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Report on Lithogeochemical Study Reeves Joint Venture Property

for

GOLDROCK RESOURCES INC.

and

GLEN AUDEN RESOURCES LIMITED

by

Ron Burk, M.Sc.Eng.

April, 1988

Lead
2.10291

TABLE O

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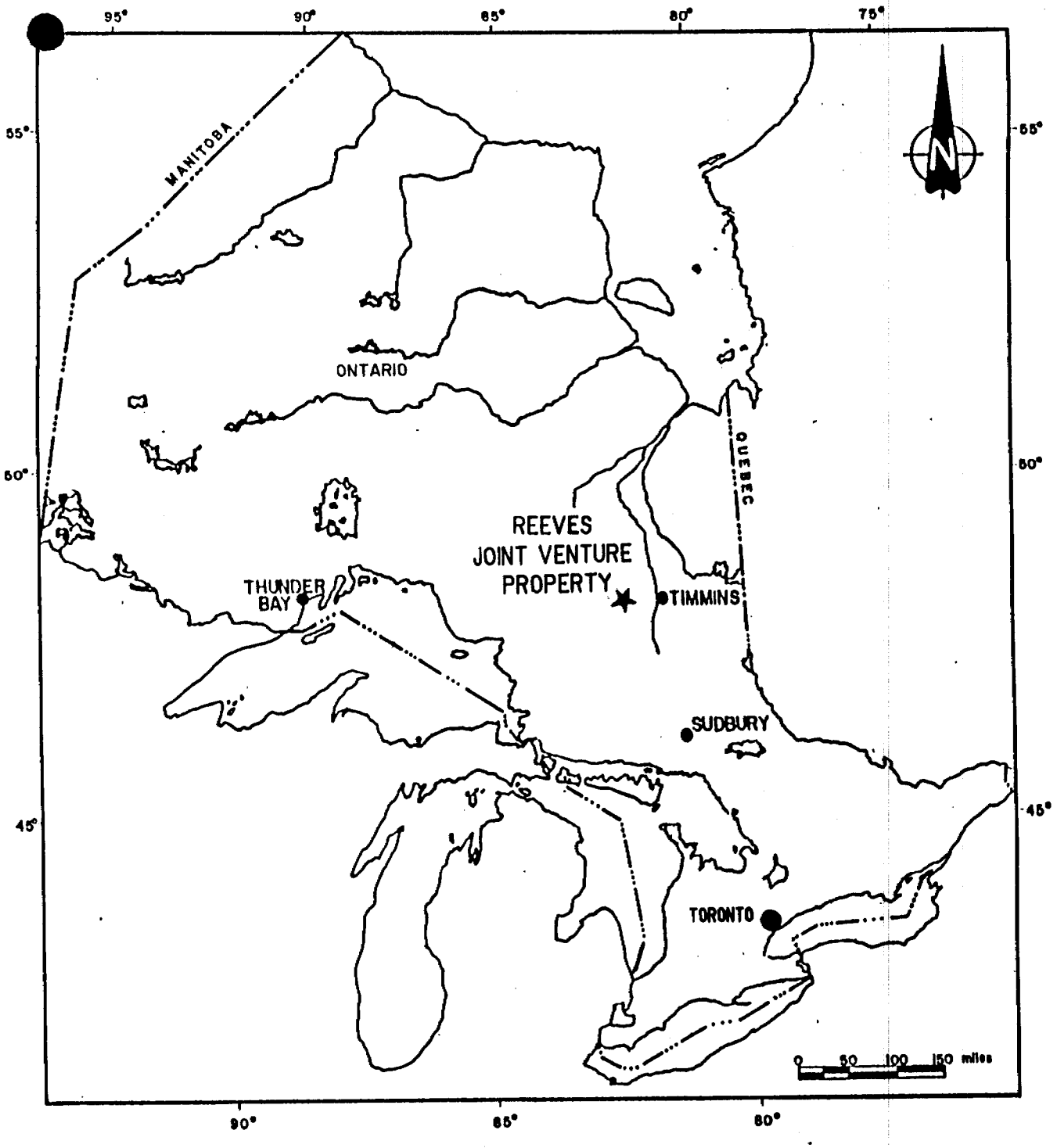
INTRODUCTION

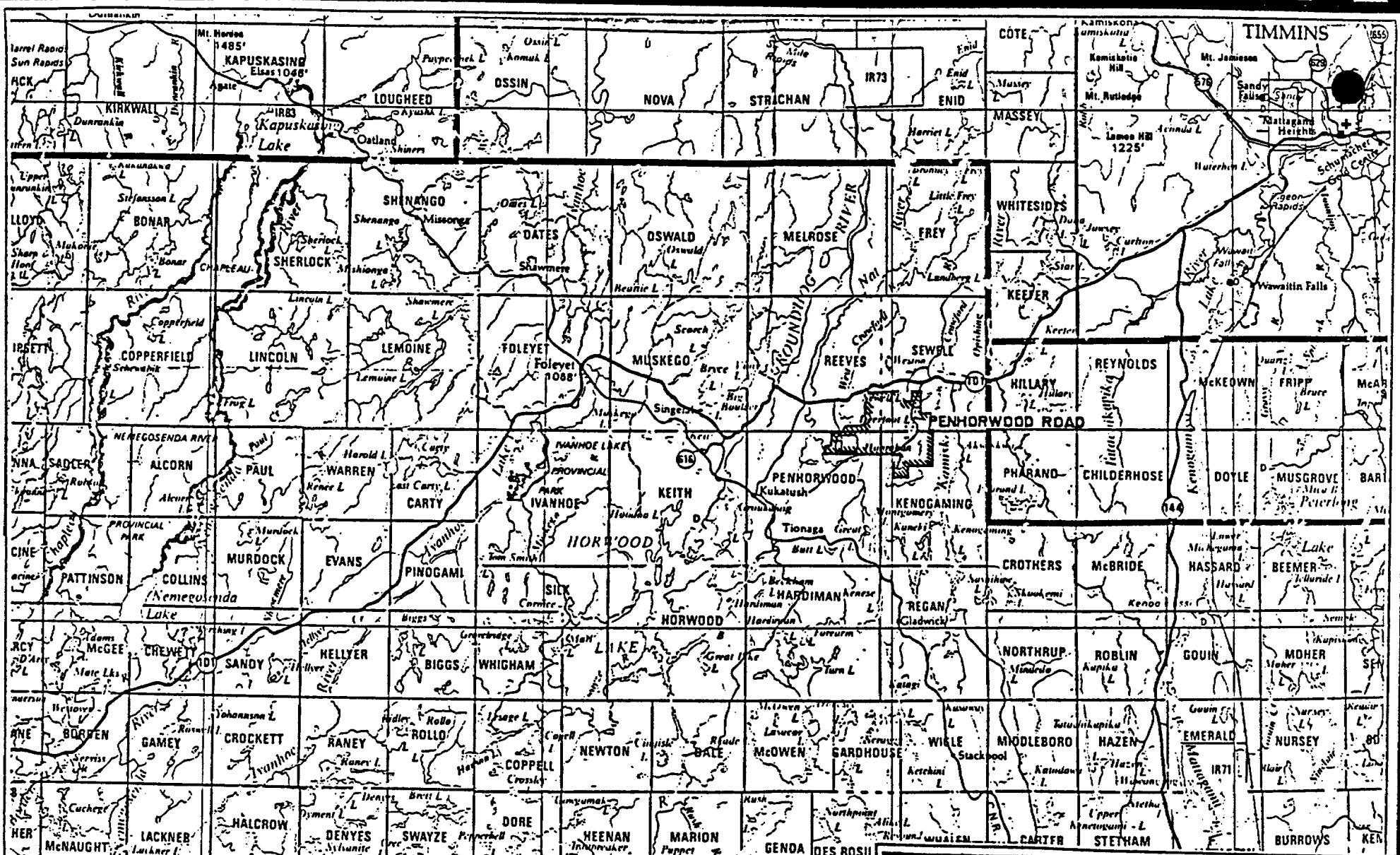
An integrated gold exploration program was begun in May, 1987 on the 385-claim Reeves Joint Venture property located in Reeves, Sewell, Penhorwood and Kenogaming Townships, Porcupine Mining Division, Ontario. The property is jointly held by Toronto junior mining companies, Glen Auden Resources Limited and Goldrock Resources Inc. As of March, 1988, geological mapping, rock and overburden sampling and a magnetometer survey have been done on the property. This report deals primarily with the results of the lithogeochemical program.

PROPERTY LOCATION AND ACCESS

The Reeves Joint Venture (RJV) property encompasses approximately 6,000 hectares broadly centred on the four contiguous corners of Reeves, Sewell, Penhorwood and Kenogaming Townships, some 55 kilometers west of Timmins, Ontario (Figures 1 and 2). Access to the property is via Highway 101 which skirts the northern boundary of the property, and the Penhorwood logging road (Figure 2). A network of secondary logging roads allows good access to about three quarters of the property.



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC./ GLEN AUDEN RESOURCES LTD. J.V.		
	Title PROPERTY LOCATION MAP		Fig. 1
	Date: Oct. 87	Scale: 1"=160mi.	N.T.S.:
	Drawn: B.S.B.	Approved:	File: M-223.



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RES. INC./ GLEN AUDEN RES.
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	Fig. 2
	Date: MAR/88 | Scale: | N.T.S.:
	Drawn: S.S. | Approved: | File: M-223

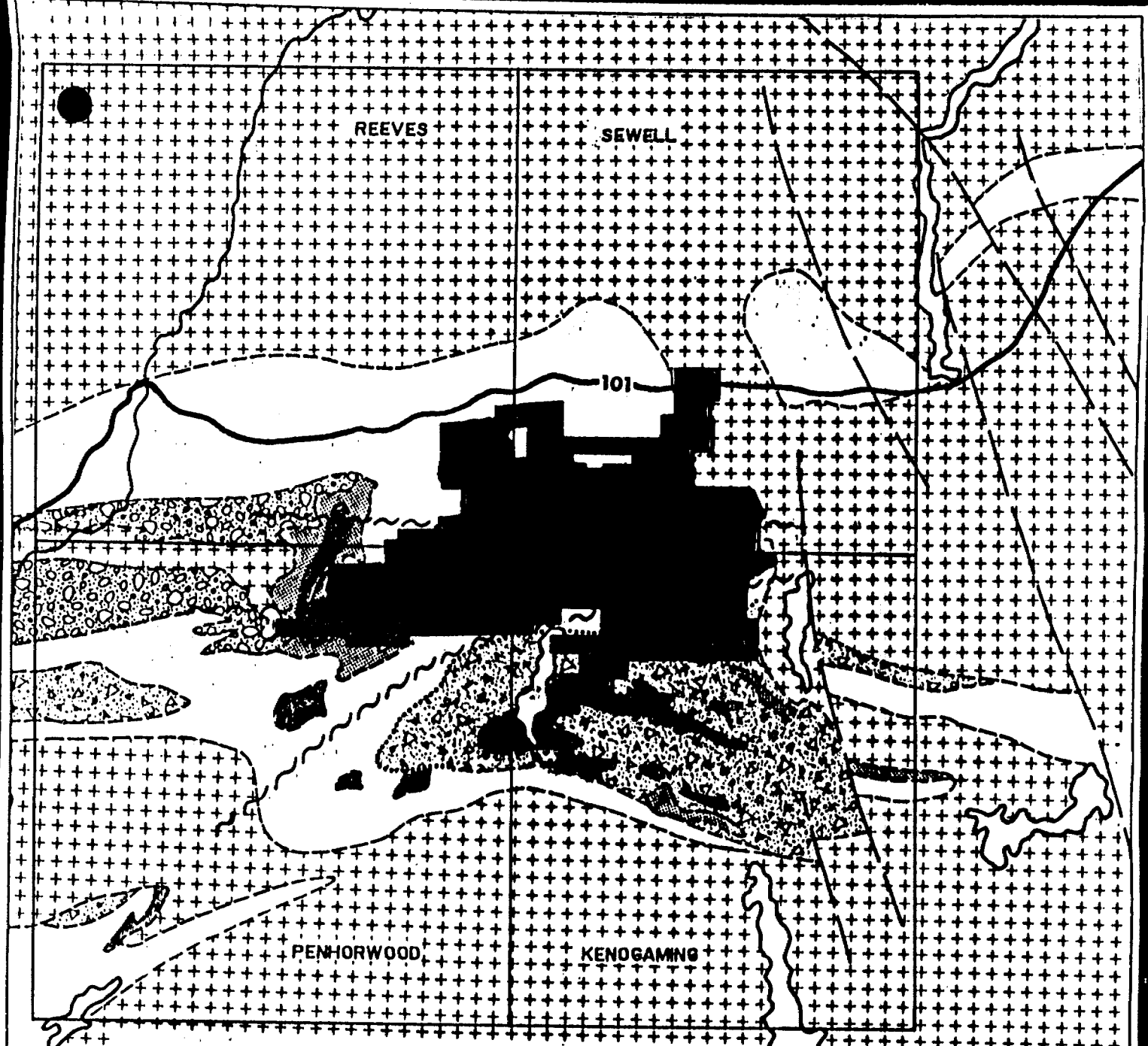
TOPOGRAPHY AND VEGETATION

Generally, there is little topographic relief on the RJV property. As is common in this part of northeastern Ontario, low ridges are separated by broad, low-lying areas where there are a number of small lakes. Deposits of glacial debris including eskers, sand hills and boulder tills form some of the more prominent topographic features on the property.

Removed by logging, much of the original coniferous and mixed forest cover has been replaced by secondary growth of poplar, birch and moose maple. Cedar woods are common in low-lying areas. Rock exposures constitute only a few percent of the total area, with the greatest concentration of outcrops occurring in the western part of the property where logging operations have been most recently carried out.

REGIONAL GEOLOGY

The Reeves Joint Venture property lies in the northern part of the Archean Swayze Greenstone Belt (Figure 4) which comprises typical Archean supracrustal sequences of mafic submarine flows with less abundant intermediate to felsic volcanics and units of epiclastic sedimentary rocks (Milne, 1972). Two substantial units of oxide and sulfide facies banded iron formation occur in the region, the Radio Hill iron formation, with a strike length of about 5 kilometers and a maximum thickness of 200 meters, in



LEGEND

- mafic volcanic rocks
- intermediate to felsic volcanic rocks
- sedimentary rocks
- iron formation
- ultramafic intrusive
- mafic intrusive
- granitic intrusive
- faults
- interpreted shear zones
- geological boundaries
- RJV Reeves Joint Venture property boundary

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	Title REGIONAL GEOLOGY Fig. 3		
	Date: MAR/88	Scale:	N.T.S.:
	Drawn: S.S.	Approved:	File: M-223

northwestern Penhorwood Township and the 20-kilometer long Nat River iron formation which lies at the contact between mafic and felsic volcanic sequences in Kenogaming and Penhorwood Townships. Intrusive sheets and pods of ultramafic and mafic rocks are locally abundant, with the largest of these intrusions hosting the Steetley Industries Ltd. talc deposit in Reeves Township. Numerous dikes and lens-shaped bodies of feldspar, quartz-feldspar and quartz porphyry have intruded the supracrustal rocks of the belt, the largest being located along the northern boundary of Penhorwood Township. Large granodioritic plutons surround the Swayze belt and all but completely separate it from the Abitibi Greenstone Belt to the east. Proterozoic diabase dikes, generally 10 to 30 meters wide, intrude all rock types in the region and typically trend north-northwest.

Geological mapping and lithogeochemical analyses has led Pyke (1987) to propose that the supracrustal sequences in the northern part of the Swayze belt are similar, texturally and compositionally, to the volcanic units of the Timmins mining camp. Specifically, the folded felsic volcanics of the Hanrahan Lake Volcanic Complex (Milne, 1972) and the Nat River iron formation in Kenogaming Township are compared with Deloro Group rocks of the Timmins area, while the mafic volcanic rocks which underlie most of the property resemble Tisdale Group iron

tholeiites.

Three major fault trends have been identified in the northern part of the Swayze belt: north-northwest; west-northwest to west; and east-northeast (Milne, 1972; Pyke, 1987). The north-northwest structures tend to display left-handed displacements and are commonly occupied by diabase dikes. A series of westerly-trending faults occur north of the southern boundaries of Sewell and Reeves Townships and are marked by zones of schistose, carbonatized and sericitized mafic volcanic rocks. Milne (1972) discusses the possibility that these structures represent the western extension of the Destor-Porcupine Fault. Other westerly oriented fault zones are interpreted by Pyke (1987) to follow the margins of the belt of sedimentary rocks in Penhorwood and Keith Townships. A major east-northeast-trending fault is proposed by Pyke (1987) to partially follow the northern margin of the Hanrahan Lake Volcanic Complex (Figure 3). This fault is locally occupied by schistose, carbonatized ultramafic rocks which commonly host quartz-feldspar porphyry dikes and quartz-carbonate veins. Pyke suggests that this structure is in fact the western extension of the Destor-Porcupine Fault, and the series of faults to the north mark a splay structre. A west-northwest-trending shear zone is interpreted to occur between Deerfoot Lake and the four contiguous corners of Sewell, Reeves, Kenogaming and Penhorwood

Townhips (Milne, 1972).

Mineral exploration began in the region at the end of the last century when prospectors and then mining companies assessed the economic potential of the Radio Hill and Nat River iron formations. Isoclinal folding of oxide facies iron formation in the Radio Hill area has formed a subeconomic deposit of about 158 million tons grading 21 percent magnetite iron.

The ultramafic intrusive bodies in the region have also proven to be of economic interest. There are numerous asbestos showings in serpentinized ultramafics in Reeves, Penhorwood and Kenogaming Townships, the most important of which is the Reeves Mine which is also the site of the Steetley talc mine.

Nickel occurrences are reported from shear zones in ultramafic rocks in northeast Kenogaming Township, where nickeliferous sulfides are associated with disseminated pyrrhotite and carbonatized serpentinite.

Gold showings in the region are typical of Archean greenstone-hosted gold deposits, generally occurring in shear zones which are marked by pyritic, chlorite-carbonate schists in mafic volcanic sequences and pyritic, sericite-carbonate schists in felsic volcanic rocks. Veins of quartz with or without carbonate are commonly present in the auriferous zones.

PROPERTY GEOLOGY

For any lithogeochemical study it is critical that the data is related to geologic features identified directly by mapping. In this case, the geology of the RJV property was mapped from May to September, 1987, synchronous with the collection of the majority of the rock samples which constitute the data base for this study. Geology maps produced at 1:2,500 scale and descriptions of major rock types and structures are presented in a report by Burk (1987B). In addition key geologic features on the RJV property which were determined from the detailed mapping or interpreted from geophysical data are indicated along with rock sample locations on Map 1 of this report.

In general, the geology of the RJV property comprises Archean supracrustal rocks which can be broadly subdivided into a thick sequence of mafic metavolcanic rocks underlying the northern and western areas of the property and intermediate to felsic metavolcanic rocks on the southeastern part of the property. The latter group of volcanic rocks form part of the Hanrahan Lake Volcanic Complex (Milne, 1972), and is separated from the mafic volcanic rocks to the north by a thin unit of banded iron formation which is continuous along strike for more than 15 kilometers.

Volcanic Rocks

Forming massive and pillowed flows, the mafic volcanic rocks on the property are generally greenish-grey on fresh surfaces, weathering to a light grey or buff colour, and are composed mainly of fine-grained actinolite ($\pm$ chlorite) and plagioclase. A lithogeochemical study done by Pyke (1987) determined that the mafic flows are primarily iron tholeiitic basalts, with magnesian tholeiites occurring on the southernmost claims of the RJV property in Penhorwood Township. Aeromagnetic contour maps covering the area of the property produced by Dighem Geophysics Limited (1984) suggest the presence of an east-west striking, magnetically responsive rock unit on the Penhorwood Township portion of the property. This unit is interpreted to be an iron-rich tholeiitic basalt possibly intercalated with minor oxide facies iron formation.

Intermediate to felsic volcanic rocks are most abundant in the southeast corner of the RJV property in Kenogaming Township, where they are part of the Hanrahan Lake Volcanic Complex, but are also present on the western end of the property in Penhorwood Township. In Kenogaming Township, fine- to medium-grained feldspar crystal tuffs are intercalated with thin units of tuff-breccia, while in Penhorwood Township fine-grained, dacitic tuffs or reworked tuffs are the most common type of intermediate volcanic rock.

Sedimentary Rocks

Clastic sedimentary rock is not common on the RJV property. Exposures of fine-grained lithic wacke and argillite which is locally graphitic occur along a trail on claim 947094 in Sewell Township. The distribution of these outcrops, together with the contour patterns of the aeromagnetic map for this area suggest that a narrow, northerly-striking, interflow sedimentary unit is present on this part of the property.

Iron Formations

The most conspicuous chemical sedimentary rock unit on the RJV property is the Nat River iron formation in Kenogaming Township. Lying at the contact between the Hanrahan Lake Volcanic Complex and mafic volcanic sequences to the north, the Nat River formation has a strike length on the property of about 6 kilometers and a maximum width of approximately 75 meters. The iron formation consists predominantly of banded magnetite-chert. Pyrite is commonly present as disseminations, small clots, and locally as thin massive layers.

In addition to the Nat River iron formation, two and possibly three other iron formation units have been identified on the RJV property through mapping and interpretaion of the aeromagnetic maps. One unit apparently defines a south-verging fold northwest of Deerfoot Lake. This iron formation is interpreted to be at, or close to the same stratigraphic horizon

as the northerly striking argillaceous unit identified on the property in Sewell Township. Another prominent linear magnetic 'high' interpreted as banded iron formation extends from south of Deerfoot Lake eastwards to the boundary of the property.

Mafic and Ultramafic Intrusive Rocks

A number of small plugs and dikes of gabbroic to dioritic and, in one case, ultramafic rock have been identified on the property in Penhorwood Township. Also, a medium-sized mafic to ultramafic intrusive body is interpreted from aeromagnetic data to occur on the northernmost claims held in Reeves Township. These rocks are likely related to the large mafic-ultramafic complex centred on the Nat River in Penhorwood and southern Reeves Township west of the property.

The greatest volume of mafic and ultramafic intrusive rock on the property occurs in the Hanrahan Lake Volcanic Complex, based on interpretation of aeromagnetic data as much as on field mapping. Here, the ultramafic bodies consist of fine- to medium-grained, serpentinized and variably carbonatized periodotitic rock.

Highly altered ultramafic rock outcrops on claim 947253, close to the southern property boundary in Penhorwood Township. One of the exposures is an old pit blasted into well foliated chlorite-fuchsite-ankerite rock which hosts minor quartz-carbonate veining. Less than 50 meters from the pit is an

outcrop of light brown talc-carbonate schist. Located within a zone of shearing, these schists may represent altered intrusive rock, magnesian tholeiites and/or komateiitic rock.

Felsic Intrusive Rocks

A boss of feldspar and/or quartz-feldspar porphyry with a diameter of about 500 meters is indicated by Milne (1972) to occur just north of the Nat River iron formation and west of Benbow Lake in Kenogaming Township. Interestingly, the aeromagnetic contour map for the area indicates a magnetic 'high' corresponding with the indicated intrusion.

Late Mafic Intrusive Rocks

The youngest rocks on the RJV property are northerly-trending Proterozoic diabase dikes located in Sewell and Kenogaming Townships. These dikes are readily discernible on the corresponding aeromagnetic map.

Structure

The dominant regional structure in the area of the RJV property is the northwesterly plunging antiform well outlined by the Nat River iron formation, of which the core is occupied by the Hanrahan Lake Volcanic Complex (Milne, 1972). Interpretation of the Dighem aeromagnetic map suggests that magnetically-responsive basalts strike in a westerly direction across the southern portion of the property in Penhorwood Township, trending away from the north limb of the antiform. It

is possible that a major structural discordance exists close to, and locally along the interface between the mafic volcanics on the property and the Hanrahan Lake Volcanic Complex. The presence of such a structure seems to be supported by airborne geophysical survey data, since a zone of relatively weak magnetic response coincident with a weak but long electromagnetic conductor corresponds with the location of the proposed structure (Map 1). If this structural 'break' does in fact occur, it would represent the western extension of the Destor-Porcupine Fault as interpeted by Pyke (1987).

