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HOLLOWAY  
Revere Mining Corporation Limited,  
Suite 403,  
62 Richmond Street, West,  
Toronto, Ontario.

Gentlemen:

This report describes the results of a program of geophysical survey conducted by Geo-Technical Development Co. Limited, on the south part of your property, located in Holloway Township, District of Cochrane, Ontario. The purpose of the program of geophysical work was to trace the mineralized shear zone intersected by previous diamond drilling. An electric resistivity survey and a magnetometer survey were carried out in June, 1960. The data and interpretation are given on the two plans accompanying this report.

#### CONCLUSIONS AND RECOMMENDATIONS

The surveys successfully traced the mineralized shear zone through the southern part of the property and outlined a 2,000 foot section of strong shearing at the vicinity of the discovery hole. This section of the shear is structurally and geophysically favourable for the occurrence of the type of gold mineralization intersected by the discovery hole. The geophysical methods used here, can be applied to evaluate other assumed geological structures indicated on the property.

A program of diamond drilling is recommended which involves four to five holes and a minimum total core length of 2,150 feet.

LOCATION AND PROPERTY

The property is located at the north-eastern part of Holloway Township and consists of 40 claims identified as follows:

34 claims No. 67191-67224 inclusive and  
6 claims No. 71448-71453 inclusive.  
(The greater portion of the 40 claim group property was formerly held by Lobanor Gold Mines Limited. See Map No. 1953-4, Ontario Department of Mines.)

A strip of ground 2,000 feet wide and 6,400 feet long located immediately south of the Mattawasaga River at the southern part of the property was covered by the geophysical survey. The fourteen (14) claims covered by the geophysical survey over the southern part of the property are identified as follows:

67205-67194-67218-67217-67195-67196-67198-  
67193-67192-67197-67191-67203-67202-67200.

Access can be readily made by Highway No. 101, which runs across the northern part of the property. The eastern boundary of the property is about 39 miles east of Matheson. Matheson is 420 miles north of Toronto by Highway No. 11, and is on the Northland Railway.

TOPOGRAPHY AND GEOLOGY

The area covered by the geophysical survey is mostly covered by swamps on both glaciofluvial and glacial lake deposits. Rock exposures are mainly confined to a number of hilly areas which are indicated on the plans accompanying this report and the geological map quoted above, prepared by Dr. J. Satterly and assistants, 1952,

Ontario Department of Mines.

The rock exposures here, as indicated on the above said geological map, are Keewatin intermediate to basic volcanics which include unclassified andesite and basalt; pillow lava, spherulitic lava and fragmental lava. Dr. J. Satterly, in his report (page 29, Vol. LXII, Part 7, 1953) stated that the rocks in the southern part of the property are basic volcanics, mainly diabasic flows with flow breccia tops, pillowed lavas, or pillowed spherulitic lava. Similar rocks were intersected in the three drill holes in this part of the property. These rocks all face south and dip vertically to steeply south.

A vertical projection showing diamond drill cross-sectioning north-south across the property, prepared by Consulting Mining Engineer, Mr. J.S. Crosscombe, (Feb. 1947) was made available to the present writer. This projection shows a series of north dipping diorite dikes parallel to the mineralized shear zone and cutting volcanics. It seems, therefore, while the volcanics are dipping steeply to the south in this southern part of the property, the major shearing and dikes are dipping steeply to the north. The width of the major shear is in the order of 8 feet. The shear is located about 3,000 to 3,500 feet south and parallel to the largely assumed location of the Destor-Porcupine fault zone which is a strike fault. The fact that outcrops of pillow lava are noted only to the north of the shear here concerned, indicates that this shear marks the boundary between blocks of volcanics. Furthermore,

the beddings of the volcanics to the south of the shear are striking at an angle of about 30° from the strikes of the pillow lavas to the north, indicating that the shear is not a strike fault and possibly has some tensional fractures associated with the structure which is in favour of the introduction of mineral solutions.

To the north of the Destor-Porcupine fault zone, the major structural unit is the Ghost Range Syncline, the eastern end of which is assumed to run into the north part of the property.

