31M04NE0019 OP92-619 BEST

REPORT OF EXPLORATION ON RIB LAKE CLAIMS FOR 1992

Best Township, District of Nipissing, Ont.

Ontario Prospectors Assistance Program

Grant OP 92-619

NTS 31-M-4

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Haileybury, Ont.
21 Jan. 1993

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REPORT OF EXPLORATION ON RIB LAKE CLAIMS FOR 1992
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INTRODUCTION

This area was recognized for its silver-cobalt potential during reconnaissance work by the applicant in the late 1970's and early 1980's. Essentially the mineralized area around James Lake is believed to be a typical sulphide 'root zone' of a Cobalt-type Co-Ag-As vein system. It was also recognized that the mineralized zone probably extends eastward under the Huronian cover and that favourable Nipissing/Huronian/Archean stratigraphy typical of the Cobalt deposits exists in this area. It was further recognized that any Ag-Co deposit would likely by overlain by a considerable thickness of Huronian and Nipissing Diabase and that only the upper parts of any vein system would come to surface. The purpose of this programme was to identify these weak surface veins.

Claims

Early in 1992, the main, 15 unit claim, 1118,525 was staked Additional claims, 1118,526 and 1118,528 were staked when field inspections showed large fractions were open to the west and southwest. A 3 unit claim 1118,527 was added south of the main claim to cover ambiguous locations of cobalt showings described in assessment files.

The present claim holdings area as follows:

CLAIM	NO. OF UNITS	STAKING DATES
1118,525	15	19 March 1992
1118,526	3+/-	6 April 1992
1118,527	3	28 April 1992
1118,528	1.4	10 May 1992
TOTAL	22.4 units	

Location and Access

The claims lie in Best Township, 13km NNE of the Village of Temagami and 0.5 to 3 km east of Ontario Highway 11. They are readilly accessible from the south from the Roosevelt Lake Forest Access Road that passes through the southeast part of the group. On the northwest, a cottage road to the southwest corner of Rib

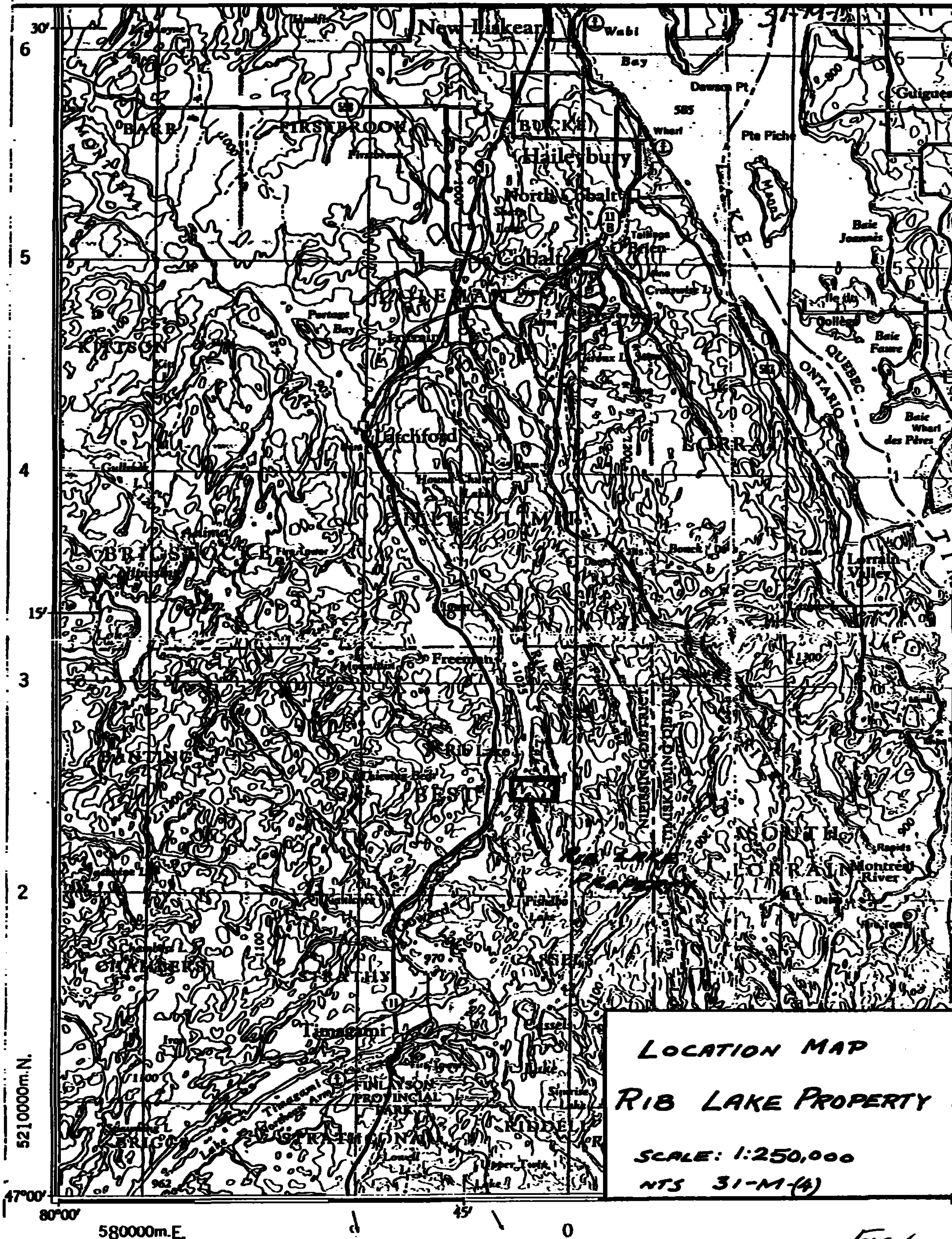

LOCATION MAP
RIB LAKE PROPERTY
SCALE: 1:250,000
NTS 31-M-(4)
New Liskeard
Wabi
Bay
Dawson Pt
Guigues
BUCKE
Haileybury
North Cobalt
Cobalt
Pte Piche
Baie Joannès
Portage Bay
KITTSON
Latchford
QUEBEC
ONTARIO
Baie
Wharf
des Pères
LORRAIN
Lorrain Valley
Freeman
Rib Lake
BEST
SOUTH
LORRAIN
Montreal River
Timagami
FINLAYSON PROVINCIAL PARK
STRATHCONA
Upper Twin Lake
30'
15'
47°00'
80°00'
45'
5210000m.N.
580000m.E.
North Bay 59 m
North Bay
0
6
5
4
3
2

Fig 1

pg 1a

Lake provides access and the north part is accessible from Rib Lake itself.

Geology

The west 1/4 of the claims (mainly 1118,526 and 1118,528) is underlain by Coleman Member, Gowganda Formation of the Huronian Supergroup, while the eastern 3/4 is underlain by a Nipissing Diabase sheet. It is interpreted from the regional geology that mafic volcanics, probably form the basement of at least the western part of the group. However, Archean granite is exposed a short distance to the southwest of the claims and likely forms some of the basement under them.

The Huronian rocks dip gently eastward and are overlain to the east by an east dipping Nipissing Diabase sheet. The contact between the Huronian and Archean rocks to the west is formed by the Net Creek Fault. Movement on this fault is down throw on the east. It is hence difficult to estimate the thickness of the Huronian sediments. This is a critical consideration in silver exploration, as in Cobalt, productive veins in this setting occur only where the Huronian 'sandwich' (between Archean volcanics and Nipissing sheet) is relatively thin, say up to 150 to 200m. Although the base of the Huronian is exposed to the southwest on the east side of the Net Creek Fault, the Huronian is too massive and unbedded to establish dips and it is therefore difficult to determine the Huronian thickness. Todd's mapping to the east places Lorrain Formation directly overlying the Nipissing sheet. i.e. the sheet seems to intrude along the Gowganda\Lorrain formation contact. It could therefore be that the entire thickness of the Gowganda Formation lies under the sheet.

To the east, the diabase exposure is exceptionally wide. This seems to be due to a combination of a gentle dip repetition by step faulting.

The area immediately west of the claims, across the Net Creek Fault, consists of a north-south striking, steeply dipping, east facing sequence of Archean, mafic volcanics. Although it is very likely that some Archean under the claims is mafic volcanics, none of the Archean strata exposed to west can be projected directly under the claims. The area lies too close to the irregular margin of the Chamber-Strathy batholith and folding as seen to the north in Gillies Limit, makes it impossible to predict the basement rocks with any certainty. (See Thomson 1968 Fig. 1) This is a critical factor in silver potential, as in all the Northeastern Ontario silver camps productive veins occur only over or adjacent to mafic volcanics.

The area is considerably disrupted by faulting. One prominent set strikes NNE. Although, as noted above, one of these, the Net Creek Fault is down thrown to the east, the fault crossing the base

line at about 16E appears to be down thrown to the west. There is a set of east-west faults, one of which crosses the Roosevelt Lake road about 300 m south of the property (south of claim 1118,527). A third set strikes ESE as indicated by a regional lineament through the south part of Rib Lake. Some of the Co-Ag-As mineralization may be related to this set.

DESCRIPTION OF WORK DONE

Line Cutting

A picket, base line was cut east-west across the claims to provide one grid over the whole property. Two north-south base lines in the western part provide control for east-west traversing of the Huronian rocks. Flagged lines for soil sampling and mapping were put in by compass and 'hip chain'. In the southeast, part of the claim line between 1118,525 and 1118,527 was cut out to serve as a local base line.

Picket line cutting was done by the writer at various times in May, late July, August and early September. Some help was hired for base line chaining. Flagged lines were put in at the time of soil sampling in September by the writer and R. Zalnieriunas of Larder Lake.

Line cutting statistics are as follows:

Total Picket Lines cut and chained:	5.03 km
Total Flagged Lines:	8.075km.

Drainage Geochemisty

A small programme of organic stream bank sampling (39 samples) was done in early May. The purpose was to identify general areas within the claims which might be more favourable for Co-Ag-As veins. Using a 1:20,000 topographic map for navigation, drainage systems on and immediately adjacent to the property were sampled at intervals of about 300m. Sample sites were flagged and marked with the sample number. Samples were analyzed by I.C.P. which covered 27 elements. However, of main interest are Ag, As, Co, and Cu. Plots of these 4 elements are shown on the 1:5000 organic soil geochemistry maps. The drainage data were examined by geochemist, R.G. Jackson of Toronto. His report is appended.

Compilation

A compilation of the James Lake area was undertaken in August for G. Chitaroni who was exploring the area west of the Rib Lake

group through an O.P.A.P. grant. This compilation was expanded to the east to cover the writer's claims. Approximately 1/3 of the work was paid for by G. Chitaroni and the remainder, ~~9~~ 1/2 days, is claimed against this grant, OP92-619. It is noted that the compilation is more involved than outlined in the proposal. The relevance of the compilation to the Rib Lake programme is as follows: At Cobalt, silver bearing veins are related to certain Archean stratigraphy in particular to base metal, mineralized inter-flow sediments which are thought to be source beds for the silver. The idea of making the compilation was to build up a geological picture in order to project the Archean geology onto the claims. A second purpose was to determine if the James Lake volcanics are similar to the Cobalt area Archean. Unfortunately, as described above, Archean trends parallel the Huronian Archean contact and the compilation has helped very little in establishing the basement geology on the claims.

The entire compilation has been submitted by G. Chitaroni with his report of work on his James Lake claims. This submission contains only an abbreviated account of the work, i.e. part which is relevant to the Rib Lake group. Three maps covering geology, showings and assays, and geophysics are included. A description of the showings is appended. It is noted that locations of some of the showings on the compilation maps differ from their location on the Rib Lake Geology sheet. The compilation maps have not been corrected for the later mapping.

Soil Geochemistry

Sampling was done by compass and 'hip chain' and in a few places by pace and compass traverses from cut base lines. The traverses are spaced at 100m and samples were taken at 25m intervals. Sample sites were flagged and marked with sample numbers. Humus samples were taken using a shovel. Descriptions of soil, sub-soil, drainage and vegetation were recorded. Analysis was by I.C.P. (as for the drainage samples). A standard was inserted about every 25 samples to monitor laboratory variation. Results are shown on maps at 1:5000.

Data for Ag, As, Co, and Cu were entered on a Lotus spreadsheet and histograms plotted. Thresholds were estimated from the histograms and used for contouring the data.

The sampling was mostly done by the writer with help from R. Zalnieriunas. Some 339 samples were collected in the following five areas:

(1) SW corner of group (claim 1118,528), covering possible source of Cu-As-Co drainage anomalies;
(2) NW corner property sampling area around known Cu showing;
(3) Area of main showings, (showings A and B centred at

BL./21E); sampled to determine response to known veins and look for extensions of veins;

(4)Area straddling Roosevelt Lake road and 1118,525-527 claim line which is apparent source of As-Co drainage anomalies;

(5)Area up slope from isolated As drainage anomaly near SE corner of claim 1118,527;

Geological Mapping and Prospecting

Reconnaissance geological mapping of selected parts of the claims was done between 29th September and 9th October. Although it was originally planned that the applicant would do the mapping and prospecting, an unexpected offer of a 3 month contract for the applicant's services was received and mapping and prospecting was contracted out to D. Robinson of Swastika, a very competent mining and exploration geologist with considerable experience in the Cobalt camp (presently under contract with MNDM in Kirkland Lake).

Control for the mapping was mainly by flagged soil sampling lines run from the picket base lines.

Although soil sampling had been completed at the time of mapping, the results were not available. Only the drainage results had been received. The soil anomalies have not been prospected.

Mapping and prospecting covered about the same area as the soil sampling, except additional work was done along the Baseline 0+00 to provide a complete cross section, particularly of the Nipissing Diabase. The small soil grid in the SW corner of claim 1118527 was not mapped. A considerable amount of hand stripping was not in the prospecting and mapping.

Geochemical analyses were done on 8 grab samples from various locations. The locations and analyses are listed in appendix V and significant analyses are plotted on the geological map.

RESULTS AND RECOMMENDATIONS

Compilation

As noted above, the compilation has not been very useful in helping to 'project' Archean rocks under the cover on the Rib Lake claims. It has, however, produced useful information on the nature of the Archean volcanics and mineralization exposed around James Lake. A lot of the mineralization consists of an assemblage of Py-Po-Cp+/-Sph, Gn (galena) with significant Ni values. Heavy sulphides in many places assay up to 0.5 or 1 % Ni. In the Acana #5, #6 and #9 Showings and Mortimer occurrences, south of Granite Lake, anomalously high Co levels (e.g. 150 ppm Co in DH C53/3, 450 ppm in DH C53//4 , 0.15% Co in DH M070/4) are reported. Although no cobalt minerals are reported, some of these occurrences could well be 'root' zones of Cobalt type Ag-As-Co vein systems.

A good deal of the mineralization in the James Lake volcanics is in silicified shear zones. These may or may not be the same as the cherty inter-flows at Cobalt. The cherty, mineralized horizon on the Acana 1-3 showings does sound very similar to Cobalt inter-flows.

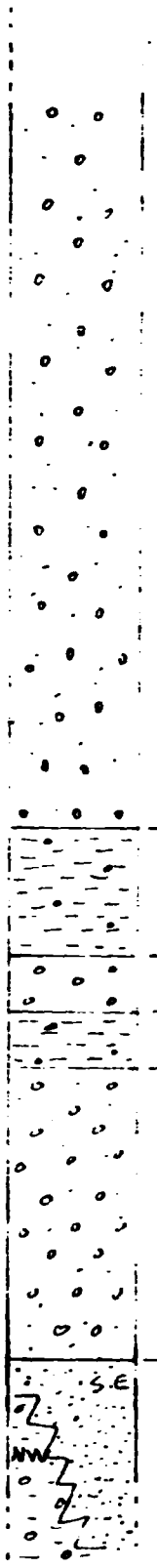
Geological Mapping and Prospecting

In the southwest, a Huronian sequence was established as shown in Fig. 7. A thin argillite-conglomerate unit was mapped over much of claim 1118,528. Some of the better exposures are in scarp faces as at the south end of BL. 6+50E. This may be a useful marker to build up the Huronian stratigraphy and help estimate the depth to basement.

In the northwest, the Huronian was divided into ortho and para conglomerates. As only part of the area was mapped and because of the general lack of bedding to determine dips, it was not possible to establish the whole sequence and estimate depth to the Archean.

Nipissing Diabase: D. Robinson was able to subdivide the sheet into generally a lower fine grained unit and an upper varied textured or coarse grained layer. It was not possible to make the ususal subdivisions recognized at Cobalt (quartz diabase, hypersthene diabase, varied textured, etc.). A mafic phase has been mapped within the fine grained in a north-south trending band through the area of the showings. Robinson regards this as either a later intrusive into the main part of the sheet, or possibly a mafic lower part of the sheet not exposed elsewhere on the property. It may be significant in that the two cobalt showings, A and B, are both within this phase. (The contacts shown are only generalizations as there is a good deal of complex 'mixing' of the

HURONIAN SECTION EXPOSED ON CLAIM 1118528



>20m ORTHOCONGLOMERATE (UPPER)
VOLCANIC CLASTS DOMINATE

3-4m UPPER ARGILLITE
UP TO 10% CLASTS, GREEN, MASSIVE

1-2m. ORTHOCONGLOMERATE (MIDDLE)

LOWER ARGILLITE
GREEN, UP TO 10% CLASTS, SHEARED WITH QUARTZ VEINING LOCALLY.

8m± ORTHOCONGLOMERATE (LOWER)

INTERBEDDED GREYWACKE AND LAMINATED ARGILLITES

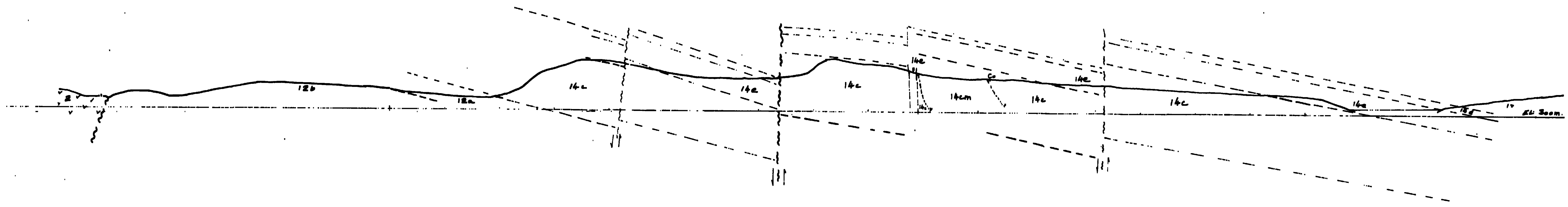
?

- FACIES CHANGE TO PARACONGLOMERATE TO N.W.

SCALE: 1:200

FIG. 5

1960



LEGEND:

NIPISSING DIABASE
14c Fine grained >10% felsics
14cm Fine grained >90% mafics
14d Coarse grained >1.5mm
14e Varied textured

HURONIAN
13 Lorrain Formation
Gowganda Formation
12a Para conglomerate
12b Ortho conglomerate

ARCHEAN
2 Mafic Volcanics

[illegible] Robinson Oct [illegible]992
[illegible] Jan. [illegible]93

RIB LAKE CLAIMS

SECTION ALONG BASE LINE
LOOKING NORTH

SCALE 1:5000

FIG 6.

pg. 66

two types.)

Because of the rugged topography, some estimate can be made of the thickness of the sheet. See Fig. 8. In this interpretation, the thickness is estimated at only about 170m compared to the ususal 300m seen at Cobalt. At the showings (A and B), the depth to the base of sheet is estimated at only about 100m. This is of course just a first approximation based on the data to date. It is dependent upon the interpretation of the layering and upon the dip of the sheet which can only be guessed at, at this stage.

Economic Geology

Minor amounts of malachite occur in conglomerate and greywacke in the southern part of claim 1118,528. Minor base metal concentrations are common in the general vicinity of silver veins at Cobalt, but the presence of these minor amounts does not seem very encouraging. No veins or mineralized structures were noted in this area.

In the northwest, at 2+60N to 2+70N/10+20E, minor chalcopyrite occurs in quartz chlorite veins in paraconglomerate. The best concentration noted is 25% Cp over 3cm x 1 cm. These veins are probably 'occurrence 17' on the compilation, known as the N. McLean showing. No impression was obtained that this is the upper part of 'Cobalt-type' vein.

Disappointingly no chlorite spotting was noted in the Huronian rocks. This is a characteristic of productive areas.

In the diabase area, two minor cobalt showings 'A' at 21+20E/0+40N and 'B' at 21+90E/1+65S were re-located. These are described in the assessment files and by Thomson. However, no accurate locations were on file and some of the locations were ambiguous.

Showing "A": A steeply dipping 110 degree striking altered, mineralized fracture with quartz and calcite has been trenched. At the western end, a water filled pit may mark a shallow shaft. In the muck from this pit coarse pyrite up to 10% over 2 cm. is present apparently in a vein wall rock. A little erythrite (Co bloom) occurs on a prominent fracture on the east wall of the pit. A grab sample from here analyzed 1456 ppm As and 722ppm Co. Aplite, up to 10 or 15 cm. thick was seen in the muck. A little chalcopyrite and sphalerite is also present. This may be the WKT cobalt occurrence described by Thomson (pg 71). Thomson also notes the presence of carbonate gangue and galena. Altered fractures with a little pyrite are noted (by Robinson) about 50m west of the pit, apparently an extension of the same general structure.

Some 300m east of the showing, on the base line, the writer noted float of aplite with specular hematite and pyrite.

Showing "B": Located about 220m south of Showing "A", this occurrence has been explored by deep trenches. Fractures trend 010 and 120°. On the 010 structure, a narrow (<1cm.) quartz-calcite vein carries a little chalcopyrite, sphalerite and cobalt arsenides in the wallrock. A grab sample here carried 2000 ppm As.

Some 65m farther south, altered fractures striking from about 030 to 115 were noted by Robinson. He also describes dark aplite from these pits.

Near the east boundary of the property, and some 50m north of the base line, an ESE structure has been tested by a pit, a trench and apparently a shaft. A substantial muck pile here suggests a shaft as much as 20m deep. Only a little pyrite and some brown carbonate was seen on the muck pile, but the trench and pit were not examined. This veining coincides with a regional lineament through Pike Lake and the south part of Rib Lake to the west and McNab Lake to the east.

Drainage Geochemistry

Jackson (See appendix I) identifies 3 significant anomalies on the property.

(1) Strong Cu-As anomalies on the SW corner of the claims;

(2) Anomalous As in the middle and south of claim 1118,527 (south of the Roosevelt Lake Road);

(3) Moderate As near the intersection of the Roosevelt Lake Road and the south boundary of the claims (sample 1061);

Co as seen in the drainage samples is anomalous over much of the property with levels ranging up to about 1400 ppm. These levels are, however, dependant upon the Mn levels (Mn scavenging). Although encouraging for the property as a whole, the Co levels are apparently not useful in guiding prospecting.

Soil Geochemistry

Threshold levels for soils, estimated from histograms, Fig. 5a to 5d, are approximately the same as determined for the organic stream data. Only the Ag, As, Co and Cu have been studied and plotted. See Fig. 6a to 6d.

Parameters estimated from the histograms and used in contouring and defining anomalies are as follows:

Est'd Mean;	Mean+1 STD Deviation	Mean + 2 STD Deviations
Ag	0.5ppm	1.0ppm	1.5ppm
As	15 ppm	25 ppm	35 ppm
Co	7 ppm	15 ppm	25 ppm
Cu	65 ppm	110 ppm	150 ppm

It was noted by Jackson that the Co levels for the stream sediments, are related to Mn scavenging. This is also apparent for the organic soils. However, inspite of this effect, all of the apparent Co anomalies coincide with anomalies of other elements, either As, Cu or Ag.

Anomaly 3+50N/8+50E: This has high Co levels, but there is only slightly elevated As. It warrants only low priority for follow up. It should be prospected.

Anomaly 9S/6+25E: This is a large, complex anomaly with strongly anomalous Cu, As and Co. Most of the 'highs' are along a 010 trending fault valley and are probably hydromorphic, but could possibly be from mineralization in the underlying structure. There are also flanking anomalies. The minor malachite occurrences in the conglomerates suggest a source for the Cu. The linear anomaly is from humus resting directly on coarse talus and it seems impractical to pursue this anomaly at this time. (It would require trenching with heavy equipment or diamond drilling under the fault valley.)

A west flanking anomaly at 6+25E/7 to 8S has coincident As, Co and Cu and could be related to Cobalt-type veins. Although the south sample is from a drainage and may be hydromorphic, the north part is on high ground and should be prospected and sampled in more detail. It rates a moderate priority for follow up.

Showing "A" Soil Anomalies (BL/ 21+00E) Scattered As, Co and Cu anomalies occur north and south of these weak Co occurrences. The anomalies to the south can be explained by glacial dispersion from known mineralization. However, to the north, an east-west linear anomaly centred on L21E/1+75N suggests 'new' mineralization. This warrants prospecting and more detailed soil sampling. It rates a high priority for follow up. As well reconnaissance sampling (100x25m spacing) should be extended eastward to cover an aplite-specular hematite float occurrence on the BL and 24E.

Anomaly 25E/2+30S: This Ag-Co anomaly is in an area of shallow soil cover. It warrants prospecting and if not explained should be sampled both by extending the grid and sampling the known anomalous area in more detail. The fact that As levels are low could be explained if it results from glacially transported material from which As could be selectively leached. It rates a medium priority

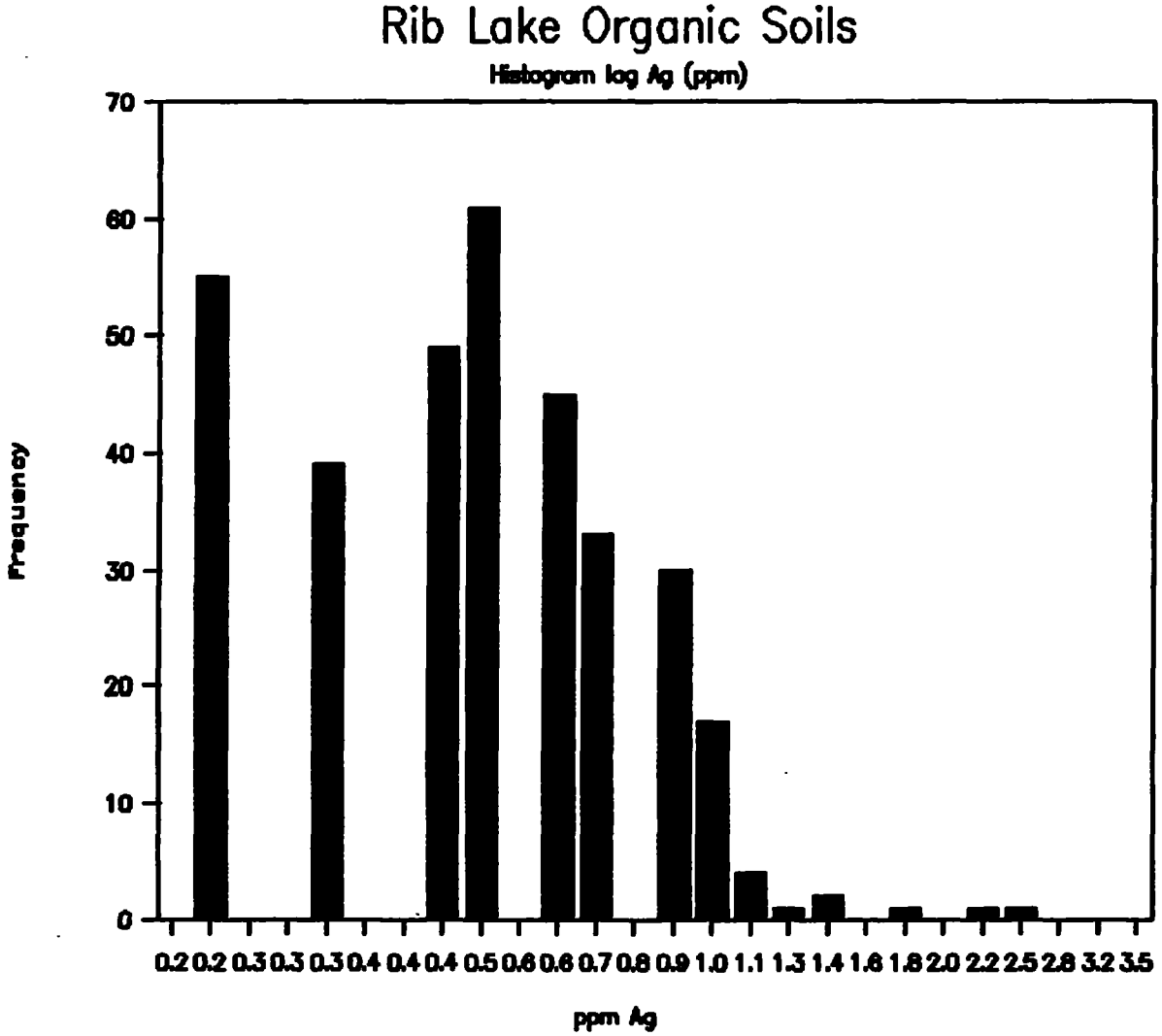

Rib Lake Organic Soils
Histogram log Ag (ppm)
Frequency
70
60
50
40
30
20
10
0
0.2 0.2 0.3 0.3 0.3 0.4 0.4 0.4 0.5 0.6 0.6 0.7 0.8 0.9 1.0 1.1 1.3 1.4 1.6 1.8 2.0 2.2 2.5 2.8 3.2 3.5
ppm Ag

Fig. 8(a)

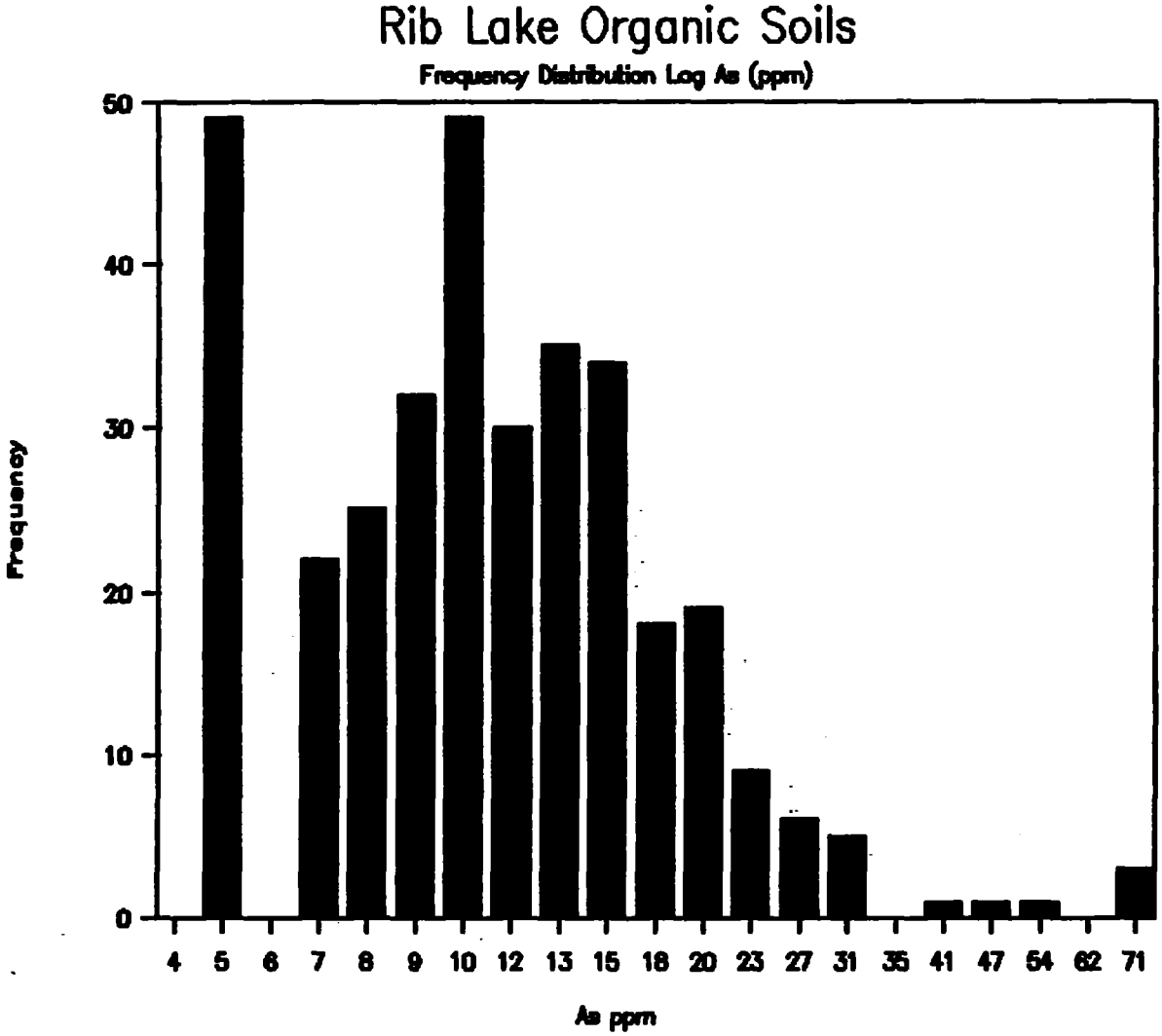

Rib Lake Organic Soils
Frequency Distribution Log As (ppm)
Frequency
50
40
30
20
10
0
4 5 6 7 8 9 10 12 13 15 18 20 23 27 31 35 41 47 54 62 71
As ppm

