

125840



42A02SE0001 63.5840 HOLMES

010

GEOPHYSICAL REPORT
ON THE
HOLMES TOWNSHIP PROPERTY
FOR
SUTTON-HANSON PARTY

Prepared By:
J.C. Grant
Exsics Exploration Ltd.
July 1990



OP90-254,253



42A02SE0001 63.5840 HOLMES

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INTRODUCTION

An Induced Polarization Survey was conducted on the Holmes Township Property for the Sutton-Hanson Group on a contract basis by Exsics Exploration Limited, Timmins, Ontario.

The purpose of this survey was to test the property for disseminated sulphides with the hopes of detecting a larger economical zone.

This report will deal with the results of this current survey as well as suggesting future follow-up work.

PERSONNEL

The following personnel were directly involved with this project between July 3 and July 9, 1990.

John Penttinen.....Timmins, Ontario
Steve Anderson.....Timmins, Ontario
Ted Anderson.....Timmins, Ontario

LOCATION AND ACCESS

The property is located in Lots 10 and 11, Concession 1 and 2 of Holmes Township, Larder Lake Mining Division, as shown in Figure 3 of this report.

More specifically it is located 12.8 km northeast of the town of Matachewan and on the west side of Galer Lake. (Figures 1 and 2)

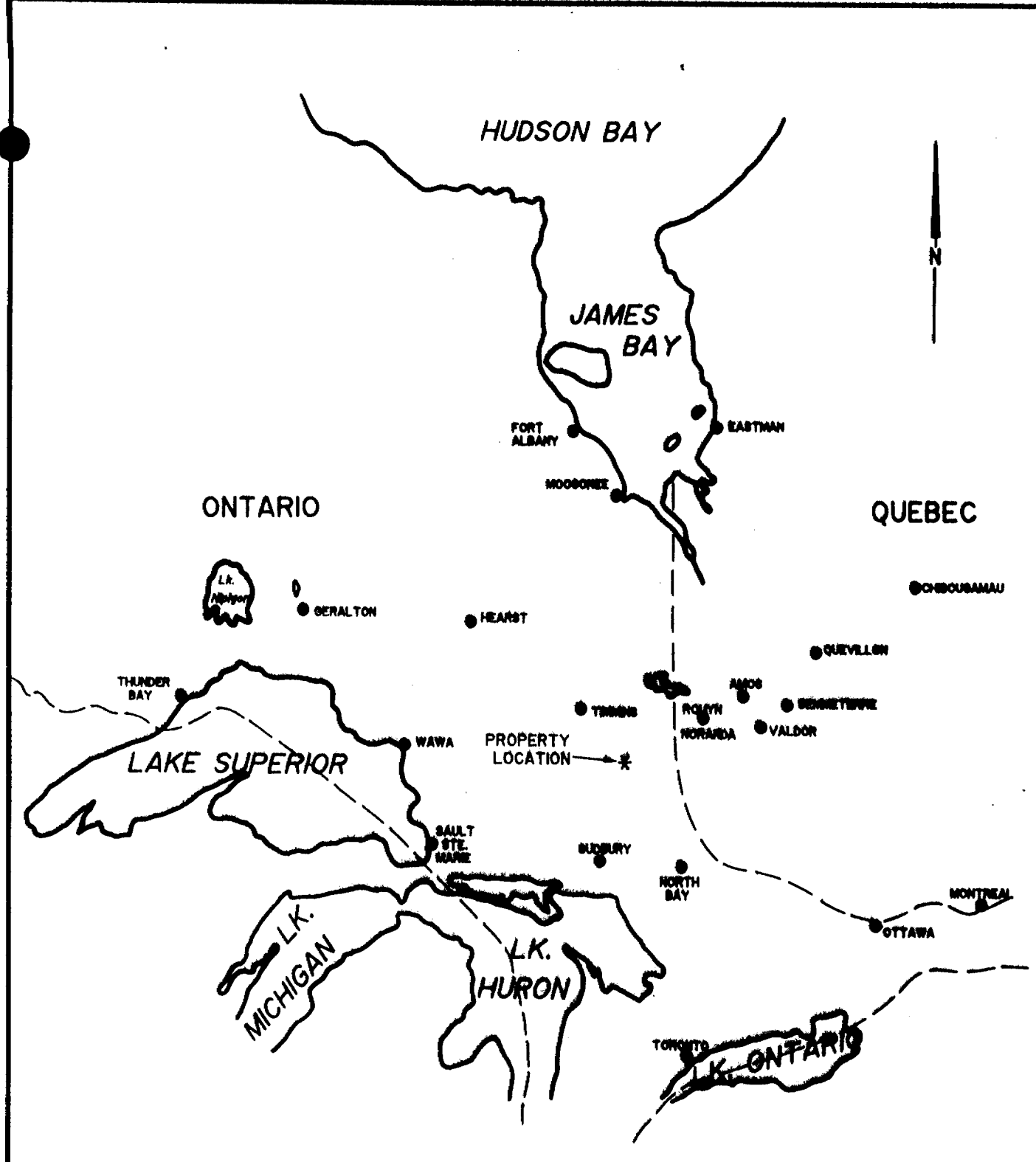
Access to the property is ideal year round as a good gravel road runs through the claim group. This gravel road runs north off of Highway 66 at Middleton lake. Refer to Figure 2 of this report.


CLAIM GROUP

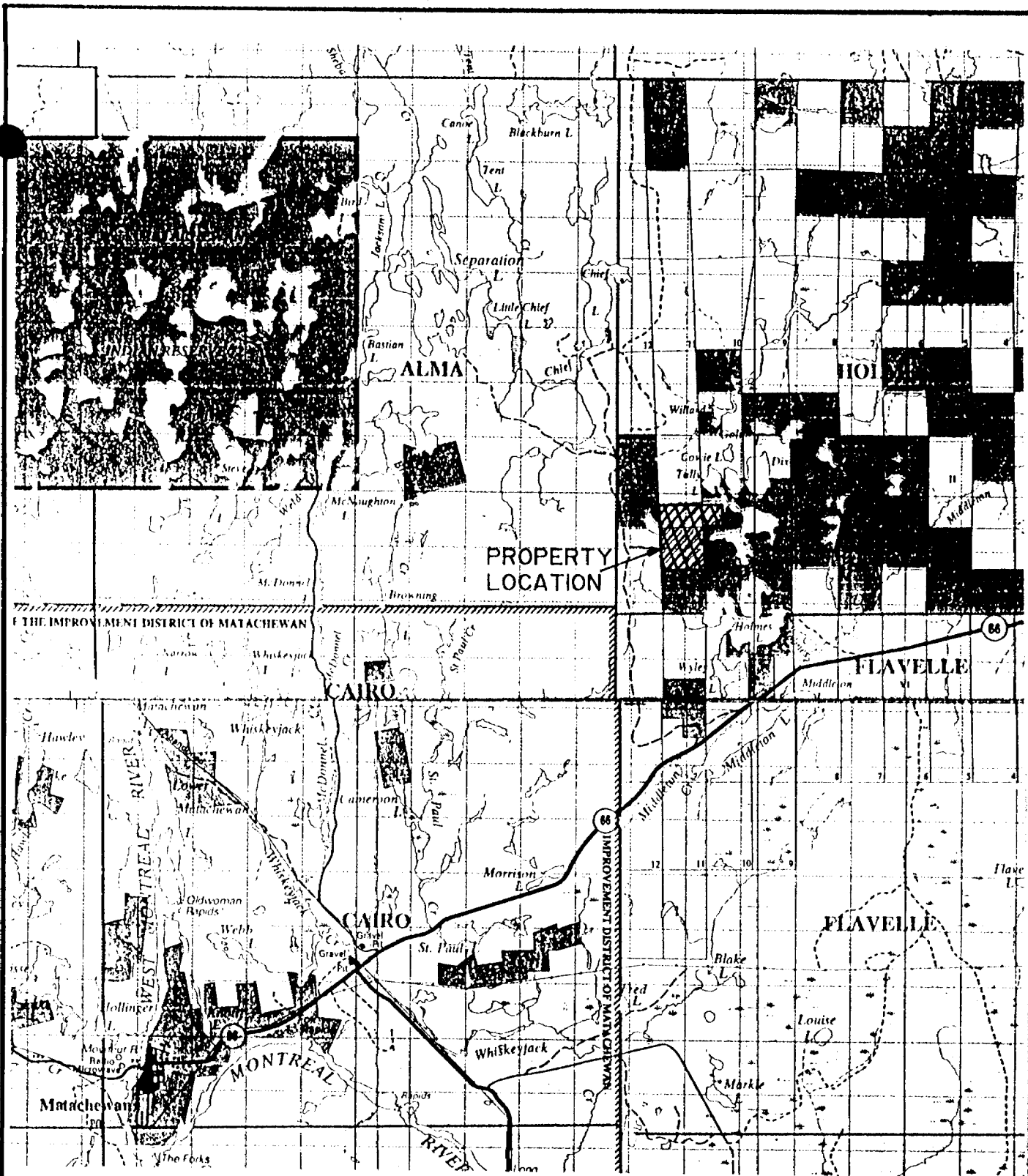
The claims covered by this current survey are shown in Figure 3 of this report and are as follows:

L1047209	L1048455
L1047200	L1048456
L1047198	L1048457
	L1048458

The status of these claims were not known at the time of this writing.



			EXSICS EXPLORATION LTD. P.O. Box 1006, POB-7X1 Suite 10, Highway 504, Timmins Ont. Telephone: 705-867-4151		
			CLIENT: HANSON - SUTTON CLAIMS		
PROPERTY: HOLMES TOWNSHIP PROPERTY			TITLE:		
LOCATION MAP			Fig. 1		
Date: JULY 1990		Scale: 1"=125miles		NTS:	
Drawn:		Interp:		Job No. IP-366	



EXSICS EXPLORATION LTD.

P.O. Box 9896, PLN-7X1
 Suite 13, Hollinger Bldg. Toronto Ont.
 Telephone: 795-987-481

CLIENT: HANSON - SUTTON CLAIMS

PROPERTY: HOLMES TOWNSHIP PROPERTY

TITLE: PROPERTY LOCATION.

Fig.-2

Date: July 1990

Scale: 1:100,000

NTS:

Drawn: P.G.

Interp:

Job No. IP-366

ALMA TWP.

IV

III

II

I

HOLMES TWP.

1047209 1047208 1047198

1048455 1048456

1048458 1048457

GALER LAKE

12

11

10

HOLMES LAKE

9

8

7

FLAVELLE TWP.



EXSICS EXPLORATION LTD.

P.O. Box 2008, P40-071
Suite 13, Flavelle Bldg, Vancouver, B.C.
Telephone: 753-807-4251

CLIENT: HANSON - SUTTON CLAIMS

PROPERTY: HOLMES TOWNSHIP PROPERTY

TITLE: CLAIM SKETCH

Fig. 3



Date: JULY 1990

Scale: 1"=1/2mile

NTS:

Drawn: P.G.

Interp:

Job No. IP-366

INDUCED POLARIZATION SURVEY

The current IP Survey utilized a portable battery powered time domain transmitter and receiver. A "dipole-dipole" electrode array was used with an "a" spacing of 100 feet.

General IP Theory:

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

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

Electro Array:

A "dipole-dipole" array was used. In this array, both receiver and current dipoles are moved down the line together. By increasing the receiver dipole distance from the current dipole by successive increments of the dipole spacing "a" results in different "n" values.

When the receiver dipole is further away from the current dipole, ie., a greater "n" value, the reading in theory would plot deeper in section. The dipole-dipole array is a symmetrical one which makes interpretation somewhat easier. It does not penetrate conductive overburden as well as the pole-dipole array, but this was not a problem on this property. The dipole spacing "a" used was 100 feet.

The IP Survey was carried out using the following specifications:

Method	:	Time domain induced polarization
Electro Array	:	Dipole-Dipole
"a" Spacing	:	100 feet
Pulse Duration	:	2 seconds on, 2 seconds off
Delay Time	:	500 milliseconds

Integration Time : (Window Width) 420 milliseconds
Receiver : EDA IP-2
Transmitter : Scintrex IPC-9
Electrodes : Porous Pots with Copper Sulphide
Data Presentation: Individual Line Pseudo-Section
Scale: 1 inch:200 feet with Fraser Filter
chargeabilities on top
(See attached appendages)
Profiled chargeabilities
Contoured chargeabilities and apparent
resistivities in Pseudo-Section form.

SURVEY RESULTS

The best IP result was on L0+00 at 9+50S. Here there is a moderately strong chargeability anomaly on the north flank of a resistivity high.

There is also a slightly chargeability high at 750MN which may be coincidental with a shear zone. There also appears to be a contact zone at 10450MS.

There is a very weak chargeability high on the south flank of a moderate resistivity high on L400E at 550-600MN, possibly an extension of the 750MN zone on L0+00.

L400MW:

There appears to be a contact or rock unit changes on L400MW at 11+50MS to 1400MS with weak chargeability highs on either flank.

L800MW:

There appears to be a contact or rock unit change on L800MW at 1300MS which is probably the same unit noted on L400MW.

L1200MW:

There is a slight chargeability high with a north flanking weak resistivity high on L1200MW at 1000MS. Also, there is a possible geological contact between 1+50N to 3+50S with a chargeability high centered at 1+00MS.

L1600MW:

There is a chargeability high centered on a resistivity high on L1600MW at 0+00. A possible contact zone may be located at 0+50MS. There is a weak possibly deep, chargeability high at 950MS on L1600MW.

L2000MW:

There is a weak chargeability high at 7+50MN, however, this zone is suspect. There appears to be a contact zone at 200MS.

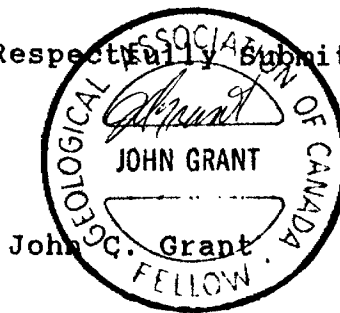
RECOMMENDATIONS AND CONCLUSIONS

The results of this IP survey suggest several areas of interest which should be examined with all other collected data and planned stripping results.

Certainly L0, L12W, L16W should be investigated further. Future IP or geophysical surveys would be based on the stripping results.

However, I would suggest a detailed magnetic survey be done over the entire cut grid which would add greatly to future interpretation.

Respectfully Submitted,



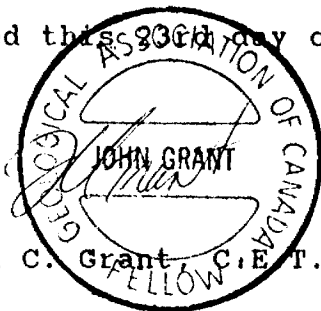
John C. Grant

CERTIFICATE OF QUALIFICATIONS

I, John Charles Grant do hereby certify:

1. that I am a geophysicist and reside at Lot 2 Martineau Avenue, Kamiskotia Lake, Timmins, Ontario.
2. that I am a Fellow of the Geological Association of Canada.
3. that I am a member of the Certified Engineering Technologist Association.
4. that I graduated from Cambrian College of Applied Arts and Technology, Sudbury Campus in 1975 with an Honour's diploma in Geology Technology.
5. that I have practised my profession continuously for 13 years.
6. that my report on the HOLMES TOWNSHIP PROPERTY, for SUTTON-HANSON PARTY is based on work carried out under my supervision.
4. I hold no specific or special interest in the described property. I have been retained as a Consulting Geophysicist for "the property".

