



52F055E0083 2.7280 ROWAN LAKE

010

**GEOPHYSICAL REPORT**

on the

**DEL+NORTE ROWAN LAKE PROPERTY, KENORA MINING DISTRICT**

for

**SILVER LAKE RESOURCES LTD**

**RECEIVED**

OCT 10 1984

**R.J. Meikle**

By: Rayan Exploration Ltd  
R.R. # 2 Hwy 11 North  
North Bay, Ontario  
April 23, 1984

**MINING LANDS SECTION**



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} See COORDINATE  
REPORT

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1. INTRODUCTION

A program of linecutting, magnetometer survey, VLF-EM survey and Induced Polarization survey was carried out between February 10 to April 15, 1984 for Silver Lake Resources Limited on the Del-Norte Rowan Lake property, Kenora Mining District.

The purpose of the surveys was to test the claim group for any sulphide-type responses, in particular the extension of the Monte-Cristo shear zone to the east of the property.

2. LOCATION AND ACCESS

The property is located approximately 25 air miles NE of Nestor Falls, Kenora Mining Division, Ontario. The property consists of a group of contiguous claims with Sullivan Bay running through the centre. Claim location, status etc is dealt with in the separate report by J. Goodwin.

Access to the property is via float, ski plane from Nestor Falls or by Winter road across Kukagi Cameron Lake if plowed.

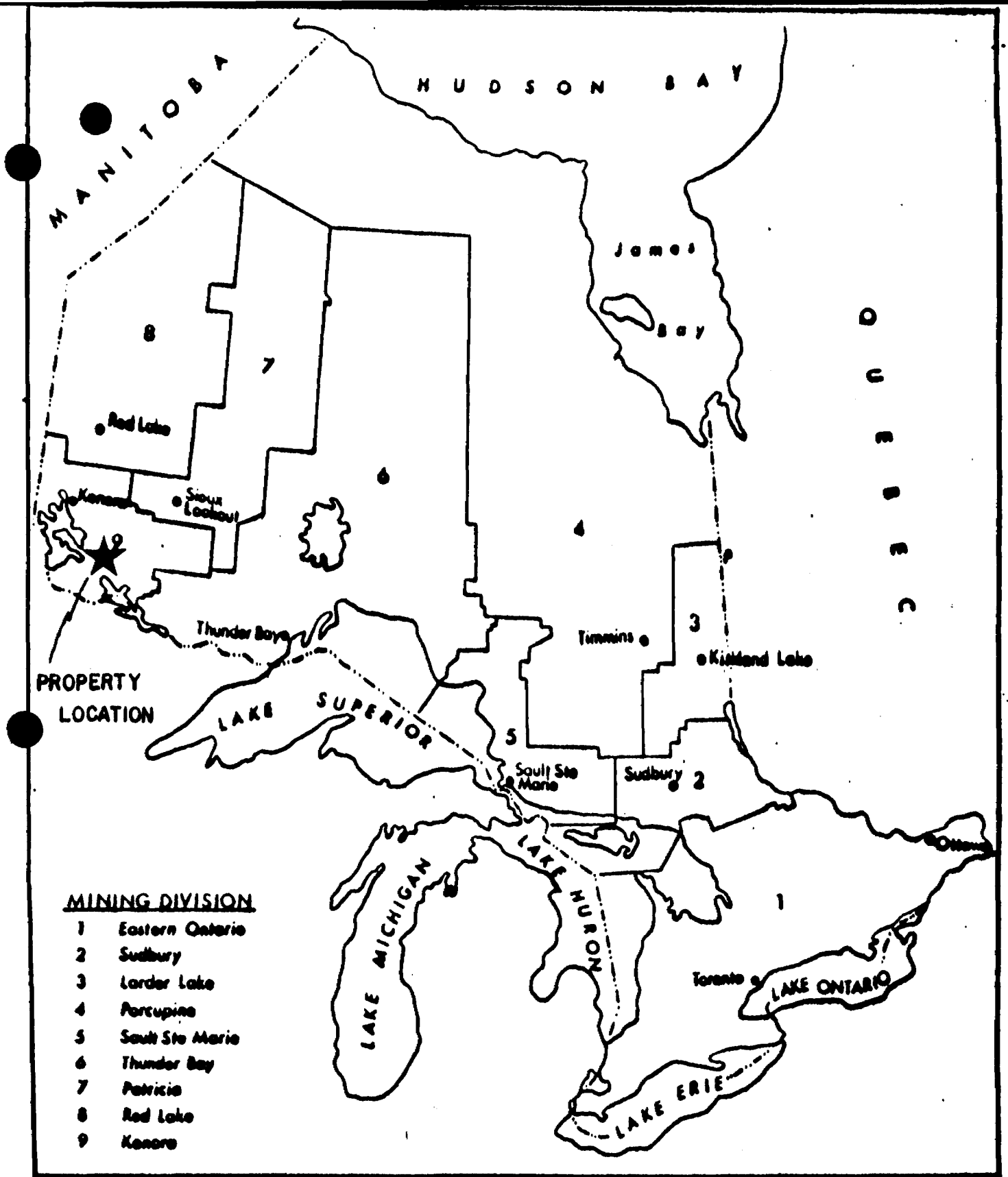
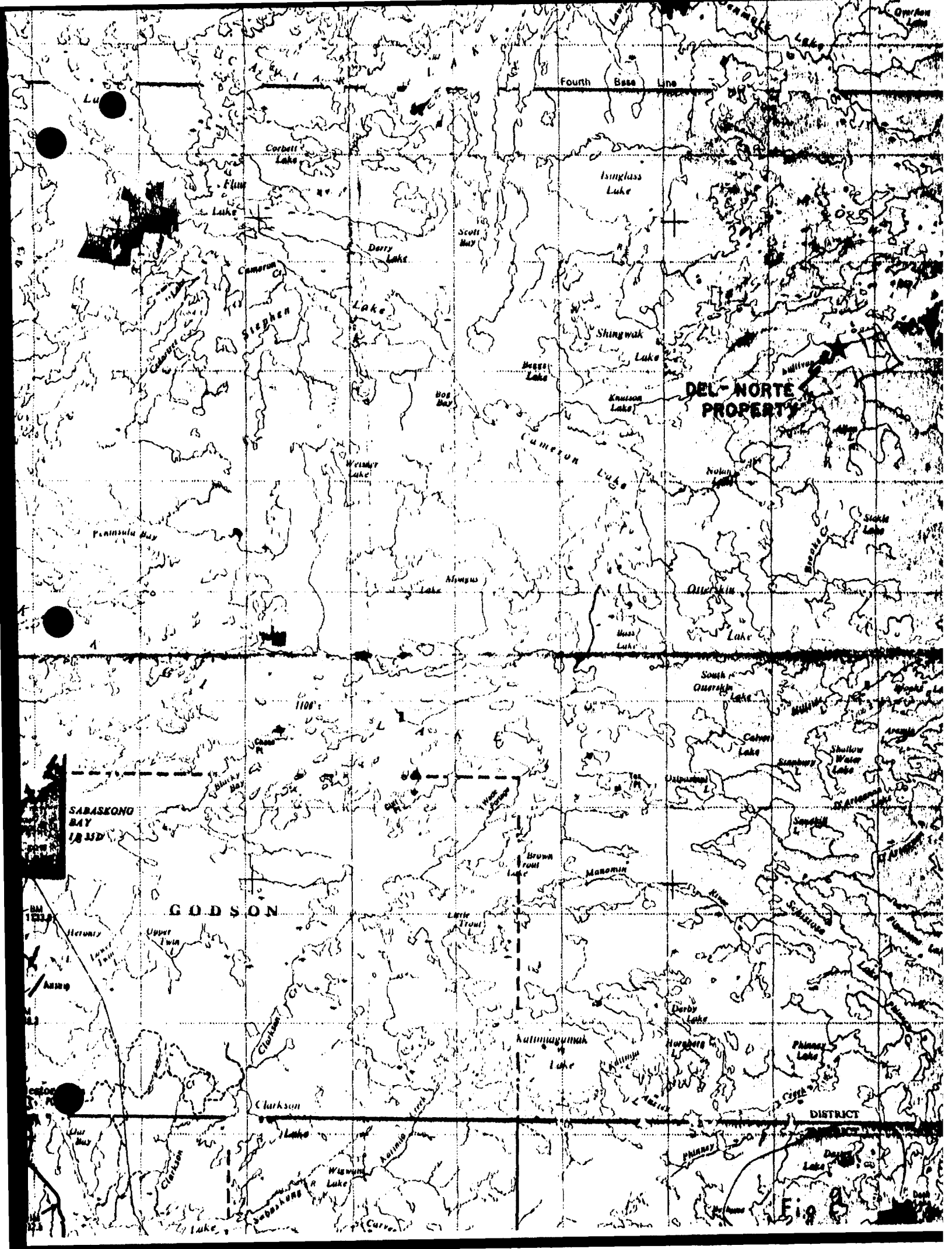


FIGURE NO: 1



Fourth Base Line

Corbett Lake

Isinglass Lake

Derry Lake

Cameron C.

STEPHEN Lake

Shingwak Lake

DEL-NORTE PROPERTY

Boggs Lake

Knutson Lake

Cameron Lake

Nolan Lake

Peninsula Bay

Wingus Lake

Otterskin Lake

South Ouarah Lake

SARASKONG BAY  
18 35D

GODSON

Brown Trout Lake

Manomin

Calver Lake

Sanbury

Shallow Water Lake

BM 1239

Heron's Lake

Upper Twin Lake

Little Trout Lake

Ostpuung

South

St. Anthony's Lake

Asny

Clarkson

Katimigumak Lake

Horsberg Lake

Phinney Lake

DISTRICT

catoc Pt

Our Bay

Clarkson Lake

Clarkson Lake

Wawung Lake

Arvin Lake

Phinney Lake

Derry Lake

Fig 8

3. PERSONNEL

The following personnel were involved with the project:

B.P. Belanger	North Bay, Ontario
R.J. Meikle	North Bay, Ontario
G. Dubroy	North Bay, Ontario
B. Marvin	Cobalt, Ontario
R. Lavoy	North Bay, Ontario
C. Davidson	North Bay, Ontario
K. Dickson	North Bay, Ontario



4. GEOLOGY

The property is underlain by mafic volcanics with numerous Gabbro intrusives and the southern edge of the property borders a large granite batholith to the south. (source ODM preliminary maps P 831, P 387, P 731, P 388). The geology is dealt with in more detail in a separate report by J. Goodwin.

5. SURVEY PARAMETERSLinecutting:

A total of 22.7 miles of grid line were cut with a line spacing of 200 ft and 400 ft with pickets every 100 ft. The majority of the grid was cut by A. Thibault while Rayan Explorations cut 2.3 miles on the south extensions.

Magnetometer Survey:

A total of 21.7 miles were surveyed with a Barringer GM-122 proton precession mag which measures the total magnetic field. The sensor was placed on a staff and an accuracy of  $\pm$  nano telsas was achieved. Dirunals and day to day corrections were made using the base station looping methods. Readings were taken every 50 ft.

VLF-EM Survey:

A total of 21 miles were surveyed using a Geonics EM-16 instrument. Both Dip angle (in-phase) and Quadrative (out of phase) measurements were taken. The dip angles were Fraser filtered. Annapolis Maryland (NSS) was used for a transmitting station with an operating frequency of 21.4 KHz.

### Induced Polarization Survey:

Approximately 14 miles were surveyed by Induced Polarization. The Induced Polarization Method is fast becoming one of the most useful techniques in the search for economic gold deposits in Canada. Basically, the method involves applying current to the ground and measuring different parameters of the resulting voltages. The method is capable of detecting minor amounts of metallic mineral (sulphides) which would not be massive enough or conductive enough to respond to Electromagnetic Methods. A prime example would be a silicious or more resistive environment with disseminated sulphides.

The following is a summation of the technique and equipment used:

- 1/ Mode - Time Domain
  - 950 millisecond delay time, 450 ms integration time
  - Rx-Tx timing, 2 sec. on, 2 sec. off
- 2/ Array - Pole-Dipole
- 3/ Electrode Spacing (a) - 100 ft, 200 ft
- 4/ Parameters Read - n=1, n=2, n=3, n=4, n=5
  - Chargeability (milliseconds)
  - Apparent Resistivity (ohm-meters)
- 5/ Instruments - Receiver - Crone N-IV "Newmont Type"
  - Transmitter - Phoenix IPT-1 2500 watts
  - Current Electrodes - Stainless Steel Rods
  - Potential Electrodes - Stainless Steel rods

The I.P. survey necessitated some experimentation with different arrays, spacings etc because of the highly conductive lake bottom sediments underlying 100 feet of water. Some of the lines were surveyed with 'a' = 100 ft and 'a' = 200 ft. A Pole-Dipole electrode array was used to get maximum current penetration. The electrodes were lowered to the bottom at each station which slowed production but should have given better results.

6. DATA PRESENTATIONMagnetometer Survey:

The magnetic data is plotted on Map No. 1 and contoured.

VLF:

The VLF results are plotted on 2 separate Maps. The Raw Dip angles and quadrature is plotted on Map No. 2. The Dip angles were filtered using Fraser's Method and contoured on Map No. 3.

Induced Polarization - Apparent Resistivity Survey:

Each line is plotted on a computer which presents the data in psuedo-section with the various 'N' rdgs profiled in stacked form above the section. The profiles are much easier to interpret than conventional pseudo-sections. N = 4 values are plotted on Map No. 4 & 5 and contoured to give a rough estimate of the trend of the I.P. anomalies. This form of presentation should not be used for detailed interpretation such as spotting diamond drill holes.

Geophysical Compilation Map:

Map No. 6 is a compilation of Mag, VLF and I.P. anomaly axis.

## 7. RESULTS

Originally, only an I.P. survey was scheduled for the property during the 1984 winter field season. It soon became apparent that a VLF EM and Magnetometer survey would be beneficial in interpreting the I.P. results. The results of the three geophysical surveys are fairly complex and will have to be correlated with a detailed mapping of the land portion of the claim group. The survey results are discussed below with some conclusions and recommendations following.

### Magnetometer Survey:

The Magnetometer survey outlined several EW trending magnetic features. Most of them are believed to be caused by gabbroic intrusions.

### VLF-EM Survey:

The VLF survey outlined several EW trending conductors. They are numbered on the compilation Map No. 6 and described below:

Anomaly A: This anomaly runs along the north edge of the property and is for the most part on land. It is quite strong in places. It has some spotty I.P. correlation.

Anomaly B: This anomaly runs across the grid south of A. It could be caused by conductive overburden.

Anomaly C, D, E: These conductors appear to be caused by shore - lake contact and are probably of low priority. There is a very weak resistivity low associated with anomaly 'D'.

Anomaly F: This is a very weak conductor running through the middle of Sullivan Bay. It has a very weak I.P. anomaly on L 24E with a Resistivity low.

Anomaly G : Appears to be a shoreline response.

Anomaly H, I: These conductors are on the south shore of Sullivan Bay. Both have I.P. correlation and could line up with sulphide zones reported to the west.

I.P. Results:

There are numerous I.P. anomalies. Some have Resistivity highs and some lows. They have been numbered on Map No. 6 and are discussed below.

# 1: This anomaly is on the NW corner of the grid. There is no coincident mag or VLF response. It is quite chargeable. It is similar to a response from disseminated sulphides.

# 2: This is a very weak response with some VLF correlation.

# 3: This anomaly is moderately strong with no apparent mag or VLF response. It has good line to line correlation.

# 4: This is a strong chargeable anomaly. The resistivity is moderately high, suggesting a disseminated sulphide source.

# 5: Is a two line anomaly which is very weak but has a weak VLF coincident response.

# 6: This is a wide moderate response with a high resistivity. It is coincident with a zone of higher magnetic susceptibility. The cause could be a gabbroic intrusive unit.

# 7: Is a broad weakly chargeable zone which lies on a resistivity contact probably due to the lake sediments to the south.

# 8: Is a very strong chargeability anomaly with a coincident VLF response and a minor resistivity low. This anomaly has a definite sulphide signature.

# 9: Is a moderate distinct chargeability anomaly with no VLF response.

There are numerous other short isolated I.P. responses which should be rated upon completion of a geological survey.



8. CONCLUSIONS & RECOMMENDATIONS

Interpretation of the I.P. results is fairly difficult due to the electrode array and the change from bedrock to the lake bottom to bedrock as one traverses the grid.

However, there are several anomalies which should be followed up. The land portion should be surveyed with a Dipole-Dipole array, 'a' = 50 ft to better resolve the anomalies. The following are a few suggested priorities, keeping in mind that they may change when compiled with a geological examination expected to be completed in summer 1984.

Priority # 1: Follow the westward extension of the Monte-Cristo shear zone. Line 28E was not surveyed by I.P. but there is a resistivity low on L 24E, 5S which correlates with a low on L 80W Monte-Cristo which was drilled. There is a magnetic high at approximately 12S or 700' south of the low. This could be the Gabbro unit which has served as a footwall marker on the Monte-Cristo ground.

Priority # 2: I.P. anomaly # 8 should be looked at and trenched and or drilled.

Priority # 3: I.P. anomaly # 1.

Priority # 4: I.P. anomaly # 4

CERTIFICATE

I, Raymond Meikle of North Bay, Ontario hereby certify that:

- 1) I hold a 3 yr Technologist Diploma from the Haileybury School of Mines, Haileybury, Ontario.
- 2) 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 February - March 1984 which was carried out under my overall supervision.
- 3) I hold no interest, directly or indirectly in this property other than professional fees, nor do I expect to receive any interest in the property or in Silver Lake, Del-Norte or any of their subsidiary companies.

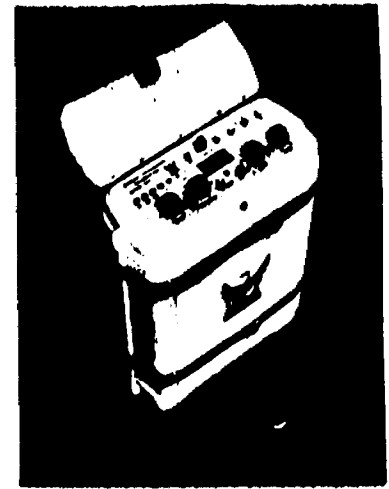
North Bay, Ontario, Canada

R.J. Meikle

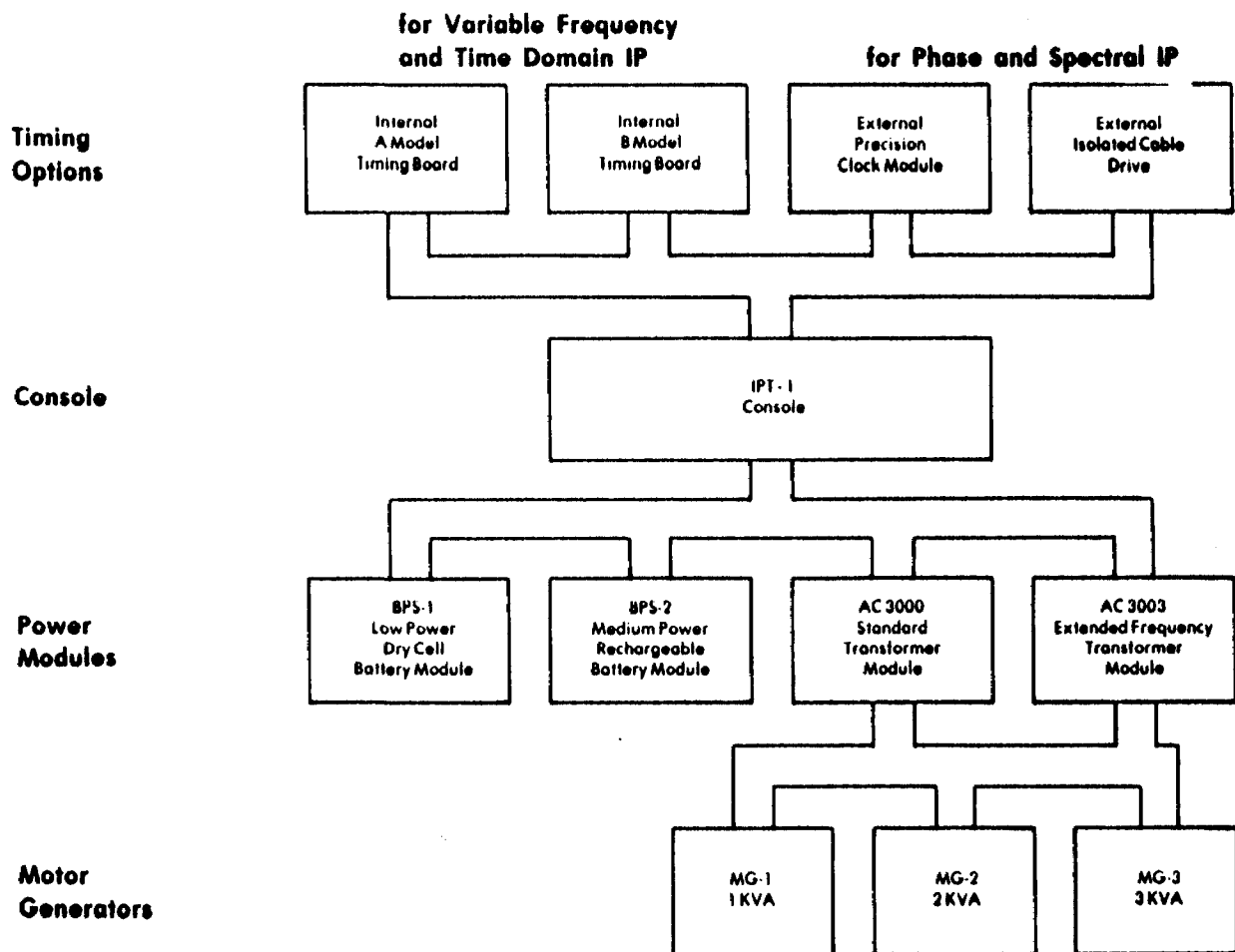
# IPT-1

## Variable Frequency, Time Domain and Phase IP Transmitter

- **Reliable:** Backed by twenty years experience in the design and worldwide operation of induced polarization and resistivity equipment
- **Versatile:** Can be used for resistivity, variable frequency IP, time domain IP or phase angle IP measurements
- **Stable:** Excellent current regulation
- **Lightweight, portable**
- **Wide selection of power sources**
- **Low cost**



### Transmitter Configurations



## PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

Head Office:

200 Yorkland Blvd., Willowdale, Ontario, Canada M2J 1R5  
Tel.: (416) 493-8350 Telex: 06-986856 Cable: PHEXCO TORONTO

Vancouver Office:

214 - 744 West Hastings Street, Vancouver, B.C., Canada V6C 1A8  
Tel.: (604) 669-1070

Denver Office:

4891 Independence St., Suite 270, Wheat Ridge, Colorado, 80033, U.S.A.  
Tel.: (303) 426-9393 Telex: 450690

# Timing Options

## INTERNAL TIMING BOARD

There are three available internal timing boards. Both have the same internally mounted crystal oscillator with a stability of 50 PPM over the temperature range -40°C to +60°C.

	STANDARD FREQUENCY SERIES	OPTIONAL FREQUENCY SERIES (change link on board)
<b>Model A :</b>	Frequency domain mode ±DC, .062, .125, .25, 1, 2 and 4 Hz. Time domain mode 2 sec +, 2 sec off, 2 sec -, 2 sec off. Simultaneous transmission mode .25 and 4.0 Hz standard, other pairs available.	Frequency domain mode ±DC, .078, .156, .313, 1.25, 2.5, and 5.0 Hz. Time domain mode 1.6 sec +, 1.6 sec off, 1.6 sec -, 1.6 sec off. Simultaneous transmission mode .313 and 5.0 Hz standard, other pairs available.
<b>Model B :</b>	The main difference between this timing board and the model A board is that the duty cycle is variable. Frequency domain operation is obtained by setting the duty cycle to 100% and selecting any of nine binary frequencies from 1/64 Hz to 4 Hz. Various time domain waveforms may be obtained by choosing any of the nine frequencies and a duty cycle of 25%, 50% or 75%. The standard 2 sec +, 2 sec off, 2 sec -, 2 sec off time domain waveform is chosen by selecting a duty cycle of 50% and a frequency of .125 Hz.	
<b>Model C :</b>	Time domain: 1, 2, 4, 8 second cycle. Frequency domain: 0.1, 0.3, 1.0, 3.0 Hz.	

## EXTERNAL HIGH PRECISION CRYSTAL CLOCKS

The IPT-1 may be driven by external high precision crystal clock modules such as the CL-1 and transmitter driver or CL-2 and transmitter driver. These clock modules were designed for use as a time reference between the IPT-1 or IPT-2 transmitters and the Phoenix IPV-2 phase IP receiver. The aging rate of the CL-1 clock module is  $5 \times 10^{-10}$ /day (0.11 mrad/hr at 1 Hz) and the stability of the CL-2 clock module is  $10^{-7}$ /day (2.26 mrad/hr at 1 Hz). These clock modules weigh 7.5 kg., however space is provided for as much as 5 kg of additional internal batteries for operating the CL-1 oven heated clocks all day at -40°C. Clock modules produced by other manufacturers of induced polarization receivers are also compatible with the IPT-1.

## EXTERNAL ISOLATED CABLE DRIVE

The isolated cable drive option allows the IPT-1 to be driven by the timing circuitry of the IPV-3 spectral IP receiver. The maximum distance allowed between transmitter and receiver is 500m. For efficient spectral IP field surveying, the distance between the transmitter and receiver is always maintained at the electrode interval. Thus the maximum convenient electrode interval, using the isolated cable drive option, is 500m. The IPV-3 measures the current six voltage dipoles ( $n=1,6$ ) simultaneously.

## Console

<b>Ammeter Ranges</b>	:	30 mA, 100 mA, 300 mA, 1A, 3A and 10A full scale.
<b>Meter Display</b>	:	A meter function switch selects the display of current level, regulation status, input frequency, output voltage, control voltage and line voltage. An optional digital display presents all of the above, plus external circuit resistance.
<b>Current Regulation</b>	:	The change in output current is less than 0.2% for a 10% change in input voltage or electrode impedance.
<b>Protection</b>	:	The current is turned off automatically if it exceeds 150% full scale or if it is less than 5% full scale.



# Internal Power Modules

## BPS-1 DRY CELL BATTERY POWER MODULE

- Output Voltage** : 90V, 180V and 360V.
- Output Current** : 1 mA to 1A maximum.
- Output Power** : Recommended maximum output power is 30 watts. Absolute maximum output power is 100 watts.
- Power Supply** : 8x45V dry cell batteries (Eveready 482, Mallory 202 or equivalent). Normal field operation, with low output power, results in an average battery life expectancy of one month. Operation with the absolute maximum output power results in much shorter battery life.
- Control Supply** : 4 x 6V lantern batteries (Eveready 409, Mallory 908 or equivalent) connected in series/parallel are used to provide the 40 to 70 mA at 12V required for the control circuitry. Average battery life expectancy is six months.
- Operating Temperature** : 0°C to +60°C.

## BPS-2 RECHARGEABLE BATTERY POWER MODULE

- Output Voltage** : 50V, 106V, 212V, 425V, and 850V.
- Output Current** : 3 mA to 3A.
- Output Power** : Maximum output power is 300 watts. Above this output power a protective cut-out is engaged to prevent battery and circuit damage.
- Batteries** : 4 x 12V rechargeable gell cell batteries connected in series/parallel have a capacity of 9 A-hr. External batteries (such as car or motorcycle batteries) may also be used. A special cord and plug are provided for this mode of operation. An adaptor cord connects the 12V batteries in parallel with the 12V charging unit.
- Operating Temperature** : 40°C to +60°C. Below 0°C the capacity of the batteries is significantly reduced (by 70% at -40°C).

## AC 3000 TRANSFORMER POWER MODULE

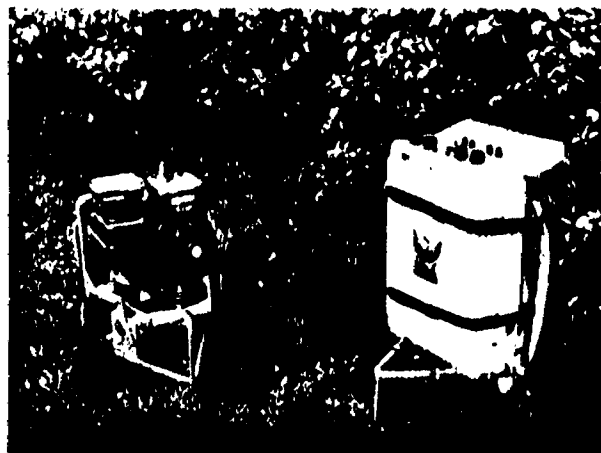
- Output Voltage** : 75V, 150V, 300V, 600V and 1200V.
- Output Current** : 3 mA to 10A.
- Output Power** : Maximum continuous output power is 3KW with MG-3 motor generator, 2KW with MG-2 motor generator and 1KW with MG-1 motor generator.
- Input Power** : Three phase, 400 Hz (350 to 1000 Hz), 60V (50V to 80V) is standard.  
Three phase, 400 Hz (350 to 1000 Hz), 120V (100V to 160V) is optional.
- Current Regulation** : Achieved by feedback to the alternator of the motor generator unit.
- Operating Temperature** : -40°C to +60°C.
- Thermal Protection** : Thermostat turns off at 65°C and turns back on at 55°C internal temperature.

## AC 3003 TRANSFORMER POWER MODULE

- Same as AC 3000 except for:
- Output Voltage** : 44V, 87V, 175V, 350V and 700V.
- Frequency Range** : DC to 3000 Hz under external drive (all other power modules have a maximum frequency of 5 Hz).
- (Note: AC 3003 is not intended for extended time domain operation)

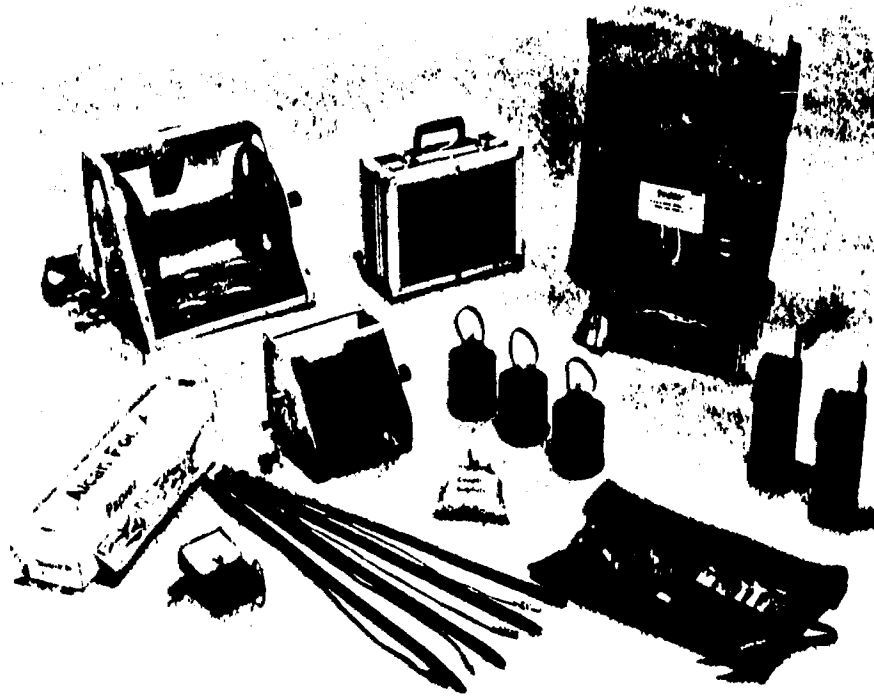
## General

- Dimensions** : 20 x 40 x 55 cm (9 x 16 x 22 in).
- Weight** : 13 kg (29 lb) with BPS-1.  
13 kg (29 lb) with BPS-2.  
17 kg (37 lb) with AC-3000.  
18 kg (40 lb) with AC-3003.
- Standard Accessories** : Pack frame, manual, At least one of the four possible power modules is required. The transformer power modules in turn require one of the three external 1KVA, 2KVA, 3KVA, motor generators and a connecting cable.



## Survey Accessories

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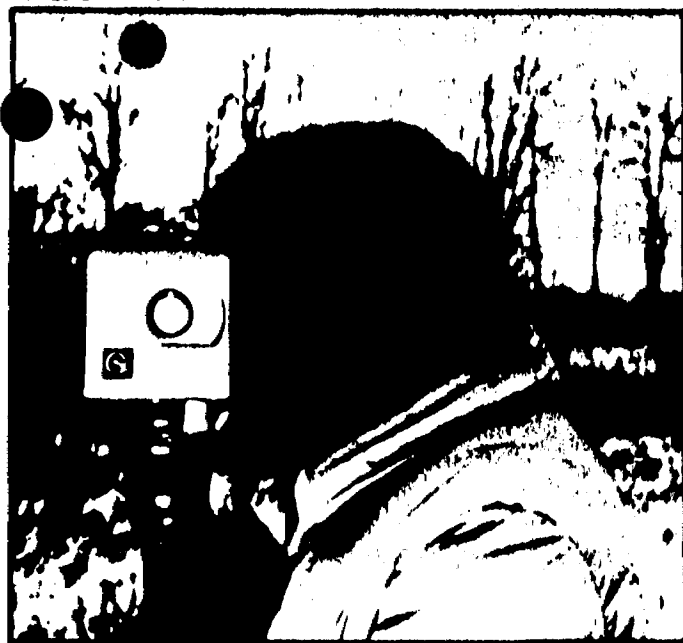


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<b>Accessory Packsack</b>	:	Trapper Nelson #3 packboard with packsack.
<b>Receiver Transport Case</b>	:	Aluminum, foam lined, 13 x 32 x 44 cm.
<b>Stake Electrodes</b>	:	Mild steel rods with hard tapered end, 1.6 cm diameter, 75 cm or 120 cm long.
<b>Foil Electrode Material</b>	:	Heavy duty industrial aluminum foil, 0.0025 cm x 46 cm x 137 m.
<b>Field Wire</b>	:	Black, low friction, polyethylene plus nylon jacket. Four copper plus three steel strands. Tensile strength 40 kg. Total resistance 76 ohm/km. External diameter 0.213 cm.
<b>Geo Reel</b>	:	Two speed aluminum winder with packstraps, 35 x 40 x 50 cm.
<b>Geo Reel Spool</b>	:	Capacity for 3000m of field wire.
<b>Speedwinder</b>	:	Aluminum winder, 20 x 25 x 30 cm.
<b>Speedwinder Spool</b>	:	Capacity for 600m of field wire.
<b>Porous Pots</b>	:	Plastic with porous asbestos bottom. Coiled copper wire makes contact with saturated copper sulfate solution.
<b>Copper Sulfate</b>	:	450 g.
<b>Multimeter</b>	:	Resistance, voltage and current.
<b>Tool Kit</b>	:	Soldering iron, wrenches, screwdrivers.
<b>Radios</b>	:	Transmitter-receivers.

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## 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 and 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>BATTERY SUPPLY</b>	6 disposable 'AA' cells
<b>DIMENSIONS</b>	42 x 14 x 8 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)

**BARRINGER RESEARCH**

## **MINI PROTON MAGNETOMETER Model GM-122**



### **DESCRIPTION**

The Barringer GM-122 mini proton magnetometer provides an absolute measurement of the earth's total magnetic field intensity. The rugged design is combined with lightweight, small size and simple operation.

### **FEATURES**

- High Sensitivity  $\pm 1$  gamma
- Toroidal Sensor No alignment or calibration required
- Automatic Lock-out Last three digits blanked if gradient exceeds 600 gammas per meter
- Rugged Design Withstands extreme shock. Operates at  $-40^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ , 0 to 100% relative humidity
- Lightweight Weight of total system 5.1 kg.
- Easy Operation Single button initiates digital display

### **APPLICATIONS**

- Geo-magnetic surveying
- Mineral and petroleum exploration
- Search for buried objects
- Archaeological prospecting

### **SYSTEM COMPONENTS**

- Lightweight console and harness
- Toroidal sensor and cable
- Five foot extendable aluminum shaft
- Impact resistant shipping case

**ADVANCED TECHNIQUES AND INSTRUMENTATION FOR THE EARTH SCIENCES**



**SPECIFICATIONS:**

**Sensitivity/Resolution** 1 gamma  
**Absolute Accuracy**  $\pm 10$  ppm — better than  $\pm 1$  gamma  
**Range** 20,000 — 100,000 gammas in 12 ranges with 100% overlap  
**Gradient Tolerance** 600 gammas/meter  
**Operating Range**  $-40^{\circ}\text{F}$  to  $+ 131^{\circ}\text{F}$   
 $-40^{\circ}\text{C}$  to  $+ 55^{\circ}\text{C}$   
0 to 100% relative humidity (splash proof)  
**Size** console 3.5" x 7" x 11"  
(9 cm x 18 cm x 28 cm)  
sensor 4 1/4" diameter (12 cm)  
4 1/4" height (11 cm)  
**Weight** console 5.5 lbs (2.4 kg)  
sensor 4.0 lbs (1.8 kg)  
staff 2.0 lbs (0.9 kg)  
**Output** 5 digit incandescent filament display with a 3 or 6 second sampling rate  
**Sensor** toroidal, omni-directional and noise cancelling

**Logic Function**

early low battery indicator in the form of a L.E.D. notifies the operator when 250 readings remain in the power supply  
lock indicator — last 3 digits of the display are blanked off when the gradient is exceeded or when the instrument is operated incorrectly  
digital readout test — all display readouts light up to permit visual inspection

**Construction**

high impact low temperature plastic: polyurethane and lexan case, shock and vibration proof mountings

**Power Supply**

12 alkaline "D" cells provide up to 10,000 readings

**Option Accessories**

external battery belt  
staff extender  
sensor backpack for one-hand operation



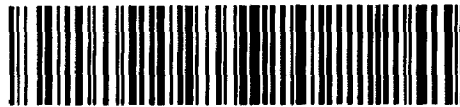
Barringer Research Limited  
304 Carlingview Dr.  
Metropolitan Toronto  
Rexdale, Ontario, Canada M9W 5G2  
Phone: 416-675-3870  
Telex: 06-989183

Representative:



# GOODWIN MINERAL EXPLORATIONS

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52F05SE0083 2.7280 ROWAN LAKE

020

GEOPHYSICAL REPORT  
ON THE  
ROWAN LAKE PROPERTY  
FOR  
SILVER LAKE RESOURCES

**RECEIVED**

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# GOODWIN MINERAL EXPLORATIONS

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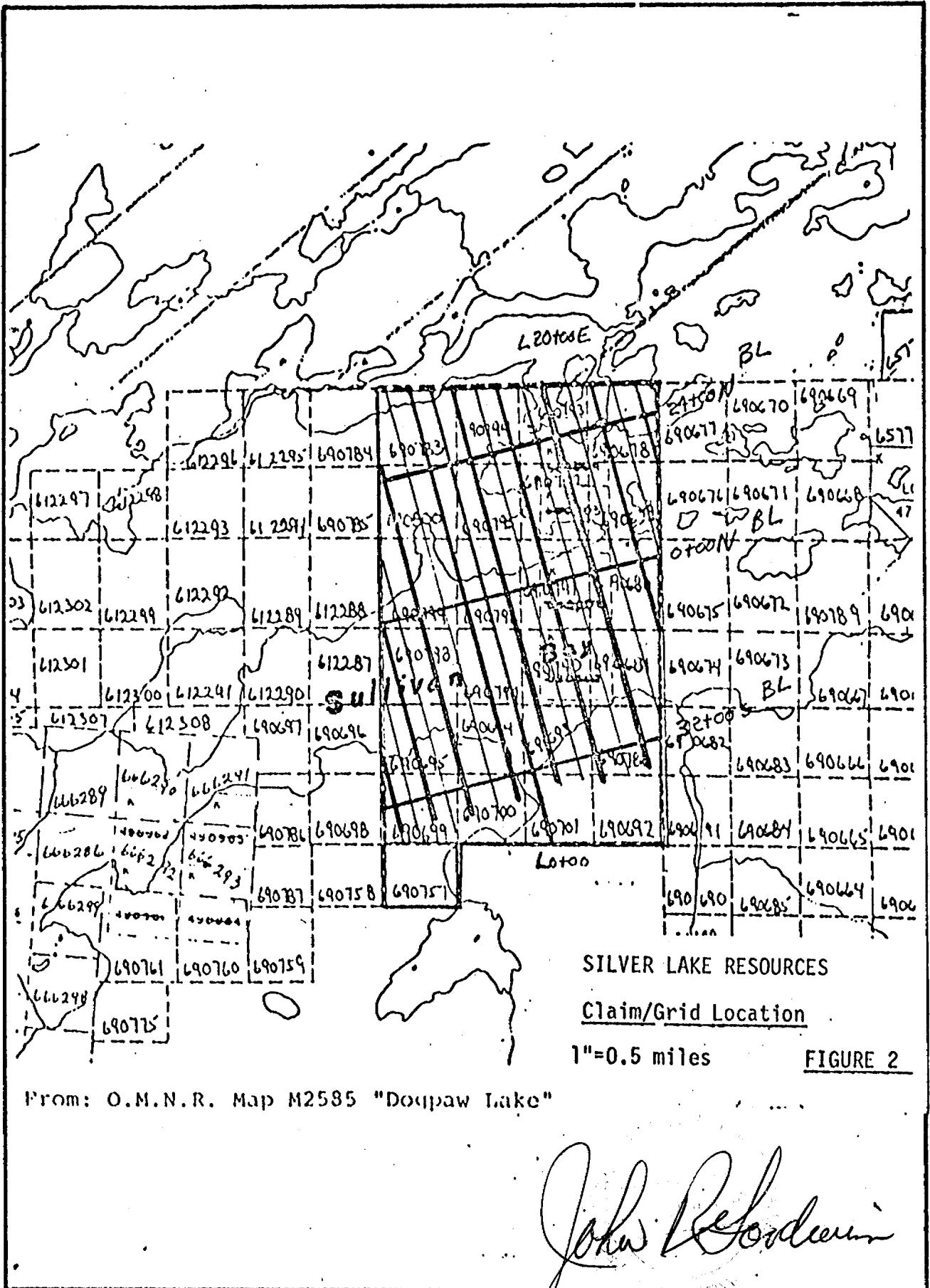
## INTRODUCTION

The Silver Lake Resources (Del Norte Chrome Corp.) property is ideally situated between the Nuinsco-Lockwood Cameron Lake deposit and the Nuinsco Monte Cristo property which has recently received very encouraging drill intersections. These two known mineralized zones are believed to be situated on a long arcuate structural/lithologic feature on which the Silver Lake claims are situated. A program of detailed time domain IP, magnetometer and VLF electromagnetic surveys was conducted over the property in February/March 1984 by Rayan Exploration Limited, North Bay. These surveys in conjunction with detailed geological mapping, prospecting and drilling proposed for the summer will assist in delineating those structures favourable to hosting gold mineralization.

## LOCATION AND ACCESS

The property is situated approximately 20 miles (32 km) northeast of Nestor Falls on Highway 71 (Figure 1). The property is transected by Sullivan Bay (Rowan Lake) and is overlain in part by several small bays with scattered islands in the eastern portion of the claim group.

Access is provided by aircraft from Nestor Falls or Dryden and a winter ice road is maintained to the Cameron Lake Nuinsco camp, Monte Cristo camp and several tourist camps situated on Rowan Lake - ice conditions permitting.



From: O.M.N.R. Map M2585 "Douppaw Lake"

*John R. Goodwin*

TOPOGRAPHY

The property is moderately hilly with some narrow steep valleys reflecting prominent faults/shear zones. There are many outcrop exposures on land, along the mainland shoreline and around the numerous islands.

CLAIM STATUS

The present claim status is as follows:

<u>CLAIM NUMBER</u>	<u>ASSESSMENT DUE DATE</u>
K 690 678 - 681 incl.	Jan. 6/85
690 692 - 695 incl.	"
690 699 - 701 incl.	"
690 790 - 800 incl.	"
690 757	"
690 783	"
690 788	"

These 25 claims were recorded January 6, 1983 and all interest was transferred to W. Whymark on January 3, 1984. On January 4, 1983, 60 days/claim were applied from a combined airborne geophysical electromagnetic and magnetometer survey which maintain the claims in good standing until January 6, 1985. Assessment credits will be increased to January 1987 by submission of the detailed geophysical surveys conducted in February/March 1984.