Fig. 8(b)

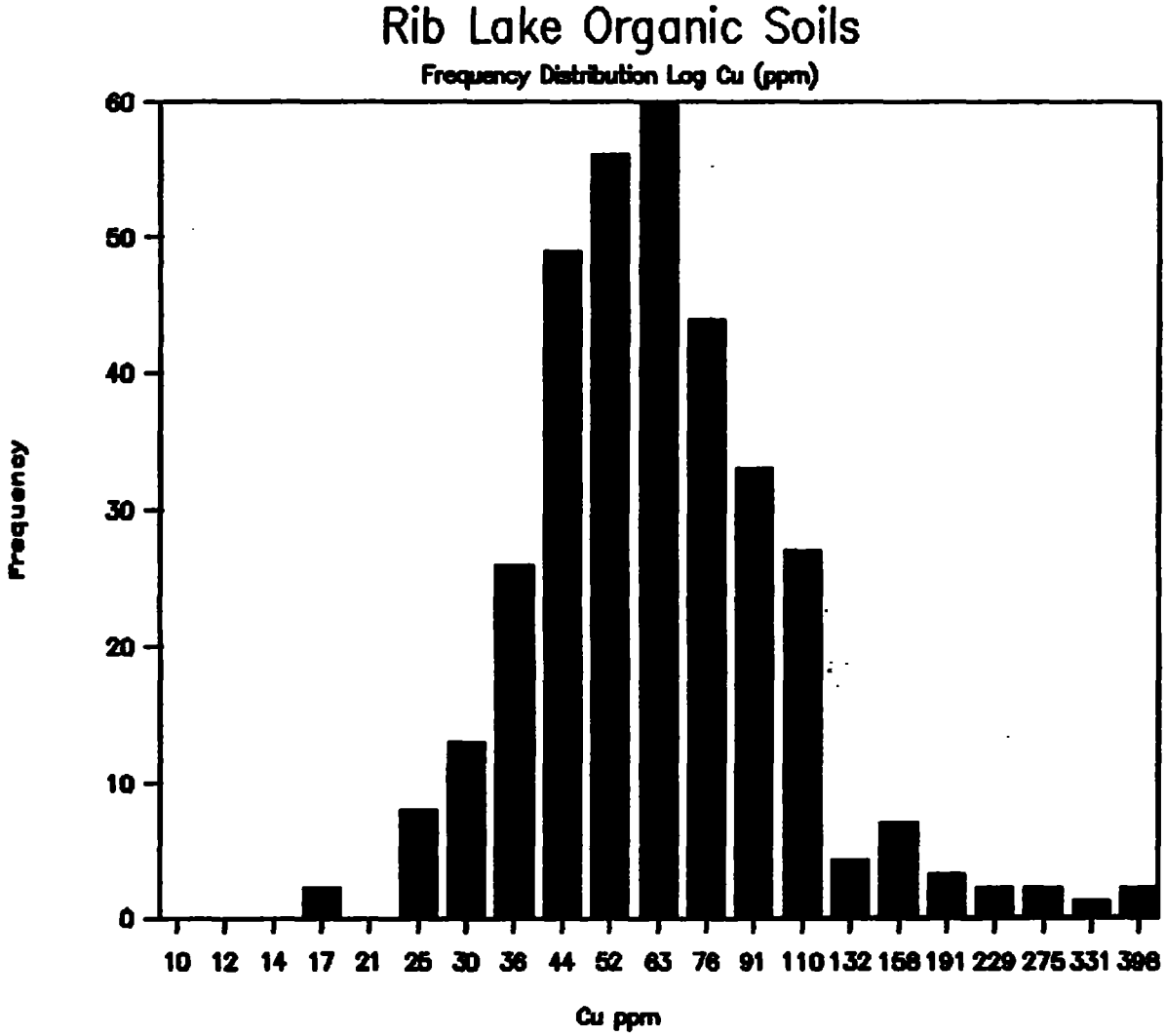

Rib Lake Organic Soils
Frequency Distribution Log Cu (ppm)
Frequency
0
10
20
30
40
50
60
10 12 14 17 21 25 30 36 44 52 63 76 91 110 132 158 191 229 275 331 398
Cu ppm

Fig 8(c)

pg 9c

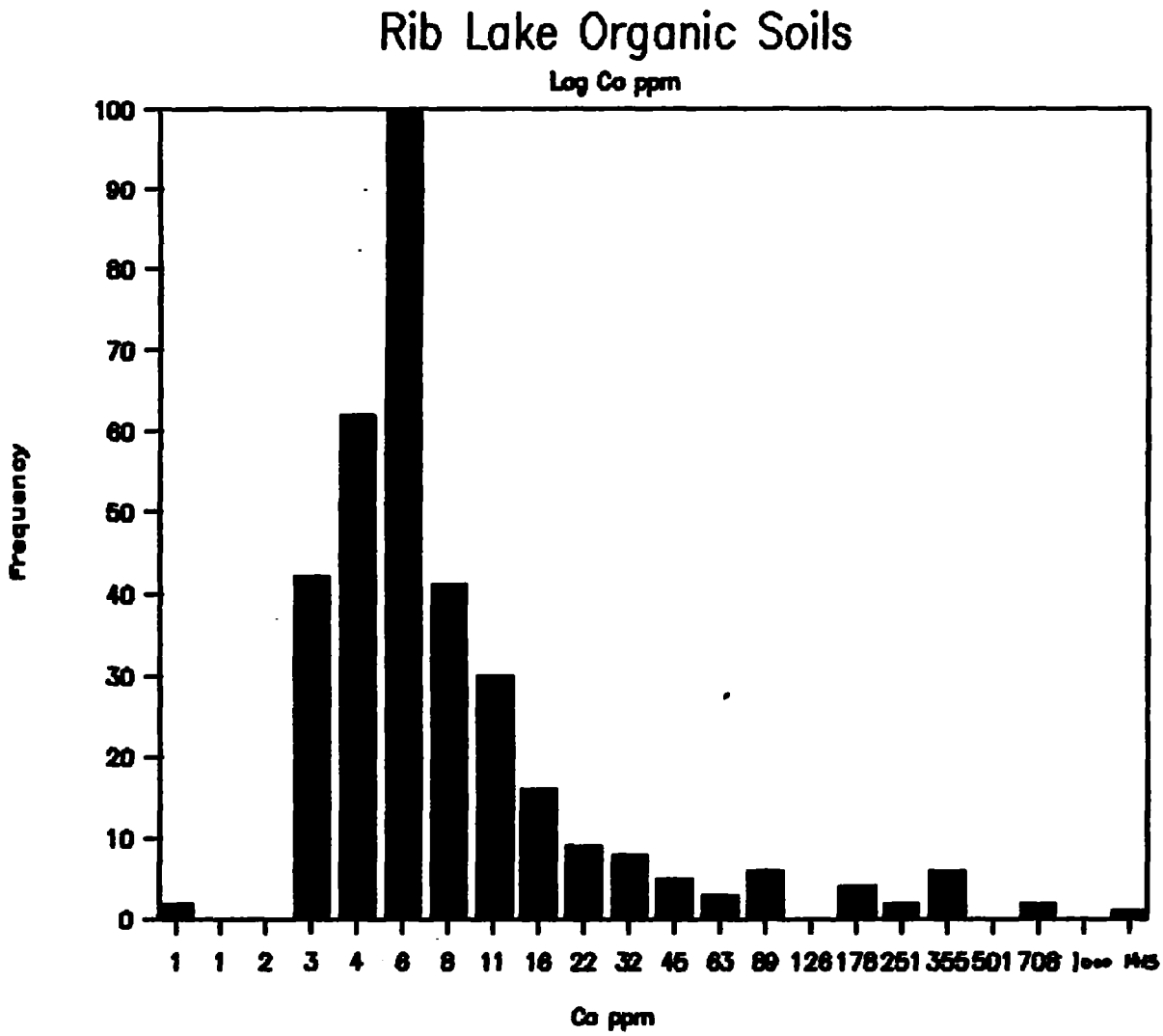

Rib Lake Organic Soils
Log Co ppm
Frequency
100
90
80
70
60
50
40
30
20
10
0
1 1 2 3 4 6 8 11 16 22 32 45 63 89 126 178 251 355 501 708 1000 INF
Co ppm

Fig 8(d)

Pg 9c

for follow up.

Anomaly 25E/5+50S (75m south of Claim line): This Ag-As-Co anomaly is one of the most interesting found. It indicates a source for the strong drainage anomaly located just to the southwest. An east-west or ENE alignment is indicated. There is some possibility of contamination here from an old road which plots 25m to the north. However, no transported mine rock has been found. It warrants a high priority for follow up. It should first be examined carefully and if no contamination if found, it should be prospected and soil sampled in detail.

SUMMARY AND CONCLUSIONS

The planned programme of geochemistry, mapping, prospecting and stripping was completed except for the mechanical stripping phase. Due to unexpected demand for the applicants services during the fall, it was necessary to contract out the some of the soil sampling and most of the mapping-prospecting. This consumed funds at a higher than expected rate and insufficient remained for detailing the soil anomalies and mechanical stripping.

The programme successfully re-located two, old cobalt occurrences, referred to here as "A" and "B". As well the drainage and soil geochemistry has given indication of at least two new zones of Cobalt-type mineralization (at L21E/1+75N, and 25E/5+50S). Although the indications are of only weak surface mineralization (both in the old occurrences and possible 'new' mineralization related to the soil anomalies), the ultimate target lies at depths of at least 100m to 200m at the base of the diabase. The presence of this weak mineralization combined with widespread strong Co geochemical anomalies in this setting should be considered encouraging.

The next programme of work should consist of the following:

(1) detailed prospecting of soil anomalies;

(2) enlargement of reconnaissance soil geochemistry where anomalies extend to the limit of sampling;

(3) mechanical stripping of high priority soil anomalies after detailing and prospecting;

(4) In the west reconnaissance mapping should extend enough to establish the complete Huronian section west of the diabase, in order to estimate the depth to the Archean basement.

(5) Old and newly found showings should be mapped at about 1:500 and sampled.

(6) Depending upon results of above work consideration should be given to diamond drilling a section on the strongest 'structure' to at least the base of the diabase.

A.W. Beecham

21 January 1993

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REFERENCES

Thomson R. (c.1964) — WKT Min. & Expl. Assessment Files Resident Geologist office, Cobalt, Ont.

Thomson R. (1968) — Geology Adjacent to Highway 11 in Best and Gillies Limit Twp. Dist. of Timiskaming and Nipissing; O.D.M. OFR. No. 5016

Todd, E.W. (1925) — Matabitchuan Area, Dist. of Timiskaming & Nipissing, Ontario, ODM. Map No. 34b;

APPENDIX I

INTERPRETATION OF ORGANIC STREAM SEDIMENT DATA, RIB LAKE AREA, COBALT, ONT.

By: Robert G. Jackson

SUBJECT: Interpretation of Organic Stream Sediment Data
Rib Lake Area, Cobalt, Ontario

APPROACH to INTERPRETATION:

The data was examined statistically to determine the significance of trace element abundances and patterns. A correlation analysis was carried out to determine the strength of linear relationships in the data. These relationships were then examined in detail using scatter plots. Factor analysis was applied to determine the inter-relationship of groups of elements.

Where no significant inter-element relationships were observed, histograms were generated and thresholds selected. The data was then represented as symbol map plots.

Where the abundance of a given element was controlled by either a regional rock type or a surficial environmental factor, samples with anomalous residual values were identified and compiled along with the other anomalies.

Only the significant results of this interpretation are discussed in the following section.

SUMMARY of RESULTS:

The two elements which appear to be most useful to define exploration targets are Cu and As. The distributions of these elements do not appear to be related to other variables. Based on histograms (Fig 1), thresholds were estimated to be 125 ppm Cu and 30 ppm As.

All the Cu anomalies cluster in the southwest corner of the area (Fig 2). The highest values were in samples 1052, 1053, and 1054. Most of this area is underlain by Gowganda Fm. but the anomaly appears to extend eastward onto the Nipissing diabase.

Anomalous As is associated with two of the Cu anomalies (Fig. 3). In addition to these, As anomalies occur to the east of the Cu anomaly over the Nipissing diabase. The strongest values were obtained in samples 1020 and 1022.

The relationship between Cu and As anomalies may represent some kind of metal zonation straddling the lower Nipissing diabase contact and oriented along an E-NE structural trend. The topography seems to suggest a fault structure of this orientation may occur in this area.

Cobalt occurs in anomalous concentrations over the whole of the area with values ranging up to 1394 ppm. However, the absolute level of Co is determined by the amount of Mn in the sample as a result of its scavenging capability (Fig 4). While encouraging that the area is anomalous in Co, the distribution pattern for Co cannot be used reliably to direct prospecting.

A considerable proportion of the variation in Ba, K, Zn, Ni, and Pb is related to higher levels of these elements over the Gowganda Fm. and the lower portion of the Nipissing diabase within approximately 500 m of the contact with the Gowganda Fm. This is illustrated by the multiple population character of the Ni histogram (Fig 4) and the spatial distribution of Ni (Fig 5). The overlap onto the Nipissing diabase may be due to glacial dispersion effects.

While the contrast is subtle, it results in sympathetic linear relationships amongst these elements. Scatter diagrams have been used to identify specific samples which have anomalously high residuals above this trend for Zn, Ni, and Pb and for residuals of Co and Cd above the Mn scavenging trend. The locations of these samples are shown on the anomaly compilation map (Fig 6). Of these, the most significant anomalies are those associated with Cu or As as in sample 1056 (Pb-Ni-Zn-Cd-As-Cu) and sample 1020 (As-Zn-Co).

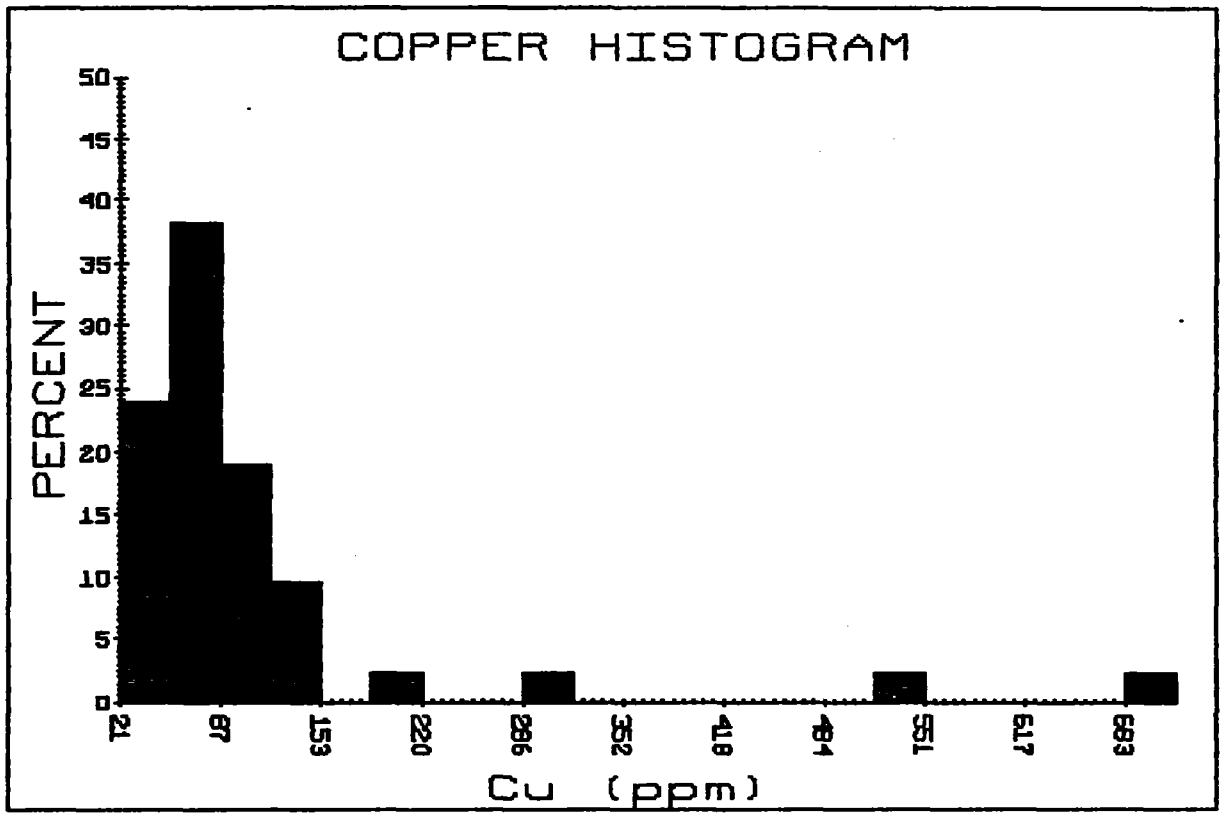
The distribution of Mo primarily reflects the distribution of mafic minerals and/or magnetite which is expressed as a strong Fe-V-Cr association. Two weakly anomalous samples (1016 and 1017) occur off this trend but these do not appear to be significant enough to warrant follow-up.

RECOMMENDATIONS:

Prospecting and soil geochemistry should be focused on the area of the Cu and As anomalies which straddle the Gowganda Fm/Nipissing diabase contact. Intensive prospecting in the area between and around samples 1052, 1053, 1054, 1056, 1020, 1022, and 1061 should establish some geological explanation for these anomalies. Soil geochemistry may be helpful to identify targets not exposed in outcrop.

Geological mapping should attempt to establish the existence of an E-NE structure in this area. If such a structure exists, it is important to determine whether mineralization is associated with this structural orientation or with the N-NE Rib Lake Fault orientation in order to plan an effective soil sampling strategy.

Either A or B horizon soils should be effective in following up these anomalies. An initial sample density of 25 m on lines spaced 100 m apart should be adequate to identify general source areas for the stream sediment anomalies. Any soil anomalies should be followed up with 50 m line spacing and 15 m sample spacing before selecting trenching targets.


COPPER HISTOGRAM
PERCENT
50
45
40
35
30
25
20
15
10
5
0
24
87
153
220
286
352
418
484
551
617
683
Cu (ppm)

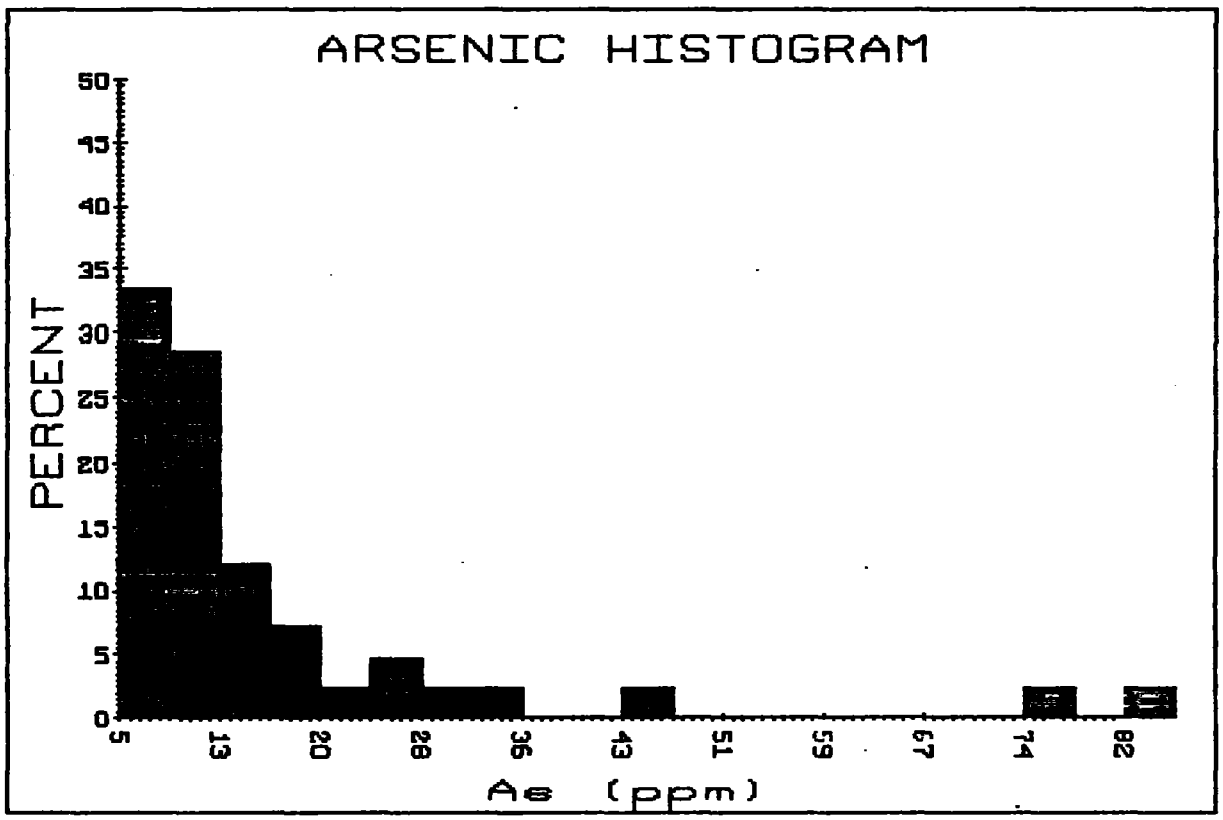
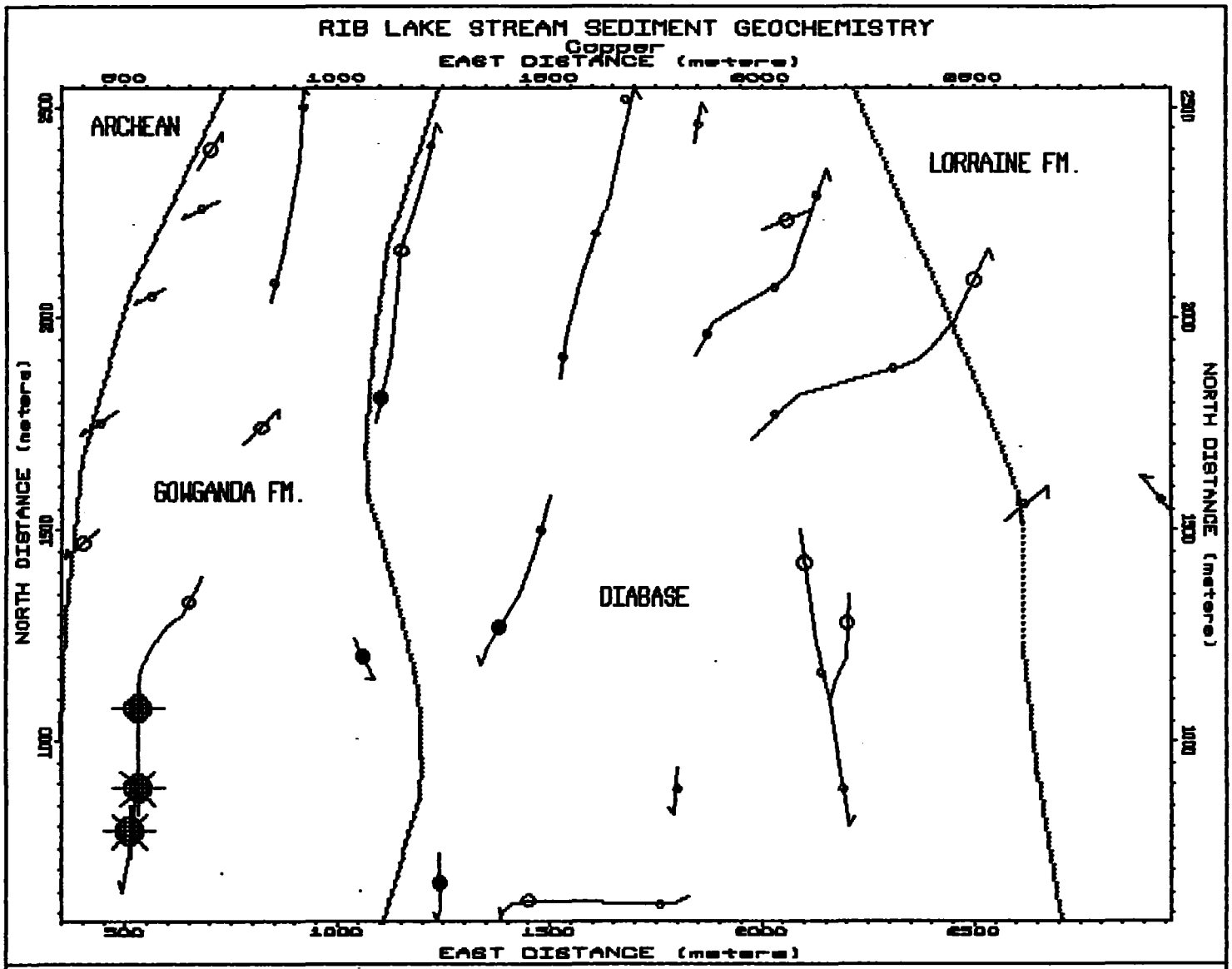
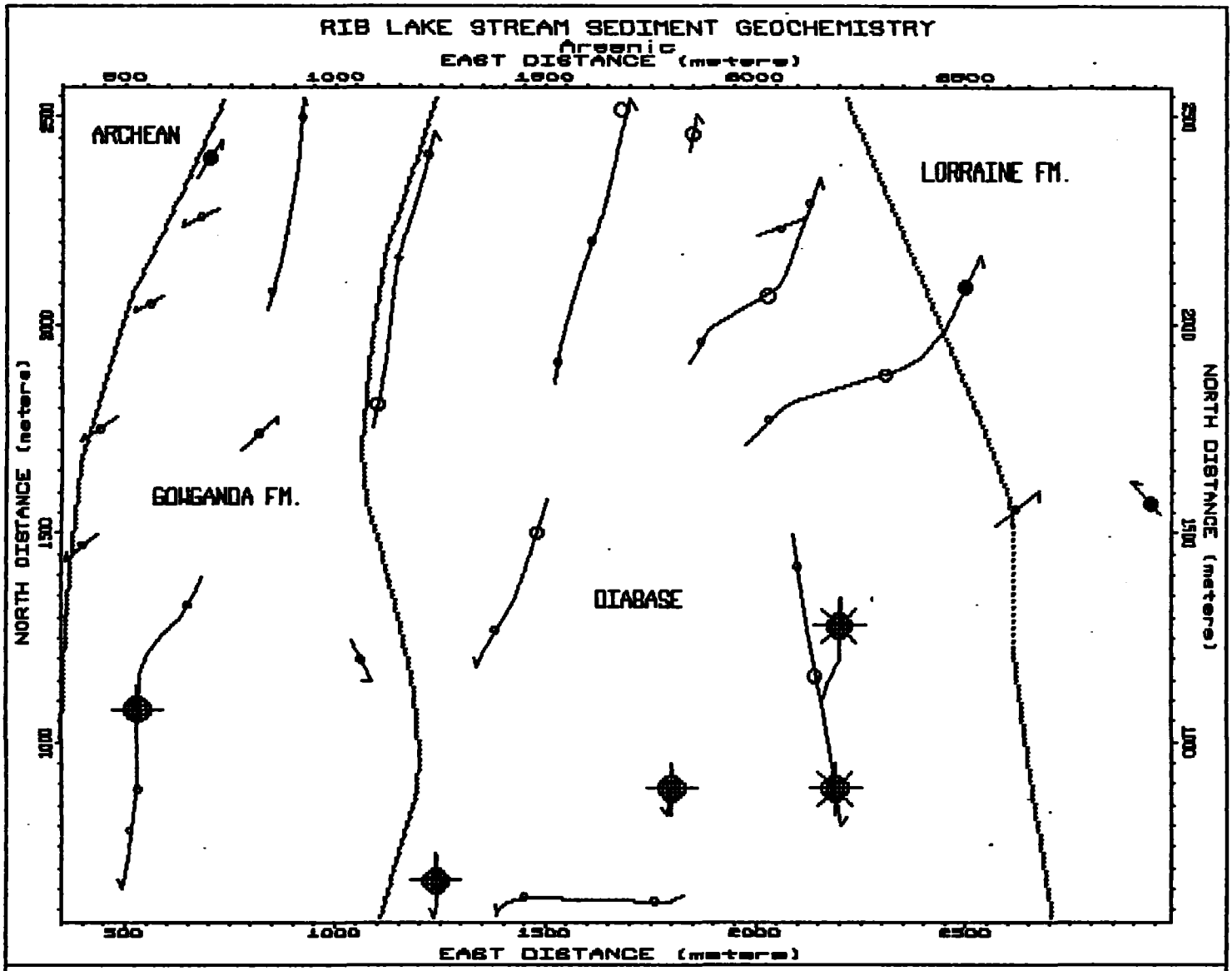

ARSENIC HISTOGRAM
PERCENT
50
45
40
35
30
25
20
15
10
5
0
5
13
20
28
36
43
51
59
67
74
82
As (ppm)

Fig. 1



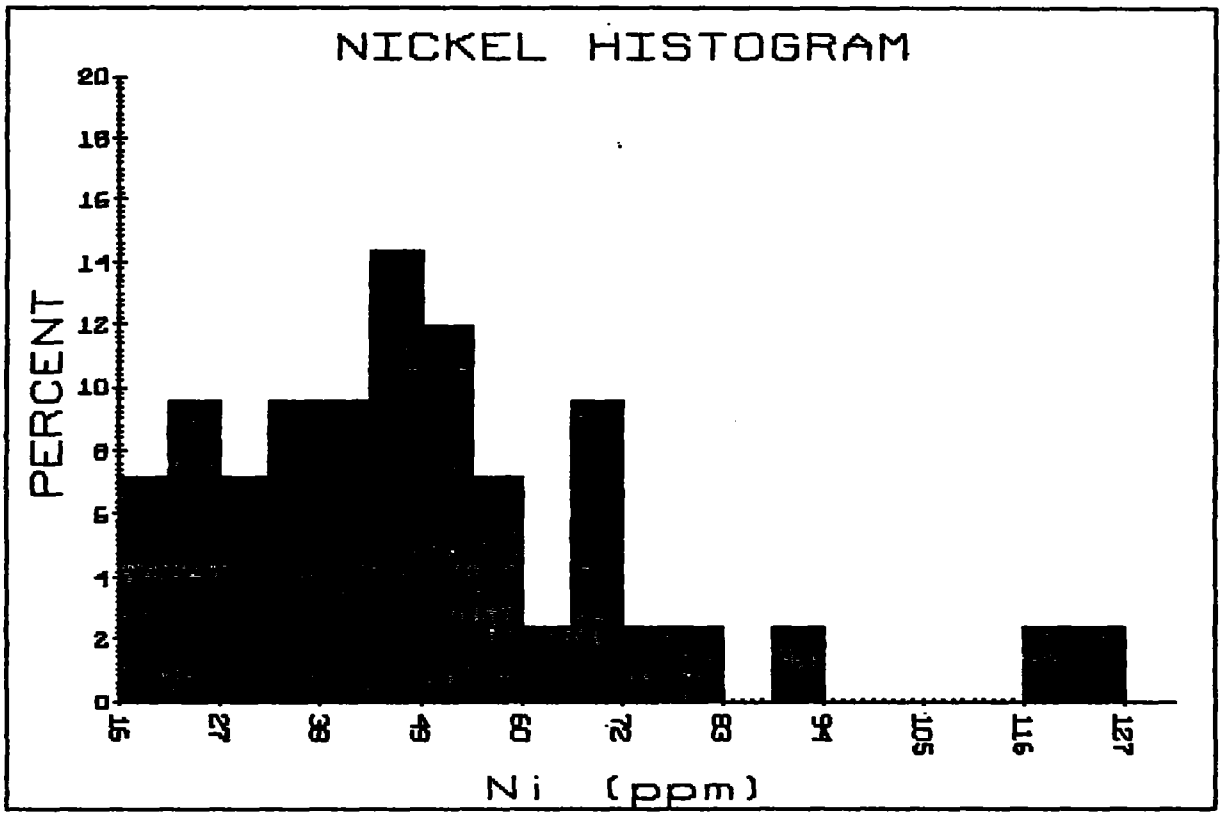
✱	> 315 ppm
✦	201 – 315 ppm
•	126 – 200 ppm
○	81 – 125 ppm
·	< 81 ppm

