

GM 56869

SUMMARY REPORT 1996, SAKAMI PROJECT, LAC GUYER AND LAC DE LA CORVETTE AREAS, BAIE-JAMES REGION

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SUMMARY REPORT 1996

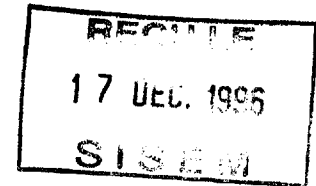
**SAKAMI PROJECT
LAC GUYER AND LAC DE LA CORVETTE AREAS,
BAIE-JAMES REGION,
QUEBEC**

NTS 33G/05,33G/06,33G/08,33G/11,33G/12

MRN-GÉOINFORMATION 1999

GM 56869

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**Myles Johnson
Project Geologist
Eastern District
October 1996**

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SUMMARY AND CONCLUSIONS

During the summer of 1996 a four man, helicopter supported crew completed a geological evaluation of P.E.M. 0001107 and P.E.M. 0001117 as part of the Sakami Project (95-MN-04).

Target areas included known gold and base metal showings, areas of hydrothermal alteration as well as areas of structural complexity and conductive zones identified by a previous helicopter-borne EM survey. (96-MN-04)

The work comprised a program of detailed sampling and reconnaissance geological mapping and prospecting. A total of 252 rock samples were collected and analyzed for Au and selected trace elements.

Sample results although anomalous at two locations, are not of sufficient tenor to justify further expenditures and no further work is recommended

1.0 INTRODUCTION

The Lac Guyer and Lac Corvette exploration permits were obtained by Phelps Dodge Corporation of Canada, Limited (PDC) during November, 1995 to cover ground thought prospective for the deposition of A) base metal massive sulphide VMS and B) iron formation hosted gold.

Preliminary geological evaluation followed by airborne geophysical surveys (EM., Mag., VLF-EM) completed during 1995 and early 1996 outlined targets that were evaluated during the summer of 1996. This report discusses with recommendations the results of this program.

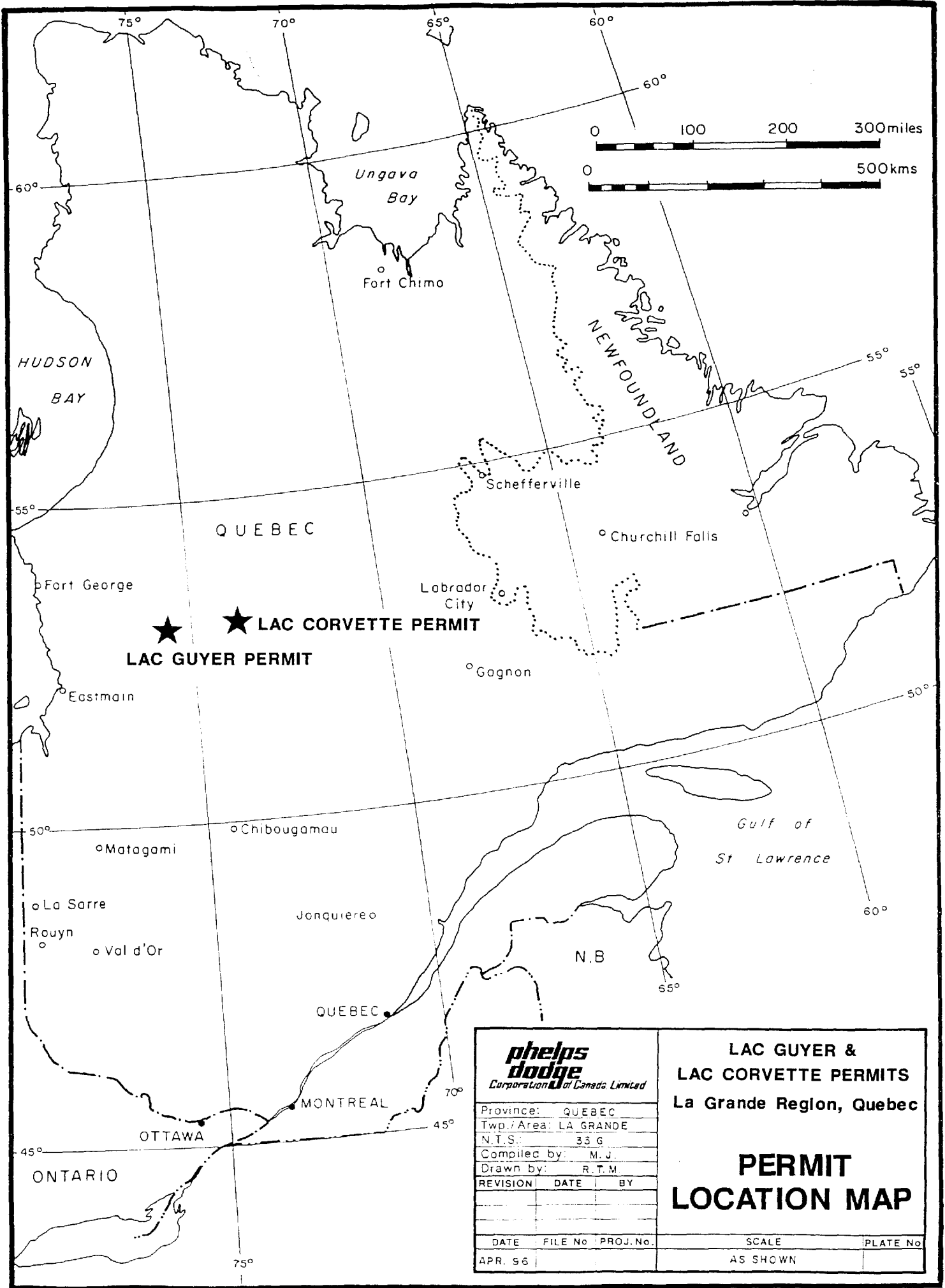
2.0 LOCATION AND ACCESS

The Lac Guyer and Lac Corvette properties are in the Baie-James region of the northern portion of Québec.(Figure 1) More specifically they are located approximately 275km and 325 km east of Radisson, Quebec, and are centred at 75° 25'W, 53° 32'N and 74° W, 53° 39'N respectively.


Access to the southern portions of the Lac Guyer property is via the 540km LG4 highway, an east-west all-weather gravel road connecting the Hydro Québec installations between Radison and Brisay.(Figure 2) Helicopter and or fixed wing aircraft access the remainder of the property. The Lac de la Corvette block is accessed by helicopter that are usually positioned at La Grande 4(Figure 3).

3.0 CLAIM STATUS

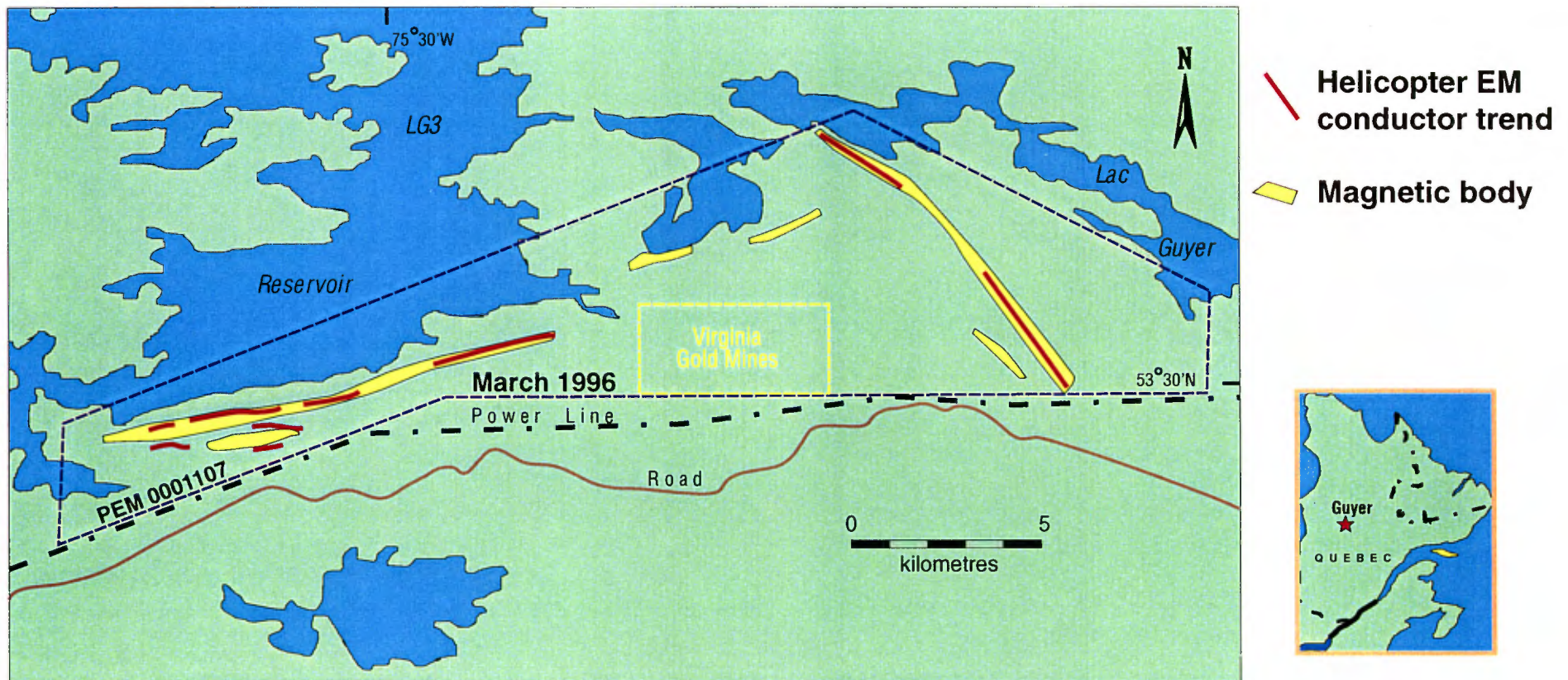
Map delineated Permit P.E.M.0001107 encloses the Lac Guyer area and comprises an area of 144km². The Lac de la Corvette P.E.M. 0001117 covers 50km².(Figure 1&2)



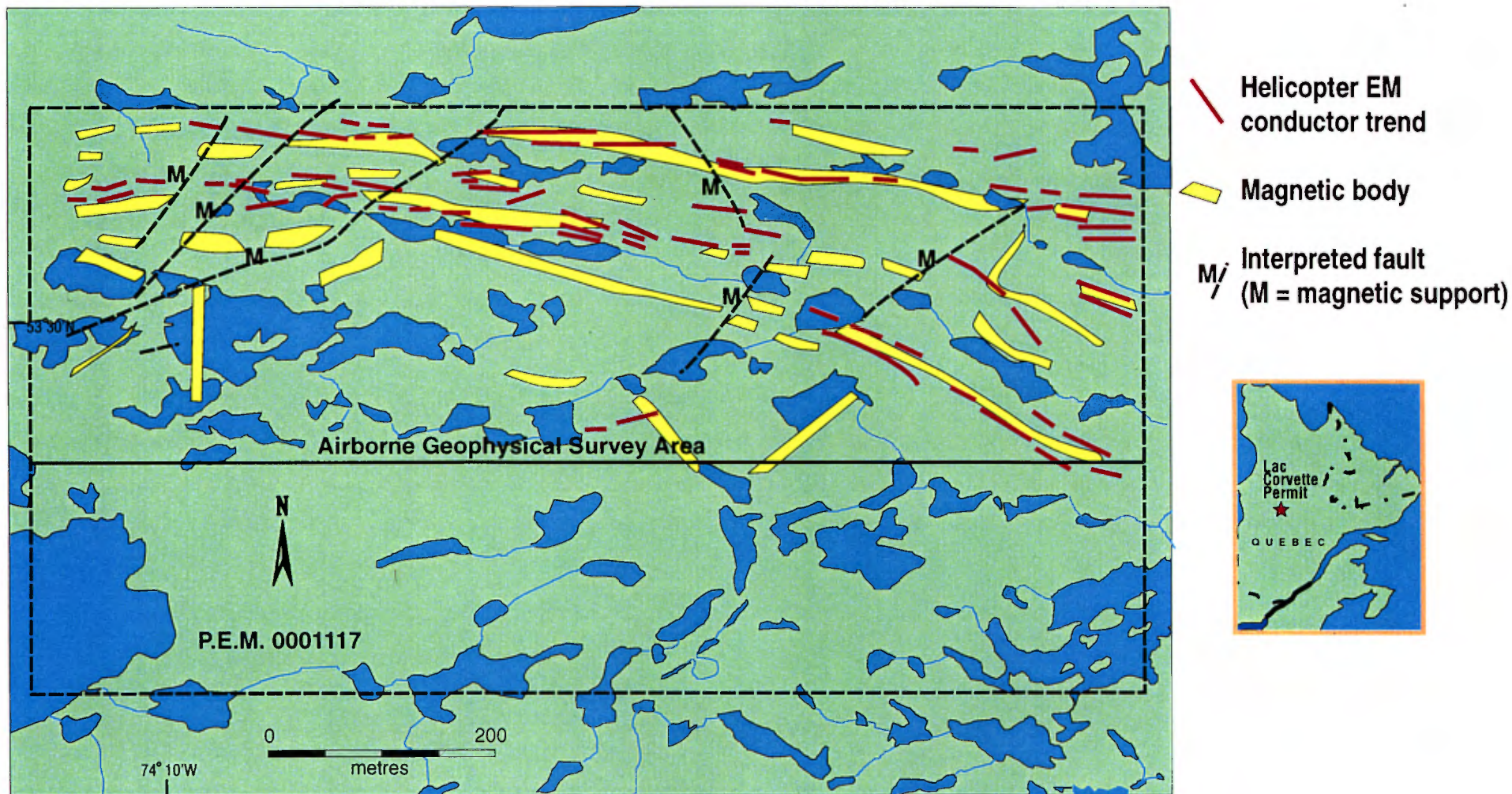
★ ★ **LAC CORVETTE PERMIT**
LAC GUYER PERMIT

 <i>Corporation of Canada Limited</i>			LAC GUYER & LAC CORVETTE PERMITS La Grande Region, Quebec		
Province:	QUEBEC		DATE	FILE No	PROJ. No.
Twp./Area:	LA GRANDE				
N.T.S.:	33 G				
Compiled by:	M. J.				
Drawn by:	R. T. M.				
REVISION	DATE	BY			
APR. 96			AS SHOWN		PLATE No

LAC GUYER-SHIELD GOLD PROJECT LA GRANDE REGION, QUEBEC



LAC DE LA CORVETTE VMS (Cu-Zn) PROJECT LA GRANDE REGION, QUEBEC



4.0 PREVIOUS WORK

1959-1960 Tyrone Mines Ltd

A subsidiary of Phelps Dodge Corporation, Tyrone Mines completed extensive areal reconnaissance prospecting, sampling, line cutting, and a Hunting fixed-winged two frequency quadrature phase system(400 Hz and 2300 Hz)

1973-1976 Société de Développement de la Baie James (SDBJ)

Completed extensive lake sediment geochemical surveys in the Baie James hydro electric corridor.

1976 Sharma K.

Regional geological mapping of the La Grande Rivière Area.

1982 St. Seymour

Completed a doctorate that studied the petrogenesis of the volcanic rocks in the Lac Guyer area

1988 St. Seymour and Francis

Discussed the Lac Guyer greenstone belt

1995 Chartrand and Gauthier

Discussed the mineral potential of the La Grande Rivière Region.

5.0 PREVIOUS WORK BY PHELPS DODGE

Reconnaissance geology and sampling in the general La Grande area led to the acquisition of exploration permits at Lac Guyer and Lac de la Corvette in late 1995.(see Osborne 1995)

In early 1996 a helicopter-borne multi-sensor (electromagnetic-magnetic-VLF-EM) survey was completed on the two properties. The coverage of the Lac Guyer area comprised 980 line km of surveying while 340.6 line km. were completed on the Lac de la Corvette permit. For a complete discussion of these surveys see Jagodits, 1996.

These programs were partially funded by a QMER grant (95-MN-04), an assistance program to stimulate mineral exploration in the Baie James region (the Moyen Nord)

6.0 PRESENT PROGRAM

During the period of July 15 to August 20, a four man helicopter supported crew investigated: anomalous airborne geophysical (EM, Mag.) responses, areas of structural complexity, and known areas of base metal and gold mineralization.

