

31M04SW0118 63.1319 STRATHY

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REPORT ON
A GEOMAGNETIC & ELECTROMAG-
NETIC SURVEY OF CLAIMS T. 53521
AND T. 54296, STRATHY TOWNSHIP,
TEMAGAMI AREA, ONTARIO,

Haileybury, Ontario
 Sept. 15, 1964

E.L. MacVeigh B.A., M.S.



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 -Scale 1" = 200'.

FOREWORD

The writer holds two mining claims in the southwest part of Strathy Township, Temagami Area, Ontario, No. T.53521 and No. T.54296.

The claims are considered a gold and base metal prospect and cover geological structures to which diamond drill exploration should be directed. To aid the direction of further work a geomagnetic and electromagnetic survey was completed on the two claims over a picket line grid. The surface rock outcrops were also examined and the geology is correlated with the geophysics.

Submitted with this report are copies of Geomagnetic, Electromagnetic and Geological maps on a scale of 1 inch equals 200 feet.

HISTORY

Most of the presently known gold showings in the Strathy Township section of the Temagami Area were found in the early 1930's. Long previous to this time however Dan O'Connor working out of Temagami, did early work on the extensive iron formation and the sulphide prospects now held by the International Nickel Company. In 1934 or thereabouts the discovery of the Beanland gold showing

now Clenor, initiated a large amount of activity which resulted in a number of gold finds, most of which were considered refractory for treatment at the time. This period was also one in which the Cuniptau Mine, now Trebor Mine, was developed which is still considered an interesting low grade large tonnage copper-nickel prospect.

The two claims held by the writer are crossed by a narrow band of Keewatin iron formation which is the northeast extension of the Iron Lake-Vermilion Lake iron zone to be mined by Cleveland Cliffs. This large project will be comparable in size and similar to the Boston Creek iron development near Kirkland Lake. A more extensive iron band to be mined by Cleveland Cliffs in Strathy Township extends across the south part of Strathy Township along the north shore of the northeast arm of Temagami Lake. The site of the proposed pelletizing plant will be just south of the two claims reported herein but no iron of commercial importance is known to be present on the two claims.

Some previous exploration has been carried out on the two claims reported herein in the form of surface stripping and rock trenching. Most of this work has been carried out along an iron formation at the north end of the property where a north-south gold bearing vein has been exposed in a pit 10 feet deep. There is also some surface trenching in the central part of the property along the south contact of a diabase dike exposing a rusty sheared zone.

PROPERTY & ACCESS

The claims are approximately 40 acres each, or a total of 80 acres. The claims are recorded in the Temiskaming Mining Division at Haileybury as T.53521 and T.54296.

The Town of Temagami is located 3 miles to the southeast. This town is situated on the No. 11 Highway and on the Ontario Northland Railway, a distance of 300 miles north of Toronto. From Temagami, Ontario, the claims may be reached by driving 3 miles north on No. 11 Highway to the Town of Goward and thence $2\frac{1}{2}$ miles west on a secondary road to the neighborhood of the Clenor Mine shaft. Before crossing the bridge to the Clenor a newly cut trail leads half a mile southwest to the campsite on the south shore of the small lake at the north boundary of the property. The claims adjoin east of leased ground of Mayfair Mines Limited and south of patented claim W.D. 266 held by the International Nickel Company.

GEOLOGY

The rocks in the southwest part of Strathy Township are made up chiefly of Keewatin volcanics striking northeast-southwest and dipping steeply to the southeast. The Keewatin is composed of basic and acid volcanic flows interbedded with bands of cherty iron formation and pyroclastic sediments, including tuffs and agglomerates. The Keewatin is intruded by an early period of basic and ultra basic rocks including diorite, gabbro and peridotite referred

to as Haileyburian in age. A later period of acid intrusives including granite and related porphyrys are referred to as Algoman in age. The youngest rocks are dike intrusions of quartz and olivine diabase. Rock formations in the area are interrupted by strike faults trending northeast-southwest and cross faults trending north-south.