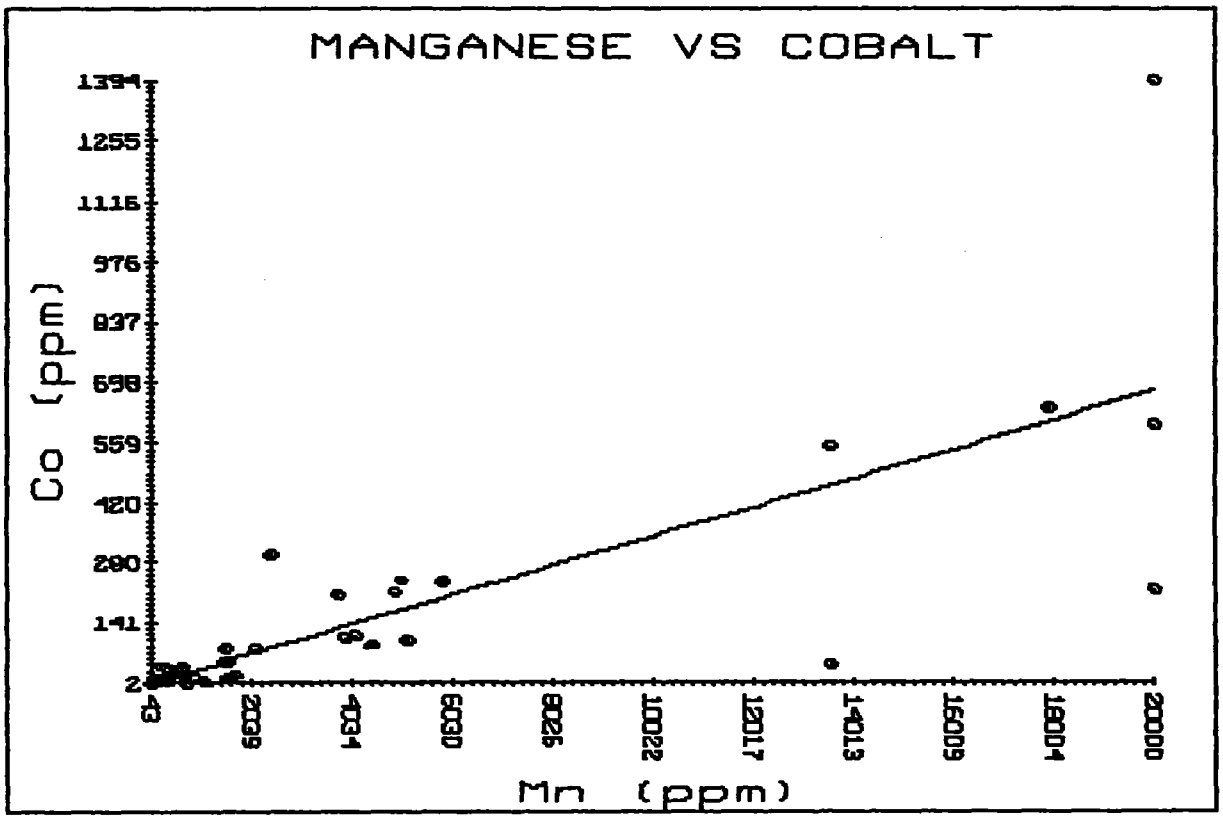
Fig 2



✳	> 50 ppm
✦	31 – 50 ppm
•	21 – 30 ppm
○	13 – 20 ppm
·	< 13 ppm

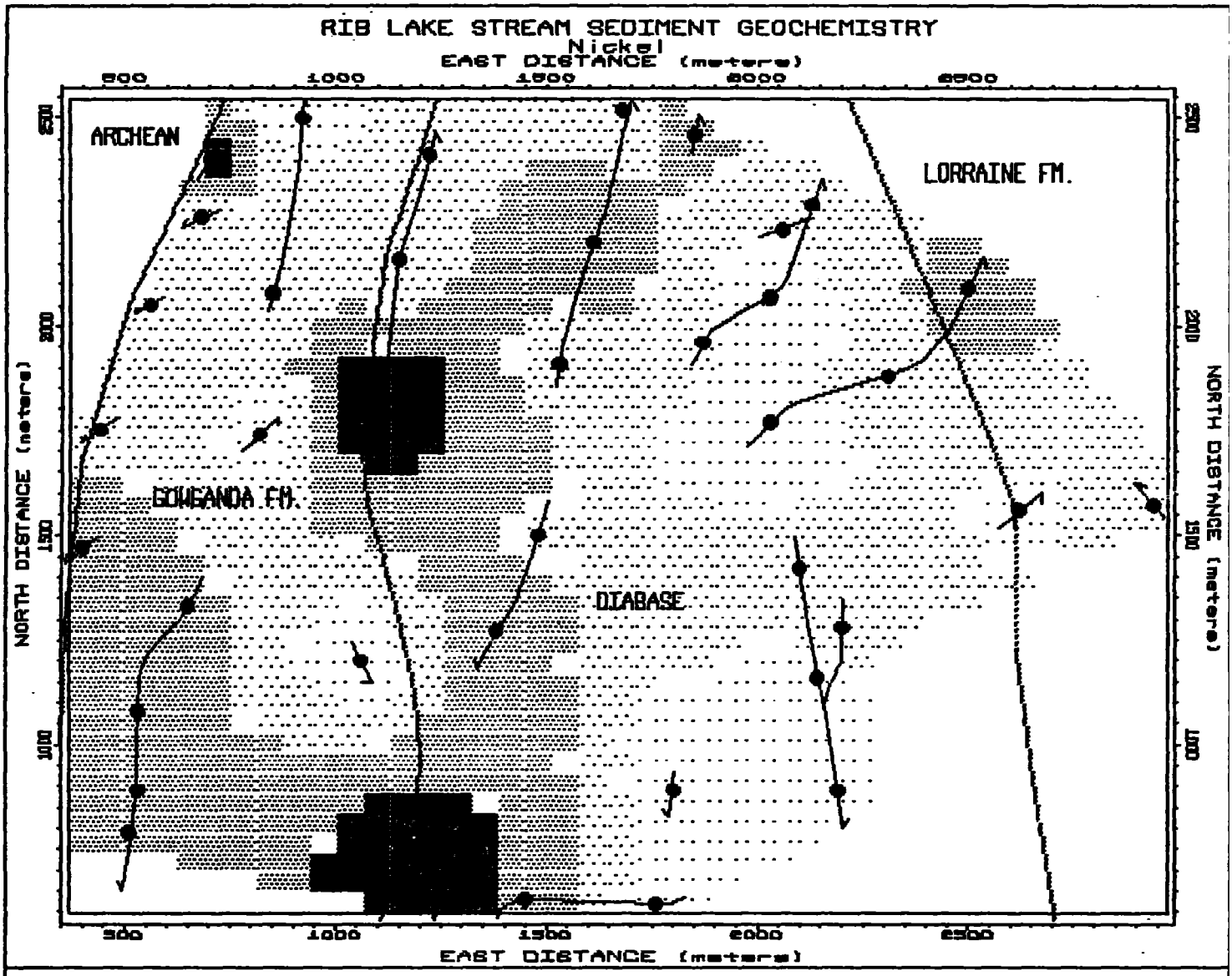
Fig 3


NICKEL HISTOGRAM
PERCENT
20
18
16
14
12
10
8
6
4
2
0
15
27
38
49
60
72
83
94
105
116
127
Ni (ppm)


MANGANESE VS COBALT
Co (ppm)
1394
1255
1116
976
837
698
559
420
280
141
2
43
2039
4034
6030
8026
10022
12017
14013
16009
18004
20000
Mn (ppm)

VI

Fig 4



> 80 ppm

56 – 80 ppm

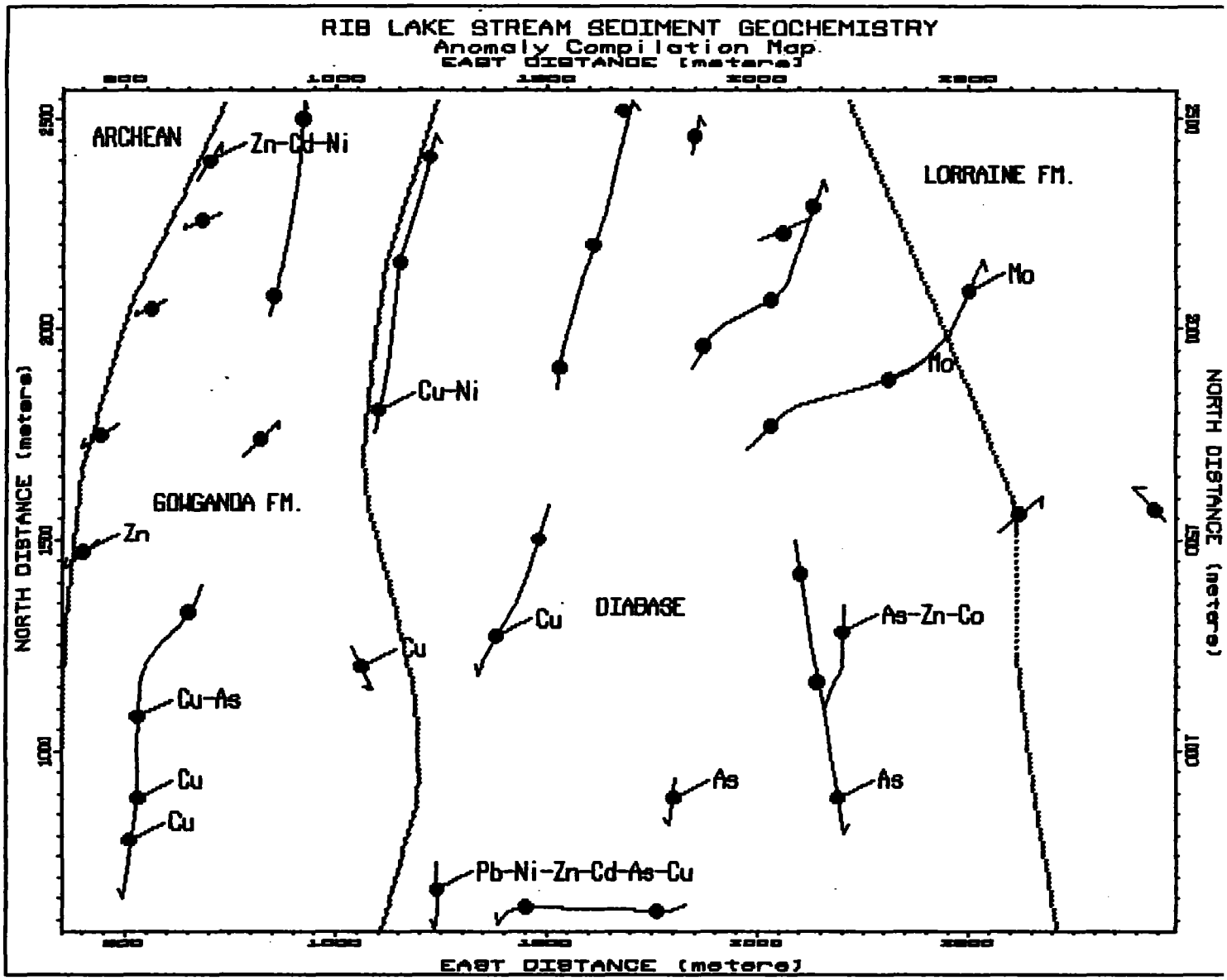
40 – 55 ppm

< 40 ppm

• Sample Sites

vii

Fig 5


RIB LAKE STREAM SEDIMENT GEOCHEMISTRY
Anomaly Compilation Map
EAST DISTANCE (metere)
ARCHEAN
Zn-Cd-Ni
LORRAINE FM.
Mo
Mo
Cu-Ni
GOWGANDA FM.
Zn
Cu
DIABASE
Cu
Cu
As-Zn-Co
Cu-As
Cu
Cu
As
As
Pb-Ni-Zn-Cd-As-Cu
NORTH DISTANCE (metere)
EAST DISTANCE (metere)

vccc

Fig 6

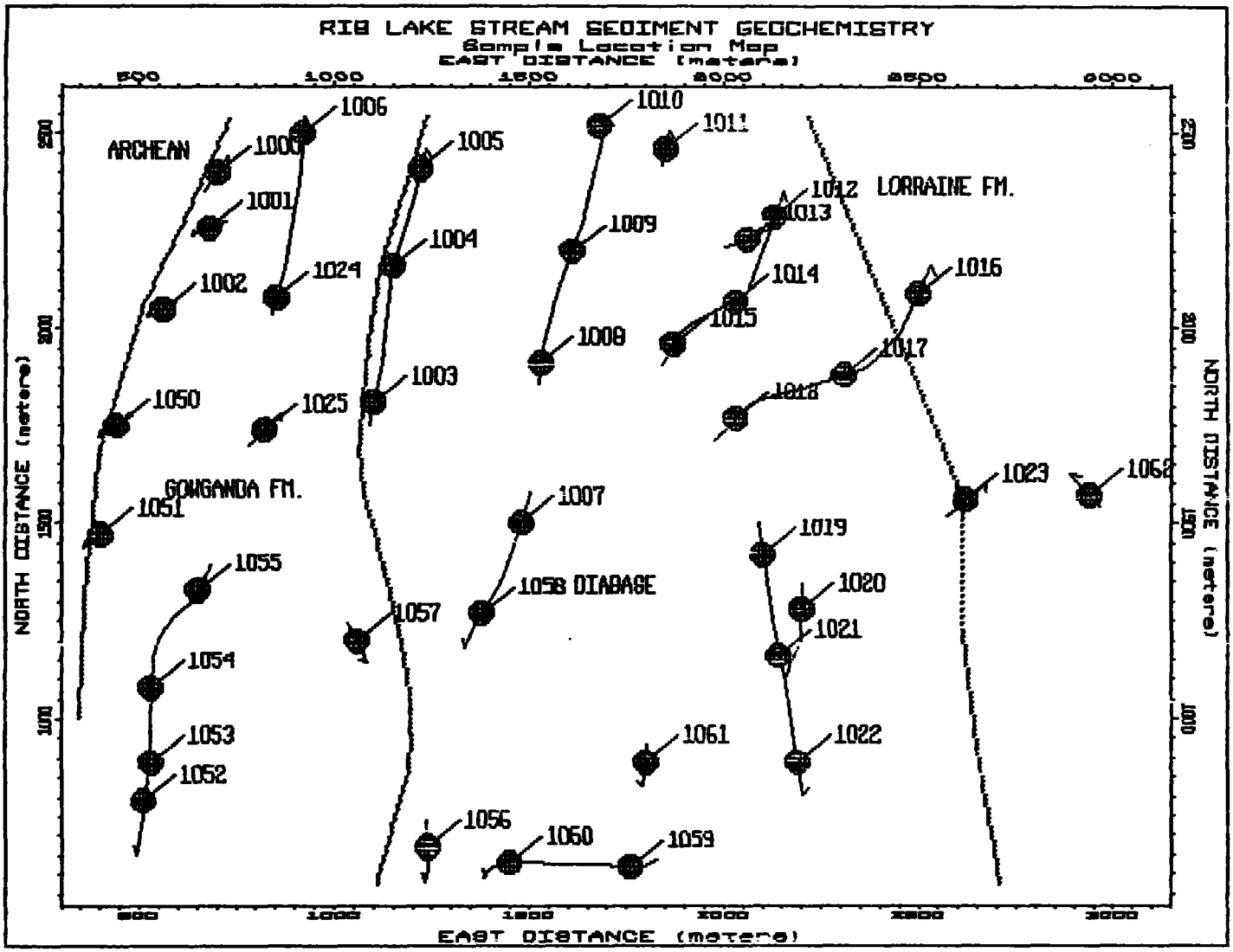

RIB LAKE STREAM SEDIMENT GEOCHEMISTRY
Sample Location Map
EAST DISTANCE (meters)
500
1000
1500
2000
2500
3000
NORTH DISTANCE (meters)
2500
2000
1500
1000
ARCHEAN
GOWGANDA FM.
LORRAINE FM.
1058 DIABASE
1000
1001
1002
1003
1004
1005
1006
1007
1008
1009
1010
1011
1012
1013
1014
1015
1016
1017
1018
1019
1020
1021
1022
1023
1024
1025
1050
1051
1052
1053
1054
1055
1056
1057
1059
1060
1061
1062

Fig 7

ix

APPENDIX II

DRAINAGE GEOCHEMISTRY DATA: BONDAR CLEGG GEOCHEMICAL LAB REPORTS

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
K1J 9G2
Tel: (613) 749-2220
fax: (613) 749-7170

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 092-41044.0 (COMPLETE)

REFERENCE INFO:

CLIENT: A.W. BEECHAM GEOLOGICAL SERVICES
PROJECT: NONE

SUBMITTED BY: ART BEECHAM
DATE PRINTED: 10-JUN-92

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
ORGANIC OR HUMUS	42	-80	42	DRY, SIEVE -80	41

REPORT COPIES TO: A.W. BEECHAM

INVOICE TO: A.W. BEECHAM

Bondar-Clegg & Company Ltd.
5420 Canotek Road
Ottawa, Ontario
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PROJECT: NONE

SUBMITTED BY: ART BEECHAM
DATE PRINTED: 10-JUN-92

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Al	Aluminum	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
2	Fe	Iron	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3	Mn	Manganese	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4	Mg	Magnesium	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5	Ca	Calcium	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Na	Sodium	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	K	Potassium	42	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	V	Vanadium	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	Cr	Chromium	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Co	Cobalt	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Ni	Nickel	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Cu	Copper	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Zn	Zinc	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	As	Arsenic	42	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	Sr	Strontium	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	Y	Yttrium	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Mo	Molybdenum	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Ag	Silver	42	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Cd	Cadmium	42	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Sn	Tin	42	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	Sb	Antimony	42	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	Te	Tellurium	42	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	Ba	Barium	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	La	Lanthanum	42	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	Sc	Scandium	42	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	W	Tungsten	42	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Pb	Lead	42	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Bi	Bismuth	42	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

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SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	V PPM	Cr PPM	Co PPM	Ni PPM
0999		0.53	0.51	43	0.10	0.66	0.04	0.04	8	10	2	17
1000		0.19	0.45	57	0.07	0.29	0.04	0.05	5	3	3	91
1001		0.19	0.72	1139	0.07	0.69	0.04	0.11	8	9	3	46
1002		0.24	0.83	404	0.08	0.60	0.04	0.12	7	8	3	45
1003		2.47	1.38	>20000	0.11	0.58	0.04	0.08	17	29	600	119
1004		1.96	2.18	1531	0.17	0.43	0.04	0.05	26	38	81	43
1005		0.71	0.86	1496	0.09	0.80	0.03	0.06	5	9	48	52
1006		0.39	0.71	1088	0.07	0.27	0.04	0.10	14	11	7	23
1007		1.60	1.66	672	0.13	0.15	0.04	0.07	22	24	20	54
1008		0.16	0.71	734	0.07	0.40	0.04	0.12	4	4	2	47
1009		0.98	0.95	5021	0.06	0.49	0.04	0.08	5	10	239	79
1010		2.51	6.38	3904	0.22	0.20	0.04	0.04	96	51	105	37
1011		0.56	0.70	1606	0.10	0.98	0.04	0.08	6	7	14	66
1012		0.66	1.14	910	0.13	0.41	0.04	0.10	15	20	12	46
1013		2.00	1.57	13565	0.08	0.26	0.04	0.07	21	34	44	40
1014		2.08	3.47	2119	0.07	0.08	0.04	0.05	56	24	79	27
1015		1.73	1.48	417	0.05	0.10	0.04	0.07	7	13	32	41
1016		2.33	1.68	13549	0.12	0.27	0.04	0.06	23	26	552	69
1017		2.21	2.27	5845	0.18	0.48	0.04	0.08	26	38	236	51
1018		1.97	0.52	150	0.06	0.16	0.03	0.05	8	15	7	24
1019		2.04	1.97	3765	0.06	0.11	0.03	0.06	18	23	206	44
1020		1.76	2.33	2429	0.27	0.81	0.04	0.08	25	30	298	53
1021		1.50	4.39	411	0.35	0.15	0.04	0.05	82	42	19	33
1022		2.15	8.06	4887	0.14	0.20	0.04	0.05	168	40	210	35
1023		1.49	1.86	1729	0.23	0.43	0.04	0.06	24	31	21	37
1024		0.83	0.89	97	0.05	0.09	0.04	0.07	5	10	8	46
1025		4.13	3.07	1555	0.09	0.13	0.04	0.03	42	58	48	30
1026	STANDARD	0.51	0.52	53	0.10	0.68	0.04	0.04	7	10	2	20
1050		1.08	2.04	678	0.09	0.23	0.04	0.07	27	20	29	51
1051		0.81	1.01	659	0.11	0.69	0.04	0.07	9	11	38	74
1052		1.11	0.99	246	0.12	0.62	0.04	0.06	11	17	41	69
1053		3.17	5.41	>20000	0.25	0.27	0.04	0.06	91	72	1394	59
1054		2.30	>10.00	17900	0.12	0.31	0.04	0.05	232	67	639	64
1055		0.78	1.57	173	0.06	0.26	0.04	0.08	12	8	12	57
1056		2.35	2.44	>20000	0.11	0.89	0.04	0.05	30	22	217	127
1057		0.95	2.19	277	0.10	0.12	0.04	0.05	31	20	11	26
1058		3.46	2.63	4427	0.20	0.36	0.04	0.06	37	41	89	67
1059		1.29	1.08	5131	0.08	0.22	0.04	0.06	17	22	101	31
1060		2.00	2.25	4118	0.22	1.01	0.04	0.08	35	26	111	73
1061		1.20	3.57	645	0.05	0.06	0.04	0.05	89	14	21	29

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Geochemical Lab Report

DATE PRINTED: 10-JUN-92

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	
0999		21	22	8	22	2	<1	0.8	0.6	<20	<5	<10	STANDARD
1000		89	237	22	25	1	<1	0.5	2.2	<20	<5	<10	
1001		60	191	9	21	<1	<1	0.4	1.9	<20	<5	<10	
1002		56	161	8	29	2	<1	0.6	1.0	<20	<5	<10	
1003		189	168	19	26	14	2	<0.2	5.2	<20	9	<10	
1004		106	70	<5	23	16	4	0.6	1.0	<20	7	<10	
1005		64	96	10	46	10	<1	0.4	1.5	<20	<5	<10	
1006		22	92	<5	15	1	<1	0.3	0.5	<20	<5	<10	
1007		68	51	14	12	4	<1	0.7	0.5	<20	6	<10	
1008		44	119	5	16	<1	<1	0.5	1.1	<20	<5	<10	
1009		72	63	8	34	11	1	0.4	1.7	<20	<5	<10	
1010		64	54	18	13	7	3	0.7	0.9	<20	6	<10	
1011		68	78	16	84	22	1	0.8	1.1	<20	<5	<10	
1012		57	66	10	22	5	2	0.8	0.5	<20	<5	<10	
1013		124	95	<5	19	12	3	1.6	1.6	<20	7	<10	
1014		54	37	17	8	5	3	0.5	<0.2	<20	6	<10	
1015		69	37	9	9	7	<1	0.7	0.6	<20	6	<10	
1016		96	123	25	21	16	9	0.2	2.3	<20	7	<10	
1017		71	96	15	33	16	10	1.0	1.4	<20	6	<10	
1018		59	26	7	12	15	3	0.5	<0.2	<20	8	<10	
1019		99	75	6	11	10	1	1.6	0.9	<20	6	<10	
1020		86	199	75	36	20	4	0.9	1.6	<20	6	<10	
1021		54	56	16	9	3	2	0.3	<0.2	<20	5	<10	
1022		61	86	82	12	6	6	0.7	1.9	<20	<5	<10	
1023		34	113	10	20	10	<1	0.4	0.6	<20	<5	<10	
1024		50	33	8	7	5	1	0.3	<0.2	<20	<5	<10	
1025		97	44	<5	10	8	2	0.7	<0.2	<20	8	<10	
1026		23	27	15	23	2	<1	0.6	0.5	<20	<5	<10	STANDARD
1050		60	98	9	19	6	1	1.3	0.7	<20	<5	<10	
1051		116	188	6	49	15	1	0.7	1.6	<20	<5	<10	
1052		540	38	<5	41	27	2	0.2	1.0	<20	5	<10	
1053		683	101	10	20	19	14	<0.2	2.5	<20	8	<10	
1054		311	131	31	24	10	13	0.9	4.7	<20	<5	<10	
1055		94	50	11	22	6	<1	0.4	0.2	<20	<5	<10	
1056		138	240	44	46	20	<1	<0.2	6.0	<20	9	<10	
1057		135	32	10	10	4	2	0.7	0.5	<20	<5	<10	
1058		128	83	9	24	11	2	0.3	0.6	<20	10	<10	
1059		57	35	<5	15	8	<1	0.8	1.3	<20	<5	<10	
1060		105	105	12	44	15	<1	0.5	2.7	<20	7	<10	
1061		65	33	35	5	3	3	0.5	<0.2	<20	<5	<10	

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Geochemical Lab Report

DATE PRINTED: 10-JUN-92

REPORT: 092-41044.0 (COMPLETE)

PROJECT: NONE PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Ba PPM	La PPM	Sc PPM	W PPM	Pb PPM	Bi PPM
0999		40	7	<5	<20	24	<5
1000		89	2	<5	<20	70	<5
1001		192	4	<5	<20	97	<5
1002		84	9	<5	<20	90	<5
1003		191	50	<5	<20	112	<5
1004		85	57	<5	<20	29	<5
1005		169	45	<5	<20	45	<5
1006		101	6	<5	<20	45	<5
1007		66	22	<5	<20	25	<5
1008		88	2	<5	<20	67	<5
1009		111	52	<5	<20	52	<5
1010		66	35	<5	<20	35	<5
1011		133	134	<5	<20	104	<5
1012		68	34	<5	<20	84	<5
1013		124	72	<5	<20	62	<5
1014		42	21	<5	<20	31	<5
1015		49	31	<5	<20	30	<5
1016		125	60	<5	<20	63	<5
1017		115	49	<5	<20	37	<5
1018		41	86	<5	<20	17	<5
1019		73	38	<5	<20	64	<5
1020		113	60	<5	<20	59	<5
1021		37	19	<5	<20	24	<5
1022		57	29	<5	<20	49	<5
1023		83	31	<5	<20	30	<5
1024		48	18	<5	<20	31	<5
1025		38	32	<5	<20	19	<5
1026		37	7	<5	<20	25	<5
1050		77	22	<5	<20	38	<5
1051		170	53	<5	<20	64	<5
1052		85	118	<5	<20	41	<5
1053		250	73	<5	<20	21	<5
1054		201	42	<5	<20	86	<5
1055		99	19	<5	<20	51	<5
1056		207	62	<5	<20	350	<5
1057		53	16	<5	<20	34	<5
1058		99	44	<5	<20	26	<5
1059		56	24	<5	<20	38	<5
1060		115	36	<5	<20	51	<5
1061		39	13	<5	<20	37	<5

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Geochemical Lab Report

DATE PRINTED: 10-JUN-92

REPORT: 092-41044.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	V PPM	Cr PPM	Co PPM	Ni PPM
1062		0.92	2.02	1559	0.24	1.76	0.04	0.04	24	24	10	41
1063		0.49	0.52	45	0.10	0.68	0.04	0.04	8	9	2	16

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Geochemical Lab Report

DATE PRINTED: 10-JUN-92

REPORT: 092-41044.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM
1062		52	101	25	36	17	<1	0.4	0.3	<20	<5	<10
1063		22	24	10	22	2	<1	0.7	0.2	<20	<5	<10 STANDARD

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PROJECT: NONE PAGE 2C

SAMPLE NUMBER	ELEMENT UNITS	Ba PPM	La PPM	Sc PPM	W PPM	Pb PPM	Bi PPM	
1062		79	61	<5	<20	53	<5	
1063		37	6	<5	<20	26	<5	Standard

APPENDIX III

SOIL GEOCHEMISTRY DATA; BONDAR CLEGG GEOCHEMICAL LAB REPORTS

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BONDAR-CLEGG

Geochemical Lab Report

REPORT: 092-42569.0 (COMPLETE)

REFERENCE:

CLIENT: A.W. BEECHAM GEOSERV.
PROJECT: NONE

SUBMITTED BY: A. BEECHAM
DATE PRINTED: 8-OCT-92

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
SOIL	165	-80	165	DRY, SIEVE -80	165

REPORT COPIES TO: MR. A.W. BEECHAM

INVOICE TO: MR. A.W. BEECHAM

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Geochemical Lab Report

REPORT: 092-42569.0 (COMPLETE)

REFERENCE:

CLIENT: A.W. BEECHAM GEOSERV.
PROJECT: NONE

SUBMITTED BY: A. BEECHAM
DATE PRINTED: 8-OCT-92

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Al	Aluminum	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
2	Fe	Iron	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3	Mn	Manganese	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4	Mg	Magnesium	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5	Ca	Calcium	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Na	Sodium	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	K	Potassium	165	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	Sc	Scandium	165	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	V	Vanadium	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Cr	Chromium	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Co	Cobalt	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Ni	Nickel	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Cu	Copper	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	Zn	Zinc	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	As	Arsenic	165	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	Sr	Strontium	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Y	Yttrium	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Mo	Molybdenum	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Ag	Silver	165	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Cd	Cadmium	165	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	Sn	Tin	165	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	Sb	Antimony	165	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	Te	Tellurium	165	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	Ba	Barium	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	La	Lanthanum	165	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	W	Tungsten	165	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Pb	Lead	165	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Bi	Bismuth	165	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

