



32012SW0161 2.3976 GARRISON

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GEOPHYSICAL REPORT

ON

GARRISON TOWNSHIP PROJECT

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**RECEIVED**

JUL 2 1981

MINING LANDS SECTION

f o r

WINDJAMMER POWER & GAS LIMITED

Toronto, Ontario, Canada  
February, 1981

D. Jones, M.Sc.

## 1. INTRODUCTION

Initial exploration was completed on the Garrison Township gold prospect of Windjammer Power and Gas Limited of Calgary in the period of June to September, 1980 by M P H Consulting Limited of Toronto. This work is the subject of a previous report by M P H Consulting Limited.

As a result of that report, further exploration was commissioned and carried out during late November, 1980 and is the subject of this report. The purpose of this latest programme, which included Induced Polarization and magnetic surveying, was to extend and further detail geophysical anomalies mapped during the initial phase of exploration.

Approximately 22 km of new picket line was cut and surveyed. A portion of this work was within existing Grid 1 where intermediate lines were cut and surveyed. The remainder of the surveying was carried out east of Grid 1 where lines were cut at 200m intervals.

This work was carried out in order to investigate a large zone of anomalous chargeability extending eastward from Grid 1 and also to explore the ground between Grids 1 and 2, which are located at either end of the property on which the initial exploration work was conducted.

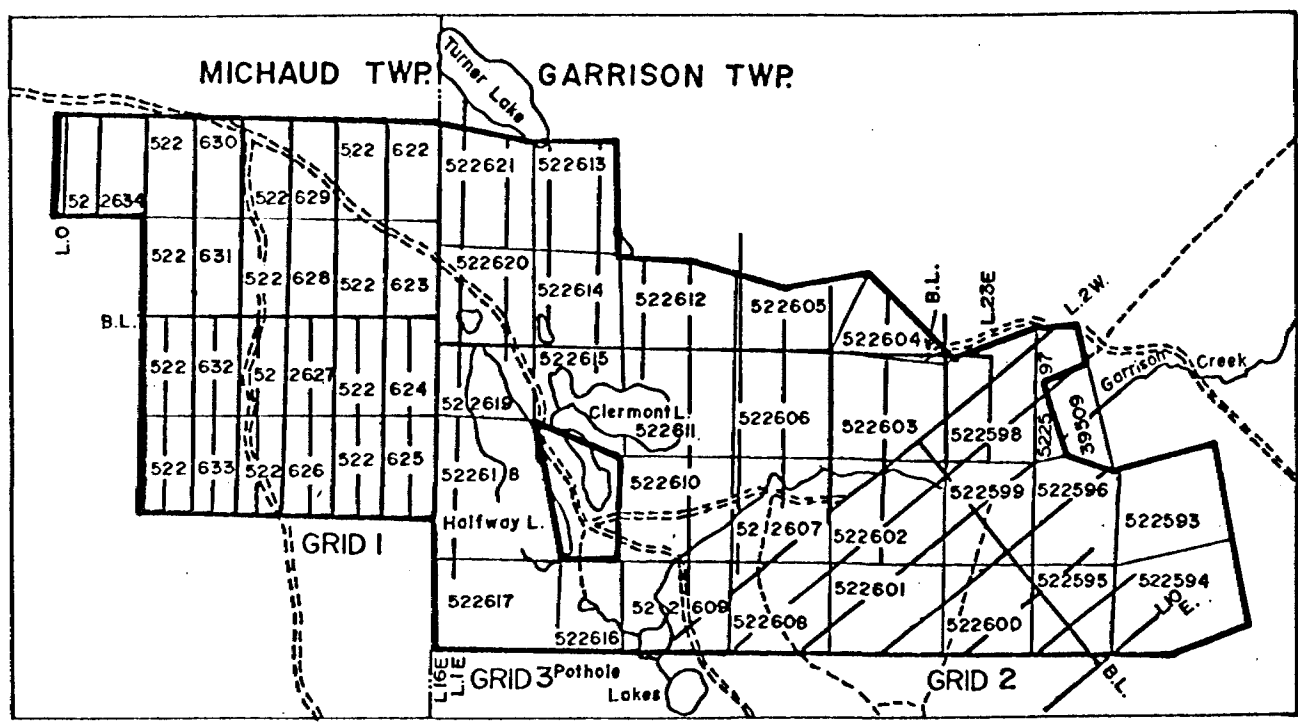
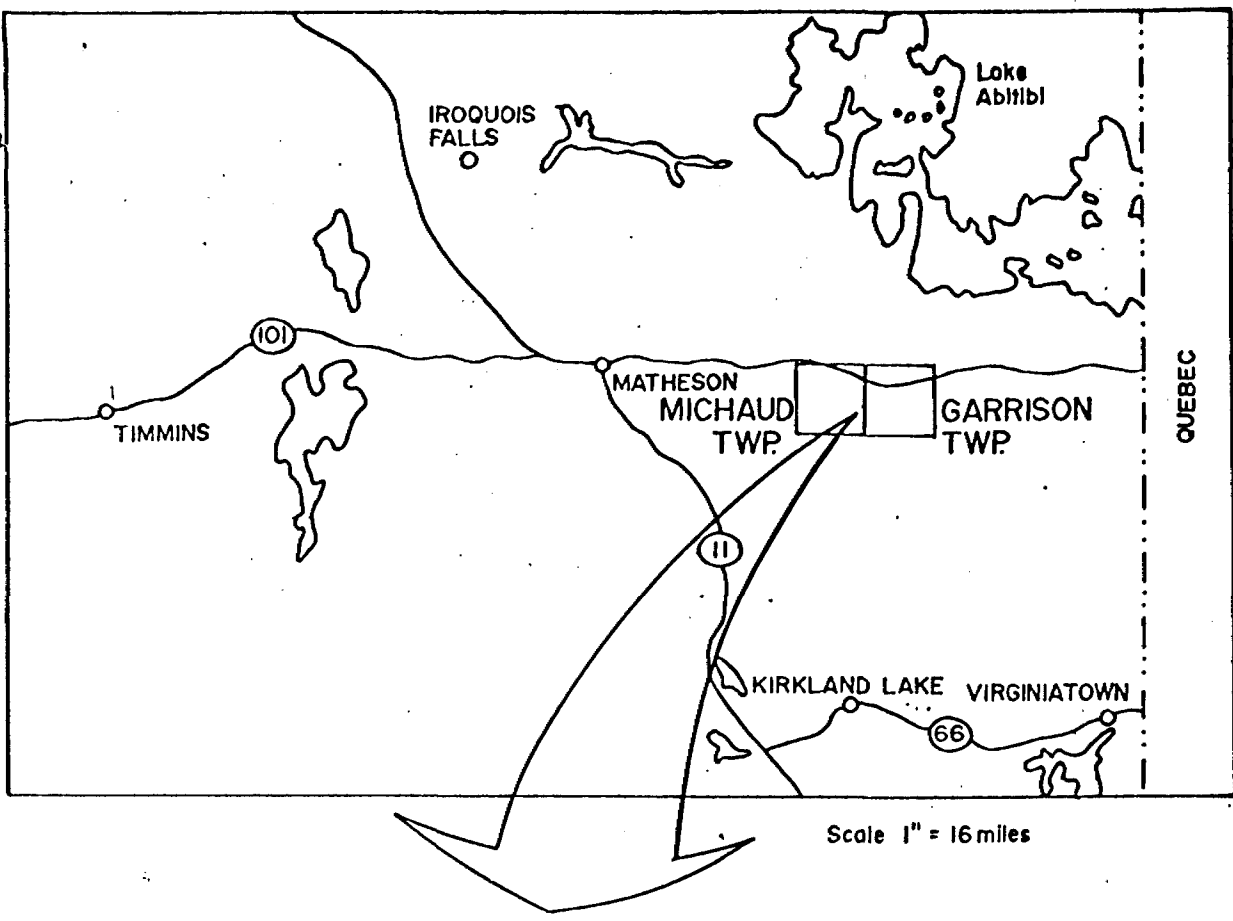
## 2. LOCATION AND ACCESS

The property straddles the township line between Garrison and Michaud Townships in the District of Cochrane, Larder Lake Mining Division, northeastern Ontario.

The property is located approximately 102 km east of Timmins and 37 km due north of Kirkland Lake. Highway 101 traverses the northern part of the townships.

The property consists of 42 contiguous claims in Garrison Township numbered 522593 to 522634 inclusive. One patented claim located in the centre of the property was previously owned by Buffonta Mines Limited. In Michaud Township the claims cover Lot 1 and the NW 1/4 and SE 1/4 of the N 1/2 and the NE 1/4 and the SE 1/4 of the S 1/2 of Lot 2 in Concession III. Garrison Township is unsubdivided.

Access to the property is via unmaintained forest access roads leading south from Highway 101 approximately 6 km east of Perry Lake (see Figure 1).



- Township Line
- ==== Claim Line
- ==== Property Line
- ==== Grid Line

**WINDJAMMER POWER & GAS**

**GARRISON TOWNSHIP PROJECT LOCATION MAP**

Project No.	By:
Scale:	Drawn:
Drawing No.	Date:

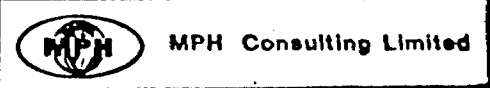


Figure 1

### 3. SURVEY PARAMETERS

#### 3.1 Linecutting

The linecutting was carried out by Ingamar Explorations Limited. Approximately 22 km of linecutting was completed, 2.5 km of which was located on Grid 1 and the remainder on Grid 3. Stations on all baselines and crosslines were established at 25 meter intervals.

Grid 1 - Grid 1 was previously established with a baseline starting at a point near post 4 of claim 522632. The baseline was cut easterly at 90° for a distance of 1200 m. Crosslines were established at 200 meter intervals and extended north and south of the baseline.

For the work reported on herein, intermediate crosslines were cut between the previous lines 4+00E to 16+00E inclusive. These were only extended to the south of the baseline and were designed to cover large IP-resistivity and magnetic anomalies.

Grid 3 - This baseline was established with a starting point of 0+25S on Line 16+00E of Grid 1 and cut easterly at 90° for a distance of 2,300 m. The baseline was offset from that of Grid 1 to avoid a small

lake. Crosslines were established on the grid at 200 meter intervals starting with Line 1+00E.

### 3.2 Induced Polarization Survey

Routine coverage of Grid 3 and a portion of Grid 1 was carried out using a pole-dipole survey array. Dipole spacing 'a' of 25 meters and dipole separation 'n' of 4 and 5 was used with observations recorded at 26 meter intervals. Approximately 19 km of pole-dipole surveying was completed in this fashion.

Detailed dipole-dipole surveying was carried out along four lines on Grid 1. A dipole spacing 'a' of 25 meters with dipole separations 'n' of 1, 2, 3, 4, and 5 was utilized.

### 3.3 Magnetic Survey

Approximately 20 km of magnetic surveying was carried out on the property. Readings were taken at 25 meter intervals with intermediate stations within anomalous zones.

### 3.4 Personnel

The following M P H Consulting Limited personnel were involved with the exploration programme:

Geophysicist

D. Jones, M.Sc.  
Toronto, Ontario

Geophysical Party Chief

D. Morrison  
Washago, Ontario

Instrument Operator

P. O'Donnell  
Matheson, Ontario

Helpers

W. Keeshig  
Wiarnton, Ontario

K. Keeshig  
Wiarnton, Ontario

Draughtsperson

E. Jones  
Toronto, Ontario

## 4. GEOPHYSICAL SURVEYS

### 4.1 Induced Polarization Survey

A Scintrex IPR-8 Time Domain Induced Polarization Receiver was used for data gathering with a Hunttec 2.5 kw Time Domain Transmitter transmitting a 2-second/off square wave as a signal generator.

A pole-dipole array was used as a survey technique with a dipole 'a' spacing of 25 meters. For this array, one of the current electrodes is fixed at a large distance (approximately 20 times the 'a' separation) from the nearest point of the remainder of the array. The remainder of the surveying array is then moved along the survey lines with readings taken at preselected intervals. For routine coverage, readings with a dipole separation ('n') of 4 and 5 were taken at each station. The reading with a dipole separation of  $n = 5$  gives a deeper depth of penetration than that with  $n = 4$ .

The main advantage of the technique is that only one current electrode requires moving, thus reducing possible contact problems. The major disadvantage is that the anomalies are asymmetric due to the non-symmetrical nature of the array.



For detailed surveying of selected anomalies, a dipole-dipole array was used with a dipole length 'a' of 25 meters and dipole separation 'n' of 1 through 5.

Radio contact using walkie-talkies enabled synchronization of current on-off times between operators to ensure the safety of personnel. The technical specifications of the survey equipment are presented in Appendix 1.

Two values are of interest in Time Domain Induced Polarization surveying:

- a) the apparent resistivity of the ground
- b) the chargeability or polarizability of the ground.

The apparent resistivity values of the ground is not directly measured but is obtained by calculations from observed data.

At each station, six chargeability values (M1 through M6) which describe a decay curve were observed. In addition a secondary voltage value was taken.

The apparent resistivity value of the ground is found from a mathematical formula utilizing the secondary voltage value coupled with the current output from

the transmitter at the same instant, and a geometrical constant dependent on the array type being used and the value of 'n'.

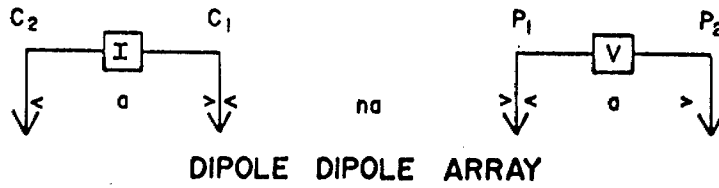
The decay curve constructed from the six chargeability observations is generally in the form of an exponential decay and can be split into two portions - a fast decay portion and a slow decay portion. The fast decay portion is generally due to inductive effects. Apparent chargeability, by definition, is the value of the slow decay rate at zero time.

This slow decay rate predominates at later times on the decay curve and for this reason only the M6 values have been used to construct the chargeability field maps for this project. The plotting point for both the chargeability and apparent resistivity values were generally taken as being at the mid-point of the survey array.

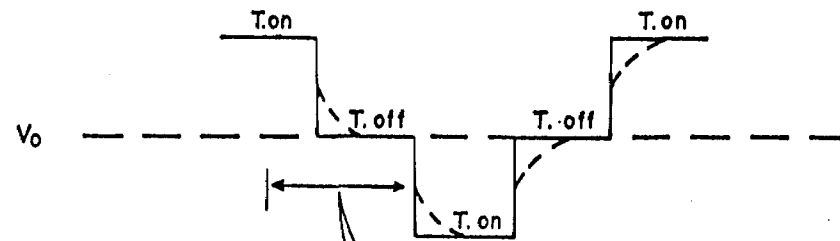
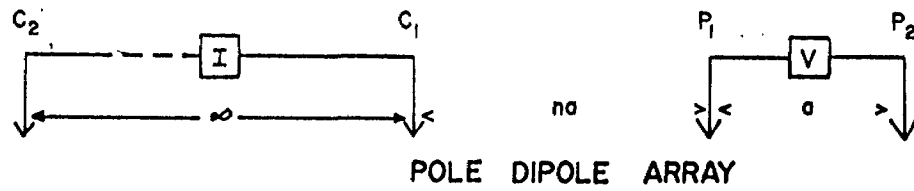
The basic principles of the Induced Polarization method are displayed in Figure 2.

#### 4.2 Magnetometer Systems

A McPhar GP-70 proton precession field magnetometer was used to survey the grid. This system

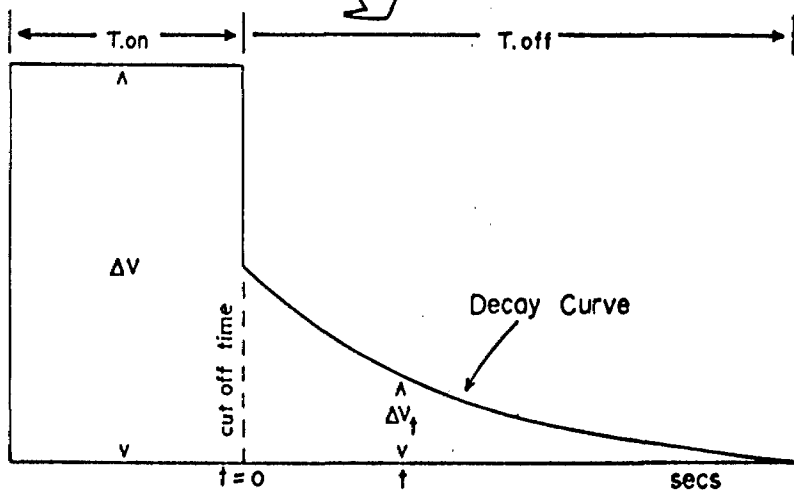


Apparent Resistivity  $\rho_a = \frac{V}{I} \cdot G$   
 where G is a geometrical factor  
 dependant on survey array



—— Transmitter waveform  
 - - - Signal "seen" at reciever

T.on = 2 secs.  
 T.off = 2 secs.



Chargeability at time t  $M_t = \frac{\Delta V_t}{\Delta V}$

PRINCIPLE OF TIME DOMAIN I.P.

Figure 2

utilizes the precession of protons in a hydrocarbon fluid. These spinning magnetic dipoles (protons) are polarized by applying a magnetic field using a current within a coil of wire. When the current is discontinued the protons precess about the earth's magnetic field and in turn generate a small current in the wire. This frequency of precession is proportional to the earth's total magnetic field.

This instrument is read directly in gammas which is the absolute value of the earth's total field for that station.

Correction of the magnetic data for instrument and diurnal drift was done by re-occupying previously established base stations periodically (approximately every 2 hours) during the course of the survey. In this manner a drift curve for the instrument can be established and adjustment of the field readings can be made such that they are all related to an established datum. Instrument specifications are presented in Appendix 1.

Since a portion of the magnetic survey had to be correlated with a previous survey, all the data

collected was referenced to base stations established during the previous survey. A base station shift correction was carried out on this data in addition to the diurnal corrections.

