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GEOLOGICAL EXPLORATION OF THE DELBREUIL CANTON

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Geological Exploration of the Delbreuil Canton

Report on work carried out during the summer of 2005

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Table of Contents

List of Figures

List of Tables

List of Photos

Abstract

A detailed mapping study has been conducted in the Delbreuil Canton, which is situated in the Pontiac subprovince northeast of Winneway in the Abitibi-Temiscamingue region. Delbreuil is comprised of several units which can be subdivided into 1) Supracrustal rocks: a) komatiite flows, b) volcanoclastics sediments and sediments (e.g. tuffite), c) sediments, and d) basalt; 2) Intrusive rocks: a) Granite and pegmatite, b) monzodiorite, c) monzonite, d) magmatic breccia, e) gabbro, and f) dykes; 3) High-grade (basement) metamorphic rocks: a) biotite schist, b) biotite-amphibolite schist, c) white mica-amphibolite schist, d) amphibolite, and e) gneiss. All the rocks in Delbreuil have undergone metamorphism and the structures of Delbreuil are complex. Folding and shearing are evident throughout the Delbreuil area, and there is a general northwest-southeast trend of the major structures.

Fine-grained disseminated sulfides are common throughout Delbreuil and can be found in almost all the rock units. Generally the sulfides compose < 5% of the rock. The most common sulfides found in Delbreuil are pyrite and pyrrhotite. Pegmatites containing molybdenite and lepidolite also occur.

Komatiites of Delbreuil are flanking flows of a distal-lateral/low discharge lobate flow facies, and not a preferred lava pathway. However, the flows may be basal and could warrant further study since most economic mineral deposits in komatiites are located at the base of komatiite flows. Also, primary mineralization of the flanking flows may indicate that there is mineralization in the preferred lava pathway. Geochemical and polished thin section analyses may offer further support for the continued exploration of the surrounding Delbreuil area. It is recommended based on field observations such as flow direction of the komatiites and younging directions that further exploration should take place southeast and east of Delbreuil.

Introduction

The Delbreuil Canton is situated in the Pontiac subprovince between Lac Nodier and Lac Simard, north-east of Winneway in the Abitibi-Temiscamingue region (Figure 1). Access is fairly easy due to a number of trails maintained for ATV and snowmobile usage. Mapping of the area was carried out during the summer of 2005. The area is comprised of Neoarchean komatiites, volcanioclastics, sediments, mafic volcanics and both mafic and felsic intrusions.

Unit Descriptions

All the rocks in the Delbreuil area are metamorphosed to some extent and therefore meta is implied in all the unit names. Compositions of the units were determined from hand samples or in the field from outcrop relationships.

Supracrustal rocks

Komatiite

Komatiitic rocks in Delbreuil exhibit a range of textures including 1) spinifex textures; 2) pillowed textures; 3) polyhedral jointed textures; and 4) massive rocks. The rocks occur in cycles, representing episodes of lava emplacement. most often comprised of just pillowed and polyhedral jointed flows. Massive ultramafics and spinifex textured flows occur less often but are not uncommon. Tuffites and sediments are interlayered with the komatiites (Figure 2). Although the textures are generally preserved, there has been a regional metamorphic overprint, from greenschist to lower amphibolite facies. As a result the komatiites often display schistocity. Hand samples exhibit secondary mineral assemblages of actinolite-tremolite, ± biotite, ± magnetite, ± plagioclase, ± talc, ± serpentine, ± chlorite, ± olivine (?) and ± pyroxene (?). It is not clear from the hand samples whether the olivine and pyroxene are secondary, primary or both. Graphite nodules are sparsely distributed but present in rocks associated with komatiites in the area.

Spinifex textures: Spinifex textures form layers up to 1.5 m in width with crystal sizes ranging from 15 cm to 2 mm long (Photo 1). There are two areas where fining of the crystals is to the south-west. Spinifex textured flow sequences occur in Delbreuil where the crystals are oriented randomly at the top of the sequence, followed by a coarsening of crystals which

are aligned subparallel and are perpendicular to bedding contacts. At the bottom of the sequence is a thin layer of foliated spinifex crystals ~ 0.5 cm to 1 cm in length oriented parallel to the bedding contact with polyhedral jointed ultramafic rock (Figure 3). Where it can be seen, spinifex contacts are sharp and regular. Commonly, spinifex textured flows display pillows with crystals oriented perpendicular to the pillow walls (Photo 2).

Pillowed ultramafic: Pillows with these ultramafic rocks are often elongated and display preferred orientations (Photo 3). Bedding thicknesses range from 20 m to 2 m thick. Individual pillows range in size from 30 cm to 1 cm commonly exhibiting spinifex textures. Spinifex textures are coarse to medium grained. Otherwise, the pillows are fine grained. The pillows often have vesicles and amygdales filled with serpentine (Photo 4). Pillow keels are sometimes visible indicating way up. Also visible at some outcrops are pillow fissures. These were measured to determine a flow direction.

Polyhedral jointed ultramafic: Polyhedral jointed ultramafic rocks are fine grained. The jointing is angular to rounded and 50 cm to 2 cm in diameter (Photo 5). Contacts between polyhedral jointed and pillowed ultramafic units are often gradational.

Massive ultramafic: Massive ultramafic rocks are fine grained. This unit is often highly weathered and displays an iron oxide (rusty) coating. Commonly it exhibits very thin (~ 1mm) and folded plagioclase-rich veinlets.

Basalt

Basalt is rare in Delbreuil. They are generally massive and very fine to fine-grained (aphinitic). Feldspar veinlets are common.

Tuffite

Tuffite is a generic term used to describe various volcanogenic rocks found in Delbreuil. Tuffite is composed of mixed sediments and pyroclastic materials. These rocks are very fine to fine-grained and display layers up to 50 cm thick and laminations that are continuous laterally on an outcrop scale (Photo 6). The layers are sometimes graded (Photo 7) and commonly folded. Occasionally grading indicates a way-up and a younging direction can be determined. Locally there are carbonate veins, quartz veins and/ or felsic veins cross cutting the bedding. The carbonate veins are 10 cm to 30 cm in width while the quartz veins may be 30 cm to < 1 cm in width. Felsic veins are commonly < 2 cm thick.

Rare breccias are found interlayered within the tuffites in Delbreuil. They are heterolithic, containing igneous and sedimentary fragments. The clasts are rounded and elongated parallel to the bedding and rangeing from ~ 10 cm to 0.5 cm in size (Photo 8). The fragment / matrix ratio is usually high.

Sediments

Sediments in Delbreuil include pelites, graywackes and sandstones that are thinly bedded (up to 7 cm thick) and laminated. Particles are rounded and very fine to fine-grained. They are commonly cross cut by granitic veins 5 cm wide and smaller granitic veinlets.

Intrusive rocks

Granite and pegmatite

The granite is coarse-grained to medium-grained and commonly exhibits irregular pegmatite and graphic textures (Photo 9). Pegmatites sometimes contain feldspar crystals up to 30 cm long (Photo 10). Accessory and metamorphic minerals include biotite, garnet, ± phlogopite, ± white mica, ± hornblende, and ± graphite. In north-western Delbreuil, granite commonly contains graphite and very little or no mica. The pegmatites exhibit large books of mica composed of crystals up to 5 cm in size as well as small mica books and crystals generally 1 mm in size. The difference in mica textures is probably due to primary growth and secondary growth respectively. In the northern area of Delbreuil the granite has biotite-rich and felsic-rich gneissic layers (Photo 11). Massive quartz veins up to 30 cm in width cross-cut both the granite and pegmatite.

Monzodiorite

Delbreuil monzodiorite is coarse grained and porphyritic, with euhedral, zoned feldspar phenocrysts that can be up to 1 cm in size in a coarse-grained feldspar and pyroxene groundmass (Photo 12). Metamorphic minerals in the monzodiorite include epidote, hornblende and garnet. Enclaves of mafic material are common forming augen generally 3 cm to 8 cm in size (Photo 13). There are areas of high strain where the monzodiorite exhibits mineral lineations. In these areas the augen are alligned parallel to the mineral lineation. Mylonite shear zones 1 mm to 5 mm across contain epidote and sometimes quartz borders

with epidote in the centre. Feldspar and quartz veins are common in the monzodiorite ranging from 50 cm to 3 cm in width (Photo 14 and 15).

Monzonite

Monzonite occurs as pods in the granite intrusion in the north-western part of Delbreuil. It is coarse to medium-grained, with feldspar phenocrysts and a pyroxene groundmass (Photo 16). The monzonite is deformed, and exhibits mineral lineations. Granite and pegmatite dykes cross cut the lineation.

Gabbro

Gabbro is rare in Delbreuil, occurring in the north-western part in association with komatiitic and basaltic rocks. It is highly deformed and locally shows mineral lineation, and coarse to medium-grained with anhedral crystals.

Magmatic breccia

In the northern and north-western parts of Delbreuil, granite intrudes monzodiorite forming a breccia with monzodiorite fragments in a granite matrix (Photo 17). The fragments are angular, up to several meters in size, and have regular sharp borders. These features indicate that the monzodiorite underwent brittle fragmentation and the fragments did not travel far. The breccias range from fragment-rich to matrix-rich.

Dykes

There are a number of dykes in Delbreuil: 1) Pegmatite and granite dykes intrude almost all the units in Delbreuil. They are generally between 50 cm and 5 cm, and sometimes exhibit chill margins. Sometimes there are monzodiorite inclusions in the pegmatite; 2) There are at least two generations of mafic dykes in Delbreuil, where the first generation is highly deformed and is cross cut by the second generation. Both generations of dykes intrude the monzodiorite rocks. They range in size from 5 m to 20 cm in width. The first generation mafic dykes cross cut felsic veins, while the second generation of mafic dykes are cross cut by felsic veins; both sets of mafic dykes are often strongly deformated and display boudins 1 m to 30 cm in size. Both sets of dykes are cross cut by granitic and pegmatitic dykes and quartz veins. 3) Biotite schist dykes, 50 cm to 20 cm thick, are highly deformed and containing massive quartz veins which form boudins 20 cm to 5 cm in size. These rocks occur in the monzodiorite and komatiite. Inclusions of komatiite are often present in the biotite schsit dykes. Feldspar veins cross cut these dykes; 4) Medium-grained monzodiorite

dykes ~1m wide intrude the coarse-grained monzodiorite and tuffite. These dykes have feldspar-rich margins. The relationship between these dykes and the other dykes are unknown.

Metamorphic rocks

Biotite schist

Biotite schist in Delbreuil is medium to very fine-grained with crenulated, moderately to steeply dipping schistosity. The rocks are composed of biotite, plagioclase, quartz, ± garnet, and ± hornblende. Therefore the protolith is likely a sedimentary rock. Often, there are boudined quartz veins. Granite dykes and pods are extensive throughout this unit. Both the quartz veins and the grainitic material are often highly deformed and cross cut the schistosity (Photo 18).

Biotite-amphibolite (± chlorite) schist

Delbreuil biotite-amplibolite schist displays a strong, moderately to steeply dipping schistosity which is often crenulated. It is fine grained and composed of biotite, actinolite-tremolite, ± chlorite, ± plagioclase and ± hornblende. Sometimes there are patches or veins of coarse-grained biotite and hornblende. The protolith is likely a mafic to ultramafic volcanic rock. Quartz veins and granitic dykes 20 cm to 3 cm in width cross cut the schistosity.

Fine-grained mica - amphibolite schist

Fine-grained white mica - amphibolite schsit has a strong, steeply to moderately dipping schistosity. It is composed of very fine grained white mica, actinolite-tremolite, plagioclase, quartz, and ± biotite. The protolith is likely an intermediate to mafic volcanic. It contains many feldspar and quartz veinlets and less commonly epidote veinlets that cross cut the schistosity in several different directions. Larger, massive quartz veins from 20 cm to 10 cm in width are boudined and also cross cut the schistosity. Pegmatitic dykes in the schist sometimes contain molybdenite. Tension gashes filled with quartz are perpendicular to the schistosity. Commonly there are meta-sediments thinly interlayered (30 cm to 3 cm) within the mica-amphibolite schist. These sediments are laminated and are not continuous.

Gneiss

There are two types of gneiss in Delbreuil: 1) Biotite-amphibole gneiss which exhibits biotite-amphibole-rich layers where the crystals have a preferred orientation, and felsic layers that are not continuous. The felsic layers occur in patches and are strongly deformed. The protolith of this gneissic rock may be a mélange of both mafic and granitic rocks which now form a single lithotectonic unit. Garnet is commonly present in the gneiss and fine to coarse-grained; 2) Augen gneiss, with augen of medium-grained hornblende and biotite 7 cm to 3 cm long in mostly granitic material with garnet. The protoliths of this rock were likely granitic-dioritic intrusions.

Amphibolite

Amphibolite in Delbreuil is fine to coarse-grained, dark green in colour with biotite, actinolite-tremolite and hormblende. The schistosity is weak or not visible. The protolith of the fine grained amphibolite may be a volcanic ultra-mafic rock whereas the coarse grained varieties may have an intrusive mafic/ultra-mafic parent.

Unit relationships

Contacts in Delbreuil are most often observed between the intrusions, the komatiites and the tuffite. Contacts between the tuffite, sediments and the komatiite units are most often primary and sharp but can be sheared. Biotite schist and komatiite contacts are sheared. Contacts between the monzodiorite and the biotite-amphibolite schist, komatiite, and tuffite are sheared and in the western part of Delbreuil there is a tectonic melange of biotite-amphibolite schsit and monzodiorite. Granite and pegmatite contain xenoliths and / or cross cut almost all the units in Delbreuil (Photo 19). The contacts between the units in Delbreuil are interpreted to be mostly tectonic and range from shallow to steeply dipping.

Structure

The structures of Delbreuil are locally complex. Younging directions determined from fining of spinifex crystals, sediments and tuffs, and from pillow keel orientations indicate that units are folded. In the monzodiorite, all the dykes commonly occur in pairs, generally about 10 m to 1 m apart. This may be indicative that the dykes are also folded. Folding is directly observed in the felsic dykes (Photo 20).

