



31M04SW0090 2.2633 STRATHY

010

REPORT ON

HORIZONTAL LOOP E.M. SURVEY

RECEIVED

MAR 23 1978

PROJECTS UNIT

TEMAGAMI-HOLLINGER JOINT VENTURE #195

Claim Sheet M596

NTS31M4W

Lat. 47° 05'

Long. 79° 48'

Sudbury Mining Division

by: N.W. Rayner - Geologist
October 19 - 28, 1977
February 14-17, 22, 1978.

REPORT ON GEOPHYSICAL SURVEYS

1. INTRODUCTION

A Horizontal Loop Electromagnetic Survey was performed on a group of 19 claims in Northeastern Ontario in Strathy Township NTS 31M4W. The work was carried out during October 1977 and February, 1978.

The claim group is under option agreement with Hollinger Mines Limited.

This report covers all claims on which grid lines were cut that were physically possible to traverse with the type of instruments used. As a consequence, some claims do not have complete coverage due to lakes, streams, roads, railways and buildings.

Pertinent data regarding the survey is presented on maps accompanying this report. Data regarding the instruments used may be found in the appendix to this report.

The geophysical surveying was carried out by the following personnel:

- N.W. Rayner, 37 Martin Road, Toronto, Ontario.
- V.C. Papertzian, 89 Macpherson Ave., Toronto, Ontario.
- S.W. Gibson, 71 Evanston Dr., Downsview, Ontario.
- C. Harrison, 28 Wychwood Park, Toronto, Ontario.
- W. Ng-Sec-Quan, 42 Robertsfield Cres., Scarborough, Ont.
- R. Pascoe, P.O. Box 350, Cobalt, Ontario.

2. PROPERTY and CLAIM STATUS

The Temagami-Hollinger Joint Venture property consists of 34 claims of which 19 claims will be covered by this report. The following list describes the claims.

<u>Claim No.</u>	<u>Assessment credits due:</u>
S 398943	March 21, 1978
S 398944	March 21, 1978
S 398945	March 21, 1978
S 398946	March 21, 1978
S 398947	March 21, 1978
S 449375	March 21, 1978
S 399059	March 21, 1978
S 399060	March 21, 1978
S 399061	March 21, 1978
S 399062	March 21, 1978
S 399063	March 21, 1978
S 399064	March 21, 1978
S 399065	March 21, 1978
S 399066	March 21, 1978
S 399067	March 21, 1978
S 399068	March 21, 1978
S 462820	March 21, 1978
S 462821	March 21, 1978
S 462822	March 21, 1978

These claims are owned by Hollinger Mines Limited, (See attached map for location of mining claims).

3. LOCATION and ACCESS

The Temagami-Hollinger Joint Venture property is located in Strathy Township approximately 1 mile north of the town of Temagami astride Highway 11. The grid is easily accessible from Highway 11.

4. GEOLOGICAL SETTING

The area is underlain by northeast southwest striking metavolcanics and metasediments of the Temagami greenstone belt.

Outcrop exposure within the area of the claims is limited because of numerous lakes, streams, swamps and glacial overburden.

The most up to date geological map is published by the Ontario Department of Mines and Northern Affairs, Preliminary Map 667 Strathy Township, at a scale of 1 inch equal 1/4 mile. The regional geology is shown on Map 2188, Sudbury-Cobalt sheet.

5. HISTORY of PREVIOUS WORK

This area has seen discontinuous mineral exploration since 1890 with the most intensive exploration since 1955. The following is a list of properties which have received work that in part make up the present claim group.

- 1) Penrose Gold Mines Limited
- 2) Wm. G. Morrison
- 3) Wm. Milne and Sons, Limited
- 4) Paul D. Hermiston
- 5) Ralph H. Percy
- 6) Edwin, Lester MacVeigh
- 7) T. E. Chester
- 8) Lake Beaverhouse Mines Limited
- 9) Maralgo Mines Limited

The area has received a good deal of trenching in areas of mineral showings as well as several drill holes in various parts of the property. Some electro-magnetic and magnetic surveys have been carried out by previous workers on portions of the present claim group.