While the mafic volcanic rocks on the property are generally massive to weakly foliated, there are a few poorly defined, east-west to east-southeast-trending zones of moderately to well foliated chloritic ($\pm$ sericitic) rock. One of the most obvious zones is exposed just west of the four contiguous township corners and is interpreted to extend eastwards to Deerfoot Lake. It is indicated on Map 1 as the Deerfoot Lake Zone. Another zone lies within 250 meters of the southern property boundary in Penhorwood Township and is referred to as the Fuchsite Zone. The zones are identified by the presence of highly strained or flattened pillow structures, diamond-shaped cleavage patterns and schistose rock. In addition to chlorite and sericite, rocks occurring within the high deformation zones typically contain carbonate, both calcite and ankerite, and locally combinations of

talc, fuchsite, pyrite and quartz-carbonate veins. These zones likely mark shear structures, and may be splays off of the proposed western extension of the Destor-Porcupine Fault.

LITHOGEOCHEMICAL SURVEY

Purpose

As part of the integrated gold exploration program being carried out on the RJV property, the lithogeochemical study reported on here was done to assist in determining the geologic setting on the property and to identify areas with reasonable potential for being sites of economically significant gold mineralization.

Rock samples which were collected during mapping of the property geology were analyzed for major oxide and trace element concentrations so that quantitative descriptions of the rocks could be done. It was important to establish whether the mafic volcanic units on the property are tholeiitic or calc-alkalic in composition, since tholeiitic volcanics are the dominant host rocks in major gold mining camps, such as the Porcupine and Red Lake camps, where both composition types are present.

Chemical analyses were to potentially give compositional signatures identifying individual units so that the orientation of the volcanic sequences could be established or confirmed, particularly in areas where there is a lack of outcrops or

distinctive marker horizons.

Finally, the analyses were done to identify hydrothermal alteration zones which typically halo known gold deposits. Such zones are commonly defined by enrichments in gold indicator elements, such as As, Sb, W, Mo and Zn, as well as enrichments in Co and SiO and depletions of Fe O and MgO.

Previous Lithogeochemical Studies

The analyses of rock samples from the locations indicated on Map 1 of this report represent a compilation of data from previous lithogeochemical surveys done on the RJV property. Specifically, major oxide and trace element analyses have been incorporated from reports done by D. Garner (1987), R. Burk (1987B), D. Pyke (1987) and S. Frostad (1986). Analyses which represent new data and those which have been previously reported on are identified in Appendix A.

To establish the lithogeochemical characteristics of the property geology the distribution of sample locations should be as extensive and complete as possible. In the case of the RJV property, the rock sampling was influenced by the uneven distribution of outcrops, and somewhat limited by costs. Essentially two types of samples were collected, those which were analyzed for major oxides and trace element contents (whole rock analyses), and those collected for gold and trace element analysis only (Appendix A). Several of the 258 sample locations

plotted on Map 1 are actually sites of muliple samples collected for gold and trace element analysis. Of the 258 sample sites, 170 locations have corresponding whole rock analyses, 39 of which were obtained from studies done by Frostad (1986) and Pyke (1987). A total of 254 samples have complete trace element analyses listed in Appendix A; of these, 73 analyses were obtained from the reports of Burk (1987B) and Garner (1987). Analyses from channel rock samples collected by Garner (1987) alone constitute 35 of the 254 trace element analyses. In addition, 78 samples collected by Frostad (1986) were analyzed for gold and arsenic, with 24 of these samples also being analyzed for antimony.

Whole rock analyses were done by X-Ray Assay Laboratories Limited in Toronto using x-ray fluorescence (XRF) spectrometry. The major oxides that were tested for consist of Si02, A1203, CaO, MgO, Na20, K20, Fe203, MnO, Ti02, P205, Volatiles and Cr, Rb, Sr, Y, Zr, Nb and Ba were also included in the analysis. The majority of trace element analyses were also done by X-Ray, using the neutron activation technique. Trace elements included in the X-Ray analyses are Au, As, Sb, Ag, Mo, Zn, Ba, Ni, Cr, Co, Sc, Se, Ta, and the rare earths La, Ce, Sm, Eu, Yb, Lu, and Hf. The channel samples of Garner (1987) were analyzed by Bondar-Clegg & Company of Ottawa for 32 trace elements, including gold, also using neutron activation. The 38 samples reported on by Burk

(1987B) were analyzed by Min-En Laboratories of Vancouver using plasma mass spectrometry.

LITHOGEOCHEMICAL RESULTS

Whole Rock Geochemistry

Rocks for which whole rock analyses were done (see Appendix A) are classified according to composition using the Jensen cation method of classifying subalkalic volcanic rocks (Appendix B). The calculations indicate that tholeiitic basalts predominate on the property in the sequence of greenstones north of the Nat River banded iron formation. Analyses for samples collected from an east-west trending linear magnetic 'high' in Penhorwood Township suggest that a unit of iron-rich tholeiitic basalt (which locally contains visible amounts of magnetite) is the source of the magnetic feature. In addition, tholeiitic dacites have been determined to be present on the property across the north end of Penhorwood Township.

The use of whole rock geochemistry indicates that the itermediate to felsic pyroclastic rocks on the southeastern portion of the property are calc-alkalic in composition.

Analyses of talc-carbonate schist from the so-called Fuchsite Zone (see Map 1) yielded MgO contents of approximately 35%, SiO2 values of less than 30%, and high chromium and nickel contents relative to the tholeiitic basalts. Based on the Jensen

classification scheme, these rocks are komateiitic ultramafic in composition. Other chemical determinations of ultramafic or komateiitic rock correspond with rocks identified as ultramafic intrusive rock using mineralogical and textural criteria.

Trace Element Geochemistry

Of the 30 or so trace elements that were analyzed for, certain elements are commonly associated with gold in lode deposits and, therefore, are considered to be indicator elements of gold mineralization. Specifically, anomalous concentrations in Ag, As, Sb, Mo, W, and to a lesser degree Cu, Zn, Pb, Te, Se and Cr are regarded as favourable signs for gold. The locations of rock samples enriched in a number of these elements are indicated on Map 2. The actual metal contents, in parts per million (ppm) except for gold values which are given in ppb, are plotted as well. For gold, geochemically (and statistically) anomalous values are those greater than 40 ppb. Background values for the basic rocks on the property, which constitute by far the majority of rock samples that were analyzed, are typically less than 5 ppb gold and rarely greater than 15 ppb. The anomaly threshold for arsenic was calculated to be about 120 ppm; for antimony, 2.0 ppm; and for zinc, 1400 ppm. No samples gave silver values greater than 5 ppm. Only one sample has an appreciably anomalous molybdenum content (91ppm), where background values tend to be less than 2 ppm. In addition to

having their locations plotted on Map 2, rock samples which yielded anomalous trace element contents are briefly described in Appendix C.

Interpretation

Based on the distribution of the compositionally distinctive iron tholeiite unit and dacitic rock in Penhorwood Township, together with contour patterns on the aeromagnetic map and the orientations of lava pillows, the volcanic stratigraphy on the western portion of the property is interpreted to strike in an east-west direction.

More important than their usefulness in identifying stratigraphic marker units, the chemical analyses determined that the majority of the mafic volcanic rocks north of the Nat River iron formation are tholeiitic in composition, whereas pyroclastic rocks south of the iron formation and, more specifically, south of the major fault zone interpreted as the western extension of the Destor-Porcupine Fault are calc-alkaline. The distinction between tholeiitic and calc-alkalic volcanic rocks is significant to gold exploration since in major gold mining camps, such as the Porcupine and Red Lake camps, all the important deposits are hosted by tholeiitic rocks. Furthermore, proximity to the tholeiitic/calc-alkalic rock boundary is also considered favourable for gold exploration.

With regards to the trace element geochemistry, Map 2 shows

that there are three main areas on the Reeves joint venture property where rock samples yielded geochemically anomalous values in gold and/or the gold indicator elements given above. One group of samples was collected from folded banded iron formation located in the southeast corner of the property, with all samples returning gold values between 40 and 80 ppb. Instead of being enriched in gold, it is quite likely that the oxide facies iron formation contains higher background values than the volcanic rocks on the property, particularly where the iron formation contains sulfides as well as magnetite.

A second group of samples with elevated levels of gold indicator elements, specifically As and Sb, exists northwest of the four contiguous township corners in an area of numerous overgrown trenches and blast pits (Map 2). Outcrop stripping and channel sampling have been done recently in this area. One sample from an old trench yielded weakly anomalous gold (120 ppb), antimony (3.7 ppm) and molybdenum (91 ppm) values. In general, however, the trace element contents were disappointingly low, especially considering that the samples were collected from the western end of the Deerfoot Lake deformation/alteration zone.

The third group of trace element anomalies is associated, at least spatially, with sheared and pervasively carbonatized ultramafic rocks located near the southern property boundary in Penhorwood Township (Fuchsite Zone). Samples collected from

highly altered ultramafic rock gave anomalous concentrations in As (up to 720 ppm), as well as predictably high Ni and Cr contents. The highest gold assay value for samples of this rock was only 31 ppb. Interestingly, a number of samples with relatively high antimony contents (2.1 to 4.7 ppm) occur peripheral to the apparently arsenic-enriched sheared ultramafic rock.

Besides the three areas described above, there are a few widely distributed sample sites in the northwestern part of the RJV property where rocks with weakly to moderately anomalous gold contents were collected. These samples appear to be spatially related to relatively short fault zones oriented in the northeast direction. Also in this area, an antimony showing is hosted by a one-meter wide, northerly-striking shear zone.

CONCLUSIONS

This lithogeochemical study of the more common rocks on the Reeves Joint Venture property has determined that the greenstone belt north of the Nat River iron formation is prospective in terms of gold exploration. The abundance of tholeiitic basalt on the property is an important finding since this rock type is a common host rock in major gold camps. More importantly, trace element analyses show enrichments in the gold indicator elements, arsenic and antimony in sheared and hydrothermally altered rocks

which are interpreted as marking two structural zones considered to be highly prospective targets for gold mineralization on the property.

Respectfully submitted

Ron Burk, M.Sc.Eng.

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CERTIFICATION

I, Ron Burk of 29 Wardencourt Drive, Agincourt, Ontario certify that;

1. I am a graduate of the University of Toronto with a Bachelor of Applied Science in Geo-Engineering

2. I am a graduate of Queen's University with a Master of Science, Geological Engineering.

3. I have been practising my profession in Canada for 5 years.

4. I have no economic interests in the property covered by this report.

Dated this April 6, 1988
TIMMINS, Ontario

Ron Burk

APPENDIX A

LITHOGEOCHEMICAL ANALYSES

A. Rock Sample Analyses Submitted for Assessment Credit

(i) Whole Rock Analyses

27302-27350; 120801-120821; 120829-120834; 120836, 120838, 120840, 120951-120984; 120996-121000; 106151, 106152, 106156, 106157, 106158, 106164, 106166, 106168; 120845-120848; 120850.

(ii) Trace Element Analyses

239B-250B; 27302-27350; 120801-120850; 120951-121000; 106151-106170.

B. Rock Sample Analyses Previously Submitted for Assessment Credits in Other Work Reports

(i) Whole Rock Analyses

58504-58529, 58534-58536, 58538, 58541, 58542, 58543, 58545-58548, 58551-58554.

(ii) Trace Element Analyses

201B-238B; 22351-22385; 58504-58529, 58534, 58536, 58538, 58541, 58542, 58543, 58545-58548, 58551-58570, 58573-58599, excluding 58576, 58578 and 58591

TO: ROBERT S. MIDDLETON EXPLORATION
ATTN: ROBERT S. MIDDLETON
BOX 1637
TIMMINS, ONTARIO
P4N 7W8

CUSTOMER NO. 1078

DATE SUBMITTED
10-AUG-87

REPORT 2192

REF. FILE 28778-R2

(142) ROCKS PROJ. M-223

WERE ANALYSED AS FOLLOWS:

	METHOD	DETECTION LIMIT
AU PPB	NA	5.000
NA %	NA	0.050
WRMAJ %	WR	0.010
CA %	NA	1.000
SC PPM	NA	0.100
CR PPM	NA	10.000
WRMIN PPM	WR	10.000
FE %	NA	0.020
CO PPM	NA	5.000
NI PPM	NA	200.000
ZN PPM	NA	50.000
AS PPM	NA	2.000
SE PPM	NA	5.000
RB PPM	NA	30.000
MO PPM	NA	5.000
AG PPM	NA	5.000
SB PPM	NA	0.200
BA PPM	NA	100.000
LA PPM	NA	1.000
CE PPM	NA	3.000
SM PPM	NA	0.100
EU PPM	NA	0.200
YB PPM	NA	0.200
LU PPM	NA	0.050
HF PPM	NA	1.000
TA PPM	NA	1.000
W PPM	NA	4.000
IR PPB	NA	20.000
TH PPM	NA	0.500
U PPM	NA	0.500

XRAL

XRF - WHOLE ROCK ANALYSIS 21-OCT-87 REPORT 2192 REFERENCE FILE 28778 PAGE 1

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	LOI	SUM
G27302	59.7	15.3	0.65	3.44	1.65	[2.80]	10.4	0.07	0.83	0.16	3.99	99.1
G27303	52.7	15.7	4.71	6.84	2.82	0.29	10.6	0.17	1.21	0.13	3.93	99.2
G27304	51.4	13.4	9.65	6.08	2.34	0.03	10.3	0.21	1.03	0.11	4.93	99.5
G27305	54.4	13.9	8.55	4.97	2.00	<0.01	8.87	0.19	1.05	0.12	5.77	99.9
G27306	49.8	10.9	11.0	6.25	0.75	<0.01	10.2	0.23	0.80	0.09	[10.1]	100.2
G27307	49.7	13.9	10.0	7.41	1.43	<0.01	12.2	0.21	1.07	0.11	3.00	99.1
G27308	61.2	13.7	2.82	1.29	3.22	0.64	10.7	0.18	0.99	0.38	3.70	98.9
G27309	50.6	12.9	7.93	6.10	1.98	0.49	14.9	0.20	1.17	0.10	2.85	99.3
G27310	44.1	15.0	8.74	4.21	1.92	1.81	12.4	0.20	1.32	0.11	[9.47]	99.4
G27311	53.9	14.1	5.71	6.14	2.44	0.04	10.2	0.16	1.11	0.12	5.62	99.6
G27312	50.2	13.1	5.96	5.37	1.33	1.87	15.8	0.22	1.61	0.16	3.31	99.1
G27313	47.4	13.0	10.9	5.03	2.34	0.47	7.97	0.19	1.00	0.11	[11.2]	99.6
G27314	47.0	[20.5]	3.38	4.51	2.32	0.51	13.6	0.16	1.19	0.08	6.31	99.6
G27315	[29.0]	[0.87]	1.03	[35.6]	[0.02]	[0.05]	6.40	0.12	0.08	0.01	[26.5]	100.6
G27316	46.4	15.1	12.5	4.87	2.53	0.10	9.18	0.15	0.61	0.05	8.54	100.1
G27317	41.3	14.2	4.59	8.75	0.89	0.11	20.0	0.23	1.09	0.13	7.70	99.0
G27318	53.6	13.4	8.05	5.49	1.23	<0.01	12.6	0.30	0.71	0.05	6.16	99.6
G27319	63.3	13.0	1.50	1.91	1.46	0.86	12.4	0.12	1.06	0.23	3.70	99.6
G27320	52.7	14.7	13.3	8.48	3.53	0.18	2.52	0.07	1.14	0.06	2.93	99.7
G27321	52.6	15.1	7.50	3.06	3.29	0.01	11.0	0.21	1.32	0.10	4.70	98.9
G27322	62.0	14.3	3.50	2.47	5.64	0.20	6.31	0.10	0.94	0.33	3.39	99.2
G27323	52.0	14.6	4.71	3.99	3.19	0.44	15.0	0.18	1.40	0.09	3.39	99.0
G27324	58.4	14.1	4.73	3.02	0.59	2.07	8.70	0.09	0.95	0.23	6.08	99.1
G27325	46.8	16.1	2.60	6.87	4.39	<0.01	15.2	0.18	1.05	0.07	5.16	98.5
G27326	49.0	17.6	1.81	5.90	5.23	<0.01	12.5	0.12	1.54	0.23	4.54	98.5

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

XRAL

XRAL WHOLE ROCK ANALYSIS 21-OCT-87 REPORT 2192 REFERENCE FILE 28778 PAGE 2

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	LOI	SUM
G27327	48.3	14.0	9.20	9.79	2.92	0.04	11.2	0.10	0.99	0.10	8.31	99.0
G27328	50.0	16.2	6.68	3.49	3.75	0.26	9.64	0.22	0.93	0.07	7.85	99.2
G27329	28.2	1.00	2.10	34.2	0.22	<0.01	6.98	0.12	0.07	0.01	26.8	100.4
G27330	41.3	17.0	7.80	8.00	2.83	0.02	14.0	0.17	0.99	0.08	6.70	99.0
G27331	47.5	13.3	6.31	2.80	2.01	0.75	16.0	0.28	1.55	0.12	7.77	98.5
G27332	53.6	12.8	10.0	2.68	4.13	<0.01	6.55	0.19	0.98	0.11	8.00	99.1
G27333	50.3	15.6	9.62	9.82	3.16	0.80	14.0	0.15	1.37	0.10	5.62	98.6
G27334	48.3	13.5	5.82	6.15	3.51	0.01	16.0	0.20	1.66	0.12	3.00	98.3
G27335	44.8	16.9	5.44	3.21	0.78	2.78	13.7	0.21	1.15	0.10	8.00	97.2
G27336	58.4	15.2	1.45	1.80	2.89	0.88	13.0	0.12	1.21	0.37	3.54	98.9
G27337	57.9	14.4	4.13	1.24	2.75	1.02	11.3	0.15	1.16	0.35	5.16	99.6
G27338	54.6	16.7	5.61	3.76	2.42	0.98	9.65	0.23	0.97	0.06	4.16	99.2
G27339	46.8	14.1	5.85	8.40	0.43	0.05	14.9	0.25	1.11	0.11	7.47	99.5
G27340	48.9	13.6	8.29	8.40	2.51	<0.01	10.5	0.20	1.06	0.12	8.39	100.0
G27341	69.3	13.5	2.06	3.31	3.76	0.13	7.27	0.12	1.01	0.11	4.93	99.6
G27342	48.3	13.0	5.36	7.42	2.48	0.06	16.5	0.22	1.29	0.09	5.00	99.8
G27343	48.7	13.7	7.86	6.44	2.73	0.59	14.9	0.18	1.13	0.09	2.54	98.9
G27344	47.8	15.4	9.39	5.33	1.96	0.17	10.9	0.23	0.80	0.06	7.62	99.8
G27345	48.5	11.6	4.73	12.4	1.13	0.35	14.1	0.19	0.89	0.08	5.31	99.4
G27346	49.7	13.5	10.4	6.86	1.61	0.02	13.4	0.18	0.91	0.06	2.70	99.4
G27347	56.7	14.8	5.79	4.59	5.12	0.06	5.99	0.11	0.83	0.17	5.62	99.8
G27348	43.4	13.8	6.30	8.94	2.87	0.01	11.1	0.17	0.85	0.08	11.7	99.3
G27349	45.2	13.9	9.30	7.68	2.27	0.02	10.3	0.19	0.77	0.06	10.4	100.1
G27350	55.2	15.2	3.54	4.70	4.49	0.14	9.61	0.11	1.00	0.14	5.16	99.3
H120801	44.0	13.8	15.6	4.09	1.82	0.03	8.81	0.24	0.69	0.05	11.2	100.3

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

XRAL

XRF - WHOLE ROCK ANALYSIS 21-OCT-87 REPORT 2192 REFERENCE FILE 28778 PAGE 3

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	LOI	SUM
H120802	48.9	14.9	5.63	4.58	2.28	<0.01	15.9	0.39	1.35	0.09	5.85	99.9
H120803	48.0	14.8	9.92	4.71	1.45	<0.01	12.7	0.31	0.76	0.05	7.23	100.0
H120804	48.0	14.5	9.25	6.55	2.33	0.02	14.3	0.21	1.18	0.09	3.08	99.6
H120805	58.4	15.0	4.53	3.07	7.08	0.16	5.17	0.08	0.78	0.29	4.62	99.3
H120806	49.3	14.8	9.86	5.28	1.20	<0.01	15.0	0.16	0.96	0.08	3.31	100.0
H120807	68.3	15.6	3.33	1.05	5.54	1.22	2.67	0.07	0.38	0.10	1.08	99.5
H120808	46.1	14.4	6.76	8.48	2.69	0.26	11.7	0.19	0.77	0.06	8.47	99.9
H120809	47.2	14.8	11.8	7.79	1.52	0.01	11.1	0.18	0.74	0.06	5.00	100.1
H120810	66.1	13.4	5.20	2.10	6.00	0.10	5.61	0.07	0.56	0.22	1.08	100.5
H120811	50.2	16.0	9.06	3.74	2.81	0.71	12.1	0.23	1.01	0.08	2.62	98.6
H120812	49.9	13.6	9.66	5.90	1.40	<0.01	11.4	0.21	1.06	0.11	6.62	99.9
H120813	43.4	12.6	15.2	5.09	0.83	0.14	16.7	0.58	0.63	0.06	4.31	99.6
H120814	50.8	14.1	6.42	7.50	3.68	0.11	12.2	0.28	1.15	0.12	2.77	99.2
H120815	67.7	15.5	2.78	1.49	5.59	2.03	2.30	0.04	0.35	0.12	1.70	99.8
H120816	67.4	16.6	2.70	1.11	5.02	1.90	2.69	0.04	0.38	0.14	1.93	100.2
H120817	46.6	15.7	10.9	8.77	1.50	0.02	11.7	0.19	0.81	0.06	3.23	99.6
H120818	47.3	15.3	10.3	9.26	2.24	0.06	11.2	0.17	0.79	0.06	2.93	99.7
H120819	44.7	14.2	11.8	3.33	1.43	0.33	10.4	0.21	0.81	0.06	12.9	100.3
H120820	49.9	16.0	6.03	5.18	1.56	0.59	11.0	0.21	0.93	0.07	8.54	100.1
H120821	87.5	16.0	1.48	0.68	8.45	0.93	2.12	0.05	0.29	0.14	1.08	99.0
H120829	44.9	14.7	7.21	7.85	3.63	<0.01	14.2	0.21	1.25	0.09	5.62	99.7
H120830	54.2	13.8	6.44	6.72	2.75	<0.01	10.0	0.17	1.06	0.10	4.06	99.4
H120831	45.8	13.3	6.76	7.64	2.20	<0.01	13.8	0.18	1.23	0.09	8.47	99.5
H120951	47.3	14.7	7.32	5.79	3.63	0.01	14.6	0.25	1.50	0.13	4.06	99.4
H120952	58.9	14.4	4.45	2.54	3.85	1.76	6.76	0.13	0.57	0.16	3.85	97.5