A great many cross-faults are present in the area, two of these are mapped within the outcrop areas immediately south of the shear zone mentioned above. These are all minor faults.

According to the drill record of D.D.H. No. 2-A, logged by Mr. J.S. Crosscombe, the gold mineralization intersected by this drill hole, is associated with quartz and silicification and probably hydrothermal alteration. The country rocks to the south of the main shear, are slightly sheared, graphitic, and without gold mineralization.

MAGNETOMETER SURVEY METHOD AND INSTRUMENTATION

The base check method used by the magnetometer survey had a base control station established on the base line at 1,000 feet west of Line 0+00. Four other control stations were established along the same base line. A Sharpe A-2 magnetometer with a sensitivity of 20.5 gammas per scale division was used for the survey.

RESISTIVITY SURVEY METHOD AND INTERPRETATION

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 property, with a spread line drawn through the centre of the property, at right angles to the base line. The contacts are spaced equi-distant from the central 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.

Shear and fracture zones are relatively better conductors, due to their higher water content. This is true also of porous, unconsolidated, sediments. Extreme low resistivity readings may be due to graphite, or to sulphide mineralization, and there is no way to distinguish between sulphides and graphite, from the results obtained. Graphite is suspected as the cause of an anomaly, when there are occurrences of this mineral within schists or shear zones in the immediate vicinity. Sulphide mineral deposits have also been discovered in areas of high resistivity contrasts which did not register extremely low readings.

For the electrical resistivity survey, a Canadian Research Institute Vacuum Tube Voltmeter, Model No. E-9008A, with 100-microvolt full-scale deflection, was used, together with a Canadian Fairbanks-Morse Onan Motor Generator Plant 115V., 400W..

SURVEY RESULTS, INTERPRETATION AND RECOMMENDATIONS

The magnetic data show that in the north part of the surveyed area, over the known outcrop areas of pillow lava, the readings are in the order of 600 to 1,000 gammas. There are few readings or bands which are over 1,000 gammas but below 1,800 gammas. These are interpreted as indicating more basic type of lavas and/or slight concentration of ferromagnetic minerals, mostly magnetite. Readings below 600 gammas are interpreted as due to the more silicious nature of the rocks and possibly silicification. A group of these comparatively lower readings are located more or less along the base line between Line 4-E and Line 12-E.

In the southern part of the property, there is a moderately strong anomalous area, which has several anomalies of over 2,000 gammas to as high as 4,000 gammas. These anomalies are located immediately south of the fault indicated here on Geological Map No. 1953-4, Ontario Department of Mines. Several dipole effects are noted along the eastern section of this fault. Readings of over 3,000 gammas are noted exclusively on the unclassified basic volcanics but not the seemingly three bands of fragmental lava indicated here at the south-eastern section of the property. These readings are considerably higher and more common than would be expected from the volcanics and indicate the occurrence of considerable concentrations of ferromagnetic minerals in the volcanics or the occurrence of some basic intrusives. The electrical resistivity readings at these anomalies, however, show that the ferromagnetic

minerals which cause the anomalies, are mostly magnetite.

The electrical resistivity data, indicates that the location of the shear zone is at exactly the same place as intersected by previous diamond drilling. This shear is represented by a sharp drop of resistivity readings from over about 5,000 ohm-cm x 10<sup>3</sup> to below about 250 ohm-cm x 10<sup>3</sup>. This rather strong shearing extends for an indicated distance of 2,000 feet at the vicinity of the discovery hole and weakens but continues towards the west and eastern ends of the surveyed area.

All electrical resistivity readings of below 200 ohm-cm x 10<sup>3</sup> are classified as conductors. There are five interesting conductors encountered by the survey. Four of the conductors are located to the south and within the vicinity of the discovery hole. These conductors are lettered "E-1" to "E-5" inclusive on the plans accompanying this report. Conductors "E-1" to "E-4" are interpreted as mostly due to a graphitic shear, plus the effect of topography. Gold Mineralization was intersected by previous drilling at this main shear to the east of Conductor "E-3". This conductor, and Conductors "E-1" and "E-2" are associated with low magnetic readings along the indicated main shear zone, and are therefore considered favourable and should be checked by diamond drilling.

