REPORT ON GROUND GEOPHYSICAL SURVEY

GRID #6

A.E.M. #5

Toronto, Ontario.
February, 1978

V.C.Papertzian
St.Joseph Explorations Ltd.

SUMMARY

A horizontal loop electromagnetic survey and a magnetometer survey were conducted on grid #6, A.E.M. #5.

INTRODUCTION

Grid #6 consists of 4 contiguous claims numbered as follows: KRL 483667 to KRL 483670. These claims are all located in the area of Slate Lake, District of Kenora (Patricia Portion), Red Lake Mining Division, (NTS 52K,N).

The ground was staked for St.Joseph Explorations Ltd. in the summer of 1977.

The horizontal loop survey and the magnetometer survey were both conducted to locate the airborne anomalies on the ground. The horizontal loop survey was conducted on February 3, 1978, while the magnetometer survey was conducted on February 1, 2 and 4, 1978.

LOCATION and ACCESS

Grid #6 is found approximately 0.8 kilometers northwest of the north shore of Slate Lake. See attached location map. Access can be gained to this group of claims by chartering a light plane from Red Lake, Ontario. The trip is approximately 90 kilometers long, flying roughly due east from Red Lake.

HISTORY

The area was mapped in 1938 by J.D.Bateman for the Ontario Dept. of Mines. The report was titled "Geology and Gold Deposits of the Uchi-Slate Lake Area".

The area was also mapped in 1975 by the Ontario Ministry of Natural Resources, Breaks, F.W.; Bond, W.D.; Stone, Denver; Harris, N.; and Desnoyers, D.W., Operation Kenora-Ear Falls, Papaonga-Wapesi Lakes Sheet, District of Kenora; Ontario Div. of Mines, Prelim. Map P1200, Geol. Ser., scale 1:63,360 or 1 inch to 1 mile, Geology 1975.

In the summer of 1977 some reconnaissance mapping was done on these claims by St.Joseph Explorations Ltd.

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GEOPHYSICAL SURVEYS

Approximately 5.5 kilometers of line was cut on this claim group and was covered with a Max-Min II electromagnetic system (see appendix II for specifications). The coil separation was 100 meters and readings were taken at 30 meter intervals. The frequency used was 1777 Hz.

A magnetometer survey was also carried out using a Barringer GM-122 magnetometer (see appendix III for specifications). Readings were taken at 30 meter intervals along the lines.

A Scintrex total field magnetic base station, model MBS-II, (see appendix IV for specifications) was utilized to make diurnal corrections on raw magnetometer data. The base station sensor head was set up 50 meters from the base camp on the north shore of Slate Lake. See location map for the base station location. A reading was taken every minute by the instrument and was recorded on a strip chart recorder.

The surveys were carried out by the following personnel:

V.C.Papertzian, 89 Macpherson Ave., Toronto, Ontario.
M.Marren, 27 Augusta St., Cambridge, Ontario.
A.Sweezey, P.O. Box 733, Kingston, Ontario.
C.Perity, 8771 Tardif Ave., LaSalle, Quebec.

The grid lines were separated by 100 meters and were picketed every 30 meters.

RESULTS and INTERPRETATION

Horizontal Loop Survey

The horizontal loop results are plotted on a scale of 1:5000 with a profile scale of 1 cm = 20%.

The survey shows an anomaly south of the base line beginning at line 1+00E and ending at line 2+00W. The best response to the conductor is located on line 1+00W at 1+00S. Lines 2+00W; 0+00 and 1+00E all show weak out-of-phase anomalies while the in-phase component remains flat.

The in-phase to out-of-phase ratio for the conductor on line 1+00W at 1+00S is 1.5 to 1, and it is estimated to be 20 meters wide. It is striking approximately east west and has a vertical dip. This anomaly is probably due to sulphides.

Magnetometer Survey

The magnetometer survey is also plotted at a scale of 1:5000 and the map is contoured at 100 γ intervals.

The magnetometer survey shows a number of magnetic highs, line 4W at the baseline, line 2+00W at 2+40S, line 1+00E at 0+60N and line 3+00E at 2+10N. Two magnetic lows are also apparent, line 1+00E at 0+30S and line 2+00E at 2+10N. Neither the magnetic highs or lows obtained from the magnetometer survey correspond to the horizontal loop anomaly on line 1+00W at 1+00S. The weak out-of-phase anomalies on lines 1+00E and 0+00 are flanked to the north by a magnetic low.

CONCLUSIONS and RECOMMENDATIONS

It is recommended that detailed mapping and prospecting be carried out around the horizontal loop anomaly. This may explain the source of this particular anomaly. Should this fail, soil sampling and rock geochemistry may reveal the source of the anomaly.

