FALCONBRIDGE LIMITED EXPLORATION

GEOLOGY OF THE MONTREAL RIVER/BOTHA LAKE PROPERTY ASSESSMENT REPORT

September 22, 1993

GILLIES LIMIT TOWNSHIP
LARDER LAKE MINING DIVISION
NTS 31M/5

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SUMMARY

The accompanying report describes the work performed on two groups of claims located at the northwest and southeast corners of a contiguous claim block in Gillies Limit township(north part).

The work outlined in this report consists of line-cutting (63 Km), geological mapping (1:2000 scale) and lithogeochemical sampling (318 samples).

The bimodal volcanic sequence underlying the Montreal River claim block contains a massive pyrite unit, a possibly related zone of pervasive silicification, a unit of cherty interflow sediment and is proximal to the Montreal River structural lineament(fault?,synvolcanic?) making it a favorable setting for a volcanogenic massive sulphide deposit.

The Botha Lake grid contains similar bimodal volcanic rocks but does not contain significant amounts of hydrothermal alteration or associated sulphide mineralization.

Ground magnetic and conductivity geophysical surveys are recommended over favorable portions of the volcanic inliers on both properties.

TABLE C

LIST OF APPENDICIES

LIST OF FIGURES AND MAPS

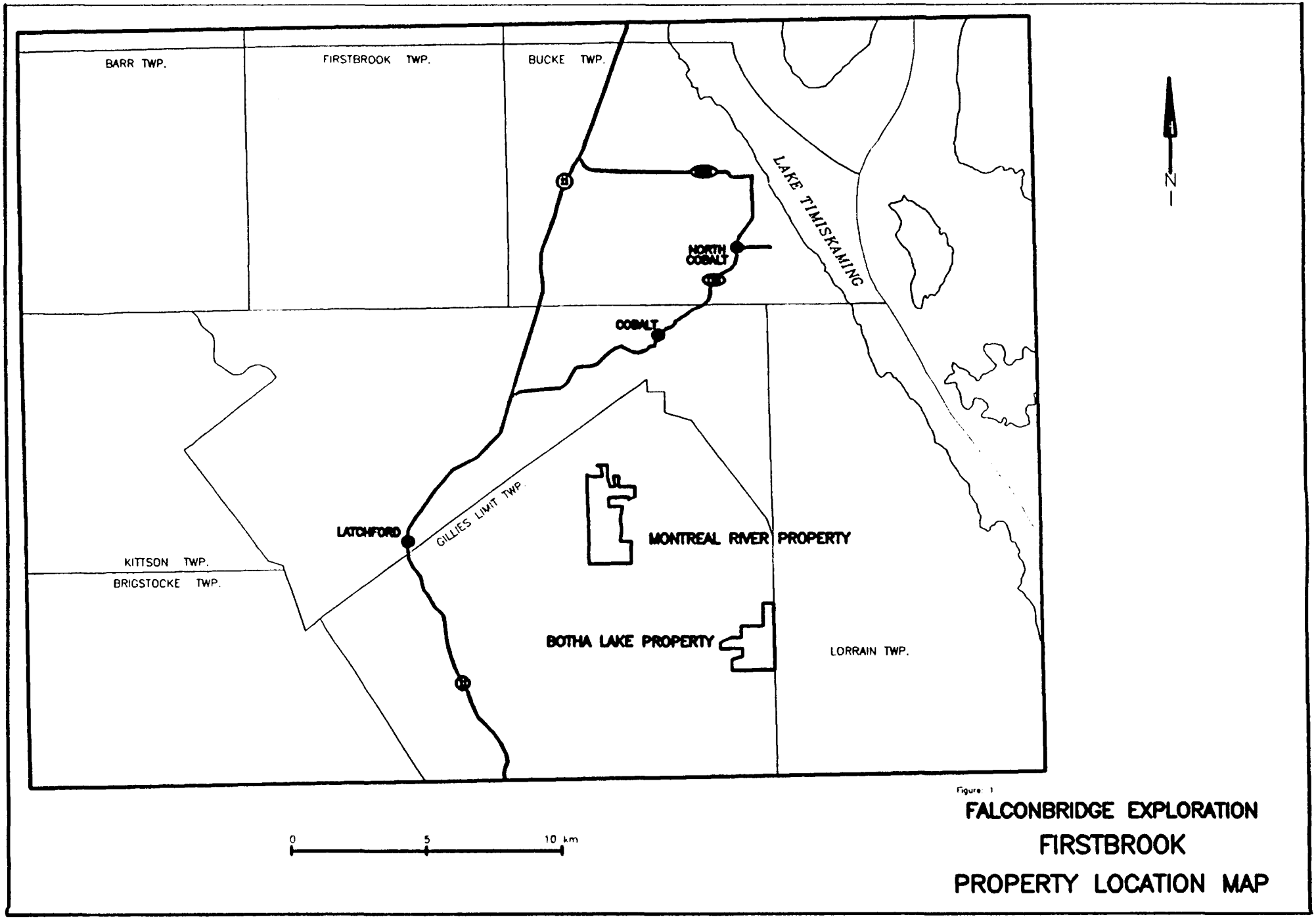

Figure 1

FALCONBRIDGE EXPLORATION
FIRSTBROOK
PROPERTY LOCATION MAP

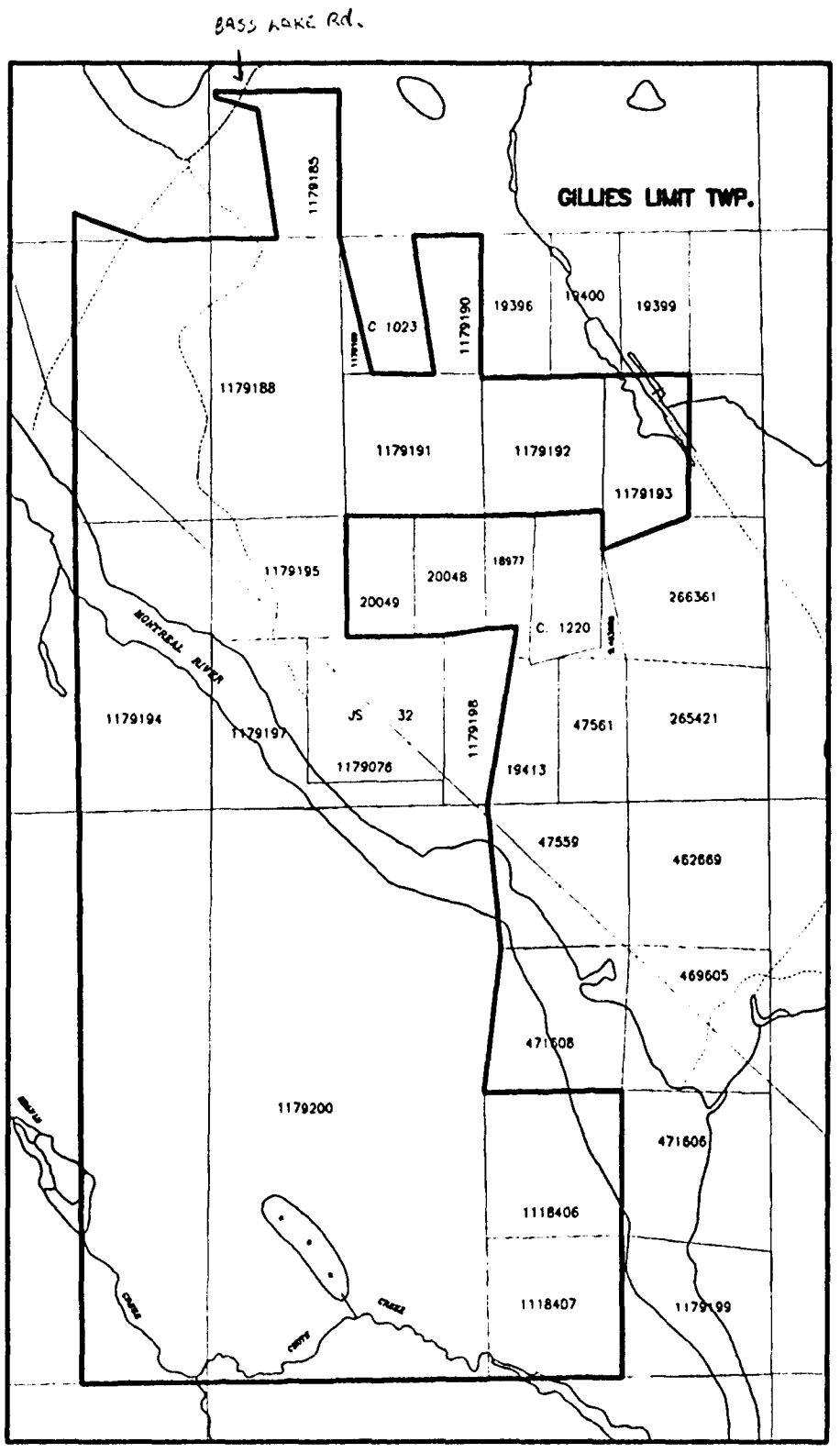

Figure: 2

FALCONBRIDGE EXPLORATION

MONTREAL RIVER PROPERTY

CLAIM MAP

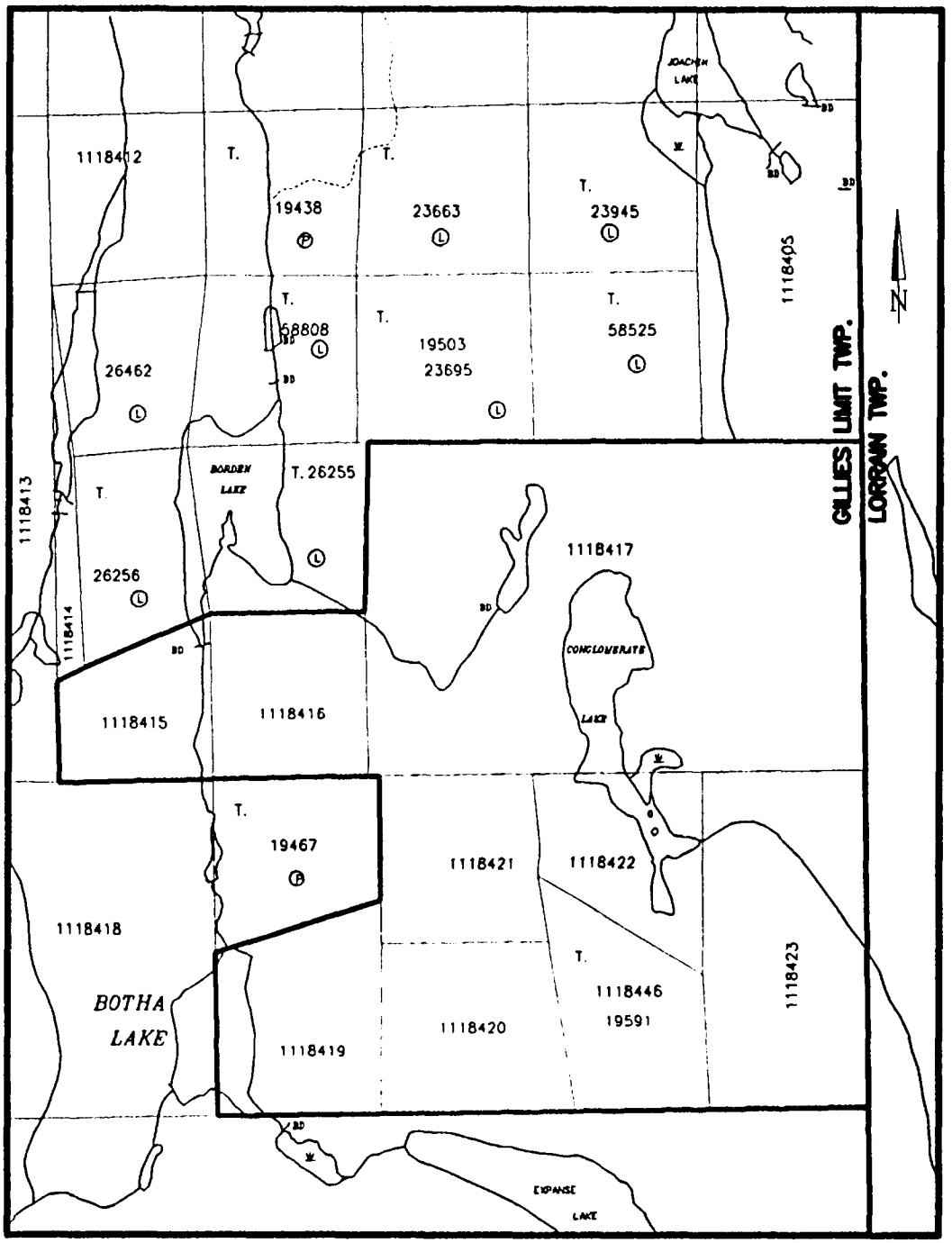

Figure 3

FALCONBRIDGE EXPLORATION

BOTHA LAKE PROPERTY

CLAIM MAP

INTRODUCTION

Purpose of Report

The purpose of this report is to outline the work performed by Falconbridge Limited, between June and September 1993 on two parts of a contiguous claim block. The report describes the nature of the work performed and summarizes the results obtained.

Location, Access

MONTREAL RIVER GRID:
The grid is located approximately 6 km southwest of Cobalt(parts 9,10,17 and 18 on claim map) and straddles the Montreal River. Access to the the north part of the grid is gained using Bass(Cassity) Lake road off highway 11B. The south portion of the grid is accessible only by boat (or snowmobile) via the Montreal River. The river can be accessed by several dirt road in the area.

BOTHA LAKE GRID:
The south grid is located 12 km south southeast of Cobalt(parts 32,44 and 43 on claim map) and is bounded by Botha Lake and Borden Lake to the southwest and northwest respectively. Access to the grid is by the gravel road(Silver Trail/Ragged Chutes roads) which leads to the hydro compressed air installation at ragged chutes on the Montreal River. A dirt road accessable by two wheel drive vehicle can then be taken to a point within approximately 500m of the grid. A path can then be travelled by foot or atv to the grid.

Physiography

The physiography of the Montreal River property consists of gently rolling ridges and valleys to flat terrain covering the northwest part of the property. A more prominent northwest trending ridge of Nipissing diabase occurs at the northeast end of the property. Relief south of the river consists of a moderate northwest trending ridge of Archean volcanic bedrock parallelling the river. Towards the southwestern part of the property a north to northwesterly trending linear swamp marks the boundary between Archean volcanic rocks and a prominent north to northwest trending ridge of Nipissing diabase.

The physiography of the Botha Lake area is similar to that descibed above, however the Nipissing diabase does not form distinct prominent ridges.

The higher ground on both properties is covered by mixed forests consisting of spruce, white pine, poplar and birch with scrub maples covering the floor. A re-plant area covers the flatter terrain north of the Montreal River. Lower areas are covered by cedar and spruce swamps and muskeg.

Bedrock exposure is moderate (approx. 10-20%) over most of the properties with the exception of a certain drift covered areas where exposure is less than 5% to non existent.

Maximum relief over the properties is approximately 45 metres.

Property Definition

The Montreal River property(part of a larger claim block) consists of 16 claims, and the Botha Lake property consists of 10 claims. The mining rights to all claims are owned by Falconbridge Limited(Suite 1200, 95 Wellington Street W., Toronto Ont.) as is the larger 38 claim block they are a part of. The following lists outlines claims to be covered by this work report:

MINING CLAIMS ON WHICH SURVEY WAS PERFORMED

NORTH GRID	SOUTH GRID
	1118418
1179185	1118415
1179188	1118416
1179189	1118419
1179190	1118420
1179191	1118421
1179192	1118417
1179193	1118422
1179194	1118446
1179195	1118423
1179197	
1179198	
1179200	
1179076	
1118406	
1118407	
1179199	

1993 program

Two grids were cut during May and June over the two areas. The baselines on both grids are oriented at 315° azimuth. Lines oriented at 45° azimuth are spaced 100 metres apart. The Montreal River grid contains tie lines at 600m , 900m and 1300m north and 400m and 700m south(due to the irregular nature of the property boundary these tie lines in essence were used in some cases as base lines.) The Botha Lake grid contains a tie line at 800m north. The grids were tied in using topography, the tie lines or by hip chaining across the end of lines. The linecuting was done by N. McBride Staking and Line cutting of Notre Dame du Nord. Claim lines and claim posts were tied in to the grid and/or topography. Not all claim posts were found in the field and corner locations on claim maps were used on the maps in such cases.

The areas gridded were mapped geologically at a scale of 1:2000 and sampled for lithogeochemistry every 100m (or when a change in lithology occurred) along grid lines(outcrop permitting). The mapping and sampling were performed by Steve Kormos, Senior Field Geologist with Falconbridge Limited, with assistance from Jason Dunning, third year geology summer student. All work was completed between May 14 and September 22, 1993(including report writing/ map preparation). James K. Cecchetto, Senior Project Geologist with Falconbridge Limited(Chelmsford Office, 1977 McKenzie Rd. #2, Chelmsford, Ont.), supervised the program.

Summary of Previous Exploration

Regional geological mapping covering the Montreal River grid area was done in 1964 by R. Thomson of the Ontario Department of Mines.(map 2051 SW sheet). The Botha Lake grid area was covered by regional mapping by the OGS (P. Born and M. Hitch) in 1988(map 2551). The documented previous exploration work performed on the two properties are summarized in the following two tables.(A number of old exploration trenches and pits occur on the properties presumably from mainly silver prospecting)

Montreal River Block

Year	Company	Type of Work
1956	Partridge Canadian Ltd.	Diamond drilling, 8 holes into pyrite zone north of Montreal River
1969	Craig, McConnell	Geophysical, EM survey
1974	Teck Corporation	Linecutting,geophysics Mag, Vertical loop EM, Self Potential
1976	Teck Corporation	Geochemical, soil sampling

Botha Lake Block

Year	Company	Type of Work
1960	Botha Lake Mining Corp.	Geophysics,Ratiograph survey
1960	Botha Lake Mining	Diamond drilling, 15 holes
1950	Price, James H.	Diamond drilling, 2 holes
1960	Rayrock MinesLtd.	Diamond drilling , 5 holes

GEOLOGY

Regional Geology
(summarized from Smyk and Watkinson, 1989)

The geology of the area is comprised of Precambrian rocks of the Superior and Southern structural provinces of the Canadian Shield.
Archean volcanic, sedimentary and intrusive rocks may comprise the southernmost extent of the Abitibi greenstone belt. Correlation of the rocks in the Cobalt area with those found in the main Abitibi is hindered however by intervening Proterozoic sedimentary cover.
Early Proterozoic rocks of the Huronian Supergroup form the northeastern portion of the Southern Province form what has been termed the Cobalt Embayment. This strata is comprised of the upper part of the Huronian Supergroup, known as the Cobalt Group, which includes the Gowganda, Lorrain , and the Gordon Lake Formations(Sims et al. 1981).
The Huronian sedimentary and Archean rocks are intruded by Nipissing diabase dykes and sills. Later, middle Proterozoic, diabase and lamprophyre dykes intrude the above mentioned rocks.

Regional fault systems consists of a prominent northwest-striking fault set that parallels the Timiskaming rift valley system(Lovell and Caine 1970), which is the nothern extention of the Ottawa-Bonnechere Graben.

Regional mapping by Born and Hitch, 1990 and by Thomson, 1964 describe the regional geology of the areas of which this work is a part of.

The prefix "meta" has been ommitted in this text, although the rocks of the region and specific areas mapped have been exposed to regional greenschist metamorphism.

Property Geology

The two properties are underlain by Archean volcanic/sedimentary and intrusive rocks and Huronian Coleman Member sedimentary rocks of the Gowganda Formation. Nipissing diabase intrudes the above lithologies. Later diabase, mafic dykes and lamprophyre dykes are also found.

Montreal River Grid

North of the river, the property consists of mainly subaqueous pillowed to massive mafic volcanic flows of basaltic to andesitic composition. These rocks are typically dark green on both weathered and fresh surface,fine grained, occasionally amygdaloidal and are weakly foliated.
No unequivocal Archean interflow sediments were seen with the possible exception of one area located at the north end of the property where a unit of greywacke may exist. This unit may be a sheared mafic of intermediate volcanic rock with strong chloritic and siliceous veining along foliation planes, creating a layered appearance. A fine grained quartzphyric rhyolitic interflow or sill, one metre wide, occurs towards the northern extent of the volcanics.
The northern extent of the property is underlain by Huronian sedimentary rocks consisting of

conglomerate and pebble greywacke of the Coleman Member, Gowganda Formation. This unit is heterolithic but contains a large proportion of granitic clasts. Clast content ranges from 10 to 40% and are unsorted and well rounded.

A north trending ridge of Nipissing diabase occurs at the northeast end of the property and consists of medium grained quartz diabase characteristic of the base of the intrusion.

South of the river, the property is underlain by a bimodal volcanic sequence consisting of alternating subaqueous amygdaloidal pillowed to massive mafic flows and massive felsic quartz-feldsparphyric flows/subvolcanic intrusives(?).The felsic unit contains variable amounts of phenocrysts with 1 to 20% quartz phenocrysts 1 to 3 mm in size and a similar feldspar content. Quartz phenocrysts are clear and have a round to locally square shape. The felsic units are rhyodacitic to rhyolitic in composition, the mafic units are basaltic to andesitic. Features such as flow banding, chilled margins, clasts or xenoliths which may indicate an intrusive vs extrusive origin were not seen in the felsic units.

