



32D05SE0014 2.1269 PONTIAC

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REPORT  
ON  
GEOPHYSICAL SURVEYS  
ON THE PROPERTY OF  
SILVERMAQUE MINING LTD.  
PONTIAC TOWNSHIP, ONT.

INTRODUCTION

Geophysical surveys, consisting of electromagnetic and magnetic surveys, were carried out over the major portion of the 47 claim property in Pontiac township, Ontario.

The following report and accompanying maps describe the results of the survey and give an interpretation of the results.

PROPERTY AND LOCATION

The property consists of 47 claims situated in the northeast portion of Pontiac township. Approximately one-half of the property is covered by Clarice Lake, as shown on the accompanying maps.

The claims are registered with the Ontario  
Department of Mines under the following claim numbers:

L.	366200 to 366209	inclusive
	366220 to 366229	"
	366048 to 366067	"
	366069 to 366072	"
	341110 <sub>1</sub> to 341112 <sub>3</sub>	"

### GEOLOGY

The geology of the area is shown on Geological Map P 69, published by the Ontario Department of Mines. This map shows the area to be largely underlain by volcanic rocks which have been intruded by felsic intrusive rocks which include quartz diorite.

The central portion of the property, which includes Clarice Lake, is underlain by an intrusive complex. South of the lake and in fairly close contact to the intrusive complex there are two known occurrences containing sulphide mineralization. Rock outcrops are fairly abundant in this area as the terrain is fairly rugged.

### SURVEY METHODS AND INSTRUMENT DATA

The geophysical surveys have been completed over the lake portion of the property and the adjacent ground

to the south. The electromagnetic survey was carried out over a network of lines at 400 foot intervals using a Geonics EM-17 horizontal loop unit. A 400 foot coil interval was used over the lake portion of the property and a 300 foot coil interval on the land portion.

In the horizontal loop type of survey both the in-phase and out-of-phase components of the secondary field are measured, whose special characteristics make possible a fairly accurate evaluation of the conductivity. A conductor caused by sulphide mineralization will produce a curve going from positive readings through zero to negative and back again to positive. Both the in-phase and out-of-phase readings show the same general curve. The ratio between the in-phase and out-of-phase readings over a conductor is an indication of the conductivity of the body. A good conductor would cause a greater deviation of the in-phase component than the out-of-phase component. The opposite is true of a poor conductor.

In some areas secondary currents are induced in swamps and clay belts, as well as lakes. Anomalies caused by these currents produce a large out-of-phase response

with little or no deviation of the in-phase component. This usually enables the geologist to distinguish them from a regular conductor in the underlying rocks.

The magnetic readings were taken with a Sharpe MF-1 fluxgate magnetometer measuring the variations of the vertical component of the earth's magnetic field. Readings were taken on lines at 800 foot intervals and plotted as gammas after correction for diurnal variation. The results of the two surveys are plotted on separate maps that accompany this report.

#### RESULTS OF THE GEOPHYSICAL SURVEYS

The electromagnetic survey over the lake portion showed a few minor responses but they do not appear to be significant. A minor conductive response shows close to the shore from line 48E to 56E and this appears to be along the flank of a magnetic anomaly. The conductive response would appear to be due to the shore line but its position in relation to the magnetic anomaly is somewhat intriguing. Some out-of-phase response was obtained in places but this is interpreted as due to lake bottom rather than a conductor in the underlying rocks.

On the land portion of the property south of the lake, some weak responses were obtained in the southwest corner. This is in the vicinity of an indicated sulphide occurrence containing pyrrhotite so any magnetic association could be regarded significant. There are no coincident magnetics but there are some in close proximity and these should be examined on the ground.

No conductive responses were indicated in the vicinity of the other known sulphide occurrence in the southeast corner of the property. A mineral occurrence was noted just off the surveyed area that shows up as a magnetic low, indicating pyrrhotite<sup>?</sup> The electromagnetic survey did not cover this showing so it is not known if there was sufficient mineralization to be conductive.

The magnetic survey shows the lake to be generally low which corresponds to the intrusive. The contact between the intrusive and the volcanic rocks shows up as an irregular magnetic anomaly which is probably due to the alteration along the contact.