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

XRAL

XRF - WHOLE ROCK ANALYSIS 21-OCT-87 REPORT 2192 REFERENCE FILE 28778 PAGE 4

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	LOI	SUM
H120953	48.7	14.9	5.03	4.57	2.30	0.33	15.9	0.32	1.35	0.09	5.16	98.7
H120954	52.3	13.1	6.68	3.37	0.72	2.74	15.5	0.19	2.12	0.33	2.00	99.2
H120955	62.9	15.4	2.86	1.41	2.78	2.32	7.39	0.11	1.01	0.30	3.31	99.2
H120956	36.9	2.03	0.19	32.2	0.14	<0.01	10.7	0.13	0.11	0.02	16.7	99.8
H120957	53.2	16.7	6.68	4.25	3.85	0.51	9.39	0.14	1.09	0.20	2.62	98.7
H120958	52.7	14.8	10.6	3.16	0.91	0.37	10.9	0.24	1.26	0.12	4.93	100.1
H120959	48.5	16.3	10.2	4.54	2.00	0.06	10.7	0.24	0.83	0.06	5.77	99.3
H120960	61.4	15.8	2.18	1.74	7.30	0.35	6.29	0.05	0.66	0.15	2.93	99.1
H120961	58.5	16.0	2.79	2.36	4.62	1.19	9.04	0.14	1.35	0.35	2.85	99.3
H120962	56.3	16.1	4.83	1.75	3.77	1.20	8.91	0.15	1.32	0.35	5.00	99.8
H120963	56.8	17.6	0.54	4.31	5.25	1.42	9.15	0.03	0.65	0.15	3.08	99.1
H120964	57.9	16.1	3.54	2.56	5.27	0.37	8.89	0.11	1.33	0.35	2.39	98.9
H120965	55.8	14.3	9.02	1.82	2.53	1.47	9.09	0.17	1.22	0.12	3.31	98.9
H120966	52.4	14.6	3.38	3.03	3.82	0.06	14.4	0.29	1.69	0.13	4.85	98.7
H120967	53.5	15.0	9.20	3.47	1.42	0.53	10.6	0.18	1.16	0.13	3.77	99.1
H120968	59.8	14.0	5.65	3.02	4.85	0.01	6.75	0.12	1.01	0.13	4.39	99.8
H120969	46.0	14.7	11.1	7.28	1.65	0.04	13.6	0.20	1.20	0.08	3.08	99.0
H120970	58.3	15.6	4.80	4.37	5.21	0.48	4.78	0.13	0.47	0.15	5.70	100.1
H120971	52.5	13.7	9.90	6.96	1.65	0.05	10.5	0.20	1.10	0.11	2.70	99.4
H120972	51.7	15.3	7.99	3.67	1.40	0.56	13.2	0.15	1.53	0.18	3.39	99.1
H120973	47.6	14.7	9.41	5.94	1.66	0.12	11.4	0.18	0.87	0.07	8.06	100.1
H120974	45.9	15.3	12.3	6.54	1.68	0.17	13.8	0.21	0.89	0.07	2.62	99.5
H120975	59.3	11.2	13.1	2.30	0.27	<0.01	8.82	0.10	0.65	0.06	3.47	99.4
H120976	48.5	14.4	5.52	5.22	2.71	0.02	14.5	0.21	1.32	0.10	6.23	98.8
H120977	48.6	13.9	11.1	6.96	1.55	0.06	10.3	0.25	1.05	0.11	5.85	99.8

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

XRAL

XRAL WHOLE ROCK ANALYSIS 21-OCT-87 REPORT 2192 REFERENCE FILE 28778 PAGE 5

SAMPLE \ %	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TIO2	P205	LOI	SUM
H120978	47.5	13.8	7.55	9.45	2.00	0.17	15.9	0.28	1.54	0.13	6.23	98.6
H120979	48.5	15.2	4.19	5.35	2.57	0.05	15.3	0.34	1.37	0.11	5.62	98.7
H120980	47.9	14.7	5.10	5.95	2.44	<0.01	14.8	0.14	1.34	0.14	6.70	99.2
H120981	53.0	13.5	7.45	2.34	2.73	2.14	7.85	0.12	0.55	0.14	8.16	98.1
H120982	54.8	16.7	4.60	2.36	5.37	0.26	10.1	0.15	1.35	0.55	2.47	98.8
H120983	61.4	15.6	3.68	1.32	3.45	1.95	8.02	0.11	0.80	0.29	2.08	98.8
H120984	39.9	4.13	1.75	30.8	0.04	<0.01	10.7	0.10	0.14	0.02	10.8	99.4
H120996	48.7	13.6	9.12	6.45	1.92	0.05	14.1	0.19	1.23	0.10	3.19	98.7
H120997	59.4	16.4	0.48	1.34	1.87	0.43	13.1	0.18	1.65	0.29	4.00	99.2
H120998	47.4	13.5	4.81	4.88	3.25	0.30	14.2	0.18	1.25	0.10	8.93	98.8
H120999	45.8	14.3	5.14	8.14	3.23	0.02	11.0	0.14	0.93	0.08	9.70	98.6
H121000	55.2	15.7	2.54	5.18	2.78	0.16	11.5	0.25	1.23	0.13	4.00	98.8

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

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SAMPLE \ PPM	CR	RB	SR	Y	ZR	NB	BA
G27302	70	60	60	20	100	20	1180
G27303	220	20	60	30	70	20	170
G27304	310	10	70	40	40	10	40
G27305	250	10	80	20	40	10	60
G27306	260	10	40	10	20	20	40
G27307	340	<10	140	10	50	10	40
G27308	<10	50	80	50	220	20	210
G27309	40	30	90	10	40	30	80
G27310	140	70	90	20	60	10	250
G27311	570	10	40	10	50	20	70
G27312	<10	90	90	30	80	20	1020
G27313	270	20	110	30	30	10	90
G27314	180	30	140	20	50	10	140
G27315	1040	<10	<10	<10	<10	<10	30
G27316	310	20	120	10	10	20	30
G27317	120	<10	<10	<10	80	20	100
G27318	300	10	20	20	20	10	30
G27319	<10	40	90	20	120	20	300
G27320	110	10	200	30	40	20	20
G27321	170	<10	80	10	60	<10	60
G27322	<10	20	150	20	130	10	160
G27323	10	40	120	30	50	10	120
G27324	80	80	40	20	150	10	820
G27325	190	<10	30	30	30	20	100
G27326	100	10	110	30	150	10	90

SAMPLE \ PPM	CR	RB	SR	Y	ZR	NB	BA
G27327	390	30	30	30	50	10	70
G27328	310	30	80	10	30	20	140
G27329	4570	<10	20	<10	<10	20	10
G27330	310	10	70	20	40	10	70
G27331	40	30	40	30	80	<10	300
G27332	310	10	180	20	20	20	20
G27333	160	50	60	20	50	10	140
G27334	60	<10	30	30	90	20	20
G27335	10	60	110	<10	50	20	460
G27336	<10	60	70	40	210	30	290
G27337	<10	50	60	30	190	20	360
G27338	310	30	70	30	40	<10	320
G27339	310	10	40	20	60	10	80
G27340	320	20	50	<10	60	20	50
G27341	80	20	170	40	90	20	110
G27342	20	10	60	20	60	20	70
G27343	140	30	60	30	50	20	200
G27344	330	10	180	30	30	10	130
G27345	440	30	30	<10	40	20	140
G27346	190	<10	100	10	40	10	20
G27347	170	10	250	10	80	10	110
G27348	300	20	100	<10	50	30	60
G27349	250	10	40	10	20	<10	50
G27350	60	10	60	30	90	<10	90
H120801	270	<10	90	10	30	10	<10

XRAL

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SAMPLE \ PPM	CR	RB	SR	Y	ZR	NB	BA
H120802	170	20	50	30	50	20	70
H120803	310	<10	50	<10	<10	10	30
H120804	120	30	130	10	40	20	20
H120805	170	30	280	<10	130	20	100
H120806	120	20	240	10	50	30	50
H120807	10	40	620	<10	120	<10	400
H120808	130	10	40	10	30	30	80
H120809	310	20	90	20	20	<10	30
H120810	60	10	360	10	130	10	100
H120811	140	40	110	20	40	20	220
H120812	340	20	120	20	30	20	30
H120813	250	20	20	10	10	10	30
H120814	350	10	100	40	70	10	90
H120815	30	60	730	10	110	10	850
H120816	10	50	470	<10	110	<10	560
H120817	330	<10	60	10	20	20	50
H120818	330	10	170	<10	20	20	60
H120819	260	20	80	20	20	10	90
H120820	310	30	80	10	30	20	180
H120821	20	30	950	<10	90	10	1260
H120829	140	20	20	20	50	30	50
H120830	370	10	130	<10	50	20	80
H120831	180	20	50	<10	40	20	70
H120951	130	10	70	<10	70	10	40
H120952	60	<10	150	<10	110	20	610

SAMPLE \ PPM	CR	RB	SR	Y	ZR	NB	BA
H120953	180	30	40	20	60	<10	210
H120954	<10	80	320	30	190	30	740
H120955	<10	80	130	60	210	<10	480
H120956	4570	10	<10	<10	<10	10	30
H120957	100	30	360	10	80	<10	200
H120958	130	20	360	20	80	10	130
H120959	950	<10	120	20	30	20	60
H120960	30	30	160	20	190	20	220
H120961	<10	50	90	40	190	30	560
H120962	<10	50	160	20	180	10	290
H120963	110	40	110	<10	130	10	340
H120964	<10	20	240	20	210	20	220
H120965	120	80	230	10	80	10	580
H120966	30	20	20	20	100	10	120
H120967	110	30	320	<10	90	20	210
H120968	120	10	170	20	80	10	90
H120969	130	10	160	20	30	10	90
H120970	190	20	210	30	80	<10	230
H120971	290	10	90	20	60	10	100
H120972	10	40	230	30	90	20	160
H120973	240	20	100	20	40	20	50
H120974	160	<10	130	20	40	20	80
H120975	60	10	850	10	<10	10	10
H120976	160	10	90	30	50	20	70
H120977	260	20	80	20	40	10	90

SAMPLE \ PPM	CR	RB	SR	Y	ZR	NB	BA
H120978	20	20	80	30	70	20	180
H120979	170	10	10	20	80	20	120
H120980	20	10	20	20	100	30	120
H120981	60	60	170	20	90	10	550
H120982	<10	30	160	50	190	10	150
H120983	<10	60	330	30	230	20	500
H120984	6280	10	<10	<10	<10	10	40
H120996	140	10	160	20	40	10	90
H120997	10	30	140	40	180	10	250
H120998	60	30	40	20	20	10	160
H120999	310	20	100	<10	30	20	100
H121000	390	10	60	20	70	10	200

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
120832	52.6	13.5	8.08	5.08	1.56	1.43	14.8	0.27	1.18	0.11	0.01	1.23	99.9
120833	49.7	12.2	10.8	12.6	1.49	1.01	9.22	0.17	0.62	0.60	0.12	1.47	100.1
120834	64.9	14.5	5.73	3.84	4.45	0.80	4.47	0.06	0.48	0.12	0.04	0.54	100.0
120836	48.2	10.0	7.90	17.5	0.64	0.33	10.5	0.18	0.52	0.08	0.21	4.00	100.1
120838	69.9	15.2	2.47	0.88	5.30	1.54	2.51	0.03	0.32	0.10	0.01	1.70	100.1
120840	37.0	2.32	1.67	35.4	0.04	0.03	10.4	0.13	0.18	0.03	0.59	12.3	100.1

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

SAMPLE \ PPM	RB	SR	Y	ZR	NB	BA
120832	56	88	41	65	<10	309
120833	27	313	22	70	22	157
120834	21	446	<10	102	18	314
120836	22	78	12	41	15	84
120838	125	313	<10	124	<10	559
120840	<10	<10	<10	<10	13	21

SAMPLE \ %	SIO2	AL2O3	CAO	MGO	NA2O	K2O	FE2O3	MNO	TIO2	P2O5	CR2O3	LOI	SUM
106151	63.3	15.5	6.03	2.15	3.06	1.07	5.87	0.10	0.61	0.15	0.02	2.08	100.1
106152	61.0	16.6	2.60	1.94	1.76	2.50	10.1	0.17	0.56	0.18	<0.01	2.62	100.1
106156	49.3	13.3	10.1	6.62	2.94	0.61	13.3	0.21	0.89	0.06	0.01	2.62	100.0
106157	35.0	0.46	0.42	[illegible]	0.03	<0.01	7.41	0.11	0.04	0.01	0.29	[illegible]	100.4
106158	54.5	13.3	7.48	4.74	2.67	0.62	13.0	0.18	0.93	0.12	<0.01	2.31	99.9
106164	[illegible]	15.0	3.38	0.98	0.74	[illegible]	3.75	0.06	0.57	0.16	0.01	2.62	99.7
106166	55.3	13.2	6.54	4.36	2.68	0.77	13.9	0.19	1.07	0.14	<0.01	2.31	100.5
106168	63.0	14.5	4.93	4.51	5.42	0.91	4.06	0.09	0.37	0.18	0.03	1.31	99.6
120845	53.1	15.0	5.02	4.94	2.63	0.24	13.5	0.21	0.95	0.07	0.02	4.54	100.3
120846	49.0	15.4	6.15	6.09	1.10	0.20	15.5	0.23	0.97	0.08	0.02	4.70	99.5
120847	61.6	14.9	6.22	3.94	4.16	0.67	5.97	0.10	0.70	0.16	0.04	1.47	100.0
120848	33.3	1.72	1.14	[illegible]	0.04	0.01	8.75	0.16	0.11	0.02	0.48	[illegible]	100.0
120850	[illegible]	15.9	0.99	0.96	[illegible]	[illegible]	2.15	0.06	0.36	0.10	<0.01	1.54	100.0

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

SAMPLE \ PPM	RB	SR	Y	ZR	NB	BA
106151	44	428	<10	113	18	342
106152	54	221	10	115	14	545
106156	23	199	<10	17	14	152
106157	<10	19	<10	<10	11	24
106158	36	129	<10	84	31	180
106164	100	349	<10	122	<10	1270
106166	48	145	23	82	11	190
106168	40	982	<10	69	37	1080
120845	20	67	21	30	12	156
120846	17	89	<10	37	16	141
120847	23	293	18	101	<10	237
120848	<10	<10	<10	<10	<10	25
120850	58	237	<10	144	13	1220

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TI02	P205	CR203	LOI	SUM
58501	64.7	15.3	2.73	1.82	3.84	1.82	4.29	0.06	0.61	0.07	0.01	3.54	98.9
58502	62.5	16.5	3.86	1.96	3.45	2.03	4.60	0.07	0.67	0.13	0.02	3.85	99.8
58503	65.4	16.1	2.68	1.23	3.84	2.94	2.98	0.05	0.51	0.11	0.01	3.23	99.2
58504	48.0	11.6	8.73	12.2	1.80	0.15	11.2	0.20	0.57	0.08	0.13	3.54	98.2
58505	48.9	16.8	3.28	3.90	3.27	0.67	14.1	0.12	1.53	0.12	0.02	5.54	98.3
58506	44.6	13.6	8.43	8.25	2.11	0.05	11.4	0.17	0.67	0.05	0.04	10.4	99.8
58507	37.0	8.13	19.8	3.62	0.21	0.15	11.0	0.25	0.43	0.04	0.01	19.8	100.4
58508	42.7	9.76	6.83	17.6	<0.01	0.07	12.3	0.16	0.59	0.05	0.21	8.39	98.7
58509	46.9	14.9	13.8	4.73	0.67	0.05	11.2	0.25	0.75	0.06	0.05	6.23	99.6
58510	49.0	14.2	10.2	3.44	1.21	0.03	13.6	0.36	1.22	0.10	0.03	6.62	100.0
58511	47.6	15.1	11.9	3.81	2.57	0.05	8.66	0.24	0.77	0.07	0.05	8.62	99.5
58512	49.4	15.2	8.09	3.73	4.04	0.33	13.7	0.46	1.34	0.11	0.03	2.62	99.1
58513	52.5	14.0	6.69	5.90	4.78	0.15	9.86	0.20	1.10	0.12	0.04	3.16	98.5
58514	37.0	12.8	8.66	10.4	0.80	2.51	8.66	0.16	0.99	0.12	0.05	18.2	100.5
58515	50.2	16.0	7.69	4.55	1.91	0.08	11.3	0.26	0.84	0.07	0.06	6.16	99.1
58516	54.7	16.3	2.28	5.22	5.15	0.11	10.2	0.13	0.98	0.15	0.01	3.54	98.8
58517	43.5	14.5	7.60	5.30	3.18	0.38	12.5	0.21	0.88	0.07	0.02	11.6	99.8
58518	41.7	14.8	13.4	4.80	2.47	0.39	9.81	0.20	0.59	0.06	0.05	12.0	100.3
58519	45.6	14.0	8.10	5.47	1.26	0.21	14.2	0.17	1.20	0.10	0.02	8.85	99.2
58520	48.9	13.4	9.30	6.39	2.49	0.08	13.9	0.19	1.18	0.10	0.02	2.47	98.4
58521	49.4	13.3	7.65	5.25	2.79	0.50	13.9	0.18	1.11	0.09	0.01	4.08	98.3
58522	47.9	14.6	11.1	8.03	1.42	0.06	11.8	0.17	0.88	0.07	0.04	3.70	99.8
58523	46.2	13.7	5.58	4.67	2.62	0.04	15.9	0.27	1.58	0.12	<0.01	8.00	98.7
58524	47.9	13.3	8.30	6.28	3.06	0.14	14.6	0.21	1.37	0.11	0.02	3.16	98.5
58525	50.1	13.2	5.67	5.39	4.04	0.13	15.8	0.18	1.38	0.13	0.01	2.70	98.8
58526	46.5	13.1	9.06	4.73	2.51	0.08	13.1	0.20	1.12	0.10	0.02	9.31	99.9
58527	60.2	15.0	4.39	1.48	4.04	1.71	7.88	0.11	1.04	0.35	<0.01	2.85	99.2

SAMPLE	RB	SR	Y	ZR	NB	BA
58501	60	250	10	130	20	500
58502	80	400	<10	130	20	470
58503	120	240	<10	140	10	620
58504	40	140	10	40	20	60
58505	40	50	20	70	30	250
58506	<10	120	10	20	<10	40
58507	10	50	10	10	20	<10
58508	20	50	<10	<10	20	80
58509	10	80	10	30	20	40
58510	10	150	20	40	10	40
58511	<10	80	20	30	30	40
58512	40	130	20	60	20	170
58513	<10	80	40	50	10	70
58514	70	190	20	40	10	250
58515	30	80	<10	30	10	60
58516	20	80	20	100	30	120
58517	20	110	20	40	10	90
58518	30	70	10	30	20	110
58519	30	110	20	70	<10	70
58520	30	100	10	50	30	40
58521	40	60	10	50	50	130
58522	20	110	10	30	10	50
58523	10	30	30	70	20	90
58524	20	60	30	70	10	60
58525	10	50	30	80	40	80
58526	20	50	10	40	20	50
58527	100	210	30	200	20	410

SAMPLE	SIO2	AL203	CAO	MGO	NA20	K20	FE203	MNO	TI02	P205	CR203	LOI	SUM
58528	60.6	15.0	3.82	2.31	4.87	0.62	8.17	0.13	1.22	0.33	<0.01	3.00	100.2
58529	57.4	18.6	2.11	2.44	5.44	1.34	6.83	0.09	1.45	0.19	0.03	3.08	99.1
58530	48.6	14.3	8.93	8.03	2.96	0.07	12.2	0.16	0.82	0.07	0.02	3.23	99.4
58531	49.3	16.4	8.54	3.38	1.73	0.58	7.99	0.21	0.84	0.06	0.05	10.3	99.4
58532	44.8	14.8	7.87	8.31	2.29	0.03	11.0	0.20	0.78	0.06	0.05	9.47	99.7
58533	47.8	14.1	7.52	6.60	2.30	0.13	15.0	0.22	1.26	0.10	0.02	3.70	98.8
58534	46.8	13.4	11.0	6.60	1.86	0.09	13.7	0.20	1.19	0.10	0.02	4.16	99.1
58535	51.3	15.1	6.79	2.83	3.86	0.99	9.75	0.24	1.33	0.10	0.03	6.31	98.7
58536	49.4	13.4	10.2	5.60	2.95	0.05	10.1	0.20	1.03	0.12	0.06	5.70	98.8
58537	49.4	13.2	8.56	7.88	1.20	0.10	13.6	0.24	1.05	0.11	0.06	3.23	98.7
58538	47.9	14.4	9.22	4.86	0.19	0.03	15.2	0.24	1.26	0.10	0.03	5.31	98.8
58539	47.5	14.9	9.75	7.60	1.23	0.04	11.2	0.22	0.76	0.06	0.05	5.47	98.8
58540	47.1	15.1	12.5	4.97	0.26	0.07	11.2	0.21	0.85	0.07	0.05	6.54	99.0
58541	46.7	15.0	12.1	3.35	1.19	0.04	12.2	0.29	0.91	0.08	0.02	6.62	98.5
58542	46.5	13.8	9.85	6.12	1.26	0.04	14.4	0.22	1.21	0.10	0.02	5.39	98.9
58543	49.4	14.8	11.5	3.05	1.44	0.05	11.0	0.23	1.25	0.10	0.02	6.08	99.0
58544	51.4	14.7	4.12	3.73	3.32	0.01	13.9	0.19	1.62	0.25	<0.01	5.00	98.3
58545	47.4	12.9	7.93	7.92	1.56	0.04	10.3	0.21	1.63	0.69	0.04	8.00	98.7
58546	47.9	12.4	10.8	6.11	1.28	0.03	11.0	0.18	0.94	0.11	0.08	8.31	99.2
58547	44.8	12.9	8.85	5.96	2.30	0.01	12.2	0.18	1.16	0.09	0.02	10.4	98.9
58548	49.6	12.9	7.02	2.58	3.42	0.12	13.8	0.22	1.48	0.12	<0.01	8.00	99.3
58549	49.2	13.0	9.26	8.00	1.81	0.14	12.3	0.22	1.06	0.11	0.05	3.47	98.6
58550	46.5	14.7	9.06	5.29	0.68	0.04	15.4	0.24	1.31	0.10	0.02	6.93	100.3
58551	49.0	14.8	6.66	3.23	1.08	0.59	12.9	0.14	1.12	0.10	0.05	9.93	99.7
58552	43.2	14.8	8.68	8.16	2.68	0.04	11.0	0.16	0.69	0.06	0.04	10.9	100.5
58553	44.1	14.7	7.10	8.00	2.97	0.04	10.9	0.16	0.70	0.05	0.05	9.70	98.5
58554	51.2	17.7	3.21	2.49	3.49	0.92	16.5	0.23	1.47	0.40	0.01	1.85	99.6

SAMPLE	RB	SR	Y	ZR	NB	BA
58528	20	180	40	190	10	260
58529	70	180	20	130	10	320
58530	<10	90	10	20	30	60
58531	50	160	10	30	<10	120
58532	10	50	10	20	20	70
58533	10	120	30	50	20	90
58534	10	130	20	50	<10	40
58535	40	20	20	60	10	560
58536	<10	110	10	60	20	40
58537	<10	100	10	70	10	70
58538	10	170	30	50	20	40
58539	20	70	10	20	<10	30
58540	30	150	10	20	30	40
58541	<10	200	20	50	10	20
58542	<10	110	40	60	20	40
58543	<10	140	30	60	10	50
58544	10	180	30	150	20	70
58545	<10	460	30	150	20	60
58546	10	110	30	50	20	40
58547	<10	170	20	60	<10	70
58548	40	90	20	80	30	80
58549	10	110	20	50	20	50
58550	20	110	20	50	20	60
58551	50	120	20	50	10	570
58552	<10	80	10	50	20	60
58553	10	120	10	20	20	50
58554	70	160	60	270	20	300

XRAL

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SAMPLE	AU PPB	NA %	CA %	SC PPM	CR PPM	FE %
239B	<12	2.10	8	74.0	200	15.8
240B	19	1.20	3	53.0	220	9.91
241B	<9	5.20	<2	13.5	110	3.98
242B	<11	1.00	<1	47.9	220	22.2
243B	<5	0.06	<1	1.8	10	1.19
244B	<8	0.13	5	41.8	50	7.30
245B	<5	0.10	<1	7.0	40	1.34
246B	14	3.20	2	63.6	210	16.4
247B	<9	4.40	<1	22.6	190	7.50
248B	<10	3.70	5	28.3	160	8.88
249B	<5	0.60	1	7.0	30	2.44
250B	<6	1.70	2	6.0	40	1.82
G27302	16	1.50	<1	24.4	90	9.27
G27303	<11	2.40	3	57.3	280	9.18
G27304	<10	2.00	7	50.5	400	8.61
G27305	15	1.80	8	48.5	340	7.94
G27306	51	0.72	9	39.4	360	9.12
G27307	<10	1.30	9	52.3	480	11.0
G27308	<10	2.80	2	25.6	10	9.40
G27309	14	1.80	8	55.4	50	12.9
G27310	<10	1.70	6	53.6	190	10.1
G27311	<10	2.00	3	54.4	680	8.32
G27312	<11	1.20	3	51.1	10	13.1
G27313	<10	2.00	7	44.4	340	6.41
G27314	<11	1.90	3	53.8	230	10.9
G27315	<5	INF	<1	5.8	870	4.38
G27316	<10	2.10	10	47.0	400	7.70
G27317	<12	0.90	3	44.9	160	17.3
G27318	<10	0.97	4	42.8	360	10.2
G27319	<8	1.20	1	18.8	<10	11.4
G27320	<10	2.70	11	51.5	150	2.23
G27321	<12	2.80	7	56.2	230	9.71
G27322	<8	4.00	3	13.8	10	4.89
G27323	<11	2.50	3	47.5	10	12.0
G27324	<9	0.39	4	23.3	80	7.06
G27325	13	INF	1	49.4	180	11.9
G27326	19	4.00	1	31.5	100	9.36
G27327	<10	2.30	INF	61.2	360	INF
G27328	<6	INF	INF	41.5	320	7.45
G27329	[31]	INF	<1	66.9	INF	INF
G27330	<5	2.30	4	54.8	380	11.1
G27331	<11	2.00	INF	55.7	INF	INF
G27332	<12	2.90	7	27.1	340	4.92
G27333	[22]	2.60	3	44.8	INF	INF
G27334	<5	3.00	3	45.5	60	10.4
G27335	[79]	0.63	4	40.1	10	9.24
G27336	<11	3.00	INF	51.0	30	INF
G27337	<5	2.60	2	21.6	<10	8.15

