



42A12SE0280 63.1194 ROBB

010

63.1194

Mr. G. A. MacMillan, Trustee,
Suite 416,
25 Adelaide Street West,
Toronto, Ontario.

Dear Sir:-

This report describes the results of a resistivity survey, a magnetometer survey and an electromagnetic check survey conducted by Geo-Technical Development Co. Limited on your 4-claim property, located in Robb Township, Timmins Area, Ontario. The surveys were carried out in August and September, 1962, and the results are depicted on the plan accompanying this report.

CONCLUSIONS AND RECOMMENDATIONS

The program of geophysical survey outlined a weak anomalous zone which is inferred as the northwestern extension of the mineral bearing anomalous zone known at Kam-Kotia Mine. Conductivities indicated by the survey data are, however, not indicative of the occurrence of sulphide mineralization. Two choice locations are given for assessment and/or exploration diamond drilling if such is desired.

PROPERTY, LOCATION AND ACCESS

The 4 claims covered by the geophysical survey are identified as follows:

P-45692, 45693, 45687 and 45684; all in Robb Township, Porcupine Mining Division, Ontario.

The center of the property is about one mile to the northwest of the ore bodies located at Kam-Kotia Porcupine Mines Limited.

Access can be readily made by car from Timmins to Kamiskotia Lake and via bush roads to the east and west parts of the property.

TOPOGRAPHY AND GEOLOGY

Topography as noted by the geophysical operators are depicted on the plan accompanying this report. The property area is all covered by heavy sand and gravel.

The geology is practically unknown. However, judging from the general geology and aeromagnetic data of the Township, one may conclude that the property area is underlain by andesite and rhyolite which are cut by north-southerly diabase dikes, similar to the geology at the property of Kam-Kotia Porcupine Mines Limited.

SURVEY METHODS AND INSTRUMENTS

Base-check method was used by the magnetometer survey with the Base Control station established at B.L. #1, 1.4 E, on the Wallingford Option to the south. 2 control stations located in the same option and 2 other control stations located within your property were established.

A Sharpe A-2 magnetometer with a sensitivity of 20 gammas per scale division was used throughout the survey.

A Sharpe S.E.-200 electromagnetic unit was used for part of the E.M. check survey. Parallel line method, configuration "A", was used, with the transmitter located at 400 feet to the east of the receiver. Two lines were checked by using a Ronka Mark I Unit.

The resistivity survey was carried out in conjunction with the survey on seven other claims located to the south and southeast.

RESISTIVITY SURVEY METHOD AND INSTRUMENT

In short, a known current is introduced into the ground by means of two screen contacts which are separated by a distance approximately equal to three times the width of the area surveyed, and connected by a spread wire drawn through the center of the area at right angles to the base line cut parallel to the main structure. The contacts are spaced equi-distant from the base line. Readings are then taken at 50 foot intervals along the picket lines, by means of a sensitive vacuum tube voltmeter which measures the potential drop across the interval. The apparent resistivity is then calculated from the potential readings and current, in terms of ohm-centimeters.

A Canadian Research Institute Vacuum Tube Voltmeter, Model E-9008A, with 100 microvolt full-scale deflection, and a Canadian Fairbanks-Morse Onan Motor Generator Plant, 115V, 400W., were used in this survey.

SURVEY RESULTS AND INTERPRETATION

The magnetometer survey outlined two north-south anomalous zones which have "highs" in the order of 900 to 1,500 gammas above a background in the order of 750-850 gammas. These zones are apparently indicating diabase dikes. While the east dike appears to be vertical and has a maximum width of 400 feet, the west dike appears to be dipping to the west and has a maximum indicated

width of about 800 feet. The actual width of this west dike is probably considerably smaller.

An outstanding feature of the magnetic picture is the occurrence of a weak anomaly which runs across the central part of the claim group toward the northwest of Claim P-27911. The anomaly is, in places, associated with comparatively lower resistivity readings. In Claim P-27911, the anomaly is associated with a low resistivity zone which is apparently the northwest extension of the low resistivity zone outlined by a previous survey along the mineralized section of the Kam-Kotia Mine. Although the magnetic anomaly is in the same order as the diabase, the fact that it is associated with an area with comparatively lower resistivity, and the fact that the mineralized area at Kam-Kotia Mine has, in general, some magnetic expressions, led the writer to conclude that this magnetic anomaly and its associated low resistivity readings indicate a zone of more or less altered andesite which represents the western extension of the mineralized anomalous zone known at Kam-Kotia Mine.

