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MINING LANDS SECTION

REPORT  
ON  
V.L.F. ELECTROMAGNETIC SURVEY  
CREAM SILVER MINES LTD.  
GARRISON TOWNSHIP, ONTARIO

by

PROSPECTING GEOPHYSICS LTD.

Toronto, Ontario

May 16, 1981

L.D.

REPORT  
ON  
V.L.F. ELECTROMAGNETIC SURVEY  
ON PROPERTY OF  
CREAM SILVER MINES LTD.  
GARRISON TOWNSHIP, ONTARIO

INTRODUCTION

Cream Silver Mines Ltd. holds a group of claims in Garrison Township, Ontario in close proximity to the Murphy property owned by Kerr Addison Mines Ltd. A gold deposit has been outlined on the Murphy property that is suitable for open pit mining and Kerr Addison plans production from this deposit later this year.

A V.L.F. electromagnetic survey has recently been completed on the property in conjunction with a similar survey carried out on the adjacent property of Val d'Or Explorations Ltd. This method was chosen as it is quite sensitive and will outline such poor conductors as shear zones, faults and geological contacts as well as good sulphide conductors.

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

PROPERTY

The property of Cream Silver Mines Ltd. consists of 41 claims in the central part of Garrison Township, Larder Lake Mining Division of Ontario. The claims are registered under

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PROPERTY (cont'd)

the following numbers:

L567479 to L567498 inclusive  
L576528 to L576533 inclusive  
L576540 to L576548 inclusive  
L576555 to L576560 inclusive

GEOLOGY

The area generally is underlain by Keewatin lavas that trend slightly northwest and dip to the southwest. These have been intruded by numerous granitic intrusives of Algomian age. These are usually in the form of bosses and dikes.

Gold mineralization in the area has been found in quartz veins and porphyries which are associated with the igneous intrusion. Shears and faults in the vicinity of the intrusive bodies appear to provide the best channels for mineralization.

The X nearby Kerr Addison gold deposit is in the volcanics but in close proximity to an Algomian granite intrusive located in the southeast quarter of Garrison Township. Further to the east in Harker Township, the abandoned Harker gold mine is associated with a syenite intrusive.

The property of Cream Silver Mines appears to be partially underlain by volcanic rocks with the central portion of the claim group probably underlain by the granite intrusive. The outline of the granite intrusion is largely postulated as there are fairly extensive areas covered with overburden.

GEOLOGY (cont'd)

The property would appear to straddle a good portion of the volcanic-granite contact which provides a favourable environment for gold mineralization.

SURVEY METHODS AND INSTRUMENT DATA

The V.L.F. (very low frequency) electromagnetic survey was conducted over previously cut lines at 400 foot intervals in a north-south direction as shown on the accompanying map. The equipment used was a Geonics EM-16 system.

The V.L.F. method uses the radiation from powerful military radio transmitters at low frequencies (15 to 20 kHz) as a primary signal as opposed to portable transmitters in the conventional EM methods. The instrument has two receiving coils built into it with one coil having a vertical axis and the other is horizontal. The instrument is oriented along the survey lines which should approximate the lines of the magnetic field and the operator tilts the instrument to minimize the signal from the vertical axis coil. The mechanical tilt angle is a measure of the vertical real-component and the reading from the horizontal coil is a measure of the quadrature vertical signal.

The interpretation of the results uses the relative measurements of these two parameters and it is possible to outline such poor conductors as shear zones, breccia zones, faults and alteration zones, as well as good sulphide conductors.

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SURVEY METHODS AND INSTRUMENT DATA (cont'd)

Because V.L.F. anomalies are produced by a wide range of geological effects, profiles tend to show a complex "cluttered" pattern which is sometimes difficult to interpret.

By the use of the Fraser method of filtering tilt angle profiles, the noisy non-contourable data is transformed into less noisy contourable data. In the plotting of this survey, the Fraser method has been used and it is the contourable data that has been plotted. The calculations are made so that the conductors are represented by negative readings on the accompanying map.

RESULTS OF THE ELECTROMAGNETIC SURVEY

The results of the electromagnetic survey are plotted on the accompanying map on a scale of 400 feet to the inch. The survey also included three patented claims that jut into the Cream Silver property (See Key Map) as it was necessary to do this to provide continuity.