Dated this 20th day of July, 1990 at Timmins, Ontario



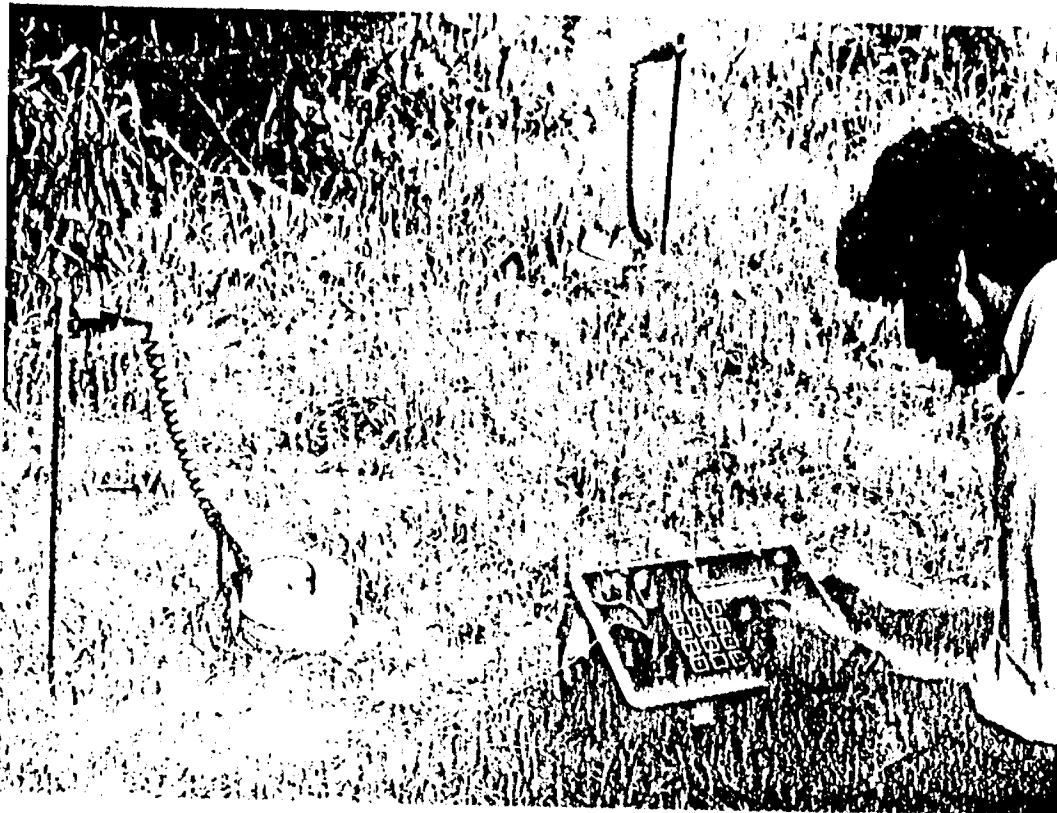
John C. Grant, C.E.T., F.G.A.C.

APPENDICES

APPENDIX A

Product Information

IP-2 TWO DIPOLE TIME DOMAIN IP RECEIVER



MAJOR BENEFITS

- * TWO DIPOLES SIMULTANEOUSLY MEASURED
- * SOLID STATE MEMORY
- * AUTOMATIC PRIMARY VOLTAGE (V_p) RANGING
- * AUTOMATICALLY CALCULATES APPARENT RESISTIVITY
- * COMPUTER COMPATIBLE

EDA Instruments Inc., Head Office: 4 Thorncliffe Park Drive, Toronto, Canada M4H 1H1
Telephone: (416) 425-7800, Telex: 06 23222 EDA TOR, Cables: INSTRUMENTS TORONTO

In USA, EDA Instruments Inc., 5151 Ward Road, Wheat Ridge, Colorado 80033
Telephone: (303) 422-9112

Specifications

Dipoles	Two simultaneous input dipoles.
Input Voltage (Vp) Range	40 microvolts to 4 volts, with automatic ranging and overvoltage protection.
Vp Resolution	10 microvolts.
Vp Accuracy	0.3% typical; maximum 1% over temperature range.
Chargeability Resolution	1 %.
Chargeability Accuracy	0.3% typical; maximum 1% over temperature range for Vp > 10 mV.
Automatic SP Compensation	± 1 V with linear drift correction up to 1 mV/s.
Input Impedance	1 Megohm.
Sample Rate	10 milliseconds.
Automatic Stacking	3 to 99 cycles.
Synchronization	Minimum primary voltage level of 40 microvolts.
Rejection Filters	50 and 60 Hz power line rejection greater than 100 dB.
Grounding Resistance Check	100 ohm to 128 kilo-ohm.
Compatible Transmitters	Any time domain waveform transmitter with a pulse duration of 1 or 2 seconds and a crystal timing stability of 100 ppm.
Programmable Parameters	Geometric parameters, time parameter, intensity of current, type of array and station number.
Display	Two line, 32-character alphanumeric liquid crystal display protected by an internal heater for low temperature conditions.
Memory Capacity	600 sets of readings.
RS-232C Serial I/O Interface	1200 baud, 8 data bits, 1 stop bit, no parity.
Console Power Supply	Six 1.5V "D" cell disposable batteries with a maximum supply current of 70 mA and auto power save.
Operating Environmental Range	- 25°C to + 55°C; 0-100% relative humidity; weatherproof.
Storage Temperature Range	- 40°C to + 60°C.
Weight and Dimensions	5.5 kg, 310x230x210 mm.
Standard System Complement	Instrument console with carrying strap, batteries and operations manual.
Available Options	Stainless steel transmitting electrodes, copper sulphate receiving electrodes, alligator clips, bridge leads, wire spools, interface cables, rechargeable batteries, charger and software programs.

EDA Instruments Inc.
 4 Thorncliffe Park Drive,
 Toronto, Ontario
 Canada M4H 1H1
 Telex: 06 23222 EDA TOR
 Cable: Instruments Toronto
 (416) 425 7800

In USA
 EDA Instruments Inc.
 5151 Ward Road,
 Wheat Ridge, Colorado
 U.S.A. 80033
 (303) 422 9112

A P P E N I X B

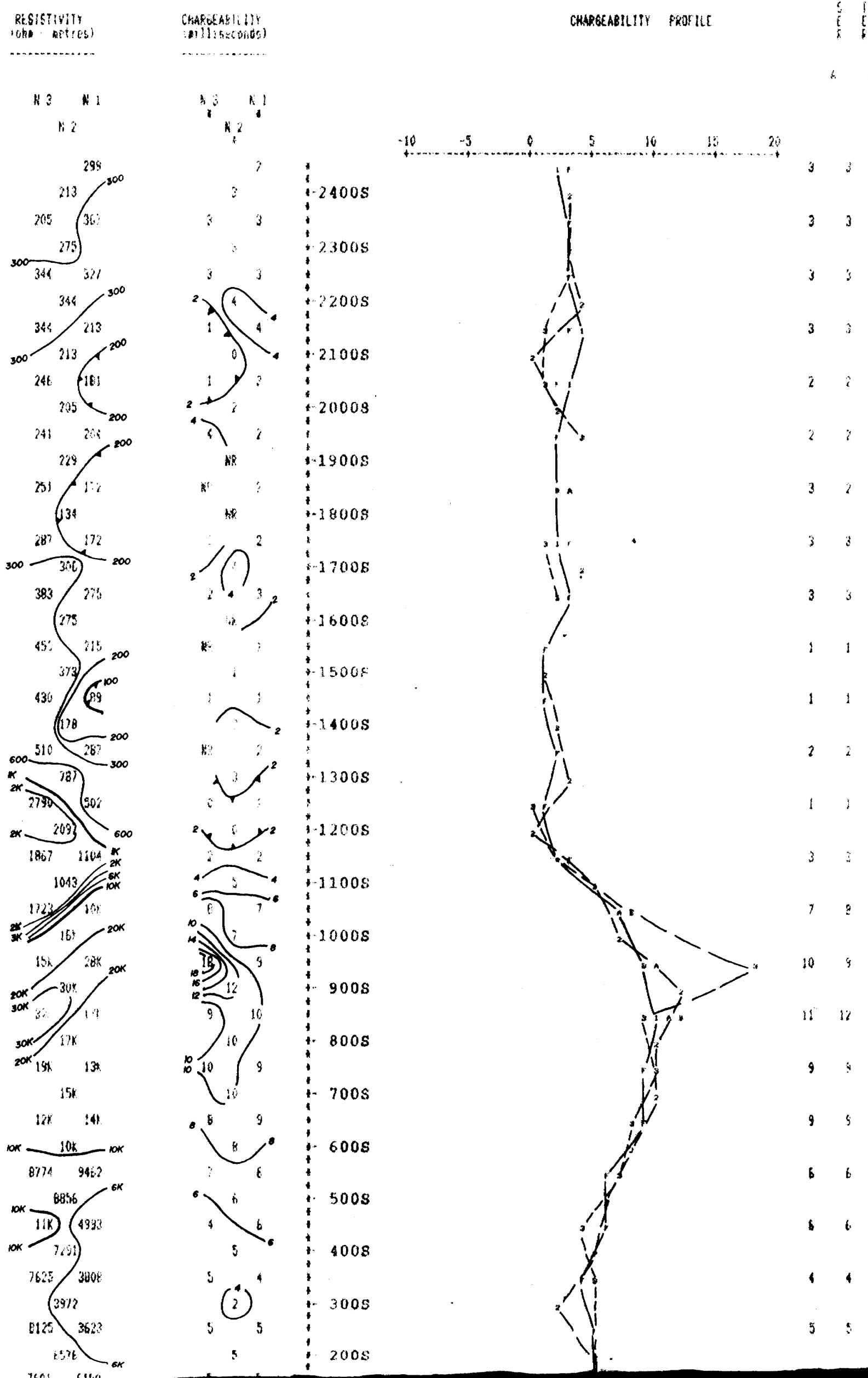
INDUCED POLARIZATION AND D.C.
RESISTIVITY TRANSMITTER

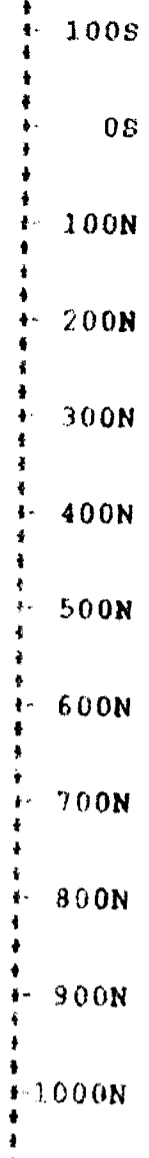
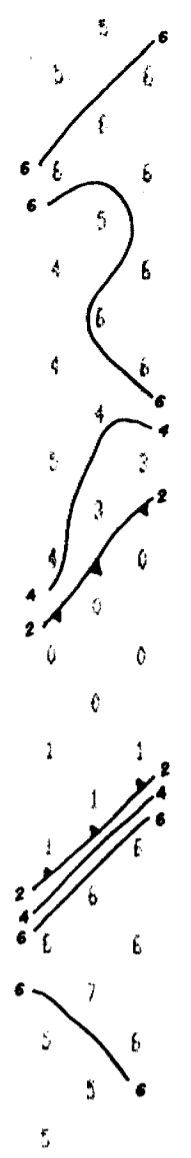
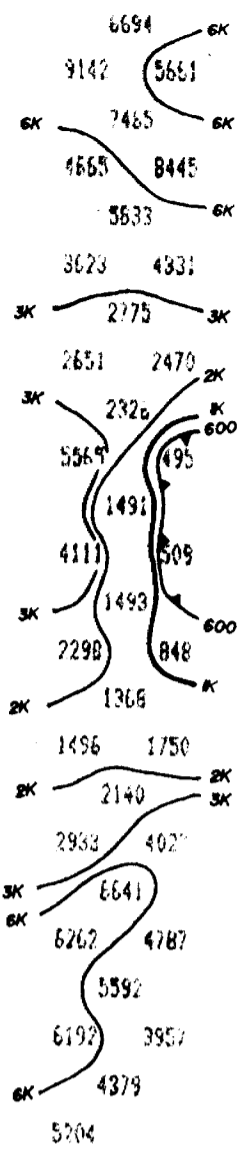
2.0 SPECIFICATIONS

Maximum Output Power	200W defined as when current is on and into a resistive load.
Output Voltage	Switch selectable at nominal settings of 15, 150, 210, 300, 425, 600 or 850 V.
Output Current	1.5 A maximum.
Meter Ranges	Switch selectable at 50 mA, 150 mA, 500 mA, 1500 mA full scale with accuracy of $\pm 3\%$ of full scale.
Automatic Cycle Timing	T:T:T:T; on:off:on:off.
Automatic Polarity Change	Each 2T.
Pulse Durations	T is switch selectable at 1, 2, 4, 8, 16 or 32 seconds.
Period Time Stability and Accuracy	Crystal controlled to better than 0.002 percent of the selected pulse duration.
Open Loop Protection	High voltage is automatically turned off if the output power is less than 2 W. This can be overridden manually for testing purposes. This protection is not effective at the 15 V output.
Synchronization Output	Optically isolated, suitable for external synchronization of the IPR-11 multichannel IP Receiver.
Internal Power Sources	Two battery packs are standard, each containing 4 GC 660-1 lead-acid gel-type batteries giving 24 V at 12 Ah. One Penlite battery, Eveready E91 or equivalent.
External Power Sources	24 V DC supply at maximum 10A.

Power for Battery Charger	115 or 230 VAC, 50 to 400 Hz, 100 W.
Dimensions and Weights	Transmitters with two battery packs: 140 x 300 x 460 mm; 16.0 kg Single battery pack: 140 x 300 x 150 mm; 6.2 kg Charger: 140 x 300 x 150 mm; 5.5 kg
Operating Temperature Range	-30°C to +55°C.
Standard Equipment	Console, 2 battery packs, battery charger, carrying harness. Two giant banana plugs, minor spare parts kit.
Optional Equipment	Reels, wire, porous pots, electrodes, major spare parts kit, radio transceivers, back pack.
Shipping Weight	46 kg includes reusable wooden shipping case.

SCALE : 1 inch to 200 feet





Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

Date of Survey : 7/7/90
 Operator : JP
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

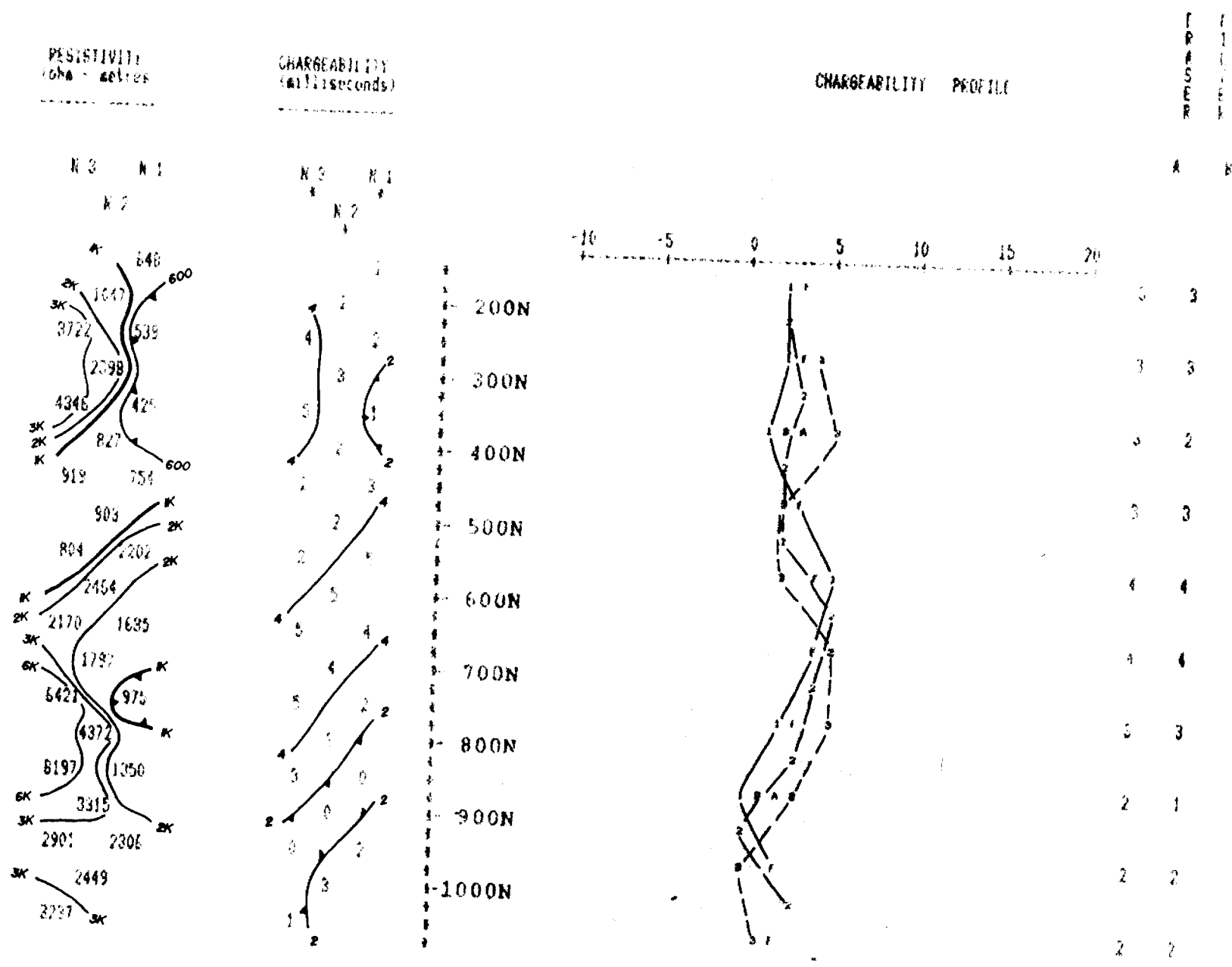
 EXSIBS EXPLORATION LTD.

