



42A05NE0099 2.17256 BRISTOL

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REPORT
ON AN INDUCED POLARIZATION SURVEY
ON THE
BRISTOL TOWNSHIP PROPERTIES
PORCUPINE MINING DIVISION, ONTARIO
FOR
R. J. POIRIER

2.17256

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Submitted by: S.D. Anderson
Rayan Exploration Ltd.
Sept., 1995



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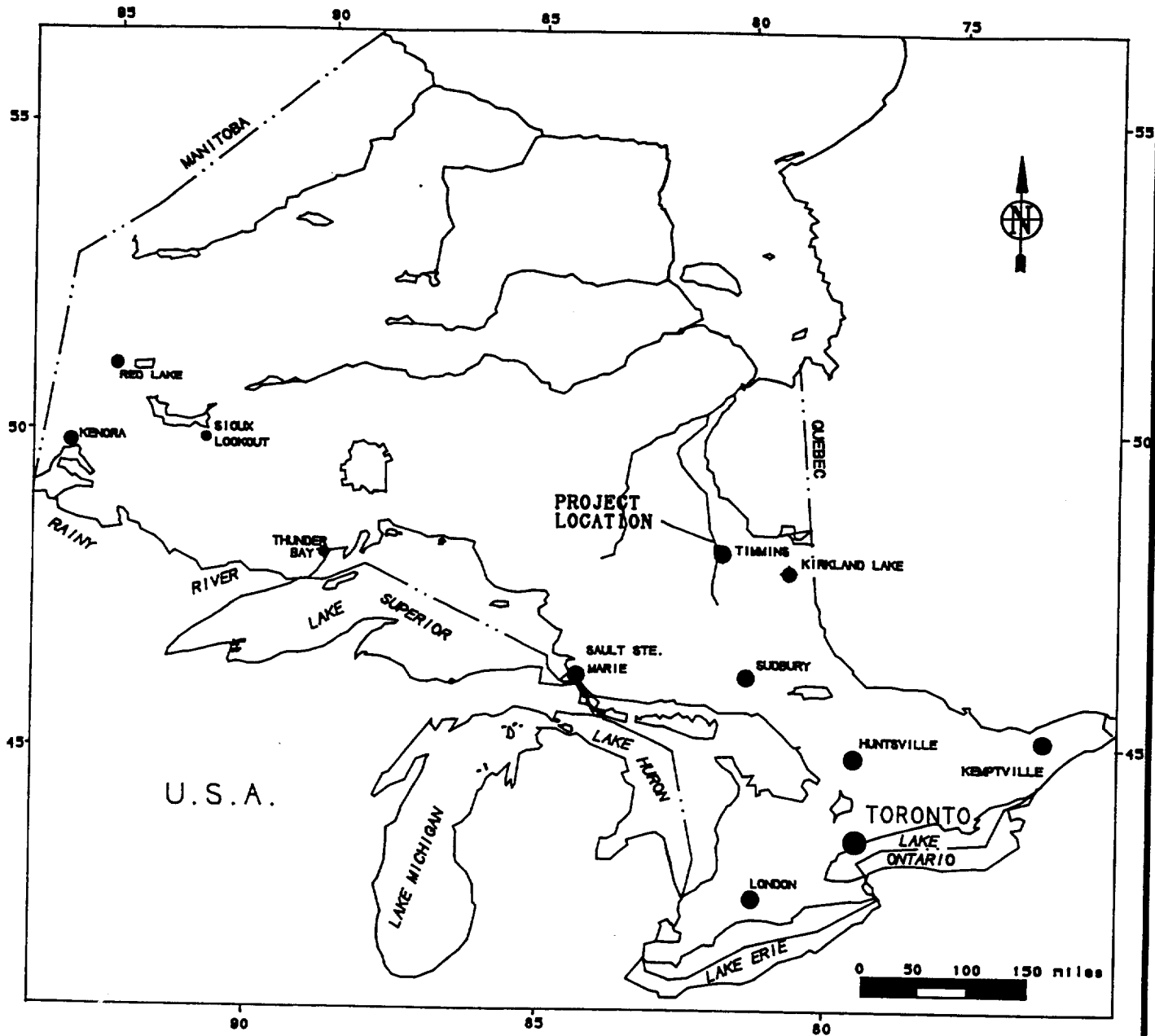
INTRODUCTION

Rayan Exploration Limited of Timmins Ontario was hired on a contract basis by Mr R.J. Poirier to conduct a linecutting program and Induced Polarization survey on his Bristol Township properties. This was carried out over two separate work areas, grid A and grid B, both located in Bristol Township, Porcupine Mining Division, District of Cochrane, Ontario.

The purpose of this program was to further test the two work areas for any IP responses that might indicate areas containing sulphides. The survey on Grid A will be testing a weak HLEM conductor while Grid B will test an area not previously surveyed with IP, due to flooding at the time.

A total of 7 km of grid lines were re-furbished or established and surveyed with IP. Two days were spent surveying Grid A, while due to difficulties with ground contact and geological noise, three days were spent on grid B.

This report will deal with the results obtained from this program and make recommendation based on those results.



PROVINCE OF ONTARIO

FIG 1

POIRIER OPAP 1995		
BRISTOL TWP. GRID A and B		
LOCATION MAP		
Date:	Scale: 1" = 150 mi	N.T.S.: 42A/04
Drawn: R.M.	Approved: R.M.	File: LCC

LOCATION AND ACCESS

The Bristol Twp. properties, Grid A and Grid B are both located in Bristol Township, Porcupine Mining Division, District of Cochrane, Ontario. Bristol Township is located approximately 10 kilometres southwest from the city of Timmins. Hwy 101 West, runs diagonally, in a southwest direction through the township.

Grid A is situated roughly midway along the Bristol Carscallen township line. Grid B is located in the central part of Bristol township.

Access to Grid A was gained by taking Hwy 101 west from the city of Timmins for roughly 17 kilometres. There a gravel road heads north from the Hwy, just east of Bristol Lake. This road then swings to the northwest, branching off in various directions. It can be travelled by 4 wheel drive or ATV to just north of Grid B, and to the northeastern section of grid A.

This road was used as access for both work areas.

SURVEY PERSONNEL

The I.P. survey was carried out during the latter part of August and the beginning of September, 1995, by the following Rayan Exploration personnel:

W. Pearson	Timmins, Ontario
L. Anderson	Timmins, Ontario
B. Norman	Timmins, Ontario
D. MacArthur	Timmins, Ontario
A. Durham	Timmins, Ontario

All IP work was supervised by R.J. Meikle.

Mr. R.J. Poirier of Timmins Ontario, also assisted with the I.P. survey.

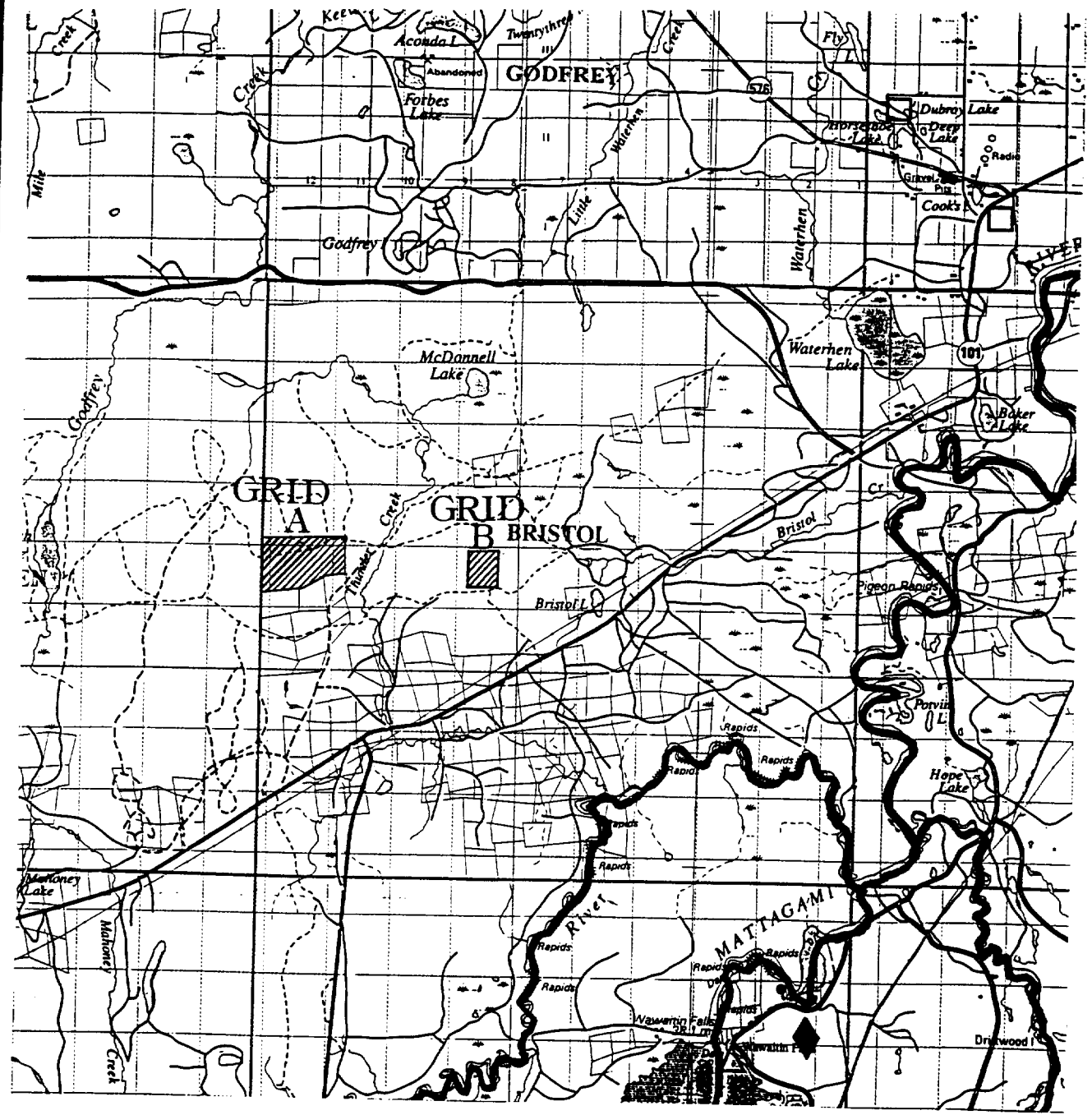


Fig 2

Client: POIRIER OPAP 1995

Property: BRISTOL TWP GRID A and B

Title:
REGIONAL LOCATION MAP

Drawn: JDA	Checked: J.M.
Date: 08/27/95	Project: 017/111
Drawn: J.M.	Scale: 49A/01
Scale: 1:100000	Drawn: 1278100



CLAIMS

The Bristol Township Grid A and Grid B properties are made up of two separate work areas. Grid A consists of a block of 6, contiguous unpatented mining claims (6 units), while Grid B is made up of 4 (4 units) contiguous, unpatented mining claims. Both groups are located in Bristol Township, Porcupine Mining Division, District of Cochrane, Ontario. The following is a list of the mining claims covered or partially covered by this work program.