The rock outcrops on the two claim property reported herein are chiefly andesitic Keewatin lavas showing amygdaloidal and pillow structures striking east-northeast and dipping steeply south. In the north part of the property on Claim T.53521, two narrow bands of cherty iron formation occur, one at the north boundary of the claim and one 300 feet south of the small lake. The latter has been exposed by considerable stripping showing a maximum of 10 to 12 feet of magnetite in discontinuous lenses with heavy pyritization and considerable associated chert and quartz vein development. This iron formation strikes N.70° E. and shows small offsets by north-south cross faults, one of which contains a quartz type vein showing appreciable gold values. In the north part of Claim T.54296 an olivine diabase dike 150 feet wide strikes N.70°W. This is a regional feature but on this claim appears to terminate underneath the small pond in the east part of the claim, possibly by offset.

Northeast-southwest fracture zones or faults are strongly developed on the two claims, some of which may also be shear locations. A north-south cross fault and a northwest-southeast fracture zone are shown to have a junction under the small pond at the east side of Claim T.54296. This would also be a junction with the strike of the olivine diabase dike.

Previous mineral exploration on the claims has been largely devoted to trenching and rock blasting along the iron formation in Claim T.53521. The pyrite and quartz associated with the iron show only very low gold values, not exceeding \$1.05 per ton by the writer's sampling. However a north-south vein bearing heavy arsenopyrite on picket line 8 where it crosses the iron formation shows appreciable gold values. A chip sample taken by the writer across a 12 inch width returned 0.21 oz. of gold per ton, or \$7.10. Five grab samples taken from the vein by the writer showed the following in ounces per ton: 0.01, 0.01, 0.52, 0.18, and 0.28.

GEOPHYSICAL SURVEYS

Enclosed are two map sheets showing the recording of geomagnetic and electromagnetic detail in the recent surveys. The 80 acre area was covered by 4.2 miles of picket line spaced 200 feet apart and run in a north-south direction from a central east-west base line. These are designated as Line 0 at the west boundary of the property to Line 14E. at the east boundary of the ground.

(a) Geomagnetic Survey

The Geomagnetic Survey was conducted with a Sharpe A2 magnetometer using a sensitivity of 20 gammas per scale division. In all a total of 245 stations were established on 4.2 miles of line at which magnetic readings were recorded. The main control station is located on Line 12E near the north boundary of the property 120 feet south of the shore of the small lake. No normal correction is applied to the readings as plotted on the accompanying geomagnetic contour map on a scale of 200 feet to 1 inch.

The results of the Geomagnetic Survey showed the presence of three highly magnetic features. Two of these were predicted as being the location of the Keewatin cherty iron formation striking east-northeast in the north part of the property, and the olivine diabase dike location striking west-northwest in the central part of the property. A third location over which high magnetic readings were obtained is located 300-400 feet south of the above mentioned iron formation and approximately parallel to it. A rock type near this location shows the presence of abundant magnetite in a dark Keewatin lava type rock. The magnetic anomaly may thus be caused by a high magnetite bearing flow or a sill-like intrusive. The rock is believed to be a lava. Some of the high magnetic readings to the south of the iron may of course be due to float boulders from the iron band.

On the other hand, one of the highest readings gained by the magnetometer near the north end of Line 8E. giving 5,026 gammas, was taken over an outcrop of the dark volcanic type rock which is quite magnetic to a hand magnet.

(b) Electromagnetic Survey

The Electromagnetic Survey was conducted over the same picket line grid as the Geomagnetic survey. The equipment used was the Ronka Horizontal Loop Method with a frequency of 876 cps and a cable separation of 200 feet. Two hundred and seven electromagnetic stations were read and recorded and are plotted on an accompanying map on a scale of 200 feet to one inch.

The results of the Electromagnetic Survey show significant readings at four locations. Two of these locations are north of the iron band near the shore of the small lake at the north boundary of Claim T.53521. The location marked No. 1 on the map and the location marked No. 2 on the map may be part of the same conductor area underlying the shoreline of the lake. The cause of this conductor is not known but may be due to heavy pyrite associated with the presence of the Keewatin banded iron formation in the nearby area. The east end of this conductor location on Line 8E covers the site of the north-south gold bearing vein which however does not have associated with it sulphides or graphite which would cause the readings recorded.

