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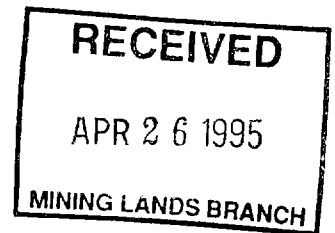
010

WORK REPORT

2.1595 9

ON THE

ODGEN TOWNSHIP PROPERTY



PORCUPINE MINING DIVISION, ONTARIO

FOR

*Deal # 2.12306.*

S. ANDERSON

SUBMITTED BY: S. ANDERSON



42A06NW0038 2.15959 OGDEN

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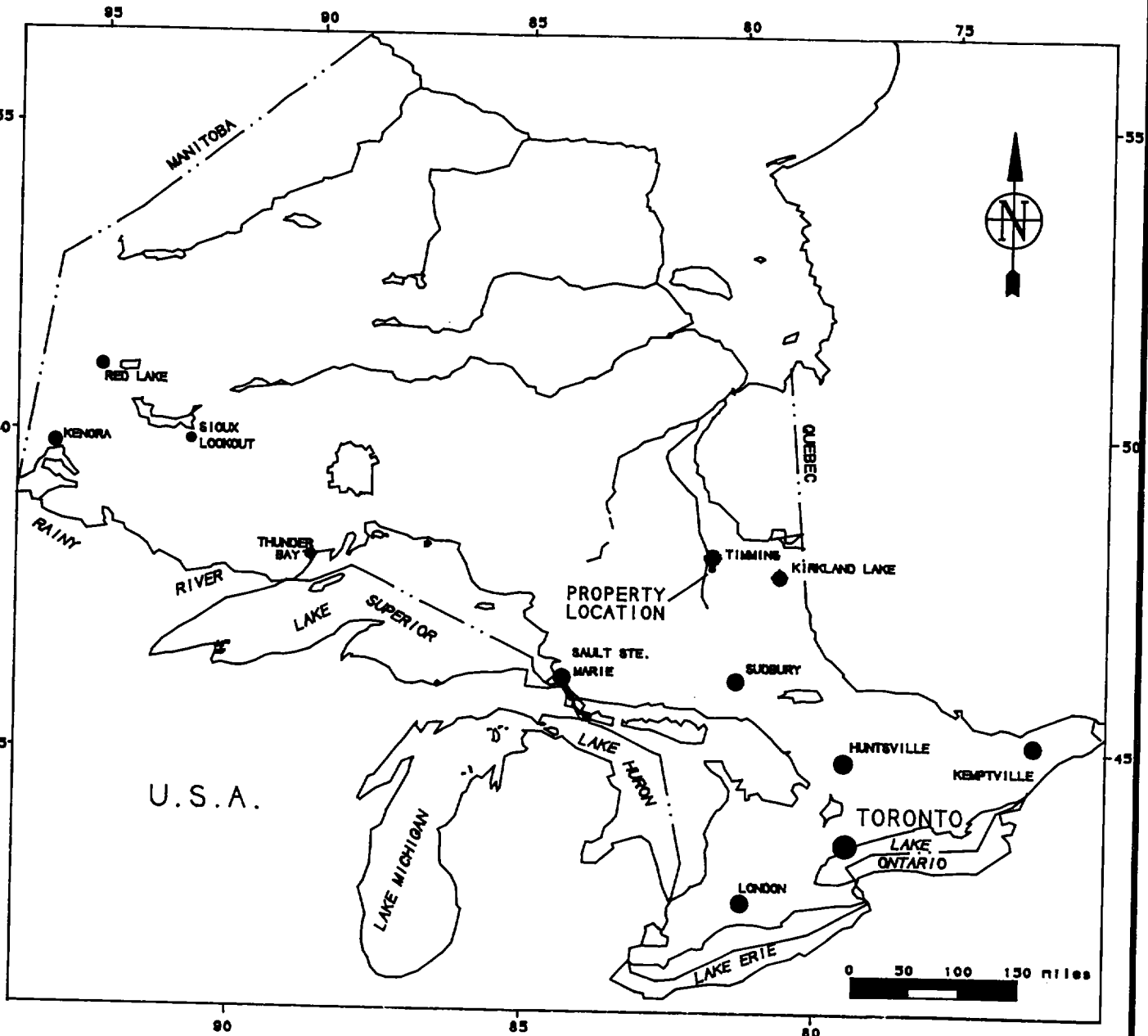
## INTRODUCTION

The contents of this report will deal with the Geophysical and Geological work programs carried out by S. Anderson on the Ogden Twp. Property. This property is located within Ogden Township, Porcupine Mining Division, District of Cochrane, Ontario (Fig 1).

The work Program conducted was carried out from June/94 to Dec/94 and was supervised by Steve Anderson. It included line cutting, geophysical (magnetometer, VLF and Induced Polarization), and geological (prospecting, and sampling) programs. This project was funded by a Ontario Prospector's Assistant Program (OPAP) grant.

The purpose of this exploration project was to test areas reported to contain anomalous values in gold. These values were said to be obtained from quartz veins situated within a shear zone striking roughly E-W across the northern portion of the claim block.

This project was intended to further test these areas, as well as possibly outline any other areas which may suggest an environment that is favourable for gold deposition.



# PROVINCE OF ONTARIO

Fig#1

<i>STEVE ANDERSON OPAP/94</i>		
OGDEN TOWNSHIP PROPERTY		
LOCATION MAP		
Date:	Scale: 1" = 150 mi	N.T.S.: 42A/NW
Drawn: SDA	Approved: SDA	File: LOC

### LOCATION AND ACCESS

The Ogden Twp. Property is located within the Porcupine Mining Division District of Cochrane, Ontario. It is situated along the central portion of the eastern boundary between Ogden and Deloro Townships. In a straight line, the claim block is approximately 9 km South- South West of the City of Timmins (Fig 2).

Access to the property during the survey period was gained by taking Pine St. south from the City of Timmins for about 10 km. At this point a seasonal logging road heads west from Pine St. A 2 km ride on this road provides access to the North East portion of the block in the area of the #4 post. The road then continues West, cutting across the entire block, thus providing excellent access to the entire project area. It should be noted the this road is no longer maintained, and as a result, it's condition varies throughout the summer.

### CLAIM STATUS

The claim over which this project was conducted is an unpatented, 12 unit block claim in Ogden Township which is recorded within the Porcupine Mining Division as claim number P-1189546 (Fig 3).

The author currently holds 100% in this claim.

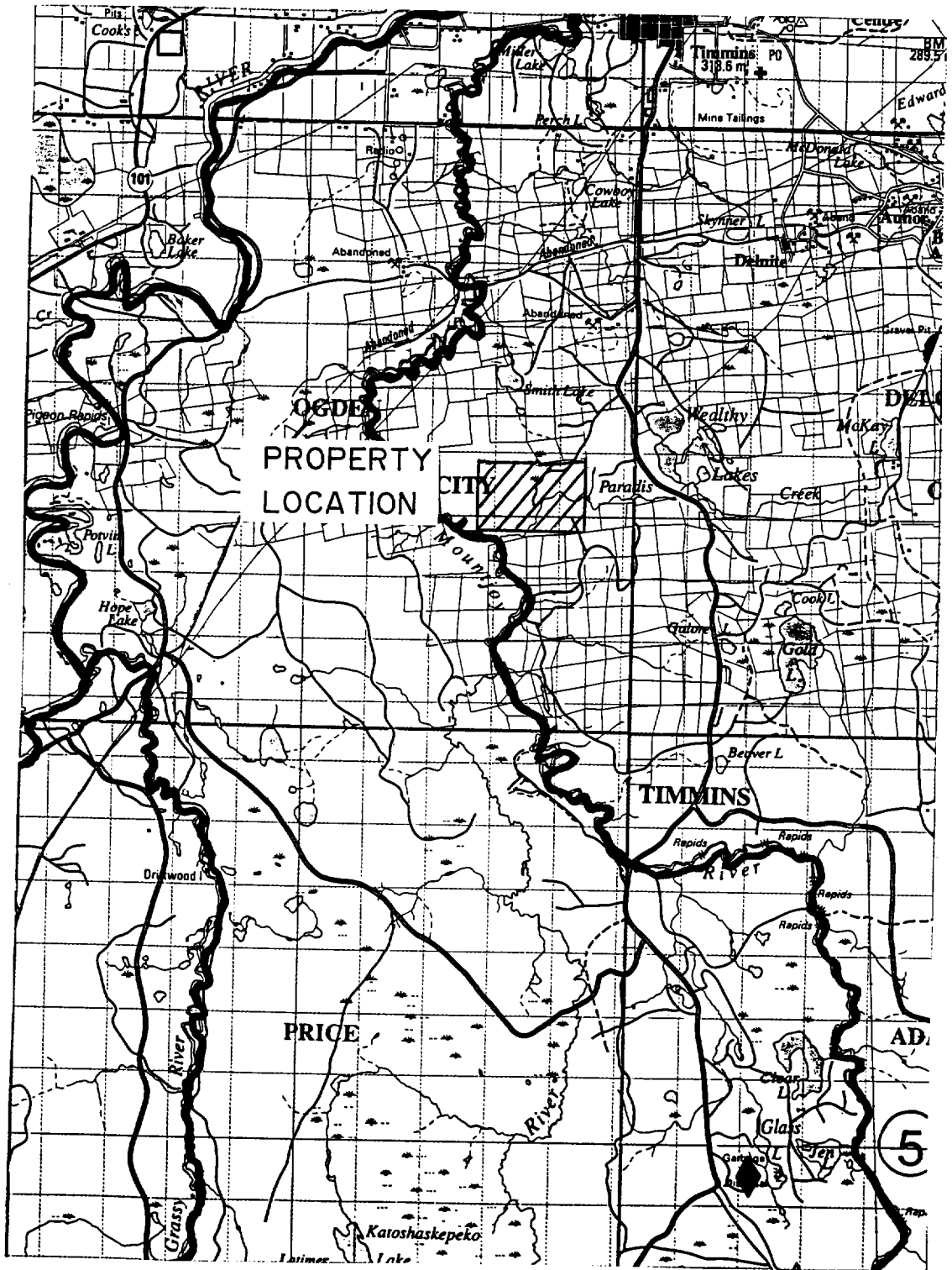


Fig 2

Client: STEVE ANDERSON OPAP 1994  
 Property: OGDEN TWP PROP.  
 Title: REGIONAL LOCATION MAP

Drawn by: SDA	Checked by: SDA
Date: DEC/94	Location: OGDEN
Province: ONT	N.T.S.: 42A/NR
Scale: 1:100000	Drawing: RLOC

