



Introduction

Rechaining followed by a VLF-EM survey was carried out in ~~November-December 1973~~ and January-February 1974 on 19 claims in McElroy and Catherine Townships. Lines had been cut and a magnetometer survey conducted previously. Previous lines were run in late fall after the ground had frozen and snow cover during the present survey necessitated rechaining and picketing the lines.

Location, Access and Ownership

The property is located in the south-east corner of McElroy township and parts of lots 2 and 3 Concession 6 in Catherine township. It comprises 19 claims numbered L282856-282861 inclusive; L283253; I321182-321183 inclusive; I339071; I339073-339081 inclusive. The claims are recorded in the name of R.A. MacGregor, 134 Palace Drive, Sault Ste. Marie, Ontario. The property is accessible from logging and forest access roads leading north from Highway 624 approximately 10 miles south of Larder Lake, Ontario.

Previous Exploration

In previous work, ground and airborne magnetic surveys have been carried out, with a little bulldozer stripping near the McElroy-Catherine boundary. One diamond drill hole was put down 800 feet in 1968. The log of this hole is on file at the Provincial Geologist's office in Kirkland Lake. Extensive areas of drift have limited conventional prospecting in the past.

Geology

Large areas of the property are covered by drift which is over 100 feet thick in the south-west part.¹ Outcrop is mostly serpentized peridotite with mafic volcanics and occasional small outcrops of felsic volcanics. The serpentized peridotite occurs as north-west trending sills in the mafic volcanics. Sills are up to 700 feet wide (from magnetic data) and may be locally displaced by north-east trending faults.

From area maps² and magnetic data the extreme north-east corner is probably underlain by metasedimentary rocks, but they do not outcrop.

Survey Procedure

A base line along the township boundary between McElroy and Catherine townships had previously been laid out with cross lines normal to the base line at 400 foot intervals. Cross lines are north-south. Tie lines were run for control. The lines were reused in the present survey after rechaining. Rechaining was

necessary at 100 foot intervals as the previous lines had been cut after the ground was frozen and snow cover prevented the recovery of the pickets.

A VLF-EM survey was carried out using a Radem instrument set to read the signal from the Seattle Washington station (18.6 KHz) Readings were taken at 100 foot intervals using the procedure outlined in Appendix I. A looping method was used in taking readings. A base station was selected and readings taken along lines describing a loop, arriving back at the starting base station. The time was noted for each station. Subsequent loops were then tied to previous readings.

Results and Conclusions

The Radem survey shows a number of cross-overs; most however are weak or follow the trend of the magnetics and are believed caused by faults. One exception is noted and marked A on the accompanying plan. This conductor has a medium response and crosses the trend of the magnetics on Line 12W. It warrants further investigation.

Respectfully Submitted



R. A. MacGregor, P.Eng.

February 15, 1974

References

G.S.C. Map 11 - 1967

M.N.R. Ontario Vol. 59 part 6, 1950 by E.M. Abraham
Map 1950-3

M.N.R. Ontario G.R. No. 18 by J.A. Grant



31M13NW9695 2.1419 CATHARINE

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 VLF-EM
Township or Area McElroy and Catherine
Claim holder(s) R.A. MacGregor
134 Palace Drive, Sault Ste. Marie, Ont.
Author of Report R.A. MacGregor
Address 134 Palace Dr. Sault Ste. Marie, Ont.
Covering Dates of Survey Nov. 15-Dec. 9, 1973; Jan 23-25
(linecutting to office) Feb 15-17, 1974
Total Miles of Line cut - previously reported

MINING CLAIMS TRAVERSED	
List numerically	
L282856 ✓	(prefix) (number)
L282857 ✓	
L282858 ✓	
L282859 ✓	
L282860 ✓	
L282861 ✓	
L283253 ✓	
L321182 ✓	
L321183 ✓	
L339071 ✓	
L339073 ✓	
<i>at go</i> L339074 ✓	
L339075 ✓	
L339076 ✓	
L339077 ✓	
L339078 ✓	
L339079 ✓	
L339080 ✓	
L339081 ✓	
TOTAL CLAIMS <u>19</u>	

If space insufficient, attach list

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

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

DATE: Feb. 15, 1974 SIGNATURE: _____
Author of Report or Agent

PROJECTS SECTION
Res. Geol. _____ Qualifications on this file
Previous Surveys L.D. see attached sheet

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 992 Number of Readings 992
Station interval 100 feet
Line spacing 400 feet
Profile scale or Contour intervals " = 20'
(specify for each type of survey)

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base station location _____

ELECTROMAGNETIC

Instrument Crone-Radem
Coil configuration Not Applicable
Coil separation Not Applicable
Accuracy ± 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency Seattle, Washington 18.6 KHz
(specify V.L.F. station)
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 _____
Time domain _____ Frequency domain _____
Frequency _____ Range _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

SCALE 1"=16MILES

ONTARIO
QUEBEC

Cochrane

Matheson

Timmins

Kirkland Lake

Larder Lake

McElroy & Catherine Twps.