6. CURRENT GEOPHYSICAL WORK

6.1 Grid

Two baselines and a sub baseline were established to cover all the claims.

Claim S 449375 is wholly underlain by water. Grid lines on the lake were tied to existing lines on claims S 460736-37.

An east-west baseline was put in along an Ontario Hydro transmission right of way with azimuth 250°.

Six cross lines were cut to cover the 5 most westerly claims (S 398943-47 incl.).

An east-west sub baseline was turned off of line 12+00W at 20S and extended to the east. Twenty-seven cross lines cover claims S 399059-68 incl. and S 462820-22 incl. of the Temagami-Hollinger property. All lines were spaced 400' apart with pickets placed at 100' intervals along the lines.

6.2 Horizontal Loop Electromagnetic Survey

The grid lines on all claims were surveyed using the Apex Parametrics Max-Min II system. Two frequencies 1777 hz and 444 hz were recorded at each station. Coil separation was 100 metres.

Additional instrument data regarding the Max-Min II unit is given as an appendix to this report.

Surveying was hampered because of the network of major roads, highways and railways. As a result the survey is incomplete 50 metres either side of these cultural features.

Surveying in the vicinity of powerlines and gas pipelines gave strong electromagnetic responses in most cases. If there are any conductors due to a bedrock source near either the powerlines or the pipelines, they will be difficult to isolate.

The following is a list of electromagnetic conductors with their location and interpretation.

<u>Conductor</u>	<u>Location of Intercepts</u>	<u>Interpretation</u>
A	line 36W 700N	TransCanada Gas Pipeline
J	line 32E 1700S	railway
K	line 40W 325S line 44W 375S	powerline combination powerline and railway
L	line 4W BL 2000S	powerline, possible bed- rock conductor, due to shape of positive I.P. and O.P. shoulders

<u>Conductor</u>	<u>Location of Intercepts</u>	<u>Interpretation</u>
M	line 28E 1400S	railway, possible bedrock conductor due to northly shift of conductor axis
N	line 80E 650S	very weak bedrock conductor, possible minor sulfide
O	line 44N 1900E line 48N 1950E	conductive lake bottom sediments

7. CONCLUSIONS and RECOMMENDATIONS

Anomalies A, J and K are caused by cultural features. Anomalies L and M are closely associated with cultural features, but the shape of the profiles and the displacement of the conductor axis away from the cultural source suggests there might be a possible bedrock source.

Anomaly N is a very weak bedrock response. The low amplitude of the in-phase and out-of-phase readings indicate very minor sulfide. Anomaly O is a broad wavey out-of-phase conductor which is typical response from lake bottom sediments.