A number of conductors were outlined in the survey with a trend ranging from east-west to slightly north of west. This conforms with the regional trend. The conductivity ranges from moderate to fairly strong and the major conductors have been lettered A, B, C, etc., for reference purposes.

"A" zone has a length of some 7,600 feet on the property and shows moderate conductivity. Geologically, this would appear to be almost on the north contact of the granite intrusion.

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RESULTS OF THE ELECTROMAGNETIC SURVEY (cont'd)

with the volcanics. It may well represent the contact and thus would be favourable for gold mineralization.

"B" zone includes two and possibly three separate conductors that are probably related. Portions of these have fairly strong conductivity that could well represent shearing. The zone may be within the granite but close to the contact.

"C" zone has a length of about 2,000 feet but a portion at the western extremity would be on the patented ground. The conductivity is fair and the zone is probably in the volcanics just north of the granite body.

"D" zone is parallel to "C" zone but slightly stronger. It appears to have similar characteristics and both are in the conductivity range of shear zones.

"E" and "F" zones are situated at the north end of the property and extend off the claim group. However, the conductivity is quite strong and they warrant some further investigation.

CONCLUSIONS AND RECOMMENDATIONS

The survey was successful in outlining a number of conductive zones, all of which are close to the favourable granite volcanic contact. Some may be within the granite,

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CONCLUSIONS AND RECOMMENDATIONS (cont'd)

all of which provides a favourable environment for gold mineralization.

The zones warrant further investigation and, initially, prospecting and geological mapping are recommended, which should be followed by diamond drilling.

Respectfully submitted,  
PROSPECTING GEOPHYSICS LTD.

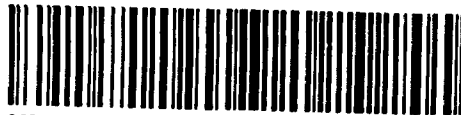


H. J. Bergmann, P. Eng.

Toronto, Ontario  
May 16, 1981



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900

File \_\_\_\_\_

**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) Electromagnetic

Township or Area Garrison

Claim Holder(s) D. McKinnon

Survey Company Prospecting Geophysics Ltd.

Author of Report H. J. Bergmann, P. Eng.

Address of Author 70 Chiswell Cres. Willowdale

Covering Dates of Survey M2N 6E1 March 8 - May 16, 1981  
(linecutting to office)

Total Miles of Line Cut 40.78

**MINING CLAIMS TRAVERSED**  
List numerically

(prefix) (number)

See attached list

If space insufficient, attach list

**SPECIAL PROVISIONS  
CREDITS REQUESTED**

DAYS  
per claim

- Geophysical
- Electromagnetic 40
- Magnetometer \_\_\_\_\_
- Radiometric \_\_\_\_\_
- Other \_\_\_\_\_
- Geological \_\_\_\_\_
- Geochemical \_\_\_\_\_

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: May 20, 1981 SIGNATURE: [Signature]  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 63.1061

**Previous Surveys**

File No.	Type	Date	Claim Holder
			<u>L.D.</u>

**TOTAL CLAIMS** 41

OFFICE USE ONLY



GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1820 Number of Readings 1820
Station interval 100 ft Line spacing 400 ft
Profile scale
Contour interval Fraser filter values 10

MAGNETIC

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

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration
Coil separation
Accuracy 1%
Method: [X] Fixed transmitter [ ] Shoot back [ ] In line [ ] Parallel line
Frequency Approx. 15 - 25 kHz Cutler, Maine
(specific V.L.F. station)
Parameters measured Vertical in-phase component (tilt angle)
Vertical out-of-phase (quadrature) component

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

23918

LIST OF CLAIMS

L567479  
L567480  
L567481  
L567482  
L567483  
L567484  
L567485  
L567486  
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L576532  
L576533