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

SAMPLE	AU PPB	NA %	CA %	SC PPM	CR PPM	FE %
G27338	<5	2.40	INF	43.0	320	7.40
G27339	<5	0.32	4	53.8	340	11.1
G27340	<5	2.00	5	46.4	340	8.26
G27341	<5	INF	1	24.9	80	5.49
G27342	<9	INF	6	54.1	30	14.5
G27343	<5	1.80	4	46.4	150	11.2
G27344	<6	1.40	6	44.0	370	8.18
G27345	<5	0.87	2	20.4	(410	9.86
G27346	<5	1.70	6	41.1	200	9.47
G27347	<5	3.70	INF	11.3	170	4.28
G27348	10	2.20	3	38.1	270	7.75
G27349	<5	1.80	6	37.3	260	7.56
G27350	<5	3.70	2	29.2	60	7.41
H120801	<5	1.50	8	38.4	300	6.62
H120802	<18	1.80	4	48.7	190	12.2
H120803	<5	1.10	INF	38.0	(300	8.77
H120804	<5	1.60	4	38.9	80	8.99
H120805	<12	5.10	4	17.2	190	3.99
H120806	<5	0.91	5	43.5	140	10.6
H120807	<7	3.60	2	5.6	20	2.14
H120808	<5	2.00	4	39.2	150	8.43
H120809	<5	0.98	7	39.7	320	7.67
H120810	<9	4.30	3	10.6	70	4.41
H120811	<11	2.20	8	43.9	160	9.05
H120812	<11	1.00	6	48.5	(400	8.76
H120813	<9	0.67	11	35.9	330	12.9
H120814	<12	2.90	4	50.8	(410	9.63
H120815	<7	3.90	INF	5.0	40	1.82
H120816	14	3.70	2	4.8	10	2.48
H120817	<10	1.10	9	51.1	(420	9.65
H120818	<10	1.80	7	49.7	410)	9.13
H120819	<12	1.10	8	43.0	340	8.33
H120820	<14	1.30	4	54.7	400)	9.05
H120821	13	(6.50	<2	5.2	30	1.91
H120822	15	0.91	3	36.7	270	10.9
H120823	<6	0.70	4	14.0	<10	5.96
H120824	<5	<0.05	<1	3.0	10	16.6
H120825	<5	0.15	<1	7.2	30	1.09
H120826	(2)	<0.05	<1	8.7	60	6.24
H120827	<6	0.51	1	12.1	70	4.06
H120828	<5	0.61	<1	13.4	10	5.38
H120829	<11	2.70	6	46.5	160	10.4
H120830	<14	2.10	4	50.4	(430)	8.04
H120831	<11	1.70	6	45.6	200	10.6
H120951	<14	2.80	6	54.1	150	11.6
H120952	<8	2.60	4	13.2	80	5.15
H120953	<11	1.70	4	53.4	200	12.3
H120954	10	0.51	6	35.5	<10	12.2

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

SAMPLE	AU PPB	NA %	CA %	SC PPM	CR PPM	FE %
H120955	13	2.00	3	15.5	<10	5.92
H120956	<5	<0.05	<1	8.2	(4100)	7.68
H120957	<9	2.80	6	24.5	110	6.97
H120958	<8	0.69	6	23.7	140	7.31
H120959	<11	1.40	7	46.6	(410)	7.80
H120960	<9	5.40	<1	16.5	30	5.04
H120961	<9	3.40	<1	17.7	10	6.90
H120962	<10	2.80	3	17.8	<10	6.75
H120963	<11	3.70	<2	34.5	100	6.86
H120964	<5	5.10	<1	16.1	70	6.40
H120965	<5	1.10	INF	13.2	70	INF
H120966	<12	3.80	2	52.5	30	INF
H120967	<9	1.40	INF	32.5	150	9.66
H120968	<11	4.50	4	27.2	160	6.41
H120969	<11	1.60	8	57.7	150	12.2
H120970	<11	4.80	3	13.9	(230)	4.19
H120971	14	INF	INF	45.6	(410)	6.14
H120972	<9	1.30	4	39.2	10	11.4
H120973	<6	1.50	6	45.6	260	9.52
H120974	<5	INF	INF	56.2	270	10.4
H120975	15	0.25	INF	25.7	150	6.19
H120976	15	INF	INF	42.8	210	5.04
H120977	<6	1.40	7	48.5	320	8.51
H120978	<6	1.80	5	48.3	30	13.0
H120979	<9	2.00	INF	46.9	160	11.3
H120980	<7	2.20	4	51.9	20	12.5
H120981	(71)	2.30	4	15.7	80	6.41
H120982	14	4.10	INF	18.1	<10	7.26
H120983	<6	2.90	<1	15.2	<10	6.75
H120984	<5	<0.05	<1	17.1	(7600)	10.6
H120985	7	0.42	7	32.2	(1800)	5.82
H120986	<5	0.52	<1	14.0	940	1.09
H120987	<5	0.41	3	17.2	130	3.69
H120988	<5	0.27	<1	21.1	260	4.05
H120989	<5	2.00	2	8.0	INF	5.76
H120990	<5	1.10	2	9.6	40	8.45
H120991	<5	<0.05	3	0.4	60	4.80
H120992	<5	0.11	<1	7.7	<10	1.27
H120993	<5	<0.05	<1	0.2	<10	2.55
H120994	<7	2.20	2	53.3	380	10.4
H120995	<6	2.60	1	18.1	130	5.83
H120996	<5	INF	INF	38.7	210	8.45
H120997	<5	INF	<1	23.5	INF	8.14
H120998	<5	INF	INF	39.8	100	8.41
H120999	12	2.40	2	39.0	310	7.68
H121000	<10	2.20	<1	47.9	390	8.17

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

SAMPLE	CO PPM	NI PPM	ZN PPM	AS PPM	SE PPM	RB PPM
239B	77	<400	160	21	<7	<60
240B	53	<300	180	9	<5	<40
241B	23	500	90	19	<8	<60
242B	30	<300	260	20	<9	<50
243B	5	<200	<50	4	<5	<30
244B	19	<200	120	10	<6	<30
245B	7	<200	<50	5	<5	<30
246B	66	<400	<110	10	<9	<80
247B	38	300	140	9	8	60
248B	46	<300	210	3	7	60
249B	6	<200	100	13	<5	30
250B	7	<200	70	8	<5	50
G27302	25	<300	(870)	28	<5	80
G27303	43	<300	390	5	<5	<50
G27304	49	<300	210	10	<5	<40
G27305	47	<300	310	4	<8	<40
G27306	43	<300	260	13	<7	<30
G27307	56	<300	230	4	<8	<40
G27308	20	<200	190	3	<5	<50
G27309	54	<300	290	7	<5	60
G27310	47	<300	190	17	<5	100
G27311	76	<300	290	3	<5	INF
G27312	56	<300	210	<2	<5	110
G27313	47	<300	230	27	<8	50
G27314	46	<300	300	4	<5	<50
G27315	68	(700)	70	(720)	<5	<30
G27316	46	<300	150	23	<5	<40
G27317	76	<300	330	22	<5	<40
G27318	48	400	210	10	<5	<30
G27319	32	<200	210	2	<5	<30
G27320	14	<300	80	35	<5	<40
G27321	60	<300	370	13	<5	<50
G27322	14	<200	140	7	<5	INF
G27323	46	<300	150	4	<5	60
G27324	27	<200	160	13	<5	100
G27325	68	<200	90	10	<5	<30
G27326	45	<200	<60	10	<10	<50
G27327	65	<400	<80	<2	<6	<70
G27328	52	<200	<50	2	<5	70
G27329	63	<400	150	59	<8	<70
G27330	59	<300	250	17	<5	INF
G27331	59	(500)	90	<2	<7	<60
G27332	27	<200	100	<6	<5	<30
G27333	35	<400	180	3	<7	<70
G27334	41	<200	70	3	<5	<30
G27335	43	<200	170	15	<5	100
G27336	31	<400	120	<2	<8	<70
G27337	16	<200	60	<2	<5	60

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

SAMPLE	CO PPM	NI PPM	ZN PPM	AS PPM	SE PPM	RB PPM
G27338	39	<200	70	<2	<5	50
G27339	47	<200	200	<2	<5	<30
G27340	52	<200	80	<2	<5	<30
G27341	28	<200	<50	5	<5	<30
G27342	54	<300	160	6	<6	<40
G27343	47	<200	70	2	<5	50
G27344	34	<200	160	17	<5	30
G27345	61	<200	120	6	<5	30
G27346	38	<200	<50	8	<5	<30
G27347	23	<200	90	3	<5	<30
G27348	33	<200	120	3	<5	<30
G27349	39	<200	<50	10	<5	<30
G27350	35	<200	<50	3	<5	<30
H120801	41	<200	<50	15	<5	<30
H120802	66	<300	350	<9	<8	<30
H120803	36	<200	50	2	<5	<30
H120804	37	<200	4500	<2	<5	INF
H120805	18	<200	50	8	<5	<30
H120806	38	<200	240	18	<5	<30
H120807	9	<200	<50	<4	<5	40
H120808	52	<200	300	<8	<5	<30
H120809	42	<200	200	<7	<5	<30
H120810	19	<200	<80	9	<5	<50
H120811	49	<300	250	<2	<5	50
H120812	50	<300	330	4	<5	<40
H120813	56	<300	230	<2	<5	<30
H120814	44	<300	250	9	<5	<40
H120815	8	<200	<60	2	<6	<40
H120816	7	<200	<60	5	<5	60
H120817	51	<300	230	<2	<5	<40
H120818	52	<300	120	13	<5	<40
H120819	40	<300	170	24	6	<40
H120820	52	<300	300	25	<5	50
H120821	9	<300	<90	3	<5	<60
H120822	51	<300	450	5	<5	<40
H120823	13	200	150	<2	<5	<30
H120824	9	200	<50	5	11	<30
H120825	9	<200	<50	2	<5	<30
H120826	<5	<200	100	<2	<7	<40
H120827	12	<200	140	<2	<5	<30
H120828	8	<200	80	6	<5	<30
H120829	51	<300	320	21	<5	<40
H120830	51	<300	260	8	<9	<40
H120831	55	<300	270	5	<8	<40
H120951	34	<300	330	13	<5	<40
H120952	24	300	1400	<2	<5	<40
H120953	52	<300	260	3	<5	<40
H120954	38	<200	190	7	<7	90

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

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SAMPLE	CO PPM	NI PPM	ZN PPM	AS PPM	SE PPM	RB PPM
H120955	14	<200	140	2	<5	90
H120956	120	200	70	2	<5	<30
H120957	25	400	260	16	<5	<40
H120958	26	<200	140	5	<5	<30
H120959	45	<300	230	7	<5	<40
H120960	17	<200	(1400)	2	<5	<50
H120961	17	<200	110	3	<5	50
H120962	20	<200	190	4	<5	<40
H120963	15	300	120	20	<5	<40
H120964	15	(500)	120	<2	<5	<30
H120965	15	<200	<50	9	<5	<30
H120966	69	<400	<100	6	<7	<80
H120967	41	<300	<70	6	<6	<50
H120968	36	<400	<110	11	<6	<80
H120969	63	<400	120	4	<7	<60
H120970	24	<400	150	3	11	<80
H120971	37	400	170	5	<5	<30
H120972	43	<300	120	14	8	<60
H120973	56	<200	70	14	<5	<40
H120974	56	600	250	<2	<5	<30
H120975	19	300	110	3	<5	<30
H120976	45	<200	180	<2	<5	<30
H120977	39	<200	80	2	<5	<30
H120978	54	<200	80	<2	<5	<40
H120979	63	<300	130	<2	<5	<60
H120980	60	<200	<50	<2	<5	<40
H120981	38	300	(2900)	30	<5	80
H120982	20	<300	<50	3	<6	<70
H120983	18	<200	100	2	<5	60
H120984	160	(600)	120	2	<5	<30
H120985	87	300	170	23	<5	90
H120986	43	300	80	23	<5	<30
H120987	31	<200	50	26	<5	<30
H120988	20	400	50	21	<5	<30
H120989	10	<200	340	<2	<5	<30
H120990	5	<200	140	<2	<5	50
H120991	<5	<200	<50	3	<5	<30
H120992	8	<200	<50	<2	<5	<30
H120993	<5	<200	<50	<2	<5	<30
H120994	64	<200	<50	30	<5	<40
H120995	24	<200	<50	22	<5	100
H120996	36	<200	190	<2	<5	<30
H120997	25	<200	170	<2	<5	<30
H120998	37	<200	220	<2	<5	<30
H120999	43	<300	260	<2	<5	<40
H121000	35	<300	470	46	<5	<30

SAMPLE	MO PPM	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM
239B	<5	<5	0.4	<200	4	11
240B	6	<5	0.9	<200	3	16
241B	<5	<5	0.4	600	48	69
242B	6	<5	0.4	<200	3	13
243B	<5	<5	<0.2	<100	<1	<3
244B	<5	<5	1.4	<100	3	9
245B	<5	<5	<0.2	<100	<1	<3
246B	<6	<5	<0.3	<700	7	27
247B	<5	<5	0.3	500	8	19
248B	<5	<5	0.5	400	11	20
249B	<5	<5	<0.2	100	17	32
250B	5	<5	0.4	500	29	60
G27302	<5	<5	<0.2	1300	12	27
G27303	<5	<5	0.5	INF	7	20
G27304	<5	<5	<0.3	<200	5	14
G27305	<5	<5	<0.3	<200	6	19
G27306	<5	<5	<0.2	INF	5	15
G27307	<5	<5	<0.3	<200	5	26
G27308	<5	<5	<0.2	300	16	42
G27309	<5	<5	0.9	<200	5	18
G27310	5	<5	0.5	400	5	19
G27311	<5	<5	<0.3	<200	5	17
G27312	<5	<5	0.8	1100	7	23
G27313	6	<5	0.7	INF	4	13
G27314	<8	<5	0.3	300	3	10
G27315	<5	<5	1.2	<100	1	<3
G27316	<5	<5	0.6	<200	2	<3
G27317	<5	<5	0.3	<200	6	22
G27318	<5	<5	0.3	<400	2	4
G27319	<5	<5	<0.2	400	7	20
G27320	<5	<5	4.7	<200	4	11
G27321	<5	<5	<0.3	<200	4	18
G27322	<5	<5	0.3	<300	16	41
G27323	<5	<5	1.0	200	5	16
G27324	11	<5	0.7	800	22	49
G27325	<5	<5	0.4	<100	3	4
G27326	<5	<5	0.8	<200	14	49
G27327	<5	<5	<0.3	<200	4	7
G27328	<5	<5	0.3	100	2	10
G27329	<6	<5	0.6	<300	10	15
G27330	<5	<5	<0.5	<100	4	16
G27331	<5	<5	0.4	200	8	24
G27332	7	<5	<0.3	<100	5	15
G27333	12	<5	<0.3	<200	12	41
G27334	<5	<5	0.5	100	6	16
G27335	<5	<5	<0.4	400	5	16
G27336	<6	<5	<0.3	<200	15	45
G27337	<5	<5	0.2	300	12	39

INF - COMPOSITION MAKES DETECTION IMPOSSIBLE BY THIS METHOD

SAMPLE	MO PPM	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM
G27338	<5	<5	<0.2	200	3	14
G27339	<5	<5	<0.4	<400	4	24
G27340	<8	<5	<0.2	<100	4	<3
G27341	<5	<5	0.4	100	7	16
G27342	<5	<5	0.3	200	8	23
G27343	<5	<5	0.3	100	3	12
G27344	<5	<5	1.4	<100	2	14
G27345	<5	<5	1.5	<100	4	12
G27346	<5	<5	0.6	<100	3	10
G27347	<5	<5	0.2	100	15	35
G27348	<5	<5	1.3	<100	3	13
G27349	<5	<5	<0.2	<100	2	<3
G27350	<5	<5	0.3	100	10	25
H120801	<5	<5	2.7	<100	2	5
H120802	<5	<5	2.1	200	4	12
H120803	<5	<5	3.4	<100	2	9
H120804	<5	<5	0.3	<100	2	<3
H120805	<5	<5	<0.3	100	28	57
H120806	<5	<5	1.0	<400	4	13
H120807	<5	<5	<0.2	300	16	30
H120808	<5	<5	<0.4	<400	3	7
H120809	<5	<5	<0.4	<200	3	7
H120810	<5	<5	0.3	200	20	44
H120811	15	<5	<0.3	200	5	15
H120812	<5	<5	<0.3	<200	5	16
H120813	5	<5	<0.2	<100	3	9
H120814	<7	<5	3.4	<200	5	15
H120815	<5	<5	<0.2	900	24	35
H120816	<5	<5	0.2	600	20	30
H120817	<5	<5	0.5	<200	4	11
H120818	13	<5	0.5	<400	3	14
H120819	<5	<5	1.2	200	2	10
H120820	5	<5	0.9	<200	2	12
H120821	<5	<5	<0.2	1300	33	53
H120822	<5	<5	0.3	200	9	17
H120823	<5	<5	<0.2	300	6	20
H120824	<5	<5	<0.2	<100	7	13
H120825	<5	<5	0.3	<100	<1	<3
H120826	<5	<5	<0.2	300	6	12
H120827	<5	<5	0.4	300	31	54
H120828	<5	<5	<0.2	200	5	13
H120829	<5	<5	<0.3	<200	4	16
H120830	<5	<5	1.1	<200	6	14
H120831	<5	<5	<0.3	<200	3	11
H120951	10	<5	0.4	<500	6	19
H120952	<5	<5	0.3	600	16	39
H120953	<5	<5	<0.3	<200	4	14
H120954	<5	<5	0.4	800	39	83

SAMPLE	MO PPM	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM
H120955	<5	<5	<0.2	400	23	44
H120956	<5	<5	0.3	<100	<1	<3
H120957	<5	<5	0.4	<200	17	36
H120958	<5	<5	0.8	200	8	21
H120959	<5	<5	0.9	<200	3	13
H120960	<5	<5	0.6	200	26	49
H120961	<5	<5	0.3	400	24	53
H120962	<5	<5	<0.2	300	22	53
H120963	12	<5	<0.3	300	81	149
H120964	<5	<5	<0.2	100	4	8
H120965	<5	<5	<0.2	<200	4	5
H120966	<5	<5	0.6	<300	5	10
H120967	<5	<5	0.7	400	13	25
H120968	<5	<5	1.8	300	13	25
H120969	<5	<5	0.4	<200	6	14
H120970	<5	<5	0.3	<200	22	37
H120971	<5	<5	<0.2	100	<1	8
H120972	<5	<5	0.4	<200	25	39
H120973	<5	<5	0.3	<100	4	12
H120974	<5	<5	<0.2	<100	1	<3
H120975	<5	<5	<0.2	<100	1	10
H120976	<5	<5	<0.2	100	<1	19
H120977	<5	<5	0.6	<100	4	11
H120978	<5	<5	0.5	200	6	19
H120979	<5	<5	0.5	<200	3	10
H120980	<5	<5	0.4	<100	6	20
H120981	<5	6	0.9	600	11	27
H120982	<5	<5	0.6	400	23	47
H120983	<5	<5	0.4	500	32	73
H120984	<5	<5	0.5	<100	1	11
H120985	<5	<5	1.6	400	3	7
H120986	<5	<5	<0.2	<100	1	<3
H120987	<5	<5	<0.2	<100	2	<3
H120988	<5	<5	<0.2	<100	1	6
H120989	<5	<5	0.2	300	11	23
H120990	<5	<5	0.6	500	16	30
H120991	<5	<5	0.2	<100	<1	<3
H120992	<5	<5	<0.2	<100	<1	<3
H120993	<5	<5	<0.2	<100	<1	<3
H120994	<5	<5	0.7	<100	7	19
H120995	<5	<5	0.6	800	52	91
H120996	<5	<5	<0.2	<100	2	<3
H120997	<5	<5	<0.2	<100	<1	<3
H120998	<5	<5	<0.2	<100	1	<3
H120999	<5	<5	1.5	<200	3	10
H121000	<15	<5	<0.3	<100	6	27

SAMPLE	SM PPM	EU PPM	YB PPM	LU PPM	HF PPM
239B	2.1	1.6	3.3	0.40	2
240B	2.1	0.7	2.3	0.45	1
241B	6.1	<0.7	0.8	0.22	4
242B	1.9	0.9	3.2	0.49	2
243B	0.1	<0.2	<0.2	<0.05	<1
244B	2.1	0.8	2.0	0.28	1
245B	0.2	0.2	<0.2	<0.05	<1
246B	3.1	<0.2	4.7	0.69	5
247B	2.8	0.6	1.5	0.24	3
248B	2.8	0.6	1.5	0.24	2
249B	2.9	0.5	0.7	0.14	1
250B	5.3	1.2	0.9	0.12	3
G27302	2.9	0.8	1.4	0.30	3
G27303	4.0	0.9	3.2	0.56	2
G27304	3.3	1.1	2.8	0.53	2
G27305	3.6	1.3	3.1	0.51	2
G27306	2.7	1.1	2.1	0.33	1
G27307	3.5	1.7	3.2	0.56	2
G27308	7.3	2.0	5.9	0.94	6
G27309	3.5	1.4	3.4	0.55	2
G27310	3.1	0.9	3.0	0.43	2
G27311	3.3	0.8	3.0	0.50	1
G27312	4.6	1.3	3.7	0.59	3
G27313	2.6	0.6	2.4	0.40	2
G27314	2.7	1.1	2.2	0.33	2
G27315	0.4	0.3	0.4	<0.05	<1
G27316	1.8	0.7	1.8	0.24	<1
G27317	3.6	1.4	2.4	0.44	2
G27318	1.9	0.8	1.8	0.33	1
G27319	3.0	1.1	2.7	0.45	3
G27320	3.3	1.2	3.1	0.47	2
G27321	3.9	1.6	3.4	0.53	3
G27322	5.3	1.9	2.6	0.41	4
G27323	3.2	1.1	2.9	0.40	2
G27324	7.5	2.3	3.3	0.51	4
G27325	1.6	0.9	2.4	0.34	2
G27326	3.5	1.1	2.7	0.32	5
G27327	2.0	<0.9	2.7	0.41	3
G27328	1.3	<0.2	2.1	0.30	1
G27329	3.8	2.4	5.5	0.76	4
G27330	2.5	1.3	2.2	0.38	1
G27331	3.0	2.4	4.2	0.55	3
G27332	2.6	1.0	2.2	0.31	2
G27333	5.8	<0.2	7.1	1.03	5
G27334	2.4	0.9	3.3	0.45	4
G27335	2.9	0.8	2.7	0.39	2
G27336	7.5	3.6	9.1	1.34	7
G27337	4.0	1.9	4.3	0.63	5