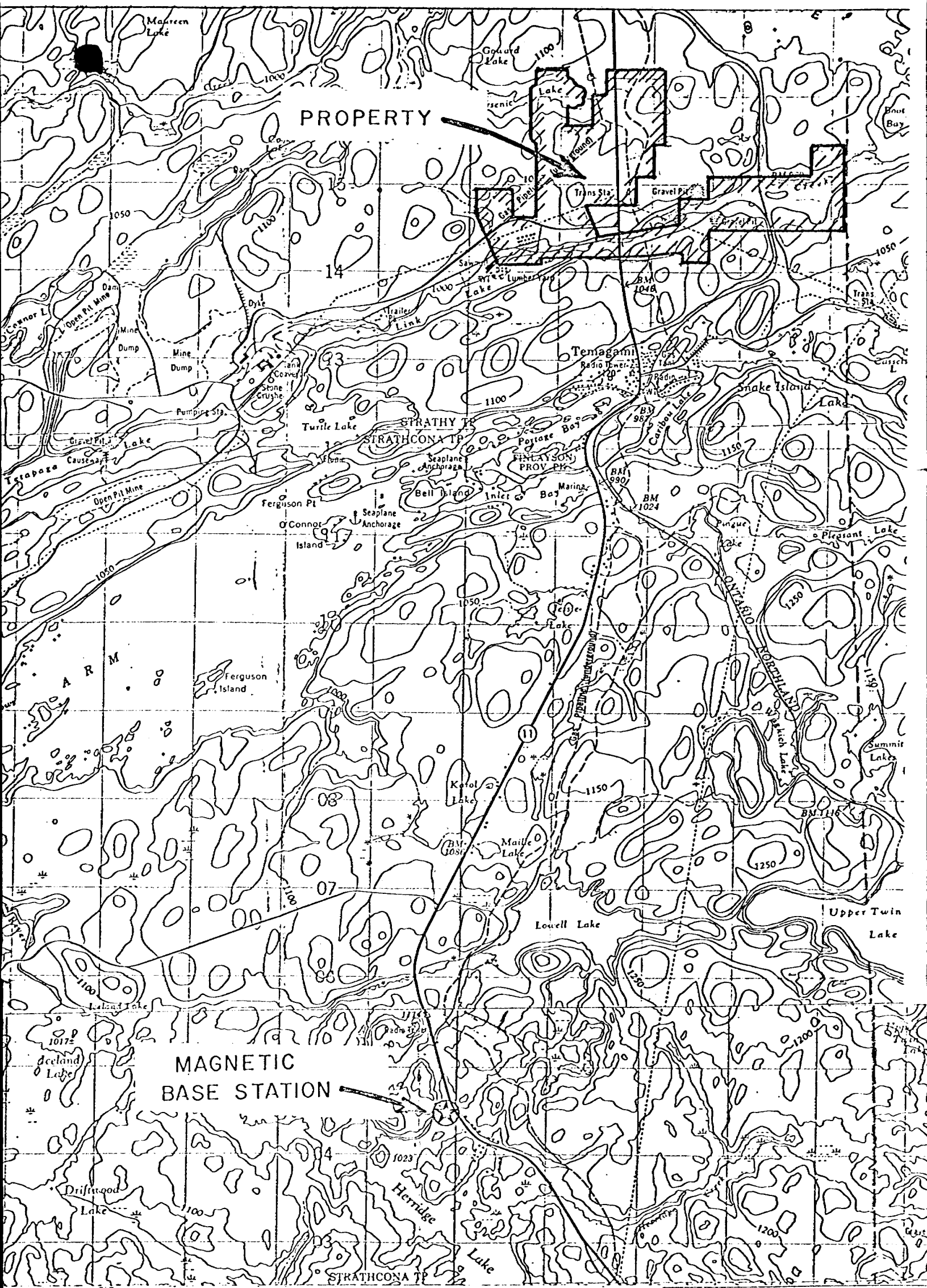
I recommend geological follow-up in areas of anomalies L, M and N.

Respectfully submitted,

N.W. Rayner

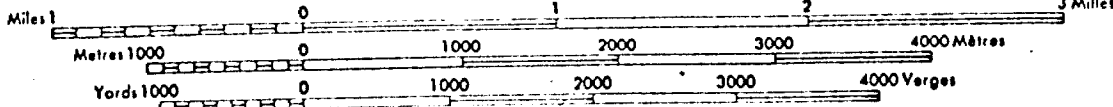
N.W. Rayner

NWR*MS



TEMAGAMI ONTARIO

Scale 1:50,000 Échelle



ST. JOSEPH EXPLORATIONS LIMITED
TORONTO, CANADA

LOCATION MAP

SCALE 1" =	PROJECT NO 195	SHEET NO
APPROX LAT & LONG OF LOWER RT COR OF DWS	REPORT NO	OF
— LATITUDE		11
— LONGITUDE		31



GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA



31M045W0090 2.2633 STRATHY

900

TO BE ATTACHED AS AN APPENDIX
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Horizontal Loop E.M.
 Township or Area Strathy Twp.
 Claim Holder(s) Hollinger Mines Limited
 Survey Company St. Joseph Explorations Ltd.
 Author of Report N. W. Rayner
 Address of Author 90 Eglinton Ave. West, Ste. 505,
Toronto, Ontario.
 Covering Dates of Survey Oct. 19-28/77 Feb. 14-17/78
 (linecutting to office)
 Total Miles of Line Cut _____

