~~Copy #1 to be filed for Assessment~~

2.564

PETER L. GORDON
114 LASCELLES BOULEVARD,
TORONTO 7, ONTARIO, CANADA

REPORT OF THE
GROUND GEOPHYSICAL SURVEY
ON A CLAIM GROUP IN STRATHY TOWNSHIP
LARDER LAKE MINING DIVISION, ONTARIO

FOR

PETER L. GORDON

RECEIVED
AUG 18 1971
PROJECTS SECTION

BY

BARRINGER RESEARCH LIMITED

304 CARLINGVIEW DRIVE

METROPOLITAN TORONTO

REXDALE, ONTARIO

APRIL 1971

Erratum: The claim numbers referred to herein as T.61545, T.61544, T.61542, T.61543, T.61540, T.61541, T.61539, T.51438, T.61537 and T.61536 should be referred to, respectively, as claim numbers L.267134, L.267135, L.267136, L.267137, L.267138, L.267139, L.266949, L.266950, L.266951 and L.266952.

INTRODUCTION

In January and February of 1971, a geophysical survey was carried out over a group of ten claims presently held by Peter L. Gordon whose residence address is 114 Lascelles Blvd., Toronto 7, Ontario

Between the dates of January 17 and January 27, a three man crew led by Peter Beranek, geophysicist for Barringer Research Limited partially fulfilled a contract to put in a grid over the claims and take electromagnetic and magnetic readings every 100 feet over the grid, using a Barringer Research Limited LEM-2 vertical loop electromagnetic system and a Barringer Research Limited GM-102A total field magnetometer.

The grid was prepared by chain and compass from a base line with lines spaced 400 feet apart, and pickets every 100 feet along line and along the base line. The base line was partially cut on land to preserve it for future use.

Heavy interference was encountered in this survey from power lines which encircle most of the property boundary and from a local radio station transmitter. Subsequently, a two man crew led by Ron Wilson went back into the property between February 1, 1971 and February 5, 1971 with a McPhar SS-15 vertical loop electromagnetic system, which is a more powerful unit, though less portable than the LEM-2, and the EM survey was completed with follow-up detailed EM on anomalous zones.

A total of 6.59 line miles of magnetics and 5.83 line miles of reconnaissance electromagnetics were carried out with EM readings taken every 100 feet and magnetic readings taken every 100 feet closing to 50 feet near regions of high gradients. 4.62 line miles of detailed E.M. completed the survey.

Noisy conditions meant that many of the E.M. readings and some of the magnetic readings were not possible to obtain.

The claim numbers covered are L.267134 to L.267139 (inclusive) and L.266949 to L.266952 (inclusive), located five miles north of Timagami about 1,000 feet west of Highway 11 in Strathy Township, in the District of Nipissing, Larder Lake Mining Division. The claim boundaries are shown on Plan No. M596 of the Ontario Department of Mines and Northern Affairs. Approximately 90% of the claims lie on a section of Net Lake and a side road intersects the southern part of the property, though this road is snow covered in winter.

The terrain consists of rounded till covered hills rising slowly from the lake edge.

INSTRUMENTS AND SURVEY PROCEDURES

The McPhar SS-15 EM unit employs a large loop transmitting coil powered by a small generator, at a frequency of 1,000 Hz or 5,000 Hz or both frequencies simultaneously. The plane of the transmitting loop is oriented vertically and the axis pointed towards the receiver location. The receiver measures the dip angle of the total magnetic field, (primary plus secondary). The null width is also recorded, as this is a measure of the quadrature phase component of the field, but this has been of no value on this property due to high noise conditions.

A sufficient number of transmitter sites (13) were chosen to give a primary coverage of the property with readings taken every 100 feet, on lines either 400 feet or 800 feet from the transmitter, at the higher frequency of 5,000 Hz. The most important conductors found were detailed by setting up the transmitter directly over the implied conductor axis and readings taken at both high and low frequencies.

The Barringer Research Limited GM-102 precession magnetometer is a total field instrument having a sensitivity and accuracy of $\pm 10\gamma$. The readings were taken every 100 feet along lines, closing to 50 feet near anomalous magnetic zones. All readings were corrected to an arbitrary datum by repeating base readings every hour or so and assuming a linear drift with time. Sometimes readings cannot be taken with a precession instrument in regions of high magnetic gradients. This problem was hardly encountered on this survey, but some readings were lost near power lines.

PRESENTATION OF THE RESULTS

The EM results are presented in stacked profile form superimposing both reconnaissance and detailed work, but distinguishing them by numbering the profiles according to the number given to each transmitter site, all of which are plotted. The conductor axes are marked and the claim boundaries are also shown.

The magnetics are presented on a contour map , together with the geological interpretation. The contour interval is 20γ where the contour spacing permits.

KNOWN GEOLOGY

A report on the property written in May 1968 by P. B. Hermiston, Geological Engineer describes the economic geology of the area. At this time the property belonged to Hermco Consolidated Mining and Smelting.

Hermiston's report was partly based on a geological map drawn up by E. L. MacVeigh, who has interests in several properties in this township. There are no references to other sources of information either in the report or on the map.

The Ontario Department of Mines and Northern Affairs issued a geological map of Strathy Township on March 4, 1971, (Preliminary Map P.667), together with explanatory notes, and extensive use has been made of this to correlate the magnetic and geological data using the magnetic contour map as a base map. (See DWG. NO. 5-273-4)

This map is assumed to be superior to MacVeigh's at least in the respects that references are given, outcrops are shown and the complete township is mapped.

INTERPRETATION

General Discussion

The magnetics were contoured at a 20γ interval and an attempt has been made to map the geological boundaries with the help of the contour map.

The property separates into four distinct magnetic domains which have been classed according to the outcrops shown on the preliminary geology map to a fair degree of certainty. These are discussed further in the next section.

The reconnaissance phase of the EM survey was successful in locating or indicating some eight conductive zones, despite heavy interference from power lines and a local radio station transmitter. A few conductors were found having sufficient length and strength to justify detailed work. This was done by the fixed transmitter method, with the transmitter set up directly over the crossover. This has the effect of accentuating the conductors on which the transmitter is set up, and masking to some extent the influence of nearby conductors. It also provides fairly reliable information on the depth, dip and depth extent of the conductor. The thickness of the conductor is not easily resolved by vertical loop EM.

The ratio of high frequency to low frequency response gives a qualitative estimate of the conductivity thickness parameter.

Detailed Discussion of the Interpretation

(i) Magnetometer Survey

The four main regions marked A,B,C, and D are fairly well defined, having quite a distinct magnetic amplitude and "grain". There is sufficient outcrop marked on the geological map to identify these areas, except for area B, which has been surmised to be part of the Chambers-Strathy batholith. This outcrops extensively to the north and east of Net Lake.

Areas A and D are probably felsic to intermediate metavolcanics, though clearly showing different characteristics between the two areas. The contact between the felsic to intermediate metavolcanics and the intermediate to basic metavolcanics to the north is most likely defined by the magnetic contact marking the northern edge of the property. Area C is most likely intermediate to mafic metavolcanics.

The locations of the faults were taken from the O.D.M. geological map, with corrections and extensions made to better fit the magnetic data. Notice that L1 was mentioned in the Hermiston report, mentioned above, as a major fault in this area, whereas reference to the geological map shows no evidence of displacement either side of L1, and it is impossible to say with any certainty that L1 is indeed a fault. The most outstanding magnetic feature is (I.F.) an anomaly of about 3,000γ which traces the eastern shoreline of Net Lake as far as L1. This is most likely an iron formation, and it parallels F5 a few hundred feet to the south, presuming F5 extends that far. Two parallel olivine-bearing diabase dykes have intruded from the west, one of which terminates at F2. These are unmistakeable as 1,000γ magnetic anomalies, but the extensions drawn to the east were copied from the geology map. Many more magnetic features are apparent, some of which will be discussed with the electromagnetics.

(ii) Electromagnetic Survey

The conductors are discussed individually. Conductor C1 has been traced for 1200 feet in a direction N55°W to the edge of the property, where the response is strongest. The conductor is apparently plunging to the west, and comes very close to the surface on the east shore of Net Lake, (the property boundary).

There is a 300γ magnetic association to the conductor, possibly 50 feet to the north on lines 12W and 8W. On lines 4W and 00 the magnetic iron formation (I.F.) swamps out any possible indication of a magnetic association. The conductor dips at about 70° to the southeast of lines 12W and 8W, swinging to perhaps 45° to the southeast on line 00. The depth extent tentatively is 600 feet or greater, though this figure is definitely prone to error.