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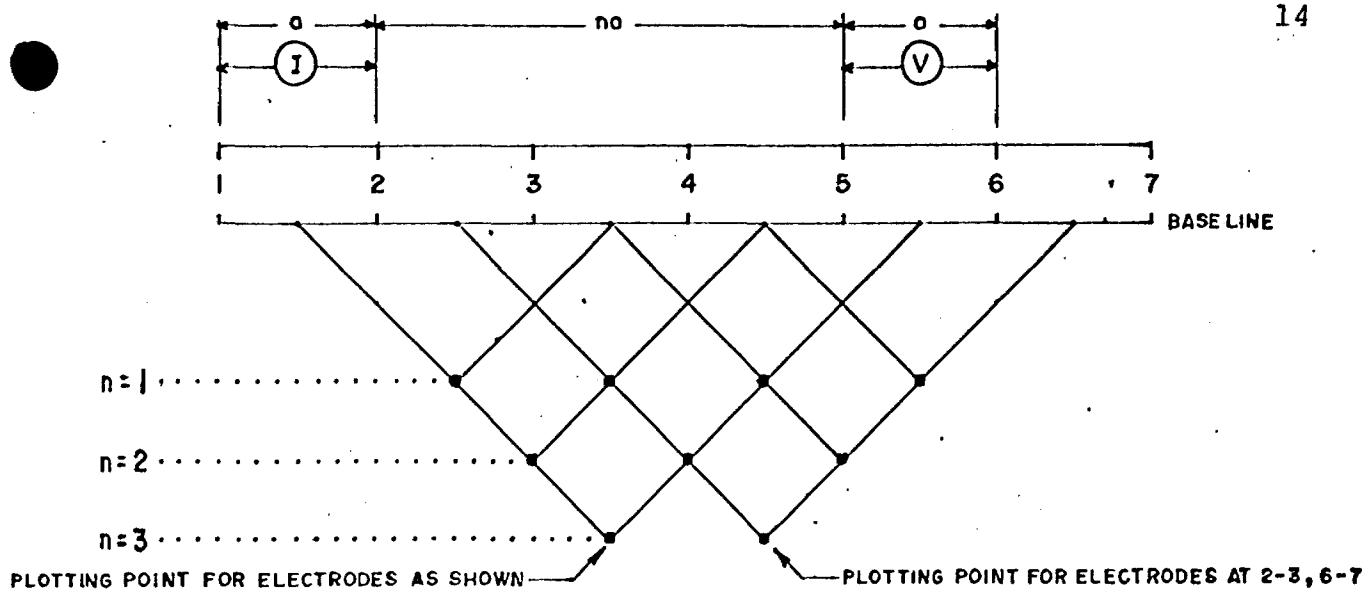
## 5. PRESENTATION OF DATA

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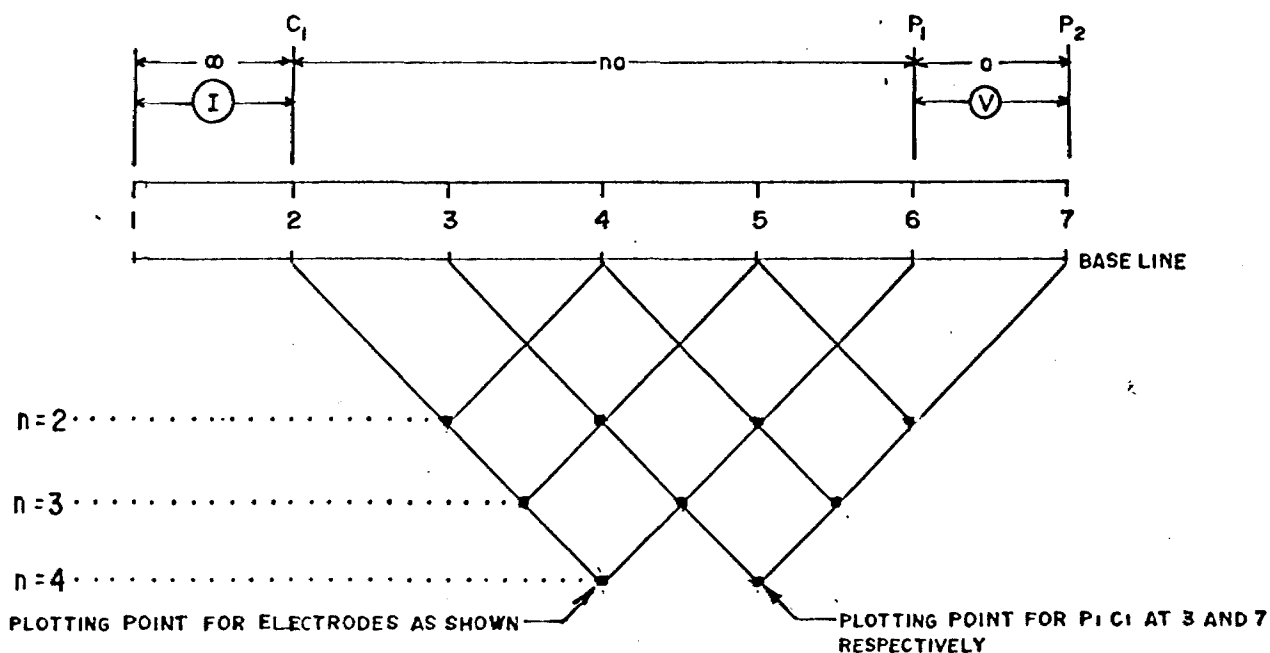
The data from the Induced Polarization surveying are presented as a series of equal value contour lines superimposed on a map containing the apparent resistivity or chargeability values from the area.

Detailed profiles of some lines are presented in pseudo-section form. To obtain this form of presentation, data for each station is plotted on a vertical section at the point of intersection of 45° lines drawn from the baselines or surface starting at the mid-point of the current and potential electrodes. In this way the readings appear at points directly below the centre of the electrode spread at a vertical distance which increases with the 'n' value for the spread. The result is a form of a two-dimensional plot in vertical section. (Figure 3).

The magnetic data are shown as a series of isomagnetic contours superimposed on a map of corrected magnetic values recorded at each station. Contour intervals were chosen to suitably highlight the magnetic features of the survey area.



DIPOLE DIPOLE ARRAY



POLE DIPOLE ARRAY

PLOTting POINTS FOR VARIOUS ARRAYS

Figure 3

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## 6. GEOPHYSICAL INTERPRETATION

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### 6.1 Grid 1

The intermediate survey lines established between the previously cut lines were surveyed using both magnetic and IP techniques. The latest data was merged with the previously obtained data and interpreted.

Magnetic Survey - The survey was conducted over Anomaly A-1 previously mapped as a strong linear feature striking at approximately 070° and located in the southern portion of this grid.

The localized highs (Anomaly A-1, A-2 ref. previous report) within the major structure are modified and refined as a result of the new survey data. A-1 is a short (200 m strike length), broad magnetic feature showing sharp truncation immediately west of line 6+00E and elongation and narrowing eastward to line 8+00E. This zone is approximately 2000 gammas above the background of the linear magnetic feature Anomaly A.

The additional mapping of the anomaly has further substantiated the inferred structural dislocation



of A-1 at its western extent as demonstrated by the abruptness of the truncation and deviation of magnetic contours in the vicinity of line 5+50S.

The additional surveying has resolved Anomaly A-1 into two small anomalous zones centred at 6+00S on line 6+00E and 5+62S on line 7+00E with the strongest portion of the zone being situated on line 6+00E.

Anomaly A-2 is a strong linear magnetic zone centered at approximately 4+00S on line 13+00E. The additional surveying has supplied further details about the zone although there have been no major changes in strike length or shape.

From previous diamond drilling, Anomaly A is known to be a magnetite iron formation containing minor sulphide zones.

Induced Polarization - The additional Induced Polarization surveying on Grid 1 was split into two portions. Detailed surveying was carried out over Anomaly A-1 and routine surveying was carried out over Anomaly A-2 so that a correlation between the reconnaissance surveying of Grid 3 and the surveying on the eastern part of Grid 1 would be possible.

Anomaly A-1 - Previous surveying indicated a strong chargeability zone coincident with a relative apparent resistivity low and with the magnetic anomaly. One line of detailed dipole-dipole surveying on line 6+OOE outlined a broad ( $\sim 60$  meter), strong ( $\sim 100$  milliseconds), chargeability anomaly with a corresponding apparent resistivity low.

Diamond drilling of this zone on lines 6+OOE and 8+OOE during the initial exploration programme revealed a magnetite iron formation with a minor sulphide portion.

Detailed dipole dipole surveying was carried out on lines 5+OOE, 7+OOE and 9+OOE (see maps D.2, D.3 and D.4 respectively). These detailed pseudosections present a picture similar to the pseudosections obtained on line 6+OOE during the previous survey. (For comparison the pseudosection from line 6+OOE (Map D.1) is included in this report.)

Interpretation of the detailed surveying indicates that the strongest portion of the anomaly is located between lines 6+OOE and 7+OOE. A sharp fall-off in chargeability values is seen between line 6+OOE and line 5+OOE with the near surface values on line 5+OOE

(n = 1 to 3 data) indicating no anomalous expression. Higher values at n = 5 could be attributable to effects from a nearby source. Similar features are seen on line 9+OOE.

The Induced Polarization anomaly narrows perceptibly from a width of approximately 75 m in line 6+OOE to a width of approximately 40 m on line 9+OOE.

The changeability gradient, defining the edge of the anomalous chargeability zone (see maps D.1, D.2, D.3 and D.4) indicates a relatively sharp geologic contact between the anomalous zone and the host rock. Dip estimates from the pseudosection vary between 70°S to vertical with depth estimates for lines 6+OOE and 7+OOE of approximately 50 to 65 meters.

Anomaly A-2 - A pole-dipole survey was carried out on lines 11+OOE, 13+OOE and 15+OOE. This provided data on the intermediate lines covering Anomaly A-2. Data from the previously surveyed lines had shown no Induced Polarization anomalous values coincident with magnetic Anomaly A-2 although a small chargeability zone detailed on line 16+OOE, was of possible interest.

The additional surveying outlined a small anomalous chargeability zone on line 15+OOE which extended the

zone previously detected on line 16+00E to the east. A small chargeability zone was also detected on line 13+00E at approximately 4+00S which correlated directly with Anomaly A-2. No corresponding apparent resistivity low was observed.

Grid 3 - This grid extended eastward from Grid 1 to the western extremity of Grid 2. Due to adverse ice conditions on the lakes within the grid area, the southern portion of lines 3+00E - 9+00E could not be surveyed.

Magnetic Survey - The main magnetic feature outlined on the grid was a northeast-southwest trend striking at approximately  $070^{\circ}$ . This zone represents the eastern extension of Anomaly A on Grid 1, and parallels the main magnetic trend of this area. Several small magnetic features were outlined by this survey and they will be discussed individually.

Anomaly A - As stated, this is the eastern extension of Anomaly A on Grid 1. It strikes at approximately  $070^{\circ}$  and is located between 1+50S, line 1+00E and 0+50N line 11+00E. The zone is a broad ( $\sim 50$  to 100 meters wide), linear feature approximately 7000 to 9000 gammas above background. Truncation and deviation of the magnetic contours in the eastern portion

of the zone in the vicinity of line 11+00E are possibly reflective of a structural feature such as a drag fold or a northwest-southeast fault zone.

Localized magnetic highs were observed within the broad magnetic zone. These are labelled A-3 and A-4 on Map 4 and are located at 1+50S on lines 5+00E to 7+00E and 0+00 on lines 9+00E to 11+00E respectively.

A-3 exhibits the largest amplitude of these anomalies and an interpretation of its profile yields a depth estimate of approximately 60 m and a southward dip of  $70^{\circ}$ . Depth to anomaly and dip estimates for Anomaly A-4 were deemed to be unreliable due to the postulated structural influence.

Anomaly B - This zone is located in the northwest corner of Grid 3 at approximately 6+50N on line 1+00E. This is the eastern extension of Anomaly B, Grid 1.

Anomaly C - This zone of low magnetic intensity situated at the extreme northern extent of lines 5+00E and 7+00E is only partly mapped due to the proximity of the property boundary. It is of interest in that its location is coincident with the projected location of the Destor-Porcupine fault which transects the property.

Anomaly D - This zone is located at approximately 3+50N on line 13+00E. It is believed to be the continuation of Anomaly 'A'. No further information is available on this zone as its extension continues beyond the property boundary.

No other anomalous features were mapped on the property. The magnetic relief on the remainder of the property was minimal with magnetic trends apparently conforming to the regional stratigraphy.

#### Induced Polarization Survey

The Induced Polarization Survey conducted on this grid reflected bedrock structural trends as outlined by the magnetics.

Anomaly A - One large 20 millisecond chargeability zone coincident with magnetic Anomaly 'A' was outlined. It is the extension of zones mapped on Grid 1.

The chargeability survey carried out on this grid showed the western end of this Anomaly 'A' to be sharply truncated in the vicinity of line 11+00E, suggesting that Anomaly 'A' has suffered either faulting and displacement to the north or drag folding. No evidence of horizontal fault displacement was observed along the postulated strike extent of the fault.

A chargeability high of approximately 56 msec. was outlined within the broad (50 - 75 m) linear feature. This zone was only partially mapped due to unfavourable ice conditions on Halfway and Clement Lakes.

This local zone of high chargeability appeared to show coincidence with magnetic Anomaly A-3. No chargeability zone was found coincident with magnetic Anomaly A-4. This leads to the hypothesis that a change from sulphide rich to sulphide poor iron formation is possibly being mapped as one proceeds from west to east along Anomaly A on Grid 3.

A weak apparent resistivity low was found to be coincident with Anomaly 'A'. No distinct apparent resistivity anomaly was coincident with either Anomaly A-3 or A-4.

There was no evidence in the apparent resistivity data to confirm the postulated truncation and displacement of the western end of Anomaly A as was expressed in the magnetic and chargeability data.

No detailed surveying was carried out on Anomaly A-3 since the survey lines of interest included stations on Clement Lake which at the survey time was covered by untraversable ice.

Anomaly A-3 shows similar characteristics as Anomaly A-1 on which the previous gold intersection was made, i.e. a magnetic high coincident with a chargeability high. Anomaly A-3 is therefore a potential target for additional work.

Anomaly B - No chargeability or resistivity zones were observed coincident with this magnetic anomaly.

Anomaly C - No chargeability or resistivity zone was directly coincident with the magnetic low characterizing Anomaly 'C' although a small chargeability high was mapped parallel to Anomaly 'C' directly south of the magnetic low. No apparent resistivity signature coincided with this chargeability zone. No particular emphasis is placed on the anomaly and no further work is warranted on this target at this time.

Anomaly D - This anomalous zone is believed to be an eastward continuation of Anomaly 'A'. A relatively strong chargeability zone was coincident with the magnetic horizon though no coincident apparent resistivity low was observed. Since this zone has been mapped on only one line, no definite conclusion can be reached as to the causative source. This anomaly strikes off the property and thus no further work can be recommended.



## 7. CONCLUSIONS

As a consequence of recommendations put forward in a previous report, additional geophysical surveys were carried out on the Windjammer property to refine and extend known geophysical targets and zones.

Further detailed surveying of Anomaly A-1 on Grid 1 has outlined a small magnetic peak coincident with a strong chargeability zone on line 7+00E. Anomaly A-1 was previously diamond drill tested on lines 6+00E and 8+00E. Within both these holes gold values of up to 0.15 oz/T was encountered. Following additional assaying, geochemically anomalous amounts of silver in concentrations of up to 100 times average background were obtained, particularly in the vicinity of the mafic volcanic-iron formation contact. These concentrations are comparable with or greater than silver tenors observed in many gold deposits. In that silver is generally more mobile than gold during primary dispersion, it may be acting as a qualitative pathfinder element in this area. Based upon the re-surveying of Anomaly A-1, it is clear that the previous two holes tested Anomaly A-1 close to either end of its strike length such that the central portion remains untested. A diamond drill collar can now be located to test this central area on line 7+00E based upon the detailed surveying.

The surveying carried out on Grid 3 has extended Anomaly A by an additional 1000 m. Within this broad anomalous horizon, a localized anomalous chargeability zone was found to be coincident with a magnetic high (Anomaly A-3). This situation is identical to that for Anomaly A-1. Anomaly A-3 is therefore concluded to be a potential gold target. (Based on the results to date from Anomaly A-1.)

The possible drag fold outlined at the western end of Anomaly A has interesting geological connotations in that it could act as a favourable structural trap for the accumulation of gold. No definite conclusion has been made regarding the potential of this zone although a re-evaluation should be made following any further diamond drilling along the Anomaly 'A' horizon.

## 8. RECOMMENDATIONS

To further evaluate the economic potential of this property it is recommended that

- 1) Further diamond drill testing of Anomaly 'A-1' be carried out with the drill collar located at 5+87S, 7+00E. The Azimuth of the drill hole should be  $360^\circ$  with a dip of  $-50^\circ$ . The length of the hole should be a minimum of 650 ft ( $\sim 200\text{m}$ ).
  
- 2) Double-dipole detail surveying should be carried out on lines 5+00E, 7+00E and possibly line 3+00E of Grid 3. Additionally, lines 6+00E and 4+00E should be cut and surveyed over Anomaly A-3.

Specific recommendations for a drill test of Anomaly A-3 will be made at that time.

Respectfully submitted,



D. Jones, M.Sc.  
Geophysicist

DJ/g



GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 574 Number of Readings 482 Magneticts: 440 IP

Station interval IP 25 m Mag. 25 m + 12.5 m Line spacing 200 m

Profile scale \_\_\_\_\_

Contour interval Magnetics 1000, 500, 100'  
IP Chargeability 10 m secs resistivity 500  $\Omega$ m

MAGNETIC

Instrument McPhar GP 70 Proton Magnetometer

Accuracy - Scale constant  $\pm 1$

Diurnal correction method Constant Slope

Base Station check-in interval (hours) 2 hrs.