Conductor Zone "E-4" is wider but has less contrasts and is associated with no appreciable change in magnetism. The indications are not considered as favourable but because

of the fact that it is located close to the other favourable conductors and has a different trend which may indicate a fracture zone, it therefore should also be checked by diamond drilling.

Conductor Zone "E-5" is located at the northern end of Line 20-W, within the valley of the Mattawasage River. This conduction is apparently affected to a certain degree by the valley, however the contrast is moderate and the conductor is associated with a slight increment of magnetism. This type of conductor may indicate the occurrence of weak sulphide mineralization along a fault or shear zone, and warrants a brief geological examination of the adjacent outcrops.

A geological interpretation of the combined magnetic and electrical resistivity survey data is depicted on both Plans No. 1 and No. 2 accompanying this report. Five diamond drill holes are proposed and plotted on the plans. Four of these proposed drill holes are recommended and the No. 5 hole is optional, to be judged by the results obtained in Drill Hole No. 3. A minimum of 2,150 feet of test diamond drilling is recommended. The details of these proposed diamond drill holes are listed as follows:



LOCATION OF RECOMMENDED DRILL HOLES

<u>Drill Hole No.</u>	<u>Location</u>	<u>Direction</u>	<u>Dip</u>	<u>Length</u>	<u>Remarks</u>
1	L-12-E...200'South,100'East	As indicated on Plan No. 1.	45°	400'	.....
2	L-8-E....175'North	S. along picket line	45°	650'	.....
3	L-4-E....275'North	S. along picket line	45°	650'	.....
4	L-4-W....200'North	S. along picket line	45°	450'	.....
5	L-8-E....425'North	S. along picket line	45°	500'	Optional

SURVEY DATA

An electrical resistivity and a magnetometer survey were conducted by Geo-Technical Development Co. Limited on the southern section of the Revere Mining Corporation property. The geophysical field survey work was carried out in the period from June 3rd., to June 22nd., 1960 and the results of the geophysical survey work are depicted on Plan No. 1 and Plan No. 2, accompanying this report.


The geophysical survey work was carried out along 7 miles of cut and chained picket lines established at 400 foot intervals. The picket lines were turned off from a base line 6,400 feet in length that was cut across the southern part of the property in a north-east, south-west direction,

The electrical resistivity survey traverses were run over 7 miles of picket lines established for the survey work. Seven miles of resistivity survey traverses required a total of 739 electrical resistivity readings that were taken at 50 foot intervals along the picket line grid laid out for the survey.

A total of 364 magnetic readings taken at 100 foot intervals over the 7 miles of magnetic survey traverses were also run over the established picket line grid on the southern part of the property.

Respectfully submitted,

GEO-TECHNICAL DEVELOPMENT CO. LIMITED,

  
S.S. Szetuy Ph.D.  
Consulting Geologist.