Two vertical drill holes plotted on the geology map directly over the conductor intersected pyrite and pyrrhotite mineralization. The conductor is also on strike with two copper-molybdenum showings to the northeast straddling either side of Highway 11, about 1500 feet from the shore of Net Lake. The Hermiston report mentions a sulphide deposit in altered diabase (diorite) which was assayed by INCO yielding 0.48% copper, 0.27% nickel and $1.40 gold. This is shown on the geology map by E.L. MacVeigh and is also roughly on strike with C1 between the lake shore and Highway 11. It is clear that C1 has considerable potential for economic mineralization, being certainly a massive sulphide zone. Conduction is very strong and several showings on strike with the conductor add interest to it. The conductor has already been drilled to some extent, but detailed information on the drill holes is not available. The proximity to the lineation L1 and the fault F5, either of which could act as a channel for ore-bearing solutions, and the volcanic environment, would tend to focus some attention on this conductor, especially in the region disturbed by the iron formation (IF). Further exploration is recommended here.

Conductor C2 lies on the contact between regions A and B, ie. felsic to intermediate metavolcanics and granitic rocks, just 50 feet south of a prominent magnetic high. In fact the conductor response waxes and wanes according to the strength of the magnetic high. C2 is vertical and perhaps 30 feet below surface. It follows a rather meandering path including a sharp change in direction on line 00. The magnetic anomaly and presumably the conductor as well, terminates on line 8W at fault F4. This sharp bend is a possible trap for mineralization in ore-bearing solutions moving along a fracture zone or zone of weakness, in this case a geological contact. The increased strength of conduction on line 4W may be only graphitic or pyritic in origin but the magnetic association is an indication of possible Cu-Ni mineralization and further investigation is warranted.

C3 consists of a series of very weak conductors in region D, probably associated with banding or shearing in the metavolcanics. There is no interest here.

C4 lies directly on the fault F3, (which is sheared) and has no magnetic correlation. The conduction is weak and probably the result of a wet shear and there is no further interest here.

C5 actually consists of two very weak, non-magnetic, parallel conductors, C5(a) and C5(b). The former is more obvious and has been detailed at 5,000 Hz. The latter lies directly on the fault zone F5. C5 is probably connected with a pyrite, chalcopyrite, nickel showing in a pit 1,000 feet along the shoreline to the southwest, and this of course adds interest to the conductors, except that the strike length actually lying within the property boundary is only about two or three hundred feet. The map shows four drill holes by INCO, apparently on this fault zone (F5) although MacVeigh's map misplaces the fault. In view of the limited strike length on the property it is rather difficult to recommend any further work here.

C6 is rather ill-defined, as it is mostly off the edge of the property and consequently most of the necessary readings were not taken. In any event C6 is parallel to, and just south of F5 and has a magnetic correlation of 800γ on line 00. There is some indication of continuation of the conductor to line 4E, but it appears to have disappeared by line 12E. C6 has many of the necessary attributes of a massive sulphide deposit including limited strike length, reasonably strong conduction, and magnetic correlation. Most likely it is a massive sulphide phase of the iron formation, i.e. pyrite and pyrrhotite, but is worthy of further investigation. Unfortunately we again run into the problem of ownership and it is unclear what proportion of the conductor lies within the property, especially as the conductor most likely dips to the southeast, away from the property.

C7 is a one-line indication of conduction, (line 4W) lying on a broad magnetic anomaly of 100γ or more which continues through to line 00, parallel to L2. The depth of the magnetic body was estimated to be 60 feet, and the dip is indeterminate though not far from vertical.

The EM readings were noisy at this position, but two separate profiles showed similar results. The presence of L1 as a control feature adds interest to the anomaly, which could well be a local concentration of sulphides perhaps large enough to justify further exploration.

C8 is the last anomaly to be discussed. It is most likely caused by a gas pipeline known to be in close proximity to this position, there is no magnetic correlation and is of no further interest.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey of P.L. Gordon's property has been successful in aiding geological mapping of the property when coordinated with Preliminary Map P.667 of the Ontario Department of Mines, and in helping to evaluate the merit of the conductors located by the electromagnetic survey. Of eight conductive zones found, five were thought to be potential sources of massive sulphides. Possibly three of these have a great enough strike length within the property boundary to warrant further investigation; C1, C2 and C7 on the accompanying map. (DWG. NO. 5-273-2)

As all three targets are under the lake, a winter diamond drilling programme is the most satisfactory method of carrying out further exploration. This should be comparatively inexpensive because of the ease of access, but the basic grid, or parts of it will have to be re-established from the position of the baseline where it crosses land.

The drill targets recommended, in order of priority are:-

D.D.H. 1	Collar: 120 feet due north of line 4W, Base line; dip 45°, directed due south to a depth of 300 feet.
D.D.H. 2	Collar: line 12E, 1+50N; dip 45°, directed grid south to a depth of 300 feet
D.D.H. 3	Collar: line 4W, 14+00S; dip 60°, directed grid north to a depth of 300 feet
D.D.H. 4	Collar: line 4W, 20 + 00S; dip 60°, directed grid north to a depth of 300 feet.

BARRINGER RESEARCH LIMITED

E. Reeves,
Geophysicist

F. L. Jagodits, P.Eng.
Chief Geophysicist.

REGISTERED PROFESSIONAL ENGINEER
F. L. JAGODITS
PROVINCE OF ONTARIO

APPENDIX I

ASSESSMENT WORK

A considerable amount of work filed for assessment with The Ontario Department of Mines and Northern Affairs has come to the attention of the writer after completion of the report.

This work consists of the following:-

1. An airborne magnetic and electromagnetic survey covering the above and adjacent properties. (Geophysical Engineering and Surveys Limited, 1964) File No. 63-1297.

2. A long wire electromagnetic survey covering most of the above property. (Geophysical Engineering and Surveys Limited, 1959) File No. 63-997.

3. Two reports covering a ground magnetic and ground electromagnetic survey respectively of an adjacent property to the west of the above property. (E. L. MacNeigh, 1968) File No. 63-2341.

The first two are of most interest here because they cover the same ground by the same general methods as reported on above. It is clear, however that they are by no means of the same quality, mainly because of the type of instrumentation employed. Both the airborne and ground magnetic surveys suffer from a poor resolution and the aeromagnetic survey cannot hope to provide the 10γ detail that, from the results of the ground survey reported above, is necessary for accurate evaluation. In fact, the results of flying in two perpendicular directions are markedly different.

The long wire method of electromagnetic prospecting is clearly an inferior method for shallow exploration, merely judging from the results of this one survey, (which is the only one the writer has seen of this type). It is clearly necessary to use a transmitting wire laid out in as straight a line as possible, (whereas in this case they have followed a curving road), and to normalize the results according to the distance of the point away from the wire. The near wire anomalies are clearly amplified enormously compared to the anomalies further away. The conductor C2, recommended for drilling in this report, (and also showing up strongly on the airborne survey), has not appeared at all on the long wire survey, whereas a number of very weak conductors, collectively called C5, show up strongly on the long wire method, due to the proximity of the transmitting wire, and perhaps because of the increased depth penetration of the long wire method.