A 22.7 line mile grid with 400' line spacing and 100' stations was established on the property in January, 1984 (Figure 2).



### EXPLORATION HISTORY

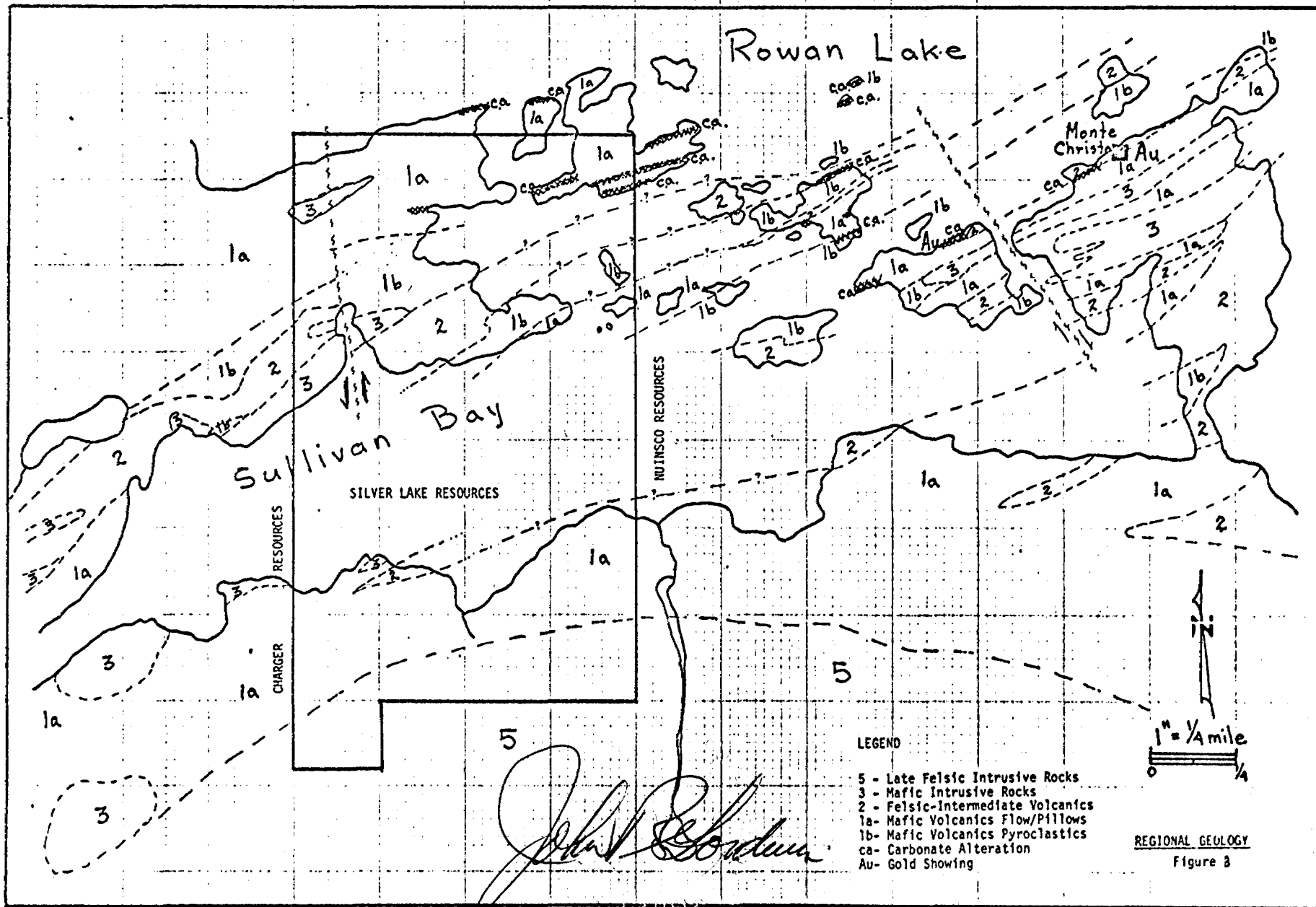
The Silver Lake Resources property begins about one mile west of the Monte Cristo discovery area and although no record of exploration activity is known on the property, the structural and mineralogical features found at Monte Cristo are believed to extend westerly through the Silver Lake Resources ground on a regional structure believed common to the Cameron Lake and Monte Cristo deposits.

Mineral exploration has been carried out sporadically in the region from the late 1800's to its most extensive activity at the present time. A number of small mines were opened up but for various reasons were shortlived and have remained dormant till the 1980's. In the 1950/60's exploration for base metals was carried out and one gold property about 5-6 miles (8 Km) southwest of this property was investigated by diamond drilling on two occasions: by Noranda. This gold property has now become the Nuinsco-Lockwood Cameron Lake deposit. Gold was also reported from a strong shear zone on an island one mile east of the Silver Lake property in 1899 known as the Monte Cristo claim. In 1931 damming of rivers into the lake for logging operations lead to below normal water levels where a gold bearing shear/schist zone was exposed for nearly 200 feet wide and could be traced for over 1 mile. Sampling of pits and trenches by Cross (1931) yielded significant gold assays. In 1936 Lakeport Gold Mines Ltd. drilled 9 holes on the Monte Cristo property for a total of 2,214.4 feet. Because of strong shearing, core recovery was poor and sampling was not completely carried out on all the holes. This drilling indicated that gold mineralization did continue to depth but the economic potential of the property remained unknown until recent acquisition by Nuinsco who are presently carrying out a successful drill program.

### GOLD MINERALIZATION

The structural and mineralogical events that make up the Cameron-Rowan Lake gold belt is gradually being resolved. Detailed geochemical and petrological studies by Bryndzia (1983) has indicated that gold mineralization is restricted to the strong alteration envelope and within that envelope gold occurs in essentially three forms; as discrete inclusions within pyrite grains (up to 100 u), as trapped inclusions along annealed grain boundary contacts and/or fractures within aggregates of pyrite grains (5-30 u) and as free gold in the matrix often interstitial to pyrite (1-30 u). In some cherty, brecciated silica flooded zones large grains up to 1-2 mm have been observed but are rare. No studies have been undertaken to determine if gold less than 0.1 u occurs within the pyrite lattice. Bryndzia (1983) in discussing the Cameron Lake deposit states that;

"Surface exposures indicate that alteration, including carbonatization, sericitization + pyrite, silicification and gold mineralization predate or were synchronous with the development of major sheared or mylonitized basalt flows. Textural data also suggest that formation of second generation pyrite post-date brittle deformation of primary pyrite and was accompanied by deposition of gold and chalcopyrite. This event was coeval with silicification, sericitization, albitization and oxidation. Cores of pyrite grains are often seive-textured and contain inclusions of gangue minerals and opaques-rutile and chalcopyrite being the most common. The rims are free of inclusions and in general are host to native gold. Oxidation accompanying the mineralization process is evident from the occurrence of rutile and hematite relative to sphene and ilmenomagnetite in the unaltered rocks. Numerous quartz-carbonate veins of varying dimensions cross-cut the pervasive altered zones but the veins themselves do not contain gold and are only rarely pyritic."



● However, Bryndzia (1983) noted the association of albite and high gold assays. The association of gold with the alkali feldspar event is most obvious at the Monte Cristo deposit. The alkali feldspar-gold mineralization association may be genetically quite significant since quartz feldspar porphyry dykes are sometimes intersected in drilling and can be observed in outcrop exposures. Some of these dykes contain minor pyrite, fuchsite and tourmaline which is a much more common association with gold at Monte Cristo than at Cameron Lake.

### REGIONAL GEOLOGY

Regional mapping of the area was most recently carried out in 1973 by the Ontario Geological Survey and presented in Preliminary map #P831 by L. Kaye and assistants, (Figure 3). The belt is characterized by a broad arcuate belt of mafic to felsic volcanics with intercalated pyroclastics intruded by gabbroic and porphyritic intrusives. The northern and southern portion of the Silver Lake property is underlain by predominantly mafic-intermediate flows and pillowed lava. Intermediate to felsic volcanic flows and sediments possibly occur under Sullivan Bay and extend to the north of the north shore of Sullivan Bay. Gold showings on a regional scale in both Cameron Lake and Rowan Lake areas are generally associated with zones of alteration and shearing. The shearing trend may vary but the alteration-mineralization assemblage is characterized by carbonate-sericite-quartz with or without pyrite, free gold where present and minor chalcopyrite.

### ROCK GEOCHEMISTRY

The pervasively altered envelope and mineralized rocks plot in exactly the same location as the unaltered and non-mineralized rocks which are classified as iron rich to normal tholeiitic basalts on the Jensen cation plot (Bryndzia (1983)). Numerous whole rock analyses were

carried out on the Cameron Lake property where it was found that gold mineralization was accompanied by:

- strong increases in Ag, As, Sb and Cr
- Hg is a poor or inconsistent indicator
- K is strongly enriched
- Al, Fe and Ca are depleted

#### SOIL GEOCHEMISTRY

On the Cameron Lake property, zones of known surface Au mineralization indicated a strong enrichment in As (up to 120 ppm) coincident with anomalous Au values (up to 180 ppb). Neither Cu nor Cr showed any correlation. There was no clear advantage to collecting soil over humus horizons as both returned similar assay results.

#### GEOPHYSICS (REGIONAL)

A vertical gradiometer survey, carried out by the Geological Survey of Canada outlined a distinct curvilinear regional magnetic structure on which the Cameron Lake zone is situated and continues in a northeasterly direction through Sullivan Bay (Rowan Lake) and in the vicinity of the Monte Cristo deposit. This is also outlined as a total field magnetic feature on the Aerodat airborne survey. (APPENDIX B)

At Cameron Lake Main Zone and the Monte Cristo deposit, detailed magnetometer, VLF-EM and frequency Domain IP surveys were conducted. At Cameron Lake the most specific geophysical response which could indicate mineralized zones was that defined by the resistivity component of the IP survey. A broad resistivity low about 100' x 500' coincided with the surface expression of the carbonatized metavolcanics and the footwall shear zone. Values of less than 100 ohm meters were obtained over this zone relative to a background range of 250 - 1500 ohm meters (average of about 350 - 400 ohm meters).

A number of IP conductive zones were coincident with the resistivity lows with chargeability (frequency effect) ranging from 1 - 3% and metal factors ranging from 5 to 50. Reconnaissance drilling of these targets indicated an association with weakly to moderately sheared and altered metavolcanics, particularly at contacts between felsic tuff units and mafic metavolcanics with only minor disseminated sulphides ( 1%).

#### DETAILED GEOPHYSICS (SILVER LAKE PROPERTY)

Time domain IP was conducted over the property in several configurations depending on overburden conditions specifically over Sullivan Bay. Rayan Explorations Limited, North Bay conducted all the surveys to date and will present the IP results in a separate report.

The magnetometer survey was carried out with the Barranger Research Limited Ground Magnetometer Model GM-122-a proton magnetometer with a sensitivity of 1 gamma. Readings were taken every 50 feet with fill-in readings in areas of increased magnetic response. The magnetic readings were corrected hourly for diurnal fluctuation and contoured at 100 gammas (Drawing GME2-2).

The VLF-EM survey was conducted over the grid with 50 foot readings and plotted as dip angle and quadrature (Drawing #GME2-3). The data was then Fraser Filtered and contoured (Drawing #GME2-4).

#### DISCUSSION OF GEOPHYSICAL RESULTS

A report by Rayan Exploration Limited, North Bay, will outline in detail the results of the time domain IP survey carried out by them in February and March 1984. Nine chargeable zones have been identified of which three are strong chargeable zones, three are moderate and three weak to very weak anomalies have been described.

If we follow the geophysical criteria found most indicative of outlining potential gold bearing structures on the Nuinsco property then three anomalies immediately attract our attention;

Anomaly #8 - very strong chargeability, minor resistivity low, coincident VLF anomaly.

- this anomaly has a definite sulphide signature and is a prime geophysical target.

Anomaly #4 - strong chargeability, moderate to high resistivity.

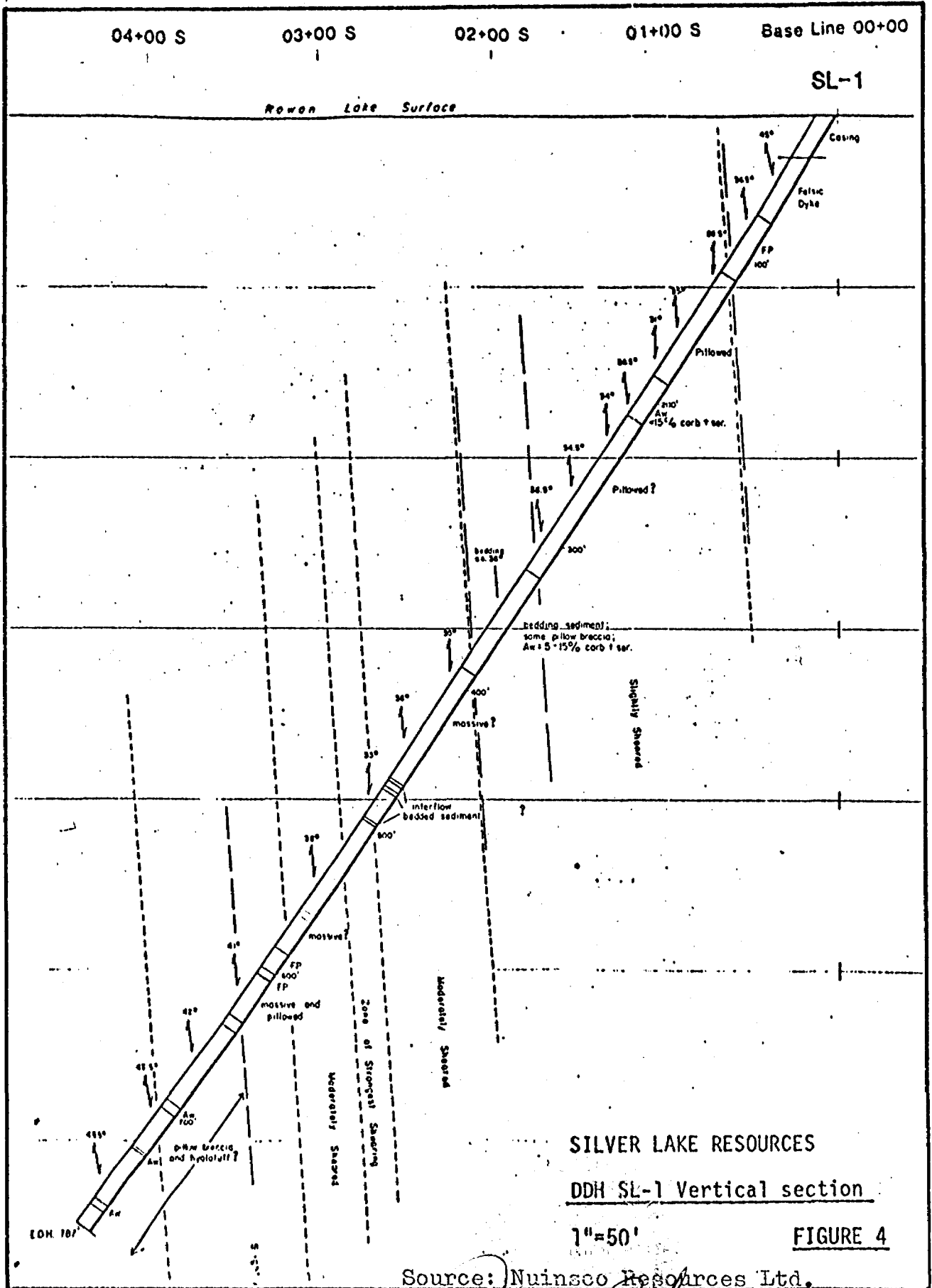
- this anomaly has a disseminated sulphide source.

Anomaly #1 - moderate chargeability, no apparent resistivity, magnetics or VLF response.

- this zone also reflects a disseminated sulphide source but is not as attractive geophysically.

In the vicinity of anomaly #4 are two parallel magnetic lows on L 20+00 W at 12+00 N and 16+00 N and may represent the eastern extension of the Charger Resources zone drilled to the west.

There are other IP anomalies with various characteristics which at this time cannot be adequately evaluated until detailed geological mapping, prospecting and geochemical surveys have been carried out. This would assist in interpreting zones such as anomaly #6 which has moderate chargeability, high resistivity with a coincident magnetic high. These parameters are interpreted as representing a gabbroic intrusive with disseminated pyrite and/or magnetite. The remaining IP anomalies will have to be investigated on the ground and evaluated after the summer field program. The magnetometer survey will assist in interpreting geological stratigraphy and structure. The magnetic response is relatively flat with several scattered highs to 2000 (background 800) and one strong magnetic low on L 20+00 E at 41+00 S. Geological interpretation at this time is not possible because the mafic volcanics contain scattered magnetic highs within the sequence. A review of the VLF data



SILVER LAKE RESOURCES  
 DDH SL-1 Vertical section

1"=50' FIGURE 4

Source: Nuinco Resources Ltd.

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suggests that this aspect of the geophysical surveys is not a useful tool in delineating favourable targets at this time. Many of the VLF responses are attributed to conductive overburden, particularly along the shoreline of Sullivan Bay. The presence of massive sulphides and/or graphite which would be detected by the VLF surveys is not necessarily a prime target for gold mineralization in this area. These short scattered VLF conductors will be examined and evaluated in the summer program.

#### DIAMOND DRILL HOLE SL-1

A 787 foot drill hole was collared on L80+00 W, 16+00 N of the Nuinsco grid (L32+00 E, 0+00 BASELINE on the Silver Lake grid) bearing  $150^{\circ}$  at  $-59^{\circ}$  dip to test a weak IP anomaly apparently located on the Nuinsco grid. This anomaly would be represented by the broad shear zone exposed on an island 1400 feet to the northeast. A vertical section profile of DDH SL-1 (Figure 4) indicates the lithologies, structures and alteration encountered. A zone of moderate to strong shearing centered near 3+00 S would possibly coincide with a weak resistivity low detected on the Nuinsco survey. There was no chargeability reported which is substantiated in the core by the scarcity of disseminated sulphides. A complete evaluation of this hole is not possible until sludge and split core samples are assayed. A summary of the drill results will be presented by Nuinsco at a later date.

CONCLUSIONS

The search for gold mineralization on the Silver Lake property has been greatly facilitated by the IP and magnetometer surveys conducted to date. There are a number of anomalous zones that contain variable resistivity, chargeability and may or may not have coincident magnetic expression. These anomalous zones will be examined geologically, rock and soil samples collected and assayed for Au, As and K. Evidence from other properties in the area suggest that the determination of As and Au in soil/humus horizons would be an effective geochemical prospecting tool in areas of thin overburden. Those areas anomalous in Au, As and K will be prospected, trenched if possible and followed up with diamond drilling in the fall and/or on ice in the winter.

Further detailed IP surveys may be required to delineate those anomalies not explained on surface and require testing by diamond drilling.

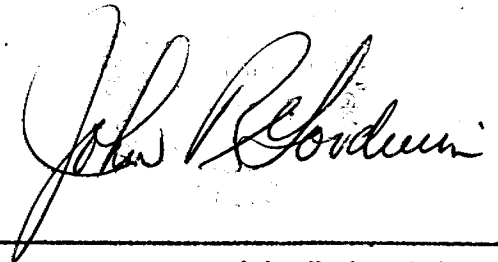
RECOMMENDATIONS

Summer 1984

- 1) detailed geological mapping and prospecting with emphasis on those areas with coincident IP and magnetic response.
- 2) detailed soil/humus geochemistry over those geological/geophysical targets outlined by the detailed mapping.
- 3) careful attention to the structural elements on the property to assist in extrapolating the tectonic history of the area leading to locale and timing of gold mineralization.
- 4) maintain open and co-operative communications with Nuinsco and Charger Resources in tracing their mineralized zones into the vicinity of Sullivan Bay and the Silver Lake property.

ESTIMATE OF EXPENDITURES

1) GEOLOGY, GEOCHEMISTRY, PROSPECTING, TRENCHING 1 geologist and 1 helper - 2 weeks @ \$400/day	\$ 5,500.00
2) ASSAYING 100 samples @ \$15/sample	1,500.00
3) CAMP COSTS travel, room and board, boat rental	4,000.00
4) REPORT geology, geochemistry, trenching, drill program	2,000.00
5) CONTINGENCIES + 10%	<u>2,000.00</u>
ESTIMATED EXPENDITURES	<u><u>\$15,000.00</u></u>



APPENDIX A

DRILL LOG FOR DDH SL-1

DRILL LOG

Property: ROWAN LAKE

NUINSCO/LOCKWOOD

DDH: SL-1

Co Ordinates: BL0, 32 E Silver Lake Grid	Claims:	Date Hole Commenced: April 1, 1984
Declination: L80 W, 16 N Nuinso Grid -59°	Azimuth: 150° Core Size: 8Q Total Depth: 787'	Date Completed: April 4, 1984 Logged By: Marcus J. Buck

ACID TEST				TROPARI TEST					
Depth	Inclination	Depth	Inclination	Depth	Inclination	Azimuth	Depth	Inclination	Azimuth
42' (casing)	58°	440'	56.5°						
140'	57°	540'	56°						
240'	57°	640'	54.5°						
340'	57°	740'	52.5°						

Drill Log Summary	Assay	Comments
<p><b>Mineralization:</b>                      Almost no Py mineralization.                      Sediment units (particularly 322'-390') typically have weak carb + ser alteration. <sup>Ant</sup> Py is more likely primary.                      In mafic flows there are two sections of very weak carb + ser alteration: 187'-215' and 630'-773' (probably not significant).</p>		<p>The core of the Monte Cristo Shear Zone is at 497'-527' and is marked by strong banding (bands of chl., chl. + ser, and carb.), primary textures and structures are destroyed.                      The banding and shearing decrease gradually outward from this central core; the limits of the shear zone are therefore arbitrary.</p>

**ABBREVIATIONS USED IN LOGGING:**

<p><b>Rock type:</b> MV metavolcanic; Tu tuff; QFP quartz feldspar porphyry.                      A altered zone; Aw weak; Am moderate; As strong.                      CSZ chloritic shear zone.</p>	<p><b>Veining:</b> QCV quartz-carbonate vein; CV/QV carbonate vein/quartz vein;                      z/S'-Estimate over 5' interval; estimate attitude; indicate color.</p>
<p><b>Texture:</b> ns massive; gb gabbroid; vs vesicular; sp spotted;                      an amygdaloidal; Rc rhomb-carbonated.</p>	<p><b>Alteration:</b> Carb carbonatization; Sil silicification; Ser sericitization;                      Chl chlorite; Hm hematite; F fuchsite; I tourmaline.  <b>Modifier:</b> Pvs pervasive; Df diffuse; Av, Am, As.                      Rc rhomb-carbonated; Qf quartz flooding (grey).</p>
<p><b>Structure:</b> Fol foliated; Sh shears; My mylonite.</p>	<p><b>Mineralization:</b> Py pyrite; Cpy chalcopyrite; Au gold; Ag silver.  <b>Modifier:</b> Dis disseminated; Pp pyrite porphyroblasts;                      Ps pressure shadows; cl clusters; sv selvage; V veins.</p>
<p><b>Grain Size:</b> fgr fine &lt; 1 mm; agr medium 1-2 mm; cgr coarse &gt; 2mm.</p>	

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DRILL LOG

Depth	Rock type	Grain size Colour	Secondary Structure	Texture and Structure	Alteration	Mineralization	Comments
0-44' 39-64.3	Casing Felsic dyke	fgr.; medium gray with pinkish tint.	weak foliation (5-10% irregular chl. grains slightly aligned fol. c.a. 62° 45°	massive, homogenous quartz (+ feldspar?) + ser - rich rock (fgr matrix) with 5% irregular chlorite grains.	- trace of chl. + quartz + carb. veinlets with pink quartz-rich A. envelopes	-	
64.3-114.0  91.4-92.0 92.2-93.0 94.3-96.1 98.2-100.2 101.0-104.3	Feldspar porphyry dyke  } sections of sheared. mafic flow - same as below	fgr., porphyritic dark gray	- generally weakly foliated but becoming well foliated near included and adjacent sheared mafic flow - fol. defined by fine ser. lamellae and to a lesser extent by irregular chl. lamellae fol. c.a. 88° 43'   99° 30' 90° 42'   103° 35' 92° 33'   105° 36'	- 10-20% anhedral to subhedral feldspar phenocrysts (1-3 mm long) in a quartz (+ feldspar??) - rich matrix with ≤ 5% ser and ≤ 8% chl.	- a few veins with A. envelopes similar to those above.	-	gradational contact? } could be different phases of the same dyke?
114.0-322.0	Mafic flow; initially pillowed, then massive  continued next page	aphanitic; dark green- gray	- well developed cleavage from alignment of chl. grains - initially unit is only slightly sheared but becomes increasingly sheared downhill. - cleavage is often kinked at crosscutting veins, and occasionally displaced on fractures	- initially pillowed; distinct dark green chloritic pillow rims with interflow hyaloclastite slightly altered to carb. + ser. and sheared. Trace → 2% small carb. + amygdules. - further down the hole, primary features become more difficult to recognize (because of shearing) but occasionally carb. sm. and perhaps some pillow selvages	- generally very weak - trace of thin An (carb + ser) envelopes on small QCV, and a few ser. - rich bands (foliated) in slightly bleached sections. 187-215 (5-15% carb + ser) variable zone of slight bleaching (carb.) with numerous ser-rich	-	- probably within Monte Cristo shear zone.





NUINSCO RESOURCES LIMITED.

DRILL LOG

Depth	Rock type	Grain size Colour	Secondary Structure	Texture and Structure	Alteration	Mineralization	Comments																							
390-387.6	Sheared mafic flow	aphanitic; dark green	-very well-developed foliations defined by chl.-rich bands alternating with discontinuous thin carb. veins or bands; also there is a fine chl. cleavage.	-probably mafic <del>flow</del> (massive?) -possibly some carb. am. but these are difficult to distinguish from bedding-parallel carb. bands.																										
467.1-468.9 472.7-475.2 479.7-496.5 503.7-509.9	interflow sediment		-commonly fol. is kinked at crosscutting veins, and offset on crosscutting joints. -497-527' particularly fol. or banded; fol. defined by relatively coarse chl.-rich bands, $\leq 5\%$ chl. + ser. bands, and $\leq 25\%$ carb. bands (banding $\sim .5-1.5$ mm) -510' $\rightarrow$ a spectacular set of conjugate chevron kink folds (hinge plunging $\sim 60^\circ$ E) -kink folds are common in this unit wherever banding is well-developed. -fol. c.n.	-finely bedded sediment. chl.-rich beds, carb+ser.-rich beds, and some minor siliceous beds.	- $\leq 20\%$ carb (oxosome) restricted to some of the sediment beds.		467.1-496.5 much of this section could possibly be chloritic (gr. sediment rather than mafic flow (too sheared to determine).																							
				<table border="0"> <tr> <td>504'</td> <td>20'</td> <td>549'</td> <td>27'</td> </tr> <tr> <td>518'</td> <td>25'</td> <td>558'</td> <td>33'</td> </tr> <tr> <td>523'</td> <td>41'</td> <td>567'</td> <td>40'</td> </tr> <tr> <td>529'</td> <td>37'</td> <td>572'</td> <td>37'</td> </tr> <tr> <td>534'</td> <td>38'</td> <td>586'</td> <td>39'</td> </tr> <tr> <td>544'</td> <td>41'</td> <td></td> <td></td> </tr> </table>	504'	20'	549'	27'	518'	25'	558'	33'	523'	41'	567'	40'	529'	37'	572'	37'	534'	38'	586'	39'	544'	41'				
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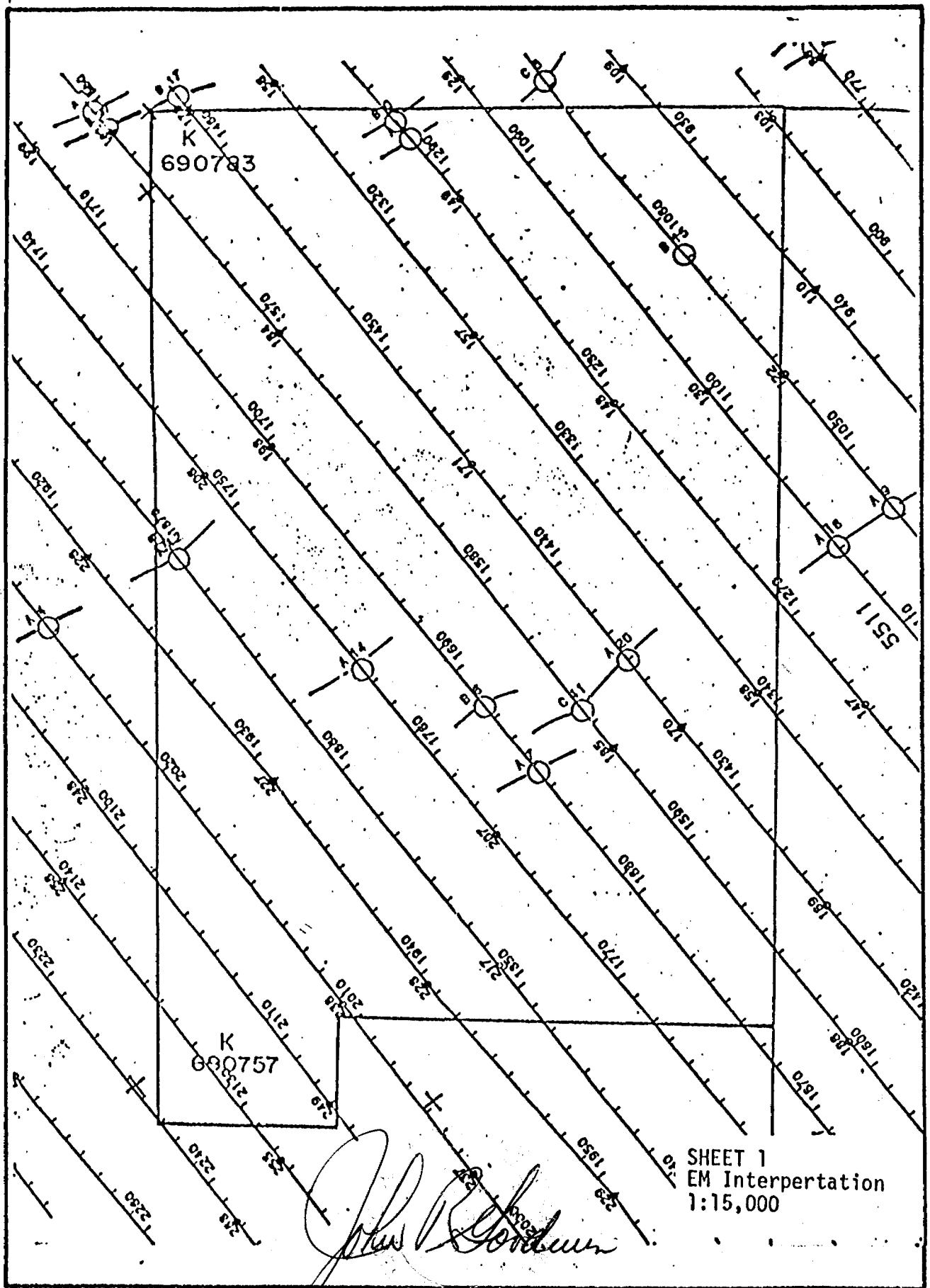
NUINSCO RESOURCES LIMITED

DRILL LOG

Depth	Rock type	Grain size Colour	Secondary Structure	Texture and Structure	Alteration	Mineralization	Comments
587.6-601.3	Feldspar porphyry	porphyritic; yellowish gray	-weak foliation -both contacts are very deformed (ie folded)	-15-20% (0.5-2.0 mm) feldspar phenocrysts in a fgr. matrix, $\leq 5\%$ chl. -massive, homogeneous.	-	-	
601.3-605.5	Sheared mafic flow	aphanitic; dark green	-well fol. -fol. ca. 604' 44'	-massive flow?	-	-	
605.5-606.4	Feldspar porphyry			-same as above   FP			
606.4-787	sheared mafic flow	aphanitic to fgr. dark green; yellowish green where altered	-initially well fol., but fol. decreases considerably towards the bottom of the hole -fol. defined by chl. and ser orientation (cleavage), but also by discontinuous carb. bands, small thin ser. lamellae, and chl. lamellae, and by alignment of flattened mafic fragments -there are some kink folds, and some tight folds with AP // main fol. -fol. on. 611' 40'   640' 40' 619' 37'   653' 47' 630' 38'   660' 42'	606.4-634 massive, some pillowed (some pillow selvages can be recognized) 634-787 predominantly "pillow breccia": flattened sericitized mafic flow fragments and small pillows in a fgr. to mgr chloritic hyalotuff (?) and massive flow. Some larger pillows and short sections of massive flow fol. c.a. 673' 43'   730' 41' 678' 41'   740' 45' 686' 42'   754' 45' 698' 42'   769' 45' 702' 45'   779' 47' 710' 41'   782' 44' 722' 46'   784' 47'	-generally some very weak carb + ser alter. -630-773 2-10% carb + ser alteration restricted to bands (usually with sharp contacts and // fol.) -pillow rims and pillow fragments are selectively sericitized and often very bleached (carb?) 635-642 10% A 697-702.5 20% A 730.6-731.4 50% A 769-773 20% A -locally some QGV with thin A envelopes	-There is rarely up to 1% mgr. dis. Py associated with carb + ser alteration	
787'	End of Hole						

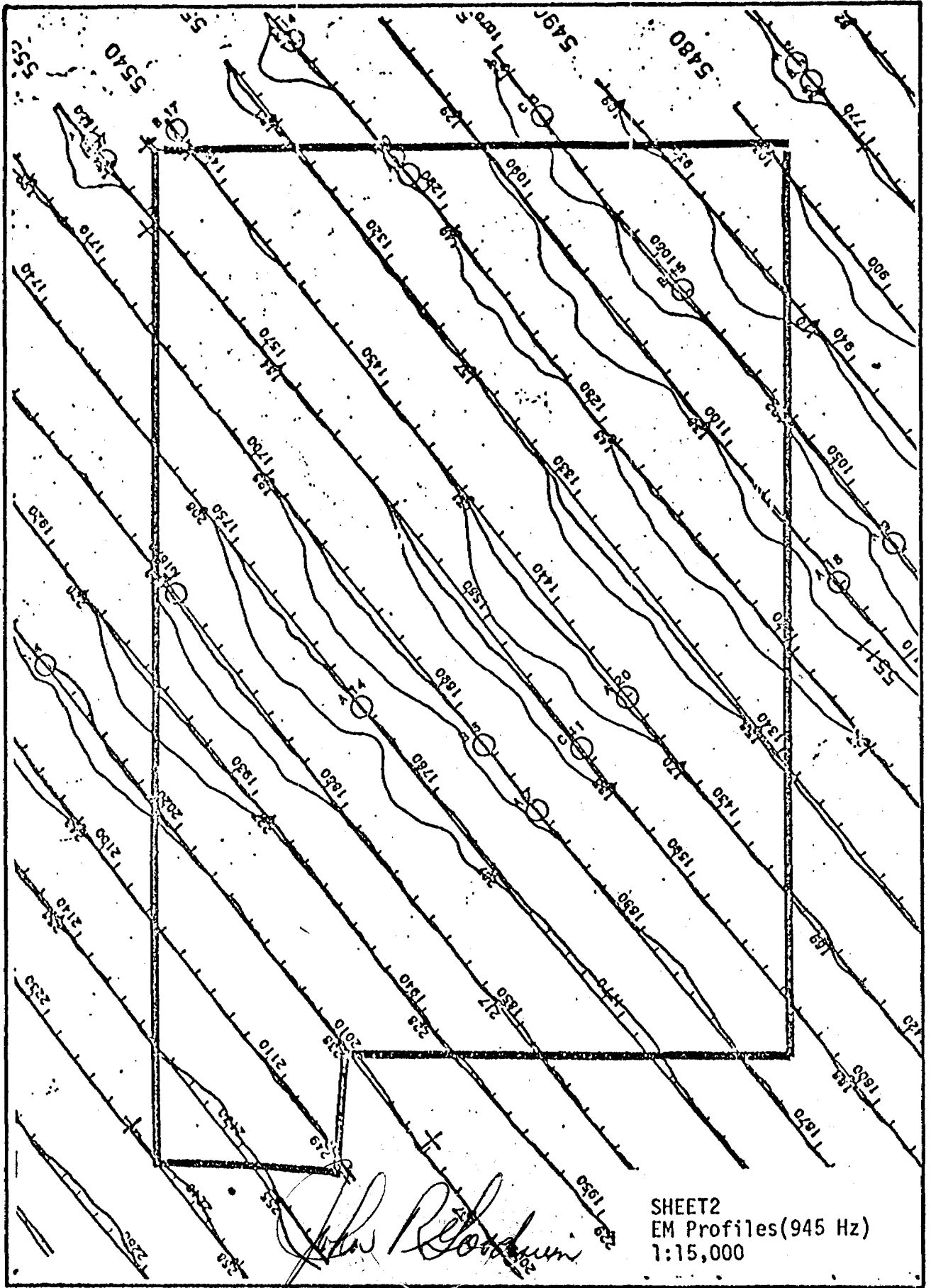
APPENDIX B

AERODAT SURVEY RESULTS



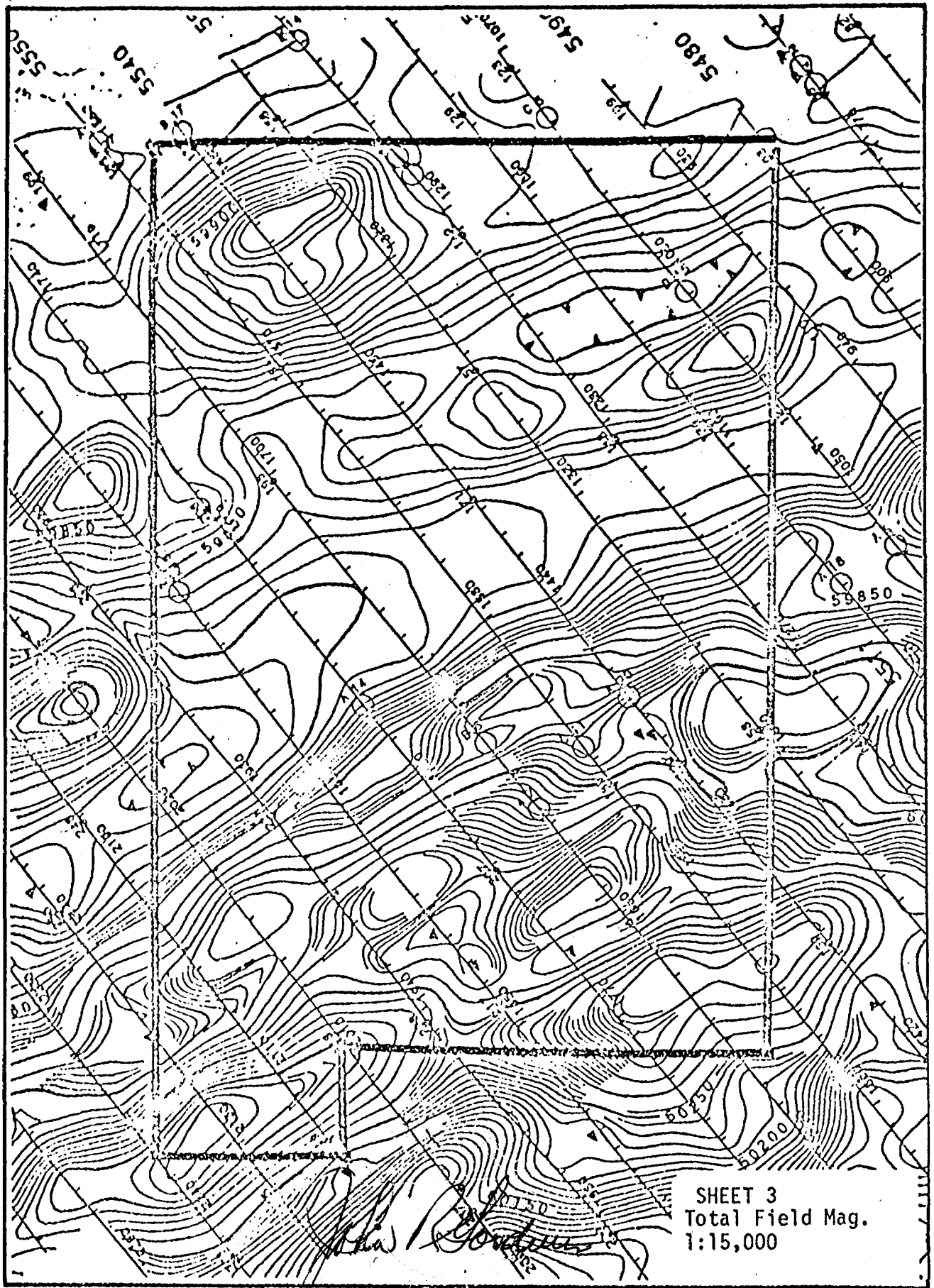
Source: AERODAT Limited; AEM Survey of Nestor Falls area, 1984.