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

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
 Magnetometer _____ Electromagnetic _____ Radiometric _____
 (enter days per claim)

DATE: March 14/78 SIGNATURE: N.W. Rayner
 Author of Report or Agent

Res. Geol. L.D. Qualifications 2.1785

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED		
List numerically		
EM		
✓	S	398946
	(prefix)	(number)
✓	S	398944
1/3	S	398945
✓	S	398943
1/4	S	398947
✓	S	449375
1/3	S	399059
✓	S	399060
✓	S	399061
✓	S	399063
✓	S	399062
1/3	S	399064
✓	S	399065
✓	S	399066
✓	S	462820
✓	S	462821
✓	S	462822
✓	S	399067
✓	S	399068
TOTAL CLAIMS		19

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 E.M. 910 Number of Readings E.M. 1820
Station interval 100' Line spacing 400'
Profile scale 1 inch = 30%
Contour interval

MAGNETIC

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

ELECTROMAGNETIC

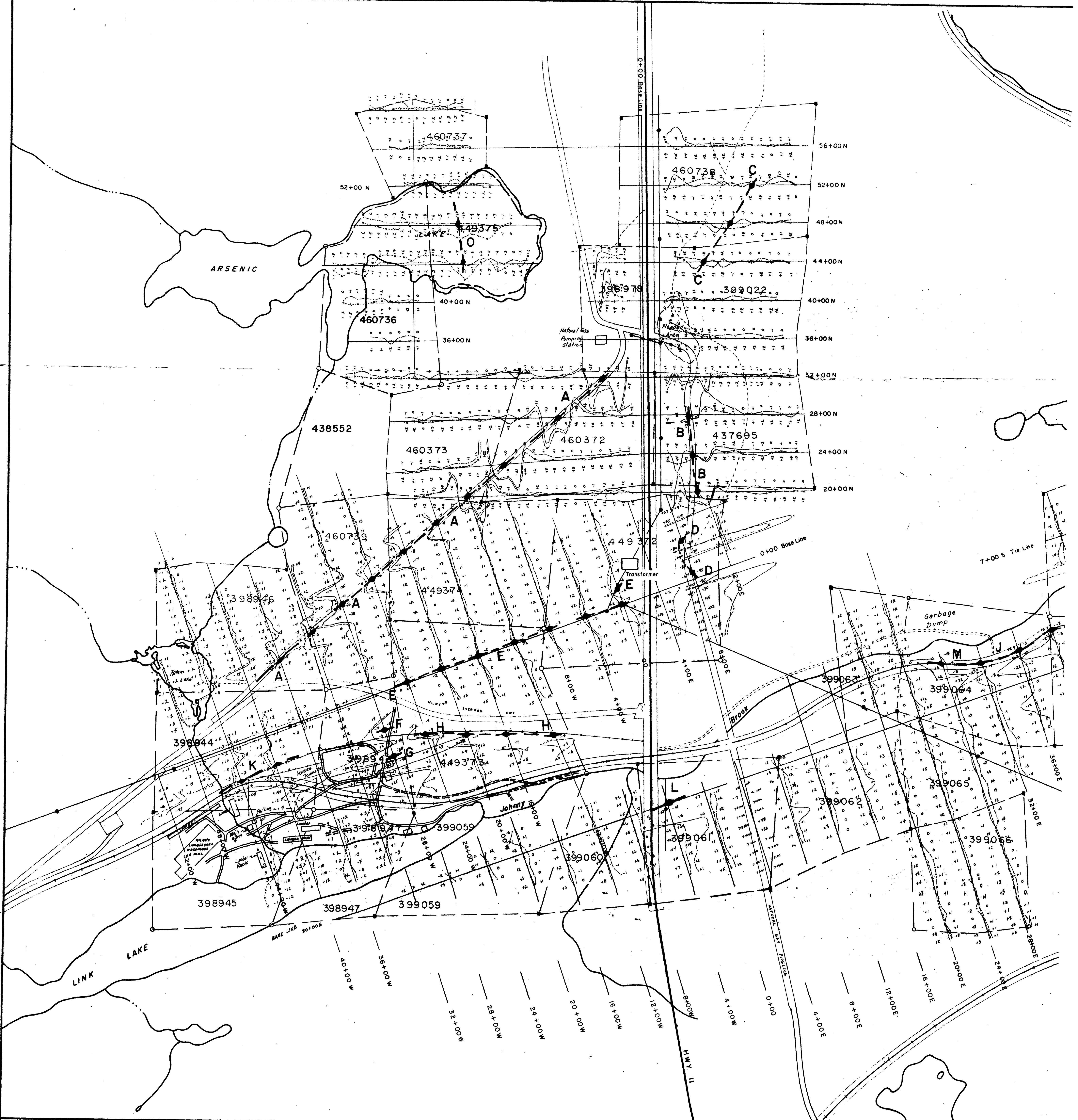
Instrument Apex Parametrics Max-Min II
Coil configuration Horizontal Loop
Coil separation 100 meters
Accuracy +/- 0.5%
Method: [] Fixed transmitter [] Shoot back [x] In line [] Parallel line
Frequency 1777 Hz and 444 Hz (specify V.L.F. station)
Parameters measured In phase and out of phase component 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