GRID A:

<u>Claim #</u>	<u># of Units</u>
1072989	1
1074268	1
1074269	1
1074270	1
1074271	1
1074272	1
-----	-----
6 claims	6 units

GRID B:

<u>Claim #</u>	<u># of Units</u>
752197	1
752198	1
752199	1
752200	1
-----	-----
4 claims	4 units



CARSCALLEN TWP. G-

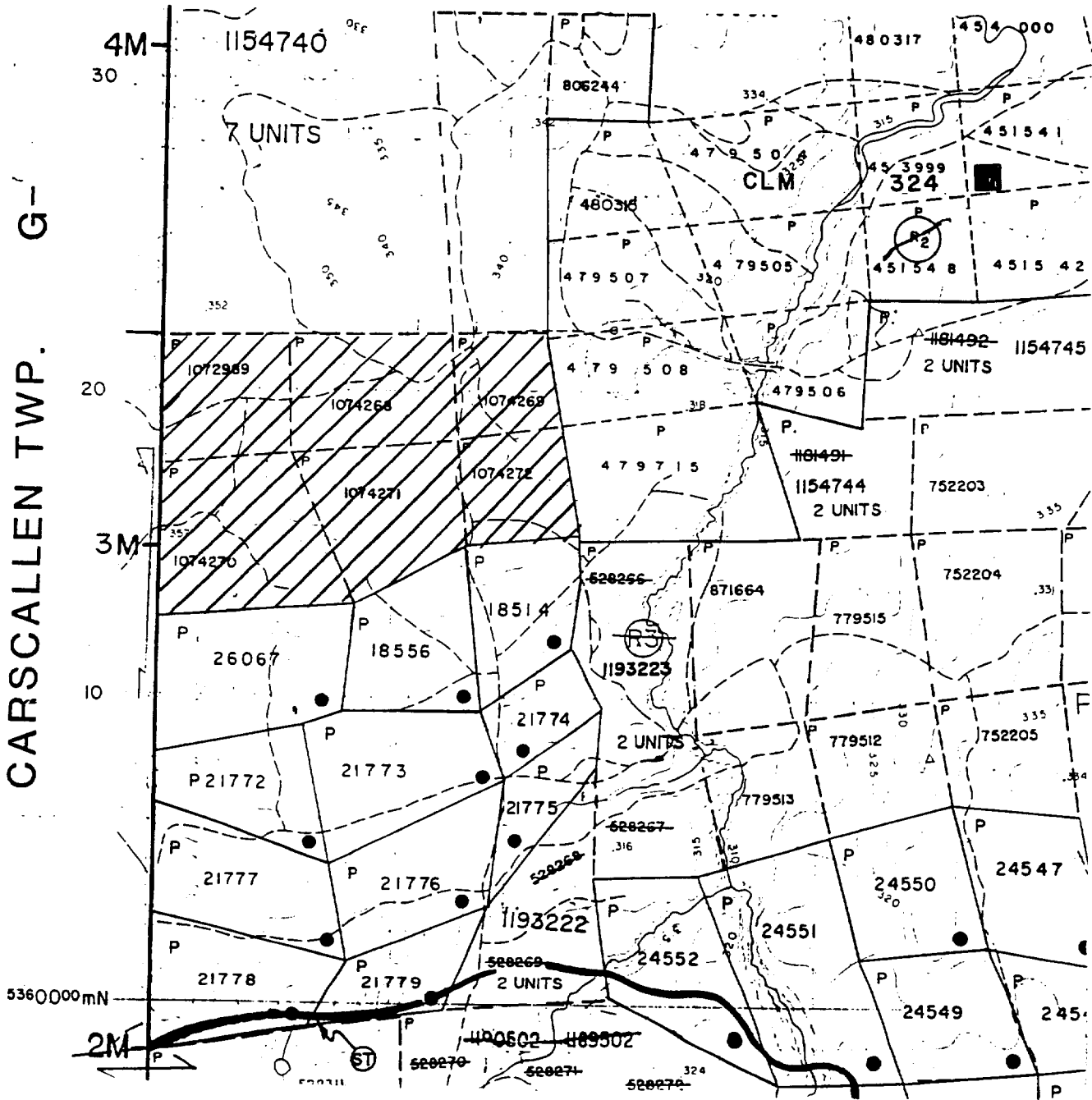


Fig 3

Client: POIRIER OPAP 1995

Property: BRISTOL TWP GRID A

Title: CLAIM SKETCH

Prepared by	BOA	Checked by	J.M.
Date	SEPT/95	Year	1995
Project	ONT	Scale	AS SHOWN
Sheet No.	1-20000	Drawn by	377AC004



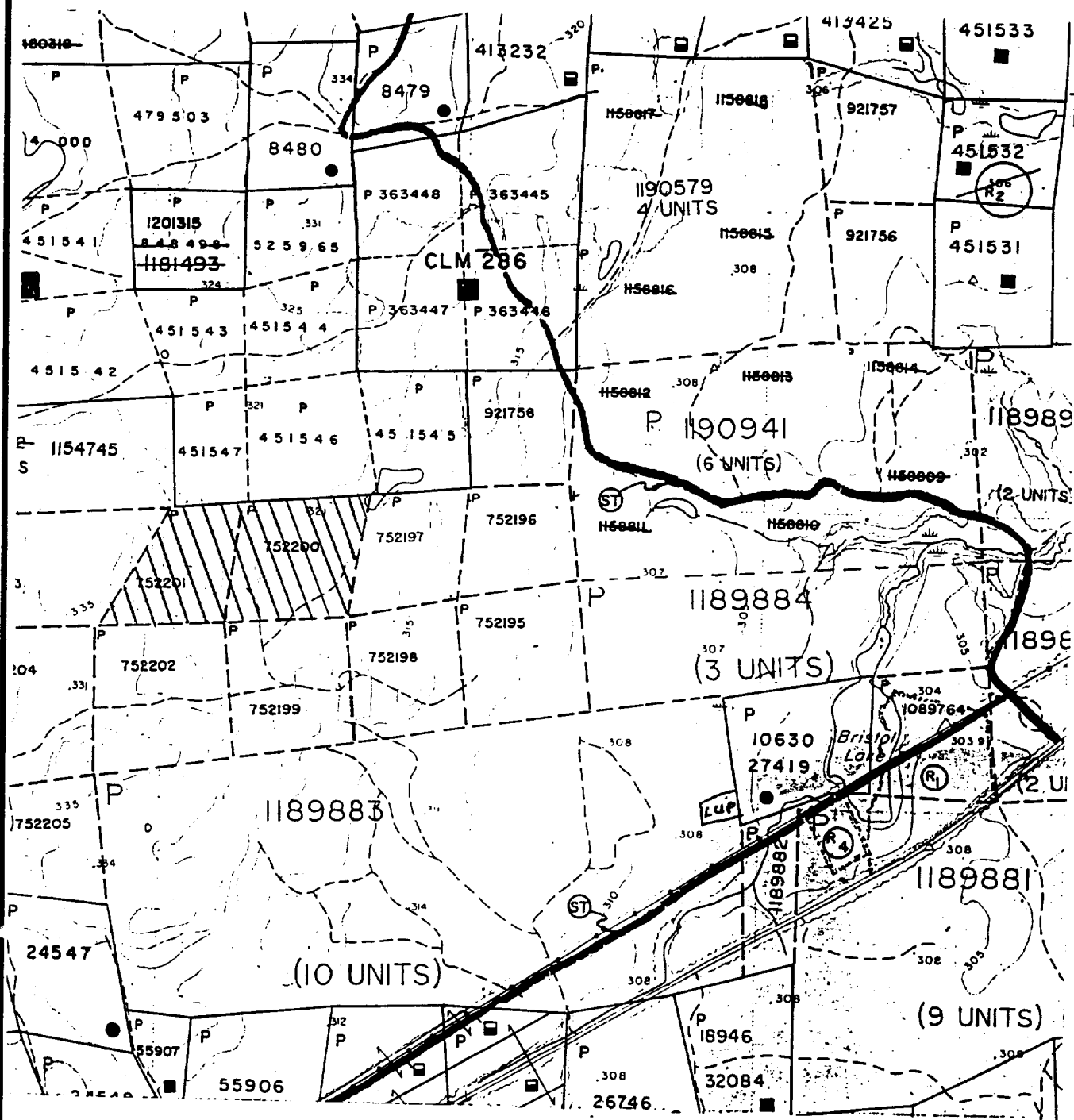


Fig. 4


Client: POIRIER OPAP 1995

Property: BRISTOL TWP GRID B

Title:

CLAIM SKETCH

Date: SEPT/95	Drawn by: [Signature]
Prepared by: GNT	Checked by: [Signature]
Scale: 1:20000	Project: ESTAC 95



RAYAN
EXPLORATION LTD.

PREVIOUS WORK

Both the work areas have had some type of work previously conducted on them. The following is a brief summary of this work for each of the work areas.

GRID A:

In 1981 Texas Gulf carried out an overburden drill hole program. This included the completion of 5 hole situated in the current claim block.

In 1991 the current claim holder, Mr. R.J. Poirier completed a magnetometer and HLEM survey over the block. The current work program is testing the results obtained in by Mr. Poirier in 1991.

GRID B:

This block has had much more work performed on it in the past. Some of the first was that recorded by Cortez Exploration Ltd. in 1926, which included trenching which was followed up with a diamond drill program. A total of 6 holes were drilled.

In 1939 Toburn Gold Mines Limited reported carrying out a EM survey which was followed by 3 diamond drill holes. In 1945 Hulbert Balboa Mines completed an addition 8 diamond drill holes.

In 1973 Dome Mines conducted a geophysical program which included a Magnetometer and EM survey on the property.

Some of the most recent, and most extensive work programs carried out was that by BHP-UTAH in 1985-86. The geophysics completed included a magnetometer, VLF and Induced Polarization Survey. A geochemical (soils) and geological mapping program was also completed. After the compilation of this data, a total of 3

diamond drill holes were completed to test some of the targets outlined by the previously described work.

The area being surveyed on grid B is to test ground not tested by BHP-UTAH due to flooding at the time.

GENERAL GEOLOGY

The Bristol Township properties are situated within the western extension of the Abitibi Greenstone Belt. This belt is made up of primarily Precambrian (Arcane) aged rocks, metamorphosed to greenschist facies that extend across northeastern Ontario and northwestern Quebec. The rocks consist of a variety of mafic to felsic volcanics, related volcanoclastic sediments and detrital and chemical sediments and felsic to ultramafic intrusive.

The properties are underlain by rocks of the Carscallen Assemblage which consists of theolitic and calc-alkaline, massive and pillowed basaltic flows interlayered with minor amounts of siliceous rhyolite (Jackson and Fyan 1991). The project areas lie within the Porcupine-Destor deformation zone and the rocks show moderate to intense shearing. The Porcupine-Destor deformation zone is known to host many significant gold deposits as well as many gold occurrences.

