REPORT

ON

MAGNETOMETER AND VLF-ELECTROMAGNETIC SURVEYS

ON THE

EAGLE LAKE PROPERTY

KENORA MINING DIVISIONS

NORTHEASTERN ONTARIO

FOR

BOND GOLD CANADA INC.

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MPH CONSULTING LIMITED

Toronto, Ontario
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SUMMARY

During May, 1988, MPH Consulting Limited of Toronto, Ontario carried out total field magnetic and VLF-EM surveys on behalf of Bond Gold Canada Inc. on the latter's Eagle Lake property in northwestern Ontario.

The objective of the surveying was to map conductive horizons and magnetic features on the property and prioritize potential exploration targets. Lithologic and structural information was also to be derived from the datasets.

The property is known to be located within the Wabigoon (West) Geological Subprovince and is believed to be primarily located on the northeast margin of the felsic to intermediate intrusives of the Atikwa Batholith. While the magnetic data suggests several phases within the intrusive complex, the lack of geological knowledge does not allow a detailed interpretation to be made at this time. A diabase dyke has been mapped in the centre of the property and the magnetic results indicate that the dyke traverses the area in an easterly direction.

A copper, silver and gold showing has been mapped in the eastern sector of the property and is identified by Blackburn (1978). The exact location of the showing is not known at present and its geophysical signature cannot therefore be determined.

Two general fault directions have been interpreted and have orientations of N45W and N85E. Both fault systems are interpreted primarily from offsets, of 25 m or less, along the strike extent of the magnetic response associated with the diabase dyke.

The faults/shear zones on the property are inferred to primarily reflect concentric faulting around the perimeter of the batholith.

The VLF-EM results indicate 69 conductive zones, one of which is further subdivided. These zones are interpreted as definite (0), probable (3) or

possible (41) bedrock conductors or possible bedrock conductors and/or topographic or conductive overburden responses (26).

The conductors extend over two or more lines and vary in orientation from east to east-southeast.

Given the current limited knowledge of the property geology and the uncertainty of the exact location of the reported showing, target prioritization is confined at this time to those conductors rated as probable bedrock conductors.

Conductor V16 may reflect weak graphite/sulphide mineralization possibly associated with shearing within the felsic intrusives in the southwest corner of the property.

Conductors V32 and V33 are interpreted to reflect weakly polarizable material in or near the contact area between the diabase dyke and the felsic-to-intermediate Atikwa Batholith within which the former has been intruded.

From the results above it is recommended that:

1. The exact location of the gold showing be identified and its geophysical signature determined.

2. The property be mapped.

3. The geophysical interpretation be updated to reflect the results of (1) and (2).

4. All revised first priority targets be investigated by trenching or drilling.

5. IP/resistivity surveying should be considered in areas of geological interest which have not previously been investigated by this method.

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1.0 INTRODUCTION

During May 1988, MPH Consulting Limited of Toronto, Ontario carried out a geophysical exploration program consisting of total field magnetometer and VLF electromagnetic surveys. It was conducted on behalf of Bond Gold Canada Inc., also of Toronto, Ontario, on the latter's Eagle Lake property situated 12 kilometres south of Dryden in the Kenora Mining Division of northwestern Ontario.

The purpose of the surveys was to map conductors and magnetic features on the property and to derive lithologic and structural information. This information is to be used in targeting areas for further exploration.

The program was conducted under supervision of S.J. Bate, Senior Geophysicist. Liaison with Bond Gold Canada Inc. was through Robin Jowett, Senior Exploration Geologist in Toronto.

Within this report, survey parameters, instrumentation and field procedures are outlined. The field results and interpretations are presented, conclusions drawn and recommendations are made to further evaluate the economic potential of the property.

2.0 LOCATION, ACCESS AND INFRASTRUCTURE

The Eagle Lake property is located 12 kilometres south of the town of Dryden and east of Trap Lake (NTS 52F/10) within the Kenora Mining Division of northwestern Ontario (Figure 1). The centre of the property is situated approximately at latitude 49°40'N and longitude 92°46'W.

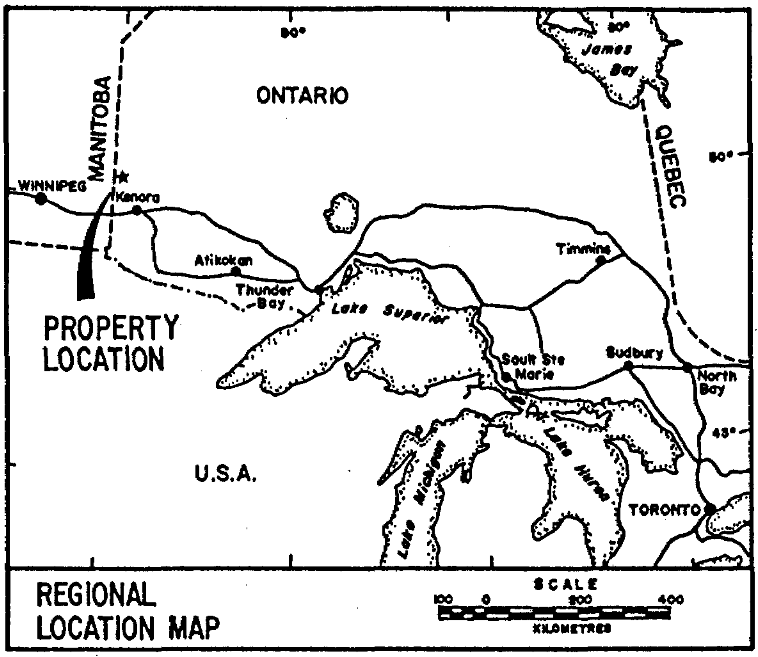
The area of the property covered by the surveys include all or part of the following 14 claims which all have the prefix K-:

882550	1019744
882551	1019745
972460	1019750
1007460	1019751
1019735	1019752
1019736	1019782
1019743	1019787

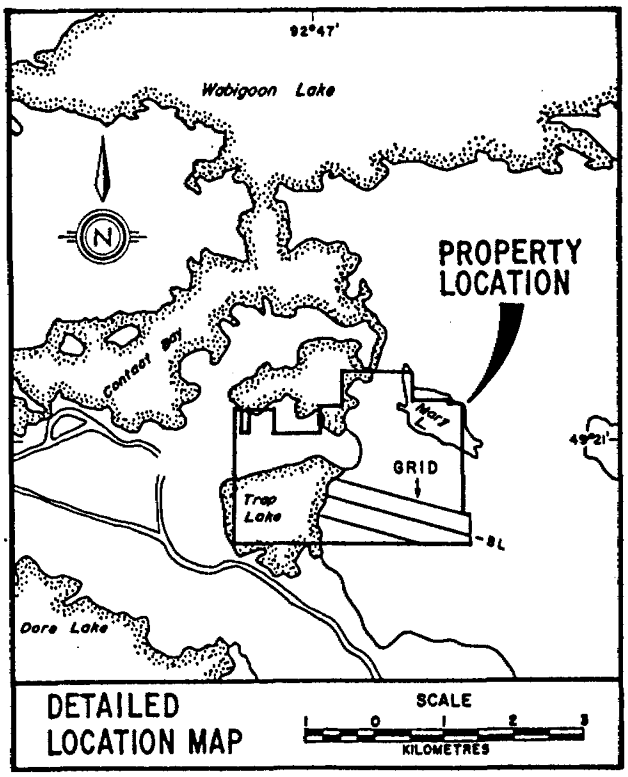
Access to the Eagle Lake claims was made by boat from Birchcliff Lodge situated on the north shore of Wabigoon Lake.

In general, all exploration services and supplies are available in Dryden and the surrounding area.

The local economy is based on the forestry, tourism, mining and government service industries.



REGIONAL LOCATION MAP



DETAILED LOCATION MAP

BOND GOLD CANADA INC.

EAGLE LAKE PROPERTY

LOCATION MAP

Project No. C-1132	By: P.A. Gledhill
Scale: as shown	Drawn: MPH
Drawing No: Figure 1	Date: July, 1988

MPH Consulting Limited

3.0 GEOLOGY

3.1 Regional Geology

3.1.1 Geology

The property, located in the Manitou-Wabigoon Lake Belt of the Wabigoon Subprovince of the Archean Superior Structural Province, is 24 km southeast of Dryden and on the southwest shore of Dinorwic Lake. The Wabigoon Subprovince is bounded transitionally to the north by the sediment-rich English Subprovince and to the south, across the Quetico Fault, by the sediment-rich Quetico Subprovince.

The Wabigoon Subprovince can be generally described as two broad northeast trending assemblages of metavolcanics, volcaniclastic and lesser sedimentary rocks separated by a large area of granitic rocks. One extends from west of Lake of the Woods to Savant Lake and contains the Manitou-Wabigoon Lakes Belt; the other extends from the Mine Centre-Atikokan area, under the Proterozoic rocks of the Nipigon Plate, to east of the Geraldton area.

Mafic volcanic rocks in the subprovince are primarily basalts and andesites consisting of lava flows and, to a much lesser extent, pyroclastics.

Felsic volcanics have been mapped in the greatest concentrations in the Lake of the Woods area, west of the property. Smaller concentrations are noted as several thin bands between Eagle and Wabigoon Lakes and as an elliptical mass (10 miles by 4 miles) trending northeast about Upper Manitou Lake.

Thin discontinuous felsic zones are also present in the intervening, predominantly mafic areas. These zones are typically 1 to 6 ft thick and form marker horizons (Goodwin, 1969).

The felsic volcanics generally consist of massive to well-banded lava flows with bedded to massive tuff and tuff breccia.

Bands of clastic sediments, such as conglomerate, sandstone, siltstone, argillite and graywacke, are generally intimately associated with the felsic volcanics in the region.

There are numerous mafic sills and dykes in both the volcanic and sedimentary sequences. Most predate the main period of folding (Goodwin, 1969) although some may be syntectonic. East of the property and on the east shore of Dinorwic Lake pegmatitic phases occur within the mafic volcanics in the form of stringers and irregular masses. Both anticlinal and synclinal folding of these intrusives has been mapped (OGS, Map 2443).

Felsic intrusives underlie 50 percent or more of the region. They range in size from large circular and elliptic batholithic masses up to 40 and 50 miles in diameter to smaller local units. The batholiths vary in composition from granitic at the core to dioritic at their margins. The Atikwa Batholith is situated immediately southwest of the property separating, in a north-south sense, the volcanic/sedimentary units of the Eagle-Wabigoon Lakes area from those in Upper and Lower Manitou Lakes.

Diabase dykes occur occasionally and trend northwest. One thin persistent dyke crosses the Dinorwic-Eagle Lakes area traversing the center of the property.

3.1.2 Structure

The volcanic and sedimentary units in the region have been highly folded and are commonly sheared, presenting a complex structural picture. Regionally, eight large structural domes have been superimposed on the original east to northeast fold patterns. The largest granitic batholiths have been intruded in these structural domes, all being mantled with outward facing supracrustal rocks. The stratigraphically older units lie near the granite margins and younger rocks occupy the intervening structural troughs (Goodwin, 1969).

Local fold axes are generally sympathetic and parallel to the margin of the nearest felsic batholith. At greater distances from these granite margins the lithologies assume the northeast fold pattern characteristic of the region.

