

32D04SE8974 2.10882 HEARST

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MAGNETOMETER & VLF-EM SURVEYS
HEARST TOWNSHIP, ONTARIO
by
COLEX EXPLORATION INC.
for
GARRISON GOLD INC.
February 6, 1988

2.10882

RECEIVED

MAR 04 1988

MINING LANDS SECTION

MAGNETOMETER AND VLF-EM SURVEYS

HEARST TOWNSHIP, ONTARIO

by

COLEX EXPLORATION INC.

for

GARRISON GOLD INC.

February 6, 1988

I. INTRODUCTION

Magnetometer and VLF-EM surveys were conducted over cut lines on 6 claims in Hearst Township during December 1987.

II. LOCATION, ACCESS AND OWNERSHIP

The property is located in the south-central part of Hearst Township, Larder Lake Mining Division, District of Temiskaming, Ontario. The claims are numbered L917547 to 917549 and L979922 to 979924 both inclusive. They are recorded in the name of Garrison Gold Inc., c/o Box 1110, Sault Ste. Marie, Ontario.

Highway 624, a paved secondary highway passes through the central part of the claims. The claims lie about 5 miles south of the town of Larder Lake on this highway.

III. PREVIOUS EXPLORATION

There are no records of previous exploration on the claims, however a number of pits and trenches are in evidence of past work.

VI. TOPOGRAPHY

Large parts of the claims are covered by swamp or gravel and clay overburden. The east part of the claims are quite rugged due to steep outcrops formed of Cobalt sediments.

V. MAPPING PROCEDURE

A north-south baseline was laid out starting from a survey pin defining one of the claim corners on the north boundary. Crosslines were cut approximately every 400 feet from the baseline, starting at 500 feet south, as the north boundary (line 0) runs south-east and south-west from the survey pin. Picket lines were chained and picketed every 100 feet.

Magnetometer readings were taken with a Sharpe MF-1 Fluxgate magnetometer at 100-foot intervals. The looping method was used for control of variation. In this method a base station is selected, and readings taken along lines describing a loop, arriving back at the starting base station in less than two hours. A second loop is then started using either the same base station or another which is tied to the previous loop. Readings are then corrected for diurnal variation by assuming the time between readings is the same and distributing any variation equally among the intervening readings. No correction was applied less than the accuracy of the base station readings.

A VLF-EM survey was run with a Phoenix VLF-2 instrument set to the signal from Cutler, Maine (24.0 KHz). Readings were taken at 100-foot intervals along all lines, using the procedure outlined in Appendix 1. The looping method was used for control of variation as in the magnetometer survey.

VI. GENERAL GEOLOGY

The general geology of Hearst Township has been described by J.E. Thomson. The area is underlain by early Precambrian volcanic, sedimentary and intrusive rocks. The eastern part of the claims are overlain by later Proterozoic Cobalt series sediments.

VII. DISCUSSION OF RESULTS

Magnetometer

The magnetometer survey outlined a highly magnetic body trending approximately N.N.W.-S.S.E. about the centre of the claim group. It is probably an ultramafic, or magnetite bearing syenitic intrusion. It could possibly also be an iron formation band within the sediments mapped as being within this area.

The survey also shows a higher magnetic gradient for the Cobalt sediments on the east part of the claims. This feature may be useful in mapping drift covered areas.

VLF-EM

The VLF-EM results are somewhat inconclusive. It would appear any anomalies present are trending more north-south, and except in the north-west corner coupling is poor.

VIII. CONCLUSIONS AND RECOMMENDATIONS

The magnetometer survey has outlined a highly magnetic body in the central part of the claims. A large part of the body is covered by swamp or later Cobalt sediments. A Geological survey and possibly diamond drilling is warranted to check for gold in or along the margins of this body.

Respectfully submitted



February 6, 1988

R.A. MacGregor, P. Eng.

