



52F16NE8257 2.3915 KABIK LAKE

2.3915

010

SIOUX LOOKOUT AREA

PROJECT 3353

FAIRSERVICE OPTION and OJIBWAY LAKE CLAIMS

N.T.S. 52F/16

GEOPHYSICAL REPORT

H.L.E.M. SURVEY

MAGNETOMETER SURVEY

April, 1981

N.W. Rayner 2.1785'
J.L. Wright 2.2330



52F16NE8257 2.3915 KABIK LAKE

010C

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INTRODUCTION

This report describes ground electromagnetic and magnetic surveys carried out on a group of 37 claims in Pickerel Township of Northwestern Ontario. The results of the surveys are plotted on maps found in the pocket at the back of this report.

PROPERTY, DESCRIPTION and LOCATION

The claims covered by this report started out as a group of four (4) claims 566803-566804 and 566806-566807, called the Ojibway Lake Property. An additional five (5) claims 589032-589036 were staked. Then an option agreement was made with R. Fairservice to acquire twenty-eight (28) adjoining claims which makes up the present claim group. The claim map found at the back of this report shows the location of the claim group and the claim numbers.

The property is located sixteen (16) miles southwest of Sioux Lookout on highway 72.

ACCESS

Access to the property is by truck from Sioux Lookout, a distance of sixteen (16) miles on highway 72.

HISTORY OF PREVIOUS WORK

The earliest reference to the geology of the Sioux Lookout area is contained in a report by R. Bell in Report on the Country between Lake Superior and Lake Winnipeg, Geol. Surv. Can. Sum. Rept., 1872, p.101, 102. See the list of publications at the end of the report for other previous work in the area. The following list outlined work done by exploration companies.

1950 - Eagle Land Gold Mines - geological mapping and diamond drilling

1950-51 - Quyta Gold Mines - diamond drilling

1950 - Realmont Red Lake Gold Mines - diamond drilling

For details of the above work see O.G.S. data series map P.2333 Kabik Lake-Pickerel Township Area.

WORK DONE BY ST. JOSEPH EXPLORATIONS LIMITED

- 1980 - AEM Survey
- 1980 - Claim staking and linecutting
- 1981 - Ground geophysics H.L.E.M. and Mag (this report)
- 1981 - Option of claims and linecutting

GENERAL GEOLOGY

The Ojibway Lake claims and the Fairservice Option claims are underlain mainly by mafic volcanics in the form of pillowed flows and variolitic flows. The sequence is south facing. The pyroclastic rocks occur in lesser abundance. They include tuffs and agglomerates which have been in part recrystallized to a point where the tuffs look like feldspar porphyry dikes. Areas of fine grained light grey rhyolite may be porphyry sills. These rocks are cut by up to 40' wide granodiorite dikes which can be traced for 3000'. The granodiorite dikes are the host for numerous quartz veins which in some localities carry gold mineralization.

SURVEY PROCEDURE

Both the magnetic and H.L.E.M. surveys are discussed separately in the following.

Magnetic Survey

Diurnal control was provided by a continuously recording magnetic base station which monitored the earth's field each minute to a resolution of ± 5 gammas. Output was via a paper strip chart recorder. From this chart additive corrections could be scaled to be applied to the field data. The base value was arbitrarily set to be 60500 gammas, with the base station located at 41 Lakeshore, Sioux Lookout, Ontario. Before plotting the diurnally corrected data had a datum of 60000 gammas subtracted. These values were plotted upon a grid map at a scale of 1:5000 and contoured at an interval of 500 gammas. Following is a list of logistical details concerning the program.

Instrumentation:	Barringer GM122 Magnetometer Scintrex MBS2 Base Station
Base Station Location:	41 Lakeshore, Sioux Lookout, Ontario
Base Station Value:	60500 gammas
Datum Subtracted:	60000 gammas
Line Spacing:	100m
Station Interval:	25m
Personnel:	J.R.Newall, P.Churcher, D.Windsor, T.Hamilton
Survey Dates:	Jan. 12, Feb. 5-13, March 21-23, 1981
Parameter Read:	Amplitude of total magnetic field

Details concerning equipment specifications can be found in Appendix A. A print of the aforementioned map can be found in the map pocket at the rear of the report.

Horizontal Loop Electromagnetic (H.L.E.M.) Survey

A standard horizontal loop survey was done which recorded the amplitude of the secondary electromagnetic field to a resolution of $\pm 0.5\%$. This is expressed as a percentage of the primary field. The secondary field is decomposed into its in-phase and out-of-phase components. These values were plotted upon grid maps at a scale of 1:5000 in standard profile form using a profile scale of 1 cm = 20%. Two (2) plots exist one for each of the two frequencies. Details concerning the plotting convention can be found upon these plots, prints of which are in the map pocket at the rear of the report. Further details concerning the survey appear below.

Instrumentation:	Apex Parametrics Max-Min II
Frequency:	444 Hz & 1777 Hz
Coil Separation:	100m
Station Interval:	25m
Line Spacing:	100m
Personnel:	I.Lowe-Wylde, A.P.Drost, P.Churcher, T.Hamilton, J.R.Newall
Survey Dates:	Feb. 6-9, March 18-25, 1981
Parameters Read:	In-phase and Out-of-phase percentages of the secondary electromagnetic field

Details concerning equipment specifications can be found in Appendix B.

INTERPRETATION

Each survey is reviewed separately in the following. Results will be codified later during the conclusions.

Magnetic Survey

Background over the grid seems to be in the 60500 gamma range with a regional trend rising to the southwest at a rate of 120 gammas/km. Superimposed on this regional trend is much high frequency anomalous showing a total amplitude of generally around 6000 gammas. Texturally the map is fairly unusual being almost totally covered by high frequency, short strike length anomalies of moderately large amplitude. Indeed it appears as a jumbled mass of anomalies. Only one fairly persistent linear trend exists. Line locations are as follows:

L35E, 350N	L39E, 375N	L43E, 325N	L47E, 250N	L51E, 100N
L36E, 350N	L40E, 375N	L44E, 315N	L48E, 225N	L52E, 100N
L37E, 350N	L41E, 375N	L45E, 275N	L49E, 200N	
L38E, 350N	L42E, 335N	L46E, 300N	L50E, 150N	

Some broad banding can also be noted. Three broad bands of relatively lower amplitude anomalous traverse the grid. End point line locals are listed below.