The work comprised a program of detailed sampling and reconnaissance geological mapping and prospecting. A total of 252 rock samples were collected and analyzed for Au and selected trace elements.

7.0 GENERAL GEOLOGY (Seymour and Francis, 1988)

The Lac Guyer-Lac de la Corvette areas are underlain by Archean rocks of the Superior Province. They are interpreted as a series of volcanic troughs that comprise the larger La Grande greenstone belt, which comprises a series of such volcanic troughs running 350 km, in an east-west direction along the boundary between granitoid gneisses of the Ungava subprovince to the north and the larger Laguiche sedimentary domain to the south.

The belt consists of a succession of isoclinally folded volcanic rocks comprising a lower sequence of basalts overlain by felsic tuffs, rhyodacites and sediments that are in turn succeeded by an upper sequence of basalt and komatiite. Plutons of granodioritic composition syntectonically intrude the volcanic succession.

8.0 PROPERTY GEOLOGY

8.1 LAC GUYER PERMIT (from Gamble 1996)

The Lac Guyer property is underlain by a narrow, (2-4km. wide) amphibolite grade, mixed mafic volcanic-metasedimentary sequence. The south boundary is defined by a white granodiorite, while to the north metasediments predominate. Both ultramafic sills and white granite pegmatite occur locally. The geological sequence is very similar to the Lac Corvette permit.

The mafic volcanic rocks comprise a sequence of fine grained laminated tuffs and flows that are variably amphibolitized.

Interbedded with the mafic volcanic assemblage are metasedimentary horizons consisting of grey-banded fine grained siltstones, minor coarse clastics to conglomerate, quartzite, minor carbonaceous dark grey siltstones, banded magnetite/quartzite lean iron formation, and sulphidized 'banded iron formation (BIF).

The foliation-bedding fabric in the west Lac Guyer fly block strikes 080° to 065° with dips of 60° to 80° north. Facing evidence in the form of graded bedding observed at a metasedimentary exposure on the shore of Lac Guyer, indicate tops are to the south. This suggests an overturned volcano-sedimentary sequence.

The orientation of the foliation-bedding fabric in the east Lac Guyer area changes to approximately 130° as indicated by the long conductive trend centred on a long formational magnetite iron formation conductor. Within this magnetite iron formation is a strong fracture set striking 340° and dipping vertically.

The source of the AEM conductivity throughout the Lac Guyer property is attributed to a series of thin banded magnetite and sulphidized BIF. The BIF can vary from thin layered magnetite-quartzite lean iron formation to weak to strong rusty gossaneous sulphidized iron formation. Locally strong rusty gossaneous zones occur (ie C-5 area) where the sulphides consists mainly of pyrrhotite + pyrite with trace chalcopyrite.

The BIF and local sedimentary host lie within a regime of mafic volcanic tuffs and flows. There is no evidence of any felsic volcanism in the Lac Guyer volcano-sedimentary belt.

8.2 LAC CORVETTE PERMIT (from Gamble 1996)

The mafic volcanic rocks comprise a sequence of, fine grained tuffs and pillowed flow rocks. Interbedded with the mafic volcanic sequence are several metasedimentary horizons. The sedimentary sequence generally consists of finely bedded quartzites, conglomerate (with BIF clasts), grey siltstone, thin black shale, and thin banded iron formation. (both magnetite lean iron formation and sulphidized iron formation) The magnetite iron formation is characterized by thin bedded magnetite interbedded with quartzite beds, in places having minor conglomerate pebbles and small cobbles of similar quartzite composition.

The foliation fabric and bedding orientation is striking 110° and dipping 60° south. Limited facing directions indicate tops to the north and south which suggests possible folding.

The source of the AEM conductivity throughout the Corvette flying block is attributed to a number of thin banded iron formation BIF horizons. The BIF horizons are within a sedimentary assemblage of quartzite, grey siltstone, with lesser conglomerate and black argillaceous siltstone units. The BIF can vary from thin layered magnetite iron formation to weak sulphidized iron formation. Locally strong sulphide gossans do occur (C-11, old Tyrone pits). The sulphides consist mainly of pyrrhotite and pyrite with trace chalcopyrite and sphalerite. (old Tyrone pits)

The BIF and sedimentary horizons lie within a sequence of variably amphibolized mafic volcanic tuffs and flow rocks. There is no evidence to support felsic volcanism within the permit area.

9.0 MINERALIZATION

Sulphide mineralization in the form of pyrite and pyrrhotite are the most abundant metallic minerals found on the permits. This mineralization is found as: disseminations within banded iron formation, and as narrow bands associated near banded iron formation, generally with recrystallised chert (Tyrone showings)

Chalcopyrite in the form of fine disseminations and veinlets is found of the Lac de la Corvette Permit hosted within folded iron formation. A selected grab sample of this mineralization returned an assay of 1.4% Cu. (sample 117810)

Sphalerite is also associated with folded iron formation on the Lac de la Corvette permit. A selected grab sample analyzed > 10,000 ppm Zn.

An anomalous gold value of 3.22 gms./t (117533) from previously sampled, sheared, sulphidized lean iron formation was obtained from area A. (see Lac Guyer East Sheet in rear pocket) Visible fracture controlled galena was also encountered and is associated with anomalous gold.

10.0 GEOCHEMISTRY

A total of 252 grab rock samples were collected and submitted to Les Laboratoires XRAL of Rouyn-Noranda, Québec for analysis. All samples are crushed to -10 mesh using a multistage jaw crusher, a 250 gram sample is then reduced to -150 mesh using a ring and puck pulverizer. The samples were subjected to aquaregia digestion followed by 31 element analysis by ICP. The results of the geochemical analysis are reported in Appendix 1. The locations of samples are presented on the Lac Guyer and Lac de la Corvette sample location maps found in the rear pocket.

Discussion of results

The results of the geochemical sampling program indicates that anomalous precious and base metal values are present on the Lac Guyer and Lac de la Corvette permits.

Lac Guyer Permit

Anomalous gold and base metal values were encountered at Zone A. A gold value of 3.22 gms./t.(sample 117533) with associated anomalous Pb (18400ppm) Ag (43.6ppm) is hosted within siliceous metasediments. Elevated Zn values (samples 11736, 117539) of 6360, 6050ppm. respectively were also found in the immediate area of Zone A. East of zone A, grab samples (117563,117569) of rusty pyritic metasediments yielded Au values of 600 and 692 ppb.

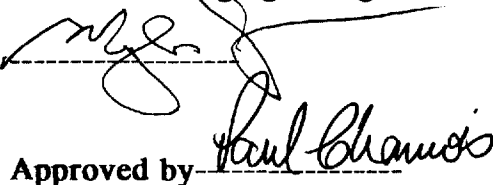
Slightly elevated Au values in the .5gm/t range were encountered while sampling iron formations on conductors C-16, C-3, C-5,and C-6. See samples; 117653, 117713, 117714, 117727, and 117744.

Lac de la Corvette Permit

Anomalous base metal values were encountered in the vicinity of Conductor C-11 which lies directly south of Lac Long.(see Appendix 2 and Lac de la Corvette Sample Location Map in rear pocket) Copper values as high as 14100 ppm.and Zn > 10000ppm were encountered within sulphide facies iron formation. See samples 117801 to 117813.

11.0 CONCLUSIONS AND RECOMMENDATIONS

Reconnaissance geological mapping and bedrock sampling completed on the Lac Guyer and Lac de la Corvette permits indicate that the properties are underlain predominantly by mafic volcanic and sedimentary rock including banded iron formation terrains. Two areas: Area A on the Lac Guyer permit, and the Tyrone pits area on the Lac de la Corvette permit have anomalous gold or base metal values, both are associated with BIF. The values encountered however are not encouraging enough to recommend further expenditures on the two permit

Approved by 

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Paul Chamois
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Date 12-12-96

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APPENDIX 1
LAC GUYER SAMPLE LOCATIONS AND
DESCRIPTIONS

LAC GUYER SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117501	463770	5926210	fresh,fg,blue grey,sil,fine dis. py to 20%, mafic to int., garnets, qtz felds amph. gnt gneiss,
117502	463653	5926254	garnetiferis,amph. chlorite shist,minor qtz,up to5% fine py as streaks and dis.,red garnets,pale grey qtz with black streaks,fg,270 and dip 70 N
117503	463662	5926245	similar sheared material,whispy cpy veinlit,banded fg,chl,hard sil.,pos. graphite,sheared
117504	463599	5926215	rusty garnetiferous amph. qtz shist,rusty bands and patches,small scale folds,270 and dips 75N
117505	463500	5926300	rusty,sil. qtz amph. gneiss, 2.5% fine py,qtz 60%,amph. 30%
117506	463420	5926165	pod like feature,within amph. qtz gneiss,pos. folded area,poss. qtz porph., wheathered white grey,fresh grey fg,white felds,chl,po 5-2% py 1-2% as fine and dis
117507	463195	5926123	rusty magnetic,garnet amph.,py po trace,BIF?,gnt 2-5%,amph. dark grey
117508	463100	5926200	BIF,magnetic,3-5% fine po,py as whisps and specks,magnetite,amphibolite
117509	463182	5925940	rusty fg tuff,amph. pale white grey,py cubes to .5cm,fine py
117510	463116	5926886	rusty,fg,grey,white,black,magnetic,sil. with granular qtz eyes to 40%,black .5mm scale amph.,2-5% diss. py 280 dip 70 N
117511	462722	5926758	sheared qtz felds porph, rusty in spots,white grey,fresh fg white grey, stretched,qtz 50-60%,felds 20-30%,trace py 2%,up to 10% fine py on shear
117512	462890	5926320	rusty sil.,fresh green fg,sil.,pos. chl,slight mag.,5% fine dis. py ,layered needle like laths to 1cm in a lattice like habit
117513	463050	5926480	rusty sheared slaty, same #512,5% diss. py
117514	463106	5926345	rusty,slaty sheared,fresh green grey,sil. to 5%,fine diss. py,acicular radiating crystals
117515	465118	5926572	azurite stain,rusty garnitiferous amph.,1cm elongated garnets 10-15%,fg amph. matrix,amph. 50-60%,garnets 15-20%,qtz 20%
117516	465038	5926772	rusty segment in baded felsic gneiss,fresh green grey,fg,layered,qtz 50-60%,felds 20-30%,amph. 10-20%py dis. and streaky 5-10%,slightly mag.,255/75 N
117517	464847	5926932	no py,rusty,banded on mm scale,magnetite,amph.,pos. chert,100m N of BIF, sil. metaseds or tuff??,int. felsic
117518	465135	5926941	pos. qtz felds porph.,now qtz felds sed gneiss,white grey slight banding,fresh grey white fg,qtz granular,minor qtz eyes,felds white fg,amph.,chl,tr py
117519	462276	5925834	chert mag.,banded,rusty,white grey to dark grey laminations,fresh banded,qtz,chl layers, highly magnetic
117520	462141	5925895	rusty mafic gneiss,fresh fg,10-15% sulphides as fine diss.,green dark amph.,magnetic,pegmatic dike just 25m S.
117521	461976	5926000	rusty qtz amph. gneiss,reddih gossan in qtz feld amph. gneiss,fres coarse amph.,2% py as diss.,slightly mag.
117522	462290	5926062	rusty,fresh fg,green grey,sil.,fine dis. py to 2-5%,magnetic
117523	462444	5926174	rusty,slaty,fg,qtz 60%,amph. 2-5%,fine py and po,magnetic
117524	462883	5926100	med. fg,green,qtz layers to 2cm,HEAVY,black on hands
117525	482712	5928423	ultra mafic,rusty red,pos. serpentine,fresh dull grey green fine grained,slightly mag.,tr sulph.
117526	482224	5929060	felsic porph.,10% dis. py and whisps,quartz and minor biotite
117527	482224	5929060	similar to above,white felds,looks ryolitic
117528	482224	5929060	as above coarse py shreaks
117529	482224	5929060	see fieldbook for initial description
117530	482224	5929060	fairly fresh rhyolite porph. tr-2%
117531			
117532	482282	5932026	green qtzite, 5% dis. py,
117533	482282	5932026	green qtsite, 5% dis. py.
117534	482282	5932026	green qtzite, 5% dis. py.
117535	482282	5932026	green qtzite, 5% dis. py.
117536			
117537	482344	5932016	rusty mafic, 5% total sulphides, 50 on strike
117538	482366	5932054	rusty, 5 meters wide, sil., tuff?, 2-3% py
117539	482390	5932085	rusty 10% py, magnetic, chl
117540	482337	5932196	slightly sil., amph.,1-2% dis. py
117541	482337	5932296	grey siltstone with dis. py
117542	482113	5931995	rusty metased,qtzsite 5-10% py, banded, sil.,amph.
117543	482113	5931995	py,amph.,qtzite

LAC GUYER SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117544	482284	5932296	BIF, mag., minor qtz bands, 2-3% py
117545	467550	5927328	rusty zone approx. 10 cm, fg, amph, argillite?, tr 1% dis. py, fg, banded, red garnets
117546	467850	5927495	rusty segments, fresh qtz rich with bio. and amph., trace py., mag, possible gf
117547	469530	5928109	breccia, angular clasts 2-3 cm, qtzite, amph., sulphides
117548	469892	5928296	carb. breccia, pair red weathered, fresh greenish gray, 5% py, mafi ?
117549	490272	5928752	silic. amph., gnt, 2-3 % dis. py., mag
117550	469400	5928476	sulph. facies, Bif, 10-20 % sulph., bid
117551	469364	5928500	silic. metased., 5% dis. py.
117552	469085	5928470	Bif, 2-5% sulph., silic.
117553	482700	5929360	lamin., Bif ?, fg, fresh=dark green-gray, qtzite layers, mag., rusty zone
117554	482700	5929360	see 117553
117555	482900	5929470	rusty metaseds., fg amph., 2-3 % very fine po + py, slightly mag.
117556	482995	5929436	rusty zone in amph., metaseds. aphanitic, po + py, alternating amph and slightly silic. seds
117557	484574	5929431	shrd seds, tr 1% py, rusty
117558	479068	5930454	rusty felds porph., pos. pillow MV
117559	476080	5931340	fg amph., fine dis. py., feldspar, MV
117560	476145	5931390	M to UM?, grey-green, pseudo pillow-like, mag., fg, fairly soft on fresh, possibly actino.
117561	477840	5930740	qtz sst or porphy, rusty, massive white to black, mag., fg qtz and feldspar
117562	486466	5930169	MV, green-grey, fg to med-g, amph., 1-2 mm phenos., non mag., no sulphides
117563	482075	5932120	rusty amph., fresh grey-green, 5-10% dis. sulphides, somewhat silic., fg
117564	482020	5932060	rusty amph., slightly silic., 2-5% dis. sulphides, slightly mag.
117565	481985	5932020	silic. seds, amph., banding, 5-7% py, slightly mag.
117566	481985	5932020	see 117565
117567	481750	5932365	Bif, fg dark grey amph., silic. bands, 1-2% dis. py
117568	481814	5932129	Bif, mag., silic. green layers, 2-3% sulphides
117569	481733	5932269	silic., slightly mag., 5-10% dis. and wispy py, crystalline qtz and feldspar
117570	481730	5932210	silic. sed., contact with porphy or very silic. cherty sed., amph., 1-2% py.
117571	481580	5932175	rusty silic. and amphibolitic seds., trace 1% py. non mag.
117572	481499	5932157	rusty bld, sub-crop, silic. metased., 2-3% sulphides, mag., greenish layering, actino. or tourmal.
117651			c16- lamina. grey to grey-black, silts., weak rusty, po + py, trace to 2%
117652			c16- finely lamina. grey seds. and amph. layers, po + py, trace to 2%
117653			c16- finely lamina. grey-green, metaseds., rusty foliation planes
117654	466222	5927666	c16 North-grey, banded seds., rusty qtzite., 2% po + py
117655	466222	5927666	see 117654
117656	466222	5927666	see 117654
117657			c16-grey and green banded lamina. seds., several narrow sulph. goss layers, 1-2 ft thick, carrying weak py + po
117658	466114	5927433	c13-seds., qtzite + sulph., 1-2ft rusty bands, trace to 5% dis. po + py
117659	466114	5927433	see 117658
117660	460893	5925999	c5-gneissic Bif in contact with gd, rusty trace to 5% po + py
117661	460828	5925965	c5- Bif, strong rusty gossan, qtzite, silic. seds., py+po, trace to 5%, cut locally by gd dikes, locally hydrozincite in the more intense rusty pods