The No. 3 location shown on the electromagnetic map is a series of readings showing medium conductivity aligned north and south on picket Line 8E. As mentioned above this is also the alignment or strike of the gold bearing vein crossing the iron formation. These conductor readings show deep negatives on both the in-phase and out-of-phase readings and graphite may be suspected but conductivity could be due to a mineralized north-south cross fault with which gold occurrence may be associated. A north-south cross fault is projected through this area close to picket line 8 on the basis of geological offset and surface contour.

The No. 4 conductor area is on picket lines 4E and 6E, and appears to be localized at the south contact of the olivine diabase intrusive where it outcrops west of the small pond in Claim T.54296. At this location surface trenching has been carried out on a rusty shear zone along the contact of the diabase. Such conductivity is not unusual associated with the olivine diabase of this area but it has yet to be established that the conductors are due to sulphide mineralization near the dike. The conductor readings could be due to mineralization associated with the rusty shear or graphite associated with the rusty shear.

SUMMARY & RECOMMENDATIONS

The dormant Clenor Gold Mine located 2000 feet

northeast of the claims referred to in this report is developed to a vertical depth of 475 feet. Development was carried out laterally on three levels following a northeast-southwest vein which paralleled the local iron formation and is located 450 feet south of the iron formation. The extension on strike of the Clenor vein formation would extend through Claim T.53521 if it persisted. It is likely that the Clenor type of vein is associated structurally with the local iron formation.

On the two claims reported there has been no evidence found of a Clenor type of vein but gold has been found in a north-south vein of the arsenopyrite bearing type. The extension on strike of this gold bearing vein and the possible nearby presence of parallel veins should be investigated by diamond drilling and it is recommended that the following drilling be carried out, as shown on the accompanying geological map.

<u>HOLE NO.</u>	<u>PICKET LOCATION</u>	<u>BEARING</u>	<u>ANGLE</u>	<u>LENGTH</u>
1	940'E + 1820' N	S 50° W	- 45°	350 Ft.
2	940'E + 1820' N	Due West	- 45°	350 Ft.
3	940'E + 1820' N	Due East	- 45°	350 Ft.
4	930'E * 1430' N	Due West	- 45°	<u>350 Ft.</u>
Total				<u>1,500 Ft.</u>

This recommended drilling amounts to 1500 feet and could be contracted for \$3.00 per foot at

the present time. With allowance for supervision, drilling extras, sampling, etc. and overall cost of \$5.00 per foot should be estimated, or a total cost for 1500 feet of \$7,500.00.

It is also recommended that a surface stripping investigation be made of the four conductor locations indicated by the Electromagnetic Survey.

Respectfully submitted,



September 15, 1964,
Haileybury, Ontario.

E.L. MacVeigh B.A., M.S.

Reference:

1. "The Northeastern part of the Temagami Lake Area" Ontario Dept. of Mines Report, Vol LI, Part VI, 1942. W.W. Moorhouse.
2. "Part of Strathy Township", Ontario Dept. of Mines Report, Vol. XLIV, Part VII, 1935, W.S. Savage.
3. "The Matabitchouan Area," Ontario Dept. of Mines Report, Vol. XXXIV, Part III, 1925. E.W. Todd.
4. "Anima-Nipissing Lake Area", Ontario Dept. of Mines Report. Vol. XXXV, Part III, 1926. E.W. Todd.