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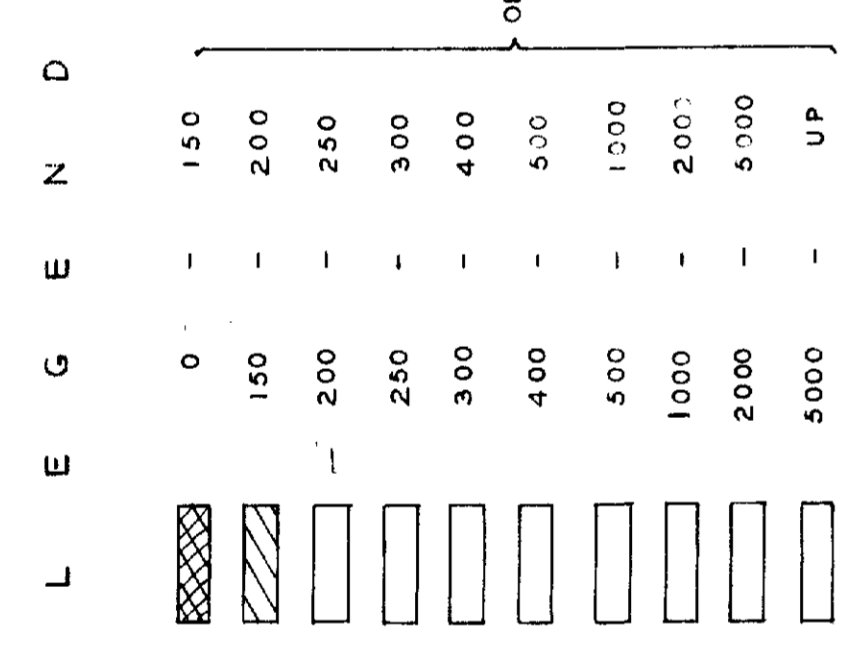
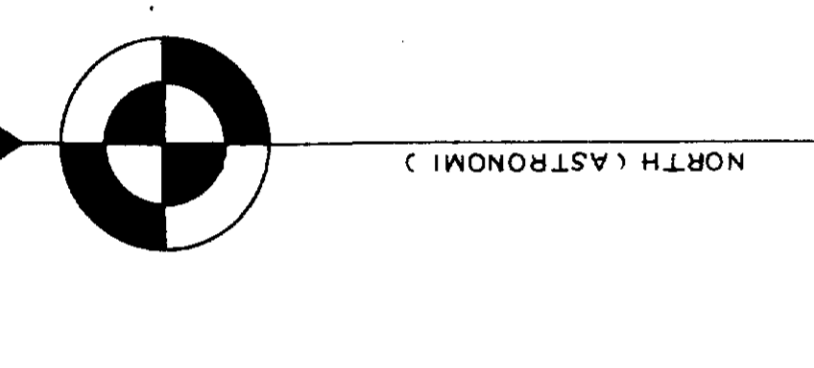
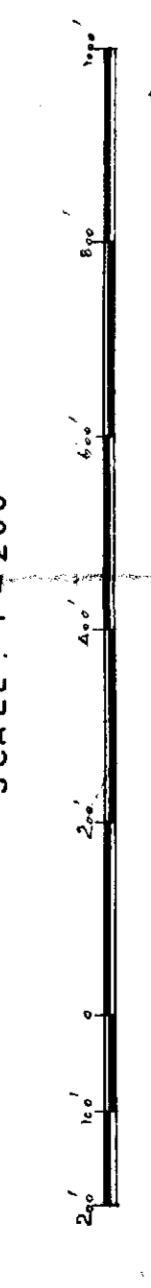
Toronto, Ontario.

July 8th., 1960.

# REVERE MINING CORPORATION LTD. CONTOURS OF ELECTRICAL RESISTIVITY SURVEY DATA, OUTLINE OF MAGNETIC ANOMALY AREAS AND GEOLOGICAL INTERPRETATION

HOLLOWAY TOWNSHIP  
ONTARIO

GEO - TECHNICAL DEVELOPMENT COMPANY LIMITED  
JUNE - 1980  
PLAN NO.-1  
SCALE: 1" = 200'

