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JUL 14 1980

MINING LANDS SECTION

REPORT ON  
GEOLOGICAL & GEOPHYSICAL SURVEYS

CLAIMS M.R. 18650 & L. 494949  
CAMERON SILVER PROPERTY  
MICKLE TWP., ONTARIO

New Liskeard, Ontario  
June 30, 1980

Jack G. Willars B.A.So., P.Eng.  
Consulting Mining Geologist.

REPORT ON  
GEOLOGICAL & GEOPHYSICAL SURVEYS  
CLAIMS M.R. 18650 & L. 494949  
CAMERON SILVER - COBALT PROPERTY  
MICKLE TWP., ONTARIO

INTRODUCTION

The Cameron Silver - Cobalt Property consists of seventeen contiguous leased and unpatented mining claims comprising approximately 551.8 acres. Eight leased claims are M.R. 423, 18417, 18650, 17662, 17663, 21129, 21087, and 21088. Nine unpatented claims are numbered L. 494943 to L. 494951 inclusive. All are located in Mickle Twp., Larder Lake Mining Division, Ontario.

In a report dated December 3, 1979, the same author described the geological and geophysical surveys conducted on all claims, but M.R. 18650 and L. 494949. Inclement seasonal weather did not permit conducting the surveys at that time. This report is in addition to that of December 3, 1979, and completes the property surveys.

SURVEY PROGRAM

Claim M.R. 18650 has been surveyed and the west boundary was used as a base line and traverse lines were established at 200' intervals. The west boundary of L. 494949 and the east boundary of M.R. 18650 were used as tie lines. Base and tie lines totalled 0.9 miles and picket lines totalled 2.65 miles with stations every 100'.

This control system was used to conduct 1) a geology survey, 2) a magnetometer survey, 3) an electromagnetic survey using a power source from the east, 4) an electromagnetic survey using a power source from the south.

#### GEOLOGY SURVEY

All of the rocks on these two claims are of Nipissing diabase. The south part contains more exposed outcrop than the north.

Regular jointing patterns were observed as in the north part of the property, as well as cylindroidal or columnar jointing. Topographic depressions may reflect the joint patterns, vein patterns or fault and fracture patterns. As in the northern claims these features trend  $N15^{\circ}E$ ,  $N15^{\circ}W$ , east-west and north-south.

Many trenches and pits containing calcite veins were observed on the property. The predominant trends are  $N15^{\circ}E$ , north-south and east-west. The veins appear to converge on projection at an assumed  $N65^{\circ}W$  trending fault structure. Irregular fracturing accompanies these veins. The veins are located in the south end of M.R. 18650 chiefly. Silver is recorded in several drill holes under one of the pits near the cabin on the west boundary of M.R. 18650.

#### MAGNETOMETER SURVEY

A Scintrex MP-2 Proton Precession magnetometer was used for the survey. Total magnetic intensity readings were taken at 100' intervals along the lines. A total of 161 readings were taken along 3.05 miles of line. The readings

were plotted on a scale of 1" = 400' after deducting a normal correction of 57,000 gammas and contoured at an interval of 200 gammas.

#### ELECTROMAGNETIC SURVEY

##### Cutler

A Ronka EM-16 instrument was used for the survey and the transmitting source was Cutler, Maine at 17.8 kHz. A total of 161 stations were read and the dip values were plotted on a scale of 1" = 400' and contoured at intervals of 5%. Although this method is not precise, conductivity lying parallel to and between lines can be detected. The conductor is interpreted to be located between a positive high and negative low when looking from south to north.

#### ELECTROMAGNETIC SURVEY

##### Annapolis

Using the same control system and instrument, a total of 161 stations were used with Annapolis, Maryland at 21.8 kHz as the transmitting source. The dip and quadrature values were plotted on a base map of scale 1" = 400' and profiles drawn on the plan with 1/50" representing 1%. Conductors were then detected at the inflections of the curves.

#### RESULTS OF GEOPHYSICAL SURVEYS

##### Magnetometer Survey

Magnetically the lands within the claims did not exhibit much contrast. The general trend or grain is N15°W as is the lineation of the swamps.