LAC GUYER SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117662			see 117661
117663			"
117664			"
117665			"
117666			"
117667			"
117668			"
117669			"
117670			"
117671			"
117672			"
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117675			"
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117693			"
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117695			"
117696			"
117697			"
117698			"
117699			"
117700	460510	5925929	west end of c5 zone. 310 M along strike from sample #117661
117701			lies within c5 zone
117702			lies within c5 zone
117703			lies within c5 zone
117704			lies within c5 zone

LAC GUYER SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117705	460760	5926051	c4- silic., rusty, Bif, qtzite and amph. layers, 2m rusty zone, trace to 5% po+py
117706	"	"	"
117707	"	"	"
117708	"	"	"
117709	"	"	"
117710	"	"	"
117711	"	"	"
117712	460575	5926236	north of c4, Bif, banded mag., qtzite, finely lamina.
117713	460237	5926175	c3- Bif, rusty, hem., mag.+ qtzite. interlayered
117714	"	"	"
117715	"	"	"
117716	"	"	"
117717	"	"	"
117718	460960	5925848	c5 going east from detailed zone. rusty Bif
117719	"	"	"
117720	461110	5926028	c5 contuing east from 117719. Bif, rusty as previous
117721	461075	5926070	c4- rusty Bif
117722	"	"	"
117723	"	"	"
117724	"	"	"
117725	"	"	continuation eastward towards small lake from 117724. rusty Bif
117726	"	"	"
117727	"	"	"
117728	"	"	c6- southside of small lake. rusty Bif
117729	"	"	"
117730	"	"	"
117731	"	"	"
117732	461190	5926168	c4 north side of lake on west end. rusty Bif
117733	"	"	"
117734	"	"	"
117735	"	"	"
117736	"	"	"
117737	"	"	"
117738	461358	5926175	c4- rusty Bif
117739	461395	5926250	c3 east end, 150m north of lake. rusty Bif, trace cpy,+ trace hydrozinc., dark grey, argillac. seds.
117740	"	"	"
117741	"	"	c3 east end. rusty Bif
117742	461406	5926469	c3- rusty hem.,magn., Bif
117743	"	"	"
117744	461457	5926019	c6 east end. rusty qtzite., trace to 3% po+py
117745	"	"	c6 east end. southeast shore of small lake. rusty qtzite., + magn., Bif, trace py
117746	461705	5926132	c6 east end. rusty Bif zone along creek edge and between 2 ponds east of small lake
117747	"	"	"

LAC GUYER SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117748	461724	5925986	c8 west end. rusty seds., Bif
117749	478009	5934425	main southeast trending magn. IF., heavily fractured magn. Bif
117750	478099	5934311	" .., rusty magn., Bif
117751	"	"	"
117752	465457	5926590	c11- grey, weak rusty gw
117753	479781	5932820	cM north shore east end of lake. sheared UM. trace py
117754	"	"	"
117755	479985	5933248	main southeast trendind magn. IF. weak rusty magn. bif, trace py+po
117756	480617	5932939	"

APPENDIX 2

**LAC DE LA CORVETTE SAMPLE
LOCATIONS AND DESCRIPTIONS**

LAC CORVETTE SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117601			c6- rusty lamina., fg,seds., silic., py+po trace cpy
117602			" large rusty erratic
117603			" "
117604			c5- grey and green lamina. seds., fg, rusty, garn., py+po trace to 2%, trace cpy
117605			c5- amphibol. layer in rusty layered sed. sequence. trace to 2% po+py
117606			southwest of c8. 2m rusty sed. horizon, trace to 2% po+py in Mv-amph.
117607	562044	5928828	c10- rusty Bif, sulph. in seds., po+py 2-5%, trace cpy
117608	"	"	c10- rusty sed. contact border zone with gran. pegm., seds. foliated with seric. development along foliation, trace to 2% po+
117609	"	"	"
117610	"	"	c10- see 117607
117611	"	"	c10- Bif same as 117607
117612	563725	5928828	c8- strong rusty Bif bld. magn.IF
117613	"	"	c8- weak rusty MV-amph., trace po+py
117614	563333	5927253	sheared ultramafic schist tr. py, 200m s of c-11
117615	563432	5927593	c11 eastend. Bif, 2-5% po+py
117616	557784	5929597	c15 southside west end of lake. weak rusty lamina., Bif, trace to 2% po+py
117617	"	"	c15 southside of lake in bay. rusty Bif, 5% po+py, trace cpy + hydrozinc.
117618	"	"	c15. rusty Bif, qtzite + argillac. silts., 2-5% po
117619	"	"	"
117620	"	"	c15. semi-massive po. 60% heavily dis.
117621	558807	5930058	c1-w. Bif, rusty qtzit. silic. seds, in MV, trace to 2% py+po
117622	"	"	"
117623	"	"	same as 117621 but strong rusty gossan, Bif + hydrozinc., 2-5% po+py
117624	558688	5930078	same as 117623
117625	"	"	c1-w. magn. IF + qtzite beds. trace py+po
117626	"	"	c1-w. dark grey-black shales. 5% py
117627	"	"	c1-w. 2m strong rusty 5% py, gossan, immediately north of banded magn.IF
117628	559669	5929911	c2-w.magn. Bif within Mv, trace py
117629	"	"	c2-w. rusty foliation, trace po+py
117630	"	"	c2-w. rusty garn. amphib. magn., Bif
117631	"	"	c2-w. Bif, amphib. + garn., trace to 2% po+py
117632	"	"	c2-w. rusty, heavy gossan zone within magn. Bif, trace to 2% po+py
117633	560163	5929791	c2-w. same as 117632, 25m zone
117634	"	"	c2-w. strong gossan in middle of 25m Bif zone
117635	"	"	same as 117634

LAC CORVETTE SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117636			
117637			
117638			
117801	561545	5927970	grey phase of um, tr cpy
117802	561970	5927880	old PD trenches, BIF, py po, tr cpy
117803	--	--	
117804	--	--	
117805	--	--	
117806	--	--	felsic schist
117807	--	--	amph., tr cpy, po, py
117808	562103	5927701	BIF, py, po, 1-2% cpy
117809	--	--	BIF, 20-30% po py, 1% cpy, zn?
117810	561996	5927790	lean BIF, 1% diss. cpy, po, py 5%
117811	--	--	BIF, po, mag
117812	560500	5929000	BIF, gf, po, py, c-07
117813	560154	5928432	turmaline schist, fuschite
117814	560154	5928432	BIF, py, po, cpy
117815	--	--	fuschite gneiss,
117816	554790	5929910	BIF, py, po
117817	555077	5929217	int. lap. tuff? (Seds), tr py
117818	555081	5929279	metaseds, rusty, 5% diss. py
117819	557780	5927697	C-13, rusty, QFP, diss. py 1-2%
117820	532204	5927245	Dawn Lake, BIF, py, po, tr. cpy
117821	--	--	
117822	--	--	Qtz vein
117823	569275	5929560	BIF, 1-2% py po
117824	559810	5929000	rusty metaseds, 1-2% py
117825	559460	5928943	rusty metaseds py po 1_2%
117826	558792	5929050	UM, diss. py po 1-2%, C-09
117827	559356	5929603	BIF, py po 2-3%
117828	559384	5929786	amph., 2-5% py po
117829	575225	5943204	East of Corvette Lake, UM

LAC CORVETTE SAMPLES 1996

SAMPLE NUMBER	LATITUDE	DEPARTURE	DESCRIPTION
117830	554543	5929172	BIF, Sil., py po
117831	554358	5929558	sil metaseds, py 2%
117832	554345	5929390	Qzt felds biotite gneiss 5% py
117833	--	--	pos. basic volc., sil, 10% py
117834	--	--	semi massive banded py
117835	--	--	qtz felds biotite schist, 15% banded py
117836	554345	5929390	Int. lap. tuff?? (seds) tr py
117837	556313	5929294	sheard basic volc, 10% py
117838	--	--	sheared basic volc., 1% py
117839	556245	5929808	BIF, po py to 10%
117840			
117841			
117842			
117843			

APPENDIX 3
SAKAMI PROJECT ANALYTICAL RESULTS
SORTED BY NUMBER

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APPENDIX 4
XRAL LABORATORIES CERTIFICATES OF ANALYSIS
31 ELEMENT SCAN

SEP 4 1996



LES LABORATOIRES XRAL LABORATORIES

UNE DIVISION DE / A DIVISION OF SGS CANADA INC.
129 AVE. RÉAL CAQUETTE • C.P. 2283 • ROUYN-NORANDA • QUÉBEC J9X 5A9
TÉL.: (819) 764-9108 FAX: (819) 764-4673

your ref:

our ref: 9996,9997/R8444

CERTIFICAT D'ANALYSE/ASSAY CERTIFICATE

23-Aug-96

PHELPS DODGE
120 ADELAIDE STREET W.
SUITE 912
TORONTO, ONTARIO
M5H 1T1
ATTENTION: PAUL CHAMOIS

Date Soumis/Submitted: August 13, 1996

No. of samples: 251

No. of pages: 18

ELEMENTS

METHOD

DETECTION LIMIT

31 elements scan

aqua/regialCP

Certifié par/Certified by:



J.J. Landers Gérant/Manager

SAMPLE	BE PPM ICP 0.5	NA % ICP 0.01	MG % ICP 0.01	AL % ICP 0.01	P % ICP 0.01	K % ICP 0.01	CA % ICP 0.01	SC PPM ICP 0.5	TI % ICP 0.01
117501	<.5	0.08	0.35	0.54	<.01	0.14	0.10	2.8	0.05
117502	<.5	0.08	0.82	1.22	0.06	0.18	0.35	1.2	0.12
117503	0.6	0.07	0.40	0.75	0.05	0.18	0.40	1.1	0.09
117504	<.5	0.07	0.65	0.93	0.05	0.11	0.38	0.8	0.10
117505	<.5	0.06	0.83	1.05	0.04	0.15	0.31	1.6	0.09
117506	<.5	0.09	0.92	1.20	0.29	0.08	0.79	1.1	0.05
117507	<.5	0.12	0.31	0.71	0.06	0.11	0.79	1.2	0.04
117508	<.5	0.07	0.34	0.56	0.04	0.24	0.71	0.8	0.07
117509	<.5	0.11	0.28	0.59	0.08	0.04	0.43	6.5	0.18
117510	<.5	0.08	0.61	0.82	0.04	0.17	0.68	4.1	0.09
117511	<.5	0.07	0.44	0.56	0.02	0.14	0.13	0.9	0.03
117512	<.5	0.23	0.26	5.66	0.03	0.03	4.05	1.2	0.02
117513	<.5	0.12	0.33	0.71	0.02	0.02	0.41	2.0	0.03
117514	<.5	0.28	0.53	3.80	0.03	0.04	2.47	1.5	0.01
117515	<.5	0.08	0.44	0.91	0.03	0.14	0.56	0.9	0.06
117516	<.5	0.13	0.31	1.20	0.03	0.08	0.81	0.9	0.01
117517	<.5	0.02	0.05	0.05	0.11	<.01	0.25	<.5	<.01
117518	<.5	0.09	0.29	0.53	0.02	0.11	0.33	0.8	0.03
117519	<.5	0.02	0.07	0.05	0.19	0.02	0.47	<.5	<.01
117520	<.5	0.08	0.54	1.03	0.05	0.07	0.74	2.8	0.09
117521	<.5	0.06	0.19	0.43	0.09	0.08	0.42	1.0	0.04
117522	<.5	0.09	0.80	1.30	0.03	0.13	0.45	2.3	0.02
117523	<.5	0.07	0.77	0.92	0.04	0.08	0.29	1.5	0.07
117524	<.5	0.02	0.05	0.04	<.01	<.01	0.10	<.5	<.01
117525	<.5	0.02	2.00	0.87	0.02	<.01	0.29	0.9	0.02
117526	<.5	0.11	0.28	0.66	0.02	0.25	0.11	2.1	0.08
117527	<.5	0.09	0.42	0.67	0.05	0.30	0.35	2.1	0.07
117528	<.5	0.07	0.20	0.56	0.03	0.14	0.25	1.2	0.07
117529	<.5	0.06	0.69	0.92	0.02	0.06	0.50	1.2	0.02
117530	<.5	0.08	0.55	0.84	0.02	0.06	0.41	2.5	0.07
117531	<.5	0.07	0.26	0.57	0.03	0.14	0.21	1.2	0.04
117532	<.5	0.08	0.30	0.52	0.05	0.10	0.46	4.0	0.10
117533	<.5	0.05	0.48	0.96	0.03	0.14	0.55	1.2	0.08
117534	<.5	0.04	0.26	0.53	0.03	0.11	0.33	1.0	0.12
117535	<.5	0.04	0.46	0.91	0.03	0.14	0.56	1.3	0.08
117536	<.5	0.04	0.33	0.52	0.02	0.28	0.13	8.6	0.09
117537	<.5	0.05	0.70	1.01	0.03	0.16	0.35	1.7	0.11
117538	<.5	0.04	0.58	0.89	0.03	0.15	0.19	2.7	0.13
117539	<.5	0.03	0.34	0.63	0.02	0.14	0.19	4.2	0.06
117540	<.5	0.05	1.21	1.83	0.07	0.19	0.40	6.6	0.09
117541	<.5	0.06	0.55	1.03	0.06	0.31	0.23	3.4	0.08
117542	<.5	0.04	1.13	1.39	0.02	0.16	0.63	1.9	0.07
117543	<.5	0.04	0.28	0.52	0.03	0.13	0.34	2.0	0.10
117544	<.5	0.02	0.49	0.54	0.06	0.08	0.19	<.5	0.02
117545	<.5	0.08	0.49	0.93	0.04	0.03	0.78	3.3	0.05
117546	0.5	0.07	1.58	1.55	0.15	0.08	1.11	1.5	0.07
117547	1.6	0.04	0.82	1.14	0.05	0.33	0.56	7.2	0.06
117548	<.5	0.06	0.61	0.93	0.03	0.10	0.54	5.6	0.09
117549	<.5	0.07	0.28	0.76	0.04	0.16	0.50	1.0	0.04
117550	<.5	0.02	0.10	0.24	0.12	0.02	0.32	<.5	0.01
117551	<.5	0.04	2.54	1.94	0.06	0.33	0.37	11.0	0.09
117552	<.5	0.02	0.05	0.05	0.08	0.02	0.14	<.5	<.01
117553	<.5	0.07	0.13	0.44	0.04	0.09	0.37	1.9	0.08
117554	<.5	0.08	0.28	1.14	0.03	0.06	0.97	1.8	0.07
117555	<.5	0.06	0.60	0.99	0.04	0.35	0.31	1.4	0.08
117556	<.5	0.09	0.32	1.22	0.03	0.04	0.98	2.7	0.06
117557	<.5	0.03	3.02	2.86	0.03	0.14	1.27	5.7	0.17
117558	<.5	0.04	0.04	0.21	<.01	0.10	0.07	<.5	<.01
117559	<.5	0.23	0.13	1.42	0.03	<.01	1.06	1.5	0.04
117560	<.5	0.02	1.82	0.82	<.01	<.01	0.11	0.7	<.01
117561	<.5	0.07	0.19	0.30	<.01	0.05	0.10	1.4	0.01
117562	<.5	0.04	1.14	0.92	0.01	0.03	0.18	0.7	0.03
117563	<.5	0.07	0.74	1.06	0.05	0.12	0.63	2.3	0.10
117564	<.5	0.09	0.47	0.73	0.03	0.08	0.75	3.5	0.09
117565	<.5	0.06	0.29	0.47	0.03	0.05	0.48	2.7	0.06
117566	<.5	0.07	0.37	0.59	0.03	0.05	0.54	2.7	0.06
117567	<.5	0.09	0.27	0.47	0.03	0.07	0.56	3.5	0.07
117568	<.5	0.07	0.23	0.38	0.04	0.05	0.54	2.3	0.05
117569	<.5	0.05	0.13	0.50	0.03	0.08	0.56	1.1	0.05
117570	<.5	0.08	0.18	0.36	0.02	0.03	0.15	<.5	0.04
117571	<.5	0.10	0.25	0.44	0.03	0.12	0.31	0.8	0.06
117572	<.5	0.06	0.22	0.45	0.04	0.07	0.59	2.9	0.05
117601	<.5	0.09	0.43	1.59	0.03	0.69	0.48	3.5	0.14