Respectfully submitted,

V. C. Papertzian

VCP*MS
Toronto, Ontario.
February, 1978

V.C.Papertzian

REPORT ON GROUND GEOPHYSICAL SURVEY

GRID #7

A.E.M. #1

Toronto, Ontario
April, 1978

V.C.Papertzian
St.Joseph Explorations Ltd.

SUMMARY

A horizontal loop electromagnetic survey and a magnetometer survey were conducted on this property designated as grid #7, A.E.M. #1.

INTRODUCTION

Grid #7 consists of 4 contiguous claims, numbered as follows: KRL 483663 to KRL 483666 inclusive. These claims are all located in the Slate Lake area, District of Kenora, (Patricia Portion), Red Lake Mining Division, (NTS 52K,N).

The ground was staked on behalf of St.Joseph Explorations Ltd. in the summer of 1977.

A horizontal loop survey as well as a magnetometer survey were run on this grid to define the airborne conductors on the ground. The horizontal loop survey was carried out on February 4, 1978, while the magnetometer survey was carried out on February 2, 3, and 4, 1978.

LOCATION and ACCESS

Grid #7 is located on the spit of land on the south shore of Panama Lake. Access can be gained to this group of claims by chartering a light plane from Red Lake, Ontario. The trip is approximately 90 kilometers long, flying roughly due east of Red Lake. Panama Lake is located approximately 0.8 kilometers north of Slate lake.

HISTORY

The area was mapped previously in 1938 by J.D.Bateman for the Ontario Department of Mines. The report was titled "Geology and Gold Deposits of the Uchi-Slate Lake Area".

In 1975 the area was mapped in detail by the Ontario Ministry of Natural Resources, by Breaks, F.W.; Bond, W.D.; Stone, Denver; Harris, N.and Desnoyers, D.W., Operation Kenora-Ear Falls, Papaonga-Wapesi Lakes Sheet, District of Kenora, Ontario Division of Mines, Prelim. map P 1200, Geol. Ser. scale 1:63,360, or 1 inch to 1 mile, Geology 1975.

2/.....

In the summer of 1977 some reconnaissance mapping was carried out on these claims by St.Joseph Explorations Ltd.

GEOPHYSICAL SURVEYS

Approximately 6.1 kilometers of line was cut and laid out on the lake on this claim group. The grid lines were separated by 100 meters and were picketed every 30 meters on the lake and land portions of this grid.

The claims were covered with a Max-Min II electromagnetic system (see appendix II for specifications). The coil separation was 100 meters and readings were taken at 30 meter intervals. The frequency used was 1777 Hz.

A magnetometer survey was also conducted on this ground using a Barringer GM-122 magnetometer (see appendix III for specifications). Readings were taken at 30 meter intervals.

A Scintrex total field magnetic base station, model MBS-II, (see appendix IV for specifications) was utilized to make diurnal corrections on raw magnetometer data. The base station sensor head was set up 50 meters from the base camp on the north shore of Slate Lake. (see location map for the base station location) A reading was taken every minute by the instrument and recorded on a strip chart recorder.

The above surveys were carried out by the following personnel:

V.C.Papertzian, 89 Macpherson Ave., Toronto, Ontario.

M.Marren, 27 Augusta St., Cambridge, Ontario.

A.Sweezey, P.O. Box 733, Kingston, Ontario.

C.Perity, 8771 Tardif Ave., LaSalle, Quebec.

RESULTS and INTERPRETATION

Horizontal Loop Survey

The horizontal loop results are plotted at a scale of 1:5000 with a profile scale of 1cm = 20%.

The survey shows a small one line anomaly on line 0+00 at 0+75N. This particular anomaly has an in-phase to out-of-phase ratio of 1 to 1 and is approximately 20 meters wide. The dip is fairly steep to the southwest. This anomaly is probably due to sulphides.

Other out-of-phase anomalies were noted in the survey. These were as follows: lines 1+00W, 2+00W, 3+00W and 4+00W at 2+25N which is a weak negative out-of-phase anomaly, lines 1+00W, 2+00W and 3+00W at approximately 1+50S, which is a weak positive out-of-phase anomaly, and line 1+00E at 1+60N which is a weak positive out-of-phase anomaly.

The first weak negative out-of-phase anomaly on lines 1+00W, 2+00W, 3+00W and 4+00W on 2+25N may be a weak conductor possibly along a fault zone.

Magnetometer Survey

The magnetometer survey is also plotted at a scale of 1:5000 and the map is contoured at 100 gamma intervals.

One major magnetic high came to light in the survey as well as four minor highs. The highest magnetic high is located on line 1+00E, on the baseline and this partially coincides with the horizontal loop anomaly found on line 0+00 at 0+75N.

The other four are located on the grid as follows: line 2+00W at 1+15S, line 0+00 at 3+00S, line 2+00E at 3+25S and line 3+00E at 1+20S. The magnetic high on line 2+00W at 1+15S is the only other one that corresponds to a weak positive out-of-phase anomaly from the horizontal loop survey.