SAMPLE	SM PPM	EU PPM	YB PPM	LU PPM	HF PPM
G27338	1.6	1.0	2.3	0.32	1
G27339	3.5	1.5	3.5	0.55	1
G27340	2.3	1.2	2.8	0.40	2
G27341	1.9	0.8	2.3	0.27	3
G27342	3.0	1.7	4.4	0.65	4
G27343	1.9	<0.2	2.8	0.41	2
G27344	2.0	0.9	1.5	0.27	1
G27345	1.5	<0.2	1.4	0.20	2
G27346	1.4	0.2	1.1	0.30	1
G27347	2.6	1.1	0.7	0.09	3
G27348	1.4	<0.2	1.7	0.24	1
G27349	1.2	0.4	1.9	0.25	1
G27350	2.2	1.6	1.9	0.24	3
H120801	1.3	0.5	0.4	0.25	2
H120802	2.9	0.6	3.3	0.36	3
H120803	1.2	0.4	2.0	0.26	1
H120804	1.3	0.8	1.7	0.23	2
H120805	5.5	1.7	1.1	0.23	3
H120806	2.3	0.9	2.2	0.41	1
H120807	3.5	0.8	0.6	0.13	3
H120808	2.1	0.9	1.9	0.32	1
H120809	1.8	0.8	1.9	0.33	1
H120810	5.0	1.3	1.2	0.14	3
H120811	2.6	1.0	2.5	0.38	2
H120812	3.3	1.4	2.7	0.45	1
H120813	1.9	0.3	2.3	0.32	<1
H120814	3.3	1.5	3.2	0.51	1
H120815	3.9	1.2	0.6	0.11	3
H120816	3.0	<0.2	0.6	0.16	3
H120817	2.3	0.6	2.1	0.32	2
H120818	2.2	1.4	2.3	0.29	2
H120819	1.6	<0.4	2.0	0.29	1
H120820	2.3	0.8	2.7	0.38	1
H120821	6.0	2.9	0.6	0.06	4
H120822	3.1	<0.4	2.1	0.41	3
H120823	3.1	0.9	2.0	0.29	2
H120824	1.0	<0.2	0.9	0.21	1
H120825	0.3	<0.2	0.3	<0.05	<1
H120826	1.2	1.0	1.4	0.21	1
H120827	4.5	<0.4	0.8	0.20	3
H120828	2.5	1.2	1.6	0.28	1
H120829	3.1	1.1	2.7	0.44	2
H120830	3.2	0.7	2.8	0.41	2
H120831	3.1	1.1	2.9	0.43	2
H120951	4.1	0.9	3.3	0.62	3
H120952	3.6	0.9	1.5	0.25	2
H120953	3.3	<0.4	3.4	0.52	1
H120954	9.6	2.0	4.8	0.69	5

SAMPLE	SM PPM	EU PPM	YB PPM	LU PPM	HF PPM
H120955	7.2	<0.2	3.7	0.63	5
H120956	<0.1	<0.2	<0.2	<0.05	<1
H120957	5.0	0.8	1.7	0.33	3
H120958	3.5	1.1	2.0	0.33	2
H120959	2.1	<0.3	2.0	0.31	1
H120960	6.0	1.4	3.3	0.44	5
H120961	7.6	2.0	3.7	0.57	5
H120962	7.1	2.4	3.6	0.60	4
H120963	15.2	1.9	1.4	0.21	4
H120964	0.9	0.7	0.6	0.09	4
H120965	1.1	<0.2	1.3	0.06	3
H120966	1.8	<1.1	3.4	0.51	3
H120967	2.9	2.8	2.8	0.36	4
H120968	2.7	<1.3	2.3	0.27	2
H120969	2.2	1.4	3.4	0.42	3
H120970	2.5	<1.3	1.1	0.15	4
H120971	<0.1	0.9	<0.3	0.27	<1
H120972	3.9	1.6	3.4	0.52	3
H120973	1.7	1.2	2.3	0.28	2
H120974	<0.1	0.5	<0.3	<0.05	3
H120975	<0.1	0.6	<0.2	<0.05	1
H120976	<0.1	1.1	0.3	<0.05	2
H120977	1.9	<0.2	2.2	0.29	3
H120978	3.1	<0.2	3.7	0.59	3
H120979	1.8	<0.8	2.4	0.38	<1
H120980	2.4	0.8	3.3	0.47	3
H120981	1.8	0.8	1.2	0.19	3
H120982	5.0	<0.2	3.2	0.50	4
H120983	6.5	1.4	5.0	0.72	7
H120984	0.2	0.3	0.3	<0.05	<1
H120985	1.0	0.6	1.2	0.24	1
H120986	<0.1	0.3	<0.3	<0.05	2
H120987	<0.1	<0.2	0.2	<0.05	<1
H120988	<0.1	0.5	<0.3	<0.05	<1
H120989	1.6	1.1	0.9	0.08	2
H120990	2.1	1.7	0.9	0.15	2
H120991	0.1	<0.2	<0.2	<0.05	<1
H120992	0.1	<0.2	<0.2	<0.05	<1
H120993	0.1	0.3	<0.2	<0.05	<1
H120994	2.3	1.6	3.5	0.40	2
H120995	4.8	1.6	1.1	0.22	5
H120996	<0.1	0.8	0.4	<0.05	<1
H120997	<0.1	1.0	<0.3	<0.05	3
H120998	<0.1	<0.2	<0.3	<0.05	2
H120999	2.3	0.7	2.0	0.31	2
H121000	4.0	1.5	3.0	0.45	2

SAMPLE	TA PPM	W PPM	IR PPB	TH PPM	U PPM
239B	<1	<4	<20	<0.9	<0.5
240B	<1	<6	<20	<0.7	<0.5
241B	3	5	<20	4.2	2.4
242B	1	<7	<20	<0.7	<0.5
243B	<1	<4	<20	<0.5	<0.5
244B	<1	<5	<20	<0.5	<0.5
245B	<1	<4	<20	<0.5	<0.5
246B	3	16	<20	<1.0	2.3
247B	<1	<5	<20	0.9	<1.2
248B	<1	<5	<20	0.7	1.2
249B	<1	<4	<20	0.8	0.9
250B	<1	<4	<20	8.8	1.8
G27302	<1	<5	<20	2.1	<0.5
G27303	2	<7	<20	<0.7	<0.5
G27304	<1	<6	<20	<0.6	<0.5
G27305	2	8	<20	<0.6	<0.5
G27306	<1	<5	<20	0.8	<0.5
G27307	2	<6	<20	0.8	<0.5
G27308	<1	<5	<20	2.0	<0.5
G27309	2	<7	<20	<0.7	<0.5
G27310	<1	<6	<20	<0.6	<0.5
G27311	1	<6	<20	<0.6	2.3
G27312	<1	<6	<20	<0.6	<0.5
G27313	<1	<6	<20	<0.6	<0.5
G27314	<1	<7	<20	<0.7	<0.5
G27315	<1	<4	<20	<0.5	<0.5
G27316	<1	<6	<20	<0.6	<0.5
G27317	1	<7	<20	0.8	<0.5
G27318	<1	<7	<20	<0.6	<0.5
G27319	<1	<5	<20	1.1	<0.5
G27320	<1	<6	<20	<0.6	<0.5
G27321	<1	<7	<20	<0.7	<0.5
G27322	<1	<4	<20	1.7	1.5
G27323	<1	<6	<20	<0.6	2.2
G27324	<1	<5	<20	1.6	<0.5
G27325	<1	<4	<20	<0.5	<0.5
G27326	1	<4	<20	0.9	3.1
G27327	<1	<4	<20	<0.9	<0.5
G27328	1	<4	<20	<0.5	<0.8
G27329	2	11	<20	<0.9	2.1
G27330	<1	<4	<20	<0.6	<0.5
G27331	2	<4	<20	<0.8	<0.5
G27332	<1	<4	<20	<0.5	<0.5
G27333	<1	<4	<20	<0.9	<0.5
G27334	1	<4	<20	<0.5	<0.5
G27335	<1	[30]	<20	<0.5	<0.5
G27336	<1	<4	<20	1.2	<0.5
G27337	<1	<4	<20	0.7	<0.5

SAMPLE	TA PPM	W PPM	IR PPB	TH PPM	U PPM
G27338	<1	<4	<20	<0.5	<0.5
G27339	<1	<4	<20	<0.6	<0.5
G27340	1	<4	<20	0.7	<0.5
G27341	<1	<4	<20	0.8	<0.5
G27342	<1	<4	<20	<0.7	<0.5
G27343	<1	<4	<20	<0.5	<0.5
G27344	<1	<4	<20	<0.5	<2.2
G27345	2	<4	<20	<0.5	<0.5
G27346	<1	<4	<20	<0.5	<0.5
G27347	<1	<4	<20	1.9	<0.5
G27348	<1	<4	<20	<0.5	<0.5
G27349	<1	<4	<20	<0.5	<0.5
G27350	<1	<4	<20	1.8	<0.5
H120801	<1	<4	<20	<0.5	<0.5
H120802	<1	<4	<20	<0.6	<0.5
H120803	1	<4	<20	<0.5	<0.5
H120804	<1	<4	<20	<0.5	<0.5
H120805	<1	<4	<20	3.0	<0.5
H120806	<1	<4	<20	0.8	2.5
H120807	<1	<4	<20	3.2	<1.0
H120808	<1	<4	<20	<0.5	<0.5
H120809	<1	<4	<20	<0.5	<0.5
H120810	<2	<5	<20	4.0	2.1
H120811	<1	<6	<20	0.7	<0.5
H120812	1	<7	<20	<0.6	<0.5
H120813	<1	<6	<20	<0.5	<0.5
H120814	<1	<7	<20	1.3	<0.5
H120815	2	<4	<20	4.6	2.0
H120816	<1	5	<20	2.7	1.5
H120817	<1	<7	<20	<0.6	<0.5
H120818	<1	<7	<20	<0.6	<0.5
H120819	<1	<8	<20	<0.7	<0.5
H120820	<1	<8	<20	<0.7	<0.5
H120821	<2	7	<20	5.6	3.0
H120822	<1	<7	<20	1.4	<0.5
H120823	<1	<4	<20	0.8	<0.8
H120824	<1	<4	<20	0.5	<0.5
H120825	<1	<4	<20	<0.5	<0.5
H120826	<1	<4	<20	<0.6	<1.2
H120827	<1	<4	<20	5.1	1.8
H120828	<1	<4	<20	0.6	<0.5
H120829	<1	<7	<20	<0.6	<1.3
H120830	1	<8	<20	<0.7	<0.5
H120831	1	<7	<20	<0.6	<0.5
H120951	<1	<8	<20	<0.7	<0.5
H120952	<1	<5	<20	2.2	<0.5
H120953	<1	<7	<20	<0.6	<0.5
H120954	<1	<6	<20	2.3	<0.5

SAMPLE	TA PPM	W PPM	IR PPB	TH PPM	U PPM
H120955	1	<5	<20	2.2	<1.0
H120956	<1	<4	<20	<0.5	<0.5
H120957	<1	<5	<20	1.7	<1.2
H120958	<1	7	<20	0.9	<1.1
H120959	<1	<7	<20	0.8	<1.2
H120960	<1	<5	<20	3.0	<1.3
H120961	<1	<5	<20	2.0	1.9
H120962	<1	<5	<20	1.7	<0.5
H120963	<2	<6	<20	2.0	<0.5
H120964	1	<4	<20	<0.5	<0.5
H120965	<1	<4	<20	<0.6	5.8
H120966	2	<5	<20	<0.9	<0.5
H120967	<1	<4	<20	1.1	<0.5
H120968	<2	<4	<20	<0.8	<0.5
H120969	<1	<4	<20	<0.8	<0.5
H120970	<2	<4	<20	3.2	<0.5
H120971	<1	<4	<20	<0.5	<0.7
H120972	2	<4	<20	2.0	1.9
H120973	<1	<4	<20	0.9	<0.8
H120974	<1	5	<20	<0.5	<0.7
H120975	<1	<4	<20	<0.5	<0.5
H120976	<1	<4	<20	<0.5	<0.8
H120977	<1	<4	<20	<0.5	<0.7
H120978	<1	<4	<20	<0.5	<0.8
H120979	1	<4	<20	<0.7	<0.5
H120980	<1	<4	<20	0.9	<0.9
H120981	<1	<4	<20	2.3	<0.7
H120982	2	<4	<20	1.8	<0.5
H120983	<1	<4	<20	2.4	<0.7
H120984	1	<4	<20	<0.5	<0.8
H120985	<1	<4	<20	<0.5	<0.6
H120986	<1	<4	<20	<0.5	<0.8
H120987	<1	<4	<20	<0.5	<0.7
H120988	<1	<4	<20	<0.5	<0.8
H120989	<1	<4	<20	1.4	0.9
H120990	<1	<4	<20	2.0	0.8
H120991	<1	<4	<20	<0.5	<0.5
H120992	<1	<4	<20	<0.5	<0.5
H120993	<1	<4	<20	<0.5	<0.5
H120994	<1	<4	<20	<0.5	<0.9
H120995	<1	5	<20	5.5	1.5
H120996	<1	<4	<20	<0.5	<0.7
H120997	<1	<4	<20	<0.5	<0.6
H120998	<1	<4	<20	<0.5	<0.7
H120999	<1	<7	<20	<0.5	<1.2
H121000	<1	<7	<20	<0.6	<1.3

SAMPLE	AU PPB	NA %	CA %	SC PPM	CR PPM	FE %	CO PPM	NI PPM	ZN PPM	AS PPM
120832	--	--	--	--	--	--	--	--	--	--
120833	--	--	--	--	--	--	--	--	--	--
120834	--	--	--	--	--	--	--	--	--	--
120835	6	2.50	<1	7.2	170	2.50	21	<200	300	9
120836	--	--	--	--	--	--	--	--	--	--
120837	47	<0.05	1	1.8	90	48.3	85	<200	<50	15
120838	--	--	--	--	--	--	--	--	--	--
120839	40	<0.05	<1	1.6	40	50.1	74	<200	<50	2
120840	--	--	--	--	--	--	--	--	--	--
120841	17	<0.05	2	15.6	4000	11.9	360	3900	150	<2

SAMPLE	SE PPM	RB PPM	MO PPM	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM	SM PPM
120832	--	--	--	--	--	--	--	--	--
120833	--	--	--	--	--	--	--	--	--
120834	--	--	--	--	--	--	--	--	--
120835	<5	70	<5	<5	0.5	500	8	15	1.1
120836	--	--	--	--	--	--	--	--	--
120837	<5	<30	<5	<5	1.0	<100	1	<3	0.2
120838	--	--	--	--	--	--	--	--	--
120839	<5	30	<5	<5	0.3	<100	1	<3	0.2
120840	--	--	--	--	--	--	--	--	--
120841	9	<30	<5	<5	1.0	<100	<1	<3	0.5

SAMPLE	EU PPM	YB PPM	LU PPM	HF PPM	TA PPM	W PPM	IR PPB	TH PPM	U PPM
120832	--	--	--	--	--	--	--	--	--
120833	--	--	--	--	--	--	--	--	--
120834	--	--	--	--	--	--	--	--	--
120835	<0.5	0.6	0.13	2	<1	<4	<20	1.3	1.1
120836	--	--	--	--	--	--	--	--	--
120837	0.2	0.4	0.08	<1	<1	<4	<20	<0.5	<0.5
120838	--	--	--	--	--	--	--	--	--
120839	<0.2	<0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
120840	--	--	--	--	--	--	--	--	--
120841	0.2	0.3	0.06	<1	<1	<4	<20	<0.5	<0.6

SAMPLE	AU PPB	NA %	CA %	SC PPM	CR PPM	FE %	CO PPM	NI PPM	ZN PPM	AS PPM
106151	<9	2.60	4	16.0	200	5.09	21	<300	170	<2
106152	<5	1.30	1	11.6	110	7.25	22	<200	50	<2
106153	<5	0.48	2	3.2	240	1.69	6	<200	<50	<2
106154	5	0.19	8	8.7	90	17.5	10	<200	170	<2
106155	<5	0.61	2	8.1	190	3.65	22	<200	<50	2
106156	<14	2.70	10	64.3	140	11.1	73	<200	<50	<2
106157	<5	<0.05	<1	4.9	1700	5.21	100	1200	50	170
106158	<10	2.40	7	43.5	90	10.5	38	<300	<100	2
106159	<5	<0.05	<1	0.4	300	0.37	<5	<200	<50	<2
106160	<5	0.15	2	5.8	100	12.2	7	<200	160	2
106161	630	0.06	<1	1.3	150	19.2	81	<200	<50	58
106162	<5	0.07	1	1.2	100	12.5	<5	<200	60	<2
106163	<5	<0.05	1	1.4	160	17.5	42	<200	120	14
106164	<5	0.50	3	11.0	140	2.71	6	<200	<50	<2
106165	<11	3.00	4	42.2	80	10.7	54	<300	<110	<2
106166	<11	2.30	4	42.9	90	11.1	54	<300	<100	<2
106167	<5	<0.05	<1	1.6	240	2.98	8	<200	<50	12
106168	<11	4.50	<3	11.9	310	3.38	25	<300	<130	3
106169	8	<0.05	<1	3.3	130	47.5	36	200	90	12
106170	<5	1.70	<1	2.2	150	1.52	<5	<200	<50	<2
120842	448	0.06	<1	5.0	140	9.21	130	<200	1000	18
120843	<5	<0.05	<1	1.5	70	20.8	<5	<200	60	<2
120844	180	<0.05	2	0.7	180	3.83	<5	<200	310	<2
120845	<7	1.90	3	43.2	180	9.55	55	<200	<70	<2
120846	<7	0.86	6	46.8	170	10.8	61	<200	70	2
120847	<7	3.00	4	17.2	290	4.24	26	<200	<70	<2
120848	<5	<0.05	1	8.0	2900	6.25	130	1300	100	3
120849	51	<0.05	<1	0.4	170	8.04	<5	<200	<50	3
120850	<12	5.10	<3	4.9	100	2.07	7	<300	<150	<2

SAMPLE	SE PPM	RB PPM	MO PPM	AG PPM	SB PPM	BA PPM	LA PPM	CE PPM	SM PPM
106151	<6	<70	<5	<5	0.4	400	25	36	3.8
106152	<5	50	<5	<5	0.2	400	11	20	5.4
106153	<5	<30	<5	<5	0.4	200	5	7	2.4
106154	<5	<30	<5	<5	<0.2	<100	11	23	6.5
106155	<5	50	<5	<5	0.3	400	11	20	5.1
106156	<7	<70	<5	<5	0.4	<100	4	13	7.8
106157	<5	<30	<5	<5	[illegible]	<100	<1	<3	<0.1
106158	<6	<70	<5	<5	0.5	100	11	24	3.0
106159	<5	<30	<5	<5	0.5	<100	<1	<3	0.1
106160	<5	30	<5	<5	0.4	<100	6	9	1.5
106161	<5	<30	<5	<5	1.0	200	1	<3	0.3
106162	<5	<30	<5	<5	<0.2	<100	1	3	0.7
106163	<5	<30	<5	<5	<0.2	100	1	<3	1.1
106164	<5	110	<5	<5	0.8	1000	11	23	1.9
106165	<7	110	<5	<5	<0.3	500	11	13	7.4
106166	<6	<70	7	<5	0.6	300	11	30	14.2
106167	<5	<30	<5	<5	0.6	100	1	3	0.2
106168	<7	<90	<5	<5	0.9	1300	37	55	6.5
106169	<5	<40	<5	<5	0.9	<100	3	3	1.9
106170	<5	40	<5	<5	0.3	300	12	22	3.2
120842	6	<30	<5	<5	1.0	<100	2	4	0.5
120843	<5	<30	<5	<5	0.2	<100	<1	<3	0.1
120844	<5	<30	<5	<5	0.3	<100	2	4	0.5
120845	<5	<40	<5	<5	<0.2	<100	4	10	4.4
120846	<5	<30	<5	<5	0.6	<100	5	9	5.3
120847	<5	<50	<5	<5	[illegible]	300	14	23	2.8
120848	<5	<30	<5	<5	0.2	100	<1	<3	0.1
120849	<5	<30	<5	<5	<0.2	<100	<1	<3	<0.1
120850	<8	<100	<5	<5	<0.2	1100	20	23	0.1

SAMPLE	EU PPM	YB PPM	LU PPM	HF PPM	TA PPM	W PPM	IR PPB	TH PPM	U PPM
106151	<0.2	1.7	0.27	4	<2	<4	<20	2.6	2.0
106152	0.8	0.9	0.16	3	<1	<4	<20	1.9	0.8
106153	<0.2	0.3	<0.05	1	<1	<4	<20	0.7	0.6
106154	0.8	1.2	0.19	2	1	<4	<20	1.0	<0.5
106155	0.6	0.7	0.11	2	1	<4	<20	1.9	0.7
106156	1.0	2.7	0.51	2	<2	<4	<20	<0.8	1.7
106157	<0.2	<0.2	<0.05	<1	<1	6	<20	<0.5	<0.5
106158	1.6	2.7	0.50	2	<2	<4	<20	2.0	<1.4
106159	<0.2	<0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
106160	0.2	0.5	0.08	2	<1	<4	<20	1.5	<0.5
106161	<0.2	<0.2	<0.05	1	<1	<4	<20	<0.5	0.8
106162	<0.2	0.3	0.06	<1	<1	<4	<20	<0.5	<0.5
106163	0.2	0.4	0.06	<1	<1	<4	<20	<0.5	0.7
106164	0.5	1.0	0.14	4	<1	<4	<20	2.4	1.4
106165	<0.2	2.6	0.33	4	<2	<4	<20	<0.8	<1.5
106166	1.2	2.8	0.49	3	<2	<4	<20	1.3	<1.5
106167	0.2	0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
106168	<0.2	0.8	0.11	2	<3	<4	<20	5.3	2.4
106169	0.3	0.6	0.10	<1	<1	<4	<20	<0.5	<0.6
106170	0.5	0.3	0.07	3	<1	<4	<20	2.2	1.0
120842	0.2	0.4	0.08	<1	<1	<4	<20	<0.5	0.6
120843	<0.2	0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
120844	0.7	0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
120845	1.0	2.1	0.27	1	<1	<4	<20	<0.5	<1.0
120846	1.0	2.1	0.33	2	1	<4	<20	<0.5	1.3
120847	<0.2	1.3	0.20	2	<2	<4	<20	1.5	<0.9
120848	<0.2	0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
120849	<0.2	<0.2	<0.05	<1	<1	<4	<20	<0.5	<0.5
120850	<0.2	0.4	0.11	5	<4	<4	<20	4.1	2.2

SAMPLE	AU PPB	CO2 %	AS PPM
58501	<1	1.64	60.0
58502	1	1.83	0.7
58503	<1	1.79	6.8
58504	2	0.27	1.8
58505	12	2.46	37.0
58506	1	6.21	0.5
58507	1	17.2	0.5
58508	3	2.13	3.6
58509	9	3.33	2.1
58510	2	3.56	1.0
58511	<1	5.36	32.0
58512	4	1.61	28.0
58513	2	0.59	20.0
58514	<1	15.5	8.4
58515	9	2.35	20.0
58516	<1	0.40	8.0
58517	2	8.79	40.0
58518	3	8.76	9.4
58519	<1	4.49	3.2
58520	<1	0.09	5.4
58521	390	1.46	2.6
58522	<1	0.60	10.0
58523	7	4.42	12.0
58524	1	0.86	6.8
58525	2	0.58	1.8
58526	1	5.75	14.0
58527	<1	1.14	0.4
58528	2	0.72	0.6
58529	1	0.24	2.8
58530	5	0.42	0.4
58531	2	6.69	0.7
58532	4	4.93	0.5
58533	5	0.14	0.6
58534	2	1.61	0.5
58535	7	3.68	1.8
58536	2	3.46	0.1
58537	3	0.03	0.1
58538	<1	1.52	0.3
58539	<1	1.72	4.0
58540	2	3.14	0.8
58541	1	3.91	0.5
58542	4	1.93	2.4
58543	1	3.97	3.2
58544	<1	1.80	0.5
58545	<1	3.36	0.3
58546	11	5.02	52.0
58547	<1	6.41	0.3
58548	2	5.46	0.3

SAMPLE	AU PPB	CO2 %	AS PPM
58549	<1	0.44	0.6
58550	2	2.86	52.0
58551	2	6.14	9.5
58552	4	6.03	7.2
58553	6	5.29	10.0
58554	7	0.39	2.2
58555	<1	0.59	4.4
58556	1	0.65	6.4
58557	<1	0.33	0.4
58558	1	0.09	2.2
58559	<1	3.99	11.0
58560	<1	0.57	0.2
58561	6	2.96	0.2
58562	<1	2.46	6.0
58563	1	6.38	0.1
58564	<1	6.08	0.1
58565	<1	4.11	0.3
58566	2	6.47	0.3
58567	1	7.95	21.0
58568	<1	0.41	0.5
58569	3	1.62	0.6
58570	3	2.43	24.0

