



TEXASGULF CANADA LTD.
 REPORT ON GEOPHYSICAL WORK
 MATHESON TOWNSHIP
 N.T.S.: 42-A-10/9

CLAIM NUMBERS:

Matheson 51:	P 525091		①
	P 528330 - 349	✓	20
	P 528371 - 373	✓	3
	P 528404 - 408		5 29 ✓
Matheson 53:	P 528351 - 356		6
	P 528359 - 363	✓	5
	P 528366 - 369		4 15 ✓
Matheson 55:	P 515771 - 774		4
	P 515844 - 845		2
	P 525298 - 299		2 ✓
	P 528386 - 387		2
	P 528390 - 395		6
	P 525349 - 351		3
Matheson 45:	P 528409 - 412		4 23 cl's ✓
	P 528379 - 384		6
	P 528417 - 420		4 10 cl's

15
8
23 ✓

TEXASGULF CANADA LTD.
REPORT ON GEOPHYSICAL WORK
MATHESON TOWNSHIP
N.T.S.: 42-A-10/9

INTRODUCTION:

Geophysical surveys consisting of proton precession magnetometer and horizontal loop electromagnetic traverses were conducted over a total of seventy-seven (77) staked claims in Matheson Township. In addition, these surveys covered two leased claims and one patented half lot.

Because of the early breakup conditions encountered at the time of the surveys, a number of gaps occur in the data, especially where flooded creeks made traverses impossible.

PREVIOUS WORK

Little assessment work has been filed with the regional geologist's office for any of the claims. Some geophysics and diamond drilling were filed by both Dominion Gulf and Hollinger Mines. Dominion Gulf drilled one hole on what presently is the Matheson 53 claim group. Hollinger drilled two additional holes on this claim group and one on the Matheson 55 property.

The Hollinger drilling intersected graphitic material at the contact between sediments and mafic volcanics. The Dominion Gulf hole intersected both mafic and ultramafic volcanics

SURVEY DETAILS

On all four properties, lines were cut North-South at 100 metre intervals with stations established every 20 metres. Magnetic values were recorded at 20 metre intervals using a

Geometrics G-816 Proton Precession magnetometer. An Apex Parametrics Max Min II was used for the horizontal loop work. Values were recorded every 40 metres with 20 metre detail taken in anomalous areas.

SURVEY RESULTS

Matheson 51:

A prominent magnetic high strikes roughly east-west across the north half of the property. This feature is centred at about 800 N at 200 E and at 500 N at 1600 E. This very likely represents an ultramafic horizon. There is a strong possibility that faulting, represented by north-west trends A and B, results in a break in the east-west pattern at line 1200 E. On the west boundary, high magnetic values at the north end of line 0 and similarly high values at the south end of line 100 E are indicative of a north-south trending diabase dike. No definite magnetic patterns can be seen in the remainder of the property.

A conductive zone parallels the east-west trend and is located approximately 200 metres south of the ultramafic horizon. The zone is quite narrow but at places appears to be highly conductive. This zone is shallowest (least overburden cover) at lines 600 E to 800 E. Any testing of this conductor should be done on these lines, keeping in mind that from the E.M. profiles it is likely that the zone dips to the north. This zone very likely represents a graphitic horizon at the contact with mafic volcanics to the north and sediments to the south. Numerous weaker conductive responses have been marked. Although most of them are discontinuous and poorly conducting, they may be significant in indicating additional contacts.

Matheson 53:

A major conductive zone trends east-west through the property. Previous drilling indicates that this conductor is due to graphite at the contact between sediments to the north and mafic

volcanics to the south. At the extreme south-west edges of claims P 528368 and P 528361, high magnetics indicates the presence of the same ultramafic horizon located in Matheson 51. On the Matheson 51 property, however, there is no indication of a highly conductive horizon 500 to 600 metres north of the ultramafics as there is on this property.

Matheson 55:

Only the magnetics for the north part of this property is available at the present time. The magnetics is quite flat and for the most part appears to represent underlying sediments. A small magnetic high at the south-west corner may be due to underlying mafic volcanics.

Again the horizontal loop survey indicates a major conductive trend crossing the north portion of the property. This zone is very likely the continuation of the conductor located on Matheson 51. Previous drilling again indicates that the conductor is due to graphitic material. This conductor stops abruptly at line 700 E. On lines 500 E and 600 E, a second conductor occurs immediately to the south; however, wet conditions made it impossible to trace this zone westward.

On the south part of the property, a conductor runs from 200 S on line 800 W to 300 S on line 500 W before it is lost in the interference from the railway tracks. This zone may be in a stratigraphically similar position to the conductor on the Matheson 51 property.

Matheson 45:

Only magnetic surveys were completed here before breakup. The property is very flat magnetically and is very likely wholly underlain by sediments. The magnetic activity at 500 S on line 600 E may be cultural.

CONCLUSIONS AND RECOMMENDATIONS

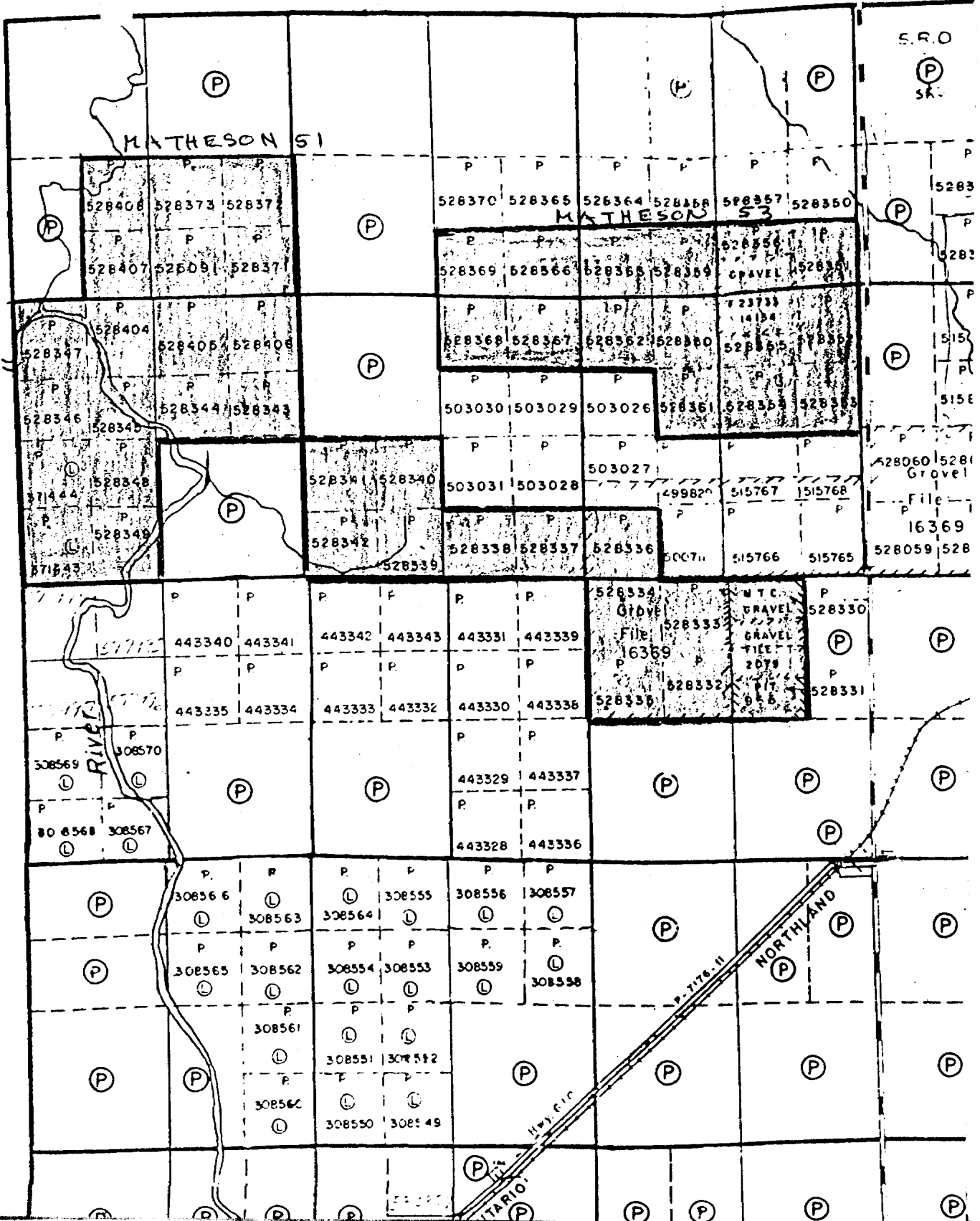
Only the Matheson 45 property seems to be of little interest with respect to potential gold mineralization. All the other properties seem to be on or close to zones of mafic and ultramafic volcanics in contact with sediments.

Matheson 51 appears to be particularly interesting and a program of overburden drilling based on a geological interpretation of the geophysical data should be initiated. Basal till and bedrock sampling will help in tracing the source of any gold mineralization as well as define the geology.