Lineations include mineral lineations in intrusive rocks and pillow alignment trends in pillowed ultramafic rocks. There are two main regional lineations in Delbreuil: 1) trending northwest-southeast, and; 2) trending northeast-southwest.

Schistosity and gneissose banding generally strikes north-west and dips to the north-east. The dip may be shallow or steep.

Shear zones occur throughout Delbreuil, most commonly in the monzodiorite, monzonite, and komatiite units. They are 1 mm to 3 mm in width and filled with epidote and sometimes quartz and sulfides. Usually, they are steeply dipping and striking to the northeast.

Mineralization

Fine-grained disseminated sulfides are common throughout Delbreuil and can be found in almost all the rock units. Generally the sulfides compose < 5% of the rock. The most common sulfides found in Delbreuil are pyrite and pyrrhotite.

In komatiite rocks the fine-grained disseminated sulfides are exhibited interstitially or form veinlets. In the northwestern part of Delbreuil, there are fine to coarse-grained sulfides forming blebs in massive ultramafic rock associated with epidote veins (Photo 21). In the tuffite and sedimentary rocks there are commonly fine-grained disseminated sulfides and veinlets. The sulfide content of these rocks is slightly higher relative to the komatiitic rocks, sometimes containing coarse-grained disseminated sulfides composing up to 5% of the rock.

In the southeastern part of Delbreuil there are disseminated medium-grained crystals of pyrite and linear pyrite clusters in the granite (Photo 22). Pegmatitic rocks sometimes contain molybdinite and pegmatite that has intruded the monzodiorite rarely contains lepidolite. Also in the monzodiorite are medium to fine-grained pyrite crystals that are associated with massive quartz veins 30 cm to 5 cm in width. Monzonite contains interstitial very fine-grained disseminated crystals that are metallic silvery-blue in colour. Their small size makes identification difficult but they are likely to be graphite or molybdinite.

Delbreuil gabbro contains fine-grained disseminated sulfides that are contained along veinlets that also contain epidote. The gabbro is associated with basalt that also exhibits fine-grained disseminated sulfides.

	Supracrustal Rocks						
	Komatiite						
	Spinifex texture	Pillowed texture	Polyhedral texture	Massive	Basalt	Tuffite	Sediments
Mineralization	Fine-grained disseminated sulfides < 5% of the rock	Fine-grained disseminated sulfides < 5% of the rock	Fine-grained disseminated sulfides and veinlets < 5% of the rock	Fine to medium-grained disseminated sulfides, veinlets, and blebs (blebs associated with epidote veins)	Fine-grained disseminated sulfides < 5% of the rock	Fine to coarse-grained disseminated sulfides and veinlets generally < 5% of the rock but sometimes up to 5%	Fine-grained disseminated sulfides < 5% of the rock

Table 1: Mineralization in the supracrustal rocks

	Intrusive Rocks					
	Granite/ Pegmatite	Pegmatite	Monzodiorite	Monzonite	Gabbro	Dykes
Mineralization	Fine to medium-grained disseminated sulfides < 1% of the rock	Molybdinite blebs, lepidolite (rare)	Fine to coarse-grained disseminated sulfides associated with quartz veins < 5% of the rock	Very fine-grained disseminated graphite or molybdinite (?) < 1% of the rock	Fine-grained disseminated sulfides associated with veinlets also containing epidote	Fine-grained disseminated sulfides (uncommon) < 5% of the rock

Table 2: Mineralization in the intrusive rocks

	Metamorphic Rocks					
	Biotite schist	Biotite-amphibolite schist	Fine-grained white mica-amphibolite schist	Amphibolite	Biotite-amphibolite gneiss	Augen gneiss
Mineralization	Fine-grained disseminated sulfides < 1% of the rock	Fine-grained disseminated sulfides < 1% of the rock	Fine-grained disseminated sulfides < 1% of the rock	None	Fine-grained disseminated sulfides < 1% of the rock	None

Table 3: Mineralization in the metamorphic rocks

Interpretations

Komatiites

Ultramafic olivine or pyroxene cumulates are not present in Delbreuil (however without viewing thin sections it is difficult to know for sure). There is extensive interlayering of sediments indicating that the flow may be basal (Lesher and Keays, 2002). This is encouraging since most economic mineral deposits in komatiites are located at the base of komatiite flows (Lesher and Keays, 2002). However, due to the generally thin cycles displayed by the flows, and the fairly common occurrence of spinifex textures as layers and in pillows, it may be that the komatiites of Delbreuil are flanking flows of a distal-lateral / low discharge lobate flow facies, and not a preferred lava pathway. These main lava channels or, preferred lava pathways, are where cumulate textures occur and host the economically interesting Ni deposits (Hill, 2001).

Primary mineralization of flanking flows is encouraging for further exploration (Hill, 2001). Although the komatiites of Delbreuil are mineralized, it is necessary to determine whether the mineralization is primary or secondary. This may be achieved through thin section observations, and geochemical analyses. Field and hand sample observations depict a situation where there was mobilization of sulfides. Evidence includes: 1) sulfides associated with epidote veinlets; 2) mineralization of virtually all units in Delbreuil; and 3) mineralization associated with quartz veins in monzodiorite. It is probable that the extensive grainite intrusions of Delbreuil have caused hydrothermal alteration and mobilization of some minerals including sulfides in the komatiite flows.

An important question to keep in mind is: Where did the sulfides come from? It may be that the mineralization of the Delbreuil komatiites is both primary and secondary. Field and hand sample observations support this since sulfides are exhibited both interstitially and in epidote veinlets.

Komatiite flow directions

Flow directions of the komatiite pillows were determined by measuring the orientation of pillow fissures (breakouts). Flow trends are oriented in different directions throughout Delbreuil, however there is a clear trend to the northwest (Figure 4). Caution is exercised in using this information to interpret an overall komatiite flow direction

because of the complex structure of the area. However, there is supporting evidence that this may in fact be the flow direction: 1) Bedding contacts of the komatiitic flows are usually primary and bedding orientations are striking generally northwest-southeast; and 2) Coarse-grained sub-parallel spinifex orientated perpendicular to bedding contacts are formed by lava inflation of komatiite lava lobes and are perpendicular to the flow (Hill, 2001; Figure 5).

The flow direction coupled with the younging direction indicates that komatiite flows to the southeast or east may contain preferred lava pathways. Another possibility is that the preferred lava pathways are not exposed at the surface. Hill (2001) illustrates 4 possible orientations komatiite flows may exhibit (Figure 6).

Sample collection and analyses

Samples were collected of all the rock units in Delbreuil. Polished thin sections were requested for characterization of all the rock units. Any rocks exhibiting sulfides were submitted for assay analyses of Ni-Cu-Au-Pt-Pd. Granite and pegmatitic samples were submitted for analyses of rare earth elements and uranium as well as molybdenum. Several samples of quartz veins were submitted for assay analyses of Au.

Komatiite samples, and rock suspected of being komatiitic, were submitted for whole rock analyses to confirm their identification. Ultramafic rocks with komatiitic lava parentage have MgO contents of > 18 wt% (Arndt and Nesbitt, 1982). This can serve as a guide to aid in field observations. Trace element and rare earth element analyses was also requested in order to assist in the determination of komatiitic flow facies i.e. whether the komatiites of Delbreuil are preferred lava pathways or flanking flows. This is done by using compatible/incompatible element ratios (Hill, 2001). Flanking flows will be enriched in incompatible elements whereas preferred lava pathways will have higher values of MgO and Ni (because of their high olivine content) and lower concentrations of incompatible elements (Hill, 2001).

Recommendations

1) To more completely characterize the units of Delbreuil petrographic analyses of polished thin sections are necessary. This will also contribute to the understanding of metamorphic and alteration processes of the area.

2) Analyses of geochemical data will determine enrichments and depletions of mobile elements in the komatiites.

3) To aid in the determination of whether primary mineralization occurred in the Delbreuil komatiites analyses of Ni in primary olivine crystals may be carried out. If the komatiites contain Ni-depleted olivine than they may contain ore zones (Barnes et al, 1988a).

4) More detailed structural analyses of the area will aid in tracing flow directions and further constrain contacts for potential diamond drill sites.

Conclusions

The Delbreuil area has undergone regional metamorphism and local alteration caused by repeated intrusions. Several stages of regional tectonic activity have created complex structures. Mobilization of sulfides is evident throughout Delbreuil and may have involved sulfide mobilization from the komatiite flows. Polished section and geochemical analyses will contribute greatly to the understanding of the alteration processes that have taken place. Flow direction of the Delbreuil komatiites is southeast to northwest and the younging direction is generally to the southwest. Considering this, further exploration for komatiitic flows should be to the southeast and east of Delbreuil. However, preferred lava pathways may not be exposed at the surface. In this case further structural constraints are necessary to target potential diamond drill sites.

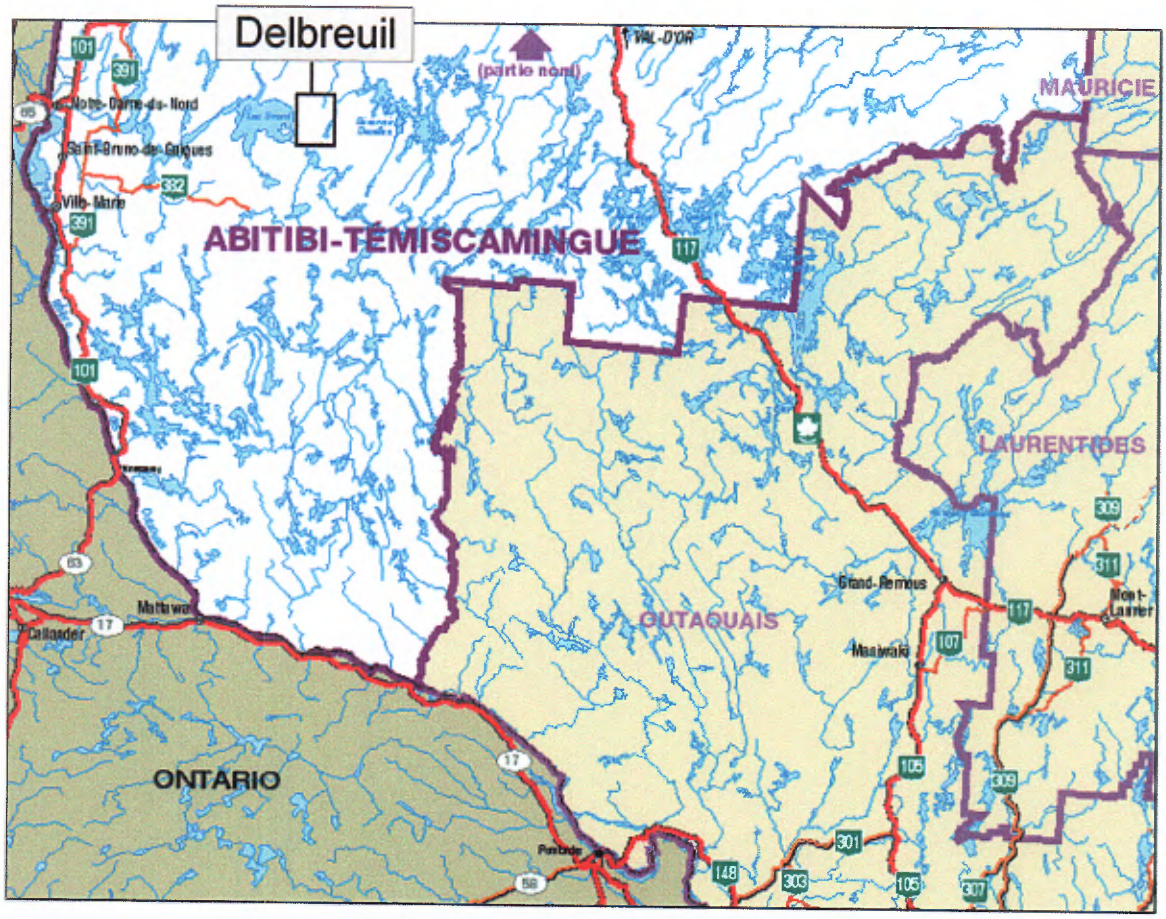
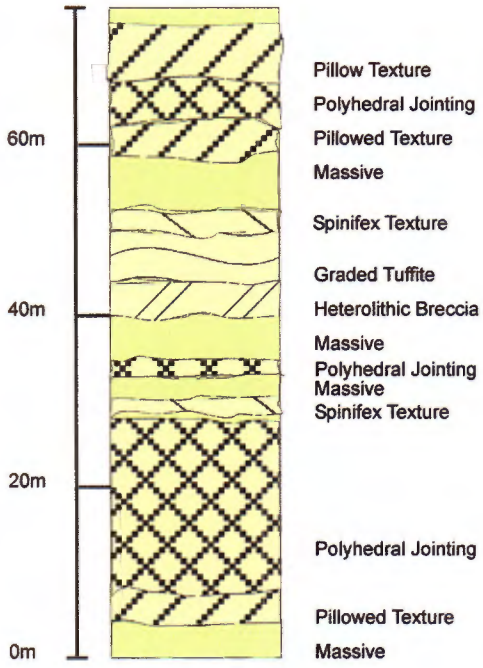