JP Pseudosections for N = 1 to 3

'a' Spacing = 100 ft

LINE O E

SCALE : 1 inch to 200 feet



Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

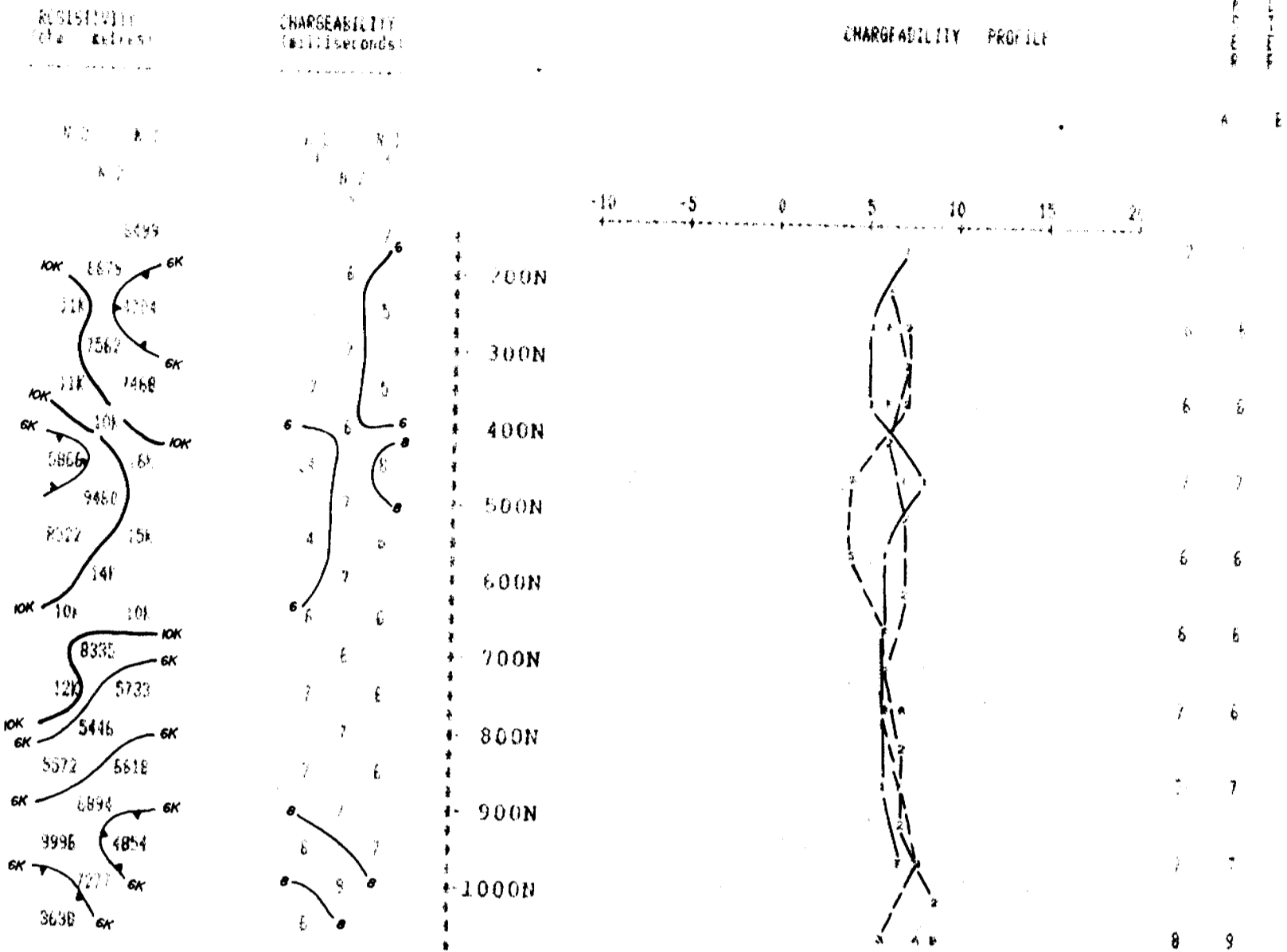
Date of Survey : 7/7/90
 Operator : JP
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3
 'a' Spacing = 100 ft

LINE 400 E

SCALE : 1 inch to 200 feet



Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

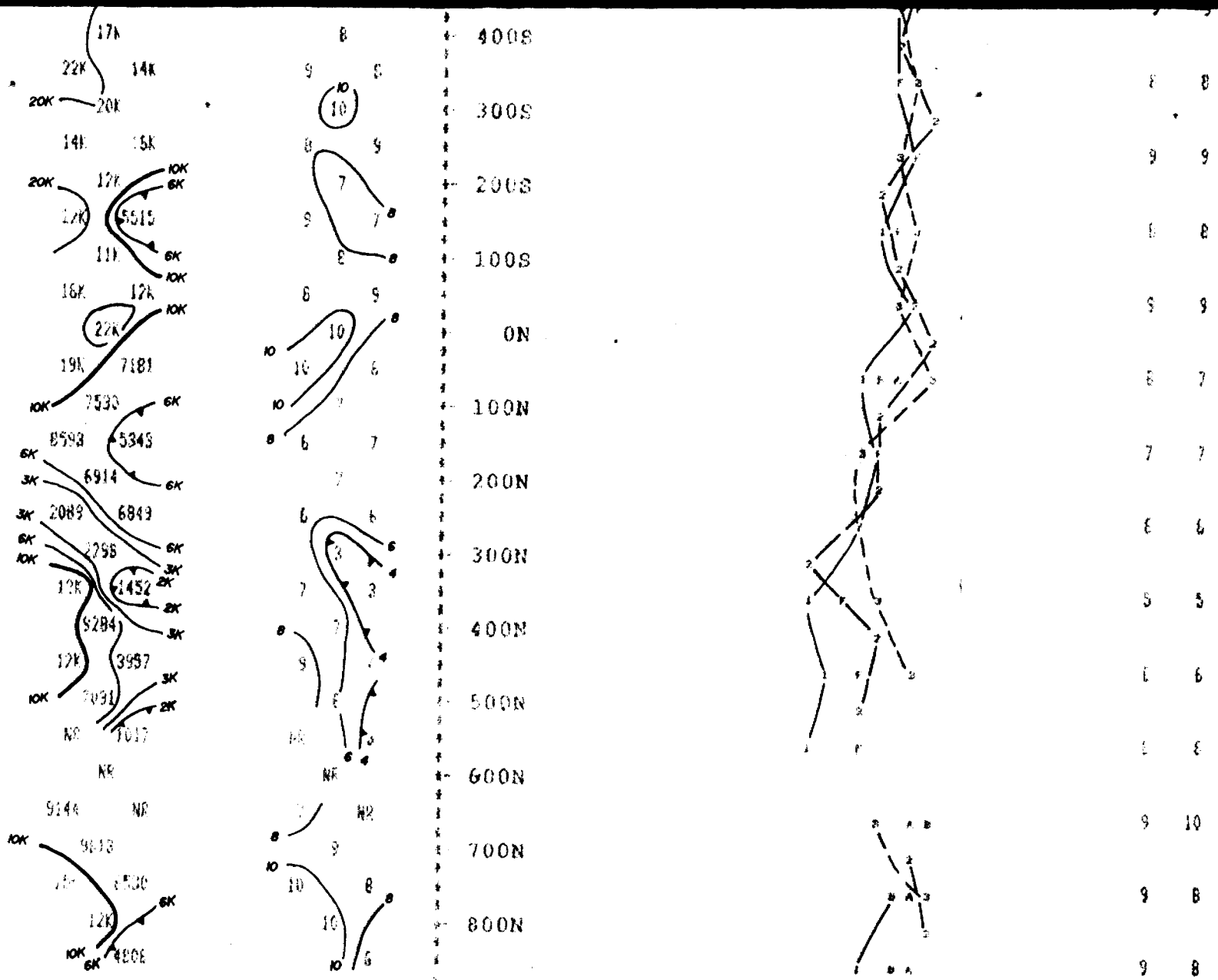
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 Operator : JP
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : LDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse time : 2 Sec on, 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

"a" Spacing = 100 ft

LINE 800 E



Property : HOLMES TOWNSHIP
 Client : HANSON/BUTTON CLAIMS

Date of Survey : 6/7/90
 Operator : TA
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

'a' Spacing = 100 ft

LINE 400 W

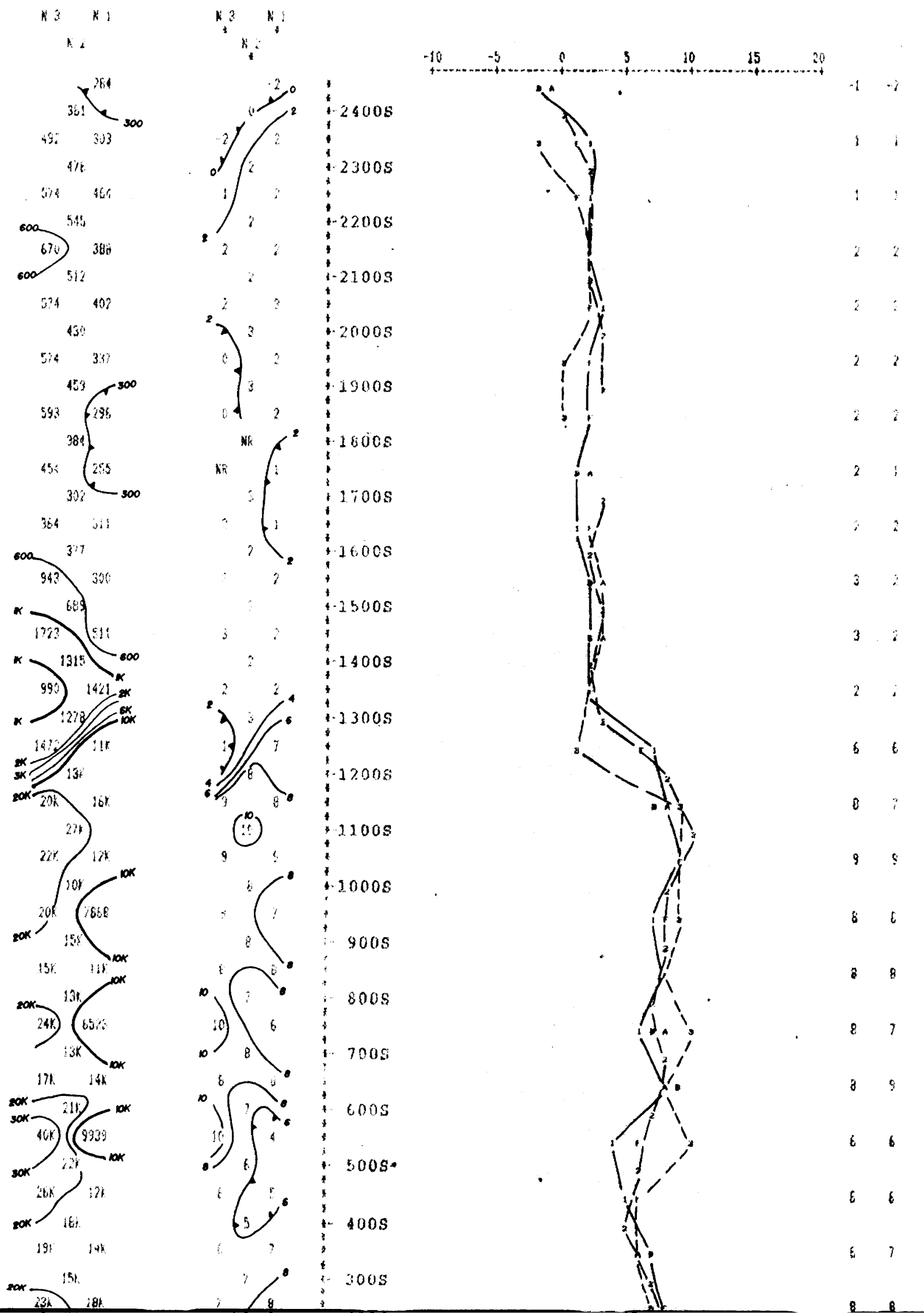
SCALE : 1 inch to 200 feet

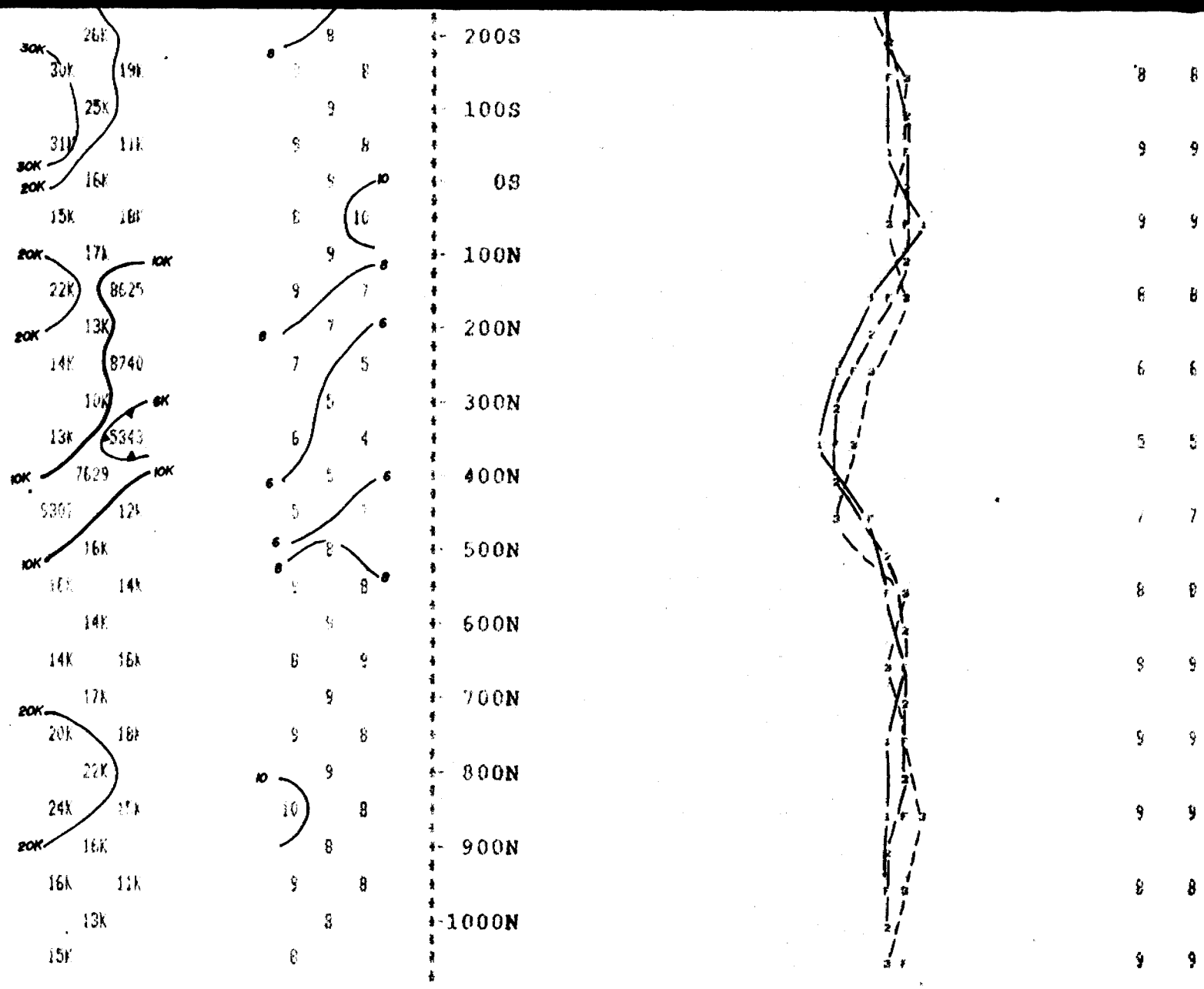
RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

