460	909	3190	399	92.2	194	24.4	111
133986	11	< 2	2358	412	34	463	16	< 0.5	< 0.2	11	< 0.5	< 0.5	179	1.2	3470	6890	729	2460	318	78.5	169	21.2	94.3
133987	12	< 2	2680	397	47	399	14	< 0.5	< 0.2	15	< 0.5	< 0.5	195	< 0.4	4880	9480	979	3240	365	82.2	168	19.0	80.9
133988	< 5	< 2	36	5	7	18	2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	61.4	119	12.6	41.0	5.2	1.13	2.2	0.3	1.2
133989	12	< 2	2460	432	59	815	14	< 0.5	< 0.2	16	< 0.5	< 0.5	199	< 0.4	3420	7010	760	2670	341	84.3	182	21.3	92.2
133990	10	< 2	2376	421	65	821	14	< 0.5	< 0.2	17	< 0.5	< 0.5	213	0.5	3170	6570	721	2530	320	80.0	171	20.6	89.0
133991	11	< 2	2691	441	47	357	6	< 0.5	< 0.2	7	< 0.5	< 0.5	218	0.6	4130	8400	870	2790	321	79.9	178	21.9	94.0
133992	12	< 2	2356	364	41	479	14	< 0.5	< 0.2	8	< 0.5	< 0.5	205	< 0.4	4880	9040	935	3230	381	86.2	175	20.1	82.2
133993	20	< 2	2074	403	36	542	13	< 0.5	< 0.2	15	< 0.5	< 0.5	184	1.6	4290	8300	882	3080	408	99.0	213	26.3	113
133994	14	< 2	2457	455	31	440	9	< 0.5	< 0.2	15	< 0.5	< 0.5	202	1.3	5040	9710	995	3320	408	100	220	26.8	111
133995	13	< 2	2299	473	21	275	10	< 0.5	< 0.2	13	< 0.5	< 0.5	149	1.5	3640	7670	817	2680	348	93.4	216	28.9	121
133996	11	2	2165	533	42	258	13	< 0.5	< 0.2	8	< 0.5	< 0.5	160	0.8	3910	7530	772	2540	323	82.7	191	26.1	121
133997	23	3	1544	1003	47	281	30	0.6	0.4	15	< 0.5	< 0.5	228	1.5	8130	15100	1540	5070	633	161	357	49.5	233
133998	27	6	1754	1136	75	438	32	0.6	0.2	12	0.5	< 0.5	378	1.2	9890	17600	1760	5860	751	190	421	55.2	249
133999	< 5	< 2	12	3	8	32	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	24.1	44.5	4.58	15.3	2.2	0.45	1.2	0.1	0.7
134000	11	25	3040	881	225	344	52	1.1	< 0.2	44	< 0.5	< 0.5	13350	2.2	2600	4930	550	2200	455	129	316	43.5	199
134001	23	8	2098	693	50	412	136	< 0.5	0.3	25	1.0	< 0.5	580	2.1	4480	8860	961	3400	466	117	260	34.7	161
134002	17	< 2	2046	493	33	527	34	< 0.5	< 0.2	22	0.6	< 0.5	310	1.1	5050	9120	910	2990	390	96.5	210	26.5	112
134003	12	< 2	2365	529	26	364	12	< 0.5	< 0.2	11	< 0.5	< 0.5	249	0.6	4820	8700	864	2810	363	91.6	203	25.6	111
134004	9	< 2	2372	357	20	285	9	< 0.5	0.2	11	< 0.5	< 0.5	161	1.6	3590	6910	716	2440	320	77.5	163	19.9	83.7
134005	12	< 2	2423	397	32	375	6	< 0.5	< 0.2	11	< 0.5	< 0.5	195	0.5	5090	9140	921	3080	369	86.5	183	21.5	91.8
134006	15	< 2	2244	383	38	390	5	< 0.5	< 0.2	10	< 0.5	< 0.5	210	0.7	4680	8610	876	3010	396	93.9	193	21.9	89.7
134007	16	< 2	2049	438	27	279	7	< 0.5	< 0.2	10	< 0.5	< 0.5	156	0.9	6770	11700	1140	3700	454	109	234	27.3	112
134008	12	< 2	1823	377	19	181	6	< 0.5	< 0.2	13	< 0.5	< 0.5	147	1.0	3650	7060	740	2580	379	103	241	29.9	115
134009	15	< 2	2299	483	23	439	5	< 0.5	< 0.2	12	< 0.5	< 0.5	177	0.6	6460	11300	1080	3480	441	115	259	31.7	128
134010	15	< 2	2290	465	21	385	6	< 0.5	< 0.2	12	< 0.5	< 0.5	179	0.7	6340	11100	1070	3500	445	114	258	31.9	126
134011	13	< 2	2234	361	23	452	7	< 0.5	< 0.2	10	< 0.5	< 0.5	201	0.8	4580	8390	847	2880	374	92.4	197	24.2	97.3
134012	13	< 2	2381	386	30	240	6	< 0.5	< 0.2	10	< 0.5	< 0.5	227	0.7	5490	9580	877	2940	360	88.9	191	23.5	99.5
134013	17	< 2	2453	503	21	76	6	< 0.5	< 0.2	7	< 0.5	< 0.5	278	0.5	5530	10800	1080	3830	473	112	236	29.4	131
134014	15	< 2	2486	441	41	117	7	< 0.5	< 0.2	7	< 0.5	< 0.5	194	< 0.4	5770	9950	909	3020	378	91.4	189	23.9	104
134015	16	< 2	2483	410	46	174	4	< 0.5	< 0.2	8	< 0.5	< 0.5	176	< 0.4	5940	10200	974	3140	383	89.5	180	21.3	93.8
134016	15	< 2	2611	452	34	150	6	< 0.5	< 0.2	8	< 0.5	< 0.5	267	0.5	7090	12100	1040	3260	374	90.3	193	25.5	110
134017	15	< 2	2353	421	26	138	5	< 0.5	< 0.2	8	< 0.5	< 0.5	118	0.9	5470	10000	934	3220	403	96.3	201	25.5	106
134018	15	< 2	2810	436	33	68	7	< 0.5	< 0.2	7	< 0.5	< 0.5	178	< 0.4	6500	11000	1000	3340	386	92.3	195	24.3	109
134019	16	< 2	2384	576	19	208	13	< 0.5	< 0.2	46	< 0.5	< 0.5	181	< 0.4	5350	9650	933	3230	412	102	226	30.3	143
134020	16	< 2	2001	450	24	339	14	< 0.5	< 0.2	6	< 0.5	< 0.5	178	< 0.4	4570	8840	878	3210	440	106	222	27.3	121
134021	16	2	2083	387	30	498	10	< 0.5	< 0.2	12	< 0.5	< 0.5	249	< 0.4	7200	11600	1020	3370	432	106	219	26.2	107
134022	16	< 2	2088	320	12	258	7	< 0.5	< 0.2	12	< 0.5	< 0.5	145	< 0.4	6210	10700	984	3360	439	103	202	22.4	89.0
134023	21	6	2039	277	16	636	8	< 0.5	< 0.2	58	< 0.5	< 0.5	496	< 0.4	5110	9560	918	3170	396	89.5	178	18.2	72.8
134024	< 5	< 2	32	5	7	13	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	78.0	138	14.0	48.4	6.8	1.49	3.2	0.4	1.4

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134025	152	34	20290	913	213	13	31	1.9	< 0.2	< 1	6.2	1.8	910	7.2	18400	29300	2640	7940	835	193	357	36.4	166
134026	14	10	4814	1570	146	1020	7	1.7	< 0.2	23	0.6	< 0.5	800	< 0.4	1080	2700	296	1200	264	89.4	246	50.4	312
134027	16	3	2123	391	47	586	29	0.5	< 0.2	12	< 0.5	< 0.5	348	0.7	4320	7820	737	2630	377	90.8	193	24.1	104
134028	38	2	1896	346	22	366	8	< 0.5	< 0.2	11	< 0.5	< 0.5	264	0.8	3760	7180	704	2580	391	98.5	210	25.3	101
134029	21	3	2327	427	72	586	21	0.8	< 0.2	10	< 0.5	< 0.5	284	< 0.4	7950	12500	1070	3380	406	101	215	27.4	115
134030	17	2	2300	406	60	520	22	0.6	< 0.2	10	< 0.5	< 0.5	262	< 0.4	8490	13200	1090	3410	395	98.6	213	26.4	110
134031	19	6	2169	322	35	477	14	< 0.5	< 0.2	17	< 0.5	< 0.5	433	1.5	5300	9700	909	3160	441	107	220	24.9	96.8
134032	18	5	2501	668	23	195	2	< 0.5	0.2	6	< 0.5	< 0.5	329	0.7	3640	7050	785	2970	524	137	316	40.9	186
134033	15	< 2	2176	514	13	217	3	0.5	0.3	13	< 0.5	< 0.5	151	1.8	4310	8100	804	3020	507	134	297	36.4	148
134034	12	< 2	2097	431	13	525	< 2	< 0.5	0.3	20	< 0.5	< 0.5	240	1.2	3450	7110	694	2440	379	102	235	31.6	136
134035	14	< 2	1797	596	24	489	11	0.5	0.3	17	< 0.5	< 0.5	160	2.7	3200	6360	675	2620	431	110	246	33.4	153
134036	15	< 2	2128	479	25	880	10	< 0.5	< 0.2	21	< 0.5	< 0.5	213	1.7	4420	7890	763	2720	394	102	229	30.4	131
134037	14	< 2	2486	406	32	620	14	0.6	< 0.2	15	< 0.5	< 0.5	193	0.8	6250	10300	924	3070	410	104	231	29.0	118
134038	14	< 2	2413	392	22	652	7	< 0.5	< 0.2	26	< 0.5	< 0.5	237	1.7	4440	8570	823	2820	369	95.6	212	27.2	113
134039	14	< 2	2321	376	37	690	11	< 0.5	< 0.2	11	< 0.5	< 0.5	235	0.5	5740	9840	880	2950	408	100	212	25.9	106
134040	13	< 2	2815	292	64	389	4	0.6	< 0.2	7	< 0.5	< 0.5	266	< 0.4	5500	9380	815	2670	394	97.8	194	21.0	77.2
134041	13	< 2	2502	256	72	203	4	0.6	< 0.2	4	< 0.5	< 0.5	192	< 0.4	6270	10700	926	2940	377	92.1	181	18.9	68.3
134042	13	< 2	2648	259	40	275	7	< 0.5	< 0.2	5	< 0.5	< 0.5	263	< 0.4	6070	10100	877	2810	375	99.9	214	22.4	78.9
134043	15	3	2233	286	35	327	5	< 0.5	< 0.2	9	< 0.5	< 0.5	378	< 0.4	5160	9610	916	3250	447	111	237	25.8	95.6
134044	16	2	1817	261	39	383	3	< 0.5	< 0.2	7	< 0.5	< 0.5	293	0.5	4860	9390	931	3350	449	102	206	21.7	79.5
134045	20	< 2	2104	307	35	298	8	< 0.5	< 0.2	13	< 0.5	< 0.5	277	0.5	7870	13400	1170	3740	442	104	215	24.2	86.8
134046	16	< 2	2288	313	41	316	8	< 0.5	< 0.2	9	< 0.5	< 0.5	319	0.4	6500	11300	1010	3240	387	93.4	204	24.5	93.9
134047	17	< 2	2108	327	24	314	6	< 0.5	< 0.2	8	< 0.5	< 0.5	331	< 0.4	6780	11600	998	3240	405	95.3	195	22.4	85.6
134048	14	< 2	2196	267	32	253	6	< 0.5	< 0.2	6	< 0.5	< 0.5	264	0.7	5300	9430	858	2850	362	86.9	180	19.5	72.6
134049	< 5	< 2	25	4	7	12	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	53.8	94.3	9.37	29.9	3.8	0.80	1.8	0.2	0.9
134050	13	25	2943	877	215	374	55	2.0	< 0.2	46	< 0.5	< 0.5	13420	2.7	2730	5120	530	2160	451	127	313	45.1	213
134051	16	< 2	2521	354	37	345	5	< 0.5	< 0.2	6	< 0.5	< 0.5	217	0.4	6140	10700	952	3100	379	91.9	194	23.4	93.8
134052	15	< 2	2244	332	36	355	5	< 0.5	< 0.2	7	< 0.5	< 0.5	271	< 0.4	5890	10700	1010	3440	421	95.4	196	22.7	93.1
134053	13	< 2	2585	348	39	239	3	< 0.5	< 0.2	4	< 0.5	< 0.5	253	< 0.4	6290	10400	897	2870	346	82.5	171	20.6	86.7
134054	19	< 2	2102	290	31	665	3	14.7	< 0.2	11	< 0.5	< 0.5	265	0.8	4920	8730	874	2900	373	91.8	197	23.1	92.3
134055	15	4	2012	254	30	522	3	< 0.5	< 0.2	13	< 0.5	< 0.5	405	0.7	4520	8520	906	3090	388	89.6	184	19.2	74.4
134056	20	4	2498	606	38	392	2	< 0.5	< 0.2	13	< 0.5	< 0.5	457	0.5	4670	8720	922	3200	447	116	264	32.6	143
134057	16	2	2218	438	40	369	4	< 0.5	< 0.2	13	< 0.5	< 0.5	380	0.5	4300	8020	846	2970	417	102	223	26.3	111
134058	17	< 2	1943	348	37	458	5	< 0.5	< 0.2	9	< 0.5	< 0.5	416	0.5	5400	9920	1040	3520	441	104	217	23.0	92.9
134059	16	< 2	2121	336	28	262	5	< 0.5	< 0.2	10	< 0.5	< 0.5	262	0.6	4750	8390	864	2950	372	89.7	189	20.3	83.8
134060	19	< 2	2236	349	43	468	7	3.0	< 0.2	9	< 0.5	< 0.5	277	0.8	4740	8240	842	2940	375	90.0	186	21.3	95.5
134061	13	< 2	2471	301	33	502	6	< 0.5	< 0.2	9	< 0.5	< 0.5	376	0.5	5620	9380	894	2950	362	86.0	182	19.5	75.2
134062	11	< 2	2408	277	19	121	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	217	0.8	5020	8350	803	2600	346	85.3	182	18.6	70.9
134063	15	3	2491	341	47	316	6	< 0.5	< 0.2	9	< 0.5	< 0.5	358	0.7	5100	9450	972	3290	416	97.3	200	21.2	83.7
134064	14	3	2819	314	81	238	4	0.8	< 0.2	8	< 0.5	< 0.5	489	0.8	5270	9820	1010	3400	426	97.8	200	20.5	78.5
134065	18	3	2382	220	60	324	7	2.4	< 0.2	11	< 0.5	< 0.5	495	0.6	4890	8910	916	3190	367	80.6	154	15.8	65.6
134066	12	2	2745	244	70	410	4	0.5	< 0.2	8	< 0.5	< 0.5	400	0.6	5310	8870	878	2840	326	75.7	160	17.4	63.8
134067	11	< 2	3091	292	47	221	4	< 0.5	< 0.2	5	< 0.5	< 0.5	403	0.6	4590	8820	881	2720	283	67.5	146	16.8	68.3
134068	13	2	2887	332	38	214	4	< 0.5	< 0.2	3	< 0.5	< 0.5	415	0.4	6570	10900	1010	3060	335	78.9	168	18.8	77.5
134069	14	5	2733	288	37	587	3	< 0.5	< 0.2	7	< 0.5	< 0.5	552	0.5	5910	10100	988	3150	353	80.5	166	17.9	70.3
134070	14	2	3152	381	31	722	6	< 0.5	< 0.2	11	< 0.5	< 0.5	454	0.6	5450	9220	885	2860	352	86.0	191	22.8	94.0
134071	11	< 2	2969	276	33	489	3	< 0.5	< 0.2	10	< 0.5	< 0.5	364	0.4	5550	9870	933	2810	308	74.6	161	17.7	67.4
134072	13	< 2	2716	312	34	477	4	< 0.5	< 0.2	10	< 0.5	< 0.5	273	0.6	6610	11500	1050	3090	338	83.1	178	19.1	75.2
134073	11	< 2	2829	320	66	580	5	0.5	< 0.2	8	< 0.5	< 0.5	423	0.5	4130	7550	763	2530	321	76.2	163	18.4	78.1
134074	< 5	< 2	33	3	4	34	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	48.3	85.1	8.54	27.4	3.3	0.80	1.7	0.2	0.8

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134075	156	34	20070	898	215	29	33	4.1	< 0.2	< 1	6.4	1.8	892	7.8	18200	29000	2610	7800	813	188	346	35.7	161
134076	11	< 2	2639	201	35	89	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	974	< 0.4	6120	10300	963	3000	360	83.0	164	15.5	53.5

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133926	33.3	69.5	6.52	28.3	3.02	2.6	3.1	13	0.2	362	924	2.8	3.732
133927	16.9	36.1	3.98	20.1	2.32	1.5	1.5	7	0.1	285	800	2.7	3.813
133928	22.3	50.0	5.34	26.0	2.96	1.6	0.9	4	< 0.1	214	808	0.7	3.888
133929	11.9	26.3	3.06	15.6	1.82	1.1	1.0	7	< 0.1	144	527	0.5	3.625
133930	17.3	34.8	3.83	19.1	2.21	1.2	< 0.1	7	< 0.1	179	795	0.5	3.665
133931	10.9	23.6	2.69	13.3	1.61	1.0	0.2	4	< 0.1	349	758	0.2	3.461
133932	14.2	30.4	3.48	17.8	2.15	1.3	< 0.1	3	< 0.1	399	1030	< 0.1	2.409
133933	9.9	19.6	2.16	10.9	1.40	1.1	< 0.1	1	0.1	518	980	< 0.1	3.583
133934missing													0.000
133935	< 0.1	0.2	< 0.05	0.2	< 0.04	< 0.2	< 0.1	13	0.3	< 5	3.6	< 0.1	0.395
133936	17.4	38.0	3.92	19.7	2.21	1.6	1.0	2	0.2	400	883	0.4	3.458
133937	13.8	30.6	3.71	18.4	2.19	0.8	1.1	2	0.2	256	1420	0.7	3.448
133938	11.2	26.3	3.26	17.4	2.14	1.2	0.8	4	< 0.1	163	645	0.4	3.222
133939	12.1	27.3	3.13	16.9	2.05	1.2	0.6	3	< 0.1	81	570	0.3	1.515
133940	12.6	28.6	3.23	17.0	2.04	1.2	0.6	4	< 0.1	106	566	0.3	1.852
133941	14.6	32.7	3.61	19.2	2.38	1.3	0.4	3	< 0.1	169	677	0.3	3.653
133942	11.0	25.7	3.01	16.5	1.97	1.1	0.6	3	0.2	188	664	0.3	2.525
133943	10.3	22.6	2.71	15.7	1.89	1.1	0.4	3	< 0.1	117	559	0.2	3.840
133944	12.6	27.6	3.14	16.8	2.10	1.2	0.4	5	< 0.1	87	490	0.2	3.482
133945	10.9	24.0	2.88	15.6	1.87	1.1	0.4	4	< 0.1	231	537	0.2	3.773
133946	12.6	28.4	3.08	17.7	2.13	1.1	0.5	6	< 0.1	63	672	0.3	3.509
133947	11.3	24.1	2.88	15.7	1.99	1.0	0.6	4	< 0.1	65	501	0.4	3.795
133948	13.6	30.2	3.56	19.6	2.46	1.3	0.4	5	< 0.1	67	672	0.3	3.595
133949	0.1	0.3	< 0.05	0.2	0.04	1.1	< 0.1	< 1	< 0.1	< 5	6.2	< 0.1	0.377
133950	33.9	78.6	9.31	49.6	6.00	5.2	2.8	27	0.4	583	884	2.5	0.018
133951	11.5	25.9	2.95	16.7	2.06	1.2	0.8	5	< 0.1	38	753	0.4	3.432
133952	11.7	26.7	3.09	16.5	2.06	1.0	1.4	5	< 0.1	38	456	0.8	3.549
133953	10.8	24.8	2.99	16.6	2.05	1.4	1.4	4	< 0.1	45	403	0.8	3.568
133954	14.4	31.1	3.54	19.7	2.31	1.9	1.3	8	< 0.1	39	466	2.5	3.153
133955	16.1	34.1	3.70	19.6	2.36	1.8	2.7	5	< 0.1	212	639	1.4	3.843
133956	18.3	36.1	3.88	21.3	2.54	2.5	0.6	5	< 0.1	188	656	0.4	3.606
133957	23.5	46.6	4.94	26.1	3.13	2.0	< 0.1	3	< 0.1	50	593	0.2	3.602
133958	21.3	38.7	3.86	18.8	2.15	1.8	< 0.1	9	< 0.1	268	585	0.7	3.563
133959	16.8	32.8	3.54	18.7	2.24	1.8	0.8	9	< 0.1	154	578	1.5	1.498
133960	16.3	31.0	3.31	17.4	2.11	1.7	0.9	9	< 0.1	173	588	1.4	1.788
133961	23.1	44.0	4.48	22.3	2.54	1.9	< 0.1	7	< 0.1	313	936	0.4	3.479
133962	9.1	19.0	2.06	10.7	1.38	1.1	2.8	3	< 0.1	137	595	2.5	3.587
133963	13.5	26.6	2.77	13.8	1.62	1.3	2.3	4	< 0.1	169	541	2.8	3.675
133964	33.3	67.5	6.66	28.3	3.04	2.7	< 0.1	14	< 0.1	141	931	0.3	3.719
133965	21.5	47.5	4.87	20.1	2.20	1.8	< 0.1	6	< 0.1	280	725	0.1	3.641
133966	19.6	43.9	4.19	20.3	2.35	1.5	< 0.1	7	< 0.1	258	795	0.1	3.790
133967	18.2	40.9	4.42	22.8	2.64	1.7	< 0.1	8	< 0.1	89	768	0.2	3.485
133968	18.4	41.1	4.48	23.8	2.75	1.6	< 0.1	7	< 0.1	375	817	0.1	3.916
133969	17.1	38.5	4.58	24.7	2.94	1.7	< 0.1	6	< 0.1	95	570	< 0.1	3.604
133970	17.5	39.3	4.58	25.0	2.96	1.8	< 0.1	5	< 0.1	133	661	0.1	3.749
133971	16.0	36.6	3.98	20.0	2.37	1.8	< 0.1	11	< 0.1	154	581	0.2	3.620
133972	23.9	52.2	5.50	25.5	2.98	2.0	< 0.1	5	< 0.1	161	684	0.6	3.804
133973	15.5	34.4	3.88	19.1	2.28	1.6	< 0.1	9	< 0.1	126	504	0.2	3.750

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
133974	< 0.1	0.1	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.7	< 0.1	0.378
133975	27.1	68.8	8.64	49.8	6.60	3.0	< 0.1	4	2.1	995	168	223	0.012
133976	18.7	43.0	4.04	20.1	2.26	1.4	< 0.1	5	< 0.1	188	572	0.6	3.637
133977	23.4	47.4	4.32	21.3	2.33	1.9	< 0.1	8	0.2	647	792	0.1	3.780
133978	27.4	57.1	5.69	25.8	2.82	2.0	< 0.1	6	0.2	622	906	< 0.1	3.644
133979	31.1	65.8	6.90	30.9	3.36	2.3	< 0.1	2	< 0.1	242	865	< 0.1	3.836
133980	14.9	32.9	3.79	18.0	2.12	1.1	< 0.1	3	< 0.1	138	695	< 0.1	3.697
133981	20.7	45.7	5.07	24.7	2.78	1.5	< 0.1	2	< 0.1	63	684	< 0.1	3.810
133982	14.2	34.2	4.27	23.2	2.86	1.3	< 0.1	4	< 0.1	136	706	< 0.1	3.942
133983	12.9	32.1	4.02	22.3	2.80	1.4	0.4	3	< 0.1	188	660	0.4	3.670
133984	13.3	31.7	3.78	20.2	2.46	1.2	< 0.1	4	< 0.1	203	546	0.1	3.616
133985	17.5	39.1	4.27	21.1	2.47	1.6	0.6	5	< 0.1	170	510	0.5	3.848
133986	14.8	32.8	3.72	19.5	2.35	1.4	0.2	5	< 0.1	151	588	0.5	3.886
133987	13.0	30.8	3.97	22.3	2.84	1.5	< 0.1	4	< 0.1	94	375	< 0.1	3.735
133988	0.2	0.5	0.06	0.4	0.09	< 0.2	< 0.1	< 1	0.6	< 5	7.3	< 0.1	0.396
133989	14.3	34.0	4.09	23.4	2.98	1.6	2.1	6	< 0.1	47	389	1.9	1.715
133990	14.1	32.8	4.13	22.7	2.81	1.7	2.5	5	< 0.1	49	381	1.8	1.723
133991	14.5	34.7	4.26	21.4	2.60	1.6	< 0.1	3	< 0.1	51	331	< 0.1	3.524
133992	12.5	28.1	3.26	17.8	2.19	1.4	0.4	3	< 0.1	24	252	0.3	3.681
133993	16.2	35.8	4.02	19.6	2.37	0.9	0.4	5	0.2	60	464	0.4	3.758
133994	16.2	34.1	3.72	18.5	2.22	1.6	< 0.1	5	< 0.1	50	456	0.1	3.762
133995	17.3	37.5	3.87	17.7	2.01	1.6	< 0.1	5	< 0.1	164	758	0.1	3.676
133996	19.4	41.7	4.66	23.7	2.91	1.8	< 0.1	5	< 0.1	126	586	0.3	3.585
133997	37.1	85.4	9.77	51.4	6.44	3.0	< 0.1	6	0.2	313	1060	0.8	2.375
133998	39.0	90.7	10.7	58.8	7.28	3.5	< 0.1	7	0.4	230	1190	1.5	1.191
133999	0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	4.4	< 0.1	0.380
134000	32.5	76.3	9.15	48.6	5.87	5.4	1.9	27	0.4	542	838	2.5	0.013
134001	25.6	59.6	7.08	38.1	4.73	2.2	0.4	6	0.8	352	753	2.7	2.341
134002	17.3	37.4	4.01	20.8	2.58	1.6	0.8	7	0.3	163	487	0.5	1.169
134003	17.0	35.9	4.10	21.6	2.59	1.5	0.5	4	0.2	151	457	0.3	3.404
134004	12.5	27.3	3.05	15.5	1.95	1.2	0.2	2	< 0.1	282	445	0.2	3.429
134005	14.0	30.4	3.52	19.0	2.27	1.4	0.5	3	< 0.1	89	331	0.4	3.528
134006	13.3	29.3	3.48	18.4	2.25	1.4	0.5	4	0.1	136	333	0.3	3.554
134007	16.0	33.4	3.64	19.3	2.28	1.5	< 0.1	2	< 0.1	140	403	0.2	3.770
134008	15.9	32.5	3.36	18.0	2.17	1.4	< 0.1	48	< 0.1	126	643	0.4	3.619
134009	17.6	37.5	3.89	19.9	2.31	1.6	0.1	3	< 0.1	57	764	0.1	1.555
134010	17.2	36.7	3.60	19.5	2.31	1.6	0.1	3	< 0.1	58	736	0.1	1.852
134011	13.7	28.0	3.08	16.5	1.97	1.4	0.6	2	< 0.1	118	407	0.3	3.567
134012	14.1	29.8	3.43	18.0	2.20	1.4	0.6	2	0.1	116	587	0.4	3.282
134013	19.2	41.0	4.61	24.6	2.90	1.5	< 0.1	< 1	< 0.1	73	427	< 0.1	3.506
134014	15.7	35.5	4.15	22.4	2.83	1.6	< 0.1	1	< 0.1	109	347	< 0.1	3.462
134015	14.1	32.5	4.06	21.2	2.70	1.0	< 0.1	1	< 0.1	85	308	< 0.1	3.615
134016	15.8	34.0	4.04	21.8	2.55	1.6	< 0.1	< 1	0.1	131	362	0.1	3.804
134017	15.5	33.6	3.75	19.7	2.43	1.3	< 0.1	3	< 0.1	134	368	0.1	3.626
134018	16.4	37.4	4.50	23.8	2.78	1.5	< 0.1	3	< 0.1	65	340	< 0.1	3.639
134019	22.3	46.8	5.38	27.1	3.28	1.6	0.3	1	< 0.1	61	503	0.3	3.745
134020	18.0	38.8	4.31	22.8	2.71	1.6	1.8	2	< 0.1	65	351	1.4	3.568
134021	15.1	31.2	3.36	17.7	2.04	1.4	1.0	4	< 0.1	61	385	0.7	3.599
134022	12.4	26.1	2.80	15.3	1.84	1.1	0.1	< 1	< 0.1	90	326	0.2	2.901
134023	10.7	23.8	2.96	15.3	1.79	1.0	0.8	5	0.3	57	340	2.7	2.587

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134024	0.2	0.5	0.05	0.3	0.06	< 0.2	< 0.1	< 1	< 0.1	< 5	5.6	< 0.1	0.380
134025	26.8	66.1	8.65	49.4	6.58	2.8	< 0.1	4	2.2	985	166	217	0.009
134026	59.3	141	16.6	80.8	9.62	4.2	2.3	6	0.7	74	1270	6.8	2.120
134027	15.4	32.5	3.75	19.8	2.33	1.5	1.1	3	0.2	59	461	2.6	4.445
134028	13.9	29.8	3.30	17.1	2.02	1.2	0.3	2	0.2	145	518	2.1	3.977
134029	16.4	35.5	3.93	20.2	2.50	2.2	1.2	2	0.2	45	434	0.9	1.747
134030	15.5	34.0	3.59	18.8	2.30	1.7	0.9	2	0.1	38	412	0.6	1.983
134031	13.0	27.3	2.96	15.3	1.79	1.4	0.7	4	0.3	52	625	1.3	3.394
134032	28.2	59.2	5.82	26.0	2.92	1.2	< 0.1	2	0.4	68	942	0.3	2.503
134033	20.4	38.3	3.81	18.4	2.08	1.6	< 0.1	1	< 0.1	340	805	< 0.1	3.279
134034	19.3	37.5	3.73	17.9	1.93	1.5	< 0.1	3	< 0.1	167	689	0.2	3.845
134035	23.0	46.2	4.78	22.2	2.51	1.9	< 0.1	2	0.2	323	671	0.3	3.885
134036	18.7	38.5	4.02	19.8	2.31	1.7	0.4	4	< 0.1	161	617	0.4	3.992
134037	15.9	30.5	3.18	16.9	1.97	1.6	0.2	3	< 0.1	94	641	0.2	3.808
134038	15.9	30.8	3.35	17.3	2.05	1.4	0.2	4	< 0.1	136	633	0.2	3.927
134039	15.1	32.1	3.45	17.7	1.97	1.7	0.4	3	< 0.1	79	341	0.4	3.711
134040	10.9	23.7	2.72	15.5	1.75	1.7	0.1	2	< 0.1	95	258	0.1	3.999
134041	9.5	20.0	2.42	13.8	1.67	1.6	< 0.1	< 1	< 0.1	97	221	< 0.1	3.668
134042	10.3	21.0	2.43	13.2	1.57	1.3	0.3	1	< 0.1	77	245	0.3	3.604
134043	12.4	25.4	2.88	14.4	1.70	1.5	0.2	2	0.2	102	260	1.2	3.842
134044	10.5	22.1	2.37	12.9	1.53	1.4	1.0	< 1	0.1	119	231	0.7	3.885
134045	11.3	22.8	2.38	12.6	1.56	1.4	1.5	9	0.1	146	297	1.1	3.788
134046	12.2	23.8	2.61	13.5	1.56	1.5	1.3	< 1	0.1	141	275	0.8	3.970
134047	11.7	25.7	2.70	14.5	1.66	1.3	0.3	1	< 0.1	110	271	0.2	3.751
134048	10.0	20.2	2.29	12.4	1.44	1.2	0.9	1	< 0.1	144	295	0.6	3.951
134049	0.1	0.3	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	0.2	< 5	4.4	< 0.1	0.377
134050	34.6	81.1	9.62	51.8	6.23	5.9	3.0	27	0.3	589	890	2.6	0.008
134051	13.7	30.5	3.40	17.5	2.11	1.5	0.5	< 1	< 0.1	121	241	0.3	3.828
134052	13.6	29.0	3.09	16.1	1.90	1.4	< 0.1	3	0.2	104	220	0.4	2.515
134053	12.9	29.5	3.41	18.5	2.13	1.5	< 0.1	< 1	< 0.1	117	173	0.1	2.576
134054	12.7	26.4	2.63	12.7	1.49	0.9	2.2	3	0.2	316	368	1.4	3.814
134055	10.0	20.9	2.26	11.2	1.33	1.1	0.1	4	0.4	107	262	1.4	3.611
134056	22.6	51.0	5.74	27.9	3.28	1.7	< 0.1	4	0.4	117	371	1.4	1.246
134057	16.1	34.1	3.82	18.9	2.23	1.5	< 0.1	4	0.3	120	281	0.6	3.635
134058	13.5	28.9	3.09	15.4	1.79	1.4	0.4	5	0.2	107	233	1.7	3.575
134059	12.7	28.1	3.10	15.4	1.77	1.2	< 0.1	3	< 0.1	130	233	0.5	1.740
134060	14.4	31.7	3.57	17.9	2.09	0.9	< 0.1	3	< 0.1	155	276	0.6	1.791
134061	11.0	24.6	2.66	13.9	1.63	1.1	0.2	2	< 0.1	98	201	0.3	3.588
134062	10.2	22.8	2.47	12.9	1.55	1.0	< 0.1	< 1	< 0.1	215	184	< 0.1	3.619
134063	12.0	27.8	3.02	16.5	1.97	1.5	0.2	1	0.2	220	212	0.2	3.790
134064	11.2	26.9	2.90	16.2	1.96	1.9	0.2	2	0.1	200	289	0.2	3.777
134065	9.1	20.2	2.29	12.1	1.44	1.0	< 0.1	2	0.2	150	174	0.7	3.682
134066	9.2	21.3	2.26	12.3	1.53	1.6	0.1	1	0.2	140	176	0.2	3.655
134067	10.3	22.8	2.54	12.7	1.56	1.3	< 0.1	< 1	< 0.1	146	222	< 0.1	3.626
134068	11.7	25.7	2.77	13.9	1.60	1.3	< 0.1	2	< 0.1	92	175	0.1	3.646
134069	10.5	23.3	2.51	13.1	1.50	1.3	0.1	2	0.2	83	204	0.3	3.530
134070	13.8	29.3	3.08	15.0	1.76	1.4	0.1	3	0.2	145	285	0.2	3.674
134071	9.7	21.1	2.23	11.5	1.32	1.2	0.2	2	< 0.1	122	338	0.2	3.492
134072	10.8	22.1	2.45	12.8	1.50	1.2	0.3	2	< 0.1	132	325	0.2	3.867
134073	11.9	26.5	3.01	14.5	1.68	1.6	2.5	3	< 0.1	148	212	1.2	3.868

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134074	0.1	0.3	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.6	< 0.1	0.395
134075	26.2	65.4	8.51	49.7	6.57	3.0	< 0.1	4	2.2	1030	165	216	0.012
134076	7.2	15.9	1.71	9.1	1.13	0.9	< 0.1	< 1	< 0.1	86	128	< 0.1	4.083

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.14	11.43	1.87	0.72	0.012	0.34	42.55	0.86	0.54	0.116	30.21					1652							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.21																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.11																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.12	18.23	9.70	0.148	10.15	11.48	1.90	0.22	0.479	0.07			31		158	260	57	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		70.17	12.75	3.14	0.141	0.14	0.60	2.50	5.40	0.280	0.04			5	4	5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		30	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		53.16	15.38	10.55	0.166	6.34	11.14	2.23	0.63	1.082	0.13			36	< 1	280		42	60	100		17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110		17.0	1.00
SY-4 Meas		49.97	20.33	6.29	0.107	0.50	8.16	6.93	1.67	0.285	0.13			1	3	8							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				60			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.62	15.91	11.37	0.172	9.66	13.52	1.80	0.02	0.978	0.02			43	< 1	340	380	53	170	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1050	92	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		72.92	15.07	0.58	0.037	0.07	0.66	4.49	3.89	0.012	0.01				1337								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		25	70	2600	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				970		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		18		180			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		49		440			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas		65.78	13.92	2.26	0.056	0.09		0.60	5.62	0.171	0.02												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
133941 Orig	5.53	1.34	0.14	10.43	1.537	12.42	28.22	0.05	0.07	0.074	0.60	36.88	91.77	47	9	52	< 20	5	< 20	< 10	1120	34	6
133941 Dup	5.32	1.34	0.14	10.70	1.570	12.65	28.75	0.06	0.07	0.077	0.64	36.88	92.87	49	9	52	< 20	6	< 20	< 10	1080	33	6
133958 Orig	2.81	2.64	0.14	13.48	1.497	12.30	26.26	0.04	0.04	0.373	0.72	37.49	94.98	54	6	94	< 20	7	< 20	< 10	1310	25	4
133958 Dup	2.72	2.68	0.15	13.43	1.511	12.12	26.34	0.04	0.04	0.333	0.73	37.49	94.87	53	6	89	< 20	7	< 20	< 10	1390	26	5
133968 Orig	5.11	2.25	0.36	18.41	1.844	11.31	23.78	0.15	0.10	0.397	0.71	34.97	94.29	47	10	100	< 20	9	< 20	< 10	1260	20	3
133968 Dup	5.17	2.24	0.36	18.67	1.859	11.31	23.88	0.15	0.10	0.396	0.74	34.97	94.68	48	10	98	< 20	9	< 20	< 10	1250	21	3
133976 Orig	1.58	0.94	0.08	11.52	1.500	13.33	26.48	0.02	0.05	0.061	0.97	39.82	94.77	51	8	59	< 20	7	< 20	< 10	850	38	10
133976 Split	1.50	0.96	0.08	11.91	1.463	13.77	26.52	0.02	0.05	0.062	1.04	39.70	95.58	53	9	60	< 20	6	< 20	< 10	770	39	11
133985 Orig	3.39	1.15	0.14	9.90	1.592	12.95	27.89	0.04	0.04	0.068	0.85	38.00	92.63	47	9	63	< 20	4	< 20	< 10	1010	26	5
133985 Split	3.37	1.09	0.13	9.55	1.523	12.36	26.64	0.04	0.04	0.066	0.79	38.31	90.54	46	9	62	< 20	4	< 20	10	1090	24	5
134011 Orig	2.90	0.95	0.12	8.60	1.290	13.72	28.12	0.03	0.07	0.055	0.81	38.97	92.74	50	8	66	< 20	5	< 20	< 10	750	25	4
134011 Dup	3.05	0.92	0.12	8.36	1.254	13.17	27.52	0.03	0.07	0.053	0.78	38.97	91.25	48	8	64	< 20	5	< 20	< 10	650	24	4
134026 Orig	6.88	4.20	1.26	6.19	0.632	9.16	35.91	0.23	0.52	0.482	10.54	23.44	92.57	32	9	72	< 20	8	< 20	< 10	150	10	3
134026 Split	6.68	4.50	1.33	6.17	0.597	8.82	36.40	0.24	0.57	0.581	10.04	22.53	91.79	34	9	85	< 20	8	< 20	< 10	150	10	2
134026 Orig	6.73	4.12	1.25	6.12	0.625	9.06	35.62	0.22	0.51	0.484	10.63	23.44	92.08	32	8	71	< 20	8	< 20	< 10	150	10	3
134026 Dup	7.03	4.27	1.27	6.27	0.639	9.27	36.21	0.23	0.52	0.479	10.46	23.44	93.05	33	9	74	< 20	8	< 20	< 10	160	10	3
134045 Orig	7.42	3.10	0.13	8.07	1.337	12.01	30.10	0.03	0.09	0.037	1.42	33.21	89.52	28	8	41	< 20	5	< 20	< 10	1400	35	8
134045 Split	7.42	3.11	0.13	8.35	1.317	11.87	30.59	0.03	0.09	0.039	1.44	33.27	90.23	30	8	42	< 20	5	< 20	< 10	1400	33	6
134069 Orig	2.77	2.67	0.25	9.53	1.540	13.74	27.50	0.05	0.21	0.088	1.01	36.41	93.00	27	5	53	< 20	4	< 20	< 10	610	27	5
134069 Dup	2.67	2.77	0.25	9.73	1.583	14.25	28.12	0.05	0.21	0.087	1.04	36.41	94.51	28	6	53	< 20	5	< 20	< 10	640	27	5
134073 Orig	3.95	1.28	0.11	9.88	1.555	13.44	26.88	0.05	0.06	0.099	1.01	37.48	91.85	25	8	41	< 20	6	< 20	< 10	880	21	4
134073 Split	3.96	1.30	0.12	9.84	1.528	13.72	27.25	0.06	0.06	0.102	0.97	37.35	92.30	26	8	41	< 20	6	< 20	< 10	890	21	4
134076 Orig	5.56	4.34	0.08	8.30	1.472	12.79	27.94	0.05	0.06	0.038	1.01	35.21	91.29	20	14	22	< 20	2	< 20	< 10	1040	27	5
134076 Split	5.69	4.26	0.07	8.28	1.518	12.97	28.13	0.05	0.05	0.039	0.98	35.23	91.58	20	13	23	< 20	2	< 20	< 10	1000	27	5
134076 Orig	5.52	4.36	0.09	8.32	1.477	12.73	28.00	0.06	0.06	0.038	1.00	35.21	91.33	20	14	23	< 20	2	< 20	< 10	1040	27	5
134076 Dup	5.59	4.32	0.08	8.28	1.468	12.85	27.89	0.05	0.06	0.038	1.01	35.21	91.25	20	14	22	< 20	3	< 20	< 10	1050	27	5
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			144	16	35								107		3.9			5.2		0.60			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			42	45	396								495										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas		73					< 2			3	0.7	2.3			49.7	92.1		43.5	8.1	1.48			4.8
LKSD-3 Cert		78.0					2.00			3.00	1.30	2.30			52.0	90.0		44.0	8.00	1.50			4.90
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas			196	19	86		< 2	< 0.5					177	< 0.4	10.4	22.3		12.2	3.2	1.06		0.6	3.8
W-2a Cert			190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1209	117	526								344										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2210	3330		1140	168	45.7	124	15.0	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			108	14	15								10					2.5	1.0	0.54	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	175		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas						201																	
ZW-C Cert						198																	
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.7			180			80.3	45.5	87.5	10.2	39.0	7.9	1.75	7.2	1.2	6.6
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	73	499							1.3	1700		42.2			22.4	55.8	7.46	30.6	12.4		14.6	3.3	20.7
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							26								270	481	47.1	153	24.9	3.77		3.9	24.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							22								816	1390	131	394	50.6	7.98		5.5	32.2
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	17	259				14	3	< 0.5	< 0.2			21.0			20.1	47.6	5.87	23.7	6.1	0.30		1.1	
JR-1 Cert	16.3	257				15.2	3.25	0.031	0.028			20.8			19.7	47.2	5.58	23.3	6.03	0.30		1.01	
NCS DC86318 Meas				17200											1960	418	724	3250	1670	18.7	2090	457	3120
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						980																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1120	15640																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															21000	28600	2360	6320	503	85.0			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
133941 Orig	14	< 2	2137	407	32	664	24	< 0.5	< 0.2	28	< 0.5	0.6	197	1.7	5390	9860	966	3210	429	108	231	25.4	101
133941 Dup	11	< 2	2182	412	32	639	22	< 0.5	< 0.2	28	< 0.5	< 0.5	202	2.2	5300	9840	964	3190	420	107	228	24.9	99.4

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133958 Orig	10	< 2	1638	531	30	794	14	< 0.5	0.3	29	< 0.5	< 0.5	169	0.7	4000	7090	701	2510	422	123	300	42.0	166
133958 Dup	12	< 2	1643	516	31	816	14	< 0.5	0.3	31	< 0.5	< 0.5	164	1.0	4030	7220	708	2520	427	123	302	42.1	165
133968 Orig	9	< 2	1792	522	40	945	< 2	< 0.5	0.3	28	< 0.5	< 0.5	179	1.4	2620	5060	536	2090	381	98.9	219	27.8	121
133968 Dup	6	< 2	1801	523	39	940	< 2	< 0.5	0.3	28	< 0.5	< 0.5	182	1.3	2720	5240	556	2150	394	103	229	28.6	123
133976 Orig	20	< 2	2170	573	28	498	14	< 0.5	< 0.2	14	< 0.5	< 0.5	221	0.9	3450	6590	725	2610	390	101	211	27.4	126
133976 Split	21	< 2	2142	587	30	458	13	< 0.5	< 0.2	13	< 0.5	< 0.5	227	0.8	3530	6770	749	2670	392	101	220	28.7	132
133985 Orig	14	< 2	2365	500	31	541	21	< 0.5	< 0.2	15	< 0.5	< 0.5	213	1.2	4420	8460	909	3190	399	92.2	194	24.4	111
133985 Split	16	< 2	2276	475	31	553	23	< 0.5	< 0.2	17	< 0.5	< 0.5	205	2.3	4410	8440	916	3230	411	94.4	203	24.3	113
134011 Orig	13	< 2	2280	366	23	458	7	< 0.5	< 0.2	10	< 0.5	< 0.5	204	0.8	4720	8640	872	2980	387	94.8	202	24.6	101
134011 Dup	12	< 2	2188	355	23	445	7	< 0.5	< 0.2	10	< 0.5	< 0.5	198	0.7	4450	8140	822	2770	361	90.0	192	23.7	94.1
134026 Orig	14	10	4814	1570	146	1020	7	1.7	< 0.2	23	0.6	< 0.5	800	< 0.4	1080	2700	296	1200	264	89.4	246	50.4	312
134026 Split	12	12	4749	1577	155	922	7	1.3	< 0.2	22	0.6	< 0.5	880	< 0.4	1130	2550	304	1240	269	90.8	249	47.4	292
134026 Orig	14	10	4808	1547	142	1050	8	1.8	< 0.2	24	0.6	< 0.5	792	< 0.4	1070	2680	293	1180	262	88.2	245	49.9	312
134026 Dup	15	10	4820	1593	151	990	7	1.7	< 0.2	23	0.6	< 0.5	808	< 0.4	1090	2720	298	1210	265	90.5	247	50.9	311
134045 Orig	20	< 2	2104	307	35	298	8	< 0.5	< 0.2	13	< 0.5	< 0.5	277	0.5	7870	13400	1170	3740	442	104	215	24.2	86.8
134045 Split	20	< 2	2267	315	36	305	7	< 0.5	< 0.2	13	< 0.5	< 0.5	281	0.4	7560	12900	1220	3860	458	108	224	23.3	83.0
134069 Orig	13	5	2707	286	35	573	3	< 0.5	< 0.2	6	< 0.5	< 0.5	545	0.4	5780	9840	961	3070	343	78.3	163	17.4	68.5
134069 Dup	14	6	2760	290	38	602	3	< 0.5	< 0.2	8	< 0.5	< 0.5	560	0.7	6030	10400	1020	3220	363	82.6	168	18.3	72.0
134073 Orig	11	< 2	2829	320	66	580	5	0.5	< 0.2	8	< 0.5	< 0.5	423	0.5	4130	7550	763	2530	321	76.2	163	18.4	78.1
134073 Split	11	< 2	2898	310	68	574	5	< 0.5	< 0.2	9	< 0.5	< 0.5	429	0.6	4010	7300	744	2480	314	74.7	161	17.9	75.4
134076 Orig	11	< 2	2639	201	35	89	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	974	< 0.4	6120	10300	963	3000	360	83.0	164	15.5	53.5
134076 Split	11	< 2	2610	200	38	94	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	997	< 0.4	6030	10000	941	2940	353	81.8	161	15.1	52.7
134076 Orig	11	< 2	2639	200	35	91	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	975	< 0.4	6110	10300	964	2990	362	82.9	164	15.5	53.5
134076 Dup	12	< 2	2640	202	35	87	< 2	< 0.5	< 0.2	5	< 0.5	< 0.5	972	< 0.4	6130	10200	962	3010	359	83.1	164	15.5	53.4
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas											914	
DH-1a Cert											910	
NIST 694 Meas												
NIST 694 Cert												
NIST 694 Meas												
NIST 694 Cert												
NIST 694 Meas												
NIST 694 Cert												
DNC-1 Meas				2.0								
DNC-1 Cert				2.0								
GBW 07113 Meas												
GBW 07113 Cert												

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
LKSD-3 Meas				2.7	0.41						11.0	4.4
LKSD-3 Cert				2.70	0.400						11.4	4.60
OKA-2 Meas											29300	
OKA-2 Cert											28900.000	
W-2a Meas	0.8			2.1				< 1	< 0.1		2.4	0.5
W-2a Cert	0.760			2.10				0.300	0.200		2.40	0.530
SY-4 Meas												
SY-4 Cert												
CTA-AC-1 Meas				10.8	1.10						23.7	4.0
CTA-AC-1 Cert				11.4	1.08						21.8	4.4
BIR-1a Meas				1.7						< 5		
BIR-1a Cert				1.7						3		
NCS DC86312 Meas	35.5	95.9	14.3	87.1	11.9						25.3	
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6	
ZW-C Meas							82.1	332	34.3			
ZW-C Cert							82	320	34			
NCS DC86302 Meas												
NCS DC86302 Cert												
NCS DC70014 Meas	1.3	3.4	0.53	3.5	0.49					27200		
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200		
NCS DC70009 (GBW07241) Meas	4.3	13.0	2.30	16.2				2200			27.5	
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3	
OREAS 100a (Fusion) Meas	5.2	15.2	2.42	15.9	2.29						53.9	140
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	6.6	19.2	2.97	18.7	2.58						36.7	420
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422
JR-1 Meas			0.70	4.8	0.70		1.7		1.6	19	27.2	8.9
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	564	1710	270	1770	256							
NCS DC86318 Cert	560	1750	270	1840	260.0							
SARM 3 Meas												
SARM 3 Cert												
USZ 44-2007 Meas												
USZ 44-2007 Cert												
USZ 42-2006 Meas												
USZ 42-2006 Cert												
133941 Orig	14.7	33.3	3.67	19.6	2.44	1.3	0.4	3	< 0.1	169	677	0.3
133941 Dup	14.4	32.2	3.56	18.8	2.32	1.3	0.4	3	< 0.1	169	677	0.3
133958 Orig	21.5	40.0	4.00	18.8	2.15	1.8	< 0.1	8	< 0.1	257	581	0.7
133958 Dup	21.2	37.4	3.73	18.8	2.16	1.8	< 0.1	9	< 0.1	279	588	0.7
133968 Orig	18.1	40.5	4.46	23.7	2.69	1.6	< 0.1	7	< 0.1	375	804	0.1
133968 Dup	18.7	41.7	4.50	23.9	2.81	1.5	< 0.1	7	< 0.1	374	831	0.1
133976 Orig	18.7	43.0	4.04	20.1	2.26	1.4	< 0.1	5	< 0.1	188	572	0.6

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
133976 Split	20.2	46.3	4.37	21.2	2.33	1.5	< 0.1	6	< 0.1	151	573	0.6
133985 Orig	17.5	39.1	4.27	21.1	2.47	1.6	0.6	5	< 0.1	170	510	0.5
133985 Split	17.9	38.4	4.31	21.7	2.54	1.6	0.6	4	< 0.1	184	538	0.5
134011 Orig	14.1	28.4	3.17	17.0	2.03	1.4	0.7	2	< 0.1	126	417	0.3
134011 Dup	13.4	27.6	2.99	15.9	1.91	1.3	0.6	2	0.1	111	397	0.3
134026 Orig	59.3	141	16.6	80.8	9.62	4.2	2.3	6	0.7	74	1270	6.8
134026 Split	56.4	133	15.8	75.7	9.39	4.1	2.3	7	0.6	71	1210	6.7
134026 Orig	57.7	140	16.5	80.2	9.57	4.2	2.3	6	0.7	74	1270	6.8
134026 Dup	60.9	143	16.6	81.3	9.66	4.3	2.4	6	0.6	74	1270	6.9
134045 Orig	11.3	22.8	2.38	12.6	1.56	1.4	1.5	9	0.1	146	297	1.1
134045 Split	10.9	22.5	2.37	12.6	1.46	1.3	1.5	< 1	0.2	128	298	1.0
134069 Orig	10.2	22.3	2.45	12.8	1.46	1.3	0.2	2	0.2	72	199	0.2
134069 Dup	10.7	24.3	2.57	13.4	1.54	1.3	0.1	2	0.2	95	209	0.3
134073 Orig	11.9	26.5	3.01	14.5	1.68	1.6	2.5	3	< 0.1	148	212	1.2
134073 Split	11.6	25.0	2.89	14.2	1.68	1.5	2.5	2	< 0.1	156	212	1.1
134076 Orig	7.2	15.9	1.71	9.1	1.13	0.9	< 0.1	< 1	< 0.1	86	128	< 0.1
134076 Split	7.0	14.5	1.70	9.2	1.10	0.9	< 0.1	< 1	< 0.1	95	126	< 0.1
134076 Orig	7.2	16.3	1.74	8.9	1.12	1.0	< 0.1	< 1	0.1	89	127	< 0.1
134076 Dup	7.1	15.4	1.68	9.3	1.14	0.9	< 0.1	< 1	< 0.1	82	128	< 0.1
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank												
Method Blank												
Method Blank												
Method Blank												
Method Blank												

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03178
Invoice Date: 11-Jun-14
Your Reference: ASHRAM-BATCH #2

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

146 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03178**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134077	6.06	3.56	0.08	12.56	1.695	10.97	27.99	0.03	0.05	0.108	2.10	33.10	92.24	63	14	58	< 20	8	< 20	< 10	1250	83	16
134078	6.09	3.51	0.10	14.28	1.798	10.93	26.41	0.04	0.05	0.165	1.05	33.88	92.20	69	13	60	< 20	9	< 20	< 10	1590	84	16
134079	5.84	1.23	0.07	14.58	1.975	11.25	26.67	0.03	0.03	0.111	0.97	34.95	91.87	67	12	56	< 20	7	< 20	< 10	1570	70	13
134080	7.84	3.06	0.06	13.07	2.050	11.57	29.23	0.03	0.04	0.048	0.89	33.37	93.40	57	13	46	< 20	6	< 20	< 10	2030	81	15
134081	5.79	1.57	0.13	10.80	1.811	12.23	30.89	0.04	0.05	0.051	1.78	34.91	94.26	63	11	53	< 20	5	< 20	< 10	1520	87	16
134082	7.44	1.58	0.08	10.76	1.729	12.17	31.17	0.03	0.05	0.102	0.84	34.77	93.28	56	12	59	< 20	3	< 20	< 10	1250	87	15
134083	6.25	1.74	0.10	12.79	1.879	12.33	29.88	0.03	0.05	0.074	0.80	34.94	94.61	61	16	60	< 20	6	< 20	< 10	2330	80	16
134084	5.19	1.71	0.43	11.39	1.610	11.87	30.84	0.04	0.06	0.236	3.09	33.84	95.11	72	28	64	< 20	5	< 20	< 10	1080	56	11
134085	6.03	1.10	0.11	14.10	2.000	12.21	28.59	0.03	0.06	0.089	0.69	35.43	94.40	61	16	57	< 20	6	< 20	< 10	1490	75	14
134086	6.09	1.23	0.10	12.02	1.845	12.71	29.39	0.04	0.07	0.087	1.56	35.12	94.17	58	16	51	< 20	6	< 20	< 10	1640	82	14
134087	6.23	1.62	0.12	11.79	1.798	12.24	29.64	0.05	0.08	0.084	1.82	34.30	93.54	57	20	47	< 20	5	< 20	< 10	1580	80	13
134088	6.65	1.30	0.12	11.97	1.771	11.96	29.57	0.03	0.08	0.129	1.05	35.08	93.06	53	11	61	< 20	5	< 20	< 10	1400	70	12
134089	6.26	0.91	0.17	14.81	1.968	11.39	28.97	0.03	0.10	0.214	1.42	34.10	94.08	58	8	78	< 20	7	< 20	< 10	1400	74	14
134090	7.77	0.67	0.10	12.76	1.725	11.54	30.96	0.04	0.05	0.159	1.12	34.35	93.47	61	16	73	< 20	5	< 20	< 10	1530	79	14
134091	4.52	0.48	0.11	15.98	1.993	12.01	27.08	0.03	0.05	0.145	0.73	36.64	95.25	57	14	75	< 20	6	< 20	< 10	1470	70	14
134092	3.00	0.59	0.18	8.66	1.345	12.15	31.39	0.06	0.11	0.204	3.96	35.72	94.37	61	9	70	< 20	4	< 20	< 10	640	80	18
134093	5.42	0.40	0.13	13.01	1.640	11.36	30.06	0.04	0.04	0.206	2.27	34.93	94.09	66	18	72	< 20	5	< 20	< 10	1260	65	14
134094	2.44	1.24	0.38	10.95	1.486	12.35	30.20	0.16	0.11	0.311	2.64	36.55	96.38	69	8	81	< 20	9	< 20	< 10	960	70	16
134095	5.40	1.70	0.22	12.09	1.644	12.26	29.75	0.08	0.07	0.236	1.09	35.55	94.69	59	8	65	< 20	5	< 20	< 10	1270	83	17
134096	8.48	2.23	0.18	12.15	1.606	11.26	31.09	0.05	0.07	0.231	0.89	32.56	92.31	56	16	58	< 20	5	< 20	< 10	1650	92	17
134097	8.20	1.25	0.11	12.19	1.632	11.98	30.51	0.03	0.07	0.205	0.99	33.88	92.85	58	15	56	< 20	5	< 20	< 10	1520	82	15
134098	6.05	2.25	0.20	12.96	1.685	11.96	28.54	0.06	0.07	0.224	1.09	34.45	93.49	58	11	61	< 20	5	< 20	< 10	1680	81	15
134099	0.09	96.20	0.12	0.49	0.026	0.27	0.59	0.04	0.02	0.003	0.03	0.82	98.62	< 1	< 1	< 5	90	< 1	< 20	< 10	< 30	1	1
134100	6.59	21.00	3.04	27.68	2.416	7.22	17.63	0.32	1.38	1.456	0.57	12.82	95.53	24	13	163	170	30	50	30	1460	56	13
134101	3.87	3.64	0.11	33.80	2.396	8.31	13.03	0.02	0.02	0.134	0.60	32.70	94.77	40	8	57	30	15	< 20	< 10	1190	45	11
134102	6.35	4.72	0.18	21.52	1.835	9.00	22.34	0.04	0.04	0.260	0.97	31.53	92.44	58	13	77	< 20	8	< 20	< 10	1340	62	13
134103	1.00	2.56	0.76	15.57	1.580	12.25	24.28	0.27	0.12	0.291	1.10	38.09	96.89	74	6	98	< 20	8	< 20	< 10	1140	50	12
134104	3.42	1.66	0.45	11.42	1.412	12.48	29.82	0.12	0.13	0.336	1.39	37.22	96.43	76	6	95	< 20	5	< 20	< 10	810	58	13
134105	2.04	2.30	0.54	12.24	1.376	12.43	27.34	0.15	0.17	0.314	1.15	38.05	96.06	73	6	94	< 20	7	< 20	< 10	980	55	13
134106	2.95	1.50	0.33	11.51	1.371	11.89	30.60	0.03	0.13	0.213	2.92	35.76	96.26	84	6	81	< 20	5	< 20	< 10	730	69	15
134107	2.27	1.43	0.15	12.28	1.576	11.94	27.04	0.02	0.04	0.246	1.85	37.06	93.62	67	5	81	< 20	5	< 20	< 10	980	72	17
134108	3.20	3.14	0.15	15.78	1.729	10.95	25.59	0.04	0.07	0.269	1.76	34.98	94.45	66	5	86	< 20	8	< 20	< 10	1540	75	16
134109	6.20	1.66	0.09	14.90	1.547	11.15	28.52	0.03	0.05	0.258	0.74	34.53	93.48	65	6	79	< 20	9	< 20	< 10	1540	72	15
134110	3.95	0.95	0.06	16.48	1.529	11.83	26.32	0.03	0.04	0.141	1.21	36.51	95.10	52	5	74	< 20	8	< 20	< 10	1250	64	15
134111	2.28	1.89	0.12	27.55	2.302	9.34	17.08	0.02	0.03	0.164	0.97	35.04	94.51	47	7	78	< 20	13	< 20	< 10	1260	48	14
134112	5.30	0.99	0.09	18.10	1.769	10.79	25.35	0.02	0.05	0.243	0.68	35.12	93.21	57	6	77	< 20	8	< 20	40	1500	70	15
134113	5.17	0.99	0.10	18.39	1.814	11.00	25.81	0.02	0.06	0.239	0.69	34.98	94.10	58	6	78	< 20	8	< 20	< 10	1430	66	15
134114	3.75	1.12	0.09	20.00	1.763	11.30	24.60	0.03	0.04	0.189	0.93	36.26	96.31	61	7	80	< 20	8	< 20	< 10	1000	53	13
134115	2.53	3.50	0.08	23.90	2.304	10.16	19.31	0.02	0.04	0.216	0.91	35.09	95.52	60	7	81	< 20	10	< 20	< 10	1350	54	14
134116	4.86	0.66	0.07	20.19	2.417	10.94	23.81	0.02	0.02	0.179	0.29	35.91	94.52	64	9	70	< 20	8	< 20	< 10	1540	50	13
134117	4.75	1.58	0.09	24.73	2.477	9.59	21.55	0.02	0.02	0.089	0.82	34.25	95.22	59	6	58	< 20	10	< 20	20	1530	54	15
134118	6.06	2.11	0.09	23.53	2.485	9.57	22.28	0.03	0.03	0.135	0.50	33.38	94.14	62	5	63	< 20	9	< 20	< 10	2210	54	15
134119	3.14	1.05	0.12	27.23	2.823	9.76	18.62	0.04	0.04	0.150	1.75	34.03	95.61	61	4	74	< 20	10	< 20	< 10	2420	52	15
134120	7.92	0.85	0.09	18.66	2.285	10.35	27.23	0.04	0.04	0.093	0.51	33.00	93.14	70	7	63	< 20	7	< 20	< 10	2310	63	16
134121	5.80	0.50	0.08	13.42	1.934	12.16	28.98	0.03	0.04	0.081	0.54	36.45	94.21	69	8	69	< 20	5	< 20	< 10	1580	61	14
134122	3.35	0.64	0.08	14.06	2.075	12.76	27.52	0.03	0.04	0.142	0.47	38.24	96.06	71	7	78	< 20	5	< 20	< 10	1540	57	13
134123	5.79	0.44	0.08	14.25	1.969	11.50	29.05	0.04	0.03	0.134	1.65	35.10	94.24	69	9	72	< 20	6	< 20	< 10	1550	59	15
134124	0.05	97.87	0.28	0.44	0.028	0.27	0.53	0.03	0.03	0.008	< 0.01	0.69	100.2	< 1	< 1	< 5	100	< 1	< 20	< 10	30	1	2

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134125	1.95	15.04	2.57	13.30	0.144	0.48	27.01	0.95	1.04	0.145	19.39	8.33	88.40	18	14	158	20	32	60	110	620	228	39
134126	3.03	2.22	0.18	12.69	1.696	12.77	25.48	0.02	0.02	0.117	0.61	37.18	92.98	64	8	72	< 20	6	< 20	< 10	1230	75	16
134127	3.85	2.90	0.11	13.05	1.848	12.15	27.36	0.05	0.06	0.176	0.55	36.89	95.13	69	8	93	< 20	6	< 20	< 10	1390	64	15
134128	4.14	2.61	0.06	12.81	1.967	12.19	27.39	0.03	0.04	0.133	0.69	36.50	94.42	60	8	77	< 20	7	< 20	< 10	1930	73	17
134129	7.12	2.30	0.09	12.29	2.018	11.67	29.16	0.04	0.04	0.144	0.39	34.85	92.99	50	10	68	< 20	5	< 20	< 10	1940	66	15
134130	4.69	1.53	0.11	13.79	2.412	11.82	27.31	0.05	0.04	0.236	0.38	36.60	94.27	56	7	77	< 20	4	< 20	< 10	1750	61	14
134131	6.03	1.12	0.16	13.88	2.115	11.50	28.36	0.06	0.06	0.182	0.83	35.15	93.41	65	8	70	< 20	5	< 20	< 10	1110	61	16
134132	5.84	2.13	0.13	10.79	1.393	12.24	29.35	0.05	0.09	0.107	1.15	35.24	92.67	66	14	66	< 20	5	< 20	< 10	1080	61	14
134133	5.65	2.09	0.18	9.79	1.389	12.37	29.83	0.05	0.10	0.112	0.90	35.87	92.66	57	8	62	< 20	5	< 20	< 10	920	71	16
134134	5.52	1.16	0.10	9.23	1.426	12.48	30.43	0.03	0.07	0.127	1.04	36.46	92.55	60	8	57	< 20	4	< 20	50	990	79	18
134135	5.04	1.83	0.10	10.96	1.521	12.54	28.70	0.04	0.08	0.193	1.12	36.06	93.15	58	11	54	< 20	4	< 20	10	940	77	15
134136	4.67	1.93	0.14	14.55	1.650	12.18	26.27	0.06	0.09	0.126	0.96	35.84	93.80	51	7	63	< 20	7	< 20	< 10	1600	77	16
134137	3.57	1.59	0.12	12.52	1.597	12.43	26.50	0.05	0.09	0.440	0.83	36.68	92.85	51	7	71	< 20	6	< 20	< 10	1040	67	15
134138	3.27	2.56	0.10	13.89	1.741	12.16	25.62	0.05	0.07	0.429	0.66	36.78	94.06	50	5	80	< 20	7	< 20	40	1150	67	15
134139	3.34	1.25	0.13	11.53	1.518	13.31	27.29	0.04	0.13	0.208	1.09	37.46	93.95	64	10	65	< 20	6	< 20	< 10	1160	74	16
134140	2.89	2.16	0.12	9.58	1.367	13.36	26.62	0.07	0.11	0.097	1.31	37.83	92.62	64	12	60	< 20	4	< 20	10	750	72	14
134141	3.83	1.57	0.10	11.47	1.520	13.22	28.29	0.05	0.09	0.089	1.79	36.54	94.72	72	12	70	< 20	5	< 20	< 10	1380	73	16
134142	3.97	1.81	0.11	11.15	1.489	13.08	27.50	0.05	0.10	0.080	1.69	36.44	93.51	72	13	66	< 20	6	< 20	< 10	1360	76	16
134143	3.64	1.84	0.10	11.62	1.627	13.09	27.15	0.05	0.07	0.123	1.07	37.06	93.78	56	10	76	< 20	5	< 20	< 10	1210	73	15
134144	4.98	1.42	0.18	14.31	1.873	12.38	26.54	0.07	0.10	0.082	1.14	35.64	93.74	49	9	62	< 20	7	< 20	< 10	1180	72	15
134145	2.99	1.24	0.13	11.23	1.756	12.90	26.83	0.02	0.02	0.182	0.86	37.53	92.69	47	7	69	< 20	6	< 20	20	1790	80	17
134146	4.05	1.30	0.13	16.84	2.128	12.01	24.45	0.04	0.08	0.078	0.84	36.02	93.91	50	7	68	< 20	8	< 20	< 10	1620	64	16
134147	3.63	1.48	0.08	13.22	1.834	13.10	27.13	0.03	0.05	0.086	0.58	37.69	95.28	49	8	68	< 20	6	< 20	< 10	810	56	14
134148	3.18	0.56	0.11	8.95	1.308	13.52	31.29	0.05	0.07	0.079	3.16	37.12	96.22	62	9	65	< 20	3	< 20	< 10	560	68	17
134149	0.05	96.33	0.10	0.43	0.027	0.22	0.53	0.04	0.02	0.003	< 0.01	0.71	98.43	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	1	2
134150	6.25	20.87	3.06	27.85	2.419	7.23	17.63	0.33	1.37	1.466	0.56	12.23	95.00	24	13	162	170	29	50	30	1430	54	13
134151	7.52	1.23	0.13	8.49	1.265	12.19	33.79	0.04	0.10	0.094	2.52	33.39	93.24	57	13	62	< 20	3	< 20	10	900	71	14
134152	6.47	0.93	0.13	10.01	1.385	12.00	32.63	0.04	0.08	0.121	3.36	33.01	93.70	54	10	67	< 20	3	< 20	< 10	800	77	15
134153	3.42	0.90	0.12	9.27	1.316	13.95	29.44	0.04	0.08	0.066	0.84	38.55	94.57	59	8	65	< 20	6	< 20	< 10	580	69	14
134154	1.99	2.23	0.13	8.56	1.263	14.02	28.02	0.03	0.14	0.069	1.10	38.77	94.34	56	15	56	< 20	4	< 20	< 10	740	80	15
134155	5.34	1.27	0.13	6.72	1.159	14.51	32.25	0.03	0.14	0.056	1.19	37.55	94.99	54	12	50	< 20	2	< 20	< 10	660	75	14
134156	2.01	2.24	0.20	8.40	1.004	14.90	28.28	0.05	0.19	0.065	1.03	38.27	94.62	66	17	64	< 20	5	< 20	< 10	800	78	16
134157	3.37	1.34	0.12	8.08	1.170	14.37	29.68	0.03	0.10	0.051	1.07	38.76	94.77	49	10	63	50	4	< 20	1600	940	79	16
134158	8.83	1.60	0.11	6.60	1.027	12.18	34.92	0.04	0.10	0.114	1.66	33.24	91.58	41	12	50	< 20	3	< 20	< 10	620	96	20
134159	3.01	2.22	0.09	7.03	1.162	15.13	29.74	0.04	0.09	0.083	1.40	38.83	95.81	54	12	58	< 20	4	< 20	< 10	730	77	17
134160	2.93	1.96	0.11	7.30	1.186	14.54	28.87	0.04	0.10	0.111	1.13	38.73	94.08	52	11	56	< 20	4	< 20	< 10	630	72	15
134161	2.20	2.55	0.21	9.84	1.364	14.29	27.18	0.09	0.13	0.069	1.23	38.32	95.28	58	12	57	< 20	7	< 20	< 10	790	70	15
134162	3.65	3.39	0.12	8.65	1.346	13.38	28.23	0.05	0.09	0.074	1.41	36.76	93.50	49	14	61	< 20	5	< 20	< 10	890	82	17
134163	6.91	0.74	0.13	8.84	1.280	12.52	31.71	0.04	0.07	0.087	1.25	34.98	91.65	45	6	63	< 20	3	< 20	< 10	500	105	20
134164	4.63	1.16	0.30	8.28	1.268	13.32	30.62	0.04	0.19	0.115	2.22	36.28	93.80	54	11	73	< 20	4	< 20	20	820	92	21
134165	1.37	1.23	0.25	8.12	1.058	11.92	27.13	0.04	0.07	0.093	6.70	34.16	90.78	51	10	57	30	6	< 20	10	570	47	11
134166	3.21	0.74	0.20	9.30	1.237	12.72	30.09	0.04	0.11	0.101	3.26	36.42	94.23	58	9	71	< 20	7	< 20	< 10	660	81	20
134167	1.83	1.27	0.14	12.79	1.572	13.04	26.56	0.05	0.07	0.097	2.45	37.28	95.32	56	9	80	< 20	7	< 20	< 10	850	71	18
134168	2.11	0.82	0.16	11.04	1.384	13.34	27.95	0.06	0.09	0.064	2.91	37.40	95.21	53	9	77	< 20	6	< 20	< 10	670	81	19
134169	5.35	0.43	0.12	9.15	1.288	13.62	30.35	0.03	0.07	0.045	1.25	36.82	93.17	41	6	66	< 20	4	< 20	< 10	530	95	20
134170	4.19	0.90	0.26	8.22	1.187	14.28	29.87	0.03	0.15	0.105	1.06	37.97	94.04	45	10	78	< 20	5	< 20	< 10	680	88	18
134171	3.15	0.75	0.26	8.45	1.212	13.70	28.23	0.09	0.08	0.091	0.87	38.89	92.63	47	6	66	< 20	4	< 20	< 10	790	78	17
134172	6.10	0.51	0.17	9.62	1.340	13.36	30.69	0.04	0.07	0.065	1.23	36.22	93.31	52	6	60	< 20	3	< 20	< 10	860	91	20
134173	0.61	0.84	0.27	11.86	1.380	14.02	22.34	0.02	0.05	0.088	1.27	39.69	91.82	42	5	61	< 20	7	< 20	< 10	700	45	11
134174	0.04	97.13	0.13	0.33	0.018	0.22	1.56	0.05	0.02	0.002	0.01	1.46	100.9	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	1	2

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134175	1.78	15.20	2.60	13.01	0.147	0.50	26.43	0.95	1.03	0.149	17.81	8.09	85.92	17	15	155	20	34	60	110	650	249	46
134176	1.99	4.64	0.13	15.86	1.596	12.56	22.27	0.06	0.07	0.034	0.74	36.77	94.73	44	8	69	< 20	8	< 20	< 10	1160	67	17
134177	4.27	1.93	0.19	11.44	1.415	12.91	27.29	0.04	0.17	0.042	0.87	36.50	92.80	51	10	57	< 20	5	< 20	< 10	730	84	20
134178	3.54	4.08	0.12	16.18	1.736	11.09	24.45	0.06	0.08	0.043	0.60	35.35	93.79	80	4	44	< 20	7	< 20	< 10	800	70	17
134179	2.75	1.60	0.11	14.68	1.707	12.20	25.30	0.03	0.06	0.051	0.33	37.84	93.91	84	4	45	< 20	6	< 20	< 10	850	69	18
134180	3.68	0.49	0.15	11.05	1.487	12.02	29.85	0.04	0.06	0.085	2.58	36.45	94.26	76	4	54	< 20	7	< 20	10	970	74	18
134181	5.27	0.54	0.17	9.87	1.320	11.88	31.48	0.04	0.06	0.094	2.50	35.51	93.45	64	6	58	< 20	6	< 20	< 10	950	82	21
134182	3.73	0.63	0.09	9.58	1.413	13.73	29.32	0.03	0.04	0.041	0.69	39.01	94.58	61	8	44	< 20	2	< 20	< 10	390	75	17
134183	4.86	2.08	0.15	7.48	1.168	13.58	29.54	0.07	0.06	0.051	0.49	38.01	92.69	54	8	40	< 20	< 1	< 20	< 10	400	85	20
134184	4.33	1.37	0.13	12.67	1.576	12.63	27.67	0.03	0.08	0.049	0.39	37.06	93.66	56	9	48	< 20	5	< 20	< 10	1200	75	17
134185	5.07	1.58	0.12	9.58	1.393	13.09	28.95	0.05	0.06	0.058	0.61	37.30	92.79	57	9	46	< 20	2	< 20	< 10	660	79	18
134186	6.20	2.48	0.19	10.51	1.386	12.92	29.93	0.08	0.07	0.049	0.61	35.60	93.83	65	6	44	< 20	3	< 20	< 10	790	78	19
134187	4.28	3.23	0.21	9.38	1.388	13.20	28.75	0.06	0.15	0.077	0.66	36.95	94.05	60	9	56	< 20	4	< 20	< 10	700	69	16
134188	5.22	2.98	0.24	9.20	1.388	13.29	29.06	0.06	0.21	0.073	0.64	37.32	94.47	61	8	56	< 20	3	< 20	< 10	700	51	11
134189	3.72	0.44	0.11	12.29	2.072	13.16	27.54	0.04	0.04	0.036	0.59	38.01	94.31	65	5	37	< 20	4	< 20	< 10	1550	75	15
134190	4.27	1.59	0.11	12.14	1.685	12.87	27.46	0.04	0.08	0.043	0.86	36.79	93.67	68	9	50	< 20	5	< 20	< 10	1040	73	17
134191	7.34	1.69	0.24	7.17	1.192	12.95	32.63	0.06	0.14	0.029	0.90	35.45	92.45	51	10	45	< 20	3	< 20	< 10	790	74	17
134192	2.87	0.72	0.15	8.65	1.389	14.61	29.19	0.02	0.14	0.058	0.89	39.53	95.33	54	10	47	< 20	4	< 20	< 10	640	77	16
134193	6.65	1.52	0.07	8.05	1.283	13.21	30.94	0.03	0.06	0.035	0.94	35.85	91.98	55	10	36	< 20	1	< 20	< 10	520	81	17
134194	4.62	1.40	0.12	10.53	1.606	13.21	28.25	0.03	0.10	0.042	0.57	37.30	93.15	51	7	41	< 20	3	< 20	< 10	810	81	17
134195	4.33	1.98	0.17	10.80	1.518	13.49	28.66	0.03	0.16	0.111	0.79	35.91	93.63	49	10	53	< 20	5	< 20	< 10	800	67	14
134196	6.03	2.10	0.12	15.43	1.764	11.38	27.17	0.04	0.10	0.189	1.04	32.99	92.32	47	13	73	< 20	7	< 20	< 10	1430	53	13
134197	3.28	1.29	0.18	13.46	1.630	12.85	26.78	0.04	0.13	0.176	0.88	37.10	94.51	50	11	67	< 20	6	< 20	< 10	1220	50	12
134198	2.54	3.25	0.23	13.85	1.652	12.44	25.35	0.04	0.17	0.224	1.34	36.37	94.92	53	18	72	< 20	6	< 20	< 10	1190	52	12
134199	0.08	96.52	0.08	0.99	0.036	0.30	0.65	0.02	< 0.01	0.003	< 0.01	0.72	99.34	< 1	< 1	< 5	180	< 1	< 20	< 10	< 30	2	2
134200	6.65	20.73	3.05	28.13	2.449	7.06	17.51	0.30	1.33	1.465	0.51	12.78	95.31	21	13	156	170	29	70	30	1490	57	14
134201	2.92	3.03	0.15	16.33	1.900	11.29	24.60	0.04	0.09	0.226	2.18	34.44	94.27	43	13	68	< 20	7	< 20	< 10	1580	51	14
134202	3.31	3.93	0.08	23.27	2.280	10.03	19.23	0.04	0.03	0.237	0.88	34.19	94.18	35	13	69	< 20	9	< 20	< 10	1690	52	15
134203	3.35	4.43	0.12	14.50	1.628	11.20	23.75	0.03	0.05	0.234	0.91	35.12	91.98	40	12	66	< 20	6	< 20	< 10	1390	49	13
134204	2.38	2.88	0.18	13.97	1.695	12.39	25.42	0.05	0.08	0.191	1.16	36.96	94.98	45	9	64	< 20	6	< 20	< 10	1170	56	14
134205	4.07	2.84	0.14	14.38	1.720	12.01	26.38	0.04	0.06	0.187	0.86	35.95	94.57	45	11	70	< 20	5	< 20	10	1380	49	8
134206	1.98	4.08	0.14	16.94	1.797	10.83	22.55	0.04	0.06	0.231	2.13	34.67	93.48	39	7	64	< 20	8	< 20	< 10	1450	54	8
134207	3.93	1.76	0.16	12.49	1.597	12.84	28.60	0.05	0.08	0.154	1.52	36.63	95.88	52	12	71	< 20	6	< 20	< 10	1160	55	8
134208	5.00	1.02	0.12	11.85	1.546	12.42	29.54	0.03	0.04	0.162	0.84	36.71	94.28	52	13	68	< 20	5	< 20	< 10	1140	54	7
134209	4.70	1.52	0.13	13.18	1.613	12.31	26.40	0.03	0.07	0.178	1.16	36.39	92.97	53	9	70	< 20	6	< 20	< 10	1160	55	8
134210	3.62	2.59	0.14	13.98	1.746	12.16	25.57	0.03	0.07	0.148	1.58	35.41	93.44	52	9	66	< 20	7	< 20	< 10	1250	56	8
134211	5.62	1.65	0.11	14.12	1.789	11.84	26.33	0.03	0.07	0.128	1.36	34.97	92.40	45	9	61	< 20	6	< 20	50	1500	58	8
134212	2.24	1.45	0.22	12.53	1.597	13.07	25.91	0.04	0.03	0.145	0.86	38.40	94.25	42	8	60	< 20	6	< 20	< 10	1150	41	10
134213	2.76	1.09	0.13	12.47	1.567	13.32	25.49	0.03	0.08	0.124	1.10	38.36	93.76	45	7	59	< 20	5	< 20	< 10	1030	50	7
134214	1.10	1.87	0.14	14.41	1.782	13.06	23.14	0.03	0.09	0.185	0.86	38.80	94.37	45	6	67	< 20	6	< 20	20	880	57	8
134215	3.68	2.51	0.10	12.41	1.550	12.58	24.73	0.02	0.08	0.104	0.75	37.12	91.96	46	8	54	< 20	6	< 20	30	1080	60	9
134216	3.40	2.84	0.12	15.40	1.732	11.90	23.60	0.03	0.09	0.222	1.09	35.87	92.90	52	11	68	< 20	8	< 20	< 10	1160	64	9
134217	4.30	3.56	0.14	16.34	1.848	11.48	23.58	0.03	0.11	0.185	1.05	35.07	93.41	48	14	65	< 20	7	< 20	< 10	1360	60	9
134218	3.24	3.10	0.13	17.05	1.846	11.17	22.43	0.03	0.10	0.170	0.99	35.42	92.44	46	8	65	< 20	8	< 20	< 10	1300	46	7
134219	4.06	4.17	0.16	18.15	1.959	10.76	23.34	0.05	0.10	0.145	1.60	33.99	94.43	46	9	64	< 20	8	< 20	< 10	1600	52	9
134220	2.85	7.55	0.17	19.28	2.118	10.56	19.86	0.04	0.15	0.138	0.63	32.41	92.89	44	7	69	< 20	8	< 20	70	1630	52	8
134221	< 0.01	96.86	0.06	0.80	0.021	0.21	0.38	0.01	< 0.01	0.002	0.01	0.42	98.78	< 1	< 1	< 5	220	< 1	< 20	20	< 30	< 1	1
134222	2.15	14.76	2.55	12.64	0.144	0.49	26.88	0.93	1.04	0.160	19.93	8.32	87.85	17	13	155	< 20	34	60	110	620	237	26

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134077	24	< 2	2404	548	68	379	24	0.7	< 0.2	18	< 0.5	< 0.5	235	2.1	5100	9050	910	2920	414	105	202	23.1	98.8
134078	35	< 2	1838	475	45	609	15	0.5	0.3	30	< 0.5	< 0.5	174	1.4	5160	9380	948	3030	432	114	224	24.6	95.7
134079	22	< 2	2128	440	31	392	7	0.5	0.3	22	< 0.5	< 0.5	170	1.9	3770	7360	769	2490	354	93.3	184	20.7	82.7
134080	23	< 2	2253	640	48	203	38	0.6	0.2	21	< 0.5	< 0.5	221	4.2	4760	9030	916	2830	330	87.0	184	24.1	112
134081	27	< 2	2578	424	53	249	49	0.9	< 0.2	19	< 0.5	< 0.5	219	1.7	4640	9030	958	3120	353	84.0	164	18.8	76.5
134082	23	< 2	2309	501	54	486	11	0.6	< 0.2	15	< 0.5	< 0.5	209	0.9	5400	9610	964	3030	356	89.3	180	21.0	88.8
134083	27	< 2	2275	474	41	315	9	< 0.5	0.2	17	< 0.5	< 0.5	188	1.7	4550	8550	874	2760	349	86.6	177	20.6	86.2
134084	18	< 2	2939	472	123	663	14	1.0	< 0.2	22	< 0.5	< 0.5	196	2.8	2790	5480	578	1900	254	69.5	152	19.2	84.3
134085	22	< 2	2141	531	47	303	6	0.5	< 0.2	13	< 0.5	< 0.5	271	1.8	4200	7780	798	2560	313	81.5	173	21.0	91.4
134086	23	< 2	2786	445	90	344	14	0.8	< 0.2	12	< 0.5	< 0.5	280	0.9	4870	8620	861	2690	310	76.9	158	18.3	75.0
134087	34	< 2	2861	453	93	348	16	0.8	< 0.2	14	< 0.5	< 0.5	293	1.5	4730	8430	845	2660	306	75.0	157	18.3	75.1
134088	20	< 2	2279	417	80	343	8	0.8	< 0.2	18	< 0.5	< 0.5	248	1.2	4420	7680	741	2260	259	65.5	135	16.5	70.4
134089	23	< 2	2038	494	60	633	18	0.6	0.2	34	< 0.5	< 0.5	218	1.5	3980	7580	797	2620	332	82.3	170	19.9	84.5
134090	21	< 2	2206	495	47	489	9	< 0.5	< 0.2	18	< 0.5	< 0.5	158	0.7	4900	8530	831	2580	325	82.6	172	21.2	89.5
134091	26	< 2	1811	459	46	366	7	< 0.5	0.2	14	< 0.5	< 0.5	152	1.5	3970	7260	744	2450	338	84.2	171	20.6	86.7
134092	26	< 2	2701	484	113	623	8	0.9	< 0.2	15	< 0.5	< 0.5	270	0.7	4290	8040	883	3140	430	108	209	23.7	94.2
134093	23	< 2	2094	420	37	643	7	< 0.5	< 0.2	19	< 0.5	< 0.5	144	0.9	3120	6350	719	2600	385	99.6	199	21.9	83.2
134094	28	< 2	2305	471	33	595	11	< 0.5	< 0.2	27	< 0.5	< 0.5	202	1.2	3330	6930	806	2970	445	118	245	26.4	109
134095	40	< 2	2170	629	52	725	8	< 0.5	< 0.2	21	< 0.5	< 0.5	152	1.2	4850	8890	916	3020	400	109	241	29.6	135
134096	25	< 2	2104	720	68	598	10	0.5	0.2	23	< 0.5	< 0.5	162	0.9	5760	10000	991	3100	388	105	240	33.3	144
134097	23	< 2	2107	597	68	674	11	0.6	0.2	21	< 0.5	< 0.5	170	0.7	5190	8870	887	2870	396	108	234	27.9	123
134098	23	< 2	2279	545	67	527	11	0.6	0.3	19	< 0.5	< 0.5	172	1.1	5150	8690	871	2830	401	111	238	29.5	115
134099	13	< 2	29	7	5	34	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	56.4	105	10.5	34.3	4.7	1.23	2.5	0.3	1.3
134100	20	25	3142	1003	241	368	53	1.8	< 0.2	41	< 0.5	0.5	13700	2.3	2610	4770	552	2230	455	132	298	40.1	196
134101	17	< 2	965	842	33	271	4	< 0.5	0.4	23	< 0.5	< 0.5	72	1.7	2430	4440	492	1920	458	136	289	38.1	166
134102	20	< 2	1419	452	26	608	4	< 0.5	0.3	31	< 0.5	< 0.5	105	1.6	3640	6350	674	2440	487	135	269	29.8	108
134103	23	< 2	1727	531	26	402	5	< 0.5	0.3	36	< 0.5	< 0.5	156	1.3	2370	4810	567	2210	447	128	261	30.5	120
134104	22	< 2	1824	513	25	845	3	< 0.5	0.2	28	< 0.5	< 0.5	196	0.5	2880	5670	652	2440	418	117	245	29.9	116
134105	21	3	1820	542	24	619	4	< 0.5	0.2	30	< 0.5	< 0.5	326	0.8	2750	5430	624	2380	449	129	269	31.5	119
134106	24	2	2200	702	53	619	3	< 0.5	< 0.2	18	< 0.5	< 0.5	312	0.7	3510	6840	771	2810	470	140	300	37.6	147
134107	29	< 2	1740	670	43	642	3	< 0.5	0.2	23	< 0.5	< 0.5	185	1.2	3550	7200	797	2880	481	136	317	41.8	172
134108	27	< 2	1629	929	26	680	9	< 0.5	0.3	26	< 0.5	< 0.5	181	1.0	3880	7480	841	3100	513	146	323	45.0	199
134109	23	< 2	1626	1002	33	793	8	< 0.5	0.3	20	< 0.5	< 0.5	162	1.3	4600	7750	787	2700	482	149	340	48.6	215
134110	22	< 2	1790	939	34	502	3	< 0.5	0.3	15	< 0.5	< 0.5	145	0.9	3440	6240	691	2620	552	167	365	46.8	203
134111	20	< 2	1113	640	20	478	4	< 0.5	0.4	23	< 0.5	< 0.5	100	1.2	1850	4080	540	2410	570	158	322	39.6	154
134112	22	< 2	1612	1194	47	830	6	< 0.5	0.3	19	< 0.5	< 0.5	136	1.5	4330	7150	749	2740	563	174	393	54.6	259
134113	28	< 2	1619	1163	48	866	7	0.7	0.4	21	0.7	< 0.5	146	1.4	4070	6870	714	2640	556	176	411	57.0	262
134114	19	< 2	1676	471	16	1000	2	< 0.5	0.3	26	< 0.5	< 0.5	140	0.9	2760	5040	569	2260	453	123	247	27.6	103
134115	20	< 2	1340	628	23	965	5	< 0.5	0.3	25	< 0.5	< 0.5	114	2.8	2330	4630	582	2500	509	143	302	36.7	145
134116	19	< 2	1791	296	12	522	< 2	< 0.5	0.3	17	< 0.5	< 0.5	117	1.8	1810	4340	576	2380	422	108	212	21.1	69.4
134117	20	< 2	1559	298	18	237	2	< 0.5	0.3	24	< 0.5	< 0.5	96	1.8	1940	4610	608	2560	501	126	238	22.7	72.6
134118	21	< 2	1424	456	16	276	3	< 0.5	0.3	25	< 0.5	< 0.5	95	1.8	1910	4610	611	2560	479	126	258	29.7	110
134119	21	< 2	1520	537	17	216	3	< 0.5	0.4	19	< 0.5	< 0.5	87	2.8	1670	4490	640	2700	547	142	303	36.1	135
134120	22	< 2	1682	650	23	146	4	< 0.5	0.3	20	< 0.5	< 0.5	112	2.5	2960	6270	764	2830	492	131	287	36.2	144
134121	19	< 2	2256	788	27	192	7	< 0.5	< 0.2	15	< 0.5	< 0.5	168	5.0	3140	6410	736	2560	383	101	234	33.0	153
134122	20	< 2	2149	805	26	231	5	< 0.5	0.2	18	< 0.5	< 0.5	144	3.3	2860	5980	695	2430	391	109	251	34.5	156
134123	21	< 2	2507	578	35	306	8	< 0.5	0.2	19	< 0.5	< 0.5	157	2.7	2630	5860	714	2600	424	110	236	28.1	115
134124	< 5	< 2	29	7	6	42	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	12	< 0.4	30.9	64.8	7.32	27.6	4.7	1.23	2.9	0.4	1.5
134125	149	33	20520	1056	237	17	31	2.5	< 0.2	< 1	5.9	1.6	923	7.8	17700	28100	2540	7760	846	194	359	35.7	146

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134126	27	< 2	1997	469	36	343	15	< 0.5	0.2	20	< 0.5	< 0.5	215	2.2	4060	7530	789	2680	406	107	241	29.4	121
134127	21	< 2	1967	815	32	297	6	< 0.5	0.2	16	< 0.5	< 0.5	195	1.6	3210	6720	763	2630	439	119	266	35.6	159
134128	24	< 2	1938	436	38	241	9	0.6	0.2	17	< 0.5	< 0.5	183	2.9	3160	7580	908	3100	446	111	232	26.2	96.5
134129	22	< 2	2275	462	19	183	< 2	< 0.5	0.2	18	< 0.5	< 0.5	247	4.3	2760	6870	838	2850	378	92.7	200	23.2	92.5
134130	20	< 2	1944	545	16	231	< 2	< 0.5	0.2	20	< 0.5	< 0.5	159	2.6	2340	6030	764	2710	401	104	233	28.4	116
134131	23	< 2	1925	637	28	356	< 2	< 0.5	< 0.2	32	< 0.5	< 0.5	186	1.7	2310	5750	751	2800	456	121	272	33.6	136
134132	21	< 2	2384	583	57	687	4	0.7	< 0.2	22	< 0.5	< 0.5	340	0.9	3040	6140	701	2500	404	105	225	27.8	112
134133	23	< 2	2225	454	34	568	9	< 0.5	< 0.2	20	< 0.5	< 0.5	318	1.2	4090	7540	817	2800	443	115	250	28.3	100
134134	25	< 2	2071	433	36	963	10	< 0.5	< 0.2	24	1.9	< 0.5	232	1.0	4500	8410	919	3130	452	109	228	25.4	91.9
134135	22	< 2	2334	497	37	1040	3	< 0.5	< 0.2	18	< 0.5	< 0.5	280	0.7	4720	8360	857	2750	365	88.0	194	24.7	101
134136	22	< 2	1816	600	36	347	< 2	< 0.5	< 0.2	11	< 0.5	< 0.5	218	2.1	4620	8470	878	2820	379	90.6	192	24.5	107
134137	21	< 2	2093	538	26	937	< 2	< 0.5	0.2	23	< 0.5	< 0.5	216	1.4	3940	7190	753	2510	398	105	231	29.2	117
134138	22	< 2	2055	678	32	909	< 2	< 0.5	0.2	25	< 0.5	< 0.5	178	1.2	3750	7110	769	2620	417	110	244	32.0	140
134139	23	2	2345	475	36	931	4	< 0.5	< 0.2	23	< 0.5	< 0.5	272	1.2	4620	8190	858	2870	436	109	236	26.9	103
134140	22	< 2	2226	479	57	890	5	0.6	< 0.2	21	< 0.5	< 0.5	268	1.1	4620	8010	817	2670	407	110	245	29.9	111
134141	24	< 2	2646	709	70	731	5	0.7	< 0.2	21	< 0.5	< 0.5	305	3.2	4480	8050	841	2770	441	118	264	33.5	143
134142	23	< 2	2545	692	72	696	5	0.8	< 0.2	18	< 0.5	< 0.5	299	2.5	4730	8320	863	2850	457	123	270	34.0	143
134143	22	< 2	2211	701	41	635	7	< 0.5	0.2	17	< 0.5	< 0.5	261	1.0	4150	7810	834	2780	467	128	287	36.2	150
134144	22	< 2	2225	622	42	423	6	0.6	0.3	14	< 0.5	< 0.5	257	3.4	4350	7850	814	2690	491	135	292	33.9	134
134145	28	< 2	2306	473	22	399	4	< 0.5	0.2	27	< 0.5	< 0.5	273	3.6	3900	7980	846	2810	415	112	260	32.5	130
134146	21	< 2	1844	884	25	338	41	< 0.5	0.3	19	< 0.5	< 0.5	209	2.0	3410	6590	738	2670	504	141	324	45.0	194
134147	21	< 2	2103	530	18	414	4	< 0.5	< 0.2	18	< 0.5	< 0.5	212	1.1	2730	5680	666	2430	382	93.3	202	25.7	109
134148	22	< 2	3225	638	62	335	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	218	0.8	3500	7160	808	2810	413	106	236	32.4	140
134149	< 5	< 2	30	7	< 4	27	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	44.2	88.7	9.55	32.4	5.3	1.37	2.9	0.4	1.6
134150	19	25	3197	991	243	365	52	1.8	< 0.2	42	< 0.5	< 0.5	13550	2.2	2580	4800	549	2140	472	131	304	42.2	195
134151	22	< 2	2918	545	79	317	12	0.7	< 0.2	13	44.6	< 0.5	233	1.1	4530	8130	827	2670	380	93.4	200	24.6	104
134152	23	< 2	2555	521	130	338	5	1.0	< 0.2	19	0.7	< 0.5	186	0.7	4970	8770	893	2910	407	98.2	209	24.7	102
134153	21	< 2	2194	388	38	440	8	< 0.5	< 0.2	12	< 0.5	< 0.5	193	0.7	4410	7710	801	2620	336	77.4	158	18.3	74.2
134154	21	2	2668	379	47	274	7	0.5	< 0.2	11	< 0.5	< 0.5	289	0.6	5680	9320	903	2810	360	82.3	168	19.1	76.7
134155	21	2	2455	388	57	351	10	< 0.5	< 0.2	8	< 0.5	< 0.5	415	0.6	5160	8600	845	2690	354	81.7	167	19.2	73.6
134156	26	3	2198	452	29	337	15	< 0.5	< 0.2	12	< 0.5	< 0.5	338	0.6	4950	8820	919	3060	425	99.8	208	24.0	96.0
134157	23	< 2	2219	585	37	330	7	0.5	0.2	153	< 0.5	< 0.5	241	0.5	5170	8980	909	2970	433	112	247	31.5	131
134158	30	< 2	2086	675	41	460	7	< 0.5	< 0.2	52	< 0.5	< 0.5	296	< 0.4	6020	10900	1150	3720	483	118	263	33.6	142
134159	23	< 2	2590	441	47	468	11	< 0.5	< 0.2	13	< 0.5	< 0.5	305	0.6	4860	8540	884	2940	400	93.6	195	22.9	92.3
134160	22	< 2	2455	523	47	455	11	< 0.5	< 0.2	14	< 0.5	< 0.5	319	0.8	4610	8080	834	2770	392	93.4	200	25.1	107
134161	21	2	2110	500	49	682	15	0.6	< 0.2	18	< 0.5	< 0.5	255	0.7	4230	7830	824	2750	408	99.9	213	25.7	106
134162	24	2	2362	386	50	219	10	0.6	< 0.2	13	< 0.5	< 0.5	262	< 0.4	5200	8940	908	2920	411	104	215	25.2	100
134163	32	< 2	2016	410	46	319	9	0.5	< 0.2	13	< 0.5	< 0.5	161	< 0.4	7200	11500	1130	3560	454	111	230	25.8	101
134164	33	4	2286	618	33	717	13	< 0.5	< 0.2	15	0.5	< 0.5	371	0.6	5010	9400	1050	3660	533	138	298	37.8	162
134165	23	< 2	3338	662	71	420	6	< 0.5	< 0.2	14	< 0.5	< 0.5	275	0.5	2840	6190	703	2780	420	109	251	30.5	146
134166	31	3	2593	517	43	567	13	< 0.5	< 0.2	16	< 0.5	< 0.5	256	0.6	4100	8020	922	3350	514	124	252	29.7	126
134167	28	< 2	2457	591	36	391	21	< 0.5	< 0.2	16	< 0.5	< 0.5	212	1.1	3490	6790	784	2890	515	139	302	37.7	156
134168	32	< 2	2634	761	39	367	14	< 0.5	< 0.2	14	< 0.5	< 0.5	203	0.6	4530	8130	900	3240	549	145	322	43.5	194
134169	31	< 2	2438	567	34	350	14	< 0.5	< 0.2	8	< 0.5	< 0.5	179	< 0.4	6190	10200	1030	3360	447	109	236	30.9	138
134170	29	3	2401	486	32	571	19	< 0.5	< 0.2	13	< 0.5	< 0.5	310	< 0.4	5270	9100	953	3200	443	107	226	28.8	128
134171	27	< 2	2413	381	25	364	14	< 0.5	< 0.2	9	< 0.5	< 0.5	268	0.4	4660	8210	875	2950	386	89.5	184	22.6	100
134172	33	< 2	2373	476	26	346	8	< 0.5	< 0.2	12	< 0.5	< 0.5	191	0.8	5440	9470	1010	3400	490	121	253	31.3	130
134173	23	< 2	2148	592	31	312	10	1.3	< 0.2	19	< 0.5	< 0.5	240	1.5	3180	6190	672	2610	429	117	289	36.8	159
134174	< 5	< 2	49	5	< 4	24	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	47.8	87.1	8.76	30.6	4.5	1.10	2.3	0.3	1.4
134175	139	35	20760	929	219	26	31	2.5	< 0.2	< 1	6.3	1.8	927	3.5	18400	28500	2560	8150	866	199	367	36.6	155

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134176	26	< 2	1902	258	21	260	6	< 0.5	0.2	12	< 0.5	< 0.5	211	1.6	3460	6640	746	2650	418	99.5	201	21.5	78.3
134177	28	3	2516	352	23	260	12	< 0.5	< 0.2	9	< 0.5	< 0.5	293	0.8	5280	8810	905	3020	443	105	211	22.3	86.8
134178	26	< 2	1773	787	17	259	6	< 0.5	< 0.2	16	< 0.5	< 0.5	157	0.8	3840	6980	768	2730	517	143	315	41.9	181
134179	25	< 2	1856	645	18	253	6	< 0.5	< 0.2	15	< 0.5	< 0.5	162	0.8	3670	6870	766	2760	506	134	285	34.9	148
134180	30	< 2	2222	924	35	403	7	< 0.5	< 0.2	25	< 0.5	< 0.5	170	1.6	3170	7000	842	3040	456	113	252	39.5	208
134181	32	< 2	2220	895	25	523	9	0.7	< 0.2	21	< 0.5	< 0.5	201	0.7	3970	8020	935	3400	505	120	252	37.2	197
134182	27	< 2	2047	411	28	120	3	< 0.5	< 0.2	13	< 0.5	< 0.5	177	< 0.4	4100	7660	854	3010	403	86.3	167	17.6	74.7
134183	30	< 2	2229	341	21	147	2	< 0.5	< 0.2	9	< 0.5	< 0.5	213	< 0.4	4570	8760	965	3320	421	87.6	164	15.8	64.9
134184	28	< 2	1981	443	15	177	6	< 0.5	< 0.2	10	< 0.5	< 0.5	204	0.5	3730	7450	836	2910	438	101	197	20.7	86.2
134185	27	< 2	1872	349	29	257	5	< 0.5	< 0.2	8	< 0.5	< 0.5	221	0.8	4370	8100	887	3020	377	81.5	158	15.8	65.9
134186	28	< 2	2024	342	47	217	7	< 0.5	< 0.2	10	< 0.5	< 0.5	198	0.6	4150	7760	873	3050	412	91.3	179	17.3	66.4
134187	26	4	1828	400	34	438	9	< 0.5	< 0.2	21	< 0.5	< 0.5	282	1.2	3570	6840	780	2780	397	89.9	179	18.9	77.6
134188	21	< 2	1807	383	34	394	9	< 0.5	< 0.2	16	< 0.5	< 0.5	291	1.2	3610	7060	751	2780	380	87.9	186	17.8	75.4
134189	23	< 2	1740	267	17	112	3	< 0.5	< 0.2	21	< 0.5	< 0.5	122	3.1	3630	7860	834	2540	311	75.2	152	14.7	55.1
134190	24	< 2	2003	353	42	288	7	< 0.5	< 0.2	8	< 0.5	< 0.5	206	1.2	4230	7510	791	2660	382	90.0	178	18.4	71.2
134191	27	3	2110	365	49	363	12	< 0.5	< 0.2	9	< 0.5	< 0.5	242	0.6	4210	7440	795	2710	357	83.5	169	17.7	69.8
134192	26	3	2254	315	42	329	9	< 0.5	< 0.2	11	< 0.5	< 0.5	262	0.5	4600	7880	814	2680	362	85.6	174	18.4	72.4
134193	26	< 2	2235	363	58	136	12	< 0.5	< 0.2	4	< 0.5	< 0.5	204	< 0.4	5040	8580	887	2940	382	87.1	176	18.3	71.0
134194	27	2	2081	286	35	96	8	< 0.5	< 0.2	5	< 0.5	< 0.5	211	0.4	4440	8300	881	2910	400	93.4	181	16.8	61.5
134195	29	4	2413	343	30	295	6	< 0.5	< 0.2	9	< 0.5	< 0.5	314	0.7	3860	6950	746	2530	358	86.0	180	20.2	79.7
134196	22	3	2623	543	21	347	5	< 0.5	0.2	14	< 0.5	< 0.5	342	1.7	2530	5120	585	2080	367	102	234	30.9	132
134197	21	3	2470	474	25	364	4	< 0.5	0.2	13	< 0.5	< 0.5	356	1.2	2510	4930	550	1910	331	94.4	223	31.4	134
134198	19	4	2633	544	25	446	4	< 0.5	0.2	28	< 0.5	< 0.5	525	1.3	2530	5030	562	1960	341	97.1	229	34.2	153
134199	< 5	< 2	41	7	5	28	10	< 0.5	< 0.2	< 1	< 0.5	< 0.5	9	< 0.4	71.4	131	13.3	46.1	6.8	1.55	3.1	0.4	1.6
134200	23	26	3063	892	219	350	51	1.8	< 0.2	42	< 0.5	< 0.5	13340	2.6	2560	4670	547	2180	464	127	302	43.1	203
134201	22	2	2799	850	31	417	3	< 0.5	0.3	26	< 0.5	< 0.5	341	3.0	2040	4650	585	2240	414	120	290	45.4	215
134202	22	< 2	1819	522	16	613	6	< 0.5	0.3	22	< 0.5	< 0.5	185	2.6	2340	4800	598	2360	445	114	245	30.1	128
134203	19	< 2	2275	436	24	465	4	< 0.5	0.2	22	< 0.5	< 0.5	275	1.8	2460	4810	546	1970	354	96.1	210	27.1	111
134204	20	< 2	2333	442	22	449	5	< 0.5	< 0.2	18	< 0.5	< 0.5	278	1.3	2950	5630	623	2190	372	101	227	29.4	119
134205	19	< 2	2420	512	27	331	5	< 0.5	0.2	17	2.3	< 0.5	263	1.3	2720	5340	611	2160	370	102	227	29.2	122
134206	23	< 2	2343	831	37	378	2	< 0.5	0.3	21	< 0.5	< 0.5	268	2.9	2690	5540	658	2450	465	130	302	42.8	191
134207	21	< 2	2911	579	27	335	5	< 0.5	0.2	18	< 0.5	< 0.5	306	1.9	2980	5920	674	2350	379	103	227	30.1	131
134208	19	< 2	2701	454	26	363	4	< 0.5	< 0.2	15	< 0.5	< 0.5	236	1.1	3250	6010	645	2150	322	83.7	184	22.9	98.1
134209	22	< 2	2538	539	32	453	5	< 0.5	0.2	17	< 0.5	< 0.5	283	1.9	3050	5840	654	2270	377	105	232	29.9	126
134210	23	< 2	2480	620	29	409	5	< 0.5	0.2	22	< 0.5	< 0.5	263	1.3	2890	5780	667	2370	395	108	247	33.2	144
134211	23	< 2	2384	496	24	272	3	< 0.5	0.2	21	< 0.5	< 0.5	237	1.4	2790	6060	724	2550	385	101	222	27.2	115
134212	16	< 2	2439	396	22	279	6	< 0.5	0.2	15	0.7	< 0.5	286	2.8	2600	5010	577	2080	321	85.9	190	24.2	98.8
134213	19	< 2	2476	495	25	421	3	< 0.5	0.2	15	< 0.5	< 0.5	269	1.5	2640	5250	607	2140	345	92.1	209	26.8	115
134214	21	< 2	2155	418	19	390	3	< 0.5	0.2	21	< 0.5	< 0.5	274	1.4	2830	5760	667	2340	356	94.0	210	26.2	109
134215	24	< 2	2256	373	19	455	7	< 0.5	0.2	20	< 0.5	< 0.5	270	2.4	3330	6220	696	2430	364	88.3	185	21.2	84.8
134216	24	< 2	2342	468	24	717	7	< 0.5	0.3	24	< 0.5	< 0.5	334	1.4	3920	6850	730	2470	384	96.7	204	24.7	103
134217	22	2	2326	537	22	446	6	< 0.5	0.2	17	< 0.5	< 0.5	325	1.5	3040	6100	692	2410	402	105	231	28.7	121
134218	20	< 2	2318	540	19	355	5	< 0.5	0.3	22	< 0.5	< 0.5	306	3.2	2180	4500	533	1940	351	95.1	218	28.7	122
134219	23	2	2559	738	21	362	5	< 0.5	0.3	29	< 0.5	< 0.5	332	3.0	2320	4870	604	2340	458	126	290	38.7	165
134220	23	3	2162	450	16	280	7	< 0.5	0.3	21	< 0.5	< 0.5	389	2.6	2570	4980	602	2320	417	106	227	25.7	101
134221	< 5	< 2	18	5	4	22	11	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	19.3	38.0	4.09	14.5	2.5	0.67	1.6	0.2	0.8
134222	133	33	20840	1008	212	25	33	2.5	< 0.2	< 1	5.6	1.8	916	2.8	18500	28700	2580	8160	870	200	363	35.4	154

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134077	15.4	36.5	4.30	24.2	3.09	1.9	< 0.1	7	0.1	88	762	0.1	2.474
134078	13.5	29.9	3.57	20.0	2.59	1.6	0.4	6	< 0.1	78	776	0.3	3.690
134079	12.3	33.1	3.41	19.0	2.44	1.3	0.4	4	< 0.1	207	745	0.3	3.871
134080	18.0	41.1	4.96	25.9	3.12	1.8	< 0.1	2	< 0.1	184	605	< 0.1	4.042
134081	11.5	26.6	3.20	17.8	2.36	1.5	0.3	4	< 0.1	113	477	0.3	3.394
134082	13.5	31.4	3.71	19.9	2.59	1.7	0.3	6	< 0.1	103	498	0.3	3.713
134083	12.9	29.2	3.39	18.1	2.29	1.4	< 0.1	4	< 0.1	190	702	0.1	3.890
134084	13.2	31.4	3.64	19.6	2.55	2.1	5.4	5	0.1	234	705	2.0	3.410
134085	14.4	34.0	3.89	19.5	2.36	1.7	< 0.1	3	0.1	185	681	0.2	3.665
134086	11.5	27.5	3.38	18.6	2.42	1.9	< 0.1	4	0.1	149	554	0.1	1.616
134087	11.6	28.0	3.40	19.1	2.41	1.8	0.1	4	0.1	184	546	0.2	1.770
134088	11.0	26.6	3.25	17.6	2.22	1.8	0.2	5	0.1	171	450	0.2	3.868
134089	13.1	29.9	3.66	20.7	2.59	1.6	1.5	6	0.1	237	673	1.1	3.405
134090	13.5	30.2	3.72	19.7	2.49	1.6	0.2	5	< 0.1	194	593	< 0.1	3.621
134091	13.0	29.9	3.43	18.5	2.20	1.5	< 0.1	4	< 0.1	275	695	< 0.1	3.247
134092	13.5	29.9	3.47	20.4	2.60	2.2	1.4	6	0.2	75	528	1.0	3.198
134093	11.5	25.6	2.93	17.3	2.25	1.5	1.9	7	< 0.1	136	476	1.2	2.537
134094	14.3	31.4	3.52	19.4	2.57	1.6	0.9	11	0.2	143	538	2.3	3.352
134095	19.1	37.6	4.18	21.6	2.62	2.1	0.8	8	< 0.1	133	603	0.6	3.265
134096	21.5	46.5	5.23	25.5	3.06	2.3	< 0.1	7	0.1	164	706	0.2	3.739
134097	17.4	38.1	4.44	22.6	2.79	2.1	< 0.1	8	< 0.1	163	624	0.1	3.948
134098	16.2	34.1	3.83	20.9	2.48	2.1	0.1	10	< 0.1	217	676	0.2	3.370
134099	0.2	0.5	0.06	0.3	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	7.9	< 0.1	0.402
134100	31.8	75.6	8.89	48.8	6.08	5.8	2.8	26	0.4	525	892	2.7	0.015
134101	25.8	56.7	6.12	29.2	3.25	2.1	< 0.1	5	< 0.1	749	860	< 0.1	2.922
134102	13.7	26.9	2.87	15.3	1.78	1.6	1.2	9	< 0.1	615	785	0.7	2.414
134103	16.6	34.1	3.93	20.5	2.60	1.8	1.5	8	0.2	372	658	2.8	4.241
134104	15.8	32.3	3.70	19.7	2.25	1.6	4.0	16	0.1	214	604	2.5	3.914
134105	16.4	36.0	4.05	22.4	2.87	1.7	2.1	10	0.1	236	646	3.6	3.912
134106	20.2	43.5	5.03	27.6	3.66	2.3	2.5	6	0.1	78	775	1.8	3.968
134107	25.0	51.8	5.76	30.2	3.72	3.6	1.1	8	< 0.1	67	765	1.1	3.870
134108	29.6	61.0	6.40	31.1	3.64	2.6	0.5	6	< 0.1	221	828	0.6	3.849
134109	31.6	65.2	6.57	30.8	3.44	2.9	< 0.1	7	< 0.1	227	883	0.2	3.832
134110	29.0	56.5	5.93	29.3	3.17	2.7	< 0.1	5	< 0.1	253	1040	0.2	4.094
134111	20.7	38.9	4.17	21.1	2.48	2.0	0.2	4	< 0.1	417	972	0.4	4.251
134112	38.1	78.6	7.45	33.2	3.60	3.5	< 0.1	8	< 0.1	403	1120	0.1	2.072
134113	39.2	79.0	7.78	32.9	3.58	5.6	< 0.1	9	< 0.1	463	1140	0.1	1.929
134114	13.8	28.9	3.33	17.0	2.00	1.4	0.1	8	< 0.1	269	784	0.4	3.774
134115	19.4	37.8	4.03	20.4	2.36	2.0	< 0.1	12	< 0.1	612	1000	0.3	3.922
134116	8.2	16.9	1.95	10.9	1.45	1.0	< 0.1	5	< 0.1	301	860	< 0.1	4.611
134117	8.7	17.8	2.02	11.6	1.51	1.1	0.2	4	< 0.1	358	994	0.2	4.216
134118	13.9	25.5	2.71	14.0	1.69	1.5	< 0.1	3	< 0.1	325	997	< 0.1	4.024
134119	16.5	30.4	2.97	14.8	1.74	1.7	< 0.1	2	0.1	538	1040	< 0.1	3.038
134120	19.4	36.8	3.63	17.3	2.09	1.9	< 0.1	2	< 0.1	358	980	< 0.1	3.702
134121	21.8	45.7	4.69	22.8	2.59	2.1	< 0.1	2	0.1	579	819	0.1	3.636
134122	22.3	46.9	5.06	25.4	2.85	2.1	< 0.1	3	0.1	387	818	< 0.1	3.711
134123	16.3	33.1	3.52	18.3	2.25	1.7	0.5	3	< 0.1	344	884	0.4	3.752
134124	0.2	0.5	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	11.8	< 0.1	0.393

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134125	23.6	57.5	7.66	44.6	6.14	3.7	< 0.1	4	2.4	996	153	195	0.009
134126	17.4	37.2	3.76	18.9	2.31	2.0	0.3	4	< 0.1	17	837	0.4	3.792
134127	24.3	50.3	5.29	25.8	3.04	2.1	< 0.1	5	< 0.1	185	745	0.2	3.862
134128	13.0	26.7	2.84	16.3	2.05	1.6	< 0.1	3	0.1	478	814	0.1	3.795
134129	13.2	26.2	2.78	14.9	1.74	1.3	< 0.1	3	< 0.1	336	851	0.1	3.764
134130	16.6	33.7	3.47	18.0	2.02	1.5	< 0.1	5	< 0.1	399	813	< 0.1	3.849
134131	19.1	39.1	3.94	19.7	2.38	1.9	0.5	4	< 0.1	239	993	0.5	4.363
134132	16.1	36.8	4.12	22.9	2.84	1.9	0.1	4	< 0.1	169	671	0.2	3.385
134133	12.8	26.7	2.85	17.0	2.05	1.6	0.3	7	0.1	151	607	0.2	3.954
134134	11.9	24.3	2.77	16.0	1.94	1.6	0.5	5	< 0.1	160	496	0.4	3.760
134135	13.8	29.9	3.08	16.4	2.04	1.6	0.2	7	< 0.1	128	412	0.2	3.850
134136	16.1	36.2	3.84	18.7	2.28	1.7	0.4	2	< 0.1	289	509	0.3	3.770
134137	16.1	32.3	3.30	16.6	1.92	1.7	0.1	5	< 0.1	218	463	0.2	3.892
134138	20.4	41.7	4.42	21.2	2.51	2.0	1.1	5	< 0.1	287	504	0.4	3.652
134139	13.6	28.9	3.16	16.6	2.03	1.6	< 0.1	5	0.1	257	555	0.2	3.425
134140	14.6	29.7	3.35	18.4	2.27	2.0	< 0.1	6	0.1	158	472	0.3	3.636
134141	20.5	42.0	4.55	24.3	2.98	2.6	< 0.1	4	< 0.1	375	632	0.2	1.885
134142	20.4	42.8	4.55	24.6	3.15	2.6	< 0.1	3	0.1	327	665	0.2	1.709
134143	21.3	42.0	4.30	23.2	2.79	2.3	< 0.1	4	< 0.1	215	673	0.2	3.597
134144	18.6	37.2	3.63	19.6	2.38	2.2	< 0.1	2	< 0.1	238	790	0.3	3.672
134145	18.0	35.2	3.60	18.5	2.15	1.8	< 0.1	5	< 0.1	52	658	0.2	3.393
134146	28.2	53.5	5.30	25.3	2.92	2.5	< 0.1	2	0.1	526	984	0.3	3.682
134147	15.9	33.3	3.49	17.4	2.01	1.6	0.2	3	< 0.1	153	674	0.3	3.531
134148	20.2	40.0	4.35	22.4	2.64	2.3	< 0.1	6	< 0.1	75	601	0.4	3.902
134149	0.2	0.5	0.05	0.3	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	8.6	< 0.1	0.392
134150	32.0	75.8	8.95	49.6	6.15	5.8	3.0	26	0.4	508	876	2.7	0.016
134151	15.4	34.3	3.87	21.1	2.58	1.9	0.4	2	0.1	63	500	0.4	3.675
134152	15.1	33.1	3.84	21.0	2.57	2.2	0.5	2	< 0.1	92	548	0.4	3.757
134153	10.9	25.3	2.88	15.7	2.01	1.4	0.5	3	< 0.1	117	365	0.4	3.799
134154	11.1	24.3	2.82	16.2	2.01	1.6	0.1	2	< 0.1	66	368	0.2	3.648
134155	10.3	22.7	2.67	14.8	1.88	1.6	0.3	1	< 0.1	69	306	0.2	4.079
134156	13.6	28.6	3.31	18.0	2.25	1.4	< 0.1	2	0.2	167	362	0.2	3.579
134157	18.5	37.5	3.89	20.4	2.42	2.1	0.2	2	< 0.1	111	450	0.4	3.988
134158	20.7	41.8	4.46	20.8	2.45	2.2	0.4	3	< 0.1	124	661	0.4	3.920
134159	13.4	29.4	3.24	18.0	2.12	1.6	0.6	3	< 0.1	124	299	0.4	1.680
134160	16.2	35.6	3.88	20.6	2.44	1.8	0.2	2	< 0.1	139	325	0.3	1.727
134161	15.3	33.0	3.61	19.1	2.34	2.0	< 0.1	4	0.1	167	448	0.4	3.814
134162	13.9	30.0	3.30	17.3	2.12	1.9	1.1	3	0.2	167	398	0.8	3.580
134163	13.7	28.2	3.10	16.5	1.99	1.9	0.7	3	< 0.1	122	485	0.4	3.879
134164	23.8	48.2	5.15	26.7	3.08	2.4	4.7	4	0.3	190	542	3.2	3.791
134165	24.1	55.6	6.25	31.5	3.59	1.7	3.1	7	< 0.1	16	487	7.7	3.782
134166	19.0	42.7	4.68	24.4	2.89	2.2	2.1	4	0.2	149	552	2.1	3.728
134167	22.5	49.1	4.82	25.2	3.05	2.6	< 0.1	3	< 0.1	193	684	0.5	3.644
134168	28.9	59.6	6.09	30.3	3.67	3.2	< 0.1	3	< 0.1	123	684	0.8	3.914
134169	21.3	44.0	4.60	22.6	2.67	2.3	0.3	2	< 0.1	103	450	0.5	3.739
134170	19.2	38.3	3.90	18.6	2.26	2.2	1.8	5	0.2	137	375	1.3	3.788
134171	14.7	29.3	3.06	14.9	1.79	1.7	0.7	3	< 0.1	123	348	0.9	3.796
134172	18.1	33.4	3.46	16.2	2.07	2.1	0.5	3	< 0.1	99	498	0.5	3.607
134173	23.5	46.5	4.76	23.0	2.46	1.4	0.9	5	< 0.1	32	575	1.6	3.923
134174	0.2	0.5	0.06	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	5.4	< 0.1	0.394

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134175	24.6	63.9	8.23	46.1	6.31	4.0	< 0.1	5	2.3	819	157	204	0.011
134176	9.8	18.6	1.95	9.9	1.26	1.3	0.3	1	0.2	139	720	0.3	3.637
134177	11.9	25.1	2.65	14.0	1.80	1.5	0.4	2	0.1	59	529	0.3	3.785
134178	26.9	51.8	5.24	25.9	2.93	2.7	< 0.1	2	< 0.1	175	1020	0.3	3.706
134179	21.9	44.1	4.56	22.6	2.60	2.2	< 0.1	2	< 0.1	151	940	0.3	4.088
134180	33.1	66.7	6.50	30.1	3.50	3.4	1.0	3	< 0.1	172	1010	1.0	4.042
134181	31.4	63.3	6.39	28.7	3.45	3.6	0.9	4	< 0.1	103	1060	1.1	3.754
134182	11.9	29.1	3.75	20.7	2.52	1.5	< 0.1	1	< 0.1	57	546	< 0.1	3.769
134183	9.7	23.8	2.84	16.0	1.95	1.1	< 0.1	2	< 0.1	81	409	0.1	1.127
134184	13.3	30.7	3.88	21.3	2.51	1.6	< 0.1	1	< 0.1	155	690	0.2	2.619
134185	10.0	25.6	3.19	17.3	2.21	1.3	< 0.1	2	< 0.1	150	445	< 0.1	3.830
134186	9.6	23.0	2.94	17.0	2.15	1.6	< 0.1	2	< 0.1	141	567	< 0.1	3.796
134187	12.1	29.7	3.85	22.1	2.78	1.6	2.7	2	0.2	161	510	1.7	1.792
134188	11.4	28.7	3.58	20.1	2.40	1.0	2.2	3	< 0.1	23	468	1.4	1.774
134189	7.7	17.6	2.09	12.2	1.59	1.0	< 0.1	< 1	0.1	379	618	0.1	3.988
134190	10.3	25.1	3.17	18.4	2.42	1.5	0.1	2	0.1	198	605	0.2	3.966
134191	10.5	27.8	3.68	20.5	2.65	1.8	0.4	2	0.1	131	386	0.5	4.030
134192	10.4	24.4	3.06	17.4	2.16	1.6	0.4	2	0.1	139	466	0.4	4.000
134193	10.5	26.2	3.31	19.1	2.51	1.7	< 0.1	2	< 0.1	86	399	< 0.1	3.920
134194	8.6	19.7	2.42	14.2	1.82	1.4	< 0.1	1	< 0.1	117	440	< 0.1	3.964
134195	11.3	25.3	2.98	16.3	1.97	1.5	0.4	3	0.1	323	481	0.4	3.919
134196	18.6	37.7	3.60	17.9	2.12	2.1	< 0.1	3	0.2	468	799	0.3	3.844
134197	18.3	32.7	3.38	16.6	1.99	2.2	0.2	4	0.3	257	728	0.4	3.807
134198	21.7	42.8	4.02	19.2	2.19	2.5	0.5	4	0.3	220	782	0.6	3.949
134199	0.2	0.5	0.06	0.3	< 0.04	< 0.2	< 0.1	2	< 0.1	5	10.0	< 0.1	0.379
134200	32.7	77.7	9.15	49.2	6.17	5.9	2.1	27	0.4	605	885	2.7	0.004
134201	31.7	59.3	5.87	26.6	3.01	3.4	< 0.1	5	0.3	419	895	0.3	3.994
134202	18.3	33.8	3.53	17.8	1.96	1.9	< 0.1	7	0.3	554	739	0.1	4.328
134203	15.4	29.3	3.03	15.8	1.88	1.9	< 0.1	5	0.3	365	664	0.2	4.080
134204	16.2	31.2	3.09	15.8	1.86	2.0	0.9	4	0.2	224	687	0.8	3.920
134205	16.6	32.9	3.28	15.9	1.91	2.0	0.2	5	0.3	292	654	0.4	3.873
134206	27.6	54.0	5.39	25.8	2.85	2.4	< 0.1	6	0.3	416	871	0.2	4.117
134207	18.8	37.6	3.96	19.5	2.19	1.6	< 0.1	4	0.2	290	625	0.4	4.418
134208	13.8	29.3	3.00	14.8	1.80	1.3	0.1	4	0.2	260	545	0.2	3.182
134209	17.5	34.5	3.49	17.3	2.04	1.7	0.2	5	0.2	299	642	0.3	4.231
134210	21.1	42.0	4.19	20.0	2.35	1.9	2.5	5	0.3	250	674	1.7	3.752
134211	15.8	32.2	3.27	16.2	1.84	1.4	0.1	3	0.2	248	636	0.2	3.990
134212	14.4	28.3	3.02	15.6	1.81	2.8	0.3	3	< 0.1	46	559	0.3	1.768
134213	16.3	32.5	3.43	17.1	1.93	1.4	0.3	6	0.2	285	576	0.3	1.941
134214	14.9	29.1	2.90	14.3	1.61	1.3	< 0.1	7	0.2	265	667	0.4	3.958
134215	11.6	23.3	2.46	13.1	1.56	1.3	0.2	4	0.2	320	634	0.2	4.142
134216	14.5	30.6	3.19	17.0	1.93	1.5	0.3	7	0.2	283	788	0.3	4.243
134217	17.1	35.8	3.49	17.0	1.91	1.5	1.8	4	0.3	285	797	1.3	4.510
134218	17.2	34.1	3.31	16.4	1.87	1.5	0.2	4	0.3	426	691	0.3	4.160
134219	23.1	45.9	4.47	21.6	2.41	2.0	< 0.1	4	0.3	451	911	0.2	2.790
134220	13.6	27.3	2.78	14.2	1.63	1.3	< 0.1	3	0.4	523	597	0.1	4.583
134221	0.1	0.2	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	5.0	< 0.1	0.379
134222	24.3	58.4	7.75	44.0	5.92	3.6	< 0.1	5	2.3	742	155	195	0.004