Figure 1: Location of Delbreuil



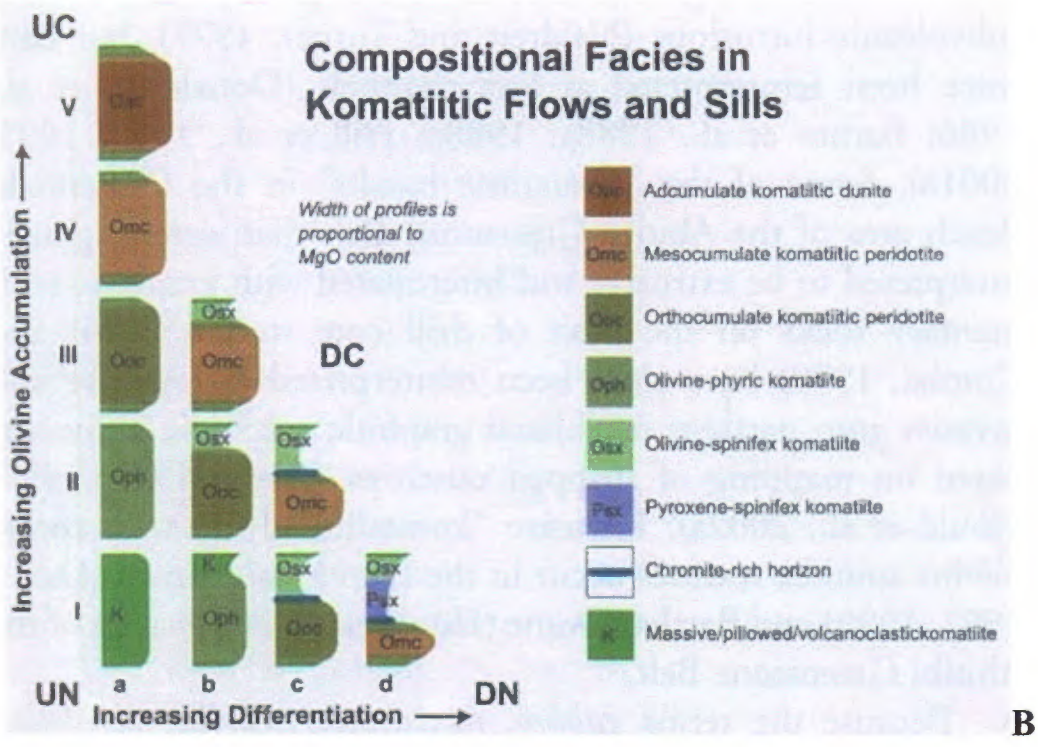


Figure 2: Stratigraphic column of komatiite flows in Delbreuil (figure A). These komatiites match the facies characterization by Lesher and Keays (2002, figure B) of an undifferentiated non-cumulate komatiite - Ia. Classifications are based on relative degrees of olivine enrichment and differentiation in situ.

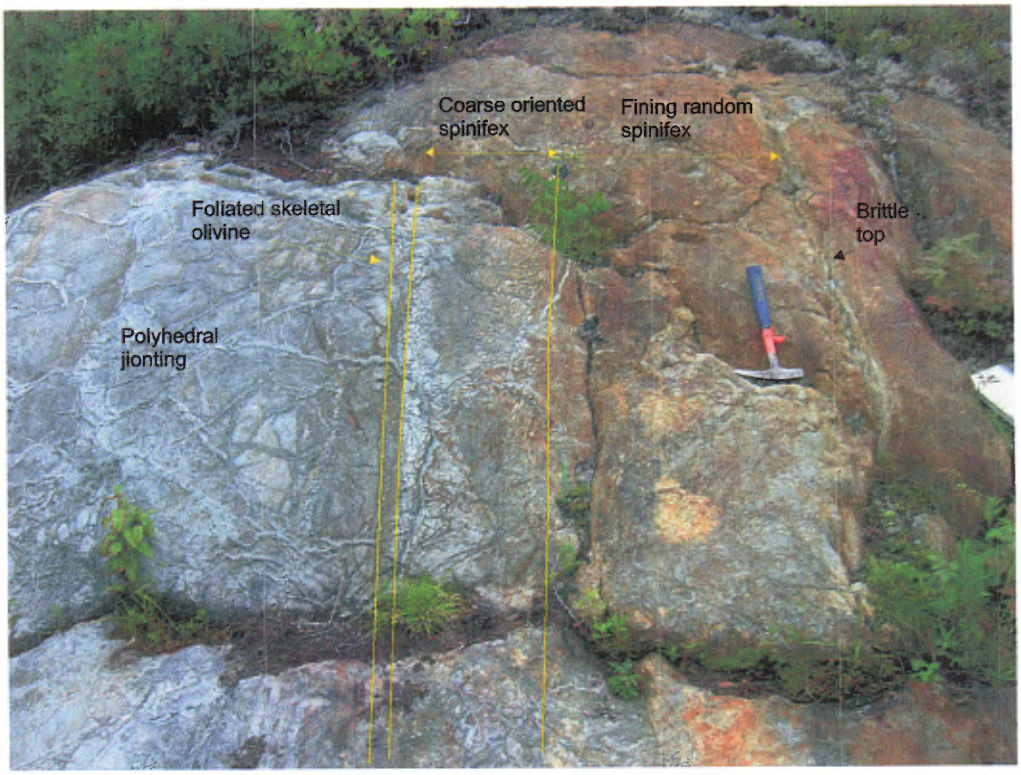


Figure 3: Spinifex flow showing polyhedral jointed textures under spinifex flow and fine polyhedral jointing at the top.

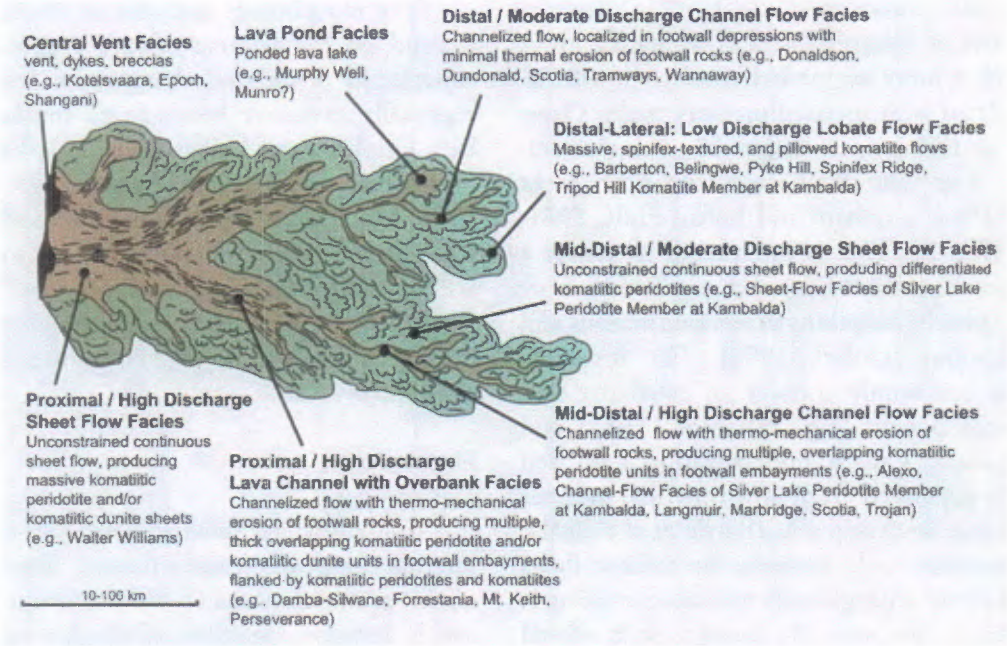


Figure 4: Komatiite volcanic facies model (Lesher and Keays, 2002). Delbreuil komatiites exhibit distal-lateral: low discharge lobate flow facies characteristics.

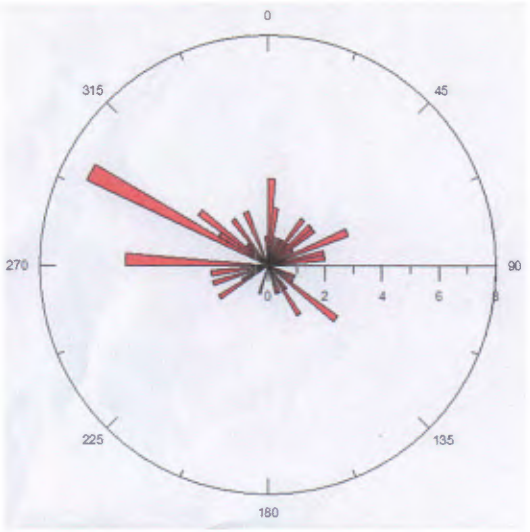


Figure 5: Rose plot of pillow flow orientations. There is a clear trend to the north-west.

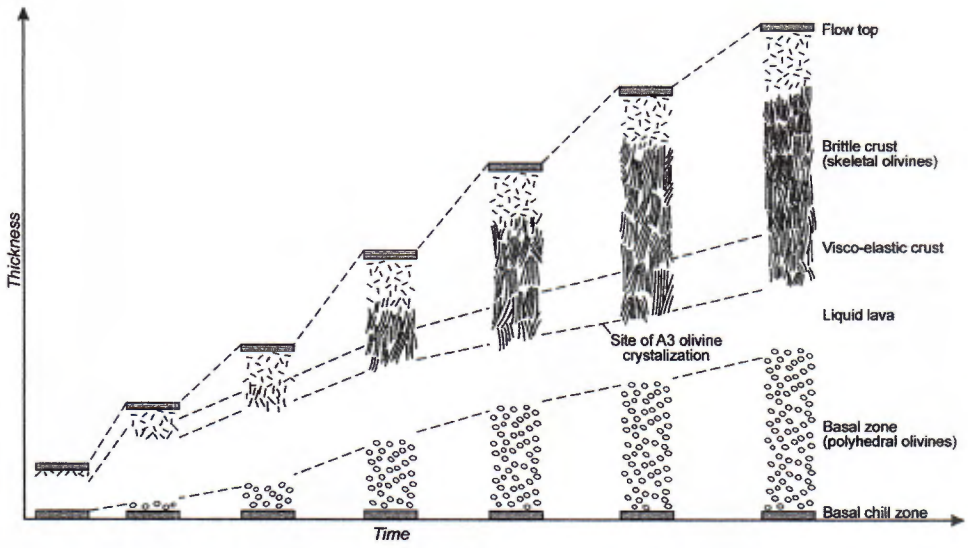


Figure 6: Representation of inflation and growth of a komatiite lava lobe over time showing coarse-grained sub-parallel spinifex oriented perpendicular to the lava flow direction (after Hill, 2001).

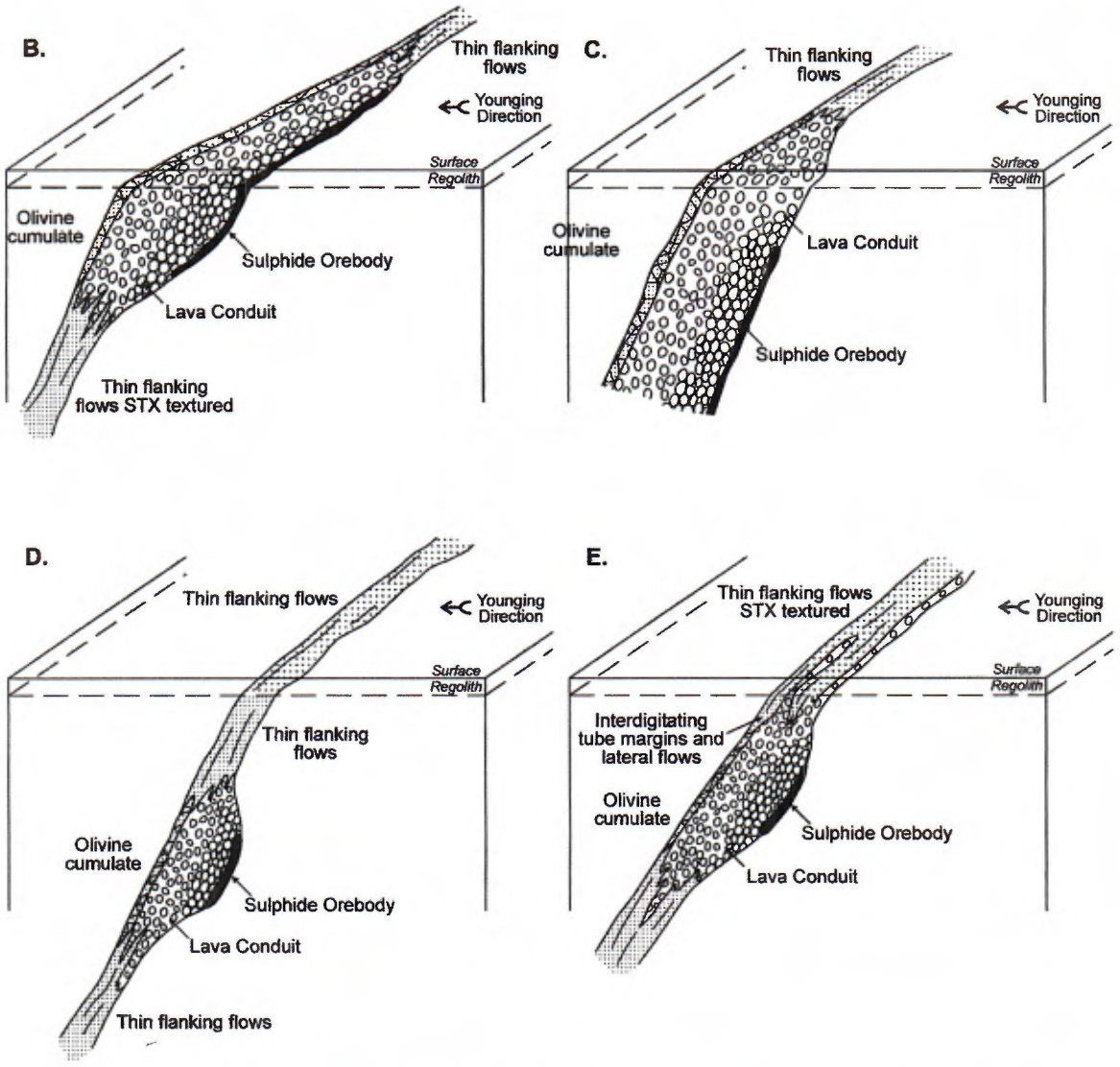


Figure 7: Four possible orientations komatiite flows may exhibit displaying different flows at surface. STX = spinifex (after Hill, 2001)

Photo 1: Spinifex crystals several centimeters long

Photo 2: Pillowed spinifex textures. Notice the spinifex crystals are oriented perpendicular to the pillow walls. The ruler displayed for scale is 15 cm long.