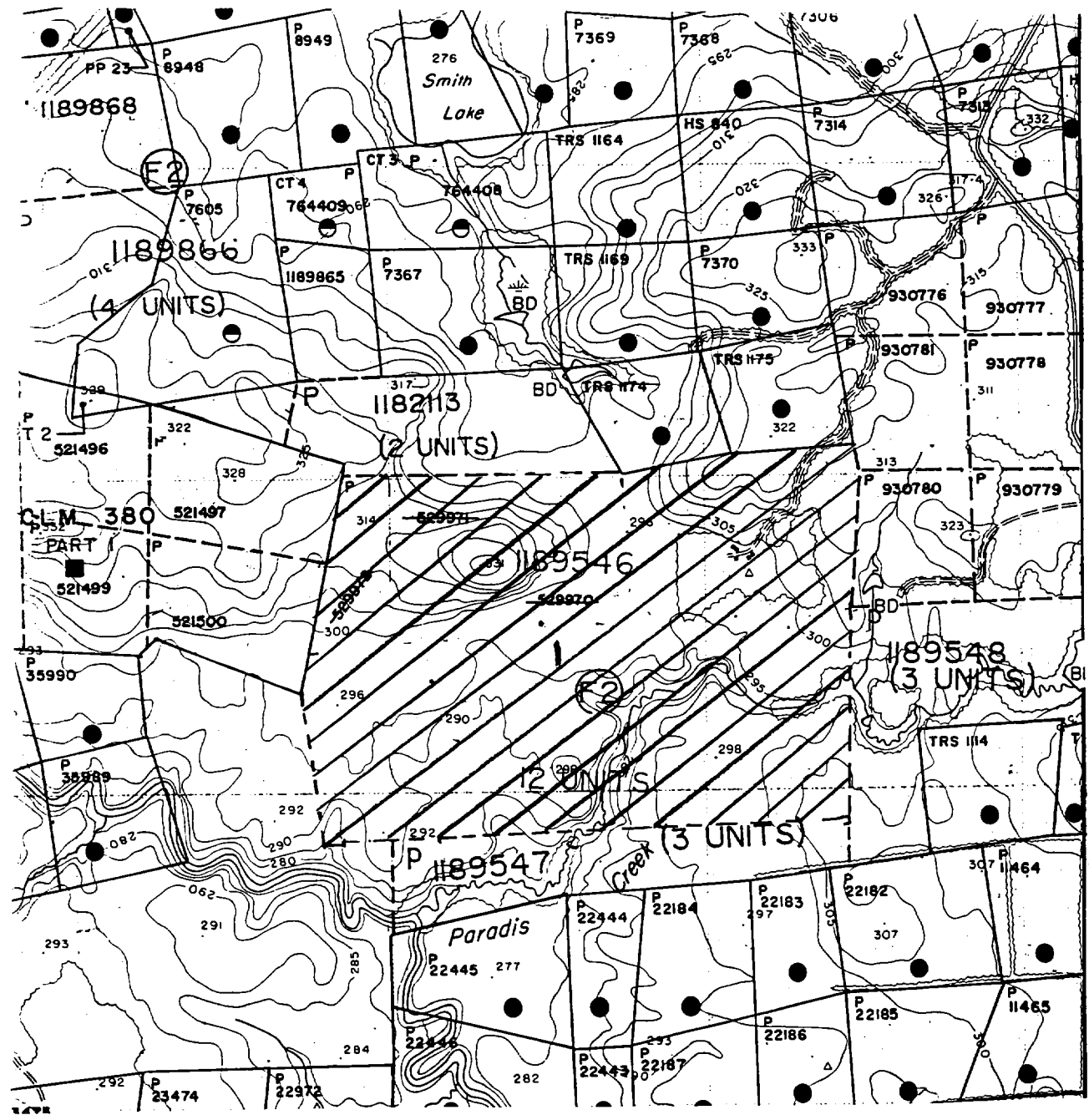


Fig 3

Client: <b>STEVE ANDERSON OPAP 1994</b>	
Property: <b>OGDEN TWP PROP.</b>	
Title: <b>CLAIM SKETCH</b>	
Prepared: <b>SDA</b>	Prepared: <b>SDA</b>
Date: <b>DEC/94</b>	Drawn: <b>PLUND.</b>
Prepared: <b>ONT</b>	Scale: <b>42A/NE</b>
Sheet: <b>1100006</b>	Drawing: <b>RLOC</b>

**PERSONNEL**

The people who were directly involved in this work program are listed below:

Steve Anderson	Timmins, Ontario
Raymond Meikle	Timmins, Ontario
Wayne Pearson	Timmins, Ontario
Eddy Brunet	Timmins, Ontario

All work was supervised by Steve Anderson.

**PREVIOUS WORK**

Some of the earliest reported work carried out on this property was done by John Reid in 1910. He reported gold values at that time, which ranged from \$0.60 to \$20.67 per ton. These assay results were apparently taken from a 5 foot channel sample.

In 1940 the property was then re-sampled by Sylvanite Gold Mines, in an attempt to repeat the gold values obtained by Mr. Reid. Although most of the samples taken by Sylvanite Mines reported only trace values in gold, one sample which was not assayed contained visible gold. At this time, they felt that the property should be further tested with a stripping and trenching program. However because of the cost's involved at the time, this was never done.

This is the extent of previous work carried out on the property. It is because of the limited work conducted on the ground, as well as the reportedly high Au. assay results obtained by Mr. Reid, that this property was acquired.



### GENERAL GEOLOGY

The Ogden Township Property lies within the Abitibi Greenstone Belt.

Locally, the property is shown to be underlain by felsic volcanics, as shown by Map 2205 Timmins-Kirkland Lake Geological Compilation Series..

Areas of outcropping within the project area were found to be made up of a sheared, carbonated chloritic schist. The shear zone strikes at roughly, north 80 degrees west, and is dipping 80 degrees to the north. All of the exposed outcropping within the block was found to be of the above mentioned rock type, varying only slightly as to the degree of shearing or carbonatization. Numerous Quartz veins are present within the shear, varying in width from a few millimetres to better than 1 meter. Overall the property was found to contains a favourable geological setting for gold deposition.

### WORK PROGRAM

The work conducted on the Ogden Township Property was carried out from June through December, 1994. This project basically involved three stages. This included, line cutting, geophysical and geological programs, all of which will be discussed in further detail below.

### LINE CUTTING

The first part of this project involved a line cutting program. This was set up in order to establishing a grid covering the area of interest, as outlined by prospecting prior to this . A total of 10km. of grid lines were cut, which covered the northern portion of the claim. The grid utilized cross-lines in a north-south direction, with a east-west base line. Lines were cut every 100 meters, with station pickets every 25 meters.

This provided a grid, from which all the work to be carried out on the property could be tied in to.

### GEOPHYSICAL PROGRAM

The geophysical part of the project included a Magnetometer, VLF and Induced Polarization survey. The magnetometer and VLF survey were carried out first, and covered the entire grid. The purpose of these surveys was to provide data which might aid in outline the limits of the shear zone striking across the grid, as well as any other possible changes in geology .

The final portion of the geophysical program was a Induced Polarization survey, which was conducted on every other line . The purpose of this survey was to help outline any areas that may contain sulphides or disseminated sulphides, which may not have been detected previously. This survey will also provide information as to the resistance of the rock, thus possibly

outlining resistive areas which may indicate zones of alteration or silicification.

Compiling the data obtained from this portion of the project should aid in outlining any zones with geophysical responses, that may indicate areas favourable for gold deposition.

#### **MAGNETOMETER THEORY**

An EDA OMNI IV Proton Precession magnetometer was used to carry out the magnetometer survey. The instrument is synchronized with an EDA recording base station to help eliminate magnetic diurnal variation. This should ensure an accuracy of less than 10 Nt.

The Proton Precession method involves energizing a wire coil immersed in a hydrocarbon fluid. This causes the protons in the proton rich fluid to spin or precess simulating spinning magnetic dipoles. When the current is removed the protons precess about the direction of the earth's magnetic field, generating a signal in the same coil which is proportional to the total magnetic field intensity. In this way, the horizontal gradient of the earth's magnetic field can be measured and plotted in plan form with values of equal intensity joined to form a contour map. This presentation is useful in correlating with other data sets to aid in structural interpretation. Individual magnetic responses can be interpreted for dip, depth and width estimates after profiling the data.

The following parameters were employed for the survey:  
Instrument - EDA Omni IV Proton Precession Magnetometer  
Station Interval - 25m  
Line Interval - 100m  
Diurnal Correction Method - EDA Recording Base Station  
Data Presentation - Magnetic Contours Map 1  
- 1:5000 scale  
- Contour interval = 50 nano-teslas

#### VLF - EM Survey

An Geonics EM-16 instrument was used to survey the entire property. Both the In-phase (dip angle) and Quadrature values were recorded at 25m intervals.

While VLF stands for Very Low Frequency, it is for mineral exploration purposes a very high frequency compared to other commonly used Electromagnetic Surveys. The commonly used frequencies are in the order of 18-20 kilohertz. The VLF-EM technique employs fixed transmitter stations located at various places around the world to facilitate navigation. Because of this, one has a limited choice as to what transmitter station that can be used, depending on distance from and azimuth to the transmitter station.

For this survey, Cutler Main (NAA) was used. It has an operating frequency of 24.0 khz and an azimuth of approximately of 130 degrees TN from the property. Very briefly, the

transmitting station emits a concentric, circular wave pattern, expanding about the transmitter dipole. Being thousands of miles away from the transmitter, we deal with the tangent of this wave pattern which in this case would have a direction normal to the azimuth of 130 degrees. Thus any conductors having a general E-W strike direction would be intersected by this signal which induces a signal in the conductor which in turn opposes the primary signal from the transmitter station. This elliptically polarizes the resultant field enabling detection of the conductor using a receiver coil to determine the attitude of the resultant field at various points along the grid lines.

The resultant field dips away from the conductor axis on both sides of the conductor producing a cross-over on the conductor axis. For an E-W conductor, a true cross-over would occur where the field dips south and changes to a north dip as you progress from south to north. For this survey, a +/- system is used where a (+) dip angle means the field is dipping to the south (indicating anomaly is to north) and a (-) dip angle means the field is dipping to the north (indicating anomaly is to south). This is the case only if all readings were taken facing north as per this survey.

The quadrature values, while not useful alone, can help distinguish between bedrock conductors which generally have a smaller out-of-phase response than overburden or short wavelength conductors. Also, the polarity of the quadrature is diagnostic, ie; if the polarity follows or is the same sense as the In-phase

it gives more credibility to the conductor. Reverse quadrature often indicate overburden responses.

The following parameters were employed for the survey:

Instrument - Geonics EM-16

Transmitter Station - Cutler Main (USA)

- Call symbol NAA

Frequency - 24.0 KHZ

Azimuth to station - approx. 130 degrees TN

Reading Direction - All reading taken facing north

Station Interval - 25m

Line Interval - 100m

Data Presentation - Plan, profiled map No 1

- Plan, Fraser Filtered map No 1

- Scale - 1:5000

- profile scale 1 cm = 20%

### General IP Theory

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 P1 P2 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, 3.0KW

Data Presentation: Individual Psuedosections

Scale: 1:1250

### PROSPECTING AND SAMPLING

A total of 7 days were spent prospecting and sampling on the property. In addition to this, two days were spent refurbishing two old trenches, that were located as a result of the prospecting. Refurbishing of the two old trenches involved the use of explosives as well as pick and shovel. This allowed fresh samples to be taken from both the trenches. Between this, and the time spent prospecting, a total of 26 grab samples were taken. All the samples collected were labelled, described, and sent to be assayed for gold. The values obtained from these samples can be found under appendix D of this report. Sample locations were plotted on a plan map and may be found in the back pocket of this report (Map 2).

### PROJECT RESULTS

The results obtained from the exploration program conducted on the Ogden Township Property were encouraging. The prospecting, which was carried out over the property showed that the block is situated over a geological area, that could provide a favourable environment for gold deposition. However, of the 26 samples taken from the property, no values higher than 45 ppb Au were reported.

Despite this, the geophysical portion of the project was successful in outlining other areas of interest. Most of these could not be explained by prospecting, because of overburden cover.

The IP survey has outlined a number of chargeable areas which should be looked at in further detail.

The first zone outlined by the IP is situated at the north end of L2E, and most likely continues east, to L4E. On both lines this feature shows up as a moderately chargeable zone situated over a resistivity high.

A second zone on L4E is shown as a weak response which occurs at depth, at 150N to 175N. This zone also occurs along the southern flank of a strong magnetic high.

This zone occurring on L6E/250N-275N, shows the same characteristics as the previous zone, and may be an extension of that same feature.

The strongest response encountered is located on L8E from

125N to 225N. This zone occurs along the northern flank of a resistivity low.

A moderately chargeable zone is located on L16E from 400N to 425N. This zone is situated over a very resistive zone, and is coincidental with a strong one-line magnetic high.

The last area outlined by the IP, occurs on L18E at 300N. This feature is moderately chargeable, and occurs over a narrow conductive zone.

It would appear that the conductors outlined by the VLF survey may be responding to outcrop to overburden situations that occur throughout the block. This may be why the conductors located show very little direct correlation with the other work conducted.

For a more detailed look at the results obtained from this project, refer to the maps located in the back pocket of this report.