- 1) L37E, 575N - to - L44E, 600N
- 2) L30E, 300N - to - L52E, 150S
- 3) L0, 650S - to - L29E, 350S

These likely represent distinct rock units or changes in lithology. Dikes are not particularly indicated.

Horizontal Loop Electromagnetic (H.L.E.M.) Survey

No bedrock conductors of note are found on the entire grid. Much out-of-phase role occurs in the 1777 Hz data over much of lines 28E to 73E and most likely results from overburden and/or shear zone conduction effects.

RECOMMENDATIONS and CONCLUSIONS

No obvious base metal targets were outlined by the work presented herein. However, precious metals may be associated with some of the magnetic features noted. Detailed geologic mapping accompanied by soil geochemistry is suggested. Input from this will guide any further geophysical work.

James L. Wright

J.L. Wright

May 1981

N.W. Rayner

1330

A P P E N D I X A

(ii) Magnetometer Instrument Data

General Description, Principle of Operation

If a proton rich fluid such as Kerosene, jet fuel, heptane, etc. is placed into a magnetic field the protons will align along the magnetic field vector. The magnetic field is induced in the sensor upon depressing the push-button. Then this field is suddenly removed. Protons which behave as elementary gyroscopes will start precessing around the remaining magnetic field that of the earth. The precession frequency is directly proportional to the magnetic field of the earth. The magnetometer counts this frequency, divides it by the appropriate constant to obtain a reading in gammas and displays the reading in the form of a 5 digit number.

MODEL GM-122

SPECIFICATIONS

Range: 20,000 to 99,999 In 12 ranges

Accuracy: $\pm 1 \gamma$ through operating temperature range

Sensitivity: 1γ

Gradient Tolerance: 600 γ /ft.

Power: 12-"D" cells

Power Consumption: < 50 Joules (Wsec) per reading

Polarizing Power: 0.8 A @ 13.5 V for 1.5 sec. (3 second cycle)
0.8 A @ 13.5 V for 3 sec. (6 second cycle)

Number of Readings with 1 Battery Set: 2,000 - 10,000 depending on type of batteries

Frequency of Readings: 1 every 3 seconds
1 every 6 seconds

Controls: Pushbutton switch
Range Selection switch - Slide switch for 3 and 6 sec. located on P/C Board

Output: 5 digit incandescent filament readout

Indicators: LED point
Lock Indicator - last three digits of the display blanked off when phaselock not achieved
Segment Function Indicator - all segments light up to permit visual inspection of the display function :

Mechanical:

Instrument: Dimensions - 7" X 3.5" X 11"
(18 cm X 9 cm X 28 cm)

Weight - 8 lbs (3.6 kg) including batteries

Sensor: Omnidirectional noise cancelling toroidal sensing head

Dimensions - 4 7/8" (12 cm) diameter
- 4 3/8" (11 cm) height

Weight - 3 lbs (1.4 kg)

Ambient Conditions: Operating Temperature Range -
-40°F to 131°F (-40°C to 55°C)

Relative Humidity - 0 to 100%

Environmental: Instrument and sensor case made of high impact plastic

SCINTREX

TOTAL FIELD MAGNETIC BASE STATION

MODEL MBS-2

SPECIFICATIONS:

Resolution	1 gamma
Total Field Accuracy	\pm 1 gamma over full operating range
Operating Range	20,000 to 100,000 gammas in 25 overlapping switch selectable steps
Gradient Tolerance	Up to 5000 gammas/metre
Sensor	Omnidirectional, shielded, noise-cancelling, dual coil
Sampling Rate	Internal control: switch selectable every 2, 4, 10, 30 seconds or 1,2,10 minutes External control: manual command or by external clock at any rate longer than 2 seconds. For external trigger, a positive transition from 0 to +4V or greater initiates one reading
Clock Accuracy and Stability	\pm 10 ppm over full temperature range
Visual Outputs	5 digit light emitting diode numerical display lasting 0.1 seconds in automatic recycle mode and 1.7 seconds in manual mode. Internal strip chart recorder with 65 mm chart width and 100 or 600 mm/hr chart speed. Inkless recording. Switch selectable at 10, 100 or 1000 gammas full scale
External Outputs	5 digit, 1-2-4-8 BCD DTL, TTL compatible (2 loads) with 0.5 msec, 5V pulse for synchronization of MBS-2 and external recorder. Analogue recorder output of 1V at 1 mA max. Switch selectable for 10, 100 or 1000 gammas full scale.
Time Marker	A 1.5 second pulse every 10 minutes generates a time mark on the internal or on external analogue recorders. For an external analogue recorder, a switch to ground is provided (NPN transistor, 40V max., 250 mA max). No side pen is required for continuously writing recorders as the pen returns to zero at every event mark. Intervals of less than 10 minutes are

Sensor Cable	50 m length is standard
Power Requirement	The internal batteries of the MP-2, (8 "D" cells) are used to power all functions of the MBS-2. This power source lasts approximately 80 hours, at 25°C and a once per minute sampling interval. An external 10 to 32V DC supply may alternatively be used. Current drain is approximately 0.9A during polarize time and 35 mA during standby, depending upon supply voltage.
Battery Test	Digital readout of normalized internal battery voltage activated by touching switch.
Operating Temperature Range	Console: 0 to 50°C Sensor: -35 to 50°C
Dimensions	Console: 140 mm x 310 mm x 390 mm Sensor: 80 mm diameter x 150 mm length Tripod: 130 mm extended length
Weights	Console: 7.7 kg Sensor with cable: 5.5 kg Tripod: 1.5 kg.
Shipping Weight	Approximately 18 kg
Optional Accessories	Sensor monopod, harness, sensor backpack and 2 m sensor cable allow field portable survey use of MP-2 magnetometer. See MP-2 specification sheet.