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Geochemical Lab Report

DATE PRINTED: 8-OCT-92

REPORT: 092-42569.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1027		2.49	4.07	8741	0.17	0.35	0.05	0.08	<5	63	59	263
1028		0.38	1.24	1387	0.11	0.64	0.05	0.11	<5	15	21	10
1029		0.23	0.84	982	0.07	0.52	0.06	0.14	<5	9	10	4
1030		0.34	0.76	180	0.07	0.18	0.05	0.07	<5	11	29	5
1031		0.51	1.30	292	0.07	0.19	0.05	0.09	<5	20	17	5
1032		0.19	0.67	386	0.06	0.33	0.06	0.14	<5	7	9	3
1033		0.48	0.98	78	0.06	0.11	0.06	0.07	<5	20	19	3
1034		0.54	1.44	671	0.10	0.30	0.06	0.11	<5	24	19	5
1035		0.32	0.72	227	0.05	0.19	0.06	0.08	<5	16	11	2
1036		0.35	0.99	393	0.06	0.24	0.05	0.10	<5	17	15	3
1037		0.37	0.56	249	0.05	0.17	0.06	0.07	<5	15	14	2
1038		0.35	0.52	234	0.04	0.16	0.05	0.06	<5	14	14	2
1039		0.16	0.80	955	0.05	0.38	0.05	0.13	<5	7	10	3
1040		0.61	0.72	1242	0.08	0.16	0.05	0.09	<5	11	13	18
1041		0.37	0.63	1681	0.05	0.19	0.05	0.07	<5	15	15	5
1042		0.33	0.81	1639	0.06	0.41	0.05	0.10	<5	11	16	7
1043		1.39	2.41	7650	0.14	0.34	0.06	0.10	<5	42	31	228
1044		0.33	0.54	187	0.04	0.17	0.06	0.08	<5	12	13	4
1045		1.17	6.06	15146	0.07	0.38	0.07	0.10	<5	89	42	533
1046		0.54	1.42	258	0.09	0.14	0.05	0.07	<5	30	26	7
1047		0.61	1.59	208	0.10	0.14	0.05	0.06	<5	36	27	4
1048		0.35	0.87	245	0.06	0.21	0.06	0.09	<5	16	17	3
1049		0.47	0.52	52	0.11	0.71	0.05	0.07	<5	8	10	3 STANDARD
1064		1.10	1.21	126	0.07	0.14	0.05	0.09	<5	15	14	9
1065		0.23	0.27	77	0.04	0.28	0.05	0.06	<5	4	6	4
1066		0.52	1.08	101	0.09	0.18	0.05	0.07	<5	22	18	4
1067		0.37	0.87	825	0.07	0.40	0.06	0.08	<5	15	25	4
1068		1.47	1.47	126	0.09	0.08	0.06	0.08	<5	18	23	6
1069		0.88	0.98	181	0.07	0.13	0.06	0.09	<5	19	20	5
1070		1.16	1.11	125	0.05	0.06	0.05	0.07	<5	15	20	5
1071		1.18	1.87	371	0.12	0.10	0.05	0.09	<5	28	26	12
1072		1.52	2.61	88	0.06	0.05	0.05	0.08	<5	28	22	5
1073		0.38	0.99	238	0.05	0.17	0.05	0.08	<5	16	13	3
1074		0.25	0.50	108	0.03	0.25	0.05	0.07	<5	6	6	4
1075		0.48	1.04	168	0.06	0.19	0.05	0.08	<5	18	16	4
1076		0.34	0.84	798	0.06	0.40	0.05	0.09	<5	13	12	4
1077		0.26	0.67	381	0.08	0.45	0.05	0.12	<5	10	14	19
1078		0.59	1.20	183	0.12	0.19	0.05	0.08	<5	25	21	14
1079		0.67	1.73	164	0.09	0.21	0.05	0.09	<5	24	21	10
1080		0.33	0.84	203	0.05	0.24	0.06	0.09	<5	15	14	6

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BONDAR-CLEGG

Geochemical Lab Report

DATE PRINTED: 8-OCT-92

REPORT: 092-42569.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	
1027		68	351	104	23	24	14	7	0.6	2.3	<20	8	
1028		60	54	197	8	32	<1	3	0.6	2.1	<20	<5	
1029		49	41	131	<5	20	<1	<1	0.7	1.7	<20	<5	
1030		45	81	84	10	10	1	1	0.6	1.2	<20	<5	
1031		54	40	102	8	14	1	1	0.5	0.8	<20	<5	
1032		52	60	123	10	13	<1	2	1.0	1.5	<20	<5	
1033		29	32	45	10	8	1	1	<0.2	0.4	<20	<5	
1034		52	49	77	9	16	1	2	0.8	1.6	<20	<5	
1035		32	35	47	<5	13	1	1	0.3	1.4	<20	<5	
1036		32	47	56	<5	12	<1	<1	0.5	1.5	<20	<5	
1037		22	41	72	6	14	<1	<1	0.7	1.5	<20	<5	
1038		21	39	68	6	13	<1	1	0.6	1.1	<20	<5	
1039		72	73	129	9	15	<1	2	0.9	1.7	<20	<5	
1040		37	108	77	<5	11	2	1	0.4	0.8	<20	<5	
1041		21	25	50	8	13	1	<1	0.6	1.0	<20	<5	
1042		52	63	253	7	19	1	2	0.4	2.7	<20	<5	
1043		65	249	101	17	26	8	4	0.2	2.2	<20	7	
1044		34	54	146	10	16	1	<1	0.2	2.1	<20	<5	
1045		58	174	65	65	27	7	8	0.7	2.0	<20	<5	
1046		44	58	97	10	11	2	1	0.8	1.2	<20	<5	
1047		28	42	51	13	10	1	1	0.5	1.2	<20	<5	
1048		47	50	50	7	15	<1	1	0.6	2.5	<20	<5	
1049		20	24	30	17	24	2	<1	1.1	0.7	<20	<5	STANDAR
1064		67	59	91	11	11	3	1	0.7	2.1	<20	6	
1065		24	27	79	6	21	<1	<1	0.3	1.2	<20	<5	
1066		33	38	63	11	11	<1	1	0.3	0.8	<20	<5	
1067		55	55	145	5	20	1	3	0.6	1.6	<20	<5	
1068		40	113	58	12	8	4	<1	0.5	1.1	<20	7	
1069		44	153	89	8	12	3	<1	0.7	1.0	<20	5	
1070		29	103	47	8	7	2	<1	0.6	1.3	<20	6	
1071		70	96	76	22	11	3	1	0.9	2.4	<20	7	
1072		50	63	56	16	5	3	1	0.8	0.9	<20	7	
1073		45	53	57	8	13	1	<1	0.6	1.3	<20	<5	
1074		70	83	80	9	25	1	<1	0.6	2.9	<20	<5	
1075		67	78	90	12	13	1	<1	0.5	2.7	<20	5	
1076		56	78	148	9	19	1	2	0.9	2.4	<20	<5	
1077		48	83	192	9	32	<1	2	0.9	16.1	<20	5	
1078		32	53	71	11	20	2	1	0.7	9.1	<20	<5	
1079		48	122	584	13	16	<1	2	0.7	8.6	<20	5	
1080		39	65	156	6	17	1	<1	0.5	4.4	<20	<5	

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1027		<10	129	43	<20	64	<5
1028		<10	215	4	<20	82	<5
1029		<10	106	3	<20	64	<5
1030		<10	96	5	<20	74	<5
1031		<10	118	5	<20	87	<5
1032		<10	86	2	<20	141	<5
1033		<10	44	6	<20	50	<5
1034		<10	104	5	<20	92	<5
1035		<10	113	6	<20	63	<5
1036		<10	130	5	<20	94	<5
1037		<10	81	4	<20	79	<5
1038		<10	77	4	<20	73	<5
1039		<10	93	2	<20	139	<5
1040		<10	76	11	<20	54	<5
1041		<10	194	6	<20	48	<5
1042		<10	190	5	<20	91	<5
1043		<10	151	28	<20	83	<5
1044		<10	118	7	<20	77	<5
1045		<10	122	25	<20	203	<5
1046		<10	155	7	<20	65	<5
1047		<10	72	6	<20	47	<5
1048		<10	245	6	<20	94	<5
1049		<10	38	6	<20	37	<5
1064		<10	106	9	<20	84	<5
1065		<10	93	2	<20	44	<5
1066		<10	52	4	<20	55	<5
1067		<10	151	6	<20	83	<5
1068		<10	76	14	<20	61	<5
1069		<10	100	10	<20	83	<5
1070		<10	76	10	<20	40	<5
1071		<10	119	11	<20	97	<5
1072		<10	43	13	<20	67	<5
1073		<10	185	6	<20	80	<5
1074		<10	233	5	<20	93	<5
1075		<10	136	7	<20	98	<5
1076		<10	181	5	<20	159	<5
1077		<10	126	3	<20	123	<5
1078		<10	82	10	<20	80	<5
1079		<10	60	4	<20	99	<5
1080		<10	122	5	<20	92	<5

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1081		0.38	0.87	222	0.06	0.20	0.05	0.07	<5	22	17	5
1082		0.91	1.00	287	0.12	0.18	0.06	0.10	<5	15	18	15
1083		0.32	0.76	698	0.05	0.25	0.05	0.08	<5	14	16	7
1084		0.42	1.00	108	0.05	0.20	0.06	0.07	<5	22	17	4
1085	STANDARD	0.55	0.58	58	0.12	0.83	0.06	0.08	<5	9	13	5
1086		0.24	0.91	161	0.04	0.19	0.05	0.08	<5	12	13	4
1087		0.44	0.87	116	0.04	0.12	0.06	0.09	<5	10	11	5
1088		0.31	0.74	428	0.05	0.23	0.05	0.09	<5	12	11	4
1089		0.86	1.14	2553	0.09	0.15	0.06	0.09	<5	21	23	67
1090		0.25	0.55	224	0.04	0.23	0.05	0.08	<5	8	9	5
1091		0.49	1.04	195	0.06	0.20	0.06	0.07	<5	21	15	3
1092		0.31	0.61	315	0.05	0.35	0.06	0.09	<5	12	13	4
1093		0.31	0.66	310	0.05	0.22	0.06	0.07	<5	17	15	2
1094		0.52	0.52	53	0.05	0.15	0.07	0.06	<5	13	13	6
1095		0.62	1.37	77	0.10	0.12	0.05	0.06	<5	33	25	3
1096		0.30	0.80	162	0.06	0.23	0.06	0.08	<5	21	12	5
1097		0.56	1.25	240	0.11	0.23	0.06	0.08	<5	25	25	5
1098		0.79	0.69	109	0.07	0.15	0.06	0.09	<5	12	10	6
1099		0.42	0.88	68	0.06	0.17	0.06	0.08	<5	13	14	10
1100		0.58	0.74	115	0.05	0.13	0.06	0.07	<5	13	12	10
1101		0.43	0.92	282	0.06	0.16	0.06	0.08	<5	24	18	4
1102		0.45	0.62	230	0.05	0.21	0.07	0.09	<5	10	11	12
1103		0.30	0.55	224	0.05	0.26	0.06	0.06	<5	15	12	3
1104		1.06	1.98	136	0.15	0.17	0.07	0.08	<5	35	32	6
1105		0.25	0.45	99	0.04	0.55	0.05	0.07	<5	7	8	4
1106		1.20	0.26	45	0.05	0.47	0.07	0.05	<5	6	18	3
1107		0.33	0.48	91	0.05	0.39	0.06	0.07	<5	8	9	8
1108		0.22	0.84	258	0.08	0.34	0.06	0.12	<5	9	9	4
1109		0.62	1.71	60	0.05	0.08	0.05	0.05	<5	43	24	2
1110	STANDARD	0.57	0.61	54	0.12	0.82	0.07	0.08	<5	10	12	3
1111		0.76	0.26	18	0.03	0.05	0.06	0.06	<5	13	14	<1
1112		1.03	0.85	102	0.05	0.06	0.05	0.07	<5	15	21	20
1113		0.24	0.65	317	0.05	0.32	0.05	0.08	<5	12	10	10
1114		0.71	1.19	197	0.05	0.38	0.06	0.13	<5	7	9	14
1115		0.41	1.33	394	0.16	0.40	0.05	0.09	<5	26	35	9
1116		1.50	1.61	113	0.07	0.07	0.06	0.08	<5	15	18	11
1117		0.48	0.27	23	0.04	0.29	0.06	0.06	<5	6	6	4
1118		0.28	0.71	491	0.07	0.45	0.06	0.08	<5	12	16	5
1119		0.47	1.07	266	0.10	0.22	0.06	0.11	<5	17	23	8
1120		0.35	0.58	326	0.06	0.16	0.06	0.09	<5	10	12	4

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Geochemical Lab Report

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REPORT: 092-42569.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	
1081		27	38	94	7	15	2	1	0.4	2.6	<20	<5	
1082		55	62	101	8	16	3	<1	1.4	2.8	<20	6	
1083		51	65	99	<5	22	1	1	0.7	3.5	<20	<5	
1084		45	50	95	11	16	1	1	0.3	2.8	<20	<5	
1085		22	27	49	13	28	2	1	1.1	1.7	<20	5	STAND
1086		62	73	107	7	10	<1	1	0.4	2.3	<20	<5	
1087		64	67	62	7	14	2	2	0.7	2.1	<20	<5	
1088		49	62	118	<5	16	1	<1	0.3	2.6	<20	<5	
1089		36	93	78	9	15	3	2	0.6	1.4	<20	6	
1090		51	84	90	8	21	1	<1	0.6	2.3	<20	<5	
1091		42	42	77	7	18	1	1	0.6	1.6	<20	<5	
1092		53	51	116	<5	24	1	<1	0.4	2.3	<20	<5	
1093		30	37	58	5	16	1	<1	0.7	1.3	<20	<5	
1094		29	63	40	<5	13	3	1	0.3	0.9	<20	<5	
1095		35	52	74	11	11	1	6	0.2	1.2	<20	<5	
1096		43	54	71	9	24	1	5	0.8	1.6	<20	<5	
1097		45	43	73	9	17	1	4	0.5	1.4	<20	<5	
1098		44	62	54	8	15	4	2	0.4	1.4	<20	<5	
1099		83	77	90	6	21	2	2	0.5	3.2	<20	<5	
1100		56	79	77	<5	14	3	2	0.5	2.6	<20	<5	
1101		36	40	54	8	12	1	2	0.4	0.8	<20	<5	
1102		66	73	89	<5	20	2	1	0.5	2.4	<20	<5	
1103		34	40	63	<5	22	1	1	0.4	1.2	<20	<5	
1104		64	55	89	12	15	2	1	0.4	1.5	<20	5	
1105		60	61	50	7	55	1	1	0.7	1.7	<20	<5	
1106		16	224	40	<5	29	20	1	0.3	1.0	<20	7	
1107		54	47	61	11	31	1	1	0.5	1.1	<20	<5	
1108		49	45	207	5	15	<1	1	0.5	1.4	<20	<5	
1109		29	35	37	9	8	1	2	0.3	1.3	<20	<5	
1110	STANDARD	23	27	58	17	28	2	2	0.9	0.7	<20	6	STAN
1111		18	45	37	6	7	2	<1	<0.2	0.7	<20	5	
1112		37	91	62	9	17	3	2	0.6	12.6	<20	6	
1113		41	42	95	7	30	<1	1	0.8	7.8	<20	<5	
1114		69	105	88	6	37	5	1	0.5	3.2	<20	5	
1115		51	46	102	10	35	1	2	0.6	3.2	<20	<5	
1116		51	275	85	15	10	5	1	0.8	2.7	<20	8	
1117		27	101	31	<5	22	10	1	0.5	1.8	<20	<5	
1118		44	76	175	<5	28	2	<1	0.5	3.8	<20	<5	
1119		53	220	105	8	17	2	1	0.8	1.9	<20	<5	
1120		38	64	72	6	14	1	<1	0.3	2.4	<20	<5	

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1081		<10	95	7	<20	73	<5
1082		<10	119	12	<20	74	<5
1083		<10	290	5	<20	87	<5
1084		<10	126	7	<20	76	<5
1085		<10	46	7	<20	40	<5
1086		<10	71	4	<20	97	<5
1087		<10	268	9	<20	84	<5
1088		<10	193	6	<20	78	<5
1089		<10	103	14	<20	73	<5
1090		<10	169	6	<20	117	<5
1091		<10	198	7	<20	67	<5
1092		<10	176	6	<20	70	<5
1093		<10	109	6	<20	55	<5
1094		<10	52	11	<20	47	<5
1095		<10	87	7	<20	72	<5
1096		<10	189	8	<20	73	<5
1097		<10	126	6	<20	62	<5
1098		<10	102	14	<20	75	<5
1099		<10	153	6	<20	116	<5
1100		<10	132	11	<20	88	<5
1101		<10	86	6	<20	65	<5
1102		<10	247	9	<20	128	<5
1103		<10	152	8	<20	81	<5
1104		<10	127	8	<20	77	<5
1105		<10	146	4	<20	79	<5
1106		<10	62	64	<20	16	<5
1107		<10	147	4	<20	71	<5
1108		<10	83	3	<20	61	<5
1109		<10	42	7	<20	43	<5
1110		<10	45	7	<20	42	<5
1111		<10	60	8	<20	49	<5
1112		<10	68	10	<20	59	<5
1113		<10	134	5	<20	66	<5
1114		<10	158	17	<20	84	<5
1115		<10	145	6	<20	64	<5
1116		<10	76	17	<20	60	<5
1117		<10	59	24	<20	26	<5
1118		<10	216	5	<20	125	<5
1119		<10	156	9	<20	117	<5
1120		<10	131	7	<20	105	<5

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SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1121		0.32	0.82	1007	0.07	0.29	0.05	0.08	<5	15	13	5
1122		1.51	1.64	399	0.06	0.08	0.06	0.08	<5	21	18	15
1123		0.59	2.10	50	0.04	0.07	0.06	0.09	<5	14	14	6
1124		0.33	1.17	86	0.04	0.16	0.06	0.08	<5	32	18	3
1125		0.94	1.32	55	0.05	0.12	0.06	0.07	<5	21	21	5
1126		0.70	0.83	35	0.04	0.08	0.05	0.07	<5	14	12	4
1127		1.00	0.57	29	0.05	0.06	0.05	0.06	<5	10	13	4
1128		1.32	0.61	698	0.04	0.10	0.06	0.09	<5	9	9	35
1129		0.21	0.57	2128	0.06	0.53	0.06	0.10	<5	7	7	4
1130		0.28	0.82	1088	0.06	0.37	0.06	0.09	<5	15	13	4
1131		0.26	0.61	963	0.05	0.43	0.05	0.08	<5	10	13	3
1132		0.83	0.78	50	0.05	0.06	0.05	0.06	<5	15	14	3
1133		0.26	0.80	160	0.05	0.47	0.06	0.07	<5	5	7	9
1134		0.76	1.31	175	0.18	0.14	0.06	0.07	<5	25	28	5
1135		0.37	0.78	168	0.07	0.17	0.06	0.07	<5	17	15	3
1136		0.40	0.79	67	0.04	0.11	0.06	0.07	<5	20	12	2
1137		0.60	1.19	75	0.09	0.10	0.06	0.06	<5	20	19	4
1138		0.94	0.79	54	0.05	0.11	0.06	0.09	<5	10	13	7
1139		0.81	1.13	60	0.04	0.08	0.06	0.10	<5	9	11	5
1140		0.33	0.77	65	0.05	0.15	0.05	0.08	<5	17	11	2
1141		0.23	0.74	365	0.05	0.34	0.05	0.11	<5	8	12	3
1142		0.56	0.55	39	0.06	0.15	0.05	0.08	<5	9	10	6
1143		0.53	0.58	48	0.04	0.13	0.06	0.07	<5	10	9	6
1144		0.67	1.31	3433	0.09	0.27	0.06	0.11	<5	24	20	6
1145		0.25	0.50	442	0.06	0.49	0.06	0.10	<5	8	11	2
1146		0.26	0.66	195	0.06	0.43	0.06	0.10	<5	12	9	2
1147		0.38	0.86	516	0.06	0.34	0.04	0.08	<5	18	21	4
1148		0.73	1.41	1283	0.08	0.18	0.05	0.07	<5	23	26	35
1149		1.03	3.92	>20000	0.06	0.15	0.05	0.09	<5	53	54	1064
1150	>1 PPM Ag	0.51	0.59	522	0.12	0.82	0.05	0.08	<5	9	11	12
1151		1.17	2.75	7048	0.13	0.11	0.05	0.08	<5	36	34	270
1152		0.35	0.43	465	0.04	0.34	0.05	0.07	<5	9	14	16
1153		0.54	0.43	191	0.03	0.12	0.05	0.06	<5	10	14	7
1154		0.55	0.55	123	0.05	0.07	0.05	0.06	<5	15	14	5
1155		0.85	1.16	91	0.04	0.05	0.05	0.09	<5	11	13	4
1156		0.37	0.91	223	0.04	0.12	0.06	0.08	<5	21	15	3
1157		0.83	1.12	95	0.06	0.16	0.05	0.07	<5	6	43	14
1158		0.42	1.12	383	0.07	0.23	0.05	0.08	<5	28	25	6
1159		0.28	0.43	220	0.04	0.18	0.05	0.07	<5	12	20	2
1160		0.27	0.49	1977	0.05	0.61	0.05	0.08	<5	9	30	3

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1121		38	34	77	9	19	<1	<1	0.7	1.9	<20	<5
1122		41	86	66	13	8	4	1	0.9	2.2	<20	7
1123		45	82	46	20	9	3	<1	0.7	1.1	<20	<5
1124		43	38	78	7	17	<1	1	0.4	1.0	<20	<5
1125		59	68	41	11	11	2	1	0.7	0.8	<20	5
1126		55	145	69	21	10	2	1	0.6	1.6	<20	<5
1127		39	287	31	17	6	5	1	0.5	0.5	<20	5
1128		71	334	95	17	9	4	2	1.1	2.3	<20	8
1129		49	55	196	7	32	<1	1	0.8	2.3	<20	<5
1130		34	38	154	5	18	<1	2	0.9	1.1	<20	<5
1131		32	37	154	<5	25	<1	<1	0.9	1.1	<20	<5
1132		14	27	38	11	7	2	<1	0.6	0.6	<20	5
1133		79	62	126	13	31	2	1	0.6	0.9	<20	<5
1134		29	33	43	8	11	2	<1	0.5	0.8	<20	6
1135		37	49	73	11	13	<1	1	0.6	0.9	<20	<5
1136		31	52	40	7	10	1	1	0.6	0.7	<20	<5
1137		41	67	55	12	7	1	1	0.4	2.0	<20	5
1138		64	75	75	16	12	4	<1	0.7	0.7	<20	6
1139		57	69	88	22	7	2	1	0.9	1.4	<20	6
1140		40	44	82	13	12	<1	1	0.5	0.5	<20	<5
1141		55	55	150	10	17	<1	1	0.5	1.6	<20	<5
1142		28	41	34	8	14	4	<1	1.0	0.7	<20	<5
1143		33	43	41	<5	14	4	<1	0.5	0.6	<20	<5
1144		30	28	139	9	14	1	1	0.7	1.0	<20	5
1145		36	57	149	9	21	1	1	0.7	1.4	<20	<5
1146		48	69	180	14	20	1	1	0.5	2.0	<20	<5
1147		65	36	121	6	18	1	6	0.4	1.4	<20	<5
1148		41	41	58	8	17	4	3	0.8	1.0	<20	<5
1149		41	47	210	20	13	3	5	<0.2	2.0	<20	<5
1150	STANDARD	22	26	49	11	27	2	3	1.1	0.7	<20	<5
1151		44	77	68	18	10	5	4	0.5	0.9	<20	7
1152		47	44	73	<5	26	3	3	0.6	1.0	<20	<5
1153		29	51	62	6	14	3	2	0.8	1.4	<20	<5
1154		11	22	18	8	8	2	2	0.6	0.7	<20	<5
1155		24	41	55	11	6	2	2	0.7	0.6	<20	6
1156		37	46	66	9	11	1	2	0.6	1.4	<20	<5
1157		75	43	64	7	15	5	6	0.6	1.1	<20	6
1158		42	40	70	7	16	1	5	0.5	0.5	<20	<5
1159		62	15	55	<5	11	<1	3	0.8	0.6	<20	<5
1160		46	43	200	<5	26	1	4	0.2	2.2	<20	<5

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1121		<10	206	5	<20	68	<5
1122		<10	63	12	<20	56	<5
1123		<10	80	9	<20	67	<5
1124		<10	102	5	<20	80	<5
1125		<10	79	11	<20	71	<5
1126		<10	76	9	<20	73	<5
1127		<10	38	14	<20	46	<5
1128		<10	114	12	<20	189	<5
1129		<10	260	3	<20	93	<5
1130		<10	147	4	<20	71	<5
1131		<10	168	4	<20	48	<5
1132		<10	43	7	<20	30	<5
1133		<10	102	5	<20	66	<5
1134		<10	71	8	<20	52	<5
1135		<10	67	4	<20	102	<5
1136		<10	81	8	<20	89	<5
1137		<10	38	5	<20	56	<5
1138		<10	91	13	<20	56	<5
1139		<10	55	6	<20	77	<5
1140		<10	85	5	<20	76	<5
1141		<10	125	3	<20	88	<5
1142		<10	74	12	<20	43	<5
1143		<10	74	13	<20	43	<5
1144		<10	113	6	<20	64	<5
1145		<10	231	6	<20	98	<5
1146		<10	209	4	<20	98	<5
1147		<10	119	10	<20	60	<5
1148		<10	83	14	<20	38	<5
1149		<10	425	15	<20	65	<5
1150		<10	44	6	<20	39	<5
1151		<10	85	21	<20	72	<5
1152		<10	123	12	<20	56	<5
1153		<10	109	11	<20	43	<5
1154		<10	39	8	<20	28	<5
1155		<10	51	6	<20	32	<5
1156		<10	115	7	<20	109	<5
1157		<10	62	18	<20	38	<5
1158		<10	126	5	<20	79	<5
1159		<10	71	6	<20	53	<5
1160		<10	216	6	<20	70	<5

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SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1161		0.27	0.56	2158	0.05	0.47	0.05	0.10	<5	10	14	3
1162		0.37	0.72	6789	0.05	0.40	0.05	0.10	<5	12	13	10
1163		0.36	0.61	159	0.04	0.15	0.06	0.06	<5	15	15	2
1164		0.32	0.72	1117	0.05	0.41	0.05	0.11	<5	12	13	2
1165		0.28	0.80	701	0.08	0.48	0.04	0.15	<5	11	11	3
1166		0.27	0.58	335	0.06	0.28	0.04	0.14	<5	10	19	3
1167		0.30	0.70	513	0.06	0.19	0.04	0.12	<5	14	18	2
1168		0.24	0.56	1967	0.07	0.40	0.03	0.12	<5	9	11	4
1169		0.43	0.73	155	0.06	0.19	0.06	0.12	<5	17	39	6
1170		0.33	0.89	117	0.09	0.24	0.05	0.11	<5	18	22	4
1171		0.21	0.75	138	0.06	0.30	0.04	0.13	<5	10	6	3
1172		1.03	0.57	73	0.12	0.11	0.05	0.08	<5	11	22	6
1173		0.25	0.40	46	0.05	0.15	0.05	0.10	<5	9	5	3
1174		0.45	0.87	77	0.06	0.10	0.04	0.09	<5	21	14	3
1175		0.23	0.63	131	0.04	0.22	0.04	0.08	<5	11	17	3
1176		0.51	1.12	76	0.10	0.10	0.05	0.06	<5	20	22	4
1177		0.91	1.22	84	0.16	0.12	0.05	0.07	<5	13	21	10
1178		0.25	0.48	37	0.03	0.06	0.05	0.05	<5	10	13	3
1179		0.73	1.17	105	0.10	0.12	0.05	0.07	<5	24	31	5
1180		1.16	0.68	55	0.04	0.05	0.05	0.07	<5	8	36	5
1181		0.27	0.64	112	0.04	0.13	0.05	0.09	<5	14	43	3
1182		0.23	0.52	306	0.05	0.31	0.04	0.10	<5	8	7	2
1183		0.56	0.65	92	0.09	0.45	0.05	0.06	<5	12	16	6
1184		0.60	0.49	43	0.09	0.54	0.04	0.06	<5	7	12	2
1185		1.07	1.20	4617	0.21	0.62	0.05	0.10	<5	17	29	31
1186		0.34	0.69	781	0.06	0.23	0.04	0.08	<5	15	16	3
1187		0.82	1.34	3085	0.15	0.16	0.04	0.07	<5	21	26	21
1188		0.21	0.55	444	0.04	0.23	0.05	0.09	<5	8	14	2
1189		0.18	0.51	124	0.04	0.29	0.04	0.08	<5	7	13	3
1190	STANDARD	0.50	0.54	59	0.11	0.76	0.05	0.07	<5	8	13	3
1191		0.40	1.18	154	0.08	0.18	0.04	0.08	<5	25	20	4
1192		0.62	0.65	71	0.08	0.12	0.04	0.06	<5	15	15	5
1193		0.33	0.59	226	0.05	0.21	0.05	0.09	<5	10	9	4
1194		0.41	0.96	988	0.06	0.27	0.05	0.07	<5	22	16	8
1195		0.64	1.12	172	0.04	0.11	0.05	0.09	<5	10	14	3
1196		0.92	3.74	245	0.10	0.10	0.05	0.10	<5	80	29	7
1197		0.25	0.68	2025	0.05	0.35	0.08	0.17	<5	11	10	6
1198		0.25	0.64	163	0.03	0.09	0.05	0.07	<5	14	14	2
1199		1.47	0.88	68	0.06	0.09	0.05	0.06	<5	7	41	6
1200		2.00	0.83	82	0.08	0.13	0.05	0.07	<5	9	17	4

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SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1161		30	30	153	<5	18	<1	1	0.8	1.2	<20	<5
1162		46	46	150	8	18	1	2	0.5	2.0	<20	<5
1163		28	28	66	7	10	<1	1	0.4	0.6	<20	<5
1164		39	31	144	8	16	<1	1	0.8	1.3	<20	<5
1165		48	48	116	7	17	<1	2	0.9	1.3	<20	6
1166		67	42	93	9	12	<1	2	0.8	2.2	<20	5
1167		53	36	113	9	10	<1	2	0.8	0.9	<20	6
1168		42	25	156	<5	15	<1	2	0.8	1.9	<20	9
1169		138	77	99	14	20	2	5	0.4	1.8	<20	<5
1170		74	48	77	11	26	<1	3	0.6	1.6	<20	<5
1171		54	60	137	11	16	<1	1	0.8	1.7	<20	5
1172		26	48	26	<5	8	4	1	0.5	0.6	<20	8
1173		33	38	68	7	16	<1	<1	0.8	2.5	<20	5
1174		21	26	33	9	10	1	<1	0.8	0.7	<20	5
1175		68	73	90	9	14	1	2	0.4	1.7	<20	<5
1176		40	37	58	12	13	1	2	0.3	0.4	<20	<5
1177		31	39	33	<5	10	5	1	0.6	0.3	<20	6
1178		33	26	33	8	14	<1	1	0.3	1.1	<20	<5
1179		59	48	58	17	8	1	3	0.7	1.2	<20	6
1180		95	79	55	8	6	3	4	0.8	1.5	<20	7
1181		105	67	45	<5	9	1	5	0.3	0.6	<20	<5
1182		46	72	154	<5	20	<1	1	0.8	2.2	<20	<5
1183		42	36	36	<5	33	8	2	0.7	0.6	<20	<5
1184		20	22	23	<5	33	32	1	0.3	0.3	<20	<5
1185		46	58	76	<5	39	20	2	<0.2	1.8	<20	6
1186		22	22	96	<5	12	1	1	0.4	1.1	<20	<5
1187		35	33	60	7	13	5	1	0.5	1.0	<20	5
1188		35	42	111	<5	14	<1	2	0.4	1.4	<20	<5
1189		45	54	84	15	13	<1	2	0.5	1.1	<20	<5
1190		21	27	51	9	25	2	1	1.1	0.9	<20	5 STD
1191		42	50	96	12	10	1	1	0.8	1.4	<20	<5
1192		26	23	36	5	11	2	<1	0.5	0.3	<20	<5
1193		39	44	71	8	13	1	<1	0.5	1.4	<20	<5
1194		31	31	93	9	17	1	<1	0.4	1.6	<20	<5
1195		42	78	88	10	7	2	1	0.5	1.3	<20	<5
1196		44	42	56	14	8	2	3	0.8	1.2	<20	<5
1197		54	58	162	<5	18	1	<1	0.5	2.9	<20	<5
1198		25	34	62	9	7	<1	1	0.6	0.6	<20	<5
1199		29	49	42	<5	6	5	2	0.5	0.3	<20	8
1200		29	97	63	15	7	8	6	0.5	1.0	<20	10