SAMPLE	BE PPM ICP 0.5	NA % ICP 0.01	MG % ICP 0.01	AL % ICP 0.01	P % ICP 0.01	K % ICP 0.01	CA % ICP 0.01	SC PPM ICP 0.5	TI % ICP 0.01
117602	<.5	0.05	0.11	0.39	0.03	0.12	0.28	<.5	0.04
117603	<.5	0.04	0.12	0.29	0.03	0.08	0.16	<.5	0.03
117604	<.5	0.10	0.25	0.61	0.09	0.14	0.73	1.5	0.08
117605	<.5	0.09	0.28	0.61	0.10	0.10	0.93	2.1	0.06
117606	<.5	0.05	1.18	1.34	0.03	0.16	0.13	5.6	0.11
117607	<.5	0.05	0.97	1.12	0.03	0.24	0.27	6.1	0.07
117608	<.5	0.04	0.03	0.22	<.01	0.14	0.02	<.5	<.01
117609	0.6	0.02	<.01	0.05	0.03	0.03	0.05	<.5	<.01
117610	0.9	0.03	0.37	0.66	0.02	0.27	0.17	1.7	0.07
117611	0.8	0.04	0.29	0.64	0.05	0.02	0.89	1.4	0.05
117612	<.5	0.02	0.03	0.04	0.07	<.01	0.18	<.5	<.01
117613	<.5	0.08	0.12	0.30	0.03	0.07	0.29	0.7	0.05
117614	<.5	0.02	5.79	0.35	0.01	<.01	0.61	2.5	<.01
117615	<.5	0.04	0.66	1.37	0.03	0.03	0.76	3.3	0.04
117616	<.5	0.06	0.76	1.42	0.02	0.19	0.68	3.7	0.06
117617	<.5	0.04	0.60	0.81	0.04	0.25	0.09	3.7	0.02
117618	<.5	0.12	0.83	2.31	0.04	0.25	1.26	7.7	0.05
117619	<.5	0.04	0.44	0.54	0.02	0.11	0.19	2.5	0.05
117620	<.5	0.02	0.81	1.05	0.02	0.05	0.44	5.3	0.04
117621	<.5	0.07	0.25	0.39	0.06	0.04	0.12	1.9	0.03
117622	0.5	0.05	1.25	1.68	0.02	0.58	0.66	3.1	0.12
117623	<.5	0.02	0.18	0.32	0.13	0.06	0.34	<.5	0.02
117624	0.6	0.02	0.31	0.56	0.13	0.07	0.21	<.5	0.03
117625	0.8	0.02	0.03	0.06	0.10	<.01	0.19	<.5	<.01
117626	<.5	0.02	0.41	1.14	0.02	0.24	0.09	3.3	0.10
117627	<.5	0.02	0.77	1.96	0.05	0.96	0.13	4.6	0.16
117628	<.5	0.09	0.60	0.88	0.03	0.03	0.37	3.0	0.03
117629	<.5	0.06	0.31	0.95	0.03	0.35	0.32	1.9	0.11
117630	<.5	0.05	0.26	0.51	0.07	0.04	0.44	1.9	0.04
117631	<.5	0.04	0.25	0.61	0.06	0.13	0.48	2.8	0.08
117632	<.5	0.02	0.19	0.55	0.02	0.28	0.04	3.6	0.06
117633	<.5	0.03	0.64	1.37	0.06	0.81	0.24	2.3	0.10
117634	<.5	0.03	0.25	0.56	0.06	0.10	0.34	1.6	0.04
117635	<.5	0.03	0.14	0.36	0.07	0.03	0.31	<.5	0.02
C DCP CONTROL	<.5	0.05	0.76	0.67	0.12	0.08	0.79	1.5	0.03
C DCP CONTROL	<.5	0.06	0.77	0.67	0.12	0.08	0.79	1.5	0.04
C DCP CONTROL	<.5	0.06	0.80	0.70	0.12	0.09	0.82	1.5	0.04
D 117501	<.5	0.07	0.34	0.50	<.01	0.12	0.09	2.7	0.04
D 117513	<.5	0.10	0.29	0.65	0.02	0.01	0.39	1.7	0.02
D 117525	<.5	0.01	1.80	0.82	0.02	<.01	0.28	0.7	0.01
D 117537	<.5	0.04	0.69	0.97	0.03	0.14	0.32	1.5	0.09
D 117547	1.6	0.04	0.82	1.14	0.05	0.33	0.55	7.2	0.06
D 117559	<.5	0.20	0.12	1.27	0.03	<.01	1.00	1.3	0.03
D 117571	<.5	0.11	0.23	0.43	0.03	0.12	0.28	0.7	0.06
D 117611	0.7	0.03	0.27	0.59	0.05	0.02	0.81	1.3	0.05
D 117621	<.5	0.08	0.26	0.41	0.06	0.05	0.12	2.0	0.03
D 117633	<.5	0.03	0.63	1.34	0.06	0.79	0.24	2.2	0.09

SAMPLE	V PPM ICP 2	CR PPM ICP 1	MN PPM ICP 2	FE % ICP 0.01	CO PPM ICP 1	NI PPM ICP 1	CU PPM ICP 0.5	ZN PPM ICP 0.5	AS PPM ICP 3
117501	15	102	152	1.73	4	14	13.0	27.1	21
117502	43	99	452	3.54	13	40	5.0	50.9	10
117503	28	77	453	6.39	7	22	78.0	34.8	8
117504	28	70	553	4.72	16	42	35.8	40.6	6
117505	49	191	233	3.53	30	95	92.0	27.9	<3
117506	55	49	657	4.26	15	12	13.7	16.2	5
117507	25	64	786	5.31	3	4	11.2	8.8	<3
117508	31	95	816	8.35	10	19	34.5	12.0	<3
117509	126	45	243	3.97	58	25	52.7	14.0	24
117510	70	91	324	4.82	50	65	123	27.0	<3
117511	13	95	135	1.16	5	9	43.5	43.7	<3
117512	16	84	115	2.11	29	99	44.5	11.7	<3
117513	29	79	102	2.79	33	81	75.3	12.4	<3
117514	23	108	124	2.82	40	139	58.4	9.5	4
117515	19	81	614	2.97	8	20	19.0	13.3	<3
117516	22	94	102	3.68	26	50	58.2	11.2	<3
117517	14	71	28	12.2	2	<1	5.6	0.9	<3
117518	12	117	73	1.40	4	8	59.0	8.8	<3
117519	7	48	67	5.76	2	2	9.4	1.3	17
117520	58	58	389	5.47	38	43	108	53.3	<3
117521	18	101	83	3.33	6	14	38.6	10.1	<3

SAMPLE	V PPM	CR PPM	MN PPM	FE %	CO PPM	NI PPM	CU PPM	ZN PPM	AS PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	2	1	2	0.01	1	1	0.5	0.5	3
117522	102	265	197	3.09	36	127	87.3	40.0	<3
117523	52	197	121	2.82	30	83	55.4	25.9	<3
117524	11	44	328	11.9	11	23	41.3	7.6	5
117525	63	955	140	3.76	55	579	116	27.1	<3
117526	31	125	153	3.72	9	20	45.8	209	<3
117527	32	118	213	2.34	8	15	10.8	46.8	4
117528	27	106	98	7.09	17	34	19.3	23.3	<3
117529	19	44	119	1.14	12	66	100	13.4	<3
117530	28	116	299	2.06	8	10	24.8	183	<3
117531	21	96	191	2.89	10	30	20.6	39.1	<3
117532	58	84	204	4.55	40	64	147	260	11
117533	67	95	176	5.12	36	93	391	162	27
117534	49	86	109	4.06	26	58	204	241	35
117535	53	98	169	5.18	36	93	318	179	31
117536	101	298	168	6.21	37	112	103	6360	296
117537	56	91	215	4.37	37	58	87.2	92.0	<3
117538	82	126	164	3.95	16	23	60.6	598	<3
117539	79	155	186	11.2	58	86	364	6050	49
117540	84	144	374	7.53	19	42	53.1	162	<3
117541	49	109	127	3.64	10	21	35.0	84.1	<3
117542	53	152	295	3.38	36	124	95.5	228	<3
117543	39	158	113	3.55	57	203	182	342	44
117544	24	51	335	13.8	5	9	17.8	22.6	<3
117545	46	42	382	3.14	13	15	85.6	19.3	<3
117546	67	297	446	3.74	16	60	60.0	87.6	13
117547	118	105	2570	5.82	24	15	15.5	189	<3
117548	116	112	541	8.60	90	60	16.5	47.3	96
117549	17	67	267	5.58	6	14	49.0	17.6	<3
117550	15	88	84	7.60	9	28	148	4.6	19
117551	132	203	123	4.96	34	69	63.8	28.0	<3
117552	10	70	24	7.46	3	2	5.0	1.1	17
117553	27	44	105	3.44	30	65	111	9.1	<3
117554	27	79	205	2.72	22	53	59.9	23.1	<3
117555	36	89	250	2.31	10	25	13.3	34.2	<3
117556	32	56	346	2.74	22	42	101	30.7	<3
117557	186	117	717	7.29	31	50	85.7	99.3	<3
117558	3	85	40	0.64	2	5	8.9	20.2	<3
117559	13	44	55	0.85	17	35	200	4.5	<3
117560	48	658	58	1.99	27	327	34.1	14.7	<3
117561	5	128	81	0.59	2	19	5.9	6.0	<3
117562	18	167	144	1.19	11	75	7.0	15.2	10
117563	63	78	244	4.81	39	57	104	64.1	<3
117564	87	40	367	2.14	10	14	22.9	16.0	<3
117565	29	59	287	2.42	14	20	826	17.6	<3
117566	33	47	361	3.52	14	27	927	20.5	<3
117567	35	58	297	2.01	33	19	237	13.2	<3
117568	25	43	228	2.05	25	20	172	21.4	<3
117569	25	73	84	4.54	43	60	386	10.4	<3
117570	8	106	110	1.17	4	9	27.4	12.3	<3
117571	16	116	160	2.65	4	5	150	13.4	<3
117572	29	41	302	2.11	24	22	108	122	<3
117601	55	171	186	5.57	14	34	60.0	48.5	<3
117602	16	132	173	8.94	10	22	184	16.3	<3
117603	16	119	98	10.1	9	25	514	16.6	<3
117604	27	68	452	3.71	22	30	136	18.8	<3
117605	24	68	768	4.44	37	90	631	22.1	<3
117606	143	174	209	6.07	14	27	122	186	4
117607	61	193	351	4.32	84	121	416	2780	66
117608	8	101	28	7.77	4	6	71.2	52.0	<3
117609	2	183	37	1.59	6	11	197	14.6	73
117610	23	130	95	3.34	14	20	430	190	98
117611	27	61	505	3.39	23	44	176	22.5	66
117612	6	74	27	5.18	3	6	15.2	1.9	290
117613	14	110	216	3.77	8	15	103	7.6	3
117614	13	516	585	3.78	121	1670	377	18.6	4
117615	54	128	164	6.83	38	98	310	12.4	<3
117616	62	144	367	3.12	23	64	93.0	36.7	105
117617	36	93	316	8.45	38	122	275	194	<3
117618	106	138	255	5.34	42	89	192	454	5
117619	44	275	165	9.67	23	131	136	2050	168
117620	42	101	287	20.1	285	377	466	2140	<3
117621	38	118	53	2.51	13	35	88.6	46.7	<3
117622	64	296	270	3.68	18	79	58.0	43.3	16

SAMPLE	V PPM	CR PPM	MN PPM	FE %	CO PPM	NI PPM	CU PPM	ZN PPM	AS PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	2	1	2	0.01	1	1	0.5	0.5	3
117623	14	98	100	9.90	24	23	63.4	35.3	3690
117624	18	125	98	7.24	6	11	31.9	24.0	274
117625	12	39	40	11.6	3	<1	5.7	2.4	9
117626	38	136	204	7.78	2	4	18.5	42.7	48
117627	83	125	127	12.0	11	3	40.2	27.3	22
117628	97	40	684	10.4	5	<1	85.5	17.6	<3
117629	35	134	284	4.90	4	11	80.4	15.9	<3
117630	40	67	353	5.21	13	14	80.1	12.0	<3
117631	46	75	268	4.85	13	13	55.5	13.6	<3
117632	36	141	84	6.21	3	9	49.9	11.9	19
117633	46	149	93	6.39	10	26	41.3	33.3	31
117634	24	124	80	3.12	16	36	32.0	18.4	216
117635	13	147	80	5.42	9	21	46.4	10.5	<3
C DCP CONTROL	25	233	484	2.86	461	627	63.0	78.0	458
C DCP CONTROL	25	233	487	2.87	466	633	64.3	79.4	455
C DCP CONTROL	26	240	510	2.98	488	661	67.0	81.8	487
) 117501	15	97	148	1.69	3	13	14.8	25.9	18
) 117513	27	71	94	2.71	33	79	76.1	10.9	<3
D 117525	58	890	128	3.35	53	561	113	25.7	<3
D 117537	54	88	206	4.38	37	57	88.8	89.4	<3
) 117547	118	101	2580	5.83	24	13	14.9	189	<3
) 117559	12	40	50	0.81	17	36	202	4.0	<3
) 117571	16	110	149	2.57	3	5	146	12.4	<3
D 117611	24	59	475	3.27	23	44	176	21.2	60
) 117621	39	122	55	2.60	13	36	92.5	48.4	4
) 117633	45	146	92	6.31	9	27	40.4	33.1	33

SAMPLE	SR PPM	Y PPM	ZR PPM	MO PPM	AG PPM	CD PPM	SN PPM	SB PPM	BA PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	0.5	0.5	0.5	1	0.2	1	10	5	1
117501	6.0	8.9	23.5	8	<.2	<1	<10	65	21
117502	5.8	2.2	2.6	5	<.2	<1	<10	65	41
117503	7.7	1.8	2.0	5	0.3	<1	<10	65	53
117504	3.4	2.3	1.9	4	0.3	<1	<10	65	13
117505	7.9	1.2	2.5	5	<.2	<1	<10	65	34
117506	20.5	7.9	9.3	3	<.2	<1	<10	65	12
117507	23.6	1.4	1.3	5	<.2	<1	<10	65	21
117508	10.7	0.9	<.5	6	0.3	<1	<10	65	25
117509	6.8	6.5	1.8	3	<.2	<1	<10	65	27
117510	7.6	2.5	1.2	4	0.7	<1	<10	65	7
117511	8.4	1.6	3.7	10	0.2	<1	<10	65	24
117512	47.5	0.6	<.5	6	<.2	<1	<10	65	4
117513	7.5	0.9	<.5	4	<.2	<1	<10	65	2
117514	53.6	0.7	<.5	7	0.3	<1	<10	65	4
117515	7.8	1.4	10.0	5	<.2	<1	<10	65	36
117516	20.3	0.8	<.5	6	0.4	<1	<10	65	22
117517	24.1	4.1	<.5	5	<.2	<1	<10	65	2
117518	13.0	1.4	3.1	12	<.2	<1	<10	65	50
117519	18.9	4.9	<.5	8	0.3	<1	<10	65	5
117520	4.0	3.3	0.6	4	<.2	<1	<10	65	9
117521	10.7	1.9	2.3	24	<.2	<1	<10	65	14
117522	8.4	3.0	<.5	4	<.2	<1	<10	65	18
117523	5.1	1.0	3.3	6	<.2	<1	<10	65	17
117524	2.5	1.5	<.5	3	0.5	<1	<10	65	<1
117525	1.9	0.8	<.5	2	<.2	<1	<10	9	<1
117526	6.9	1.4	8.1	9	0.4	<1	<10	65	40
117527	7.4	2.1	4.9	9	<.2	<1	<10	65	66
117528	7.8	1.5	5.2	8	0.2	<1	<10	65	18
117529	9.5	1.1	<.5	2	<.2	<1	<10	65	12
117530	5.9	6.2	8.4	10	<.2	<1	<10	65	24
117531	6.2	1.9	4.0	6	<.2	<1	<10	65	19
117532	5.8	3.4	0.6	4	2.6	<1	<10	65	11
117533	2.7	2.3	<.5	5	43.6	29	<10	41	7
117534	4.8	1.9	<.5	7	4.2	<1	<10	65	7
117535	2.8	2.3	<.5	7	45.6	19	<10	28	6
117536	2.6	1.2	<.5	10	45.7	110	<10	15	8
117537	5.0	2.0	<.5	4	2.2	<1	<10	65	10
117538	6.2	1.7	0.8	5	2.7	22	<10	65	11
117539	3.5	1.5	<.5	22	5.9	103	<10	65	8
117540	8.9	6.9	2.2	8	0.4	<1	<10	65	38
117541	4.4	2.3	2.1	8	<.2	<1	<10	65	43
117542	2.5	1.4	<.5	3	1.3	<1	<10	65	13