The associated resistivity lows and electromagnetic check data, however, are not indicative of appreciable concentrations of conductive minerals such as chalcopyrite. Furthermore, this inferred favourable zone is apparently turned westerly at the western part of the claim group -- in accordance with the strike of the country rocks to the south (Map P.118 - O.D.M.) Because of the fact that the traverses were made at a northeast-southwest direction,

the resistivity and E.M. data obtained at the western part of the claim group may not represent the true magnitudes. Nevertheless, there are indications of comparatively better conductivity.

Two choice locations for the exploration and/or assessment diamond drilling are given for your consideration. The locations of these holes are listed as follows:

	<u>Location</u>	<u>Dip</u>	<u>Direction</u>	<u>Core Length</u>
Hole #1	L.4W, 300' N. B.L. #2	45°	S-W	430'
Hole #2 (Optional)	L.36W, 200' N. B.L. #1	45°	N-E	450'

It should be noted here that if Hole #1 cut diabase near its end, it would not be advisable to drill Hole #2.

SURVEY DATA

A magnetometer survey, a resistivity survey and an electromagnetic survey were carried out on the above said 4 claims. Two northwest-southeast base lines were cut across the group of claims for the turning-off of picket lines at 400 foot intervals to cover the area. A total of 5.4 miles of lines was cut and chained on the 4 claims, plus an additional 1.5 miles of spread line was cut outside the property. A total of 4.54 miles of magnetometer survey, the same mileage of resistivity survey, and 4 miles of electromagnetic check survey were carried out.

The 8-hour man-days required to complete the surveys are as follows:

	<u>8-Hour Man-days</u>	<u>Attributable to Assessment Work</u>
Line cutting and chaining	10 x 4	40
Operating resistivity, magnetometer and electro- magnetic surveys	20 x 4	80
Drafting	6 x 4	24
Preparation of report and office typing	<u>4 x 4</u>	<u>16</u>
	<u>40</u>	<u>160</u>