At one mafic/felsic contact a 2 metre wide interflow sedimentary unit occurs consisting of laminated cherty pyritic sediments(exhalite?), siltstone and fine- grained greywacke.

The volcanic rocks are overlain by Coleman Member conglomerates at the east end of the property and a ridge of Nipissing diabase (bottom of sill) along the southern and eastern extent of the mapped area.

Botha Lake Grid

Two north-northwest trending inliers of Archean volcanic rocks bisect the centre of the property with Nipissing diabase underlying the southwest and Archean granite and Coleman Member Huronian sedimentary rocks underlying the northeast portions of the grid. (Previous drilling has documented that Nipissing diabase also underlies the volcanic rocks).

The Nipissing diabase consists of a more leucocratic gabbro than the diabase on the Montreal River grid and is locally granophyric indicating proximity to the top of the intrusion.
The Coleman Member consists of matrix supported pebble greywacke to clast supported conglomerate. Fragments consist mostly of rounded medium grained granite but a variety of volcanic and mafic dyke clasts also occur locally. Local zones also contain quite angular clasts(regolith?).

The Archean granite is a homogeneous massive, medim grained to coarse grained granite, consisting of about 40% quartz and 30% Kspar and 30% plagioclase with less than 5% mafics minerals.

The Archean Volcanic sequence consists of two inliers. The main, larger inlier consists of a massive felsic unit underlying the southwest portion, a middle massive to pillowed(poorly developed) feldsparphyric,amygdaloidal intermediate unit. The northeast extent of the inlier

consists of well developed pillowed basalt to andesite. The smaller inlier exposed east of Conglomerate Lake contains an intermediate massive flow unit to the southwest, a middle distinctive blue quartz eye felsic unit and a mafic flow with a fragmental component to the northeast end of the inlier.

Felsic Unit

The felsic volcanic rocks consist mainly of featureless massive fine grained rhyodacite to rhyolite and has a buff colored weathered surface and a sugary textured brownish to greenish grey fresh surface.. These rocks are similar in nature to the felsic unit described for the Montreal River grid in that they do not contain features indicative of an intrusive vs extrusive origin. Within the felsic package however there is a variation in quartz phenocryst content and some possible fragmental units indicating there is some statigraphic and pyroclastic component. The smaller inlier contains a distinctive felsic unit containing 1 - 5 % blue quartz eyes.

Intermediate Unit

This unit is conprised of mainly massive to pillowed(not well defined) fine grained feldsparphyric, amygdaloidal flows, andesitic to dacitic in composition with a pale green weathered surface. These rocks have a green weathered and fresh surface and contain 1 to 3% white feldspar phenocrysts, 1 to 3mm in size, and 1 to 5% quartz-feldspar amygdules 1 to 5 mm in size. There are also local fragmental units with a similar matrix and 5 to 20% lapilli sized elliptical fragments(of similar composition and texture as the matrix). The continuity of the fragmental units and the massive vs pillowed facies could not be traced due to lack of outcrop exposure.

Mafic Unit

This unit is characterized by well developed pillowed flows with thick selvages and well rounded pillows. The composition is basaltic to andesitic.

Dykes

A number a of mafic and ultramafic dykes intrude volcanic rocks. These dykes/sills? consist of massive medium to fine grained mafic to intermediate dykes/sills, biotitic lamprophyre dykes and a porphyritic hornblendphyric mafic dyke/sill(?). The hornblendphyric dyke has a biotitic matrix and intrudes the felsic unit incorporating a large number of angular xenoliths near its contacts.

Rhyolitic dykes/sills? (flows?) found at the northwest part of the grid are fine grained and contain no apparent chill margins or flow banding.

A number of the mafic dykes seen may represent syn-volcanic intrusions.

STRUCTURE

Montreal River Grid

A pervasive foliation(S1) can be seen throughout most of the property trending at 300 to 310°, dipping 70 to 85° to the north. A conjugate fabric consisting of a space cleavage is also apparent.

The long axis of variably flattened pillows and amygdules, along with a weak to moderate schistosity defines S1 in the mafic volcanics , and flattened quartz eyes defines S1 in the more massive non-schistose felsic volcanics.

Primary layering(bedding) was seen only in one unit, the cherty/greywacke interflow sediment described above. The attitude of the bedding(S0) is 280 to 290°, dipping 85° to the north. A stratiform massive pyrite layer may also represent S0. The bimodal volcanic package south of the river contains alternating mafic pillowed and felsic flows trending approximately 300° and may represent primary layering. The pillows also appear to be bedded sub-parallel to S1. The younging direction as defined by pillow packing is vague in most exposures but a few outcrops indicate fairly well that tops are facing south.

The property straddles the Montreal River which defines a strong structural lineament and may represent a fault. No definite displacement in stratigaphy ,stronger jointing, shearing or hematite staining was seen in the mapping as the river was approached. The river however, does mark the contact between a predominently mafic and a more bimodal sequence of volcanic rocks and has the same orientation as most other regional faulting in the area . No apparent displacement occurs where Nipissing diabase or Huronian sediments are cut by the lineament, implying that if it does represent a fault it would be likely syn-volcanic. A strong lineament trending north-northwest marked by a swamp marks the end of the exposed volcanic inlier at the southwest end of the grid. This lineament also marks the contact between the volcanic inlier and the ridge of Nipissing diabase.

No evidence of folding was seen.

Botha Lake Grid

A weak foliation(trending 320 to 340°,dipping 70 to 80° to the northeast) can be seen in some of the intermediate volcanic rocks, as defined by a weak schistosity,and flattened clasts and amygdules. The felsic and pillowed mafic units are visually un-deformed. A few north to north-northwest trending lineaments cut the property but no associated displacement occcurs in proximity to any of them, although increased jointing is found in proximity to them in some cases.

Primary layering can infered from stratigraphic variations within the intermediate unit(fragmental/tuffaceous, amygdule/feldspar phenocryst content). Lack of exposure however

makes correlation and orientation of this possible stratigraphy difficult. Primary layering in the pillowed mafic volcanics trend 330° with stratigraphic top facing direction to the northeast. Lithological contacts between the three main volcanic units trend about 320 to 340°. No evidence for folding was seen.

ALTERATION AND LITHOGEOCHEMISTRY

A study of visual and chemical alteration was done on the properties in order to identify zones of hydrothermal activity which may be associated with sulphide mineralization. In order to establish chemically the nature and intensity of the alteration as well as to try to characterize the various rock types, the properties were systematically sampled for lithogeochemistry. The target sampling density was approximately every 100 metres(outcrop permitting) along grid lines spaced 100 metres apart. A total of 318 samples were taken(243 on Montreal River grid, 75 on Botha Lake grid).Sample locations are shown on Map 2. All samples were processed by XRAL lab in Toronto. The sample analysis consisted of whole rock (SiO2, Al2O3, CaO, MgO, Na2O, Fe2O3, Mno, Cr2O3, P2O5, TiO2, LOI) plus the following trace elements (Ba, Rb, Y, Zr, Cu, Zn, Ni, Co,Ag, and Au). All results are included in appendix I. Also, where metal values only were desired samples were taken for Cu, Zn, Pb and Ag.(29 samples taken).

With the exception of local to moderate zones of pervasive silicification and local patchy and pervasive epidote alteration no significant visual or chemical syn-volcanic hydrothermal alteration zones, typical of those associated with VMS sulphide deposits, occur on the properties.

Montreal River Grid

Visual Alteration

No significant extensive zones of visual alteration were seen within the felsic volcanic units. The most significant alteration found within the mafic volcanics is a zone of pervasive silicification north of the Montreal River(L11W to 14W/600N). Pillow cores are hard and bleached in moderately altered outcrops , where alteration is strongest both the cores and the selvages are silicified and strongly bleached. Accompanying this silicification is fine grained pink(kspar?) veining and patchy pervasive epidotization. This zone of silicification may be significant in that it's brittle nature may have resulted in fracturing which could have focused mineralizing hydrothermal fluids.

Other types of alteration seen locally are as follows:

- green stockwork veining (weathers positive,chlorite/quartz? chloritiod? hornfels?)
- saussuritization of feldspars
- one small zone of pervasive carbonate alteration
- pink pervasive hematitic staining
- chlorite spotting (hard similar in composition to green veining)
- chlorite along fractures

- quartz/chlorite and quartz/magnetite veining
- carbonate along fractures
- patchy massive magnetite
- pervasive silicification
- Kspar veining ,often associated with green stockwork veining

Lithogeochemistry

As expected samples from the silicified/bleached pillows returned elevated silica values. No obvious significant anomalous chemical trends(such as Na or Ca depletions, MgO,FeO enrichment) were found.Several samples returned Cu and Zn values over 100ppm(no correlation between the two). A statistical analysis and plotting/contouring of the data would be neccesary in order to test for any subtle chemical anamalies(determine threshold/anomalous values) or the significance of anomalous metal values.

Botha Lake Grid

The Botha Lake grid contains similar styles of alteration to that described above, however the intensity is weaker and for all intensive purposes(relating to VMS exploration) no significant zones of syn-volcanic hydrothermal alteration were discovered. A zone of weak silicification similar in appearance but less intense and extensive occur (L4E to L6E/100N) within the intermediate unit.

MINERALIZATION

No mineralization was seen in the Nipissing diabase or the Huronian sediments. Mineralization described below occurs within the volcanic rocks.

Montreal River Grid

The types of sulphide mineralization which occur on the property consist of the following styles:

- Along primary porosity such as amygdules, pillow selvages,disseminations and along lithological contacts.
- Dissemminated and laminated exhalative.
- Along secondary porosity such as fractures and chlorite spots(assuming chlorite spotting is not primary).

Mineralization thought to be syn-volcanic consists of only pyrite and occurs as a fine disseminated weakly laminated dusting in cherty interflow sediments(2-3% pyrite, L11W/200N). A 10 metre wide zone of pyrite also occurs(L1250W to 1100W/500N) within the mafic pillowed volcanics(possibly at a flow contact). The zone consists of pyrite focused within the selvages and as layers along the foliation(stringer veins,disseminations later remobilized along foliation?). A 1 metre wide massive pyrite layer occurs at the top of the zone (assuming stratigraphic tops

are to the south). No elevated Cu or Zn values are associated with the pyrite zone. A good represenative(un-leached) sample of the massive zone however, was not possible due to extensive weathering. This zone of mineralization is spatially and possibly genetically related to the zone of pervasive alteration silicification described in alteration.

Secondary mineralization throughout the property consists of pyrite, chalcopyrite, sphalerite and galena along fractures and associated (replacing) with chlorite spots. These sulphides occur in trace amounts to 1%.(best result from grab samples was 3200ppm Zn and 1200 ppm Cu)

A strongly carbonatized outcop of felsic volcanics(L10W/100S) contains 2-3% disseminated chalcopyrite and similar amounts of pyrite.
Magnetite occurs throughout the property associated with quartz veining and replacing amygdules.

Botha Lake Grid

Mineralization is less extensive than on the Montreal River grid, and consists of pyrite only, no base metal sulphides were seen. The pyrite occurs along fractures, as small patchy zones and as disseminated blebs within amygdules. Local weakly gossanous zones contain up to 5% fracture controlled and disseminated pyrite, some zones may be associated with weak shearing. A patchy pyrite zone(L6E/75N) within a zone of silicification(L4E to L6E/100N) returned 0.5 ppm Au.

CONCLUSIONS

The purpose of this study was to establish whether or not either of the properties had the potential to host economic VMS type deposits(No significant evidence for silver/cobalt potential was observed). With this purpose in mind, the property was mapped at a scale of 1:2000 and sampled. No strong indicators such as obvious discordant zones of chloritic and/or sericitic hydrothermal alteration or stringer type Cu sulphide or definite primary exhalitive Zn sulphides were discovered. Base metal sulphides observed appear to be controlled by secondary porosity, but may imply remobilization from a primary source has occurred. The following however summarizes the results obtained which may be considered favorable for VMS potential.

Montreal River Grid

Lithology:

- Felsic / mafic contact
- Cherty exhalative horizon

Structure:

- Proximity to Montreal River structural lineament(possible synvolcanic fault)
- A prominent northwest trending structural lineament, also possibly representing a fault(synvolcanic?), cuts the volcanic inlier off at the south end of the property.

Alteration:

- Moderately sized zone of pervasive silicification which may facilitate brittle fracturing focusing mineralizing hydrothermal fluids. Another possibility is that the silicification created an insulating cap forcing hydrothermal fluid temperatures to rise providing a more favorable environment for base metal deposition.
- patchy quartz-epidote alteration(ie Noranda)

Mineralization:

- massive pyrite zone and inter-pillow pyrite mineralization in proximity to silicification. Appears to be syn-volcanic mineralization filling primary porosity.
- Traces of sphalerite, chalcopyrite and galena are common along fractures(with carbonate) and associated with chlorite spotting. While this mineralization is likely late it may represent remobilized syn-volcanic mineralization. The best values obtained in the lithogeochemistry were 1280 ppm Cu and 3230 ppm Zn(not the same sample, fracture controlled).
- A number of anomalous Cu and Zn values(> 100ppm) returned in the lithogeochemistry.
- Layered fine dusting of disseminated py in cherty exhalative unit

<u>Botha Lake Grid</u>

Lithology:

- Mafic / Felsic contacts
- Flow / fragmental contacts
- Possible synvolcanic dykes

Alteration:

- Small zone of pervasive silicification(as above)
- Patchy quartz-epidote

Mineralization:

- no significant mineralization
- some anomalous scattered Cu and Zn values in lithogeochemistry
- one sample returned 0.5 grams/tonne Au . It was associated with patchy disseminated, or possibly shear related, py mineralization within the zone of pervasive silicification.

Structure:

- Minor north and northwest trending lineaments may represent faults(synvolcanic?)

Infrastructure

Both properties are located within 250 km of the Kidd Creek Metallurgical Complex, and are near Highway 11, a railway line, and power and natural gas lines lines.

RECOMMENDATIONS

The properties (especially the Montreal River grid) provide enough favorable criteria to warrant follow up deep EM ground geophysics over selected portions of the volcanic inliers.(ie covering the py zone, cherty exhalite, zone of silicification, lithological contacts ect.) A statistical analysis and plotting/contouring of the lithogeochemical data should also be done.

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Sims, P. K., Card,K. D., and Lumbers, S. B.; Evolution of early Proterozoic Basins of the Great Lakes Region. Geological Survey of Canada. Paper 81-10 , 1981.

APPENDIX 1
ANALYTICAL RESULTS

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23560

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
9-Jul-93

REF. FILE 15350-L6

Total Pages 6

47 ROCKS Proj. FIRSTBROOK

	METHOD	DETECTION LIMIT
AU PPB	FADCP	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 04-Aug-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA43301	69	53.1	<.1	23	10	41.5	--
SA43302	<1	1.5	.2	18	16	77.8	--
SA43303	35	121	.5	9	18	133	--
SA43304	50	8.5	<.1	10	18	219	--
SA43305	92	32.7	.3	20	20	52.1	--
SA43306	43	31.5	.3	18	13	123	--
SA43307	58	86.1	.7	60	15	77.2	--
SA43308	92	99.1	.2	12	30	61.0	--
SA43309	63	<.5	<.1	26	26	145	--
SA43310	38	21.5	<.1	22	9	93.3	--
SA43311	76	<.5	.3	10	18	197	--
SA43312	31	89.4	<.1	22	16	145	--
SA43313	120	21.6	<.1	27	14	241	--
SA43314	120	69.7	<.1	14	18	95.2	--
SA43315	70	76.5	<.1	34	14	141	--
SA43316	45	23.3	<.1	20	16	263	--
SA43317	27	79.2	.2	19	16	56.6	--
SA43318	23	37.9	1.2	21	24	122	--
SA43319	48	4.9	<.1	13	12	153	--
SA43320	53	54.8	.2	10	28	23.9	--
SA43321	43	157	.5	37	16	247	--
SA43322	16	75.9	.1	16	16	43.1	--
SA43323	23	1.6	.2	26	17	140	--
SA43324	134	<.5	<.1	12	14	117	--
SA43325	30	<.5	<.1	4	16	25.0	--
SA43326	18	<.5	<.1	12	21	156	--
SA43327	113	97.9	.3	17	17	44.3	--
SA43328	99	21.5	<.1	20	61	55.3	--
SA43329	<1	6.9	.2	<1	26	3.1	--
SA43330	32	1.3	<.1	16	10	200	--
SA43331	42	9.3	<.1	22	28	206	--
SA43332	14	4.2	<.1	32	56	66.6	--
SA43333	49	12.6	<.1	20	27	380	--
SA43334	50	<.5	<.1	9	25	390	--
SA43335	43	8.3	<.1	2	16	66.8	--
SA43336	34	<.5	<.1	4	14	21.5	--
SA43337	60	3.3	1.0	32	19	78.0	--
SA43338	34	4.8	.6	28	12	51.4	--
SA43339	126	.8	.2	21	12	119	--
SA43340	52	31.9	.4	29	20	159	--
SA43341	160	21.3	.4	23	12	177	--
SA43342	116	74.0	<.1	10	10	61.9	--
SA43343	69	193	.4	5	16	29.4	--
SA43344	136	6.2	<.1	17	17	80.5	--
SA43401	79	37.8	.9	--	30	141	41

	SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
	SA43402	131	108	2.5	--	9	631	544
	SA43403	58	71.6	.8	--	14	1140	781
D	SA43301	68	54.3	<.1	23	10	42.0	--
D	SA43313	121	21.8	<.1	28	12	237	--
D	SA43325	31	.6	.1	4	17	25.5	--
D	SA43337	60	3.6	.9	34	18	77.2	--
D	SA43403	63	74.1	.8	--	--	1190	798

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA43301	57.5	14.4	5.98	4.80	5.86	.95	7.90	.16	.860	.20	.04	1.40	100.1
SA43302	61.4	15.7	1.50	1.77	5.31	1.84	6.88	.16	1.44	.35	<.01	2.00	98.5
SA43303	55.8	15.1	1.55	2.87	5.71	.86	11.8	.19	1.11	.25	.02	3.80	99.1
SA43304	55.1	16.1	1.93	4.16	5.61	.69	10.3	.23	.965	.18	<.01	3.85	99.2
SA43305	55.3	14.5	5.73	5.62	4.73	.65	8.96	.17	.953	.34	.04	2.55	99.6
SA43306	55.2	16.0	3.25	3.16	6.11	1.69	9.12	.30	1.15	.21	.02	2.55	98.9
SA43307	59.6	16.6	.95	3.04	4.61	1.26	8.12	.12	1.16	.23	<.01	3.40	99.2
SA43308	56.8	16.6	4.04	2.59	7.42	.40	7.84	.15	1.05	.20	<.01	3.10	100.2
SA43309	47.1	15.4	3.00	5.09	4.81	.52	17.8	.35	.944	.07	.03	3.60	98.8
SA43310	51.7	15.3	8.43	3.61	5.19	.46	11.6	.24	1.31	.10	.01	2.20	100.2
SA43311	55.4	14.3	4.53	6.30	5.35	1.38	8.80	.34	.871	.23	.04	2.45	100.1
SA43312	51.5	15.4	4.04	4.73	4.92	.88	10.8	.28	1.61	.61	<.01	4.95	99.8
SA43313	59.1	15.1	1.77	4.13	5.34	1.24	8.84	.22	.891	.19	.04	2.95	99.9
SA43314	55.4	13.9	5.80	6.71	4.49	1.11	8.67	.21	.785	.17	.04	2.35	99.7
SA43315	48.9	14.9	7.02	7.05	2.78	.19	13.2	.20	1.03	.09	.02	3.85	99.3
SA43316	50.3	13.5	5.14	5.18	4.49	.70	15.0	.46	1.41	.11	.02	2.60	99.0
SA43317	49.7	13.4	7.82	6.68	3.16	1.04	14.2	.24	1.04	.08	.01	2.45	99.9
SA43318	48.2	12.6	4.92	7.36	3.38	.77	16.5	.29	1.26	.10	.02	3.25	98.7
SA43319	55.6	17.1	2.46	3.47	6.38	1.97	7.05	.37	1.24	.09	.02	2.45	98.3
SA43320	45.3	12.8	13.5	4.03	1.52	.32	19.2	.66	.865	.06	.02	1.90	100.2
SA43321	50.2	15.0	6.62	5.29	4.11	.74	13.7	.32	1.21	.11	.01	2.50	99.9
SA43322	49.0	13.0	8.12	7.44	2.92	.67	14.3	.28	1.24	.09	.02	2.75	99.9
SA43323	46.7	13.2	5.65	6.89	3.25	.41	18.2	.42	1.34	.11	.02	3.35	99.6
SA43324	46.4	11.5	7.96	9.44	1.56	2.02	13.9	.52	1.09	.54	.11	2.85	98.3
SA43325	60.9	16.1	4.06	2.11	8.52	.78	3.34	.20	.759	.15	<.01	1.40	98.4
SA43326	55.2	16.0	3.25	3.63	6.33	1.26	9.22	.41	1.18	.38	<.01	2.35	99.3
SA43327	55.7	14.5	4.74	5.71	5.02	1.73	8.67	.20	.763	.18	.04	2.20	99.5
SA43328	59.7	17.3	.80	2.45	.34	3.78	8.78	.08	1.06	.25	.03	4.85	99.5
SA43329	73.9	14.0	.26	.26	4.72	2.13	.58	.02	.064	.02	<.01	2.05	98.1
SA43330	53.6	15.1	3.86	4.81	5.85	.42	11.1	.65	1.05	.08	.01	2.60	99.2
SA43331	53.0	13.9	5.99	4.99	4.88	.20	13.6	.32	.984	.08	.02	2.20	100.2
SA43332	47.8	13.2	6.64	6.69	2.63	1.82	16.7	.43	1.32	.12	.02	1.35	98.8
SA43333	49.5	15.5	3.74	4.19	4.10	2.49	14.3	.64	1.41	.16	.02	3.25	99.6
SA43334	55.6	13.7	4.43	5.33	4.95	2.09	9.53	.27	.769	.14	.04	1.95	98.9
SA43335	58.0	14.2	5.15	4.42	6.59	.62	7.08	.21	.761	.17	.04	1.30	98.6
SA43336	58.3	14.9	4.58	4.45	6.68	.58	8.02	.21	.729	.17	.05	1.40	100.1
SA43337	49.2	14.3	5.54	5.15	4.29	.21	17.4	.30	1.18	.10	.02	2.60	100.3
SA43338	50.5	14.0	7.60	4.73	3.87	.69	14.9	.34	1.18	.10	.01	2.00	100.0
SA43339	52.3	14.9	3.10	6.13	4.51	2.17	11.1	.26	.889	.20	.04	3.55	99.2
SA43340	49.6	14.7	5.66	6.09	4.16	1.06	13.2	.32	1.50	.14	.02	3.00	99.6
SA43341	52.7	14.4	3.11	9.32	3.24	1.80	9.58	.27	.899	.20	.04	4.35	100.0
SA43342	60.3	17.5	2.19	2.18	7.69	2.33	4.12	.13	.942	.18	.05	2.05	99.7
SA43343	63.0	18.4	1.40	.96	8.01	3.78	1.90	.06	.970	.19	.05	1.65	100.4
SA43344	56.6	16.2	2.75	3.67	6.59	1.85	7.21	.21	.896	.18	.05	2.65	98.9
D SA43301	57.2	14.3	5.95	4.76	5.85	.93	7.82	.16	.843	.20	.04	1.55	99.7

