



32004SE0275 2.2869 HEARST

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REPORT
ON
V.L.F. ELECTROMAGNETIC SURVEY
ON
CLAIM GROUP
HEARST TWP., ONT.

RECEIVED
F. O. B.
MINING LANDS SECTION

REPORT
ON
V. L. F. ELECTROMAGNETIC SURVEY
ON
CLAIM GROUP
HEARST TWP., ONT.

INTRODUCTION

A V.L.F. (Very low frequency) electromagnetic survey has been completed on a group of claims in Hearst township, Larder Lake Mining Division of Ontario. The object of the survey was to outline conductive zones that could represent shear zones or faults which might be gold-bearing.

The following report and accompanying map describe the results obtained on the land claims only as the results have not yet been compiled on the water claims. An addendum to this report will be prepared with a revised map as soon as the balance of the survey is plotted.

PROPERTY

The claim group surveyed consists of seven claims located in Hearst township, Larder Lake Mining Division of Ontario. The claims are registered with the Department of Mines under claims L495396 to L495402 inclusive as shown on the Key Map. Approximately half of the acreage represented by these claims is within the south arm of Larder Lake.

The property is readily accessible from the town of Larder Lake and highway 624 cuts through a portion of the property.

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GEOLOGY

The general geology in the vicinity of the property is described in Thomson's report¹ and Map 1947-1. This indicates that the area is essentially underlain by Temiskaming sedimentary rocks consisting of grey wacke, argillites and minor amounts of conglomerate. Minor exposures of Keewatin volcanic rocks also are found in the area.

The sedimentary and volcanic rocks have been extensively intruded by syenite with some minor dykes of lamprophyre and diabase also present.

The former Martin-Bird gold property is about one mile east of the claim group covered in this report. This has been developed underground and numerous gold-bearing veins have been found within a shear zone that has been traced across the property in a direction N 60 E.

SURVEY AND INSTRUMENT DATA

The V.L.F. (Very low frequency) electromagnetic survey was conducted over lines at 400 foot intervals as shown on the accompanying map. The equipment used was a

¹Thompson, J. E. Geology of Hearst and McFadden Townships, Ontario Department of Mines, Vol. LVI, Part VIII, 1947.

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Geonics EM-16 system.

The V. L. F. method uses the radiation from powerful military radio transmitters at low frequencies as primary signals as opposed to portable transmitters in the conventional EM methods. In this case the radio transmitter at Cutler, Maine was used. The instrument has two receiving coils and the parameters measured are:

- (1) The vertical in-phase component
- (2) The vertical out-of-phase component
(quadrature component)

The interpretation of the results uses the relative measurements of these two parameters and it is possible to outline such poor conductors as sheared contacts, breccia zones, faults and alteration zones, as well as the good sulphide conductors. The results are plotted as profiles on the accompanying maps and the axes of the conductors are interpreted from the profiles.

RESULTS OF THE ELECTROMAGNETIC SURVEY

The electromagnetic survey has outlined several conductive zones which have been lettered A, B, C etc. on the accompanying map for reference purposes. These have a general northeast strike which conforms with the main shear zone on the Martin-Bird property.

A Zone is a conductor of medium conductivity that trends in a direction N55E for a length of close to 4,000 feet. This could well represent a shear zone and since it

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has a similar strike to the Martin-Bird gold-bearing shear, it warrants further investigation.

"B" Zone has a length of about 2,000 feet and a strike of about N75E. It is particularly strong on line 24W and there would appear to be a reasonable change of mineralization in this zone.

"C" & "D" Zones are weaker conductors and close to the roads. As a result they may be due to other than a conductor in the underlying rocks and should be checked closely.

There is another zone indicated in the southwest corner that appears to extend to the southwest off claim L495396. There are also a few one line conductive responses but their significance will largely depend on an investigation of the main conductive zones.

CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey outlined two main conductive zones referred to as "A" and "B" zones that could represent shear zones. Since they have a similar strike to the nearby Martin-Bird shear zone that contains gold-bearing veins, some additional investigation is warranted.

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Initially, the zones should be examined geologically and prospected to determine if an explanation for the conductive zones can be found. They should also be correlated with any data available on the Martin-Bird property prior to possible investigation by diamond drilling.

Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.


H. J. Bergmann, P. Eng.

Montreal, Que.
Dec. 18, 1978.