A P P E N D I X B

The Maxmin II is a two-man continuously portable EM system. It is designed to measure both the vertical and horizontal in-phase (IP) and quadrature (QP) components of the anomalous field from electrically conductive zones.

The plane of the transmitter (Tx) is kept parallel to the mean slope between the transmitter and receiver (Rx) at all times. The Maxmin II is a horizontal loop (HL) system when the receiver measures anomalous components perpendicular to the mean slope between the coils. It is a minimum coupled (Min C) system when the receiver measures anomalous components parallel to the mean slope between the coils.

APEX MAXMIN II EM SYSTEM SPECIFICATIONS

- OPERATING FREQUENCIES: 222, 444, 888, 1777 and 3555Hz.
- MODES OF OPERATION:
- a) Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal loop mode). Used with reference cable.
 - b) Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.
 - c) Transmitter coil plane vertical and receiver coil plane horizontal, tilted for null in the receiver output. (Vertical loop mode). Used without reference cable, in parallel lines.
- COIL SEPARATIONS: 25, 50, 100, 150, 200 and 250mm (MM II) (modes a and b) or 100, 200, 300, 400, 600 and 800 ft. (MM II F). Coil separations in mode c) not restricted to fixed values.
- PARAMETERS MEASURED:
- a) In-Phase and Quadrature components of the secondary field in modes a) and b).
 - b) Tilt-angle of the total field in mode c).

READOUTS:

- a) Automatic, direct readout on 90mm (3½" edgewise meters in modes a) and b). nulling or compensation necessary.
- b) Tilt-angle and null on 90mm (3½" edgewise meters in mode c).

SCALE RANGES:

In-phase: $\pm 20\%$ normal, $\pm 100\%$ by switch
Quadrature: $\pm 20\%$ normal, $\pm 100\%$ by switch
Tilt: $\pm 75\%$ slope
Null: Null sensitivity adjustable by separation switch.

READING REPEATABILITY:

$\pm 1\%$ to $\pm 7\%$ normally, depending on conditions, frequency and coil separation used.

TRANSMITTER DIPOLE MOMENT:

150 Atm² @ 222Hz, 150 Atm² @ 444Hz, 90 Atm² @ 888Hz, 40 Atm² @ 1777 Hz and 30 Atm² @ 3555 Hz.

RECEIVER BATTERIES:

9V transistor radio type, 4 batteries
Life: approx. 35 hrs. continuous duty (alkaline; .5Ah), less in cold weather.

TRANSMITTER BATTERIES:

- a) 12V7.5Ah Gel-Cell rechargeable batteries (2 x 6V in series)
- b) 18V21Ah alkaline lantern batteries (3 x 6V in series). Transmitter current drain 0.5A to 2.2A depending on operating frequency.

REFERENCE CABLE:

Light weight, special teflon cable for minimum friction. Unshielded. All reference cables option at extra cost. Please specify.

Built-in intercom system for voice communication between receiver and transmitter operators.

INDICATOR LIGHTS:

Built-in signal and reference warning lights to indicate erroneous readings.

OPERATING TEMPERATURE:

-40°C to + 60°C (-40°F to + 140°F)

WEIGHT OF RECEIVER UNIT:

6kg (13 lbs.)

WEIGHT OF TRANSMITTER UNIT:

Typically 65 kg (143 lbs.), depending on quantities of reference cable and batteries included. Shipped in two shipping/field cases.

VOICE LINK:

Built-in intercom system for voice communication between receiver and transmitter operators.

A P P E N D I X C



GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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 - H.L.E.M. & Magnetic
Township or Area Pickereil Township
Claim Holder(s) St. Joseph Explorations Limited
2161 Yonge Street, Suite 301,
Toronto, Ontario. M4S 3A6
Survey Company as above
Author of Report N.W. Rayner & J.L. Wright
Address of Author as above
Covering Dates of Survey February 12 - April 30, 1981
(linecutting to office)
Total Miles of Line Cut 63.7 line-km

MINING CLAIMS TRAVERSED
List numerically

S A L
E (prefix) I (number)
E T S
A T
C
H
E
D

If space insufficient, attach list

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

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

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

DATE: _____ SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 37

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

	H.L.E.M. - 2121		H.L.E.M. - 2121
Number of Stations	Magnetic - 2387	Number of Readings	Magnetic - 2387
Station interval	25m (both surveys)	Line spacing	100m (both surveys)
Profile scale	H.L.E.M. = 1cm = 20%		Magnetic - n/a
Contour interval	H.L.E.M. = n/a		Magnetic - 500 gammas

MAGNETIC

Instrument Barringer GM122 Magnetometer/Scintrex MBS-2 Base Station

Accuracy – Scale constant +1 gamma

Diurnal correction method Continuously recording base station

Base Station check-in interval (hours) Reading each minute

Base Station location and value 41 Lakeshore, Sioux Lookout, Ontario
Base Value - 60500 gammas

ELECTROMAGNETIC

Instrument Apex Parametrics Max-Min II

Coil configuration Horizontal Loop

Coil separation 100m

Accuracy +0.5%

Method: Fixed transmitter Shoot back In line Parallel line

Frequency 444 Hz & 1777 Hz
(specify V.L.F. station)

Parameters measured In-phase and out-of-phase percentages of the secondary 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 _____

SCHEDULE OF CLAIMS

<u>Claim No.</u>	<u>Days</u>
437097	20
437098	20
486429	20
486430	20
486431	20
486432	20
486433	20
486434	20
486435	20
486436	20
487002	20
487003	20
487004	20
487005	20
541896	20
541897	20
541898	20
541903	20
541904	20
541905	20
566803	20
566804	20
•••	20
566806	20
566807	20
589032	20
589033	20
589034	20
589035	20
589036	20
594003	20
594004	20
594005	20
594006	20
594007	20
594008	20
594009	20
594010	20



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A separate form is required for each type of work to be recorded.

