



32004SE0272 2.3197 HEARST

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MINING LANDS SECTION

REPORT
ON
MAGNETOMETER SURVEY
ON THE PROPERTY OF
HUMMINGBIRD MINES LTD.
HEARST TOWNSHIP, ONTARIO.

BY

PROSPECTING GEOPHYSICS LTD.

Montreal, Que.

January 21, 1980.

REPORT
ON
MAGNETOMETER SURVEY
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HUMMINGBIRD MINES LTD.
HEARST TOWNSHIP, ONTARIO.

INTRODUCTION

A V.L.F. (Very low frequency) electromagnetic survey was carried out on the property of Hummingbird Mines Ltd. in Hearst township in 1978. This survey outlined several conductive zones and this now has been followed by a magnetometer survey to assist in the interpretation prior to planning a more detailed exploration program.

The following report and accompanying map describe the results of the magnetometer survey.

PROPERTY AND LOCATION

The property consists of seven claims as shown on the accompanying map which are situated 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 of the claims is within the south arm of Larder Lake.

The property is readily accessible from the town of Larder Lake a distance of 15 miles and highway 624 cuts through a portion of the property. The main highway and the Canadian National railroad from Kirkland Lake to Noranda pass just north of the property.

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.

¹Thompson, J. E. Geology of Hearst and McFadden Townships, Ontario Department of Mines, Vol. LV1, Part VIII, 1947.

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The sedimentary and volcanic rocks have been extensively intruded by syenite with some minor dykes of lamprophyrs 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.

There is no known gold occurrence on the Hummingbird property but the projected extension of the Martin-Bird shear zone could extend to the property.

SURVEY AND INSTRUMENT DATA

The magnetometer survey was carried out over the same network of lines used for the electromagnetic survey. However, the lines on the lake had to be re-chained and picketed as shown on the accompanying map.

The instrument used was a Geometrics G-816 Portable Proton magnetometer measuring the earth's total magnetic field. Readings were taken at 100 foot intervals along the lines with detail readings at 50 foot intervals over anomalous areas. The readings were plotted as gammas after correction for diurnal variation on a map with a scale of 200 feet to the inch. The conductor axes from the electromagnetic survey have been superimposed on the magnetic map to aid in the interpretation of the results.

DISCUSSION OF THE RESULTS

The magnetic results show an irregular but rather high anomaly in the southwest corner of the property. Readings here go over 5,000 gammas compared to a background ranging from 1,000 to 1500 gammas. This probably represents a more basic rock possibly an intrusive or basic volcanics as compared to the sedimentary rocks. The anomaly extends to the east with a fairly large area containing values over 2,000 gammas.

The readings on the lake are mostly lower than those on the land which is probably due to the greater depth to bedrock on the lake. It is also noticeable that the readings in the east half of the property are higher than the west half. This may be due to a different geological formation or a variation in the depth of overburden.

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In addition to the main magnetic anomaly there is a small weaker one in the northwest corner of the property on claim L 495399.

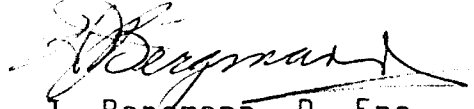
In correlating the results of the electromagnetic survey with the present survey "A" zone does not appear to be related to the magnetic readings and is largely outside of the magnetic anomaly and is probably entirely within the sedimentary rocks. "B" and "C" zones are within the magnetic anomaly but until some geological information is obtained in this area it is not possible to determine the significance of this environment. "E" zone, which has been interpreted as possibly representing the shore line, appears to follow the north extremity of the magnetic anomaly. It is possible that this northeast trend may represent a structural weakness.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic survey outlined one significant anomaly that may represent a basic intrusive or an area of basic volcanic rocks. Correlation of the conductive zones with the magnetic results is difficult until more geological information is available. As a result, the initial recommendation is geological mapping of the land portion of the property. The information from this work should be correlated with the results of the geophysical surveys and information on the adjacent Martin-Bird property. This data could then be used to lay out a diamond drilling program.

Respectfully submitted,

PROSPECTING GEOPHYSICS LTD.


H. J. Bengmann, P. Eng.

Montreal, Que.
January 21, 1980.