Matatchewan

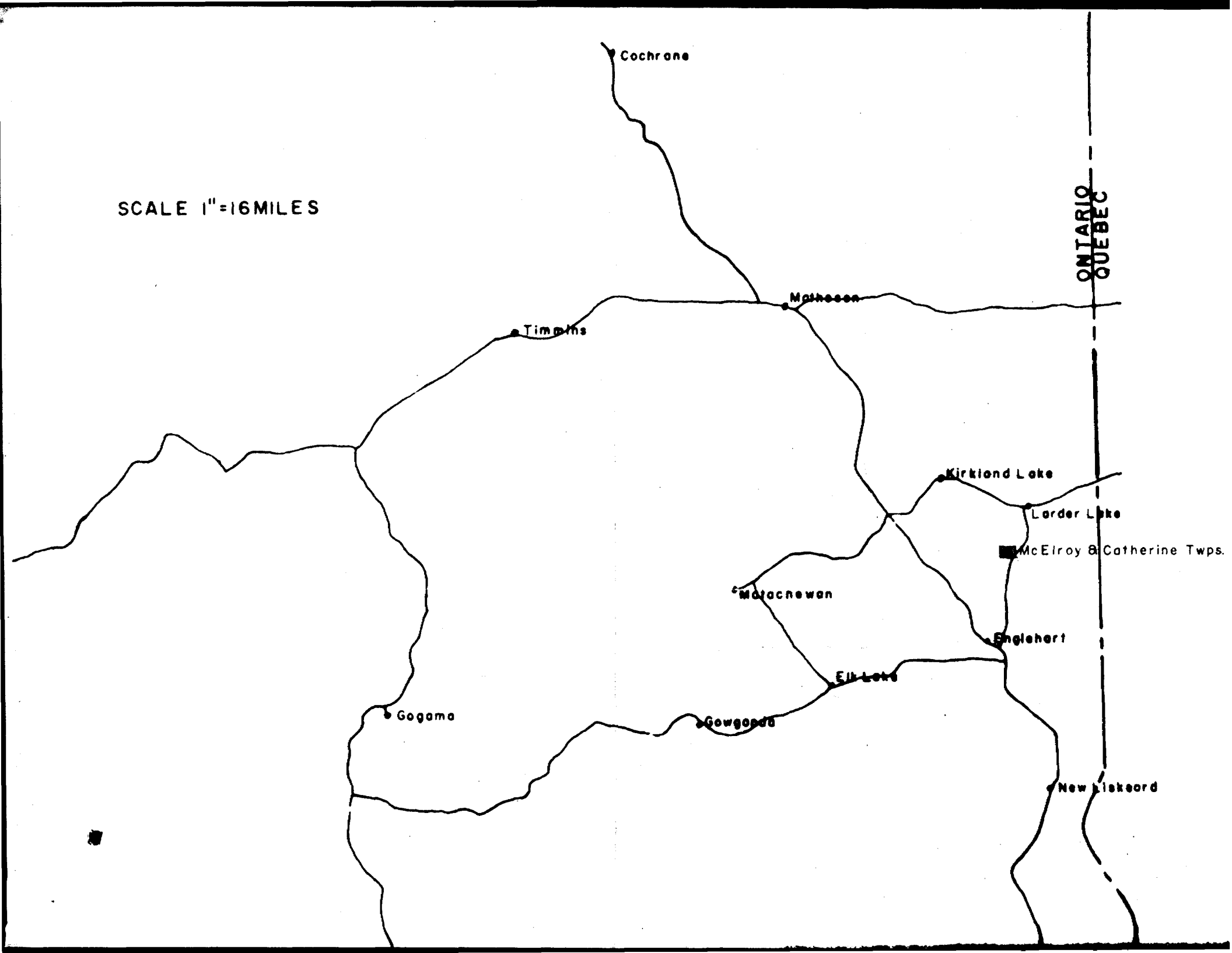
Englehart

Ell Lake

Gogama

Gowgoda

Newiskeard

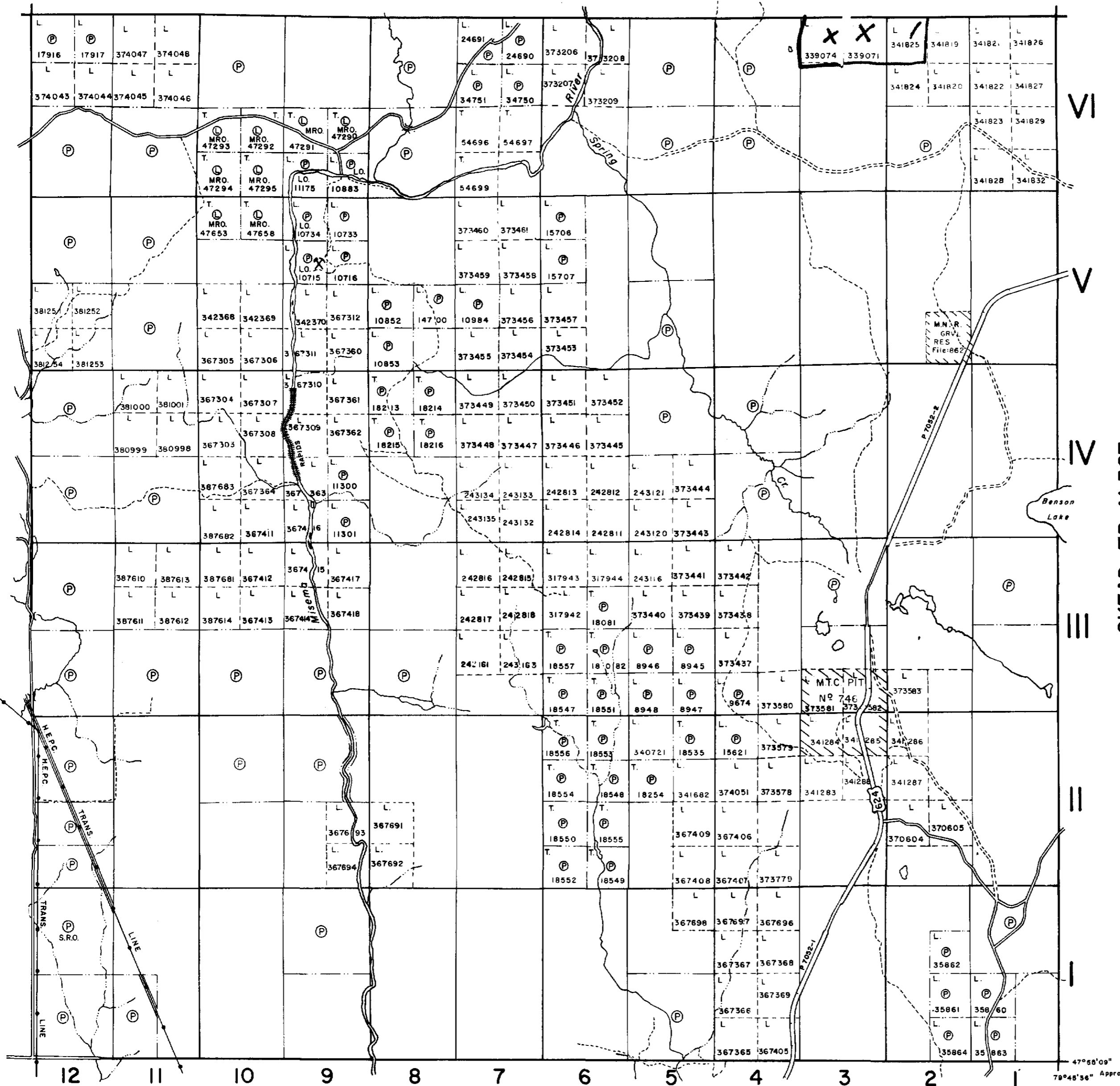


McELROY TP. M. 366

PACAUD TP. M. 380

SKEAD TP. M. 387

MARTER TP. M. 543



NOTES

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

File - 2.1419

MINING LANDS
DATE OF ISSUE
FEB 20 1974
MINISTRY
OF NATURAL RESOURCES

LEGEND

- PATENTED LAND (P) or ●*
- PATENTED FOR SURFACE RIGHTS ONLY ●
- LEASE (L)
- 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
CATHARINE
DISTRICT OF
TIMISKAMING
LARDER LAKE
MINING DIVISION
SCALE : 1 INCH = 40 CHAINS (1/2 MILE)

DR. K.K.I.
DATE JUNE '72
PLAN NO. **M. 336**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



THE TOWNSHIP OF
OF
Mc ELROY

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND ● or ⊕
- CROWN LAND SALE C.S.
- LEASES ⊙
- 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 C.
- PATENTED FOR SURFACE RIGHTS ONLY ⊖