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.22	11.05	1.89	0.75	0.012	0.35	44.24	0.84	0.55	0.117	30.11					1675							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.24																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.23																						
NIST 694 Cert	3.2																						
DNC-1 Meas		46.46	18.80	9.80	0.149	10.03	11.19	1.89	0.22	0.493	0.07			31		156	260	57	250	110	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		71.62	12.96	3.24	0.140	0.16	0.57	2.40	5.33	0.280	0.05			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		31	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		52.90	15.44	10.59	0.166	6.41	10.74	2.27	0.64	1.085	0.13			36	< 1	277		41	70	100	80	18	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas		49.94	20.43	6.15	0.106	0.50	7.92	6.95	1.68	0.284	0.14			1	3	6							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.62	15.50	10.87	0.170	9.41	13.10	1.82	0.02	0.945	0.03			43	< 1	338	380	52	160	120	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1040	97	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		72.70	14.35	0.58	0.036	0.08	0.61	4.31	3.79	0.012	0.02				1310								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		26	70	2610	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC86316 Meas																							
NCS DC86316 Cert																							
NCS DC70009 (GBW07241) Meas																				930		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		17		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		430			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas		65.34	13.47	2.27	0.057	0.09		0.58	5.46	0.169	< 0.01												

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134091 Orig	4.40	0.48	0.11	15.86	1.977	11.97	26.98	0.04	0.05	0.143	0.73	36.64	94.96	57	15	75	< 20	6	< 20	< 10	1480	71	14
134091 Dup	4.65	0.48	0.11	16.11	2.009	12.05	27.19	0.03	0.05	0.146	0.73	36.64	95.54	57	14	75	< 20	6	< 20	< 10	1460	70	13
134108 Orig	3.14	3.15	0.15	16.01	1.740	11.03	25.75	0.04	0.07	0.269	1.76	34.98	94.95	68	5	87	< 20	8	< 20	< 10	1550	74	16
134108 Dup	3.26	3.13	0.15	15.55	1.718	10.87	25.42	0.04	0.07	0.268	1.75	34.98	93.96	64	5	84	< 20	8	< 20	< 10	1540	75	17
134118 Orig	6.17	2.11	0.09	23.38	2.467	9.52	22.31	0.03	0.03	0.134	0.50	33.38	93.96	62	5	62	< 20	9	< 20	10	2210	53	15
134118 Dup	5.96	2.12	0.10	23.68	2.504	9.62	22.24	0.03	0.03	0.136	0.50	33.38	94.32	62	5	64	< 20	10	< 20	< 10	2220	54	14
134133 Orig	5.70	2.08	0.18	9.61	1.358	12.31	29.61	0.05	0.09	0.111	0.90	35.87	92.17	57	8	60	< 20	5	< 20	< 10	910	70	16
134133 Dup	5.59	2.09	0.17	9.96	1.419	12.43	30.04	0.05	0.10	0.113	0.90	35.87	93.15	58	8	63	< 20	4	< 20	< 10	930	72	16
134150 Orig	6.12	20.71	3.04	27.74	2.408	7.20	17.55	0.33	1.37	1.471	0.57	12.23	94.63	24	13	163	170	30	60	40	1440	53	14
134150 Dup	6.38	21.02	3.07	27.96	2.430	7.25	17.71	0.32	1.37	1.462	0.54	12.23	95.38	24	13	162	170	29	50	30	1420	54	12
134161 Orig	2.26	2.53	0.21	9.76	1.358	14.20	27.20	0.09	0.13	0.070	1.24	38.32	95.10	57	12	57	< 20	6	< 20	< 10	810	70	15
134161 Dup	2.14	2.57	0.21	9.92	1.370	14.37	27.16	0.09	0.13	0.068	1.23	38.32	95.45	58	12	58	< 20	7	< 20	< 10	780	70	16
134193 Orig	6.68	1.55	0.07	8.00	1.277	13.08	30.65	0.03	0.06	0.034	0.94	35.85	91.53	54	9	37	< 20	1	< 20	< 10	540	81	17
134193 Dup	6.61	1.48	0.07	8.10	1.289	13.34	31.23	0.03	0.06	0.036	0.94	35.85	92.43	55	10	36	< 20	1	< 20	20	510	82	17
134204 Orig	2.47	2.94	0.19	14.21	1.723	12.63	25.78	0.06	0.08	0.190	1.18	36.96	95.94	46	10	64	< 20	6	< 20	< 10	1200	58	14
134204 Dup	2.28	2.82	0.18	13.72	1.667	12.16	25.05	0.05	0.08	0.192	1.15	36.96	94.02	44	9	63	< 20	6	< 20	< 10	1140	55	14
134219 Orig	4.17	4.16	0.16	17.99	1.945	10.71	23.31	0.05	0.10	0.145	1.59	33.99	94.15	46	9	63	< 20	9	< 20	< 10	1610	52	9
134219 Dup	3.95	4.18	0.16	18.32	1.972	10.80	23.38	0.05	0.10	0.144	1.61	33.99	94.70	46	9	65	< 20	8	< 20	< 10	1600	52	9
134220 Orig	2.85	7.55	0.17	19.28	2.118	10.56	19.86	0.04	0.15	0.138	0.63	32.41	92.89	44	7	69	< 20	8	< 20	70	1630	52	8
134220 Split	2.71	7.42	0.16	18.96	2.080	10.41	19.72	0.03	0.15	0.135	0.62	32.43	92.13	43	7	70	< 20	8	< 20	10	1580	52	9
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			145	16	34						0.7		107		3.8			4.8		0.59			
DNC-1 Cert			144.0	18.0	38						0.96		118		3.6			5.20		0.59			
GBW 07113 Meas			41	44	394								498										

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	24	74					< 2			3		2.3			50.2	94.1		44.0	8.1	1.44		0.9	4.8
LKSD-3 Cert	27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		20	197	20	87		< 2	0.5			0.8		177	< 0.4	10.9	23.2		12.6	3.4	1.08		0.6	3.5
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460			0.790		182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1202	117	527								349										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2180	3310		1130	165	45.4	123	14.9	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			107	15	14								10					2.5	1.1	0.53			
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55			
NCS DC86312 Meas															2350	182		1570			228	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.8			180			80.3	46.4	89.9	10.0	38.0	8.0	1.67	7.1	1.2	6.5
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC86316 Meas																							
NCS DC86316 Cert																							
NCS DC70009 (GBW07241) Meas	70	500							1.3	1700	3.4	41.7			22.7	57.1	7.25	30.0	12.0		13.9	3.3	20.5
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							24								274	490	46.2	151	24.6	3.65		3.8	23.3
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								843	1420	128	395	51.0	8.05		5.6	32.0
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		257				15	3	< 0.5	< 0.2	4		21.0		0.5	20.9	49.3	5.84	23.5	6.0		5.5	1.1	
JR-1 Cert		257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	
NCS DC86318 Meas				17590											2000	436	750	3340	1800	19.2	2040	482	3050
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1185	15940																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															21100	28200	2300	6480	518	87.0			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134091 Orig	26	< 2	1818	465	46	369	7	< 0.5	0.2	14	< 0.5	< 0.5	151	1.4	3990	7300	749	2470	339	84.7	172	20.8	88.6
134091 Dup	27	< 2	1803	453	46	364	7	< 0.5	0.2	15	< 0.5	< 0.5	152	1.6	3950	7220	739	2430	337	83.6	170	20.3	84.7
134108 Orig	28	< 2	1648	952	26	675	9	< 0.5	0.3	26	< 0.5	< 0.5	180	0.9	3880	7500	843	3110	514	147	325	45.2	200
134108 Dup	27	< 2	1610	906	26	686	9	< 0.5	0.3	26	< 0.5	< 0.5	182	1.1	3870	7470	839	3090	513	146	321	44.8	198
134118 Orig	21	< 2	1423	456	17	278	2	< 0.5	0.4	27	< 0.5	< 0.5	97	2.0	1880	4550	603	2530	472	124	255	29.3	109

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134118 Dup	21	< 2	1425	456	16	273	3	< 0.5	0.3	22	< 0.5	< 0.5	94	1.7	1930	4670	619	2590	485	128	260	30.1	111
134133 Orig	22	< 2	2206	448	34	556	10	< 0.5	< 0.2	20	< 0.5	< 0.5	316	1.1	4040	7450	805	2760	436	113	246	27.8	98.5
134133 Dup	24	< 2	2245	461	34	580	9	< 0.5	< 0.2	21	< 0.5	< 0.5	320	1.3	4150	7630	829	2840	450	116	254	28.8	102
134150 Orig	19	25	3204	987	243	360	52	1.8	< 0.2	42	< 0.5	< 0.5	13480	2.2	2590	4800	550	2140	472	131	306	42.1	196
134150 Dup	19	25	3190	995	243	371	51	1.8	< 0.2	42	< 0.5	< 0.5	13620	2.1	2570	4800	549	2140	472	130	303	42.4	195
134161 Orig	21	2	2103	499	49	698	15	0.6	< 0.2	18	< 0.5	< 0.5	255	0.7	4270	7900	830	2770	411	100	214	25.8	106
134161 Dup	21	2	2118	502	49	666	14	0.6	< 0.2	17	< 0.5	< 0.5	255	0.7	4180	7760	817	2730	405	99.3	213	25.7	106
134193 Orig	26	< 2	2208	361	57	145	11	< 0.5	< 0.2	4	< 0.5	< 0.5	204	< 0.4	5050	8600	887	2950	384	87.7	176	18.4	71.0
134193 Dup	27	< 2	2263	365	59	127	12	0.5	< 0.2	4	< 0.5	< 0.5	204	0.5	5040	8550	887	2920	381	86.5	176	18.2	70.9
134204 Orig	20	< 2	2378	448	21	446	5	< 0.5	< 0.2	18	< 0.5	< 0.5	283	1.2	3010	5740	637	2250	379	103	231	30.1	122
134204 Dup	20	< 2	2287	435	23	452	5	< 0.5	< 0.2	18	< 0.5	< 0.5	272	1.4	2880	5510	609	2130	364	98.3	222	28.8	117
134219 Orig	22	2	2554	734	21	359	5	< 0.5	0.3	30	< 0.5	< 0.5	332	3.0	2320	4880	605	2340	460	127	291	38.8	165
134219 Dup	23	2	2565	741	20	364	5	< 0.5	0.3	28	< 0.5	< 0.5	332	2.9	2320	4870	604	2340	456	125	289	38.6	165
134220 Orig	23	3	2162	450	16	280	7	< 0.5	0.3	21	< 0.5	< 0.5	389	2.6	2570	4980	602	2320	417	106	227	25.7	101
134220 Split	22	3	2136	433	15	276	7	< 0.5	0.3	20	< 0.5	< 0.5	391	2.1	2550	4920	594	2280	410	104	224	25.3	100.0
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											923		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				1.9									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.41	4.1					11.4	4.4	
LKSD-3 Cert				2.70	0.400	4.80					11.4	4.60	
OKA-2 Meas											28900		
OKA-2 Cert											28900.000		
W-2a Meas	0.7	2.0	0.35	1.9	0.36			< 1	< 0.1		2.2	0.6	
W-2a Cert	0.760	2.50	0.380	2.10	0.330			0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
CTA-AC-1 Meas				10.8	1.12						23.9	4.1	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.6	0.23	0.5				< 5			
BIR-1a Cert				1.7	0.3	0.60				3			
NCS DC86312 Meas	35.6	96.2	14.2	86.4	11.9						25.8		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							85.0	333	33.9				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.5	0.51	3.4	0.49					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC86316 Meas						712							
NCS DC86316 Cert						712							
NCS DC70009 (GBW07241) Meas	4.2	12.5	2.29	15.5				2200			27.4		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.6	2.41	15.4	2.14						54.0	138	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.2	2.90	17.9	2.45						37.2	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.69	4.7	0.69		1.8	1	1.6	20	28.1	9.1	
JR-1 Cert			0.67	4.55	0.71		1.86	1.59	1.56	19.3	26.7	8.88	
NCS DC86318 Meas	568	1600	267	1760	255								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134091 Orig	13.4	30.6	3.47	18.7	2.21	1.5	< 0.1	4	< 0.1	263	699	< 0.1	
134091 Dup	12.6	29.1	3.39	18.4	2.20	1.5	< 0.1	4	< 0.1	287	691	< 0.1	
134108 Orig	29.6	61.7	6.43	31.3	3.62	2.6	0.6	6	< 0.1	224	830	0.6	
134108 Dup	29.6	60.3	6.36	31.0	3.66	2.5	0.5	6	< 0.1	218	826	0.6	
134118 Orig	13.7	25.1	2.67	14.0	1.66	1.5	< 0.1	3	< 0.1	338	986	< 0.1	
134118 Dup	14.1	25.8	2.75	14.1	1.72	1.5	< 0.1	3	< 0.1	313	1010	< 0.1	
134133 Orig	12.6	25.8	2.74	16.5	2.04	1.6	0.3	3	0.1	149	597	0.2	
134133 Dup	13.1	27.6	2.96	17.5	2.06	1.6	0.3	11	0.1	153	616	0.2	
134150 Orig	32.1	76.1	8.90	49.8	6.16	5.7	3.0	26	0.3	515	876	2.7	
134150 Dup	32.0	75.6	8.99	49.5	6.13	5.8	3.0	26	0.4	501	876	2.6	
134161 Orig	15.4	33.5	3.60	19.5	2.35	2.0	0.2	4	0.1	161	452	0.4	
134161 Dup	15.2	32.5	3.61	18.7	2.33	2.0	< 0.1	5	0.1	172	443	0.4	
134193 Orig	10.3	26.8	3.32	19.4	2.49	1.6	< 0.1	2	< 0.1	85	398	< 0.1	

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134193 Dup	10.6	25.6	3.30	18.9	2.52	1.7	< 0.1	1	< 0.1	87	399	< 0.1	
134204 Orig	16.3	31.9	3.15	16.0	1.89	2.0	0.9	4	0.2	215	700	0.8	
134204 Dup	16.0	30.4	3.04	15.6	1.82	2.0	0.9	4	0.2	233	675	0.8	
134219 Orig	23.3	47.0	4.59	21.1	2.44	1.9	< 0.1	4	0.3	464	918	0.2	
134219 Dup	22.9	44.8	4.34	22.0	2.38	2.1	< 0.1	4	0.3	438	904	0.2	
134220 Orig	13.6	27.3	2.78	14.2	1.63	1.3	< 0.1	3	0.4	523	597	0.1	
134220 Split	13.5	26.4	2.69	13.8	1.61	1.4	< 0.1	3	0.3	493	598	0.1	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03180
Invoice Date: 13-Jun-14
Your Reference: ASHRAM-BATCH #3

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

154 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03180**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134223	1.87	1.14	0.07	7.29	1.142	11.36	28.40	0.06	0.02	0.127	6.14	35.10	90.85	59	16	81	< 20	3	< 20	< 10	650	69	18
134224	1.57	0.89	0.05	8.22	1.168	12.76	26.92	0.04	0.02	0.134	3.24	37.74	91.18	61	12	97	< 20	6	< 20	< 10	860	62	15
134225	2.74	1.81	0.13	10.90	1.350	12.54	25.03	0.04	0.08	0.256	1.13	37.70	90.96	53	25	96	< 20	5	< 20	< 10	890	57	12
134226	6.71	3.44	0.24	7.75	1.138	11.81	30.52	0.07	0.07	0.169	1.76	33.73	90.70	53	40	78	< 20	3	< 20	< 10	970	78	14
134227	5.32	2.15	0.10	9.26	1.392	12.49	29.72	0.05	0.05	0.192	1.50	35.28	92.16	50	39	85	< 20	4	< 20	< 10	950	62	12
134228	3.11	2.38	0.13	10.99	1.538	12.80	26.92	0.03	0.07	0.133	1.07	36.70	92.77	57	52	87	< 20	6	< 20	< 10	1110	65	13
134229	2.28	1.67	0.05	10.86	1.444	12.70	26.27	0.02	0.04	0.151	1.04	37.88	92.14	54	23	81	< 20	7	< 20	< 10	1080	62	13
134230	2.35	1.67	0.10	8.41	1.418	13.97	27.63	0.03	0.05	0.191	1.15	38.12	92.74	50	23	88	< 20	4	< 20	< 10	1070	46	10
134231	4.59	3.18	0.05	12.98	1.629	11.85	25.78	0.03	0.03	0.228	1.25	34.75	91.77	54	46	90	< 20	6	< 20	< 10	1190	71	15
134232	4.81	3.89	0.11	10.50	1.403	12.18	27.42	0.05	0.06	0.231	1.26	35.23	92.34	58	44	85	< 20	4	< 20	< 10	910	64	13
134233	3.76	3.85	0.08	12.02	1.604	11.97	26.06	0.04	0.04	0.262	1.95	34.89	92.77	60	46	109	< 20	6	< 20	< 10	910	64	13
134234	1.08	4.71	0.20	8.84	1.194	13.28	28.29	0.03	0.04	0.227	2.75	36.39	95.96	66	19	104	20	4	< 20	10	670	30	6
134235	1.84	4.19	0.18	8.44	1.130	12.76	27.98	0.07	0.07	0.234	3.10	36.43	94.58	63	17	107	< 20	4	< 20	< 10	500	48	10
134236	5.94	1.76	0.07	9.12	1.224	11.32	31.52	0.04	0.02	0.162	4.01	33.08	92.33	69	19	90	< 20	4	< 20	< 10	1000	56	11
134237	4.14	2.74	0.09	10.50	1.378	12.26	27.87	0.04	0.05	0.126	1.93	35.76	92.74	63	19	81	< 20	6	< 20	< 10	930	60	12
134238	5.60	1.43	0.07	13.35	1.612	11.59	26.98	0.02	0.05	0.101	1.08	34.84	91.13	51	15	63	< 20	7	< 20	< 10	1410	67	13
134239	1.99	2.71	0.19	11.16	1.480	12.95	25.56	0.06	0.06	0.139	0.89	38.31	93.50	68	10	81	< 20	6	< 20	< 10	870	59	13
134240	4.52	1.88	0.10	11.51	1.460	11.89	27.73	0.04	0.07	0.442	1.36	35.77	92.25	61	16	104	< 20	5	< 20	< 10	1100	60	13
134241	2.98	6.83	0.19	13.01	1.505	11.78	25.99	0.03	0.05	0.181	1.09	34.25	94.91	52	12	75	< 20	6	< 20	10	680	28	7
134242	4.79	3.96	0.04	15.12	1.669	11.52	24.57	0.03	0.04	0.159	0.75	34.79	92.63	60	18	76	< 20	7	< 20	< 10	890	61	13
134243	6.34	2.04	0.06	13.06	1.573	11.57	27.34	0.02	0.05	0.135	0.94	34.30	91.09	64	15	71	< 20	8	< 20	< 10	960	65	14
134244	5.09	2.63	0.14	12.60	1.556	11.40	27.19	0.04	0.07	0.182	0.78	35.70	92.29	62	16	89	< 20	5	< 20	< 10	660	56	12
134245	2.74	2.08	0.03	19.51	2.324	10.66	20.97	0.02	0.02	0.192	0.97	35.92	92.69	54	11	89	< 20	9	< 20	< 10	600	46	11
134246	1.40	0.94	0.04	19.31	2.440	11.31	20.93	0.02	0.05	0.805	1.04	36.82	93.70	61	13	153	< 20	8	< 20	< 10	850	41	11
134247	2.96	2.52	0.02	17.38	2.209	11.23	22.86	0.02	0.01	0.263	0.66	36.04	93.21	55	11	97	< 20	10	< 20	< 10	1340	47	13
134248	2.41	1.79	0.06	19.17	2.205	11.44	21.52	0.03	0.06	0.593	0.39	36.61	93.88	61	16	145	< 20	10	< 20	< 10	1090	44	11
134249	0.03	96.46	0.07	0.57	0.041	0.28	0.63	0.02	0.01	0.008	< 0.01	0.41	98.51	1	< 1	< 5	90	< 1	< 20	< 10	< 30	< 1	2
134250	6.51	20.85	2.98	28.61	2.364	6.98	17.92	0.31	1.31	1.467	0.55	12.58	95.93	21	12	157	190	29	80	30	1430	48	12
134251	3.68	3.03	0.06	15.78	1.935	10.96	24.62	0.03	0.04	0.475	0.80	34.98	92.70	66	13	106	< 20	12	< 20	40	910	45	12
134252	3.40	6.33	0.18	13.86	1.934	11.06	24.47	0.07	0.08	0.423	1.48	34.19	94.08	77	11	105	< 20	7	< 20	< 10	990	53	11
134253	5.92	3.99	0.15	20.58	2.166	8.94	22.97	0.05	0.09	0.443	1.98	29.75	91.11	64	9	97	< 20	16	< 20	< 10	1940	36	9
134254	5.22	1.22	0.07	13.07	1.728	10.85	28.63	0.03	0.06	0.359	0.67	35.57	92.27	79	7	110	< 20	6	< 20	< 10	1010	53	11
134255	4.87	1.87	0.11	21.84	2.327	9.70	22.37	0.04	0.06	0.277	1.09	33.56	93.24	60	9	102	< 20	10	< 20	< 10	1470	46	11
134256	1.97	2.31	0.06	27.56	3.277	8.65	13.80	0.02	< 0.01	0.247	0.42	34.59	90.93	40	6	73	< 20	15	< 20	< 10	2030	26	8
134257	5.74	1.33	0.08	18.00	2.075	10.50	24.93	0.03	0.05	0.400	0.81	34.10	92.31	72	10	98	< 20	9	< 20	< 10	1360	45	10
134258	5.59	2.07	0.10	20.35	1.977	9.59	23.38	0.04	0.06	0.691	0.81	33.25	92.31	66	8	114	< 20	10	< 20	< 10	1200	42	11
134259	1.41	5.45	0.05	37.43	3.348	6.40	9.32	0.02	0.02	0.287	0.36	32.34	95.03	36	23	102	< 20	17	< 20	< 10	1510	32	10
134260	2.64	3.96	0.16	18.68	1.979	10.30	21.77	0.04	0.06	0.162	1.14	34.51	92.76	84	13	80	< 20	11	< 20	< 10	1560	34	8
134261	2.21	5.58	0.12	23.47	2.357	8.95	18.22	0.05	0.06	0.242	1.26	33.60	93.91	74	9	93	< 20	10	< 20	< 10	1240	46	11
134262	8.06	2.77	0.09	19.05	1.952	9.16	25.48	0.05	0.03	0.577	0.82	31.23	91.21	64	12	87	< 20	8	< 20	< 10	1350	57	12
134263	8.85	2.70	0.15	12.45	1.619	9.96	29.93	0.05	0.06	0.631	1.55	30.48	89.59	77	13	78	< 20	6	< 20	< 10	1540	42	8
134264	7.88	1.43	0.09	13.63	1.537	10.44	28.65	0.05	0.07	0.536	0.83	33.01	90.28	67	14	90	< 20	5	< 20	< 10	990	57	11
134265	2.81	1.69	0.17	24.51	2.734	10.35	20.16	0.10	0.10	0.560	1.70	33.77	95.85	85	6	118	< 20	10	< 20	< 10	1880	42	12
134266	5.81	2.01	0.19	16.63	2.045	10.12	26.22	0.04	0.12	0.598	1.26	32.39	91.64	60	7	102	< 20	8	< 20	< 10	1540	55	11
134267	4.15	1.28	0.27	18.65	2.128	10.88	24.34	0.05	0.18	0.529	0.65	34.18	93.14	65	9	109	< 20	9	< 20	< 10	1390	55	13
134268	3.03	1.83	0.19	17.33	1.970	10.50	21.29	0.07	0.14	0.386	0.75	35.50	89.95	70	7	88	< 20	9	< 20	< 10	1300	49	11
134269	3.52	2.71	0.30	15.80	2.047	11.53	24.02	0.09	0.23	0.249	0.97	35.09	93.04	74	6	85	< 20	9	< 20	< 10	1280	51	11
134270	2.55	2.44	0.44	25.41	2.614	9.24	18.76	0.04	0.29	0.575	0.80	32.31	92.91	56	5	104	20	13	< 20	< 10	1790	58	13

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134271	1.11	3.82	0.51	16.98	1.950	10.78	23.37	0.06	0.33	0.546	1.56	33.45	93.35	52	6	105	< 20	14	< 20	< 10	2360	47	11
134272	1.98	3.44	0.82	12.32	1.367	9.86	26.10	0.07	0.56	1.167	5.56	30.06	91.31	54	9	78	20	10	< 20	< 10	1040	34	9
134273	5.14	3.37	0.31	19.29	2.030	9.65	23.29	0.07	0.20	0.802	1.09	31.93	92.03	57	7	102	< 20	10	< 20	< 10	1450	56	13
134274	< 0.01	99.73	0.06	0.23	0.011	0.10	0.23	0.01	< 0.01	0.002	< 0.01	0.33	100.7	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	< 1	1
134275	1.75	14.90	2.55	13.21	0.144	0.45	26.06	0.95	0.95	0.149	20.22	8.15	87.73	17	13	157	30	32	70	110	630	208	35
134276	4.19	1.32	0.17	16.10	1.821	10.64	25.95	0.04	0.07	0.366	1.07	33.86	91.42	58	6	89	< 20	11	< 20	< 10	1670	35	9
134277	0.92	2.47	0.07	14.09	1.813	10.91	25.38	0.04	0.04	0.465	0.91	37.25	93.44	69	2	73	< 20	7	< 20	< 10	1160	55	12
134278	5.76	0.75	0.10	22.25	2.221	9.77	23.91	0.04	0.07	0.270	1.30	33.10	93.78	56	10	85	< 20	9	< 20	< 10	1490	53	11
134279	6.69	0.52	0.11	16.51	1.823	10.64	27.47	0.02	0.09	0.180	0.92	34.11	92.39	63	7	74	< 20	8	< 20	< 10	1450	58	12
134280	2.03	1.92	0.23	26.08	2.474	9.53	19.51	0.05	0.14	0.279	0.74	34.28	95.24	49	5	92	30	11	< 20	< 10	1310	54	14
134281	3.15	2.83	0.11	19.09	1.879	10.93	22.93	0.08	0.09	0.297	0.95	35.57	94.76	67	7	86	20	11	< 20	< 10	1060	50	13
134282	1.92	2.59	0.07	18.91	1.826	9.77	23.34	0.05	0.04	0.398	2.65	35.08	94.72	68	5	94	< 20	9	< 20	< 10	1020	50	14
134283 missing																							
134284 missing																							
134285 missing																							
134286 missing																							
134287 missing																							
134288 missing																							
134289	5.19	1.05	0.06	18.40	2.226	11.24	23.85	0.03	0.03	0.137	0.32	35.50	92.84	55	11	73	< 20	8	< 20	< 10	1510	58	12
134290	9.00	1.90	0.08	13.91	1.896	10.29	28.97	0.04	0.07	0.191	0.49	31.74	89.56	56	14	77	< 20	7	< 20	< 10	1320	75	13
134291	6.65	3.27	0.11	15.13	1.965	11.04	25.92	0.06	0.08	0.196	1.01	32.93	91.71	58	14	78	< 20	8	< 20	< 10	1490	66	13
134292	5.61	1.34	0.07	15.34	1.948	11.43	26.08	0.04	0.05	0.167	0.82	35.13	92.41	58	14	70	< 20	5	< 20	< 10	1200	57	11
134293	5.10	2.34	0.16	13.78	1.965	11.25	27.35	0.05	0.04	0.128	0.72	33.23	91.01	60	20	68	< 20	6	< 20	< 10	1300	45	9
134294	5.63	2.97	0.09	12.96	1.850	11.62	26.20	0.08	0.08	0.120	0.75	33.50	90.22	58	24	72	< 20	5	< 20	< 10	1090	64	12
134295	4.74	2.66	0.09	13.55	1.941	11.57	25.60	0.06	0.07	0.139	0.93	34.84	91.45	58	18	80	< 20	6	< 20	< 10	1260	74	14
134296	5.02	4.08	0.31	10.57	1.469	10.52	29.46	0.07	0.14	0.180	4.40	31.43	92.62	62	21	85	< 20	7	< 20	< 10	1230	57	12
134297	2.86	5.33	0.76	11.96	1.589	11.55	27.31	0.03	0.16	0.234	2.15	33.08	94.15	60	13	107	< 20	8	< 20	< 10	1330	35	8
134298	3.71	4.57	0.07	25.93	2.580	9.74	17.60	0.03	0.04	0.165	0.43	33.19	94.33	46	8	92	< 20	10	< 20	< 10	1830	52	12
134299	< 0.01	99.45	0.07	0.24	0.015	0.11	0.28	0.02	0.01	0.002	< 0.01	0.29	100.5	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	< 1	2
134300	6.25	20.38	3.00	28.20	2.362	6.94	17.74	0.31	1.30	1.497	0.53	12.22	94.48	21	12	157	200	30	80	30	1470	50	12
134301	3.89	5.79	0.17	15.14	1.846	10.61	24.97	0.03	0.08	0.153	1.71	32.21	92.72	77	10	79	< 20	8	< 20	< 10	1660	41	8
134302	7.10	2.69	0.10	12.87	1.727	11.00	27.60	0.05	0.08	0.107	0.88	33.09	90.18	64	15	79	< 20	7	< 20	< 10	1620	67	12
134303	4.43	3.92	0.04	13.10	2.079	11.34	25.01	0.04	0.03	0.181	0.70	35.04	91.47	51	13	86	< 20	6	< 20	< 10	2280	67	12
134304	7.13	2.51	0.05	11.04	1.653	11.75	28.80	0.04	0.04	0.142	0.54	34.26	90.83	49	14	84	< 20	4	< 20	< 10	1430	69	13
134305	5.34	2.14	0.05	18.01	2.118	10.93	23.67	0.05	0.03	0.241	0.37	34.70	92.31	55	13	89	< 20	8	< 20	< 10	1430	58	12
134306	1.31	5.05	0.24	21.80	2.207	10.84	17.92	0.05	0.19	0.222	0.56	34.89	93.97	59	8	104	< 20	11	< 20	< 10	1550	43	11
134307	2.31	4.25	0.33	16.91	1.748	10.84	22.97	0.05	0.23	0.342	0.54	35.87	94.08	64	7	126	< 20	9	< 20	< 10	1370	46	11
134308	5.44	3.92	0.09	11.98	1.665	11.15	27.67	0.03	0.05	0.152	1.38	34.16	92.24	49	12	85	< 20	4	< 20	< 10	1460	49	11
134309	3.95	1.67	0.11	17.96	1.920	10.24	24.35	0.05	0.06	0.138	3.34	33.38	93.22	69	13	87	< 20	9	< 20	< 10	1530	45	11
134310	3.45	1.71	0.12	10.17	1.426	12.43	27.10	0.04	0.08	0.112	1.07	37.56	91.83	51	11	82	< 20	4	< 20	< 10	1010	53	10
134311	5.45	2.80	0.14	9.22	1.353	12.39	30.56	0.06	0.08	0.087	2.29	34.29	93.26	59	16	81	< 20	4	< 20	< 10	1200	60	12
134312	6.18	2.09	0.08	8.43	1.395	11.82	29.99	0.04	0.06	0.128	2.31	33.85	90.19	52	13	72	< 20	4	< 20	< 10	1410	80	14
134313	6.27	2.39	0.11	8.68	1.390	11.61	29.70	0.04	0.07	0.134	2.24	33.40	89.76	53	15	71	< 20	4	< 20	< 10	1560	89	15
134314	3.71	1.68	0.09	10.71	1.564	12.80	27.25	0.04	0.07	0.136	1.27	37.13	92.75	54	9	74	< 20	5	< 20	< 10	1050	61	12
134315	3.48	1.21	0.11	9.65	1.464	13.20	28.15	0.05	0.08	0.127	1.36	37.71	93.11	51	13	82	< 20	3	< 20	< 10	1180	66	13
134316	7.56	4.65	0.15	8.27	1.324	10.94	30.98	0.07	0.13	0.140	3.19	31.00	90.83	49	17	77	< 20	5	< 20	< 10	1450	70	13
134317	4.23	2.05	0.15	11.74	1.543	11.64	27.84	0.04	0.13	0.179	2.50	34.66	92.47	53	13	89	< 20	5	< 20	< 10	920	68	14
134318	3.90	1.07	0.21	9.92	1.631	11.89	29.04	0.06	0.15	0.205	3.21	35.22	92.60	57	9	88	< 20	4	< 20	< 10	1230	55	12
134319	3.53	2.15	0.14	12.28	1.672	11.93	26.43	0.06	0.11	0.190	1.54	35.87	92.38	58	11	85	< 20	5	< 20	< 10	1100	56	12
134320	5.56	1.34	0.10	16.36	1.821	11.35	25.21	0.03	0.08	0.183	0.83	34.93	92.23	47	17	78	< 20	8	< 20	< 10	1210	60	13

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134321	4.99	3.27	0.14	15.50	1.946	10.89	25.17	0.05	0.10	0.311	0.64	34.13	92.15	55	10	81	< 20	7	< 20	10	1160	58	13
134322	4.66	3.90	0.19	18.21	2.149	10.16	22.96	0.07	0.15	0.302	0.57	32.77	91.42	53	7	87	< 20	10	< 20	< 10	1180	51	12
134323	5.30	0.68	0.09	18.53	1.984	10.43	24.50	0.02	0.04	0.304	0.40	34.81	91.78	50	8	76	< 20	8	< 20	< 10	1480	47	12
134324	0.04	98.74	0.09	0.31	0.021	0.18	0.40	0.04	0.02	0.003	< 0.01	0.47	100.3	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	< 1	2
134325	1.78	14.76	2.53	12.66	0.134	0.47	26.58	0.92	0.99	0.144	18.36	8.18	85.73	15	14	155	30	33	60	100	620	188	33
134326	5.61	0.97	0.10	18.38	1.881	9.88	24.01	0.03	0.06	0.231	0.88	34.47	90.88	55	10	68	< 20	8	< 20	< 10	1140	47	12
134327	2.41	1.44	0.06	20.16	2.321	10.85	21.63	0.02	0.03	0.212	0.28	36.92	93.94	52	5	71	< 20	8	< 20	< 10	1970	47	13
134328	2.85	1.06	0.10	20.96	2.391	10.42	20.69	0.03	0.03	0.086	0.32	36.16	92.26	53	6	56	< 20	10	< 20	< 10	1850	41	12
134329	5.42	0.45	0.06	19.21	2.073	10.04	24.32	0.03	0.02	0.321	0.20	35.21	91.94	52	7	70	< 20	10	< 20	< 10	1410	46	11
134330	3.99	0.73	0.14	21.50	2.530	9.94	21.74	0.04	0.02	0.266	0.58	35.27	92.74	58	8	67	< 20	10	< 20	< 10	1290	45	11
134331	5.83	1.09	0.10	20.56	2.341	10.13	24.29	0.03	0.02	0.403	0.42	34.48	93.86	64	11	71	< 20	8	< 20	< 10	1130	49	12
134332	4.74	1.25	0.10	19.63	2.416	9.84	23.03	0.03	0.02	0.258	0.28	35.03	91.89	55	8	58	< 20	8	< 20	< 10	1150	46	11
134333	2.83	2.72	0.09	16.50	2.080	10.90	23.57	0.02	0.06	0.461	0.45	36.71	93.57	55	8	71	< 20	7	< 20	< 10	1040	39	10
134334	4.97	1.39	0.08	19.81	2.504	10.30	23.81	0.03	0.03	0.297	0.41	34.60	93.25	55	11	60	< 20	9	< 20	< 10	1710	51	13
134335	5.53	1.37	0.06	19.18	2.410	10.01	23.55	0.03	0.03	0.358	0.35	34.42	91.76	55	7	65	< 20	8	< 20	< 10	1560	52	13
134336	5.03	0.60	0.07	18.19	2.297	10.16	25.05	0.03	0.04	0.390	0.25	35.05	92.14	52	8	75	< 20	8	< 20	< 10	1550	49	12
134337	5.13	3.55	0.21	13.92	1.708	10.62	27.12	0.04	0.15	0.365	1.24	33.73	92.66	58	9	75	< 20	7	< 20	< 10	1260	47	11
134338	3.99	1.16	0.13	20.36	2.312	10.23	22.98	0.04	0.08	0.591	0.27	34.38	92.53	54	7	74	< 20	13	< 20	< 10	1240	46	11
134339	3.37	2.17	0.20	17.50	2.114	10.42	23.07	0.04	0.13	0.297	0.52	34.98	91.45	59	6	61	< 20	9	< 20	< 10	1290	53	13
134340	2.08	4.06	0.15	20.57	2.221	10.00	20.57	0.04	0.10	0.236	0.56	34.49	93.00	57	6	73	< 20	9	< 20	< 10	940	44	12
134341	1.96	2.84	0.13	23.16	2.437	9.85	19.10	0.02	0.09	0.346	0.26	34.52	92.75	56	6	69	< 20	13	< 20	< 10	1630	46	12
134342	0.42	1.20	0.08	16.21	1.819	12.02	24.35	0.02	0.04	0.481	0.29	39.62	96.12	65	8	102	< 20	8	< 20	< 10	980	47	11
134343	2.13	1.51	0.10	17.31	2.049	11.02	23.61	0.03	0.03	0.267	0.40	37.67	93.99	68	5	81	< 20	8	< 20	< 10	1310	52	12
134344	3.74	2.10	0.17	20.00	2.176	10.14	22.83	0.03	0.03	0.227	0.53	35.21	93.44	61	7	73	< 20	9	< 20	< 10	1270	47	12
134345	3.83	1.86	0.11	19.43	2.170	10.29	23.15	0.03	0.03	0.196	0.46	35.53	93.26	55	6	61	< 20	8	< 20	< 10	1180	51	11
134346	6.36	1.53	0.12	14.77	1.916	10.48	27.79	0.04	0.04	0.396	0.40	34.47	91.94	57	8	75	< 20	6	< 20	< 10	1240	55	11
134347	2.83	2.08	0.16	17.23	2.178	10.51	24.10	0.04	0.03	0.174	0.87	36.00	93.37	69	5	64	< 20	7	< 20	< 10	1340	42	10
134348	1.71	3.24	0.06	17.44	2.124	11.15	22.82	0.02	0.02	0.253	0.24	37.55	94.92	61	4	78	< 20	8	< 20	< 10	1470	44	10
134349	< 0.01	99.47	0.07	0.30	0.020	0.12	0.29	0.02	0.01	0.002	< 0.01	0.29	100.6	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	1	2
134350	6.76	20.29	3.07	28.16	2.388	6.87	17.66	0.30	1.31	1.483	0.54	12.26	94.34	21	13	154	210	29	80	30	1400	43	11
134351	1.99	0.78	0.08	13.88	2.085	11.66	25.87	0.03	0.03	0.119	0.75	38.58	93.85	77	4	70	< 20	5	< 20	< 10	1850	45	10
134352	5.50	1.54	0.19	19.65	2.169	9.33	24.65	0.03	0.05	0.261	0.99	33.69	92.56	65	6	71	< 20	10	< 20	< 10	1090	50	12
134353	5.32	0.60	0.10	20.48	2.334	9.18	23.70	0.02	0.03	0.193	0.49	34.26	91.39	54	11	57	< 20	9	< 20	80	1550	49	12
134354	4.30	1.41	0.43	15.41	1.837	10.14	27.29	0.03	0.07	0.268	0.61	35.43	92.94	58	5	77	< 20	10	< 20	< 10	1280	47	11
134355	4.84	1.27	0.10	11.35	1.558	10.18	30.15	0.04	0.03	0.195	2.20	34.56	91.63	66	8	79	< 20	5	< 20	< 10	1150	60	13
134356	2.89	1.16	0.16	11.87	1.540	10.64	29.09	0.03	0.08	0.227	1.38	36.57	92.74	73	6	94	< 20	8	< 20	< 10	980	58	14
134357	4.96	0.79	0.11	13.00	1.614	10.50	28.54	0.02	0.07	0.219	1.01	35.94	91.83	70	6	89	< 20	6	< 20	< 10	1230	52	12
134358	3.85	1.95	0.14	14.02	1.685	11.12	26.91	0.05	0.08	0.158	0.99	36.01	93.12	68	9	108	< 20	6	< 20	< 10	1210	45	10
134359	5.04	1.09	0.09	9.67	1.322	11.73	29.34	0.03	0.06	0.077	1.06	36.61	91.09	61	5	84	< 20	5	< 20	< 10	840	52	10
134360	3.61	1.86	0.21	9.36	1.321	12.75	29.26	0.04	0.11	0.097	0.94	37.64	93.59	58	6	79	< 20	7	< 20	< 10	820	48	10
134361	1.95	4.03	0.19	9.06	1.305	13.35	27.33	0.06	0.15	0.204	0.98	37.99	94.65	62	6	91	< 20	6	< 20	100	1010	49	10
134362	3.87	2.62	0.21	9.21	1.267	12.37	28.30	0.04	0.17	0.247	1.75	35.74	91.94	59	5	94	< 20	4	< 20	< 10	750	62	11
134363	0.61	2.50	0.14	7.77	1.211	13.91	26.10	0.05	0.14	0.139	1.50	39.87	93.33	59	5	87	< 20	4	< 20	50	480	61	12
134364	1.51	3.29	0.21	9.68	1.393	13.14	26.27	0.12	0.16	0.117	1.47	37.58	93.44	63	5	108	< 20	7	< 20	< 10	1060	63	12
134365	2.35	3.65	0.23	14.30	1.714	11.24	23.56	0.05	0.19	0.133	0.98	34.57	90.62	48	4	76	< 20	7	< 20	< 10	920	50	10
134366	1.48	1.54	0.14	21.98	2.289	10.69	20.41	0.03	0.10	0.221	0.26	37.06	94.72	46	2	84	< 20	11	< 20	< 10	1420	48	10
134367	1.51	1.58	0.16	20.22	2.172	10.49	20.29	0.05	0.10	0.204	0.23	37.24	92.74	45	2	79	< 20	10	< 20	< 10	1490	44	10
134368	1.14	2.81	0.28	16.93	1.945	11.07	21.51	0.07	0.23	0.214	0.53	36.52	92.10	43	5	81	< 20	9	< 20	< 10	1090	44	10
134369	1.68	1.05	0.18	9.78	1.371	13.69	27.52	0.02	0.10	0.086	0.88	39.81	94.49	33	3	72	< 20	5	< 20	< 10	700	53	11
134370	5.80	1.40	0.14	10.98	1.403	11.73	28.85	0.05	0.07	0.040	1.25	35.07	90.99	34	4	59	< 20	4	< 20	50	1140	69	11

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134371	1.77	3.77	0.45	8.09	1.173	13.57	26.54	0.11	0.21	0.194	1.07	38.08	93.26	33	7	72	< 20	7	< 20	< 10	780	54	10
134372	2.15	3.26	0.89	9.40	1.122	11.83	28.28	0.24	0.31	0.176	4.03	33.60	93.16	35	4	72	< 20	10	< 20	10	600	37	9
134373	0.42	1.04	0.29	9.82	1.406	14.50	25.97	0.03	0.18	0.093	0.72	40.98	95.03	32	4	73	< 20	5	< 20	< 10	340	53	11
134374	0.02	97.98	0.08	0.33	0.020	0.19	0.40	0.03	0.01	0.002	0.02	0.48	99.55	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	< 1	1
134375	1.74	15.01	2.53	12.73	0.143	0.48	26.59	0.90	0.98	0.143	18.57	8.03	86.12	15	14	152	20	32	60	110	600	150	26
134376	3.78	0.88	0.23	7.18	1.128	13.77	29.48	0.04	0.15	0.086	1.19	37.66	91.80	33	5	67	< 20	8	< 20	< 10	470	66	13

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134223	31	< 2	2956	611	36	319	34	0.5	< 0.2	10	< 0.5	< 0.5	203	0.5	3720	8140	988	3720	576	147	311	38.8	160
134224	31	< 2	2430	505	30	354	50	< 0.5	< 0.2	13	< 0.5	< 0.5	199	0.5	3180	7030	850	3170	504	131	276	31.8	129
134225	22	< 2	2258	362	33	678	7	< 0.5	< 0.2	24	< 0.5	< 0.5	328	0.5	3910	7140	766	2600	396	101	211	24.4	96.2
134226	28	< 2	2413	421	60	589	45	0.7	< 0.2	16	< 0.5	< 0.5	246	0.6	6330	10200	1010	3230	413	97.9	198	22.2	93.0
134227	24	< 2	2503	477	49	817	26	< 0.5	< 0.2	18	< 0.5	< 0.5	260	0.6	4530	7930	820	2700	383	96.9	206	25.2	106
134228	25	< 2	2411	509	44	731	15	< 0.5	< 0.2	18	< 0.5	< 0.5	281	0.7	4650	8240	855	2780	385	100	221	28.4	122
134229	27	< 2	2210	391	41	387	17	0.8	< 0.2	17	< 0.5	< 0.5	198	1.3	3500	6900	714	2610	375	95.8	207	24.1	94.9
134230	25	< 2	2352	394	45	652	17	< 0.5	< 0.2	22	0.8	< 0.5	212	1.0	4820	8760	933	3240	436	108	219	24.0	105
134231	27	< 2	2460	476	48	910	12	0.6	0.2	23	< 0.5	< 0.5	277	1.5	5130	8860	946	3220	485	120	246	27.8	112
134232	24	< 2	2455	536	57	719	9	0.6	< 0.2	19	< 0.5	< 0.5	282	0.8	4670	8010	840	2880	453	116	240	28.0	116
134233	26	< 2	2620	470	61	799	16	0.6	< 0.2	26	< 0.5	< 0.5	220	1.7	4530	7940	850	2920	439	109	223	25.8	106
134234	20	< 2	3153	292	65	350	9	< 0.5	< 0.2	15	0.5	< 0.5	237	0.9	2940	5360	576	2060	303	78.9	163	17.8	74.5
134235	22	< 2	3132	327	59	436	8	< 0.5	< 0.2	13	< 0.5	< 0.5	250	0.5	3410	5880	620	2100	314	79.8	166	18.6	76.1
134236	22	< 2	3145	424	97	563	14	0.8	< 0.2	17	< 0.5	< 0.5	208	0.5	4200	7100	734	2450	356	90.1	191	22.5	96.2
134237	24	< 2	2487	332	56	457	11	< 0.5	< 0.2	18	< 0.5	< 0.5	315	0.9	4510	7660	780	2540	363	88.7	180	19.9	79.4
134238	24	< 2	2159	514	33	315	18	< 0.5	0.2	16	< 0.5	< 0.5	410	1.0	5020	8800	878	2750	381	101	233	31.0	133
134239	26	< 2	2155	607	33	460	14	< 0.5	0.2	17	< 0.5	< 0.5	260	0.8	3810	7110	781	2730	437	119	272	36.4	154
134240	23	< 2	2416	421	35	845	17	< 0.5	0.2	24	< 0.5	< 0.5	359	1.1	4390	7540	783	2650	434	114	243	28.6	110
134241	16	< 2	2484	258	35	585	28	< 0.5	< 0.2	19	0.5	< 0.5	267	1.2	2670	4940	538	1970	344	89.2	184	19.6	73.1
134242	23	< 2	2189	396	31	617	45	< 0.5	0.2	18	< 0.5	< 0.5	494	0.7	4440	7620	789	2690	430	105	220	24.8	98.7
134243	25	< 2	2247	380	53	476	226	0.7	< 0.2	13	< 0.5	< 0.5	376	0.7	4840	8000	822	2860	489	119	239	25.2	92.9
134244	22	< 2	1899	443	20	679	31	< 0.5	< 0.2	15	< 0.5	< 0.5	613	0.7	3850	6680	711	2490	403	101	211	23.8	93.8
134245	21	< 2	1484	402	17	691	81	< 0.5	< 0.2	24	< 0.5	< 0.5	745	1.1	2840	5090	599	2360	427	102	207	22.9	94.8
134246	19	< 2	1615	394	23	1240	36	< 0.5	0.3	36	0.6	< 0.5	1228	1.0	1870	4130	555	2280	383	91.7	191	22.4	93.2
134247	21	< 2	1937	348	17	813	35	< 0.5	0.3	42	< 0.5	< 0.5	376	2.1	2090	4890	662	2630	393	89.7	181	20.8	84.8
134248	23	< 2	1533	383	22	1250	52	< 0.5	0.3	46	0.6	< 0.5	964	1.2	2170	4630	595	2350	392	94.7	197	23.1	93.8
134249	< 5	< 2	45	7	< 4	3	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	16	< 0.4	4.2	7.6	0.75	2.5	0.4	0.09	0.3	< 0.1	0.1
134250	20	25	3092	928	215	388	53	1.7	< 0.2	45	< 0.5	0.5	13180	2.5	2590	4700	551	2190	471	130	308	43.1	201
134251	20	< 2	1731	377	25	954	28	< 0.5	< 0.2	51	< 0.5	< 0.5	327	1.4	2210	4920	627	2390	374	89.9	187	21.5	89.4
134252	20	< 2	1939	371	48	815	36	< 0.5	0.2	39	< 0.5	< 0.5	296	2.8	3120	6070	702	2490	359	87.9	186	22.0	90.2
134253	21	< 2	1793	414	52	903	22	< 0.5	0.3	37	< 0.5	< 0.5	236	5.0	2800	6070	732	2730	405	100	211	23.6	103
134254	20	< 2	1580	459	30	966	4	< 0.5	0.2	30	< 0.5	< 0.5	225	1.3	3430	6310	692	2410	391	98.1	207	24.5	102
134255	19	< 2	1653	487	45	640	< 2	0.5	0.4	24	< 0.5	< 0.5	243	4.3	2710	5210	612	2280	390	97.2	207	24.9	106
134256	17	< 2	1059	335	16	441	4	< 0.5	0.5	23	< 0.5	< 0.5	98	16.1	1070	3590	564	2480	407	94.5	190	21.0	88.7
134257	18	< 2	1547	565	31	731	< 2	< 0.5	0.3	36	< 0.5	< 0.5	221	4.3	2280	4960	601	2210	378	99.7	219	27.9	120
134258	19	< 2	1541	480	33	1410	< 2	< 0.5	0.4	68	< 0.5	< 0.5	197	1.8	2550	4780	550	2120	387	91.7	189	23.0	99.8
134259	18	< 2	715	282	16	508	< 2	< 0.5	0.8	31	< 0.5	< 0.5	102	4.1	1200	2590	408	2030	409	89.4	170	17.4	67.9
134260	18	< 2	1879	381	44	341	4	< 0.5	0.4	28	< 0.5	< 0.5	318	2.6	3120	5880	657	2470	430	111	238	27.1	111
134261	19	< 2	1524	412	46	523	< 2	< 0.5	0.5	33	< 0.5	< 0.5	265	2.1	2730	5090	588	2250	424	103	219	26.6	109
134262	21	< 2	1657	654	33	876	< 2	< 0.5	0.4	46	1.3	< 0.5	207	1.9	4030	7120	735	2460	441	123	279	36.4	156
134263	16	< 2	2388	532	31	1100	5	< 0.5	0.3	28	0.6	< 0.5	283	1.0	4570	8140	798	2560	410	123	290	35.5	143
134264	20	< 2	2196	549	23	965	< 2	< 0.5	0.2	42	0.8	< 0.5	273	1.2	3880	6820	705	2330	397	110	256	31.3	132
134265	19	2	1814	437	22	570	3	0.7	0.5	42	< 0.5	< 0.5	218	3.8	1900	4320	591	2440	462	119	246	29.6	117
134266	19	3	2164	605	28	901	3	0.6	0.3	37	< 0.5	< 0.5	298	1.7	3810	6820	717	2410	407	113	256	33.4	150
134267	22	4	2055	626	29	840	2	0.6	0.3	42	0.6	< 0.5	283	2.8	3120	6220	755	2810	489	129	281	37.0	156
134268	21	3	1647	422	32	559	< 2	0.6	0.2	36	0.7	< 0.5	257	2.9	3070	5810	656	2320	389	98.3	203	25.0	101
134269	18	5	1985	510	40	431	< 2	0.6	0.2	26	< 0.5	< 0.5	308	1.1	3250	6040	662	2250	368	94.6	199	25.7	111
134270	25	7	1478	508	21	634	3	0.7	0.4	52	< 0.5	< 0.5	329	2.5	2890	6240	783	2990	505	126	258	30.8	121
134271	23	8	2488	756	60	455	9	1.4	0.4	36	< 0.5	< 0.5	415	3.3	2680	5340	628	2310	424	122	281	41.1	185

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134272	17	13	3538	775	256	774	3	2.8	0.3	57	0.5	< 0.5	571	2.6	1660	3420	419	1600	321	96.9	237	40.4	195
134273	22	4	1830	592	33	1080	4	0.8	0.3	58	< 0.5	< 0.5	268	2.2	3290	6380	751	2760	469	123	263	32.9	138
134274	< 5	< 2	11	3	< 4	59	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	12.7	25.2	2.73	9.7	1.7	0.47	1.1	0.2	0.7
134275	165	34	20730	973	220	50	37	2.9	< 0.2	< 1	6.8	1.7	927	8.1	18800	29000	2640	8420	899	205	366	36.8	154
134276	19	< 2	1891	658	39	549	9	< 0.5	0.2	45	0.6	< 0.5	174	2.3	2580	5870	693	2510	402	114	268	36.5	169
134277	21	< 2	2776	735	19	339	< 2	0.6	0.3	25	< 0.5	< 0.5	210	0.9	3470	6670	744	2570	445	123	269	35.8	157
134278	19	< 2	1801	502	20	448	3	0.6	0.3	38	< 0.5	< 0.5	194	1.9	3130	6230	704	2480	417	108	229	28.1	114
134279	20	< 2	1913	796	43	418	< 2	0.6	0.3	25	< 0.5	< 0.5	247	1.3	3780	7090	766	2540	405	113	258	36.1	166
134280	24	3	1582	481	19	457	4	0.5	0.4	26	< 0.5	< 0.5	246	2.2	2910	5680	723	2920	533	130	261	28.7	112
134281	21	< 2	1558	461	27	770	3	< 0.5	0.3	37	< 0.5	< 0.5	166	1.1	3000	5760	682	2550	454	113	229	26.1	104
134282	23	< 2	1807	487	31	450	2	< 0.5	0.3	28	< 0.5	< 0.5	119	2.3	2320	5260	697	2860	568	153	309	33.3	121
134283 missing																							
134284 missing																							
134285 missing																							
134286 missing																							
134287 missing																							
134288 missing																							
134289	21	< 2	2047	813	25	621	12	< 0.5	0.3	25	< 0.5	< 0.5	186	2.1	3520	6870	771	2620	410	110	247	35.1	169
134290	23	< 2	2229	352	18	482	9	< 0.5	0.2	22	< 0.5	< 0.5	271	0.8	5410	9600	955	2870	356	87.8	184	20.5	78.8
134291	21	< 2	2012	403	38	668	34	0.5	0.2	25	< 0.5	< 0.5	282	1.4	4660	8240	848	2710	363	85.1	170	18.9	79.3
134292	20	< 2	2346	346	23	439	4	< 0.5	0.2	15	< 0.5	< 0.5	309	1.2	3890	7000	749	2520	377	95.6	196	21.5	80.7
134293	18	< 2	2623	387	24	259	3	< 0.5	< 0.2	20	< 0.5	< 0.5	3405	1.1	4610	8220	847	2740	368	94.7	203	21.6	89.7
134294	21	< 2	2675	468	28	285	9	< 0.5	< 0.2	9	< 0.5	< 0.5	5284	0.6	4850	8060	818	2640	352	87.0	182	21.9	93.4
134295	25	< 2	2491	477	23	397	10	< 0.5	< 0.2	12	< 0.5	< 0.5	2553	1.2	5060	8910	962	3250	429	101	206	23.9	98.7
134296	25	3	2971	636	59	560	44	0.7	< 0.2	28	< 0.5	< 0.5	413	1.4	3890	6780	720	2450	380	98.3	212	28.1	130
134297	30	< 2	2510	460	48	415	35	< 0.5	< 0.2	40	< 0.5	< 0.5	607	2.3	3300	6280	671	2340	334	85.5	189	23.5	107
134298	22	< 2	1354	557	18	261	22	< 0.5	0.3	18	< 0.5	< 0.5	192	3.5	2760	5520	679	2630	438	103	211	26.8	118
134299	< 5	< 2	17	4	< 4	3	7	< 0.5	< 0.2	< 1	< 0.5	< 0.5	14	< 0.4	6.3	11.8	1.20	4.2	0.6	0.14	0.4	< 0.1	0.2
134300	21	26	3022	921	214	349	54	2.0	< 0.2	45	< 0.5	< 0.5	13260	2.6	2620	4750	564	2250	481	134	307	41.0	199
134301	18	< 2	2283	536	40	441	12	< 0.5	0.2	18	< 0.5	< 0.5	280	2.0	4030	7280	743	2500	386	104	227	28.5	127
134302	21	< 2	2045	432	28	378	18	< 0.5	0.2	13	< 0.5	< 0.5	306	1.1	5000	8610	861	2690	367	87.1	179	21.4	92.2
134303	20	< 2	2120	492	16	260	7	< 0.5	0.3	11	< 0.5	< 0.5	328	1.7	4590	8420	855	2620	358	99.5	227	28.5	114
134304	22	< 2	2429	438	19	511	18	< 0.5	0.2	14	< 0.5	< 0.5	310	1.3	5530	9070	888	2770	375	96.4	211	26.3	104
134305	20	< 2	2086	559	15	672	12	< 0.5	0.3	26	< 0.5	< 0.5	283	1.6	4080	7280	755	2450	365	94.2	204	27.7	127
134306	27	4	1375	509	20	420	36	< 0.5	0.3	48	< 0.5	< 0.5	407	2.4	2190	4580	581	2290	395	95.1	197	26.0	117
134307	27	5	1705	654	22	728	13	< 0.5	0.3	77	< 0.5	< 0.5	543	2.5	2270	4840	603	2320	442	120	264	35.6	155
134308	19	< 2	2445	397	26	512	10	< 0.5	< 0.2	20	< 0.5	< 0.5	237	3.3	2550	5640	681	2410	339	78.6	161	19.6	85.6
134309	19	< 2	2427	723	55	471	4	0.7	0.3	19	< 0.5	< 0.5	280	2.7	2240	4850	593	2230	428	118	269	37.8	171
134310	19	< 2	2153	442	24	436	11	< 0.5	< 0.2	13	< 0.5	< 0.5	264	1.0	3360	6350	699	2360	308	73.6	156	20.9	99.0
134311	22	< 2	2758	481	44	355	14	< 0.5	< 0.2	15	< 0.5	< 0.5	298	1.1	3790	7250	801	2720	383	96.3	200	24.8	108
134312	24	< 2	2775	357	73	444	13	0.7	< 0.2	14	< 0.5	< 0.5	281	0.9	5780	10000	1010	3100	369	86.9	177	19.0	76.3
134313	26	< 2	2609	356	77	437	13	0.8	< 0.2	14	< 0.5	< 0.5	312	0.9	6550	11300	1120	3390	387	90.6	185	19.7	78.6
134314	24	< 2	2582	356	51	222	11	0.6	< 0.2	16	< 0.5	< 0.5	311	1.1	4890	8530	886	2860	394	95.7	192	21.2	85.4
134315	25	< 2	2704	335	51	225	12	0.5	< 0.2	15	< 0.5	< 0.5	347	0.6	5210	9240	962	3160	424	99.6	194	20.1	80.3
134316	28	2	3440	422	78	462	32	0.7	< 0.2	16	< 0.5	< 0.5	329	0.8	5860	9930	980	3060	402	99.2	203	23.1	94.3
134317	26	3	2522	352	62	558	19	0.7	0.2	23	< 0.5	< 0.5	245	1.0	5800	9680	976	3160	438	107	217	23.9	92.8
134318	24	3	3051	543	67	374	15	0.9	0.2	16	< 0.5	< 0.5	377	1.7	3830	7280	816	2860	442	116	252	32.9	140
134319	23	< 2	2304	334	47	384	5	0.6	< 0.2	18	< 0.5	< 0.5	272	1.0	4210	7640	806	2670	361	84.3	168	19.2	76.6
134320	24	< 2	2445	444	29	402	5	< 0.5	< 0.2	16	< 0.5	< 0.5	389	3.6	4160	8130	898	3020	397	92.7	190	23.3	104
134321	26	< 2	2141	377	23	514	21	< 0.5	0.2	27	< 0.5	< 0.5	277	2.7	3910	7610	848	2890	438	107	217	23.4	92.1

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134322	26	2	1828	535	24	628	36	< 0.5	0.3	27	< 0.5	< 0.5	231	2.3	3170	6370	739	2670	442	112	235	28.5	120
134323	25	< 2	1939	432	15	731	40	< 0.5	0.3	35	< 0.5	< 0.5	137	2.4	3120	6030	695	2570	501	129	264	29.3	115
134324	< 5	< 2	24	5	< 4	2	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	4.6	9.1	0.89	3.1	0.5	0.11	0.3	< 0.1	0.1
134325	178	34	20160	911	223	41	30	2.8	< 0.2	< 1	7.2	1.8	900	7.8	18100	28000	2530	8020	854	195	359	37.1	151
134326	23	< 2	2068	444	15	594	43	< 0.5	0.3	26	< 0.5	< 0.5	141	2.1	3310	6150	694	2540	508	131	260	29.0	114
134327	27	< 2	1659	386	14	413	33	< 0.5	0.3	20	< 0.5	< 0.5	112	3.7	2170	5420	740	2940	519	132	267	29.3	107
134328	28	< 2	1570	374	13	286	22	< 0.5	0.3	12	< 0.5	< 0.5	139	4.1	1750	4590	635	2540	468	117	233	25.3	98.9
134329	26	< 2	1657	318	9	770	35	< 0.5	0.3	26	0.8	< 0.5	126	3.2	3110	5870	676	2470	428	111	229	24.4	88.6
134330	26	< 2	1558	315	13	627	22	< 0.5	0.3	25	< 0.5	< 0.5	122	3.6	2510	5430	681	2570	398	93.8	194	22.9	88.0
134331	23	< 2	1656	263	15	1180	13	< 0.5	0.3	34	1.1	< 0.5	132	1.8	2970	6030	723	2680	413	94.0	182	19.2	68.4
134332	23	< 2	1597	281	10	579	7	< 0.5	0.3	18	< 0.5	< 0.5	130	1.7	2640	5660	687	2490	360	82.9	167	18.2	68.7
134333	20	< 2	2065	300	17	776	3	< 0.5	0.3	36	< 0.5	< 0.5	167	1.5	2130	4710	586	2200	351	85.2	175	20.6	81.2
134334	26	< 2	1948	369	19	621	3	< 0.5	0.3	20	2.7	< 0.5	169	3.0	2860	6340	790	2860	409	94.8	194	21.5	86.9
134335	27	< 2	1936	375	15	714	4	< 0.5	0.3	23	< 0.5	< 0.5	156	4.0	3140	6570	805	2930	422	98.5	199	22.0	85.9
134336	32	< 2	2015	320	10	928	7	< 0.5	0.3	33	< 0.5	< 0.5	156	1.8	3040	6210	736	2650	387	92.1	190	21.1	79.9
134337	22	3	2127	448	24	918	4	< 0.5	0.2	36	0.7	< 0.5	336	2.6	3320	6170	681	2400	403	103	217	28.2	123
134338	25	< 2	1826	290	12	1030	< 2	< 0.5	0.3	31	< 0.5	< 0.5	230	1.6	3060	5880	673	2440	398	94.6	188	19.7	72.5
134339	24	2	1857	279	16	713	3	< 0.5	0.3	21	< 0.5	< 0.5	312	1.4	3550	6870	781	2750	407	94.6	188	19.8	73.5
134340	24	< 2	1605	316	47	569	< 2	0.5	0.3	22	< 0.5	< 0.5	216	1.3	2480	5310	663	2560	436	103	200	20.4	77.5
134341	28	< 2	1528	350	16	527	< 2	< 0.5	0.4	28	0.5	< 0.5	201	4.4	2630	5580	703	2710	453	107	210	22.1	81.7
134342	22	< 2	1884	268	19	322	< 2	< 0.5	0.3	26	< 0.5	< 0.5	251	1.6	3170	6230	702	2460	367	88.5	179	19.1	72.1
134343	23	< 2	2022	357	18	523	< 2	< 0.5	0.3	18	< 0.5	< 0.5	140	1.7	3610	6820	752	2620	425	103	211	22.8	86.3
134344	23	< 2	1885	286	17	530	5	< 0.5	0.3	21	< 0.5	< 0.5	139	2.2	2850	5950	722	2690	453	106	206	20.7	72.7
134345	23	< 2	1785	337	12	459	5	< 0.5	0.3	27	< 0.5	< 0.5	109	2.5	3620	6690	739	2630	432	106	216	23.4	88.2
134346	22	< 2	2046	321	15	1020	6	< 0.5	0.3	36	< 0.5	< 0.5	156	1.3	4210	7480	787	2640	413	106	219	23.8	85.3
134347	20	< 2	1773	339	28	451	8	< 0.5	0.3	23	< 0.5	< 0.5	121	3.0	2380	5190	618	2180	320	78.5	163	19.5	78.7
134348	21	< 2	1964	196	7	511	< 2	< 0.5	0.3	30	< 0.5	< 0.5	143	3.4	2670	5700	675	2410	341	74.8	143	14.0	48.2
134349	< 5	< 2	16	4	5	41	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	23.7	48.3	5.47	20.0	3.3	0.77	1.7	0.2	0.8
134350	21	26	2866	886	218	373	50	2.0	< 0.2	44	0.5	0.5	13260	2.3	2580	4710	549	2190	469	129	301	41.5	196
134351	20	< 2	2021	463	20	169	6	< 0.5	0.3	10	< 0.5	< 0.5	168	2.8	2770	6080	703	2370	319	80.4	180	24.5	109
134352	24	< 2	1858	389	16	430	5	< 0.5	0.4	35	< 0.5	< 0.5	202	3.5	3140	6450	759	2780	489	122	249	27.8	104
134353	21	< 2	1798	305	13	312	< 2	< 0.5	0.4	30	< 0.5	< 0.5	116	2.8	3260	6530	750	2640	419	102	212	23.6	83.9
134354	22	< 2	1830	283	20	661	13	< 0.5	0.3	26	< 0.5	< 0.5	168	2.2	3060	6240	721	2580	393	91.7	187	20.7	74.8
134355	27	< 2	2301	579	38	459	13	0.6	0.2	19	< 0.5	< 0.5	168	2.0	4250	8120	928	3340	519	128	271	32.6	137
134356	31	< 2	2120	662	31	438	28	< 0.5	0.3	27	< 0.5	< 0.5	242	2.4	3970	7760	893	3280	581	151	323	39.2	159
134357	27	< 2	2154	392	32	542	29	< 0.5	0.3	36	< 0.5	< 0.5	202	2.2	4480	8700	984	3500	560	140	288	30.8	111
134358	23	< 2	2055	383	40	437	17	0.5	0.2	22	< 0.5	< 0.5	238	1.2	4330	7800	835	2890	453	113	236	26.4	101
134359	24	< 2	2106	365	84	341	39	0.8	< 0.2	12	< 0.5	< 0.5	200	0.4	5340	9310	960	3170	454	116	241	26.5	97.2
134360	27	< 2	2013	304	80	381	77	0.8	< 0.2	18	< 0.5	< 0.5	238	0.7	4860	8480	886	2970	431	111	229	23.6	84.8
134361	24	3	2145	288	55	421	70	0.6	< 0.2	30	< 0.5	< 0.5	238	0.7	4860	8760	905	2950	409	106	216	22.9	84.6
134362	29	3	2557	393	83	353	41	0.7	< 0.2	15	< 0.5	< 0.5	286	0.5	6760	11100	1060	3540	490	124	255	27.6	104
134363	29	2	2107	347	78	216	52	0.6	< 0.2	13	< 0.5	< 0.5	195	< 0.4	6230	10700	1070	3700	516	126	252	26.3	98.3
134364	31	3	2177	310	41	348	52	< 0.5	< 0.2	16	< 0.5	< 0.5	214	0.8	6210	11200	1120	3770	493	118	237	24.0	88.0
134365	25	4	2110	395	33	284	45	< 0.5	0.2	12	< 0.5	< 0.5	243	0.9	4830	8650	918	3090	428	104	211	23.6	97.3
134366	27	< 2	1722	446	13	478	4	< 0.5	0.3	27	< 0.5	< 0.5	158	1.9	3900	7780	891	3200	496	120	244	26.5	107
134367	26	< 2	1664	487	18	471	4	< 0.5	0.3	24	< 0.5	< 0.5	161	2.0	3560	7130	818	2940	464	112	232	26.4	111
134368	26	4	2004	503	33	366	6	0.7	0.3	19	< 0.5	< 0.5	292	1.0	3590	6980	792	2860	449	111	237	28.0	121
134369	30	< 2	1988	302	28	297	29	< 0.5	< 0.2	11	< 0.5	< 0.5	196	0.9	4800	8940	966	3330	463	106	207	20.4	78.5
134370	28	< 2	2086	334	50	182	17	0.6	< 0.2	12	< 0.5	< 0.5	267	0.7	8090	12600	1120	3530	401	90.3	180	18.4	73.1
134371	28	4	2046	265	65	457	12	0.6	< 0.2	16	< 0.5	< 0.5	376	< 0.4	5860	9620	949	3010	381	89.9	178	18.6	72.7

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134372	27	6	2734	933	63	555	14	0.8	< 0.2	13	< 0.5	< 0.5	358	< 0.4	2850	5670	658	2470	464	132	315	42.1	194
134373	29	3	1748	279	17	221	10	< 0.5	< 0.2	8	< 0.5	< 0.5	235	0.8	5000	9080	983	3380	404	90.7	180	18.7	74.5
134374	< 5	< 2	24	5	< 4	2	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	11.9	23.6	2.54	9.1	1.5	0.35	0.9	< 0.1	0.3
134375	157	30	20280	920	223	20	33	2.6	< 0.2	< 1	7.2	1.8	892	7.1	17700	28000	2520	7910	837	194	354	34.3	144
134376	36	2	2062	310	32	431	15	< 0.5	< 0.2	8	0.6	< 0.5	362	< 0.4	7340	11900	1140	3840	455	102	196	20.1	79.5

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134223	22.5	45.9	5.37	29.8	3.87	1.9	< 0.1	4	0.1	46	471	0.2	3.661
134224	18.2	37.5	4.21	23.9	3.05	1.6	< 0.1	6	0.2	105	431	0.2	4.297
134225	13.5	27.1	2.94	16.0	1.96	1.3	< 0.1	8	0.2	122	425	0.2	3.542
134226	13.4	29.1	3.24	17.5	2.24	1.6	0.3	5	0.3	123	356	0.2	2.394
134227	15.0	31.3	3.42	18.0	2.24	1.6	0.2	6	0.2	118	363	0.2	2.083
134228	17.4	34.3	3.59	18.5	2.30	1.7	< 0.1	40	0.2	134	538	0.2	4.056
134229	13.3	27.2	3.03	15.8	1.92	2.7	< 0.1	4	0.1	173	505	0.2	3.129
134230	14.9	30.7	3.27	17.1	2.05	1.4	< 0.1	14	< 0.1	16	392	0.2	2.494
134231	15.4	31.9	3.17	17.5	2.10	1.7	< 0.1	10	0.2	201	722	0.1	3.589
134232	16.3	33.1	3.56	19.4	2.34	1.9	< 0.1	6	0.1	127	517	< 0.1	2.368
134233	15.1	30.4	3.42	18.6	2.36	1.7	< 0.1	6	0.2	184	507	0.2	4.457
134234	10.2	21.0	2.50	14.0	1.80	1.3	3.3	10	< 0.1	23	520	5.3	1.615
134235	10.6	21.8	2.52	14.1	1.82	1.5	1.5	5	0.3	60	493	6.2	1.596
134236	14.2	31.4	3.60	20.8	2.57	2.0	0.3	5	0.1	80	525	0.3	3.310
134237	10.9	23.0	2.53	14.2	1.89	1.4	0.9	3	0.2	119	550	0.5	4.303
134238	18.4	35.5	3.78	18.5	2.26	1.8	< 0.1	3	0.3	261	680	0.1	3.398
134239	22.0	42.9	4.45	23.0	2.65	2.0	< 0.1	4	0.4	114	662	< 0.1	4.247
134240	14.4	27.9	3.03	16.4	1.99	1.6	< 0.1	7	0.3	180	783	0.2	3.653
134241	9.1	17.1	1.94	10.4	1.27	1.1	6.2	9	< 0.1	37	759	3.8	2.553
134242	13.2	28.3	3.01	16.0	2.08	1.5	< 0.1	4	0.2	173	722	< 0.1	4.655
134243	12.0	23.2	2.52	14.9	1.89	1.9	< 0.1	3	0.3	145	846	< 0.1	3.067
134244	12.5	23.4	2.61	14.9	1.90	1.2	< 0.1	5	0.1	89	579	0.1	3.069
134245	13.3	27.4	3.06	16.9	2.11	1.3	< 0.1	5	0.1	204	802	0.2	3.928
134246	13.2	26.7	2.90	16.3	2.04	1.4	< 0.1	11	< 0.1	337	811	0.3	4.006
134247	11.4	22.0	2.52	14.0	1.84	1.2	< 0.1	8	0.1	455	870	< 0.1	4.216
134248	13.1	25.3	2.82	15.7	1.89	1.3	< 0.1	10	0.2	279	749	0.2	4.545
134249	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	0.8	< 0.1	0.382
134250	32.7	77.6	9.16	49.2	6.15	5.4	3.1	26	0.3	559	878	2.6	0.014
134251	12.4	25.8	2.84	16.0	2.04	1.4	< 0.1	14	0.2	317	695	0.1	4.577
134252	12.4	26.9	2.93	15.9	2.08	1.7	0.4	9	0.2	338	718	1.0	2.349
134253	14.0	29.7	3.16	17.8	2.21	1.5	0.2	16	< 0.1	158	932	0.2	5.083
134254	14.8	31.0	3.52	19.1	2.37	1.4	1.1	8	< 0.1	177	654	0.9	3.120
134255	15.7	33.4	3.73	19.7	2.40	1.7	< 0.1	6	0.1	503	930	< 0.1	4.482
134256	12.6	25.7	2.75	13.8	1.57	0.9	< 0.1	14	< 0.1	447	890	< 0.1	3.138
134257	18.2	38.6	4.33	22.6	2.77	1.6	< 0.1	10	0.2	341	859	0.2	2.687
134258	15.1	32.4	3.82	19.9	2.43	1.5	< 0.1	13	0.1	307	897	0.3	4.150
134259	9.4	20.0	2.16	11.0	1.29	1.2	< 0.1	7	0.2	683	818	< 0.1	1.975
134260	14.2	27.4	2.80	14.7	1.81	1.5	< 0.1	7	< 0.1	205	1070	< 0.1	0.883
134261	14.8	28.6	2.96	16.6	2.07	1.9	< 0.1	7	0.2	359	1010	< 0.1	0.853
134262	22.4	45.7	4.81	25.0	3.06	2.1	< 0.1	14	< 0.1	301	941	0.1	4.261
134263	19.2	39.2	4.31	23.6	3.00	1.5	< 0.1	17	< 0.1	48	902	0.1	3.668
134264	18.5	38.0	4.24	23.2	2.85	1.8	< 0.1	14	< 0.1	211	793	0.2	4.630
134265	15.3	30.2	3.02	16.7	2.09	1.4	< 0.1	9	0.2	628	993	0.1	2.700
134266	20.8	41.0	4.29	22.5	2.70	1.9	0.2	10	0.1	373	926	0.3	2.829
134267	22.0	43.3	4.61	23.5	2.86	2.0	< 0.1	9	0.1	464	1020	0.3	2.637
134268	13.9	27.9	2.93	16.2	1.93	1.5	< 0.1	6	0.2	415	838	0.3	4.007
134269	16.5	33.3	3.86	21.6	2.60	1.7	0.6	4	0.2	215	707	0.5	4.013
134270	16.4	32.2	3.43	18.1	2.21	1.6	0.2	5	0.2	519	1210	0.8	3.812

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134271	27.7	59.3	5.86	29.9	3.46	2.7	< 0.1	7	0.3	715	859	1.4	4.229
134272	29.7	60.6	6.35	32.0	3.66	4.7	3.2	8	0.5	458	596	4.3	1.604
134273	19.8	41.2	4.15	21.7	2.48	1.8	2.4	8	0.2	330	873	0.8	1.740
134274	0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	3.9	< 0.1	0.398
134275	25.0	63.6	8.02	46.7	6.38	3.7	< 0.1	5	2.5	1060	158	201	0.014
134276	24.3	48.6	5.10	25.0	2.89	1.7	0.1	14	< 0.1	77	939	0.4	2.214
134277	23.4	46.8	5.29	27.1	3.26	1.9	< 0.1	6	< 0.1	214	975	0.2	0.875
134278	16.1	34.1	3.66	19.6	2.44	1.6	< 0.1	5	< 0.1	320	790	< 0.1	4.727
134279	25.6	53.9	5.94	30.4	3.56	2.4	0.3	4	< 0.1	219	878	0.3	1.940
134280	15.5	31.7	3.40	18.5	2.20	1.5	< 0.1	5	0.1	371	897	0.2	2.954
134281	14.8	31.0	3.64	19.8	2.38	1.6	< 0.1	8	< 0.1	217	739	0.6	3.278
134282	16.3	33.4	3.74	21.9	2.78	1.4	0.2	5	0.1	455	696	1.1	3.754
134283 missing													0.000
134284 missing													0.000
134285 missing													0.000
134286 missing													0.000
134287 missing													0.000
134288 missing													0.000
134289	27.5	63.2	7.26	36.1	4.14	2.1	< 0.1	8	< 0.1	321	1110	0.1	1.723
134290	11.0	25.5	2.96	16.7	2.13	1.1	0.5	8	< 0.1	141	755	0.2	5.621
134291	12.3	29.7	3.96	23.5	3.02	1.5	0.6	9	< 0.1	193	621	0.3	3.231
134292	11.0	24.9	2.98	17.3	2.17	1.2	0.1	7	< 0.1	218	736	0.1	3.791
134293	13.0	30.4	3.75	21.9	2.80	1.1	0.2	7	< 0.1	19	860	0.1	3.582
134294	14.4	35.4	4.47	26.0	3.39	1.5	< 0.1	5	< 0.1	128	568	< 0.1	3.179
134295	15.3	36.3	4.40	25.4	3.23	1.5	< 0.1	6	< 0.1	249	589	< 0.1	4.280
134296	20.8	46.9	5.85	33.6	4.27	2.1	2.4	9	0.1	172	541	1.5	3.604
134297	16.3	37.3	4.45	25.0	3.30	1.2	1.5	7	< 0.1	26	574	1.3	3.751
134298	18.3	40.8	4.52	24.4	3.08	1.6	< 0.1	4	0.2	433	1080	< 0.1	4.615
134299	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	18	1.3	< 0.1	0.383
134300	32.5	76.9	9.07	48.9	6.12	5.4	2.6	26	0.4	594	888	2.7	0.016
134301	18.9	39.2	4.45	24.2	3.10	1.5	0.7	6	< 0.1	153	1100	0.5	2.182
134302	13.8	31.2	3.65	21.1	2.79	1.4	0.1	4	0.1	222	668	0.2	3.953
134303	16.4	35.2	4.09	23.6	3.01	1.6	< 0.1	4	< 0.1	257	711	< 0.1	2.901
134304	14.7	32.1	3.76	21.2	2.78	1.4	< 0.1	7	< 0.1	295	628	< 0.1	2.479
134305	19.3	41.3	4.56	25.1	3.12	1.7	< 0.1	13	< 0.1	191	842	< 0.1	3.802
134306	17.6	36.6	4.03	22.0	2.72	1.6	0.9	5	0.3	697	1030	1.9	3.980
134307	22.7	46.6	4.95	26.3	3.36	1.9	1.9	11	0.3	462	1150	3.7	3.069
134308	12.8	28.5	3.31	19.4	2.55	1.4	0.2	5	0.2	381	628	0.2	2.050
134309	25.5	51.6	5.81	31.7	4.29	2.3	0.7	5	0.3	473	1060	0.5	3.954
134310	15.2	32.8	3.76	19.8	2.52	1.4	0.4	5	0.1	152	567	0.4	3.445
134311	16.0	33.1	3.87	22.1	2.84	1.8	< 0.1	3	0.1	228	580	0.1	4.648
134312	11.4	25.4	2.96	16.9	2.29	1.8	0.3	3	< 0.1	190	343	0.2	1.365
134313	11.6	25.5	2.97	17.2	2.27	1.9	0.3	4	< 0.1	164	381	0.3	1.408
134314	12.3	27.2	3.07	17.1	2.16	1.5	0.3	3	< 0.1	209	606	0.1	3.730
134315	11.8	26.1	2.94	16.9	2.16	1.4	0.2	3	< 0.1	183	396	< 0.1	3.890
134316	14.2	31.3	3.76	21.1	2.83	1.9	1.4	4	0.2	218	356	0.4	3.433
134317	13.0	29.3	3.21	17.8	2.40	1.7	1.0	4	0.2	282	410	0.5	4.306
134318	20.7	43.3	4.63	24.1	3.08	2.0	1.2	3	0.2	324	544	1.4	2.995
134319	11.5	25.4	2.94	15.9	2.08	1.5	0.6	4	0.1	174	471	0.2	2.352
134320	16.3	34.3	3.74	18.7	2.26	1.4	0.3	5	0.1	407	725	0.1	3.980

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134321	13.2	26.8	2.67	13.4	1.64	1.3	0.3	6	0.2	302	879	0.2	4.213
134322	17.1	33.6	3.55	17.6	2.18	1.5	0.5	7	0.2	529	899	0.4	4.343
134323	15.7	29.1	2.90	14.5	1.78	1.4	< 0.1	9	0.2	461	1090	0.2	3.617
134324	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.0	< 0.1	0.403
134325	24.7	59.6	7.84	45.5	6.24	3.7	< 0.1	10	2.4	1110	158	201	0.010
134326	16.0	32.5	3.36	18.1	2.31	1.4	< 0.1	6	0.3	230	1190	0.2	3.021
134327	14.2	27.5	2.77	16.0	1.89	1.3	< 0.1	5	0.4	658	1020	0.1	4.502
134328	13.4	25.8	2.79	15.5	1.91	1.2	< 0.1	4	0.4	660	948	0.1	3.418
134329	11.2	21.8	2.12	12.3	1.47	1.0	0.1	9	0.3	543	847	0.2	3.146
134330	11.7	22.8	2.17	11.9	1.52	1.1	0.9	6	0.3	511	829	1.0	3.831
134331	8.7	18.4	1.94	10.2	1.30	1.0	0.7	10	0.1	273	758	0.4	3.829
134332	9.2	18.9	2.01	11.4	1.42	0.9	0.2	6	0.2	339	658	0.3	3.161
134333	11.2	22.2	2.21	12.0	1.53	1.2	0.1	13	0.2	321	690	0.9	3.062
134334	12.5	25.1	2.70	14.2	1.77	1.3	< 0.1	11	0.2	389	767	0.2	1.902
134335	12.1	24.5	2.70	13.9	1.73	1.2	< 0.1	10	0.3	476	768	0.2	1.830
134336	10.7	21.4	2.30	12.3	1.56	1.2	0.4	10	0.2	341	690	0.4	3.821
134337	18.2	37.4	4.06	21.2	2.48	1.7	2.1	8	0.3	319	807	1.5	3.471
134338	9.7	19.8	2.09	11.3	1.43	1.1	< 0.1	9	0.1	273	671	0.4	4.782
134339	10.0	20.4	2.16	11.2	1.36	1.1	1.0	8	0.1	286	752	0.8	3.480
134340	10.8	21.6	2.41	13.3	1.67	1.6	0.5	6	0.2	240	833	0.8	3.824
134341	11.6	24.5	2.64	14.4	1.77	1.3	< 0.1	7	0.3	612	759	0.3	4.807
134342	9.8	19.4	2.04	10.8	1.39	1.0	< 0.1	9	< 0.1	261	569	0.7	5.385
134343	12.3	25.2	2.77	15.1	1.91	1.2	0.3	9	< 0.1	305	750	0.4	3.129
134344	9.4	19.2	1.96	11.6	1.45	1.0	1.0	6	0.2	314	853	0.6	3.559
134345	12.0	23.4	2.51	14.0	1.74	1.1	< 0.1	5	0.1	458	741	0.1	3.402
134346	11.0	20.0	2.13	12.9	1.67	1.2	1.3	12	< 0.1	184	730	0.6	3.045
134347	11.4	24.2	2.73	15.0	1.89	1.2	1.0	7	0.2	416	644	0.7	4.614
134348	6.2	12.3	1.41	8.4	1.12	0.6	< 0.1	7	0.2	430	622	0.7	4.469
134349	0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	7.3	< 0.1	0.389
134350	32.4	76.7	9.15	48.9	6.18	5.6	2.3	27	0.3	578	896	2.7	0.015
134351	16.5	34.9	4.24	23.0	3.03	1.4	< 0.1	4	0.1	335	682	0.2	3.969
134352	13.8	27.1	2.96	17.4	2.24	1.4	0.8	6	< 0.1	202	1040	0.6	4.454
134353	10.4	19.2	2.13	12.8	1.69	1.1	1.2	4	< 0.1	269	902	0.7	3.076
134354	9.9	20.5	2.29	13.3	1.69	1.1	6.1	6	0.1	189	720	3.1	4.116
134355	19.9	42.9	5.13	29.1	3.68	2.0	0.1	5	< 0.1	137	945	0.4	3.952
134356	22.9	47.1	5.33	29.2	3.73	2.2	< 0.1	4	0.1	85	955	0.4	3.926
134357	14.1	28.6	2.84	16.0	1.93	1.3	0.4	6	0.3	183	819	0.4	4.356
134358	13.4	28.1	3.04	16.6	2.11	1.3	0.8	4	0.3	304	664	0.6	3.102
134359	12.3	24.4	2.76	15.9	2.07	1.9	0.5	3	0.2	119	613	0.4	4.478
134360	10.4	20.5	2.15	12.6	1.59	1.5	1.5	4	0.3	184	542	1.0	3.439
134361	10.3	19.7	2.11	11.8	1.43	1.3	1.2	4	0.4	122	549	0.7	4.276
134362	13.5	27.5	2.88	16.3	2.05	1.8	1.9	3	0.4	179	622	1.5	3.911
134363	12.5	25.6	2.78	15.7	1.91	1.6	< 0.1	3	0.3	73	496	1.0	4.323
134364	11.0	21.3	2.27	13.1	1.67	1.2	0.6	2	0.4	149	531	0.4	3.554
134365	13.8	26.9	2.90	14.4	1.64	1.1	0.3	2	0.4	203	528	0.4	4.195
134366	15.7	30.6	3.16	15.5	1.70	1.2	0.4	4	0.4	325	743	0.7	2.139
134367	16.8	34.5	3.55	16.8	1.86	1.1	0.6	3	0.4	333	703	0.6	2.144
134368	18.2	36.3	3.73	17.7	1.98	1.4	< 0.1	2	0.5	335	578	0.6	3.150
134369	10.5	21.3	2.23	11.6	1.35	1.0	0.9	2	0.3	118	340	0.6	2.624
134370	10.2	20.4	2.31	11.7	1.44	1.1	0.2	< 1	0.2	142	344	0.3	3.572

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134371	9.8	19.1	1.99	10.3	1.23	1.2	0.4	6	0.6	101	290	1.4	3.936
134372	31.8	71.7	7.44	36.9	4.30	2.2	2.3	6	0.9	373	509	6.0	4.431
134373	10.0	19.6	1.96	10.6	1.23	0.9	0.1	3	0.6	142	231	1.2	3.633
134374	< 0.1	0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	5	3.4	< 0.1	0.409
134375	23.0	58.4	7.43	42.9	5.72	3.2	< 0.1	5	2.3	911	158	203	0.011
134376	10.7	21.7	2.33	11.4	1.40	1.1	0.7	3	0.6	63	304	0.6	3.098

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.08	11.22	1.90	0.74	0.013	0.34	42.75	0.87	0.55	0.118	30.21					1664							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.09																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.23																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.14																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.46	18.48	9.88	0.148	10.09	11.50	1.90	0.22	0.495	0.07			31		157	280	58	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		71.74	12.95	3.19	0.140	0.15	0.61	2.46	5.39	0.284	0.03			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																	90	31	50	30			
LKSD-3 Cert																	87.0	30.0	47.0	35.0			
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		53.07	15.47	10.63	0.167	6.30	11.07	2.21	0.62	1.086	0.14			35	< 1	278		42	70	100	80	17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas		50.27	20.26	6.20	0.108	0.51	8.11	6.96	1.67	0.286	0.13			1	3	7							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		48.12	15.57	11.03	0.169	9.43	13.51	1.80	0.02	0.975	0.02			43	< 1	339	380	52	160	120	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1040	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		74.23	15.21	0.57	0.037	0.08	0.66	4.60	3.87	0.013	0.01				1309								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC86302 Meas		74.23	15.21	0.57	0.037	0.08	0.66	4.60	3.87	0.013	0.01				1309								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC86302 Meas		74.03	14.95	0.58	0.037	0.06	0.67	4.51	3.89	0.011	< 0.01				1280								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC86302 Meas		74.42	15.27	0.60	0.039	0.06	0.66	4.49	3.88	0.012	< 0.01				1292								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		26	70	2610	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																		3		930		16	11
NCS DC70009 (GBW07241) Cert																		3.7		960		16.5	11.2
OREAS 100a (Fusion) Meas																		17		170			
OREAS 100a (Fusion) Cert																		18.1		169			

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
OREAS 101a (Fusion) Meas																		48		430			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20			16	
JR-1 Cert																			1.67			16.1	
NCS DC86318 Meas		65.88	13.86	2.25	0.056	0.09		0.59	5.56	0.173	< 0.01												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134237 Orig	4.17	2.74	0.09	10.49	1.375	12.28	27.82	0.04	0.05	0.126	1.94	35.76	92.70	63	19	81	< 20	5	< 20	< 10	930	60	11
134237 Dup	4.11	2.73	0.08	10.51	1.381	12.24	27.93	0.04	0.05	0.127	1.93	35.76	92.79	63	19	81	< 20	6	< 20	< 10	930	60	12
134254 Orig	5.26	1.22	0.07	13.19	1.731	10.86	28.80	0.03	0.06	0.358	0.69	35.57	92.57	79	7	110	< 20	6	< 20	< 10	1020	54	12
134254 Dup	5.17	1.23	0.08	12.95	1.724	10.84	28.47	0.03	0.07	0.360	0.66	35.57	91.97	79	7	110	< 20	6	< 20	< 10	1010	52	11
134279 Orig	6.65	0.52	0.11	16.53	1.827	10.64	27.55	0.02	0.09	0.183	0.92	34.11	92.51	63	7	76	< 20	7	< 20	20	1460	57	12
134279 Dup	6.74	0.51	0.10	16.50	1.819	10.63	27.39	0.02	0.09	0.176	0.91	34.11	92.27	63	7	73	< 20	8	< 20	< 10	1440	58	12
134302 Orig	7.04	2.70	0.10	12.87	1.726	11.03	27.59	0.05	0.08	0.108	0.88	33.09	90.22	65	15	78	< 20	7	< 20	< 10	1640	67	12
134302 Dup	7.17	2.68	0.10	12.86	1.727	10.98	27.61	0.05	0.08	0.107	0.88	33.09	90.15	64	15	80	< 20	7	< 20	< 10	1600	67	13
134313 Orig	6.19	2.37	0.10	8.68	1.393	11.63	29.68	0.04	0.07	0.135	2.23	33.40	89.74	53	15	71	< 20	4	< 20	< 10	1530	89	15
134313 Dup	6.36	2.41	0.11	8.69	1.388	11.58	29.72	0.04	0.07	0.132	2.24	33.40	89.78	53	15	72	< 20	4	< 20	< 10	1600	89	16
134322 Orig	4.66	3.90	0.19	18.21	2.149	10.16	22.96	0.07	0.15	0.302	0.57	32.77	91.42	53	7	87	< 20	10	< 20	< 10	1180	51	12
134322 Split	4.44	3.94	0.14	20.02	2.460	9.84	21.67	0.05	0.11	0.317	0.48	32.57	91.61	54	6	83	< 20	10	< 20	< 10	1540	40	9
134328 Orig	2.97	1.05	0.10	21.01	2.407	10.41	20.78	0.03	0.03	0.087	0.33	36.16	92.40	53	6	56	< 20	11	< 20	< 10	1860	41	11
134328 Dup	2.73	1.07	0.11	20.91	2.375	10.43	20.60	0.03	0.03	0.086	0.32	36.16	92.12	53	7	56	< 20	9	< 20	< 10	1850	41	12
134342 Orig	0.42	1.20	0.08	16.21	1.819	12.02	24.35	0.02	0.04	0.481	0.29	39.62	96.12	65	8	102	< 20	8	< 20	< 10	980	47	11
134342 Split	0.42	1.13	0.07	15.61	1.784	11.74	23.76	0.03	0.03	0.469	0.31	39.58	94.52	63	8	99	< 20	7	< 20	< 10	920	39	9
134345 Orig	3.93	1.86	0.11	19.41	2.162	10.25	23.10	0.03	0.03	0.198	0.46	35.53	93.14	55	7	62	< 20	8	< 20	< 10	1180	51	11
134345 Dup	3.72	1.85	0.10	19.46	2.178	10.33	23.20	0.03	0.03	0.195	0.47	35.53	93.37	54	5	59	< 20	8	< 20	< 10	1180	51	11
134356 Orig	2.98	1.19	0.16	11.94	1.551	10.76	29.38	0.03	0.08	0.228	1.41	36.57	93.29	74	6	95	< 20	8	< 20	< 10	990	58	15
134356 Dup	2.79	1.13	0.16	11.79	1.528	10.53	28.80	0.03	0.08	0.225	1.35	36.57	92.19	72	6	92	< 20	9	< 20	< 10	970	58	14
134371 Orig	1.85	3.80	0.46	8.18	1.187	13.67	26.85	0.11	0.21	0.197	1.08	38.08	93.81	34	7	73	< 20	7	< 20	< 10	790	54	10
134371 Dup	1.70	3.74	0.44	8.01	1.160	13.48	26.22	0.11	0.21	0.191	1.06	38.08	92.70	33	7	70	< 20	8	< 20	< 10	780	54	10
134372 Orig	2.15	3.26	0.89	9.40	1.122	11.83	28.28	0.24	0.31	0.176	4.03	33.60	93.16	35	4	72	< 20	10	< 20	10	600	37	9
134372 Split	1.93	3.20	0.91	8.88	1.096	11.95	28.61	0.26	0.29	0.193	4.32	34.14	93.84	37	4	81	< 20	10	< 20	10	550	35	8
134373 Orig	0.42	1.04	0.29	9.82	1.406	14.50	25.97	0.03	0.18	0.093	0.72	40.98	95.03	32	4	73	< 20	5	< 20	< 10	340	53	11
134373 Split	0.44	1.02	0.30	9.83	1.425	14.69	26.13	0.03	0.18	0.094	0.73	40.94	95.38	34	4	73	< 20	5	< 20	< 10	340	54	11
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			144	15	36						0.8		107		3.9			4.8		0.60			
DNC-1 Cert			144.0	18.0	38						0.96		118		3.6			5.20		0.59			
GBW 07113 Meas			41	45	383								495										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	26	74					< 2	2.7		3	0.9	2.4			49.5	93.8		43.3	8.0	1.41		0.9	4.9
LKSD-3 Cert	27.0	78.0					2.00	2.70		3.00	1.30	2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		19	197	19	88		< 2	0.5			0.8		176	< 0.4		24.1		13.4	3.4			0.6	3.6
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460			0.790		182	0.0300		23.0		13.0	3.30			0.630	3.60
SY-4 Meas			1207	117	543								347										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2180	3320		1130	164	45.1	122	14.7	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			107	14	16						0.5		10					2.3	1.1	0.52			
BIR-1a Cert			110	16	18						0.58		6					2.5	1.1	0.55			
NCS DC86312 Meas															2350	184		1570			228	34.3	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.7			180			80.3	46.4	90.9	10.0	38.1	8.0	1.66	7.2	1.2	6.4
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	70	503							1.3	1700	3.2	43.2			22.6	57.1	7.23	30.0	12.2		14.1	3.2	20.7
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							25								270	491	45.8	149	24.3	3.68		3.8	23.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a							21								838	1400	128	391	50.8	8.10		5.6	32.0

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
(Fusion) Meas																							
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		246				15	2	0.5	< 0.2		1.1	20.8		0.5	19.9	47.2	5.58	22.4	5.7		5.4	1.0	6.2
JR-1 Cert		257				15.2	3.25	0.031	0.028		1.19	20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69
NCS DC86318 Meas				17320											2010	434	737	3360	1720	19.6	2080	468	3040
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1152	15430																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															21000	28000	2290	6490	530	87.8			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134237 Orig	24	< 2	2511	331	56	453	11	< 0.5	< 0.2	17	< 0.5	< 0.5	316	1.0	4560	7750	789	2570	366	89.5	181	20.0	79.5
134237 Dup	24	< 2	2462	334	56	461	12	0.6	< 0.2	18	< 0.5	< 0.5	315	0.9	4450	7580	771	2510	360	88.0	179	19.8	79.2
134254 Orig	21	< 2	1594	466	29	975	4	< 0.5	0.2	30	< 0.5	< 0.5	229	1.3	3450	6360	699	2440	395	99.1	208	24.7	105
134254 Dup	20	< 2	1566	452	31	956	4	< 0.5	0.2	29	< 0.5	< 0.5	222	1.3	3400	6270	686	2390	386	97.0	206	24.3	99.5
134279 Orig	20	< 2	1922	797	42	424	< 2	0.6	0.3	26	< 0.5	< 0.5	249	1.3	3790	7110	768	2560	408	114	259	36.3	168
134279 Dup	20	< 2	1904	796	44	412	< 2	0.6	0.3	24	< 0.5	< 0.5	245	1.2	3770	7070	764	2530	403	112	256	35.9	165
134302 Orig	22	< 2	2046	432	28	380	18	< 0.5	0.2	13	< 0.5	< 0.5	305	1.2	4970	8560	856	2670	364	86.4	178	21.4	91.6
134302 Dup	21	< 2	2043	433	27	376	18	< 0.5	0.2	13	< 0.5	< 0.5	307	1.1	5030	8660	866	2720	369	87.8	179	21.5	92.7
134313 Orig	27	< 2	2620	356	79	441	12	0.8	< 0.2	14	< 0.5	< 0.5	316	0.9	6510	11200	1110	3380	385	89.9	183	19.6	77.5
134313 Dup	26	< 2	2598	357	75	433	13	0.8	< 0.2	14	< 0.5	< 0.5	309	1.0	6600	11300	1120	3400	389	91.3	187	19.8	79.7
134322 Orig	26	2	1828	535	24	628	36	< 0.5	0.3	27	< 0.5	< 0.5	231	2.3	3170	6370	739	2670	442	112	235	28.5	120
134322 Split	23	< 2	1768	459	23	548	35	< 0.5	0.3	31	< 0.5	< 0.5	206	2.8	3110	6420	749	2700	436	111	236	26.4	110
134328 Orig	30	< 2	1571	372	12	293	22	< 0.5	0.3	13	< 0.5	< 0.5	138	4.3	1760	4620	638	2560	470	118	233	25.1	98.9
134328 Dup	27	< 2	1569	375	14	279	21	< 0.5	0.3	12	< 0.5	< 0.5	139	4.0	1740	4560	632	2530	467	117	234	25.4	98.9
134342 Orig	22	< 2	1884	268	19	322	< 2	< 0.5	0.3	26	< 0.5	< 0.5	251	1.6	3170	6230	702	2460	367	88.5	179	19.1	72.1
134342 Split	21	< 2	1879	271	22	301	< 2	< 0.5	0.3	25	< 0.5	< 0.5	239	1.2	3140	6350	712	2470	363	89.5	184	18.9	70.5
134345 Orig	24	< 2	1800	338	12	459	5	< 0.5	0.3	27	< 0.5	< 0.5	110	2.6	3650	6740	747	2660	436	107	218	23.4	88.2
134345 Dup	22	< 2	1770	337	12	459	5	< 0.5	0.3	27	< 0.5	< 0.5	109	2.3	3590	6630	732	2600	428	105	214	23.5	88.3
134356 Orig	31	< 2	2144	669	33	440	28	0.5	0.3	27	0.5	< 0.5	243	2.5	4000	7810	900	3300	587	152	325	39.7	161
134356 Dup	30	< 2	2095	656	30	435	27	< 0.5	0.3	27	< 0.5	< 0.5	240	2.4	3930	7710	886	3260	574	150	321	38.7	157
134371 Orig	28	4	2065	267	62	453	12	0.7	< 0.2	16	< 0.5	< 0.5	379	< 0.4	5910	9700	955	3040	386	90.9	180	18.8	73.5
134371 Dup	28	4	2026	263	69	462	12	0.6	< 0.2	16	< 0.5	< 0.5	373	0.5	5810	9550	942	2990	376	88.9	177	18.5	72.0
134372 Orig	27	6	2734	933	63	555	14	0.8	< 0.2	13	< 0.5	< 0.5	358	< 0.4	2850	5670	658	2470	464	132	315	42.1	194
134372 Split	29	5	2866	965	60	598	11	0.7	< 0.2	14	0.7	< 0.5	318	< 0.4	2450	5100	612	2350	463	134	323	43.6	202
134373 Orig	29	3	1748	279	17	221	10	< 0.5	< 0.2	8	< 0.5	< 0.5	235	0.8	5000	9080	983	3380	404	90.7	180	18.7	74.5
134373 Split	28	3	1831	276	16	226	10	< 0.5	< 0.2	8	< 0.5	< 0.5	235	0.7	4980	9080	990	3380	407	91.3	182	19.0	73.9
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											929		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.40		0.7	3			11.1	4.4	
LKSD-3 Cert				2.70	0.400		0.700	2.00			11.4	4.60	
OKA-2 Meas											29200		
OKA-2 Cert											28900.000		
W-2a Meas	0.8		0.36	2.0	0.35			< 1	< 0.1		2.3	0.5	
W-2a Cert	0.760		0.380	2.10	0.330			0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.9	1.10	1.1					23.8	4.1	
CTA-AC-1 Cert				11.4	1.08	1.13					21.8	4.4	
BIR-1a Meas				1.7						< 5			
BIR-1a Cert				1.7						3			
NCS DC86312 Meas	35.6	96.1	14.3	87.2	12.0						25.7		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							83.1	332	33.6				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.5	0.53	3.5	0.48					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.3	12.5	2.32	15.9				2200			27.4		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.5	2.39	15.4	2.14						53.3	137	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
OREAS 101a (Fusion) Meas	6.6	19.1	2.98	18.5	2.48						36.8	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas		3.9	0.63	4.6	0.68	4.2	1.8	2	1.6	18	26.6	8.6	
JR-1 Cert		3.61	0.67	4.55	0.71	4.51	1.86	1.59	1.56	19.3	26.7	8.88	
NCS DC86318 Meas	566	1610	265	1760	257								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134237 Orig	11.0	23.1	2.50	14.2	1.86	1.5	1.0	3	0.2	112	555	0.5	
134237 Dup	10.8	22.8	2.56	14.2	1.91	1.4	0.9	3	0.2	126	545	0.5	
134254 Orig	15.2	31.3	3.60	19.7	2.44	1.5	1.1	9	< 0.1	176	659	0.8	
134254 Dup	14.4	30.6	3.43	18.5	2.31	1.4	1.2	8	< 0.1	179	649	1.0	
134279 Orig	25.7	54.7	5.97	30.6	3.60	2.4	0.3	4	0.1	223	880	0.3	
134279 Dup	25.4	53.0	5.91	30.1	3.52	2.5	0.3	4	< 0.1	215	877	0.4	
134302 Orig	13.7	31.6	3.59	21.2	2.79	1.5	0.1	4	0.1	221	667	0.2	
134302 Dup	14.0	30.9	3.71	21.1	2.80	1.4	0.1	4	0.1	223	670	0.2	
134313 Orig	11.5	24.4	2.91	17.0	2.23	2.0	0.3	3	< 0.1	159	379	0.3	
134313 Dup	11.6	26.5	3.04	17.3	2.31	1.9	0.3	4	< 0.1	169	384	0.3	
134322 Orig	17.1	33.6	3.55	17.6	2.18	1.5	0.5	7	0.2	529	899	0.4	
134322 Split	15.9	30.7	3.23	16.0	1.99	1.3	0.4	5	0.3	1170	903	0.3	
134328 Orig	13.3	25.7	2.71	15.2	1.92	1.2	< 0.1	4	0.5	672	949	0.2	
134328 Dup	13.5	26.0	2.87	15.7	1.90	1.3	< 0.1	4	0.4	649	947	0.1	
134342 Orig	9.8	19.4	2.04	10.8	1.39	1.0	< 0.1	9	< 0.1	261	569	0.7	
134342 Split	9.2	18.3	1.93	10.6	1.27	0.9	< 0.1	9	< 0.1	216	570	0.7	
134345 Orig	11.8	22.8	2.49	13.8	1.72	1.1	< 0.1	5	0.1	489	749	0.1	
134345 Dup	12.1	24.0	2.54	14.2	1.77	1.1	< 0.1	6	0.1	427	733	0.1	
134356 Orig	23.1	47.7	5.46	29.8	3.76	2.2	0.1	4	0.1	85	960	0.4	
134356 Dup	22.7	46.5	5.20	28.6	3.70	2.2	< 0.1	5	0.1	86	949	0.4	
134371 Orig	9.9	19.3	2.05	10.4	1.24	1.2	0.4	5	0.6	100	295	1.4	
134371 Dup	9.7	18.8	1.93	10.2	1.22	1.3	0.4	6	0.6	101	286	1.4	
134372 Orig	31.8	71.7	7.44	36.9	4.30	2.2	2.3	6	0.9	373	509	6.0	
134372 Split	32.8	73.5	7.68	37.7	4.47	2.2	2.4	7	0.8	308	511	6.8	
134373 Orig	10.0	19.6	1.96	10.6	1.23	0.9	0.1	3	0.6	142	231	1.2	
134373 Split	9.8	18.4	1.98	10.2	1.17	0.8	< 0.1	3	0.5	129	232	1.1	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03182
Invoice Date: 11-Jun-14
Your Reference: ASHRAM-BATCH #4

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

133 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03182**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134377	3.35	0.83	0.10	15.75	1.709	12.65	26.52	< 0.01	0.01	0.593	0.72	36.90	95.80	73	13	120	20	8	< 20	30	1670	61	15
134378	4.16	0.87	0.07	17.89	1.789	12.01	24.64	< 0.01	0.01	0.184	0.87	35.79	94.13	66	27	84	< 20	10	< 20	< 10	1650	66	16
134379	5.29	1.49	0.06	13.96	1.709	11.78	27.13	0.04	0.04	0.509	1.16	35.02	92.90	63	15	101	< 20	8	< 20	10	1640	30	7
134380	4.80	1.42	0.14	16.20	1.759	11.72	24.70	0.04	0.12	1.463	0.84	33.57	91.98	55	25	200	< 20	8	< 20	< 10	1400	26	7
134381	4.89	1.31	0.10	13.66	1.684	12.41	27.33	0.03	0.07	0.378	0.69	35.69	93.35	58	14	94	< 20	6	< 20	< 10	1370	30	7
134382	6.95	1.07	0.13	9.26	1.218	12.44	31.45	0.04	0.09	0.188	0.90	35.22	92.01	64	21	71	< 20	4	< 20	< 10	1040	37	7
134383	3.39	1.09	0.09	11.32	1.553	13.01	28.29	0.04	0.05	0.125	1.05	37.72	94.34	75	26	80	< 20	5	< 20	< 10	1230	30	6
134384	3.63	4.20	0.12	16.62	1.986	11.36	24.11	0.05	0.06	0.223	2.13	33.81	94.66	62	46	85	< 20	8	< 20	< 10	970	26	6
134385	7.64	2.67	0.06	11.17	1.471	11.41	31.05	0.04	0.04	0.166	1.41	33.36	92.85	60	33	69	< 20	4	< 20	< 10	1020	30	6
134386	4.25	3.34	0.14	15.91	1.963	11.40	23.63	0.04	0.08	0.166	0.71	35.10	92.47	51	97	77	< 20	7	< 20	< 10	1260	27	6
134387	2.51	4.01	0.11	17.87	2.275	12.49	22.83	0.02	0.05	0.244	0.55	35.59	96.04	57	18	92	< 20	8	< 20	< 10	1180	63	16
134388	2.71	3.58	0.14	18.79	2.345	11.60	20.98	0.05	0.07	0.200	0.55	35.99	94.31	52	18	85	< 20	8	< 20	< 10	1060	25	6
134389	4.11	3.37	0.11	17.61	2.512	10.98	22.76	0.05	0.05	0.294	1.14	34.44	93.30	56	21	82	< 20	10	< 20	10	1750	27	7
134390	5.33	2.71	0.13	17.86	2.149	11.16	24.09	0.03	0.05	0.258	0.53	34.54	93.50	40	14	80	< 20	9	< 20	< 10	1670	27	6
134391	6.21	3.67	0.20	13.28	1.581	11.61	27.07	0.04	0.14	0.561	0.75	38.83	97.73	47	26	99	< 20	7	< 20	< 10	1210	29	6
134392	5.16	4.04	0.20	14.07	1.657	11.76	25.99	0.06	0.14	0.776	0.73	33.86	93.28	68	24	121	< 20	7	< 20	< 10	1550	28	6
134393	3.44	3.64	0.13	16.62	1.975	11.67	22.42	0.09	0.11	0.767	1.06	34.64	93.13	80	20	107	< 20	7	< 20	< 10	1250	28	6
134394	8.00	2.47	0.12	13.99	1.785	10.96	27.96	0.06	0.09	0.350	0.92	32.22	90.93	71	26	80	< 20	6	< 20	< 10	1460	33	6
134395	3.95	4.16	0.11	16.44	1.865	11.92	23.64	0.04	0.05	0.306	0.80	34.41	93.75	70	34	90	< 20	8	< 20	< 10	1150	64	14
134396	3.15	9.61	0.41	19.19	1.883	9.06	21.18	0.06	0.20	0.307	3.96	25.02	90.86	63	14	77	< 20	24	< 20	10	1340	65	16
134397	5.51	2.58	0.09	15.15	1.956	11.59	25.38	0.05	0.05	0.382	0.66	34.38	92.27	58	34	78	< 20	7	< 20	< 10	1350	29	6
134398	4.28	3.30	0.15	17.94	2.076	11.22	23.18	0.05	0.08	0.292	0.94	34.66	93.89	54	30	86	< 20	8	< 20	< 10	1540	27	6
134399	0.02	99.52	0.07	0.32	0.016	0.11	0.24	0.03	0.01	0.002	0.03	0.32	100.7	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	3	1
134400	6.65	20.20	3.10	27.90	2.414	6.95	17.73	0.31	1.35	1.487	0.58	11.68	93.70	21	13	157	170	29	80	30	1480	28	7
134401	4.25	2.65	0.14	18.91	2.215	11.36	23.02	0.05	0.08	0.217	0.72	35.20	94.56	56	27	83	< 20	8	< 20	< 10	1190	25	6
134402	7.58	2.78	0.09	11.55	1.684	11.65	29.33	0.05	0.06	0.284	0.86	33.59	91.92	63	63	68	< 20	4	< 20	< 10	1020	29	6
134403	6.23	5.08	0.12	13.40	1.748	11.11	27.25	0.06	0.09	0.202	1.97	32.21	93.23	60	91	67	< 20	5	< 20	10	1210	28	6
134404	6.86	4.97	0.11	16.74	1.932	10.37	25.45	0.04	0.08	0.217	0.87	31.77	92.54	40	27	75	< 20	8	< 20	< 10	1450	29	6
134405	3.80	4.33	0.20	22.18	2.387	10.10	20.30	0.05	0.11	0.231	0.71	33.36	93.96	40	42	76	< 20	11	< 20	< 10	1290	26	6
134406	4.26	4.91	0.19	21.82	2.332	9.71	19.80	0.04	0.15	1.437	0.45	31.32	92.14	38	21	128	< 20	11	< 20	30	2400	23	7
134407	4.61	4.63	0.13	16.84	1.941	11.46	23.92	0.05	0.09	0.227	0.79	33.37	93.45	45	44	76	< 20	10	< 20	< 10	1780	28	7
134408	4.56	1.93	0.09	13.83	1.931	12.41	26.86	0.05	0.06	0.272	1.03	35.40	93.84	47	55	70	< 20	6	< 20	< 10	1300	28	6
134409	6.86	4.56	0.16	21.86	2.355	8.94	23.13	0.04	0.05	0.442	1.67	30.32	93.53	35	52	88	< 20	10	< 20	< 10	1480	25	5
134410	3.51	3.20	0.09	10.29	1.495	12.41	28.83	0.04	0.06	0.108	1.59	36.38	94.48	48	26	73	< 20	4	< 20	< 10	930	34	7
134411	5.29	2.22	0.15	10.48	1.509	11.93	29.82	0.05	0.09	0.081	1.75	35.20	93.28	47	40	62	< 20	5	< 20	< 10	970	28	6
134412	3.41	4.08	0.12	16.02	1.863	11.74	24.58	0.04	0.08	0.179	0.69	35.99	95.38	47	31	66	< 20	8	< 20	< 10	1060	27	6
134413	3.47	4.16	0.12	15.56	1.842	11.53	24.53	0.04	0.08	0.190	0.70	36.00	94.74	45	27	66	< 20	9	< 20	< 10	960	29	7
134414	3.39	5.25	0.13	15.28	1.833	11.09	24.04	0.04	0.06	0.145	0.86	35.51	94.23	40	17	67	< 20	9	< 20	< 10	1120	25	7
134415	3.81	3.40	0.11	18.01	2.058	10.82	24.19	0.05	0.04	0.138	1.82	34.56	95.21	49	11	63	< 20	9	< 20	< 10	1320	26	6
134416	2.36	3.19	0.24	8.79	1.178	10.66	32.48	0.07	0.03	0.162	7.67	32.42	96.90	58	8	71	< 20	3	< 20	< 10	350	28	8
134417	2.35	2.53	0.19	8.42	1.203	11.85	31.26	0.07	0.07	0.202	4.84	35.41	96.05	51	12	80	< 20	3	< 20	30	410	27	7
134418	1.37	0.65	0.14	11.22	1.588	11.68	29.79	0.07	0.03	0.113	5.46	36.03	96.77	53	10	67	< 20	4	< 20	< 10	420	28	8
134419	3.88	2.31	0.10	11.50	1.705	12.70	28.36	0.04	0.07	0.052	1.27	36.95	95.04	44	16	58	< 20	4	< 20	10	940	61	10
134420	3.71	2.04	0.09	11.06	1.688	13.61	28.34	0.03	0.06	0.062	0.87	37.86	95.71	43	10	65	< 20	4	< 20	< 10	820	58	9
134421	2.05	2.95	0.13	9.61	1.351	13.69	28.63	0.05	0.07	0.126	1.80	38.38	96.78	52	12	76	< 20	4	< 20	< 10	560	45	8
134422	6.05	3.27	0.12	9.78	1.343	11.51	31.17	0.04	0.07	0.257	2.34	33.44	93.33	51	12	80	< 20	4	< 20	< 10	770	56	9
134423	3.53	1.17	0.12	11.57	1.463	12.49	29.38	0.05	0.06	0.139	2.84	36.24	95.51	51	13	66	< 20	5	< 20	< 10	690	49	8
134424	0.03	97.64	0.11	0.34	0.016	0.12	0.28	0.04	0.02	0.002	0.04	0.41	99.01	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	< 1

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134425	1.88	14.77	2.51	13.09	0.143	0.50	26.71	0.92	1.04	0.148	17.75	8.52	86.09	18	13	153	20	29	60	100	570	190	24
134426	5.39	1.50	0.38	16.86	1.923	12.09	24.87	0.02	0.02	0.211	0.99	34.55	93.41	50	13	64	< 20	8	< 20	< 10	1370	55	11
134427	4.89	1.07	0.13	11.06	1.410	13.00	29.50	0.03	0.07	0.109	1.04	38.96	96.39	56	15	63	< 20	6	< 20	< 10	770	58	9
134428	6.16	2.47	0.10	11.51	1.504	12.17	29.17	0.03	0.07	0.088	0.88	34.74	92.72	46	16	57	< 20	6	< 20	< 10	970	57	8
134429	4.53	2.53	0.14	12.57	1.665	12.89	27.36	0.03	0.08	0.065	0.73	36.64	94.72	53	17	63	< 20	5	< 20	< 10	900	51	7
134430	7.54	1.04	0.20	9.62	1.492	12.43	32.03	0.05	0.11	0.062	0.97	34.14	92.14	54	26	66	< 20	10	< 20	< 10	1600	61	8
134431	3.98	0.70	0.10	12.33	1.779	13.25	27.79	0.03	0.06	0.115	0.63	38.11	94.90	52	15	73	< 20	6	< 20	< 10	750	53	8
134432	5.47	1.10	0.10	10.23	1.632	13.04	29.73	0.04	0.05	0.141	0.77	37.03	93.87	58	16	66	< 20	3	< 20	< 10	840	57	9
134433	7.32	0.68	0.15	10.36	1.427	12.02	31.02	0.04	0.07	0.092	0.65	35.29	91.78	50	16	64	< 20	5	< 20	< 10	830	55	8
134434	5.87	2.26	0.35	8.98	1.332	12.85	30.67	0.12	0.12	0.057	0.83	36.18	93.75	54	15	58	< 20	5	< 20	< 10	670	50	7
134435	7.73	0.88	0.18	8.98	1.275	12.08	32.84	0.04	0.07	0.143	1.69	34.01	92.17	55	16	65	< 20	4	< 20	< 10	970	71	10
134436	5.77	0.83	0.14	11.97	1.641	12.67	28.04	0.01	0.02	0.091	0.73	36.42	92.56	42	18	53	< 20	7	< 20	< 10	920	54	11
134437	3.95	1.61	0.13	11.99	1.598	13.34	27.93	0.03	0.09	0.185	0.86	37.20	94.96	46	17	80	< 20	5	< 20	< 10	1210	52	8
134438	4.37	1.28	0.12	11.33	1.545	13.03	27.99	0.03	0.08	0.139	0.89	37.03	93.46	45	18	76	< 20	5	< 20	< 10	1250	55	8
134439	5.10	1.69	0.11	10.76	1.507	12.56	28.83	0.02	0.07	0.151	0.92	35.93	92.55	44	12	72	< 20	6	< 20	< 10	870	58	8
134440	6.83	1.81	0.12	8.95	1.443	12.76	31.11	0.04	0.08	0.090	0.86	34.78	92.03	43	18	52	< 20	4	< 20	< 10	910	66	10
134441	4.60	1.11	0.11	11.34	1.609	12.77	26.64	0.04	0.07	0.102	0.83	37.00	91.63	46	15	62	< 20	5	< 20	< 10	960	58	9
134442	2.89	3.41	0.14	9.10	1.236	13.15	26.02	0.03	0.07	0.169	1.13	38.09	92.55	46	11	72	< 20	4	< 20	< 10	830	51	8
134443	2.86	1.96	0.09	10.43	1.575	13.86	25.57	0.03	0.08	0.091	1.05	37.97	92.69	43	13	58	< 20	5	< 20	< 10	750	62	10
134444	4.35	1.95	0.11	11.51	1.685	13.32	25.41	0.04	0.07	0.102	0.70	36.86	91.75	39	10	57	< 20	5	< 20	< 10	860	58	10
134445	4.05	2.52	0.07	13.96	1.901	12.60	23.30	0.03	0.05	0.163	0.59	35.69	90.88	41	13	71	< 20	7	< 20	< 10	1330	63	10
134446	1.49	2.97	0.18	12.55	1.562	13.92	23.47	0.02	0.02	0.091	1.01	38.38	94.18	49	10	58	< 20	9	< 20	< 10	1450	58	12
134447	2.98	3.39	0.11	11.47	1.709	12.51	24.34	0.05	0.10	0.137	2.19	35.45	91.45	49	13	54	< 20	5	< 20	< 10	930	67	11
134448	4.32	3.57	0.07	9.29	1.547	13.18	26.65	0.03	0.08	0.173	1.60	35.54	91.72	46	10	50	< 20	6	< 20	< 10	890	76	11
134449	< 0.01	97.95	0.07	0.27	0.011	0.09	0.17	0.02	0.01	0.001	0.02	0.22	98.84	< 1	< 1	< 5	80	< 1	< 20	40	30	< 1	< 1
134450	6.58	19.80	3.02	27.52	2.372	7.01	16.73	0.31	1.34	1.494	0.55	12.85	92.99	23	13	154	180	27	80	30	1330	45	8
134451	4.09	3.50	0.10	8.32	1.380	13.51	28.30	0.04	0.07	0.146	1.35	36.65	93.37	49	10	52	< 20	4	< 20	< 10	790	62	10
134452	6.33	2.60	0.10	7.31	1.282	13.47	30.63	0.03	0.11	0.112	1.36	34.99	91.99	43	15	46	< 20	3	< 20	< 10	600	67	9
134453	4.89	3.01	0.08	9.52	1.729	12.93	27.18	0.03	0.10	0.121	1.13	35.54	91.38	44	17	49	< 20	4	< 20	< 10	1270	77	10
134454	5.43	3.04	0.08	7.12	1.318	13.34	28.81	0.03	0.09	0.113	1.08	35.65	90.68	48	17	48	< 20	3	< 20	< 10	860	73	11
134455	6.92	1.43	0.12	7.83	1.394	13.56	30.09	0.02	0.13	0.137	0.91	35.88	91.50	39	12	49	< 20	3	< 20	< 10	820	68	10
134456	5.09	4.52	0.06	7.31	1.309	13.28	27.62	0.03	0.08	0.122	1.12	35.15	90.60	38	22	46	< 20	3	< 20	< 10	530	77	11
134457	3.93	2.51	0.11	8.23	1.465	14.06	27.61	0.03	0.12	0.094	1.08	37.45	92.75	44	11	57	< 20	5	< 20	< 10	580	71	10
134458	2.86	3.01	0.14	7.96	1.340	14.11	27.25	0.02	0.11	0.112	0.99	37.97	93.02	50	10	65	< 20	5	< 20	< 10	1010	70	10
134459	3.04	2.97	0.16	9.19	1.324	13.69	26.91	0.05	0.13	0.089	1.18	37.26	92.95	58	13	71	< 20	6	< 20	< 10	810	65	9
134460	4.46	1.75	0.07	8.11	1.264	14.25	30.70	0.02	0.05	0.084	0.91	37.85	95.06	45	8	58	< 20	3	< 20	< 10	610	70	10
134461	3.29	1.18	0.09	9.18	1.301	13.92	29.06	0.02	0.07	0.078	1.03	38.45	94.37	55	7	67	< 20	5	< 20	< 10	790	62	9
134462	4.22	1.14	0.09	9.43	1.333	13.43	28.19	0.03	0.05	0.073	0.99	37.66	92.42	46	7	69	< 20	5	< 20	< 10	770	87	17
134463	3.61	1.00	0.07	9.48	1.344	13.57	28.31	0.03	0.05	0.065	1.10	37.76	92.77	47	7	67	< 20	5	< 20	< 10	760	92	18
134464	2.44	2.67	0.08	7.98	1.330	14.57	27.87	0.02	0.07	0.043	0.99	39.30	94.93	50	10	64	< 20	3	< 20	< 10	680	82	16
134465	2.81	1.29	0.09	8.01	1.235	14.05	28.67	0.03	0.06	0.053	1.01	38.91	93.40	52	8	70	< 20	5	< 20	< 10	830	85	18
134466	4.40	2.13	0.22	7.49	1.237	13.62	28.81	0.04	0.03	0.070	2.08	36.85	92.58	51	9	76	< 20	4	< 20	< 10	760	74	14
134467	6.11	8.13	2.29	9.84	0.979	12.88	27.17	0.04	1.18	0.300	1.30	29.18	93.28	54	17	98	20	9	< 20	10	720	81	18
134468	4.13	1.82	0.15	8.23	1.228	12.81	29.80	0.02	0.03	0.064	2.42	35.73	92.31	65	11	80	< 20	5	< 20	< 10	1140	77	15
134469	3.22	2.13	0.17	7.47	1.121	13.83	29.04	0.04	0.13	0.104	1.62	37.80	93.47	55	11	90	< 20	5	< 20	< 10	880	89	19
134470	4.20	1.04	0.09	9.17	1.224	13.50	28.19	0.03	0.07	0.072	0.96	37.86	92.21	52	8	76	< 20	6	< 20	< 10	1070	83	17
134471	3.80	1.91	0.16	8.15	1.242	12.86	30.24	0.03	0.03	0.047	1.60	36.06	92.31	52	11	82	< 20	3	< 20	< 10	980	71	14
134472	1.33	1.55	0.14	13.59	1.581	13.54	24.32	0.04	0.12	0.102	1.24	38.23	94.47	61	7	100	< 20	10	< 20	< 10	1120	85	19
134473	2.95	1.75	0.14	9.06	1.183	12.49	29.77	0.05	0.11	0.097	3.70	35.58	93.94	67	8	82	< 20	5	< 20	< 10	750	77	17
134474	0.10	98.45	0.05	0.21	0.007	0.09	0.18	< 0.01	< 0.01	0.001	< 0.01	0.31	99.31	< 1	< 1	< 5	30	< 1	< 20	< 10	< 30	< 1	1