CONCLUSIONS AND RECOMMENDATIONS

The geophysical surveys outlined some minor conductive responses but they do not appear to be too significant. The magnetic survey was successful in outlining the contact zone of the intrusive and this should be the favorable area for mineralization.

Since pyrrhotite is known to be an accessory mineral in the area, detailed examination should be made on the ground of the magnetic highs and lows, as well as the conductive responses. If mineralization is found associated with these, more detailed surveys may be warranted.

Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.

  
H.J. Bergmann, P. Eng.

Montreal, Que.  
April 28, 1973.



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### GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey ELECTROMAGNETIC  
 Township or Area PONTIAC  
 Claim holder(s) SILVERMAQUE MINING LTD. *Self*  
*by AP Silvermaque Inc Trust*  
 Author of Report H.J. BERGMANN  
 Address 3518 Vendome Ave., Montreal  
 Covering Dates of Survey March - April, 1973,  
 (linecutting to office)  
 Total Miles of Line cut 23.9

#### MINING CLAIMS TRAVERSED List numerically

(prefix) (number)

(SEE ATTACHED LIST)

*See "Man days" breakdown*

If space insufficient, attach list

#### SPECIAL PROVISIONS CREDITS REQUESTED

DAYS  
per claim

Geophysical  
 -- Electromagnetic 40  
 -- Magnetometer (20)  
 -- Radiometric \_\_\_\_\_  
 -- Other \_\_\_\_\_  
 Geological \_\_\_\_\_  
 Geochemical \_\_\_\_\_

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

#### AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: July 24, 1973 SIGNATURE: *H. J. Bergmann*  
Author of Report

#### PROJECTS SECTION

Res. Geol. \_\_\_\_\_ Qualifications \_\_\_\_\_

Previous Surveys \_\_\_\_\_

Checked by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by \_\_\_\_\_ date \_\_\_\_\_

TOTAL CLAIMS \_\_\_\_\_

OFFICE USE ONLY

MINING CLAIMS TRAVERSED

- 366222 <sup>3/4</sup> not covered
- 366223 <sup>3/4</sup>
- 366224 <sup>1/4</sup>
- 366200
- 366209
- 366072
- 366071
- 366208
- 366201
- 366225
- 366226
- 366227
- 366228 <sup>2/3</sup>
- 366063 <sup>1/3</sup>
- 366056 <sup>1/3</sup>
- 366054
- 366053
- 366202
- 366207
- 366070 <sup>1/4</sup>
- 366069
- 366206
- 366203
- 366052
- 366055 <sup>1/2</sup>
- 366048 <sup>1/2</sup>
- 366049
- 366204
- 341112
- 341113 <sup>2/3</sup>
- 341111 <sup>2/3</sup>
- 366205 <sup>1/2</sup>
- 366051 <sup>1/2</sup>
- 366050 <sup>2/3</sup>

Circled claim not covered

No Credits

Area of claims not covered  
= 7

$$33 \times 40 = 1320 \div (33 + 6)$$
$$= \underline{33.8 \text{ days per claim.}}$$

*J* (34 claims)



GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 1,125 Number of Readings 1,138 E.M.  
Station interval 100 ft. 980 Mag.  
Line spacing 400 ft.  
Profile scale or Contour intervals \_\_\_\_\_  
(specify for each type of survey)

MAGNETIC

Instrument SHARPE MP-1 Fluxgate  
Accuracy - Scale constant ± 5 Gammas  
Diurnal correction method Base station readings at regular intervals.  
Base station location Shown on map.

ELECTROMAGNETIC

Instrument GEONICS EM-17  
Coil configuration Horizontal  
Coil separation 400' - lake portion - 300' - land portion  
Accuracy ±2%  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency 1600 Hz  
(specify V.L.F. station)  
Parameters measured In-phase and out-of-phase components.

GRAVITY

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

INDUCED POLARIZATION - RESISTIVITY

Instrument \_\_\_\_\_  
Time domain \_\_\_\_\_ Frequency domain \_\_\_\_\_  
Frequency \_\_\_\_\_ Range \_\_\_\_\_  
Power \_\_\_\_\_  
Electrode array \_\_\_\_\_  
Electrode spacing \_\_\_\_\_  
Type of electrode \_\_\_\_\_

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PONTIAC TWP.