Respectfully submitted,

GEO-TECHNICAL DEVELOPMENT CO. LIMITED,

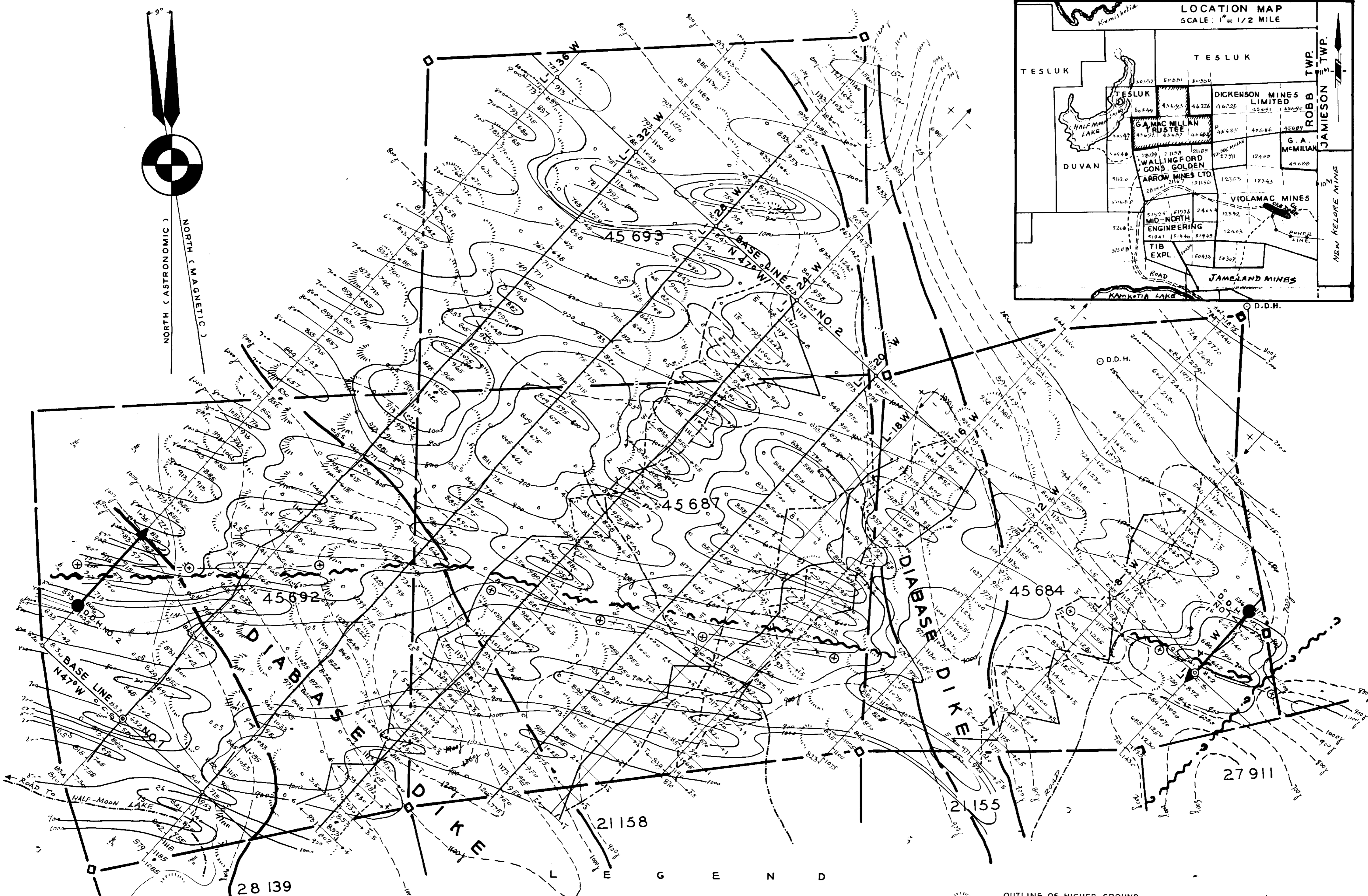
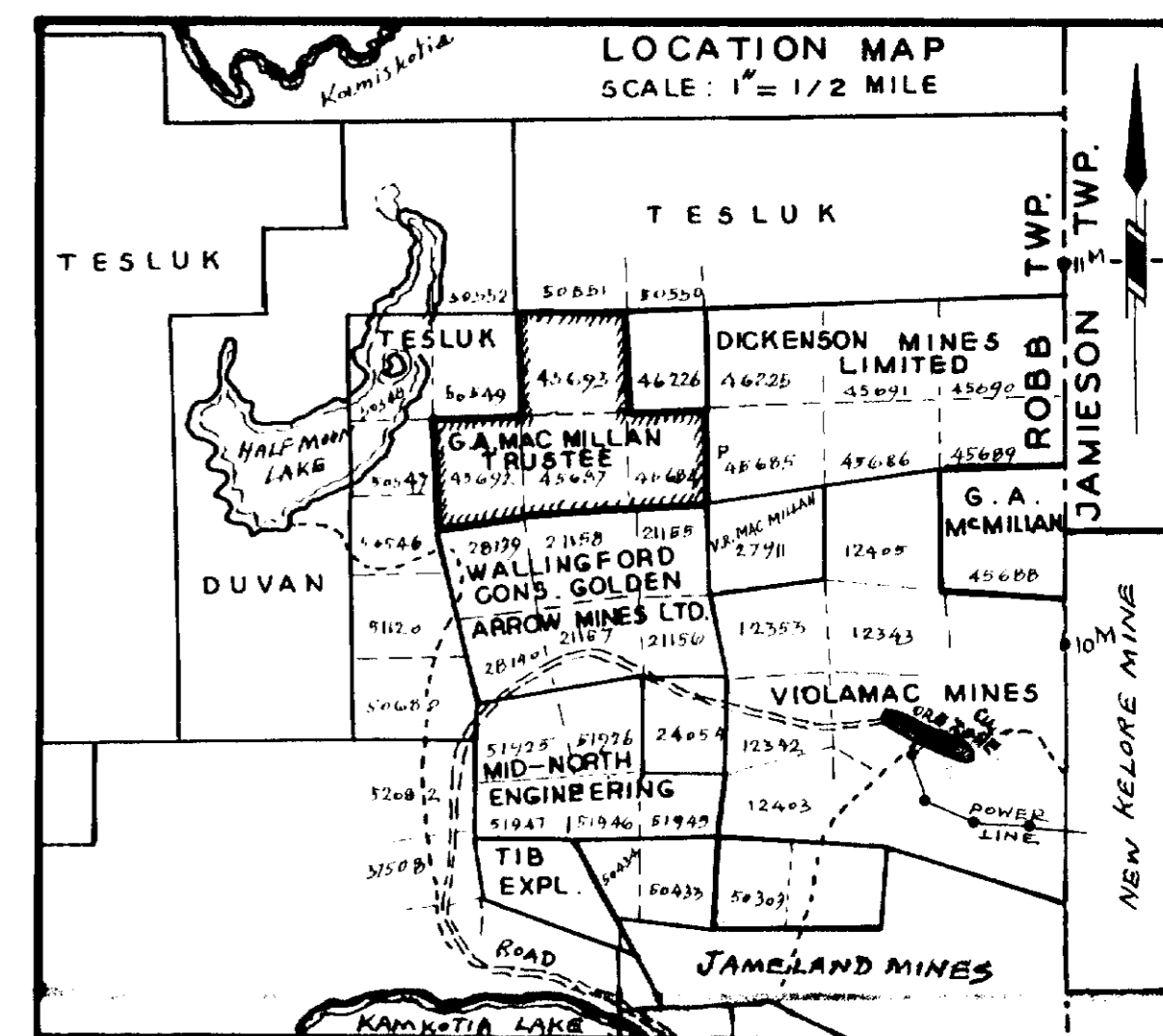
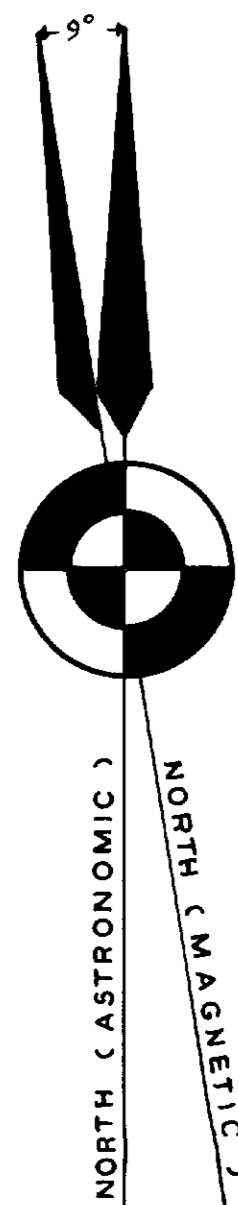
S.S. Szeto
 S.S. SZETO, PH.D.
 Consulting Geologist.