SAMPLE	SR PPM ICP 0.5	Y PPM ICP 0.5	ZR PPM ICP 0.5	MO PPM ICP 1	AG PPM ICP 0.2	CD PPM ICP 1	SN PPM ICP 10	SB PPM ICP 5	BA PPM ICP 1
117543	3.9	1.1	<.5	7	3.3	3	<10	<5	8
117544	10.2	2.0	<.5	3	0.5	<1	<10	<5	7
117545	3.1	3.6	0.6	3	<.2	<1	<10	<5	4
117546	15.8	5.2	11.2	6	1.6	<1	<10	5	19
117547	11.7	5.3	0.7	5	<.2	<1	<10	<5	94
117548	3.4	2.3	<.5	30	1.0	<1	<10	<5	17
117549	15.5	4.2	1.3	5	<.2	<1	<10	<5	59
117550	1.9	2.5	<.5	7	<.2	<1	<10	<5	9
117551	6.6	4.0	<.5	4	<.2	<1	<10	<5	173
117552	10.1	1.8	<.5	5	<.2	<1	<10	6	6
117553	7.8	1.9	<.5	2	0.4	<1	<10	<5	13
117554	13.2	2.0	<.5	5	<.2	<1	<10	<5	4
117555	7.2	2.2	3.0	6	<.2	<1	<10	<5	110
117556	18.7	1.9	0.5	3	<.2	<1	<10	<5	6
117557	10.6	5.0	1.9	2	0.7	<1	<10	<5	29
117558	2.5	2.0	6.8	8	<.2	<1	<10	<5	14
117559	31.1	2.0	<.5	3	<.2	<1	<10	<5	6
117560	1.3	<.5	<.5	1	<.2	<1	<10	7	1
117561	7.0	7.1	4.2	7	<.2	<1	<10	<5	13
117562	2.0	0.6	<.5	2	<.2	<1	<10	<5	5
117563	7.0	2.8	<.5	3	1.6	<1	<10	<5	17
117564	3.6	1.7	0.8	2	<.2	<1	<10	<5	34
117565	3.7	1.6	<.5	5	0.7	<1	<10	<5	9
117566	3.8	1.7	<.5	4	0.7	<1	<10	<5	7
117567	8.6	1.2	0.5	4	<.2	<1	<10	<5	13
117568	8.1	1.9	1.0	4	<.2	<1	<10	<5	7
117569	4.9	1.7	<.5	6	1.1	<1	<10	<5	8
117570	4.6	1.4	7.9	9	<.2	<1	<10	<5	13
117571	5.7	1.0	2.1	12	<.2	<1	<10	<5	33
117572	4.8	2.1	<.5	4	<.2	<1	<10	<5	8
117601	17.1	1.4	<.5	12	0.2	<1	<10	<5	86
117602	3.7	2.2	<.5	9	0.4	<1	<10	<5	43
117603	3.1	2.2	<.5	26	0.9	<1	<10	<5	36
117604	11.0	1.8	0.8	7	<.2	<1	<10	<5	26
117605	10.0	2.3	<.5	6	0.4	<1	<10	<5	7
117606	2.7	1.4	1.9	4	<.2	<1	<10	<5	58
117607	3.6	2.8	4.3	8	0.4	<1	<10	<5	21
117608	1.7	3.1	34.2	14	0.9	<1	<10	<5	12
117609	0.6	2.6	12.3	19	<.2	<1	<10	6	1
117610	3.7	2.4	7.7	14	0.3	<1	<10	<5	20
117611	4.8	3.2	0.5	5	<.2	<1	<10	<5	2
117612	35.5	1.2	<.5	6	<.2	<1	<10	<5	<1
117613	11.8	1.3	1.0	16	<.2	<1	<10	<5	9
117614	7.4	1.7	<.5	2	<.2	<1	<10	<5	2
117615	2.1	1.8	0.8	5	0.2	<1	<10	<5	11
117616	10.2	1.3	0.6	4	<.2	<1	<10	<5	18
117617	2.5	1.6	7.0	7	0.8	<1	<10	<5	9
117618	30.1	2.6	1.7	7	0.2	<1	<10	<5	36
117619	7.9	1.2	3.7	6	0.3	<1	<10	<5	27
117620	2.5	2.6	1.6	8	2.0	<1	<10	<5	10
117621	5.5	2.3	3.3	7	<.2	<1	<10	<5	22
117622	24.9	4.3	5.4	7	<.2	<1	<10	<5	183
117623	10.7	3.3	1.8	9	0.3	<1	<10	8	8
117624	17.7	2.3	1.0	9	0.4	<1	<10	6	22
117625	3.7	3.1	<.5	2	<.2	<1	<10	8	8
117626	2.3	1.3	2.5	13	<.2	<1	<10	6	14
117627	9.1	1.8	3.0	5	0.3	<1	<10	<5	78
117628	13.3	2.9	0.9	2	<.2	<1	<10	<5	1
117629	22.7	1.3	2.3	6	<.2	<1	<10	<5	49
117630	8.6	2.5	1.5	5	0.2	<1	<10	<5	9
117631	5.9	2.5	1.1	6	<.2	<1	<10	<5	48
117632	1.5	1.3	3.1	13	0.2	<1	<10	7	22
117633	4.3	1.9	2.2	9	<.2	<1	<10	<5	60
117634	6.1	1.6	2.8	10	<.2	<1	<10	6	33
117635	10.4	1.6	3.4	13	0.2	<1	<10	<5	2
C DCP CONTROL	33.3	7.3	4.5	<1	4.0	<1	<10	7	113
C DCP CONTROL	33.1	7.4	5.1	1	4.1	<1	<10	6	115
C DCP CONTROL	34.1	7.5	4.1	1	4.8	<1	<10	5	121
D 117501	5.4	8.3	21.6	8	<.2	<1	<10	<5	26
D 117513	6.7	0.8	<.5	4	<.2	<1	<10	<5	2
D 117525	1.9	0.7	<.5	1	<.2	<1	<10	7	<1
D 117537	4.3	1.7	<.5	3	2.2	<1	<10	<5	9
D 117547	11.8	5.3	1.0	5	<.2	<1	<10	<5	95

SAMPLE	SR PPM	Y PPM	ZR PPM	MO PPM	AG PPM	CD PPM	SN PPM	SB PPM	BA PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	0.5	0.5	0.5	1	0.2	1	10	5	1
D 117559	27.5	1.8	<.5	2	<.2	<1	<10	<5	5
D 117571	5.8	0.9	2.1	12	0.3	<1	<10	<5	33
D 117611	4.4	3.1	0.9	5	<.2	<1	<10	<5	2
D 117621	5.7	2.3	2.9	7	<.2	<1	<10	<5	23
D 117633	4.3	1.8	1.8	9	<.2	<1	<10	<5	58

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM
	ICP	ICP	ICP	ICP
	0.5	10	2	5
117501	15.2	33	12	<5
117502	6.3	<10	3	<5
117503	4.8	20	6	<5
117504	11.7	<10	3	<5
117505	4.0	<10	8	<5
117506	53.5	<10	<2	<5
117507	4.6	<10	3	<5
117508	1.4	<10	6	<5
117509	4.0	<10	3	<5
117510	2.1	<10	3	<5
117511	1.8	<10	6	<5
117512	1.3	43	<2	<5
117513	0.9	<10	<2	<5
117514	2.0	<10	<2	<5
117515	8.2	<10	3	<5
117516	4.7	<10	<2	<5
117517	0.7	<10	7	7
117518	2.5	<10	2	<5
117519	2.3	<10	5	<5
117520	3.3	<10	8	<5
117521	10.5	<10	6	<5
117522	5.1	<10	6	<5
117523	3.8	<10	2	<5
117524	3.9	<10	6	5
117525	<.5	<10	4	<5
117526	7.5	<10	45	<5
117527	14.2	<10	6	<5
117528	5.3	<10	8	<5
117529	<.5	<10	3	<5
117530	17.4	<10	182	<5
117531	11.0	<10	12	<5
117532	2.8	<10	100	<5
117533	<.5	15	18400	<5
117534	0.5	<10	407	<5
117535	<.5	<10	11500	<5
117536	1.2	<10	4470	<5
117537	<.5	<10	160	<5
117538	1.0	<10	96	<5
117539	<.5	<10	900	7
117540	10.4	<10	63	<5
117541	6.6	<10	17	<5
117542	<.5	<10	35	<5
117543	1.3	<10	484	<5
117544	2.3	<10	25	12
117545	4.4	<10	10	<5
117546	36.2	<10	34	<5
117547	3.7	<10	10	<5
117548	0.8	<10	41	9
117549	11.3	<10	6	<5
117550	8.2	<10	6	<5
117551	4.3	<10	<2	<5
117552	1.1	<10	5	5
117553	1.2	<10	6	<5
117554	<.5	<10	6	<5
117555	9.6	<10	3	<5
117556	<.5	<10	2	<5
117557	3.8	<10	9	<5
117558	1.9	<10	26	<5
117559	1.3	<10	<2	<5
117560	<.5	<10	<2	<5
117561	24.7	<10	5	<5
117562	<.5	<10	<2	<5
117563	1.0	19	6	<5

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM
	ICP 0.5	ICP 10	ICP 2	ICP 5
117564	0.6	<10	2	5
117565	<.5	<10	2	5
117566	<.5	<10	5	5
117567	<.5	<10	2	5
117568	3.7	<10	2	5
117569	0.5	<10	8	5
117570	10.2	<10	6	5
117571	4.4	<10	3	5
117572	2.4	<10	35	5
117601	4.1	<10	3	7
117602	5.9	<10	7	6
117603	4.2	170	6	5
117604	18.5	<10	4	5
117605	20.4	<10	2	5
117606	3.3	<10	5	5
117607	6.2	<10	32	5
117608	8.0	<10	47	9
117609	10.8	<10	4	5
117610	5.5	<10	7	5
117611	4.1	27	2	5
117612	1.2	<10	2	5
117613	7.3	<10	7	5
117614	<.5	<10	2	5
117615	2.0	<10	4	5
117616	0.8	<10	2	5
117617	2.1	<10	12	5
117618	4.2	<10	10	5
117619	1.7	<10	14	5
117620	6.5	<10	23	8
117621	5.7	<10	5	5
117622	10.9	<10	5	5
117623	3.7	<10	7	10
117624	9.1	<10	4	6
117625	0.8	<10	8	7
117626	3.6	<10	9	5
117627	13.8	<10	7	10
117628	1.8	<10	5	5
117629	3.9	<10	6	5
117630	3.0	<10	5	5
117631	2.7	<10	5	5
117632	1.5	<10	7	7
117633	8.8	<10	5	6
117634	4.7	<10	2	5
117635	5.5	<10	6	5
C DCP CONTROL	9.2	<10	23	5
C DCP CONTROL	9.0	<10	22	5
C DCP CONTROL	9.5	<10	25	5
D 117501	14.1	33	10	5
D 117513	1.3	<10	2	5
D 117525	<.5	<10	2	5
D 117537	<.5	<10	157	5
D 117547	3.6	<10	10	5
D 117559	1.4	<10	2	5
D 117571	4.0	<10	3	5
D 117611	4.4	31	3	5
D 117621	5.3	<10	5	5
D 117633	8.6	<10	5	6

SAMPLE	BE PPM ICP 0.5	NA % ICP 0.01	MG % ICP 0.01	AL % ICP 0.01	P % ICP 0.01	K % ICP 0.01	CA % ICP 0.01	SC PPM ICP 0.5	TI % ICP 0.01
117651	<.5	0.13	0.31	1.02	0.06	0.06	0.89	2.2	0.04
117652	<.5	0.05	0.26	0.55	0.04	0.03	0.67	2.7	0.06
117653	<.5	0.12	0.32	0.79	0.06	0.06	0.79	2.5	0.04
117654	<.5	0.06	0.70	0.99	0.03	0.17	0.23	1.2	0.06
117655	<.5	0.09	0.59	1.06	0.04	0.46	0.50	2.6	0.11
117656	<.5	0.08	0.77	1.13	0.04	0.58	0.20	3.2	0.13
117657	<.5	0.07	0.78	0.88	0.06	0.21	0.31	3.1	0.10
117658	<.5	0.10	0.61	0.92	0.03	0.09	0.40	1.6	0.04
117659	<.5	0.10	1.01	1.23	0.03	0.15	0.67	2.6	0.06
117660	<.5	0.03	0.06	0.10	0.17	0.03	0.70	<.5	<.01
117661	0.6	0.02	0.03	0.03	0.10	0.02	0.15	<.5	<.01
117662	0.6	0.02	0.07	0.11	0.14	0.03	0.36	<.5	<.01
117663	0.5	0.02	0.04	0.04	0.14	0.04	0.22	<.5	<.01
117664	0.7	0.02	0.15	0.35	0.09	0.08	0.31	<.5	<.01
117665	0.6	0.02	0.03	0.02	0.15	<.01	0.42	<.5	<.01
117666	<.5	0.06	0.29	0.68	0.03	0.18	0.05	12.4	0.07
117667	<.5	0.06	0.45	0.81	0.04	0.13	0.10	6.2	0.06
117668	<.5	0.04	0.10	0.35	0.01	0.18	0.07	1.0	0.04
117669	<.5	0.03	0.16	0.18	<.01	0.09	0.23	<.5	0.02
117670	<.5	0.12	0.28	0.54	0.05	0.14	0.38	1.5	0.03
117671	<.5	0.07	0.22	0.46	0.05	0.12	0.22	1.4	0.07
117672	<.5	0.04	0.18	0.41	0.03	0.11	0.26	<.5	0.03
117673	<.5	0.02	0.10	0.06	0.01	0.02	0.24	<.5	<.01
117674	<.5	0.03	0.08	0.11	0.01	0.02	0.14	<.5	0.01
117675	<.5	0.07	0.19	0.45	0.03	0.12	0.37	2.6	0.08
117676	<.5	0.02	0.13	0.13	0.01	0.01	0.16	<.5	<.01
117677	<.5	0.07	0.14	0.42	0.04	0.14	0.28	1.7	0.08
117678	<.5	0.07	0.26	0.59	0.04	0.11	0.30	2.2	0.13
117679	<.5	0.05	0.22	0.49	0.05	0.13	0.50	2.0	0.08
117680	<.5	0.06	0.28	0.71	0.07	0.15	0.48	3.3	0.10
117681	<.5	0.09	0.11	0.36	0.04	0.15	0.27	2.8	0.13
117682	<.5	0.07	0.13	0.43	0.04	0.14	0.24	1.7	0.13
117683	<.5	0.09	0.15	0.52	0.07	0.13	0.43	3.3	0.09
117684	<.5	0.08	0.17	0.53	0.06	0.14	0.34	2.5	0.09
117685	<.5	0.07	0.43	0.83	0.05	0.15	0.23	3.2	0.16
117686	<.5	0.07	0.22	0.76	0.07	0.15	0.43	3.0	0.13
117687	<.5	0.09	0.19	0.50	0.04	0.14	0.29	2.6	0.11
117688	<.5	0.07	0.15	0.49	0.04	0.15	0.46	2.8	0.08
117689	<.5	0.07	0.19	0.54	0.04	0.14	0.40	3.0	0.09
117690	<.5	0.07	0.59	1.09	0.08	0.16	0.37	2.3	0.08
117691	<.5	0.08	0.73	1.27	0.06	0.50	0.21	2.0	0.12
117692	<.5	0.08	0.31	0.65	0.04	0.13	0.35	3.0	0.09
117693	<.5	0.09	0.22	0.48	0.09	0.13	0.38	3.4	0.09
117694	<.5	0.09	0.23	0.48	0.04	0.10	0.45	4.2	0.08
117695	0.7	0.08	0.49	0.95	0.07	0.25	0.36	2.5	0.10
117696	<.5	0.10	0.20	0.48	0.05	0.19	0.23	2.4	0.09
117697	<.5	0.08	0.15	0.38	0.05	0.16	0.19	3.7	0.06
117698	<.5	0.08	0.19	0.51	0.04	0.09	0.27	3.1	0.09
117699	<.5	0.07	0.28	0.51	0.03	0.11	0.23	4.2	0.08
117700	<.5	0.06	0.30	0.56	0.03	0.08	0.52	2.5	0.09
117701	<.5	0.05	0.07	0.26	0.03	0.08	0.11	<.5	0.07
117702	<.5	0.05	0.35	0.72	0.03	0.14	0.25	1.8	0.06
117703	<.5	0.09	0.22	0.40	0.07	0.07	0.40	1.7	0.08
117704	<.5	0.05	0.18	0.38	0.12	0.14	0.37	0.6	0.04
117705	<.5	0.02	0.03	0.03	0.15	0.01	0.27	<.5	<.01
117706	0.6	0.02	0.26	0.48	0.15	0.05	0.39	<.5	<.01
117707	<.5	0.02	0.05	0.05	0.14	0.03	0.34	<.5	<.01
117708	0.9	0.02	0.02	0.02	0.09	0.01	0.25	<.5	<.01
117709	<.5	0.02	0.03	0.04	0.12	0.03	0.21	<.5	<.01
117710	<.5	0.03	0.03	0.03	0.11	0.04	0.19	<.5	<.01
117711	<.5	0.07	0.38	0.88	0.08	0.15	0.59	1.9	0.07
117712	<.5	0.02	0.03	0.02	0.06	0.01	0.14	<.5	<.01
117713	<.5	0.02	0.08	0.11	0.08	0.11	0.17	<.5	<.01
117714	<.5	0.02	0.09	0.14	0.09	0.14	0.17	<.5	<.01
117715	0.5	0.02	0.04	0.02	0.04	0.02	0.09	<.5	<.01
117716	<.5	0.02	0.05	0.04	0.09	0.05	0.13	<.5	<.01
117717	<.5	0.02	0.07	0.08	0.08	0.08	0.17	<.5	<.01
117718	<.5	0.03	0.08	0.09	0.01	0.05	0.14	<.5	<.01
117719	<.5	0.02	0.10	0.11	0.01	0.05	0.16	<.5	0.01
117720	0.8	0.03	0.17	0.45	0.04	0.15	0.07	0.9	0.04
117721	<.5	0.05	0.07	0.23	0.03	0.09	0.22	1.4	0.07
117722	<.5	0.07	0.18	0.47	0.03	0.10	0.47	2.6	0.08
117723	<.5	0.02	0.05	0.02	<.01	<.01	0.11	<.5	<.01