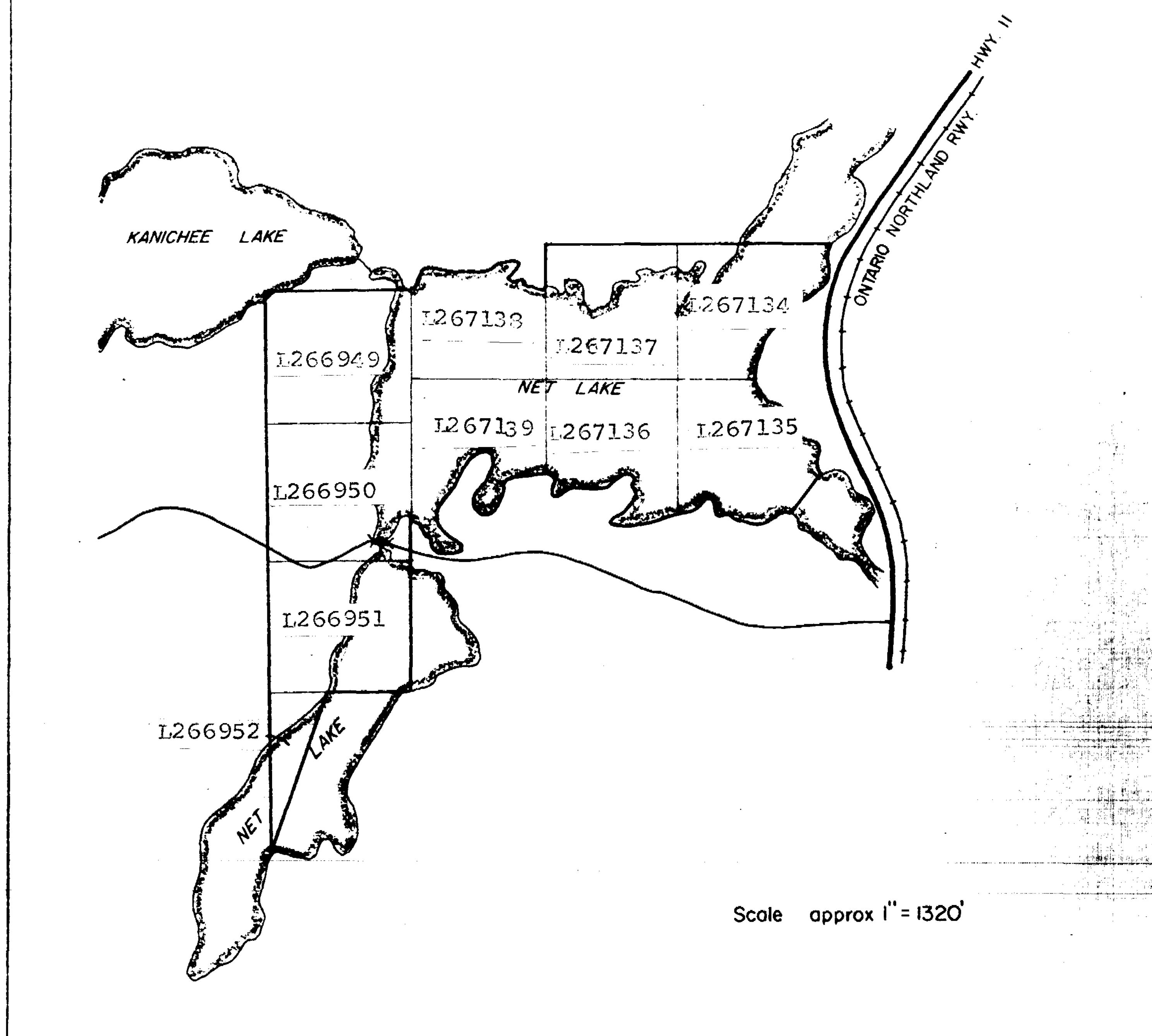
The overall result is that with more modern geophysical methods providing a far greater degree of accuracy and detail, further exploration of the property is now justified, with the provision that, as INCO is the only company known to have actually drilled on the property, and although the exact location is uncertain, it would be comforting to have the information that INCO has on the property.

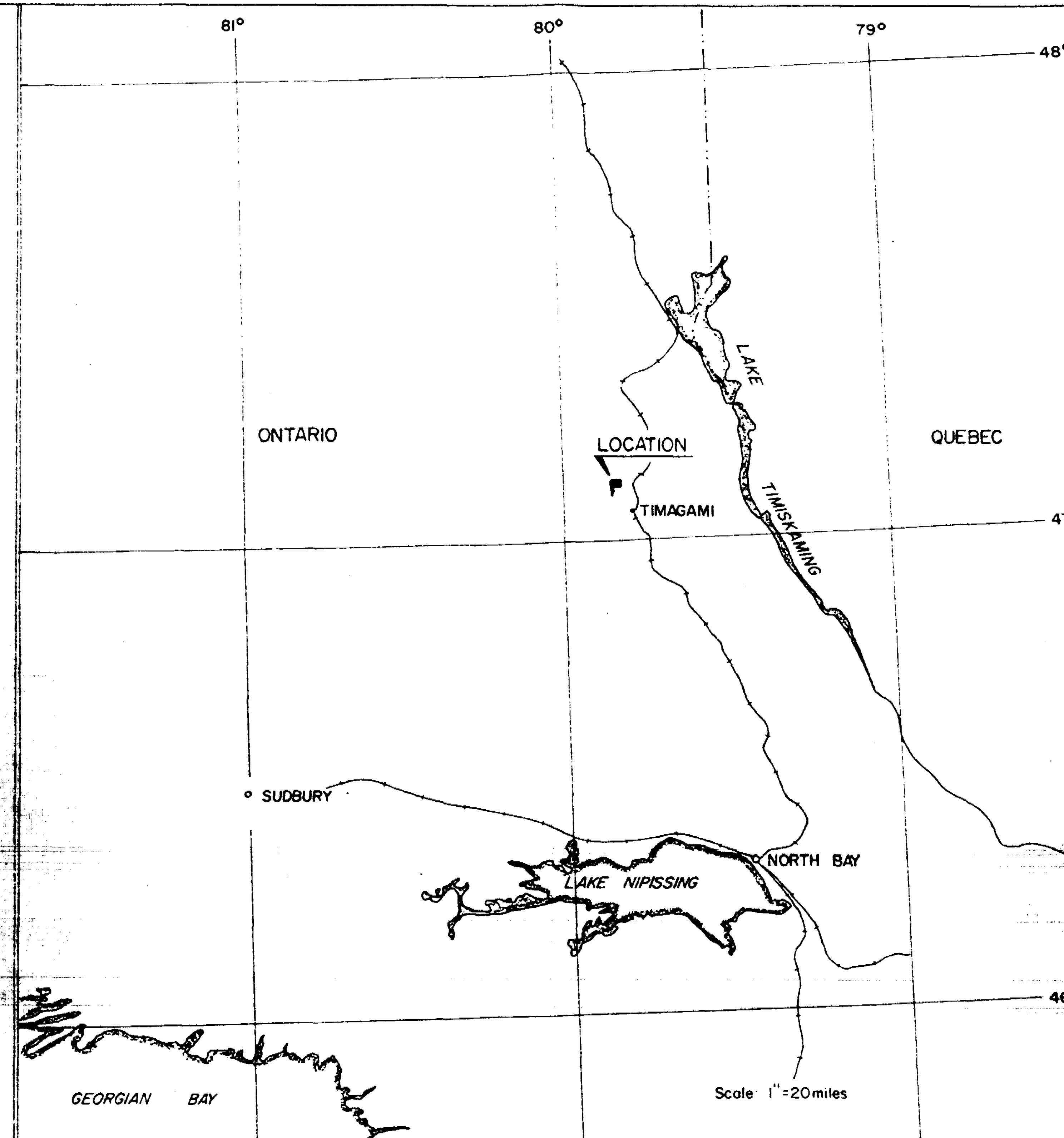
The survey of the adjacent property by a Sharpe A-2 magnetometer and a Ronka Horizontal Loop electromagnetic survey at a frequency of 876 Hz and a coil separation of 200 feet was comparable in standard to the survey reported on above, but failed to show any significant conductors. MacNeigh appreciated the limited depth penetration of the electromagnetic system, which is shared by all ground ULF systems except perhaps the long wire method (which has its own limitations, of course), and he recommended an I.P. survey to try and obtain penetration to 1,000 feet or so. He suggests that this may be the depth of an intrusive sill-like body, a possible host to mineralization. In the writers experience, this type of survey has little chance of success at depth over a lake having conductive lake bottom sediments, as Net Lake may well have, so that the property is fairly well limited to shallow exploration by direct geophysical means. However, there is nothing in any of the available assessment data to contradict the encouraging evaluation of the geophysical results given in the report above.

BARRINGER RESEARCH LIMITED

13 May 1971.

E. Reeves
Geophysicist.





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Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada.

PETER L. GORDON	
STRATHY TWP., LARDER LAKE M.D., ONTARIO	
LOCALITY PLAN	
FEB 1971	DWG. 5-273-1

PERFORMANCE & CC

31M04NW0013 2.564 STRATHY

900

ASSESSMENT WORK DETAILS

Township or Area: Strathy Township

Type of Survey: Magnetic

A separate form is required for each type of survey

Chief Line Cutter or Contractor: P. Beranek (Name)

304 Carlingview Drive, Rexdale, Ont. (Address)

Party Chief: P. Beranek (Name)

304 Carlingview Drive, Rexdale, Ont. (Address)

Consultant: F. Jagodits (Name)

304 Carlingview Drive, Rexdale, Ont. (Address)

COVERING DATES

Line Cutting: Jan. 17 - Jan 27, 1971

Field: Jan. 17 - Jan 27 & Feb. 1 - Feb. 5/71

Instrument work, geological mapping, sampling etc.

Office: Feb. 8 - April 5th, 1971.