C E R T I F I C A T E

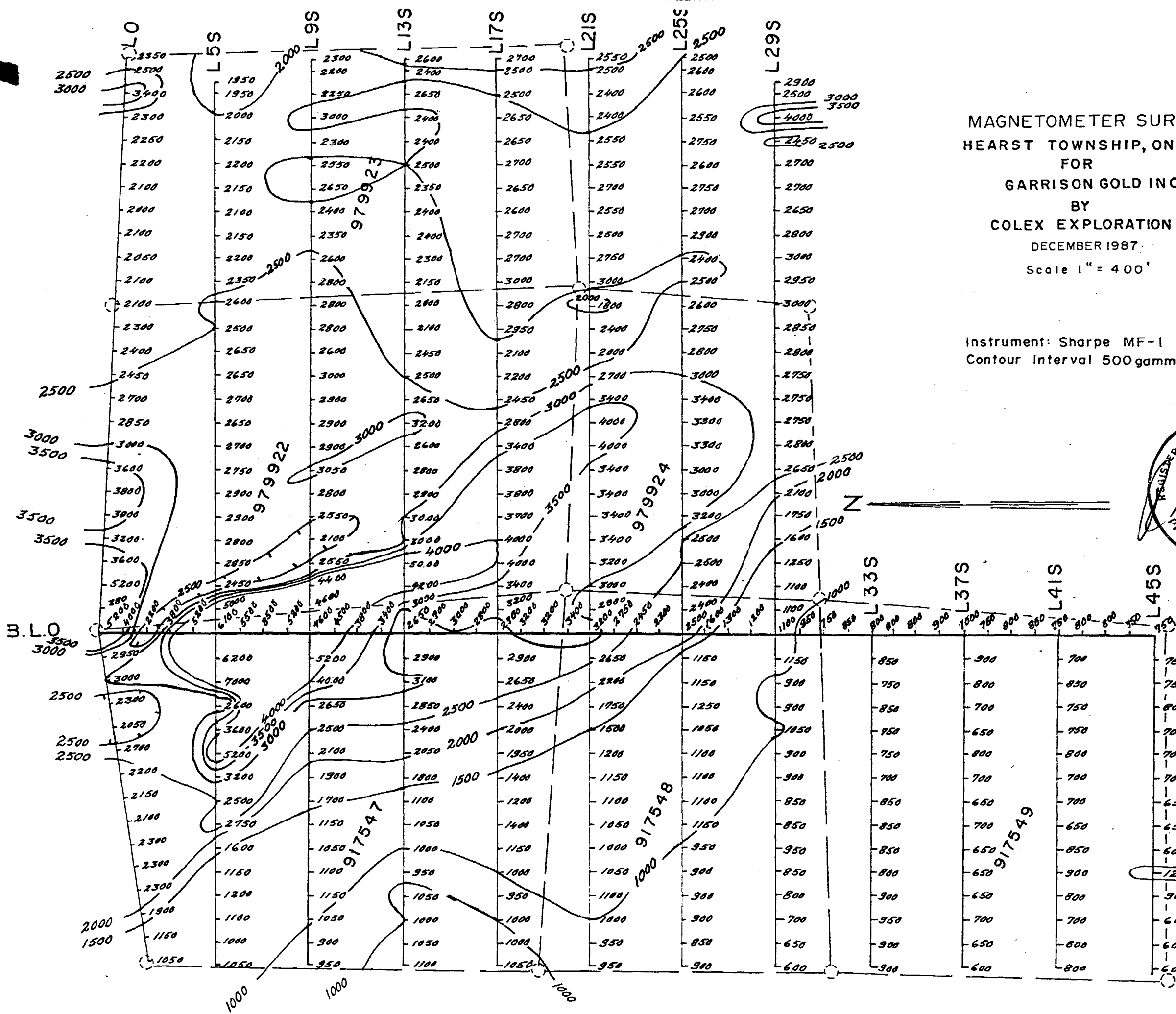
I, Robert A. MacGregor, certify:

1. I am a Mining Engineer residing at 28 Ford Street, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 20 years.
2. I am a member of the Association of Professional Engineers of the Province of Ontario and a member of the Canadian Institute of Mining and Metallurgy.
3. I attended Queen's University for two years in the Mining-Geology course.
4. I personally supervised the field work covered by this report.