SAMPLE	BE PPM	NA %	MG %	AL %	P %	K %	CA %	SC PPM	TI %
	ICP 0.5	ICP 0.01	ICP 0.01	ICP 0.01	ICP 0.01	ICP 0.01	ICP 0.01	ICP 0.5	ICP 0.01
117724	<.5	0.02	0.03	0.02	0.19	<.01	0.43	<.5	<.01
117725	0.7	0.03	0.04	0.07	0.25	0.02	0.61	<.5	<.01
117726	<.5	0.02	0.03	0.01	0.08	<.01	0.12	<.5	<.01
117727	0.5	0.02	0.03	0.06	0.15	0.03	0.30	<.5	<.01
117728	<.5	0.08	0.12	0.30	0.04	0.15	0.12	3.0	0.10
117729	<.5	0.09	0.24	0.62	0.06	0.13	0.59	2.9	0.08
117730	<.5	0.06	0.12	0.36	0.03	0.07	0.40	1.7	0.08
117731	<.5	0.07	0.29	0.58	0.05	0.11	0.63	2.3	0.11
117732	<.5	0.06	0.14	0.41	0.06	0.05	0.49	1.0	0.07
117733	<.5	0.04	0.38	0.56	0.10	0.16	0.40	1.5	0.04
117734	<.5	0.03	0.13	0.18	0.13	0.04	0.43	<.5	<.01
117735	<.5	0.03	0.11	0.19	0.11	0.03	0.31	<.5	0.01
117736	<.5	0.04	0.11	0.29	0.10	0.10	0.31	<.5	0.01
117737	<.5	0.05	0.31	0.85	0.03	0.34	0.17	2.6	0.08
117738	<.5	0.06	0.14	0.28	0.14	0.09	0.23	<.5	0.04
117739	<.5	0.04	0.24	0.33	0.06	0.06	0.16	<.5	0.02
117740	0.6	0.05	0.07	0.42	0.05	0.02	0.47	0.6	0.04
117741	<.5	0.06	0.30	0.51	0.10	0.05	0.58	1.7	0.02
117742	<.5	0.02	0.07	0.10	0.11	0.05	0.19	<.5	<.01
117743	<.5	0.02	0.07	0.11	0.11	0.07	0.17	<.5	<.01
117744	<.5	0.03	0.16	0.52	0.06	0.10	0.32	<.5	0.04
117745	0.7	0.02	0.06	0.05	0.12	0.05	0.36	<.5	<.01
117746	<.5	0.02	0.03	0.04	0.17	<.01	0.41	<.5	<.01
117747	<.5	0.02	0.02	0.02	0.17	0.01	0.44	<.5	<.01
117748	<.5	0.03	0.23	0.53	0.10	0.16	0.26	<.5	0.02
117749	<.5	0.02	0.23	0.26	0.07	0.05	0.30	<.5	<.01
117750	<.5	0.02	0.27	0.23	0.07	0.02	0.42	<.5	<.01
117751	<.5	0.02	0.30	0.12	0.12	0.04	0.27	<.5	<.01
117752	<.5	0.06	1.25	1.46	0.05	0.22	0.20	4.6	0.11
117753	<.5	0.02	2.69	1.59	<.01	<.01	0.08	<.5	0.01
117754	<.5	0.02	3.49	2.18	<.01	0.01	0.07	0.6	0.01
117755	<.5	0.06	1.00	1.34	0.06	0.82	0.16	3.4	0.09
117756	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
117801	1.8	0.05	5.66	4.22	0.20	1.82	0.63	6.8	0.20
117802	<.5	0.02	0.12	0.30	0.01	0.03	0.33	<.5	0.02
117803	<.5	0.05	0.40	0.93	0.02	0.06	0.90	2.5	0.03
117804	<.5	0.05	0.37	0.68	<.01	0.05	0.65	1.2	0.04
117805	<.5	0.02	0.14	0.27	<.01	0.02	0.24	<.5	0.02
117806	<.5	0.02	0.01	0.21	<.01	0.15	0.03	<.5	<.01
117807	<.5	0.03	0.13	0.41	0.02	0.04	0.55	<.5	0.03
117808	<.5	0.02	0.09	0.05	0.04	<.01	0.20	<.5	<.01
117809	<.5	0.02	0.09	0.04	0.05	<.01	0.22	<.5	<.01
117810	<.5	0.02	0.09	0.04	0.05	<.01	0.32	<.5	<.01
117811	<.5	0.02	0.09	0.07	0.03	<.01	0.23	<.5	<.01
117812	<.5	0.04	0.55	1.19	0.04	0.08	0.65	2.3	0.06
117813	1.5	0.03	4.99	4.31	0.03	1.03	0.15	16.4	0.13
117814	<.5	0.02	0.14	0.10	0.02	<.01	0.12	<.5	<.01
117815	<.5	0.03	0.85	1.01	<.01	0.48	0.02	9.5	0.05
117816	<.5	0.02	0.04	0.04	0.07	0.01	0.16	<.5	<.01
117817	<.5	0.08	0.73	0.69	0.02	0.03	0.11	1.4	0.03
117818	<.5	0.02	0.84	0.56	0.01	0.08	0.19	0.6	0.03
117819	<.5	0.10	0.02	0.19	<.01	0.05	0.02	0.7	0.02
117820	<.5	0.03	1.92	2.14	0.02	0.04	0.34	3.1	0.13
117821	<.5	0.05	0.86	1.10	0.02	0.08	0.17	5.6	0.08
117822	<.5	0.02	0.02	0.03	<.01	<.01	0.01	<.5	<.01
117823	<.5	0.03	0.42	0.92	0.06	0.41	0.35	2.2	0.07
117824	0.8	0.05	0.25	0.47	0.03	0.04	0.39	1.3	0.03
117825	<.5	0.05	2.18	2.04	0.02	0.41	0.35	1.7	0.13
117826	<.5	0.02	5.94	0.61	<.01	<.01	0.29	4.1	<.01
117827	<.5	0.04	0.50	0.74	0.02	0.27	0.31	1.6	0.07
117828	<.5	0.06	0.81	1.43	0.11	0.39	0.88	4.6	0.16
117829	<.5	0.02	7.49	0.56	<.01	<.01	0.03	5.5	<.01
117830	<.5	0.03	0.41	0.65	0.03	0.11	0.36	0.5	0.02
117831	<.5	0.06	0.80	1.17	0.09	0.20	0.78	3.2	0.09
117832	<.5	0.07	1.76	1.84	0.08	0.98	0.36	9.9	0.16
117833	<.5	0.04	1.17	1.74	0.03	0.37	1.02	6.6	0.08
117834	<.5	0.04	0.73	0.75	0.02	0.17	0.06	0.5	0.06
117835	<.5	0.05	2.01	1.99	0.03	0.34	0.08	3.8	0.07
117836	<.5	0.06	0.70	0.90	0.06	0.34	0.35	6.3	0.09
117837	<.5	0.05	0.80	1.04	0.04	0.09	0.38	2.7	0.07
117838	<.5	0.05	0.93	1.25	0.02	0.11	0.72	2.5	0.08
117839	<.5	0.06	0.64	1.42	0.05	0.04	0.34	4.2	0.04
C DCP CONTROL	<.5	0.06	0.80	0.70	0.12	0.09	0.83	1.6	0.04

SAMPLE	BE PPM ICP 0.5	NA % ICP 0.01	MG % ICP 0.01	AL % ICP 0.01	P % ICP 0.01	K % ICP 0.01	CA % ICP 0.01	SC PPM ICP 0.5	TI % ICP 0.01
C DCP CONTROL	<.5	0.06	0.85	0.75	0.13	0.10	0.90	1.8	0.04
C DCP CONTROL	<.5	0.06	0.83	0.73	0.13	0.09	0.87	1.7	0.04
) DCP CONTROL	<.5	0.06	0.79	0.68	0.12	0.08	0.82	1.5	0.04
) 117651	<.5	0.12	0.31	1.01	0.06	0.05	0.91	2.3	0.04
D 117663	<.5	0.02	0.03	0.04	0.13	0.03	0.20	<.5	<.01
D 117675	<.5	0.07	0.19	0.46	0.03	0.11	0.39	2.8	0.08
) 117687	<.5	0.08	0.19	0.50	0.04	0.14	0.30	2.7	0.13
) 117697	<.5	0.07	0.15	0.38	0.05	0.15	0.20	3.9	0.08
) 117709	<.5	0.02	0.02	0.04	0.12	0.03	0.19	<.5	<.01
D 117721	<.5	0.06	0.12	0.32	0.03	0.11	0.26	2.2	0.09
D 117733	<.5	0.03	0.37	0.54	0.10	0.16	0.37	1.4	0.04
) 117743	<.5	0.02	0.07	0.10	0.11	0.07	0.15	<.5	<.01
) 117755	<.5	0.05	0.98	1.29	0.06	0.80	0.15	3.4	0.08
D 117811	<.5	0.02	0.11	0.08	0.03	<.01	0.26	<.5	<.01
D 117823	<.5	0.04	0.43	0.99	0.06	0.40	0.41	2.6	0.06
) 117833	<.5	0.04	1.31	1.91	0.03	0.40	1.11	7.3	0.09

SAMPLE	V PPM ICP 2	CR PPM ICP 1	MN PPM ICP 2	FE % ICP 0.01	CO PPM ICP 1	NI PPM ICP 1	CU PPM ICP 0.5	ZN PPM ICP 0.5	AS PPM ICP 3
117651	22	94	141	1.99	21	52	76.5	11.5	15
117652	31	97	552	3.34	13	21	205	15.1	7
117653	26	108	147	2.00	25	57	57.2	11.2	1920
117654	40	53	264	2.29	8	10	31.8	30.8	12
117655	53	71	254	3.90	11	15	75.9	27.6	<3
117656	74	87	200	10.1	28	20	177	41.2	<3
117657	53	89	179	3.32	22	43	38.9	32.9	<3
117658	39	77	108	4.49	30	46	85.2	13.3	<3
117659	41	92	206	3.04	29	101	57.7	27.4	<3
117660	8	97	98	5.80	2	9	53.6	3.4	<3
117661	9	62	34	7.40	<1	2	7.3	4.0	128
117662	4	50	49	3.44	<1	5	11.7	5.6	40
117663	4	37	30	3.57	<1	2	9.1	25.9	17
117664	8	49	105	5.44	1	9	22.0	8.6	55
117665	3	26	29	2.51	<1	4	5.6	4.0	5
117666	63	182	335	8.31	44	71	152	740	<3
117667	70	125	401	8.01	25	40	64.1	345	<3
117668	19	156	99	3.74	3	10	33.5	18.6	<3
117669	8	74	554	3.72	9	19	94.7	19.8	<3
117670	20	70	223	3.73	3	16	27.3	9.5	<3
117671	23	73	334	3.71	8	25	45.9	9.2	<3
117672	7	61	748	4.74	4	8	39.9	12.7	<3
117673	6	19	355	3.15	4	2	39.5	7.6	<3
117674	9	121	165	6.10	38	25	148	5.3	<3
117675	32	34	256	3.27	16	27	57.4	8.3	<3
117676	11	126	228	10.9	73	56	317	7.9	<3
117677	38	80	167	4.35	10	13	60.4	9.7	<3
117678	64	103	330	7.14	30	28	77.1	20.1	<3
117679	31	118	313	3.06	5	10	21.3	19.2	<3
117680	66	57	374	4.49	18	32	54.2	26.7	<3
117681	49	107	232	4.81	5	9	45.7	9.5	<3
117682	48	63	214	8.07	5	7	71.5	10.0	<3
117683	46	60	278	4.24	21	24	120	11.1	<3
117684	53	50	266	6.79	19	27	79.9	10.5	<3
117685	90	60	332	4.14	2	6	27.7	9.8	<3
117686	60	58	331	6.37	36	32	78.8	7.7	<3
117687	48	48	256	4.09	13	16	65.6	7.1	<3
117688	45	63	203	3.45	19	27	66.1	12.2	<3
117689	43	46	204	2.75	19	27	50.9	20.9	<3
117690	79	42	503	5.76	23	30	110	20.7	<3
117691	65	86	468	4.96	7	22	51.7	37.2	<3
117692	47	52	347	4.21	22	35	88.8	10.8	<3
117693	59	67	255	4.19	10	13	85.6	13.7	<3
117694	45	43	230	2.76	17	29	64.9	14.5	<3
117695	38	98	310	3.77	3	11	23.2	48.3	<3
117696	42	65	193	6.22	14	21	61.3	24.5	<3
117697	49	76	136	4.39	8	18	58.6	20.9	<3
117698	44	44	177	3.89	12	18	50.1	16.2	<3
117699	58	51	198	2.55	4	12	32.5	10.5	<3
117700	46	61	207	2.86	9	18	54.3	11.4	<3
117701	26	117	814	10.6	15	27	119	20.0	<3
117702	34	119	501	6.38	15	48	62.4	1010	<3