### CONCLUSIONS AND RECOMMENDATIONS

The work program carried out on the Ogden Township Property, was successful in outlining a number of areas which should be further tested.

As previously mentioned under the general geology as well as survey results, the geological environment occurring within this block is definitely favourable for gold deposition. This area's potential is also enhanced by being situated less than 2 km south of the past gold producing DeSantis and Naybob Mines. As a result, even though the assay results obtained from the grab samples taken off the property were discouraging, a large portion of the block still remains untested.

At this point, some areas that might receive priority would be the chargeable zones outlined by the Induced Polarization Survey. Some of these zones occur over resistivity highs. This might be an indication of disseminated sulphides situated within a zone of alteration or silicification.

Because much of the property is covered by overburden, a soil sampling program might also be helpful in detecting any areas of gold mineralization.

As well as testing the areas of interest outlined in this program, the southern portion of the 12 unit claim should also be tested. This part of the block is covered by overburden, and for the most part remains untested. It is shown to have similar geology as the ground covered by this program, and therefore,

could be tested with a geophysical program similar to the use in  
this project.

CERTIFICATION

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

1. I hold a three year Technologist Diploma from Sir Sandford Flemming 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 1994.
5. I hold a 100% interest in the Ogden Twp. Property, subject of this report.

Dated this 25th day of January 1995  
at Timmins, Ontario.



APPENDIX A



# OMNI IV "Tie-Line" Magnetometer

# EDA



## OMNI IV's Major Benefits

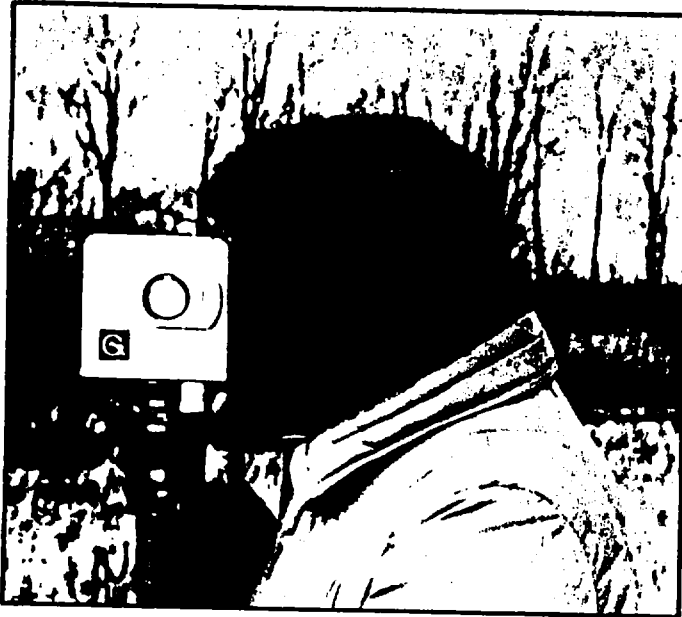
- Four Magnetometers In One
- Self Correcting for Diurnal Variations
- Reduced Instrumentation Requirements
- 25% Weight Reduction
- User Friendly Keypad Operation
- Universal Computer Interface
- Comprehensive Software Packages

## 1.1 Specifications

Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	$\pm 15\%$ relative to ambient field strength of last stored value
Display Resolution	0.1 gamma
Processing Sensitivity	$\pm 0.02$ gamma
Statistical Error	0.01 gamma
Resolution	
Absolute Accuracy	$\pm 1$ gamma at 50,000 gammas at 23°C $\pm 2$ gamma over total temperature range
Standard Memory	
Capacity	
Total Field or Gradient	1,200 data blocks or sets of readings
Tie-Line Points	100 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from -40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors.
RS 232 Serial I/O	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	6,000 gammas per meter (field proven)

**APPENDIX B**

## VLF EM



### EM16

One of the most popular and widely used electromagnetic instruments, the EM16 VLF receiver makes the ideal reconnaissance EM. This can be attributed to its field reliability, operational simplicity, compactness and mutual compatibility with other reconnaissance instruments such as portable magnetometers and radiometric detectors.

The VLF method of EM surveying, pioneered by Geonics, has proven to be a simple economical means of mapping geological structure and fault tracing. The applications are many and varied, ranging from direct detection of massive sulphide conductors to the indirect detection of precious metals and radioactive deposits.

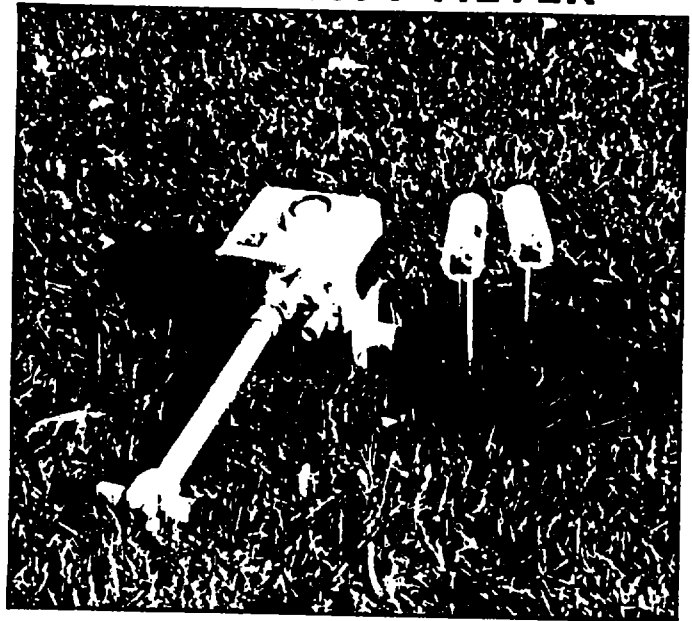
#### FEATURES

- The EM16 is the only VLF instrument that measures the quad phase as well as the in-phase secondary field. This has the advantage of providing an additional piece of data for a more comprehensive interpretation and also allows a more accurate determination of the tilt angle.
- The secondary fields are measured as a ratio to the primary field making the measurement independent of absolute field strength.
- The EM16 is the only VLF receiver that can be adapted to measure VLF resistivity.

### Specifications

<b>MEASURED QUANTITY</b>	In-phase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity)
<b>SENSITIVITY</b>	In-phase : $\pm 150\%$ Quad-phase : $\pm 40\%$
<b>RESOLUTION</b>	$\pm 1\%$
<b>OUTPUT</b>	Nulling by audio tone. In-phase indication from mechanical inclinometer and quad-phase from a graduated dial.
<b>OPERATING FREQUENCY</b>	15-25 kHz VLF Radio Band. Station selection done by means of plug-in units.
<b>OPERATOR CONTROLS</b>	On/Off switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
<b>POWER SUPPLY</b>	6 disposable 'AA' cells
<b>DIMENSIONS</b>	42 x 14 x 9 cm
<b>WEIGHT</b>	Instrument: 1.6 kg Shipping : 5.5 kg

## VLF RESISTIVITY METER



### EM16/16R

The EM16R is a simple, button on attachment to the EM16 converting it to a direct reading terrain resistivity meter. The EM16R interfaces a pair of potential electrodes to the EM16 enabling the measurement of the ratio of, and the phase angle between, the horizontal electric and magnetic fields of the plane wave propagated by distant VLF radio transmitters.

The EM16R is direct reading in ohm-meters of apparent ground resistivity. If the phase angle is  $45^\circ$ , the resistivity reading is the true value and the earth is uniform to the depth of exploration (i.e. a skin depth). Any departure from  $45^\circ$  of phase indicates a layered earth. Two layer interpretation curves are supplied with each instrument to permit an interpretation based on a two layer earth model.

This highly portable resistivity meter makes an ideal tool for quick geological mapping and has been used successfully for a variety of applications.

- Detection of massive and disseminated sulphide deposits
- Overburden conductivity and thickness measurements
- Permafrost mapping
- Detection and delineation of industrial mineral deposits
- Aquifer mapping

### Specifications EM16R ATTACHMENT

<b>MEASURED QUANTITY</b>	● Apparent Resistivity of the ground in ohm-meters ● Phase angle between $E_x$ and $H_y$ in degrees
<b>RESISTIVITY RANGES</b>	● 10 — 300 ohm-meters ● 100 — 3000 ohm-meters ● 1000 — 30000 ohm-meters
<b>PHASE RANGE</b>	0-90 degrees
<b>RESOLUTION</b>	● Resistivity : $\pm 2\%$ full scale ● Phase : $\pm 0.5^\circ$
<b>OUTPUT</b>	Null by audio tone. Resistivity and phase angle read from graduated dials.
<b>OPERATING FREQUENCY</b>	15-25 kHz VLF Radio Band. Station selection by means of rotary switch.
<b>INTERPROBE SPACING</b>	10 meters
<b>PROBE INPUT IMPEDANCE</b>	100 M $\Omega$ in parallel with 0.5 picofarads
<b>DIMENSIONS</b>	19 x 11.5 x 10 cm. (attached to side of EM16)
<b>WEIGHT</b>	1.5 kg (including probes and cable)

**APPENDIX C**

# 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 JPC 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 µvolt 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

40% to 80% of the current on time.

## Transient Program

Total measuring time keyboard selectable at 1, 2, 4, 8, 16 or 32 seconds. Normally 4 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. Hand-shaking 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. Tel.: (905) 669-2280  
Concord, Ontario Fax: (905) 669-6403  
Canada, L4K 1B5 Telex: (905) 06-964570

## In the U.S.A.

85 River Rock Drive Tel.: (716) 298-1219  
Unit # 202 Fax: (716) 298-1317  
Buffalo, N.Y.  
U.S.A. 14207

# SCINTREX TSQ-3

## Time and Frequency Domain IP and Resistivity Transmitter

### 3000 W

#### 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.

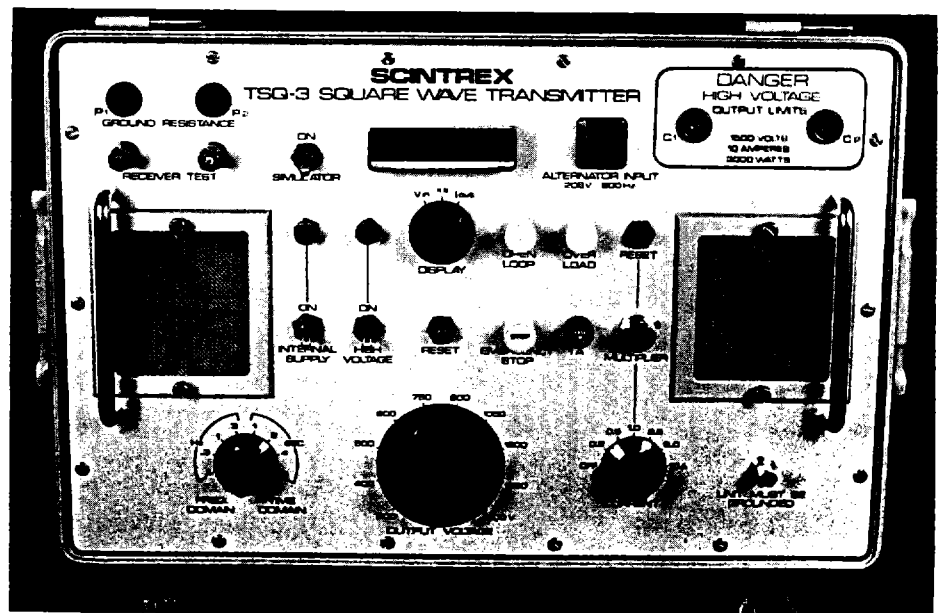
Rectifier circuit is protected against transients.

Excellent power/weight ratio and efficiency.

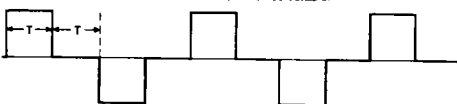
Designed for field portability; motor-generator is installed on a convenient frame and is easily man-portable. The transmitter is housed in an aluminum case.