Electromagnetic Survey - Cutler

A conductor of low intensity is observed trending N65°W between line 85 and line 109. This could be extended southeasterly when the high positive build up in the south part of the lake is considered. A small subsidiary conductor lies 200' north of this one.

Electromagnetic Survey - Annapolis

Several one line conductors were observed. Four conductors of significance were noted:

1. One east of the base line on lines 22S and 24S.
2. One west of the base line on lines 22S, 24S and 26S.
3. One west of the base line on lines 24S and 26S.
4. One on the base line at lines 22S to 20S and northerly.

SUMMARY AND CONCLUSIONS

The rock is all Nipissing diabase. A major N65°W fault trends across the north part of claim M.R. 18650 and Silverclaim Lake. This is a topographic low and is detected by VLF-EM surveys.

Silver type calcite veins were observed in the south part of claim M.R. 18650 trending in N15°E, east-west and north-south directions. These are 2" to 6" wide and of vertical dip, sometimes two or three parallel veins containing chalcopyrite. Nickel and cobalt mineral oxidation stain was observed in some veining.

Fracturing accompanies these vein areas. Other indications of structure trends are the swamp linears and electromagnetic conductors. The conductor east of the

base line on lines 22S and 24S is coincident with a vein area.

A large pit south of the cabin has been drilled and two intersections of significant silver values were encountered.

Silver-cobalt ore occurrences traditionally are found at the intersections of veins, the intersection of veins and faults, changes of direction and attitudes of faults, fractures, veins and contacts.

This veining and fracturing could be associated with the N65°W trending fault structure and produce an area of silver veins which might prove to be economical upon proper investigation.

This area is the first priority for exploration for silver on the Cameron Mine Property.

Respectfully submitted,



Jack G. Willars B.A. So., P. Eng.  
Consulting Mining Geologist.