THE MINING ACT REPORT OF WORK

To the Recorder of PATRICIA Mining Division
ST. JOSEPH EXPLORATIONS LIMITED T-501
 name of Recorded Holder Prospector's Licence
Suite 301, 2161 Yonge Street, Toronto, Ontario. M4S 3A6
 Post Office Address

do hereby report the performance of 760 days of Magnetometer Geophysical
 type of work

not before reported to be applied on the following contiguous claims

Claim No.	Days	Claim No.	Days	Claim No.	Days
.....
S	A	S	.....	.....	.....
E	T	C	.....	.....	.....
E	T	H	.....	.....	.....
.....	A	E	.....	.....	.....
.....	C	D	.....	.....	.....
.....	H	U	.....	.....	.....
.....	E	L	.....	.....	.....
.....	D	E	.....	.....	.....

All the work was performed on Mining Claim (s)
 (In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
- For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
- For Compressed Air or Other Power Driven or Mechanical Equipment
 Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
- For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
- With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
- For Geophysical, Geological, Geochemical Surveys and Expenditure Credits - the name of author of report. Covering dates of survey (linecutting & office). Type of instrument used. Total amount of expenditure. Technical reports, maps, expenditure breakdown, receipts must be filed in duplicate with the Minister within 60 days of recording.
- For Land Survey - the name and address of Ontario L. and surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

Authors - N.W. Rayner - J.L. Wright
 Covering dates - Geophysics - March 1-15, 1981
 Line cutting - Feb. 12-28, 1981
 Instrument - Barringer Research GM-122
 Proton Precession Magnetometer

Date March 25, 1981 Signature of Recorded Holder or Agent

The Mining Act
 Certificate Verifying Report of Work

Norman Wallace Rayner
Suite 301, 2161 Yonge Street, Toronto, Ontario. M4S 3A6
 (Post Office Address)

- hereby certify:
- That I have a personal and intimate knowledge of the facts set forth in the report of work annexed hereto, having performed the work or witnessed same during and/or after its completion.
 - That the annexed report is true.

Dated March 25 19 81 Signature N.W. Rayner

THE PENALTY FOR MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH



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A separate form is required for each type of work to be recorded.

THE MINING ACT REPORT OF WORK

To the Recorder of.....PATRICIA.....Mining Division
I,St. Joseph Explorations Limited.....T-501
name of Recorded Holder Prospector's Licence
.....Suite 301, 2161 Yonge Street, Toronto, Ontario.....M4S 3A6
Post Office Address

do hereby report the performance of1520..... days of Linecutting - H.L.E.M. Geophysical
type of work
not before reported to be applied on the following contiguous claims

Claim No.	Days	Claim No.	Days	Claim No.	Days
.....S	.....A	.....S	.....	.....	.....
.....E	.....T	.....C	.....	.....	.....
.....E	.....T	.....H	.....	.....	.....
.....	.....A	.....E	.....	.....	.....
.....	.....C	.....D	.....	.....	.....
.....	.....H	.....U	.....	.....	.....
.....	.....E	.....L	.....	.....	.....
.....	.....D	.....E	.....	.....	.....
.....

All the work was performed on Mining Claim (s)
(In the case of geological and/or geophysical survey (s) where more than 18 claims are involved attach a schedule)

READ CAREFULLY: THE FOLLOWING INFORMATION IS REQUIRED BY THE MINING RECORDER.

- For Manual Work, Stripping or Opening up of Mines, Sinking Shafts or Other Actual Mining Operations - Names and addresses of the men who performed the work and the dates and hours of their employment.
- For Diamond and other Core Drilling - Footage, No. and angle of holes and diameter of core. Name and address of owner or operator of drill. Dates when drilling was done. Signed core log and sketch in duplicate.
- For Compressed Air or Other Power Driven or Mechanical Equipment
Type of drill or equipment. Names and addresses of men engaged in operating equipment and the dates and hours of their employment.
- For Power Stripping - Type of equipment. Name and address of owner or operator. Amount expended. Dates on which work was done. Proof of actual cost must be submitted within 30 days of recording.
- With each of the above types of work sketches are required to show the location and extent of the work in relation to the nearest claim post. In the case of diamond or other core drilling the sketch must be submitted in duplicate.
- For Geophysical, Geological, Geochemical Surveys and Expenditure Credits - the name of author of report. Covering dates of survey (linecutting & office). Type of instrument used. Total amount of expenditure. Technical reports, maps, expenditure breakdown, receipts must be filed in duplicate with the Minister within 60 days of recording.
- For Land Survey - the name and address of Ontario Land surveyor.

The Required Information is as Follows: (Attach a list if this space is insufficient)

Authors - N.W. Rayner - J.L. Wright
Covering dates - Geophysics - March 1-5, 1981
Linecutting - February 12-28, 1981
Instrument - Apex Parametrics Max-Min II H.L.E.M.
Linecutting - Pierre Ouellette Prospecting Enr.
C.P. 608,
Amos, Quebec.

Date March 25, 1981

N.W. Rayner
Signature of Recorded Holder or Agent

The Mining Act
Certificate Verifying Report of Work

I,Norman Wallace Rayner.....
Suite 301, 2161 Yonge Street, Toronto, Ontario. M4S 3A6
(Post Office Address)

hereby certify:

1. That I have a personal and intimate knowledge of the facts set forth in the report of work annexed hereto, having performed the work or witnessed same during and/or after its completion.
2. That the annexed report is true.