FRASER
METER





Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

Date of Survey : 6/7/90
 Operator : TA
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXBICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

'a' Spacing = 100 ft

LINE 800 W

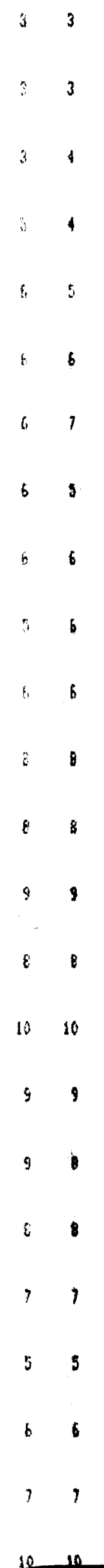
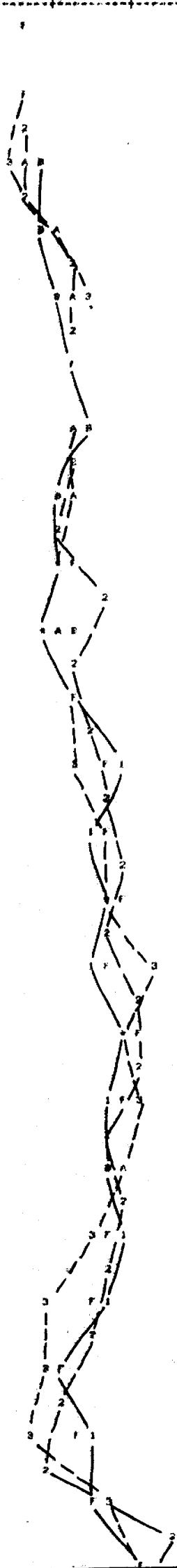
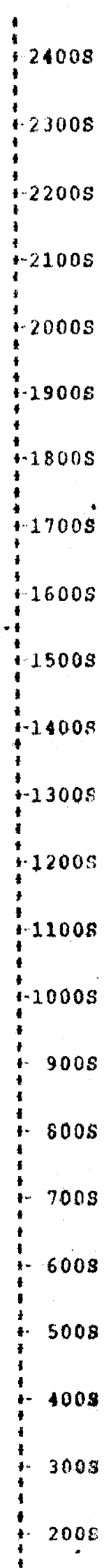
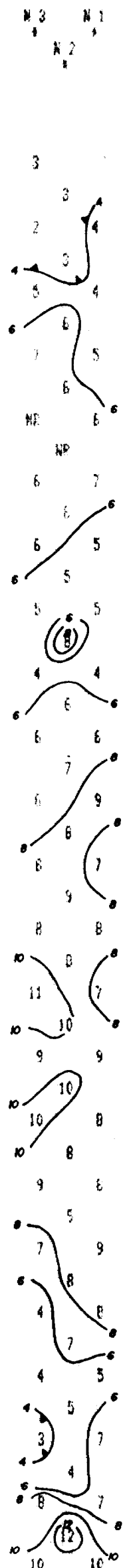
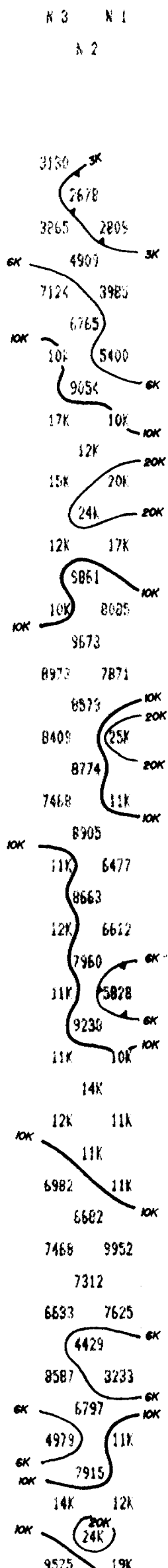
RESISTIVITY
(ohm - metres)

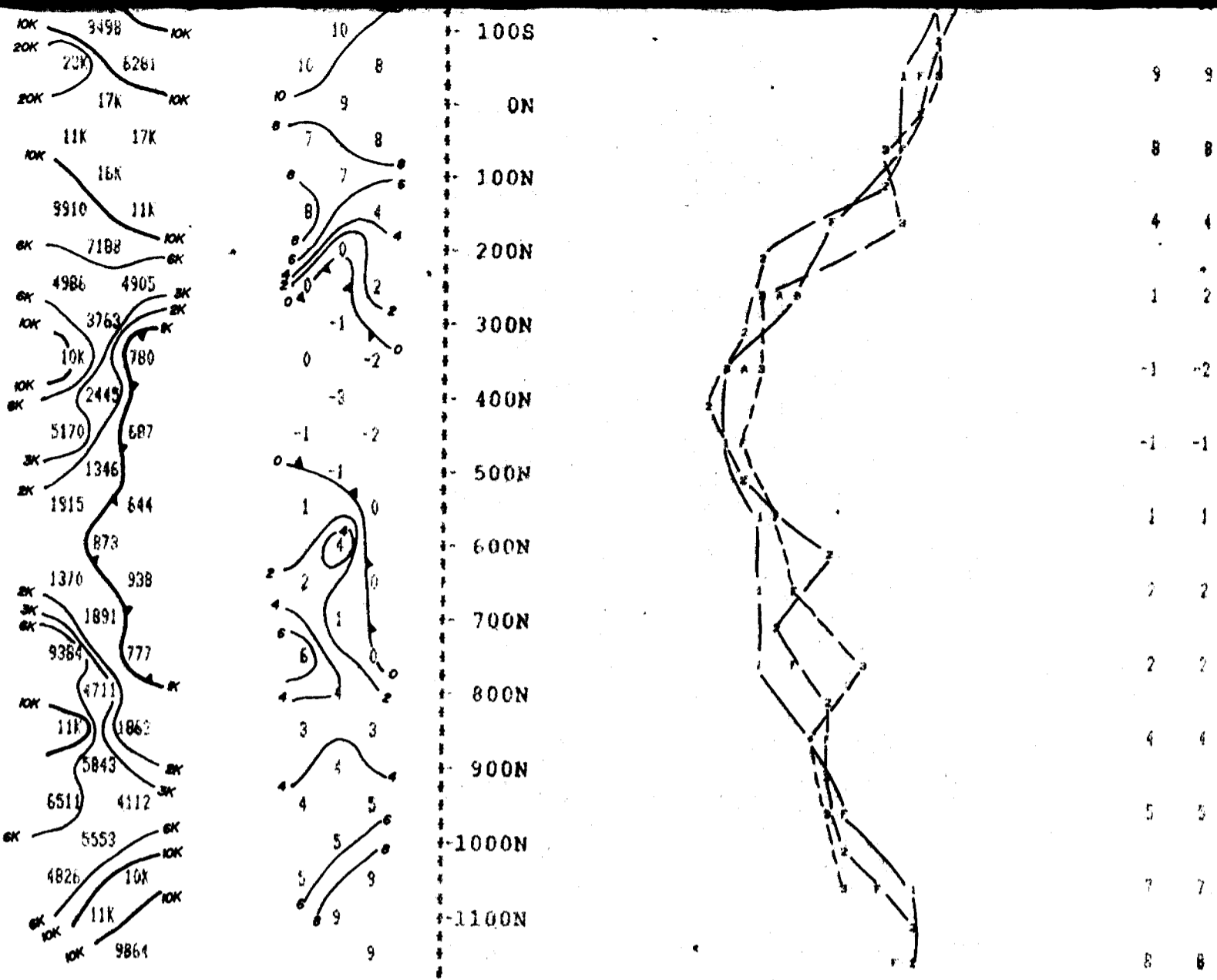
CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

RESISTIVITY

CHARGEABILITY





Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

Date of Survey : 5/7/90
 Operator : SA
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

'A' Spacing = 100 ft

LINE 1200 W

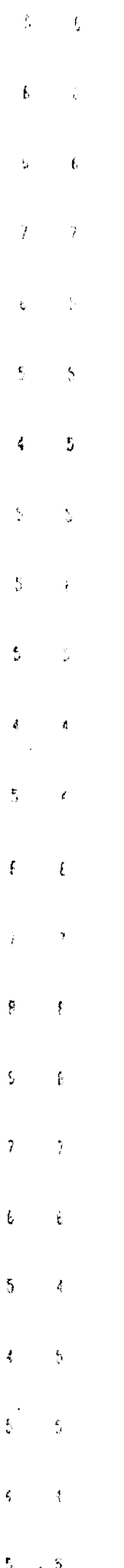
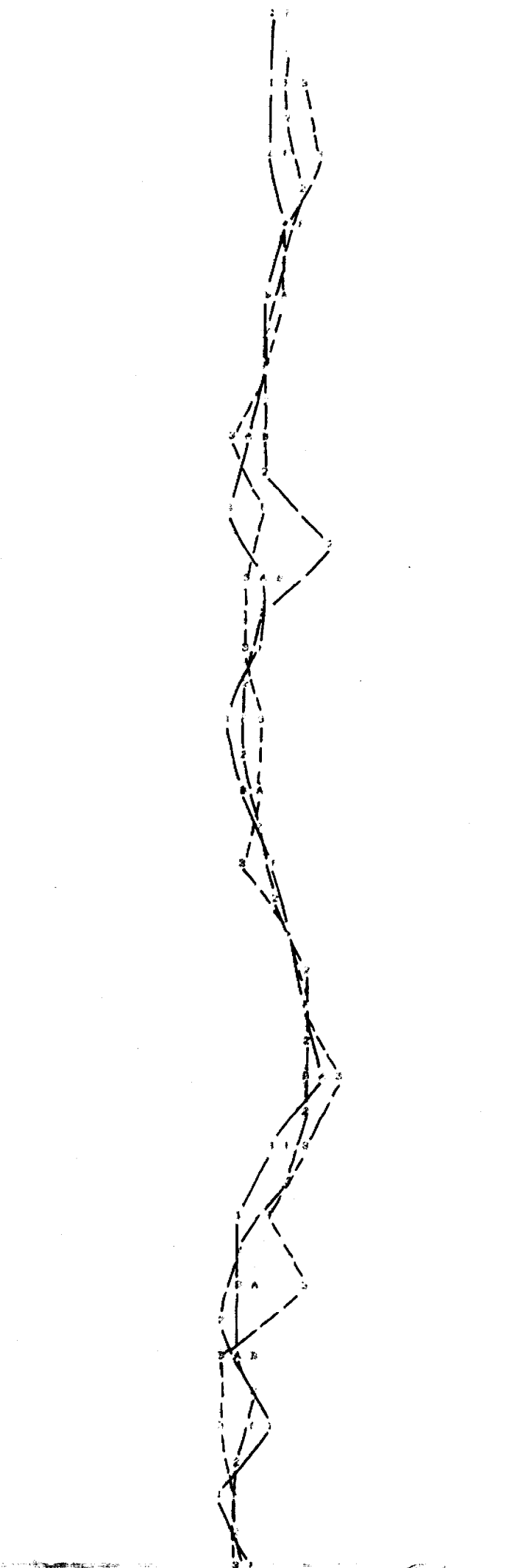
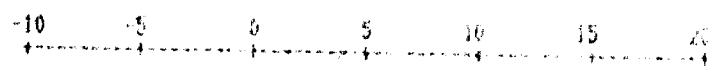
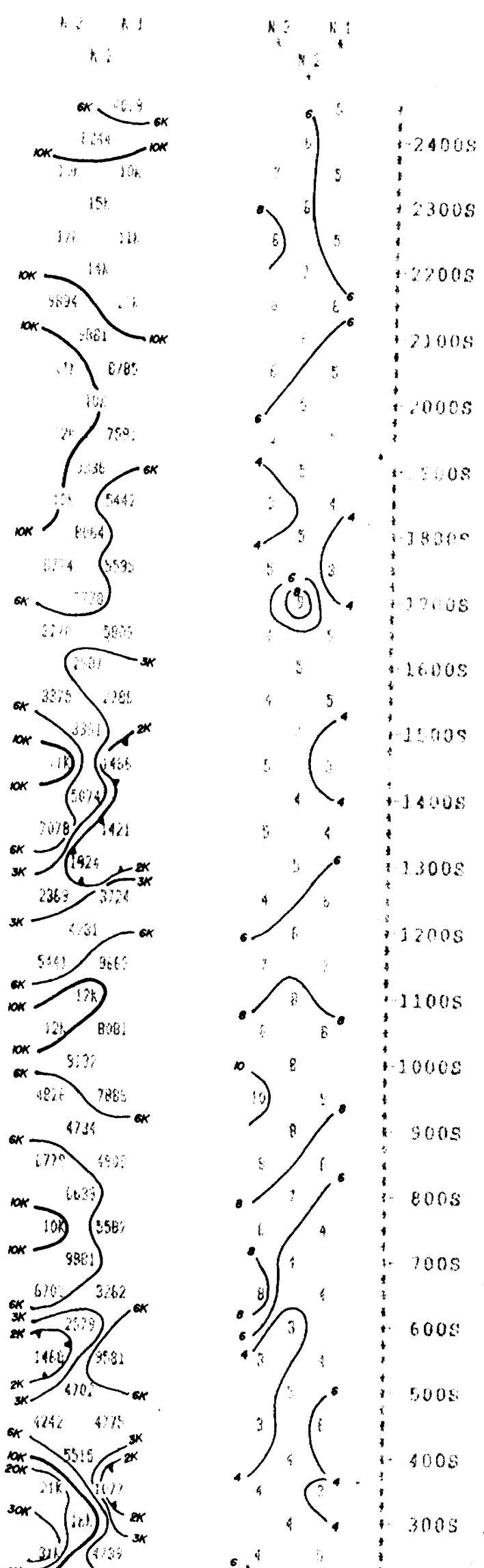
SCALE : 1 inch to 200 feet

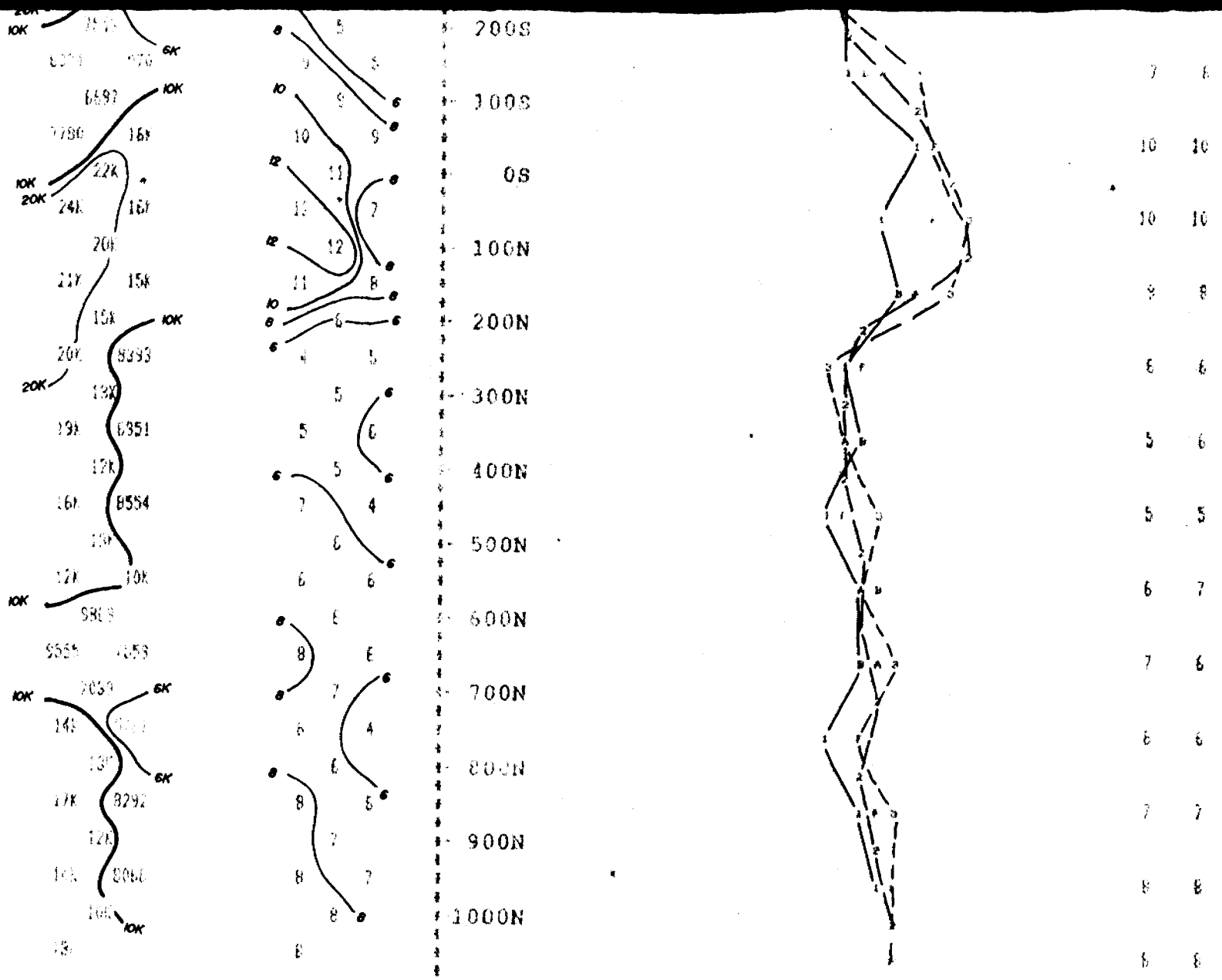
RESISTIVITY
(ohm meters)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