ADDENDUM

The following is an addendum to our report of December 18, 1978 which described the results of the electromagnetic survey on claims L495396-97-98 in Hearst township, Ont. The survey has now been completed on the lake claims L495399-400-401 and 402 which completes the survey over the entire claim block.

This addendum describes the results of the survey on the lake and the accompanying map is a revised edition of the original survey. The map shows the entire survey over the seven claim group.

DISCUSSION OF RESULTS

The land portion of the survey outlined several conductive zones described in the earlier report. The present survey outlined one contiguous conductive zone referred to as "E" zone. This conductor is fairly strong and more or less follows the shore line which is fairly typical of this type of survey. It probably represents the shore line rather than a shear zone.

The remainder of the readings over the lake are fairly flat and there is no indication of a conductor under the lake.

CONCLUSIONS AND RECOMMENDATIONS

Since the lake portion of the survey did not encounter a conductor believed to represent a shear zone, future exploration should be confined to the land portion of the property.

Work should be carried out on "A" and "B" zones as recommended in the Dec. 18 report.

Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.



H. J. Bergmann,

Montreal, Que.
January 29, 1979.



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Ministry of Natural Resources

Notification of recording of assessment work credits

Recording Office 4 Gov't Road East Kirkland Lake, Ontario P2N 1A2

Supervisor, Projects Unit Mining Lands Section Ministry of Natural Resources Room 1617, Whitney Block Queen's Park, Toronto M7A 1W3

RECEIVED

OCT 31 1978

MINING LANDS SECTION

Date of recording of work: October 25, 1978
Recorded holder: C D Robbins
Address: 704 Bonair Street Beloeil, Quebec
Township or Area: Hearst township

Table with 2 columns: Type of survey and number of Assessment days credit per claim, Mining claims. Includes rows for Geophysical (Electromagnetic, Magnetometer, Radiometric, Induced polarization, Section 86 (18), Geological, Geochemical) and checkboxes for Man days, Airborne, Special provision, Ground.

Notice to recorded holder:

- Survey reports and maps in duplicate must be submitted to the Projects Unit, Toronto within 60 days from the date of recording of this work.
Reports and maps are being forwarded to the Projects Unit with this letter.