Feb 6/80

DATE

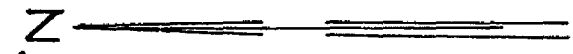
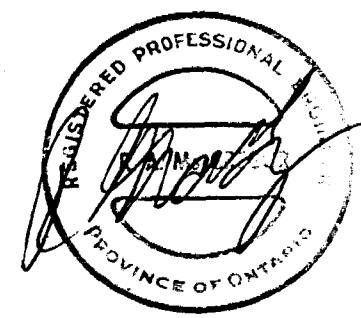




MAGNETOMETER SURVEY
 HEARST TOWNSHIP, ONTARIO
 FOR
 GARRISON GOLD INC.
 BY
 COLEX EXPLORATION INC.
 DECEMBER 1987
 Scale 1" = 400'

2.10882

Instrument: Sharpe MF-1
 Contour Interval 500 gammas



W.L.O.
3500
3000

1000

1000

1000

917549

917548

917924

917923

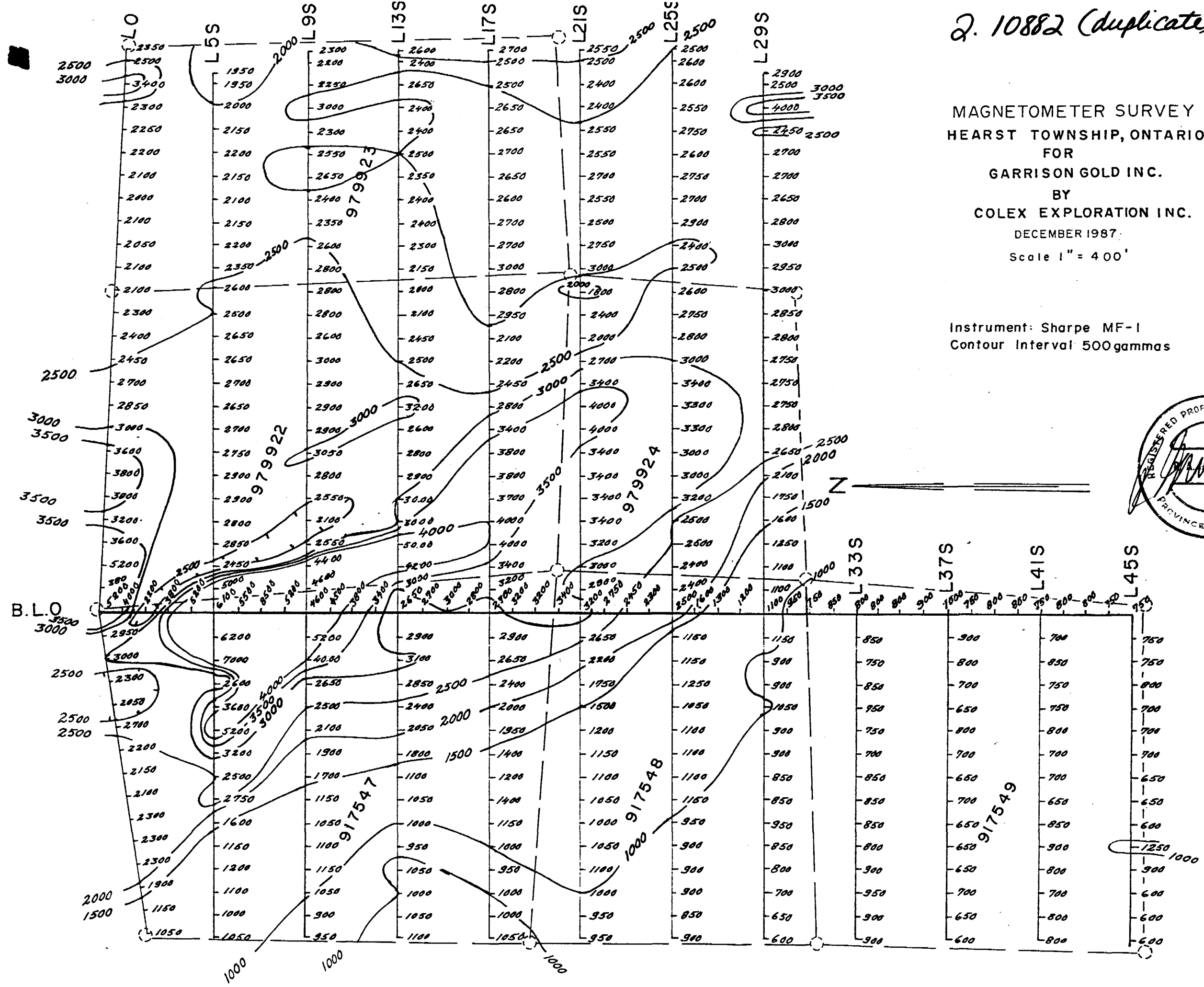
917922

2. 10882 (duplicate)