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
D SA43314	55.1	13.9	5.74	6.67	4.42	1.09	8.59	.20	.767	.18	.04	2.35	99.1
D SA43328	59.8	17.2	.80	2.39	.31	3.74	8.87	.08	1.04	.25	.03	4.85	99.4
D SA43342	59.2	17.4	2.12	2.14	7.67	2.34	3.83	.13	.953	.17	.05	2.05	98.1

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA43301	14	13	93	272
SA43302	62	<10	215	741
SA43303	35	16	139	353
SA43304	18	<10	167	296
SA43305	<10	34	116	275
SA43306	25	12	104	792
SA43307	36	<10	160	310
SA43308	<10	<10	92	253
SA43309	<10	13	51	306
SA43310	10	21	68	300
SA43311	36	16	115	585
SA43312	15	28	174	165
SA43313	45	<10	114	304
SA43314	18	<10	97	356
SA43315	<10	15	51	129
SA43316	<10	23	69	540
SA43317	51	17	56	415
SA43318	34	17	44	317
SA43319	45	<10	57	1130
SA43320	<10	20	30	95
SA43321	25	<10	72	645
SA43322	19	13	58	606
SA43323	<10	12	78	325
SA43324	45	<10	102	3140
SA43325	10	<10	123	305
SA43326	32	<10	155	640
SA43327	55	<10	101	578
SA43328	207	19	125	426
SA43329	157	<10	73	189
SA43330	11	10	67	327
SA43331	<10	17	56	167
SA43332	31	11	66	1070
SA43333	70	10	74	2210
SA43334	29	<10	76	1200
SA43335	24	11	93	248
SA43336	<10	20	91	222
SA43337	<10	27	57	167
SA43338	15	20	64	467
SA43339	55	<10	122	571
SA43340	26	<10	58	891
SA43341	47	<10	120	508
SA43342	48	<10	115	480
SA43343	76	19	118	423
SA43344	57	16	113	472
D SA43301	16	23	93	244

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
D SA43314	29	<10	102	409
D SA43328	192	<10	124	409
D SA43342	43	<10	103	480

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23556

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
19-Jul-93

REF. FILE 15463-J7

Total Pages 6

53 ROCKS Proj. F.BROOK 6270

	METHOD	DETECTION LIMIT
AU PPB	FADCP	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 04-Aug-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA43345	186	49.5	<.1	36	6	166	--
SA43346	22	25.9	.1	16	8	147	--
SA43347	81	80.4	.5	27	10	90.2	--
SA43348	30	50.4	.4	11	9	19.1	--
SA43349	53	30.3	<.1	16	11	47.3	--
SA43350	55	14.9	.4	11	9	47.2	--
SA43351	35	30.5	<.1	12	8	26.1	--
SA43352	43	7.9	<.1	23	10	106	--
SA43353	35	11.6	.2	15	12	37.3	--
SA43354	47	16.8	<.1	29	15	37.4	--
SA43355	32	38.5	<.1	5	13	23.2	--
SA43356	40	24.3	<.1	20	7	41.8	--
SA43357	32	44.3	<.1	11	9	29.4	--
SA43358	84	41.0	<.1	27	8	53.9	--
SA43359	215	6.8	<.1	29	12	212	--
SA43360	27	10.6	.2	11	6	42.9	--
SA43361	16	4.2	<.1	9	9	84.0	--
SA43362	90	26.3	<.1	19	8	94.2	--
SA43363	58	28.1	<.1	19	9	111	--
SA43364	79	9.1	.2	38	9	90.9	--
SA43365	94	159	<.1	23	13	380	--
SA43366	51	38.8	<.1	14	13	66.4	--
SA43367	60	87.4	.2	22	11	67.1	--
SA43368	33	99.4	.4	17	13	104	--
SA43369	58	6.5	1.1	38	12	146	--
SA43370	60	107	<.1	16	12	47.6	--
SA43371	68	27.5	.9	19	11	100	--
SA43372	85	37.0	.2	24	11	30.4	--
SA43373	61	44.7	.7	30	12	531	--
SA43374	64	63.7	.5	25	13	143	--
SA43375	38	46.7	.2	13	14	44.9	--
SA43376	21	19.2	<.1	18	10	72.8	--
SA43377	55	3.6	<.1	14	11	49.3	--
SA43378	9	46.1	<.1	10	8	19.3	--
SA43379	58	44.5	.3	21	9	127	--
SA43380	32	8.7	<.1	6	7	66.6	--
SA43381	6	35.2	.2	7	7	79.5	--
SA43382	36	39.9	<.1	11	8	115	--
SA43383	1	3.7	<.1	3	6	11.6	--
SA43384	<1	26.4	.2	3	8	68.3	--
SA43385	10	10.5	<.1	12	8	26.3	--
SA43386	81	100	.2	26	10	115	--
SA43387	9	10.6	<.1	11	6	50.2	--
SA43388	<1	98.6	.7	21	10	131	--
SA43389	30	3.4	<.1	7	8	64.8	--

	SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
	SA43404	69	84.1	.8	--	16	93.1	46
	SA43405	7	265	.2	--	9	9.4	12
	SA43406	40	84.1	.5	--	10	202	57
	SA43407	70	4.7	.4	--	6	87.9	34
	SA43408	86	76.3	.7	--	10	69.4	25
	SA43409	82	62.9	.6	--	9	77.6	26
	SA43410	67	150	1.2	--	6	3230	1310
	SA43411	64	139	.7	--	<5	560	154
D	SA43345	173	45.5	.3	34	7	156	--
D	SA43357	27	38.7	<.1	9	7	25.8	--
D	SA43369	54	5.0	.7	35	8	136	--
D	SA43381	6	34.6	.2	7	7	78.4	--
D	SA43405	8	265	<.1	--	--	9.7	9
D	SA43407	--	--	--	--	7	--	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA43345	50.1	13.3	5.68	10.5	3.46	.71	11.0	.37	.840	.33	.08	3.45	99.9
SA43346	50.9	13.1	7.42	4.17	4.34	.32	15.1	.33	1.78	.17	.02	1.70	99.4
SA43347	51.0	15.7	4.83	4.55	5.28	.55	11.7	.29	1.02	.09	.04	3.10	98.2
SA43348	62.2	13.5	7.77	3.39	3.43	.82	6.54	.12	.535	.09	.04	1.90	100.4
SA43349	55.0	17.0	7.02	4.66	3.78	1.69	7.79	.13	.674	.12	.02	2.30	100.3
SA43350	59.1	15.4	4.15	4.17	6.17	1.81	6.96	.21	.761	.16	.03	1.50	100.5
SA43351	57.8	13.8	5.31	5.29	5.53	1.39	8.39	.17	.919	.27	.03	1.30	100.3
SA43352	53.8	12.9	6.15	7.61	4.29	1.23	10.1	.24	.802	.30	.05	1.95	99.5
SA43353	60.4	14.1	4.75	3.91	5.03	1.58	6.09	.13	.628	.10	.02	1.35	98.2
SA43354	55.6	15.1	5.44	5.74	4.68	2.07	8.67	.17	.771	.16	.02	1.75	100.3
SA43355	60.8	15.5	3.10	3.55	6.20	3.44	4.84	.12	.588	.11	.02	1.05	99.4
SA43356	58.9	16.2	3.76	4.04	4.24	2.92	6.42	.09	.769	.13	.02	2.20	99.8
SA43357	62.3	13.2	5.34	4.14	4.42	2.06	6.45	.14	.624	.13	.03	1.40	100.3
SA43358	58.4	14.9	4.22	4.80	2.21	2.98	8.39	.12	.719	.15	.03	2.60	99.6
SA43359	46.7	10.3	8.36	12.6	2.20	.43	11.9	.24	.667	.65	.14	4.30	98.5
SA43360	57.5	16.3	5.87	3.73	4.69	1.87	7.06	.13	.617	.10	.01	1.85	99.8
SA43361	55.2	14.0	5.09	4.14	5.76	.97	10.3	.26	1.12	.39	<.01	2.20	99.5
SA43362	51.4	17.8	12.7	2.52	2.10	1.64	8.38	.14	1.22	.26	.05	1.75	100.0
SA43363	47.5	14.1	4.39	7.23	3.30	.69	17.3	.33	.901	.07	.03	3.60	99.5
SA43364	51.1	14.9	4.64	5.69	3.44	.46	11.5	.15	.961	.18	.01	7.10	100.2
SA43365	53.7	14.3	3.03	6.36	5.31	.20	10.4	.25	.810	.16	.05	3.60	98.2
SA43366	57.4	13.9	6.35	4.42	2.90	2.83	8.36	.16	.654	.14	.03	2.15	99.4
SA43367	56.0	14.9	3.80	4.97	3.37	2.78	9.13	.12	.612	.11	.02	3.05	99.0
SA43368	56.7	17.3	1.98	3.40	6.88	.81	6.73	.17	1.77	.33	.01	3.05	99.2
SA43369	47.6	15.8	8.28	4.43	3.91	.20	14.7	.29	1.08	.10	.03	2.80	99.2
SA43370	56.9	15.4	7.92	4.50	2.22	1.35	8.06	.16	.712	.15	.03	2.50	100.0
SA43371	56.4	16.6	2.51	4.16	5.84	2.56	7.88	.14	.833	.17	.03	2.70	99.9
SA43372	60.5	14.2	4.54	3.84	4.83	1.03	7.66	.16	.841	.19	.06	1.90	99.8
SA43373	52.8	15.1	4.29	4.34	5.52	.73	11.8	.33	1.65	.24	.01	2.45	99.3
SA43374	50.3	15.3	3.60	4.66	4.77	1.23	12.5	.31	1.73	.26	<.01	3.85	98.7
SA43375	55.6	14.3	5.11	4.27	5.68	.99	9.27	.19	1.43	.22	.01	2.00	99.1
SA43376	57.7	15.8	2.83	3.46	6.38	.44	8.83	.16	1.28	.20	<.01	2.50	99.6
SA43377	59.3	15.6	2.19	3.84	5.31	.85	8.59	.10	.796	.12	.02	3.25	100.0
SA43378	72.0	12.8	.47	1.58	5.15	.89	4.44	.05	.462	.10	.03	2.05	100.1
SA43379	54.5	16.7	3.18	3.27	6.84	.42	9.47	.22	1.51	.25	.02	2.40	98.8
SA43380	61.0	15.2	3.25	3.34	6.79	.45	6.77	.16	.662	.14	.02	1.85	99.7
SA43381	65.0	14.2	1.87	1.65	6.61	.51	6.91	.15	.864	.19	.02	1.65	99.7
SA43382	55.2	15.2	3.59	3.63	6.23	.36	10.3	.23	.780	.13	<.01	3.00	98.7
SA43383	71.1	13.2	1.11	.80	5.65	1.38	3.84	.05	.480	.09	.03	1.75	99.6
SA43384	71.8	13.2	.86	.75	5.71	1.64	4.54	.08	.438	.10	.03	1.20	100.5
SA43385	64.5	15.4	.30	2.37	1.68	3.90	7.07	.06	.938	.20	.01	3.40	100.0
SA43386	58.0	15.4	.66	3.34	4.99	1.11	12.0	.16	.729	.14	.01	3.20	99.8
SA43387	64.6	14.0	1.04	2.38	5.12	.88	7.79	.10	.902	.21	.02	2.60	99.7
SA43388	58.9	15.0	3.13	2.23	5.09	.85	9.39	.18	1.34	.47	<.01	2.30	99.0
SA43389	60.0	14.6	3.56	3.26	6.50	1.05	7.44	.18	.736	.15	.02	1.60	99.2

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
D SA43345	50.0	13.2	5.56	10.4	3.47	.73	10.9	.37	.827	.33	.09	3.45	99.4
D SA43358	58.0	14.9	4.18	4.78	2.23	3.00	8.34	.12	.725	.15	.03	2.45	99.0
D SA43372	60.2	14.1	4.51	3.84	4.88	1.00	7.72	.16	.850	.19	.30	1.95	99.7
D SA43386	58.2	15.5	.64	3.31	4.96	1.12	12.1	.16	.739	.14	.01	3.05	100.0

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA43345	32	<10	82	845
SA43346	<10	15	103	182
SA43347	21	17	57	420
SA43348	17	<10	119	219
SA43349	63	18	150	572
SA43350	44	27	144	478
SA43351	38	<10	169	654
SA43352	20	20	94	796
SA43353	40	18	126	601
SA43354	70	17	117	939
SA43355	81	35	132	727
SA43356	115	<10	133	917
SA43357	46	25	115	458
SA43358	117	32	141	715
SA43359	<10	13	104	102
SA43360	66	<10	123	595
SA43361	18	14	195	256
SA43362	29	30	115	395
SA43363	21	14	48	408
SA43364	19	<10	90	168
SA43365	<10	<10	100	117
SA43366	77	14	124	717
SA43367	120	<10	144	828
SA43368	22	33	250	302
SA43369	<10	<10	45	127
SA43370	33	22	132	405
SA43371	58	15	160	466
SA43372	20	33	124	270
SA43373	11	18	151	583
SA43374	26	11	163	1260
SA43375	29	19	131	278
SA43376	<10	23	153	209
SA43377	26	25	161	258
SA43378	24	23	280	287
SA43379	19	36	168	260
SA43380	12	27	193	232
SA43381	11	39	314	210
SA43382	<10	<10	145	187
SA43383	32	41	284	385
SA43384	31	42	292	572
SA43385	135	43	344	631
SA43386	21	24	157	323
SA43387	37	46	309	270
SA43388	14	36	233	487
SA43389	16	17	185	224

D - QUALITY CONTROL DUPLICATE

SAMPLE \ PPM	RB	Y	ZR	BA
D SA43345	16	11	84	841
D SA43358	121	23	133	767
D SA43372	38	21	122	281
D SA43386	34	17	151	314

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23709

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
28-Jul-93

REF. FILE 15570-R5

Total Pages 3

30 ROCKS Proj. F.BROOK 6270

	METHOD	DETECTION LIMIT
AU PPB	FADCP	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 12-Aug-93

CERTIFIED BY .....

per Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA05518	3	8.0	.2	15	<5	63.6	--
SA05519	11	150	<.1	9	5	43.7	--
SA05520	13	57.2	<.1	18	9	58.0	--
SA05521	3	73.4	.2	11	8	24.7	--
SA05522	40	80.2	.2	24	14	62.1	--
SA05523	27	7.0	<.1	15	12	74.5	--
SA05524	90	22.3	.2	21	15	105	--
SA05525	118	81.7	.2	19	10	61.5	--
SA05526	3	14.6	<.1	5	9	19.9	--
SA05527	70	19.9	<.1	21	15	91.3	--
SA05528	2	13.9	<.1	5	11	56.6	--
SA05529	6	22.5	.1	15	13	38.5	--
SA05530	8	13.4	<.1	4	10	22.0	--
SA05531	19	25.3	<.1	11	14	70.8	--
SA05532	29	18.9	<.1	29	11	135	--
SA43390	<1	12.5	<.1	7	11	46.2	--
SA43391	1	35.1	.2	8	9	64.4	--
SA43392	8	13.3	<.1	9	8	52.6	--
SA43393	11	37.4	<.1	13	9	65.5	--
SA43394	18	31.5	.2	24	13	89.0	--
SA43395	32	15.2	<.1	9	6	63.2	--
SA43396	14	25.9	.2	17	11	64.1	--
SA43397	18	17.9	<.1	20	9	60.7	--
SA43398	38	69.4	<.1	16	14	99.4	--
SA43399	12	17.0	<.1	8	7	38.8	--
SA43400	14	9.9	.3	13	8	52.6	--
SA43412	119	222	<.1	--	11	62.2	96
SA43413	9	21.7	.3	--	10	26.3	26
SA43414	13	33.2	<.1	--	10	82.5	8
SA43415	29	27.3	.2	--	13	189	29
D SA05518	4	8.0	<.1	16	<5	64.0	--
D SA05530	8	13.7	.1	5	8	22.2	--
D SA43399	12	17.1	<.1	9	7	39.3	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA05518	61.7	14.4	2.37	1.99	6.31	.66	8.00	.14	1.34	.46	.02	2.35	99.8
SA05519	63.8	13.6	3.65	1.22	5.26	2.84	5.64	.10	.874	.20	.03	2.70	100.1
SA05520	61.0	14.3	2.99	3.26	5.01	.75	9.38	.14	1.09	.23	.01	2.35	100.6
SA05521	71.2	13.4	.85	.88	5.96	.90	4.62	.05	.489	.10	.03	1.15	99.7
SA05522	53.9	16.1	4.51	3.52	5.18	1.28	11.3	.12	1.13	.24	<.01	2.30	99.7
SA05523	55.4	15.2	3.76	4.07	5.91	1.36	10.6	.15	1.12	.23	<.01	1.80	99.7
SA05524	55.1	15.3	3.34	6.24	4.68	1.49	9.51	.20	.894	.19	.02	2.65	99.7
SA05525	52.4	17.0	1.28	6.40	5.03	.76	11.0	.11	.732	.15	.01	4.50	99.4
SA05526	71.9	13.2	.56	1.22	5.43	1.49	3.99	.04	.476	.10	.02	1.20	99.7
SA05527	53.9	14.7	5.88	5.49	4.34	.55	10.3	.17	1.26	.22	.02	2.65	99.5
SA05528	58.6	15.5	5.58	1.08	2.90	4.78	8.19	.14	.962	.28	<.01	1.65	99.8
SA05529	69.0	13.5	1.61	1.09	6.58	.70	5.15	.06	.636	.15	.02	1.20	99.8
SA05530	69.3	13.7	1.90	1.05	4.38	2.49	3.50	.05	.647	.13	.02	2.65	99.9
SA05531	60.6	14.8	4.46	2.34	6.85	.47	5.86	.18	1.16	.18	.01	2.70	99.7
SA05532	50.3	18.0	5.67	3.16	4.37	2.05	11.2	.26	1.56	.24	<.01	2.35	99.3
SA43390	67.1	11.5	1.82	1.11	5.85	.15	9.77	.09	1.04	.35	.03	1.15	100.0
SA43391	67.8	10.4	4.14	1.64	3.39	1.78	5.58	.15	.933	.33	.02	3.65	99.9
SA43392	66.1	13.2	1.91	1.34	4.87	2.80	6.58	.11	.848	.18	.02	1.20	99.3
SA43393	61.4	14.8	2.72	1.49	4.67	4.14	6.42	.13	.946	.21	.01	2.40	99.5
SA43394	56.5	15.4	5.98	3.02	3.42	.70	10.6	.16	1.20	.26	<.01	3.00	100.3
SA43395	66.0	15.1	.83	2.02	6.24	1.76	5.41	.08	.553	.08	.02	1.80	100.0
SA43396	56.2	15.3	3.96	3.38	5.19	1.57	10.6	.16	1.14	.23	<.01	2.00	99.8
SA43397	56.6	15.6	5.22	3.11	4.17	1.43	9.70	.16	1.18	.25	<.01	2.30	99.8
SA43398	57.4	15.1	2.67	3.66	5.57	.78	10.6	.14	1.10	.23	.01	2.30	99.6
SA43399	59.0	14.5	3.09	2.30	5.96	2.41	9.09	.12	1.14	.21	<.01	1.35	99.2
SA43400	57.0	14.8	7.64	2.56	3.02	.89	9.85	.12	1.08	.22	.01	2.80	100.1
D SA05518	61.8	14.4	2.37	2.00	6.33	.66	8.04	.14	1.33	.46	.02	2.20	99.8
D SA05531	60.6	14.8	4.46	2.31	6.79	.49	5.88	.18	1.16	.18	.01	2.85	99.7