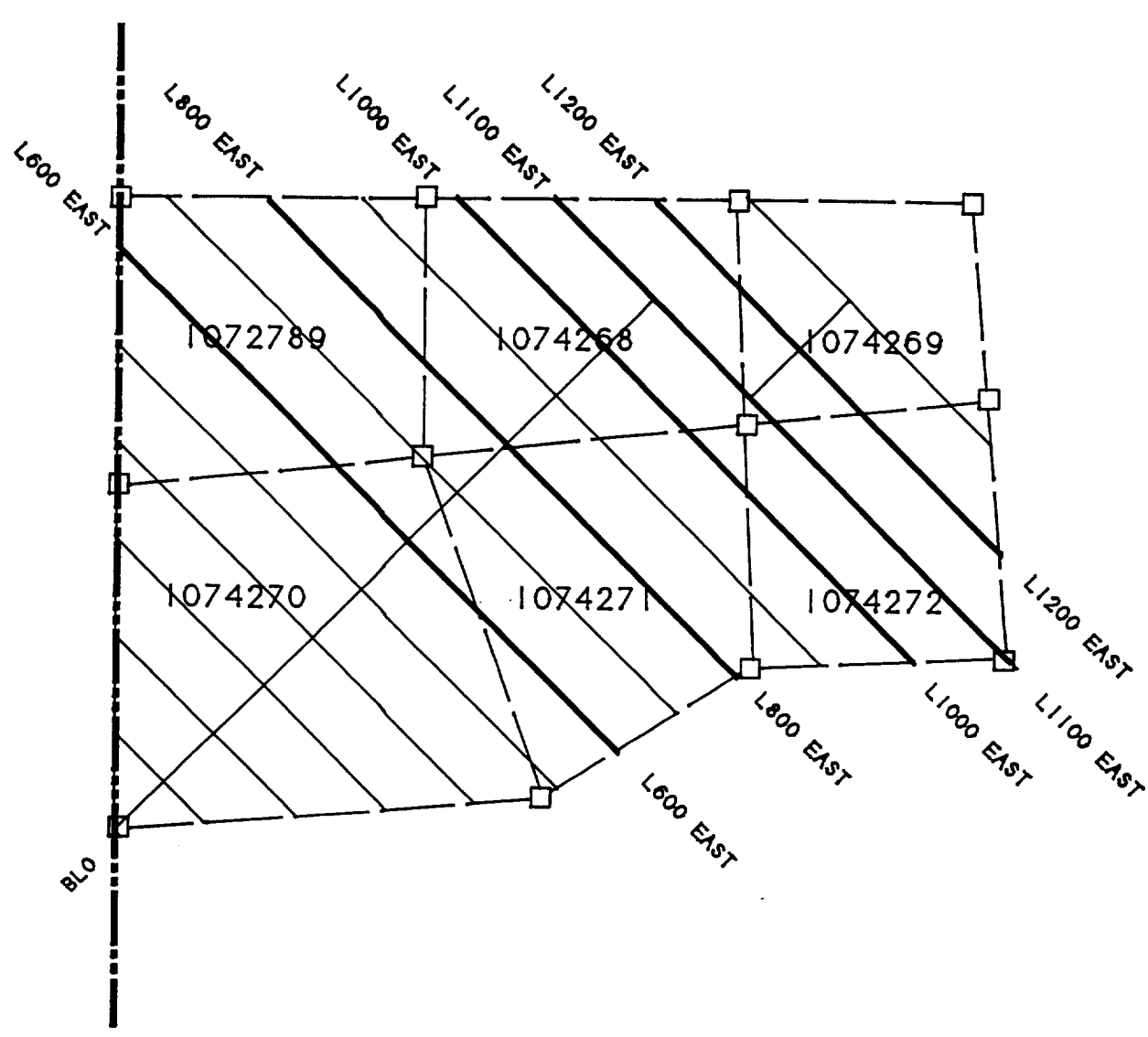
WORK PROGRAM

The work program conducted on the Bristol Properties for Mr. R.J. Poirier involved establishing and re-establishing two separate grids, and covering each with an Induced Polarization survey.

The linecutting for grid A was set up to re-establish 4 kilometres of grid lines that were cut in 1991. The old lines were re-cut so that the current survey could be accurately tied into the previous survey data. The same parameters used in 1991 were used for this program, with a 100 meter line spacing and 25 meter station interval.

The lines established for grid B were all new cut, as no grid had existed in this area before. A total of 3.4 kilometres was cut, using a east-west base line with 100 meter cross-lines and a 25 meter station interval.

Both these grids were cover by the I.P. survey. The parameters used as well as a brief discussion of the I.P. theory can be found below.



— NEW CUT LINE
— OLD CUT LINE
- - - CLAIM LINE

FIG 5

Client: POIRIER OPAP 1995
Property: BRISTOL TWP GRID A
Title:
LINE CUTTING SKETCH

Prepared by: JDA	Checked by: R.P.		RAYAN EXPLORATION LTD
Date: SEPT/95	Project: BRISTOL		
Location: ONT	Area: 42A/SW		
Scale: 1:1000	Sheet: 20A		

BRISTOL TWP

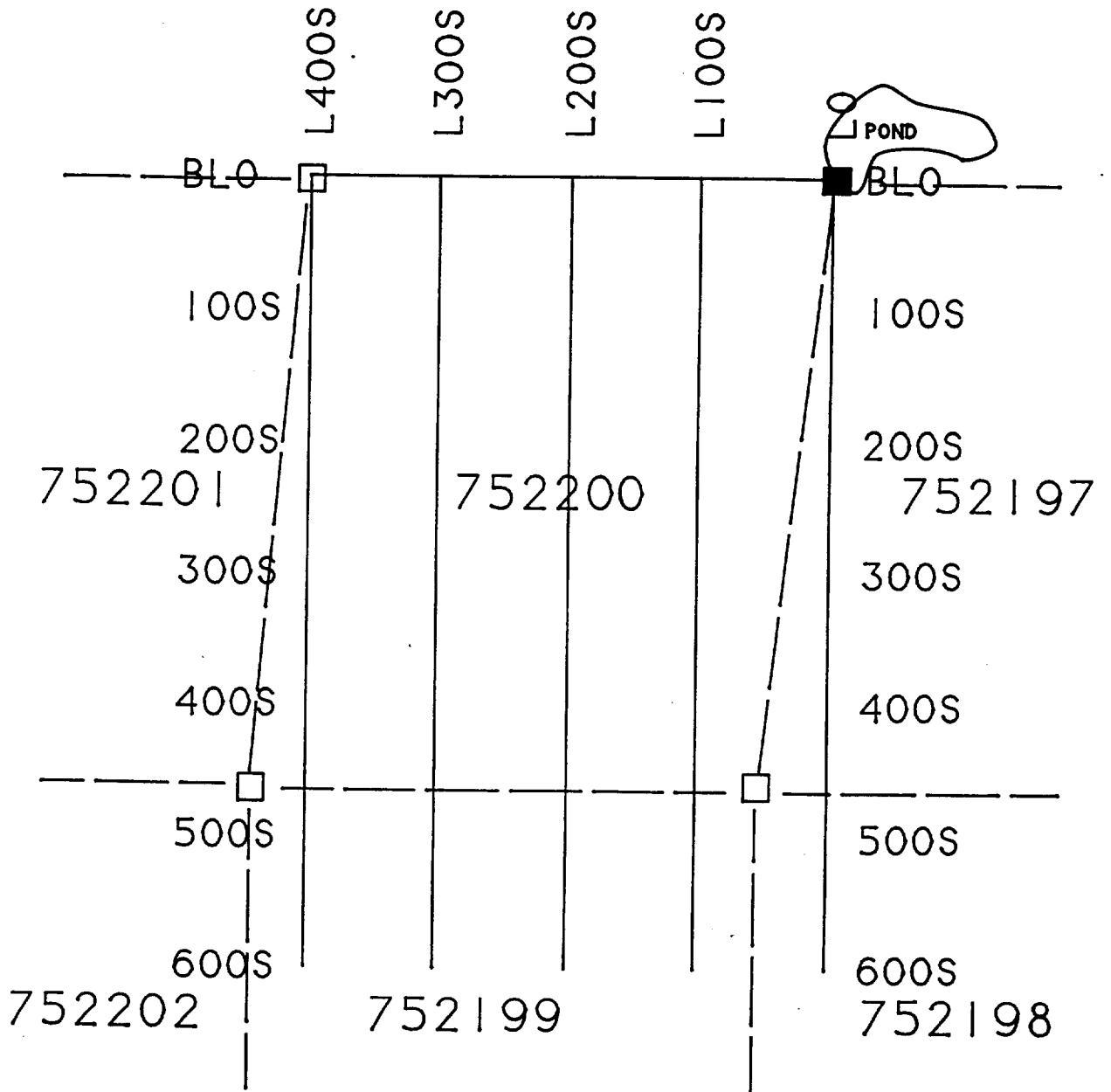


FIG 6

Client: POIRIER OPAP 1995

Property: BRISTOL TWP GRID B

Title:

LINE CUTTING SKETCH

Prepared by: SDA	Checked by: R.M.	RAYAN EXPLORATION LTD
Date: SEPT/95	Scale: 1:1000	
Project: ONT	Area: 42A/SW	
Scale: 1:5000	Prepared by: SDA	

General IP Theory

7

The IP method involves applying voltage across two electrodes in a pulsed manner i.e. 2 seconds on, 2 seconds off. A second "dipole" or electrode pair, measures the residual potential or voltage between them after the voltage is shut off or during the 2 second off cycle. The potential is recorded at different times after the shut off. If, for example, there is sulphide mineralization within the measuring dipoles, they will be polarized or charges set up on the sulphide particles. This polarization gives the zone a capacitor effect, thereby blocking the current delay giving a higher chargeability reading.

A typical signature for many gold showings would be a chargeability high, resistivity high and magnetic low. This would be characteristic of a mineralized, highly altered carbonated and/or silicified zone. However, this is by no means the only geological setting for gold, therefore every profile should be looked at individually and correlated with all other geophysical-geological data.

Electrode Array

The electrode array used for the survey was the Pole-Dipole Array. In this array, one current electrode (C1) and two receiver or potential electrodes (P1,P2), are moved down a line in unison. A second current electrode (C2), is placed normal to the expected strike direction an infinite distance away, at least one km. The two current electrodes are hooked up to a motor-generator and a current applied across them, usually less than 3 amperes. The applied voltage is pulsed in a 2 second on, 2 second off pattern controlled by the transmitter.

Thus we have a single pole current electrode following a pair or dipole of potential electrodes moving down the line. The advantage of this "Pole-Dipole" array over the "Dipole-Dipole" array is a deeper current pattern between the infinite and moving current electrode, resulting in better penetration of conductive overburden. Also, this array is considerably faster in areas of high electrode contact impedance due to frozen and or rocky ground conditions because only one current electrode placement is needed for each reading. A disadvantage of the "Pole-Dipole" array is a slightly more ambiguous interpretation due to the assymetry of the array.