0487-6-C-265

MAGNETOMETER SURVEY
HEARST TOWNSHIP, ONTARIO
FOR
GARRISON GOLD INC.
BY
COLEX EXPLORATION INC.
DECEMBER 1987
Scale 1" = 400'

Instrument: Sharpe MF-1
Contour Interval 500 gammas



VLF-EM SURVEY
 HEARST TOWNSHIP, ONTARIO
 FOR
 GARRISON GOLD INC.

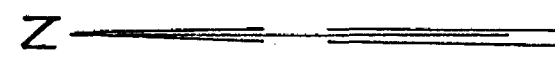
BY
 COLEX EXPLORATION INC.

DECEMBER 1987

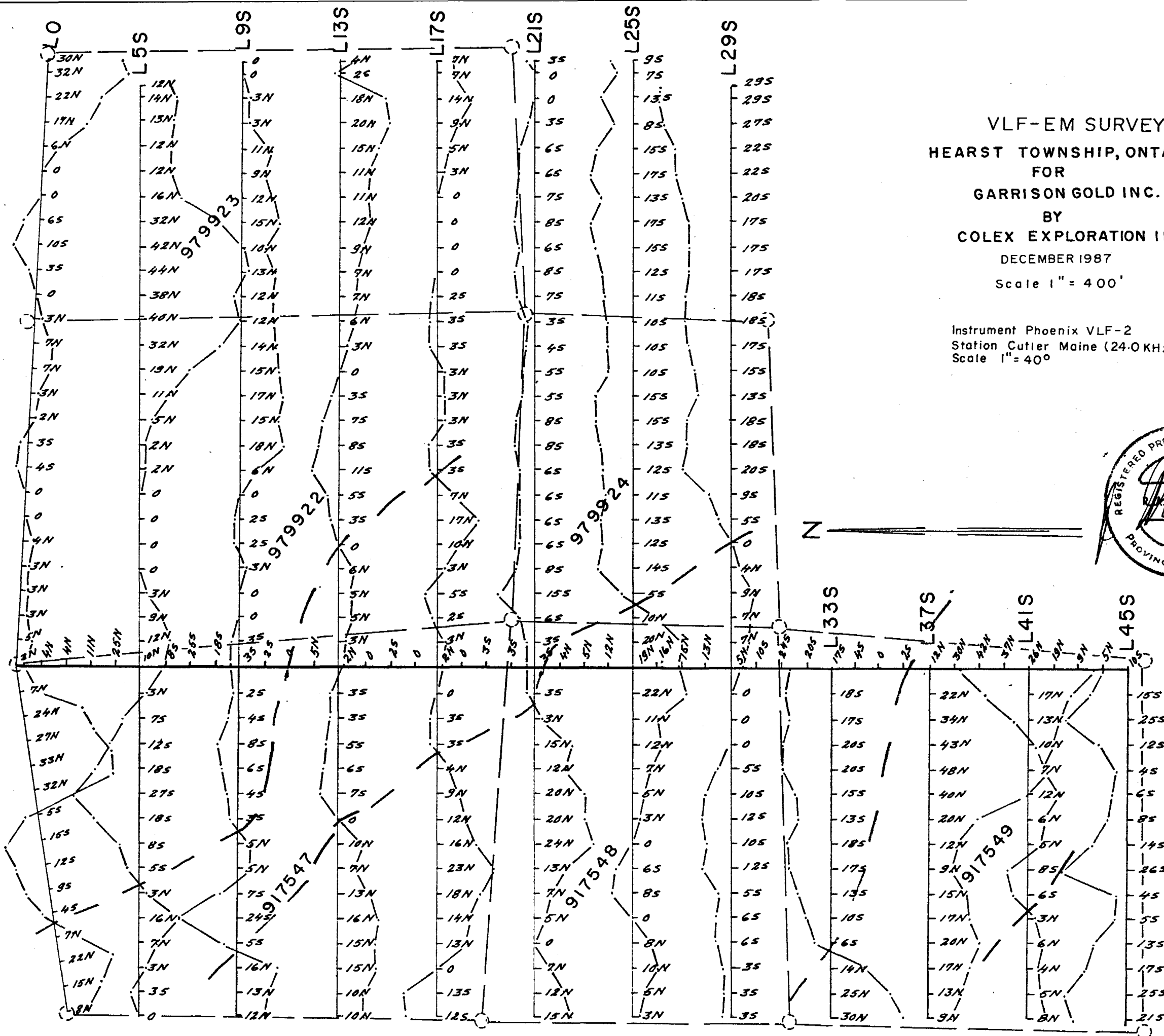
Scale 1" = 400'