Shearing and carbonatization is widespread and normally parallel to local lithologic trends. The Atikwa granite batholith is characterized by circumfluent shear zone girdles, as are other batholiths in the area. This is reflected in the host volcanic/sedimentary rocks by regional faults such as the Wabigoon Fault near the north shores of Eagle and Wabigoon Lakes. The most important structural event in the region are the Pipestone-Cameron Lakes Fault and the Manitou Straits Fault, south of the Atikwa and Lawrence Lake batholiths, which form a discontinuous, often splayed system about 180 km in length.

The magnitude and extent of related fault movement is unknown but may be substantial.

3.2 Property Geology

The property is for the most part believed to be underlain by Early precambrian supracrustal rocks. The volcanic rocks of this area are believed to face radially, northeastward, away from the Dome Lake lobe of the Atikwa-Norcen dome.

At greater distances from the granite margin the strata assume the normal northeast-trending fold pattern characteristic of the eastern part of the region.

The underlying felsic intrusive rocks on the property are hosted by mafic metavolcanics and felsic to intermediate flows, which are present to the north of the property.

An approximately east-southeast trending diabase dike is inferred to exist across the property on the vicinity of the baseline at 0+00E.

A copper, silver and gold showing has been mapped coinciding with the diabase dyke in the eastern portion of the property (Blackburn, 1978).

3.3 Mineral Occurrences

Most of the precious metal deposits of the western Wabigoon Sub-province are historically reported to be associated with late cross-cutting quartz veins. Accessory vein sulphide mineralogy includes pyrite, pyrrhotite, galena and sphalerite while gold occurs in its native state and/or as tellurides.

The precious metal deposits display strong lithologic (synvolcanic) associations within the region. Basaltic lithologies contain the largest number of precious metal deposits and occurrences, followed by those in felsic volcanics then mineralization associated with felsic intrusives. A similar number of deposits were or are being developed in metasediments, particularly in the Beardmore-Geraldton area, as in felsic volcanics.

While the region has both precious and platinum group metal occurrences, the property is primarily being explored for potential economic gold mineralization. Gold deposits and occurrences in the immediate vicinity of the property which may serve as useful exploration models include the following.

(a) The Van Houten past producing prospect is situated 10 km southwest of the property. Auriferous quartz veins, mineralized with py, cp, mo, occur in granitic rocks which have intruded mafic-to-intermediate metavolcanic rocks and agglomerate. Veins measure up to 0.8 ft wide.

(b) The Big Ruby prospect is approximately 20 km east of the grid and on the north shore of Dinorwic Lake. A 6 ft wide quartz vein or quartz-rich band interbedded with slate occurs within chlorite schist (mafic metavolcanics) and is mineralized with py, native copper and gold. Grab sample assays of 1.0 to 8.2 oz/ton Au were reported.

(c) 1.5 km southwest of the grid are several deposits and occurrences associated with the Manitou Straits Fault system and local north-south structures:

(i) the past producing Laurentian Mine is an auriferous quartz vein hosted by a shear zone at the contact of felsic and mafic metavolcanic rocks. The average grade of ore milled was 0.41 oz/t Au. During 1906 to 1909, 19,950 tons of ore was milled and produced 8,140 oz Au.

(ii) the Big Master Mine is a past producer of several parallel auriferous quartz veins in mafic metavolcanics which are cut by felsic and quartz-feldspar porphyry.

(iii) the Detola prospect occurs in sheared mafic metavolcanics cut by quartz veins mineralized with pyrite, native gold, tourmaline and carbonate.

(iv) the Volcanic Reef gold prospect is two parallel quartz veins hosted by intermediate metavolcanic rocks. The No. 1 vein is 1,300 ft long by 1 ft wide and grades 0.2 oz/t Au. The No. 2 vein is 800 ft by 1 ft but no assays are reported.

(v) the Paymaster prospect is two lenticular quartz veins, 1.5 to 2 ft wide on surface and 11 ft wide at depth, hosted by mafic metavolcanic rocks. No assays were reported.

4.0 SURVEY PARAMETERS

4.1 Linecutting

The linecutting on the property was conducted by Bond Gold Canada Inc. and was carried out in early May 1988. The survey grid was established with its origin (0+00) at the number one post of claim 109743, and the baseline trending N115°E. Limits for the baseline were 0+00E to 18+00E. Crosslines were established at 50 m intervals and driven both north and south for a distance of 400 metres. An exception to these northern and southern limits is in the eastern part of the grid, where the lines are constrained by the property boundary. To maintain grid control tie lines were established at 4+00S and 4+00N. Stations were picketed every 25 m on all the tie-lines and crosslines.

The configuration of the grid and significant topographic features are outlined in Map 1. The grid is also shown on all geophysical maps.

4.2 Magnetometer Survey

Approximately 26 km of total field magnetic surveying was carried out on the property. Readings were taken every 12.5 m along all north-south grid lines in order to define as fully as possible individual magnetic features.

Some notes on total field magnetic surveys are included in Appendix I.

Scintrex IGS-2/MP-4 magnetometers were utilized both in the field to measure total field values and as a base station to record diurnal variations for the purpose of correcting field measurements. Specifications are included in Appendix II.

4.3 VLF-Electromagnetic Surveys

Approximately 26 km of VLF electromagnetic (VLF-EM) surveying was completed. Cutler, Maine with a frequency of 24.0 kHz was used as the transmitting source for the north-south lines. Readings of tilt angle in-phase and quadrature were taken every 12.5 m along all north-south grid lines.

Some notes on the VLF-EM method are included in Appendix I.

The instrument used was a Scintrex IGS-2 and its specifications are contained in Appendix II.

4.4 Personnel

The following MPH Consulting Limited personnel were connected with this project at various times:

S. Bate, M.Sc. - Senior Geophysicist, Toronto, Ontario
P. Gledhill, P.Eng. - Geophysicist, Cannington, Ontario
J. Foster - Senior Operator, North Bay, Ontario
B. McLeod - Operator, Ottawa, Ontario

5.0 DATA PRESENTATION

5.1 Topographic Map (Map 1, 1:2500)

The base map sbows an ideal representation of the geophysical grid as the survey lines were found to diverge only marginally from a regular rectangular grid. Digitization of the grid was therefore not deemed necessary.

The topography on the property, as well as the location of claim posts and outcrops, where noted, are presented on the map.

5.2 Total Field Magnetics (Map 2, 1:2500)

The corrected data is presented in contour form with postings of the corrected total field magnetic readings. Several contouring intervals have been used to accommodate the large range in anomaly amplitudes. No attempt was made to bias the contours.

Superimposed on the contoured data is an interpretation of the significant magnetic features described in detail in Section 6.2.

5.3 VLF-Electromagnetics (Map 3, 1:2500)

The raw VLF-EM data is presented as in-phase and quadrature profiles at a vertical scale of 1 cm = 25%. In terms of the plotting convention employed, proper crossovers are positive to negative from south to north with positive measured facing west.

Superimposed on the VLF profile map is an interpretation of the conductive features described in detail in Section 6.3.

6.0 RESULTS AND INTERPRETATION

6.1 Total Field Magnetics (Map 2)

The total field magnetic data present a relatively homogeneous response. The dominant magnetic feature is a previously mapped diabase dyke which trends grid ENE across the survey area. With the exception of several isolated anomalies, there are two other broad anomalous regions observed. They are, a low susceptibility area situated in the south-central portion of the survey grid, and a higher susceptibility unit located in the north central area of the grid. Both these areas are interpreted to reflect areas of compositional variation in the Atikwa Batholith, interpreted to underlay a majority of the survey area.

The greatest variations in the field magnetic values are observed to be coincident with the interpreted diabase dyke and range between 52,227 nT and 69,662 nT. The remainder of the survey area exhibits a much less dramatic response with background in the order of 59,400 nT to 59,500 nT. Beyond the influence of the dyke anomalous amplitudes are generally 200 nT to 500 nT above and below background. In order to facilitate discussion of the magnetics, the survey grid has been divided, based on the two main characteristic signatures on the property, into domain I, interpreted to reflect a diabase dyke, and the remainder of the survey area, denoted domain II.

Magnetic domain I traverses the northern half of the survey area extending from 0+60N on line 0+50E to 3+60N on line 14+00E, the western and eastern limits of survey coverage, respectively. The response amplitudes are typically 1,500 nT to 5,500 nT above those amplitudes recorded over the remainder of the property.

Along the majority of its strike length, this response feature maintains a relatively consistent width of approximately 50 metres. Profiles across this interpreted dyke indicate it is generally narrow (less than 5 metres wide), near surface and dipping to the south.

Several offsets of 25 metres or less are observed in the overall trend of domain I. These are interpreted to correspond to faults which traverse the property along two primary orientations.

The first and most prolific set strikes at N45°W and likely reflect concentric faulting around the perimeter of the Atikwa Batholith. The interpreted faults which comprise this set are labelled f_2 through f_6.

The second major fault orientation is N85°E and is described by a single fault, f_1. The fault extends from 100E/225S to 1450E/425N and offsets the interpreted diabase dyke approximately 50 metres to the south from line 800E to 750E in the vicinity of 125N. Similar to the other set of faults, the causal source of f_1 may possibly be concentric faulting around the perimeter of the batholith.

Beyond domain I, the remainder of the property is encompassed by the relatively quiescent magnetic domain II. Background amplitudes are in the order of 59,400 nT to 59,500 nT, with anomalous features generally being 200 nT to 500 nT above or below this level. The presence of the high susceptibility domain I through the center of domain II has a considerable effect on the resultant magnetic field for some distance away from domain I. Taking this fact into account, domain II does not have any particularly pronounced magnetic texture or strike. This is not surprising considering the property is believed to be primarily underlain by diorites of the Atikwa Batholith, which in general would tend to exhibit a rather amorphous magnetic signature.

Within magnetic domain II there are two distinct areas of contrasting magnetic response denoted <u>subdomains II_A and II_B</u>. <u>Subdomain II_A</u> is located between lines 550E and 800E, extending from approximately 230N to the southern boundary of survey coverage at 400S. The northern extent of this area is crosscut by domain I. This subfeature has a characteristic background intensity of approximately 59,200 nT, which is 250 nT lower than the general background of domain II. Consequently, subdomain II_A is interpreted to reflect a more felsic element within the batholith. Fault f_2 is the only apparent structural feature which traverses II_A. The resultant offset of II_A along the plane of f_2 is less than 25 metres.

<u>Subdomain II_B</u> is located in the northeastern corner of the survey area. It is observed as a region of elevated susceptibilities which extends from the northern survey boundary (400N) between lines 650E and 950E to the southeast. The subdomain tapers to approximately 50 metres in width at the point where it intersects the eastern limit of survey coverage at 075N on line 1800E. Within subdomain II_B, magnetic amplitudes are observed to be 200 nT to 500 nT above the background of domain II. From the limited geological knowledge available for the area, the source of subdomain II_B can only be interpreted as a more mafic phase of the batholith.

The interpreted diabase dyke (magnetic domain I) crosscuts the center of II_B. It is interesting to note that the strike of subdomain II_B is similar to the set of magnetically interpreted faults which trend at N45°W. This suggests that the causal source of subdomain II_B is a structurally controlled feature and may, in part, reflect a shear zone. However, in the absence of any firm geological evidence such an interpretation should be considered speculative.

