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MINING LANDS SECTION

GOLDMAC EXPLORATIONS INC.
MAGNETIC AND ELECTROMAGNETIC SURVEYS
BEN NEVIS TOWNSHIP
ONTARIO

JULY 20, 1980

HARPER CONSULTING SERVICES INC.

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INTRODUCTION

This report covers magnetic and electromagnetic surveys on seven claims of a sixteen claim group located in Ben Nevis Township, Larder Lake Mining Division, Ontario. Similar surveys were done on the original nine claims in the Fall of 1979. The present surveys were done during the Spring of 1980.

PROPERTY AND LOCATION

The seven claims are located in Ben Nevis Township, Larder Lake Mining Division, and are numbered as follows:

L575225 to L575231 inclusive.

The claims have an area of about 250 acres.

ACCESS AND FACILITIES

Access to the property from the Town of Larder Lake,

Ontario is via a Ministry of Natural Resources resource access road which runs northward immediately east of the town. The resource access road ends about the middle of Ben Nevis Township some seventeen miles north of Highway 66. It is an all weather, gravel road. During the winter it is snowploughed only as required by logging operations.

The claim group lies $1\frac{1}{2}$ miles northeast of the end of the resource access road and is reached by a well blazed walking trail.

During the course of the survey a grid system of picket lines 400 feet apart were cut and chained over all of the claims. These lines are in serviceable condition and can be used for further exploration requirements. There are no other mining facilities on the property.

HISTORY AND DEVELOPMENT

The general area north of the Canagau Mine was first prospected in the 1920's. During the 1930's more prospecting and considerable trenching was done. In 1964 Dome Explorations (Canada) Ltd. and Frobex Limited drilled six holes totalling 1971 linear feet encountering silver values over substantial core lengths. Subsequently Amax Explorations Inc. drilled 3 cross section holes about $\frac{1}{4}$ mile east of the Frobex silver value location. These holes encountered minor amounts of

copper, lead, and silver in quartz veins. No assay data is available. In 1979 the Ontario Ministry of Natural Resources published airborne input and magnetic surveys of the entire township.

In the spring of 1980 the subject claims were staked and surveyed as part of a larger exploration program covering the 16 claims in the group.

GENERAL GEOLOGY

The general geology of Ben Nevis Township was published on Map 2283 by the Ontario Ministry of Natural Resources. The general geology indicates that the claims are underlain by intermediate and felsic volcanics, with a major andesite-rhyolite contact striking roughly east-west through the claim group. A major north-east trending linear (several miles in length) cuts through the claim group. Basic and acid intrusives occur in the immediate area.

SURVEY RESULTS AND INTERPRETATION

The airborne input and magnetic surveys completed this year in Ben Nevis Township showed absolutely no positive responses over the claim area. The magnetics are flat and the

fault linear did not respond to the input survey. Obviously there are no large iron formations, sulphide conductors, or graphitic shears within the claim area.

The ground surveys were done on lines 400 feet apart with readings at 50 foot intervals on the picket lines.

MAGNETIC SURVEYS

The maximum magnetic change recorded is 440 gammas whereas on the original 9 claim group the maximum magnetic change was 700 gammas. These relatively slight changes are a clear reflection of the minimal change in magnetic susceptibility of the underlying rocks. It can be assumed that those rocks are uniformly low in magnetite and pyrrhotite content and probably belong to the same rock sequence. The relatively minor increases in susceptibility are probably due to small diabase dikes.

The eastern and northern claims of the group are slightly more magnetic and it is in these areas where the strongest and best defined VLF conductors occur.

ELECTROMAGNETIC SURVEY

As in the case of the electromagnetic survey of the original claim group, the VLF conductors continue to present an interpretation problem. Their concentration in the north and eastern portion of the property is not readily explained. There may be a major geological change, probably in strike

direction, the nature of which is still unknown.

The strongest and best developed group of conductors lies in the northern tier of claims in the general location of a creek and the major northeast trending fault zone. It appears that in this area the very complex, multiple conductors, are caused by both overburden and the major fault. A wildcat drill hole here would greatly assist the interpretation of the geophysics and geology of the property.

