



32D04SE0163 2.10936 HEARST

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VLF-EM SURVEY - HEARST TWP., ONT.

by

COLEX EXPLORATION INC.

for

GARRISON GOLD INC.

February 20, 1988

**RECEIVED**

MAR 18 1988

MINING LANDS SECTION

VLF-EM SURVEY  
HEARST TOWNSHIP, ONTARIO

by

COLEX EXPLORATION INC.

for

GARRISON GOLD INC.

February 20, 1988

## I. INTRODUCTION

A VLF-EM survey was conducted over cut lines on six 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.

A VLF-EM survey was run with a Phoenix VLF-2 instrument set to the signal from Annapolis, Maryland (21.4 KHz). Readings were taken at 100-foot intervals along all lines, using the procedure outlined in Appendix I. The looping method was used for control of variation.

#### 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

The VLF-EM survey shows four anomalies trending approximately NW-SE. Two of these anomalies approximately follow the margins of the magnetic body found in a magnetometer survey. They could represent shearing or mineralization along the edge of this presumed intrusion.

VIII. CONCLUSIONS AND RECOMMENDATIONS

Four anomalies have been located, two of which approximately parallel a magnetic body. Further work is indicated either by trenching or drilling to explain these anomalies.

Respectfully submitted



R.A. MacGregor, P. Eng.

February 20, 1988

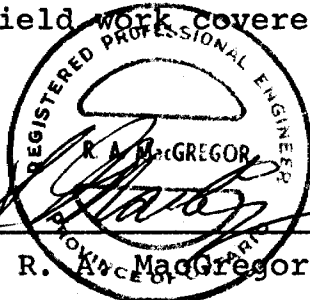
C E R T I F I C A T E

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 20/88

DATE

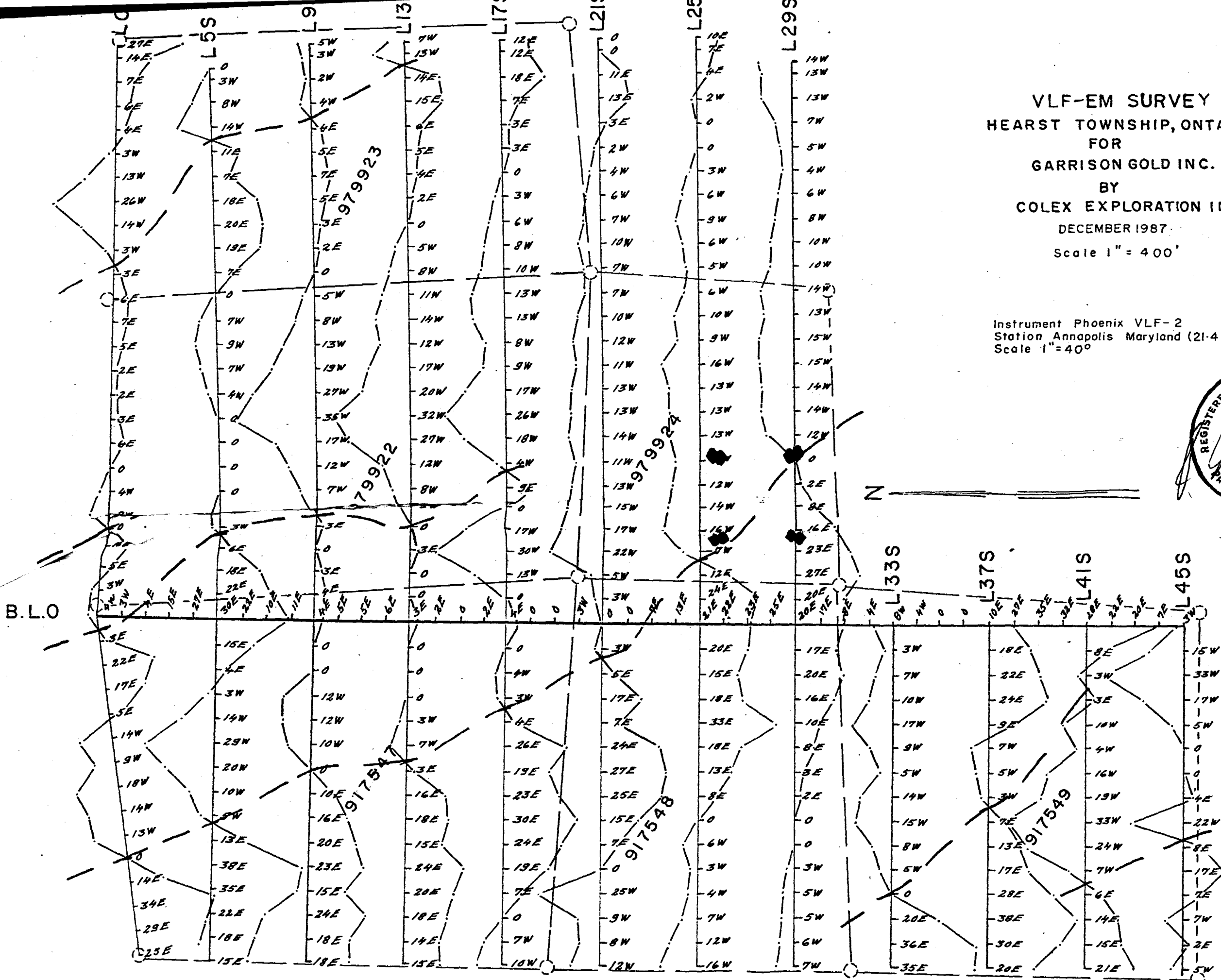
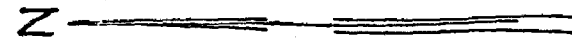
A circular seal for a Registered Professional Engineer. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. The center of the seal features a stylized signature of "R. A. MacGregor" and the name "R. A. MacGregor" printed below it. The seal is stamped over a horizontal line.