Dated March 25 19 81

N.W. Rayner
Signature

THE PENALTY FOR MAKING A FALSE STATEMENT IN THIS REPORT AND/OR CERTIFICATE IS \$500. OR SIX MONTHS IMPRISONMENT OR BOTH



Final letter

900

Recorded Holder **Sulpetro Minerals Limited**

Township or Area **Kabik Lake & Pickerel Township**

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic <u>40</u> days	
Magnetometer <u>20</u> days	
Radiometric _____ days	Pa.437097 & 98
Induced polarization _____ days	Pa.486429 to 36 incl.
Section 86 (18) _____ days	Pa.487002 to 05 incl.
Geological _____ days	Pa.541896 to 98 incl.
Geochemical _____ days	Pa.541903 to 05 incl.
	Pa.566803 & 04
	Pa.566806 & 07
	Pa.589032 to 36 incl.
	Pa.594003 to 10 incl.
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.	
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	



Special credits under section 86 (15a) for the following mining claims

[Empty box for special credits]

No credits have been allowed for the following mining claims

not sufficiently covered by the survey Insufficient technical data filed

[Empty box for no credits]



Ontario

RECEIVED

MAY 12 1981

MINING LANDS SECTION

Ministry of Natural Resources

Notification of recording of assessment work credits

Lands Administration Branch Mining Lands Section Ministry of Natural Resources Room 1617, Whitney Block Queen's Park, Toronto M7A 1W3

Date of recording of work: April 2, 1981

Recorded holder: Success Minerals Limited - St. Joseph Explorations Limited -

Address: Suite 301, 2161 Yonge Street, Toronto, Ont.

Township or Area: Kabik Lake & Pickerel Twp. M-2258

Table with 2 columns: Type of survey and number of Assessment days credit per claim; Mining claims. Includes rows for Geophysical (Electromagnetic, Magnetometer, Radiometric, Induced polarization), Section 86 (18), Geological, and Geochemical. Includes checkboxes for Man days, Airborne, Special provision, and Ground.

Notice to recorded holder:

- Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.
Reports and maps are being forwarded to the Lands Administration Branch with this letter.

Acting Mining recorder
c.c. St. Joseph Explor. Ltd. Toronto, Ont.

June 1/81 #81-25 #81-26



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Resources

Ontario

Your file.

August 25, 1981

Our file: 2.3915

Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Sioux Lookout, Ontario
POV 2T0

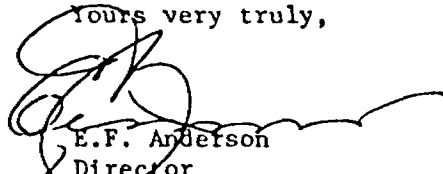
Dear Sir:

Re: Geophysical (Electromagnetic and Magnetometer) Survey on
Mining Claims Pa.437097 et al, in the Area of Kabik Lake
and Township of Pickerel.

The Geophysical (Electromagnetic and Magnetometer) Survey
assessment work credits as shown on the attached statement
have been approved as of the above date.

Please inform the recorded holder of these mining claims and
so indicate on your records.

Yours very truly,



E.F. Anderson
Director
Land Management Branch

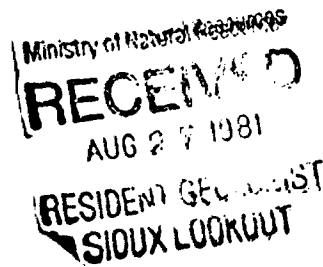
Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

J.S. Halperin/bk

Encl.

cc: Sulpetro Minerals Limited
Toronto, Ontario

cc: D.A. Janes
Resident Geologist
Sioux Lookout, Ontario



92°16'

85M

VERMILION TWP. M.2272

FOR STATUS REFER TO TWP. PLAN

Little
Vermilion
Lake

Cedarbough
L.

12

11

10

9

8

6

5

4

3

VI

Ojibway Provincial Park
File. 168897

*** PICKEREL TWP
M-5088**

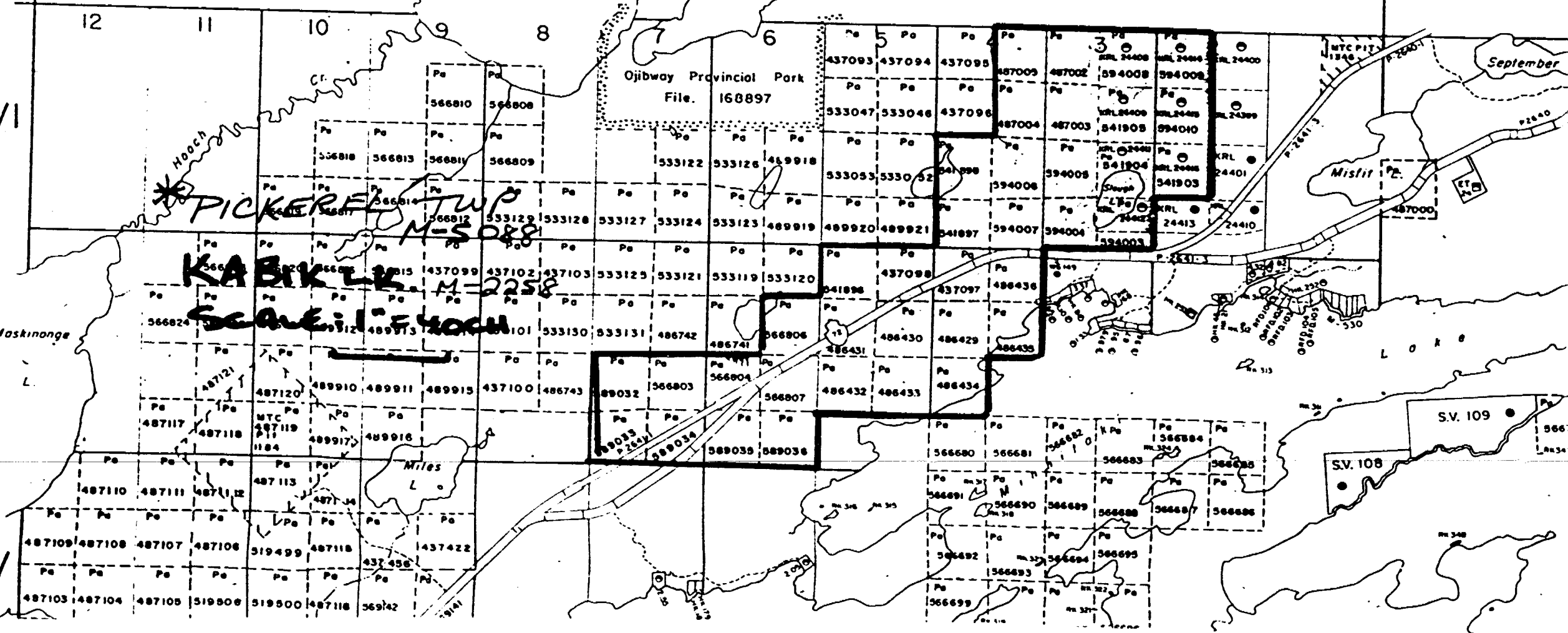
KABIK LK. M-2258

SCARLETT HOCH

V Maskinonge
L.