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA05518	18	45	238	241
SA05519	70	40	281	819
SA05520	20	27	190	270
SA05521	21	18	285	309
SA05522	31	15	138	397
SA05523	39	30	154	340
SA05524	39	<10	133	426
SA05525	31	<10	95	210
SA05526	43	62	289	351
SA05527	<10	26	156	224
SA05528	91	39	234	1150
SA05529	24	36	300	166
SA05530	56	56	276	509
SA05531	<10	25	129	177
SA05532	50	43	178	707
SA43390	<10	25	180	101
SA43391	36	40	160	562
SA43392	63	41	274	755
SA43393	98	39	309	934
SA43394	10	16	218	292
SA43395	35	22	203	455
SA43396	42	35	204	425
SA43397	66	19	211	322
SA43398	17	18	152	295
SA43399	65	19	205	221
SA43400	26	31	176	271
D SA05518	20	36	233	253
D SA05531	18	23	138	171

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23785

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
4-Aug-93

REF. FILE 15616-U6

Total Pages 3

32 ROCKS Proj. FIRSTBROOK 6270

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 19-Aug-93

CERTIFIED BY .....

per Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA43416	83	362	.3	--	10	93.2	<2
SA43417	20	401	<.1	--	15	32.2	<2
SA05533	115	39.3	.1	27	12	56.6	--
SA05534	83	101	.6	28	14	87.7	--
SA05535	10	7.2	<.1	5	12	18.9	--
SA05536	7	202	<.1	9	14	52.0	--
SA05537	64	17.7	<.1	54	10	118	--
SA05538	10	48.9	<.1	8	11	61.7	--
SA05539	60	90.3	.1	16	11	84.5	--
SA05569	45	8.0	<.1	10	9	38.7	--
SA05570	54	79.5	.5	14	12	71.1	--
SA05571	25	32.9	.2	9	12	141	--
SA05572	25	5.9	.2	45	20	85.4	--
SA05573	24	20.2	<.1	15	10	33.1	--
SA05574	15	49.9	<.1	23	12	16.6	--
SA05575	8	8.1	<.1	15	11	10.9	--
SA05576	25	155	.4	26	11	129	--
SA05577	79	43.6	<.1	11	10	47.7	--
SA05578	8	27.1	<.1	5	12	22.6	--
SA05579	68	10.9	<.1	18	10	99.8	--
SA05580	60	33.6	<.1	22	11	69.0	--
SA05581	4	19.6	<.1	4	10	11.5	--
SA05582	72	26.6	<.1	22	9	63.0	--
SA05583	12	5.9	<.1	13	11	10.8	--
SA05584	59	29.8	.2	16	12	51.6	--
SA05585	60	69.2	<.1	24	12	45.3	--
SA05586	<1	3.0	<.1	2	12	8.3	--
SA05587	88	13.3	.3	37	10	96.3	--
SA05588	10	19.2	.2	11	12	45.4	--
SA05589	15	258	.2	70	10	27.8	--
SA05590	8	9.4	<.1	12	14	21.2	--
SA05591	10	36.1	.1	13	10	34.6	--
D SA43416	80	355	.7	--	10	90.2	<2
D SA05572	24	5.6	.5	43	28	81.6	--
D SA05584	58	29.2	<.1	16	17	50.6	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA05533	55.0	14.9	6.66	4.99	4.30	.95	8.82	.14	.940	.18	.04	2.60	99.6
SA05534	55.6	14.9	1.69	5.05	3.85	1.33	11.9	.15	.782	.20	.02	4.30	99.8
SA05535	68.2	14.1	1.18	1.02	5.44	1.49	4.32	.05	.621	.14	.02	1.75	98.4
SA05536	68.3	13.5	1.54	1.38	5.47	1.40	4.80	.08	.498	.13	.03	2.25	99.5
SA05537	57.8	14.5	4.04	2.64	6.10	.31	7.82	.16	1.47	.26	.02	4.20	99.4
SA05538	65.6	14.9	.85	1.16	5.85	1.79	5.72	.09	.687	.15	.02	1.40	98.3
SA05539	53.6	15.2	4.65	4.84	5.16	1.28	10.0	.20	1.24	.21	.02	2.60	99.1
SA05569	56.6	15.3	5.72	4.28	5.64	1.40	8.01	.16	.997	.20	.04	1.20	99.6
SA05570	55.1	13.7	4.78	5.63	5.96	.27	9.10	.17	.879	.18	.02	2.25	98.1
SA05571	57.3	16.8	1.40	2.62	7.28	.40	9.44	.17	1.20	.20	<.01	2.15	99.0
SA05572	56.7	15.7	3.73	2.93	7.78	.22	8.26	.15	1.24	.20	<.01	1.50	98.4
SA05573	59.6	15.2	1.06	2.75	6.80	.26	7.78	.08	1.19	.22	.01	3.15	98.1
SA05574	64.4	13.3	2.85	1.78	6.47	.15	6.28	.07	1.04	.19	.02	3.15	99.7
SA05575	69.0	14.2	.74	1.02	6.81	.92	4.70	.05	.548	.13	.04	1.75	100.0
SA05576	56.3	15.6	2.70	3.70	5.72	.85	9.34	.22	1.24	.20	<.01	2.40	98.3
SA05577	54.9	14.1	6.18	4.39	5.11	1.24	9.38	.23	1.05	.23	.04	1.80	98.7
SA05578	69.3	14.0	.90	1.70	6.21	.70	5.10	.06	.541	.13	.03	1.80	100.5
SA05579	54.3	14.6	4.71	6.27	4.02	.80	10.1	.24	.961	.19	.03	2.60	98.9
SA05580	55.5	16.6	5.12	3.26	5.05	1.20	8.67	.19	1.47	.24	.02	2.15	99.5
SA05581	73.6	13.7	.19	.97	3.69	2.36	2.96	.03	.466	.10	.02	2.05	100.2
SA05582	52.7	17.6	6.68	2.17	5.45	1.40	8.58	.16	1.62	.25	.02	1.85	98.6
SA05583	67.1	13.9	.44	1.66	6.21	.66	7.02	.03	.884	.19	.02	1.70	99.9
SA05584	59.0	16.5	2.36	1.61	8.46	.42	8.53	.12	1.51	.22	.02	1.25	100.0
SA05585	54.4	16.6	9.62	2.10	4.40	.21	8.59	.13	1.47	.24	.03	1.15	99.0
SA05586	65.1	18.9	1.36	.14	11.0	.45	.51	.03	.542	.12	<.01	1.10	99.3
SA05587	54.0	18.0	3.95	3.29	5.90	.60	8.88	.15	1.68	.26	.02	3.25	100.0
SA05588	66.9	13.8	4.12	1.54	4.16	1.00	6.44	.11	.811	.18	.03	1.45	100.6
SA05589	54.5	17.0	2.98	2.31	7.84	.25	9.06	.06	.938	.22	<.01	2.35	97.6
SA05590	66.5	14.2	.52	2.35	6.07	.42	6.44	.05	.847	.18	.03	2.40	100.1
SA05591	65.5	14.5	1.99	1.59	5.68	1.35	6.01	.08	.869	.19	.02	1.45	99.3
D SA05533	55.3	15.1	6.75	5.03	4.35	.93	8.84	.15	.974	.19	.04	2.55	100.3
D SA05575	69.4	14.3	.75	1.03	6.84	.91	4.70	.04	.556	.13	.05	1.80	100.6
D SA05589	54.7	17.1	2.99	2.32	7.84	.26	9.12	.07	.957	.22	<.01	2.30	97.9

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA05533	26	11	126	255
SA05534	49	18	133	242
SA05535	63	36	291	292
SA05536	45	26	243	369
SA05537	<10	47	193	70
SA05538	38	30	315	412
SA05539	41	15	161	277
SA05569	57	14	129	392
SA05570	21	<10	122	111
SA05571	21	13	149	115
SA05572	<10	<10	144	108
SA05573	<10	32	148	78
SA05574	15	42	133	87
SA05575	40	39	262	174
SA05576	38	31	155	239
SA05577	34	12	113	522
SA05578	<10	46	253	191
SA05579	32	<10	141	242
SA05580	56	16	164	277
SA05581	80	45	300	470
SA05582	33	31	174	351
SA05583	31	27	341	179
SA05584	12	25	192	103
SA05585	<10	26	174	<50
SA05586	<10	84	321	85
SA05587	28	48	184	224
SA05588	25	49	304	405
SA05589	13	69	367	89
SA05590	18	36	327	132
SA05591	43	38	329	407
D SA05533	36	13	142	275
D SA05575	26	35	271	171
D SA05589	14	58	379	76

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23954

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
18-Aug-93

REF. FILE 15786-B4

Total Pages 4

40 ROCKS Proj. FIRSTBROOK 6-270

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 01-Sep-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA43419	37	1130	.5	--	11	63.2	109
SA43420	4	171	<.1	--	6	74.2	<2
SA43421	100	1280	4.3	--	9	48.2	<2
SA48401	6	10.8	.3	11	7	13.8	--
SA48402	91	6.4	.2	14	9	126	--
SA48403	6	6.3	<.1	4	7	34.4	--
SA48404	20	38.5	<.1	16	7	56.9	--
SA48405	5	5.6	.3	5	28	38.5	--
SA48406	26	37.7	.1	9	8	76.7	--
SA48407	25	27.9	.3	13	8	700	--
SA48408	20	17.9	.1	6	5	115	--
SA48409	87	2.9	.1	14	31	109	--
SA48410	84	2.6	.6	16	16	99.6	--
SA48411	3	4.4	.4	3	9	8.5	--
SA48412	24	67.7	.3	10	8	35.8	--
SA48413	6	20.3	.3	4	12	37.5	--
SA48414	54	10.8	.4	12	6	123	--
SA48415	28	10.8	.5	18	12	114	--
SA48416	35	9.8	<.1	12	11	84.7	--
SA48417	41	42.9	<.1	26	10	60.3	--
SA48418	3	4.3	<.1	6	10	50.3	--
SA48419	36	71.7	<.1	16	7	114	--
SA48420	74	19.2	<.1	16	7	91.1	--
SA48421	90	8.3	<.1	18	7	66.7	--
SA48422	7	72.0	.3	6	<5	47.0	--
SA48423	83	4.1	.2	22	<5	117	--
SA48424	34	32.8	.4	14	6	53.5	--
SA48425	80	3.4	.3	17	7	385	--
SA48426	12	4.4	.1	6	<5	11.4	--
SA48427	13	35.4	.3	36	13	23.7	--
SA48428	8	12.8	<.1	8	11	37.7	--
SA48429	98	1.6	<.1	28	9	410	--
SA48430	25	120	.2	15	28	21.6	--
SA48431	39	29.2	.5	16	17	99.1	--
SA48432	28	184	.9	25	28	35.2	--
SA49846	22	6.5	.3	12	7	55.0	--
SA49847	26	117	.2	19	14	86.2	--
SA49848	18	67.7	<.1	11	13	60.9	--
SA49849	98	1.4	.3	23	14	105	--
SA49850	7	10.9	<.1	4	10	16.3	--
D SA43421	--	--	--	--	6	--	--
D SA43419	38	1100	.3	--	--	62.0	108
D SA48412	--	--	--	--	6	--	--
D SA48410	82	2.5	.2	19	--	94.5	--
D SA48427	--	--	--	--	14	--	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
D SA48422	7	68.9	<.1	5	--	46.6	--
D SA49849	--	--	--	--	12	--	--
D SA49847	24	113	<.1	19	--	85.9	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA48401	73.0	13.0	.20	1.05	6.32	.60	3.63	.03	.402	.09	.04	1.35	99.8
SA48402	51.9	13.9	3.92	6.16	5.15	.38	13.7	.33	.997	.23	.03	2.25	99.0
SA48403	72.2	13.7	.26	.94	7.10	.62	2.96	.06	.412	.08	.04	1.40	99.8
SA48404	57.9	15.0	3.54	3.24	6.86	.93	10.0	.14	.983	.21	.01	1.00	99.9
SA48405	71.5	13.3	1.61	.81	4.70	1.85	3.89	.08	.416	.08	.04	1.20	99.6
SA48406	55.6	14.5	4.37	3.92	5.79	1.69	9.44	.17	.999	.38	<.01	2.05	99.0
SA48407	55.1	15.5	2.96	4.06	5.98	.90	10.1	.23	1.18	.26	.01	2.60	98.9
SA48408	66.6	14.2	1.79	1.86	7.02	1.27	4.42	.11	.517	.08	.02	1.25	99.2
SA48409	52.1	14.2	6.82	4.37	5.14	.79	11.7	.42	1.02	.23	.03	2.60	99.5
SA48410	52.1	14.6	4.64	3.72	6.21	.30	14.4	.27	.920	.23	.03	2.35	99.8
SA48411	74.0	12.6	.67	.68	5.05	1.55	3.34	.03	.270	.05	.03	1.40	99.8
SA48412	53.6	15.1	4.50	5.03	5.66	.90	10.3	.21	1.11	.26	.01	1.75	98.5
SA48413	68.9	14.0	.98	1.27	6.72	.52	5.03	.09	.589	.14	.03	1.30	99.7
SA48414	52.7	15.1	4.96	6.45	4.86	1.06	9.54	.20	1.02	.25	.01	2.50	98.7
SA48415	57.4	14.7	1.67	3.41	5.44	.50	12.0	.15	1.09	.24	.02	2.85	99.5
SA48416	55.3	15.5	3.19	3.93	6.18	.99	10.4	.18	1.13	.23	<.01	2.35	99.4
SA48417	56.2	14.9	7.11	3.52	2.99	.71	10.3	.18	1.08	.23	.03	2.80	100.1
SA48418	70.1	13.4	.67	1.17	4.53	1.89	4.60	.06	.461	.10	.03	1.45	98.6
SA48419	55.9	15.4	3.07	4.01	5.85	.47	10.2	.16	1.13	.24	.01	2.10	98.6
SA48420	56.1	15.7	2.41	5.30	4.53	1.09	9.40	.20	.965	.25	.03	3.15	99.2
SA48421	55.0	16.1	4.36	3.49	6.47	.67	8.97	.20	1.19	.25	.03	1.95	98.8
SA48422	70.1	13.5	1.02	1.12	6.62	.67	3.63	.08	.581	.14	.04	1.40	99.0
SA48423	50.4	13.9	3.78	5.01	4.91	.36	15.1	.32	1.02	.22	.02	3.25	98.3
SA48424	62.8	15.4	2.01	2.82	5.92	1.19	5.92	.10	.631	.09	.02	2.10	99.1
SA48425	52.7	13.1	6.42	4.74	5.38	.81	11.8	.45	.922	.22	.03	2.35	99.0
SA48426	70.6	13.3	.41	.80	7.18	.35	4.97	.03	.499	.13	.03	1.50	99.9
SA48427	55.7	14.5	6.52	3.17	5.27	1.40	10.3	.13	.812	.19	.02	1.15	99.2
SA48428	67.1	14.0	1.32	1.40	6.04	1.58	5.65	.07	.576	.13	.03	1.35	99.4
SA48429	53.2	15.9	3.50	3.57	6.68	.25	11.1	.38	1.11	.25	.03	2.35	98.4
SA48430	65.7	14.8	1.92	2.29	6.90	1.01	5.00	.08	.533	.08	.03	.95	99.4
SA48431	50.3	15.0	5.99	6.06	4.29	1.48	11.1	.28	1.24	.28	.02	2.55	98.7
SA48432	58.6	14.8	2.88	3.49	6.35	1.17	7.87	.12	1.03	.20	.01	2.25	98.8
SA49846	55.3	15.6	4.37	3.59	6.03	1.19	9.21	.16	1.09	.23	<.01	1.35	98.2
SA49847	56.3	14.8	3.97	3.84	6.26	1.21	9.12	.20	1.06	.21	<.01	2.00	99.0
SA49848	71.2	12.2	.80	1.42	5.32	1.65	4.53	.10	.476	.07	.03	1.40	99.3
SA49849	51.1	13.5	3.37	4.56	5.76	.16	17.3	.30	.894	.21	.03	1.75	99.0
SA49850	69.4	13.5	.29	1.45	5.66	1.03	5.60	.04	.478	.11	.03	1.90	99.6
D SA48401	73.0	13.0	.20	1.07	6.36	.61	3.61	.03	.412	.09	.04	1.28	99.8
D SA48414	52.9	15.2	4.98	6.48	4.84	1.07	9.56	.20	1.03	.25	.01	2.30	98.9
D SA48428	67.1	13.9	1.31	1.38	5.98	1.59	5.61	.07	.577	.13	.03	1.30	99.1

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA48401	34	35	269	191
SA48402	<10	11	137	178
SA48403	28	41	307	172
SA48404	18	14	127	251
SA48405	46	32	218	791
SA48406	28	22	160	230
SA48407	20	<10	190	257
SA48408	36	25	160	246
SA48409	21	<10	131	205
SA48410	<10	24	132	94
SA48411	51	48	323	557
SA48412	31	23	159	258
SA48413	19	41	254	330
SA48414	32	14	132	501
SA48415	16	30	226	204
SA48416	33	17	150	346
SA48417	27	14	156	289
SA48418	52	32	282	672
SA48419	<10	21	149	207
SA48420	45	<10	157	405
SA48421	12	29	168	804
SA48422	20	15	222	335
SA48423	<10	17	145	169
SA48424	25	20	168	478
SA48425	17	<10	106	262
SA48426	<10	32	300	127
SA48427	<10	11	141	436
SA48428	26	40	262	698
SA48429	21	15	151	188
SA48430	28	20	194	481
SA48431	29	31	152	1080
SA48432	32	<10	164	524
SA49846	33	18	142	477
SA49847	17	29	135	279
SA49848	36	23	151	462
SA49849	17	19	120	113
SA49850	27	30	299	253
D SA48401	25	26	280	205
D SA48414	19	17	147	482
D SA48428	36	59	250	709

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 23863

TO: FALCONBRIDGE LIMITED
ATTN: STEVE KORMOS
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
9-Aug-93