Dec. 14/78

Handwritten signature and Mining recorder title

c.c. C D Robbins
c.c. H J Bergmann
3518 Vendome Avenue
Montreal, Quebec

McVITTIE TWP. M-370

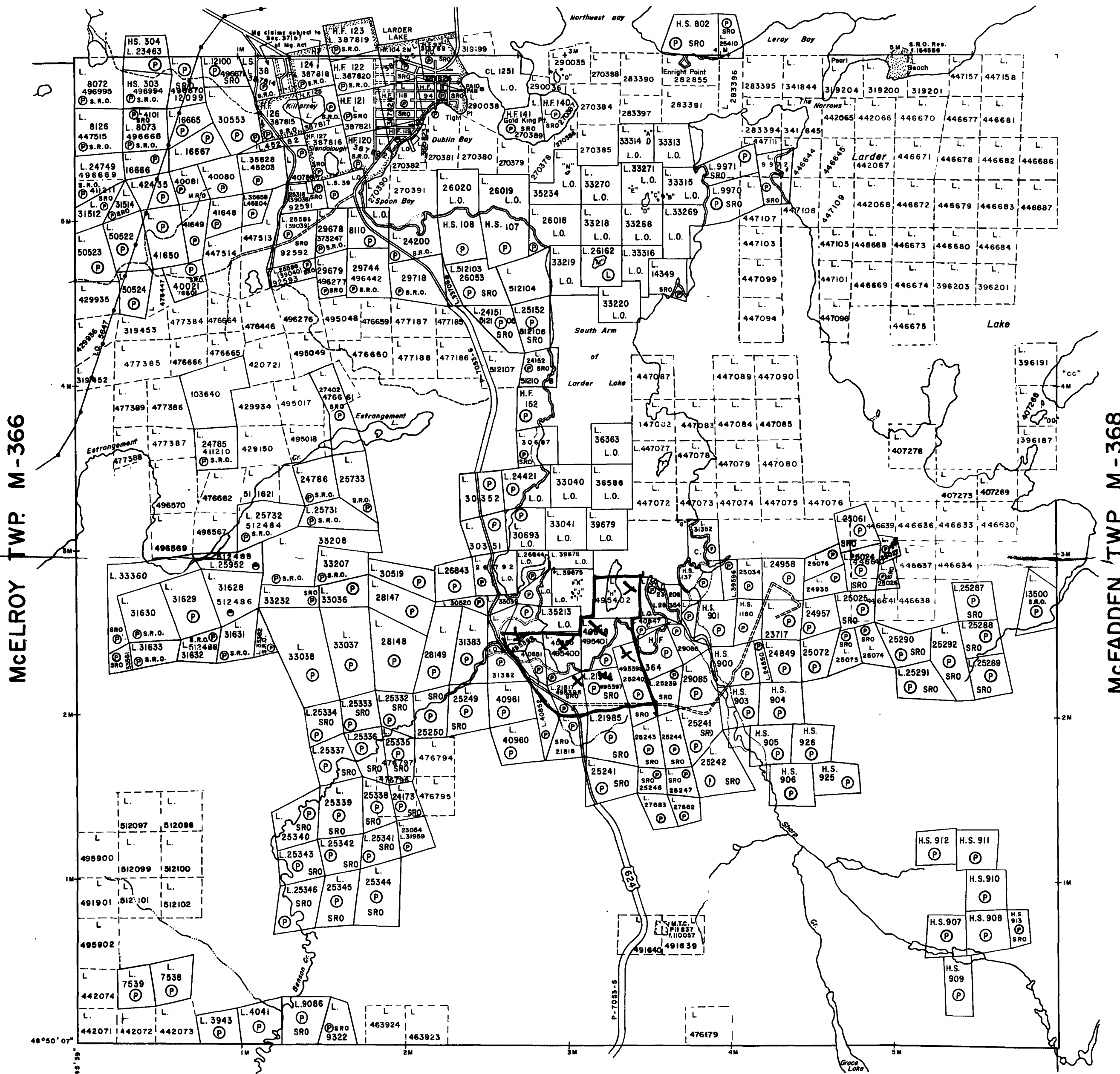
THE TOWNSHIP
OF 2.2869

HEARST

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH - 40 CHAINS



LEGEND

- PATENTED LAND ● or (P)
- CROWN LAND SALE C.S.
- LEASES (L)
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- PATENTED S.R.O. (C)

NOTES

400' Surface Rights reservation along the shores of all lakes and rivers.

Township of Hearst lies entirely within the CORPORATION of the TOWNSHIP OF LARDER LAKE. File: 129282.

Staking of mining claims within the Town of Larder Lake shown thus subject to Sec. 37 (b) of the Mining Act (R.S.O. 1970).

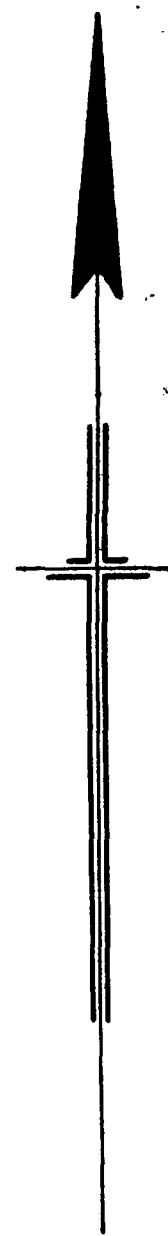
DATE OF ISSUE
JAN - 5 1979
SURVEYS AND MAPPING
BRANCH

PLAN NO. M-354

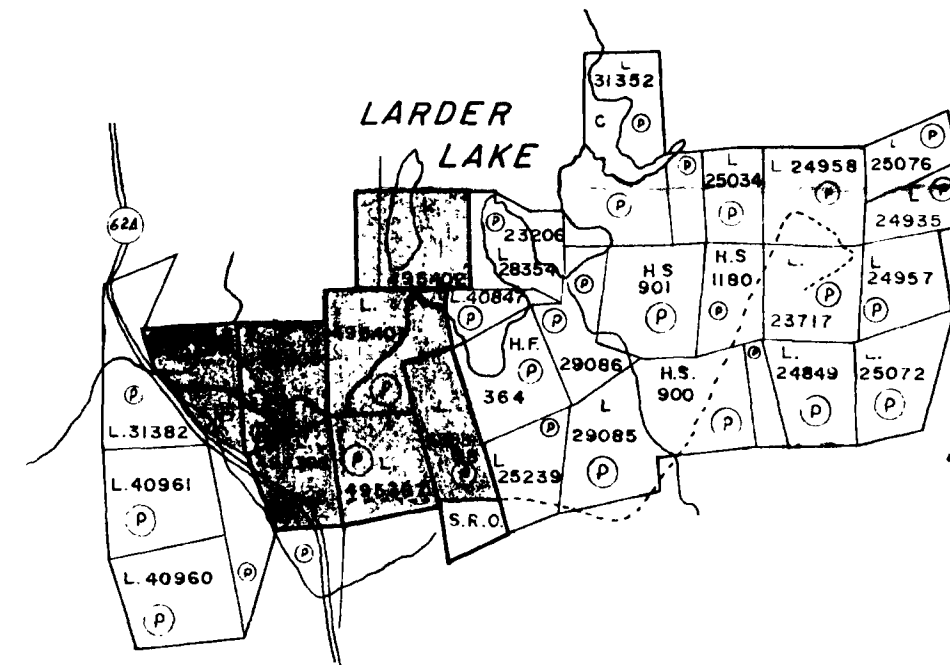
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