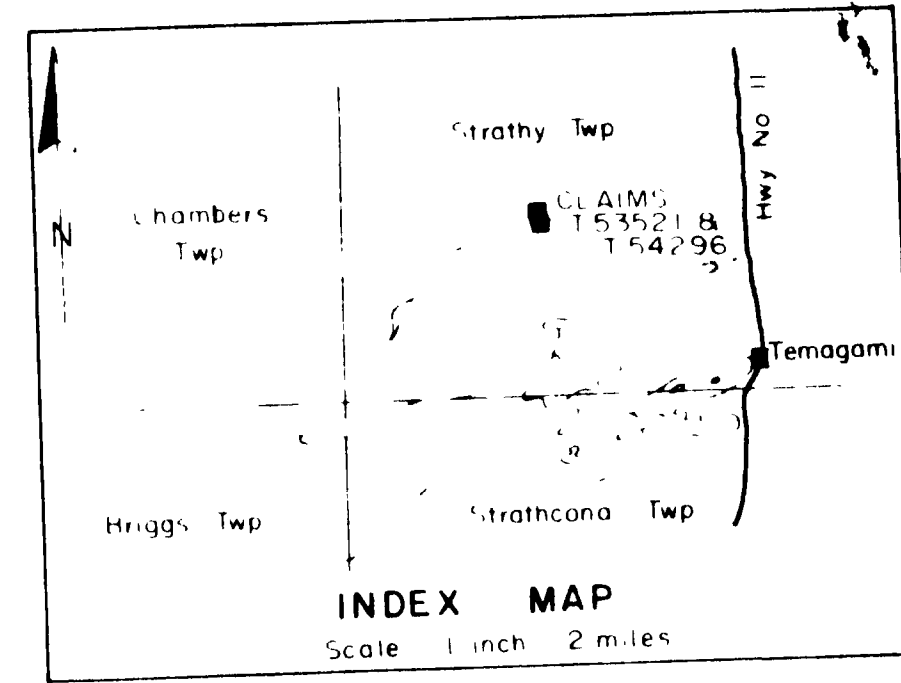
INCO

MULOCH

ESTATE

LAKE

T 5 3 5 2 1



SYMBOLS

- Main control station
- Magnetometer reading
- Contour line of equal vertical magnetic intensity
- Shoreline of lake or pond
- Footpath
- Claim post and line (surveyed, not surveyed)
- Base and picket line
- Recommended diamond drill hole

MAGNETOMETER DATA

SCALE CONSTANT 20 gammas per scale division
 NORMAL CORRECTION zero
 CONTOUR INTERVAL 100 gammas