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1161		<10	156	4	<20	73	<5
1162		<10	427	8	<20	104	<5
1163		<10	85	5	<20	42	<5
1164		<10	118	5	<20	87	<5
1165		11	108	4	<20	100	<5
1166		<10	85	4	<20	74	5
1167		<10	63	3	<20	76	<5
1168		<10	116	4	<20	89	<5
1169		<10	288	8	<20	202	6
1170		<10	142	3	<20	80	<5
1171		<10	132	3	<20	126	<5
1172		<10	35	17	<20	32	<5
1173		<10	161	3	<20	88	<5
1174		<10	94	6	<20	54	<5
1175		<10	116	4	<20	165	<5
1176		<10	175	5	<20	55	<5
1177		<10	43	17	<20	28	<5
1178		<10	96	5	<20	56	<5
1179		<10	58	5	<20	65	<5
1180		<10	54	9	<20	53	<5
1181		<10	82	5	<20	90	<5
1182		<10	123	3	<20	108	<5
1183		<10	64	34	<20	51	<5
1184		<10	60	175	<20	38	<5
1185		<10	134	115	<20	80	<5
1186		<10	67	6	<20	45	<5
1187		<10	69	18	<20	46	<5
1188		<10	84	5	<20	75	<5
1189		<10	51	3	<20	78	<5
1190		<10	42	7	<20	37	<5
1191		<10	67	5	<20	67	<5
1192		<10	45	7	<20	37	<5
1193		<10	82	6	<20	62	<5
1194		<10	130	5	<20	60	<5
1195		<10	75	6	<20	76	<5
1196		<10	43	9	<20	39	<5
1197		<10	200	5	<20	112	<5
1198		<10	42	6	<20	65	<5
1199		<10	32	18	<20	21	<5
1200		<10	45	37	<20	43	<5

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1201		0.86	1.45	50	0.05	0.07	0.05	0.07	<5	14	16	3
1202		0.22	0.90	256	0.05	0.41	0.05	0.08	<5	7	8	3
1203		0.27	0.60	186	0.05	0.24	0.05	0.09	<5	12	10	3
1204		0.80	0.56	80	0.06	0.13	0.05	0.09	<5	7	11	9
1205		0.39	0.94	140	0.06	0.15	0.05	0.07	<5	21	18	3

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1201		27	47	50	15	5	2	4	0.5	1.3	<20	6
1202		72	74	102	11	14	<1	3	0.7	2.0	<20	<5
1203		38	46	96	8	17	<1	2	0.5	1.8	<20	<5
1204		40	44	83	14	13	3	2	0.7	1.0	<20	6
1205		39	27	59	13	16	<1	2	0.5	0.7	<20	<5

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1201		<10	34	6	<20	32	<5
1202		<10	115	3	<20	98	<5
1203		<10	131	4	<20	80	<5
1204		<10	102	10	<20	58	<5
1205		<10	99	5	<20	46	<5

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STANDARD NAME / ELEMENT / UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
TRACE GEOCHEM STD	0.79	2.70	623	1.19	1.48	0.11	0.19	-	8	78	10
TRACE GEOCHEM STD	0.84	2.82	669	1.29	1.59	0.11	0.19	-	8	81	9
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	0.813	2.761	645.9	1.237	1.537	0.111	0.192	2.5	8.1	79.3	9.5
Standard Deviation	0.0329	0.0799	32.33	0.0688	0.0790	0.0005	0.0030	-	0.17	2.39	0.71
Accepted Value	0.77	2.40	600	1.34	1.50	0.09	0.14	12	9	80	9
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	5	5	5	5	5	5	5	5	5	5	5
Mean Value	0.005	0.005	0.5	0.005	0.005	0.005	0.005	2.5	0.5	0.5	0.5
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	-	0.05	1	-	-	-	-	-	1	1	1
GS89-2	5.30	4.72	825	4.81	4.63	0.43	0.28	-	36	179	49
GS89-2	5.14	4.67	839	4.83	4.58	0.40	0.25	-	35	174	51
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	5.220	4.699	832.0	4.820	4.604	0.416	0.265	2.5	35.2	176.4	49.9
Standard Deviation	0.1131	0.0339	9.90	0.0135	0.0372	0.0223	0.0197	-	0.69	3.63	1.30
Accepted Value	5.10	5.00	800	5.10	4.70	0.40	0.20	12	34	180	45
GEO TRACE STD1(1989)	2.99	4.58	508	1.18	0.81	0.14	0.19	7	95	100	9
Number of Analyses	1	1	1	1	1	1	1	1	1	1	1
Mean Value	2.992	4.581	508.0	1.180	0.813	0.140	0.191	6.5	95.2	99.9	9.0
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	2.75	4.50	450	1.21	0.76	0.06	0.12	-	85	100	7

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STANDARD NAME / ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
TRACE GEOCHEM STD	0.79	2.70	623	1.19	1.48	0.11	0.19	-	8	78	10
TRACE GEOCHEM STD	0.84	2.82	669	1.29	1.59	0.11	0.19	-	8	81	9
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	0.813	2.761	645.9	1.237	1.537	0.111	0.192	2.5	8.1	79.3	9.5
Standard Deviation	0.0329	0.0799	32.33	0.0688	0.0790	0.0005	0.0030	-	0.17	2.39	0.71
Accepted Value	0.77	2.40	600	1.34	1.50	0.09	0.14	12	9	80	9
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	5	5	5	5	5	5	5	5	5	5	5
Mean Value	0.005	0.005	0.5	0.005	0.005	0.005	0.005	2.5	0.5	0.5	0.5
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	-	0.05	1	-	-	-	-	-	1	1	1
GS89-2	5.30	4.72	825	4.81	4.63	0.43	0.28	-	36	179	49
GS89-2	5.14	4.67	839	4.83	4.58	0.40	0.25	-	35	174	51
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	5.220	4.699	832.0	4.820	4.604	0.416	0.265	2.5	35.2	176.4	49.9
Standard Deviation	0.1131	0.0339	9.90	0.0135	0.0372	0.0223	0.0197	-	0.69	3.63	1.30
Accepted Value	5.10	5.00	800	5.10	4.70	0.40	0.20	12	34	180	45
GEO TRACE STD1(1989)	2.99	4.58	508	1.18	0.81	0.14	0.19	7	95	100	9
Number of Analyses	1	1	1	1	1	1	1	1	1	1	1
Mean Value	2.992	4.581	508.0	1.180	0.813	0.140	0.191	6.5	95.2	99.9	9.0
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	2.75	4.50	450	1.21	0.76	0.06	0.12	-	85	100	7

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TRACE GEOCHEM STD	43	272	271	34	39	3	3	0.6	0.9	-	-
TRACE GEOCHEM STD	44	278	295	31	42	3	4	0.4	0.7	-	-
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	43.5	275.2	283.0	32.3	40.2	2.7	3.5	0.51	0.80	10.0	2.5
Standard Deviation	0.71	3.98	17.23	2.43	2.21	0.08	0.95	0.133	0.141	-	-
Accepted Value	42	290	255	30	39	4	4	0.5	0.8	5	-1
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	5	5	5	5	5	5	5	5	5	5	5
Mean Value	0.5	0.5	0.5	2.5	0.5	0.5	0.5	0.10	0.10	10.0	2.5
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	1	1	1	5	-	-	1	0.2	1.0	-	5
GS89-2	642	843	576	285	86	5	613	5.5	3.1	-	46
GS89-2	605	815	563	279	83	4	603	6.2	2.6	-	47
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	623.4	828.9	569.6	282.0	84.5	4.5	607.9	5.85	2.85	10.0	46.3
Standard Deviation	26.35	19.93	8.74	4.24	2.18	0.07	6.94	0.495	0.354	-	1.03
Accepted Value	600	820	500	320	78	6	600	5.0	2.0	16	50
GEO TRACE STD1(1989)	17	193	64	9	71	5	18	31.1	0.3	-	8
Number of Analyses	1	1	1	1	1	1	1	1	1	1	1
Mean Value	17.0	193.2	64.3	9.0	71.4	5.5	17.5	31.10	0.30	10.0	8.0
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	15	190	62	8	63	10	17	34.0	0.2	5	7

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TRACE GEOCHEM STD	-	51	8	-	36	5
TRACE GEOCHEM STD	-	57	8	-	37	-
Number of Analyses	2	2	2	2	2	2
Mean Value	5.0	54.0	8.1	10.0	36.5	3.8
Standard Deviation	-	4.24	0.37	-	0.71	1.90
Accepted Value	-	45	4	1	33	2
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
Number of Analyses	5	5	5	5	5	5
Mean Value	5.0	0.5	0.5	10.0	1.0	2.5
Standard Deviation	-	-	-	-	-	-
Accepted Value	-	-	-	-	2	2
GS89-2	10	237	12	-	220	7
GS89-2	-	233	14	-	214	6
Number of Analyses	2	2	2	2	2	2
Mean Value	7.6	235.0	13.0	10.0	217.2	6.1
Standard Deviation	3.73	2.83	1.41	-	4.11	0.75
Accepted Value	-	220	6	-	250	4
GEO TRACE STD1(1989)	-	86	7	-	19	-
Number of Analyses	1	1	1	1	1	1
Mean Value	5.0	86.4	7.0	10.0	19.0	2.5
Standard Deviation	-	-	-	-	-	-
Accepted Value	-	74	4	2	15	1

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SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1036		0.35	0.99	393	0.06	0.24	0.05	0.10	<5	17	15	3
Duplicate		0.32	0.75	369	0.04	0.20	0.06	0.09	<5	17	12	2
1048		0.35	0.87	245	0.06	0.21	0.06	0.09	<5	16	17	3
Prep Duplicate		0.35	0.91	268	0.07	0.30	0.06	0.11	<5	14	15	8
1067		0.37	0.87	825	0.07	0.40	0.06	0.08	<5	15	25	4
Duplicate		0.38	0.84	821	0.07	0.40	0.06	0.08	<5	15	28	4
1086		0.24	0.91	161	0.04	0.19	0.05	0.08	<5	12	13	4
Duplicate		0.28	0.96	165	0.04	0.19	0.06	0.09	<5	12	12	3
1098		0.79	0.69	109	0.07	0.15	0.06	0.09	<5	12	10	6
Prep Duplicate		0.84	0.67	135	0.06	0.17	0.05	0.10	<5	12	10	9
1103		0.30	0.55	224	0.05	0.26	0.06	0.06	<5	15	12	3
Duplicate		0.31	0.60	227	0.05	0.27	0.06	0.06	<5	16	12	3
1121		0.32	0.82	1007	0.07	0.29	0.05	0.08	<5	15	13	5
Prep Duplicate		0.35	0.95	1102	0.08	0.39	0.04	0.10	<5	17	16	7
1122		1.51	1.64	399	0.06	0.08	0.06	0.08	<5	21	18	15
Duplicate		1.65	1.79	435	0.06	0.09	0.06	0.09	<5	23	21	16
1139		0.81	1.13	60	0.04	0.08	0.06	0.10	<5	9	11	5
Duplicate		0.81	1.14	65	0.04	0.08	0.06	0.10	<5	9	12	4
1158		0.42	1.12	383	0.07	0.23	0.05	0.08	<5	28	25	6
Duplicate		0.45	1.16	365	0.07	0.23	0.05	0.08	<5	30	20	5
1175		0.23	0.63	131	0.04	0.22	0.04	0.08	<5	11	17	3
Duplicate		0.24	0.66	135	0.04	0.23	0.05	0.08	<5	11	10	2
1177		0.91	1.22	84	0.16	0.12	0.05	0.07	<5	13	21	10
Prep Duplicate		1.02	1.27	65	0.11	0.14	0.05	0.08	<5	12	18	13
1195		0.64	1.12	172	0.04	0.11	0.05	0.09	<5	10	14	3
Duplicate		0.62	1.09	158	0.04	0.11	0.05	0.09	<5	10	15	4
1201		0.86	1.45	50	0.05	0.07	0.05	0.07	<5	14	16	3
Prep Duplicate		0.83	1.40	46	0.04	0.05	0.05	0.07	<5	12	15	3

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Geochemical Lab Report

DATE PRINTED: 8-OCT-92

REPORT: 092-42569.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1036		32	47	56	<5	12	<1	<1	0.5	1.5	<20	<5
Duplicate		35	37	47	<5	13	1	1	0.7	1.0	<20	<5
1048		47	50	50	7	15	<1	1	0.6	2.5	<20	<5
Prep Duplicate		59	66	81	7	23	<1	1	0.5	3.4	<20	<5
1067		55	55	145	5	20	1	3	0.6	1.6	<20	<5
Duplicate		54	54	146	<5	20	1	1	0.3	1.8	<20	<5
1086		62	73	107	7	10	<1	1	0.4	2.3	<20	<5
Duplicate		67	73	103	7	10	<1	1	0.5	1.8	<20	<5
1098		44	62	54	8	15	4	2	0.4	1.4	<20	<5
Prep Duplicate		49	62	60	11	17	4	<1	0.7	1.9	<20	6
1103		34	40	63	<5	22	1	1	0.4	1.2	<20	<5
Duplicate		34	40	65	<5	22	1	<1	0.3	0.7	<20	<5
1121		38	34	77	9	19	<1	<1	0.7	1.9	<20	<5
Prep Duplicate		31	44	102	6	25	1	5	0.9	2.3	<20	<5
1122		41	86	66	13	8	4	1	0.9	2.2	<20	7
Duplicate		47	91	73	13	9	4	2	1.0	2.1	<20	7
1139		57	69	88	22	7	2	1	0.9	1.4	<20	6
Duplicate		55	68	87	23	7	2	1	0.7	1.1	<20	6
1158		42	40	70	7	16	1	5	0.5	0.5	<20	<5
Duplicate		37	40	75	10	16	1	1	0.5	0.8	<20	<5
1175		68	73	90	9	14	1	2	0.4	1.7	<20	<5
Duplicate		50	73	96	10	15	1	2	0.8	2.1	<20	<5
1177		31	39	33	<5	10	5	1	0.6	0.3	<20	6
Prep Duplicate		37	51	40	6	12	7	<1	0.7	0.8	<20	6
1195		42	78	88	10	7	2	1	0.5	1.3	<20	<5
Duplicate		42	75	85	14	7	2	1	0.5	1.5	<20	<5
1201		27	47	50	15	5	2	4	0.5	1.3	<20	6
Prep Duplicate		25	44	47	11	5	2	1	0.3	1.0	<20	6

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Geochemical Lab Report

DATE PRINTED: 8-OCT-92

REPORT: 092-42569.0 (COMPLETE)

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1036		<10	130	5	<20	94	<5
Duplicate		<10	117	6	<20	68	<5
1048		<10	245	6	<20	94	<5
Prep Duplicate		<10	281	5	<20	105	<5
1067		<10	151	6	<20	83	<5
Duplicate		<10	153	6	<20	85	<5
1086		<10	71	4	<20	97	<5
Duplicate		<10	73	4	<20	100	<5
1098		<10	102	14	<20	75	<5
Prep Duplicate		<10	116	15	<20	82	<5
1103		<10	152	8	<20	81	<5
Duplicate		<10	150	8	<20	80	<5
1121		<10	206	5	<20	68	<5
Prep Duplicate		<10	217	6	<20	92	<5
1122		<10	63	12	<20	56	<5
Duplicate		<10	66	14	<20	58	<5
1139		<10	55	6	<20	77	<5
Duplicate		<10	55	6	<20	78	<5
1158		<10	126	5	<20	79	<5
Duplicate		<10	125	5	<20	85	<5
1175		<10	116	4	<20	165	<5
Duplicate		<10	116	4	<20	178	<5
1177		<10	43	17	<20	28	<5
Prep Duplicate		<10	54	22	<20	33	<5
1195		<10	75	6	<20	76	<5
Duplicate		<10	69	6	<20	73	<5
1201		<10	34	6	<20	32	<5
Prep Duplicate		<10	37	6	<20	35	<5

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE) REFERENCE:

CLIENT: A.W. BEECHAM GEOSERV. SUBMITTED BY: A.W. BEECHAM

PROJECT: NONE DATE PRINTED: 19-OCT-92

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
SOIL	182	-80	182	DRY, SIEVE -80	182

REPORT COPIES TO: MR. A.W. BEECHAM

INVOICE TO: MR. A.W. BEECHAM

Bondar-Clegg & Company Ltd.
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Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE) REFERENCE:

CLIENT: A.W. BEECHAM GEOSERV. SUBMITTED BY: A.W. BEECHAM
PROJECT: NONE DATE PRINTED: 19-OCT-92

ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Al	Aluminum	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
2	Fe	Iron	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3	Mn	Manganese	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4	Mg	Magnesium	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5	Ca	Calcium	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Na	Sodium	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	K	Potassium	182	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	Sc	Scandium	182	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	V	Vanadium	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Cr	Chromium	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Co	Cobalt	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Ni	Nickel	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Cu	Copper	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	Zn	Zinc	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	As	Arsenic	182	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	Sr	Strontium	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Y	Yttrium	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Mo	Molybdenum	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Ag	Silver	182	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Cd	Cadmium	182	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	Sn	Tin	182	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	Sb	Antimony	182	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	Te	Tellurium	182	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	Ba	Barium	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	La	Lanthanum	182	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	W	Tungsten	182	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Pb	Lead	182	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Bi	Bismuth	182	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

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Geochemical Lab Report

Inchcape Testing Services

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REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1206		0.57	0.67	2553	0.09	0.46	0.04	0.09	<5	9	9	26
1207		0.33	0.75	1393	0.09	0.44	0.05	0.09	<5	10	9	3
1208		0.27	0.88	4197	0.08	0.45	0.05	0.13	<5	12	9	6
1209		0.30	0.70	259	0.05	0.30	0.05	0.07	<5	16	7	2
1210		0.26	0.57	4220	0.06	0.53	0.05	0.11	<5	10	10	11
1211		0.72	1.09	9767	0.09	0.69	0.05	0.11	<5	15	13	37
1212		0.40	0.76	1528	0.07	0.30	0.06	0.08	<5	15	9	6
1213		1.31	0.61	75	0.03	0.05	0.05	0.08	<5	5	7	3
1214		0.38	0.85	429	0.07	0.23	0.06	0.10	<5	13	10	2
1215		1.41	0.95	6855	0.07	0.25	0.05	0.09	<5	13	21	84
1216		0.38	0.49	261	0.04	0.24	0.04	0.07	<5	9	7	5
1217		0.25	0.63	195	0.04	0.20	0.04	0.11	<5	7	5	3
1218		0.58	0.72	728	0.04	0.11	0.04	0.07	<5	10	7	12
1219		1.30	1.16	1389	0.08	0.07	0.05	0.06	<5	12	15	49
1220		0.28	0.70	726	0.05	0.37	0.05	0.08	<5	9	7	6
1221		0.32	0.70	624	0.07	0.42	0.05	0.09	<5	12	9	4
1222		0.47	0.91	612	0.06	0.23	0.06	0.07	<5	15	11	4
1223		0.33	0.62	1029	0.04	0.24	0.06	0.07	<5	9	8	3
1224		0.35	0.89	1239	0.06	0.23	0.06	0.11	<5	16	14	5
1225		1.46	1.13	3806	0.15	0.10	0.04	0.08	<5	14	21	134
1226		0.35	1.11	414	0.08	0.39	0.04	0.09	<5	19	21	7
1227		0.75	1.16	3345	0.13	0.16	0.05	0.07	<5	20	26	84
1228		1.17	1.54	1144	0.11	0.09	0.05	0.07	<5	18	17	71
1229		0.32	0.47	61	0.03	0.13	0.06	0.05	<5	12	8	2
1230		0.32	0.42	113	0.03	0.18	0.05	0.07	<5	9	6	2
1231		0.32	0.58	116	0.04	0.13	0.06	0.06	<5	11	8	3
1232		0.36	0.96	136	0.04	0.13	0.06	0.08	<5	15	9	4
1233		0.52	0.66	61	0.04	0.19	0.06	0.04	<5	8	7	5
1234		0.29	0.67	266	0.05	0.26	0.06	0.08	<5	12	8	3
1235		0.35	0.73	109	0.04	0.16	0.04	0.07	<5	16	10	3
1236		0.43	1.03	207	0.06	0.15	0.05	0.10	<5	18	14	3
1237		0.27	0.51	362	0.05	0.41	0.05	0.08	<5	9	6	4
1238		0.80	0.47	40	0.04	0.32	0.05	0.08	<5	3	8	11
1239		0.30	0.62	3443	0.05	0.44	0.06	0.09	<5	11	8	5
1240		1.21	2.61	2834	0.09	0.19	0.06	0.12	<5	39	20	185
1241		0.98	0.55	72	0.04	0.13	0.05	0.07	<5	7	5	16
1242		1.40	1.19	702	0.14	0.11	0.05	0.07	<5	13	15	64
1243		0.21	0.54	437	0.04	0.28	0.04	0.09	<5	8	4	4
1244		0.97	0.88	100	0.07	0.07	0.05	0.06	<5	14	13	6
1245		0.46	0.92	235	0.07	0.19	0.04	0.07	<5	14	9	5

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Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 19-OCT-92

REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1206		31	41	100	5	30	6	1	0.6	1.6	<20	<5
1207		39	48	101	8	21	<1	1	0.4	0.9	<20	<5
1208		48	37	221	6	22	<1	<1	<0.2	2.4	<20	<5
1209		21	26	79	9	18	<1	<1	0.5	0.6	<20	<5
1210		38	40	237	5	29	<1	<1	0.4	2.8	<20	<5
1211		50	53	184	12	37	9	3	0.6	2.8	<20	<5
1212		29	37	140	11	18	2	<1	<0.2	1.3	<20	<5
1213		15	93	53	12	6	2	<1	0.4	1.0	<20	6
1214		35	48	104	14	16	<1	1	0.2	1.2	<20	<5
1215		45	82	74	14	26	25	2	2.3	1.4	<20	8
1216		37	75	100	13	18	2	<1	0.4	1.3	<20	<5
1217		57	84	110	9	19	1	1	0.4	1.7	<20	<5
1218		38	64	78	12	10	4	<1	0.5	0.7	<20	<5
1219		34	53	74	66	7	4	1	<0.2	<0.2	<20	7
1220		60	84	129	8	23	1	2	0.8	2.2	<20	<5
1221		33	44	104	11	20	1	<1	0.5	1.2	<20	<5
1222		42	42	94	11	15	<1	<1	0.3	1.6	<20	<5
1223		21	63	63	<5	14	2	<1	0.3	2.3	<20	<5
1224		41	40	110	11	12	<1	2	0.4	0.4	<20	<5
1225		35	51	73	18	9	8	<1	0.6	1.0	<20	8
1226		45	38	119	14	30	<1	2	0.8	0.9	<20	<5
1227		33	38	100	8	12	4	1	0.6	1.5	<20	<5
1228		24	44	65	24	10	6	2	0.7	0.8	<20	5
1229		50	71	61	15	10	1	<1	<0.2	1.9	<20	<5
1230		59	71	64	9	15	1	<1	0.3	1.9	<20	<5
1231		42	34	75	7	12	<1	<1	0.3	1.1	<20	<5
1232		79	70	62	15	10	<1	1	0.5	0.7	<20	<5
1233		41	34	80	11	15	2	<1	0.5	0.8	<20	<5
1234		42	35	67	8	16	<1	1	0.4	0.9	<20	<5
1235		40	48	73	14	11	<1	1	0.3	1.1	<20	<5
1236		45	54	81	11	10	<1	1	0.3	1.2	<20	<5
1237		44	52	150	12	37	1	<1	0.4	2.2	<20	<5
1238		80	97	70	10	25	10	<1	0.9	2.2	<20	5
1239		48	58	209	8	21	1	1	<0.2	3.0	<20	<5
1240		57	64	90	18	18	6	2	1.1	0.4	<20	5
1241		67	74	70	18	14	6	<1	0.6	0.5	<20	<5
1242		37	141	63	13	10	10	<1	0.5	0.7	<20	7
1243		49	81	111	10	14	1	1	0.6	1.3	<20	<5
1244		27	49	56	13	7	2	<1	0.2	0.7	<20	<5
1245		53	70	101	13	12	1	<1	0.4	1.1	<20	<5

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE)

DATE PRINTED: 19-OCT-92

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1206		<10	185	18	<20	50	<5
1207		<10	132	5	<20	83	<5
1208		<10	192	3	<20	91	<5
1209		<10	121	5	<20	46	<5
1210		<10	278	7	<20	84	<5
1211		<10	218	32	<20	88	<5
1212		<10	137	8	<20	76	<5
1213		<10	57	8	<20	41	<5
1214		<10	119	4	<20	83	<5
1215		<10	146	128	<20	68	<5
1216		<10	176	11	<20	111	<5
1217		<10	293	5	<20	134	<5
1218		<10	129	14	<20	92	<5
1219		<10	75	22	<20	40	<5
1220		<10	140	6	<20	147	<5
1221		<10	169	5	<20	90	<5
1222		<10	174	4	<20	65	<5
1223		<10	212	6	<20	110	<5
1224		<10	106	4	<20	93	<5
1225		<10	71	35	<20	46	<5
1226		<10	175	6	<20	76	<5
1227		<10	107	15	<20	52	<5
1228		<10	72	23	<20	46	<5
1229		<10	175	5	<20	70	<5
1230		<10	140	6	<20	76	<5
1231		<10	84	4	<20	57	<5
1232		<10	75	5	<20	112	<5
1233		<10	98	6	<20	49	<5
1234		<10	101	6	<20	70	<5
1235		<10	87	5	<20	72	<5
1236		<10	100	5	<20	83	<5
1237		<10	287	5	<20	99	<5
1238		<10	102	50	<20	43	<5
1239		<10	276	5	<20	113	<5
1240		<10	102	12	<20	58	<5
1241		<10	136	15	<20	63	<5
1242		<10	87	24	<20	58	<5
1243		<10	153	2	<20	149	<5
1244		<10	71	4	<20	50	<5
1245		<10	234	3	<20	112	<5

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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE)

DATE PRINTED: 19-OCT-92

PROJECT: HOME

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1246		0.40	0.76	85	0.04	0.13	0.05	0.08	<5	20	10	4
1247		0.46	1.01	73	0.06	0.06	0.05	0.05	<5	21	11	3
1248		0.65	0.64	108	0.04	0.15	0.05	0.08	<5	9	13	5
1249		0.49	1.23	179	0.06	0.18	0.05	0.07	<5	23	15	3
1250		0.32	0.63	534	0.04	0.26	0.05	0.08	<5	12	9	4
1251		0.31	0.19	72	0.04	0.35	0.04	0.03	<5	5	2	5
1252		0.32	0.53	67	0.03	0.13	0.05	0.07	<5	9	7	3
1253		0.36	0.52	27	0.03	0.09	0.05	0.05	<5	10	10	2
1254		0.49	0.19	33	0.03	0.24	0.05	0.04	<5	6	3	5
1255		0.40	0.11	33	0.03	0.26	0.05	0.01	<5	6	12	3
1256		0.45	0.12	45	0.04	0.35	0.05	0.01	<5	7	4	4
1257		0.69	0.14	32	0.05	0.43	0.06	0.02	<5	6	4	3
1258		0.37	0.70	53	0.07	0.50	0.06	0.08	<5	5	5	12
1259		0.25	0.72	74	0.04	0.22	0.05	0.07	<5	10	6	4
1260		0.85	1.92	790	0.09	0.37	0.05	0.07	<5	24	10	47
1261		0.64	2.28	1429	0.13	0.67	0.05	0.11	<5	73	18	69
1262		0.44	0.94	724	0.07	0.33	0.05	0.09	<5	15	10	9
1263		1.76	1.37	239	0.07	0.09	0.05	0.08	<5	10	11	9
1264		0.28	0.53	333	0.05	0.22	0.06	0.10	<5	8	6	4
1265		0.16	0.56	801	0.04	0.24	0.06	0.13	<5	5	4	3
1266		0.37	0.90	282	0.05	0.24	0.06	0.09	<5	13	9	5
1267		0.84	2.94	1523	1.21	1.05	0.06	0.19	<5	35	51	26
1268		0.50	1.09	488	0.08	0.27	0.06	0.08	<5	15	12	5
1269		0.34	0.68	236	0.05	0.20	0.06	0.08	<5	14	10	5
1270		0.28	0.79	453	0.05	0.30	0.05	0.08	<5	12	7	5
1271		0.34	0.68	91	0.05	0.17	0.05	0.09	<5	13	9	4
1272		0.27	0.37	134	0.03	0.20	0.05	0.06	<5	7	5	2
1273		0.47	0.59	108	0.04	0.12	0.06	0.08	<5	14	8	3
1274		0.47	0.67	364	0.06	0.28	0.06	0.14	<5	9	6	18
1275		0.38	0.88	234	0.06	0.19	0.06	0.08	<5	16	9	5
1276		0.67	1.89	75	0.04	0.09	0.06	0.08	<5	74	13	7
1277		0.33	1.17	189	0.05	0.22	0.04	0.08	<5	32	9	14
1278		0.41	0.75	153	0.05	0.18	0.05	0.10	<5	16	7	7
1279		0.30	0.66	84	0.04	0.20	0.05	0.08	<5	15	7	4
1280		0.61	0.90	57	0.07	0.10	0.06	0.08	<5	22	10	6
1281		0.54	0.90	57	0.04	0.10	0.06	0.05	<5	35	10	2
1282		0.32	0.56	119	0.05	0.25	0.06	0.05	<5	16	6	2
1283		0.35	0.65	72	0.04	0.18	0.07	0.05	<5	51	4	2
1284		1.06	1.45	39	0.05	0.09	0.06	0.07	<5	29	8	3
1285		0.53	0.76	61	0.05	0.17	0.06	0.08	<5	27	7	2

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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 19-OCT-92

REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1246		35	48	67	11	12	<1	<1	<0.2	0.9	<20	<5
1247		47	56	54	15	8	1	<1	0.2	1.1	<20	<5
1248		61	101	81	20	13	3	2	0.5	1.3	<20	<5
1249		45	46	95	13	14	<1	2	0.3	1.2	<20	<5
1250		50	62	97	7	23	1	1	0.5	2.3	<20	<5
1251		17	27	72	5	24	2	<1	0.3	0.3	<20	<5
1252		59	101	83	10	11	1	<1	0.3	2.2	<20	<5
1253		29	41	52	8	10	<1	<1	<0.2	0.8	<20	<5
1254		21	42	63	6	16	2	<1	<0.2	1.1	<20	<5
1255		14	27	45	<5	16	2	<1	<0.2	0.6	<20	<5
1256		14	31	48	<5	23	2	<1	<0.2	0.4	<20	<5
1257		9	32	45	<5	25	5	<1	<0.2	0.4	<20	<5
1258		56	46	58	11	47	3	1	<0.2	1.1	<20	<5
1259		84	80	96	14	26	<1	<1	0.4	1.6	<20	<5
1260		48	61	71	27	34	8	4	0.5	0.9	<20	<5
1261		56	62	94	14	44	4	2	0.7	1.2	<20	<5
1262		37	34	111	17	15	<1	1	0.5	1.1	<20	<5
1263		31	103	111	20	6	5	1	0.4	1.1	<20	9
1264		41	54	131	7	12	<1	<1	1.0	1.3	<20	<5
1265		45	45	111	7	11	<1	<1	0.4	1.4	<20	<5
1266		36	49	106	10	14	1	<1	0.6	1.7	<20	<5
1267		83	53	319	18	140	6	1	0.4	2.3	<20	8
1268		54	55	120	20	20	1	<1	<0.2	1.8	<20	<5
1269		41	39	97	9	13	<1	<1	0.2	0.8	<20	<5
1270		47	51	105	<5	17	<1	<1	0.4	1.1	<20	<5
1271		47	112	54	14	16	1	<1	0.4	0.9	<20	<5
1272		45	73	74	15	10	1	<1	<0.2	1.8	<20	<5
1273		29	58	57	12	12	2	<1	0.3	1.1	<20	<5
1274		59	107	97	15	19	3	1	0.7	1.3	<20	<5
1275		41	47	79	10	13	<1	<1	0.5	1.2	<20	<5
1276		29	45	47	8	9	2	2	0.6	0.6	<20	<5
1277		66	99	68	15	20	1	<1	0.7	3.9	<20	<5
1278		36	68	77	11	15	1	<1	0.4	1.9	<20	<5
1279		70	92	85	10	14	1	1	0.3	1.5	<20	<5
1280		52	96	69	17	13	2	<1	0.5	1.4	<20	<5
1281		22	56	44	10	8	1	<1	0.2	1.3	<20	<5
1282		33	39	89	13	12	<1	<1	0.2	1.2	<20	<5
1283		22	46	41	6	10	<1	<1	0.2	1.0	<20	<5
1284		20	92	49	11	7	2	<1	<0.2	1.5	<20	<5
1285		39	72	77	16	11	1	1	0.3	1.6	<20	<5