INSTRUMENT DATA

Make, Model and Type: ~~Barringer LEM 2 - McPhar SS15~~ ~~McPhar M-700~~ Barringer GM-102A

Scale Constant or Sensitivity: - - -

Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count: - - -

Number of Stations Within Claim Group: 403

Number of Readings Within Claim Group: 415

Number of Miles of Line cut Within Claim Group: 7.3

Number of Samples Collected Within Claim Group:

CREDITS REQUESTED	20 DAYS per claim	40 DAYS per claim	Includes (Line cutting)
Geological Survey	☐	☐	
Geophysical Survey	☒	☒	Show Check ✓
Geochemical Survey	☐	☐	

DATE: July 16-71

SIGNED: [signature]

List numerically

L267134, L267135, L267136,

L267137, L267138, L267139,

L266949, L266950, L266951,

L266952. no credits

Areas not covered: 1 claim

claims covered: 9

allow 20 days

If space insufficient, attach list

RECEIVED

AUG 18 1971

PROJECTS SECTION

TOTAL: 10

Send in duplicate to:

FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES &
NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

Performance and coverage credits do not apply to airborne surveys

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS

AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

(a) substantial and systematic coverage of each claim
(b) line spacing not exceeding 400 foot intervals
(c) stations not exceeding 100 foot intervals or
(d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

PERFORMANCE & COVERAGE CREDITS

ASSESSMENT WORK DETAILS

Township or Area: Strathy Township

Type of Survey: Electromagnetic
A separate form is required for each type of survey

Chief Line Cutter or Contractor: P. Beranek
Name
304 Carlingview Drive, Rexdale, Ont.
Address

Party Chief: P. Beranek
Name
304 Carlingview Drive, Rexdale, Ontario.
Address

Consultant: F. Jagodits
Name
304 Carlingview Drive, Rexdale, Ontario
Address

COVERING DATES

Line Cutting: Jan. 17 - Jan. 27, 1971.

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Instrument work, geological mapping, sampling etc.

Office: Feb. 8 - April 5th, 1971.

INSTRUMENT DATA

Make, Model and Type: Barringer LEM 2 - McPhar SS15

Scale Constant or Sensitivity: - - -
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count: - - -

Number of Stations Within Claim Group: 403

Number of Readings Within Claim Group: 415

Number of Miles of Line cut Within Claim Group: 7.3

Number of Samples Collected Within Claim Group: - - -

MINING CLAIMS TRAVERSED

List numerically

L267134, L267135, L267136,
L267137, L267138, L267139,
L266949, L266950, L266951,
L266952. no credit

areas not covered = 1
claims covered = 9
allow 40 days for

If space insufficient, attach list

RECEIVED
AUG 18 1971
PROJECTS SECTION

TOTAL 10

CREDITS REQUESTED

	20 DAYS per claim	40 DAYS per claim	Includes (Line cutting)
Geological Survey	☐	☐	
Geophysical Survey	☐	☒ xx	Show Check ✓
Geochemical Survey	☐	☐	

DATE July 17-71

SIGNED

Send in duplicate to:
FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES & NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

Performance and coverage credits do not apply to airborne surveys

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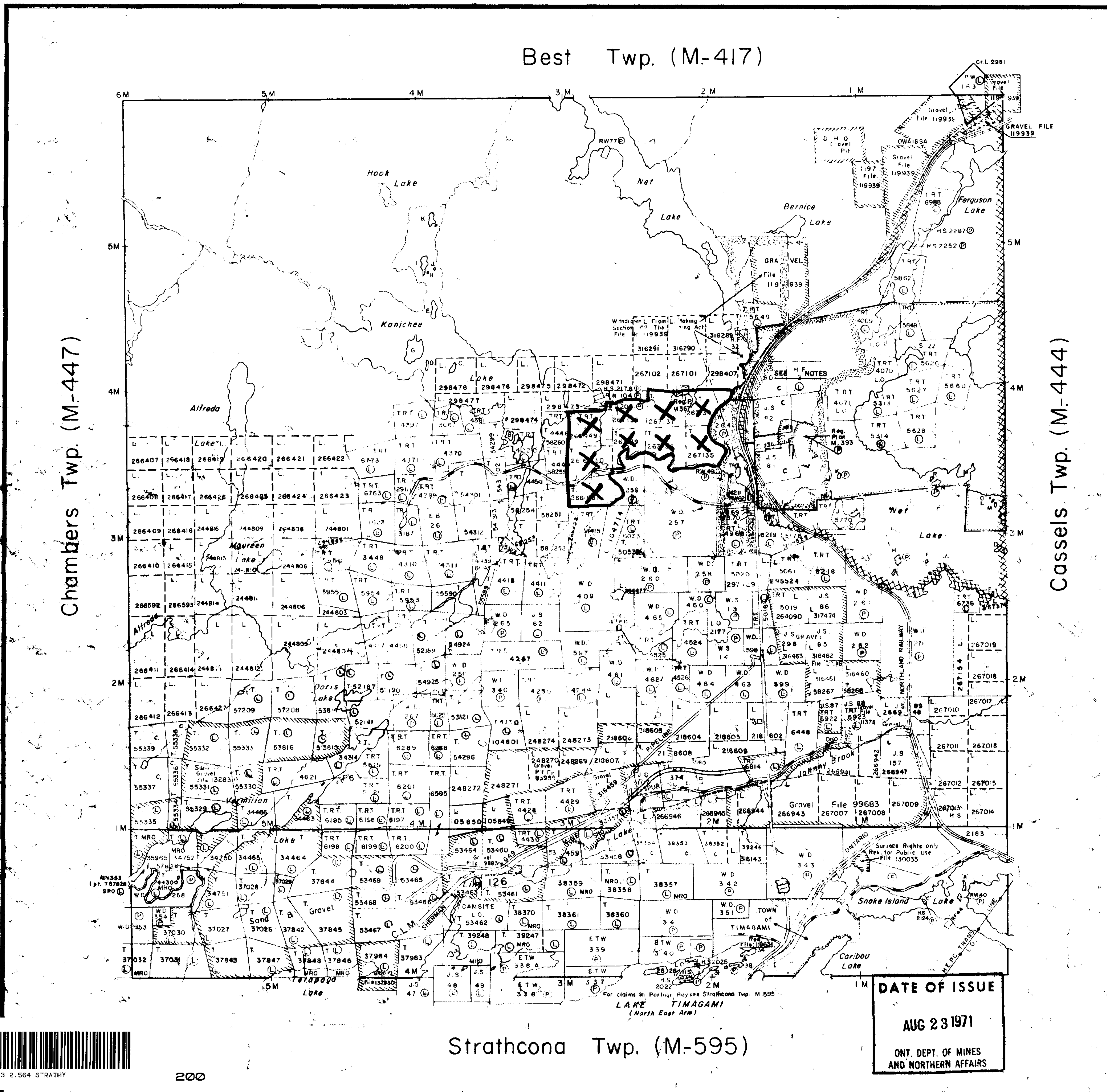
If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.



THE TOWNSHIP

Claim OF map

STRATHY

DISTRICT OF NIPISSING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	Ⓟ
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.

NOTES

400' Surface Rights Reservation around all Lakes & Rivers.

Area reserved to Dept. of Highways shown thus
First Mile Line surveyd by E.L. Moore 1928

Area within mining claims T 53460 T 53461 T 53463 & T 53464 reserved for Sand & Gravel File No 99831 ... of T 53458 & T 53459 ... T 53487 ...

Area shown thus reserved for Timagami Townsite subject to Section 36 (a) of The Mining Act.
See also O/C 2022/66 – File 3996

THE ESTABLISHMENT OF PITS AND QUARRIES IN AREA SHOWN THUS IS PROHIBITED BY ORDER OF THE MINISTER OF MUNICIPAL AFFAIRS.

Mining Rights in an area shown thus ... HF 3, are Withdrawn from Staking under Sec. 42 of The Mining Act. Files 148517 etc

PLAN NO. M.596

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

31M04NW0013 2.564 STRATHY

200

J.P.V.K.

LEGEND

1000 Hz Profile } Scale 1" = 20°
5000Hz Profile }
Fixed transmitter location
Conductor – definite, indication
Assumed claim line and post
Located witness post

210

Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada

Copy #1

PETER L. GORDON
STRATHY TWP, LARDER LAKE M.D., ONTARIO

VERTICAL LOOP
ELECTROMAGNETIC SURVEY

FEB 1971	Scale 1" = 200'	DWG. 5-273-2

LEGEND

Contour interval -- 20 gammas
20 gamma contour
100 gamma contour
500 gamma contour
depression
Claim post - located, unlocated
Claim line
L267134 Claim number

220

Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada

Copy #1

PETER L. GORDON		
STRATHY TWP., LARDER LAKE M.D., ONTARIO		
TOTAL INTENSITY MAGNETICS		
FEB 1971	Scale 1"=200'	DWG. 5-273-3

INTERPRETATION

Geological contact
Fault — F —
Lineation or zone of weakness (possible fault) — L —
Shear S
Diabase dyke D.D.
Iron formation IF
EM conductor – definite, indication

230

SOURCES OF INFORMATION
(in order of importance)
Magnetics (M)
Geology (G)
Electromagnetics (E.M.)