New Liskeard, Ontario

June 30, 1980

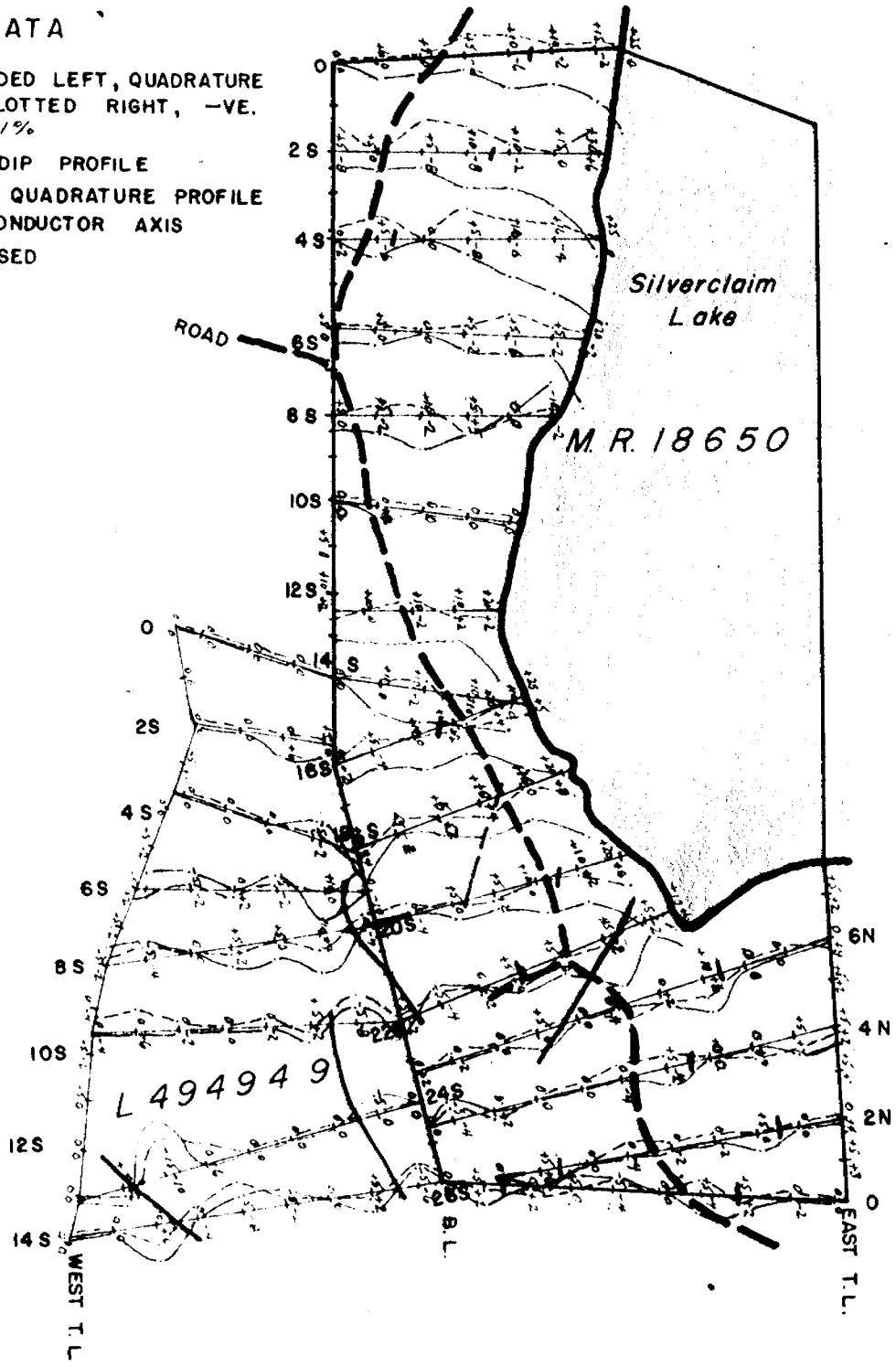
E. M. DATA

DIP VALUES RECORDED LEFT, QUADRATURE  
RIGHT. +VE. PLOTTED RIGHT, -VE.  
LEFT 1/50" = 1%

————— DIP PROFILE  
- - - - - QUADRATURE PROFILE  
————— CONDUCTOR AXIS  
RONKA E M 16 USED



ANNAPOLIS, MARYLAND  
21.4 KHZ



VLF - EM SURVEY  
CAMERON SILVER - COBALT PROPERTY  
MICKLE TWP, ONTARIO

SCALE: 1" = 400'