Only one magnetic low resulted from the survey and it occurs on line 1+00E at 1+50N. This magnetic low corresponds to a weak positive out-of-phase horizontal loop anomaly.

CONCLUSIONS and RECOMMENDATIONS

The results of the geophysics indicate the presence of a possible bedrock conductor that should be explained. It is recommended that lines 1+00W, 0+00 and 1+00E be run again with the horizontal loop system using a 200 meter cable in order to better delineate the anomaly. Should this fail, the grid might be reoriented in order that the weak conductor might be seen better by the horizontal loop system. Also detailed mapping and prospecting should be carried out to explain the source of this anomaly. Should this fail, soil sampling and rock geochemistry should be carried out.

Respectfully submitted,

V.C. Papertzian

VCP*MS
Toronto, Ontario.
April, 1978

Ministry of Natur

Ontario

GEOPHYSICAL -- GEOLOGIC
TECHNICAL DATA

52K15NE0024 2.2758 SLATE LAKE

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(s) Geophysical

Township or Area Slate Lake

Claim Holder(s) St. Joseph Explorations Limited
Suite 505, 90 Eglinton Ave. West
Toronto, Ontario. M4R 2E4

Survey Company St. Joseph Explorations Limited

Author of Report V.C. Papertzian

Address of Author Suite 505, 90 Eglinton Ave. West
Toronto, Ontario. M4R 2E4

Covering Dates of Survey February 1 - 4, 1978
(linecutting to office)

Total Miles of Line Cut 5.5 km (3.4 miles)

SPECIAL PROVISIONS
CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	40
--Magnetometer	20
--Radiometric	
--Other	
Geological	
Geochemical	

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

Magnetometer ____ Electromagnetic ____ Radiometric ____
(enter days per claim)

DATE: July 4/78 SIGNATURE: V.C. Papertzian
Author of Report or Agent

Res. Geol. ____ Qualifications 2.1376

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)	
KRL	483667	
*	483668	
*	483669	
	483670	

* + M - 30 days

TOTAL CLAIMS 4

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag. - 194 E.M. - 169 Number of Readings Mag. - 194 E.M. - 169

Station interval 30 meters Line spacing 100 meters

Profile scale 1 cm = 20%

Contour interval 100 gammas

MAGNETIC

Instrument Barringer Research GM-122 Magnetometer

Accuracy – Scale constant ± 1 gamma

Diurnal correction method continuous recording base station.

Base Station check-in interval (hours)

Base Station location and value North shore of Slate Lake; Value 61690 gammas

ELECTROMAGNETIC

Instrument Apex Parametrics Max-Min II H.L.E.M.

Coil configuration horizontal mode

Coil separation 100 meters

Accuracy ± 1%

Method: [ ] Fixed transmitter [ ] Shoot back [X] In line [ ] Parallel line

Frequency 1777 hz
(specify V.L.F. station)

Parameters measured in-phase and out-of-phase components of the primary electromagnetic field

GRAVITY

Instrument

Scale constant

Corrections made

Base station value and location

Elevation accuracy

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

Ontario

Ministry of Natural Resources

File 2.3758

GEOPHYSICAL -- GEOLOGICAL -- GEOCHEMICAL TECHNICAL DATA STATEMENT

Grid #7

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) Geophysical

Township or Area Slate Lake

Claim Holder(s) St. Joseph Explorations Limited
Suite 505, 90 Eglinton Ave. West
Toronto, Ontario. M4R 2E4

Survey Company St. Joseph Explorations Limited

Author of Report V.C. Papertzian

Address of Author Suite 505, 90 Eglinton Ave. West
Toronto, Ontario. M4R 2E4

Covering Dates of Survey February 2,3,4, 1978
(linecutting to office)

Total Miles of Line Cut 6.1 km (3.8 miles)

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
- Electromagnetic	40
- Magnetometer	20
- Radiometric	
- Other	
Geological	
Geochemical	

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

Magnetometer ____ Electromagnetic ____ Radiometric ____
(enter days per claim)

DATE: July 4/78 SIGNATURE: V.C. Papertzian
Author of Report or Agent

L.D

Res. Geol. ____ Qualifications 2.1376

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)	
KRL	483663	✓
	483664	✓
*	483665	1/3
	483666	1/4

XEM - 30 days
Mag - 15 days

TOTAL CLAIMS 4

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag. - 208 E.M. - 191 Number of Readings Mag. - 208 E.M. - 191

Station interval 30 meters Line spacing 100 meters

Profile scale 1 cm = 20%

Contour interval 100 gammas

MAGNETIC

Instrument Barringer Research GM-122 Magnetometer

Accuracy -- Scale constant ± 1 gamma

Diurnal correction method continuous recording base station.