2.10882

Instrument Phoenix VLF-2
 Station Cutler Maine (24.0 KHz)
 Scale 1" = 400'



B.L.O

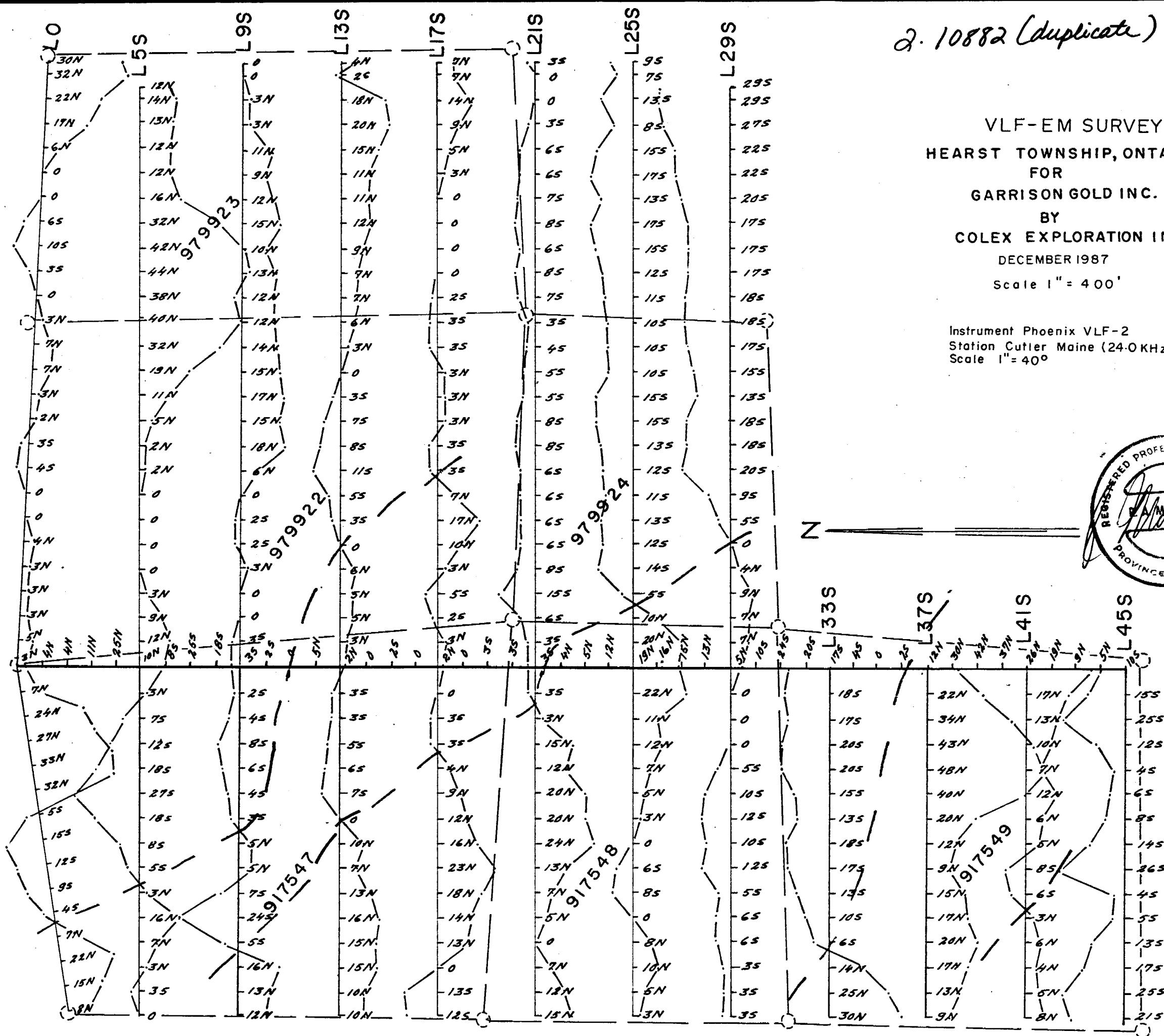


VLF-EM SURVEY
 HEARST TOWNSHIP, ONTARIO
 FOR
 GARRISON GOLD INC.
 BY
 COLEX EXPLORATION INC.
 DECEMBER 1987
 Scale 1" = 400'

Instrument Phoenix VLF-2
 Station Cutler Maine (24.0KHz)
 Scale 1" = 400'



B.L.O





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(s) Magnetometer & VLF-EM Surveys
Township or Area Hearst Twp.
Claim Holder(s) Garrison Gold Inc.
Survey Company Colex Exploration Inc.
Author of Report R.A. MacGregor
Address of Author 28 Ford St., Sault Ste. Marie, Ont.
Covering Dates of Survey Dec./87 to Feb. 6, 1988
Total Miles of Line Cut

Table with 2 columns: SPECIAL PROVISIONS CREDITS REQUESTED, DAYS per claim. Rows include Geophysical, Electromagnetic (20), Magnetometer (20), Radiometric, Other, Geological, Geochemical.

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Feb. 6/88 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. Qualifications 2.1102

Table with 4 columns: File No., Type, Date, Claim Holder. Multiple rows for listing previous surveys.

MINING CLAIMS TRAVERSED
List numerically
L917547 (prefix) (number)
L917548
L917549
L979922
L979923
L979924
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MAR 04 1988
MINING LANDS SECTION
TOTAL CLAIMS 6

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 412 Mag 412 VLF Number of Readings 412 Mag 412 VLF
Station interval 100ft Line spacing 400 ft.
Profile scale 1" = 40'
Contour interval 250 gammas

MAGNETIC

Instrument Sharp MF-1