There is no VLF response over the Main Showing when it is surveyed on N-S lines, yet one claim width due east and on strike, there are some very strong VLF responses.

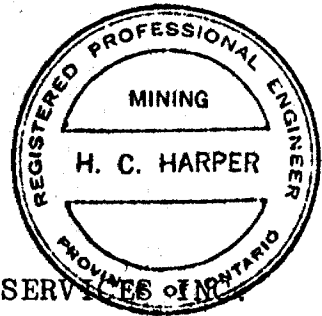
A very strong VLF conductor occurs on the southeasternmost claim. A drill test of this conductor is in order.

CONCLUSIONS AND RECOMMENDATIONS

1. The magnetic survey has produced very little of interest.
2. There are strong VLF conductors in the northern tier of claims roughly coinciding with the major fault that traverses the area and not far removed in distance from the known silver-gold mineralisation. A drill test of these conductors and the fault zone is recommended.
3. There is a very strong conductor on the southeastern claim which warrants drill testing.

4. The general area of the known silver-gold mineralisation warrants drill testing but this particular area is not covered by the surveys described in this report. Therefore, only a general recommendation to drill test the mineralised zone is pertinent to the contents of this report.

This report is respectfully submitted.



HARPER CONSULTING SERVICES OF ONTARIO

H. G. Harper

H. G. Harper, P.Eng.
President.

WILLOWDALE, ONTARIO
July 20, 1980

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations 456 Number of Readings 1368
Station interval 50 feet Line spacing 200 feet
Profile scale 1" = 30'
Contour interval 300'

MAGNETIC

Instrument Mc Phor M 500A Fluxgate Magnetometer.
Accuracy - Scale constant ± 5 gamma.
Diurnal correction method Check back on Base & Control Station
Base Station check-in interval (hours) 1/2 to 1 hour
Base Station location and value ~~2000~~ L12W-0+00 2400 gamma

ELECTROMAGNETIC

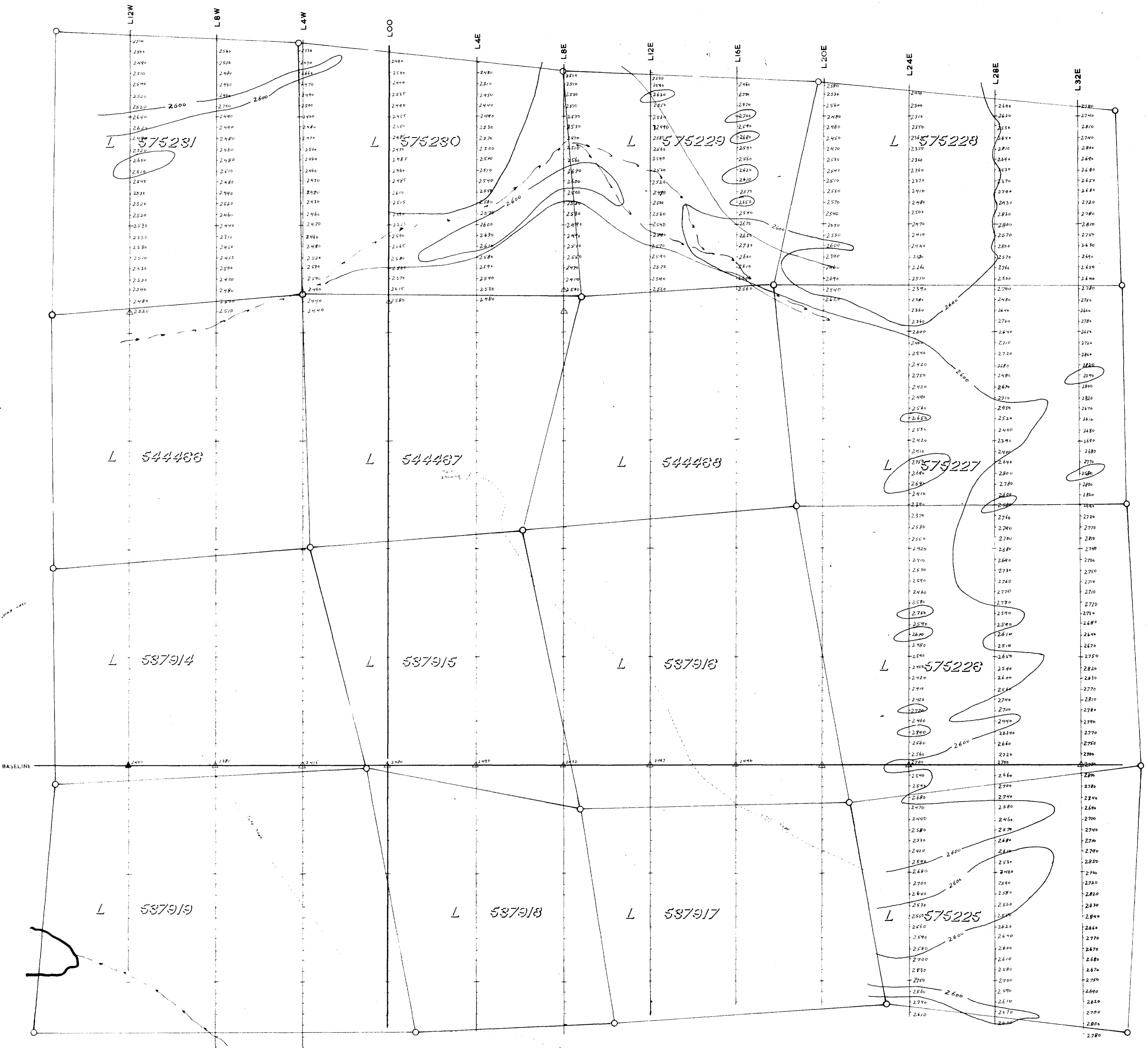
Instrument Ronko EM 16
Coil configuration Fixed Horizontal & Vertical
Coil separation N/A.
Accuracy ± 1%.
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 17.80 kHz Cutler Main
(specify V.L.F. station)
Parameters measured Vertical in phase & out of phase components