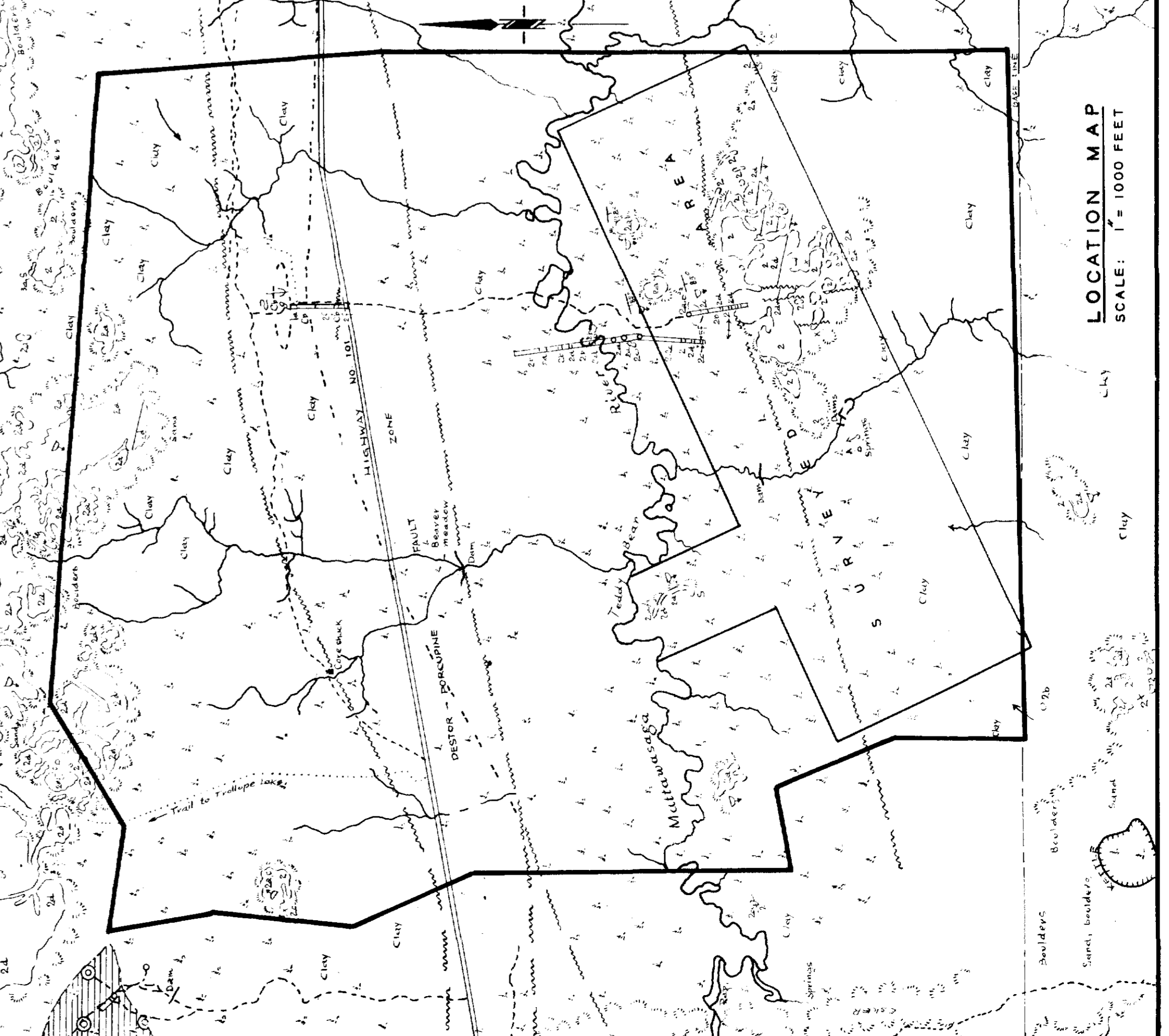


- LINES CUT AND CHAINED RESISTIVITY READINGS OBSERVED AND PLOTTED ON EAST SIDE OF LINE GRID
- ELECTRICAL RESISTIVITY CONTOUR
- MAGNETIC BASE CONTROL STATION
- MAGNETIC CONTROL STATION
- SWAMP AND AREA OF LOW GROUND
- OUTLINE OF HIGHER GROUND
- CLIFF
- OUTCROP AREA
- CLAIM POST LOCATION AND CLAIM BOUNDARY
- OLD DIAMOND DRILL HOLE
- AXIS OF ELECTRICAL CONDUCTOR
- INFERRED CROSS FAULT
- INFERRED STRIKE FAULT
- INFERRED SHEAR
- PROPOSED DIAMOND DRILL HOLE