Photo 3: Pillowed ultramafic rocks with vesicles

Photo 4: Pillowed ultramafic rocks with amygdales filled with serpentine. The ruler displayed for scale is 15 cm long.

Photo 5: Polyhedral jointed ultramafic

Photo 6: Layered tuffite with continuous layers 50 cm thick to laminations

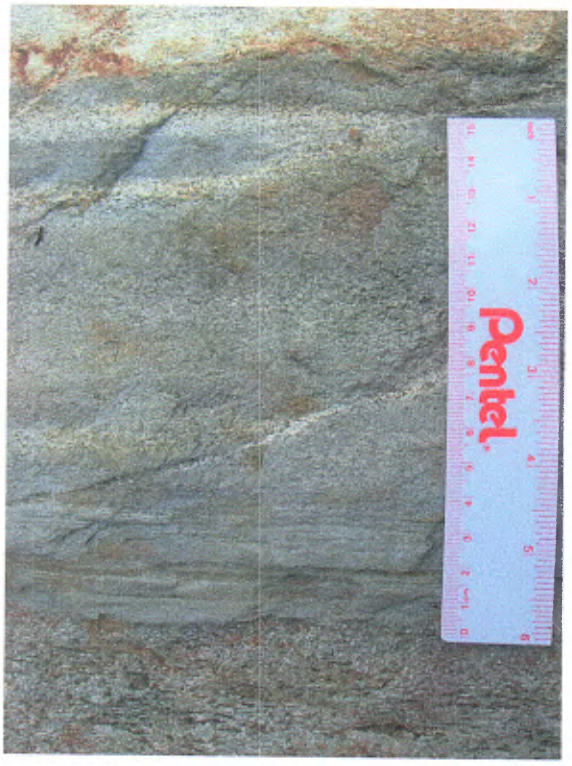


Photo 7: Layer of fining tuffite. The ruler displayed for scale is 15 cm long

Photo 8: Brecciated layer in tuffite

Photo 9: Graphic texture in granite (intergrowth of alkali-feldspar and quartz)

Photo 10: Alkali-feldspar crystal in pegmatitic granite ~ 30 cm long

Photo 11: Granite with biotite-rich and felsic-rich gneissic layering

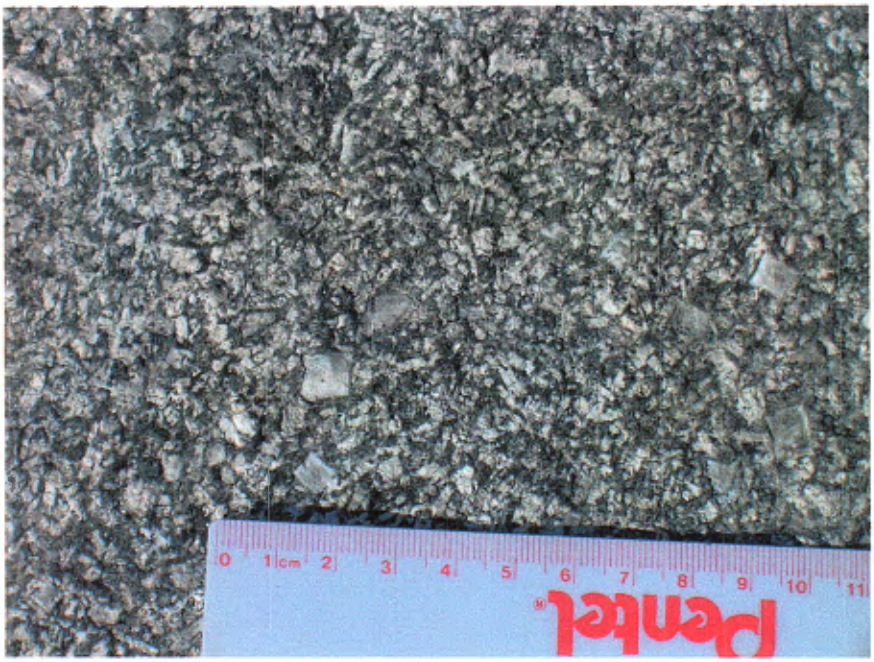


Photo 12: Monzodiorite with euhedral phenocrysts of feldspar and a groundmass of feldspar and pyroxene

Photo 13: Augen of mafic material in monzodiorite ~ 5.5 cm long

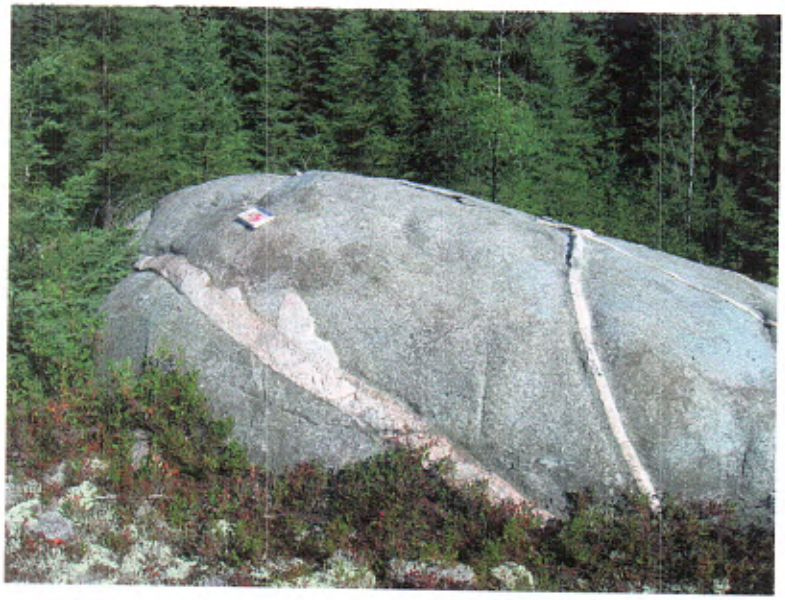


Photo 14: Felsic veins in monzodiorite

Photo 15: Massive quartz vein in monzodiorite

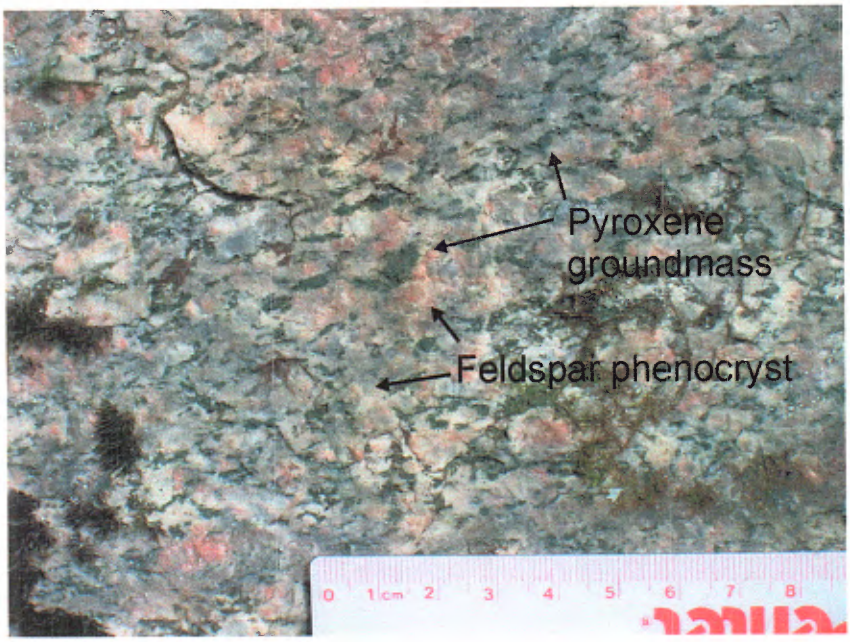


Photo 16: Monzonite cumulate with feldspar phenocrysts and pyroxene groundmass

Photo 17: Magmatic breccia with granite matrix and monzodiorite fragments

Photo 18: Boudined granitic veins in biotite schist

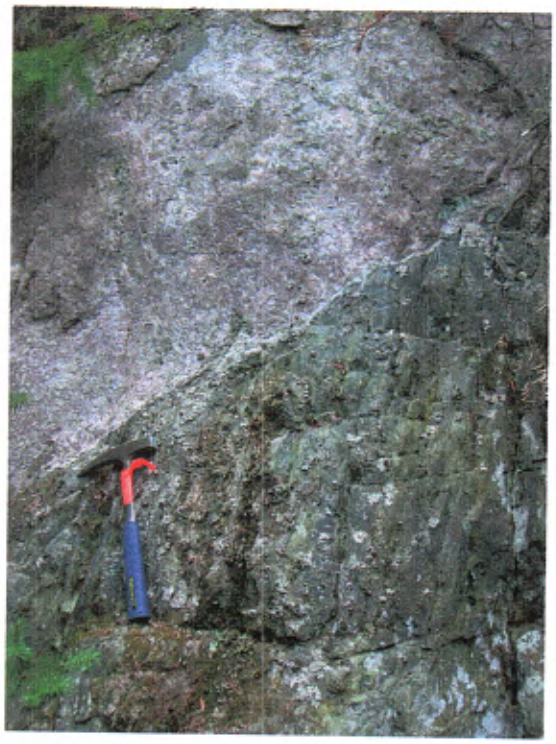


Photo 19: Granite (top) cross cuts gneiss (bottom)

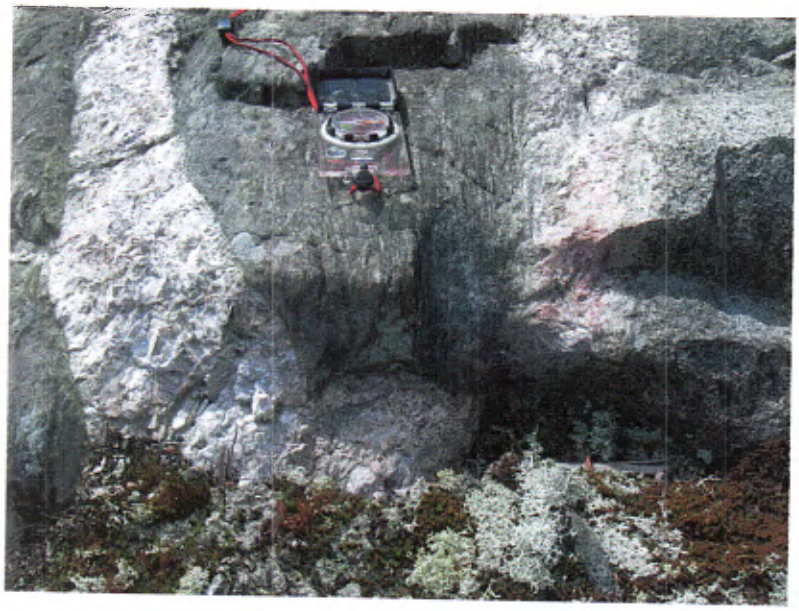


Photo 20: Tightly folded felsic dyke in monzodiorite

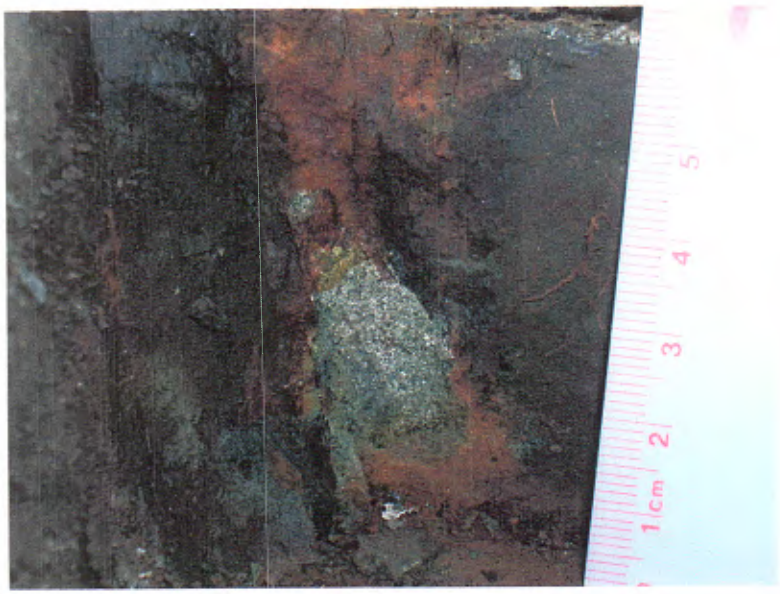


Photo 21: Sulfide bleb (pyrite) in fine grained massive ultramafic rock

Photo 22: Disseminated grains and clusters of rusty pyrite in granite

References

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Lesher, C.M. and Keays, R.R., 2002. Komatiite-associated Ni-Cu-PGE Deposits: Geology, Mineralogy, Geochemistry, and Genesis. The Geology, Geochemistry, Mineralogy and Mineral Beneficiation of Platinum-Group Elements, 54, p 579-617.

Certificat de qualifications

Je, soussigné, Laurent Hallé, certifie que :

Je demeure à Fabre, province de Québec depuis 1992 ;
mon adresse actuelle est : 1967 Chemin de la Galère.

Je suis gradué en géologie (Bsc. géol.) de l'université du Québec à Montréal depuis 1982.

Je travaille professionnellement en géologie et en exploration minière depuis plus de 20 ans.

Je suis membre (no. 388) en règle de l'association des géologues et géophysiciens du Québec

J'ai lu et étudié tous les rapports pertinents concernant la propriété, de même que tous les documents de nature géoscientifiques s'y rapportant . Ce rapport est donc basé sur cette documentation et sur mon expérience professionnelle. J'ai visité à plusieurs reprises les propriétés de Fiedex-Aurora.