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134475	1.83	14.88	2.56	12.96	0.142	0.51	26.39	0.98	1.06	0.146	19.12	8.16	86.89	18	14	154	20	33	60	110	620	247	43
134476	1.07	2.44	0.22	11.19	1.420	12.80	26.54	0.03	0.03	0.079	2.62	36.93	94.30	64	6	86	< 20	7	< 20	< 10	990	63	13
134477	2.66	2.33	0.18	10.96	1.420	13.42	27.02	0.05	0.16	0.068	1.50	36.70	93.81	67	8	89	< 20	5	< 20	< 10	1120	82	18
134478	6.75	1.64	0.15	8.88	1.216	12.39	31.47	0.04	0.13	0.080	1.30	34.63	91.93	57	11	66	< 20	4	< 20	< 10	1190	87	15
134479	4.59	2.30	0.18	12.16	1.419	12.50	28.38	0.03	0.08	0.118	1.99	35.33	94.48	53	6	74	< 20	8	< 20	< 10	960	76	16
134480	6.76	0.98	0.22	8.33	1.135	12.43	34.34	0.04	0.07	0.130	2.94	33.73	94.33	51	9	86	< 20	6	< 20	< 10	920	85	17
134481	4.57	3.70	0.39	8.42	1.184	12.94	29.87	0.04	0.14	0.076	2.10	35.64	94.50	55	10	69	< 20	7	< 20	< 10	470	79	16
134482	5.22	1.42	0.16	6.72	1.119	14.38	32.22	0.03	0.12	0.048	1.11	37.54	94.87	51	9	66	< 20	4	< 20	10	990	89	18
134483	2.54	1.62	0.49	8.01	1.233	15.08	29.95	0.04	0.17	0.147	1.15	39.11	97.00	50	9	94	< 20	6	< 20	< 10	540	79	16
134484	1.88	2.09	0.75	8.34	1.042	13.35	30.42	0.05	0.21	0.295	4.52	35.07	96.13	48	11	96	< 20	9	< 20	10	310	57	13
134485	3.05	2.12	0.19	8.33	1.184	14.27	28.72	0.02	0.02	0.154	1.07	38.29	94.37	45	9	86	< 20	4	< 20	20	820	62	13
134486	3.08	2.05	0.18	7.82	1.207	14.93	30.22	0.03	0.16	0.113	1.42	38.08	96.20	52	11	79	< 20	5	< 20	< 10	1150	98	19
134487	9.15	2.60	0.10	5.47	0.974	13.64	34.51	0.03	0.09	0.043	1.26	34.20	92.92	37	12	57	< 20	3	< 20	< 10	1550	93	17
134488	1.51	1.76	0.27	7.16	1.151	15.46	28.71	0.03	0.25	0.093	1.30	39.69	95.88	45	13	74	< 20	4	< 20	< 10	460	84	17
134489	0.58	1.36	0.35	7.98	0.902	14.97	27.03	0.03	0.29	0.107	1.86	40.06	94.95	52	10	76	< 20	5	< 20	< 10	530	103	20
134490	0.83	1.07	0.25	6.92	1.007	14.73	29.46	0.05	0.18	0.060	3.50	38.57	95.80	50	9	92	< 20	5	< 20	< 10	410	86	19
134491	1.30	1.09	0.22	7.07	1.028	14.18	28.96	0.02	0.02	0.161	3.37	38.81	94.93	41	7	87	< 20	4	< 20	< 10	400	58	13
134492	1.35	0.62	0.18	6.95	1.076	15.55	29.16	0.03	0.12	0.052	1.24	40.99	95.96	47	7	77	< 20	5	< 20	< 10	740	76	16
134493	1.02	1.49	0.16	8.23	1.186	13.77	27.88	0.02	0.02	0.056	3.28	38.63	94.72	56	8	78	< 20	3	< 20	20	580	62	14
134494	3.77	1.26	0.12	13.70	1.714	12.24	27.60	0.02	0.07	0.198	1.10	36.61	94.64	55	5	78	< 20	7	< 20	< 10	1520	74	17
134495	3.20	2.20	0.11	20.07	2.211	10.93	22.25	0.02	0.03	0.190	0.52	35.98	94.52	50	5	68	< 20	8	< 20	< 10	1230	61	13
134496	4.09	1.15	0.14	15.88	2.081	11.54	26.31	0.03	0.03	0.219	0.60	36.52	94.48	54	5	71	< 20	6	< 20	< 10	1290	66	16
134497	3.14	2.50	0.09	22.66	2.441	10.65	21.09	0.02	0.01	0.058	0.48	35.59	95.58	45	6	49	< 20	7	< 20	< 10	1790	51	14
134498	1.48	4.68	0.17	12.52	1.629	12.08	24.95	0.03	0.03	0.101	1.19	37.25	94.63	58	6	66	< 20	5	< 20	< 10	860	60	12
134499	< 0.01	98.70	0.06	0.25	0.012	0.20	0.40	< 0.01	0.01	0.001	0.02	0.51	100.2	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	1	2
134500	7.41	20.30	3.04	28.16	2.456	7.38	17.97	0.32	1.34	1.470	0.55	12.00	95.00	23	13	156	170	29	80	30	1450	56	14
134526	0.13	2.67	0.19	10.11	1.637	13.19	28.00	0.02	0.03	0.068	1.35	35.64	92.90	56	7	55	< 20	4	< 20	< 10	1410	70	15
134527	6.53	1.57	0.08	9.23	1.631	12.59	32.03	0.02	0.04	0.094	1.95	34.90	94.14	51	7	55	< 20	4	< 20	< 10	870	84	18
134528	0.97	1.25	0.12	7.68	1.168	15.16	28.87	0.03	0.10	0.110	2.03	39.79	96.31	41	7	74	< 20	4	< 20	< 10	540	72	16
134529	0.39	1.64	0.36	8.88	1.225	15.09	27.41	0.03	0.21	0.085	1.72	39.64	96.29	34	6	79	< 20	7	< 20	< 10	540	78	18
134530	3.34	0.93	0.18	7.24	1.197	14.36	29.60	0.02	0.15	0.057	1.24	38.79	93.76	42	9	51	< 20	3	< 20	< 10	420	114	21
134531	2.24	0.61	0.15	8.13	1.513	14.29	28.63	0.03	0.13	0.070	1.16	39.53	94.24	53	6	62	< 20	5	< 20	< 10	780	99	19
134532	2.18	0.56	0.15	8.03	1.504	14.27	28.44	0.02	0.12	0.072	1.21	39.67	94.05	52	6	62	< 20	4	< 20	< 10	800	104	20
134533	2.64	0.83	0.19	7.12	1.288	14.92	28.89	0.02	0.18	0.036	0.85	40.11	94.44	48	8	50	< 20	3	< 20	< 10	340	79	19
134534	1.38	0.99	0.22	8.52	1.355	14.52	26.94	0.02	0.17	0.053	1.17	38.88	92.84	56	6	58	< 20	9	< 20	< 10	920	107	21

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134377	27	< 2	2042	550	31	835	17	0.5	0.4	37	< 0.5	< 0.5	250	1.7	2700	5390	632	2340	519	161	370	44.5	158
134378	27	< 2	1966	503	28	565	20	< 0.5	0.4	20	< 0.5	< 0.5	189	1.7	3040	5950	686	2480	484	142	323	38.8	140
134379	15	< 2	2324	494	31	919	42	0.6	0.3	23	< 0.5	< 0.5	251	1.1	4180	7750	797	2750	489	147	338	41.5	151
134380	16	< 2	2264	418	29	1310	41	< 0.5	0.3	43	< 0.5	< 0.5	377	1.0	3520	6670	708	2510	456	127	291	36.1	134
134381	16	< 2	2433	388	26	817	46	< 0.5	0.3	21	0.6	< 0.5	294	1.2	4050	7440	790	2720	425	113	254	30.6	118
134382	18	< 2	2639	344	28	463	45	< 0.5	< 0.2	12	< 0.5	< 0.5	304	0.5	5720	9830	977	3250	468	118	239	25.9	98.5
134383	17	< 2	2341	381	41	625	44	< 0.5	< 0.2	14	< 0.5	< 0.5	224	0.6	4090	7560	808	2770	417	108	234	27.0	108
134384	16	< 2	2212	417	64	757	63	0.6	0.2	27	< 0.5	< 0.5	202	1.0	3200	6040	679	2490	403	103	226	27.4	113
134385	14	< 2	2333	394	69	471	40	< 0.5	< 0.2	16	< 0.5	< 0.5	192	0.7	4320	7420	725	2330	337	90.8	209	25.1	102
134386	13	< 2	2080	373	35	405	50	< 0.5	0.2	24	< 0.5	< 0.5	366	1.2	3400	6420	711	2590	419	107	229	26.9	107
134387	26	< 2	2023	438	31	696	71	< 0.5	0.3	53	< 0.5	< 0.5	311	3.0	2840	5280	631	2390	392	97.5	212	25.7	101
134388	13	< 2	1943	335	26	583	57	< 0.5	0.2	36	< 0.5	< 0.5	286	1.7	2730	5310	639	2460	391	95.3	205	24.0	97.3
134389	14	< 2	2221	564	33	534	26	< 0.5	0.2	41	< 0.5	< 0.5	311	5.2	2560	5990	746	2740	387	96.1	212	29.2	142
134390	15	< 2	1782	546	35	443	4	< 0.5	0.3	21	< 0.5	< 0.5	225	4.1	2720	5790	667	2300	342	89.8	204	28.9	136
134391	13	2	2105	430	41	1080	< 2	< 0.5	< 0.2	32	0.5	< 0.5	526	2.2	3970	7250	732	2300	326	85.6	188	24.3	106
134392	13	2	1968	389	37	1410	< 2	< 0.5	0.2	40	0.7	< 0.5	533	1.9	3530	6600	718	2450	363	92.4	194	22.5	96.7
134393	13	< 2	1982	367	46	887	< 2	< 0.5	0.2	33	< 0.5	< 0.5	365	2.4	3870	7020	747	2610	372	88.8	174	20.1	89.1
134394	13	< 2	2075	426	43	688	< 2	< 0.5	0.2	21	< 0.5	< 0.5	460	2.2	5330	8820	866	2800	382	95.9	200	23.9	104
134395	23	< 2	2173	413	34	574	< 2	< 0.5	< 0.2	21	< 0.5	< 0.5	410	3.4	3130	5860	644	2170	338	86.9	190	22.3	88.4
134396	33	4	2493	344	149	607	2	1.1	0.3	22	< 0.5	< 0.5	566	7.5	2530	5470	689	2570	383	90.0	189	21.3	83.3
134397	13	< 2	1834	438	26	855	< 2	< 0.5	0.2	35	< 0.5	< 0.5	357	1.8	3820	7270	764	2460	336	88.9	203	24.9	108
134398	12	< 2	1822	356	33	1070	< 2	< 0.5	0.3	38	< 0.5	< 0.5	426	2.7	3250	6290	692	2460	383	93.3	191	21.0	90.6
134399	< 5	< 2	18	4	< 4	42	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	17.8	36.0	4.05	14.2	2.0	0.52	1.2	0.2	0.6
134400	14	26	3086	920	222	375	52	1.5	< 0.2	45	< 0.5	< 0.5	13290	2.2	2640	4910	566	2280	471	132	323	45.5	217
134401	13	< 2	1737	509	35	448	4	< 0.5	0.2	21	< 0.5	< 0.5	328	3.4	2900	5720	674	2490	373	91.0	199	26.5	127
134402	12	< 2	2447	570	37	630	3	< 0.5	< 0.2	17	< 0.5	< 0.5	525	2.8	3670	7320	782	2650	356	87.4	187	25.7	129
134403	12	< 2	2708	401	66	439	< 2	< 0.5	< 0.2	17	24.9	< 0.5	659	1.8	3650	6820	711	2370	310	73.8	149	18.2	86.2
134404	12	< 2	2062	520	48	424	3	< 0.5	0.2	20	1.2	< 0.5	417	4.6	4100	7290	731	2380	333	82.7	182	25.1	119
134405	12	< 2	1561	386	36	343	< 2	< 0.5	0.3	22	0.6	< 0.5	427	5.0	3090	5840	650	2380	344	81.9	168	20.9	96.2
134406	12	3	1602	329	22	1040	7	< 0.5	0.3	94	< 0.5	< 0.5	463	12.6	1560	4370	644	2640	372	81.9	158	18.6	83.2
134407	14	< 2	1873	525	48	477	3	0.5	0.2	36	< 0.5	< 0.5	554	4.8	2870	6360	755	2700	338	76.1	149	20.1	105
134408	12	< 2	2437	516	49	556	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	618	1.7	3370	6580	705	2380	328	80.3	170	22.3	112
134409	12	< 2	1953	383	36	623	4	< 0.5	0.3	18	< 0.5	< 0.5	356	3.4	2860	5770	624	2260	359	82.1	151	17.0	78.2
134410	15	< 2	2451	375	40	493	4	< 0.5	< 0.2	14	< 0.5	< 0.5	425	1.1	4770	8760	910	3030	369	85.1	165	18.2	86.8
134411	13	< 2	2364	408	68	426	4	< 0.5	< 0.2	14	0.6	< 0.5	434	1.2	3500	6620	703	2380	308	72.4	146	17.8	86.3
134412	14	< 2	1911	353	31	575	3	< 0.5	< 0.2	21	< 0.5	< 0.5	500	1.2	3370	6480	701	2380	356	84.3	163	18.0	80.1
134413	13	< 2	1895	370	35	592	4	< 0.5	< 0.2	21	< 0.5	< 0.5	449	1.1	3540	6750	713	2470	357	86.4	170	19.2	86.9
134414	13	< 2	1699	398	36	467	9	< 0.5	< 0.2	21	< 0.5	< 0.5	267	3.1	2500	5770	723	2690	366	84.9	168	18.6	86.2
134415	13	< 2	2035	420	36	435	13	< 0.5	0.3	26	< 0.5	< 0.5	215	4.1	2630	5750	692	2660	391	92.2	183	21.0	94.2
134416	16	< 2	2795	662	99	399	< 2	0.6	< 0.2	13	< 0.5	< 0.5	160	1.0	2840	6680	838	3240	496	125	275	34.3	158
134417	15	< 2	2653	576	71	461	2	< 0.5	< 0.2	17	< 0.5	< 0.5	252	1.4	2500	5760	711	2790	416	105	227	29.6	136
134418	15	< 2	2633	798	47	329	2	< 0.5	< 0.2	14	< 0.5	< 0.5	174	3.3	2670	6350	815	3120	472	121	267	36.2	179
134419	23	< 2	2166	766	53	190	9	0.6	< 0.2	11	< 0.5	< 0.5	249	1.3	4370	8220	897	3180	485	123	267	33.6	149
134420	21	< 2	2053	541	34	209	12	< 0.5	< 0.2	12	< 0.5	< 0.5	221	1.9	4430	8250	880	3000	411	101	215	26.5	117
134421	19	< 2	2323	534	49	302	7	< 0.5	< 0.2	15	< 0.5	< 0.5	234	0.5	3020	6170	697	2530	387	96.0	200	24.2	108
134422	21	< 2	2300	593	50	838	8	< 0.5	< 0.2	25	< 0.5	< 0.5	271	0.5	4330	8010	839	2850	396	97.8	207	25.2	113
134423	21	< 2	2645	665	40	569	5	< 0.5	< 0.2	21	< 0.5	< 0.5	275	1.0	3310	6570	737	2680	430	113	251	32.7	145
134424	< 5	< 2	21	6	5	40	2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	31.6	60.2	6.43	22.1	3.3	0.86	1.9	0.2	1.1
134425	131	30	20370	1003	229	33	30	2.3	< 0.2	< 1	6.4	1.8	915	5.6	18600	29300	2630	8130	865	200	367	36.3	155

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134426	19	< 2	1749	387	33	560	22	< 0.5	0.2	38	0.6	< 0.5	200	2.7	4050	7080	743	2510	366	91.4	193	22.8	91.7
134427	21	< 2	2228	601	43	597	8	< 0.5	< 0.2	17	< 0.5	< 0.5	287	1.3	4560	8030	821	2760	379	95.0	212	27.8	126
134428	19	< 2	2496	453	39	669	8	< 0.5	< 0.2	18	< 0.5	< 0.5	340	0.9	5010	8620	817	2500	312	75.3	165	20.7	94.1
134429	18	< 2	2449	368	34	408	12	< 0.5	< 0.2	16	< 0.5	< 0.5	459	1.3	3940	7130	741	2500	335	77.2	158	17.8	78.5
134430	22	< 2	2391	530	60	398	164	< 0.5	< 0.2	14	< 0.5	< 0.5	346	< 0.4	5550	9230	882	2790	351	83.5	176	21.8	102
134431	19	< 2	2247	481	26	219	3	< 0.5	< 0.2	20	< 0.5	< 0.5	299	0.8	4310	7740	793	2660	362	87.9	186	22.8	102
134432	19	< 2	2527	494	32	339	2	< 0.5	< 0.2	21	< 0.5	< 0.5	308	1.0	4810	8290	837	2780	363	85.4	178	21.4	96.6
134433	20	< 2	2370	521	31	458	10	< 0.5	< 0.2	25	< 0.5	< 0.5	295	1.2	4600	8070	809	2610	349	86.3	190	23.6	103
134434	18	< 2	2360	453	40	405	11	< 0.5	< 0.2	15	< 0.5	< 0.5	296	0.5	3970	7040	708	2330	299	70.9	154	19.1	87.3
134435	23	< 2	2537	524	53	787	13	< 0.5	< 0.2	29	< 0.5	< 0.5	262	0.6	6340	10700	1020	3200	408	98.1	208	25.2	110
134436	20	< 2	2081	384	32	438	22	< 0.5	< 0.2	18	< 0.5	< 0.5	166	1.9	3940	6970	736	2510	327	78.0	166	20.0	85.0
134437	19	< 2	2374	478	37	394	7	< 0.5	0.2	39	< 0.5	< 0.5	267	1.2	4150	7340	752	2520	352	84.6	179	21.7	95.6
134438	19	< 2	2317	482	35	346	9	< 0.5	< 0.2	30	< 0.5	< 0.5	245	1.0	4520	7820	785	2600	355	84.7	181	21.5	97.3
134439	20	< 2	2273	491	36	679	16	< 0.5	< 0.2	35	< 0.5	< 0.5	244	1.1	4880	8320	825	2700	359	85.1	181	22.3	99.8
134440	22	< 2	2382	444	33	356	15	< 0.5	< 0.2	18	< 0.5	< 0.5	318	0.9	5740	9630	950	3080	395	92.1	187	20.1	86.9
134441	21	< 2	2293	525	28	302	13	< 0.5	< 0.2	26	< 0.5	< 0.5	263	1.3	4380	7950	831	2820	397	97.0	204	22.9	100
134442	19	< 2	2443	430	31	516	7	< 0.5	< 0.2	25	< 0.5	< 0.5	302	0.9	3880	6950	723	2460	346	85.9	185	22.0	95.2
134443	23	< 2	2651	413	30	497	20	< 0.5	< 0.2	19	< 0.5	< 0.5	1705	2.1	4400	8260	882	3060	416	97.5	204	23.1	95.2
134444	23	< 2	2531	399	22	386	14	< 0.5	< 0.2	20	< 0.5	< 0.5	473	1.3	3960	7560	822	2900	412	94.4	191	20.7	82.6
134445	24	< 2	2537	475	21	350	3	< 0.5	0.2	21	< 0.5	< 0.5	2774	2.6	4010	8230	888	2970	398	96.5	211	24.5	103
134446	20	< 2	2653	545	29	310	3	< 0.5	0.2	15	0.7	< 0.5	1510	3.6	3830	7610	817	2680	326	82.5	189	25.8	124
134447	27	< 2	2760	343	75	495	8	0.6	< 0.2	18	< 0.5	< 0.5	362	2.5	4590	8700	932	3240	446	100	197	19.0	76.4
134448	27	< 2	2396	359	79	649	15	< 0.5	< 0.2	19	< 0.5	< 0.5	423	1.6	5810	10100	1020	3370	439	102	207	21.0	80.5
134449	< 5	< 2	13	< 2	5	40	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	10	< 0.4	18.8	35.6	3.69	12.9	1.7	0.44	0.9	0.1	0.5
134450	20	21	3084	961	226	324	47	1.8	< 0.2	46	< 0.5	0.6	13300	2.4	2500	4630	529	2130	455	127	307	43.0	197
134451	23	< 2	2440	366	47	293	7	< 0.5	< 0.2	14	< 0.5	< 0.5	301	1.1	4120	7820	836	2850	371	85.1	177	19.2	79.0
134452	22	< 2	2636	408	46	398	7	< 0.5	< 0.2	13	< 0.5	< 0.5	544	0.5	5200	8970	888	2900	359	82.7	176	19.9	86.8
134453	25	< 2	2524	461	28	208	6	< 0.5	< 0.2	13	< 0.5	< 0.5	1212	1.3	5570	10200	1010	3190	372	87.9	197	25.3	113
134454	25	< 2	2833	386	42	231	10	< 0.5	< 0.2	11	< 0.5	< 0.5	424	0.5	5380	9550	955	3100	378	87.2	189	20.3	83.0
134455	25	< 2	2669	347	27	389	8	< 0.5	< 0.2	18	< 0.5	< 0.5	328	0.5	5150	8930	889	2910	375	89.6	193	21.2	81.7
134456	25	< 2	2821	334	36	182	12	< 0.5	< 0.2	12	< 0.5	< 0.5	616	0.4	6390	10500	984	3070	366	86.8	193	21.0	77.8
134457	25	< 2	2460	387	33	352	7	< 0.5	< 0.2	14	< 0.5	< 0.5	300	0.8	5560	9460	934	3030	378	90.7	199	21.9	85.9
134458	25	< 2	2571	320	28	461	4	< 0.5	< 0.2	19	< 0.5	< 0.5	376	0.6	5060	9080	919	3030	396	95.1	205	21.9	81.8
134459	26	< 2	2579	380	37	481	3	< 0.5	< 0.2	23	< 0.5	< 0.5	362	0.5	4460	8300	860	2900	377	90.8	200	23.1	91.2
134460	23	< 2	2612	445	19	200	5	< 0.5	< 0.2	19	< 0.5	< 0.5	232	< 0.4	5570	9320	910	2940	387	95.9	218	25.1	99.9
134461	24	< 2	2397	363	36	342	5	< 0.5	< 0.2	17	< 0.5	< 0.5	294	< 0.4	4770	8050	799	2650	417	109	238	25.0	91.0
134462	29	< 2	2532	373	27	185	6	< 0.5	< 0.2	16	< 0.5	< 0.5	209	< 0.4	5840	9560	972	3140	456	114	219	24.6	91.3
134463	29	< 2	2567	388	28	199	7	< 0.5	< 0.2	14	< 0.5	< 0.5	185	0.6	6330	10200	1020	3230	466	117	227	25.2	92.5
134464	27	< 2	2375	364	40	352	5	< 0.5	< 0.2	13	< 0.5	< 0.5	325	0.5	4820	8620	929	3070	425	105	204	23.1	87.1
134465	29	< 2	2239	519	31	433	5	< 0.5	< 0.2	16	< 0.5	< 0.5	261	0.5	5160	9010	957	3210	467	118	238	29.6	119
134466	27	< 2	2565	464	41	448	18	< 0.5	< 0.2	17	0.5	< 0.5	239	1.1	5900	9760	947	3270	403	99.5	216	27.8	118
134467	29	24	1980	472	28	579	10	< 0.5	< 0.2	30	< 0.5	0.9	2028	0.6	4410	7930	876	3000	429	111	227	29.0	117
134468	29	< 2	2583	525	51	410	44	0.6	< 0.2	14	1.5	< 0.5	262	1.2	6120	10300	990	3410	445	115	258	33.9	141
134469	33	2	2338	676	37	589	6	0.5	< 0.2	24	< 0.5	< 0.5	355	1.0	5320	9200	984	3350	492	128	268	37.5	160
134470	29	< 2	2374	541	35	636	8	< 0.5	< 0.2	13	< 0.5	< 0.5	233	0.7	5140	8700	913	3050	433	108	225	29.9	124
134471	27	< 2	2704	633	47	202	30	0.6	< 0.2	16	0.6	< 0.5	262	1.0	5540	9380	912	3180	472	128	290	38.0	161
134472	34	< 2	1952	527	35	299	7	< 0.5	< 0.2	18	< 0.5	< 0.5	213	0.8	4940	8500	929	3320	546	135	267	32.4	127
134473	29	2	2567	1304	64	449	7	0.6	< 0.2	23	< 0.5	< 0.5	245	0.5	4470	7910	866	3030	502	142	310	48.7	247
134474	< 5	< 2	10	2	5	23	21	< 0.5	< 0.2	< 1	0.8	< 0.5	5	< 0.4	20.3	35.0	3.40	11.7	1.6	0.42	0.9	0.1	0.5
134475	180	35	20170	1005	228	28	34	2.8	< 0.2	< 1	7.1	1.7	915	8.5	18700	28900	2600	8290	882	201	356	36.8	144

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134476	27	< 2	2158	611	81	256	42	0.9	< 0.2	17	0.9	< 0.5	233	1.3	4530	8010	861	3060	472	121	260	33.3	148
134477	35	3	1957	513	104	450	13	1.1	< 0.2	17	< 0.5	< 0.5	224	0.8	5180	8600	892	2980	451	111	215	26.1	110
134478	31	2	2411	465	77	239	7	0.7	< 0.2	11	< 0.5	< 0.5	265	0.4	6000	9660	946	2920	385	92.9	182	21.9	90.3
134479	28	< 2	2192	536	41	454	10	< 0.5	< 0.2	14	< 0.5	< 0.5	161	0.5	4710	7820	817	2780	416	99.7	195	24.6	106
134480	32	< 2	2662	523	53	346	10	0.5	< 0.2	16	< 0.5	< 0.5	165	< 0.4	5100	8720	936	3240	443	103	196	23.5	98.7
134481	28	2	2454	564	43	419	13	< 0.5	< 0.2	15	< 0.5	< 0.5	267	< 0.4	4790	8030	849	2870	405	97.3	189	23.6	105
134482	29	2	2320	403	40	288	9	< 0.5	< 0.2	9	< 0.5	< 0.5	255	< 0.4	5550	9540	1000	3310	430	97.8	184	20.4	79.3
134483	29	3	2115	529	42	477	14	< 0.5	< 0.2	22	< 0.5	< 0.5	278	< 0.4	4570	8030	871	2990	418	103	206	25.7	109
134484	27	3	2974	1042	104	409	5	1.0	< 0.2	23	0.5	< 0.5	295	0.7	3030	5590	638	2320	432	128	288	42.3	209
134485	23	< 2	2181	343	55	413	19	0.7	< 0.2	17	1.1	< 0.5	197	0.9	4610	8040	837	2870	379	89.6	185	21.4	86.1
134486	29	3	2345	351	96	401	18	0.8	< 0.2	12	< 0.5	< 0.5	274	0.4	7060	11200	1080	3360	404	90.3	176	19.0	70.2
134487	27	< 2	2703	373	67	371	14	0.7	< 0.2	5	< 0.5	< 0.5	210	< 0.4	6520	10400	1020	3180	375	81.3	155	16.6	61.9
134488	26	4	2175	354	85	350	9	0.7	< 0.2	10	< 0.5	< 0.5	355	0.4	5570	9250	945	3060	386	89.8	175	19.4	74.7
134489	34	4	1995	626	76	179	10	0.7	< 0.2	9	< 0.5	< 0.5	303	0.9	6630	11000	1130	3710	483	116	231	28.4	119
134490	32	3	2314	794	51	190	14	0.5	< 0.2	5	< 0.5	< 0.5	253	0.5	4630	8690	997	3580	522	127	260	34.1	154
134491	25	< 2	2228	739	68	372	18	1.0	< 0.2	12	2.0	< 0.5	186	1.3	4140	7390	800	2860	449	124	282	39.9	182
134492	25	< 2	2003	410	71	312	12	0.7	< 0.2	7	< 0.5	< 0.5	191	0.7	4720	8020	846	2860	386	94.6	187	22.4	88.5
134493	26	< 2	2161	626	52	192	25	0.6	< 0.2	7	< 0.5	< 0.5	133	1.8	4090	7780	869	3160	452	116	253	33.5	150
134494	27	< 2	1793	517	29	427	2	< 0.5	0.2	13	< 0.5	< 0.5	160	1.8	3810	7340	852	3080	482	121	247	30.4	117
134495	21	< 2	1568	504	11	390	5	< 0.5	0.3	14	< 0.5	< 0.5	128	1.8	3240	6210	683	2330	388	102	210	26.5	106
134496	23	< 2	1672	418	13	483	12	< 0.5	0.2	18	< 0.5	< 0.5	130	3.0	2970	6290	754	2720	390	88.4	174	19.7	77.8
134497	23	< 2	1339	373	15	213	4	0.6	0.3	11	< 0.5	< 0.5	81	3.5	1820	4190	592	2500	415	91.7	170	17.1	64.2
134498	23	< 2	1923	359	34	356	17	< 0.5	< 0.2	12	< 0.5	< 0.5	141	2.7	3940	7440	814	2850	375	89.1	188	22.4	91.7
134499	< 5	< 2	16	3	< 4	34	9	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	20.8	39.0	4.07	14.1	1.9	0.50	1.1	0.1	0.6
134500	23	27	3065	958	230	349	52	1.9	< 0.2	42	< 0.5	0.5	13670	2.4	2570	4680	552	2190	470	129	283	39.9	186
134526	26	< 2	2229	372	55	335	24	0.6	< 0.2	9	0.8	< 0.5	141	3.3	4960	9200	955	3380	399	86.4	170	18.5	77.0
134527	27	< 2	2220	332	91	514	22	0.8	< 0.2	11	< 0.5	< 0.5	158	2.4	4930	8780	949	3130	356	72.8	139	14.9	57.2
134528	27	< 2	2169	552	44	255	9	< 0.5	< 0.2	9	< 0.5	< 0.5	273	0.5	3840	7170	815	2890	416	103	205	24.8	107
134529	52	4	2178	571	49	393	26	1.0	< 0.2	11	< 0.5	< 0.5	290	0.4	4380	7690	846	3010	475	122	249	32.7	139
134530	37	2	2143	345	50	391	11	0.6	< 0.2	9	< 0.5	< 0.5	243	< 0.4	7060	11300	1090	3520	442	99.4	198	20.5	79.7
134531	31	2	1911	334	39	460	9	< 0.5	< 0.2	13	< 0.5	< 0.5	223	0.6	5340	9450	971	3210	382	82.8	166	17.8	72.3
134532	32	< 2	1918	356	42	447	6	< 0.5	< 0.2	13	< 0.5	< 0.5	213	0.4	5650	9900	1010	3330	399	85.7	173	18.7	76.4
134533	28	4	1871	360	35	489	7	< 0.5	< 0.2	10	< 0.5	< 0.5	289	0.8	3480	6990	796	2890	380	84.7	170	19.0	78.4
134534	46	3	2020	412	61	280	10	0.6	< 0.2	14	< 0.5	< 0.5	307	0.5	6340	10200	1010	3340	421	93.8	188	20.8	87.5

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134377	18.9	32.5	3.31	17.3	2.12	2.4	< 0.1	6	< 0.1	241	717	0.2	3.556
134378	17.3	30.6	3.24	17.8	2.25	2.1	< 0.1	4	< 0.1	274	776	0.2	4.048
134379	18.6	34.6	3.40	17.7	2.33	1.3	< 0.1	4	0.2	183	819	< 0.1	3.777
134380	16.3	30.4	2.96	16.1	1.88	1.2	< 0.1	9	0.3	260	854	0.1	4.428
134381	14.4	26.6	2.68	13.8	1.67	0.9	0.6	5	0.2	329	750	0.5	2.610
134382	12.3	23.9	2.47	12.7	1.62	1.0	< 0.1	4	0.2	138	565	< 0.1	2.702
134383	14.0	28.3	3.10	16.3	2.09	1.0	< 0.1	5	0.2	177	553	0.1	3.698
134384	15.6	31.9	3.37	17.3	2.17	1.4	2.0	5	0.2	351	714	1.2	4.992
134385	13.5	28.8	3.03	16.4	2.09	1.5	< 0.1	4	< 0.1	145	483	< 0.1	1.520
134386	14.2	27.5	2.93	14.8	1.84	1.2	< 0.1	2	0.2	378	783	0.1	3.375
134387	13.7	26.0	2.81	15.6	1.89	1.9	< 0.1	6	< 0.1	352	742	0.3	1.693
134388	12.9	24.8	2.60	13.3	1.74	0.9	< 0.1	6	0.2	313	752	0.2	1.737
134389	21.7	47.3	5.05	23.7	2.78	1.3	< 0.1	5	0.2	491	922	< 0.1	3.202
134390	20.7	42.7	4.31	20.0	2.33	1.2	< 0.1	4	0.2	490	812	< 0.1	3.749
134391	15.5	32.6	3.64	18.2	2.22	1.2	< 0.1	8	0.2	255	716	< 0.1	4.091
134392	13.9	31.1	3.37	17.7	2.10	1.3	0.3	13	0.3	315	596	0.5	3.545
134393	13.2	28.6	3.23	17.0	2.03	1.3	< 0.1	7	0.2	439	596	0.2	3.808
134394	15.6	34.1	3.93	20.5	2.48	1.3	< 0.1	6	0.2	408	636	0.1	1.723
134395	12.6	26.9	3.14	17.8	2.35	1.8	< 0.1	5	< 0.1	327	722	0.2	3.548
134396	11.6	24.8	2.80	16.0	2.19	2.9	0.6	6	< 0.1	487	808	0.9	0.810
134397	15.8	33.7	3.82	18.0	2.18	1.0	< 0.1	7	< 0.1	254	628	0.1	3.236
134398	12.6	26.1	2.89	15.1	1.82	0.9	1.1	7	0.1	428	877	1.1	3.392
134399	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	5.0	< 0.1	0.413
134400	35.8	80.9	9.34	49.3	6.33	4.8	3.1	26	0.3	550	891	2.8	0.034
134401	19.3	40.8	4.34	19.8	2.37	1.3	< 0.1	3	0.2	456	695	< 0.1	3.446
134402	20.3	44.6	4.76	23.2	2.65	1.2	< 0.1	6	< 0.1	259	706	< 0.1	3.664
134403	13.3	30.9	3.55	18.2	2.25	1.3	< 0.1	3	< 0.1	241	639	0.1	4.061
134404	18.1	40.0	4.16	20.1	2.27	1.5	< 0.1	3	< 0.1	422	762	< 0.1	3.643
134405	14.0	29.7	3.36	16.6	1.96	1.1	< 0.1	3	< 0.1	547	674	< 0.1	2.729
134406	11.8	25.2	2.72	12.9	1.45	1.2	< 0.1	10	0.3	1090	892	0.2	3.605
134407	17.5	43.1	4.99	25.0	2.78	1.4	0.2	4	0.1	521	586	0.3	4.175
134408	18.4	43.3	4.90	24.0	2.68	1.3	< 0.1	5	< 0.1	259	544	0.2	4.210
134409	12.2	29.3	3.48	17.3	2.03	1.0	< 0.1	7	< 0.1	370	672	< 0.1	2.419
134410	13.4	32.6	3.87	20.3	2.45	1.1	0.5	3	< 0.1	159	447	0.4	4.124
134411	13.9	34.6	4.12	21.2	2.53	1.4	0.5	3	< 0.1	140	391	0.5	3.867
134412	12.2	28.0	3.27	16.2	1.86	1.0	0.3	4	< 0.1	157	493	0.3	1.614
134413	13.4	30.6	3.58	17.2	2.00	1.1	0.3	5	< 0.1	142	502	0.3	1.660
134414	13.8	33.4	3.81	19.1	2.28	1.2	0.2	5	< 0.1	302	508	0.3	2.686
134415	14.7	35.5	3.91	20.8	2.57	1.1	0.6	3	< 0.1	385	629	0.4	3.669
134416	24.3	56.6	6.68	34.7	4.39	2.1	1.6	4	< 0.1	58	642	2.4	2.814
134417	21.3	49.3	5.69	29.4	3.61	1.7	0.9	5	< 0.1	63	549	2.1	3.150
134418	29.6	70.7	8.37	42.8	5.24	1.6	< 0.1	3	< 0.1	142	552	0.3	3.567
134419	23.4	55.4	6.29	32.4	3.72	2.4	< 0.1	1	< 0.1	157	488	0.3	4.964
134420	17.8	40.9	4.45	22.6	2.60	1.7	< 0.1	1	< 0.1	171	397	0.2	2.569
134421	16.8	40.0	4.72	26.7	3.23	1.8	< 0.1	4	< 0.1	105	388	0.2	2.828
134422	17.7	43.9	5.34	30.5	3.85	1.9	0.9	5	< 0.1	105	387	0.7	3.960
134423	21.5	47.5	5.15	27.6	3.31	2.1	< 0.1	4	< 0.1	144	495	0.4	3.130
134424	0.2	0.5	0.06	0.3	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	4.7	< 0.1	0.400

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134425	24.7	60.6	7.75	45.4	6.08	3.6	< 0.1	3	2.3	861	158	198	0.014
134426	13.6	30.1	3.32	18.4	2.19	1.5	0.6	5	< 0.1	264	597	0.4	4.499
134427	19.2	42.5	4.85	25.3	2.99	1.9	< 0.1	4	0.1	120	419	0.2	3.282
134428	14.2	31.1	3.59	19.6	2.39	1.6	0.2	5	< 0.1	170	412	0.2	3.902
134429	11.7	27.5	3.14	17.2	2.10	1.4	0.2	2	0.1	185	478	0.3	4.050
134430	16.2	38.8	4.82	26.6	3.32	1.8	< 0.1	2	0.3	160	403	0.2	4.033
134431	15.7	34.7	3.88	20.9	2.44	1.5	< 0.1	1	< 0.1	95	526	< 0.1	3.981
134432	14.8	36.4	4.18	22.4	2.85	1.6	< 0.1	4	< 0.1	133	466	< 0.1	3.682
134433	15.2	33.1	3.66	19.5	2.32	1.7	0.1	3	0.1	177	677	0.2	3.928
134434	13.4	30.8	3.62	19.7	2.42	1.5	1.1	3	0.1	108	408	0.8	4.099
134435	16.3	37.4	4.18	22.4	2.80	1.9	0.1	7	< 0.1	120	622	0.2	4.684
134436	12.9	29.5	3.44	18.5	2.33	1.6	0.1	4	< 0.1	181	538	0.2	4.569
134437	14.9	35.5	3.88	20.3	2.45	1.8	< 0.1	3	0.1	245	614	< 0.1	1.996
134438	14.9	34.2	3.83	20.4	2.44	1.6	< 0.1	3	< 0.1	178	542	< 0.1	1.855
134439	15.7	36.4	4.09	21.2	2.54	1.6	0.2	4	0.1	142	507	0.3	3.204
134440	13.3	29.7	3.55	18.8	2.23	1.5	0.1	2	0.1	141	419	0.2	3.435
134441	15.5	32.8	3.78	19.9	2.35	1.6	< 0.1	2	< 0.1	134	595	0.1	4.025
134442	14.4	31.2	3.39	18.1	2.18	1.5	1.1	3	< 0.1	110	418	1.1	4.265
134443	13.3	28.2	3.06	16.4	1.92	1.5	< 0.1	7	0.1	176	411	0.3	4.395
134444	12.3	27.1	3.17	16.9	1.97	1.2	< 0.1	4	< 0.1	250	507	0.1	3.768
134445	15.5	34.1	3.50	17.6	2.05	1.5	< 0.1	3	< 0.1	280	688	< 0.1	4.204
134446	20.7	45.6	5.05	25.2	3.07	1.8	< 0.1	3	< 0.1	184	646	< 0.1	2.559
134447	10.6	23.3	2.81	15.8	1.97	1.7	< 0.1	2	< 0.1	274	391	0.1	4.194
134448	11.1	25.1	2.78	15.8	2.00	1.6	0.5	4	< 0.1	182	339	0.4	4.068
134449	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	2.9	< 0.1	0.402
134450	31.9	73.5	9.21	47.9	5.81	5.5	2.3	26	0.4	590	891	2.7	0.022
134451	11.0	23.7	2.69	15.9	2.02	1.5	0.1	2	< 0.1	103	308	0.2	3.224
134452	12.4	26.8	2.97	16.7	2.14	1.6	0.6	2	< 0.1	77	231	0.3	4.062
134453	15.7	30.6	3.10	14.9	1.84	1.5	< 0.1	4	< 0.1	209	374	0.1	4.269
134454	12.0	26.2	2.87	15.6	1.91	1.4	0.3	2	< 0.1	114	229	0.2	4.239
134455	10.9	22.8	2.26	12.9	1.60	1.3	0.8	2	0.2	146	252	0.4	4.270
134456	10.3	21.9	2.39	13.3	1.67	1.4	< 0.1	1	< 0.1	87	227	0.1	4.109
134457	11.9	24.6	2.70	15.6	1.97	1.4	0.3	1	0.1	142	261	0.2	3.893
134458	10.8	21.5	2.30	13.6	1.76	1.3	1.1	2	0.2	173	313	0.6	4.192
134459	12.5	25.3	2.77	15.3	2.04	1.7	1.2	3	0.2	174	338	0.8	4.127
134460	14.0	29.5	3.31	17.6	2.23	1.5	< 0.1	< 1	< 0.1	133	294	0.1	4.239
134461	11.7	23.9	2.53	13.5	1.66	1.6	0.5	2	< 0.1	148	350	0.4	3.430
134462	12.3	27.2	2.69	14.8	1.81	1.6	< 0.1	2	< 0.1	159	308	0.2	1.745
134463	12.4	25.2	2.81	14.6	1.82	1.6	0.2	2	< 0.1	206	329	0.3	1.784
134464	11.7	26.1	3.00	15.9	2.00	1.6	0.2	3	< 0.1	147	253	0.3	3.368
134465	17.0	34.9	3.85	20.5	2.54	2.0	0.3	3	< 0.1	146	287	0.4	3.447
134466	17.5	37.0	4.15	21.8	2.74	2.1	0.5	3	< 0.1	138	347	0.5	2.377
134467	16.1	32.6	3.54	18.9	2.45	1.9	5.2	4	0.7	49	373	2.7	3.898
134468	20.4	39.9	4.36	24.4	3.13	2.4	0.5	3	< 0.1	72	397	0.6	3.987
134469	22.9	52.9	4.86	25.8	3.42	2.6	1.0	4	0.2	123	327	0.9	3.718
134470	18.1	36.8	3.85	20.6	2.55	2.2	0.1	3	< 0.1	134	359	0.3	3.599
134471	23.6	51.2	5.20	27.8	3.45	2.5	< 0.1	2	< 0.1	102	506	0.2	3.970
134472	17.6	34.8	3.67	20.9	2.54	2.2	< 0.1	3	0.1	172	656	0.8	4.453
134473	41.3	91.1	9.32	46.5	5.75	4.0	< 0.1	4	0.1	150	586	0.7	3.250
134474	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	9	1.9	< 0.1	0.402

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134475	23.4	59.6	7.60	44.4	6.12	4.0	< 0.1	5	2.5	1050	157	205	0.017
134476	22.9	48.1	5.36	30.0	3.81	2.7	1.9	3	< 0.1	172	592	1.6	3.742
134477	16.2	33.6	3.78	21.7	2.69	2.6	0.6	4	0.2	428	490	0.7	4.056
134478	13.4	28.9	3.26	18.1	2.36	2.1	0.2	1	0.2	148	405	0.2	4.609
134479	15.9	34.9	3.83	21.2	2.66	1.8	2.6	3	0.1	155	435	1.6	3.797
134480	14.9	32.5	3.70	19.8	2.56	1.9	1.7	2	< 0.1	119	412	1.0	2.231
134481	16.8	40.1	4.69	26.5	3.33	2.0	1.5	3	< 0.1	51	391	1.3	3.782
134482	11.3	24.7	2.92	16.0	2.10	1.6	1.1	4	0.2	68	261	0.9	3.672
134483	16.0	36.4	4.03	22.1	2.81	1.9	0.3	5	0.3	89	309	3.1	4.139
134484	31.5	69.2	7.73	40.4	5.10	3.5	1.1	6	0.4	85	455	3.7	2.503
134485	12.5	26.7	3.02	16.8	2.19	1.8	0.8	3	< 0.1	116	329	0.6	4.088
134486	10.2	22.8	2.60	15.1	1.97	1.9	1.5	3	0.3	157	362	1.1	3.802
134487	9.3	20.2	2.54	14.8	1.98	1.6	0.3	2	0.1	76	215	0.1	2.380
134488	10.6	22.1	2.55	15.0	1.95	1.8	0.2	2	0.3	85	287	1.1	3.963
134489	18.4	40.5	4.74	26.1	3.39	2.5	0.1	2	0.3	216	451	2.1	3.660
134490	24.2	53.1	5.77	30.4	3.93	2.6	< 0.1	2	0.2	138	493	1.5	3.856
134491	28.3	60.0	6.41	33.7	4.12	3.0	0.2	3	< 0.1	91	586	0.8	3.568
134492	12.3	25.4	2.84	15.8	2.09	2.2	0.2	2	0.1	137	337	1.4	3.770
134493	23.2	50.5	5.31	28.5	3.47	2.4	< 0.1	2	< 0.1	213	571	0.3	3.067
134494	15.6	29.3	3.20	18.2	2.26	2.0	0.6	4	0.2	576	587	0.6	3.897
134495	15.1	31.2	3.03	16.3	1.98	1.7	0.4	4	0.1	254	625	0.3	4.619
134496	11.6	25.8	2.83	15.8	1.94	1.9	0.6	6	0.2	454	570	0.5	3.100
134497	10.0	25.1	2.90	16.7	2.15	1.1	0.1	2	0.4	1090	564	0.2	3.385
134498	13.2	30.0	3.02	16.5	2.03	1.6	0.8	2	< 0.1	106	563	0.9	3.301
134499	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	36	< 0.1	< 5	3.1	< 0.1	0.403
134500	30.4	73.0	8.73	47.5	5.89	5.9	2.3	27	0.4	564	898	2.8	0.022
134526	12.3	28.9	3.62	20.5	2.64	1.5	0.4	2	< 0.1	7	407	0.3	2.422
134527	8.7	22.2	2.68	15.4	1.98	1.8	0.5	4	< 0.1	171	314	0.3	2.599
134528	17.1	38.8	4.30	21.9	2.70	2.0	< 0.1	3	0.2	126	373	1.2	3.150
134529	20.7	43.3	4.44	21.6	2.64	2.5	1.7	3	0.4	90	414	2.7	3.853
134530	11.2	23.6	2.55	13.6	1.73	2.2	1.1	2	0.2	36	327	1.0	4.128
134531	11.0	25.3	2.90	15.0	1.82	1.7	< 0.1	3	0.2	90	323	0.7	1.639
134532	11.8	26.5	3.02	16.1	2.04	1.8	< 0.1	3	0.1	81	332	0.5	1.636
134533	12.1	27.2	3.18	17.1	2.08	1.6	< 0.1	2	0.2	110	236	0.2	2.160
134534	13.6	31.2	3.53	19.0	2.40	2.2	< 0.1	3	0.3	176	311	0.7	2.735

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.11	11.05	1.89	0.75	0.012	0.35	44.24	0.84	0.55	0.117	30.11					1675							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.20																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.16																						
NIST 694 Cert	3.2																						
DNC-1 Meas		46.46	18.80	9.80	0.149	10.03	11.19	1.89	0.22	0.493	0.07			31		156	260	57	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		71.62	12.96	3.24	0.140	0.16	0.57	2.40	5.33	0.280	0.05			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		31	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
W-2a Meas		52.90	15.44	10.59	0.166	6.41	10.74	2.27	0.64	1.085	0.13			36	< 1	277		41	70		80	16	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0		80.0	17.0	1.00
SY-4 Meas		49.94	20.43	6.15	0.106	0.50	7.92	6.95	1.68	0.284	0.14			1	3	6							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.62	15.50	10.87	0.170	9.41	13.10	1.82	0.02	0.945	0.03			43	< 1	338	380	53	160	130		15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1050	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		71.13	14.64	0.57	0.035	0.08	0.61	4.45	3.76	0.012	< 0.01				1307								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		26	70	2610	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				940	100	16	11
NCS DC70009 (GBW07241) Cert																				960	100	16.5	11.2
OREAS 100a (Fusion) Meas																		18		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		420			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20	< 10	30	17	
JR-1 Cert																			1.67	2.68	30.6	16.1	
NCS DC86318 Meas		65.24	13.89	2.28	0.055	0.08		0.60	5.49	0.173	0.03												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							
SARM 3 Cert																							
USZ 44-2007 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134391 Orig	6.24	3.67	0.20	13.34	1.587	11.63	27.13	0.04	0.14	0.567	0.75	38.83	97.90	47	27	99	< 20	7	< 20	< 10	1230	30	6
134391 Dup	6.19	3.66	0.20	13.23	1.576	11.58	27.00	0.04	0.14	0.554	0.74	38.83	97.56	47	26	99	< 20	7	< 20	< 10	1200	29	6
134408 Orig	4.56	1.92	0.08	13.79	1.922	12.35	26.75	0.05	0.05	0.268	1.03	35.40	93.60	47	54	69	< 20	6	< 20	< 10	1290	28	6
134408 Dup	4.55	1.93	0.09	13.88	1.939	12.47	26.97	0.05	0.06	0.275	1.03	35.40	94.09	47	55	71	< 20	6	< 20	< 10	1300	28	5
134418 Orig	1.32																						
134418 Dup	1.43	0.65	0.14	11.22	1.588	11.68	29.79	0.07	0.03	0.113	5.46	36.03	96.77	53	10	67	< 20	4	< 20	< 10	420	28	8
134433 Orig	7.34	0.67	0.15	10.38	1.430	12.09	31.05	0.04	0.07	0.092	0.65	35.29	91.92	50	16	63	< 20	5	< 20	< 10	840	55	8
134433 Dup	7.31	0.68	0.15	10.33	1.424	11.94	30.98	0.04	0.07	0.091	0.65	35.29	91.64	50	16	64	< 20	5	< 20	< 10	830	56	8
134436 Orig	5.77	0.83	0.14	11.97	1.641	12.67	28.04	0.01	0.02	0.091	0.73	36.42	92.56	42	18	53	< 20	7	< 20	< 10	920	54	11
134436 Split	5.77	0.91	0.15	11.93	1.674	12.61	28.18	0.03	0.02	0.089	0.74	36.12	92.45	42	19	56	< 20	7	< 20	< 10	910	52	11
134461 Orig	3.40	1.17	0.09	9.12	1.291	13.92	28.91	0.02	0.07	0.078	1.00	38.45	94.12	55	7	68	< 20	5	< 20	< 10	770	62	10
134461 Dup	3.17	1.18	0.09	9.23	1.312	13.92	29.21	0.02	0.07	0.079	1.06	38.45	94.63	55	7	67	< 20	5	< 20	< 10	800	62	9
134476 Orig		2.44	0.22	11.19	1.420	12.80	26.54	0.03	0.03	0.079	2.62	36.93	94.30	64	6	86	< 20	7	< 20	< 10	990	63	13
134476 Split	0.94	2.34	0.18	11.25	1.474	12.92	26.56	0.01	0.02	0.076	2.56	37.14	94.53	64	6	86	< 20	6	< 20	< 10	940	63	14
134534 Orig	1.38	0.99	0.22	8.52	1.355	14.52	26.94	0.02	0.17	0.053	1.17	38.88	92.84	56	6	58	< 20	9	< 20	< 10	920	107	21
134534 Split	1.39	0.95	0.21	8.30	1.314	14.14	26.10	0.02	0.16	0.053	1.11	38.83	91.19	54	6	57	< 20	8	< 20	< 10	890	103	20
134534 Orig	1.42	0.97	0.21	8.61	1.368	14.49	27.20	0.02	0.16	0.053	1.23	38.88	93.20	56	6	59	< 20	8	< 20	< 10	900	106	20
134534 Dup	1.34	1.01	0.22	8.43	1.342	14.56	26.68	0.03	0.17	0.053	1.10	38.88	92.48	55	6	57	< 20	9	< 20	< 10	950	108	21
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			145	16	34								107		3.8			4.8		0.57			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			41	44	394								498										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas		74					< 2			3		2.3			49.7	91.3		43.5	7.9	1.40		0.9	4.9
LKSD-3 Cert		78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90
W-2a Meas	< 5		197	20	87		< 2	< 0.5			0.8		177	< 0.4	10.9	23.9		13.0	3.4			0.6	3.6
W-2a Cert	1.20		190	24.0	94.0		0.600	0.0460			0.790		182	0.0300	10.0	23.0		13.0	3.30			0.630	3.60
SY-4 Meas			1202	117	527								349										

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2260	3350		1160	170	46.3	125	15.2	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			107	15	14	< 1							10					2.5	1.2	0.52			
BIR-1a Cert			110	16	18	0.6							6					2.5	1.1	0.55			
NCS DC86312 Meas															2280	175		1550			227	34.1	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas						196																	
ZW-C Cert						198																	
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.8			180			80.3	47.7	90.7	10.6	39.4	8.0	1.74	7.3	1.2	6.5
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	70	502						2.3	1.3	1700		41.5			22.5	55.5	7.38	30.2	12.2		14.1	3.3	20.9
NCS DC70009 (GBW07241) Cert	69.9	500						1.8	1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							25								269	474	46.6	151	24.4	3.68		3.7	23.4
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								822	1340	129	389	50.3	8.03		5.6	31.9
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		255				15	3	< 0.5	< 0.2	3		21.0		0.6	21.0	48.8	6.11	23.7	6.0	0.28		1.1	
JR-1 Cert		257				15.2	3.25	0.031	0.028	2.86		20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30		1.01	
NCS DC86318 Meas				17340											1990	429	741	3310	1730	19.1	2010	476	3020
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1137	15740																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															20700	27600	2260	6410	521	86.3			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134391 Orig	13	2	2122	428	42	1060	< 2	< 0.5	< 0.2	33	0.6	< 0.5	527	2.5	3990	7230	729	2300	328	85.5	188	24.2	106
134391 Dup	12	2	2088	431	40	1110	< 2	< 0.5	< 0.2	32	0.5	< 0.5	526	1.9	3950	7280	735	2290	324	85.7	187	24.4	107
134408 Orig	12	< 2	2435	515	50	555	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	617	1.6	3340	6560	704	2350	327	80.1	170	21.9	110
134408 Dup	12	< 2	2439	517	49	557	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	619	1.8	3400	6600	706	2400	329	80.4	170	22.7	115
134418 Orig																							
134418 Dup	15	< 2	2633	798	47	329	2	< 0.5	< 0.2	14	< 0.5	< 0.5	174	3.3	2670	6350	815	3120	472	121	267	36.2	179
134433 Orig	20	< 2	2375	522	30	449	10	< 0.5	< 0.2	24	< 0.5	< 0.5	296	1.2	4600	8090	811	2620	349	86.4	191	23.7	103
134433 Dup	19	< 2	2366	521	31	467	10	< 0.5	< 0.2	25	< 0.5	< 0.5	294	1.1	4600	8050	806	2610	349	86.2	190	23.6	102
134436 Orig	20	< 2	2081	384	32	438	22	< 0.5	< 0.2	18	< 0.5	< 0.5	166	1.9	3940	6970	736	2510	327	78.0	166	20.0	85.0
134436 Split	20	< 2	2087	381	31	452	27	< 0.5	< 0.2	18	1.0	< 0.5	172	2.2	3870	6850	718	2450	323	76.6	162	19.7	83.3
134461 Orig	24	< 2	2403	358	36	337	5	< 0.5	< 0.2	17	< 0.5	< 0.5	294	< 0.4	4730	7990	794	2630	414	108	235	24.7	89.4
134461 Dup	24	< 2	2391	367	35	347	5	< 0.5	< 0.2	17	< 0.5	< 0.5	294	0.6	4800	8110	805	2670	420	110	240	25.4	92.6
134476 Orig	27	< 2	2158	611	81	256	42	0.9	< 0.2	17	0.9	< 0.5	233	1.3	4530	8010	861	3060	472	121	260	33.3	148
134476 Split	26	< 2	2168	619	84	277	18	0.9	< 0.2	17	1.0	< 0.5	223	1.3	4450	7910	849	3030	468	121	261	33.1	146
134534 Orig	46	3	2020	412	61	280	10	0.6	< 0.2	14	< 0.5	< 0.5	307	0.5	6340	10200	1010	3340	421	93.8	188	20.8	87.5

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134534 Split	44	3	1974	412	58	281	10	0.6	< 0.2	13	< 0.5	< 0.5	300	0.5	6100	9800	967	3200	405	89.3	183	20.2	84.1
134534 Orig	49	3	2024	410	60	285	10	0.5	< 0.2	14	< 0.5	< 0.5	303	0.5	6350	10200	1010	3340	418	93.7	187	20.7	87.8
134534 Dup	43	3	2015	414	61	275	10	0.6	< 0.2	13	< 0.5	< 0.5	310	0.5	6330	10200	1010	3350	424	93.9	189	21.0	87.1
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											915		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.41						11.2	4.5	
LKSD-3 Cert				2.70	0.400						11.4	4.60	
W-2a Meas	0.8		0.36	2.0	0.36			< 1	< 0.1		2.2	0.6	
W-2a Cert	0.760		0.380	2.10	0.330			0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				11.1	1.13							4.1	
CTA-AC-1 Cert				11.4	1.08							4.4	
BIR-1a Meas				1.7		0.6				< 5			
BIR-1a Cert				1.7		0.60				3			
NCS DC86312 Meas	35.6	96.0	14.3	87.3	12.0						25.4		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							83.1	328	34.2				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.6	0.53	3.4	0.50					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.3	12.8	2.33	16.0				2200			27.7		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
OREAS 100a (Fusion) Meas	5.0	14.8	2.45	15.5	2.21						53.5	138	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.1	2.95	18.2	2.52						36.5	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.72	4.9	0.72	4.4	1.8	2	1.6	20	28.0	9.2	
JR-1 Cert			0.67	4.55	0.71	4.51	1.86	1.59	1.56	19.3	26.7	8.88	
NCS DC86318 Meas	565	1620	266	1680	252								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134391 Orig	15.4	33.1	3.65	18.5	2.23	1.3	< 0.1	9	0.2	265	722	< 0.1	
134391 Dup	15.5	32.2	3.64	18.0	2.21	1.2	< 0.1	8	0.2	245	710	< 0.1	
134408 Orig	18.2	42.7	4.96	23.8	2.66	1.2	< 0.1	5	< 0.1	246	543	0.2	
134408 Dup	18.5	43.8	4.84	24.3	2.70	1.4	< 0.1	5	< 0.1	272	545	0.2	
134418 Orig													
134418 Dup	29.6	70.7	8.37	42.8	5.24	1.6	< 0.1	3	< 0.1	142	552	0.3	
134433 Orig	15.3	33.7	3.68	19.5	2.36	1.7	0.1	3	0.1	174	679	0.2	
134433 Dup	15.0	32.5	3.63	19.5	2.29	1.7	0.1	3	0.1	180	676	0.2	
134436 Orig	12.9	29.5	3.44	18.5	2.33	1.6	0.1	4	< 0.1	181	538	0.2	
134436 Split	12.7	28.2	3.29	18.7	2.27	1.5	0.1	5	< 0.1	200	544	0.2	
134461 Orig	11.6	23.4	2.46	13.3	1.64	1.5	0.5	2	< 0.1	149	346	0.4	
134461 Dup	11.9	24.4	2.60	13.7	1.69	1.7	0.4	3	< 0.1	147	353	0.4	
134476 Orig	22.9	48.1	5.36	30.0	3.81	2.7	1.9	3	< 0.1	172	592	1.6	
134476 Split	21.5	47.0	5.42	29.7	3.69	2.8	2.0	3	< 0.1	146	608	1.5	
134534 Orig	13.6	31.2	3.53	19.0	2.40	2.2	< 0.1	3	0.3	176	311	0.7	
134534 Split	12.9	28.9	3.38	18.6	2.35	2.0	< 0.1	3	0.2	164	298	0.6	
134534 Orig	13.7	30.6	3.52	19.1	2.35	2.1	< 0.1	3	0.3	194	310	0.7	
134534 Dup	13.6	31.7	3.53	19.0	2.45	2.2	< 0.1	3	0.2	159	312	0.7	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03183
Invoice Date: 06-Jun-14
Your Reference: ASHRAM-BATCH #5

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

112 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03183**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN
TM

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134535	5.78	0.35	0.08	7.54	1.119	13.30	30.65	0.03	0.05	0.258	1.30	37.11	91.79	56	21	87	< 20	4	< 20	< 10	850	28	4
134536	3.10	0.41	0.09	8.37	1.194	14.31	29.52	0.03	0.07	0.130	1.40	39.19	94.72	57	15	84	< 20	4	< 20	< 10	820	22	3
134537	4.49	1.01	0.07	6.99	1.212	13.91	30.19	0.03	0.04	0.043	1.23	37.97	92.71	65	18	73	< 20	5	< 20	< 10	930	29	4
134538	5.24	0.47	0.07	9.31	1.290	13.55	29.93	0.03	0.07	0.071	1.21	36.99	93.00	60	15	70	< 20	6	< 20	< 10	460	30	4
134539	3.96	0.42	0.08	6.18	1.074	13.08	31.38	0.04	0.07	0.094	4.36	35.82	92.61	56	17	75	< 20	3	< 20	< 10	740	35	5
134540	4.62	0.34	0.08	7.20	1.106	13.32	30.64	0.04	0.05	0.127	2.01	37.41	92.34	56	11	74	< 20	4	< 20	< 10	690	30	3
134541	7.31	0.25	0.05	7.20	1.166	13.05	32.45	0.03	0.04	0.062	1.01	36.39	91.71	48	12	61	< 20	3	< 20	< 10	740	24	3
134542	3.94	0.34	0.07	7.97	1.127	14.05	30.14	0.04	0.04	0.151	0.89	39.21	94.02	58	11	82	< 20	5	< 20	< 10	620	23	2
134543	4.26	0.49	0.08	8.16	1.123	13.26	29.79	0.04	0.06	0.249	1.45	37.87	92.56	43	15	89	< 20	4	< 20	< 10	610	26	3
134544	4.00	0.84	0.07	10.66	1.324	12.79	27.98	0.03	0.05	0.181	0.82	38.06	92.83	51	13	83	< 20	6	< 20	< 10	720	22	3
134545	2.94	0.59	0.09	15.19	1.424	12.41	25.55	0.03	0.07	0.242	1.20	37.17	93.97	58	10	106	< 20	7	< 20	< 10	720	20	3
134546	2.36	2.04	0.17	20.69	1.686	11.26	21.16	0.03	0.15	0.114	1.00	34.02	92.33	53	10	104	< 20	10	< 20	< 10	720	20	3
134547	6.00	0.66	0.11	10.65	1.306	12.63	29.05	0.03	0.11	0.103	0.90	36.22	91.77	52	18	82	< 20	4	< 20	< 10	870	25	3
134548	3.21	1.22	0.23	20.53	2.268	11.40	21.71	0.04	0.22	1.082	0.99	33.81	93.50	52	10	158	< 20	9	< 20	10	1080	25	4
134549	0.02	97.44	0.07	0.46	0.019	0.29	0.53	0.04	0.01	0.002	< 0.01	0.72	99.59	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	2	< 1
134550	1.88	15.00	2.57	13.23	0.141	0.48	26.01	0.96	0.95	0.148	19.19	8.11	86.78	17	14	156	20	32	50	110	630	88	15
134551	0.71	1.55	0.30	29.52	3.413	10.16	13.77	0.03	0.28	1.147	0.70	32.63	93.51	44	8	151	< 20	12	< 20	20	1380	22	3
134552	0.66	3.44	0.67	30.78	3.548	9.72	13.90	0.03	0.67	0.622	0.67	29.63	93.69	31	14	212	< 20	14	< 20	10	910	26	5
134553	0.57	1.65	0.31	32.10	3.786	9.66	12.98	0.02	0.28	0.481	0.67	32.94	94.90	36	8	167	< 20	13	< 20	< 10	2040	24	4
134554	2.33	0.45	0.09	24.24	3.092	10.61	17.95	0.03	0.05	0.223	1.10	35.81	93.64	35	6	80	< 20	9	< 20	< 10	1830	25	4
134555	4.01	0.46	0.10	26.28	3.097	9.58	18.29	0.03	0.06	0.375	0.89	33.35	92.51	37	7	141	< 20	11	< 20	< 10	1590	21	2
134556	7.48	1.74	0.17	13.89	2.040	11.15	28.74	0.04	0.08	0.290	1.06	33.13	92.33	40	14	93	< 20	6	< 20	< 10	1280	25	3
134557	7.46	0.47	0.07	14.30	2.235	11.00	28.02	0.03	0.03	0.249	1.09	33.72	91.21	42	13	91	< 20	5	< 20	< 10	1570	27	3
134558	6.49	0.43	0.07	12.45	2.079	12.06	27.94	0.03	0.05	0.119	1.15	35.34	91.71	45	10	67	< 20	5	< 20	< 10	1300	26	3
134559	4.70	0.42	0.07	11.87	2.259	12.78	27.01	0.03	0.04	0.206	0.91	37.06	92.65	47	11	82	< 20	4	< 20	< 10	1490	28	3
134560	4.90	1.00	0.08	13.49	2.300	12.30	25.86	0.02	0.07	0.184	0.64	36.52	92.45	39	13	76	< 20	5	< 20	< 10	1300	24	3
134561	7.38	0.47	0.08	14.25	2.186	11.73	27.31	0.03	0.06	0.124	0.57	34.56	91.37	40	9	58	< 20	6	< 20	< 10	1820	24	2
134562	6.89	0.51	0.09	11.25	1.721	12.30	29.10	0.04	0.05	0.171	0.47	35.86	91.55	41	10	68	< 20	4	< 20	< 10	1170	27	3
134563	2.26	1.12	0.09	21.03	2.566	11.71	19.88	0.02	0.06	0.144	0.34	37.13	94.10	40	8	71	< 20	8	< 20	< 10	1260	24	3
134564	3.19	0.97	0.09	19.44	2.408	12.11	21.88	0.02	0.06	0.125	0.46	36.92	94.49	40	9	68	< 20	7	< 20	< 10	1240	25	3
134565	4.63	0.88	0.07	23.79	2.670	10.44	20.05	0.03	0.02	0.192	1.33	34.12	93.58	34	9	64	< 20	10	< 20	< 10	1240	24	3
134566	9.22	0.77	0.06	13.21	1.717	10.82	29.64	0.02	0.03	0.329	0.75	32.86	90.20	35	13	75	< 20	6	< 20	< 10	1120	28	3
134567	2.54	0.85	0.09	19.45	1.914	12.24	21.30	0.02	0.06	0.251	0.55	38.10	94.83	38	10	81	< 20	9	< 20	< 10	740	23	2
134568	2.24	5.01	0.08	31.37	3.071	8.48	13.83	0.03	0.03	0.492	1.06	32.82	96.28	31	6	94	< 20	13	< 20	< 10	1130	18	3
134569	2.25	0.68	0.05	29.04	3.038	10.06	15.97	0.02	0.01	0.314	0.38	36.05	95.62	29	5	88	< 20	11	< 20	< 10	1010	19	2
134570	4.44	1.02	0.11	17.30	2.359	11.73	24.73	0.02	0.03	0.249	0.42	36.49	94.46	29	8	85	< 20	6	< 20	< 10	1620	27	2
134571	3.49	1.99	0.05	12.04	2.049	12.89	25.35	0.02	0.03	0.075	0.29	38.11	92.89	35	9	53	< 20	5	< 20	< 10	1070	28	3
134572	5.11	1.76	0.05	12.65	1.935	12.31	27.00	0.02	0.02	0.507	0.64	36.18	93.08	41	11	94	< 20	7	< 20	60	1440	28	2
134573	6.27	1.93	0.04	11.17	1.764	12.33	28.32	0.02	0.02	0.109	0.67	35.50	91.88	45	11	57	< 20	5	< 20	< 10	1500	33	3
134574	0.04	95.96	0.06	0.33	0.023	0.64	1.06	0.02	< 0.01	0.002	< 0.01	1.63	99.74	< 1	< 1	< 5	100	< 1	< 20	< 10	< 30	5	< 1
134575	6.71	21.95	3.21	27.68	2.397	6.95	18.82	0.28	0.80	1.478	0.61	11.68	95.86	21	12	173	160	28	60	50	1520	30	8
134576	4.45	1.69	0.09	12.50	1.637	12.58	26.74	0.03	0.03	0.259	0.90	36.24	92.68	50	12	78	< 20	10	< 20	< 10	1310	28	3
134577	1.49	3.00	0.15	13.10	1.435	12.80	24.00	0.03	0.10	0.142	0.81	37.45	93.02	46	7	73	< 20	12	< 20	< 10	790	26	3
134578	1.28	1.62	0.15	10.94	1.256	14.20	26.97	0.03	0.10	0.119	1.21	39.64	96.24	60	11	83	< 20	8	< 20	< 10	680	24	3
134579	3.62	2.48	0.08	11.59	1.392	13.19	27.47	0.02	0.07	0.166	1.35	36.91	94.71	46	15	79	< 20	7	< 20	< 10	790	22	3
134580	2.64	1.39	0.05	11.24	1.441	13.19	26.44	0.03	0.04	0.346	1.55	38.04	93.75	47	11	71	< 20	5	< 20	< 10	920	25	3
134581	2.03	2.51	0.12	14.60	1.808	12.50	24.30	0.04	0.08	0.200	1.12	37.47	94.76	59	9	81	< 20	7	< 20	< 10	1220	27	3
134582	3.70	2.45	0.13	14.26	1.765	12.09	25.80	0.02	0.08	0.253	0.97	36.11	93.93	47	10	75	< 20	7	< 20	< 10	2040	30	4

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134583	3.43	1.12	0.10	11.92	1.393	12.75	27.61	0.02	0.07	0.183	1.03	37.72	93.89	55	9	79	< 20	6	< 20	20	1180	27	3
134584	0.49	3.27	0.10	14.10	1.476	12.82	24.86	0.02	0.06	0.115	1.44	38.74	97.02	47	7	78	< 20	8	< 20	< 10	650	26	4
134585	1.26	1.53	0.13	12.29	1.339	12.61	24.89	0.02	0.05	0.108	1.13	39.30	93.38	48	7	71	< 20	7	< 20	< 10	760	23	3
134586	1.73	3.31	0.11	14.52	1.436	12.46	21.20	0.03	0.04	0.114	0.96	37.57	91.75	59	9	67	< 20	7	< 20	< 10	1100	26	3
134587	1.01	1.92	0.07	13.88	1.516	13.28	22.29	0.02	0.02	0.099	0.76	39.40	93.26	54	7	74	< 20	7	< 20	< 10	710	25	3
134588	1.15	1.71	0.07	14.00	1.497	13.38	22.59	0.02	0.02	0.093	0.89	39.32	93.61	55	7	73	< 20	8	< 20	< 10	610	26	3
134589	1.55	0.99	0.08	11.05	1.524	14.19	26.94	< 0.01	0.02	0.085	0.82	39.94	95.64	48	8	65	< 20	4	< 20	< 10	770	29	5
134590	4.42	1.27	0.05	10.81	1.559	12.86	26.32	0.02	0.04	0.054	0.99	37.27	91.24	44	11	48	< 20	3	< 20	< 10	1090	28	3
134592	3.95	2.22	0.07	14.07	1.601	12.23	23.99	0.02	0.02	0.083	0.66	36.62	91.60	42	12	59	< 20	6	< 20	< 10	950	25	2
134593	3.48	8.44	0.08	12.21	1.515	11.58	25.06	< 0.01	0.02	0.157	0.84	34.08	93.99	42	10	61	< 20	5	< 20	< 10	1080	35	7
134594	3.29	2.75	0.12	11.12	1.316	13.13	24.97	0.02	0.06	0.082	0.79	37.63	91.99	69	17	58	< 20	4	< 20	< 10	1050	22	2
134595	3.30	3.10	0.12	9.72	1.241	12.93	25.74	0.02	0.05	0.077	1.23	37.27	91.50	60	13	56	< 20	5	< 20	< 10	1300	27	3
134596	1.44	1.57	0.08	11.81	1.514	12.88	25.76	0.03	0.04	0.203	1.34	38.91	94.13	42	7	69	< 20	6	< 20	< 10	820	27	3
134597	1.64	0.86	0.09	10.14	1.362	11.52	28.99	0.04	0.04	0.180	4.97	35.72	93.91	46	7	71	< 20	3	< 20	< 10	640	26	4
134598	1.23	0.89	0.06	8.96	1.350	13.65	27.64	0.02	0.03	0.147	1.30	40.29	94.34	40	9	65	< 20	3	< 20	< 10	550	28	3
134599	< 0.01	98.94	0.05	0.25	0.013	0.13	0.26	0.01	< 0.01	0.001	0.01	0.33	100.0	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	4	< 1
134600	1.87	15.10	2.49	12.80	0.138	0.47	26.64	0.92	0.99	0.141	18.15	8.07	85.91	16	14	152	20	32	60	110	610	94	14
134601	7.21	1.36	0.13	8.40	1.282	11.79	32.86	< 0.01	0.03	0.132	2.98	32.77	91.73	40	12	59	< 20	3	< 20	< 10	1160	43	7
134602	6.08	1.41	0.15	7.77	1.122	11.75	31.80	0.04	0.06	0.088	3.31	33.89	91.38	40	11	56	< 20	2	< 20	< 10	480	34	4
134603	4.18	1.67	0.10	10.15	1.340	13.34	28.67	0.02	0.05	0.099	0.88	37.45	93.77	40	12	69	< 20	3	< 20	< 10	1090	26	3
134604	3.20	2.90	0.10	9.93	1.298	12.76	27.04	0.02	0.07	0.108	1.03	37.08	92.34	35	12	61	< 20	3	< 20	< 10	1230	34	4
134605	4.77	1.10	0.07	9.51	1.396	13.03	29.28	0.02	0.06	0.103	0.88	37.23	92.68	38	14	59	< 20	2	< 20	< 10	930	32	4
134606	3.57	1.68	0.15	11.54	1.443	12.98	27.12	0.03	0.10	0.249	0.88	37.17	93.34	52	16	78	< 20	5	< 20	< 10	1130	29	4
134607	3.42	2.96	0.09	8.53	1.235	13.18	27.36	0.03	0.09	0.043	1.22	37.37	92.10	51	13	53	< 20	3	< 20	< 10	890	29	3
134608	7.78	0.98	0.06	6.90	1.254	13.22	32.77	< 0.01	0.03	0.089	1.16	35.16	91.63	39	13	49	< 20	< 1	< 20	< 10	840	45	7
134609	5.23	0.93	0.07	9.92	1.424	12.91	29.47	0.02	0.03	0.116	0.63	37.09	92.62	39	9	62	< 20	3	< 20	< 10	1130	28	3
134610	2.75	0.38	0.10	8.23	1.309	13.90	29.66	0.03	0.06	0.126	1.32	39.17	94.27	41	9	68	< 20	6	< 20	40	830	31	4
134611	6.29	0.82	0.09	8.63	1.341	12.88	30.41	0.03	0.08	0.067	0.94	36.17	91.45	39	11	56	< 20	3	< 20	< 10	1070	34	4
134612	6.64	0.47	0.08	8.44	1.322	12.79	30.67	0.03	0.07	0.061	0.90	35.88	90.71	39	12	54	< 20	3	< 20	< 10	1040	35	4
134613	4.52	0.36	0.07	9.22	1.441	13.17	29.18	0.02	0.05	0.059	0.78	37.73	92.08	34	8	53	< 20	3	< 20	< 10	1020	33	3
134614	2.93	0.99	0.08	12.97	1.536	12.87	25.52	0.02	0.05	0.098	0.54	38.41	93.09	28	7	56	< 20	5	< 20	< 10	1050	29	4
134615	2.36	3.10	0.10	29.49	2.371	9.71	15.76	0.02	0.03	0.078	0.39	34.30	95.36	31	8	69	< 20	11	< 20	< 10	1350	19	2
134616	0.72	6.16	0.22	24.16	2.137	10.57	17.76	0.01	0.06	0.065	0.52	34.84	96.50	39	10	60	< 20	8	< 20	< 10	1190	21	6
134617	1.67	5.17	0.11	38.74	3.509	7.14	9.34	0.02	0.03	0.296	0.90	31.95	97.21	30	5	67	< 20	13	< 20	< 10	1350	13	2
134618	1.13	4.90	0.03	33.63	3.236	8.38	12.36	0.02	< 0.01	0.061	0.80	33.66	97.08	36	6	45	< 20	11	< 20	< 10	1610	17	2
134619	0.77	5.87	0.03	34.91	3.322	6.57	8.16	0.02	< 0.01	0.193	1.02	31.99	92.10	31	5	46	< 20	12	< 20	< 10	1380	15	2
134620	0.70	7.16	0.05	40.45	3.200	6.42	8.26	0.02	0.03	0.167	0.57	30.86	97.20	29	5	68	< 20	14	< 20	< 10	1690	14	2
134621	1.99	2.94	0.06	24.88	2.341	10.75	18.10	0.02	0.02	0.109	0.49	36.22	95.94	44	7	75	< 20	9	< 20	< 10	1130	27	7
134622	3.55	0.28	0.05	11.01	1.420	14.08	27.11	0.03	0.03	0.035	0.69	38.91	93.65	40	6	61	< 20	4	< 20	< 10	660	38	8
134623	4.71	0.52	0.07	10.39	1.251	13.54	27.87	0.03	0.07	0.041	0.73	37.74	92.26	37	11	70	< 20	3	< 20	< 10	810	34	7
134624	0.03	98.64	0.06	0.57	0.024	0.23	0.41	0.02	0.01	0.002	0.03	0.67	100.7	< 1	< 1	< 5	130	< 1	< 20	< 10	< 30	1	1
134625	6.24	21.13	3.16	28.35	2.380	7.01	16.86	0.34	1.42	1.449	0.59	11.69	94.37	21	13	164	180	29	70	40	1510	34	8
134626	5.14	0.31	0.07	8.24	1.206	13.83	31.62	< 0.01	0.03	0.034	0.85	37.30	93.49	38	11	63	< 20	3	< 20	< 10	590	92	17
134627	4.86	0.44	0.08	9.69	1.376	14.25	28.35	0.03	0.08	0.023	0.56	37.90	92.77	34	10	48	< 20	4	< 20	< 10	760	41	8
134628	2.15	2.01	0.04	34.41	3.050	9.67	11.48	0.01	< 0.01	0.073	0.25	26.01	87.00	27	2	47	< 20	46	< 20	< 10	1120	42	13
134629	4.16	0.47	0.08	14.10	2.049	12.65	24.91	0.02	0.05	0.061	0.53	37.14	92.06	28	8	67	< 20	6	< 20	< 10	1750	43	9
134630	4.40	0.29	0.07	10.67	1.735	13.47	27.87	0.02	0.05	0.051	0.77	37.66	92.67	34	10	58	< 20	4	< 20	40	1410	41	8
134631	4.79	0.29	0.05	8.66	1.436	13.84	28.82	0.02	0.06	0.027	0.89	37.80	91.89	36	7	58	< 20	4	< 20	< 10	1220	45	8
134632	4.85	0.40	0.06	8.27	1.520	13.61	29.66	0.02	0.05	0.023	0.73	37.85	92.20	34	8	59	< 20	3	< 20	< 10	1440	37	6
134633	5.26	0.32	0.06	10.34	1.508	13.40	29.04	0.02	0.05	0.037	0.86	37.21	92.85	41	16	69	< 20	4	< 20	< 10	1180	41	8

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134634	5.53	2.48	0.06	9.53	1.434	13.33	28.59	0.03	0.07	0.043	1.15	35.54	92.25	46	16	48	< 20	5	< 20	< 10	1130	49	9
134635	2.51	1.59	0.09	7.71	1.353	14.52	27.32	0.03	0.09	0.090	1.14	39.42	93.36	44	9	49	< 20	3	< 20	< 10	690	51	9
134636	4.78	2.89	0.05	9.70	1.682	13.50	28.57	0.02	0.04	0.063	0.51	36.86	93.89	38	8	44	< 20	2	< 20	< 10	1040	43	8
134637	4.13	3.82	0.10	8.11	1.410	13.34	29.06	0.04	0.09	0.106	2.02	35.93	94.04	52	12	48	< 20	2	< 20	< 10	780	40	8
134638	3.86	4.50	0.07	7.27	1.214	13.40	28.88	0.03	0.06	0.104	1.83	36.21	93.54	42	11	48	< 20	3	< 20	10	570	40	8
134639	4.07	6.24	0.04	6.27	1.220	12.59	30.70	0.03	0.06	0.037	3.28	33.89	94.34	32	12	36	< 20	3	< 20	10	550	51	9
134640	3.80	6.20	0.09	6.12	1.250	13.41	29.84	0.04	0.07	0.029	1.78	36.02	94.85	32	12	42	< 20	2	< 20	< 10	500	34	7
134641	4.26	4.53	0.09	6.28	1.250	13.52	31.23	0.04	0.07	0.031	2.20	35.77	95.01	32	11	43	< 20	2	< 20	< 10	490	34	7
134642	2.94	3.67	0.07	5.54	1.138	14.77	29.65	0.03	0.07	0.019	1.81	37.93	94.69	35	13	47	< 20	2	< 20	< 10	570	44	9
134643	1.28	1.97	0.12	6.09	1.133	14.70	28.28	0.04	0.07	0.037	2.18	39.44	94.07	35	10	53	< 20	4	< 20	< 10	240	41	8
134644	3.43	0.80	0.10	6.32	1.168	14.43	30.65	0.05	0.06	0.040	2.15	38.06	93.83	42	5	50	< 20	3	< 20	< 10	450	46	9
134645	1.39	2.16	0.10	8.15	1.245	14.72	26.89	0.04	0.06	0.109	1.18	39.78	94.43	51	8	73	< 20	4	< 20	< 10	620	41	8
134646	< 0.01	97.40	0.07	0.26	0.014	0.26	0.45	0.02	< 0.01	< 0.001	0.02	0.65	99.15	< 1	< 1	< 5	90	< 1	< 20	< 10	< 30	< 1	1
134647	1.79	15.02	2.63	13.02	0.142	0.47	26.50	0.97	1.06	0.145	19.37	8.05	87.38	16	14	160	< 20	32	70	110	650	133	23

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134535	10	< 2	2653	358	66	699	< 2	0.7	< 0.2	20	< 0.5	< 0.5	374	0.4	5000	8850	837	2750	371	94.3	185	20.9	83.2
134536	6	< 2	2879	280	55	463	5	< 0.5	< 0.2	13	< 0.5	< 0.5	379	< 0.4	3350	6240	644	2220	321	82.3	165	18.3	70.4
134537	10	< 2	2734	365	53	461	13	< 0.5	< 0.2	8	< 0.5	< 0.5	308	< 0.4	5050	8970	877	2930	380	92.4	178	20.5	87.6
134538	12	< 2	2539	329	61	1050	5	< 0.5	< 0.2	13	< 0.5	< 0.5	298	0.6	5340	9100	885	2970	387	93.9	179	19.5	78.9
134539	14	< 2	2836	431	74	722	7	< 0.5	< 0.2	13	< 0.5	< 0.5	365	< 0.4	5780	10600	1070	3680	477	115	220	25.9	106
134540	10	< 2	2434	335	44	637	12	< 0.5	< 0.2	14	< 0.5	< 0.5	280	< 0.4	4920	8910	888	3030	414	97.7	185	20.3	80.8
134541	7	< 2	2407	355	43	360	13	< 0.5	< 0.2	7	< 0.5	< 0.5	199	< 0.4	3980	7020	688	2350	315	76.5	153	17.7	74.8
134542	10	< 2	2369	351	29	719	5	< 0.5	< 0.2	14	0.5	< 0.5	241	< 0.4	3340	6420	670	2430	362	90.1	181	21.6	89.5
134543	9	< 2	2359	457	34	757	12	< 0.5	< 0.2	15	< 0.5	< 0.5	259	< 0.4	4190	7640	761	2640	395	105	221	28.2	117
134544	7	< 2	2150	377	36	814	19	< 0.5	< 0.2	20	< 0.5	< 0.5	273	0.6	3050	6010	625	2290	372	95.2	193	23.8	99.9
134545	6	< 2	2009	372	32	719	17	< 0.5	< 0.2	28	< 0.5	< 0.5	206	0.4	2470	4990	560	2260	389	93.2	179	22.1	94.3
134546	8	2	1785	477	40	501	19	< 0.5	0.2	24	< 0.5	< 0.5	251	0.9	2380	4810	533	2090	358	90.2	183	25.4	117
134547	8	< 2	2170	575	38	415	116	< 0.5	< 0.2	35	< 0.5	< 0.5	286	0.8	3590	6740	701	2550	420	106	219	30.0	139
134548	10	3	1843	435	23	1390	126	0.5	0.3	70	0.9	< 0.5	346	2.4	3330	6160	681	2670	444	107	209	26.7	118
134549	< 5	< 2	25	5	< 4	20	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	30.2	56.4	5.84	21.8	3.3	0.89	1.7	0.2	0.9
134550	110	31	20150	913	223	24	38	2.1	< 0.2	2	7.0	1.7	927	4.5	17600	28600	2620	8070	853	200	333	33.9	149
134551	8	5	1401	268	19	1260	11	0.7	0.5	52	< 0.5	< 0.5	432	3.5	1420	3820	559	2510	386	84.6	155	16.7	69.3
134552	9	13	1432	312	21	616	4	1.5	0.4	40	< 0.5	< 0.5	646	5.1	1110	3920	611	2680	393	87.4	168	19.0	82.4
134553	8	5	1194	428	38	689	2	1.3	0.5	34	< 0.5	< 0.5	330	4.9	866	3780	610	2700	410	93.5	190	23.8	108
134554	8	< 2	1535	372	26	425	3	0.6	0.4	17	< 0.5	< 0.5	137	3.6	1510	5000	705	2840	405	92.5	183	22.9	97.7
134555	5	< 2	1527	348	18	748	< 2	0.5	0.4	52	< 0.5	< 0.5	141	6.6	1510	4100	525	2030	315	74.4	148	18.7	82.4
134556	7	< 2	2405	539	42	898	3	< 0.5	0.3	27	< 0.5	< 0.5	332	4.0	2340	5860	674	2430	360	89.9	191	28.7	142
134557	8	< 2	2166	491	41	439	3	< 0.5	0.2	22	< 0.5	< 0.5	206	5.7	2210	6660	800	2780	346	81.5	170	24.4	115
134558	6	< 2	2457	461	51	257	2	< 0.5	< 0.2	9	< 0.5	< 0.5	223	3.1	3230	7060	741	2470	309	74.5	154	21.5	103
134559	6	< 2	2392	428	51	342	< 2	< 0.5	< 0.2	11	< 0.5	< 0.5	238	2.0	3350	7500	782	2510	290	70.0	145	20.3	96.9
134560	6	< 2	2276	257	26	373	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	275	1.7	2470	6150	677	2300	278	60.9	114	13.2	58.3
134561	6	< 2	2147	351	32	267	2	< 0.5	0.2	10	< 0.5	< 0.5	200	3.0	2580	6350	709	2390	283	63.1	121	15.5	72.5
134562	6	< 2	2539	417	29	311	< 2	< 0.5	< 0.2	9	< 0.5	< 0.5	241	1.5	4550	7830	719	2320	301	71.7	143	19.3	89.2
134563	< 5	< 2	1731	317	19	284	< 2	< 0.5	0.3	13	< 0.5	< 0.5	204	3.1	2630	5660	609	2160	307	69.2	131	15.4	70.4
134564	6	< 2	1877	352	20	241	< 2	< 0.5	0.3	13	< 0.5	< 0.5	215	2.4	3170	6470	671	2360	332	75.6	146	17.5	81.0
134565	6	< 2	1754	323	37	287	5	< 0.5	0.3	17	< 0.5	< 0.5	129	4.0	2590	5540	647	2500	390	90.8	173	19.5	76.8
134566	7	< 2	2040	386	24	513	2	< 0.5	0.2	21	< 0.5	< 0.5	197	1.8	4180	7930	781	2610	370	90.9	181	21.5	88.2
134567	6	< 2	1841	632	43	364	3	< 0.5	0.2	18	< 0.5	< 0.5	196	2.1	3140	5900	625	2330	397	102	216	30.8	145
134568	6	< 2	1177	302	17	499	16	< 0.5	0.6	200	< 0.5	< 0.5	113	3.1	1300	3170	474	2420	512	111	201	22.0	83.9
134569	< 5	< 2	1197	259	14	441	3	< 0.5	0.4	35	< 0.5	< 0.5	104	2.1	1720	3970	493	2050	319	69.8	131	15.1	64.1
134570	8	< 2	2128	319	18	513	3	< 0.5	0.3	22	< 0.5	< 0.5	189	3.9	2650	6650	757	2590	305	66.0	126	15.3	67.6
134571	6	< 2	2402	336	20	167	< 2	< 0.5	< 0.2	6	< 0.5	< 0.5	233	1.6	3350	7600	779	2450	250	57.1	110	13.8	66.3
134572	7	< 2	2332	322	22	763	9	< 0.5	< 0.2	46	< 0.5	< 0.5	359	3.5	3290	7680	789	2460	256	58.6	117	15.2	68.1
134573	8	< 2	2639	357	20	330	4	< 0.5	< 0.2	9	< 0.5	< 0.5	309	2.1	4640	9680	937	2820	286	63.4	126	16.3	75.2
134574	< 5	< 2	23	3	< 4	23	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	28.6	62.4	6.57	22.2	2.7	0.64	1.2	0.2	0.7
134575	22	17	3146	858	217	358	40	1.6	< 0.2	48	< 0.5	< 0.5	13170	3.0	2560	4800	560	2230	463	128	334	47.1	215
134576	10	< 2	2275	400	27	669	6	< 0.5	< 0.2	24	< 0.5	< 0.5	271	2.6	3490	7680	791	2540	310	76.7	158	20.4	91.2
134577	15	< 2	1986	364	40	418	3	< 0.5	< 0.2	14	< 0.5	< 0.5	236	1.8	3850	6980	726	2450	357	92.5	219	24.6	101
134578	12	< 2	2547	350	50	349	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	280	1.2	3500	6350	677	2410	408	106	244	24.8	95.0
134579	6	< 2	2402	306	42	600	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	259	0.8	3180	6060	641	2180	314	78.6	173	17.5	71.7
134580	7	< 2	2484	308	43	725	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	202	0.5	3640	6720	692	2300	298	73.9	170	17.9	75.2
134581	10	< 2	1952	450	26	493	< 2	< 0.5	0.2	20	< 0.5	< 0.5	275	0.9	3310	7150	770	2570	373	105	263	31.1	126
134582	10	< 2	1861	595	36	1020	< 2	< 0.5	0.2	29	< 0.5	< 0.5	300	1.2	3820	7950	830	2650	374	104	278	36.0	155
134583	8	< 2	1982	377	43	864	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	198	0.5	4020	7100	711	2340	309	77.0	185	21.3	90.8

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134584	10	< 2	2025	399	34	274	4	< 0.5	< 0.2	13	< 0.5	< 0.5	227	1.1	3050	6390	728	2680	465	124	297	31.9	119
134585	8	< 2	2066	381	30	369	3	< 0.5	< 0.2	17	< 0.5	< 0.5	247	1.0	2830	5740	650	2380	377	99.2	239	27.6	107
134586	9	< 2	1934	335	34	460	2	< 0.5	0.2	16	< 0.5	< 0.5	206	1.2	4090	6970	705	2410	406	107	249	25.5	94.2
134587	10	< 2	2060	326	28	356	3	< 0.5	< 0.2	13	< 0.5	< 0.5	192	1.5	3040	6140	697	2560	408	106	241	25.2	94.7
134588	10	< 2	2113	327	26	369	3	< 0.5	< 0.2	12	< 0.5	< 0.5	193	1.2	3210	6400	705	2560	421	108	248	25.2	95.8
134589	13	< 2	2252	291	28	406	2	< 0.5	< 0.2	16	< 0.5	< 0.5	185	0.9	3380	6340	690	2430	339	82.2	177	19.2	81.2
134590	7	< 2	2385	415	34	174	16	< 0.5	< 0.2	6	< 0.5	< 0.5	240	0.7	4630	7930	761	2370	302	79.0	193	23.2	96.9
134592	7	< 2	2107	321	32	336	11	< 0.5	< 0.2	23	< 0.5	< 0.5	215	0.7	3930	6690	649	2090	294	73.5	174	19.4	76.9
134593	14	< 2	1929	400	39	496	3	< 0.5	< 0.2	25	< 0.5	< 0.5	278	1.6	4400	7730	787	2680	385	105	256	29.9	116
134594	5	< 2	2643	279	50	219	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	376	1.2	3100	5460	558	1860	263	70.3	175	20.0	75.9
134595	7	< 2	2584	315	43	372	2	< 0.5	< 0.2	9	< 0.5	< 0.5	300	0.8	4170	7160	706	2310	295	74.0	178	19.3	79.6
134596	8	< 2	2114	360	32	395	3	< 0.5	< 0.2	20	< 0.5	< 0.5	218	0.9	3670	7110	755	2660	355	85.2	199	22.7	97.2
134597	10	< 2	2825	495	87	349	10	0.5	< 0.2	20	< 0.5	< 0.5	220	1.9	2700	6420	784	2970	408	98.7	228	27.5	124
134598	10	< 2	2367	371	31	372	8	< 0.5	< 0.2	18	< 0.5	< 0.5	212	1.8	3920	7520	814	2820	365	92.8	223	25.3	105
134599	< 5	< 2	15	3	< 4	23	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	21.1	40.6	4.34	15.4	2.2	0.56	1.3	0.1	0.5
134600	147	34	20480	901	197	24	31	1.8	< 0.2	< 1	6.9	1.7	899	6.9	18500	29400	2680	8130	837	194	391	36.9	155
134601	19	< 2	2880	496	56	692	7	0.7	< 0.2	21	< 0.5	< 0.5	267	2.2	5510	9770	960	3100	399	98.1	217	26.6	118
134602	9	< 2	2947	448	60	573	5	< 0.5	< 0.2	12	< 0.5	< 0.5	283	0.5	6000	10200	961	2960	334	81.0	192	23.6	109
134603	7	< 2	2610	316	38	578	6	< 0.5	< 0.2	14	< 0.5	< 0.5	284	0.9	4030	7070	703	2300	322	79.9	177	18.5	73.6
134604	10	< 2	2497	430	58	364	4	< 0.5	< 0.2	12	< 0.5	< 0.5	234	0.6	5550	9360	913	2990	428	110	250	26.0	106
134605	9	< 2	2546	291	35	485	8	< 0.5	< 0.2	13	< 0.5	< 0.5	270	0.5	5600	9290	882	2830	353	82.2	174	16.5	67.4
134606	10	< 2	2185	381	38	740	3	< 0.5	< 0.2	15	< 0.5	< 0.5	324	0.5	4490	8020	804	2630	367	94.1	213	23.2	96.8
134607	8	< 2	2544	328	46	398	3	< 0.5	< 0.2	8	< 0.5	< 0.5	323	0.6	4750	8140	790	2560	329	80.3	184	19.6	79.4
134608	17	< 2	2781	389	40	407	4	< 0.5	< 0.2	10	< 0.5	< 0.5	275	0.6	6520	10500	986	3120	371	87.2	178	20.3	91.8
134609	8	< 2	2400	380	28	378	5	< 0.5	< 0.2	9	< 0.5	< 0.5	185	0.8	4590	7870	771	2510	340	86.7	203	22.5	91.5
134610	10	< 2	2528	490	37	653	3	< 0.5	< 0.2	11	< 0.5	< 0.5	268	0.6	4610	8420	854	2870	364	91.4	226	28.5	125
134611	10	< 2	2593	410	42	409	7	< 0.5	< 0.2	8	< 0.5	< 0.5	258	0.5	5930	9960	950	2940	340	80.5	189	21.4	93.7
134612	11	< 2	2582	387	38	414	7	< 0.5	< 0.2	8	< 0.5	< 0.5	265	0.5	6020	10100	946	2970	342	80.1	184	20.2	87.6
134613	9	< 2	2662	468	31	296	4	< 0.5	< 0.2	8	< 0.5	< 0.5	212	0.8	5470	9400	893	2830	376	97.7	238	28.3	121
134614	10	< 2	2290	546	25	374	6	< 0.5	0.2	14	< 0.5	< 0.5	248	1.0	4360	7780	783	2750	494	123	283	32.1	136
134615	6	< 2	1344	463	21	206	5	< 0.5	0.3	14	< 0.5	< 0.5	114	2.8	1700	3920	477	2040	398	96.8	219	25.5	110
134616	14	< 2	1797	346	26	306	< 2	< 0.5	0.3	18	< 0.5	< 0.5	206	2.5	1520	3160	431	2040	419	97.7	201	22.4	92.4
134617	< 5	< 2	802	236	13	465	< 2	< 0.5	0.5	24	< 0.5	< 0.5	115	5.0	423	1530	299	1600	312	69.4	153	14.9	59.4
134618	7	< 2	1149	221	14	229	2	< 0.5	0.5	13	< 0.5	< 0.5	75	5.6	877	2550	438	2270	407	86.2	176	15.5	59.0
134619	< 5	< 2	843	186	16	576	< 2	< 0.5	0.5	23	< 0.5	< 0.5	67	4.6	493	1640	338	1930	357	75.4	157	14.6	54.8
134620	< 5	< 2	929	155	9	361	< 2	1.7	0.6	38	< 0.5	< 0.5	103	2.5	602	1570	312	1990	392	75.6	146	11.8	40.4
134621	14	< 2	1604	235	20	408	13	< 0.5	0.4	19	< 0.5	< 0.5	114	2.0	2450	4430	516	2240	368	77.8	150	15.0	62.7
134622	16	< 2	2827	294	28	286	21	< 0.5	< 0.2	8	< 0.5	< 0.5	133	0.7	4490	7400	732	2560	360	82.2	166	16.9	71.6
134623	12	< 2	2686	313	34	216	23	< 0.5	< 0.2	9	< 0.5	< 0.5	188	0.7	4320	6860	648	2260	308	70.1	145	16.3	71.5
134624	< 5	< 2	19	4	< 4	12	8	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	24.5	46.3	5.22	22.0	3.3	0.78	1.5	0.2	0.8
134625	17	26	3046	891	218	363	49	0.9	< 0.2	44	< 0.5	< 0.5	13470	2.3	2520	4660	527	2170	472	129	328	46.5	221
134626	29	< 2	2852	397	45	421	25	< 0.5	< 0.2	7	< 0.5	< 0.5	191	1.2	6050	9100	843	2820	360	81.9	169	18.5	75.3
134627	18	< 2	2898	276	17	344	23	< 0.5	< 0.2	6	< 0.5	< 0.5	243	0.8	5050	8330	807	2760	343	75.2	148	14.7	64.4
134628	37	< 2	1000	222	10	413	9	< 0.5	0.4	34	< 0.5	< 0.5	86	7.7	1320	2830	426	1980	313	63.1	126	12.8	49.3
134629	22	< 2	2286	303	23	813	14	< 0.5	0.3	10	0.8	< 0.5	171	3.3	3310	7670	866	3120	384	86.8	182	19.7	81.9
134630	17	< 2	2751	311	31	320	9	< 0.5	< 0.2	10	< 0.5	< 0.5	185	1.4	3690	7500	783	2660	349	82.9	175	19.2	78.7
134631	18	< 2	2880	314	41	360	13	< 0.5	< 0.2	7	< 0.5	< 0.5	169	1.6	4840	8740	868	2870	351	79.9	167	18.5	77.0
134632	13	< 2	3149	305	44	81	< 2	< 0.5	< 0.2	4	< 0.5	< 0.5	184	0.6	3550	6990	690	2180	263	63.8	146	18.7	78.2
134633	17	< 2	2908	383	46	200	6	< 0.5	< 0.2	9	< 0.5	< 0.5	167	2.0	3970	7490	763	2630	346	83.2	186	22.2	94.5
134634	19	< 2	2966	327	34	248	15	< 0.5	< 0.2	12	< 0.5	< 0.5	341	1.0	5890	9640	914	3070	386	89.6	191	20.0	80.3

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134635	19	< 2	2742	288	27	578	20	< 0.5	< 0.2	12	< 0.5	< 0.5	281	0.8	6120	10100	951	3180	400	91.3	190	19.0	75.7
134636	16	< 2	2615	276	22	187	7	< 0.5	< 0.2	8	< 0.5	< 0.5	245	0.5	4730	8490	822	2760	361	87.2	182	17.8	69.8
134637	17	< 2	2780	350	65	527	4	< 0.5	< 0.2	14	< 0.5	< 0.5	330	0.6	4190	7870	809	2820	342	77.6	168	19.2	84.1
134638	17	< 2	2561	387	63	697	6	< 0.5	< 0.2	21	< 0.5	< 0.5	234	0.5	4170	7510	783	2840	373	84.1	170	19.1	85.3
134639	19	< 2	2633	335	86	493	7	< 0.5	< 0.2	8	< 0.5	< 0.5	184	< 0.4	5780	9730	922	3090	377	82.6	166	17.4	76.5
134640	16	< 2	2341	330	66	547	7	< 0.5	< 0.2	7	< 0.5	< 0.5	246	0.5	3130	6170	659	2420	336	77.5	160	17.6	77.1
134641	14	< 2	2440	379	71	622	7	< 0.5	< 0.2	8	< 0.5	< 0.5	235	< 0.4	3160	6210	679	2500	354	82.6	171	19.1	87.0
134642	19	< 2	2527	304	62	364	8	< 0.5	< 0.2	6	< 0.5	< 0.5	266	0.6	4640	8320	857	3110	413	90.9	182	17.9	76.5
134643	17	< 2	2498	305	76	260	7	< 0.5	< 0.2	8	< 0.5	< 0.5	247	< 0.4	4490	7830	811	2920	390	88.9	181	19.0	80.5
134644	21	< 2	2583	362	104	800	10	< 0.5	< 0.2	11	< 0.5	< 0.5	147	< 0.4	5400	9190	914	3220	435	102	219	23.5	98.9
134645	18	< 2	2439	304	51	339	2	< 0.5	< 0.2	14	< 0.5	< 0.5	186	0.9	4350	7720	794	2840	380	88.2	183	19.8	82.8
134646	< 5	< 2	19	2	< 4	30	6	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	27.2	47.7	4.89	16.8	2.4	0.54	1.0	0.1	0.5
134647	143	33	20130	945	216	21	30	1.9	< 0.2	< 1	6.0	1.7	923	6.6	18400	28900	2610	8060	860	197	374	38.7	174

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134535	11.6	26.1	3.03	15.8	2.02	1.6	0.2	6	0.2	93	397	0.2	3.342
134536	9.5	20.7	2.27	12.2	1.59	1.2	0.6	3	0.2	61	389	0.4	3.392
134537	12.3	27.3	3.10	16.4	2.04	1.5	0.1	4	0.1	70	266	0.1	3.884
134538	10.8	23.2	2.70	14.6	1.78	1.5	0.1	5	0.2	92	318	0.1	3.289
134539	14.9	31.9	3.71	19.0	2.39	1.8	0.3	3	0.1	58	293	0.3	4.046
134540	11.2	24.8	2.70	14.6	1.78	1.4	< 0.1	3	< 0.1	46	279	0.1	4.056
134541	11.0	24.2	2.66	14.0	1.78	1.3	0.1	1	< 0.1	61	223	< 0.1	3.936
134542	12.4	26.4	2.90	15.4	1.83	1.2	0.1	5	< 0.1	55	254	0.2	3.864
134543	16.7	35.3	3.68	18.3	2.13	1.6	< 0.1	4	< 0.1	52	328	0.2	4.009
134544	13.4	27.7	2.87	14.9	1.77	1.4	< 0.1	4	< 0.1	99	448	0.1	3.016
134545	13.4	27.8	2.88	14.8	1.74	1.3	< 0.1	5	< 0.1	133	411	0.1	3.440
134546	17.7	34.8	3.61	18.4	2.16	1.6	< 0.1	3	0.2	278	513	0.1	2.638
134547	20.7	39.8	4.14	20.1	2.37	1.8	< 0.1	2	0.1	130	548	< 0.1	2.317
134548	16.1	30.4	3.15	16.1	1.84	1.5	< 0.1	7	0.2	383	738	0.1	2.296
134549	0.1	0.4	< 0.05	0.2	< 0.04	< 0.2	< 0.1	3	< 0.1	< 5	4.5	< 0.1	0.400
134550	24.2	61.3	7.89	44.0	5.88	3.5	< 0.1	4	2.3	898	160	198	0.009
134551	9.1	17.6	1.84	9.7	1.23	1.0	< 0.1	5	0.3	487	762	0.1	3.607
134552	11.3	22.3	2.27	11.8	1.37	1.1	< 0.1	3	0.6	416	742	0.1	2.666
134553	15.7	31.9	3.28	15.9	1.77	1.5	< 0.1	4	0.4	673	770	0.1	1.765
134554	13.3	25.8	2.57	12.6	1.53	1.3	< 0.1	2	0.2	502	832	< 0.1	3.681
134555	11.8	24.0	2.61	13.7	1.62	1.0	< 0.1	3	0.3	710	655	0.1	5.060
134556	21.6	47.7	5.41	26.5	3.06	2.0	0.4	4	0.1	313	799	0.3	1.912
134557	17.3	35.8	3.55	16.7	1.92	1.7	< 0.1	3	0.1	377	764	0.2	4.071
134558	15.7	32.7	3.60	17.0	1.98	1.6	< 0.1	3	< 0.1	298	601	< 0.1	3.936
134559	14.9	31.9	3.40	16.6	1.98	1.5	< 0.1	3	< 0.1	241	533	< 0.1	3.833
134560	8.5	18.5	2.07	10.4	1.24	1.0	< 0.1	3	0.1	288	581	< 0.1	1.541
134561	11.2	25.2	2.85	14.5	1.67	1.1	0.8	3	0.1	419	620	< 0.1	2.242
134562	13.7	29.1	3.26	15.9	1.80	1.3	< 0.1	2	< 0.1	243	489	< 0.1	2.921
134563	10.8	23.0	2.61	13.6	1.55	1.0	< 0.1	1	0.1	377	458	< 0.1	1.524
134564	12.4	26.9	2.89	14.7	1.69	1.1	< 0.1	7	0.1	330	488	< 0.1	1.698
134565	10.7	23.0	2.44	12.8	1.53	1.4	< 0.1	1	0.2	597	707	< 0.1	3.097
134566	12.4	26.7	2.70	13.5	1.51	1.3	< 0.1	4	< 0.1	163	529	< 0.1	3.338
134567	22.3	44.9	4.65	21.8	2.36	2.0	< 0.1	2	< 0.1	172	665	< 0.1	3.670
134568	10.8	21.3	2.23	11.4	1.26	1.1	< 0.1	3	0.2	636	1070	< 0.1	3.784
134569	8.8	17.2	1.78	8.4	0.97	0.9	< 0.1	2	< 0.1	279	586	< 0.1	3.019
134570	10.2	21.8	2.36	11.1	1.29	1.0	< 0.1	3	< 0.1	417	604	0.1	4.344
134571	10.8	26.0	3.17	15.8	1.75	0.9	< 0.1	< 1	< 0.1	150	541	< 0.1	4.615
134572	10.5	25.1	3.09	15.6	1.86	1.0	0.2	9	< 0.1	246	494	0.1	3.898
134573	11.9	27.9	3.34	17.1	2.01	1.0	< 0.1	3	< 0.1	171	488	< 0.1	3.257
134574	0.1	0.3	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	6.4	< 0.1	0.403
134575	35.3	81.8	9.88	52.7	6.38	4.9	3.5	25	< 0.1	389	877	2.8	0.014
134576	13.9	31.6	3.54	17.2	2.05	1.2	0.6	6	0.2	191	475	0.5	4.100
134577	13.8	29.1	3.10	15.6	1.69	1.5	0.4	4	0.4	239	430	1.9	3.319
134578	12.7	25.9	2.83	15.6	1.84	1.5	< 0.1	3	0.4	197	552	0.5	2.469
134579	10.4	24.0	2.69	15.0	1.77	1.2	< 0.1	3	0.2	176	334	0.2	4.912
134580	10.6	22.8	2.54	13.7	1.60	1.5	< 0.1	7	< 0.1	177	252	0.1	4.623
134581	17.2	33.4	3.25	16.3	1.90	1.6	< 0.1	4	0.1	304	495	0.3	3.410
134582	22.2	43.9	4.41	20.0	2.27	2.1	< 0.1	5	0.1	285	560	0.3	3.956

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134583	13.0	27.5	3.12	16.5	2.05	1.5	0.7	4	< 0.1	146	324	0.5	4.211
134584	15.2	29.3	2.95	15.4	1.76	1.5	< 0.1	2	0.1	148	594	0.3	4.239
134585	14.6	28.3	3.03	15.3	1.75	1.5	0.2	2	0.1	164	469	0.6	3.798
134586	12.1	23.9	2.48	12.9	1.59	1.4	< 0.1	3	< 0.1	273	588	0.3	3.808
134587	12.4	25.0	2.55	13.5	1.60	1.3	< 0.1	3	< 0.1	207	549	0.3	1.991
134588	12.2	24.6	2.65	13.3	1.54	1.3	< 0.1	2	< 0.1	178	570	0.3	1.960
134589	11.3	23.5	2.61	13.6	1.56	1.2	0.4	< 1	< 0.1	17	358	0.5	4.400
134590	14.1	30.6	3.46	18.0	2.08	1.5	< 0.1	2	< 0.1	190	431	0.1	2.584
134592	10.6	21.3	2.33	12.3	1.43	1.3	< 0.1	2	< 0.1	175	411	0.1	2.781
134593	14.7	30.0	3.00	15.1	1.76	1.1	< 0.1	< 1	< 0.1	63	619	0.2	4.489
134594	9.7	19.7	2.13	11.2	1.52	1.6	0.2	1	0.2	226	457	0.2	3.712
134595	11.0	22.4	2.38	13.1	1.65	1.3	1.0	2	0.2	169	429	0.6	4.622
134596	13.8	27.4	2.83	15.4	1.76	1.5	< 0.1	4	< 0.1	121	388	0.5	4.149
134597	17.5	37.7	4.40	23.9	2.83	2.4	< 0.1	4	< 0.1	202	455	0.4	3.934
134598	14.4	28.9	3.01	15.4	1.83	1.5	< 0.1	3	< 0.1	153	418	0.5	4.056
134599	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	3.0	< 0.1	0.389
134600	24.9	61.4	7.95	45.3	6.15	3.3	< 0.1	5	2.4	964	157	198	0.008
134601	17.5	38.8	4.48	24.1	2.98	1.4	< 0.1	1	< 0.1	34	532	0.2	3.386
134602	16.8	36.9	4.18	22.5	2.79	1.9	1.3	4	0.1	115	368	0.6	4.059
134603	10.9	23.4	2.69	14.4	1.83	1.4	0.2	5	< 0.1	208	308	0.2	4.458
134604	15.8	34.9	4.08	22.7	2.65	2.1	< 0.1	2	0.1	233	451	0.2	4.136
134605	9.7	22.0	2.56	14.4	1.89	1.4	< 0.1	3	< 0.1	161	261	0.1	2.941
134606	14.5	32.6	3.77	20.9	2.49	1.6	0.3	4	0.2	209	436	0.3	4.347
134607	11.3	24.0	2.87	16.8	2.11	1.4	0.5	4	0.2	158	317	0.4	5.398
134608	13.5	30.0	3.45	17.8	2.20	1.1	< 0.1	< 1	< 0.1	34	188	0.1	3.232
134609	13.2	27.8	3.09	16.6	1.97	1.4	< 0.1	2	< 0.1	179	327	0.1	3.238
134610	18.6	39.4	4.30	22.0	2.49	1.9	2.0	3	< 0.1	143	297	1.3	4.562
134611	14.2	31.8	3.61	18.7	2.20	1.6	< 0.1	2	< 0.1	138	270	0.2	1.790
134612	13.0	30.4	3.33	16.6	1.96	1.6	0.3	2	< 0.1	140	255	0.2	1.820
134613	17.8	37.7	4.01	20.5	2.25	1.7	< 0.1	2	< 0.1	196	367	0.2	4.886
134614	20.5	43.6	4.58	21.5	2.24	1.8	< 0.1	2	< 0.1	296	598	0.1	4.179
134615	17.3	35.1	3.86	17.0	1.76	1.4	< 0.1	1	0.2	587	639	< 0.1	2.870
134616	13.6	27.9	2.95	14.1	1.65	0.8	< 0.1	2	< 0.1	336	781	0.3	2.877
134617	8.0	17.2	1.91	10.0	1.18	0.9	< 0.1	4	0.4	1200	502	< 0.1	3.822
134618	7.7	16.2	1.94	9.8	1.20	0.9	< 0.1	1	0.3	1370	709	< 0.1	3.880
134619	7.1	13.4	1.60	9.3	1.29	0.9	< 0.1	4	0.3	1400	564	< 0.1	3.369
134620	5.0	9.5	1.16	6.9	0.93	0.7	< 0.1	3	0.2	917	594	< 0.1	3.112
134621	8.6	17.3	2.16	11.2	1.44	0.6	0.1	5	0.4	631	557	0.2	3.272
134622	10.1	20.8	2.88	15.8	1.76	0.6	< 0.1	1	0.1	148	436	< 0.1	4.085
134623	11.0	23.9	3.01	16.0	1.91	0.8	0.1	< 1	0.2	176	375	0.1	3.016
134624	0.1	0.3	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	8	5.9	< 0.1	0.386
134625	35.9	83.0	9.94	53.1	6.45	4.5	2.5	26	0.4	544	869	2.7	0.016
134626	11.6	26.2	3.10	16.8	2.06	1.7	0.2	3	< 0.1	12	432	0.3	3.979
134627	9.5	19.9	2.68	14.3	1.68	0.5	< 0.1	1	< 0.1	145	300	0.2	2.252
134628	7.1	14.8	1.93	10.8	1.44	1.0	< 0.1	5	< 0.1	58	454	< 0.1	2.075
134629	11.5	25.2	2.79	13.8	1.71	0.7	< 0.1	3	< 0.1	368	576	0.1	3.046
134630	11.4	25.6	2.93	15.0	1.81	0.7	< 0.1	1	< 0.1	162	449	< 0.1	4.340
134631	11.0	25.0	2.88	15.1	1.86	0.9	0.1	1	< 0.1	199	351	0.2	4.180
134632	10.8	25.5	2.79	14.9	1.83	0.9	< 0.1	< 1	< 0.1	141	395	< 0.1	3.100
134633	13.5	29.5	3.45	17.7	2.15	1.0	< 0.1	< 1	< 0.1	208	502	< 0.1	4.416

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134634	11.3	26.0	3.09	17.1	2.06	0.8	< 0.1	3	< 0.1	158	316	0.1	1.937
134635	10.7	24.7	2.95	16.2	1.99	0.7	0.4	2	< 0.1	98	272	0.3	2.725
134636	9.7	22.3	2.68	15.4	1.92	0.7	0.1	< 1	< 0.1	121	294	< 0.1	3.638
134637	12.3	29.1	3.50	19.3	2.40	1.2	0.2	2	< 0.1	91	338	0.2	4.349
134638	13.2	30.9	3.85	20.9	2.52	1.2	1.7	3	< 0.1	91	253	1.5	3.657
134639	11.7	28.8	3.55	19.5	2.41	1.3	< 0.1	1	< 0.1	55	180	< 0.1	3.477
134640	12.0	27.8	3.51	19.3	2.34	1.0	0.1	1	< 0.1	68	150	0.2	1.719
134641	13.5	33.5	3.97	20.8	2.61	1.3	0.7	2	< 0.1	60	152	0.5	1.508
134642	11.0	25.0	3.04	16.4	2.07	0.9	0.2	< 1	< 0.1	83	135	0.1	4.243
134643	11.4	26.6	3.13	16.9	2.09	1.2	< 0.1	2	< 0.1	51	142	0.4	4.044
134644	14.2	32.0	3.75	20.2	2.61	1.8	0.6	3	< 0.1	64	193	0.5	3.445
134645	11.8	26.1	2.96	15.8	2.01	1.0	< 0.1	2	< 0.1	106	283	0.2	4.668
134646	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.0	< 0.1	0.382
134647	27.6	67.6	8.74	50.3	6.73	2.8	< 0.1	4	2.3	941	163	214	0.008

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.07	11.40	1.91	0.75	0.013	0.34	43.94	0.88	0.56	0.119	30.14					1665							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.24																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.16																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.17	18.49	9.92	0.148	10.02	11.30	1.90	0.23	0.484	0.07			31		158	260	57	260	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
LKSD-3 Meas																		31	40				
LKSD-3 Cert																		30.0	47.0				
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		52.50	15.11	10.68	0.166	6.26	10.82	2.21	0.63	1.059	0.14			35	< 1	279		42		110		18	1
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0		110		17.0	1.00
SY-4 Meas		49.66	20.62	6.11	0.106	0.49	7.89	6.95	1.66	0.287	0.17			< 1	3	9							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.98	15.61	11.26	0.173	9.50	13.25	1.82	0.02	0.962	0.02			44	< 1	337	380	53	160	120		15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1060	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		73.25	15.11	0.58	0.036	0.06	0.62	4.58	3.87	0.012	0.02				1328								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		25		2610	7400	25	
NCS DC70014 Cert																		26		2600	7400	25.2	
NCS DC86316 Meas																							
NCS DC86316 Cert																							
NCS DC70009 (GBW07241) Meas																	30		< 20	940	90	16	
NCS DC70009 (GBW07241) Cert																	30		2.8	960	100	16.5	
OREAS 100a (Fusion) Meas																		18		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		420			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20			16	
JR-1 Cert																			1.67			16.1	
NCS DC86318 Meas		66.41	13.98	2.29	0.056	0.09		0.62	5.64	0.172	0.03												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134566 Orig	9.29	0.77	0.06	13.21	1.727	10.79	29.63	0.02	0.03	0.336	0.75	32.86	90.18	35	13	74	< 20	6	< 20	< 10	1150	29	4
134566 Dup	9.15	0.76	0.06	13.20	1.707	10.86	29.65	0.02	0.03	0.322	0.75	32.86	90.21	34	13	75	< 20	5	< 20	< 10	1090	28	3
134576 Orig	4.37	1.66	0.08	12.38	1.626	12.46	26.51	0.03	0.03	0.256	0.89	36.24	92.17	49	12	79	< 20	9	< 20	< 10	1290	27	3
134576 Dup	4.52	1.71	0.09	12.61	1.648	12.69	26.97	0.03	0.04	0.261	0.92	36.24	93.20	50	12	77	< 20	10	< 20	< 10	1320	28	3
134592 Orig	3.89	2.24	0.06	14.03	1.593	12.23	23.88	0.02	0.02	0.083	0.67	36.62	91.45	42	13	59	< 20	6	< 20	< 10	940	24	2
134592 Dup	4.01	2.20	0.07	14.12	1.609	12.23	24.11	0.02	0.02	0.084	0.66	36.62	91.75	42	12	59	< 20	6	< 20	< 10	960	25	2
134609 Orig	5.17	0.94	0.07	9.92	1.423	12.90	29.48	0.02	0.03	0.116	0.64	37.09	92.63	39	9	62	< 20	3	< 20	< 10	1130	28	3
134609 Dup	5.30	0.92	0.07	9.92	1.424	12.92	29.46	0.02	0.03	0.116	0.63	37.09	92.60	39	9	63	< 20	3	< 20	< 10	1120	28	3
134626 Orig	5.14	0.31	0.07	8.24	1.206	13.83	31.62	< 0.01	0.03	0.034	0.85	37.30	93.49	38	11	63	< 20	3	< 20	< 10	590	92	17
134626 Split	4.42	0.32	0.07	8.11	1.188	13.86	30.81	< 0.01	0.03	0.034	0.85	37.41	92.69	38	11	62	< 20	3	< 20	30	560	92	17
134635 Orig	2.51	1.59	0.09	7.71	1.353	14.52	27.32	0.03	0.09	0.090	1.14	39.42	93.36	44	9	49	< 20	3	< 20	< 10	690	51	9
134635 Split	2.50	1.62	0.09	7.70	1.346	14.45	27.90	0.03	0.09	0.090	1.14	39.15	93.61	43	9	49	< 20	3	< 20	80	830	51	9
134635 Orig	2.47	1.55	0.09	7.62	1.335	14.28	26.89	0.02	0.09	0.090	1.11	39.42	92.50	44	9	48	< 20	3	< 20	< 10	650	48	9
134635 Dup	2.55	1.64	0.09	7.81	1.371	14.76	27.75	0.03	0.09	0.090	1.18	39.42	94.23	44	9	50	< 20	3	< 20	< 10	730	54	10
134645 Orig	1.39	2.16	0.10	8.15	1.245	14.72	26.89	0.04	0.06	0.109	1.18	39.78	94.43	51	8	73	< 20	4	< 20	< 10	620	41	8
134645 Split	1.40	2.13	0.11	8.21	1.237	14.65	26.65	0.04	0.07	0.111	1.21	39.78	94.20	50	8	70	< 20	4	< 20	< 10	620	42	8
134647 Orig	1.77	14.88	2.58	12.98	0.140	0.47	26.37	0.98	1.04	0.143	19.22	8.05	86.86	17	14	161	< 20	32	70	110	660	133	23
134647 Dup	1.81	15.16	2.69	13.05	0.144	0.47	26.62	0.97	1.07	0.148	19.52	8.05	87.90	16	14	160	< 20	32	70	110	640	132	23
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			142	16	34								108					4.9		0.59			
DNC-1 Cert			144.0	18.0	38								118					5.20		0.59			
LKSD-3 Meas	26	74					< 2			3		2.4			49.5	92.7		42.6	8.2	1.41			4.9
LKSD-3 Cert	27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50			4.90
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		19	191	20	85		< 2	< 0.5					175	< 0.4	10.6	23.5		12.7	3.2	1.10		0.6	3.5
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1208	116	529								344										

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2200	3330		1130	166	45.0	121	14.7	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			107	15	14								10					2.5	1.1	0.52	1.9		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	180		1570			229	34.3	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.6			180			80.3	45.7	88.4	9.95	37.9	8.0	1.68	7.2	1.1	6.3
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC86316 Meas																							
NCS DC86316 Cert																							
NCS DC70009 (GBW07241) Meas	70	505							1.3	1700	3.2	43.3			22.3	56.3	7.22	30.2	12.2		14.1	3.2	20.5
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							25								266	478	45.6	150	24.2	3.65		3.8	23.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								828	1390	127	390	50.4	8.09		5.5	31.9
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		245				15	2	< 0.5	< 0.2			20.7		0.5	19.7	46.7	5.68	22.6	5.8		5.3	1.0	6.1
JR-1 Cert		257				15.2	3.25	0.031	0.028			20.8		0.56	19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69
NCS DC86318 Meas				17800											1970	422	732	3300	1710	19.0	2150	466	3130
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						980																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1152	15350																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															20600	28000	2310	6430	519	86.4			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134566 Orig	7	< 2	2040	387	23	513	3	< 0.5	0.2	21	< 0.5	< 0.5	197	1.8	4190	7980	784	2610	372	91.2	182	21.3	88.1
134566 Dup	7	< 2	2040	385	24	514	2	< 0.5	0.2	20	< 0.5	< 0.5	196	1.9	4170	7870	777	2610	368	90.7	181	21.7	88.2
134576 Orig	10	< 2	2255	395	26	659	6	< 0.5	< 0.2	24	< 0.5	< 0.5	270	2.6	3480	7600	788	2540	309	76.1	158	20.3	90.8
134576 Dup	10	< 2	2296	406	28	678	6	< 0.5	< 0.2	24	< 0.5	< 0.5	272	2.5	3500	7750	794	2550	312	77.3	158	20.4	91.7
134592 Orig	6	< 2	2103	320	32	328	11	< 0.5	< 0.2	23	< 0.5	< 0.5	215	0.6	3870	6600	642	2070	289	72.9	174	19.3	76.8
134592 Dup	7	< 2	2111	321	32	345	11	< 0.5	< 0.2	23	< 0.5	< 0.5	216	0.8	3990	6780	656	2120	298	74.2	174	19.5	77.1
134609 Orig	7	< 2	2405	383	29	376	5	< 0.5	< 0.2	9	< 0.5	< 0.5	186	0.8	4610	7890	779	2540	342	87.5	204	22.7	93.0
134609 Dup	8	< 2	2396	378	26	381	5	< 0.5	< 0.2	9	< 0.5	< 0.5	183	0.8	4570	7850	764	2490	339	85.9	201	22.3	90.1
134626 Orig	29	< 2	2852	397	45	421	25	< 0.5	< 0.2	7	< 0.5	< 0.5	191	1.2	6050	9100	843	2820	360	81.9	169	18.5	75.3
134626 Split	27	< 2	2845	378	44	446	24	< 0.5	< 0.2	7	< 0.5	< 0.5	188	1.2	6060	9110	842	2820	362	81.9	169	18.4	73.4
134635 Orig	19	< 2	2742	288	27	578	20	< 0.5	< 0.2	12	< 0.5	< 0.5	281	0.8	6120	10100	951	3180	400	91.3	190	19.0	75.7
134635 Split	19	< 2	2728	282	27	591	19	< 0.5	< 0.2	19	< 0.5	< 0.5	285	0.9	6100	10100	948	3170	398	91.6	185	18.7	73.3
134635 Orig	19	< 2	2705	283	27	561	20	< 0.5	< 0.2	11	< 0.5	< 0.5	276	0.7	6050	9970	942	3150	394	89.4	187	18.5	73.9