Base Station check-in interval (hours)

Base Station location and value North Shore of Slate Lake; Value 61690 gammas

ELECTROMAGNETIC

Instrument Apex Parametrics Max-Min II H.L.E.M.

Coil configuration horizontal mode

Coil separation 100 meters

Accuracy ± 1%

Method: [ ] Fixed transmitter [ ] Shoot back [X] In line [ ] Parallel line

Frequency 1777 hz
(specify V.L.F. station)

Parameters measured in-phase and out-of-phase components of the primary electromagnetic 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

Uchi Lake Area & Earngey Twp. (M-2157)

Fredart Lake Area (M-2415)

Avis Lake Area (M-2410)

Whitemud Lake Area (M-2413)

92°45' 92°30' 51°00' 50°52'30"

BOWERMAN TWP.
FOR STATUS REFER TO TWP. PLAN M.2145

Fly Cr.
Uchi R.
Ben Lake
Lower Slate Lake
Upper Slate Lake
Slate Lake
Wenasaga R.
Cr.
Panama Lake
Anape L.
Sawan Bay
Wassa Bay
Tepeka
Wenasaga River
Papaonga R.
Papaonga River
Badrock Lake

KRL 483653 483652 483654 483651
KRL 504061
KRL 504041 504044 504043 504042 504045 504046 504047 504049
KRL 483668 483669 483667 483670
KRL 483665 483664 483666 483663
KRL 455398 468719 468720 468722 455399 468721 455400

3M 2M 1M
8M 9M 10M 11M
59' 58' 57' 56' 55' 54' 53'
44' 43' 42' 41' 40' 39' 38' 37' 36' 35' 34' 33' 32' 31'

AREA OF 2.2758
SLATE LAKE

DISTRICT OF
KENORA
(PATRICIA PORTION)

RED LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

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 C.

NOTES

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

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order Nº	File	Date	Disposition

NATIONAL TOPOGRAPHIC SERIES 52K

PLAN NO. M-2412

ONTARIO
MINISTRY OF NATURAL RESOURCE
SURVEYS AND MAPPING BRANCH

92°50'

92°15'

51°07'

51°05'

51°00'

50°50'

Fly Lake

Grid 3

Grid 4

Jubilee Lake

Grid 5

MAGNETIC BASE STATION

Upper Slate

Grid 6

Grid 16

Grid 1

Grid 2

Grid 7

Pyrrhotite

Slate Lake

Sawan Bay

Grid 00

Lower Slate L.

Wassa Bay

Badrock L.