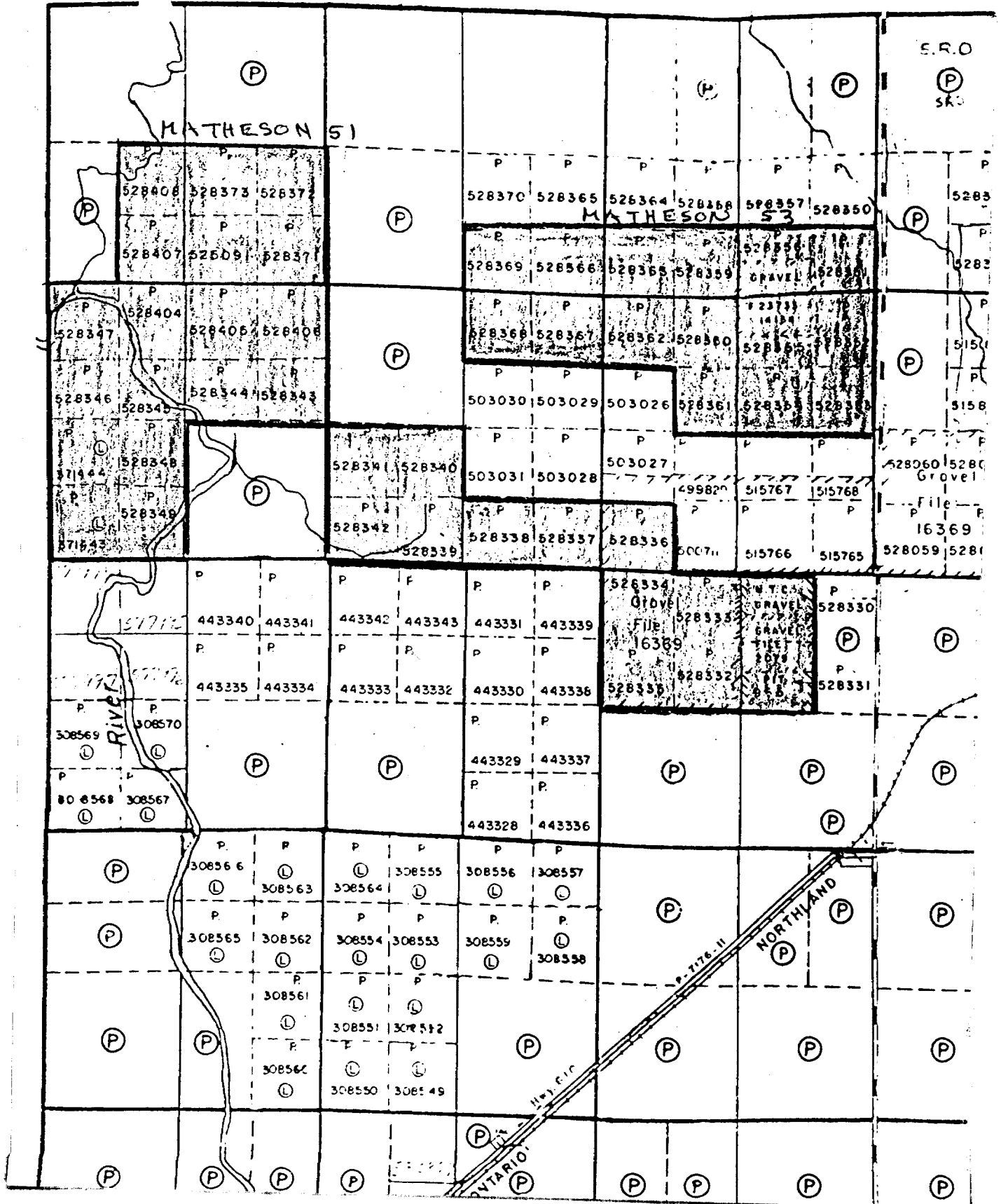


W. A. GASTEIGER

Evelyn Twp



Evelyn Twp





Ministry

GEOPHYSICAL - C
TECHNICAL



42A10SW0091 2.3906 MATHESON

File

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 MATHESON

Claim Holder(s) TEXASGULF CANADA LTD.
P.O. BOX 1140, TIMMINS, ONTARIO

Survey Company SAME AS ABOVE

Author of Report W.A. GASTEIGER

Address of Author AS ABOVE

Covering Dates of Survey FEBRUARY /81 - MAY /81
(linecutting to office)

Total Miles of Line Cut 40 MILES

MATHESON 51

MINING CLAIMS TRAVERSED
List numerically

P	525091
(prefix)	(number)
P	528330
P	528331
P	528332
P	528333
P	528334
P	528335
P	528336
P	528337
P	528338
P	528339
P	528340
P	528341
P	528342
P	528343
P	528344
P	528345
P	528346
P	528347
P	528348
P	528349

If space insufficient, attach list

**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	<u>20</u>
-Magnetometer	<u>40</u>
-Radiometric	
-Other	
Geological	
Geochemical	

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: May 27th, 1981 SIGNATURE: W.A. Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications 2, 1798

Previous Surveys

File No.	Type	Date	Claim Holder

List Continued attached

TOTAL CLAIMS 29

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag. 2479
E.M. 998 Number of Readings Mag. 2479
E.M. 998
 Station interval Mag. 40 metres
E.M. 20 metres Line spacing 100 metres
 Profile scale 1 cm = 20%
 Contour interval 100 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Precession Magnetometer
 Accuracy - Scale constant ± 1 gamma
 Diurnal correction method Base line corrected by looping along base line at
Base Station check-in interval (hours) 100 metre intervals. Line loops subsequently
Base Station location and value corrected to base line values. Base station at
0 on base line 0 = 59563

ELECTROMAGNETIC

Instrument APEX PARAMETRICS MAX-MIN II
 Coil configuration COPLANAR
 Coil separation 160 METRES
 Accuracy ± 1%
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency 1777 Hz
(specify V.L.F. station)
 Parameters measured In phase and quadrature component of the secondary field
as a percentage of the primary transmitted 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 _____

MINING CLAIMS TRAVERSED

List Continued.....

P 528371

P 528372

P 528373

P 528404

P 528405

P 528406

P 528407

P 528408



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
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TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOPHYSICAL
Township or Area MATHESON
Claim Holder(s) TEXASGULF CANADA LTD.
P.O. BOX 1140, Timmins, Ontario
Survey Company SAME AS ABOVE
Author of Report W.A. GASTEIGER
Address of Author AS ABOVE
Covering Dates of Survey FEBRUARY /81 - MAY /81
(linecutting to office)
Total Miles of Line Cut 16 MILES

MATHESON 53

MINING CLAIMS TRAVERSED
List numerically

P	528351
(prefix)	(number)
P	528352
P	528353
P	528354
P	528355
P	528356
P	528359
P	528360
P	528361
P	528362
P	528363
P	528366
P	528367
P	528368
P	528369

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic	<u>20</u>
	-Magnetometer	<u>40</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: May 27th, 1981 SIGNATURE: W.A. Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications _____

<u>Previous Surveys</u>			
File No.	Type	Date	Claim Holder

TOTAL CLAIMS 15

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Mag: 1177 E.M.: 560 Number of Stations
Mag.: 1177 E.M.: 560 Number of Readings
Station interval Mag. 20 metres E.M. 40 metres Line spacing 100 metres
Profile scale 1 cm = 20%
Contour interval 100 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Magnetometer
Accuracy - Scale constant + 1 gamma
Diurnal correction method Base line corrected by looping along base line at
Base Station check-in interval (hours) 100 metre intervals. Line loops subsequently
Base Station location and value corrected to base line values. Base station at
0 on base line 0 = 59387

ELECTROMAGNETIC

Instrument APEX PARAMETRICS MAX-MIN II
Coil configuration COPLANAR
Coil separation 160 METRES
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 quadrature component of the secondary field as a percentage of the primary transmitted 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



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
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TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOPHYSICAL
Township or Area MATHESON
Claim Holder(s) TEXASGULF CANADA LTD.
P.O. BOX 1140, TIMMINS, ONTARIO
Survey Company SAME AS ABOVE
Author of Report W.A. GASTEIGER
Address of Author AS ABOVE
Covering Dates of Survey FEBRUARY /81 - MAY /81
(linecutting to office)
Total Miles of Line Cut 27 MILES

MATHESON 55

MINING CLAIMS TRAVERSED
List numerically

P	515771
(prefix)	(number)
P	515772
P	515773
P	515774
P	515844
P	515845
P	525298
P	525299
P	528386
P	528387
P	528390
P	528391
P	528392
P	528393
P	528394
P	528395
P	525349
P	525350
P	525351
P	528409
P	528410
P	528411
P	528412

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>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	_____
	-Other	_____
	Geological	_____
	Geochemical	_____

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

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

DATE: May 27th, 1981 SIGNATURE: W.A. Gasteiger
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 23

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Mag.: 1155 Mag.: 1155
Number of Stations E.M.: 760 Number of Readings E.M.: 760
Station interval Mag.: 20 metres Line spacing 100 Metres
E.M.: 40 metres
Profile scale 1 cm = 20%
Contour interval 50 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Magnetometer
Accuracy - Scale constant + 1 gamma
Diurnal correction method Base line corrected by looping along base line at
Base Station check-in interval (hours) 100 metre intervals. Line loops subsequently
Base Station location and value corrected to base line values. Base station at
1200 W on 800 N tie line = 59486

ELECTROMAGNETIC

Instrument APEX PARAMETRICS MAX-MIN II
Coil configuration COPLANAR
Coil separation 160 METRES
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 quadrature component of the secondary field
as a percentage of the primary transmitted 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



Ministry of Natural Resources

File _____

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
Township or Area MATHESON
Claim Holder(s) TEXASGULF CANADA LTD.
P.O. BOX 1140, TIMMINS, ONTARIO
Survey Company SAME AS ABOVE
Author of Report W.A. GASTEIGER
Address of Author AS ABOVE
Covering Dates of Survey FEBRUARY /81 - MAY /81
(linecutting to office)
Total Miles of Line Cut 11.5 MILES

MATHESON 45

MINING CLAIMS TRAVERSED
List numerically

Table with 2 columns: Prefix (P) and Number (528379, 528380, 528381, 528382, 528383, 528384, 528417, 528418, 528419, 528420)

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED table with columns for Geophysical, Geological, Geochemical and DAYS per claim.