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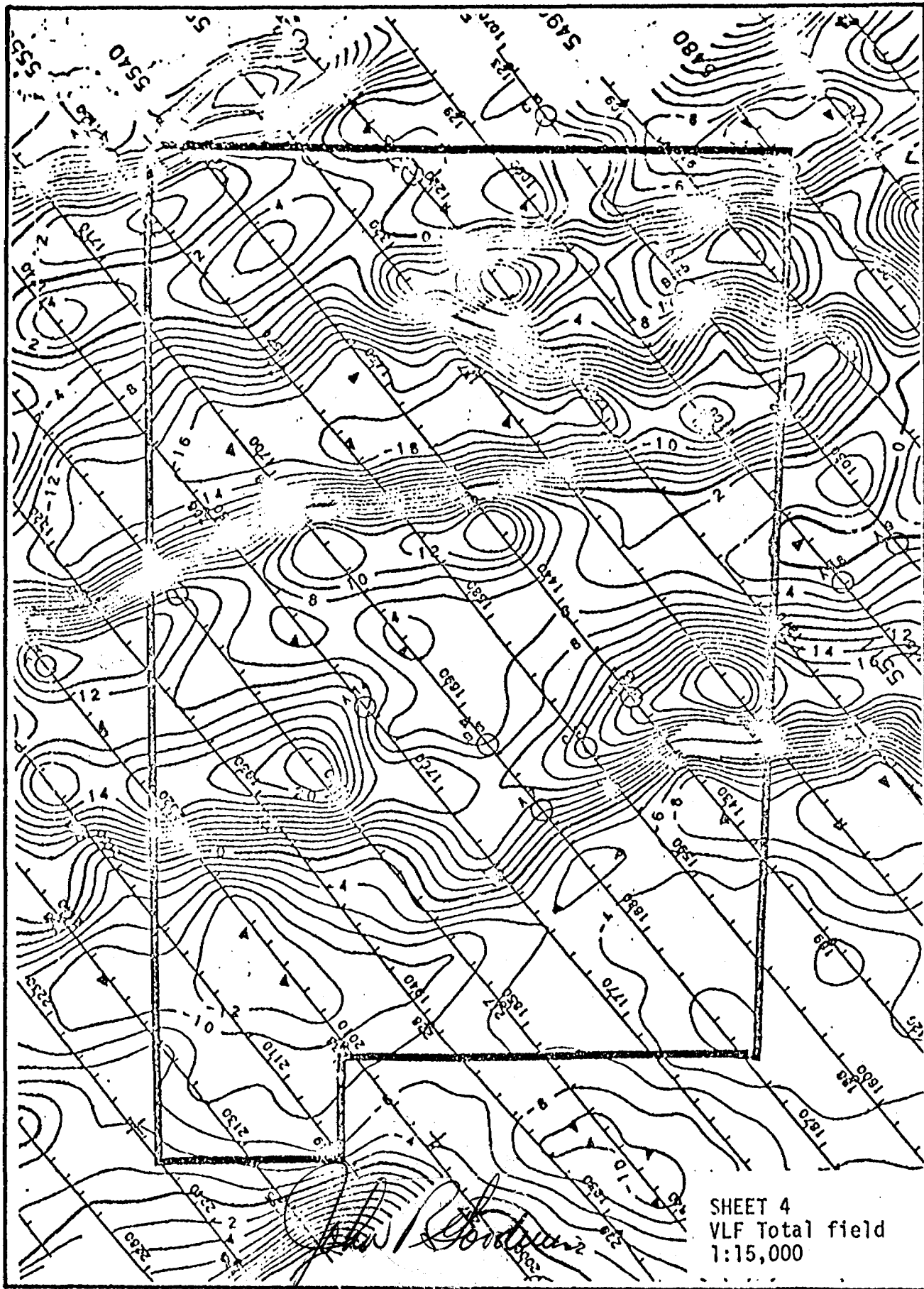
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John R. Goodwin, MSc  
Consulting Geologist



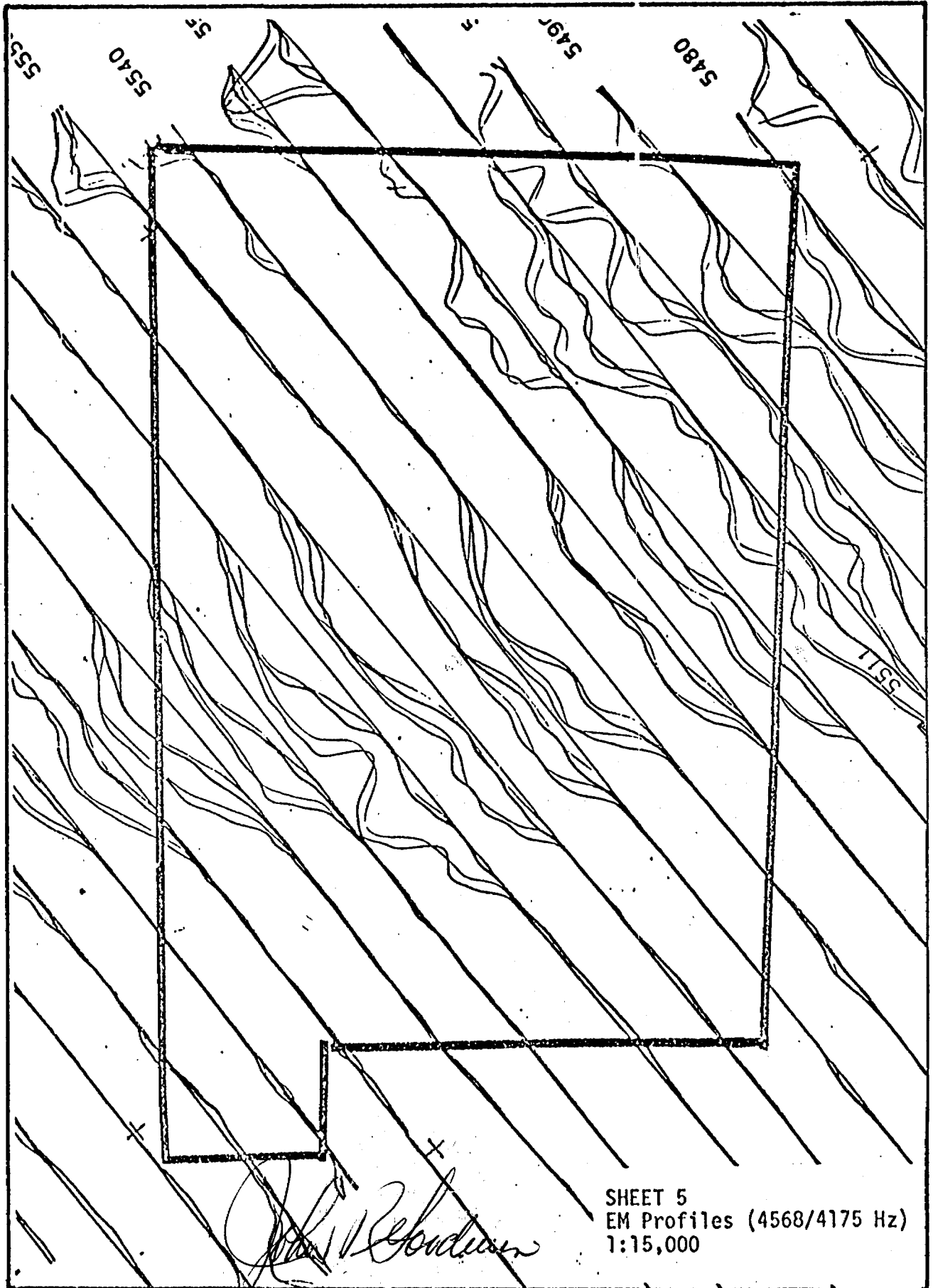
Source: AERODAT Limited; AEM Survey of Nestor Falls area, 1984.

John R. Goodwin, MSc  
Consulting Geologist



Source: AERODAT Limited; AEM Survey of Nestor Falls area, 1984.

John R. Goodwin, MSc  
Consulting Geologist



Source: AERODAT Limited; AEM Survey of Nestor Falls area, 1984.

John R. Goodwin, MSc  
Consulting Geologist



## APPENDIX C

### REFERENCES

Aerodat Limited, 1984:

Report on combined helicopter-borne magnetic and electromagnetic survey, Nestor Falls area, Ontario.

Blackburn, C.E., 1983:

Gold deposits of the Western Wabigoon Sub-province, Northwestern Ontario and their metallogeny.

Bryndzia, T., 1983:

Petrological examination of samples from the Cameron Lake gold prospect, Northwestern Ontario. Unpublished report for Nuinsco Resources.

Cross, J.G., 1931:

The Monte Cristo gold property, Rowan Lake, Lake of the Woods, Ontario.

Kaye, L., 1973:

Rowan Lake Area, District of Kenora, Ontario Division of Mines, Preliminary Map 831, Geological series, Scale 1 inch to 1/4 mile geology.

APPENDIX D

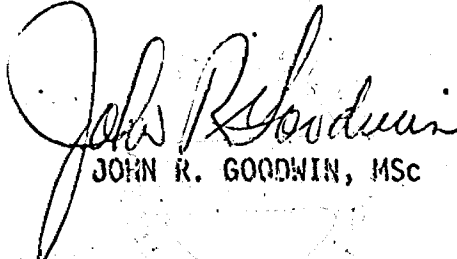
CERTIFICATE

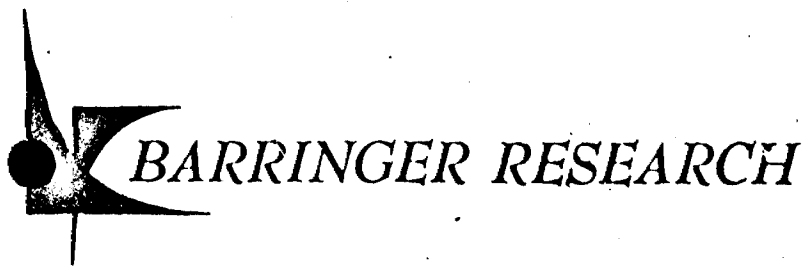
I, John R. Goodwin of RR #1, Callander, District of Parry Sound  
in the Province of Ontario

DO HEREBY CERTIFY THAT:

1. I am a Consulting Geologist.
2. I have practised my profession since 1969.
3. I am a graduate of Laurentian University in Sudbury,  
Ontario where I obtained a MSc degree in Geological  
Sciences in 1981.
4. I am a Fellow of the Geological Association of Canada.
5. I am a member of the Prospectors and Developers  
Association.
6. I have no interest in the properties or securities of  
Silver Lake Resources, nor do I expect to receive or  
acquire any.

DATED THIS 14th DAY OF MAY 1984

  
JOHN R. GOODWIN, MSc



## **MINI PROTON MAGNETOMETER Model GM-122**



### **DESCRIPTION**

The Barringer GM-122 mini proton magnetometer provides an absolute measurement of the earth's total magnetic field intensity. The rugged design is combined with lightweight, small size and simple operation.

### **FEATURES**

- High Sensitivity             $\pm 1$  gamma
- Toroidal Sensor            No alignment or calibration required
- Automatic Lock-out        Last three digits blanked if gradient exceeds 600 gammas per meter
- Rugged Design             Withstands extreme shock. Operates at  $-40^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ , 0 to 100% relative humidity
- Lightweight                Weight of total system 5.1 kg.
- Easy Operation             Single button initiates digital display

### **APPLICATIONS**

- Geo-magnetic surveying
- Mineral and petroleum exploration
- Search for buried objects
- Archaeological prospecting

### **SYSTEM COMPONENTS**

- Lightweight console and harness
- Toroidal sensor and cable
- Five foot extendable aluminum shaft
- Impact resistant shipping case

**SPECIFICATIONS:**

**Sensitivity/Resolution** 1 gamma  
**Absolute Accuracy**  $\pm 10$  ppm — better than  $\pm 1$  gamma  
**Range** 20,000 — 100,000 gammas in 12 ranges with 100% overlap  
**Gradient Tolerance** 600 gammas/meter  
**Operating Range**  $-40^{\circ}\text{F}$  to  $+ 131^{\circ}\text{F}$   
 $-40^{\circ}\text{C}$  to  $+ 55^{\circ}\text{C}$   
0 to 100% relative humidity (splash proof)  
**Size** console 3.5" x 7" x 11"  
(9 cm x 18 cm x 28 cm)  
sensor 4 1/4" diameter (12 cm)  
4 1/2" height (11 cm)  
**Weight** console 5.5 lbs (2.4 kg)  
sensor 4.0 lbs (1.8 kg)  
staff 2.0 lbs (0.9 kg)  
**Output** 5 digit incandescent filament display with a 3 or 6 second sampling rate  
**Sensor** toroidal, omni-directional and noise cancelling

**Logic Function**

early low battery indicator in the form of a L.E.D. notifies the operator when 250 readings remain in the power supply

lock indicator — last 3 digits of the display are blanked off when the gradient is exceeded or when the instrument is operated incorrectly  
digital readout test — all display readouts light up to permit visual inspection

**Construction**

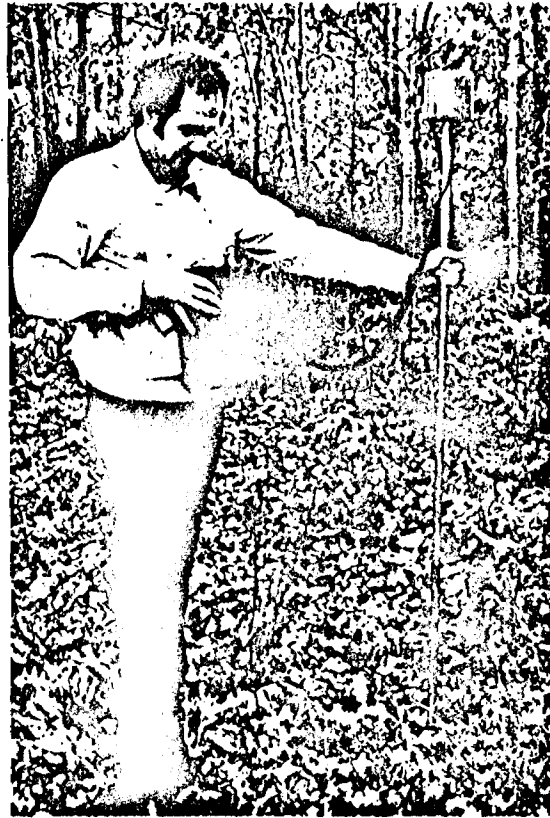
high impact low temperature plastic: polyurethane and lexan case, shock and vibration proof mountings

**Power Supply**

12 alkaline "D" cells provide up to 10,000 readings

**Option Accessories**

external battery belt  
staff extender  
sensor backsack for one-hand operation

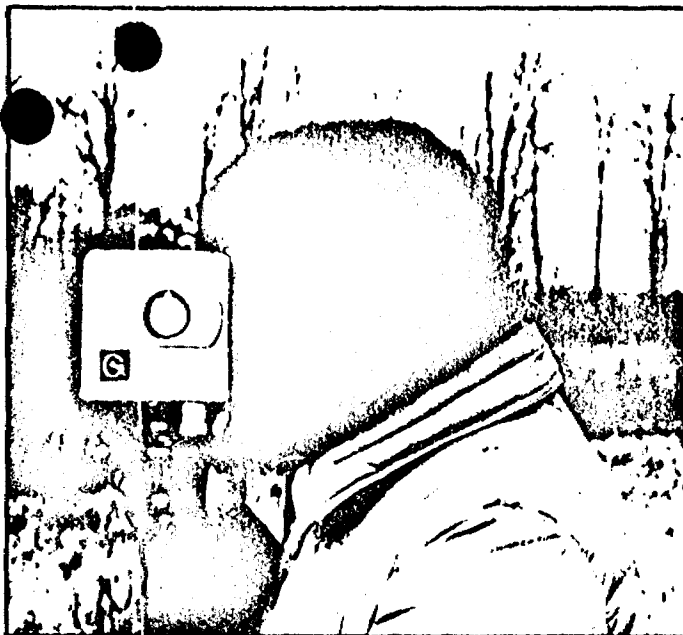


Barringer Research Limited  
304 Carlingview Dr.  
Metropolitan Toronto  
Rexdale, Ontario, Canada M9W 5G2  
Phone: 416-675-3870  
Telex: 06-989183

Representative:

# VLF (PLANE WAVE) EM INSTRUMENTS

## 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.

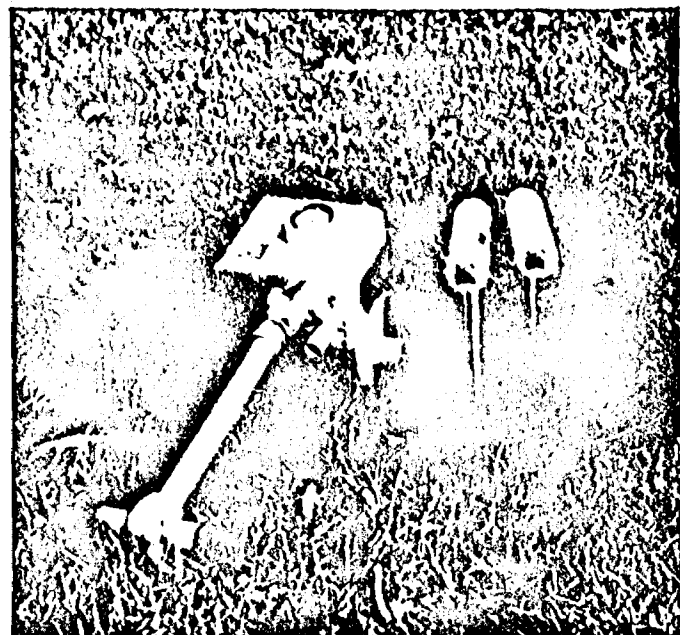
#### FEATURES

- 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)



Mining Lands Section

File No 2.7280

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
- GEOLOGICAL
- GEOCHEMICAL
- EXPENDITURE

MINING LANDS COMMENTS:

*OK special provisions for VLF and Mag.*  
*will require man-days for I.P. or*  
*Major Notice of Intent - depending on what is*  
*asked for on report of work.*  
*only magnetometer recorded*

*loyd*

LD

*Doug*  
Signature of Assessor

5/12/84  
Date



Ontario

---

Ministry of  
Northern Development  
and Mines

The following material (Mag. survey, 2 VLF-EM maps, Resistivity grids) has been placed on file from OMEP submittal OMS 4-3-C-219. The following material was not included in the assessment submittal but has been placed on file due to its significance to this report.



**Report of Work**  
(Geophysical, Geological,  
Geochemical and Expenditures)

*FWM*  
*2.7280*  
*Amended*

Instructions: - Please type or print. #243-84  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. Do not use shaded areas below.

**The Mining Act**

Type of Survey(s) **Geophysical- V.L.F., Magnetometer, I.P.** *NB* **ROWAN LAKE M-2580**  
 Claim Holder(s) **Silver Lake Resources Inc.,** **1989**  
 Address **P.O. Box 77, Suite 4650, Toronto Dominion Bank Tower, Toronto, Ontario.**  
 Survey Company **Rayan Explorations Ltd.,** Date of Survey (from & to) **10 02 84 15 04 84** Total Miles of line Cut **22.7**  
 Name and Address of Author (of Geo-Technical report) **J.R. Goodwin R.R. " 1, Callander, Ont.; R.J. Meikle, R.R. " 2, North Bay, Ont.**

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other <b>I.P.</b>	
	Geological	
	Geochemical	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

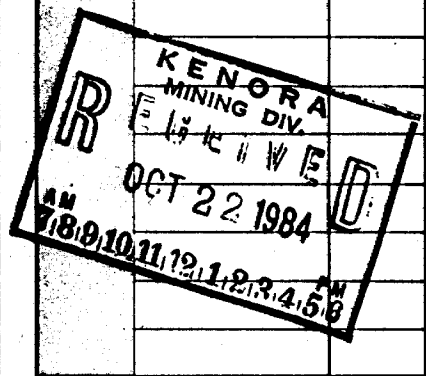
Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
K	690678	
	690679	
	690680	
	690681	
	690692	
	690693	
	690694	
	690695	
	690699	
	690700	
	690701	
	690757	
	690783	
	690788	
	690790	
	690791	
	690792	
	690793	
	690794	
	690795	
	690796	
	690797	
	690798	

Prefix	Mining Claim Number	Expend. Days Cr.
K	690799	
	690800	



Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$  +  = Total Days Credits

Instructions  
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date **10/10/84**  
 Signature of Agent (Signature) *John R. Goodwin*

**690666** Total number of mining claims covered by this report of work. **25**

For Office Use Only

Total Days Cr. Recorded **500** Date Recorded **Oct 22/84** Mining Recorder *McLennan Acting*

Date Approved as Recorder **8.12.12** *[Signature]*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying **John R. Goodwin R.R. " 1, Callander, Ontario. POH 1H0**

Date Certified **10/10/84** Certified by (Signature) *John R. Goodwin*



1984 10 19

Your File:  
Our File: 2.7280

Mining Recorder  
Ministry of Natural Resources  
808 Robertson Street  
Box 5080  
Kenora, Ontario  
P9N 3X9

Dear Sir:

We received reports and maps on October 10, 1984 for Geophysical (Electromagnetic, Magnetometer and Induced Polarization) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 690678 et al in the Area of Dogpaw Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone:(416)965-6918

A. Barr:sc

cc: Silver Lake REsources Inc  
Suite 4650  
T.D. Centre  
Toronto, Ontario  
M5K 1E7

cc: John R. Goodwin  
R.R. #1  
Pine Creek Road  
Callander, Ontario  
POH 1H0



Ontario

Ministry of Natural Resources

File 2.7280

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT

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

Type of Survey(s) Geophysical - V.L.F., Magnetometer, I.P.

Township or Area Dogpaw Lake Area, M2585

Claim Holder(s) Silver Lake Resources Inc.,

Survey Company Rayan Explorations Ltd.,

Author of Report J.R. Goodwin; R.J. Meikle

Address of Author R.R. #1, Callander, Ontario

Covering Dates of Survey 10/02/84 to 15/04/84  
(linecutting to office)

Total Miles of Line Cut 22.7

MINING CLAIMS TRAVERSED	
List numerically	
K690678 (prefix)	K690798 (number)
K690679	K690799
K690680	K690800
K690681	
K690692	
K690693	
K690694	
K690695	
K690699	
K690700	
K690701	
K690757	
K690783	
K690788	
K690790	
K690791	
K690792	
K690793	
K690794	
K690795	
K690796	
K690797	
TOTAL CLAIMS <u>25</u>	

If space insufficient, attach list

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

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: 10/10/84 SIGNATURE: John R. Goodwin  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 23609 / 23860

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

**GEOPHYSICAL TECHNICAL DATA**

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

Mag.-2330

Number of Stations 1165 Number of Readings V.L.F.-2x1165=2330

Station interval V.L.F.-100'; Mag.-50' Line spacing 200' and 400'

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

Contour interval 100 gammas

**MAGNETIC**

Instrument Barranger Mini-Proton Mag. Model G.M.-122

Accuracy – Scale constant ± 1 gamma

Diurnal correction method base station looping

Base Station check-in interval (hours) hourly or less

Base Station location and value at base lines and cross-lines

**ELECTROMAGNETIC**

Instrument Geonics E.M.-16

Coil configuration horizontal primary field, in-phase and quad. of vertical field.

Coil separation infinity

Accuracy ± 1%

Method:  Fixed transmitter  Shoot back  In line  Parallel line

Frequency 21.4 Khz at Annapolis Maryland, U.S.A.  
(specify V.L.F. station)

Parameters measured dip angle and quadrature

**GRAVITY**

Instrument \_\_\_\_\_

Scale constant \_\_\_\_\_

Corrections made \_\_\_\_\_

Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

**INDUCED POLARIZATION RESISTIVITY**

Instrument Crone N-IV Newmont Receiver; Phoenix I.P.T.-1 Transmitter

Method  Time Domain  Frequency Domain

Parameters – On time 2 sec. Frequency \_\_\_\_\_

– Off time 2 sec. Range \_\_\_\_\_

– Delay time 950 milliseconds

– Integration time 450 milliseconds

Power 2500 watts

Electrode array Pole-dipole

Electrode spacing "a" = 100' and 200'

Type of electrode stainless steel



# GOODWIN MINERAL EXPLORATIONS

John R. Goodwin, MSc  
Consulting Geologist

October 10, 1984.

Dear Mining Recorder:

Please find enclosed two copies each of two geophysical reports on 25 claims held by Silver Lake Resources in the Dogpaw Lake area, Kenora District, Ontario.

Assessment credits of 80 days per claim is requested based on work performed as reported by Goodwin Mineral Explorations and Rayan Mineral Explorations respectively.

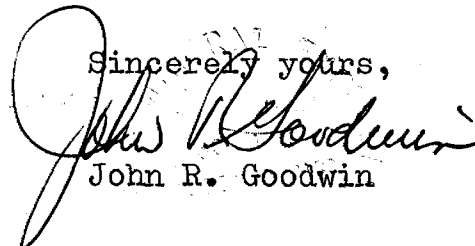
Two copies of Report of Work have been forwarded to the Mining Records office, Kenora District, Ontario

**RECEIVED**

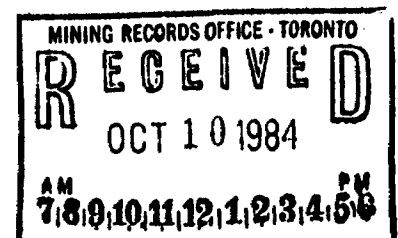
OCT 10 1984

**MINING LANDS SECTION**

Sincerely yours,



John R. Goodwin



2.7280

	Em	mag	IP
K 690678	✓	✓	
679	✓	✓	
680	✓	✓	
681	✓	✓	
690692	✓	✓	
693	✓	✓	
694	✓	✓	
695	✓	1/4	
690699	✓	✓	
700	✓	✓	
701	✓	✓	
690757	1/4	1/4	
690783	✓	✓	
690788	✓	✓	
690790	✓	✓	
791	✓	✓	
792	✓	✓	
793	✓	✓	
794	✓	✓	
795	✓	✓	
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797	✓	✓	
798	✓	✓	
799	✓	✓	
690800	✓	✓	

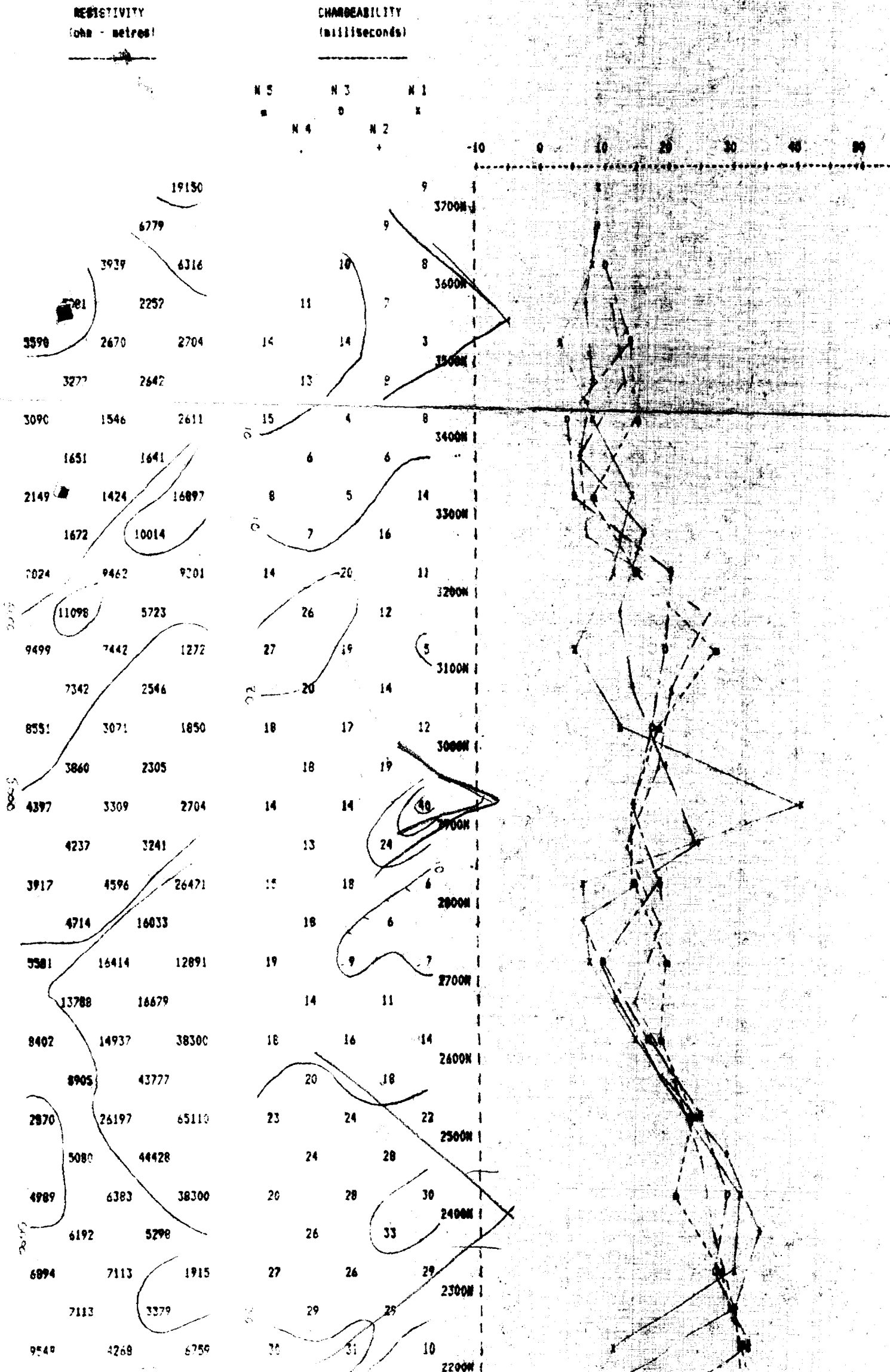
Needs Man days for IP

\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 0 N

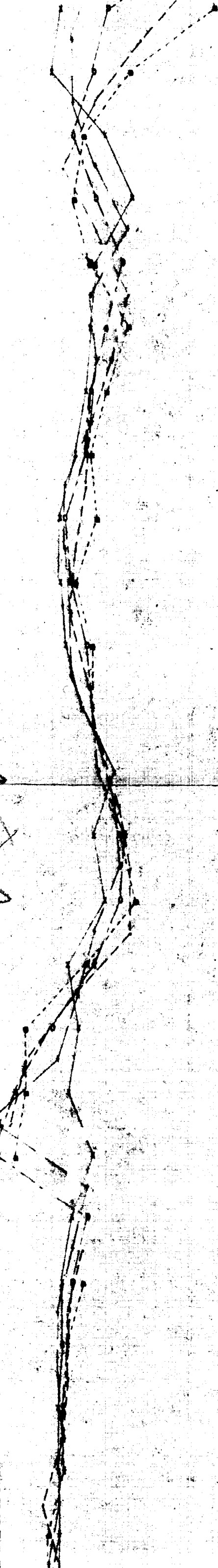
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 Client : SILVER LAKE

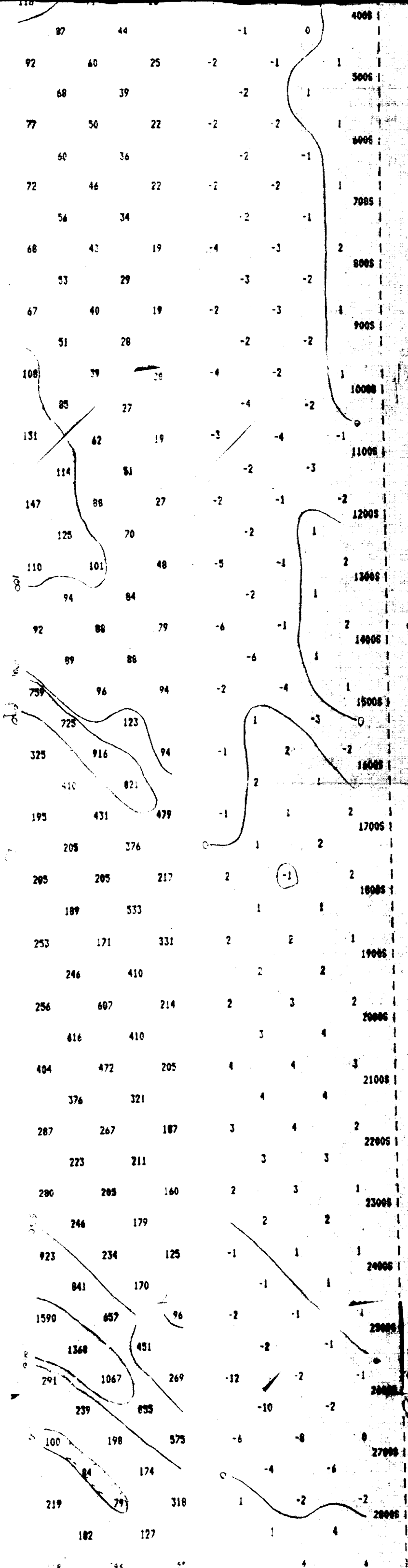
Date of Survey : 2/24/84  
 Operator : BAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



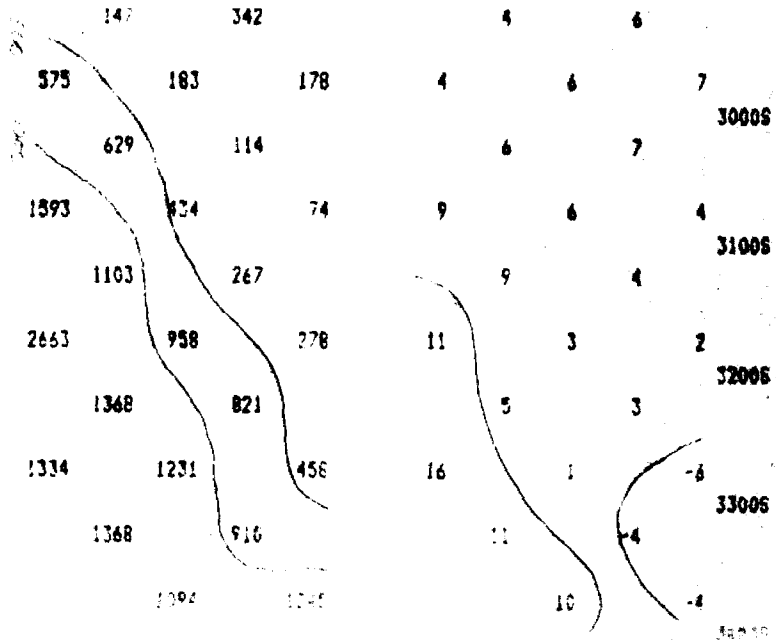
6064 13974 8086  
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 3000 88750 56442  
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 77932 88292 77073  
 81475 52982  
 32841 94525 35108  
 20991 44975  
 29787 16897 22980  
 26668 5745  
 36684 10138 2643  
 16368 6336  
 10091 11692 2394  
 8207 7039  
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 4272 291  
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 3467 2004  
 1172 1548 106  
 489 107  
 447 52 121  
 37 54  
 32 40 1863  
 35 1641  
 30 1133 919  
 1590 868  
 291 494 339  
 249 280  
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 321 109  
 213 166 60  
 157 107  
 173 109 41  
 125 68  
 137 85 28  
 103 48

33 13 4  
 19 6 2100N  
 17 10 2 2000N  
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 NR 7 4 200N  
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 6 4 2 1000N  
 3 2 2 0N  
 3 1 0N  
 2 2 1 1000N  
 2 2 1000N  
 2 1 1 2000N  
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10

\*\*\*\*\*  
**RAYAN EXPLORATION**  
 \*\*\*\*\*

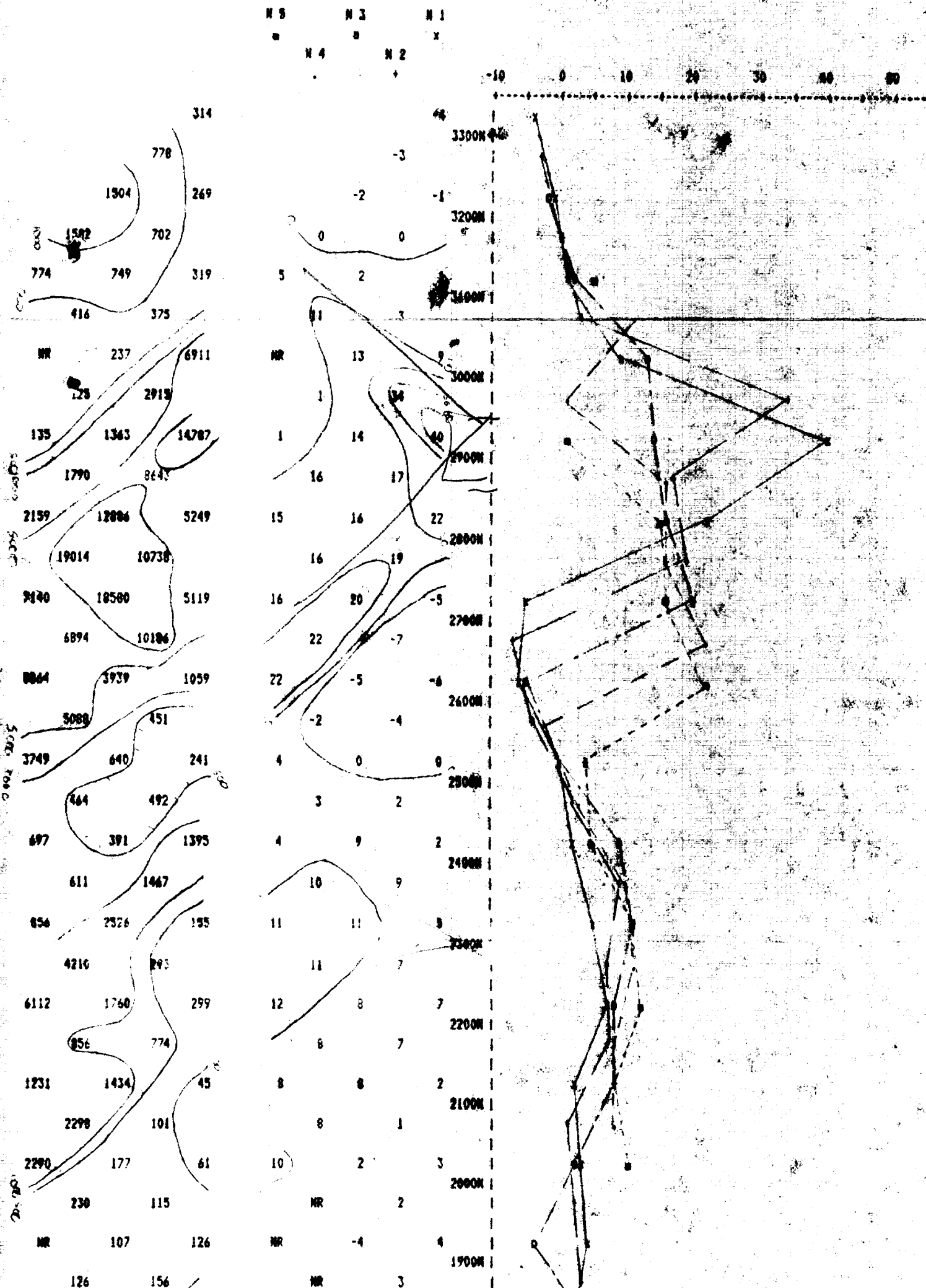
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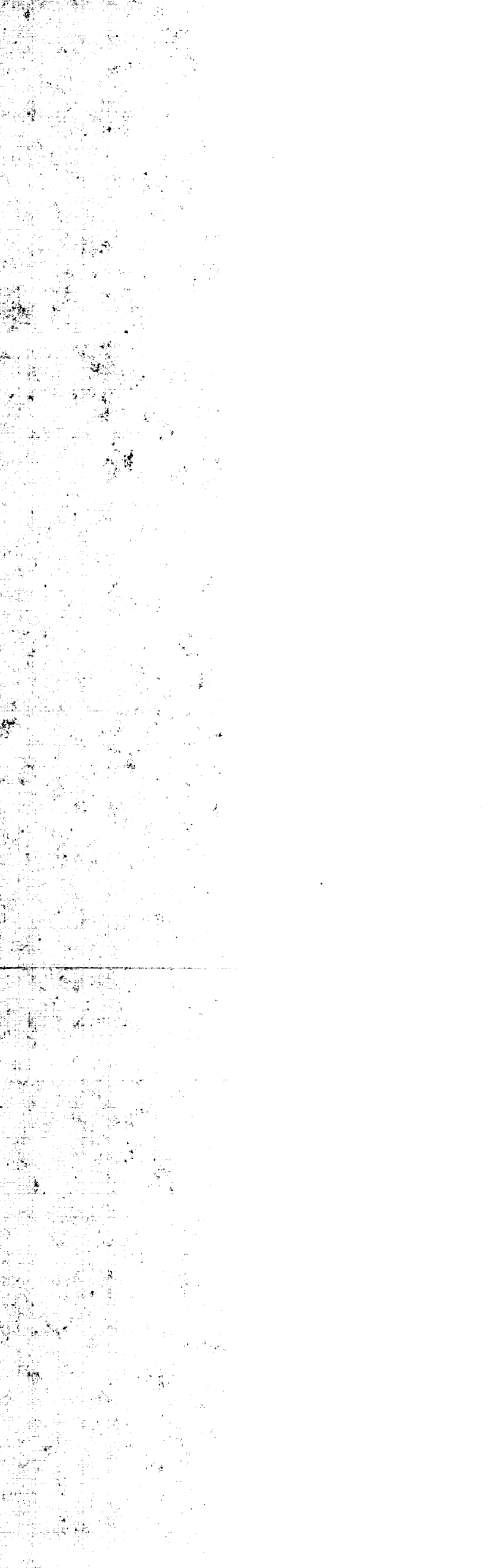
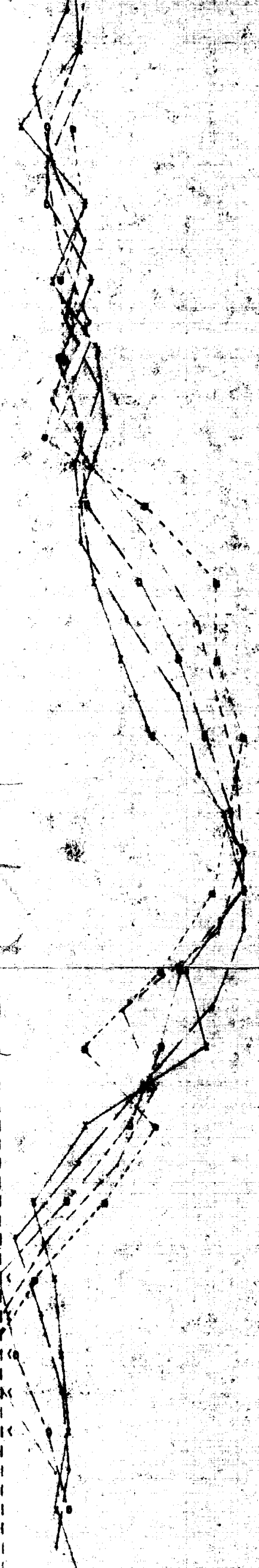
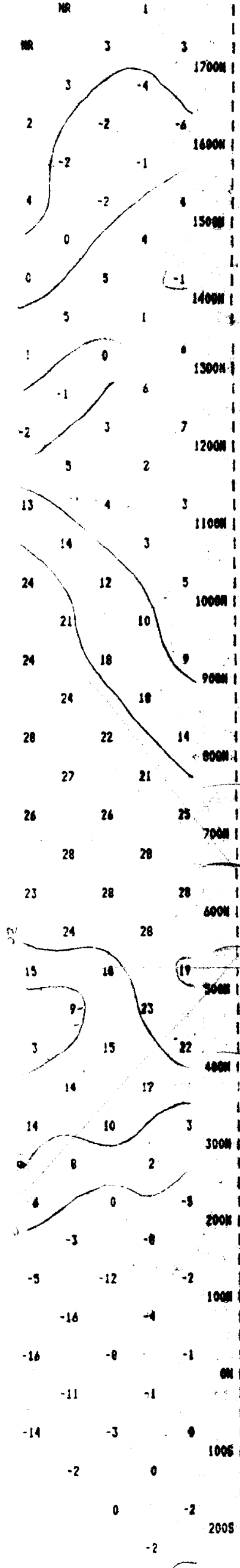
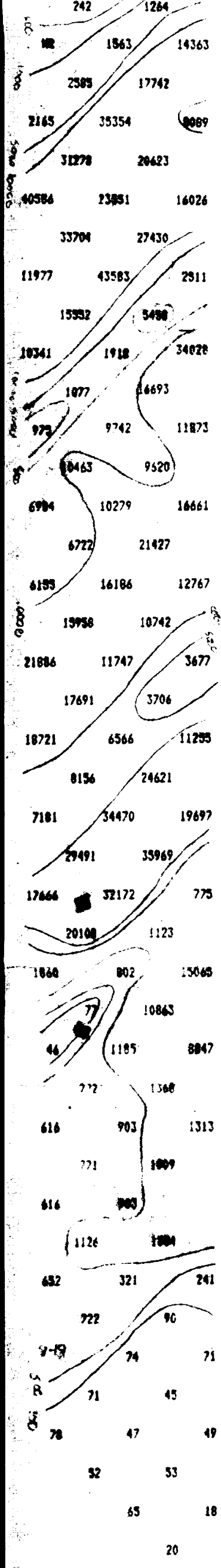
Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/24/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)