N.C. Copeland

ST. JOSEPH EXPLORATIONS LIMITED

SLATE LAKE AREA, N.W. Ontario

GRID LOCATION MAP

1:25,000

191

52 K/N

Scale: 1:125,000

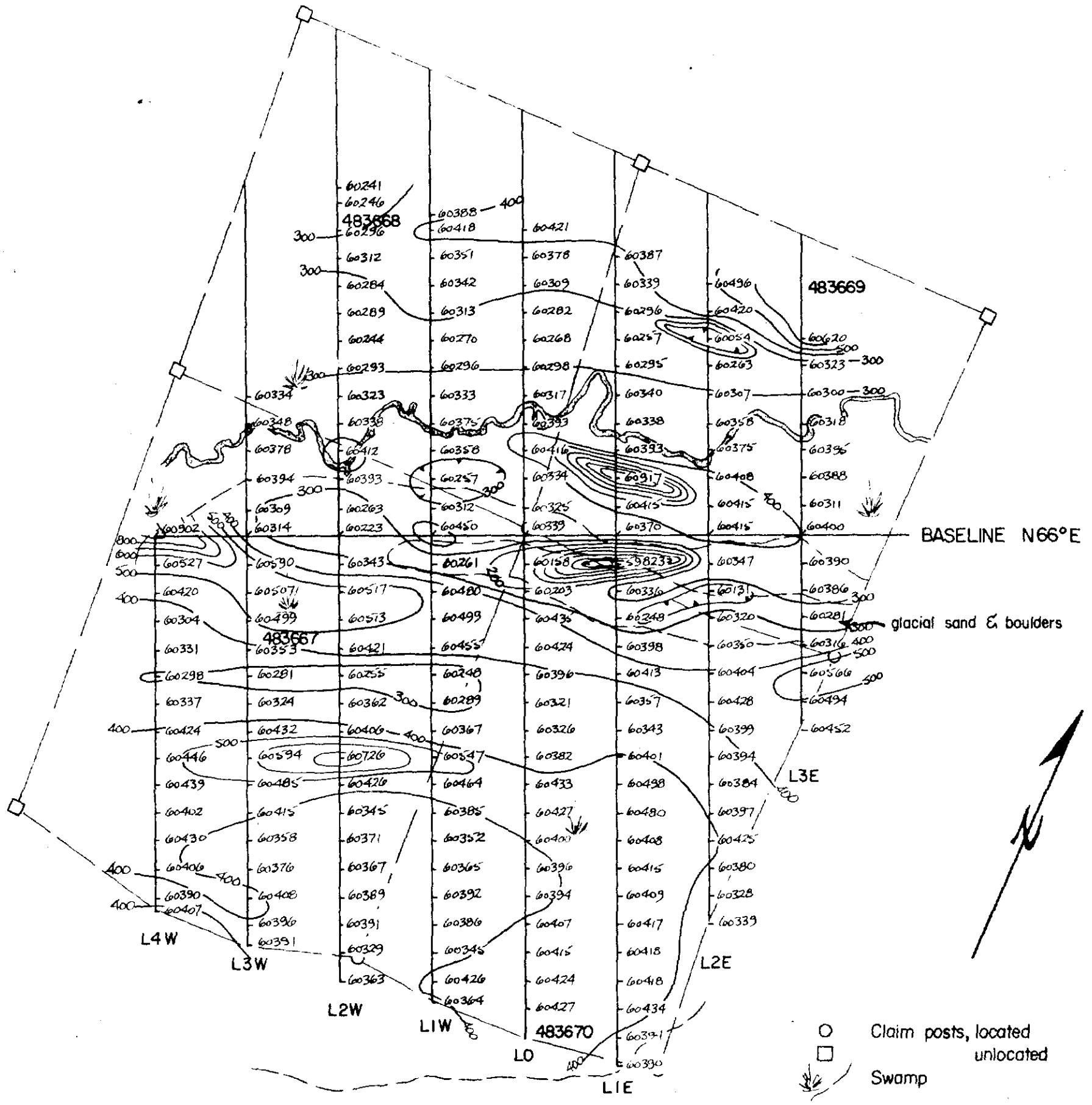
2 4 6 8 Miles

4 6 8 10 12 14 Kilometres

40' 35' 92°30' 25' 20' 92°15'

52K15NE0024 2.2758 SLATE LAKE

210



LEGEND

Barringer Research GM-122
Magnetometer

Readings at 30 meter intervals

Contour Interval: 100 gammas (γ)

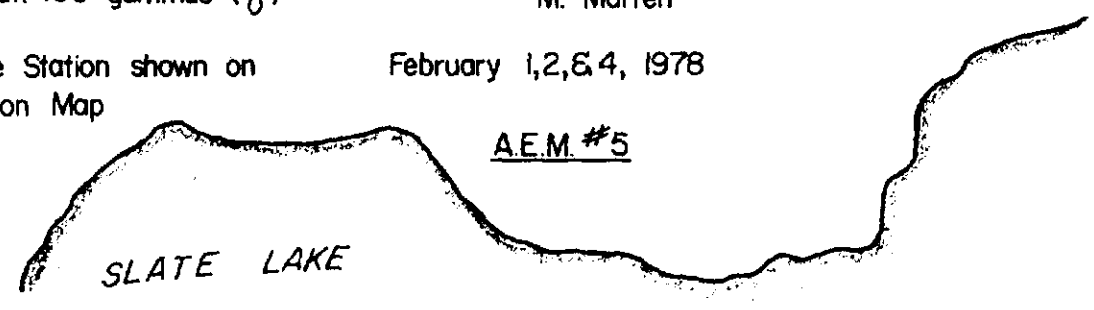
Magnetic Base Station shown on Location Map

Forced Readings (*)