In addition to subdomains II_A and II_B, there are several other short strike extent, anomalous magnetic features throughout domain II. The most pronounced of these is a high susceptibility feature situated at approximately 120S on lines 300E and 350E. Coincident with the projected strike of fault f_1, the causal source of this magnetic high is interpreted to be quite narrow (less than 5 m) and of short strike length (less than 100 m). Its coincidence with f_1 suggests it may possibly reflect an area of alteration as a result of hydrothermal fluids introduced along fault f_1.

6.2 VLF-EM Survey

As is typically the case, the VLF-EM survey provided a multitude of anomalous features. With the exception of conductive overburden responses a majority of the observed anomalies exhibit an in-phase amplitude of less than 5% and consequently have little in the way of a characteristic signature. This lack of character, in combination with the amorphous magnetic signature over a significant portion of the survey area, makes the line to line interpretation of various anomalies rather speculative in certain instances. Notwithstanding this, a total of 69 anomalous features of strike length 50 metres or greater were interpreted from the data. These have been labelled V1 through V69. The characteristics of each labelled VLF conductor along with its associated magnetic response and interpreted causal source are given in Table 1. These sources are classified as either definite, probable or possible bedrock responses or as probable conductive overburden or topographic responses.

Apart from the multitude of conductive VLF-EM responses indicated by the data, another general observation of the data can be made. Examination of the data on a line by line basis reveals the presence of a significant positive gradient from south to north of the in-phase signal over the entire survey area. In general, this gradient is in the order of 40% to 50% between 400S and 400N.

The cause of this gradient is quite clearly the presence of a large scale resistivity contrast in the vicinity of the property. Based on the regional mapping of the area, this contact would appear to be between the felsic and intermediate intrusives of the Atikwa Batholith, interpreted to underlay the survey area, and the metavolcanics of the Manitou-Wabigoon Lake Belt immediately to the north and east of the grid.

Pending additional geological and/or geophysical information the exploration potential of a majority of these interpreted conductors remains highly speculative. However, there are several VLF-EM anomalies worthy of note at this point. They are briefly described and interpreted below.

V16

Anomaly V16 extends from 300E, 340S to the western limit of the survey coverage at 150E, 370S. This moderate to strong amplitude response is coincident with a small decrease in the amplitudes within magnetic domain II. Consequently, it may reflect conductive mineralization associated with weak shearing.

V32

This weak amplitude conductor extends from 145N on line 750E to 210N on line 950E. Anomaly V32 is semi-coincident with magnetically interpreted fault f_2 and is situated along the northern boundary of domain I, the interpreted diabase dyke. Consequently, anomaly V32 may reflect conductive mineralization along the boundary of the dyke, or alternatively mineralization introduced along the plane of f_2.

V33

Anomaly V33 is recorded as a weak amplitude conductive response extending from 800E, 115N to 1000E, 185N. Anomaly V33 is semi-coincident with the central magnetic high within domain I, indicating that this possible bedrock response may reflect a resistivity contrast between differing basement lithologies: i.e. the diabase dyke and the host felsic intrusives.

TABLE 1

CHARACTERISTICS OF VLF-EM ANOMALIES

ANOMALY	STRENGTH (1)	LENGTH (metres)	MAGNETIC DOMAIN	MAGNETIC CORRELATION (2)					SOURCE (3)
				C	PC	F	N	CF	
V1	W	+50	II					x	?
V2	W	+150	II	x					?/T
V3	W	+100	II					x	?/T
V4	W	+200	II		x				?/T
V5	W	+50	II				x		?/T
V6	W	+250	II					x	?/T
V7	W	50	I			x			?
V8A	W	400	I		x				?
V8B	W	50	I			x			?/T
V9	W	+100	I			x			?
V10	W	50	II					x	?/T
V11	W	50	II					x	?
V12	M-S	+100	II					x	?
V13	M-S	+100	II					x	?
V14	W	+500	II					x	?
V15	W	100	II					x	?
V16	M-S	+150	II			x			P
V17	W	50	II					x	?
V18	W	100	II				x		?
V19	W-M	50	II			x			?
V20	W	200	II			x			?
V21	W	50	II					x	?
V22	W	50	II			x			?/T
V23	W	150	I				x		T
V24	W	150	I					x	?
V25	W	150	II				x		T
V26	W	150	II					x	?
V27	W	+100	IIB			x			?
V28	W	50	IIB					x	T
V29	W	50	IIB			x			?
V30	W	100	IIB				x		T
V31	W	50	IIB				x		T
V32	W	200	I			x			P
V33	W	200	I		x				P
V34	W	200	II				x		T
V35	W	100	II					x	?
V36	W	300	II/IIA					x	?/T
V37	W	100	II					x	?
V38	W	150	IIA				x		T
V39	W	350	IIA					x	T

TABLE 1

CHARACTERISTICS OF VLF-EM ANOMALIES (cont'd)

ANOMALY	STRENGTH (1)	LENGTH (metres)	MAGNETIC DOMAIN	MAGNETIC CORRELATION (2)					SOURCE (3)
				C	PC	F	N	CF	
V40	W	150	II					x	?
V41	W-M	+200	II					x	?
V42	W	200	II					x	?
V43	W-S	+300	II					x	?
V44	W	50	II						?
V45	W-S	+450	II					x	?
V46	W	350	II/IIB				x		?
V47	W	100	II					x	?
V48	W	150	II/IIB				x		?/T
V49	W	200	II				x		T
V50	W-S	100	II/IIB				x		?/T
V51	W-S	350	II/IIB				x		?/T
V52	W	200	II/IIB				x		?/T
V53	W-S	300	II/IIB				x		?/T
V54	W-S	750	II/IIB/I				x		?/T
V55	W	200	I/II			x			?
V56	N-S	100	IIB					x	?
V57	W-S	400	I/IIB			x			?
V58	W	250	II/IIB				x		T
V59	S	+150	II					x	?
V60	W-M	150	II					x	?
V61	W-M	250	IIB					x	?
V62	W	250	IIB			x			?
V63	W	+200	II					x	?
V64	W	+200	II					x	?/T
V65	W-S	+150	II					x	?
V66	M-S	+150	II				x		?
V67	S	+50	II						?
V68	S	+50	II			x			?
V69	W	+50	II						?

1. Relative Anomalous Strength of VLF-EM Anomalies
   - W - weak
   - M - moderate
   - S - strong
2. Magnetic Correlation
   - C - coincident with a high susceptibility feature
   - PC - partially coincident with a high susceptibility feature
   - F - flanking a high susceptibility feature
   - CF - conformable with the local magnetic trend
   - N - non-conformable with the local magnetic trend
3. Source
   - D - definite bedrock conductor
   - P - probable bedrock conductor
   - ? - possible bedrock conductor
   - T - probable topographic/conductive overburden response

7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of the geophysical program was to map conductors and magnetic features on the property and to derive lithologic and structural information so as to define target areas of potential gold mineralization for further exploration. The program was partially successful in that the geology of the survey area is now more fully understood. However, while the magnetics indicated an intrusive environment which has been subjected to faulting, the VLF-EM did not conclusively identify any areas of potentially favourable conductive mineralization.

The total field magnetic data indicates that the survey area is underlain primarily by intrusives of the Atikwa Batholith which are reflected by magnetic domain II. Within this generally amorphous magnetic background are two areas which exhibit a distinct magnetic signature. These have been denoted subdomains II_A and II_B. The former is situated in the south central portion of the survey area and is observed as lower susceptibility response (250 nT lower) relative to the background of domain II. Subdomain II_B trends southeast across the northeast portion of the property and exhibits a characteristic response 200 nT to 500 nT above that of domain II. Subdomains II_A and II_B are interpreted to reflect, respectively, more felsic and mafic phases of the batholith. An alternative, more tentative, interpretation is that they may reflect remnants of the metavolcanics situated immediately to the north.

Striking east-west across the survey area is a narrow high susceptibility feature, known to reflect a diabase dyke. This feature has been denoted magnetic domain I.

Two sets of faults have been interpreted from the magnetic data. They trend at N45°W (faults f_2 through f_6) and at N85°E (fault f_1). These may possibly reflect concentric faulting around the perimeter of the batholith. Offsets along these faults are generally small, usually less than 25 metres.

The VLF-EM data revealed a multitude of conductive responses within the survey area. With the exception of areas covered with conductive overburden, the data indicated generally weak amplitude conductive features which were often difficult to interpret from line to line due to their lack of distinctive character. A total of 69 conductive features were interpreted with strike extents of 50 metres or more. Of these, only three (V16, V32 and V33) were interpreted to reflect probable bedrock conductors. The remaining 59 conductors were interpreted as possible bedrock/topographic sources.

Anomaly V16 is interpreted to reflect weak sulphide/graphite mineralization possibly associated with shearing within the felsic intrusives underlying domain II.

Anomalies V32 and V33 are low amplitude VLF-EM responses which are tentatively inferred to reflect weakly polarizable material associated with the contact area between the felsic intrusives of the Atikwa Batholith and the diabase dyke intruded into the felsic rocks.

While the magnetic data was useful in delineating the structural and lithologic aspects of the survey area, additional geophysical and/or geological input is required to further evaluate the potential of the property as well as aid in the further classification of the VLF-EM responses.

From the preceding discussion and conclusions the following recommendations are made pertinent to the further evaluation of the Eagle Lake property:

1. The exact location of the reported showing should be identified with the current grid and any magnetic or conductive correlation noted so that similar target areas can be identified on the property.

2. The property should be mapped so as to obtain a better geological understanding of the property.

3. The present interpretation should then be updated to reflect the improved geological understanding.

4. All targets which are then considered to be of first priority should either be the subject of a trenching program if the overburden is sufficiently shallow or tested by diamond drilling.

5. A map with overburden depths should be compiled on an on-going basis. This map may indicate areas within the Eagle Lake property where thick overburden has restricted the effectiveness of the VLF surveys. Such areas should be re-surveyed by IP if considered geologically interesting and if not previously explored by this method.

Respectfully submitted,

P.A. Gledhill, P.Eng.
MPH CONSULTING LIMITED

Simon J. Bate

Toronto, Ontario
September, 1988

S.J. Bate, M.Sc.
MPH CONSULTING LIMITED

2.6451

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APPENDIX I

Notes on Geophysical Techniques

NOTES ON GEOPHYSICAL TECHNIQUES

Total Field Magnetics

A proton magnetometer was used on the project. This type of magnetometer utilizes the precession of spinning protons of a hydrogen atom within a hydrocarbon fluid as a measurement technique. These spinning magnetic dipoles are polarized by applying a magnetic field provided by a current within a coil of wire. When the current is discontinued the protons precess about like a spinning top with the earth field supplying the precessing force. The proton precesses at an angular frequency ω (known as the Lamar precession frequency) which is proportional to the magnetic field strength F so that:

$$\omega = \gamma_p F$$

The constant γ_p is the gyromagnetic ratio of the proton which is known to an accuracy of 0.25×10^{-4}. Since precise frequency measurements are relatively easy it is clear that the magnetic field can be determined to the same accuracy. The proton being a moving charge induces a voltage in the coil which varied with the precession frequency. Thus the magnetic field can be determined from the equation:

$$F = \omega/\gamma_p = 2\pi f/\gamma_p$$

The instrument reading unit is the gamma and the reading is the absolute value of the earth's total field for that station. Repeatability is usually within one gamma for a particular station.