MAGNETICALLY SEPARABLE GEOLOGICAL REGIONS
A ..... felsic to intermediate metavolcanics
B ..... Unknown, could be granite (Chambers, Strathy batholith)
C ..... intermediate to mafic metavolcanics
D ..... as A, largely rhyolite to rhyodacite

LEGEND

Contour interval – 20 gammas
20 gamma contour
100 gamma contour
500 gamma contour
depression
Claim post – located, unlocated
Claim line
L267135 Claim number

Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada

Copy #1

PETER L. GORDON			
STRATHY TWP, LARDER LAKE M.D., ONTARIO			
INTERPRETATION			
FEB 1971	Scale 1"=200'		DWG 5-273-4

~~Copy #1 to be filed for Assessment~~

2.564

PETER L. GORDON
114 LASCELLES BOULEVARD,
TORONTO 7, ONTARIO, CANADA

010

REPORT OF THE GROUND GEOPHYSICAL SURVEY ON A CLAIM GROUP IN STRATHY TOWNSHIP LARDER LAKE MINING DIVISION, ONTARIO

FOR

PETER L. GORDON

BY

BARRINGER RESEARCH LIMITED
304 CARLINGVIEW DRIVE
METROPOLITAN TORONTO
REXDALE, ONTARIO

APRIL 1971

Erratum: The claim numbers referred to herein as T.61545, T.61544, T.61542, T.61543, T.61540, T.61541, T.61539, T.51438, T.61537 and T.61536 should be referred to, respectively, as claim numbers L.267134, L.267135, L.267136, L.267137, L.267138, L.267139, L.266949, L.266950, L.266951 and L.266952.

INTRODUCTION

In January and February of 1971, a geophysical survey was carried out over a group of ten claims presently held by Peter L. Gordon whose residence address is 114 Lascelles Blvd., Toronto 7, Ontario

Between the dates of January 17 and January 27, a three man crew led by Peter Beranek, geophysicist for Barringer Research Limited partially fulfilled a contract to put in a grid over the claims and take electromagnetic and magnetic readings every 100 feet over the grid, using a Barringer Research Limited LEM-2 vertical loop electromagnetic system and a Barringer Research Limited GM-102A total field magnetometer.

The grid was prepared by chain and compass from a base line with lines spaced 400 feet apart, and pickets every 100 feet along line and along the base line. The base line was partially cut on land to preserve it for future use.

Heavy interference was encountered in this survey from power lines which encircle most of the property boundary and from a local radio station transmitter. Subsequently, a two man crew led by Ron Wilson went back into the property between February 1, 1971 and February 5, 1971 with a McPhar SS-15 vertical loop electromagnetic system, which is a more powerful unit, though less portable than the LEM-2, and the EM survey was completed with follow-up detailed EM on anomalous zones.

A total of 6.59 line miles of magnetics and 5.83 line miles of reconnaissance electromagnetics were carried out with EM readings taken every 100 feet and magnetic readings taken every 100 feet closing to 50 feet near regions of high gradients. 4.62 line miles of detailed E.M. completed the survey.

Noisy conditions meant that many of the E.M. readings and some of the magnetic readings were not possible to obtain.

The claim numbers covered are L.267134 to L.267139 (inclusive) and L.266949 to L.266952 (inclusive), located five miles north of Timagami about 1,000 feet west of Highway 11 in Strathy Township, in the District of Nipissing, Larder Lake Mining Division. The claim boundaries are shown on Plan No. M596 of the Ontario Department of Mines and Northern Affairs. Approximately 90% of the claims lie on a section of Net Lake and a side road intersects the southern part of the property, though this road is snow covered in winter.

The terrain consists of rounded till covered hills rising slowly from the lake edge.

INSTRUMENTS AND SURVEY PROCEDURES

The McPhar SS-15 EM unit employs a large loop transmitting coil powered by a small generator, at a frequency of 1,000 Hz or 5,000 Hz or both frequencies simultaneously. The plane of the transmitting loop is oriented vertically and the axis pointed towards the receiver location. The receiver measures the dip angle of the total magnetic field, (primary plus secondary). The null width is also recorded, as this is a measure of the quadrature phase component of the field, but this has been of no value on this property due to high noise conditions.

A sufficient number of transmitter sites (13) were chosen to give a primary coverage of the property with readings taken every 100 feet, on lines either 400 feet or 800 feet from the transmitter, at the higher frequency of 5,000 Hz. The most important conductors found were detailed by setting up the transmitter directly over the implied conductor axis and readings taken at both high and low frequencies.

The Barringer Research Limited GM-102 precession magnetometer is a total field instrument having a sensitivity and accuracy of $\pm 10\gamma$. The readings were taken every 100 feet along lines, closing to 50 feet near anomalous magnetic zones. All readings were corrected to an arbitrary datum by repeating base readings every hour or so and assuming a linear drift with time. Sometimes readings cannot be taken with a precession instrument in regions of high magnetic gradients. This problem was hardly encountered on this survey, but some readings were lost near power lines.

PRESENTATION OF THE RESULTS

The EM results are presented in stacked profile form superimposing both reconnaissance and detailed work, but distinguishing them by numbering the profiles according to the number given to each transmitter site, all of which are plotted. The conductor axes are marked and the claim boundaries are also shown.

The magnetics are presented on a contour map , together with the geological interpretation. The contour interval is 20γ where the contour spacing permits.

KNOWN GEOLOGY

A report on the property written in May 1968 by P. B. Hermiston, Geological Engineer describes the economic geology of the area. At this time the property belonged to Hermco Consolidated Mining and Smelting.

Hermiston's report was partly based on a geological map drawn up by E. L. MacVeigh, who has interests in several properties in this township. There are no references to other sources of information either in the report or on the map.

The Ontario Department of Mines and Northern Affairs issued a geological map of Strathy Township on March 4, 1971, (Preliminary Map P.667), together with explanatory notes, and extensive use has been made of this to correlate the magnetic and geological data using the magnetic contour map as a base map. (See DWG. NO. 5-273-4)

This map is assumed to be superior to MacVeigh's at least in the respects that references are given, outcrops are shown and the complete township is mapped.

INTERPRETATION

General Discussion

The magnetics were contoured at a 20γ interval and an attempt has been made to map the geological boundaries with the help of the contour map.

The property separates into four distinct magnetic domains which have been classed according to the outcrops shown on the preliminary geology map to a fair degree of certainty. These are discussed further in the next section.

The reconnaissance phase of the EM survey was successful in locating or indicating some eight conductive zones, despite heavy interference from power lines and a local radio station transmitter. A few conductors were found having sufficient length and strength to justify detailed work. This was done by the fixed transmitter method, with the transmitter set up directly over the crossover. This has the effect of accentuating the conductors on which the transmitter is set up, and masking to some extent the influence of nearby conductors. It also provides fairly reliable information on the depth, dip and depth extent of the conductor. The thickness of the conductor is not easily resolved by vertical loop EM.

The ratio of high frequency to low frequency response gives a qualitative estimate of the conductivity thickness parameter.

Detailed Discussion of the Interpretation

(i) Magnetometer Survey

The four main regions marked A,B,C, and D are fairly well defined, having quite a distinct magnetic amplitude and "grain". There is sufficient outcrop marked on the geological map to identify these areas, except for area B, which has been surmised to be part of the Chambers-Strathy batholith. This outcrops extensively to the north and east of Net Lake.

Areas A and D are probably felsic to intermediate metavolcanics, though clearly showing different characteristics between the two areas. The contact between the felsic to intermediate metavolcanics and the intermediate to basic metavolcanics to the north is most likely defined by the magnetic contact marking the northern edge of the property. Area C is most likely intermediate to mafic metavolcanics.

The locations of the faults were taken from the O.D.M. geological map, with corrections and extensions made to better fit the magnetic data. Notice that L1 was mentioned in the Hermiston report, mentioned above, as a major fault in this area, whereas reference to the geological map shows no evidence of displacement either side of L1, and it is impossible to say with any certainty that L1 is indeed a fault. The most outstanding magnetic feature is (I.F.) an anomaly of about 3,000γ which traces the eastern shoreline of Net Lake as far as L1. This is most likely an iron formation, and it parallels F5 a few hundred feet to the south, presuming F5 extends that far. Two parallel olivine-bearing diabase dykes have intruded from the west, one of which terminates at F2. These are unmistakeable as 1,000γ magnetic anomalies, but the extensions drawn to the east were copied from the geology map. Many more magnetic features are apparent, some of which will be discussed with the electromagnetics.