IV

M.2236



September

Misfit P.

SV. 109

SV. 108

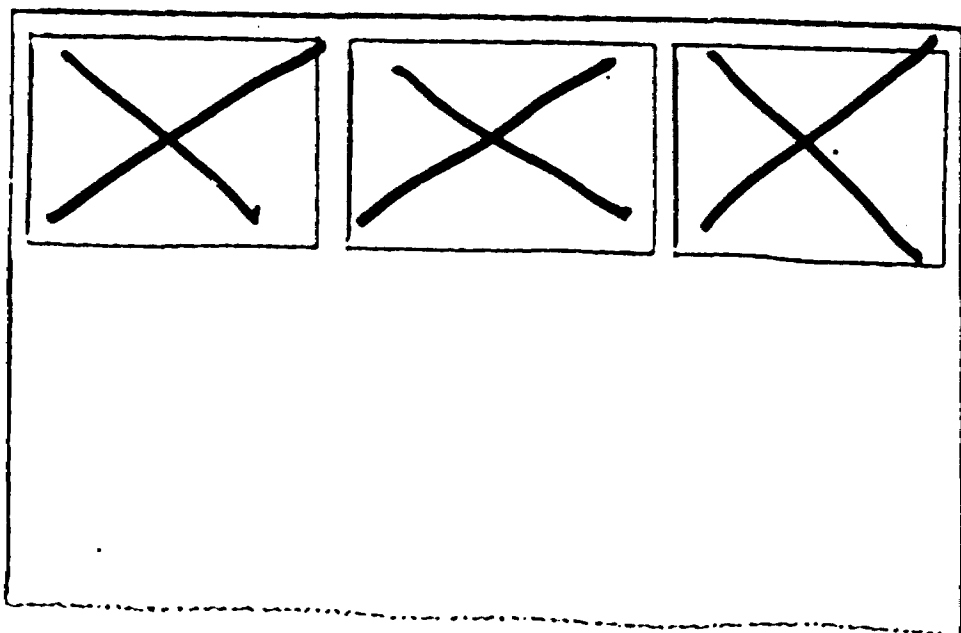
SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

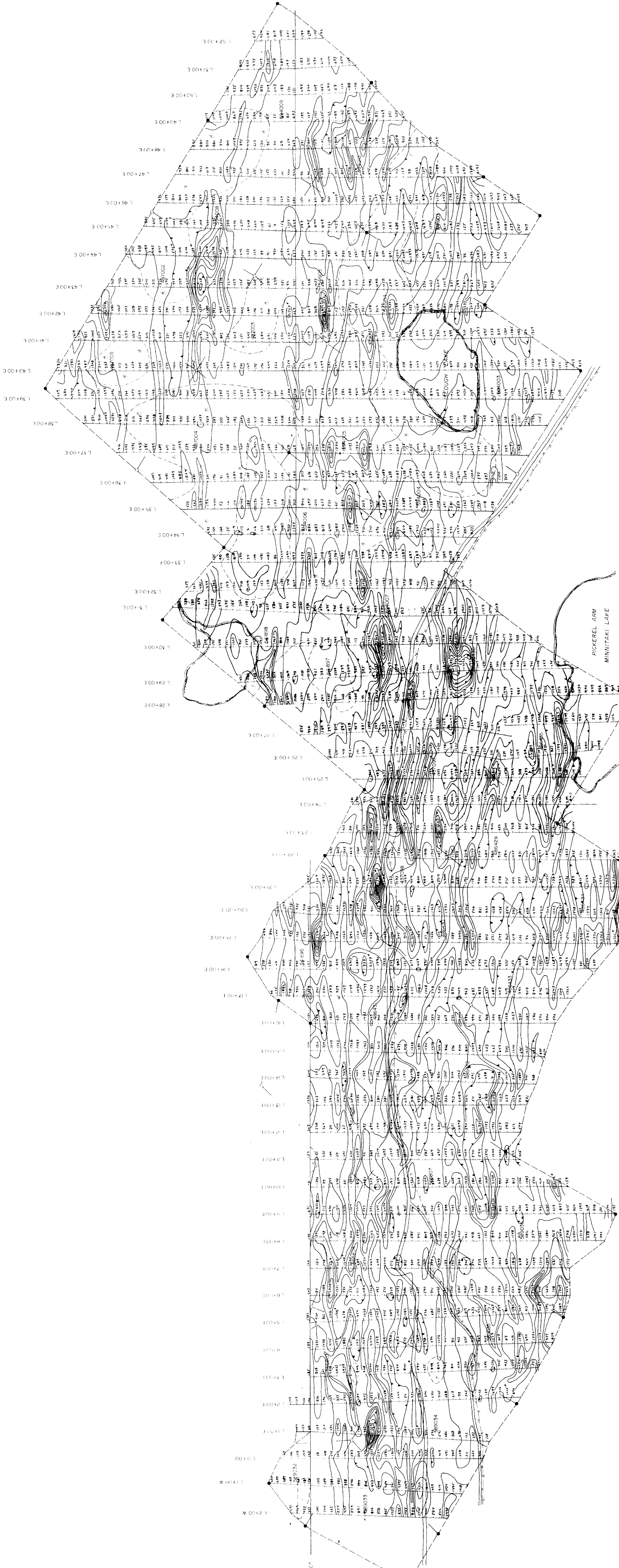
52F/16NE-0030-#1

_____ #2

_____ #3

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





- LEGEND**
- Highway no. 72
 - Road
 - Swamp
 - Claim post, located
 - Claim post, unlocated
 - Witness post
 - Power line