NOTES

400' Surface rights reservation along the shores of all lakes & rivers

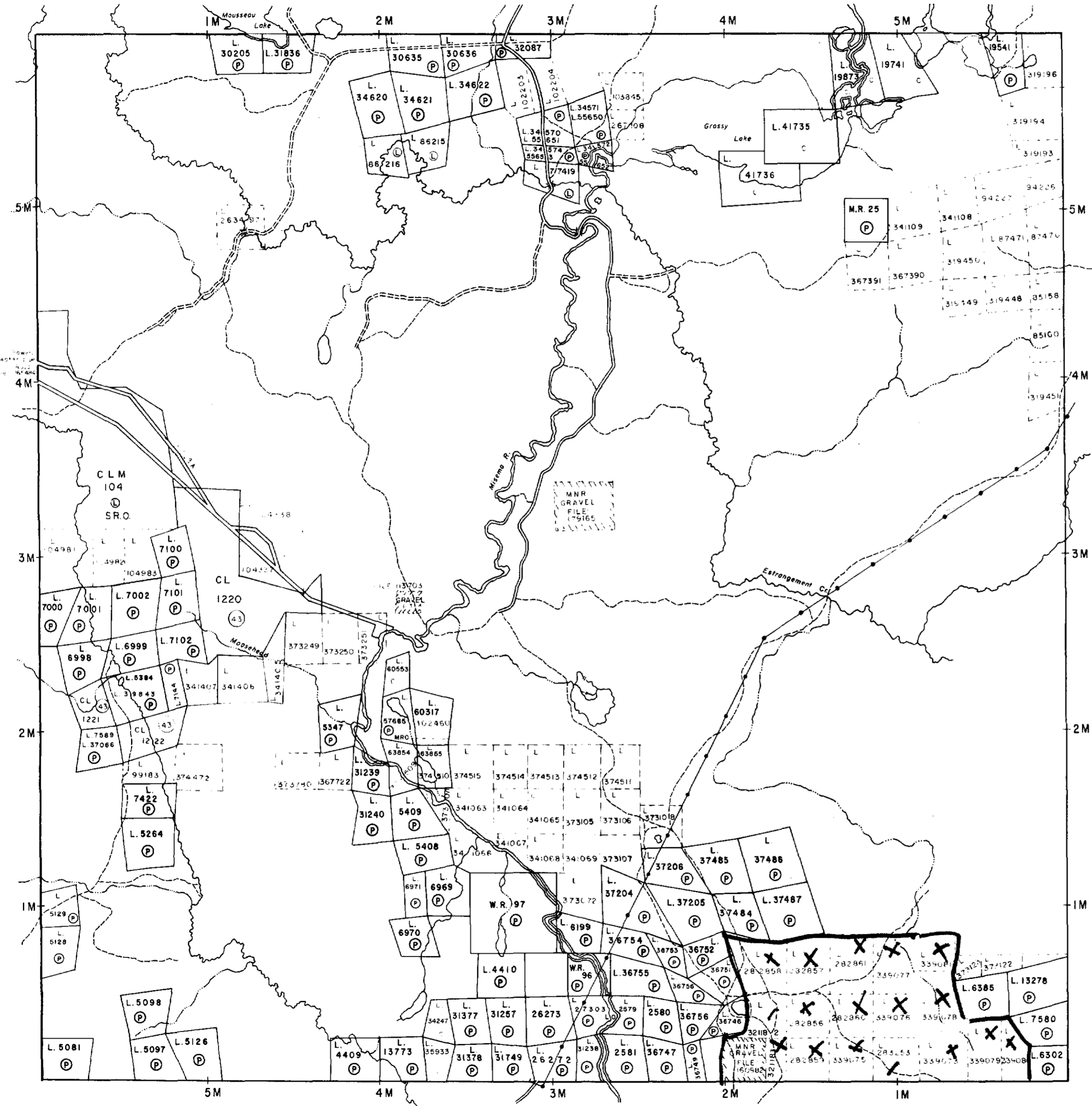
Areas withdrawn from staking under Section 43 of the Mining Act.

File	Date	Disposition
Ⓞ 186016	27 Nov 72	S.F.S.M.R.