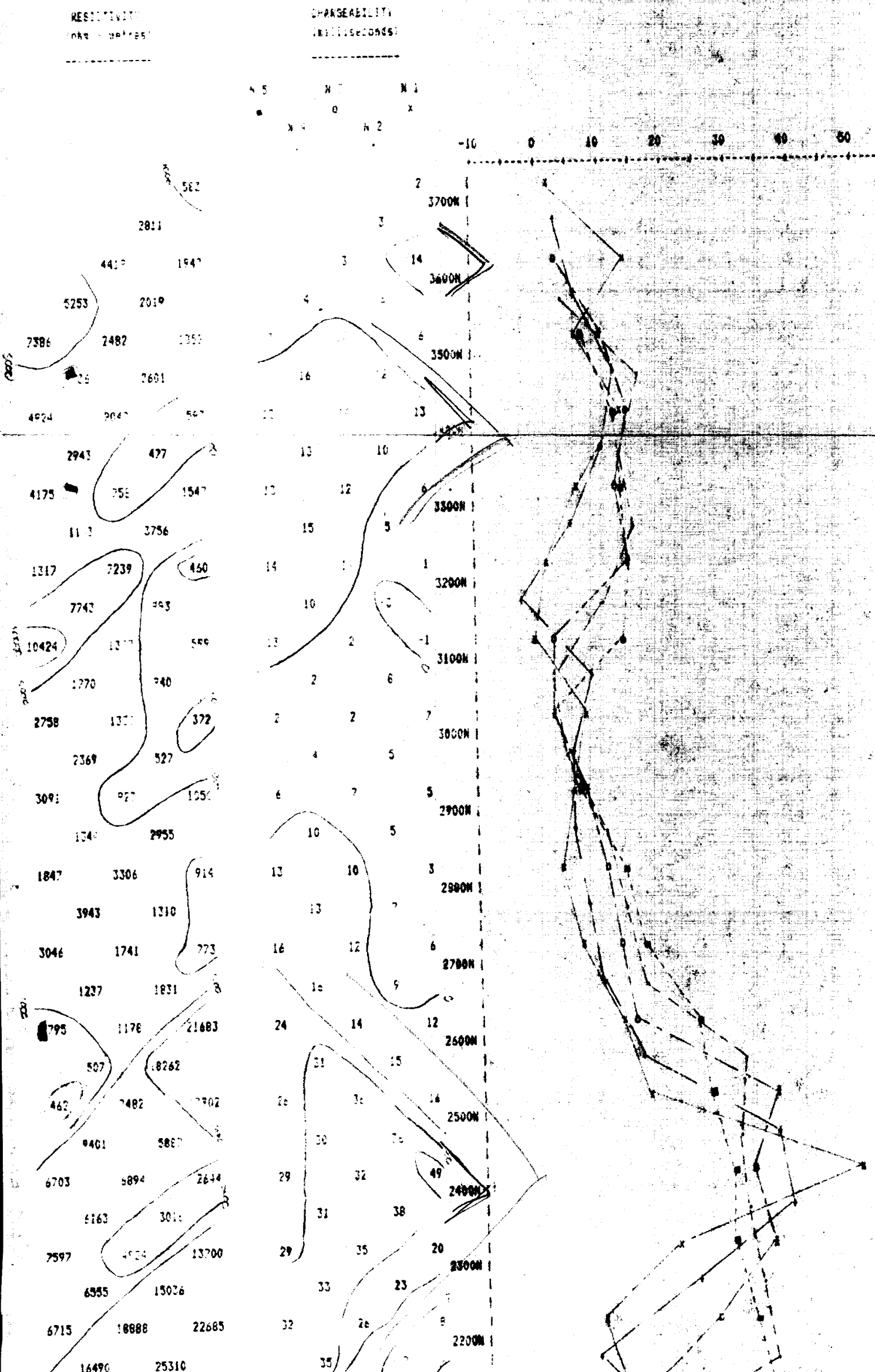


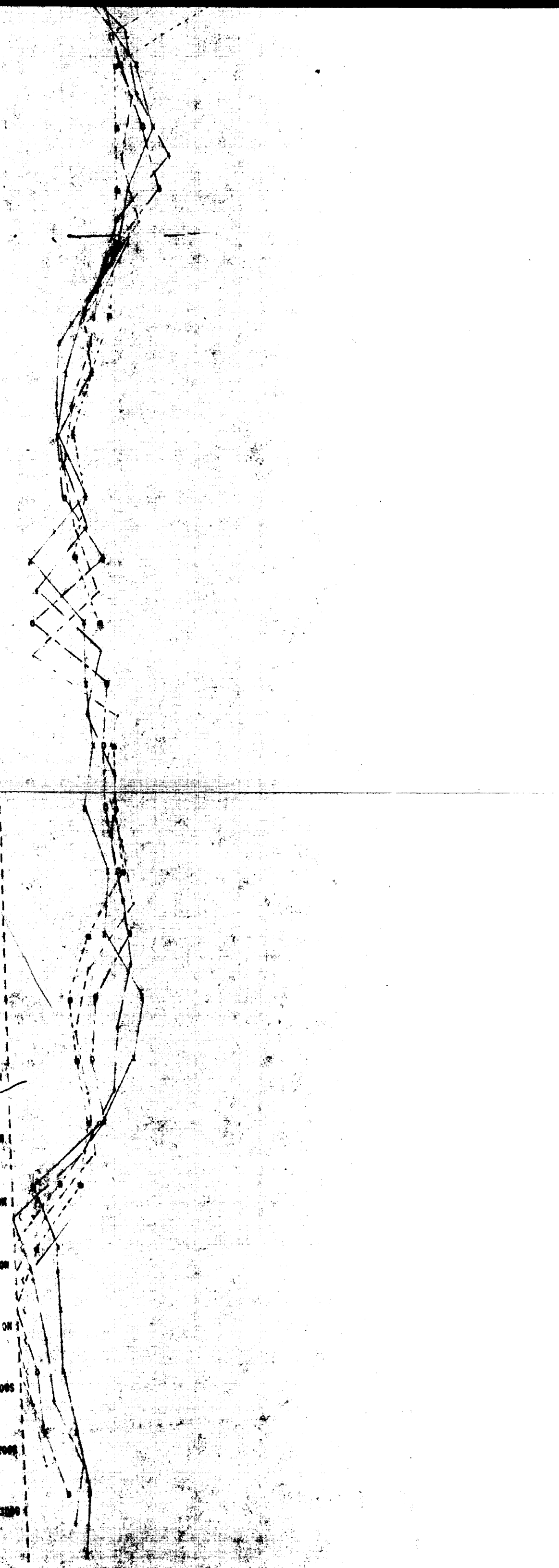
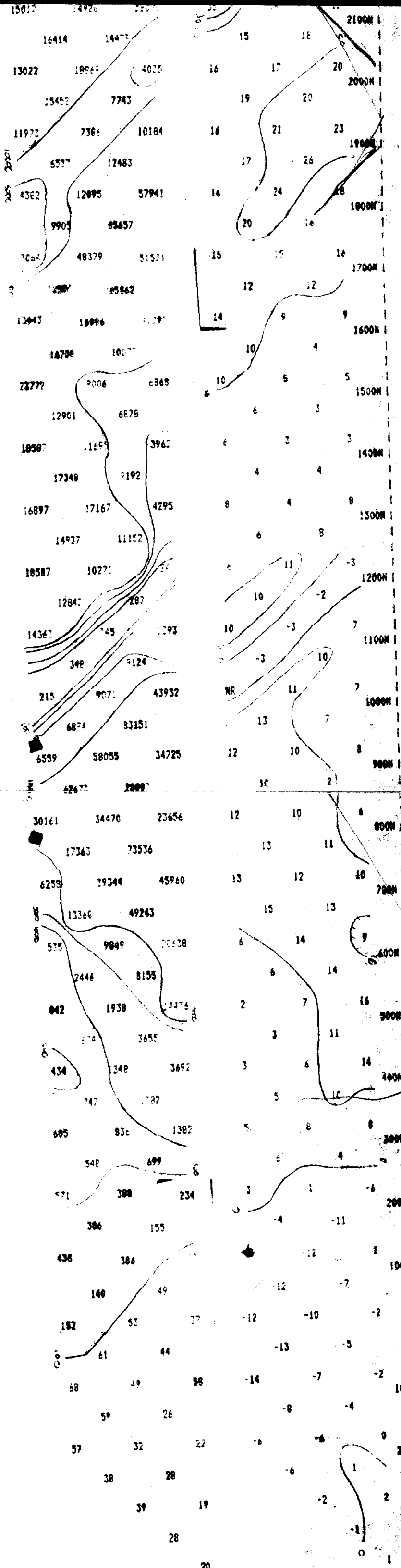
\*\*\*\*\*  
**RAYAN EXPLORATION**  
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**LINE 4 S**

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode : ...  
 Mode : ...  
 Delay : ...  
 Integration : 450 m



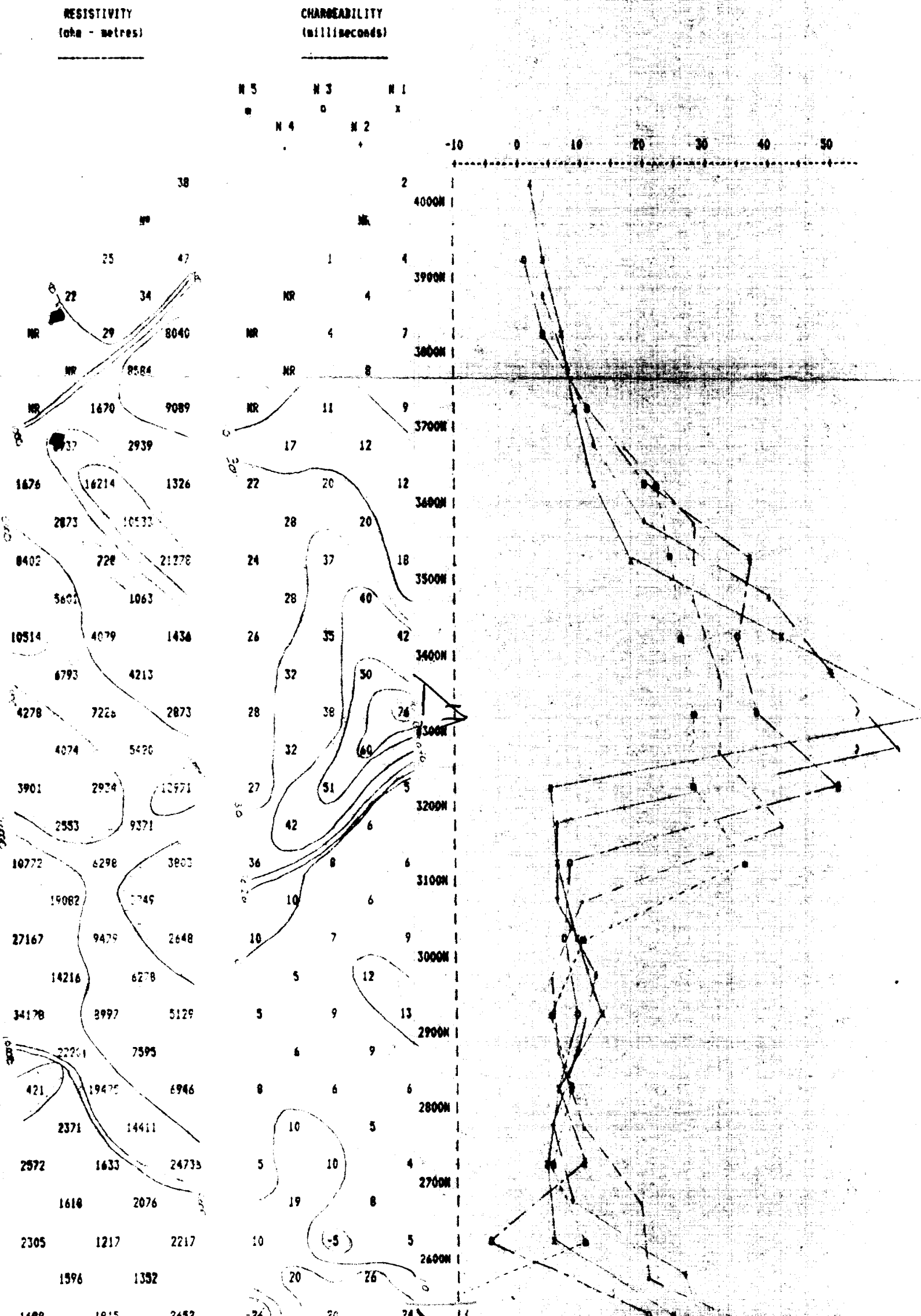


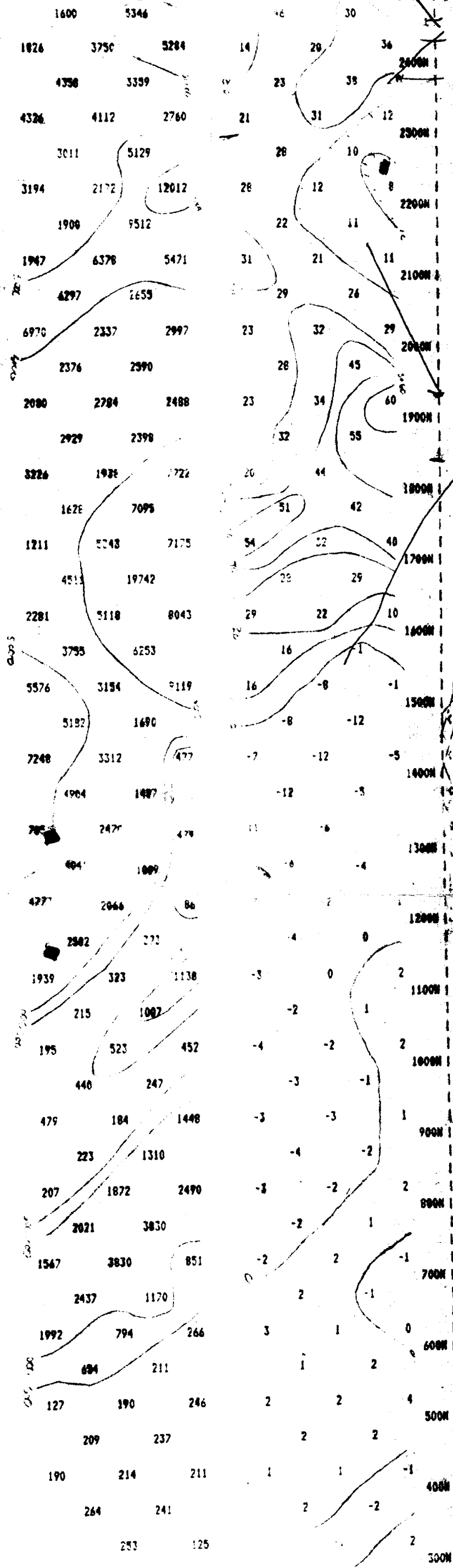
\*\*\*\*\*  
 RAYAN EXPLORATION  
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LINE 1-3

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms





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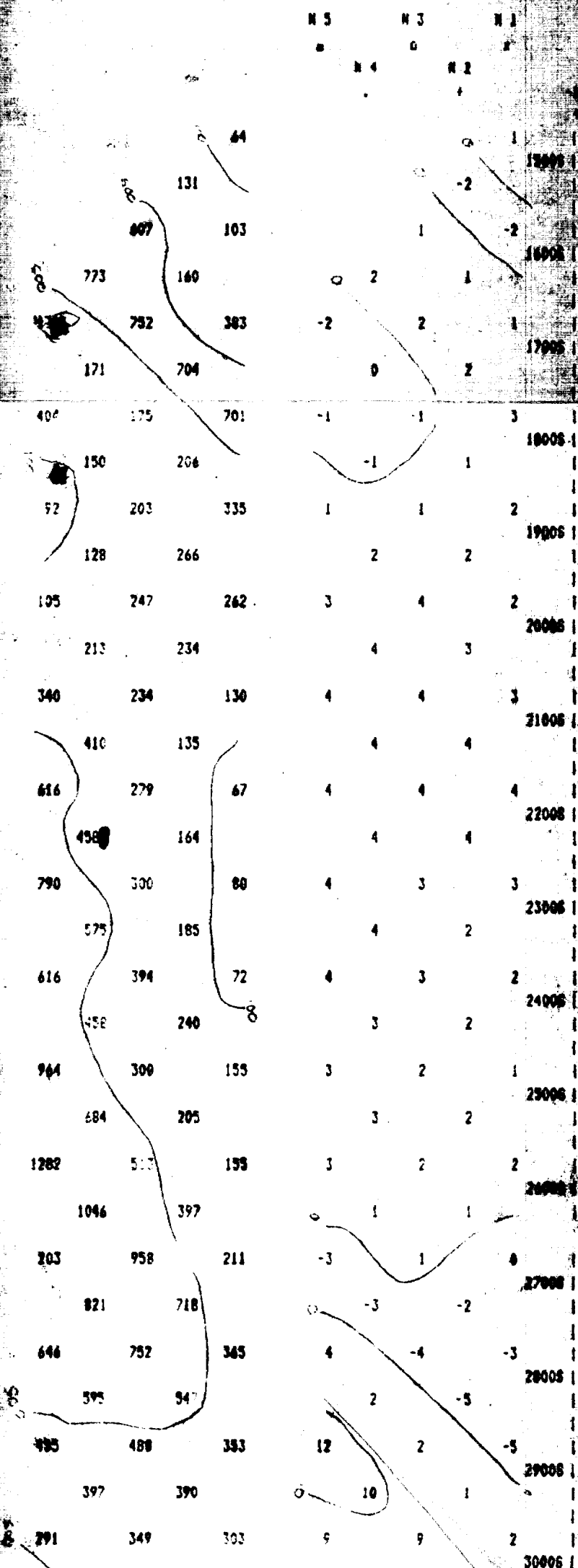
CHZM

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/20/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

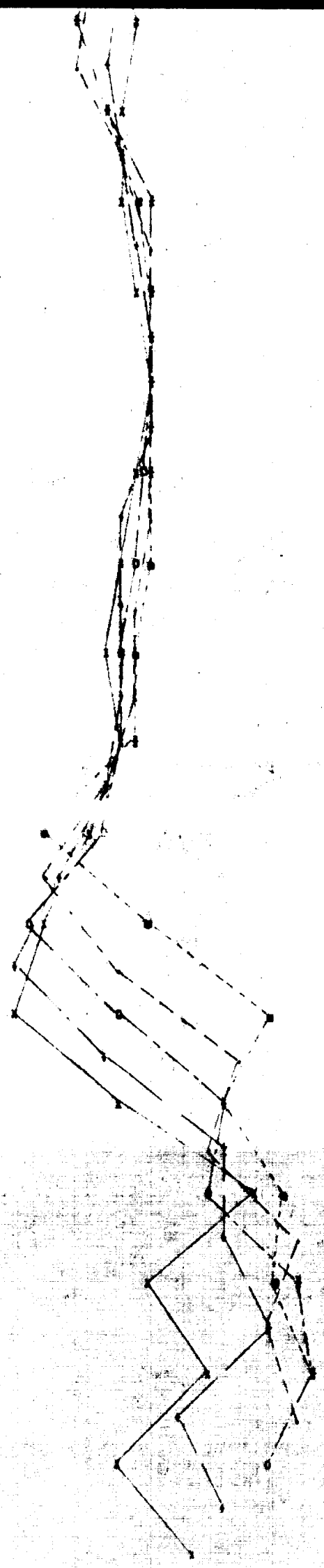
RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)





407	175	701	-1	-1	3	1800S
150	208			1		
52	203	335	1	1	2	1900S
128	266		2	2		
105	247	262	3	4	2	2000S
213	234		4	3		
340	234	130	4	4	3	2100S
410	135		4	4		
616	279	67	4	4	4	2200S
458	164		4	4		
790	300	80	4	3	3	2300S
575	185		4	2		
616	394	72	4	3	2	2400S
558	240	8	3	2		
964	300	155	3	2	1	2500S
684	205		3	2		
1282	511	155	3	2	2	2600S
1046	397		1	1		
203	958	211	-3	1	0	2700S
821	718		-3	-2		
644	752	345	4	-4	-3	2800S
595	94		2	-5		
455	488	353	12	2	-5	2900S
397	390		10	1		
291	349	303	9	9	2	3000S
262	342		9	0		
1106	246	192	13	8	11	3100S
1140	463		14	9		
2545	959	97	12	14	4	3200S
2052	801		12	12		
3420	1473	464	15	8	8	3300S
2854	885		14	6		
2032	471		12	2		3400S
1326			9			

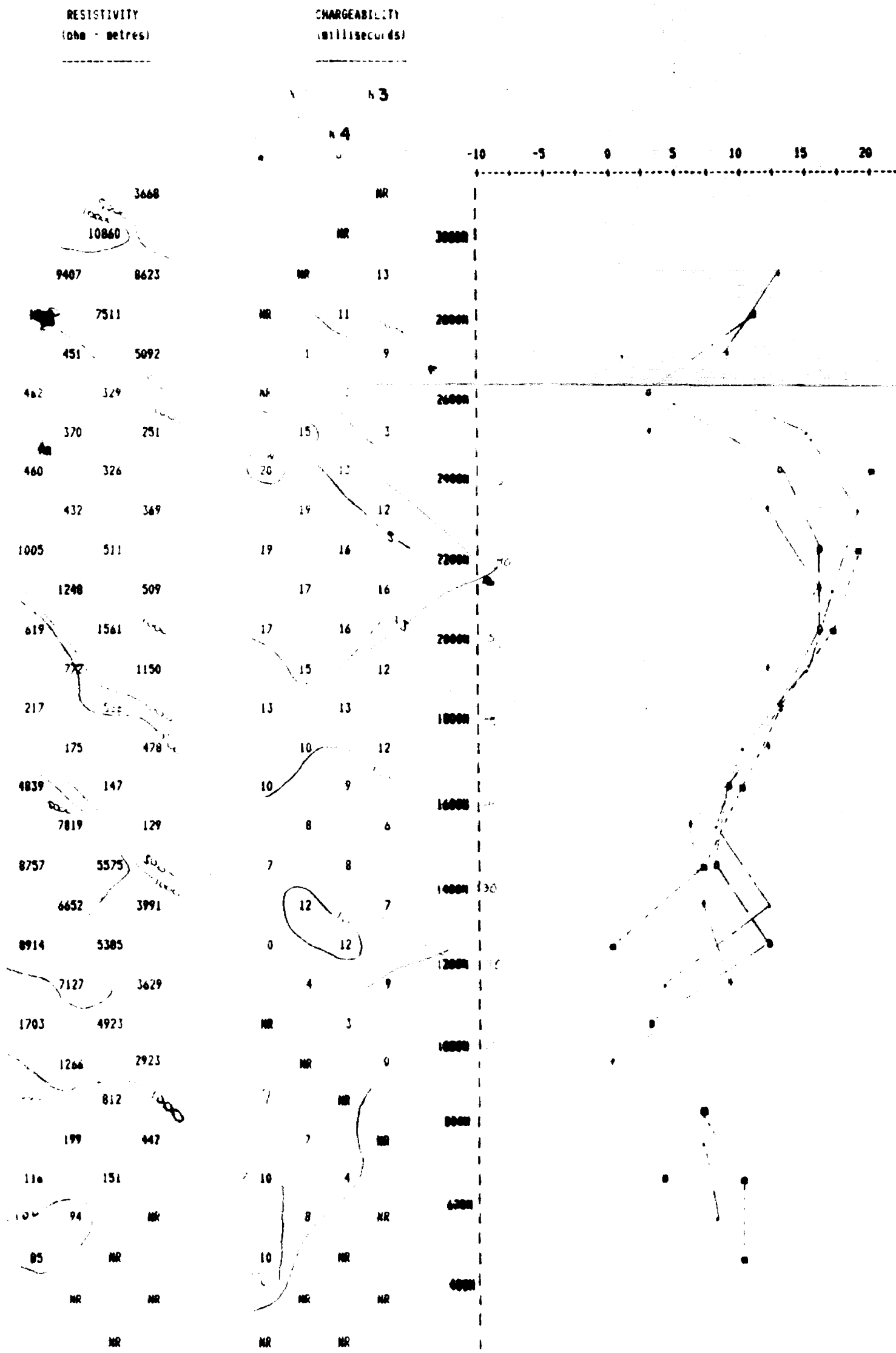


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 RAYAN EXPLORATION  
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LINE 14 E

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 15  
 Operator : GAD  
 A Spacing : 200  
 N Spacings Read : 5 TC  
 Electrode Array : Time Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms





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 RAYAN EXPLORATION  
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 RAYAN EXPLORATION  
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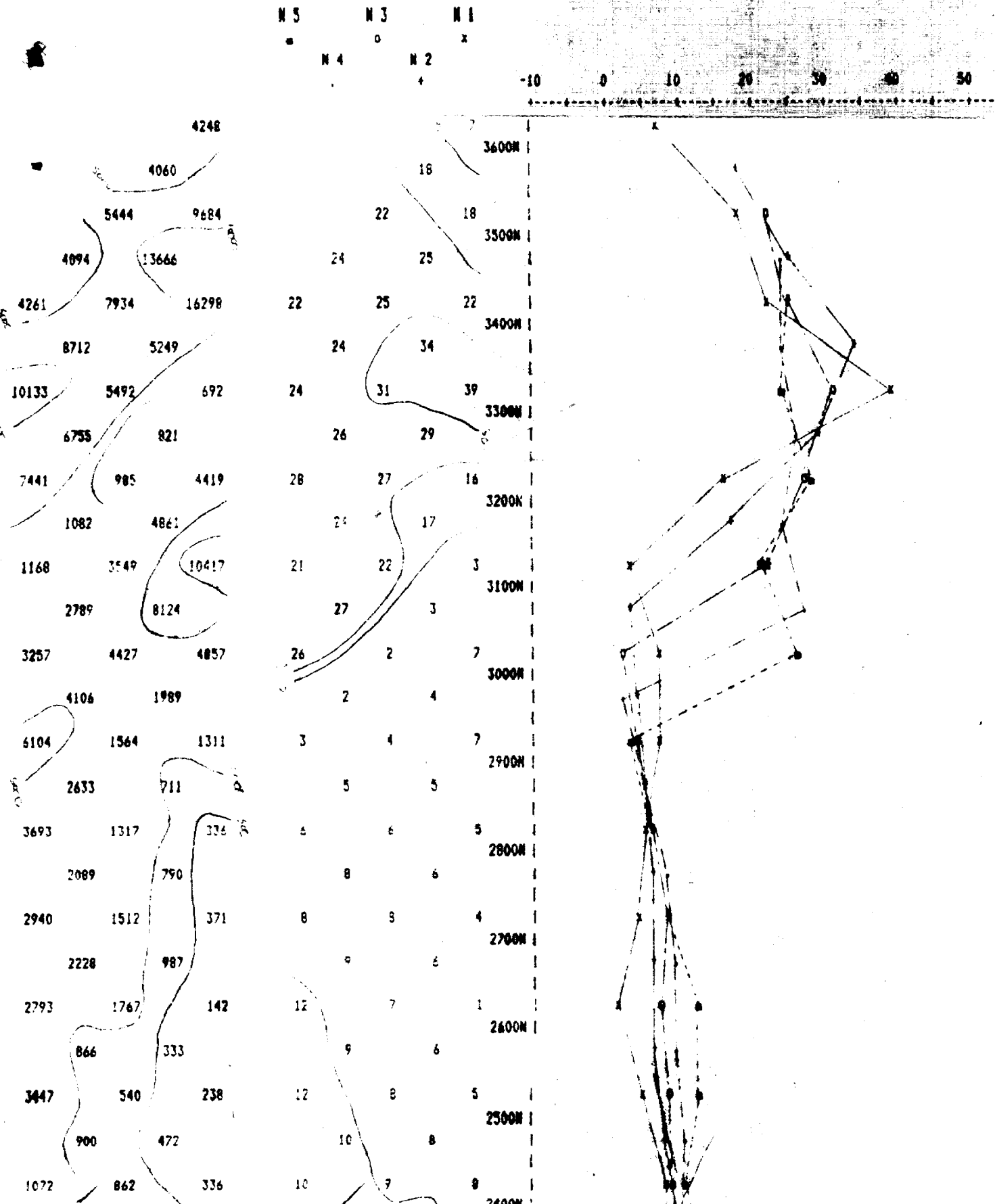
LINE 0 W

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/24/64  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

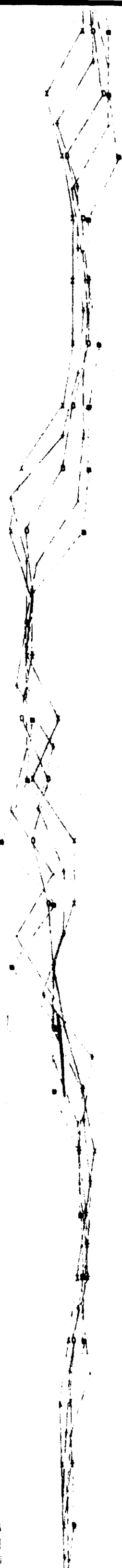
RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

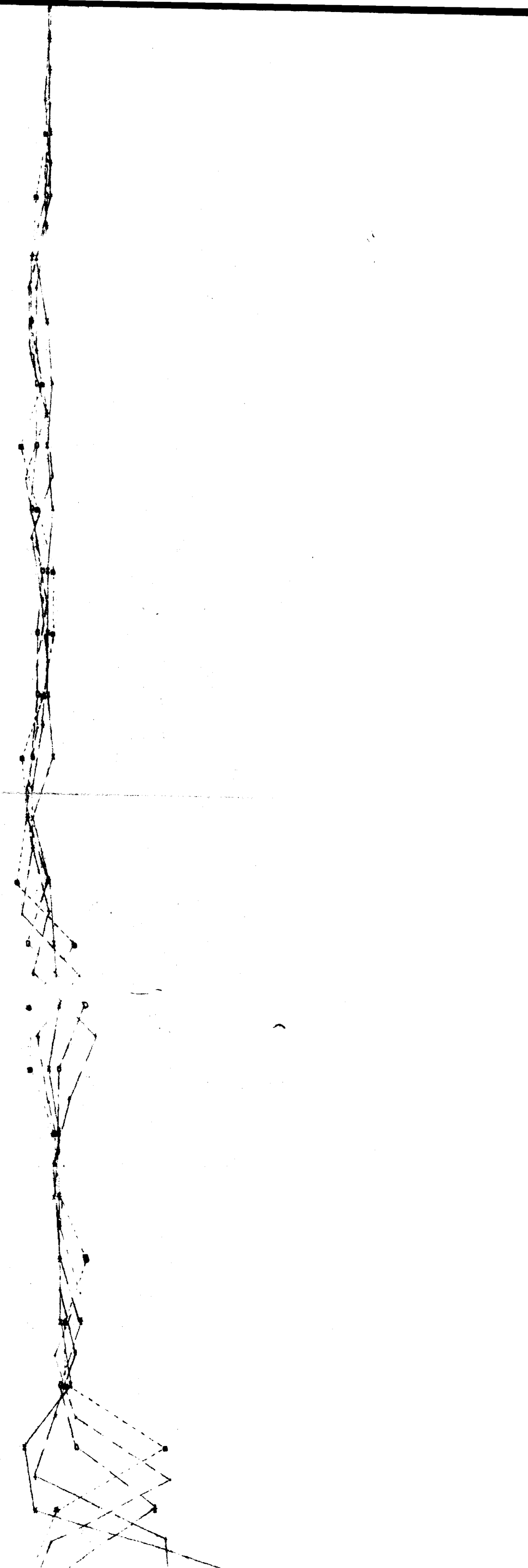


4750	1266	679	13	10	8
	1170	1589		13	10
2462	2971	553	13	12	1
	3997	1541		13	3
5453	2496	654	15	5	4
	3870	1487		6	7
5208	2709	496	9	8	6
	4104	1137		8	7
5745	2652	538	9	9	6
	3130	1326		9	6
4325	2298	316	11	9	6
	2315	821		8	7
5223	1399	347	9	6	4
	2089	947		8	4
2841	1641	423	9	4	-4
	2433	1045		7	-6
3059	1981	400	8	-3	-6
	2763	1149		-1	-3
3788	1851	370	-2	-2	-2
	2977	761		-3	-3
4249	1392	285	-3	-2	-3
	2040	645		-3	-5
2816	1189	1064	-2	-4	3
1702	2496		-3	2	
1986	2585	759	-3	1	-2
	2217	945		-6	-1
2389	1040	1989	-8	-2	6
	5035	1310		2	4
1527	640	7810	2	1	6
	398	1755		-5	4
450	3345	1915	-6	2	2
	4245	1993		2	0
3264	3046	1567		2	4
	2394	5223		2	10
1548	3273	2332	2	8	6
	2089	7007		7	8
3055	1515	1602	7	7	10
	2263	1184		7	9
1645	2019	737	7	8	8
	1358	1654		8	8
740	1253	812		6	6
	54	799		7	5
435	533	406		7	5
	11	704		6	4
279	244	204	4	4	2
	205	181		4	1
236	270	104	4	7	2
	187	117		3	2
157	138	55	4	2	2

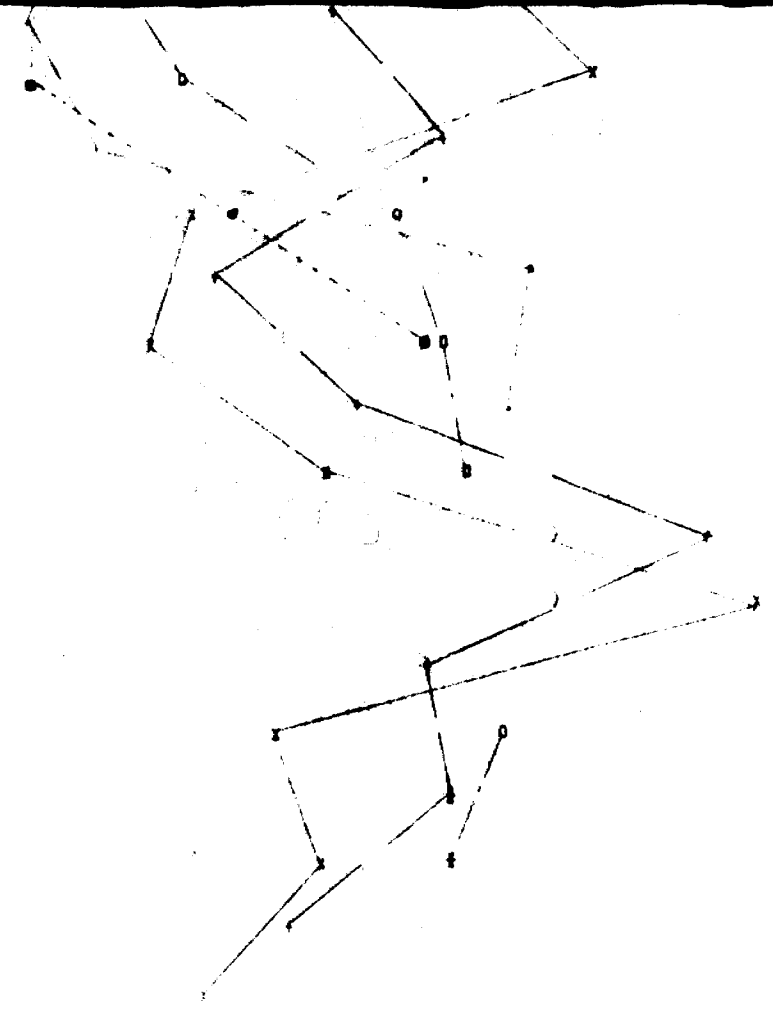
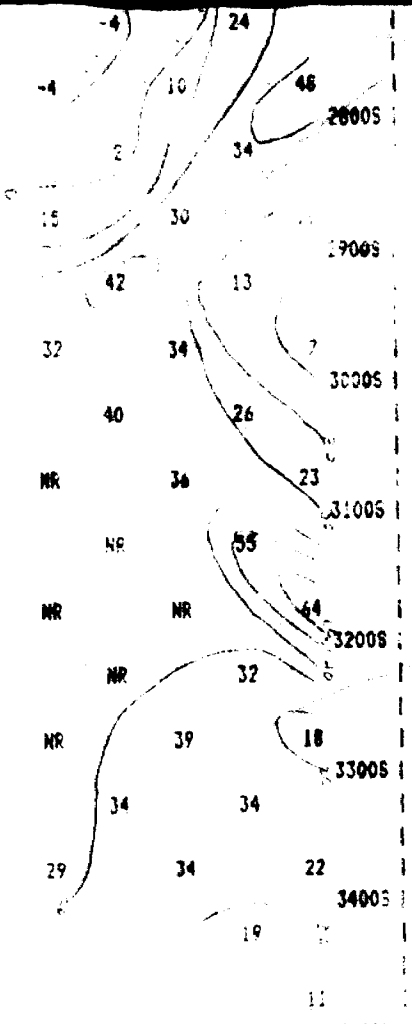
2300M  
2200M  
2100M  
2000M  
1900M  
1800M  
1700M  
1600M  
1500M  
1400M  
1300M  
1200M  
1100M  
1000M  
900M  
800M  
700M  
600M  
500M  
400M  
300M  
200M  
100M  
0M  
100S



170	116	90	2	2	2	2005
173	69		2	2		
147	84	38	2	2	2	3005
111	54		2	1		
124	54	28	1	2	2	4005
92	51		1	2		
101	55	28	-1	1	2	5005
77	44		1	1		
84	55	40	-2	-2	-1	6005
61	40		-3	-1		
118	54	22	-2	-2	1	7005
95	38		-2	-1		
180	25	23	0	-1	2	8005
140	46		1	1		
126	100	31	-4	-1	1	9005
96	74		-3	2		
138	84	42	-1	-2	2	10005
128	71		-1	-2		
192	98	59	2	0	1	11005
140	88		1	0		
149	126	67	2	-1	1	12005
148	115		-1	1		
172	135	81	0	-1	1	13005
153	119		-1	0		
192	119	88	-4	-2	2	14005
220	95		2	-2		
797	192	80	-3	-3	-2	15005
791	171		-2	-2		
553	727	114	-5	1	1	16005
549	600		-4	1		
481	481	345	1	-3	2	17005
459	373			-2		
283	70	570		8	3	18005
267	595		-1	10		
124	328	869	-3	3	1	19005
151	567		1	5		
127	364	475	2	3	3	20005
75	345		4	4		
231	256	197	3	3	2	21005
251	190		3	3		
376	189	98	6	3	3	22005
315	129		7	3		
376	226	70	4	7	3	23005
281	154		2	6		
2498	197	76	4	3	5	24005
1949	138		6	2		
1893	1293	88	23	6	-4	25005
1405	815		24	-2		
1354	1065	259	2	21	-2	26005
1076	904		1	23		



00001	638	1286
1117	805	10164
1485	5303	
1197	2530	8937
5657	15703	
1022	10341	23311
1439	16486	
185	1858	13939
176	1485	
2633	169	678
2394	116	
2413	1588	260
2259	1724	
2280	2478	875
	1834	

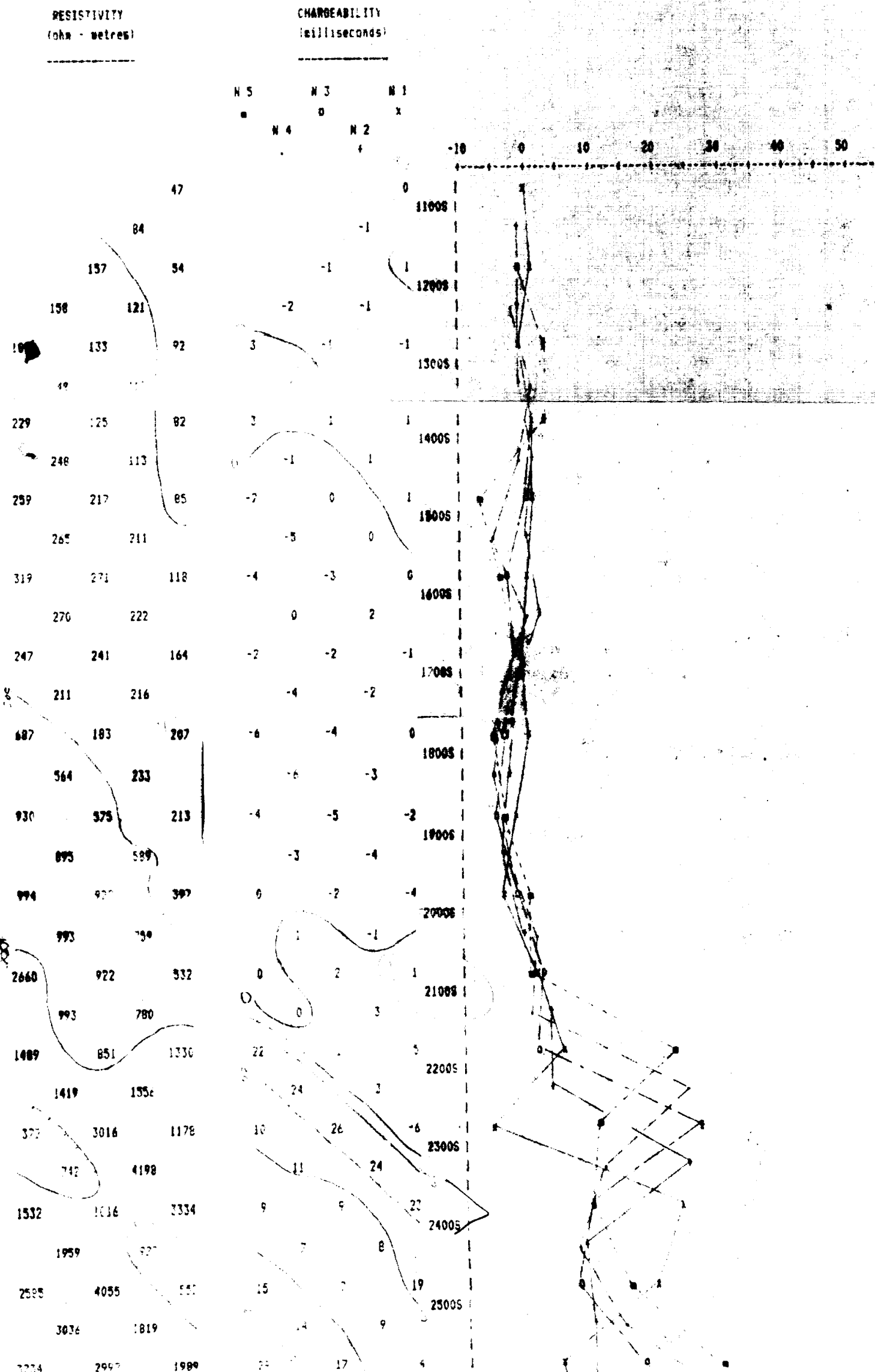


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 RYAN EXPLORATION  
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LINE NO 3

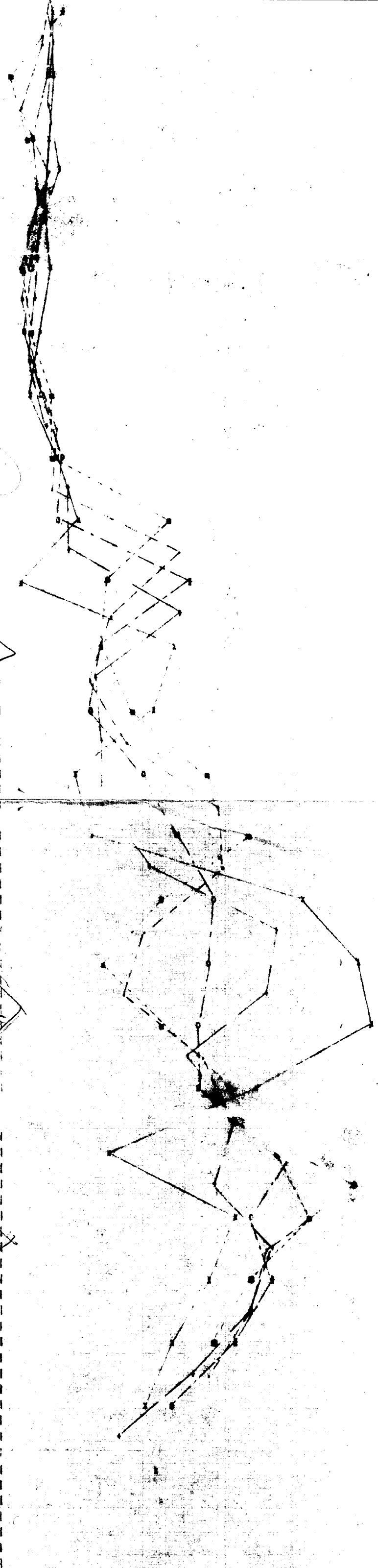
Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 3/3/84  
 Operator : GAD  
 A Spacing : 100 ft  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms





229	125	82	3	1	1
248	113		-1	1	
259	217	85	-7	0	1
265	211		-5	0	
319	271	118	-4	-3	0
270	222		0	2	
247	241	164	-2	-2	-1
211	216		-4	-2	
687	183	207	-6	-4	0
564	233		-6	-3	
930	575	213	-4	-5	-2
895	589		-3	-4	
994	927	397	0	-2	-4
993	709		1	-1	
2660	922	532	0	2	1
993	780		0	3	
1489	851	1330	22	5	
1419	1550		24	3	
377	3016	1178	10	26	-6
742	4198		11	24	
1532	1016	3334	9	9	23
1959	327		7	8	
2695	4055	551	15	7	19
3036	1819		14	9	
3234	2997	1989	25	17	4
3467	3845		31	9	
4071	4729	2394	35	23	
4772	3134		32	18	
5524	3226	356	20	30	47
4419	2955		17	42	
3082	5947	7140	9	29	55
6235	8040		11	40	
6920	6434	5193	20	27	60
5040	5086		28	25	
10018	7424	4026	11	27	
9689	7834		20	34	
8026	9055	17677	41	45	10
8955	14148		53	30	
7399	16036	10312	49	34	
11410	14318		40		
7453	13258	14092	37	29	
8838	11490		37	27	
15467	7931	6535	30	34	22
5613	9487		29	26	
6711	6677		22	17	
6693			17		
9652					19

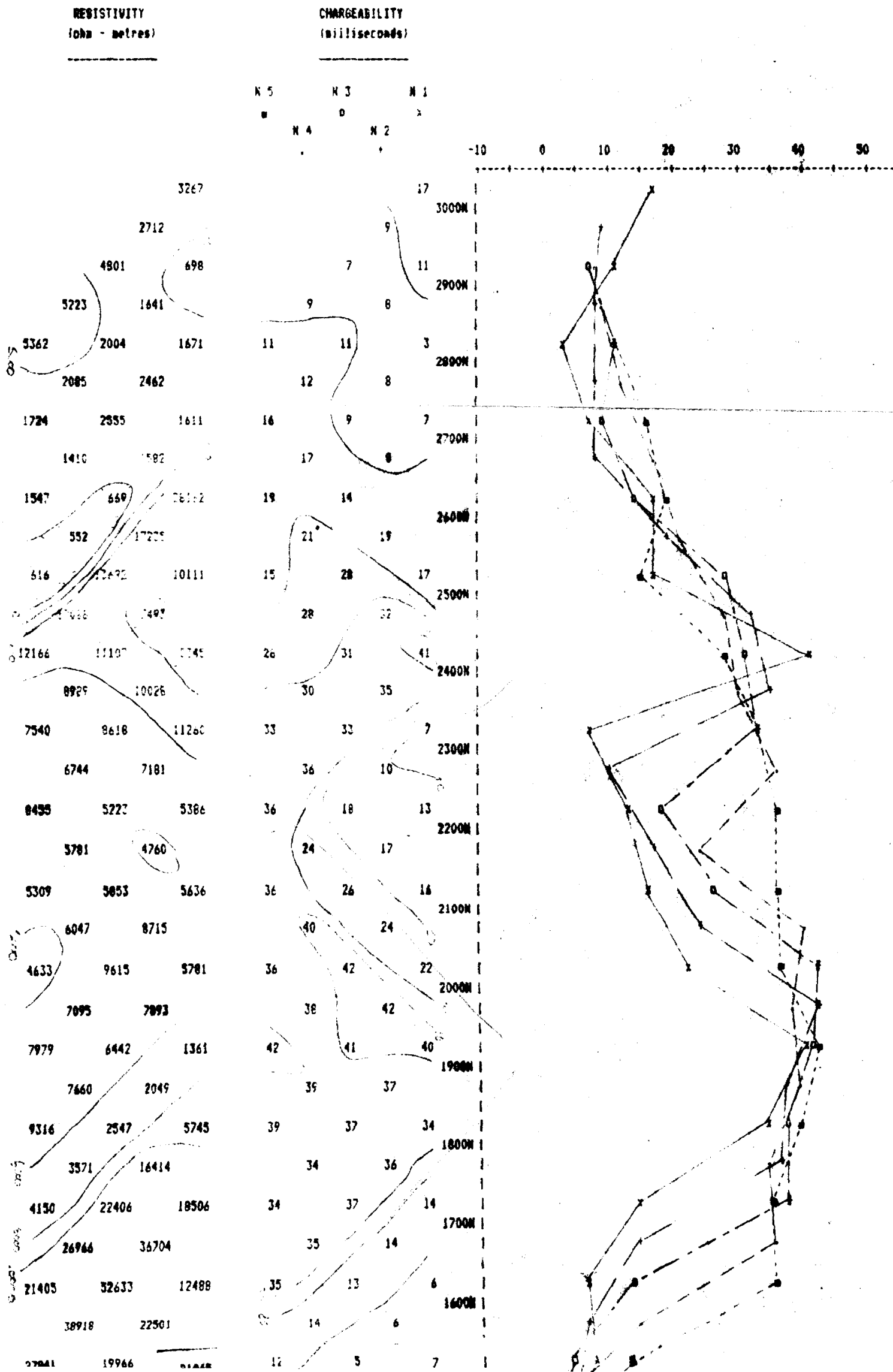


\*\*\*\*\*  
 RAYAN EXPLORATION  
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LINE 10 W

Property : DEL-NORTE  
 Client : SILVER LAKE

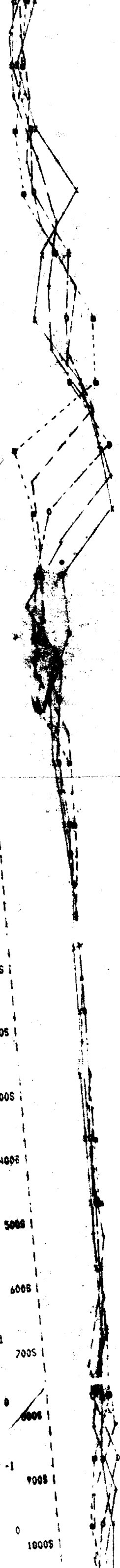
Date of Survey : 2/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

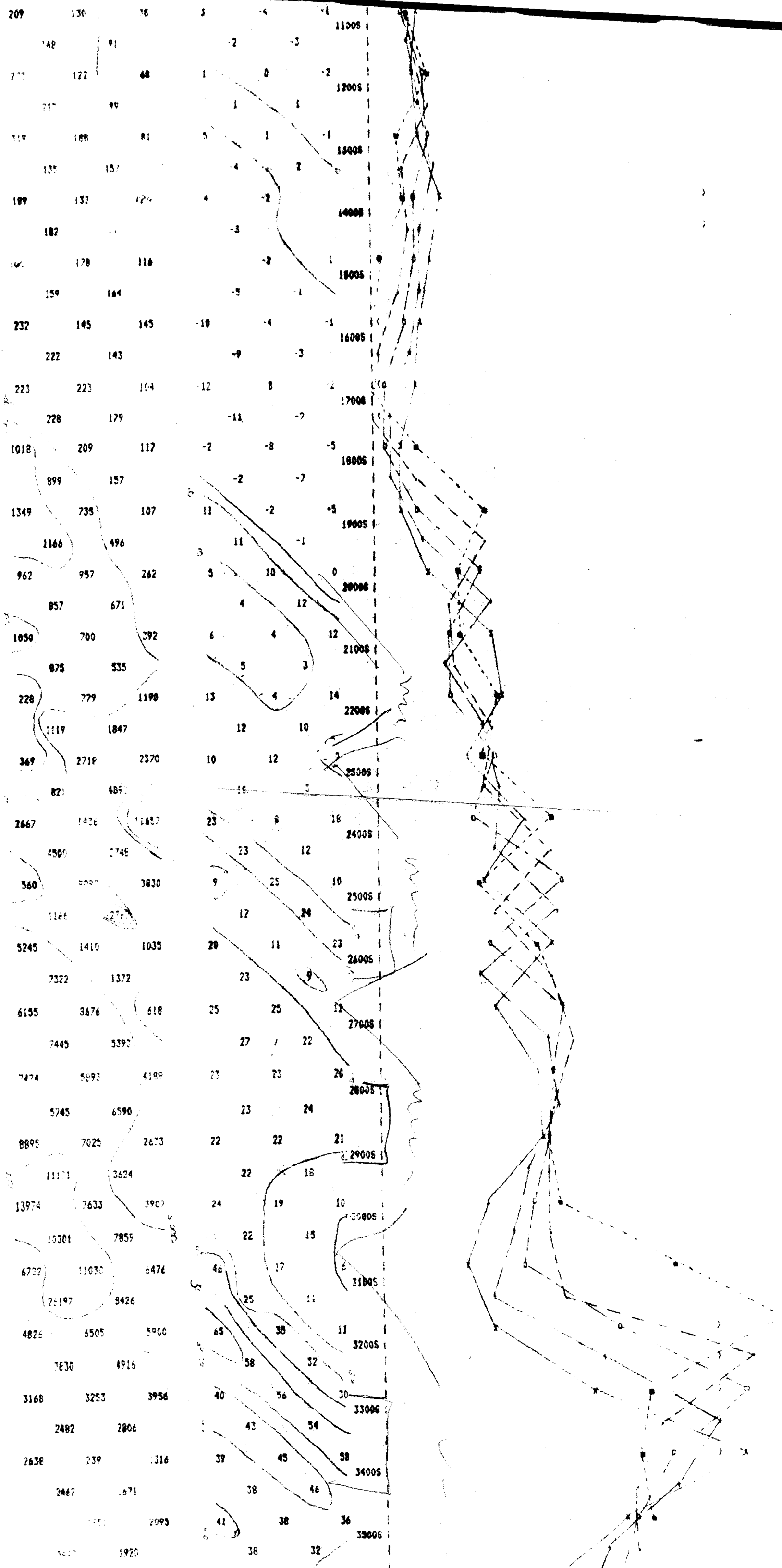


12535 9280 11302  
 8565 8419  
 7140 9471 8102  
 7113 10863  
 8672 9489 5919  
 13008 5198  
 10885 6764 4377  
 6518 7674  
 6629 8466 9756  
 8397 12699  
 8777 14180 8601  
 16414 12616  
 13607 14194 22759  
 11490 26114  
 969 20482 26930  
 1212 23585  
 1073 888 17357  
 550 467  
 619 264 327  
 344 192  
 393 264 308  
 382 462  
 436 521 248  
 607 264  
 743 368  
 4 210  
 672 597 83  
 420 162  
 499 279 64  
 360 144  
 438 226 70  
 290 131 70  
 276 185  
 168 117  
 223 128 55  
 162 87  
 174 114 45  
 126 75  
 160 91 36  
 122 61  
 118 87 34  
 8 97 58  
 70 64 29  
 58 41  
 165 42 18  
 114 32  
 189 81 27  
 139 33  
 274 104 10

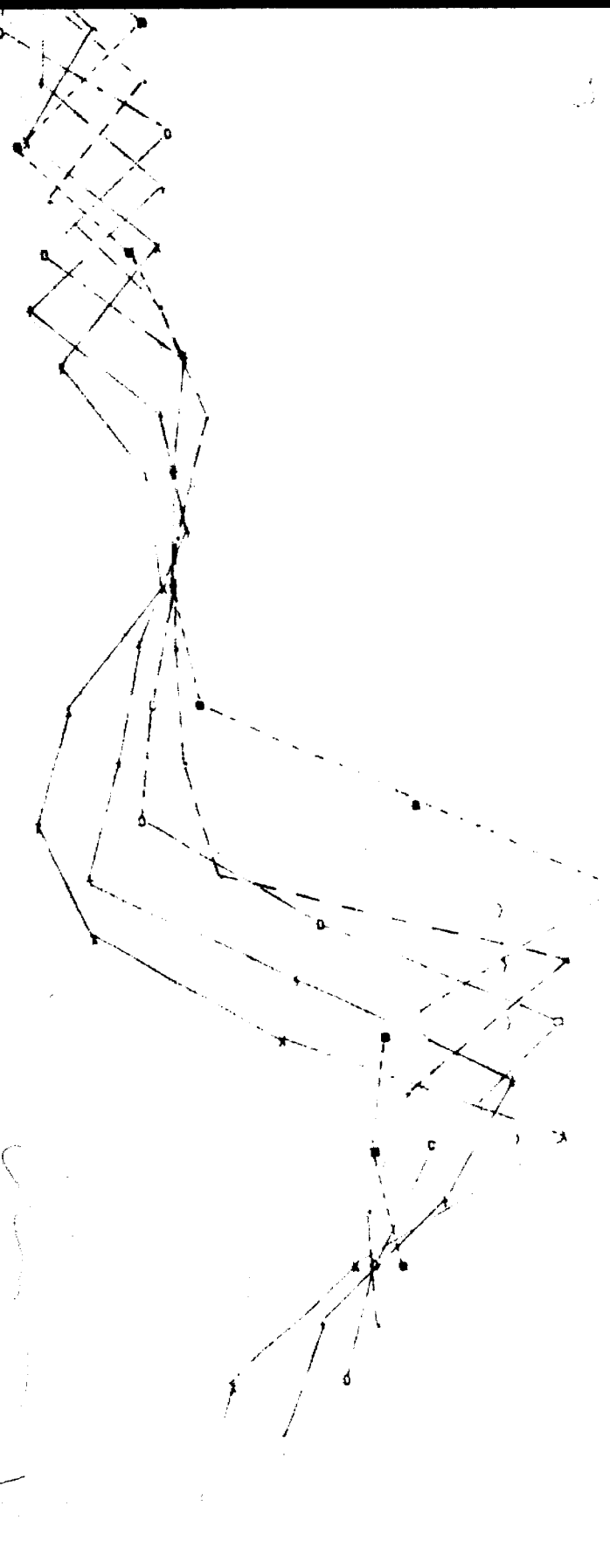
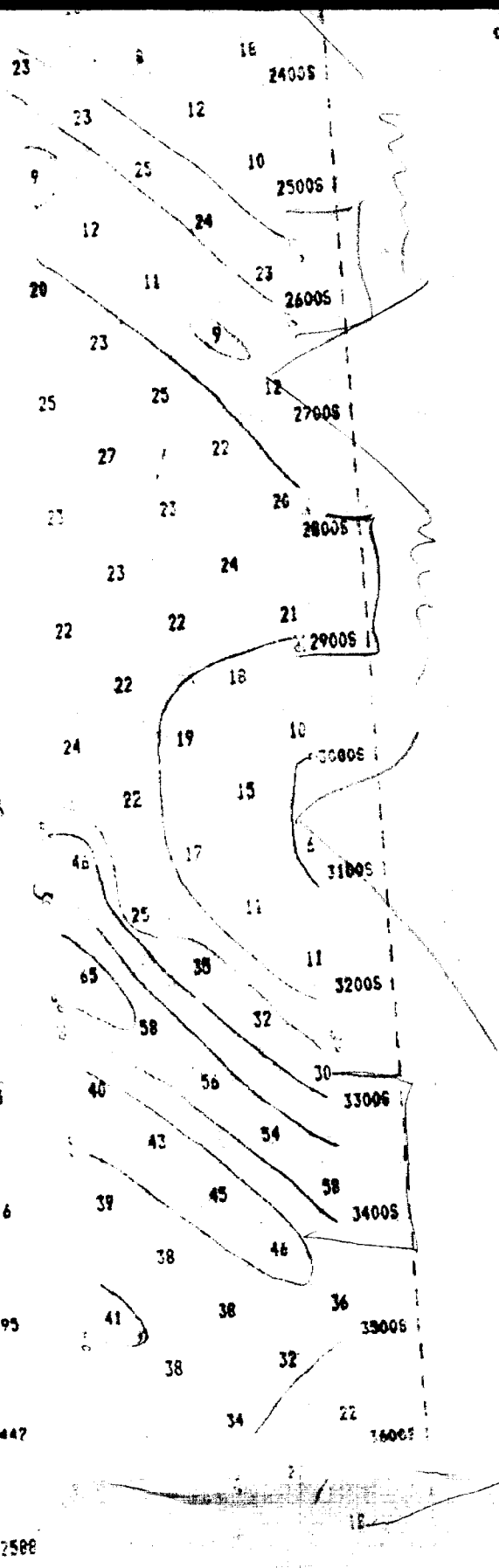
1 5  
 2 0  
 2 0  
 3 0  
 0 3  
 2 4  
 1 3 11  
 4 7  
 6 9 4  
 10 5  
 13 8 2  
 8 5  
 13 8 10  
 12 12  
 -3 15 13  
 0 15  
 0 3 15  
 1 5  
 1 0 5  
 1 1 -2  
 1 -1 4  
 -1 3 1  
 4 2  
 4 2  
 4 3 2  
 4 3 3  
 3 3 3  
 3 3 2  
 3 3 1005  
 3 3 2  
 3 3 2005  
 3 3 7  
 3 3 1  
 3005  
 3 2  
 4005  
 2 2  
 5005  
 3 1  
 6005  
 1 2  
 7005  
 2 0  
 -3 0  
 2 -2  
 -3 2 -1  
 -3 1  
 -4 -2  
 -4 2

1400N  
 1300N  
 1200N  
 1100N  
 1000N  
 900N  
 800N  
 700N  
 600N  
 500N  
 400N  
 300N  
 200N  
 100N  
 0N  
 100S  
 200S  
 300S  
 400S  
 500S  
 600S  
 700S  
 800S  
 900S  
 1000S





82 487  
2667 1426 11657  
4500 2748 3830  
560 1166 275  
5245 1410 1035  
7322 1372  
6155 3676 618  
7445 5397  
7474 5893 4198  
5745 6590  
8895 7025 2673  
11171 3624  
13974 7633 3907  
10301 7859  
6722 11030 6476  
25197 8426  
4826 6505 5900  
7830 4915  
3168 3253 3958  
2482 2806  
2638 239 1116  
2467 1671  
2095  
1920  
775 2447  
3728  
2588



\*\*\*\*\*  
 RAYAN EXPLORATION  
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LINE 24 B

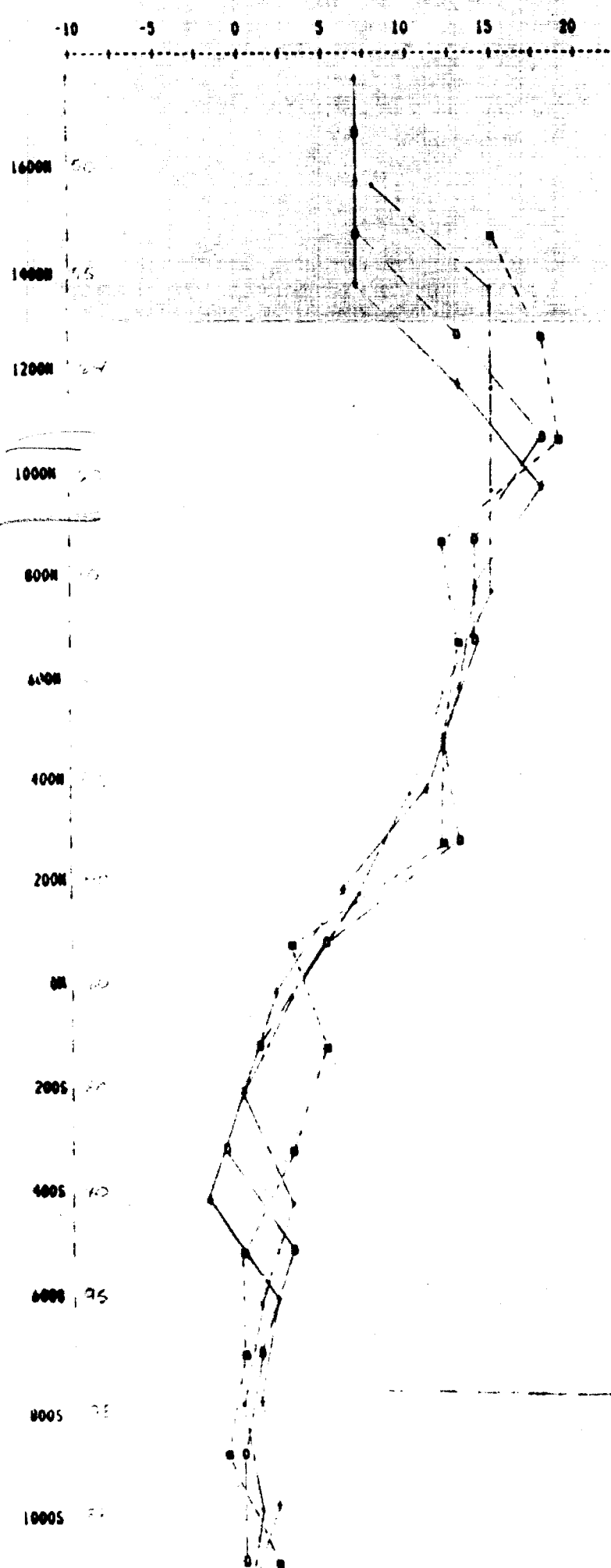
Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 200 F  
 N Spacings Read : 3 TO 6  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

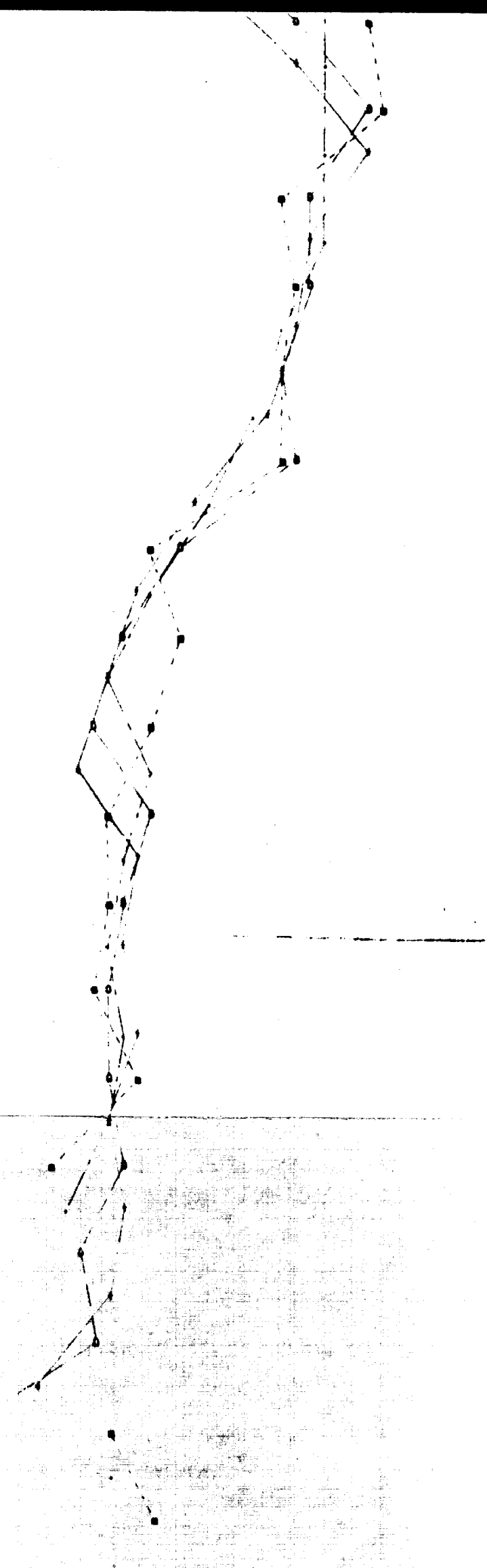
RESISTIVITY (ohm - metres)		CHARGEABILITY (milliseconds)	
N 5	N 3	N 5	N 3
N 6	N 4	N 6	N 4
a	b	a	b
			7
	334		
	460		7
	526	8	7
9669	357	15	7
	6537	15	7
22493	4446	18	13
	15637	15	13
28011	10732	19	18
	20496	15	18
6976	14412	12	14
	4982	15	14
	8738		
2415	3424	13	14
	1771	11	13
	2085		
1706	1227	12	12
	1265	10	11
	1254		
665	1342	12	13
	758	7	6
	1330		
322	986	3	5
	600	3	2
	1063		
293	839	5	1
	466	0	0
	597		
467	352	3	-1
	388	3	-2
	255		
2121	285	0	3
	1740	1	2
	177		
740	1290	0	1
	598	0	1
	886		
431	451	-1	0
	346	1	2
	323		
379	264	2	0



22493 4446  
 15637 2759  
 28011 10732  
 20496 6715  
 6976 14412  
 4982 8738  
 2415 3424  
 1771 2085  
 1706 1227  
 1265 1254  
 665 1342  
 758 1330  
 322 986  
 600 1063  
 293 839  
 466 597  
 467 352  
 388 255  
 2121 285  
 1748 177  
 740 1290  
 598 886  
 431 451  
 340 323  
 379 264  
 310 208  
 255 259  
 205 177  
 36 182  
 47 404  
 54 596  
 210 196  
 1088 222  
 932  
 2382

18 13  
 15 13  
 19 18  
 15 18  
 12 14  
 15 14  
 13 14  
 11 12  
 12 12  
 10 11  
 12 13  
 7 6  
 3 5  
 3 2  
 5 1  
 0 0  
 3 -1  
 3 -2  
 0 3  
 1 2  
 0 1  
 0 1  
 -1 0  
 1 2  
 2 0  
 0 0  
 -4 1  
 -3 1  
 NR -2  
 NR 0  
 NR -1  
 -14 -5  
 0 -12  
 0  
 3

1200N  
 1000N  
 800N  
 600N  
 400N  
 200N  
 0N  
 200S  
 400S  
 600S  
 800S  
 1000S  
 1200S  
 1400S  
 1600S  
 1800S  
 2000S

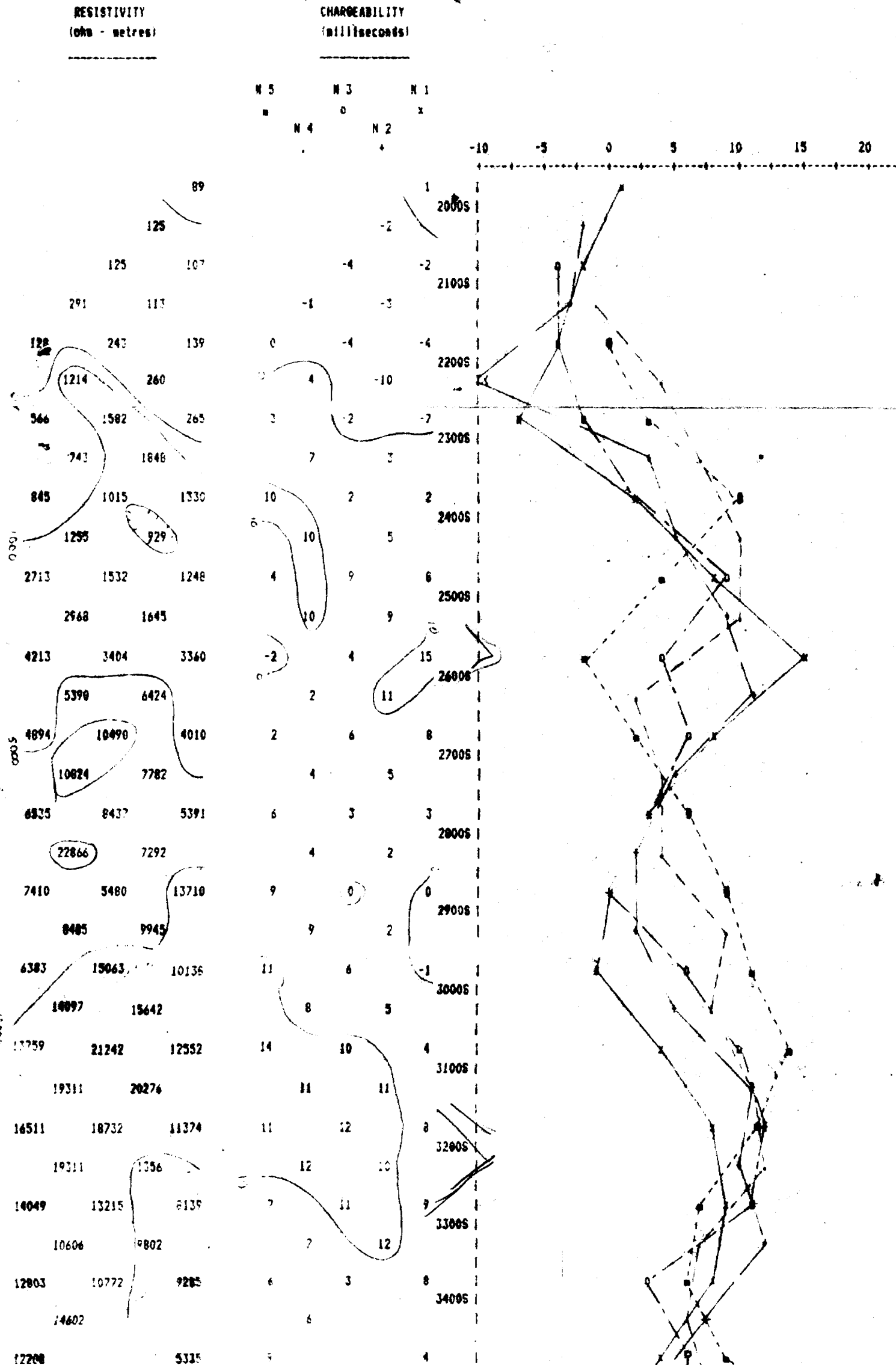


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 RAYAN EXPLORATION  
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LINE 20 E

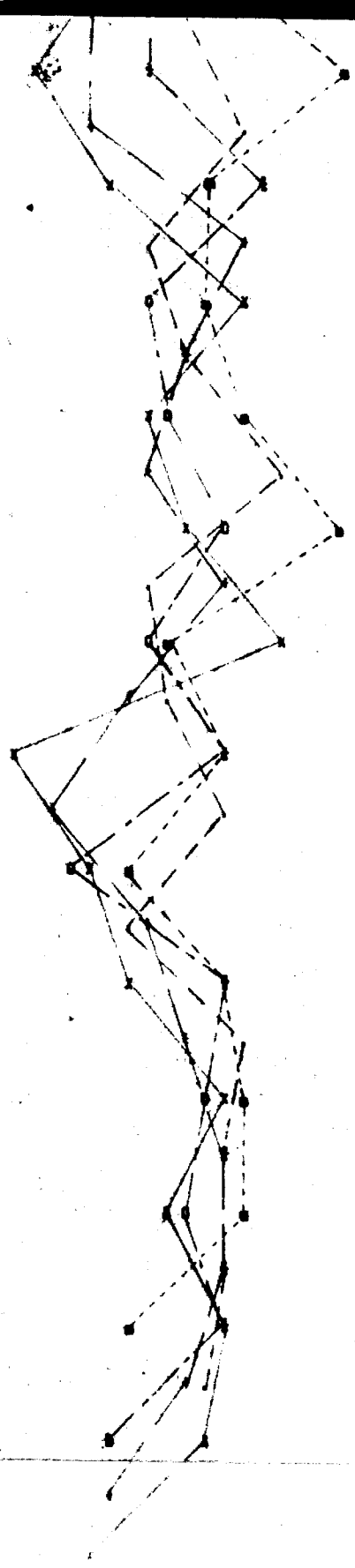
Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms





0618	9486	6	0	3600S
14875	7977	14	3	
11849	13864	9	12	3700S
10920	9887	6	11	
7205	9071	9	6	3800S
5846	7348	8	6	
19352	4236	11	7	3900S
18041	3390	13	6	
16026	14554	16	10	4000S
15958	12567	6	10	
11921	13788	7	6	4100S
12820	11225	7	5	
16713	12727	10	10	4200S
16495	8033	10	1	
11059	14835	5	2	4300S
8851	18817	5	6	
10528	12089	10	10	4400S
14987	13357	11	8	
14773	16086	11	9	4500S
16517	15036	10	10	
12341	16739	11	8	4600S
13192	18441	10	10	
12979	16455	5	10	4700S
11348	14976	9	8	
10611	17379	4	9	4800S
13370		4		

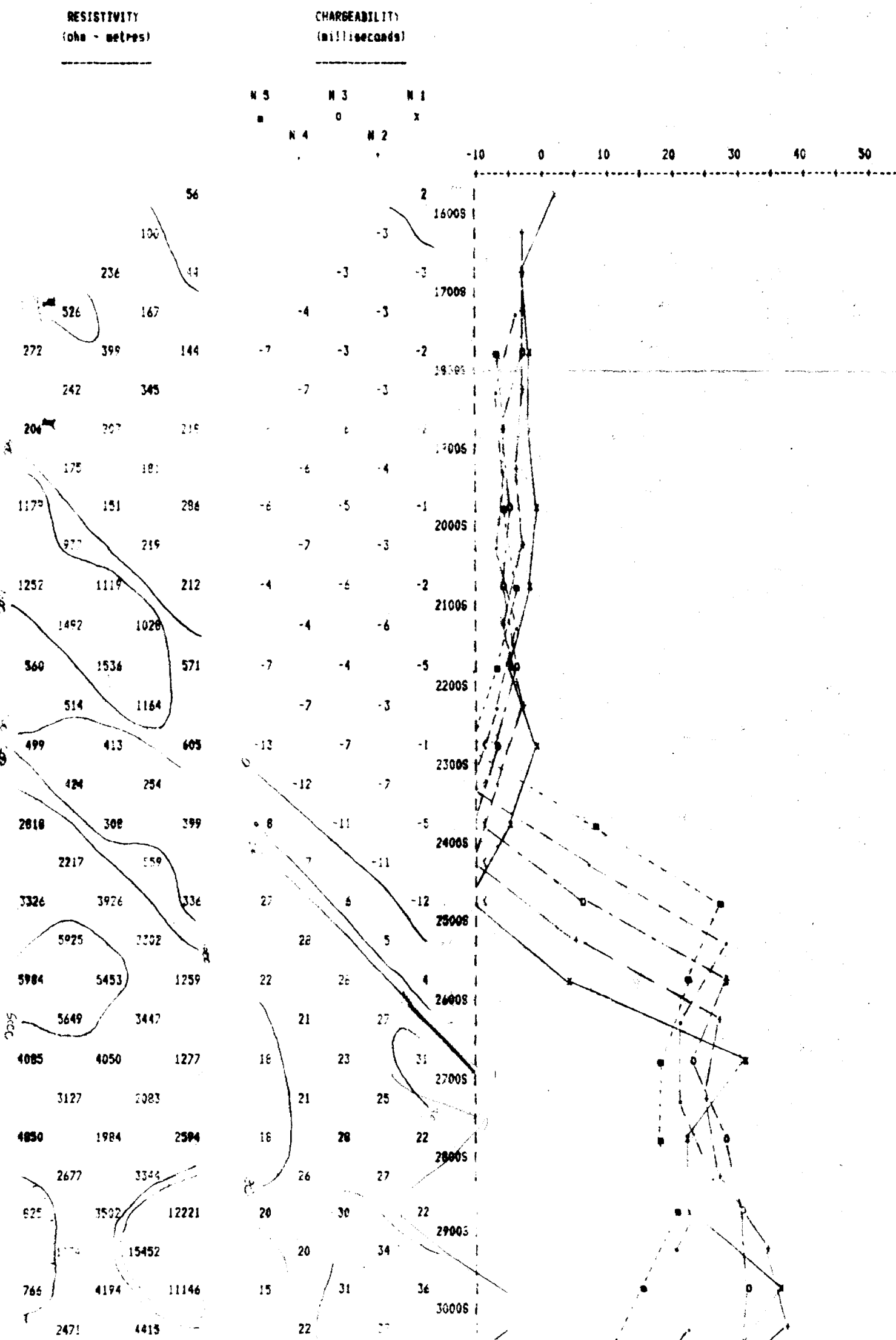


\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

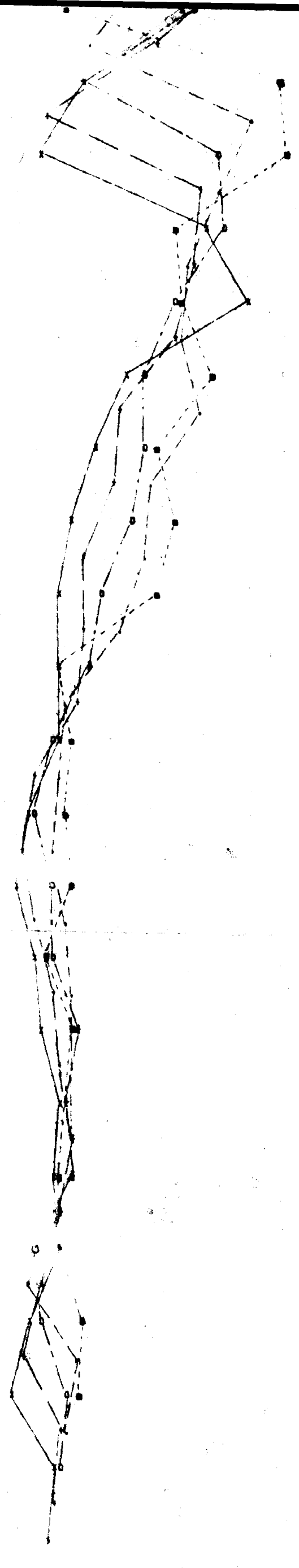
LINE 24W-B

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



9978	2252	13
19654	9927	44
19887	4463	39
13808	14994	45
12424	8151	34
13831	8179	27
8980	5171	29
8043	5824	28
5605	5368	28
6605	3570	33
5015	11969	31
9092	6466	24
10546	8672	23
18173	12422	27
18384	16927	22
5098	14590	24
5129	14114	18
1508	3878	8
1407	2578	9
1061	1060	10
917	907	8
869	773	9
783	888	7
1944	919	10
2864	572	7
10239	1994	6
11904	56	10
14906	7084	10
10863	3874	10
8385	8828	9
6347	3604	10
5318	3913	8
4072	2401	8
4822	2873	9
5264	2873	3
3076	5207	12
3112	5223	11
2239	3134	11
2263	1870	9
2499	2507	8
1818		7
2416		4



31005  
32005  
33005  
34005  
35005  
36005  
37005  
38005  
39005  
40005  
41005  
42005  
43005  
44005  
45005  
46005  
47005  
48005  
49005  
50005  
51005  
52005

\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

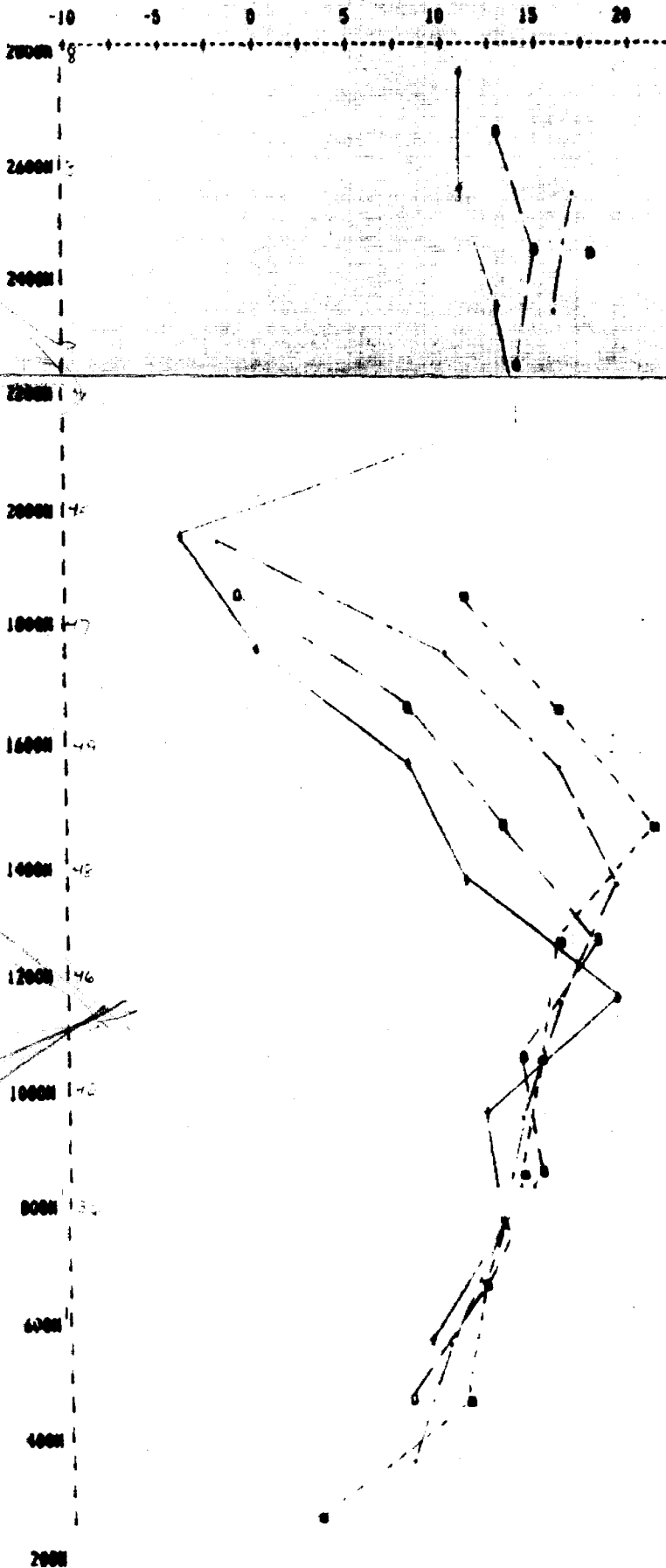
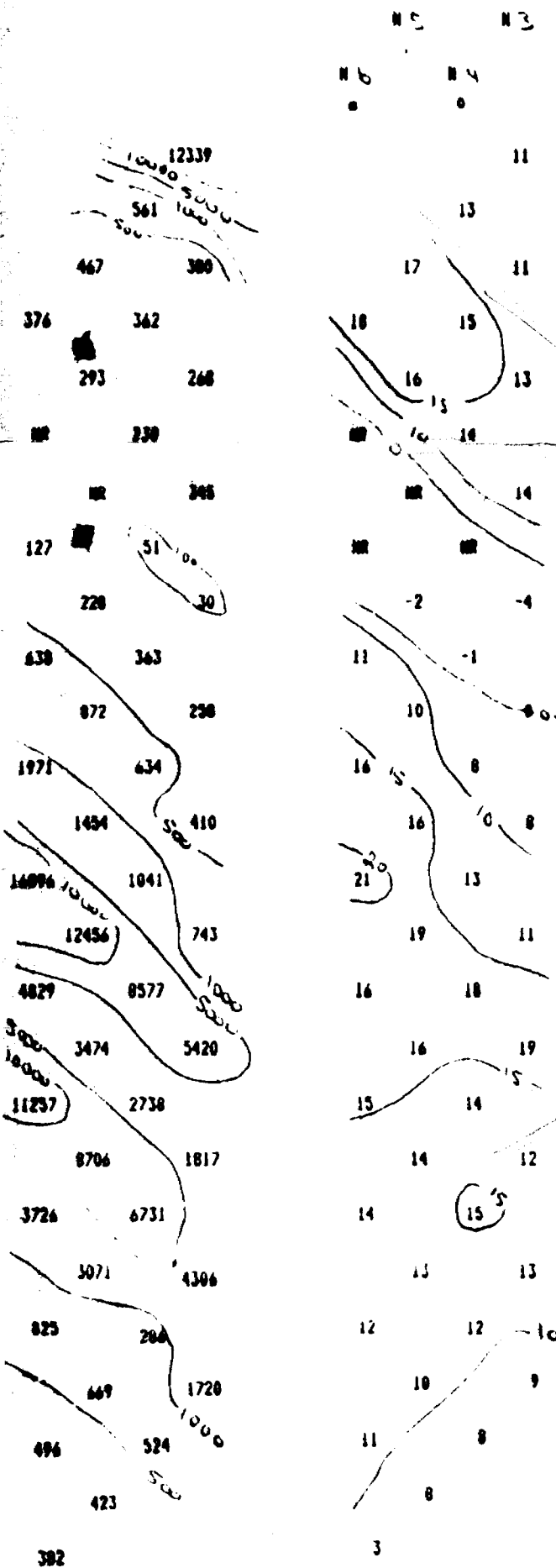
LINE NO 8