Operators: V. C. Papertzian
R. A. Sweezey
M. Marren

February 1,2,&4, 1978

A.E.M. #5



V. C. Papertzian

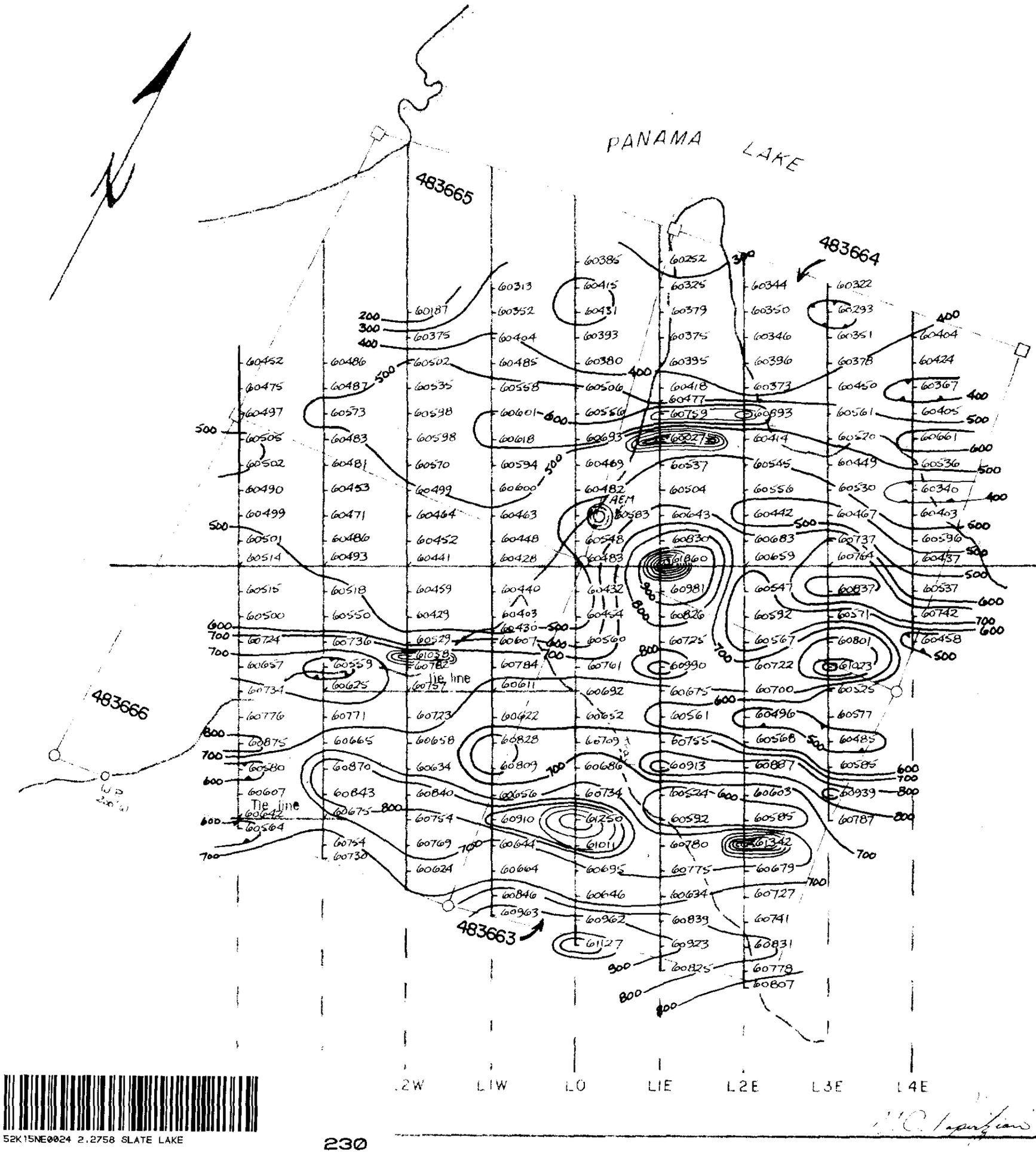
ST. JOSEPH EXPLORATIONS LIMITED

SLATE LAKE AREA, N.W. Ontario
MAGNETOMETER SURVEY
1:5000 GRID 6

191

52K

V. C. Papertzian



LEGEND

Barringer Research GM-122
Magnetometer

Readings at 30 meter intervals

Contour Interval: 100 gammas (γ)