A useful feature of modern solid state magnetometers are their ability to record the field data, i.e. line/station co-ordinates, time measured from an internal clock and the total field magnetic data automatically. This data is stored in a solid state memory device for later recall. The output can be in the form of a hard copy on chart paper or via an RS 232 output part into a field computer.

Magnetic data were recorded in order to monitor diurnal variations using a base station recorder. This unit monitors daily variations in the total magnetic field over time at one location central to the grid area.

The data can then be outputted onto chart paper or as input to a field computer.

The instrument contains its own microprocessor with internal software which enables it to input both the field and base station magnetic readings and to subsequently correct the field data for the diurnal variations observed in the base station readings. The final output is in the form of a strip chart containing line/station number, time and corrected field magnetic readings.

This allows for total correction of the field data on a routine daily basis.

Total Field Magnetics Interpretation

The total field magnetic data, after correction for diurnal drift, are plotted on a plan map and contoured using contour intervals suitable to highlight magnetic features of interest.

Structural interpretation of faults, contact zones, etc. is based primarily on distortion and truncations of magnetic trends. Correlations with other surveys are made to aid in magnetic interpretation.

Individual anomalies may be profiled and, using curve matching techniques with a varity of models, estimates of dip, depth and magnetic susceptibility contrast can be determined (e.g. Cook 1930, Haigh & Smith, 1975, Parker Guy 1963).

Model curve fitting using two and three dimensional models can also be applied.

NOTES ON GEOPHYSICAL TECHNIQUES

VLF-EM

The VLF-EM method employs as a source, one of the numerous submarine communications transmitters in the 15 to 25 kHz band located throughout the world. At the surface of the earth these radio waves propagate predominantly in a single mode along the earth-air interface. This mode is known as the "surface wave". Over flat homogeneous ground in the absence of vertical conductive discontinuities, the magnetic field component of this radio wave is horizontal and perpendicular to its direction of propagation.

Where non-horizontal structures (such as faults, contacts, intrusions, dipping beds, margins of lakes and swamps, and abrupt facies changes) give rise to abrupt changes in ground conductivity, secondary modes are generated which give rise to a vertical component of the magnetic field. This produced an elliptical polarization of the total field in the plane perpendicular to its direction of propagation.

Commercial VLF instruments enable detection of disturbing structures by measuring the tilt angle of the major axis of the polarization ellipse. On flat, homogeneous ground, tilt angles will be zero but in the vicinity of conductive disturbances they will acquire some finite structure. Measurable tilt angles can be observed at quite large distances from the source of the disturbance.

Ability to deduce such parameters as depth, depth extent, dip angle and thickness of anomalous structures is minimal. Fortunately, this does not seriously affect location of points where VLF profiles cross the upper limit of dipping structures which are identified as areas of greater change in tilt angle per unit of distance.

Sense of change of direction of tilt angle must also be considered. This must indicate that the conductive disturbance is ahead of the operator as he approaches and is behind him as he passes it. This particular point has given rise to the terms "true crossover" and "false crossover". Commonly, signs are arbitrarily assigned to the sense of direction of tilt. A popular approach is to then compute gradients from the tilt angle measurements such that negative gradients are associated with true crossovers while positive gradients are associated with false crossovers. By contouring the negative gradients, one then has a map of those structural axes detected by the VLF instrument.

Consideration must also be given to the strike direction of structures to be mapped. The VLF method is not sensitive to structures which are perpendicular (or nearly so) to the direction of propagation.

VLF-EM Interpretation

The relative high frequency employed by the VLF-EM method compared to most geological electromagnetic systems dictates that in addition to conductive mineralized or graphitic zones, lateral changes in resistivity, either in bedrock or overburden, will also give rise to dip-angle anomalies. Because of this, the VLF-EM method can be useful in delineating structural features and in outlining contact zones provided that the resistivity contrast across the zone is sufficiently large to produce a measurable signature.

Thus, when analyzing VLF-EM data, good topographic control is essential so that topographic anomalies such as the edges of swamps and creeks, etc. can be recognized and eliminated.

The optimum approach is often to survey an area using two stations with propagation directions intersecting as close as possible to 90°. As the maximum range of sensitivity is commonly quoted as 0-45° from the propagation direction, the ideal case of a 90° intersection of the two signals would map all strike directions.

The VLF-EM data are then processed and interpreted to produce a subsurface structural map.

The VLF-EM dip angle data can also be processed to produce a VLF first derivation map. This is produced by compiling simple gradients per unit distance. Adjacent tilt angle readings are subtracted and the result normalized to a unit distance, usually the normal station separation. The computed first derivative values are plotted at the midpoint between the two tilt angle values from which they are computed. The resultant data are then contoured. Only the negative gradient values which correspond to true crossovers are contoured. Conductive axes are then interpreted. Structural information is then interpreted from contour truncations and deviations.

The popular "Fraser Gradient Method" (Fraser, 1969) is a contouring technique frequently used to present conductor axes. This technique should not be used when the anomalies are small and subtle in that this is a low pass filtering method and would remove information which might be useful for mapping bedrock structure.

The Fraser Filtered values are calculated as follows: if P_1 to P_4 are the tilt angles obtained at stations 1 to 4 then the Fraser filtered contour value C_{23} is:

$$C_{23} = (P_3 + P_4) - (P_1 + P_2)$$

and is plotted midway between station 2 and 3.

Interpretation of raw dip angle profiles can be carried out by curve fitting the profiles to VLF-EM model suite curves (Madden-Vozoff). Depth values have been calculated from the profiles (Fraser, 1981) while dip is interpreted from the assymetry of the dip angle profile. The depth values are tenuous at best and it is possible that a $\pm$ 50% error could in fact accompany the value.

APPENDIX II

Instrument Specifications

SCINTREX IGS

Integrated Portable Geophysical System

Scintrex has used low power consumption microprocessors and high density memory chips to create the IGS Integrated Portable Geophysical System; instrumentation which will change the way you do ground geophysics.

Here are the main benefits which you will derive from the IGS family of instrumentation:

1. You will save time and money in the acquisition, processing and presentation of ground geophysical survey data.
2. You will achieve an improvement in the quality of data through enhanced reading resolution, an increase in the number of different parameters measured and/or a higher density of observations.
3. Your operator will appreciate the simplicity of operation achieved through automation.
4. Since add-on sensors are relatively less expensive, your investment in a range of IGS instrumentation may be much less than it would be with a number of different instruments, each dedicated to a different measurement.

The Scintrex IGS-2/MP-4/VLF-4 permits one operator to efficiently measure both magnetic and VLF fields and to record data in computer compatible solid-state memory

Description

The heart of this system is the IGS-2 System Control Console which contains a powerful CMOS microprocessor, EPROM and RAM memory and peripheral electronics which permit a single operator to execute three major functions. First, he can control a variety of sensors, either individually or in certain combinations. Second, at the push of a button, he can record data in solid-state memory. Then, at the end of a day's surveying, he can use the IGS to playback, calculate, list and plot data on a simple digital printer, often to report level quality.

Alone, the IGS-2 System Control Console is an electronic notebook into which geophysical, geological or other data may be manually entered. With the addition of an inexpensive conversion kit it can be used to record data directly from older generation magnetometers such as the Scintrex MP-2. Most importantly, however, especially designed IGS Sensor Options can be selected which permit the IGS-2 to become a magnetometer or a VLF receiver, or both.

Many Applications

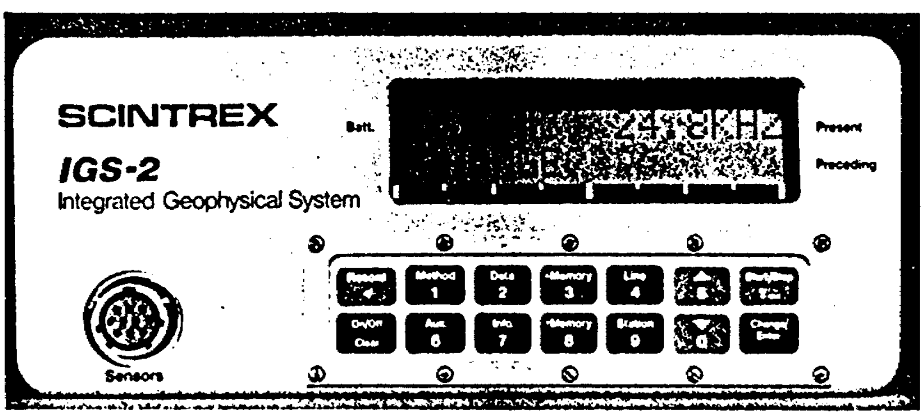
IGS-2. Alone, the System Control Console can be used for manual entry and storage of data. For example, electromagnetic, gravity or other information can be entered along with station coordinates and time for later outputting as listings or profiles on a digital printer, to a microcomputer, magnetic tape recorder or modem.

IGS-2/MP-2. A proton magnetometer such as the Scintrex MP-2 can be attached to the IGS-2 Console for automatic recording of the magnetometer outputs in the solid-state memory of the IGS-2. In this way an existing investment can be utilized, albeit at the expense of additional weight and degraded resolution, compared to the Scintrex MP-3 or IGS-2/MP-4 Magnetometers. For this application the Conversion Kit for Standard Proton Magnetometers must be purchased. This option consists of external mounting brackets for the magnetometer, a cable and a minor modification to the magnetometer.

IGS-2/MP-4. The MP-4 Proton Magnetometer Sensor Option can be added to the IGS-2 System Control Console. This IGS-2/MP-4 combination is a 0.1 gamma magnetometer and/or vertical gradiometer with a performance identical to the Scintrex MP-3 Proton Magnetometer.

IGS-2/VLF-4. The IGS-2 can be used for VLF electromagnetic measurements by the addition of the VLF-4 VLF Electromagnetic Sensor Option. The combination, designated as IGS-2/VLF-4, performs identically to the Scintrex VLF-3.

IGS-2/MP-4/VLF-4. The MP-4 and VLF-4 Sensor Options can be employed simultaneously with the IGS-2, to permit one operator to efficiently carry out both magnetometer and VLF surveying. This combining of sensors is not possible with the MP-3 and VLF-3 instruments unless they are returned to Scintrex for upgrading.



