Report No. 438T
N.T.S. 42-I-16/5E

# AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

## CLAIMS T-52577 TO T-52581 INCLUSIVE

## CLEMENT TOWNSHIP, ONTARIO

## FOR

## SOCRATES MINING CORPORATION LIMITED

E.G. Thompson

# ABSTRACT

Late in 1964 the five claims in Clement Township were investigated as part of a larger area using combined airborne magnetic and electromagnetic methods.

The results are described in a four page report and shown on bound-in map DWG. 2763.

63-1382

# AIRBORNE MAGNETIC AND ELECTROMAGNETIC SURVEY

# CLAIMS T-52577 TO T-52581 INCLUSIVE

# CLEMENT TOWNSHIP, ONTARIO

## INTRODUCTION

The five claims, T-52577 to T-52581 inclusive, of Socrates Mining Corporation Limited were flown as a part of a larger survey.

## LOCATION AND ACCESS

The claims are located in the central northeast part of Clement Township. The claims may be reached from Gull Lake, from Lake Temagami or the motor road into Emerald Lake.

## GEOLOGY AND MINERALIZATION

The general area is underlain by Nipissing diabase. The known mineralization consists of disseminated chalcopyrite and nickeliferous pyrrhotite and is associated with pyroxenite dikes which intrude the diabase. No specific direction of strike of these dikes has been noted.

The survey was done in the hope of outlining concentrations of sulphides that could be profitably mined. As the known mineralization apparently has no specific alignment, the survey was done in two directions so that maximum E.M. couplings would be obtained.

GEOPHYSICAL SURVEY

The survey was carried out with electromagnetic and magnetic instruments in a Beaver aircraft.

Method of Positioning and Flight Details

The flight of the aircraft was recorded by photographing topographic features at selected spots along a line. Whenever a photograph was taken a mark was made on both the magnetic and electromagnetic record and a fiducial number assigned it. Lines were approximately 500 feet apart and the aircraft was approximately 100 feet above the ground.

Magnetic Instrument

The changes in total magnetic intensity was measured using a Varian Nuclear Precession Magnetometer. At the flying speed of the Beaver the instrument sampled the magnetic field every 80 feet.

The base level was 58,717 gammas and the magnetic values could be read from the tape to an accuracy of $\pm$ 5 gammas.

Electromagnetic Equipment

The electromagnetic unit consisted of a vertical 300 cycle transmitting coil on one wing and a vertical receiving coil on the other wing.

The effect of the transmitted field at the receiver coil was kept balanced out to a few parts per million of the primary field.

The 300 cycle residual field was divided into parts which were in and out of phase with the primary field and recorded separately.

## PLOTTING RESULTS

(a) The flight paths were plotted on one inch to one-quarter mile photo mosaics.

(b) Changes in magnetic intensities, above a base value of 58,717 gammas, were plotted along the flight lines and contoured in a standard manner.

(c) There were no E.M. anomalies recorded so no values have been plotted.

## DISCUSSION OF RESULTS

### Magnetic

No unusual magnetic conditions appear to exist on the property. The high magnetic readings to the southeast of claim T-52577 are probably caused by iron formation lying beneath the diabase as iron formation outcrops on strike further to the east.

The two magnetic maps illustrate the effect of a change in flight line direction on the shape of the contours.

Electromagnetic

No electromagnetic anomalies were indicated in either direction.

CONCLUSIONS

The survey indicates that no large bodies of massive sulphides exist close to the surface on the claim area.

The survey also shows that no large bodies of magnetic mineralization exists on the claims.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

E.G. Thompson.

Toronto, Ontario
February 1, 1965

Use for one type of sur

41116SE0023 0015A1 CLEMENT

900

Submit in duplicate

## Assessment Work Breakdown

1. Type of Survey: Airborne Electromagnetic
2. Township or Area: Clement Township
3. Mining claim numbers: T-52581, T-52580, T-52579, T-52578, T-52577

4. Number of miles of line cut: 7

* 5. Type of instrument used: Geophysical Engineering & Surveys Limited Electromagnetic Unit
* 6. Scale constant or sensitivity: ± 20 ppm
* 7. Number of stations established

8. Summary of days worked ( details on reverse side )

Total technical (include consultants, draughting etc.)