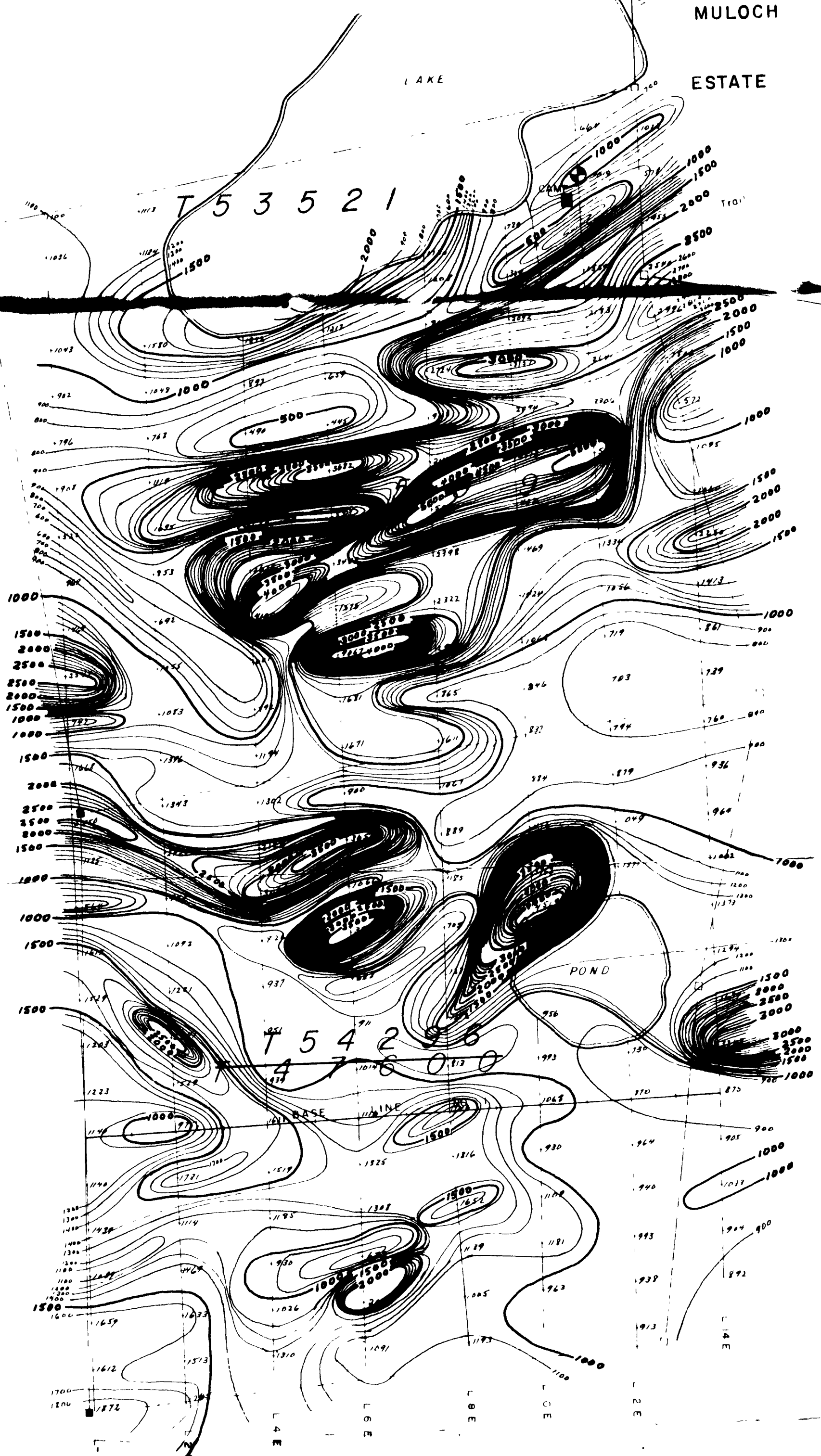
LEGEND

- 0 - 500 gammas
- 500 - 1000 gammas
- 1000 - 1500 gammas
- 1500 - 2500 gammas
- 2500 - 5500 gammas

MAYFAIR

MINES

LTD



GEOMAGNETIC MAP
 OF
CLAIMS T53521 & T54296
 STRATHY TWP., ONT.

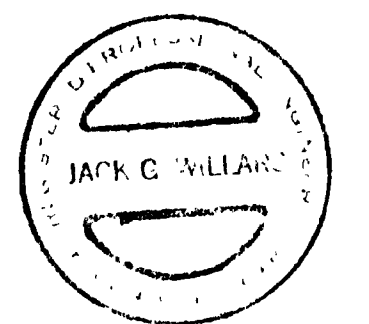
TO ACCOMPANY REPORT BY E. L. MacVEIGH B.A., M.S.

SEPT 15, 1964.

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MacVeigh



J. Willars
Jack G Willars B A Sc., P Eng

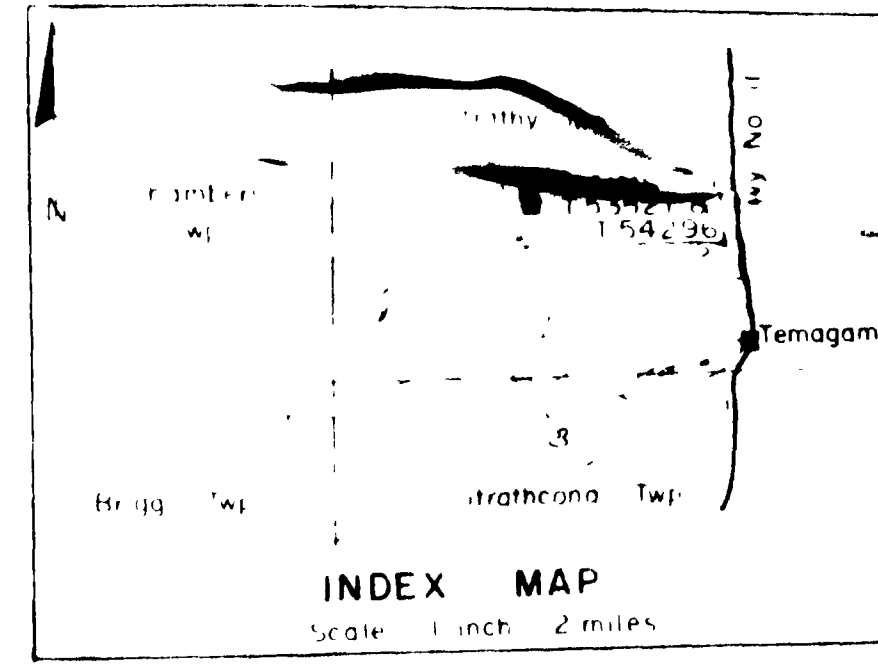


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INCO

MULOCH
ESTATE



SYMBOLS

- Claim post and line (surveyed, not surveyed)
- Base and picket line
- Swamp area
- Outcrop
- Fault assumed
- Pit
- Geological contact assumed
- Footpath
- Recommended diamond drill hole