The distance between the potential electrodes is fixed, usually 25 or 50 meters and this is called the "a" spacing. When the potential dipole is positioned with one "a" spacing between the C1 and the nearest P1, it is called a "N=1" reading with a

theoretical plot point at the intersection of a 45 degree line drawn down in a section format from the C1 and nearest P1. When this N=1 reading is finished, the C1 remains stationary and the P1P2 dipole moves ahead one "a" spacing and a N=2 reading is obtained. Using the above plot convention it can be seen that the plot point is now further from the C1 and deeper. This is repeated for as many "N" readings as desired.

IP Survey Parameters

The IP survey was carried out using the following parameters:

Method: Time Domain
Electrode Array: Pole-Dipole
"a" spacing: 25 meters
Number of Dipoles Read: 1-4 inclusive
Pulse Duration: 2 seconds on, 2 seconds off
Delay Time: 310 milliseconds
Integration Time: 140 milliseconds
Receiver: Scintrex IPR-12
Transmitter: Scintrex TSQ-3 3KVA.
Data Presentation: Individual Psuedosections
Scale: 1:2500

RESULTS

The Geophysical Program conducted on the Bristol Twp. properties was successful in outlining 4 areas of interest. One on grid A and two on grid B. All of these will be discussed individually and in further detail below.

Grid A:

The I.P. survey outlined one weak chargeable zone in the southeast corner of the block that is centred from L10E/587S to L12E/562S, and appears to be open in both directions. It is situated over a weakly conductive zone.

When this data correlated with the data from the magnetometer and HLEM surveys conducted over this same ground in 1991 by R.J. Poirier, the I.P. anomaly is shown to be situated approximately 25-50 meters south of a weak HLEM conductor. There does not appear to be any significant magnetic correlation with the I.P. anomaly outlined in this work program.

Grid B:

Within this grid, there were three anomalous zones outlined by the I.P. survey.

The first, and most evident feature is zone A, which strikes roughly east west across the block from L0W/287S to L4W/425S, and remains open in both directions. It is a moderately chargeable zone that is situated over a resistivity high.

Zone B is situated on L1W at 500S and remains open to east.

This feature is moderately chargeable and occurs over a moderately resistive zone. It is similar in characteristic to the previously described anomaly.

The last zone, C, occurs on L4W at 575S and remains open to the west and south. A complete profile of this feature was not obtained, due to the line length. It does however seem similar to the two other zones discussed.

Responses such as the ones occurring on this property, are often an indication of weakly mineralized areas occurring within a silicious or carbonatized environment. However this is not the only explanation for such a response, and all three zones should be further tested.

The extreme southern portion of the grid, as well as the remainder of the property was covered with an IP survey in 1985-86 by BHP-UTAH. This same program included complete coverage with geological mapping, magnetometer and VLF. However, because the grid used in 1985-86 is in very poor shape, and the few pickets that were found could not be read, an exact tie-in between this data set and UTAH's was not established.

CONCLUSIONS AND RECOMMENDATIONS

The IP survey conducted on the Bristol Twp, grids A and B was successful in outlining some areas of interest. The results for both grids will be discussed in further detail below.

Grid A:

The IP anomaly outlined on this block showed a weak response that has not been tested with diamond drilling. The only problem with this zone is that it strikes across the extreme southeast corner of the block, with only about 300 meters of it on the property. The anomaly extends off the block onto patented to the south and leased claims to the east.

This response is typical of weakly mineralized zone, and is worthy of further testing, possibly with diamond drilling.

Grid B:

The three IP anomalies discussed are all of interest and should be further tested.

The zone of priority at the point would be zone A. This zone strikes across the entire grid, and shows a response that is typical of a weakly mineralized silicious or carbonatized zone. The other two zones show similar responses, but over limited strike lengths.

The first thing that should be done is to establish an accurate tie in between this data and the BHP UTAH data. This would require spending time in the field to determine where the two grids overlap. Once this is done, the IP can be correlated

with the geological mapping, magnetometer and VLF surveys. This may provide answers as to the source of the IP anomalies detected by this work program. After this, if any of the zones warrant it, a diamond drill program could be set up for further testing.

The original IP survey done by BHP UTAH was done using a 200 ft. dipole spacing and N=1-4. The parameters used for this program were found to be much more affective outlining narrow zones that were not detected by UTAH. In the Porcupine Camp, narrow zones such as this have proven in some cases, to contain significant amounts of gold. For this reason, a strong case can be made for re-surveying the remainder of the block using a 25 meter dipole spacing.

✓

CERTIFICATION

I, Steve Anderson of Timmins, Ontario hereby certify that:

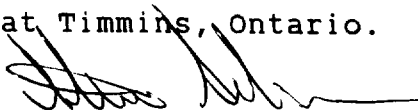
1. I hold a three year Technologist Diploma from Sir Sandford College , Lindsay, Ontario, obtained in May 1981.

2. I have been practising my profession since 1979 in Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, NWT, Manitoba, and Saskatchewan.

3. I have been employed directly with Asamera Oil Inc. Urangellschaft Canada Ltd.. Nanisivik Mines Ltd., R.S. Middleton Exploration Services Ltd., and Rayan Exploration Ltd.

4. I have based conclusions and recommendations contained in this report on knowledge of the area, my previous experience and on the results of the field work conducted on the property during 1995.

Dated this 18th day of September 1995
at Timmins, Ontario.



APPENDIX "A"

SCINTREX

IPR-12 Time Domain Induced Polarization/Resistivity Receiver

Brief Description

The IPR-12 Time Domain IP/Resistivity Receiver is principally used in exploration for precious and base metal mineral deposits. In addition, it is used in geoelectrical surveying for groundwater or geothermal resources, often to great depths. For these latter targets, the induced polarization measurements may be as useful as the high accuracy resistivity results since it often happens that geological materials have IP contrasts when resistivity differences are absent.

Due to its integrated, lightweight, microprocessor based design and its large, 16 line display screen, the IPR-12 is a remarkably powerful, yet easy to use instrument. A wide variety of alphanumeric and graphical information can be viewed by the operator during and after the taking of readings. Signals from up to eight potential dipoles can be measured simultaneously and recorded in solid-state memory along with automatically calculated parameters. Later, data can be output to a printer or a PC (direct or via modem) for processing into profiles and maps.

The IPR-12 is compatible with Scintrex IPC and TSQ Transmitters, or others which output square waves with equal on and off periods and polarity changes each half cycle. The IPR-12 measures the primary voltage (V_p), self potential (SP) and time domain induced polarization (Mi) characteristics of the received waveform. Resistivity, statistical and Cole-Cole parameters are calculated and recorded in memory with the measured data and time.

Scintrex has been active in induced polarization research, development, manufacturing, consulting and surveying for over thirty years. We offer a full range of instrumentation, accessories and training.



The IPR-12 Receiver measures spectral IP signals from eight dipoles simultaneously then records measured and calculated parameters in memory.

Benefits

Speed Up Surveys

The IPR-12 saves you time and money in carrying out field surveys. Its capacity to measure up to eight dipoles simultaneously is far more efficient than older receivers measuring a single dipole. This advantage is particularly valuable in drillhole logging where electrode movement time is minimal.

The built-in, solid-state memory records all information associated with a reading, dispensing with the need for any hand written notes. PC compatibility means rapid electronic transfer of data from the receiver to a computer for rapid data processing.

Taking a reading is simple and fast. Only a few keystrokes are virtually needed

since the IPR-12 features automatic circuit resistance checks, SP buckout and gain setting.

High Quality Data

One of the most important features of the IPR-12 in permitting high quality data to be acquired, is the large display screen which allows the operator easy real time access to graphic and alphanumeric displays of instrument status and measured data. The IPR-12 ensures that the operator obtains accurate data from field work.

The number and relative widths of the IP decay curve windows have been carefully chosen to yield the transient information required for proper interpretation of spectral IP data. Timings are selectable to permit a very wide range of responses to be measured.

Specifications

Inputs

1 to 8 dipoles are measured simultaneously.

Input Impedance

16 Megohms

SP Bucking

±10 volt range. Automatic linear correction operating on a cycle by cycle basis.

Input Voltage (Vp) Range

50 μ volt to 14 volt

Chargeability (M) Range

0 to 300millivolt

Tau Range

1 millisecond to 1000 seconds

Reading Resolution of Vp, SP and M

Vp, 10 microvolt; SP, 1 millivolt; M, 0.01 millivolt/volt

Absolute Accuracy of Vp, SP and M

Better than 1%

Common Mode Rejection

At input more than 100db

Vp Integration Time

10% to 80% of the current on time.

IP Transient Program

Total measuring time keyboard selectable at 1, 2, 4, 8, 16 or 32 seconds. Normally 14 windows except that the first four are not measured on the 1 second timing, the first three are not measured on the 2 second timing and the first is not measured on the 4 second timing. (See diagram on page 2.) An additional transient slice of minimum 10 ms width, and 10ms steps, with delay of at least 40 ms is keyboard selectable.

Transmitter Timing

Equal on and off times with polarity change each half cycle. On/off times of 1, 2, 4, 8, 16 or 32 seconds. Timing accuracy of ±100 ppm or better is required.

External Circuit Test

All dipoles are measured individually in sequence, using a 10 Hz square wave. The range is 0 to 2 Mohm with 0.1kohm resolution. Circuit resistances are displayed and recorded.

Synchronization

Self synchronization on the signal received at a keyboard selectable dipole. Limited to avoid mistriggering.

Filtering

RF filter, 10 Hz 6 pole low pass filter, statistical noise spike removal.

Internal Test Generator

1200 mV of SP; 807 mV of Vp and 30.28 mV/V of M.

Analog Meter

For monitoring input signals; switchable to any dipole via keyboard.

Keyboard

17 key keypad with direct one key access to the most frequently used functions.

Display

16 lines by 42 characters, 128 x 256 dots, Backlit Liquid Crystal Display. Displays instrument status and data during and after reading. Alphanumeric and graphic displays.

Display Heater

Available for below -15°C operation.

Memory Capacity

Stores approximately 400 dipoles of information when 8 dipoles are measured simultaneously.

Real Time Clock

Data is recorded with year, month, day, hour, minute and second.

Digital Data Output

Formatted serial data output for printer and PC etc. Data output in 7 or 8 bit ASCII, one start, one stop bit, no parity format. Baud rate is keyboard selectable for standard rates between 300 baud and 51.6 kBaud. Selectable carriage return delay to accommodate slow peripherals. Handshaking is done by X-on/X-off.

Standard Rechargeable Batteries

Eight rechargeable Ni-Cad D cells. Supplied with a charger, suitable for 110/230V, 50 to 60 Hz, 10W. More than 20 hours service at +25°C, more than 8 hours at -30°C.

Ancillary Rechargeable Batteries

An additional eight rechargeable Ni-Cad D cells may be installed in the console along with the Standard Rechargeable Batteries. Used to power the Display Heater or as back up power. Supplied with a second charger. More than 6 hours service at -30°C.

Use of Non-Rechargeable Batteries

Can be powered by D size Alkaline batteries, but rechargeable batteries are recommended for longer life and lower cost over time.