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE)

DATE PRINTED: 19-OCT-92

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	U PPM	Pb PPM	Bi PPM
1246		<10	114	3	<20	79	<5
1247		<10	124	2	<20	62	<5
1248		<10	168	9	<20	129	<5
1249		<10	167	3	<20	77	<5
1250		<10	249	3	<20	136	<5
1251		<10	67	2	<20	17	<5
1252		<10	103	3	<20	142	<5
1253		<10	92	2	<20	58	<5
1254		<10	60	3	<20	25	<5
1255		<10	48	3	<20	7	<5
1256		<10	66	3	<20	8	<5
1257		<10	49	8	<20	6	<5
1258		<10	68	4	<20	58	<5
1259		<10	267	2	<20	96	<5
1260		<10	148	12	<20	92	<5
1261		<10	150	6	<20	103	<5
1262		<10	85	2	<20	70	<5
1263		<10	76	9	<20	95	<5
1264		<10	66	2	<20	98	<5
1265		<10	70	<1	<20	82	<5
1266		<10	115	2	<20	88	<5
1267		<10	265	18	<20	106	<5
1268		<10	223	2	<20	100	<5
1269		<10	75	2	<20	64	<5
1270		<10	155	2	<20	81	<5
1271		<10	177	4	<20	178	<5
1272		<10	88	2	<20	71	<5
1273		<10	138	5	<20	71	<5
1274		<10	142	8	<20	162	<5
1275		<10	108	3	<20	73	<5
1276		<10	48	4	<20	36	<5
1277		<10	96	3	<20	119	<5
1278		<10	65	3	<20	76	<5
1279		<10	126	3	<20	129	<5
1280		<10	122	4	<20	97	<5
1281		<10	63	3	<20	66	<5
1282		<10	88	1	<20	45	<5
1283		<10	100	1	<20	35	<5
1284		<10	43	4	<20	30	<5
1285		<10	80	2	<20	78	<5

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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 19-OCT-92

REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1286		0.41	0.54	33	0.03	0.10	0.05	0.05	<5	13	3	2
1287		1.32	0.10	13	0.02	0.06	0.04	0.02	<5	7	7	1
1288		0.81	0.30	29	0.03	0.15	0.05	0.03	<5	15	10	2
1289		1.04	0.20	28	0.03	0.20	0.05	0.02	<5	7	9	3
1290		0.49	0.90	110	0.04	0.22	0.06	0.09	<5	11	5	3
1291		1.68	0.88	28	0.03	0.05	0.06	0.06	<5	8	7	3
1292		0.79	1.25	29	0.03	0.06	0.06	0.05	<5	8	6	4
1293		0.37	0.45	87	0.04	0.15	0.06	0.05	<5	10	5	4
1294		0.48	0.71	73	0.04	0.12	0.07	0.04	<5	16	11	2
1295		0.64	1.85	107	0.08	0.11	0.04	0.06	<5	31	13	4
1296		0.76	0.85	45	0.04	0.06	0.05	0.04	<5	35	8	2
1297		1.16	1.13	38	0.07	0.05	0.06	0.07	<5	11	10	6
1298		0.34	0.68	40	0.03	0.10	0.06	0.07	<5	12	6	3
1299		0.50	1.00	45	0.06	0.09	0.06	0.07	<5	19	16	4
1300		0.64	0.57	33	0.03	0.07	0.06	0.06	<5	9	7	3
1301		0.21	0.31	31	0.03	0.11	0.07	0.07	<5	7	4	2
1302		0.27	0.51	133	0.04	0.25	0.07	0.10	<5	12	9	3
1303		0.67	1.10	68	0.05	0.10	0.06	0.07	<5	47	9	6
1304		0.23	0.50	59	0.04	0.25	0.06	0.06	<5	16	8	5
1305		0.30	0.90	170	0.05	0.24	0.05	0.07	<5	13	7	5
1306		1.00	0.95	92	0.10	0.12	0.05	0.06	<5	16	13	10
1307		1.21	0.22	41	0.04	0.31	0.06	0.04	<5	6	6	12
1308		1.97	0.17	11	0.02	0.06	0.06	0.03	<5	6	14	2
1309		1.05	0.21	19	0.02	0.13	0.06	0.03	<5	10	4	4
1310		0.75	0.47	81	0.04	0.17	0.06	0.07	<5	7	4	5
1311		0.28	0.51	114	0.03	0.19	0.06	0.04	<5	7	7	2
1312		0.29	0.73	307	0.05	0.30	0.04	0.06	<5	15	8	2
1313		1.34	0.94	51	0.05	0.07	0.05	0.06	<5	7	9	5
1314		0.23	0.50	208	0.04	0.28	0.05	0.08	<5	8	6	2
1315		0.25	0.37	86	0.05	0.38	0.06	0.09	<5	7	5	2
1316		0.26	0.88	238	0.07	0.53	0.06	0.10	<5	20	10	2
1317		0.40	0.30	35	0.08	1.04	0.07	0.06	<5	3	3	6
1318		0.44	0.15	22	0.08	1.30	0.07	0.01	<5	3	2	2
1319		0.53	0.20	85	0.05	0.65	0.06	0.05	<5	3	4	8
1320		0.34	0.57	1350	0.05	0.78	0.06	0.08	<5	11	10	31
1321		1.59	0.69	2832	0.06	0.13	0.06	0.07	<5	9	12	141
1322		0.46	1.04	5445	0.08	0.35	0.05	0.07	<5	19	16	20
1323		2.00	3.08	3350	0.11	0.25	0.06	0.07	<5	50	48	285
1324	ST ANDARD	0.50	0.55	73	0.12	0.85	0.06	0.06	<5	8	12	4
1325		0.38	0.78	211	0.05	0.13	0.06	0.07	<5	15	9	5

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Geochemical Lab Report

Inchcape Testing Services

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REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1286		48	140	71	19	10	1	1	<0.2	1.4	<20	<5
1287		17	74	35	8	4	3	<1	<0.2	<0.2	<20	7
1288		13	33	42	8	9	2	<1	<0.2	0.5	<20	<5
1289		18	84	48	6	11	3	<1	0.2	0.3	<20	6
1290		64	83	93	25	9	1	1	0.4	1.2	<20	<5
1291		20	59	51	27	5	2	<1	0.2	1.0	<20	8
1292		26	56	58	19	6	2	<1	0.5	0.4	<20	<5
1293		27	42	67	10	11	1	<1	0.3	0.9	<20	<5
1294		30	71	64	17	10	1	<1	0.2	1.5	<20	<5
1295		31	42	63	11	8	<1	<1	0.3	0.4	<20	<5
1296		19	65	31	12	7	1	<1	0.2	0.9	<20	<5
1297		31	40	51	15	5	3	<1	0.4	<0.2	<20	6
1298		67	96	80	17	12	1	<1	0.3	1.5	<20	<5
1299		76	79	86	24	10	<1	2	<0.2	1.2	<20	<5
1300		41	57	61	13	8	2	<1	<0.2	0.5	<20	<5
1301		56	95	86	18	12	<1	1	0.4	2.2	<20	<5
1302		44	168	76	17	14	1	3	<0.2	2.2	<20	<5
1303		34	92	77	13	10	2	1	0.4	1.0	<20	<5
1304		63	77	91	14	13	<1	1	0.3	2.0	<20	<5
1305		67	74	95	15	21	<1	1	0.2	1.3	<20	<5
1306		54	81	73	21	11	2	1	0.3	1.1	<20	6
1307		42	73	27	10	26	8	1	0.3	1.4	<20	6
1308		9	95	22	<5	5	7	<1	0.2	<0.2	<20	8
1309		23	54	14	6	10	4	<1	<0.2	0.7	<20	5
1310		34	60	62	13	13	2	<1	0.4	1.2	<20	<5
1311		60	69	51	12	8	<1	1	0.3	1.5	<20	<5
1312		45	47	69	10	18	<1	2	0.3	0.7	<20	<5
1313		33	103	41	19	8	3	1	<0.2	0.2	<20	7
1314		35	41	119	<5	25	<1	2	0.3	2.1	<20	<5
1315		29	61	46	7	30	1	2	0.6	1.9	<20	<5
1316		30	34	91	10	31	<1	2	<0.2	0.5	<20	<5
1317		30	35	45	6	65	6	2	<0.2	0.7	<20	5
1318		8	23	26	<5	65	7	1	<0.2	0.8	<20	<5
1319		30	44	88	6	39	5	1	0.3	1.5	<20	<5
1320		70	89	162	15	45	2	3	0.8	4.5	<20	<5
1321		61	105	75	13	13	6	2	0.9	1.7	<20	9
1322		71	75	110	18	23	2	2	0.3	1.9	<20	<5
1323		46	161	58	50	20	12	21	1.4	1.3	<20	7
1324	STANDARD	21	25	35	15	28	2	2	0.7	1.0	<20	<5
1325		54	59	92	16	17	1	1	0.5	1.7	<20	<5

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
1286		<10	92	2	<20	115	<5
1287		<10	30	5	<20	12	<5
1288		<10	38	4	<20	15	<5
1289		<10	52	6	<20	11	<5
1290		<10	91	2	<20	96	<5
1291		<10	55	4	<20	40	<5
1292		<10	56	3	<20	40	<5
1293		<10	64	3	<20	27	<5
1294		<10	90	3	<20	49	<5
1295		<10	44	3	<20	43	<5
1296		<10	78	3	<20	50	<5
1297		<10	26	4	<20	20	<5
1298		<10	124	2	<20	128	<5
1299		<10	101	2	<20	101	<5
1300		<10	71	4	<20	64	<5
1301		<10	159	1	<20	131	<5
1302		<10	64	2	<20	343	<5
1303		<10	67	4	<20	77	<5
1304		<10	61	1	<20	100	<5
1305		<10	185	2	<20	110	<5
1306		<10	59	4	<20	92	<5
1307		<10	97	18	<20	18	<5
1308		<10	24	17	<20	9	<5
1309		<10	50	7	<20	13	<5
1310		<10	110	3	<20	70	<5
1311		<10	70	3	<20	56	<5
1312		<10	161	2	<20	59	<5
1313		<10	48	7	<20	29	<5
1314		<10	232	2	<20	73	<5
1315		<10	149	3	<20	130	<5
1316		<10	139	2	<20	92	<5
1317		<10	72	12	<20	35	<5
1318		<10	101	8	<20	2	<5
1319		<10	111	9	<20	31	<5
1320		<10	287	5	<20	102	<5
1321		<10	104	14	<20	98	<5
1322		<10	442	3	<20	107	<5
1323		<10	112	27	<20	29	<5
1324		<10	43	3	<20	30	<5
1325		<10	199	3	<20	125	<5

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BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-42620.0 (COMPLETE)

DATE PRINTED: 19-OCT-92

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1326		0.78	0.56	147	0.04	0.10	0.06	0.06	<5	7	6	4
1327		0.28	0.61	437	0.06	0.62	0.06	0.12	<5	6	5	6
1328		0.23	0.70	315	0.07	0.39	0.07	0.14	<5	8	8	3
1329		0.51	1.00	291	0.10	0.25	0.06	0.08	<5	17	22	4
1330		0.15	0.83	1147	0.06	0.46	0.05	0.13	<5	7	5	4
1331		0.20	0.80	191	0.04	0.33	0.05	0.07	<5	8	6	3
1332		0.18	0.34	201	0.05	0.68	0.06	0.05	<5	7	6	2
1333		1.06	1.79	980	0.11	0.18	0.05	0.06	<5	32	22	31
1334		1.73	4.78	5053	0.12	0.11	0.07	0.10	<5	30	35	263
1335		0.24	0.61	95	0.04	0.32	0.06	0.07	<5	10	6	5
1336		1.83	1.07	258	0.08	0.11	0.07	0.08	<5	12	20	26
1337		0.35	0.93	1383	0.08	0.50	0.07	0.12	<5	19	12	5
1338		1.65	4.66	750	0.18	0.11	0.07	0.09	<5	100	38	35
1339		2.74	9.29	7990	0.26	0.12	0.07	0.12	<5	169	81	295
1340		0.32	0.65	485	0.06	0.48	0.05	0.08	<5	10	14	8
1341		0.14	0.38	372	0.04	0.34	0.05	0.07	<5	5	4	3
1342		0.46	1.40	130	0.06	0.14	0.06	0.10	<5	44	17	5
1343		0.43	1.01	71	0.05	0.12	0.06	0.06	<5	24	11	3
1344		1.80	1.50	41	0.03	0.06	0.06	0.07	<5	9	8	7
1345		1.30	1.75	48	0.06	0.07	0.06	0.07	<5	17	12	4
1346		2.22	0.97	117	0.05	0.16	0.06	0.07	<5	9	11	16
1347		3.11	3.18	3912	0.14	0.12	0.05	0.05	<5	50	52	262
1348		2.92	1.87	2349	0.06	0.08	0.05	0.06	<5	20	24	133
1349		0.51	1.06	3063	0.08	0.32	0.06	0.14	<5	14	13	23
1350		0.70	1.49	331	0.09	0.14	0.06	0.12	<5	45	8	11
1351		1.98	>10.00	338	0.14	0.10	0.06	0.07	<5	208	61	50
1352		0.67	1.31	121	0.04	0.13	0.06	0.11	<5	23	14	10
1353		1.28	2.21	73	0.04	0.09	0.07	0.07	<5	13	10	9
1354		0.22	0.50	99	0.05	0.25	0.07	0.09	<5	7	5	7
1355		0.36	0.99	342	0.05	0.27	0.06	0.10	<5	30	9	6
1356		0.43	0.44	147	0.05	0.24	0.07	0.09	<5	9	8	9
1357		0.38	0.90	174	0.08	0.26	0.05	0.07	<5	17	10	6
1358		0.37	0.47	41	0.04	0.13	0.05	0.06	<5	16	6	4
1359		1.85	0.14	21	0.03	0.16	0.05	0.02	<5	9	10	5
1360	(STANDARD)	0.51	0.54	46	0.12	0.81	0.06	0.06	<5	8	8	3
1364		0.37	0.69	799	0.08	0.45	0.07	0.07	<5	10	8	3
1365		0.26	0.47	134	0.05	0.24	0.07	0.08	<5	13	7	2
1366		0.29	0.59	244	0.04	0.17	0.07	0.07	<5	13	10	2
1367		1.93	5.63	4487	0.28	0.31	0.07	0.15	<5	116	50	167
1368		0.57	1.08	2429	0.08	0.36	0.05	0.10	<5	16	11	34

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Geochemical Lab Report

Inchcape Testing Services

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DATE PRINTED: 19-OCT-92

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1326		56	57	60	27	9	2	<1	0.5	0.7	<20	5
1327		66	58	138	11	41	1	2	0.6	1.6	<20	<5
1328		65	73	171	12	26	<1	1	0.6	1.9	<20	<5
1329		47	55	117	6	18	1	1	0.4	1.9	<20	<5
1330		43	47	187	6	25	<1	1	<0.2	1.3	<20	<5
1331		70	62	138	15	27	<1	1	0.2	1.2	<20	<5
1332		58	94	99	29	25	<1	1	0.2	2.2	<20	<5
1333		37	28	69	10	15	2	<1	<0.2	0.2	<20	<5
1334		33	49	47	16	9	7	<1	0.4	1.8	<20	6
1335		50	66	68	19	22	<1	2	0.5	1.3	<20	<5
1336		34	94	50	17	12	6	<1	1.1	0.6	<20	8
1337		43	40	94	7	27	<1	1	0.4	1.8	<20	<5
1338		35	55	51	25	9	3	3	0.8	0.4	<20	6
1339		59	135	113	46	11	6	7	1.0	1.7	<20	6
1340		37	58	130	9	31	<1	1	0.5	1.3	<20	<5
1341		53	54	121	15	20	<1	1	0.7	1.4	<20	<5
1342		41	36	73	8	11	<1	1	0.4	0.4	<20	<5
1343		43	40	58	12	8	<1	<1	0.3	0.3	<20	<5
1344		62	92	61	23	7	4	<1	0.4	<0.2	<20	8
1345		22	59	49	11	6	4	<1	0.7	0.5	<20	6
1346		61	91	78	17	16	8	<1	0.7	0.9	<20	11
1347		40	151	102	20	13	8	2	0.4	2.3	<20	9
1348		21	130	64	7	8	7	2	1.1	0.6	<20	13
1349		63	56	180	9	21	1	1	0.5	2.5	<20	<5
1350		49	81	114	39	8	2	2	0.6	1.1	<20	5
1351		30	89	54	25	9	3	7	1.2	1.7	<20	<5
1352		61	91	86	15	12	3	3	0.4	1.1	<20	<5
1353		57	60	74	21	9	3	1	0.8	1.2	<20	6
1354		65	69	182	21	22	<1	1	0.7	2.1	<20	<5
1355		45	66	121	15	16	1	2	0.4	1.3	<20	<5
1356		63	66	92	14	19	2	2	0.5	1.6	<20	<5
1357		53	46	88	11	15	<1	<1	0.6	0.7	<20	<5
1358		31	67	92	24	10	1	1	0.5	1.6	<20	<5
1359		18	50	39	<5	12	15	<1	<0.2	<0.2	<20	9
1360	STANDARD	16	25	58	16	27	2	<1	1.1	0.9	<20	<5
1364		13	16	94	6	25	1	<1	<0.2	0.8	<20	<5
1365		22	40	68	9	17	<1	<1	0.5	1.4	<20	<5
1366		29	47	83	11	17	1	<1	0.6	2.0	<20	<5
1367		44	42	107	68	21	10	11	2.2	1.6	<20	<5
1368		51	66	88	13	25	3	3	0.6	1.1	<20	<5

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	U PPM	Pb PPM	Bi PPM
1326		<10	85	3	<20	72	<5
1327		<10	129	3	<20	110	<5
1328		<10	117	2	<20	123	<5
1329		<10	201	3	<20	113	<5
1330		<10	117	1	<20	99	<5
1331		<10	138	1	<20	103	<5
1332		<10	94	1	<20	92	<5
1333		<10	92	4	<20	41	<5
1334		<10	39	11	<20	50	<5
1335		<10	139	2	<20	74	<5
1336		<10	68	14	<20	30	<5
1337		<10	100	3	<20	91	<5
1338		<10	40	8	<20	23	<5
1339		<10	109	15	<20	79	<5
1340		<10	195	2	<20	68	<5
1341		<10	77	<1	<20	99	<5
1342		<10	46	2	<20	61	<5
1343		<10	53	2	<20	71	<5
1344		<10	49	7	<20	59	<5
1345		<10	36	6	<20	23	<5
1346		<10	131	22	<20	47	<5
1347		<10	101	23	<20	25	<5
1348		<10	46	11	<20	24	<5
1349		<10	191	3	<20	105	<5
1350		<10	63	2	<20	92	<5
1351		<10	77	10	<20	36	<5
1352		<10	82	5	<20	117	<5
1353		<10	59	6	<20	45	<5
1354		<10	67	1	<20	101	<5
1355		<10	83	2	<20	106	<5
1356		<10	107	3	<20	119	<5
1357		<10	70	2	<20	80	<5
1358		<10	74	2	<20	92	<5
1359		<10	61	35	<20	32	<5
1360		<10	41	4	<20	29	<5
1364		<10	105	3	<20	30	<5
1365		<10	109	3	<20	89	<5
1366		<10	144	3	<20	67	<5
1367		<10	101	21	<20	52	<5
1368		<10	113	8	<20	107	<5

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Geochemical Lab Report

Inchcape Testing Services

DATE PRINTED: 19-OCT-92

REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE PAGE 5A

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1369		0.44	1.06	279	0.07	0.28	0.06	0.09	<5	16	11	8
1370		0.23	0.50	178	0.05	0.34	0.06	0.10	<5	9	6	4
1371		0.42	0.48	119	0.06	0.37	0.07	0.10	<5	9	7	3
1372		0.26	0.48	109	0.05	0.34	0.07	0.06	<5	11	6	3
1373		0.29	0.80	314	0.05	0.28	0.07	0.09	<5	11	7	4
1374		0.37	0.81	120	0.05	0.27	0.07	0.07	<5	14	10	5
1375		0.29	0.50	77	0.05	0.41	0.07	0.08	<5	12	7	7
1376		0.29	0.71	204	0.07	0.38	0.07	0.10	<5	10	8	12
1377		0.71	1.63	745	0.13	0.71	0.06	0.11	<5	24	20	13
1378		1.34	0.54	259	0.10	0.30	0.05	0.06	<5	7	20	29
1379	STANDARD	0.51	0.53	47	0.12	0.78	0.06	0.06	<5	8	9	3
1380		0.94	0.87	45	0.04	0.23	0.06	0.08	<5	5	8	8
1381		0.23	0.37	73	0.06	0.79	0.06	0.06	<5	3	3	7
1382		0.36	0.33	64	0.06	0.48	0.06	0.08	<5	7	5	10
1383		0.54	1.05	76	0.06	0.16	0.07	0.06	<5	19	16	6
1384		0.19	0.76	396	0.06	0.77	0.07	0.12	<5	6	6	12
1385		0.23	0.43	92	0.04	0.37	0.05	0.07	<5	8	5	5
1386		0.26	1.12	520	0.08	0.72	0.06	0.17	<5	12	9	14
1387		1.24	1.09	4487	0.10	0.70	0.06	0.11	<5	13	16	537
1388		0.23	0.45	125	0.05	0.55	0.06	0.09	<5	8	5	12
1389		0.37	0.86	727	0.10	0.41	0.06	0.12	<5	13	10	8
1390		0.36	0.69	519	0.09	0.39	0.07	0.09	<5	13	12	6

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Geochemical Lab Report

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SAMPLE NUMBER	ELEMENT UNITS	Mi PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1369		76	102	96	15	27	2	1	0.8	1.9	<20	<5
1370		54	67	131	13	27	1	2	0.7	0.8	<20	<5
1371		39	47	69	8	35	2	<1	0.5	1.0	<20	<5
1372		52	60	81	11	28	1	1	0.9	1.4	<20	<5
1373		73	83	108	14	15	1	1	0.3	1.4	<20	<5
1374		50	44	146	10	18	<1	1	0.5	1.5	<20	<5
1375		68	137	224	17	30	1	1	0.9	4.0	<20	<5
1376		57	67	127	20	22	1	2	0.6	1.9	<20	<5
1377		29	25	142	12	28	2	2	0.5	1.7	<20	<5
1378		14	29	46	13	12	23	<1	0.6	0.8	<20	7
1379	STANDARD	17	24	42	17	26	2	<1	0.8	0.6	<20	<5
1380		39	45	64	14	17	10	1	0.4	1.1	<20	<5
1381		36	36	82	7	39	5	1	0.3	1.5	<20	<5
1382		75	82	107	23	32	1	1	<0.2	1.8	<20	<5
1383		44	64	95	18	15	2	<1	<0.2	1.0	<20	<5
1384		65	63	281	14	36	<1	1	0.8	1.7	<20	<5
1385		34	35	114	10	24	1	<1	0.7	0.9	<20	<5
1386		55	47	259	11	35	<1	2	0.5	1.6	<20	<5
1387		56	61	255	30	38	14	4	0.7	1.3	<20	5
1388		50	56	150	12	30	1	1	0.5	1.5	<20	<5
1389		36	31	158	6	27	1	<1	0.6	0.5	<20	<5
1390		30	31	143	6	30	1	<1	0.4	1.0	<20	<5

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	U PPM	Pb PPM	Bi PPM
1369		<10	386	7	<20	99	<5
1370		<10	172	3	<20	118	<5
1371		<10	201	6	<20	102	<5
1372		<10	160	3	<20	100	<5
1373		<10	115	2	<20	121	<5
1374		<10	132	2	<20	82	<5
1375		<10	186	3	<20	196	<5
1376		<10	103	3	<20	117	<5
1377		<10	112	3	<20	45	<5
1378		<10	41	38	<20	13	<5
1379		<10	42	3	<20	30	<5
1380		<10	70	16	<20	37	<5
1381		<10	90	6	<20	48	<5
1382		<10	142	2	<20	176	<5
1383		<10	128	3	<20	64	<5
1384		<10	128	2	<20	88	<5
1385		<10	133	3	<20	52	<5
1386		<10	123	2	<20	85	<5
1387		<10	127	27	<20	70	<5
1388		<10	99	2	<20	99	<5
1389		<10	152	4	<20	47	<5
1390		<10	185	5	<20	65	<5

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STANDARD NAME	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
TRACE GEOCHEM STD		0.88	2.65	630	1.24	1.50	0.16	0.21	-	8	75	8
TRACE GEOCHEM STD		0.83	2.84	654	1.33	1.60	0.12	0.18	-	8	78	10
Number of Analyses		2	2	2	2	2	2	2	2	2	2	2
Mean Value		0.856	2.743	641.9	1.285	1.547	0.142	0.196	2.5	8.3	76.3	9.0
Standard Deviation		0.0316	0.1337	17.17	0.0690	0.0700	0.0277	0.0166	-	0.19	1.81	1.41
Accepted Value		0.77	2.40	600	1.34	1.50	0.09	0.14	12	9	80	9
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK		-	-	-	-	-	-	-	-	-	-	-
Number of Analyses		6	6	6	6	6	6	6	6	6	6	6
Mean Value		0.005	0.005	0.5	0.005	0.005	0.005	0.005	2.5	0.5	0.5	0.5
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-
Accepted Value		-	0.05	1	-	-	-	-	-	1	1	1
GS89-2		5.14	4.60	837	4.98	4.65	0.42	0.27	-	34	169	45
GS89-2		5.51	4.86	887	5.10	4.83	0.45	0.25	-	37	169	47
Number of Analyses		2	2	2	2	2	2	2	2	2	2	2
Mean Value		5.324	4.732	862.0	5.039	4.740	0.436	0.259	2.5	35.3	169.0	46.0
Standard Deviation		0.2631	0.1854	35.36	0.0810	0.1229	0.0177	0.0114	-	1.87	-	1.41
Accepted Value		5.10	5.00	800	5.10	4.70	0.40	0.20	12	34	180	45
GEO TRACE STD1(1989)		2.86	4.50	470	1.24	0.77	0.15	0.18	6	92	90	9
GEO TRACE STD1(1989)		2.91	4.60	477	1.28	0.83	0.13	0.17	6	93	94	9
Number of Analyses		2	2	2	2	2	2	2	2	2	2	2
Mean Value		2.885	4.551	473.5	1.261	0.799	0.135	0.172	6.3	92.5	91.8	9.0
Standard Deviation		0.0352	0.0653	4.95	0.0254	0.0378	0.0139	0.0080	0.26	1.16	2.89	-
Accepted Value		2.75	4.50	450	1.21	0.76	0.06	0.12	-	85	100	7

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STANDARD NAME / ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
TRACE GEOCHEM STD	41	281	251	26	39	3	4	0.5	1.1	-	-
TRACE GEOCHEM STD	45	294	273	26	41	3	4	0.5	0.9	-	-
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	42.9	287.3	262.0	25.8	40.1	2.8	3.7	0.49	1.00	10.0	2.5
Standard Deviation	2.78	9.28	15.56	0.15	1.21	0.05	0.27	0.011	0.141	-	-
Accepted Value	42	290	255	30	39	4	4	0.5	0.8	5	-1
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses	6	6	6	6	6	6	6	6	6	6	6
Mean Value	0.5	0.5	0.5	2.5	0.5	0.5	0.5	0.10	0.10	10.0	2.5
Standard Deviation	-	-	-	-	-	-	-	-	-	-	-
Accepted Value	1	1	1	5	-	-	1	0.2	1.0	-	5
GS89-2	583	801	541	275	85	4	617	5.9	2.7	-	51
GS89-2	634	836	533	311	90	5	645	5.4	2.8	-	53
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	608.4	818.6	537.0	293.2	87.5	4.5	631.2	5.65	2.75	10.0	52.3
Standard Deviation	36.32	24.63	5.66	25.15	3.43	0.23	19.98	0.359	0.071	-	1.44
Accepted Value	600	820	500	320	78	6	600	5.0	2.0	16	50
GEO TRACE STD1(1989)	16	183	64	9	68	5	18	30.5	0.5	-	9
GEO TRACE STD1(1989)	17	187	62	10	71	5	18	28.8	0.5	-	8
Number of Analyses	2	2	2	2	2	2	2	2	2	2	2
Mean Value	16.7	185.4	63.0	9.6	69.3	5.1	18.1	29.67	0.48	10.0	8.5
Standard Deviation	0.56	2.76	1.41	0.60	1.96	0.18	0.19	1.221	0.045	-	0.71
Accepted Value	15	190	62	8	63	10	17	34.0	0.2	5	7

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STANDARD NAME / ELEMENT UNITS	Te PPM	Ba PPM	La PPM	W PPM	Pb PPM	Bi PPM
TRACE GEOCHEM STD	-	52	7	-	35	-
TRACE GEOCHEM STD	-	50	4	-	33	-
Number of Analyses	2	2	2	2	2	2
Mean Value	5.0	51.0	5.4	10.0	34.1	2.5
Standard Deviation	-	1.41	1.99	-	1.14	-
Accepted Value	-	45	4	1	33	2
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
ANALYTICAL BLANK	-	-	-	-	-	-
Number of Analyses	6	6	6	6	6	6
Mean Value	5.0	0.5	0.5	10.0	1.0	2.5
Standard Deviation	-	-	-	-	-	-
Accepted Value	-	-	-	-	2	2
GS89-2	-	238	7	-	201	6
GS89-2	-	241	7	-	204	-
Number of Analyses	2	2	2	2	2	2
Mean Value	5.0	239.5	6.8	10.0	202.3	4.3
Standard Deviation	-	2.12	0.12	-	2.47	2.47
Accepted Value	-	220	6	-	250	4
GEO TRACE STD1(1989)	-	78	4	-	18	-
GEO TRACE STD1(1989)	-	77	3	-	16	-
Number of Analyses	2	2	2	2	2	2
Mean Value	5.0	77.5	3.7	10.0	17.0	2.5
Standard Deviation	-	0.71	0.67	-	1.41	-
Accepted Value	-	74	4	2	15	1

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REPORT: 092-42620.0 (COMPLETE) PROJECT: NONE PAGE 7A