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

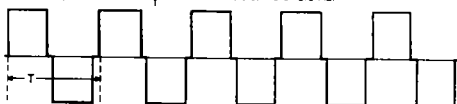
New motor-generator design eliminates need for time domain dummy load.



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



Frequency Domain:  $T = \frac{1}{f}$  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

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

APPENDIX D

**SAMPLE LOCATIONS AND DESCRIPTIONS**

Sample#	Location	Description
S-1	1000E/362N	Sheared Seracite/brown card.
S-2	1000E/362N	Quartz
S-3	1000E/362N	Quartz
S-4	1000E/400N	Quartz
S-5	875E/325N	Sheared Chloritic Schist/brown carb.
S-6	675E/270N	Quartz
S-7	675E/270N	Sheared Chloritic Schist
S-8	585E/205N	Sheared Chloritic Schist
S-9	695E/250N	Sheared Chloritic Schist/minor py.
S-10	875E/325N	Green Carbonate
S-11	875E/325N	Sheared Chloritic Schist
S-12	675E/270N	Quartz
S-13	675E/270N	Quartz
S-14	695E/250N	Chloritic Schist/minor py.
S-15	695E/250N	Chloritic Schist/minor py.
S-16	1700E/465N	Green Carbonate
S-17	725E/125N	Sheared Chloritic Schist
S-18	700E/130N	Sheared Chloritic schist
S-19	830E/370N	Brown Carbonate
S-21	850E/215N	Quartz
S-22	970E/325N	Quartz
S-23	960E/190N	Sheared Chloritic Schist
S-25	730E/330N	Brown Carbonate
S-28	930E/360N	Sheared Chloritic Schist
S-29	930E/360N	Quartz
S-30	800E/225N	Brown Carbonate



# Swastika Laboratories

A Division of TSL/Assayers Inc.

Established 1938

Assaying - Consulting - Representation

## Geochemical Analysis Certificate

4W-3037-RG1

Company: **S. ANDERSON**

Date: NOV-25-94

Project:

Area: **S. Anderson**

We hereby certify the following Geochemical Analysis of 19 Rock samples submitted NOV-22-94 by .

Sample Number	Au PPB	Au Check PPB
S-1	17	14
S-2	Nil	-
S-3	7	-
S-4	3	3
S-5	9	-
S-6	7	-
S-7	15	-
S-8	2	-
S-9	38	31
S-10	Nil	-
S-11	3	-
S-12	9	7
S-13	3	-
S-14	26	27
S-15	41	45
S-16	5	-
S-17	2	-
S-18	Nil	-
S-19	Nil	-

One assay ton portion used.

Certified by Dennis Chantre



Established 1928

# Swastika Laboratories

A Division of TBL/Assayers Inc.

Assaying - Consulting - Representation

32062

## Geochemical Analysis Certificate

SW-0121-RG1

Company: **S. ANDERSON**

Project:

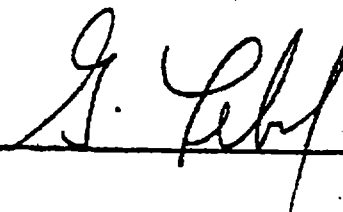
Date: JAN-26-95

Anal: **S. Anderson**

We hereby certify the following Geochemical Analysis of 17 Rock samples submitted JAN-23-95 by .

Sample Number	Au PFB	Au Check PFB
[REDACTED]		
S-21	7	-
S-22	21	-
S-23	5	-
[REDACTED]		
S-25	34	-
[REDACTED]		
S-28	14	-
S-29	12	-
S-30	7	-
[REDACTED]		

One assay ton portion used.

Certified by 

P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244 FAX (705) 642-3300



# Report of Work Conducted After Recording Claim

## Mining Act

Transaction Number  
**W 9560.00053**

Personal information collected on this form is obtained under the authority of the Mining Act. This collection should be directed to the Provincial Manager, Mining Lands, Mining Division, Sudbury, Ontario, P3E 6A5, telephone (705) 870-7284.



42A06NW0038 2.15959 OGDEN

900

- Instructions:**
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
  - A separate copy of this form must be completed for each Work Group.
  - Technical reports and maps must accompany this form in duplicate.
  - A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s) <b>Steve Dean Anderson</b>	Client No. <b>102430</b>
Address <b>780 McClinton Dr. Timmins, Ont. P4W 4P8</b>	Telephone No. <b>705-268-2851</b>
Mining Division <b>Porcupine</b>	Township/Area <b>Ogden Twp.</b>
Date Work Performed From: <b>July 3/94</b>	To: <b>Jan 10/95</b>

**Work Performed (Check One Work Group Only)**

Work Group	Type
<input checked="" type="checkbox"/> Geotechnical Survey	<b>linecutting, prospecting, IP, Mag, VLF</b>
<input type="checkbox"/> Physical Work, Including Drilling	
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

**RECEIVED**  
APR 26 1995  
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs \$ 14,590

**Note:** The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

**Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)**

Name	Address
<b>Steve Dean Anderson</b>	<b>780 McClinton Dr, Timmins, Ont P4W 4P8</b>

(attach a schedule if necessary)

**Certification of Beneficial Interest \* See Note No. 1 on reverse side**

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date <b>Feb 20/95</b>	Recorded Holder or Agent (Signature) <i>[Signature]</i>
--	--------------------------	--

**Certification of Work Report**

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.		
Name and Address of Person Certifying <b>Steve Dean Anderson, 780 McClinton Dr. Timmins, Ont</b>		
Telephone No. <b>705-268-2851</b>	Date <b>Feb 20/95</b>	Certified By (Signature) <i>[Signature]</i>

**For Office Use Only**

Total Value Cr. Recorded <b>14,590.</b>	Date Recorded	Mining Recorder <b>Sally White</b>
	Deemed Approval Date <b>MAY 22/95</b>	Date Approved <i>[Signature]</i>
	Date Notice for Amendments Sent	

**RECEIVED**  
FEB 21 1995  
12.00 (C) *[Signature]*  
PORCUPINE MINING DIVISION





Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des mines

**Statement of Costs  
for Assessment Credit**

**État des coûts aux fins  
du crédit d'évaluation**

Mining Act/Loi sur les mines

Transaction No./N° de transaction

9560.00053

2.15959

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

**1. Direct Costs/Coûts directs**

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'œuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type Linecutting		
	Mag, VLF, IP		
	Prospecting, Report		
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
<b>Total Direct Costs Total des coûts directs</b>			<b>14590</b>

**2. Indirect Costs/Coûts indirects**

\*\* Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work. Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
<b>Sub Total of Indirect Costs Total partiel des coûts indirects</b>			
<b>Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)</b>			
<b>Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)</b>			<b>Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)</b>

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

**Filing Discounts**

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	× 0.50 =

**Remises pour dépôt**

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Evaluation totale demandée
	× 0,50 =

**Certification Verifying Statement of Costs**

I hereby certify:  
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as [Signature] I am authorized  
(Recorded Holder, Agent, Position in Company)

to make this certification

**Attestation de l'état des coûts**

J'atteste par la présente :  
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de [Signature] je suis autorisé  
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
<u>[Signature]</u>	<u>[Date]</u>



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

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

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

May 03, 1995

Our File: 2.15959  
Transaction #: W9560.00053

Mining Recorder  
Ministry of Northern Development & Mines  
60 Wilson Avenue, 1st Floor  
Timmins, Ontario  
P4N 2S7

Dear Mr. White:

**Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIM  
1189546 IN OGDEN TOWNSHIP**

Assessment work credits have been approved as outlined on the attached report of work form. The credits have been approved under Section 9 (Prospecting) and Section 14 (Geophysical) of the Mining Act Regulations.


The approval date is May 02, 1995.

If you have any questions regarding this correspondence, please contact Steven Beneteau at (705) 670-5858.

ORIGINAL SIGNED BY:



Ron C. Gashinski  
Senior Manager, Mining Lands Section  
Mining and Land Management Branch  
Mines and Minerals Division

 SBB/jl  
Enclosure:

cc: Resident Geologist  
Timmins, Ontario

✓ Assessment Files Library  
Sudbury, Ontario

**REPORT OF WORK FORM**

Please note assessment credits have been distributed to reflect the value of work performed on each claim.

**MAY 03, 1995**  
**FILE NUMBER 2.15959**  
**TRANSACTION NO. W9560.00053**

<b>CLAIM NUMBER</b>	<b>VALUE OF ASSESSMENT WORK DONE ON THIS CLAIM</b>
1189546	\$14,590.00
1189547	\$ 0.00
1189548	\$ 0.00
	-----
<b>TOTAL</b>	<b>\$14,590.00</b>

MAP SYMBOLOGY

Aerial Cableway	Pipeline (above ground)
Boundary	Railroad
International	Single Track
Interprovincial	Double Track
District Township	Abandoned
Indian Reserve	Turbine
Approximate	Road
Set, Concession	Highway County
Approximate	Township
Paris Boundary	Access (road of doubtful maintenance or significant driveway)
Bridge	Trail, Bush Road (partage sites)
Road, Railroad	Rapids
Building	Double line river with multiple rapids
Chimney	Double line river with multiple rapids
Cliff, Pit, Pile	Reservoir
Contours	River, Stream, Canal
Interpretation	Approximate boundary
Approximate	Direction of flow
Control Points	Lock
Horizontal	Culvert
Vertical	Falls
Culvert	Double line river
Falls	Fence, Hedge, Wall
Double line river	Feature Outline (construction features and)
Fence, Hedge, Wall	Flooded Land
Feature Outline (construction features and)	Lock
Flooded Land	Marsh or Swamp
Lock	Moat
Marsh or Swamp	Mine Head Frame
Moat	Outcrop
Mine Head Frame	
Outcrop	

REFERENCES

L.O. 6613 "BOOMING GROUNDS" COVERS THE WESTERLY HALF OF THE BED OF THE MATTAGAMI RIVER FLOWING THROUGH THE TOWNSHIP FILE 73543