Operating Temperature Range

-30°C to +50°C

Storage Temperature Range

-30°C to +50°C

Dimensions

Console: 355 x 270 x 165 mm

Charger: 120 x 95 x 55mm

Weights

Console: 5.8 kg

Standard or Ancillary Rechargeable

Batteries: 1.3 kg

Charger: 1.1 kg

Transmitters available

IPC-9 200 W

TSQ-2E 750 W

TSQ-3 3 kW

TSQ-4 10 kW

SCINTREX

In Canada

222 Snidercroft Rd.
Concord, Ontario
Canada, L4K 1B5

Tel.: (905) 669-2280
Fax: (905) 669-6403
Telex: (905) 06-964570

In the U.S.A.

85 River Rock Drive
Unit # 202
Buffalo, N.Y.
U.S.A. 14207

Tel.: (716) 298-1219
Fax: (716) 298-1317

APPENDIX "B"

SCINTREX

TSQ-3

3000 W

Time and Frequency Domain IP and Resistivity Transmitter

Function

The TSQ-3 is a multi-frequency, square wave transmitter suitable for induced polarization and resistivity measurements in either the time or frequency domain. The unit is powered by a separate motor-generator.

The favourable power/weight ratio and compact design of this system make it portable and highly versatile for use with a wide variety of electrode arrays. The medium range power rating is sufficient for use under most geophysical conditions.

The TSQ-3 has been designed primarily for use with the Scintrex Time Domain and Frequency Domain Receivers, for combined induced polarization and resistivity measurements, although it is compatible with most standard time domain and frequency domain receivers. It is also compatible with the Scintrex Commutated DC Resistivity Receivers for resistivity surveying. The TSQ-3 may also be used as a very low frequency electromagnetic transmitter.

Basically the transmitter functions as follows. The motor turns the generator (alternator) which produces 800 Hz, three phase, 230 V AC. This energy is transformed upwards according to a front panel voltage setting by a large transformer housed in the TSQ-3. The resulting AC is then rectified in a rectifier bridge. Commutator switches then control the DC voltage output according to the waveform and frequency selected. Excellent output current stability is ensured by a unique, highly efficient technique based on control of the phase angle of the three phase input power.

Features

Current outputs up to 10 amperes, voltage outputs up to 1500 volts, maximum power 3000 VA.

Solid state design for both power switching and electronic timing control circuits.

Circuit boards are removable for easy servicing.

Switch selectable wave forms: square wave continuous for frequency domain and square wave interrupted with automatic polarity change for time domain.

Switch selectable frequencies and pulse times.

Overload, underload and thermal protection for maximum safety.

Digital readout of output current.

Programmer is crystal controlled for very high stability.

Low loss, solid state output current regulation over broad range of load and input voltage variations.

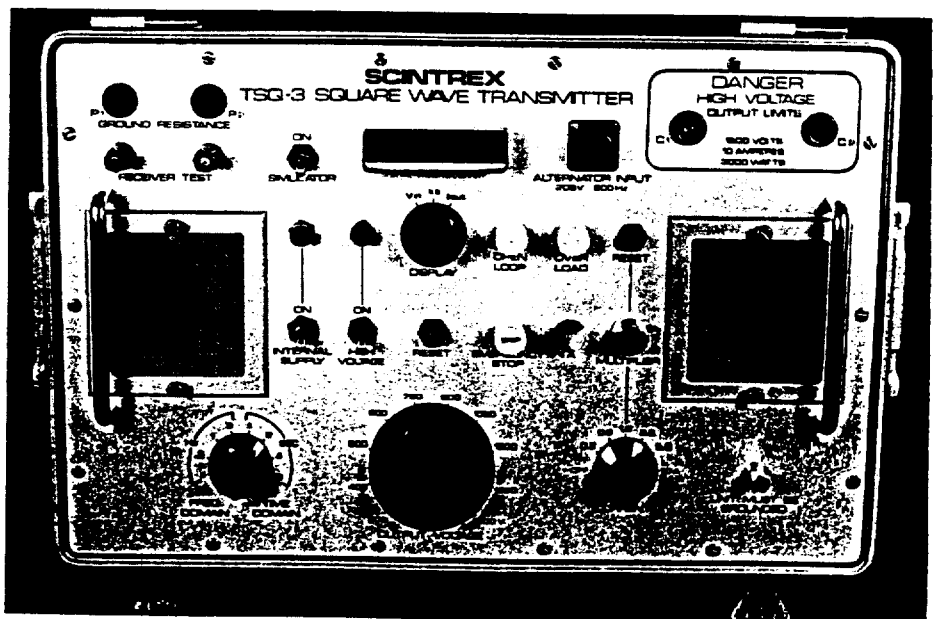
Rectifier circuit is protected against transients.

Excellent power/weight ratio and efficiency.

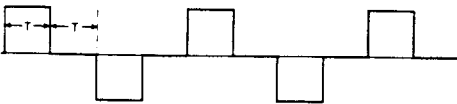
Designed for field portability; motor-generator is installed on a convenient frame and is easily man-portable. The transmitter is housed in an aluminum case.

The motor-generator consists of a reliable Briggs and Stratton four stroke engine coupled to a brushless permanent magnet alternator.

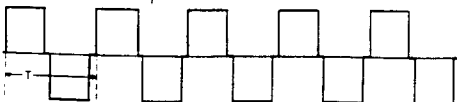
New motor-generator design eliminates need for time domain dummy load.



Time Domain $T = 1, 2, 4$ or 8 seconds, switch selectable

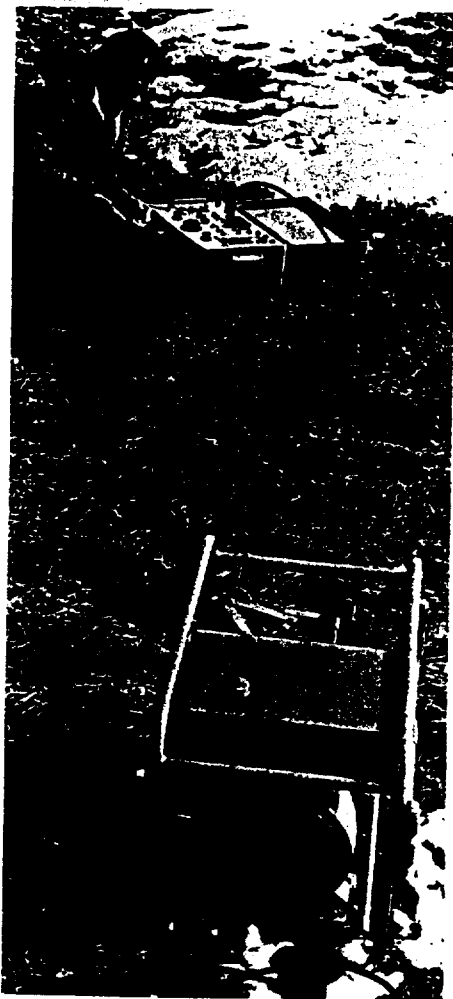


Frequency Domain $f = \frac{1}{T}$ and $f = 0.01, 0.3, 1.0$ or 3.0 Hz.



Waveforms output by the TSQ-3

**Technical
Description of
TSQ-3/3000W
Time and Frequency Domain
IP and Resistivity Transmitter**



TSQ-3 transmitter with portable motor generator unit

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical
Instrumentation and Services

Transmitter Console	
Output Power	3000 VA maximum
Output Voltages	300, 400, 500, 600, 750, 900, 1050, 1200, 1350 and 1500 volts, switch selectable
Output Current	10 amperes maximum
Output Current Stability	Automatically controlled to within $\pm 0.1\%$ for up to 20% external load variation or up to $\pm 10\%$ input voltage variation
Digital Display	Light emitting diodes permit display up to 1999 with variable decimal point; switch selectable to read input voltage, output current, external circuit resistance. Dual current range, switch selectable
Absolute Accuracy	$\pm 3\%$ of full range
Current Reading Resolution	10 mA on coarse range (0-10A) 1 mA on fine range (0-2A)
Frequency Domain Waveform	Square wave, continuous with approximately 6% off time at polarity change
Frequency Domain Frequencies	Standard: 0.1, 0.3, 1.0 and 3.0 Hz, switch selectable Optional: any number of frequencies in range 0 to 5 Hz.
Time Domain Cycle Timing	t:t:t:t;on:off:on:off;automatic
Time Domain Polarity Change	each 2t; automatic
Time Domain Pulse Durations	Standard: t = 1, 2, 4 or 8 seconds Optional: any other timings
Time and Frequency Stability	Crystal controlled to better than .01%
Efficiency	.78
Operating Temperature Range	-30°C to +50°C
Overload Protection	Automatic shut-off at 3300 VA
Underload Protection	Automatic shut-off at current below 75mA
Thermal Protection	Automatic shut-off at internal temperature of +85°C
Dimensions	350 mm x 530 mm x 320 mm
Weight	25.0 kg.
Power Source	
Type	Motor flexibly coupled to alternator and installed on a frame with carrying handles.
Motor	Briggs and Stratton, four stroke, 8 H.P.
Alternator	Permanent magnet type, 800 Hz, three phase 230 V AC
Output Power	3500 VA maximum
Dimensions	520 mm x 715 mm x 560 mm
Weight	72.5 kg
Total System	
Shipping Weight	150 kg includes transmitter console, motor generator, connecting cables and re-usable wooden crates



Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsections 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
W9760.00090
Assessment Files Research Imaging



900

of subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the review the assessment work and correspond with the mining land holder. Recorder, Ministry of Northern Development and Mines, 6th Floor.

Arained Deemed

2.17256

Instructions: - For work performed on Crown Lands before recording a claim, use form 0240.
- Please type or print in ink.

1. Recorded holder(s) (Attach a list if necessary)

Name <i>Roland Poirier</i>	Client Number <i>183246</i>
Address <i>561 Birch St. North Timmins Ontario</i>	Telephone Number <i>705 267-1924</i>
Name	Client Number
Address	Telephone Number
	Fax Number

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2. Type of work performed: Check (✓) and report on only ONE of the following groups for this declaration.