SAMPLE	V PPM ICP 2	CR PPM ICP 1	MN PPM ICP 2	FE % ICP 0.01	CO PPM ICP 1	NI PPM ICP 1	CU PPM ICP 0.5	ZN PPM ICP 0.5	AS PPM ICP 3
117703	36	55	278	4.78	14	14	65.7	14.3	<3
117704	22	155	128	6.81	8	21	39.3	23.9	<3
117705	4	44	15	2.51	<1	4	5.1	1.9	12
117706	6	104	50	4.36	5	21	21.4	5.3	22
117707	4	104	25	2.94	2	14	14.6	1.6	9
117708	4	119	28	3.09	<1	10	11.5	1.6	9
117709	4	58	14	3.17	<1	3	5.9	1.4	188
117710	4	62	18	3.21	<1	2	4.3	1.7	65
117711	28	118	329	3.85	6	19	31.1	16.8	<3
117712	14	87	26	12.8	<1	5	6.3	1.4	<3
117713	12	98	40	9.14	<1	5	6.8	2.4	<3
117714	16	94	36	8.58	<1	5	12.0	3.0	<3
117715	11	108	41	8.89	<1	4	5.2	1.4	<3
117716	12	71	22	10.4	<1	1	15.7	5.2	<3
117717	11	68	23	9.45	<1	4	7.3	1.8	<3
117718	9	24	354	5.57	<1	1	17.6	5.4	<3
117719	14	22	518	7.55	7	6	49.3	10.9	<3
117720	28	168	136	9.33	6	17	60.1	33.9	62
117721	29	31	110	4.25	4	8	103	3.6	<3
117722	31	61	287	3.17	12	15	93.7	6.2	<3
117723	4	51	187	2.76	7	5	62.8	3.2	<3
117724	3	79	42	1.92	<1	5	8.5	30.3	20
117725	7	68	60	6.68	3	11	34.2	4.2	<3
117726	4	97	35	2.91	<1	5	9.1	3.2	23
117727	6	66	29	3.61	<1	4	10.8	3.2	257
117728	41	126	50	5.40	14	15	209	17.4	<3
117729	43	89	487	3.76	5	10	77.2	26.5	<3
117730	24	104	489	3.33	3	7	83.4	19.5	<3
117731	41	52	500	3.35	10	15	60.5	23.2	<3
117732	18	57	447	6.19	<1	5	54.7	7.6	<3
117733	20	95	113	3.84	11	156	34.4	13.1	<3
117734	6	234	154	4.06	2	14	24.9	8.9	5
117735	9	135	86	4.85	<1	7	15.7	5.6	4
117736	11	136	96	5.88	6	19	40.3	8.9	<3
117737	43	86	124	6.69	1	4	30.6	13.6	<3
117738	17	130	69	7.27	<1	4	25.2	7.5	<3
117739	22	174	49	9.58	25	101	131	6.3	6
117740	14	135	40	5.43	21	85	128	3.4	<3
117741	20	129	126	3.87	13	50	74.3	10.2	48
117742	14	102	38	13.6	<1	3	7.3	2.0	<3
117743	14	82	30	11.8	<1	2	5.2	1.5	<3
117744	16	132	98	6.63	4	15	54.3	5.1	3
117745	8	63	96	6.13	<1	3	11.5	1.8	4
117746	5	65	29	3.63	3	12	28.5	2.6	5
117747	3	20	21	2.28	<1	3	7.9	1.1	3
117748	24	83	471	10.7	5	9	90.2	6.3	<3
117749	23	63	305	18.8	2	4	8.9	8.9	<3
117750	18	87	174	18.4	1	2	7.3	5.3	<3
117751	30	44	360	25.7	1	<1	7.3	12.3	<3
117752	68	311	347	3.47	7	29	44.7	28.9	<3
117753	49	1040	187	2.24	17	268	36.8	22.5	<3
117754	59	1300	211	2.90	20	413	53.5	29.9	<3
117755	32	114	237	11.2	5	23	18.3	21.7	<3
117756	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS	SMP MISS
117801	130	101	442	5.99	33	43	932	119	<3
117802	21	79	95	19.2	357	1770	1950	13.7	<3
117803	37	48	242	5.90	86	379	1570	19.7	<3
117804	32	74	321	13.3	413	1350	2510	26.6	<3
117805	29	43	100	26.9	413	2390	5360	43.0	<3
117806	<2	143	20	0.42	5	33	55.0	1.5	<3
117807	17	32	113	10.2	163	1090	1730	21.3	<3
117808	16	91	95	13.0	74	109	2180	691	<3
117809	21	72	69	22.0	172	219	1910	>10000	<3
117810	9	81	106	9.36	153	159	14100	379	<3
117811	7	70	96	6.60	72	157	767	659	<3
117812	50	86	543	18.9	34	206	657	771	98
117813	176	241	146	5.56	32	179	91.3	66.2	106
117814	12	91	57	11.8	189	728	5050	114	<3
117815	67	883	100	1.26	60	722	144	21.6	474
117816	9	136	42	7.84	3	15	64.6	3.9	31
117817	67	128	108	1.71	9	29	110	21.7	<3
117818	19	101	121	6.21	25	72	1490	286	<3
117819	5	112	23	1.00	<1	5	76.9	3.5	<3

SAMPLE	V PPM ICP 2	CR PPM ICP 1	MN PPM ICP 2	FE % ICP 0.01	CO PPM ICP 1	NI PPM ICP 1	CU PPM ICP 0.5	ZN PPM ICP 0.5	AS PPM ICP 3
117820	91	171	370	6.85	45	106	319	121	<3
117821	59	148	396	6.54	52	233	307	667	22
117822	<2	238	30	0.35	<1	12	13.0	6.1	<3
117823	49	91	86	3.65	10	21	11.8	23.0	42
117824	18	75	98	3.11	39	98	283	18.2	544
117825	86	159	236	4.41	33	75	91.7	71.9	<3
117826	24	770	437	3.57	84	1470	26.1	44.5	1920
117827	34	172	431	3.83	39	195	123	14.9	649
117828	112	77	418	4.89	33	50	88.4	96.8	6
117829	24	774	329	3.41	62	875	6.2	27.9	5
117830	25	110	269	11.7	28	53	131	94.5	<3
117831	27	60	312	2.48	7	11	11.8	42.5	<3
117832	100	125	598	3.66	17	50	60.1	51.8	<3
117833	60	95	283	2.97	27	78	79.0	33.0	<3
117834	51	120	103	25.8	82	59	53.9	307	<3
117835	51	96	194	6.74	11	60	80.4	132	<3
117836	70	125	340	2.08	12	27	26.4	41.5	<3
117837	50	100	385	10.9	98	95	246	98.0	<3
117838	53	118	268	3.49	35	98	105	60.4	<3
117839	147	61	1080	6.32	15	16	56.0	62.9	17
C DCP CONTROL	27	260	519	3.00	493	674	67.0	83.1	488
C DCP CONTROL	29	301	548	3.24	522	713	70.8	88.1	521
C DCP CONTROL	28	270	531	3.10	502	689	69.1	86.4	503
C DCP CONTROL	26	257	508	2.96	486	667	66.0	82.6	487
D 117651	22	94	141	1.98	22	53	76.9	11.5	9
D 117663	4	38	28	3.43	<1	3	8.5	25.5	14
D 117675	33	34	265	3.33	18	27	58.3	8.6	<3
D 117687	50	38	265	4.27	15	15	68.5	7.0	<3
D 117697	51	76	143	4.56	8	20	60.7	21.0	<3
D 117709	4	62	13	3.00	<1	4	5.7	1.3	166
D 117721	36	37	134	4.56	4	9	107	5.3	<3
D 117733	20	95	106	3.87	10	159	35.1	12.7	5
D 117743	11	71	26	10.7	<1	2	4.5	1.0	<3
D 117755	28	109	228	10.1	4	22	17.3	21.3	<3
D 117811	7	70	104	6.26	68	148	717	632	<3
D 117823	53	92	110	3.79	10	21	11.6	23.8	33
D 117833	67	105	318	3.36	30	93	87.1	37.9	<3

SAMPLE	SR PPM ICP 0.5	Y PPM ICP 0.5	ZR PPM ICP 0.5	MO PPM ICP 1	AG PPM ICP 0.2	CD PPM ICP 1	SN PPM ICP 10	SB PPM ICP 5	BA PPM ICP 1
117651	21.3	2.3	1.5	6	<.2	<1	<10	<5	17
117652	5.8	2.6	1.6	8	0.5	<1	<10	<5	5
117653	11.0	2.0	1.5	6	0.2	<1	<10	<5	8
117654	3.9	1.5	1.6	5	<.2	<1	<10	<5	36
117655	8.6	2.1	3.0	6	0.3	<1	<10	<5	123
117656	7.2	2.4	4.0	10	1.6	<1	<10	<5	129
117657	8.7	1.7	1.5	3	<.2	<1	<10	<5	43
117658	13.2	0.9	<.5	4	0.3	<1	<10	<5	13
117659	8.3	1.4	1.2	4	<.2	<1	<10	<5	47
117660	121	5.1	1.4	9	<.2	<1	<10	<5	7
117661	7.9	1.8	<.5	5	<.2	<1	<10	<5	6
117662	9.3	5.3	0.6	5	<.2	<1	<10	<5	14
117663	9.3	3.0	<.5	4	0.3	<1	<10	<5	9
117664	8.6	3.3	0.8	4	<.2	<1	<10	<5	36
117665	7.8	6.2	<.5	2	<.2	<1	<10	<5	2
117666	6.9	2.5	6.4	21	1.1	<1	<10	<5	22
117667	6.1	2.7	4.9	11	0.7	<1	<10	<5	21
117668	5.7	2.5	2.6	14	0.4	<1	<10	<5	23
117669	4.8	0.8	2.7	7	0.6	<1	<10	<5	54
117670	14.6	1.8	1.2	6	0.4	<1	<10	<5	22
117671	8.7	2.1	1.1	6	<.2	<1	<10	<5	15
117672	8.2	1.1	2.3	5	0.4	<1	<10	<5	131
117673	3.8	1.0	0.5	2	<.2	<1	<10	<5	4
117674	1.7	1.6	0.7	10	1.5	<1	<10	<5	9
117675	8.4	1.9	0.7	3	0.6	<1	<10	<5	16
117676	0.9	1.1	0.6	11	1.5	<1	<10	<5	2
117677	11.8	2.2	1.0	8	0.3	<1	<10	<5	17
117678	8.7	2.0	1.4	9	0.9	<1	<10	<5	18
117679	7.6	2.4	1.9	11	0.4	<1	<10	<5	15
117680	9.6	2.3	0.8	4	0.5	<1	<10	<5	19
117681	21.0	2.0	1.7	9	0.6	<1	<10	<5	42

SAMPLE	SR PPM ICP 0.5	Y PPM ICP 0.5	ZR PPM ICP 0.5	MO PPM ICP 1	AG PPM ICP 0.2	CD PPM ICP 1	SN PPM ICP 10	SB PPM ICP 5	BA PPM ICP 1
117682	12.2	2.0	2.4	5	0.6	<1	<10	<5	21
117683	13.9	2.8	1.5	5	0.4	<1	<10	<5	13
117684	10.5	2.6	1.4	4	0.7	<1	<10	<5	10
117685	9.7	2.7	4.7	3	0.5	<1	<10	<5	49
117686	10.3	2.8	1.5	5	0.7	<1	<10	<5	14
117687	12.5	2.3	1.3	3	0.5	<1	<10	<5	11
117688	11.5	2.5	1.7	5	0.5	<1	<10	<5	14
117689	9.5	2.7	1.2	13	<.2	<1	<10	<5	12
117690	9.8	2.7	0.7	3	0.8	<1	<10	<5	20
117691	13.2	2.0	1.7	5	0.4	<1	<10	<5	56
117692	8.9	2.6	1.0	3	0.9	<1	<10	<5	25
117693	17.7	2.8	1.3	6	0.7	<1	<10	<5	25
117694	9.2	2.5	1.5	5	<.2	<1	<10	<5	13
117695	12.3	7.2	1.7	37	<.2	<1	<10	<5	41
117696	12.8	2.1	3.0	9	0.6	<1	<10	<5	42
117697	9.8	1.9	1.4	7	0.4	<1	<10	<5	16
117698	12.5	1.8	1.6	4	0.3	<1	<10	<5	11
117699	15.3	1.7	1.4	4	<.2	<1	<10	<5	22
117700	7.1	2.4	2.4	4	0.6	<1	<10	<5	14
117701	8.0	1.3	1.8	10	0.4	<1	<10	<5	13
117702	7.3	4.2	3.2	10	0.4	<1	<10	<5	28
117703	4.5	3.3	1.2	5	0.4	<1	<10	<5	19
117704	7.6	3.6	2.8	15	0.9	<1	<10	<5	28
117705	24.6	3.7	0.7	4	<.2	<1	<10	<5	4
117706	24.3	4.0	0.9	9	<.2	<1	<10	<5	20
117707	23.1	3.3	0.9	9	<.2	<1	<10	<5	8
117708	19.1	2.9	1.2	11	<.2	<1	<10	<5	3
117709	24.2	1.8	<.5	6	<.2	<1	<10	<5	46
117710	45.5	1.6	0.5	6	<.2	<1	<10	<5	8
117711	8.4	1.9	1.6	9	<.2	<1	<10	<5	32
117712	16.1	4.8	<.5	5	0.5	<1	<10	<5	7
117713	31.7	6.1	0.9	11	0.8	<1	<10	<5	54
117714	34.9	6.4	0.9	12	0.5	<1	<10	<5	62
117715	13.5	4.0	<.5	9	0.4	<1	<10	<5	7
117716	17.4	4.5	<.5	5	0.4	<1	<10	<5	21
117717	18.0	6.1	<.5	6	0.5	<1	<10	<5	16
117718	3.0	0.9	1.5	3	0.5	<1	<10	<5	12
117719	3.7	1.3	0.9	5	0.7	<1	<10	<5	12
117720	4.1	1.9	1.6	12	0.6	<1	<10	<5	27
117721	10.2	0.8	1.6	1	0.6	<1	<10	<5	20
117722	6.3	2.1	<.5	5	0.4	<1	<10	<5	11
117723	0.9	2.3	<.5	5	<.2	<1	<10	<5	1
117724	43.9	5.4	<.5	7	<.2	<1	<10	<5	2
117725	42.0	6.3	0.7	7	<.2	<1	<10	<5	7
117726	5.4	1.4	0.8	9	0.2	<1	<10	<5	4
117727	19.3	4.8	<.5	6	<.2	<1	<10	<5	30
117728	9.6	1.3	9.4	16	0.4	<1	<10	<5	21
117729	9.9	3.1	1.8	8	0.4	<1	<10	<5	23
117730	6.2	2.2	2.1	9	0.2	<1	<10	<5	10
117731	7.3	2.8	1.6	5	<.2	<1	<10	<5	22
117732	18.9	1.4	0.9	13	0.6	<1	<10	<5	6
117733	9.3	2.3	2.3	5	0.3	<1	<10	<5	71
117734	7.4	3.0	2.1	21	<.2	<1	<10	<5	9
117735	17.8	1.6	0.8	11	0.4	<1	<10	<5	11
117736	9.0	3.1	1.8	13	0.3	<1	<10	<5	35
117737	18.3	2.7	1.1	7	0.2	<1	<10	<5	130
117738	12.0	1.3	1.8	12	0.3	<1	<10	<5	86
117739	11.9	3.3	4.3	11	0.5	<1	<10	<5	21
117740	7.0	3.2	2.1	13	0.4	<1	<10	<5	146
117741	7.6	2.2	2.7	8	<.2	<1	<10	<5	45
117742	30.6	4.8	<.5	8	<.2	<1	<10	<5	32
117743	38.6	4.8	<.5	7	0.3	<1	<10	<5	39
117744	26.2	1.5	3.5	15	0.6	<1	<10	<5	56
117745	37.0	5.5	<.5	8	<.2	<1	<10	<5	6
117746	125	5.7	0.9	7	0.2	<1	<10	<5	2
117747	91.4	4.8	0.6	16	<.2	<1	<10	<5	2
117748	15.3	2.3	1.2	16	1.6	<1	<10	<5	57
117749	25.4	4.3	<.5	4	0.4	<1	<10	<5	12
117750	40.1	4.9	<.5	6	<.2	<1	<10	<5	5
117751	24.6	6.7	<.5	<1	0.7	<1	<10	<5	6
117752	10.9	3.4	4.1	15	0.3	<1	<10	<5	76
117753	1.5	<.5	<.5	2	<.2	<1	<10	11	1
117754	1.3	<.5	<.5	1	<.2	<1	<10	11	1