SSS:S

September 19th., 1962.

24 Wellington Street West,
Toronto, Ontario.

*Let. - No. of stations not
 given - Let go
 MS*



- 1000 — 975 — 950 —
LINES CUT AND CHAINED ELECTRICAL-RESISTIVITY READINGS OBSERVED AND PLOTTED ON RIGHT SIDE OF PICKET LINE.
- 600 —
ELECTRICAL-RESISTIVITY CONTOUR.
- 1000 — 975 —
MAGNETIC READINGS OBSERVED AND PLOTTED ON LEFT SIDE OF PICKET LINE.
- 1000 —
MAGNETIC CONTOUR.
- ⊙ D.C.S. MAGNETIC BASE CONTROL STATION (L-4E, ON BASE LINE NO. 2, SOUTH)

- ⊙ C.S. MAGNETIC CONTROL STATION.
- — — — —
DATA OBTAINED BY RONKA MARK-I, ELECTRO-MAGNETIC CHECK SURVEY. SOLID PROFILE DENOTES "IN PHASE COMPONENT" READINGS PLOTTED ON LEFT SIDE OF PICKET LINE. DOTTED PROFILE DENOTES "OUT OF PHASE COMPONENT" READINGS PLOTTED ON RIGHT SIDE OF PICKET LINE. SCALE: 1/10" = 10% OF PHASE CHANGE. + AND - SIGNS SHOWN AT NORTH-EAST END OF PROFILES. DIRECTION OF TRAVERSE (RECEIVER LEADING).
- — — — —
ELECTRO-MAGNETIC READINGS (IN DEGREES) OBTAINED BY USING A S.E.-200 UNIT ARE PLOTTED TO THE WEST OF MAGNETIC READINGS. ALL BUTT ONE TRAVERSES ARE WITH TRANSMITTER LOCATED 400' TO THE EAST. SWAMP AND AREA OF LOW GROUND.

- — — — —
OUTLINE OF HIGHER GROUND.
- — — — —
HILL.
- — — — —
CLAIM POST LOCATION AND CLAIM BOUNDARY.
- — — — —
INFERRED FAULT OR SHEAR.
- — — — —
INFERRED CROSS FAULT.
- — — — —
INFERRED GEOLOGICAL BOUNDARY.
- — — — — —
CHOICE LOCATION FOR EXPLORATION AND/OR ASSESSMENT DIAMOND DRILLING.
- ⊕ — — — — —
AXIS OF INTERESTING MAGNETIC ANOMALY.

GEOPHYSICAL SURVEY DATA ON 4 CLAIMS-GROUP PROPERTY OF
G. A. MAC MILLAN
 CONTOURS OF ELECTRICAL-RESISTIVITY AND MAGNETIC SURVEY DATA
 AND ELECTRO-MAGNETIC CHECK SURVEY PROFILES

LEGEND

0 - 700
700 - 900
900 - 1000 (IN GAMMAS)
1000 - 1200
1200 - UP.

LEGEND

0 - 600
600 - 700
700 - 800
800 - 900
900 - 1000
1000 - 1500
1500 - 2000
2000 - UP

(OHM-CM X 10³)

AND GEOLOGICAL INTERPRETATION
 ROBB TOWNSHIP
 KAM-KOTIA AREA
 ONTARIO

GEOPHYSICAL SURVEY BY :
GEO-TECHNICAL DEVELOPMENT CO. LIMITED

PLAN NO. - 1 SCALE : 1" = 200' SEPTEMBER - 1962