**MINING LANDS -
DATE OF ISSUE**
FEB 20 1974
MINISTRY OF NATURAL RESOURCES

File - 2.1419

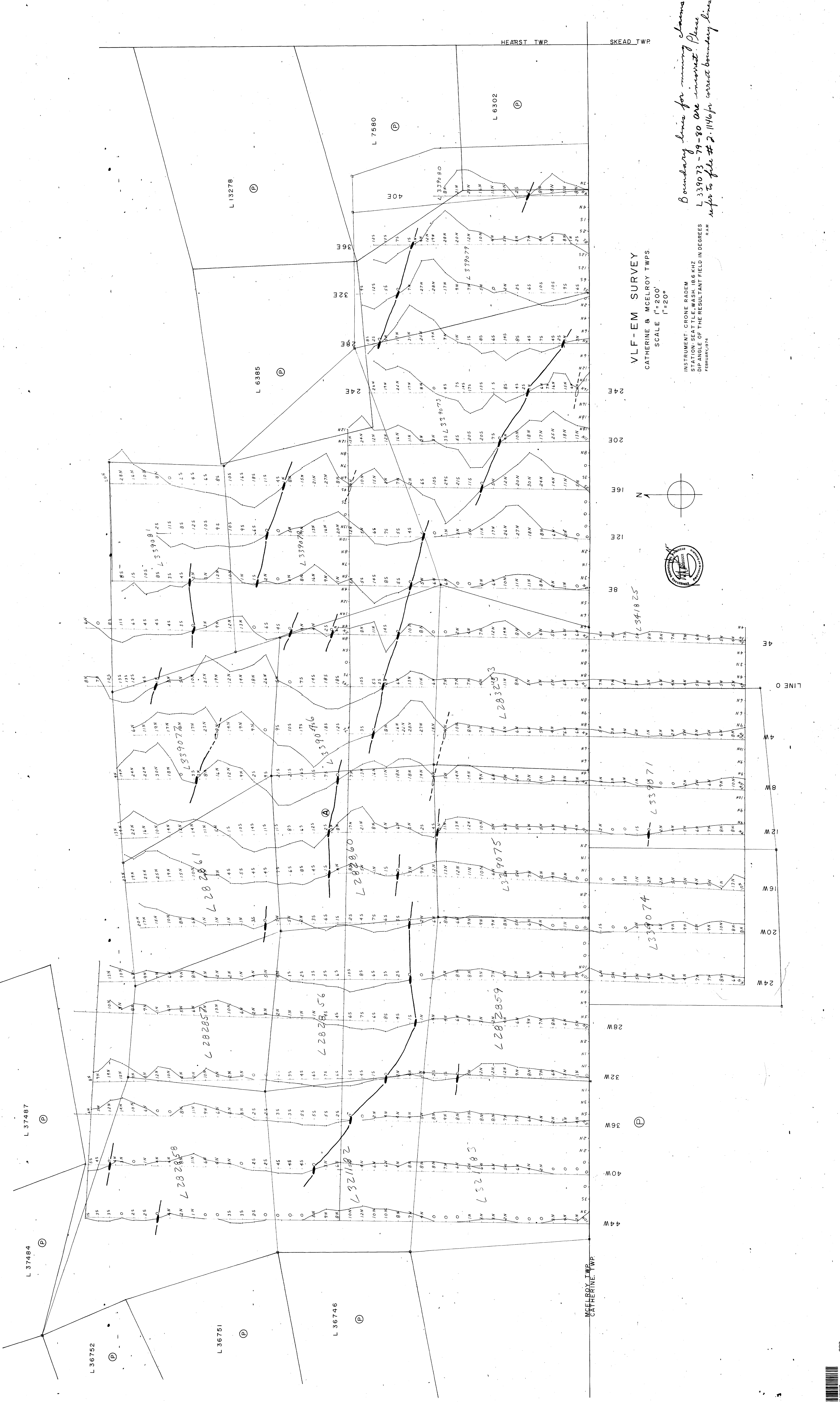
PLAN NO. **M-366**



BOSTON Tp. M-332

HEARST Tp. M-354

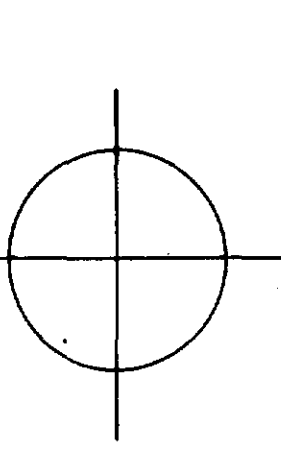




VLF-EM SURVEY
 CATHERINE & MCELROY TOWNSHIPS
 SCALE 1"=200'



INSTRUMENT: CRONE RADEM
 STATION: SEATTLE, WASH. 18.6 KHZ
 DIP ANGLE OF THE RESULTANT FIELD IN DEGREES R.A.M.
 FEBRUARY, 1974



Boundary lines for mining claims
 L 33907-33980 are incorrect. Please
 refer to file # 2-1146 for correct boundary lines.