- Geotechnical: prospecting, surveys, assays and work under section 18 (regs)
 Physical: drilling, stripping, trenching and associated assays
 Rehabilitation

Work Type <i>INDUCED POLARIZATION SURVEY (I.P.) & LINECUTTING</i>	Office Use
	Commodity
	Total \$ Value of Work Claimed <i>\$3,450.</i>
Dates Work Performed From <i>1</i> Day <i>08</i> Month <i>95</i> Year To <i>15</i> Day <i>09</i> Month <i>95</i> Year	NTS Reference
Global Positioning System Data (if available)	Mining Division <i>PORCUPINE</i>
Township/Area <i>BRISTOL TWP</i>	Resident Geologist District <i>TIMMINS</i>
M or G-Plan Number	

Please remember to:

- obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name <i>STEVE ANDERSON</i>	Telephone Number <i>705 268 4866</i>
Address <i>40 RAYAN EXPLORATION TIMMINS ONT.</i>	Fax Number
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

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FEB 10 1997

2:10

PORCUPINE MINING DIVISION

4. Certification by Recorded Holder or Agent

I, *Kevin Fido* (Print Name) do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent <i>[Signature]</i>	Date <i>Feb 8 / 96</i>
Agent's Address <i>535 BARTLEMAN ST.</i>	Telephone Number <i>268-0371</i>
	Fax Number <i>268-0371</i>

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjacent) the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.		Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date.
eg	TB 7827	16 ha	\$26,825	N/A	\$24,000	\$2,825
eg	1234567	12	.0	\$24,000	0	0
eg	1234568	2	\$8,892	\$4,000	0	\$4,892
1	752200	1	2235	0	1985	\$250.00
2	752199	1	520	800	0	
3	752198	1	175	800	0	
4	XXXXXXXXXX					
5	752197	1	520	800	0	
6	752196	1	0	800	0	
7						
8						
9						
10						
11						
12						
13						
14						
15						
Column Totals			3450	3200	1985	250

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I, J. K. E. 10, do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing: [Signature] Date: FEB 8 / 96

6. Instructions for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- 3. Credits are to be cut back equally over all claims listed in this declaration; or
- 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp RECEIVED FEB 10 1997 3:10	Deemed Approved Date <u>MAY 11, 1997</u>	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

2.17256

Work Type	Units of Work <small>Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.</small>	Cost Per Unit of work	Total Cost
LINECUTTING	3.0 km AK	250/km	750.00
INDUCED POLARIZATION SURVEYING & REPORT	3.0 km 3.0 AK	900/km	\$ 2700.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
Food and Lodging Costs			
Total Value of Assessment Work			3450.00

RECEIVED
 MAY 12 1997
 MINING LANDS BRANCH

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK $\times 0.50 =$ Total \$ value of worked claimed.

Note:

- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, J. K. FILL, do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Asst I am authorized to make this certification.

RECEIVED
 FEB 10 1997
 PORCUPINE DIVISION

Signature [Signature] Date FEB 5 1997

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines



Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

May 15, 1997

Gary White
Mining Recorder
Ontario Government Complex
P.O. Bag 3060, Hwy 101 East
South Porcupine, ON
P0N 1H0

Telephone: (705) 670-5853
Fax: (705) 670-5863

Dear Sir or Madam:

Submission Number: 2.17256

Status

Subject: Transaction Number(s): W9760.00090 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

NOTE: This correspondence may affect the status of your mining lands. Please contact the Mining Recorder to determine the available options and the status of your claims.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at beneteau_s@torv05.ndm.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Ron C. Gashinski".

ORIGINAL SIGNED BY
Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

Work Report Assessment Results

Submission Number: 2.17256

Date Correspondence Sent: May 15, 1997

Assessor: Steve Beneteau

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9760.00090	752200	BRISTOL	Deemed Approval	May 11, 1997

Section:

14 Geophysical IP

Correspondence to:

Mining Recorder
South Porcupine, ON

Resident Geologist
South Porcupine, ON

Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Kevin Filo
TIMMINS, ONTARIO, CANADA

ROLLAND JOSEPH POIRIER
TIMMINS, Ontario

MAP SYMBOLOGY

Aerial Cableway	Pipeline
Boundary	Railroad
International	Single Track
Interprovincial	Double Track
District, Township	Abandoned
Indian Reserve	Turbine
Approximate	Road
Lot, Concession	Highway, County
Approximate	Traverse
Park Boundary	Access (road of doubtful
Race, Railroad	interruption at
Building	significant intervals)
Chimney	Trail, Bush Road
Cliff, Pit, Pile	(average width)
Contours	Rapids
Interpreted	Double line river
Approximate	with multiple rapids
Control Points	Reservoir
Horizontal	River, Stream, Canal
Vertical	Approximate
Culvert	position
Falls	Location of flow
Double line river	Hack
Fence, Hedge, Wall	with fence
Feature Outline	Spot Elevation
(Construction features, etc.)	(true elevations)
Flooded Land	Tower
Lock	Transmission Line
Marsh or Swamp	Pole
Mast	Pylon
Mine Head Frame	Tunnel
Outcrop	Utility Poles
	Wharf, Dock, Pier
	Wooded Area

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.S. - MINING AND SURFACE RIGHTS

Disposition	Order No.	Date	Disposition	File No.
			S.R.O.	164564

MINING AND SURFACE RIGHTS WITHDRAWN FROM PROSPECTING, STAKING, SALE OR LEASE

SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. W-96496-WR DATED 26-08-96

MINING AND SURFACE RIGHTS RE-OPENED TO PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. O-P-22102-NER DATED 22-AUG-01

MINING AND SURFACE RIGHTS WITHDRAWN FROM PROSPECTING, STAKING, SALE OR LEASE: SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. W-96496-WR DATED 26-MAY-96

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MINING AND SURFACE RIGHTS WITHDRAWN FROM PROSPECTING, STAKING, SALE OR LEASE: SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. W-96496-WR DATED 26-MAY-96

THIS TWP SUBJECT TO FOREST ACTIVITY IN 1982/83. FURTHER INFORMATION AVAILABLE ON FILE.

MINING AND SURFACE RIGHTS RE-OPENED TO PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 35 OF THE MINING ACT, R.S.O. 1990, ORDER NO. O-P-22102-NER DATED 22-AUG-01

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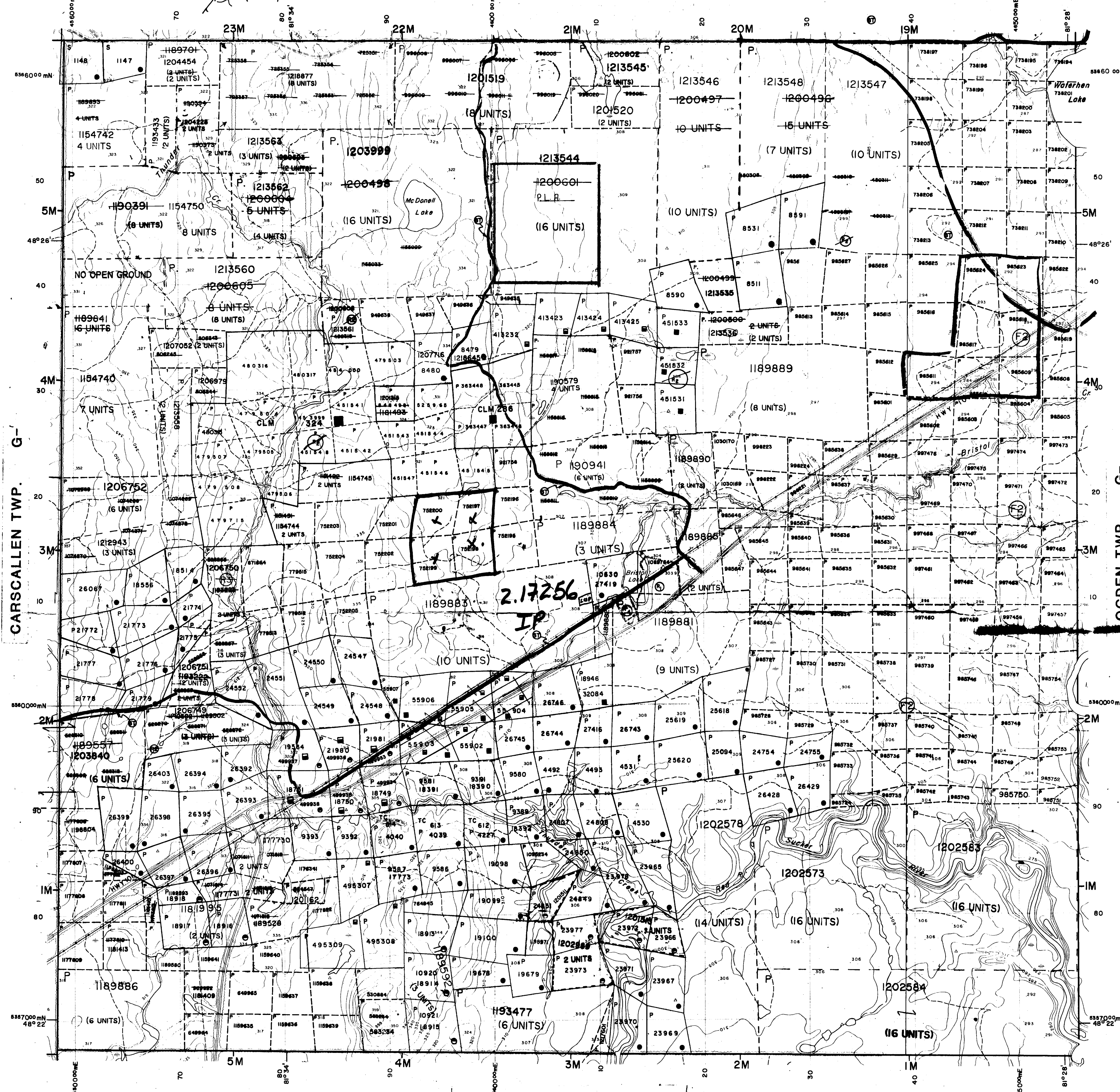
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GODFREY TWP. G-



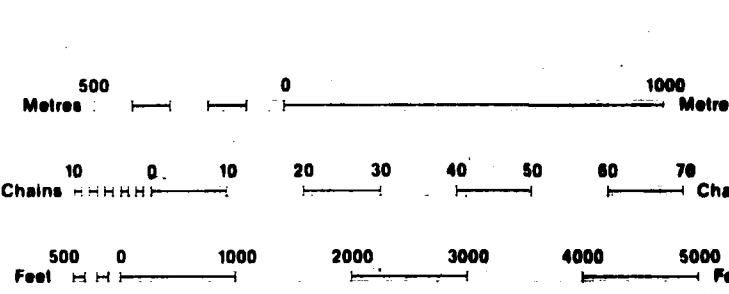
LEGEND

Highway and Route No.	
Other Roads	
Trails	
Surveyed Lines: Townships, Base Lines, Etc.	
Lot Lines, 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 or Composite Plan	
Reservations	
Original Shoreline	
Marsh or Muskeg	
Mines	
Traverse Monument	

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	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 83, SUBSEC. 1.



SCALE 1:20 000
ZONE 17

APPLICATION PENDING UNDER THE PUBLIC LANDS ACT
NOTICE RECEIVED 23-DEC-91
SNOWMOBILE TRAILS

APPLICATION FOR CROWN LAND UNDER THE PUBLIC LANDS ACT
NOTICE RECEIVED 23-MAY-94
C&B EXCAVATION TOP SOIL HOLDING STORAGE ETC.

THIS TWP SUBJECT TO FOREST ACTIVITY IN 1982/83.
AREAS DESIGNATED EXACTLY AS SUBMITTED BY MNR TIMMING.