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KEY MAP
SCALE: 1" = 40 Chains

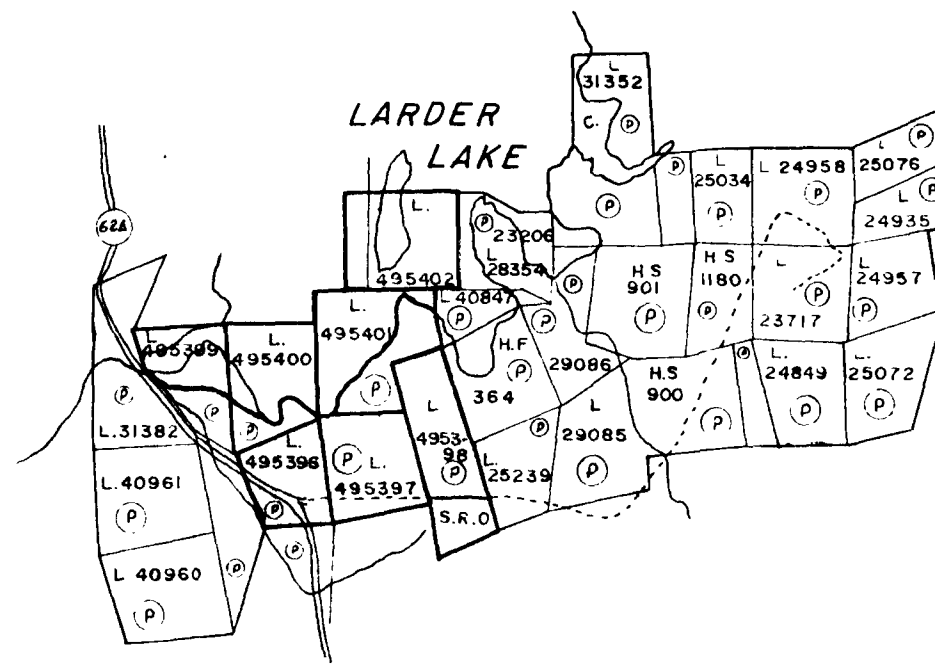
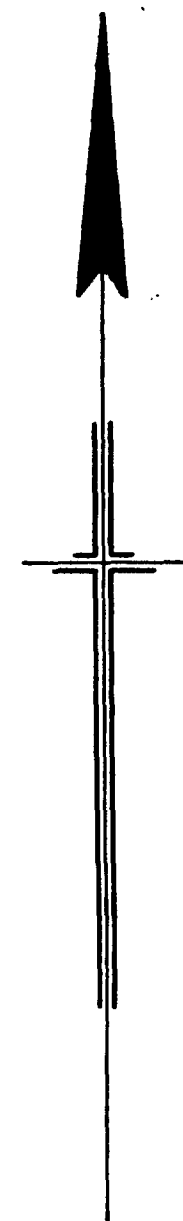