MP-4 Proton Magnetometer Sensor Option

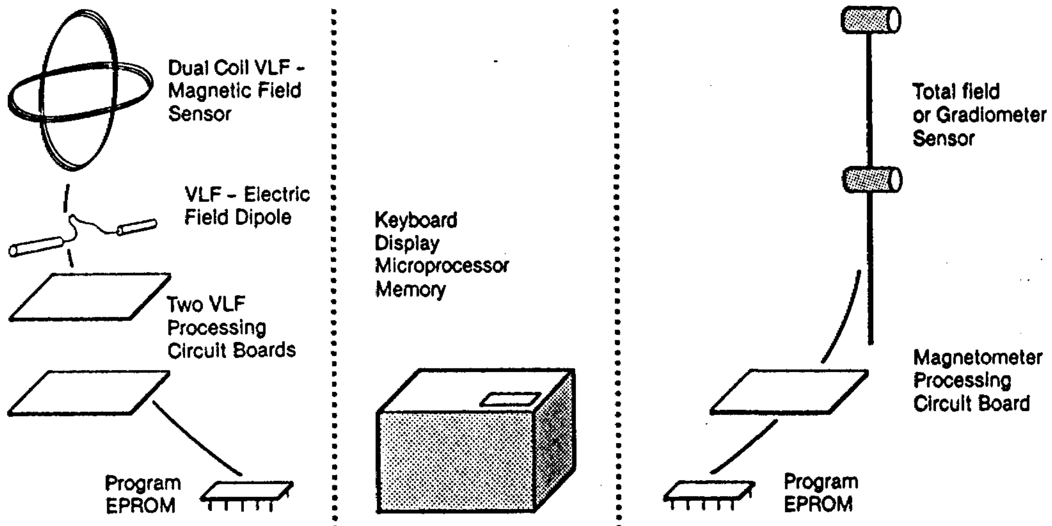
The MP-4 Proton Magnetometer Sensor Option consists of: 1) a choice of portable, base station or gradiometer sensors, 2) an electronic circuit board, and 3) a program EPROM. The circuit board and EPROM can be installed inside an IGS-2 Console either at the Scintrex plant or by the end user. The resulting IGS-2/MP-4 combination has a performance identical to the MP-3 Proton Magnetometer which is fully described in another Scintrex brochure. The advantage that the IGS-2/MP-4 has over the MP-3 is that it is designed to permit the additional use of a VLF sensor.

VLF-4 VLF Electromagnetic Sensor Option

The VLF-4 VLF Electromagnetic Sensor Option can be used with the IGS-2 or with the IGS-2/MP-4 combination for VLF surveying. This standard option consists of: 1) a dual coil backpack mounted sensor for VLF-magnetic measurements, 2) two electronic circuit boards, and 3) a program EPROM. An additional choice is to add a dipole with capacitive electrodes in order to measure VLF-electric fields. The circuit boards and EPROM are easily installed inside the IGS Console. The combination designated as IGS-2/VLF-4 functions identically to the Scintrex VLF-3 VLF Electromagnetic Receiver which is the subject of another Scintrex brochure. While the VLF-3 is dedicated to VLF measurements, the owner of an IGS-2 based system can later add an MP-4 Proton Magnetometer Sensor Option for use with the IGS-2, with or without the VLF-4.

Description

Block diagram showing how the IGS-2 can be complemented by VLF-4 and MP-4 options to function as a VLF receiver and/or magnetometer.



VLF-4	*IGS-2*	*MP-4*
VLF Electromagnetic Sensor Option	System Control Console	Proton Magnetometer Sensor Option

Summary of Important Features of Scintrex MP-3, VLF-3 and IGS Based Instrumentation

Common Features

- Simple operation via keypad
- 32 character LCD display
- Displays present and previous data
- Alarm and warning messages ensure data quality
- 'Speaks' any language with Latin characters
- Solid-state memory expandable to hold several days' data
- Records actual coordinates
- Records time
- Records header information
- Records ancillary data
- Permits revision of data
- Outputs to commonly available printers, modems, tape recorders and microcomputers
- Prints data lists and plots profiles directly on a digital printer
- Organizes data by grid, line and station number, regardless of the order in which data were taken
- Several power supply options
- Wide operating temperature range

Magnetics

Additional features found in both MP-3 and IGS-2/MP-4.

- 0.1 gamma resolution over 20K to 100K gamma range
- Total field and vertical gradient measurements
- High gradient tolerance
- Same console for portable, base station or mobile survey applications
- Keyboard selectable automatic or manual tuning
- Automatic diurnal correction without a microcomputer

Additional features found only in IGS-2/MP-4.

- The VLF-4 VLF Electromagnetic Sensor Option can be added so that one operator can make both magnetic and VLF readings

VLF

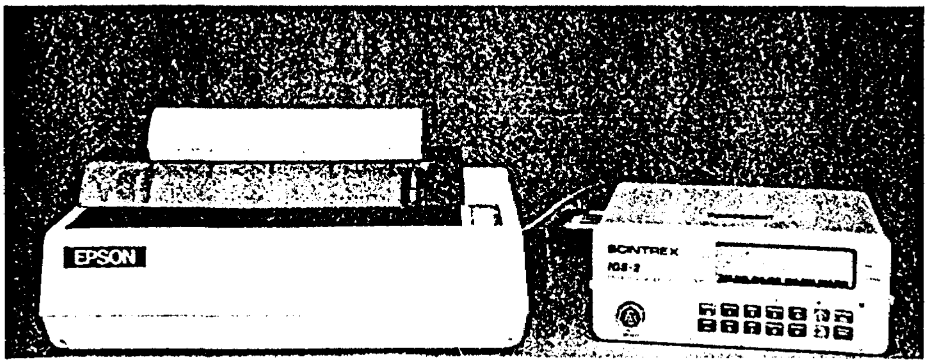
Additional features found in both VLF-3 and IGS-2/VLF-4.

- Measures both VLF-magnetic and VLF-electric fields
- Values are normalized by the horizontal vector amplitude, to overcome errors due to varying primary field strengths
- Calculates resistivity and phase angle
- Digital tuning to any VLF station
- Automatic measurement of up to three VLF stations
- Automatic tilt compensation
- Signal/noise enhancement through automatic signal stacking
- Automatic gain adjustment

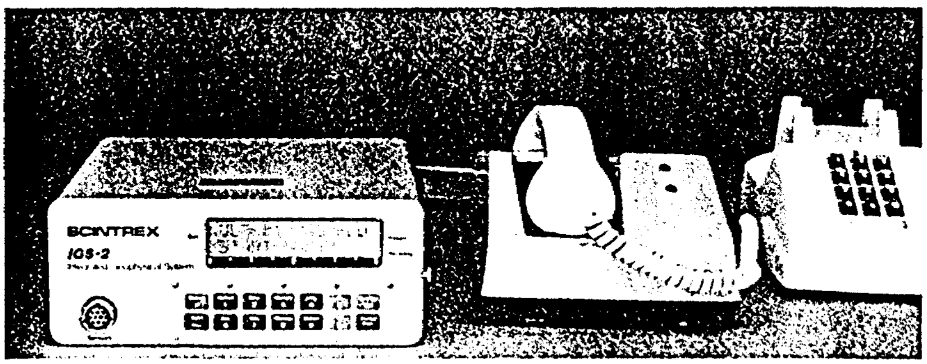
Additional feature found only in IGS-2/VLF-4

- The MP-4 Proton Magnetometer Sensor Option can be added so that one operator can make both magnetic and VLF readings

Technical Description of the IGS-2 System Control Console



Coupled directly to a digital printer, the IGS-2 can output data as listings or profiles.



A modem unit can be used to transmit data directly from the IGS-2 to head office over a telephone line.


A microcomputer such as the Apple IIe, Apple III, HP-85, IBM PC or Osborne can be interfaced with the IGS-2 for archiving or processing data.

Standard Control Console Specifications

Digital Display
32 character, 2 line LCD display

Keyboard Input
14 keys for entering all commands, coordinates, header and ancillary information.

Languages
English plus French is standard.

Standard Memory
16K RAM. More than sufficient for a day's data in most applications.

Clock
Real time clock with day, month, year, hour, minute and second. One second resolution, ± 1 second stability over 12 hours. Needs keyboard initialization only after battery replacement.

Digital Data Output
RS-232C serial interface for digital printer, modem, microcomputer or cassette tape recorder. Data outputs in 7 bit ASCII, no parity format. Baud rate is keyboard selectable at 110, 300, 600 and 1200 baud. Carriage return delay is keyboard selectable in increments of one from 0 through 999. Handshaking is done through X-on/X-off protocol.

Trigger Output
Allows IGS-2 to act as a master for other instrumentation.

Analog Output
For a strip chart recorder. 0 to 999 mV full scale with keyboard selectable sensitivities of 10, 100 or 1000 units full scale.

Console Dimensions
240 x 90 x 240 mm includes mounted battery pack.

Weights
Console: 2.2 kg
Console with Non-rechargeable Battery Pack: 3.2 kg.
Console with Rechargeable Battery Pack: 3.6 kg.

Operating Temperature Range
-40°C to +50°C provided optional Display Heater is used below -20°C.

Technical Description of the IGS-2 System Control Console

Power Requirements
Can be powered by external 12 V DC or one of the Battery Pack Options listed below.

Sensor Options

MP-4 Proton Magnetometer Sensor Option
Can be used with IGS-2 or IGS-2/VLF-4 to make total field and vertical gradient magnetic measurements.

VLF-4 VLF Electromagnetic Sensor Option
Can be used with IGS-2 or IGS-2/MP-4 to make VLF-magnetic and VLF-electric field measurements.

Conversion Kit for Standard Proton Magnetometers
Consists of brackets for mounting a magnetometer such as the Scintrex MP-2 on the IGS-2 Console, a cable and a minor modification to the magnetometer.

Battery Pack Options

Battery Pack lifetime depends on which Battery Pack is selected, sensor(s) used, reading time and ambient temperature. Life expectancy would be 1 to 10, eight hour survey days.

Non-Rechargeable Battery Pack
Includes battery holder and 10 disposable 'C' cell batteries for installation on console. Used in low sensitivity total field magnetometry or VLF in temperatures above 0°C. Weight is 0.9 kg.

Rechargeable Battery Pack and Charger
Includes battery holder, 6 rechargeable, non-magnetic, sealed lead-acid batteries and charger for installation on console. Best for high sensitivity total field measurements, all gradient measurements and operation below 0°C. Pack weighs 1.3 kg. Charger specifications are: 140 x 95 x 65 mm, 115/230 V AC, 50/60Hz, 20 VA, overload protected.

Heavy Duty Rechargeable Battery Pack
Includes heavy duty rechargeable batteries installed in a console with a built-in charger. Used for rapid cycling base station or mobile applications. Total weight is 7.6 kg. Dimensions are 240x 90 x 240 mm. Power requirements: 115/230 V AC, 50/60 Hz, 20 VA. Overload protected.

Optional Accessories

Language Options
In addition to English, a second language using Latin characters can replace French.

RS-232 Cable and Adapter
Used for communicating between IGS-2 and peripheral devices such as an MP-3 magnetometer, a second IGS-2, digital printer, microcomputer, cassette recorder or modem.

Minor Spare Parts Kit
Includes 2 keyboard diaphragms and 2 fuses.

Carrying Cases
A variety of carrying cases is available to suit different combinations of console and sensor options.

Display Heater
Required for cold weather operation. Powered by main batteries, thermostatically controlled to turn off above -20°C.

Solar Panel Power Source
The panel measures 30 x 550 x 550 mm. Self-contained circuits output 14 V DC to charge the batteries. For rapid charging, two sources can be used in parallel.

Peripheral Devices
Scintrex is prepared to recommend or supply digital printers, modems, cassette tape recorders, analog recorders and microcomputers with software.

Memory Expansion
IGS Memory Expansion I increases memory to 32K RAM. Expansion II increases memory to 48K RAM. Expansion III permits a system total of up to 144K RAM. Further expansion to 192K RAM is feasible for some applications.