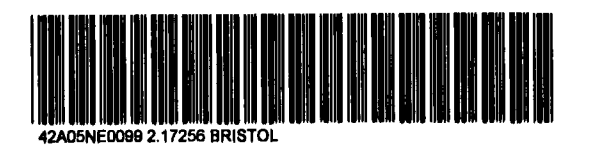
RECEIVED
MAY 12 1997
MINING LANDS BRANCH
ISSUED
MAY 08 1997
PUBLIC MINE MINING DIVISION

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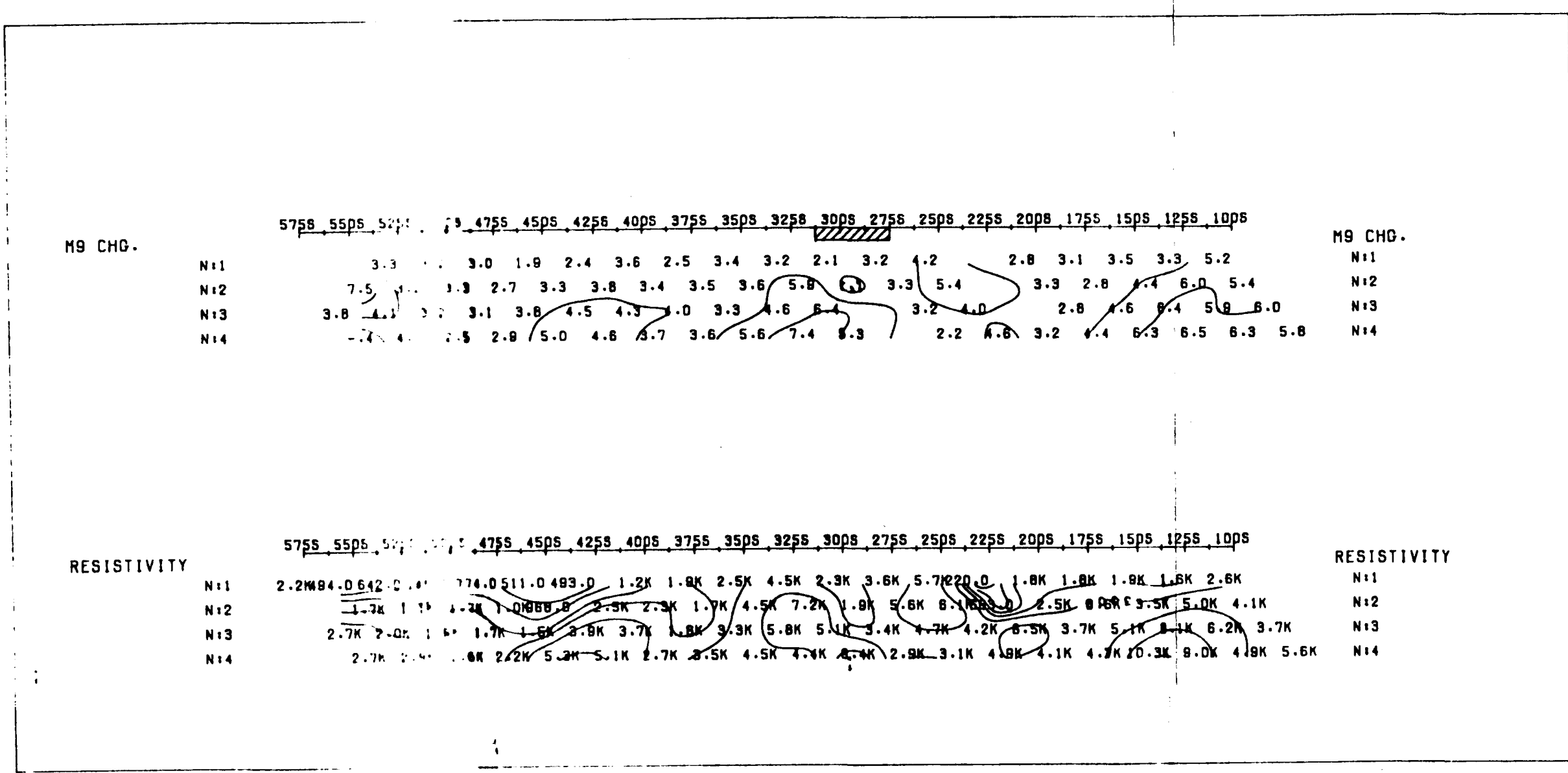
TOWNSHIP
BRISTOL
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources
Land Management Branch
Ontario

ORIGINAL COMPILATION JULY 1984
REVISED JULY 9, 1994 BY DC
CHECKED BY G.W.
Number
G-3998



not to scale



LINE : 0 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...

R SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON, 2 sec OFF
TRANSMITTER: SCINTREX T80-3 3KV
SLICE TIMING: 310-405 sec
PLOTTED WINDOW: SLICE 99

POIRIER OPAP 1995

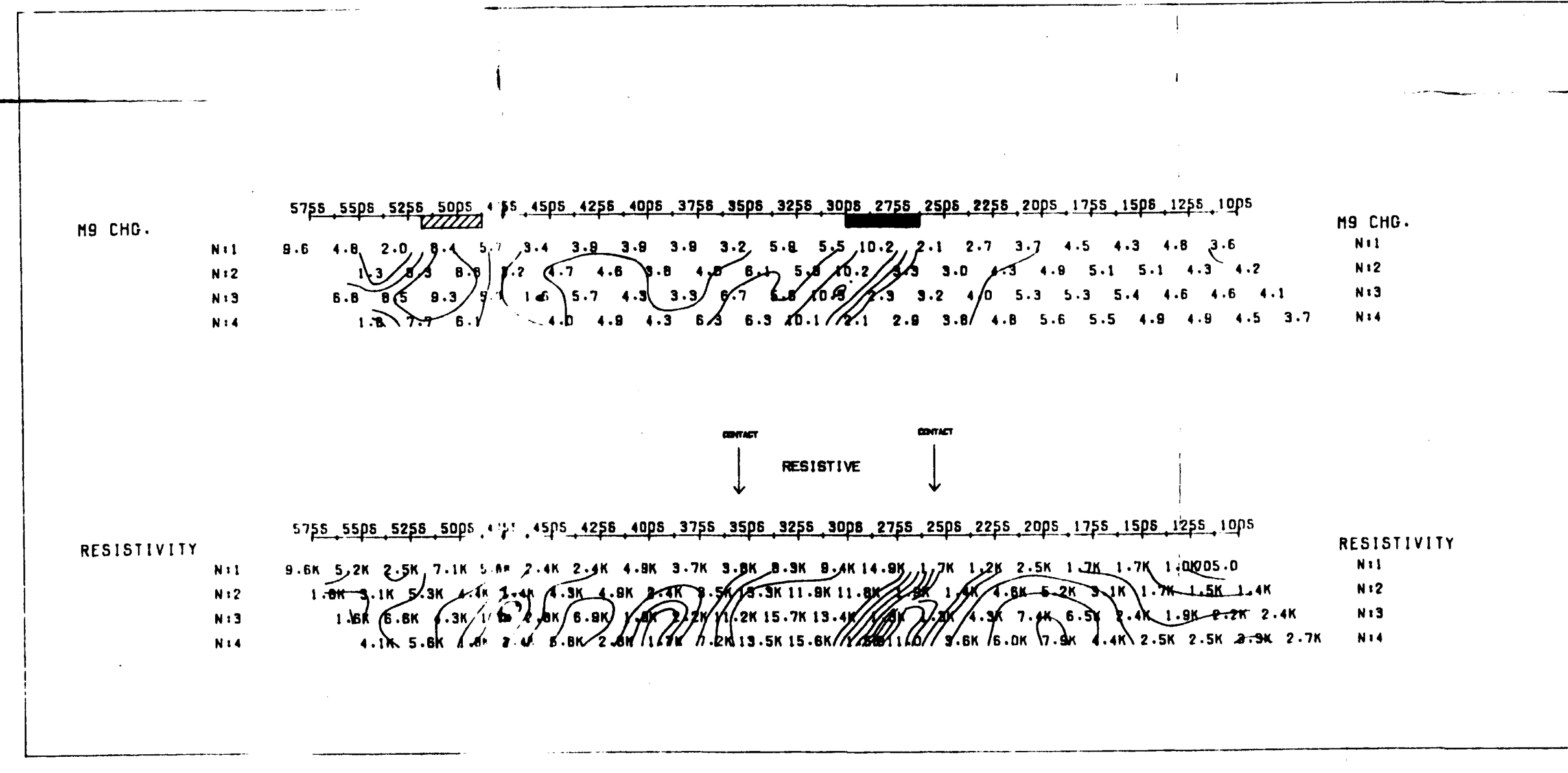
GRID B PROPERTY

BRISTOL TOWNSHIP

DATE : SEPT. 1995 REF : R278-B

SCALE = 1 : 2500

RAYAN EXPLORATION LTD.



LINE : 100 W

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...

R SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON, 2 sec OFF
TRANSMITTER: SCINTREX T80-3 3KV
SLICE TIMING: 310-405 sec
PLOTTED WINDOW: SLICE 99