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134635 Dup	20	< 2	2780	293	27	596	20	< 0.5	< 0.2	12	< 0.5	< 0.5	286	1.0	6190	10200	960	3210	405	93.1	193	19.5	77.5
134645 Orig	18	< 2	2439	304	51	339	2	< 0.5	< 0.2	14	< 0.5	< 0.5	186	0.9	4350	7720	794	2840	380	88.2	183	19.8	82.8
134645 Split	19	< 2	2472	314	52	352	3	< 0.5	< 0.2	14	< 0.5	< 0.5	190	0.9	4140	7360	763	2760	374	85.5	175	19.2	81.2
134647 Orig	149	33	20100	938	214	24	30	1.4	< 0.2	< 1	5.7	1.7	915	7.7	18600	29200	2630	8140	867	198	376	38.3	174
134647 Dup	137	33	20160	953	219	18	31	2.4	< 0.2	< 1	6.4	1.8	931	5.5	18200	28600	2590	7990	854	197	372	39.1	174
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											906		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
LKSD-3 Meas				2.7	0.40						11.2	4.4	
LKSD-3 Cert				2.70	0.400						11.4	4.60	
OKA-2 Meas											28800		
OKA-2 Cert											28900.000		
W-2a Meas	0.7		0.34	1.9				< 1	< 0.1		2.2	0.5	
W-2a Cert	0.760		0.380	2.10				0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.7	1.09						23.8	4.1	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.6		0.6				< 5			
BIR-1a Cert				1.7		0.60				3			
NCS DC86312 Meas	35.6	96.2	14.3	87.1	12.0						25.7		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							86.6	333	34.0				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.4		3.4	0.48					27200			
NCS DC70014 Cert	1.3	3.5		3.3	0.50					27200			
NCS DC86316 Meas						712							
NCS DC86316 Cert						712							

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
NCS DC70009 (GBW07241) Meas	4.2	12.4	2.29	15.7				2200			27.3		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.5	2.35	15.2	2.16						53.5	137	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.1	2.97	18.2	2.50						36.9	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas		3.8	0.62	4.6	0.66			2	1.3	18	26.8	8.6	
JR-1 Cert		3.61	0.67	4.55	0.71			1.59	1.56	19.3	26.7	8.88	
NCS DC86318 Meas	569	1740	276	1860	252								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134566 Orig	12.4	26.9	2.68	13.4	1.51	1.2	< 0.1	3	< 0.1	169	534	< 0.1	
134566 Dup	12.5	26.6	2.71	13.6	1.52	1.3	0.1	4	< 0.1	157	525	< 0.1	
134576 Orig	13.7	32.2	3.59	16.8	2.03	1.2	0.6	6	0.2	197	474	0.5	
134576 Dup	14.0	31.0	3.49	17.5	2.07	1.3	0.7	6	0.2	186	476	0.5	
134592 Orig	10.6	21.6	2.32	12.2	1.42	1.3	< 0.1	2	< 0.1	171	408	0.1	
134592 Dup	10.6	21.0	2.34	12.3	1.45	1.3	< 0.1	3	< 0.1	178	414	0.1	
134609 Orig	13.4	26.9	3.11	17.0	2.08	1.5	< 0.1	2	< 0.1	179	330	0.1	
134609 Dup	12.9	28.7	3.07	16.2	1.85	1.4	< 0.1	2	< 0.1	179	323	0.1	
134626 Orig	11.6	26.2	3.10	16.8	2.06	1.7	0.2	3	< 0.1	12	432	0.3	
134626 Split	11.0	23.4	2.96	15.7	1.92	1.7	0.2	3	< 0.1	13	433	0.3	
134635 Orig	10.7	24.7	2.95	16.2	1.99	0.7	0.4	2	< 0.1	98	272	0.3	
134635 Split	10.5	23.5	2.82	15.4	1.97	0.7	0.4	3	< 0.1	100	268	0.3	
134635 Orig	10.3	24.7	2.92	15.7	1.94	0.6	0.4	2	< 0.1	94	264	0.3	
134635 Dup	11.0	24.8	2.97	16.7	2.04	0.7	0.4	2	< 0.1	101	280	0.3	
134645 Orig	11.8	26.1	2.96	15.8	2.01	1.0	< 0.1	2	< 0.1	106	283	0.2	
134645 Split	11.6	24.7	2.90	15.7	2.01	0.9	< 0.1	2	< 0.1	100	275	0.2	
134647 Orig	27.9	66.1	8.73	50.1	6.71	2.8	< 0.1	4	2.2	979	164	216	
134647 Dup	27.3	69.1	8.75	50.5	6.76	2.8	< 0.1	4	2.4	902	162	212	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03185 (i)
Invoice Date: 06-Jun-14
Your Reference: ASHRAM-BATCH #6

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

113 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03185 (i)**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134648	5.07	1.94	0.07	9.95	1.576	12.07	29.60	0.02	0.06	0.256	0.89	36.18	92.62	65	53	98	< 20	4	< 20	< 10	1180	79	13
134649	7.49	2.68	0.07	9.08	1.474	11.42	31.79	0.03	0.06	0.215	1.23	33.85	91.91	69	75	83	< 20	4	< 20	< 10	940	87	14
134650	4.21	2.36	0.33	7.93	1.349	12.05	31.89	0.11	0.16	0.228	2.69	35.72	94.82	68	104	78	< 20	7	< 20	< 10	350	71	13
134651	4.50	4.00	0.26	13.64	1.692	11.97	26.34	0.08	0.13	0.193	0.90	35.10	94.29	67	37	94	< 20	9	< 20	10	790	85	16
134652	1.24	2.46	0.10	9.33	1.192	14.10	27.26	0.04	0.06	0.351	1.09	39.72	95.69	79	24	112	< 20	8	< 20	< 10	650	61	14
134653	2.76	1.37	0.09	11.53	1.480	12.99	27.48	0.04	0.05	0.287	1.09	38.55	94.94	74	26	111	< 20	5	< 20	< 10	1030	70	15
134654	5.33	1.68	0.09	12.58	1.726	12.18	27.57	0.03	0.06	0.505	0.75	35.68	92.85	51	23	117	< 20	7	< 20	< 10	1570	85	17
134655	6.11	1.36	0.16	8.89	1.354	12.12	30.90	0.04	0.13	0.335	0.77	36.02	92.08	53	22	100	< 20	4	< 20	< 10	1130	76	15
134656	2.95	1.87	0.15	11.14	1.532	13.62	28.73	< 0.01	0.02	0.313	1.42	37.24	96.05	71	23	105	< 20	5	< 20	10	980	73	15
134657	3.02	2.18	0.10	8.83	1.223	13.41	28.49	0.04	0.09	0.380	1.50	37.80	94.04	63	21	136	< 20	5	< 20	< 10	960	80	15
134658	5.15	2.73	0.18	14.60	1.712	11.40	27.38	0.04	0.10	0.302	1.98	33.54	93.97	64	15	97	< 20	8	< 20	< 10	1550	72	15
134659	5.85	1.22	0.13	15.74	1.836	11.61	26.62	0.04	0.06	0.297	1.12	34.38	93.04	61	14	99	< 20	9	< 20	< 10	1420	73	14
134660	5.01	1.09	0.08	11.33	1.497	12.14	29.13	0.04	0.05	0.301	1.94	35.30	92.90	64	18	93	< 20	6	< 20	< 10	1270	83	16
134661	2.77	2.87	0.12	13.19	1.615	11.83	25.90	0.04	0.04	0.420	1.40	36.23	93.65	63	11	105	< 20	8	< 20	510	1110	69	15
134662	2.81	1.46	0.13	11.46	1.557	12.76	29.13	< 0.01	0.02	0.357	1.92	36.43	95.24	80	11	94	< 20	7	< 20	< 10	1070	74	15
134663	3.52	1.72	0.12	11.74	1.561	12.47	29.22	0.04	0.05	0.330	2.04	36.02	95.31	77	11	94	< 20	7	< 20	< 10	1120	75	15
134664	5.09	2.01	0.12	11.41	1.532	11.73	28.51	0.03	0.06	0.381	1.55	34.95	92.29	64	16	101	< 20	7	< 20	< 10	1080	81	16
134665	3.93	0.67	0.13	12.92	1.541	12.20	27.78	0.05	0.05	0.267	1.38	36.68	93.65	72	12	97	< 20	8	< 20	< 10	1650	75	15
134666	2.99	0.72	0.12	13.12	1.603	12.79	27.12	0.04	0.04	0.466	0.95	37.88	94.84	69	59	123	< 20	7	< 20	< 10	1260	77	15
134667	1.95	0.56	0.19	10.91	1.372	12.96	30.21	0.06	0.05	0.380	3.01	37.55	97.24	62	14	110	< 20	5	< 20	< 10	880	55	13
134668	1.32	0.73	0.13	11.28	1.493	13.52	27.20	0.05	0.05	0.418	0.75	40.10	95.71	68	11	117	< 20	8	< 20	< 10	1000	64	14
134669	1.79	0.76	0.11	10.77	1.471	13.42	28.14	0.04	0.04	0.355	0.93	39.46	95.49	66	12	110	< 20	7	< 20	< 10	1000	66	15
134670	2.62	1.41	0.11	14.11	1.724	11.79	26.08	0.05	0.03	0.383	1.30	36.94	93.92	73	7	104	< 20	8	< 20	< 10	1480	64	15
134671	2.68	0.78	0.13	12.68	1.519	12.24	27.26	0.06	0.06	0.669	1.19	40.80	97.39	79	11	123	< 20	8	< 20	< 10	1050	65	15
134672	2.82	1.08	0.07	13.56	1.733	12.27	28.39	< 0.01	0.01	0.289	0.85	36.66	94.94	85	10	90	< 20	8	< 20	< 10	1720	78	17
134673	3.97	1.75	0.12	13.10	1.563	11.92	28.42	0.05	0.04	0.584	1.78	35.61	94.94	82	9	111	< 20	6	< 20	< 10	1110	65	14
134674	0.04	97.63	0.11	0.45	0.026	0.18	0.43	0.05	0.02	0.006	0.01	0.48	99.39	1	< 1	< 5	20	< 1	< 20	< 10	< 30	1	1
134675	6.08	19.57	3.01	27.04	2.298	6.74	16.71	0.32	1.30	1.401	0.58	15.20	94.16	20	12	152	170	30	80	40	1520	57	13
134676	2.62	1.77	0.11	14.42	1.602	11.95	26.26	0.04	0.05	0.485	1.38	36.83	94.90	78	10	102	< 20	12	< 20	< 10	1260	59	14
134677	0.49	4.06	0.68	13.14	1.669	12.28	26.74	0.02	0.01	0.622	1.52	36.86	97.58	86	9	120	< 20	9	< 20	20	1290	66	15
134678	3.47	1.85	0.06	10.07	1.432	12.05	28.61	0.02	0.04	0.476	1.61	37.43	93.65	82	11	104	< 20	4	< 20	< 10	1430	72	15
134679	5.53	1.99	0.13	10.45	1.403	11.40	29.85	0.04	0.07	0.768	1.92	34.27	92.28	85	8	105	< 20	7	< 20	< 10	1350	73	14
134680	5.34	2.18	0.29	13.41	1.472	11.24	28.73	0.06	0.07	0.738	1.50	36.04	95.72	75	7	107	< 20	12	< 20	< 10	1030	56	13
134681	4.02	1.43	0.19	12.64	1.653	11.22	31.33	< 0.01	0.02	0.678	1.80	33.49	94.44	84	9	111	< 20	6	< 20	10	1410	81	17
134682	4.19	1.69	0.09	19.27	2.145	10.34	22.45	0.03	0.03	0.783	0.63	34.71	92.17	65	9	119	< 20	11	< 20	< 10	1180	61	13
134683	3.01	2.40	0.17	27.63	2.626	8.96	16.01	0.04	0.08	0.536	0.64	33.32	92.40	54	8	100	< 20	14	< 20	< 10	1820	50	13
134684	2.42	3.70	0.09	32.99	2.916	8.10	12.28	0.04	0.02	0.492	0.93	32.53	94.08	46	7	100	< 20	15	< 20	< 10	1900	45	13
134685	2.72	5.44	0.13	29.08	2.721	8.22	14.89	0.03	0.04	0.276	1.13	32.15	94.10	55	7	86	< 20	14	< 20	< 10	2110	40	11
134686	4.19	1.36	0.14	18.24	1.940	10.64	23.75	0.06	0.04	0.207	0.67	35.21	92.26	65	9	81	< 20	8	< 20	< 10	1740	56	12
134687	4.43	1.75	0.19	15.89	1.710	11.49	26.69	0.05	0.08	0.254	0.95	35.51	94.56	76	11	89	< 20	8	< 20	< 10	1160	63	14
134688	2.34	1.51	0.21	20.20	2.139	10.59	22.49	0.04	0.03	0.314	3.01	34.41	94.94	70	10	95	< 20	9	< 20	< 10	1580	59	14
134689	3.09	1.29	0.15	19.78	2.140	11.03	23.61	0.05	0.03	0.330	2.34	34.77	95.52	68	13	99	< 20	9	< 20	< 10	1360	59	14
134690	4.08	1.20	0.15	14.25	1.506	12.16	27.35	0.05	0.08	0.366	1.19	36.35	94.66	78	15	104	< 20	7	< 20	< 10	1080	67	16
134691	2.02	1.36	0.10	12.56	1.478	12.60	27.20	0.04	0.07	0.338	1.29	39.96	96.99	75	10	100	< 20	6	< 20	< 10	850	63	16
134692	1.76	1.27	0.11	15.90	1.603	12.25	25.47	0.04	0.05	0.415	1.01	38.33	96.45	82	8	108	< 20	10	< 20	< 10	1130	62	16
134693	3.58	2.45	0.17	13.98	1.493	11.67	26.46	0.05	0.07	0.169	1.24	36.36	94.10	80	12	82	< 20	7	< 20	< 10	1250	55	15
134694	3.64	2.01	0.11	12.52	1.518	11.92	26.62	0.04	0.05	0.311	1.05	36.98	93.12	63	11	79	210	6	< 20	< 10	800	65	14
134695	4.93	2.91	0.10	11.44	1.350	11.69	28.48	0.03	0.08	0.234	1.33	34.52	92.17	55	15	73	< 20	6	< 20	< 10	980	78	16

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134696	4.77	4.79	0.11	11.92	1.391	11.59	28.11	0.04	0.07	0.327	1.64	34.15	94.14	59	13	83	< 20	6	< 20	< 10	980	74	17
134697	2.43	2.65	0.11	15.19	1.532	12.32	24.64	0.03	0.07	0.183	0.77	37.51	95.01	61	8	77	< 20	10	< 20	< 10	1240	60	15
134698	4.30	2.36	0.13	12.24	1.373	12.08	27.81	0.03	0.09	0.679	0.92	35.99	93.71	55	12	89	< 20	6	< 20	< 10	1140	62	15
134699	0.03	97.72	0.07	0.36	0.018	0.11	0.27	0.03	0.02	0.003	0.01	0.43	99.04	< 1	< 1	< 5	60	< 1	< 20	< 10	< 30	1	2
134700	1.85	15.04	2.60	13.17	0.143	0.47	26.34	0.97	1.06	0.145	19.43	8.69	88.04	16	14	159	30	34	70	110	650	243	47
134701	5.50	3.27	0.14	11.36	1.477	11.29	29.70	0.04	0.06	0.375	1.10	34.40	93.22	59	12	74	< 20	6	< 20	< 10	990	69	16
134702	2.13	5.42	0.15	9.18	0.992	13.42	27.03	0.05	0.04	0.101	0.71	38.34	95.46	45	18	54	< 20	4	< 20	< 10	620	43	10
134703	2.38	3.90	0.08	8.03	1.129	13.70	27.31	0.04	0.05	0.156	0.75	38.90	94.05	64	16	98	< 20	4	< 20	< 10	810	61	15
134704	4.35	4.99	0.31	8.32	1.233	12.60	28.22	0.15	0.10	0.150	0.89	36.11	93.06	65	12	91	< 20	3	< 20	< 10	880	66	15
134705	3.49	5.70	0.18	8.55	1.190	12.84	27.46	0.06	0.11	0.159	1.18	36.34	93.77	69	12	92	< 20	4	< 20	< 10	980	68	16
134706	4.73	4.18	0.11	8.26	1.257	12.56	28.69	0.06	0.07	0.195	2.06	35.34	92.79	57	18	85	< 20	4	< 20	< 10	1300	74	16
134707	6.13	2.24	0.08	9.82	1.367	12.21	28.77	0.04	0.06	0.263	1.22	35.14	91.20	67	19	90	< 20	4	< 20	< 10	1120	80	17
134708	6.19	2.40	0.10	11.21	1.260	12.32	28.50	0.04	0.07	0.165	1.00	38.70	95.76	78	18	88	< 20	6	< 20	< 10	1410	71	16
134709	3.76	3.64	0.11	8.91	1.214	12.12	29.14	0.07	0.07	0.191	3.73	34.70	93.90	74	13	89	< 20	4	< 20	< 10	790	71	17
134710	2.72	1.49	0.14	7.71	1.154	11.54	30.65	0.07	0.10	0.132	5.96	34.38	93.32	79	12	86	< 20	2	< 20	< 10	450	74	20
134711	3.41	1.56	0.13	11.16	1.273	11.02	30.15	0.06	0.07	0.124	5.92	33.03	94.49	68	10	85	< 20	4	< 20	40	740	77	20
134712	4.83	2.40	0.09	9.33	1.135	12.72	29.51	0.05	0.07	0.200	1.07	35.83	92.41	63	17	101	< 20	6	< 20	< 10	980	84	18
134713	6.30	2.08	0.10	8.99	1.097	12.94	30.83	0.05	0.07	0.187	1.06	35.60	92.99	63	20	95	< 20	4	< 20	< 10	920	83	17
134714	4.22	1.30	0.13	11.48	1.396	12.29	27.84	0.04	0.08	0.822	1.21	36.25	92.85	68	11	150	< 20	6	< 20	< 10	1210	73	18
134715	5.47	1.37	0.16	12.07	1.500	12.14	28.61	0.04	0.09	0.485	0.98	35.56	93.00	65	14	124	< 20	6	< 20	< 10	1030	62	15
134716	8.49	1.71	0.11	12.43	1.749	10.65	29.94	0.04	0.05	0.333	0.90	32.20	90.10	58	20	91	< 20	7	< 20	< 10	1630	68	14
134717	9.71	1.64	0.08	10.21	1.336	11.16	32.28	0.04	0.04	0.248	0.93	32.49	90.46	50	18	86	< 20	7	< 20	< 10	1690	78	15
134718	6.65	6.32	0.37	12.32	1.447	10.24	28.40	0.04	0.07	0.242	1.92	30.39	91.77	53	9	89	< 20	13	< 20	< 10	1870	68	15
134719	4.41	3.10	0.26	15.51	1.602	11.05	25.48	0.04	0.04	0.260	1.43	34.31	93.07	64	17	97	< 20	11	< 20	< 10	1300	55	13
134720	4.91	4.46	0.16	15.20	1.562	10.71	25.38	0.06	0.07	0.380	0.80	33.94	92.73	68	10	118	< 20	7	< 20	< 10	1350	61	16
134721	4.14	1.87	0.16	13.95	1.622	11.96	26.68	0.03	0.06	0.407	0.84	36.11	93.69	68	11	123	< 20	8	< 20	< 10	1300	64	15
134722	6.46	2.44	0.13	15.26	1.637	10.85	27.18	0.04	0.09	0.259	0.89	33.65	92.43	75	11	95	< 20	9	< 20	< 10	1400	61	14
134723	4.97	4.64	0.36	11.80	1.392	10.89	28.58	0.08	0.25	0.314	1.25	33.47	93.03	78	8	106	< 20	11	< 20	< 10	1540	65	15
134724	0.02	97.39	0.09	0.28	0.013	0.09	0.28	0.04	0.02	0.002	< 0.01	0.37	98.58	< 1	< 1	< 5	70	< 1	< 20	780	40	1	2
134725	6.07	20.66	3.03	27.90	2.375	6.86	17.32	0.32	1.34	1.457	0.57	12.32	94.16	21	13	160	180	30	90	40	1480	59	15
134726	6.17	2.16	0.13	14.12	1.686	10.99	27.73	0.03	0.07	0.337	0.74	34.15	92.15	74	8	121	< 20	9	< 20	< 10	1410	70	16
134727	4.75	2.12	0.15	23.46	2.349	9.92	21.35	0.03	0.05	0.131	0.44	34.00	94.00	60	6	92	< 20	11	< 20	< 10	1760	62	16
134728	5.01	1.20	0.10	15.09	1.734	11.29	26.75	0.03	0.06	0.278	0.46	35.86	92.84	67	7	119	< 20	7	< 20	< 10	1610	68	17
134729	4.02	3.48	0.27	13.78	1.526	11.36	26.36	0.10	0.11	0.326	0.64	35.60	93.56	71	9	103	< 20	8	< 20	< 10	900	59	14
134730	5.23	4.77	0.15	14.61	1.538	10.96	26.58	0.06	0.09	0.190	0.68	34.21	93.85	62	9	91	< 20	8	< 20	< 10	1150	56	13
134731	4.41	0.32	0.08	18.51	1.889	10.94	25.88	0.04	0.05	0.416	1.23	35.24	94.60	64	6	106	< 20	9	< 20	< 10	1080	55	12
134732	1.84	1.21	0.21	12.97	1.328	13.06	25.93	0.05	0.18	0.131	0.55	39.28	94.90	37	8	66	< 20	5	< 20	< 10	960	67	15
134733	3.61	2.58	0.24	15.86	1.633	10.98	25.90	0.12	0.12	0.271	1.59	34.74	94.03	79	7	105	< 20	9	< 20	< 10	1500	36	8
134734	2.33	1.27	0.24	20.00	1.881	11.13	21.89	0.04	0.21	0.210	0.81	35.64	93.32	70	8	138	< 20	8	< 20	< 10	1380	35	8
134735	0.94	1.67	0.34	14.81	1.530	11.59	24.19	0.05	0.29	0.158	0.76	37.66	93.05	45	7	87	< 20	8	< 20	< 10	1990	35	7
134736	0.90	0.83	0.19	16.80	1.725	12.00	23.54	0.03	0.16	0.092	0.34	38.03	93.76	53	5	85	< 20	10	< 20	40	1650	35	7
134737	1.09	1.37	0.25	10.97	1.191	12.80	25.93	0.04	0.25	0.095	0.49	40.07	93.46	45	8	73	< 20	4	< 20	< 10	1010	24	5
134738	0.27	1.21	0.11	23.73	2.475	11.12	17.95	0.03	0.07	0.160	0.30	37.93	95.08	55	3	83	30	12	< 20	< 10	1830	32	7
134739	0.53	0.71	0.12	17.52	1.734	12.09	23.45	0.05	0.08	0.227	0.47	39.62	96.07	77	6	99	< 20	11	20	< 10	1580	24	6
134740	0.61	0.89	0.12	17.00	1.694	11.85	23.02	0.05	0.08	0.236	0.42	39.44	94.79	78	6	108	< 20	11	20	< 10	1420	26	6
134741	0.64	5.46	0.19	13.19	1.242	12.48	22.58	0.04	0.15	0.344	0.43	37.91	94.01	52	10	111	< 20	16	50	< 10	1970	38	9
134742	3.52	13.44	0.30	19.59	1.852	8.40	19.77	0.07	0.07	0.262	2.22	28.31	94.28	58	9	70	< 20	11	< 20	< 10	1620	28	7
134743	7.10	3.77	0.12	17.80	2.394	9.79	26.47	0.06	0.04	0.284	0.39	31.35	92.46	74	8	82	< 20	12	< 20	< 10	890	38	9
134744	5.63	1.93	0.17	15.09	2.296	10.76	27.42	0.07	0.06	0.262	0.23	34.35	92.64	81	8	86	< 20	8	< 20	< 10	1120	46	10
134745	2.09	0.99	0.23	11.16	1.317	13.32	28.70	0.01	0.03	0.203	1.66	37.30	94.92	71	10	80	< 20	13	< 20	< 10	430	34	7

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134746	5.50	0.69	0.09	15.28	1.969	11.04	27.13	0.04	0.05	0.151	0.38	35.70	92.52	85	8	87	< 20	6	< 20	< 10	1490	35	8
134747	5.00	0.68	0.19	15.77	2.045	11.55	26.98	< 0.01	0.02	0.113	0.33	36.02	93.70	99	7	73	< 20	5	< 20	< 10	1330	37	7
134748	5.16	0.41	0.11	14.25	2.011	11.51	28.27	0.05	0.05	0.115	0.52	36.24	93.53	105	6	71	< 20	4	< 20	< 10	1440	35	7
134749	0.03	99.66	0.07	0.24	0.015	0.07	0.22	0.03	0.01	0.002	< 0.01	0.25	100.6	< 1	< 1	< 5	70	< 1	< 20	< 10	< 30	3	1
134750	1.85	14.74	2.52	12.93	0.145	0.48	27.10	0.85	1.05	0.143	19.02	8.04	87.00	17	13	155	20	33	70	110	640	129	22
134751	5.16	0.30	0.09	17.78	2.121	10.70	25.22	0.03	0.03	0.282	0.25	35.53	92.32	68	9	88	< 20	7	< 20	< 10	2030	40	8
134752	5.12	0.76	0.17	14.30	1.788	10.82	26.12	0.03	0.04	0.189	0.42	35.57	90.19	66	7	67	< 20	9	< 20	< 10	1520	32	6
134753	4.23	2.57	0.09	14.57	1.970	10.97	26.24	0.03	0.03	0.202	0.55	35.70	92.91	64	6	71	< 20	8	< 20	< 10	1570	38	8
134754	4.36	3.26	0.10	12.76	1.740	11.67	26.54	0.04	0.04	0.177	0.97	35.54	92.84	52	11	55	< 20	6	< 20	< 10	1230	37	8
134755	3.97	1.48	0.07	12.61	1.693	12.91	26.91	0.03	0.03	0.195	0.67	37.17	93.78	57	10	57	< 20	6	< 20	< 10	1770	39	8
134756	6.21	2.27	0.10	12.59	1.731	11.60	28.10	0.04	0.04	0.260	0.92	34.21	91.85	65	13	57	< 20	5	< 20	< 10	1340	42	8
134757	5.26	1.91	0.09	13.92	1.646	11.88	27.56	0.03	0.03	0.227	0.72	35.69	93.71	54	10	60	< 20	6	< 20	< 10	1380	37	7
134758	7.35	2.41	0.09	15.09	1.613	10.57	27.82	0.03	0.03	0.231	0.24	33.57	91.70	50	9	66	< 20	8	< 20	< 10	1590	40	8
134759	5.87	0.35	0.09	16.21	1.483	11.00	27.62	0.03	0.02	0.151	0.28	35.52	92.74	62	7	63	< 20	10	< 20	< 10	1770	33	7
134760	5.82	0.35	0.13	17.57	1.654	10.71	26.54	0.06	0.03	0.148	0.89	34.77	92.84	80	9	62	< 20	10	< 20	< 10	1650	35	7

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134648	20	< 2	2536	328	25	561	< 2	< 0.5	0.2	16	< 0.5	< 0.5	592	1.1	5620	8780	791	2330	280	70.1	149	18.8	80.4
134649	23	< 2	2598	325	32	482	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	538	0.6	6060	9650	887	2630	325	81.8	168	20.2	80.1
134650	20	3	2647	302	65	501	3	< 0.5	< 0.2	15	< 0.5	< 0.5	320	0.6	4500	7340	714	2300	309	74.5	148	17.0	69.2
134651	26	2	2101	255	29	399	< 2	< 0.5	0.2	18	< 0.5	< 0.5	350	1.5	5220	8450	827	2670	363	87.9	176	18.5	68.0
134652	24	< 2	2318	292	34	304	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	225	0.8	2670	5460	638	2400	363	88.6	176	19.7	76.7
134653	24	< 2	2353	279	31	526	< 2	< 0.5	0.2	17	< 0.5	< 0.5	245	1.6	3670	6700	722	2540	382	95.4	191	20.4	75.1
134654	26	< 2	2369	257	27	934	< 2	< 0.5	0.2	24	0.6	< 0.5	303	2.4	4840	8570	886	2920	369	86.9	173	18.8	67.5
134655	24	2	2772	271	23	548	3	< 0.5	< 0.2	19	< 0.5	< 0.5	565	0.7	4650	7800	783	2610	336	79.4	159	17.5	66.7
134656	26	< 2	2552	306	36	661	3	< 0.5	< 0.2	17	< 0.5	< 0.5	352	1.7	4040	6790	698	2270	305	73.8	161	17.7	63.3
134657	27	< 2	2601	358	40	750	3	< 0.5	< 0.2	19	< 0.5	< 0.5	366	0.8	4960	8310	837	2800	381	93.5	190	22.1	85.6
134658	25	< 2	2229	387	57	767	2	< 0.5	0.2	23	< 0.5	< 0.5	268	1.4	4040	7390	764	2540	361	91.8	194	22.8	90.7
134659	24	< 2	2003	363	34	735	< 2	< 0.5	0.3	24	< 0.5	< 0.5	207	1.4	4410	7510	750	2460	352	88.9	187	21.9	84.0
134660	25	< 2	2351	358	47	837	2	< 0.5	< 0.2	20	< 0.5	< 0.5	238	0.8	5550	8950	869	2780	360	89.2	187	21.6	84.5
134661	25	< 2	1837	387	29	589	< 2	< 0.5	0.2	51	0.9	< 0.5	155	1.6	3480	6640	727	2580	383	97.6	205	24.6	95.6
134662	29	< 2	2115	374	38	851	3	< 0.5	< 0.2	25	< 0.5	< 0.5	188	1.8	3610	6620	722	2460	356	90.0	202	23.2	85.6
134663	27	< 2	2181	366	46	774	3	< 0.5	< 0.2	22	< 0.5	< 0.5	178	1.2	3990	7400	791	2710	392	102	215	24.8	94.2
134664	31	< 2	2157	397	43	876	2	< 0.5	< 0.2	26	< 0.5	< 0.5	189	0.8	4530	8100	839	2820	388	97.3	205	25.3	102
134665	27	< 2	2129	380	37	907	2	< 0.5	0.2	22	< 0.5	< 0.5	152	1.5	4400	7670	795	2700	395	100.0	210	25.2	98.7
134666	28	< 2	2170	350	30	738	3	< 0.5	0.2	26	< 0.5	< 0.5	165	1.1	4540	7860	806	2710	393	97.5	200	23.2	90.5
134667	23	< 2	2790	337	61	385	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	140	0.9	2830	5390	595	2150	341	87.1	181	21.6	87.1
134668	28	< 2	2288	318	24	362	< 2	< 0.5	< 0.2	23	0.6	< 0.5	125	0.9	3230	6130	677	2420	364	93.1	198	23.6	91.4
134669	28	< 2	2241	328	25	435	< 2	< 0.5	< 0.2	18	< 0.5	< 0.5	118	1.0	3290	6300	706	2530	386	99.8	210	24.7	92.4
134670	26	< 2	1901	460	18	527	< 2	< 0.5	0.3	25	0.6	< 0.5	99	1.4	2930	6000	699	2600	431	115	249	29.7	122
134671	27	< 2	1827	447	27	647	< 2	< 0.5	0.3	34	0.6	< 0.5	133	1.0	3300	6370	718	2610	423	112	240	28.2	118
134672	32	< 2	1900	431	27	926	5	< 0.5	0.3	21	< 0.5	< 0.5	114	3.1	3720	7060	765	2600	405	105	234	27.0	103
134673	22	< 2	2164	385	36	931	4	< 0.5	0.2	29	< 0.5	< 0.5	153	0.9	3430	6370	692	2420	366	95.1	204	24.3	94.5
134674	< 5	< 2	30	6	5	55	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	48.3	90.8	9.58	34.3	5.4	1.36	2.9	0.3	1.3
134675	19	26	2915	883	211	372	52	1.3	< 0.2	38	< 0.5	< 0.5	13060	2.4	2480	4520	527	2120	455	126	292	39.0	195
134676	23	< 2	2118	290	27	561	33	< 0.5	0.3	25	0.6	< 0.5	190	1.6	2890	5770	660	2390	395	102	208	23.1	82.2
134677	28	< 2	2082	308	35	632	3	< 0.5	0.2	29	< 0.5	< 0.5	247	1.2	2910	5930	673	2340	371	97.2	217	23.5	82.1
134678	22	< 2	2225	328	38	880	< 2	< 0.5	0.2	26	< 0.5	< 0.5	172	0.5	4040	7440	779	2630	387	99.6	212	24.0	86.7
134679	23	< 2	2223	321	52	1220	3	< 0.5	0.2	33	< 0.5	< 0.5	211	1.3	4430	7740	770	2490	356	91.2	194	22.0	79.8
134680	21	< 2	1889	363	40	1180	2	< 0.5	0.2	31	< 0.5	< 0.5	194	0.6	2880	5420	596	2140	345	92.0	199	23.6	90.0
134681	29	< 2	2225	327	43	1560	2	< 0.5	0.2	53	0.6	< 0.5	188	1.5	3930	7200	772	2590	399	103	227	24.1	79.4
134682	21	< 2	1676	265	18	993	< 2	< 0.5	0.3	48	0.6	< 0.5	122	1.2	3090	6080	680	2420	389	101	216	23.9	81.0
134683	18	< 2	1336	292	12	790	< 2	< 0.5	0.4	36	0.6	< 0.5	154	2.7	1890	4290	543	2150	399	99.4	201	21.5	78.4
134684	18	< 2	1188	269	14	627	< 2	< 0.5	0.6	37	< 0.5	< 0.5	124	4.5	1450	3430	472	2100	432	104	198	19.8	69.5
134685	17	< 2	1335	335	26	506	< 2	< 0.5	0.6	28	< 0.5	< 0.5	101	4.5	1230	2950	419	1860	400	101	212	23.1	84.7
134686	18	< 2	1766	399	21	594	< 2	< 0.5	0.3	23	< 0.5	< 0.5	118	2.5	3010	5540	596	2090	380	106	235	28.1	105
134687	22	< 2	1924	351	37	793	< 2	< 0.5	0.2	23	2.5	< 0.5	257	1.9	3500	6370	683	2380	378	98.4	206	23.4	86.7
134688	22	< 2	2196	359	72	558	2	< 0.5	0.3	23	0.8	< 0.5	112	1.9	2780	5550	653	2470	442	115	240	27.0	99.2
134689	24	< 2	2214	346	56	710	2	< 0.5	0.3	28	< 0.5	< 0.5	111	2.0	2950	5670	651	2390	414	108	224	25.6	92.7
134690	23	< 2	1996	408	33	961	< 2	< 0.5	0.2	29	< 0.5	< 0.5	212	0.8	3990	7330	785	2720	449	116	240	27.4	104
134691	25	< 2	2139	402	33	547	< 2	< 0.5	< 0.2	23	0.5	< 0.5	198	0.8	3610	6970	779	2790	458	119	249	28.8	109
134692	26	< 2	2070	431	25	716	< 2	< 0.5	0.3	31	2.0	< 0.5	160	1.5	3350	6560	755	2800	532	139	280	30.6	114
134693	22	< 2	2094	422	33	777	5	< 0.5	0.3	22	< 0.5	< 0.5	193	1.6	3240	6020	663	2440	441	108	219	25.2	98.8
134694	21	< 2	2274	317	33	943	5	< 0.5	< 0.2	23	< 0.5	< 0.5	184	1.3	4180	7290	762	2580	389	97.6	201	23.0	85.4
134695	24	< 2	2513	374	44	824	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	262	0.7	5490	8900	873	2810	395	97.2	202	23.5	90.9
134696	25	< 2	2253	339	41	1000	< 2	< 0.5	< 0.2	25	< 0.5	< 0.5	237	0.6	4810	8500	890	3030	450	109	220	24.1	86.9

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134697	21	< 2	2418	283	28	675	< 2	< 0.5	0.2	17	< 0.5	< 0.5	225	1.8	3360	6400	710	2520	388	94.3	193	21.6	78.3
134698	21	< 2	2372	353	28	1180	< 2	< 0.5	0.2	40	< 0.5	< 0.5	264	0.8	3710	6870	728	2500	375	93.7	198	23.2	91.5
134699	< 5	< 2	20	4	< 4	57	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	36.9	66.5	6.96	24.4	3.9	0.92	2.0	0.2	0.8
134700	167	36	19780	946	216	54	34	2.4	< 0.2	< 1	6.7	1.8	919	7.4	18600	29400	2640	8280	884	201	372	39.4	154
134701	23	< 2	2137	341	34	1020	< 2	< 0.5	< 0.2	26	< 0.5	< 0.5	259	0.7	4150	7700	816	2750	393	96.1	201	23.0	87.6
134702	15	< 2	2593	242	26	432	3	< 0.5	< 0.2	12	< 0.5	< 0.5	287	0.9	2460	4560	490	1680	259	64.8	135	15.8	61.2
134703	22	< 2	2647	305	24	511	18	< 0.5	< 0.2	15	< 0.5	< 0.5	384	0.8	3310	6420	724	2610	401	99.0	199	21.3	77.2
134704	21	< 2	2724	445	32	547	6	< 0.5	< 0.2	13	< 0.5	< 0.5	333	0.7	4330	7420	756	2510	385	104	226	28.3	111
134705	21	< 2	2235	377	38	683	5	< 0.5	< 0.2	16	< 0.5	< 0.5	349	0.8	4150	7480	789	2680	384	99.1	212	24.9	97.6
134706	23	< 2	3070	415	49	723	9	< 0.5	< 0.2	14	< 0.5	< 0.5	361	0.6	5020	8660	856	2730	379	98.4	219	26.8	105
134707	25	< 2	2414	368	32	558	8	< 0.5	< 0.2	20	< 0.5	< 0.5	306	1.0	5230	8920	896	2910	410	105	219	25.6	92.8
134708	24	< 2	2237	348	34	350	19	< 0.5	< 0.2	10	< 0.5	< 0.5	303	1.0	4420	7700	796	2690	369	88.2	182	20.7	78.0
134709	25	< 2	2968	642	47	643	11	< 0.5	< 0.2	14	< 0.5	< 0.5	295	0.5	4060	7490	805	2810	411	104	233	32.4	145
134710	27	< 2	3004	849	61	568	< 2	0.5	< 0.2	11	< 0.5	< 0.5	330	< 0.4	3610	7490	873	3210	483	124	280	41.1	191
134711	28	< 2	2949	531	45	413	3	< 0.5	< 0.2	15	< 0.5	< 0.5	265	0.7	3710	7840	918	3380	495	115	234	28.2	121
134712	26	< 2	2451	429	29	760	28	< 0.5	< 0.2	19	< 0.5	< 0.5	327	0.9	5960	9690	931	2970	432	110	235	27.7	105
134713	26	< 2	2570	447	33	767	28	< 0.5	< 0.2	17	< 0.5	< 0.5	341	0.8	5780	9300	893	2830	412	107	229	27.2	106
134714	26	< 2	2405	538	36	1140	16	< 0.5	0.2	30	0.6	< 0.5	280	1.0	4140	7460	801	2820	448	117	265	32.0	140
134715	20	< 2	2241	464	36	1010	17	< 0.5	< 0.2	23	< 0.5	< 0.5	306	1.4	3660	6470	685	2350	352	92.9	209	27.2	113
134716	21	< 2	2430	462	28	606	12	< 0.5	0.2	25	< 0.5	< 0.5	264	4.0	4130	7360	731	2310	340	89.4	202	26.4	109
134717	23	< 2	2576	474	30	520	15	< 0.5	< 0.2	15	< 0.5	< 0.5	256	2.2	5470	8800	826	2570	376	93.0	205	26.6	110
134718	23	< 2	2196	503	89	528	12	0.7	0.2	25	< 0.5	< 0.5	207	1.7	4590	7360	721	2310	327	83.9	191	25.6	112
134719	20	< 2	2009	593	41	476	3	< 0.5	0.2	24	< 0.5	< 0.5	194	1.8	3140	5510	581	1980	305	82.8	198	29.0	132
134720	22	< 2	1954	471	38	699	2	< 0.5	0.3	36	< 0.5	< 0.5	237	2.1	3460	6320	672	2330	429	115	251	30.1	118
134721	22	< 2	2144	523	43	753	4	< 0.5	0.2	35	< 0.5	< 0.5	273	2.1	3890	6770	702	2370	392	104	234	31.0	131
134722	21	< 2	2034	363	47	648	4	0.5	0.3	25	< 0.5	< 0.5	285	1.6	3390	6180	652	2230	351	87.0	183	21.3	83.5
134723	26	4	2345	490	61	696	15	0.6	0.2	33	< 0.5	< 0.5	397	1.9	3750	6690	701	2380	396	106	236	29.1	117
134724	< 5	< 2	15	3	< 4	39	3	< 0.5	< 0.2	72	< 0.5	< 0.5	6	< 0.4	22.6	40.8	4.16	14.5	2.3	0.54	1.3	0.2	0.6
134725	22	27	3034	896	216	396	52	1.6	< 0.2	40	< 0.5	< 0.5	13450	2.3	2620	4790	554	2210	476	130	304	43.3	202
134726	24	< 2	2170	637	38	635	6	< 0.5	0.2	26	< 0.5	< 0.5	225	1.3	3790	7070	748	2530	420	118	276	38.7	167
134727	24	< 2	1516	633	29	336	5	< 0.5	0.4	17	< 0.5	< 0.5	144	2.2	2730	5660	657	2450	460	125	288	38.4	165
134728	24	< 2	1881	672	28	548	4	< 0.5	0.3	25	< 0.5	< 0.5	201	1.6	3510	6780	749	2660	456	125	287	38.2	166
134729	20	2	1823	402	33	705	4	< 0.5	< 0.2	25	< 0.5	< 0.5	278	0.8	3340	6040	638	2180	367	98.6	213	26.8	107
134730	19	< 2	1911	375	30	422	17	< 0.5	0.2	20	< 0.5	< 0.5	320	1.6	2930	5570	610	2180	368	97.1	213	25.8	99.1
134731	17	< 2	2013	541	22	467	12	< 0.5	0.2	19	< 0.5	< 0.5	159	0.9	3410	5710	563	1910	386	105	233	32.0	139
134732	21	3	1697	379	15	291	10	< 0.5	< 0.2	15	< 0.5	< 0.5	240	0.8	3920	7190	733	2370	360	91.4	200	25.2	100
134733	19	< 2	2261	683	58	526	34	0.5	0.3	36	< 0.5	< 0.5	219	1.9	3440	6740	718	2640	459	124	305	43.0	199
134734	17	4	1958	494	30	367	46	< 0.5	0.3	40	< 0.5	< 0.5	298	2.1	3350	6470	684	2550	453	116	260	31.8	136
134735	17	5	2226	312	12	316	35	0.5	0.3	28	< 0.5	< 0.5	350	3.3	3230	6130	650	2400	385	95.5	209	25.1	105
134736	18	2	2121	294	12	304	35	< 0.5	0.3	17	< 0.5	< 0.5	220	1.9	3520	6850	708	2490	377	92.1	210	24.6	98.4
134737	10	4	2134	271	9	181	17	< 0.5	0.2	12	< 0.5	< 0.5	253	1.9	2490	4640	467	1620	263	68.1	159	19.5	83.3
134738	17	< 2	1571	329	10	237	15	< 0.5	0.5	15	< 0.5	< 0.5	117	3.7	2550	5580	664	2610	467	119	262	29.3	113
134739	17	< 2	1992	367	13	236	25	< 0.5	0.4	23	< 0.5	< 0.5	118	4.0	1650	3780	471	1960	372	98.3	236	28.4	118
134740	19	< 2	1950	331	9	263	26	< 0.5	0.4	25	< 0.5	< 0.5	129	2.2	1760	3950	491	2040	389	102	240	27.8	110
134741	34	2	1551	559	29	289	11	< 0.5	0.4	25	< 0.5	< 0.5	180	4.7	3480	6930	785	3030	536	142	335	40.9	170
134742	21	< 2	1803	823	71	370	6	0.6	0.5	20	< 0.5	< 0.5	177	3.5	1900	4830	598	2390	523	159	406	58.5	259
134743	27	< 2	2129	560	29	422	9	< 0.5	0.4	26	< 0.5	< 0.5	169	3.0	2330	6500	829	3290	561	143	331	37.7	156
134744	26	< 2	2219	583	24	700	12	< 0.5	0.3	21	< 0.5	< 0.5	187	5.6	3140	8500	1010	3700	519	133	315	39.3	166
134745	52	< 2	3942	445	33	355	29	< 0.5	< 0.2	19	0.7	< 0.5	237	3.8	2590	4970	542	1900	299	80.3	186	26.5	117
134746	17	< 2	2243	676	31	234	6	< 0.5	0.3	15	< 0.5	< 0.5	157	1.6	3220	6650	708	2580	453	121	287	37.5	176

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134747	17	< 2	2304	966	34	182	18	< 0.5	0.3	12	< 0.5	< 0.5	163	1.5	3680	6970	731	2710	456	118	278	38.9	194
134748	17	< 2	2374	552	32	444	14	< 0.5	0.2	13	< 0.5	< 0.5	184	2.0	3200	6410	695	2570	445	112	258	32.0	143
134749	< 5	< 2	15	3	5	15	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	16.2	34.7	3.96	14.2	2.7	0.68	1.8	0.2	0.9
134750	157	33	20510	1017	137	18	34	2.5	< 0.2	< 1	6.4	1.7	915	6.9	18700	29800	2680	8290	884	202	372	39.8	173
134751	17	< 2	2109	496	23	1560	12	< 0.5	0.3	29	< 0.5	< 0.5	142	2.7	3640	7670	796	2780	445	116	269	32.6	137
134752	18	< 2	2339	408	25	396	26	< 0.5	0.2	13	< 0.5	< 0.5	212	3.4	2660	5910	657	2410	366	91.3	212	28.0	125
134753	17	< 2	2261	466	30	348	30	< 0.5	0.2	14	< 0.5	< 0.5	177	2.4	3220	7300	791	2750	368	86.9	201	27.3	127
134754	17	< 2	2772	339	28	362	84	< 0.5	< 0.2	18	< 0.5	< 0.5	315	4.4	3590	7090	747	2640	362	84.3	179	21.4	94.5
134755	19	< 2	2625	329	22	409	21	< 0.5	< 0.2	19	< 0.5	< 0.5	312	6.7	3120	7140	804	2910	351	77.3	165	19.8	89.4
134756	19	< 2	2594	309	24	330	39	< 0.5	< 0.2	34	< 0.5	< 0.5	253	2.2	3990	8040	832	2890	335	74.7	153	17.9	81.3
134757	16	< 2	2418	308	16	363	25	< 0.5	< 0.2	38	< 0.5	< 0.5	204	1.9	3610	7160	751	2620	351	82.2	171	19.9	91.3
134758	19	< 2	2232	320	15	347	23	< 0.5	0.2	54	< 0.5	< 0.5	141	3.5	4190	8140	810	2750	392	97.9	224	25.4	100
134759	18	< 2	2077	222	10	274	18	< 0.5	0.2	17	< 0.5	< 0.5	89	2.4	2830	6030	668	2460	355	78.8	161	16.4	63.8
134760	18	< 2	2149	291	21	290	14	< 0.5	0.2	20	< 0.5	< 0.5	108	2.0	3090	6540	722	2680	375	86.2	178	19.6	82.7

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134648	11.9	26.0	2.98	15.7	1.94	1.0	< 0.1	8	0.1	68	463	< 0.1	5.66
134649	11.4	24.9	2.98	16.6	2.06	1.1	< 0.1	8	0.1	34	434	0.1	6.38
134650	10.3	24.7	3.28	18.7	2.41	1.4	3.3	5	0.2	29	376	1.3	1.21
134651	8.8	18.4	2.11	12.3	1.61	1.0	0.7	4	0.2	45	546	0.4	3.79
134652	10.6	22.6	2.80	15.8	2.11	1.1	< 0.1	8	0.1	39	395	0.1	3.85
134653	9.9	21.3	2.60	14.9	1.88	1.1	< 0.1	7	< 0.1	94	496	0.2	3.59
134654	8.7	19.5	2.22	13.1	1.72	1.0	< 0.1	10	0.1	259	530	0.1	3.14
134655	9.0	20.1	2.38	13.8	1.81	0.9	< 0.1	7	0.2	142	316	< 0.1	2.76
134656	8.8	20.8	2.44	14.3	1.91	1.3	< 0.1	10	< 0.1	26	370	0.1	3.92
134657	12.0	26.6	3.23	18.4	2.35	1.3	< 0.1	7	0.2	157	392	0.4	4.46
134658	12.6	28.6	3.22	17.9	2.16	1.5	1.2	7	0.3	284	682	0.9	4.37
134659	11.6	25.6	2.97	16.5	2.06	1.3	0.3	10	0.2	283	611	0.3	3.89
134660	11.8	28.6	3.21	17.8	2.31	1.2	0.2	11	< 0.1	199	411	0.2	3.37
134661	13.2	29.1	3.19	17.7	2.17	1.3	< 0.1	11	0.2	236	594	0.9	3.19
134662	11.4	26.1	3.00	16.5	2.17	1.6	0.5	10	< 0.1	55	548	0.8	1.89
134663	12.6	28.1	3.20	17.9	2.29	1.3	0.1	9	< 0.1	217	535	0.7	1.97
134664	14.2	30.5	3.44	18.1	2.26	1.5	0.6	9	0.2	218	563	1.1	3.91
134665	13.5	29.1	3.32	17.0	2.09	1.4	1.0	9	0.1	347	691	0.8	3.58
134666	12.4	27.2	3.26	16.7	2.09	1.2	< 0.1	10	< 0.1	293	536	0.2	4.77
134667	12.6	28.0	3.15	17.5	2.10	1.4	0.3	9	< 0.1	267	547	2.6	3.95
134668	12.3	25.4	2.81	14.9	1.86	1.1	< 0.1	9	0.1	222	560	0.5	3.89
134669	12.0	24.2	2.69	15.2	1.88	1.3	< 0.1	10	0.2	225	517	0.5	3.87
134670	17.0	35.5	3.90	19.2	2.39	1.4	< 0.1	12	< 0.1	280	634	0.3	4.20
134671	16.4	33.4	3.79	19.8	2.46	1.4	< 0.1	15	< 0.1	251	709	0.2	4.41
134672	14.3	29.9	3.57	20.8	2.62	1.8	< 0.1	10	< 0.1	46	751	0.2	3.73
134673	12.8	26.8	3.05	17.3	2.22	1.4	< 0.1	17	< 0.1	187	603	0.1	4.16
134674	0.2	0.4	0.05	0.3	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	8.9	< 0.1	0.410
134675	29.4	73.1	9.09	48.4	5.84	5.1	3.1	26	0.3	548	843	2.7	0.0350
134676	10.3	21.6	2.38	13.0	1.69	1.1	< 0.1	18	0.2	249	732	0.2	2.15
134677	10.4	21.5	2.46	13.9	1.81	1.6	0.4	13	< 0.1	17	702	0.9	3.22
134678	11.4	25.0	2.95	18.0	2.36	1.4	< 0.1	13	< 0.1	50	531	0.3	4.11
134679	10.5	23.2	2.78	16.5	2.17	1.4	0.2	16	0.1	144	515	0.2	3.45
134680	12.1	25.4	3.03	17.5	2.25	1.5	0.3	12	0.2	100	537	0.6	2.38
134681	9.6	20.6	2.37	13.6	1.75	1.7	0.6	19	< 0.1	20	686	0.8	2.66
134682	9.5	19.3	2.06	11.1	1.44	1.1	< 0.1	16	< 0.1	280	839	0.1	3.24
134683	9.9	19.8	2.17	11.6	1.44	0.9	< 0.1	12	0.2	584	886	< 0.1	3.26
134684	8.9	18.5	2.08	11.7	1.49	0.9	< 0.1	13	0.2	822	1020	< 0.1	2.00
134685	11.1	22.7	2.47	14.7	1.83	1.3	< 0.1	8	0.2	908	874	0.2	3.61
134686	14.0	27.1	2.93	15.2	1.85	1.3	0.2	9	< 0.1	389	723	0.2	3.36
134687	11.5	23.2	2.52	12.8	1.60	1.4	1.8	10	0.2	302	741	1.3	2.24
134688	12.6	26.2	2.71	15.0	1.96	1.7	0.2	14	< 0.1	360	871	0.6	1.02
134689	11.9	24.8	2.78	15.0	1.90	1.5	0.2	14	< 0.1	318	804	0.4	1.16
134690	14.0	29.5	3.32	18.5	2.29	1.4	0.1	16	0.2	163	641	0.4	4.35
134691	14.8	30.9	3.25	18.0	2.15	1.4	< 0.1	15	0.2	140	575	0.2	4.15
134692	15.3	29.9	3.20	17.2	2.14	1.4	< 0.1	20	0.1	341	740	0.2	4.56
134693	13.8	28.3	3.28	17.7	2.22	1.4	0.1	10	0.1	309	556	0.2	3.74
134694	11.3	23.6	2.55	14.6	1.84	1.3	0.3	10	< 0.1	163	453	0.3	3.83
134695	12.5	26.1	3.12	17.3	2.26	1.6	0.1	9	< 0.1	135	337	0.1	3.28

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134696	11.8	25.3	2.87	16.3	2.01	1.5	0.3	12	< 0.1	150	418	0.3	4.08
134697	10.1	19.6	2.07	11.6	1.44	1.1	0.3	6	0.1	346	547	0.4	3.34
134698	12.4	24.2	2.90	14.8	1.77	1.2	< 0.1	12	< 0.1	171	439	0.2	4.71
134699	0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	6	5.2	< 0.1	0.409
134700	25.2	64.9	8.40	47.3	6.31	3.4	< 0.1	6	2.5	1040	156	211	0.0250
134701	11.7	23.6	2.65	14.2	1.74	1.3	0.3	13	0.2	130	461	0.2	3.50
134702	8.5	17.3	1.95	11.1	1.38	0.9	0.2	4	< 0.1	144	357	0.2	3.33
134703	10.3	22.8	2.64	14.4	1.78	1.1	0.2	6	0.1	171	417	0.1	4.05
134704	15.2	32.4	3.46	19.2	2.37	1.6	< 0.1	8	< 0.1	148	518	< 0.1	3.35
134705	13.4	28.4	3.01	16.4	2.04	1.5	0.1	8	0.2	163	433	0.2	3.80
134706	14.6	30.0	3.22	17.2	2.19	1.7	< 0.1	9	0.1	174	407	< 0.1	3.27
134707	12.3	26.0	2.90	16.7	2.05	1.4	< 0.1	9	0.1	217	494	0.1	3.42
134708	10.9	24.7	2.85	15.6	2.08	1.3	0.2	5	0.2	216	466	0.1	2.47
134709	21.7	45.9	5.26	27.0	3.32	2.1	< 0.1	8	0.1	175	447	0.2	3.91
134710	29.3	65.2	7.25	36.8	4.63	2.6	< 0.1	7	0.2	130	548	0.2	2.80
134711	18.2	41.8	4.70	24.8	3.09	1.7	< 0.1	6	0.1	200	516	0.2	4.17
134712	14.6	33.1	3.42	18.2	2.28	1.4	< 0.1	10	0.1	225	494	0.1	1.65
134713	14.7	32.9	3.44	18.7	2.29	1.5	0.2	10	0.1	198	476	0.2	1.91
134714	19.7	40.0	4.08	21.0	2.62	1.9	< 0.1	18	0.2	357	655	0.1	4.72
134715	16.0	33.2	3.51	18.3	2.21	1.5	0.1	12	0.2	233	495	0.2	2.88
134716	15.6	32.9	3.57	17.7	2.12	1.5	0.6	10	0.2	354	838	0.5	3.69
134717	16.4	36.2	3.96	21.3	2.48	1.5	< 0.1	7	0.1	390	727	0.1	3.82
134718	16.7	36.3	4.33	23.4	2.90	2.2	0.6	10	0.2	440	532	0.5	2.10
134719	20.6	42.2	4.85	24.6	2.92	1.7	0.8	6	0.1	375	496	0.7	1.91
134720	16.1	33.2	3.62	18.2	2.35	1.6	< 0.1	14	0.1	320	955	0.1	2.89
134721	18.8	39.1	4.27	21.7	2.61	1.8	1.4	13	0.2	316	674	0.9	3.27
134722	11.7	26.3	2.97	15.8	2.01	1.5	0.7	8	0.2	323	642	0.4	4.07
134723	16.7	35.3	3.98	21.1	2.67	1.9	6.3	8	0.4	420	857	4.0	3.59
134724	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	4.2	< 0.1	0.410
134725	33.4	79.3	9.45	51.0	6.20	5.5	2.9	27	0.4	548	880	2.8	0.0320
134726	23.5	44.7	4.53	22.8	2.69	2.2	0.7	11	0.2	325	845	0.4	4.22
134727	23.6	44.4	4.48	22.1	2.52	1.9	0.5	5	0.2	639	830	0.4	3.47
134728	24.0	46.1	4.58	22.5	2.64	2.0	0.5	9	0.1	418	770	0.4	4.01
134729	14.6	29.8	3.13	15.4	1.92	1.4	0.9	10	0.2	195	636	0.6	4.05
134730	13.4	27.1	2.79	15.1	1.88	1.4	0.3	6	0.1	251	690	0.2	4.49
134731	19.9	39.3	4.09	20.7	2.47	1.7	< 0.1	10	< 0.1	193	744	< 0.1	4.98
134732	13.8	27.1	2.81	14.6	1.82	1.1	< 0.1	3	0.1	145	779	0.1	3.38
134733	28.2	55.3	5.70	28.4	3.35	1.4	0.7	5	< 0.1	328	919	0.7	5.05
134734	18.9	38.1	4.05	20.9	2.49	0.9	< 0.1	5	< 0.1	350	1050	0.2	3.89
134735	13.7	26.4	2.88	14.4	1.77	0.6	0.1	3	< 0.1	582	743	0.3	3.44
134736	12.7	25.1	2.71	13.8	1.61	0.5	0.2	3	< 0.1	337	800	0.3	4.53
134737	11.2	21.2	2.45	12.1	1.46	0.5	< 0.1	2	< 0.1	267	572	< 0.1	3.91
134738	14.2	26.5	2.81	13.8	1.68	0.6	< 0.1	2	< 0.1	671	996	0.2	4.20
134739	16.1	29.7	3.37	17.8	2.14	0.7	< 0.1	3	< 0.1	695	832	0.3	1.67
134740	14.5	27.3	3.00	15.4	1.87	0.6	< 0.1	3	< 0.1	491	875	0.2	1.77
134741	23.9	49.9	5.39	26.2	3.02	1.1	< 0.1	5	< 0.1	729	1330	0.2	3.99
134742	36.7	71.8	7.52	35.3	4.24	2.4	< 0.1	6	< 0.1	668	1470	0.3	4.32
134743	21.4	43.8	4.54	21.8	2.50	1.2	< 0.1	4	< 0.1	240	894	< 0.1	3.66
134744	23.3	48.2	5.21	25.9	2.95	1.1	0.2	6	< 0.1	267	928	0.1	3.81
134745	15.5	29.9	3.18	16.5	2.07	1.4	1.7	5	< 0.1	17	705	7.0	2.13

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134746	26.7	54.7	5.98	28.3	3.14	1.2	0.3	2	< 0.1	458	1090	0.4	3.41
134747	31.6	71.2	8.36	40.8	4.73	1.4	< 0.1	1	< 0.1	439	1340	0.2	4.11
134748	20.8	43.3	4.79	24.5	3.00	1.1	< 0.1	3	< 0.1	628	1310	0.2	3.86
134749	0.1	0.3	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	6.8	< 0.1	0.410
134750	27.7	72.3	9.08	51.4	6.75	2.9	< 0.1	4	1.4	994	166	213	0.0250
134751	19.4	38.2	4.18	20.6	2.47	1.0	0.2	14	< 0.1	513	1080	0.4	3.80
134752	17.0	33.5	3.47	17.1	2.09	0.9	2.0	3	< 0.1	428	953	2.2	4.16
134753	19.0	40.1	4.53	21.6	2.54	1.0	2.2	9	< 0.1	415	893	2.3	4.06
134754	13.2	27.2	2.99	15.3	1.80	0.8	0.5	4	< 0.1	327	755	0.5	3.83
134755	13.1	25.7	2.78	13.8	1.64	0.7	< 0.1	5	< 0.1	507	708	< 0.1	4.89
134756	11.4	23.4	2.44	12.6	1.54	0.7	< 0.1	4	< 0.1	268	582	< 0.1	3.05
134757	12.7	25.6	2.73	13.7	1.64	0.7	0.2	4	< 0.1	292	598	0.1	4.41
134758	12.9	25.1	2.46	12.4	1.45	0.7	< 0.1	4	< 0.1	339	875	< 0.1	3.80
134759	8.1	17.3	1.89	9.1	1.07	0.4	< 0.1	3	< 0.1	314	623	< 0.1	3.59
134760	11.1	23.3	2.56	13.5	1.67	0.8	0.2	3	< 0.1	294	729	0.1	3.07

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.20	11.01	1.90	0.74	0.013	0.34	42.80	0.87	0.55	0.118	30.19					1656							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.28																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.27	18.51	9.78	0.148	10.05	11.48	1.92	0.23	0.488	0.07			31		157	260	57	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		69.28	12.71	3.15	0.141	0.14	0.60	2.48	5.36	0.273	0.04			5	4	5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		30	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		52.66	15.25	10.55	0.166	6.19	11.02	2.24	0.63	1.084	0.15			35	< 1	281		42	60	100		17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110		17.0	1.00
SY-4 Meas		49.69	20.26	6.25	0.108	0.50	8.11	6.84	1.65	0.283	0.13			1	3	8							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				60			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.52	15.49	11.02	0.171	9.69	13.52	1.82	0.02	0.973	0.02			43	< 1	342	380	53	170	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1040	98	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		75.53	14.78	0.59	0.036	0.06	0.66	4.41	3.86	0.012	0.01				1276								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC86302 Meas		73.71	15.18	0.58	0.035	0.06	0.60	4.63	3.88	0.012	0.03				1316								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		25	70	2600	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				970		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		18		180			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		49		440			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas		66.94	14.07	2.30	0.057	0.08		0.60	5.52	0.177	0.01												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134679 Orig	5.38	1.98	0.14	10.35	1.392	11.23	29.57	0.04	0.07	0.760	1.90	34.27	91.71	84	8	105	< 20	7	< 20	< 10	1310	73	14
134679 Dup	5.67	2.00	0.13	10.55	1.415	11.56	30.12	0.04	0.07	0.777	1.93	34.27	92.86	86	9	105	< 20	7	< 20	< 10	1400	74	14
134689 Orig	3.14	1.30	0.15	19.72	2.134	11.02	23.52	0.05	0.03	0.331	2.32	34.77	95.33	67	12	99	< 20	9	< 20	< 10	1350	59	14
134689 Dup	3.05	1.29	0.15	19.84	2.145	11.04	23.70	0.05	0.04	0.329	2.36	34.77	95.70	68	14	99	< 20	9	< 20	< 10	1380	59	13
134704 Orig	4.43	4.98	0.31	8.36	1.234	12.69	28.24	0.15	0.10	0.151	0.89	36.11	93.20	65	12	93	< 20	3	< 20	10	890	66	14
134704 Dup	4.27	5.00	0.32	8.28	1.232	12.51	28.21	0.15	0.10	0.149	0.88	36.11	92.93	65	12	90	< 20	3	< 20	< 10	870	67	15
134721 Orig	4.26	1.86	0.16	13.86	1.615	11.86	26.58	0.03	0.06	0.403	0.84	36.11	93.37	68	11	122	< 20	8	< 20	< 10	1300	65	15
134721 Dup	4.02	1.88	0.16	14.03	1.628	12.07	26.78	0.03	0.06	0.411	0.84	36.11	94.01	68	10	124	< 20	8	< 20	< 10	1310	64	15
134732 Orig	1.91	1.22	0.21	13.07	1.337	13.14	26.06	0.05	0.18	0.130	0.56	39.28	95.25	37	8	66	< 20	5	< 20	< 10	980	68	15
134732 Dup	1.78	1.20	0.21	12.87	1.319	12.98	25.80	0.05	0.18	0.132	0.53	39.28	94.56	37	8	66	< 20	6	< 20	< 10	930	66	14
134737 Orig	1.09	1.37	0.25	10.97	1.191	12.80	25.93	0.04	0.25	0.095	0.49	40.07	93.46	45	8	73	< 20	4	< 20	< 10	1010	24	5
134737 Split	1.12	1.37	0.25	11.09	1.206	13.06	26.41	0.03	0.25	0.097	0.50	40.20	94.46	45	8	74	< 20	5	< 20	< 10	1020	26	5
134747 Orig	5.00	0.68	0.19	15.77	2.045	11.55	26.98	< 0.01	0.02	0.113	0.33	36.02	93.70	99	7	73	< 20	5	< 20	< 10	1330	37	7
134747 Split	5.08	0.58	0.16	15.11	1.995	11.58	27.71	< 0.01	0.02	0.099	0.36	36.09	93.70	103	8	71	< 20	5	< 20	< 10	1250	37	8
134747 Orig	5.02	0.68	0.19	15.53	2.019	11.43	26.81	< 0.01	0.01	0.112	0.34	36.02	93.16	98	7	73	< 20	5	< 20	< 10	1340	37	7
134747 Dup	4.98	0.67	0.19	16.00	2.070	11.66	27.16	< 0.01	0.02	0.114	0.32	36.02	94.23	101	7	74	< 20	5	< 20	< 10	1320	37	7
134760 Orig	5.82	0.35	0.13	17.57	1.654	10.71	26.54	0.06	0.03	0.148	0.89	34.77	92.84	80	9	62	< 20	10	< 20	< 10	1650	35	7
134760 Split	5.68	0.35	0.13	17.55	1.662	10.81	26.81	0.06	0.03	0.146	0.90	34.78	93.23	81	10	65	< 20	9	< 20	< 10	1630	35	7
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			145	16	35								107		3.9			5.2		0.60			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			41	45	388								495										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas		73					< 2			3	0.7	2.3			49.7	92.1		43.5	8.1	1.48			4.8
LKSD-3 Cert		78.0					2.00			3.00	1.30	2.30			52.0	90.0		44.0	8.00	1.50			4.90
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas			198	19	86		< 2	< 0.5					175	< 0.4	10.4	22.3		12.2	3.2	1.06		0.6	3.8
W-2a Cert			190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1194	117	541								342										

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2210	3330		1140	168	45.7	124	15.0	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			109	15	14								10					2.5	1.0	0.54	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	175		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.7			180			80.3	45.5	87.5	10.2	39.0	7.9	1.75	7.2	1.2	6.6
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	73	499							1.3	1700		42.2			22.4	55.8	7.46	30.6	12.4		14.6	3.3	20.7
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							26								270	481	47.1	153	24.9	3.77		3.9	24.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							22								816	1390	131	394	50.6	7.98		5.5	32.2
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	17	259				14	3	< 0.5	< 0.2			21.0			20.1	47.6	5.87	23.7	6.1	0.30		1.1	
JR-1 Cert	16.3	257				15.2	3.25	0.031	0.028			20.8			19.7	47.2	5.58	23.3	6.03	0.30		1.01	
NCS DC86318 Meas				17430											2000	429	739	3320	1750	19.2	2070	466	3040
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1144	15760																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															21000	28000	2280	6420	528	86.8			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134679 Orig	23	< 2	2200	320	52	1160	3	< 0.5	0.2	33	< 0.5	< 0.5	210	1.1	4420	7690	765	2470	355	91.1	193	22.2	79.4
134679 Dup	23	< 2	2245	322	53	1290	3	< 0.5	0.2	34	< 0.5	< 0.5	212	1.4	4450	7790	775	2500	358	91.3	194	21.9	80.2
134689 Orig	24	< 2	2199	343	55	716	2	< 0.5	0.3	28	< 0.5	< 0.5	112	2.1	2990	5740	657	2410	420	109	226	26.0	93.2
134689 Dup	23	< 2	2230	349	57	704	2	< 0.5	0.3	28	< 0.5	< 0.5	110	2.0	2920	5610	645	2360	409	107	221	25.3	92.2
134704 Orig	22	< 2	2726	446	32	548	6	< 0.5	< 0.2	13	< 0.5	< 0.5	335	0.7	4300	7370	752	2500	384	103	225	28.2	110
134704 Dup	21	< 2	2723	444	31	546	6	< 0.5	< 0.2	13	< 0.5	< 0.5	332	0.7	4350	7470	760	2530	387	104	227	28.4	112
134721 Orig	21	< 2	2126	519	42	754	4	< 0.5	0.2	36	< 0.5	< 0.5	269	2.4	3880	6760	703	2370	392	104	233	30.5	131
134721 Dup	22	< 2	2162	526	43	753	4	< 0.5	0.3	35	< 0.5	< 0.5	276	1.9	3890	6770	701	2380	391	104	234	31.4	131
134732 Orig	21	3	1720	385	15	295	10	< 0.5	< 0.2	15	< 0.5	< 0.5	242	0.9	3990	7300	743	2410	366	92.9	201	25.6	103
134732 Dup	20	3	1674	374	15	287	9	< 0.5	< 0.2	14	< 0.5	< 0.5	238	0.7	3860	7080	723	2340	354	90.0	198	24.8	98.2
134737 Orig	10	4	2134	271	9	181	17	< 0.5	0.2	12	< 0.5	< 0.5	253	1.9	2490	4640	467	1620	263	68.1	159	19.5	83.3
134737 Split	12	4	2108	265	8	188	17	< 0.5	0.2	12	< 0.5	< 0.5	250	1.2	2560	4790	481	1670	274	70.4	166	20.2	84.0
134747 Orig	17	< 2	2304	966	34	182	18	< 0.5	0.3	12	< 0.5	< 0.5	163	1.5	3680	6970	731	2710	456	118	278	38.9	194

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134747 Split	17	< 2	2350	1045	36	169	14	< 0.5	0.3	11	< 0.5	< 0.5	176	1.1	3810	7220	753	2820	481	125	298	42.6	216
134747 Orig	17	< 2	2289	956	33	185	18	< 0.5	0.3	12	< 0.5	< 0.5	162	1.5	3720	7050	743	2730	461	119	277	39.0	195
134747 Dup	17	< 2	2318	976	34	179	18	< 0.5	0.2	12	< 0.5	< 0.5	164	1.5	3640	6880	720	2690	451	117	279	38.8	194
134760 Orig	18	< 2	2149	291	21	290	14	< 0.5	0.2	20	< 0.5	< 0.5	108	2.0	3090	6540	722	2680	375	86.2	178	19.6	82.7
134760 Split	18	< 2	2127	294	18	295	15	< 0.5	0.2	20	< 0.5	< 0.5	107	1.6	3080	6590	724	2700	377	87.1	180	20.1	83.5
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											923		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.41						11.0	4.4	
LKSD-3 Cert				2.70	0.400						11.4	4.60	
OKA-2 Meas											27900		
OKA-2 Cert											28900.000		
W-2a Meas	0.8			2.1				< 1	< 0.1		2.4	0.5	
W-2a Cert	0.760			2.10				0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.8	1.10						23.7	4.0	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.7						< 5			
BIR-1a Cert				1.7						3			
NCS DC86312 Meas	35.5	95.9	14.3	87.1	11.9						25.3		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							84.7	334	33.9				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.4	0.53	3.5	0.49					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
NCS DC70009 (GBW07241) Meas	4.3	13.0	2.30	16.2				2200			27.5		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.2	15.2	2.42	15.9	2.29						53.9	140	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.2	2.97	18.7	2.58						36.7	420	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.70	4.8	0.70		1.7		1.6	19	27.2	8.9	
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88	
NCS DC86318 Meas	563	1660	269	1710	247								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134679 Orig	10.5	22.9	2.80	16.9	2.18	1.4	0.1	16	0.1	143	511	0.2	
134679 Dup	10.5	23.5	2.76	16.2	2.16	1.4	0.3	16	0.1	144	518	0.2	
134689 Orig	12.1	25.4	2.81	14.9	1.97	1.5	0.2	14	< 0.1	314	819	0.4	
134689 Dup	11.7	24.3	2.75	15.1	1.83	1.5	0.2	14	0.1	322	789	0.4	
134704 Orig	15.1	32.2	3.42	18.6	2.34	1.7	< 0.1	8	< 0.1	148	515	< 0.1	
134704 Dup	15.3	32.6	3.49	19.8	2.40	1.6	< 0.1	8	< 0.1	148	520	< 0.1	
134721 Orig	18.6	39.1	4.29	21.6	2.58	1.8	1.5	14	0.2	319	673	0.9	
134721 Dup	18.9	39.1	4.25	21.7	2.64	1.8	1.4	13	0.2	314	675	0.9	
134732 Orig	14.1	28.2	2.81	14.7	1.84	1.2	< 0.1	3	0.1	151	792	0.1	
134732 Dup	13.6	25.9	2.80	14.5	1.79	1.1	< 0.1	3	0.1	139	765	0.1	
134737 Orig	11.2	21.2	2.45	12.1	1.46	0.5	< 0.1	2	< 0.1	267	572	< 0.1	
134737 Split	11.5	22.1	2.38	12.5	1.52	0.4	< 0.1	2	< 0.1	252	580	< 0.1	
134747 Orig	31.6	71.2	8.36	40.8	4.73	1.4	< 0.1	1	< 0.1	439	1340	0.2	
134747 Split	35.7	77.9	9.17	45.6	5.18	1.5	< 0.1	1	< 0.1	486	1410	0.3	
134747 Orig	31.6	70.0	8.38	40.8	4.71	1.5	< 0.1	1	< 0.1	453	1350	0.2	
134747 Dup	31.7	72.3	8.34	40.8	4.76	1.3	< 0.1	2	< 0.1	425	1320	0.2	
134760 Orig	11.1	23.3	2.56	13.5	1.67	0.8	0.2	3	< 0.1	294	729	0.1	
134760 Split	11.4	23.7	2.52	13.5	1.68	0.7	0.2	2	< 0.1	283	725	0.1	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03294
Invoice Date: 03-Jun-14
Your Reference: ASHRAM-BATCH #7

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

12 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A14-03294**

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134761	0.42	2.99	0.21	7.34	0.527	11.09	32.59	0.04	0.10	0.064	3.68	37.58	96.20	12	11	93	< 20	4	< 20	< 10	140	13	3
134762	0.39	1.29	0.14	3.92	0.329	3.92	45.40	0.07	0.07	0.039	3.84	37.48	96.49	9	4	63	< 20	2	< 20	20	70	9	2
134763	0.46	3.96	0.61	4.87	0.511	7.71	39.44	0.06	0.36	0.247	3.53	35.61	96.90	12	11	105	< 20	4	< 20	20	80	17	4
134764	0.42	1.04	0.10	4.60	0.337	2.56	47.33	0.06	0.03	0.025	4.79	35.63	96.51	6	3	97	< 20	3	< 20	10	80	8	2
134765	0.33	0.89	0.18	4.77	0.300	1.93	47.31	0.09	0.05	0.019	3.86	36.03	95.44	6	3	98	< 20	3	< 20	< 10	50	8	2
134766	0.45	2.83	0.80	4.65	0.372	3.58	43.95	0.15	0.41	0.275	4.11	34.52	95.65	8	4	85	< 20	4	< 20	20	250	11	2
134767	0.42	2.53	0.68	4.99	0.365	3.61	43.93	0.08	0.41	0.294	3.91	34.63	95.42	8	3	92	< 20	5	< 20	20	90	12	2
134768	0.37	1.74	0.37	4.78	0.297	2.46	44.79	0.10	0.22	0.114	3.59	35.35	93.81	8	2	97	< 20	3	< 20	< 10	70	9	2
134769	0.67	21.54	5.42	11.68	0.360	7.90	24.45	0.98	2.90	3.015	3.36	15.65	97.24	12	13	258	< 20	30	40	120	110	15	2
134770	0.87	26.78	7.89	9.85	0.331	11.34	17.67	0.87	5.10	3.644	0.97	14.41	98.85	23	14	221	< 20	23	50	140	130	15	2
134771	1.10	21.94	6.97	8.48	0.382	11.48	21.50	0.44	4.77	2.386	3.03	16.50	97.86	13	23	230	< 20	21	30	100	150	19	3
134772	0.84	24.98	7.49	9.15	0.302	10.46	19.25	0.89	4.76	3.695	1.07	15.64	97.69	23	14	196	< 20	24	40	90	120	15	2

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134761	8	2	1630	83	166	1400	4	1.2	< 0.2	3	< 0.5	< 0.5	170	< 0.4	748	1460	164	580	82.1	20.9	46.8	5.2	22.2
134762	8	< 2	3571	84	137	1230	4	1.0	< 0.2	4	< 0.5	< 0.5	465	< 0.4	410	982	113	411	62.4	16.6	38.3	4.6	21.6
134763	9	10	2268	94	144	1160	10	1.1	< 0.2	3	< 0.5	< 0.5	456	< 0.4	951	1880	213	739	94.9	23.3	50.2	5.6	25.2
134764	6	< 2	2718	70	94	1330	16	0.8	< 0.2	5	< 0.5	< 0.5	257	< 0.4	390	939	113	417	61.1	15.6	35.5	4.3	18.9
134765	5	< 2	4237	66	93	1270	9	0.7	< 0.2	4	< 0.5	< 0.5	352	< 0.4	370	887	104	378	55.6	14.8	32.9	4.0	18.1
134766	7	13	4597	97	133	1170	5	0.9	< 0.2	3	< 0.5	< 0.5	1117	< 0.4	488	1100	132	482	72.4	19.5	45.4	5.9	26.9
134767	7	13	4526	81	141	1230	5	1.0	< 0.2	4	< 0.5	< 0.5	1254	< 0.4	519	1120	132	474	67.9	18.3	41.2	5.0	22.9
134768	6	7	5502	80	118	1380	6	0.9	< 0.2	4	< 0.5	< 0.5	925	< 0.4	402	975	114	411	61.5	16.2	38.1	4.7	21.8
134769	< 5	97	2522	47	566	506	5	3.6	< 0.2	3	< 0.5	2.6	1730	< 0.4	250	518	59.8	216	32.9	9.54	21.6	2.7	12.2
134770	< 5	174	1842	31	496	534	8	3.0	< 0.2	4	< 0.5	4.2	3207	< 0.4	215	444	50.7	176	25.6	6.62	15.6	1.8	8.6
134771	6	156	2223	73	347	407	24	2.2	< 0.2	3	< 0.5	3.7	4111	< 0.4	724	1140	119	391	52.4	13.8	32.3	4.1	19.0
134772	< 5	161	2071	33	444	434	8	2.8	< 0.2	4	< 0.5	3.8	3050	< 0.4	215	457	53.0	188	27.4	6.82	16.4	2.0	9.1

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134761	3.6	8.9	0.96	5.2	0.68	1.2	13.6	2	< 0.1	51	140	11.9	3.78
134762	3.7	8.8	1.04	5.6	0.73	1.1	18.2	< 1	< 0.1	19	130	18.2	3.65
134763	4.1	10.5	1.18	6.4	0.79	1.5	8.7	4	< 0.1	19	94.0	8.0	3.32
134764	3.2	7.6	0.90	4.9	0.62	0.6	0.6	2	< 0.1	12	72.3	0.4	3.72
134765	3.0	7.4	0.88	4.7	0.60	0.5	1.0	3	< 0.1	7	78.2	0.6	4.03
134766	4.4	10.4	1.26	6.4	0.78	1.3	12.0	3	< 0.1	14	112	13.6	1.98
134767	3.8	8.9	1.01	5.6	0.70	1.4	12.7	4	< 0.1	15	122	15.1	1.92
134768	3.6	8.7	1.00	5.0	0.67	1.1	12.7	< 1	< 0.1	17	101	12.5	3.10
134769	2.1	5.1	0.63	3.2	0.43	9.9	5.9	3	0.3	14	20.4	3.4	3.82
134770	1.4	3.4	0.42	2.4	0.33	11.6	10.1	9	0.6	17	17.4	4.8	3.75
134771	3.1	7.9	0.99	5.2	0.66	6.3	6.6	9	0.6	17	32.1	4.3	2.54
134772	1.5	3.7	0.45	2.5	0.35	10.1	9.5	9	0.6	15	22.7	3.7	2.91

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas	3.16	11.60	1.93	0.74	0.013	0.34	42.78	0.88	0.55	0.119	30.24					1664							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
DNC-1 Meas		47.15	18.64	9.91	0.146	10.05	11.42	1.92	0.22	0.486	0.06			31		157	260	57	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		72.84	12.96	3.25	0.144	0.14	0.60	2.50	5.45	0.286	0.03			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		30	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
W-2a Meas		52.62	15.31	10.87	0.166	6.28	11.08	2.23	0.63	1.077	0.12			35	< 1	278		42	60	100		17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110		17.0	1.00
SY-4 Meas		49.90	20.53	6.16	0.107	0.50	8.16	6.93	1.67	0.287	0.12			< 1	3	7							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				60			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		48.24	15.70	11.45	0.173	9.64	13.50	1.85	0.02	0.971	0.02			44	< 1	340	380	53	170	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																							
ZW-C Cert																							
NCS DC70014 Meas																		25	70	2600	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				970		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		18		180			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		49		440			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
SARM 3 Meas																							
SARM 3 Cert																							
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			147	15	34								108		3.9			5.2		0.60			

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			42	45	397								505										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas		73					< 2			3	0.7	2.3			49.7	92.1		43.5	8.1	1.48			4.8
LKSD-3 Cert		78.0					2.00			3.00	1.30	2.30			52.0	90.0		44.0	8.00	1.50			4.90
W-2a Meas			198	19	86		< 2	< 0.5					174	< 0.4	10.4	22.3		12.2	3.2	1.06		0.6	3.8
W-2a Cert			190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1187	116	527								345										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2210	3330		1140	168	45.7	124	15.0	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			112	14	14								10					2.5	1.0	0.54	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	175		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC70014 Meas							270	16.7			180			80.3	45.5	87.5	10.2	39.0	7.9	1.75	7.2	1.2	6.6
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	73	499							1.3	1700		42.2			22.4	55.8	7.46	30.6	12.4		14.6	3.3	20.7
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							26								270	481	47.1	153	24.9	3.77		3.9	24.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							22								816	1390	131	394	50.6	7.98		5.5	32.2
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	17	259				14	3	< 0.5	< 0.2			21.0			20.1	47.6	5.87	23.7	6.1	0.30		1.1	
JR-1 Cert	16.3	257				15.2	3.25	0.031	0.028			20.8			19.7	47.2	5.58	23.3	6.03	0.30		1.01	
SARM 3 Meas						979																	
SARM 3 Cert						978																	
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
LKSD-3 Meas				2.7	0.41						11.0	4.4	
LKSD-3 Cert				2.70	0.400						11.4	4.60	
W-2a Meas	0.8			2.1				< 1	< 0.1		2.4	0.5	
W-2a Cert	0.760			2.10				0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.8	1.10						23.7	4.0	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.7						< 5			
BIR-1a Cert				1.7						3			
NCS DC86312 Meas	35.5	95.9	14.3	87.1	11.9						25.3		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							79.0	330	33.9				
ZW-C Cert							82	320	34				
NCS DC70014 Meas	1.3	3.4	0.53	3.5	0.49					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.3	13.0	2.30	16.2				2200			27.5		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.2	15.2	2.42	15.9	2.29						53.9	140	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.2	2.97	18.7	2.58						36.7	420	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.70	4.8	0.70		1.7		1.6	19	27.2	8.9	
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88	
SARM 3 Meas													
SARM 3 Cert													
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03295 (i)
Invoice Date: 12-Jun-14
Your Reference: ASHRAM-BATCH #8

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

13 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A14-03295 (i)**

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	Received Weight	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga
Unit Symbol	Kg	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit		0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1
Analysis Method	none	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134773	3.66	0.56	0.37	0.11	2.50	0.536	18.03	31.73	0.06	0.05	0.092	2.89	42.03	98.39	8	3	25	< 20	1	< 20	< 10	160	4
134774	0.411	< 0.01	99.67	0.07	0.23	0.007	0.08	0.24	0.02	0.02	0.008	0.03	0.14	100.5	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1
134775	0.0300	6.51	19.97	3.15	28.15	2.440	6.87	17.68	0.31	1.34	1.481	0.55	11.68	93.62	21	13	156	180	29	70	20	1440	29
134776	3.65	0.76	0.27	0.08	3.09	0.562	17.00	32.23	0.05	0.04	0.066	3.59	40.71	97.68	10	3	30	< 20	2	< 20	< 10	230	5
134777	3.76	1.82	0.23	0.07	3.67	0.576	16.12	33.13	0.07	0.03	0.071	4.36	38.62	96.95	14	4	43	< 20	5	< 20	< 10	510	6
134778	3.82	0.70	0.27	0.06	2.54	0.556	17.43	31.37	0.05	0.03	0.031	2.95	42.09	97.37	11	3	23	< 20	< 1	< 20	< 10	80	5
134779	3.78	1.33	0.19	0.05	3.73	0.630	16.96	31.84	0.04	0.03	0.065	2.68	41.21	97.44	15	4	41	< 20	3	< 20	< 10	250	8
134780	3.77	0.40	0.28	0.09	2.58	0.549	17.85	31.49	0.06	0.04	0.048	2.83	42.37	98.19	9	1	22	< 20	1	< 20	< 10	80	4
134781	4.14	0.38	0.33	0.09	2.96	0.587	18.60	30.92	0.04	0.07	0.037	1.77	43.42	98.83	15	3	34	< 20	< 1	< 20	< 10	260	6
134782	4.05	0.40	0.34	0.10	4.31	0.693	16.61	31.08	0.05	0.06	0.054	3.17	41.30	97.77	21	3	47	< 20	3	< 20	< 10	200	8
134783	3.86	0.42	0.36	0.11	2.71	0.528	17.48	31.53	0.06	0.07	0.093	3.73	41.01	97.68	9	2	32	< 20	3	< 20	< 10	50	4
134784	3.10	0.52	0.90	0.25	5.25	0.638	15.30	31.61	0.05	0.13	0.135	5.48	36.88	96.61	27	3	66	< 20	9	< 20	20	220	18
134785	2.71	0.40	0.79	0.23	5.85	0.785	15.97	30.25	0.05	0.19	0.050	2.69	40.40	97.26	25	3	57	< 20	3	< 20	< 10	440	10

Results

Analyte Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134773	< 1	6	< 2	4624	63	37	494	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	127	< 0.4	272	603	70.3	270	43.2	11.2	25.8	3.2
134774	< 1	< 5	< 2	26	< 2	< 4	10	2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	22	< 0.4	5.7	11.1	1.16	3.9	0.6	0.18	0.4	< 0.1
134775	5	14	25	3079	919	222	348	51	0.8	< 0.2	37	< 0.5	< 0.5	13200	2.4	2530	4610	524	2140	459	125	321	45.0
134776	< 1	8	< 2	4382	100	53	510	8	< 0.5	< 0.2	< 1	< 0.5	< 0.5	306	< 0.4	385	811	93.6	357	59.2	15.7	37.9	5.1
134777	< 1	11	< 2	4354	140	61	1130	7	< 0.5	< 0.2	2	< 0.5	< 0.5	79	< 0.4	529	1100	125	464	75.8	19.8	47.0	6.4
134778	< 1	5	< 2	4407	83	30	382	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	137	< 0.4	407	841	93.8	344	50.9	12.9	29.7	4.1
134779	< 1	9	< 2	3874	120	35	374	2	< 0.5	< 0.2	3	< 0.5	< 0.5	91	0.4	821	1620	177	623	90.8	22.4	50.9	6.5
134780	< 1	6	< 2	4369	66	23	323	2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	75	< 0.4	301	675	77.9	297	48.6	12.9	29.9	4.0
134781	< 1	< 5	< 2	4051	62	26	327	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	113	< 0.4	612	1180	125	447	65.7	16.1	35.3	4.0
134782	< 1	9	< 2	3787	185	46	278	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	102	< 0.4	831	1580	171	617	102	28.1	68.8	9.5
134783	< 1	7	< 2	4399	106	40	593	3	< 0.5	< 0.2	2	< 0.5	< 0.5	99	< 0.4	248	573	67.7	276	49.9	14.1	35.0	5.2
134784	4	16	3	3995	150	84	1560	3	0.6	< 0.2	7	< 0.5	< 0.5	139	0.6	753	1470	170	611	92.2	23.4	53.9	7.0
134785	1	9	< 2	3714	117	36	534	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	289	0.5	1110	2110	226	801	117	28.5	62.3	7.3

Results

Analyte Symbol	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134773	14.7	2.3	5.4	0.66	3.5	0.44	0.5	0.3	2	0.6	18	59.9	0.2
134774	0.2	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	0.2	< 1	0.2	< 5	0.9	< 0.1
134775	216	34.8	79.6	9.69	51.0	6.15	4.7	2.6	26	0.5	590	876	2.8
134776	25.0	4.1	9.9	1.11	5.9	0.74	0.8	0.3	1	0.2	12	80.5	0.3
134777	31.6	5.3	12.4	1.51	8.3	1.00	0.9	0.6	2	0.2	14	132	0.6
134778	19.5	3.2	7.5	0.89	4.8	0.65	0.4	0.2	< 1	< 0.1	8	81.1	0.2
134779	30.1	4.7	11.1	1.27	6.4	0.82	0.5	< 0.1	< 1	< 0.1	23	130	0.1
134780	18.3	2.9	6.5	0.78	3.9	0.47	0.3	< 0.1	< 1	< 0.1	29	66.8	< 0.1
134781	16.7	2.5	5.7	0.67	3.3	0.44	0.4	0.1	< 1	< 0.1	45	110	0.2
134782	46.6	7.7	17.4	2.09	10.3	1.25	0.6	< 0.1	1	< 0.1	38	169	0.3
134783	26.6	4.5	10.5	1.26	6.4	0.77	0.6	0.3	1	< 0.1	9	61.5	0.1
134784	32.4	5.4	13.3	1.59	8.1	0.99	1.3	1.3	4	< 0.1	6	190	0.9
134785	31.9	4.9	11.8	1.43	7.6	0.90	0.5	0.6	3	< 0.1	87	209	0.5

QC

Analyte Symbol	Received Weight	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga
Unit Symbol	Kg	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit		0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1
Analysis Method	none	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas		2.99	11.25	2.08	0.79	0.014	0.34	43.06	0.93	0.56	0.120	30.17					1669						
NIST 694 Cert		3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740						
NIST 694 Meas		3.37																					
NIST 694 Cert		3.2																					
NIST 694 Meas		3.11																					
NIST 694 Cert		3.2																					
NIST 694 Meas		3.26																					
NIST 694 Cert		3.2																					
DNC-1 Meas			47.24	18.22	9.69	0.146	9.92	11.43	1.93	0.23	0.473	0.08			31		158	260	57	250	110	70	
DNC-1 Cert			47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70	
GBW 07113 Meas			72.55	13.15	3.28	0.146	0.14	0.61	2.46	5.38	0.285	0.05			5	4	< 5						
GBW 07113 Cert			72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00						
LKSD-3 Meas																			31	50	30		
LKSD-3 Cert																			30.0	47.0	35.0		
W-2a Meas			52.68	15.33	10.56	0.164	6.18	11.01	2.22	0.62	1.072	0.14			35	< 1	278		42	70	100	80	18
W-2a Cert			52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0
SY-4 Meas			49.94	20.43	6.15	0.106	0.50	7.92	6.95	1.68	0.284	0.14			1	3	6						
SY-4 Cert			49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0						
CTA-AC-1 Meas																					50		
CTA-AC-1 Cert																					54.0		
BIR-1a Meas			48.00	15.87	11.08	0.171	9.59	13.44	1.83	0.02	0.980	0.03			44	< 1	337	380	53	160	130	80	15
BIR-1a Cert			47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																						1050	99
ZW-C Cert																						1050.000	99
NCS DC86302 Meas			73.75	14.89	0.66	0.048	0.12	0.78	4.41	3.87	0.013	0.03				1304							
NCS DC86302 Cert			73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315							
NCS DC70014 Meas																			26	70	2610	7400	25
NCS DC70014 Cert																			26	70	2600	7400	25.2
NCS DC70009 (GBW07241) Meas																					940		16
NCS DC70009 (GBW07241) Cert																					960		16.5
OREAS 100a (Fusion) Meas																			17		170		
OREAS 100a (Fusion) Cert																			18.1		169		
OREAS 101a (Fusion) Meas																			48		430		
OREAS 101a (Fusion) Cert																			48.8		434		
JR-1 Meas																				< 20		30	17
JR-1 Cert																				1.67		30.6	16.1
NCS DC86318 Meas			66.88	13.90	2.28	0.057	0.08		0.59	5.58	0.172	< 0.01											
NCS DC86318 Cert			66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020											
SARM 3 Meas																							

Analyte Symbol	Received Weight	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga
Unit Symbol	Kg	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit		0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1
Analysis Method	none	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
Method Blank																		< 20	< 1	< 20	< 10	< 30	< 1
Method Blank		< 0.01																					
Method Blank		< 0.01																					
Method Blank		< 0.01																					
Method Blank		< 0.01																					

QC

Analyte Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas				146	15	36								114		3.8			4.8		0.58		
DNC-1 Cert				144.0	18.0	38								118		3.6			5.20		0.59		
GBW 07113 Meas				43	46	385								498									
GBW 07113 Cert				43.0	43.0	403								506									
LKSD-3 Meas		24	74					< 2			3		2.3			50.0	93.6		43.9	8.1	1.43		0.9
LKSD-3 Cert		27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50		1.00
W-2a Meas	2		19	197	19	88		< 2	< 0.5			0.8		180	< 0.4	10.9	23.1		12.5	3.4	1.07		0.6
W-2a Cert	1.00		21.0	190	24.0	94.0		0.600	0.0460			0.790		182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630
SY-4 Meas				1202	117	527								349									
SY-4 Cert				1191	119	517								340									
CTA-AC-1 Meas																2190	3330		1140	166	45.6	124	14.9
CTA-AC-1 Cert																2176	3326		1087	162	46.7	124	13.9
BIR-1a Meas				112	14	15								10					2.5	1.1	0.51	1.8	
BIR-1a Cert				110	16	18								6					2.5	1.1	0.55	2.0	
NCS DC86312 Meas																2330	180		1560			227	34.2
NCS DC86312 Cert							200						256			2360	190		1600			225.0	34.6
ZW-C Meas																							
ZW-C Cert							198						260										
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas								270	16.8			180			80.3	46.6	89.9	10.1	38.4	8.0	1.66	7.1	1.2
NCS DC70014 Cert								270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1
NCS DC70009	11	70	500							1.3	1700	3.4	41.7			22.6	56.6	7.30	30.2	11.9		13.9	3.2

Analyte Symbol	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
(GBW07241) Meas																							
NCS DC70009 (GBW07241) Cert	11.2	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3
OREAS 100a (Fusion) Meas								24								272	487	46.5	152	24.5	3.64		3.8
OREAS 100a (Fusion) Cert								24.1								260	463	47.1	152	23.6	3.71		3.80
OREAS 101a (Fusion) Meas								21								837	1390	129	394	50.7	8.05		5.6
OREAS 101a (Fusion) Cert								21.9								816	1396	134	403	48.8	8.06		5.92
JR-1 Meas			257				15		< 0.5	< 0.2			21.0		0.5	21.0	49.1	5.89	23.7	6.0			1.1
JR-1 Cert			257				15.2		0.031	0.028			20.8		0.56	19.7	47.2	5.58	23.3	6.03			1.01
NCS DC86318 Meas					17250											1990	425	730	3260	1730	19.0	2110	466
NCS DC86318 Cert					17010											1960	430	740	3430	1720	18.91	2095	470
SARM 3 Meas							979																
SARM 3 Cert							978																
USZ 44-2007 Meas					1137	15560																	
USZ 44-2007 Cert					1102	15800																	
USZ 42-2006 Meas																20600	27300	2230	6340	521	86.0		
USZ 42-2006 Cert																21100	27600	2300	6500	539	87.22		
Method Blank	< 1	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas												902	
DH-1a Cert												910	
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas					1.9								
DNC-1 Cert					2.0								
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas	4.8				2.6	0.42	4.1					11.5	4.4
LKSD-3 Cert	4.90				2.70	0.400	4.80					11.4	4.60
W-2a Meas	3.4	0.7				0.36			< 1	< 0.1		2.2	0.6

Analyte Symbol	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
W-2a Cert	3.60	0.760				0.330			0.300	0.200		2.40	0.530
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas					10.9	1.12						23.9	4.1
CTA-AC-1 Cert					11.4	1.08						21.8	4.4
BIR-1a Meas					1.7		0.5				< 5		
BIR-1a Cert					1.7		0.60				3		
NCS DC86312 Meas	183	35.6	96.1	14.2	86.3	11.9						25.8	
NCS DC86312 Cert	183	36	96.2	15.1	87.79	11.96						23.6	
ZW-C Meas								83.1	328	34.2			
ZW-C Cert								82	320	34			
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	6.6	1.3	3.4	0.52	3.4	0.50					27200		
NCS DC70014 Cert	6.7	1.3	3.5	0.57	3.3	0.50					27200		
NCS DC70009 (GBW07241) Meas	20.4	4.2	12.5	2.29	15.5				2200			27.4	
NCS DC70009 (GBW07241) Cert	20.7	4.5	13.4	2.2	14.9				2200			28.3	
OREAS 100a (Fusion) Meas	23.2	5.0	14.7	2.42	15.5	2.15						53.8	138
OREAS 100a (Fusion) Cert	23.2	4.81	14.9	2.31	14.9	2.26						51.6	135
OREAS 101a (Fusion) Meas	32.0	6.5	19.2	2.91	18.0	2.43						37.3	421
OREAS 101a (Fusion) Cert	33.3	6.46	19.5	2.90	17.5	2.66						36.6	422
JR-1 Meas				0.69	4.8	0.69		1.8		1.6	20	28.1	9.1
JR-1 Cert				0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	3010	560	1680	273	1770	245							
NCS DC86318 Cert	3220	560	1750	270	1840	260.0							
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
Method Blank	< 0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03296
Invoice Date: 13-Jun-14
Your Reference: ASHRAM-BATCH #9

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

107 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03296**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134786	5.42	2.20	0.05	6.64	0.908	13.54	30.94	0.03	0.02	0.097	0.95	38.22	93.58	42	189	50	< 20	1	< 20	< 10	660	32	7
134787	2.46	1.16	0.07	7.56	1.092	14.44	28.83	0.03	0.02	0.071	0.62	40.45	94.34	49	70	53	< 20	4	< 20	< 10	1060	47	10
134788	2.42	1.01	0.07	7.20	1.154	14.62	28.61	0.03	0.03	0.078	0.71	40.79	94.29	53	26	54	< 20	3	< 20	< 10	960	54	12
134789	4.16	2.70	0.10	6.82	1.045	13.84	30.27	0.03	0.05	0.089	0.79	38.50	94.23	50	44	55	< 20	1	< 20	< 10	880	52	11
134790	0.93	2.10	0.10	7.99	1.191	14.44	28.20	0.04	0.03	0.154	1.03	40.98	96.24	56	80	65	< 20	3	< 20	< 10	660	39	10
134791	0.52	1.13	0.08	8.89	1.380	14.41	27.76	< 0.01	< 0.01	0.223	1.04	41.09	96.01	68	25	82	< 20	4	< 20	10	500	29	7
134792	2.72	1.13	0.13	8.61	1.214	13.50	28.88	0.03	0.04	0.301	1.27	39.06	94.18	56	100	74	< 20	4	< 20	30	470	49	11
134793	6.25	2.16	0.08	7.14	1.215	12.52	31.74	0.02	0.03	0.074	0.82	36.20	92.00	40	286	39	< 20	2	< 20	< 10	380	58	11
134794	2.27	1.26	0.07	8.23	1.143	13.89	28.58	0.02	0.01	0.081	0.85	40.26	94.42	47	175	45	< 20	3	< 20	< 10	400	41	9
134795	3.91	1.32	0.05	8.24	1.111	13.32	30.19	0.02	0.01	0.183	0.94	38.52	93.91	52	138	62	< 20	2	< 20	< 10	790	47	9
134796	5.67	3.83	0.08	7.01	1.121	13.02	29.73	0.03	0.03	0.104	0.71	36.70	92.35	47	159	47	< 20	3	< 20	< 10	1000	67	13
134797	2.91	1.97	0.05	6.92	1.111	14.19	29.14	0.02	0.02	0.079	1.16	39.37	94.02	55	177	41	< 20	2	< 20	< 10	920	47	10
134798	3.19	3.48	0.04	6.25	1.110	13.97	28.94	0.03	0.02	0.300	1.69	38.20	94.03	59	161	63	< 20	1	< 20	< 10	790	45	11
134799	< 0.01	98.77	0.09	0.25	0.011	0.09	0.25	0.03	0.02	0.002	< 0.01	0.32	99.84	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	< 1	1
134800	2.01	15.10	2.51	13.00	0.141	0.48	26.36	0.91	0.99	0.144	19.16	8.28	87.08	17	14	154	20	32	60	110	620	221	38
134801	1.78	2.85	0.06	9.44	1.354	13.14	27.64	0.03	0.03	0.503	1.26	38.79	95.09	67	86	98	< 20	3	< 20	< 10	820	47	11
134802	1.71	2.14	0.05	7.52	1.332	14.39	28.17	0.03	0.02	0.145	0.85	40.35	95.00	67	50	64	< 20	3	< 20	< 10	870	46	11
134803	2.95	2.78	0.06	7.00	1.399	13.37	28.50	0.04	0.03	0.196	1.54	38.46	93.38	63	94	60	< 20	2	< 20	< 10	1060	56	12
134804	2.09	2.21	0.06	8.09	1.506	13.56	28.41	0.04	0.04	0.189	1.24	39.39	94.72	63	61	59	< 20	2	< 20	< 10	1110	54	12
134805	6.09	2.76	0.05	10.14	1.462	11.58	29.10	0.02	0.02	0.214	0.73	35.83	91.91	57	146	77	< 20	4	< 20	< 10	1380	58	13
134806	4.38	0.32	0.08	9.45	1.590	13.16	29.71	0.03	0.03	0.180	0.88	38.04	93.47	50	57	63	< 20	4	< 20	< 10	1290	44	11
134807	1.76	0.91	0.06	9.13	1.425	13.83	27.89	< 0.01	< 0.01	0.321	1.03	39.97	94.56	58	38	88	< 20	5	< 20	< 10	820	28	7
134808	1.46	2.32	0.18	8.41	1.205	13.89	28.08	0.04	0.02	0.120	0.86	40.10	95.24	60	42	64	< 20	3	< 20	< 10	760	48	11
134809	5.61	3.56	0.08	6.18	1.253	12.57	31.10	0.05	0.04	0.061	2.54	35.03	92.46	73	131	65	< 20	1	< 20	< 10	960	47	11
134810	2.26	2.57	0.10	8.14	1.450	13.30	28.58	0.03	0.04	0.147	1.16	38.57	94.10	73	148	71	< 20	4	< 20	< 10	630	60	13
134811	5.62	2.86	0.06	7.53	1.351	12.59	30.40	0.03	0.03	0.143	1.16	36.22	92.37	65	176	65	< 20	2	< 20	< 10	660	60	13
134812	5.23	3.33	0.07	6.53	1.336	12.77	30.77	0.04	0.04	0.113	1.53	35.60	92.12	61	110	50	< 20	2	< 20	< 10	770	57	12
134813	9.11	1.50	0.07	6.65	1.245	13.40	33.04	< 0.01	0.01	0.282	0.98	34.65	91.84	60	114	54	< 20	2	< 20	< 10	770	38	8
134814	1.94	2.63	0.08	9.68	1.294	12.91	28.65	0.03	0.03	0.163	1.38	38.42	95.26	67	78	73	< 20	6	< 20	< 10	360	47	11
134815	2.83	2.94	0.11	9.08	1.193	12.60	29.16	0.03	0.03	0.149	1.45	37.80	94.54	64	76	72	< 20	8	< 20	20	340	43	9
134816	0.95	2.51	0.12	9.64	1.148	13.17	26.74	0.03	0.03	0.094	0.69	39.28	93.45	58	34	67	< 20	7	< 20	< 10	480	38	9
134817	3.07	3.82	0.11	10.08	1.166	11.84	28.88	0.03	0.03	0.384	0.79	37.26	94.39	66	67	87	< 20	6	< 20	< 10	560	40	8
134818	3.50	3.07	0.17	9.16	1.265	12.90	29.97	0.03	0.02	0.241	0.66	38.65	96.14	75	30	81	< 20	3	< 20	< 10	540	47	10
134819	4.41	2.80	0.17	13.13	1.657	11.04	29.01	0.03	0.02	0.178	0.62	35.99	94.64	69	27	76	< 20	5	< 20	< 10	1070	49	10
134820	4.31	2.75	0.13	16.51	2.064	10.93	25.71	0.04	0.02	0.142	0.54	35.81	94.64	72	16	69	< 20	10	< 20	< 10	1260	51	12
134821	3.42	2.07	0.07	17.00	2.050	11.19	25.13	0.02	0.02	0.208	0.45	36.20	94.40	78	12	86	< 20	12	< 20	< 10	1440	53	11
134822	3.43	2.54	0.06	19.77	2.382	10.60	22.81	< 0.01	< 0.01	0.203	0.53	34.92	93.83	62	17	77	< 20	13	< 20	< 10	2290	35	7
134823	6.36	2.58	0.07	16.81	2.000	9.87	27.17	0.03	0.02	0.225	1.18	32.88	92.83	54	24	78	< 20	10	< 20	< 10	1470	51	10
134824	0.02	99.56	0.08	0.28	0.015	0.14	0.34	0.03	0.02	0.002	< 0.01	0.43	100.9	< 1	< 1	< 5	80	< 1	< 20	< 10	< 30	1	2
134825	6.36	20.58	3.02	27.87	2.382	6.79	17.38	0.30	1.31	1.437	0.55	13.10	94.73	21	12	155	170	29	50	30	1470	53	13
134826	6.52	2.32	0.07	19.68	2.140	9.44	24.62	0.02	0.02	0.446	1.53	32.62	92.90	55	16	101	< 20	9	< 20	< 10	1420	48	11
134827	5.02	2.80	0.08	15.73	1.884	10.27	26.95	0.02	0.03	0.298	0.74	34.26	93.07	56	17	83	< 20	7	< 20	< 10	1090	45	10
134828	4.02	1.68	0.16	15.79	1.839	10.87	26.39	0.02	0.09	0.387	0.67	36.27	94.17	53	15	92	< 20	7	< 20	< 10	1070	50	11
134829	5.13	1.79	0.05	17.89	2.281	10.49	24.64	0.02	0.02	0.241	0.52	35.14	93.08	54	13	79	< 20	9	< 20	< 10	1150	55	11
134830	5.21	2.71	0.07	18.36	2.231	9.67	24.75	0.02	0.02	0.335	1.77	33.72	93.64	64	12	89	< 20	9	< 20	< 10	1290	49	11
134831	5.32	2.01	0.20	15.16	1.828	10.36	27.66	0.03	0.07	0.288	1.37	34.53	93.50	60	15	87	< 20	9	< 20	< 10	1280	52	11
134832	4.41	2.17	0.08	14.26	1.622	10.97	27.23	0.03	0.03	0.451	0.54	36.44	93.83	74	18	92	< 20	7	< 20	< 10	920	41	9
134833	3.67	2.74	0.08	14.76	1.594	10.90	26.26	0.02	0.03	0.429	1.03	36.08	93.94	60	57	111	< 20	10	< 20	< 10	1340	51	10

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134834	5.26	2.64	0.13	13.55	1.435	10.87	27.79	0.03	0.08	0.325	2.60	33.65	93.08	66	152	102	< 20	7	< 20	< 10	1070	55	10
134835	2.79	4.71	0.06	12.14	1.457	11.57	26.50	0.02	0.03	0.349	1.17	36.28	94.28	62	31	80	20	7	< 20	< 10	690	65	12
134836	2.34	6.70	0.08	14.58	1.360	10.58	25.39	0.02	0.01	0.234	0.66	36.23	95.86	55	11	61	< 20	5	< 20	< 10	1010	41	10
134837	4.23	4.63	0.11	12.75	1.339	10.26	28.00	0.02	0.01	0.239	0.38	35.74	93.48	54	12	62	< 20	5	< 20	30	950	47	10
134838	4.69	4.44	0.10	12.72	1.331	10.12	28.09	0.02	0.02	0.221	0.38	35.40	92.84	53	17	58	< 20	5	< 20	< 10	880	48	9
134839	2.76	4.39	0.15	12.22	1.342	10.82	27.60	0.03	0.02	0.319	1.04	36.79	94.72	54	18	80	< 20	4	< 20	< 10	540	43	9
134840	1.92	5.51	0.36	10.60	1.148	10.84	27.58	0.03	0.04	0.137	0.90	37.48	94.64	47	8	58	< 20	4	< 20	< 10	400	39	9
134841	4.13	6.74	0.16	14.11	1.504	10.69	25.67	0.04	0.05	0.137	0.79	34.35	94.24	63	6	68	< 20	8	< 20	< 10	1130	60	12
134842	7.08	3.14	0.06	8.64	1.094	11.66	31.38	0.03	0.03	0.141	0.89	34.94	92.00	45	6	59	< 20	4	< 20	< 10	790	63	11
134843	1.19	2.66	0.49	12.30	1.375	12.33	26.47	0.20	0.11	0.265	1.23	38.44	95.88	64	6	91	< 20	7	< 20	< 10	820	54	12
134844	7.53	4.36	0.10	12.80	1.364	10.59	28.19	0.02	0.03	0.087	0.91	32.76	91.20	54	7	55	< 20	8	< 20	< 10	1130	69	14
134845	1.79	4.06	0.07	12.68	1.276	12.36	25.21	0.02	0.03	0.095	0.80	38.09	94.68	53	7	58	< 20	6	< 20	< 10	900	55	12
134846	3.83	1.03	0.07	7.08	0.905	15.02	30.21	0.02	0.04	0.086	0.25	40.59	95.29	46	10	45	< 20	< 1	< 20	< 10	550	46	11
134847	1.37	2.00	0.06	11.93	1.257	13.94	26.30	0.02	0.04	0.094	0.44	39.82	95.91	66	6	60	< 20	5	< 20	< 10	1040	53	13
134848	0.79	4.21	0.09	21.79	2.102	10.99	17.94	0.02	0.03	0.114	0.73	36.43	94.44	41	4	59	< 20	10	< 20	< 10	1770	64	18
134849	< 0.01	97.52	0.07	0.40	0.018	0.20	0.44	0.02	0.02	0.002	< 0.01	0.61	99.29	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	1
134850	1.96	15.07	2.48	13.13	0.141	0.45	26.98	0.92	1.00	0.144	19.28	8.08	87.68	16	14	156	20	32	70	110	630	223	39
134851	4.07	3.79	0.33	10.32	1.147	12.20	29.06	0.10	0.11	0.117	2.23	35.39	94.80	65	7	66	< 20	4	< 20	< 10	700	46	10
134852	3.46	5.48	0.24	15.41	1.465	11.40	24.44	0.05	0.13	0.157	1.17	35.08	95.01	61	9	64	< 20	7	< 20	< 10	1010	46	11
134853	2.98	1.88	0.09	11.05	1.182	12.78	28.52	0.02	0.04	0.171	1.24	38.13	95.10	60	6	62	< 20	5	< 20	< 10	990	62	14
134854	0.40	5.03	1.15	8.80	1.002	13.30	26.55	0.46	0.19	0.364	1.52	38.09	96.45	60	9	78	< 20	7	< 20	< 10	490	56	11
134855	0.58	5.59	0.09	12.80	1.209	13.32	23.59	0.02	0.05	0.298	0.71	38.66	96.35	53	6	78	< 20	8	< 20	< 10	430	53	11
134856	2.02	4.92	0.13	11.78	1.221	12.77	25.95	0.03	0.07	0.175	0.95	37.75	95.74	55	5	63	< 20	7	< 20	< 10	790	65	13
134857	4.35	4.48	0.06	9.26	1.091	12.77	28.56	0.02	0.04	0.285	0.75	36.79	94.10	40	7	62	< 20	6	< 20	< 10	510	55	11
134858	0.67	12.95	0.11	13.71	1.463	11.16	20.21	0.04	0.07	0.168	1.28	34.34	95.49	58	8	78	< 20	7	< 20	< 10	570	57	12
134859	3.45	4.21	0.16	14.40	1.522	11.92	24.89	0.02	0.04	0.122	1.00	36.05	94.35	54	6	62	< 20	8	< 20	< 10	1100	60	12
134860	2.53	11.12	0.13	13.21	1.356	11.00	22.21	0.05	0.05	0.114	0.89	33.84	93.96	50	7	59	< 20	8	< 20	< 10	800	59	12
134861	3.40	7.32	0.08	14.39	1.348	11.27	23.48	0.04	0.04	0.337	0.76	34.43	93.49	46	6	84	< 20	10	< 20	30	920	59	12
134862	2.42	5.62	0.31	14.43	1.315	11.97	23.88	0.10	0.19	0.235	1.13	35.26	94.44	51	8	81	< 20	11	< 20	< 10	1240	65	13
134863	0.55	0.81	0.11	12.73	1.173	12.81	25.17	0.02	0.09	0.244	0.83	39.86	93.85	49	6	85	< 20	12	< 20	< 10	700	56	10
134864	2.04	2.15	0.18	13.68	1.034	12.53	25.67	0.04	0.15	0.325	1.11	37.23	94.09	47	10	81	< 20	13	< 20	< 10	770	62	11
134865	4.90	2.00	0.08	13.18	1.016	12.05	27.53	0.04	0.05	0.234	0.73	36.27	93.20	41	9	54	< 20	9	< 20	< 10	950	54	10
134866	5.53	1.34	0.05	13.07	0.996	12.25	28.38	0.03	0.04	0.207	0.76	36.31	93.43	39	9	55	< 20	8	< 20	< 10	930	54	10
134867	5.25	3.21	0.05	12.46	1.021	11.97	28.09	0.03	0.04	0.199	1.34	35.23	93.64	51	11	53	< 20	7	< 20	< 10	900	57	10
134868	5.80	2.23	0.12	13.90	1.304	11.54	27.89	0.02	0.07	0.187	0.88	35.01	93.15	58	8	61	< 20	8	< 20	< 10	1090	58	12
134869	2.40	5.87	0.14	14.81	1.315	11.48	24.86	0.03	0.08	0.301	1.57	35.45	95.91	66	10	80	< 20	8	< 20	< 10	1220	62	12
134870	2.01	2.23	0.11	13.02	1.284	12.27	25.89	0.02	0.07	0.221	1.34	37.67	94.13	55	5	64	< 20	9	< 20	< 10	1100	68	12
134871	3.78	3.73	0.17	13.09	1.320	11.55	26.73	0.05	0.10	0.220	1.48	34.90	93.34	56	9	73	< 20	8	< 20	< 10	850	65	11
134872	4.28	4.38	0.20	11.26	1.359	11.99	27.48	0.05	0.13	0.240	1.31	35.35	93.75	62	11	73	< 20	6	< 20	< 10	510	57	11
134873	4.21	1.51	0.10	11.95	1.490	12.75	28.54	0.02	0.05	0.117	0.78	36.84	94.15	46	5	48	< 20	6	< 20	< 10	850	59	11
134874	0.06	95.09	0.09	0.57	0.026	0.36	0.83	0.03	0.02	0.004	0.01	1.04	98.07	1	< 1	< 5	60	< 1	< 20	< 10	< 30	< 1	2
134875	6.45	20.52	3.01	28.16	2.412	6.81	17.77	0.30	1.32	1.508	0.57	11.81	94.19	21	13	155	160	28	70	30	1370	53	11
134876	3.69	3.36	0.10	9.87	1.532	12.92	27.83	< 0.01	0.02	0.085	0.83	36.82	93.37	47	6	44	< 20	5	< 20	< 10	1210	59	11
134877	4.58	4.03	0.06	9.91	1.266	12.32	29.10	0.03	0.04	0.114	1.81	35.05	93.73	50	12	48	< 20	5	< 20	< 10	810	63	11
134878	5.98	5.78	0.04	10.89	1.087	11.25	28.15	0.05	0.04	0.116	1.95	33.05	92.41	42	12	53	< 20	6	< 20	< 10	890	66	12
134879	3.59	1.87	0.34	11.77	1.309	12.32	27.10	0.07	0.21	0.226	0.94	36.27	92.42	45	5	71	< 20	7	< 20	< 10	420	56	10
134880	2.18	4.65	1.07	9.69	1.028	12.24	27.69	0.27	0.43	0.592	3.48	33.96	95.09	49	10	100	< 20	7	< 20	10	480	46	8
134881	4.23	1.72	0.15	12.28	1.344	12.46	27.82	0.03	0.09	0.208	0.97	36.28	93.36	40	10	67	< 20	7	< 20	< 10	510	65	12
134882	4.71	3.59	0.13	14.12	1.297	12.38	27.76	0.05	0.09	0.208	1.90	34.09	95.62	43	9	63	< 20	7	< 20	< 10	820	62	11
134883	4.51	2.05	0.05	13.69	1.211	12.20	27.02	0.03	0.03	0.260	1.26	35.32	93.11	37	10	63	< 20	7	< 20	< 10	810	58	10

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134884	4.94	2.11	0.04	13.35	1.212	12.24	26.93	0.03	0.02	0.279	1.34	35.29	92.84	38	10	64	< 20	8	< 20	< 10	760	59	10
134885	4.34	2.90	0.09	10.22	1.123	12.95	28.28	0.03	0.07	0.182	0.99	36.60	93.43	41	9	58	< 20	5	< 20	< 10	590	58	10
134886	2.93	2.61	0.80	9.22	1.006	11.76	29.96	0.24	0.16	0.408	5.47	32.68	94.31	46	7	63	< 20	7	< 20	< 10	460	38	8
134887	4.93	1.62	0.05	13.82	1.435	12.57	27.06	0.03	0.04	0.259	0.62	36.15	93.65	39	7	64	< 20	7	< 20	< 10	810	62	11
134888	3.54	2.70	0.06	12.68	1.393	12.05	27.60	0.04	0.04	0.129	1.77	35.78	94.26	45	10	52	< 20	5	< 20	< 10	780	55	10
134889	4.65	2.71	0.06	13.84	1.548	11.87	26.95	0.04	0.05	0.236	0.86	35.04	93.21	41	12	56	< 20	6	< 20	20	960	64	11
134890	3.02	1.01	0.05	15.19	1.680	12.76	25.27	< 0.01	0.01	0.285	0.39	37.26	93.92	41	8	65	< 20	6	< 20	40	870	55	10
134891	1.00	2.81	0.11	16.55	1.897	12.04	23.06	0.04	0.06	0.187	1.57	37.30	95.63	52	7	66	< 20	9	< 20	< 10	1070	57	12
134892	1.64	1.29	0.07	13.79	1.581	13.16	25.05	0.02	0.05	0.183	0.39	39.48	95.05	40	9	60	< 20	5	< 20	< 10	830	48	9

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134786	14	< 2	2547	219	62	224	3	0.7	< 0.2	9	< 0.5	< 0.5	63	0.6	1840	3710	414	1430	204	50.5	106	12.1	51.6
134787	20	< 2	2450	255	48	212	4	0.5	< 0.2	8	< 0.5	< 0.5	92	0.8	2860	5390	577	1950	294	74.9	156	17.3	66.2
134788	21	< 2	2261	303	54	272	3	0.5	< 0.2	11	< 0.5	< 0.5	123	0.7	3350	6160	659	2230	327	85.6	183	20.9	79.7
134789	19	< 2	2444	293	56	283	3	0.6	< 0.2	10	< 0.5	< 0.5	153	1.1	3190	5870	630	2150	298	73.5	152	17.1	68.8
134790	19	< 2	2380	295	36	254	4	< 0.5	< 0.2	14	< 0.5	< 0.5	128	1.0	1910	4200	495	1820	278	72.1	158	19.5	80.0
134791	19	< 2	2101	242	46	216	7	< 0.5	< 0.2	16	7.4	< 0.5	95	1.5	2190	4880	573	2070	279	69.0	145	16.0	66.1
134792	21	< 2	2323	278	69	579	4	1.7	< 0.2	27	< 0.5	2.1	121	1.0	2540	5410	610	2060	281	68.1	144	16.3	67.6
134793	19	< 2	2342	275	62	231	4	0.8	< 0.2	7	< 0.5	< 0.5	113	1.2	3770	7050	688	2090	257	61.3	130	15.5	63.4
134794	18	< 2	2291	253	56	329	7	0.6	< 0.2	9	< 0.5	< 0.5	59	1.0	2100	4410	502	1780	253	61.4	129	14.2	59.4
134795	17	< 2	2510	230	49	401	3	< 0.5	< 0.2	15	< 0.5	< 0.5	82	1.3	3000	5540	580	1920	279	69.3	142	14.8	54.7
134796	23	< 2	2629	243	38	271	4	< 0.5	< 0.2	9	< 0.5	< 0.5	164	2.3	4770	8110	808	2560	346	83.6	167	16.7	60.2
134797	18	< 2	2520	266	69	390	8	0.7	< 0.2	9	< 0.5	< 0.5	120	1.0	2580	5150	573	1990	280	70.0	147	16.1	64.6
134798	19	< 2	2487	289	76	699	3	0.6	< 0.2	21	< 0.5	< 0.5	152	1.1	2310	4860	555	1960	290	73.7	157	17.8	70.4
134799	< 5	< 2	15	2	6	35	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	26.5	46.6	4.56	14.0	1.9	0.48	1.0	0.1	0.5
134800	153	33	20520	931	232	30	32	2.9	< 0.2	< 1	6.6	1.7	917	7.5	17800	28600	2560	7880	834	195	358	36.4	153
134801	21	< 2	2147	340	41	672	13	0.8	0.2	37	0.7	< 0.5	185	2.0	2350	5080	596	2180	356	92.0	198	23.2	92.9
134802	20	< 2	2122	248	40	486	5	< 0.5	< 0.2	14	< 0.5	< 0.5	187	0.8	2100	4800	577	2120	302	72.6	145	15.7	62.1
134803	21	< 2	2205	240	57	697	3	0.6	< 0.2	16	< 0.5	< 0.5	172	1.5	2900	6130	697	2410	318	72.2	142	14.4	56.2
134804	20	< 2	2281	210	48	543	5	0.5	< 0.2	15	< 0.5	< 0.5	167	2.5	2830	6100	686	2330	295	66.4	130	13.0	49.2
134805	22	< 2	2269	238	30	686	< 2	< 0.5	0.2	21	< 0.5	< 0.5	190	1.5	3290	6500	708	2400	333	77.5	153	15.5	57.0
134806	20	< 2	2294	239	56	759	11	0.6	0.2	17	< 0.5	< 0.5	140	1.2	1900	4550	565	2070	288	65.4	130	13.4	54.0
134807	22	< 2	2181	379	38	475	12	< 0.5	< 0.2	24	0.6	< 0.5	129	2.1	2040	4590	560	2200	342	88.9	196	24.2	104
134808	21	< 2	1978	408	42	412	6	< 0.5	< 0.2	14	< 0.5	< 0.5	118	0.7	2160	4860	583	2170	317	78.5	171	21.5	96.1
134809	18	< 2	2603	389	114	653	4	1.1	< 0.2	10	< 0.5	< 0.5	198	1.1	2170	4940	584	2070	272	65.5	141	17.7	79.9
134810	24	< 2	2549	291	47	594	5	< 0.5	< 0.2	20	< 0.5	< 0.5	298	1.8	3170	6490	722	2490	355	86.4	180	19.4	73.5
134811	22	< 2	2646	293	89	656	3	0.7	< 0.2	14	< 0.5	< 0.5	203	2.0	3460	6700	714	2380	321	75.4	153	16.6	65.9
134812	19	< 2	2499	232	84	1130	3	0.7	< 0.2	14	< 0.5	< 0.5	190	1.0	3360	6540	695	2270	261	57.2	113	11.9	48.8
134813	17	< 2	2662	242	76	666	2	< 0.5	< 0.2	21	0.7	< 0.5	191	1.5	4190	7150	708	2320	293	68.6	133	13.1	53.6
134814	21	< 2	2678	209	57	523	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	177	0.9	2600	5060	555	1930	285	69.3	141	14.9	55.3
134815	20	< 2	2675	210	55	502	3	< 0.5	< 0.2	15	< 0.5	< 0.5	179	0.7	2360	4640	508	1770	254	62.9	130	13.7	53.1
134816	19	< 2	2283	179	33	320	3	< 0.5	< 0.2	9	< 0.5	< 0.5	134	0.5	2010	4170	471	1700	260	62.8	124	12.7	46.6
134817	16	< 2	2256	196	44	836	3	< 0.5	< 0.2	32	< 0.5	< 0.5	178	0.7	2360	4480	478	1610	218	52.8	110	11.9	46.3
134818	19	< 2	2257	263	28	718	4	< 0.5	< 0.2	20	< 0.5	< 0.5	184	1.3	2680	5230	574	1960	266	64.4	136	15.8	65.3
134819	17	< 2	2221	248	22	484	26	< 0.5	< 0.2	18	< 0.5	< 0.5	164	1.8	2960	5570	584	1920	266	63.6	134	15.0	60.7
134820	20	< 2	2062	310	19	410	80	< 0.5	0.2	24	< 0.5	< 0.5	116	3.8	2670	5550	632	2200	295	68.2	144	17.6	77.3
134821	23	< 2	2037	261	19	541	65	< 0.5	0.3	28	< 0.5	< 0.5	136	3.7	2620	5550	635	2210	319	75.2	157	17.6	70.0
134822	20	< 2	1935	352	21	575	73	< 0.5	0.3	26	0.8	< 0.5	145	7.3	2750	5860	673	2370	308	74.7	159	18.9	85.2
134823	21	< 2	2186	286	24	539	120	< 0.5	0.3	25	0.7	< 0.5	125	2.5	3110	5870	607	1990	304	73.5	151	16.3	66.8
134824	< 5	< 2	17	< 2	5	35	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	19.1	38.7	4.22	14.6	2.0	0.48	1.1	0.1	0.5
134825	20	25	3054	893	224	363	52	1.6	< 0.2	44	< 0.5	< 0.5	13560	2.5	2540	4790	553	2150	460	129	306	42.8	202
134826	17	< 2	2006	299	26	897	12	< 0.5	0.3	32	< 0.5	< 0.5	129	2.5	2800	5310	573	1960	321	80.6	166	18.3	73.8
134827	15	< 2	2141	224	33	795	10	< 0.5	0.2	20	< 0.5	< 0.5	148	1.3	2590	4980	538	1810	265	64.2	132	13.9	53.9
134828	17	< 2	2076	222	27	769	10	< 0.5	0.2	24	< 0.5	< 0.5	328	2.5	3070	5760	620	2040	307	74.5	153	16.2	59.4
134829	20	< 2	1932	271	26	739	8	< 0.5	0.3	20	< 0.5	< 0.5	148	2.2	3420	6190	661	2170	316	76.6	159	18.0	69.8
134830	19	< 2	2018	309	35	843	32	< 0.5	0.3	26	< 0.5	< 0.5	134	2.9	2640	5330	604	2050	311	76.9	162	19.3	77.5
134831	19	< 2	2324	261	46	816	12	< 0.5	0.2	24	< 0.5	< 0.5	200	3.4	3080	5890	631	2040	291	71.3	152	17.1	66.4
134832	17	< 2	1950	365	24	1170	9	< 0.5	0.2	31	0.5	< 0.5	118	1.9	2230	4520	512	1760	294	76.7	165	20.4	86.0
134833	20	< 2	2011	275	27	951	9	< 0.5	< 0.2	26	< 0.5	< 0.5	99	2.5	3230	5940	634	2060	298	74.0	158	17.6	67.1
134834	17	< 2	2549	361	91	827	4	0.8	< 0.2	18	< 0.5	< 0.5	171	1.6	4310	6740	644	1950	279	73.2	163	20.0	80.0