(ii) Electromagnetic Survey

The conductors are discussed individually. Conductor C1 has been traced for 1200 feet in a direction N55°W to the edge of the property, where the response is strongest. The conductor is apparently plunging to the west, and comes very close to the surface on the east shore of Net Lake, (the property boundary).

There is a 300γ magnetic association to the conductor, possibly 50 feet to the north on lines 12W and 8W. On lines 4W and 00 the magnetic iron formation (I.F.) swamps out any possible indication of a magnetic association. The conductor dips at about 70° to the southeast of lines 12W and 8W, swinging to perhaps 45° to the southeast on line 00. The depth extent tentatively is 600 feet or greater, though this figure is definitely prone to error.

Two vertical drill holes plotted on the geology map directly over the conductor intersected pyrite and pyrrhotite mineralization. The conductor is also on strike with two copper-molybdenum showings to the northeast straddling either side of Highway 11, about 1500 feet from the shore of Net Lake. The Hermiston report mentions a sulphide deposit in altered diabase (diorite) which was assayed by INCO yielding 0.48% copper, 0.27% nickel and $1.40 gold. This is shown on the geology map by E.L. MacVeigh and is also roughly on strike with C1 between the lake shore and Highway 11. It is clear that C1 has considerable potential for economic mineralization, being certainly a massive sulphide zone. Conduction is very strong and several showings on strike with the conductor add interest to it. The conductor has already been drilled to some extent, but detailed information on the drill holes is not available. The proximity to the lineation L1 and the fault F5, either of which could act as a channel for ore-bearing solutions, and the volcanic environment, would tend to focus some attention on this conductor, especially in the region disturbed by the iron formation (IF). Further exploration is recommended here.

Conductor C2 lies on the contact between regions A and B, ie. felsic to intermediate metavolcanics and granitic rocks, just 50 feet south of a prominent magnetic high. In fact the conductor response waxes and wanes according to the strength of the magnetic high. C2 is vertical and perhaps 30 feet below surface. It follows a rather meandering path including a sharp change in direction on line 00. The magnetic anomaly and presumably the conductor as well, terminates on line 8W at fault F4. This sharp bend is a possible trap for mineralization in ore-bearing solutions moving along a fracture zone or zone of weakness, in this case a geological contact. The increased strength of conduction on line 4W may be only graphitic or pyritic in origin but the magnetic association is an indication of possible Cu-Ni mineralization and further investigation is warranted.

C3 consists of a series of very weak conductors in region D, probably associated with banding or shearing in the metavolcanics. There is no interest here.

C4 lies directly on the fault F3, (which is sheared) and has no magnetic correlation. The conduction is weak and probably the result of a wet shear and there is no further interest here.

C5 actually consists of two very weak, non-magnetic, parallel conductors, C5(a) and C5(b). The former is more obvious and has been detailed at 5,000 Hz. The latter lies directly on the fault zone F5. C5 is probably connected with a pyrite, chalcopyrite, nickel showing in a pit 1,000 feet along the shoreline to the southwest, and this of course adds interest to the conductors, except that the strike length actually lying within the property boundary is only about two or three hundred feet. The map shows four drill holes by INCO, apparently on this fault zone (F5) although MacVeigh's map misplaces the fault. In view of the limited strike length on the property it is rather difficult to recommend any further work here.

C6 is rather ill-defined, as it is mostly off the edge of the property and consequently most of the necessary readings were not taken. In any event C6 is parallel to, and just south of F5 and has a magnetic correlation of 800γ on line 00. There is some indication of continuation of the conductor to line 4E, but it appears to have disappeared by line 12E. C6 has many of the necessary attributes of a massive sulphide deposit including limited strike length, reasonably strong conduction, and magnetic correlation. Most likely it is a massive sulphide phase of the iron formation, i.e. pyrite and pyrrhotite, but is worthy of further investigation. Unfortunately we again run into the problem of ownership and it is unclear what proportion of the conductor lies within the property, especially as the conductor most likely dips to the southeast, away from the property.

C7 is a one-line indication of conduction, (line 4W) lying on a broad magnetic anomaly of 100γ or more which continues through to line 00, parallel to L2. The depth of the magnetic body was estimated to be 60 feet, and the dip is indeterminate though not far from vertical.

The EM readings were noisy at this position, but two separate profiles showed similar results. The presence of L1 as a control feature adds interest to the anomaly, which could well be a local concentration of sulphides perhaps large enough to justify further exploration.

C8 is the last anomaly to be discussed. It is most likely caused by a gas pipeline known to be in close proximity to this position, there is no magnetic correlation and is of no further interest.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey of P.L. Gordon's property has been successful in aiding geological mapping of the property when coordinated with Preliminary Map P.667 of the Ontario Department of Mines, and in helping to evaluate the merit of the conductors located by the electromagnetic survey. Of eight conductive zones found, five were thought to be potential sources of massive sulphides. Possibly three of these have a great enough strike length within the property boundary to warrant further investigation; C1, C2 and C7 on the accompanying map. (DWG. NO. 5-273-2)

As all three targets are under the lake, a winter diamond drilling programme is the most satisfactory method of carrying out further exploration. This should be comparatively inexpensive because of the ease of access, but the basic grid, or parts of it will have to be re-established from the position of the baseline where it crosses land.

The drill targets recommended, in order of priority are:-

D.D.H. 1 — Collar: 120 feet due north of line 4W, Base line; dip 45°, directed due south to a depth of 300 feet.

D.D.H. 2 — Collar: line 12E, 1+50N; dip 45°, directed grid south to a depth of 300 feet

D.D.H. 3 — Collar: line 4W, 14+00S; dip 60°, directed grid north to a depth of 300 feet

D.D.H. 4 — Collar: line 4W, 20 + 00S; dip 60°, directed grid north to a depth of 300 feet.

BARRINGER RESEARCH LIMITED

E. Reeves,
Geophysicist

F. L. Jagodits, P.Eng.
Chief Geophysicist.

REGISTERED PROFESSIONAL ENGINEER
F. L. JAGODITS
PROVINCE OF ONTARIO

APPENDIX I

ASSESSMENT WORK

A considerable amount of work filed for assessment with The Ontario Department of Mines and Northern Affairs has come to the attention of the writer after completion of the report.

This work consists of the following:-

1. An airborne magnetic and electromagnetic survey covering the above and adjacent properties. (Geophysical Engineering and Surveys Limited, 1964) File No. 63-1297.

2. A long wire electromagnetic survey covering most of the above property. (Geophysical Engineering and Surveys Limited, 1959) File No. 63-997.

3. Two reports covering a ground magnetic and ground electromagnetic survey respectively of an adjacent property to the west of the above property. (E. L. MacNeigh, 1968) File No. 63-2341.

The first two are of most interest here because they cover the same ground by the same general methods as reported on above. It is clear, however that they are by no means of the same quality, mainly because of the type of instrumentation employed. Both the airborne and ground magnetic surveys suffer from a poor resolution and the aeromagnetic survey cannot hope to provide the 10γ detail that, from the results of the ground survey reported above, is necessary for accurate evaluation. In fact, the results of flying in two perpendicular directions are markedly different.

The long wire method of electromagnetic prospecting is clearly an inferior method for shallow exploration, merely judging from the results of this one survey, (which is the only one the writer has seen of this type). It is clearly necessary to use a transmitting wire laid out in as straight a line as possible, (whereas in this case they have followed a curving road), and to normalize the results according to the distance of the point away from the wire. The near wire anomalies are clearly amplified enormously compared to the anomalies further away. The conductor C2, recommended for drilling in this report, (and also showing up strongly on the airborne survey), has not appeared at all on the long wire survey, whereas a number of very weak conductors, collectively called C5, show up strongly on the long wire method, due to the proximity of the transmitting wire, and perhaps because of the increased depth penetration of the long wire method.

The overall result is that with more modern geophysical methods providing a far greater degree of accuracy and detail, further exploration of the property is now justified, with the provision that, as INCO is the only company known to have actually drilled on the property, and although the exact location is uncertain, it would be comforting to have the information that INCO has on the property.