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical Instrumentation and Services

Ministry of Northern Development and Mines
Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT W8801·

52F10NW0064 2.11598 CONTACT BAY (WABIGOO 900

T.S #235

Mining Act

Type of Survey(s): Magnetometer VLF-EM

Township or Area: Contact Bay G.2579

Claim Holder(s): Bond Gold Canada Inc.

Prospector's Licence No.: T-3608

Address: 1100-20 Adelaide St. E., Toronto, Ontario M5C 2T6

Survey Company: MPH COnsulting

Date of Survey (from & to): 26 05 88 | 02 06 88 (Day Mo. Yr. | Day Mo. Yr.)

Total Miles of line Cut: 26Km

Name and Address of Author (of Geo Technical report): P.A. Gledhill, 2406-120 Adelaide St. W., Toronto, Ontario M5H 1T1

Credits Requested per Each Claim in Columns at right

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

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

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

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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.

Date: Sept. 8/88 | Recorded Holder or Agent (Signature): [signature]

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
K	882550	
	882551	
	1007460	
	1019735	
	1019736	
	1019743	
	1019744	
	1019745	
	1019750	
	1019751	
	1019752	
	1019782	
	1019783	

RECEIVED
OCT 19 1988
MINING LANDS SECTION

KENORA MINING DIV.
RECEIVED
SEP 12 1988
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

882550

Total number of mining claims covered by this report of work: 13

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
780	Sept 12/88	[signature]
	Date Approved as Recorded	Branch Director

RM

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: Robin Jowett 177 Cobblestone Place Box 358 Rockwood Ontario N0B 2K0 (519) 856-1148

Date Certified: Sept 8/88 | Certified by (Signature): [signature]

1362 (85/12)

Aug 30

Ministry of Northern Development and Mines
Ontario

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

DOCUMENT No. W8801·181

Mining Act

2.11598

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 "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): Magnetometer, VLF	Township or Area: Contact Bay G.2579
Claim Holder(s): (Bond Gold Canada, Inc.) St. Joe Canada Inc.	Prospector's Licence No.: T3608
Address: 1100-20 Adelaide St. E, Toronto, Ont. M5C 2T6	
Survey Company: MPH Consulting	Date of Survey (from & to): 26 5 88 (Day Mo. Yr.) – 02 6 88 (Day Mo. Yr.) / Total Miles of line Cut: 1.6 km
Name and Address of Author (of Geo-Technical report): Simon Bate 2406-120 Adelaide St. W. Toronto, Ont. M5M 1T1	

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	20
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other VLF	40
	Geological	
	Geochemical	

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

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.
	972460	

972460

Total number of mining claims covered by this report of work: 1

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

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.

Date: July 7/88 Recorded Holder or Agent (Signature): [signature]

For Office Use Only		
Total Days Cr. Recorded: 60	Date Recorded: July 11/88	Mining Recorder: M E Lemay (Acting)
	Date Approved as Recorded	Branch Director

RM

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
Robin Jowett 883 Sunningdale Bend Mississauga, Ontario L5J 1G1

Date Certified: July 7/88 Certified by (Signature): [signature]

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Witney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

November 18, 1988

Your file: W8801-181
W8801-235
Our file: 2.11598

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
OFFICE
NOV 25 1988
RECEIVED

Mining Recorder
Ministry of Northern Development and Mines
808 Robertson Street
P.O. Box 5200
Kenora, Ontario
P8N 3X9

Dear Sir:

Re: Notice of Intent dated November 3, 1988
Geophysical (Electromagnetic and Magnetometer) Survey
submitted on Mining Claims K 882550 et al in Contact Bay Area

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division
RM.
RM:pl
Enclosure

cc: Mr. G.H. Ferguson
Mining and Lands Commissioner
Toronto, Ontario

Bond Gold Canada Inc.
Suite 1100, 20 Adelaide Street E.
Toronto, Ontario
M5C 2T6

Resident Geologist
Kenora, Ontario

MPH Consulting Ltd.
Suite 2406, 120 Adelaide Street W.
Toronto, Ontario
M5H 1T1

Mr. Robin Jowett
177 Cobblestone Place
Box 358
Rockwood, Ontario
NOB 2KO

Ministry of
Northern Development
and Mines
Ontario

Technical Assessment Work Credits

File
2.11598

Date	Mining Recorder's Report of Work No.
November 3, 1988	W8801-181

Recorded Holder
Bond Gold Canada Inc.
XXXXXXXr Area
Contact Bay Area

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	K 972460
Electromagnetic 30 days	
Magnetometer 15 days	
Radiometric ______ days	
Induced polarization ______ days	
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ______ days	
Geochemical ______ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File
2.11598

Date	Mining Recorder's Report of Work No.
November 3, 1988	W8801-235

Recorded Holder	Bond Gold Canada Inc.
XXXXXXX Township or Area	Contact Bay ARea

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	K 882550-551
Electromagnetic 30 days	107460
Magnetometer ____ days	1019735-736
Radiometric ____ days	1019743 to 745 inclusive
Induced polarization ____ days	1019750 to 752 inclusive
Other ____ days	1019782-783
Section 77 (19) See "Mining Claims Assessed" column	
Geological ____ days	
Geochemical ____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
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☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

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Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File
2.11598

Date	Mining Recorder's Report of Work No.
November 3, 1988	W8801-235

Recorded Holder
Bond Gold Canada Inc.
XXXXXXXX Area
Contact Bay Area

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic ______ days	
Magnetometer 15 days	K 882550-551
	1007460
	1019735
Radiometric ______ days	1019743 to 745 inclusive
Induced polarization ______ days	1019750 to 752 inclusive
	1019782-783
Other ______ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ______ days	
Geochemical ______ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey ☐ insufficient technical data filed

K 1019736

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

828 (85/12)

XEROX TELECOPIER 495-1; 1-11-88; 2:14PM ; 8074689451→ 4169216926;# 1

SENT BY:MINING RECORDER ;11- 1-88 1:16PM ; 8074689451→ 4169216926;# 1

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Facsimile Transmittal

Please Print or Type

No. of pages (including this page)	Date
3	88 NOV 1

To:

Addressee's Name: BOB MUSGRAVE

Location: TORONTO

From:

Sender's Name: KATRINA

Location: KENORA

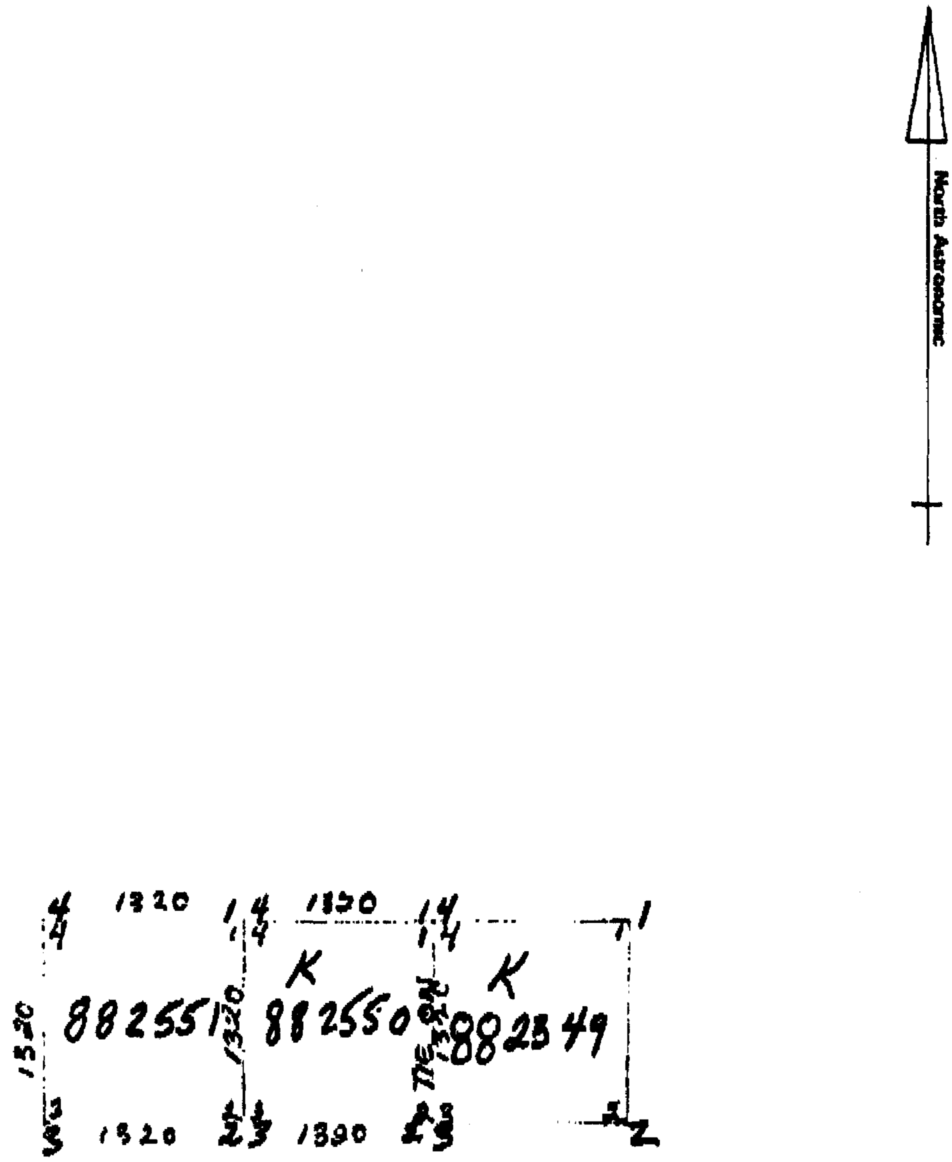
Special Instructions:

PER YOUR REQUEST - HOPE THIS IS WHAT YOU NEED

Any questions regarding this transmittal, please call:

Name	Telephone No.
KATRINA	8074688492

Group Sketch of claims listed on page 1	Scale: 1 inch = 1320 feet (20 chains)



Ontario

Ministry of Northern Development and Mines
Ministère du Développement du Nord et des Mines

Facsimile Transmittal

Please Print or Type

No. of pages (including this page)	Date
3	88 Nov 1

To:

Addressee's Name: Bob Musgrove

Location: Toronto

From:

Sender's Name: Katrina

Location: Kenora

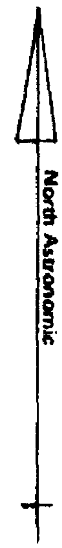
Special Instructions:

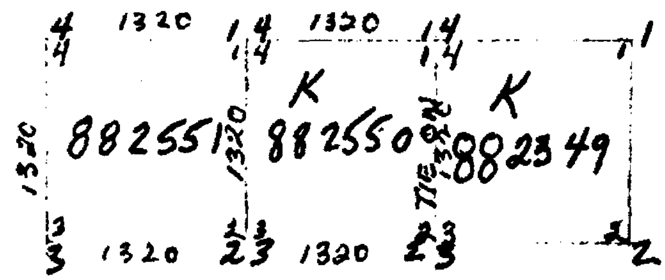
Per your request - hope this is what you need

Any questions regarding this transmittal, please call:

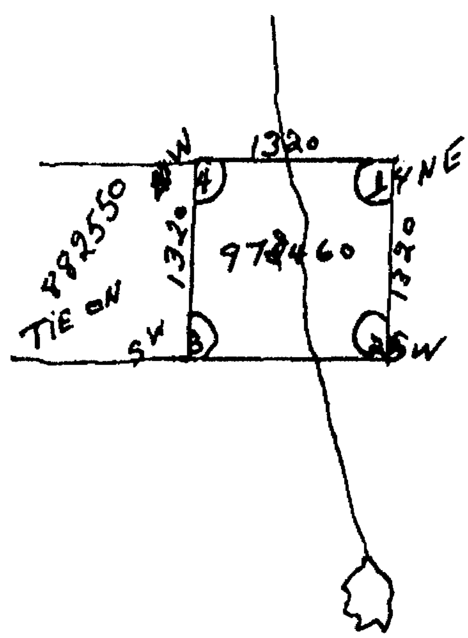
Name	Telephone No.
Katrina	8074688492

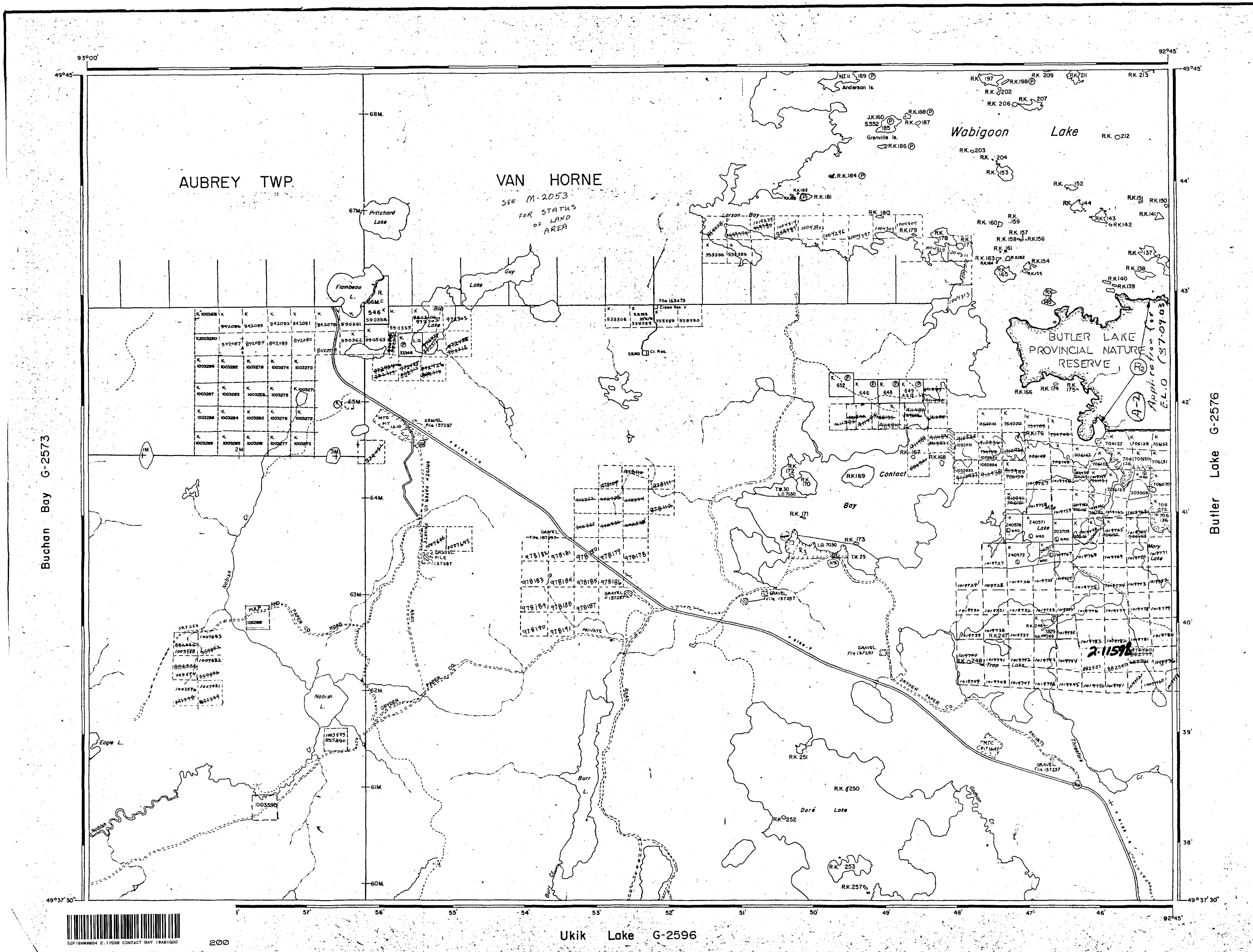
Group Sketch of claims listed on page 1	Scale: 1 inch = 1320 feet (20 chains)





Group Sketch of claims listed on page 1	Scale: 1 inch = 1320 feet (20 chains)





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	Ⓟ or ●
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	Ⓛ or ■
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	OC
RESERVATION	
CANCELLED	
SAND & GRAVEL	

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.

REFERENCES

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
Ⓡ	W.78/77	29/3/77	S.R.O.	161004
Ⓢ	W.34/83	9/13/83	M&S	185716
Ⓢ	Proposed Surface Rights Reservation Jan 11/83			Pub. Lands Act
Ⓡ₄	Proposed Short Term LUO		Fall 85 Cancelled	

All Islands in Wabigoon Lake withdrawn from staking under Sec. 39 Sub. C. of Mining Act.

Roads indicated Dryden Paper Co. Private Road may be used by Prospectors only after permission is obtained from Dryden Paper Co. Dryden, Ont.

Ⓡ5 Proposed Short Term LUO Spring 86.

Effective as linen

KENORA MINING DIV. RECEIVED SEP 1 1985

A-2

SCALE: 1 INCH = 40 CHAINS

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

AREA
CONTACT BAY
WABIGOON LAKE

M.N.R. ADMINISTRATIVE DISTRICT
DRYDEN
MINING DIVISION
KENORA
LAND TITLES / REGISTRY DIVISION
KENORA

KENORA MINING DIV. RECEIVED SEP 30 1988

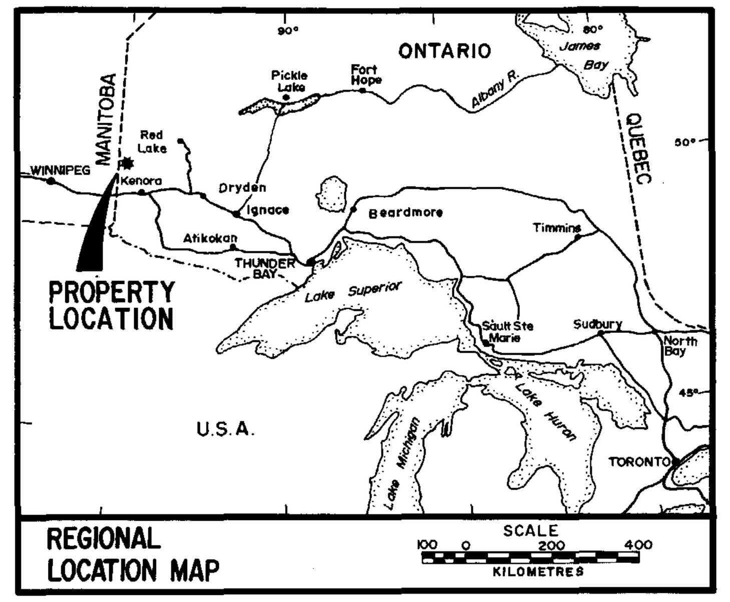
Ministry of Natural Resources
Ontario
Land Management Branch

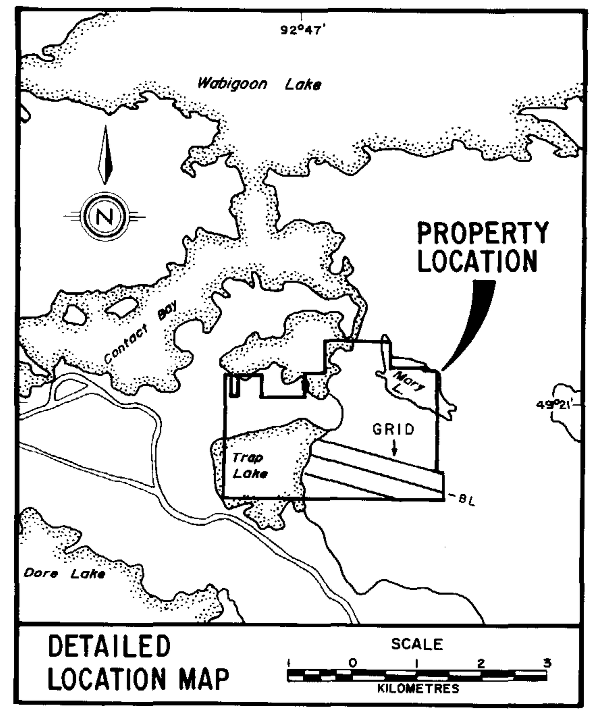
Date JANUARY, 1984
Number G-2579

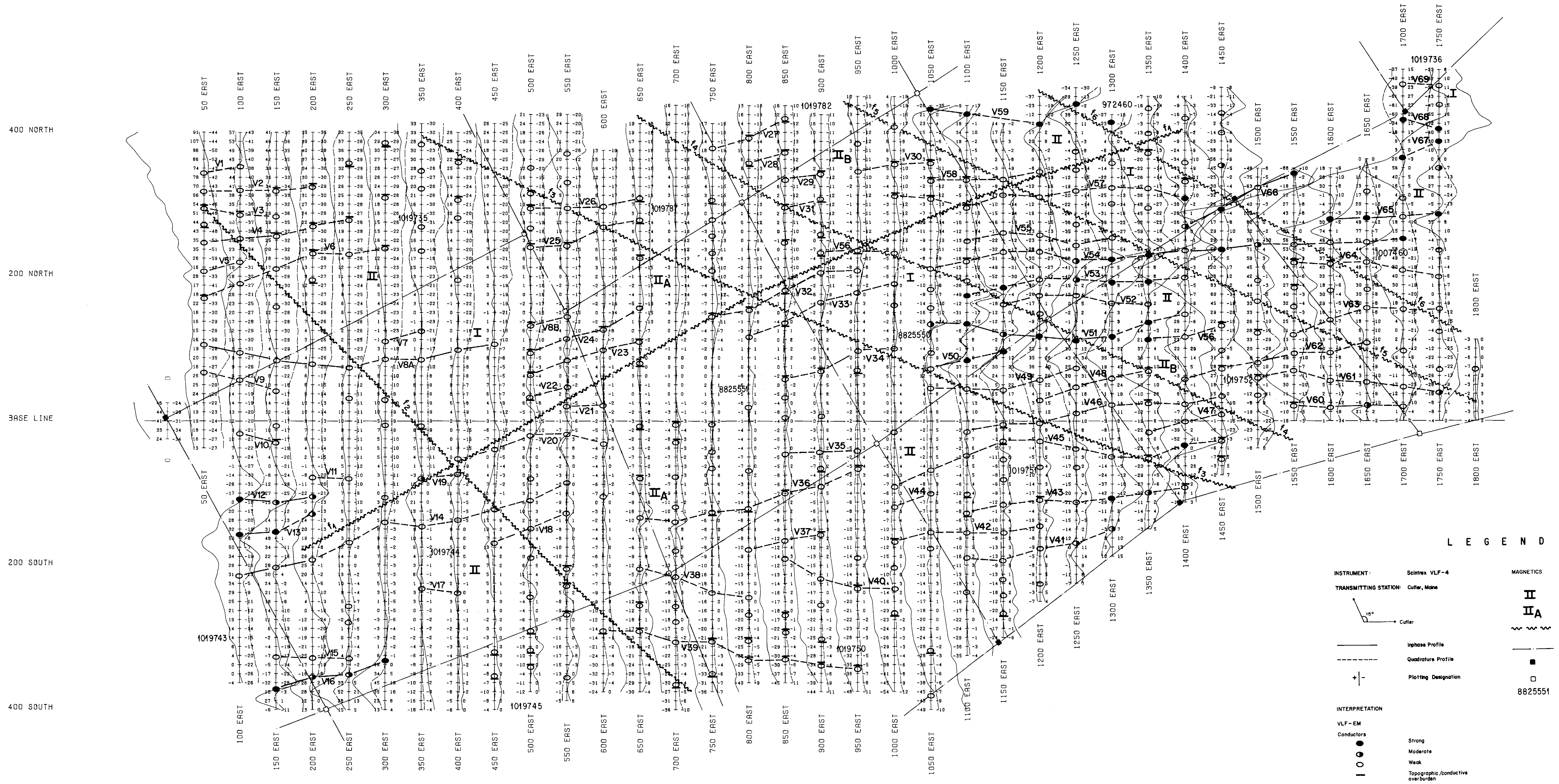
52F10NW0064 2.11598 CONTACT BAY (WABIGOO