GEOPHYSICAL - GEOL
TECHNICAL DATA STATEMENT

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900

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 Magnetometer
Township or Area Hearst
Claim holder(s) C. D. Robbins
704 Bonair St., Beloeil, Que.
Author of Report H. J. Bergmann, P. Eng.
Address 3518 Vendome Ave., Montreal, Que.
Covering Dates of Survey Jan. 4 1980 - Jan. 22, 1980
(linecutting to office)
Total Miles of Line cut _____

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L 495396	
L 495397	
L 495 398	
L 495399	} 40 days May
L 495400	
L 495401	
L 495402	
L 495402	

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic _____ -Magnetometer _____ -Radiometric _____	40 20
ENTER 20 days for each additional survey using same grid.	-Other _____ Geological _____ Geochemical _____	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)
DATE: Jan. 22, 1980 SIGNATURE: [Signature]
Author of Report

PROJECTS SECTION L.D
Res. Geol. _____ Qualifications 63.1061
Previous Surveys _____
Checked by _____ date _____
GEOLOGICAL BRANCH _____
Approved by _____ date _____
GEOLOGICAL BRANCH _____
Approved by _____ date _____

OFFICE USE ONLY

TOTAL CLAIMS 7

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 430 Number of Readings 546
Station interval 100 feet
Line spacing 400 feet
Profile scale or Contour intervals 500 gamma
(specify for each type of survey)

MAGNETIC

Instrument Geometrics G-816 Proton Magnetometer
Accuracy - Scale constant + 1 gamma
Diurnal correction method Base station
Base station location See map.

ELECTROMAGNETIC

Instrument _____
Coil configuration _____
Coil separation _____
Accuracy _____
Method: Fixed transmitter Shoot back In line Parallel line
Frequency _____
(specify V.L.F. station)