June 30, 1980

J. S. WILLARS JUNE 1980

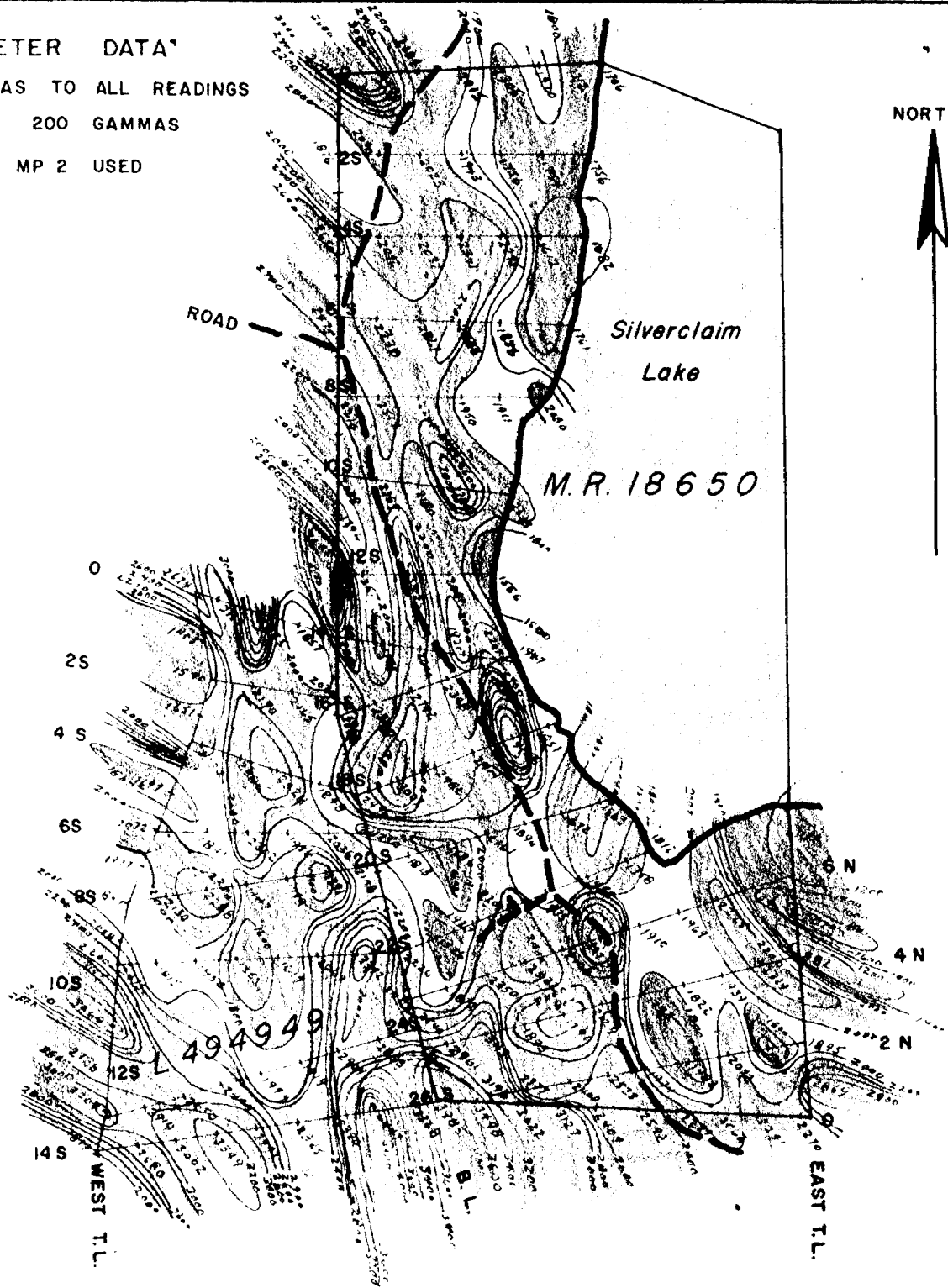
MAGNETOMETER DATA

ADD 57000 GAMMAS TO ALL READINGS

CONTOUR INTERVAL 200 GAMMAS

SCINTREX PROTON MP 2 USED

NORTH



MAGNETOMETER SURVEY

CAMERON SILVER - COBALT PROPERTY

MICKLE TWP., ONTARIO







SCALE: 1" = 400'