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
1206		0.57	0.67	2553	0.09	0.46	0.04	0.09	<5	9	9	26
Duplicate		0.66	0.78	2766	0.10	0.51	0.06	0.10	<5	11	11	29
Prep Duplicate		0.62	0.74	2833	0.10	0.51	0.05	0.10	<5	10	10	29
1224		0.35	0.89	1239	0.06	0.23	0.06	0.11	<5	16	14	5
Duplicate		0.36	0.90	1256	0.06	0.23	0.06	0.11	<5	16	10	4
1243		0.21	0.54	437	0.04	0.28	0.04	0.09	<5	8	4	4
Duplicate		0.24	0.63	463	0.05	0.30	0.06	0.10	<5	9	5	4
1260		0.85	1.92	790	0.09	0.37	0.05	0.07	<5	24	10	47
Duplicate		0.89	2.01	835	0.08	0.38	0.06	0.07	<5	26	11	49
1279		0.30	0.66	84	0.04	0.20	0.05	0.08	<5	15	7	4
Duplicate		0.31	0.68	82	0.04	0.19	0.06	0.08	<5	17	10	3
1282		0.32	0.56	119	0.05	0.25	0.06	0.05	<5	16	6	2
Prep Duplicate		0.33	0.57	116	0.05	0.25	0.06	0.05	<5	16	6	2
1295		0.64	1.85	107	0.08	0.11	0.04	0.06	<5	31	13	4
Duplicate		0.71	2.02	118	0.08	0.13	0.06	0.07	<5	35	16	4
1308		1.97	0.17	11	0.02	0.06	0.06	0.03	<5	6	14	2
Prep Duplicate		1.87	0.16	32	0.02	0.06	0.05	0.02	<5	5	13	2
1315		0.25	0.37	86	0.05	0.38	0.06	0.09	<5	7	5	2
Duplicate		0.26	0.39	89	0.05	0.38	0.07	0.09	<5	7	8	2
1326		0.78	0.56	147	0.04	0.10	0.06	0.06	<5	7	6	4
Prep Duplicate		0.80	0.57	152	0.04	0.10	0.06	0.06	<5	7	7	4
1331		0.20	0.80	191	0.04	0.33	0.05	0.07	<5	8	6	3
Duplicate		0.22	0.90	188	0.04	0.34	0.06	0.08	<5	8	10	4
1351		1.98	>10.00	338	0.14	0.10	0.06	0.07	<5	208	61	50
Duplicate		2.01	>10.00	340	0.14	0.10	0.06	0.07	<5	209	61	50
1370		0.23	0.50	178	0.05	0.34	0.06	0.10	<5	9	6	4
Duplicate		0.24	0.54	185	0.05	0.35	0.08	0.11	<5	9	8	5
1374		0.37	0.81	120	0.05	0.27	0.07	0.07	<5	14	10	5
Prep Duplicate		0.35	0.78	113	0.05	0.26	0.06	0.07	<5	14	9	5
1390		0.36	0.69	519	0.09	0.39	0.07	0.09	<5	13	12	6
Duplicate		0.37	0.70	520	0.09	0.38	0.07	0.09	<5	13	13	7

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SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
1206		31	41	100	5	30	6	1	0.6	1.6	<20	<5
Duplicate		37	42	112	10	32	6	1	0.8	1.9	<20	<5
Prep Duplicate		34	43	112	6	32	6	<1	0.9	1.9	<20	<5
1224		41	40	110	11	12	<1	2	0.4	0.4	<20	<5
Duplicate		41	40	113	11	13	<1	1	0.4	0.9	<20	<5
1243		49	81	111	10	14	1	1	0.6	1.3	<20	<5
Duplicate		58	85	119	11	15	1	1	0.4	2.0	<20	<5
1260		48	61	71	27	34	8	4	0.5	0.9	<20	<5
Duplicate		49	61	73	23	36	8	2	0.6	0.9	<20	<5
1279		70	92	85	10	14	1	1	0.3	1.5	<20	<5
Duplicate		72	90	82	12	14	1	2	0.5	1.5	<20	<5
1282		33	39	89	13	12	<1	<1	0.2	1.2	<20	<5
Prep Duplicate		32	38	89	12	12	<1	<1	0.3	1.3	<20	<5
1295		31	42	63	11	8	<1	<1	0.3	0.4	<20	<5
Duplicate		36	45	69	11	10	1	1	0.4	0.2	<20	<5
1308		9	95	22	<5	5	7	<1	0.2	<0.2	<20	8
Prep Duplicate		8	90	20	<5	5	6	<1	<0.2	<0.2	<20	8
1315		29	61	46	7	30	1	2	0.6	1.9	<20	<5
Duplicate		30	61	45	6	31	1	1	0.3	1.5	<20	<5
1326		56	57	60	27	9	2	<1	0.5	0.7	<20	5
Prep Duplicate		57	59	60	20	9	2	1	0.6	0.9	<20	5
1331		70	62	138	15	27	<1	1	0.2	1.2	<20	<5
Duplicate		76	64	143	12	27	<1	2	0.3	1.2	<20	<5
1351		30	89	54	25	9	3	7	1.2	1.7	<20	<5
Duplicate		29	88	54	34	9	3	8	1.2	0.5	<20	<5
1370		54	67	131	13	27	1	2	0.7	0.8	<20	<5
Duplicate		53	70	137	11	29	1	1	0.6	1.1	<20	<5
1374		50	44	146	10	18	<1	1	0.5	1.5	<20	<5
Prep Duplicate		46	44	137	12	16	<1	1	0.3	1.7	<20	<5
1390		30	31	143	6	30	1	<1	0.4	1.0	<20	<5
Duplicate		29	31	139	5	30	1	<1	0.5	1.2	<20	<5

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SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	U PPM	Pb PPM	Bi PPM
1206		<10	185	18	<20	50	<5
Duplicate		<10	195	19	<20	56	<5
Prep Duplicate		<10	197	19	<20	56	<5
1224		<10	106	4	<20	93	<5
Duplicate		<10	107	2	<20	95	<5
1243		<10	153	2	<20	149	<5
Duplicate		<10	162	2	<20	158	<5
1260		<10	148	12	<20	92	<5
Duplicate		<10	155	12	<20	95	<5
1279		<10	126	3	<20	129	<5
Duplicate		<10	125	3	<20	125	<5
1282		<10	88	1	<20	45	<5
Prep Duplicate		<10	88	1	<20	46	<5
1295		<10	44	3	<20	43	<5
Duplicate		<10	47	3	<20	47	<5
1308		<10	24	17	<20	9	<5
Prep Duplicate		<10	24	16	<20	7	<5
1315		<10	149	3	<20	130	<5
Duplicate		<10	150	3	<20	128	<5
1326		<10	85	3	<20	72	<5
Prep Duplicate		<10	89	3	<20	73	<5
1331		<10	138	1	<20	103	<5
Duplicate		<10	139	1	<20	106	<5
1351		<10	77	10	<20	36	<5
Duplicate		<10	73	8	<20	37	<5
1370		<10	172	3	<20	118	<5
Duplicate		<10	182	3	<20	123	<5
1374		<10	132	2	<20	82	<5
Prep Duplicate		<10	120	2	<20	75	<5
1390		<10	185	5	<20	65	<5
Duplicate		<10	184	5	<20	65	<5

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APPENDIX IV

ANALYSES OF GEOCHEMICAL STANDARD SAMPLE

LIST OF ANALYSES OF GEOCHEMICAL STANDARD

The following is a list of analyses of one homogenized organic soil sample used as a control standard to monitor laboratory variation:

INSERTED WITH ORGANIC DRAINAGE SAMPLES

Sample #	ppm Ag	As	Co	Cu	Pb	Zn	Mn	Remarks
0999	0.8	8	2	21	24	22	43	
1026	0.6	15	2	23	25	27	53	
1063	0.7	10	2	22	26	24	45	

INSERTED WITH ORGANIC SOIL SAMPLES

Sample #	ppm Ag	As	Co	Cu	Pb	Zn	Mn	Remarks
1049	1.1	17	3	24	37	30	52	
1085	1.1	13	5	27	40	49	58	
1110	0.9	17	3	27	42	58	54	
1150	1.1	11	12	26	39	49	522	decimal pt. error?
1190	1.1	9	3	27	37	51	59	
1324	0.7	15	4	25	30	35	73	
1360	1.1	16	3	25	29	58	46	
1379	0.8	17	3	24	30	42	47	

APPENDIX V

ANALYSES OF BEDROCK SAMPLES

LIST OF BEDROCK GRAB SAMPLES

SAMPLE NO.	LOCATION	DESCRIPTION
13327	20+80E/ 1+99S	Minor cobalt arsenide in muck from pit;
13328	6+23E/10+56S	Trace malachite on weathered out seam
13330	21+20E/ 0+40N	Co bloom on slips from east wall of pit, fine grained phase of diabase;
13331	8+00E/10+00S	Black film on slip in conglomerate;
13332	8+25E/ 9+80S	Malachite on slips, minor Po, prominent, brown limonite;
13335	21+20E/ 0+40N	Aplite dyke
13336	21+20E/ 0+40N	0.3 cm. quartz vein from muck pile;
13337	21+20E/ 0+40N	Prominent Py on slip faces from muck;

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REPORT: 092-43015.0 (COMPLETE) REFERENCE:

CLIENT: MR. A.W. BEECHAM SUBMITTED BY: A. BEECHAM
PROJECT: NONE DATE PRINTED: 18-DEC-92

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
ROCK	8	-200	8	CRUSH, PULVERIZE	8

REPORT COPIES TO: MR. A.W. BEECHAM
FAX:705-672-3980

INVOICE TO: MR. A.W. BEECHAM

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CLIENT: MR. A.W. BEECHAM SUBMITTED BY: A. BEECHAM
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ORDER		ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Al	Aluminum	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
2	Fe	Iron	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
3	Mn	Manganese	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
4	Mg	Magnesium	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
5	Ca	Calcium	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Na	Sodium	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	K	Potassium	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	Sc	Scandium	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	V	Vanadium	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Cr	Chromium	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Co	Cobalt	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Ni	Nickel	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Cu	Copper	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	Zn	Zinc	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	As	Arsenic	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	Sr	Strontium	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Y	Yttrium	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Mo	Molybdenum	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Ag	Silver	8	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Cd	Cadmium	8	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	Sn	Tin	8	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	Sb	Antimony	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	Te	Tellurium	8	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	Ba	Barium	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	La	Lanthanum	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	W	Tungsten	8	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Pb	Lead	8	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Bi	Bismuth	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

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Geochemical Lab Report

Inchcape Testing Services

REPORT: 092-43015.0 (COMPLETE)

DATE PRINTED: 18-DEC-92

PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Al PCT	Fe PCT	Mn PPM	Mg PCT	Ca PCT	Na PCT	K PCT	Sc PPM	V PPM	Cr PPM	Co PPM
13327		3.51	>10.00	908	2.03	1.21	0.32	0.19	6	64	135	84
13328		2.26	5.65	542	2.02	0.23	0.71	0.07	10	102	154	16
13330		5.49	>10.00	1338	4.29	0.77	0.25	0.02	22	223	52	722
13331		2.65	6.58	879	2.54	0.24	0.78	0.14	12	190	215	40
13332		1.94	5.32	398	1.54	0.21	0.76	0.07	8	80	106	33
13335		1.02	1.90	213	0.51	0.75	0.89	0.03	<5	7	166	20
13336		2.47	>10.00	1918	1.21	0.84	0.30	0.26	8	151	44	33
13337		1.57	7.49	870	0.72	1.53	0.46	0.30	<5	156	57	53

Bondar-Clegg & Company Ltd.
5420 Canotek Road, Ottawa, Ontario, K1J 9G2, Canada
Tel: (613) 749-2220, Fax: (613) 749-7170

BONDAR-CLEGG

Geochemical Lab Report

Inchcape Testing Services

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SAMPLE NUMBER	ELEMENT UNITS	Ni PPM	Cu PPM	Zn PPM	As PPM	Sr PPM	Y PPM	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM
13327		43	14	183	>2000	11	14	4	1.3	4.6	<20	<5
13328		62	198	47	48	4	5	2	<0.2	<0.2	<20	7
13330		43	5	233	1456	5	10	46	1.7	<0.2	24	<5
13331		114	52	97	8	5	6	<1	0.3	2.3	<20	<5
13332		62	467	28	25	4	8	2	0.4	0.9	<20	7
13335		10	17	22	41	4	4	<1	<0.2	<0.2	<20	9
13336		13	28	97	37	22	7	<1	0.9	1.0	<20	<5
13337		12	82	99	54	28	6	<1	0.6	0.8	<20	<5

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PROJECT: NONE

SAMPLE NUMBER	ELEMENT UNITS	Te PPM	Ba PPM	La PPM	U PPM	Pb PPM	Bi PPM
13327		<10	27	16	<20	160	<5
13328		<10	11	4	<20	30	5
13330		<10	41	11	<20	159	<5
13331		<10	23	8	<20	34	<5
13332		<10	14	4	<20	30	<5
13335		14	9	1	<20	47	<5
13336		<10	162	9	<20	42	<5
13337		<10	245	7	<20	41	<5

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APPENDIX VI

SHOWINGS AND OCCURRENCES JAMES LAKE AREA, BEST TOWNSHIP (COMPILATION)

SHOWINGS AND OCCURRENCES

1. NORTHLAND PYRITE DEPOSIT COMMODITY: Pyrite

DESCRIPTION: 3 massive Py bands in 400m long sulphide zone in and close to 750 long north-south lens of felsic tuff breccia; Tuff breccia within mafic flows close to west contact of volcanics with Chambers-Strathy granite-quartz monzonite batholith; Not entirely certain if sulphides are exhalative or structurally controlled;

DEVELOPMENT, PRODUCTION: Shaft to 52m, inclined(?) 70° to the west with level at 30m?;
Produced 38,000 tons of pyrite from Feb. 1906 to March 1911;

ASSAYS: One bulk sample assayed 42 % S, but best drill hole intersection were 22.96 % S over 11.7m and 13.56 % S over 16m;

Diamond Drill Holes:
DH NL52/1 0.21% Cu /0.46m
DH NL52/2 0.24% Cu /0.61m
DH NL52/3 0.32% Zn /0.61m
DH RE57/8 0.28% Cu /1.1m
Surface Samples: from dump by Sylvanite assayed up to 0.40% Cu;

MINERALIZATION: Py, Po, minor Cp

GEOPHYSICS: The sulphides are outlined by a self-potential anomaly which continues southward, somewhat diminished, about 500m onto the present holdings of G. Chitaroni; The sulphides could extend farther south, under Granite Lake, beyond the limit of the survey.

2. NIEMETZ COPPER OCCURRENCE METALS: Cu;

DESCRIPTION: 0.3 m. wide rusty band with Py, Cp, some carbonate and quartz in NW striking shear in pillow lava; Cp also in DD core;

MINERALIZATION: Py, Cp;

REF: AFCO R.T. (Robert Thomson) Field mapping notes, Best Twp.

3. ACANA #1 METALS: Cu,Ni, minor Zn

DESCRIPTION: Concentrations of Py-Po and Cp up to 50% sulphides over about 1m width by an 8m strike length, in sheared, silicified mafic volcanics or chert beds, striking 010 and dipping 75°W.

ASSAYS: 0.21% Cu; 0.18% Ni/0.91m
Channel sample in trench by Falconbridge Nickel Mines

4. ACANA #3 METALS: Minor Zn, Pb;
(60m south of Acana #1)

DESCRIPTION: Heavy Py-Po across 3.7 - 4.6 m wide shear zone in rhyolites or silicified mafic volcanics;

MINERALIZATION: Py,Po, minor Sph., Gn;

REF: AFCO Acana M.L. Best twp.

5. ACANA #2 & #4 METALS: Cu, Ni;
Acana #2 referred to as shaft zone, Acana #4 located 75m south has similar mineralization but apparently not within gabbro;

DESCRIPTION: Sulphides, apparently mainly associated with pyroxenite layer in gabbro sill (according to J. Kelly then of Falconbridge Nickel); However, some of assays plot within mafic volcanics?

ASSAYS: Surface sampling by Reef Explorations (AFCO Reef Expl. Ltd., Best and Gillies Block 97)

Location	% Cu	% Ni	Sample Length m;
At shaft	1.55	0.84	0.91
13m W of Sh.	0.55	0.32	7.00
28m SW of Sh.	0.69	1.14	7.00

Lower values were intersected, apparently down plunge, to SSW, where values are within mafic volcanics, 10 to 20m stratigraphically below the layered gabbro-pyroxenite; Values as follows:

	%Cu	%Ni	Sample Length (m)
DH RE57/3 {	0.36	0.16	1.2
{	0.14	0.09	0.91
DH RE57/4 {	0.49	0.03	0.61
{	0.19	0.16	1.2
{	0.13	0.11	4.0

5. ACANA #2 & #4 (cont'd)

DEVELOPMENT: shallow shaft or pit, 10.7m deep;

MINERALIZATION: Py,Po, Cp

6. GUPPY OCCURRENCE METALS: Mo;

DESCRIPTION: MoS_2, Py, Cp, in quartz veins, several occurrences along TransCanada Pipeline; (minor Mo occurrences;)

MINERALS: Besides above, minor powellite, $\{Ca(Mo,W)O_4\}$, axinite;

7. ACANA #10 METALS: Cu;

DESCRIPTION: Py, Po, minor Cp in "silicified shear" in dacite tuffs, striking north and dipping steeply west;

8. CAMP-SITE Mo METALS: Mo

DESCRIPTION: Quartz vein up to 8 cm. with molybdenite, Py, Cp cutting mafic volcanics;

9. ACANA #6, #7, #8, METALS: Cu, Ni

DESCRIPTION: #6 mineralized zone in fractured, sheared, early diabase; #7, #8 are similar but in mafic volcanics;
Mortimer drill holes, M070/A4,& A5, 90m WNW of Acana 6 reported to contain up to 4m of "massive sulphides" with minor Cp and minor MoS_2 in diabase, but accuracy of the location and description is suspect;

ASSAYS:

	%Cu	%Ni	%Co	Sam. Leng	Remarks
DH C53/3	0.20	0.05			
DH C53/4	0.5%	0.2	0.045	1.07m	Under #6 shwg.
	0.29	0.29		0.82m	
M070/A5	1-2%?	0.4?		4.1m	Data suspect
M070/A6	1-2%	0.44		4.1m	Data suspect

MINERALS: Py, Po

REF: AFCO Acana M.L. Best twp;

10. ACANA #9 METALS: Cu, Ni;

DESCRIPTION: Narrow, mineralized shear zone in mafic volcanics over strike length of 15m;

ASSAYS:

	% Cu	% Ni	Sample Length (m)
DH CM53/5	-	0.15	1.5
	0.29	0.20	1.5

MINERALS: Py, Po, minor Cp;

11. ACANA #5 METALS: PGM; Cu, Ni;

DESCRIPTION: 3.7 to 4.6m wide, mineralized, N-S shear along contact(s) of Matachewan-age diabase in granite;

ASSAYS: Up to 35g/t Pt (AFCO, Acana M.L. Best twp.), other assays, 0.33% Ni, 1.59 % Cu, 4.11 g/t PGE; R.Thomson (ODM resident geologist) reported 1.37 g/t Pt and 2.74 g/t Pd presumably in a grab sample;

Mortimer drill hole M068/1 reported from 65m south of Acana #5 trench (but thought to more likely directly under the Acana trench from which PGE assays were previously obtained) includes following assays:

Pt g/t	Pd g/t	% Ni	% Cu	% Co	Core Length
0.68	5.14	1.84	1.66	0.15	1.52m

12. MORTIMER DH70/3,4 METALS: minor Cu, Zn, Pb, (Py)

DESCRIPTION: Shallow DH's, 70/4 records 3.7m "massive sulphides", mainly Py in diabase; 70/5 records minor Cp, Sph, Gn in diabase; DH 72/3 records 3.7m "massive pyrite" with minor Cp, in granite; "Massive sulphide" descriptions are suspect.

ASSAYS: Sulphides in DH 72/3 assay 0.1% Ni and 0.2 % Cu;

13. MORTIMER DH 70/2 METALS: minor Cu, Pb, Zn, (Py);

DESCRIPTION: Shallow DH's 70/2 and 70/3 record minor Cp, Gn, Sph in diabase;

14. MORTIMER DH 67/3 METALS: Cu, Mo

DESCRIPTION: Shallow DH 67/3 records Py, Cp, molybdenite, powellite ($Ca(Mo,W)O_4$) in quartz-diabase breccia;

15. CUNIPTAU SILICA DEPOSIT COMMODITY: Silica flux;

DESCRIPTION: Silicified granite plus quartz veins, silica replacement in fractured zone 550m long E-W by 30 to 38m wide;

PRODUCTION: Small production of flux in 1936 shipped to Cuniptau (Ajax, Kanichee) smelter in Strathy Twp;

ASSAYS: Representative flux sample analyzed by ODM as follows:

Silica	97.91 %
Alumina	0.54
Iron	0.20
Lime	0.02
Magnesia	0.13
Soda	<0.10
Potash	<0.50

No gold values reported in silica zone, and not known if tested for gold, but 50m to south isolated gold value 6.17 g/t Au/ 0.55m reported in quartz veins in E-W shear zone;

16. DANLOU METAL: Au

DESCRIPTION: Quartz veins up to 0.6m in 2 m wide shear zone in granite;

ASSAYS: Isolated; 6.17g/t Au and 34g/t Ag / 0.55m;
0.69 g/t Au;

MINERALS: Py, Cp, Au(?)

17. TURNBALL #1 (N. McLean) METAL: Cu;

DESCRIPTION: Quartz, minor red feldspar, calcite, epidote, chlorite veins with Cp "splashes" and Py in Gowganda Formation; One 0.18m vein strikes 005° and dips 45° east.

18. TURNBALL #2 METAL: Co, Ag;

DESCRIPTION: Carbonate-quartz vein with strike 283° has Co bloom and smaltite; native Ag reported from overburden near vein; Vein in Nipissing Diabase;

19. TURNBALL #3 METAL: Co

DESCRIPTION: 2 to 3 fractures at 110°strike and 78° north dip with

minor calcite and quartz, and Py, Co bloom and Gn, some pink aplite; Veins in Nipissing Diabase;

APPENDIX VII

DAILY TIME LOG, VEHICLE LOG

ONTARIO PROSPECTOR'S ASSISTANCE PROGRAMME DAILY TIME LOG
RIB LAKE PROPERTY

DATE	DESCRIPTION OF WORK	DAYS FIELD/OFFIC	TRANSP. KM.
APRIL 1992			
25	Teleph. R. Jackson geochemist	n/c	
27	Contact MNR re: work permit	n/c	
29	Line cutting; N-S control line on 20+00E	0.5	92km
30	Check indexes in Resid. Geol. Office and have to re-order some of photos	n/c	16km
	TOTALS FOR MONTH	0.5 days	108km

DATE	DESCRIPTION OF WORK	DAYS FIELD/OFFIC	TRANSP. KM.
MAY 1992			
1st. Fri.	Cutting N-S control line from south claim line & start E-W. Base Line; Wet snow, progress slow;	1 -	96km
4th Mon.	Line cutting E-W. Base Line west of N-S. control line;	1 -	96
5th	Line cutting E-W. Base Line eastward from NS. control line;	1 -	92
6th	Cutting E-W. Base Line east of control line;	1 -	92
7th	Planning stream geochem. survey 2hrs Stream sediment sampling west side;	1 -	92
8th Fri	Geochem. sampling middle & east part Rib Lake property;	1 -	92
9th Sat.	Finish stream sediment sampling, south part property;	1 -	92
11th Mon.	Line cutting; extend Base Line west from east scarp to middle of west scarp	1 -	84
12th	Chain east part Base Line (Hip chain); Cut 2 short lines over main showing;	1 -	93
16th Sat	Detailed mapping on main trenches; Run line 21+00E from S. boundary 1118525 & find second group of trenches; cut out part of area around trenches;	1 -	92
24th Sat	Collect bulk soil sample for standard;	- -	26
	TOTALS FOR MONTH	10 DAYS	947km

DATE	DESCRIPTION OF WORK	DAYS FIELD	DAYS OFFIC	TRANSP. KM.
JULY 1992				
28	1 hr. reviewing geochem. (office); Cutting main E-W base line	1	-	85km
29	Finish cutting main E-W Base Line	1	-	85
30	Conferring with Geochemist R. Jackson, Arrange for Bondar-Clegg to transmit geochem. data to Jackson's computer; Ordering supplies;	-	1	-
31	Chain main base line; helped by John Gore; Re-chain eastern 1000m of B/L originally chained by 'hip chain' -6.3m error over 1000m; mostly sunny;	1	-	92
	TOTALS FOR MONTH	3	1	262 km

DATE	DESCRIPTION OF WORK	DAYS FIELD	DAYS OFFIC	TRANSP. KM.
AUGUST 1992				
3rd	Line cutting; cut line 10+00E from baseline north almost to lake; Leave HLBY 07:50 return 19:45	1	-	85km
4th	Rain in early morning; Ordering supplies;	-	-	
5th	Confir with Geochemist; Drawing up compilation base map;		.5	-
10th	Chaining picket lines 10+00E; Cutting picket line 4+75S;	1		91km
11th	Finish cutting & chaining line 4+75S chain Line 10+00E from B\L to Rib Lk.	1		86km
25th	Compiling assessment data area to west		0.5	
26th	Compiling geophysical data area to west		0.5	16km
27th	Compiling geology of area to west		0.5	
28th	Compilation: re-plotting errors in plots complete geology; work on assay plan		1	
29th	Compilation; correct dd. locations, assay plan; Legend;		0.5	
30th	Compilation;Sheet layout, revise titles drafting;		1	
31st	Compilation; Legend, extend base map topography, compile trenching, drafting		1	
	TOTALS FOR MONTH	3	5.5	278km

DATE	DESCRIPTION OF WORK	DAYS FIELD	DAYS OFFIC	TRANSP. KM.
SEPTEMBER 1992				
1ST	Compilation; drawing up base map; compile diamond drilling data;		1	16km
2nd	Line cutting L5+50E	1		98km
4th	Complete line cutting on south Claim;	1		93km
5th	Soil sampling south west claim;	1		91km
6th	Compilation: diamond drilling, geol. property lines;		0.5	
7th	Compilation; property map, draw up geol. map		1	
8th	Compilation; Drafting; alter property map; draw assay & showing map		1	
9th	Soil sampling on west part	1		89km
10th	Soil sampling on west part;	0.5		87km
11th	Soil sampling on west part;	1		87km
12th	Soil sampling on west part;	1		86km
14th	Chain L20E from B/L S to claim line; check chainage on B\L; Cut out and chain Claim Line 20E to 26E;	1		92km
16th	Prospect stream sediment anom. and soil sample; Heavy rain;	0.5		94km
17th	Soil sampling across Roosevelt Lk Rd	1		90km
21st	Soil sampling across Roosevelt Lk Rd.	1		94km
26th	Revise and complete compilation report		1	
29th	Show D. Robinson field locations;	0.5		99km
	TOTALS FOR MONTH	10.5	4.5	1116km

DATE	DESCRIPTION OF WORK	DAYS FIELD	DAYS OFFIC	TRANSP. KM.
OCTOBER 1992				
NOVEMBER 1992				
DECEMBER 1992				
	Supervision, filing, data organization only;			
		-	-	

DATE	DESCRIPTION OF WORK	DAYS FIELD/OFFIC		TRANSP. KM.
JANUARY 1993				
7th	Update work records, cost statement	-	0.5	-
8th	Cost statements, drawing up base map	-	1	
9th(Sat)	Constructing base map from airphotos	-	1	
11th	Constructing base map; Sorting out details of geology, legend, etc.	-	1	
12th	Drafting base map; printing & draft'g sepias for geol. and geochem. base maps; geol. & geochem; Drafting geol. map;	-	1	
13th	Draft remainder geology map; draw up cross section of Huronian in SW corner of claims; Draw 1:5000 section across property to show thickness of Nipissing Diabase; Plotting soil soil sample plan and add stream sediment sample points;	-	1	
14th	Plotting geochem. sample plan & plot Ag, As, Cu, and Co data on sepias;	-	1	
15th	Drafting Geochem. plan labels, legends, Print out and test contour maps; Enter soil geochem. data on Ag,As,Co,Cu into Lotus spreadsheet for stat.analys.	-	1	
16th(Sat)	Plot histograms of geochem. data; White prints of geochem. maps	-	1	
17th	Report writing, up date financial data;	-	1	
18th	Report writing; assemble report, maps; Photocopying, making white prints;	-	1	16km
19th	Report writing, map preparation	-	1	
20th	Report writing, map preparation	-	1	16km
	TOTALS FOR MONTH	-	12.5	32km.