REF. FILE 15671-M5

Total Pages 3

30 ROCKS Proj. FIRSTBROOK 6-270

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 23-Aug-93

CERTIFIED BY .....
per Jean H.L. Opdebeeck, General Manager

SAMPLE	NI PPM	CU PPM	AG PPM	CO PPM	AU PPB	ZN PPM	PB PPM
SA43418	65	65.0	<.1	--	15	48.5	<2
SA48489	4	8.5	<.1	11	22	20.8	--
SA48490	35	8.8	<.1	19	18	39.3	--
SA48491	3	14.8	.3	2	19	8.7	--
SA48492	40	241	<.1	16	27	81.5	--
SA48493	41	42.8	.2	13	22	25.7	--
SA48494	4	7.4	.5	5	22	11.7	--
SA48495	35	23.7	.2	24	22	108	--
SA48496	31	24.0	<.1	13	17	94.7	--
SA48497	5	18.1	<.1	4	18	30.1	--
SA48498	39	38.5	<.1	19	17	89.2	--
SA48499	17	72.1	.5	17	18	713	--
SA48500	11	39.3	<.1	14	17	15.0	--
SA49837	67	61.5	<.1	27	22	46.4	--
SA49838	45	17.3	<.1	15	10	53.4	--
SA49839	37	30.6	<.1	20	17	55.8	--
SA49840	2	13.6	.1	2	14	17.5	--
SA49841	24	12.7	<.1	11	17	46.1	--
SA49842	35	54.6	<.1	18	12	43.1	--
SA49843	22	4.1	<.1	12	12	48.8	--
SA49844	12	14.4	.4	7	12	1270	--
SA49845	44	54.4	<.1	15	10	60.5	--
SA05592	14	43.9	<.1	10	10	19.7	--
SA05593	3	8.8	<.1	2	14	8.7	--
SA05594	15	31.1	<.1	19	12	57.7	--
SA05595	29	6.8	<.1	15	13	42.7	--
SA05596	11	17.0	.4	11	10	55.8	--
SA05597	36	48.1	<.1	9	11	30.3	--
SA05598	3	2.1	<.1	6	9	23.1	--
SA05599	34	94.1	.1	17	8	22.9	--
D SA43418	63	63.6	<.1	--	9	47.7	<2
D SA48500	11	38.7	<.1	14	19	15.1	--
D SA05594	14	29.4	<.1	18	10	55.4	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA48489	66.9	14.3	.86	1.64	6.89	.39	5.22	.05	.624	.16	.04	2.75	99.9
SA48490	58.5	14.5	2.95	3.53	5.85	.26	9.04	.11	1.04	.23	<.01	3.85	99.9
SA48491	72.9	12.3	.51	.79	4.98	1.64	3.91	.03	.314	.06	.04	.90	98.5
SA48492	57.5	14.8	2.45	4.12	5.24	.19	10.3	.13	1.08	.22	<.01	4.10	100.2
SA48493	60.8	14.9	.94	3.46	6.25	.30	8.36	.06	1.07	.23	.02	3.10	99.5
SA48494	70.0	14.2	.22	1.43	5.42	1.71	3.41	.03	.571	.12	.02	1.95	99.2
SA48495	57.0	15.3	1.29	4.88	4.77	1.03	10.0	.16	1.10	.24	.01	3.55	99.4
SA48496	56.5	14.8	4.51	3.40	4.76	.96	9.37	.17	1.03	.21	.02	2.35	98.1
SA48497	74.9	12.6	.41	.59	5.46	1.65	3.13	.04	.279	.05	.04	1.05	100.3
SA48498	57.4	14.6	3.53	3.93	5.29	1.03	9.35	.17	1.03	.22	.01	2.15	98.8
SA48499	57.5	15.7	2.61	2.91	6.51	.61	10.7	.15	1.17	.24	.02	2.30	100.5
SA48500	68.6	14.1	.80	1.88	6.34	.61	5.28	.05	.574	.14	.03	1.40	99.9
SA49837	52.2	13.2	4.59	6.17	3.52	.20	11.9	.14	.802	.33	.08	7.10	100.3
SA49838	59.2	14.7	1.54	4.13	5.02	.77	10.7	.11	1.05	.23	.01	2.20	99.7
SA49839	57.8	14.7	3.25	3.92	5.28	.80	10.4	.15	1.02	.22	.02	1.95	99.6
SA49840	73.3	12.9	.52	.39	5.80	1.81	3.06	.03	.268	.05	.04	1.80	100.1
SA49841	56.1	15.4	4.30	3.23	6.29	1.37	8.68	.16	1.03	.22	<.01	2.80	99.6
SA49842	59.9	14.2	5.10	2.12	4.68	1.86	8.44	.14	1.01	.24	.03	1.55	99.4
SA49843	55.9	15.5	3.87	3.15	6.53	1.00	8.93	.16	1.08	.21	<.01	2.95	99.3
SA49844	68.1	14.0	.62	1.18	6.78	.76	5.24	.05	.566	.13	.03	2.55	100.1
SA49845	58.3	15.7	1.44	3.68	6.43	.33	9.71	.12	.749	.15	<.01	3.20	99.8
SA05592	68.2	14.0	1.04	1.97	5.43	.74	5.79	.05	.877	.19	.03	1.85	100.2
SA05593	73.4	12.5	.38	.54	4.99	2.01	3.13	.03	.283	.05	.03	2.85	100.3
SA05594	56.8	15.0	4.30	2.74	5.39	.48	10.1	.15	1.12	.23	.02	2.10	98.5
SA05595	61.1	13.9	.66	3.93	5.14	.19	10.4	.09	1.01	.22	.01	3.60	100.3
SA05596	64.8	14.3	4.32	1.49	4.52	.89	5.72	.10	.815	.19	.03	2.80	100.1
SA05597	56.1	14.6	1.96	3.57	5.64	.13	12.6	.11	1.08	.21	.01	3.90	99.9
SA05598	62.0	17.8	1.74	1.72	9.14	.27	3.83	.06	.758	.16	<.01	2.60	100.1
SA05599	51.0	13.9	8.55	6.43	2.22	1.87	11.6	.17	.860	.09	.04	3.20	100.0
D SA48489	66.5	14.2	.84	1.62	6.86	.40	5.18	.05	.622	.15	.03	2.60	99.1
D SA49838	58.6	14.8	1.56	4.12	4.96	.77	10.8	.11	1.05	.23	.01	2.02	99.1
D SA05598	61.7	17.7	1.75	1.71	9.10	.24	3.80	.06	.745	.16	<.01	2.85	99.9

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA48489	<10	29	254	229
SA48490	<10	31	213	123
SA48491	39	34	317	397
SA48492	12	75	163	130
SA48493	<10	42	205	111
SA48494	49	44	266	399
SA48495	16	23	233	313
SA48496	29	13	131	355
SA48497	28	52	323	604
SA48498	24	37	132	313
SA48499	27	27	213	220
SA48500	28	34	258	237
SA49837	21	114	133	99
SA49838	10	35	202	231
SA49839	<10	43	125	255
SA49840	59	47	356	539
SA49841	36	24	135	292
SA49842	50	26	118	588
SA49843	27	17	136	306
SA49844	20	43	262	233
SA49845	30	21	153	142
SA05592	34	62	352	175
SA05593	46	41	333	376
SA05594	14	25	201	215
SA05595	<10	32	208	90
SA05596	<10	52	315	372
SA05597	<10	<10	151	97
SA05598	<10	67	361	107
SA05599	66	21	66	237
D SA48489	<10	42	245	214
D SA49838	26	23	203	245
D SA05598	<10	70	346	83

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 24094

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
30-Aug-93

REF. FILE 15936-P7

Total Pages 4

44 ROCKS Proj. FIRSTBROOK

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 14-Sep-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
SA43104	5	20	65	9.5	101	<.1	--
SA43105	10	13	79	22.7	31.3	<.1	--
SA43106	12	14	13	78.0	29.0	<.1	--
SA43107	22	59	54	293	99.0	<.1	--
SA43108	10	21	51	22.6	33.5	<.1	--
SA43109	14	15	17	211	28.2	<.1	--
SA43110	10	7	15	9.2	20.6	<.1	--
SA43111	12	25	58	325	69.5	<.1	--
SA43112	14	14	35	12.4	24.6	<.1	--
SA43113	20	19	123	45.0	33.2	<.1	--
SA43114	14	19	18	63.5	21.4	<.1	--
SA43115	7	7	6	12.6	25.7	<.1	--
SA43116	6	28	80	13.1	45.9	<.1	--
SA43117	<5	26	17	126	29.6	<.1	--
SA43118	<5	23	75	14.1	73.9	<.1	--
SA43119	5	26	66	415	29.5	<.1	--
SA43120	<5	19	82	44.7	66.5	<.1	--
SA43121	<5	18	53	33.6	40.7	<.1	--
SA43122	5	14	19	6.5	6.8	<.1	--
SA43123	<5	31	97	7.3	62.1	<.1	--
SA43124	<5	<1	7	8.1	5.0	<.1	--
SA43125	<5	15	51	25.9	56.7	<.1	--
SA43126	<5	16	56	28.6	110	<.1	--
SA43422	12	--	25	177	17.3	<.1	12
SA43423	8	--	82	25.0	269	<.1	24
SA43424	13	--	52	57.7	59.8	<.1	6
SA43127	15	29	67	87.9	74.4	<.1	--
SA43128	13	14	28	14.4	25.3	<.1	--
SA43129	10	14	7	147	23.6	<.1	--
SA43130	9	14	14	6.3	25.4	<.1	--
SA43131	5	34	103	55.2	292	<.1	--
SA43132	12	17	48	19.9	27.9	<.1	--
SA43133	12	14	23	11.7	17.8	<.1	--
SA43134	13	12	1	20.7	41.7	<.1	--
SA43135	10	17	52	13.1	40.1	<.1	--
SA43136	8	14	26	72.5	17.2	<.1	--
SA43137	21	24	73	113	86.1	<.1	--
SA43138	6	11	55	145	24.4	<.1	--
SA43139	10	23	75	337	60.5	<.1	--
SA43140	9	18	113	156	46.2	<.1	--
SA43141	<5	20	8	17.2	7.5	<.1	--
SA43142	5	17	62	5.9	21.2	<.1	--
SA43143	10	22	12	75.8	28.6	<.1	--
SA43144	5	8	13	2.5	18.9	<.1	--
D SA43104	8	20	62	9.6	96.6	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
D SA43116	6	28	79	13.0	45.5	<.1	--
D SA43423	8	--	82	23.7	266	<.1	24
D SA43137	25	24	73	116	86.8	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA43104	62.2	14.1	3.49	4.33	5.00	.79	6.80	.14	.569	.13	.03	2.45	100.1
SA43105	61.7	13.4	4.39	4.79	4.26	2.21	6.74	.12	.460	.15	.05	1.70	100.1
SA43106	70.5	12.8	.75	1.61	5.95	.71	4.75	.05	.394	.09	.02	1.65	99.3
SA43107	63.8	11.8	2.06	3.89	3.02	1.51	9.01	.11	.485	.10	.01	2.75	98.6
SA43108	57.5	15.4	4.53	4.31	4.84	1.14	7.97	.13	.689	.15	.02	2.35	99.1
SA43109	69.2	12.3	1.12	2.12	5.24	.67	5.28	.05	.349	.09	.02	1.95	98.4
SA43110	70.5	13.8	.47	1.53	7.03	.31	2.76	.03	.422	.09	.01	1.50	98.5
SA43111	57.3	15.3	2.65	3.16	5.22	1.33	10.1	.08	.651	.15	.02	2.85	98.9
SA43112	57.7	14.7	4.12	3.91	6.36	1.46	7.97	.12	.596	.12	.02	1.25	98.4
SA43113	51.7	11.5	7.98	9.99	2.71	2.04	9.30	.17	.605	.30	.11	1.90	98.4
SA43114	66.2	14.5	2.20	1.36	6.14	2.11	3.57	.05	.406	.09	.01	1.70	98.4
SA43115	66.9	13.9	1.88	1.37	7.53	.51	5.39	.05	.633	.18	.01	1.00	99.4
SA43116	61.1	14.7	2.60	4.54	6.50	.26	6.85	.10	.593	.14	.02	1.90	99.3
SA43117	68.9	13.4	.46	1.23	7.13	.28	5.75	.04	.693	.18	.02	1.40	99.6
SA43118	61.8	13.8	4.49	4.17	2.60	2.11	7.68	.10	.554	.12	.02	1.30	98.8
SA43119	60.2	14.4	4.98	3.71	4.34	1.75	7.63	.09	.579	.13	.03	1.40	99.3
SA43120	59.0	15.6	5.84	3.80	3.51	1.65	7.46	.10	.626	.15	.02	1.35	99.2
SA43121	61.3	14.9	4.94	3.76	3.80	1.61	7.07	.11	.555	.12	.02	1.10	99.4
SA43122	76.2	12.3	.30	.72	4.33	1.99	2.30	.04	.137	.03	<.01	1.25	99.7
SA43123	48.7	19.2	4.00	6.30	3.85	1.90	9.25	.08	.694	.15	.01	4.90	99.1
SA43124	77.7	13.0	.76	.30	3.45	2.45	1.04	.02	.018	.02	.02	1.20	100.0
SA43125	58.7	15.6	5.19	4.51	4.87	.69	7.30	.16	.591	.12	.02	1.60	99.4
SA43126	58.9	14.2	4.09	4.94	2.29	3.79	7.07	.14	.520	.12	.01	2.15	98.4
SA43127	65.4	11.6	1.46	3.57	3.96	1.53	8.29	.07	.472	.11	.02	2.30	98.9
SA43128	58.1	16.1	4.91	3.80	5.67	1.37	7.43	.14	.619	.13	<.01	1.25	99.6
SA43129	69.6	13.8	1.08	1.15	7.33	.44	4.08	.04	.526	.13	.01	1.35	99.6
SA43130	68.9	13.8	.64	2.26	6.36	.39	5.68	.05	.389	.09	<.01	1.65	100.3
SA43131	57.9	14.9	1.14	4.71	5.31	.54	9.47	.12	.656	.15	.01	3.85	98.8
SA43132	60.4	14.2	7.17	3.86	3.27	.97	7.29	.13	.559	.13	.03	1.00	99.1
SA43133	57.5	15.6	5.74	4.00	5.84	1.53	6.80	.11	.626	.13	<.01	.90	98.8
SA43134	67.4	14.0	2.56	1.61	5.00	1.72	5.52	.07	.682	.20	<.01	.85	99.7
SA43135	65.1	13.4	4.67	3.68	3.51	1.35	6.20	.09	.508	.11	.01	1.10	99.8
SA43136	58.7	15.9	9.33	2.21	1.12	4.28	6.32	.12	.544	.12	.02	1.40	100.2
SA43137	58.8	16.1	3.74	4.63	4.05	1.42	7.99	.12	.603	.11	.01	2.15	99.8
SA43138	58.7	15.4	7.84	3.70	3.71	1.09	6.69	.11	.704	.15	.05	1.05	99.3
SA43139	61.3	14.4	2.75	3.84	6.13	.41	6.62	.08	.602	.13	.02	2.00	98.3
SA43140	61.8	16.1	3.83	3.45	3.09	3.12	5.77	.06	.628	.14	.02	1.35	99.5
SA43141	62.8	14.3	3.57	2.84	7.24	1.25	5.57	.09	.549	.16	<.01	.70	99.1
SA43142	63.1	14.2	4.45	3.85	4.04	1.75	6.96	.09	.540	.13	.02	1.10	100.3
SA43143	70.7	13.5	1.08	1.40	6.77	.59	4.25	.05	.408	.09	<.01	1.35	100.2
SA43144	68.7	13.4	.18	1.94	6.73	.21	5.33	.03	.415	.09	<.01	1.80	98.9
D SA43104	61.9	14.0	3.48	4.32	4.95	.81	6.83	.14	.584	.12	.03	2.50	99.7
D SA43117	69.4	13.5	.47	1.22	7.18	.28	5.77	.04	.681	.18	.02	1.45	100.3
D SA43131	57.9	14.9	1.16	4.70	5.33	.54	9.53	.12	.646	.15	.01	3.90	98.9

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA43104	36	<10	150	348
SA43105	62	11	162	650
SA43106	17	13	213	214
SA43107	35	<10	115	462
SA43108	33	16	161	278
SA43109	16	35	223	167
SA43110	12	33	240	117
SA43111	44	20	148	320
SA43112	33	14	190	445
SA43113	39	<10	85	1120
SA43114	33	52	235	430
SA43115	18	33	302	178
SA43116	12	24	188	149
SA43117	<10	36	327	130
SA43118	94	17	175	450
SA43119	42	21	191	566
SA43120	66	25	189	386
SA43121	59	20	172	406
SA43122	53	23	160	297
SA43123	76	23	222	265
SA43124	87	24	67	317
SA43125	13	19	172	302
SA43126	113	22	157	954
SA43127	<10	23	161	440
SA43128	46	15	149	527
SA43129	11	50	276	174
SA43130	<10	41	233	139
SA43131	28	<10	154	207
SA43132	27	13	176	326
SA43133	32	<10	136	403
SA43134	82	23	211	462
SA43135	40	22	147	322
SA43136	107	12	147	516
SA43137	42	<10	175	320
SA43138	50	11	107	296
SA43139	16	19	199	177
SA43140	139	32	201	575
SA43141	<10	32	170	406
SA43142	46	38	211	382
SA43143	13	53	245	148
SA43144	<10	17	232	110
D SA43104	27	14	160	332
D SA43117	<10	24	344	128
D SA43131	21	12	149	188

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 24095

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
30-Aug-93

REF. FILE 15935-P7

Total Pages 3

21 ROCKS Proj. FIRSTBROOK 6-270

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1

DATE 14-Sep-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM
SA48433	<5	11	11	39.9	37.0	<.1
SA48434	6	18	78	11.0	77.3	<.1
SA48435	5	11	19	28.0	15.8	<.1
SA48436	5	12	4	88.6	24.6	<.1
SA48437	12	12	18	13.1	15.2	<.1
SA48438	7	13	42	3.4	45.2	<.1
SA48439	<5	30	228	41.5	44.1	<.1
SA48440	<5	21	203	9.0	42.5	<.1
SA48441	<5	11	41	9.4	26.3	<.1
SA48442	<5	15	85	5.6	42.5	<.1
SA48443	5	10	33	7.8	20.5	<.1
SA48444	7	7	28	9.6	22.9	<.1
SA48445	7	31	90	55.6	100	<.1
SA48446	<5	16	60	19.4	69.4	<.1
SA48447	5	14	36	39.7	53.8	<.1
SA48448	7	19	64	35.0	110	<.1
SA48449	6	8	30	12.1	28.2	<.1
SA48450	39	25	59	204	37.1	<.1
SA43101	7	11	<1	37.4	52.8	<.1
SA43102	6	20	80	5.9	48.6	<.1
SA43103	5	20	64	97.4	50.9	<.1
D SA48433	<5	10	12	39.7	37.4	<.1
D SA48445	7	31	95	57.2	103	<.1

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA48433	70.7	12.9	.97	1.23	2.91	4.62	4.54	.07	.371	.09	<.01	1.55	100.1
SA48434	59.3	14.6	3.42	4.78	4.73	1.17	7.25	.13	.571	.14	.02	2.75	98.9
SA48435	59.7	13.8	4.52	3.88	6.17	2.15	7.71	.13	.541	.11	.01	1.05	99.8
SA48436	71.0	12.8	.45	2.34	5.00	.96	4.67	.04	.397	.12	<.01	2.00	99.8
SA48437	70.1	13.4	.20	1.92	6.41	.61	3.57	.03	.273	.09	<.01	3.50	100.1
SA48438	62.7	14.3	3.33	3.12	5.31	1.45	6.41	.10	.562	.14	.01	1.65	99.2
SA48439	53.7	10.7	5.45	12.1	2.90	2.28	8.15	.14	.456	.27	.16	2.05	98.4
SA48440	53.4	10.2	6.20	12.0	3.61	.91	7.98	.16	.414	.27	.19	2.70	98.1
SA48441	60.9	14.7	7.16	3.87	3.44	1.12	6.64	.12	.551	.11	.02	1.60	100.3
SA48442	54.7	11.6	6.17	8.34	3.21	3.11	8.18	.15	.547	.38	.06	1.85	98.5
SA48443	59.2	14.9	4.77	3.82	5.17	2.23	6.56	.11	.559	.12	<.01	1.30	98.8
SA48444	61.3	14.2	4.78	3.93	5.58	1.71	6.58	.12	.521	.12	.01	.95	99.9
SA48445	56.7	16.1	4.26	5.29	3.27	1.58	8.70	.13	.586	.13	<.01	2.75	99.6
SA48446	59.1	15.3	5.80	4.32	2.97	1.86	7.42	.16	.563	.12	.01	1.75	99.4
SA48447	57.9	15.5	6.01	4.31	4.97	.68	7.84	.16	.706	.18	<.01	1.90	100.2
SA48448	63.5	14.2	3.78	4.06	3.59	1.34	6.37	.13	.532	.11	<.01	2.05	99.7
SA48449	60.5	14.3	6.19	3.75	4.68	.55	6.77	.11	.526	.11	.03	1.40	99.0
SA48450	61.7	14.5	3.83	3.70	6.54	.43	6.35	.11	.559	.12	.02	2.55	100.5
SA43101	65.5	13.9	4.43	1.77	3.56	1.61	5.88	.07	.648	.23	.02	1.50	99.2
SA43102	62.0	14.1	3.86	4.08	3.61	2.31	7.46	.10	.556	.13	.02	1.30	99.6
SA43103	59.2	15.3	5.97	4.16	3.86	1.64	7.81	.11	.629	.13	.02	1.30	100.2
D SA48433	70.4	12.8	.96	1.21	2.93	4.60	4.51	.06	.388	.09	<.01	1.45	99.5
D SA48446	58.8	15.2	5.77	4.28	3.00	1.85	7.36	.16	.570	.12	.01	1.90	99.1

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA48433	105	20	227	630
SA48434	52	21	187	427
SA48435	45	23	178	232
SA48436	28	23	227	206
SA48437	32	<10	112	154
SA48438	54	11	187	357
SA48439	111	16	94	568
SA48440	24	<10	90	427
SA48441	56	22	153	243
SA48442	43	16	113	1220
SA48443	29	43	159	500
SA48444	43	<10	175	445
SA48445	55	30	173	289
SA48446	76	19	145	342
SA48447	23	<10	159	262
SA48448	52	12	145	377
SA48449	<10	24	157	198
SA48450	18	13	176	160
SA43101	67	22	188	442
SA43102	106	23	180	475
SA43103	83	17	154	350
D SA48433	95	33	224	610
D SA48446	73	16	158	337