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134835	20	< 2	2342	317	48	717	< 2	< 0.5	< 0.2	21	< 0.5	< 0.5	83	0.7	4980	7840	746	2240	301	76.1	163	19.0	77.3
134836	17	< 2	2065	299	25	434	< 2	< 0.5	0.3	26	< 0.5	< 0.5	94	2.1	2250	4480	510	1800	307	76.9	157	17.4	69.4
134837	18	< 2	2040	393	20	456	< 2	< 0.5	< 0.2	22	< 0.5	< 0.5	91	1.6	2970	5530	583	1910	306	80.0	174	21.1	88.8
134838	18	< 2	2054	389	21	427	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	147	1.6	3030	5510	571	1830	290	77.0	167	20.4	86.1
134839	16	< 2	2144	271	28	703	2	< 0.5	< 0.2	24	< 0.5	< 0.5	343	1.8	2470	4800	527	1770	272	68.9	145	16.2	64.1
134840	16	< 2	1868	289	23	389	3	< 0.5	< 0.2	15	< 0.5	< 0.5	175	1.4	2240	4380	479	1620	252	65.6	141	16.9	70.0
134841	22	< 2	1538	501	26	303	6	< 0.5	0.2	22	< 0.5	< 0.5	186	2.2	3860	7010	732	2350	349	91.0	202	27.0	121
134842	22	< 2	1574	412	26	564	4	< 0.5	< 0.2	12	< 0.5	< 0.5	106	0.4	4770	7750	749	2270	286	69.0	149	19.1	87.6
134843	22	< 2	1731	396	46	290	5	< 0.5	0.2	23	< 0.5	< 0.5	237	1.0	3150	5890	641	2160	343	90.0	194	23.4	97.2
134844	24	< 2	1538	351	29	409	28	< 0.5	< 0.2	12	< 0.5	< 0.5	130	1.2	4670	8140	830	2600	350	85.3	177	20.1	82.0
134845	22	< 2	1593	336	44	249	5	< 0.5	0.2	13	< 0.5	< 0.5	132	1.7	3270	6060	655	2240	360	90.1	184	20.3	82.4
134846	17	< 2	2110	296	10	194	2	< 0.5	< 0.2	6	< 0.5	< 0.5	176	< 0.4	2500	4950	558	1930	292	73.2	154	17.7	73.1
134847	24	< 2	1784	426	18	190	3	< 0.5	< 0.2	16	1.1	< 0.5	151	1.0	3130	5960	662	2310	400	108	232	26.9	108
134848	33	< 2	1256	1057	35	224	18	< 0.5	0.3	15	< 0.5	< 0.5	142	2.1	2330	5970	838	3380	620	164	377	52.0	239
134849	< 5	< 2	24	4	4	< 1	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	27	< 0.4	5.6	10.8	1.11	4.0	0.5	0.13	0.3	< 0.1	0.1
134850	170	33	19950	963	219	22	33	2.6	< 0.2	1	6.6	1.7	911	8.1	17900	28600	2580	7820	844	197	370	38.0	152
134851	18	< 2	2317	375	86	424	< 2	0.8	< 0.2	15	< 0.5	< 0.5	239	0.8	2620	5010	552	1910	328	89.1	189	22.3	89.4
134852	21	< 2	1653	353	42	290	4	< 0.5	0.3	17	< 0.5	< 0.5	282	1.6	2520	4930	554	1990	380	95.5	188	20.2	77.6
134853	25	< 2	1770	490	24	541	7	< 0.5	< 0.2	15	< 0.5	< 0.5	139	1.1	3930	6960	747	2560	425	112	238	29.1	122
134854	25	< 2	1885	341	47	444	15	< 0.5	< 0.2	20	0.5	< 0.5	262	0.7	3640	6400	672	2240	352	88.5	182	20.9	85.2
134855	21	< 2	1672	500	26	346	< 2	< 0.5	< 0.2	29	< 0.5	< 0.5	152	0.9	3350	5960	639	2170	353	94.1	211	27.1	118
134856	26	< 2	1770	365	40	347	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	174	0.8	4740	7840	775	2430	333	83.7	179	21.1	88.3
134857	25	< 2	1825	275	15	498	2	< 0.5	< 0.2	16	< 0.5	< 0.5	144	0.6	3820	6480	659	2100	294	76.9	168	19.5	74.3
134858	20	< 2	1528	532	51	293	3	< 0.5	< 0.2	16	< 0.5	< 0.5	197	1.5	3590	6590	695	2260	377	107	247	31.6	135
134859	22	< 2	1786	274	65	260	6	0.5	0.2	12	< 0.5	< 0.5	139	1.3	4030	7030	721	2310	334	83.3	170	17.0	61.1
134860	24	< 2	1658	239	39	322	3	< 0.5	< 0.2	10	< 0.5	< 0.5	160	1.4	3800	6810	715	2320	355	88.7	178	17.0	56.7
134861	86	< 2	1943	208	21	472	3	< 0.5	< 0.2	21	< 0.5	< 0.5	148	1.2	3690	6810	716	2290	316	74.9	149	14.0	48.2
134862	98	3	1627	222	29	557	2	< 0.5	< 0.2	20	< 0.5	< 0.5	252	1.6	4450	7510	759	2370	306	69.9	142	14.3	51.2
134863	35	< 2	1896	171	19	404	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	133	0.9	4160	6670	651	2000	255	61.3	125	13.0	46.2
134864	33	< 2	1976	194	18	506	< 2	< 0.5	< 0.2	22	< 0.5	< 0.5	234	0.7	4820	7670	724	2130	253	58.5	119	12.3	46.0
134865	19	< 2	1942	179	30	371	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	172	0.7	3800	6550	656	2020	250	55.7	108	10.5	37.3
134866	20	< 2	1984	177	24	330	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	176	0.7	3830	6500	645	1990	244	54.2	108	10.2	36.6
134867	20	< 2	2452	199	49	311	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	210	1.5	3790	6660	675	2090	257	58.2	118	11.8	42.9
134868	20	< 2	1957	294	49	375	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	214	1.2	3950	6920	699	2160	277	66.8	142	16.2	63.4
134869	22	< 2	2109	258	62	549	< 2	0.6	< 0.2	21	< 0.5	< 0.5	207	1.1	4100	7390	752	2330	294	70.7	149	16.6	63.6
134870	24	< 2	2108	243	51	509	< 2	< 0.5	< 0.2	13	< 0.5	< 0.5	186	1.1	4930	8240	809	2450	297	70.2	148	16.1	61.6
134871	26	< 2	2171	314	78	493	< 2	0.6	< 0.2	18	< 0.5	< 0.5	205	1.3	4520	7770	805	2680	342	81.1	158	17.7	71.9
134872	29	3	2190	253	49	623	2	< 0.5	< 0.2	21	< 0.5	< 0.5	259	2.0	3430	6530	719	2530	372	90.0	166	16.5	59.6
134873	27	< 2	1887	209	38	296	14	0.6	< 0.2	18	< 0.5	< 0.5	160	1.0	3370	6390	712	2540	351	78.6	138	12.6	45.4
134874	< 5	< 2	39	5	6	< 1	4	< 0.5	< 0.2	< 1	< 0.5	< 0.5	7	< 0.4	10.1	17.6	1.67	5.5	0.6	0.18	0.4	< 0.1	0.1
134875	25	28	3069	904	233	346	58	2.1	< 0.2	44	< 0.5	< 0.5	13520	2.2	2510	4700	561	2290	483	135	305	42.5	200
134876	29	< 2	2048	191	51	178	14	< 0.5	< 0.2	10	0.6	< 0.5	159	5.4	3210	6150	681	2260	291	65.9	126	11.7	41.3
134877	28	< 2	2696	240	85	263	2	0.6	< 0.2	11	< 0.5	< 0.5	456	0.9	4040	7220	763	2540	315	71.3	132	13.0	49.8
134878	29	< 2	2690	250	72	287	< 2	0.6	< 0.2	10	< 0.5	< 0.5	219	1.4	4450	7790	804	2700	352	81.9	151	15.5	57.2
134879	32	5	2412	217	60	367	4	< 0.5	< 0.2	21	< 0.5	< 0.5	372	2.3	3470	6350	683	2360	317	74.4	139	13.9	50.9
134880	23	10	3194	354	116	366	2	0.8	< 0.2	26	< 0.5	< 0.5	797	1.3	2810	5060	543	1890	271	70.3	147	19.0	81.8
134881	27	< 2	2860	212	44	598	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	230	1.4	4370	7570	784	2650	353	84.2	155	15.0	52.2
134882	37	< 2	3053	350	80	530	2	0.6	< 0.2	15	< 0.5	< 0.5	277	2.1	4030	7130	751	2540	337	81.6	163	18.8	75.7
134883	25	< 2	2897	204	50	542	< 2	< 0.5	< 0.2	13	< 0.5	< 0.5	163	1.2	3750	6650	701	2390	301	69.0	127	11.8	43.3
134884	27	< 2	2865	205	53	591	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	170	1.4	3770	6690	711	2430	314	71.5	131	12.4	43.9

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134885	25	< 2	2851	242	42	410	3	< 0.5	< 0.2	13	< 0.5	< 0.5	274	1.2	3880	6690	699	2360	307	73.0	140	14.5	54.7
134886	24	2	3995	520	121	388	2	0.8	< 0.2	21	< 0.5	< 0.5	222	1.0	1980	3960	453	1670	268	75.9	172	25.7	118
134887	28	< 2	2745	209	31	620	< 2	0.5	< 0.2	19	< 0.5	< 0.5	190	1.2	3820	6980	752	2600	354	82.1	149	14.1	48.9
134888	24	< 2	3080	268	44	582	< 2	< 0.5	< 0.2	12	< 0.5	< 0.5	173	1.6	3450	6280	678	2360	332	79.3	150	15.5	59.5
134889	29	2	2556	199	21	635	< 2	< 0.5	< 0.2	17	< 0.5	< 0.5	232	1.5	3970	7120	767	2670	372	85.1	162	15.7	57.3
134890	29	< 2	2606	193	18	591	< 2	< 0.5	< 0.2	20	1.1	< 0.5	198	1.8	3030	5700	643	2240	343	83.4	167	16.2	54.2
134891	27	< 2	2431	348	101	260	< 2	0.9	0.2	16	< 0.5	< 0.5	225	2.8	2980	6000	697	2560	404	105	216	25.0	96.4
134892	20	< 2	2959	239	19	430	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	217	1.6	2810	5310	588	2060	307	76.9	156	17.5	65.4

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134786	7.4	15.9	1.83	10.4	1.35	1.3	0.2	1	< 0.1	55	240	0.1	3.126
134787	8.9	18.4	2.14	12.6	1.52	1.3	< 0.1	1	< 0.1	54	356	0.1	2.992
134788	10.7	21.9	2.29	13.5	1.63	1.4	< 0.1	2	< 0.1	57	435	< 0.1	3.310
134789	9.6	19.8	2.32	13.6	1.62	1.4	< 0.1	3	0.1	85	351	< 0.1	3.780
134790	10.9	22.9	2.63	14.0	1.79	1.2	< 0.1	3	< 0.1	86	367	0.1	4.479
134791	8.9	17.8	1.95	10.7	1.33	1.0	0.3	11	< 0.1	39	414	0.9	3.977
134792	9.6	20.5	2.31	13.3	1.72	1.5	0.5	3	< 0.1	35	419	0.4	3.802
134793	8.9	19.2	2.09	12.1	1.48	1.5	< 0.1	< 1	< 0.1	23	283	< 0.1	3.798
134794	8.6	18.1	2.03	11.7	1.47	1.3	< 0.1	2	< 0.1	23	259	0.2	3.134
134795	7.6	16.2	1.80	10.5	1.36	1.2	< 0.1	3	< 0.1	32	324	0.1	4.194
134796	7.9	16.6	1.81	10.7	1.35	1.1	< 0.1	1	< 0.1	73	365	< 0.1	2.605
134797	9.0	19.0	2.25	12.7	1.66	1.4	< 0.1	2	< 0.1	108	255	0.1	4.009
134798	9.8	20.3	2.33	13.3	1.77	1.5	< 0.1	6	< 0.1	121	264	0.2	4.429
134799	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.3	< 0.1	0.410
134800	24.7	60.6	7.97	48.3	6.55	3.8	< 0.1	5	2.4	996	158	205	0.024
134801	12.6	24.1	2.76	15.2	1.97	1.5	< 0.1	8	0.2	268	515	0.2	4.332
134802	8.7	18.4	2.02	12.0	1.53	1.1	< 0.1	4	< 0.1	153	346	0.2	4.305
134803	7.8	16.3	1.91	11.3	1.48	1.2	< 0.1	7	< 0.1	156	247	0.2	4.104
134804	6.8	14.8	1.72	10.4	1.35	1.0	< 0.1	4	< 0.1	220	282	0.1	3.461
134805	7.3	15.6	1.81	11.4	1.41	1.0	< 0.1	6	< 0.1	202	492	< 0.1	4.897
134806	7.7	17.9	2.16	11.5	1.42	1.2	0.1	5	< 0.1	263	419	0.2	3.833
134807	14.6	28.3	3.10	15.1	1.80	1.2	< 0.1	7	< 0.1	135	422	0.2	4.080
134808	14.5	30.9	3.34	16.9	2.12	1.5	< 0.1	5	< 0.1	62	328	0.3	2.161
134809	12.5	28.7	3.53	19.7	2.61	2.3	< 0.1	5	< 0.1	100	297	0.2	2.846
134810	9.8	22.0	2.48	13.2	1.71	1.3	< 0.1	7	< 0.1	70	444	0.2	3.726
134811	9.2	23.0	2.84	16.2	2.11	1.8	< 0.1	5	< 0.1	50	382	0.1	3.366
134812	7.5	18.7	2.38	12.9	1.72	1.6	< 0.1	9	< 0.1	36	257	0.2	4.060
134813	7.5	18.1	2.23	12.5	1.65	1.3	< 0.1	7	< 0.1	31	235	< 0.1	2.823
134814	7.3	17.1	1.91	11.2	1.47	1.2	0.6	4	< 0.1	30	355	0.5	1.461
134815	6.9	16.2	2.02	11.1	1.44	1.1	0.9	4	< 0.1	29	321	0.6	1.550
134816	6.1	13.8	1.66	9.1	1.23	0.9	0.1	3	< 0.1	29	314	0.3	3.162
134817	6.4	14.6	1.77	9.8	1.33	1.0	< 0.1	9	< 0.1	68	295	0.2	3.139
134818	9.3	20.0	2.26	12.7	1.68	1.1	0.2	5	< 0.1	59	342	0.2	3.955
134819	8.5	18.2	2.02	11.0	1.40	0.9	0.3	3	< 0.1	153	600	0.3	3.525
134820	11.2	22.7	2.43	12.7	1.55	1.1	< 0.1	7	0.1	373	700	< 0.1	4.701
134821	9.3	19.2	2.09	11.1	1.44	1.0	0.2	5	0.1	249	793	0.1	4.449
134822	12.3	25.3	2.74	14.3	1.72	0.9	< 0.1	6	< 0.1	463	812	< 0.1	4.323
134823	9.6	20.7	2.46	14.4	1.85	1.0	< 0.1	5	0.1	286	803	< 0.1	4.296
134824	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	4.9	< 0.1	0.415
134825	33.0	77.6	9.12	52.2	7.13	5.7	3.1	26	0.4	561	884	2.7	0.030
134826	10.2	21.3	2.60	14.6	1.98	1.1	< 0.1	7	< 0.1	286	862	< 0.1	3.285
134827	7.2	16.4	1.81	10.7	1.44	1.0	0.3	6	< 0.1	173	632	0.2	3.340
134828	7.6	15.8	1.69	9.8	1.32	1.1	0.1	6	0.3	193	698	< 0.1	4.182
134829	9.3	19.9	2.14	12.0	1.58	1.2	< 0.1	7	0.1	247	771	< 0.1	3.382
134830	10.4	22.8	2.57	14.5	1.96	1.3	< 0.1	7	0.1	329	716	< 0.1	4.043
134831	8.8	18.6	2.04	11.3	1.55	1.3	0.7	7	0.2	295	591	0.5	4.337
134832	12.3	26.3	2.91	16.0	1.99	1.4	< 0.1	9	< 0.1	211	594	< 0.1	4.194
134833	9.0	19.5	2.18	12.9	1.70	1.2	< 0.1	9	0.1	271	501	< 0.1	3.757

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134834	11.4	24.9	2.84	16.6	2.28	2.0	< 0.1	8	0.2	222	512	< 0.1	1.944
134835	10.6	23.8	2.67	14.5	1.87	1.5	< 0.1	6	< 0.1	131	470	< 0.1	3.923
134836	9.7	22.0	2.51	14.8	1.87	1.2	< 0.1	4	< 0.1	278	640	< 0.1	3.572
134837	13.2	28.6	3.14	16.4	2.02	1.2	< 0.1	4	< 0.1	173	747	< 0.1	2.259
134838	12.7	27.2	2.99	15.8	1.88	1.2	< 0.1	4	< 0.1	166	709	< 0.1	2.034
134839	9.0	20.1	2.27	13.2	1.80	1.0	0.3	6	< 0.1	58	484	0.3	4.041
134840	9.9	21.3	2.39	12.8	1.60	1.0	0.4	3	< 0.1	57	500	0.3	2.558
134841	17.5	34.7	3.62	18.7	2.30	1.6	0.2	2	0.2	251	729	0.3	3.215
134842	13.3	29.3	3.20	17.0	2.12	1.3	0.5	5	< 0.1	118	346	0.5	2.897
134843	14.0	29.1	3.02	17.3	2.28	1.6	0.2	5	0.2	217	532	1.7	4.602
134844	11.5	23.5	2.60	15.0	1.85	1.3	0.5	4	0.2	290	613	0.4	3.298
134845	11.6	24.5	2.70	15.5	1.89	1.5	< 0.1	2	0.1	190	576	< 0.1	4.617
134846	10.4	21.3	2.32	12.2	1.53	1.0	< 0.1	2	< 0.1	70	266	< 0.1	3.823
134847	15.0	30.4	3.25	17.3	1.99	1.3	< 0.1	2	< 0.1	384	595	< 0.1	2.908
134848	36.9	74.2	7.63	38.9	4.67	3.1	< 0.1	3	0.2	667	1390	< 0.1	2.001
134849	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	0.8	< 0.1	0.411
134850	24.9	61.7	7.97	49.1	6.75	3.8	< 0.1	5	2.4	1060	162	209	0.025
134851	12.4	24.9	2.62	15.6	1.99	1.8	4.2	6	0.3	214	668	3.8	2.905
134852	10.7	22.8	2.37	13.7	1.66	1.4	1.3	3	0.4	371	792	0.8	2.339
134853	17.5	33.8	3.24	17.5	2.01	1.7	1.7	4	0.1	294	667	1.1	2.828
134854	12.3	24.6	2.51	13.9	1.71	1.4	2.2	7	0.2	147	453	3.6	1.775
134855	17.9	35.3	3.63	19.0	2.43	1.7	< 0.1	7	0.1	129	444	0.5	3.965
134856	12.9	26.3	2.67	14.7	1.76	1.5	< 0.1	4	0.1	124	384	0.1	3.969
134857	10.1	20.2	1.98	10.2	1.25	1.0	0.7	5	< 0.1	100	299	0.4	4.147
134858	19.6	38.9	3.91	21.4	2.67	2.3	< 0.1	2	0.2	178	644	0.3	3.683
134859	8.4	18.9	2.23	13.8	1.84	1.5	0.5	2	0.1	230	589	0.4	3.665
134860	7.3	16.2	1.96	11.7	1.57	1.2	0.8	2	0.1	226	730	0.5	3.520
134861	6.2	13.7	1.58	9.5	1.28	0.8	0.6	6	< 0.1	114	560	0.4	1.128
134862	7.0	15.6	1.85	10.6	1.36	0.9	0.9	6	0.4	398	502	0.8	4.647
134863	6.1	13.3	1.56	9.1	1.20	0.8	0.7	4	0.2	146	377	0.9	4.198
134864	6.4	14.2	1.73	9.7	1.24	0.8	0.2	6	0.2	108	360	0.3	3.609
134865	5.3	12.8	1.65	10.6	1.42	0.9	0.2	4	< 0.1	122	417	0.1	0.947
134866	5.3	12.6	1.60	9.9	1.32	0.8	0.2	4	< 0.1	121	379	0.1	0.924
134867	6.0	14.6	1.78	11.3	1.47	1.0	0.1	4	< 0.1	184	419	< 0.1	1.979
134868	9.0	20.3	2.39	14.6	1.93	1.3	0.4	5	0.2	186	528	0.3	2.122
134869	8.9	19.0	2.27	13.9	1.86	1.4	0.7	6	0.2	194	536	1.0	4.390
134870	8.5	18.8	2.18	12.8	1.69	1.4	0.6	5	0.1	176	476	1.0	4.237
134871	10.3	22.6	2.72	15.6	2.07	1.6	1.5	4	0.2	168	536	0.8	3.417
134872	7.9	16.3	1.90	11.7	1.52	1.1	5.3	4	0.4	182	697	2.4	3.123
134873	6.2	14.2	1.71	10.1	1.39	0.9	1.4	2	0.2	186	500	0.6	4.622
134874	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.2	< 0.1	0.409
134875	33.1	77.0	9.13	48.9	6.28	6.5	3.4	27	0.4	559	874	2.7	0.030
134876	5.6	13.4	1.66	9.9	1.33	1.1	0.7	2	< 0.1	431	480	0.5	2.727
134877	7.1	15.9	2.05	12.1	1.60	1.5	0.2	2	0.2	163	342	0.2	4.585
134878	8.1	17.4	2.09	12.1	1.64	1.4	0.5	2	0.1	141	329	0.4	3.935
134879	6.8	15.1	1.80	9.9	1.28	1.2	1.2	3	0.3	110	361	0.5	2.656
134880	12.1	26.0	3.05	17.0	2.21	2.0	3.5	4	0.5	193	353	3.8	4.394
134881	6.7	14.4	1.64	9.5	1.23	1.0	1.2	5	0.2	115	414	0.5	3.430
134882	11.2	24.4	2.68	14.7	1.92	1.6	0.8	6	0.2	172	368	0.4	3.863
134883	5.8	13.0	1.54	9.3	1.22	1.0	0.1	5	< 0.1	142	267	0.1	1.876

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134884	5.9	12.5	1.51	9.1	1.25	1.1	0.2	6	< 0.1	150	284	0.1	1.876
134885	7.6	16.6	1.88	11.0	1.47	1.0	0.6	4	0.2	151	304	0.4	4.847
134886	18.0	39.1	4.39	23.5	3.18	2.1	0.8	6	0.3	232	440	4.0	2.862
134887	6.4	13.8	1.57	8.8	1.22	1.8	0.1	6	0.1	146	292	0.2	4.665
134888	8.4	18.3	2.22	12.5	1.62	1.2	0.4	3	0.2	229	298	0.3	3.334
134889	7.7	17.3	2.09	12.4	1.64	0.8	< 0.1	7	0.2	239	345	0.1	4.335
134890	6.5	13.0	1.45	7.6	0.97	0.8	0.1	8	< 0.1	237	493	0.1	4.354
134891	13.0	24.2	2.67	14.8	1.92	2.2	< 0.1	5	0.3	356	660	0.2	3.210
134892	8.6	17.8	1.81	9.6	1.22	0.9	< 0.1	4	0.2	314	415	0.1	3.172

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.24	11.38	1.88	0.73	0.013	0.33	42.55	0.85	0.54	0.120	30.24					1661							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.23																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.16																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.40	18.33	9.85	0.147	9.96	11.49	1.90	0.22	0.492	0.06			31		156	260	57	250	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		71.28	13.13	3.26	0.143	0.13	0.60	2.54	5.57	0.290	0.03			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		30	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
W-2a Meas		52.65	15.34	10.58	0.168	6.27	11.11	2.23	0.63	1.092	0.14			35	< 1	278		42	60	100		17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110		17.0	1.00
SY-4 Meas		50.48	20.43	6.19	0.107	0.50	8.20	6.95	1.67	0.290	0.12			1	3	6							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				60			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		48.22	15.90	11.46	0.174	9.62	13.57	1.82	0.02	0.982	0.01			44	< 1	340	380	53	170	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1040	99	
ZW-C Cert																					1050.000	99	
NCS DC70014 Meas																		25	70	2600	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				970		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		18		180			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		49		440			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas																							
NCS DC86318 Cert																							
SARM 3 Meas																							
SARM 3 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134800 Orig	2.04	15.04	2.52	12.83	0.140	0.49	26.24	0.91	0.99	0.144	19.06	8.28	86.63	17	14	155	20	32	60	110	620	220	38

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134800 Dup	1.97	15.16	2.50	13.18	0.141	0.47	26.49	0.91	1.00	0.144	19.26	8.28	87.53	16	14	154	20	32	60	110	620	222	37
134817 Orig	3.09	3.82	0.11	10.15	1.183	11.86	28.97	0.03	0.02	0.388	0.74	37.26	94.53	66	66	86	< 20	6	< 20	< 10	570	41	8
134817 Dup	3.05	3.81	0.11	10.02	1.149	11.83	28.80	0.03	0.03	0.380	0.84	37.26	94.24	66	67	88	< 20	5	< 20	< 10	550	40	8
134827 Orig	4.97	2.81	0.09	15.80	1.895	10.26	27.00	0.02	0.03	0.297	0.74	34.26	93.21	55	17	83	< 20	7	< 20	< 10	1060	45	10
134827 Dup	5.08	2.79	0.08	15.66	1.872	10.28	26.89	0.02	0.03	0.299	0.74	34.26	92.92	56	16	83	< 20	7	< 20	< 10	1120	45	10
134842 Orig	7.05	3.16	0.06	8.62	1.090	11.66	31.38	0.03	0.03	0.140	0.89	34.94	91.99	45	7	59	< 20	4	< 20	< 10	770	63	11
134842 Dup	7.11	3.11	0.06	8.65	1.099	11.66	31.38	0.03	0.03	0.143	0.89	34.94	92.00	44	5	58	< 20	4	< 20	< 10	820	63	12
134859 Orig	3.45	4.19	0.16	14.42	1.524	11.92	24.86	0.02	0.04	0.121	0.99	36.05	94.31	53	6	62	< 20	7	< 20	< 10	1090	60	12
134859 Dup	3.46	4.23	0.17	14.39	1.520	11.92	24.91	0.02	0.04	0.124	1.00	36.05	94.39	54	6	63	< 20	9	< 20	< 10	1100	61	13
134870 Orig	2.00	2.23	0.11	12.94	1.278	12.19	25.72	0.02	0.07	0.224	1.32	37.67	93.79	54	5	65	< 20	9	< 20	< 10	1090	67	13
134870 Dup	2.03	2.23	0.11	13.10	1.289	12.34	26.07	0.02	0.07	0.219	1.35	37.67	94.48	55	5	63	< 20	9	< 20	< 10	1110	68	12
134885 Orig	4.34	2.90	0.09	10.22	1.123	12.95	28.28	0.03	0.07	0.182	0.99	36.60	93.43	41	9	58	< 20	5	< 20	< 10	590	58	10
134885 Split	4.79	2.90	0.09	10.20	1.128	12.78	28.38	0.03	0.07	0.187	1.06	36.68	93.51	40	9	57	< 20	5	< 20	< 10	590	57	10
134885 Orig	4.20	2.90	0.09	10.21	1.123	12.94	28.29	0.03	0.07	0.177	0.99	36.60	93.42	41	9	57	< 20	5	< 20	< 10	590	58	9
134885 Dup	4.47	2.89	0.09	10.23	1.122	12.95	28.26	0.03	0.07	0.187	1.00	36.60	93.44	41	9	60	< 20	5	< 20	< 10	590	58	10
134892 Orig	1.64	1.29	0.07	13.79	1.581	13.16	25.05	0.02	0.05	0.183	0.39	39.48	95.05	40	9	60	< 20	5	< 20	< 10	830	48	9
134892 Split	1.65	1.31	0.06	13.88	1.594	13.15	25.13	0.03	0.05	0.185	0.37	39.45	95.19	39	9	59	< 20	5	< 20	< 10	820	48	9
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			145	17	35								108		3.9			5.2		0.60			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			42	46	408								508										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas		73					< 2			3	0.7	2.3			49.7	92.1		43.5	8.1	1.48			4.8
LKSD-3 Cert		78.0					2.00			3.00	1.30	2.30			52.0	90.0		44.0	8.00	1.50			4.90
W-2a Meas			197	19	82		< 2	< 0.5					177	< 0.4	10.4	22.3		12.2	3.2	1.06		0.6	3.8
W-2a Cert			190	24.0	94.0		0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1195	117	530								348										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2210	3330		1140	168	45.7	124	15.0	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			112	15	15								10					2.5	1.0	0.54	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NCS DC86312 Meas															2330	175		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas						192																	
ZW-C Cert						198																	
NCS DC70014 Meas							270	16.7			180			80.3	45.5	87.5	10.2	39.0	7.9	1.75	7.2	1.2	6.6
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	73	499							1.3	1700		42.2			22.4	55.8	7.46	30.6	12.4		14.6	3.3	20.7
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701		41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							26								270	481	47.1	153	24.9	3.77		3.9	24.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							22								816	1390	131	394	50.6	7.98		5.5	32.2
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	17	259				14	3	< 0.5	< 0.2			21.0			20.1	47.6	5.87	23.7	6.1	0.30		1.1	
JR-1 Cert	16.3	257				15.2	3.25	0.031	0.028			20.8			19.7	47.2	5.58	23.3	6.03	0.30		1.01	
NCS DC86318 Meas															1970	424	742	3250	1760	19.4	2080	488	3100
NCS DC86318 Cert															1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 42-2006 Meas															20600	28000	2300	6270	501	86.6			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134800 Orig	154	33	20470	928	230	31	32	2.6	< 0.2	< 1	6.7	1.7	913	7.7	17800	28600	2560	7890	832	195	356	36.0	152
134800 Dup	151	33	20580	935	233	28	31	3.1	< 0.2	< 1	6.5	1.7	921	7.3	17800	28700	2570	7860	835	195	360	36.8	154
134817 Orig	16	< 2	2191	199	43	791	3	< 0.5	< 0.2	33	< 0.5	< 0.5	177	0.8	2390	4550	486	1640	221	53.5	111	12.0	46.7
134817 Dup	16	< 2	2321	194	44	880	2	< 0.5	< 0.2	31	< 0.5	< 0.5	180	0.7	2330	4420	469	1580	214	52.1	109	11.8	45.8
134827 Orig	15	< 2	2134	224	35	785	10	< 0.5	0.2	20	< 0.5	< 0.5	147	1.3	2590	4980	538	1810	263	63.8	131	13.9	53.6
134827 Dup	16	< 2	2147	223	32	804	10	< 0.5	0.2	21	< 0.5	< 0.5	148	1.3	2600	4990	538	1820	266	64.5	132	13.9	54.1
134842 Orig	22	< 2	1587	418	26	554	5	< 0.5	< 0.2	12	< 0.5	< 0.5	106	0.4	4780	7760	750	2280	286	69.3	148	19.2	89.2
134842 Dup	22	< 2	1560	407	26	575	4	< 0.5	< 0.2	13	< 0.5	< 0.5	106	0.4	4760	7750	748	2270	286	68.7	149	19.0	85.9
134859 Orig	21	< 2	1781	275	64	262	6	0.5	0.2	12	< 0.5	< 0.5	139	1.3	3980	6950	714	2290	332	82.5	168	16.7	60.7
134859 Dup	23	< 2	1791	274	66	258	7	0.5	0.2	12	0.7	< 0.5	139	1.3	4080	7110	728	2330	335	84.2	172	17.3	61.5
134870 Orig	24	< 2	2103	237	51	484	< 2	< 0.5	< 0.2	13	< 0.5	< 0.5	186	1.0	4890	8190	803	2440	296	69.9	146	15.8	60.5
134870 Dup	23	< 2	2114	250	50	535	< 2	< 0.5	< 0.2	13	< 0.5	< 0.5	186	1.2	4960	8290	814	2460	298	70.5	149	16.5	62.7
134885 Orig	25	< 2	2851	242	42	410	3	< 0.5	< 0.2	13	< 0.5	< 0.5	274	1.2	3880	6690	699	2360	307	73.0	140	14.5	54.7
134885 Split	24	< 2	2816	240	38	392	3	< 0.5	< 0.2	14	< 0.5	< 0.5	277	0.9	3760	6510	681	2320	300	72.2	138	14.5	54.8
134885 Orig	25	< 2	2835	241	45	413	3	< 0.5	< 0.2	13	< 0.5	< 0.5	273	1.4	3870	6670	696	2360	306	72.7	140	14.6	54.4
134885 Dup	25	< 2	2867	243	40	406	3	< 0.5	< 0.2	13	< 0.5	< 0.5	275	1.0	3890	6710	702	2370	309	73.4	140	14.4	54.9
134892 Orig	20	< 2	2959	239	19	430	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	217	1.6	2810	5310	588	2060	307	76.9	156	17.5	65.4
134892 Split	21	< 2	2910	235	18	433	< 2	< 0.5	< 0.2	17	< 0.5	< 0.5	215	1.7	2810	5340	592	2090	312	77.9	158	17.7	65.8
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											924		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.41						11.0	4.4	
LKSD-3 Cert				2.70	0.400						11.4	4.60	
W-2a Meas	0.8			2.1				< 1	< 0.1		2.4	0.5	
W-2a Cert	0.760			2.10				0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.8	1.10						23.7	4.0	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.7						< 5			
BIR-1a Cert				1.7						3			
NCS DC86312 Meas	35.5	95.9	14.3	87.1	11.9						25.3		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							83.1	332	33.6				
ZW-C Cert							82	320	34				
NCS DC70014 Meas	1.3	3.4	0.53	3.5	0.49					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.3	13.0	2.30	16.2				2200			27.5		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.2	15.2	2.42	15.9	2.29						53.9	140	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.2	2.97	18.7	2.58						36.7	420	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.70	4.8	0.70		1.7		1.6	19	27.2	8.9	
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88	
NCS DC86318 Meas	577	1570	270	1750	260								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134800 Orig	24.5	59.9	7.93	48.4	6.49	3.8	< 0.1	5	2.4	1030	158	205	

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134800 Dup	24.9	61.3	8.01	48.2	6.62	3.8	< 0.1	5	2.4	966	158	206	
134817 Orig	6.4	14.8	1.80	10.1	1.35	0.9	< 0.1	9	< 0.1	74	298	0.2	
134817 Dup	6.3	14.4	1.73	9.6	1.31	1.0	< 0.1	9	< 0.1	63	292	0.2	
134827 Orig	7.2	16.6	1.77	10.8	1.44	1.0	0.3	6	< 0.1	165	625	0.2	
134827 Dup	7.2	16.2	1.84	10.6	1.45	1.0	0.3	5	< 0.1	181	640	0.2	
134842 Orig	13.5	31.0	3.39	17.3	2.15	1.3	0.5	6	< 0.1	114	345	0.5	
134842 Dup	13.1	27.7	3.01	16.8	2.10	1.2	0.6	5	< 0.1	121	347	0.5	
134859 Orig	8.4	18.3	2.13	13.2	1.76	1.4	0.5	2	0.1	221	584	0.4	
134859 Dup	8.5	19.5	2.34	14.3	1.91	1.5	0.5	2	0.1	240	595	0.5	
134870 Orig	8.2	18.0	2.13	12.3	1.62	1.4	0.6	5	0.1	169	474	1.0	
134870 Dup	8.7	19.5	2.23	13.3	1.76	1.5	0.5	5	0.1	182	477	0.9	
134885 Orig	7.6	16.6	1.88	11.0	1.47	1.0	0.6	4	0.2	151	304	0.4	
134885 Split	7.6	16.6	1.98	11.0	1.47	1.1	0.5	3	0.2	147	308	0.4	
134885 Orig	7.6	16.9	1.87	10.8	1.45	1.1	0.6	4	0.2	160	303	0.4	
134885 Dup	7.6	16.2	1.89	11.2	1.48	1.0	0.6	3	0.2	143	305	0.4	
134892 Orig	8.6	17.8	1.81	9.6	1.22	0.9	< 0.1	4	0.2	314	415	0.1	
134892 Split	8.7	17.2	1.84	9.4	1.24	0.9	< 0.1	3	0.2	321	434	0.2	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03298
Invoice Date: 11-Jun-14
Your Reference: ASHRAM-BATCH #10

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

119 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

REPORT **A14-03298**

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134893	3.04	0.60	0.04	9.86	1.689	13.72	27.90	0.02	0.05	0.242	0.76	38.75	93.64	51	12	94	< 20	3	< 20	< 10	880	72	14
134894	7.85	0.56	0.11	11.69	1.544	12.29	29.82	0.04	0.06	0.375	1.05	34.19	91.73	45	23	102	< 20	4	< 20	< 10	1470	50	10
134895	7.66	0.40	0.09	7.53	1.120	12.73	33.88	0.05	0.07	0.054	1.00	34.71	91.62	50	19	67	< 20	2	< 20	< 10	1030	84	16
134896	5.99	0.96	0.14	9.91	1.243	13.18	30.92	0.07	0.10	0.445	0.96	35.28	93.20	47	26	113	< 20	6	< 20	< 10	1160	70	14
134897	1.62	0.91	0.13	9.06	1.158	13.52	28.10	0.05	0.11	0.683	1.78	38.37	93.87	55	22	149	< 20	7	< 20	< 10	1120	56	13
134898	2.04	0.85	0.09	9.44	1.398	13.69	28.20	0.05	0.06	0.195	1.16	39.26	94.40	50	18	97	< 20	5	< 20	< 10	930	58	13
134899	0.01	98.02	0.19	0.30	0.015	0.14	0.31	0.09	0.04	0.002	0.02	0.36	99.48	< 1	< 1	< 5	< 20	< 1	< 20	< 10	< 30	< 1	1
134900	1.97	14.91	2.53	12.31	0.139	0.49	26.71	0.93	1.08	0.145	17.53	8.16	84.93	17	13	157	20	33	70	110	640	237	44
134901	5.94	0.46	0.08	9.24	1.438	13.11	31.41	0.04	0.08	0.135	0.77	36.08	92.86	40	27	72	< 20	4	< 20	< 10	1040	74	15
134902	4.03	0.51	0.12	10.42	1.564	13.71	28.63	0.05	0.09	0.291	0.76	37.94	94.07	46	18	95	< 20	5	< 20	< 10	1220	65	16
134903	5.94	0.57	0.09	13.63	2.069	11.66	27.00	0.04	0.04	0.078	0.89	37.10	93.18	41	26	64	< 20	6	< 20	< 10	1730	62	15
134904	7.65	1.15	0.11	12.68	2.068	12.08	28.28	0.06	0.05	0.142	0.68	34.22	91.52	39	23	75	< 20	6	< 20	< 10	2000	70	16
134905	3.28	3.31	0.08	14.28	2.217	12.70	23.84	0.04	0.07	0.342	0.64	36.38	93.89	39	26	107	< 20	6	< 20	< 10	1560	57	13
134906	2.08	4.61	0.22	9.97	1.434	12.44	25.87	0.09	0.19	0.162	2.37	35.78	93.14	62	28	91	< 20	6	< 20	< 10	800	61	14
134907	3.66	2.88	0.09	11.49	1.894	12.54	25.95	0.06	0.07	0.317	1.22	36.09	92.61	53	28	96	< 20	6	< 20	< 10	1770	74	15
134908	1.53	0.88	0.08	11.22	1.897	13.33	24.41	0.04	0.08	0.151	1.35	38.98	92.43	59	26	91	< 20	5	< 20	< 10	1670	68	14
134909	2.93	1.27	0.11	10.63	1.562	12.71	25.73	0.05	0.08	0.417	1.28	37.79	91.65	66	34	99	< 20	5	< 20	< 10	1160	61	14
134910	4.93	0.84	0.12	13.97	2.009	12.79	25.82	0.06	0.08	0.156	0.73	35.89	92.46	52	34	87	< 20	6	< 20	30	1600	64	14
134911	3.51	2.55	0.19	12.80	1.734	12.53	25.03	0.09	0.15	0.183	0.75	36.57	92.60	55	30	85	< 20	8	< 20	< 10	900	66	14
134912	3.30	2.24	0.15	13.38	1.749	12.43	25.01	0.07	0.14	0.209	0.70	36.22	92.30	54	29	89	< 20	9	< 20	< 10	820	60	12
134913	4.28	1.53	0.09	13.02	1.644	12.25	24.86	0.05	0.09	0.363	0.79	35.86	90.55	45	19	96	< 20	6	< 20	20	1310	71	14
134914	2.78	0.79	0.07	16.91	2.249	11.93	20.78	0.03	0.06	0.314	0.53	37.01	90.68	41	10	101	< 20	7	< 20	< 10	1590	56	13
134915	6.20	1.10	0.08	11.12	1.695	13.12	28.26	0.04	0.10	0.137	0.54	36.18	92.37	32	15	57	< 20	3	< 20	< 10	1120	67	12
134916	6.45	0.98	0.09	7.99	1.233	12.99	31.66	0.04	0.09	0.095	0.53	36.41	92.12	39	15	72	< 20	2	< 20	< 10	1130	76	16
134917	4.71	2.13	0.12	9.90	1.369	13.35	29.24	0.04	0.12	0.318	1.00	36.77	94.35	40	16	87	< 20	7	< 20	< 10	1070	76	16
134918	1.42	1.54	0.14	8.93	1.256	13.51	27.80	0.05	0.12	0.211	1.55	39.32	94.42	44	18	112	< 20	5	< 20	< 10	680	68	15
134919	2.60	0.79	0.14	12.48	1.813	12.98	25.61	0.05	0.10	0.184	1.03	38.29	93.48	51	13	104	< 20	9	< 20	40	1560	60	16
134920	4.26	0.80	0.13	12.78	1.947	12.10	27.46	0.04	0.12	0.270	1.77	35.65	93.06	48	20	107	< 20	8	< 20	< 10	1340	53	15
134921	7.47	0.82	0.17	9.55	1.784	12.41	30.92	0.07	0.12	0.364	0.52	35.37	92.11	52	13	102	< 20	4	< 20	< 10	1430	74	14
134922	3.41	1.36	0.15	11.41	1.896	13.29	26.57	0.06	0.13	0.515	0.46	37.51	93.35	50	10	117	< 20	5	< 20	< 10	1950	60	12
134923	4.29	1.25	0.12	10.91	2.020	13.23	28.18	0.04	0.12	0.566	0.54	36.02	92.99	55	11	139	< 20	6	< 20	< 10	1720	63	12
134924	< 0.01	98.00	0.10	0.23	0.014	0.15	0.31	0.05	0.02	0.002	0.03	0.44	99.36	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	< 1	2
134925	6.02	20.22	3.03	27.51	2.485	7.09	17.84	0.32	1.34	1.465	0.57	12.35	94.21	23	13	161	170	29	80	40	1490	55	14
134926	5.58	1.95	0.13	8.08	1.574	13.19	30.97	0.06	0.10	0.116	1.34	35.94	93.45	57	17	83	< 20	4	< 20	< 10	1370	81	17
134927	2.76	3.60	0.09	8.74	1.475	12.94	27.86	0.05	0.09	0.097	1.80	36.72	93.44	47	16	81	< 20	5	< 20	< 10	820	72	16
134928	2.52	2.70	0.11	8.76	1.370	13.05	28.50	0.06	0.09	0.134	2.61	36.88	94.24	48	15	83	< 20	5	< 20	< 10	940	75	17
134929	3.92	3.90	0.17	10.92	1.565	12.31	26.45	0.09	0.10	0.100	1.18	35.62	92.40	48	13	81	< 20	6	< 20	< 10	1150	75	15
134930	4.14	2.73	0.12	9.02	1.498	13.04	29.25	0.05	0.10	0.116	1.60	36.44	93.97	51	15	84	< 20	5	< 20	< 10	760	77	16
134931	0.92	2.42	0.10	10.70	1.563	13.78	26.62	0.05	0.07	0.121	1.10	39.75	96.28	56	10	94	< 20	6	< 20	< 10	900	40	8
134932	1.75	4.01	0.23	8.09	1.128	12.38	28.41	0.07	0.21	0.287	4.30	35.18	94.31	59	28	97	< 20	6	< 20	< 10	370	35	8
134933	2.63	1.71	0.11	9.04	1.415	13.82	27.88	0.07	0.06	0.086	0.76	38.92	93.86	52	13	78	< 20	4	< 20	10	960	68	14
134934	3.25	4.25	0.10	8.11	1.311	12.95	28.79	0.09	0.09	0.111	2.08	35.88	93.75	52	16	78	< 20	5	< 20	< 10	630	72	15
134935	3.32	1.69	0.08	8.51	1.400	14.47	28.82	0.04	0.07	0.244	0.86	38.09	94.26	43	16	86	< 20	5	< 20	< 10	870	90	17
134936	4.93	1.96	0.14	7.33	1.278	13.68	30.70	0.04	0.12	0.112	1.63	35.77	92.77	49	18	70	< 20	4	< 20	< 10	980	90	16
134937	5.59	1.73	0.05	8.59	1.390	13.71	30.44	0.04	0.05	0.081	0.98	36.52	93.59	50	18	75	< 20	4	< 20	< 10	1010	82	16
134938	4.71	2.42	0.09	8.14	1.344	13.14	29.21	0.03	0.10	0.352	1.17	35.95	91.95	60	18	113	< 20	3	< 20	< 10	1110	86	16
134939	2.64	2.62	0.07	10.47	1.464	13.72	26.14	0.05	0.08	0.260	1.01	38.09	93.97	66	15	101	< 20	6	< 20	< 10	1050	84	17
134940	3.17	2.67	0.06	9.91	1.406	13.50	27.07	0.05	0.08	0.232	1.02	37.40	93.40	66	16	96	< 20	6	< 20	< 10	1050	86	17

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134941	3.28	2.62	0.08	7.62	1.243	12.52	30.97	0.05	0.09	0.167	4.33	35.04	94.74	54	14	88	< 20	3	< 20	< 10	470	82	18
134942	6.50	2.93	0.17	7.39	1.279	12.69	31.95	0.09	0.09	0.172	1.24	34.66	92.66	45	18	80	< 20	4	< 20	< 10	1070	84	15
134943	4.79	4.50	0.09	10.95	1.522	12.22	27.55	0.06	0.07	0.125	1.04	35.11	93.24	66	16	78	< 20	5	< 20	< 10	1060	78	15
134944	4.51	2.76	0.06	7.88	1.234	13.40	30.63	0.04	0.05	0.119	0.92	36.97	94.08	54	12	71	< 20	4	< 20	< 10	770	80	17
134945	3.51	1.48	0.11	8.82	1.162	13.14	30.33	0.05	0.06	0.123	1.20	38.18	94.66	71	11	77	< 20	3	< 20	< 10	910	68	15
134946	2.67	4.19	0.17	9.36	1.215	12.77	28.17	0.08	0.11	0.225	0.72	37.41	94.42	57	8	82	< 20	5	< 20	< 10	710	66	14
134947	4.42	4.34	0.17	9.82	1.219	12.51	28.66	0.07	0.17	0.234	0.80	35.88	93.89	61	11	78	< 20	4	< 20	< 10	990	65	14
134948	2.51	3.46	0.12	10.61	1.328	12.20	27.02	0.08	0.11	0.218	1.52	36.39	93.06	68	9	80	< 20	6	< 20	< 10	1170	64	14
134949	< 0.01	98.20	0.09	0.45	0.029	0.23	0.53	0.04	0.02	0.004	0.03	0.27	99.89	1	< 1	< 5	< 20	< 1	< 20	< 10	< 30	2	2
134950	1.89	14.61	2.44	12.76	0.142	0.49	26.67	0.94	1.01	0.145	16.99	8.06	84.25	17	14	158	< 20	34	70	110	670	279	48
134951	3.45	2.30	0.06	19.08	1.632	10.61	21.95	0.04	0.05	0.240	0.70	35.30	91.96	59	7	81	< 20	12	< 20	< 10	1750	61	15
134952	3.80	1.64	0.10	10.06	1.273	11.89	27.50	0.05	0.06	0.206	1.16	36.82	90.75	68	9	84	< 20	7	< 20	< 10	750	73	16
134953	3.12	2.28	0.11	9.15	1.257	13.27	28.92	0.05	0.09	0.233	0.79	37.96	94.12	71	11	92	< 20	5	< 20	< 10	920	74	16
134954	2.65	2.67	0.13	15.81	1.747	12.54	23.41	0.07	0.06	0.306	0.74	37.22	94.69	66	9	110	< 20	7	< 20	10	720	61	14
134955	2.83	2.77	0.09	15.14	1.610	12.41	25.69	0.05	0.06	0.202	1.40	36.47	95.91	69	12	97	< 20	8	< 20	< 10	710	71	16
134956	1.17	3.61	0.07	37.30	4.097	7.54	8.32	0.03	0.02	0.171	0.51	33.30	94.97	38	6	92	< 20	18	< 20	< 10	1780	42	15
134957	3.45	1.92	0.11	13.54	2.088	12.08	26.84	0.04	0.07	0.260	0.60	36.61	94.16	53	13	89	< 20	8	< 20	< 10	1410	66	14
134958	5.94	1.37	0.12	14.57	1.939	11.83	26.97	0.05	0.08	0.205	0.63	35.04	92.80	51	13	78	< 20	8	< 20	< 10	1520	69	14
134959	4.21	4.30	0.11	19.24	2.087	11.07	22.21	0.05	0.06	0.239	0.54	33.41	93.32	42	9	90	< 20	16	< 20	< 10	1770	68	16
134960	3.32	3.61	0.14	14.28	1.853	11.96	24.34	0.05	0.09	0.147	0.64	36.13	93.25	48	11	74	< 20	9	< 20	< 10	1350	63	12
134961	2.20	2.06	0.14	12.28	1.484	11.57	24.97	0.05	0.07	0.233	1.94	36.34	91.15	61	10	77	< 20	6	< 20	< 10	1160	59	11
134962	4.17	1.01	0.13	12.87	1.770	12.18	28.53	0.04	0.06	0.345	0.75	36.95	94.63	52	12	96	< 20	6	< 20	< 10	1430	74	14
134963	5.99	1.18	0.10	12.18	1.778	11.70	30.22	0.04	0.07	0.173	0.70	34.89	93.02	48	19	77	< 20	5	< 20	< 10	1280	74	14
134964	4.57	2.80	0.12	13.59	1.846	11.06	25.81	0.07	0.10	0.155	1.21	33.79	90.56	50	16	70	< 20	6	< 20	< 10	1520	80	16
134965	5.01	2.91	0.11	13.87	1.880	10.97	26.59	0.07	0.11	0.214	0.98	33.12	90.82	50	17	77	< 20	7	< 20	< 10	1520	82	16
134966	5.61	2.16	0.07	18.51	2.232	10.99	24.04	0.05	0.06	0.119	0.61	33.86	92.70	33	14	58	< 20	8	< 20	< 10	1170	42	9
134967	5.43	2.18	0.11	19.14	2.219	10.93	22.31	0.06	0.10	0.278	0.38	33.82	91.53	37	21	84	< 20	11	< 20	< 10	1540	73	17
134968	2.88	2.18	0.10	17.08	2.462	11.18	24.16	0.04	0.03	0.118	0.75	34.47	92.58	38	19	60	< 20	8	< 20	< 10	1630	41	10
134969	5.02	1.12	0.07	13.53	2.010	12.14	27.23	0.04	0.06	0.158	0.38	36.45	93.19	44	22	71	< 20	5	< 20	< 10	1230	82	16
134970	6.22	1.09	0.09	9.99	1.690	12.54	30.49	0.05	0.07	0.102	0.59	35.25	91.95	41	18	60	< 20	5	< 20	< 10	1690	96	17
134971	5.38	1.42	0.08	12.37	2.122	12.39	27.56	0.04	0.06	0.112	0.47	35.73	92.36	41	15	64	< 20	5	< 20	< 10	1380	76	14
134972	6.87	0.84	0.08	10.59	1.806	11.95	30.48	0.03	0.08	0.327	0.83	34.58	91.60	41	19	82	< 20	4	< 20	< 10	1280	91	16
134973	5.04	1.86	0.08	14.25	2.055	12.10	26.63	0.04	0.05	0.384	0.37	35.50	93.32	31	28	73	< 20	9	< 20	< 10	1840	86	16
134974	0.02	97.08	0.10	0.44	0.024	0.12	0.29	0.04	0.02	0.002	0.04	0.32	98.47	< 1	< 1	< 5	20	< 1	< 20	< 10	< 30	3	2
134975	6.67	20.13	3.04	26.63	2.440	7.13	17.87	0.31	1.36	1.493	0.60	12.24	93.24	24	13	163	150	31	80	40	1530	66	16
134976	8.42	1.70	0.11	12.23	1.739	11.02	30.76	0.04	0.07	0.600	0.68	32.15	91.10	34	24	105	< 20	7	< 20	< 10	1850	71	13
134977	4.43	1.10	0.04	13.19	1.954	12.30	26.29	0.03	0.03	0.278	0.29	36.97	92.48	34	15	71	< 20	7	< 20	< 10	1480	72	15
134978	2.28	2.45	0.16	11.58	1.590	13.12	28.11	0.04	0.05	0.163	2.29	37.13	96.68	43	14	80	< 20	9	< 20	< 10	960	65	14
134979	5.23	1.33	0.12	11.81	1.787	12.74	29.15	0.06	0.08	0.297	0.61	36.66	94.65	41	16	69	< 20	6	< 20	10	1690	98	17
134980	4.51	2.46	0.08	14.71	1.929	11.53	25.80	0.03	0.05	0.426	1.11	35.14	93.26	44	12	82	< 20	9	< 20	< 10	1040	73	14
134981	4.44	0.83	0.05	11.84	1.948	13.04	28.44	0.03	0.04	0.113	0.31	37.40	94.03	42	12	53	< 20	7	< 20	< 10	1550	80	14
134982	4.98	0.53	0.06	10.08	1.646	13.67	29.62	0.02	0.06	0.038	0.43	37.75	93.90	31	14	53	< 20	4	< 20	< 10	1830	92	16
134983	3.86	2.92	0.08	19.78	1.940	10.81	22.73	0.03	0.05	0.105	0.53	35.76	94.74	43	13	74	< 20	10	< 20	< 10	1240	64	14
134984	6.44	2.45	0.07	11.66	1.695	12.21	28.74	0.03	0.05	0.201	0.77	34.72	92.59	46	15	55	< 20	7	< 20	< 10	1750	82	15
134985	5.28	2.73	0.06	9.08	1.566	13.26	29.92	0.04	0.06	0.057	1.09	36.09	93.95	45	18	52	< 20	4	< 20	< 10	850	88	16
134986	5.82	2.70	0.06	9.19	1.366	13.38	29.91	0.04	0.07	0.038	1.16	35.50	93.41	38	21	59	< 20	7	< 20	< 10	950	94	17
134987	3.59	2.20	0.09	9.24	1.458	14.45	28.83	0.04	0.10	0.047	0.99	37.81	95.26	39	19	63	< 20	5	< 20	< 10	740	90	17
134988	3.86	2.60	0.08	14.96	1.919	12.30	25.14	0.04	0.06	0.031	1.14	35.74	94.01	40	13	51	< 20	7	< 20	< 10	1180	84	18
134989	1.29	4.50	0.14	13.32	1.787	13.22	23.82	0.04	0.05	0.061	0.75	37.46	95.13	39	8	51	< 20	8	< 20	90	950	44	10
134990	1.62	3.34	0.08	12.07	1.789	13.05	24.10	0.04	0.06	0.048	0.74	38.49	93.80	41	8	53	< 20	7	< 20	< 10	960	74	17

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134991	1.55	5.23	0.18	12.20	1.465	12.95	23.82	0.08	0.14	0.074	0.77	37.38	94.29	40	12	62	30	9	< 20	< 10	940	69	14
134992	3.24	2.90	0.19	14.25	2.066	12.37	24.91	0.09	0.09	0.053	0.69	36.78	94.40	36	9	56	< 20	7	< 20	< 10	1350	71	14
134993	1.77	2.11	0.09	11.13	1.538	13.63	25.67	0.04	0.07	0.046	1.02	39.13	94.48	49	10	55	< 20	5	< 20	< 10	890	79	15
134994	3.08	3.44	0.09	15.69	1.780	12.33	24.18	0.04	0.07	0.057	0.88	36.26	94.82	41	12	61	< 20	8	< 20	840	970	77	16
134995	2.12	2.35	0.09	15.82	1.821	11.98	24.51	0.03	0.05	0.054	1.19	37.21	95.11	37	8	67	< 20	7	< 20	< 10	860	70	15
134996	3.20	2.47	0.06	9.77	1.804	13.58	28.08	0.04	0.05	0.063	0.72	38.14	94.78	38	11	57	< 20	4	< 20	< 10	1010	78	14
134997	1.96	1.82	0.11	10.36	1.623	13.47	24.13	0.03	0.11	0.472	1.04	38.31	91.46	50	11	105	< 20	5	< 20	< 10	1430	87	16
134998	3.86	1.77	0.09	8.38	1.403	13.23	26.69	0.02	0.09	1.417	0.90	36.82	90.82	43	14	213	< 20	3	< 20	< 10	1110	82	17
134999	< 0.01	98.20	0.05	0.96	0.016	0.10	0.19	0.02	< 0.01	0.001	< 0.01	0.05	99.58	< 1	< 1	< 5	40	< 1	< 20	< 10	< 30	< 1	1
135000	1.83	15.16	2.65	12.62	0.140	0.48	25.64	1.03	1.15	0.143	20.47	8.25	87.73	18	13	158	20	33	60	110	660	271	46
135001	4.38	1.97	0.07	9.34	1.612	13.24	29.26	0.02	0.07	0.215	0.58	37.10	93.48	42	14	80	< 20	3	< 20	< 10	1060	71	14
135002	6.18	2.33	0.10	11.58	1.763	12.29	29.38	0.02	0.08	0.152	0.75	34.67	93.12	38	15	68	< 20	6	< 20	< 10	1500	84	15
135003	4.48	4.95	0.15	9.25	1.443	12.01	28.11	0.03	0.11	0.229	1.41	34.41	92.12	38	14	72	< 20	5	< 20	< 10	1390	73	13
135004	5.75	2.37	0.07	9.96	1.607	12.85	29.14	0.03	0.06	0.187	0.77	35.56	92.59	41	18	71	< 20	5	< 20	< 10	1420	85	16
135005	6.44	1.88	0.05	8.03	1.546	13.10	31.24	0.02	0.06	0.106	0.93	35.49	92.45	36	18	41	< 20	3	< 20	< 10	870	91	16
135006	4.79	3.22	0.07	10.92	1.672	12.56	28.11	0.03	0.09	0.342	1.05	34.92	92.98	37	15	65	< 20	5	< 20	< 10	1060	87	17
135007	1.63	2.72	0.16	13.27	1.659	12.78	22.58	0.06	0.13	0.940	0.79	36.89	91.98	38	15	107	< 20	7	< 20	< 10	990	72	16
135008	1.75	2.94	0.11	12.72	1.514	11.09	26.38	0.04	0.10	0.404	3.51	34.38	93.19	40	8	82	< 20	8	< 20	< 10	1010	77	18
135009	2.84	3.34	0.09	11.12	1.369	12.35	28.20	0.04	0.09	0.124	2.34	35.59	94.66	36	10	61	< 20	5	< 20	< 10	780	73	18
135010	4.45	3.02	0.12	7.99	1.188	13.06	28.14	0.03	0.12	0.046	0.71	36.89	91.34	35	13	60	< 20	4	< 20	10	1010	64	13
135011	4.85	2.51	0.11	7.99	1.180	12.25	27.70	0.04	0.12	0.055	1.30	35.64	88.89	33	13	66	< 20	3	< 20	< 10	900	70	13

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134893	25	< 2	2226	303	27	392	3	0.6	< 0.2	9	< 0.5	< 0.5	222	0.6	5030	8570	848	2480	280	66.1	131	14.9	61.2
134894	19	< 2	2503	303	47	558	4	< 0.5	< 0.2	19	< 0.5	< 0.5	252	1.2	5250	8910	844	2830	390	94.0	191	18.4	70.8
134895	29	< 2	2446	387	46	488	5	0.8	< 0.2	8	< 0.5	< 0.5	188	< 0.4	6060	9850	976	2940	359	85.5	167	18.4	72.5
134896	25	< 2	2592	336	36	1240	4	0.6	< 0.2	19	< 0.5	< 0.5	310	0.5	4890	8020	803	2460	317	77.3	151	16.4	64.6
134897	26	< 2	2728	418	45	777	10	0.6	< 0.2	22	0.5	< 0.5	362	0.9	3380	6150	687	2340	357	92.1	189	23.0	94.5
134898	25	< 2	2722	382	35	429	5	< 0.5	< 0.2	13	< 0.5	< 0.5	312	0.8	3140	6020	686	2330	328	80.4	160	19.7	83.4
134899	< 5	< 2	21	5	4	33	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	30.2	55.2	5.82	18.4	2.7	0.64	1.2	0.1	0.6
134900	184	35	20520	1018	234	35	35	2.7	< 0.2	< 1	6.8	1.7	903	6.8	18700	29000	2670	8330	878	206	371	37.8	154
134901	26	< 2	2471	276	35	404	3	0.6	< 0.2	9	< 0.5	< 0.5	235	0.6	5270	8590	867	2640	321	76.2	146	15.6	60.3
134902	27	< 2	2302	300	36	861	4	< 0.5	0.2	22	< 0.5	< 0.5	235	1.4	3660	6910	813	2860	397	89.6	168	17.1	65.9
134903	25	< 2	2234	413	42	230	< 2	0.7	0.3	6	< 0.5	< 0.5	207	9.3	2660	6160	777	2670	353	83.8	173	20.8	84.7
134904	27	< 2	2362	433	33	296	< 2	0.6	0.2	9	< 0.5	< 0.5	253	8.7	2980	7420	900	2890	337	79.8	168	22.0	93.6
134905	22	< 2	2313	302	31	514	< 2	0.6	0.2	12	< 0.5	< 0.5	366	5.8	2280	5950	747	2480	307	73.5	151	19.1	76.8
134906	24	4	2708	391	86	363	3	1.0	< 0.2	9	< 0.5	< 0.5	450	1.0	3780	6730	746	2500	365	91.8	186	21.6	87.6
134907	26	< 2	2353	379	39	486	< 2	0.6	< 0.2	13	< 0.5	< 0.5	436	3.8	4080	8440	931	2880	349	84.1	171	20.7	84.3
134908	24	< 2	2325	335	47	304	< 2	0.6	< 0.2	6	< 0.5	< 0.5	381	1.9	4000	7720	838	2620	312	74.4	153	17.3	69.7
134909	22	< 2	2361	446	41	549	< 2	0.7	< 0.2	18	< 0.5	< 0.5	445	1.6	3590	6650	734	2410	356	95.2	203	24.2	104
134910	24	< 2	2165	368	26	447	< 2	0.6	0.2	11	< 0.5	< 0.5	435	2.8	3930	7120	772	2470	327	80.0	164	19.3	76.6
134911	24	3	2080	271	21	386	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	451	2.0	4230	7420	784	2500	329	77.4	153	16.6	63.6
134912	23	3	2091	257	21	414	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	439	2.0	4000	6950	736	2340	310	73.9	143	15.9	59.4
134913	24	< 2	1976	290	27	632	< 2	< 0.5	< 0.2	27	< 0.5	< 0.5	327	1.0	4720	8150	851	2690	344	79.9	156	17.0	64.2
134914	22	< 2	1685	245	18	639	< 2	0.5	0.3	20	< 0.5	< 0.5	164	1.8	3340	6180	696	2370	312	69.9	136	14.1	52.7
134915	20	< 2	2438	227	25	470	< 2	< 0.5	< 0.2	11	< 0.5	< 0.5	268	0.8	5140	8190	802	2370	267	62.0	122	13.1	47.6
134916	25	< 2	2469	290	17	411	5	< 0.5	< 0.2	7	< 0.5	< 0.5	328	0.5	5370	9050	929	2860	342	80.1	158	16.4	61.8
134917	27	2	2552	315	44	805	8	0.5	< 0.2	15	< 0.5	< 0.5	318	0.7	5240	8720	902	2850	383	91.5	175	18.7	70.6
134918	26	2	2242	433	31	391	< 2	< 0.5	< 0.2	12	< 0.5	< 0.5	307	0.4	4250	7610	837	2810	387	95.5	191	23.0	94.3
134919	29	< 2	2183	497	36	554	10	0.6	0.3	59	< 0.5	< 0.5	239	2.3	2930	5880	756	2940	477	119	241	29.0	117
134920	24	3	2570	397	48	686	3	0.6	0.2	22	< 0.5	< 0.5	303	3.4	2630	5380	657	2340	327	78.7	161	20.4	84.3
134921	24	< 2	2769	357	19	541	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	313	1.0	5100	8970	901	2620	293	68.2	139	16.3	68.9
134922	21	3	2552	303	21	853	< 2	< 0.5	0.2	13	< 0.5	< 0.5	307	2.0	3360	6730	728	2240	270	63.1	130	15.0	62.8
134923	22	2	2448	359	20	923	< 2	< 0.5	0.2	16	< 0.5	< 0.5	293	1.1	3930	7270	739	2160	264	66.1	139	17.2	71.4
134924	< 5	< 2	17	3	5	43	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	27.9	50.6	4.99	15.6	2.0	0.50	1.0	0.1	0.5
134925	24	26	3108	990	232	363	57	1.9	< 0.2	38	< 0.5	0.5	13450	2.2	2590	4720	566	2200	469	132	297	42.1	199
134926	28	< 2	2522	480	41	402	9	< 0.5	< 0.2	8	< 0.5	< 0.5	318	0.8	5270	9260	980	3110	398	98.2	200	24.1	100
134927	26	< 2	2491	427	59	601	4	0.6	< 0.2	9	< 0.5	< 0.5	343	< 0.4	4630	8090	859	2750	348	84.3	173	21.2	90.6
134928	28	< 2	2827	431	62	416	3	0.5	< 0.2	11	< 0.5	< 0.5	363	0.6	4810	8430	908	2970	404	100	206	24.5	101
134929	26	< 2	2176	406	41	627	< 2	0.6	< 0.2	12	< 0.5	< 0.5	305	1.0	5200	8500	877	2780	371	91.0	182	21.1	84.5
134930	29	< 2	2592	359	51	724	< 2	0.5	< 0.2	10	< 0.5	< 0.5	451	0.8	4960	8590	910	2900	358	84.5	166	18.5	74.3
134931	17	< 2	2307	311	40	223	< 2	< 0.5	< 0.2	9	< 0.5	< 0.5	278	0.8	4250	7840	839	2910	363	84.7	169	19.5	85.0
134932	16	5	3751	324	133	305	14	1.2	< 0.2	11	< 0.5	< 0.5	587	0.8	1900	3510	403	1400	208	53.7	111	14.4	66.1
134933	26	< 2	2435	309	28	415	< 2	< 0.5	< 0.2	9	< 0.5	< 0.5	587	0.6	4420	7700	817	2610	331	77.0	150	16.2	63.5
134934	28	< 2	2618	454	70	595	2	0.6	< 0.2	9	< 0.5	< 0.5	744	0.4	4560	7970	860	2810	354	84.5	168	20.8	91.1
134935	28	< 2	2880	451	37	667	5	< 0.5	< 0.2	13	< 0.5	< 0.5	2961	0.7	5120	9130	921	2980	385	97.7	197	24.6	102
134936	26	3	3050	383	60	420	3	< 0.5	< 0.2	9	< 0.5	< 0.5	1328	< 0.4	5440	9290	902	2830	331	77.8	152	18.3	77.4
134937	25	< 2	2774	363	50	251	3	< 0.5	< 0.2	13	< 0.5	< 0.5	331	0.8	4660	8080	829	2750	359	85.3	159	18.2	73.3
134938	26	< 2	2580	465	40	643	< 2	< 0.5	< 0.2	18	< 0.5	< 0.5	442	0.6	5300	8830	871	2800	364	92.1	188	24.4	105
134939	25	< 2	2267	304	38	565	2	< 0.5	< 0.2	20	< 0.5	< 0.5	328	0.9	4640	8220	855	2890	383	92.2	177	18.8	71.0
134940	25	< 2	2348	325	42	726	2	< 0.5	< 0.2	20	< 0.5	< 0.5	345	0.5	4820	8410	865	2890	381	91.9	177	19.3	72.2
134941	27	< 2	2902	627	59	527	< 2	< 0.5	< 0.2	11	< 0.5	< 0.5	419	< 0.4	3810	7500	848	3070	427	111	234	31.4	140

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134942	22	< 2	2450	415	46	504	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	349	< 0.4	4950	8510	817	2540	294	72.3	148	19.0	82.6
134943	22	< 2	2049	659	51	434	< 2	< 0.5	< 0.2	12	< 0.5	< 0.5	353	0.5	4380	7600	771	2560	360	94.7	205	29.3	136
134944	25	< 2	2313	513	31	584	4	< 0.5	< 0.2	11	< 0.5	< 0.5	334	< 0.4	4190	7580	803	2790	406	103	205	25.0	105
134945	23	< 2	2210	601	31	604	< 2	< 0.5	< 0.2	13	< 0.5	< 0.5	256	< 0.4	3400	6260	679	2430	403	111	235	30.7	130
134946	22	2	1936	472	17	718	2	< 0.5	< 0.2	17	< 0.5	< 0.5	276	0.5	3330	6100	650	2270	352	94.5	200	26.3	111
134947	19	3	2239	446	17	644	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	358	0.9	3250	5840	620	2160	331	87.8	183	23.4	97.5
134948	21	< 2	2330	479	41	584	4	< 0.5	< 0.2	20	< 0.5	< 0.5	360	1.0	3140	5790	624	2200	349	95.2	200	26.2	109
134949	< 5	< 2	45	9	5	51	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	13	< 0.4	65.9	121	12.6	43.5	6.7	1.78	3.8	0.5	2.2
134950	137	35	20780	1018	228	31	34	2.5	< 0.2	< 1	6.7	1.7	912	2.8	18600	29100	2630	8330	876	205	366	38.1	151
134951	23	< 2	1438	582	13	513	< 2	< 0.5	0.3	36	< 0.5	< 0.5	175	1.5	2840	5520	628	2370	483	137	282	34.3	136
134952	25	< 2	1752	490	33	697	< 2	< 0.5	< 0.2	22	< 0.5	< 0.5	237	0.7	3790	6770	719	2510	389	103	212	26.4	110
134953	25	< 2	2100	435	29	839	2	< 0.5	< 0.2	17	< 0.5	< 0.5	412	0.5	3770	6950	746	2610	391	98.8	197	23.4	93.0
134954	20	< 2	1796	508	33	544	12	< 0.5	< 0.2	26	< 0.5	< 0.5	246	0.9	2920	5350	599	2260	388	97.2	197	25.4	110
134955	25	< 2	2042	384	30	642	52	< 0.5	0.3	81	< 0.5	< 0.5	265	0.7	3500	6190	688	2600	425	104	199	22.2	85.9
134956	21	< 2	647	215	10	291	5	< 0.5	0.6	31	< 0.5	< 0.5	140	7.3	614	2210	441	2220	388	85.9	159	16.2	57.1
134957	22	< 2	2190	554	26	568	7	< 0.5	< 0.2	22	< 0.5	< 0.5	338	3.2	2880	6070	667	2220	312	82.6	184	26.3	123
134958	23	< 2	2188	514	25	454	3	< 0.5	< 0.2	26	< 0.5	< 0.5	302	4.1	2930	6240	699	2360	312	78.7	168	23.7	109
134959	24	< 2	1717	521	28	575	6	< 0.5	0.3	34	< 0.5	< 0.5	229	3.1	2760	5780	685	2530	367	84.1	167	22.8	109
134960	19	< 2	1843	512	34	448	11	< 0.5	< 0.2	15	< 0.5	< 0.5	288	1.4	2980	5500	587	2000	265	63.5	136	19.5	95.6
134961	18	< 2	2202	390	35	442	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	339	0.9	2800	5330	572	1960	268	65.1	133	17.5	79.8
134962	22	< 2	2053	363	25	769	2	< 0.5	< 0.2	34	< 0.5	< 0.5	286	0.7	3760	7100	723	2330	314	76.8	155	18.6	77.4
134963	20	< 2	2263	568	29	412	4	< 0.5	< 0.2	20	< 0.5	< 0.5	440	< 0.4	4020	7180	711	2290	331	79.8	165	21.8	101
134964	25	< 2	2590	589	37	347	7	< 0.5	< 0.2	15	< 0.5	< 0.5	575	0.9	4270	7500	758	2500	356	86.7	176	22.9	105
134965	25	< 2	2518	565	38	444	6	< 0.5	0.2	18	< 0.5	< 0.5	633	0.9	4420	7790	788	2590	368	89.2	180	23.1	103
134966	18	< 2	2227	318	22	233	10	< 0.5	0.2	25	< 0.5	< 0.5	490	2.5	4170	6960	688	2480	346	77.5	155	16.0	68.8
134967	25	< 2	2071	698	24	379	< 2	< 0.5	< 0.2	33	< 0.5	< 0.5	1306	2.3	2790	6340	775	2740	348	83.5	179	26.3	133
134968	19	< 2	2228	428	21	255	3	< 0.5	< 0.2	13	< 0.5	< 0.5	1709	7.9	2360	6230	759	2770	312	67.2	142	17.2	92.4
134969	24	< 2	3057	706	25	311	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	1617	1.5	3870	7560	798	2590	321	77.1	160	20.8	107
134970	25	< 2	3085	628	30	361	6	< 0.5	< 0.2	6	< 0.5	< 0.5	1575	1.7	5230	9700	939	2810	297	68.1	139	18.0	89.5
134971	21	< 2	2533	548	33	553	< 2	< 0.5	< 0.2	10	< 0.5	< 0.5	1133	0.9	3950	7310	740	2320	257	57.5	116	15.0	77.1
134972	23	< 2	2469	464	59	591	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	445	0.8	4620	8870	909	2740	260	57.3	121	15.7	75.3
134973	26	< 2	2333	412	19	524	4	< 0.5	< 0.2	25	< 0.5	< 0.5	530	3.1	3320	8030	907	2830	255	53.0	110	14.2	70.0
134974	< 5	< 2	24	6	5	36	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	18	< 0.4	34.0	67.1	7.12	23.1	2.9	0.68	1.3	0.2	0.8
134975	23	27	3108	1004	230	382	55	1.8	< 0.2	43	< 0.5	< 0.5	13560	2.3	2650	4870	563	2240	474	133	295	41.7	195
134976	20	< 2	2568	411	44	757	3	< 0.5	< 0.2	40	< 0.5	< 0.5	379	5.8	2880	6650	743	2330	239	55.4	118	15.9	72.6
134977	23	< 2	2324	486	22	1110	4	< 0.5	< 0.2	19	< 0.5	< 0.5	270	4.4	2950	6670	753	2510	296	71.2	148	19.6	90.7
134978	26	< 2	2891	455	49	317	2	0.5	< 0.2	15	< 0.5	< 0.5	268	2.0	2840	6140	691	2390	330	86.1	185	23.9	105
134979	29	< 2	2613	291	191	571	2	1.7	< 0.2	22	< 0.5	< 0.5	305	0.5	5430	10000	992	2980	296	64.1	134	15.2	63.4
134980	23	< 2	2131	347	1001	917	< 2	7.9	< 0.2	22	< 0.5	< 0.5	281	2.0	3190	6890	753	2450	289	67.7	142	17.6	77.5
134981	23	< 2	2595	288	16	281	3	< 0.5	< 0.2	9	< 0.5	< 0.5	558	1.5	3910	8110	813	2390	244	58.9	126	15.0	64.4
134982	25	< 2	2929	320	18	221	7	< 0.5	< 0.2	6	< 0.5	< 0.5	478	1.4	5160	9360	896	2660	291	64.8	128	14.1	58.7
134983	21	< 2	2035	354	22	513	6	< 0.5	< 0.2	22	< 0.5	< 0.5	241	0.6	3120	6050	624	2130	385	90.1	171	19.1	75.5
134984	25	< 2	2397	412	38	351	13	< 0.5	< 0.2	20	< 0.5	< 0.5	358	1.2	4270	8240	823	2530	334	81.4	162	18.4	77.9
134985	27	< 2	3012	392	47	216	8	0.5	< 0.2	10	< 0.5	< 0.5	449	0.5	5480	9020	878	2820	382	92.4	180	18.6	71.6
134986	28	< 2	3197	382	57	197	18	< 0.5	< 0.2	8	< 0.5	< 0.5	446	0.6	6050	9670	917	2870	366	87.6	175	18.9	73.6
134987	27	< 2	3095	338	51	189	12	< 0.5	< 0.2	10	< 0.5	< 0.5	447	0.5	5570	9070	872	2770	361	85.4	170	18.1	70.0
134988	28	< 2	2566	381	34	180	14	< 0.5	0.2	11	< 0.5	< 0.5	319	2.4	4740	7950	813	2840	414	95.8	188	20.7	80.4
134989	18	< 2	2093	283	48	409	5	< 0.5	< 0.2	23	< 0.5	< 0.5	322	0.7	3910	7520	786	2800	367	85.7	180	17.7	69.3
134990	23	< 2	2101	307	38	377	4	< 0.5	< 0.2	15	< 0.5	< 0.5	340	0.8	3750	7090	761	2620	355	86.1	173	18.3	70.6
134991	22	3	2343	316	45	328	3	< 0.5	< 0.2	15	< 0.5	< 0.5	314	0.6	3430	6280	667	2280	307	71.1	143	16.4	65.3

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134992	22	< 2	2260	251	23	343	5	< 0.5	< 0.2	11	< 0.5	< 0.5	284	1.0	3650	6610	688	2310	303	68.2	133	13.5	51.6
134993	24	< 2	2106	266	56	423	7	< 0.5	< 0.2	10	< 0.5	< 0.5	234	< 0.4	3950	7220	755	2580	343	76.3	145	14.3	54.8
134994	25	< 2	2140	274	43	373	9	< 0.5	0.2	116	< 0.5	< 0.5	253	0.7	4320	7310	731	2470	339	75.8	144	14.4	53.2
134995	24	< 2	1971	377	30	394	5	< 0.5	< 0.2	11	< 0.5	< 0.5	195	0.5	3230	6320	693	2500	402	93.4	177	18.7	74.4
134996	22	< 2	2513	344	23	286	4	< 0.5	< 0.2	6	< 0.5	< 0.5	246	< 0.4	4200	7680	750	2300	277	68.7	146	16.8	68.6
134997	26	< 2	2493	360	43	434	4	0.5	< 0.2	41	< 0.5	< 0.5	279	0.6	4490	8220	845	2800	393	98.6	206	23.2	90.0
134998	27	< 2	2666	384	29	1100	3	< 0.5	< 0.2	88	0.6	< 0.5	355	< 0.4	4500	7820	802	2710	373	89.5	178	20.6	83.3
134999	< 5	< 2	9	< 2	5	30	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	11.4	20.1	1.99	6.5	0.8	0.22	0.4	< 0.1	0.2
135000	164	34	20270	1002	219	35	32	2.8	< 0.2	< 1	6.5	1.8	912	5.4	17800	28100	2510	7950	847	197	361	37.1	152
135001	22	< 2	2980	372	38	704	< 2	0.6	< 0.2	21	< 0.5	< 0.5	294	0.5	4070	7100	708	2260	291	70.5	150	18.5	78.8
135002	24	< 2	2774	466	28	443	6	0.5	< 0.2	15	< 0.5	< 0.5	287	0.6	5030	8500	816	2550	306	71.0	153	20.0	94.4
135003	21	< 2	2792	288	39	532	8	< 0.5	< 0.2	17	< 0.5	< 0.5	313	0.5	4390	7220	699	2220	281	65.8	131	13.9	57.6
135004	26	< 2	2756	404	37	525	5	< 0.5	< 0.2	18	< 0.5	< 0.5	308	0.7	4940	8250	804	2600	334	79.8	166	19.2	81.4
135005	25	< 2	2954	324	42	550	6	< 0.5	< 0.2	8	< 0.5	< 0.5	611	< 0.4	5580	9110	861	2640	305	70.2	141	15.5	64.3
135006	26	< 2	2834	357	35	1040	8	< 0.5	< 0.2	20	< 0.5	< 0.5	553	< 0.4	4800	8440	838	2680	376	88.1	175	18.9	76.1
135007	26	2	2292	363	40	808	5	< 0.5	0.2	30	< 0.5	< 0.5	324	1.6	3290	6380	706	2530	421	103	202	21.8	83.5
135008	29	< 2	2723	603	54	493	4	< 0.5	< 0.2	22	< 0.5	< 0.5	246	1.7	2990	6670	793	2950	468	118	241	29.8	132
135009	29	< 2	2891	460	24	466	11	< 0.5	< 0.2	21	< 0.5	< 0.5	255	0.8	2940	6360	754	2860	435	103	205	23.6	98.5
135010	20	2	2730	279	26	289	7	< 0.5	< 0.2	8	< 0.5	< 0.5	293	0.6	3410	6160	629	2030	244	56.1	114	13.4	56.0
135011	21	2	2801	354	35	231	4	< 0.5	< 0.2	11	< 0.5	< 0.5	294	< 0.4	3830	6850	692	2240	284	67.7	138	16.2	70.5

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134893	9.0	21.2	2.55	14.6	1.80	1.2	< 0.1	5	< 0.1	135	283	0.1	2.934
134894	9.5	22.4	2.44	14.4	1.77	1.9	< 0.1	10	< 0.1	24	478	< 0.1	2.557
134895	10.4	23.6	2.76	16.0	2.12	1.7	< 0.1	4	< 0.1	100	260	0.2	3.043
134896	9.2	21.7	2.52	15.0	1.97	1.4	< 0.1	11	0.1	102	311	0.3	4.469
134897	13.7	31.4	3.69	20.3	2.66	1.9	0.1	14	0.3	192	454	0.8	3.434
134898	12.5	27.4	3.13	17.6	2.33	1.6	< 0.1	7	0.1	143	377	0.4	3.698
134899	< 0.1	0.2	< 0.05	0.1	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	5.0	< 0.1	0.393
134900	25.1	61.4	8.17	45.8	6.21	4.4	< 0.1	5	2.4	1040	157	204	0.010
134901	8.6	20.3	2.46	14.2	1.92	1.4	< 0.1	4	0.2	152	250	3.1	4.065
134902	9.4	22.7	2.54	14.1	1.81	1.5	< 0.1	9	0.2	254	449	0.3	3.605
134903	12.0	25.8	2.83	15.9	2.03	1.9	< 0.1	3	0.3	558	639	< 0.1	3.588
134904	13.3	28.4	3.00	15.8	1.98	1.7	< 0.1	4	0.2	573	620	< 0.1	2.523
134905	10.4	20.2	2.11	11.5	1.49	1.5	< 0.1	7	0.3	479	571	< 0.1	1.381
134906	12.6	27.7	3.15	18.0	2.32	2.4	< 0.1	5	0.4	149	368	0.7	4.401
134907	12.2	26.7	3.09	16.7	2.21	1.8	< 0.1	4	0.1	254	466	0.1	4.451
134908	10.4	23.6	2.98	16.3	2.15	1.7	< 0.1	3	0.1	211	407	0.1	3.760
134909	14.5	29.9	3.41	18.6	2.37	2.2	< 0.1	5	0.1	259	453	0.3	3.825
134910	10.8	23.4	2.73	15.7	2.01	1.5	0.1	3	0.1	360	506	0.1	3.975
134911	8.5	17.7	2.03	11.5	1.55	1.2	< 0.1	3	0.2	277	377	0.1	1.658
134912	8.0	16.5	2.03	10.9	1.43	1.1	< 0.1	4	0.2	256	373	0.2	1.837
134913	9.0	18.6	2.21	12.0	1.57	1.4	< 0.1	7	< 0.1	233	381	< 0.1	4.447
134914	7.4	15.8	1.95	11.4	1.45	0.9	< 0.1	5	< 0.1	470	374	< 0.1	3.914
134915	6.5	13.8	1.63	9.4	1.25	1.0	< 0.1	3	< 0.1	224	186	< 0.1	0.946
134916	8.7	20.4	2.43	13.0	1.70	1.2	< 0.1	4	< 0.1	134	217	0.1	4.503
134917	9.8	21.8	2.51	14.2	1.86	1.8	< 0.1	7	0.1	120	330	0.3	3.347
134918	13.9	30.2	3.61	20.2	2.46	1.9	< 0.1	9	< 0.1	96	226	0.3	4.621
134919	16.1	33.4	3.78	20.4	2.62	2.0	< 0.1	5	0.1	383	676	0.3	3.851
134920	12.1	26.2	2.91	16.1	2.11	1.7	0.7	5	0.2	386	607	0.6	4.336
134921	10.2	23.9	2.82	15.0	1.90	1.3	< 0.1	3	0.1	175	435	< 0.1	3.309
134922	9.2	19.6	2.38	12.6	1.63	1.2	< 0.1	5	0.1	257	470	< 0.1	3.346
134923	10.3	23.6	2.59	14.1	1.75	1.3	< 0.1	6	0.1	141	489	< 0.1	4.003
134924	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.9	< 0.1	0.394
134925	32.6	77.1	9.08	48.8	6.06	6.2	1.8	26	0.4	581	882	2.7	0.016
134926	14.5	31.8	3.69	20.1	2.58	1.9	< 0.1	3	0.1	139	331	0.2	4.209
134927	13.6	30.0	3.66	19.3	2.39	2.1	< 0.1	4	< 0.1	92	206	0.2	4.318
134928	14.1	28.4	3.20	17.3	2.22	2.1	< 0.1	5	0.2	149	325	0.4	4.278
134929	11.7	24.5	2.93	16.0	2.09	1.9	0.2	4	0.1	202	389	0.3	2.570
134930	10.6	23.9	2.65	14.6	1.91	1.7	0.3	5	0.1	110	283	0.4	3.144
134931	11.5	24.5	2.67	13.4	1.71	1.1	< 0.1	4	0.2	148	278	0.5	2.620
134932	10.6	25.7	2.92	16.4	2.17	2.1	0.7	3	0.4	141	325	2.4	1.579
134933	8.8	19.1	2.11	11.4	1.47	1.4	< 0.1	2	0.1	100	298	0.2	3.310
134934	13.8	29.6	3.41	18.3	2.28	2.2	< 0.1	4	0.2	59	290	0.2	3.314
134935	14.2	30.2	3.27	17.3	2.19	1.9	< 0.1	4	0.2	80	327	0.2	3.831
134936	11.5	26.5	3.02	17.1	2.20	1.7	0.6	2	0.3	76	249	0.5	3.756
134937	10.8	23.5	2.73	15.9	2.00	1.6	< 0.1	< 1	0.1	182	290	0.2	3.876
134938	15.4	32.6	3.37	19.2	2.56	1.8	< 0.1	3	0.2	168	331	0.2	3.372
134939	9.6	20.0	2.38	13.3	1.72	1.4	< 0.1	7	0.1	167	332	0.2	1.324
134940	9.9	21.2	2.48	13.6	1.79	1.7	< 0.1	4	0.1	143	324	0.3	1.345

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134941	20.5	40.7	4.56	24.7	3.08	2.7	< 0.1	3	0.1	85	299	0.2	2.929
134942	12.3	26.1	3.02	16.8	2.19	1.8	< 0.1	2	< 0.1	92	240	0.1	3.041
134943	20.6	42.7	4.79	24.0	2.89	2.5	< 0.1	2	0.1	147	356	0.1	3.358
134944	15.3	32.2	3.73	19.7	2.42	1.9	< 0.1	3	< 0.1	126	372	0.2	3.868
134945	19.1	39.3	4.30	22.5	2.83	2.2	< 0.1	3	0.1	110	480	0.3	2.735
134946	15.6	30.6	3.07	16.7	1.99	1.8	< 0.1	3	0.2	125	358	0.2	4.481
134947	13.6	27.4	3.01	16.2	1.98	1.5	0.3	2	0.3	188	403	0.5	2.240
134948	15.6	33.8	3.75	18.6	2.21	2.1	< 0.1	2	0.2	189	463	1.0	2.182
134949	0.3	0.7	0.09	0.4	0.04	< 0.2	< 0.1	< 1	< 0.1	9	8.5	< 0.1	0.395
134950	24.4	60.2	8.01	46.9	6.33	4.0	< 0.1	6	2.3	829	160	205	0.015
134951	17.9	35.5	3.93	19.0	2.24	2.1	< 0.1	2	0.3	324	653	0.3	3.032
134952	15.5	30.9	3.34	17.1	2.11	1.8	0.5	3	0.1	141	511	0.6	3.667
134953	13.1	28.1	3.20	18.6	2.48	1.8	< 0.1	4	0.2	123	348	0.2	2.944
134954	15.9	31.9	3.53	18.4	2.25	2.0	< 0.1	4	0.1	299	453	0.2	2.804
134955	11.6	25.3	2.79	15.0	1.94	1.6	< 0.1	4	0.2	279	470	0.2	2.391
134956	6.9	14.2	1.54	7.7	0.89	1.0	< 0.1	1	0.4	1130	730	0.1	4.291
134957	18.2	36.5	3.82	18.3	2.11	2.0	< 0.1	3	0.2	344	687	0.2	3.995
134958	16.4	35.7	3.48	16.1	1.87	1.9	< 0.1	2	0.2	333	680	0.2	3.287
134959	16.4	33.4	3.40	15.5	1.76	1.9	< 0.1	4	0.2	303	715	0.2	3.526
134960	15.5	34.5	3.59	16.7	1.90	1.9	< 0.1	2	0.2	210	474	0.2	3.857
134961	12.1	26.3	2.99	15.6	1.94	1.5	< 0.1	3	0.2	145	486	0.5	3.538
134962	11.2	25.0	2.70	13.0	1.43	1.4	0.4	4	0.2	170	473	0.4	2.989
134963	16.0	35.9	3.91	18.9	2.19	1.8	< 0.1	2	0.1	154	517	< 0.1	3.948
134964	16.6	39.5	4.40	22.4	2.66	2.0	< 0.1	2	0.2	265	606	0.3	1.975
134965	16.1	37.4	4.25	21.4	2.51	2.0	< 0.1	4	0.2	267	632	0.2	2.139
134966	10.0	23.0	2.56	13.2	1.40	0.8	< 0.1	2	< 0.1	115	499	< 0.1	3.683
134967	21.8	48.5	4.92	22.8	2.43	2.1	< 0.1	2	0.1	325	667	< 0.1	4.525
134968	14.5	33.7	3.06	14.1	1.44	1.0	< 0.1	2	< 0.1	131	627	< 0.1	3.132
134969	19.4	46.8	5.31	25.7	2.74	1.9	< 0.1	2	0.1	154	616	< 0.1	2.710
134970	16.9	41.1	4.70	21.7	2.37	1.7	< 0.1	2	0.1	213	504	< 0.1	3.368
134971	15.2	37.7	4.59	22.2	2.51	1.6	< 0.1	3	0.1	232	421	< 0.1	4.389
134972	13.0	32.5	3.83	18.4	2.23	1.9	< 0.1	4	0.1	188	439	0.1	4.140
134973	11.8	27.6	3.09	14.4	1.55	1.4	< 0.1	4	< 0.1	251	414	< 0.1	3.486
134974	0.1	0.4	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	5.5	< 0.1	0.396
134975	31.7	76.3	8.98	48.9	6.04	6.3	3.0	25	0.4	567	891	2.6	0.019
134976	11.3	25.9	2.87	14.1	1.65	1.5	0.2	6	0.2	355	541	0.3	4.301
134977	14.6	32.1	3.46	16.9	1.87	1.6	< 0.1	7	0.1	345	527	0.2	3.984
134978	15.9	36.2	3.84	19.4	2.25	2.0	< 0.1	3	0.3	172	497	3.1	3.786
134979	9.5	23.2	2.56	12.7	1.46	4.8	< 0.1	6	< 0.1	96	363	1.5	3.023
134980	11.6	26.4	2.87	14.3	1.70	21.5	< 0.1	5	< 0.1	202	442	1.2	4.211
134981	9.6	22.7	2.38	12.0	1.40	1.3	< 0.1	3	< 0.1	159	457	< 0.1	4.158
134982	9.1	22.0	2.56	13.3	1.55	1.1	< 0.1	2	< 0.1	152	302	< 0.1	3.802
134983	10.7	23.4	2.46	13.4	1.54	1.5	< 0.1	4	< 0.1	300	534	0.1	5.432
134984	11.7	27.6	3.16	15.7	1.94	1.7	< 0.1	5	< 0.1	196	571	0.1	3.395
134985	10.7	26.9	3.04	16.7	2.14	1.6	< 0.1	2	< 0.1	123	315	< 0.1	4.196
134986	10.9	25.1	2.99	16.1	1.95	1.8	< 0.1	1	0.2	180	291	0.1	4.253
134987	10.1	22.2	2.45	13.7	1.71	1.7	< 0.1	1	0.1	153	289	0.1	4.304
134988	11.6	25.7	2.79	14.4	1.70	1.6	< 0.1	< 1	0.1	370	558	0.1	5.232
134989	9.5	20.9	2.38	12.8	1.52	1.2	< 0.1	2	< 0.1	17	412	0.3	1.868
134990	9.9	21.2	2.38	13.2	1.57	1.5	< 0.1	2	< 0.1	137	452	0.3	1.748

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
134991	9.8	21.7	2.58	13.6	1.67	1.6	< 0.1	2	0.2	103	329	0.3	3.386
134992	7.5	16.6	1.96	10.9	1.36	1.1	< 0.1	2	< 0.1	172	439	0.2	4.284
134993	8.0	18.7	2.24	12.3	1.54	1.5	< 0.1	2	< 0.1	165	283	0.3	3.935
134994	7.8	18.5	2.20	12.2	1.45	1.3	< 0.1	2	< 0.1	315	367	0.2	4.677
134995	11.1	25.1	2.90	16.1	1.90	1.6	0.3	1	< 0.1	232	522	0.4	4.251
134996	10.5	24.0	2.88	15.6	1.82	1.3	< 0.1	2	< 0.1	120	309	0.1	3.682
134997	13.1	29.3	3.22	17.6	2.14	1.8	< 0.1	5	0.2	224	465	0.2	4.182
134998	12.8	28.0	3.34	17.3	2.04	1.7	< 0.1	13	0.1	163	289	0.2	3.944
134999	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	1.2	< 0.1	0.399
135000	24.8	62.4	8.03	46.5	6.30	4.2	< 0.1	24	2.3	973	153	201	0.016
135001	12.2	28.3	3.29	17.1	1.98	1.8	< 0.1	5	0.2	207	308	0.2	3.942
135002	15.1	34.6	3.78	18.3	2.06	1.7	0.2	3	0.1	219	443	0.4	4.715
135003	9.2	21.7	2.61	13.3	1.58	1.5	2.4	3	0.2	153	325	1.4	2.685
135004	13.1	31.1	3.63	18.4	2.14	1.7	< 0.1	3	< 0.1	194	299	0.1	3.903
135005	10.1	24.7	2.93	14.7	1.74	1.5	< 0.1	3	< 0.1	103	176	0.1	4.077
135006	11.2	25.6	2.94	14.9	1.66	1.5	< 0.1	5	< 0.1	174	416	0.1	3.794
135007	11.9	27.0	2.92	15.5	1.75	1.8	< 0.1	5	0.2	396	470	0.2	4.238
135008	20.6	44.5	4.95	25.9	3.02	2.7	< 0.1	5	0.2	291	584	0.8	4.857
135009	15.0	33.6	3.75	20.2	2.35	1.7	< 0.1	5	0.2	208	444	0.6	3.532
135010	8.7	20.3	2.46	13.0	1.56	1.2	0.6	1	0.2	124	255	0.4	3.151
135011	11.0	25.9	3.10	16.8	2.20	1.5	0.2	< 1	0.2	120	300	0.3	3.234

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	3.03	11.27	1.90	0.74	0.013	0.35	43.93	0.87	0.56	0.116	30.18					1659							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.18																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.31																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.11	18.25	9.94	0.148	10.06	11.28	1.92	0.23	0.486	0.07			31		158	260	57	260	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		72.57	13.14	3.33	0.143	0.15	0.57	2.49	5.34	0.278	0.06			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		31	40				
LKSD-3 Cert																		30.0	47.0				
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		53.02	15.52	10.41	0.164	6.34	10.70	2.31	0.65	1.058	0.15			35	< 1	277		41		100		18	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0		110		17.0	1.00
SY-4 Meas		49.59	20.49	6.17	0.107	0.50	7.93	6.94	1.67	0.283	0.13			< 1	3	8							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.93	15.35	10.70	0.172	9.60	13.23	1.81	0.03	0.964	0.03			44	< 1	344	380	53	160	120		15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125		16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1060	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		72.17	14.71	0.62	0.041	0.07	0.65	4.40	3.87	0.012	0.02				1366								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		25		2610	7400	25	
NCS DC70014 Cert																		26		2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																	30		< 20	940	90	16	10
NCS DC70009 (GBW07241) Cert																	30		2.8	960	100	16.5	11.2
OREAS 100a (Fusion) Meas																		18		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		420			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20			16	2
JR-1 Cert																			1.67			16.1	1.88
NCS DC86318 Meas		65.28	13.37	2.26	0.055	0.10		0.60	5.57	0.166	< 0.01												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
134907 Orig	3.54	2.91	0.09	11.56	1.908	12.62	25.99	0.06	0.07	0.320	1.22	36.09	92.84	53	28	94	< 20	6	< 20	< 10	1780	74	15
134907 Dup	3.78	2.86	0.08	11.42	1.881	12.46	25.91	0.06	0.07	0.314	1.23	36.09	92.38	53	28	97	< 20	6	< 20	< 10	1750	75	15
134922 Orig		1.36	0.15	11.41	1.896	13.29	26.57	0.06	0.13	0.515	0.46	37.51	93.35	50	10	117	< 20	5	< 20	< 10	1950	60	12
134922 Split	3.62	1.38	0.14	11.61	1.923	13.46	27.00	0.05	0.13	0.518	0.45	37.37	94.03	49	10	113	< 20	5	< 20	< 10	1970	70	13
134924 Orig	< 0.01	97.70	0.10	0.23	0.014	0.14	0.30	0.05	0.02	0.002	0.02	0.44	99.02	< 1	< 1	< 5	50	< 1	< 20	30	< 30	< 1	2
134924 Dup	0.02	98.31	0.10	0.24	0.014	0.16	0.31	0.05	0.02	0.002	0.05	0.44	99.70	< 1	< 1	< 5	50	< 1	< 20	< 10	< 30	1	1
134934 Orig	3.29	4.28	0.11	8.13	1.311	13.00	28.94	0.09	0.09	0.112	2.11	35.88	94.06	52	16	78	< 20	5	< 20	< 10	620	71	15
134934 Dup	3.21	4.21	0.10	8.08	1.311	12.89	28.63	0.09	0.09	0.109	2.06	35.88	93.45	51	16	78	< 20	5	< 20	< 10	640	73	15
134966 Orig	5.60	2.17	0.08	18.54	2.240	10.94	24.05	0.05	0.06	0.120	0.61	33.86	92.72	33	14	58	< 20	8	< 20	< 10	1170	42	9
134966 Dup	5.62	2.15	0.07	18.48	2.223	11.03	24.04	0.05	0.06	0.117	0.61	33.86	92.68	33	14	57	< 20	8	< 20	< 10	1160	42	9
134977 Orig	4.67	1.11	0.04	13.13	1.947	12.22	26.06	0.03	0.03	0.275	0.29	36.97	92.09	33	14	70	< 20	7	< 20	< 10	1480	72	15
134977 Dup	4.20	1.10	0.04	13.26	1.961	12.39	26.53	0.03	0.03	0.282	0.28	36.97	92.87	34	15	71	< 20	8	< 20	< 10	1490	73	14
134982 Orig	4.98	0.53	0.06	10.08	1.646	13.67	29.62	0.02	0.06	0.038	0.43	37.75	93.90	31	14	53	< 20	4	< 20	< 10	1830	92	16
134982 Split	4.83	0.51	0.06	10.06	1.610	13.74	29.05	0.02	0.07	0.041	0.45	37.66	93.27	31	13	52	< 20	4	< 20	< 10	1470	89	15
134992 Orig	3.29	2.90	0.19	14.36	2.081	12.37	24.94	0.09	0.09	0.054	0.68	36.78	94.54	36	9	56	< 20	7	< 20	< 10	1320	70	14
134992 Dup	3.19	2.89	0.20	14.15	2.051	12.37	24.88	0.09	0.09	0.053	0.71	36.78	94.26	36	9	57	< 20	7	< 20	< 10	1380	72	13
135009 Orig	2.87	3.35	0.09	11.02	1.355	12.27	28.14	0.04	0.09	0.122	2.33	35.59	94.39	36	10	61	< 20	4	< 20	< 10	770	73	18
135009 Dup	2.81	3.33	0.09	11.23	1.383	12.44	28.27	0.04	0.09	0.127	2.35	35.59	94.93	36	10	61	< 20	5	< 20	< 10	800	74	18
135011 Orig	4.85	2.51	0.11	7.99	1.180	12.25	27.70	0.04	0.12	0.055	1.30	35.64	88.89	33	13	66	< 20	3	< 20	< 10	900	70	13
135011 Split	4.91	2.66	0.11	8.46	1.249	13.18	29.66	0.04	0.12	0.062	1.38	35.87	92.79	35	14	73	< 20	3	< 20	< 10	890	73	14
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			144	17	35								108					4.9		0.59			
DNC-1 Cert			144.0	18.0	38								118					5.20		0.59			
GBW 07113 Meas			43	47	381								506										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	26	74					< 2			3		2.4			49.5	92.7		42.6	8.2	1.41			4.9
LKSD-3 Cert	27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50			4.90

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
OKA-2 Meas																							
OKA-2 Cert																							
W-2a Meas		19	199	20	86		< 2	< 0.5			0.9	0.8	177	< 0.4	10.7	23.5		12.5	3.2	1.10		0.6	3.5
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460			0.790	0.990	182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1199	116	526								348										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2200	3330		1130	166	45.0	121	14.7	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			109	15	14								10					2.5	1.1	0.52	1.9		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	180		1570			229	34.3	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.6			180			80.3	45.7	88.4	9.95	37.9	8.0	1.68	7.2	1.1	6.3
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	70	505							1.3	1700	3.2	43.3			22.3	56.3	7.22	30.2	12.2		14.1	3.2	20.5
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							25								266	478	45.6	150	24.2	3.65		3.8	23.1
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								828	1390	127	390	50.4	8.09		5.5	31.9
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		245				15		< 0.5	< 0.2			20.7			19.7	46.7	5.68	22.6	5.8		5.3	1.0	6.1
JR-1 Cert		257				15.2		0.031	0.028			20.8			19.7	47.2	5.58	23.3	6.03		5.06	1.01	5.69
NCS DC86318 Meas				17480											2030	436	745	3330	1740	19.3	2010	462	3020
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1143	15950																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															21300	28200	2300	6540	534	88.5			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
134907 Orig	26	< 2	2393	379	40	484	< 2	0.7	< 0.2	14	< 0.5	< 0.5	436	4.3	4090	8460	933	2880	350	84.6	172	20.9	85.6
134907 Dup	26	< 2	2313	378	39	488	< 2	0.6	< 0.2	13	< 0.5	< 0.5	435	3.3	4060	8410	928	2870	348	83.6	170	20.5	82.9
134922 Orig	21	3	2552	303	21	853	< 2	< 0.5	0.2	13	< 0.5	< 0.5	307	2.0	3360	6730	728	2240	270	63.1	130	15.0	62.8
134922 Split	21	3	2583	300	19	831	< 2	< 0.5	0.2	15	< 0.5	< 0.5	308	1.4	3280	6680	690	2170	265	60.7	127	15.0	62.1
134924 Orig	< 5	< 2	17	3	4	53	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	26.8	49.4	4.85	14.9	1.9	0.48	1.0	0.1	0.5
134924 Dup	< 5	< 2	17	3	5	32	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	29.0	51.7	5.13	16.3	2.1	0.53	1.0	0.1	0.5
134934 Orig	28	< 2	2630	459	70	595	2	0.6	< 0.2	9	< 0.5	< 0.5	748	0.4	4580	7990	863	2820	355	84.5	168	21.0	91.2
134934 Dup	28	< 2	2607	450	70	595	2	0.6	< 0.2	9	< 0.5	< 0.5	741	0.5	4550	7950	856	2800	353	84.5	167	20.7	91.1
134966 Orig	19	< 2	2249	320	20	237	10	< 0.5	0.2	22	< 0.5	< 0.5	492	2.5	4190	7000	690	2480	346	77.7	155	16.0	69.1
134966 Dup	17	< 2	2206	315	23	228	9	< 0.5	0.2	27	< 0.5	< 0.5	488	2.6	4150	6920	686	2490	345	77.3	154	16.0	68.6

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
134977 Orig	24	< 2	2297	484	21	1090	4	< 0.5	< 0.2	19	< 0.5	< 0.5	268	4.2	2940	6660	750	2490	294	70.9	148	19.6	90.6
134977 Dup	23	< 2	2352	488	22	1130	4	< 0.5	< 0.2	19	< 0.5	< 0.5	272	4.6	2960	6690	756	2520	299	71.6	148	19.6	90.7
134982 Orig	25	< 2	2929	320	18	221	7	< 0.5	< 0.2	6	< 0.5	< 0.5	478	1.4	5160	9360	896	2660	291	64.8	128	14.1	58.7
134982 Split	23	< 2	2845	311	17	255	6	< 0.5	< 0.2	7	< 0.5	< 0.5	474	1.6	5010	9070	872	2600	283	63.4	128	14.0	58.2
134992 Orig	23	< 2	2253	250	24	337	5	< 0.5	< 0.2	11	< 0.5	< 0.5	284	1.0	3630	6560	684	2300	302	67.9	132	13.3	51.1
134992 Dup	22	< 2	2267	253	22	349	5	< 0.5	< 0.2	11	< 0.5	< 0.5	284	1.0	3670	6660	692	2320	303	68.5	134	13.7	52.2
135009 Orig	29	< 2	2857	459	23	451	10	< 0.5	< 0.2	21	< 0.5	< 0.5	256	0.8	2900	6270	742	2820	428	102	201	23.2	97.4
135009 Dup	29	< 2	2924	461	24	481	11	< 0.5	< 0.2	21	< 0.5	< 0.5	254	0.7	2990	6450	766	2910	442	105	209	23.9	99.6
135011 Orig	21	2	2801	354	35	231	4	< 0.5	< 0.2	11	< 0.5	< 0.5	294	< 0.4	3830	6850	692	2240	284	67.7	138	16.2	70.5
135011 Split	22	2	2945	379	39	246	4	< 0.5	< 0.2	11	< 0.5	< 0.5	310	0.5	3950	7070	713	2310	294	69.8	142	16.9	72.3
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											922		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				2.0									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.7	0.40	4.1	0.9				11.2	4.4	
LKSD-3 Cert				2.70	0.400	4.80	0.700				11.4	4.60	
OKA-2 Meas											27700		
OKA-2 Cert											28900.000		
W-2a Meas	0.7	2.0	0.35	2.0				< 1	< 0.1		2.2	0.5	
W-2a Cert	0.760	2.50	0.380	2.10				0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.7	1.09						23.8	4.1	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.6		0.6				< 5			
BIR-1a Cert				1.7		0.60				3			
NCS DC86312 Meas	35.6	96.2	14.3	87.1	12.0						25.7		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
ZW-C Meas							80.7	331	33.8				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.4		3.4	0.48					27200			
NCS DC70014 Cert	1.3	3.5		3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.2	12.4	2.29	15.7				2200			27.3		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.5	2.35	15.2	2.16						53.5	137	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.6	19.1	2.97	18.2	2.50						36.9	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas		3.8	0.62	4.6	0.66	3.9		2	1.3	18	26.8	8.6	
JR-1 Cert		3.61	0.67	4.55	0.71	4.51		1.59	1.56	19.3	26.7	8.88	
NCS DC86318 Meas	556	1590	264	1750	242								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
134907 Orig	12.3	27.2	3.16	16.7	2.19	1.8	< 0.1	4	0.1	257	470	0.1	
134907 Dup	12.1	26.3	3.02	16.8	2.23	1.8	< 0.1	4	0.1	251	462	0.1	
134922 Orig	9.2	19.6	2.38	12.6	1.63	1.2	< 0.1	5	0.1	257	470	< 0.1	
134922 Split	9.1	19.2	2.28	12.8	1.66	1.2	< 0.1	4	0.1	223	460	< 0.1	
134924 Orig	< 0.1	0.2	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	2.9	< 0.1	
134924 Dup	< 0.1	0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.9	< 0.1	
134934 Orig	13.8	28.9	3.39	18.7	2.36	2.2	< 0.1	4	0.2	61	290	0.2	
134934 Dup	13.8	30.2	3.43	18.0	2.20	2.2	< 0.1	4	0.2	57	290	0.2	
134966 Orig	10.0	23.2	2.61	13.2	1.41	0.8	< 0.1	2	< 0.1	116	499	< 0.1	
134966 Dup	10.0	22.8	2.51	13.2	1.38	0.8	< 0.1	2	< 0.1	114	500	< 0.1	
134977 Orig	14.6	32.4	3.46	17.2	1.84	1.6	< 0.1	6	0.1	346	526	0.2	
134977 Dup	14.6	31.7	3.45	16.7	1.89	1.7	< 0.1	7	0.1	345	529	0.2	
134982 Orig	9.1	22.0	2.56	13.3	1.55	1.1	< 0.1	2	< 0.1	152	302	< 0.1	
134982 Split	9.0	21.3	2.53	13.0	1.58	1.1	< 0.1	1	< 0.1	161	308	< 0.1	
134992 Orig	7.4	15.7	1.94	10.9	1.37	1.1	< 0.1	1	< 0.1	167	436	0.2	
134992 Dup	7.6	17.5	1.99	10.8	1.36	1.2	< 0.1	2	< 0.1	177	442	0.2	
135009 Orig	14.9	33.1	3.66	19.7	2.35	1.7	< 0.1	4	0.1	208	440	0.6	
135009 Dup	15.0	34.0	3.85	20.8	2.35	1.7	< 0.1	5	0.2	208	448	0.6	
135011 Orig	11.0	25.9	3.10	16.8	2.20	1.5	0.2	< 1	0.2	120	300	0.3	
135011 Split	11.5	27.1	3.29	17.6	2.27	1.7	0.2	< 1	0.2	121	311	0.4	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03299
Invoice Date: 10-Jun-14
Your Reference: ASHRAM-BATCH #11

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

15 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03299**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135012	0.59	1.77	0.08	3.42	0.655	16.25	31.01	0.04	0.03	0.009	3.91	40.30	97.48	8	4	21	< 20	< 1	< 20	< 10	210	10	2
135013	0.47	0.93	0.08	3.80	0.772	16.36	31.54	0.05	0.04	0.063	4.57	39.27	97.48	13	2	43	< 20	1	< 20	< 10	380	9	2
135014	0.72	0.91	0.09	4.20	0.619	14.91	34.14	0.07	0.03	0.089	7.27	35.81	98.14	11	2	52	< 20	2	< 20	< 10	150	6	< 1
135015	0.67	0.80	0.07	3.95	0.603	14.72	32.57	0.05	0.02	0.084	6.99	36.13	95.98	10	2	49	< 20	2	< 20	10	120	12	3
135016	0.30	1.89	0.09	4.40	0.915	16.95	28.75	0.03	0.03	0.036	0.98	42.58	96.66	17	3	48	< 20	< 1	< 20	< 10	350	13	3
135017	0.37	5.02	0.07	4.20	0.891	15.97	28.31	0.03	0.04	0.037	1.66	40.47	96.69	17	4	41	< 20	< 1	< 20	< 10	280	14	3
135018	0.17	3.43	0.10	4.96	0.927	16.49	29.22	0.03	0.03	0.032	1.76	40.51	97.49	17	5	54	< 20	< 1	< 20	< 10	280	14	3
135019	0.24	1.37	0.13	7.54	0.890	15.37	28.36	0.03	0.03	0.107	2.31	38.90	95.04	36	4	93	< 20	5	< 20	< 10	990	31	7
135020	0.39	2.28	0.12	4.55	0.817	16.79	29.39	0.04	0.02	0.063	2.80	40.00	96.89	17	2	58	< 20	3	< 20	< 10	230	21	5
135021	0.94	1.40	0.03	3.64	0.684	15.41	32.64	0.04	0.01	0.079	5.18	38.05	97.17	14	2	44	< 20	< 1	< 20	< 10	240	10	2
135022	0.41	4.14	0.17	4.41	0.796	15.85	29.62	0.09	0.05	0.075	2.22	40.15	97.56	13	2	44	< 20	< 1	< 20	< 10	270	12	3
135023	0.31	2.85	0.08	4.38	0.776	16.08	29.47	0.03	0.04	0.053	2.29	40.63	96.70	10	1	43	< 20	1	< 20	< 10	210	11	2
135024	< 0.01	97.78	0.11	0.33	0.021	0.33	0.70	0.04	0.02	0.003	0.08	0.76	100.2	< 1	< 1	< 5	110	< 1	< 20	< 10	< 30	1	< 1
135025	6.63	20.28	3.18	28.44	2.408	7.06	17.87	0.32	1.38	1.493	0.55	11.45	94.43	21	13	156	160	29	70	30	1460	28	6
135026	0.54	3.46	0.09	4.29	0.854	15.22	30.46	0.04	0.05	0.073	4.61	37.90	97.06	14	2	47	< 20	1	< 20	< 10	280	14	3

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135012	8	< 2	2051	125	34	158	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	49	< 0.4	889	2220	285	1170	183	44.1	92.0	9.6	38.6
135013	7	< 2	3803	105	52	460	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	82	1.3	938	2090	249	936	134	31.0	64.9	7.1	30.7
135014	7	< 2	4004	149	94	869	< 2	< 0.5	< 0.2	4	< 0.5	< 0.5	76	< 0.4	555	1280	152	595	97.4	26.0	63.0	8.3	38.9
135015	8	< 2	4059	132	91	1180	< 2	0.9	< 0.2	5	< 0.5	< 0.5	68	< 0.4	530	1170	147	574	97.2	25.7	58.5	7.6	34.6
135016	9	< 2	2964	122	47	201	2	< 0.5	< 0.2	1	< 0.5	< 0.5	87	< 0.4	1420	3000	357	1330	182	41.7	84.3	8.5	37.7
135017	9	< 2	2869	139	48	198	2	< 0.5	< 0.2	1	< 0.5	< 0.5	111	< 0.4	1310	2890	349	1320	192	44.5	92.1	9.5	41.9
135018	9	< 2	2781	146	40	158	3	< 0.5	< 0.2	< 1	< 0.5	< 0.5	92	< 0.4	1370	3030	367	1420	200	46.0	93.9	9.8	43.0
135019	20	< 2	2989	188	80	563	4	0.8	0.2	10	0.8	< 0.5	107	2.2	1660	3500	407	1440	219	52.4	112	12.4	48.9
135020	12	< 2	3492	144	57	514	4	0.5	< 0.2	4	< 0.5	< 0.5	101	0.7	1010	2210	269	1010	150	37.1	78.2	9.3	39.5
135021	8	< 2	3560	151	75	686	< 2	< 0.5	< 0.2	3	< 0.5	< 0.5	76	0.5	915	2160	256	979	134	32.0	68.2	8.4	39.2
135022	7	< 2	2596	136	40	293	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	75	< 0.4	1350	2760	321	1220	177	42.6	94.3	10.2	42.2
135023	8	< 2	2681	129	45	284	< 2	< 0.5	< 0.2	1	< 0.5	< 0.5	79	< 0.4	948	2290	285	1130	173	43.2	90.2	9.6	40.2
135024	< 5	< 2	84	4	7	29	5	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	25.2	58.8	6.78	25.4	3.3	0.77	1.6	0.2	0.9
135025	13	25	3172	924	223	363	52	1.1	< 0.2	44	< 0.5	< 0.5	13110	2.3	2530	4660	548	2190	463	129	325	44.9	215
135026	10	< 2	3145	213	75	285	2	< 0.5	< 0.2	2	< 0.5	< 0.5	97	0.5	1200	2790	357	1410	219	55.3	121	15.2	63.1

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
135012	4.9	9.8	1.19	6.7	0.93	0.4	< 0.1	4	< 0.1	8	28.1	< 0.1	3.003
135013	4.2	8.5	1.01	5.5	0.77	0.7	0.1	1	< 0.1	11	50.2	0.2	2.889
135014	5.8	12.3	1.45	8.0	1.04	1.2	0.5	2	< 0.1	8	78.4	0.6	1.577
135015	5.0	10.7	1.31	7.3	0.96	1.5	0.9	2	< 0.1	< 5	77.0	0.7	1.579
135016	4.9	10.3	1.14	6.2	0.79	0.6	< 0.1	1	< 0.1	11	65.3	0.2	4.109
135017	5.7	11.8	1.33	7.3	0.91	0.7	< 0.1	< 1	< 0.1	12	75.7	0.2	4.140
135018	6.0	12.8	1.45	7.6	0.95	0.6	< 0.1	< 1	< 0.1	11	80.6	0.2	3.498
135019	6.8	14.3	1.79	10.5	1.46	1.4	0.7	2	< 0.1	< 5	307	0.5	3.910
135020	5.6	12.1	1.35	7.2	0.90	1.1	0.4	< 1	< 0.1	< 5	92.6	0.3	2.614
135021	5.9	13.2	1.50	7.9	1.06	0.9	1.0	1	< 0.1	9	72.4	1.4	2.483
135022	5.6	11.9	1.21	6.4	0.74	0.6	0.2	< 1	< 0.1	7	59.7	0.5	3.904
135023	5.3	11.1	1.25	6.4	0.83	0.7	< 0.1	< 1	< 0.1	7	44.3	0.2	4.126
135024	0.1	0.3	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	2.1	< 0.1	0.391
135025	34.0	80.3	9.76	51.4	6.29	4.8	3.2	27	0.3	576	883	2.7	0.013
135026	8.7	17.7	1.91	10.0	1.25	1.1	< 0.1	1	< 0.1	24	75.4	0.2	2.586

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	2.99	11.25	2.08	0.79	0.014	0.34	43.06	0.93	0.56	0.120	30.17					1669							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.37																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.11																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.26																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.24	18.22	9.69	0.146	9.92	11.43	1.93	0.23	0.473	0.08			31		158	260	57	250	110	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		72.55	13.15	3.28	0.146	0.14	0.61	2.46	5.38	0.285	0.05			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		31	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
W-2a Meas		52.68	15.33	10.56	0.164	6.18	11.01	2.22	0.62	1.072	0.14			35	< 1	278		42	70	100	80	18	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas		49.94	20.43	6.15	0.106	0.50	7.92	6.95	1.68	0.284	0.14			1	3	6							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		48.00	15.87	11.08	0.171	9.59	13.44	1.83	0.02	0.980	0.03			44	< 1	337	380	53	160	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1050	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		73.75	14.89	0.66	0.048	0.12	0.78	4.41	3.87	0.013	0.03				1304								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		26	70	2610	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				940		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		17		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		430			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas		66.88	13.90	2.28	0.057	0.08		0.59	5.58	0.172	< 0.01												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
135013 Orig	0.46																< 20	1	< 20	< 10	380	10	1
135013 Dup	0.48	0.93	0.08	3.80	0.772	16.36	31.54	0.05	0.04	0.063	4.57	39.27	97.48	13	2	43	< 20	1	< 20	< 10	380	9	2
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			146	15	36								114		3.8			4.8		0.58			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			43	46	385								498										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	24	74					< 2			3		2.3			50.0	93.6		43.9	8.1	1.43		0.9	4.8
LKSD-3 Cert	27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90
W-2a Meas		19	197	19	88		< 2	< 0.5			0.8		180	< 0.4	10.9	23.1		12.5	3.4	1.07		0.6	3.4
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460			0.790		182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1202	117	527								349										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2190	3330		1140	166	45.6	124	14.9	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			112	14	15								10					2.5	1.1	0.51	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	180		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas						200						256											
ZW-C Cert						198						260											
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.8			180			80.3	46.6	89.9	10.1	38.4	8.0	1.66	7.1	1.2	6.6

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	70	500							1.3	1700	3.4	41.7			22.6	56.6	7.30	30.2	11.9		13.9	3.2	20.4
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							24								272	487	46.5	152	24.5	3.64		3.8	23.2
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								837	1390	129	394	50.7	8.05		5.6	32.0
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		257				15		< 0.5	< 0.2			21.0		0.5	21.0	49.1	5.89	23.7	6.0			1.1	
JR-1 Cert		257				15.2		0.031	0.028			20.8		0.56	19.7	47.2	5.58	23.3	6.03			1.01	
NCS DC86318 Meas				17250											1990	425	730	3260	1730	19.0	2110	466	3010
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1137	15560																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															20600	27300	2230	6340	521	86.0			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
135013 Orig	7	< 2				458	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5		1.5	920	2050	243	923	132	30.8	63.3	6.9	29.9
135013 Dup	7	< 2	3803	105	52	461	< 2	< 0.5	< 0.2	2	< 0.5	< 0.5	82	1.1	955	2130	255	948	135	31.3	66.4	7.3	31.5
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											902		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				1.9									
DNC-1 Cert				2.0									
GBW 07113 Meas													

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
GBW 07113 Cert													
LKSD-3 Meas				2.6	0.42	4.1					11.5	4.4	
LKSD-3 Cert				2.70	0.400	4.80					11.4	4.60	
W-2a Meas	0.7				0.36			< 1	< 0.1		2.2	0.6	
W-2a Cert	0.760				0.330			0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.9	1.12						23.9	4.1	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.7		0.5				< 5			
BIR-1a Cert				1.7		0.60				3			
NCS DC86312 Meas	35.6	96.1	14.2	86.3	11.9						25.8		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							83.1	328	34.2				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.4	0.52	3.4	0.50					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009 (GBW07241) Meas	4.2	12.5	2.29	15.5				2200			27.4		
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.7	2.42	15.5	2.15						53.8	138	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.5	19.2	2.91	18.0	2.43						37.3	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.69	4.8	0.69		1.8		1.6	20	28.1	9.1	
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88	
NCS DC86318 Meas	560	1680	273	1770	245								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
135013 Orig	4.1	8.2	0.97	5.4	0.77	0.6	0.1	1	< 0.1	10	50.0	0.2	
135013 Dup	4.4	8.7	1.04	5.6	0.77	0.7	0.1	1	< 0.1	12	50.3	0.2	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 16-May-14
Invoice No.: A14-03300
Invoice Date: 09-Jun-14
Your Reference: ASHRAM-BATCH #12

Dahrouge Geological Consulting Ltd.
10509-81 Ave., Suite 18
Edmonton AB T6E 1X7 Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

118 Rock samples were submitted for analysis.

The following analytical package was requested:

REPORT **A14-03300**

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report Received(kg) & Pulp(g) weights