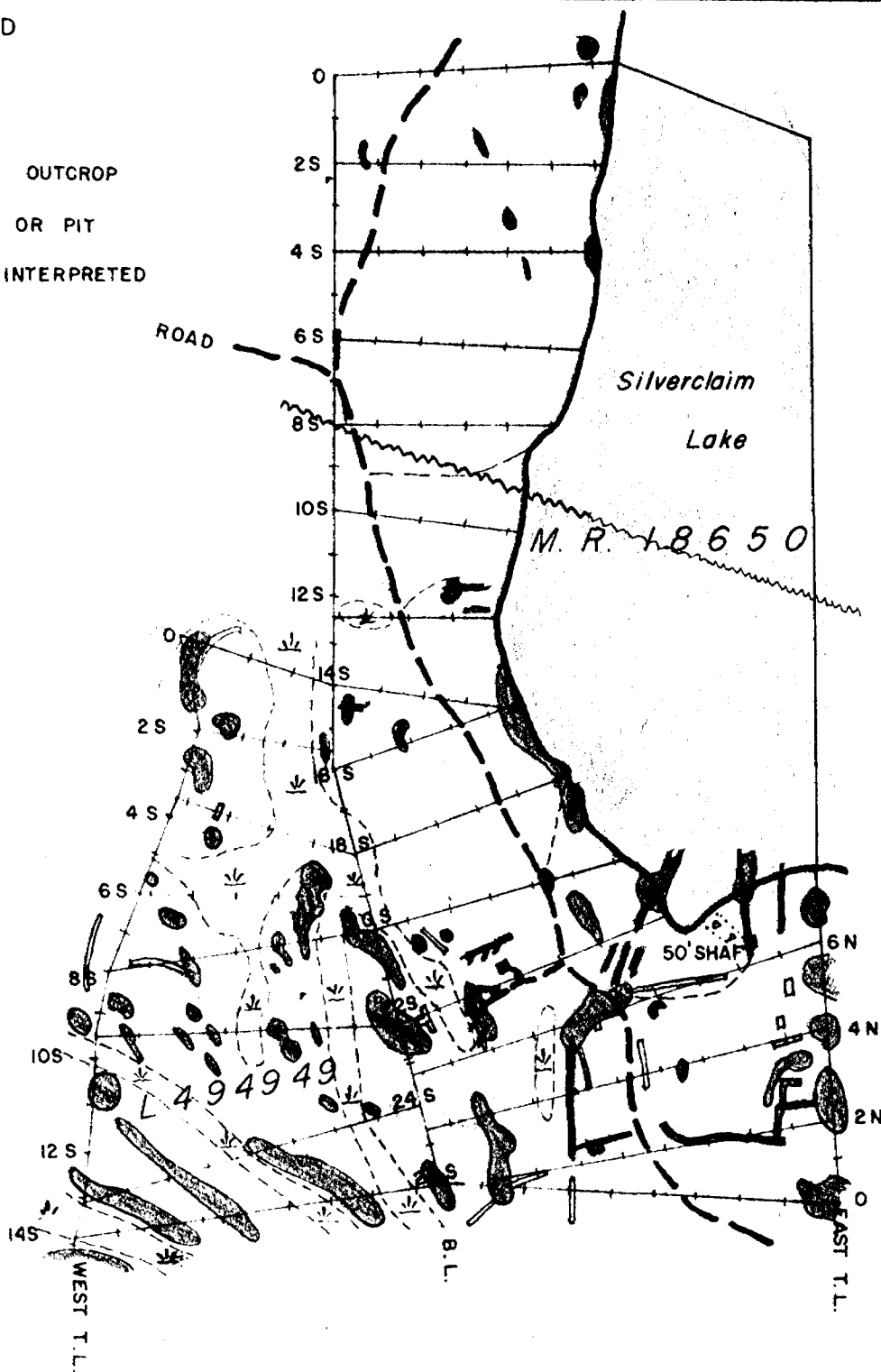
Jan 30, 1980

J. G. WILLARS JUNE 1980



LEGEND

-  VEIN
-  SWAMP
-  DIABASE OUTCROP
-  TRENCH OR PIT
-  FAULT INTERPRETED
-  CABIN



GEOLOGY SURVEY

CAMERON SILVER - COBALT PROPERTY

MICKLE TWP, ONTARIO

SCALE: 1" = 400'