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

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

DATE: May 27th, 1981 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

Table with 4 columns: File No., Type, Date, Claim Holder

TOTAL CLAIMS 10

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations Mag.: 657 Number of Readings Mag. 657
Station interval 20 metres Line spacing 100 metres
Profile scale
Contour interval 50 gammas

MAGNETIC

Instrument Geometrics G-816 Proton Magnetometer
Accuracy - Scale constant + 1 gamma
Diurnal correction method Base line corrected by looping along base line at
Base Station check-in interval (hours) 100 metre intervals. Line loops subsequently
Base Station location and value corrected to base line values. Base station at
700 E on base line 0 = 59371

ELECTROMAGNETIC

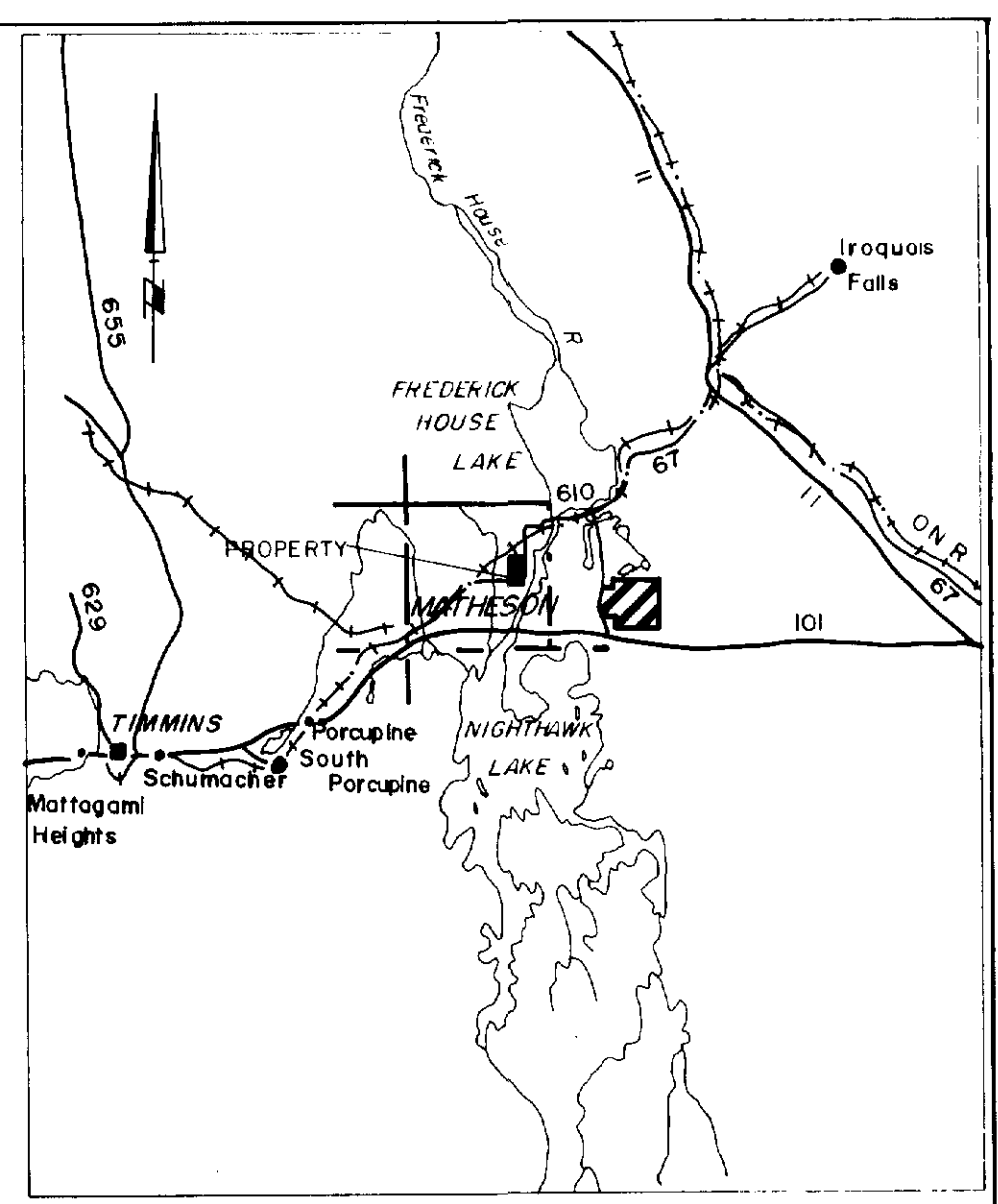
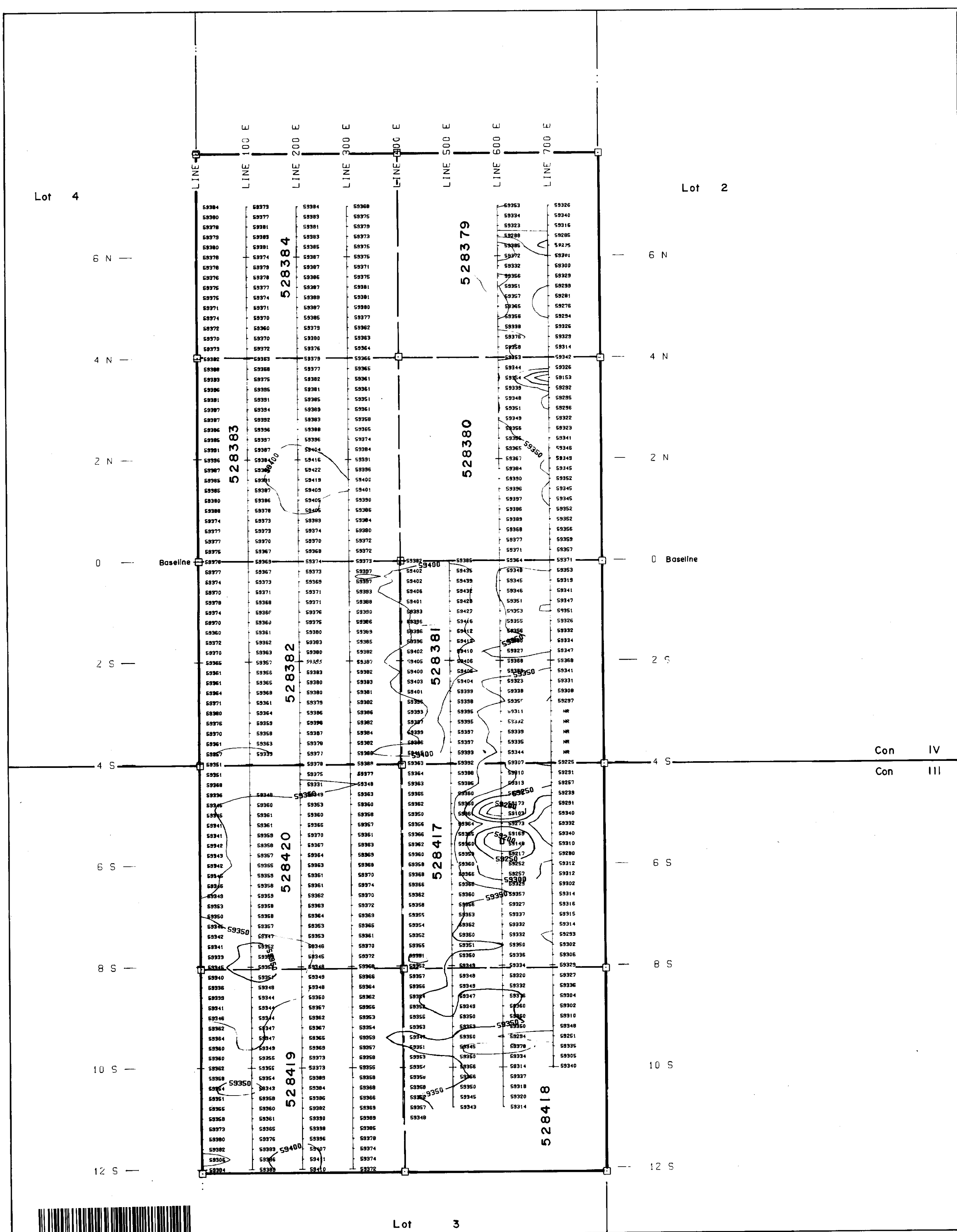
Instrument
Coil configuration
Coil separation
Accuracy
Method: [] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency (specify V.L.F. station)
Parameters measured

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

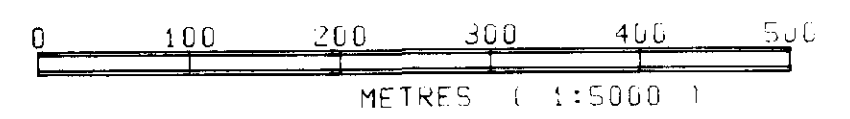


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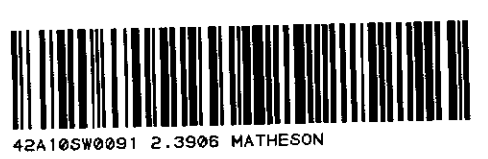


LEGEND

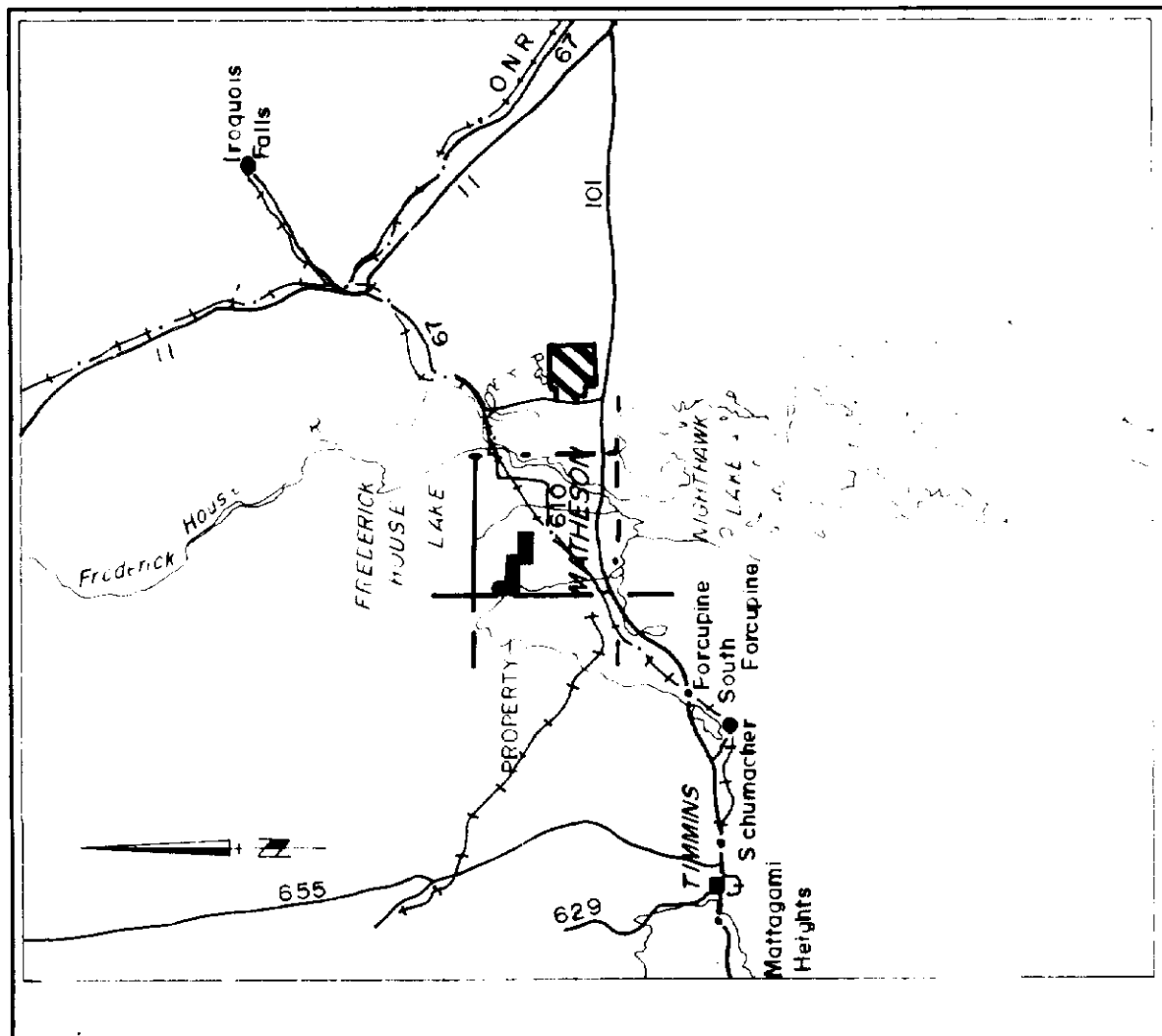
INSTRUMENT : GEOMETRICS 6816
 TYPE : PROTON PRECISION, TOTAL FIELD
 READINGS IN GAMMAS
 ▲ MAGNETIC BASE STATION