Parameters measured _____

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 _____

McVITTIE TWP. M-370

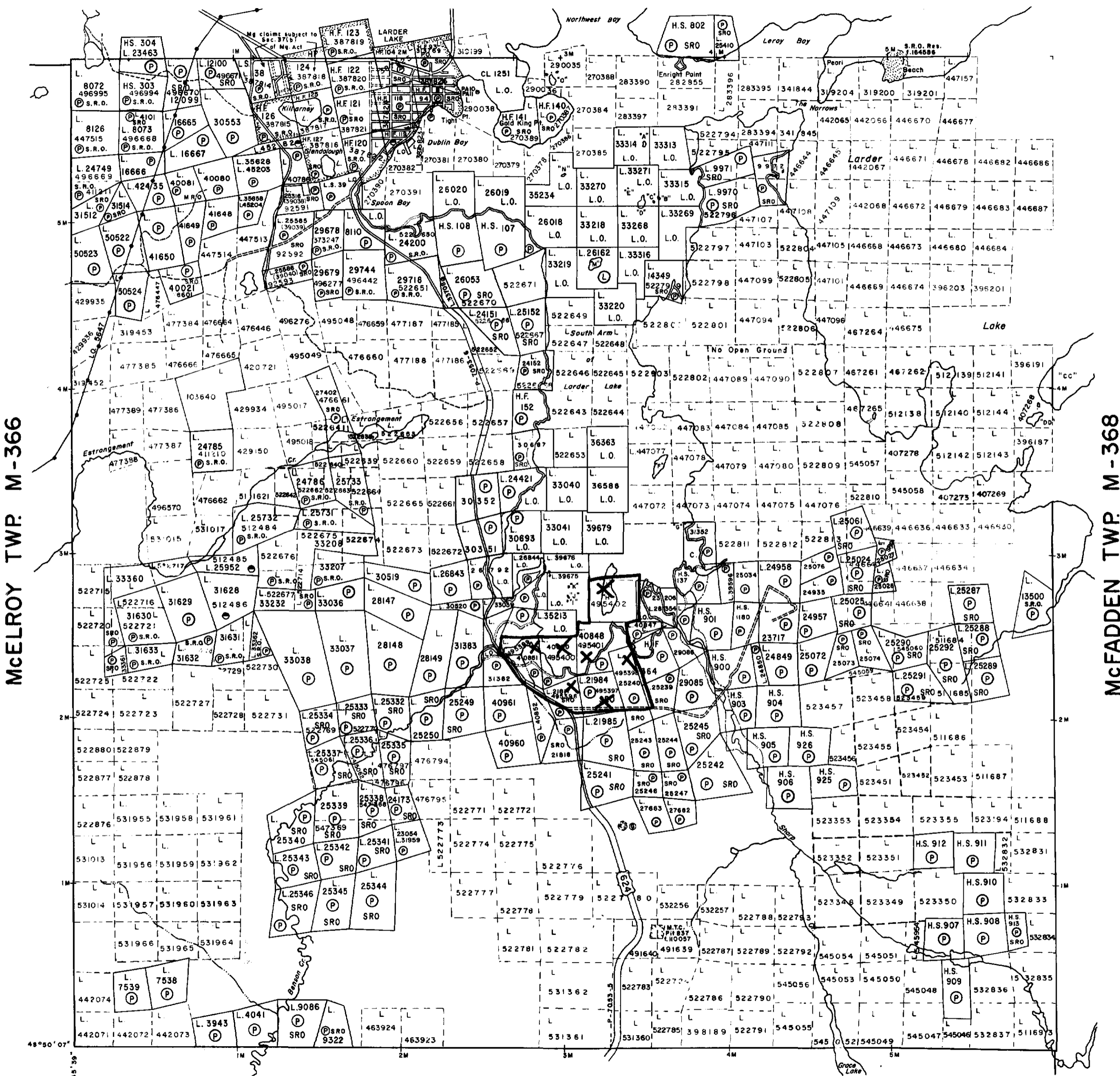
THE TOWNSHIP OF 2.3197

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.

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).