Total line-cutting

Total man-days ( technical plus line-cutting )

Assessment days credit per claim

9. Dated: February 1, 1965 Signed:

* Complete only if applicable

Complete list of names, addresses and dates on reverse side

Use for one type of survey only

## Assessment Work Breakdown

### 1. Technical

| Type of Work | Name & Address | Dates Worked | Hours | Days |
|---|---|---|---|---|
| Pilot | D. Fahlgren, North Bay | December 18, 1964 | | 1 |
| Operator | M. Steiner, North Bay | December 18, 1964 | | 1 |
| Observer | T.G. Robinson, North Bay | December 18, 1964 | | 1 |
| | | | | |
| | | | | |
| | | | | |
| | | Totals | | 3 |

### Consultants

| Name & Address | Dates Worked (specify in field or office) | Hours | Days |
|---|---|---|---|
| M. Steiner, North Bay | January 6 and 11, 1965, half days | | 1 |
| E.G. Thompson, Toronto | February 1, 1965 | | 1 |
| | | | |
| | Totals | | 2 |

### Draughtsmen, Typing, others (specify)

| Name & Address | Type of Work | Dates Worked | Hours | Days |
|---|---|---|---|---|
| H. Davison, North Bay | Draughtsman | December 22, 1965 | | 1/2 |
| M. VanTone, North Bay | Draughtsman | January 22, 1965 | | 1 |
| E.T. Thompson, Toronto | Report | February 1, 1965 | | 1 |
| S. Ferroti, Toronto | Typing | February 2, 1965 | | 1 |
| | | Totals | | 3 1/2 |

### Line-Cutting

| Name | Address | Dates Worked | Hours | Days |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | Totals | | |

Use for one type of survey only

Submit in duplicate

## Assessment Work Breakdown

1. Type of Survey: **Airborne Magnetic**
2. Township or Area: **Clement Township**
3. Mining claim numbers: **T-52581, T-52580, T-52579, T-52578, T-52577**

4. Number of miles of line cut: **7**

* 5. Type of instrument used: **Varian Nuclear Precession Mag**
* 6. Scale constant or sensitivity: **± 5 gammas**
* 7. Number of stations established

8. Summary of days worked ( details on reverse side )

Total technical (include consultants, draughting etc.)

Total line-cutting

Total man-days ( technical plus line-cutting )

Assessment days credit per claim

9. Dated **February 1, 1965** Signed

* Complete only if applicable

Complete list of names, addresses and dates on reverse side

Use for one type of survey only

## Assessment Work Breakdown

### 1. Technical

| Type of Work | Name & Address | Dates Worked | Hours | Days |
|---|---|---|---|---|
| Pilot | D. Fahlgren, North Bay | December 18, 1964 | | 1 |
| Operator | M. Steiner, North Bay | December 18, 1964 | | 1 |
| Observer | T.G. Robinson, North Bay | December 18, 1964 | | 1 |
| | | | | |
| | | | | |
| | | | | |
| | | Totals | | 3 |

### Consultants

| Name & Address | Dates Worked (specify in field or office) | Hours | Days |
|---|---|---|---|
| M. Steiner, North Bay | January 6 and 11, 1965, half days | | 1 |
| E.G. Thompson, Toronto | February 1, 1965 | | 1 |
| | | | |
| | Totals | | 2 |

### Draughtsman, Typing, others (specify)

| Name & Address | Type of Work | Dates Worked | Hours | Days |
|---|---|---|---|---|
| H. Davison, North Bay | Draughtsman | December 22, 1965 | 4 | 1/2 |
| M. VanTuyn, North Bay | Draughtsman | January 22, 1965 | | 1 |
| E.G. Thompson, Toronto | Report | February 1, 1965 | | 1 |
| S. Perrett, Toronto | Typing | February 2, 1965 | | 1 |
| | | Totals | | 3 1/2 |

### 2. Line-Cutting

| Name | Address | Dates Worked | Hours | Days |
|---|---|---|---|---|
| | | | | |
| | | | | |
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| | | | | |
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ONTARIO
DEPARTMENT OF MINES
*Mining Lands Branch*

File 63.1382

PARLIAMENT BUILDINGS
TORONTO 2, ONTARIO

February 24, 1965.