Base Station location and value \_\_\_\_\_

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 \_\_\_\_\_

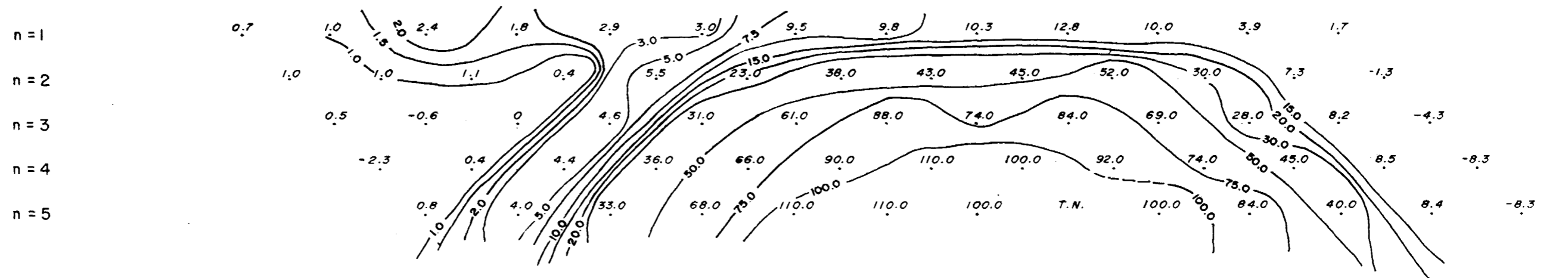
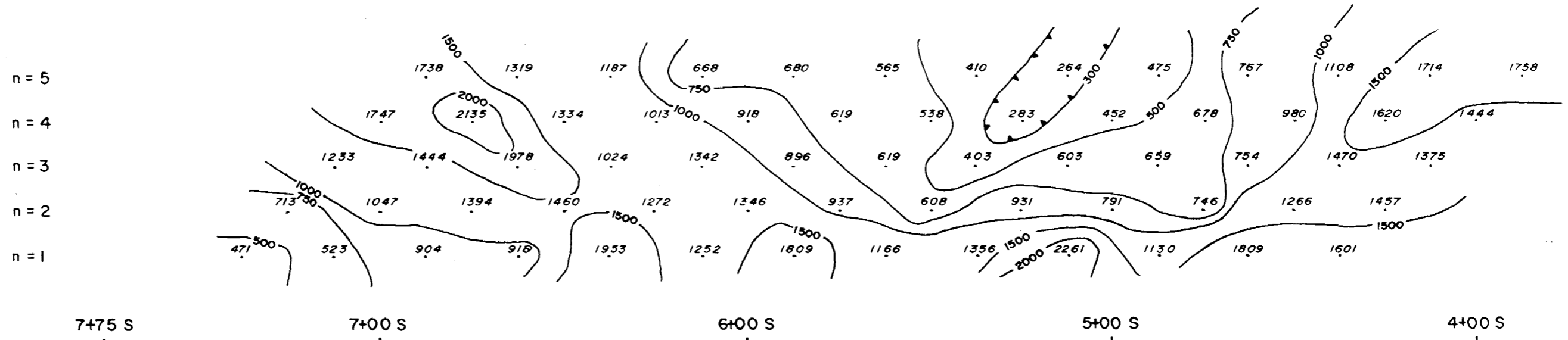
- Integration time \_\_\_\_\_

Power \_\_\_\_\_

Electrode array \_\_\_\_\_

Electrode spacing \_\_\_\_\_

Type of electrode \_\_\_\_\_



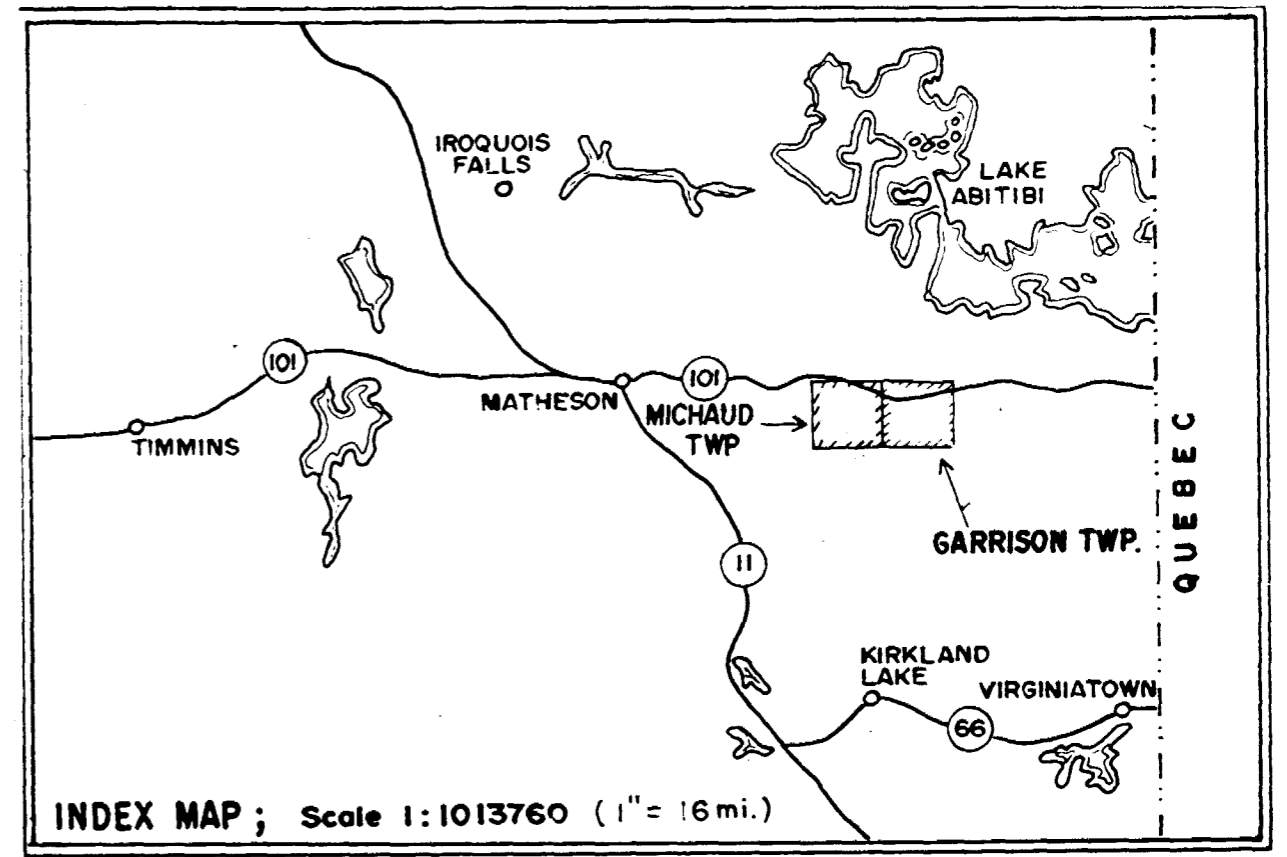
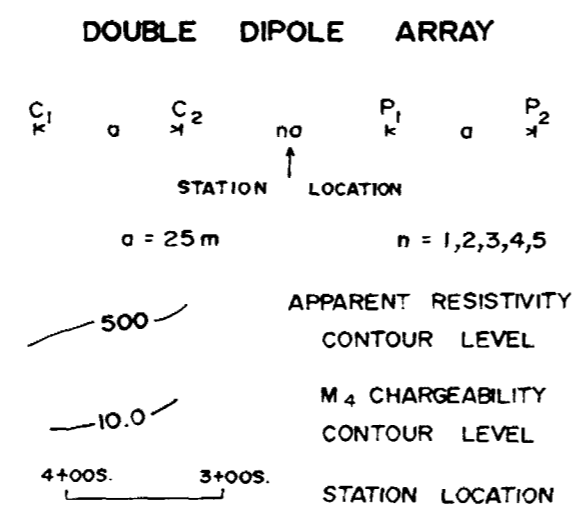
n = 5  
 n = 4  
 n = 3  
 n = 2  
 n = 1

3+00 S

LINE 6+00 E

n = 1  
 n = 2  
 n = 3  
 n = 4  
 n = 5

LEGEND



WINDJAMMER POWER & GAS

GARRISON TOWNSHIP PROJECT  
 GRID I

DETAIL PSEUDO SECTIONS

Project No: C-504	By: D.J.
Scale: 1:1250	Drawn: D.R.
Drawing No: D.I	Date: July, 1980



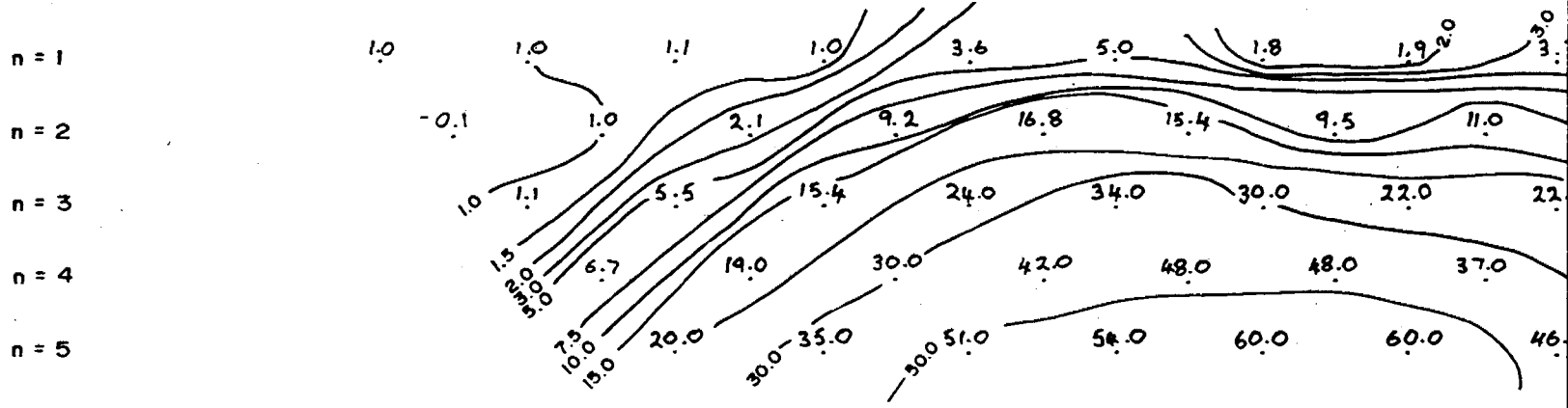
MPH Consulting Limited

2,3976

### APPARENT RESISTIVITY

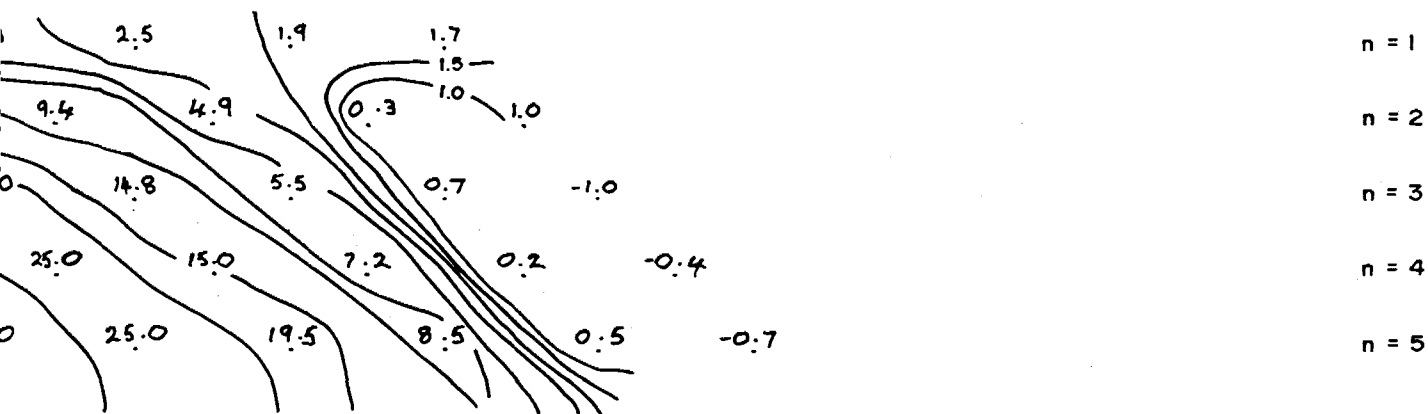
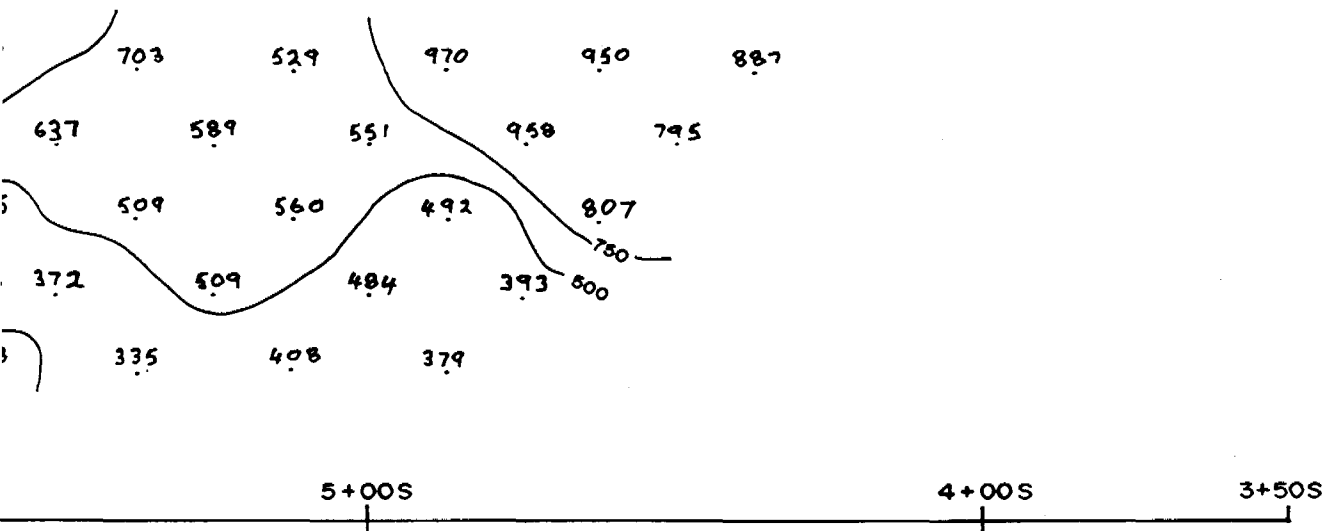


LINE 5 + 00 E.



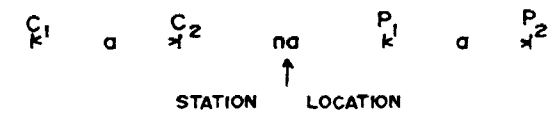
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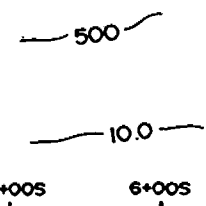
LEGEND

DOUBLE DIPOLE ARRAY



a = 25 m

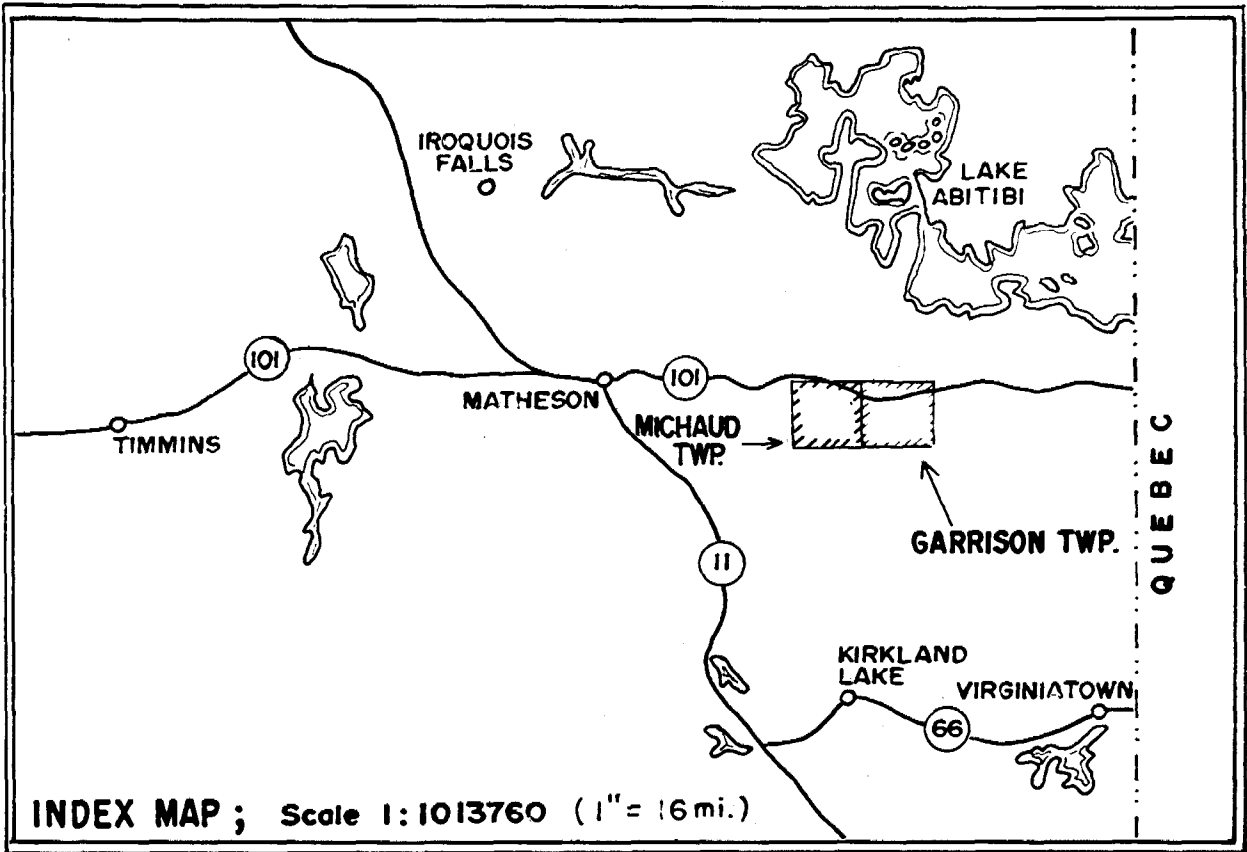
n = 1,2,3,4,5



APPARENT RESISTIVITY  
CONTOUR LEVEL ( $\Omega$ )

$M_3$  CHARGEABILITY  
CONTOUR LEVEL (m)

STATION LOCATION



# WINDJAMMER POWER & GAS

GARRISON TOWNSHIP PROJECT  
GRID I

## DETAIL PSEUDOSECTION

Project No: C504

By: DAVID JONES

Scale: 1:1250

Drawn: E.J.