Magnetic Base Station shown on Location Map

Operators: V.C. Papertzian
R.A. Sweezey
C. Perity

Survey Dates: February 2,3,&4, 1978

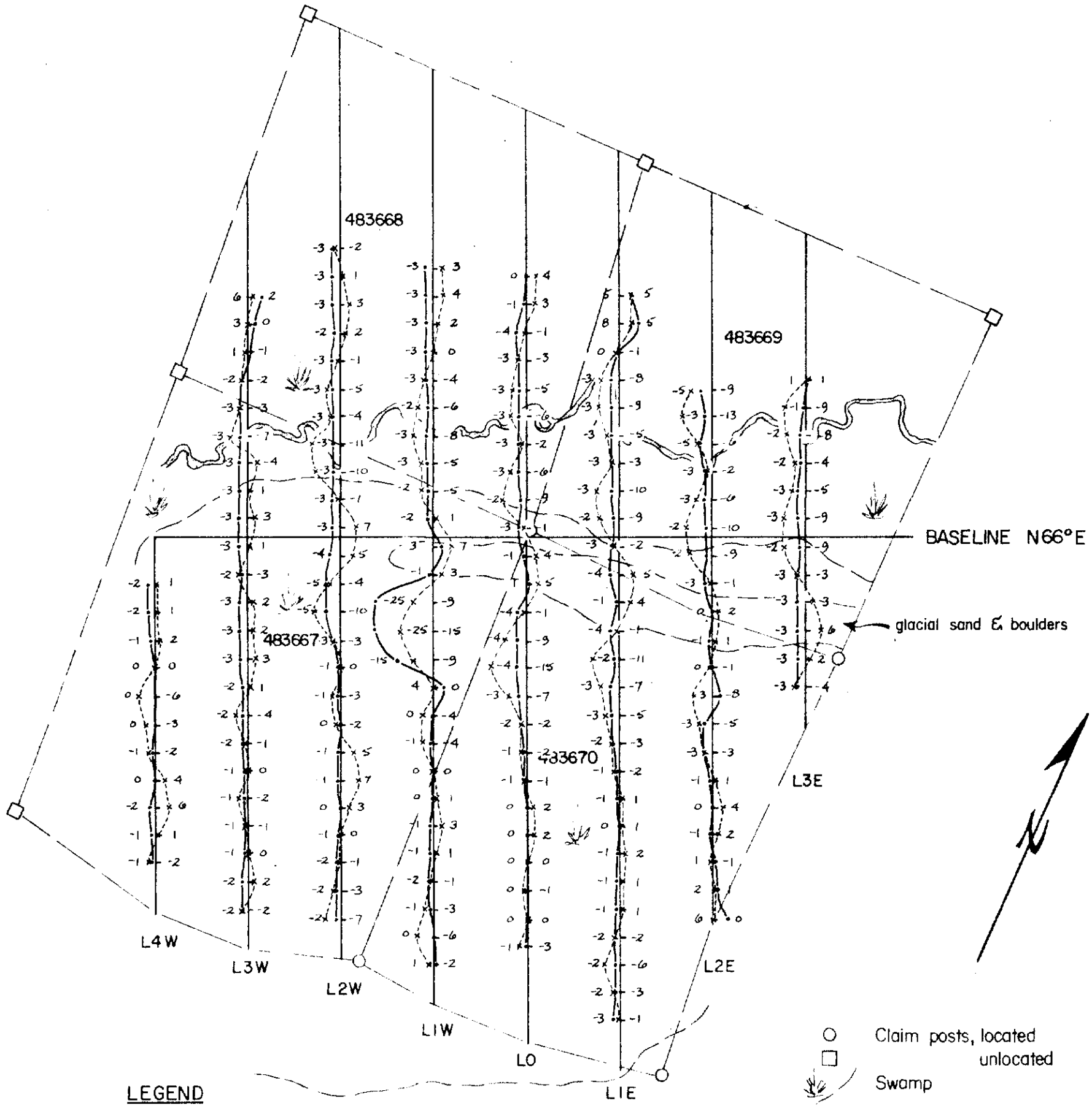
A.E.M. #1

○ Claim posts, located
□ unlocated

V.C. Papertzian

SLATE LAKE AREA, N.W. Ontario
MAGNETOMETER SURVEY
1:5000 GRID 7
191

52K



LEGEND

Max-Min II Horizontal Loop System, Unit 549

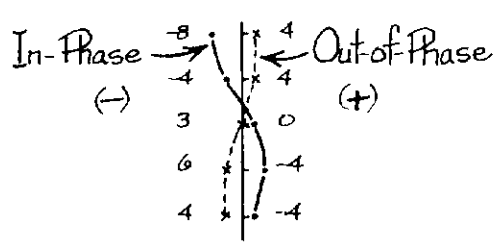
Frequency: 1777 Hz

Coil Separation: 100 meters

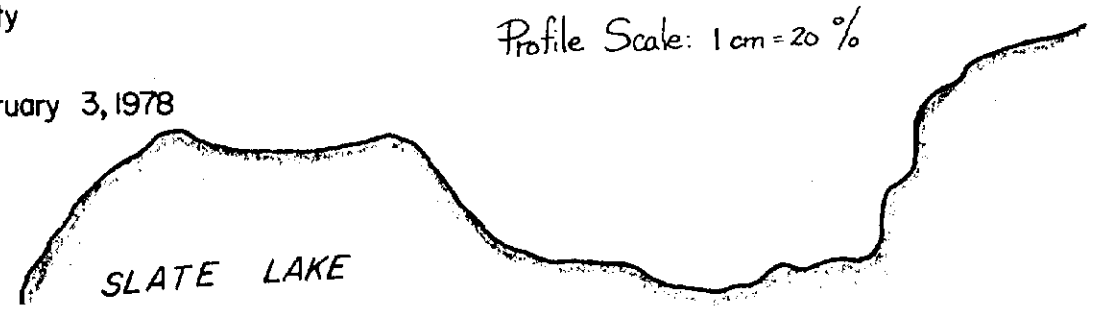
Readings at 30 meter intervals

Operators: M. Marren
C. Perity

Survey Date: February 3, 1978