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 24110

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
7-Sep-93

REF. FILE 16024-K7

Total Pages 4

43 ROCKS Proj. FIRSTBROOK

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 15-Sep-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
SA21304	22	14	20	630	497	.2	--
SA21305	8	18	6	155	181	<.1	--
SA21306	8	18	73	18.5	124	<.1	--
SA21307	11	17	64	12.0	153	<.1	--
SA21308	10	14	47	3.0	71.0	<.1	--
SA21309	6	16	72	43.5	147	<.1	--
SA21310	10	20	76	6.0	93.7	<.1	--
SA21312	8	11	45	8.2	84.3	<.1	--
SA21313	40	35	53	118	76.9	<.1	--
SA21314	6	14	48	6.9	37.5	<.1	--
SA21315	25	14	44	30.7	62.9	<.1	--
SA21316	6	11	54	9.4	61.8	<.1	--
SA21317	14	19	80	13.5	52.2	<.1	--
SA21318	12	11	52	6.2	60.1	<.1	--
SA21319	9	58	64	42.4	155	<.1	--
SA21320	8	19	100	3.4	62.0	<.1	--
SA21321	43	17	50	663	45.6	<.1	--
SA21322	8	15	47	90.3	49.0	<.1	--
SA21323	5	11	43	26.5	33.5	<.1	--
SA21324	6	4	7	38.7	8.8	<.1	--
SA21325	8	15	55	37.4	55.3	<.1	--
SA21326	10	26	77	1.5	54.2	<.1	--
SA21327	65	7	7	134	112	.6	--
SA21328	15	83	32	38.7	44.4	<.1	--
SA21329	10	14	56	23.7	59.9	<.1	--
SA21330	8	25	102	10.5	111	<.1	--
SA21331	13	24	83	24.6	58.5	<.1	--
SA21332	30	19	43	18.5	45.3	<.1	--
SA21333	8	15	39	413	34.2	<.1	--
SA21334	8	11	41	26.8	32.4	<.1	--
SA21335	6	23	61	76.5	37.3	<.1	--
SA21336	14	16	23	80.7	56.0	<.1	--
SA21337	26	11	49	12.7	28.8	<.1	--
SA21338	12	17	64	17.4	83.3	<.1	--
SA21339	9	13	44	26.8	36.4	<.1	--
SA43145	10	11	10	5.2	20.0	<.1	--
SA43146	10	12	57	2.7	79.2	<.1	--
SA43147	7	15	13	50.3	140	<.1	--
SA43148	16	12	37	17.1	24.9	<.1	--
SA43149	27	18	31	11.5	48.6	<.1	--
SA43150	14	18	30	151	55.4	<.1	--
SA43426	507	--	44	27.1	208	<.1	47
SA43427	20	--	84	1.8	61.0	<.1	5
D SA21304	28	15	21	641	498	.3	--
D SA21317	10	21	83	12.9	57.2	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
D SA21329	12	15	58	24.9	59.7	<.1	--
D SA43146	12	11	55	2.5	79.3	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA21304	58.0	15.1	5.18	3.90	6.12	1.21	7.94	.13	.660	.11	.01	1.10	99.5
SA21305	67.3	14.1	2.53	1.88	5.25	1.31	4.29	.09	.645	.21	.02	1.35	99.1
SA21306	58.3	14.7	6.14	4.93	4.14	1.20	8.13	.12	.704	.17	.03	1.60	100.2
SA21307	61.4	14.1	4.84	4.11	3.98	1.30	7.12	.11	.549	.13	.02	1.40	99.1
SA21308	60.6	14.5	5.84	4.08	3.52	1.74	7.17	.13	.552	.12	.02	1.85	100.2
SA21309	58.9	15.6	5.03	3.71	3.71	2.22	6.96	.10	.581	.12	.02	3.55	100.6
SA21310	59.6	14.6	3.72	4.34	3.22	2.42	7.79	.10	.556	.12	.02	2.60	99.2
SA21312	60.5	14.3	6.03	4.35	3.60	1.47	7.07	.14	.523	.11	.02	1.75	99.9
SA21313	54.0	18.2	3.75	1.83	4.43	4.80	9.24	.10	.815	.11	<.01	2.40	99.8
SA21314	61.0	15.0	5.28	4.00	4.32	1.12	6.76	.10	.538	.12	.02	1.45	99.8
SA21315	61.3	14.3	6.16	4.02	3.07	1.33	7.21	.13	.525	.11	.02	1.60	99.8
SA21316	59.8	14.5	4.12	4.33	5.39	1.84	7.71	.11	.619	.15	.02	1.50	100.2
SA21317	55.1	15.4	5.55	5.89	2.84	2.77	7.93	.11	.677	.16	.02	1.80	98.3
SA21318	62.5	13.9	4.92	4.12	4.23	1.45	6.59	.12	.526	.13	.02	1.15	99.7
SA21319	53.7	15.3	2.18	5.66	4.86	.84	11.3	.22	1.45	.42	<.01	4.45	100.5
SA21320	55.3	16.6	3.34	5.54	7.13	.11	6.72	.10	.655	.16	.01	4.60	100.3
SA21321	59.3	15.0	5.53	2.53	4.19	2.21	7.24	.10	.549	.12	.01	1.40	98.3
SA21322	60.0	14.9	4.29	3.94	5.62	.67	7.05	.13	.557	.12	.02	1.20	98.6
SA21323	63.4	13.8	4.32	3.47	5.14	.76	6.39	.12	.536	.13	.02	1.10	99.2
SA21324	73.5	13.7	.29	.68	8.14	.19	1.22	.02	.415	.10	<.01	.60	98.9
SA21325	62.2	15.2	4.19	2.80	5.10	.85	5.69	.10	.575	.12	.02	1.75	98.7
SA21326	61.0	14.2	.72	5.18	4.80	.08	8.10	.08	.572	.15	.02	3.45	98.4
SA21327	70.4	13.4	.49	.90	5.47	2.35	3.05	.04	.384	.10	<.01	1.45	98.1
SA21328	50.5	5.54	8.78	9.79	1.59	.93	20.5	.19	.172	.06	<.01	1.60	99.7
SA21329	60.4	14.2	3.94	4.21	5.24	.78	7.62	.13	.570	.14	.02	1.40	98.7
SA21330	55.6	15.2	3.89	5.67	3.13	1.76	9.31	.17	.626	.15	.01	2.85	98.5
SA21331	50.1	14.6	8.08	6.97	2.36	1.59	11.1	.18	.939	.24	.02	2.05	98.3
SA21332	65.9	14.4	3.39	1.57	4.74	2.10	5.89	.07	.532	.11	.02	1.25	100.1
SA21333	64.0	15.0	1.82	2.75	7.17	.15	4.31	.08	.553	.11	.01	2.35	98.3
SA21334	60.3	14.1	6.12	3.95	3.59	1.27	7.20	.12	.516	.11	.02	1.05	98.4
SA21335	58.9	14.9	5.31	4.13	4.04	1.18	7.46	.10	.541	.12	.03	1.50	98.3
SA21336	59.0	16.2	3.50	3.52	6.06	1.27	6.59	.10	.480	.13	<.01	1.45	98.4
SA21337	60.5	14.8	4.75	4.07	4.22	1.86	6.98	.10	.569	.13	.01	1.90	100.0
SA21338	57.8	15.2	4.23	4.84	3.39	3.45	7.04	.16	.632	.13	.01	1.80	98.8
SA21339	59.3	15.4	6.52	4.28	4.15	.77	6.56	.12	.548	.12	.03	1.30	99.1
SA43145	69.6	13.5	1.08	1.64	5.56	1.10	4.31	.04	.371	.09	.02	1.80	99.2
SA43146	58.2	14.6	4.26	4.84	5.58	1.33	7.78	.16	.673	.16	.02	1.55	99.3
SA43147	66.0	15.8	1.66	1.72	5.46	2.47	4.74	.08	.459	.11	.04	1.55	100.3
SA43148	61.5	13.7	4.73	3.82	4.47	2.46	6.86	.12	.547	.12	.01	1.15	99.6
SA43149	52.4	14.7	6.48	4.06	2.65	3.72	12.8	.15	1.34	.42	<.01	1.50	100.3
SA43150	60.3	14.6	4.67	3.61	4.43	1.79	7.44	.11	.837	.16	<.01	1.70	99.7
D SA21304	57.8	15.0	5.17	3.91	6.14	1.20	7.87	.14	.662	.11	.01	1.00	99.1
D SA21318	62.4	13.9	4.91	4.14	4.23	1.46	6.62	.12	.528	.14	.02	1.32	99.9
D SA21332	65.7	14.4	3.42	1.59	4.71	2.09	5.93	.08	.533	.12	.02	1.35	100.0

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA21304	20	28	124	336
SA21305	72	30	204	405
SA21306	50	11	165	235
SA21307	61	18	185	303
SA21308	57	27	173	371
SA21309	77	26	165	383
SA21310	106	12	164	404
SA21312	53	<10	162	344
SA21313	128	15	69	724
SA21314	56	16	169	252
SA21315	57	14	159	227
SA21316	37	35	233	613
SA21317	115	14	143	412
SA21318	61	19	170	450
SA21319	32	29	276	267
SA21320	<10	25	187	124
SA21321	54	23	164	593
SA21322	33	26	176	260
SA21323	23	27	191	214
SA21324	<10	51	255	70
SA21325	23	23	182	230
SA21326	<10	<10	174	91
SA21327	51	<10	224	313
SA21328	12	21	61	169
SA21329	25	28	206	250
SA21330	55	13	179	674
SA21331	55	10	132	365
SA21332	49	25	143	471
SA21333	<10	21	160	89
SA21334	57	10	152	271
SA21335	40	23	146	244
SA21336	70	<10	140	270
SA21337	61	21	176	428
SA21338	95	24	133	1260
SA21339	37	15	141	153
SA43145	49	49	231	174
SA43146	16	31	189	612
SA43147	78	52	273	1000
SA43148	55	28	202	746
SA43149	95	31	222	756
SA43150	53	14	144	576
D SA21304	22	28	123	332
D SA21318	61	16	163	492
D SA21332	58	18	145	487

D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS

REPORT 24226

TO: FALCONBRIDGE LIMITED
ATTN: JAMIE CECCHETTO
1977 MCKENZIE ROAD
GENERAL DELIVERY RR#2
CHELMSFORD, ONTARIO P0M 1L0

CUSTOMER No. 233

DATE SUBMITTED
10-Sep-93

REF. FILE 16077-

Total Pages 3

14 ROCKS Proj. FIRSTBROOK 6-270

	METHOD	DETECTION LIMIT
AU PPB	FAAA	5.
WRMAJ %	XRF-F	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
WRMIN PPM	XRF-F	10.
AG PPM	ICP	.1
PB PPM	ICP	2.

DATE 17-Sep-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

	SAMPLE	AU PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AG PPM	PB PPM
	SA21340	13	19	42	51.0	43.0	<.1	--
	SA21341	<5	13	51	24.7	43.3	<.1	--
	SA21342	9	14	45	26.4	45.1	<.1	--
	SA21343	8	27	90	43.5	88.6	<.1	--
	SA21344	18	16	58	68.5	51.7	<.1	--
	SA21345	6	18	49	33.7	56.5	<.1	--
	SA21346	11	6	2	4.9	30.2	<.1	--
	SA21347	9	9	13	52.3	32.0	<.1	--
	SA21348	<5	10	13	2.6	22.3	<.1	--
	SA43428	<5	--	87	44.8	104	<.1	3
	SA43429	18	--	64	<.5	275	14.0	147
	SA47075	<5	25	37	92.4	102	<.1	--
	SA47076	8	7	10	162	75.5	<.1	--
	SA47077	<5	22	71	27.0	85.5	<.1	--
D	SA21340	10	19	41	51.2	42.1	<.1	--
D	SA47076	--	8	10	161	76.4	<.1	--

D - QUALITY CONTROL DUPLICATE

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
SA21340	58.6	14.2	6.88	5.39	3.09	1.64	8.43	.13	.606	.19	.04	1.20	100.5
SA21341	59.3	15.9	6.46	4.11	3.34	1.85	7.23	.14	.586	.12	.02	1.35	100.5
SA21342	65.1	14.5	4.77	2.47	4.67	.55	5.57	.10	.547	.12	.02	1.25	99.7
SA21343	62.1	15.2	4.01	3.75	1.08	3.19	7.00	.13	.571	.12	.03	2.95	100.2
SA21344	59.9	15.5	5.35	4.92	4.27	.71	7.12	.17	.609	.14	.02	1.45	100.2
SA21345	62.2	14.6	5.11	3.99	1.77	2.55	7.06	.13	.546	.12	.02	2.20	100.4
SA21346	73.4	12.7	3.17	.76	2.53	2.23	3.26	.05	.298	.06	.02	1.35	99.9
SA21347	70.3	13.9	1.76	1.64	4.45	1.70	4.16	.06	.405	.10	.03	1.60	100.2
SA21348	70.9	13.9	.41	1.75	6.63	.50	4.35	.04	.388	.10	.02	1.30	100.3
SA47075	56.6	16.3	1.90	4.28	4.23	2.44	10.7	.11	.764	.13	<.01	2.75	100.3
SA47076	65.0	14.7	2.27	1.75	5.62	1.85	6.51	.11	.777	.23	.02	1.60	100.5
SA47077	61.1	14.4	5.14	4.59	2.31	2.66	7.52	.10	.568	.14	.02	1.35	100.0
D SA21340	58.4	14.1	6.92	5.41	3.11	1.65	8.46	.13	.613	.19	.04	1.25	100.4

D - QUALITY CONTROL DUPLICATE

XRF W.R.A. SUMS INCLUDE ALL ELEMENTS DETERMINED. FOR SUMMATION, ELEMENTS ARE CALCULATED AS OXIDES

SAMPLE \ PPM	RB	Y	ZR	BA
SA21340	53	16	145	462
SA21341	67	16	145	451
SA21342	29	17	160	205
SA21343	137	<10	150	721
SA21344	28	14	200	309
SA21345	102	<10	158	504
SA21346	70	41	308	585
SA21347	64	27	227	494
SA21348	30	29	256	152
SA47075	93	26	126	650
SA47076	36	28	257	619
SA47077	114	21	184	552
D SA21340	59	20	136	469

D - QUALITY CONTROL DUPLICATE

APPENDIX II

SUMMARY OF EXPENDITURES

SUMMARY OF EXPENDITURES

Line-Cutting

Montreal River grid
41.7 Km @ $220/Km $9174.00

Botha Lake grid
21.27 Km @ $220/Km $4679.40

Analysis

318 Samples @ $21.00 / Sample $6678.00

Geological Mapping and Sampling

Senior Field Geologist
63 days @ $250 / day . . . . . $ 15750.00

Junior Field Assistant
50 days @ $150 / day . . . . . $ 7500.00
(including report writing)

Digitizing, plotting of maps
8 days @ $150 / day . . . . . $ 1200.00

Accommodations

2.5 months @ $600 / month $1500.00

Food

12 weeks @ $100 / week $1200.00

Truck Rental and Gas

2.5 months @ $400 / month $1000.00
2.5 months @ $150 / month $375.00

TOTAL $49056.40

APPENDIX III

STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Steve Kormos of Hanmer, Ontario, hereby certify that:

1. I graduated from Queen's University in 1988 with a Bachelor of Science(Honours) degree in Geological Sciences.

2. I am a geologist of permanent employee status with Falconbridge Limited.

3. Since graduation I have been practicing my profession in Canada.

4. I have no financial interests in the property described in this report.

5. I have personally conducted or supervised the work described in this report.

Dated at Chelmsford, Ontario this 22nd day of September 1993.

Steve Kormos
Senior Field Geologist

APPENDIX IV

GEOLOGICAL LEGEND

LEGEND

Code	Prismacolor	MAJOR ROCK DIVISIONS
12	932	NIPISSING DIABASE
11		HURONIAN SUPER GROUP
10	941	DIABASE
9	929	FELSIC INTRUSIVE ROCKS
8	928	INTERMEDIATE INTRUSIVE ROCKS
7	903	MAFIC INTRUSIVE ROCKS
6	902	ULTRAMAFIC INTRUSIVE ROCKS
5	964	SEDIMENTARY ROCKS
5c	935	Oxide Iron Formation
MSS	924	Massive Sulphides
4	915	FELSIC VOLCANIC ROCKS
3	920	INTERMEDIATE VOLCANIC ROCKS
2	909	MAFIC VOLCANIC ROCKS
1	956	ULTRAMAFIC VOLCANIC ROCKS

Code	Prismacolor	HURONIAN MODIFIERS
		COBALT GROUP
i	943	LORRAIN FORMATION
		COWGANDA FORMATION
ii	945	Firstbrook Member
iii	947	Coleman Member
		QUIRKE LAKE GROUP
iv	934	SERPENT FORMATION
v	919	ESPANOLA FORMATION
vi	967	BRUCE FORMATION
		HOUGH LAKE GROUP
vii	936	MISSISSAGI FORMATION
viii		PECORS FORMATION
viiii		RAMSEY LAKE FORMATION
		ELLIOT LAKE GROUP
x		MCKIM FORMATION
xi		MATINENDA FORMATION

ch-f-M

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained
b	Medium Grained
bx	Breccia
c	Coarse Grained
d	Quartz–Feldspar Phyric
e	Amygdaloidal/Vesicular
f	Primary Fragmentals
g	Graphitic/Argillaceous
h	Tholeiitic
i	Alkalic
j	Calc–Alkalic
k	Komatiitic
l	Flows
m	Massive
n	Variolitic/Spheriiitic
p	Pillowed
q	Quartz Phyric
r	Oxide Iron Formation
s	Sulphides, Exhalites
t	Pyroclastic
u	Tuff
v	Lappilli
w	Aglomerate Lappilli Tuff
x	Andesite
y	Icelandite
z	mixed lithologies

A	Primitive (Y<20)
B	Evolved (Y>20<60)
C	Heterolithic
D	Feldspar Phyric
E	Chert
F	Wacke
G	Conglomerate
H	Siltstone
I	Olivine
J	Pyroxenite
K	Net Textured
L	Peridotite
M	Dunite
N	Ophitic
P	Porphyritic
Q	Basaltic Komatiite
R	Polysutured
S	Fractured
T	Gabbroic Textured
U	Pyroxene Spinifex
V	Olivine Spinifex
W	Skeletal/Crescumulate
X	Adcumulate
Y	Mesocumulate
Z	Orthocumulate

ALTERATION MODIFIERS

<Ab>	Albitization
<Bl>	Bleached
<C>>	Carbonaceous
<Cb>	Carbonatization
<Ch>	Chloritization
<Ep>	Epidotization
<He>	Hematization
<K>>	Potassic Alteration
<Se>	Sericitization
<Si>	Silicification
<Sr>	Serpentinization
<Tc>	Talc–Carbonatized
Fc	Fe Cb.

ALTERATION FORM

d = SPOTS

f = FRACTURE CONTROLLED

p = PERVASIVE

r = PERMEABILITY

ALTERATION INTENSITY

S = STRONG

m = MODERATE

w = WEAK

MINERAL OCCURRENCES

asp	Arsenopyrite
ba	Barite
bn	Bornite
cp	Chalcopyrite
Co	Cobalt
Cu	Copper
gn	Galena
Au	Gold
gf	Graphite
Pb	Lead
mag	Magnetite
mc	Malachite
mar	Marcasite
Mo	Molybdenum
Ni	Nickel
pent	Pentlandite
Pt	Platinum
py	Pyrite
po	Pyrrhotite
Ag	Silver
sp	Sphalerite
stib	Stibnite
Zn	Zinc

MINERALIZATION FORM

d = DISSEMINATED

f = FRACTURE CONTROLLED

m = MASSIVE

Mineralization %

Ontario

900

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Section
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

Our File: 2.15162
Transaction #: W9380.00235

December 22, 1993

Mining Recorder
Ministry of Northern
Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

RE: APPROVAL OF ASSESSMENT WORK ON MINING CLAIMS L 1179185 ET AL. IN GILLIES LIMIT TOWNSHIP.

The Assessment Credits for GEOLOGY and GEOCHEMISTRY, sections 12 and 13 of the Mining Act Regulations, as listed on the above report of work, have been approved as of DECEMBER 22, 1993.

Please indicate this approval on the claim record sheets.

If you have any questions please call Clive Stephenson at (705) 670-5856.

Yours sincerely

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

CDS/ls

cc: Resident Geologist
Cobalt, Ontario

Assessment Files Office
Toronto, Ontario

G.A.U.

Ministry of Northern Development and Mines

Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W 9380.00235 DOCUMENT No.