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 Spacing : 200 F  
 Spacings Read : 3 TO 6  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

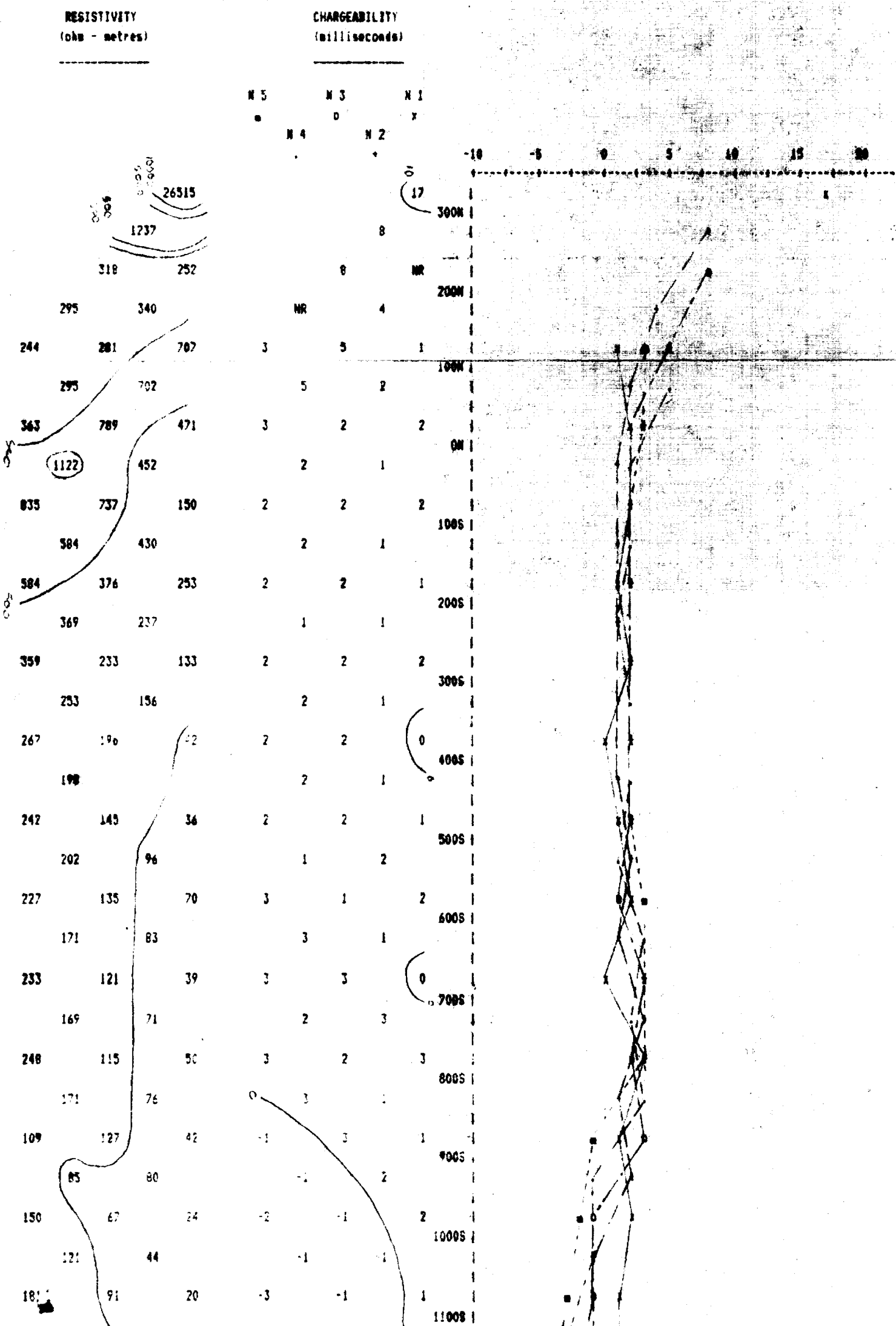


\*\*\*\*\*  
 RADIAN EXPLORATION  
 \*\*\*\*\*

LINE 22 W

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



295	702	5	2	1000		
363	789	471	3	2	2	00
(1122)	452	2	1	1005		
835	737	150	2	2	2	1005
584	430	2	1	2005		
584	376	253	2	2	1	2005
369	237	1	1	3005		
359	233	133	2	2	2	3005
253	156	2	1	4005		
267	190	42	2	2	0	4005
198	2	2	1	5005		
242	143	36	2	2	1	5005
202	96	1	2	6005		
227	135	70	3	1	2	6005
171	83	3	1	7005		
233	121	39	3	3	0	7005
169	71	2	3	8005		
248	115	50	3	2	3	8005
171	76	3	1	9005		
109	127	42	-1	3	1	9005
85	80	-1	2	10005		
150	67	24	-2	-1	2	10005
121	44	-1	1	11005		
181	91	20	-3	-1	1	11005
147	65	-3	-1	12005		
194	119	65	-4	-2	1	12005
161	91	-4	-3	13005		
181	119	41	-2	-3	-2	13005
141	98	-2	2	14005		
100	121	45	-1	-1	-1	14005
150	94	33	-8	0	1	15005
137	53	-6	1	16005		
354	109	-3	-5	17005		
276	-3	18005				
529	-4	19005				



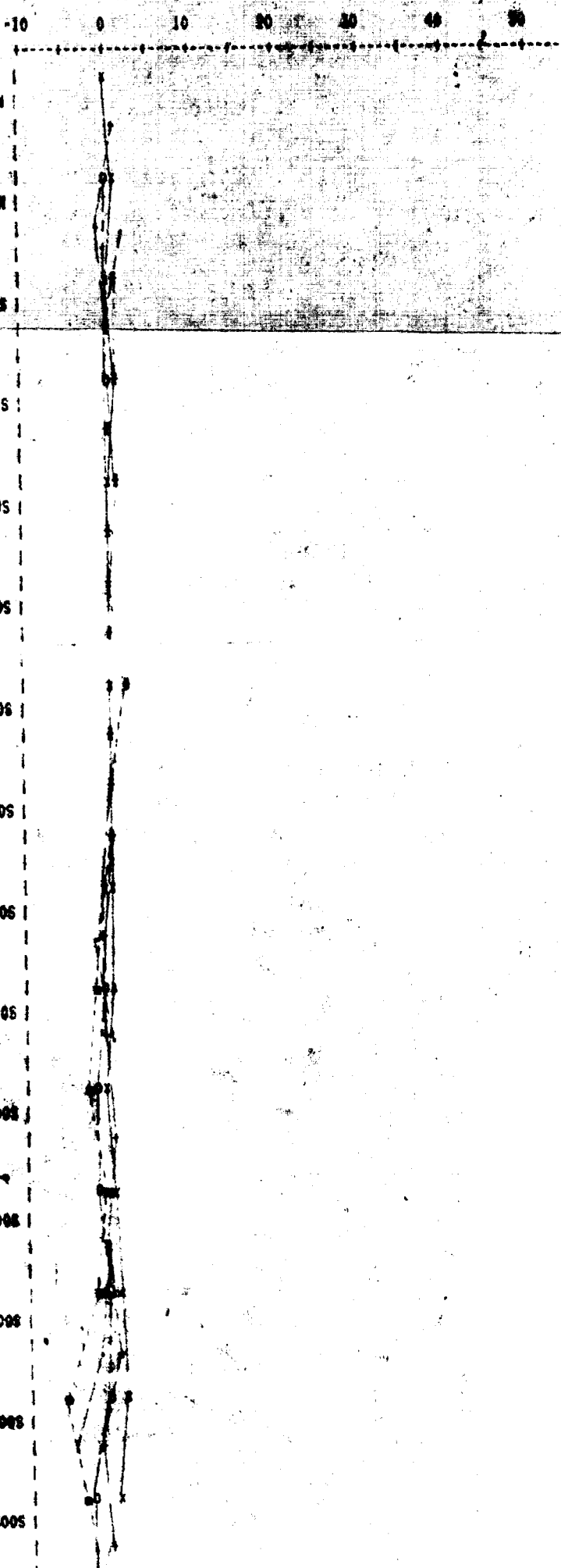
\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE ■ ■

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/21/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

RESISTIVITY (ohm - metres)	CHARGEABILITY (milliseconds)				
	N 5	N 4	N 3	N 2	N 1
1113					
619					
287					
294					
215			2	-1	
174					
202			1	0	0
139					
139					
178			1	0	1
109					
128			0	0	0
61					
160			0	1	0
87					
119			0	0	0
53					
134			0	0	0
82					
110					
122			2	0	0
73					
92			0	0	0
43					
89			0	0	0
70					
24					
64			0	0	0
42					
68			-1	-1	0
46					
22					
52			-2	-1	0
35					
104			-2	-1	0
41					
20					
79			0	-1	0
31					
77			-3	-2	-1
60					
15					
NR					
42					
110			-1	-2	0
47					
27					
84					
37					
60			7	2	0
74					
25					
52			-2	0	0
52					
73			-6	-1	1
41					
12					
52			-5	-2	0
35					
226			-4	-3	0
62					
38					
195			-3	-1	0
50					



178	109	46	1	0	1	200S
128	61		0	0	0	
160	87	33	0	1	0	300S
119	53		0	0	0	
134	82	25	0	0	0	400S
115	16		0	0	0	
122	73	28	2	0	0	500S
92	43		0	0	0	
89	70	24	0	0	0	600S
64	42		0	0	0	
68	46	22	-1	-1	0	700S
52	35		-2	-1	0	
104	41	20	-2	-1	0	800S
79	31		0	-1	0	
77	60	15	-3	-2	-1	900S
NR	42				0	
110	47	22	-1	-2	0	1000S
84	37			-1	0	
68	74	28	7	0	0	1100S
52	52		-2	0	0	
73	41	12	-6	-1	1	1200S
52	35		-5	-2	0	
226	63	38	-4	-3	0	1300S
195	50		-3	-1	0	
155	165					1400S

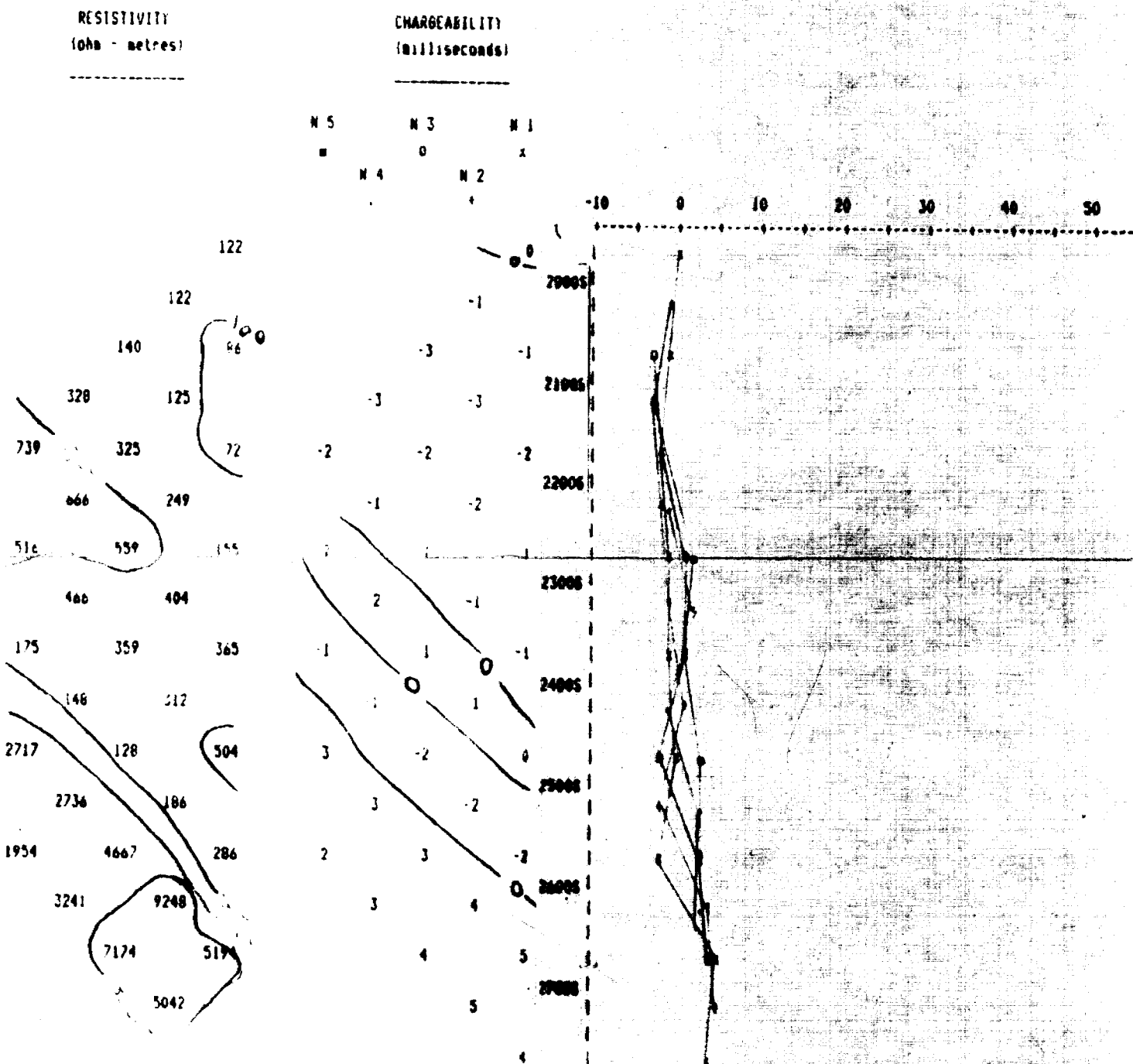


RAYAN EXPLORATION  
 \*\*\*\*\*

LINE N4 E

Property : DEL NORTE  
 Client : SILVER LAKE

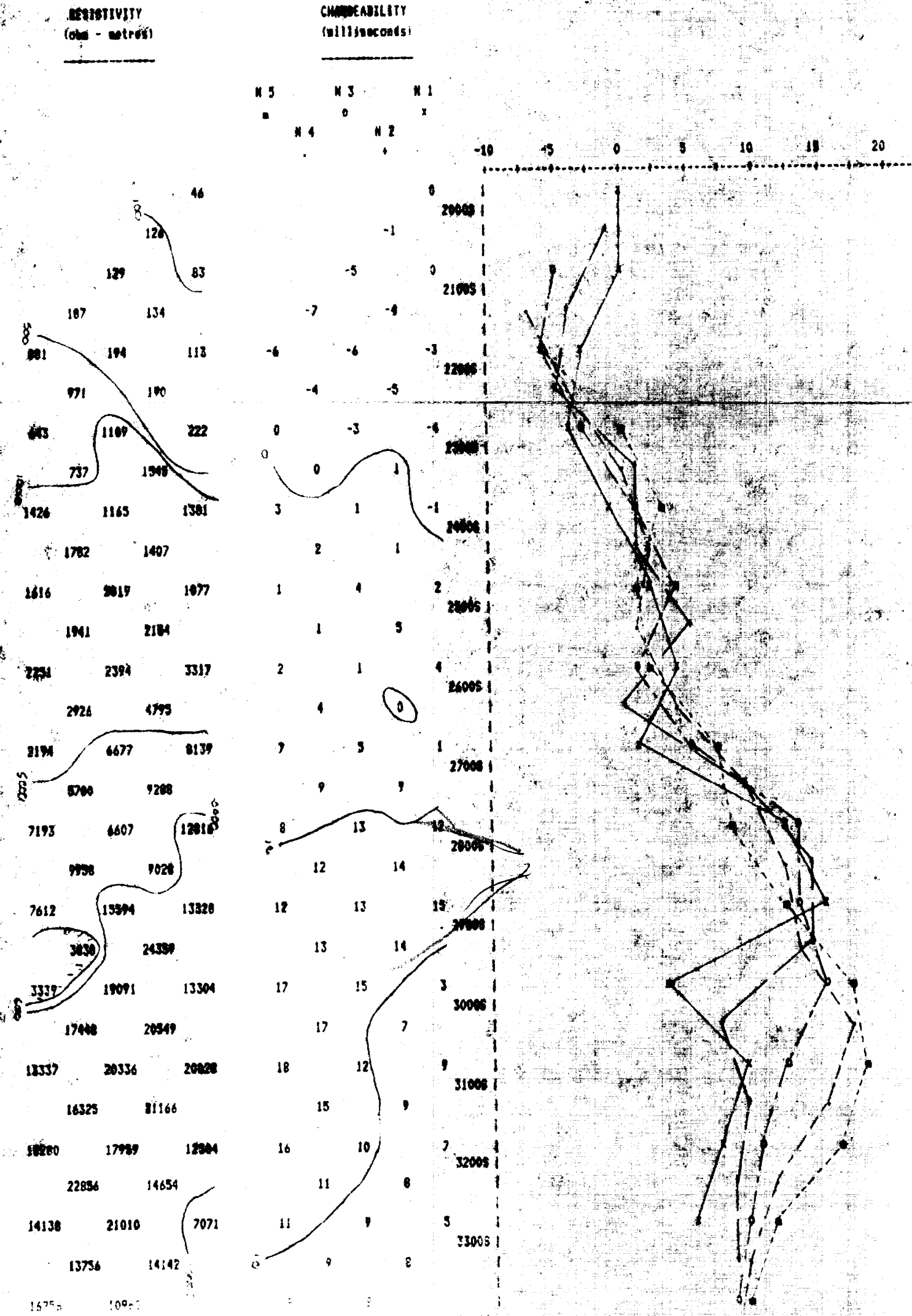
Date of Survey : 3/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 1

Property : DEL-NORTE  
 Orient : SILVER LAKE  
 Date of Survey : 2/22/64  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

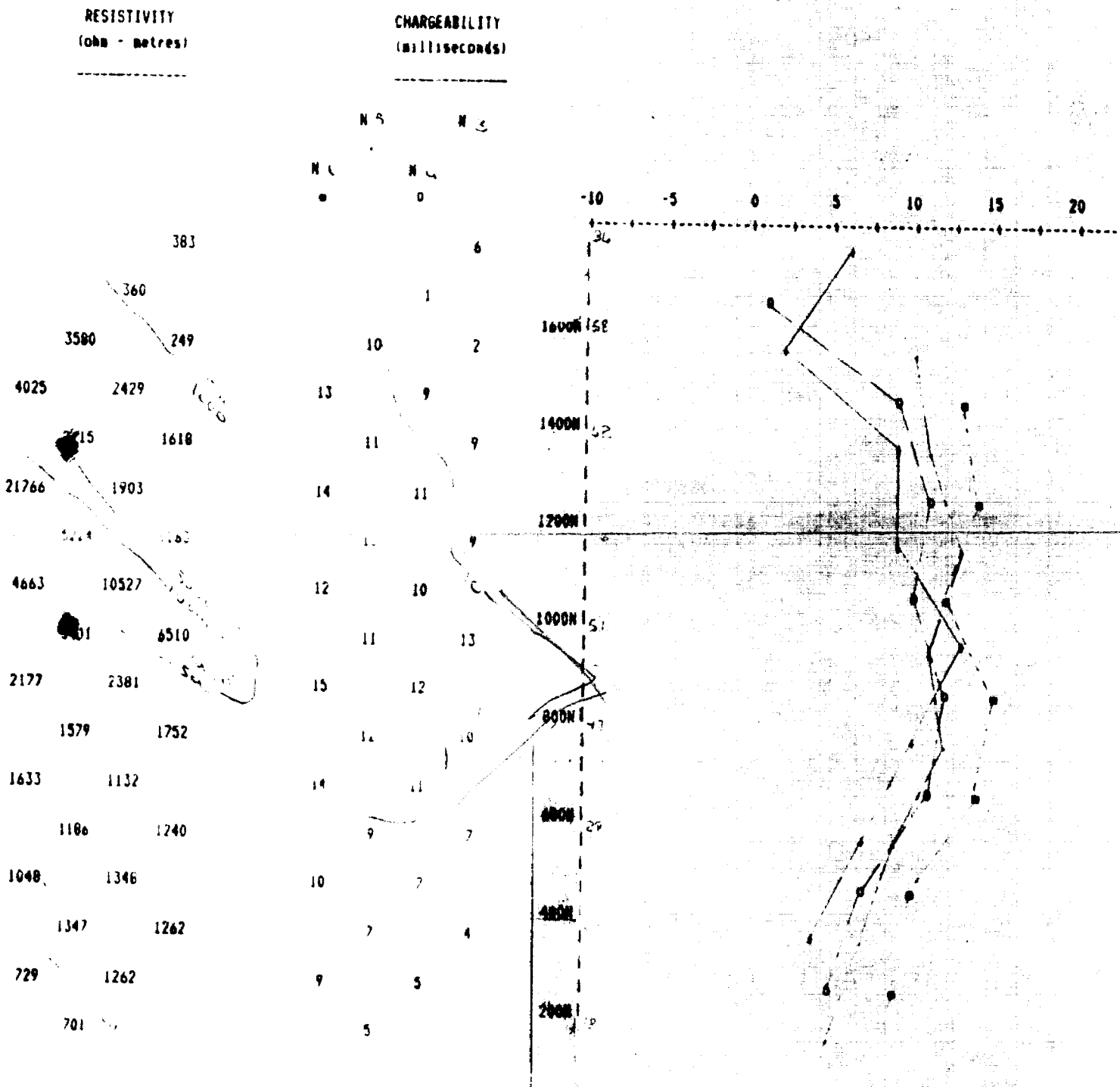


RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 40 E

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 200 F  
 N Spacings Read : 1 TO 6  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

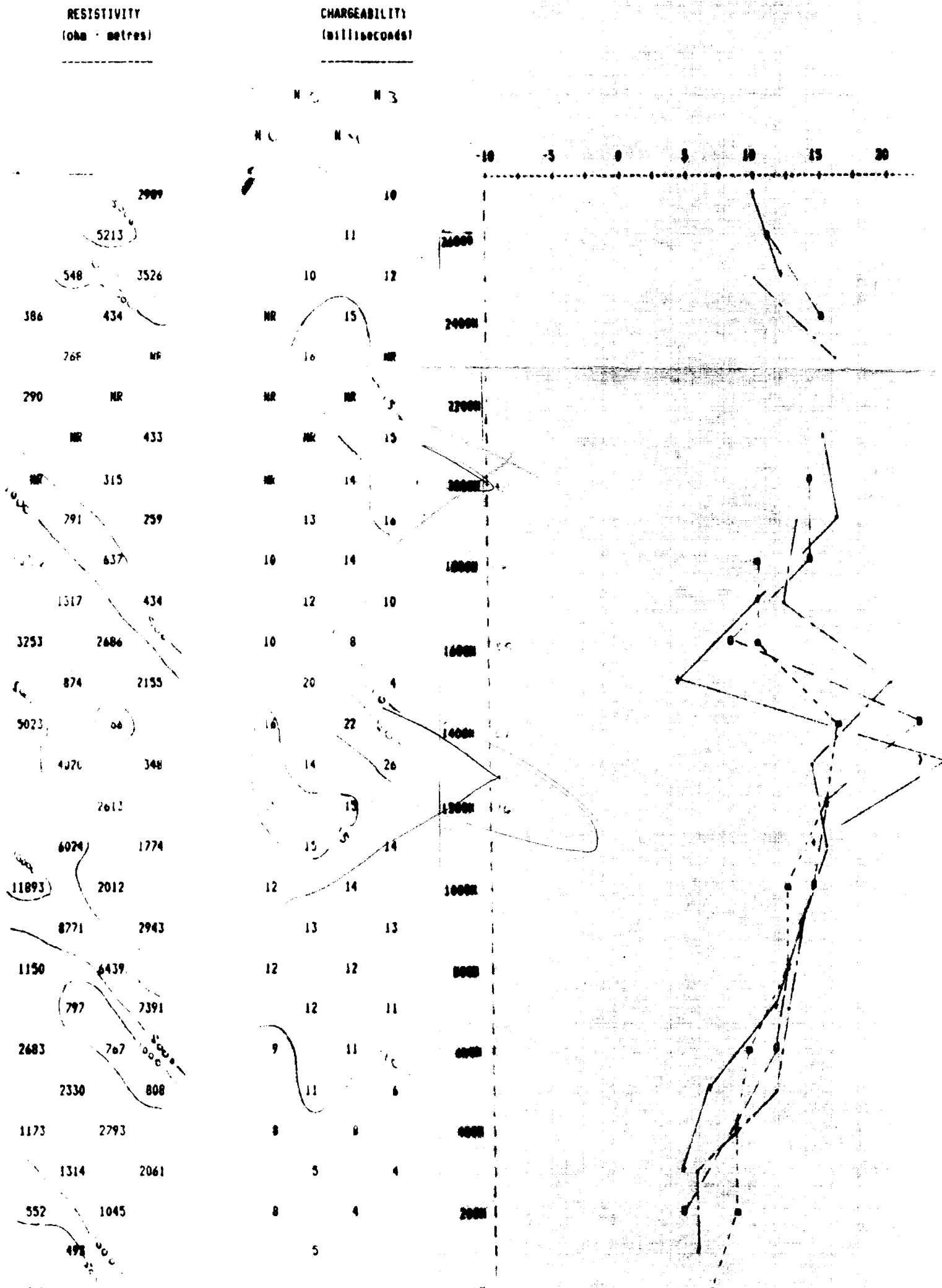


\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 32 E

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 200 F  
 N Spacings Read : 3 TO 6  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

L N Z E

Property: DEL-NORTE  
 Client: SILVER LAKE

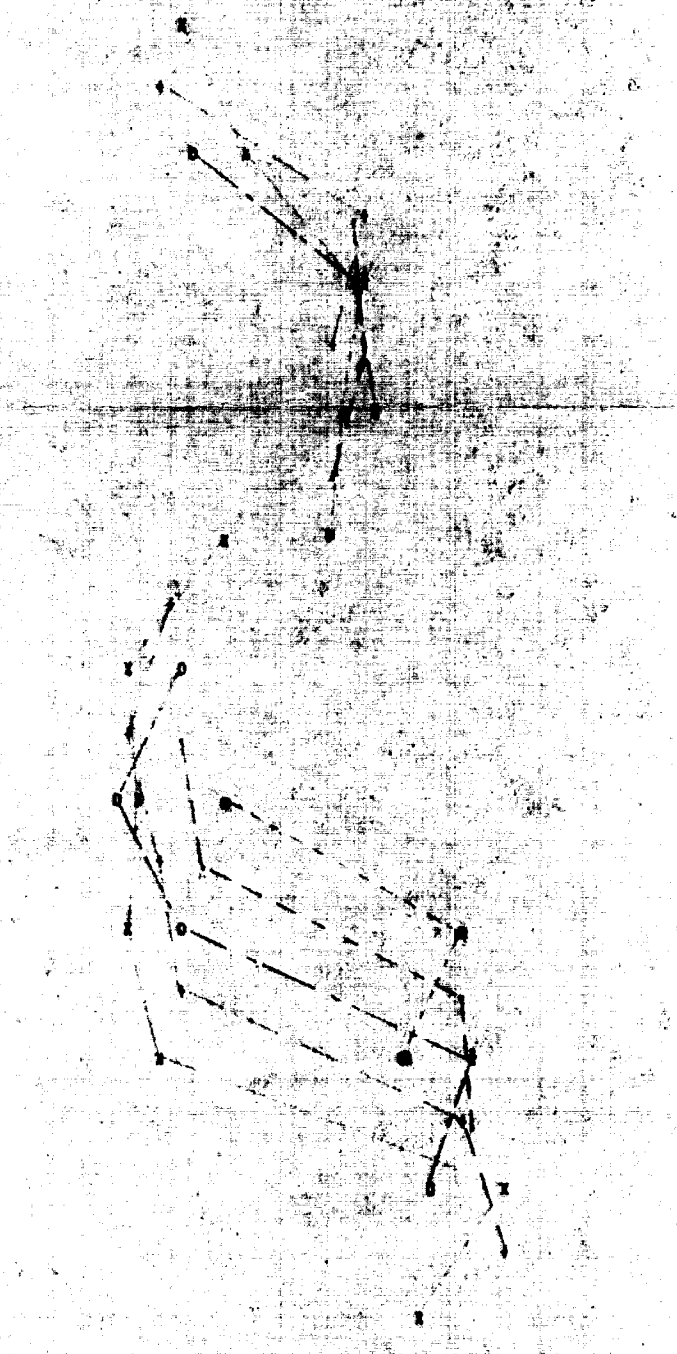
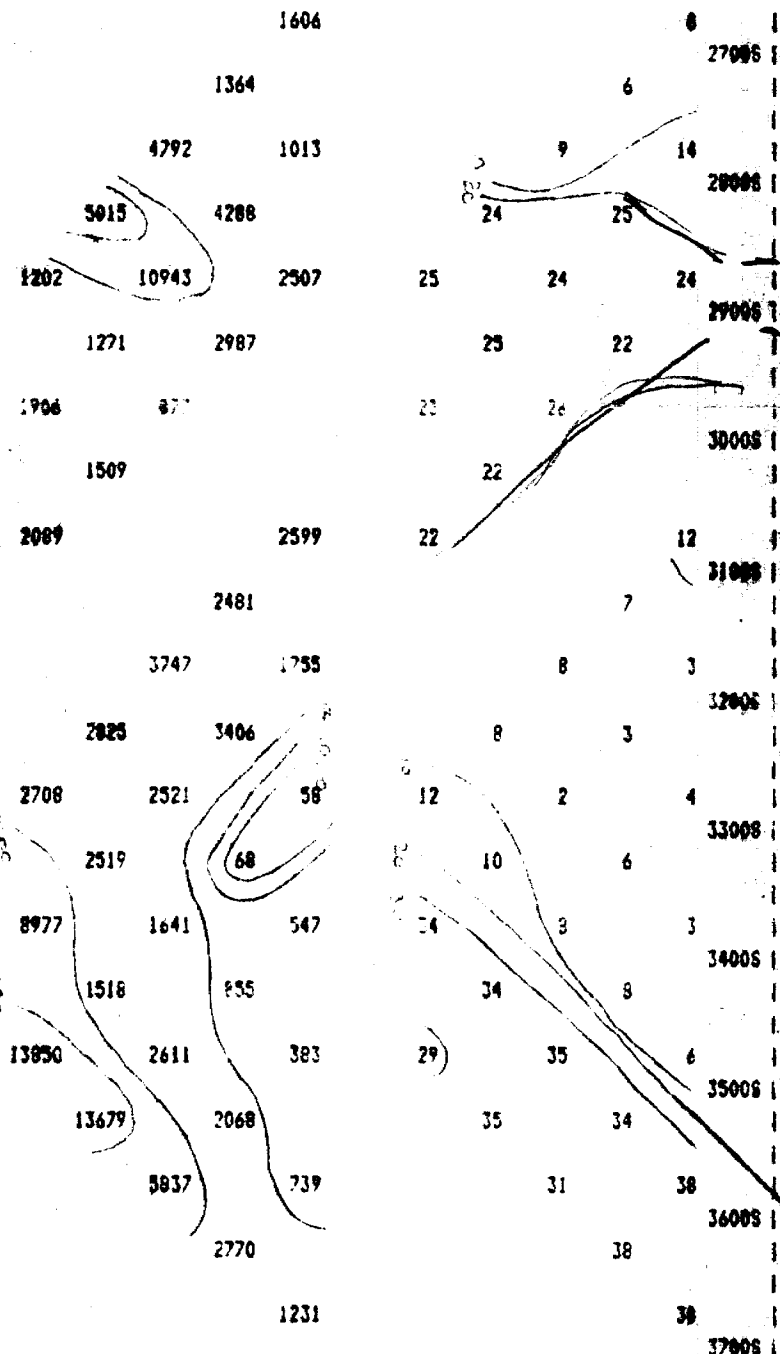
Date of Survey: 2/15/84  
 Operator: SAD  
 A Spacing: 100 F  
 N Spacings Read: 1 TO 5  
 Electrode Array: Pole - Dipole  
 Mode: Time Domain  
 Pulse Time: 2 Sec on 2 Sec off  
 Delay Time: 900 ms  
 Integration Time: 450 ms

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

N 5      N 3      N 1  
 a      D      x  
 N 4      N 2

-10      0      10      20      30      40      50

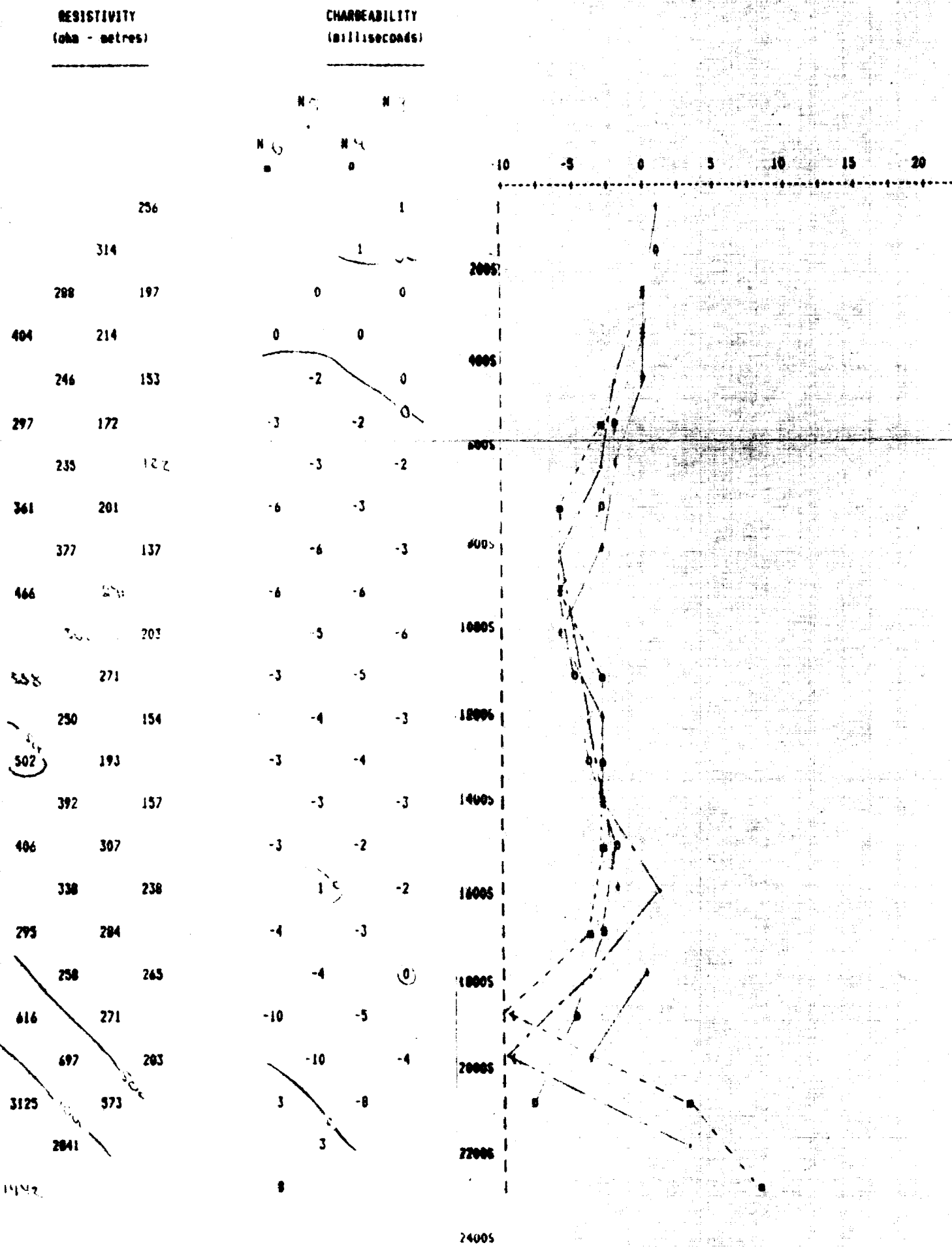


\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 0 E

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 200 F  
 N Spacings Read : 3 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

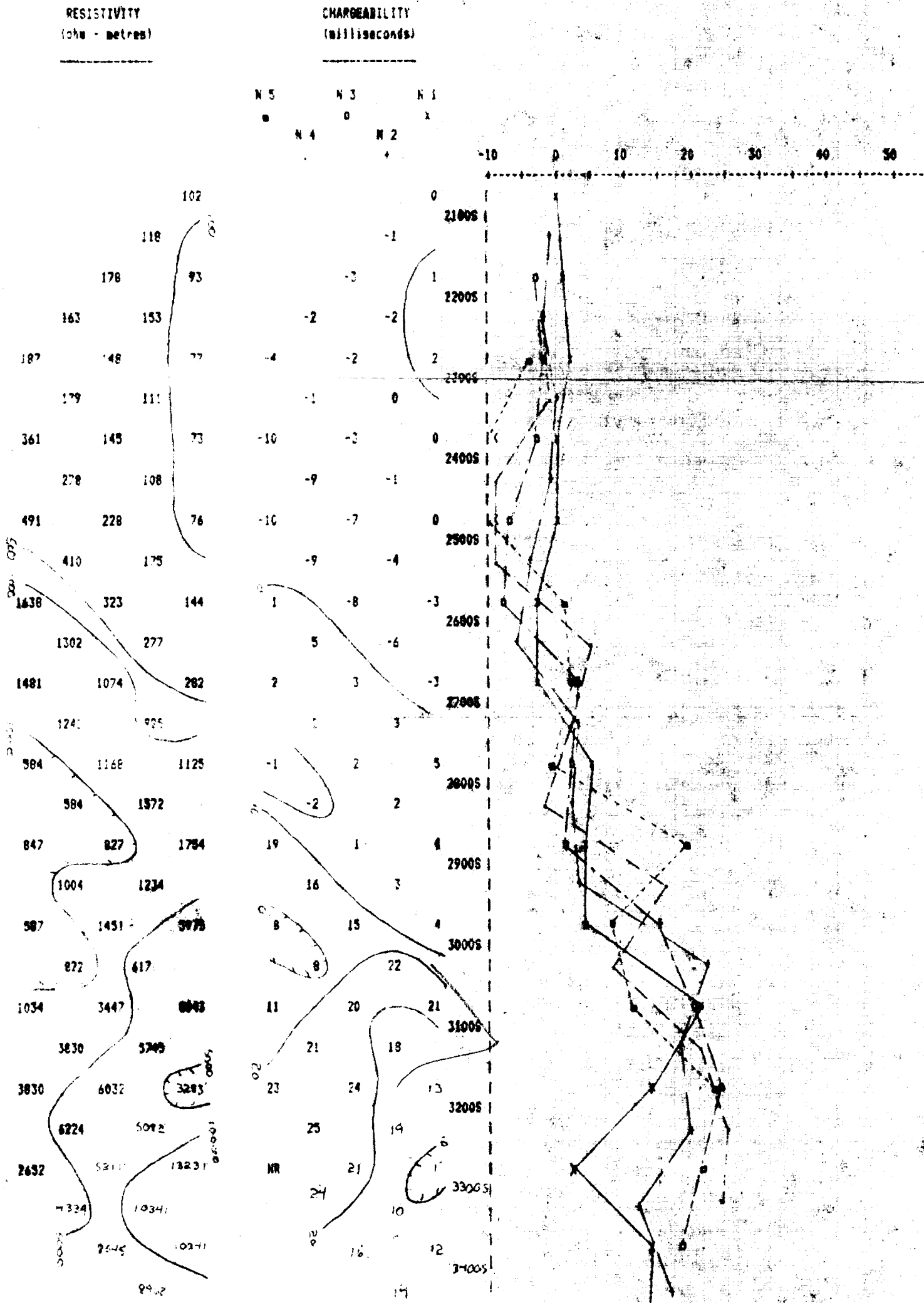


\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 08

Property : DEL NORTE  
 Client : SILVER LAKE

Date of Survey : 3/23/84  
 Operator : RAD  
 A Spacing : 100 M  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

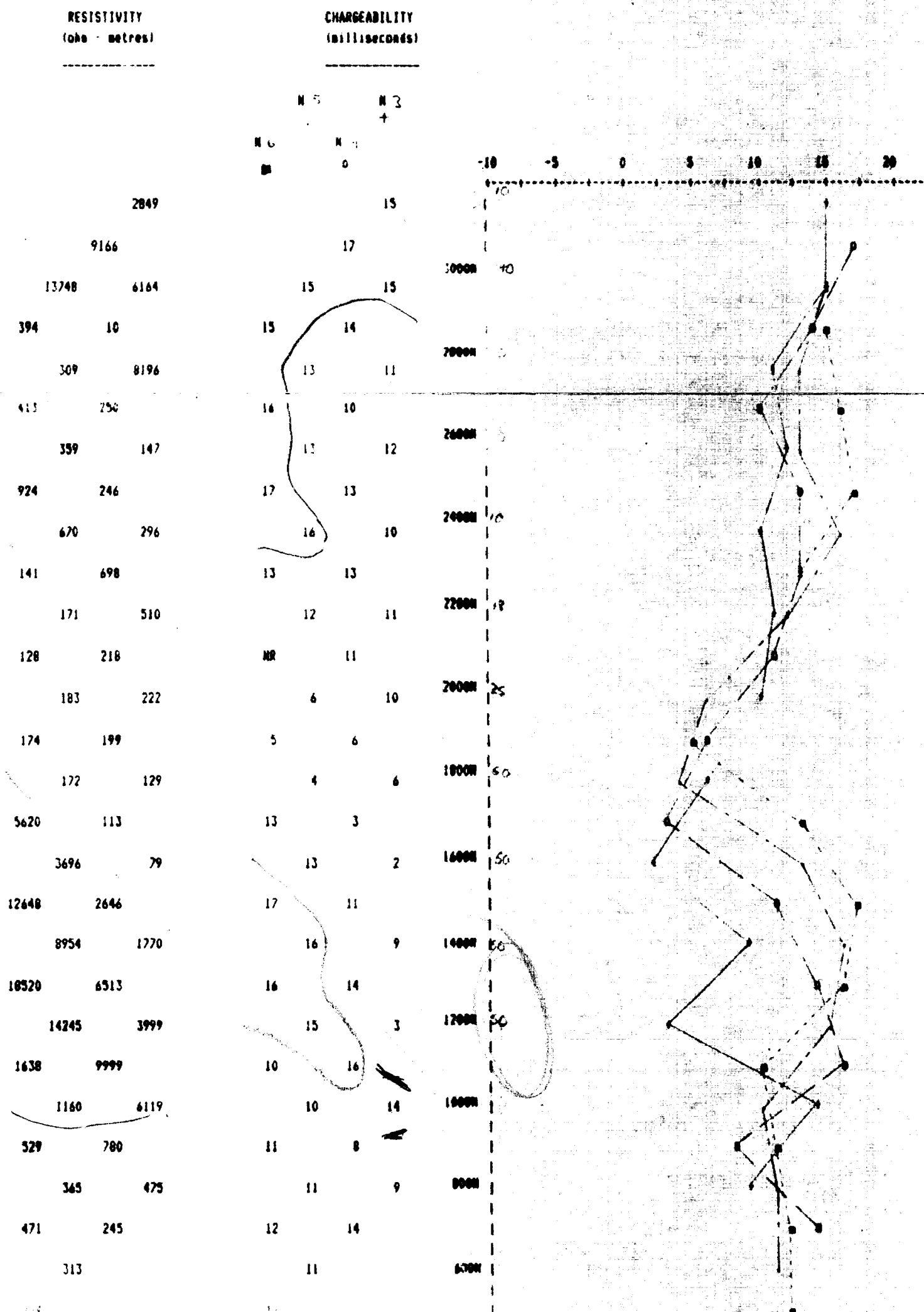


\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 20 E

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 2/15/84  
 Operator : GAD  
 A Spacing : 200 F  
 N Spacings Read : 3 TO 6  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms





\*\*\*\*\*  
 RAYON EXPLORATION  
 \*\*\*\*\*

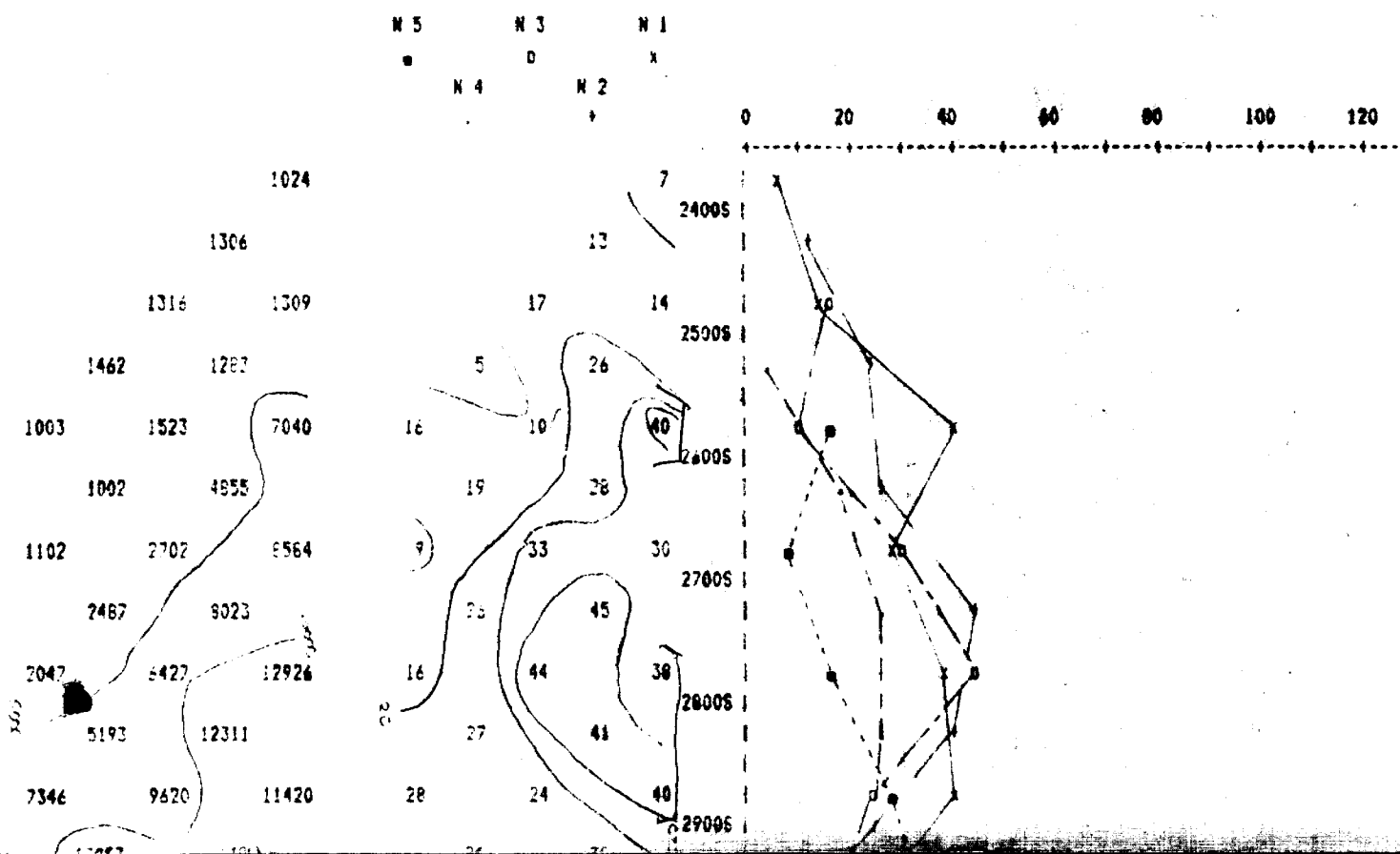
LINE 1 N W

Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 17 / 11 / 64  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

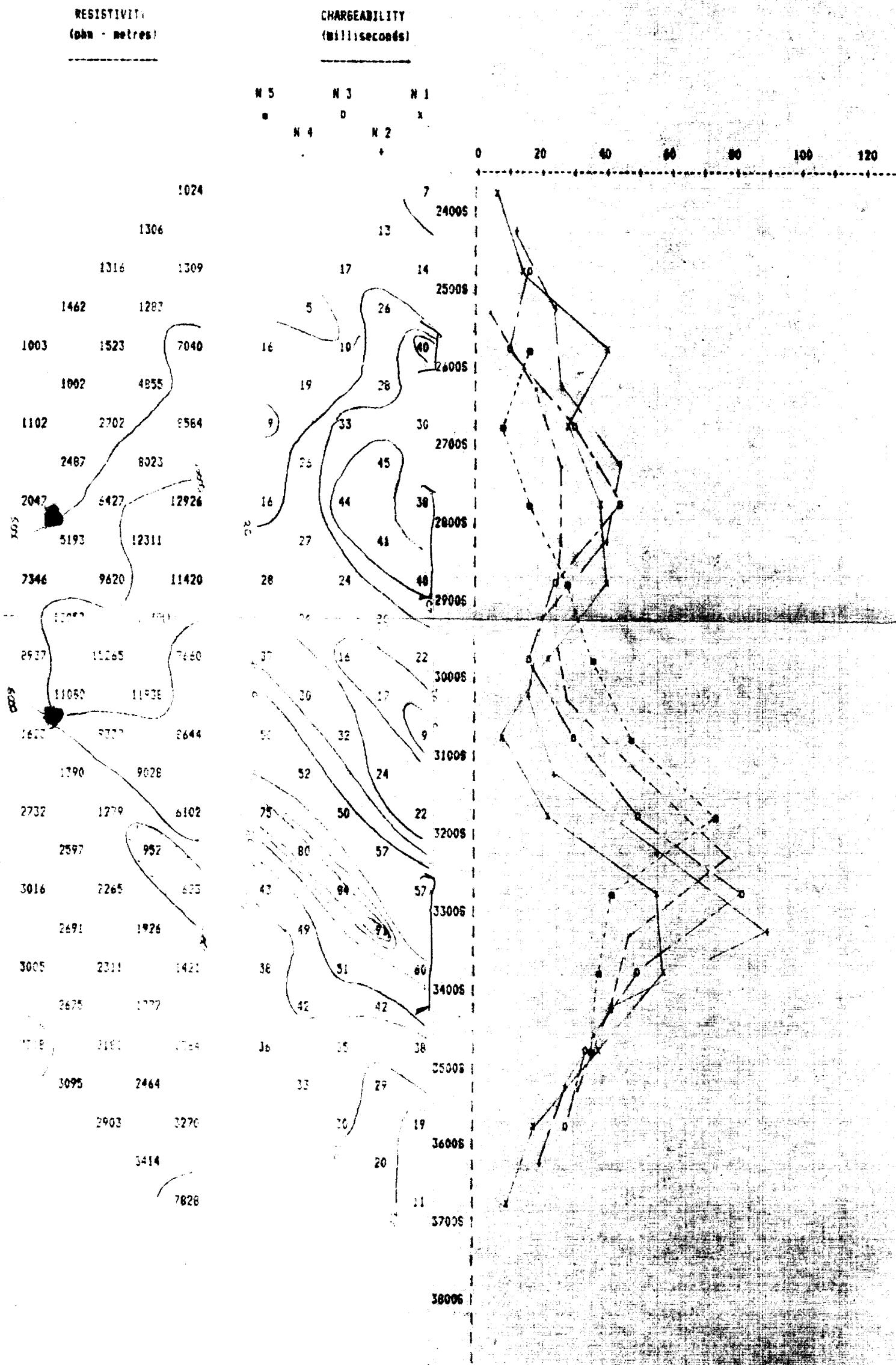
RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)



Property : DEL-NORTE  
 Client : SILVER LAKE

Date of Survey : 17/07/04  
 Operator : JAT  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 RAYAN EXPLORATION  
 \*\*\*\*\*

LINE 12 W

Property : DEL-NORTE  
 Client : SILVER LAKE

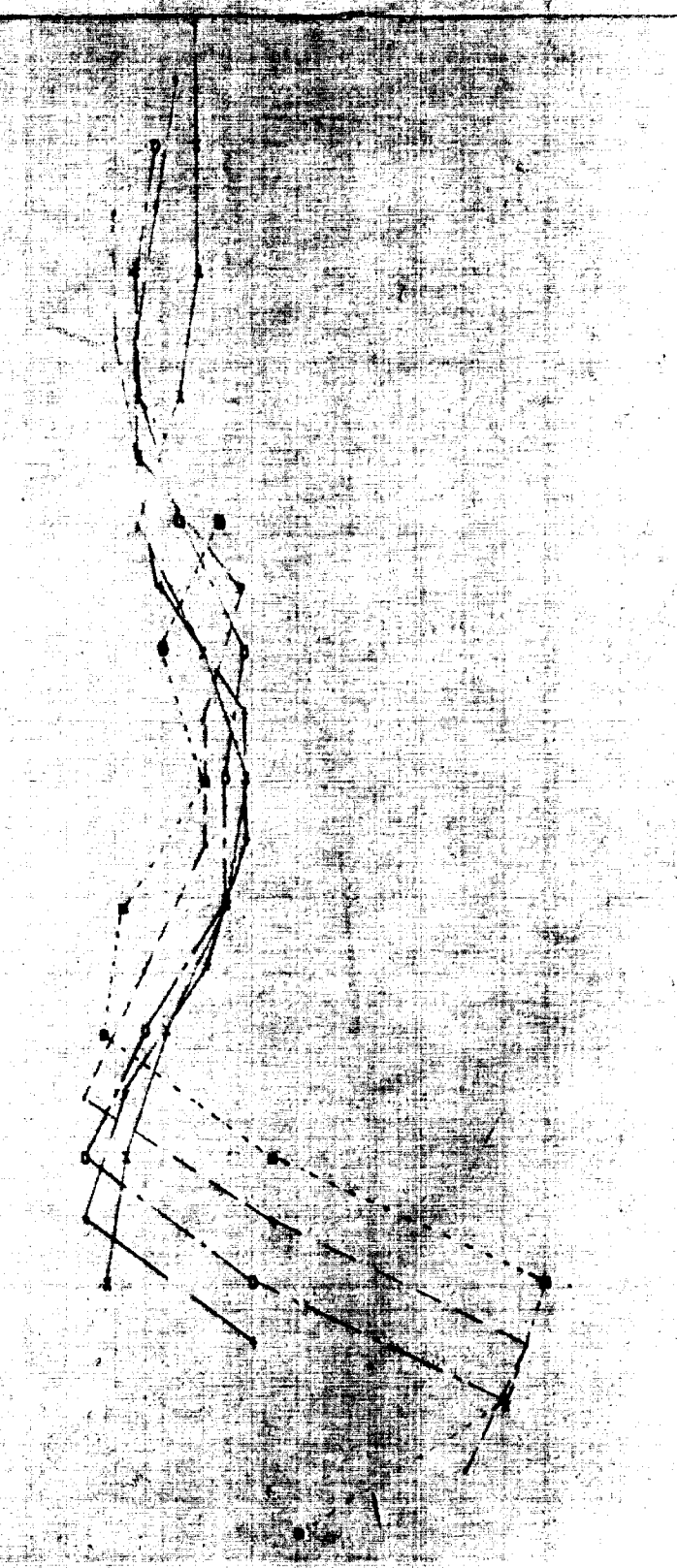
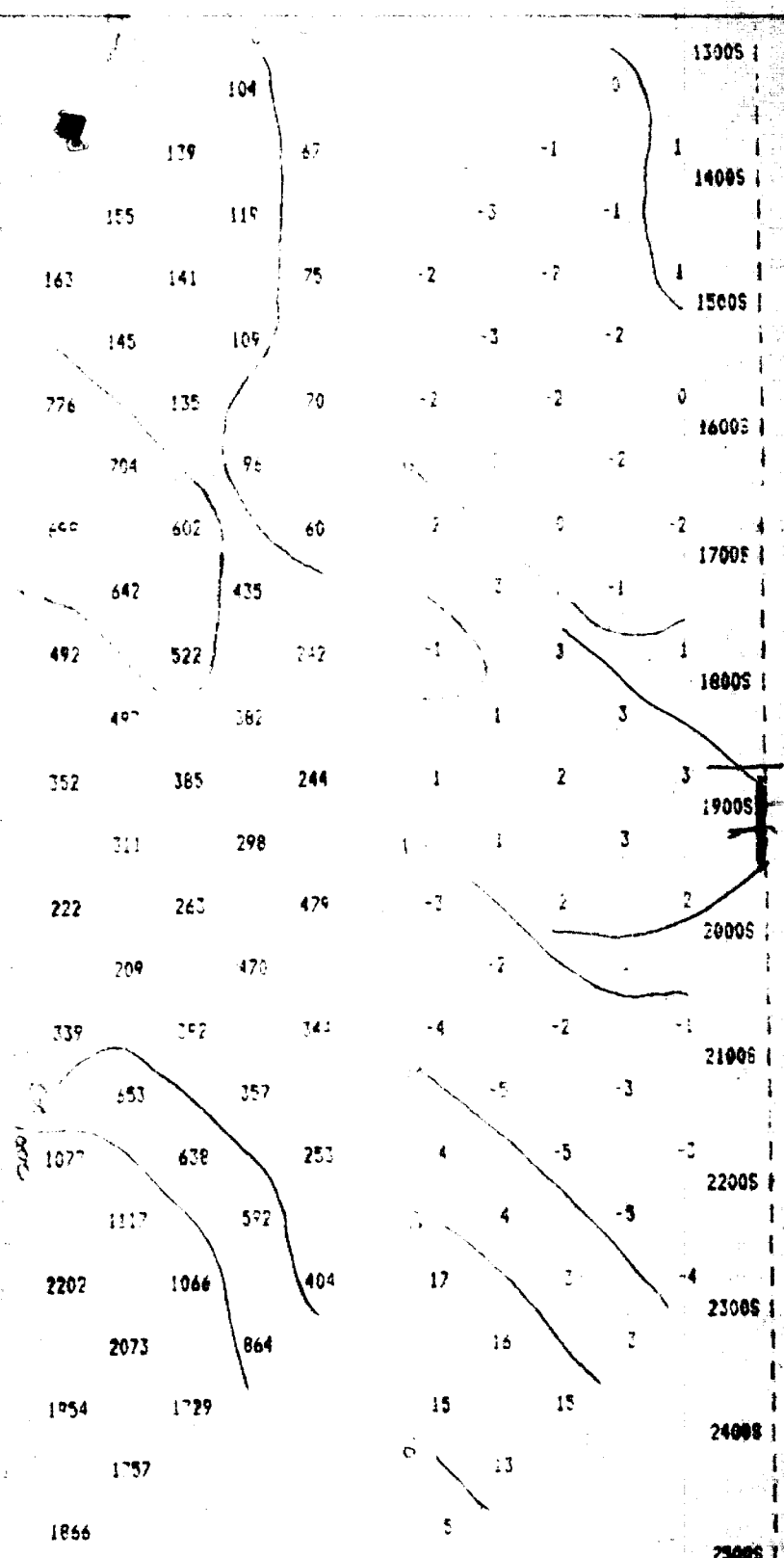
Date of Survey : 8/23/84  
 Operator : GAD  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 5  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

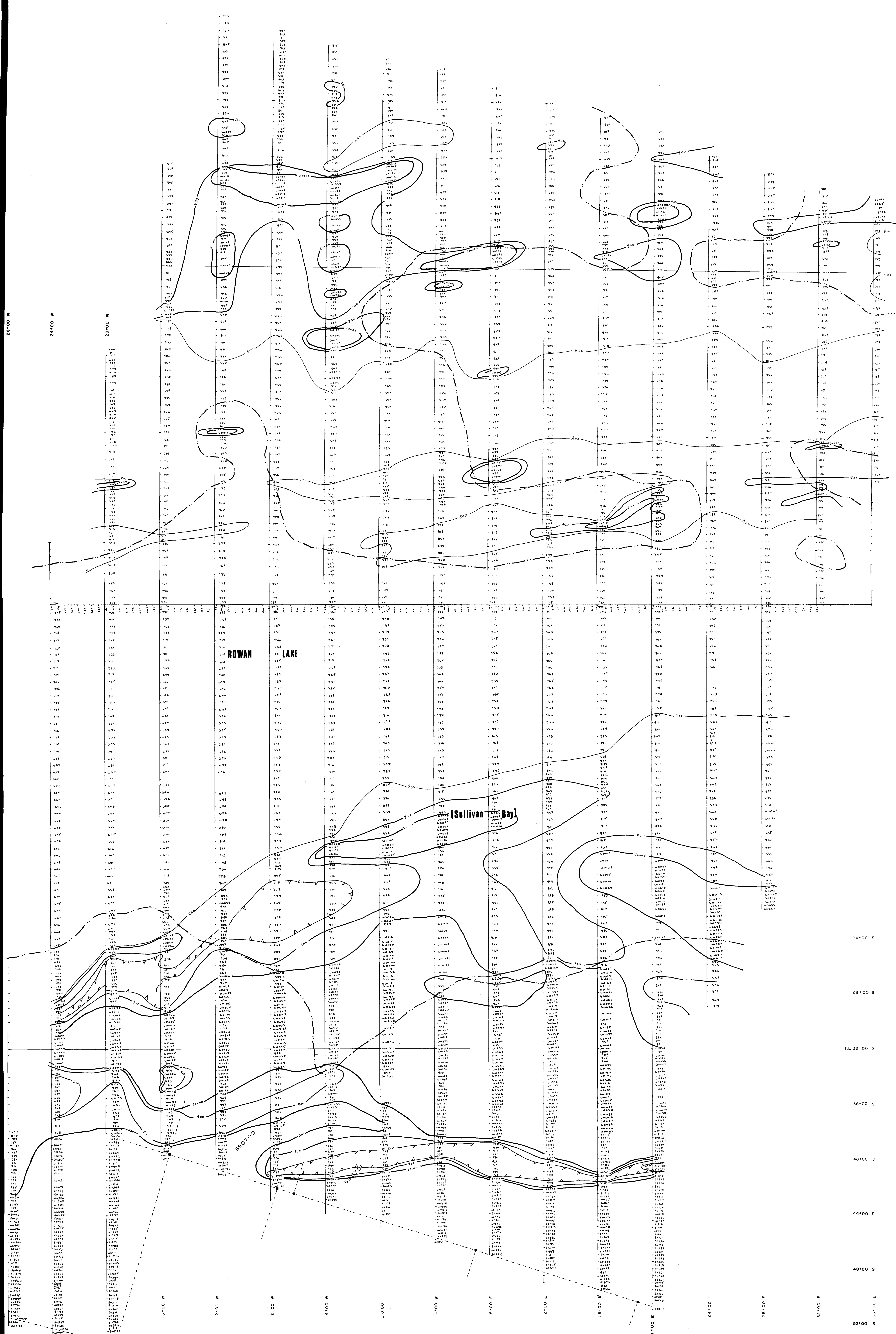
RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milli:seconds)

N 5      N 3      N 1  
 N 4      N 2

-10    -5    0    5    10    15    20

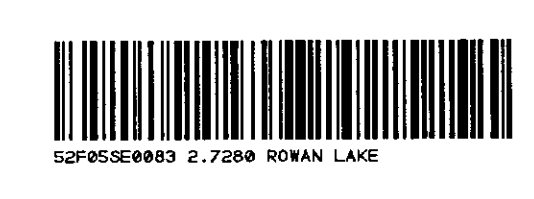


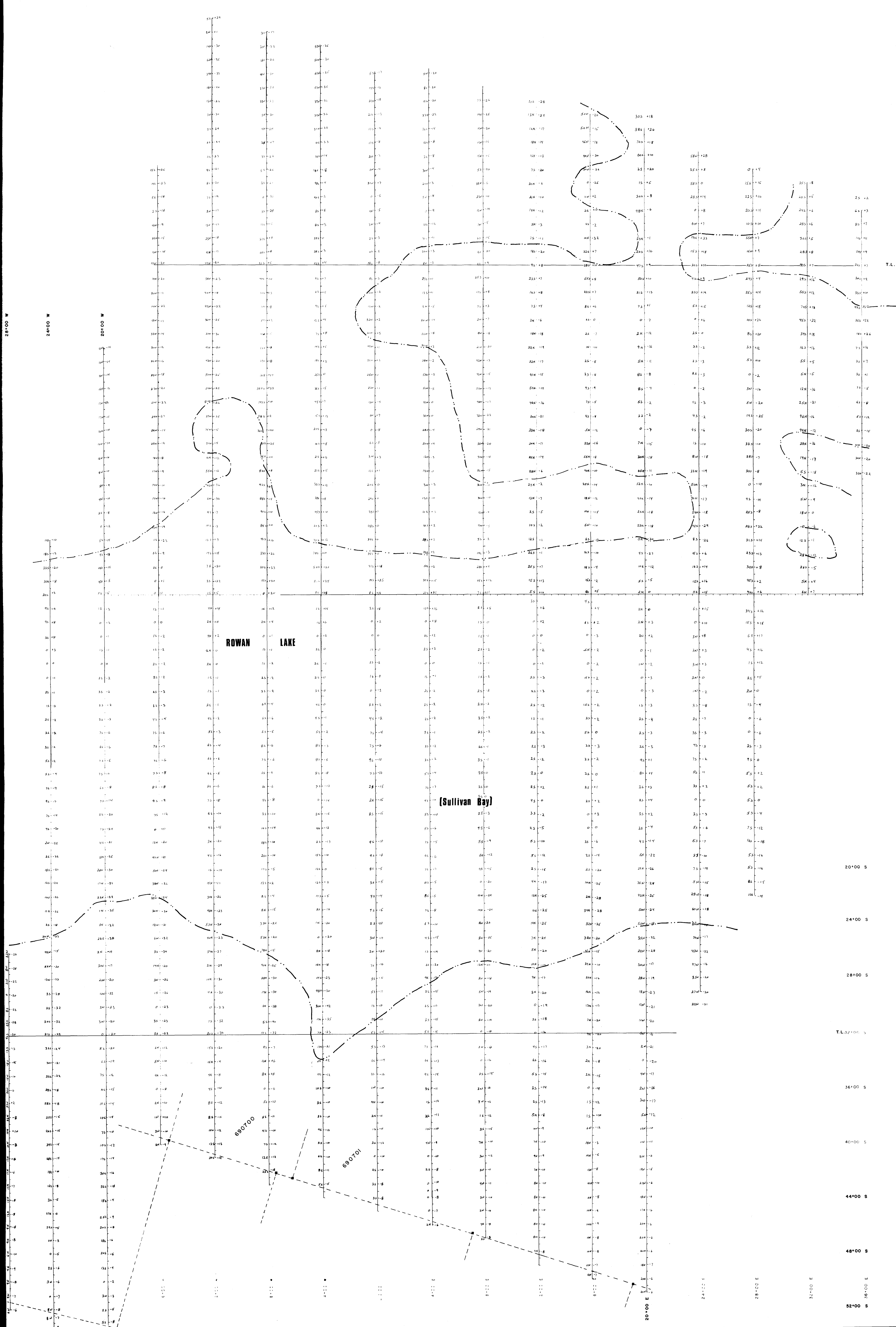


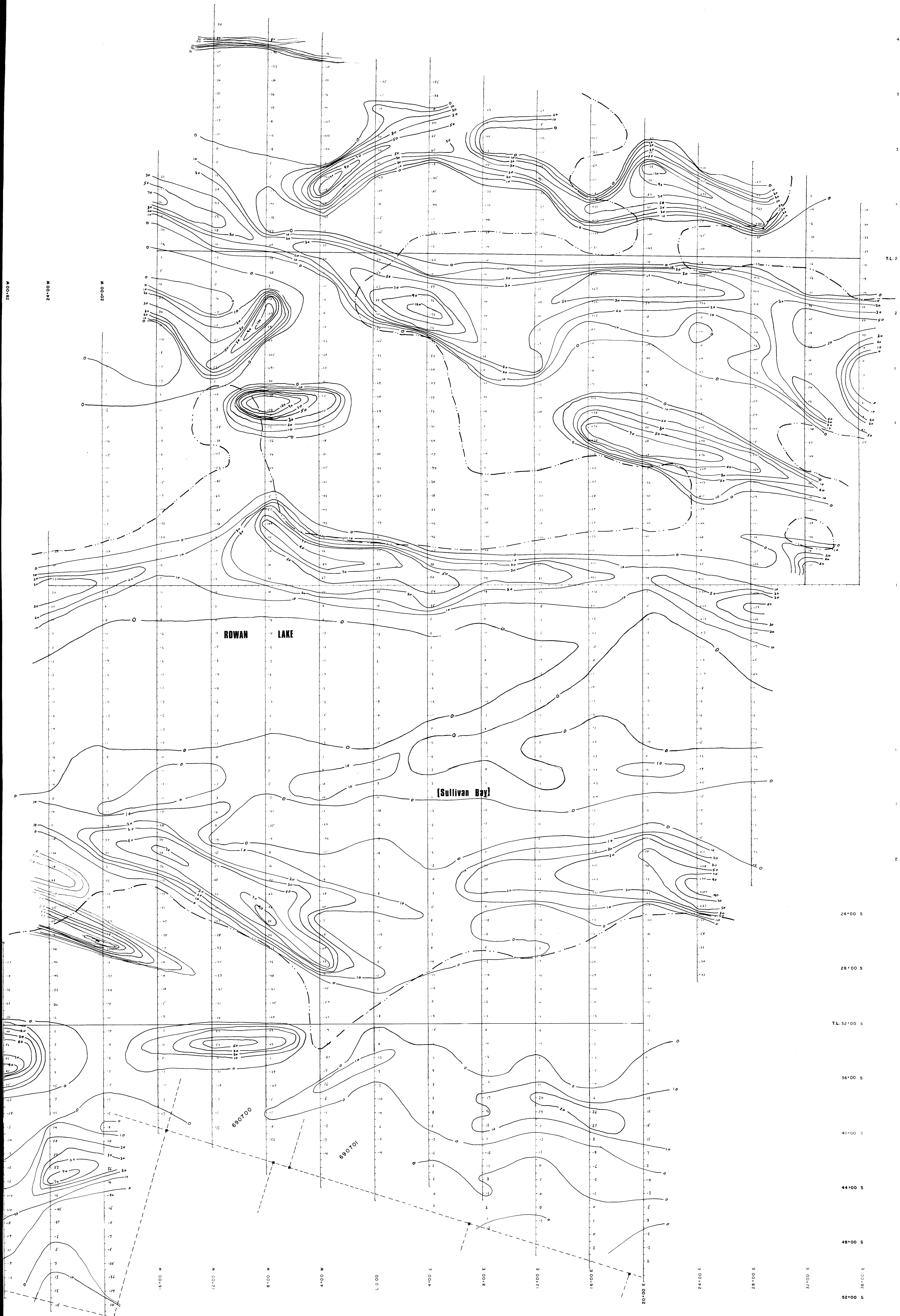
ROWAN LAKE

Sullivan Bay

T.L.







ROWAN LAKE

(Sullivan Bay)

690700

690701

24°00' S

28°00' S

T.L. 32°00' S

36°00' S

40°00' S

44°00' S

48°00' S

52°00' S

28°00' W

24°00' W

20°00' W

ROWAN LAKE

(Sullivan Bay)

24°00' S

28°00' S

TL 32°00' S

36°00' S

4°00' E

44°00' S

48°00' S

52°00' S

16°00' W

12°00' W

8°00' W

4°00' W

0°00'

4°00' E

8°00' E

12°00' E

16°00' E

20°00' E

24°00' E

28°00' E

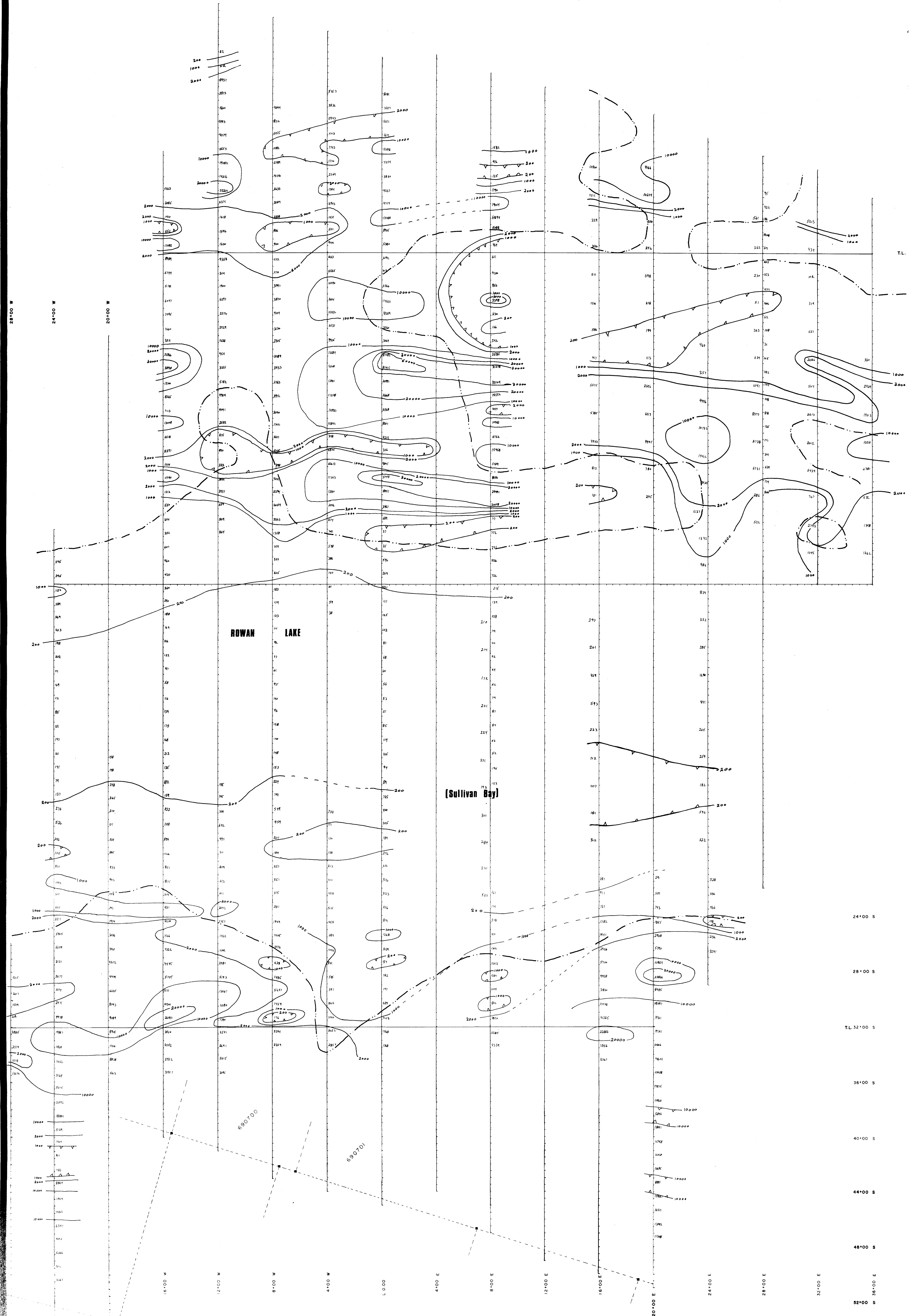
32°00' E

36°00' E

690700

690701





ROWAN LAKE

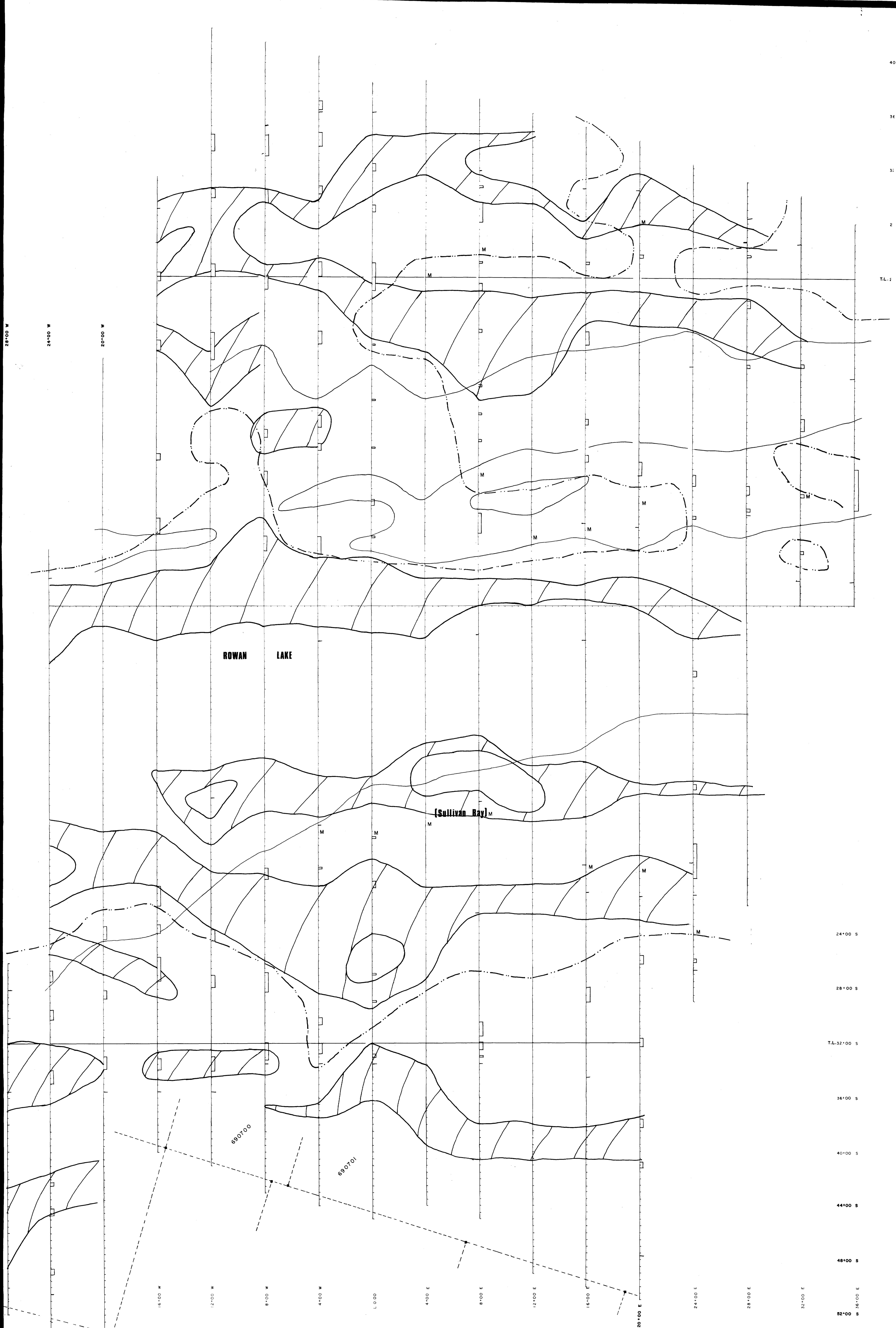
(Sullivan Bay)

690700

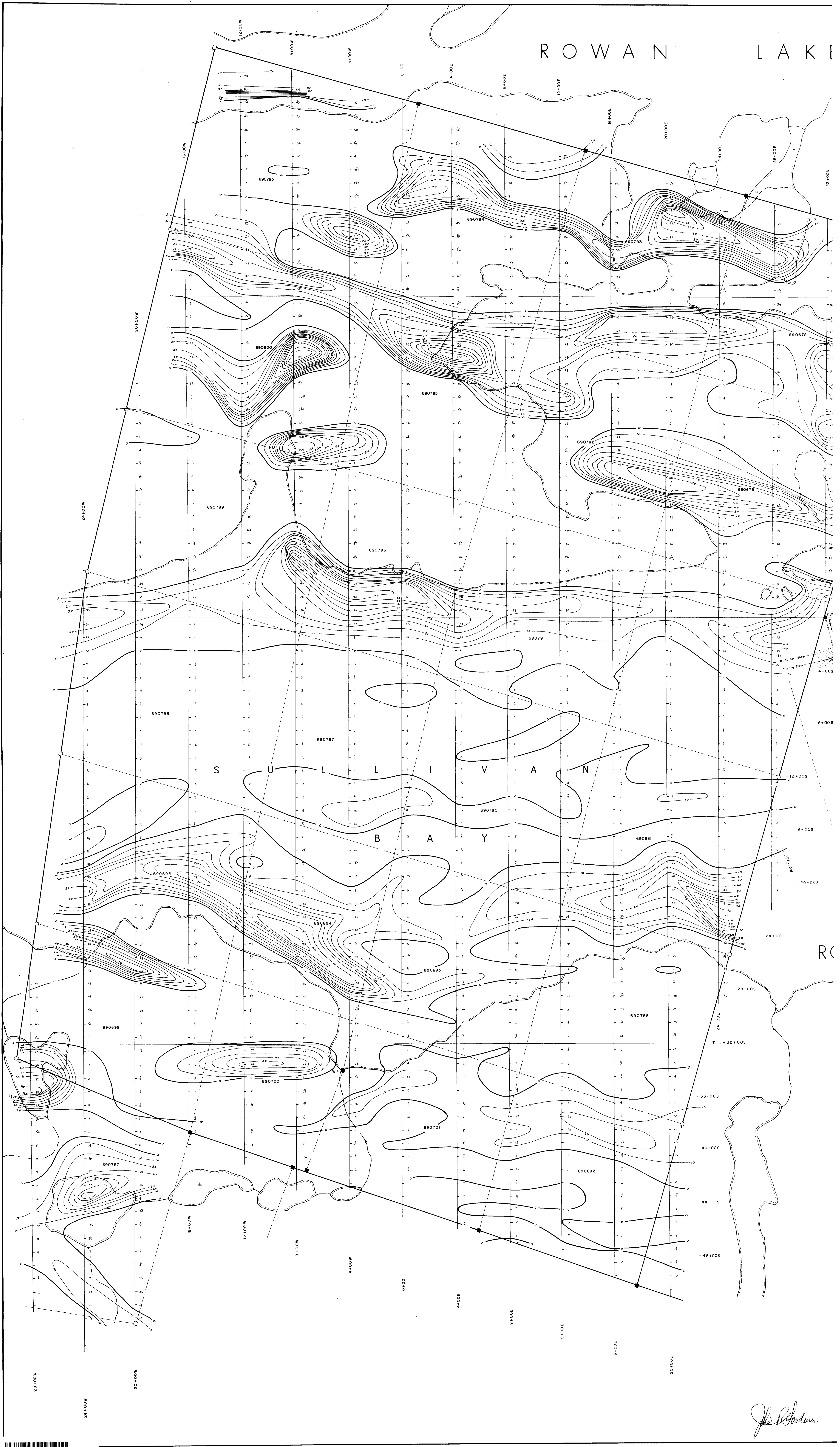
690701







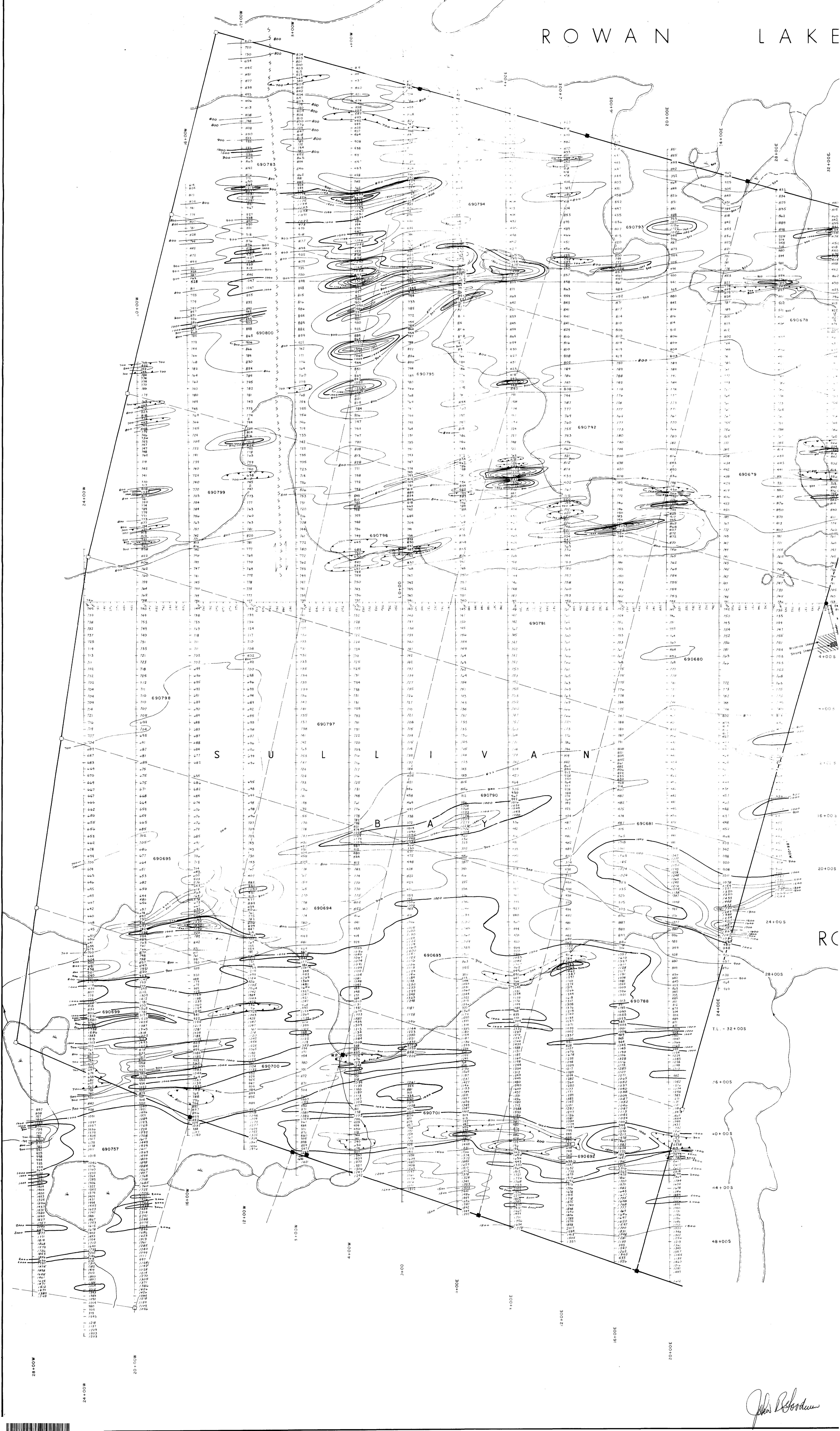
# ROWAN LAKE



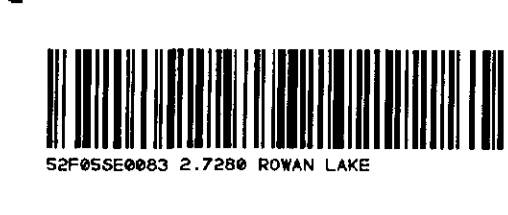
*John R. Woodman*



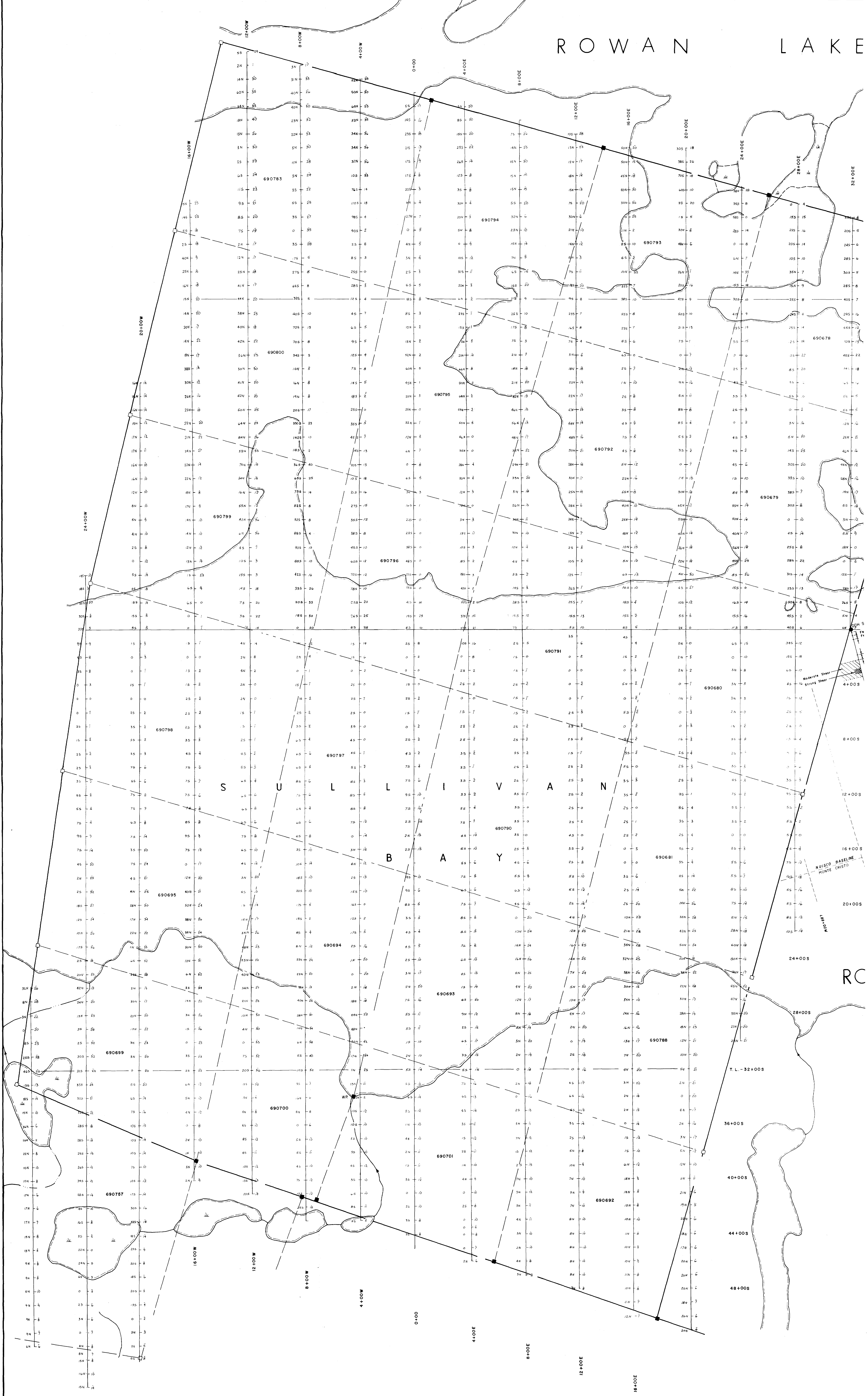
# ROWAN LAKE



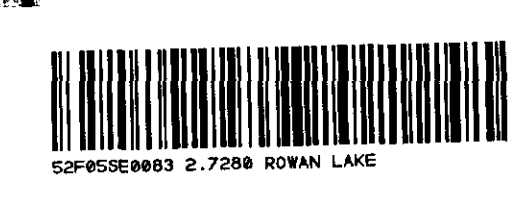
*John Robinson*



# ROWAN LAKE



*John Robertson*



40°00' N

36°00' N

32°00' N

28°00' N

T.L. 24°00' N

20°00' N

16°00' N

12°00' N

8°00' N

4°00' N

B.L. 0°00'