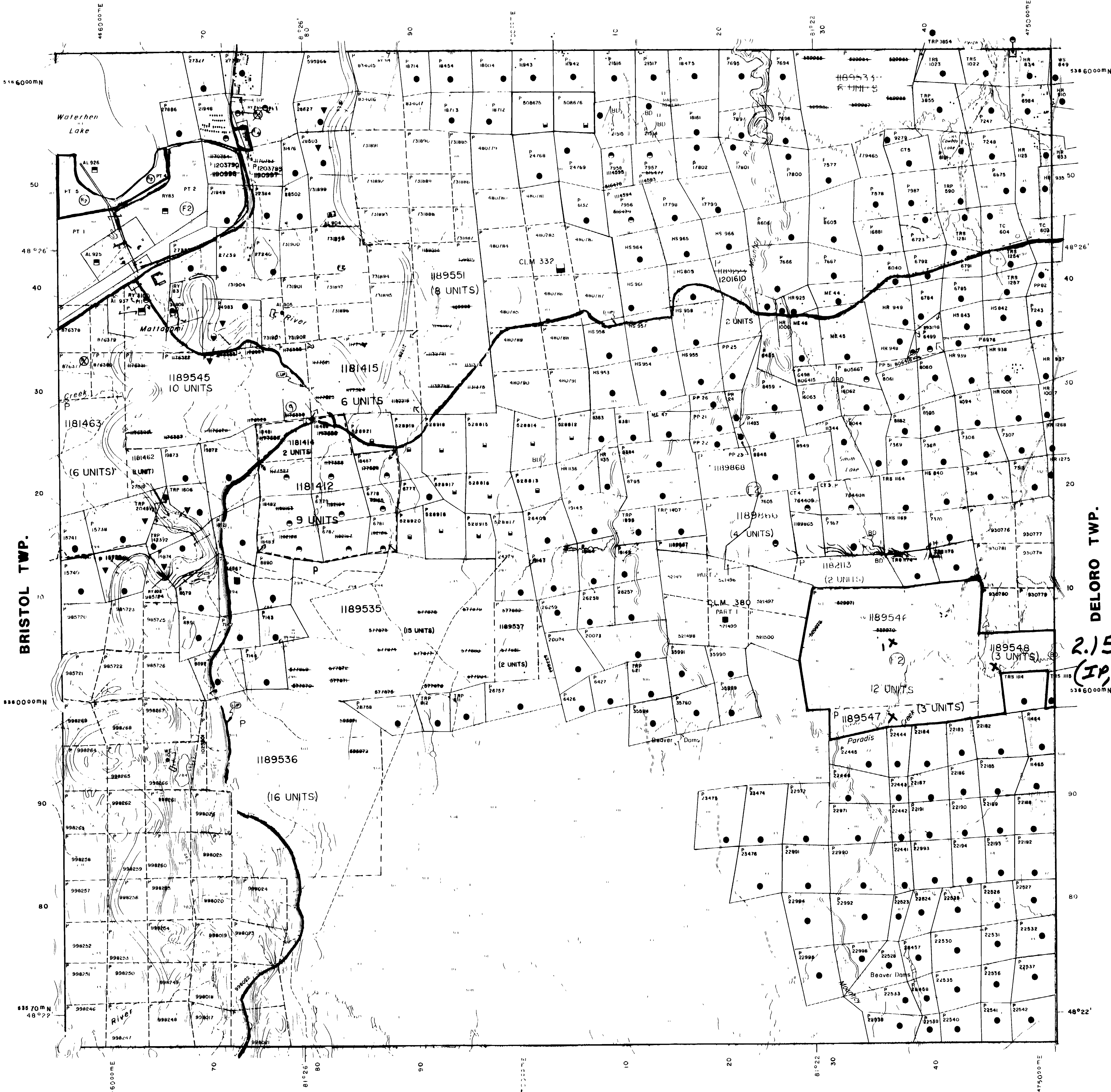
AREAS WITHDRAWN FROM DISPOSITION

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

Description Order No Date Disposition File

- ① BONA FIDE APPLICATION UNDER P.L.A. FOR SURFACE RIGHTS
- ② NW 50/19, 20/19 S.R.O.
- ③ BONA FIDE APPLICATION UNDER P.L.A. MAY 5, 1985
- ④ BONA FIDE APPLICATION UNDER P.L.A. JULY 10, 1985
- ⑤ APPLICATION PENDING UNDER PUBLIC LANDS ACT NOTICE RECEIVED 93-MAR-30 (SNOWMOBILE TRAIL)
- ⑥ ACQU-GATE PERMIT
- ⑦ THIS TWP IS SUBJECT TO FORESTRY ACTIVITIES IN 92-93 - FURTHER INFORMATION AVAILABLE ON FILE
- ⑧ THIS TWP IS SUBJECT TO FORESTRY ACTIVITY IN 1995/96 - FURTHER INFORMATION AVAILABLE ON FILE

MOUNTJOY TWP.



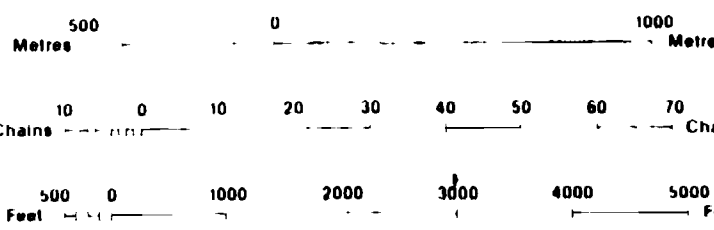
LEGEND

HIGHWAY AND ROUTE No	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC	
LOTS, MINING CLAIMS, PARCELS, ETC	
UNSURVEYED LINES	
LOI 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 SHORFLINE	
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 PATENTEE BY THE PUBLIC LANDS ACT R.S.O. 1970 CHAP. 380 SEC. 63 SUBSEC. 1



SCALE 1:20 000  
GRID ZONE 17

NOTES

2.15959  
(IP, MAG, ULF)

RECEIVED  
APR 26 1995  
MINING LANDS BRANCH

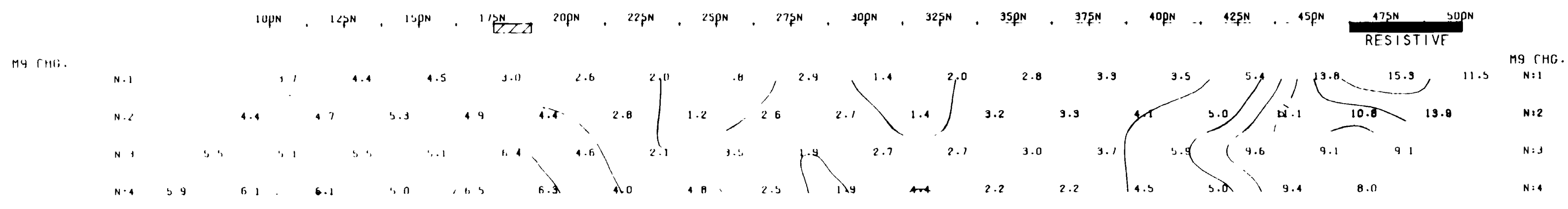
2.15959

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

Ontario Ministry of Natural Resources Land Management Branch

ORIGINAL COMPILATION JULY 1984  
ACTIVATED BY Y.S. 1997 BY D.C. REVISED  
G-3979

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.



LINE : 200 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

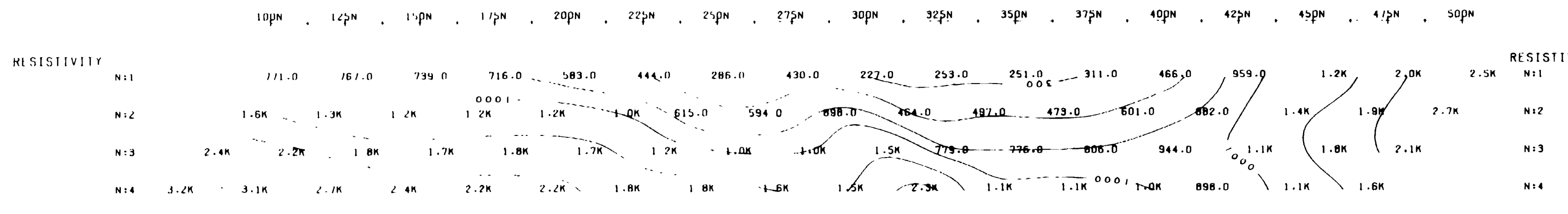
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON



LINE : 400 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

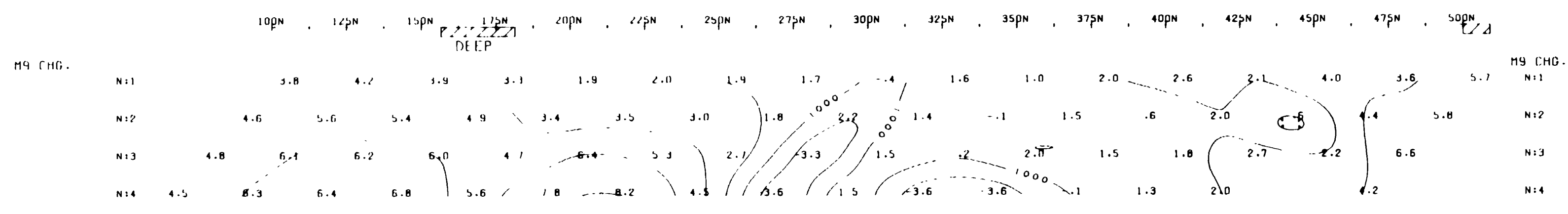
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON



LINE : 600 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

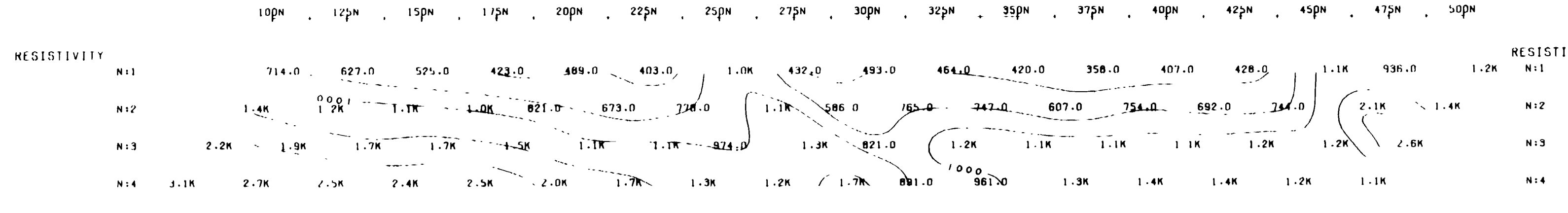
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON



LINE : 800 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

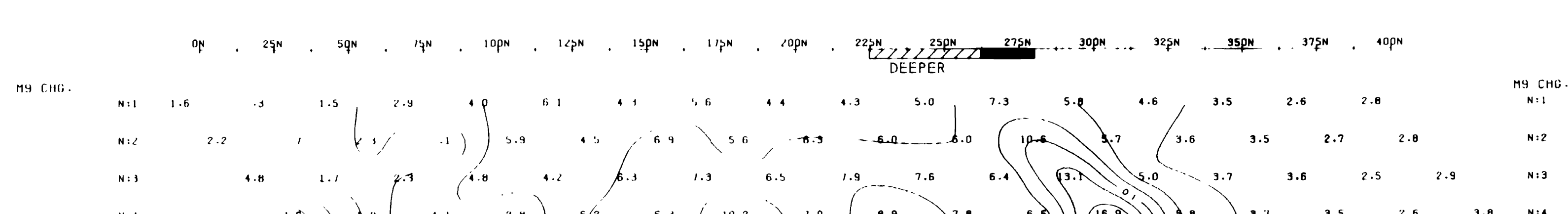
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON



LINE : 1000 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

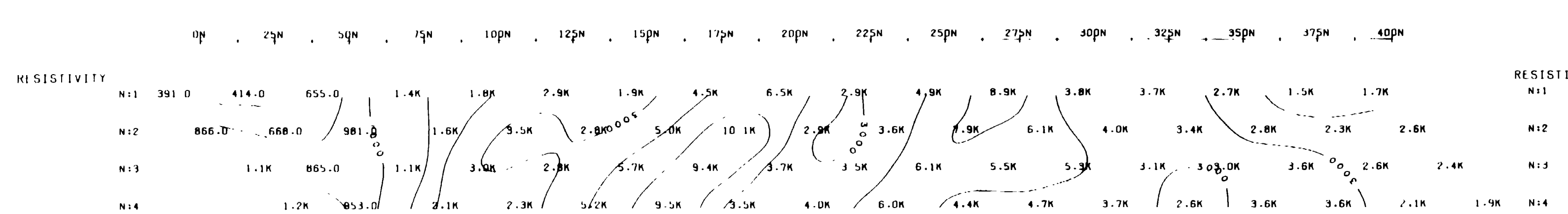
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON



LINE : 1200 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

RECEIVER SCIENTEX IPI-12  
TRANSMITTER SCIENTEX TPO-3 250 WATT  
MULTI TAPPING: Zone On Zone Off

STEVE ANDERSON OPAP 1994

OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1: 1250

STEVE ANDERSON

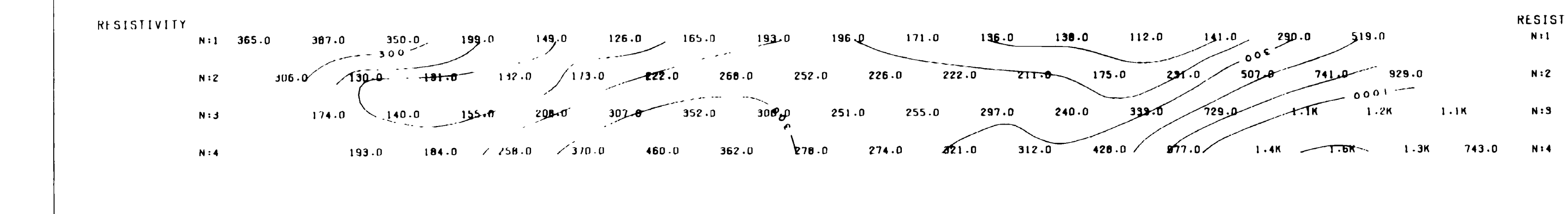
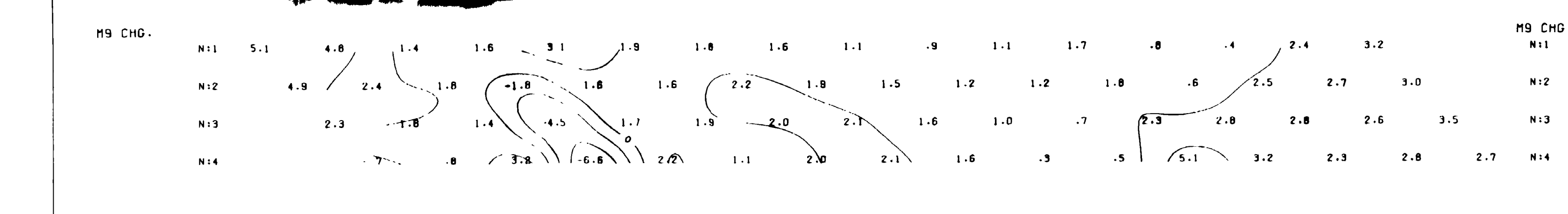
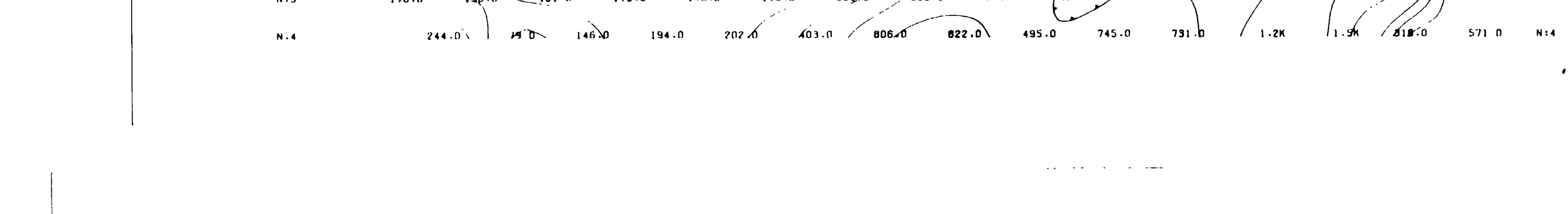
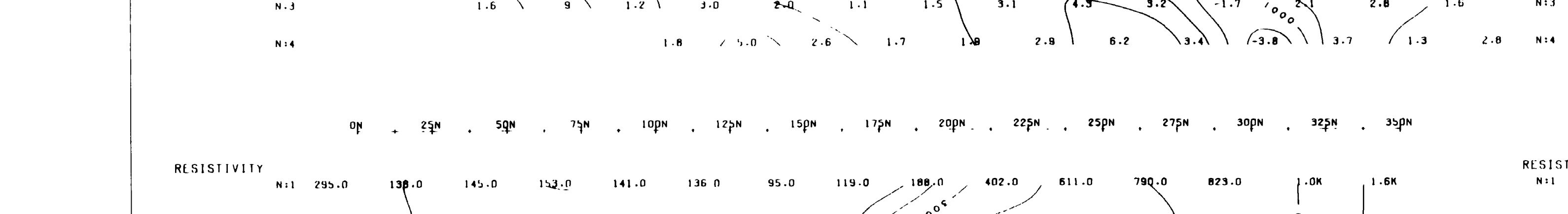
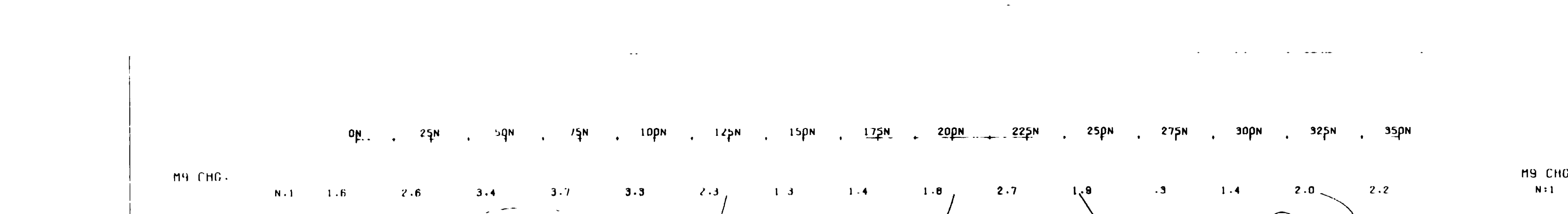
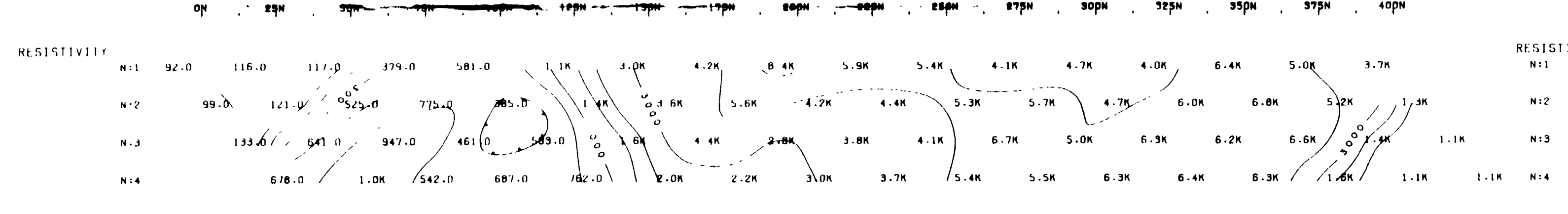
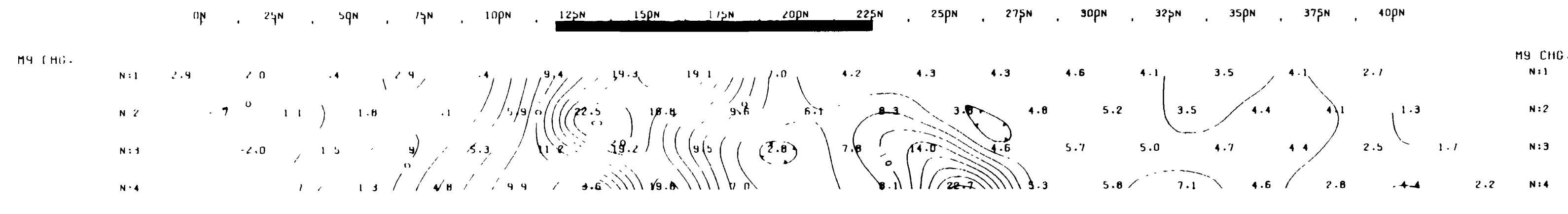
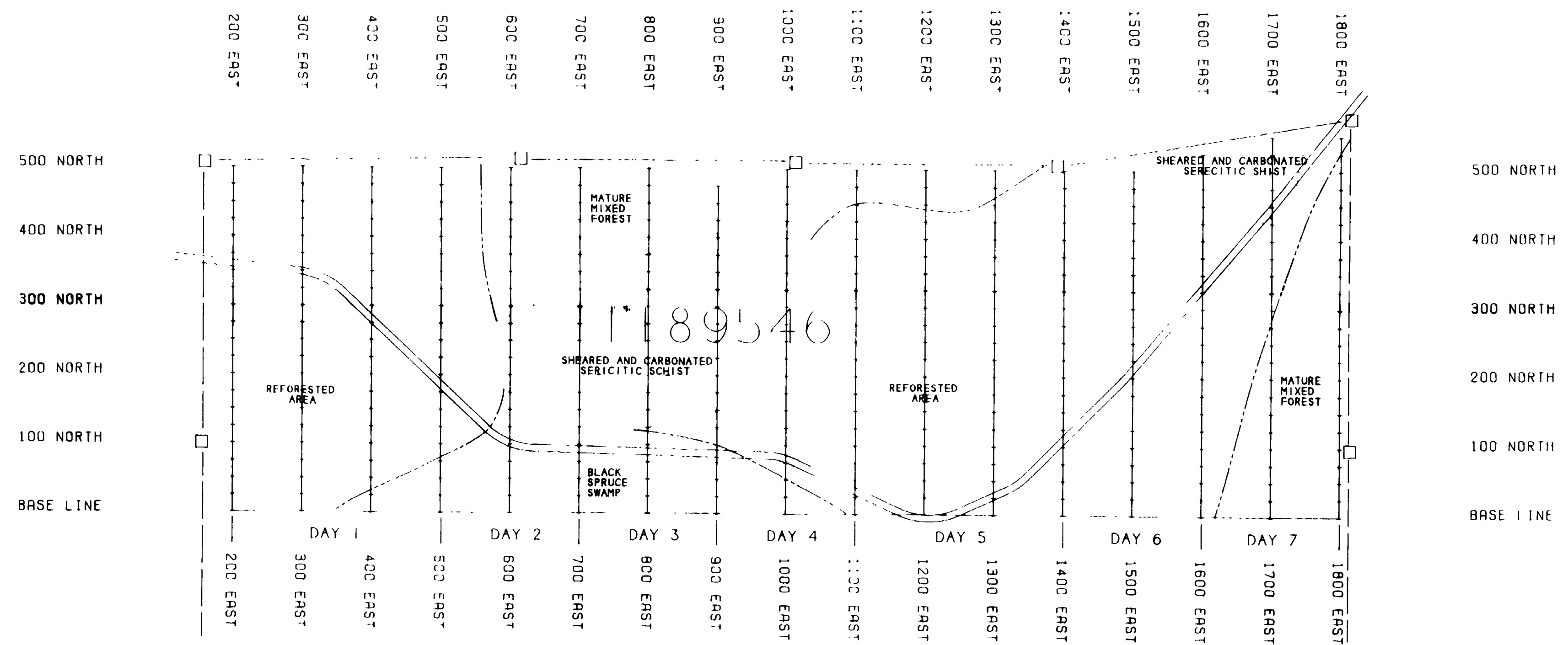