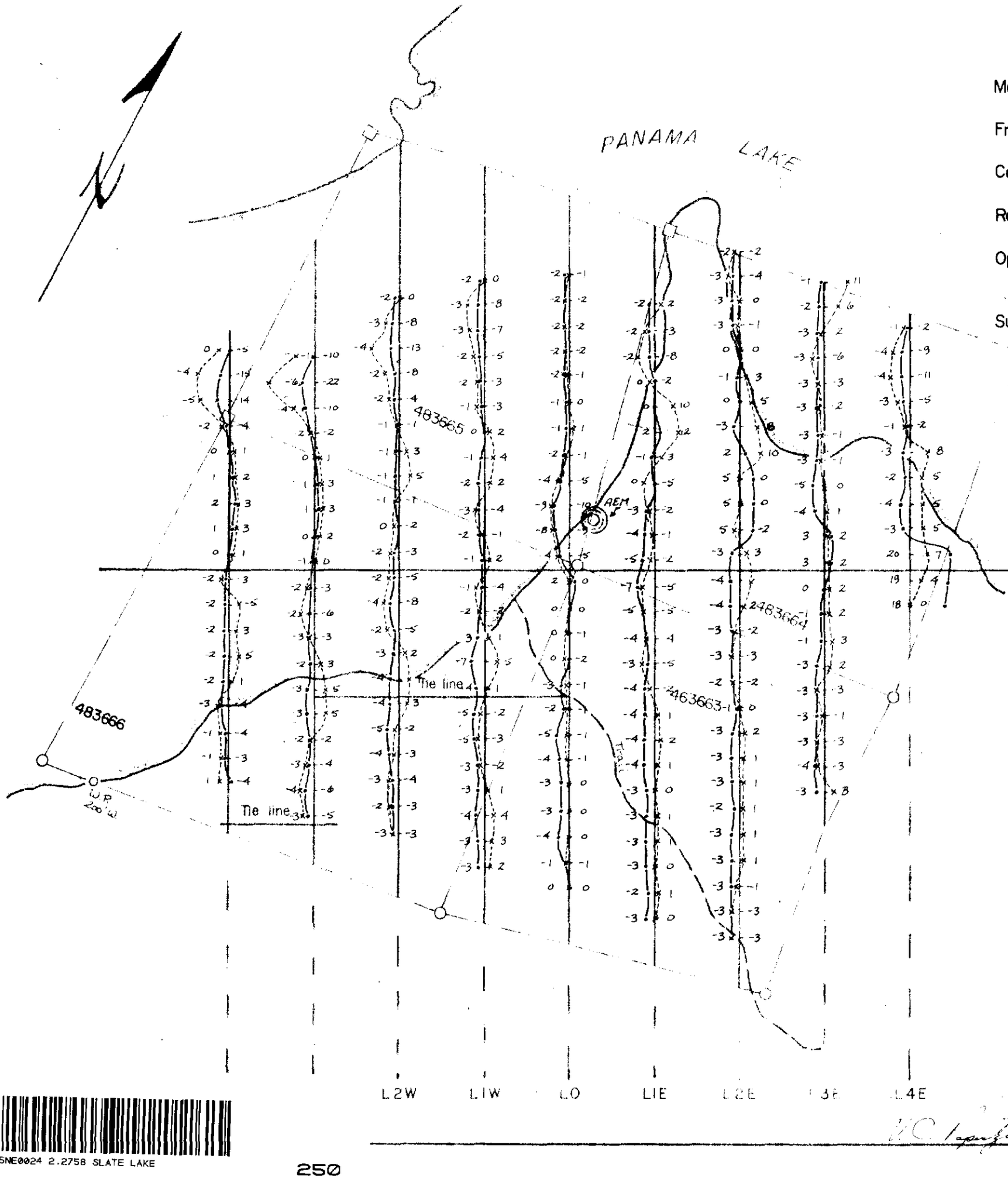


Profile Scale: 1 cm = 20 %



ST. JOSEPH EXPLORATIONS LIMITED

SLATE LAKE AREA, N.W. Ontario
H.L.E.M. SURVEY
1:5000 GRID 6
191
52 K



LEGEND

Max-Min II Horizontal Loop System, Unit 549

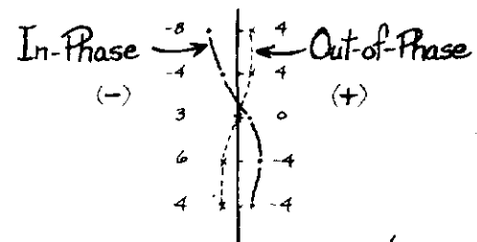
Frequency: 1777 Hz

Coil Separation: 100 meters

Readings at 30 meter intervals

Operators: V.C. Papertzian
R.A. Sweezey

Survey Date: February 4, 1978



Profile Scale: 1 cm = 20 %

BASELINE Az 63°

○ Claim posts, located
□ unlocated

V.C. Papertzian

SLATE LAKE AREA, N.W. Ontario
H.L.E.M. Survey
1:5000 GRID 7
191

52K

V.C. Papertzian