Drawing No: D2

Date: NOVEMBER, 1980



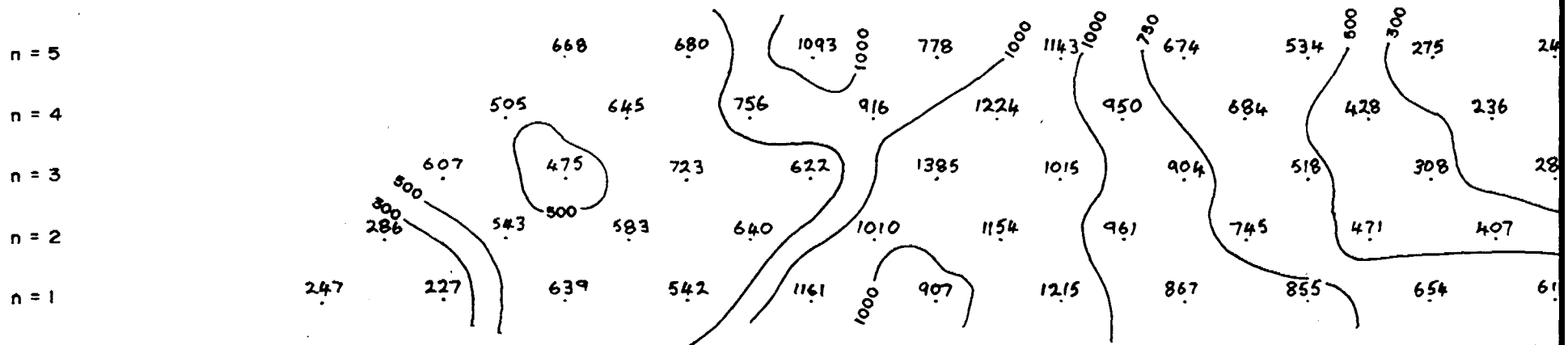
MPH Consulting Limited

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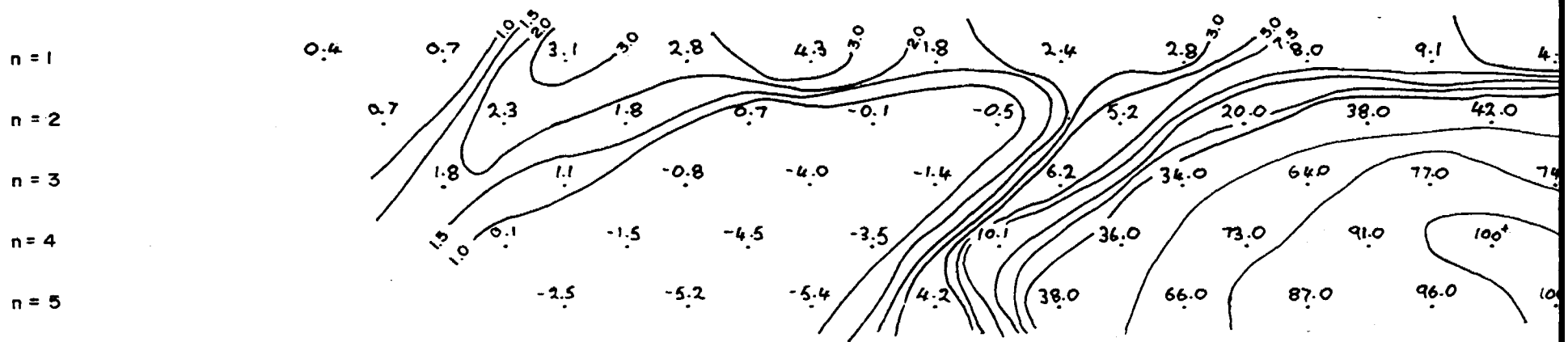
hm-meters)

secs)

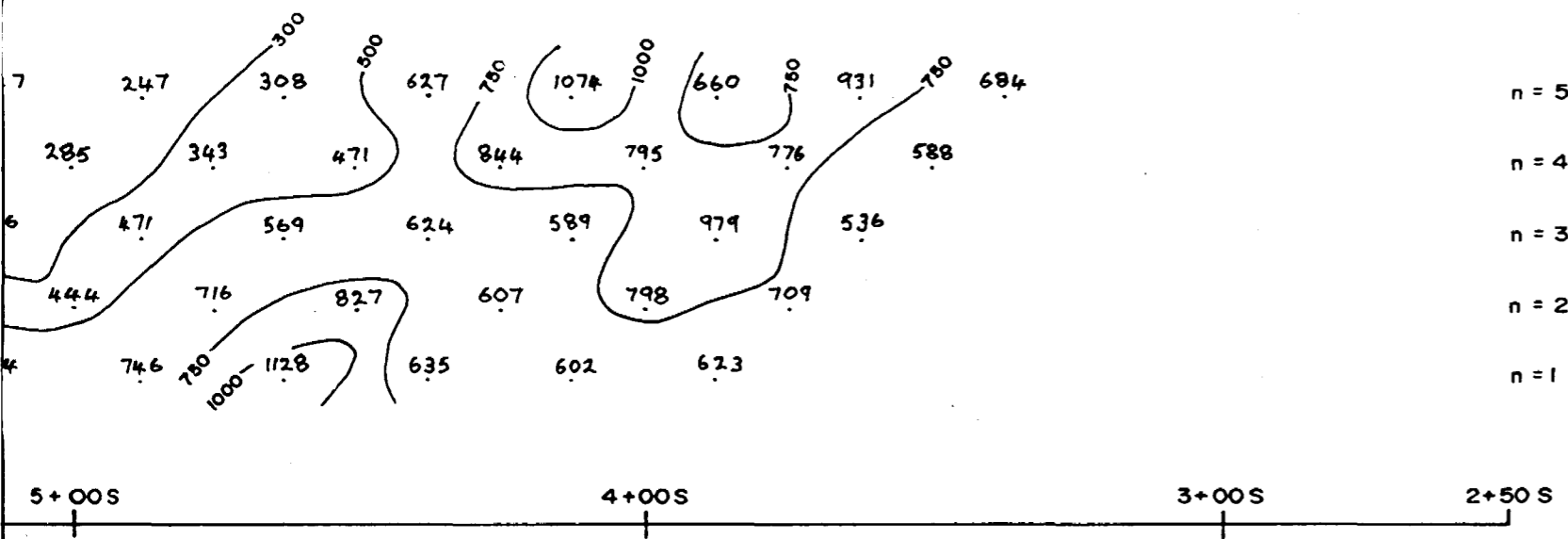
APPARENT RESISTIVITY



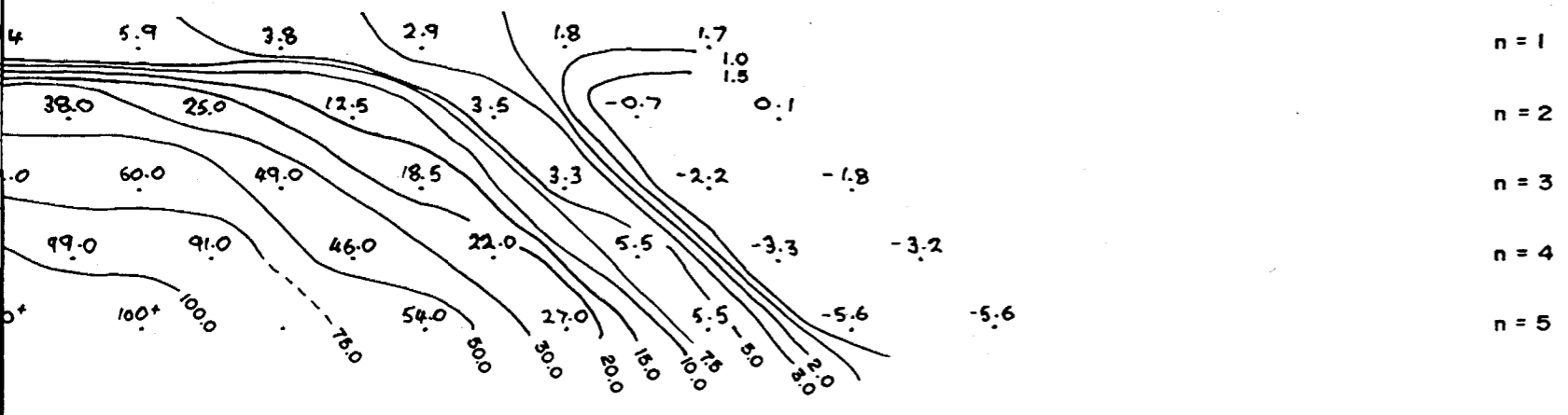
LINE 7+00 E



M<sub>3</sub> CHARGEABILITY

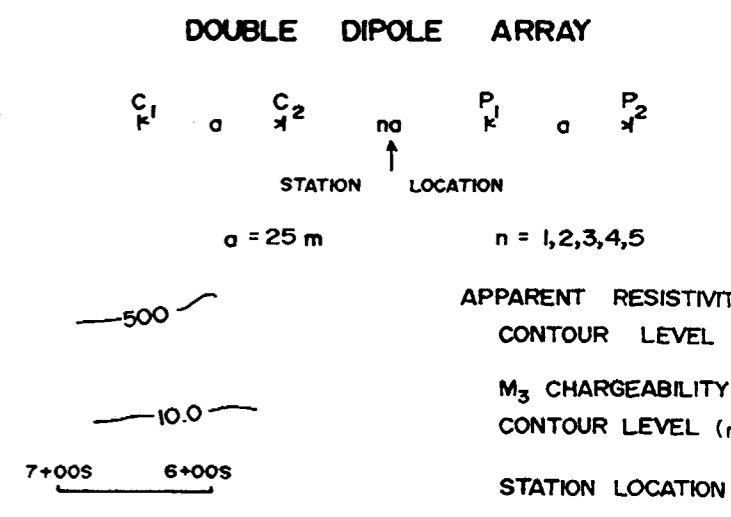


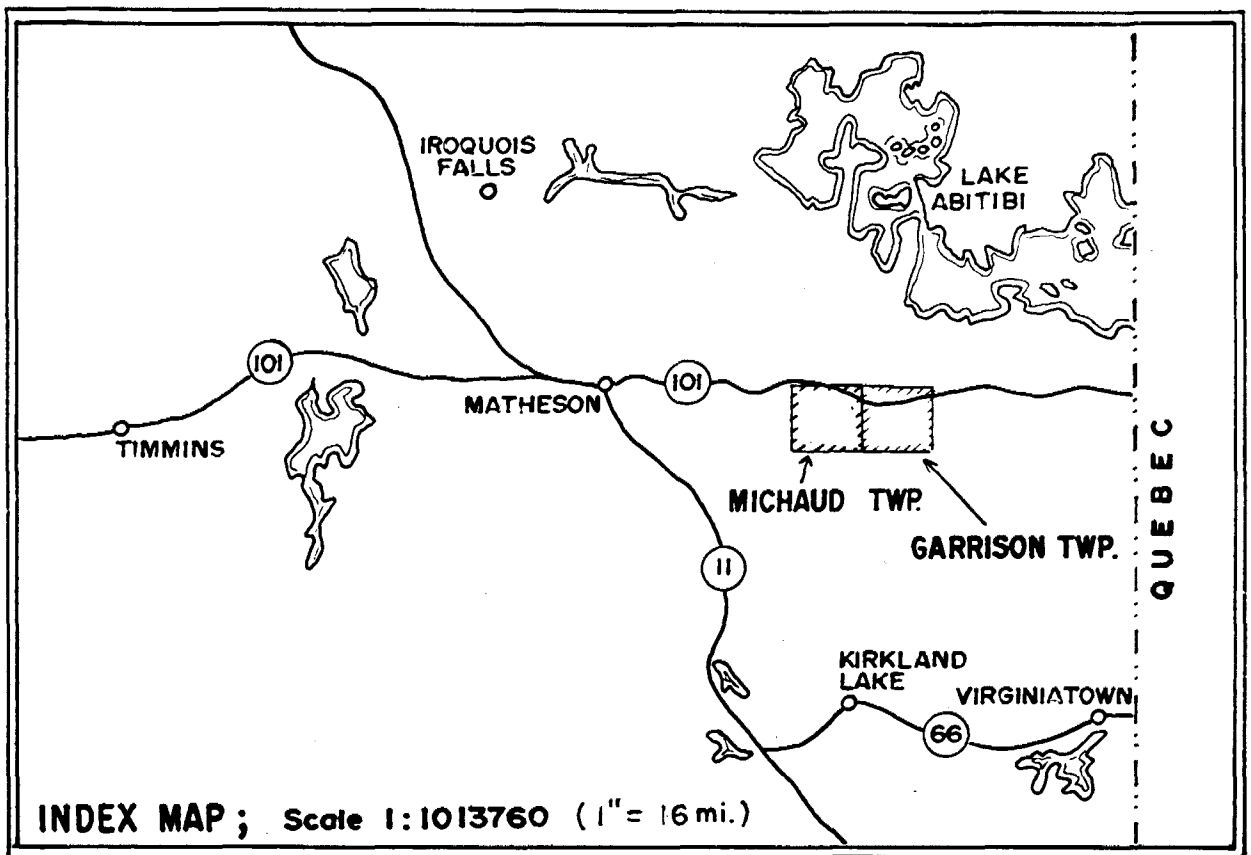
n = 5  
n = 4  
n = 3  
n = 2  
n = 1



n = 1  
n = 2  
n = 3  
n = 4  
n = 5

LEGEND





# WINDJAMMER POWER & GAS

GARRISON TOWNSHIP PROJECT  
GRID I

## DETAIL PSEUDOSECTION

Project No: C 504

By: DAVID JONES

Scale: 1:1250

Drawn: E.J.

Drawing No: D3

Date: NOVEMBER, 1980



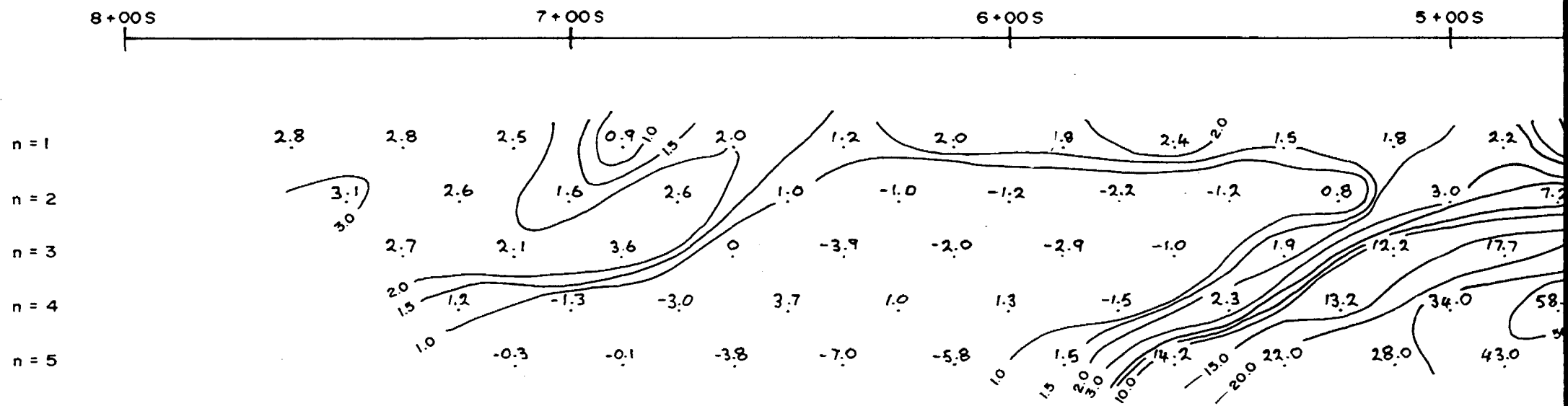
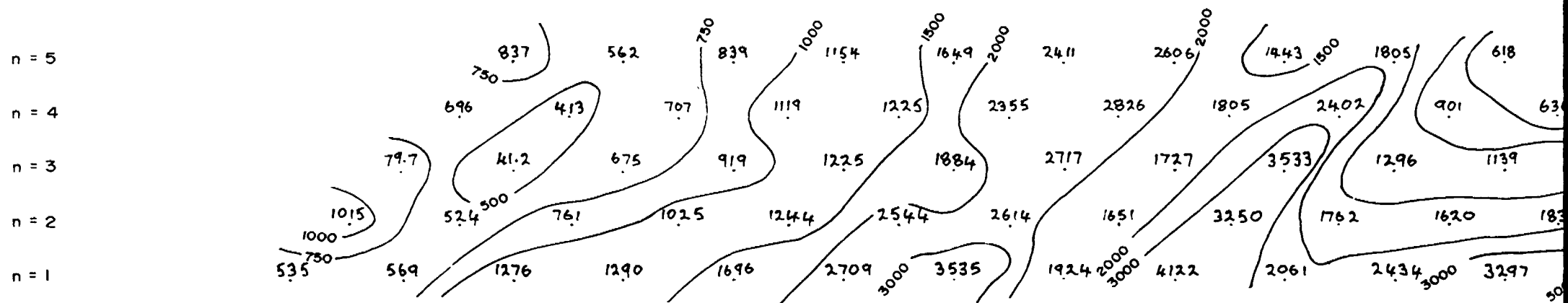
MPH Consulting Limited

2.3976

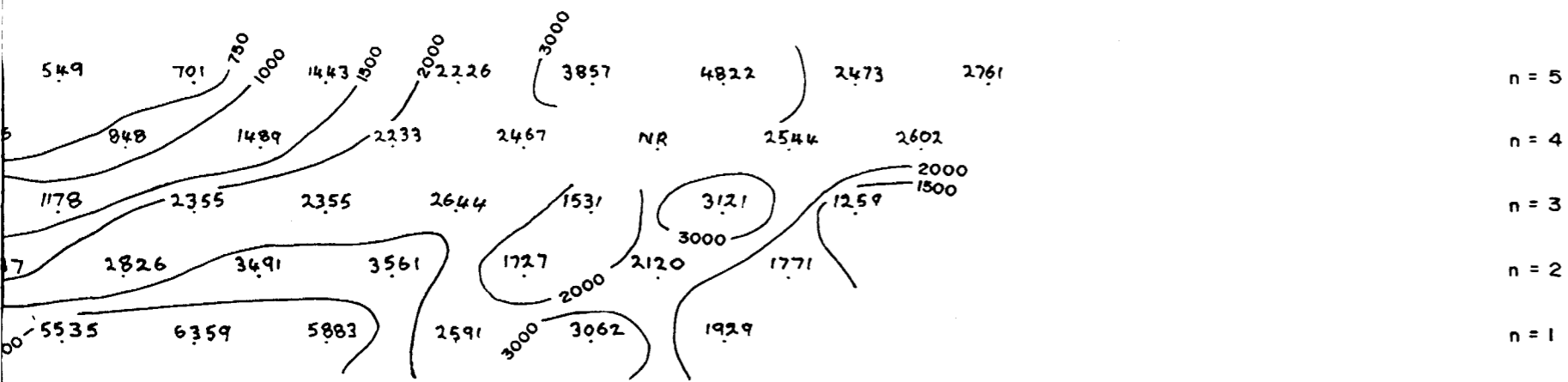
(ohm-meters)

n. secs)