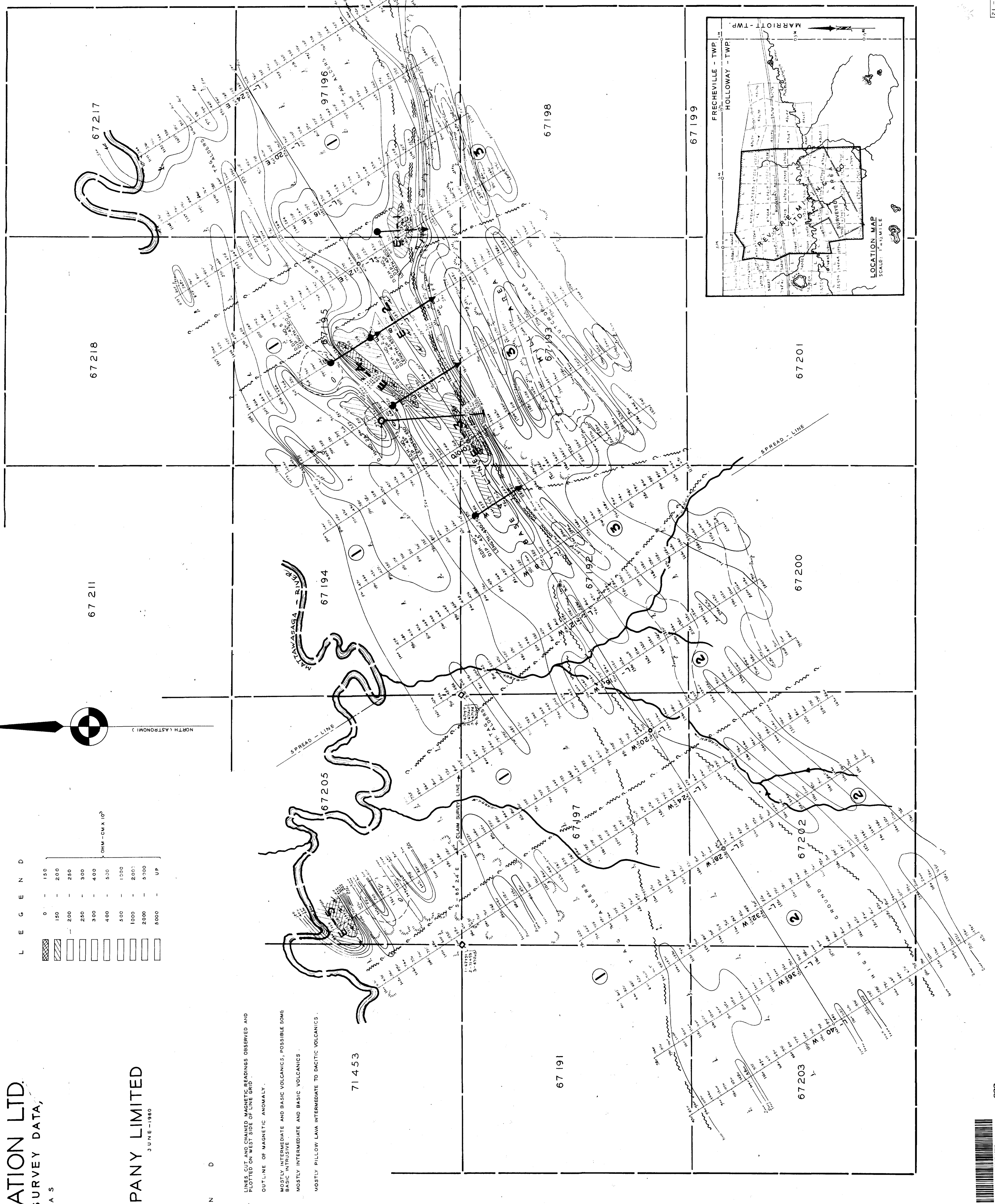
- MOSTLY INTERMEDIATE AND BASIC VOLCANICS, POSSIBLE SOME BASIC INTRUSIVE
- MOSTLY INTERMEDIATE AND BASIC VOLCANICS
- MOSTLY PILLOW LAVA INTERMEDIATE TO DACITIC VOLCANICS