Accuracy - Scale constant 20 gammas on lowest scale
Diurnal correction method looping method
Base Station check-in interval (hours) 2 hours or less
Base Station location and value various along base line

ELECTROMAGNETIC

Instrument Phoenix VLF-2
Coil configuration N/A
Coil separation N/A
Accuracy +/- 1/2'
Method: [X] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency Cutler, Maine (24.0 KHz)
Parameters measured dip angle of resultant field

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



Ontario

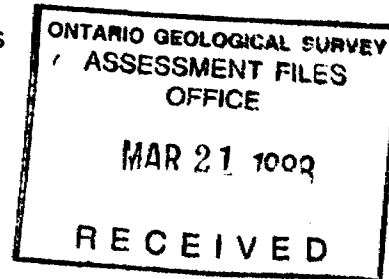
Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

March 11, 1988

File: 2.10882

Mining Recorder
Ministry of Northern Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2



Dear Sir:

Re: Notice of Intent dated March 7, 1988
Report of Work W8808-10 & W8808-052

Please disregard the above-noted Notice of Intent. Report of Work W8808-052 does not pertain to this file and will be assessed separately at a later date.

The assessment work credits have been approved as recorded on Report of Work W8808-10 as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan, Manager
Mining Lands Section
Mines & Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

SH:p1
Enclosure

cc: Garrison Gold Inc.
c/o Box 1110
Sault Ste. Marie, Ontario
P6A 6N7

Mr. R.A. MacGregor
28 Ford Street
Sault Ste. Marie, Ontario
P6A 4N4

Mr. G.H. Ferguson
Mining and Lands Commissioner
Toronto, Ontario

Resident Geologist
Kirkland Lakes, Ontario



Ministry of Northern Development
and Mines

Land Management

Report of Work
(Geophysical, Geological
Geochemical and Expenditures)