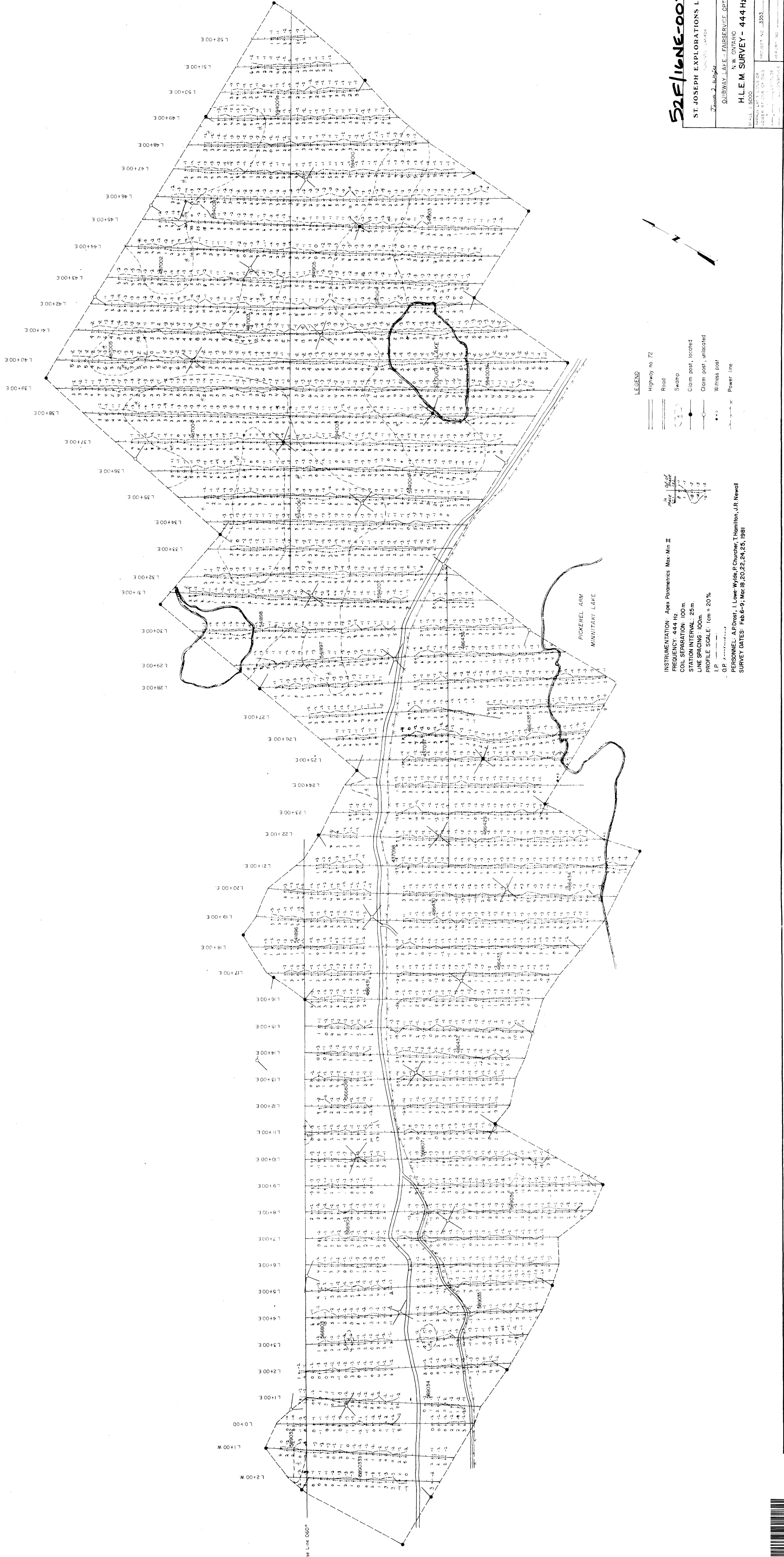
INSTRUMENTATION: Barometer GM-122 Magnetometer
 Scintrex MBS-2 Base Station
 BASE STATION LOCATION: 41 Lakeshore, Saux-Lekouat, Ont.
 BASE STATION VALUE: 605000
 DATUM SUBTRACTED: 600001
 LINE SPACING: 100 m.
 STATION INTERVAL: 25m.
 CONTOUR INTERVAL: 500'
 * FORCED READING
 PERSONNEL: J.R. Newell, T. Hamilton, P. Churcher, D. Windsor
 SURVEY DATES: Jan 12; Feb 5, 12, 13; Mar 21, 23, 1981

52F/16NE-0030-1

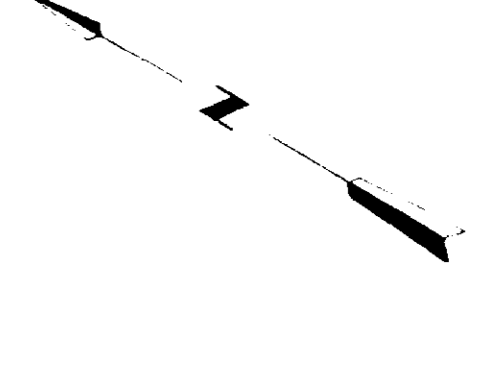
ST. JOSEPH EXPLORATIONS LIMITED
 TORONTO, CANADA
 N.W. ONTARIO
 OJIBWAY LAKE - FAIRSERVICÉ OPTION
 MAGNETOMETER SURVEY
 SCALE: 1:5000