SAMPLE	AU PPB	AS PPM	SB PPM
58571	5	3.6	<0.1
58572	56	--	--
58573	5	--	--
58574	26	--	--
58575	<1	--	--
58576	41	18.0	0.3
58577	100	72.0	2.4
58578	>10000	2.4	0.3
58579	20	--	--
58580	11	--	--
58581	4	0.9	<0.1
58582	3	0.3	<0.1
58583	6	--	--
58584	7	0.7	<0.1
58585	1500	--	--
58586	14	--	--
58587	360	140.	0.3
58588	11	4.8	<0.1
58589	13	6.4	0.2
58590	5	0.7	0.2
58591	3	--	--
58592	25	20.0	<0.1
58593	3	--	--
58594	<1	--	--
58595	9	0.5	<0.1
58596	3	0.7	<0.1
58597	48	5.2	<0.1
58598	27	84.0	0.5
58599	<1	--	--

> - CONCENTRATION TOO HIGH FOR GEOCHEMICAL ANALYSIS

COMPANY: MIDDLETON EXPLORATION
PROJECT NO: M 223 Loggy
ATTENTION: D. GARNER

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

(ACT:631) PAGE 1 OF 3
FILE NO: 72-501/P1+2
* TYPE ROCK GEOCHEM * DATE:JUNE 6, 1987

(VALUES IN P	AG	AL	AS	B	BA	BE	BI	CA	CD	CO	CU	FE
201	.7	44380	20	18	22	1.1	4	21200	4.9	13	27	75870
202B	1.7	54810	55	27	107	7.8	15	7410	13.0	29	83	144780
203	1.3	38630	11	18	78	3.0	6	21470	8.0	30	72	127640
204	1.3	37040	24	17	79	5.0	9	28160	8.4	13	22	112010
205B	1.0	38250	26	16	62	4.6	13	19420	7.0	17	390	84810
206B	.1	5570	3	1	148	1.1	2	10100	2.0	3	10	13500
207	1.2	31090	12	13	73	1.9	7	25370	5.5	19	75	120310
208B	1.5	36390	15	16	66	4.8	8	57030	9.7	23	138	88010
209B	1.9	53340	35	23	74	5.4	11	52560	8.9	24	222	104180
210	1.2	12330	15	12	46	3.2	5	82590	8.1	16	50	64790
211B	1.1	29960	30	14	57	4.7	9	29130	8.7	20	89	87520
212B	.8	26520	22	30	45	3.6	8	64470	10.0	20	62	79970
213	1.4	28620	78	15	69	7.2	17	610	10.3	25	94	109660
214	.2	23000	19	25	97	2.8	5	4280	3.7	7	32	41550
215B	1.2	25750	17	11	39	2.9	7	56050	6.5	14	129	60310
216	1.4	23270	40	13	54	4.7	10	32320	8.4	21	61	81800
217	.5	2930	11	6	30	2.2	2	4900	3.4	6	14	35360
218B	1.6	58360	47	26	57	6.0	10	20200	11.3	31	25	101850
219B	1.3	26640	13	14	46	.1	6	12800	2.0	13	93	171510
220	2.5	65730	63	33	146	10.7	25	1950	16.0	24	184	227450
221B	1.1	9230	22	6	32	1.9	6	54540	5.3	12	34	52250
222B	.3	5710	13	5	32	1.2	1	23320	2.8	6	16	31140
223	1.0	28410	13	12	25	.1	5	13590	3.3	16	91	191570
224B	1.6	46690	3	21	189	1.2	7	43150	5.5	19	82	157790
225B	1.3	34870	2	14	27	.2	5	24080	3.8	21	70	157790
226	2.5	57070	42	27	115	8.6	22	14990	13.3	22	111	210570
227B	1.4	29930	17	15	59	.2	5	15020	1.0	18	144	254900
228B	.5	15770	5	7	182	.2	5	3150	3.6	7	101	80740
229	1.5	72690	68	31	59	5.6	15	2400	11.0	38	192	108190
230	1.6	25630	28	14	108	3.7	11	26420	7.3	27	111	73360
231B	1.5	56200	4	24	60	2.6	10	7640	9.3	24	170	237630
232	.9	38340	11	19	145	2.3	7	28750	4.6	14	27	111430
233	.9	8410	36	7	75	6.4	15	710	8.3	14	110	110290
234B	1.0	53110	4	24	57	1.3	6	11000	6.5	28	26	218900
235	.1	5340	2	2	30	.8	3	8790	2.3	4	20	25720
236	.3	27690	30	17	67	3.5	9	3030	4.7	11	25	61650
237B	.3	15410	1	6	19	1.1	4	8840	2.5	7	4	67710
238	1.2	56750	49	25	56	5.4	11	22120	10.2	26	84	93550

[illegible] MIDDLETON EXPLORATION
[illegible] NO: M 223
[illegible] ON: D. BARNER

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

(ACT:631) PAGE 2 OF 3
FILE NO: 72-501/P1+2
* TYPE ROCK GEOCHEM * DATE: JUNE 6, 1927

VALUES IN PPM)	K	LI	MG	MN	MO	NA	NI	P	PB	SB	SR	TH
[illegible]0E	30	6	21310	477	1	1350	76	20	7	4	53	1
[illegible]02E	300	17	14370	2933	20	170	40	240	26	28	74	1
[illegible]03B	370	12	19500	2064	4	560	107	190	1	10	48	1
[illegible]04B	590	14	9380	2919	12	660	3	1210	11	19	60	1
[illegible]05B	400	15	23170	1032	7	290	19	520	13	14	66	1
[illegible]6E	1480	1	3040	251	2	2300	6	660	12	2	28	1
[illegible]07B	500	14	12250	1064	4	340	2	250	14	8	42	1
[illegible]08E	1050	25	24600	1663	9	160	77	260	2	15	61	1
[illegible]09E	820	38	23940	1295	12	60	82	230	16	16	78	1
[illegible]10E	890	8	20340	1573	7	820	158	420	7	12	38	1
[illegible]11E	240	28	22170	965	12	440	74	300	22	16	50	1
[illegible]12B	130	20	35260	1365	7	520	95	200	21	11	45	1
[illegible]13B	200	25	17330	148	18	660	63	260	46	29	50	1
[illegible]14B	2300	14	8440	502	8	200	2	1250	11	9	32	1
[illegible]15B	280	18	13840	1255	9	60	36	200	7	11	49	1
[illegible]16E	490	19	17710	890	9	620	77	290	18	18	45	1
[illegible]17B	390	1	1700	968	4	460	23	60	5	11	12	1
[illegible]18B	70	37	26880	839	11	30	96	20	9	20	71	1
[illegible]19B	580	10	14560	870	3	930	4	130	17	4	32	1
[illegible]20B	60	2	19720	2858	21	10	33	70	3	45	90	1
[illegible]21E	360	4	21050	952	3	600	72	180	8	9	25	1
[illegible]22E	430	3	8000	724	3	440	22	110	5	5	14	1
[illegible]23E	40	5	18830	653	1	490	5	40	5	1	26	1
[illegible]24B	5680	15	17770	1444	3	2100	69	40	13	5	62	1
[illegible]25B	90	8	24070	783	2	700	82	20	3	1	35	1
[illegible]26B	100	2	14370	3248	17	30	8	420	17	39	80	1
[illegible]27B	1720	6	14800	583	1	1100	7	70	9	4	29	1
[illegible]28B	1520	4	10980	362	1	180	1	30	10	1	15	1
[illegible]29B	110	20	51240	1194	9	90	70	330	34	11	80	2
[illegible]30B	630	11	12990	1452	9	730	110	220	10	16	42	1
[illegible]31B	130	8	42410	1359	1	20	16	50	22	7	62	3
[illegible]32B	4870	25	10700	946	2	1480	1	1070	13	8	67	1
[illegible]33B	1050	2	2510	877	15	900	23	480	13	31	36	1
[illegible]34B	260	12	37390	1440	5	200	61	50	5	4	55	3
[illegible]35B	410	2	2310	1005	3	530	1	690	4	5	16	1
[illegible]36B	1460	11	5150	1249	11	1080	1	1590	9	14	44	1
[illegible]37B	30	4	6410	557	1	710	1	390	6	5	22	1
[illegible]38B	50	25	31320	945	9	180	95	230	12	15	72	3

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

[redacted] (IN PPM)	U	V	ZN	GA	SR	N	CR	AU-PPB
[redacted]	3	45.0	51	1	18	21	41	2
[redacted]	1	285.8	150	10	63	14	12	3
[redacted]	2	168.9	114	12	15	29	88	6
[redacted]	2	24.0	156	3	35	6	6	3
[redacted]	2	235.4	74	12	34	46	7	1
[redacted]	1	10.1	44	2	12	1	53	8
207B	2	199.7	83	4	9	23	2	4
[redacted]	3	125.8	130	6	33	32	69	12
[redacted]	1	166.0	152	14	39	42	72	11
[redacted]	2	33.0	76	1	18	11	115	3
[redacted]	1	109.0	133	6	28	8	72	5
[redacted]	1	106.4	106	11	22	10	175	4
213B	1	130.8	116	2	43	24	112	24
[redacted]	1	10.7	82	1	19	10	1	4
[redacted]	1	76.2	80	1	19	3	52	6
216B	1	103.2	95	2	24	4	100	20
[redacted]	1	17.3	27	1	10	1	153	2
[redacted]	1	141.3	170	3	35	12	68	5
219B	1	59.8	55	2	2	12	111	1
220B	1	529.5	190	8	51	23	66	171
[redacted]	1	29.4	47	2	13	2	106	3
222B	1	23.0	41	1	8	4	223	2
223B	1	54.1	57	4	3	9	152	2
[redacted]	1	138.4	59	3	7	5	202	4
[redacted]	1	83.3	58	3	6	13	223	3
226B	1	141.3	180	5	44	14	6	5
[redacted]	1	148.5	85	3	4	14	2	5
[redacted]	1	35.9	38	2	1	1	227	1
229B	1	248.1	176	3	42	9	292	3
[redacted]	1	97.9	89	1	26	4	269	3
[redacted]	1	136.2	125	6	4	15	234	11
232B	3	27.1	94	4	23	13	10	4
[redacted]	1	32.7	132	1	51	3	21	4
[redacted]	2	134.3	121	6	14	18	234	2
235B	1	6.4	23	1	12	2	83	6
[redacted]	1	13.0	112	4	34	10	2	4
[redacted]	1	11.9	57	3	6	3	47	1
238B	2	224.7	115	7	41	12	111	3

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	UNIT	EXTRACTION	METHOD
1	Na	Sodium	35	0.05	PCI		Neutron Activation
2	Sc	Scandium	35	0.5	PPM		Neutron Activation
3	Cr	Chromium	35	50	PPM		Neutron Activation
4	Fe	Iron	35	0.5	PCI		Neutron Activation
5	Co	Cobalt	35	10	PPM		Neutron Activation
6	Ni	Nickel	35	50	PPM		Neutron Activation
7	Zn	Zinc	35	200	PPM		Neutron Activation
8	As	Arsenic	35	1	PPM		Neutron Activation
9	Se	Selenium	35	10	PPM		Neutron Activation
10	Br	Bromine	35	1	PPM		Neutron Activation
11	Rb	Rubidium	35	10	PPM		Neutron Activation
12	Zr	Zirconium	35	500	PPM		Neutron Activation
13	Mo	Molybdenum	35	2	PPM		Neutron Activation
14	Ag	Silver	35	5	PPM		Neutron Activation
15	Cd	Cadmium	35	10	PPM		Neutron Activation
16	Sn	Tin	35	200	PPM		Neutron Activation
17	Sb	Antimony	35	0.2	PPM		Neutron Activation
18	Te	Tellurium	35	20	PPM		Neutron Activation
19	Cs	Cesium	35	1	PPM		Neutron Activation
20	Ba	Barium	35	100	PPM		Neutron Activation
21	La	Lanthanum	35	5	PPM		Neutron Activation
22	Ce	Cerium	35	10	PPM		Neutron Activation
23	Sm	Samarium	35	0.1	PPM		Neutron Activation
24	Eu	Europium	35	2	PPM		Neutron Activation
25	Tb	Terbium	35	1	PPM		Neutron Activation
26	Yb	Ytterbium	35	5	PPM		Neutron Activation
27	Lu	Lutetium	35	0.5	PPM		Neutron Activation
28	Hf	Hafnium	35	2	PPM		Neutron Activation
29	Ta	Tantalum	35	1	PPM		Neutron Activation
30	W	Tungsten	35	2	PPM		Neutron Activation
31	Ir	Iridium	35	100	PPB		Neutron Activation
32	Au	Gold	35	5	PPB		Neutron Activation
33	Th	Thorium	35	0.5	PPM		Neutron Activation
34	U	Uranium	35	0.5	PPM		Neutron Activation
35	WI	Test Weight	35	0.01	g		

Bondar-Clegg & Company Ltd.
[redacted] Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8X5
Phone: (613) 74[redacted]
Telex: 053-3233

BONDAR-CLEGG

Geochemical Lab Report

REPO[redacted]: 017-6384

PROJECT: M-223 PAGE 1A

SAMPLE NUMBE[redacted]	ELEMENT UNITS	Na PCT	Sc PPM	Cr PPM	Fe PCT	Co PPM	Ni PPM	Zn PPM	As PPM	Se PPM	Br PPM	Rb PPM	Zr PPM
A 22351		1.10	31.0	370	7.8	53	100	<200	77	<10	<5	14	<500
A [redacted]2352		1.10	17.0	190	12.0	16	<50	300	260	<10	<5	36	<500
A [redacted]2353		1.70	26.0	270	10.0	23	56	330	250	<10	<5	44	<500
A 22354		1.40	22.0	250	9.3	21	53	310	15	<10	<5	29	<500
A [redacted]2355		0.86	16.0	170	19.0	63	91	210	38	<10	<5	26	<500
A 22356		1.00	17.0	190	18.0	55	69	220	27	<10	<5	24	<500
A [redacted]2357		0.78	30.0	210	11.0	44	73	330	24	<10	<5	50	<500
A [redacted]2358		0.83	45.0	190	12.0	55	88	240	27	<10	<5	41	<500
A 22359		1.40	39.0	240	10.0	62	110	<200	49	<10	<5	45	<500
A 22360		1.40	37.0	270	9.0	56	82	<200	38	<10	<5	44	<500
A [redacted]2361		1.60	37.0	320	7.7	70	95	<200	62	<10	<5	40	<500
A 22362		1.10	34.0	290	9.0	56	100	<200	43	<10	<5	65	<500
A [redacted]2363		1.40	41.0	280	8.8	65	140	<200	55	<10	<5	48	<500
A [redacted]2364		1.60	42.0	300	10.0	68	110	200	49	<10	<5	49	<500
A 22365		1.50	37.0	330	8.0	82	130	<200	11	<10	<5	85	<500
A [redacted]2366		0.82	30.0	410	8.1	48	99	<200	6	<10	<5	41	<500
A 22367		1.70	42.0	300	8.2	100	150	230	64	<10	<5	53	<500
A [redacted]2368		1.60	37.0	280	7.3	77	160	<200	29	<10	<5	40	<500
A [redacted]2369		1.60	32.0	260	7.8	47	68	270	15	<10	<5	30	<500
A 22370		1.40	27.0	310	7.3	45	120	240	13	<10	<5	50	<500
A [redacted]2371		1.60	16.0	240	7.3	49	70	590	3	<10	<5	44	510
A 22372		1.60	73.6	150	13.0	78	76	270	43	<10	<5	26	<500
A 22373		1.40	42.0	120	11.0	58	63	<200	4	<10	<5	17	<500
A [redacted]2374		1.40	47.0	140	13.0	59	<50	<200	13	<10	<5	28	670
A [redacted]2375		1.70	18.0	120	6.3	33	<50	310	15	<10	<5	38	<500
A [redacted]2376		0.44	12.0	120	12.0	29	<50	390	3	<10	<5	17	<500
A [redacted]2377		0.48	11.0	380	3.5	20	<50	220	7	<10	9	11	<500
A 22378		1.60	35.0	440	6.5	53	71	<200	40	<10	<5	27	<500
A [redacted]2379		1.20	23.0	140	12.0	49	<50	380	22	<10	<5	39	<500
A [redacted]2380		1.40	36.0	470	9.0	53	110	<200	54	<10	<5	13	<500
A [redacted]2381		3.30	24.0	280	13.0	20	<50	330	114	<10	<5	54	<500
A [redacted]2382		0.28	10.0	3800	6.0	72	1200	<200	650	<10	<5	<10	<500
A [redacted]2383		0.25	5.9	1200	5.8	77	1400	<200	635	<10	<5	<10	<500
A 22384		0.21	10.0	1500	6.4	130	2180	<200	265	<10	<5	<10	<500
A [redacted]2385		0.14	17.0	1600	6.1	74	660	<200	27	<10	<5	<10	<500

[redacted]dar-Clegg & Company Ltd.
[redacted] Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8X5
[redacted]one: (613) 74[redacted]
[redacted]x: 053-3233

BONDAR-CLEGG

Geochemical Lab Report

EPO[redacted]: 017-6384

PROJECT: N-223 PAGE 1B

AMPLE UMB[redacted]	ELEMENT UNITS	Mo PPM	Ag PPM	Cd PPM	Sn PPM	Sb PPM	Te PPM	Cs PPM	Ba PPM	La PPM	Ce PPM	Sm PPM	Eu PPM
A 22351		2	<5	<10	<200	0.4	<20	<1	<100	<5	<10	2.2	<2
A [redacted]2352		2	<5	<10	<200	1.1	<20	<1	130	13	24	2.7	<2
A [redacted]2353		<2	<5	<10	<200	1.3	<20	2	250	14	27	3.3	<2
A 22354		<2	<5	<10	<200	1.0	<20	<1	180	14	27	3.0	<2
A [redacted]2355		4	<5	<10	<200	2.1	<20	<1	<100	10	25	2.3	<2
A 22356		4	<5	<10	<200	2.1	<20	1	<100	10	21	2.3	<2
A [redacted]2357		<2	<5	<10	<200	0.7	<20	1	350	7	16	2.3	<2
A [redacted]2358		<2	<5	<10	<200	0.4	<20	1	260	<5	<10	1.6	<2
A 22359		<2	<5	<10	<200	0.6	<20	1	350	<5	<10	1.6	<2
A [redacted]2360		<2	<5	<10	<200	0.6	<20	2	380	<5	<10	1.5	<2
A 22361		<2	<5	<10	<200	0.6	<20	1	330	<5	11	1.6	<2
A 22362		<2	<5	<10	<200	0.6	<20	2	460	<5	<10	1.5	<2
A [redacted]2363		<2	<5	<10	<200	0.6	<20	2	390	<5	10	1.8	<2
A [redacted]2364		<2	<5	<10	<200	0.5	<20	1	330	<5	10	1.6	<2
A 22365		<2	<5	<10	<200	0.6	<20	2	650	<5	12	1.5	<2
A [redacted]2366		2	<5	<10	<200	0.5	<20	1	330	<5	15	1.5	<2
A 22367		<2	<5	<10	<200	0.6	<20	2	370	<5	10	1.7	<2
A [redacted]2368		<2	<5	<10	<200	0.6	<20	2	360	<5	<10	1.5	<2
A [redacted]2369		<2	<5	<10	<200	0.8	<20	<1	310	<5	<10	1.7	<2
A 22370		<2	<5	<10	<200	0.6	<20	2	500	8	<10	2.5	<2
A [redacted]2371		<2	<5	<10	<200	1.1	<20	2	330	16	36	3.0	2
A 22372		<2	<5	<10	<200	0.8	<20	1	170	6	15	3.4	<2
A 22373		<2	<5	<10	<200	0.5	<20	<1	160	<5	15	2.1	<2
A [redacted]2374		<2	<5	<10	<200	0.6	<20	<1	170	8	17	3.4	<2
A 22375		<2	<5	<10	<200	0.7	<20	<1	280	12	26	2.8	<2
A [redacted]2376		<2	<5	<10	<200	0.5	<20	<1	110	9	16	2.0	<2
A [redacted]2377		<2	<5	<10	<200	0.4	<20	<1	210	<5	<10	1.0	<2
A 22378		<2	<5	<10	<200	0.8	<20	<1	240	<5	<10	2.3	<2
A [redacted]2379		3	<5	<10	<200	0.7	<20	1	260	9	17	3.0	<2
A [redacted]2380		<2	<5	<10	<200	0.7	<20	<1	<100	<5	12	2.3	<2
A 22381		91	<5	<10	<200	3.7	<20	1	410	9	12	1.8	<2
A [redacted]2382		<2	<5	<10	<200	0.8	<20	<1	<100	<5	<10	<0.5	<2
A 22383		3	<5	<10	<200	0.8	<20	<1	<100	<5	<10	<0.5	<2
A 22384		<2	<5	<10	<200	2.7	<20	<1	<100	<5	<10	<0.5	<2
A [redacted]2385		<2	<5	<10	<200	0.9	<20	<1	<100	<5	<10	0.7	<2

ndar-Clegg & Company Ltd.
20 Canotek Rd.,
Ottawa, Ontario,
Canada K1J 8[illegible]
Phone: (613) 7[illegible]0
Telex: 053-323[illegible]

BONDAR-CLEGG

Geochemical Lab Report

REPORT: 017-6384

PROJECT: M-223 PAGE 1C

SAMPLE NUMBER	ELEMENT UNITS	Tb PPM	Yb PPM	Lu PPM	Hf PPM	Ta PPM	W PPM	Ir PPB	Au PPB	Th PPM	U PPM	WT g
A 22351		<1	<5	<0.5	<2	<1	4	<100	<5	<0.5	<0.5	11.60
A 22352		<1	<5	<0.5	3	<1	<2	<100	8	1.9	<0.5	10.83
A 22353		<1	<5	<0.5	3	<1	<2	<100	8	2.0	<0.5	8.61
A 22354		<1	<5	<0.5	3	<1	<2	<100	<5	1.8	<0.5	8.30
A 22355		<1	<5	<0.5	3	<1	<2	<100	12	1.6	<0.5	12.03
A 22356		<1	<5	<0.5	4	<1	<2	<100	10	1.5	<0.5	10.65
A 22357		<1	<5	<0.5	2	<1	4	<100	23	0.9	<0.5	11.55
A 22358		<1	<5	<0.5	<2	<1	<2	<100	12	<0.5	<0.5	11.31
A 22359		<1	<5	<0.5	<2	<1	<2	<100	6	<0.5	<0.5	9.11
A 22360		<1	<5	<0.5	<2	<1	<2	<100	11	<0.5	<0.5	11.26
A 22361		<1	<5	<0.5	<2	<1	<2	<100	12	<0.5	<0.5	9.16
A 22362		<1	<5	<0.5	<2	<1	<2	<100	9	<0.5	<0.5	9.00
A 22363		<1	<5	<0.5	<2	<1	<2	<100	<5	<0.5	<0.5	7.89
A 22364		<1	<5	<0.5	<2	<1	<2	<100	7	<0.5	<0.5	8.45
A 22365		<1	<5	<0.5	<2	<1	7	<100	28	<0.5	<0.5	9.01
A 22366		<1	<5	<0.5	<2	<1	<2	<100	8	<0.5	<0.5	9.70
A 22367		<1	<5	<0.5	<2	<1	<2	<100	9	<0.5	<0.5	9.15
A 22368		<1	<5	<0.5	<2	<1	<2	<100	10	0.6	<0.5	8.17
A 22369		<1	<5	<0.5	<2	<1	2	<100	6	<0.5	<0.5	9.78
A 22370		<1	<5	<0.5	2	<1	2	<100	8	0.9	<0.5	9.07
A 22371		<1	<5	<0.5	2	<1	4	<100	27	1.9	<0.5	10.35
A 22372		<1	<5	0.6	4	<1	<2	<100	<5	0.5	<0.5	8.95
A 22373		<1	<5	<0.5	3	<1	2	<100	<5	<0.5	<0.5	10.51
A 22374		1	<5	0.5	<2	<1	<2	<100	<5	<0.5	<0.5	8.02
A 22375		<1	<5	<0.5	2	<1	<2	<100	<5	1.6	<0.5	10.23
A 22376		<1	<5	<0.5	<2	<1	<2	<100	<5	0.9	<0.5	9.33
A 22377		<1	<5	<0.5	<2	<1	2	<100	<5	<0.5	<0.5	12.47
A 22378		<1	<5	<0.5	<2	<1	8	<100	<5	<0.5	<0.5	8.74
A 22379		<1	<5	0.5	4	<1	4	<100	41	0.8	<0.5	10.15
A 22380		<1	<5	<0.5	<2	<1	<2	<100	7	0.6	<0.5	8.91
A 22381		<1	<5	<0.5	3	<1	10	<100	120	1.3	<0.5	10.40
A 22382		<1	<5	<0.5	<2	<1	3	<100	6	<0.5	<0.5	8.89
A 22383		<1	<5	<0.5	<2	<1	<2	<100	<5	<0.5	<0.5	11.21
A 22384		<1	<5	<0.5	<2	<1	<2	<100	<5	<0.5	<0.5	9.17
A 22385		<1	<5	<0.5	<2	<1	<2	<100	16	<0.5	<0.5	9.48