2.15162

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s)		Client No.
FALCONBRIDGE LIMITED		130 679
Address		**Telephone No.**
SUITE 1200, 95 WELLINGTON STREET W. TORONTO M5J 2V4.		416-956-5700
Mining Division	**Township/Area**	**M or G Plan No.**
LARDER LAKE	GILLIES LIMIT (NORTH PART)	M 484
Dates Work Performed From: MAY 15/93	To: SEPT 22/93	

Work Performed (Check One Work Group Only)

	Work Group	Type
✓	Geotechnical Survey	- GRID CUTTING - GEOLOGICAL MAPPING / LITHOGEOCHEMISTRY
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

D205/10

RECEIVED
SEP 30 1993
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 49,056.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
STEVE KORMOS - ~~LITHOGEOCHEMISTRY~~ - GEOLOGICAL MAPPING - REPORT WRITING	FALCONBRIDGE LIMITED (EXPLORATION) - SEE ADRESS BELOW
X-RAY ASSAY LABORATORIES	1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4
NORM McBRIDE - LINE CUTTING	BOX 112, NOTRE DAME DU NORD, QUEBEC J0Z 3B0

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

	Date	Recorded Holder or Agent (Signature)
I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Sept 23, 1993	Steve Kormos

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying		
STEVE KORMOS, GENERAL DELIVERY, 1977 McKENZIE RD. R.R. #2, CHELMSFORD, ONT		
Telepone No.	**Date**	**Certified By (Signature)**
705-855-0311	SEPT 23, 1993	Steve Kormos

For Office Use Only

Total Value Cr. Recorded	Date Recorded	Mining Recorder	Received Stamp
	Deemed Approval Date	Date Approved	RECEIVED 93 SEP 24 AM 11 20 MINING LANDS BRANCH
	Date Notice for Amendments Sent		

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	1179185	1	1115.00	1200.00	~~1115.00~~	—
	1179188	4	4460.00	3200.00	~~1200.00~~ 604	656
	1179189	1	1115.00	1200.00	~~1115.00~~	—
	1179190	1	1115.00	1200.00	~~1115.00~~	—
	1179191	1	1115.00	1200.00	~~1115.00~~	—
	1179192	1	1115.00	1200.00	~~1115.00~~	—
	1179194	2	2230.00	2400 ~~3056.00~~	~~2230.00~~	—
	1179195	1	1115.00	1200.00	~~1115.00~~	—
	1179197	1	1115.00	1200.00	~~1115.00~~	—
	1179198	1	1115.00	1200.00	~~1115.00~~	—
	1179200	12	13380.00	14,400	~~13380.00~~	—
	1179076	1	1115.00	1600.00	~~1115.00~~	—
	1118406	1	1115.00	1200.00	~~1115.00~~	—
	1118407	1	1115.00	1200.00	~~1115.00~~	—
	1118415	1	1115.00	1200.00	~~1115.00~~	—
	1118416	1	1115.00	1200.00	~~1115.00~~	—
	1118417	6	6690.00	4800.00	1890 ~~6690.00~~	—
	17 (37)					656
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

0241 (03/91)

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1. [ ] Credits are to be cut back starting with the claim listed last, working backwards.
2. [ ] Credits are to be cut back equally over all claims contained in this report of work.
3. [ ] Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed

Signature

Date

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	1118419	1	1115.00	1200.00	~~1115.00~~	–
	1118420	1	1115.00	1200.00	~~1115.00~~	–
	1118421	1	1115.00	1200.00	~~1115.00~~	–
	1118422	1	1115.00	1200.00	~~1115.00~~	–
	1118423	2	2230.00	1600.00	630 ~~1115.00~~	–
	1118446	1	1111.00	1200.00	~~1111.00~~	–
	23	(44)	$49,056	$49,056	$ ~~49,056~~ 3780.	0
	Total Number of Claims		Total Value Work Done	Total Value Work Applied	Total Assigned From	Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3. ☐ Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed

Signature

Date

Ministry of Northern Development and Mines

Ontario

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

DOCUMENT No.
Transaction No./N° de transaction
W 9380 00235

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre	$ 24,450	
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type LINECUTTING	$ 13,853	
	ANALYSIS - LITHOGEOCHEMISTRY	$ 6,678	
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
	Total Direct Costs Total des coûts directs		$ 44,981

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type TRUCK RENTAL	$ 1000	
	GAS	$ 375	
Food and Lodging Nourriture et hébergement		$ 2,700	
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		$ 4075
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		
	Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) / **Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles**		49,056

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as STEVE KORMOS (Recorded Holder, Agent, Position in Company) I am authorized

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé

à faire cette attestation.

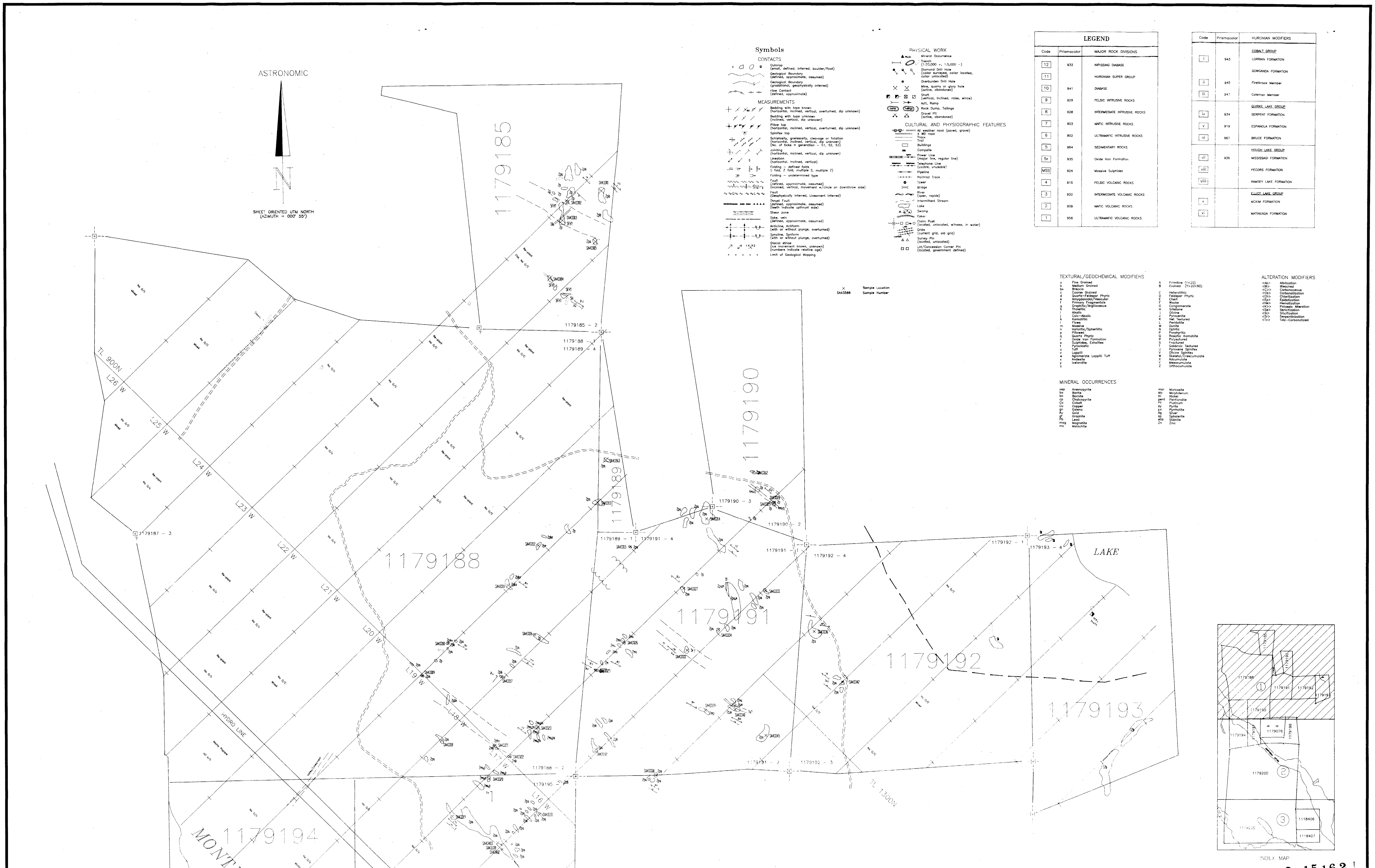
Signature	Date
Steve Kormos	Sept 23, 1993

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre


THE TOWNSHIP OF
GILLIES LIMIT
(NORTH PART)
DISTRICT OF TIMISKAMING
LARDER LAKE MINING DIVISION
SCALE: 1 INCH = 20 CHAINS
LEGEND
PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KINGS HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED PATENT OR LEASE
NOTES
400' Surface Rights Reservation along the shores of all lakes and rivers.
Mining Claims Accepted Subject To Sec. 34 Of The Mining Act Excepting Claims Staked In Any Of The "A" Mining Locations
L.O. 7151 Covers Flooding Rights On Montreal River Lying Northerly Of And Upstream From The Dam At Hound Chute To Contour 910' H.E.P.C. File: 1164 Vol. 2.
L.O. 7558 Covers Flooding Rights On Montreal River Upstream From The Upper Notch Power Site To Contour Elevation 785.5' H.E.P.C. File: 20994 Vol. 3.
RESERVE FLOODING RIGHTS TO H.E.P.C. (PROPOSED) TO CONTOUR 905' G.S.C.
Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970).
Order No. File Date Disposition
W.3/79 168540 2/2/79 S.R.O.
W.1/80 Tem. 168149 14/8/80 S.R.O.
Township closed to staking effective May 8, 1978, Sec. 38(1) of The Mining Act.
NOTICE OF FORESTRY ACTIVITY
THIS TOWNSHIP / AREA FALLS WITHIN THE LATCHFORD MANAGEMENT UNIT AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT: P.O. BOX 38 LAKESHORE DRIVE TEMAGAMI, ONT. P0H 2H0 705-569-3622
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.
SAND AND GRAVEL
QUARRY PERMIT
Aggregate permit - AP12579
"THIS MAP SHOWS THE APPROXIMATE LOCATION OF THE BOUNDARIES OF THE AREA WHICH IS THE SUBJECT OF CURRENT LITIGATION. THE EXACT LOCATION WILL BE SHOWN FOLLOWING CONFIRMATION BY THE PARTIES TO THE ACTION"
PLAN NO. M.484
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH
DATE OF ISSUE SEP 24 1993 LARDER LAKE MINING RECORDER'S OFFICE
COPY OF THIS MYLAR ARCHIVED ON JAN 28/92
Coleman Tp. (M.454)
Lorrain Tp. (M.536)
South Part Gillies Limit (M.483)
Locke Tp. (M.429)
TOWN OF LATCHFORD
SURFACE and MINING RIGHTS of ALL CROWN LANDS WITHDRAWN from STAKING ORDER No. W-3/82 NOV 5/82
KERR L. BRANCH ONTARIO NORTHLAND RAILWAY (ABANDONED)
GILLIES LIMIT PROVINCIAL PARK
MNR GRAVEL RESERVE
Hound Lake
Chute Lake
Hearst Lake
Slate Lake
Straight Lake
Kelvin Lake
Montreal River
2.15162

200



2.15162

FALCONBRIDGE LIMITED

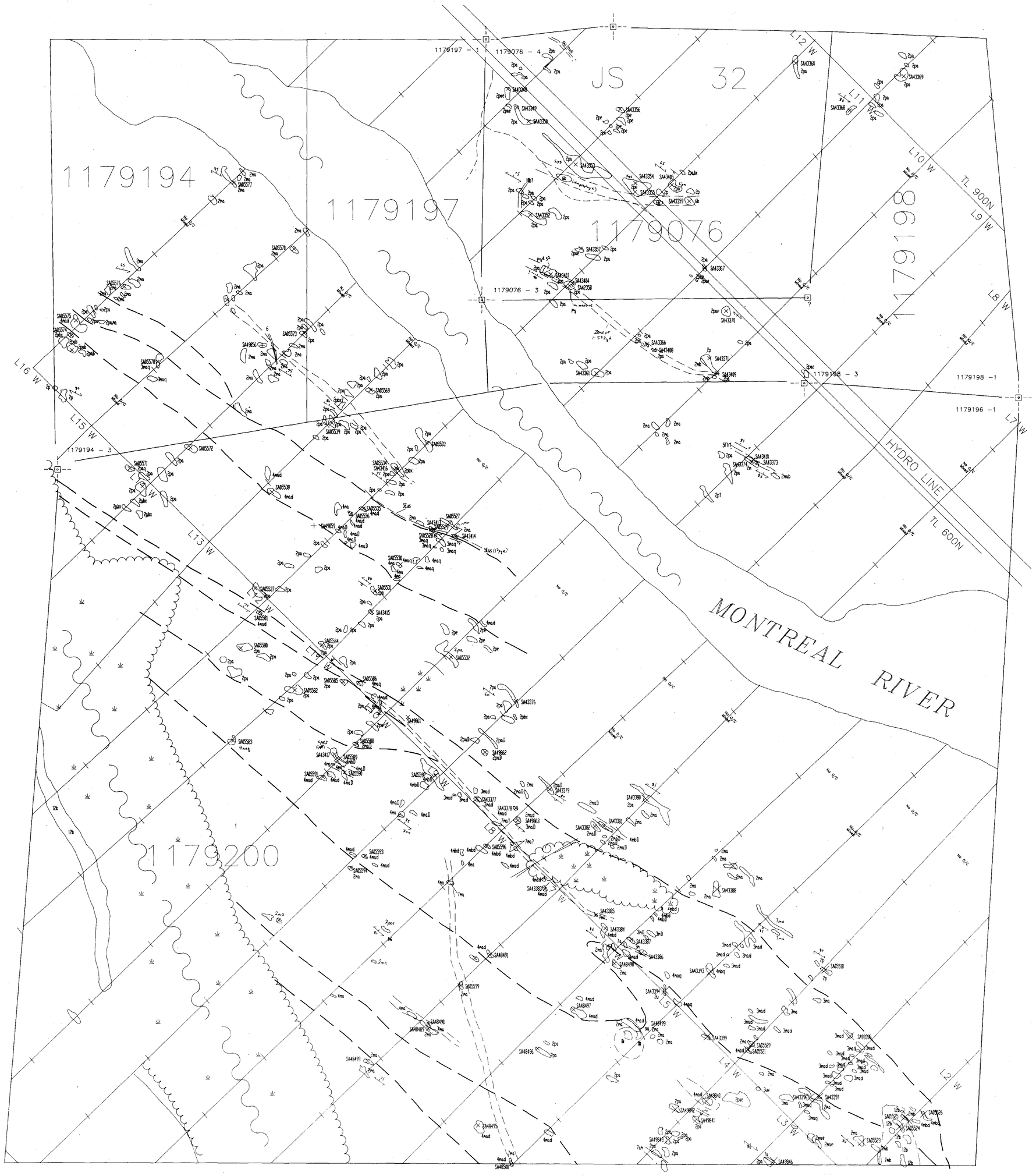
Exploration Division — Chelmsford ONTARIO

31M/5
(GILLIES LIMIT TWP.)

GEOLOGY AND SAMPLE LOCATION MAP
MONTREAL RIVER PROPERTY

TRACED: D.F.	DATE: 09/93	NTS: 31M/5	PROJECT: 6270
DRAWN:	DATE:	MAP No:	FILE: 1GLNGRID.DWG
SUPERVISED: S.E.Kormos	DATE: 09/93	SCALE 1:2000	
REVISED:	DATE:		

210



ASTRONOMIC

N

SHEET ORIENTED UTM NORTH
(AZIMUTH = 000° 55')

LEGEND

Code	Prismacolor	MAJOR ROCK DIVISIONS
12	932	NIPISSING DIABASE
11		HURONIAN SUPER GROUP
10	941	DIABASE
9	929	FELSIC INTRUSIVE ROCKS
8	928	INTERMEDIATE INTRUSIVE ROCKS
7	903	MAFIC INTRUSIVE ROCKS
6	902	ULTRAMAFIC INTRUSIVE ROCKS
5	964	SEDIMENTARY ROCKS
5f	935	Oxide Iron Formation
MSS	924	Massive Sulphides
4	915	FELSIC VOLCANIC ROCKS
3	920	INTERMEDIATE VOLCANIC ROCKS
2	909	MAFIC VOLCANIC ROCKS
1	956	ULTRAMAFIC VOLCANIC ROCKS

Code	Prismacolor	HURONIAN MODIFIERS
		COBALT GROUP
i	943	LORRAIN FORMATION
		GOWGANDA FORMATION
ii	945	Firstbrook Member
iii	947	Coleman Member
		QUIRKE LAKE GROUP
iv	934	SERPENT FORMATION
v	919	ESPANOLA FORMATION
vi	967	BRUCE FORMATION
		HOUGH LAKE GROUP
vii	936	MISSISSAGI FORMATION
viii		PECORS FORMATION
viiii		RAMSEY LAKE FORMATION
		ELLIOT LAKE GROUP
x		MCKIM FORMATION
xi		MATINENDA FORMATION

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained
b	Medium Grained
bx	Breccia
c	Coarse Grained
d	Quartz-Feldspar Phyric
e	Amygdaloidal/Vesicular
f	Primary Trachytoidal
g	Graphitic/Argillaceous
h	Tholeiitic
i	Alkalic
j	Calc-Alkalic
k	Komatiitic
l	Flows
m	Massive
n	Variolitic/Spherilitic
o	Pillowed
p	Quartz Phyric
q	Oxide Iron Formation
r	Sulphides, Exhalites
s	Pyroclastic
t	Tuff
u	Lapilli Tuff
v	Agglomerate Lapplli Tuff
w	Andesite
x	Icelandite
A	Primitive (Y<20)
B	Evolved (Y>20<60)
C	Metasiltstic
D	Feldspar Phyric
E	Felsic
F	Mafic
G	Conglomerate
H	Siltstone
I	Olivine
J	Pyroxenite
K	Met Textured
L	Peridotite
M	Dunite
N	Gabbro
O	Porphyritic
P	Basaltic Komatiite
Q	Foliatured
R	Fractured
S	Gabbroic Textured
T	Pyroxene Spinifex
U	Olivine Spinifex
V	Skeletal/Crescumulate
W	Adcumulate
X	Mesocumulate
Y	Orthocumulate
Z	

ALTERATION MODIFIERS

<Ab>	Albitization
<Bl>	Bleached
<Cc>	Carbonaceous
<Cb>	Carbonatization
<Ch>	Chloritization
<Ep>	Epidotization
<He>	Hematization
<Ka>	Kaolinization
<Se>	Sericitization
<Si>	Silicification
<Sr>	Serpentinization
<Tc>	Talc-Carbonatized

MINERAL OCCURRENCES

asp	Arsenopyrite
bo	Bornite
bn	Bornite
cp	Chalcopyrite
Co	Cobalt
Cu	Copper
gl	Galena
Au	Gold
gr	Graphite
Pb	Lead
mag	Magnetite
mc	Malachite
mor	Moroxite
Mo	Molybdenum
Ni	Nickel
pent	Pentlandite
Pt	Platinum
py	Pyrite
po	Pyrrhotite
Ag	Silver
sp	Sphalerite
stib	Stibnite
Zn	Zinc

Symbols

CONTACTS

- Outcrop (small, defined, inferred, boulder/float)
- Geological Boundary (defined, approximate, assumed)
- Geological Boundary (gradational, geophysically inferred)
- Flow Contact (defined, approximate)

MEASUREMENTS

- Bedding with tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Bedding with tops unknown (inclined, vertical, dip unknown)
- Pillow top (horizontal, inclined, vertical, overturned, dip unknown)
- Spinifex top
- Schistosity, gneissosity, cleavage or foliation (horizontal, inclined, vertical, dip unknown) (No. of ticks = generation – S1, S2, S3)
- Jointing (horizontal, inclined, vertical, dip unknown)
- Lineation (horizontal, inclined, vertical)
- Folding – defined folds S fold, Z fold, multiple S, multiple Z)
- Folding – undetermined type
- Fault (defined, approximate, assumed) (inclined, vertical, movement ←/circle on downthrow side)
- Fault (Geophysically inferred, Lineament inferred)
- Thrust Fault (defined, approximate, assumed) (teeth indicate upthrust side)
- Shear zone
- Dyke, vein (defined, approximate, assumed)
- Anticline, Antiform (with or without plunge, overturned)
- Syncline, Synform (with or without plunge, overturned)
- Glacial striae (ice movement known, unknown) (numbers indicate relative age)
- Limit of Geological Mapping

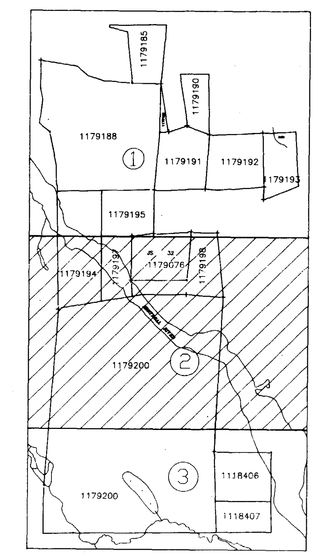
Sample Location
SA43566 Sample Number

PHYSICAL WORK

- Mineral Occurrence
- Trench (1:20,000 +, 1:5,000 –)
- Diamond Drill Hole (collar surveyed, collar located, collar unlocated)
- Overburden Drill Hole
- Mine, quarry or glory hole (active, abandoned)
- Shaft (vertical, inclined, raise, winze)
- Adit, Ramp
- Rock Dump, Tailings
- Gravel Pit (active, abandoned)

CULTURAL AND PHYSIOGRAPHIC FEATURES

- All weather road (paved, gravel) 4 WD road
- Track
- Trail
- Buildings
- Campsite .
- Power Line (major line, regular line)
- Telephone Line (catchis, unusable)
- Pipeline
- Railroad Track
- Tower
- Bridge
- River (open, rapids)
- Intermittent Stream
- Lake
- Swamp
- Esker
- Claim Post (located, unlocated, witness, in water)
- Grids (current grid, old grid)
- Survey Pin (located, unlocated)
- Lot/Concession Corner Pin (located, government defined)



INDEX MAP

2.15162

FALCONBRIDGE LIMITED

Exploration Division — Chelmsford ONTARIO

31M/5
(GILLIES LIMIT TWP.)