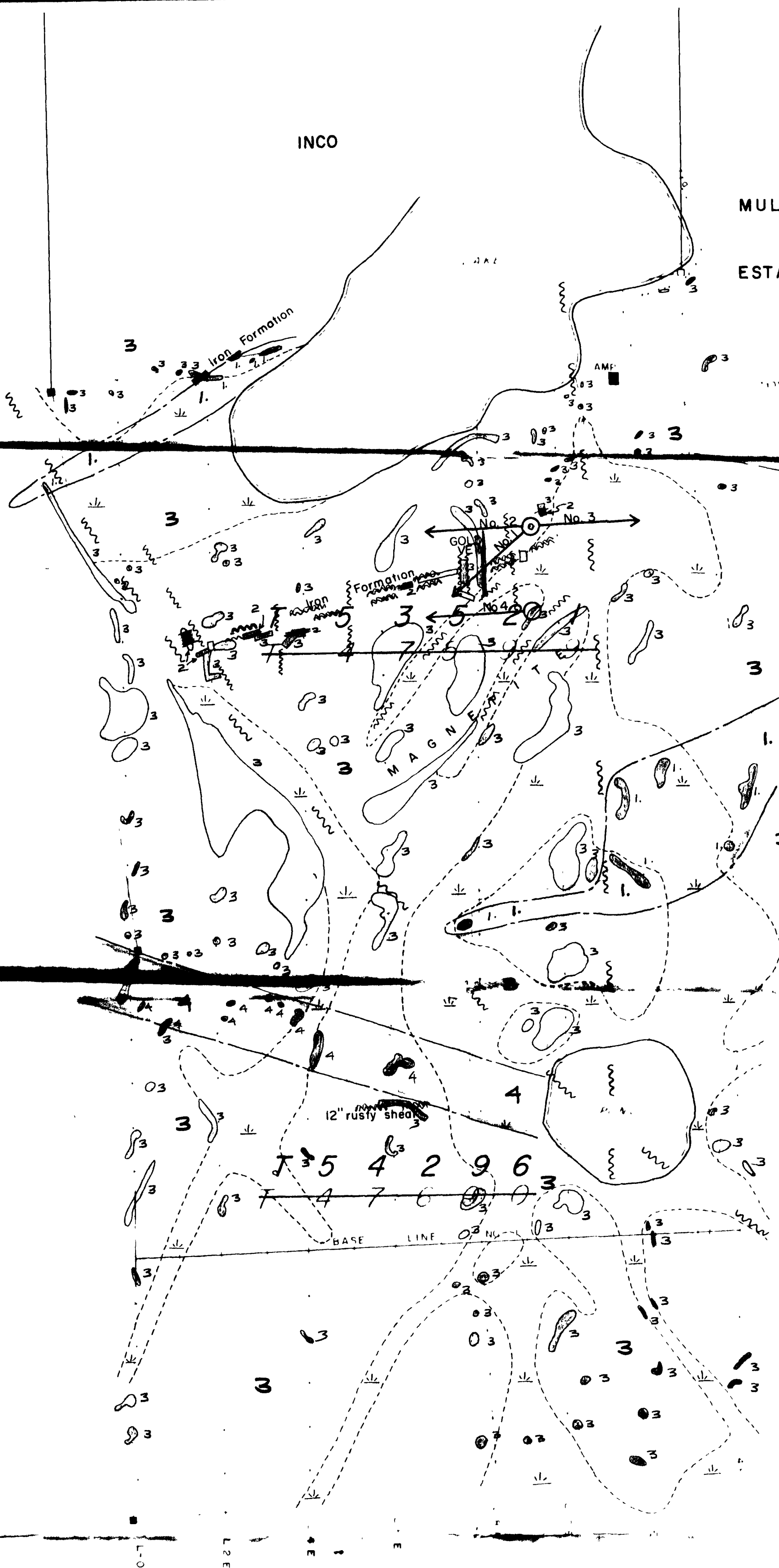
LEGEND

- Overburden
- Vein
- Olivine diabase
- Andesite - amygdular, vesicular, gabbroic, dioritic, spherulitic, pillow lava, magnetic
- Iron formation
- Intermediate lava