R. A. MacGregor



VLF-EM SURVEY  
 HEARST TOWNSHIP, ONTARIO  
 FOR  
 GARRISON GOLD INC.  
 BY  
 COLEX EXPLORATION INC. **2.10936**  
 DECEMBER 1987  
 Scale 1" = 400'

Instrument Phoenix VLF-2  
 Station Annapolis Maryland (21.4 KHz)  
 Scale 1" = 400'







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) VLF-EM Survey
Township or Area Hearst
Claim Holder(s) Carrison Gold Inc.
Survey Company Coler Exploration Inc.
Author of Report R.A. MacGregor
Address of Author 28 Ford St., Sault Ste. Marie
Covering Dates of Survey Dec./87 - Feb. 20/88
Total Miles of Line Cut

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

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Feb. 20/88 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. Qualifications 2-1102

Table with 4 columns: File No., Type, Date, Claim Holder. Header: Previous Surveys.

MINING CLAIMS TRAVERSED
List numerically
Table with 2 columns: (prefix), (number). Entries: L917847, L917848, L917849, L979922, L979923, L979924. 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 Number of Readings 412
Station interval 100 ft. Line spacing 400 ft.
Profile scale
Contour interval

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base Station check-in interval (hours)
Base Station location and value

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 Annapolis, Maryland (21.4 KHz)
Parameters measured Dip angle of the 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

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

Mining Act 2-10926

Type of Survey(s) **VLF-EM Survey** Township or Area **Hearst Twp.**

Claim Holder(s) **Garrison Gold Inc.** Prospector's Licence No. **T-1858**

Address **c/o Box 1110, Sault Ste. Marie, Ontario P6A 5N7**

Survey Company **Colex Exploration Inc.** Date of Survey (from & to) **10 12 87** to **31 12 87** Total Miles of line Cut **7.72**