RESISTIVITY
CHARGEABILITY





Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

Date of Survey : 5/7/90
 Operator : SA
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

'a' Spacing = 100 ft

LINE 1600 W

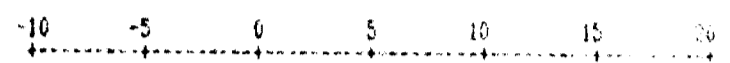
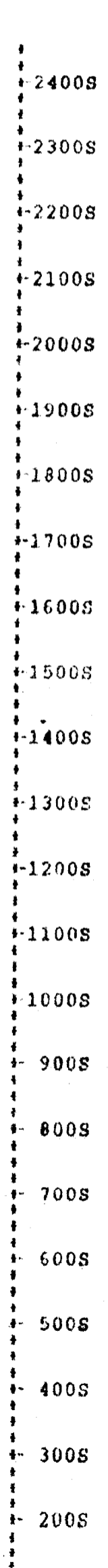
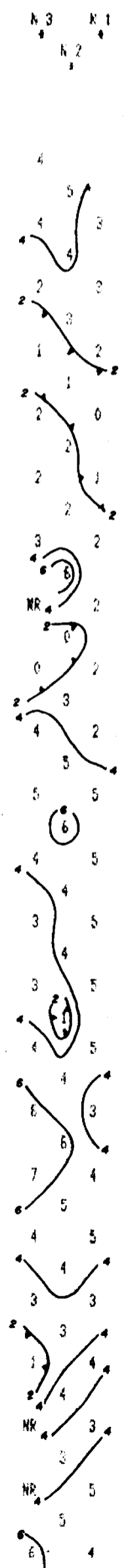
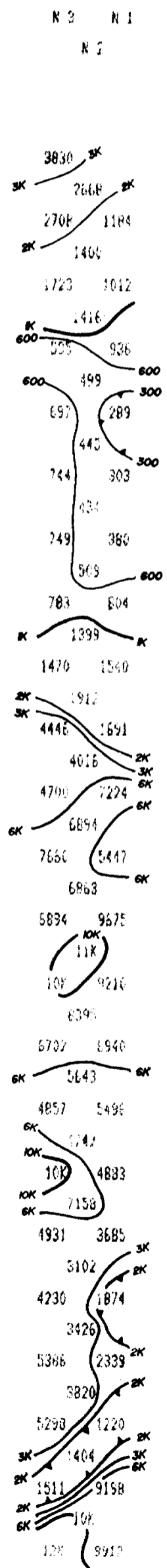
SCALE : 1 inch to 200 feet

RESISTIVITY
(ohm-metres)

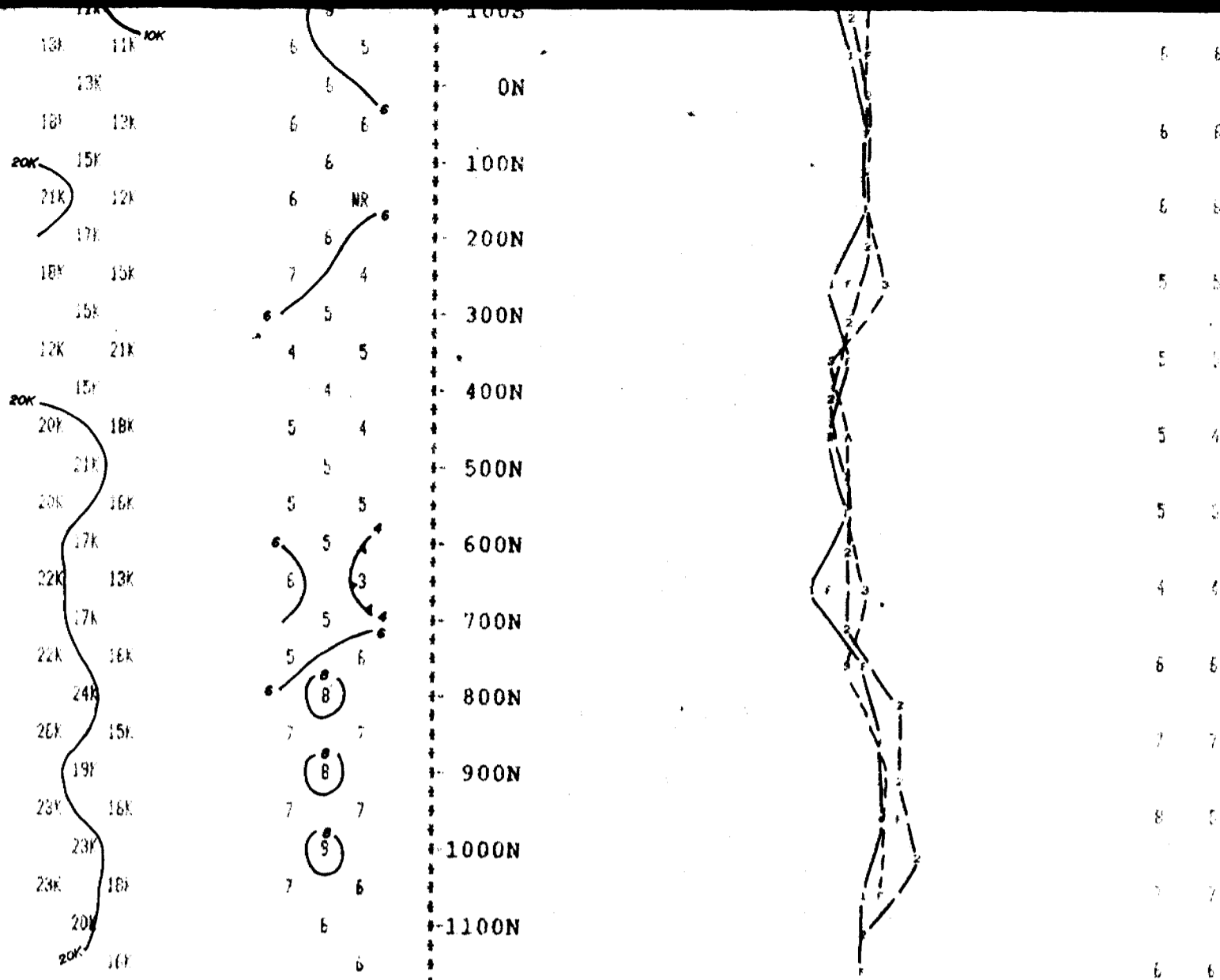
CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

FRAC
OFF
A B



Time (S)	Profile A	Profile B
2400S	4	4
2300S	5	5
2200S	4	4
2100S	3	3
2000S	2	2
1900S	1	1
1800S	2	2
1700S	3	3
1600S	2	2
1500S	2	2
1400S	3	3
1300S	5	5
1200S	5	5
1100S	4	4
1000S	4	4
900S	4	4
800S	5	5
700S	5	5
600S	5	5
500S	3	3
400S	3	4
300S	3	3
200S	5	5
100S	5	5



Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

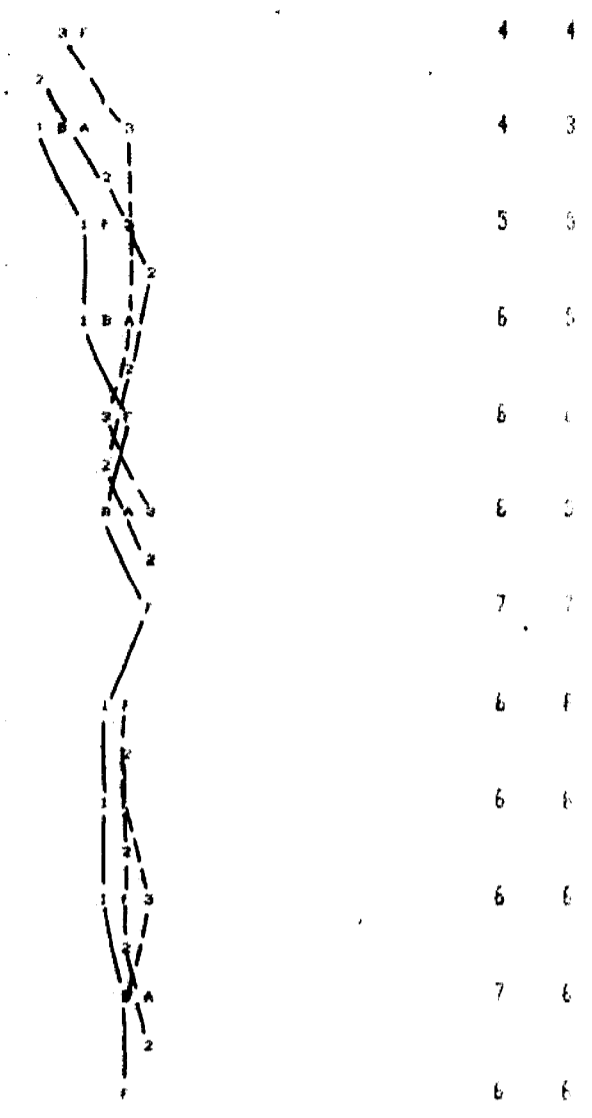
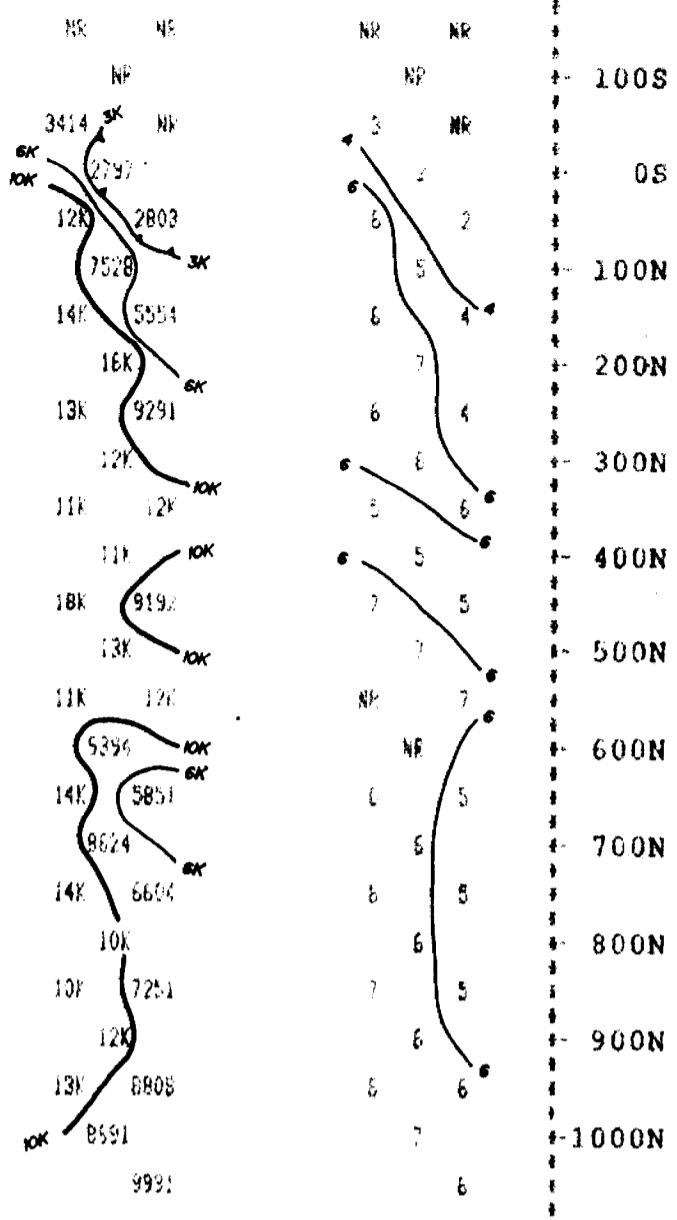
Date of Survey : 4/7/90
 Operator : JP
 Electrode Array : DIFOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3

'a' Spacing = 100 ft

LINE 2000 W



Property : HOLMES TOWNSHIP
 Client : HANSON/SUTTON CLAIMS

Date of Survey : 4/7/90
 Operator : JP
 Electrode Array : DIPOLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : EDA IP-2
 Transmitter : SCINTREX IPC-9
 Pulse Time : 2 Sec on 2 Sec off
 Chargeability Window Plotted : #3
 Delay Time : 500 ms
 Integration Time : 420 ms

 EXSICS EXPLORATION LTD.

IP Pseudosections for N = 1 to 3
 'a' Spacing = 100 ft
 LINE 2400 W



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) Induced Polarization
Township or Area Holmes Township
Claim Holder(s) Sutton-Hanson
Box 534, Kirkland Lake, Ontario
Survey Company Exsics Exploration Limited
Author of Report J. Grant
Address of Author Box 1880, Timmins, Ontario
Covering Dates of Survey July 3 - July 19
(linecutting to office)
Total Miles of Line Cut 7.0

MINING CLAIMS TRAVERSED
List numerically

L 1047209
(prefix) (number)
1047208
1047198
1048455
1048456
1048457
1048458

If space insufficient, attach list

**SPECIAL PROVISIONS
CREDITS REQUESTED**

DAYS
per claim

Geophysical
--Electromagnetic _____
--Magnetometer _____
--Radiometric _____
--Other IP-20
Geological _____
Geochemical _____

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

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

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

DATE: July 23/90 SIGNATURE: J. Grant
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 7

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 317 Number of Readings 951
Station interval 100' Line spacing 400'
Profile scale Chargeability Profile: See enclosed
Contour interval Chargeability: 2 millisec

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

ELECTROMAGNETIC

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

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____
Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument EDA IP-2 Receiver
Method Time Domain Frequency Domain
Parameters - On time 2 seconds Frequency _____
- Off time 2 seconds Range _____
- Delay time 500 millisec
- Integration time 420 millisec
Power IPC-9 (Scintres) Battery Unit
Electrode array Dipole-Dipole
Electrode spacing 100'
Type of electrode Porous Pots - Copper Sulphate



42A02SE0001 63.5840 HOLMES

020

THE SUTTON-HANSON CLAIMS

GENERAL

Eighteen contiguous claims are located in Holmes Township. Located along a logging road two kilometres north of highway 66, between Matachewan and Kirkland Lake, the claims are easily accessed. A branch of the logging road was pushed through the centre of the block and the forest clear cut during the summer of 1989. Lake access to the eastern portion of the block is easily attainable via $\approx 200'$ (≈ 60 metre) portage. The claims are as follows:

NE $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 12	Con I	1048454	NW $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 11	Con II	1048461
SE $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 12	Con I	1048459	SW $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 11	Con II	1047209
NE $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con I	1048456	SE $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 11	Con II	1047208
NW $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con I	1048455	SW $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con II	1111077
SW $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con I	1048458	SE $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con II	1111076
SE $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 11	Con I	1048457	NW $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 10	Con II	1048464
SW $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 10	Con II	1047198	SW $\frac{1}{4}$ -N $\frac{1}{2}$	Lot 10	Con II	1048463
NW $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 11	Con II	1048460	NW $\frac{1}{4}$ -S $\frac{1}{2}$	Lot 12	Con I	1112092

Location: Holmes Twp.; Larder Lake Mining Division

Co-Owners: Michael Sutton K21854
Tim Hanson K21859

Prospecting Targets: Au & Associated Ag, Molybdenum, Copper in addition to these claims, two claims that follow, also contiguous are held under lease 1/3-1/3-1/3 by Michael Sutton, Tim Hanson, and prospector Ivan Jack Dea of Timmins:

NW $\frac{1}{4}$ -N $\frac{1}{2}$ Con 12 Lot I 750778
SW $\frac{1}{4}$ -N $\frac{1}{2}$ Con 12 Lot I 641611

Claims adjoining to the East and Northeast are held under patent by Len Cunningham of Kirkland Lake, who has optioned them to Pamourex. Results of some of their drilling in the summer of 1989 in Holmes Twp. including 0.3oz over 22' were published in the Northern Miner on Dec. 25 (Vol 75, #42 - see ILLUSTRATION A)

The claims adjoining the claims on the South are held by Roger Dufresne of Kirkland Lake who has, it is our understanding, optioned them to Queenston. They carried out extensive stripping on cherty silicified veining along a showing.