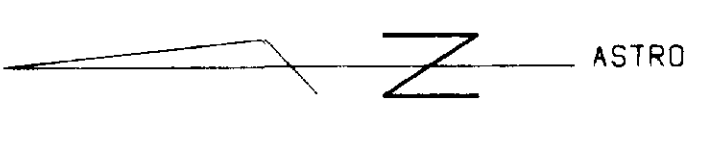
TEXASGULF CANADA LTD.	
MAGNETIC SURVEY	
MATHESON45 2,3906	
NTS: 42A9/10	PROJ. #82
WORK BY	DATE
	1981



Neil Cartwright

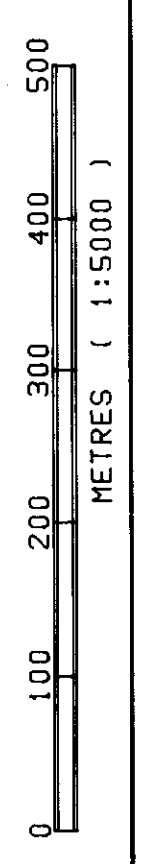


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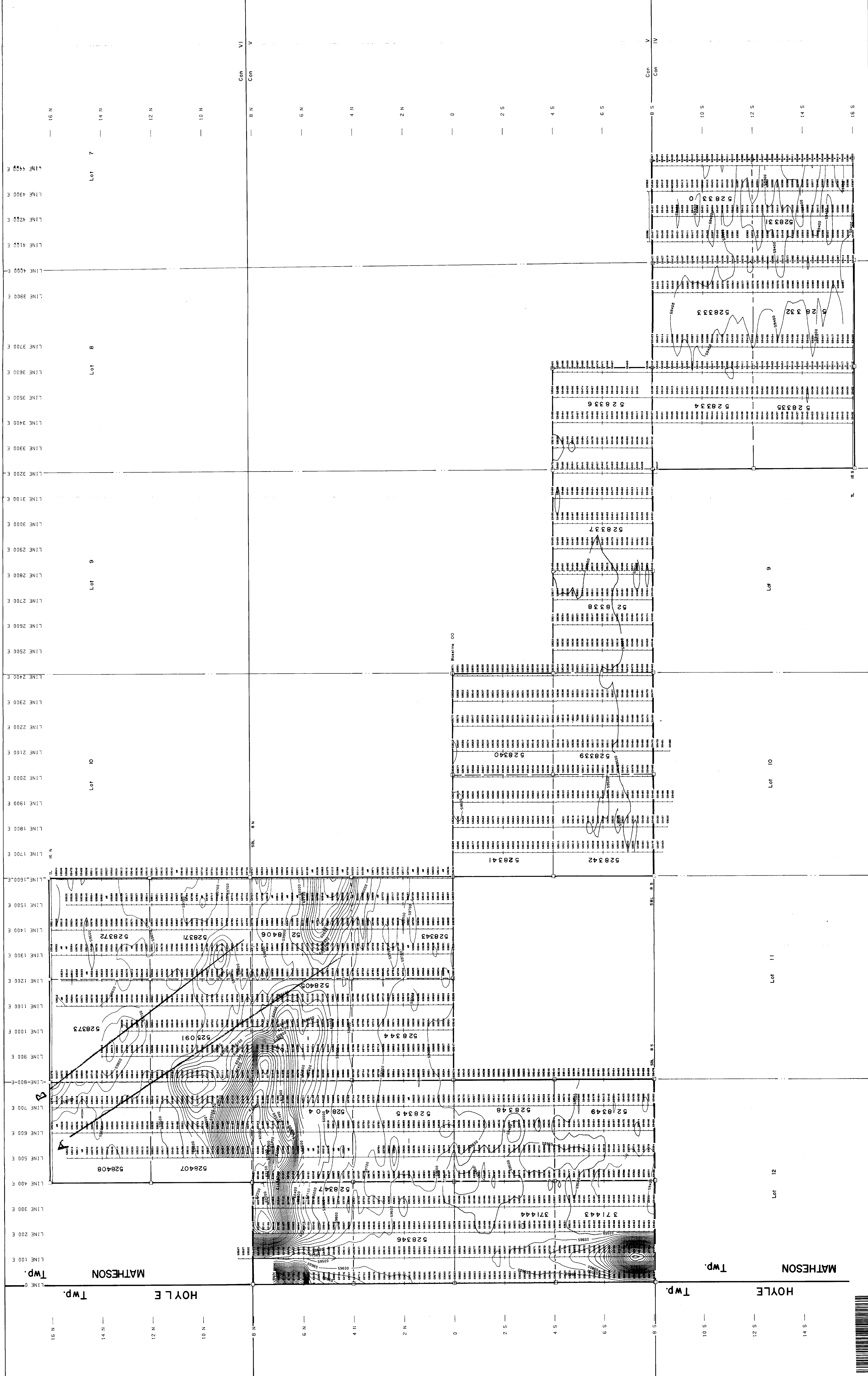


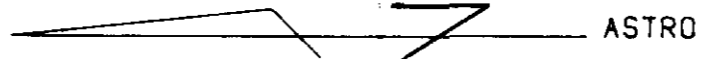
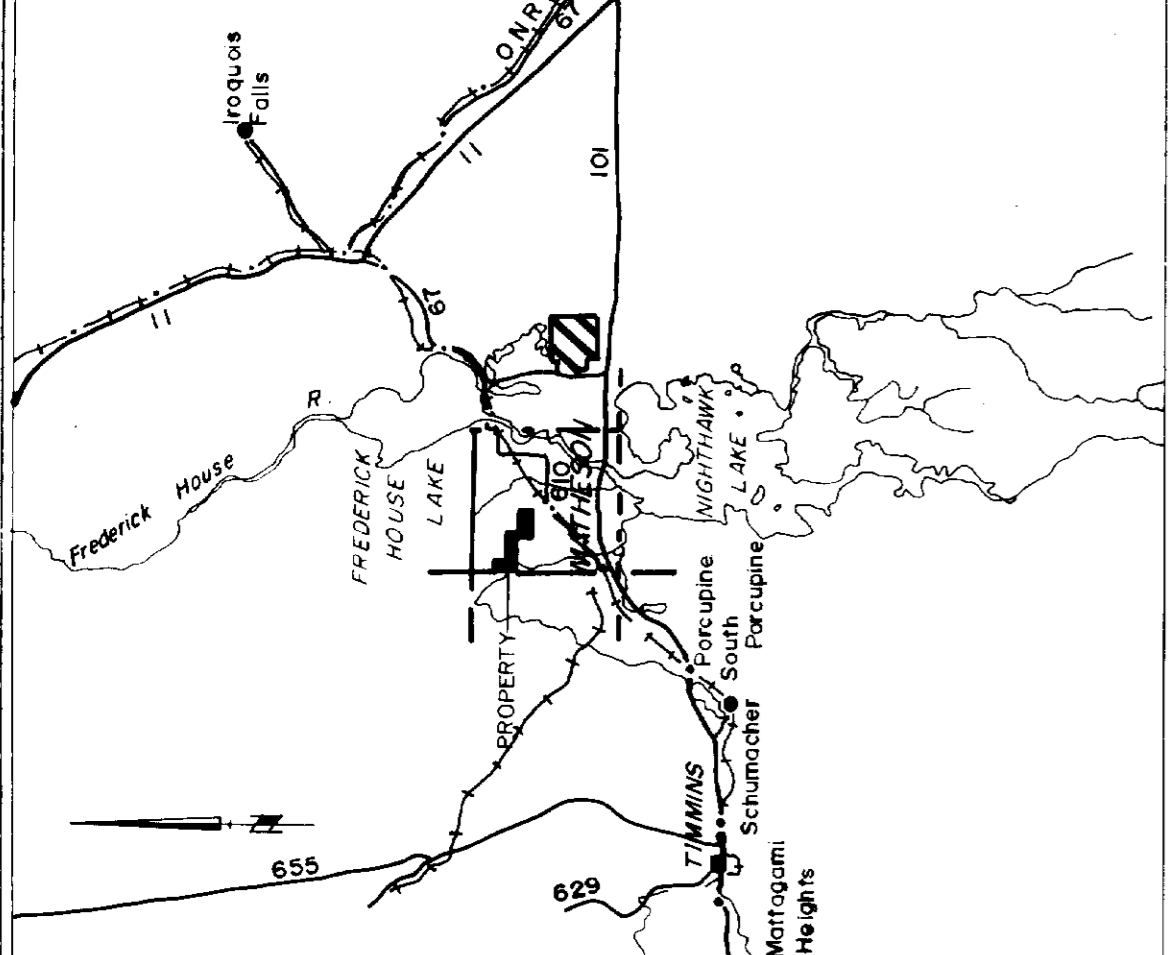
LEGEND