June 30, 1980

*G. Willars*

G. WILLARS, JUNE 1980

E. M. DATA

DIP VALUES RECORDED TOP, QUADRATURE  
BOTTOM

CONTOUR INTERVAL 5%

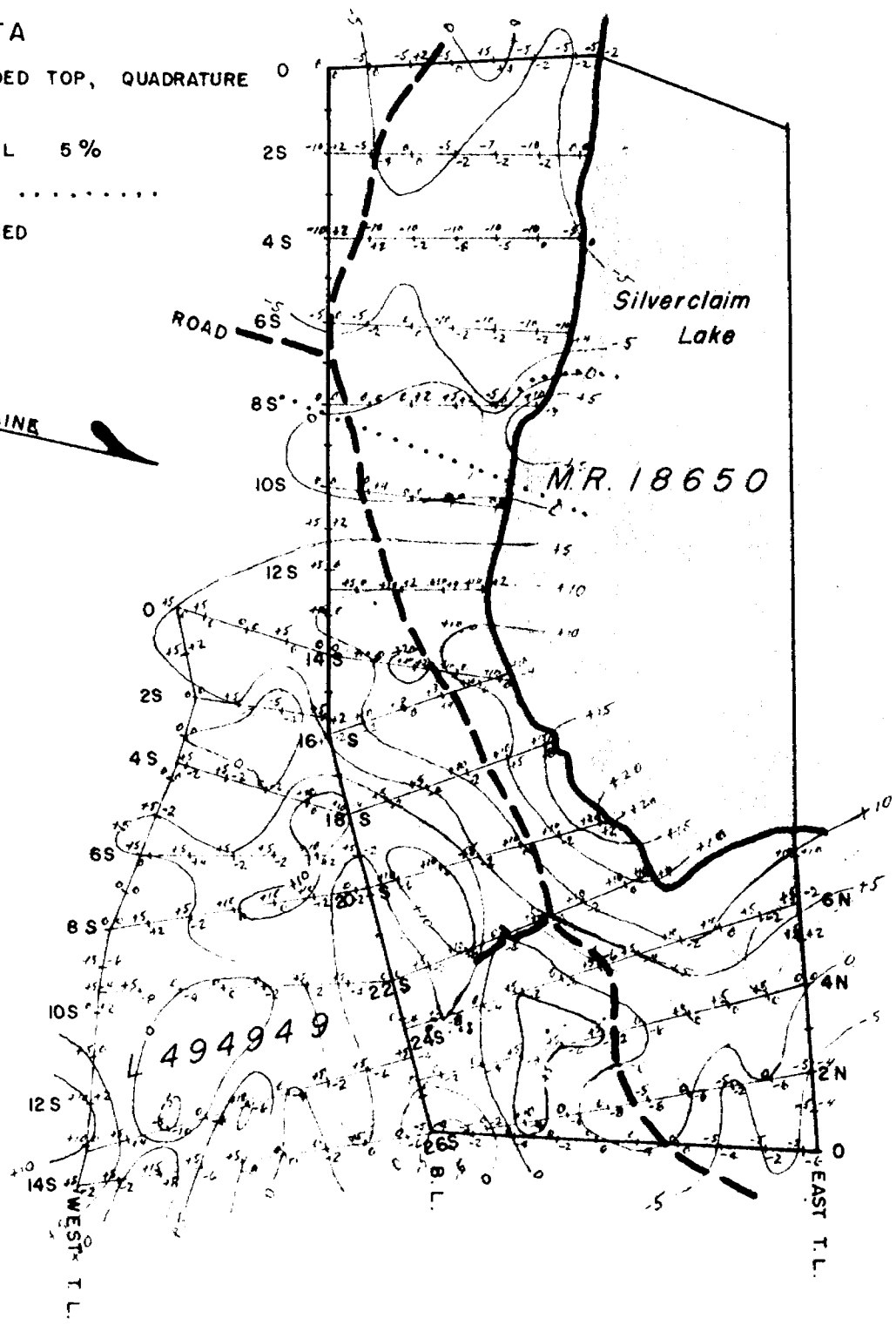
CONDUCTOR AXIS .....

RONKA EM16 USED

NORTH



CUTLER, MAINE  
17.8 KHZ



VLF - EM SURVEY

CAMERON SILVER - COBALT PROPERTY

MICKLE TWP., ONTARIO

SCALE: 1" = 400'

June 20, 1980

J. WILLIAMS  
JUNE 1980

2.3378





GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 62 Number of Readings 62

Station interval 100' Line spacing 200'

Profile scale 1/50" = 1%

Contour interval 5% for E.M. 200 r for magnetometer

MAGNETIC

Instrument SCINTREX MP-2 PRECESSION

Accuracy -- Scale constant ONE GAMMA

Diurnal correction method HOURLY AND DAILY

Base Station check-in interval (hours) 24 HOUR

Base Station location and value as previously Dec 3/79 report  
B.L. 6E 584967

ELECTROMAGNETIC

Instrument RONKA EM 16

Coil configuration \_\_\_\_\_

Coil separation \_\_\_\_\_

Accuracy \_\_\_\_\_

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency CUTLER, MAINE 17.8 KHZ AND ANNAPOLIS, MARYLAND 21.4 KHZ  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

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 \_\_\_\_\_

Farr Twp. - M.219

THE TOWNSHIP OF 2.3378

# MICKLE

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

## LEGEND

PATENTED LAND	Ⓟ
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	⊘

## NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers

- Ⓛ M.T.C. Pit 1296
- Ⓛ M.T.C. Pit 1281 File 177499
- Ⓛ M.T.C. Pit 1534

Township closed to staking effective May 8, 1978, Sec.38(f) of The Mining Act.

DATE OF ISSUE  
 JUL 15 1980  
 SURVEYS AND MAPPING  
 BRANCH

PLAN NO. - M.234

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