J'ai supervisé et approuvé les travaux fait par Christina Snow, Report on work carried out during the summer of 2005 Geological Exploration of the Delbreuil Canton.

Je suis directeur de Fieldex et je possède des actions de Fieldex et de FNX mining.

L'autorisation d'utiliser ce rapport auprès des organismes de réglementations est accordée par la présente pour une période de un an.

Daté le 19 avril 2006

Fabre, Québec.

Laurent Hallé B.sc. Géol.

Apendix I

Samples collected in the Delbreuil Canton for assay and geochemical analyses

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2501	17T	688772	5276056	2005_06_22	Delbreuil	CS	Outcrop	12g	Monzodiorite - fine grained disseminated sulfides (pyrite) with many quartz veins in the outcrop	Cu-Ni-Au-Pt-Pd
T2502	17T	689089	5276497	2005_06_18	Delbreuil	CS	Outcrop	12s	Granitic pegmatite with blue mica - lepidilite	U-REE
T2503	17T	690251	5275974	2005_06_10	Delbreuil	CS	Outcrop	1a	Fine grained metavolcanic amphibolite - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2504	17T	688108	5275084	2005_06_19	Delbreuil	CS	Outcrop	7g	Meta-sediment and tuff - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2505	17T	689838	5276153	2005_06_10	Delbreuil	CS	Outcrop	12s	Pegmatitic granite	U-REE
T2506	17T	688098	5274998	2005_06_20	Delbreuil	CS	Outcrop	7g	Meta-sediment and tuff - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd and polished section 117-020
T2507	17T	688041	5275250	2005_06_20	Delbreuil	CS	Outcrop	1a	Meta-ultramafic - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2508	17T	688026	5275066	2005_06_19	Delbreuil	CS	Outcrop	1f	Columnar jointed ultra-mafic - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2509	17T	688123	5275072	2005_06_19	Delbreuil	CS	Outcrop	7p	Graphite - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2510	17T	688063	5275314	2005_06_21	Delbreuil	CS	Outcrop	7a	Meta-sediment - fine grained disseminated sulfides and veinlets	Cu-Ni-Au-Pt-Pd
T2511	17T	687915	5275026	2005_06_26	Delbreuil	CS	Outcrop	1f	Columnar jointed ultra-mafic - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2512	17T	691549	5276243	2005_06_12	Delbreuil	CS	Outcrop	1a	Massive metavolcanic - amphibolite - fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2513	17T	692386	5273535	2005_07_09	Delbreuil	CS	Outcrop	7r	Gneiss - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2514	17T	692387	5273745	2005_07_09	Delbreuil	CS	Outcrop		Quartz vein in meta-ultramafic	Cu-Ni-Au-Pt-Pd
T2515	17T	692397	5273796	2005_07_10	Delbreuil	CS	Outcrop	1f	Columnar jointed ultra-mafic - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd and whole rock and polished section 273-052
T2516	17T	692388	5274069	2005_07_10	Delbreuil	CS	Outcrop	2s	Amphibolite biotite schist - fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd and polished section 295-054
T2518	17T	692264	5274154	2005_07_11	Delbreuil	CS	Outcrop	1n	Pillow textured meta-ultramafic - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2519	17T	688055	5274852	2005_06_19	Delbreuil	CS	Outcrop	1n	Pillow textured meta-ultramafic - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2520	17T	688032	5274804	2005_06_24	Delbreuil	CS	Outcrop	1n	Pillow textured meta-ultramafic - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2521	17T	692486	5275317	2005_06_28	Delbreuil	CS	Outcrop	2s	Mica schist - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2522	17T	692368	5275875	2005_06_29	Delbreuil	CS	Outcrop	1n	Pillow textured meta-ultramafic - disseminated fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2523	17T	690820	5274667	2005_06_14	Delbreuil	CS	Outcrop	1a	Massive metavolcanic - amphibolite - fine grained sulfides	Cu-Ni-Au-Pt-Pd
T2525	17T	692344	5274043	2005_07_11	Delbreuil	CS	Outcrop	7c	Biotite schist	Whole rock major element and polished section 299-056
T2526	17T	691676	5274810	2005_07_14	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic	Whole rock major element and polished section 340-061
T2527	17T	692549	5274498	2005_07_15	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic -fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd and polished section 377-068
T2528	17T	692660	5274524	2005_07_16	Delbreuil	CS	Outcrop	7g	Meta tuffs and sediments interlayered - medium grained sulfides and veinlets	Cu-Ni-Au-Pt-Pd
T2529	17T	692861	5274539	2005_07_16	Delbreuil	CS	Outcrop	7a	Meta-sediments - fine to coarse grained sulfides and veins and veinlets	Cu-Ni-Au-Pt-Pd
T2530	17T	691986	5274178	2005_07_17	Delbreuil	CS	Outcrop	1f	Columnar jointed ultra-mafic	Whole rock major element and polished section 426-072
T2531	17T	688546	5276655	2005_07_29	Delbreuil	CS	Outcrop	12a	Granodiorite dyke - fine grained disseminated sulfides	Ni-Cu-Au-Pt-Pd
T2532	17T	693109	5274759	2005_07_20	Delbreuil	CS	Outcrop	1n	Pillowed meta-ultramafic - fine disseminated sulfides	Cu-Ni-Au-Pt-Pd

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2533	17T	688758	5273545	2005_07_31	Delbreuil	CS	Outcrop	7r	Gneiss	Whole rock major element
T2534	17T	688838	5273521	2005_07_31	Delbreuil	CS	Outcrop	12s	Gneiss with molybdinite in pegmatitic vein	REE and molybdinite
T2535	17T	688224	5273913	2005_07_27	Delbreuil	CS	Outcrop	12s	Pegmatite in sercite schist	REE and molybdinite
T2536	17T	689428	5276782	2005_08_02	Delbreuil	CS	Outcrop		Quartz vein in monzodiorite	Au-Ag
T2537	17T	689428	5276782	2005_08_03	Delbreuil	CS	Outcrop	12s	Pegmatite vein in monzodiorite	Cu-Ni-Au-Pt-Pd
T2538	17T	692842	5273816	2005_08_13	Delbreuil	CS	Outcrop	1n	Pillowed meta-ultramafic	Whole rock major and trace element and polished section 707-115
T2539	17T	692857	5274114	2005_08_13	Delbreuil	CS	Outcrop	1f	Columnar jointed meta-ultramafic - fine grained disseminated sulfides	Whole rock major and trace element, Cu-Ni-Au-Pt-Pd and polished section 716-117
T2540	17T	692862	5274206	2005_08_13	Delbreuil	CS	Outcrop	7c	Biotite schist with quartz veins	Au-Ag
T2541	17T	692844	5274379	2005_08_13	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic - fine to medium grained disseminated sulfides	Whole rock major and trace element, Cu-Ni-Au-Pt-Pd and polished section 720-119

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2542	17T	692387	5273745	2005_07_09	Delbreuil	CS	Outcrop	1a	Meta-ultramafic	Whole rock major and trace elementsand polished section 264-048
T2543	17T	692383	5273772	2005_07_09	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic	Whole rock major and trace elements and polished section 266-049
T2544	17T	688231	5273111	2005_07_31	Delbreuil	CS	Outcrop	2s	Biotite amphibolite schist	Whole rock major and trace elements and Polished section 606-109
T2545	17T	685614	5279256	2005_08_17	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic	Cu-Ni-Au-Pt-Pd
T2546	17T	685614	5279256	2005_08_17	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic	Whole rock major and trace elements and polished section 727-121
T2547	17T	686024	5279527	2005_08_17	Delbreuil	CS	Outcrop	12s	Granite and pegmatite	U-REE
T2548	17T	685704	5279461	2005_08_17	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic with disseminated sulfides and blebs	Ni-Cu-Au-Pt-Pd
T2549	17T	685704	5279461	2005_08_17	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic with disseminated sulfides and blebs	whole rock major and trace and polished section 739-125
T2550	17T	684636	5280126	2005_08_19	Delbreuil	CS	Outcrop	1a	Amphibolite	Whole rock major and trace elements
T2551	17T	684903	5279554	2005_08_18	Delbreuil	CS	Outcrop	12s	Granite and pegmatite	U-REE and polished section 745-126
T2552	17T	684941	5279580	2005_08_18	Delbreuil	CS	Outcrop	12f	Monzonite	REE-molybdonite and polished section 746-127

Sample	Zone	Easting	Northing	Date	Property_Area	Sampler	Medium	Lithology	Description	Analysis_Package
T2553	17T	684970	5279789	2005_08_18	Delbreuil	CS	Outcrop	1n	Pillowed meta-ultramafic with fine grained disseminated sulfides	Cu-Ni-Au-Pt-Pd
T2554	17T	684970	5279789	2005_08_18	Delbreuil	CS	Outcrop	1n	Pillowed meta-ultramafic with fine grained disseminated sulfides	Whole rock major and trace elements
T2555	17T	683530	5280675	2005_08_20	Delbreuil	CS	Outcrop	12s	Pegmatite	U-REE
T2556	17T	683451	5280732	2005_08_20	Delbreuil	CS	Outcrop	8a	Amphibolite	Whole rock major and trace elements
T2557	17T	683260	5280895	2005_08_20	Delbreuil	CS	Outcrop	12s	Pegmatite	U-REE
T2558	17T	683526	5280632	2005_08_20	Delbreuil	CS	Outcrop	12s	Pegmatite	U-REE
T2559	17T	686830	5277637	2005_08_22	Delbreuil	CS	Outcrop	9am	Gabbro with dissiminated fine grained sulfides	Ni-Cu-Au-Pt-Pd and polished section 800-135
T2560	17T	686851	5277650	2005_08_22	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic with fine grained disseminated sulfides	Ni-Cu-Au-Pt-Pd and polished section 801-136
T2561	17T	687406	5277739	2005_08_22	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic with fine grained disseminated sulfides	Ni-Cu-Au-Pt-Pd
T2562	17T	687406	5277739	2005_08_22	Delbreuil	CS	Outcrop	1a	Massive meta-ultramafic with fine grained disseminated sulfides	whole rock major and trace
T2563	17T	687378	5277770	2005_08_22	Delbreuil	CS	Outcrop	12s	Pegmatite	U-REE
T2564	17T	686177	5278449	2005_08_23	Delbreuil	CS	Outcrop	12s	Granite and pegmatite	U-REE

Appendix II

Pillow flow trend measurements

Outcrop	Date of data collection	Pillow flow trend
631	02/08/2005	4
631	02/08/2005	76
631	02/08/2005	70
631	02/08/2005	11
3	04/08/2005	302
3	04/08/2005	299
3	04/08/2005	339
3	04/08/2005	32
3	04/08/2005	322
3	04/08/2005	10
3	04/08/2005	298
3	04/08/2005	302
3	04/08/2005	36
3	04/08/2005	114
3	04/08/2005	8
3	04/08/2005	4
3	04/08/2005	127
3	04/08/2005	127
3	04/08/2005	148
53	04/08/2005	306
53	04/08/2005	68
53	04/08/2005	36
53	04/08/2005	296
53	04/08/2005	244
53	04/08/2005	52
53	04/08/2005	160
53	04/08/2005	336
53	04/08/2005	265
112	05/08/2005	55
112	05/08/2005	25
112	05/08/2005	358
112	05/08/2005	45
112	05/08/2005	78
112	05/08/2005	67
112	05/08/2005	164
112	05/08/2005	239
112	05/08/2005	122
112	05/08/2005	81
112	05/08/2005	149
112	05/08/2005	252
112	05/08/2005	265
112	05/08/2005	130
112	05/08/2005	141

Outcrop	Date of data collection	Pillow flow trend
304	07/08/2005	84
308	07/08/2005	298
308	07/08/2005	274
308	07/08/2005	324
315	07/08/2005	2
315	07/08/2005	239
315	07/08/2005	254
315	07/08/2005	46
315	07/08/2005	299
315	07/08/2005	299
711	13/08/2005	26
711	13/08/2005	59
713	13/08/2005	312
713	13/08/2005	273
713	13/08/2005	273
713	13/08/2005	273
715	13/08/2005	198
730	17/08/2005	309
730	17/08/2005	309
730	17/08/2005	48
730	17/08/2005	300
730	17/08/2005	271
730	17/08/2005	316

LABORATOIRE EXPERT LABORATORY

127 Boulevard Industriel , Rouyn-Noranda, QC J9X 6P2
Tel: 819.762.7100 Fax: 819.762.7510

Date: 23 août 2005

Votre référence: 72400 Bloc A

Notre référence: A05-2491 / Dossier 8401

Exploration Fieldex
210, 9ème Rue
Bureau 108
Rouyn-Noranda, Qc
J9X 2C2

Attn: Sylvain Champagne

Nombre d'échantillons: 4

Éléments	**Méthode**
Analyses totales	ICP 4B Li + REE

Joe Landers / Directeur

Report: A05-2491

Final Report
Activation Laboratories

Element:	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Ba	Sr	Y	Sc	Zr	Be
Units:	%	%	%	%	%	%	%	%	%	%	%	%	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	0.01	2	2	1	1	2	1
Reference 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-ICP	FUS-ICP	FUS-ICP
Client I.D.																		
2502	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2525	53.45	13.93	8.26	0.143	9.07	7.53	4.09	0.61	0.675	0.25	1.67	99.67	831	1149	14	21	90	2
2526	45.74	8.73	13.31	0.276	13.71	13.85	1.02	0.47	0.679	0.05	1.53	99.35	222	218	14	30	36	1
2530	42.21	6.7	11.15	0.17	27.06	5.41	0.13	< 0.01	0.276	0.02	6.09	99.21	9	32	7	20	16	< 1

Final Report
Activation Laboratories

Element:	V	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co
Units:	ppm	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm
Detection Limit:	5	0.01	0.01	0.01	0.001	0.01	0.01	0.01	0.01	0.001	0.01	0.01	0.01	1	1	5	20	1
Reference 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-ICP	FUS-MS	FUS-MS
Client I.D.																		
2502	--	77.29	13.28	0.44	0.21	0.13	0.12	2.73	3.83	0.005	0.03	1.3	99.35	< 1	5	< 5	< 20	2
2525	170	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2526	209	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2530	117	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Final Report
Activation Laboratories