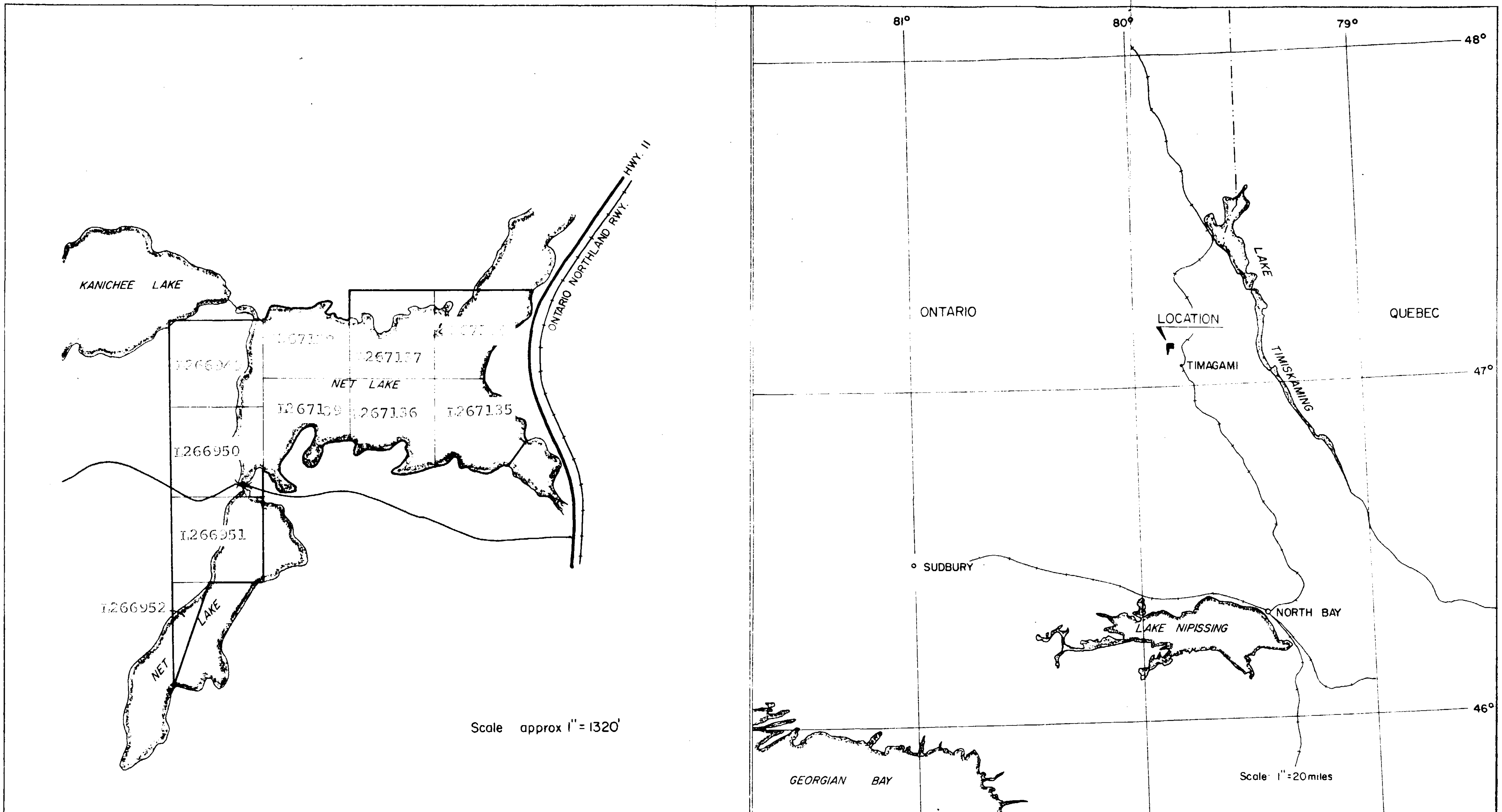
The survey of the adjacent property by a Sharpe A-2 magnetometer and a Ronka Horizontal Loop electromagnetic survey at a frequency of 876 Hz and a coil separation of 200 feet was comparable in standard to the survey reported on above, but failed to show any significant conductors. MacNeigh appreciated the limited depth penetration of the electromagnetic system, which is shared by all ground ULF systems except perhaps the long wire method (which has its own limitations, of course), and he recommended an I.P. survey to try and obtain penetration to 1,000 feet or so. He suggests that this may be the depth of an intrusive sill-like body, a possible host to mineralization. In the writers experience, this type of survey has little chance of success at depth over a lake having conductive lake bottom sediments, as Net Lake may well have, so that the property is fairly well limited to shallow exploration by direct geophysical means. However, there is nothing in any of the available assessment data to contradict the encouraging evaluation of the geophysical results given in the report above.

BARRINGER RESEARCH LIMITED

13 May 1971.

E. Reeves

Geophysicist.



Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada.

PETER L. GORDON		
STRATHY TWP, LARDER LAKE M.D., ONTARIO		
LOCALITY PLAN		
FEB 1971		DWG.5-273-1

PERFORMANCE & CC

31M04NW0013 2.564 STRATHY

900

ASSESSMENT WORK DETAILS

Township or Area: Strathy Township

Type of Survey: Magnetic
A separate form is required for each type of survey

Chief Line Cutter or Contractor: P. Beranek (Name)
304 Carlingview Drive, Rexdale, Ont. (Address)

Party Chief: P. Beranek (Name)
304 Carlingview Drive, Rexdale, Ont. (Address)

Consultant: F. Jagodits (Name)
304 Carlingview Drive, Rexdale, Ont. (Address)

List numerically

L267134, L267135, L267136,
L267137, L267138, L267139,
L266949, L266950, L266951,
L266952. no credits

areas not covered: 1 claim
claims covered: 9
allow 20 days

If space insufficient, attach list

TOTAL 10

COVERING DATES

Line Cutting: Jan. 17 - Jan 27, 1971

Field: Jan. 17 - Jan 27 & Feb. 1 - Feb. 5/71
Instrument work, geological mapping, sampling etc.

Office: Feb. 8 - April 5th, 1971.

INSTRUMENT DATA

McPhar M-700 Barringer GM-102A

Make, Model and Type: ~~Barringer LEM 2 - McPhar SS15~~

Scale Constant or Sensitivity: - - -

Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count: - - -

Number of Stations Within Claim Group: 403

Number of Readings Within Claim Group: 415

Number of Miles of Line cut Within Claim Group: 7.3

Number of Samples Collected Within Claim Group:

RECEIVED
AUG 18 1971
PROJECTS SECTION

CREDITS REQUESTED

	20 DAYS per claim	40 DAYS per claim	Includes (Line cutting)
Geological Survey	☐	☐	
Geophysical Survey	☒	☒	Show Check ✓
Geochemical Survey	☐	☐	

DATE: July 16 - 71

SIGNED: [signature]

Send in duplicate to:
FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES &
NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

Performance and coverage credits do not apply to airborne surveys

SUBMISSION OF GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL SURVEYS AS ASSESSMENT WORK

In order to simplify the filing of geological, geochemical and ground geophysical surveys for assessment work, the Minister has approved the following procedure under Section 84 (8a) of the Ontario Mining Act. This special provision does not apply to airborne geophysical surveys.

If, in the opinion of the Minister, a ground geophysical survey meets the requirements prescribed for such a survey, including:

(a) substantial and systematic coverage of each claim
(b) line spacing not exceeding 400 foot intervals
(c) stations not exceeding 100 foot intervals or
(d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

Each additional ground geophysical survey using the same grid system and otherwise meeting these requirements will qualify for an assessment work credit of 20 days.

A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

Similarly, a geochemical survey using the same grid system with the average number of collected samples per claim being not less than 40 samples, and meeting the requirements for the submission of geochemical surveys for maximum credits, will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geochemical survey a credit of 40 days per claim will be allowed for the survey.

Credits for partial coverage or for surveys not meeting requirements for full credit will be granted on a pro-rata basis.

If the credits are reduced for any reason, a fifteen day Notice of Intent will be issued. During this period, the applicant may apply to the Mining Commissioner for relief if his claims are jeopardized for lack of work or, if he wishes, may file with the Department, normal assessment work breakdowns listing the names of the employees and the dates of work. The survey would then be re-assessed to determine if higher credits may be allowed under the provisions of subsections 8 and 9 of section 84 of the Mining Act.

If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.

PERFORMANCE & COVERAGE CREDITS

ASSESSMENT WORK DETAILS

Township or Area: Strathy Township

Type of Survey: Electromagnetic
A separate form is required for each type of survey

Chief Line Cutter or Contractor: P. Beranek
Name
304 Carlingview Drive, Rexdale, Ont.
Address

Party Chief: P. Beranek
Name
304 Carlingview Drive, Rexdale, Ontario.
Address

Consultant: F. Jagodits
Name
304 Carlingview Drive, Rexdale, Ontario
Address

COVERING DATES

Line Cutting: Jan. 17 - Jan. 27, 1971.

Field: Jan. 17 - Jan. 27 & Feb 1 - Feb. 5/71
Instrument work, geological mapping, sampling etc.

Office: Feb. 8 - April 5th, 1971.