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

Special Provisions For first survey: Enter 40 days. (This includes line cutting)  For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	Days per Claim
	- Electromagnetic	<b>20</b>
	- Magnetometer	
	- Radiometric	
Man Days Complete reverse side and enter total(s) here  <b>RECEIVED</b> <b>MAR 4 1988</b> <b>MINING LANDS SECTION</b>	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
	<b>917547</b>				
	<b>917548</b>				
	<b>917549</b>				
	<b>979922</b>				
	<b>979923</b>				
	<b>979924</b>				

ONTARIO GEOLOGICAL SURVEY  
ASSESSMENT FILES  
OFFICE  
APR 5 1988  
RECEIVED

LARBER LAKE  
MINING DIV.  
RECEIVED  
FEB 25 1988  
8 19 10 11 12 13 14

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**

Date **Feb. 13, 1988** Recorded Holder or Agent (Signature) *[Signature]*

For Office Use Only

Total Days Cr. Recorded **120** Date Recorded **Feb. 23, 1988** Mining Recorder *[Signature]*

Date Approved as Recorded **24 March 88** Branch Director *[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, Ontario P6A 4N4**

Date Certified **Feb. 13/88** Certified by (Signature) *[Signature]*

P.O. BOX 1110  
SAULT STE. MARIE  
ONTARIO P6A 5N7

R. A. MACGREGOR, P. ENG.  
MINING ENGINEER  
~~104 PALACE DRIVE~~  
SAULT STE. MARIE, ONTARIO  
~~P6B 5H5~~

OFFICE:  
705-949-5928  
HOME:  
705-949-4250

Mar 10 / 88

MINISTRY OF NORTHERN DEVELOPMENT & MINES  
Mining Lands Section  
Whitney Block 1  
Room 6610  
Queen's Park  
TORONTO, Ontario  
M7A 1W3

Dear Sir or Madam:

Enclosed please find report (s) on VLF-EM Survey - Hearst Sup  
& VLF-EM Survey - Mc Barry Sup. re:  
Garrison Gold Inc. date Feb 20 + Feb 12/88  
respectively

Yours truly

*Robert A. MacGregor*

*for:*

Robert A. MacGregor, P. Eng.

/jh

RECEIVED

MAR 18 1988

MINING LANDS SECTION

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

① SURFACE RIGHTS WITHDRAWN FROM STAKING SECTION 36/80 ORDER NO. W 14/80

② Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 65/84

③ MINING RIGHTS WITHDRAWN FROM STAKING SECTION 36 / 80 ORDER NO. W 9 L 85

④ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 17/85

O 32 / 85 OPENS W 17 / 85.

⑤ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 36/85

O 22 / 85 OPENS W 36 / 85

⑥ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 38/85

- 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 38 / 85.
- O 97 / 87 OPENS PART OF W 38 / 85

⑦ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 7/86

- O 74 / 86 OPENS PART OF W 7 / 86.
- O 98 / 87 OPENS PART OF W 7 / 86.

⑧ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 8/86

- O 64 / 87 OPENS PART OF W 8 / 86.

⑨ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 9/86

⑩ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 61/86

- O 75 / 86 OPENS W 61 / 86.

⑪ Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W 50/86

- O-8188 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 (R.S.O.1970)