INSTRUMENT: Max-Min II
 FREQUENCY: 1777 Hz.
 PROFILE SCALE: 1" = 30%
 OPERATORS: S. W. Gibson, N.W. Reyner, W. Ng-Soo-Quan, R. Pascoe,
 C. F. Harrison, V. C. Papertian
 Horizontal Mode, 100 meter separation
 DATE: Oct 19-28, 1977
 FEB 14-17, 22, 1978

In-phase
 Out-of-phase

Conductor axis, A-J
 K-O

Claim post, located, unlocated

ST. JOSEPH EXPLORATIONS LIMITED
 TORONTO, CANADA

STRATHY TOWNSHIP, ONT.
 HOLLINGER J.V.
 HORIZONTAL LOOP E.M. SURVEY

SCALE: 1" = 400'
 APPROX LAT & LONG OF LOWER RT. COR. OF DWG. PROJECT NO. 195 SHEET NO. OF
 LATITUDE REPORT NO. NTS 31 M/4

NET LAKE

0

Telephone line along Railway

70

462820

462822

462821

438553

438554

399067

399068

40400E

41400E

42400E

43400E

44400E

45400E

64400E

65400E

72400E

73400E

80400E

Ont.

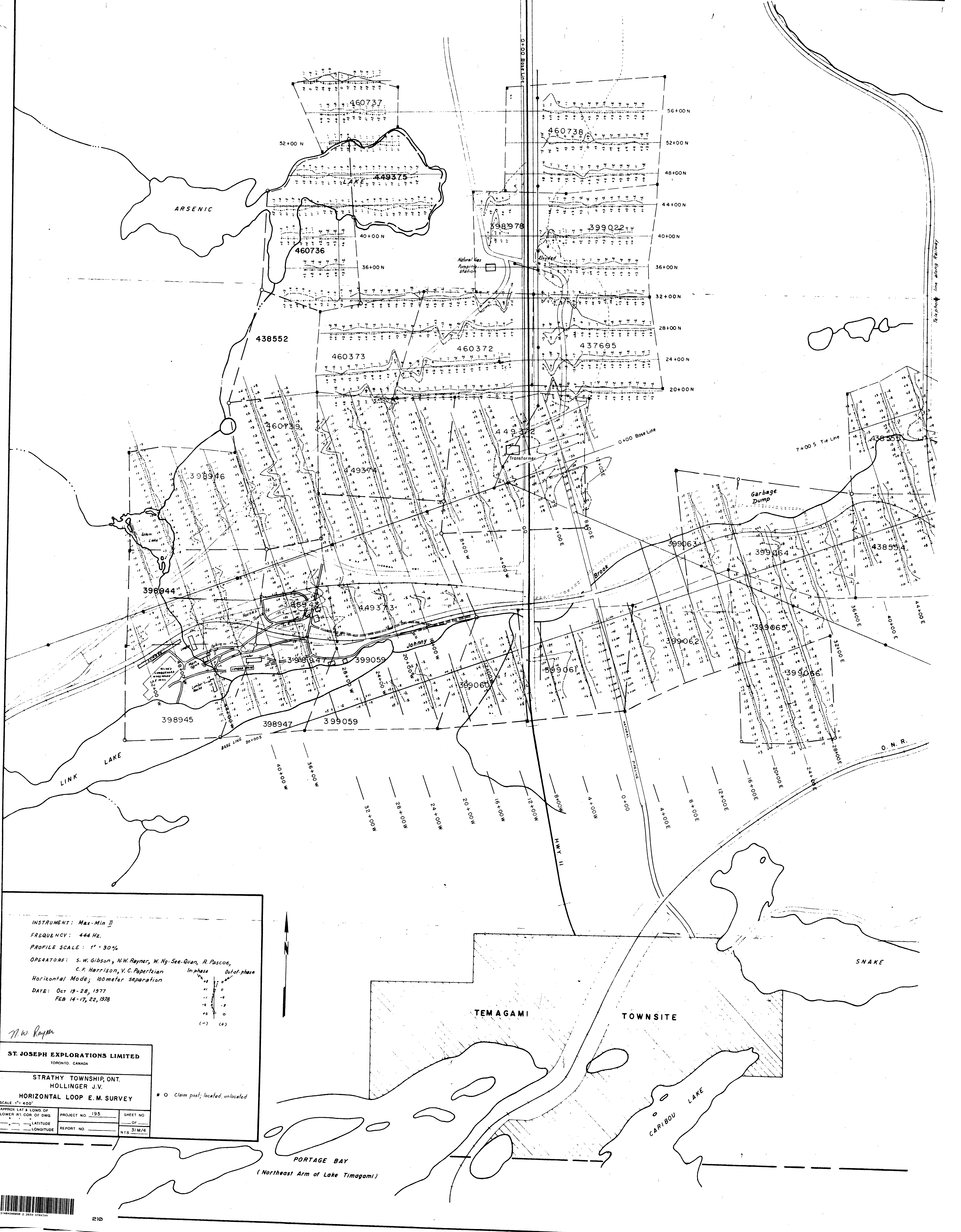
Hydro

Transmission

O. N. R.

SNAKE ISLAND LAKE

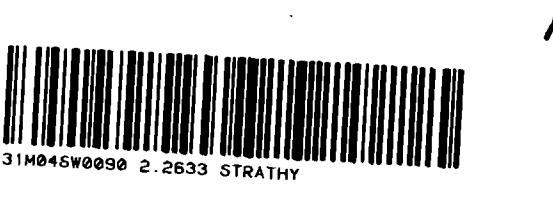
STRATHY TWP.
STRATHCONA TWP.



INSTRUMENT: Max-Min T
 FREQUENCY: 444 Hz.
 PROFILE SCALE: 1" = 30%
 OPERATORS: S. W. Gibson, N.W. Rayner, W. Ng-See-Quan, R. Pascoe,
 C. F. Harrison, V. C. Papertkian
 Horizontal Mode; 100 meter separation
 DATE: Oct 19-28, 1977
 FEB 14-17, 22, 1978