PLATE 1 OF 2

2.15959  
RECEIVED  
APR 26 1995  
MINING LANDS BRANCH

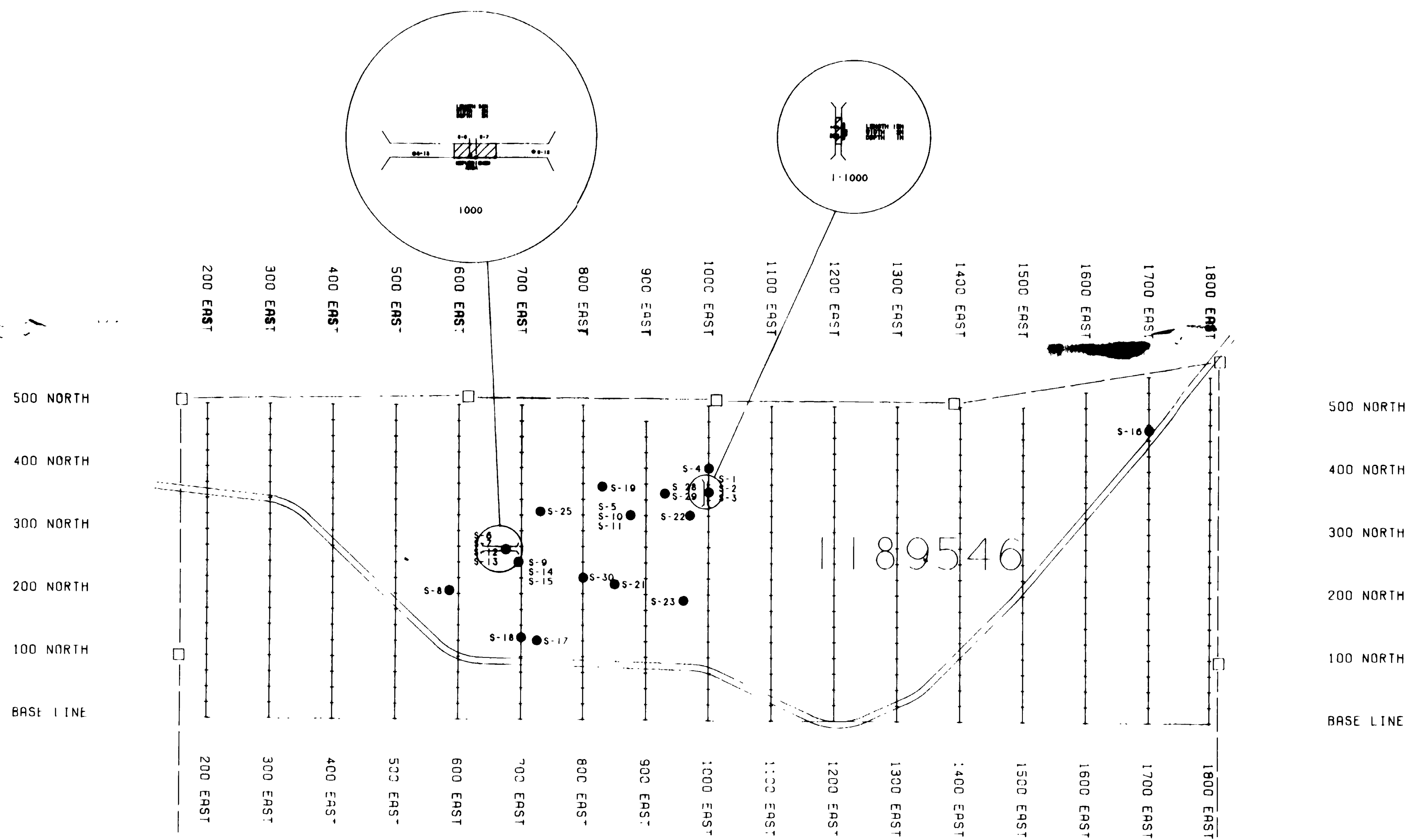


PROSPECTING SKETCH

- VEGETATION LIMITS
- OUTCROP LIMITS
- S-1 SAMPLE LOCATION AND NUMBER
- OLD TRENCH

TOPO LEGEND

- CLAIM POST
- ROAD
- CLAIM LINE



SAMPLE LOCATIONS

2.1595 9

RECEIVED  
APR 26 1995  
MINING LANDS BRANCH



Client STEVE ANDERSON - OPAP/94

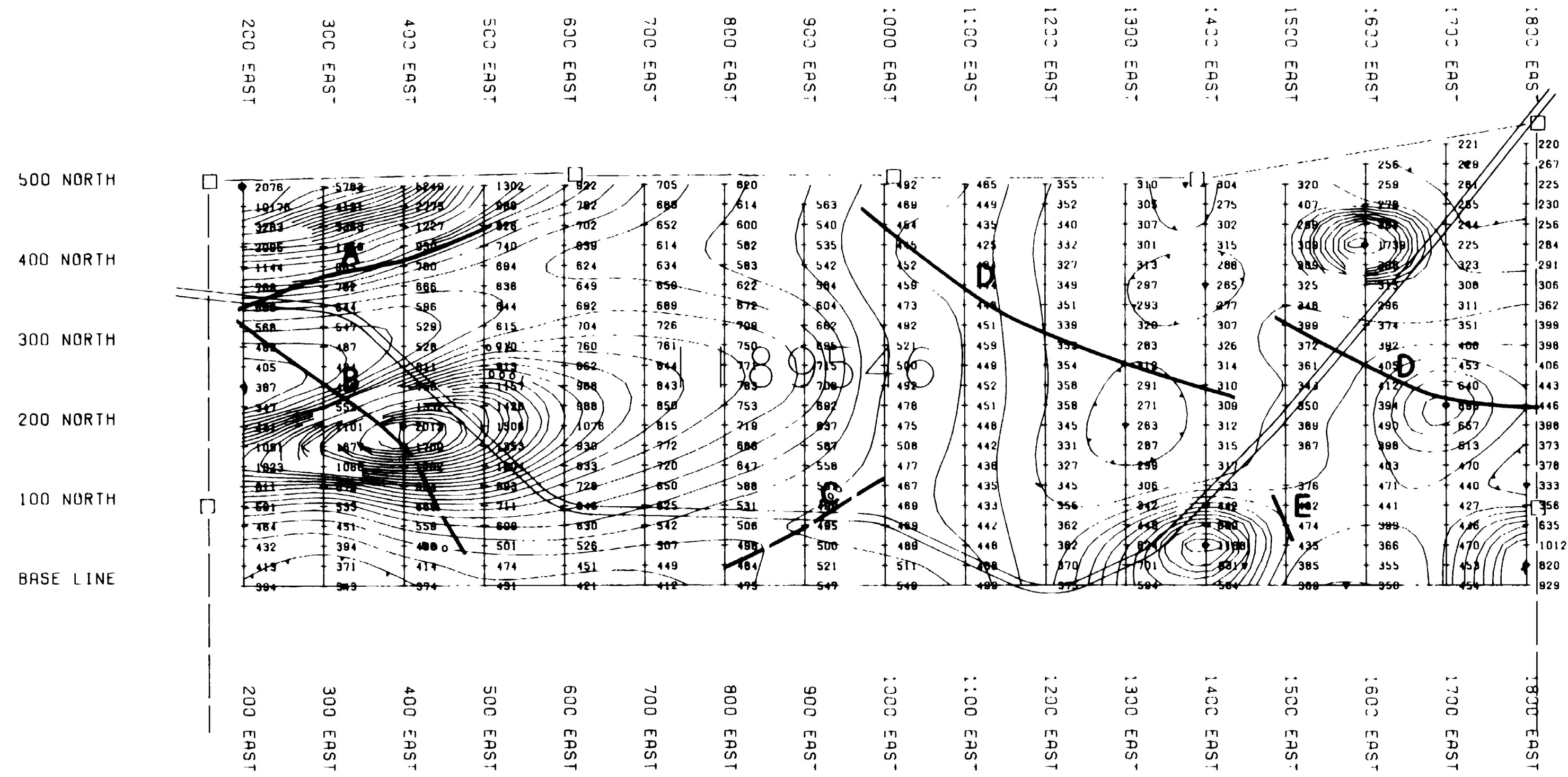
Property OGDEN TOWNSHIP PROPERTY

Title PROSPECTING SKETCH AND SAMPLE LOCATIONS

Processed SDA	Checked SDA
Date SEPT/94	Township OGDEN
Province ONT	N T S 42A/SW
Scale 1:5,000	Drawing PRO/SAM

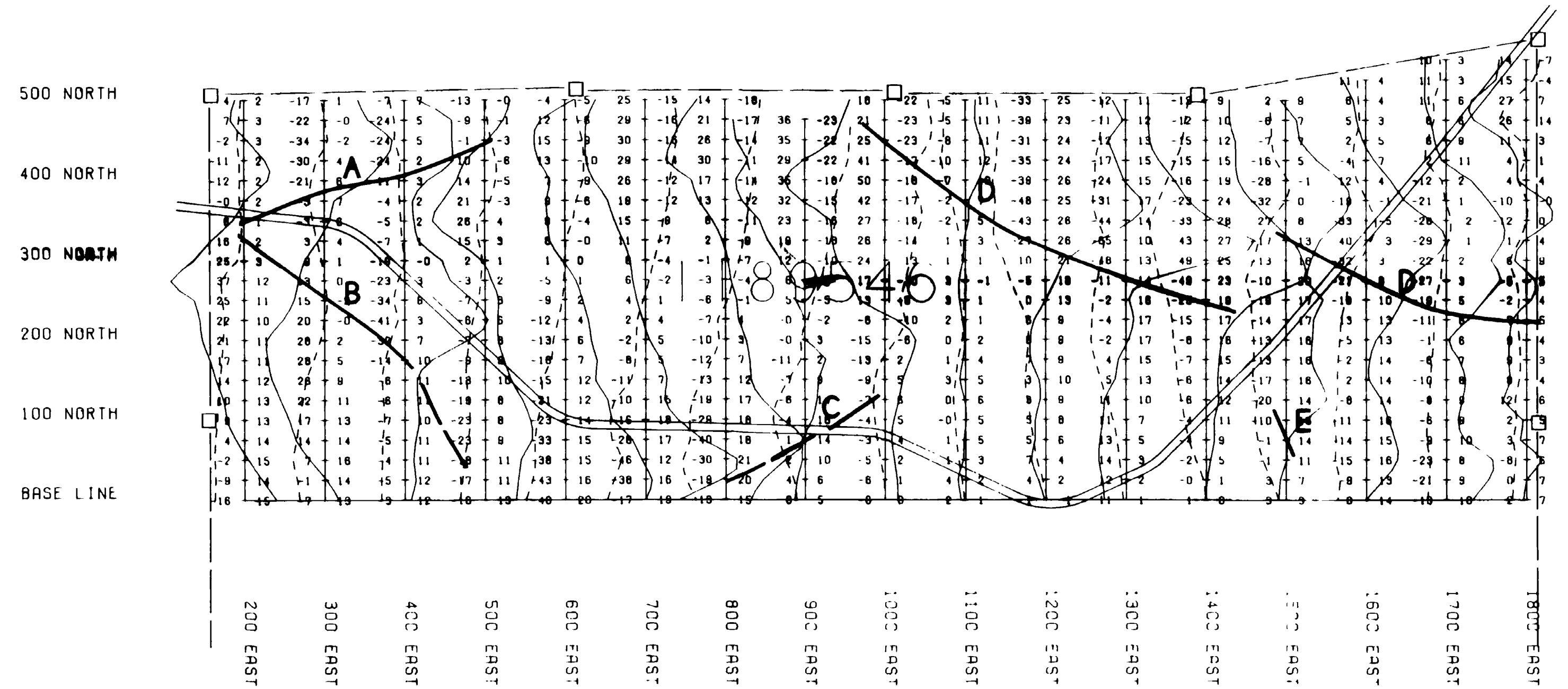






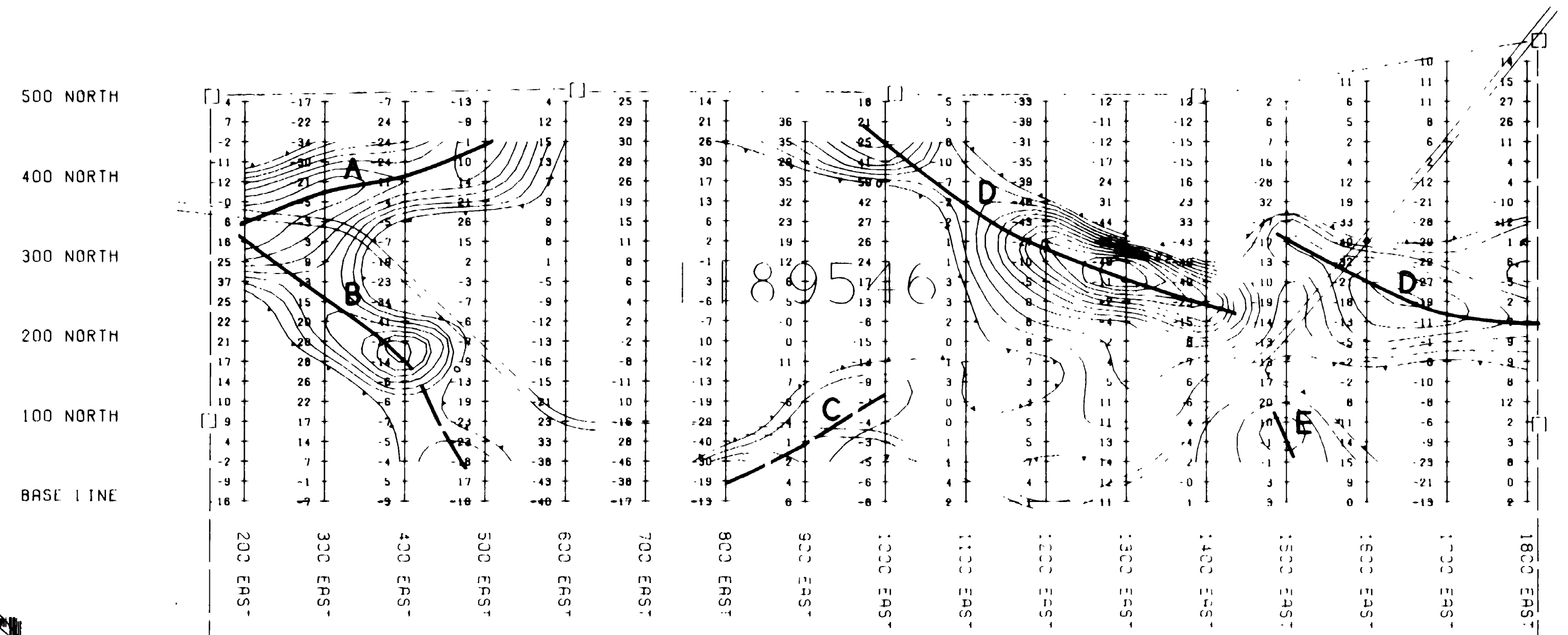
500 NORTH  
400 NORTH  
300 NORTH  
200 NORTH  
100 NORTH  
BASE LINE