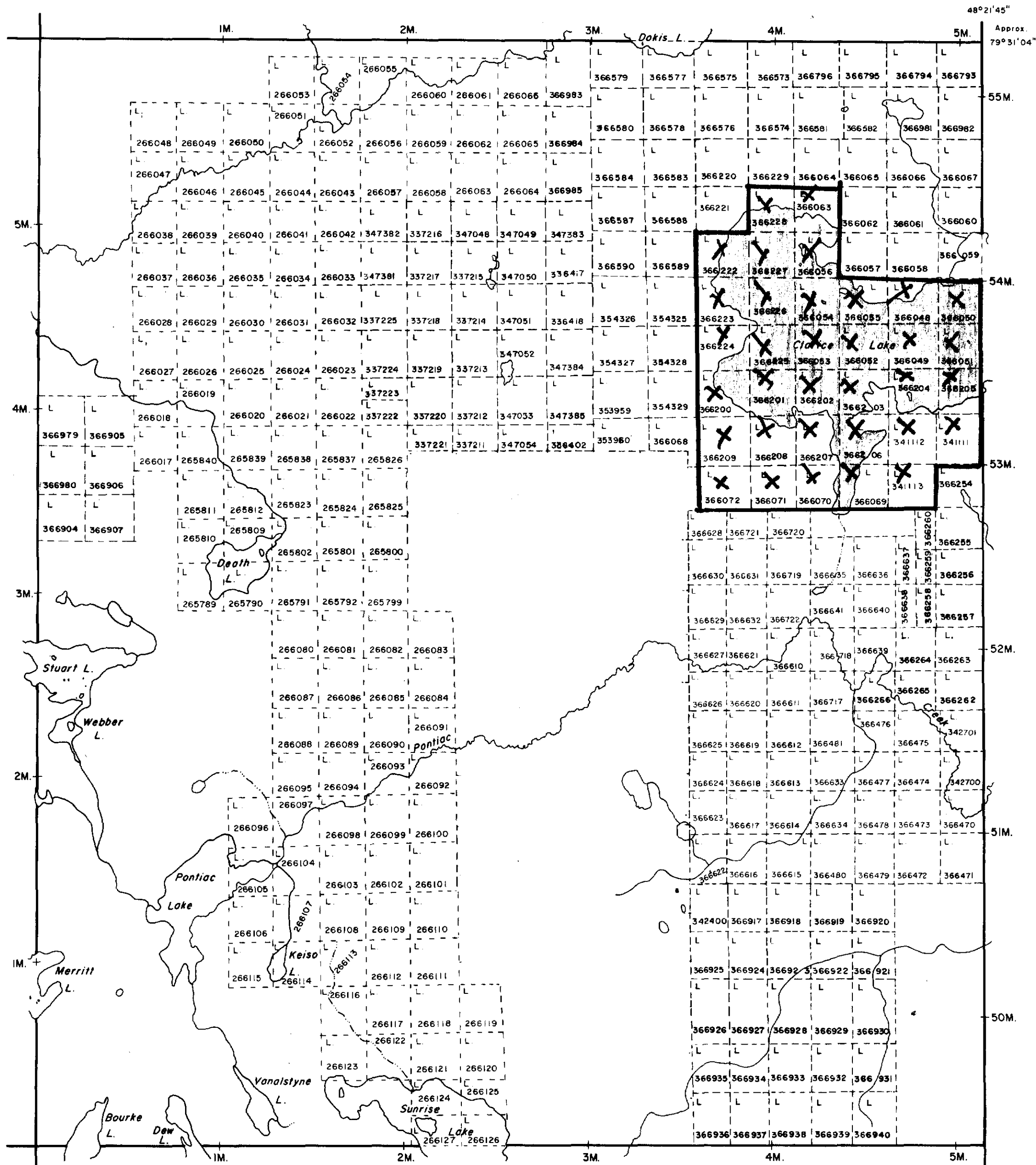
M-385

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PONTIAC TWP.