LEGEND

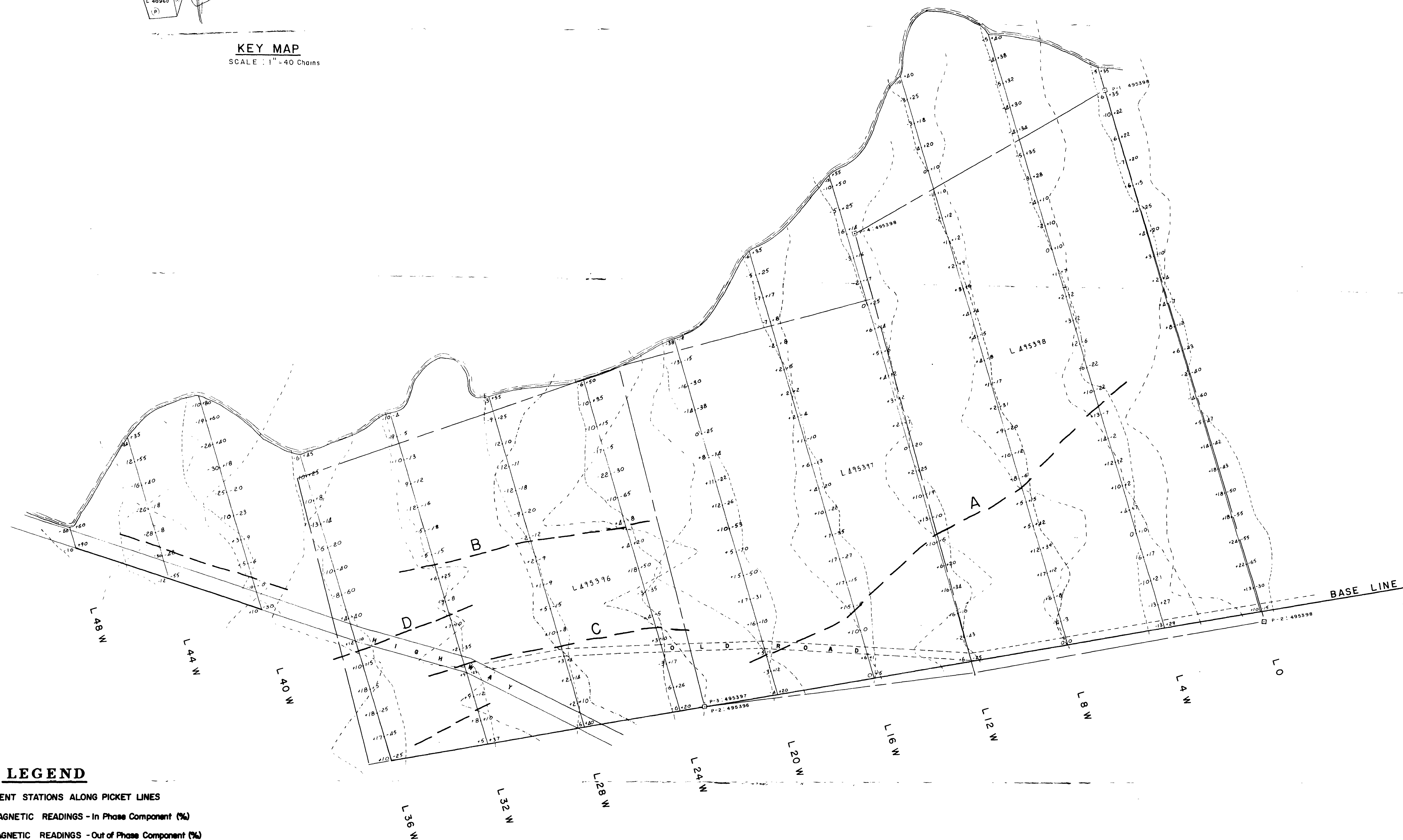
- MEASUREMENT STATIONS ALONG PICKET LINES
- ELECTROMAGNETIC READINGS - In Phase Component (%)
- ELECTROMAGNETIC READINGS - Out of Phase Component (%)
- PROFILE - In Phase Component (Scale 1" = 40 %)
- PROFILE - Out of Phase Component (Scale 1" = 40 %)
- CLAIMS SURVEYED
- INSTRUMENT - GEONICS - EM-16
- ELECTRICAL CONDUCTOR

TYPE OF WORK		
ELECTROMAGNETIC SURVEY		
CLIENT		
C.D. ROBBINS		
PROJECT	AREA	
	HEARST TOWNSHIP, ONTARIO	
SCALE	DATE	
1 INCH TO 200 FEET	DEC. 1978	
DRAWN BY	MAP OR SHEET NO.	
<i>J. Bergman</i>		







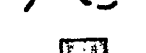
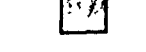




KEY MAP
SCALE : 1" = 40 Chains



LEGEND

-  MEASUREMENT STATIONS ALONG PICKET LINES
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PROJECT	AREA	HEARST TOWNSHIP, ONTARIO	
SCALE	DATE	1 INCH TO 200 FEET	DEC. 1978
DRAWN BY	MAP OR SHEET NO.	J	