APPROX. EASTING OF	PROJECT NO.	SHEET NO.
412500	3553	1
APPROX. NORTHING OF	DATE	BY
10000	1981	J.R. NEWELL

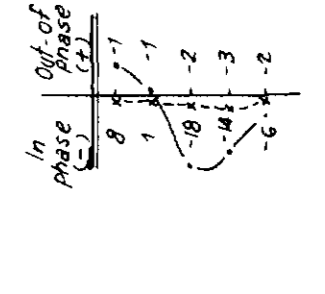




52F/16NE-0030-8
ST. JOSEPH EXPLORATIONS LIMITED
 Town 2, Range 16, N. 16, E. 03, R. 08
 QUIBWAY LAKE - FAIRSERVICE OPTION
 N.W. ONTARIO
H.L.E.M. SURVEY - 444 Hz
 SCALE: 1:5000
 APPROVED BY THE ENGINEER
 PROJECT NO. 3385
 SHEET NO. 1
 DATE: 1981



- LEGEND**
- Highway no 72
 - Road
 - Swamp
 - Claim post, located
 - Claim post, unlocated
 - Witness post
 - Power line



INSTRUMENTATION: Apex Parametrix Mar-Min II
FREQUENCY: 444 Hz
COIL SEPARATION: 100 m
STATION INTERVAL: 25 m
LINE SPACING: 100 m
PROFILE SCALE: 1cm = 20%
 I.P. _____
 O.P. _____

PERSONNEL: A. Frost, I. Lowe, W. P. Churcher, T. Hamilton, J.R. Newall
SURVEY DATES: Feb 6-9, Mar 18, 20, 22, 24, 25, 1981



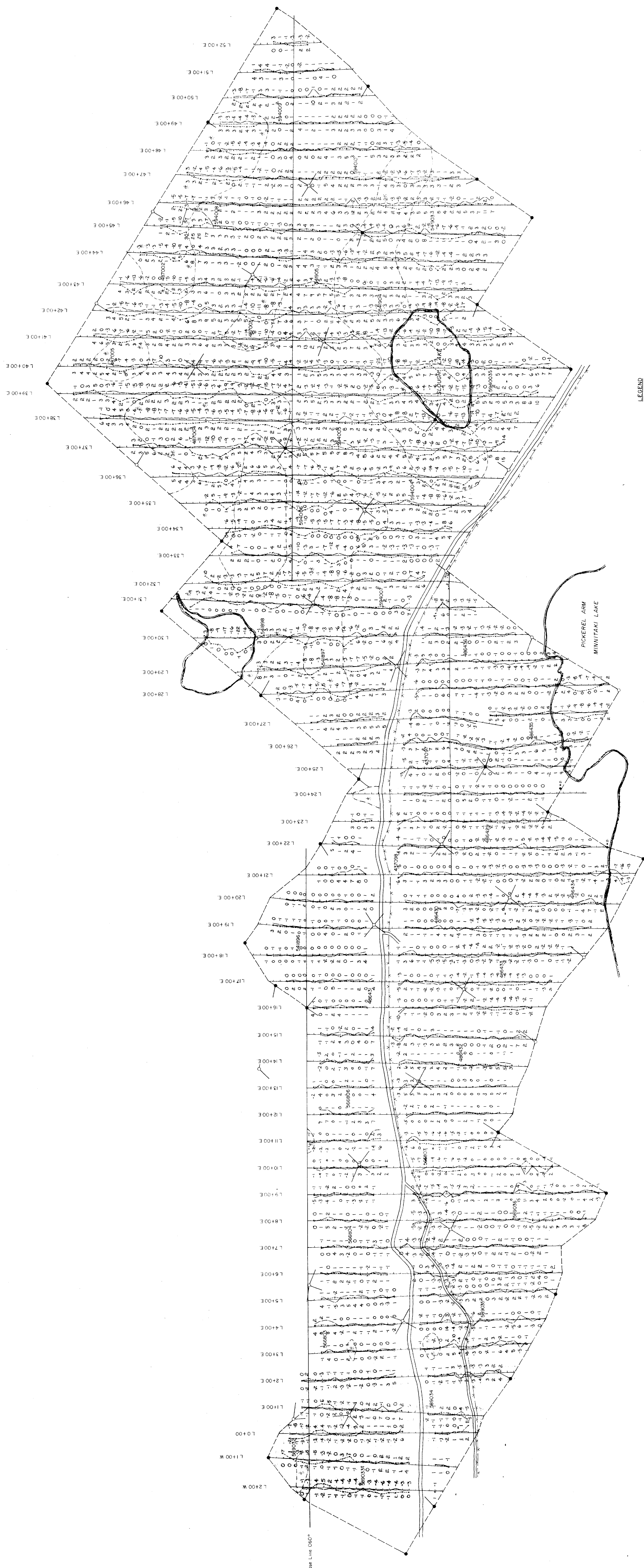
52F/16NE-0030-13

ST. JOSEPH EXPLORATIONS LIMITED
 TORONTO, CANADA

OLIBWAY LAKE - FAIRSERVICE OPTION
 N.W. ONTARIO

H.L.E.M. SURVEY - 1777 HZ.

SCALE: 1:5000
 APPROX. LAT & LONG OF LOWER RT. COR. OF DWG: _____
 PROJECT NO. 3583
 SHEET NO. _____ OF _____
 REPORT NO. _____ NTS. 52E/16



- LEGEND**
- Highway no. 72
 - Road
 - Swamp
 - Claim post, located
 - Claim post, unlocated
 - Witness post
 - Power line

Feet	Meters
1	0.3048
2	0.6096
3	0.9144
4	1.2192
5	1.5240
6	1.8288
7	2.1336
8	2.4384
9	2.7432
10	3.0480

INSTRUMENTATION: Apex Parametrics Mar-Min II
FREQUENCY: 1777 Hz
COIL SEPARATION: 100 m
STATION INTERVAL: 25 m
LINE INTERVAL: 100 m
PROFILE SCALE: 1cm = 20%
 I.P. _____
 O.P. _____

PERSONNEL: A.P. Drost, I. Lowe-Wyde, T. Hamilton, P. Churcher, J. Newall
SURVEY DATES: Feb 8-9, March 18, 20, 22, 24, 25, 1981