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DOKIS TWP. M-342



OSSIAN TWP. M-378

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

MINING LANDS -  
DATE OF ISSUE  
AUG 3 1973  
MINISTRY  
OF NATURAL RESOURCES

LEGEND

- PATENTED LAND ⊗ or ●
- PATENTED FOR SURFACE RIGHTS ONLY ⊙
- LEASE ○
- LICENSE OF OCCUPATION L.O.
- CROWN LAND SALES C.S.
- LOCATED LAND Loc.
- CANCELLED C.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- HIGHWAY & ROUTE NO.
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES

\*used only with summer resort locations or when space is limited

TOWNSHIP OF  
**PONTIAC**

DISTRICT OF  
TIMISKAMING

LARDER LAKE  
MINING DIVISION

SCALE : 1 INCH -- 40 CHAINS (1/2 MILE)

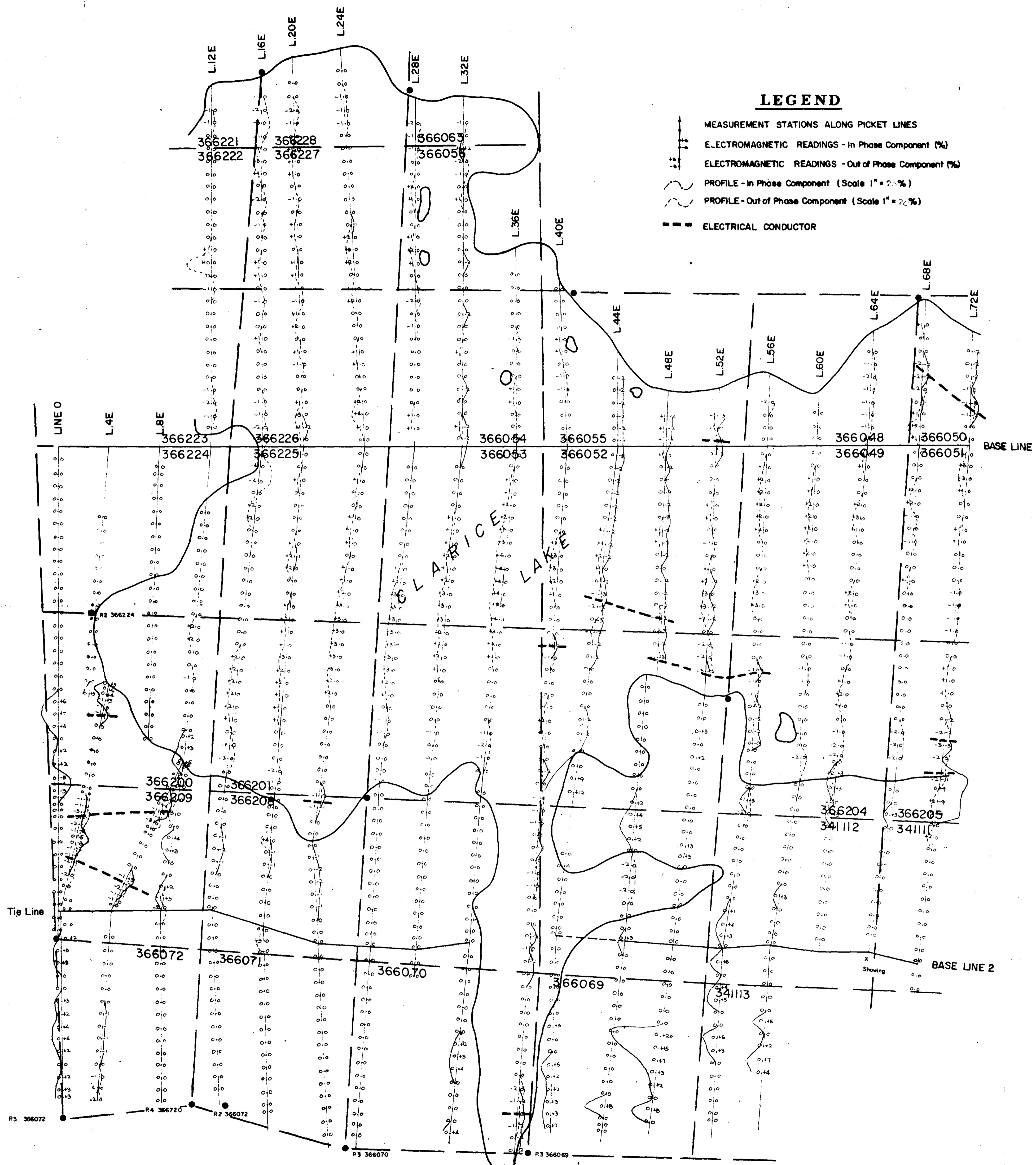
DR. *R.W. Noble*  
DATE *Feb 10, 72.* PLAN NO. **M-382**