DOCUMENT No.
W8808-010/88

Instructions: - Please type or print.
- If number of mining claims traversed exceeds space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Mau

Mining Act

2-10882

Type of Survey(s) MAGNETOMETER & VLF-EM	Township or Area Hearst
Claim Holder(s) Garrison Gold Inc.	Prospector's Licence No. T-1858
Address C/O Box 1110, Sault Ste. Marie, Ont. P6A 6N7	
Survey Company Colex Exploration Inc.	Total Miles of line Cut 7.72
Date of Survey (from & to) 10 12 87 31 12 87 Day Mo. Yr. Day Mo. Yr.	
Name and Address of Author (of Geo-Technical report) R.A. MacGregor, 28 Ford St., Sault Ste. Marie, Ontario P6A 4N4	

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20
	- Magnetometer Radiometric	20
For each additional survey: using the same grid: Enter 20 days (for JAN 19 1988)	Geological	
	Geochemical	

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JAN 19 1988
MINING LANDS SECTION

Man Days	Geophysical	Days per Claim
Complete reverse side	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	- Geological	
	- Geochemical	

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JAN 11 1988
9.50am

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	- Electromagnetic	
	- Magnetometer	
	- Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
L	917547				
	917548				
	917549				
	979922				
	979923				
	979924				

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ + **15** = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **6**

For Office Use Only

Total Days Cr. Recorded 240	Date Recorded Jan. 11/88	Mining Recorder <i>M.G. W. ...</i>
	Date Approved as Recorded <i>See Revised statement</i>	Branch Director

Date **Jan. 6/88** Recorder Holder or Agency (Signature) *[Signature]*

Certification Verifying Report of Work
I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
R.A. MacGregor, 28 Ford St., Sault Ste. Marie, Ont. P6A 4N4