X-RAY ASSAY LABORATORIES
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1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

COPY TO:

ROBERT S. MIDDLETON EXPLORATION
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P4N 7W8

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ATTN: ROBERT S. MIDDLETON
BOX 1637
TIMMINS, ONTARIO
P4N 7W8

CUSTOMER NO. 1078

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
2192	21-Oct-87	28778	10-Aug-87

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
	M-223		ROCK

	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
6 BAGS	TRANS PROVINCIAL	79829	TIMMINS

		DESCRIPTION METHOD	XRAL CODE	UNIT COST	AMOUNT
1.	112	WRA	6, 0, 0, 0, 0	24.00	2688.00
2.	142	02-6 (LOT)	14,20, 0, 0, 0	13.00	1846.00
3.	112	CRUSH & AGATE MILL	1, 0, 0, 0, 0	4.50	504.00
4.	30	CRUSH & CHROME MILL	1, 0, 0, 0, 0	3.15	94.50

WRA for samples 27302-27350
120801-120821
120829-120834
120836, -838, -840
120951-120984
120996-121000

JOB NO.	M-223.
Approved by	J.W. Watson
Date Approved	Oct. 29/87
Posted	

Trace Element Analysis of samples:
239B-250B
27302-27350
120801-120831
120951-121000

SUB-TOTAL $ 5132.50

SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES
OTHER			SURCHARGE - RUSH SERVICE

TOTAL IN CANADIAN FUNDS $ 5132.50

ORIGINAL INVOICE

AL

LIMITED

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SUBMITTED TO:

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ATTN: TOM GOUTH
BOX 1637
TIMMINS, ONTARIO
P4N 7W8

SAME

CUSTOMER NO. 1078

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
2609	12-Nov-87	29475	24-Sep-87

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

CLIENTS P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
	M-223		ROCK

NO. OF PKGS	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
2 BOXES	BPX	356672	TIMMINS

QUANTITY		DESCRIPTION METHOD	CODE NUMBER	UNIT COST	AMOUNT
	13	WRA	6, 0, 0, 0, 0	32.00	416.00
2.	29	L-VIAL, 02-6(LOT)	14,20, 0, 0, 0	15.00	435.00
	29	CRUSH & MILL	1, 0, 0, 0, 0	3.15	91.35

Trace Element Analyses for samples 106151 - 106170; 120842-120850

WRA for ~~samples~~ 13 of the above samples

JOB NO.	M-223
Approved by	JW Newsome
Date Approved	Nov. 1/87
Posted	

SUB-TOTAL $ 942.35

MISC. CHARGES	SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES	
	5.00				$ 5.00
	OTHER			SURCHARGE - RUSH SERVICE	

TOTAL IN CANADIAN FUNDS $ 947.35

ORIGINAL INVOICE

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COPY TO:

ROBERT S. MIDDLETON EXPLORATION
ATTN: DON GARNER
BOX 1637
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P4N 7W8

SAME

M223

CUSTOMER NO. 1078

SUBMITTED TO:

ROBERT S. MIDDLETON EXPLORATION
ATTN: DON GARNER
BOX 1637
TIMMINS, ONTARIO
P4N 7W8

SAME

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTE
2914	30-Nov-87	30542	27-Nov-87

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

CLIENTS P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED

NO. PKGS	SHIPPED VIA	WAYBILL NO.	SHIPPED FROM
	FOR JENSEN CATION PLOT		

QUANTITY	DESCRIPTION METHOD	CODE NUMBER	UNIT COST	AMOUNT
1. 6	JCP ON 28778,29475	15, 0, 0, 0, 0	10.00	60.00
			SUB-TOTAL	$ 60.00

JOB NO. M223
Approved by
Date Approved Dec-8/87
Posted

MISC. CHARGES	SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES
	OTHER			SURCHARGE - RUSH SERVICE

TOTAL IN CANADIAN FUNDS $ 60.00

ORIGINAL INVOICE

X-RAY ASSAY LABORATORIES
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ATTN: DON GARNER
BOX 1637
TIMMINS, ONTARIO
P4N 7W8

UBMITTED TO:
ROBERT S. MIDDLETON EXPLORATION
ATTN: DON GARNER
BOX 1637
TIMMINS, ONTARIO SAME
P4N 7W8

CUSTOMER NO. 1078

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
3403	11-Jan-88	30628	4-Dec-87

TERMS
TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

CLIENT P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
	M223		ROCK

NO. OF PKGS.	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
1 BOX	BPX	X371397	TIMMINS

QUANTITY		DESCRIPTION METHOD	CODE NUMBER	UNIT COST	AMOUNT
1.	6	WRA SAMPLES 120832, -833, -834, -836, -838, -840	6, 0, 0, 0, 0	40.00	240.00
2	4	L-VIAL, 02-6 (LOT)	14, 20, 0, 0, 0	15.00	60.00
3	1	JENSEN PLOT	15, 0, 0, 0, 0	10.00	10.00

10 samples : 120832 - 120841
for trace element analysis
+ 6 of which analysed for whole rock

JOB NO.	M-223
Approved by	F W Morrison
Date Approved	Jan 18/88
Posted	SD.

SUB-TOTAL $ 310.00

MISC. CHARGES	SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES	
	3.50				$ 3.50
	OTHER			SURCHARGE - RUSH SERVICE	

ORIGINAL INVOICE [illegible] YOUR [illegible]

TOTAL IN CANADIAN FUNDS $ 313.50

A P P E N D I X B

X-RAY ASSAY LABORATORIES
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION
R.S. MIDDLETON (REF 028778)

30-NOV-87
GRAPH 1

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TI02
G27302	1	BC	56.94	16.19	26.87
G27303	2	BT	49.04	27.02	23.93
G27304	3	BT	47.06	27.00	25.93
G27305	4	BC	52.15	23.58	24.27
G27306	5	BT	41.94	30.41	27.66
G27307	6	BT	43.58	29.38	27.04
G27308	7	AT	59.80	7.12	33.08
G27309	8	BT	41.59	24.87	33.54
G27310	9	AT	51.32	18.22	30.46
G27311	10	BT	48.29	26.59	25.12
G27312	11	FT	42.03	21.79	36.17
G27313	12	BC	51.54	25.22	23.24
G27314	13	BC	57.32	15.95	26.73
G27315	14	UK	1.74	89.84	8.43
G27316	15	BC	54.68	22.30	23.02
G27317	16	BT	36.51	28.45	35.04
G27318	17	BT	46.12	23.89	29.99
G27319	18	AT	53.95	10.02	36.02
G27320	19	**	52.86	38.56	8.58
G27321	20	AT	55.95	14.34	29.71
G27322	21	AC	64.64	14.12	21.25
G27323	22	FT	48.27	16.68	35.05
G27324	23	BC	58.40	15.82	25.78
G27325	24	BT	45.62	24.62	29.76
G27326	25	BC	51.60	21.87	26.53

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
** - NOT DEFINED	

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E. C. GRUNSKY (1981): NO. 16 AN ALGORITHM FOR THE CLASSIFICATION OF SUBALKALIC VOLCANIC ROCKS USING THE JENSEN CATION PLOT. SUMMARY OF FIELD WORK. ONTARIO DIV. OF MINES, MISC. PAPER 100.

X-RAY ASSAY LABORATORIES 30-NOV-87
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION GRAPH 2
R.S. MIDDLETON (REF 028778)

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
G27327	1	MT	40.89	36.16	22.94
G27328	2	BC	58.87	16.04	25.10
G27329	3	UK	2.05	88.56	9.39
G27330	4	BT	46.18	27.49	26.33
G27331	5	FT	47.08	12.54	40.38
G27332	6	AC	60.57	16.04	23.39
G27333	7	AT	51.40	15.92	32.69
G27334	8	FT	41.29	23.79	34.92
G27335	9	AT	55.24	13.27	31.49
G27336	10	AT	57.07	8.55	34.39
G27337	11	AT	59.92	6.53	33.55
G27338	12	BC	58.80	16.74	24.46
G27339	13	BT	40.14	30.24	29.61
G27340	14	BT	46.55	27.70	25.75
G27341	15	BC	58.55	18.15	23.30
G27342	16	BT	38.35	27.68	33.97
G27343	17	BT	42.54	25.29	32.18
G27344	18	BC	51.72	22.64	25.64
G27345	19	BK	31.36	42.40	26.24
G27346	20	BT	42.94	27.59	29.47
G27347	21	BC	59.20	23.22	17.58
G27348	22	MT	42.00	34.41	23.59
G27349	23	BT	45.11	31.52	23.38
G27350	24	BC	54.29	21.23	24.48
H120801	25	BC	54.74	20.52	24.74

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
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X-RAY ASSAY LABORATORIES
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION
R.S. MIDDLETON (REF 028778)

30-NOV-87
GRAPH 3

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
H120802	1	FT	46.58	18.11	35.31
H120803	2	FT	50.05	20.14	29.81
H120804	3	BT	44.18	25.24	30.58
H120805	4	AC	65.97	17.07	16.96
H120806	5	FT	46.57	21.01	32.42
H120807	6	RC	82.43	7.02	10.55
H120808	7	BT	43.34	32.28	24.38
H120809	8	BT	45.43	30.65	23.92
H120810	9	AC	66.85	13.25	19.90
H120811	10	AT	54.67	16.16	29.17
H120812	11	BT	46.63	25.58	27.79
H120813	12	FT	41.29	21.09	37.62
H120814	13	BT	43.64	29.36	27.00
H120815	14	RC	81.13	9.86	9.01
H120816	15	RC	82.66	6.99	10.35
H120817	16	MT	44.97	31.77	23.27
H120818	17	MT	43.98	33.66	22.36
H120819	18	AT	55.21	16.37	28.41
H120820	19	BC	52.77	21.61	25.62
H120821	20	RC	86.79	4.67	8.54
H120829	21	BT	42.43	28.66	28.91
H120830	22	BT	46.79	28.81	24.40
H120831	23	BT	40.69	29.56	29.75
H120951	24	FT	45.26	22.54	32.20
H120952	25	AC	64.33	14.35	21.32

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
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X-RAY ASSAY LABORATORIES 30-NOV-87

JENSEN CATION PLOT WITH GRUNSKY MODIFICATION GRAPH 4

R.S. MIDDLETON (REF 028778)

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
H120953	1	FT	46.68	18.10	35.22
H120954	2	FT	45.57	14.83	39.61
H120955	3	DT	68.18	7.89	23.92
H120956	4	UK	4.08	81.86	14.06
H120957	5	BC	57.93	18.64	23.43
H120958	6	AT	55.36	14.95	29.69
H120959	7	BC	55.11	19.41	25.47
H120960	8	DT	69.91	9.74	20.36
H120961	9	DT	62.21	11.60	26.18
H120962	10	DT	64.52	8.87	26.61
H120963	11	AC	60.01	18.58	21.41
H120964	12	DT	62.06	12.48	25.46
H120965	13	DT	61.46	9.89	28.65
H120966	14	AT	50.50	13.25	36.25
H120967	15	AT	55.50	16.24	28.26
H120968	16	AC	61.24	16.71	22.05
H120969	17	BT	43.88	27.48	28.64
H120970	18	AC	69.49	22.49	14.02
H120971	19	BT	45.59	29.29	25.12
H120972	20	AT	51.95	15.76	32.30
H120973	21	BT	48.72	24.89	26.39
H120974	22	BT	46.22	24.99	28.79
H120975	23	AT	55.37	14.36	30.25
H120976	24	FT	46.08	21.12	32.80
H120977	25	BT	46.14	29.22	24.65

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
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X-RAY ASSAY LABORATORIES 30-NOV-87
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION GRAPH 5
R.S. MIDDLETON (REF 028778)

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
H120978	1	FT	46.78	14.79	38.43
H120979	2	FT	46.27	20.59	33.14
H120980	3	BT	45.05	23.06	31.89
H120981	4	DT	61.62	13.51	24.87
H120982	5	DT	61.62	11.01	27.37
H120983	6	DT	67.89	7.26	24.85
H120984	7	UK	8.25	77.79	13.97
H120996	8	BT	42.93	25.75	31.32
H120997	9	AT	59.33	6.13	34.54
H120998	10	FT	45.51	20.80	33.69
H120999	11	BT	44.26	31.86	23.88
H121000	12	BC	51.38	21.44	27.18

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
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X-RAY ASSAY LABORATORIES
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION
R.S. MIDDLETON (REF 30628)

11-JAN-88
GRAPH 1

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
120832	1	FT	44.52	21.19	34.29
120833	2	BK	35.32	46.14	18.54
120834	3	AC	64.27	21.53	14.20
120836	4	BK	25.45	56.32	18.23
120838	5	RC	83.79	6.13	10.08
120840	6	UK	4.30	83.00	12.70

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
** - NOT DEFINED	

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X-RAY ASSAY LABORATORIES
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION
S. MIDDLETON (REF 029475)

30-NOV-87
GRAPH 1

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
106151	1	AC	69.11	12.12	18.77
106152	2	DT	63.89	9.44	26.67
106156	3	BT	43.07	27.11	29.82
106157	4	UK	0.82	90.54	8.63
106158	5	FT	46.97	21.17	31.86
106164	6	DC	78.78	6.51	14.71
106166	7	FT	46.47	19.41	34.12
106168	8	AC	62.78	24.69	12.53
120845	9	FT	48.98	20.40	30.62
120846	10	BT	45.59	22.80	31.62
120847	11	AC	61.54	20.58	17.88
120848	12	UK	3.38	85.27	11.35
120850	13	RC	84.76	6.47	8.77

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
** - NOT DEFINED	

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X-RAY ASSAY LABORATORIES' 26-JAN-87
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION GRAPH 1
D.R. PYKE (REP:30218 - REF:25768)

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
58501	1	DC	73.65	11.08	15.27
58502	2	DC	73.68	11.07	15.25
58503	3	RC	80.83	7.81	11.37
58504	4	BK	33.44	44.48	22.08
58505	5	AT	52.83	15.51	31.65
58506	6	BT	42.69	32.75	24.57
58507	7	FT	40.28	22.68	37.04
58508	8	BK	24.18	55.15	20.67
58509	9	BC	51.93	20.85	27.22
58510	10	AT	50.23	15.39	34.38
58511	11	BC	57.83	18.45	23.72
58512	12	AT	50.92	15.80	33.28
58513	13	BT	48.95	26.09	24.97
58514	14	BK	39.72	40.81	19.47
58515	15	BC	53.89	19.38	26.73
58516	16	BC	54.09	21.91	24.00
58517	17	BT	48.50	22.42	29.08
58518	18	BC	53.52	21.95	24.53
58519	19	FT	45.35	22.41	32.24
58520	20	BT	42.89	25.86	31.25
58521	21	FT	44.85	22.39	32.76
58522	22	BT	44.28	30.80	24.92
58523	23	FT	44.25	19.08	36.67
58524	24	BT	42.10	25.14	32.75
58525	25	FT	42.42	21.91	35.67

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
RC - CALC-ALKALINE RHYOLITE	DC - CALC-ALKALINE DACITE
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X-RAY ASSAY LABORATORIES 26-JAN-87
JENSEN CATION PLOT WITH GRUNSKY MODIFICATION GRAPH 2
D.R. PYKE (REP:30218 - REF:25768)

SAMPLE	SYMBOL	CODE	AL203	MGO	FE203+MNO+TIO2
58526	1	FT	46.28	21.13	32.58
58527	2	DT	66.24	8.27	25.50
58528	3	DT	62.47	12.17	25.36
58529	4	AC	68.80	11.41	19.79
58530	5	BT	43.49	30.88	25.63
58531	6	AC	61.97	16.15	21.87
58532	7	MT	44.88	31.87	23.24
58533	8	BT	42.75	25.30	31.95
58534	9	BT	42.68	26.58	30.74
58535	10	AT	58.24	13.81	27.95
58536	11	BT	48.32	25.54	26.14
58537	12	BT	40.38	30.48	29.14
58538	13	FT	46.11	19.68	34.20
58539	14	BT	46.12	29.75	24.13
58540	15	BC	51.66	21.50	26.84
58541	16	AT	53.93	15.23	30.84
58542	17	BT	43.58	24.44	31.97
58543	18	AT	55.55	14.48	29.97
58544	19	FT	49.89	16.01	34.09
58545	20	BT	42.04	32.64	25.31
58546	21	BT	44.48	27.72	27.81
58547	22	BT	44.34	25.90	29.76
58548	23	FT	49.47	12.51	38.02
58549	24	BT	40.87	31.81	27.32
58550	25	FT	45.61	20.76	33.64

CODE REFERENCE - JENSEN CATION PLOT

UK - ULTRAMAFIC KOMATIITE	BK - BASALTIC KOMATIITE
FT - IRON RICH BASALT	MT - HIGH MAGNESIUM BASALT
AT - THOLEIITIC ANDESITE	DT - THOLEIITIC DACITE
RT - THOLEIITIC RHYOLITE	BT - THOLEIITIC BASALT
AC - CALC-ALKALINE ANDESITE	BC - CALC-ALKALINE BASALT
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A P P E N D I X C

Descriptions of Rock Samples With Anomalous Trace Element Contents

Sample	Trace Element (ppm, ppb for Au)	Description
27315	As (720)	Talcose, komateiitic ultramafic
27320	Sb (4.7)	Felsic Volcanic, or silicified mafic volcanic
27329	Au (31)	Talcose, komateiitic ultramafic
27335	Au (79)	Tholeiitic andesite; carbonatized, 2% pyrite
120801	Sb (2.7)	Calc-alkaline basalt; bleached (carbonatized)
120802	Sb (2.1)	Dark green, iron-rich basalt
120803	Sb (3.4)	Iron-rich basalt
120804	Zn (4500)	Tholeiitic basalt
120814	Sb (3.4)	Dark green, tholeiitic basalt
120837	Au (47)	Banded iron formation; 10-15% Fe sulfides
120839	Au (40)	Banded iron formation; 10% Fe sulfides
120842	Au (48)	Banded iron formation; chert-magnetite
120844	Au (80)	Banded iron formation float
120847	Sb (4.8)	Intermediate volcanic; sericitic
120849	Au (57)	Banded iron formation; chert-magnetite
120952	Zn (1400)	Calc-alkaline andesite; 2% pyrite
120960	Zn (1400)	Tholeiitic dacite; 4% pyrite
120981	Au (37), Zn (2900)	Tholeiitic dacite; 4% pyrite; thin quartz veins

Sample	Trace Element (ppm, ppb for Au)	Description
106157	As (170), Sb (4.3)	Serpentinized komateiitic ultramafic
220B	Au (171)	Graphitic and pyritic argillite
58521	Au (390), Sb (2.4)	Dark green, iron-rich basalt
58577	Au (100)	Graphitic and pyritic argillite
58588	Au (360)	Smokey quartz vein from old pit
58589	Au (1500)	Smokey quartz vein hosted by diabase
58597	Au (48)	Graphitic argillite
22352	As (260), Sb (2.1)	Chloritic, well foliated mafic volcanic
22353	As (250), Sb (2.1)	Chloritic, well foliated mafic volcanic
22381	Au (120), Sb (3.7) Mo (91)	Sulfide facies iron formation (?)
22382	As (650)	Carbonatized ultramafic; talcose
22383	As (635)	Carbonatized ultramafic; talcose
22384	As (265)	Carbonatized ultramafic; talcose

Ontario Ministry of Northern Development and Mines

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. W3806.187

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the

Amended Copy 2.11119

Mining

900

Type of Survey(s): Assaying

Claim Holder(s): Glen Auden Resources L

Address: P.O. Box 1637 Timmins Ont. P4N 7W8

Survey Company: R.S. Middleton Exploration Services Inc

Date of Survey (from & to): 01 05 87 (Day Mo. Yr.) 01 03 88 (Day Mo. Yr.)

Total Miles of line Cut: N/A

Name and Address of Author (of Geo-Technical report): R. Burk c/o Box 1637 Timmins, Ont. P4N 7W8

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

RECEIVED
AUG 2 1988
MINING LANDS SECTION

RECEIVED
APR 27 1988

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	724554	~~18.7~~ 18.84
	901328	40
	901329	35
	901330	40
	901331	40
	901332	40
	901333	40
	901335	40
	901336	40
	901337	40
	947100	40
	944882	16.3
	~~Crown Reserve~~	
	~~to Section 6(2)~~	
	~~60 DAY Restriction~~	

RECORDED
APR 27 1988

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

* 2.14 days credit allowed as per not P-724554 60 days credits allowed under Section 77-19

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
OCT 13 1988
RECEIVED

Expenditures (excludes power stripping)

Type of Work Performed: Assaying

Performed on Claim(s): see schedule 1 (attached)

Calculation of Expenditure Days Credits

Total Expenditures: $ 6453.35 ÷ 15 = Total Days Credits: 430.2

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work: 12

For Office Use Only

Total Days Cr. Recorded: 418.7 ~~430.2~~

Date Recorded: 88 APR. 27

Mining Recorder: S. Uplit

Date Approved as Recorded: 16 Sept 88 R.M.

Branch Director: [signature]

Date: April 27/88

Recorded Holder or Agent (Signature): [signature]

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: Dan Farrow Box 1637 Timmins Ont P4N 7W8

Date Certified: April 27/88

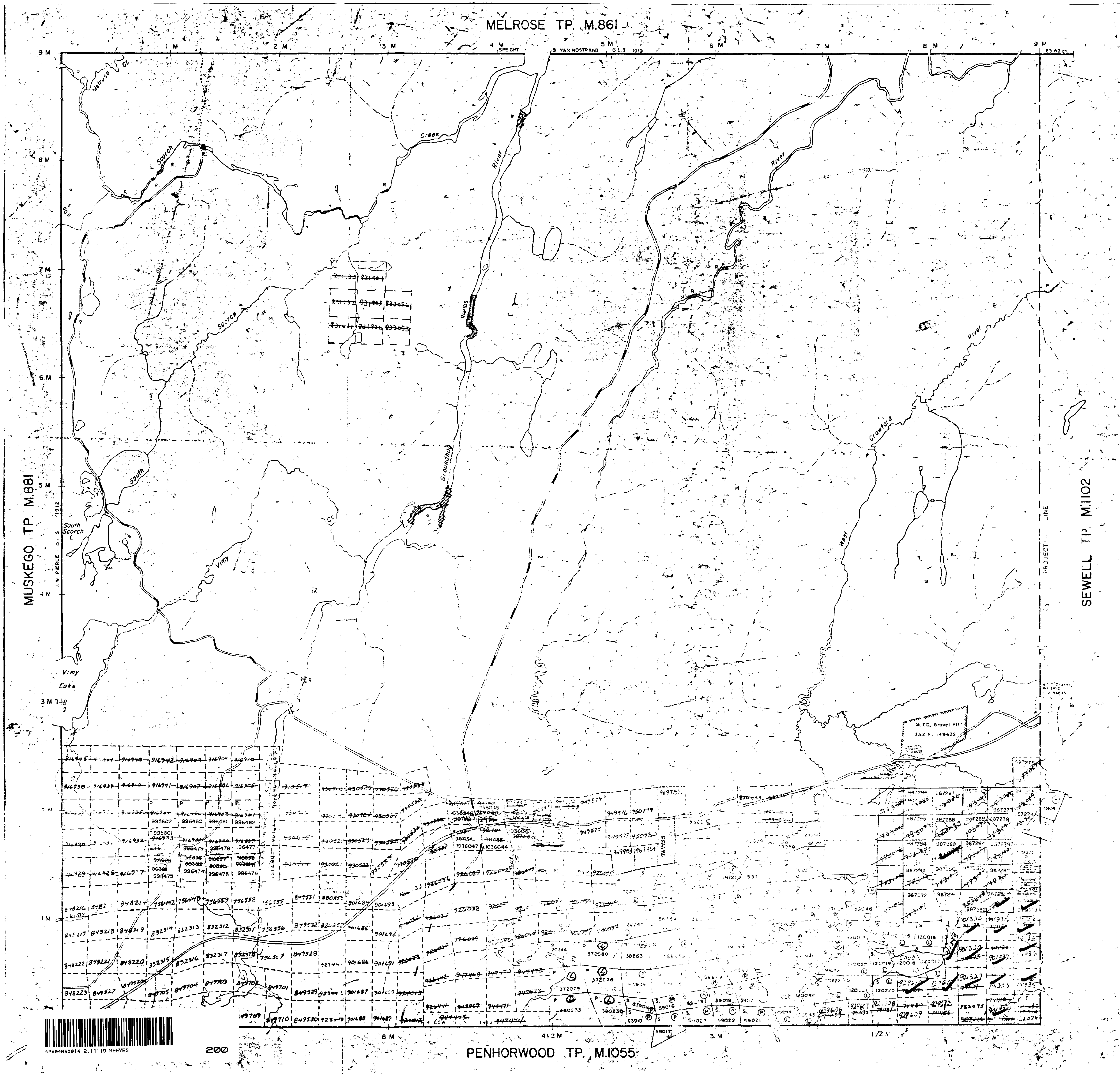
Certified by (Signature): [signature]

0362 (85/12)

SCHEDULE 1

CLAIMS SAMPLED

724554	893527	901327	901328	901329
901330	901331	901332	901333	901334
901335	901336	901337	901340	901343
901344	901345	901353	901354	901356
901357	901358	901359	915460	929610
929611	933528	933563	933566	933567
933569	933574	944882	944886	944887
944888	944889	944890	944891	944892
944893	944894	944895	944896	944897
944899	944904	944908	944909	944910
944913	944915	947085	947088	947091
947092	947097	947099	947099	947100
947102	947104	947106	947108	947252
947253	947258	949089	949096	949097
949098	949107	949109	949110	949111
949112	987253	987254	987258	987262
987267	987281	988389	1027204	1029373



THE TOWNSHIP OF
REEVES

DISTRICT OF SUDBURY

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	● or Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.
PATENTED S.R.O.	