CONTOURED MAGNETOMETER SURVEY  
POSTED DATA



500 NORTH  
400 NORTH  
300 NORTH  
200 NORTH  
100 NORTH  
BASE LINE

PROFILED VLF SURVEY  
POSTED IN PHASE AND QUADRATURE

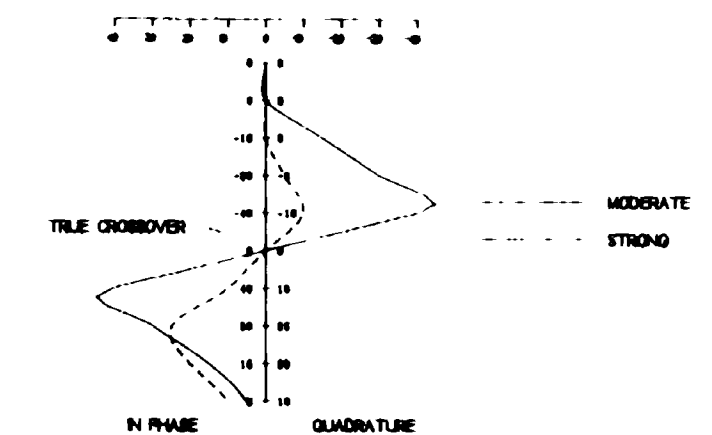


500 NORTH  
400 NORTH  
300 NORTH  
200 NORTH  
100 NORTH  
BASE LINE

CONTOURED FRASER FILTER  
POSTED IN PHASE

VLF-EM LEGEND

INSTRUMENT GEONICS EM-16  
PARAMETERS MEASURED IN-PHASE AND QUADRATURE  
READING INTERVAL 25 M  
FRASER FILTER CONTOUR INTERVAL 5 UNITS  
FILTER METHOD FRASER FILTER, FILTER DIRECTION UP  
STATION CUTLER MAINF 24 0 KHz  
PROFILE SCALE 1cm=20%



MAGNETOMETER LEGEND

INSTRUMENT FIA OMNI IV  
PARAMETERS MEASURED: EARTH'S TOTAL MAGNETIC FIELD  
READING INTERVAL 25M  
CONTOUR INTERVAL 50 nT  
DIURNAL CORRECTION RECORDING BASE STATION  
DATUM SUBTRACT: 58000 nT

2.1595 9

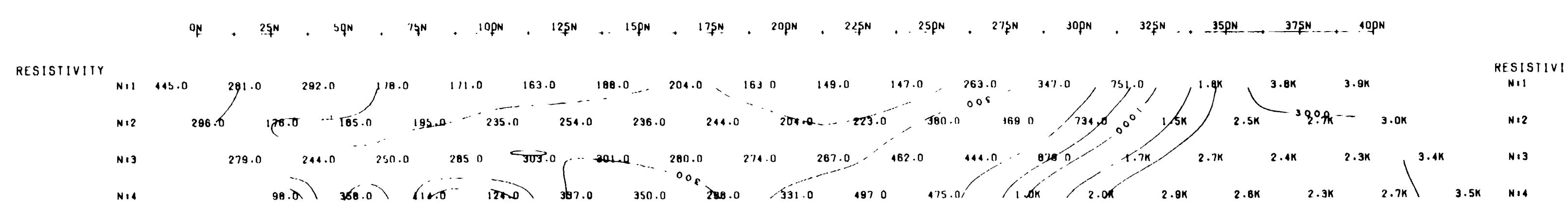
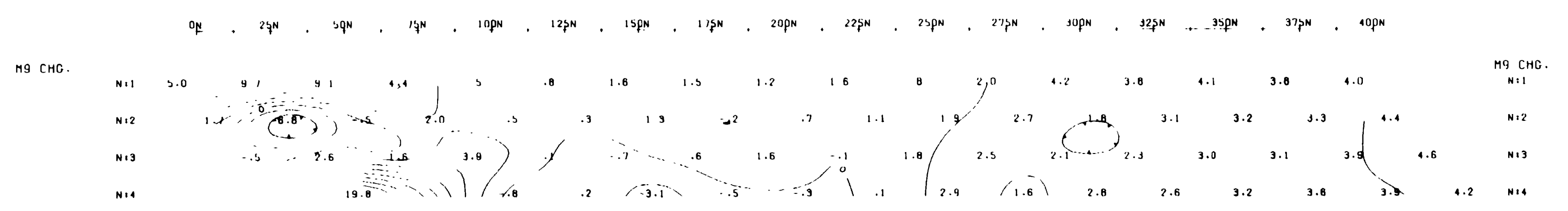
RECEIVED  
APR 26 1995  
MINING LANDS BRANCH

TOPO LEGEND

- CLAIM POST
- ROAD
- - - CLAIM LINE



Client	STEVE ANDERSON -- OPAP/94		
Property	OGDEN TOWNSHIP PROPERTY		
Title	MAGNETOMETER AND VLF-EM SURVEY		
Processed	SDA	Checked	SDA
Date	SEPT/94	Township	OGDEN
Province	ONT	N T S	42A/SW
Scale	1:5,000	Drawing	MAG/VLF



LINE : 1400 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

DEPTH POINT  
N = 1, 2, 3, 4, ...  
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPH-12  
TRANSMITTER: SCINTREX TRO-3 250 WATT  
RX-TX TIMING: 2secs ON 2secs OFF

STEVE ANDERSON OPAP 1994

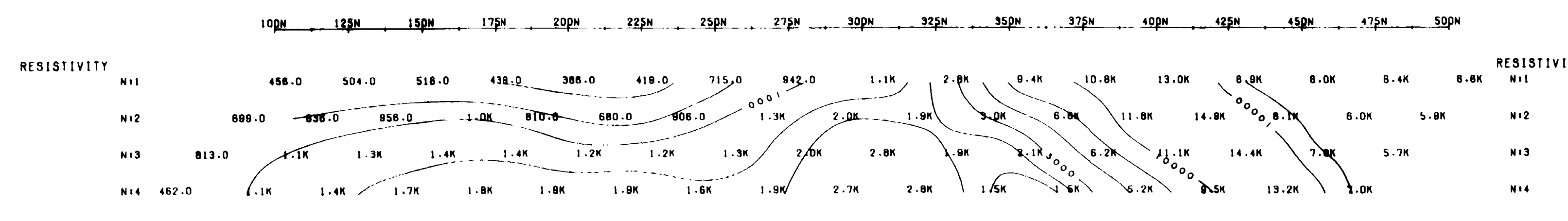
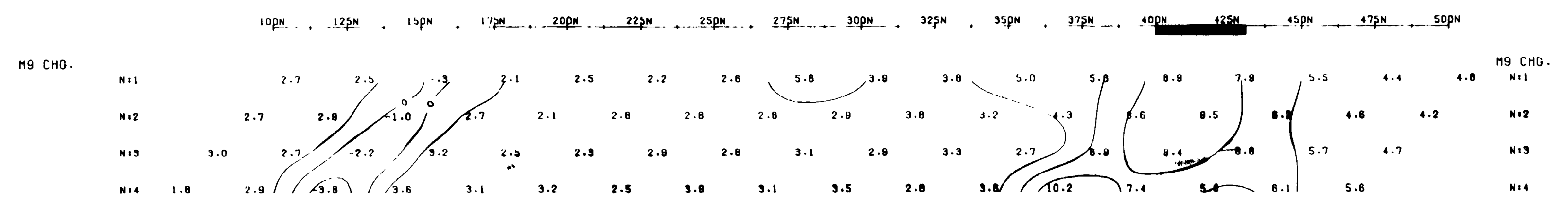
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1 : 1250

STEVE ANDERSON



LINE : 1600 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

DEPTH POINT  
N = 1, 2, 3, 4, ...  
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPH-12  
TRANSMITTER: SCINTREX TRO-3 250 WATT  
RX-TX TIMING: 2secs ON 2secs OFF

STEVE ANDERSON OPAP 1994

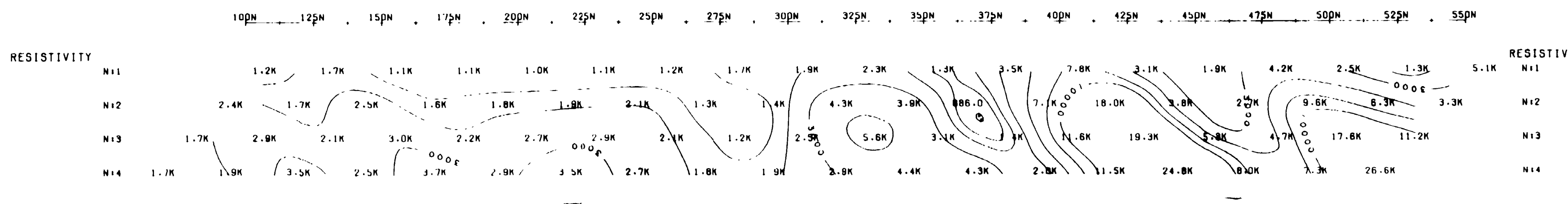
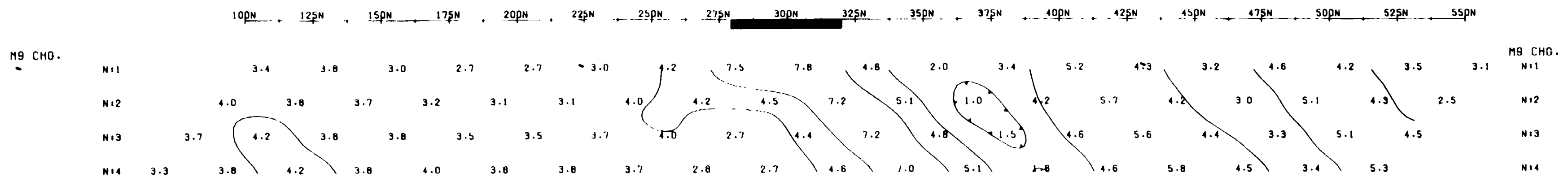
OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1 : 1250

STEVE ANDERSON



LINE : 1800 E

INDUCED POLARIZATION SURVEY

POLE-DIPOLE ARRAY

DEPTH POINT  
N = 1, 2, 3, 4, ...  
"A" SPACING = 25.0 METRES

RECEIVER: SCINTREX IPH-12  
TRANSMITTER: SCINTREX TRO-3 250 WATT  
RX-TX TIMING: 2secs ON 2secs OFF

STEVE ANDERSON OPAP 1994

OGDEN PROJECT

OGDEN TOWNSHIP

DATE : SEPT 1994 REF : SDR

SCALE = 1 : 1250

STEVE ANDERSON

PLATE 2 OF 2