APPARENT RESISTIVITY



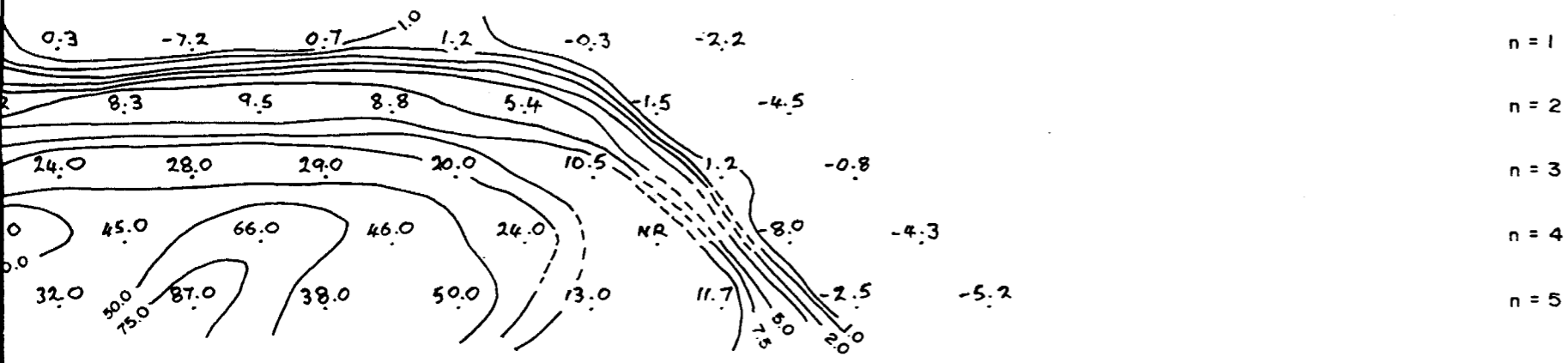
M<sub>3</sub> CHARGEABILITY



n = 5  
 n = 4  
 n = 3  
 n = 2  
 n = 1

4+00S 3+00S 2+00S

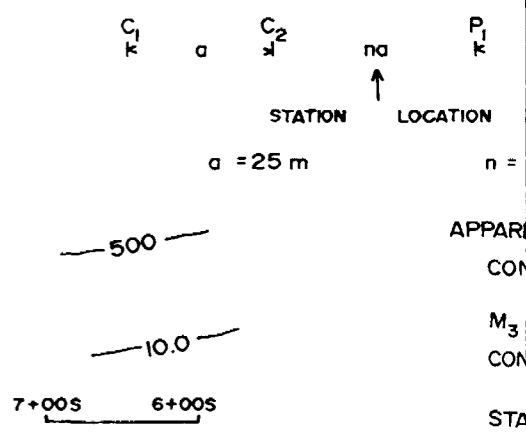
LINE 9+00 E

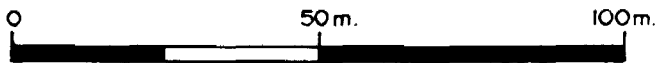
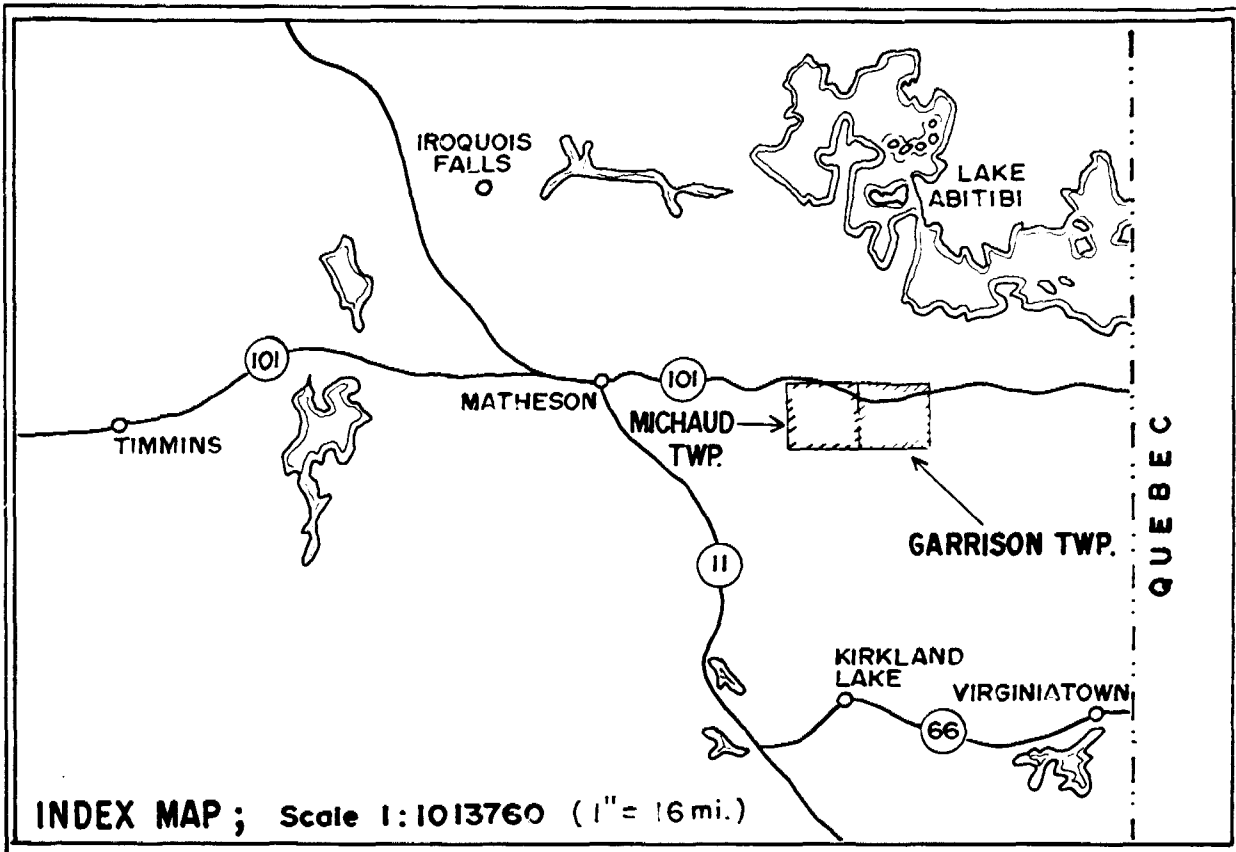


n = 1  
 n = 2  
 n = 3  
 n = 4  
 n = 5

LEGEND

DOUBLE DIPOLE ARR





RAY

o P<sub>2</sub>

1,2,3,4,5

ENT RESISTIVITY

TOUR LEVEL (ohm - meters)

CHARGEABILITY

TOUR LEVEL (m. secs)

TION LOCATION

# WINDJAMMER POWER & GAS

GARRISON TOWNSHIP PROJECT  
GRID I

## DETAIL PSEUDOSECTION

Project No: C504

By: DAVID JONES

Scale: 1:1250

Drawn: E.J.

Drawing No: D4

Date: NOVEMBER, 1980



MPH Consulting Limited

2.3976



NOTES

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

SAND and GRAVEL

① - M.T.C. Gravel Pif No. 762

RESERVATIONS

② - S.R.O. for Public Use, Sec. 39(d) of Mining Act (R.S.O.'50) File: 42000.

AREAS WITHDRAWN FROM STAKING

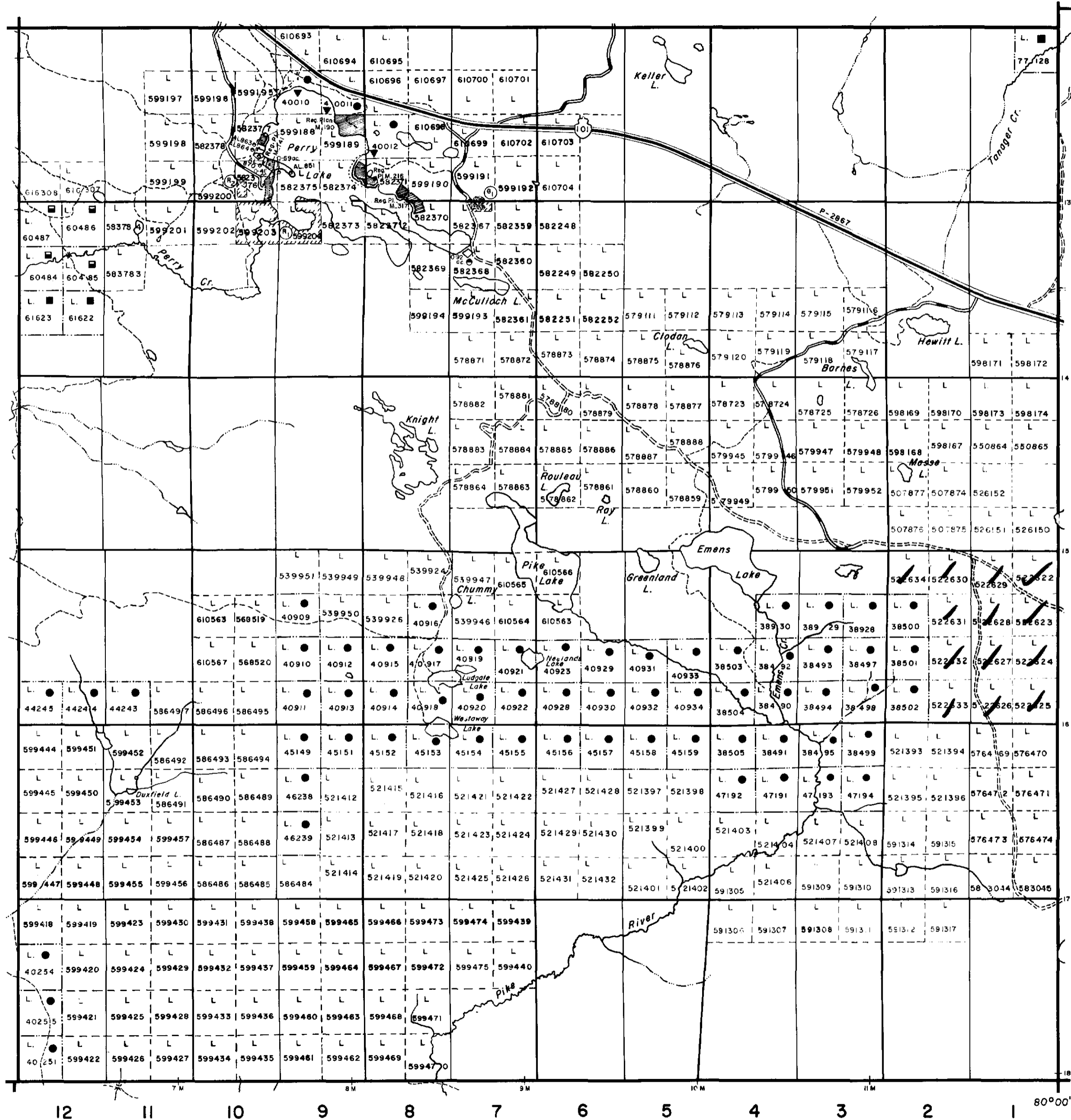
S.R. - SURFACE RIGHTS M.R. - MINING RIGHTS

Section	Order No.	Date	Disposition	File
②	42 (R.S.O.'60)		S.R.	164586

DATE OF ISSUE  
DEC 21 1981  
Ministry of Natural Resources  
TORONTO

McCool Tp. M-365

Guibord Tp. M-352



Barnet Tp. M-322

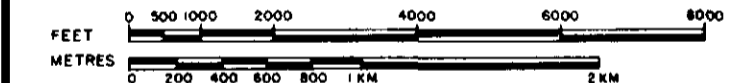
LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

- | TYPE OF DOCUMENT                | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS |        |
| " SURFACE RIGHTS ONLY           |        |
| " MINING RIGHTS ONLY            |        |
| LEASE, SURFACE & MINING RIGHTS  |        |
| " SURFACE RIGHTS ONLY           |        |
| " MINING RIGHTS ONLY            |        |
| LICENCE OF OCCUPATION           |        |
| CROWN LAND SALE                 |        |
| ORDER-IN-COUNCIL                |        |
| RESERVATION                     |        |
| CANCELLED                       |        |
| SAND & GRAVEL                   |        |

SCALE: 1 INCH = 40 CHAINS



ACRES	HECTARES
40	16

TOWNSHIP

**MICHAUD**

DISTRICT

COCHRANE

MINING DIVISION

LARDER LAKE

23976

Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date 28, JUNE / 74

Plan No.

Whitney Block  
Queen's Park, Toronto

M-372



32D125W0161 2.3976 GARRISON

200

80°00'43" approx.

VI

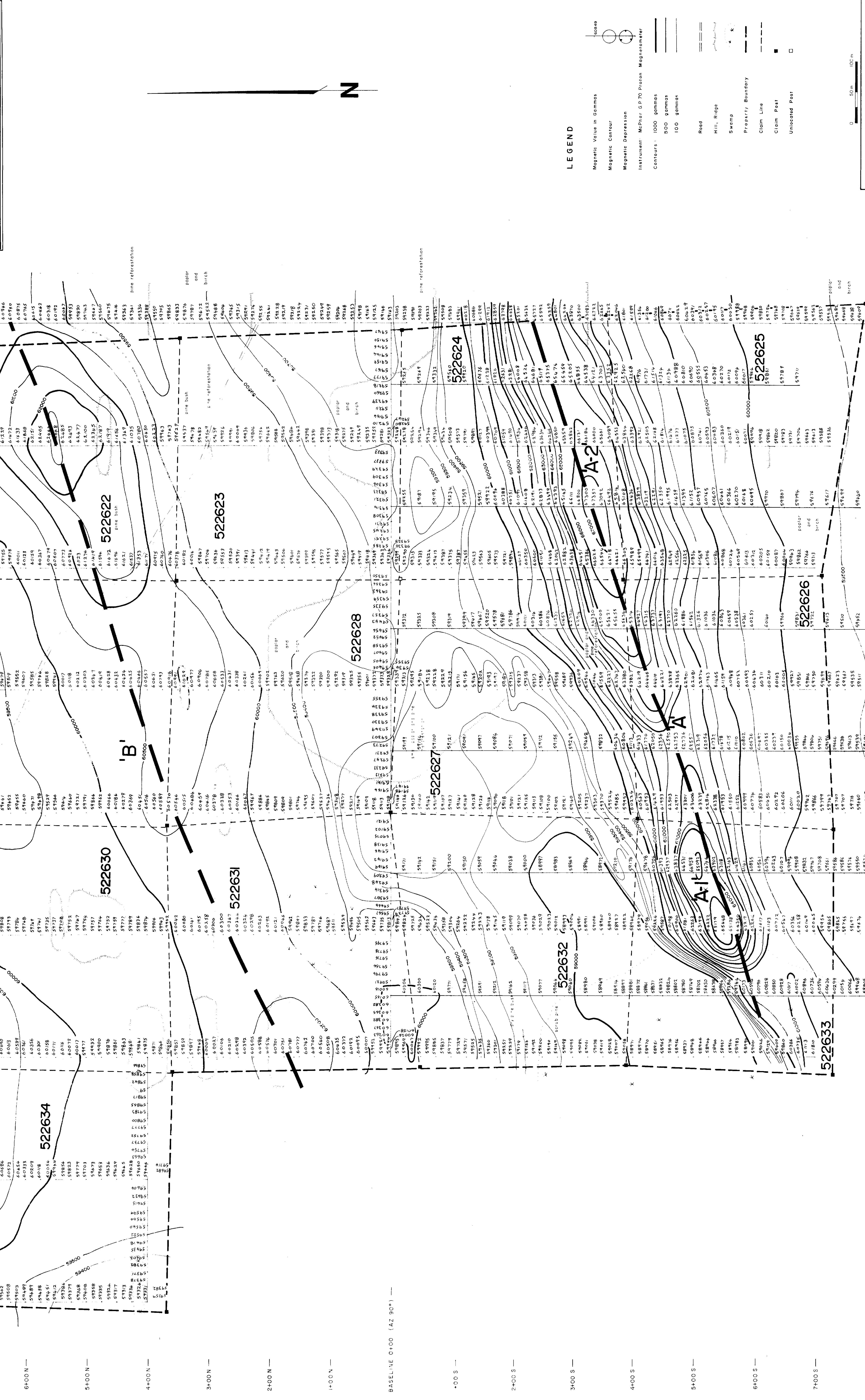
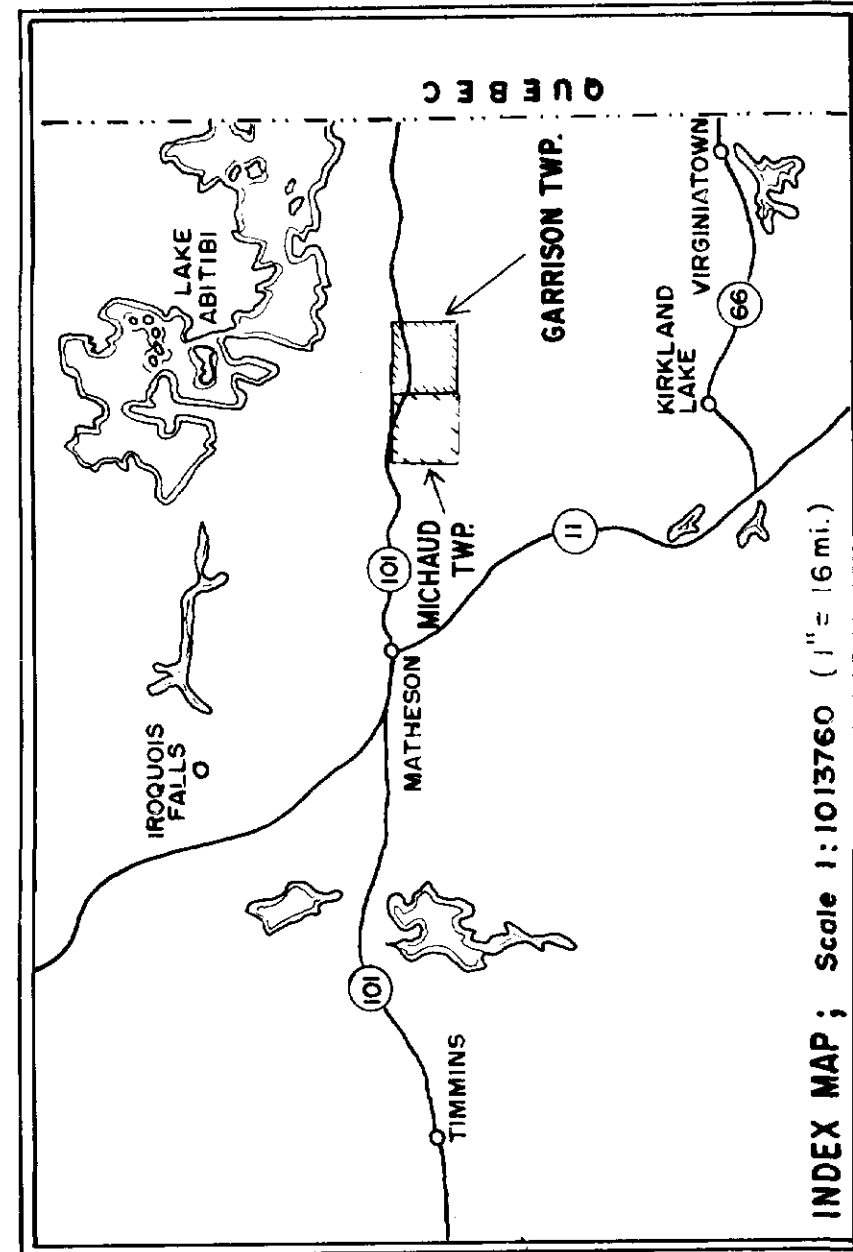
V