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135027	3.40	1.53	0.12	13.49	1.756	11.74	27.08	0.04	0.09	0.336	1.04	37.74	94.96	61	8	82	< 20	7	< 20	< 10	1080	28	6
135028	5.40	0.82	0.07	11.17	1.551	11.69	29.83	0.02	0.07	0.160	0.98	37.88	94.24	56	9	74	< 20	5	< 20	< 10	1040	29	5
135029	3.90	0.81	0.10	10.99	1.551	12.55	29.07	0.02	0.08	0.127	1.18	36.95	93.43	65	10	69	< 20	5	< 20	< 10	1010	75	15
135030	3.96	2.84	0.09	10.55	1.541	11.53	28.74	0.02	0.08	0.460	1.31	35.70	92.87	57	8	77	< 20	6	< 20	< 10	840	34	6
135031	2.61	1.64	0.14	10.02	1.483	12.51	28.97	0.03	0.09	0.406	0.92	38.34	94.54	67	8	87	< 20	5	< 20	< 10	770	31	6
135032	6.54	1.26	0.08	11.23	1.534	11.37	30.95	0.02	0.05	0.223	0.93	34.98	92.62	61	7	70	< 20	5	< 20	< 10	1070	32	6
135033	10.3	1.84	0.09	11.13	1.428	10.48	33.00	0.02	0.07	0.285	1.00	31.44	90.78	55	10	63	< 20	4	< 20	< 10	1280	36	5
135034	9.35	2.50	0.04	13.75	1.697	10.07	29.58	0.02	0.04	0.385	0.63	31.24	89.96	46	6	68	< 20	7	< 20	< 10	1200	105	18
135035	13.5	4.99	0.10	9.01	1.194	9.31	35.14	0.02	0.10	0.400	0.42	27.55	88.22	47	8	66	< 20	5	< 20	< 10	1430	114	18
135036	3.86	2.53	0.06	12.08	1.681	12.18	27.45	0.02	0.05	0.093	1.00	36.06	93.21	62	8	61	< 20	6	< 20	< 10	1570	84	17
135037	5.33	4.73	0.06	10.50	1.500	10.87	29.20	0.05	0.06	0.142	2.75	32.93	92.78	57	14	64	< 20	3	< 20	< 10	940	31	5
135038	3.92	2.31	0.08	12.54	1.661	11.42	27.29	0.04	0.06	0.326	1.87	35.31	92.92	56	8	71	< 20	7	< 20	< 10	1060	32	6
135039	4.21	3.18	0.05	11.77	1.692	11.52	27.28	0.03	0.05	0.218	1.36	35.39	92.54	49	10	60	< 20	6	< 20	< 10	1270	33	5
135040	4.15	4.17	0.06	12.88	1.768	11.77	25.45	0.03	0.04	0.211	1.05	35.35	92.77	48	11	56	< 20	6	< 20	< 10	1290	80	15
135041	4.20	3.85	0.07	13.43	1.845	11.94	25.78	0.04	0.05	0.219	0.99	35.68	93.90	48	11	62	< 20	6	< 20	190	1320	50	9
135042	5.64	0.75	0.06	13.91	1.788	11.42	27.94	0.03	0.04	0.254	0.76	35.16	92.12	55	11	66	< 20	6	< 20	< 10	1450	47	8
135043	5.77	1.01	0.15	14.33	1.792	11.60	27.15	0.03	0.05	0.232	1.07	35.23	92.63	62	10	74	< 20	6	< 20	< 10	1330	51	9
135044	1.60	1.00	0.07	14.24	1.719	11.95	26.24	0.02	0.07	0.183	1.31	36.21	92.99	63	10	71	< 20	8	< 20	< 10	1220	48	11
135045	3.18	2.93	0.09	14.03	1.705	12.43	24.91	0.04	0.09	0.304	1.38	36.11	94.02	64	11	75	< 20	7	< 20	< 10	1090	50	8
135046	3.30	2.39	0.14	15.93	1.809	11.74	24.28	0.04	0.11	0.356	1.09	35.51	93.39	60	10	76	< 20	9	< 20	10	1270	46	9
135047	6.75	2.02	0.16	14.14	1.781	11.52	27.32	0.03	0.07	0.290	1.15	33.74	92.23	54	13	64	< 20	7	< 20	< 10	1320	50	9
135048	3.36	2.85	0.09	13.73	1.744	11.45	26.35	0.03	0.06	0.280	1.02	34.49	92.09	54	9	66	< 20	8	< 20	< 10	1140	49	10
135049	0.07	95.29	0.10	0.74	0.046	0.29	0.66	0.04	0.02	0.006	0.03	1.57	98.80	1	< 1	< 5	180	< 1	< 20	< 10	< 30	1	2
135050	1.74	14.86	2.56	12.76	0.140	0.48	26.51	0.93	1.05	0.143	18.06	8.01	85.49	17	13	154	< 20	34	60	110	640	168	26
135051	5.34	2.12	0.22	12.84	1.604	12.07	27.27	0.03	0.09	0.277	0.90	35.42	92.85	51	7	69	< 20	6	< 20	< 10	1100	48	9
135052	3.58	3.48	0.17	8.95	1.311	13.20	29.46	0.04	0.12	0.100	1.08	37.16	95.07	54	8	54	< 20	3	< 20	< 10	860	42	8
135053	5.00	3.75	0.13	8.94	1.259	12.35	29.26	0.03	0.11	0.124	0.96	35.93	92.85	46	8	59	< 20	3	< 20	< 10	680	37	7
135054	2.63	4.21	0.33	14.93	1.650	11.02	25.37	0.05	0.21	0.141	1.59	32.41	91.90	55	7	85	< 20	9	< 20	< 10	1390	33	7
135055	1.84	3.79	0.42	11.71	1.598	11.21	27.85	0.05	0.26	0.355	4.50	33.75	95.48	65	8	103	< 20	6	< 20	< 10	730	37	7
135056	1.89	2.41	0.24	13.45	1.937	11.84	25.92	0.06	0.18	0.366	1.47	36.73	94.61	75	10	82	< 20	6	< 20	< 10	810	48	9
135057	3.46	2.72	0.13	12.12	1.595	12.72	26.98	0.04	0.09	0.397	0.76	36.60	94.16	50	11	65	< 20	5	< 20	< 10	1130	44	8
135058	4.41	4.38	0.11	12.86	1.678	12.02	25.76	0.04	0.08	0.219	1.25	35.02	93.42	51	12	61	< 20	5	< 20	< 10	1130	42	8
135059	2.43	2.93	0.29	11.41	1.543	12.49	27.25	0.08	0.12	0.186	3.33	35.34	94.99	65	10	62	< 20	5	< 20	< 10	760	42	8
135060	5.18	1.43	0.21	12.22	1.558	12.33	27.33	0.08	0.10	0.222	1.30	35.51	92.28	58	10	59	< 20	5	< 20	< 10	1070	45	8
135061	3.47	2.96	0.10	11.40	1.482	12.53	26.70	0.04	0.07	0.265	1.25	36.09	92.88	55	10	61	< 20	4	< 20	< 10	1210	45	8
135062	4.47	5.93	0.15	13.33	1.514	11.71	24.81	0.05	0.11	0.270	0.97	34.03	92.88	52	9	64	< 20	5	< 20	10	1210	35	6
135063	4.44	1.01	0.09	12.54	1.650	12.45	27.46	0.03	0.05	0.256	0.91	36.38	92.82	56	9	63	< 20	5	< 20	< 10	1450	51	9
135064	3.91	0.86	0.09	12.34	1.597	12.49	26.60	0.03	0.05	0.227	0.80	37.28	92.35	58	9	63	< 20	5	< 20	< 10	1330	47	9
135065	3.90	1.05	0.08	11.66	1.478	12.47	27.29	0.03	0.06	0.190	1.35	36.67	92.33	61	10	59	< 20	4	< 20	< 10	930	43	8
135066	4.37	1.78	0.10	14.15	1.722	12.28	25.27	0.03	0.06	0.219	0.72	36.32	92.64	58	13	71	< 20	6	< 20	< 10	1170	43	8
135067	6.60	2.49	0.12	9.99	1.304	12.44	31.29	0.03	0.08	0.156	1.00	35.96	94.85	44	14	60	< 20	3	< 20	< 10	570	43	8
135068	5.56	3.87	0.08	9.42	1.479	12.61	29.57	0.03	0.07	0.194	0.94	35.26	93.53	41	16	61	< 20	3	< 20	< 10	550	48	9
135069	2.86	5.66	0.09	11.35	1.598	11.78	24.24	0.03	0.06	0.215	0.73	35.60	91.37	44	11	66	< 20	5	< 20	30	540	45	9
135070	4.39	3.07	0.08	10.38	1.608	12.70	28.21	0.03	0.06	0.236	0.83	36.49	93.70	46	13	66	< 20	4	< 20	< 10	560	46	9
135071	3.00	3.19	0.23	12.48	1.759	12.86	26.08	0.07	0.11	0.250	0.72	36.26	94.02	59	10	81	< 20	5	< 20	< 10	580	45	9
135072	3.56	4.10	1.73	11.88	1.279	11.55	26.16	0.05	0.14	0.421	2.75	31.01	91.08	50	21	64	< 20	8	< 20	< 10	270	36	7
135073	2.43	1.88	0.11	11.74	1.625	13.32	26.32	0.03	0.07	0.204	0.90	38.40	94.61	54	8	70	< 20	4	< 20	< 10	470	41	8
135074	< 0.01	95.74	0.05	0.28	0.012	0.14	0.28	0.02	< 0.01	0.001	< 0.01	2.20	98.71	< 1	< 1	< 5	20	< 1	< 20	< 10	< 30	< 1	1

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135075	6.66	20.26	3.04	27.22	2.431	7.05	17.56	0.31	1.34	1.441	0.56	11.85	93.06	23	13	156	140	24	50	30	1230	40	9
135076	1.99	3.19	0.07	11.36	1.568	12.67	24.50	0.03	0.06	0.309	1.03	37.58	92.39	54	9	55	< 20	4	< 20	< 10	880	44	8
135077	2.89	16.70	0.17	9.81	1.221	11.12	23.48	0.05	0.12	0.172	0.75	31.90	95.49	38	11	48	< 20	3	< 20	< 10	650	31	6
135078	6.19	1.38	0.08	14.17	2.031	11.73	27.46	0.02	0.05	0.248	0.32	34.60	92.07	47	10	59	< 20	6	< 20	< 10	1310	46	8
135079	9.05	0.94	0.07	12.15	1.774	11.44	31.22	0.03	0.05	0.148	0.66	33.46	91.93	52	12	58	< 20	4	< 20	< 10	1040	48	8
135080	5.39	1.73	0.10	9.98	1.712	12.57	30.67	0.03	0.09	0.278	0.56	36.18	93.90	56	9	65	< 20	3	< 20	< 10	820	42	8
135081	5.45	0.94	0.10	11.28	1.511	12.55	29.93	0.03	0.07	0.181	0.74	36.68	94.02	60	10	68	< 20	4	< 20	< 10	1380	64	12
135082	5.70	3.41	0.21	12.05	1.619	11.68	29.33	0.04	0.16	0.328	0.96	33.70	93.47	64	11	78	< 20	4	< 20	< 10	1280	50	10
135083	7.33	1.26	0.16	10.57	1.554	11.79	31.59	0.04	0.10	0.207	1.03	33.62	91.91	61	11	69	< 20	5	< 20	< 10	1170	72	13
135084	3.67	3.16	0.16	15.47	1.541	11.60	24.06	0.04	0.07	0.239	0.89	35.09	92.30	62	9	78	< 20	12	< 20	10	1310	72	17
135085	3.49	2.41	0.11	13.84	1.530	12.45	25.71	0.04	0.10	0.192	0.95	36.34	93.65	70	11	69	< 20	7	< 20	< 10	1130	77	16
135086	4.32	3.51	0.16	14.77	1.593	12.32	24.84	0.04	0.09	0.226	0.85	35.47	93.88	71	13	73	< 20	10	< 20	< 10	970	69	15
135087	3.41	4.14	0.89	12.94	1.383	11.09	27.31	0.29	0.18	0.273	3.06	32.85	94.40	68	9	90	< 20	9	< 20	< 10	1100	62	14
135088	4.94	3.50	0.68	13.48	1.431	11.20	27.42	0.18	0.19	0.251	1.91	33.42	93.65	70	9	85	< 20	10	< 20	< 10	970	64	14
135089	2.49	0.76	0.23	11.30	1.254	11.82	29.67	0.06	0.10	0.269	4.37	35.09	94.93	66	8	87	< 20	8	< 20	< 10	670	58	13
135090	3.15	3.31	0.45	13.49	1.419	12.48	26.03	0.04	0.36	0.307	0.89	36.13	94.90	58	9	83	< 20	10	< 20	< 10	900	61	14
135091	0.38	3.22	0.42	11.24	0.937	15.27	26.14	0.04	0.29	0.210	0.40	40.32	98.50	34	15	48	< 20	5	< 20	< 10	420	39	9
135092	0.13	4.93	0.05	26.37	2.187	10.43	13.13	0.02	0.03	0.203	0.52	34.98	92.85	17	4	47	< 20	17	< 20	< 10	1300	63	16
135093	0.64	3.78	0.06	21.95	2.115	10.72	15.60	0.02	0.03	0.097	0.40	36.86	91.62	31	4	47	< 20	12	< 20	< 10	1910	65	16
135094	0.55	2.89	0.08	23.54	2.239	11.15	15.79	0.02	0.04	0.114	0.34	37.61	93.81	39	4	59	< 20	14	< 20	10	1510	66	16
135095	0.21	3.97	0.10	38.10	2.658	7.94	9.76	0.03	0.04	0.241	0.99	32.95	96.78	18	3	88	< 20	18	< 20	< 10	1640	45	14
135096	0.64	3.60	0.09	37.12	3.187	7.74	8.75	0.03	0.01	0.221	1.45	33.06	95.27	34	3	63	< 20	17	< 20	20	2120	50	15
135097	1.38	1.17	0.08	20.26	2.507	11.00	19.82	0.03	0.05	0.214	0.70	37.41	93.25	56	4	79	< 20	9	< 20	< 10	1070	66	15
135098	1.81	1.62	0.23	13.96	1.747	11.65	26.96	0.07	0.20	0.735	2.15	35.93	95.24	84	7	123	< 20	7	< 20	20	910	67	16
135099	0.02	98.27	0.06	1.00	0.051	0.16	0.30	0.02	0.01	0.004	0.03	0.52	100.4	< 1	< 1	< 5	190	< 1	< 20	< 10	< 30	2	2
135100	1.72	14.51	2.61	12.96	0.138	0.47	26.75	0.95	1.04	0.145	18.76	8.03	86.38	17	14	154	20	33	60	110	640	271	46
135101	1.76	1.19	0.14	15.70	1.980	11.40	25.96	0.06	0.09	0.276	2.05	36.41	95.25	72	7	111	< 20	8	< 20	< 10	1000	67	16
135102	3.58	1.03	0.14	13.67	1.825	11.85	28.10	0.07	0.18	0.146	1.56	36.26	94.82	69	7	101	< 20	8	< 20	< 10	1460	79	17
135103	5.18	2.17	0.05	18.52	2.266	10.43	24.03	0.03	0.03	0.100	0.41	35.03	93.06	63	5	86	< 20	9	< 20	< 10	1330	79	15
135104	4.68	2.81	0.05	20.29	2.533	10.08	22.97	0.04	0.03	0.085	1.61	33.00	93.50	66	9	79	< 20	9	< 20	< 10	1490	71	14
135105	7.07	2.20	0.06	13.82	1.945	11.08	28.28	0.04	0.04	0.102	1.28	33.41	92.25	66	10	81	< 20	5	< 20	< 10	1670	84	14
135106	7.54	3.60	0.06	11.54	1.709	11.29	29.57	0.05	0.07	0.137	1.98	31.70	91.72	57	19	65	< 20	5	< 20	< 10	1650	94	16
135107	4.76	0.85	0.05	14.07	1.977	11.63	27.19	0.03	0.04	0.141	1.03	36.27	93.29	61	11	81	< 20	6	< 20	< 10	1070	64	13
135108	7.31	1.38	0.07	14.06	1.883	11.23	29.07	0.03	0.05	0.173	0.60	33.42	91.95	49	10	72	< 20	6	< 20	< 10	2030	82	17
135109	8.11	0.92	0.07	15.79	1.798	10.84	28.45	0.03	0.06	0.115	1.01	33.13	92.22	55	12	68	< 20	7	< 20	< 10	1740	83	16
135110	9.01	2.32	0.10	14.27	1.690	10.18	30.02	0.04	0.06	0.247	0.77	31.75	91.44	61	11	70	< 20	7	< 20	< 10	1700	90	17
135111	8.38	1.65	0.08	15.73	1.813	10.34	28.08	0.03	0.05	0.214	0.74	32.65	91.37	62	11	68	< 20	7	< 20	10	1440	81	16
135112	8.81	1.65	0.17	13.08	1.620	10.98	31.96	0.04	0.07	0.143	1.15	31.40	92.27	65	11	72	< 20	7	< 20	< 10	1240	73	15
135113	6.99	2.35	0.43	11.93	1.563	11.46	29.19	0.05	0.16	0.157	1.14	33.29	91.71	63	11	78	< 20	7	< 20	< 10	1060	76	15
135114	2.43	1.25	0.06	20.64	2.410	11.07	21.75	0.03	0.03	0.179	1.05	35.93	94.40	69	8	79	< 20	8	< 20	< 10	1380	59	13
135115	1.42	2.85	0.92	11.78	1.479	12.33	25.16	0.10	0.45	0.199	0.66	37.51	93.45	78	9	92	< 20	8	< 20	< 10	790	64	15
135116	1.08	2.32	0.74	13.60	1.618	12.48	25.73	0.12	0.38	0.321	1.15	37.98	96.42	88	6	99	< 20	8	< 20	10	1080	63	14
135117	3.82	2.78	0.42	10.99	1.405	11.87	29.76	0.05	0.29	0.239	1.29	35.31	94.40	72	6	95	< 20	7	< 20	< 10	860	66	15
135118	0.75	2.91	0.52	10.89	1.433	12.96	25.70	0.04	0.37	0.189	1.07	38.52	94.60	63	5	95	< 20	11	< 20	< 10	880	63	14
135119	1.42	2.75	0.26	19.70	2.207	11.25	20.18	0.03	0.21	0.290	0.48	36.11	93.46	45	6	86	< 20	12	< 20	10	1650	70	15
135120	2.68	1.86	0.10	20.44	2.449	11.16	20.96	0.03	0.04	0.257	0.28	37.07	94.65	41	5	69	< 20	11	< 20	< 10	1360	72	17
135121	3.10	1.60	0.07	17.41	2.255	11.40	23.51	0.03	0.04	0.116	0.48	36.66	93.58	55	4	71	< 20	8	< 20	< 10	1620	74	16
135122	0.86	1.83	0.10	10.65	1.204	13.18	25.20	0.04	0.11	0.157	1.39	39.65	93.51	50	12	90	< 20	5	< 20	< 10	1130	81	15
135123	0.92	1.15	0.10	13.64	1.632	13.18	24.07	0.05	0.05	0.148	0.93	39.81	94.76	65	6	114	< 20	7	< 20	< 10	1300	73	16
135124	0.06	96.25	0.07	0.72	0.044	0.21	0.49	0.03	0.01	0.003	0.03	0.72	98.58	< 1	< 1	< 5	140	< 1	< 20	< 10	< 30	2	1

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135125	6.16	20.09	3.13	27.72	2.422	6.93	17.67	0.31	1.34	1.485	0.55	11.84	93.48	21	13	155	170	30	80	40	1530	64	15
135126	2.80	0.89	0.05	12.51	1.977	12.03	25.93	0.03	0.03	0.128	0.94	37.96	92.49	73	8	89	< 20	4	< 20	< 10	1190	78	15
135127	1.56	2.64	0.07	13.48	1.835	12.51	24.72	0.04	0.04	0.131	0.85	38.22	94.53	62	9	104	< 20	7	< 20	20	1520	34	7
135128	2.26	1.82	0.08	19.75	2.082	11.19	21.34	0.02	0.04	0.095	0.63	36.82	93.87	47	7	85	< 20	10	< 20	< 10	1480	32	8
135129	0.52	3.06	0.43	10.15	1.157	13.68	24.67	0.04	0.32	0.247	1.86	37.40	93.03	103	19	152	< 20	9	< 20	< 10	1990	156	34
135130	0.43	1.62	0.15	9.07	1.131	14.10	27.13	0.04	0.09	0.210	2.31	38.96	94.81	63	8	157	< 20	5	< 20	20	1240	140	34
135131	0.67	2.87	0.11	14.91	1.674	11.64	24.12	0.04	0.06	0.179	2.58	36.71	94.90	52	6	108	< 20	5	< 20	50	1320	35	10
135132	3.20	2.22	0.08	17.65	1.896	10.89	22.70	0.02	0.06	0.143	0.52	35.46	91.63	45	5	83	< 20	7	< 20	< 10	1650	37	9
135133	5.79	1.72	0.11	11.45	1.303	11.20	29.91	0.03	0.08	0.281	1.41	34.54	92.04	56	8	113	< 20	4	< 20	20	2050	45	11
135134	1.09	1.38	0.20	11.68	1.301	11.58	28.85	0.06	0.06	0.340	4.33	36.12	95.89	54	7	126	< 20	6	< 20	< 10	630	30	9
135135	1.44	1.30	0.12	10.78	1.276	13.38	27.17	0.03	0.08	0.191	0.89	39.73	94.95	54	8	121	< 20	5	< 20	< 10	800	32	8
135136	12.0	1.36	0.09	10.80	1.223	10.55	33.65	0.03	0.07	0.128	0.87	29.96	88.73	48	11	70	< 20	6	< 20	< 10	1260	120	23
135137	7.24	1.22	0.14	10.44	1.256	11.90	30.98	0.04	0.07	0.141	0.92	34.54	91.65	47	10	84	< 20	3	< 20	< 10	930	41	9
135138	6.48	2.00	0.09	11.60	1.398	11.76	29.73	0.03	0.07	0.100	0.80	35.02	92.61	52	11	83	< 20	2	< 20	< 10	1090	36	9
135139	5.30	1.20	0.11	13.89	1.580	12.25	27.52	0.04	0.08	0.112	1.25	35.18	93.21	45	9	81	< 20	7	< 20	< 10	1430	37	8
135140	5.62	1.21	0.11	13.44	1.544	12.14	28.15	0.04	0.08	0.110	1.32	34.81	92.95	45	9	80	< 20	6	< 20	20	1330	38	8
135141	3.67	2.50	0.16	11.46	1.525	13.10	27.84	0.05	0.11	0.164	1.17	36.22	94.31	63	8	91	< 20	5	< 20	< 10	1020	37	9
135142	3.94	2.78	0.18	14.17	1.797	11.66	26.28	0.07	0.11	0.269	0.58	34.76	92.65	59	7	99	< 20	6	< 20	< 10	1470	35	7
135143	2.74	3.60	0.18	11.68	1.729	12.53	26.52	0.06	0.10	0.314	0.66	37.11	94.48	54	8	102	< 20	7	< 20	< 10	1230	35	7
135144	7.13	0.79	0.12	12.77	1.826	11.65	29.16	0.03	0.04	0.172	0.81	34.57	91.93	51	10	76	< 20	4	< 20	< 10	1570	40	8

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135027	15	< 2	2266	280	29	689	12	< 0.5	0.2	28	< 0.5	< 0.5	200	2.5	3430	6680	721	2460	328	83.6	181	20.9	86.0
135028	14	< 2	2422	274	42	672	9	< 0.5	0.2	16	< 0.5	< 0.5	171	1.3	3820	6930	706	2340	304	74.9	164	18.5	75.8
135029	25	< 2	2786	323	46	357	13	< 0.5	< 0.2	13	< 0.5	< 0.5	236	3.5	4080	7120	735	2360	320	78.2	171	19.4	74.4
135030	17	< 2	2298	240	44	945	8	< 0.5	0.2	24	< 0.5	< 0.5	197	2.3	5130	8800	881	2860	359	88.3	184	19.6	76.3
135031	17	< 2	2240	250	43	788	3	< 0.5	0.2	24	< 0.5	< 0.5	239	3.0	4150	7420	757	2500	338	85.9	181	19.6	79.5
135032	16	< 2	2235	271	33	434	2	< 0.5	< 0.2	13	< 0.5	< 0.5	181	1.6	4420	7780	780	2500	306	74.6	158	18.3	73.4
135033	15	< 2	2412	232	47	790	< 2	< 0.5	< 0.2	20	< 0.5	< 0.5	183	1.1	5750	9260	868	2610	306	76.1	160	16.6	66.1
135034	29	< 2	1783	220	20	914	2	< 0.5	0.2	31	< 0.5	< 0.5	185	1.7	6560	10500	951	2920	341	82.8	185	19.9	65.1
135035	31	< 2	2313	189	25	1090	3	< 0.5	< 0.2	33	< 0.5	< 0.5	385	1.9	7810	12000	1040	3070	329	77.3	167	16.6	51.8
135036	28	< 2	2376	258	36	390	5	< 0.5	< 0.2	10	< 0.5	< 0.5	215	3.4	4290	7860	798	2690	339	79.7	169	18.2	66.0
135037	14	< 2	2477	346	70	286	6	< 0.5	< 0.2	9	< 0.5	< 0.5	242	1.2	4470	7660	757	2430	318	78.7	170	20.1	88.9
135038	17	< 2	2399	226	52	879	15	< 0.5	< 0.2	21	< 0.5	< 0.5	225	1.2	4500	7680	765	2470	320	79.5	173	18.2	69.7
135039	19	< 2	2432	213	44	511	25	< 0.5	< 0.2	14	< 0.5	< 0.5	402	1.5	5000	8250	796	2490	316	79.6	165	17.0	64.6
135040	27	< 2	2110	206	27	431	9	< 0.5	0.2	14	< 0.5	< 0.5	404	2.7	4920	7850	773	2440	341	84.8	182	18.5	59.9
135041	17	< 2	2088	216	26	403	7	< 0.5	0.2	21	< 0.5	< 0.5	316	2.1	4520	7430	738	2410	336	85.1	179	17.3	61.2
135042	17	< 2	2068	220	28	524	12	< 0.5	0.2	16	< 0.5	< 0.5	186	1.7	3980	6980	713	2390	354	88.0	181	17.1	59.1
135043	18	< 2	2089	282	37	468	15	< 0.5	0.2	17	< 0.5	< 0.5	195	1.9	4470	7600	770	2530	377	95.3	199	19.9	72.5
135044	19	< 2	2291	261	46	390	11	< 0.5	0.2	18	< 0.5	< 0.5	216	2.5	4840	8410	815	2740	373	93.1	196	19.0	69.4
135045	16	< 2	2326	367	61	701	6	< 0.5	0.2	22	< 0.5	< 0.5	264	1.3	5060	8040	780	2450	353	92.2	206	23.6	92.1
135046	17	< 2	2059	391	46	700	6	< 0.5	0.2	23	< 0.5	< 0.5	263	1.7	4020	7090	734	2460	378	97.6	212	24.5	97.9
135047	18	< 2	2072	253	48	563	6	< 0.5	0.2	21	< 0.5	< 0.5	231	1.9	4790	7730	754	2420	352	90.5	189	18.7	65.3
135048	20	< 2	2045	205	35	669	8	< 0.5	0.2	21	< 0.5	< 0.5	236	2.8	5100	8490	798	2620	369	93.3	198	17.7	56.8
135049	< 5	< 2	57	8	5	42	9	< 0.5	< 0.2	< 1	< 0.5	< 0.5	11	< 0.4	100	171	17.2	57.6	8.8	2.17	4.9	0.5	2.1
135050	137	37	20040	1020	227	32	32	2.2	< 0.2	< 1	5.6	1.6	907	6.2	17900	27800	2480	7870	842	195	353	34.6	158
135051	18	< 2	2038	230	40	715	5	< 0.5	0.2	24	< 0.5	< 0.5	227	2.1	4450	7380	731	2400	380	96.2	198	17.6	58.9
135052	15	< 2	2293	269	66	331	3	< 0.5	< 0.2	11	< 0.5	< 0.5	270	1.4	3650	6490	679	2270	310	75.3	152	15.5	60.8
135053	14	< 2	2069	521	70	337	< 2	< 0.5	< 0.2	15	< 0.5	< 0.5	260	0.9	3130	5730	610	2080	301	77.2	177	23.7	107
135054	19	5	2224	265	55	512	6	< 0.5	0.2	16	0.8	< 0.5	449	1.0	2370	4680	521	1850	299	75.2	160	16.8	64.1
135055	14	5	2763	305	112	542	< 2	0.6	0.2	20	< 0.5	< 0.5	498	1.0	2860	5330	567	1940	314	86.1	194	22.0	81.3
135056	17	3	2471	225	42	475	5	< 0.5	0.3	22	< 0.5	< 0.5	402	0.9	4080	7290	771	2640	396	99.5	202	19.7	66.6
135057	14	< 2	2346	183	24	907	6	< 0.5	0.2	20	< 0.5	< 0.5	322	1.1	4120	7090	711	2290	325	82.0	167	15.1	53.2
135058	15	< 2	2275	219	51	574	9	< 0.5	0.2	17	< 0.5	< 0.5	238	1.5	3740	6440	667	2230	322	80.1	165	16.6	59.0
135059	16	< 2	3356	269	88	498	6	< 0.5	< 0.2	17	< 0.5	< 0.5	248	1.8	3530	6320	687	2400	364	87.8	183	18.5	71.0
135060	15	< 2	2262	251	61	429	5	< 0.5	< 0.2	15	< 0.5	< 0.5	246	1.4	4200	7160	737	2450	358	86.9	177	17.0	64.1
135061	16	< 2	2226	219	35	458	7	< 0.5	0.2	18	< 0.5	< 0.5	248	1.3	4300	7390	750	2470	352	85.4	174	16.8	60.8
135062	12	< 2	2057	255	62	552	8	< 0.5	0.2	20	< 0.5	< 0.5	265	1.8	3400	5590	561	1840	274	70.3	154	17.1	67.4
135063	18	< 2	2258	215	39	485	9	< 0.5	0.2	27	< 0.5	< 0.5	183	2.7	4770	8220	835	2770	403	99.3	202	18.9	62.9
135064	16	< 2	2306	223	39	428	6	< 0.5	0.2	17	< 0.5	< 0.5	184	1.4	4290	7610	795	2640	394	97.0	196	18.5	63.0
135065	15	< 2	2550	274	48	366	3	< 0.5	< 0.2	18	< 0.5	< 0.5	243	0.8	3910	6860	722	2470	377	93.3	195	19.3	69.9
135066	15	< 2	2215	255	35	706	< 2	< 0.5	0.3	20	< 0.5	< 0.5	254	1.3	3890	6850	712	2380	355	87.8	179	17.6	64.4
135067	15	< 2	2522	320	56	599	< 2	< 0.5	< 0.2	14	< 0.5	< 0.5	280	2.1	4100	6930	707	2360	316	73.0	142	14.3	60.6
135068	18	< 2	2780	223	47	519	3	< 0.5	< 0.2	16	< 0.5	< 0.5	312	1.1	4540	7900	812	2700	362	83.5	160	13.8	51.4
135069	17	< 2	2290	172	34	516	3	< 0.5	< 0.2	17	< 0.5	< 0.5	272	1.0	4080	7270	763	2570	364	85.9	163	13.6	44.7
135070	18	< 2	2613	201	38	563	< 2	< 0.5	< 0.2	16	< 0.5	< 0.5	263	1.3	4070	7320	778	2620	370	86.2	167	14.3	48.6
135071	18	< 2	2373	217	37	604	< 2	< 0.5	< 0.2	18	< 0.5	< 0.5	260	1.0	3760	6890	735	2480	351	84.0	170	14.8	52.3
135072	15	2	2581	264	68	597	< 2	< 0.5	< 0.2	21	< 0.5	< 0.5	702	1.4	2860	5370	581	1990	286	70.9	152	16.1	63.2
135073	16	< 2	2166	270	56	566	2	< 0.5	< 0.2	16	< 0.5	< 0.5	243	1.1	3630	6570	695	2390	351	85.7	179	18.7	70.9
135074	< 5	< 2	12	< 2	7	43	3	< 0.5	< 0.2	< 1	2.4	< 0.5	6	< 0.4	12.9	23.2	2.38	8.0	1.2	0.26	0.7	< 0.1	0.2
135075	16	23	3062	970	227	354	47	1.3	< 0.2	44	< 0.5	0.5	13300	2.2	2620	4770	559	2230	477	130	323	44.9	208

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135076	15	< 2	2582	221	52	508	3	< 0.5	< 0.2	16	< 0.5	< 0.5	252	1.3	3830	6820	716	2390	322	76.2	156	15.2	56.8
135077	11	< 2	2341	192	64	392	4	< 0.5	< 0.2	12	< 0.5	< 0.5	314	1.1	2570	4670	498	1690	236	57.2	122	12.9	50.4
135078	15	< 2	2098	301	13	357	52	< 0.5	0.3	18	< 0.5	< 0.5	213	1.2	4040	7420	728	2250	322	78.7	167	18.7	73.8
135079	14	< 2	2209	535	37	280	23	< 0.5	0.2	15	< 0.5	< 0.5	226	0.5	4450	7630	735	2250	324	85.4	198	25.9	119
135080	13	< 2	2411	467	24	329	38	< 0.5	0.2	15	< 0.5	< 0.5	252	0.7	3590	6510	662	2160	319	82.1	184	23.2	105
135081	22	< 2	2395	334	32	280	25	< 0.5	0.2	18	< 0.5	< 0.5	226	1.2	3870	6940	658	2140	303	77.1	165	17.9	71.1
135082	18	3	2235	380	32	489	24	< 0.5	0.3	30	< 0.5	< 0.5	355	2.4	4030	7320	803	2790	391	94.8	197	22.6	91.0
135083	24	< 2	2409	336	43	412	33	< 0.5	0.2	19	< 0.5	< 0.5	286	1.2	4540	7990	752	2440	338	91.7	206	23.9	89.9
135084	25	< 2	1838	330	28	470	19	< 0.5	0.3	27	< 0.5	< 0.5	213	1.5	3650	6890	749	2650	439	113	235	26.9	100.0
135085	26	< 2	1908	379	44	378	21	< 0.5	0.2	22	< 0.5	< 0.5	260	1.5	4260	7440	773	2680	408	103	210	24.7	97.8
135086	28	< 2	1754	394	41	509	52	0.5	0.3	24	< 0.5	< 0.5	267	1.6	3450	6460	711	2590	439	111	227	26.4	103
135087	26	3	2129	628	91	516	36	0.8	0.3	30	0.5	< 0.5	299	1.3	2510	5330	624	2330	444	128	290	39.2	167
135088	26	4	1873	586	68	757	37	0.7	0.3	28	0.6	< 0.5	320	1.1	2680	5610	648	2400	447	127	282	36.3	152
135089	22	< 2	2752	809	65	395	15	0.6	< 0.2	20	< 0.5	< 0.5	259	0.5	2620	5170	576	2100	360	103	240	36.5	179
135090	24	7	1566	349	31	627	29	< 0.5	0.2	32	0.5	< 0.5	569	0.8	2870	5610	622	2250	388	104	214	24.8	93.2
135091	17	< 2	1307	234	17	394	21	< 0.5	< 0.2	28	< 0.5	< 0.5	372	0.7	1760	3250	371	1350	230	57.3	121	13.6	52.1
135092	26	< 2	600	231	10	159	38	< 0.5	0.4	42	< 0.5	< 0.5	57	3.7	2110	4730	632	2640	446	105	206	20.7	69.3
135093	24	< 2	784	242	9	164	24	< 0.5	0.4	15	< 0.5	< 0.5	86	4.3	2310	5450	683	2570	406	96.3	192	20.7	73.5
135094	30	< 2	656	229	4	171	34	< 0.5	0.4	23	< 0.5	< 0.5	75	7.9	2400	5380	670	2520	425	94.8	191	19.1	64.1
135095	20	< 2	595	275	11	145	23	< 0.5	0.5	39	< 0.5	< 0.5	82	3.9	1320	3040	423	2040	450	99.2	185	19.8	75.0
135096	23	< 2	607	382	19	160	19	< 0.5	0.6	37	< 0.5	< 0.5	131	6.4	1380	3330	482	2220	432	103	210	24.2	94.3
135097	24	< 2	1408	475	15	303	10	< 0.5	0.2	19	< 0.5	< 0.5	155	2.7	2560	5390	657	2500	399	103	229	28.8	120
135098	26	3	2081	753	23	354	15	< 0.5	0.2	40	< 0.5	< 0.5	341	1.9	2720	5630	664	2520	438	123	285	41.9	190
135099	< 5	< 2	22	6	< 4	26	13	< 0.5	< 0.2	< 1	< 0.5	< 0.5	6	< 0.4	31.9	69.0	8.48	36.7	6.7	1.68	3.2	0.4	1.4
135100	161	34	21410	956	220	23	35	2.2	< 0.2	< 1	6.2	1.7	932	6.2	18500	29000	2610	8230	874	200	364	37.5	153
135101	26	< 2	2259	538	22	240	27	< 0.5	0.2	20	< 0.5	< 0.5	239	3.0	2740	5980	714	2670	436	113	241	31.5	136
135102	30	< 2	2196	524	20	420	27	< 0.5	0.2	33	< 0.5	< 0.5	272	2.5	3380	7120	801	2720	412	105	235	29.0	118
135103	22	< 2	1757	302	15	292	18	< 0.5	0.2	20	< 0.5	< 0.5	180	1.2	3850	7540	781	2510	367	87.2	175	19.5	75.1
135104	22	< 2	2067	356	22	153	20	< 0.5	0.2	16	< 0.5	< 0.5	202	2.2	3350	6510	694	2360	358	85.6	173	20.4	83.0
135105	23	< 2	2207	443	29	136	17	< 0.5	0.3	16	< 0.5	< 0.5	222	1.2	4770	8360	802	2460	346	88.5	188	23.3	101
135106	26	< 2	3169	422	56	156	11	< 0.5	0.2	14	< 0.5	< 0.5	518	1.1	5820	9720	893	2640	327	81.0	174	22.1	93.8
135107	19	< 2	2567	490	16	165	13	< 0.5	0.2	13	< 0.5	< 0.5	263	1.0	3290	6040	623	2070	346	90.1	196	26.5	118
135108	26	< 2	2510	535	21	175	24	< 0.5	0.2	16	< 0.5	< 0.5	230	2.8	3890	7700	832	2830	424	109	242	31.2	131
135109	25	< 2	2624	430	18	169	37	< 0.5	0.3	18	< 0.5	< 0.5	246	1.9	4360	7840	802	2700	433	109	228	27.3	108
135110	26	< 2	2329	490	23	376	19	< 0.5	0.2	28	< 0.5	< 0.5	241	1.1	5080	8580	834	2700	414	107	232	28.9	120
135111	23	< 2	2226	448	22	345	20	< 0.5	0.2	24	< 0.5	< 0.5	221	1.1	4560	7790	778	2570	396	102	218	26.9	110
135112	24	< 2	2213	474	39	451	16	< 0.5	< 0.2	20	< 0.5	< 0.5	257	1.3	3910	6730	693	2290	346	87.9	194	24.0	100
135113	24	3	2209	451	62	700	21	0.6	< 0.2	22	< 0.5	< 0.5	370	0.9	4160	7180	716	2370	358	90.2	190	23.7	101
135114	24	< 2	1886	381	34	383	19	< 0.5	0.2	22	< 0.5	< 0.5	202	3.3	2530	4890	571	2060	303	70.7	153	17.7	73.0
135115	23	8	1820	300	48	288	26	< 0.5	< 0.2	27	< 0.5	< 0.5	769	1.3	2500	5230	616	2300	365	89.5	183	20.5	79.6
135116	28	6	2008	446	35	297	18	< 0.5	0.2	27	< 0.5	< 0.5	586	2.6	2250	4920	592	2220	347	88.0	190	24.4	106
135117	30	5	2065	517	27	781	20	< 0.5	< 0.2	23	< 0.5	< 0.5	443	1.2	2640	5520	654	2470	373	89.5	187	23.7	110
135118	36	7	2189	415	37	316	28	0.5	< 0.2	13	< 0.5	< 0.5	493	1.2	2690	5420	613	2220	346	87.7	186	23.7	106
135119	27	4	1771	363	16	324	7	< 0.5	0.3	31	< 0.5	< 0.5	379	1.6	2720	5840	695	2570	395	96.8	205	24.8	99.2
135120	25	< 2	1710	260	15	549	4	< 0.5	0.3	43	< 0.5	< 0.5	159	2.5	2830	6030	720	2640	366	81.3	162	17.3	65.9
135121	26	< 2	1887	324	22	349	12	< 0.5	0.3	28	< 0.5	< 0.5	154	4.4	2940	6270	730	2570	365	89.3	192	22.2	84.9
135122	24	< 2	1778	354	49	183	16	0.5	< 0.2	14	< 0.5	< 0.5	191	1.4	4310	7520	763	2510	331	78.2	166	19.5	81.5
135123	26	< 2	1547	348	26	230	25	< 0.5	0.2	17	< 0.5	< 0.5	119	3.0	2810	6170	728	2620	356	82.5	174	20.8	86.9
135124	< 5	< 2	38	8	< 4	41	9	< 0.5	< 0.2	< 1	< 0.5	< 0.5	8	< 0.4	57.1	118	13.3	47.0	7.2	1.63	3.5	0.4	1.6
135125	23	26	3170	885	221	355	54	1.7	< 0.2	44	< 0.5	0.5	13500	2.8	2570	4730	547	2200	472	130	299	40.8	198

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135126	24	< 2	2195	343	37	459	13	< 0.5	0.2	13	< 0.5	< 0.5	203	2.1	3580	7110	764	2550	354	86.4	179	20.5	82.8
135127	17	< 2	2257	361	56	191	12	< 0.5	0.2	19	< 0.5	< 0.5	212	3.3	3410	7280	788	2630	355	88.0	192	22.9	98.9
135128	18	< 2	1737	325	28	221	21	< 0.5	0.3	20	< 0.5	< 0.5	171	1.8	3400	6720	731	2630	442	105	223	23.6	91.9
135129	55	< 2	1853	670	57	462	21	< 0.5	0.3	27	< 0.5	< 0.5	823	3.4	7700	14800	1540	5410	735	173	370	43.4	170
135130	55	< 2	1654	943	29	519	29	< 0.5	0.2	23	0.5	< 0.5	195	2.7	5830	12300	1410	5390	772	178	373	44.9	194
135131	20	< 2	1854	662	21	244	23	< 0.5	0.3	20	< 0.5	< 0.5	154	2.0	2880	6640	838	3280	511	120	252	31.2	153
135132	21	< 2	1485	250	14	288	34	< 0.5	0.3	14	< 0.5	< 0.5	142	0.9	3960	7690	870	3170	485	115	233	20.1	70.7
135133	23	< 2	1922	453	25	655	11	< 0.5	0.2	64	< 0.5	< 0.5	208	1.0	4980	9570	1020	3630	540	127	255	26.6	109
135134	24	< 2	2816	730	77	399	12	< 0.5	< 0.2	23	< 0.5	< 0.5	224	1.5	2630	5860	726	2820	458	119	270	37.4	177
135135	20	< 2	2139	338	21	458	9	< 0.5	0.3	150	< 0.5	< 0.5	238	0.8	3050	6410	756	2800	403	98.6	205	23.0	96.0
135136	40	< 2	2273	441	34	542	19	< 0.5	< 0.2	21	< 0.5	< 0.5	230	2.0	7220	12100	1130	3570	460	108	228	25.4	95.5
135137	18	< 2	2369	472	39	453	22	< 0.5	< 0.2	14	< 0.5	< 0.5	198	0.8	5130	8890	899	3050	414	100.0	211	25.8	113
135138	17	< 2	2254	409	59	197	2	< 0.5	< 0.2	14	< 0.5	< 0.5	203	1.0	4050	7800	802	2700	355	85.4	184	22.2	100
135139	19	< 2	2411	328	44	515	24	< 0.5	0.2	21	< 0.5	< 0.5	467	1.4	4400	7810	801	2720	357	87.2	186	22.0	92.6
135140	18	< 2	2477	358	41	525	26	< 0.5	< 0.2	18	< 0.5	< 0.5	213	1.3	4790	8270	844	2840	373	91.4	195	23.2	98.7
135141	19	2	2339	380	39	718	24	< 0.5	< 0.2	22	< 0.5	< 0.5	321	1.4	4150	7740	828	2860	401	101	217	25.0	105
135142	16	< 2	2128	278	16	490	9	< 0.5	0.2	21	< 0.5	< 0.5	271	1.5	3510	7150	765	2540	345	87.9	196	21.5	84.1
135143	17	< 2	2260	263	30	734	24	< 0.5	< 0.2	34	< 0.5	< 0.5	285	1.4	3770	7460	776	2470	290	72.3	157	19.3	81.1
135144	17	< 2	2297	343	54	428	16	< 0.5	< 0.2	19	< 0.5	< 0.5	153	2.1	4420	8500	874	2830	329	78.8	168	20.0	86.4

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
135027	11.2	21.7	2.31	12.2	1.47	0.8	0.5	5	< 0.1	126	697	0.6	2.705
135028	9.9	19.1	2.17	12.2	1.62	0.9	0.1	6	< 0.1	69	505	0.3	2.998
135029	9.8	20.0	2.17	13.0	1.81	1.6	< 0.1	5	< 0.1	24	631	< 0.1	4.585
135030	9.2	16.4	1.77	9.9	1.34	1.0	0.1	9	< 0.1	60	564	0.2	3.786
135031	9.8	18.5	2.01	11.4	1.49	0.9	0.6	8	0.1	74	662	0.8	3.689
135032	9.6	18.7	2.09	11.1	1.46	0.8	0.4	5	0.1	95	617	0.4	2.624
135033	8.0	14.4	1.60	9.3	1.24	1.0	0.5	8	< 0.1	119	508	0.3	4.193
135034	7.4	11.9	1.27	7.7	1.02	1.1	0.2	11	< 0.1	52	620	0.2	3.672
135035	5.6	9.6	1.01	5.8	0.82	1.1	0.4	16	< 0.1	35	482	0.1	1.916
135036	8.3	17.7	2.00	10.7	1.45	1.3	< 0.1	4	< 0.1	79	576	0.1	4.241
135037	12.4	25.4	2.78	15.4	2.13	1.3	< 0.1	3	< 0.1	183	495	< 0.1	3.748
135038	8.6	17.1	1.85	10.7	1.39	0.9	0.4	7	< 0.1	230	480	0.3	3.917
135039	7.9	16.1	1.75	9.2	1.22	0.9	< 0.1	5	< 0.1	287	437	< 0.1	3.883
135040	7.0	15.1	1.66	9.2	1.18	1.1	< 0.1	5	< 0.1	103	492	0.1	1.754
135041	6.9	14.3	1.65	9.1	1.14	0.9	< 0.1	4	0.1	339	506	0.1	1.902
135042	6.7	14.8	1.61	8.5	1.15	1.0	0.1	5	0.1	277	558	< 0.1	4.731
135043	8.8	18.4	2.07	11.5	1.48	1.2	0.2	4	0.1	257	613	0.2	3.225
135044	8.7	17.4	1.91	11.3	1.41	1.0	0.3	4	< 0.1	37	588	0.2	3.434
135045	12.0	23.2	2.66	14.2	1.82	1.6	< 0.1	6	0.2	211	598	0.1	4.348
135046	13.1	24.9	2.58	13.7	1.64	1.5	0.4	7	0.2	285	722	0.4	4.131
135047	7.5	14.4	1.68	9.4	1.28	1.2	0.2	5	0.2	262	576	0.2	3.905
135048	6.5	11.7	1.42	8.3	1.05	0.9	0.7	6	< 0.1	92	589	0.4	4.379
135049	0.3	0.6	0.07	0.3	0.04	< 0.2	< 0.1	< 1	< 0.1	11	15.9	< 0.1	0.391
135050	25.2	62.4	8.14	46.6	6.11	3.6	< 0.1	5	2.3	849	158	202	0.008
135051	6.5	12.8	1.58	9.4	1.22	1.1	0.7	6	0.3	312	626	0.4	2.586
135052	7.8	15.5	1.78	10.7	1.37	1.4	0.9	3	0.2	235	548	0.6	3.618
135053	16.0	33.4	3.77	19.2	2.38	2.0	0.1	2	0.2	206	500	0.3	4.364
135054	8.3	16.2	1.87	10.8	1.34	1.3	3.6	5	0.4	1030	714	2.4	3.641
135055	10.3	20.4	2.27	12.7	1.66	1.9	2.9	9	0.4	221	612	5.4	4.310
135056	7.5	16.0	1.76	8.8	1.18	1.0	0.3	8	0.3	189	609	1.3	4.116
135057	6.1	12.4	1.38	7.2	0.95	0.8	< 0.1	15	0.1	204	457	0.2	3.946
135058	6.8	14.0	1.56	8.2	1.11	1.3	0.6	5	0.2	345	456	0.4	3.772
135059	9.0	19.2	2.13	10.9	1.38	1.6	1.6	4	0.2	301	516	1.3	2.109
135060	7.7	16.7	1.85	9.9	1.36	1.5	0.2	5	0.1	288	504	0.2	4.394
135061	7.1	14.6	1.52	8.2	1.08	1.0	< 0.1	4	0.1	261	530	< 0.1	3.891
135062	8.6	17.6	1.96	10.8	1.43	1.4	< 0.1	5	0.2	324	469	< 0.1	2.741
135063	7.2	15.4	1.69	8.9	1.19	1.0	< 0.1	5	0.1	373	590	< 0.1	1.355
135064	7.0	14.1	1.54	8.9	1.21	1.1	< 0.1	6	0.1	324	597	< 0.1	1.314
135065	8.5	17.1	1.84	11.3	1.43	1.1	< 0.1	4	0.1	249	583	< 0.1	4.066
135066	8.0	16.0	1.80	9.6	1.28	1.1	< 0.1	7	0.1	233	617	0.2	3.199
135067	8.9	19.7	2.46	13.5	1.79	1.3	0.3	5	0.1	240	332	0.3	2.993
135068	6.5	14.5	1.68	9.6	1.21	1.1	0.1	4	0.2	181	311	< 0.1	4.787
135069	5.0	10.7	1.27	7.0	0.92	0.9	0.1	6	0.2	164	401	< 0.1	4.197
135070	5.7	12.2	1.41	7.8	1.04	1.0	0.3	5	0.1	172	335	0.3	4.323
135071	6.1	12.9	1.44	8.2	1.08	0.9	0.1	6	0.2	236	371	0.1	2.633
135072	8.3	17.1	1.98	10.9	1.36	1.3	1.5	6	0.3	160	339	4.6	1.828
135073	8.6	17.4	1.84	10.7	1.28	1.3	1.5	4	0.2	259	460	1.2	4.028
135074	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	1	< 0.1	< 5	1.9	< 0.1	0.389

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
135075	33.1	79.0	9.15	48.5	5.99	5.7	2.4	26	0.4	557	870	2.6	0.013
135076	6.8	12.6	1.41	8.0	1.07	1.2	< 0.1	6	< 0.1	250	393	0.2	4.218
135077	6.3	12.1	1.30	6.8	0.87	1.4	0.2	3	0.2	185	330	0.2	4.679
135078	9.8	18.6	1.92	9.8	1.07	1.1	< 0.1	4	0.1	280	750	< 0.1	4.298
135079	17.7	37.2	3.85	17.8	2.00	1.6	< 0.1	3	< 0.1	251	676	< 0.1	4.176
135080	15.6	34.2	3.54	16.6	1.87	1.2	< 0.1	6	0.2	218	569	< 0.1	4.136
135081	10.1	21.3	2.38	12.8	1.58	1.2	0.1	2	0.1	327	672	< 0.1	4.124
135082	12.0	25.8	2.72	13.2	1.61	1.2	1.1	5	0.3	740	793	0.5	3.902
135083	11.7	24.4	2.57	12.5	1.51	1.5	0.7	6	0.2	268	527	0.4	4.237
135084	12.8	26.9	2.95	15.1	1.84	1.6	0.6	8	0.3	290	858	0.4	2.990
135085	13.6	28.3	3.09	16.9	2.12	1.8	0.9	5	0.3	277	652	0.5	4.589
135086	13.8	29.1	3.37	16.6	2.02	1.0	0.4	6	0.3	258	749	0.4	3.496
135087	23.3	47.8	4.99	24.6	3.00	3.1	0.4	6	0.6	317	897	3.5	1.706
135088	21.3	43.6	4.70	22.7	2.73	2.6	3.1	5	0.6	252	906	2.1	1.664
135089	28.4	65.0	6.94	33.2	3.96	2.9	0.6	6	0.3	187	670	3.3	1.624
135090	12.4	25.9	2.83	15.1	1.82	1.5	0.9	6	0.6	238	591	2.0	3.148
135091	7.2	16.2	2.01	11.3	1.42	0.9	0.5	5	< 0.1	21	339	0.5	3.053
135092	8.0	15.9	1.75	9.8	1.17	1.0	< 0.1	5	0.2	525	818	0.2	4.698
135093	8.8	17.3	1.84	9.8	1.19	1.0	< 0.1	1	0.2	683	1070	< 0.1	4.555
135094	7.5	14.3	1.66	8.6	1.06	0.9	< 0.1	2	< 0.1	135	1050	0.1	3.888
135095	9.6	20.5	2.35	12.2	1.46	1.1	< 0.1	3	0.2	732	1080	< 0.1	4.323
135096	12.7	27.6	2.92	15.9	2.02	1.6	< 0.1	4	0.3	991	1210	< 0.1	4.262
135097	16.8	35.2	3.77	19.5	2.34	1.8	< 0.1	6	0.1	351	896	0.3	3.641
135098	28.1	58.5	6.23	32.7	4.00	2.9	< 0.1	6	0.3	336	896	0.4	2.898
135099	0.2	0.4	< 0.05	0.2	< 0.04	< 0.2	< 0.1	< 1	< 0.1	15	18.5	< 0.1	0.392
135100	24.5	61.0	8.12	46.1	6.35	4.0	< 0.1	5	2.3	895	155	196	0.009
135101	19.3	41.0	4.83	26.6	3.30	2.0	< 0.1	5	0.3	348	855	0.4	2.725
135102	16.7	34.4	4.01	22.9	2.93	1.8	0.2	6	< 0.1	33	809	0.4	3.527
135103	10.1	22.7	2.62	13.7	1.71	1.1	0.6	3	< 0.1	155	848	0.3	3.916
135104	11.8	26.1	3.17	17.2	2.26	1.3	< 0.1	3	0.2	442	716	0.4	4.102
135105	15.0	32.5	3.70	19.8	2.46	1.5	< 0.1	3	< 0.1	256	602	< 0.1	4.377
135106	13.8	30.6	3.49	18.0	2.37	1.8	< 0.1	3	0.1	201	543	< 0.1	4.635
135107	17.2	35.6	3.98	21.9	2.71	1.7	< 0.1	3	< 0.1	161	719	< 0.1	5.128
135108	18.8	36.4	4.07	20.7	2.45	2.0	< 0.1	5	0.1	321	860	< 0.1	4.853
135109	14.8	31.4	3.29	17.7	2.20	1.6	< 0.1	4	0.2	321	906	< 0.1	4.948
135110	16.9	36.2	3.75	19.8	2.38	1.9	0.5	5	< 0.1	212	765	0.3	1.784
135111	15.7	34.7	3.56	18.8	2.29	1.8	0.3	5	< 0.1	205	731	0.2	1.606
135112	14.4	31.4	3.38	18.4	2.23	1.8	1.7	4	< 0.1	31	671	1.1	4.089
135113	15.1	34.1	3.94	22.0	2.66	2.1	3.5	6	0.3	240	561	2.1	4.060
135114	10.7	23.7	2.79	15.2	1.95	1.5	< 0.1	6	< 0.1	115	719	< 0.1	4.501
135115	10.7	23.6	2.78	15.3	1.89	1.6	0.4	5	0.3	223	623	4.0	3.952
135116	15.7	33.4	3.54	19.9	2.55	1.2	1.2	8	0.4	479	664	5.4	3.918
135117	17.1	37.3	4.14	22.5	2.78	1.7	1.1	9	0.2	385	565	4.7	3.788
135118	15.5	33.7	3.89	20.4	2.54	1.8	1.8	5	0.3	298	585	4.8	4.017
135119	13.6	29.2	2.97	16.4	1.93	1.7	< 0.1	7	0.3	725	834	1.1	4.364
135120	8.9	19.3	2.23	11.5	1.45	1.1	0.2	6	0.2	363	712	0.2	3.981
135121	11.2	24.0	2.75	14.8	1.80	1.3	0.8	3	0.2	651	708	0.3	4.191
135122	12.3	29.2	3.46	19.5	2.53	1.6	< 0.1	5	0.2	206	431	0.4	3.840
135123	12.5	28.3	3.18	17.2	2.18	1.4	< 0.1	6	0.1	323	616	< 0.1	3.644
135124	0.2	0.5	0.06	0.3	0.05	< 0.2	< 0.1	< 1	< 0.1	9	15.4	< 0.1	0.391

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
135125	32.2	77.2	9.22	50.1	6.11	6.2	2.2	27	0.4	624	887	2.6	0.016
135126	11.7	26.2	3.04	17.5	2.22	1.6	< 0.1	8	0.1	311	684	< 0.1	1.934
135127	14.2	31.1	3.57	19.6	2.45	1.1	< 0.1	3	0.3	270	711	0.1	3.799
135128	12.5	27.0	3.02	16.8	2.11	0.8	0.6	2	0.2	446	572	0.5	4.802
135129	23.6	51.0	6.06	33.3	4.31	2.9	0.2	7	< 0.1	76	1100	0.8	4.305
135130	30.4	72.3	8.90	51.4	6.49	3.0	0.6	6	< 0.1	85	845	1.1	3.449
135131	25.1	60.4	7.47	41.5	5.06	1.0	< 0.1	4	0.3	483	620	0.4	2.349
135132	8.7	19.0	2.26	12.5	1.64	0.5	0.2	2	0.2	334	602	0.2	4.297
135133	15.4	32.4	3.95	22.9	2.95	0.8	0.7	7	0.2	241	571	0.4	3.022
135134	28.7	67.2	7.96	44.1	5.47	1.7	0.8	8	0.2	243	562	4.0	3.743
135135	13.6	28.4	3.22	18.0	2.17	0.8	0.8	4	0.3	216	433	2.4	4.097
135136	12.8	27.1	2.84	16.4	2.13	1.8	0.4	5	< 0.1	43	778	0.2	4.284
135137	16.6	37.4	4.48	23.2	2.93	1.1	0.1	3	0.1	200	564	0.2	3.358
135138	15.1	33.8	3.79	20.9	2.77	1.3	< 0.1	2	0.2	222	522	< 0.1	2.936
135139	12.3	24.7	2.72	15.7	1.98	1.0	0.2	2	0.2	323	480	0.3	2.272
135140	13.4	28.0	3.13	17.2	2.16	1.0	0.5	2	0.2	284	496	0.6	1.975
135141	14.6	30.5	3.52	18.9	2.40	1.0	0.7	2	0.3	347	525	0.6	3.697
135142	10.8	21.2	2.34	12.9	1.75	0.6	2.1	2	0.3	306	585	2.4	3.870
135143	10.9	22.0	2.39	13.2	1.82	0.8	4.2	4	0.2	183	508	3.1	2.761
135144	12.1	26.8	2.98	17.3	2.22	1.1	0.9	3	0.2	297	459	0.9	1.926

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas	2.99	11.25	2.08	0.79	0.014	0.34	43.06	0.93	0.56	0.120	30.17					1669							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
NIST 694 Meas	3.37																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.11																						
NIST 694 Cert	3.2																						
NIST 694 Meas	3.26																						
NIST 694 Cert	3.2																						
DNC-1 Meas		47.24	18.22	9.69	0.146	9.92	11.43	1.93	0.23	0.473	0.08			31		158	260	57	250	110	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		72.55	13.15	3.28	0.146	0.14	0.61	2.46	5.38	0.285	0.05			5	4	< 5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																		31	50	30			
LKSD-3 Cert																		30.0	47.0	35.0			
W-2a Meas		52.68	15.33	10.56	0.164	6.18	11.01	2.22	0.62	1.072	0.14			35	< 1	278		42	70	100	80	18	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262		43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas		49.94	20.43	6.15	0.106	0.50	7.92	6.95	1.68	0.284	0.14			1	3	6							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				50			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		48.00	15.87	11.08	0.171	9.59	13.44	1.83	0.02	0.980	0.03			44	< 1	337	380	53	160	130	80	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					1050	99	
ZW-C Cert																					1050.000	99	
NCS DC86302 Meas		73.75	14.89	0.66	0.048	0.12	0.78	4.41	3.87	0.013	0.03				1304								
NCS DC86302 Cert		73.99	14.86	0.593	0.036	0.069	0.584	4.67	3.89	0.016	0.013				1315								
NCS DC70014 Meas																		26	70	2610	7400	25	
NCS DC70014 Cert																		26	70	2600	7400	25.2	
NCS DC70009 (GBW07241) Meas																				940		16	11
NCS DC70009 (GBW07241) Cert																				960		16.5	11.2
OREAS 100a (Fusion) Meas																		17		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		430			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20		30	17	
JR-1 Cert																			1.67		30.6	16.1	
NCS DC86318 Meas		66.88	13.90	2.28	0.057	0.08		0.59	5.58	0.172	< 0.01												
NCS DC86318 Cert		66.90	14.26	2.24	0.052	0.11		0.66	5.52	0.17	0.020												
SARM 3 Meas																							

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P205	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Analysis Method	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
SARM 3 Cert																							
USZ 44-2007 Meas																							
USZ 44-2007 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
135030 Orig	3.95	2.86	0.09	10.56	1.542	11.53	28.72	0.02	0.08	0.462	1.32	35.70	92.89	56	7	77	< 20	6	< 20	< 10	840	34	7
135030 Dup	3.98	2.83	0.09	10.54	1.541	11.54	28.75	0.02	0.08	0.459	1.30	35.70	92.86	57	8	77	< 20	6	< 20	< 10	830	34	6
135055 Orig	1.72	3.80	0.42	11.69	1.598	11.14	27.82	0.05	0.25	0.350	4.52	33.75	95.39	65	8	103	< 20	7	< 20	< 10	730	36	7
135055 Dup	1.97	3.78	0.41	11.73	1.598	11.29	27.87	0.05	0.26	0.361	4.48	33.75	95.57	65	8	104	< 20	6	< 20	< 10	730	37	7
135056 Orig																	< 20	6	< 20	< 10	810	48	9
135056 Split	2.00	2.83	0.25	13.79	1.897	12.50	26.93	0.06	0.17	0.377	1.39	36.73	96.93	72	9	85	< 20	5	< 20	< 10	930	37	8
135072 Orig	3.70	4.17	1.77	11.94	1.287	11.71	26.51	0.05	0.15	0.429	2.80	31.01	91.82	50	22	65	< 20	8	< 20	30	290	36	7
135072 Dup	3.42	4.03	1.69	11.83	1.270	11.40	25.82	0.05	0.14	0.412	2.69	31.01	90.34	49	21	63	< 20	8	< 20	< 10	260	36	7
135083 Orig	7.23	1.26	0.16	10.61	1.561	11.77	31.68	0.04	0.10	0.208	1.04	33.62	92.05	61	11	69	< 20	6	< 20	< 10	1160	72	13
135083 Dup	7.43	1.25	0.16	10.52	1.547	11.80	31.51	0.04	0.10	0.206	1.02	33.62	91.78	60	11	69	< 20	5	< 20	< 10	1190	72	13
135115 Orig	1.53	2.92	0.94	12.02	1.508	12.52	25.63	0.10	0.46	0.203	0.68	37.51	94.49	80	9	94	< 20	9	< 20	< 10	830	65	16
135115 Dup	1.32	2.79	0.90	11.55	1.450	12.14	24.69	0.10	0.44	0.195	0.64	37.51	92.42	77	8	90	< 20	8	< 20	< 10	750	62	14
135126 Orig	2.96	0.88	0.05	12.56	1.983	12.11	25.95	0.03	0.03	0.131	0.94	37.96	92.63	73	9	90	< 20	4	< 20	< 10	1200	78	15
135126 Dup	2.65	0.91	0.05	12.46	1.970	11.96	25.92	0.03	0.03	0.126	0.94	37.96	92.36	73	8	89	< 20	4	< 20	< 10	1180	78	15
135144 Orig	7.13	0.79	0.12	12.77	1.826	11.65	29.16	0.03	0.04	0.172	0.81	34.57	91.93	51	10	76	< 20	4	< 20	< 10	1570	40	8
135144 Split	7.14	0.77	0.08	12.78	1.842	11.53	29.19	0.03	0.04	0.165	0.90	34.54	91.87	51	10	78	< 20	4	< 20	< 10	1560	40	9
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
DH-1a Meas																							
DH-1a Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			146	15	36								114		3.8			4.8		0.58			
DNC-1 Cert			144.0	18.0	38								118		3.6			5.20		0.59			
GBW 07113 Meas			43	46	385								498										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	24	74					< 2			3		2.3			50.0	93.6		43.9	8.1	1.43		0.9	4.8
LKSD-3 Cert	27.0	78.0					2.00			3.00		2.30			52.0	90.0		44.0	8.00	1.50		1.00	4.90
W-2a Meas		19	197	19	88		< 2	< 0.5			0.8		180	< 0.4	10.9	23.1		12.5	3.4	1.07		0.6	3.4

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
W-2a Cert		21.0	190	24.0	94.0		0.600	0.0460			0.790		182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1202	117	527								349										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2190	3330		1140	166	45.6	124	14.9	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			112	14	15								10					2.5	1.1	0.51	1.8		
BIR-1a Cert			110	16	18								6					2.5	1.1	0.55	2.0		
NCS DC86312 Meas															2330	180		1560			227	34.2	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas						200																	
ZW-C Cert						198																	
NCS DC86302 Meas																							
NCS DC86302 Cert																							
NCS DC70014 Meas							270	16.8			180			80.3	46.6	89.9	10.1	38.4	8.0	1.66	7.1	1.2	6.6
NCS DC70014 Cert							270	16.7			180			80.3	45.3	87.0	10.8	39.9	8.0	1.8	7.4	1.1	6.7
NCS DC70009 (GBW07241) Meas	70	500							1.3	1700	3.4	41.7			22.6	56.6	7.30	30.2	11.9		13.9	3.2	20.4
NCS DC70009 (GBW07241) Cert	69.9	500							1.3	1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							24								272	487	46.5	152	24.5	3.64		3.8	23.2
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								837	1390	129	394	50.7	8.05		5.6	32.0
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas		257				15		< 0.5	< 0.2			21.0		0.5	21.0	49.1	5.89	23.7	6.0			1.1	
JR-1 Cert		257				15.2		0.031	0.028			20.8		0.56	19.7	47.2	5.58	23.3	6.03			1.01	
NCS DC86318 Meas				17250											1990	425	730	3260	1730	19.0	2110	466	3010
NCS DC86318 Cert				17010											1960	430	740	3430	1720	18.91	2095	470	3220
SARM 3 Meas						979																	
SARM 3 Cert						978																	
USZ 44-2007 Meas				1137	15560																		
USZ 44-2007 Cert				1102	15800																		
USZ 42-2006 Meas															20600	27300	2230	6340	521	86.0			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
135030 Orig	17	< 2	2315	241	44	934	8	< 0.5	0.2	25	< 0.5	< 0.5	197	2.2	5100	8700	877	2840	358	87.6	182	19.4	75.1
135030 Dup	17	< 2	2281	239	44	955	7	< 0.5	0.2	24	< 0.5	< 0.5	196	2.4	5160	8900	886	2870	360	89.1	186	19.8	77.4
135055 Orig	14	5	2741	298	108	564	< 2	0.5	0.2	19	< 0.5	< 0.5	496	0.8	2790	5220	557	1890	306	84.1	189	21.7	79.1
135055 Dup	14	5	2785	312	115	520	< 2	0.7	0.2	21	< 0.5	< 0.5	501	1.2	2930	5440	578	1980	322	88.1	198	22.3	83.5
135056 Orig	17	3				475	5	< 0.5	0.3	22	< 0.5	< 0.5		0.9	4080	7290	771	2640	396	99.5	202	19.7	66.6
135056 Split	19	3	2540	267	39	502	7	< 0.5	0.3	27	< 0.5	< 0.5	392	1.7	4180	7700	813	2780	409	102	222	23.1	72.0
135072 Orig	16	2	2609	268	69	616	< 2	< 0.5	< 0.2	23	< 0.5	< 0.5	711	1.6	2940	5500	595	2050	293	72.8	156	16.6	64.3
135072 Dup	15	2	2553	261	66	579	< 2	< 0.5	< 0.2	19	< 0.5	< 0.5	693	1.2	2790	5240	566	1930	278	68.9	147	15.7	62.1
135083 Orig	24	< 2	2432	336	48	415	34	< 0.5	0.2	19	< 0.5	< 0.5	288	1.2	4530	7970	749	2430	338	91.6	207	23.8	89.6
135083 Dup	23	< 2	2387	337	39	409	32	< 0.5	0.2	19	< 0.5	< 0.5	284	1.3	4550	8000	756	2450	338	91.8	206	23.9	90.2
135115 Orig	25	8	1853	307	50	306	27	< 0.5	< 0.2	27	< 0.5	< 0.5	786	1.4	2570	5370	633	2360	374	91.6	187	20.9	81.3
135115 Dup	22	8	1787	293	46	270	25	< 0.5	< 0.2	26	< 0.5	< 0.5	752	1.2	2430	5080	600	2250	357	87.4	179	20.1	77.9
135126 Orig	23	< 2	2202	342	37	455	13	< 0.5	0.2	13	< 0.5	< 0.5	206	2.3	3620	7210	775	2590	359	87.2	180	20.8	82.7

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Analysis Method	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
135126 Dup	25	< 2	2188	345	38	464	13	< 0.5	0.2	13	< 0.5	< 0.5	201	1.8	3540	7010	754	2520	349	85.6	178	20.3	82.8
135144 Orig	17	< 2	2297	343	54	428	16	< 0.5	< 0.2	19	< 0.5	< 0.5	153	2.1	4420	8500	874	2830	329	78.8	168	20.0	86.4
135144 Split	17	< 2	2281	347	54	409	16	< 0.5	< 0.2	19	< 0.5	< 0.5	152	1.9	4470	8520	894	2890	340	80.5	172	20.2	86.2
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
DH-1a Meas											902		
DH-1a Cert											910		
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
NIST 694 Meas													
NIST 694 Cert													
DNC-1 Meas				1.9									
DNC-1 Cert				2.0									
GBW 07113 Meas													
GBW 07113 Cert													
LKSD-3 Meas				2.6	0.42	4.1					11.5	4.4	
LKSD-3 Cert				2.70	0.400	4.80					11.4	4.60	
W-2a Meas	0.7				0.36			< 1	< 0.1		2.2	0.6	
W-2a Cert	0.760				0.330			0.300	0.200		2.40	0.530	
SY-4 Meas													
SY-4 Cert													
CTA-AC-1 Meas				10.9	1.12						23.9	4.1	
CTA-AC-1 Cert				11.4	1.08						21.8	4.4	
BIR-1a Meas				1.7		0.5				< 5			
BIR-1a Cert				1.7		0.60				3			
NCS DC86312 Meas	35.6	96.1	14.2	86.3	11.9						25.8		
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6		
ZW-C Meas							83.1	328	34.2				
ZW-C Cert							82	320	34				
NCS DC86302 Meas													
NCS DC86302 Cert													
NCS DC70014 Meas	1.3	3.4	0.52	3.4	0.50					27200			
NCS DC70014 Cert	1.3	3.5	0.57	3.3	0.50					27200			
NCS DC70009	4.2	12.5	2.29	15.5				2200			27.4		

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Detection Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Analysis Method	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
(GBW07241) Meas													
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9				2200			28.3		
OREAS 100a (Fusion) Meas	5.0	14.7	2.42	15.5	2.15						53.8	138	
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9	2.26						51.6	135	
OREAS 101a (Fusion) Meas	6.5	19.2	2.91	18.0	2.43						37.3	421	
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422	
JR-1 Meas			0.69	4.8	0.69		1.8		1.6	20	28.1	9.1	
JR-1 Cert			0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88	
NCS DC86318 Meas	560	1680	273	1770	245								
NCS DC86318 Cert	560	1750	270	1840	260.0								
SARM 3 Meas													
SARM 3 Cert													
USZ 44-2007 Meas													
USZ 44-2007 Cert													
USZ 42-2006 Meas													
USZ 42-2006 Cert													
135030 Orig	9.1	16.0	1.74	9.7	1.34	1.1	0.1	9	< 0.1	55	557	0.2	
135030 Dup	9.4	16.8	1.81	10.2	1.33	1.0	0.1	9	< 0.1	65	572	0.2	
135055 Orig	10.0	18.6	2.09	12.4	1.60	1.8	3.1	10	0.4	191	602	5.7	
135055 Dup	10.5	22.2	2.46	13.0	1.72	2.0	2.8	8	0.5	251	623	5.2	
135056 Orig	7.5	16.0	1.76	8.8	1.18	1.0	0.3	8	0.3	189	609	1.3	
135056 Split	7.3	14.6	1.64	8.1	1.22	0.9	0.3	7	0.3	268	614	1.2	
135072 Orig	8.5	17.7	2.02	11.1	1.40	1.4	1.6	6	0.3	174	349	4.9	
135072 Dup	8.2	16.6	1.94	10.7	1.32	1.2	1.4	6	0.3	146	329	4.4	
135083 Orig	11.6	25.3	2.54	12.5	1.51	1.6	0.7	6	0.2	258	528	0.4	
135083 Dup	11.7	23.6	2.61	12.6	1.52	1.4	0.6	5	0.2	278	526	0.4	
135115 Orig	11.0	24.4	2.85	15.8	1.95	1.6	0.6	5	0.4	231	640	4.0	
135115 Dup	10.5	22.7	2.70	14.8	1.82	1.6	0.3	4	0.3	214	606	4.0	
135126 Orig	11.7	25.9	3.01	17.9	2.29	1.5	< 0.1	8	0.1	308	690	< 0.1	
135126 Dup	11.7	26.5	3.07	17.2	2.14	1.6	< 0.1	8	0.1	313	679	< 0.1	
135144 Orig	12.1	26.8	2.98	17.3	2.22	1.1	0.9	3	0.2	297	459	0.9	
135144 Split	12.2	25.7	2.95	16.9	2.17	1.1	0.8	3	0.2	279	465	0.8	
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1	
Method Blank													
Method Blank													
Method Blank													
Method Blank													

Quality Analysis ... *Innovative Technologies*

Date Submitted: 30-Apr-15
Invoice No.: A15-02963
Invoice Date: 27-May-15
Your Reference: ASHRAM

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Darren Smith

CERTIFICATE OF ANALYSIS

8 Rock samples were submitted for analysis.

The following analytical package was requested:

Code 4F-F Fusion Specific Ion Electrode-ISE
Code 8-REE Assay Package Major Elements Fusion ICP(WRA)/Trace Elements Fusion ICP/MS(WRA4B2)
Code Weight Report (kg) Received Weights (no pulps)

REPORT **A15-02963**

Notes:

Total includes all elements in % oxide to the left of total.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
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Results

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
117001	2.86	3.12	0.08	21.55	1.748	9.94	23.89	0.03	0.03	0.296	2.18	34.46	97.34	54	10	89	< 20	9	< 20	< 10	810	46	11
117002	4.99	1.28	0.11	16.66	1.722	11.12	27.15	0.03	0.07	0.197	1.08	34.55	93.96	76	11	83	< 20	8	< 20	< 10	1060	55	10
117003	5.42	0.53	0.09	16.40	1.936	11.43	26.85	0.02	0.05	0.230	0.32	35.25	93.09	62	12	82	< 20	8	< 20	< 10	1320	59	10
117004	5.12	1.59	0.06	18.12	2.139	11.43	25.42	0.02	0.04	0.124	0.28	35.18	94.40	63	13	81	< 20	8	< 20	< 10	1300	60	11
117005	5.48	0.60	0.07	18.18	2.222	11.27	26.12	0.02	0.04	0.108	0.30	35.02	93.96	62	8	82	< 20	8	< 20	< 10	1690	62	11
117006	1.03	5.01	0.06	43.65	3.198	6.46	8.16	0.01	< 0.01	0.069	0.33	32.78	99.74	36	6	56	< 20	20	< 20	< 10	1360	29	7
117007	5.74	21.37	3.06	29.04	2.403	7.05	17.60	0.32	1.35	1.452	0.53	13.05	97.22	22	13	148	170	32	70	40	1360	52	9
117008	< 0.01	99.91	0.02	0.62	0.009	< 0.01	0.02	< 0.01	< 0.01	0.001	< 0.01	0.15	100.7	< 1	< 1	< 5	< 20	< 1	< 20	< 10	< 30	3	< 1

Results

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
117001	23	< 2	1859	467	26	441	< 2	< 0.5	1.3	31	< 0.5	< 0.5	135	1.6	2070	4830	595	2530	627	181	392	37.7	138
117002	22	< 2	2191	623	40	353	4	< 0.5	1.0	23	< 0.5	< 0.5	218	1.3	3400	6680	699	2480	445	133	326	40.8	172
117003	21	< 2	2173	489	22	408	14	< 0.5	1.0	26	< 0.5	< 0.5	203	2.4	3870	7350	753	2470	339	91.6	215	27.4	124
117004	22	< 2	2247	549	21	335	8	< 0.5	1.2	25	< 0.5	< 0.5	232	2.5	3790	7600	800	2730	423	117	276	32.7	139
117005	25	< 2	2223	895	34	512	6	< 0.5	1.4	22	< 0.5	< 0.5	183	2.3	3470	7380	806	2820	433	119	299	42.3	213
117006	15	< 2	550	293	16	160	50	< 0.5	2.2	30	< 0.5	< 0.5	29	2.2	588	1910	329	1750	400	100	213	21.6	85.1
117007	20	28	3106	890	234	373	58	0.8	0.5	45	< 0.5	< 0.5	13070	2.2	2590	4850	543	2190	453	132	336	46.2	221
117008	< 5	< 2	< 2	6	< 4	12	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	4	< 0.4	0.4	0.8	0.09	0.3	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1

Results

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U	Received Weight
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Kg
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1	
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	none
117001	16.9	33.8	3.96	21.7	2.84	1.9	0.3	6	0.2	270	1050	0.4	1.40
117002	23.1	51.4	5.70	28.4	3.65	2.5	0.2	5	0.2	349	1740	0.5	1.64
117003	17.5	38.0	4.44	23.9	2.99	1.9	0.2	7	0.1	326	1220	0.3	1.62
117004	19.6	45.5	5.34	29.2	3.60	1.8	< 0.1	6	0.1	306	1130	< 0.1	1.71
117005	32.5	71.3	7.98	41.3	4.99	2.7	< 0.1	8	0.1	378	1240	< 0.1	2.19
117006	11.1	23.0	2.36	11.2	1.28	1.2	< 0.1	2	0.2	682	824	< 0.1	1.93
117007	35.0	80.1	9.39	52.4	6.79	7.0	2.2	29	0.4	592	907	2.7	0.0250
117008	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	0.4	< 0.1	0.371

QC

Analyte Symbol	F	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni	Cu	Zn	Ga	Ge
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01		0.01	1	1	5	20	1	20	10	30	1	1
Method Code	FUS-ISE	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas	3.11	11.40	1.91	0.75	0.010	0.35	43.49	0.89	0.55	0.120	30.30					1652							
NIST 694 Cert	3.2	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2					1740							
DNC-1 Meas		46.84	18.16	9.78	0.146	10.10	11.29	1.92	0.22	0.475	0.06			31		149	280	56	260	100	70		
DNC-1 Cert		47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070			31		148	270	57	247	100	70		
GBW 07113 Meas		71.90	12.95	3.19	0.140	0.15	0.59	2.45	5.42	0.281	0.02			5	4	5							
GBW 07113 Cert		72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500			5.00	4.00	5.00							
LKSD-3 Meas																	90	30	50	40	140		
LKSD-3 Cert																	87.0	30.0	47.0	35.0	152		
W-2a Meas		52.63	15.08	10.84	0.168	6.28	11.00	2.17	0.62	1.071	0.11			36	< 1	261	90	43	70	110	80	17	2
W-2a Cert		52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130			36.0	1.30	262	92.0	43.0	70.0	110	80.0	17.0	1.00
SY-4 Meas		49.88	20.80	6.07	0.107	0.51	7.95	6.98	1.66	0.288	0.10			1	3	8							
SY-4 Cert		49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131			1.1	2.6	8.0							
CTA-AC-1 Meas																				60			
CTA-AC-1 Cert																				54.0			
BIR-1a Meas		47.65	15.88	11.46	0.172	9.76	13.26	1.85	0.02	0.964	0.01			43	< 1	313	370	53	160	130	70	15	
BIR-1a Cert		47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021			44	0.58	310	370	52	170	125	70	16	
NCS DC86312 Meas																							
NCS DC86312 Cert																							
ZW-C Meas																					990	97	
ZW-C Cert																					1050.000	99	
NCS DC70009 (GBW07241) Meas																	30			960	100	16	11
NCS DC70009 (GBW07241) Cert																	30			960	100	16.5	11.2
OREAS 100a (Fusion) Meas																		17		170			
OREAS 100a (Fusion) Cert																		18.1		169			
OREAS 101a (Fusion) Meas																		48		440			
OREAS 101a (Fusion) Cert																		48.8		434			
JR-1 Meas																			< 20	< 10	30	16	2
JR-1 Cert																			1.67	2.68	30.6	16.1	1.88
NCS DC86318 Meas																							
NCS DC86318 Cert																							
USZ 42-2006 Meas																							
USZ 42-2006 Cert																							
117008 Orig	< 0.01	100.00	0.02	0.66	0.010	0.01	0.03	< 0.01	< 0.01	0.001	< 0.01	0.15	100.9	< 1	< 1	< 5	< 20	< 1	< 20	< 10	< 30	3	< 1
117008 Dup	< 0.01	99.82	0.02	0.59	0.007	< 0.01	0.01	< 0.01	< 0.01	0.001	< 0.01	0.15	100.6	< 1	< 1	< 5							
Method Blank																	< 20	< 1	< 20	< 10	< 30	< 1	< 1
Method Blank	< 0.01																						

QC

Analyte Symbol	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	Bi	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.4	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-ICP	FUS-ICP	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-ICP	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas																							
NIST 694 Cert																							
DNC-1 Meas			145	16	36						1.0		105		3.7			4.9		0.57			
DNC-1 Cert			144.0	18.0	38						0.96		118		3.6			5.20		0.59			
GBW 07113 Meas			42	48	406								502										
GBW 07113 Cert			43.0	43.0	403								506										
LKSD-3 Meas	25	73					< 2					2.3			48.6	92.7		43.5	7.9	1.40			4.9
LKSD-3 Cert	27.0	78.0					2.00					2.30			52.0	90.0		44.0	8.00	1.50			4.90
W-2a Meas	< 5		193	18	96	8	< 2	< 0.5					172	< 0.4	10.3	22.3		12.0	3.1	1.00		0.6	3.6
W-2a Cert	1.20		190	24.0	94.0	7.90	0.600	0.0460					182	0.0300	10.0	23.0		13.0	3.30	1.00		0.630	3.60
SY-4 Meas			1185	118	511								344										
SY-4 Cert			1191	119	517								340										
CTA-AC-1 Meas															2170	3140		1070	163	44.5	122	13.6	
CTA-AC-1 Cert															2176	3326		1087	162	46.7	124	13.9	
BIR-1a Meas			110	13	17								7		0.6			2.5	1.0	0.51			
BIR-1a Cert			110	16	18								6		0.63			2.5	1.1	0.55			
NCS DC86312 Meas															2380	181		1580			221	34.4	183
NCS DC86312 Cert															2360	190		1600			225.0	34.6	183
ZW-C Meas																							
ZW-C Cert																							
NCS DC70009 (GBW07241) Meas	71	500								1700	3.0	41.9			23.8	59.5	7.70	31.2	12.1		14.3	3.3	20.3
NCS DC70009 (GBW07241) Cert	69.9	500								1701	3.1	41			23.7	60.3	7.9	32.9	12.5		14.8	3.3	20.7
OREAS 100a (Fusion) Meas							24								241	432	42.8	145	23.7	3.50		3.6	22.5
OREAS 100a (Fusion) Cert							24.1								260	463	47.1	152	23.6	3.71		3.80	23.2
OREAS 101a (Fusion) Meas							21								798	1340	129	389	47.9	8.06		5.5	32.3
OREAS 101a (Fusion) Cert							21.9								816	1396	134	403	48.8	8.06		5.92	33.3
JR-1 Meas	16	247				14	3	1.0	< 0.2	3	1.2	20.2		0.5	19.3	45.6	5.70	22.4	5.7	0.27	5.2	1.0	5.8
JR-1 Cert	16.3	257				15.2	3.25	0.031	0.028	2.86	1.19	20.8		0.56	19.7	47.2	5.58	23.3	6.03	0.30	5.06	1.01	5.69
NCS DC86318 Meas															1940	409	717	3130	1620	18.9	2210	474	3140
NCS DC86318 Cert															1960	430	740	3430	1720	18.91	2095	470	3220
USZ 42-2006 Meas															21200	28600	2350	6210	513	87.2			
USZ 42-2006 Cert															21100	27600	2300	6500	539	87.22			
117008 Orig	< 5	< 2	3	6	< 4	12	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5	5	< 0.4	0.4	0.8	0.09	0.3	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
117008 Dup			< 2	5	< 4								4										
Method Blank	< 5	< 2				< 1	< 2	< 0.5	< 0.2	< 1	< 0.5	< 0.5		< 0.4	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.05	< 0.1	< 0.1	< 0.1
Method Blank																							

QC

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Meas												

Analyte Symbol	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5	0.1	0.1
Method Code	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
NIST 694 Cert												
DNC-1 Meas				2.0								
DNC-1 Cert				2.0								
GBW 07113 Meas												
GBW 07113 Cert												
LKSD-3 Meas				2.8	0.40		0.6					
LKSD-3 Cert				2.70	0.400		0.700					
W-2a Meas	0.7			1.9			0.5	1	< 0.1	11		0.5
W-2a Cert	0.760			2.10			0.500	0.300	0.200	9.30		0.530
SY-4 Meas												
SY-4 Cert												
CTA-AC-1 Meas				10.8	1.08		2.6				21.1	
CTA-AC-1 Cert				11.4	1.08		2.65				21.8	
BIR-1a Meas				1.7		0.5				< 5		
BIR-1a Cert				1.7		0.60				3		
NCS DC86312 Meas	35.6	96.2	14.4	87.4	11.7						23.4	
NCS DC86312 Cert	36	96.2	15.1	87.79	11.96						23.6	
ZW-C Meas							82.8	338	33.8			
ZW-C Cert							82	320	34			
NCS DC70009 (GBW07241) Meas	4.3	12.5	2.10	14.9	2.16			2200	1.9		25.9	
NCS DC70009 (GBW07241) Cert	4.5	13.4	2.2	14.9	2.4			2200	1.8		28.3	
OREAS 100a (Fusion) Meas	4.8	14.2	2.15	14.1							46.6	123
OREAS 100a (Fusion) Cert	4.81	14.9	2.31	14.9							51.6	135
OREAS 101a (Fusion) Meas	6.2	18.9	2.70	17.5	2.54						33.3	384
OREAS 101a (Fusion) Cert	6.46	19.5	2.90	17.5	2.66						36.6	422
JR-1 Meas	1.2	3.9	0.70	4.5	0.70		1.9		1.6	21	24.2	8.1
JR-1 Cert	1.11	3.61	0.67	4.55	0.71		1.86		1.56	19.3	26.7	8.88
NCS DC86318 Meas	569	1660	263	1730	250							
NCS DC86318 Cert	560	1750	270	1840	260.0							
USZ 42-2006 Meas										1630	950	
USZ 42-2006 Cert										1600	946	
117008 Orig	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	0.4	< 0.1
117008 Dup												
Method Blank	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	< 0.2	< 0.1	< 1	< 0.1	< 5	< 0.1	< 0.1
Method Blank												