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

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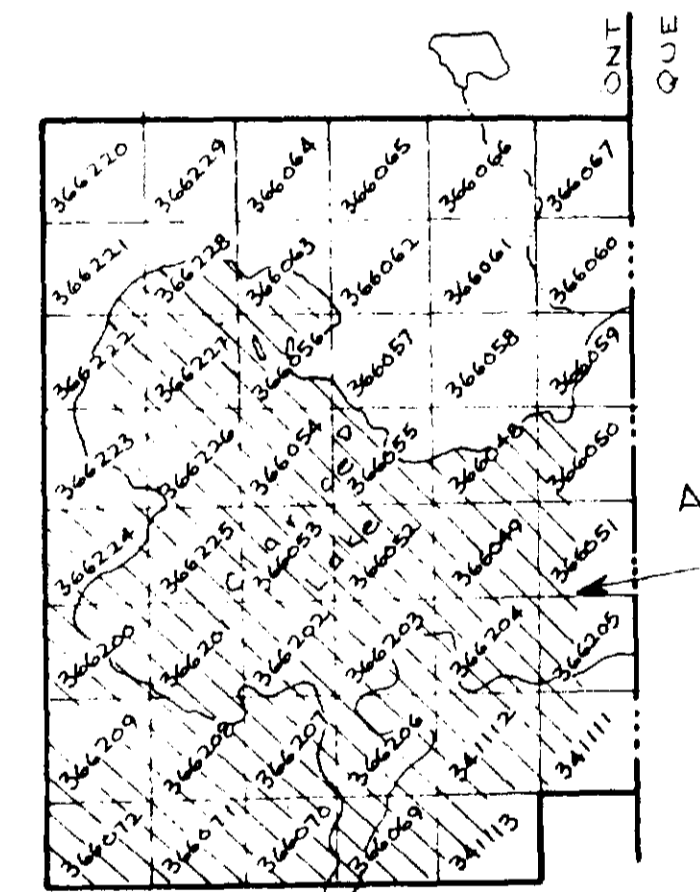
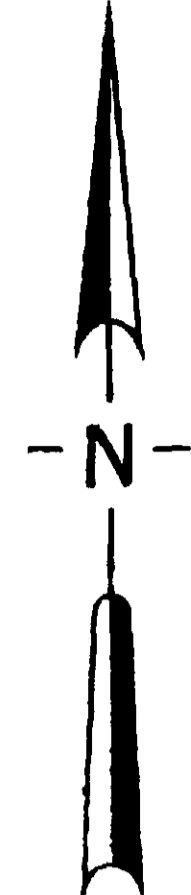


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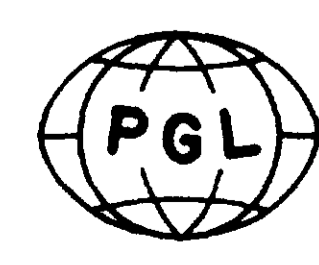
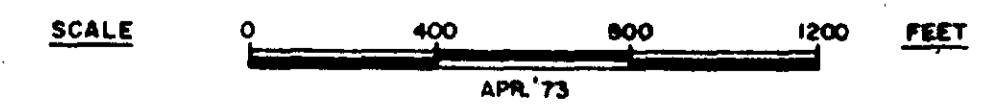
**LEGEND**