Dear Sir:

Subject : Geophysical and Geological Surveys

The assessment work credits as shown on the attached list have been approved as of the above date. Please inform the recorded holder and so indicate on your records.

Yours very truly,

R. V. Scott,
Chief, Mining Lands Branch.

FWM:smm
Encls.

c.c. Dr. Robert Thomson,
Resident Geologist,

Socrates Mining Corp.
Ltd.

Mr. W. A. Buchan,
Mining Recorder,
Haileybury, Ontario.

File 63.1382

THE MINING ACT

Assessment Work Credits

Name: SOCRATES MINING CORPORATION LTD.

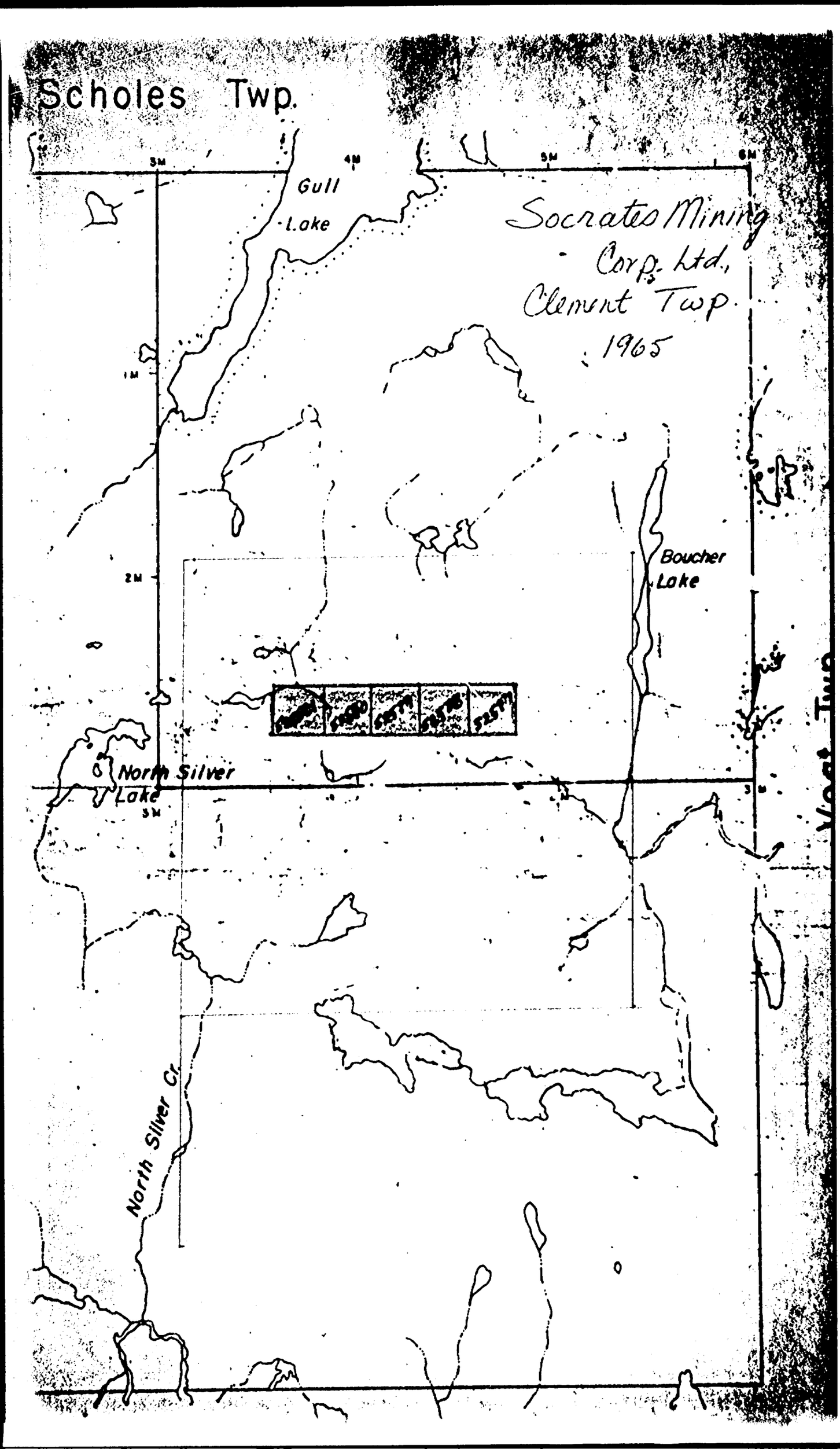
Township or Area: CLEMENT TOWNSHIP

Geophysical 60 Days Work: (per claim)

Geological nil Days Work (per claim)

Mining Claims:

T 52577 to 52581 inclusive


Scholes Twp.
Gull
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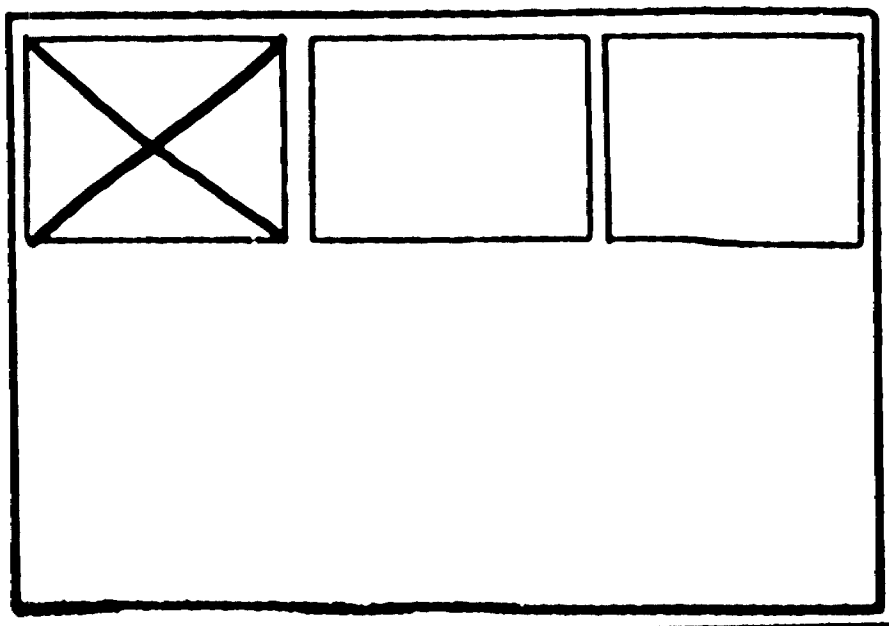
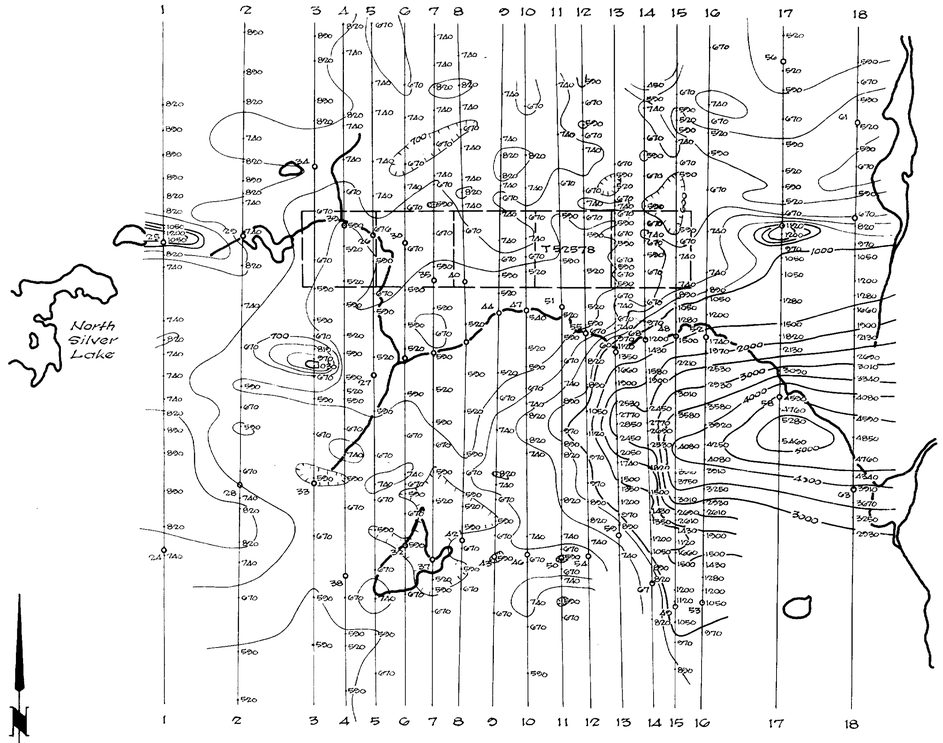
Socrates Mining
Corp. Ltd.,
Clement Twp.
1965
Boucher
Lake
North Silver
Lake
North Silver Cr.
5M
4M
6M
1M
2M
3M