IV

III

II

I



**WINDJAMMER POWER & GAS**  
**GARRISON TOWNSHIP PROJECT**  
**GRID I**  
**MAGNETIC SURVEY**

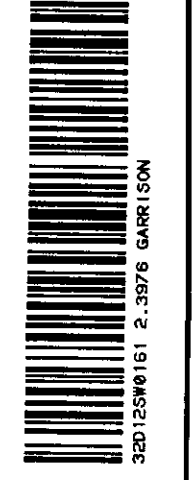
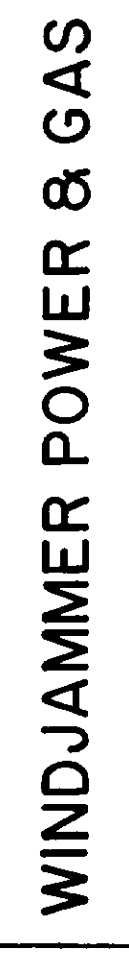
Project No. C-504  
 Scale: 1:2500  
 Drawing No. 1

By: D. JONES  
 Drawn: E. J.  
 Date: NOVEMBER, 1980

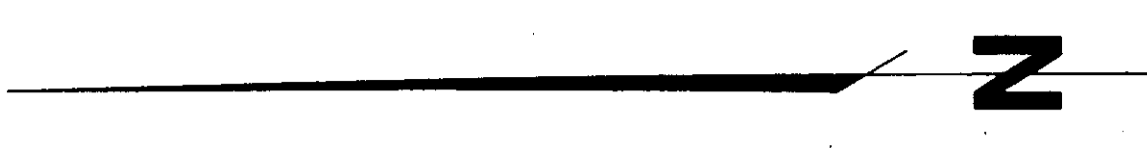
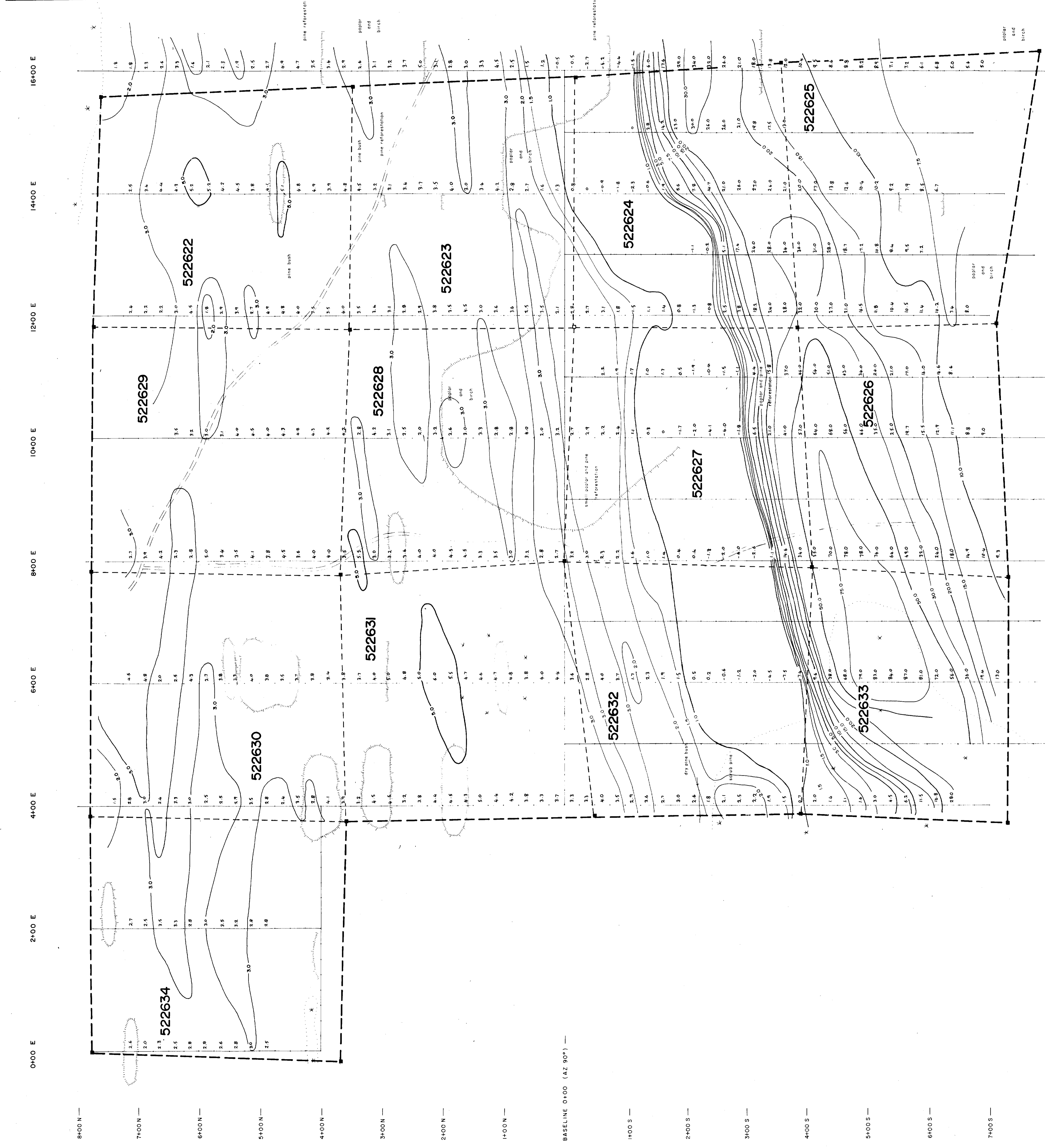
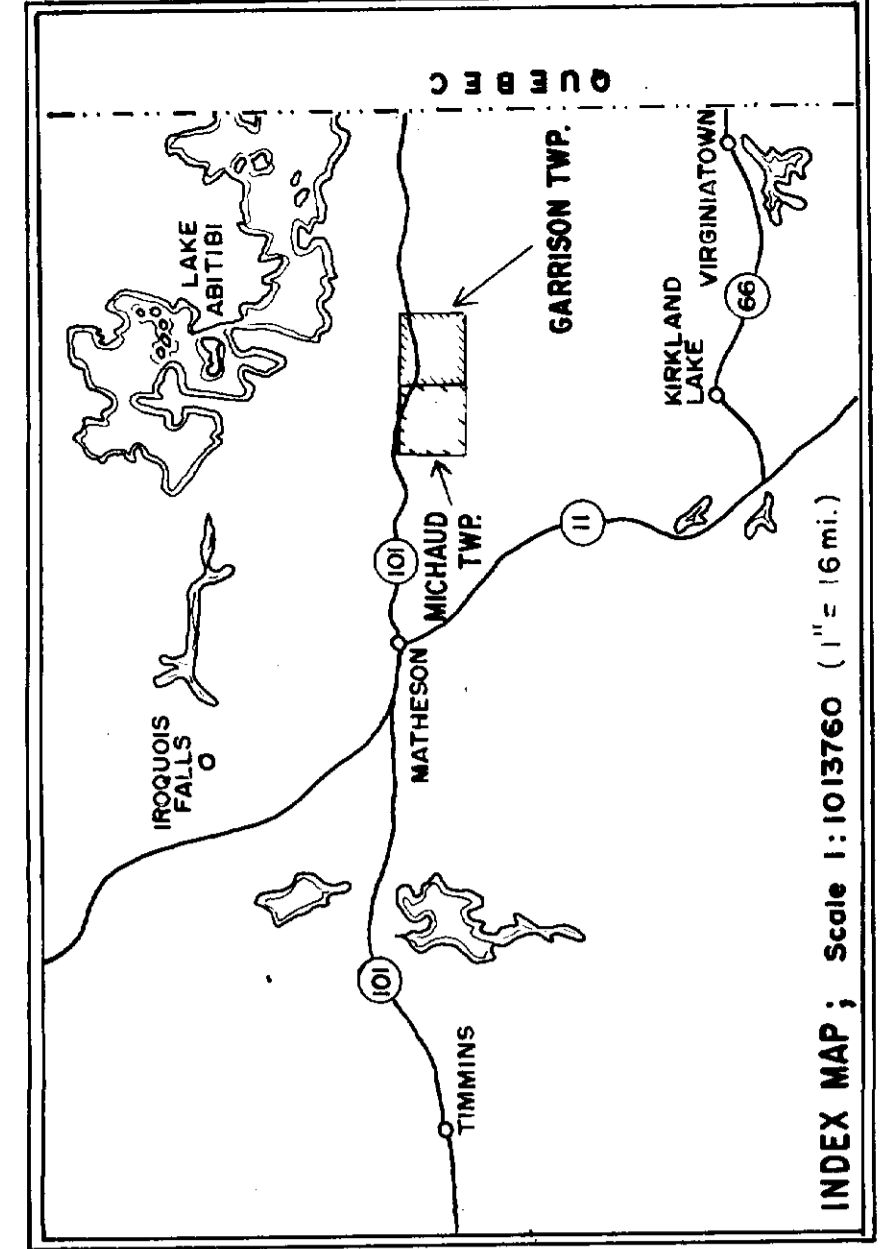
**MPH Consulting Limited**

**LEGEND**

- Magnetic Value in Gauss
- Magnetic Contour
- Magnetic Depression
- Instrument: McPhier G-70 Proton Magnetometer
- Contours: 1000 gamma
- 500 gamma
- 100 gamma
- Road
- Hill, Ridge
- Swamp
- Property Boundary
- Claim Line
- Claim Post
- Unlocated Post







LEGEND

- POLE DIPOLE ARRAY
- CHARGEABILITY CONTOUR LEVEL (m. elev.)
- ROAD
- HILL RIDGE
- SWAMP
- PROPERTY BOUNDARY
- CLAIM LINE
- CLAY PIER
- UNOCCUPIED PLOT
- STATION LOCATION
- 0.25M
- 0 50M 100M

**WINDJAMMER POWER & GAS**

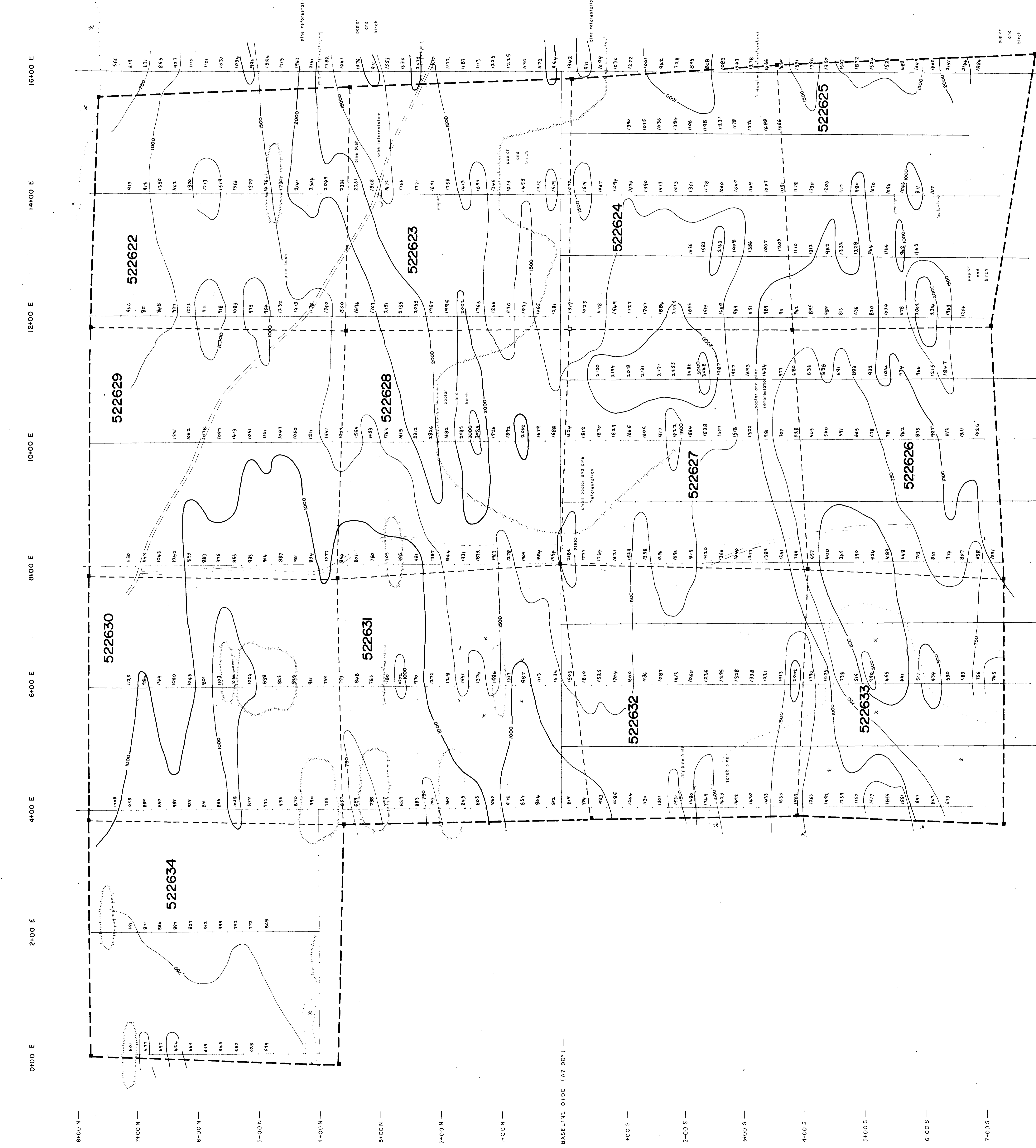
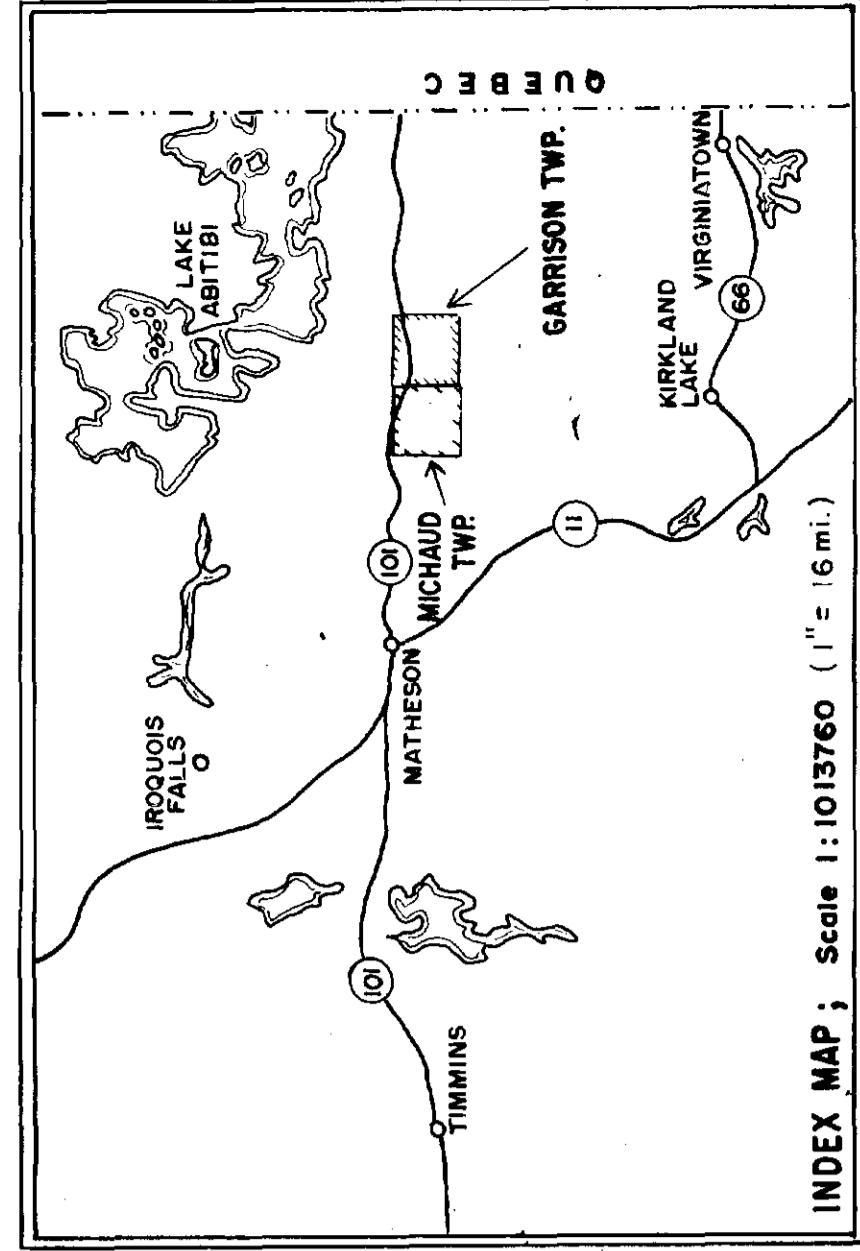
GARRISON TOWNSHIP PROJECT  
GRID 1