- MEASUREMENT STATIONS ALONG PICKET LINES
- ELECTROMAGNETIC READINGS - In Phase Component (%)
- ELECTROMAGNETIC READINGS - Out of Phase Component (%)
- PROFILE - In Phase Component (Scale 1" = 2.5%)
- PROFILE - Out of Phase Component (Scale 1" = 2.5%)
- ELECTRICAL CONDUCTOR



**CLAIM GROUP**  
- 1 INCH = 40 CHAINS -

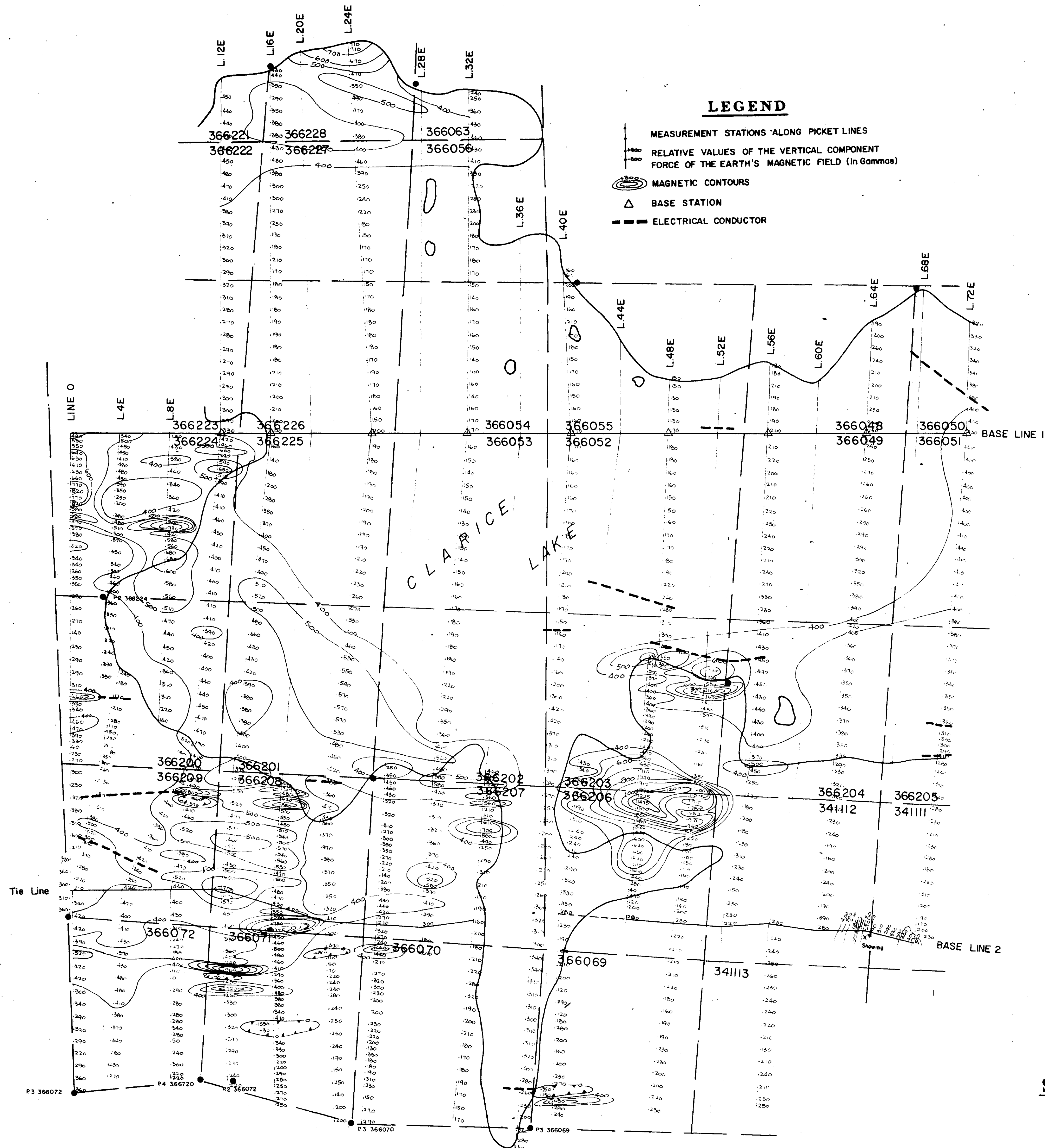
HORIZONTAL LOOP  
**ELECTROMAGNETIC SURVEY**  
- for -  
**SILVERMAQUE MINING LTD.**  
PONTIAC TOWNSHIP, ONTARIO



PROSPECTING GEOPHYSICS LTD.