4°00' S

8°00' S

12°00' S

16°00' S

20°00' S

24°00' S

28°00' S

T.L. 32°00' S

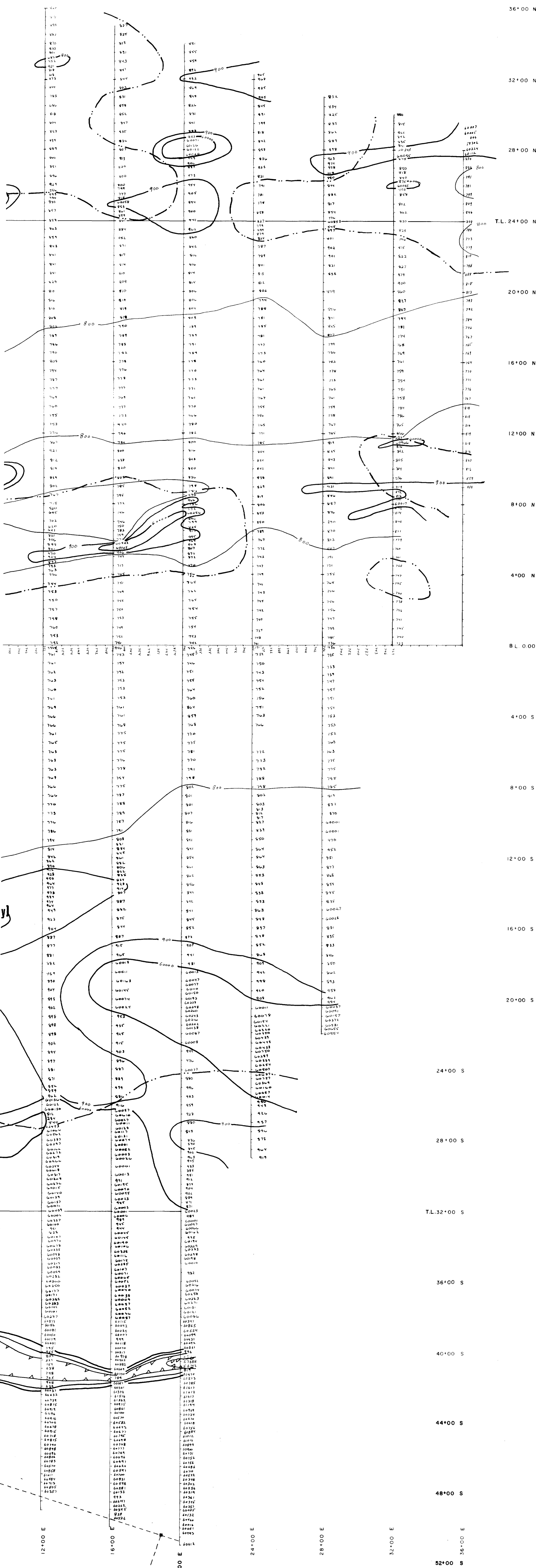
36°00' S

40°00' S

44°00' S

48°00' S

52°00' S



**LEGEND**

NOTE add 59000 unless otherwise noted

INSTRUMENT BARRINGER GM 122  
Proton Precession Magnetometer

DIURNALS corrected from base station looping

ACCURACY: ± 5 nano Tesla

**CONTOUR INTERVAL**  
(800,900,60000)

< 800  Magnetic Low

800-900

900-60000

> 60000

--- PROBE LINE  
--- CLAIM LINE  
--- SURVEY LINE  
■ CLAIM POST  
□ CLAIM POST (ASSUMED)

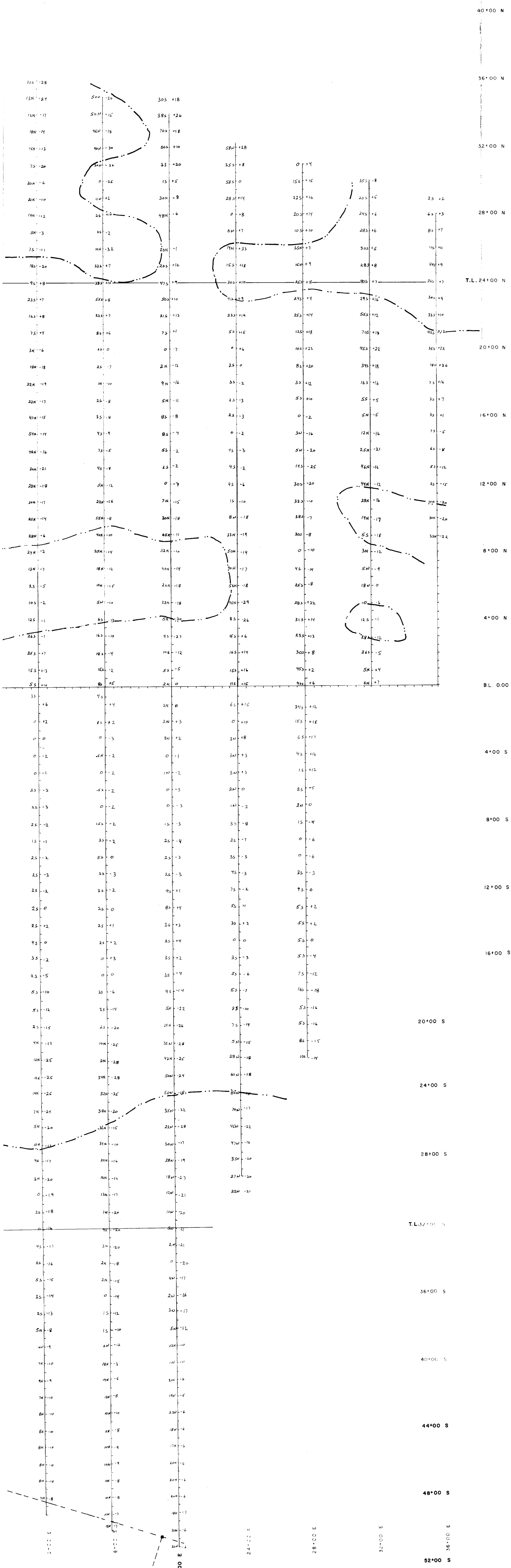
--- STREAMS + RIVERS  
--- TRAILS + ROADS  
--- SWAMP  
■ PATENTED LANDS

2.7280 (ONE)

**SILVER LAKE RESOURCES**

**magnetometer survey**

Survey by RAYAN EXPLORATION LTD.  
Property: SILVER LAKE RESOURCES  
Twp./Area: ROWAN LAKE / SULLIVAN BAY  
Proj: GNT. NTS: 52 F/5  
Drafted: A. Christopher Plotted: Checked: *[Signature]*  
Scale: 1:200 Date: MARCH 1984



**LEGEND**

INSTRUMENT **GEONICS EM 16**

TRANSMITTER STATION **Annapolis NSS**

FREQUENCY **21.4 KHz**

PARAMETERS MEASURED IN PHASE DIP ANGLES  
and QUADRATURE

All readings taken facing **NORTH**

---

dip angle quadrature

2N -15

1S -12

→ true cross-over →

1S -14

→ Annapolis, Maryland →

090°

---


(over) 2.7280

**SILVER LAKE RESOURCES**

**VLF e.m. survey**

---

Survey by <b>RAYAN EXPLORATION LTD.</b>	
Property <b>SILVER LAKE RESOURCES</b>	
Twp/Area <b>ROWAN LAKE / SULLIVAN BAY</b>	
Prov. <b>ONT.</b>	NTS: <b>52 F/5</b>
Drafted: <b>A. Christopher</b>	Plotted: <b>March</b>
Scale: <b>1" = 200'</b>	Date: <b>MARCH 1964</b>

40°00 N

36°00 N

32°00 N

28°00 N

T.L. 24°00 N

20°00 N

16°00 N

12°00 N

8°00 N

4°00 N

B.L. 0°00

4°00 S

8°00 S

12°00 S

16°00 S

20°00 S

24°00 S

28°00 S

T.L. 32°00 S

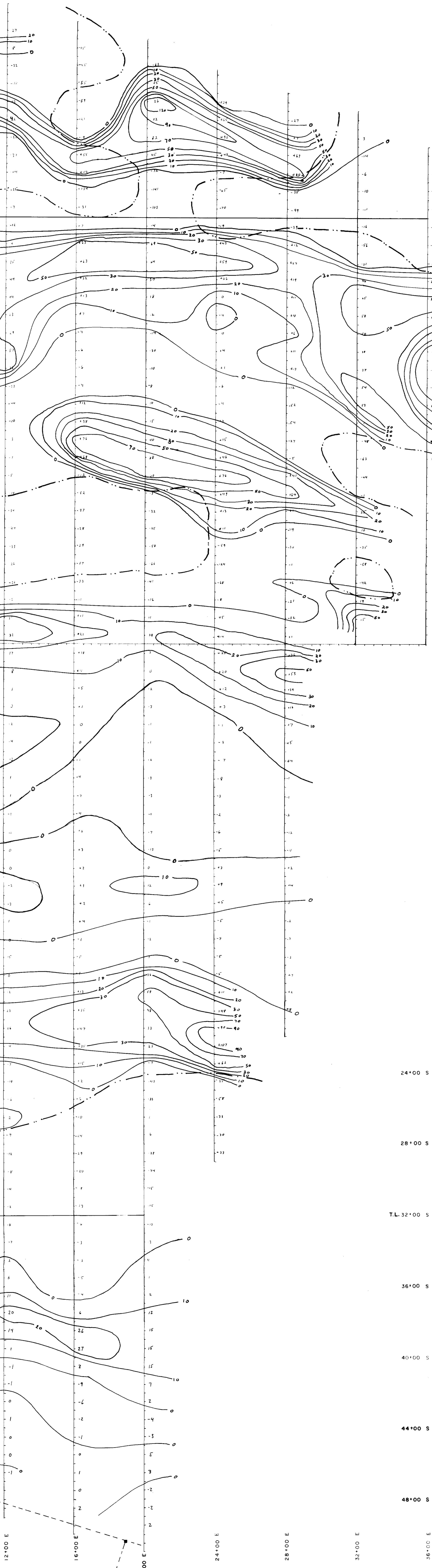
36°00 S

40°00 S

44°00 S

48°00 S

52°00 S

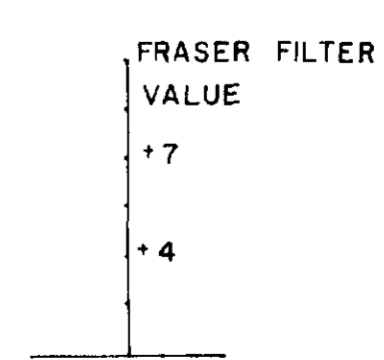


**CONTOUR INTERVAL**  
(0,10,20,30,50,70,90,120)

<0	<input type="checkbox"/>	50-70	<input type="checkbox"/>
0-10	<input type="checkbox"/>	70-90	<input type="checkbox"/>
10-20	<input type="checkbox"/>	90-120	<input type="checkbox"/>
20-30	<input type="checkbox"/>	>120	<input type="checkbox"/>
30-50	<input type="checkbox"/>		

**LEGEND**

INSTRUMENT: GEONICS EM 16  
 TRANSMITTER STATION: Annapolis NSS  
 FREQUENCY: 21.4 KHz  
 PARAMETERS MEASURED: in phase dip angle and quadrature  
 All readings taken facing NORTH



	PICKET LINE		5/16 AM - 1/4 WERS
	CLAIM LINE		TRAILS + ROADS
	SURVEY LINE		SWAMP
	CLAIM POST		PATENTED LANDS
	CLAIM POST (ASSUMED)		

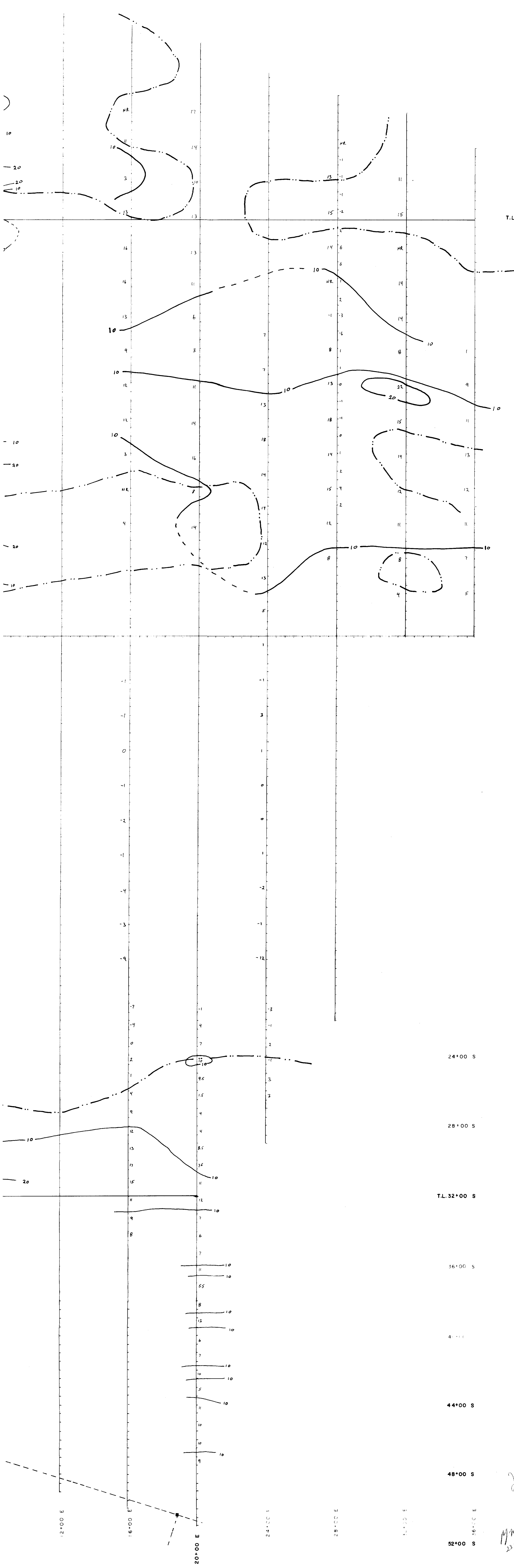
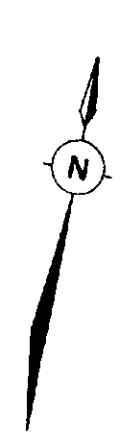
2.7260 (CHED)

**SILVER LAKE RESOURCES**

**VLF - e.m. survey**

Survey by: RAYAN EXPLORATION LTD.		
Property: SILVER LAKE RESOURCES		
Twp/Area: ROWAN LAKE / SULLIVAN BAY		
Prov: ONT.	NTS: 52 F/5	
Drafted: A. Christopher	Plotted:	Checked: <i>[Signature]</i>
Scale: 1"=200'	Date: MARCH 1984	

40+00 N  
 36+00 N  
 32+00 N  
 28+00 N  
 T.L. 24+00 N  
 20+00 N  
 16+00 N  
 12+00 N  
 8+00 N  
 4+00 N  
 B.L. 0+00  
 4+00 S  
 8+00 S  
 12+00 S  
 16+00 S  
 20+00 S

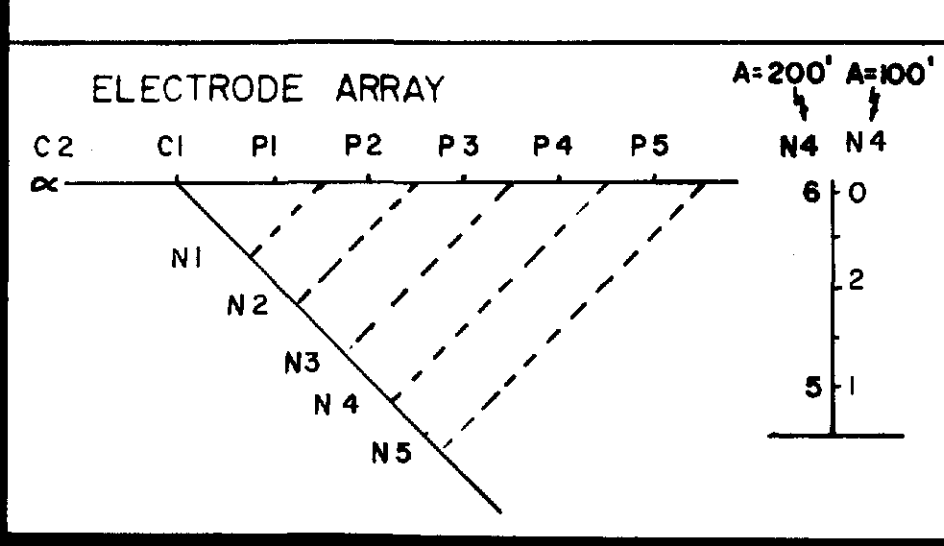


**CONTOUR INTERVAL**

A=100'	N=4	(10,20,30,40,50,60,70,80)	
<10	<input type="checkbox"/>	50-60	<input type="checkbox"/>
10-20	<input type="checkbox"/>	60-70	<input type="checkbox"/>
20-30	<input type="checkbox"/>	70-80	<input type="checkbox"/>
30-40	<input type="checkbox"/>	> 80	<input type="checkbox"/>
40-50	<input type="checkbox"/>		
A=200'	N=4	(10,20)	
<10	<input type="checkbox"/>	> 20	<input type="checkbox"/>
10-20	<input type="checkbox"/>		

**LEGEND**

Rx CRONE N-IV Tx PHOENIX IPT - I  
 Array POLE-DIPOLE Dipole Spacing 100' x 200'  
 Mode TIME DOMAIN I.P. Units N=1,2,3,4,5 (100')  
 Plotting pt as shown on array N=3,4,5,6 (200')  
 Apparent Chargeability in milliseconds



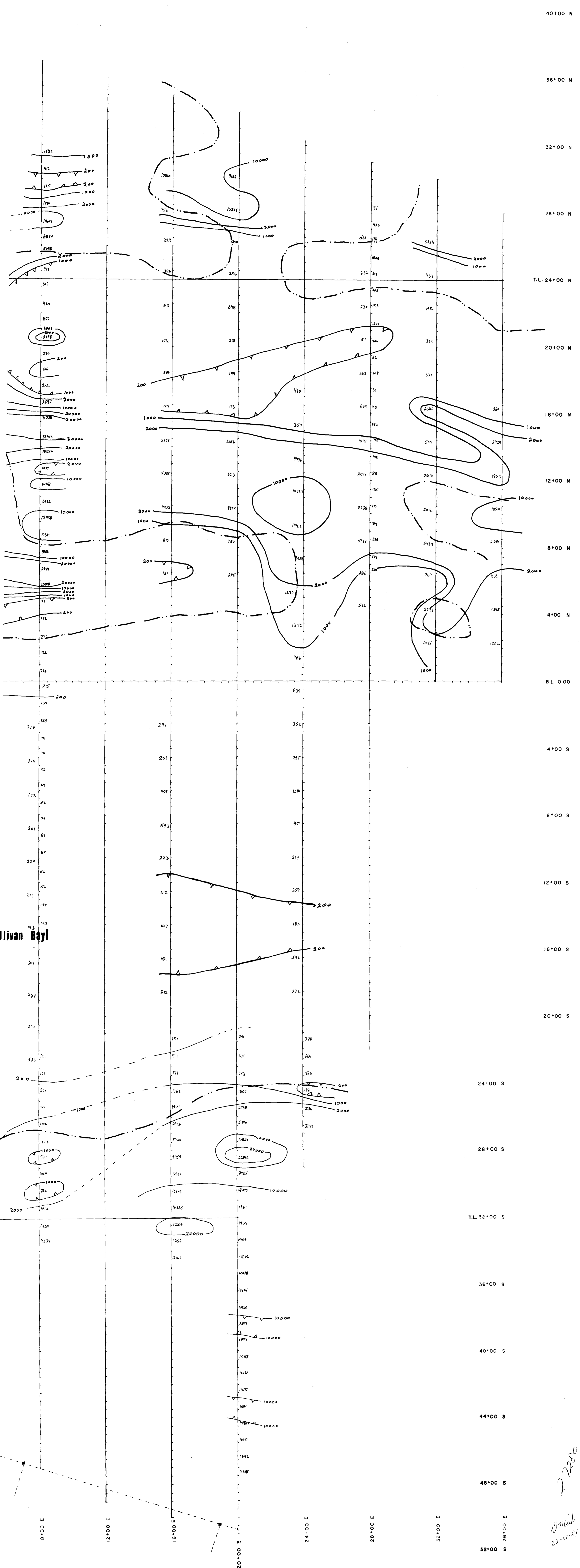
- PICKET LINE
- CLAIM LINE
- SURVEY LINE
- CLAIM POST
- CLAIM POST (ASSUMED)
- STREAM - RIVERS
- TRAILS - ROADS
- SWAMP
- PATENTED LANDS
- LAKES

**SILVER LAKE RESOURCES**  
**i.p. chargeability**

Survey by RAYAN EXPLORATION LTD.  
 Property SILVER LAKE RESOURCES  
 Twp/Area ROWAN LAKE / SULLIVAN BAY  
 Proj. ONT. NTS: 52 F/5  
 Drafted: A. Christopher Plotted: \_\_\_\_\_ Checked: \_\_\_\_\_  
 Scale 1:200 Date MARCH 1984

*27200*  
*M. Smith*  
*23-3-84*





Iivan Bay

40+00 N  
36+00 N  
32+00 N  
28+00 N  
T.L. 24+00 N  
20+00 N  
16+00 N  
12+00 N  
8+00 N  
4+00 N  
B.L. 0+00  
4+00 S  
8+00 S  
12+00 S  
16+00 S  
20+00 S



CONTOUR INTERVAL			
A=100' N=4 (200,1000,2000,10000)			
<200	<input type="checkbox"/>	10000-20000	<input type="checkbox"/>
200-1000	<input type="checkbox"/>	20000-50000	<input type="checkbox"/>
1000-2000	<input type="checkbox"/>	30000-50000	<input type="checkbox"/>
2000-10000	<input type="checkbox"/>	>50000	<input type="checkbox"/>
A=200' N=4 (200,1000,2000,10000)			
<200	<input type="checkbox"/>	2000-10000	<input type="checkbox"/>
200-1000	<input type="checkbox"/>	>10000	<input type="checkbox"/>
1000-2000	<input type="checkbox"/>		

LEGEND	
Rx CRONE N-IV	Tx PHOENIX IPT-1
Array POLE-DIPOLE	Dipole Spacing: 100' x 200'
Mode TIME DOMAIN	I.P. Units: N=1,2,3,4,5 (100')
	N=3,4,5,6 (200')
Plotting pt. as shown on array	
Apparent Resistivity in ohm-meters	

ELECTRODE ARRAY	
	A=200' A=100'

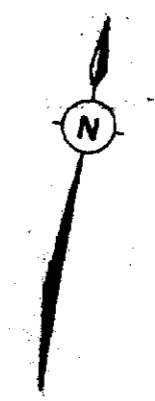
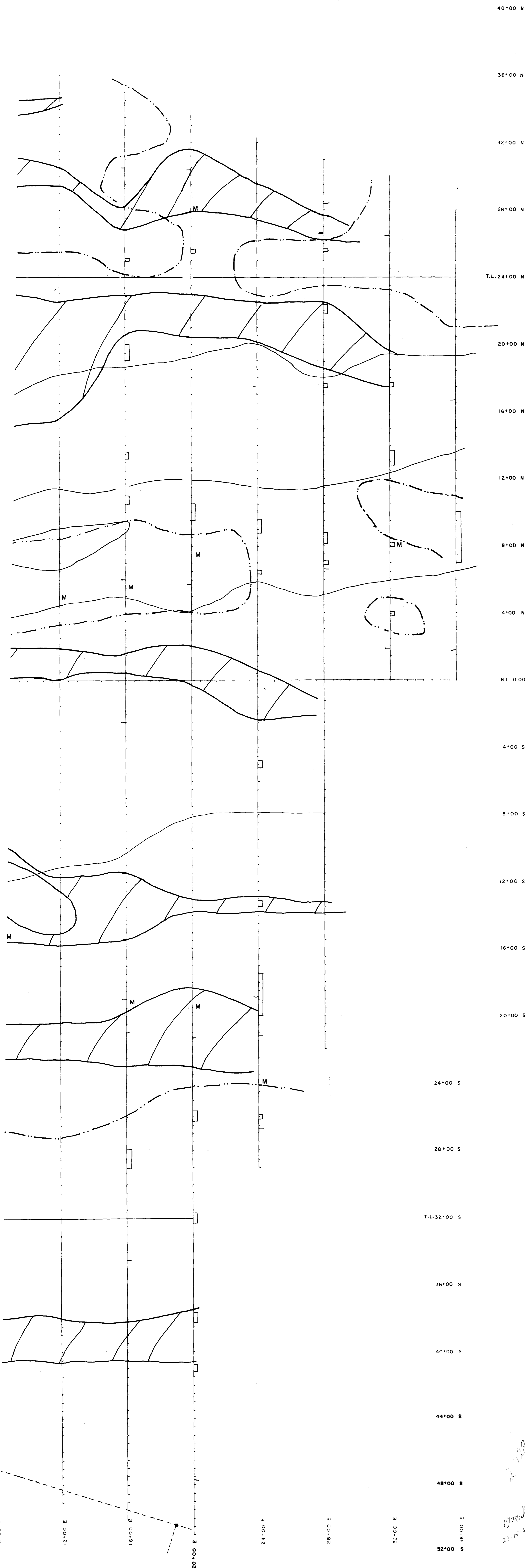
--- PICKET LINE	~ STREAMS + RIVERS
- - - CLAIM LINE	--- TRAILS + ROADS
— SURVEY LINE	~ SWAMP
■ CLAIM POST	▭ PATENTED LANDS
□ CLAIM POST (ASSUMED)	~ LAKES



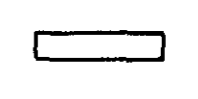



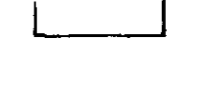
**SILVER LAKE RESOURCES**

**i. p. resistivity**


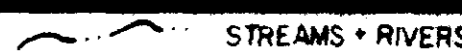

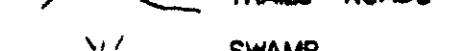
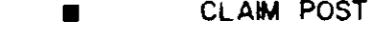




Survey by RAYAN EXPLORATION LTD.  
 Property: SILVER LAKE RESOURCES  
 Top/Area: ROWAN LAKE / SULLIVAN BAY  
 Prov: ONT.      MTS: 52 F/5  
 Drafted: A. Christopher      Plotted:      Checked:      *23-05-84*  
 Scale: 1:200'      Date: MARCH 1984



**LEGEND**

	Fraser Filtered VLF high
	Mag < 59800
	I.P. Anomalies with resistivity high
	I.P. Anomalies
	I.P. Anomalies with resistivity low
	I.P. Coverage 100' spacing
	I.P. Coverage 200' spacing
<b>M</b>	Magnetic Peaks

	PICKET LINE		STREAMS + RIVERS
	CLAIM LINE		TRAILS + ROADS
	SURVEY LINE		SWAMP
	CLAIM POST		PATENTED LANDS
	CLAIM POST (ASSUMED)		

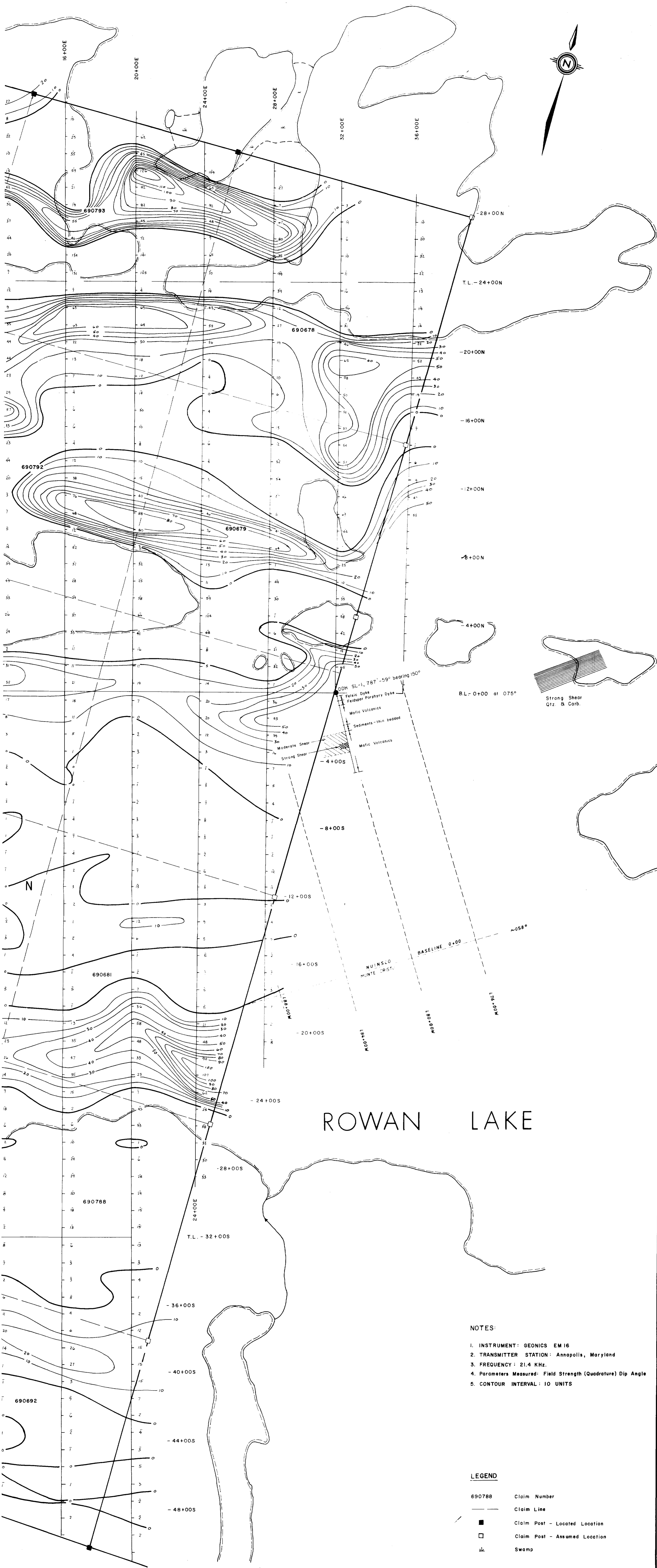
**SILVER LAKE RESOURCES**

**GEOPHYSICAL COMPILATION**

Survey by: RAYAN EXPLORATION LTD.	
Property: SILVER LAKE RESOURCES	
Twp/Area: ROWAN LAKE / SULLIVAN BAY	
Prov: ONT.	NTS: 52 F/5
Drafted: A. Christopher	Plotted: [Signature]
Scale: 1:200'	Date: MARCH 1984

*2-1280*  
*19/11/84*  
*22-5-84*

# OWAN LAKE



# ROWAN LAKE

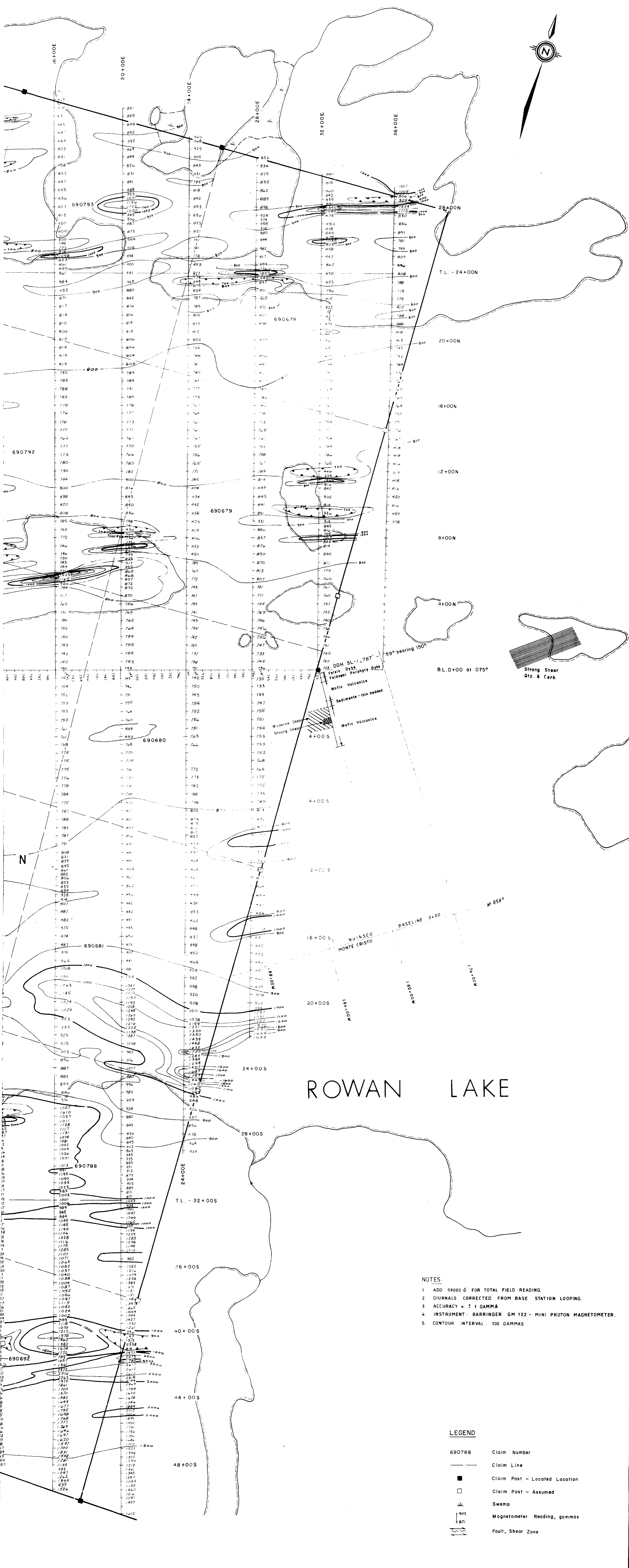
- NOTES:**
1. INSTRUMENT: GEONICS EM 16
  2. TRANSMITTER STATION: Annapolis, Maryland
  3. FREQUENCY: 21.4 KHz.
  4. Parameters Measured: Field Strength (Quadrature) Dip Angle
  5. CONTOUR INTERVAL: 10 UNITS

- LEGEND**
- 690788 Claim Number
  - Claim Line
  - Claim Post - Located Location
  - Claim Post - Assumed Location
  - ≡ Swamp

*John R. Goodwin*

GOODWIN MINERAL EXPLORATIONS	
FOR:	SILVER LAKE RESOURCES 21280
SURVEY:	<b>FILTERED V.L.F. - EM SURVEY</b>
AREA/TWP:	Scale: 200' 0 100' 200' 100m 0 100m
ROWAN LAKE AREA	
DATA: RAYAN EXPLORATION LTD.	CHECKED: J.R.G. N.T.S.: 52 F/5
DRAFTING: D. KAY	DATE: APRIL 1984 DWS. N° GME 2-4

# ROWAN LAKE



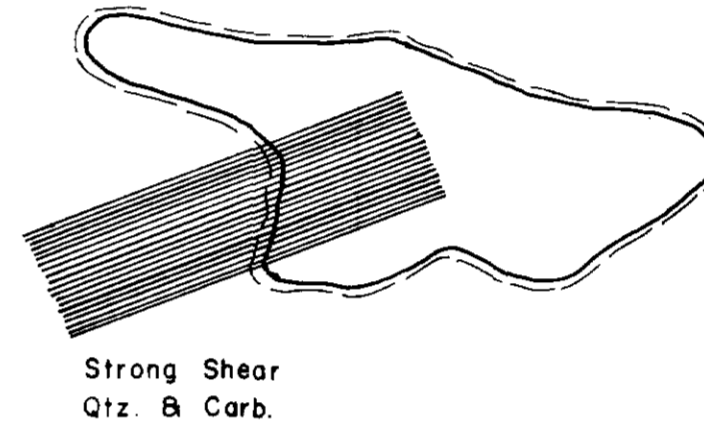
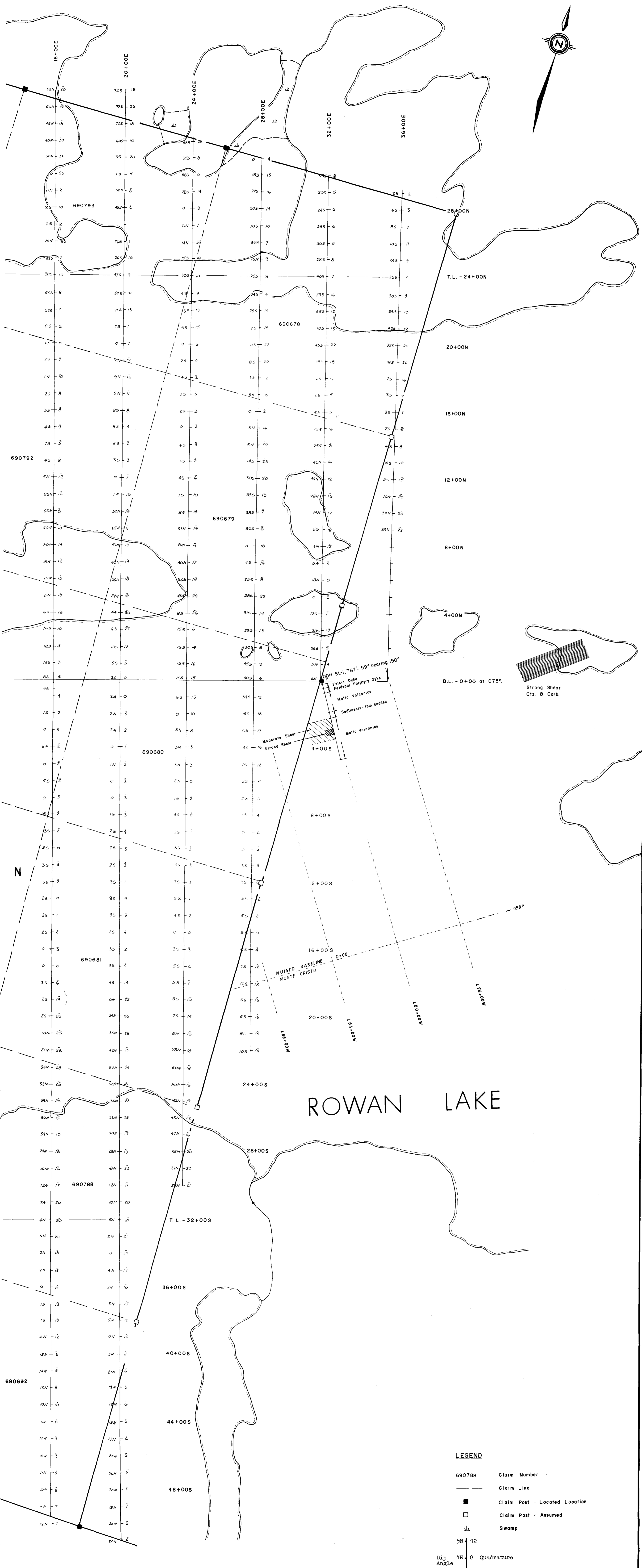
- NOTES:
1. ADD 59000  $\gamma$  FOR TOTAL FIELD READING.
  2. DIURNALS CORRECTED FROM BASE STATION LOOPING.
  3. ACCURACY =  $\pm 1$  GAMMA
  4. INSTRUMENT: BARRINGER GM 122 - MINI PROTON MAGNETOMETER.
  5. CONTOUR INTERVAL: 100 GAMMAS

- LEGEND
- 690788 Claim Number
  - Claim Line
  - Claim Post - Located Location
  - Claim Post - Assumed
  - Swamp
  - Magnetometer Reading, gammas
  - Fault, Shear Zone

*John B. Woodman*

GOODWIN MINERAL EXPLORATIONS		
FOR: SILVER LAKE RESOURCES 2/12/80		
SURVEY: MAGNETOMETER SURVEY		
AREA/TWP: ROWAN LAKE AREA	Scale: 1" = 200'	0 100' 200'
DATA: RAYAN EXPLORATION LTD.	CHECKED: J.R.G.	N.T.S.: 52 F/5
DRAFTING: D. KAY	DATE: APRIL 1984	DWG. NO: GME 2-2

# D W A N L A K E



- LEGEND**
- 690788 Claim Number
  - Claim Line
  - Claim Post - Located Location
  - Claim Post - Assumed
  - ⊞ Swamp
  - 5N 4 12 Dip Angle
  - 4N 4 8 Quadrature
  - 2N 4 3

*John R. Goodwin*

GOODWIN MINERAL EXPLORATIONS	
FOR:	SILVER LAKE RESOURCES
SURVEY:	VLF E.M. SURVEY
AREA / TWP	Scale  200' 0 100' 200'
ROWAN LAKE AREA	
DATA: RAYAN EXPLORATION LTD.	CHECKED: J.R.G. N.T.S.: 52 F/5
DRAFTING: D. KAY	DATE: APRIL 1984 DWG. No: GME 2-3