APPENDIX 10C: 2013 AND 2014 DRILL CORE SAMPLE LISTING

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133001	2013	EC13-087	2.91	4.39	1.48	1.47	1/2 NQ (saw)	230	194	-	11-Aug-13
133002	2013	EC13-087	4.39	5.87	1.48	1.49	1/2 NQ (saw)	245	206	-	11-Aug-13
133003	2013	EC13-087	5.87	7.26	1.39	1.37	1/2 NQ (saw)	250	216	-	11-Aug-13
133004	2013	EC13-087	7.26	8.72	1.46	1.45	1/2 NQ (saw)	240	203	-	11-Aug-13
133005	2013	EC13-087	8.72	10.29	1.57	1.55	1/2 NQ (saw)	250	207	-	11-Aug-13
133006	2013	EC13-087	10.29	11.66	1.37	1.39	1/2 NQ (saw)	270	232	-	11-Aug-13
133007	2013	EC13-087	11.66	13.16	1.50	1.48	1/2 NQ (saw)	250	210	-	11-Aug-13
133008	2013	EC13-087	13.16	14.48	1.32	1.30	1/2 NQ (saw)	260	228	-	11-Aug-13
133009	2013	EC13-087	14.48	15.85	1.37	1.36	1/2 NQ (saw)	330	286	-	11-Aug-13
133010	2013	EC13-087	15.85	17.37	1.52	1.51	1/2 NQ (saw)	270	226	-	11-Aug-13
133011	2013	EC13-087	17.37	18.80	1.43	1.44	1/2 NQ (saw)	260	221	-	11-Aug-13
133012	2013	EC13-087	18.80	20.25	1.45	1.45	1/2 NQ (saw)	260	220	-	11-Aug-13
133013	2013	EC13-087	20.25	21.73	1.48	1.47	1/2 NQ (saw)	270	228	-	11-Aug-13
133014	2013	EC13-087	21.73	23.13	1.40	1.39	1/4 NQ (saw)	240	260	(Original - DUP is 133015)	11-Aug-13
133015	2013	EC13-087	21.73	23.13	1.40	1.39	1/4 NQ (saw)	230	249	(Dup of 133014)	11-Aug-13
133016	2013	EC13-087	23.13	24.32	1.19	1.18	1/2 NQ (saw)	340	309	-	11-Aug-13
133017	2013	EC13-087	24.32	25.77	1.45	1.47	1/2 NQ (saw)	390	329	-	11-Aug-13
133018	2013	EC13-087	25.77	27.21	1.44	1.44	1/2 NQ (saw)	330	280	-	11-Aug-13
133019	2013	EC13-087	27.21	28.56	1.35	1.37	1/2 NQ (saw)	290	250	-	11-Aug-13
133020	2013	EC13-087	28.56	29.83	1.27	1.28	1/2 NQ (saw)	320	283	-	11-Aug-13
133021	2013	EC13-087	29.83	31.34	1.51	1.52	1/2 NQ (saw)	300	250	-	11-Aug-13
133022	2013	EC13-087	31.34	32.61	1.27	1.27	1/2 NQ (saw)	270	239	-	11-Aug-13
133023	2013	EC13-087	32.61	34.08	1.47	1.47	1/2 NQ (saw)	290	245	-	11-Aug-13
133024	2013	EC13-087	-	-	-	-	Blank	188	-	Qtz A	11-Aug-13
133025	2013	EC13-087	-	-	-	-	Standard	190	-	TRM-2	11-Aug-13
133026	2013	EC13-087	34.08	35.58	1.50	1.50	1/2 NQ (saw)	260	218	-	11-Aug-13
133027	2013	EC13-087	35.58	37.08	1.50	1.48	1/2 NQ (saw)	260	219	-	11-Aug-13
133028	2013	EC13-087	37.08	38.48	1.40	1.41	1/2 NQ (saw)	290	248	-	11-Aug-13
133029	2013	EC13-087	38.48	39.46	0.98	0.98	1/2 NQ (saw)	280	270	-	11-Aug-13
133030	2013	EC13-087	-	-	-	-	Blank	175	-	Qtz A	11-Aug-13
133031	2013	EC13-087	39.46	40.92	1.46	1.45	1/2 NQ (saw)	280	237	-	11-Aug-13
133032	2013	EC13-087	40.92	42.36	1.44	1.45	1/2 NQ (saw)	260	220	-	11-Aug-13
133033	2013	EC13-087	42.36	43.87	1.51	1.50	1/2 NQ (saw)	250	209	-	11-Aug-13
133034	2013	EC13-087	43.87	45.13	1.26	1.27	1/2 NQ (saw)	240	213	-	11-Aug-13
133035	2013	EC13-087	45.13	46.59	1.46	1.48	1/2 NQ (saw)	270	227	-	11-Aug-13
133036	2013	EC13-087	46.59	48.15	1.56	1.57	1/2 NQ (saw)	240	198	-	11-Aug-13
133037	2013	EC13-087	48.15	49.52	1.37	1.35	1/4 NQ (saw)	230	251	(Original - DUP is 133038)	11-Aug-13
133038	2013	EC13-087	48.15	49.52	1.37	1.35	1/4 NQ (saw)	220	241	(Dup of 133037)	11-Aug-13
133039	2013	EC13-087	49.52	50.94	1.42	1.42	1/2 NQ (saw)	230	196	-	11-Aug-13
133040	2013	EC13-087	50.94	52.43	1.49	1.49	1/2 NQ (saw)	250	210	-	11-Aug-13
133041	2013	EC13-087	52.43	53.98	1.55	1.53	1/2 NQ (saw)	260	216	-	11-Aug-13
133042	2013	EC13-087	53.98	55.27	1.29	1.30	1/2 NQ (saw)	220	193	-	11-Aug-13
133043	2013	EC13-087	55.27	56.70	1.43	1.40	1/2 NQ (saw)	220	189	-	11-Aug-13
133044	2013	EC13-087	56.70	58.09	1.39	1.37	1/2 NQ (saw)	240	207	-	11-Aug-13
133045	2013	EC13-087	58.09	59.55	1.46	1.50	1/2 NQ (saw)	245	205	-	11-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133046	2013	EC13-087	59.55	60.58	1.03	1.04	1/2 NQ (saw)	220	208	-	11-Aug-13
133047	2013	EC13-087	60.58	61.75	1.17	1.07	1/2 NQ (saw)	230	216	-	11-Aug-13
133048	2013	EC13-087	61.75	63.07	1.32	1.42	1/2 NQ (saw)	260	222	-	11-Aug-13
133049	2013	EC13-087	-	-	-	-	Blank	170	-	Qtz A	11-Aug-13
133050	2013	EC13-087	-	-	-	-	Standard	180	-	OREAS 146	11-Aug-13
133051	2013	EC13-087	63.07	64.40	1.33	1.34	1/2 NQ (saw)	285	248	-	11-Aug-13
133052	2013	EC13-087	64.40	66.00	1.60	1.60	1/2 NQ (saw)	300	246	-	11-Aug-13
133053	2013	EC13-087	66.00	67.25	1.25	1.26	1/2 NQ (saw)	245	218	-	13-Aug-13
133054	2013	EC13-087	67.25	68.74	1.49	1.48	1/2 NQ (saw)	265	223	-	13-Aug-13
133055	2013	EC13-087	68.74	70.23	1.49	1.49	1/2 NQ (saw)	360	302	-	13-Aug-13
133056	2013	EC13-087	70.23	71.61	1.38	1.38	1/2 NQ (saw)	310	267	-	13-Aug-13
133057	2013	EC13-087	71.61	72.99	1.38	1.37	1/2 NQ (saw)	240	207	-	13-Aug-13
133058	2013	EC13-087	72.99	74.33	1.34	1.33	1/2 NQ (saw)	245	214	-	13-Aug-13
133059	2013	EC13-087	74.33	75.58	1.25	1.23	1/4 NQ (saw)	230	259	(Original - DUP is 133060)	13-Aug-13
133060	2013	EC13-087	74.33	75.58	1.25	1.23	1/4 NQ (saw)	220	248	(Dup of 133059)	13-Aug-13
133061	2013	EC13-087	75.58	76.62	1.04	1.07	1/2 NQ (saw)	230	216	-	13-Aug-13
133062	2013	EC13-087	76.62	77.85	1.23	1.24	1/2 NQ (saw)	210	187	-	13-Aug-13
133063	2013	EC13-087	77.85	79.52	1.67	1.67	1/2 NQ (saw)	260	210	-	13-Aug-13
133064	2013	EC13-087	79.52	81.14	1.62	1.62	1/2 NQ (saw)	250	204	-	13-Aug-13
133065	2013	EC13-087	81.14	82.61	1.47	1.48	1/2 NQ (saw)	245	206	-	13-Aug-13
133066	2013	EC13-087	82.61	83.92	1.31	1.33	1/2 NQ (saw)	240	209	-	13-Aug-13
133067	2013	EC13-087	83.92	85.14	1.22	1.23	1/2 NQ (saw)	235	210	-	13-Aug-13
133068	2013	EC13-087	-	-	-	-	Blank	-	-	Qtz A	13-Aug-13
133069	2013	EC13-087	-	-	-	-	Standard	-	-	TRM-2	13-Aug-13
133070	2013	EC13-088	5.18	6.66	1.48	1.49	1/2 NQ (saw)	325	273	-	15-Aug-13
133071	2013	EC13-088	6.66	8.16	1.50	1.50	1/2 NQ (saw)	295	247	-	15-Aug-13
133072	2013	EC13-088	8.16	9.63	1.47	1.49	1/2 NQ (saw)	305	256	-	15-Aug-13
133073	2013	EC13-088	9.63	11.06	1.43	1.44	1/2 NQ (saw)	285	242	-	15-Aug-13
133074	2013	EC13-088	11.06	12.21	1.15	1.19	1/2 NQ (saw)	330	299	-	15-Aug-13
133075	2013	EC13-088	12.21	13.42	1.21	1.21	1/2 NQ (saw)	305	275	-	15-Aug-13
133076	2013	EC13-088	13.42	14.97	1.55	1.55	1/2 NQ (saw)	380	315	-	15-Aug-13
133077	2013	EC13-088	14.97	16.46	1.49	1.48	1/2 NQ (saw)	480	404	-	15-Aug-13
133078	2013	EC13-088	16.46	17.94	1.48	1.48	1/2 NQ (saw)	360	303	-	15-Aug-13
133079	2013	EC13-088	-	-	-	-	Blank	-	-	Qtz A	15-Aug-13
133080	2013	EC13-088	17.94	19.59	1.65	1.67	1/2 NQ (saw)	440	356	-	15-Aug-13
133081	2013	EC13-088	19.59	21.12	1.53	1.54	1/2 NQ (saw)	380	316	-	15-Aug-13
133082	2013	EC13-088	21.12	22.65	1.53	1.51	1/2 NQ (saw)	290	242	-	15-Aug-13
133083	2013	EC13-088	22.65	24.17	1.52	1.52	1/2 NQ (saw)	355	296	-	15-Aug-13
133084	2013	EC13-088	24.17	25.69	1.52	1.51	1/2 NQ (saw)	380	318	-	15-Aug-13
133085	2013	EC13-088	25.69	27.21	1.52	1.51	1/2 NQ (saw)	360	301	-	15-Aug-13
133086	2013	EC13-088	27.21	28.70	1.49	1.50	1/2 NQ (saw)	375	314	-	15-Aug-13
133087	2013	EC13-088	28.70	30.23	1.53	1.54	1/2 NQ (saw)	320	266	-	15-Aug-13
133088	2013	EC13-088	30.23	31.76	1.53	1.52	1/2 NQ (saw)	305	254	-	15-Aug-13
133089	2013	EC13-088	31.76	33.25	1.49	1.49	1/4 NQ (saw)	315	333	(Original - DUP is 1330090)	15-Aug-13
133090	2013	EC13-088	31.76	33.25	1.49	1.49	1/4 NQ (saw)	310	328	(Dup of 133089)	15-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133091	2013	EC13-088	33.25	34.80	1.55	1.53	1/2 NQ (saw)	355	295	-	15-Aug-13
133092	2013	EC13-088	34.80	36.30	1.50	1.50	1/2 NQ (saw)	355	297	-	15-Aug-13
133093	2013	EC13-088	36.30	37.82	1.52	1.51	1/2 NQ (saw)	400	334	-	15-Aug-13
133094	2013	EC13-088	37.82	39.36	1.54	1.52	1/2 NQ (saw)	320	267	-	15-Aug-13
133095	2013	EC13-088	39.36	40.88	1.52	1.50	1/2 NQ (saw)	315	264	-	15-Aug-13
133096	2013	EC13-088	40.88	42.43	1.55	1.55	1/2 NQ (saw)	355	294	-	15-Aug-13
133097	2013	EC13-088	42.43	43.92	1.49	1.50	1/2 NQ (saw)	290	243	-	15-Aug-13
133098	2013	EC13-088	43.92	45.42	1.50	1.49	1/2 NQ (saw)	285	239	-	15-Aug-13
133099	2013	EC13-088	-	-	-	-	Blank	-	-	Qtz A	15-Aug-13
133100	2013	EC13-088	-	-	-	-	Standard	-	-	OREAS 146	15-Aug-13
133101	2013	EC13-088	45.42	46.96	1.54	1.53	1/2 NQ (saw)	310	258	-	15-Aug-13
133102	2013	EC13-088	46.96	48.46	1.50	1.50	1/2 NQ (saw)	315	264	-	15-Aug-13
133103	2013	EC13-088	48.46	49.96	1.50	1.50	1/2 NQ (saw)	345	289	-	15-Aug-13
133104	2013	EC13-088	49.96	51.45	1.49	1.49	1/2 NQ (saw)	320	269	-	15-Aug-13
133105	2013	EC13-088	51.45	52.95	1.50	1.52	1/2 NQ (saw)	315	263	-	15-Aug-13
133106	2013	EC13-088	52.95	54.43	1.48	1.49	1/2 NQ (saw)	245	206	-	15-Aug-13
133107	2013	EC13-088	54.43	55.91	1.48	1.48	1/2 NQ (saw)	270	227	-	15-Aug-13
133108	2013	EC13-088	55.91	57.43	1.52	1.51	1/2 NQ (saw)	305	255	-	15-Aug-13
133109	2013	EC13-088	57.43	58.90	1.47	1.48	1/2 NQ (saw)	290	244	-	15-Aug-13
133110	2013	EC13-088	58.90	60.40	1.50	1.50	1/2 NQ (saw)	260	218	-	15-Aug-13
133111	2013	EC13-088	60.40	61.87	1.47	1.47	1/2 NQ (saw)	260	219	-	15-Aug-13
133112	2013	EC13-088	61.87	63.33	1.46	1.45	1/2 NQ (saw)	290	246	-	15-Aug-13
133113	2013	EC13-088	63.33	64.81	1.48	1.49	1/2 NQ (saw)	320	269	-	15-Aug-13
133114	2013	EC13-088	64.81	66.32	1.51	1.50	1/2 NQ (saw)	320	268	-	15-Aug-13
133115	2013	EC13-088	-	-	-	-	Standard	-	-	TRM-2	15-Aug-13
133116	2013	EC13-088	66.32	67.82	1.50	1.51	1/4 NQ (saw)	240	253	(Original - DUP is 133117)	15-Aug-13
133117	2013	EC13-088	66.32	67.82	1.50	1.51	1/4 NQ (saw)	245	258	(Dup of 133116)	15-Aug-13
133118	2013	EC13-088	67.82	69.34	1.52	1.50	1/2 NQ (saw)	275	230	-	15-Aug-13
133119	2013	EC13-088	69.34	70.87	1.53	1.53	1/2 NQ (saw)	315	262	-	15-Aug-13
133120	2013	EC13-088	70.87	72.32	1.45	1.42	1/2 NQ (saw)	375	320	-	15-Aug-13
133121	2013	EC13-088	72.32	73.80	1.48	1.47	1/2 NQ (saw)	385	325	-	15-Aug-13
133122	2013	EC13-088	73.80	75.32	1.52	1.50	1/2 NQ (saw)	285	239	-	15-Aug-13
133123	2013	EC13-088	75.32	76.81	1.49	1.51	1/2 NQ (saw)	315	263	-	15-Aug-13
133124	2013	EC13-088	-	-	-	-	Blank	-	-	Qtz A	15-Aug-13
133125	2013	EC13-088	-	-	-	-	Standard	-	-	OREAS 146	15-Aug-13
133126	2013	EC13-088	76.81	78.29	1.48	1.50	1/2 NQ (saw)	295	247	-	15-Aug-13
133127	2013	EC13-088	78.29	79.76	1.47	1.49	1/2 NQ (saw)	405	340	-	15-Aug-13
133128	2013	EC13-088	79.76	81.22	1.46	1.47	1/2 NQ (saw)	370	312	-	15-Aug-13
133129	2013	EC13-088	81.22	82.31	1.09	1.11	1/2 NQ (saw)	405	375	-	15-Aug-13
133130	2013	EC13-088	82.31	83.40	1.09	1.09	1/2 NQ (saw)	325	303	-	15-Aug-13
133131	2013	EC13-088	83.40	84.89	1.49	1.49	1/2 NQ (saw)	355	298	-	15-Aug-13
133132	2013	EC13-088	84.89	86.39	1.50	1.51	1/2 NQ (saw)	370	309	-	15-Aug-13
133133	2013	EC13-088	86.39	87.91	1.52	1.51	1/4 NQ (saw)	335	353	(Original - DUP is 133134)	15-Aug-13
133134	2013	EC13-088	86.39	87.91	1.52	1.51	1/4 NQ (saw)	330	348	(Dup of 133133)	15-Aug-13
133135	2013	EC13-088	87.91	89.41	1.50	1.49	1/2 NQ (saw)	420	353	-	15-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133136	2013	EC13-088	89.41	90.93	1.52	1.52	1/2 NQ (saw)	350	292	-	15-Aug-13
133137	2013	EC13-088	-	-	-	-	Blank	-	-	Qtz A	15-Aug-13
133138	2013	EC13-088	90.93	92.39	1.46	1.49	1/2 NQ (saw)	345	290	-	15-Aug-13
133139	2013	EC13-088	92.39	93.91	1.52	1.54	1/2 NQ (saw)	360	299	-	15-Aug-13
133140	2013	EC13-088	93.91	95.13	1.22	1.23	1/2 NQ (saw)	325	291	-	15-Aug-13
133141	2013	EC13-088	95.13	96.29	1.16	1.18	1/2 NQ (saw)	315	286	-	15-Aug-13
133142	2013	EC13-088	96.29	97.48	1.19	1.19	1/2 NQ (saw)	365	330	-	15-Aug-13
133143	2013	EC13-088	-	-	-	-	Blank	-	-	Qtz A	15-Aug-13
133144	2013	EC13-088	-	-	-	-	Standard	-	-	TRM-2	15-Aug-13
133145	2013	EC13-089	7.97	9.50	1.53	1.54	1/2 NQ (saw)	600	498	-	16-Aug-13
133146	2013	EC13-089	9.50	11.28	1.78	1.76	1/2 NQ (saw)	640	508	-	16-Aug-13
133147	2013	EC13-089	11.28	14.00	2.72	1.47	1/2 NQ (saw)	585	493	-	16-Aug-13
133148	2013	EC13-089	14.00	15.50	1.50	1.48	1/2 NQ (saw)	600	505	-	16-Aug-13
133149	2013	EC13-089	15.50	16.50	1.00	0.99	1/2 NQ (saw)	420	404	-	16-Aug-13
133150	2013	EC13-089	16.50	17.50	1.00	1.00	1/2 NQ (saw)	380	364	-	16-Aug-13
133151	2013	EC13-089	17.50	19.00	1.50	1.49	1/2 NQ (saw)	400	336	-	16-Aug-13
133152	2013	EC13-089	19.00	20.50	1.50	1.50	1/2 NQ (saw)	420	352	-	16-Aug-13
133153	2013	EC13-089	20.50	22.00	1.50	1.50	1/2 NQ (saw)	310	260	-	16-Aug-13
133154	2013	EC13-089	22.00	23.50	1.50	1.49	1/2 NQ (saw)	350	294	-	16-Aug-13
133155	2013	EC13-089	23.50	25.00	1.50	1.50	1/2 NQ (saw)	370	310	-	16-Aug-13
133156	2013	EC13-089	25.00	26.50	1.50	1.51	1/2 NQ (saw)	370	309	-	16-Aug-13
133157	2013	EC13-089	26.50	28.00	1.50	1.49	1/2 NQ (saw)	420	353	-	16-Aug-13
133158	2013	EC13-089	28.00	29.50	1.50	1.50	1/2 NQ (saw)	425	356	-	16-Aug-13
133159	2013	EC13-089	29.50	31.00	1.50	1.50	1/2 NQ (saw)	345	289	-	16-Aug-13
133160	2013	EC13-089	31.00	32.50	1.50	1.50	1/2 NQ (saw)	410	344	-	16-Aug-13
133161	2013	EC13-089	32.50	34.00	1.50	1.49	1/4 NQ (saw)	335	354	(Original - DUP is 133162)	16-Aug-13
133162	2013	EC13-089	32.50	34.00	1.50	1.49	1/4 NQ (saw)	340	360	(Dup of 133161)	16-Aug-13
133163	2013	EC13-089	34.00	35.50	1.50	1.50	1/2 NQ (saw)	415	348	-	16-Aug-13
133164	2013	EC13-089	35.50	37.00	1.50	1.51	1/2 NQ (saw)	320	268	-	16-Aug-13
133165	2013	EC13-089	37.00	38.50	1.50	1.50	1/2 NQ (saw)	320	268	-	16-Aug-13
133166	2013	EC13-089	38.50	39.25	0.75	0.76	1/2 NQ (saw)	300	315	-	16-Aug-13
133167	2013	EC13-089	39.25	41.00	1.75	1.74	1/2 NQ (saw)	435	347	-	16-Aug-13
133168	2013	EC13-089	41.00	42.50	1.50	1.50	1/2 NQ (saw)	395	331	-	16-Aug-13
133169	2013	EC13-089	42.50	44.00	1.50	1.48	1/2 NQ (saw)	395	332	-	16-Aug-13
133170	2013	EC13-089	44.00	45.50	1.50	1.50	1/2 NQ (saw)	340	285	-	16-Aug-13
133171	2013	EC13-089	45.50	46.80	1.30	1.30	1/2 NQ (saw)	335	294	-	16-Aug-13
133172	2013	EC13-089	46.80	48.00	1.20	1.21	1/2 NQ (saw)	320	288	-	16-Aug-13
133173	2013	EC13-089	48.00	49.50	1.50	1.50	1/2 NQ (saw)	420	352	-	16-Aug-13
133174	2013	EC13-089	-	-	-	-	Blank	-	-	Qtz A	16-Aug-13
133175	2013	EC13-089	-	-	-	-	Standard	-	-	OREAS 146	16-Aug-13
133176	2013	EC13-089	49.50	50.35	0.85	0.85	1/2 NQ (saw)	420	425	-	16-Aug-13
133177	2013	EC13-089	50.35	51.05	0.70	0.66	1/2 NQ (saw)	370	408	-	16-Aug-13
133178	2013	EC13-089	51.05	52.50	1.45	1.45	1/2 NQ (saw)	430	364	-	16-Aug-13
133179	2013	EC13-089	52.50	54.00	1.50	1.49	1/2 NQ (saw)	510	428	-	16-Aug-13
133180	2013	EC13-089	54.00	55.43	1.43	1.41	1/2 NQ (saw)	510	436	-	16-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133181	2013	EC13-089	55.43	57.00	1.57	1.58	1/2 NQ (saw)	430	354	-	16-Aug-13
133182	2013	EC13-089	57.00	58.50	1.50	1.49	1/2 NQ (saw)	380	319	-	16-Aug-13
133183	2013	EC13-089	58.50	60.00	1.50	1.49	1/2 NQ (saw)	370	311	-	16-Aug-13
133184	2013	EC13-089	60.00	61.50	1.50	1.50	1/2 NQ (saw)	370	310	-	16-Aug-13
133185	2013	EC13-089	61.50	63.00	1.50	1.48	1/2 NQ (saw)	420	353	-	16-Aug-13
133186	2013	EC13-089	63.00	64.50	1.50	1.52	1/2 NQ (saw)	410	342	-	16-Aug-13
133187	2013	EC13-089	64.50	65.50	1.00	1.00	1/4 NQ (saw)	280	338	(Original - DUP is 133188)	16-Aug-13
133188	2013	EC13-089	64.50	65.50	1.00	1.00	1/4 NQ (saw)	265	320	(Dup of 133187)	16-Aug-13
133189	2013	EC13-089	65.50	67.00	1.50	1.49	1/2 NQ (saw)	415	348	-	16-Aug-13
133190	2013	EC13-089	67.00	68.00	1.00	1.00	1/2 NQ (saw)	395	379	-	16-Aug-13
133191	2013	EC13-089	68.00	69.50	1.50	1.49	1/2 NQ (saw)	380	319	-	16-Aug-13
133192	2013	EC13-089	69.50	71.00	1.50	1.48	1/2 NQ (saw)	440	370	-	16-Aug-13
133193	2013	EC13-089	71.00	72.50	1.50	1.47	1/2 NQ (saw)	410	346	-	16-Aug-13
133194	2013	EC13-089	72.50	74.00	1.50	1.50	1/2 NQ (saw)	340	285	-	16-Aug-13
133195	2013	EC13-089	74.00	75.00	1.00	1.01	1/2 NQ (saw)	270	258	-	16-Aug-13
133196	2013	EC13-089	75.00	76.15	1.15	1.15	1/2 NQ (saw)	310	284	-	16-Aug-13
133197	2013	EC13-089	76.15	77.50	1.35	1.38	1/2 NQ (saw)	375	323	-	16-Aug-13
133198	2013	EC13-089	77.50	79.00	1.50	1.49	1/2 NQ (saw)	345	290	-	16-Aug-13
133199	2013	EC13-089	-	-	-	-	Blank	-	-	Qtz A	16-Aug-13
133200	2013	EC13-089	-	-	-	-	Standard	-	-	TRM-2	16-Aug-13
133201	2013	EC13-089	79.00	80.00	1.00	1.00	1/2 NQ (saw)	350	336	-	16-Aug-13
133202	2013	EC13-089	80.00	81.50	1.50	1.50	1/2 NQ (saw)	370	310	-	16-Aug-13
133203	2013	EC13-089	81.50	82.92	1.42	1.43	1/2 NQ (saw)	375	319	-	16-Aug-13
133204	2013	EC13-089	82.92	84.00	1.08	1.09	1/2 NQ (saw)	360	336	-	16-Aug-13
133205	2013	EC13-089	84.00	85.00	1.00	0.99	1/2 NQ (saw)	310	298	-	16-Aug-13
133206	2013	EC13-089	85.00	86.75	1.75	1.75	1/2 NQ (saw)	370	294	-	16-Aug-13
133207	2013	EC13-089	86.75	88.00	1.25	1.25	1/2 NQ (saw)	280	249	-	16-Aug-13
133208	2013	EC13-089	88.00	89.50	1.50	1.50	1/2 NQ (saw)	385	323	-	16-Aug-13
133209	2013	EC13-089	89.50	91.00	1.50	1.49	1/2 NQ (saw)	385	323	-	16-Aug-13
133210	2013	EC13-089	91.00	92.30	1.30	1.31	1/2 NQ (saw)	355	311	-	16-Aug-13
133211	2013	EC13-089	92.30	93.90	1.60	1.57	1/2 NQ (saw)	510	421	-	16-Aug-13
133212	2013	EC13-089	93.90	95.50	1.60	1.63	1/4 NQ (saw)	380	390	(Original - DUP is 133213)	17-Aug-13
133213	2013	EC13-089	93.90	95.50	1.60	1.63	1/4 NQ (saw)	385	395	(Dup of 133212)	17-Aug-13
133214	2013	EC13-089	95.50	97.00	1.50	1.51	1/2 NQ (saw)	370	309	-	17-Aug-13
133215	2013	EC13-089	97.00	98.50	1.50	1.48	1/2 NQ (saw)	470	396	-	17-Aug-13
133216	2013	EC13-089	98.50	100.00	1.50	1.50	1/2 NQ (saw)	405	339	-	17-Aug-13
133217	2013	EC13-089	100.00	101.11	1.11	1.11	1/2 NQ (saw)	340	315	-	17-Aug-13
133218	2013	EC13-089	101.11	102.35	1.24	1.26	1/2 NQ (saw)	370	329	-	17-Aug-13
133219	2013	EC13-089	102.35	103.40	1.05	1.02	1/2 NQ (saw)	420	400	-	17-Aug-13
133220	2013	EC13-089	103.40	105.00	1.60	1.58	1/2 NQ (saw)	440	362	-	17-Aug-13
133221	2013	EC13-089	105.00	106.50	1.50	1.50	1/2 NQ (saw)	465	390	-	17-Aug-13
133222	2013	EC13-089	106.50	108.00	1.50	1.50	1/2 NQ (saw)	460	385	-	17-Aug-13
133223	2013	EC13-089	108.00	109.50	1.50	1.50	1/2 NQ (saw)	520	436	-	17-Aug-13
133224	2013	EC13-089	-	-	-	-	Blank	-	-	Qtz A	17-Aug-13
133225	2013	EC13-089	-	-	-	-	Standard	-	-	OREAS 146	17-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133226	2013	EC13-089	109.50	110.63	1.13	1.11	1/2 NQ (saw)	380	352	-	17-Aug-13
133227	2013	EC13-089	110.63	112.00	1.37	1.37	1/2 NQ (saw)	460	397	-	17-Aug-13
133228	2013	EC13-089	112.00	113.50	1.50	1.50	1/2 NQ (saw)	455	381	-	17-Aug-13
133229	2013	EC13-089	113.50	115.00	1.50	1.50	1/2 NQ (saw)	460	385	-	17-Aug-13
133230	2013	EC13-089	115.00	116.50	1.50	1.52	1/2 NQ (saw)	650	542	-	17-Aug-13
133231	2013	EC13-089	116.50	118.00	1.50	1.50	1/2 NQ (saw)	485	406	-	17-Aug-13
133232	2013	EC13-089	118.00	119.50	1.50	1.51	1/2 NQ (saw)	450	376	-	17-Aug-13
133233	2013	EC13-089	119.50	121.00	1.50	1.50	1/2 NQ (saw)	450	377	-	17-Aug-13
133234	2013	EC13-089	121.00	122.13	1.13	1.13	1/2 NQ (saw)	340	313	-	17-Aug-13
133235	2013	EC13-089	122.13	123.50	1.37	1.37	1/2 NQ (saw)	630	544	-	17-Aug-13
133236	2013	EC13-089	123.50	125.00	1.50	1.49	1/2 NQ (saw)	820	689	-	17-Aug-13
133237	2013	EC13-089	125.00	126.50	1.50	1.50	1/4 NQ (saw)	560	591	(Original - DUP is 133238)	17-Aug-13
133238	2013	EC13-089	125.00	126.50	1.50	1.50	1/4 NQ (saw)	440	464	(Dup of 133237)	17-Aug-13
133239	2013	EC13-089	126.50	128.00	1.50	1.50	1/2 NQ (saw)	520	436	-	17-Aug-13
133240	2013	EC13-089	128.00	129.50	1.50	1.52	1/2 NQ (saw)	620	517	-	17-Aug-13
133241	2013	EC13-089	129.50	130.82	1.32	1.32	1/2 NQ (saw)	850	743	-	17-Aug-13
133242	2013	EC13-089	130.82	131.50	0.68	0.68	1/2 NQ (saw)	470	513	-	17-Aug-13
133243	2013	EC13-089	131.50	133.00	1.50	1.49	1/2 NQ (saw)	465	390	-	17-Aug-13
133244	2013	EC13-089	133.00	134.50	1.50	1.50	1/2 NQ (saw)	655	549	-	17-Aug-13
133245	2013	EC13-089	134.50	136.00	1.50	1.50	1/2 NQ (saw)	550	461	-	17-Aug-13
133246	2013	EC13-089	136.00	137.00	1.00	1.01	1/2 NQ (saw)	540	516	-	17-Aug-13
133247	2013	EC13-089	137.00	138.50	1.50	1.50	1/2 NQ (saw)	640	536	-	17-Aug-13
133248	2013	EC13-089	138.50	140.05	1.55	1.55	1/2 NQ (saw)	830	688	-	17-Aug-13
133249	2013	EC13-089	-	-	-	-	Blank	-	-	Qtz A	17-Aug-13
133250	2013	EC13-089	-	-	-	-	Standard	-	-	OREAS 146	17-Aug-13
133251	2013	EC13-089	140.05	141.50	1.45	1.44	1/2 NQ (saw)	480	408	-	17-Aug-13
133252	2013	EC13-089	141.50	143.00	1.50	1.50	1/2 NQ (saw)	380	318	-	17-Aug-13
133253	2013	EC13-089	143.00	143.80	0.80	0.75	1/2 NQ (saw)	330	348	-	17-Aug-13
133254	2013	EC13-089	143.80	144.70	0.90	0.90	1/2 NQ (saw)	325	323	-	17-Aug-13
133255	2013	EC13-089	144.70	145.40	0.70	0.68	1/2 NQ (saw)	440	480	-	17-Aug-13
133256	2013	EC13-089	145.40	147.00	1.60	1.60	1/2 NQ (saw)	350	287	-	17-Aug-13
133257	2013	EC13-089	147.00	148.50	1.50	1.47	1/2 NQ (saw)	350	295	-	17-Aug-13
133258	2013	EC13-089	148.50	150.00	1.50	1.50	1/2 NQ (saw)	280	235	-	17-Aug-13
133259	2013	EC13-089	150.00	151.29	1.29	1.30	1/2 NQ (saw)	390	343	-	17-Aug-13
133260	2013	EC13-089	151.29	152.55	1.26	1.26	1/2 NQ (saw)	380	337	-	17-Aug-13
133261	2013	EC13-090A	7.00	8.50	1.50	1.49	1/2 NQ (saw)	515	432	-	18-Aug-13
133262	2013	EC13-090A	8.50	10.00	1.50	1.50	1/4 NQ (saw)	345	364	(Original - DUP is 133263)	18-Aug-13
133263	2013	EC13-090A	8.50	10.00	1.50	1.50	1/4 NQ (saw)	340	359	(Dup of 133262)	18-Aug-13
133264	2013	EC13-090A	10.00	11.50	1.50	1.51	1/2 NQ (saw)	415	347	-	18-Aug-13
133265	2013	EC13-090A	11.50	13.00	1.50	1.49	1/2 NQ (saw)	370	311	-	18-Aug-13
133266	2013	EC13-090A	13.00	14.50	1.50	1.50	1/2 NQ (saw)	420	352	-	18-Aug-13
133267	2013	EC13-090A	14.50	15.95	1.45	1.43	1/2 NQ (saw)	410	349	-	18-Aug-13
133268	2013	EC13-090A	15.95	17.37	1.42	1.42	1/2 NQ (saw)	370	316	-	18-Aug-13
133269	2013	EC13-090A	17.37	18.50	1.13	1.13	1/2 NQ (saw)	370	341	-	18-Aug-13
133270	2013	EC13-090A	18.50	20.00	1.50	1.47	1/2 NQ (saw)	385	325	-	18-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133271	2013	EC13-090A	20.00	21.50	1.50	1.51	1/2 NQ (saw)	500	418	-	18-Aug-13
133272	2013	EC13-090A	21.50	23.00	1.50	1.50	1/2 NQ (saw)	460	385	-	18-Aug-13
133273	2013	EC13-090A	23.00	24.50	1.50	1.50	1/2 NQ (saw)	590	494	-	18-Aug-13
133274	2013	EC13-090A	24.50	26.00	1.50	1.52	1/2 NQ (saw)	520	434	-	18-Aug-13
133275	2013	EC13-090A	26.00	27.50	1.50	1.47	1/2 NQ (saw)	550	464	-	18-Aug-13
133276	2013	EC13-090A	27.50	28.89	1.39	1.37	1/2 NQ (saw)	420	363	-	18-Aug-13
133277	2013	EC13-090A	28.89	30.50	1.61	1.62	1/2 NQ (saw)	520	425	-	18-Aug-13
133278	2013	EC13-090A	30.50	31.90	1.40	1.40	1/2 NQ (saw)	540	463	-	18-Aug-13
133279	2013	EC13-090A	31.90	33.00	1.10	1.09	1/2 NQ (saw)	400	373	-	18-Aug-13
133280	2013	EC13-090A	33.00	34.38	1.38	1.37	1/2 NQ (saw)	420	363	-	18-Aug-13
133281	2013	EC13-090A	34.38	35.50	1.12	1.11	1/2 NQ (saw)	440	408	-	18-Aug-13
133282	2013	EC13-090A	35.50	37.07	1.57	1.58	1/2 NQ (saw)	540	445	-	18-Aug-13
133283	2013	EC13-090A	37.07	38.00	0.93	0.94	1/2 NQ (saw)	580	568	-	18-Aug-13
133284	2013	EC13-090A	38.00	39.50	1.50	1.50	1/2 NQ (saw)	630	528	-	18-Aug-13
133285	2013	EC13-090A	39.50	40.66	1.16	1.17	1/2 NQ (saw)	630	573	-	18-Aug-13
133286	2013	EC13-090A	40.66	42.00	1.34	1.34	1/2 NQ (saw)	560	487	-	18-Aug-13
133287	2013	EC13-090A	-	-	-	-	Blank	-	-	Qtz A	18-Aug-13
133288	2013	EC13-090A	-	-	-	-	Standard	-	-	TRM-2	18-Aug-13
133289	2013	EC13-090A	42.00	43.10	1.10	1.10	1/2 NQ (saw)	660	613	-	18-Aug-13
133290	2013	EC13-090A	43.10	44.63	1.53	1.53	1/2 NQ (saw)	950	791	-	18-Aug-13
133291	2013	EC13-090A	44.63	46.00	1.37	1.37	1/4 NQ (saw)	561	610	(Original - DUP is 133292)	18-Aug-13
133292	2013	EC13-090A	44.63	46.00	1.37	1.37	1/4 NQ (saw)	480	522	(Dup of 133291)	18-Aug-13
133293	2013	EC13-090A	46.00	47.50	1.50	1.51	1/2 NQ (saw)	630	527	-	18-Aug-13
133294	2013	EC13-090A	47.50	49.00	1.50	1.50	1/2 NQ (saw)	650	545	-	18-Aug-13
133295	2013	EC13-090A	49.00	50.34	1.34	1.33	1/2 NQ (saw)	700	611	-	18-Aug-13
133296	2013	EC13-090A	50.34	51.34	1.00	1.00	1/2 NQ (saw)	720	691	-	18-Aug-13
133297	2013	EC13-090A	51.34	52.19	0.85	0.87	1/2 NQ (saw)	780	784	-	18-Aug-13
133298	2013	EC13-090A	52.19	52.96	0.77	0.76	1/2 NQ (saw)	890	935	-	18-Aug-13
133299	2013	EC13-090A	52.96	54.12	1.16	1.16	1/2 NQ (saw)	700	639	-	18-Aug-13
133300	2013	EC13-090A	54.12	55.50	1.38	1.40	1/2 NQ (saw)	750	643	-	18-Aug-13
133301	2013	EC13-090A	55.50	56.50	1.00	1.00	1/2 NQ (saw)	800	767	-	18-Aug-13
133302	2013	EC13-090A	56.50	58.00	1.50	1.01	1/2 NQ (saw)	590	564	-	18-Aug-13
133303	2013	EC13-090A	58.00	59.50	1.50	1.50	1/2 NQ (saw)	630	528	-	18-Aug-13
133304	2013	EC13-090A	59.50	61.00	1.50	1.53	1/2 NQ (saw)	740	616	-	18-Aug-13
133305	2013	EC13-090A	61.00	62.35	1.35	1.38	1/2 NQ (saw)	580	500	-	18-Aug-13
133306	2013	EC13-090A	62.35	63.50	1.15	1.16	1/2 NQ (saw)	590	539	-	18-Aug-13
133307	2013	EC13-090A	63.50	65.00	1.50	1.48	1/2 NQ (saw)	470	396	-	18-Aug-13
133308	2013	EC13-090A	65.00	66.14	1.14	1.13	1/2 NQ (saw)	390	359	-	18-Aug-13
133309	2013	EC13-090A	66.14	67.45	1.31	1.29	1/2 NQ (saw)	400	352	-	18-Aug-13
133310	2013	EC13-090A	67.45	69.00	1.55	1.54	1/2 NQ (saw)	490	407	-	18-Aug-13
133311	2013	EC13-090A	69.00	70.00	1.00	1.01	1/2 NQ (saw)	350	335	-	18-Aug-13
133312	2013	EC13-090A	70.00	71.50	1.50	1.52	1/2 NQ (saw)	390	325	-	18-Aug-13
133313	2013	EC13-090A	71.50	73.00	1.50	1.49	1/4 NQ (saw)	390	413	(Original - DUP is 133314)	18-Aug-13
133314	2013	EC13-090A	71.50	73.00	1.50	1.49	1/4 NQ (saw)	420	444	(Dup of 133313)	18-Aug-13
133315	2013	EC13-090A	73.00	74.27	1.27	1.28	1/2 NQ (saw)	500	442	-	18-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133316	2013	EC13-090A	74.27	75.14	0.87	0.88	1/2 NQ (saw)	460	460	-	18-Aug-13
133317	2013	EC13-090A	75.14	76.00	0.86	0.86	1/2 NQ (saw)	360	363	-	18-Aug-13
133318	2013	EC13-090A	76.00	77.50	1.50	1.52	1/2 NQ (saw)	420	350	-	18-Aug-13
133319	2013	EC13-090A	77.50	79.00	1.50	1.50	1/2 NQ (saw)	540	452	-	18-Aug-13
133320	2013	EC13-090A	79.00	80.50	1.50	1.49	1/2 NQ (saw)	490	411	-	18-Aug-13
133321	2013	EC13-090A	80.50	81.50	1.00	0.98	1/2 NQ (saw)	450	435	-	18-Aug-13
133322	2013	EC13-090A	81.50	83.00	1.50	1.51	1/2 NQ (saw)	520	435	-	18-Aug-13
133323	2013	EC13-090A	83.00	83.97	0.97	0.98	1/2 NQ (saw)	400	386	-	18-Aug-13
133324	2013	EC13-090A	-	-	-	-	Blank	-	-	Qtz A	18-Aug-13
133325	2013	EC13-090A	-	-	-	-	Standard	-	-	OREAS 146	18-Aug-13
133326	2013	EC13-090A	83.97	84.50	0.53	0.53	1/2 NQ (saw)	490	581	-	18-Aug-13
133327	2013	EC13-090A	84.50	85.23	0.73	0.74	1/2 NQ (saw)	515	546	-	18-Aug-13
133328	2013	EC13-090A	85.23	86.33	1.10	1.10	1/2 NQ (saw)	530	492	-	18-Aug-13
133329	2013	EC13-090A	86.33	87.50	1.17	1.16	1/2 NQ (saw)	460	420	-	18-Aug-13
133330	2013	EC13-090A	87.50	89.08	1.58	1.61	1/2 NQ (saw)	500	409	-	18-Aug-13
133331	2013	EC13-090A	89.08	90.50	1.42	1.39	1/2 NQ (saw)	470	404	-	18-Aug-13
133332	2013	EC13-090A	90.50	92.00	1.50	1.52	1/2 NQ (saw)	450	375	-	20-Aug-13
133333	2013	EC13-090A	92.00	93.50	1.50	1.46	1/2 NQ (saw)	490	414	-	20-Aug-13
133334	2013	EC13-090A	93.50	95.00	1.50	1.48	1/2 NQ (saw)	460	387	-	20-Aug-13
133335	2013	EC13-090A	95.00	96.00	1.00	0.99	1/2 NQ (saw)	480	462	-	20-Aug-13
133336	2013	EC13-090A	96.00	97.50	1.50	1.50	1/2 NQ (saw)	520	436	-	20-Aug-13
133337	2013	EC13-090A	97.50	99.00	1.50	1.52	1/2 NQ (saw)	520	434	-	20-Aug-13
133338	2013	EC13-090A	99.00	100.31	1.31	1.32	1/4 NQ (saw)	360	397	(Original - DUP is 133339)	20-Aug-13
133339	2013	EC13-090A	99.00	100.31	1.31	1.32	1/4 NQ (saw)	350	386	(Dup of 133338)	20-Aug-13
133340	2013	EC13-090A	100.31	101.94	1.63	1.62	1/2 NQ (saw)	600	490	-	20-Aug-13
133341	2013	EC13-090A	101.94	103.33	1.39	1.38	1/2 NQ (saw)	490	422	-	20-Aug-13
133342	2013	EC13-090A	103.33	104.53	1.20	1.20	1/2 NQ (saw)	560	505	-	20-Aug-13
133343	2013	EC13-090A	104.53	106.00	1.47	1.46	1/2 NQ (saw)	405	342	-	20-Aug-13
133344	2013	EC13-090A	106.00	107.50	1.50	1.53	1/2 NQ (saw)	490	408	-	20-Aug-13
133345	2013	EC13-090A	107.50	109.00	1.50	1.51	1/2 NQ (saw)	530	443	-	20-Aug-13
133346	2013	EC13-090A	109.00	110.50	1.50	1.52	1/2 NQ (saw)	560	467	-	20-Aug-13
133347	2013	EC13-090A	110.50	112.00	1.50	1.51	1/2 NQ (saw)	460	385	-	20-Aug-13
133348	2013	EC13-090A	112.00	113.22	1.22	1.23	1/2 NQ (saw)	620	555	-	20-Aug-13
133349	2013	EC13-090A	-	-	-	-	Blank	-	-	Qtz A	20-Aug-13
133350	2013	EC13-090A	-	-	-	-	Standard	-	-	TRM-2	20-Aug-13
133351	2013	EC13-090A	113.22	114.50	1.28	1.29	1/2 NQ (saw)	540	476	-	20-Aug-13
133352	2013	EC13-090A	114.50	116.00	1.50	1.49	1/2 NQ (saw)	530	445	-	20-Aug-13
133353	2013	EC13-090A	116.00	117.50	1.50	1.51	1/2 NQ (saw)	530	443	-	20-Aug-13
133354	2013	EC13-090A	117.50	119.00	1.50	1.50	1/2 NQ (saw)	410	344	-	20-Aug-13
133355	2013	EC13-090A	119.00	120.50	1.50	1.50	1/2 NQ (saw)	590	494	-	20-Aug-13
133356	2013	EC13-090A	120.50	122.00	1.50	1.50	1/2 NQ (saw)	450	377	-	20-Aug-13
133357	2013	EC13-090A	122.00	123.50	1.50	1.53	1/2 NQ (saw)	420	350	-	20-Aug-13
133358	2013	EC13-090A	123.50	125.00	1.50	1.50	1/2 NQ (saw)	360	302	-	20-Aug-13
133359	2013	EC13-090A	125.00	126.32	1.32	1.32	1/2 NQ (saw)	360	315	-	20-Aug-13
133360	2013	EC13-090A	126.32	127.50	1.18	1.17	1/2 NQ (saw)	340	309	-	20-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133361	2013	EC13-090A	127.50	129.08	1.58	1.60	1/2 NQ (saw)	480	394	-	20-Aug-13
133362	2013	EC13-090A	129.08	130.50	1.42	1.41	1/2 NQ (saw)	640	547	-	20-Aug-13
133363	2013	EC13-090A	130.50	132.00	1.50	1.52	1/2 NQ (saw)	460	384	-	20-Aug-13
133364	2013	EC13-090A	132.00	133.50	1.50	1.51	1/4 NQ (saw)	390	411	(Original - DUP is 133365)	20-Aug-13
133365	2013	EC13-090A	132.00	133.50	1.50	1.51	1/4 NQ (saw)	400	421	(Dup of 133364)	20-Aug-13
133366	2013	EC13-090A	133.50	135.00	1.50	1.48	1/2 NQ (saw)	470	396	-	20-Aug-13
133367	2013	EC13-090A	135.00	136.50	1.50	1.49	1/2 NQ (saw)	520	437	-	20-Aug-13
133368	2013	EC13-090A	136.50	138.00	1.50	1.51	1/2 NQ (saw)	360	301	-	20-Aug-13
133369	2013	EC13-090A	138.00	139.50	1.50	1.50	1/2 NQ (saw)	440	369	-	20-Aug-13
133370	2013	EC13-090A	139.50	141.00	1.50	1.50	1/2 NQ (saw)	460	385	-	20-Aug-13
133371	2013	EC13-090A	141.00	142.50	1.50	1.52	1/2 NQ (saw)	420	350	-	20-Aug-13
133372	2013	EC13-090A	142.50	144.00	1.50	1.51	1/2 NQ (saw)	385	322	-	20-Aug-13
133373	2013	EC13-090A	144.00	145.50	1.50	1.49	1/2 NQ (saw)	530	445	-	20-Aug-13
133374	2013	EC13-090A	-	-	-	-	Blank	-	-	Qtz A	20-Aug-13
133375	2013	EC13-090A	-	-	-	-	Standard	-	-	OREAS 146	20-Aug-13
133376	2013	EC13-090A	145.50	147.00	1.50	1.52	1/2 NQ (saw)	490	409	-	20-Aug-13
133377	2013	EC13-090A	147.00	148.50	1.50	1.50	1/2 NQ (saw)	485	406	-	20-Aug-13
133378	2013	EC13-090A	148.50	150.00	1.50	1.52	1/2 NQ (saw)	395	330	-	20-Aug-13
133379	2013	EC13-090A	150.00	151.16	1.16	1.18	1/2 NQ (saw)	370	336	-	20-Aug-13
133380	2013	EC13-090A	151.16	152.50	1.34	1.35	1/2 NQ (saw)	400	347	-	20-Aug-13
133381	2013	EC13-090A	152.50	154.00	1.50	1.50	1/2 NQ (saw)	370	310	-	20-Aug-13
133382	2013	EC13-090A	154.00	155.50	1.50	1.50	1/2 NQ (saw)	410	344	-	20-Aug-13
133383	2013	EC13-090A	155.50	157.00	1.50	1.49	1/2 NQ (saw)	380	319	-	20-Aug-13
133384	2013	EC13-090A	157.00	158.50	1.50	1.50	1/2 NQ (saw)	350	293	-	20-Aug-13
133385	2013	EC13-090A	158.50	159.50	1.00	0.99	1/2 NQ (saw)	370	356	-	20-Aug-13
133386	2013	EC13-090A	159.50	160.63	1.13	1.13	1/2 NQ (saw)	410	378	-	20-Aug-13
133387	2013	EC13-091	4.15	5.50	1.35	1.27	1/2 NQ (saw)	430	381	-	21-Aug-13
133388	2013	EC13-091	5.50	7.00	1.50	1.49	1/2 NQ (saw)	530	445	-	21-Aug-13
133389	2013	EC13-091	7.00	8.50	1.50	1.46	1/2 NQ (saw)	450	380	-	21-Aug-13
133390	2013	EC13-091	8.50	10.00	1.50	1.50	1/2 NQ (saw)	360	302	-	21-Aug-13
133391	2013	EC13-091	10.00	11.00	1.00	1.03	1/2 NQ (saw)	320	304	-	21-Aug-13
133392	2013	EC13-091	11.00	12.50	1.50	1.48	1/2 NQ (saw)	440	370	-	21-Aug-13
133393	2013	EC13-091	12.50	14.00	1.50	1.54	1/2 NQ (saw)	490	407	-	21-Aug-13
133394	2013	EC13-091	14.00	15.24	1.24	1.26	1/2 NQ (saw)	580	515	-	21-Aug-13
133395	2013	EC13-091	15.24	16.00	0.76	0.80	1/2 NQ (saw)	570	589	-	21-Aug-13
133396	2013	EC13-091	16.00	16.82	0.82	0.84	1/2 NQ (saw)	560	569	-	21-Aug-13
133397	2013	EC13-091	16.82	18.02	1.20	1.18	1/2 NQ (saw)	630	572	-	21-Aug-13
133398	2013	EC13-091	18.02	19.00	0.98	0.95	1/2 NQ (saw)	680	663	-	21-Aug-13
133399	2013	EC13-091	-	-	-	-	Standard	-	-	TRM-2	21-Aug-13
133400	2013	EC13-091	-	-	-	-	Blank	-	-	Qtz A	21-Aug-13
133401	2013	EC13-091	19.00	20.50	1.50	1.50	1/2 NQ (saw)	560	469	-	21-Aug-13
133402	2013	EC13-091	20.50	22.00	1.50	1.49	1/2 NQ (saw)	480	403	-	21-Aug-13
133403	2013	EC13-091	22.00	23.26	1.26	1.26	1/2 NQ (saw)	430	382	-	21-Aug-13
133404	2013	EC13-091	23.26	23.80	0.54	0.53	1/2 NQ (saw)	360	427	-	21-Aug-13
133405	2013	EC13-091	23.80	24.74	0.94	0.94	1/2 NQ (saw)	440	431	-	21-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133406	2013	EC13-091	24.74	26.00	1.26	1.26	1/2 NQ (saw)	560	497	-	21-Aug-13
133407	2013	EC13-091	26.00	27.50	1.50	1.50	1/2 NQ (saw)	510	427	-	21-Aug-13
133408	2013	EC13-091	27.50	29.00	1.50	1.50	1/2 NQ (saw)	460	385	-	21-Aug-13
133409	2013	EC13-091	29.00	30.35	1.35	1.37	1/2 NQ (saw)	470	406	-	21-Aug-13
133410	2013	EC13-091	30.35	31.50	1.15	1.16	1/2 NQ (saw)	450	411	-	21-Aug-13
133411	2013	EC13-091	31.50	33.00	1.50	1.49	1/2 NQ (saw)	580	487	-	21-Aug-13
133412	2013	EC13-091	33.00	34.50	1.50	1.50	1/2 NQ (saw)	460	385	-	21-Aug-13
133413	2013	EC13-091	34.50	36.00	1.50	1.48	1/2 NQ (saw)	450	379	-	21-Aug-13
133414	2013	EC13-091	36.00	37.40	1.40	1.41	1/2 NQ (saw)	520	445	-	21-Aug-13
133415	2013	EC13-091	37.40	38.46	1.06	1.05	1/2 NQ (saw)	510	481	-	21-Aug-13
133416	2013	EC13-091	38.46	39.50	1.04	1.04	1/2 NQ (saw)	430	407	-	21-Aug-13
133417	2013	EC13-091	39.50	40.10	0.60	0.60	1/2 NQ (saw)	400	455	-	21-Aug-13
133418	2013	EC13-091	-	-	-	-	Blank	180	-	Qtz A	21-Aug-13
133419	2013	EC13-091	40.10	41.00	0.90	0.89	1/2 NQ (saw)	450	449	-	21-Aug-13
133420	2013	EC13-091	41.00	42.50	1.50	1.52	1/2 NQ (saw)	530	442	-	21-Aug-13
133421	2013	EC13-091	42.50	44.00	1.50	1.48	1/2 NQ (saw)	520	438	-	21-Aug-13
133422	2013	EC13-091	44.00	45.00	1.00	1.01	1/2 NQ (saw)	420	402	-	21-Aug-13
133423	2013	EC13-091	45.00	46.50	1.50	1.47	1/2 NQ (saw)	390	329	-	21-Aug-13
133424	2013	EC13-091	-	-	-	-	Blank	190	-	Qtz A	21-Aug-13
133425	2013	EC13-091	-	-	-	-	Standard	200	-	OREAS 146	21-Aug-13
133426	2013	EC13-091	46.50	48.00	1.50	1.49	1/2 NQ (saw)	360	302	-	21-Aug-13
133427	2013	EC13-091	48.00	49.70	1.70	1.70	1/2 NQ (saw)	450	362	-	21-Aug-13
133428	2013	EC13-091	49.70	50.50	0.80	0.80	1/2 NQ (saw)	480	496	-	21-Aug-13
133429	2013	EC13-091	50.50	52.00	1.50	1.47	1/2 NQ (saw)	460	388	-	21-Aug-13
133430	2013	EC13-091	52.00	53.50	1.50	1.52	1/2 NQ (saw)	570	475	-	21-Aug-13
133431	2013	EC13-091	53.50	55.00	1.50	1.51	1/2 NQ (saw)	330	276	-	21-Aug-13
133432	2013	EC13-091	55.00	56.50	1.50	1.50	1/2 NQ (saw)	420	352	-	21-Aug-13
133433	2013	EC13-091	56.50	58.00	1.50	1.48	1/2 NQ (saw)	420	353	-	21-Aug-13
133434	2013	EC13-091	58.00	59.50	1.50	1.50	1/2 NQ (saw)	400	335	-	21-Aug-13
133435	2013	EC13-091	59.50	61.00	1.50	1.47	1/2 NQ (saw)	360	304	-	21-Aug-13
133436	2013	EC13-091	61.00	62.50	1.50	1.50	1/2 NQ (saw)	320	268	-	21-Aug-13
133437	2013	EC13-091	62.50	64.00	1.50	1.50	1/2 NQ (saw)	300	251	-	21-Aug-13
133438	2013	EC13-091	64.00	65.50	1.50	1.50	1/4 NQ (saw)	250	264	(Original - DUP is 133439)	21-Aug-13
133439	2013	EC13-091	64.00	65.50	1.50	1.50	1/4 NQ (saw)	250	264	(Dup of 133438)	21-Aug-13
133440	2013	EC13-091	65.50	67.00	1.50	1.49	1/2 NQ (saw)	260	218	-	21-Aug-13
133441	2013	EC13-091	67.00	68.06	1.06	1.06	1/2 NQ (saw)	280	263	-	21-Aug-13
133442	2013	EC13-091	68.06	69.50	1.44	1.43	1/2 NQ (saw)	260	221	-	21-Aug-13
133443	2013	EC13-091	69.50	71.05	1.55	1.55	1/2 NQ (saw)	240	199	-	21-Aug-13
133444	2013	EC13-091	71.05	72.50	1.45	1.43	1/2 NQ (saw)	280	238	-	21-Aug-13
133445	2013	EC13-091	72.50	73.93	1.43	1.45	1/2 NQ (saw)	310	263	-	21-Aug-13
133446	2013	EC13-091	73.93	75.10	1.17	1.18	1/2 NQ (saw)	540	490	-	21-Aug-13
133447	2013	EC13-091	75.10	76.50	1.40	1.40	1/2 NQ (saw)	580	497	-	21-Aug-13
133448	2013	EC13-091	76.50	77.88	1.38	1.36	1/2 NQ (saw)	440	381	-	21-Aug-13
133449	2013	EC13-091	-	-	-	-	Blank	180	-	Qtz A	21-Aug-13
133450	2013	EC13-091	-	-	-	-	Standard	190	-	TRM-2	21-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133451	2013	EC13-091	77.88	78.72	0.84	0.85	1/2 NQ (saw)	460	466	-	21-Aug-13
133452	2013	EC13-091	78.72	80.00	1.28	1.26	1/2 NQ (saw)	550	488	-	21-Aug-13
133453	2013	EC13-091	80.00	81.42	1.42	1.43	1/2 NQ (saw)	460	392	-	21-Aug-13
133454	2013	EC13-091	81.42	83.00	1.58	1.60	1/2 NQ (saw)	330	271	-	21-Aug-13
133455	2013	EC13-091	83.00	84.50	1.50	1.50	1/2 NQ (saw)	280	235	-	21-Aug-13
133456	2013	EC13-091	84.50	85.55	1.05	1.05	1/2 NQ (saw)	270	255	-	21-Aug-13
133457	2013	EC13-091	85.55	87.00	1.45	1.45	1/2 NQ (saw)	340	288	-	21-Aug-13
133458	2013	EC13-091	87.00	88.50	1.50	1.53	1/2 NQ (saw)	295	246	-	21-Aug-13
133459	2013	EC13-091	88.50	90.00	1.50	1.51	1/2 NQ (saw)	310	259	-	21-Aug-13
133460	2013	EC13-091	90.00	91.00	1.00	1.00	1/2 NQ (saw)	335	321	-	22-Aug-13
133461	2013	EC13-091	91.00	92.00	1.00	1.02	1/2 NQ (saw)	305	291	-	22-Aug-13
133462	2013	EC13-091	92.00	93.04	1.04	1.04	1/2 NQ (saw)	320	303	-	22-Aug-13
133463	2013	EC13-091	93.04	94.00	0.96	0.96	1/2 NQ (saw)	345	335	-	22-Aug-13
133464	2013	EC13-091	94.00	95.08	1.08	1.07	1/4 NQ (saw)	335	396	(Original - DUP is 133465)	22-Aug-13
133465	2013	EC13-091	94.00	95.08	1.08	1.07	1/4 NQ (saw)	380	449	(Dup of 133464)	22-Aug-13
133466	2013	EC13-091	95.08	96.28	1.20	1.18	1/2 NQ (saw)	420	381	-	22-Aug-13
133467	2013	EC13-091	96.28	97.50	1.22	1.22	1/2 NQ (saw)	330	296	-	22-Aug-13
133468	2013	EC13-091	97.50	99.00	1.50	1.50	1/2 NQ (saw)	285	239	-	22-Aug-13
133469	2013	EC13-091	99.00	100.50	1.50	1.50	1/2 NQ (saw)	310	260	-	22-Aug-13
133470	2013	EC13-091	100.50	102.72	2.22	0.96	1/2 NQ (saw)	260	253	-	22-Aug-13
133471	2013	EC13-091	102.72	104.00	1.28	1.27	1/2 NQ (saw)	330	292	-	22-Aug-13
133472	2013	EC13-091	104.00	105.50	1.50	1.50	1/2 NQ (saw)	275	230	-	22-Aug-13
133473	2013	EC13-091	105.50	107.00	1.50	1.49	1/2 NQ (saw)	305	256	-	22-Aug-13
133474	2013	EC13-091	-	-	-	-	Blank	-	-	Qtz A	22-Aug-13
133475	2013	EC13-091	-	-	-	-	Standard	-	-	OREAS 146	22-Aug-13
133476	2013	EC13-091	107.00	108.50	1.50	1.50	1/2 NQ (saw)	260	218	-	22-Aug-13
133477	2013	EC13-091	108.50	109.90	1.40	1.40	1/2 NQ (saw)	240	206	-	22-Aug-13
133478	2013	EC13-091	109.90	111.50	1.60	1.60	1/2 NQ (saw)	300	246	-	22-Aug-13
133479	2013	EC13-091	111.50	113.00	1.50	1.48	1/2 NQ (saw)	280	236	-	22-Aug-13
133480	2013	EC13-091	113.00	114.50	1.50	1.50	1/2 NQ (saw)	320	268	-	22-Aug-13
133481	2013	EC13-091	114.50	116.00	1.50	1.49	1/2 NQ (saw)	280	235	-	22-Aug-13
133482	2013	EC13-091	116.00	117.50	1.50	1.49	1/2 NQ (saw)	245	206	-	22-Aug-13
133483	2013	EC13-091	117.50	119.00	1.50	1.50	1/2 NQ (saw)	240	201	-	22-Aug-13
133484	2013	EC13-091	119.00	120.50	1.50	1.51	1/2 NQ (saw)	250	209	-	22-Aug-13
133485	2013	EC13-091	120.50	122.00	1.50	1.48	1/2 NQ (saw)	245	206	-	22-Aug-13
133486	2013	EC13-091	122.00	123.50	1.50	1.50	1/2 NQ (saw)	240	201	-	22-Aug-13
133487	2013	EC13-091	123.50	125.00	1.50	1.48	1/2 NQ (saw)	265	223	-	22-Aug-13
133488	2013	EC13-091	125.00	126.50	1.50	1.47	1/2 NQ (saw)	315	266	-	22-Aug-13
133489	2013	EC13-091	126.50	127.60	1.10	1.09	1/2 NQ (saw)	390	363	-	22-Aug-13
133490	2013	EC13-091	127.60	129.50	1.90	1.88	1/4 NQ (saw)	260	255	(Original - DUP is 133491)	22-Aug-13
133491	2013	EC13-091	127.60	129.50	1.90	1.88	1/4 NQ (saw)	245	240	(Dup of 133490)	22-Aug-13
133492	2013	EC13-091	129.50	131.00	1.50	1.48	1/2 NQ (saw)	245	206	-	22-Aug-13
133493	2013	EC13-091	131.00	132.00	1.00	0.99	1/2 NQ (saw)	235	226	-	22-Aug-13
133494	2013	EC13-091	132.00	133.20	1.20	1.19	1/2 NQ (saw)	260	235	-	22-Aug-13
133495	2013	EC13-092	1.00	2.50	1.50	1.51	1/2 NQ (saw)	285	238	-	22-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133496	2013	EC13-092	2.50	4.00	1.50	1.50	1/2 NQ (saw)	270	226	-	22-Aug-13
133497	2013	EC13-092	4.00	5.50	1.50	1.49	1/2 NQ (saw)	285	239	-	22-Aug-13
133498	2013	EC13-092	5.50	7.00	1.50	1.50	1/2 NQ (saw)	305	256	-	22-Aug-13
133499	2013	EC13-092	-	-	-	-	Blank	-	-	Qtz A	22-Aug-13
133500	2013	EC13-092	-	-	-	-	Standard	-	-	TRM-2	22-Aug-13
133501	2013	EC13-092	7.00	8.50	1.50	1.52	1/2 NQ (saw)	340	284	-	22-Aug-13
133502	2013	EC13-092	8.50	10.00	1.50	1.49	1/2 NQ (saw)	340	286	-	22-Aug-13
133503	2013	EC13-092	10.00	11.00	1.00	1.00	1/2 NQ (saw)	320	307	-	22-Aug-13
133504	2013	EC13-092	11.00	12.15	1.15	1.14	1/2 NQ (saw)	350	321	-	22-Aug-13
133505	2013	EC13-092	12.15	13.00	0.85	0.85	1/2 NQ (saw)	330	334	-	22-Aug-13
133506	2013	EC13-092	13.00	14.00	1.00	1.00	1/2 NQ (saw)	245	235	-	22-Aug-13
133507	2013	EC13-092	14.00	15.50	1.50	1.50	1/2 NQ (saw)	410	344	-	22-Aug-13
133508	2013	EC13-092	15.50	17.00	1.50	1.50	1/2 NQ (saw)	350	293	-	22-Aug-13
133509	2013	EC13-092	17.00	18.50	1.50	1.49	1/2 NQ (saw)	385	323	-	24-Aug-13
133510	2013	EC13-092	18.50	20.00	1.50	1.48	1/2 NQ (saw)	295	248	-	24-Aug-13
133511	2013	EC13-092	20.00	21.50	1.50	1.47	1/2 NQ (saw)	350	295	-	24-Aug-13
133512	2013	EC13-092	21.50	23.00	1.50	1.47	1/2 NQ (saw)	280	236	-	24-Aug-13
133513	2013	EC13-092	23.00	24.50	1.50	1.51	1/2 NQ (saw)	285	238	-	24-Aug-13
133514	2013	EC13-092	24.50	26.00	1.50	1.49	1/4 NQ (saw)	260	275	(Original - DUP is 133515)	24-Aug-13
133515	2013	EC13-092	24.50	26.00	1.50	1.49	1/4 NQ (saw)	245	259	(Dup of 133514)	24-Aug-13
133516	2013	EC13-092	26.00	27.50	1.50	1.48	1/2 NQ (saw)	375	316	-	24-Aug-13
133517	2013	EC13-092	27.50	29.00	1.50	1.50	1/2 NQ (saw)	400	335	-	24-Aug-13
133518	2013	EC13-092	29.00	30.50	1.50	1.51	1/2 NQ (saw)	320	268	-	24-Aug-13
133519	2013	EC13-092	30.50	32.00	1.50	1.52	1/2 NQ (saw)	360	300	-	24-Aug-13
133520	2013	EC13-092	32.00	33.42	1.42	1.42	1/2 NQ (saw)	280	239	-	24-Aug-13
133521	2013	EC13-092	33.42	34.94	1.52	1.53	1/2 NQ (saw)	410	341	-	24-Aug-13
133522	2013	EC13-092	34.94	35.56	0.62	0.63	1/2 NQ (saw)	650	727	-	24-Aug-13
133523	2013	EC13-092	35.56	36.71	1.15	1.16	1/2 NQ (saw)	700	639	-	24-Aug-13
133524	2013	EC13-092	-	-	-	-	Blank	-	-	Qtz A	24-Aug-13
133525	2013	EC13-092	-	-	-	-	Standard	-	-	OREAS 146	24-Aug-13
133526	2013	EC13-092	36.71	38.00	1.29	1.26	1/2 NQ (saw)	760	675	-	24-Aug-13
133527	2013	EC13-092	38.00	38.81	0.81	0.82	1/2 NQ (saw)	620	635	-	24-Aug-13
133528	2013	EC13-092	38.81	40.00	1.19	1.19	1/2 NQ (saw)	460	416	-	24-Aug-13
133529	2013	EC13-092	40.00	41.35	1.35	1.33	1/2 NQ (saw)	295	257	-	24-Aug-13
133530	2013	EC13-092	41.35	42.38	1.03	1.02	1/2 NQ (saw)	270	257	-	24-Aug-13
133531	2013	EC13-092	42.38	43.00	0.62	0.62	1/2 NQ (saw)	260	292	-	24-Aug-13
133532	2013	EC13-092	43.00	44.50	1.50	1.49	1/2 NQ (saw)	270	227	-	24-Aug-13
133533	2013	EC13-092	44.50	46.00	1.50	1.49	1/2 NQ (saw)	310	260	-	24-Aug-13
133534	2013	EC13-092	46.00	47.50	1.50	1.49	1/2 NQ (saw)	330	277	-	24-Aug-13
133535	2013	EC13-092	47.50	49.00	1.50	1.49	1/2 NQ (saw)	330	277	-	24-Aug-13
133536	2013	EC13-092	49.00	50.50	1.50	1.50	1/2 NQ (saw)	400	335	-	24-Aug-13
133537	2013	EC13-092	50.50	52.00	1.50	1.49	1/2 NQ (saw)	270	227	-	24-Aug-13
133538	2013	EC13-092	52.00	53.50	1.50	1.50	1/4 NQ (saw)	240	253	(Original - DUP is 133539)	24-Aug-13
133539	2013	EC13-092	52.00	53.50	1.50	1.50	1/4 NQ (saw)	250	264	(Dup of 133538)	24-Aug-13
133540	2013	EC13-092	53.50	55.00	1.50	1.48	1/2 NQ (saw)	260	219	-	24-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133541	2013	EC13-092	55.00	56.50	1.50	1.49	1/2 NQ (saw)	340	286	-	24-Aug-13
133542	2013	EC13-092	56.50	58.00	1.50	1.38	1/2 NQ (saw)	300	258	-	24-Aug-13
133543	2013	EC13-092	58.00	59.50	1.50	1.22	1/2 NQ (saw)	345	310	-	24-Aug-13
133544	2013	EC13-092	59.50	61.00	1.50	1.48	1/2 NQ (saw)	270	227	-	24-Aug-13
133545	2013	EC13-092	61.00	62.50	1.50	1.50	1/2 NQ (saw)	250	209	-	24-Aug-13
133546	2013	EC13-092	62.50	64.00	1.50	1.25	1/2 NQ (saw)	250	223	-	24-Aug-13
133547	2013	EC13-092	64.00	65.50	1.50	1.33	1/2 NQ (saw)	290	253	-	24-Aug-13
133548	2013	EC13-092	65.50	67.00	1.50	1.46	1/2 NQ (saw)	240	203	-	24-Aug-13
133549	2013	EC13-092	67.00	68.50	1.50	1.50	1/2 NQ (saw)	240	201	-	24-Aug-13
133550	2013	EC13-092	-	-	-	-	Blank	-	-	Qtz A	24-Aug-13
133551	2013	EC13-092	-	-	-	-	Standard	-	-	TRM-2	24-Aug-13
133552	2013	EC13-092	68.50	69.60	1.10	1.12	1/2 NQ (saw)	235	217	-	24-Aug-13
133553	2013	EC13-092	69.60	71.50	1.90	1.88	1/2 NQ (saw)	255	198	-	24-Aug-13
133554	2013	EC13-092	71.50	73.00	1.50	1.28	1/2 NQ (saw)	245	216	-	24-Aug-13
133555	2013	EC13-092	73.00	74.50	1.50	1.47	1/2 NQ (saw)	275	232	-	24-Aug-13
133556	2013	EC13-092	74.50	76.00	1.50	1.50	1/2 NQ (saw)	280	235	-	24-Aug-13
133557	2013	EC13-092	76.00	77.36	1.36	1.35	1/2 NQ (saw)	280	243	-	24-Aug-13
133558	2013	EC13-092	77.36	78.50	1.14	1.12	1/2 NQ (saw)	250	231	-	24-Aug-13
133559	2013	EC13-092	78.50	79.76	1.26	1.27	1/2 NQ (saw)	290	257	-	24-Aug-13
133560	2013	EC13-092	79.76	80.11	0.35	0.35	1/2 NQ (saw)	440	599	-	24-Aug-13
133561	2013	EC13-092	80.11	81.00	0.89	0.90	1/2 NQ (saw)	210	209	-	24-Aug-13
133562	2013	EC13-092	81.00	82.04	1.04	1.04	1/2 NQ (saw)	240	227	-	24-Aug-13
133563	2013	EC13-093	2.50	4.00	1.50	1.48	1/2 NQ (saw)	300	252	-	24-Aug-13
133564	2013	EC13-093	4.00	5.50	1.50	1.51	1/2 NQ (saw)	280	234	-	24-Aug-13
133565	2013	EC13-093	5.50	7.00	1.50	1.53	1/2 NQ (saw)	230	191	-	24-Aug-13
133566	2013	EC13-093	7.00	8.50	1.50	1.50	1/2 NQ (saw)	260	218	-	24-Aug-13
133567	2013	EC13-093	8.50	9.72	1.22	1.22	1/2 NQ (saw)	245	220	-	24-Aug-13
133568	2013	EC13-093	9.72	11.00	1.28	1.30	1/4 NQ (saw)	240	266	(Original - DUP is 133569)	24-Aug-13
133569	2013	EC13-093	9.72	11.00	1.28	1.30	1/4 NQ (saw)	245	271	(Dup of 133568)	24-Aug-13
133570	2013	EC13-093	11.00	12.50	1.50	1.46	1/2 NQ (saw)	250	211	-	24-Aug-13
133571	2013	EC13-093	12.50	14.00	1.50	1.47	1/2 NQ (saw)	300	253	-	24-Aug-13
133572	2013	EC13-093	14.00	15.50	1.50	1.51	1/2 NQ (saw)	330	276	-	24-Aug-13
133573	2013	EC13-093	15.50	16.76	1.26	1.22	1/2 NQ (saw)	410	368	-	24-Aug-13
133574	2013	EC13-093	-	-	-	-	Blank	-	-	Qtz A	24-Aug-13
133575	2013	EC13-093	-	-	-	-	Standard	-	-	OREAS 146	24-Aug-13
133576	2013	EC13-093	16.76	18.00	1.24	1.24	1/2 NQ (saw)	320	286	-	24-Aug-13
133577	2013	EC13-093	18.00	19.50	1.50	1.54	1/2 NQ (saw)	225	187	-	24-Aug-13
133578	2013	EC13-093	19.50	21.00	1.50	1.50	1/2 NQ (saw)	250	209	-	24-Aug-13
133579	2013	EC13-093	21.00	22.50	1.50	1.51	1/2 NQ (saw)	275	230	-	24-Aug-13
133580	2013	EC13-093	22.50	23.50	1.00	1.01	1/2 NQ (saw)	230	220	-	24-Aug-13
133581	2013	EC13-093	23.50	24.19	0.69	0.70	1/2 NQ (saw)	220	238	-	24-Aug-13
133582	2013	EC13-093	24.19	25.50	1.31	1.33	1/2 NQ (saw)	205	179	-	24-Aug-13
133583	2013	EC13-093	25.50	26.92	1.42	1.42	1/2 NQ (saw)	210	179	-	24-Aug-13
133584	2013	EC13-093	26.92	27.68	0.76	0.77	1/2 NQ (saw)	200	209	-	24-Aug-13
133585	2013	EC13-093	27.68	29.00	1.32	1.31	1/2 NQ (saw)	245	215	-	24-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133586	2013	EC13-093	29.00	30.50	1.50	1.50	1/2 NQ (saw)	245	205	-	24-Aug-13
133587	2013	EC13-093	30.50	32.00	1.50	1.49	1/2 NQ (saw)	230	193	-	24-Aug-13
133588	2013	EC13-093	32.00	33.50	1.50	1.48	1/2 NQ (saw)	280	236	-	24-Aug-13
133589	2013	EC13-093	33.50	35.00	1.50	1.52	1/2 NQ (saw)	215	179	-	24-Aug-13
133590	2013	EC13-093	35.00	36.50	1.50	1.50	1/4 NQ (saw)	220	232	(Original - DUP is 133591)	24-Aug-13
133591	2013	EC13-093	35.00	36.50	1.50	1.50	1/4 NQ (saw)	225	238	(Dup of 133590)	24-Aug-13
133592	2013	EC13-093	36.50	38.00	1.50	1.50	1/2 NQ (saw)	190	159	-	24-Aug-13
133593	2013	EC13-093	38.00	39.50	1.50	1.50	1/2 NQ (saw)	200	168	-	24-Aug-13
133594	2013	EC13-093	39.50	41.00	1.50	1.51	1/2 NQ (saw)	220	184	-	25-Aug-13
133595	2013	EC13-093	41.00	42.50	1.50	1.52	1/2 NQ (saw)	260	217	-	25-Aug-13
133596	2013	EC13-093	42.50	44.00	1.50	1.50	1/2 NQ (saw)	240	201	-	25-Aug-13
133597	2013	EC13-093	44.00	45.50	1.50	1.48	1/2 NQ (saw)	240	202	-	25-Aug-13
133598	2013	EC13-093	45.50	46.50	1.00	0.99	1/2 NQ (saw)	190	183	-	25-Aug-13
133599	2013	EC13-093	-	-	-	-	Blank	180	-	Qtz A	25-Aug-13
133600	2013	EC13-093	-	-	-	-	Standard	185	-	TRM-2	25-Aug-13
133601	2013	EC13-093	46.50	47.93	1.43	1.43	1/2 NQ (saw)	270	230	-	25-Aug-13
133602	2013	EC13-093	47.93	49.50	1.57	1.57	1/2 NQ (saw)	270	223	-	25-Aug-13
133603	2013	EC13-093	49.50	51.00	1.50	1.51	1/2 NQ (saw)	250	209	-	25-Aug-13
133604	2013	EC13-093	51.00	52.00	1.00	1.00	1/2 NQ (saw)	230	221	-	25-Aug-13
133605	2013	EC13-093	52.00	53.32	1.32	1.32	1/2 NQ (saw)	270	236	-	25-Aug-13
133606	2013	EC13-093	53.32	54.65	1.33	1.32	1/2 NQ (saw)	380	332	-	25-Aug-13
133607	2013	EC13-093	54.65	55.62	0.97	0.97	1/2 NQ (saw)	220	213	-	25-Aug-13
133608	2013	EC13-093	55.62	57.00	1.38	1.40	1/2 NQ (saw)	220	189	-	25-Aug-13
133609	2013	EC13-093	57.00	58.50	1.50	1.52	1/2 NQ (saw)	250	209	-	25-Aug-13
133610	2013	EC13-093	58.50	60.00	1.50	1.51	1/2 NQ (saw)	240	201	-	25-Aug-13
133611	2013	EC13-093	60.00	61.09	1.09	1.09	1/2 NQ (saw)	230	214	-	25-Aug-13
133612	2013	EC13-093	61.09	62.16	1.07	1.18	1/2 NQ (saw)	230	209	-	25-Aug-13
133613	2013	EC13-093	62.16	63.50	1.34	1.20	1/2 NQ (saw)	280	253	-	25-Aug-13
133614	2013	EC13-093	63.50	65.00	1.50	1.47	1/4 NQ (saw)	230	244	(Original - DUP is 133615)	25-Aug-13
133615	2013	EC13-093	63.50	65.00	1.50	1.47	1/4 NQ (saw)	240	255	(Dup of 133614)	25-Aug-13
133616	2013	EC13-093	65.00	66.71	1.71	1.69	1/2 NQ (saw)	230	185	-	25-Aug-13
133617	2013	EC13-093	66.71	68.00	1.29	1.29	1/2 NQ (saw)	220	194	-	25-Aug-13
133618	2013	EC13-093	68.00	69.10	1.10	1.10	1/2 NQ (saw)	215	200	-	25-Aug-13
133619	2013	EC13-093	69.10	70.37	1.27	1.27	1/2 NQ (saw)	240	213	-	25-Aug-13
133620	2013	EC13-093	70.37	72.00	1.63	1.61	1/2 NQ (saw)	260	213	-	25-Aug-13
133621	2013	EC13-093	72.00	73.38	1.38	1.40	1/2 NQ (saw)	240	206	-	25-Aug-13
133622	2013	EC13-093	73.38	74.72	1.34	1.33	1/2 NQ (saw)	250	218	-	25-Aug-13
133623	2013	EC13-093	74.72	76.00	1.28	1.30	1/2 NQ (saw)	240	211	-	25-Aug-13
133624	2013	EC13-093	-	-	-	-	Blank	180	-	Qtz A	25-Aug-13
133625	2013	EC13-093	-	-	-	-	Standard	210	-	OREAS 146	25-Aug-13
133626	2013	EC13-093	76.00	77.55	1.55	1.33	1/2 NQ (saw)	290	253	-	25-Aug-13
133627	2013	EC13-093	77.55	79.00	1.45	1.47	1/2 NQ (saw)	230	194	-	25-Aug-13
133628	2013	EC13-093	79.00	80.50	1.50	1.45	1/2 NQ (saw)	220	186	-	25-Aug-13
133629	2013	EC13-093	80.50	82.00	1.50	1.48	1/2 NQ (saw)	220	185	-	25-Aug-13
133630	2013	EC13-093	82.00	83.50	1.50	1.46	1/2 NQ (saw)	250	211	-	25-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133631	2013	EC13-093	83.50	85.00	1.50	1.50	1/2 NQ (saw)	240	201	-	25-Aug-13
133632	2013	EC13-093	85.00	86.50	1.50	1.52	1/2 NQ (saw)	280	234	-	25-Aug-13
133633	2013	EC13-093	86.50	88.00	1.50	1.50	1/2 NQ (saw)	260	218	-	25-Aug-13
133634	2013	EC13-093	88.00	89.00	1.00	1.00	1/2 NQ (saw)	250	240	-	25-Aug-13
133635	2013	EC13-093	89.00	90.50	1.50	1.50	1/2 NQ (saw)	260	218	-	25-Aug-13
133636	2013	EC13-093	90.50	92.00	1.50	1.48	1/2 NQ (saw)	290	244	-	25-Aug-13
133637	2013	EC13-093	92.00	93.50	1.50	1.46	1/2 NQ (saw)	240	203	-	25-Aug-13
133638	2013	EC13-093	93.50	94.50	1.00	0.99	1/4 NQ (saw)	310	376	(Original - DUP is 133639)	25-Aug-13
133639	2013	EC13-093	93.50	94.50	1.00	0.99	1/4 NQ (saw)	270	327	(Dup of 133638)	25-Aug-13
133640	2013	EC13-093	94.50	95.73	1.23	1.20	1/2 NQ (saw)	330	298	-	25-Aug-13
133641	2013	EC13-093	95.73	97.00	1.27	1.31	1/2 NQ (saw)	200	175	-	25-Aug-13
133642	2013	EC13-093	97.00	98.11	1.11	1.12	1/2 NQ (saw)	190	175	-	25-Aug-13
133919	2013	EC13-093	98.11	100.00	1.89	1.89	1/2 NQ (saw)	200	155	-	2-Sep-13
133920	2013	EC13-093	100.00	102.00	2.00	2.03	1/2 NQ (saw)	150	114	-	2-Sep-13
133921	2013	EC13-093	102.00	103.90	1.90	1.82	1/2 NQ (saw)	150	118	-	2-Sep-13
133922	2013	EC13-093	103.90	105.04	1.14	1.14	1/2 NQ (saw)	160	147	-	2-Sep-13
133923	2013	EC13-093	105.04	105.77	0.73	0.73	1/2 NQ (saw)	275	293	-	2-Sep-13
133643	2013	EC13-094	1.65	3.00	1.35	1.37	1/2 NQ (saw)	290	250	-	26-Aug-13
133644	2013	EC13-094	3.00	4.00	1.00	1.02	1/2 NQ (saw)	260	248	-	26-Aug-13
133645	2013	EC13-094	4.00	5.50	1.50	1.48	1/2 NQ (saw)	260	219	-	26-Aug-13
133646	2013	EC13-094	5.50	7.07	1.57	1.57	1/2 NQ (saw)	270	223	-	26-Aug-13
133647	2013	EC13-094	7.07	8.00	0.93	0.93	1/2 NQ (saw)	260	255	-	26-Aug-13
133648	2013	EC13-094	8.00	9.50	1.50	1.50	1/2 NQ (saw)	270	226	-	26-Aug-13
133649	2013	EC13-094	-	-	-	-	Blank	180	-	Qtz A	26-Aug-13
133650	2013	EC13-094	-	-	-	-	Standard	200	-	OREAS 146	26-Aug-13
133651	2013	EC13-094	9.50	11.00	1.50	1.50	1/2 NQ (saw)	360	302	-	26-Aug-13
133652	2013	EC13-094	11.00	12.50	1.50	1.49	1/2 NQ (saw)	320	269	-	26-Aug-13
133653	2013	EC13-094	12.50	14.00	1.50	1.52	1/2 NQ (saw)	310	259	-	26-Aug-13
133654	2013	EC13-094	14.00	15.45	1.45	1.45	1/2 NQ (saw)	260	220	-	26-Aug-13
133655	2013	EC13-094	15.45	16.50	1.05	1.05	1/2 NQ (saw)	265	250	-	26-Aug-13
133656	2013	EC13-094	16.50	17.61	1.11	1.10	1/2 NQ (saw)	330	307	-	26-Aug-13
133657	2013	EC13-094	17.61	19.50	1.89	1.89	1/2 NQ (saw)	270	209	-	26-Aug-13
133658	2013	EC13-094	19.50	21.00	1.50	1.50	1/2 NQ (saw)	260	218	-	26-Aug-13
133659	2013	EC13-094	21.00	22.44	1.44	1.47	1/2 NQ (saw)	290	245	-	26-Aug-13
133660	2013	EC13-094	22.44	23.55	1.11	1.10	1/2 NQ (saw)	320	297	-	26-Aug-13
133661	2013	EC13-094	23.55	25.00	1.45	1.42	1/2 NQ (saw)	270	230	-	26-Aug-13
133662	2013	EC13-094	25.00	26.50	1.50	1.47	1/2 NQ (saw)	280	236	-	26-Aug-13
133663	2013	EC13-094	26.50	28.00	1.50	1.50	1/4 NQ (saw)	200	211	(Original - DUP is 133664)	26-Aug-13
133664	2013	EC13-094	26.50	28.00	1.50	1.50	1/4 NQ (saw)	210	222	(Dup of 133663)	26-Aug-13
133665	2013	EC13-094	28.00	29.33	1.33	1.31	1/2 NQ (saw)	275	241	-	26-Aug-13
133666	2013	EC13-094	29.33	30.58	1.25	1.25	1/2 NQ (saw)	270	240	-	26-Aug-13
133667	2013	EC13-094	30.58	32.00	1.42	1.41	1/2 NQ (saw)	330	282	-	26-Aug-13
133668	2013	EC13-094	32.00	33.50	1.50	1.50	1/2 NQ (saw)	340	285	-	26-Aug-13
133669	2013	EC13-094	33.50	35.00	1.50	1.53	1/2 NQ (saw)	300	250	-	26-Aug-13
133670	2013	EC13-094	35.00	36.50	1.50	1.48	1/2 NQ (saw)	290	244	-	26-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133671	2013	EC13-094	36.50	38.07	1.57	1.62	1/2 NQ (saw)	245	200	-	27-Aug-13
133672	2013	EC13-094	38.07	39.00	0.93	0.91	1/2 NQ (saw)	230	228	-	27-Aug-13
133673	2013	EC13-094	39.00	40.50	1.50	1.45	1/2 NQ (saw)	-	-	-	27-Aug-13
133674	2013	EC13-094	-	-	-	-	Blank	-	-	Qtz A	27-Aug-13
133675	2013	EC13-094	-	-	-	-	Standard	-	-	TRM-2	27-Aug-13
133676	2013	EC13-094	40.50	42.08	1.58	1.57	1/2 NQ (saw)	240	198	-	27-Aug-13
133677	2013	EC13-094	42.08	43.50	1.42	1.43	1/2 NQ (saw)	215	183	-	27-Aug-13
133678	2013	EC13-094	43.50	45.00	1.50	1.50	1/2 NQ (saw)	210	176	-	27-Aug-13
133679	2013	EC13-094	45.00	46.50	1.50	1.51	1/2 NQ (saw)	210	176	-	27-Aug-13
133680	2013	EC13-094	46.50	48.00	1.50	1.51	1/2 NQ (saw)	250	209	-	27-Aug-13
133681	2013	EC13-094	48.00	49.50	1.50	1.50	1/2 NQ (saw)	245	205	-	27-Aug-13
133682	2013	EC13-094	49.50	51.00	1.50	1.50	1/2 NQ (saw)	220	184	-	27-Aug-13
133683	2013	EC13-094	51.00	52.50	1.50	1.50	1/2 NQ (saw)	230	193	-	27-Aug-13
133684	2013	EC13-094	52.50	54.00	1.50	1.49	1/2 NQ (saw)	240	202	-	27-Aug-13
133685	2013	EC13-094	54.00	55.43	1.43	1.43	1/2 NQ (saw)	220	187	-	27-Aug-13
133686	2013	EC13-094	55.43	56.79	1.36	1.37	1/2 NQ (saw)	220	190	-	27-Aug-13
133687	2013	EC13-094	56.79	58.00	1.21	1.19	1/2 NQ (saw)	250	226	-	27-Aug-13
133688	2013	EC13-094	58.00	59.50	1.50	1.49	1/4 NQ (saw)	220	233	(Original - DUP is 133689)	27-Aug-13
133689	2013	EC13-094	58.00	59.50	1.50	1.49	1/4 NQ (saw)	225	238	(Dup of 133688)	27-Aug-13
133690	2013	EC13-094	59.50	61.00	1.50	1.52	1/2 NQ (saw)	215	179	-	27-Aug-13
133691	2013	EC13-094	61.00	62.13	1.13	1.15	1/2 NQ (saw)	210	192	-	27-Aug-13
133692	2013	EC13-094	62.13	63.50	1.37	1.38	1/2 NQ (saw)	195	168	-	27-Aug-13
133693	2013	EC13-094	63.50	65.00	1.50	1.52	1/2 NQ (saw)	245	204	-	27-Aug-13
133694	2013	EC13-094	65.00	66.50	1.50	1.52	1/2 NQ (saw)	220	184	-	27-Aug-13
133695	2013	EC13-094	66.50	68.00	1.50	1.51	1/2 NQ (saw)	225	188	-	27-Aug-13
133696	2013	EC13-094	68.00	69.20	1.20	1.20	1/2 NQ (saw)	-	-	-	27-Aug-13
133697	2013	EC13-095	4.56	6.00	1.44	1.40	1/2 NQ (saw)	350	300	-	27-Aug-13
133698	2013	EC13-095	6.00	7.50	1.50	1.46	1/2 NQ (saw)	400	338	-	27-Aug-13
133699	2013	EC13-095	-	-	-	-	Blank	-	-	Qtz A	27-Aug-13
133700	2013	EC13-095	-	-	-	-	Standard	-	-	OREAS 146	27-Aug-13
133701	2013	EC13-095	7.50	9.00	1.50	1.40	1/2 NQ (saw)	400	343	-	27-Aug-13
133702	2013	EC13-095	9.00	10.50	1.50	1.53	1/2 NQ (saw)	325	271	-	27-Aug-13
133703	2013	EC13-095	10.50	12.00	1.50	1.50	1/2 NQ (saw)	410	344	-	27-Aug-13
133704	2013	EC13-095	12.00	13.50	1.50	1.50	1/2 NQ (saw)	350	293	-	27-Aug-13
133705	2013	EC13-095	13.50	15.00	1.50	1.49	1/2 NQ (saw)	380	319	-	27-Aug-13
133706	2013	EC13-095	15.00	16.50	1.50	1.51	1/2 NQ (saw)	355	297	-	27-Aug-13
133707	2013	EC13-095	16.50	18.00	1.50	1.47	1/2 NQ (saw)	320	270	-	27-Aug-13
133708	2013	EC13-095	18.00	19.50	1.50	1.48	1/2 NQ (saw)	350	295	-	27-Aug-13
133709	2013	EC13-095	19.50	21.00	1.50	1.48	1/2 NQ (saw)	360	303	-	27-Aug-13
133710	2013	EC13-095	21.00	22.50	1.50	1.50	1/2 NQ (saw)	360	302	-	27-Aug-13
133711	2013	EC13-095	22.50	24.00	1.50	1.52	1/2 NQ (saw)	390	325	-	27-Aug-13
133712	2013	EC13-095	24.00	25.50	1.50	1.52	1/2 NQ (saw)	410	342	-	27-Aug-13
133713	2013	EC13-095	25.50	27.00	1.50	1.49	1/4 NQ (saw)	300	317	(Original - DUP is 133714)	27-Aug-13
133714	2013	EC13-095	25.50	27.00	1.50	1.49	1/4 NQ (saw)	285	302	(Dup of 133713)	27-Aug-13
133715	2013	EC13-095	27.00	28.50	1.50	1.50	1/2 NQ (saw)	375	314	-	27-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133716	2013	EC13-095	28.50	30.00	1.50	1.53	1/2 NQ (saw)	355	295	-	27-Aug-13
133717	2013	EC13-095	30.00	31.50	1.50	1.50	1/2 NQ (saw)	360	302	-	27-Aug-13
133718	2013	EC13-095	31.50	33.00	1.50	1.49	1/2 NQ (saw)	385	323	-	27-Aug-13
133719	2013	EC13-095	33.00	34.50	1.50	1.47	1/2 NQ (saw)	370	312	-	27-Aug-13
133720	2013	EC13-095	34.50	36.00	1.50	1.46	1/2 NQ (saw)	470	397	-	27-Aug-13
133721	2013	EC13-095	36.00	37.50	1.50	1.50	1/2 NQ (saw)	500	419	-	27-Aug-13
133722	2013	EC13-095	37.50	39.00	1.50	1.49	1/2 NQ (saw)	350	294	-	27-Aug-13
133723	2013	EC13-095	39.00	40.50	1.50	1.50	1/2 NQ (saw)	420	352	-	27-Aug-13
133724	2013	EC13-095	-	-	-	-	Blank	-	-	Qtz A	27-Aug-13
133725	2013	EC13-095	-	-	-	-	Standard	-	-	TRM-2	27-Aug-13
133726	2013	EC13-095	40.50	42.00	1.50	1.48	1/2 NQ (saw)	340	286	-	27-Aug-13
133727	2013	EC13-095	42.00	43.50	1.50	1.49	1/2 NQ (saw)	350	294	-	27-Aug-13
133728	2013	EC13-095	43.50	45.00	1.50	1.51	1/2 NQ (saw)	340	284	-	27-Aug-13
133729	2013	EC13-095	45.00	46.50	1.50	1.53	1/2 NQ (saw)	325	271	-	27-Aug-13
133730	2013	EC13-095	46.50	48.00	1.50	1.53	1/2 NQ (saw)	345	287	-	27-Aug-13
133731	2013	EC13-095	48.00	49.50	1.50	1.49	1/2 NQ (saw)	385	323	-	27-Aug-13
133732	2013	EC13-095	49.50	51.00	1.50	1.48	1/2 NQ (saw)	360	303	-	27-Aug-13
133733	2013	EC13-095	51.00	52.50	1.50	1.50	1/2 NQ (saw)	310	260	-	27-Aug-13
133734	2013	EC13-095	52.50	54.00	1.50	1.51	1/2 NQ (saw)	390	326	-	27-Aug-13
133735	2013	EC13-095	54.00	55.50	1.50	1.48	1/2 NQ (saw)	360	303	-	27-Aug-13
133736	2013	EC13-095	57.00	58.50	1.50	1.50	1/2 NQ (saw)	360	302	-	27-Aug-13
133737	2013	EC13-095	58.50	60.00	1.50	1.50	1/2 NQ (saw)	400	335	-	27-Aug-13
133738	2013	EC13-095	60.00	61.50	1.50	1.50	1/2 NQ (saw)	345	289	-	27-Aug-13
133739	2013	EC13-095	61.50	63.00	1.50	1.50	1/4 NQ (saw)	290	306	(Original - DUP is 133740)	27-Aug-13
133740	2013	EC13-095	61.50	63.00	1.50	1.50	1/4 NQ (saw)	280	296	(Dup of 133739)	27-Aug-13
133741	2013	EC13-095	63.00	64.50	1.50	1.50	1/2 NQ (saw)	350	293	-	27-Aug-13
133742	2013	EC13-095	64.50	66.00	1.50	1.50	1/2 NQ (saw)	320	268	-	27-Aug-13
133743	2013	EC13-095	66.00	67.50	1.50	1.49	1/2 NQ (saw)	380	319	-	27-Aug-13
133744	2013	EC13-095	67.50	69.00	1.50	1.49	1/2 NQ (saw)	320	269	-	27-Aug-13
133745	2013	EC13-095	69.00	70.50	1.50	1.50	1/2 NQ (saw)	315	264	-	27-Aug-13
133746	2013	EC13-095	70.50	71.50	1.00	0.99	1/2 NQ (saw)	260	250	-	27-Aug-13
133747	2013	EC13-095	71.50	73.00	1.50	1.47	1/2 NQ (saw)	240	202	-	27-Aug-13
133748	2013	EC13-095	73.00	74.46	1.46	1.43	1/2 NQ (saw)	325	277	-	27-Aug-13
133749	2013	EC13-095	-	-	-	-	Blank	-	-	Qtz A	27-Aug-13
133750	2013	EC13-095	-	-	-	-	Standard	-	-	OREAS 146	27-Aug-13
133751	2013	EC13-095	74.46	76.00	1.54	1.54	1/2 NQ (saw)	390	324	-	27-Aug-13
133752	2013	EC13-095	76.00	77.50	1.50	1.49	1/2 NQ (saw)	350	294	-	27-Aug-13
133753	2013	EC13-095	77.50	79.00	1.50	1.48	1/2 NQ (saw)	320	269	-	27-Aug-13
133754	2013	EC13-095	79.00	80.50	1.50	1.50	1/2 NQ (saw)	350	293	-	27-Aug-13
133755	2013	EC13-095	80.50	82.00	1.50	1.47	1/2 NQ (saw)	350	295	-	27-Aug-13
133756	2013	EC13-095	82.00	83.29	1.29	1.29	1/2 NQ (saw)	360	317	-	27-Aug-13
133757	2013	EC13-095	83.29	84.50	1.21	1.21	1/2 NQ (saw)	370	333	-	28-Aug-13
133758	2013	EC13-095	84.50	86.00	1.50	1.49	1/2 NQ (saw)	410	344	-	28-Aug-13
133759	2013	EC13-095	86.00	87.50	1.50	1.48	1/2 NQ (saw)	330	278	-	28-Aug-13
133760	2013	EC13-095	87.50	89.00	1.50	1.51	1/2 NQ (saw)	430	359	-	28-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133761	2013	EC13-095	89.00	90.50	1.50	1.52	1/2 NQ (saw)	490	409	-	28-Aug-13
133762	2013	EC13-095	90.50	92.00	1.50	1.51	1/2 NQ (saw)	520	435	-	28-Aug-13
133763	2013	EC13-095	92.00	93.50	1.50	1.50	1/4 NQ (saw)	350	369	(Original - DUP is 133764)	28-Aug-13
133764	2013	EC13-095	92.00	93.50	1.50	1.50	1/4 NQ (saw)	370	391	(Dup of 133763)	28-Aug-13
133765	2013	EC13-095	93.50	94.50	1.00	1.00	1/2 NQ (saw)	410	393	-	28-Aug-13
133766	2013	EC13-095	94.50	95.66	1.16	1.16	1/2 NQ (saw)	480	438	-	28-Aug-13
133767	2013	EC13-095	95.66	96.98	1.32	1.29	1/2 NQ (saw)	420	370	-	28-Aug-13
133768	2013	EC13-095	96.98	97.86	0.88	0.89	1/2 NQ (saw)	480	479	-	28-Aug-13
133769	2013	EC13-095	97.86	99.00	1.14	1.12	1/2 NQ (saw)	540	499	-	28-Aug-13
133770	2013	EC13-095	99.00	100.50	1.50	1.50	1/2 NQ (saw)	490	411	-	28-Aug-13
133771	2013	EC13-095	100.50	102.00	1.50	1.49	1/2 NQ (saw)	600	504	-	28-Aug-13
133772	2013	EC13-095	102.00	103.50	1.50	1.49	1/2 NQ (saw)	510	428	-	28-Aug-13
133773	2013	EC13-095	103.50	105.00	1.50	1.48	1/2 NQ (saw)	440	370	-	28-Aug-13
133774	2013	EC13-095	-	-	-	-	Blank	180	-	Qtz A	28-Aug-13
133775	2013	EC13-095	-	-	-	-	Standard	200	-	TRM-2	28-Aug-13
133776	2013	EC13-095	105.00	106.50	1.50	1.51	1/2 NQ (saw)	450	376	-	28-Aug-13
133777	2013	EC13-095	106.50	108.00	1.50	1.50	1/2 NQ (saw)	420	352	-	28-Aug-13
133778	2013	EC13-095	108.00	109.50	1.50	1.51	1/2 NQ (saw)	370	309	-	28-Aug-13
133779	2013	EC13-095	109.50	111.00	1.50	1.49	1/2 NQ (saw)	390	328	-	28-Aug-13
133780	2013	EC13-095	111.00	112.50	1.50	1.50	1/2 NQ (saw)	470	394	-	28-Aug-13
133781	2013	EC13-095	112.50	114.00	1.50	1.51	1/2 NQ (saw)	350	293	-	28-Aug-13
133782	2013	EC13-095	114.00	115.95	1.95	1.96	1/2 NQ (saw)	320	245	-	28-Aug-13
133783	2013	EC13-095	115.95	117.50	1.55	1.56	1/2 NQ (saw)	190	157	-	28-Aug-13
133784	2013	EC13-095	117.50	119.35	1.85	1.70	1/2 NQ (saw)	190	153	-	28-Aug-13
133785	2013	EC13-095	119.35	120.92	1.57	1.64	1/2 NQ (saw)	200	163	-	28-Aug-13
133786	2013	EC13-095	120.92	123.50	2.58	2.67	1/2 NQ (saw)	450	311	-	28-Aug-13
133787	2013	EC13-095	123.50	125.00	1.50	1.50	1/4 NQ (saw)	370	391	(Original - DUP is 133788)	28-Aug-13
133788	2013	EC13-095	123.50	125.00	1.50	1.50	1/4 NQ (saw)	380	401	(Dup of 133787)	28-Aug-13
133789	2013	EC13-095	125.00	126.50	1.50	1.51	1/2 NQ (saw)	470	393	-	28-Aug-13
133790	2013	EC13-095	126.50	128.00	1.50	1.50	1/2 NQ (saw)	470	394	-	28-Aug-13
133791	2013	EC13-095	128.00	129.50	1.50	1.48	1/2 NQ (saw)	400	337	-	28-Aug-13
133792	2013	EC13-095	129.50	131.00	1.50	1.50	1/2 NQ (saw)	430	360	-	28-Aug-13
133793	2013	EC13-095	131.00	132.00	1.00	1.00	1/2 NQ (saw)	350	336	-	28-Aug-13
133794	2013	EC13-095	132.00	133.21	1.21	1.21	1/2 NQ (saw)	450	405	-	28-Aug-13
133735A	2013	EC13-095	55.50	57.00	1.50	1.49	1/2 NQ (saw)	405	340	-	27-Aug-13
133841	2013	EC13-096	3.20	4.50	1.30	1.32	1/2 NQ (saw)	420	367	-	29-Aug-13
133842	2013	EC13-096	4.50	6.00	1.50	1.47	1/2 NQ (saw)	380	321	-	29-Aug-13
133843	2013	EC13-096	6.00	7.50	1.50	1.47	1/2 NQ (saw)	380	321	-	29-Aug-13
133844	2013	EC13-096	7.50	8.50	1.00	0.98	1/2 NQ (saw)	300	290	-	29-Aug-13
133845	2013	EC13-096	8.50	10.00	1.50	1.50	1/2 NQ (saw)	300	251	-	29-Aug-13
133846	2013	EC13-096	10.00	11.00	1.00	1.00	1/2 NQ (saw)	240	230	-	29-Aug-13
133847	2013	EC13-096	11.00	12.30	1.30	1.30	1/2 NQ (saw)	310	272	-	29-Aug-13
133848	2013	EC13-096	12.30	13.64	1.34	1.34	1/2 NQ (saw)	310	270	-	29-Aug-13
133849	2013	EC13-096	-	-	-	-	Blank	220	-	Qtz A	29-Aug-13
133850	2013	EC13-096	-	-	-	-	Standard	210	-	OREAS 146	29-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133851	2013	EC13-096	13.64	14.62	0.98	0.97	1/2 NQ (saw)	260	252	-	29-Aug-13
133852	2013	EC13-096	14.62	16.00	1.38	1.39	1/2 NQ (saw)	260	223	-	29-Aug-13
133853	2013	EC13-096	16.00	17.50	1.50	1.48	1/2 NQ (saw)	320	269	-	29-Aug-13
133854	2013	EC13-096	17.50	19.00	1.50	1.46	1/2 NQ (saw)	290	245	-	29-Aug-13
133855	2013	EC13-096	19.00	20.50	1.50	1.50	1/2 NQ (saw)	390	327	-	29-Aug-13
133856	2013	EC13-096	20.50	22.00	1.50	1.50	1/2 NQ (saw)	330	277	-	29-Aug-13
133857	2013	EC13-096	22.00	23.50	1.50	1.50	1/2 NQ (saw)	330	277	-	29-Aug-13
133858	2013	EC13-096	23.50	25.00	1.50	1.49	1/2 NQ (saw)	320	269	-	30-Aug-13
133859	2013	EC13-096	25.00	26.00	1.00	1.00	1/2 NQ (saw)	280	269	-	30-Aug-13
133860	2013	EC13-096	26.00	27.50	1.50	1.50	1/2 NQ (saw)	370	310	-	30-Aug-13
133861	2013	EC13-096	27.50	29.00	1.50	1.51	1/4 NQ (saw)	300	316	(Original - DUP is 133862)	30-Aug-13
133862	2013	EC13-096	27.50	29.00	1.50	1.51	1/4 NQ (saw)	310	327	(Dup of 133861)	30-Aug-13
133863	2013	EC13-096	29.00	30.50	1.50	1.48	1/2 NQ (saw)	350	295	-	30-Aug-13
133864	2013	EC13-096	30.50	32.00	1.50	1.48	1/2 NQ (saw)	320	269	-	30-Aug-13
133865	2013	EC13-096	32.00	33.50	1.50	1.50	1/2 NQ (saw)	300	251	-	30-Aug-13
133866	2013	EC13-096	33.50	35.00	1.50	1.50	1/2 NQ (saw)	350	293	-	30-Aug-13
133867	2013	EC13-096	35.00	36.50	1.50	1.49	1/2 NQ (saw)	280	235	-	30-Aug-13
133868	2013	EC13-096	36.50	38.00	1.50	1.49	1/2 NQ (saw)	300	252	-	30-Aug-13
133869	2013	EC13-096	38.00	39.50	1.50	1.50	1/2 NQ (saw)	340	285	-	30-Aug-13
133870	2013	EC13-096	39.50	41.00	1.50	1.49	1/2 NQ (saw)	290	244	-	30-Aug-13
133871	2013	EC13-096	41.00	42.50	1.50	1.50	1/2 NQ (saw)	310	260	-	30-Aug-13
133872	2013	EC13-096	42.50	43.17	0.67	0.67	1/2 NQ (saw)	310	340	-	30-Aug-13
133873	2013	EC13-096	43.17	44.00	0.83	0.83	1/2 NQ (saw)	370	378	-	30-Aug-13
133874	2013	EC13-096	-	-	-	-	Blank	220	-	Qtz A	30-Aug-13
133875	2013	EC13-096	-	-	-	-	Standard	230	-	TRM-2	30-Aug-13
133876	2013	EC13-096	44.00	45.50	1.50	1.50	1/2 NQ (saw)	370	310	-	30-Aug-13
133877	2013	EC13-096	45.50	47.00	1.50	1.50	1/2 NQ (saw)	430	360	-	30-Aug-13
133878	2013	EC13-096	47.00	48.00	1.00	1.00	1/2 NQ (saw)	360	345	-	30-Aug-13
133879	2013	EC13-096	48.00	49.00	1.00	1.00	1/2 NQ (saw)	370	355	-	30-Aug-13
133880	2013	EC13-096	49.00	50.00	1.00	0.99	1/2 NQ (saw)	335	322	-	30-Aug-13
133881	2013	EC13-096	50.00	51.50	1.50	1.48	1/2 NQ (saw)	380	320	-	30-Aug-13
133882	2013	EC13-096	51.50	52.25	0.75	0.75	1/2 NQ (saw)	350	369	-	30-Aug-13
133883	2013	EC13-096	52.25	53.50	1.25	1.22	1/2 NQ (saw)	280	251	-	30-Aug-13
133884	2013	EC13-096	53.50	54.50	1.00	0.99	1/2 NQ (saw)	270	260	-	30-Aug-13
133885	2013	EC13-096	54.50	55.67	1.17	1.17	1/2 NQ (saw)	280	255	-	30-Aug-13
133886	2013	EC13-096	55.67	56.80	1.13	1.11	1/4 NQ (saw)	260	303	(Original - DUP is 133887)	30-Aug-13
133887	2013	EC13-096	55.67	56.80	1.13	1.11	1/4 NQ (saw)	250	292	(Dup of 133886)	30-Aug-13
133888	2013	EC13-096	56.80	58.27	1.47	1.50	1/2 NQ (saw)	260	218	-	30-Aug-13
133889	2013	EC13-096	58.27	59.50	1.23	1.27	1/2 NQ (saw)	220	195	-	30-Aug-13
133890	2013	EC13-096	59.50	61.00	1.50	1.50	1/2 NQ (saw)	280	235	-	30-Aug-13
133891	2013	EC13-096	61.00	62.50	1.50	1.48	1/2 NQ (saw)	290	244	-	30-Aug-13
133892	2013	EC13-096	62.50	63.82	1.32	1.33	1/2 NQ (saw)	300	262	-	30-Aug-13
133893	2013	EC13-096	63.82	65.44	1.62	1.63	1/2 NQ (saw)	270	220	-	30-Aug-13
133894	2013	EC13-096	65.44	66.63	1.19	1.19	1/2 NQ (saw)	275	249	-	30-Aug-13
133895	2013	EC13-096	66.63	68.16	1.53	1.53	1/2 NQ (saw)	430	358	-	30-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133896	2013	EC13-096	68.16	69.50	1.34	1.32	1/2 NQ (saw)	310	271	-	30-Aug-13
133897	2013	EC13-096	69.50	70.66	1.16	1.17	1/2 NQ (saw)	300	273	-	30-Aug-13
133898	2013	EC13-096	70.66	72.00	1.34	1.35	1/2 NQ (saw)	380	330	-	30-Aug-13
133899	2013	EC13-096	-	-	-	-	Blank	190	-	Qtz A	30-Aug-13
133900	2013	EC13-096	-	-	-	-	Standard	200	-	OREAS 146	30-Aug-13
133901	2013	EC13-096	72.00	73.54	1.54	1.51	1/2 NQ (saw)	320	268	-	30-Aug-13
133902	2013	EC13-096	73.54	75.00	1.46	1.45	1/2 NQ (saw)	320	271	-	30-Aug-13
133903	2013	EC13-096	75.00	76.50	1.50	1.48	1/2 NQ (saw)	320	269	-	30-Aug-13
133904	2013	EC13-096	76.50	78.00	1.50	1.48	1/2 NQ (saw)	340	286	-	30-Aug-13
133905	2013	EC13-096	78.00	79.50	1.50	1.51	1/2 NQ (saw)	290	242	-	30-Aug-13
133906	2013	EC13-096	79.50	81.41	1.91	1.89	1/2 NQ (saw)	420	326	-	30-Aug-13
133907	2013	EC13-096	-	-	-	-	Blank	200	-	Qtz A	30-Aug-13
133908	2013	EC13-096	-	-	-	-	Standard	200	-	TRM2	30-Aug-13
133909	2013	EC13-096	81.41	82.50	1.09	1.14	1/2 NQ (saw)	230	211	-	30-Aug-13
133910	2013	EC13-096	82.50	84.00	1.50	1.50	1/2 NQ (saw)	260	218	-	30-Aug-13
133911	2013	EC13-096	84.00	85.45	1.45	1.45	1/2 NQ (saw)	225	191	-	30-Aug-13
133912	2013	EC13-096	85.45	87.00	1.55	1.53	1/2 NQ (saw)	330	275	-	30-Aug-13
133913	2013	EC13-096	87.00	88.50	1.50	1.50	1/4 NQ (saw)	280	296	(Original - DUP is 133914)	30-Aug-13
133914	2013	EC13-096	87.00	88.50	1.50	1.50	1/4 NQ (saw)	270	285	(Dup of 133913)	30-Aug-13
133915	2013	EC13-096	88.50	90.00	1.50	1.50	1/2 NQ (saw)	260	218	-	30-Aug-13
133916	2013	EC13-096	90.00	91.50	1.50	1.49	1/2 NQ (saw)	280	235	-	30-Aug-13
133917	2013	EC13-096	91.50	92.50	1.00	1.00	1/2 NQ (saw)	260	249	-	30-Aug-13
133918	2013	EC13-096	92.50	93.71	1.21	1.21	1/2 NQ (saw)	265	239	-	30-Aug-13
133795	2013	EC13-097	3.35	5.00	1.65	1.66	1/2 NQ (saw)	270	219	-	28-Aug-13
133796	2013	EC13-097	5.00	6.32	1.32	1.26	1/2 NQ (saw)	350	311	-	28-Aug-13
133797	2013	EC13-097	6.32	7.56	1.24	1.25	1/2 NQ (saw)	190	169	-	28-Aug-13
133798	2013	EC13-097	7.56	8.83	1.27	1.31	1/2 NQ (saw)	310	272	-	28-Aug-13
133799	2013	EC13-097	-	-	-	-	Blank	190	-	Qtz A	28-Aug-13
133800	2013	EC13-097	-	-	-	-	Standard	210	-	OREAS 146	28-Aug-13
133801	2013	EC13-097	8.83	10.00	1.17	1.21	1/2 NQ (saw)	350	315	-	28-Aug-13
133802	2013	EC13-097	10.00	11.50	1.50	1.50	1/2 NQ (saw)	360	302	-	28-Aug-13
133803	2013	EC13-097	11.50	13.00	1.50	1.50	1/2 NQ (saw)	420	352	-	28-Aug-13
133804	2013	EC13-097	13.00	13.35	0.35	0.35	1/2 NQ (saw)	330	449	-	28-Aug-13
133805	2013	EC13-097	13.35	15.00	1.65	1.59	1/2 NQ (saw)	250	205	-	28-Aug-13
133806	2013	EC13-097	15.00	17.00	2.00	1.98	1/2 NQ (saw)	240	183	-	28-Aug-13
133807	2013	EC13-097	17.00	19.00	2.00	2.00	1/2 NQ (saw)	200	152	-	28-Aug-13
133808	2013	EC13-097	19.00	20.12	1.12	1.13	1/2 NQ (saw)	360	332	-	29-Aug-13
133809	2013	EC13-097	20.12	21.44	1.32	1.31	1/2 NQ (saw)	210	184	-	29-Aug-13
133810	2013	EC13-097	21.44	23.25	1.81	1.71	1/2 NQ (saw)	210	168	-	29-Aug-13
133811	2013	EC13-097	23.25	24.04	0.79	0.78	1/2 NQ (saw)	320	333	-	29-Aug-13
133812	2013	EC13-097	24.04	25.19	1.15	1.16	1/2 NQ (saw)	190	173	-	29-Aug-13
133813	2013	EC13-097	25.19	26.38	1.19	1.09	1/2 NQ (saw)	210	196	-	29-Aug-13
133814	2013	EC13-097	26.38	27.50	1.12	1.13	1/4 NQ (saw)	320	371	(Original - DUP is 133815)	29-Aug-13
133815	2013	EC13-097	26.38	27.50	1.12	1.13	1/4 NQ (saw)	330	383	(Dup of 133814)	29-Aug-13
133816	2013	EC13-097	27.50	29.00	1.50	1.48	1/2 NQ (saw)	430	362	-	29-Aug-13