NOTES

400' surface rights reservation along the shores of all lakes and rivers

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order No.	File	Date	Disposition
(43)	163302	27/7/72	R & M.R.

S.R.O. withdrawn from staking under Sec. 34(d) of the Mining Act (R.S.O. 1960) File 63306

Rec. Feb 11/80

PLAN NO. M.1074

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

REFERENCE

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

S.R.O. – SURFACE RIGHTS ONLY

M.+ S. – MINING AND SURFACE RIGHTS

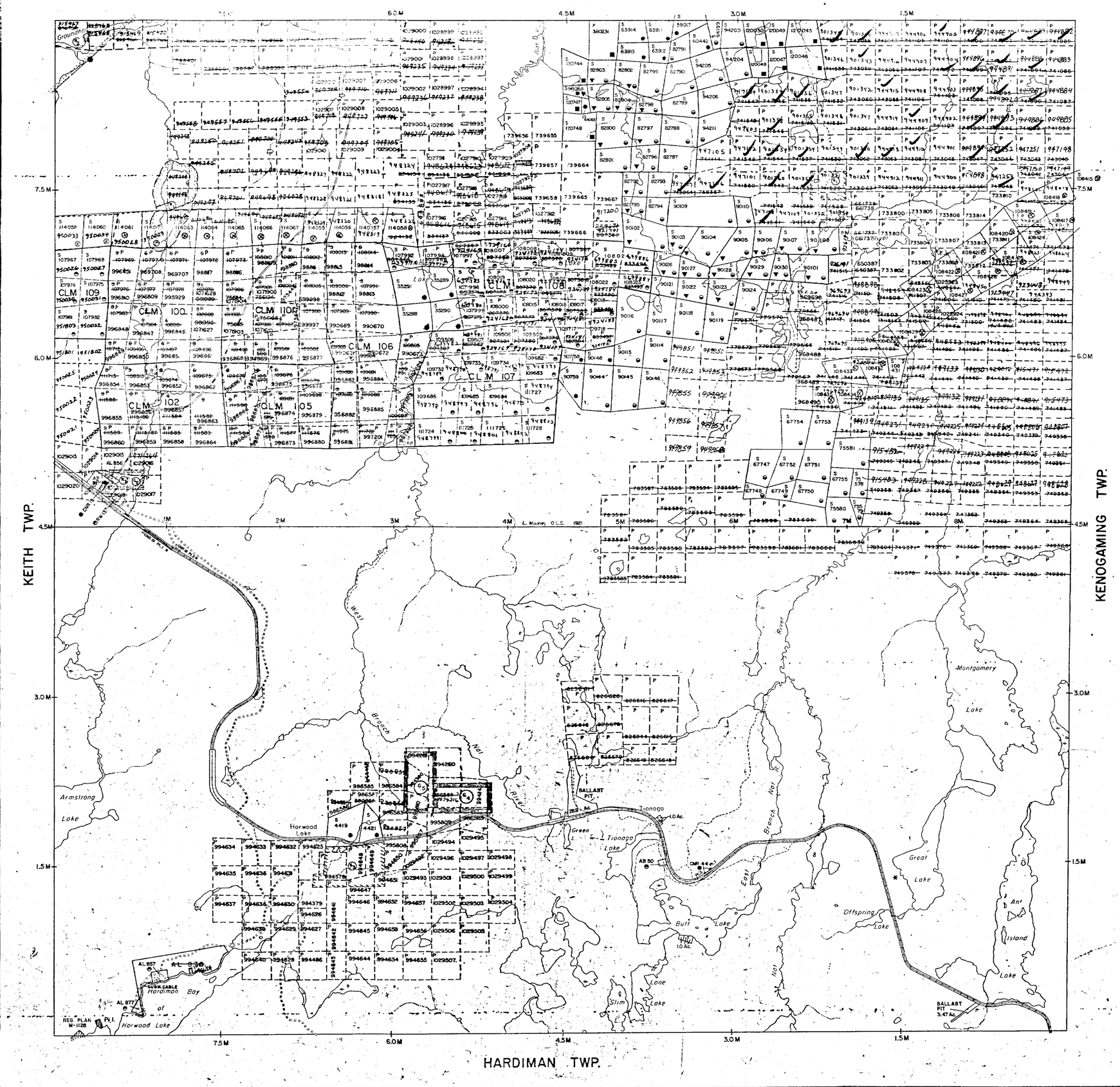
	Description	Order No.	Date	Disposition	File
(1)	400' RESERVE			S.R.O.	135537
(2)	SEC. 43/70 W.91/72		27/12/72	S.R.O.	163006 V.2
(3)	SEC. 36/80		11/7/81	S.R.O.	135537
(4)	ORDER OF THE MINISTER #33/87 DATED MARCH 30/87 WITHDRAWS MINING AND SURFACE RIGHTS UNDER SECTION 36 OF THE MINING ACT,R.S.O 1980				

SAND AND GRAVEL

(5)	GRAVEL	FILE	38729
(6)	GRAVEL PIT	FILE	13535 V.6
(7)	GRAVEL	FILE	106274
(7a)	QUARRY PERMIT # 22805 ISSUED FOR THE REMOVAL OF QUARTZ JULY 1, 1967.		
(7b)	QUARRY PERMIT # 22808 ISSUED FOR THE REMOVAL OF QUARTZ SEPT 10, 1967.		

NOTES

FLOODING RIGHTS ON HORWOOD LAKE RESERVED TO ONTARIO HYDRO TO CONTOUR ELEVATION 117'..... L.O. 7746



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES: TOWNSHIPS, BASE LINES, ETC.
- SURVEYED LINES: LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES: LOT LINES
- UNSURVEYED LINES: PARCEL BOUNDARY
- UNSURVEYED LINES: MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◒
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	◨
" , MINING RIGHTS ONLY	◨
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)
LAND USE PERMIT	✳

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

PENHORWOOD

M.N.R. ADMINISTRATIVE DISTRICT

CHAPLEAU

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH 1985

checked June 14/85 L.P. L.H.

Number G-3244

REFERENCES

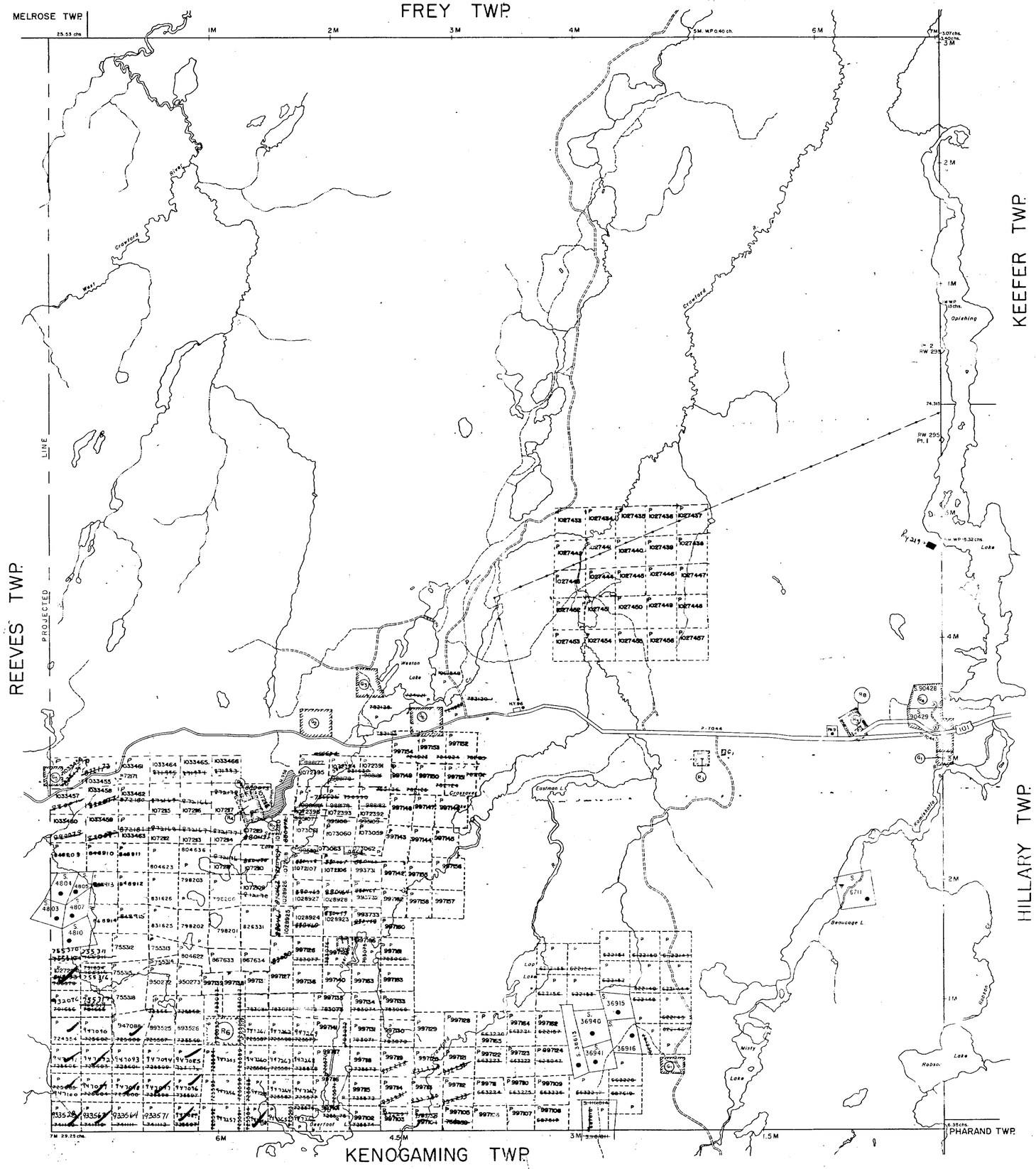
AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS

	Description	Cancel No.	Date	Disposition	File
R1	SEC 43/70	W. [illegible]/77	11/3/77	S.R.O.	135748
R2	SEC. 43/70	W. [illegible]/78	10/4/78	S.R.O.	188543
R3	SEC. 43/70	W. [illegible]/78	14/11/78	S.R.O.	135748
R4	DUMP ATTENUATION ZONE				
R5	SEC. 36/80	W. [illegible]/83	14/8/83	M. + S.	
R6	Not open for staking AWAITING INSPECTION 77/86				
R7	*FILED ONLY* S-26/86				
R8	NOT OPEN FOR STAKING. BONA FIDE APPLICATION UNDER PUBLIC LANDS ACT PENDING. 21/01/87				

SAND AND GRAVEL

G1	GRAVEL	FILE	135748
G2	M.T.C.	PIT	1577
G3	M.T.C.	PIT	3m-1 FILE 135748
G4	M.T.C.	PIT	576
G5	M.T.C.	PIT	3m-2 FILE 184702
G6	M.T.C.	PIT	243



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	▭
" , MINING RIGHTS ONLY	▬
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	⊗
SAND & GRAVEL	(G)

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

SEWELL

M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
SUDBURY

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH, 1985

Number G-3247

REFERENCE

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

SEWELL TWP.

PENHORWOOD TWP.

PHARAND TWP.

CROTHERS TWP.

REGAN TWP.

6.0M 4.5M 3.0M 1.5M

7.5M

5.0M 4.0M 3.0M 2.0M 1.0M

Deertop Lake
Lake
Leweskwo
Mindego
Cranford
Crawford Lake
Norma L.
Kenogamins
Lake
Wye Lake
Kanek Lake

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◒
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	◨
" , MINING RIGHTS ONLY	◨
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	⊗
SAND & GRAVEL	(S)

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

KENOGAMING

M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE :
LAND TITLES / REGISTRY DIVISION
SUDBURY

AUG 29 1988

Ontario Ministry of Natural Resources — Land Management Branch

Date APRIL 1985
RECEIVED APR.22/87
Number G-3239

42A04NW0014 2.11119 REEVES

REEVES TWP.

PENHORWOOD TWP.

SEWELL TWP.

KENOGAMING TWP.

Chubb Lake

Sewell Lake

Eastman L.

Lap Lake

Deerfoot Lake

Crawford Lake

Crawford L.

Munrahan Lake

River

1 inch = 1/2 mile

0 1/2 1 1 1/2 2 miles

0 1 2 3 kilometres

2.11119

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for GOLDROCK RESOURCES INC. & GLEN AUDEN RESOURCES LTD.		
	Title REEVES JOINT VENTURE PROPERTY CLAIM MAP		
	Date: Oct. 87	Scale: 1:32500	N.T.S.:
	Drawn: B.S.B.	Approved:	File: M-223

42A04NW0014 2.11119 REEVES

HIGHWAY 101

REEVES ASBESTOS MINE

CHUBB LAKE

HANRAHAN LAKE

REEVES TWP.

PENHORWOOD TWP.

SEWELL TWP.

KENOGAMING TWP.

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. AND GLEN AUDEN RESOURCES LTD.
	Title REEVES J.V. PROPERTY
	Claim Map
	Scale: 1:10 000 | N.T.S.:
	Approved: B.S.B. | File: M-223

250

HIGHWAY 101

REEVES ASBESTOS MINE

CHUBB LAKE

OUTLINE OF REEVES J

graphitic argillite

ultramafic intrusive

tholeiitic basalt

diabase

antimony

tholeiitic andesite

channel samples from stripped outcrops; see report by Garner, Nov. 1987 A22369 to A22376

rock channel samples from stripped outcrops; see report by Garner, Nov. 1987 A22352 to A22368

rock grab samples from old trench 210B, 215, 213B, 216B, 242B

channel samples from stripped outcrops, see Garner, Nov. 1987 A22377 to A22380

area of shear deformation, carbonate alteration, smokey quartz veining

REEVES TWP.

SEWELL TWP.

PENHORWOOD TWP.

KENOGAMING TWP.

DEERFOOT LAKE ZONE

rock grab samples from old pit 27324, 208B, 209B, 215B, 217B, 218B 27324, 58552, 58574

carbonate altered with minor quartz veining, pyrite feldspar porphyry

numerous gabbro dikes

tholeiitic dacite

tholeiitic basalt

dacitic tuffs

tuffaceous sediments

gabbro dikes

tuff

iron-rich tholeiitic basalt

mafic intrusive

BIF

magnetic rock: iron tholeiite ± BIF

zone of low magnetic res and weak electromagnetic

feldspar-quartz porphyry

calc-alkalic, dacitic to rhyolitic

dacitic pyroclastics

2 meter wide zone of chlorite, fuchsite, carbonate, and minor quartz veining

talc schist

carbonate altered with minor fuchsite and quartz veining

ultramafic

FUCHSITE ZONE

rock channel samples from trench; see report by Garner, Nov 1987 A22382, A22383, A22384, A22385

HANRAHAN LAKE

calc-alkalic dacitic py

LEGEND

- • 120666 location of rock sample analyzed for trace elements only
- • 120667 location of rock sample analyzed for trace elements and major oxide concentrations
- interpreted geological boundary
- G geological boundary interpreted from geophysical data
- lava pillows
- 70 foliation, with dip orientation
- zone of shear deformation
- G zone of shear deformation interpreted from geophysical data
- X BIF banded magnetite iron formation

2.11119

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. AND GLEN AUDEN RESOURCES LTD.
	Title REEVES J.V. PROPERTY GEOLOGICAL INTERPRETATION AND ROCK SAMPLE LOCATIONS
	Scale: 1 : 10,000 | N.T.S.:
	Approved: | File: M-223

42A04NW0014 2.11119 REEVES

260

HIGHWAY 101

REEVES ASBESTOS MINE

CHUBB LAKE

Antimony Occurrence

rock channel samples

REEVES TWP.

SEWELL TWP.

PENHORWOOD TWP.

KENOGAMING TWP.

HANRAHAN LAKE

rock channel samples

LEGEND

- (78) Gold; values in parts per billion (ppb)
- 300 Arsenic; values in parts per million (ppm)
- 3.0 Antimony; values in ppm
- 1500 Zinc; values in ppm
- 91 Molybdenum; values in ppm

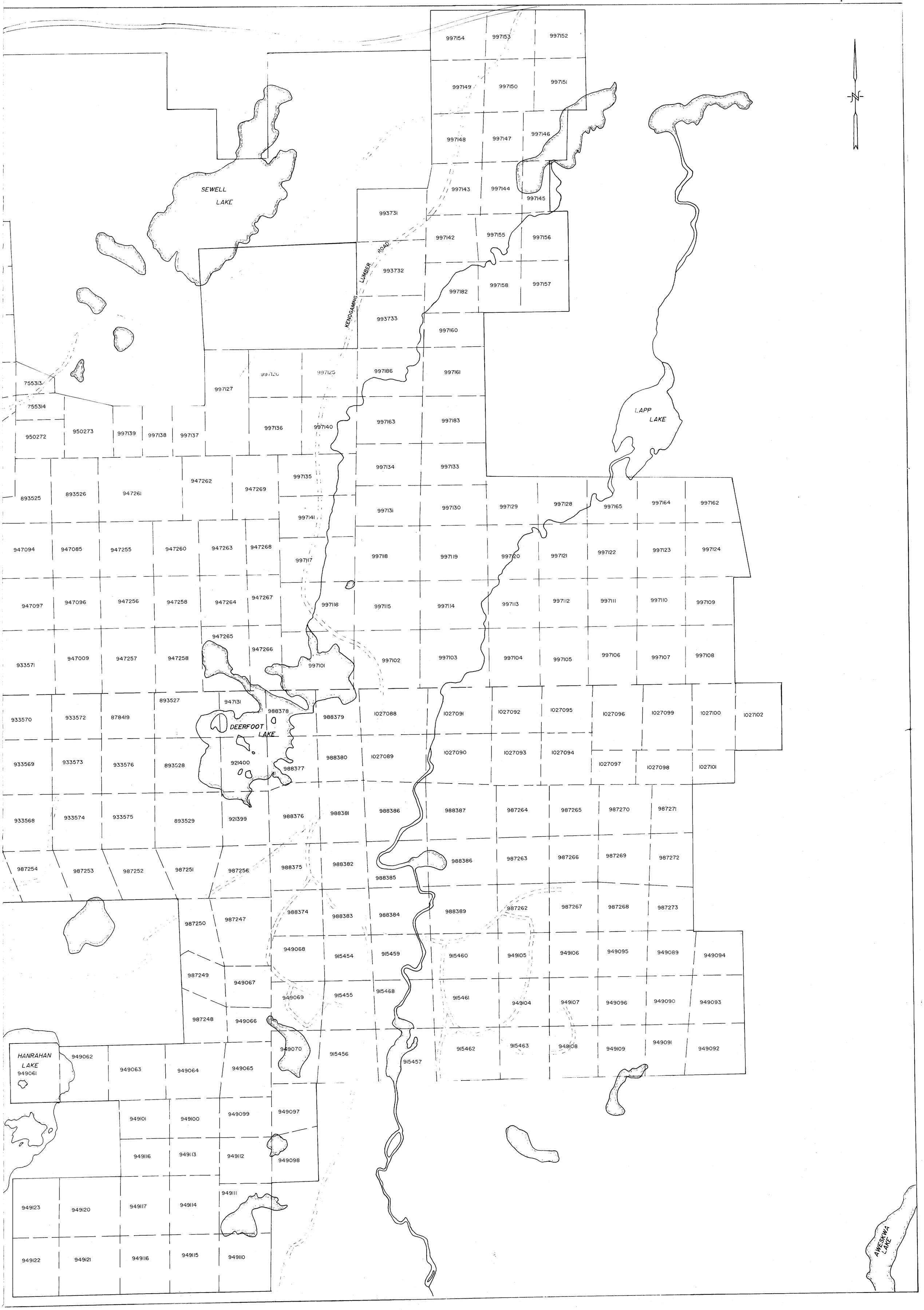
* Refer to Map I, for sample numbers, more precise locations of the sample sites, and the geology of the property.

2.11119

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GOLDROCK RESOURCES INC. AND GLEN AUDEN RESOURCES LTD.
	Title REEVES J.V. PROPERTY Gold and Gold Indicator Element Anomalies
	Scale: 1:10 000 | N.T.S.:
	Approved: B.S.B. | File: M-223

42A04NW0014 2.11119 REEVES

270


997154
997153
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997146
997143
997144
997145
SEWELL
LAKE
993731
997142
997155
997156
KENOGAMING
LUMBER
ROAD
993732
997182
997158
997157
993733
997160
997186
997161
997126
997125
997127
997163
997183
997136
997140
LAPP
LAKE
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988378
988379
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1027091
1027092
1027095
1027096
1027099
1027100
1027102
DEERFOOT
LAKE
933569
933573
933576
893528
921400
988377
988380
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1027093
1027094
1027097
1027098
1027101
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933574
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915456
915457
915462
915463
949108
949109
949091
949092
HANRAHAN
LAKE
949061
949062
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949113
949112
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949114
949122
949121
949116
949115
949110
AWESKWA
LAKE

SEWELL LAKE

KENOGAMING LUMBER ROAD

OUTLINE OF REEVES JOINT VENTURE PROPERTY

graphitic argillite

120826

120811

120810

BIF

BIF

LAPP LAKE

ultramafic intrusive

zone of low magnetic response and a weak electromagnetic conductor

ERFOOT LAKE ZONE

120812

120805

120827

241B, 249B, 250B

120995

245B

DEERFOOT LAKE

carbonate altered with minor quartz veining, pyrite, feldspar porphyry

magnetic rock, probably BIF

120819

120820

magnetic rock, probably BIF

zone of low magnetic response and weak electromagnetic conductor

120815

120816

NAT RIVER IRON FORMATION

calc-alkalic, dacitic to rhyolitic pyroclastics

120849

120850

106164

106163

106160

106161

BIF

dacitic pyroclastics

106151

106158

106165

106159

calc-alkalic, dacitic to rhyolitic pyroclastics

120835

120841

120840

120844

120842

BIF

mafic and ultramafic intrusive rocks

120837

120836

120839

diabase

calc-alkalic, dacitic to rhyolitic pyroclastics

120832

120833

120838

mafic intrusive

ultramafic intrusive

120834

diabase

NRAHAN AKE

ultramafic intrusive

mafic intrusive

120847

calc-alkalic dacitic pyroclastics

120848

ultramafic intrusive

106156

106157

ultramafic intrusive

AWESKWA LAKE

SEWELL
LAKE

KENOGAMING LUMBER ROAD

LAPP
LAKE

DEERFOOT
LAKE

57

80

40

48

47

4.8

4.3

170

AWESKWA
LAKE