GEOLOGY

The Cairo syenitic stock and its contacts with the surrounding volcanic rocks and sedimentary inlayer (both of which are located on our block (see Map #2), have been the focus of exploration for some seventy years due to two factors. First, numerous showings and occurrences are dotted throughout the area, usually associated with chalcopyrite, galena, pyrite, and molybdenum with assays up to 2.2oz Au. and 3.9oz Ag. The second reason substantiates the first. The Galer Lake fault is a major E-W striking structure that transects the Southern contact of the stock with the volcanic, eventually cutting through the stock itself. Our claim block encompasses this locally wide zone and its parallel conductive horizons. The fault itself was uncovered at site 1 (on maps 3 and 4) by Sylva. The shearing through Galer Lake is described by a report in 1957 as "nearly massive sulphides which were observed in the Talcose Schist in the form of Pyrite" along with pervasive carbonitization. The Galer Lake fault was felt by both Moore (1966) and Lovell (1967) to be the Western Extension of the Larder Lake tectonic movement (see map #1). This has been substantiated by W. Powell of Queens' University who did a structural study during the summer of 1989 and subsequently outlined his results at the Dec. 1989 Government Geological Forum in Toronto (G.S.C.). His map (map #8) shows the Larder Lake break passing through our claims—the Galer Lake Fault.

The Cairo Stock is porphyritic but country rocks on the contact of the stock are granitized and often altered to a pink, aphanitic texture "over widths of 30'" (Sylva). This is very difficult to distinguish from the rhyolite volcanic present along the South and East. Indeed, a large outcrop along Tully Lake (at site #5), which is full of silicified pyritic zones, was mapped under the Government Survey (map #2) as syenite, wacke, and rhyolite (and coloured in as syenite), while in fact most likely it is rhyolite. Similarly there is dispute over whether the outcrop in which the Larder Lake break is exposed (site #1) is sheared syenite or rhyolite.

Mapping during the summers of 1988 and 1989 have further delineated the Geology, as found on the compilation (map #9). Besides the quite ordinary pink to red syenite with 30% mafics and grain size in the 0.01 - 0.04 metre range found in the Western portion of the claims and to the North, a porphyritic syenite with grain size up to 3cm that is red and 40 - 50% mafic, was found to be present just North of the Larder break. The contact between this and the rhyolite/sheared syenite unit could not be unearthed but the strike appears to roughly parallel the fault and the absence of alternation might point to it being an intrusive unit.

The most promising horizons for gold appear to be:

- 1) The Larder Lake break and parallel structures especially if these coincide with #2 or #3.
- 2) Trachyte-Due to its porosity evidently.
- 3) Rhyolite and its contacts with syenite and sediments.

Veining is ubiquitous as either quartz or cherty silicified zones. All veining (Quartz, Pyrite, Silicification etc.), Fractures and foliation dips approximately 65-90° North and strikes 50-95° East-Northeast. Specifically there are two sets of silicification (with Associated Au); one at 60° strike and 60-70° dip and the other at 83° with a subvertical dip.

Alteration at the various sites includes Pyrite, Chalcopyrite, Galena, Molybdenum, Sericite, Chlorite, Quartz-Ankerite Veining, Quartz Veins and Group Veinlets, Silicification, Hematization, Fluorite, Tourmaline, and Cherty Veining.

GEOPHYSICS

Several conductors cross through the claims. Falconbridge, Texas Gulf, Rio Tinto, and Sylva Explorations carried out VLF-EM Surveys on different and overlapping portions of the Holmes claim block. Sylva also carried out self potential, Magnetometer, and Geochemical Surveys on "The Group of Seven: (see maps #4, 5, & 6) claims. Several important conductors were realized in the Sylva Surveys which are shown on map #5 as A, B, C, & D.

One of the strongest conductors (A) more or less follows the centre of the fault which is observable using VLF and Magnetic signature (and visually by a 50'-15 metre valley). At its strongest point, on high ground at site 2 (on maps 5&6), it correlates with a self-potential peak. This persistent anomaly has with it 3 coincident Geochemical responses of 20ppm heavy metals in organic soil. Elsewhere, unfortunately, the conductor is usually heavily overburdened. Another anomaly was delineated in the Lake and east of it (see C on map 5). "Weak but very distinctive QP Max/min Anomalies coincide with the SP Survey" which "registered some interesting readings". This also coincides with three Geochemical heavy metals responses. A North-South fault transects this conductor in the Lake. "It would appear" that this fault is "mineralized as well at the junction of the aforementioned conductor since the VLF field strength climbed to over 250%". "The SP correlation in this area rules out the possibility of it being due to Lake Sediments. Also in the high temperature environment of the Syenite stock it is probably a sulphide occurrence".

Another conductor is located at site #3 on maps #2 & #6. Here, on the road the pink "silicious Syenite forms a weak anomaly which is of interest" because it is on strike with a structure which yielded weak gold assays and is "just North of a copper showing" which was tested in earlier days. Trenching was recommended by Sylva.

In the Falconbridge VLF Survey of 1986 (map #3) a strong East-Northeast feature striking at 050" was noted. "Deflections" noted in some of the VLF zones" may represent legitimate zones at depth".

In another VLF survey, carried out by Rio Tinto in 1980 for L.J. Cunningham, conductive zones were delineated within Tully Lake and just west of Cowe Lake.

ASSAY DATA (See Map #2 for Site Locations)

Site #1 (Map #4)

At site #1 where the Larder Lake fault has been uncovered and well documented by Sylva, 3"-14" quartz veins 10 metres North of the fault were sampled and found to be in the 0.4-0.8 grams/tonne range. These white to grey veins parallel the fault in strike (60°) and dip (70° North) and contain 5% finely disseminated FeS₂ and abundant tourmaline. They³ found within sheared aphanitic, pink siliceous rhyolites or syenite.

Site #2 (Maps #4, 5, & 6)

Site #2 is a Geophysical target delineated by, and recommended for drilling as a priority target by Sylva (see Ill. B). The section "Geophysics" covers the site.

Site #3 (Map #6)

A pit and 5% Pyrite, Chalcopyrite, and Galena are found on this Geophysical anomaly which is described in the "Geophysics" section.

Site #4 (Map #4, & 5)

At this site which was recommended for drilling by Sylva, Syenite is grey and is banded with Chlorite, Molybdenum, Sulphides (Pyrite, Chalcopyrite, Galena) and Quartz Veinlets. Here Rio Tinto received Assays of 0.099 oz Au in two places. Power stripping proved the rocks to be very craggy, large, and deeply piled regular floats. However, the similarity of the rock types, their mafic and carbonate content and the quantity of the rock shows that the source is not far from the occurrence. When blasting was completed in the bedrock immediately South of the float similar material was found. On Assay of Pyritized carbonated rock, 0.545 oz Au was returned. On the hanging wall just to the south of the main showing, a float is found which contained similar mineralization in a boulder which gave the appearance of being near or in-situ. Three assays were obtained ranging from 0.49 to 1.134 oz Au. Our power stripping program in the summer 1989 failed to reach bedrock here or on strike further to the West (Maps 9 & 12). In one pit we received assays of 1.69, 1.36 & 1.84 grams/tonne. In this pit, a cherty Siliceous vein striking at 83° is present (coinciding with site 7 strike).

Site #5 (Map #9 & #10)

At site #5, ancient trenches are present which an Assay of 0.06 oz Au. was obtained by J. Moore in 1966 for the Ontario Department of Mines. Our samples of the same trenches outlined two quartz veins, one of 1' and another 2' and many strong 1-5' shear zones. The quartz veins contain Chalcopyrite, Pyrite, and Galena. The best assay's, however of 2.7 grams (0.08oz), 2.3 grams, and 1.4 grams (20 metres away and on strike), were obtained in the Chloritic shear containing finely disseminated Pyrite. Although one shear in this pink Siliceous (Rhyolite?) rock is striking @ 95°, all others are at 60°-70° and dip 72° North, Significantly 200' (~65 metres) South of the main pits over area that has yet to be stripped, is found another shear 5' wide (1.5 metres) with 10% fine FeS₂ that assays 0.5 to 1.0 gram/tonne.

Site #6 (Maps #7 & #11)

Trenching revealed Pyrite fault gouge in a major fracture which assayed 0.396 oz/ton (see MAP #11). Other fractures also give values. Interestingly, 20 metres to the North a parallel rusted zone gave anomalous values. Stripping is required to further understand this area. The Syenites are relatively unaltered otherwise here except for fluorite and hematite locally. Grabs taken by Comstate Resources in August 1984, returned 4800 ppb.

Site #7 (Map #5,6,&12)

At this location, on 60° strike with site #5 to the East and sites #3 & #6 to the West, a Siliceous and Chloritic shear containing abundant Pyrite was uncovered and sampled. It and the enclosing trachyte assayed 0.3-1.0 grams/tonne Au. along the logging road, an ancient trench was uncovered and it too contains Trachyte. The width of this unit, based on these outcrops is at least 300 metres. Further along the road, a large square boulder of cherty, dark grey silicification carrying 5-10% finely disseminated Pyrite and measuring 0.4 X 0.4 X 0.4 metres assayed 4.49 & 4.03 grams/tonne. Other larger (up to 3 metres) blocks carry assays in the 1.46 gram/tonne range and carry the same Silicification, Pyrite, and Trachyte as in outcrop; power stripping shows the bedrock here to be broken up because of severe alternation (all rusty) and weathering-bulldozing simply continues to breakup the bedrock along weaknesses. Still further West along the road, a large cherty Silicified vein was uncovered over 30 metre strike length, again in Trachyte but this time striking at 83°. Assays in the 1 gram/tonne were realized almost ubiquitously.

Site 8

On the West shore of Geraldine Lake, in the Southeast quarter of the North half of Lot 10, Concession II, trenching has exposed in a Syenite Porphyry, a 4' wide sheared zone that contains veinlets of quartz, disseminated FeS₂, and traces of Chalcopyrite. Grabs returned 0.10 oz Au and 0.79% Cu. This coincides with VLF conductor of Rio Tinto already described.

Site 9

This as yet has not been investigated but is on the other Rio Tinto conductor. Again this site is shown on Map #2.



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TECHNICAL REPORT

LOCATION & ACCESS - THE ENCLOSED GEOPHYSICAL AND GENERAL CLAIM REPORTS COVER THIS SUBJECT.

GEOLOGY - THE GENERAL CLAIM REPORT ENCLOSED COVERS THE SUBJECT

WORK DONE:

AN INDUCED POLARIZATION SURVEY WAS CARRIED OUT IN ORDER TO FURTHER DELINEATE SOME OF THE PYRITE-RICH ZONES OF ALTERATION (AND THE CHERTY SILICIFIED VEINING & Au HORIZONS FOUND WITHIN THESE WIDE ZONES) EXPOSED IN THE PREVIOUS YEAR'S DRILLING. OTHER TARGETS OF INTEREST WERE THE LARDER LAKE - KIRKLAND LAKE BREAK, IF MINERALIZED SUFFICIENTLY, SHEAR ZONES, AND ANY MASSIVE SULPHIDES POSSIBLY PRESENT IN THE RHYOLITE VOLCANICS. MAGNETIC AND GEOLOGICAL SURVEYS WERE ALSO CARRIED OUT ALONG THE GRID LINES (WHICH WERE LAID OUT EARLY IN THE SUMMER) TO FACILITATE A BETTER UNDERSTANDING OF THE I.P. RESULTS. THE I.P. SURVEY WAS CONTRACTED OUT TO EXSICS EXPLORATION LTD. THE FOLLOW-UP SURVEYS WERE CARRIED OUT BY THE CLAIM'S OWNERS.

STRIPPING OF OVERBURDEN FOLLOWED UP ON INTERESTING GEOPHYSICAL RESULTS, AND ON PREVIOUSLY KNOWN SHOWINGS. A FOUR FOOT WIDE BUCKET WAS USED WITH TEETH ATTACHED (DUE TO THE HEAVY CONCENTRATION OF LARGE Bould AT SEVERAL LOCATIONS - UP TO 12' x 10'). THIS CREATED PROBLEMS INASMUCH AS CLEANING OUT RESULTANT TRENCHES TOOK QUITE A BIT OF WORK (1' OF OVERBURDEN LEFT AND MORE IN DEEPER CREVICES). THIS WAS FOLLOWED BY CHANNEL SAMPLING WITH A ROCK SAW. AS SEVERAL OF THE TRENCHES WERE INFILLED ALMOST IMMEDIATELY WITH WATER (AND MUD) LARGELY EMANATING FROM FAULT ZONES, A WATER PUMP WAS REQUIRED TO UNCOVER BEDROCK FOR SAMPLING. AS 1990 WAS A YEAR OF PARTICULARLY HEAVY PRECIPITATION, SEVERAL TRENCHES PROVED IMPOSSIBLE TO SAMPLE.

RESULTS:

I.P. SURVEY

THE I.P. SURVEY SHOWED QUITE WELL THE WIDE ALTERATION ZONE IN TRACHYTE ON LINES 1600W - 1200W FROM 2N TO 2S (SEE CHARGEABILITY PROFILE THIS ZONE COULD EXTEND TO 2000W BUT UNFORTUNATELY A DIABASE Dike (SUBSEQUENTLY FOUND VIA TRENCHING) RAN ALONG THIS LINE AND HAS OBSURED THE READINGS. THE CHARGEABILITY PROFILE CLEARLY SHOWS THE RHYOLITE - SYENITE

CONTACT WHEREIN IS LOCATED THE KIRKLAND LAKE-LARDER LAKE BREAK AT LINE 0, 5S TO LINE 800W, 13½S. THE BEST CONDUCTOR APPEARS NEAR THIS BREAK AT LINE 0, 9½S (AT DEPTH). WE PUT ACROSS A TRENCH ON SURFACE (DISCUSSED LATER) THE FAULT COULD CONTINUE, ACROSS THE CLAIMS SURVEYED, TO LINE 2400W, 18½S AS INDICATED BY A WEAK CONDUCTOR (COLOURED GREEN). THIS CONDUCTOR AND THE OVERLAPPING MAGNETIC LOW (SEE MAGNETIC SURVEY) DO NOT CORRESPOND WITH THE UNMINERALIZED FAULT STRIPPED BY SYLVA IN 1979 AND FOUND TO BE PRODUCING WATER. WE PUT A TRENCH ON EITHER SIDE OF THIS FAULT AND FOUND WATER PRODUCED IN BOTH (SEE COMPILATION MAP II). STRIPPING PRODUCED WHAT MIGHT BE THE FAULT AT 1100W, 16S WHERE A QUARTZ VEIN CARRYING TOURMALINE HAD PREVIOUSLY BEEN REALISED. A CHERTY GREY SILICIFIED VEIN FORMS THE WALL ROCK OF A FAULT (AND ASSAYED OVER 1.2 GRAMS/TONNE OVER 0.3 METRES), AND IS ADJACENT TO A PORPHYRITIC DYKE. THIS DYKE HAS SIMILARITIES TO ONE VIEWED THIS SUMMER ON THE SOUTH SHORE OF GALER LAKE WHERE A GOLD SHOWING IS LOCATED IN THE FAULT ZONE (WIDE HERE, HEAVY SHEARING - SEE HOLMES-BURT MAP #2078). SEVERAL OTHER ZONES WERE IDENTIFIED BY THE I.P. SURVEY AS BEING OF INTEREST AND MOST WERE TRENCHED WITH A BACKHOE.