MAYFAIR

MINES

LTD



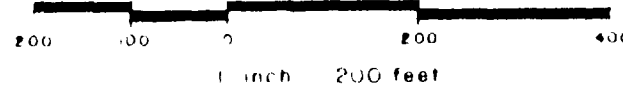
GEOLOGICAL MAP
OF
CLAIMS T53521 & T54296
STRATHY TWP, ONT

TO ACCOMPANY REPORT BY E L MacVEIGH B.A., M.S.

SEPT. 15, 1964

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SCALE

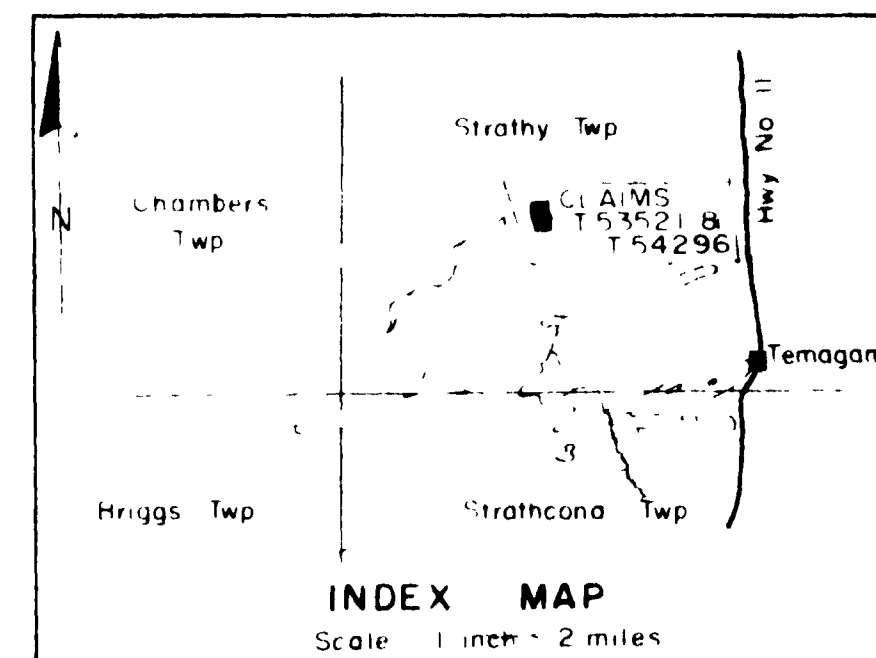


E. L. MacVeigh



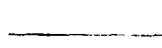

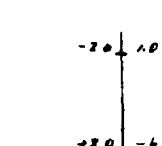

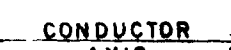



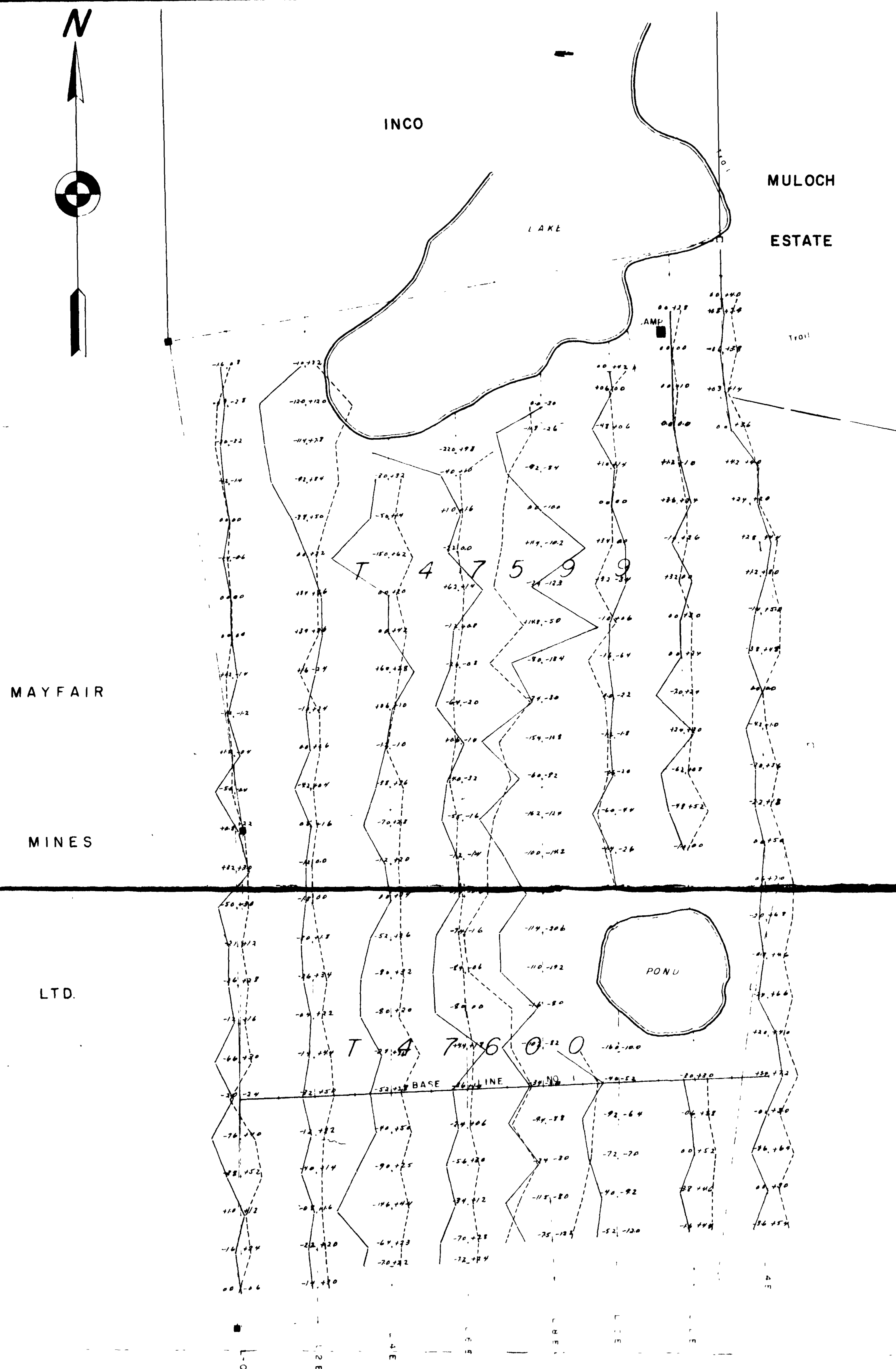
Jack G Willars B A Sc , P Eng





LEGEND

-  Shore of pond or lake.
-  Footpath
-  Base and picket line
-  Claim post and line (surveyed, not surveyed)
-  Percent of compensating voltage change due to conductor
In-phase readings plotted to the left.
Out-of-phase readings plotted to the right.
-  Broken line - profile of out-of-phase readings.
Solid line - profile of in-phase readings.
- Profile scale: 1/20" = 1 %
Negative values to the left.
-  CONDUCTOR AXIS → Conductor axis
-  Recommended diamond drill hole

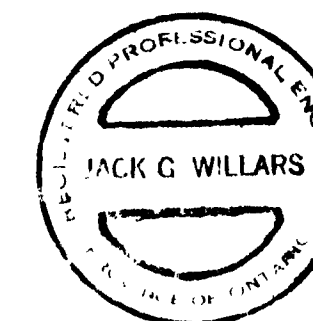


**ELECTROMAGNETIC MAP
OF
CLAIMS T53521 & T54296
STRATHLY TWP., ONT**

TO ACCOMPANY REPORT BY E. L. MacVEIGH B.A., M.S.

63-1319

SEPT 15, 1964.



J. G. Willars
Jack G. Willars B.A.Sc., P.Eng



MacVeigh



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