NOTICE OF FORESTRY ACTIVITY

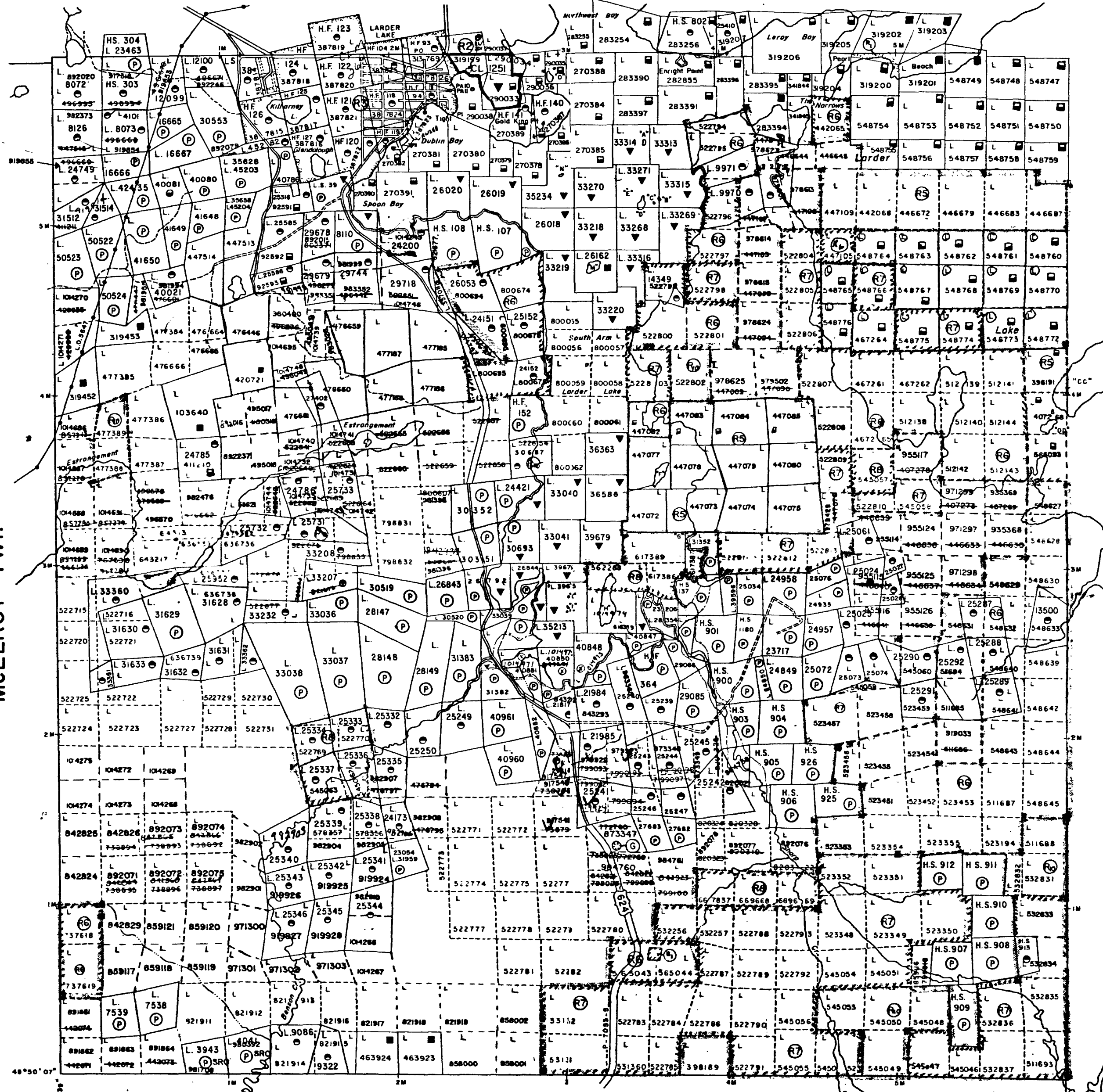
THIS TOWNSHIP / AREA FALLS WITHIN THE TIMISKAMING



32045E0163 2.10936 HEARST

200

McVITTIE TWP.



MCELROY TWP.

MCFADDEN TWP.

SKEAD TWP.

LEGEND

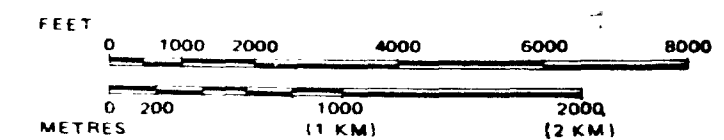
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING 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	⊙ or ●
" SURFACE RIGHTS ONLY	⊙ SRD or ●
" MINING RIGHTS ONLY	●
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	□
" MINING RIGHTS ONLY	▣
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
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



Ministry of Land Management  
Natural Resources Branch  
Ontario

2.10936

Date FEBRUARY, 1985

Number

G-3213