Element:	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	20	10	30	1	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3
Reference Method:	FUS-MS	FUS-MS	FUS-MS	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-MS	FUS-ICP
Client I.D.																		
2502	< 20	10	110	107	8	< 5	> 1000	38	< 2	< 4	66	< 2	< 0.5	< 0.2	18	1.6	300	63
2525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2526	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Final Report
Activation Laboratories

Element:	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	0.1	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1
Reference 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	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
Client I.D.																		
2502	0.4	0.5	0.11	0.5	0.2	< 0.05	0.2	< 0.1	0.1	< 0.1	< 0.1	< 0.05	< 0.1	< 0.04	1.6	126	1	13.3
2525	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2526	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Final Report
Activation Laboratories

Element:	Pb	Bi	Th	U	Li
Units:	ppm	ppm	ppm	ppm	ppm
Detection Limit:	5	0.4	0.1	0.1	1
Reference Method:	FUS-MS	FUS-MS	FUS-MS	FUS-MS	TD-ICP
Client I.D.					
2502	14	27.9	1	2.5	1290
2525	--	--	--	--	--
2526	--	--	--	--	--
2530	--	--	--	--	--

LABORATOIRE EXPERT LABORATORY

127 Boulevard Industriel , Rouyn-Noranda, QC J9X 6P2
Tel: 819.762.7100 Fax: 819.762.7510

Date: 11 octobre 2005

Votre référence: 72400

Notre référence: A05-3164 / Dossier 9190

Exploration Fieldex
210, 9ème Rue
Bureau 108
Rouyn-Noranda, Qc
J9X 2C2

Attn: Sylvain Champagne

Nombre d'échantillons: 1

Éléments	**Méthode**
Analyses totales	4 litho

Joe Landers / Directeur

Report: A05-3164

Final Report
Activation Laboratories

Element:	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni
Units:	%	%	%	%	%	%	%	%	%	%	%	%	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	0.01	1	1	5	20	1	20
Reference 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
Client I.D.																		
2538	48.21	6.19	9.77	0.146	23.02	7.82	0.31	0.04	0.259	0.01	4.23	100	20	< 1	116	2070	75	810
2544	58.86	14.16	6.45	0.103	7.14	5.03	3.63	1.83	0.538	0.34	1.59	99.71	13	3	116	420	30	210
2546	41.22	4.9	10.25	0.147	30.13	3.06	0.02	0.05	0.24	0.02	8.98	99.01	17	< 1	98	2020	94	1190
2549	49.01	15.21	12.69	0.296	4.52	12.22	2.58	0.45	0.974	0.08	0.97	99	37	1	286	210	49	100
2550	41.9	6.42	20.34	0.191	10.93	14.44	1.43	0.55	1.726	1.17	0.75	99.84	64	25	507	30	74	30
2554	46.55	4.77	8.1	0.135	25.64	8.41	0.1	0.05	0.182	0.07	5.17	99.18	12	3	120	1530	52	680
2556	45.62	9.13	14.62	0.327	9.98	13.92	1.91	0.85	1.231	0.82	1.25	99.64	35	3	266	350	49	100
2562	48.57	14.5	13.03	0.231	5.07	12.52	2.69	0.72	0.922	0.08	1.2	99.53	36	1	282	210	46	100
2563	66.34	17.95	0.43	0.027	0.16	0.29	4.27	9.48	0.057	0.02	0.46	99.48	5	4	9	< 20	< 1	< 20

Report: A05-3164

Final Report
Activation Laboratories

Element:	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	10	30	1	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.1
Reference Method:	FUS-MS	FUS-MS	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-MS	FUS-ICP	FUS-MS
Client I.D.																		
2538	30	560	9	2	< 5	< 2	22	8	11	< 1	< 2	< 0.5	< 0.2	< 1	1.3	1.7	8	1.7
2544	10	150	20	1	35	109	563	13	86	3	< 2	< 0.5	< 0.2	< 1	2	29.4	705	14.8
2546	90	60	6	2	< 5	3	124	7	12	< 1	< 2	< 0.5	< 0.2	< 1	1.6	0.6	3	1
2549	60	100	18	2	< 5	16	101	23	55	2	< 2	< 0.5	< 0.2	< 1	1.5	0.5	72	4.4
2550	50	130	23	5	< 5	7	257	17	30	7	< 2	< 0.5	< 0.2	3	1.9	< 0.5	133	17
2554	40	50	7	4	5	2	110	8	18	2	< 2	< 0.5	< 0.2	< 1	1.8	< 0.5	16	12.9
2556	< 10	200	19	2	< 5	25	981	38	60	7	< 2	< 0.5	< 0.2	< 1	1.1	4.3	331	60.8
2562	90	100	17	2	< 5	41	237	22	57	2	< 2	< 0.5	< 0.2	< 1	1.8	1	116	4.2
2563	< 10	50	48	3	< 5	2030	55	12	9	39	< 2	< 0.5	< 0.2	3	1.2	24.1	68	11.8

Final Report
Activation Laboratories

Element:	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5
Reference 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	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
Client I.D.																		
2538	3.7	0.47	2.4	0.7	0.29	1	0.2	1.3	0.3	0.9	0.14	0.9	0.14	0.4	< 0.1	2	< 0.1	< 5
2544	32.7	4.33	16.8	3.6	0.99	2.8	0.4	2.1	0.4	1.1	0.17	1.1	0.15	2.5	0.2	7	0.9	11
2546	2.6	0.38	1.9	0.5	0.11	0.7	0.1	0.9	0.2	0.5	0.08	0.5	0.08	0.5	< 0.1	< 1	0.3	< 5
2549	11.2	1.7	8.3	2.6	0.93	3.2	0.6	3.8	0.8	2.5	0.37	2.4	0.36	1.8	0.2	< 1	0.2	< 5
2550	43.8	7.07	32.1	7.6	2.04	6	0.7	3.3	0.6	1.4	0.19	1.1	0.14	1.4	0.3	2	0.1	< 5
2554	29.6	4.4	18.6	3.8	0.82	2.7	0.3	1.5	0.3	0.7	0.1	0.6	0.08	0.4	< 0.1	< 1	< 0.1	< 5
2556	145	21	82.8	16.2	4.13	11.8	1.4	7.1	1.3	3.4	0.45	2.8	0.41	2.3	0.5	< 1	0.2	< 5
2562	10.8	1.67	8.5	2.6	0.87	3	0.6	3.6	0.8	2.3	0.34	2.3	0.34	1.7	0.2	< 1	0.2	5
2563	20.3	1.91	6	1.1	0.08	0.8	0.1	0.7	0.2	0.6	0.14	1.2	0.2	1.5	6.2	< 1	10.5	62

Final Report
Activation Laboratories

Element:	Bi	Th	U
Units:	ppm	ppm	ppm
Detection Limit:	0.4	0.1	0.1
Reference Method:	FUS-MS	FUS-MS	FUS-MS
Client I.D.			
2538	< 0.4	0.1	0.1
2544	< 0.4	2.1	0.6
2546	< 0.4	0.1	0.1
2549	< 0.4	0.4	0.1
2550	0.5	0.9	1.1
2554	0.7	0.9	0.2
2556	< 0.4	1.7	0.3
2562	0.5	0.4	0.2
2563	< 0.4	7.5	6

LABORATOIRE EXPERT LABORATORY

127 Boulevard Industriel , Rouyn-Noranda, QC J9X 6P2
Tel: 819.762.7100 Fax: 819.762.7510

Date: 11 octobre 2005

Votre référence: 72400

Notre référence: A05-3165 / Dossier 9191

Exploration Fieldex
210, 9ème Rue
Bureau 108
Rouyn-Noranda, Qc
J9X 2C2

Attn: Sylvain Champagne

Nombre d'échantillons: 1

Éléments	**Méthode**
Analyses totales	4 litho

Joe Landers / Directeur

Report: A05-3165

Final Report
Activation Laboratories

Element:	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni
Units:	%	%	%	%	%	%	%	%	%	%	%	%	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	0.01	1	1	5	20	1	20
Reference 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
Client I.D.																		
2539	47.09	6.09	10.94	0.173	21.49	9.03	0.34	0.03	0.473	0.04	4.08	99.78	21	2	142	2030	86	820

Final Report
Activation Laboratories

Element:	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	10	30	1	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.1
Reference Method:	FUS-MS	FUS-MS	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-MS	FUS-ICP	FUS-MS
Client I.D.																		
2539	100	80	10	2	< 5	3	50	10	29	2	< 2	< 0.5	< 0.2	< 1	2.4	0.9	8	1.4

Final Report
Activation Laboratories

Element:	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	0.1	0.05	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.04	0.2	0.1	1	0.1	5
Reference 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	FUS-MS	FUS-MS	FUS-MS	FUS-MS	FUS-MS
Client I.D.																		
2539	4	0.68	3.8	1.3	0.55	1.5	0.3	1.7	0.3	0.9	0.13	0.8	0.12	0.9	< 0.1	< 1	< 0.1	< 5

Final Report
Activation Laboratories

Element:	Bi	Th	U
Units:	ppm	ppm	ppm
Detection Limit:	0.4	0.1	0.1
Reference Method:	FUS-MS	FUS-MS	FUS-MS
Client I.D.			
2539	< 0.4	0.1	0.1

Laboratoire Expert Inc.

127, Boulevard Industriel
Rouyn-Noranda, Québec
Canada, J9X 6P2
Téléphone : (819) 762-7100, Télécopieur : (819) 762-7510

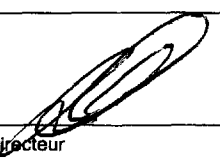
*** Certificat d'analyses ***

Client : **Exploration Fieldex**

Destinataire : **Sylvain Champagne**
210, 9ème Rue
Bureau 108
Rouyn-Noranda
Québec
J9X 2C2
Téléphone : (819) 762-0609
Télécopieur: (819) 762-0097

Dossier : **9189**
Votre no. commande :
Projet : **72400**
Nombre total d'échantillons : **14**

Identification	Au DCP-1 ppb 5	Au-Dup DCP-1 ppb 5	Pt DCP-1 ppb 5	Pt-Dup DCP-1 ppb 5	Pd DCP-1 ppb 5	Pd-Dup DCP-1 ppb 5	Ag AAT-7 ppm 0.2	Ag-Dup AAT-7 ppm 0.2
2515	8	6	10	9	6	8		
2516	7		63		52			
2519	18		13		8			
2537	14		6		<5			
2541	22		6		<5			
2542	33		17		11			
2543	100		6		<5			
2548	13		5		<5			
2553	15		7		7			
2559	11		<5		<5			
2560	24		<5		<5			
2561	5		<5		<5			
2536	5	5					<0.2	<0.2
2540	10						<0.2	



Joe Landers, Directeur

Laboratoire Expert Inc.

127, Boulevard Industriel
Rouyn-Noranda, Québec
Canada, J9X 6P2
Téléphone : (819) 762-7100, Télécopieur : (819) 762-7510

*** Certificat d'analyses ***

Date : 2005/09/22

Client : **Exploration Fieldex**

Destinataire : **Sylvain Champagne**
210, 9ème Rue
Bureau 108
Rouyn-Noranda
Québec
J9X 2C2
Téléphone : (819) 762-0609
Télécopieur: (819) 762-0097

Dossier : **9189**
Votre no. commande :
Projet : **72400**
Nombre total d'échantillons : **14**

Identification	Cu AAT-7 ppm 2	Cu-Dup AAT-7 ppm 2	Ni AAT-7 ppm 2	Ni-Dup AAT-7 ppm 2
2515	92	91	908	894
2516	296		836	
2519	199		1094	
2537	10		16	
2541	36		331	
2542	76		230	
2543	440		375	
2548	271		76	
2553	73		1732	
2559	70		34	
2560	83		54	
2561	107		38	
2536	7	8		
2540	6			

Joe Landers, Directeur

LABORATOIRE EXPERT LABORATORY

127 Boulevard Industriel , Rouyn-Noranda, QC J9X 6P2
Tel: 819.762.7100 Fax: 819.762.7510

Date: 17 octobre 2005

Votre référence: 72400

Notre référence: A05-3163 / Dossier 9189

Exploration Fieldex
210, 9ème Rue
Bureau 108
Rouyn-Noranda, Qc
J9X 2C2

Attn: Sylvain Champagne

Nombre d'échantillons: 1

Éléments	**Méthode**
Analyses totales	4 litho

Joe Landers / Directeur

Report: A05-3163

Final Report
Activation Laboratories

Element:	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Sc	Be	V	Cr	Co	Ni
Units:	%	%	%	%	%	%	%	%	%	%	%	%	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	0.01	1	1	5	20	1	20
Reference 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
Client I.D.																		
2515	45.43	7	9.99	0.134	23.46	7.74	0.21	0.03	0.274	0.03	5.32	99.61	21	<1	122	2240	94	950

Final Report
Activation Laboratories

Element:	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La
Units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit:	10	30	1	1	5	2	2	2	4	1	2	0.5	0.2	1	0.5	0.5	3	0.1
Reference Method:	FUS-MS	FUS-MS	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-MS	FUS-ICP	FUS-MS
Client I.D.																		
2515	70	60	9	2	< 5	2	34	9	23	3	< 2	< 0.5	< 0.2	< 1	1.7	< 0.5	6	0.7

Final Report
Activation Laboratories

Element:	Bi	Th	U
Units:	ppm	ppm	ppm
Detection Limit:	0.4	0.1	0.1
Reference Method:	FUS-MS	FUS-MS	FUS-MS
Client I.D.			
2515	< 0.4	1	2.1