INSTRUMENT : GEOMETRICS 6816
 TYPE : PRISM PRESSION, TOTAL FIELD
 READINGS IN CAMPUS
 ▲ MAGNETIC BASE STATION



TEXASGULF CANADA LTD.
 MAGNETIC SURVEY
 MATHESON 51
 NTS: 42-A-9/10
 DATE 1981
 PROJ. #82





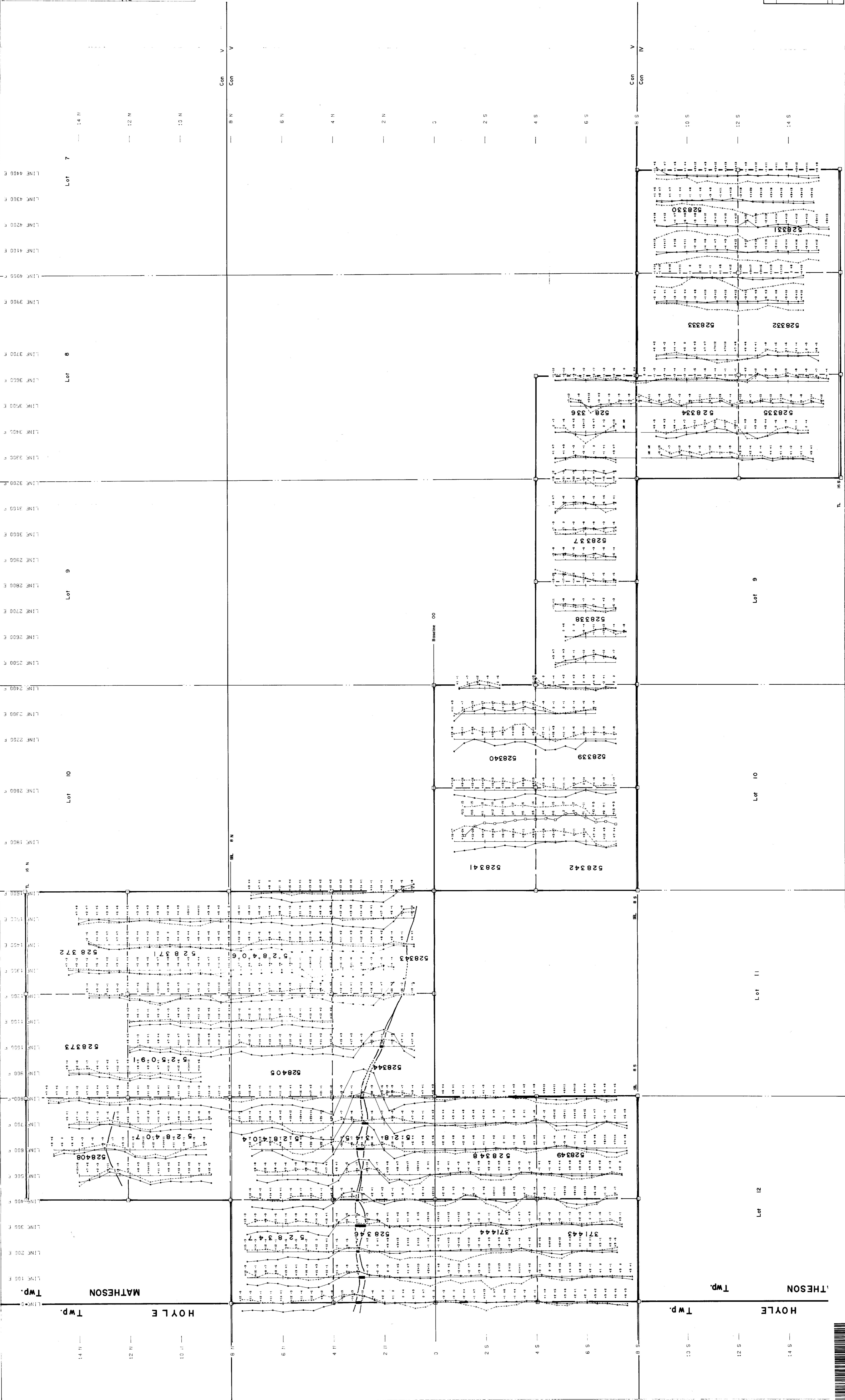
LEGEND

- 1777 Hz
- IN-PHASE READINGS
- QUADRATURE READINGS
- INSTRUMENT : APEX PARAMETRICS MAXWIN II
- FREQUENCY : 1777 Hz
- COIL SPACING : 160 METERS
- PROFILE SCALE : 1 CM = 20'
- + READINGS - READINGS