MAGNETIC AND GEOLOGICAL SURVEY

A PROTON MAGNETOMETER AS SUPPLIED BY SERVICES EXPLORATION WAS USED OVER A 5 DAY PERIOD. CLAIM 1047198 WAS NOT SURVEYED DUE TO TIME LIMITS AND GENERAL LACK OF I.P. RESPONSE. LINE 1600W, Baseline WAS THE POINT USED AS A REFERENCE POINT. HERE READINGS WERE TAKEN AT THE BEGINNING AND END OF EACH DAY WITH THE DIFFERENCE FROM THE AVERAGE PLOTTED. GENERAL A HIGHLY MAGNETIC ZONE IS FOUND IN THE NORTHWEST QUADRANT OF THE AREA OF INTEREST. THIS SYENITE WHICH IS FULL OF MAGNETITE, BIOTITE, AND CHLORITE IS COLOURED BROWN, AND IS OFTEN RUSTED, HAS A VERY SHARP NORTH-SOUTH CONTACT ON LINE 1700W, 15N-2N AND AT LINE 1200W, 1S-15S. THIS MOST LIKELY IS A 360° FAULT WHICH HAS UPTHURST ONE SIDE OR THE OTHER. THIS EXPLAINS THE SHARP CHANGE IN THE I.P. PROFILE OF THE LARDER LAKE-KIRKLAND LAKE BREAK, DESCRIBED ABOVE, FROM 0W, 11S ~~AND~~ 800W, 13½S TO POINTS WEST OF THERE. IT ALSO EXPLAINS THE 360° SWAMP AT 1000W, 15S-17 THE RHYOLITE OUTCROPS ONLY ON THE WEST SIDE OF THIS FAULT AND THUS NO COMPARISON CAN BE MADE WITH THAT TO THE EAST. THE SYENITE ON EITHER SIDE IS DIFFERENT GENERALLY, AS THAT TO THE WEST IS FINER GRAINED, CONTAINS MUCH LESS MAFIC MATERIAL, MORE HORNBLLENDE, LESS CHLORITE AND MAGNETITE (ALTHOUGH SOME EXISTS), AND NO BIOTITE. THE ONLY RUSTING IS OF THE TRACHYTE ZONE (SITE #7). OF MAJOR SIGNIFRANCE IS THE OFFSETTING OF THIS 360° FAULT AT 1200W BETWEEN LINES 1600W TO 1700W (OR 500') BY THE SITE #7 DEFECT.

ATION STRUCTURE. THIS MAJOR MOVEMENT (SINISTRAL) HAS IMPLICATIONS FOR ORE DEPOSITION. A LIKELY STRIKE DIRECTION WOULD BE 80° (THAT OF THE VEINS). OF INTEREST ARE THE STRONG MAGNETIC LOWS AT 2000W, $3\frac{1}{2}$ S AND AT 400W, 1S - 200W, BASELINE AND MODERATE LOWS AT 1000W, 2S AND 1400W, $2\frac{1}{2}$ S WHICH ALIGN THEM UP AT 80° . THIS COULD BE A NEW ZONE.

ANOTHER PARALLEL ZONE OCCURS @ 1000W, BASELINE THROUGH 1200W, $\frac{1}{2}$ S AND THROUGH TO 2200W, 1S. YET ANOTHER PARALLEL ZONE IS @ 800W, 3N THROUGH 1400W, $1\frac{3}{4}$ N AND 1800W, $\frac{1}{2}$ N.

THE MAG SURVEY BACKS UP THE I.P. SURVEY WITH THE RHYOLITE/SYENITE CONTACT AND THE CONGRUENT KIRKLAND LAKE-LARDER LAKE FAULT CLEARLY VISIBLE. THE EXTENSION OF THE FAULT WESTWARD CAN BE SEEN BY A MAGNETIC LOW AT 1200W, 1/6S THROUGH TO 2400W, 1/9S. THIS COULD BE A ZONE OF HIGH FLUID FLOW IN A SHEAR ZONE WITH POTENTIAL FOR A MINERAL DEPOSIT. UNFORTUNATELY, EITHER THE ROAD COVERS MOST OF THIS STRIKE OF 1200', OR SWAMP COVERS IT. WE COULD ONLY TRENCH ON THE LOCATION ALREADY NOTED (LINE 1100W, 1/6S) WHERE THE MAGNETIC LOW IS NOT AS PROMINENT.

AN INTERESTING FEATURE OF THE MAG SURVEY IS THAT IT DOES NOT PICK UP EITHER THE DIABASE DYKES ON LINES 2000W (EXCEPT FOR A WEAK HIGH AT $6\frac{1}{2}$ N) OR 1200W (EXCEPT FOR 1N), OR THE RHYOLITE/SYENITE CONTACT (OTHER THAN FROM 0710 $\frac{1}{2}$ S TO 1000N, 15S. OBVIOUSLY THE SYENITE (THAT CONTAINING MAGNETITE) AND THE RHYOLITE ARE EQUALLY NOW TO WEAKLY MAGNETIC. THE RHYOLITE DOES HOWEVER CONTAIN TWO STRONG, OPPOSITE ANOMALIES AT THE EXTREME SOUTH (LINES 1200W-2000W @ 24S-2/6S) IS A VERY STRONG MAG LOW (STRONGEST ON PROPERTY). THIS COULD BE EXTENDED TO LINE 0, 21, STRIKING PARALLEL TO THE SYENITE-RHYOLITE CONTACT. THE I.P. SURVEY DID NOT COVER THIS AREA IN THE EXTREME SOUTH AS IT WOULD HAVE REQUIRED ADDITIONAL LINE CUTTING INTO ADJACENT CLAIMS. A SHEAR ZONE IS A POSSIBILITY @ 80° OR 75° . THE SECOND ANOMALY IS A MAG HIGH (HIGHEST ON THE PROPERTY) AT LINE 0 W/TO LINE 1000W ON THE EXTREME SOUTHERN EDGE. POSSIBLY A B.I.F. IS LOCATED IN THE VOLCANICS OR A MAFIC VOLCANIC UNIT IS PRESENT. THE TREND IS AGAIN EAST-WEST; A DIABASE IS THUS UNLIKELY THE CAUSE.

THE GEOLOGICAL MAPPING SUCCESSFULLY OBTAINED 5-10% OUTCROP IN THE SYENITES BUT UNFORTUNATELY THE RHYOLITES OF THE SOUTH ARE ENTIRELY COVERED BY OVERBURDEN AND LOW, SOMETIMES SWAMPY, GROUND IS CHARACTERISTIC. TWO NEW MINERALIZED OUTCROPS WERE DISCOVERED DURING THE 1990 PROGRAM. THEY ARE SHOWN ON GEOLOGICAL COMPILATION MAP #1. WEST OF THE ACCESS LOGGING ROAD AND NW OF "SITE #6" AN OUTCROP OF SYENITE IS LACED WITH E-W STRIKING FRACTURES WHICH HAVE HEMATIZED AND/OR SILICIFIED THE QUARTZ. PINK AND BROUGHT IN 5-8% FINELY DISSEMINATED FeS_2 . WE OB-

TAINED ASSAYS AS HIGH AS 1.35 g/t over 0.2 metres. THESE FRACTURES CONTINUE ACROSS THE ROAD. THE SECOND SHOWING HAS SIMILAR FRACTURES IN SPENITE BUT THE WIDTH OF THE RESULTANT SHEARING IS UP TO (4 FEET) 1.2 METRES WIDE AND THE ALTERATION INCLUDES 5% CHALCOPYRITE, 5% FeS_2 , 1% GALENA, AND SOME MOLYBDENUM. THE BEST ASSAY ATTAINED IN THIS 100° STRIKING ZONE WAS 8.84 g/t OVER 0.5 METRES.

TRENCHING:

THE RESULTS OF TRENCHING (CONSULT GEOLOGICAL COMPILATION MAPS I & II & INDIVIDUAL SITE MAPS) ARE AS FOLLOWS:

TRENCH 1 - PURPOSE - TO TRENCH POSSIBLE SHEAR - SAMPLES WERE PREVIOUSLY TAKEN ON WHAT COULD BE BOULDERS ALIGNED AT 80° AND ASSAYING UP TO 0.84 g/t OVER 0.3 METRES.

- RESULTS - NO MINERALIZATION BUT A 10 METRE SHEAR AT 90° STRIKE CONTAINS BARREN WHITE QUARTZ

TRENCH 2 & 3 - PURPOSE - 2 360° TRENCHES WERE FLAGGED TO CUT MINERALIZATION FURTHER WEST THAN ALREADY PROVEN; BACKHOE OPERATOR TRENCHED TO OPPOSIT. FLAGS

- RESULTS - TRENCH 3 IS TOTALLY IN WATER; TRENCH 2 CONTAINS A TRACHYTIC SHEAR WHICH CONTAINS 10% FINE FeS_2 & ABUNDANT HEMATIZATION; ASSAYS OF 0.5 g/t OVER 0.7 METRES; NORTHERN MOST PART IS IN WATER

TRENCH 4 - PURPOSE - TO INTERSECT SOUTHERN MOST CHERTY VEINING OF DDH 89-3

- RESULTS - THE SOUTHERN PORTION IS IN WATER; A 0.2 METRE QUARTZ VEIN CONTAINING 10% CHALCOPYRITE STRIKES PARALLEL TO THE CHERTY VEINS BUT ASSAYED ONLY 0.1%

TRENCH 5 - PURPOSE - TO FURTHER DELINEATE ALTERATION ZONES - RESULTS - SEVERAL WIDE ZONES WERE UNCOVERED. THAT WHICH IN DDH 89-4 ASSAYED 2.2 g/t OVER 1.2 METRES WAS PICKED UP ON THE SOUTHERN END WITH BEST ASSAYS BEING 0.6 g/t OVER 0.3 METRES AND 0.61 g/t OVER 0.5 METRES. HEAVY ALTERATION IS PREVALENT AND 5-10% FeS_2 IS NOTED. TWO NEW ZONES 17 & 13 METRES NORTH OF THIS SOUTH ZONE ARE 2.2 AND 1.2 METRES WIDE. THE ONE FURTHEST NORTH AVERAGES 0.86 g/t OVER THE 2.2 METRES WITH A HIGH OF 1.49 g/t OVER 0.5 METRE. THE OTHER ONE HAS A HIGH OF 1.55 g/t OVER 0.3 METRES CENTRED ON A FAULT.

TRENCH 6 - PURPOSE - FOLLOW UP ON DDH 89-3 ASSAYS AT BEGINNING OF HOLE.

- RESULTS - THIS TRENCH UNEARTHED A VERY HIGHLY ALTERED TRACHYTE

WITH TWO VERY STRONG FAULTS ON THE SOUTH CONTACT EMANATING WATER. THIS
● VE IS AT LEAST 8 METRES WIDE UP TO THE NORTH WHERE IT IS UNDER
WATER. THE ZONE AVERAGES 0.92g/t OVER 6.2 METRES ON THE NORTH (0.04g/t
OVER 20.3 FEET) WITH HIGHS OF 2.95g/t OVER 0.3 METRES AND 1.51/0.3.
SEVERAL CHERTY GREY VEINS ARE PRESENT.

TRENCH 7 - PURPOSE - TO EXTEND THE KNOWN ALTERATION OF DDH 89-3 NORTH AND
TO UNCOVER THE MINERALIZATION ON SURFACE AT THE HOGE COLLAR.
- RESULTS - THE SOUTHERN PART OF THE TRENCH IS IN WATER AND ALTHOUGH
REPEATED ATTEMPTS WERE MADE TO UNCOVER BEDROCK, WATER IN-FLOW WAS
TOO HEAVY IN THIS ERODED AREA. THE TRENCHING NORTH UNCOVERED MANY
NARROW CHERTY GREY VEINS AND TRACHYTE SHEARS. LOW ASSAYS WERE RETURNED
SEVERAL AREAS WHICH ARE ON STRIKE WITH KNOWN ZONES ARE ERODED TO
CREVICE DEPTHS. DIGGING OUT OF THESE AREAS IN THIS ROUGH TOPOGRAPHY
COULD NOT BE COMPLETED DUE TO TIME CONSTRAINTS.

TRENCHES 8, 9, 10, 11 - PURPOSE - AS ABOVE (DDH 89-3)

- RESULTS - THESE TRENCHES WERE ALL UNDER WATER. THE INITIAL HOPE WAS THAT
TRENCH 8 & 9 AT LEAST WERE ON DRY GROUND AND 6' OF OVERBURDEN REMOVAL
MIGHT NOT LEAD TO MUCH WATER INFILLING. DESPITE WATER PUMP USE, THE
INFILLING WAS TOO HEAVY

TRENCH 12 - PURPOSE - SAME AS ABOVE

- RESULTS - MOST OF THE OUTCROP IS DATABASE WHICH HAS ALTERED THE
SYENITE QUITE STRONGLY. A 10 METRE CHERTY WHITE QUARTZ VEIN WITH 52% FINE
FeS₂ AND 2% CHALCOPYRITE STRIKES 80°. HIGHEST ASSAY ON IT WAS 0.3g/t

TRENCH 13 - PURPOSE - EXTENSION OF MINERALIZATION EAST & SOUTH

- RESULTS - THE SYENITE IS HIGHLY FRACTURED CARRYING NUMEROUS TRACHYTE
SHEARS. THE BEST ASSAY WAS 0.96/0.3 ON THE SOUTHERN MOST EDGE WHERE
A SHARP DROP-OFF OF 6' OCCURS (FAULT) AND WATER HAS INFILLED.

TRENCH 14 - PURPOSE - TO EXPOSE BEDROCK TO EXTEND ZONES SOUTH.

- RESULTS - BASIC SYENITE (UNALTERED) WAS UNEARTHED

TRENCH 15 & 16 - PURPOSE - LOCATED TO TEST FOR POSSIBLE TRACHYTIC ZONE (BOULDER
FOUND NEXT TO SOUTHER ROAD TO THE SOUTH CONTAINED 10% FeS₂ & ASSAYED 0.5g/t
UNALTERED SYENITE ON THE OUTCROP ON THE ROAD.

THE BOULDER WAS NOT RUSTY IN APPEARANCE AND WITHOUT LARGE

MAFIC CRYSTALS PRESENT; NO STRUCTURE PRESENT.

TRENCH 17 - PURPOSE - EXPOSE POSSIBLE SHEAR ZONE NOTED IN I.P. SURVEY.

- RESULTS - 20' OVERBURDEN; DID NOT HIT BEDROCK.

TRENCH 18 - PURPOSE - TO EXPOSE ANY STRUCTURE EVIDENT DOWN HILLSIDE AND ON STRIKE WITH 2 E-W. TOPOGRAPHIC LOWS TO THE WEST

- RESULTS - CONSULT MAP #15; A CONTACT ZONE BETWEEN THE MAGNETITE AND BIOTITE RICH, RUSTY SYENITE AND TRACHYTIC PORPHYRITIC SYENITE WAS UNCOVERED AND STRIKES 65° PARALLEL QUARTZ AND CHERTY VEINS OCCUR. CHALCOPRITE IS PRESENT (~5%), BLEACHING & ALTERATION IS NOTEABLE. AN INTERESTING NOTE TOO IS THE PRESENCE OF ASBESTOS IN THE SYENITE ALONG FRACTURES; THE BEST ASSAY WAS 0.8 g/t OVER 0.5 METRES.

TRENCH 19 - PURPOSE - UNCOVER ZONE NEAR AT BEGINNING OF 89-2 CHARACTERIZED BY QUARTZ-ANKERITE.