GEOLOGY AND SAMPLE LOCATION MAP
MONTREAL RIVER PROPERTY

TRACED: D.F.	DATE: 09/93	NTS: 31M/5	PROJECT: 6270
DRAWN:	DATE:	MAP No:	FILE: 2GLNGRID.DWG
SUPERVISED: S.E.Kormos	DATE: 09/93	SCALE 1:2000	
REVISED:	DATE:	0 25 50 75 100m	

ASTRONOMIC

SHEET ORIENTED UTM NORTH
(AZIMUTH = 000° 55')

Symbols

CONTACTS

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(small, defined, inferred, boulder/float)

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(defined, approximate, assumed)

Geological Boundary
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(defined, approximate)

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Spinifex top

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(No. of ticks = generalities - S1, S2, S3)

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S fold, Z fold, multiple S, multiple Z)

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(Geophysically inferred, Lineament inferred)

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(defined, approximate, assumed)
(teeth indicate upthrust side)

Shear zone

Dyke, sill
(defined, approximate, assumed)

Anticline, Antiform
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(with or without plunge, overturned)

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(numbers indicate relative age)

Limit of Geological Mapping

PHYSICAL WORK

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(1:20,000 +, 1:5,000 -)

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(collar surveyed, collar located, collar unlocated)

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Mine, quarry or glory hole
(active, abandoned)

Shaft
(vertical, inclined, raise, winze)

Adit, Ramp

Rock Dump, Tailings

Gravel Pit
(active, abandoned)

CULTURAL AND PHYSIOGRAPHIC FEATURES

All weather road (paved, gravel)

4 WD road

Track

Trail

Buildings

Campsite

Power Line
(major line, regular line)

Telephone Line
(usable, unusable)

Pipeline

Railroad Track

Tower

Bridge

River
(open, rapids)

Intermittent Stream

Lake

Swamp

Esker

Claim Post
(located, unlocated, witness, in water)

Grids
(current grid, old grid)

Survey Pin
(located, unlocated)

Lot/Concession Corner Pin
(located, government defined)

× Sample Location
SA43566 Sample Number

LEGEND

Code	Prismacolor	MAJOR ROCK DIVISIONS
12	932	NIPISSING DIABASE
11		HURONIAN SUPER GROUP
10	941	DIABASE
9	929	FELSIC INTRUSIVE ROCKS
8	928	INTERMEDIATE INTRUSIVE ROCKS
7	903	MAFIC INTRUSIVE ROCKS
6	902	ULTRAMAFIC INTRUSIVE ROCKS
5	964	SEDIMENTARY ROCKS
5f	935	Oxide Iron Formation
MSS	924	Massive Sulphides
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3	920	INTERMEDIATE VOLCANIC ROCKS
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Code	Prismacolor	HURONIAN MODIFIERS
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TEXTURAL/GEOCHEMICAL MODIFIERS

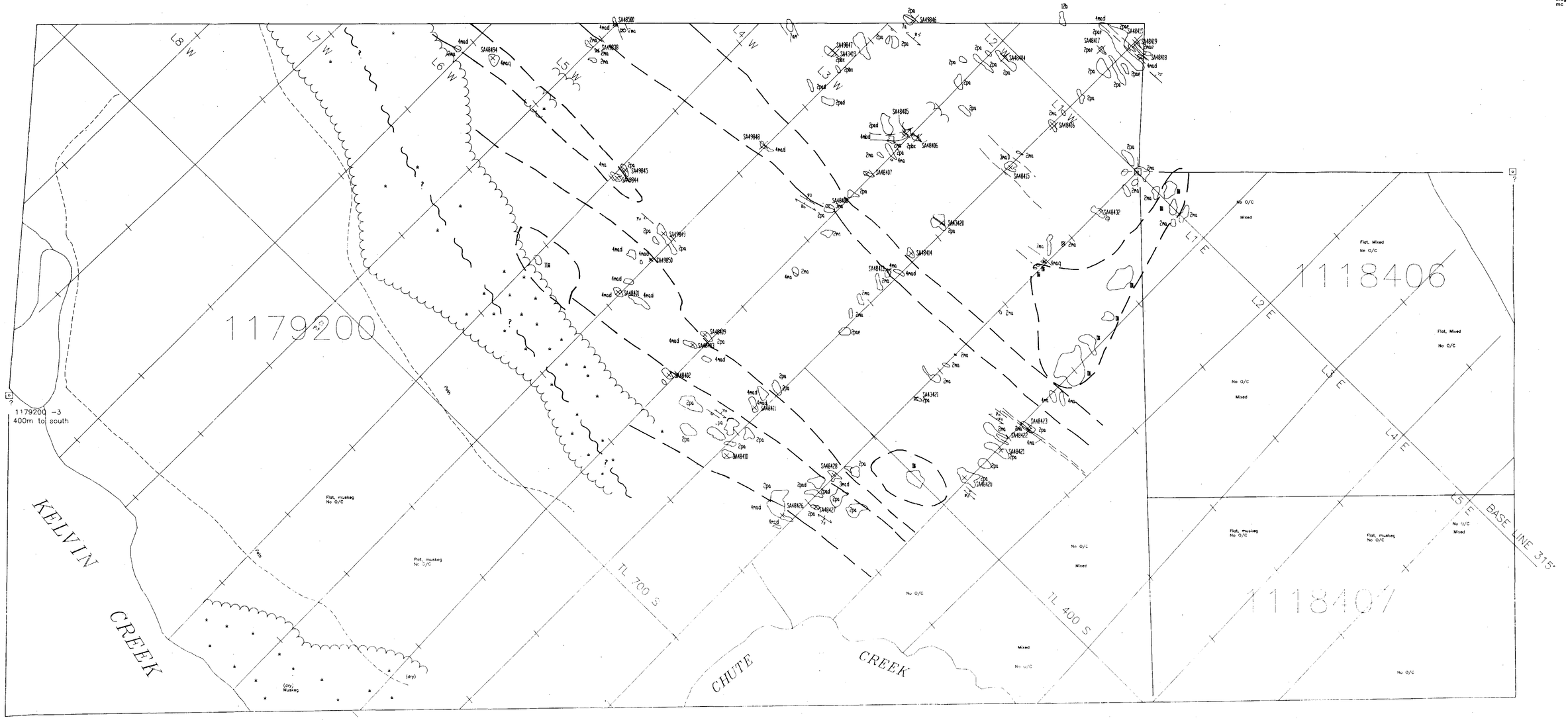
a	Fine Grained	A	Primitive (Y<20)
b	Medium Grained	B	Evolved (Y>20<60)
bx	Breccia		
c	Coarse Grained	C	Heterolithic
d	Quartz-Feldspar Phyric	D	Feldspar Phyric
e	Amygdaloidal/Vesicular	E	Chert
f	Primary Fragmentals	F	Mocks
g	Graphitic/Argillaceous	G	Conglomerate
h	Tholeiitic	H	Siltstone
i	Intrusive	I	Gabbro
j	Calc-Alkalic	J	Pyroxenite
k	Komatiitic	K	Net Textured
l	Flows	L	Peridotite
m	Massive	M	Dunite
n	Variolitic/Spherulitic	N	Ophitic
p	Pillowed	P	Porphyritic
q	Quartz Phyric	Q	Basaltic Komatiite
r	Oxide Iron Formation	R	Polysutured
s	Sedimentary Exhalites	S	Spinifex Textured
t	Pyroclastic	T	Gabbroic Textured
u	Tuff	U	Pyroxene Spinifex
v	Lapilli	V	Olivine Spinifex
w	Agglomerate Lapilli Tuff	W	Skeletal/Crescumulate
x	Andesite	X	Adcumulate
y	Icelandite	Y	Mesocumulate
z		Z	Orthocumulate

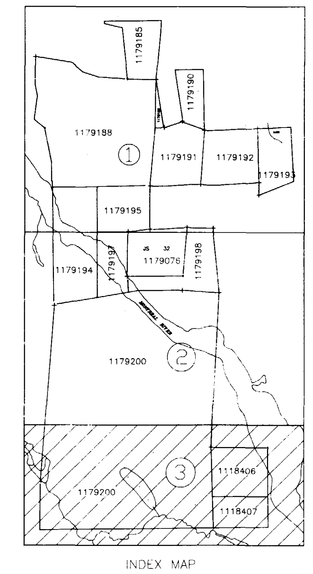
ALTERATION MODIFIERS

<Ab>	Albitization
<Bi>	Bleached
<C>	Carbonaceous
<Ca>	Carbonatization
<Ch>	Chloritization
<Ep>	Epidotization
<He>	Hematization
<K>	Potassic Alteration
<Se>	Sericitization
<Si>	Silicification
<Sr>	Serpentinization
<Tc>	Talc-Carbonatized

MINERAL OCCURRENCES

asp	Arsenopyrite	mar	Marcasite
ba	Barite	Mo	Molybdenum
bn	Bornite	ne	Nickel
cn	Chalcocyanite	Pd	Palladium
Co	Cobalt	Pt	Platinum
Cu	Copper	py	Pyrite
gn	Galena	po	Pyrrhotite
Au	Gold	Ag	Silver
gr	Graphite	sp	Sphalerite
Pb	Lead	stb	Stibnite
mag	Magnetite	Zn	Zinc
mc	Malachite		





INDEX MAP

2.15162

FALCONBRIDGE LIMITED

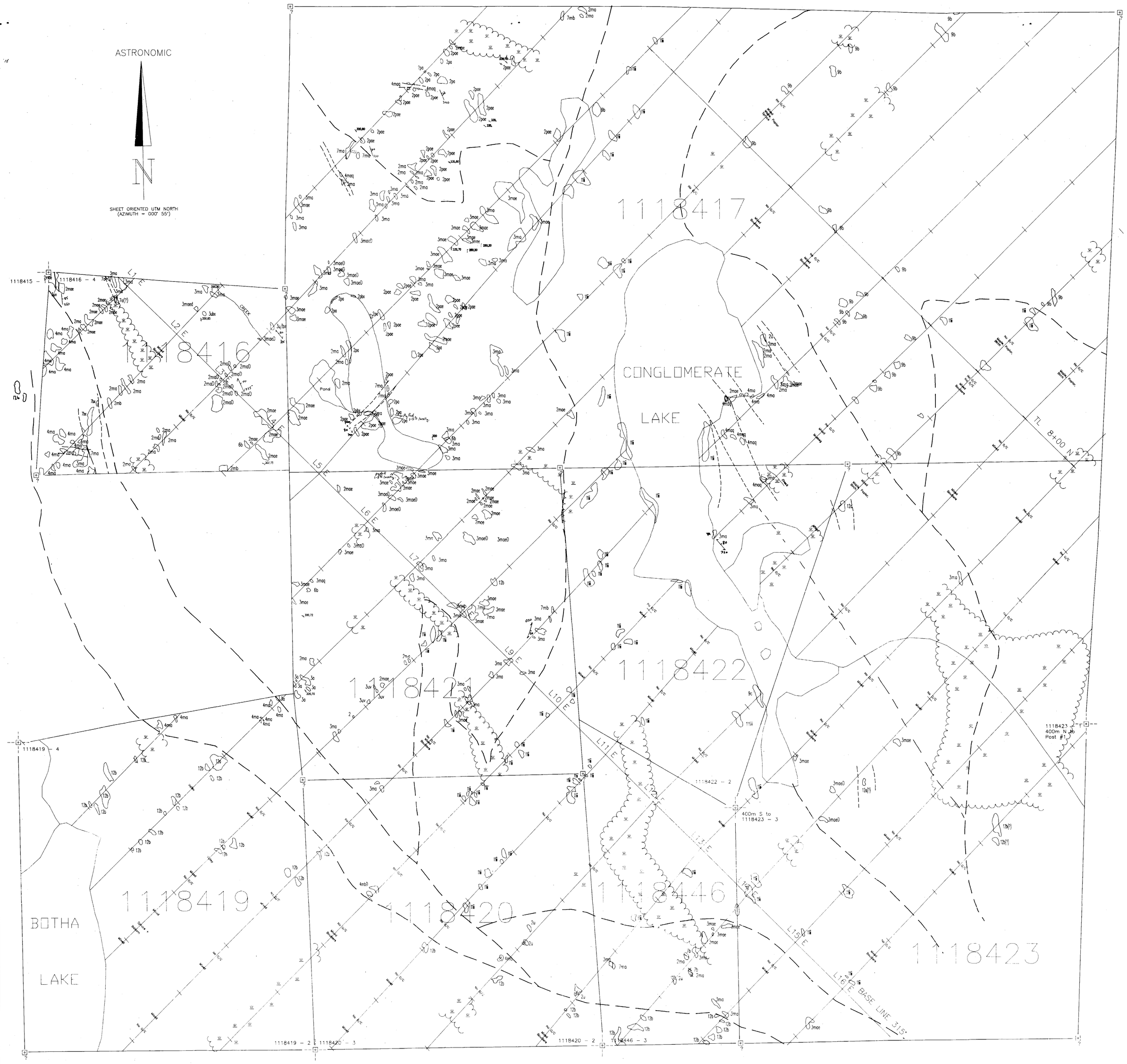
Exploration Division Chelmsford ONTARIO

31M/5
(GILLIES LIMIT TWP.)

GEOLOGY AND SAMPLE LOCATION MAP
MONTREAL RIVER PROPERTY

MAP 3

TRACED: D.F.	DATE: 09/93	NTS: 31M/5	PROJECT: 0270
DRAWN:	DATE:	MAP No:	FILE: 1GLNGRID.DWG
SUPERVISED: S.E.Kormos	DATE: 09/93	SCALE 1/2000	
REVISED:	DATE:	0 25 50 75 100m	



LEGEND

Code	Prismacolor	MAJOR ROCK DIVISIONS
12	932	NIPISSING DIABASE
11		HURONIAN SUPER GROUP
10	941	DIABASE
9	929	FELSIC INTRUSIVE ROCKS
8	928	INTERMEDIATE INTRUSIVE ROCKS
7	903	MAFIC INTRUSIVE ROCKS
6	902	ULTRAMAFIC INTRUSIVE ROCKS
5	964	SEDIMENTARY ROCKS
5f	935	Oxide Iron Formation
MSS	924	Massive Sulphides
4	915	FELSIC VOLCANIC ROCKS
3	920	INTERMEDIATE VOLCANIC ROCKS
2	909	MAFIC VOLCANIC ROCKS
1	956	ULTRAMAFIC VOLCANIC ROCKS

Code	Prismacolor	HURONIAN MODIFIERS
		COBALT GROUP
i	943	LORRAIN FORMATION
		GOWGANDA FORMATION
ii	945	Firstbrook Member
iii	947	Coleman Member
		QUIRKE LAKE GROUP
iv	934	SERPENT FORMATION
v	919	ESPANOLA FORMATION
vi	967	BRUCE FORMATION
		HOUGH LAKE GROUP
vii	936	MISSISSAGI FORMATION
viii		PECORS FORMATION
viii		RAMSEY LAKE FORMATION
		ELLIOT LAKE GROUP
x		MCKIM FORMATION
xi		MATINENDA FORMATION

TEXTURAL/GEOCHEMICAL MODIFIERS

a	Fine Grained	A	Primitive (Yx<20)
b	Medium Grained	B	Evolved (Yx20<60)
bx	Breccia		
c	Coarse Grained	C	Heterolithic
d	Quartz-Feldspar Phyric	D	Feldspar Phyric
e	Amygdaloidal/Vesicular	E	Chert
f	Primary Fragmentals	F	Wacke
g	Graphitic/Argillaceous	G	Conglomerate
h	Hematitic	H	Hematitic
i	Mafic	I	Olivine
j	Calc-Alkalic	J	Pyroxenite
k	Komatiitic	K	Net Textured
l	Flows	L	Peridotite
m	Massive	M	Dunite
n	Variolitic/Spherulitic	N	Ophitic
o	Pillowed	O	Porphyritic
p	Quartz Phyric	P	Polygonal Komatiite
q	Quartzite Formation	Q	Recrystallized
r	Sulphides, Exhalites	R	Fractured
s	Pyroclastic	S	Gabbroic Textured
t	Tuff	T	Pyroxene Spinifex
u	Lapilli	U	Olivine Spinifex
v	Agglomerate Lapilli Tuff	V	Skeletal/Crescumulate
w	Andesite	W	Adcumulate
x	Icelandite	X	Mesocumulate
y		Y	Orthocumulate
z		Z	

ALTERATION MODIFIERS

<Ab>	Albitization
<Bl>	Bleached
<C>	Carbonaceous
<Cb>	Carbonatization
<Ch>	Chloritization
<Ep>	Epidotization
<He>	Hematization
<K>	Potassic Alteration
<Si>	Silicification
<Sp>	Spilitization
<Sr>	Serpentinization
<Tc>	Talc-Carbonatized

MINERAL OCCURRENCES

asp	Arsenopyrite	mar	Marcasite
bn	Bornite	Mo	Molybdenum
bx	Barite	Ni	Nickel
cp	Chalcopyrite	pent	Pentlandite
Co	Cobalt	Pt	Platinum
Cu	Copper	py	Pyrite
Ga	Galena	po	Pyrrhotite
Au	Gold	Ag	Silver
gr	Graphite	sp	Sphalerite
Pb	Lead	stib	Stibnite
mag	Magnetite	Zn	Zinc
mc	Malachite		

Symbols

CONTACTS

- Outcrop (small, defined, inferred, boulder/float)
- Geological Boundary (defined, approximate, assumed)
- Geological Boundary (gradational, geophysically inferred)
- Flow Contact (defined, approximate)

MEASUREMENTS

- Bedding with tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Bedding with tops unknown (inclined, vertical, dip unknown)
- Pillow top (horizontal, inclined, vertical, overturned, dip unknown)
- Spinifex tops
- Schistosity, greassocity, cleavage or foliation (horizontal, inclined, vertical, dip unknown) (No. of ticks = generation – S1, S2, S3)
- Jointing (horizontal, inclined, vertical, dip unknown)
- Lineation (horizontal, inclined, vertical)
- Folding – definet folds S fold, Z fold, multiple S, multiple Z)
- Folding – undetermined type
- Fault (defined, approximate, assumed) (inclined, vertical, movement w/circle on downthrow side)
- Fault (Geophysically inferred, Lineament inferred)
- Thrust Fault (defined, approximate, assumed) (teeth indicate upthrust side)
- Shear zone
- Dyke, vein (defined, approximate, assumed)
- Anticline, Antiform (with or without plunge, overturned)
- Syncline, Synform (with or without plunge, overturned)
- Glacial striae (ice movement known, unknown) (numbers indicate relative age)
- Limit of Geological Mapping

PHYSICAL WORK

- Mineral Occurrence
- Trench (1:20,000 +, 1:5,000 –)
- Diamond Drill Hole (collar surveyed, collar located, collar unlocated)
- Overburden Drill Hole
- Mine, quarry or glory hole (active, abandoned)
- Shaft (vertical, inclined, raise, winze)
- Adit, Ramp
- Rock Dump, Tailings
- Gravel Pit (active, abandoned)

CULTURAL AND PHYSIOGRAPHIC FEATURES

- All weather road (paved, gravel)
- 4 WD road
- Track
- Trail
- Buildings
- Campsite
- Power Line (major line, regular line)
- Telephone Line (unstable, unusable)
- Pipeline
- Railroad Track
- Tower
- Bridge
- River (open, rapids)
- Intermittent Stream
- Lake
- Swamp
- Esker
- Claim Post (located, unlocated, witness, in water)
- Grids (current grid, old grid)
- Survey Pin (located, unlocated)
- Lot/Concession Corner Pin (located, government defined)

2.15162

FALCONBRIDGE LIMITED

Exploration Division — Chelmsford ONTARIO

31M/5

(GILLIES LIMIT TWP.)

GEOLOGY MAP

BOTHA LAKE PROPERTY

TRACED: D.F.	DATE: 09/93	NTS: 31M/5	PROJECT: 6270
DRAWN:	DATE:	MAP No:	FILE: AGLSORID.DWG
SUPERVISED: S.E.K. (ATAGE ADDENDA)	DATE: 09/93	SCALE 1:2000	
REVISED:	DATE:	0 25 50 75 100m	

31M05SE0008 2.15162 GILLIES LIMIT

240

ASTRONOMIC

N

SHEET ORIENTED UTM NORTH
(AZIMUTH = 000° 55')

1118417

1118416

1118421

1118422

1118419

1118420

1118446

1118423

CONGLOMERATE LAKE

BOTHA LAKE

Pond

CREEK

TL 8+00 N

1118423 – 1
400m N to
Post #1

1118422 – 2

400m S.L.
1118423 – 1

1118419 – 4

1118415 – 1

1118416 – 4

1118419 – 4 & 1118420 – 3

1118420 – 2

1118446 – 3

L1 E
L2 E
L3 E
L4 E
L5 E
L6 E
L7 E
L8 E
L9 E
L10 E
L11 E
L12 E
L13 E
L14 E
L15 E

1118E BASE LINE 3175

PHYSICAL WORK

× SAA3566 Sample Location / Sample Number

CULTURAL AND PHYSIOGRAPHIC FEATURES

- All weather road (paved, gravel)
- 4 WD road
- Track
- Trail
- Buildings
- Campsite
- Power Line (major line, regular line)
- Telephone Line (obsolete, unusable)
- Pipeline
- Railroad Track
- Tower
- Bridge
- River (open, rapids)
- Intermittent Stream
- Lake
- Swamp
- Esker
- Claim Post (located, unlocated, witness, in water)
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2.15162

FALCONBRIDGE LIMITED

Exploration Division Chelmsford ONTARIO

31M/5
(GILLIES LIMIT TWP.)

SAMPLE LOCATION MAP
BOTHA LAKE PROPERTY

TRACED: G.F.	DATE: 09/93	NTS: 31M/5	PROJECT: 6270
DRAWN:	DATE:	MAP No:	FILE: AGLSGRID.DWG
SUPERVISED: G.F.K. (CHIEF ASSAYER)	DATE: 09/93	SCALE 1:2000	0 25 50 75 100m
REVISED:	DATE:		

3140SCSB000 2.15162 GILLIES LIMIT

250