SAMPLE	SR PPM		Y PPM		ZR PPM		MO PPM		AG PPM		CD PPM		SN PPM		SB PPM		BA PPM	
	ICP		ICP		ICP		ICP		ICP		ICP		ICP		ICP		ICP	
	0.5		0.5		0.5		1		0.2		1		10		5		1	
117755	13.3		3.2		4.1		5		0.4		<1		<10		<5		88	
117756	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS	SMP	MISS
117801	8.0		20.9		1.8		3		0.9		<1		<10		<5		373	
117802	1.6		1.6		<.5		7		1.6		<1		<10		<5		4	
117803	6.0		1.9		<.5		4		0.8		<1		<10		<5		11	
117804	2.6		2.0		<.5		4		1.2		<1		<10		<5		7	
117805	0.9		2.1		<.5		2		3.4		<1		<10		<5		4	
117806	0.6		5.6		15.9		13		<.2		<1		<10		<5		13	
117807	2.3		3.0		<.5		2		1.6		<1		<10		<5		2	
117808	1.7		1.1		0.9		8		4.5		<1		<10		<5		<1	
117809	0.7		1.6		<.5		5		16.7		106		<10		<5		<1	
117810	1.3		3.0		<.5		7		10.3		<1		<10		<5		1	
117811	1.4		1.7		<.5		6		1.0		<1		<10		<5		<1	
117812	2.2		3.2		5.4		6		1.1		<1		<10		<5		6	
117813	4.0		2.2		<.5		4		0.2		<1		<10		<5		125	
117814	<.5		0.9		<.5		8		4.9		<1		<10		<5		1	
117815	1.6		<.5		<.5		15		<.2		<1		<10		9		98	
117816	6.2		3.0		1.2		12		<.2		<1		<10		<5		3	
117817	2.0		4.8		5.4		6		<.2		<1		<10		<5		3	
117818	2.8		1.8		1.7		8		8.8		<1		<10		<5		19	
117819	2.8		1.4		9.0		11		0.4		<1		<10		<5		21	
117820	0.6		2.1		0.9		7		0.2		<1		<10		<5		24	
117821	1.1		10.1		9.1		11		0.2		<1		<10		<5		7	
117822	<.5		<.5		1.1		20		<.2		<1		<10		<5		<1	
117823	9.9		1.9		2.4		7		<.2		<1		<10		5		80	
117824	3.3		1.4		1.4		6		0.3		<1		<10		<5		6	
117825	3.8		0.9		0.8		3		0.3		<1		<10		<5		60	
117826	0.6		1.9		<.5		1		<.2		<1		<10		10		1	
117827	4.5		1.1		<.5		5		0.2		<1		<10		<5		654	
117828	5.1		4.6		1.3		3		0.4		<1		<10		<5		143	
117829	0.5		0.7		<.5		<1		<.2		<1		<10		7		2	
117830	2.0		2.2		1.4		7		0.7		<1		<10		<5		12	
117831	9.3		17.0		5.0		6		<.2		<1		<10		<5		23	
117832	4.1		5.0		8.6		9		0.4		<1		<10		<5		54	
117833	5.0		2.4		2.6		11		<.2		<1		<10		<5		23	
117834	1.1		1.3		2.2		9		0.7		<1		<10		<5		8	
117835	1.0		3.7		7.3		8		0.3		<1		<10		<5		37	
117836	3.0		3.6		7.5		9		<.2		<1		<10		<5		20	
117837	3.0		2.5		3.3		5		0.5		<1		<10		<5		7	
117838	5.6		2.1		<.5		5		0.2		<1		<10		<5		8	
117839	4.5		4.7		1.0		5		<.2		<1		<10		<5		58	
C DCP CONTROL	35.1		7.9		5.9		1		3.9		<1		<10		6		122	
C DCP CONTROL	39.0		8.5		6.6		2		4.4		<1		<10		8		128	
C DCP CONTROL	37.3		8.1		6.8		2		4.0		<1		<10		7		124	
C DCP CONTROL	34.3		7.8		5.9		1		4.1		<1		<10		7		118	
D 117651	20.8		2.4		0.9		6		<.2		<1		<10		<5		16	
D 117663	9.0		2.8		<.5		3		<.2		<1		<10		<5		8	
D 117675	8.5		1.8		1.5		2		0.4		<1		<10		<5		15	
D 117687	12.1		2.0		1.7		4		0.7		<1		<10		<5		11	
D 117697	9.2		2.1		1.4		8		0.2		<1		<10		<5		15	
D 117709	23.4		1.8		<.5		5		<.2		<1		<10		<5		45	
D 117721	13.2		1.0		1.0		2		0.3		<1		<10		<5		24	
D 117733	8.9		2.4		1.8		5		<.2		<1		<10		<5		71	
D 117743	35.4		4.3		<.5		7		<.2		<1		<10		<5		36	
D 117755	10.5		3.1		3.1		5		0.2		<1		<10		<5		86	
D 117811	1.5		1.7		<.5		6		0.9		<1		<10		<5		<1	
D 117823	10.1		2.2		1.6		8		<.2		<1		<10		<5		79	
D 117833	5.3		2.7		2.8		13		<.2		<1		<10		<5		24	

SAMPLE	LA PPM		W PPM		PB PPM		BI PPM	
	ICP		ICP		ICP		ICP	
	0.5		10		2		5	
117651	5.5		<10		2		<5	
117652	2.6		<10		2		<5	
117653	6.1		14		2		<5	
117654	5.5		<10		2		<5	
117655	8.5		<10		2		<5	
117656	8.1		<10		22		6	
117657	5.3		<10		2		<5	
117658	1.9		<10		2		<5	
117659	1.4		<10		2		<5	
117660	6.0		<10		2		<5	

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM
	ICP	ICP	ICP	ICP
	0.5	10	2	5
117661	2.1	<10	2	5
117662	4.5	<10	2	5
117663	4.3	<10	22	5
117664	4.7	<10	2	5
117665	3.7	<10	2	5
117666	9.8	<10	29	5
117667	4.5	<10	22	5
117668	2.3	<10	3	6
117669	1.7	<10	4	5
117670	7.3	<10	4	5
117671	5.2	<10	5	5
117672	9.5	<10	2	5
117673	1.2	<10	2	5
117674	2.0	<10	7	5
117675	1.1	<10	3	5
117676	1.8	<10	5	5
117677	2.5	<10	2	5
117678	2.5	<10	3	5
117679	3.5	49	2	5
117680	2.7	<10	5	5
117681	4.9	<10	2	5
117682	3.1	<10	3	5
117683	2.5	<10	2	5
117684	4.0	<10	5	5
117685	2.8	<10	7	5
117686	2.5	<10	4	5
117687	1.8	<10	3	5
117688	2.7	<10	3	5
117689	2.3	<10	2	5
117690	5.0	<10	2	5
117691	5.4	<10	2	5
117692	1.6	<10	6	5
117693	7.5	<10	4	5
117694	3.4	<10	5	5
117695	13.8	338	2	5
117696	7.6	59	21	5
117697	7.8	<10	2	5
117698	3.9	<10	4	5
117699	1.5	<10	2	5
117700	1.6	<10	2	5
117701	5.1	<10	6	5
117702	9.6	<10	9	5
117703	4.4	<10	6	5
117704	7.0	<10	8	5
117705	3.6	<10	2	5
117706	6.1	<10	3	5
117707	4.4	<10	4	5
117708	3.4	29	2	5
117709	3.5	<10	2	5
117710	4.1	<10	2	5
117711	8.2	<10	2	5
117712	0.8	<10	5	11
117713	2.7	<10	8	5
117714	2.9	<10	5	5
117715	1.0	<10	5	5
117716	1.3	<10	9	5
117717	2.0	<10	5	7
117718	1.9	<10	5	5
117719	2.2	<10	8	5
117720	5.6	<10	8	6
117721	1.9	<10	2	5
117722	1.0	<10	2	5
117723	1.0	<10	2	5
117724	4.5	<10	2	5
117725	4.8	<10	5	5
117726	2.4	<10	2	5
117727	4.7	<10	2	5
117728	8.3	11	10	5
117729	7.2	<10	3	5
117730	5.2	<10	2	5
117731	4.2	<10	3	5
117732	6.1	<10	2	5
117733	4.3	<10	2	5

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM
	ICP 0.5	ICP 10	ICP 2	ICP 5
117734	4.9	<10	2	<5
117735	4.3	<10	2	<5
117736	4.6	256	2	<5
117737	7.0	<10	3	7
117738	6.3	<10	3	<5
117739	5.3	<10	10	<5
117740	7.7	<10	10	<5
117741	6.0	<10	2	<5
117742	2.2	<10	4	7
117743	3.2	<10	7	5
117744	6.6	<10	4	<5
117745	4.1	<10	2	<5
117746	4.9	<10	4	<5
117747	5.5	<10	2	<5
117748	5.0	23	10	8
117749	1.4	<10	8	9
117750	1.0	<10	4	11
117751	<.5	<10	9	15
117752	7.9	<10	5	<5
117753	<.5	<10	2	<5
117754	<.5	<10	2	<5
117755	7.4	<10	2	8
117756	SMP MISS	SMP MISS	SMP MISS	SMP MISS
117801	43.1	<10	3	<5
117802	1.6	<10	7	INF
117803	2.4	<10	2	INF
117804	0.7	<10	8	INF
117805	<.5	<10	16	INF
117806	12.8	<10	2	<5
117807	0.8	<10	3	INF
117808	3.6	<10	5	INF
117809	2.1	<10	10	INF
117810	1.9	<10	3	INF
117811	2.8	<10	3	<5
117812	12.6	<10	24	6
117813	0.7	<10	2	18
117814	2.6	<10	5	INF
117815	<.5	<10	2	<5
117816	1.5	<10	3	<5
117817	4.5	<10	2	<5
117818	3.9	<10	148	INF
117819	5.6	<10	2	<5
117820	2.6	<10	2	<5
117821	8.3	<10	4	<5
117822	<.5	<10	2	<5
117823	4.1	<10	2	<5
117824	1.5	<10	3	<5
117825	4.3	<10	4	<5
117826	<.5	<10	2	<5
117827	1.5	<10	2	<5
117828	3.9	<10	2	<5
117829	<.5	<10	2	<5
117830	4.3	<10	13	<5
117831	22.2	<10	2	<5
117832	9.1	<10	2	<5
117833	10.7	<10	2	<5
117834	<.5	<10	13	16
117835	7.3	<10	7	<5
117836	7.6	<10	2	<5
117837	8.1	<10	20	<5
117838	1.5	<10	3	<5
117839	3.0	<10	2	<5
C DCP CONTROL	10.0	<10	20	<5
C DCP CONTROL	11.0	<10	23	<5
C DCP CONTROL	10.5	<10	21	<5
C DCP CONTROL	10.0	<10	21	<5
D 117651	5.8	<10	2	<5
D 117663	4.1	<10	19	<5
D 117675	1.8	<10	3	<5
D 117687	2.1	<10	4	<5
D 117697	8.0	<10	3	<5
D 117709	3.8	<10	2	<5
D 117721	2.0	<10	2	<5

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM
	ICP 0.5	ICP 10	ICP 2	ICP 5
D 117733	4.6	<10	2	<5
D 117743	3.3	<10	4	<5
D 117755	6.8	<10	3	9
D 117811	2.7	<10	2	<5
D 117823	4.4	<10	2	<5
D 117833	12.2	<10	2	<5

APPENDIX 5
XRAL LABORATORIES CERTIFICATES OF ANALYSIS
AU



LES LABORATOIRES XRAL LABORATORIES

UNE DIVISION DE / A DIVISION OF SGS CANADA INC.
 129 AVE. RÉAL CAQUETTE • C.P. 2283 • ROUYN-NORANDA • QUÉBEC J9X 5A9
 TÉL.: (819) 764-9108 FAX: (819) 764-4673

CERTIFICAT D'ANALYSE/CERTIFICATE OF ANALYSIS

R8444

Nom de la Compagnie/Company: Phelps Dodge Corp.
 Bon de Commande No/ P.O. No:
 Projet/ Project No :
 Date Soumis/ Submitted : Aug 08, 1996
 Attention : Paul Chamois

Aug 19, 1996

No. D'Echantillon Sample No.	AU PPB	AU CHK PPB	AU CHK g/t	AU CHK g/t
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117540	17			
117541	21			
117542	34			
117543	241	232		
117544	9			
117545	4			
117546	17			
117547	<1			
117548	66	62		
117549	<1			
117550	13			
117551	2			
117552	13			
117553	54			
117554	2			
117555	<1			
117556	8			
117557	9			
117558	45			
117559	3	5		
117560	4			
117561	2			
117562	5			
117563	644	600		
117564	9			
117565	52			
117566	21			
117567	4			
117568	136			
117569	678	692		
117570	125			
117571	16	11		
117572	25			
117601	345			
117602	10	8		
117603	7			
117604	10			
117605	5			
117606	11			



LES LABORATOIRES XRAL LABORATORIES

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129 AVE. RÉAL CAOQUETTE - C.P. 2283 - ROUYN-NORANDA - QUÉBEC J9X 5A9
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Projet/ Project No :

Date Soumis/ Submitted : Aug 08, 1996

Aug 19, 1996

Attention : Paul Chamois

No. D'Echantillon Sample No.	AU PPB	AU CHK PPB	AU CHK g/t	AU CHK g/t
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117607	8			
117608	5			
117609	7			
117610	6	6		
117611	32			
117612	78			
117613	6			
117614	1			
117615	4			
117616	23			
117617	22			
117618	27			
117619	50			
117620	100			
117621	24			
117622	202			
117623	168	161		
117624	69			
117625	120			
117626	20			
117627	25			
117628	12			
117629	13			
117630	22			
117631	88			
117632	42			
117633	10	8		
117634	25			
117635	16			
117651	25			
117652	201			
117653	852	888	C-16	
117654	26			
117655	19			
117656	44			
117657	22			
117658	9			
117659	5			
117660	5			



LES LABORATOIRES XRAL LABORATORIES

UNE DIVISION DE / A DIVISION OF SGS CANADA INC.
 129 AVE. RÉAL CAQUETTE • C.P. 2283 • ROUYN-NORANDA • QUÉBEC J9X 5A9
 TÉL.: (819) 764-9108 FAX: (819) 764-4673

CERTIFICAT D'ANALYSE/CERTIFICATE OF ANALYSIS

R8444

Nom de la Compagnie/Company: Phelps Dodge Corp.

Bon de Commande No/ P.O. No:

Projet/ Project No :

Date Soumis/ Submitted : Aug 08, 1996

Aug 19, 1996

Attention : Paul Chamois

No. D'Echantillon Sample No.	AU PPB	AU CHK PPB	AU CHK g/t	AU CHK g/t
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117661	5			
117662	2			
117663	8	8		
117664	15			
117665	4			
117666	9			
117667	5			
117668	8			
117669	4			
117670	6			
117671	15			
117672	8			
117673	23			
117674	8			
117675	7			
117676	16			
117677	10			
117678	18	19		
117679	56			
117680	21			
117681	15			
117682	67			
117683	21			
117684	22			
117685	29			
117686	12			
117687	15			
117688	6			
117689	6	7		
117690	5			
117691	2			
117692	4			
117693	5			
117694	16	11		
117695	9			
117696	7			
117697	7			
117698	5			
117699	6			



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CERTIFICAT D'ANALYSE/CERTIFICATE OF ANALYSTS

R8444

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No. D'Echantillon Sample No.	AU FPB	AU CHK FPB	AU CHK g/t	AU CHK g/t
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117700	3			
117701	6	5		
117702	9			
117703	32			
117704	26			
117705	71			
117706	14	12		
117707	36			
117708	4			
117709	51			
117710	46			
117711	3			
117712	18			
117713	959	954	C-3	
117714	471	443		
117715	17			
117716	15			
117717	4			
117718	20	28		
117719	25			
117720	27			
117721	23			
117722	8			
117723	27			
117724	7			
117725	17			
117726	12			
117727	732	795	C-5	
117728	23	18		
117729	10			
117730	91			
117731	10			
117732	37			
117733	6			
117734	1			
117735	5			
117736	1			
117737	3			
117738	5			



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No. D'Echantillon AU	AU CHK	AU CHK	AU CHK
Sample No.	FPB	PPB	g/t g/t

117739	2		
117740	5		
117741	44		
117742	1		
117743	<1		
117744	232	2360E	
117745	16		
117746	13		
117747	8		
117748	67		
117749	<1		
117750	4		
117751	5		
117752	<1	2	
117753	<1		
117754	4		
117755	<1		
117756	N/S		
117801	35		
117802	14		
117803	22		
117804	12		
117805	29		
117806	9		
117807	11		
117808	14	9	
117809	15		
117810	14		
117811	<1		
117812	6		
117813	1		
117814	<1		
117815	<1		
117816	227	239	com 21E
117817	7		
117818	48		
117819	4		
117820	<1	1	
117821	1		



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No. D'Echantillon Sample No.	AU PPB	AU CHK PPB	AU CHK g/t	AU CHK g/t
---------------------------------	-----------	---------------	---------------	---------------

117822	<1			
117823	<1			
117824	13			
117825	8			
117826	5			
117827	17			
117828	7			
117829	2			
117830	32			
117831	9			
117832	4	3		
117833	7			
117834	4			
117835	2			
117836	27			
117837	18			
117838	3			
117839	61			