LABORATOIRE EXPERT LABORATORY

127 Boulevard Industriel , Rouyn-Noranda, QC J9X 6P2
Tel: 819.762.7100 Fax: 819.762.7510

Date: 31 août 2005

Votre référence: 72400 Bloc A

Notre référence: A05-2640 / Dossier 8561

Exploration Fieldex
210, 9ème Rue
Bureau 108
Rouyn-Noranda, Qc
J9X 2C2

Attn: Sylvain Champagne

Nombre d'échantillons: 12

Éléments	**Méthode**
Analyses totales	ICP 4B 4B2 Standard

Joe Landers / Directeur

Activation Laboratories Ltd. Work Order No. A05-2640 Report No. A05-2640

SAMPLE	SiO2	Al2O3	Fe2O3 (T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	TOTAL	Ba	Sr	Y	Sc	Zr	Be	V	
	%	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
2533	48.67	10.64	10.77	0.187	13.59	7.86	1.65	2.90	0.728	0.30	1.91	99.19	1220	362	14	31	57	9	205	
METHOD BLANK	-0.01	-0.01	-0.01	-0.001	-0.01	-0.01	-0.01	-0.01	-0.001	-0.01			-1	-1	-1	-1	-1	-1	-5	
SY3 CERT	59.62	11.75	6.49	0.32	2.67	8.26	4.12	4.23	0.15	0.54	1.16		450	302	718	6.8	320	20	50	syenite
SY-3/A	59.59	11.67	6.47	0.321	2.55	8.23	4.12	4.21	0.150	0.54			447	303	715	9	323	21	50	
NIST 694 CERT	11.20	1.80	0.79	0.01	0.33	43.60	0.86	0.51	0.11	30.20									1736	western phosphate rock
NIST 694/A	11.17	1.86	0.76	0.012	0.33	43.49	0.87	0.59	0.113	29.11			113	909	150	3	92	6	1555	
W-2 CERT	52.44	15.35	10.74	0.163	6.37	10.87	2.14	0.627	1.06	0.131	0.60		182	194	24	35	94	1.3	262	diabase
W-2/A	52.35	15.14	10.63	0.161	6.27	10.69	2.18	0.59	1.058	0.13			166	184	21	35	83	1	263	
DNC-1 CERT	47.04	18.30	9.93	0.149	10.05	11.27	1.87	0.229	0.48	0.085	0.60		114	145	18	31	41	1	148	dolerite
DNC-1/A	47.03	18.29	9.85	0.145	10.02	11.23	1.91	0.17	0.479	0.06			103	137	17	31	31	-1	139	
BIR-1 CERT	47.77	15.35	11.26	0.171	9.68	13.24	1.75	0.027	0.96	0.05			7.7	108	16	44	22	0.58	313	basalt
BIR-1/A	47.74	15.34	11.26	0.168	9.67	13.22	1.82	0.03	0.955	0.02			8	105	16	44	14	-1	322	
GBW 07113 CERT	72.78	12.96	3.21	0.140	0.16	0.59	2.57	5.43	0.30	0.05			506	43	42.5	5.2	403	4.09	3.8	granite
GBW 07113/A	72.68	12.85	3.17	0.137	0.14	0.58	2.50	5.41	0.282	0.04			486	40	49	5	400	4	34	
NBS 1633b CERT	49.24	28.43	11.13	0.020	0.799	2.11	0.271	2.26	1.32	0.53			709	1041		41			296	fly ash
NBS 1633b/A	49.13	28.14	11.15	0.017	0.80	2.22	0.27	2.35	1.307	0.54			708	1030	93	42	224	16	290	
STM-1 CERT	59.64	18.39	5.22	0.22	0.101	1.09	8.94	4.28	0.135	0.158			560	700	46	0.61	1210	9.6	(8.7	syenite
STM-1/A	59.57	18.10	5.22	0.217	0.09	1.14	8.81	4.23	0.132	0.15			581	694	45	-1	1190	9	-5	
IF-G CERT	41.20	0.15	55.85	0.042	1.89	1.55	0.032	0.012	0.014	0.063			1.5	3	9	0.38	2.4	4.7	4	iron form sample
IF-G/A	41.04	0.13	55.59	0.035	1.87	1.54	0.03	0.03	0.004	0.05			6	4	10	-1	7	5	-5	
FK-N CERT	65.02	18.61	0.09	0.005	0.01	0.11	2.58	12.81	0.02	0.02			200	39	0.3	0.05	13	1	3	K-feldspar
FK-N/A	65.10	18.41	0.23	0.003	0.02	0.12	2.48	12.35	0.007	0.01			201	40	1	-1	5	-1	-5	

Note: Certificate data underlined are recommended values; other values are proposed except those preceded by a "(" which are information values.
Note: The Fe2O3 for the standards is Total Fe2O3 and has not been adjusted for the FeO.

C. Douglas Read, B.Sc.
Laboratory Manager

Negative values indicate less than the reporting limit
LOI values less than -0.01% represent a Gain on Ignition

Actlabs 4B2 (Standard Package) Job #: A05-2640 **Report #: A05-2640** **Customer: Expert Lab** **Contact: L. Lafleur**

Trace Element Values Are In Parts Per Million Negative Values Equal Not Detected At That Lower Limit.

Sample ID:	V	Cr	Co	Ni	Cu	Zn	Ga	Ge	As	Rb	Sr	Y	Zr	Nb	Mo	Ag	In	Sn	Sb	Cs	Ba	La	Ce	Pr	Nd	Sm	Eu
2072	-5	-20	-1	-20	20	46	46	3	-5	11	71	213	503	815	-2	-0.5	-0.2	10	1.0	1.2	12	5.4	15.0	2.57	18.0	10.9	0.09
2073	19	-20	-1	-20	12	367	34	2	-5	18	16	63	854	391	-2	-0.5	-0.2	8	0.8	3.3	5	16.4	39.6	4.07	11.4	2.0	0.06
2074	15	-20	-1	-20	-10	297	34	3	-5	22	19	83	883	442	-2	-0.5	-0.2	8	1.1	3.2	6	27.8	59.0	6.39	17.3	2.9	0.08
2075	28	-20	-1	-20	11	712	47	3	-5	35	30	166	3 020	556	-2	-0.5	-0.2	21	1.2	3.8	10	17.3	32.3	4.63	16.2	3.5	0.10
2076	38	-20	-1	-20	-10	623	43	3	-5	21	38	176	3 790	669	-2	0.7	-0.2	19	1.2	2.0	21	19.9	39.2	5.00	15.8	3.2	0.11
2098	12	-20	-1	-20	12	36	16	-1	-5	227	163	8	190	14	-2	-0.5	-0.2	-1	1.2	25.8	315	28.7	68.1	8.43	28.5	4.6	0.74
2099	-5	-20	-1	-20	15	-30	14	-1	-5	44	101	1	20	6	-2	-0.5	-0.2	-1	0.9	11.9	24	1.4	3.3	0.33	1.2	0.3	0.29
2100	6	-20	-1	-20	-10	-30	13	-1	-5	253	245	2	15	2	-2	-0.5	-0.2	-1	1.5	15.2	582	6.2	11.9	1.44	5.1	0.9	0.57
2534	6	-20	-1	-20	-10	-30	30	2	-5	64	177	-1	19	54	>100	-0.5	-0.2	-1	1.5	4.1	228	1.7	3.3	0.44	1.8	0.5	0.14
2535	7	-20	-1	-20	13	-30	25	2	-5	20	253	1	37	36	>100	-0.5	-0.2	-1	1.1	1.0	141	2.4	4.9	0.67	3.2	0.9	0.20
2311	5	-20	-1	-20	18	-30	14	-1	-5	245	206	3	26	3	4	-0.5	-0.2	-1	0.9	11.4	437	17.6	41.0	4.96	16.7	2.5	0.57
Control Material W2	255	88	42	23	104	63	18	2	-5	19	193	21	91	7	-2	-0.5	-0.2	2	0.7	0.8	183	10.5	22.5	3.00	12.3	3.2	1.11
Certified W2	**262***	**93***	**44***	**70***	**103***	**77***	**20***	**(1.0)**	**1.2**	**20***	**194***	**24***	**94***	**7.9**	**(0.6)**	**(0.046)**			**0.79**	**0.99***	**182***	**11.4***	**24***	**(5.9)**	**14.0**	**3.25***	**1.1***
Control Material WMG-1	167	791	204	3 150	5 830	130	10	2	10	3	40	14	55	5	-2	1.5	1.1	2	3.0	-0.5	120	8.1	16.7	2.21	9.2	2.4	0.79
Certified WMG-1	**(149)**	**(770)**	**(200)**	**(2700)**	**(5900)**	**(110)**	**(10.3)**		**(7)**	**(4)**	**(41)**	**(12)**	**(43)**	**(6)**	**(1.4)**	**(2.7)**		**(2.2)**	**(1.8)**	**(0.48)**	**(114)**	**(8.2)**	**(16)**		**(9)**	**(2.3)**	**(0.8)**
Blank	-5	-20	-1	-20	-10	-30	-1	-1	-5	-2	-2	-1	-5	-1	-2	-0.5	-0.2	-1	-0.5	-0.5	-3	-0.1	-0.1	-0.05	-0.1	-0.1	-0.05
Standard MAG1	139	97	22	26	27	134	23	1	6	153	146	27	126	15	-2	-0.5	-0.2	3	1.0	8.6	529	43.2	86.6	10.45	36.9	7.4	1.53
Certified MAG1	**140***	**97***	**20.4***	**53***	**30***	**130***	**20.4***		**9.2**	**149***	**146***	**28***	**126***	**12**	**1.6**	**0.08**	**(0.18)**	**3.6**	**0.96***	**8.6***	**479***	**43***	**88***	**9.3**	**38***	**7.5***	**1.55***
Standard BIR1	314	388	51	161	124	37	16	2	-5	-2	109	16	12	-1	-2	-0.5	-0.2	-1	-0.5	-0.5	8	0.9	2.0	0.43	2.4	1.1	0.55
Certified BIR1	**313***	**382***	**51.4***	**166***	**126***	**71***	**16**	**1.5**	**(0.4)**	**0.25***	**108***	**16***	**16**	**0.6**	**(0.5)**	**(0.036)**		**0.65**	**0.58**	**0.005**	**7**	**0.62***	**1.95***	**0.38***	**2.5***	**1.1***	**0.54***
Standard DNC1	140	269	54	267	97	61	14	1	-5	3	137	17	34	1	-2	-0.5	-0.2	-1	0.9	-0.5	105	3.7	8.2	1.12	4.7	1.4	0.60
Certified DNC1	**148***	**285***	**54.7***	**247***	**96***	**66***	**15**	**(1.3)**	**(0.2)**	**(4.5)**	**145***	**18***	**41***	**3**	**(0.7)**	**(0.027)**			**0.96***	**(0.34)**	**114***	**3.8***	**10.6**	**1.3**	**4.9***	**1.38***	**0.59***
Standard GXR2	51	33	9	20	81	405	37	-1	27	79	156	18	257	11	-2	11.3	-0.2	2	33.5	5.3	2 200	26.9	53.5	5.93	20.3	3.9	0.82
Certified GXR2	**52**	**36**	**8.6**	**21**	**76**	**530**	**37**		**25**	**78.0**	**160**	**17**	**269**	**11**	**(2.1)**	**17**	**(0.252)**	**1.7**	**49**	**5.2**	**2 240**	**25.6**	**51.4**		**(19)**	**3.5**	**0.81**
Standard LKSD3	76	78	30	43	32	114	15	-1	25	73	243	31	168	8	-2	1.4	-0.2	2	0.8	2.2	685	49.7	91.7	12.1	42.5	8.0	1.54
Certified LKSD3	**82**	**87**	**30**	**47**	**35**	**152**			**27**	**78**	**240**	**30**	**178**	**8**	**(<5)**	**2.7**		**3**	**1.3**	**2.3**	**680**	**52**	**90**		**44**	**8.0**	**1.50**
Standard MICA Fe	122	83	25	20	10	1 290	94	3	-5	2 180	4	47	834	296	-2	-0.5	0.6	70	-0.5	168	156	198	420	52.9	180	35.1	0.65
Certified MICA Fe	**135***	**90***	**23***	**35***	**5***	**1300***	**95***	**3.2**	**3**	**2200***	**5***	**48***	**800***	**270***	**1.2**		**0.60**	**70***		**180***	**150***	**200***	**420***	**49***	**180***	**33***	**0.7***
Standard GXR1	89	40	8	40	1 260	881	15	4	429	7	317	33	27	2	18	31	0.8	54	130	3	769	8.5	16.2	2.2	8.9	3.1	0.7
Certified GXR1	**80**	**12**	**8.2**	**41**	**1 110**	**760**	**14**		**427**	**(14)**	**275**	**32**	**(38)**	**(0.8)**	**18**	**31**	**0.8**	**54**	**122**	**3.0**	**750**	**7.5**	**17**		**(18)**	**2.7**	**0.69**
Standard SY3	48	40	7	40	20	245	38	3	26	205	312	674	370	248	4	-1	-0.4	7	-1	3	479	1 300	2160	220	666	111	16.8
Certified SY3	**50**	**(11)**	**8.8**	**11**	**17**	**244***	**27***	**1.4**	**19**	**206***	**302***	**718***	**320**	**148**	**(1.0)**	**(1.5)**		**(6.5)**	**0.31**	**3**	**450**	**1340***	**2230***	**223***	**670**	**109**	**17***
Standard STM1	-5	-20	-1	-20	-10	234	38	2	-5	117	699	47	1 210	242	5	-0.5	-0.2	7	1.6	1.6	648	153	262	27.1	80.1	12.5	3.69
Certified STM1	**(8.7)**	**(4.3)**	**0.9**	**(3)**	**(4.6)**	**235***	**36***	**(1.4)**	**4.6**	**118***	**700***	**46***	**1210***	**268***	**5.2**	**0.079***	**(0.12)**	**6.8**	**1.66***	**1.54***	**560***	**150***	**259***	**19***	**79***	**12.6***	**3.6***
Standard IFG1	-5	-20	26	22	-10	-30	-1	24	-5	-2	3	9	-5	-1	-2	-0.5	-0.2	-1	0.9	-0.5	-3	2.4	3.6	0.40	1.6	0.4	0.36
Certified IFG1	**2**	**4**	**29***	**23**	**13***	**20***	**0.7**	**24**	**1.5**	**0.4**	**3**	**9***	**1**	**0.1***	**0.7**		**0.2**	**0.3**	**0.63**	**0.06**	**1.5**	**2.8***	**4***	**0.4***	**0.2**	**0.4***	**0.39***

NOTE: '*' = RECOMMENDED VALUES
'( )' = INFORMATION VALUES
ALL OTHER VALUES ARE PROPOSED

NOTE: WE RECOMMEND USING OPTION 4B1 FOR ACCURATE LEVELS OF BASE METALS Cu,Pb,Zn,Ni,Ag AND OPTION 4B-INAA FOR As,Sb, HIGH W>100PPM AND Cr>1000PPM; AND Sn>50PPM BY CODE 5D. VALUES FOR THESE ELEMENTS PROVIDED BY ICP/MS ARE ORDER OF MAGNITUDE ONLY AND ARE PROVIDED FOR GENERAL INFORMATION MINERALIZED SAMPLES SHOULD HAVE THE QUANT OPTION SELECTED OR REQUEST ASSAYS FOR VALUES WHICH EXCEED THE RANGE OF OPTION 4B1.