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____
Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____
Method Time Domain Frequency Domain
Parameters - On time _____ Frequency _____
- Off time _____ Range _____
- Delay time _____
- Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____



2270	2280	2290	2300	2310	2320
2330	2340	2350	2360	2370	2380
2390	2400	2410	2420	2430	2440
2450	2460	2470	2480	2490	2500
2510	2520	2530	2540	2550	2560
2570	2580	2590	2600	2610	2620
2630	2640	2650	2660	2670	2680
2690	2700	2710	2720	2730	2740
2750	2760	2770	2780	2790	2800

LOCATION MAP

1 INCH = 2640 FEET



BEN NEVIS TWP
PONTIAC TWP

- ▲ BASE STATION
- △ CONTROL STATION

- under 2600 GAMMAS
- 2600 to 2900 GAMMAS
- over 2900 GAMMAS



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BEN NEVIS TWP

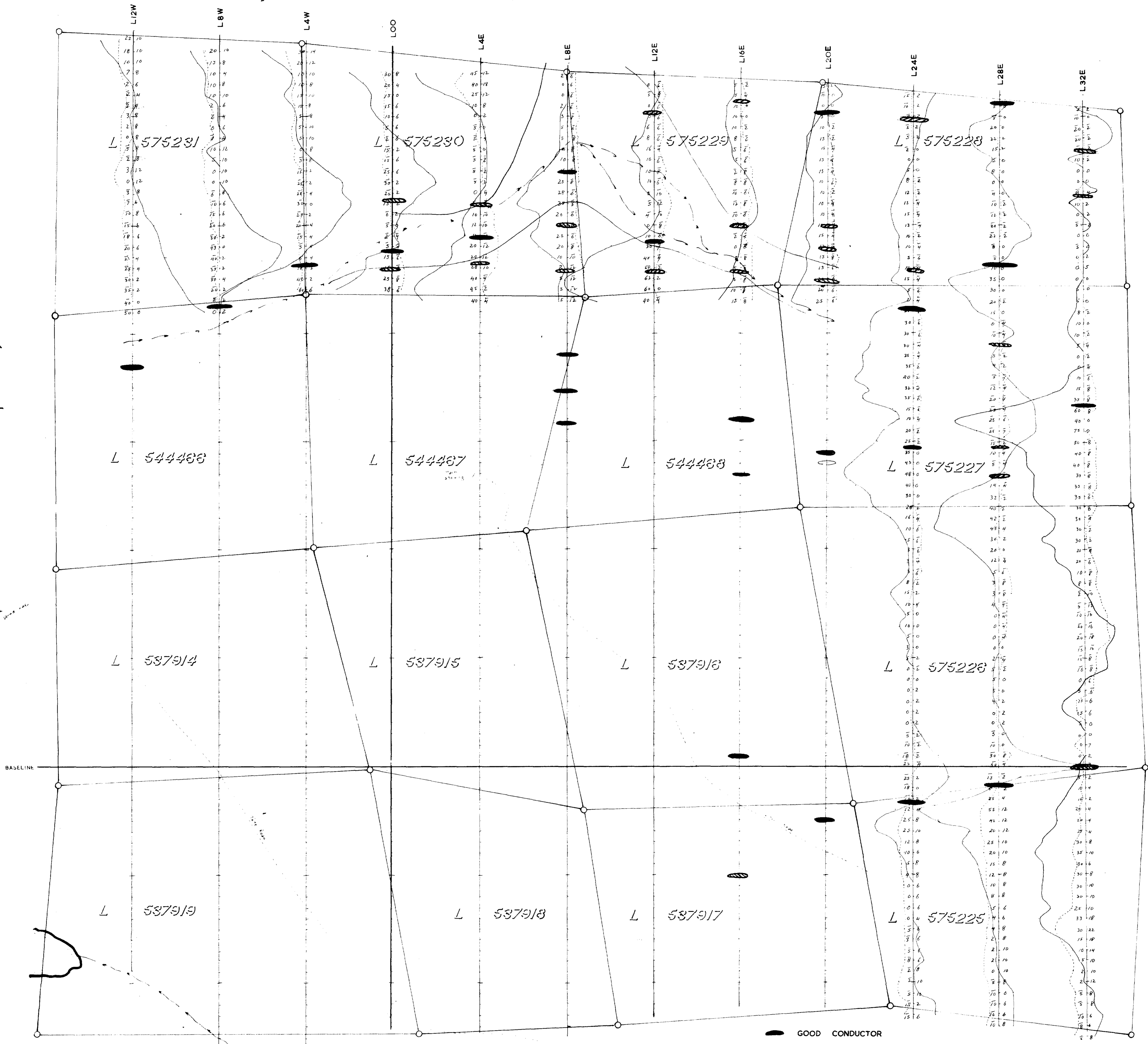
Magnetometer Survey



McPhar M500A



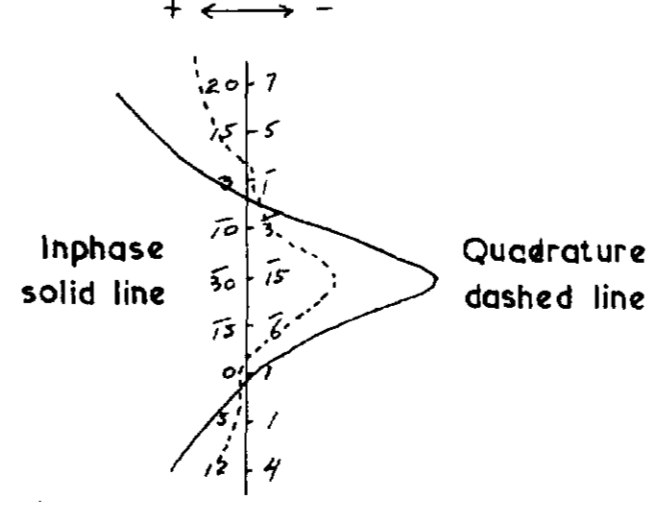
JUL 20 1980

H.C. Harper



 GOOD CONDUCTOR
 POOR CONDUCTOR

RONKA EM16



Profile Scale: 1"=30%

Transmitting Station: CUTLER, MAINE

575231	575232	575233	575234
575235	575236	575237	575238
575239	575240	575241	575242
575243	575244	575245	575246

LOCATION MAP

INCH = 2640 FEET



BEN NEVIS TWP
PONTIAC TWP



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BEN NEVIS TWP

Electromagnetic Survey



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