TEXASGULF CANADA LTD.
 HORIZONTAL LOOP SURVEY
 MATHESON S1

DATE 2, 3/06
 1981



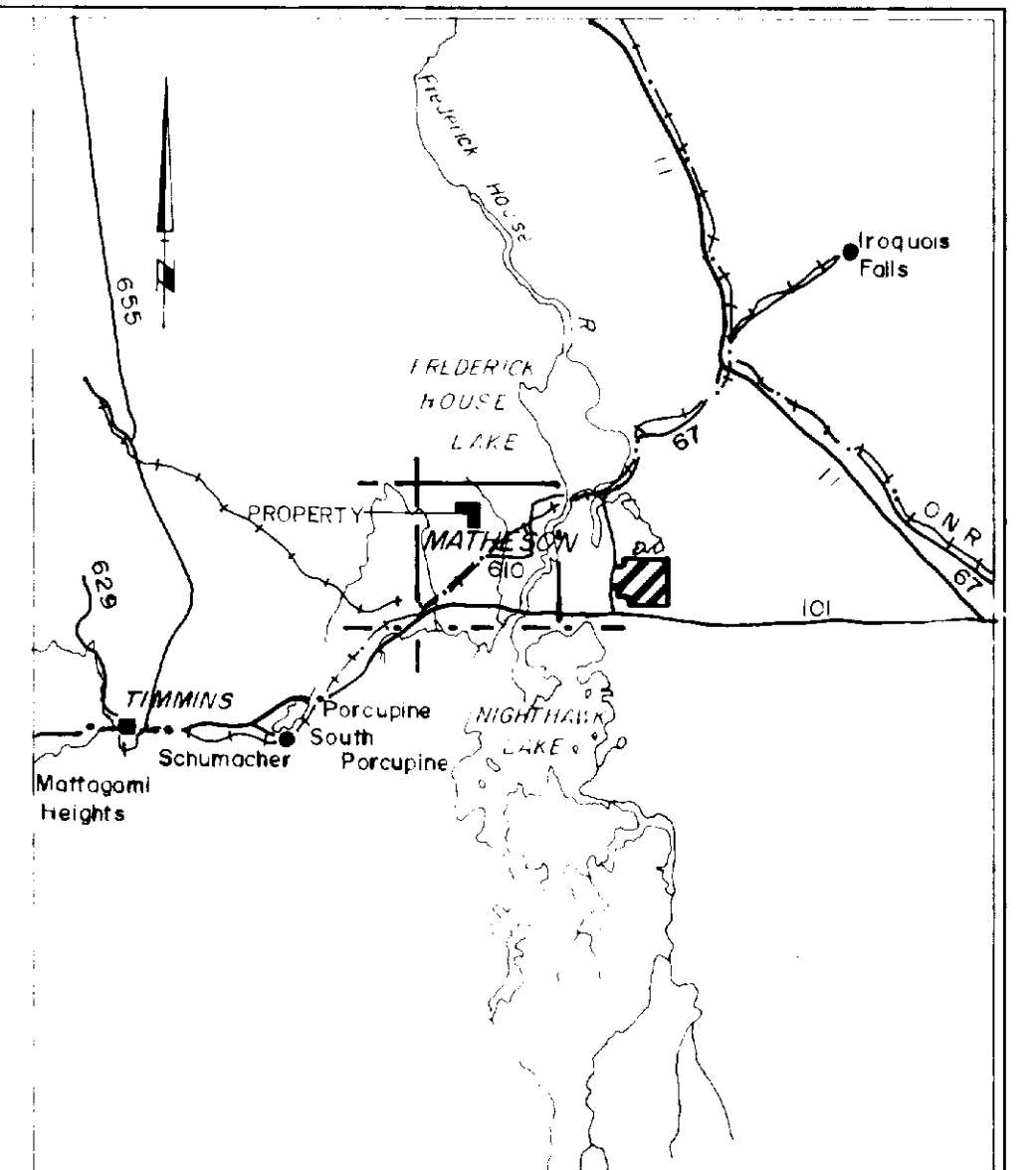
Lot 10

Lot 9

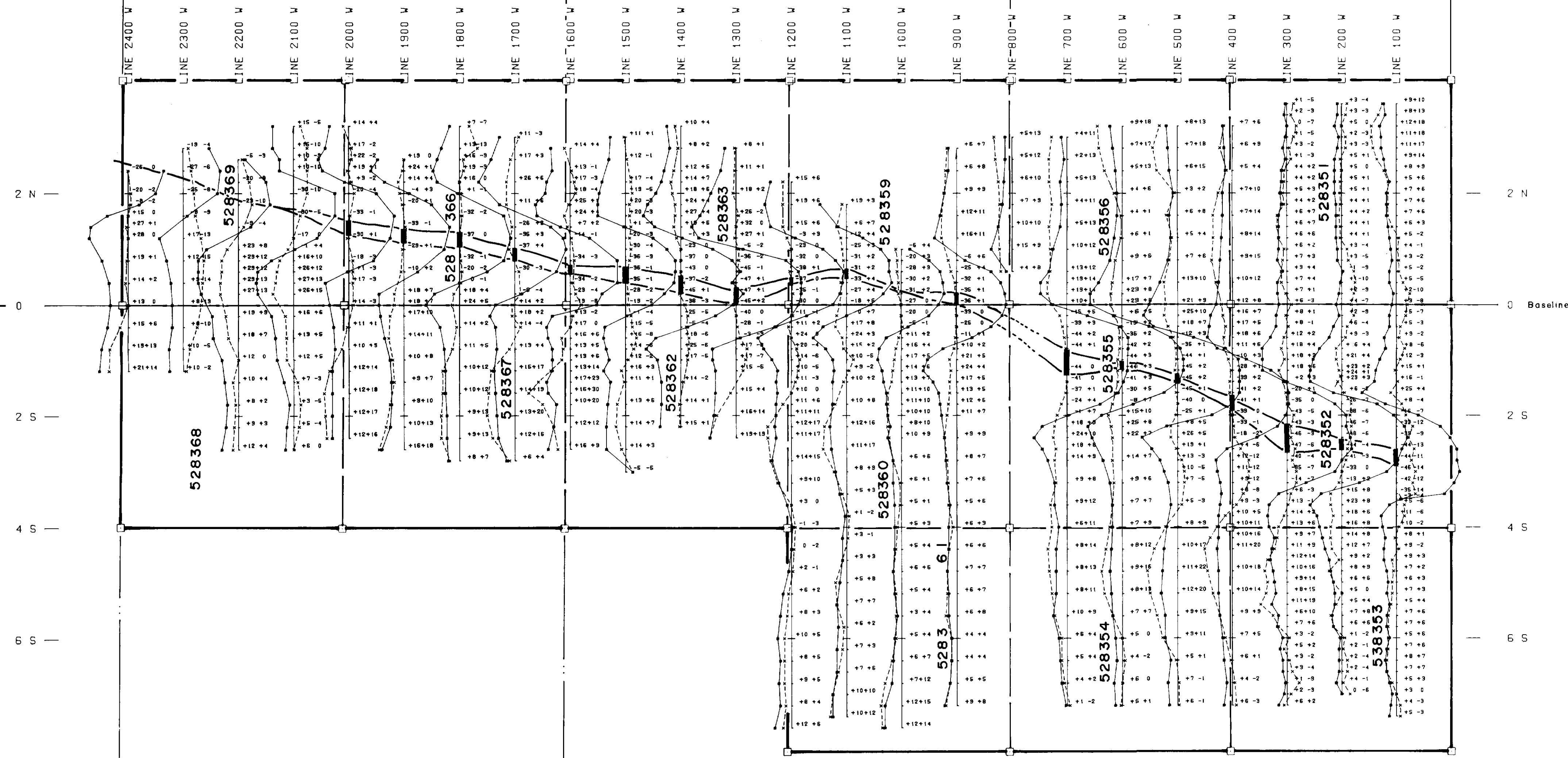
Lot 8

Lot 7

Lot 6

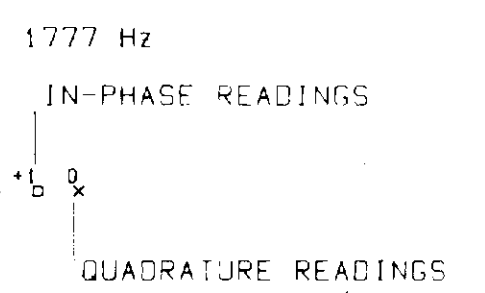


KEY MAP SCALE 1" = 8 miles



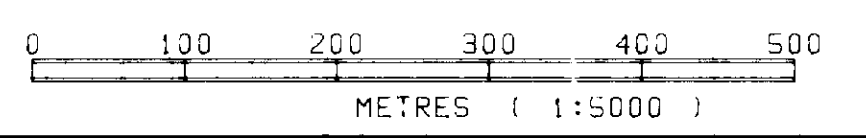
Con VI
 Con V

LEGEND



INSTRUMENT : APEX PARAMETRICS MAX/MIN II
 FREQUENCY : 1777 Hz
 COIL SPACING : 160 METERS
 PROFILE SCALE : 1 CM = 20%

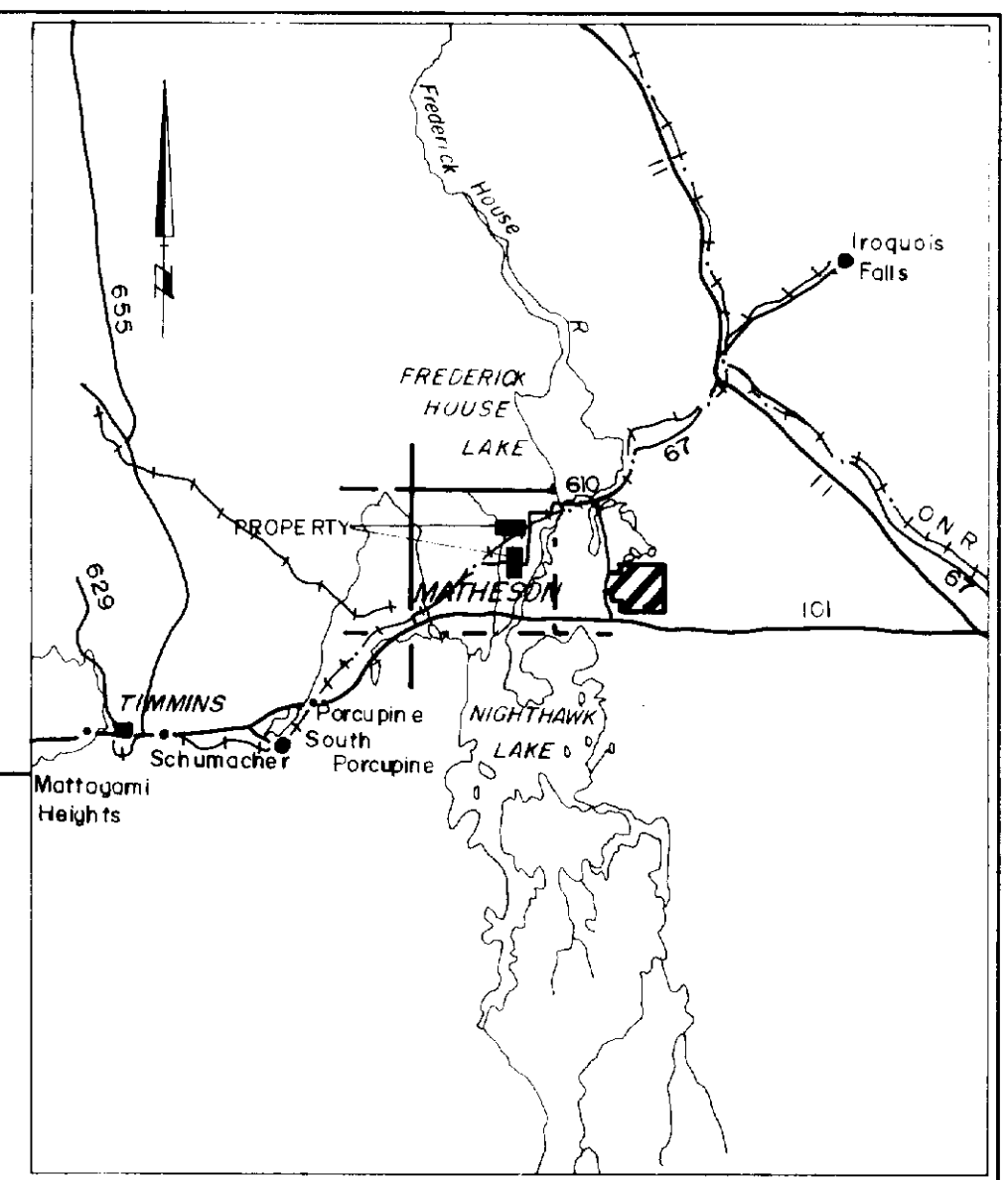
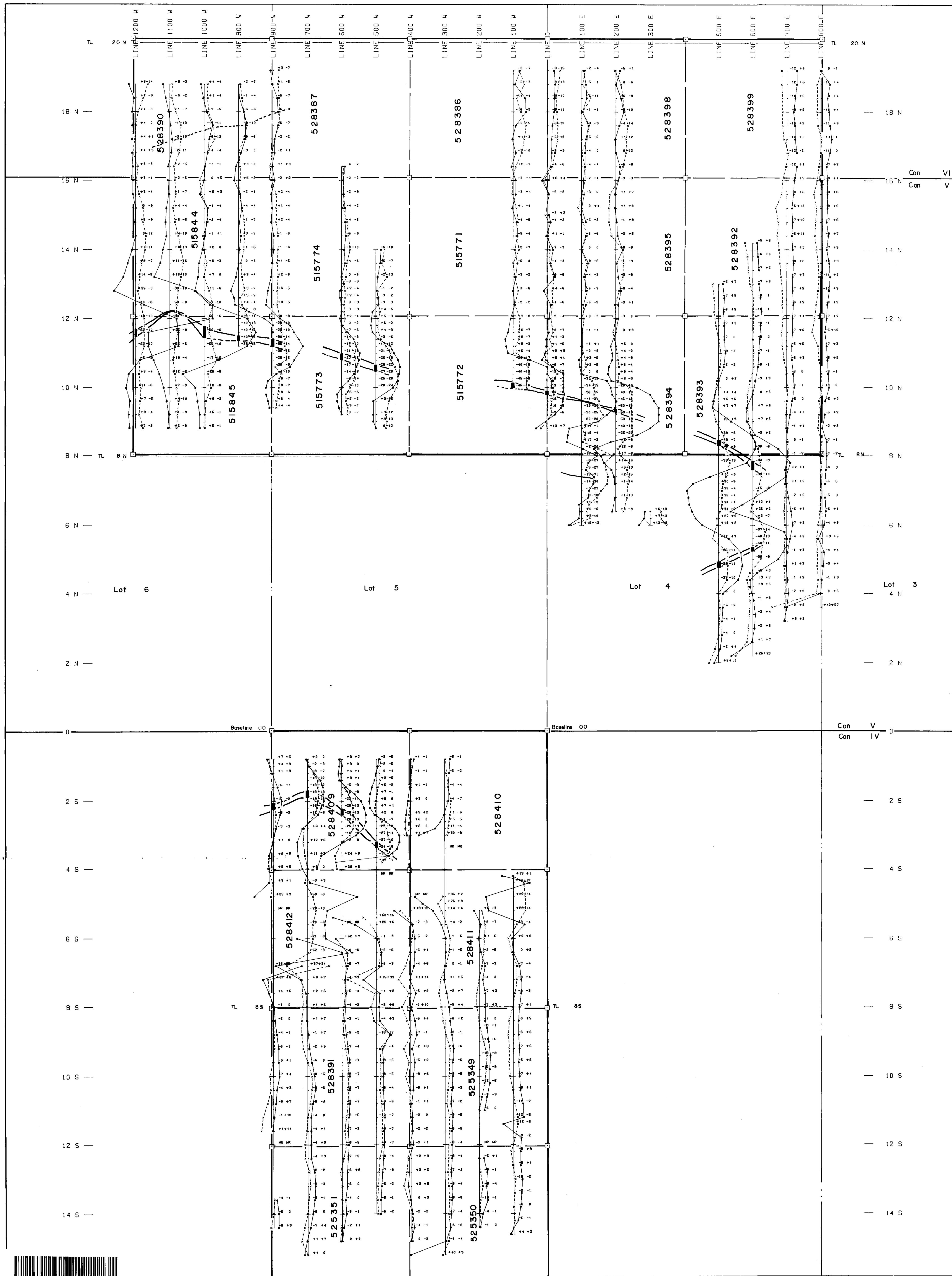
← + READINGS - READINGS →