Certified By:

C. Douglas Read, B.Sc
Laboratory Manager, Activation Laboratories Ltd.

Date Received: 12-AUG-05

Date Reported: 30-AUG-05

Actlabs 4B2 (Standard Pack
Trace Element Values Are in F

Sample ID:	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Hf	Ta	W	Tl	Pb	Bi	Th	U	U3O8
2072	16.2	3.7	24.2	4.6	15.2	3.14	22.3	3.45	43.1	94.7	-1	-0.1	112	0.8	72.6	308	363
2073	2.0	0.4	3.4	1.2	6.7	1.97	19.8	4.45	42.6	64.0	-1	0.1	34	1.9	85.5	321	378
2074	2.9	0.6	4.7	1.6	8.6	2.40	23.0	4.96	41.5	67.3	-1	0.2	28	1.8	96.6	405	478
2075	4.1	1.0	8.1	2.9	17.0	4.80	49.2	11.1	135	85.2	-1	0.2	87	5.8	265	563	664
2076	3.9	0.9	8.6	3.3	20.0	5.85	59.1	13.5	169	100	-1	0.2	166	5.4	318	718	846
2098	2.7	0.3	1.3	0.3	0.9	0.15	1.2	0.22	6.6	1.8	-1	1.3	32	-0.4	58.1	50.5	59.6
2099	0.2	-0.1	0.2	-0.1	0.2	-0.05	0.3	0.05	0.8	0.7	-1	0.3	12	-0.4	5.8	5.8	6.9
2100	0.6	-0.1	0.3	-0.1	0.2	-0.05	0.2	-0.04	0.5	0.3	-1	1.7	33	-0.4	9.5	5.5	6.5
2534	0.3	-0.1	0.1	-0.1	-0.1	-0.05	0.1	-0.04	2.7	30.7	-1	0.6	50	66.6	1.7	2.6	3.1
2535	0.5	-0.1	0.2	-0.1	0.1	-0.05	0.1	-0.04	6.3	30.1	-1	0.2	100	118	3.0	4.1	4.8
2311	1.5	0.1	0.5	-0.1	0.3	-0.05	0.3	-0.04	1.0	0.7	-1	1.4	28	1.8	18.6	10.1	11.9
Control Material W2	3.6	0.6	3.7	0.8	2.2	0.33	2.1	0.31	2.5	0.5	-1	-0.1	6	-0.4	2.1	0.5	
Certified W2	**3.6***	**0.63**	**3.8***	**0.76***	**2.5**	**0.4**	**2.05***	**0.33***	**2.56***	**0.5**	**(0.3)**	**(0.2)**	**9**	**(0.03)**	**2.2***	**0.53**	
Control Material WMG-1	2.6	0.4	2.4	0.5	1.5	0.22	1.3	0.20	1.5	0.3	-1	-0.1	21	0.5	1.2	0.7	
Certified WMG-1		**(0.4)**	**(2.8)**	**(0.5)**		**(0.2)**	**(1.3)**	**(0.21)**	**(1.3)**	**(0.5)**	**(1.3)**		**(15)**		**(1.1)**	**(0.65)**	
Blank	-0.1	-0.1	-0.1	-0.1	-0.1	-0.05	-0.1	-0.04	-0.2	-0.1	-1	-0.1	-5	-0.4	-0.1	-0.1	
Standard MAG1	6.4	1.0	5.1	1.0	2.9	0.43	2.6	0.39	3.6	1.2	1	0.2	20	-0.4	11.8	2.8	
Certified MAG1	**5.8***	**0.96***	**5.2***	**1.02***	**3**	**0.43***	**2.6***	**0.40***	**3.7***	**1.1**	**1.4**	**(0.59)**	**24***	**0.34**	**11.9***	**2.7***	
Standard BIR1	1.9	0.4	2.6	0.6	1.7	0.28	1.7	0.26	0.6	-0.1	-1	-0.1	-5	-0.4	-0.1	-0.1	
Certified BIR1	**1.85***	**0.36***	**2.5***	**0.57***	**1.7***	**0.26***	**1.65**	**0.26***	**0.6***	**0.04**	**0.07**	**(0.01)**	**3**	**(0.02)**	**0.03**	**0.01**	
Standard DNC1	2.0	0.4	2.6	0.6	1.9	0.31	1.9	0.30	1.0	-0.1	-1	-0.1	-5	-0.4	0.2	-0.1	
Certified DNC1	**2**	**0.41***	**2.7**	**0.62**	**2***	**(0.33)**	**2.01***	**0.32***	**1.01***	**0.098***	**(0.2)**	**(0.026)**	**6.3**	**(0.02)**	**(0.2)**	**(0.1)**	
Standard GXR2	3.3	0.5	3.0	0.6	1.9	0.29	1.9	0.29	7.0	0.9	1	0.7	132	-0.4	8.6	2.9	
Certified GXR2	**(3.3)**	**0.48**	**3.3**			**(0.3)**	**2.04**	**(0.27)**	**8.3**	**0.9**	**1.9**	**1.03**	**690**	**(0.69)**	**8.8**	**2.9**	
Standard LKSD3	6.8	1.0	5.4	1.1	3.2	0.49	3.0	0.46	4.6	0.6	2	0.4	6	-0.4	10.5	4.3	
Certified LKSD3		**1.0**	**4.9**				**2.7**	**0.4**	**4.8**	**0.7**	**(<4)**		**29**		**11.4**	**4.6**	
Standard MICA Fe	23.1	2.7	10.8	1.5	3.9	0.56	3.5	0.48	27.1	34.7	8	16.0	15	0.5	156	85.4	
Certified MICA Fe	**21***	**2.7***	**11***	**1.6***	**3.8***	**0.48***	**3.5***	**0.5***	**26***	**35***	**15**	**16**	**13***	**2**	**150***	**80***	
Standard GXR1	4.3	0.9	5.1	1.0	2.9	0.4	2.5	0.34	0.7	-0.2	170	0.4	730	1380	3.1	34.4	
Certified GXR1	**4.2**	**0.83**	**4.3**			**(0.43)**	**1.9**	**0.3**	**1.0**	**0.175**	**164**	**(0.39)**	**730**	**1 380**	**2.44**	**34.9**	
Standard SY3	104	19.7	118	26.0	79.3	12.0	63.0	8.01	11.3	32.5	-2	1.3	86	-0.8	999	701	
Certified SY3	**105***	**18**	**118**	**29.5***	**68**	**11.6***	**(62)**	**7.90**	**9.70**	**30***	**1.1***	**1.50**	**133***	**(0.8)**	**1003***	**650***	
Standard STM1	9.6	1.5	8.2	1.6	4.6	0.69	4.5	0.66	27.1	19.4	3	0.2	17	-0.4	31.4	9.0	
Certified STM1	**9.5***	**1.55***	**8.1***	**1.9**	**4.2***	**0.69**	**4.4***	**0.60**	**28***	**18.6***	**3.6***	**0.26**	**17.7***	**0.13**	**31***	**9.06***	
Standard IFG1	0.6	0.1	0.8	0.2	0.6	0.09	0.5	0.09	-0.2	0.2	219	-0.1	-5	-0.4	-0.1	-0.1	
Certified IFG1	**0.74***	**0.11***	**0.8***	**0.2***	**0.63***	**0.09***	**0.6***	**0.09***	**0.04**	**0.2**	**220**	**0.02**	**4**		**0.1**	**0.02**	

Laboratoire Expert Inc.

127, Boulevard Industriel
Rouyn-Noranda, Québec
Canada, J9X 6P2
Téléphone : (819) 762-7100, Télécopieur : (819) 762-7510

*** Certificat d'analyses ***

Date : 2005/09/27

Client : **Exploration Fieldex**

Destinataire : **Sylvain Champagne**
210, 9ème Rue
Bureau 108
Rouyn-Noranda
Québec
J9X 2C2
Téléphone : (819) 762-0609
Télécopieur: (819) 762-0097

Dossier : **9191**
Votre no. commande :
Projet : **72400**
Nombre total d'échantillons : **16**

Identification	Au FA-GRAV g/t 0.03	Au DCP-1 ppb 5	Au-Dup DCP-1 ppb 5	Pt DCP-1 ppb 5	Pt-Dup DCP-1 ppb 5	Pd DCP-1 ppb 5	Pd-Dup DCP-1 ppb 5	Ag AAT-7 ppm 0.2
2539		6	9	11	7	9	9	
2545		6		9		8		
2343		6		<5		<5		<0.2
2344	2.06	1945		<5		<5		21.4
2345		226		<5		<5		15.2
2346	1.99	1937		<5		<5		8.5
2347		506		<5		<5		9.9
2348		664		<5		<5		5.9
2349		106		<5		5		1.1
2350		30		<5		5		1.3
2138		33		<5		<5		2.2
2139		17		<5		5		4.1
2140		19	16	<5	<5	6	6	0.8
2141		9		<5		<5		0.5
2142		14		9		11		0.4
2143		12		<5		<5		0.5

Joe Landers, Directeur

Laboratoire Expert Inc.

127, Boulevard Industriel
Rouyn-Noranda, Québec
Canada, J9X 6P2
Téléphone : (819) 762-7100, Télécopieur : (819) 762-7510

*** Certificat d'analyses ***

Date : 2005/09/27

Client : **Exploration Fieldex**

Destinataire : **Sylvain Champagne**
210, 9ème Rue
Bureau 108
Rouyn-Noranda
Québec
J9X 2C2
Téléphone : (819) 762-0609
Télécopieur: (819) 762-0097

Dossier : **9191**
Votre no. commande :
Projet : **72400**
Nombre total d'échantillons : **16**

Identification	Ag-Dup AAT-7 ppm 0.2	Cu AAT-7 ppm 2	Cu-Dup AAT-7 ppm 2	Ni AAT-7 ppm 2	Ni-Dup AAT-7 ppm 2	Zn AAT-7 ppm 2	Zn-Dup AAT-7 ppm 2	Cu AAT-8 % 0.010
2539		134	134	678	688			
2545		81		663				
2343		114		48		45		
2344		---------- >DL		145		155		4.120
2345		---------- >DL		232		147		1.940
2346		8712		17		930		
2347		---------- >DL		37		140		1.270
2348		7159		30		236		
2349		1061		150		79		
2350		524		282		102		
2138		4515		202		47		
2139		8302		35		58		
2140	0.7	824	822	275	291	17	17	
2141		212		489		67		
2142		330		1361		12		
2143		362		533		1035		

>DL Valeur est supérieure à la limite de détection

Joe Landers, Directeur

Laboratoire Expert Inc.

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Rouyn-Noranda, Québec
Canada, J9X 6P2
Téléphone : (819) 762-7100, Télécopieur : (819) 762-7510

*** Certificat d'analyses ***

Date : 2005/08/04

Client : **Exploration Fieldex**

Destinataire : **Sylvain Champagne**
210, 9ème Rue
Bureau 108
Rouyn-Noranda
Québec
J9X 2C2
Téléphone : (819) 762-0609
Télécopieur: (819) 762-0097

Dossier : **8400**
Votre no. commande :
Projet : **72400 BLOC A**
Nombre total d'échantillons : **20**

Identification	Au DCP-1 ppb 5	Au-Dup DCP-1 ppb 5	Pt DCP-1 ppb 5	Pt-Dup DCP-1 ppb 5	Pd DCP-1 ppb 5	Pd-Dup DCP-1 ppb 5	Cu AAT-7 ppm 2	Cu-Dup AAT-7 ppm 2
2501	9	7	<5	<5	<5	<5	36	36
2503	222		14		11		70	
2504	16		<5		<5		108	
2506	13		10		10		92	
2507	12		<5		<5		77	
2508	12		12		12		126	
2509	14		<5		<5		431	
2510	11		8		<5		322	
2511	41		7		5		70	
2512	5		8		8		105	
2513	<5		<5		<5		43	
2514	7		<5		<5		41	
2518	7	9	6	<5	5	6	92	90
2520	7		9		10		205	
2521	9		13		9		381	
2522	9		9		5		56	
2523	7		7		9		500	
2527	6		7		7		172	
2528	5		5		<5		676	
2529	9		6		8		267	

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Dossier : **8400**
Votre no. commande :
Projet : **72400 BLOC A**

Nombre total d'échantillons : **20**

Identification	Ni AAT-7 ppm 2	Ni-Dup AAT-7 ppm 2
2501	23	24
2503	160	
2504	65	
2506	546	
2507	47	
2508	774	
2509	177	
2510	338	
2511	833	
2512	437	
2513	116	
2514	352	
2518	202	202
2520	1325	
2521	1660	
2522	600	
2523	1003	
2527	759	
2528	843	
2529	1320	

Joe Landers, Directeur