21/Jan. 1993

A.W. Beecham

COMPILATION
JAMES LAKE AREA
GEOLOGY

Best and Gillies Limit Twp. *District Nipissing, Temiskaming, Ontario*

SCALE 1:5000

100m 0 100 200 300 400m

Compiled by: A.W. Beecham *August 1992*

N

UTM

5980000E 5985000E 5990000E 5995000E 6000000E 6005000E

5226000N 5225000N 5224000N 5223000N

JAMES LAKE

GRANITE LAKE

RIB LAKE

PETRAUT LAKE

NET CREEK

GILLIES LIMIT
BEST TOWNSHIP

T.C. PIPELINE

ONT. N.L. RAILWAY

HWY 11

ROUSE ST

ROAD

SOURCES OF INFORMATION

COBALT, MNDM ASSESSMENT FILES
DD=Diamond drilling, G=Geology
GF=Geophysics TR=Trenching & surf. assays

		DH Pre-fix	DD	G	GF	TR
Acana M.L.	AC		X	X	X	
Ajax					X	
Candela (Freeport)	NL		X	X	X	
Central Miner	CM		X			
Chesboro	C		X			
Columbiere	CO		X			
Dantou	D		X			X
Falconbridge				X	X	
Guppy						X
Hecla-Porcupine	HP		X			
Keevil (Nemetz Opt)	NI		X	X	X	
Kerr-McLean	KM		X			
Manitwar	MO		X			
Reef Exploration	RE		X		X	X
Sutherland	SU		X			
Northland						X
WKT	TU		X			

BASE MAP Best Twp claim G-3409 and MNR Airphotos series 77

ODM AR VOL XXXIV Pt 3 Map 34c

ODM OFR No 5016 Fig 5

NOTES by A.W. Beecham

SYMBOLS

- Geological contacts
- Unconformity
- Fault, shear zone
- Pillows, tops indicated
- Bedding
- Schistosity, foliation
- Pit, trench, mineral occurrence
- Shaft and muck pile
- Diamond drill hole, with assays
- E.M. Conductor
- Self potential anomaly
- Resistivity anomaly
- Magnetic anomaly
- Gravel road
- Track, path
- Railway
- Scarp
- Swamp

GEOLOGICAL LEGEND

PROTEROZOIC

- 15 Late diabase dykes
- 14. NIPISSING DIABASE

HURONIAN SUPERGROUP

LORRAIN FORMATION
- 13

GOWGANDA FORMATION
Coleman Member
- 12(a) Paraconglomerate
- 12(b) Orthoconglomerate
- 12(c) Feldspathic Quartzite

ARCHEAN

- 9. Diabase dykes
- 8 Lamprophyre dykes

FELSIC-INTERMEDIATE INTRUSIVES
- 6(a) Granite
- 6(b) Quartz Monzonite
- 6(c) Trondjemite

MAFIC-ULTRAMAFIC INTRUSIVES
- 5(a) Metadiabase
- 5(b) Gabbro
- 5(g) Pyroxenite

SEDIMENTS
- 4(c) Chert
- 4(e) Sulphide-rich beds massive sulphides

INTERMEDIATE - FELSIC VOLCANICS & SUB-VOLCANIC INTRUSIVES
- 3(a) Felsic tuff breccia
- 3(b)
- 3(c) Feldspar porphyry flows
- 3(f) Feldspar porphyry dykes
- 3(f) Felsite dykes

MAFIC VOLCANICS
- 2(a) Massive, fine grained flows
- 2(b) Breccia, flow breccia
- 2(c) Coarse grained flows
- 2(d) Pillowed flows

ULTRAMAFIC VOLCANICS
- 1(a)

ABBREVIATIONS

Cp	Chalcopyrite	Po	Pyrrhotite
Gn	Galena	Py	Pyrite
Mo	Molybdenite	qv	quartz vein
mt	Magnetite	S	Sulphides
pos	Possible	Sph	Sphalerite
Co	Cobalt minerals		

fr Fractured
sh Sheared
sil Siliceous, silicified

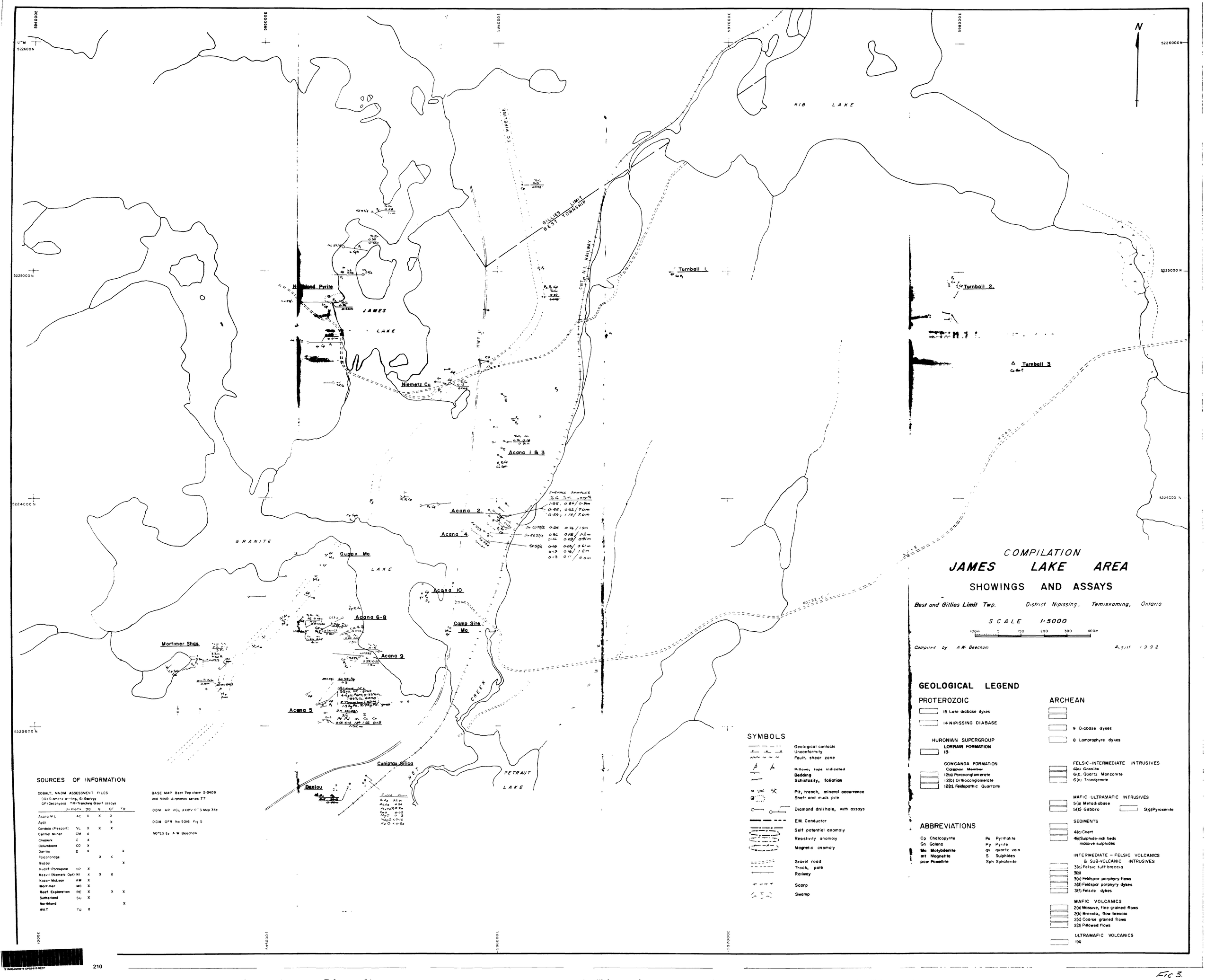
COMPILATION
JAMES LAKE AREA
SHOWINGS AND ASSAYS

Best and Gillies Limit Twp. *District Nipissing, Temiskaming, Ontario*

SCALE 1:5000

100m 0 100 200 300 400m

Compiled by A.W. Beecham *August 1992*



SYMBOLS

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- Track, path
- Railway
- Scarp
- Swamp

GEOLOGICAL LEGEND

PROTEROZOIC

- 15 Late diabase dykes
- 14 NIPISSING DIABASE

HURONIAN SUPERGROUP
LORRAIN FORMATION
13-

GOWGANDA FORMATION
Colgoon Member
12(a) Paraconglomerate
12(b) Orthoconglomerate
12(c) Feldspathic Quartzite

ARCHEAN

- 9 Diabase dykes
- 8 Lamprophyre dykes

FELSIC-INTERMEDIATE INTRUSIVES
- 6(a) Granite
- 6(b) Quartz Monzonite
- 6(c) Trondjemite

MAFIC-ULTRAMAFIC INTRUSIVES
- 5(a) Metadiabase
- 5(b) Gabbro
- 5(g) Pyroxenite

SEDIMENTS
- 4(c) Chert
- 4(e) Sulphide-rich beds massive sulphides

INTERMEDIATE - FELSIC VOLCANICS & SUB-VOLCANIC INTRUSIVES
- 3(a) Felsic tuff breccia
- 3(b)
- 3(c) Feldspar porphyry flows
- 3(d) Feldspar porpnyry dykes
- 3(f) Felsite dykes

MAFIC VOLCANICS
- 2(a) Massive, fine grained flows
- 2(b) Breccia, flow breccia
- 2(c) Coarse grained flows
- 2(d) Pillowed flows

ULTRAMAFIC VOLCANICS
- 1(a)

ABBREVIATIONS

Cp Chalcopyrite	Po Pyrrhotite
Gn Galena	Py Pyrite
Mo Molybdenite	qv quartz vein
mt Magnetite	S Sulphides
pow Powellite	Sph Sphalerite

SOURCES OF INFORMATION

COBALT, MNDM ASSESSMENT FILES
DD=Diamond drilling, G=Geology
GF=Geophysics TR=Trenching & surf assays

		D=Pre-'64	DD	G	GF	TR
Acana M.L.	AC	X	X	X		
Ajax				X		
Candela (Freeport)	NL	X	X	X		
Central Miner	CM	X				
Chesterix	C	X				
Columbiere	CO	X				
Danlou	D	X				X
Falconandge				X	X	
Guppy						X
Huchf-Porcupine	HP	X				
Keevil (Niemetz Opt)	NI	X	X	X		
Koza-McLean	KM	X				
Mortimer	MO	X				
Reef Exploration	RE	X		X		X
Sutherland	SU	X				
Northland						X
WKT	TU	X				

BASE MAP Best Twp claim G-3409 and MNR Airphotos series 77

ODM AR VOL XXXIV P. 3 Map 34c

ODM OFR No 5016 Fig 5

NOTES by A.W. Beecham

FIG 3.

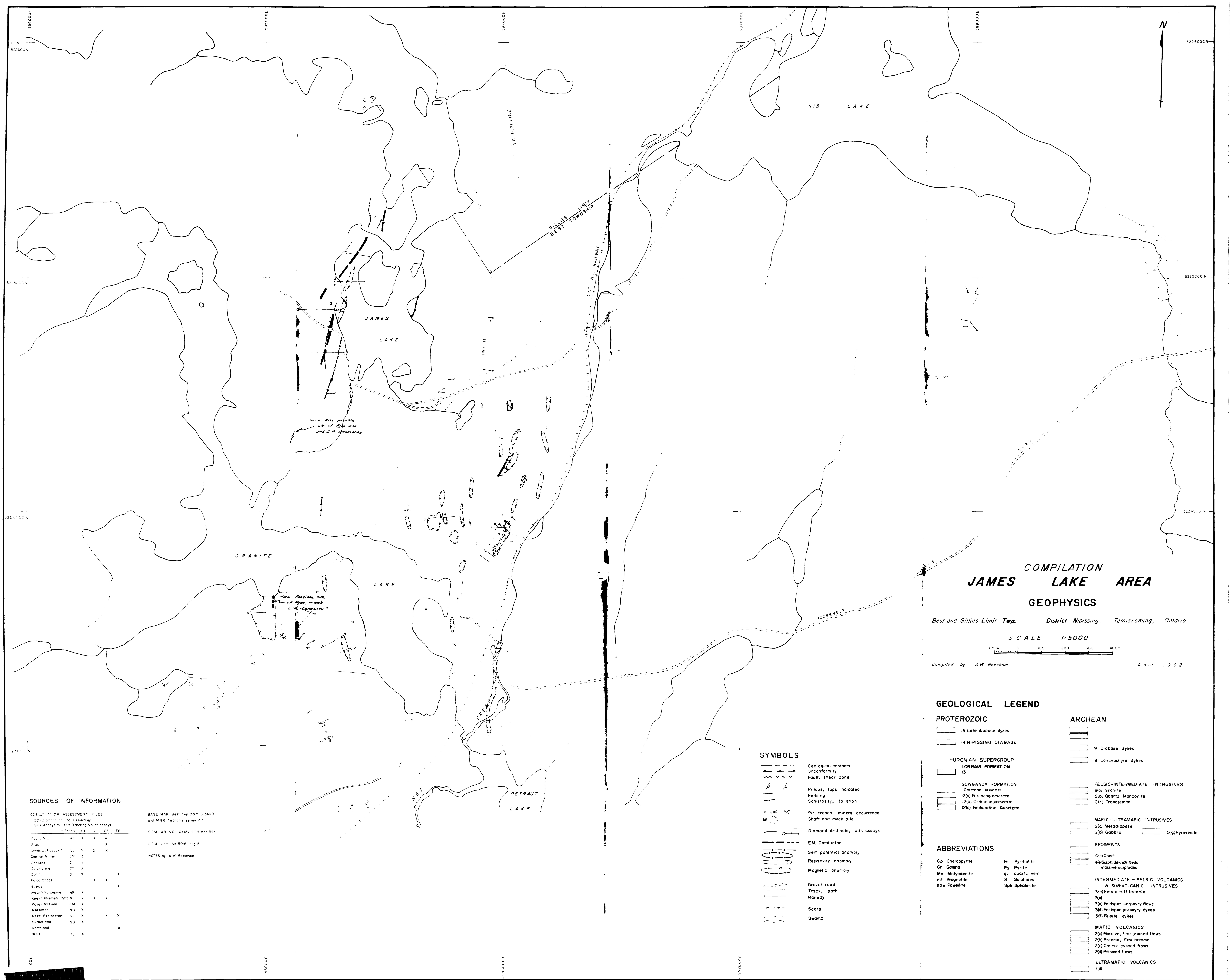

N
JAMES
LAKE
GRANITE
LAKE
PETRAUT
LAKE
GILLIES LIMIT
BEST TOWNSHIP
T.C. PIPELINE
O.N. RAILWAY
CREEK
COMPILATION
JAMES LAKE AREA
GEOPHYSICS
Best and Gillies Limit Twp. District Nipissing, Temiskaming, Ontario
SCALE 1:5000
100m 0 100 200 300 400m
Compiled by A W Beecham
GEOLOGICAL LEGEND
PROTEROZOIC
15 Late diabase dykes
14 NIPISSING DIABASE
HURONIAN SUPERGROUP
LORRAIN FORMATION
13
GOWGANDA FORMATION
Coleman Member
12(a) Paraconglomerate
12(b) Orthoconglomerate
12(c) Feldspathic Quartzite
ARCHEAN
9 Diabase dykes
8 Lamprophyre dykes
FELSIC-INTERMEDIATE INTRUSIVES
6(a) Granite
6(b) Quartz Monzonite
6(c) Trondjemite
MAFIC-ULTRAMAFIC INTRUSIVES
5(a) Metadiabase
5(b) Gabbro
5(g) Pyroxenite
SEDIMENTS
4(c) Chert
4(e) Sulphide-rich beds massive sulphides
INTERMEDIATE – FELSIC VOLCANICS & SUB-VOLCANIC INTRUSIVES
3(a) Felsic tuff breccia
3(b)
3(c) Feldspar porphyry flows
3(d) Feldspar porphyry dykes
3(f) Felsite dykes
MAFIC VOLCANICS
2(a) Massive, fine grained flows
2(b) Breccia, flow breccia
2(c) Coarse grained flows
2(d) Pillowed flows
ULTRAMAFIC VOLCANICS
1(a)
ABBREVIATIONS
Cp Chalcopyrite
Gn Galena
Mo Molybdenite
mt Magnetite
pow Powellite
Po Pyrrhotite
Py Pyrite
qv quartz vein
S Sulphides
Sph Sphalerite
SYMBOLS
Geological contacts
Unconformity
Fault, shear zone
Pillows, tops indicated
Bedding
Schistosity, foliation
Pit, trench, mineral occurrence
Shaft and muck pile
Diamond drill hole, with assays
E.M. Conductor
Self potential anomaly
Resistivity anomaly
Magnetic anomaly
Gravel road
Track, path
Railway
Scarp
Swamp
SOURCES OF INFORMATION
ASSESSMENT FILES
G=Geology
TR=Trenching & surf. assays
DD G GP TR
Ajax
Central Miner CM
Cheskirk
Falconbridge
Gubby
Hudlif-Porcupine HP
Keevil (Niemetz Opt) NI
Koza-McLean KM
Mortimer MO
Reef Exploration RE
Sutherland SU
Northland
WKT
BASE MAP Best Twp claim 3-3409
and MNR Airphotos series 77
NOTES by A W Beecham

FIG 4.

SYMBOLS

- outcrop
- bedding
- fracture, slip
- fracture with vein type alteration
- fault
- geological contact
- trench
- pit
- shaft, muck pile
- scarp
- Claim post located accurately
- Claim post approx location
- Organic stream sample, tied to grid
- Organic stream sample, approx location

ABBREVIATIONS

cp	chalcopyrite
Chl	chlorite
Co	cobalt minerals
hem	hematite, specular hematite
Py	pyrite
qv	quartz vein
L P	Line post
W-P	Witness post

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario

ORGANIC SOIL GEOCHEMISTRY: SAMPLE NUMBERS

SCALE 1:5000

Revisions

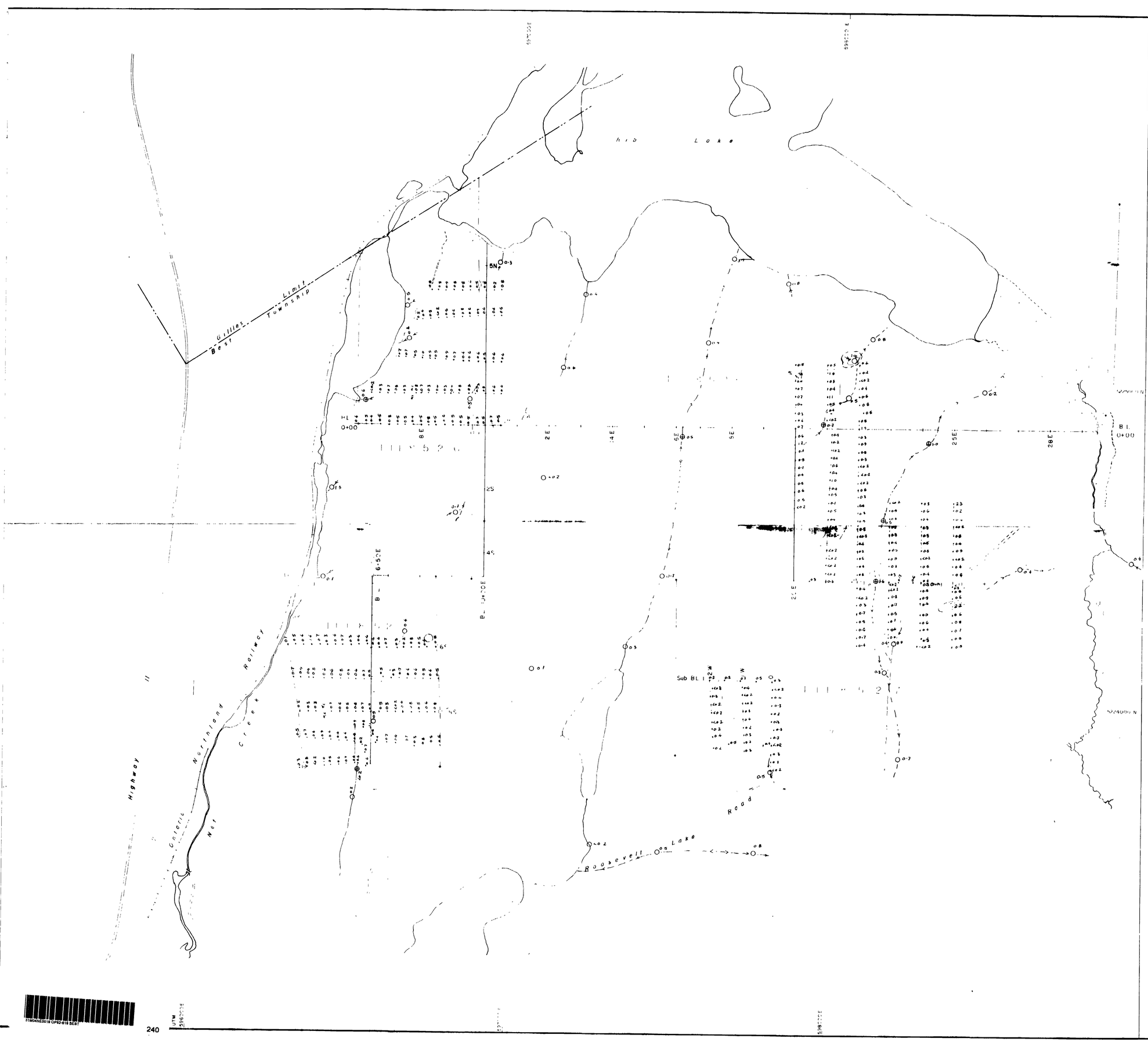
Drawn by A W Beecham

Date: Jan 1993

NTS 31-M-4

31M04NE0018 GP92-019 SE01

FIC Fig



SYMBOLS

- outcrop
- bedding
- fracture, slip
- fracture with vein type alteration
- fault
- geological contact
- trench
- pit
- shaft, muck pile
- scarp
- claim post located accurately
- claim post approx location
- ⊕ organic stream sample, tied to grid
- ○ organic stream sample, approx location

ABBREVIATIONS

- cpy chalcopyrite
- cbl bornite
- co cobalt minerals
- hem hematite, specular hematite
- py pyrite
- qz quartz, vein
- LP Line post
- WP Witness post

ANALYSES by I C P, -80 mesh fraction, Bondar Clegg, Ottawa, Ont.

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario.

ORGANIC SOIL GEOCHEMISTRY ppm Ag

SCALE 1:5000

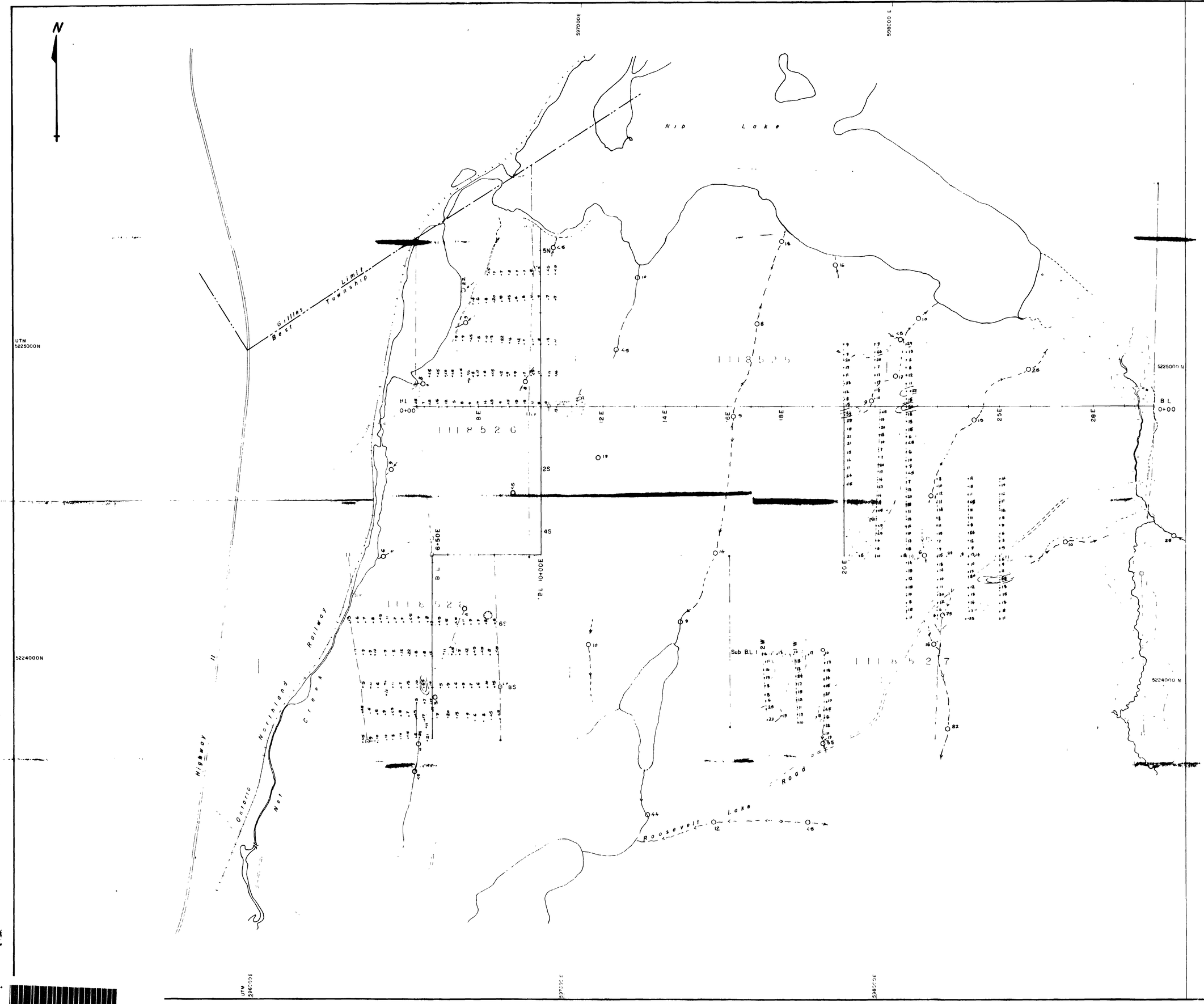
Revisions

Drawn by A W Beecham

Date: Jan 1993

NTS 31-M-4

Fig 761



SYMBOLS

- outcrops
- bedding
- fracture, 'slip'
- fracture with vein-type alteration
- fault
- geological contact
- trench
- pit
- shaft, muck pile
- scarp
- Claim post located orr
- Claim post approx loc
- Organic stream sample, her
- Organic stream sample, appr

ABBREVIATIONS

cp	chalcopyrite	LP	Line post
chl	chlorite	WP	Witness post
Co	cobalt minerals		
hem	hematite, specular hematite		
py	pyrite		
qv	quartz vein		

ANALYSES: by I.C.P., -80 mesh fraction, Bondar Clegg, Ottawa, Ont.

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario

ORGANIC SOIL GEOCHEMISTRY ppm As

SCALE 1:5000

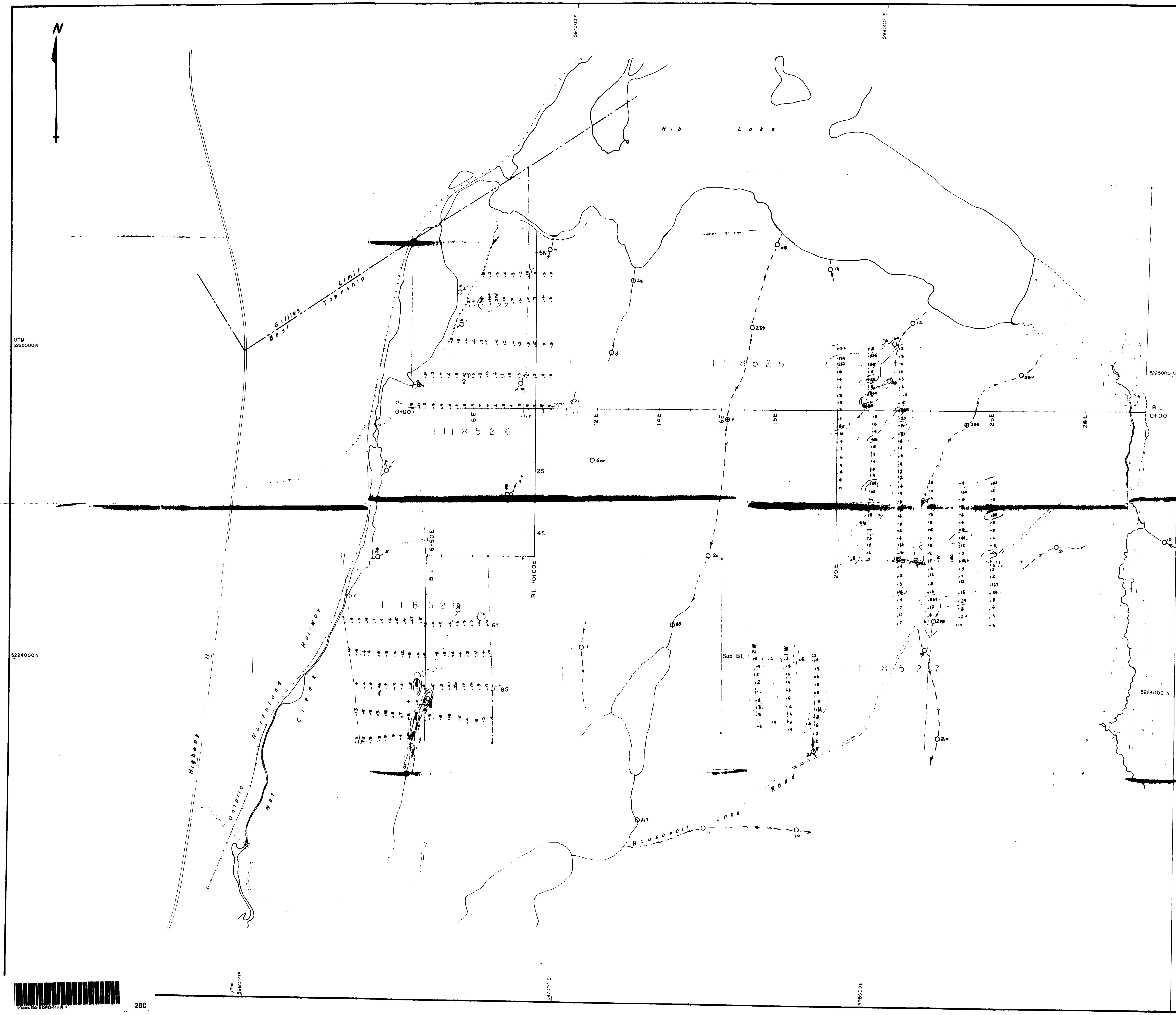
Revisions

Drawn by A.W. Beecham

Date: Jun 1993

NTS 31-M-

31M04NE0019 OP92-010 BEST



SYMBOLS

- outcrops
- bedding
- fracture, 'slip'
- fracture with vein type alteration
- fault
- geological contact
- trench
- pit
- shaft, muck pile
- scarp
- Claim post located accurately
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- Organic stream sample, tied to gr
- Organic stream sample, approx loc

ABBREVIATIONS

Cp	chalcopyrite
chl	chlorite
Co	cobalt minerals
hem	hematite, specular hematite
Py	pyrite
qv	quartz vein
LP	Line post
WP	Witness post

ANALYSES: by I.C.P, -80mesh fraction, Bondar Clegg, Ottawa, Ont.

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario.

ORGANIC SOIL GEOCHEMISTRY ppm Co

SCALE *1:5000*

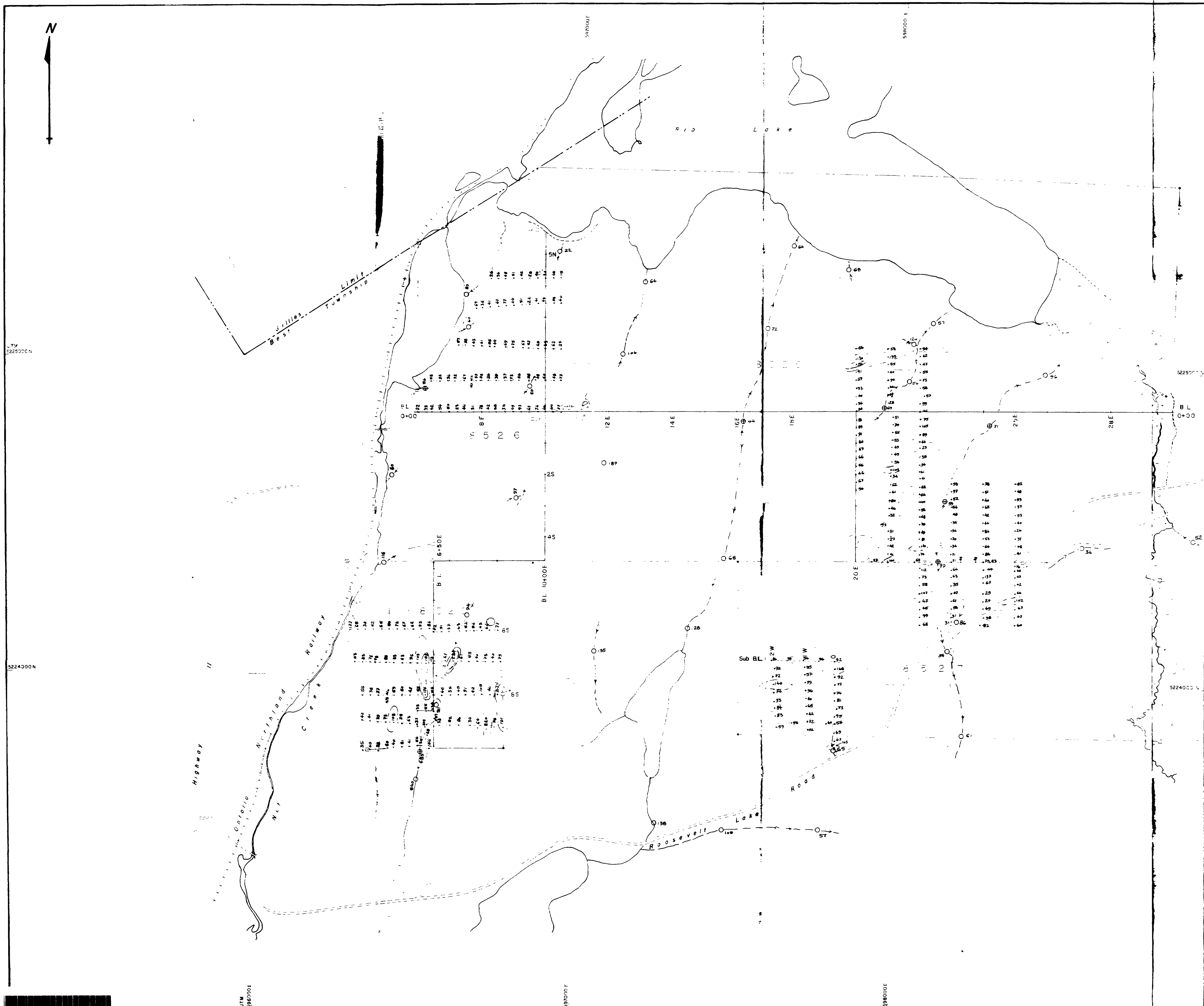
Revisions

Drawn by A W Beecham

Date: Jan 1993

NTS *31-M-4*

260



SYMBOLS

Organic stream sample, approx. location

ABBREVIATIONS

ANALYSES: by ICP, -80 mesh fraction, Bondar Clegg, Ottawa, Ont.

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario

ORGANIC SOIL GEOCHEMISTRY ppm Cu

SCALE 1:5000

Revisions

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Date: Jan 1993

NTS 31-M-4

Fig. 7(e)

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LEGEND

PROTEROZOIC

15 Late diabase dykes

Nipissing Diabase

4a Chilled diabase
14b Very fine grained, ≤0.5mm
14c Fine grained, > 0% felsics
14cm Fine grained, > 90% mafics
14d Coarse grained > 1.5mm
14e Varied textured

Huronian Supergroup

Lorrain Formation

13.

Gowganda Formation, Coleman Member

12a Paraconglomerate
12b Orthoconglomerate
12c Feldspathic quartzite
12e Argillite
12g. Interbedded greywacke & laminated argillite

ARCHEAN

SYMBOLS

outcrops
fracture, s p
fracture with vein-type alteration
fault
trench
scarp

ABBREVIATIONS

W.P. Witness post
Ca calcite, calcite vein
Sph sphalerite
mal malachite

RIB LAKE CLAIMS

Best Township, District of Nipissing, Ontario

GEOLOGY

SCALE 1:5000

Geology by Douglas Robinson

Drawn by A.W. Beecham

Date: Jan 1993

Revisions

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Fig 9.