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133817	2013	EC13-097	29.00	30.46	1.46	1.46	1/2 NQ (saw)	410	347	-	29-Aug-13
133818	2013	EC13-097	30.46	31.00	0.54	0.54	1/2 NQ (saw)	230	271	-	29-Aug-13
133819	2013	EC13-097	31.00	32.50	1.50	1.48	1/2 NQ (saw)	590	497	-	29-Aug-13
133820	2013	EC13-097	32.50	34.00	1.50	1.50	1/2 NQ (saw)	530	444	-	29-Aug-13
133821	2013	EC13-097	34.00	35.50	1.50	1.50	1/2 NQ (saw)	460	385	-	29-Aug-13
133822	2013	EC13-097	35.50	37.00	1.50	1.49	1/2 NQ (saw)	440	369	-	29-Aug-13
133823	2013	EC13-097	37.00	38.50	1.50	1.50	1/2 NQ (saw)	460	385	-	29-Aug-13
133824	2013	EC13-097	-	-	-	-	Blank	220	-	Qtz A	29-Aug-13
133825	2013	EC13-097	-	-	-	-	Standard	220	-	TRM-2	29-Aug-13
133826	2013	EC13-097	38.50	39.50	1.00	0.99	1/2 NQ (saw)	500	481	-	29-Aug-13
133827	2013	EC13-097	39.50	41.76	2.26	1.34	1/2 NQ (saw)	320	278	-	29-Aug-13
133828	2013	EC13-097	41.76	43.00	1.24	1.23	1/2 NQ (saw)	390	349	-	29-Aug-13
133829	2013	EC13-097	43.00	44.50	1.50	1.47	1/2 NQ (saw)	330	278	-	29-Aug-13
133830	2013	EC13-097	44.50	46.00	1.50	1.45	1/2 NQ (saw)	320	271	-	29-Aug-13
133831	2013	EC13-097	46.00	47.00	1.00	0.97	1/2 NQ (saw)	285	276	-	29-Aug-13
133832	2013	EC13-097	47.00	47.78	0.78	0.78	1/2 NQ (saw)	320	333	-	29-Aug-13
133833	2013	EC13-097	47.78	49.14	1.36	1.37	1/2 NQ (saw)	570	492	-	29-Aug-13
133834	2013	EC13-097	49.14	50.00	0.86	0.85	1/2 NQ (saw)	480	486	-	29-Aug-13
133835	2013	EC13-097	50.00	51.50	1.50	1.50	1/2 NQ (saw)	670	561	-	29-Aug-13
133836	2013	EC13-097	51.50	53.00	1.50	1.53	1/2 NQ (saw)	580	483	-	29-Aug-13
133837	2013	EC13-097	53.00	54.52	1.52	1.47	1/2 NQ (saw)	780	658	-	29-Aug-13
133838	2013	EC13-097	54.52	55.50	0.98	0.98	1/2 NQ (saw)	480	463	-	29-Aug-13
133839	2013	EC13-097	55.50	56.34	0.84	0.84	1/4 NQ (saw)	340	435	(Original - DUP is 133840)	29-Aug-13
133840	2013	EC13-097	55.50	56.34	0.84	0.84	1/4 NQ (saw)	320	410	(Dup of 133839)	29-Aug-13
117006	2015	EC14-098	16.36	18.50	2.14	1.44	1/4 NQ (saw)	440	471	Re-sample of 133934 (lost in transit)	13-Apr-15
133926	2014	EC14-098	4.92	6.44	1.52	1.52	1/2 NQ (saw)	660	551	-	12-Apr-14
133927	2014	EC14-098	6.44	8.00	1.56	1.54	1/2 NQ (saw)	628	522	-	12-Apr-14
133928	2014	EC14-098	8.00	9.50	1.50	1.52	1/2 NQ (saw)	498	415	-	12-Apr-14
133929	2014	EC14-098	9.50	11.00	1.50	1.47	1/2 NQ (saw)	403	340	-	12-Apr-14
133930	2014	EC14-098	11.00	12.50	1.50	1.48	1/2 NQ (saw)	470	396	-	12-Apr-14
133931	2014	EC14-098	12.50	14.00	1.50	1.42	1/2 NQ (saw)	430	367	-	12-Apr-14
133932	2014	EC14-098	14.00	15.00	1.00	1.00	1/2 NQ (saw)	579	555	-	12-Apr-14
133933	2014	EC14-098	15.00	16.36	1.36	1.33	1/2 NQ (saw)	531	463	-	12-Apr-14
133934	2014	EC14-098	16.36	18.50	2.14	1.44	1/2 NQ (saw)	560	476	Sample Lost in Transit	12-Apr-14
133935	2014	EC14-098	-	-	-	-	Blank	134	-	Qtz-A	12-Apr-14
133936	2014	EC14-098	18.50	20.00	1.50	1.44	1/2 NQ (saw)	536	455	-	12-Apr-14
133937	2014	EC14-098	20.00	21.50	1.50	1.46	1/2 NQ (saw)	778	658	-	12-Apr-14
133938	2014	EC14-098	21.50	23.00	1.50	1.45	1/2 NQ (saw)	467	396	-	13-Apr-14
133939	2014	EC14-098	23.00	24.50	1.50	1.46	1/4 NQ (saw)	330	352	(Original - Dup is 133940)	13-Apr-14
133940	2014	EC14-098	23.00	24.50	1.50	1.46	1/4 NQ (saw)	360	383	(Dup of 133939)	13-Apr-14
133941	2014	EC14-098	24.50	26.00	1.50	1.45	1/2 NQ (saw)	475	403	-	13-Apr-14
133942	2014	EC14-098	26.00	27.00	1.00	1.00	1/2 NQ (saw)	425	408	-	13-Apr-14
133943	2014	EC14-098	27.00	28.50	1.50	1.46	1/2 NQ (saw)	427	361	-	13-Apr-14
133944	2014	EC14-098	28.50	30.00	1.50	1.50	1/2 NQ (saw)	387	324	-	13-Apr-14
133945	2014	EC14-098	30.00	31.50	1.50	1.50	1/2 NQ (saw)	480	402	-	13-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133946	2014	EC14-098	31.50	33.00	1.50	1.47	1/2 NQ (saw)	440	371	-	13-Apr-14
133947	2014	EC14-098	33.00	34.50	1.50	1.48	1/2 NQ (saw)	420	353	-	13-Apr-14
133948	2014	EC14-098	34.50	36.00	1.50	1.46	1/2 NQ (saw)	542	458	-	13-Apr-14
133949	2014	EC14-098	-	-	-	-	Blank	139	-	Qtz-A	13-Apr-14
133950	2014	EC14-098	-	-	-	-	Standard	142	-	OREAS-146	13-Apr-14
133951	2014	EC14-098	36.00	37.50	1.50	1.50	1/2 NQ (saw)	391	328	-	13-Apr-14
133952	2014	EC14-098	37.50	39.00	1.50	1.47	1/2 NQ (saw)	320	270	-	13-Apr-14
133953	2014	EC14-098	39.00	40.50	1.50	1.52	1/2 NQ (saw)	391	326	-	13-Apr-14
133954	2014	EC14-098	40.50	41.90	1.40	1.37	1/2 NQ (saw)	423	365	-	13-Apr-14
133955	2014	EC14-098	41.90	43.50	1.60	1.64	1/2 NQ (saw)	457	372	-	13-Apr-14
133956	2014	EC14-098	43.50	45.00	1.50	1.47	1/2 NQ (saw)	518	437	-	13-Apr-14
133957	2014	EC14-098	45.00	46.50	1.50	1.50	1/2 NQ (saw)	480	402	-	13-Apr-14
133958	2014	EC14-098	46.50	48.00	1.50	1.50	1/2 NQ (saw)	567	475	-	13-Apr-14
133959	2014	EC14-098	48.00	49.50	1.50	1.48	1/4 NQ (saw)	353	374	(Original - Dup is 133960)	13-Apr-14
133960	2014	EC14-098	48.00	49.50	1.50	1.48	1/4 NQ (saw)	458	486	(Dup of 133959)	13-Apr-14
133961	2014	EC14-098	49.50	51.00	1.50	1.50	1/2 NQ (saw)	640	536	-	13-Apr-14
133962	2014	EC14-098	51.00	52.50	1.50	1.47	1/2 NQ (saw)	450	380	-	13-Apr-14
133963	2014	EC14-098	52.50	54.00	1.50	1.52	1/2 NQ (saw)	450	375	-	13-Apr-14
133964	2014	EC14-098	54.00	55.50	1.50	1.48	1/2 NQ (saw)	755	635	-	13-Apr-14
133965	2014	EC14-098	55.50	57.00	1.50	1.50	1/2 NQ (saw)	635	532	-	13-Apr-14
133966	2014	EC14-098	57.00	58.50	1.50	1.53	1/2 NQ (saw)	590	491	-	13-Apr-14
133967	2014	EC14-098	58.50	60.00	1.50	1.46	1/2 NQ (saw)	670	566	-	13-Apr-14
133968	2014	EC14-098	60.00	61.50	1.50	1.47	1/2 NQ (saw)	750	633	-	13-Apr-14
133969	2014	EC14-098	61.50	63.00	1.50	1.50	1/2 NQ (saw)	430	360	-	13-Apr-14
133970	2014	EC14-098	63.00	64.50	1.50	1.48	1/2 NQ (saw)	550	463	-	13-Apr-14
133971	2014	EC14-098	64.50	66.00	1.50	1.49	1/2 NQ (saw)	485	407	-	13-Apr-14
133972	2014	EC14-098	66.00	67.50	1.50	1.45	1/2 NQ (saw)	460	390	-	13-Apr-14
133973	2014	EC14-098	67.50	69.00	1.50	1.46	1/2 NQ (saw)	450	380	-	13-Apr-14
133974	2014	EC14-098	-	-	-	-	Blank	124	-	Qtz-A	13-Apr-14
133975	2014	EC14-098	-	-	-	-	Standard	155	-	TRM-2	13-Apr-14
133976	2014	EC14-098	69.00	70.50	1.50	1.50	1/2 NQ (saw)	400	335	-	13-Apr-14
133977	2014	EC14-098	70.50	72.00	1.50	1.50	1/2 NQ (saw)	695	582	-	13-Apr-14
133978	2014	EC14-098	72.00	73.50	1.50	1.45	1/2 NQ (saw)	640	542	-	13-Apr-14
133979	2014	EC14-098	73.50	75.00	1.50	1.46	1/2 NQ (saw)	680	575	-	13-Apr-14
133980	2014	EC14-098	75.00	76.50	1.50	1.50	1/2 NQ (saw)	560	469	-	13-Apr-14
133981	2014	EC14-098	76.50	78.00	1.50	1.50	1/2 NQ (saw)	535	448	-	13-Apr-14
133982	2014	EC14-098	78.00	79.50	1.50	1.50	1/2 NQ (saw)	690	578	-	13-Apr-14
133983	2014	EC14-098	79.50	81.00	1.50	1.52	1/2 NQ (saw)	630	526	-	13-Apr-14
133984	2014	EC14-098	81.00	82.50	1.50	1.50	1/2 NQ (saw)	430	360	-	13-Apr-14
133985	2014	EC14-098	82.50	84.00	1.50	1.50	1/2 NQ (saw)	500	419	-	13-Apr-14
133986	2014	EC14-098	84.00	85.50	1.50	1.50	1/2 NQ (saw)	520	436	-	14-Apr-14
133987	2014	EC14-098	85.50	87.00	1.50	1.48	1/2 NQ (saw)	380	320	-	14-Apr-14
133988	2014	EC14-098	-	-	-	-	Blank	145	-	Qtz-A	14-Apr-14
133989	2014	EC14-098	87.00	88.50	1.50	1.48	1/4 NQ (saw)	300	318	(Original - Dup is 133990)	14-Apr-14
133990	2014	EC14-098	87.00	88.50	1.50	1.48	1/4 NQ (saw)	325	345	(Dup of 133989)	14-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
133991	2014	EC14-098	88.50	90.00	1.50	1.50	1/2 NQ (saw)	350	293	-	14-Apr-14
133992	2014	EC14-098	90.00	91.50	1.50	1.48	1/2 NQ (saw)	280	236	-	14-Apr-14
133993	2014	EC14-098	91.50	93.00	1.50	1.50	1/2 NQ (saw)	440	369	-	14-Apr-14
133994	2014	EC14-098	93.00	94.50	1.50	1.50	1/2 NQ (saw)	380	318	-	14-Apr-14
133995	2014	EC14-098	94.50	96.00	1.50	1.47	1/2 NQ (saw)	680	574	-	14-Apr-14
133996	2014	EC14-098	96.00	97.50	1.50	1.52	1/2 NQ (saw)	480	400	-	14-Apr-14
133997	2014	EC14-098	97.50	98.50	1.00	0.97	1/2 NQ (saw)	630	610	-	14-Apr-14
133998	2014	EC14-098	98.50	99.00	0.50	0.50	1/2 NQ (saw)	600	725	-	14-Apr-14
133999	2014	EC14-098	-	-	-	-	Blank	150	-	Qtz-A	14-Apr-14
134000	2014	EC14-098	-	-	-	-	Standard	175	-	OREAS-146	14-Apr-14
134001	2014	EC14-098	99.00	100.00	1.00	1.00	1/2 NQ (saw)	555	532	-	14-Apr-14
134002	2014	EC14-098	100.00	100.50	0.50	0.50	1/2 NQ (saw)	300	363	-	14-Apr-14
134003	2014	EC14-098	100.50	102.00	1.50	1.46	1/2 NQ (saw)	375	317	-	14-Apr-14
134004	2014	EC14-098	102.00	103.50	1.50	1.50	1/2 NQ (saw)	400	335	-	14-Apr-14
134005	2014	EC14-098	103.50	105.00	1.50	1.50	1/2 NQ (saw)	300	251	-	14-Apr-14
134006	2014	EC14-098	105.00	106.50	1.50	1.50	1/2 NQ (saw)	315	264	-	14-Apr-14
134007	2014	EC14-098	106.50	108.00	1.50	1.50	1/2 NQ (saw)	390	327	-	14-Apr-14
134008	2014	EC14-098	108.00	109.50	1.50	1.50	1/2 NQ (saw)	615	515	-	14-Apr-14
134009	2014	EC14-098	109.50	111.00	1.50	1.50	1/4 NQ (saw)	440	464	(Original - Dup is 134010)	14-Apr-14
134010	2014	EC14-098	109.50	111.00	1.50	1.50	1/4 NQ (saw)	475	501	(Dup of 134009)	14-Apr-14
134011	2014	EC14-098	111.00	112.50	1.50	1.50	1/2 NQ (saw)	385	323	-	14-Apr-14
134012	2014	EC14-098	112.50	114.00	1.50	1.48	1/2 NQ (saw)	430	362	-	14-Apr-14
134013	2014	EC14-098	114.00	115.50	1.50	1.48	1/2 NQ (saw)	380	320	-	14-Apr-14
134014	2014	EC14-098	115.50	117.00	1.50	1.48	1/2 NQ (saw)	395	332	-	14-Apr-14
134015	2014	EC14-098	117.00	118.50	1.50	1.50	1/2 NQ (saw)	340	285	-	14-Apr-14
134016	2014	EC14-098	118.50	120.00	1.50	1.51	1/2 NQ (saw)	375	314	-	14-Apr-14
134017	2014	EC14-098	120.00	121.50	1.50	1.47	1/2 NQ (saw)	400	337	-	14-Apr-14
134018	2014	EC14-098	121.50	123.00	1.50	1.50	1/2 NQ (saw)	320	268	-	14-Apr-14
134019	2014	EC14-098	123.00	124.50	1.50	1.50	1/2 NQ (saw)	420	352	-	14-Apr-14
134020	2014	EC14-098	124.50	126.00	1.50	1.50	1/2 NQ (saw)	340	285	-	14-Apr-14
134021	2014	EC14-098	126.00	127.50	1.50	1.54	1/2 NQ (saw)	360	299	-	14-Apr-14
134022	2014	EC14-098	127.50	128.68	1.18	1.20	1/2 NQ (saw)	260	235	-	14-Apr-14
134023	2014	EC14-098	128.68	129.80	1.12	1.14	1/2 NQ (saw)	295	271	-	14-Apr-14
134024	2014	EC14-098	-	-	-	-	Blank	130	-	Qtz-A	14-Apr-14
134025	2014	EC14-098	-	-	-	-	Standard	160	-	TRM-2	14-Apr-14
134026	2014	EC14-098	129.80	130.80	1.00	1.00	1/2 NQ (saw)	715	686	-	14-Apr-14
134027	2014	EC14-098	130.80	132.50	1.70	1.75	1/2 NQ (saw)	465	370	-	14-Apr-14
134028	2014	EC14-098	132.50	134.00	1.50	1.50	1/2 NQ (saw)	410	344	-	14-Apr-14
134029	2014	EC14-098	134.00	135.50	1.50	1.50	1/4 NQ (saw)	290	306	(Original - Dup is 134030)	14-Apr-14
134030	2014	EC14-098	134.00	135.50	1.50	1.50	1/4 NQ (saw)	300	317	(Dup of 134029)	14-Apr-14
134031	2014	EC14-098	135.50	136.82	1.32	1.35	1/2 NQ (saw)	500	434	-	14-Apr-14
134032	2014	EC14-098	136.82	137.73	0.91	0.96	1/2 NQ (saw)	525	510	-	14-Apr-14
134033	2014	EC14-098	137.73	139.00	1.27	1.27	1/2 NQ (saw)	570	505	-	14-Apr-14
134034	2014	EC14-098	139.00	140.50	1.50	1.48	1/2 NQ (saw)	600	505	-	14-Apr-14
134035	2014	EC14-098	140.50	142.00	1.50	1.50	1/2 NQ (saw)	530	444	-	14-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134036	2014	EC14-098	142.00	143.50	1.50	1.50	1/2 NQ (saw)	525	440	-	14-Apr-14
134037	2014	EC14-098	143.50	145.00	1.50	1.50	1/2 NQ (saw)	590	494	-	14-Apr-14
134038	2014	EC14-098	145.00	146.50	1.50	1.52	1/2 NQ (saw)	530	442	-	14-Apr-14
134039	2014	EC14-098	146.50	148.00	1.50	1.47	1/2 NQ (saw)	340	287	-	14-Apr-14
134040	2014	EC14-098	148.00	149.50	1.50	1.52	1/2 NQ (saw)	290	242	-	14-Apr-14
134041	2014	EC14-098	149.50	151.00	1.50	1.50	1/2 NQ (saw)	275	230	-	14-Apr-14
134042	2014	EC14-098	151.00	152.50	1.50	1.50	1/2 NQ (saw)	275	230	-	14-Apr-14
134043	2014	EC14-098	152.50	154.00	1.50	1.52	1/2 NQ (saw)	280	234	-	14-Apr-14
134044	2014	EC14-098	154.00	155.50	1.50	1.52	1/2 NQ (saw)	285	238	-	14-Apr-14
134045	2014	EC14-098	155.50	157.00	1.50	1.52	1/2 NQ (saw)	270	225	-	14-Apr-14
134046	2014	EC14-098	157.00	158.50	1.50	1.50	1/2 NQ (saw)	280	235	-	14-Apr-14
134047	2014	EC14-098	158.50	160.00	1.50	1.50	1/2 NQ (saw)	330	277	-	14-Apr-14
134048	2014	EC14-098	160.00	161.50	1.50	1.51	1/2 NQ (saw)	320	268	-	14-Apr-14
134049	2014	EC14-098	-	-	-	-	Blank	135	-	Qtz-A	14-Apr-14
134050	2014	EC14-098	-	-	-	-	Standard	170	-	OREAS-146	14-Apr-14
134051	2014	EC14-098	161.50	163.00	1.50	1.50	1/2 NQ (saw)	310	260	-	14-Apr-14
134052	2014	EC14-098	163.00	164.00	1.00	1.00	1/2 NQ (saw)	230	221	-	14-Apr-14
134053	2014	EC14-098	164.00	165.00	1.00	1.00	1/2 NQ (saw)	225	216	-	14-Apr-14
134054	2014	EC14-098	165.00	166.50	1.50	1.51	1/2 NQ (saw)	330	276	-	14-Apr-14
134055	2014	EC14-098	166.50	168.00	1.50	1.50	1/2 NQ (saw)	275	230	-	14-Apr-14
134056	2014	EC14-098	168.00	168.50	0.50	0.50	1/2 NQ (saw)	290	350	-	15-Apr-14
134057	2014	EC14-098	168.50	170.00	1.50	1.50	1/2 NQ (saw)	325	272	-	15-Apr-14
134058	2014	EC14-098	170.00	171.50	1.50	1.50	1/2 NQ (saw)	250	209	-	15-Apr-14
134059	2014	EC14-098	171.50	173.00	1.50	1.50	1/4 NQ (saw)	235	248	(Original - Dup is 134060)	15-Apr-14
134060	2014	EC14-098	171.50	173.00	1.50	1.50	1/4 NQ (saw)	225	238	(Dup of 134059)	15-Apr-14
134061	2014	EC14-098	173.00	174.50	1.50	1.50	1/2 NQ (saw)	260	218	-	15-Apr-14
134062	2014	EC14-098	174.50	176.00	1.50	1.50	1/2 NQ (saw)	220	184	-	15-Apr-14
134063	2014	EC14-098	176.00	177.50	1.50	1.48	1/2 NQ (saw)	245	206	-	15-Apr-14
134064	2014	EC14-098	177.50	179.00	1.50	1.50	1/2 NQ (saw)	315	264	-	15-Apr-14
134065	2014	EC14-098	179.00	180.50	1.50	1.50	1/2 NQ (saw)	270	226	-	15-Apr-14
134066	2014	EC14-098	180.50	182.00	1.50	1.55	1/2 NQ (saw)	260	215	-	15-Apr-14
134067	2014	EC14-098	182.00	183.50	1.50	1.50	1/2 NQ (saw)	280	235	-	15-Apr-14
134068	2014	EC14-098	183.50	185.00	1.50	1.50	1/2 NQ (saw)	260	218	-	15-Apr-14
134069	2014	EC14-098	185.00	186.50	1.50	1.53	1/2 NQ (saw)	315	262	-	15-Apr-14
134070	2014	EC14-098	186.50	188.00	1.50	1.50	1/2 NQ (saw)	335	281	-	15-Apr-14
134071	2014	EC14-098	188.00	189.50	1.50	1.50	1/2 NQ (saw)	295	247	-	15-Apr-14
134072	2014	EC14-098	189.50	191.00	1.50	1.50	1/2 NQ (saw)	350	293	-	15-Apr-14
134073	2014	EC14-098	191.00	192.53	1.53	1.53	1/2 NQ (saw)	275	229	-	15-Apr-14
134074	2014	EC14-098	-	-	-	-	Blank	160	-	Qtz-A	15-Apr-14
134075	2014	EC14-098	-	-	-	-	Standard	165	-	TRM-2	15-Apr-14
134076	2014	EC14-098	192.53	194.16	1.63	1.64	1/2 NQ (saw)	210	171	-	15-Apr-14
117007	2015	EC14-098/100	-	-	-	-	Standard	-	-	OREAS-146	13-Apr-15
117008	2015	EC14-098/100	-	-	-	-	Blank	-	-	Qtz-A	13-Apr-15
134077	2014	EC14-099	5.10	6.00	0.90	0.92	1/2 NQ (saw)	650	641	-	15-Apr-14
134078	2014	EC14-099	6.00	7.50	1.50	1.47	1/2 NQ (saw)	675	569	-	15-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134079	2014	EC14-099	7.50	9.00	1.50	1.54	1/2 NQ (saw)	620	515	-	15-Apr-14
134080	2014	EC14-099	9.00	10.63	1.63	1.58	1/2 NQ (saw)	525	432	-	15-Apr-14
134081	2014	EC14-099	10.63	12.00	1.37	1.32	1/2 NQ (saw)	475	415	-	15-Apr-14
134082	2014	EC14-099	12.00	13.50	1.50	1.57	1/2 NQ (saw)	450	371	-	15-Apr-14
134083	2014	EC14-099	13.50	15.13	1.63	1.62	1/2 NQ (saw)	650	531	-	15-Apr-14
134084	2014	EC14-099	15.13	16.55	1.42	1.43	1/2 NQ (saw)	600	511	-	15-Apr-14
134085	2014	EC14-099	16.55	18.00	1.45	1.45	1/2 NQ (saw)	575	487	-	15-Apr-14
134086	2014	EC14-099	18.00	19.50	1.50	1.46	1/4 NQ (saw)	440	469	(Original - Dup is 134087)	15-Apr-14
134087	2014	EC14-099	18.00	19.50	1.50	1.46	1/4 NQ (saw)	450	479	(Dup of 134086)	15-Apr-14
134088	2014	EC14-099	19.50	21.00	1.50	1.51	1/2 NQ (saw)	500	418	-	15-Apr-14
134089	2014	EC14-099	21.00	22.50	1.50	1.44	1/2 NQ (saw)	675	573	-	15-Apr-14
134090	2014	EC14-099	22.50	24.00	1.50	1.50	1/2 NQ (saw)	430	360	-	15-Apr-14
134091	2014	EC14-099	24.00	25.32	1.32	1.32	1/2 NQ (saw)	480	420	-	15-Apr-14
134092	2014	EC14-099	25.32	26.72	1.40	1.36	1/2 NQ (saw)	445	385	-	15-Apr-14
134093	2014	EC14-099	26.72	27.82	1.10	1.09	1/2 NQ (saw)	375	349	-	15-Apr-14
134094	2014	EC14-099	27.82	29.23	1.41	1.39	1/2 NQ (saw)	440	378	-	15-Apr-14
134095	2014	EC14-099	29.23	30.50	1.27	1.29	1/2 NQ (saw)	535	471	-	15-Apr-14
134096	2014	EC14-099	30.50	32.00	1.50	1.53	1/2 NQ (saw)	575	479	-	15-Apr-14
134097	2014	EC14-099	32.00	33.50	1.50	1.51	1/2 NQ (saw)	580	485	-	15-Apr-14
134098	2014	EC14-099	33.50	35.00	1.50	1.50	1/2 NQ (saw)	625	524	-	15-Apr-14
134099	2014	EC14-099	-	-	-	-	Blank	160	-	Qtz-A	15-Apr-14
134100	2014	EC14-099	-	-	-	-	Standard	165	-	OREAS-146	15-Apr-14
134101	2014	EC14-099	35.00	36.00	1.00	0.99	1/2 NQ (saw)	650	626	-	15-Apr-14
134102	2014	EC14-099	36.00	36.90	0.90	0.90	1/2 NQ (saw)	580	576	-	15-Apr-14
134103	2014	EC14-099	36.90	38.50	1.60	1.61	1/2 NQ (saw)	660	540	-	15-Apr-14
134104	2014	EC14-099	38.50	40.00	1.50	1.50	1/2 NQ (saw)	450	377	-	15-Apr-14
134105	2014	EC14-099	40.00	41.50	1.50	1.51	1/2 NQ (saw)	570	477	-	15-Apr-14
134106	2014	EC14-099	41.50	43.00	1.50	1.50	1/2 NQ (saw)	750	628	-	15-Apr-14
134107	2014	EC14-099	43.00	44.50	1.50	1.50	1/2 NQ (saw)	600	503	-	15-Apr-14
134108	2014	EC14-099	44.50	46.00	1.50	1.48	1/2 NQ (saw)	665	560	-	15-Apr-14
134109	2014	EC14-099	46.00	47.50	1.50	1.48	1/2 NQ (saw)	775	652	-	15-Apr-14
134110	2014	EC14-099	47.50	49.00	1.50	1.50	1/2 NQ (saw)	885	742	-	15-Apr-14
134111	2014	EC14-099	49.00	50.50	1.50	1.48	1/2 NQ (saw)	825	694	-	15-Apr-14
134112	2014	EC14-099	50.50	52.00	1.50	1.50	1/4 NQ (saw)	750	792	(Original - Dup is 134113)	15-Apr-14
134113	2014	EC14-099	50.50	52.00	1.50	1.50	1/4 NQ (saw)	680	718	(Dup of 134112)	15-Apr-14
134114	2014	EC14-099	52.00	53.50	1.50	1.47	1/2 NQ (saw)	630	531	-	15-Apr-14
134115	2014	EC14-099	53.50	54.84	1.34	1.38	1/2 NQ (saw)	800	689	-	15-Apr-14
134116	2014	EC14-099	54.84	56.50	1.66	1.68	1/2 NQ (saw)	725	585	-	15-Apr-14
134117	2014	EC14-099	56.50	58.00	1.50	1.49	1/2 NQ (saw)	675	567	-	15-Apr-14
134118	2014	EC14-099	58.00	59.50	1.50	1.51	1/2 NQ (saw)	591	494	-	15-Apr-14
134119	2014	EC14-099	59.50	60.60	1.10	1.09	1/2 NQ (saw)	693	646	-	16-Apr-14
134120	2014	EC14-099	60.60	62.00	1.40	1.40	1/2 NQ (saw)	611	524	-	16-Apr-14
134121	2014	EC14-099	62.00	63.50	1.50	1.49	1/2 NQ (saw)	591	496	-	16-Apr-14
134122	2014	EC14-099	63.50	65.00	1.50	1.48	1/2 NQ (saw)	462	389	-	16-Apr-14
134123	2014	EC14-099	65.00	66.50	1.50	1.48	1/2 NQ (saw)	651	548	-	16-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134124	2014	EC14-099	-	-	-	-	Blank	171	-	Qtz-A	16-Apr-14
134125	2014	EC14-099	-	-	-	-	Standard	183	-	TRM-2	16-Apr-14
134126	2014	EC14-099	66.50	68.00	1.50	1.52	1/2 NQ (saw)	705	588	-	16-Apr-14
134127	2014	EC14-099	68.00	69.50	1.50	1.50	1/2 NQ (saw)		0	-	16-Apr-14
134128	2014	EC14-099	69.50	71.00	1.50	1.50	1/2 NQ (saw)	570	478	-	16-Apr-14
134129	2014	EC14-099	71.00	72.50	1.50	1.51	1/2 NQ (saw)	584	488	-	16-Apr-14
134130	2014	EC14-099	72.50	74.00	1.50	1.51	1/2 NQ (saw)	520	435	-	16-Apr-14
134131	2014	EC14-099	74.00	75.73	1.73	1.74	1/2 NQ (saw)	690	550	-	16-Apr-14
134132	2014	EC14-099	75.73	77.00	1.27	1.30	1/2 NQ (saw)	620	545	-	16-Apr-14
134133	2014	EC14-099	77.00	78.50	1.50	1.51	1/2 NQ (saw)	488	408	-	16-Apr-14
134134	2014	EC14-099	78.50	80.00	1.50	1.51	1/2 NQ (saw)	547	457	-	16-Apr-14
134135	2014	EC14-099	80.00	81.50	1.50	1.52	1/2 NQ (saw)	420	350	-	16-Apr-14
134136	2014	EC14-099	81.50	83.00	1.50	1.50	1/2 NQ (saw)	384	322	-	16-Apr-14
134137	2014	EC14-099	83.00	84.50	1.50	1.50	1/2 NQ (saw)	416	349	-	16-Apr-14
134138	2014	EC14-099	84.50	86.00	1.50	1.51	1/2 NQ (saw)	410	343	-	16-Apr-14
134139	2014	EC14-099	86.00	87.50	1.50	1.48	1/2 NQ (saw)	495	417	-	16-Apr-14
134140	2014	EC14-099	87.50	89.00	1.50	1.49	1/2 NQ (saw)	470	395	-	16-Apr-14
134141	2014	EC14-099	89.00	90.50	1.50	1.48	1/4 NQ (saw)	450	477	(Original - Dup is 134142)	16-Apr-14
134142	2014	EC14-099	89.00	90.50	1.50	1.48	1/4 NQ (saw)	480	509	(Dup of 134141)	16-Apr-14
134143	2014	EC14-099	90.50	92.00	1.50	1.50	1/2 NQ (saw)	470	394	-	16-Apr-14
134144	2014	EC14-099	92.00	93.50	1.50	1.50	1/2 NQ (saw)	520	436	-	16-Apr-14
134145	2014	EC14-099	93.50	95.00	1.50	1.48	1/2 NQ (saw)	461	388	-	16-Apr-14
134146	2014	EC14-099	95.00	96.50	1.50	1.54	1/2 NQ (saw)	705	586	-	16-Apr-14
134147	2014	EC14-099	96.50	98.00	1.50	1.50	1/2 NQ (saw)	570	478	-	16-Apr-14
134148	2014	EC14-099	98.00	99.50	1.50	1.54	1/2 NQ (saw)	438	364	-	16-Apr-14
134149	2014	EC14-099	-	-	-	-	Blank	185	-	Qtz-A	16-Apr-14
134150	2014	EC14-099	-	-	-	-	Standard	168	-	OREAS-146	16-Apr-14
134151	2014	EC14-099	99.50	101.00	1.50	1.51	1/2 NQ (saw)	440	368	-	16-Apr-14
134152	2014	EC14-099	101.00	102.50	1.50	1.51	1/2 NQ (saw)	430	359	-	16-Apr-14
134153	2014	EC14-099	102.50	104.00	1.50	1.51	1/2 NQ (saw)	351	293	-	16-Apr-14
134154	2014	EC14-099	104.00	105.50	1.50	1.49	1/2 NQ (saw)	482	405	-	16-Apr-14
134155	2014	EC14-099	105.50	107.00	1.50	1.52	1/2 NQ (saw)	437	365	-	16-Apr-14
134156	2014	EC14-099	107.00	108.50	1.50	1.49	1/2 NQ (saw)	360	302	-	16-Apr-14
134157	2014	EC14-099	108.50	110.00	1.50	1.52	1/2 NQ (saw)	381	318	-	16-Apr-14
134158	2014	EC14-099	110.00	111.50	1.50	1.52	1/2 NQ (saw)	657	548	-	16-Apr-14
134159	2014	EC14-099	111.50	113.00	1.50	1.49	1/4 NQ (saw)	338	358	(Original - Dup is 134160)	16-Apr-14
134160	2014	EC14-099	111.50	113.00	1.50	1.49	1/4 NQ (saw)	386	408	(Dup of 134159)	16-Apr-14
134161	2014	EC14-099	113.00	114.50	1.50	1.54	1/2 NQ (saw)	461	383	-	16-Apr-14
134162	2014	EC14-099	114.50	116.00	1.50	1.48	1/2 NQ (saw)	385	324	-	16-Apr-14
134163	2014	EC14-099	116.00	117.50	1.50	1.50	1/2 NQ (saw)	413	346	-	16-Apr-14
134164	2014	EC14-099	117.50	119.00	1.50	1.50	1/2 NQ (saw)	416	349	-	16-Apr-14
134165	2014	EC14-099	119.00	120.50	1.50	1.47	1/2 NQ (saw)	450	380	-	16-Apr-14
134166	2014	EC14-099	120.50	122.00	1.50	1.50	1/2 NQ (saw)	450	377	-	16-Apr-14
134167	2014	EC14-099	122.00	123.50	1.50	1.47	1/2 NQ (saw)	474	400	-	16-Apr-14
134168	2014	EC14-099	123.50	125.00	1.50	1.49	1/2 NQ (saw)		0	-	16-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134169	2014	EC14-099	125.00	126.50	1.50	1.48	1/2 NQ (saw)	475	400	-	16-Apr-14
134170	2014	EC14-099	126.50	128.00	1.50	1.49	1/2 NQ (saw)	370	311	-	16-Apr-14
134171	2014	EC14-099	128.00	129.50	1.50	1.49	1/2 NQ (saw)	350	294	-	16-Apr-14
134172	2014	EC14-099	129.50	131.00	1.50	1.50	1/2 NQ (saw)	631	529	-	16-Apr-14
134173	2014	EC14-099	131.00	132.50	1.50	1.52	1/2 NQ (saw)	480	400	-	16-Apr-14
134174	2014	EC14-099	-	-	-	-	Blank	200	-	Qtz-A	16-Apr-14
134175	2014	EC14-099	-	-	-	-	Standard	190	-	TRM-2	16-Apr-14
134176	2014	EC14-099	132.50	134.00	1.50	1.49	1/2 NQ (saw)	589	495	-	16-Apr-14
134177	2014	EC14-099	134.00	135.50	1.50	1.54	1/2 NQ (saw)	488	405	-	16-Apr-14
134178	2014	EC14-099	135.50	137.00	1.50	1.47	1/2 NQ (saw)	795	671	-	16-Apr-14
134179	2014	EC14-099	137.00	138.50	1.50	1.53	1/2 NQ (saw)	872	726	-	17-Apr-14
134180	2014	EC14-099	138.50	140.00	1.50	1.51	1/2 NQ (saw)	789	660	-	17-Apr-14
134181	2014	EC14-099	140.00	141.50	1.50	1.49	1/2 NQ (saw)	713	599	-	17-Apr-14
134182	2014	EC14-099	141.50	143.00	1.50	1.52	1/2 NQ (saw)	518	432	-	17-Apr-14
134183	2014	EC14-099	143.00	143.45	0.45	0.43	1/2 NQ (saw)	297	377	-	17-Apr-14
134184	2014	EC14-099	143.45	144.50	1.05	1.05	1/2 NQ (saw)	259	244	-	17-Apr-14
134185	2014	EC14-099	144.50	146.00	1.50	1.58	1/2 NQ (saw)	373	307	-	17-Apr-14
134186	2014	EC14-099	146.00	147.50	1.50	1.54	1/2 NQ (saw)	441	366	-	17-Apr-14
134187	2014	EC14-099	147.50	149.00	1.50	1.52	1/4 NQ (saw)	466	490	(Original - Dup is 134188)	17-Apr-14
134188	2014	EC14-099	147.50	149.00	1.50	1.52	1/4 NQ (saw)	484	509	(Dup of 134187)	17-Apr-14
134189	2014	EC14-099	149.00	150.50	1.50	1.50	1/2 NQ (saw)	464	389	-	17-Apr-14
134190	2014	EC14-099	150.50	152.00	1.50	1.51	1/2 NQ (saw)	565	472	-	17-Apr-14
134191	2014	EC14-099	152.00	153.50	1.50	1.51	1/2 NQ (saw)	296	247	-	17-Apr-14
134192	2014	EC14-099	153.50	155.00	1.50	1.51	1/2 NQ (saw)	385	322	-	17-Apr-14
134193	2014	EC14-099	155.00	156.50	1.50	1.48	1/2 NQ (saw)	310	261	-	17-Apr-14
134194	2014	EC14-099	156.50	158.00	1.50	1.47	1/2 NQ (saw)	462	390	-	17-Apr-14
134195	2014	EC14-099	158.00	159.54	1.54	1.52	1/2 NQ (saw)	390	325	-	17-Apr-14
134196	2014	EC14-099	159.54	161.00	1.46	1.45	1/2 NQ (saw)	662	561	-	17-Apr-14
134197	2014	EC14-099	161.00	162.50	1.50	1.51	1/2 NQ (saw)	517	432	-	17-Apr-14
134198	2014	EC14-099	162.50	164.00	1.50	1.54	1/2 NQ (saw)	640	532	-	17-Apr-14
134199	2014	EC14-099	-	-	-	-	Blank	182	-	Qtz-A	17-Apr-14
134200	2014	EC14-099	-	-	-	-	Standard	181	-	OREAS 146	17-Apr-14
134201	2014	EC14-099	164.00	165.50	1.50	1.56	1/2 NQ (saw)	630	521	-	17-Apr-14
134202	2014	EC14-099	165.50	167.00	1.50	1.52	1/2 NQ (saw)	550	459	-	17-Apr-14
134203	2014	EC14-099	167.00	168.50	1.50	1.49	1/2 NQ (saw)	523	439	-	17-Apr-14
134204	2014	EC14-099	168.50	170.00	1.50	1.51	1/2 NQ (saw)	576	482	-	17-Apr-14
134205	2014	EC14-099	170.00	171.50	1.50	1.47	1/2 NQ (saw)	652	550	-	17-Apr-14
134206	2014	EC14-099	171.50	173.00	1.50	1.52	1/2 NQ (saw)	650	542	-	17-Apr-14
134207	2014	EC14-099	173.00	174.50	1.50	1.50	1/2 NQ (saw)	420	352	-	17-Apr-14
134208	2014	EC14-099	174.50	176.00	1.50	1.49	1/2 NQ (saw)	450	378	-	17-Apr-14
134209	2014	EC14-099	176.00	177.50	1.50	1.45	1/2 NQ (saw)	558	473	-	17-Apr-14
134210	2014	EC14-099	177.50	179.00	1.50	1.50	1/2 NQ (saw)	526	441	-	17-Apr-14
134211	2014	EC14-099	179.00	180.50	1.50	1.50	1/2 NQ (saw)	560	469	-	17-Apr-14
134212	2014	EC14-099	180.50	182.00	1.50	1.50	1/4 NQ (saw)	435	459	(Original - Dup is 134213)	17-Apr-14
134213	2014	EC14-099	180.50	182.00	1.50	1.50	1/4 NQ (saw)	439	463	(Dup of 134212)	17-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134214	2014	EC14-099	182.00	183.50	1.50	1.51	1/2 NQ (saw)	585	489	-	18-Apr-14
134215	2014	EC14-099	183.50	185.00	1.50	1.54	1/2 NQ (saw)	575	478	-	18-Apr-14
134216	2014	EC14-099	185.00	186.50	1.50	1.50	1/2 NQ (saw)	750	628	-	18-Apr-14
134217	2014	EC14-099	186.50	188.00	1.50	1.55	1/2 NQ (saw)	660	547	-	18-Apr-14
134218	2014	EC14-099	188.00	189.50	1.50	1.51	1/2 NQ (saw)	520	435	-	18-Apr-14
134219	2014	EC14-099	189.50	190.50	1.00	1.02	1/2 NQ (saw)	720	686	-	18-Apr-14
134220	2014	EC14-099	190.50	192.02	1.52	1.57	1/2 NQ (saw)	550	454	-	18-Apr-14
134221	2014	EC14-099	-	-	-	-	Blank	130	-	Qtz-A	18-Apr-14
134222	2014	EC14-099	-	-	-	-	Standard	175	-	TRM-2	18-Apr-14
117001	2015	EC14-100	80.15	81.34	1.19	1.21	1/4 NQ (saw)	-	-	Re-sample of 134283 (lost in transit)	13-Apr-15
117002	2015	EC14-100	81.34	82.76	1.42	1.42	1/4 NQ (saw)	450	484	Re-sample of 134284 (lost in transit)	13-Apr-15
117003	2015	EC14-100	82.76	84.17	1.41	1.45	1/4 NQ (saw)	1000	1068	Re-sample of 134285 (lost in transit)	13-Apr-15
117004	2015	EC14-100	84.17	85.60	1.43	1.46	1/4 NQ (saw)	-	-	Re-sample of 134287 (lost in transit)	13-Apr-15
117005	2015	EC14-100	85.60	87.31	1.71	1.72	1/4 NQ (saw)	940	948	Re-sample of 134288 (lost in transit)	13-Apr-15
134223	2014	EC14-100	11.28	12.76	1.48	1.42	1/2 NQ (saw)	460	393	-	19-Apr-14
134224	2014	EC14-100	12.76	14.42	1.66	1.66	1/2 NQ (saw)	460	373	-	19-Apr-14
134225	2014	EC14-100	14.42	15.76	1.34	1.34	1/2 NQ (saw)	410	357	-	19-Apr-14
134226	2014	EC14-100	15.76	16.72	0.96	0.96	1/2 NQ (saw)	320	311	-	19-Apr-14
134227	2014	EC14-100	16.72	17.55	0.83	0.84	1/2 NQ (saw)	316	321	-	19-Apr-14
134228	2014	EC14-100	17.55	19.17	1.62	1.61	1/2 NQ (saw)	450	368	-	19-Apr-14
134229	2014	EC14-100	19.17	20.42	1.25	1.21	1/2 NQ (saw)	360	324	-	19-Apr-14
134230	2014	EC14-100	20.42	21.38	0.96	0.97	1/2 NQ (saw)	320	310	-	19-Apr-14
134231	2014	EC14-100	21.38	22.77	1.39	1.36	1/2 NQ (saw)	525	454	-	19-Apr-14
134232	2014	EC14-100	22.77	23.62	0.85	0.89	1/2 NQ (saw)	344	343	-	19-Apr-14
134233	2014	EC14-100	23.62	25.27	1.65	1.65	1/2 NQ (saw)	457	371	-	19-Apr-14
134234	2014	EC14-100	25.27	26.68	1.41	1.39	1/4 NQ (saw)	380	411	(Original - Dup is 134235)	19-Apr-14
134235	2014	EC14-100	25.27	26.68	1.41	1.39	1/4 NQ (saw)	382	414	(Dup of 134234)	19-Apr-14
134236	2014	EC14-100	26.68	27.98	1.30	1.31	1/2 NQ (saw)	422	370	-	19-Apr-14
134237	2014	EC14-100	27.98	29.57	1.59	1.63	1/2 NQ (saw)	532	434	-	19-Apr-14
134238	2014	EC14-100	29.57	30.86	1.29	1.27	1/2 NQ (saw)	472	418	-	19-Apr-14
134239	2014	EC14-100	30.86	32.50	1.64	1.67	1/2 NQ (saw)	532	430	-	19-Apr-14
134240	2014	EC14-100	32.50	33.94	1.44	1.43	1/2 NQ (saw)	710	604	-	19-Apr-14
134241	2014	EC14-100	33.94	34.92	0.98	1.01	1/2 NQ (saw)	540	516	-	19-Apr-14
134242	2014	EC14-100	34.92	36.79	1.87	1.84	1/2 NQ (saw)	480	376	-	19-Apr-14
134243	2014	EC14-100	36.79	37.92	1.13	1.13	1/2 NQ (saw)	580	534	-	19-Apr-14
134244	2014	EC14-100	37.92	39.10	1.18	1.18	1/2 NQ (saw)	492	447	-	19-Apr-14
134245	2014	EC14-100	39.10	40.59	1.49	1.48	1/2 NQ (saw)	480	404	-	19-Apr-14
134246	2014	EC14-100	40.59	42.07	1.48	1.47	1/2 NQ (saw)	533	450	-	19-Apr-14
134247	2014	EC14-100	42.07	43.69	1.62	1.60	1/2 NQ (saw)	732	600	-	19-Apr-14
134248	2014	EC14-100	43.69	45.29	1.60	1.61	1/2 NQ (saw)	769	629	-	19-Apr-14
134249	2014	EC14-100	-	-	-	-	Blank	187	-	Qtz-A	19-Apr-14
134250	2014	EC14-100	-	-	-	-	Standard	188	-	OREAS 146	19-Apr-14
134251	2014	EC14-100	45.29	46.62	1.33	1.38	1/2 NQ (saw)	570	491	-	19-Apr-14
134252	2014	EC14-100	46.62	47.76	1.14	1.13	1/2 NQ (saw)	467	430	-	19-Apr-14
134253	2014	EC14-100	47.76	49.50	1.74	1.76	1/2 NQ (saw)	700	556	-	19-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134254	2014	EC14-100	49.50	50.68	1.18	1.17	1/2 NQ (saw)	760	692	-	19-Apr-14
134255	2014	EC14-100	50.68	52.37	1.69	1.64	1/2 NQ (saw)	822	669	-	19-Apr-14
134256	2014	EC14-100	52.37	53.50	1.13	1.12	1/2 NQ (saw)	736	680	-	19-Apr-14
134257	2014	EC14-100	53.50	54.63	1.13	1.09	1/2 NQ (saw)	883	823	-	19-Apr-14
134258	2014	EC14-100	54.63	56.19	1.56	1.53	1/2 NQ (saw)	720	599	-	19-Apr-14
134259	2014	EC14-100	56.19	56.87	0.68	0.69	1/2 NQ (saw)	600	651	-	19-Apr-14
134260	2014	EC14-100	56.87	57.60	0.73	0.72	1/4 NQ (saw)	564	760	(Original - Dup is 134261)	19-Apr-14
134261	2014	EC14-100	56.87	57.60	0.73	0.72	1/4 NQ (saw)	578	779	(Dup of 134260)	19-Apr-14
134262	2014	EC14-100	57.60	59.20	1.60	1.61	1/2 NQ (saw)	755	618	-	19-Apr-14
134263	2014	EC14-100	59.20	60.67	1.47	1.42	1/2 NQ (saw)	814	695	-	19-Apr-14
134264	2014	EC14-100	60.67	62.48	1.81	1.76	1/2 NQ (saw)	648	515	-	19-Apr-14
134265	2014	EC14-100	62.48	63.47	0.99	0.97	1/2 NQ (saw)	654	634	-	19-Apr-14
134266	2014	EC14-100	63.47	64.53	1.06	1.06	1/2 NQ (saw)	717	674	-	19-Apr-14
134267	2014	EC14-100	64.53	65.47	0.94	0.96	1/2 NQ (saw)	725	705	-	19-Apr-14
134268	2014	EC14-100	65.47	67.00	1.53	1.45	1/2 NQ (saw)	802	680	-	19-Apr-14
134269	2014	EC14-100	67.00	68.49	1.49	1.50	1/2 NQ (saw)	666	558	-	19-Apr-14
134270	2014	EC14-100	68.49	69.88	1.39	1.39	1/2 NQ (saw)	997	857	-	19-Apr-14
134271	2014	EC14-100	69.88	71.41	1.53	1.52	1/2 NQ (saw)	700	584	-	19-Apr-14
134272	2014	EC14-100	71.41	72.00	0.59	0.59	1/2 NQ (saw)	523	598	-	19-Apr-14
134273	2014	EC14-100	72.00	72.66	0.66	0.66	1/2 NQ (saw)	525	578	-	19-Apr-14
134274	2014	EC14-100	-	-	-	-	Blank	248	-	Qtz-A	19-Apr-14
134275	2014	EC14-100	-	-	-	-	Standard	246	-	TRM-2	19-Apr-14
134276	2014	EC14-100	72.66	73.50	0.84	0.81	1/2 NQ (saw)	755	777	-	19-Apr-14
134277	2014	EC14-100	73.50	73.86	0.36	0.36	1/2 NQ (saw)	465	627	-	19-Apr-14
134278	2014	EC14-100	73.86	75.66	1.80	1.82	1/2 NQ (saw)	815	640	-	19-Apr-14
134279	2014	EC14-100	75.66	76.39	0.73	0.73	1/2 NQ (saw)	719	766	-	19-Apr-14
134280	2014	EC14-100	76.39	77.50	1.11	1.11	1/2 NQ (saw)	589	546	-	19-Apr-14
134281	2014	EC14-100	77.50	78.68	1.18	1.21	1/2 NQ (saw)	646	581	-	19-Apr-14
134282	2014	EC14-100	78.68	80.15	1.47	1.41	1/2 NQ (saw)	740	633	-	19-Apr-14
134283	2014	EC14-100	80.15	81.34	1.19	1.21	1/2 NQ (saw)	-	-	Sample Lost in transit	19-Apr-14
134284	2014	EC14-100	81.34	82.76	1.42	1.42	1/2 NQ (saw)	-	-	Sample Lost in transit	19-Apr-14
134285	2014	EC14-100	82.76	84.17	1.41	1.45	1/4 NQ (saw)	-	-	Sample lost in transit	19-Apr-14
134286	2014	EC14-100	82.76	84.17	1.41	1.45	1/4 NQ (saw)	-	-	Sample lost in transit	19-Apr-14
134287	2014	EC14-100	84.17	85.60	1.43	1.46	1/2 NQ (saw)	-	-	Sample Lost in transit	19-Apr-14
134288	2014	EC14-100	85.60	87.31	1.71	1.72	1/2 NQ (saw)	-	-	Sample Lost in transit	19-Apr-14
134289	2014	EC14-100	87.31	87.97	0.66	0.66	1/2 NQ (saw)	640	705	-	19-Apr-14
134290	2014	EC14-100	87.97	90.00	2.03	2.03	1/2 NQ (saw)	680	515	-	19-Apr-14
134291	2014	EC14-100	90.00	91.27	1.27	1.27	1/2 NQ (saw)	540	478	-	19-Apr-14
134292	2014	EC14-100	91.27	92.70	1.43	1.48	1/2 NQ (saw)	590	497	-	19-Apr-14
134293	2014	EC14-100	92.70	94.06	1.36	1.36	1/2 NQ (saw)	660	571	-	19-Apr-14
134294	2014	EC14-100	94.06	95.22	1.16	1.16	1/2 NQ (saw)	510	466	-	19-Apr-14
134295	2014	EC14-100	95.22	96.80	1.58	1.56	1/2 NQ (saw)	480	397	-	19-Apr-14
134296	2014	EC14-100	96.80	98.14	1.34	1.35	1/2 NQ (saw)	601	522	-	19-Apr-14
134297	2014	EC14-100	98.14	99.63	1.49	1.47	1/2 NQ (saw)	450	380	-	19-Apr-14
134298	2014	EC14-100	99.63	101.26	1.63	1.62	1/2 NQ (saw)	930	759	-	19-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134299	2014	EC14-100	-	-	-	-	Blank	145	-	Qtz-A	19-Apr-14
134300	2014	EC14-100	-	-	-	-	Standard	175	-	OREAS-146	19-Apr-14
134301	2014	EC14-100	101.26	102.05	0.79	0.79	1/2 NQ (saw)	700	726	-	19-Apr-14
134302	2014	EC14-100	102.05	103.59	1.54	1.53	1/2 NQ (saw)	620	516	-	20-Apr-14
134303	2014	EC14-100	103.59	104.70	1.11	1.11	1/2 NQ (saw)	485	449	-	20-Apr-14
134304	2014	EC14-100	104.70	105.62	0.92	0.92	1/2 NQ (saw)	425	419	-	20-Apr-14
134305	2014	EC14-100	105.62	107.12	1.50	1.51	1/2 NQ (saw)	650	543	-	20-Apr-14
134306	2014	EC14-100	107.12	108.49	1.37	1.37	1/2 NQ (saw)	850	734	-	20-Apr-14
134307	2014	EC14-100	108.49	109.69	1.20	1.21	1/2 NQ (saw)	790	711	-	20-Apr-14
134308	2014	EC14-100	109.69	110.48	0.79	0.80	1/2 NQ (saw)	600	620	-	20-Apr-14
134309	2014	EC14-100	110.48	112.11	1.63	1.60	1/2 NQ (saw)	575	472	-	20-Apr-14
134310	2014	EC14-100	112.11	113.43	1.32	1.32	1/2 NQ (saw)	500	437	-	20-Apr-14
134311	2014	EC14-100	113.43	115.25	1.82	1.77	1/2 NQ (saw)	485	385	-	20-Apr-14
134312	2014	EC14-100	115.25	116.44	1.19	1.16	1/4 NQ (saw)	275	316	(Original - Dup is 134313)	20-Apr-14
134313	2014	EC14-100	115.25	116.44	1.19	1.16	1/4 NQ (saw)	280	322	(Dup of 134312)	20-Apr-14
134314	2014	EC14-100	116.44	117.87	1.43	1.42	1/2 NQ (saw)	475	405	-	20-Apr-14
134315	2014	EC14-100	117.87	119.32	1.45	1.45	1/2 NQ (saw)	475	403	-	20-Apr-14
134316	2014	EC14-100	119.32	120.65	1.33	1.30	1/2 NQ (saw)	450	395	-	20-Apr-14
134317	2014	EC14-100	120.65	122.31	1.66	1.69	1/2 NQ (saw)	525	423	-	20-Apr-14
134318	2014	EC14-100	122.31	123.47	1.16	1.16	1/2 NQ (saw)	505	461	-	20-Apr-14
134319	2014	EC14-100	123.47	124.40	0.93	0.90	1/2 NQ (saw)	375	373	-	20-Apr-14
134320	2014	EC14-100	124.40	126.00	1.60	1.60	1/2 NQ (saw)	650	533	-	20-Apr-14
134321	2014	EC14-100	126.00	127.63	1.63	1.64	1/2 NQ (saw)	750	610	-	20-Apr-14
134322	2014	EC14-100	127.63	129.28	1.65	1.65	1/2 NQ (saw)	800	649	-	20-Apr-14
134323	2014	EC14-100	129.28	130.65	1.37	1.38	1/2 NQ (saw)	775	668	-	20-Apr-14
134324	2014	EC14-100	-	-	-	-	Blank	165	-	Qtz-A	20-Apr-14
134325	2014	EC14-100	-	-	-	-	Standard	160	-	TRM-2	20-Apr-14
134326	2014	EC14-100	130.65	131.81	1.16	1.14	1/2 NQ (saw)	780	716	-	20-Apr-14
134327	2014	EC14-100	131.81	133.50	1.69	1.69	1/2 NQ (saw)	700	564	-	20-Apr-14
134328	2014	EC14-100	133.50	134.74	1.24	1.24	1/2 NQ (saw)	675	603	-	20-Apr-14
134329	2014	EC14-100	134.74	135.97	1.23	1.24	1/2 NQ (saw)	525	469	-	20-Apr-14
134330	2014	EC14-100	135.97	137.50	1.53	1.53	1/2 NQ (saw)	615	512	-	20-Apr-14
134331	2014	EC14-100	137.50	139.00	1.50	1.49	1/2 NQ (saw)	625	525	-	20-Apr-14
134332	2014	EC14-100	139.00	140.20	1.20	1.18	1/2 NQ (saw)	575	522	-	20-Apr-14
134333	2014	EC14-100	140.20	141.32	1.12	1.12	1/2 NQ (saw)	475	439	-	20-Apr-14
134334	2014	EC14-100	141.32	142.85	1.53	1.52	1/4 NQ (saw)	475	499	(Original - Dup is 134335)	20-Apr-14
134335	2014	EC14-100	141.32	142.85	1.53	1.52	1/4 NQ (saw)	480	504	(Dup of 134334)	20-Apr-14
134336	2014	EC14-100	142.85	144.30	1.45	1.43	1/2 NQ (saw)	580	494	-	20-Apr-14
134337	2014	EC14-100	144.30	145.68	1.38	1.39	1/2 NQ (saw)	600	516	-	20-Apr-14
134338	2014	EC14-100	145.68	147.40	1.72	1.74	1/2 NQ (saw)	575	459	-	20-Apr-14
134339	2014	EC14-100	147.40	148.66	1.26	1.27	1/2 NQ (saw)	550	487	-	20-Apr-14
134340	2014	EC14-100	148.66	149.96	1.30	1.34	1/2 NQ (saw)	600	522	-	20-Apr-14
134341	2014	EC14-100	149.96	151.55	1.59	1.60	1/2 NQ (saw)	690	566	-	20-Apr-14
134342	2014	EC14-100	151.55	153.40	1.85	1.89	1/2 NQ (saw)	525	407	-	20-Apr-14
134343	2014	EC14-100	153.40	154.54	1.14	1.13	1/2 NQ (saw)	500	460	-	20-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134344	2014	EC14-100	154.54	155.84	1.30	1.31	1/2 NQ (saw)	680	596	-	20-Apr-14
134345	2014	EC14-100	155.84	157.06	1.22	1.24	1/2 NQ (saw)	590	527	-	20-Apr-14
134346	2014	EC14-100	157.06	158.19	1.13	1.12	1/2 NQ (saw)	500	462	-	20-Apr-14
134347	2014	EC14-100	158.19	159.87	1.68	1.69	1/2 NQ (saw)	550	443	-	20-Apr-14
134348	2014	EC14-100	159.87	161.50	1.63	1.66	1/2 NQ (saw)	515	417	-	20-Apr-14
134349	2014	EC14-100	-	-	-	-	Blank	165	-	Qtz-A	20-Apr-14
134350	2014	EC14-100	-	-	-	-	Standard	165	-	OREAS-145	20-Apr-14
134351	2014	EC14-100	161.50	162.95	1.45	1.44	1/2 NQ (saw)	485	412	-	20-Apr-14
134352	2014	EC14-100	162.95	164.62	1.67	1.69	1/2 NQ (saw)	705	568	-	20-Apr-14
134353	2014	EC14-100	164.62	165.74	1.12	1.11	1/2 NQ (saw)	595	551	-	20-Apr-14
134354	2014	EC14-100	165.74	167.26	1.52	1.52	1/2 NQ (saw)	625	521	-	20-Apr-14
134355	2014	EC14-100	167.26	168.78	1.52	1.53	1/2 NQ (saw)	615	512	-	20-Apr-14
134356	2014	EC14-100	168.78	170.00	1.22	1.25	1/2 NQ (saw)	715	637	-	20-Apr-14
134357	2014	EC14-100	170.00	171.66	1.66	1.66	1/2 NQ (saw)	675	547	-	20-Apr-14
134358	2014	EC14-100	171.66	172.85	1.19	1.20	1/2 NQ (saw)	475	429	-	20-Apr-14
134359	2014	EC14-100	172.85	174.54	1.69	1.66	1/2 NQ (saw)	600	486	-	20-Apr-14
134360	2014	EC14-100	174.54	176.00	1.46	1.46	1/2 NQ (saw)	415	351	-	20-Apr-14
134361	2014	EC14-100	176.00	177.50	1.50	1.49	1/2 NQ (saw)	565	474	-	20-Apr-14
134362	2014	EC14-100	177.50	178.90	1.40	1.40	1/2 NQ (saw)	575	493	-	20-Apr-14
134363	2014	EC14-100	178.90	180.45	1.55	1.53	1/2 NQ (saw)	520	433	-	20-Apr-14
134364	2014	EC14-100	180.45	181.75	1.30	1.30	1/2 NQ (saw)	485	426	-	20-Apr-14
134365	2014	EC14-100	181.75	183.25	1.50	1.51	1/2 NQ (saw)	475	397	-	20-Apr-14
134366	2014	EC14-100	183.25	184.86	1.61	1.61	1/4 NQ (saw)	480	495	(Original - Dup is 134367)	20-Apr-14
134367	2014	EC14-100	183.25	184.86	1.61	1.61	1/4 NQ (saw)	425	438	(Dup of134366)	20-Apr-14
134368	2014	EC14-100	184.86	186.00	1.14	1.16	1/2 NQ (saw)	420	383	-	20-Apr-14
134369	2014	EC14-100	186.00	187.04	1.04	1.03	1/2 NQ (saw)	325	309	-	20-Apr-14
134370	2014	EC14-100	187.04	188.35	1.31	1.34	1/2 NQ (saw)	325	283	-	20-Apr-14
134371	2014	EC14-100	188.35	189.90	1.55	1.54	1/2 NQ (saw)	300	249	-	20-Apr-14
134372	2014	EC14-100	189.90	191.66	1.76	1.75	1/2 NQ (saw)	475	378	-	20-Apr-14
134373	2014	EC14-100	191.66	193.00	1.34	1.35	1/2 NQ (saw)	260	226	-	20-Apr-14
134374	2014	EC14-100	-	-	-	-	Blank	155	-	Qtz-A	20-Apr-14
134375	2014	EC14-100	-	-	-	-	Standard	160	-	TRM-2	20-Apr-14
134376	2014	EC14-100	193.00	194.16	1.16	1.16	1/2 NQ (saw)	300	274	-	20-Apr-14
134377	2014	EC14-101	10.06	11.50	1.44	1.45	1/2 NQ (saw)	570	483	-	22-Apr-14
134378	2014	EC14-101	11.50	12.94	1.44	1.48	1/2 NQ (saw)	630	530	-	22-Apr-14
134379	2014	EC14-101	12.94	14.46	1.52	1.55	1/2 NQ (saw)	680	564	-	22-Apr-14
134380	2014	EC14-101	14.46	16.13	1.67	1.66	1/2 NQ (saw)	660	535	-	22-Apr-14
134381	2014	EC14-101	16.13	17.15	1.02	1.00	1/2 NQ (saw)	470	451	-	22-Apr-14
134382	2014	EC14-101	17.15	18.22	1.07	1.08	1/2 NQ (saw)	450	421	-	22-Apr-14
134383	2014	EC14-101	18.22	19.66	1.44	1.43	1/2 NQ (saw)	550	468	-	22-Apr-14
134384	2014	EC14-101	19.66	21.50	1.84	1.86	1/2 NQ (saw)	680	530	-	22-Apr-14
134385	2014	EC14-101	21.50	22.15	0.65	0.62	1/2 NQ (saw)	350	394	-	22-Apr-14
134386	2014	EC14-101	22.15	23.54	1.39	1.40	1/2 NQ (saw)	560	480	-	22-Apr-14
134387	2014	EC14-101	23.54	24.89	1.35	1.37	1/4 NQ (saw)	480	522	(Original - Dup is 134388)	22-Apr-14
134388	2014	EC14-101	23.54	24.89	1.35	1.37	1/4 NQ (saw)	500	544	(Dup of 134387)	22-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134389	2014	EC14-101	24.89	26.08	1.19	1.22	1/2 NQ (saw)	680	610	-	22-Apr-14
134390	2014	EC14-101	26.08	27.45	1.37	1.42	1/2 NQ (saw)	560	478	-	22-Apr-14
134391	2014	EC14-101	27.45	29.00	1.55	1.57	1/2 NQ (saw)	575	475	-	22-Apr-14
134392	2014	EC14-101	29.00	30.37	1.37	1.38	1/2 NQ (saw)	460	396	-	22-Apr-14
134393	2014	EC14-101	30.37	31.85	1.48	1.49	1/2 NQ (saw)	550	462	-	22-Apr-14
134394	2014	EC14-101	31.85	32.50	0.65	0.65	1/2 NQ (saw)	410	454	-	22-Apr-14
134395	2014	EC14-101	32.50	33.90	1.40	1.38	1/2 NQ (saw)	565	487	-	22-Apr-14
134396	2014	EC14-101	33.90	34.22	0.32	0.32	1/2 NQ (saw)	350	491	-	22-Apr-14
134397	2014	EC14-101	34.22	35.43	1.21	1.20	1/2 NQ (saw)	550	496	-	22-Apr-14
134398	2014	EC14-101	35.43	36.69	1.26	1.24	1/2 NQ (saw)	600	536	-	22-Apr-14
134399	2014	EC14-101	-	-	-	-	Blank	170	-	Qtz-A	22-Apr-14
134400	2014	EC14-101	-	-	-	-	Standard	170	-	OREAS 146	22-Apr-14
134401	2014	EC14-101	36.69	38.00	1.31	1.31	1/2 NQ (saw)	500	438	-	22-Apr-14
134402	2014	EC14-101	38.00	39.46	1.46	1.45	1/2 NQ (saw)	600	508	-	22-Apr-14
134403	2014	EC14-101	39.46	40.96	1.50	1.50	1/2 NQ (saw)	570	478	-	22-Apr-14
134404	2014	EC14-101	40.96	42.36	1.40	1.34	1/2 NQ (saw)	590	513	-	22-Apr-14
134405	2014	EC14-101	42.36	43.37	1.01	1.04	1/2 NQ (saw)	540	511	-	22-Apr-14
134406	2014	EC14-101	43.37	44.61	1.24	1.25	1/2 NQ (saw)	760	677	-	22-Apr-14
134407	2014	EC14-101	44.61	46.15	1.54	1.54	1/2 NQ (saw)	500	415	-	22-Apr-14
134408	2014	EC14-101	46.15	47.81	1.66	1.64	1/2 NQ (saw)	475	386	-	22-Apr-14
134409	2014	EC14-101	47.81	48.69	0.88	0.86	1/2 NQ (saw)	500	504	-	22-Apr-14
134410	2014	EC14-101	48.69	50.23	1.54	1.53	1/2 NQ (saw)	420	350	-	22-Apr-14
134411	2014	EC14-101	50.23	51.82	1.59	1.55	1/2 NQ (saw)	410	340	-	22-Apr-14
134412	2014	EC14-101	51.82	53.15	1.33	1.33	1/4 NQ (saw)	340	374	(Original - Dup is 134413)	22-Apr-14
134413	2014	EC14-101	51.82	53.15	1.33	1.33	1/4 NQ (saw)	350	385	(Dup of 134412)	22-Apr-14
134414	2014	EC14-101	53.15	54.28	1.13	1.10	1/2 NQ (saw)	420	390	-	22-Apr-14
134415	2014	EC14-101	54.28	55.66	1.38	1.38	1/2 NQ (saw)	490	422	-	22-Apr-14
134416	2014	EC14-101	55.66	56.80	1.14	1.16	1/2 NQ (saw)	460	420	-	22-Apr-14
134417	2014	EC14-101	56.80	58.09	1.29	1.28	1/2 NQ (saw)	500	442	-	22-Apr-14
134418	2014	EC14-101	58.09	59.50	1.41	1.44	1/2 NQ (saw)	480	408	-	22-Apr-14
134419	2014	EC14-101	59.50	61.45	1.95	1.95	1/2 NQ (saw)	485	372	-	22-Apr-14
134420	2014	EC14-101	61.45	62.48	1.03	1.02	1/2 NQ (saw)	400	381	-	22-Apr-14
134421	2014	EC14-101	62.48	63.59	1.11	1.13	1/2 NQ (saw)	360	332	-	22-Apr-14
134422	2014	EC14-101	63.59	65.10	1.51	1.51	1/2 NQ (saw)	400	334	-	22-Apr-14
134423	2014	EC14-101	65.10	66.30	1.20	1.26	1/2 NQ (saw)	420	373	-	22-Apr-14
134424	2014	EC14-101	-	-	-	-	Blank	170	-	Qtz-A	22-Apr-14
134425	2014	EC14-101	-	-	-	-	Standard	160	-	TRM-2	22-Apr-14
134426	2014	EC14-101	66.30	68.00	1.70	1.69	1/2 NQ (saw)	540	435	-	22-Apr-14
134427	2014	EC14-101	68.00	69.42	1.42	1.42	1/2 NQ (saw)	405	346	-	22-Apr-14
134428	2014	EC14-101	69.42	70.93	1.51	1.48	1/2 NQ (saw)	360	303	-	22-Apr-14
134429	2014	EC14-101	70.93	72.54	1.61	1.58	1/2 NQ (saw)	460	379	-	22-Apr-14
134430	2014	EC14-101	72.54	74.00	1.46	1.45	1/2 NQ (saw)	440	373	-	22-Apr-14
134431	2014	EC14-101	74.00	75.50	1.50	1.48	1/2 NQ (saw)	450	379	-	22-Apr-14
134432	2014	EC14-101	75.50	76.78	1.28	1.30	1/2 NQ (saw)	440	387	-	22-Apr-14
134433	2014	EC14-101	76.78	78.29	1.51	1.50	1/2 NQ (saw)	600	503	-	22-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134434	2014	EC14-101	78.29	79.81	1.52	1.55	1/2 NQ (saw)	400	332	-	22-Apr-14
134435	2014	EC14-101	79.81	81.58	1.77	1.75	1/2 NQ (saw)	530	422	-	22-Apr-14
134436	2014	EC14-101	81.58	83.28	1.70	1.73	1/2 NQ (saw)	540	431	-	22-Apr-14
134437	2014	EC14-101	83.28	84.74	1.46	1.46	1/4 NQ (saw)	400	426	(Original - Dup is 134438)	22-Apr-14
134438	2014	EC14-101	83.28	84.74	1.46	1.46	1/4 NQ (saw)	415	442	(Dup of 134437)	22-Apr-14
134439	2014	EC14-101	84.74	85.96	1.22	1.22	1/2 NQ (saw)	450	404	-	22-Apr-14
134440	2014	EC14-101	85.96	87.30	1.34	1.32	1/2 NQ (saw)	390	341	-	22-Apr-14
134441	2014	EC14-101	87.30	88.75	1.45	1.41	1/2 NQ (saw)	540	462	-	22-Apr-14
134442	2014	EC14-101	88.75	90.35	1.60	1.61	1/2 NQ (saw)	410	336	-	22-Apr-14
134443	2014	EC14-101	90.35	92.05	1.70	1.68	1/2 NQ (saw)	400	323	-	22-Apr-14
134444	2014	EC14-101	92.05	93.47	1.42	1.41	1/2 NQ (saw)	470	402	-	22-Apr-14
134445	2014	EC14-101	93.47	95.00	1.53	1.55	1/2 NQ (saw)	570	472	-	22-Apr-14
134446	2014	EC14-101	95.00	96.00	1.00	0.98	1/2 NQ (saw)	490	473	-	22-Apr-14
134447	2014	EC14-101	96.00	97.68	1.68	1.64	1/2 NQ (saw)	410	333	-	22-Apr-14
134448	2014	EC14-101	97.68	99.24	1.56	1.55	1/2 NQ (saw)	370	307	-	22-Apr-14
134449	2014	EC14-101	-	-	-	-	Blank	150	-	Qtz-A	22-Apr-14
134450	2014	EC14-101	-	-	-	-	Standard	150	-	OREAS-146	22-Apr-14
134451	2014	EC14-101	99.24	100.50	1.26	1.26	1/2 NQ (saw)	330	293	-	22-Apr-14
134452	2014	EC14-101	100.50	102.07	1.57	1.56	1/2 NQ (saw)	290	240	-	22-Apr-14
134453	2014	EC14-101	102.07	103.66	1.59	1.58	1/2 NQ (saw)	370	305	-	22-Apr-14
134454	2014	EC14-101	103.66	105.29	1.63	1.62	1/2 NQ (saw)	295	241	-	22-Apr-14
134455	2014	EC14-101	105.29	106.88	1.59	1.59	1/2 NQ (saw)	330	271	-	22-Apr-14
134456	2014	EC14-101	106.88	108.40	1.52	1.53	1/2 NQ (saw)	240	200	-	22-Apr-14
134457	2014	EC14-101	108.40	109.90	1.50	1.49	1/2 NQ (saw)	320	269	-	22-Apr-14
134458	2014	EC14-101	109.90	111.50	1.60	1.61	1/2 NQ (saw)	330	270	-	22-Apr-14
134459	2014	EC14-101	111.50	113.10	1.60	1.59	1/2 NQ (saw)	320	263	-	22-Apr-14
134460	2014	EC14-101	113.10	114.69	1.59	1.58	1/2 NQ (saw)	330	272	-	22-Apr-14
134461	2014	EC14-101	114.69	116.02	1.33	1.33	1/2 NQ (saw)	300	262	-	22-Apr-14
134462	2014	EC14-101	116.02	117.60	1.58	1.55	1/4 NQ (saw)	260	271	(Original - Dup is 134463)	22-Apr-14
134463	2014	EC14-101	116.02	117.60	1.58	1.55	1/4 NQ (saw)	260	271	(Dup of 134462)	22-Apr-14
134464	2014	EC14-101	117.60	119.00	1.40	1.39	1/2 NQ (saw)	260	223	-	22-Apr-14
134465	2014	EC14-101	119.00	120.50	1.50	1.49	1/2 NQ (saw)	260	218	-	22-Apr-14
134466	2014	EC14-101	120.50	121.47	0.97	0.97	1/2 NQ (saw)	320	310	-	24-Apr-14
134467	2014	EC14-101	121.47	123.00	1.53	1.52	1/2 NQ (saw)	410	342	-	24-Apr-14
134468	2014	EC14-101	123.00	124.52	1.52	1.49	1/2 NQ (saw)	390	328	-	24-Apr-14
134469	2014	EC14-101	124.52	125.91	1.39	1.39	1/2 NQ (saw)	380	327	-	24-Apr-14
134470	2014	EC14-101	125.91	127.32	1.41	1.42	1/2 NQ (saw)	320	273	-	24-Apr-14
134471	2014	EC14-101	127.32	128.78	1.46	1.49	1/2 NQ (saw)	470	395	-	24-Apr-14
134472	2014	EC14-101	128.78	130.44	1.66	1.65	1/2 NQ (saw)	520	422	-	24-Apr-14
134473	2014	EC14-101	130.44	131.66	1.22	1.21	1/2 NQ (saw)	540	486	-	24-Apr-14
134474	2014	EC14-101	-	-	-	-	Blank	170	-	Qtz-A	24-Apr-14
134475	2014	EC14-101	-	-	-	-	Standard	180	-	TRM-2	24-Apr-14
134476	2014	EC14-101	131.66	133.09	1.43	1.43	1/2 NQ (saw)	550	468	-	24-Apr-14
134477	2014	EC14-101	133.09	134.65	1.56	1.55	1/2 NQ (saw)	480	398	-	24-Apr-14
134478	2014	EC14-101	134.65	136.39	1.74	1.75	1/2 NQ (saw)	450	358	-	24-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134479	2014	EC14-101	136.39	137.77	1.38	1.39	1/2 NQ (saw)	410	352	-	24-Apr-14
134480	2014	EC14-101	137.77	138.75	0.98	0.99	1/2 NQ (saw)	350	337	-	24-Apr-14
134481	2014	EC14-101	138.75	140.21	1.46	1.47	1/2 NQ (saw)	400	337	-	24-Apr-14
134482	2014	EC14-101	140.21	141.59	1.38	1.39	1/2 NQ (saw)	310	266	-	24-Apr-14
134483	2014	EC14-101	141.59	143.18	1.59	1.59	1/2 NQ (saw)	340	279	-	24-Apr-14
134484	2014	EC14-101	143.18	144.11	0.93	0.95	1/2 NQ (saw)	340	332	-	24-Apr-14
134485	2014	EC14-101	144.11	145.67	1.56	1.55	1/2 NQ (saw)	370	307	-	24-Apr-14
134486	2014	EC14-101	145.67	147.08	1.41	1.40	1/2 NQ (saw)	360	309	-	24-Apr-14
134487	2014	EC14-101	147.08	148.00	0.92	0.92	1/2 NQ (saw)	220	217	-	24-Apr-14
134488	2014	EC14-101	148.00	149.50	1.50	1.50	1/2 NQ (saw)	320	268	-	24-Apr-14
134489	2014	EC14-101	149.50	150.88	1.38	1.38	1/2 NQ (saw)	390	336	-	24-Apr-14
134490	2014	EC14-101	150.88	152.32	1.44	1.42	1/2 NQ (saw)	490	418	-	24-Apr-14
134491	2014	EC14-101	152.32	153.73	1.41	1.39	1/2 NQ (saw)	500	430	-	24-Apr-14
134492	2014	EC14-101	153.73	155.14	1.41	1.40	1/2 NQ (saw)	340	292	-	24-Apr-14
134493	2014	EC14-101	155.14	156.32	1.18	1.20	1/2 NQ (saw)	410	370	-	24-Apr-14
134494	2014	EC14-101	156.32	157.81	1.49	1.48	1/2 NQ (saw)	490	412	-	24-Apr-14
134495	2014	EC14-101	157.81	159.47	1.66	1.66	1/2 NQ (saw)	500	405	-	24-Apr-14
134496	2014	EC14-101	159.47	160.63	1.16	1.18	1/2 NQ (saw)	470	427	-	24-Apr-14
134497	2014	EC14-101	160.63	161.93	1.30	1.34	1/2 NQ (saw)	460	400	-	24-Apr-14
134498	2014	EC14-101	161.93	163.21	1.28	1.28	1/2 NQ (saw)	460	406	-	24-Apr-14
134499	2014	EC14-101	-	-	-	-	Blank	180	-	Qtz-A	24-Apr-14
134500	2014	EC14-101	-	-	-	-	Standard	180	-	OREAS-146	24-Apr-14
134526	2014	EC14-101	163.21	164.15	0.94	0.93	1/2 NQ (saw)	320	314	-	24-Apr-14
134527	2014	EC14-101	164.15	165.14	0.99	0.97	1/2 NQ (saw)	290	281	-	24-Apr-14
134528	2014	EC14-101	165.14	166.35	1.21	1.26	1/2 NQ (saw)	340	302	-	24-Apr-14
134529	2014	EC14-101	166.35	167.80	1.45	1.45	1/2 NQ (saw)	390	330	-	24-Apr-14
134530	2014	EC14-101	167.80	169.43	1.63	1.61	1/2 NQ (saw)	340	278	-	24-Apr-14
134531	2014	EC14-101	169.43	170.65	1.22	1.23	1/4 NQ (saw)	260	293	(Original - Dup is 134532)	24-Apr-14
134532	2014	EC14-101	169.43	170.65	1.22	1.23	1/4 NQ (saw)	280	316	(Dup of 134531)	24-Apr-14
134533	2014	EC14-101	170.65	171.50	0.85	0.86	1/2 NQ (saw)	250	252	-	24-Apr-14
134534	2014	EC14-101	171.50	172.53	1.03	1.03	1/2 NQ (saw)	310	294	-	24-Apr-14
134535	2014	EC14-102	7.35	8.66	1.31	1.34	1/2 NQ (saw)	330	287	-	25-Apr-14
134536	2014	EC14-102	8.66	10.00	1.34	1.32	1/2 NQ (saw)	340	297	-	25-Apr-14
134537	2014	EC14-102	10.00	11.55	1.55	1.56	1/2 NQ (saw)	260	215	-	25-Apr-14
134538	2014	EC14-102	11.55	12.96	1.41	1.36	1/2 NQ (saw)	340	294	-	25-Apr-14
134539	2014	EC14-102	12.96	14.50	1.54	1.57	1/2 NQ (saw)	310	256	-	25-Apr-14
134540	2014	EC14-102	14.50	16.00	1.50	1.50	1/2 NQ (saw)	310	260	-	25-Apr-14
134541	2014	EC14-102	16.00	17.50	1.50	1.52	1/2 NQ (saw)	270	225	-	25-Apr-14
134542	2014	EC14-102	17.50	19.00	1.50	1.49	1/2 NQ (saw)	290	244	-	25-Apr-14
134543	2014	EC14-102	19.00	20.50	1.50	1.52	1/2 NQ (saw)	320	267	-	25-Apr-14
134544	2014	EC14-102	20.50	21.67	1.17	1.17	1/2 NQ (saw)	400	364	-	25-Apr-14
134545	2014	EC14-102	21.67	22.91	1.24	1.24	1/2 NQ (saw)	380	339	-	25-Apr-14
134546	2014	EC14-102	22.91	23.91	1.00	0.99	1/2 NQ (saw)	390	375	-	25-Apr-14
134547	2014	EC14-102	23.91	24.82	0.91	0.91	1/2 NQ (saw)	420	416	-	25-Apr-14
134548	2014	EC14-102	24.82	25.61	0.79	0.81	1/2 NQ (saw)	500	514	-	25-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134549	2014	EC14-102	-	-	-	-	Blank	180	-	Qtz-A	25-Apr-14
134550	2014	EC14-102	-	-	-	-	Standard	180	-	TRM-2	25-Apr-14
134551	2014	EC14-102	25.61	26.93	1.32	1.26	1/2 NQ (saw)	590	524	-	25-Apr-14
134552	2014	EC14-102	26.93	27.85	0.92	0.93	1/2 NQ (saw)	530	521	-	25-Apr-14
134553	2014	EC14-102	27.85	28.45	0.60	0.60	1/2 NQ (saw)	450	512	-	25-Apr-14
134554	2014	EC14-102	28.45	29.84	1.39	1.39	1/2 NQ (saw)	600	516	-	25-Apr-14
134555	2014	EC14-102	29.84	31.50	1.66	1.67	1/2 NQ (saw)	670	542	-	25-Apr-14
134556	2014	EC14-102	31.50	32.19	0.69	0.71	1/2 NQ (saw)	560	602	-	25-Apr-14
134557	2014	EC14-102	32.19	33.69	1.50	1.50	1/2 NQ (saw)	590	494	-	25-Apr-14
134558	2014	EC14-102	33.69	35.11	1.42	1.42	1/2 NQ (saw)	550	469	-	25-Apr-14
134559	2014	EC14-102	35.11	36.60	1.49	1.49	1/2 NQ (saw)	450	378	-	25-Apr-14
134560	2014	EC14-102	36.60	37.15	0.55	0.55	1/2 NQ (saw)	450	527	-	25-Apr-14
134561	2014	EC14-102	37.15	38.00	0.85	0.86	1/2 NQ (saw)	460	464	-	25-Apr-14
134562	2014	EC14-102	38.00	39.17	1.17	1.18	1/2 NQ (saw)	430	390	-	25-Apr-14
134563	2014	EC14-102	39.17	40.37	1.20	1.20	1/4 NQ (saw)	330	375	(Original - Dup is 134564)	25-Apr-14
134564	2014	EC14-102	39.17	40.37	1.20	1.20	1/4 NQ (saw)	350	398	(Dup of 134563)	25-Apr-14
134565	2014	EC14-102	40.37	41.75	1.38	1.12	1/2 NQ (saw)	580	536	-	25-Apr-14
134566	2014	EC14-102	41.75	43.00	1.25	1.28	1/2 NQ (saw)	430	380	-	25-Apr-14
134567	2014	EC14-102	43.00	44.31	1.31	1.31	1/2 NQ (saw)	530	465	-	25-Apr-14
134568	2014	EC14-102	44.31	45.59	1.28	1.27	1/2 NQ (saw)	700	620	-	25-Apr-14
134569	2014	EC14-102	45.59	46.57	0.98	0.98	1/2 NQ (saw)	415	401	-	25-Apr-14
134570	2014	EC14-102	46.57	48.03	1.46	1.48	1/2 NQ (saw)	580	488	-	25-Apr-14
134571	2014	EC14-102	48.03	49.65	1.62	1.64	1/2 NQ (saw)	440	358	-	25-Apr-14
134572	2014	EC14-102	49.65	51.10	1.45	1.42	1/2 NQ (saw)	460	393	-	25-Apr-14
134573	2014	EC14-102	51.10	52.33	1.23	1.24	1/2 NQ (saw)	430	384	-	25-Apr-14
134574	2014	EC14-102	-	-	-	-	Blank	190	-	Qtz-A	25-Apr-14
134575	2014	EC14-102	-	-	-	-	Standard	170	-	OREAS-146	25-Apr-14
134576	2014	EC14-102	52.33	53.80	1.47	1.48	1/2 NQ (saw)	410	345	-	25-Apr-14
134577	2014	EC14-102	53.80	55.00	1.20	1.21	1/2 NQ (saw)	420	378	-	25-Apr-14
134578	2014	EC14-102	55.00	55.91	0.91	0.91	1/2 NQ (saw)	420	416	-	25-Apr-14
134579	2014	EC14-102	55.91	57.75	1.84	1.83	1/2 NQ (saw)	400	314	-	25-Apr-14
134580	2014	EC14-102	57.75	59.39	1.64	1.61	1/2 NQ (saw)	300	246	-	25-Apr-14
134581	2014	EC14-102	59.39	60.57	1.18	1.18	1/2 NQ (saw)	425	386	-	25-Apr-14
134582	2014	EC14-102	60.57	62.05	1.48	1.51	1/2 NQ (saw)	420	351	-	25-Apr-14
134583	2014	EC14-102	62.05	63.59	1.54	1.52	1/2 NQ (saw)	330	275	-	25-Apr-14
134584	2014	EC14-102	63.59	65.12	1.53	1.53	1/2 NQ (saw)	540	449	-	25-Apr-14
134585	2014	EC14-102	65.12	66.55	1.43	1.43	1/2 NQ (saw)	450	383	-	25-Apr-14
134586	2014	EC14-102	66.55	68.00	1.45	1.43	1/2 NQ (saw)	520	443	-	25-Apr-14
134587	2014	EC14-102	68.00	69.57	1.57	1.57	1/4 NQ (saw)	420	437	(Original - Dup Is 134588)	25-Apr-14
134588	2014	EC14-102	68.00	69.57	1.57	1.57	1/4 NQ (saw)	420	437	(Dup of 134587)	25-Apr-14
134589	2014	EC14-102	69.57	71.20	1.63	1.63	1/2 NQ (saw)	370	302	-	25-Apr-14
134590	2014	EC14-102	71.20	72.17	0.97	1.00	1/2 NQ (saw)	370	355	-	25-Apr-14
134592	2014	EC14-102	72.17	73.09	0.92	0.92	1/2 NQ (saw)	390	385	-	25-Apr-14
134593	2014	EC14-102	73.09	74.68	1.59	1.62	1/2 NQ (saw)	570	465	-	25-Apr-14
134594	2014	EC14-102	74.68	76.13	1.45	1.45	1/2 NQ (saw)	490	415	-	25-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134595	2014	EC14-102	76.13	77.75	1.62	1.65	1/2 NQ (saw)	500	406	-	25-Apr-14
134596	2014	EC14-102	77.75	79.14	1.39	1.39	1/2 NQ (saw)	410	352	-	25-Apr-14
134597	2014	EC14-102	79.14	80.66	1.52	1.52	1/2 NQ (saw)	420	350	-	25-Apr-14
134598	2014	EC14-102	80.66	82.29	1.63	1.60	1/2 NQ (saw)	440	361	-	25-Apr-14
134599	2014	EC14-102	-	-	-	-	Blank	175	-	Qtz-A	25-Apr-14
134600	2014	EC14-102	-	-	-	-	Standard	175	-	TRM-2	25-Apr-14
134601	2014	EC14-102	82.29	83.50	1.21	1.21	1/2 NQ (saw)	490	441	-	25-Apr-14
134602	2014	EC14-102	83.50	85.00	1.50	1.50	1/2 NQ (saw)	370	310	-	25-Apr-14
134603	2014	EC14-102	85.00	86.65	1.65	1.64	1/2 NQ (saw)	360	293	-	25-Apr-14
134604	2014	EC14-102	86.65	88.12	1.47	1.46	1/2 NQ (saw)	390	330	-	25-Apr-14
134605	2014	EC14-102	88.12	89.19	1.07	1.07	1/2 NQ (saw)	280	263	-	25-Apr-14
134606	2014	EC14-102	89.19	90.72	1.53	1.52	1/2 NQ (saw)	390	325	-	25-Apr-14
134607	2014	EC14-102	90.72	92.56	1.84	1.85	1/2 NQ (saw)	420	328	-	25-Apr-14
134608	2014	EC14-102	92.56	93.69	1.13	1.13	1/2 NQ (saw)	275	253	-	25-Apr-14
134609	2014	EC14-102	93.69	94.81	1.12	1.12	1/2 NQ (saw)	330	305	-	25-Apr-14
134610	2014	EC14-102	94.81	96.47	1.66	1.64	1/2 NQ (saw)	340	277	-	25-Apr-14
134611	2014	EC14-102	96.47	97.81	1.34	1.33	1/4 NQ (saw)	240	264	(Original - Dup is 134612)	25-Apr-14
134612	2014	EC14-102	96.47	97.81	1.34	1.33	1/4 NQ (saw)	250	275	(Dup of 134611)	25-Apr-14
134613	2014	EC14-102	97.81	99.54	1.73	1.73	1/2 NQ (saw)	360	288	-	25-Apr-14
134614	2014	EC14-102	99.54	101.02	1.48	1.48	1/2 NQ (saw)	570	480	-	25-Apr-14
134615	2014	EC14-102	101.02	102.00	0.98	0.96	1/2 NQ (saw)	490	476	-	25-Apr-14
134616	2014	EC14-102	102.00	103.03	1.03	1.02	1/2 NQ (saw)	610	581	-	25-Apr-14
134617	2014	EC14-102	103.03	104.24	1.21	1.22	1/2 NQ (saw)	500	449	-	25-Apr-14
134618	2014	EC14-102	104.24	105.50	1.26	1.27	1/2 NQ (saw)	620	549	-	25-Apr-14
134619	2014	EC14-102	105.50	106.59	1.09	1.09	1/2 NQ (saw)	470	438	-	25-Apr-14
134620	2014	EC14-102	106.59	107.64	1.05	1.04	1/2 NQ (saw)	550	521	-	25-Apr-14
134621	2014	EC14-102	107.64	108.91	1.27	1.23	1/2 NQ (saw)	520	465	-	25-Apr-14
134622	2014	EC14-102	108.91	110.37	1.46	1.47	1/2 NQ (saw)	380	321	-	25-Apr-14
134623	2014	EC14-102	110.37	111.54	1.17	1.18	1/2 NQ (saw)	375	340	-	25-Apr-14
134624	2014	EC14-102	-	-	-	-	Blank	160	-	Qtz-A	25-Apr-14
134625	2014	EC14-102	-	-	-	-	Standard	160	-	OREAS-146	25-Apr-14
134626	2014	EC14-102	111.54	112.93	1.39	1.39	1/2 NQ (saw)	410	352	-	25-Apr-14
134627	2014	EC14-102	112.93	113.81	0.88	0.89	1/2 NQ (saw)	325	324	-	25-Apr-14
134628	2014	EC14-102	113.81	114.54	0.73	0.74	1/2 NQ (saw)	350	371	-	25-Apr-14
134629	2014	EC14-102	114.54	115.64	1.10	1.08	1/2 NQ (saw)	460	430	-	25-Apr-14
134630	2014	EC14-102	115.64	117.19	1.55	1.55	1/2 NQ (saw)	360	298	-	25-Apr-14
134631	2014	EC14-102	117.19	118.75	1.56	1.56	1/2 NQ (saw)	350	289	-	25-Apr-14
134632	2014	EC14-102	118.75	119.90	1.15	1.13	1/2 NQ (saw)	350	322	-	25-Apr-14
134633	2014	EC14-102	119.90	121.47	1.57	1.57	1/2 NQ (saw)	490	404	-	25-Apr-14
134634	2014	EC14-102	121.47	122.12	0.65	0.66	1/2 NQ (saw)	295	325	-	25-Apr-14
134635	2014	EC14-102	122.12	123.09	0.97	0.98	1/2 NQ (saw)	290	280	-	25-Apr-14
134636	2014	EC14-102	123.09	124.46	1.37	1.35	1/2 NQ (saw)	339	294	-	25-Apr-14
134637	2014	EC14-102	124.46	126.09	1.63	1.64	1/2 NQ (saw)	370	301	-	25-Apr-14
134638	2014	EC14-102	126.09	127.39	1.30	1.30	1/2 NQ (saw)	300	264	-	25-Apr-14
134639	2014	EC14-102	127.39	128.57	1.18	1.19	1/2 NQ (saw)	240	217	-	25-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134640	2014	EC14-102	128.57	129.90	1.33	1.33	1/4 NQ (saw)	210	231	(Original - Dup is 134641)	25-Apr-14
134641	2014	EC14-102	128.57	129.90	1.33	1.33	1/4 NQ (saw)	220	242	(Dup of 134640)	25-Apr-14
134642	2014	EC14-102	129.90	131.50	1.60	1.58	1/2 NQ (saw)	220	181	-	25-Apr-14
134643	2014	EC14-102	131.50	133.07	1.57	1.55	1/2 NQ (saw)	220	182	-	25-Apr-14
134644	2014	EC14-102	133.07	134.29	1.22	1.24	1/2 NQ (saw)	230	205	-	25-Apr-14
134645	2014	EC14-102	134.29	136.00	1.71	1.69	1/2 NQ (saw)	320	258	-	25-Apr-14
134646	2014	EC14-102	-	-	-	-	Blank	160	-	Qtz-A	25-Apr-14
134647	2014	EC14-102	-	-	-	-	Standard	160	-	TRM-2	25-Apr-14
134648	2014	EC14-103	17.27	19.38	2.11	2.09	1/2 NQ (saw)	480	360	-	27-Apr-14
134649	2014	EC14-103	19.38	21.68	2.30	2.30	1/2 NQ (saw)	470	342	-	27-Apr-14
134650	2014	EC14-103	21.68	22.70	1.02	0.51	1/2 NQ (saw)	290	348	-	27-Apr-14
134651	2014	EC14-103	22.70	24.00	1.30	1.29	1/2 NQ (saw)	550	485	-	27-Apr-14
134652	2014	EC14-103	24.00	25.37	1.37	1.38	1/2 NQ (saw)	410	353	-	27-Apr-14
134653	2014	EC14-103	25.37	26.63	1.26	1.24	1/2 NQ (saw)	490	437	-	27-Apr-14
134654	2014	EC14-103	26.63	27.70	1.07	1.09	1/2 NQ (saw)	440	410	-	27-Apr-14
134655	2014	EC14-103	27.70	28.72	1.02	1.00	1/2 NQ (saw)	340	326	-	27-Apr-14
134656	2014	EC14-103	28.72	30.18	1.46	1.48	1/2 NQ (saw)	430	362	-	27-Apr-14
134657	2014	EC14-103	30.18	31.86	1.68	1.66	1/2 NQ (saw)	410	332	-	27-Apr-14
134658	2014	EC14-103	31.86	33.43	1.57	1.57	1/2 NQ (saw)	570	470	-	27-Apr-14
134659	2014	EC14-103	33.43	34.88	1.45	1.44	1/2 NQ (saw)	560	476	-	27-Apr-14
134660	2014	EC14-103	34.88	36.14	1.26	1.27	1/2 NQ (saw)	360	319	-	27-Apr-14
134661	2014	EC14-103	36.14	37.39	1.25	1.23	1/2 NQ (saw)	540	483	-	27-Apr-14
134662	2014	EC14-103	37.39	38.95	1.56	1.56	1/4 NQ (saw)	390	406	(Original - Dup is 134663)	27-Apr-14
134663	2014	EC14-103	37.39	38.95	1.56	1.56	1/4 NQ (saw)	390	406	(Dup of 134662)	27-Apr-14
134664	2014	EC14-103	38.95	40.47	1.52	1.51	1/2 NQ (saw)	520	435	-	27-Apr-14
134665	2014	EC14-103	40.47	41.80	1.33	1.30	1/2 NQ (saw)	520	457	-	27-Apr-14
134666	2014	EC14-103	41.80	43.50	1.70	1.71	1/2 NQ (saw)	550	441	-	27-Apr-14
134667	2014	EC14-103	43.50	45.00	1.50	1.51	1/2 NQ (saw)	480	401	-	27-Apr-14
134668	2014	EC14-103	45.00	46.50	1.50	1.49	1/2 NQ (saw)	510	428	-	27-Apr-14
134669	2014	EC14-103	46.50	48.00	1.50	1.50	1/2 NQ (saw)	460	385	-	27-Apr-14
134670	2014	EC14-103	48.00	49.50	1.50	1.51	1/2 NQ (saw)	610	510	-	27-Apr-14
134671	2014	EC14-103	49.50	51.15	1.65	1.65	1/2 NQ (saw)	590	479	-	27-Apr-14
134672	2014	EC14-103	51.15	52.57	1.42	1.40	1/2 NQ (saw)	560	480	-	27-Apr-14
134673	2014	EC14-103	52.57	54.12	1.55	1.54	1/2 NQ (saw)	500	415	-	27-Apr-14
134674	2014	EC14-103	-	-	-	-	Blank	170	-	Qtz-A	27-Apr-14
134675	2014	EC14-103	-	-	-	-	Standard	170	-	OREAS-146	27-Apr-14
134676	2014	EC14-103	54.12	54.93	0.81	0.82	1/2 NQ (saw)	520	533	-	27-Apr-14
134677	2014	EC14-103	54.93	56.19	1.26	1.26	1/2 NQ (saw)	530	471	-	27-Apr-14
134678	2014	EC14-103	56.19	57.74	1.55	1.55	1/2 NQ (saw)	490	406	-	27-Apr-14
134679	2014	EC14-103	57.74	59.11	1.37	1.33	1/2 NQ (saw)	420	366	-	27-Apr-14
134680	2014	EC14-103	59.11	60.00	0.89	0.89	1/2 NQ (saw)	430	429	-	27-Apr-14
134681	2014	EC14-103	60.00	60.99	0.99	0.95	1/2 NQ (saw)	430	420	-	27-Apr-14
134682	2014	EC14-103	60.99	62.15	1.16	1.15	1/2 NQ (saw)	610	558	-	27-Apr-14
134683	2014	EC14-103	62.15	63.34	1.19	1.19	1/2 NQ (saw)	670	606	-	27-Apr-14
134684	2014	EC14-103	63.34	64.05	0.71	0.71	1/2 NQ (saw)	710	763	-	27-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134685	2014	EC14-103	64.05	65.41	1.36	1.33	1/2 NQ (saw)	690	602	-	27-Apr-14
134686	2014	EC14-103	65.41	66.66	1.25	1.25	1/2 NQ (saw)	540	481	-	27-Apr-14
134687	2014	EC14-103	66.66	67.50	0.84	0.82	1/2 NQ (saw)	510	523	-	27-Apr-14
134688	2014	EC14-103	67.50	68.34	0.84	0.84	1/4 NQ (saw)	430	551	(Original - Dup is 134689)	27-Apr-14
134689	2014	EC14-103	67.50	68.34	0.84	0.84	1/4 NQ (saw)	420	538	(Dup of 134688)	27-Apr-14
134690	2014	EC14-103	68.34	69.96	1.62	1.61	1/2 NQ (saw)	540	442	-	27-Apr-14
134691	2014	EC14-103	69.96	71.58	1.62	1.61	1/2 NQ (saw)	450	368	-	27-Apr-14
134692	2014	EC14-103	71.58	73.34	1.76	1.73	1/2 NQ (saw)	520	415	-	27-Apr-14
134693	2014	EC14-103	73.34	74.75	1.41	1.37	1/2 NQ (saw)	520	449	-	27-Apr-14
134694	2014	EC14-103	74.75	76.24	1.49	1.48	1/2 NQ (saw)	470	396	-	27-Apr-14
134695	2014	EC14-103	76.24	77.50	1.26	1.25	1/2 NQ (saw)	320	285	-	27-Apr-14
134696	2014	EC14-103	77.50	79.10	1.60	1.56	1/2 NQ (saw)	400	331	-	27-Apr-14
134697	2014	EC14-103	79.10	80.37	1.27	1.26	1/2 NQ (saw)	470	417	-	27-Apr-14
134698	2014	EC14-103	80.37	82.19	1.82	1.81	1/2 NQ (saw)	430	338	-	27-Apr-14
134699	2014	EC14-103	-	-	-	-	Blank	175	-	Qtz-A	27-Apr-14
134700	2014	EC14-103	-	-	-	-	Standard	185	-	TRM-2	27-Apr-14
134701	2014	EC14-103	82.19	83.50	1.31	1.37	1/2 NQ (saw)	400	345	-	27-Apr-14
134702	2014	EC14-103	83.50	85.00	1.50	1.47	1/2 NQ (saw)	400	337	-	27-Apr-14
134703	2014	EC14-103	85.00	86.57	1.57	1.57	1/2 NQ (saw)	400	330	-	27-Apr-14
134704	2014	EC14-103	86.57	87.87	1.30	1.29	1/2 NQ (saw)	415	366	-	27-Apr-14
134705	2014	EC14-103	87.87	89.41	1.54	1.55	1/2 NQ (saw)	400	332	-	27-Apr-14
134706	2014	EC14-103	89.41	90.83	1.42	1.40	1/2 NQ (saw)	440	377	-	27-Apr-14
134707	2014	EC14-103	90.83	92.22	1.39	1.43	1/2 NQ (saw)	435	370	-	27-Apr-14
134708	2014	EC14-103	92.22	93.14	0.92	0.91	1/2 NQ (saw)	380	376	-	27-Apr-14
134709	2014	EC14-103	93.14	94.73	1.59	1.59	1/2 NQ (saw)	440	362	-	27-Apr-14
134710	2014	EC14-103	94.73	95.86	1.13	1.12	1/2 NQ (saw)	410	379	-	27-Apr-14
134711	2014	EC14-103	95.86	97.50	1.64	1.63	1/2 NQ (saw)	460	375	-	27-Apr-14
134712	2014	EC14-103	97.50	99.00	1.50	1.47	1/4 NQ (saw)	370	393	(Original - Dup is 134713)	27-Apr-14
134713	2014	EC14-103	97.50	99.00	1.50	1.47	1/4 NQ (saw)	370	393	(Dup of 134712)	27-Apr-14
134714	2014	EC14-103	99.00	100.80	1.80	1.78	1/2 NQ (saw)	600	475	-	27-Apr-14
134715	2014	EC14-103	100.80	101.89	1.09	1.10	1/2 NQ (saw)	420	390	-	27-Apr-14
134716	2014	EC14-103	101.89	103.32	1.43	1.44	1/2 NQ (saw)	600	510	-	27-Apr-14
134717	2014	EC14-103	103.32	104.77	1.45	1.45	1/2 NQ (saw)	560	475	-	27-Apr-14
134718	2014	EC14-103	104.77	105.61	0.84	0.83	1/2 NQ (saw)	700	714	-	27-Apr-14
134719	2014	EC14-103	105.61	106.38	0.77	0.77	1/2 NQ (saw)	360	377	-	27-Apr-14
134720	2014	EC14-103	106.38	107.50	1.12	1.12	1/2 NQ (saw)	530	489	-	27-Apr-14
134721	2014	EC14-103	107.50	108.71	1.21	1.22	1/2 NQ (saw)	650	583	-	27-Apr-14
134722	2014	EC14-103	108.71	110.20	1.49	1.51	1/2 NQ (saw)	550	460	-	27-Apr-14
134723	2014	EC14-103	110.20	111.67	1.47	1.45	1/2 NQ (saw)	580	491	-	27-Apr-14
134724	2014	EC14-103	-	-	-	-	Blank	190	-	Qtz-A	27-Apr-14
134725	2014	EC14-103	-	-	-	-	Standard	220	-	OREAS-146	27-Apr-14
134726	2014	EC14-103	111.67	113.21	1.54	1.54	1/2 NQ (saw)	630	523	-	27-Apr-14
134727	2014	EC14-103	113.21	114.50	1.29	1.27	1/2 NQ (saw)	600	531	-	27-Apr-14
134728	2014	EC14-103	114.50	116.00	1.50	1.51	1/2 NQ (saw)	600	502	-	27-Apr-14
134729	2014	EC14-103	116.00	117.50	1.50	1.51	1/2 NQ (saw)	580	485	-	27-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134730	2014	EC14-103	117.50	119.22	1.72	1.73	1/2 NQ (saw)	560	447	-	27-Apr-14
134731	2014	EC14-103	119.22	121.09	1.87	1.90	1/2 NQ (saw)	660	511	-	27-Apr-14
134732	2014	EC14-103	121.09	122.38	1.29	1.31	1/2 NQ (saw)	580	508	-	27-Apr-14
134733	2014	EC14-103	122.38	124.18	1.80	1.81	1/2 NQ (saw)	790	622	-	27-Apr-14
134734	2014	EC14-103	124.18	125.55	1.37	1.37	1/2 NQ (saw)	750	648	-	27-Apr-14
134735	2014	EC14-103	125.55	126.87	1.32	1.32	1/2 NQ (saw)	540	472	-	27-Apr-14
134736	2014	EC14-103	126.87	128.50	1.63	1.64	1/2 NQ (saw)	600	488	-	27-Apr-14
134737	2014	EC14-103	128.50	130.00	1.50	1.51	1/2 NQ (saw)	500	418	-	27-Apr-14
134738	2014	EC14-103	130.00	131.45	1.45	1.46	1/2 NQ (saw)	710	600	-	27-Apr-14
134739	2014	EC14-103	131.45	132.78	1.33	1.34	1/4 NQ (saw)	520	570	(Original - Dup is 134740)	27-Apr-14
134740	2014	EC14-103	131.45	132.78	1.33	1.34	1/4 NQ (saw)	530	581	(Dup of 134739)	27-Apr-14
134741	2014	EC14-103	132.78	134.21	1.43	1.44	1/2 NQ (saw)	880	747	-	27-Apr-14
134742	2014	EC14-103	134.21	135.74	1.53	1.56	1/2 NQ (saw)	950	786	-	27-Apr-14
134743	2014	EC14-103	135.74	137.00	1.26	1.28	1/2 NQ (saw)	660	583	-	27-Apr-14
134744	2014	EC14-103	137.00	138.48	1.48	1.49	1/2 NQ (saw)	720	605	-	27-Apr-14
134745	2014	EC14-103	138.48	139.29	0.81	0.83	1/2 NQ (saw)	540	551	-	27-Apr-14
134746	2014	EC14-103	139.29	140.56	1.27	1.29	1/2 NQ (saw)	820	722	-	27-Apr-14
134747	2014	EC14-103	140.56	142.11	1.55	1.56	1/2 NQ (saw)	980	810	-	27-Apr-14
134748	2014	EC14-103	142.11	143.62	1.51	1.51	1/2 NQ (saw)	970	811	-	27-Apr-14
134749	2014	EC14-103	-	-	-	-	Blank	230	-	Qtz-A	27-Apr-14
134750	2014	EC14-103	-	-	-	-	Standard	190	-	TRM-2	27-Apr-14
134751	2014	EC14-103	143.62	145.00	1.38	1.39	1/2 NQ (saw)	800	688	-	27-Apr-14
134752	2014	EC14-103	145.00	146.50	1.50	1.52	1/2 NQ (saw)	790	659	-	27-Apr-14
134753	2014	EC14-103	146.50	148.00	1.50	1.50	1/2 NQ (saw)	730	612	-	27-Apr-14
134754	2014	EC14-103	148.00	149.37	1.37	1.37	1/2 NQ (saw)	650	561	-	27-Apr-14
134755	2014	EC14-103	149.37	151.21	1.84	1.82	1/2 NQ (saw)	600	471	-	27-Apr-14
134756	2014	EC14-103	151.21	152.38	1.17	1.16	1/2 NQ (saw)	450	411	-	27-Apr-14
134757	2014	EC14-103	152.38	153.92	1.54	1.57	1/2 NQ (saw)	475	392	-	27-Apr-14
134758	2014	EC14-103	153.92	155.26	1.34	1.34	1/2 NQ (saw)	680	592	-	27-Apr-14
134759	2014	EC14-103	155.26	156.50	1.24	1.23	1/2 NQ (saw)	530	474	-	27-Apr-14
134760	2014	EC14-103	156.50	157.58	1.08	1.07	1/2 NQ (saw)	600	563	-	27-Apr-14
134761	2014	EC14-104	4.91	6.50	1.59	1.57	1/2 NQ (saw)	220	182	-	29-Apr-14
134762	2014	EC14-104	6.50	8.00	1.50	1.50	1/2 NQ (saw)	230	193	-	29-Apr-14
134763	2014	EC14-104	8.00	9.53	1.53	1.51	1/2 NQ (saw)	190	159	-	29-Apr-14
134764	2014	EC14-104	9.53	11.07	1.54	1.56	1/2 NQ (saw)	170	141	-	29-Apr-14
134765	2014	EC14-104	11.07	12.65	1.58	1.56	1/2 NQ (saw)	185	153	-	29-Apr-14
134766	2014	EC14-104	12.65	14.25	1.60	1.62	1/4 NQ (saw)	190	195	(Original - Dup is 134767)	29-Apr-14
134767	2014	EC14-104	12.65	14.25	1.60	1.62	1/4 NQ (saw)	170	175	(Dup of 134766)	29-Apr-14
134768	2014	EC14-104	14.25	15.53	1.28	1.27	1/2 NQ (saw)	185	164	-	29-Apr-14
134769	2014	EC14-104	15.53	17.00	1.47	1.48	1/2 NQ (saw)	150	126	-	29-Apr-14
134770	2014	EC14-104	17.00	18.50	1.50	1.50	1/2 NQ (saw)	160	134	-	29-Apr-14
134771	2014	EC14-104	18.50	19.50	1.00	1.00	1/2 NQ (saw)	160	153	-	29-Apr-14
134772	2014	EC14-104	19.50	20.70	1.20	1.20	1/2 NQ (saw)	150	135	-	29-Apr-14
134773	2014	EC14-105	8.05	9.50	1.45	1.44	1/2 NQ (saw)	170	144	-	29-Apr-14
134774	2014	EC14-105	-	-	-	-	Blank	150	-	Qtz-A	29-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134775	2014	EC14-105	-	-	-	-	Standard	150	-	OREAS-146	29-Apr-14
134776	2014	EC14-105	9.50	11.00	1.50	1.45	1/2 NQ (saw)	170	144	-	29-Apr-14
134777	2014	EC14-105	11.00	12.50	1.50	1.49	1/2 NQ (saw)	200	168	-	29-Apr-14
134778	2014	EC14-105	12.50	14.00	1.50	1.51	1/2 NQ (saw)	180	150	-	29-Apr-14
134779	2014	EC14-105	14.00	15.50	1.50	1.47	1/2 NQ (saw)	210	177	-	29-Apr-14
134780	2014	EC14-105	15.50	17.00	1.50	1.50	1/2 NQ (saw)	175	147	-	29-Apr-14
134781	2014	EC14-105	17.00	18.50	1.50	1.52	1/2 NQ (saw)	220	184	-	29-Apr-14
134782	2014	EC14-105	18.50	20.00	1.50	1.47	1/2 NQ (saw)	240	202	-	29-Apr-14
134783	2014	EC14-105	20.00	21.50	1.50	1.52	1/2 NQ (saw)	180	150	-	29-Apr-14
134784	2014	EC14-105	21.50	22.70	1.20	1.19	1/2 NQ (saw)	230	208	-	29-Apr-14
134785	2014	EC14-105	22.70	23.72	1.02	1.06	1/2 NQ (saw)	240	226	-	29-Apr-14
134786	2014	EC14-106	8.86	10.00	1.14	1.17	1/2 NQ (saw)	250	228	-	29-Apr-14
134787	2014	EC14-106	10.00	11.11	1.11	1.11	1/2 NQ (saw)	300	278	-	29-Apr-14
134788	2014	EC14-106	11.11	12.35	1.24	1.23	1/2 NQ (saw)	370	331	-	29-Apr-14
134789	2014	EC14-106	12.35	13.82	1.47	1.46	1/2 NQ (saw)	320	271	-	29-Apr-14
134790	2014	EC14-106	13.82	15.56	1.74	1.74	1/2 NQ (saw)	430	343	-	29-Apr-14
134791	2014	EC14-106	15.56	17.06	1.50	1.51	1/2 NQ (saw)	380	318	-	29-Apr-14
134792	2014	EC14-106	17.06	18.50	1.44	1.41	1/2 NQ (saw)	330	282	-	29-Apr-14
134793	2014	EC14-106	18.50	20.10	1.60	1.59	1/2 NQ (saw)	280	230	-	29-Apr-14
134794	2014	EC14-106	20.10	21.28	1.18	1.17	1/2 NQ (saw)	300	273	-	29-Apr-14
134795	2014	EC14-106	21.28	22.75	1.47	1.50	1/2 NQ (saw)	315	264	-	29-Apr-14
134796	2014	EC14-106	22.75	23.75	1.00	1.00	1/2 NQ (saw)	270	259	-	29-Apr-14
134797	2014	EC14-106	23.75	25.25	1.50	1.50	1/2 NQ (saw)	320	268	-	29-Apr-14
134798	2014	EC14-106	25.25	26.97	1.72	1.72	1/2 NQ (saw)	290	232	-	29-Apr-14
134799	2014	EC14-106	-	-	-	-	Blank	150	-	Qtz-A	29-Apr-14
134800	2014	EC14-106	-	-	-	-	Standard	155	-	TRM-2	29-Apr-14
134801	2014	EC14-106	26.97	28.63	1.66	1.64	1/2 NQ (saw)	480	390	-	29-Apr-14
134802	2014	EC14-106	28.63	30.26	1.63	1.64	1/2 NQ (saw)	370	301	-	29-Apr-14
134803	2014	EC14-106	30.26	31.81	1.55	1.55	1/2 NQ (saw)	310	257	-	29-Apr-14
134804	2014	EC14-106	31.81	33.13	1.32	1.32	1/2 NQ (saw)	280	245	-	29-Apr-14
134805	2014	EC14-106	33.13	35.00	1.87	1.85	1/2 NQ (saw)	450	352	-	29-Apr-14
134806	2014	EC14-106	35.00	36.47	1.47	1.47	1/2 NQ (saw)	400	337	-	29-Apr-14
134807	2014	EC14-106	36.47	38.00	1.53	1.50	1/2 NQ (saw)	380	318	-	29-Apr-14
134808	2014	EC14-106	38.00	38.88	0.88	0.88	1/2 NQ (saw)	280	280	-	29-Apr-14
134809	2014	EC14-106	38.88	39.94	1.06	1.05	1/2 NQ (saw)	270	255	-	29-Apr-14
134810	2014	EC14-106	39.94	41.39	1.45	1.45	1/2 NQ (saw)	400	339	-	29-Apr-14
134811	2014	EC14-106	41.39	42.64	1.25	1.26	1/2 NQ (saw)	350	311	-	29-Apr-14
134812	2014	EC14-106	42.64	44.13	1.49	1.48	1/2 NQ (saw)	310	261	-	29-Apr-14
134813	2014	EC14-106	44.13	45.20	1.07	1.06	1/2 NQ (saw)	280	263	-	30-Apr-14
134814	2014	EC14-106	45.20	46.35	1.15	1.15	1/4 NQ (saw)	315	363	(Original - Dup is 134815)	30-Apr-14
134815	2014	EC14-106	45.20	46.35	1.15	1.15	1/4 NQ (saw)	310	358	(Dup of 134814)	30-Apr-14
134816	2014	EC14-106	46.35	47.56	1.21	1.21	1/2 NQ (saw)	360	324	-	30-Apr-14
134817	2014	EC14-106	47.56	48.71	1.15	1.15	1/2 NQ (saw)	357	327	-	30-Apr-14
134818	2014	EC14-106	48.71	50.19	1.48	1.47	1/2 NQ (saw)	340	287	-	30-Apr-14
134819	2014	EC14-106	50.19	51.54	1.35	1.34	1/2 NQ (saw)	515	448	-	30-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134820	2014	EC14-106	51.54	53.31	1.77	1.74	1/2 NQ (saw)	560	447	-	30-Apr-14
134821	2014	EC14-106	53.31	54.95	1.64	1.63	1/2 NQ (saw)	750	611	-	30-Apr-14
134822	2014	EC14-106	54.95	56.52	1.57	1.54	1/2 NQ (saw)	710	590	-	30-Apr-14
134823	2014	EC14-106	56.52	58.09	1.57	1.55	1/2 NQ (saw)	660	547	-	30-Apr-14
134824	2014	EC14-106	-	-	-	-	Blank	175	-	Qtz-A	30-Apr-14
134825	2014	EC14-106	-	-	-	-	Standard	165	-	OREAS-146	30-Apr-14
134826	2014	EC14-106	58.09	59.31	1.22	1.23	1/2 NQ (saw)	630	564	-	30-Apr-14
134827	2014	EC14-106	59.31	60.57	1.26	1.26	1/2 NQ (saw)	590	524	-	30-Apr-14
134828	2014	EC14-106	60.57	62.20	1.63	1.62	1/2 NQ (saw)	650	531	-	30-Apr-14
134829	2014	EC14-106	62.20	63.50	1.30	1.29	1/2 NQ (saw)	580	511	-	30-Apr-14
134830	2014	EC14-106	63.50	65.00	1.50	1.47	1/2 NQ (saw)	500	422	-	30-Apr-14
134831	2014	EC14-106	65.00	66.59	1.59	1.59	1/2 NQ (saw)	608	500	-	30-Apr-14
134832	2014	EC14-106	66.59	68.09	1.50	1.50	1/2 NQ (saw)	480	402	-	30-Apr-14
134833	2014	EC14-106	68.09	69.55	1.46	1.44	1/2 NQ (saw)	390	331	-	30-Apr-14
134834	2014	EC14-106	69.55	70.26	0.71	0.70	1/2 NQ (saw)	370	400	-	30-Apr-14
134835	2014	EC14-106	70.26	71.74	1.48	1.47	1/2 NQ (saw)	415	350	-	30-Apr-14
134836	2014	EC14-106	71.74	73.08	1.34	1.32	1/2 NQ (saw)	475	415	-	30-Apr-14
134837	2014	EC14-106	73.08	74.71	1.63	1.63	1/4 NQ (saw)	545	560	(Original - Dup is 134838)	30-Apr-14
134838	2014	EC14-106	73.08	74.71	1.63	1.63	1/4 NQ (saw)	550	565	(Dup of 134837)	30-Apr-14
134839	2014	EC14-106	74.71	76.24	1.53	1.50	1/2 NQ (saw)	450	377	-	30-Apr-14
134840	2014	EC14-106	76.24	77.18	0.94	0.93	1/2 NQ (saw)	450	442	-	30-Apr-14
134841	2014	EC14-106	77.18	78.41	1.23	1.21	1/2 NQ (saw)	545	491	-	30-Apr-14
134842	2014	EC14-106	78.41	79.52	1.11	1.09	1/2 NQ (saw)	350	326	-	30-Apr-14
134843	2014	EC14-106	79.52	81.30	1.78	1.75	1/2 NQ (saw)	425	338	-	30-Apr-14
134844	2014	EC14-106	81.30	82.53	1.23	1.24	1/2 NQ (saw)	500	446	-	30-Apr-14
134845	2014	EC14-106	82.53	84.27	1.74	1.71	1/2 NQ (saw)	520	417	-	30-Apr-14
134846	2014	EC14-106	84.27	85.77	1.50	1.48	1/2 NQ (saw)	300	252	-	30-Apr-14
134847	2014	EC14-106	85.77	86.83	1.06	1.08	1/2 NQ (saw)	520	486	-	30-Apr-14
134848	2014	EC14-106	86.83	87.55	0.72	0.71	1/2 NQ (saw)	850	914	-	30-Apr-14
134849	2014	EC14-106	-	-	-	-	Blank	165	-	Qtz-A	30-Apr-14
134850	2014	EC14-106	-	-	-	-	Standard	175	-	TRM-2	30-Apr-14
134851	2014	EC14-106	87.55	88.60	1.05	1.07	1/2 NQ (saw)	470	441	-	30-Apr-14
134852	2014	EC14-106	88.60	89.50	0.90	0.89	1/2 NQ (saw)	490	489	-	30-Apr-14
134853	2014	EC14-106	89.50	90.61	1.11	1.11	1/2 NQ (saw)	520	482	-	30-Apr-14
134854	2014	EC14-106	90.61	91.26	0.65	0.67	1/2 NQ (saw)	350	384	-	30-Apr-14
134855	2014	EC14-106	91.26	92.73	1.47	1.45	1/2 NQ (saw)	400	339	-	30-Apr-14
134856	2014	EC14-106	92.73	94.26	1.53	1.51	1/2 NQ (saw)	410	343	-	30-Apr-14
134857	2014	EC14-106	94.26	95.81	1.55	1.53	1/2 NQ (saw)	320	266	-	30-Apr-14
134858	2014	EC14-106	95.81	97.16	1.35	1.34	1/2 NQ (saw)	445	387	-	30-Apr-14
134859	2014	EC14-106	97.16	98.50	1.34	1.34	1/2 NQ (saw)	575	500	-	30-Apr-14
134860	2014	EC14-106	98.50	99.83	1.33	1.32	1/2 NQ (saw)	550	481	-	30-Apr-14
134861	2014	EC14-106	99.83	100.24	0.41	0.41	1/2 NQ (saw)	301	389	-	30-Apr-14
134862	2014	EC14-106	100.24	102.00	1.76	1.74	1/2 NQ (saw)	450	359	-	30-Apr-14
134863	2014	EC14-106	102.00	103.64	1.64	1.65	1/2 NQ (saw)	420	341	-	30-Apr-14
134864	2014	EC14-106	103.64	105.00	1.36	1.35	1/2 NQ (saw)	430	373	-	30-Apr-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134865	2014	EC14-106	105.00	105.77	0.77	0.77	1/4 NQ (saw)	280	369	(Original - Dup is 134866)	30-Apr-14
134866	2014	EC14-106	105.00	105.77	0.77	0.77	1/4 NQ (saw)	270	356	(Dup of 134865)	30-Apr-14
134867	2014	EC14-106	105.77	108.81	3.04	1.16	1/2 NQ (saw)	360	329	-	30-Apr-14
134868	2014	EC14-106	108.81	109.63	0.82	0.81	1/2 NQ (saw)	380	391	-	30-Apr-14
134869	2014	EC14-106	109.63	111.31	1.68	1.68	1/2 NQ (saw)	460	371	-	30-Apr-14
134870	2014	EC14-106	111.31	112.91	1.60	1.60	1/2 NQ (saw)	415	340	-	30-Apr-14
134871	2014	EC14-106	112.91	114.18	1.27	1.27	1/2 NQ (saw)	420	372	-	30-Apr-14
134872	2014	EC14-106	114.18	115.36	1.18	1.15	1/2 NQ (saw)	500	458	-	30-Apr-14
134873	2014	EC14-106	115.36	117.14	1.78	1.75	1/2 NQ (saw)	490	390	-	30-Apr-14
134874	2014	EC14-106	-	-	-	-	Blank	160	-	Qtz-A	30-Apr-14
134875	2014	EC14-106	-	-	-	-	Standard	180	-	OREAS-146	30-Apr-14
134876	2014	EC14-106	117.14	118.22	1.08	1.08	1/2 NQ (saw)	350	327	-	30-Apr-14
134877	2014	EC14-106	118.22	119.85	1.63	1.65	1/2 NQ (saw)	380	308	-	30-Apr-14
134878	2014	EC14-106	119.85	121.32	1.47	1.47	1/2 NQ (saw)	360	304	-	30-Apr-14
134879	2014	EC14-106	121.32	122.34	1.02	1.02	1/2 NQ (saw)	300	286	-	30-Apr-14
134880	2014	EC14-106	122.34	124.00	1.66	1.66	1/2 NQ (saw)	380	308	-	30-Apr-14
134881	2014	EC14-106	124.00	125.23	1.23	1.23	1/2 NQ (saw)	360	322	-	30-Apr-14
134882	2014	EC14-106	125.23	126.60	1.37	1.38	1/2 NQ (saw)	350	302	-	30-Apr-14
134883	2014	EC14-106	126.60	128.00	1.40	1.40	1/4 NQ (saw)	265	286	(Original - Dup is 134883)	30-Apr-14
134884	2014	EC14-106	126.60	128.00	1.40	1.40	1/4 NQ (saw)	270	292	(Dup of 134883)	30-Apr-14
134885	2014	EC14-106	128.00	129.74	1.74	1.77	1/2 NQ (saw)	340	270	-	30-Apr-14
134886	2014	EC14-106	129.74	130.82	1.08	1.10	1/2 NQ (saw)	390	362	-	30-Apr-14
134887	2014	EC14-106	130.82	132.47	1.65	1.65	1/2 NQ (saw)	330	268	-	30-Apr-14
134888	2014	EC14-106	132.47	133.82	1.35	1.34	1/2 NQ (saw)	300	261	-	30-Apr-14
134889	2014	EC14-106	133.82	135.38	1.56	1.58	1/2 NQ (saw)	315	259	-	30-Apr-14
134890	2014	EC14-106	135.38	137.00	1.62	1.64	1/2 NQ (saw)	460	374	-	30-Apr-14
134891	2014	EC14-106	137.00	138.13	1.13	1.13	1/2 NQ (saw)	480	442	-	30-Apr-14
134892	2014	EC14-106	138.13	139.29	1.16	1.16	1/2 NQ (saw)	415	379	-	30-Apr-14
134893	2014	EC14-107	7.43	9.20	1.77	1.75	1/2 NQ (saw)	340	271	-	1-May-14
134894	2014	EC14-107	9.20	10.15	0.95	0.94	1/2 NQ (saw)	385	377	-	1-May-14
134895	2014	EC14-107	10.15	11.35	1.20	1.17	1/2 NQ (saw)	260	237	-	1-May-14
134896	2014	EC14-107	11.35	12.53	1.18	1.15	1/2 NQ (saw)	310	284	-	1-May-14
134897	2014	EC14-107	12.53	13.90	1.37	1.34	1/2 NQ (saw)	380	331	-	1-May-14
134898	2014	EC14-107	13.90	15.35	1.45	1.43	1/2 NQ (saw)	380	324	-	1-May-14
134899	2014	EC14-107	-	-	-	-	Blank	180	-	Qtz-A	1-May-14
134900	2014	EC14-107	-	-	-	-	Standard	200	-	TRM-2	1-May-14
134901	2014	EC14-107	15.35	16.99	1.64	1.61	1/2 NQ (saw)	280	229	-	1-May-14
134902	2014	EC14-107	16.99	18.38	1.39	1.38	1/2 NQ (saw)	400	345	-	1-May-14
134903	2014	EC14-107	18.38	19.82	1.44	1.40	1/2 NQ (saw)	500	429	-	1-May-14
134904	2014	EC14-107	19.82	20.81	0.99	1.00	1/2 NQ (saw)	480	460	-	1-May-14
134905	2014	EC14-107	20.81	22.12	1.31	0.43	1/2 NQ (saw)	450	572	-	1-May-14
134906	2014	EC14-107	22.12	23.88	1.76	1.73	1/2 NQ (saw)	350	280	-	1-May-14
134907	2014	EC14-107	23.88	25.55	1.67	1.68	1/2 NQ (saw)	380	307	-	1-May-14
134908	2014	EC14-107	25.55	27.00	1.45	1.45	1/2 NQ (saw)	370	314	-	1-May-14
134909	2014	EC14-107	27.00	28.52	1.52	1.52	1/2 NQ (saw)	400	334	-	1-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134910	2014	EC14-107	28.52	30.11	1.59	1.57	1/2 NQ (saw)	420	347	-	1-May-14
134911	2014	EC14-107	30.11	31.50	1.39	1.39	1/4 NQ (saw)	300	325	(Original - Dup is 134912)	1-May-14
134912	2014	EC14-107	30.11	31.50	1.39	1.39	1/4 NQ (saw)	330	357	(Dup of 134911)	1-May-14
134913	2014	EC14-107	31.50	33.16	1.66	1.65	1/2 NQ (saw)	360	292	-	1-May-14
134914	2014	EC14-107	33.16	34.80	1.64	1.65	1/2 NQ (saw)	340	276	-	1-May-14
134915	2014	EC14-107	34.80	35.66	0.86	0.45	1/2 NQ (saw)	200	250	-	1-May-14
134916	2014	EC14-107	35.66	37.50	1.84	1.83	1/2 NQ (saw)	280	220	-	1-May-14
134917	2014	EC14-107	37.50	38.87	1.37	1.42	1/2 NQ (saw)	330	282	-	1-May-14
134918	2014	EC14-107	38.87	40.71	1.84	1.88	1/2 NQ (saw)	290	225	-	1-May-14
134919	2014	EC14-107	40.71	42.21	1.50	1.50	1/2 NQ (saw)	480	402	-	1-May-14
134920	2014	EC14-107	42.21	43.88	1.67	1.67	1/2 NQ (saw)	520	420	-	1-May-14
134921	2014	EC14-107	43.88	45.18	1.30	1.31	1/2 NQ (saw)	370	324	-	1-May-14
134922	2014	EC14-107	45.18	46.43	1.25	1.25	1/2 NQ (saw)	400	356	-	1-May-14
134923	2014	EC14-107	46.43	48.00	1.57	1.57	1/2 NQ (saw)	460	380	-	1-May-14
134924	2014	EC14-107	-	-	-	-	Blank	200	-	Qtz-A	1-May-14
134925	2014	EC14-107	-	-	-	-	Standard	180	-	OREAS-146	1-May-14
134926	2014	EC14-107	48.00	49.56	1.56	1.57	1/2 NQ (saw)	330	272	-	1-May-14
134927	2014	EC14-107	49.56	51.27	1.71	1.70	1/2 NQ (saw)	320	257	-	1-May-14
134928	2014	EC14-107	51.27	53.00	1.73	1.72	1/2 NQ (saw)	400	320	-	1-May-14
134929	2014	EC14-107	53.00	53.92	0.92	0.92	1/2 NQ (saw)	300	296	-	1-May-14
134930	2014	EC14-107	53.92	55.11	1.19	1.19	1/2 NQ (saw)	300	272	-	1-May-14
134931	2014	EC14-107	55.11	56.18	1.07	1.03	1/2 NQ (saw)	280	266	-	1-May-14
134932	2014	EC14-107	56.18	56.81	0.63	0.62	1/2 NQ (saw)	240	270	-	1-May-14
134933	2014	EC14-107	56.81	58.11	1.30	1.30	1/2 NQ (saw)	300	264	-	1-May-14
134934	2014	EC14-107	58.11	59.50	1.39	1.36	1/2 NQ (saw)	290	251	-	1-May-14
134935	2014	EC14-107	59.50	61.00	1.50	1.48	1/2 NQ (saw)	310	261	-	1-May-14
134936	2014	EC14-107	61.00	62.62	1.62	1.62	1/2 NQ (saw)	280	229	-	1-May-14
134937	2014	EC14-107	62.62	64.19	1.57	1.57	1/2 NQ (saw)	300	248	-	1-May-14
134938	2014	EC14-107	64.19	65.54	1.35	1.34	1/2 NQ (saw)	330	287	-	1-May-14
134939	2014	EC14-107	65.54	66.60	1.06	1.06	1/4 NQ (saw)	270	320	(Original - Dup is 134940)	1-May-14
134940	2014	EC14-107	65.54	66.60	1.06	1.06	1/4 NQ (saw)	260	308	(Dup of 134939)	1-May-14
134941	2014	EC14-107	66.60	67.86	1.26	1.28	1/2 NQ (saw)	270	239	-	1-May-14
134942	2014	EC14-107	67.86	69.05	1.19	1.19	1/2 NQ (saw)	270	244	-	1-May-14
134943	2014	EC14-107	69.05	70.35	1.30	1.28	1/2 NQ (saw)	360	318	-	1-May-14
134944	2014	EC14-107	70.35	71.93	1.58	1.54	1/2 NQ (saw)	380	316	-	1-May-14
134945	2014	EC14-107	71.93	73.05	1.12	1.09	1/2 NQ (saw)	400	373	-	1-May-14
134946	2014	EC14-107	73.05	74.87	1.82	1.82	1/2 NQ (saw)	400	314	-	1-May-14
134947	2014	EC14-107	74.87	75.72	0.85	0.84	1/2 NQ (saw)	370	376	-	1-May-14
134948	2014	EC14-107	75.72	76.57	0.85	0.84	1/2 NQ (saw)	340	346	-	1-May-14
134949	2014	EC14-107	-	-	-	-	Blank	180	-	Qtz-A	1-May-14
134950	2014	EC14-107	-	-	-	-	Standard	190	-	TRM-2	1-May-14
134951	2014	EC14-107	76.57	77.70	1.13	1.13	1/2 NQ (saw)	500	460	-	1-May-14
134952	2014	EC14-107	77.70	79.16	1.46	1.47	1/2 NQ (saw)	430	363	-	1-May-14
134953	2014	EC14-107	79.16	80.40	1.24	1.22	1/2 NQ (saw)	310	278	-	1-May-14
134954	2014	EC14-107	80.40	81.50	1.10	1.08	1/2 NQ (saw)	400	374	-	1-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
134955	2014	EC14-107	81.50	82.39	0.89	0.91	1/2 NQ (saw)	380	376	-	1-May-14
134956	2014	EC14-107	82.39	83.90	1.51	1.47	1/2 NQ (saw)	600	506	-	1-May-14
134957	2014	EC14-107	83.90	85.35	1.45	1.49	1/2 NQ (saw)	580	487	-	1-May-14
134958	2014	EC14-107	85.35	86.62	1.27	1.25	1/2 NQ (saw)	510	454	-	1-May-14
134959	2014	EC14-107	86.62	88.00	1.38	1.36	1/2 NQ (saw)	500	433	-	1-May-14
134960	2014	EC14-107	88.00	89.63	1.63	1.59	1/2 NQ (saw)	390	320	-	1-May-14
134961	2014	EC14-107	89.63	91.00	1.37	1.38	1/2 NQ (saw)	450	388	-	1-May-14
134962	2014	EC14-107	91.00	92.19	1.19	1.19	1/2 NQ (saw)	400	362	-	1-May-14
134963	2014	EC14-107	92.19	93.77	1.58	1.59	1/2 NQ (saw)	460	378	-	1-May-14
134964	2014	EC14-107	93.77	95.36	1.59	1.57	1/4 NQ (saw)	400	416	(Original - Dup is 134965)	1-May-14
134965	2014	EC14-107	93.77	95.36	1.59	1.57	1/4 NQ (saw)	500	520	(Dup of 134964)	1-May-14
134966	2014	EC14-107	95.36	96.73	1.37	1.36	1/2 NQ (saw)	420	364	-	1-May-14
134967	2014	EC14-107	96.73	98.37	1.64	1.63	1/2 NQ (saw)	600	489	-	1-May-14
134968	2014	EC14-107	98.37	99.50	1.13	1.15	1/2 NQ (saw)	570	522	-	1-May-14
134969	2014	EC14-107	99.50	100.48	0.98	0.99	1/2 NQ (saw)	460	443	-	1-May-14
134970	2014	EC14-107	100.48	101.77	1.29	1.27	1/2 NQ (saw)	470	416	-	1-May-14
134971	2014	EC14-107	101.77	103.37	1.60	1.60	1/2 NQ (saw)	440	361	-	1-May-14
134972	2014	EC14-107	103.37	104.96	1.59	1.60	1/2 NQ (saw)	410	336	-	1-May-14
134973	2014	EC14-107	104.96	106.18	1.22	1.22	1/2 NQ (saw)	400	359	-	1-May-14
134974	2014	EC14-107	-	-	-	-	Blank		-	Qtz-A	1-May-14
134975	2014	EC14-107	-	-	-	-	Standard		-	OREAS-146	1-May-14
134976	2014	EC14-107	106.18	107.64	1.46	1.48	1/2 NQ (saw)	470	396	-	2-May-14
134977	2014	EC14-107	107.64	109.10	1.46	1.45	1/2 NQ (saw)	430	364	-	2-May-14
134978	2014	EC14-107	109.10	110.62	1.52	1.50	1/2 NQ (saw)	480	402	-	2-May-14
134979	2014	EC14-107	110.62	111.78	1.16	1.17	1/2 NQ (saw)	340	309	-	2-May-14
134980	2014	EC14-107	111.78	113.29	1.51	1.52	1/2 NQ (saw)	400	334	-	2-May-14
134981	2014	EC14-107	113.29	114.83	1.54	1.53	1/2 NQ (saw)	460	383	-	2-May-14
134982	2014	EC14-107	114.83	116.18	1.35	1.36	1/2 NQ (saw)	300	260	-	2-May-14
134983	2014	EC14-107	116.18	118.02	1.84	1.85	1/2 NQ (saw)	560	438	-	2-May-14
134984	2014	EC14-107	118.02	119.28	1.26	1.26	1/2 NQ (saw)	470	417	-	2-May-14
134985	2014	EC14-107	119.28	120.86	1.58	1.55	1/2 NQ (saw)	320	265	-	2-May-14
134986	2014	EC14-107	120.86	122.43	1.57	1.57	1/2 NQ (saw)	320	264	-	2-May-14
134987	2014	EC14-107	122.43	124.00	1.57	1.62	1/2 NQ (saw)	340	278	-	2-May-14
134988	2014	EC14-107	124.00	125.82	1.82	1.83	1/2 NQ (saw)	520	408	-	2-May-14
134989	2014	EC14-107	125.82	127.21	1.39	1.41	1/4 NQ (saw)	320	345	(Original - Dup is 134990)	2-May-14
134990	2014	EC14-107	125.82	127.21	1.39	1.41	1/4 NQ (saw)	390	420	(Dup of 134989)	2-May-14
134991	2014	EC14-107	127.21	128.39	1.18	1.20	1/2 NQ (saw)	310	280	-	2-May-14
134992	2014	EC14-107	128.39	130.02	1.63	1.62	1/2 NQ (saw)	420	343	-	2-May-14
134993	2014	EC14-107	130.02	131.42	1.40	1.41	1/2 NQ (saw)	320	274	-	2-May-14
134994	2014	EC14-107	131.42	133.08	1.66	1.67	1/2 NQ (saw)	380	307	-	2-May-14
134995	2014	EC14-107	133.08	134.59	1.51	1.53	1/2 NQ (saw)	490	408	-	2-May-14
134996	2014	EC14-107	134.59	135.96	1.37	1.37	1/2 NQ (saw)	380	328	-	2-May-14
134997	2014	EC14-107	135.96	137.56	1.60	1.58	1/2 NQ (saw)	400	329	-	2-May-14
134998	2014	EC14-107	137.56	139.07	1.51	1.51	1/2 NQ (saw)	300	251	-	2-May-14
134999	2014	EC14-107	-	-	-	-	Blank	170	-	Qtz-A	1-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
135000	2014	EC14-107	-	-	-	-	Standard	170	-	TRM-2	2-May-14
135001	2014	EC14-107	139.07	140.50	1.43	1.43	1/2 NQ (saw)	340	289	-	2-May-14
135002	2014	EC14-107	140.50	142.20	1.70	1.71	1/2 NQ (saw)	430	345	-	2-May-14
135003	2014	EC14-107	142.20	143.17	0.97	0.97	1/2 NQ (saw)	300	291	-	2-May-14
135004	2014	EC14-107	143.17	144.61	1.44	1.43	1/2 NQ (saw)	320	272	-	2-May-14
135005	2014	EC14-107	144.61	146.09	1.48	1.49	1/2 NQ (saw)	260	218	-	2-May-14
135006	2014	EC14-107	146.09	147.40	1.31	1.32	1/2 NQ (saw)	375	328	-	2-May-14
135007	2014	EC14-107	147.40	149.00	1.60	1.60	1/2 NQ (saw)	440	361	-	2-May-14
135008	2014	EC14-107	149.00	150.68	1.68	1.67	1/2 NQ (saw)	480	388	-	2-May-14
135009	2014	EC14-107	150.68	152.06	1.38	1.38	1/2 NQ (saw)	370	319	-	2-May-14
135010	2014	EC14-107	152.06	153.36	1.30	1.27	1/2 NQ (saw)	270	239	-	2-May-14
135011	2014	EC14-107	153.36	154.53	1.17	1.17	1/2 NQ (saw)	330	300	-	2-May-14
135012	2014	EC14-108	1.44	2.75	1.31	1.31	1/2 NQ (saw)	170	149	-	2-May-14
135013	2014	EC14-108	2.75	3.92	1.17	1.16	1/2 NQ (saw)	170	155	-	2-May-14
135014	2014	EC14-108	3.92	5.24	1.32	1.31	1/4 NQ (saw)	170	188	(Original - Dup is 135015)	2-May-14
135015	2014	EC14-108	3.92	5.24	1.32	1.31	1/4 NQ (saw)	170	188	(Dup of 135014)	2-May-14
135016	2014	EC14-108	5.24	6.87	1.63	1.63	1/2 NQ (saw)	200	163	-	2-May-14
135017	2014	EC14-108	6.87	8.50	1.63	1.63	1/2 NQ (saw)	190	155	-	2-May-14
135018	2014	EC14-108	8.50	10.00	1.50	1.47	1/2 NQ (saw)	270	228	-	2-May-14
135019	2014	EC14-108	10.00	11.50	1.50	1.48	1/2 NQ (saw)	270	227	-	2-May-14
135020	2014	EC14-108	11.50	12.48	0.98	0.98	1/2 NQ (saw)	240	232	-	2-May-14
135021	2014	EC14-108	12.48	13.43	0.95	0.98	1/2 NQ (saw)	235	227	-	2-May-14
135022	2014	EC14-108	13.43	15.00	1.57	1.55	1/2 NQ (saw)	230	191	-	2-May-14
135023	2014	EC14-108	15.00	16.61	1.61	1.62	1/2 NQ (saw)	225	184	-	2-May-14
135024	2014	EC14-108	-	-	-	-	Blank	180	-	Qtz-A	2-May-14
135025	2014	EC14-108	-	-	-	-	Standard	185	-	OREAS-145	2-May-14
135026	2014	EC14-108	16.61	17.63	1.02	1.02	1/2 NQ (saw)	210	200	-	2-May-14
135027	2014	EC14-109	9.40	10.44	1.04	1.04	1/2 NQ (saw)	550	521	-	2-May-14
135028	2014	EC14-109	10.44	11.62	1.18	1.16	1/2 NQ (saw)	420	383	-	2-May-14
135029	2014	EC14-109	11.62	13.35	1.73	1.70	1/2 NQ (saw)	610	490	-	2-May-14
135030	2014	EC14-109	13.35	14.80	1.45	1.46	1/2 NQ (saw)	550	465	-	2-May-14
135031	2014	EC14-109	14.80	16.25	1.45	1.43	1/2 NQ (saw)	530	451	-	2-May-14
135032	2014	EC14-109	16.25	17.32	1.07	1.08	1/2 NQ (saw)	420	393	-	2-May-14
135033	2014	EC14-109	17.32	18.88	1.56	1.56	1/2 NQ (saw)	515	426	-	2-May-14
135034	2014	EC14-109	18.88	20.25	1.37	1.40	1/2 NQ (saw)	545	467	-	2-May-14
135035	2014	EC14-109	20.25	20.97	0.72	0.71	1/2 NQ (saw)	385	414	-	2-May-14
135036	2014	EC14-109	20.97	22.50	1.53	1.53	1/2 NQ (saw)	525	437	-	2-May-14
135037	2014	EC14-109	22.50	24.00	1.50	1.50	1/2 NQ (saw)	440	369	-	2-May-14
135038	2014	EC14-109	24.00	25.50	1.50	1.51	1/2 NQ (saw)	445	372	-	2-May-14
135039	2014	EC14-109	25.50	27.00	1.50	1.51	1/2 NQ (saw)	430	359	-	2-May-14
135040	2014	EC14-109	27.00	28.50	1.50	1.48	1/4 NQ (saw)	375	398	(Original - Dup is 135041)	2-May-14
135041	2014	EC14-109	27.00	28.50	1.50	1.48	1/4 NQ (saw)	425	451	(Dup of 135042)	2-May-14
135042	2014	EC14-109	28.50	30.22	1.72	1.73	1/2 NQ (saw)	505	403	-	2-May-14
135043	2014	EC14-109	30.22	31.45	1.23	1.21	1/2 NQ (saw)	520	468	-	2-May-14
135044	2014	EC14-109	31.45	32.78	1.33	1.32	1/2 NQ (saw)	500	437	-	2-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
135045	2014	EC14-109	32.78	34.38	1.60	1.60	1/2 NQ (saw)	460	377	-	2-May-14
135046	2014	EC14-109	34.38	35.92	1.54	1.53	1/2 NQ (saw)	540	449	-	2-May-14
135047	2014	EC14-109	35.92	37.44	1.52	1.53	1/2 NQ (saw)	565	470	-	2-May-14
135048	2014	EC14-109	37.44	39.12	1.68	1.66	1/2 NQ (saw)	660	535	-	2-May-14
135049	2014	EC14-109	-	-	-	-	Blank	155	-	Qtz-A	2-May-14
135050	2014	EC14-109	-	-	-	-	Standard	185	-	TRM-2	2-May-14
135051	2014	EC14-109	39.12	40.10	0.98	0.99	1/2 NQ (saw)	520	500	-	2-May-14
135052	2014	EC14-109	40.10	41.58	1.48	1.47	1/2 NQ (saw)	480	405	-	2-May-14
135053	2014	EC14-109	41.58	43.24	1.66	1.66	1/2 NQ (saw)	480	389	-	2-May-14
135054	2014	EC14-109	43.24	44.81	1.57	1.54	1/2 NQ (saw)	615	511	-	2-May-14
135055	2014	EC14-109	44.81	46.41	1.60	1.63	1/2 NQ (saw)	535	436	-	2-May-14
135056	2014	EC14-109	46.41	48.00	1.59	1.59	1/2 NQ (saw)	570	468	-	2-May-14
135057	2014	EC14-109	48.00	49.50	1.50	1.50	1/2 NQ (saw)	460	385	-	2-May-14
135058	2014	EC14-109	49.50	50.90	1.40	1.38	1/2 NQ (saw)	455	392	-	2-May-14
135059	2014	EC14-109	50.90	51.67	0.77	0.79	1/2 NQ (saw)	385	399	-	2-May-14
135060	2014	EC14-109	51.67	53.30	1.63	1.64	1/2 NQ (saw)	490	399	-	2-May-14
135061	2014	EC14-109	53.30	54.78	1.48	1.47	1/2 NQ (saw)	500	422	-	2-May-14
135062	2014	EC14-109	54.78	55.83	1.05	1.03	1/2 NQ (saw)	395	375	-	2-May-14
135063	2014	EC14-109	55.83	56.92	1.09	1.08	1/4 NQ (saw)	390	459	(Original - Dup is 135064)	2-May-14
135064	2014	EC14-109	55.83	56.92	1.09	1.08	1/4 NQ (saw)	400	471	(Dup of 135063)	2-May-14
135065	2014	EC14-109	56.92	58.39	1.47	1.46	1/2 NQ (saw)	530	448	-	2-May-14
135066	2014	EC14-109	58.39	59.50	1.11	1.11	1/2 NQ (saw)	550	509	-	3-May-14
135067	2014	EC14-109	59.50	60.56	1.06	1.06	1/2 NQ (saw)	330	310	-	3-May-14
135068	2014	EC14-109	60.56	62.18	1.62	1.64	1/2 NQ (saw)	380	309	-	3-May-14
135069	2014	EC14-109	62.18	63.72	1.54	1.55	1/2 NQ (saw)	470	390	-	3-May-14
135070	2014	EC14-109	63.72	65.38	1.66	1.64	1/2 NQ (saw)	350	285	-	3-May-14
135071	2014	EC14-109	65.38	66.34	0.96	0.95	1/2 NQ (saw)	345	337	-	3-May-14
135072	2014	EC14-109	66.34	67.03	0.69	0.70	1/2 NQ (saw)	275	297	-	3-May-14
135073	2014	EC14-109	67.03	68.50	1.47	1.45	1/2 NQ (saw)	450	381	-	3-May-14
135074	2014	EC14-109	-	-	-	-	Blank	180	-	Qtz-A	3-May-14
135075	2014	EC14-109	-	-	-	-	Standard	190	-	OREAS-145	3-May-14
135076	2014	EC14-109	68.50	70.00	1.50	1.49	1/2 NQ (saw)	410	344	-	3-May-14
135077	2014	EC14-109	70.00	71.66	1.66	1.68	1/2 NQ (saw)	380	307	-	3-May-14
135078	2014	EC14-109	71.66	73.21	1.55	1.52	1/2 NQ (saw)	630	526	-	3-May-14
135079	2014	EC14-109	73.21	74.70	1.49	1.50	1/2 NQ (saw)	600	503	-	3-May-14
135080	2014	EC14-109	74.70	76.25	1.55	1.56	1/2 NQ (saw)	570	471	-	3-May-14
135081	2014	EC14-109	76.25	77.77	1.52	1.56	1/2 NQ (saw)	710	587	-	3-May-14
135082	2014	EC14-109	77.77	79.19	1.42	1.42	1/2 NQ (saw)	960	819	-	3-May-14
135083	2014	EC14-109	79.19	80.77	1.58	1.56	1/2 NQ (saw)	520	430	-	3-May-14
135084	2014	EC14-109	80.77	81.88	1.11	1.11	1/2 NQ (saw)	595	551	-	3-May-14
135085	2014	EC14-109	81.88	83.50	1.62	1.63	1/2 NQ (saw)	580	473	-	3-May-14
135086	2014	EC14-109	83.50	84.73	1.23	1.21	1/2 NQ (saw)	660	594	-	3-May-14
135087	2014	EC14-109	84.73	86.05	1.32	1.32	1/4 NQ (saw)	620	683	(Original - Dup is 135088)	3-May-14
135088	2014	EC14-109	84.73	86.05	1.32	1.32	1/4 NQ (saw)	550	606	(Dup of 135087)	3-May-14
135089	2014	EC14-109	86.05	86.65	0.60	0.60	1/2 NQ (saw)	450	512	-	3-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
135090	2014	EC14-109	86.65	87.81	1.16	1.15	1/2 NQ (saw)	578	529	-	3-May-14
135091	2014	EC14-109	87.81	88.98	1.17	1.18	1/2 NQ (saw)	370	336	-	3-May-14
135092	2014	EC14-109	88.98	90.58	1.60	1.56	1/2 NQ (saw)	760	629	-	3-May-14
135093	2014	EC14-109	90.58	92.14	1.56	1.56	1/2 NQ (saw)	970	802	-	3-May-14
135094	2014	EC14-109	92.14	93.48	1.34	1.32	1/2 NQ (saw)	950	831	-	3-May-14
135095	2014	EC14-109	93.48	94.77	1.29	1.30	1/2 NQ (saw)	975	857	-	3-May-14
135096	2014	EC14-109	94.77	96.19	1.42	1.42	1/2 NQ (saw)	1000	853	-	3-May-14
135097	2014	EC14-109	96.19	97.44	1.25	1.24	1/2 NQ (saw)	695	620	-	3-May-14
135098	2014	EC14-109	97.44	98.50	1.06	1.05	1/2 NQ (saw)	590	557	-	3-May-14
135099	2014	EC14-109	-	-	-	-	Blank	175	-	Qtz-A	3-May-14
135100	2014	EC14-109	-	-	-	-	Standard	185	-	TRM-2	3-May-14
135101	2014	EC14-109	98.50	99.47	0.97	0.96	1/2 NQ (saw)	580	564	-	3-May-14
135102	2014	EC14-109	99.47	100.73	1.26	1.27	1/2 NQ (saw)	650	576	-	3-May-14
135103	2014	EC14-109	100.73	102.08	1.35	1.35	1/2 NQ (saw)	645	560	-	3-May-14
135104	2014	EC14-109	102.08	103.50	1.42	1.42	1/2 NQ (saw)	710	606	-	3-May-14
135105	2014	EC14-109	103.50	104.99	1.49	1.48	1/2 NQ (saw)	580	488	-	3-May-14
135106	2014	EC14-109	104.99	106.63	1.64	1.65	1/2 NQ (saw)	520	422	-	3-May-14
135107	2014	EC14-109	106.63	108.53	1.90	1.89	1/2 NQ (saw)	730	566	-	3-May-14
135108	2014	EC14-109	108.53	110.25	1.72	1.74	1/2 NQ (saw)	810	646	-	3-May-14
135109	2014	EC14-109	110.25	112.00	1.75	1.77	1/2 NQ (saw)	730	579	-	3-May-14
135110	2014	EC14-109	112.00	113.28	1.28	1.25	1/4 NQ (saw)	500	561	(Original - Dup is 135111)	3-May-14
135111	2014	EC14-109	112.00	113.28	1.28	1.25	1/4 NQ (saw)	460	516	(Dup of 135112)	3-May-14
135112	2014	EC14-109	113.28	114.82	1.54	1.55	1/2 NQ (saw)	640	530	-	3-May-14
135113	2014	EC14-109	114.82	116.33	1.51	1.53	1/2 NQ (saw)	540	449	-	3-May-14
135114	2014	EC14-109	116.33	118.00	1.67	1.68	1/2 NQ (saw)	540	436	-	3-May-14
135115	2014	EC14-109	118.00	119.50	1.50	1.50	1/2 NQ (saw)	605	507	-	3-May-14
135116	2014	EC14-109	119.50	121.00	1.50	1.48	1/2 NQ (saw)	555	467	-	3-May-14
135117	2014	EC14-109	121.00	122.50	1.50	1.50	1/2 NQ (saw)	545	457	-	3-May-14
135118	2014	EC14-109	122.50	124.00	1.50	1.50	1/2 NQ (saw)	530	444	-	3-May-14
135119	2014	EC14-109	124.00	125.50	1.50	1.50	1/2 NQ (saw)	740	620	-	3-May-14
135120	2014	EC14-109	125.50	127.00	1.50	1.51	1/2 NQ (saw)	630	527	-	3-May-14
135121	2014	EC14-109	127.00	128.50	1.50	1.47	1/2 NQ (saw)	650	548	-	3-May-14
135122	2014	EC14-109	128.50	130.00	1.50	1.48	1/2 NQ (saw)	440	370	-	3-May-14
135123	2014	EC14-109	130.00	131.33	1.33	1.32	1/2 NQ (saw)	555	485	-	3-May-14
135124	2014	EC14-109	-	-	-	-	Blank	175	-	Qtz-A	3-May-14
135125	2014	EC14-109	-	-	-	-	Standard	185	-	OREAS-145	3-May-14
135126	2014	EC14-109	131.33	132.08	0.75	0.75	1/2 NQ (saw)	500	528	-	3-May-14
135127	2014	EC14-109	132.08	133.44	1.36	1.35	1/2 NQ (saw)	600	521	-	3-May-14
135128	2014	EC14-109	133.44	135.10	1.66	1.66	1/2 NQ (saw)	535	433	-	3-May-14
135129	2014	EC14-109	135.10	136.63	1.53	1.53	1/2 NQ (saw)	920	766	-	3-May-14
135130	2014	EC14-109	136.63	137.92	1.29	1.30	1/2 NQ (saw)	670	589	-	3-May-14
135131	2014	EC14-109	137.92	138.80	0.88	0.88	1/2 NQ (saw)	470	470	-	3-May-14
135132	2014	EC14-109	138.80	140.33	1.53	1.55	1/2 NQ (saw)	610	506	-	3-May-14
135133	2014	EC14-109	140.33	141.42	1.09	1.10	1/2 NQ (saw)	485	451	-	3-May-14
135134	2014	EC14-109	141.42	142.83	1.41	1.40	1/2 NQ (saw)	490	420	-	3-May-14

Appendix 10c: 2013 and 2014 Drill Core Sample Listing

SAMPLE	Year Sample Collected	Drill Hole	From (m)	To (m)	Interval (m)	Physical Core Length (m)	Type	Bag CPS	Bag CPS Normalized	Description	Date Sample Collected
135135	2014	EC14-109	142.83	144.30	1.47	1.47	1/2 NQ (saw)	440	371	-	3-May-14
135136	2014	EC14-109	144.30	145.77	1.47	1.46	1/2 NQ (saw)	660	558	-	3-May-14
135137	2014	EC14-109	145.77	146.96	1.19	1.21	1/2 NQ (saw)	490	441	-	3-May-14
135138	2014	EC14-109	146.96	148.18	1.22	1.20	1/2 NQ (saw)	460	415	-	3-May-14
135139	2014	EC14-109	148.18	149.74	1.56	1.57	1/4 NQ (saw)	380	395	(Original - Dup is 135140)	3-May-14
135140	2014	EC14-109	148.18	149.74	1.56	1.57	1/4 NQ (saw)	390	405	(Dup of 135139)	3-May-14
135141	2014	EC14-109	149.74	151.16	1.42	1.43	1/2 NQ (saw)	520	443	-	3-May-14
135142	2014	EC14-109	151.16	152.50	1.34	1.34	1/2 NQ (saw)	455	396	-	3-May-14
135143	2014	EC14-109	152.50	153.50	1.00	0.99	1/2 NQ (saw)	430	414	-	3-May-14
135144	2014	EC14-109	153.50	154.29	0.79	0.80	1/2 NQ (saw)	390	403	-	3-May-14

APPENDIX 10D: 2013 AND 2014 DRILL HOLE ATTRIBUTES

Appendix 10d: 2013 and 2014 Drill hole Attributes

General Area	Hole-ID	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Azimuth[1] (°)	Dip[1] (°)	Core Size	EOH (m)		From (m)	To (m)	Interval (m)	TREO (%)	MH-T[2] (%)	F (%)	CaF_2[3] (%)
Ashram (Deposit, Land)	EC13-087	536059.210	6312224.820	59.3	-89.0	NQ	85.14		2.91	63.07	**60.16**	**2.27**	5.0	4.4	9.0
Ashram (Deposit, Land)	EC13-088	536258.730	6311996.520	261.5	-88.7	NQ	97.48		5.18	97.48	**92.30**	**2.06**	6.1	3.3	6.9
Ashram (Deposit, Land)	EC13-089	536351.420	6312062.560	111.6	-89.6	NQ	152.55		7.97	152.55	**144.58**	**1.94**	7.4	4.4	9.1
								incl.	32.50	93.90	**61.40**	**2.15**	6.8	4.7	9.8
								incl.	119.50	140.05	**20.55**	**1.62**	10.2	3.3	6.7
Ashram (Deposit, Land)	EC13-090	536287.320	6312079.710	-	-90.0	NQ	7.62		No Core						
Ashram (Deposit, Land)	EC13-090A	536287.440	6312080.180	356.7	-89.7	NQ	160.63		7.00	160.63	**153.63**	**1.86**	8.6	4.0	8.2
								incl.	35.50	66.14	**30.64**	**1.51**	12.4	4.0	8.2
Ashram (Deposit, Land)	EC13-091	536164.090	6312298.830	194.0	-89.7	NQ	133.20		4.15	133.20	**129.05**	**2.00**	6.5	4.2	8.7
Ashram (Deposit, Land)	EC13-092	536221.370	6312341.960	28.6	-89.1	NQ	82.04		12.15	82.04	**69.89**	**1.96**	6.1	2.9	6.0
Ashram (Deposit, Land)	EC13-093	536167.680	6312362.710	16.5	-89.7	NQ	105.77		2.50	16.76	**14.26**	**2.16**	4.6	4.1	8.4
								incl.	70.37	95.73	**25.36**	**1.96**	4.3	1.5	3.0
Ashram (Deposit, Land)	EC13-094	536041.000	6312272.550	75.6	-89.3	NQ	69.20		1.65	22.44	**20.79**	**2.01**	4.2	5.6	11.5
Ashram (Deposit, Land)	EC13-095	536389.850	6311967.270	167.5	-88.5	NQ	133.28		6.00	115.95	**109.95**	**1.86**	6.1	5.0	10.2
Ashram (Deposit, Land)	EC13-096	536351.260	6311935.590	176.3	-89.6	NQ	93.71		52.25	59.50	**7.25**	**1.96**	4.5	2.7	5.5
Ashram (Deposit, Land)	EC13-097	536270.570	6311937.630	310.3	-89.1	NQ	56.34		32.50	46.00	**13.50**	**2.18**	4.5	3.5	7.2
Ashram (Deposit, Pond)	EC14-098	536199.890	6312199.178	71.6	-89.1	NQ	194.16		4.92	194.16	**189.24**	**2.06**	7.6	3.9	8.1
								incl.	21.50	194.16	**172.66**	**2.13**	7.4	4.0	8.3
								or	97.50	194.16	**96.66**	**2.32**	6.6	3.9	8.0
Ashram (Deposit, Pond)	EC14-099	536219.585	6312151.913	339.3	-87.5	NQ	192.02		5.10	192.02	**186.92**	**1.80**	10.1	4.4	9.0
								incl.	77.00	158	**81**	**2.01**	8.9	4.1	8.5
Ashram (Deposit, Pond)	EC14-100	536279.591	6312199.551	270.9	-89.8	NQ	194.16		11.28	194.16	**182.88**	**1.71**	9.2	3.8	7.9
								incl.	11.28	37.92	**26.64**	**1.92**	8.7	3.7	7.6
								incl.	87.97	127.63	**39.66**	**1.91**	8.5	4.9	10.1
								incl.	167.26	194.16	**26.9**	**2.26**	7.5	2.9	5.9
Ashram (Deposit, Pond)	EC14-101	536237.960	6312228.435	-	-90.0	NQ	172.53		10.06	172.53	**162.47**	**1.97**	8.4	4.1	8.4
								incl.	96.00	152.32	**56.32**	**2.25**	7.6	3.8	7.9
Ashram (Deposit, Pond)	EC14-102	536205.716	6312268.533	-	-90.0	NQ	136.00		7.35	136.00	**128.65**	**1.74**	8.0	3.7	7.5
								incl.	82.29	101.02	**18.73**	**2.16**	7.1	4.6	9.4
								incl.	117.19	136.00	**18.81**	**2.01**	6.6	3.7	7.5
Ashram (Deposit, Pond)	EC14-103	536336.126	6312182.615	96.7	-87.6	NQ	157.58		17.27	157.58	**140.31**	**1.73**	9.2	4.0	8.3
								incl.	17.27	43.50	**26.23**	**1.93**	6.9	4.3	8.9
Ashram (Dyke, Pond)	EC14-104	536629.619	6312552.687	320.4	-89.0	NQ	20.70		Dyke hole, No Mineralization (Max 0.48% TREO)						
Ashram (Dyke, Pond)	EC14-105	536728.188	6311985.445	343.5	-87.0	NQ	23.72		Dyke hole, No Mineralization (Max 0.54% TREO)						
Ashram (Deposit, Pond)	EC14-106	536369.751	6312138.506	219.0	-89.5	NQ	139.29		8.86	139.29	**130.43**	**1.50**	7.7	3.5	7.3
								incl.	89.50	129.74	**40.24**	**1.70**	6.6	3.3	6.9
Ashram (Deposit, Pond)	EC14-107	536271.002	6312278.633	29.2	-88.3	NQ	154.53		7.43	154.53	**147.1**	**1.81**	7.6	4.1	8.3
Ashram (Dyke, Land)	EC14-108	536916.992	6312196.289	114.5	-88.3	NQ	17.63		Dyke hole, Weak mineralization (Max 0.90% TREO)						
Ashram (Deposit, Land)	EC14-109	536327.667	6312109.294	267.8	-88.5	NQ	154.29		9.40	154.29	**144.9**	**1.76**	7.9	4.1	8.4
								incl.	13.35	39.12	**25.8**	**2.01**	5.9	5.1	10.6
								incl.	135.10	151.16	**16.1**	**2.26**	8.4	4.0	8.2

Appendix 10d: 2013 and 2014 Drill hole Attributes

General Area	Hole-ID	Easting (NAD83, Zone 19)	Northing (NAD83, Zone 19)	Azimuth[1] (°)	Dip[1] (°)	Core Size	EOH (m)		From (m)	To (m)	Interval (m)	TREO (%)	MH-T[2] (%)	F (%)	CaF_2[3] (%)

1. First valid downhole test off collar
2. Middle REO (Sm, Gd, Eu) + Heavy REO (Tb, Dy, Ho, Er, Tm, Yb, Lu) divided by total REO expressed as a %
3. Fluorite (CaF_2) is calculated based on fluorine analysis, using a conversion factor of 2.055, as mineralogical work concludes fluorite is the dominant and only material source of fluorine.

APPENDIX 11: NOMENCLATURE

Common Eldor Nomenclature

Abrv.	Rock Type
cc-Carb	calcite Carbonatite
dol-Carb	dolomite Carbonatite
si-Carb	silico-Carbonatite
Carb	Carbonatite
Glim	Glimmerite
WR	Wallrock
Ovb	Overburden

Abrv.	Minerals
amph	amphibole
ap	apatite
bsn	bastnaesite
bio	biotite
cc	calcite
chl	chlorite
chp	chalcopyrite
dol	dolomite
eld	eldorite
epd	epidote
fl	fluorite
flc	fluorocarbonate
fsp	feldspar
gal	galena
hem	hematite
lim	limonite
mag	magnetite
micro-sul	microsulphide
min	mineral
mnz	monazite
msc	muscovite
phl	phlogopite
prs	parisite
py	pyrite
pych	pyrocholore
po	pyrrhotite
qtz	quartz
REflc	RE-fluorocarbonate
rt	rutile
ser	sericite
srp	serpentine
sph	sphalerite
sul	sulfides
tlc	talc
tnl	taeniolite
ukn	unknown
xnt	xenotime

Abrv.	Features
vn/vnlet	vein/veinlet
clst	clast
dyke	dyke
frac/fracd	fracture/fractured
frag	fragment
pheno	phenocryst
pbls	porphyroblasts
xtl/xtls	crystal/crystals

Abrv.	Quantity
rare	rare
few	few
trace	trace
sparse	sparse
minor	minor
mod	moderate
abnt	abundant

Abrv.	Grain Size/Shape
xtln	crystalline
v.f.g.	very fine grained
f.g.	fine grained
m.g.	medium grained
c.g.	coarse grained
v.c.g.	very coarse grained
euh	euhedral
suh	subhedral
anh	anhedral
ang	angular (sub-)
rnd	rounded (sub-)

Abrv.	Colour
b	blue
bg	beige
blk	black
br	brown
brk	brick
cr	cream
gr	green
gy	grey
og	orange
ol	olive
p	purple
pk	pink
r	red
w	white
y	yellow
dk	dark
dkr	darker
med	medium
lt	light
ltr	lighter

Abrv.	Other
ctc	contact
jn	joint
flt	fault
wthd	weathered
RA	radioactivity
STD	standard
DUP	duplicate
CA/TCA	core axis/to core axis
BZ	broken zone
SZ	shear zone
FltZ	fault zone
FrZ	fracture zone
FltZbrc	fault breccia
FltZg	fault gouge
FltZgh	fault gouge (healed)
trans	transition

Abrv.	Provisional Zone
A	A-zone
A-lean	A-lean
A/B-T	A/B-T
B	B-zone
BD	BD-zone
X	MHREO zone

Abrv.	Texture
aph	aphanitic
bleb/bleby	bleb/bleby
bnd/bnds	band/bands
bnded/bndg	banded/banding
brc/brcd	breccia/brecciated
brcg/brcn	brecciating/brecciation
clst-sup	clast supported
ctsc	cataclastic
x-bd	cross-bedded
x-cut	cross-cut/cutting
dfmd/dfmn	deformed/deformation
diss	disseminated
eqgr	equigranular
flow bndg	flow banding
fol	foliated/foliation
grblc	granoblastic
gdmass	groundmass
hetero	heterogeneous
homo	homogeneous
ibd	interbedded
igr	intergranular
itsl	interstitial
lam	laminated
mtx	matrix
mtx-sup	matrix supported
mass	massive
mottled	mottled
patchy	patchy
perv	pervasive
pkb	poikiloblastic
prtc	porphyritic
pblsc	porphyroblastic
psd-brc	pseudo-breccia
rxtld	recrystallized
shr/shrd	shear/sheared
suc	sucrosic

Common Eldor Nomenclature

Munsell Color	Abrv	Code(s)
black	blk	N1
grayish black	gy-blk	N2
dark gray	dk gy	N3
medium dark gray	med dk gy	N4
medium gray	med gy	N5
medium light gray	med lt gy	N6
light gray	lt gy	N7
very light gray	v lt gy	N8
olive gray	ol-gy	5Y 4/1
		5Y 3/2
light olive gray	lt ol-gy	5Y 6/1
		5Y 5/2
pale olive	pale ol	10Y 6/2
light olive	lt ol	10Y 5/4
grayish olive	gy-ol	10Y 4/2
light olive brown	lt ol-br	5Y 5/6
moderate olive brown	mod ol-br	5Y 4/4
light greenish gray	lt gr-gy	5G 8/1
		5GY 8/1
grayish green	gy-gr	10GY 5/2
greenish gray	gr-gy	5G 6/1
		5GY 6/1
brownish gray	br-gy	5YR 4/1
yellowish gray	y-gy	5Y 8/1
		5Y 7/2
grayish yellow	gy-y	5Y 8/4
moderate yellow	mod y	5Y 7/6
dusky yellow	dusky y	5Y 6/4
light brown	lt br	5YR 6/4
		5YR 5/6
pale reddish brown	pale r-br	10R 5/4
moderate reddish brown	mod r-br	10R 4/6
dark reddish brown	dk r-br	10R 3/4
moderate red	mod r	5R 5/4
		5R 4/6
grayish red	gy-r	10R 4/2
		5R 4/2
medium bluish gray	med b-gy	5B 5/1

Abrv.	Lustre
	adamantine (like a diamond)
	dull (no lustre)
	greasy (like fat or grease)
met	metallic (like polished metal)
	pearly
	resinous/earthy
	silky
submet	submetallic
	vitreous (like glass)
	waxy

Abrv.	Alteration Type
adv argc	advanced argillic
alb	albite
argc	argillic
btzn	biotization
cc	calcite
chl	chlorite
di	diopside
dol	dolomite
epd	epidote
grp	graphite
lim	limonite
ox	oxide
ptsc	potassic
prlc	propylitic
ser	sericite
srp	serpentine
si	silica
tlc	talc
zeo	zeolite

Abrv.	Alteration Style
perv	pervasive
locld	localized
bnded	banded
frac-rel	fracture-related
ctc-rel	contact-related

Abrv.	Mineralization
bdl	baddeleyite
bsn	bastnaesite
clb	columbite
fl	fluorite
gal	galena
hem	hematite
mol	molybdenite
mnz	monazite
prs	parisite
pych	pyrochlore
REflc	RE-fluorocarbonate
sph	sphalerite
sul	sulfides (various)

Abrv.	Modifiers
wk/wkly	weak/weakly
mod	moderate
str	strong
v.	very
text	texture
wthd	weathered
locl/locly	local/locally
rxn	reaction
litho	lithology
alt/altd/altn	alter/altered/alteration
avg	average

Crystal Habit
acicular
bladed
botryoidal
columnar
equant
reniform/colloform
twinned