Date Certified **Jan. 6/88** Certified by (Signature) *[Signature]*

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

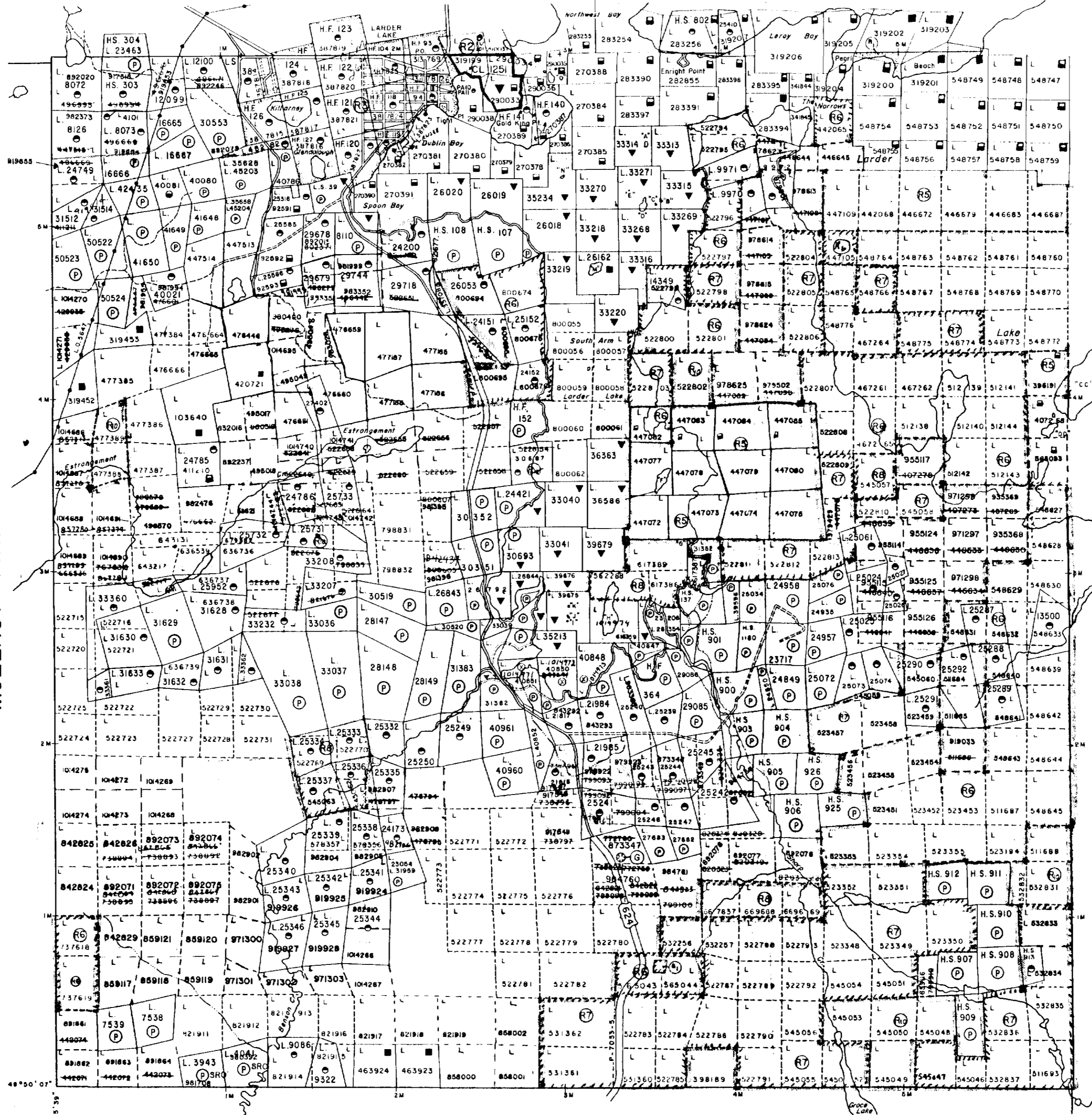
- | Description | Order No. | Date | Disposition | File |
|--|-----------|------|-------------|------|
| (R1) SURFACE RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 ORDER NO. <u>W 14/80</u> | | | | |
| (R2) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 65/84</u> | | | | |
| (R3) MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36 / 80 ORDER NO. <u>W 9 L 85</u> | | | | |
| (R4) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 11/85</u> | | | | |
| O 32 / 85 OPENS W 17 / 85. | | | | |
| (R5) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 36/85</u> | | | | |
| O 22 / 85 OPENS W 36 / 85 | | | | |
| (R6) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 38/85</u> | | | | |
| O 24 / 85 OPENS PART OF W 38 / 85. | | | | |
| O 25 / 85 OPENS PART OF W 38 / 85. | | | | |
| O 26 / 85 OPENS PART OF W 38 / 85 | | | | |
| O 63 / 87 OPENS PART OF W 36 / 85. | | | | |
| O 97/87 OPENS PART OF W 6/85 | | | | |
| (R7) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 7/86</u> | | | | |
| O 74 / 86 OPENS PART OF W 7 / 86. | | | | |
| O 98/87 OPENS PART OF W 7/86. | | | | |
| (R8) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 8/86</u> | | | | |
| O 64 / 87 OPENS PART OF W 8 / 86. | | | | |
| (R9) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 9/86</u> | | | | |
| (R10) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. <u>W 50/86</u> | | | | |
| O 60 / 87 OPENS PART OF W 50 / 86. | | | | |

NOTES

Township of Hearst lies entirely within the CORPORATION of the TOWNSHIP of LARDER LAKE. File 29282

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

McVITTIE TWP.



McELROY TWP.

McFADDEN TWP.

SKEAD TWP.

LEGEND

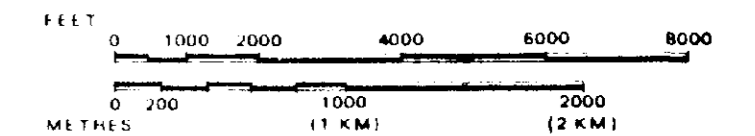
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
- TOWNSHIPS, BASE LINES, ETC.
- LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES
- LOT LINES
- PARCEL BOUNDARY
- MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS



Replaced on Aug 19, 1987

TOWNSHIP
HEARST
 M.N.R. ADMINISTRATIVE DISTRICT
 KIRKLAND LAKE
 MINING DIVISION
 LARDER LAKE
 LAND TITLES / REGISTRY DIVISION
 TIMISKAMING 2.10882

Ministry of Natural Resources Land Management Branch

Date FEBRUARY, 1985

Number

G-3213



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