**N5 IP CHARGEABILITY SURVEY**

Project No. C-504  
Scale: 1:2500  
Drawing No. 2  
By: D. JONES  
Drawn: E. J.  
Date: NOVEMBER, 1990

**MPH Consulting Limited**





LEGEND

- POLE DIPOLE ARRAY
- 0 = 25m
  - 0 = 50m
  - 0 = 75m
  - 0 = 100m
  - 0 = 125m
  - 0 = 150m
  - 0 = 175m
  - 0 = 200m
- APPARENT RESISTIVITY  
CONTOUR LEVEL (ohm-meters)
- 500
  - 1000
  - 1500
  - 2000
  - 3000
  - 4000
- Road
  - Hill Ridge
  - Swamp
  - Property Boundary
  - Claim Line
  - Claim Post
  - Unlocated Post

**WINDJAMMER POWER & GAS**

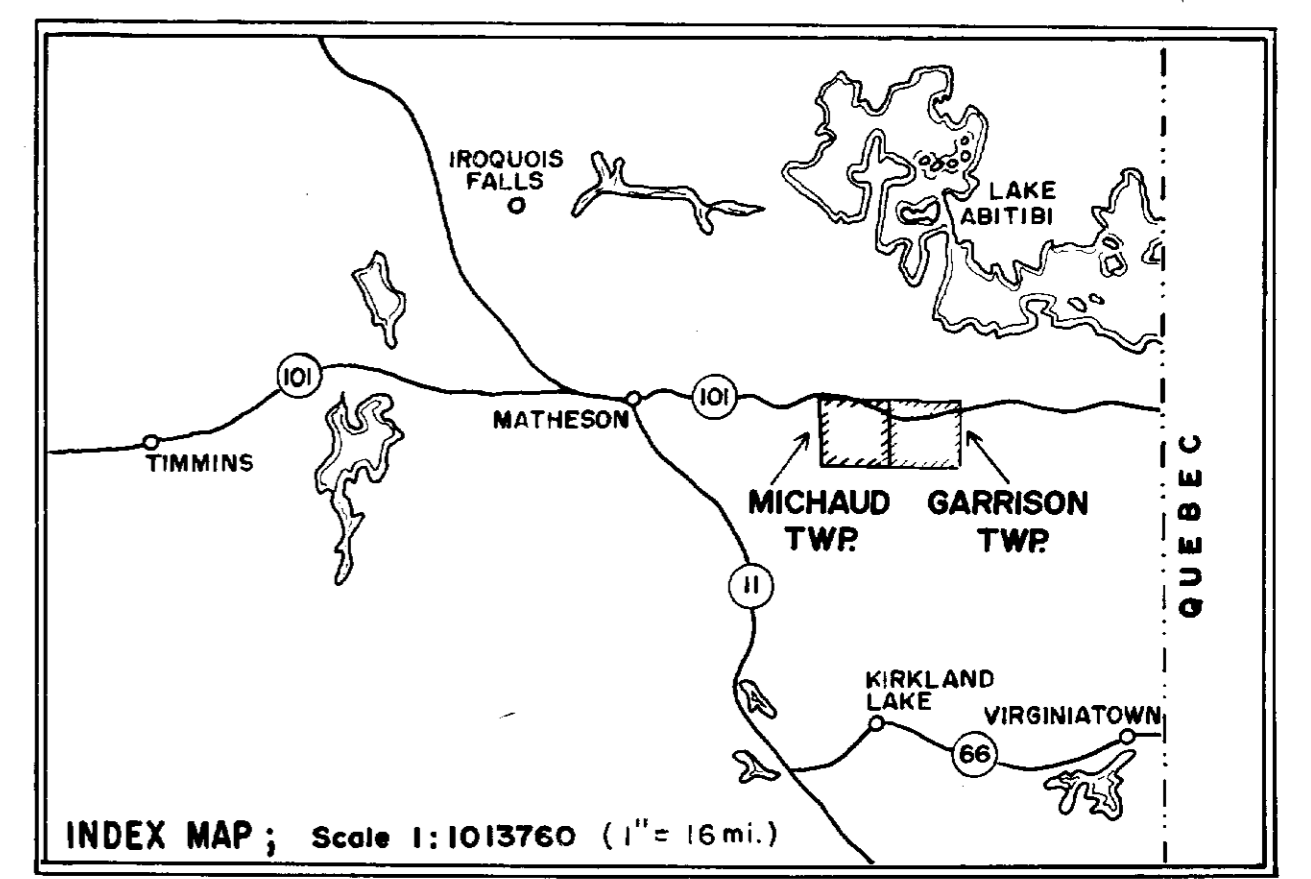
GARRISON TOWNSHIP PROJECT  
GRID 1  
N5 IP RESISTIVITY SURVEY

Project No. C-504  
Scale: 1:2500  
Drawing No. 3

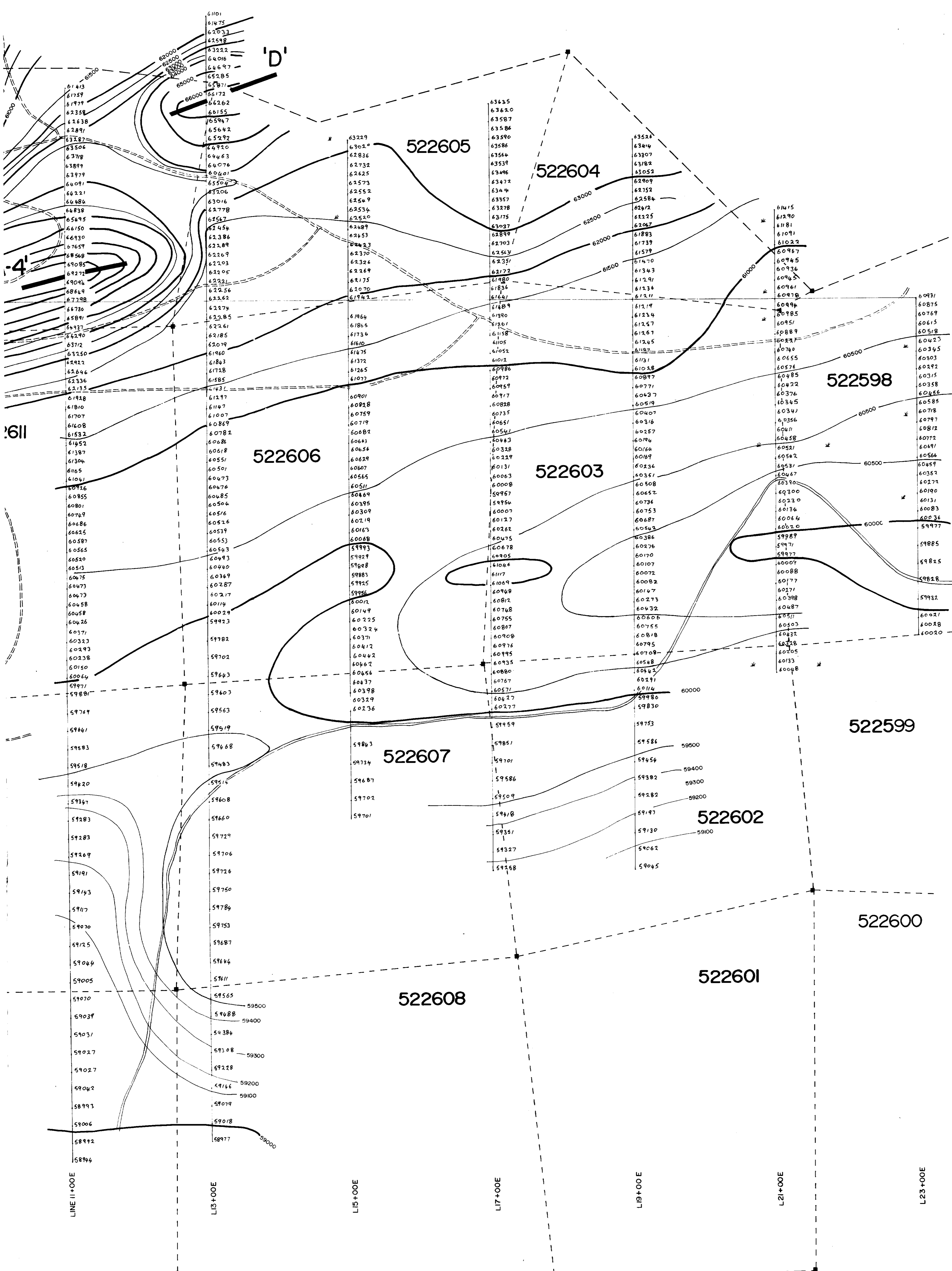
By: D. JONES  
Drawn: E. J.  
Date: NOVEMBER, 1980

MPH Consulting Limited





9+00N  
8+00N  
7+00N  
6+00N  
5+00N  
4+00N  
3+00N  
2+00N  
1+00N  
BASE LINE (AZIMUTH 90°)  
1+00S  
2+00S  
3+00S  
4+00S  
5+00S  
6+00S  
7+00S  
8+00S  
9+00S  
10+00S  
11+00S  
12+00S



**LEGEND**

Magnetic Value in Gammas

Magnetic Contour

Magnetic Depression

Instrument: McPhar G.P. 70 Proton Magnetometer

Contours: 1000 gammas  
500 gammas  
100 gammas

Road

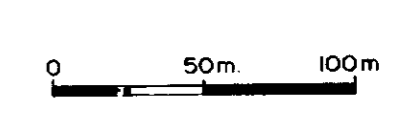
Creek

Swamp

Property Boundary

Claim Line

Claim Post



**WINDJAMMER POWER & GAS**

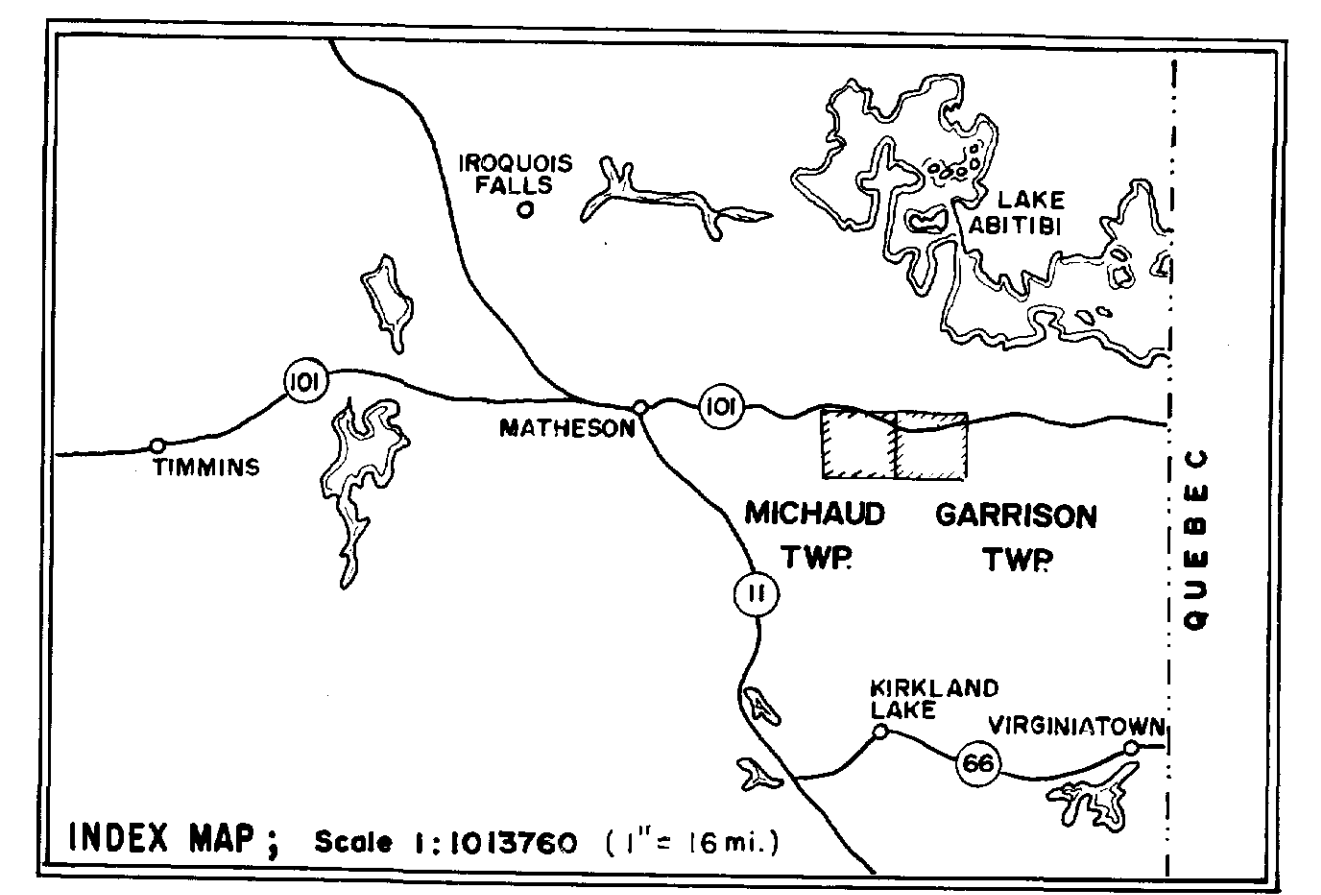
GARRISON TOWNSHIP PROJECT  
GRID 3  
**MAGNETIC SURVEY**

Project No: C504	By: D. JONES
Scale: 1:2500	Drawn: E. J.
Drawing No: 4	Date: NOVEMBER, 1980

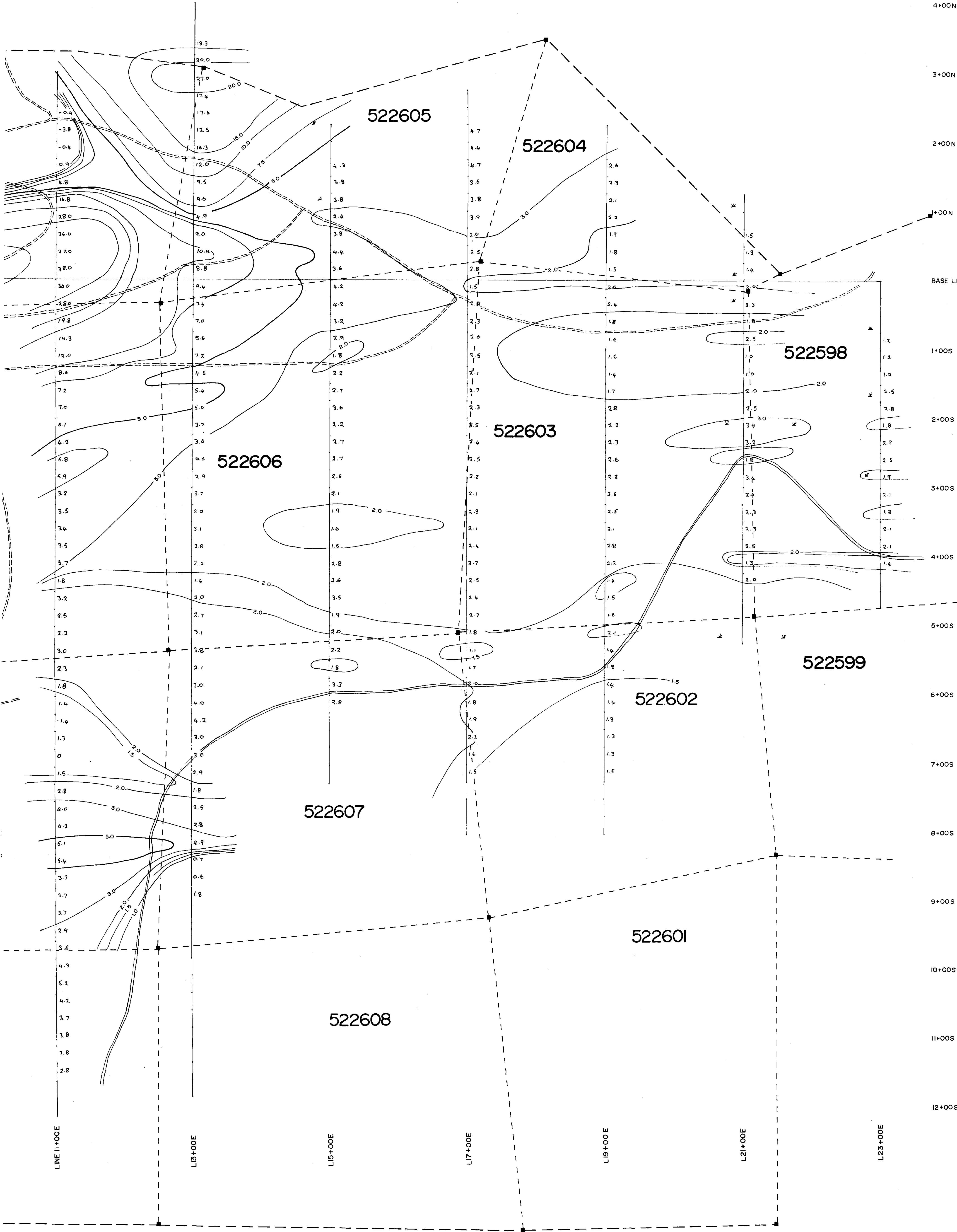
**MPH** Consulting Limited

2-3-76



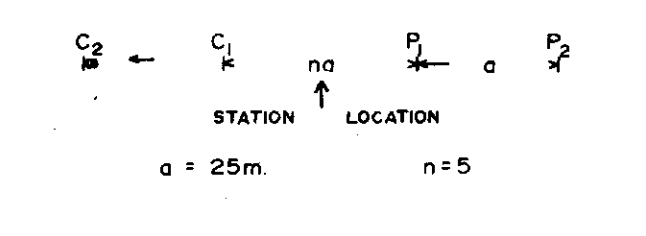


9+00N  
8+00N  
7+00N  
6+00N  
5+00N  
4+00N  
3+00N  
2+00N  
1+00N  
0+00N  
BASE LINE (AZIMUTH 90°)  
1+00S  
2+00S  
3+00S  
4+00S  
5+00S  
6+00S  
7+00S  
8+00S  
9+00S  
10+00S  
11+00S  
12+00S