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

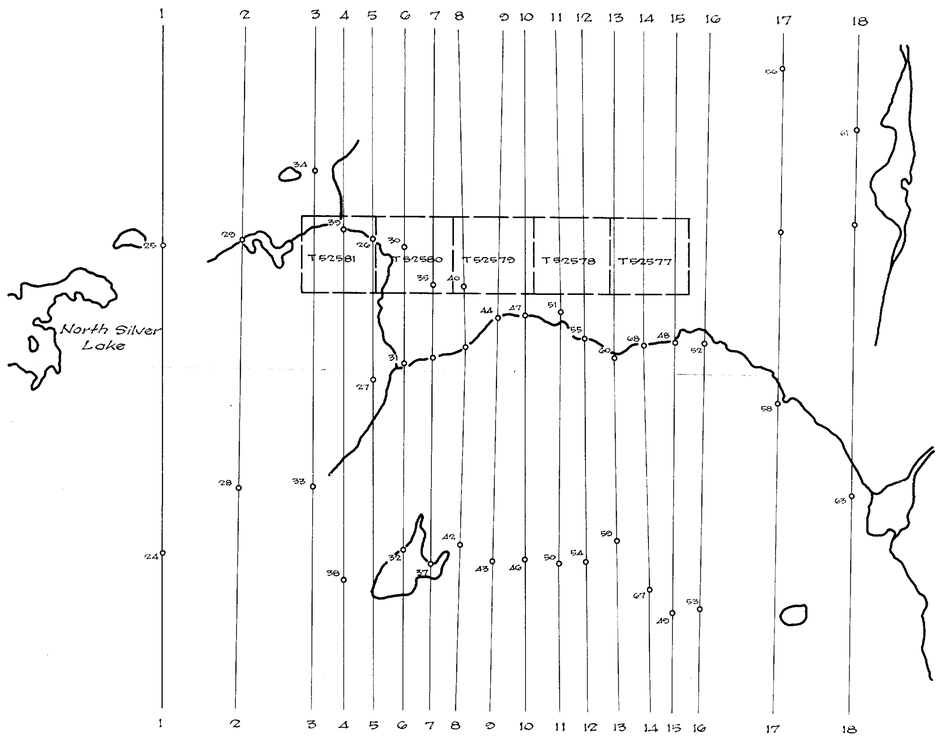
CLEMENT-0015-A1-#1

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (X)