SAND AND GRAVEL

- Q QUARRY PERMIT

DATE OF ISSUE

JAN 24 1980

SURVEYS AND MAPPING BRANCH

ordered plan

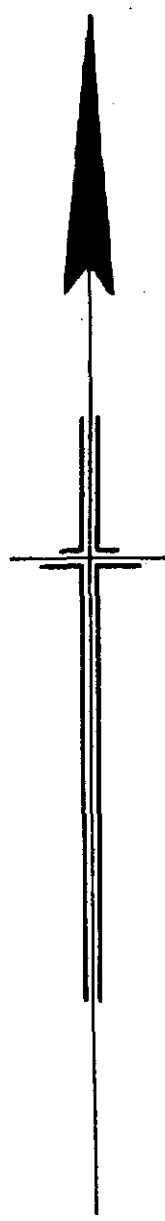
PLAN NO. M-354

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

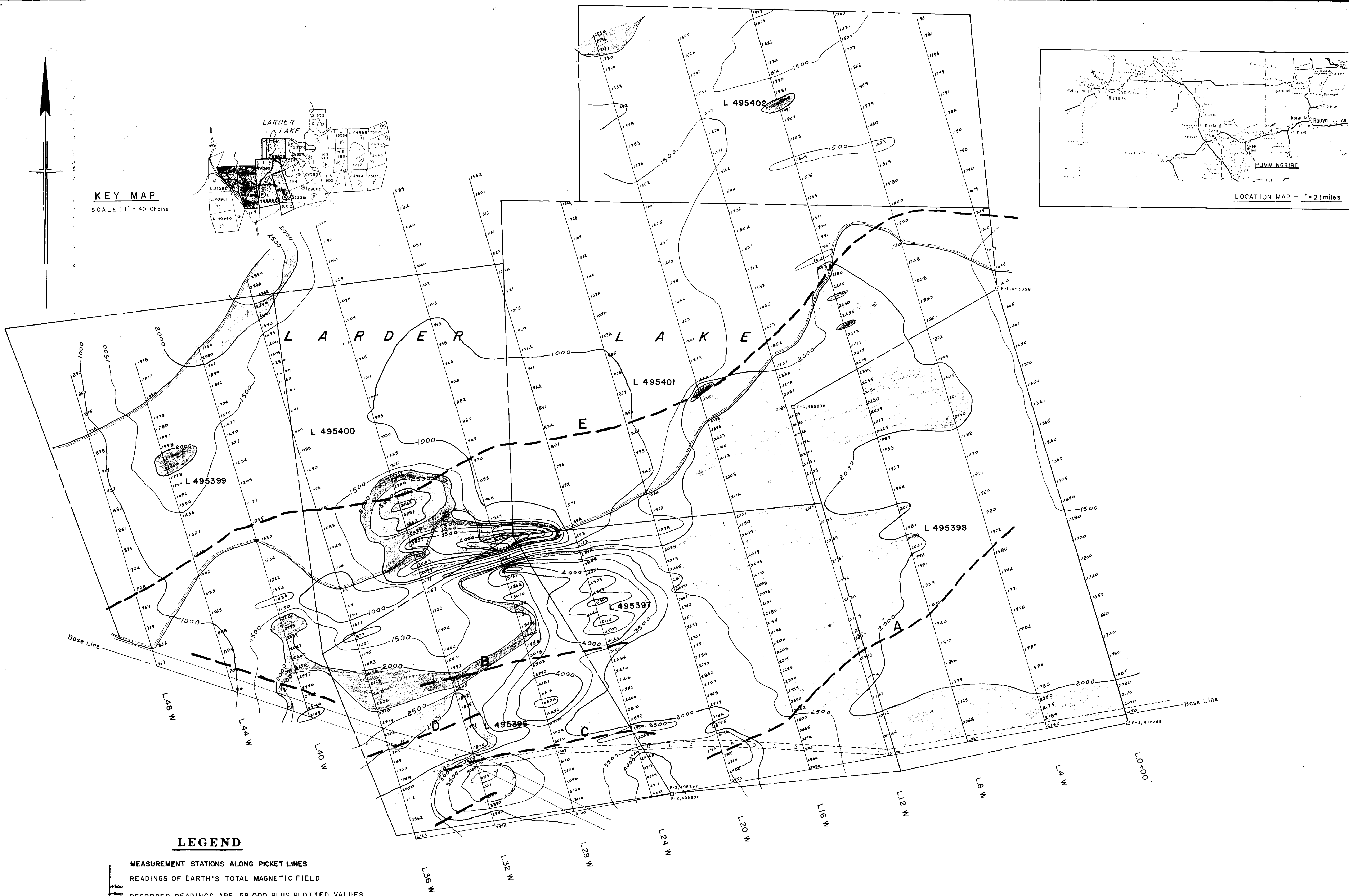
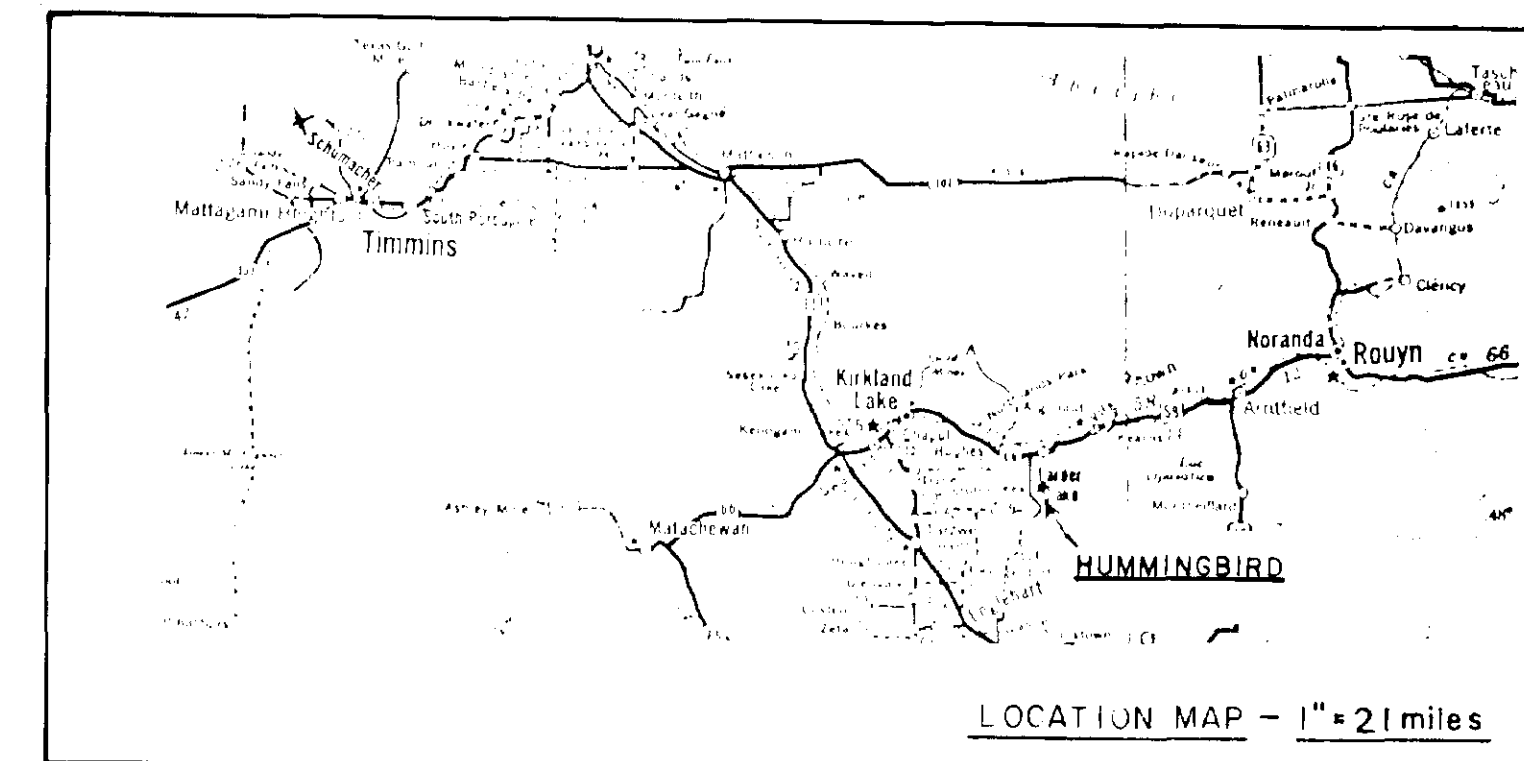
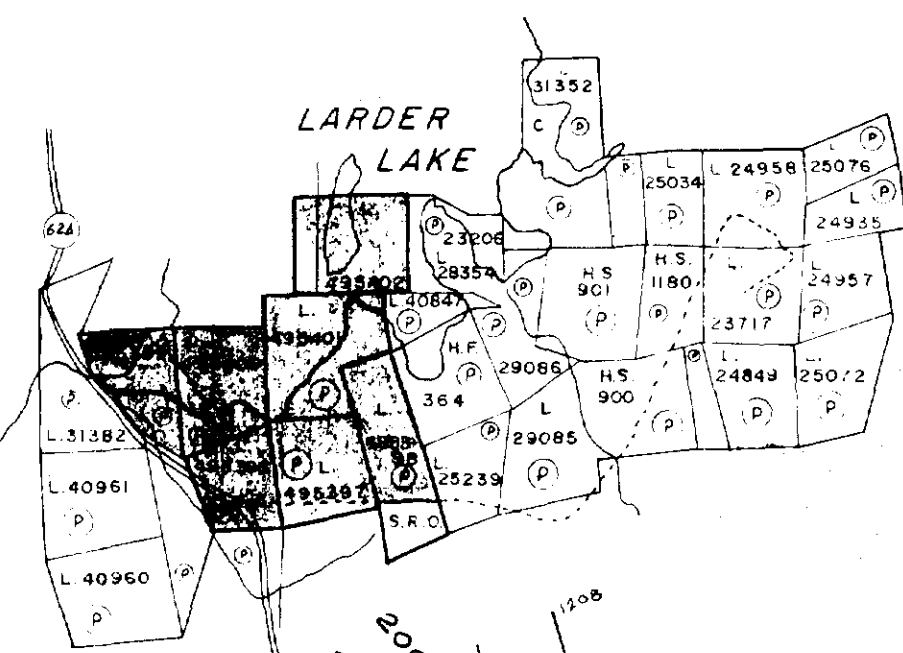
SKEAD TWP. M-387



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KEY MAP
SCALE: 1" = 40 Chains



LEGEND

- MEASUREMENT STATIONS ALONG PICKET LINES
- READINGS OF EARTH'S TOTAL MAGNETIC FIELD
- RECORDED READINGS ARE 58 000, PLUS PLOTTED VALUES
- MAGNETIC CONTOURS
- △ BASE STATION
- ELECTRICAL CONDUCTOR
- 1500 TO 2000 GAMMAS
- 2000 TO 2500 GAMMAS
- OVER 2500 GAMMAS

INSTRUMENT USED: G-816 PROTON MAGNETOMETER

TYPE OF WORK		MAGNETOMETER SURVEY	
CLIENT		HUMMINGBIRD MINES LTD.	
PROJECT	AREA		
	HEARST TOWNSHIP, ONTARIO		
SCALE	1 INCH TO 200 FEET	DATE	JAN., 1980
DRAWN BY	<i>J. Bergman</i>	MAP OR SHEET NO.	8