POIRIER OPAP 1995

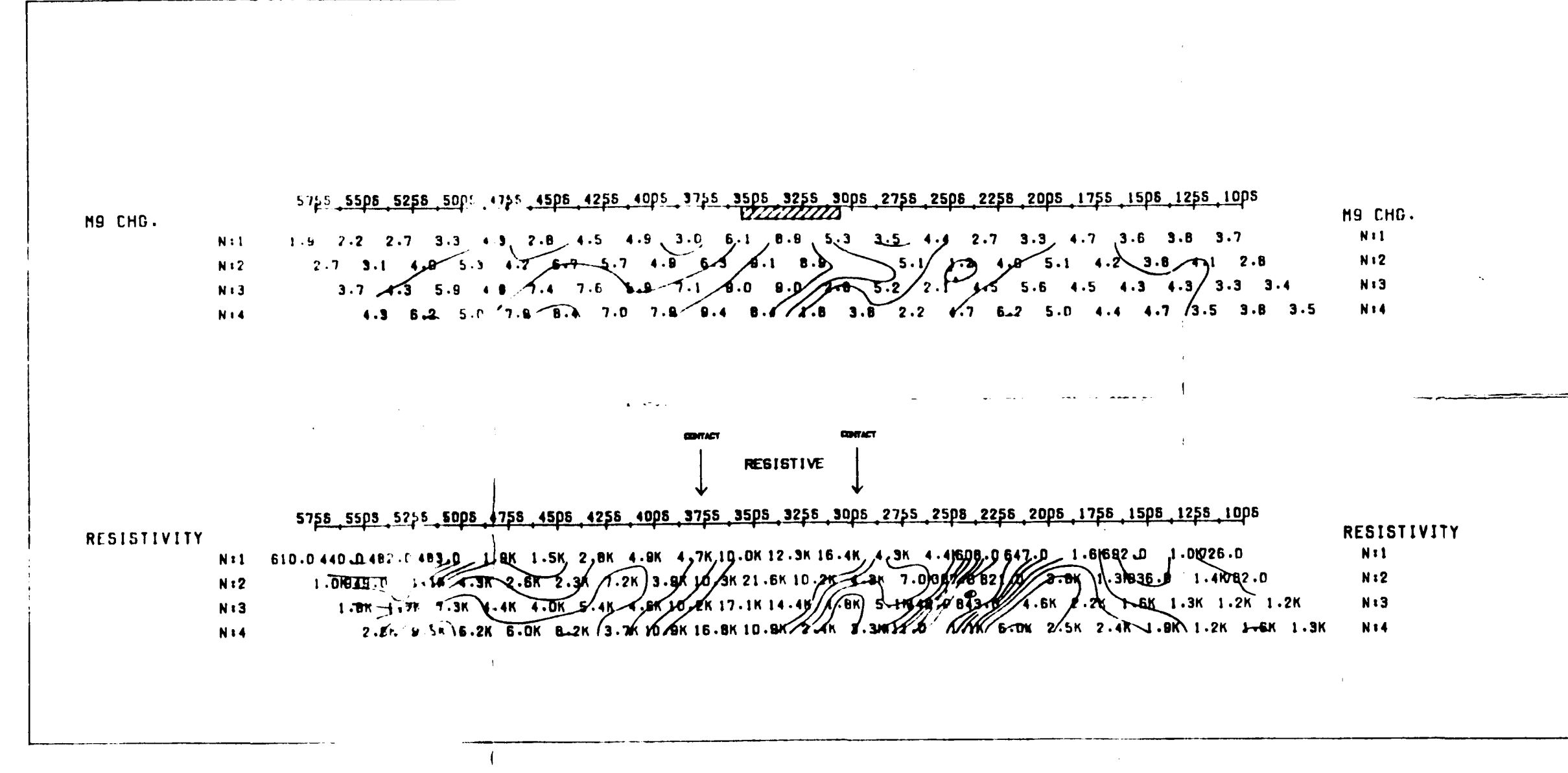
GRID B PROPERTY

BRISTOL TOWNSHIP

DATE : SEPT. 1995 REF : R278-B

SCALE = 1 : 2500

RAYAN EXPLORATION LTD.



LINE : 200 W

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...

R SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON, 2 sec OFF
TRANSMITTER: SCINTREX T80-3 3KV
SLICE TIMING: 310-405 sec
PLOTTED WINDOW: SLICE 99

POIRIER OPAP 1995

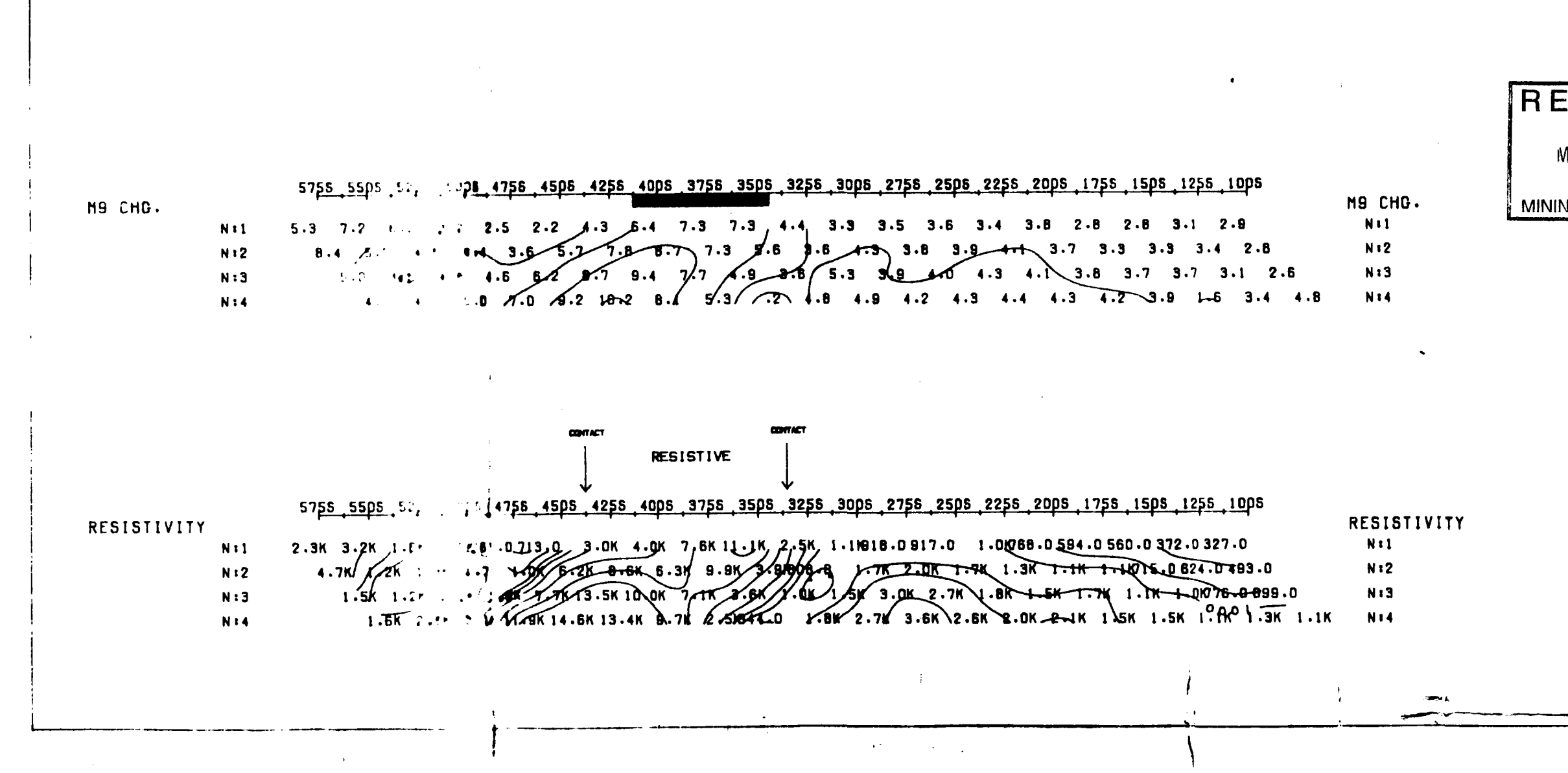
GRID B PROPERTY

BRISTOL TOWNSHIP

DATE : SEPT. 1995 REF : R278-B

SCALE = 1 : 2500

RAYAN EXPLORATION LTD.



LINE : 300 W

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...

R SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON, 2 sec OFF
TRANSMITTER: SCINTREX T80-3 3KV
SLICE TIMING: 310-405 sec
PLOTTED WINDOW: SLICE 99

POIRIER OPAP 1995

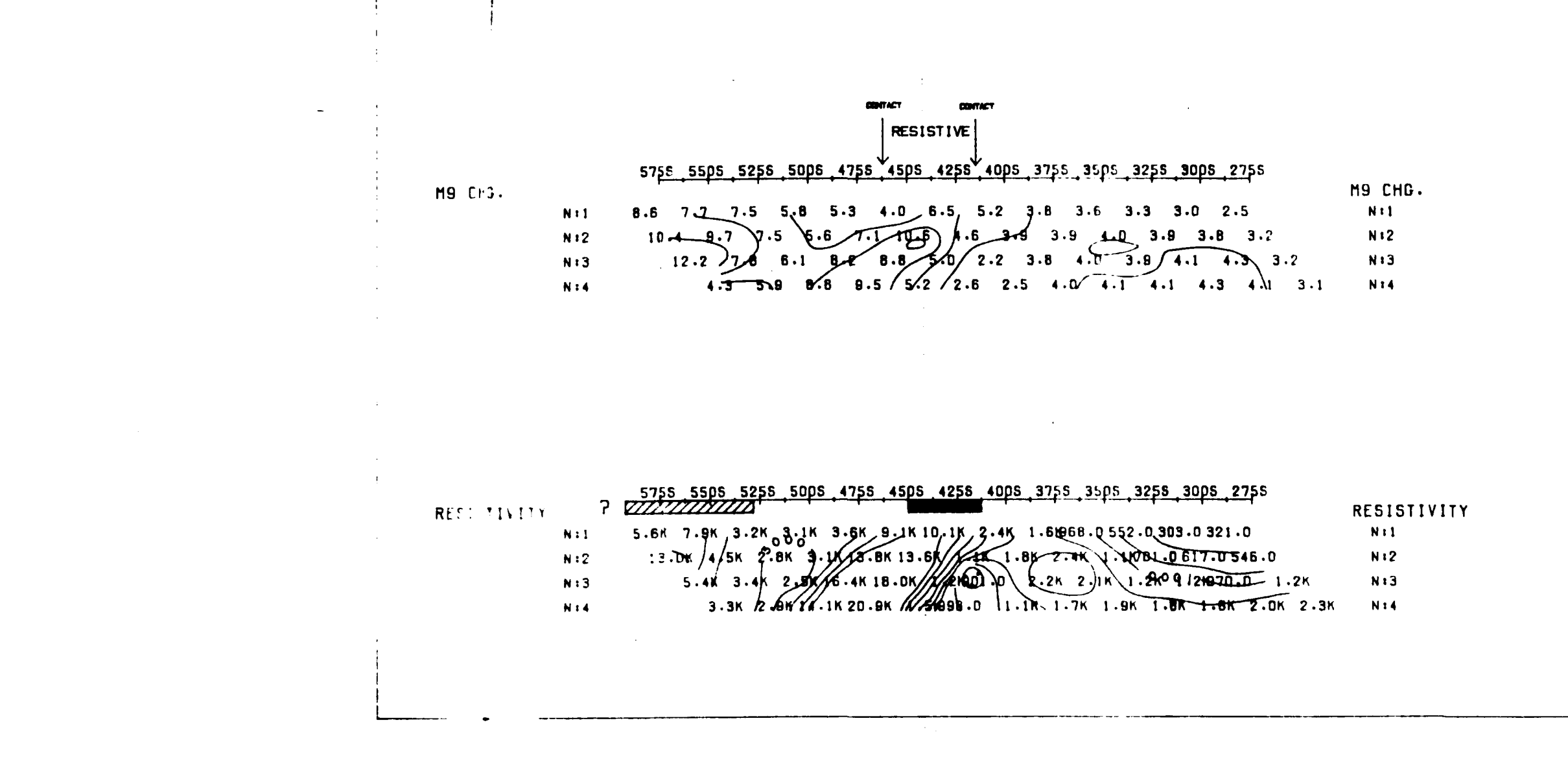
GRID B PROPERTY

BRISTOL TOWNSHIP

DATE : SEPT. 1995 REF : R278-B

SCALE = 1 : 2500

RAYAN EXPLORATION LTD.



LINE : 400 W

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

N = 1, 2, 3, 4, ...

R SPACING = 25.0 METRES

RECEIVER: SCINTREX IPR-12 TIME DOMAIN
RX-TX TIMING: 2 sec ON, 2 sec OFF
TRANSMITTER: SCINTREX T80-3 3KV
SLICE TIMING: 310-405 sec
PLOTTED WINDOW: SLICE 99

POIRIER OPAP 1995

GRID B PROPERTY

BRISTOL TOWNSHIP

DATE : SEPT. 1995 REF : R278-B

SCALE = 1 : 2500

RAYAN EXPLORATION LTD.

RECEIVED
MAY 12 1997
MINING LANDS BRANCH

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