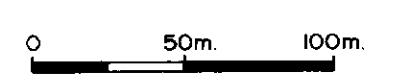
LEGEND

POLE DIPOLE ARRAY



10.0 CHARGEABILITY CONTOUR LEVEL (m. secs)

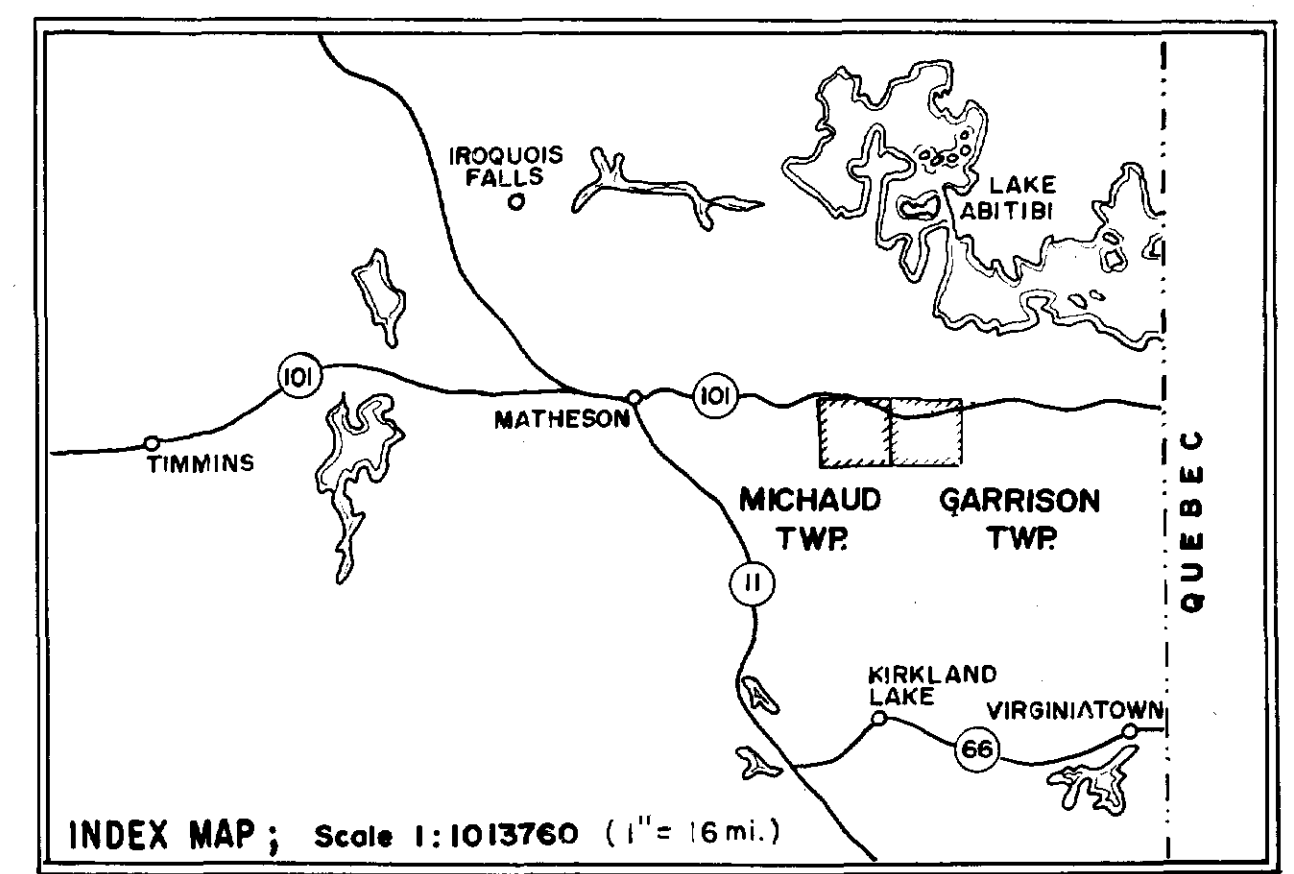
- Road
- Creek
- Swamp
- Property Boundary
- Claim Line
- Claim Post



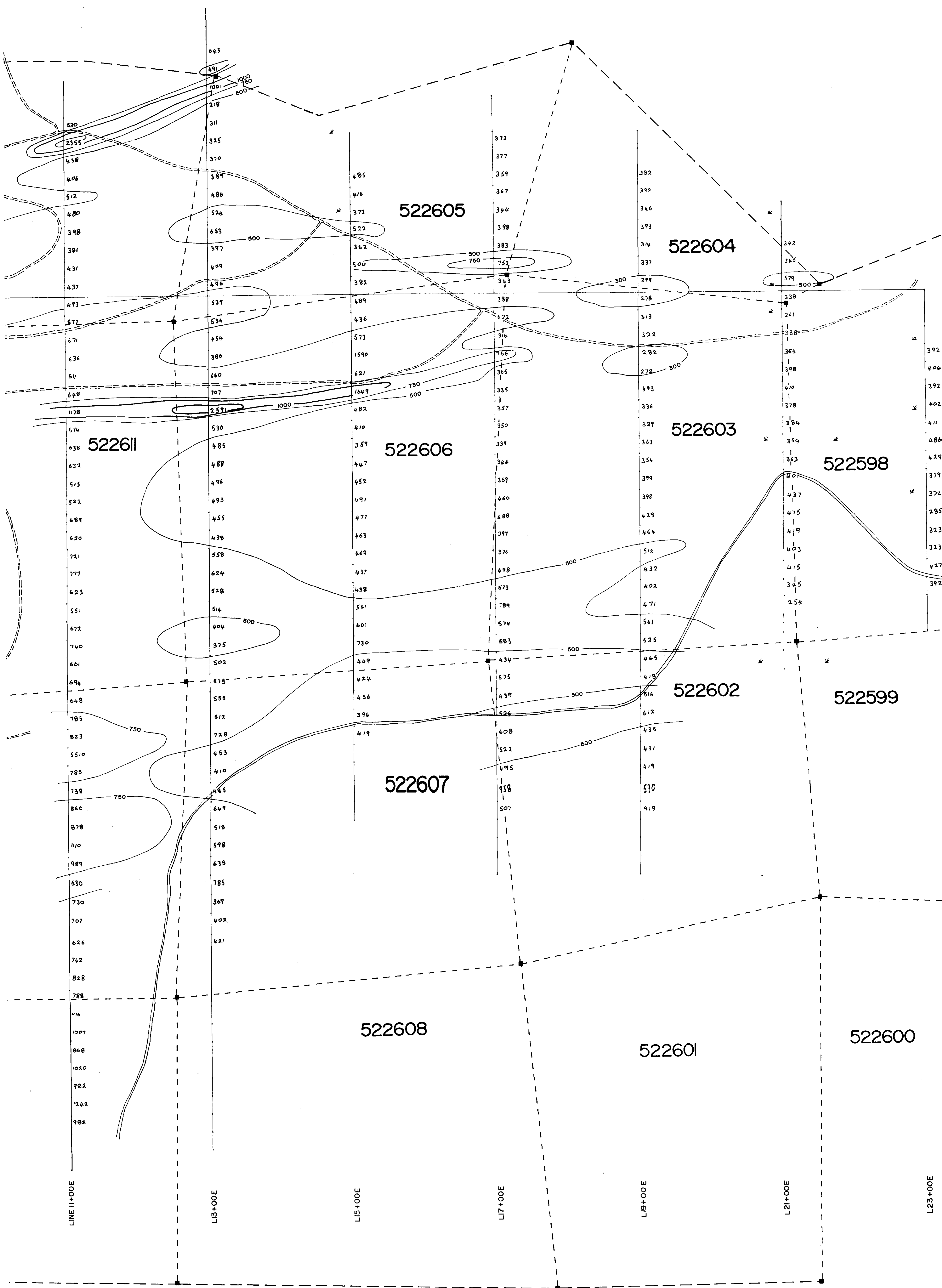
**WINDJAMMER POWER & GAS**  
 GARRISON TOWNSHIP PROJECT  
 GRID 3  
**N5 IP CHARGEABILITY SURVEY**

Project No: C504	By: D. JONES
Scale: 1:2500	Drawn: E. J.
Drawing No: 5	Date: NOVEMBER, 1980

MPH Consulting Limited

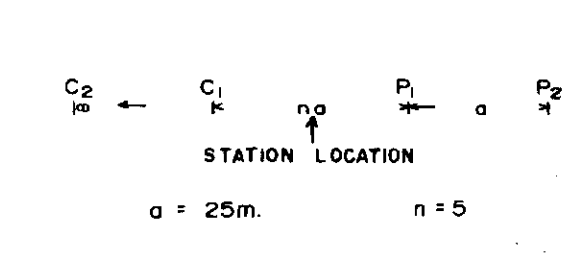


9+00N  
8+00N  
7+00N  
6+00N  
5+00N  
4+00N  
3+00N  
2+00N  
1+00N  
0+00N  
BASE LINE (AZIMUTH 90°)  
1+00S  
2+00S  
3+00S  
4+00S  
5+00S  
6+00S  
7+00S  
8+00S  
9+00S  
10+00S  
11+00S  
12+00S



**LEGEND**

**POLE DIPOLE ARRAY**



500 APPARENT RESISTIVITY CONTOUR LEVEL (ohm-metres)

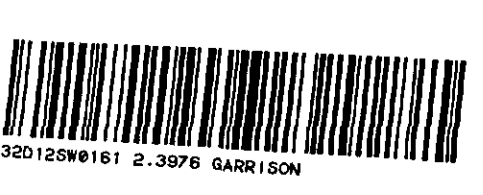
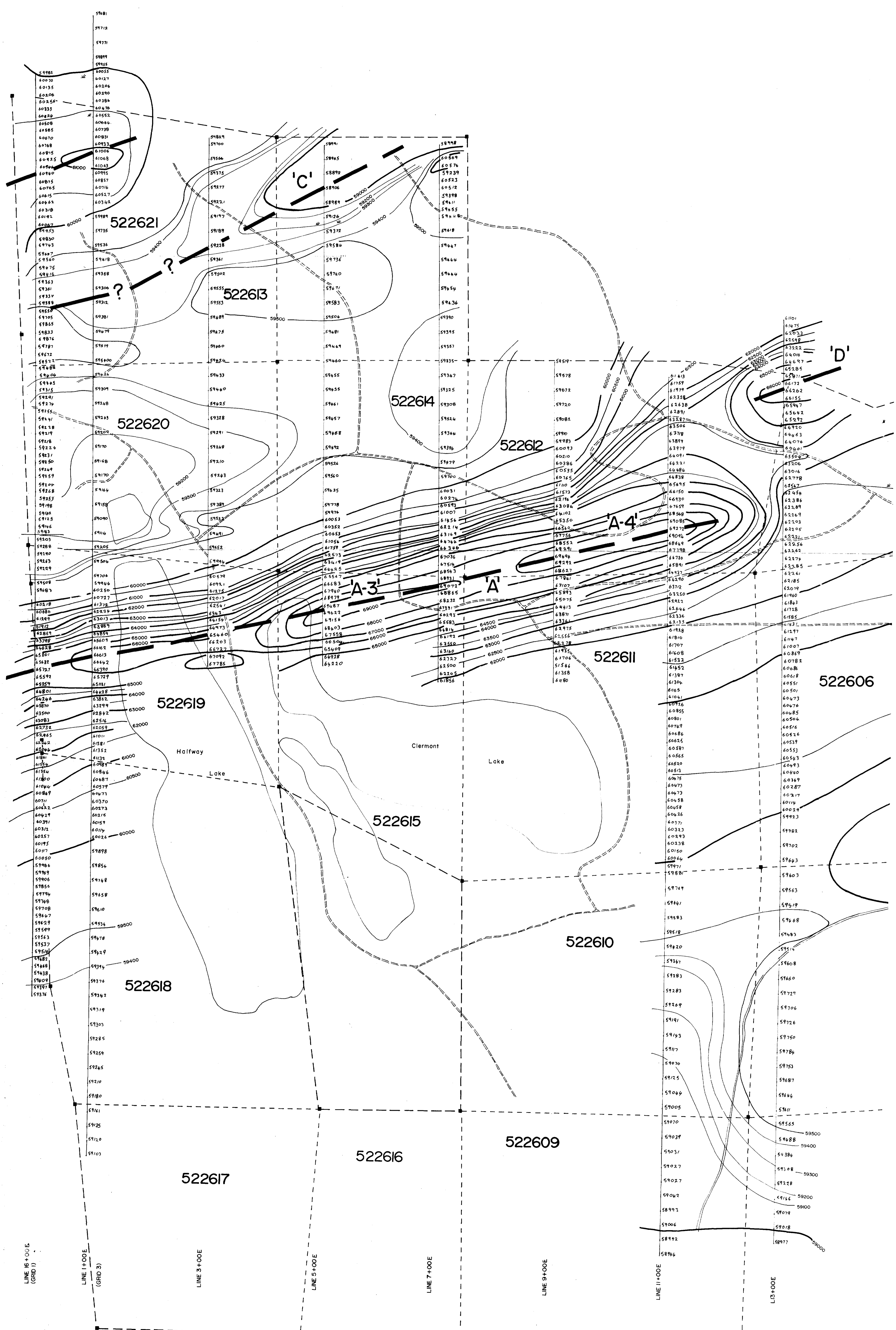
- Road
- Creek
- Swamp
- Property Boundary
- Claim Line
- Claim Post

**WINDJAMMER POWER & GAS**

**GARRISON TOWNSHIP PROJECT  
GRID 3  
N5 IP RESISTIVITY SURVEY**

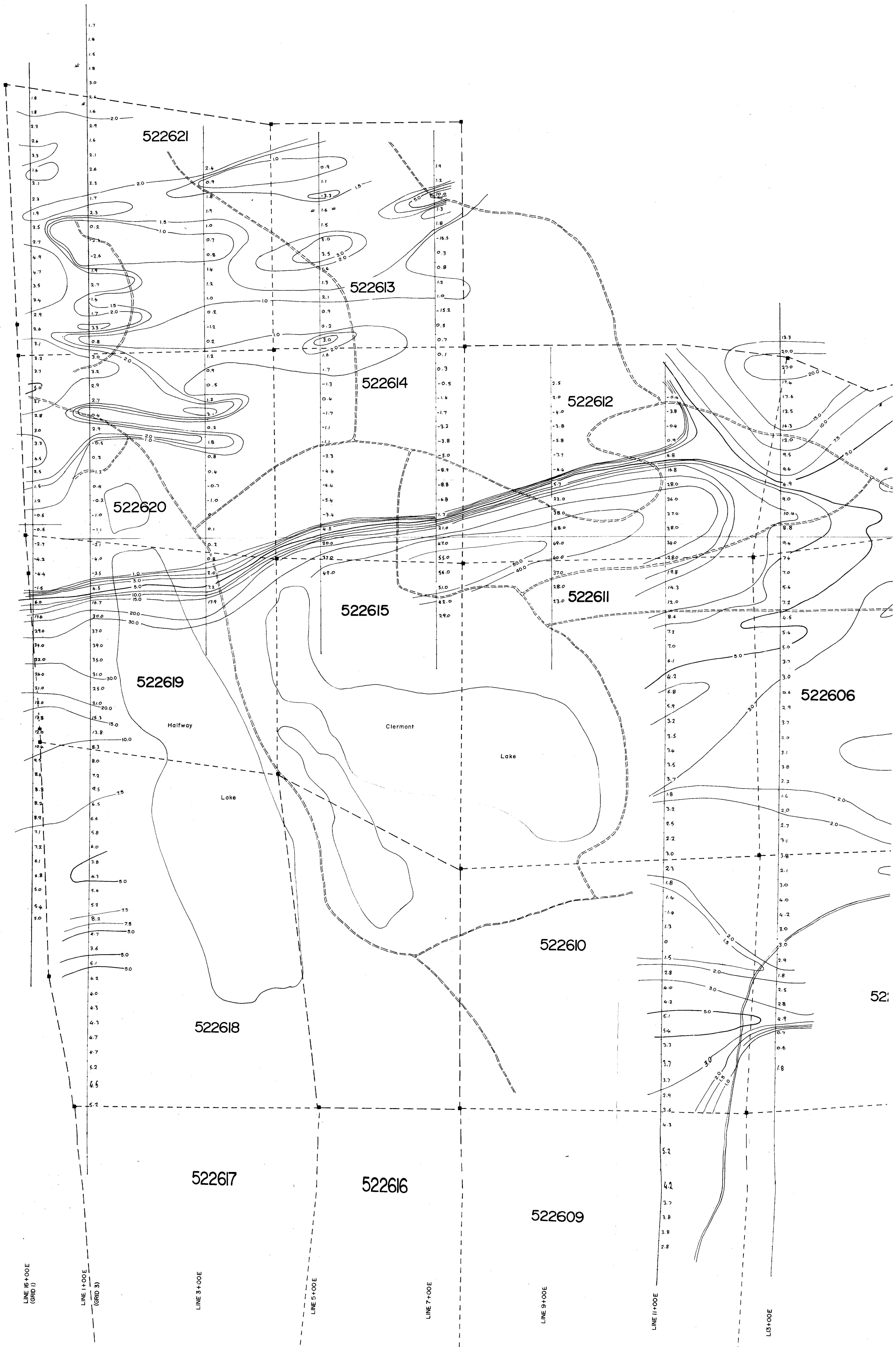
Project No: C504	By: D.JONES
Scale: 1:2500	Drawn: E.J.
Drawing No: 6	Date: NOVEMBER, 1980







BASE LINE  
GRID 1



3201269161 2.3978 54861/004