TEXASGULF CANADA LTD.
 HORIZONTAL LOOP SURVEY
 MATHESON 53
 NTS:42-A-9/10 PROJ.#82
 2,3906
 WORK BY _____ DATE _____
 1981



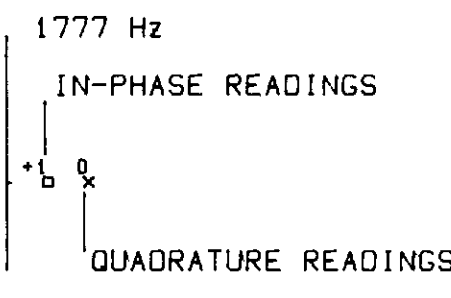
Mill Gortrup



KEY MAP SCALE : 1" = 8 miles



LEGEND



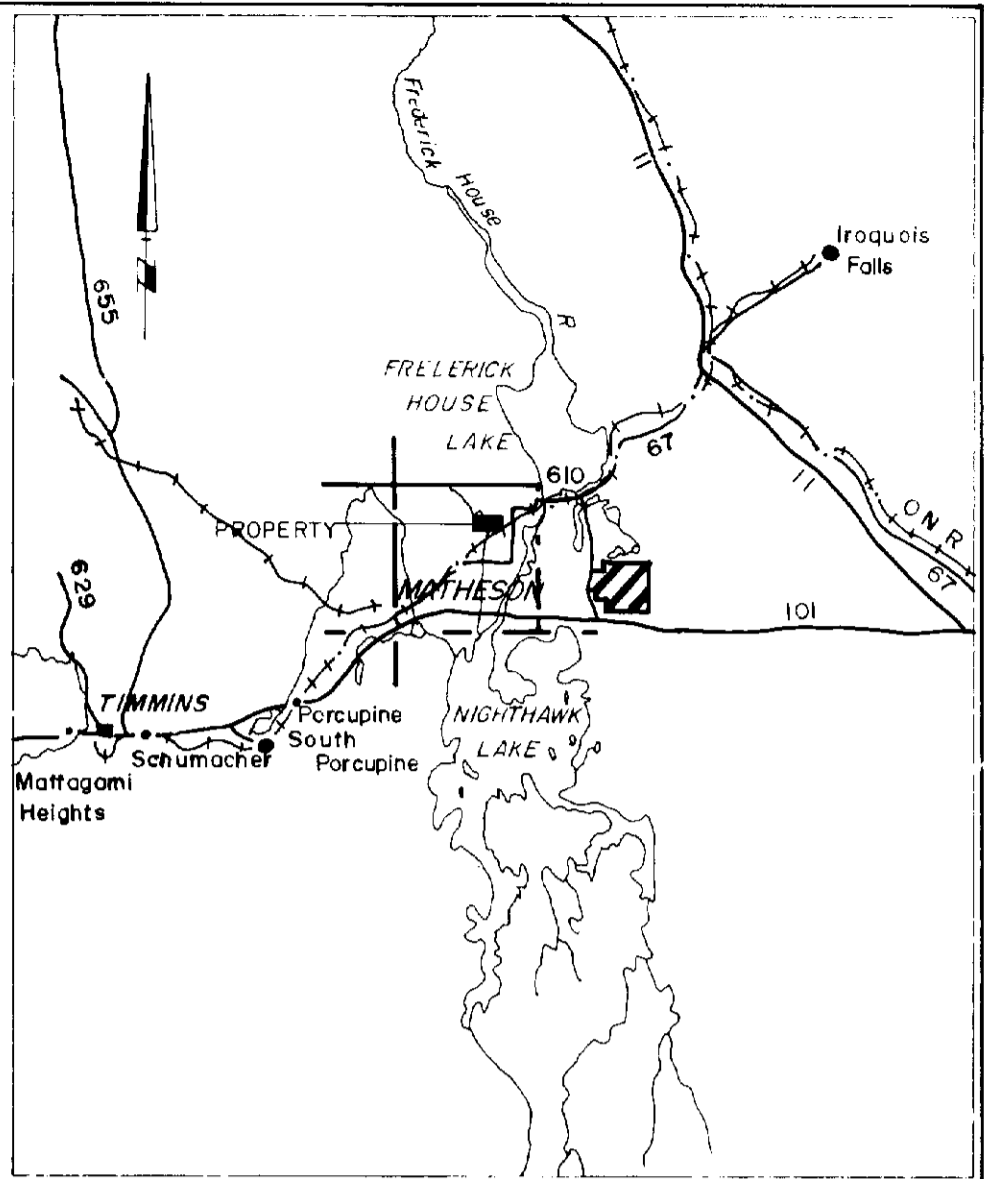
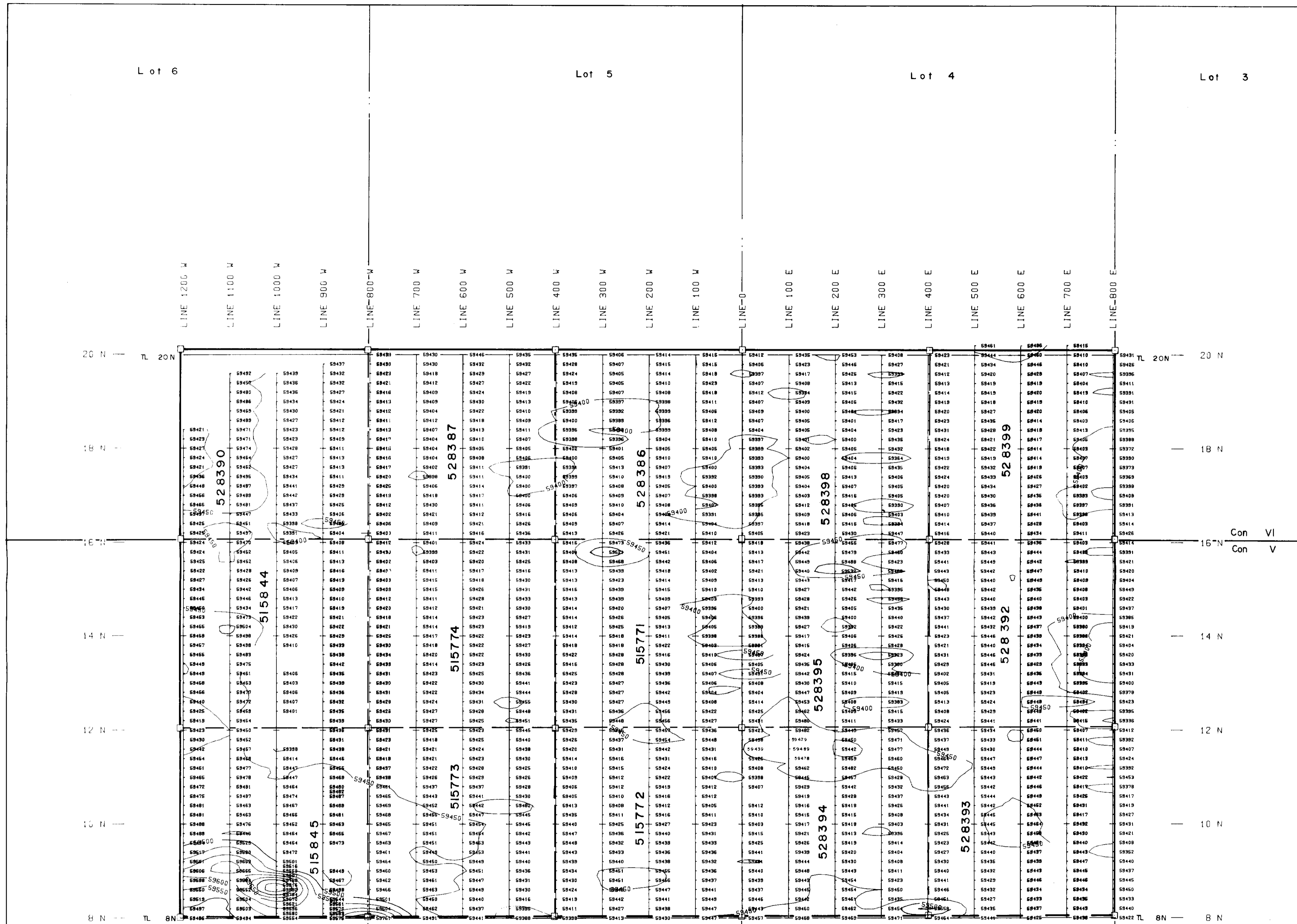
INSTRUMENT : APEX PARAMETRICS MAXMIN 11
 FREQUENCY : 1777 Hz
 COIL SPACING : 160 METERS
 PROFILE SCALE : 1 CM = 20%