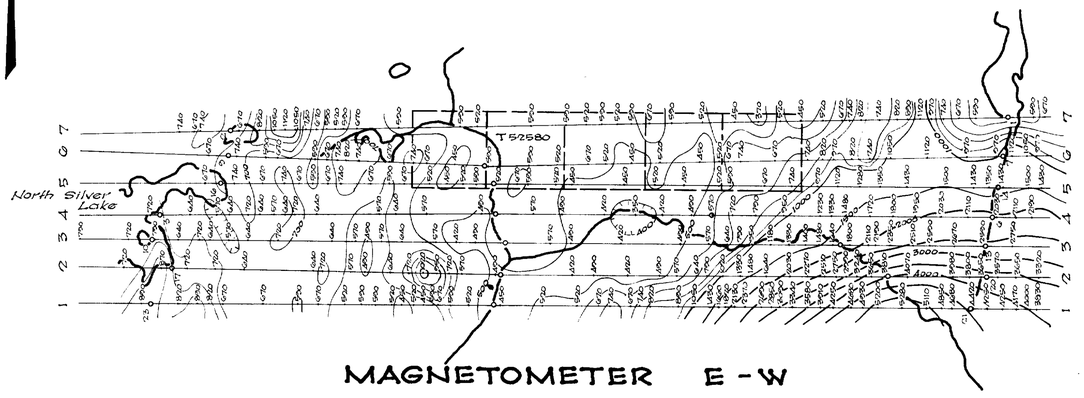




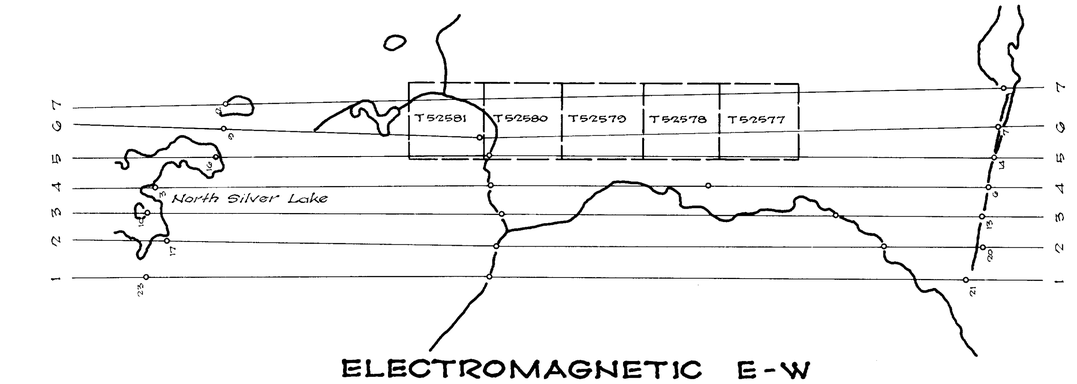

MAGNETOMETER N-S




ELECTROMAGNETIC N-S




MAGNETOMETER E-W

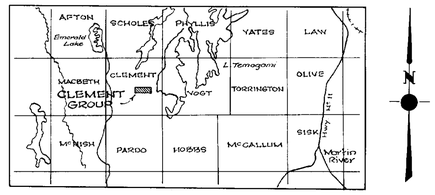



ELECTROMAGNETIC E-W

Note:

No electromagnetic anomalies indicated on records.

Magnetometer values in gammas, contoured at 100 and 500 gamma interval as noted.




· LOCATION PLAN ·

Scale : 1 inch = 8 miles

· AIRBORNE ·

MAGNETOMETER & ELECTROMAGNETIC SURVEY

# CLEMENT GROUP

TOWNSHIP OF CLEMENT
PROVINCE OF ONTARIO

## SOCRATES MINING CORPORATION LIMITED

BY

## GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED

SCALE : 1 INCH = 1320 FEET

0 1320 2640 3960

CLEMENT·0015-A1·#1

| Drawn by: H.O. Checked: M.S. | N.T.S. 41 1/16 | JAN. 1965 | JOB 761 | DWG. 2763 |
|---|---|---|---|---|