200

496924







LEGEND

INSTRUMENT: Scintrex VLF-4

TRANSMITTING STATION: Cutler, Maine

Cutler

Inphase Profile

Quadrature Profile

Plotting Designation

INTERPRETATION

VLF-EM

Conductors

Strong

Moderate

Weak

Topographic/conductive overburden

Continuity

Probable

Possible

MAGNETICS

Magnetic domain boundary

II Magnetic domain

II_A Magnetic subdomain

Fault

Claim line

Claim post, located

Claim post, assumed

8825551 Claim number

2.11598

SCALE

METRES

BOND GOLD CANADA INC.

EAGLE LAKE PROPERTY

VLF-EM PROFILES

Project No: C-1132	By: P.A. Gledhill
Scale: 1:2500	Drawn: M P H
Drawing No: Map 3	Date: June, 1988

MPH Consulting Limited

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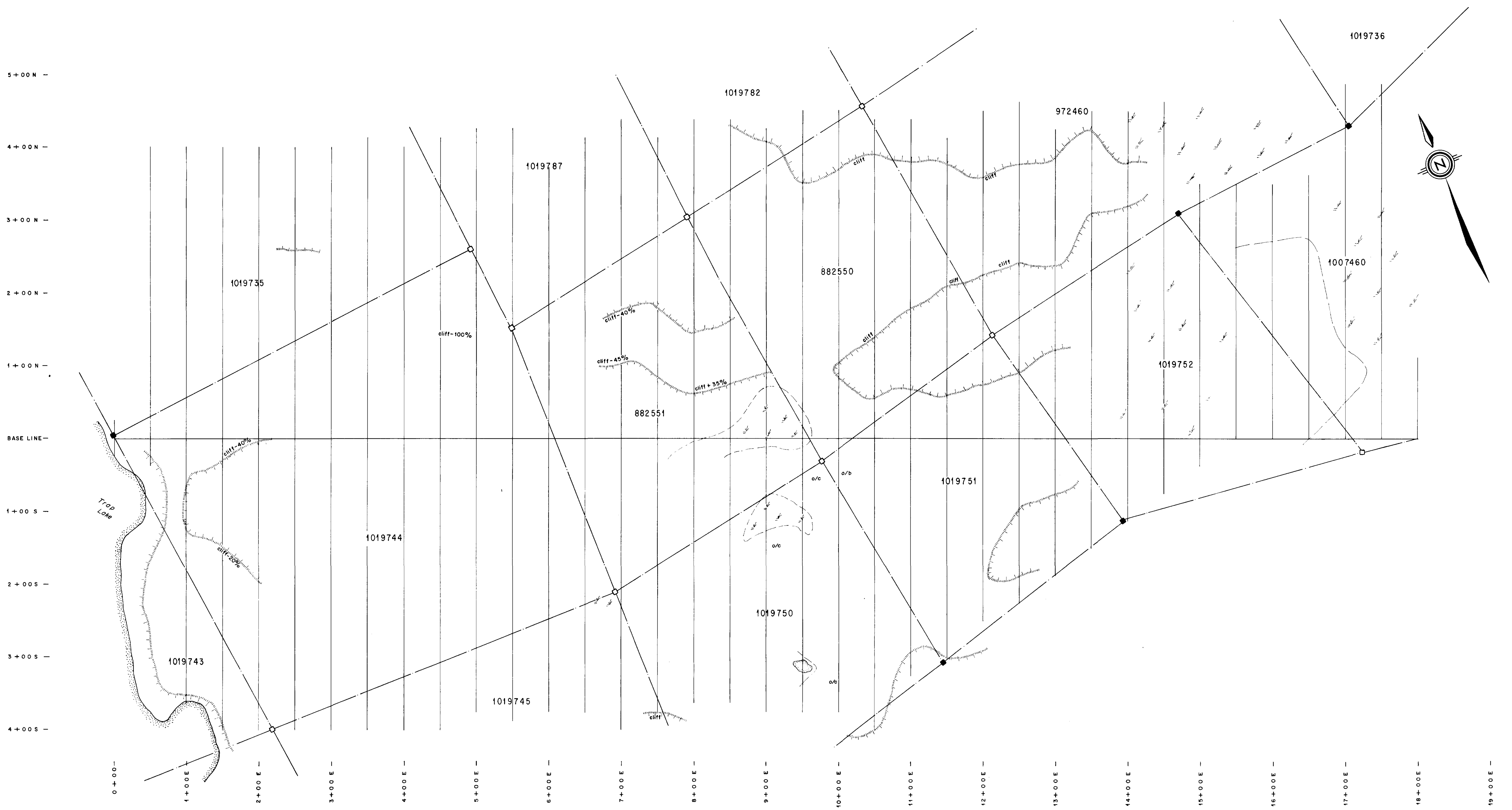
BOND GOLD CANADA INC.
EAGLE LAKE PROPERTY
TOTAL FIELD MAGNETICS
Project No: C-1132
By: P.A. Gledhill
Scale: 1:2500
Drawn: MPH
Drawing No: Map 2
Date: June, 1988
MPH Consulting Limited
2.11598
LEGEND
FIELD UNIT Scintrex MP-4
BASE STATION RECORDER Scintrex MP-4
Magnetic Value
Base Value 59,000 nT
Magnetic Contour
Magnetic Depression
Contour Interval
25 nT
100 nT
500 nT
MAGNETIC INTERPRETATION
Magnetic Domain Boundary
Magnetic Domain
Magnetic Subdomain
Fault
Claim line
Claim post, located
Claim post, assumed
Claim number
REGIONAL LOCATION MAP
DETAILED LOCATION MAP
PROPERTY LOCATION
400 NORTH
200 NORTH
BASE LINE
200 SOUTH
400 SOUTH

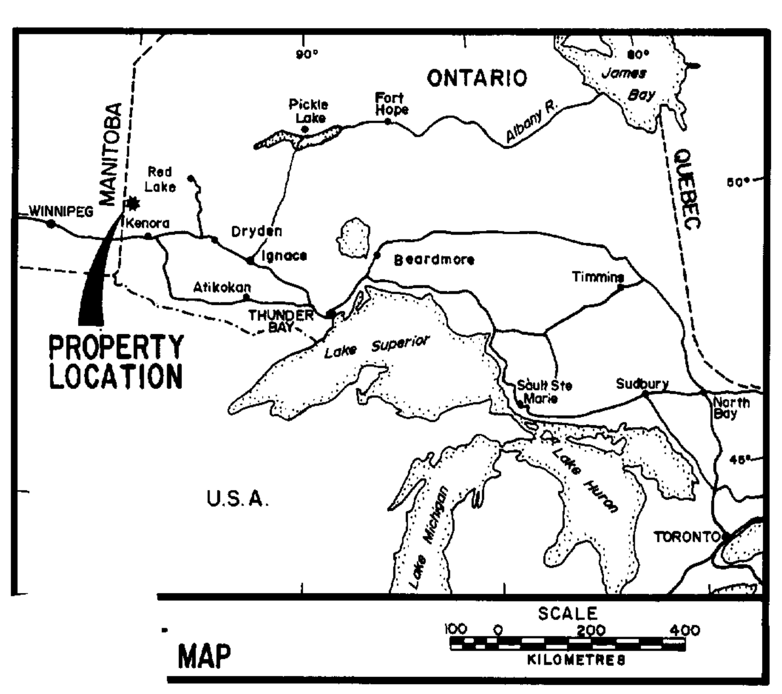


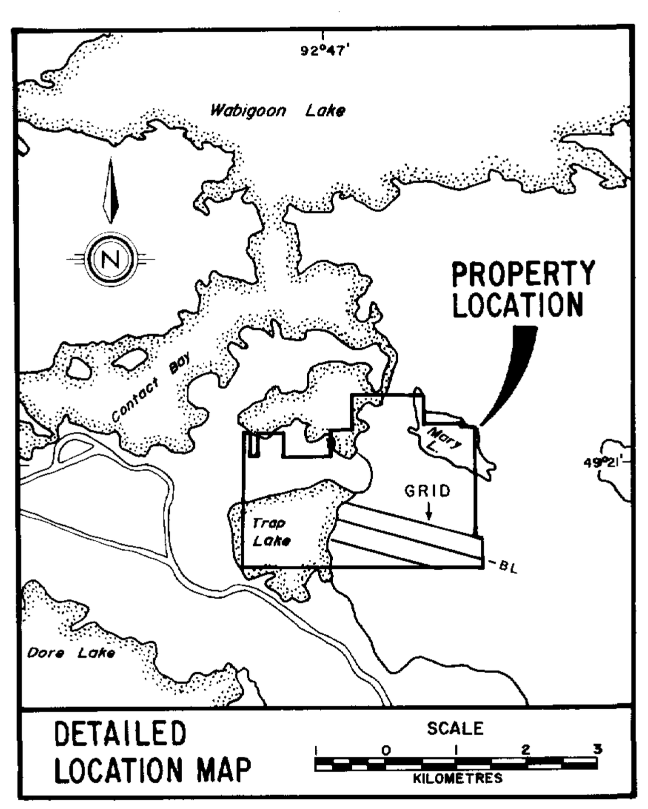
L E G E N D

- Lake
- Swamp
- Slope
- Claim line
- Claim post - located
- Claim post - assumed
- 882551 Claim number

2.11598

SCALE 50 0 100 200 METRES





BOND GOLD CANADA INC.

EAGLE LAKE PROPERTY

TOPOGRAPHY MAP

Project No: C-1132	By: P.A. Gledhill
Scale: 1:2500	Drawn: MPH
Drawing No: Map 1	Date: June, 1988

MPH Consulting Limited

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