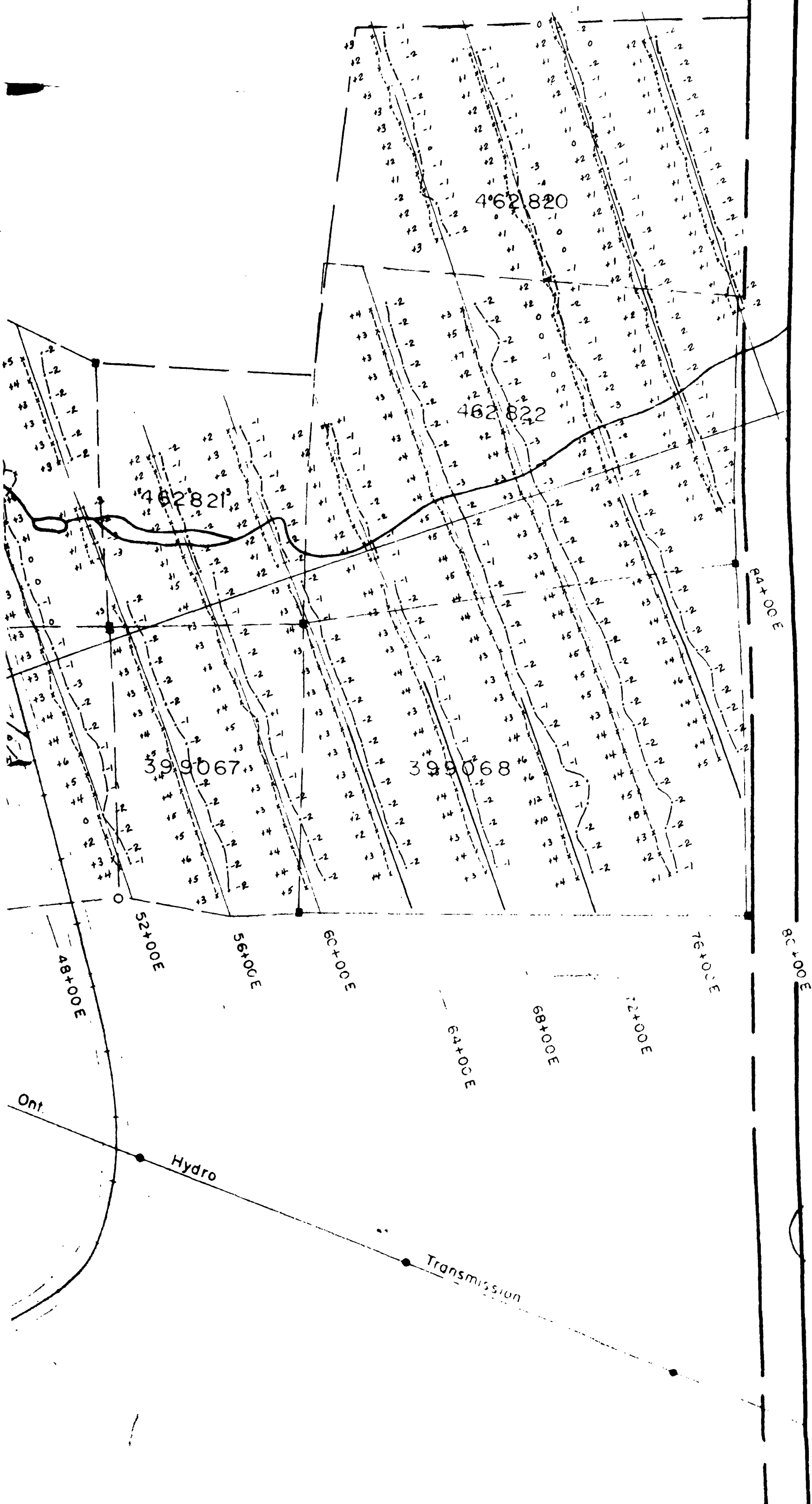
N.W. Rayner

ST. JOSEPH EXPLORATIONS LIMITED TORONTO, CANADA	
STRATHY TOWNSHIP, ONT. HOLLINGER J.V.	
HORIZONTAL LOOP E.M. SURVEY	
SCALE: 1" = 400' APPROX. LAT. & LONG. OF LOWER R.L. COR. OF DWG.	PROJECT NO. 195 REPORT NO.
SHEET NO. _____ OF _____ DATE: _____ NTS: 31 M/4	CLAIM POST; LOCATED, UNLOCATED



NET LAKE

0



ISLAND LAKE

STRATHY TWP.
STRATHCONA TWP