- LINES CUT AND CHAINED MAGNETIC READINGS OBSERVED AND PLOTTED ON EAST SIDE OF LINE GRID
- OUTLINE OF MAGNETIC ANOMALY

- SULPHIDE MINERALIZATION
  - ALGONIAN
  - ANDESITE BASALT
  - DIABASE LAVA
  - GABBROIC PERIDOTITE AND DUNITE
  - KEEWATIN VOLCANICS
  - RHONITE PYROCLITE AGGLOMERATE AND TUFF
  - TALC-CHLORITE SCHIST
  - SEDIMENTS
  - PREWACHE (M)
- NOTE: GEOLOGY TAKEN FROM SURVEY MAP NO. 193-1 OF HOLLOWAY TOWNSHIP, ONTARIO.



LOCATION MAP  
SCALE: 1" = 1000 FEET



LOCATION MAP  
SCALE: 1" = 10 MILE

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GEO PHYSICAL SURVEY DATA ON PART OF PROPERTY

# REVERE MINING CORPORATION LTD.

50 - DYNAMIC CONTOURS OF MAGNETIC INTENSITIES,  
OUTLINE OF ELECTRICAL RESISTIVITY ANOMALIES  
AND GEOLOGICAL INTERPRETATION

HOLLOWAY TOWNSHIP

ONTARIO

GEO PHYSICAL SURVEY BY:

# GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED

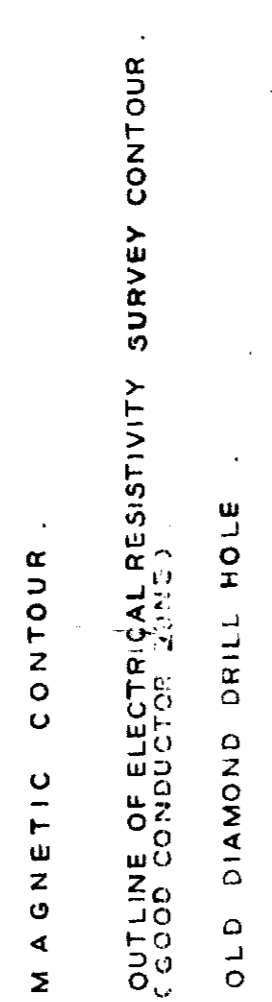
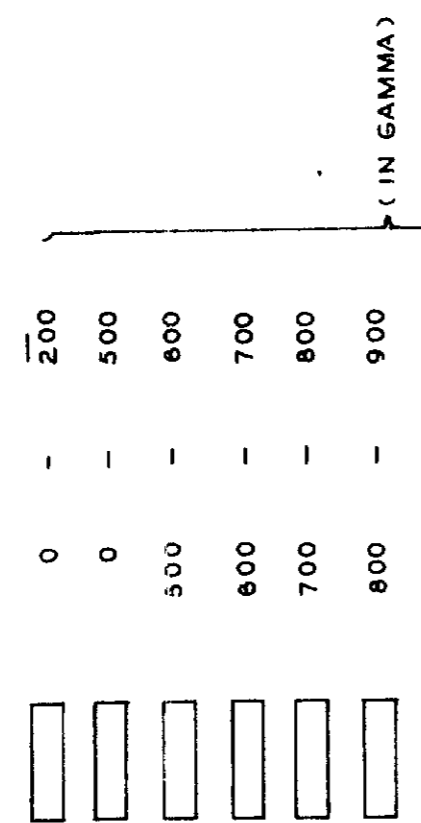
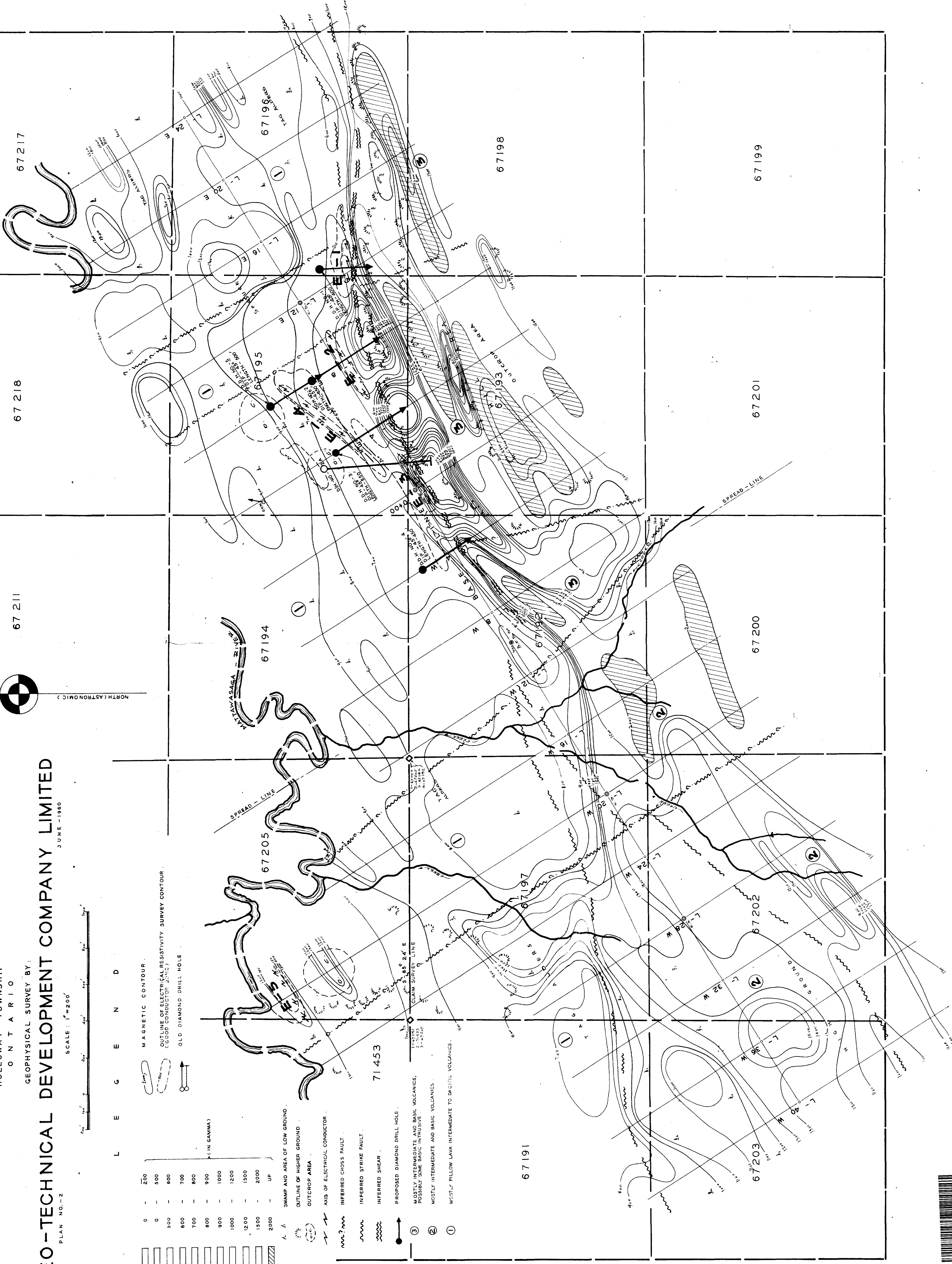
JUNE - 1960

PLAN NO. - 2

67 211

67 218

67 217



- SWAMP AND AREA OF LOW GROUND
- OUTLINE OF HIGHER GROUND
- OUTCROP AREA
- AXIS OF ELECTRICAL CONDUCTOR
- INFERRED CROSS FAULT
- INFERRED STRIKE FAULT
- INFERRED SHEAR
- PROPOSED DIAMOND DRILL HOLE
- MOSTLY INTERMEDIATE AND BASIC VOLCANICS, POSSIBLY SOME BASIC INTRUSIVE
- MOSTLY INTERMEDIATE AND BASIC VOLCANICS
- MOSTLY PILLOW LAVA INTERMEDIATE TO DACITIC VOLCANICS

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