# GARRISON

DISTRICT OF  
COCHRANE

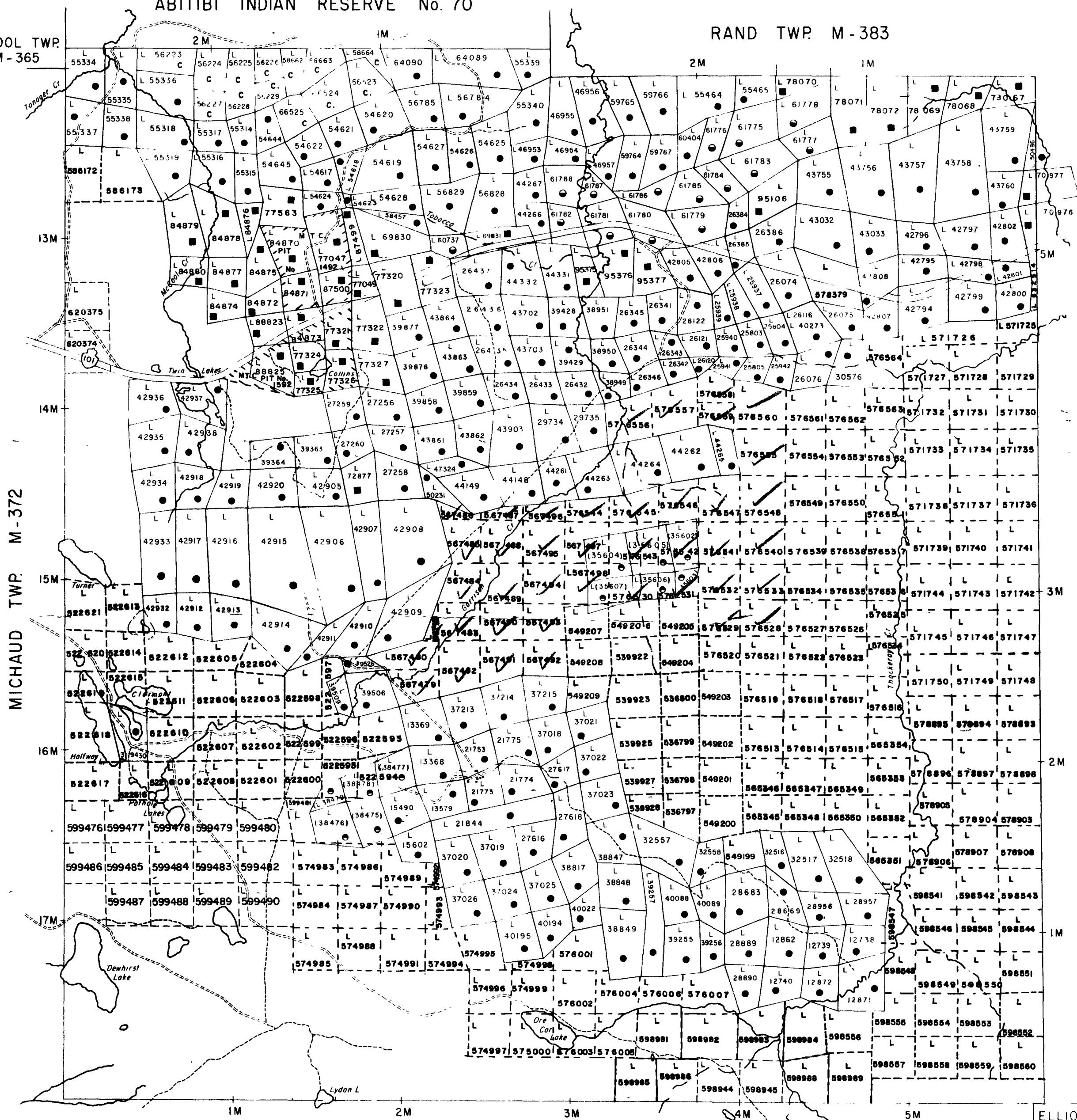
LARDER LAKE  
MINING DIVISION

SCALE 1-INCH 40 CHAINS

ABITIBI INDIAN RESERVE No. 70

McCOOL TWP.  
M-365

RAND TWP. M-383



HARKER TWP. M-353

ELLIOT TWP  
M-347

### DISPOSITION OF CROWN LANDS

- PATENT, SURFACE AND MINING RIGHTS ●
  - " , SURFACE RIGHTS ONLY ○
  - " , MINING RIGHTS ONLY ◐
  - LEASE, SURFACE AND MINING RIGHTS ■
  - " , SURFACE RIGHTS ONLY ◻
  - " , MINING RIGHTS ONLY ◻
  - LICENCE OF OCCUPATION ▽
- 
- ROADS ————
  - IMPROVED ROADS ————
  - KING'S HIGHWAYS ————
  - RAILWAYS ————
  - POWER LINES ————
  - MARSH OR MUSKEG ————
  - MINES ————
  - CANCELLED ————