← + READINGS - READINGS →

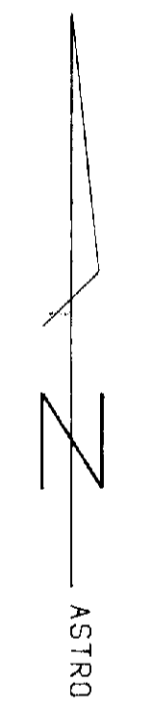


TEXASGULF CANADA LTD.	
HORIZONTAL LOOP SURVEY	
MATHESON 55	
NTS:42-A-9/10	PROJ.#82
WORK BY	DATE
	1981



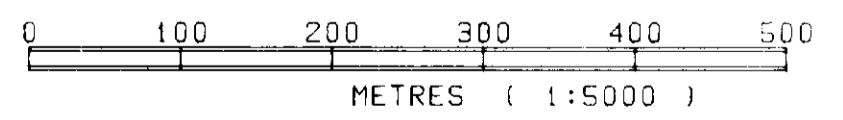


KEY MAP SCALE : 1" = 8 miles



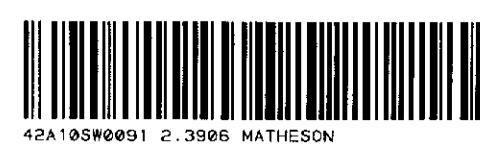
LEGEND

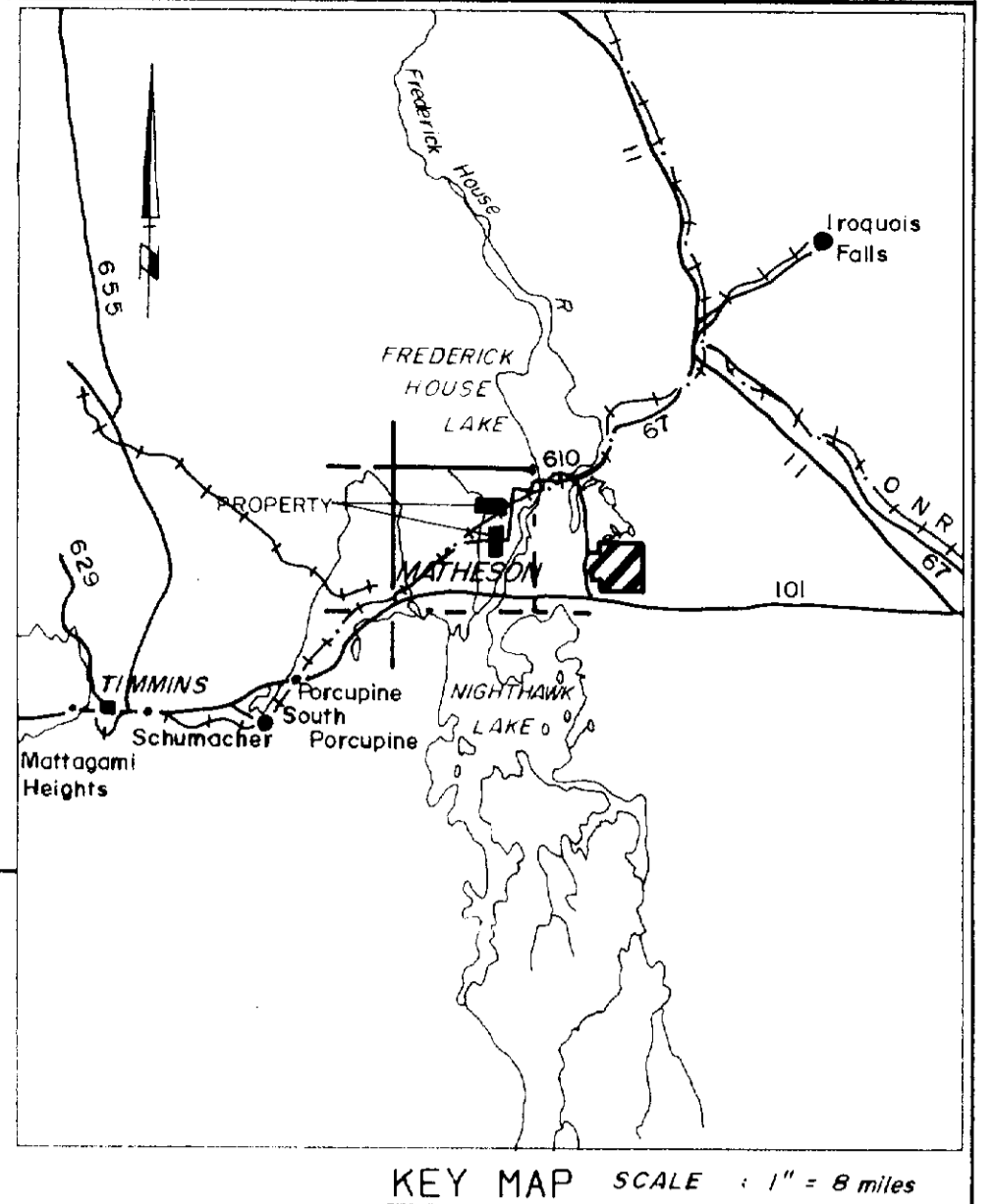
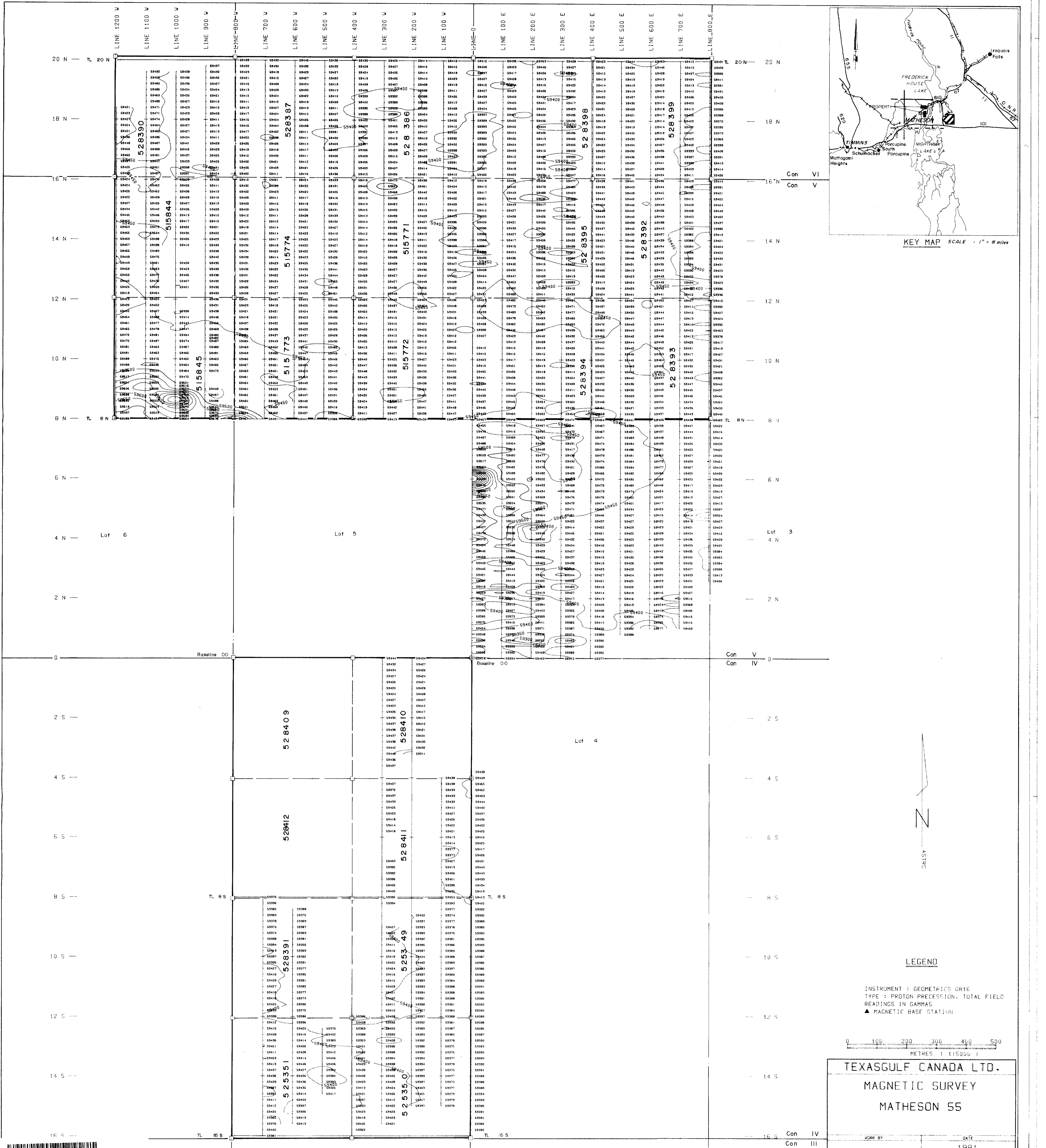
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 TYPE : PROTON PRECESSION, TOTAL FIELD
 READINGS IN GAMMAS
 ▲ MAGNETIC BASE STATION



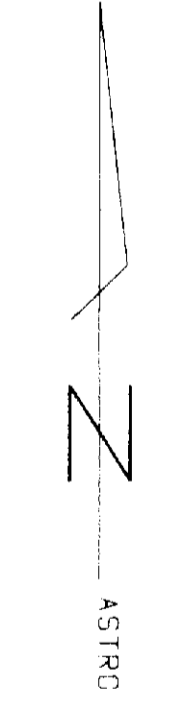
TEXASGULF CANADA LTD.	
MAGNETIC SURVEY	
MATHESON 55	
NTS: 42A9/10	PROJ #82
WORK BY	DATE
	1981

Will Gaiter



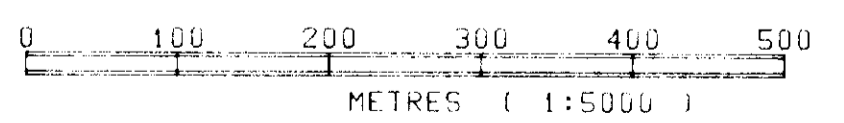


KEY MAP SCALE 1" = 8 miles



LEGEND

INSTRUMENT : GEOMETRICS 0816
 TYPE : PROTON PRECESSION. TOTAL FIELD
 READINGS IN GAMMAS
 ▲ MAGNETIC BASE STATION



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