INSTRUMENT DATA

Make, Model and Type: Barringer LEM 2 - McPhar SS15

Scale Constant or Sensitivity: - - -
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count: - - -

Number of Stations Within Claim Group: 403

Number of Readings Within Claim Group: 415

Number of Miles of Line cut Within Claim Group: 7.3

Number of Samples Collected Within Claim Group: - - -

CREDITS REQUESTED

	20 DAYS per claim	40 DAYS per claim	Includes (Line cutting)
Geological Survey	☐	☐	
Geophysical Survey	☐	xx	Show Check ✓
Geochemical Survey	☐	☐	

DATE: July 17-71

SIGNED: [signature]

MINING CLAIMS TRAVERSED

List numerically

L267134, L267135, L267136,
L267137, L267138, L267139,
L266949, L266950, L266951,
L266952. no credits

Area not covered 1
Claims covered 9
allow 40 days
Fm

RECEIVED
AUG 8 1971
PROJECTS SECTION

If space insufficient, attach list

TOTAL 10

Send in duplicate to:
FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES & NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

Performance and coverage credits do not apply to airborne surveys

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(b) line spacing not exceeding 400 foot intervals
(c) stations not exceeding 100 foot intervals or
(d) the average number of readings per claim not less than 40 readings

it will qualify for a credit of 40 assessment work days for each claim so covered. It will not be necessary for the applicant to furnish any data or breakdown concerning the persons employed in the survey except for the names and addresses of those in charge of the various phases (linecutting contractor, etc.). It will be assumed that the required number of man days were spent in producing the survey to qualify for the specified credit.

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A geological survey using the same grid system, and meeting the requirements for submission of geological surveys for maximum credits will qualify for an assessment work credit of 20 days. If line cutting has not previously been reported with any other survey and is reported in conjunction with the geological survey a credit of 40 days per claim will be allowed for the survey.

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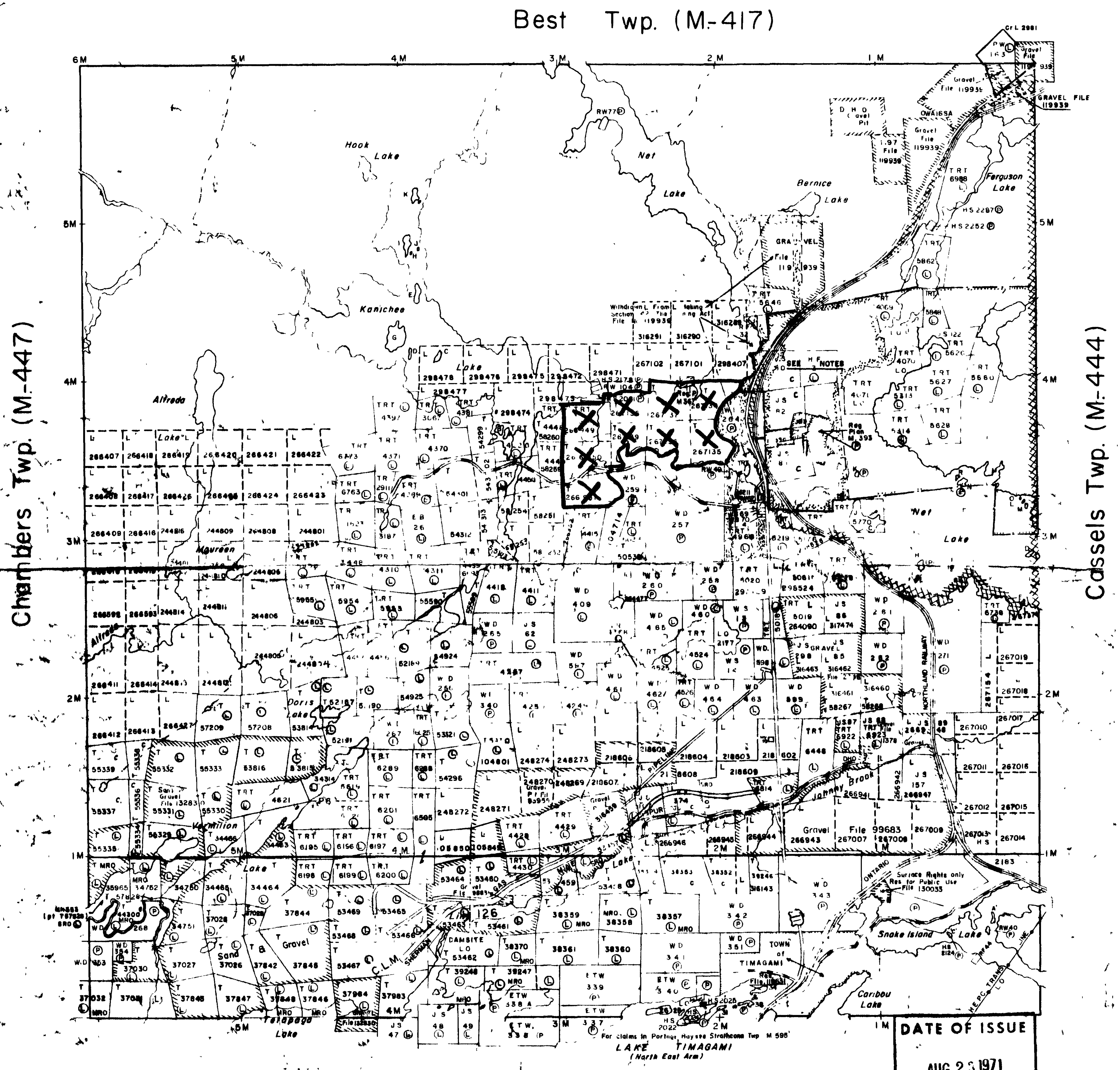
If new breakdowns are not submitted, the Performance and Coverage credits are confirmed to the Mining Recorder at the end of the fifteen days.



DATE OF ISSUE

AUG 23 1971

ONT DEPT OF MINES AND NORTHERN AFFAIRS

31M04NW0013 2.564 STRATHY

200

THE TOWNSHIP OF STRATHY

Claim map

DISTRICT OF NIPISSING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- PATENTED LAND — Ⓟ
- 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

NOTES

400' Surface Rights Reservation around all Lakes & Rivers.

Area reserved to Dept. of Highways shown thus
First Mile Line surveyd by E.L. Moore 1928

Area within mining claims T 55460 T 53461 T 53463 & T 53... reserved for Sand & Gravel File No 9883...

Area shown thus reserved for Timagami townsite subject to Section 36 (a) of The Mining Act.
See also O/C 2022/66 – File 3996

THE ESTABLISHMENT OF PITS AND QUARRIES IN AREA SHOWN THUS IS PROHIBITED BY ORDER OF THE MINISTER OF MUNICIPAL AFFAIRS.

Mining Rights on an area shown thus ... are Withdrawn from Staking under Sec. 42 of The Mining Act. Files: 148517 etc

PLAN NO. M. 596

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

<u>LEGEND</u>

1000 Hz Profile } Scale 1" = 20°
5000Hz Profile }
Fixed transmitter location
Conductor – definite, indication
Assumed claim line and post
Located witness post

31M04NW0013 2.564 STRATHY

210

Copy #1

Work undertaken by
BARRINGER RESEARCH LTD, Toronto, Canada

PETER L. GORDON		
STRATHY TWP., LARDER LAKE M.D., ONTARIO		
VERTICAL LOOP ELECTROMAGNETIC SURVEY		
FEB 1971	Scale 1"=200'	DWG.5-273-2

N

A

LEGEND

Contour interval – 20 gammas

	20 gamma contour
	100 gamma contour
	500 gamma contour
	depression
□ ○	Claim post – located, unlocated
	Claim line
L267134	Claim number

220

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TOTAL INTENSITY MAGNETICS		
FEB 1971	Scale 1"=200'	DWG. 5-273-3

INTERPRETATION	
Geological contact	
Fault	F
Lineation or zone of weakness (possible fault)	L
Shear	S
Diabase dyke	D.D.
Iron formation	IF
EM conductor – definite, indication	

SOURCES OF INFORMATION

(in order of importance)

Magnetics	(M)
Geology	(G)
Electromagnetics	(E.M.)

MAGNETICALLY SEPARABLE GEOLOGICAL REGIONS

A	felsic to intermediate metavolcanics
B	Unknown, could be granite (Chambers, Strathy batholith)
C	intermediate to mafic metavolcanics
D	as A, largely rhyolite to rhyodacite

LEGEND

Contour interval – 20 gammas

	20 gamma contour
	100 gamma contour
	500 gamma contour
	depression
□ ○	Claim post – located, unlocated
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230

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INTERPRETATION

FEB 1971 | Scale 1"=200' | DWG 5-273-4