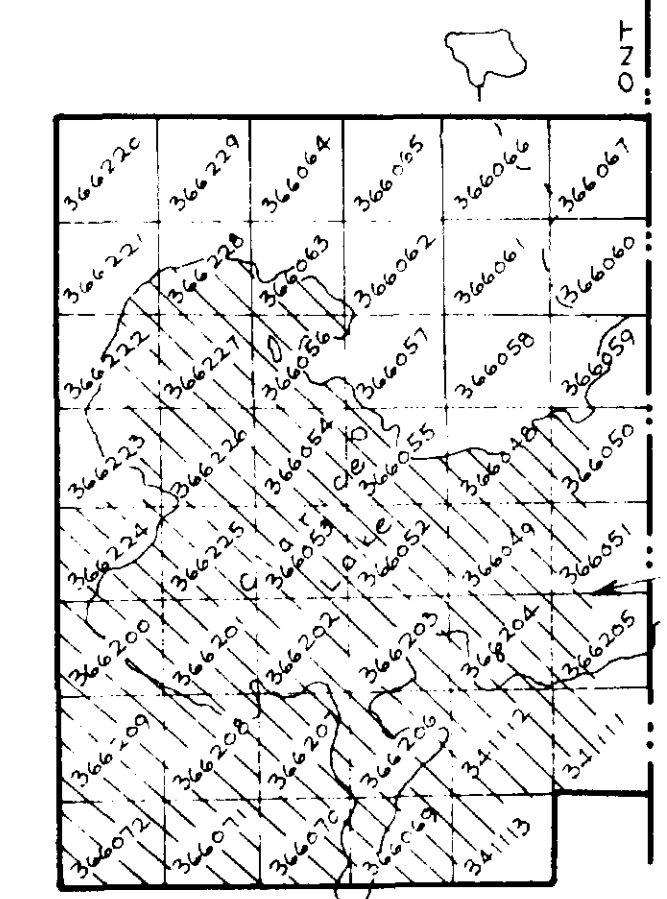
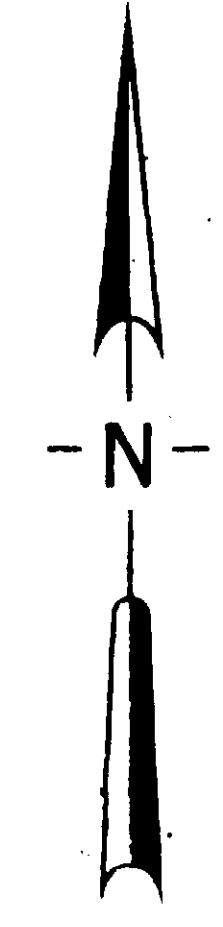
2.1269 *[Signature]*





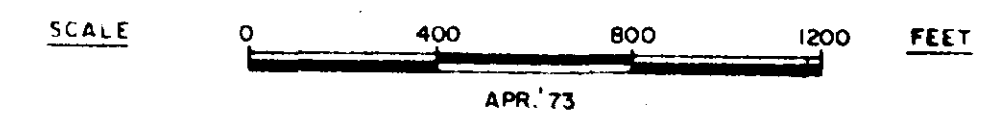
**LEGEND**

- MEASUREMENT STATIONS ALONG PICKET LINES
- RELATIVE VALUES OF THE VERTICAL COMPONENT FORCE OF THE EARTH'S MAGNETIC FIELD (In Gammas)
- MAGNETIC CONTOURS
- △ BASE STATION
- - - ELECTRICAL CONDUCTOR



**CLAIM GROUP**  
1 INCH = 40 CHAINS

**MAGNETOMETER SURVEY**  
- for -  
**SILVERMAQUE MINING LTD.**  
PONTIAC TOWNSHIP, ONTARIO



PROSPECTING GEOPHYSICS LTD.

2.1269

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