### NOTES

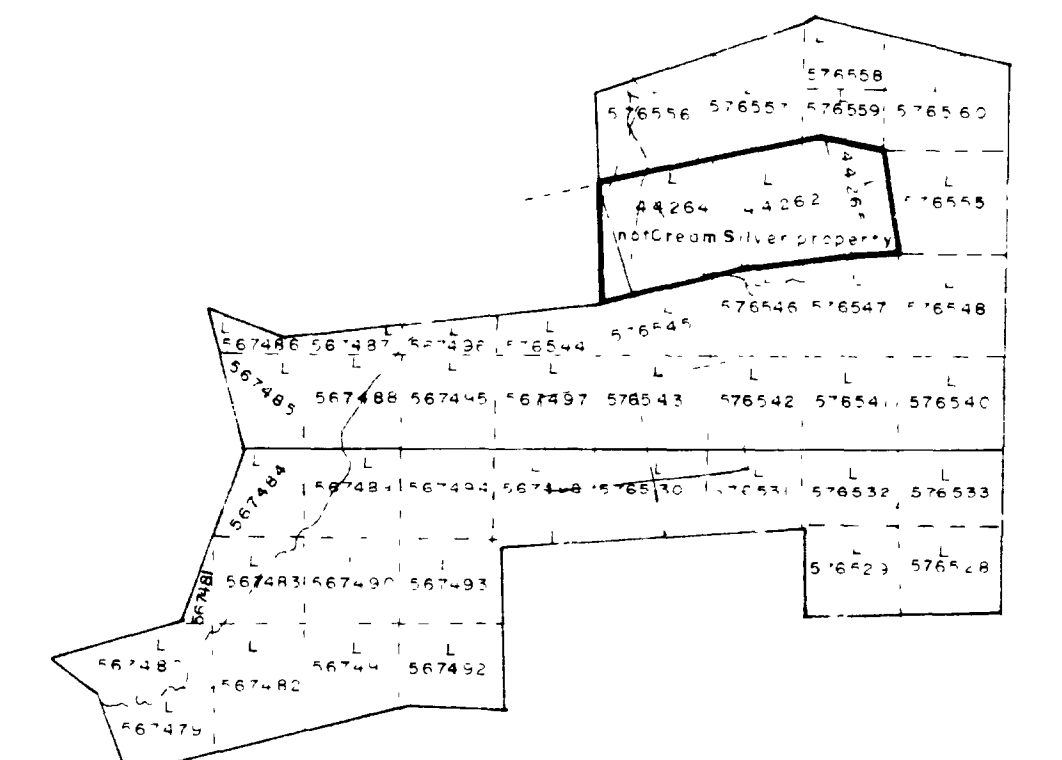
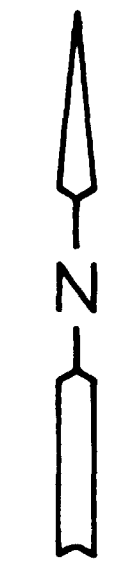
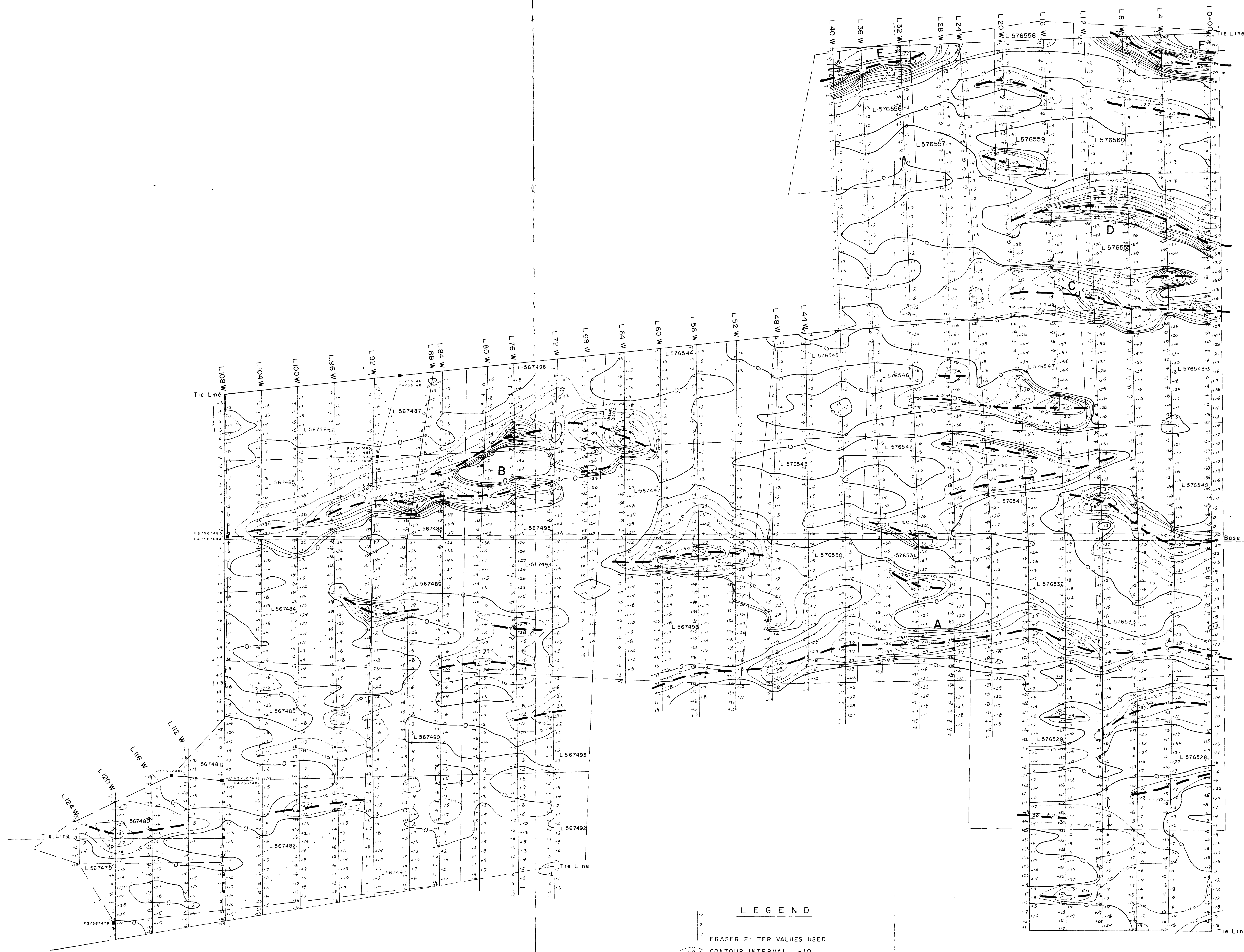
400' surface rights reservation along the shores of all lakes & rivers

**DATE OF ISSUE**  
**FEB - 1 1982**  
Ministry of Natural Resources  
TORONTO

PLAN NO **M-349**  
ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH



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CLAIM MAP  
Scale 1" = 1/2 Mile

LEGEND

- FRASER FILTER VALUES USED
- CONTOUR INTERVAL - 10
- ELECTRICAL CONDUCTOR
- INSTRUMENT USED - GEONICS EM-16
- SWAMP
- CLAIM POST
- ROAD

ELECTROMAGNETIC SURVEY	
CLIENT CREAM SILVER MINES LTD	
PROJECT	AREA GARRISON TWP, ONT DISTRICT OF COCHRANE
SCALE 1" = 400 ft	DATE MARCH, 1981
PROSPECTING GEOPHYSICS LTD <i>Geonics</i>	MAP SHEET NO. 6 D