- RESULTS - SEVERAL THIN QUARTZ-ANKERITE VEINS WERE UNCOVERED. A WIDE FRACTURED ZONE OF HIGH HEMATIZATION AND QUARTZ-ANKERITE VEINLETS IS PRESENT WHICH ASSAYS 0.95 g/t OVER 1.0 METRE. THE BEST OUTCROP ASSAY WAS 2.13/0.2 WHERE THERE IS HEAVY FeS₂ CONCENTRATIONS. PERHAPS THE MOST INTERESTING RESULT WAS THE UNCOVERING OF A HUGE BOULDER WHICH IS COMPLETELY MINERALIZED CHERTY VEINING AND SILICIFICATION CONTAINING 10% FeS₂ & 2% GALENA. THIS MIGHT EXPLAIN THE RESULTS PREVIOUSLY REPORTED FROM THE NEARBY PIT WHERE IT IS FROM IS UNCERTAIN. THE MINERALIZATION PRESENT IS NOT ECONOMICAL AND THE WIDER QUARTZ-ANKERITE FROM THE DDH MUST BE A FUNCTION OF PINCHING & SWELLING.

TRENCH 20 - PURPOSE - TO FURTHER DELINEATE VEINING FROM DDH-2

- RESULTS - SYENITE IS UNALTERED EXCEPT AT THE SOUTH END WHERE A SUDDEN DROP-OFF OCCURS; 3.4% FeS₂ IS ALONG 20° FRACTURES BUT DID NOT RUN.

TRENCH 21 - PURPOSE - TO INVESTIGATE THE BEST I.P. CONDUCTOR ON THESE CLAIMS ON SURFACE (THOUGH IT IS AT DEPTH) TO FIND ITS EXPRESSION.

- RESULTS - THE SYENITE IS INTENSELY FOLIATED, HEMATIZED AND SHEARED (ALSO CHLORITE SEAMS OF 1/8") ON THE SOUTH SIDE OF THE TRENCH. THE ONLY MINERALIZATION FOUND WAS A 0.7 METRE WIDE WHITE TO CLEAR QUARTZ VEIN CONTAINING 2% FINE FeS₂ THAT ASSAYED 0.16/0.7.

TRENCH 22 - PURPOSE - TO INVESTIGATE THE RHYOLITE ON A SMALL HILL & TO FIND

● ANY EXPRESSION OF THE LARDER LAKE - KIRKLAND LAKE FAULT (BREAK)
- RESULTS - NO BEDROCK WAS FOUND; THE HILL IS ALL GLACIAL TILL.

TRENCH 23, 24 & 25 - PURPOSE - TO INTERSECT THE FAULT IN THE CUTDROP IN ORDER TO SEE IF IT BECOMES MINERALIZED ALONG STRIKE.

- RESULTS - THE FAULT WAS INTERSECTED IN #23 & #24 AND PRODUCES WATER. ALL THREE TRENCHES WERE IN THE APHANITIC PALE GREY-LIGHT GREEN TO WHITE RHYOLITE AND NONE CONTAINED PYRITE OR ALTERATION ZONES, ALTHOUGH SHEARING AND FRACTURING WERE USQUITOUS.

TRENCH 26 - PURPOSE - TO CHECK I.P. CONTACT NOTED IN REPORT

- RESULTS - DIABASE DYKE UNEARTHED

OTHER TRENCHING - ON CLAIM 1047198 (TO THE NORTHEAST OF THE MAGNETIC & GEOLOGICAL SURVEYS), A TRENCH WAS COMPLETED AS ORIGINALLY PROPOSED AT THE SITE OF A GROUPING OF ANCIENT TRENCHES. THE OVERBURDEN WAS TOO DEEP AT THE FIRST SITE AND 15' EXISTED AT THE SECOND. THE MINERALIZED BOULDERS FOUND EVERYWHERE IN THE IMMEDIATE AREA PROVED NOT TO BE FROM HERE AS UNALTERED PINK SYENITE WITH FRESH HORNBLENDE WAS FOUND.

ON CLAIM 641611, TRENCHES WERE DUG ON EITHER SIDE OF THE ROAD AT SIT. #6 IN ORDER THAT THE HIGH-GRADE FRACTURE SYSTEM PREVALENT THERE MIGHT BE EXTENDED AND SAMPLED. THE BEDROCK TOPOGRAPHY IS VERY UNEVEN HERE AND NOT ALL CREVICES COULD BE FREED OF HUGE BOULDERS, HOWEVER TRENCHES WERE THOUGHT BETTER HERE THAN IN THE FOREST AS VALUABLE TIMBER WOULD HAVE HAD TO BE DESTROYED. - RESULTS - A 30.30 g/t OVER 0.2 METRES ASSAY WAS ATTAINED ON THE EAST SIDE OF THE ROAD (N.1 OZ/T) OPPOSITE TO THE 13.4 g/t OVER 0.2 METRE SAMPLE (0.396 OZ/T) ON THE WEST SIDE. AS WELL, SEVERAL NARROW QUARTZ-CHERTY VEINS AND FRACTURES WITH ABUNDANT FeS₂ ASSAYED ANOMALOUSLY (1.55) FURTHER TO THE NORTH.

CONCLUSIONS & RECOMMENDATIONS:

THE I.P. SURVEY INDICATES A WIDE ANOMALY AT LEAST 400 FEET X 400 FEET AND LOCATED ON LINES 1600W & 1200W CENTRED ON THE BASE LINE OVER THE ZONES OF CHERTY VEINING AND TRACHYTIC SHEARING AND HEAVY ALTERATION. A DIABASE ON 2000W PRECLUDED EXTENDING IT WEST. A PLUNGE TO THE ZONE IS NOT YET APPARENT. A WEAK I.P. ZONE ON LINE 800W IS NOTED AT 1N & 2N, MAY EXTEND THE ZONE EAST. THE I.P. ZONE SURVEY COINCIDES WITH THE MAGNETIC SURVEY TO SHOW THE SYENITE-RHYOLITE CONTACT ALONG WHICH THE KIRKLAND LAKE LARDER LAKE BREAK RUNS. THE BEST I.P. CONDUCTOR IS LOCATED NEAR THIS FAULT, AT DEPTH, ON LINE O. THIS SHOULD BE DRILLED. AN I.P. TRACE OF ANOMALOUS CONDUCTOR HIGHS EXTEND THE FAULT TO THE EAST COINCIDING WITH MAG LOWS PARTICULARLY AT LINE 1200W, 16S AND 1600W, 17S. THE TWO POINTS RUN THROUGH A VERY ANOMALOUS MAG LOW AT 1400W, 16 1/2 S. THIS WOULD BE AN EXCELLENT DRILLING TARGET (TRENCHING CANNOT BE CARRIED OUT DUE TO SWAMP & ROAD LOCATIONS).

THE MAG SURVEY PROVIDES EVIDENCE FOR MOVEMENT ALONG THE SITE TRACHYTE ALTERATION ZONES. THE SYENITE STOCK CAN BE SEEN AS BEING UP OR DOWNWARD THRUST BY A 360° FAULT FOLLOWED BY SINISTRAL MOVEMENT ALONG THE BASELINE, 80° FAULTS UNEARTHED BY STRIPPING (WHICH PRODUCE WATER) AND THE PRESENCE OF 80° MAGNETIC LOW HORIZONS ALONG THIS BASELINE SUBSTANTIATE THIS. TRENCHING INDICATES AT LEAST A 45 METRE (148 FEET) WIDE ZONE OF INTENSE ALTERATION CARRYING VALUES AVERAGING 0.5-10 GRAMS/TONNE IN THE INDIVIDUAL HORIZONS, ONE SUCH HORIZON AVERAGES 0.92/6.2 (OR 0.0402/t OVER 20.3'). THE HIGHEST ASSAY RECORDED HERE IN 1990 WAS 2.95 g/t OVER 0.3 METRE. THE CHERTY VEIN BOULDER FOUND IN 1988 WHICH ASSAYS 6.51/0.7 IS FROM THIS AREA BUT WILL REQUIRE DRILLING TO DELINEATE THE VEIN'S BEDROCK LOCATION. A CHALCOPYRITE-COVERED WHITE QUARTZ VEIN FOUND IN TRENCH #4, ALTHOUGH OF LOW ASSAY, GIVES AN ALTERNATE FOCUS FOR EXPLORATION. THE VEINS ON THE SOUTH END OF DDH 89-3 STILL REQUIRE DEFINITION AS THEY ASSAY IN THE 1.0-1.5 g/t RANGE. DRILLING IS NOW NEEDED IN THIS ENTIRE SITE #7 AREA.

OTHER TARGETS OF INTEREST WOULD INCLUDE THE MAG LOWS & HIGHS IN THE RHYOLITES ALONG THE SOUTHERN EDGE OF THE CLAIMS AS THEY ARE THE HIGHEST AND LOWEST MAG RESULTS AND COULD POSSIBLY INDICATE A BIF (OR MASSIVE SULPHIDE) AND SHEAR ZONE. RESPECTIVELY. THE LOW (MAG) ALONG LINE O, BASELINE TO LINE 400, IS . . . SHOULD BE DRILLED. THE EXTENSION OF THE HIGH GRADE ZONE ON THE ROAD ON CLAIM # 6A/11 WHICH ASSAYED 30.30% SHOULD BE THE OBJECT OF SHALLOW DRILL HOLES. A NEW ZONE WAS DISCOVERED

ON CLAIM #641611 WITH AN AVERAGE GRADE OF 2.6g/t (0.07oz) OVER 1.2 METRES (4 FEET) WITH A HIGH OF 8.84g/t OVER 0.5 METRES. THIS ZONE IS A PRIORITY FOR EXPLORATION DURING 1991. THE ZONE'S GALENA, FeS₂, AND CHALCOPYRITE ARE IMPRESSIVE.

GEOPHYSICAL (MAGNETIC AND V.L.F.) SURVEYS WOULD BE HELPFULL ON CLAIMS #641611 AND #1047198, TO FURTHER DELINEATE THE SHEAR ZONE AND GOLD SHOWINGS LOCATED THERE.

M. ~~Smith~~ B.S.C. - GEOLOGY



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0W-1043-RA1

Company: **Tim Hanson**

Project:

Attn:

Date: JUL-27-90

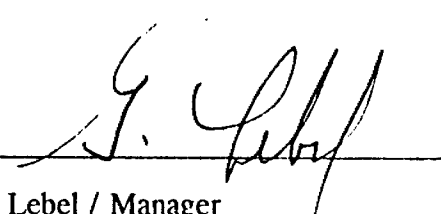
Copy 1. 30 Main St. Kirkland Lake, Ont P2N 3E1

2. fax to 567-6768

We hereby certify the following Assay of 24 rock samples submitted JUL-23-90 by .

Sample Number	Au oz/ton	Au check oz/ton	Au 2nd oz/ton	Ag oz/ton	Cu %	Mo %	Pb %
1407	0.036	1.23		0.02	0.01	0.002	0.42
1408	0.020	.69					
1409	0.016	.55					
1410	0.010	.39					
1411	0.016	.55					
1412	0.044	0.034	1.51				
1413	0.020	.69					
1414	0.014	.48					
1415	0.026	.89					
1416	0.012	.41					
1417	0.016	.55					
1418	0.034	1.17					
1419	0.010	.34					
1420	0.008	.27					
1421 & 1424	0.010	.34					
1422	0.004	.14					
1423	0.086	2.95	0.084	0.086			
1425	0.016	.55					
1426	0.008	.27					
1427	0.024	.82					
1428	0.002	.07					
1429	0.010	.34					
1430	0.002	.07					
1435	0.002	.07					

Certified by


G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

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FAX (705) 642-3300



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0W-1314-RA1

Company: **MIKE SUTTON**

Project:

Attn:

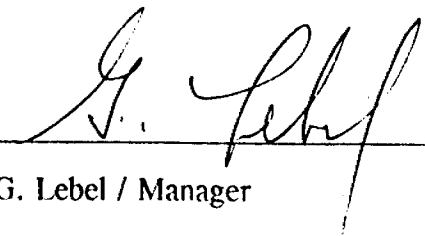
Date: SEP-12-90

Copy 1. BOX 534 KIRKLAND LAKE, ONT. P2N 3J5

We hereby certify the following Assay of 4 ROCK samples submitted SEP-05-90 by .

Sample Number	Au g/tonne	Au check g/tonne
121501	2.08	2.13
121502	Nil	
121503	1.28	
121504	Nil	

Certified by


G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0

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AMERICAN BARRICK RESOURCES CORPORATION

Holt-McDermott Mine
P.O. Box 278, Kirkland Lake, Ont., P2N 3H7
Tel.: (705) 567-9251 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 6
Lab ID: 90824-1x

Date: Aug. 24, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 1463	0.58				
64	0.30				
65	0.45				
66	30.30				
67	36.10				
68	0.50				

Eric Wilson



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Tel: (705) 567-9291 FAX: (705) 567-6867

Assay Certificate

No. of Determinations: 18
Lab ID: 90717-1m

Date: July 17, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M - 1	0.70				
2	0.66				
3	0.53				
4	0.77				
5	0.58				
6	0.36				
7	0.07				
8	0.26				
10	0.31				
11	0.11				
12	0.75				
✓ 20	1.45 ✓				
✓ 21	0.71 ✓				
✓ 31	0.74 ✓				
✓ 32	0.27 ✓				
✓ 33	1.96 ✓				
✓ 34	1.40 ✓				
✓ 35	2.70 ✓				

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P.O. Box 278, Kirkland Lake, Ont. P2N 3H7
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Assay Certificate

No. of Determinations: 12
Lab ID: 90816-1m

Date: Aug. 16, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 1451	0.21				
52	0.16				
53	8.84				
54	0.15				
55	0.37				
56	0.31				
57	0.18				
58	0.16				
59	0.13				
60	0.47				
61	0.37				
62	0.33				

AM



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Assay Certificate

No. of Determinations: 19
Lab ID: 90723-1m

Date: July 23, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
M 1431	0.14				
32	0.19				
33	0.27				
34	0.80				
M 1436	0.10				
37	0.16				
38	0.09				
39	0.11				
40	0.07				
41	0.18				
42	0.14				
43	0.12				
44	0.30				
45	0.75				
46	0.23				
47	0.95				
48	0.12				
49	0.28				
50	0.96				





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0W-1685-RA1

Company: **M. SUTTON**

Project:

Attn:

Date: NOV-05-90

Copy 1. P.O. BOX 534, KIRKLAND LAKE, ONT. P2N 3J5

We hereby certify the following Assay of 2 ROCK samples submitted OCT-30-90 by M. SUTTON.

Sample Number	Au g/tonne	Au check g/tonne
121518	0.41	
121522	0.38	0.53

Certified by Lonna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0
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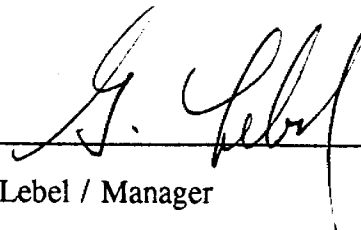
Company: **MIKE SUTTON**
Project:
Attn:

Date: OCT-16-90
Copy 1. BOX 534, KIRKLAND LAKE P2N 3G3

We hereby certify the following Assay of 16 ROCK samples submitted OCT-10-90 by .

Sample Number	Au g/tonne	Au check g/tonne
121517	0.27	
121519	1.21	1.23
121520	0.20	
121521	0.84	0.79
121526	0.69	
121527	0.52	
121528	0.47	
121529	0.46	
121530	0.10	
121531	0.50	
121535	0.67	0.61
121536	0.22	
121538	0.19	
121540	0.14	
121542	0.33	

Certified by



G. Lebel / Manager

P.O. Box 10, Swastika, Ontario P0K 1T0
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Assay Certificate

No. of Determinations: 12
Lab ID: 90511-1x

Date: May 11, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
H-1	0.09	Mike's Samples			
-2	0.19				
-3	0.55				
-4	1.21				
-5	0.19				
-6	0.15				
-7	0.90				
-8	0.40				
-9	0.54				
-10	0.47				
-11	0.06				
-12	1.50				

ADP



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Assay Certificate

0W-1454-RA1

Company: **MICHAEL SUTTON**

Project:

Attn:

Date: OCT-02-90

Copy 1. P.O. BOX 534, KIRKLAND LAKE, ONT. P2N 3J5

We hereby certify the following Assay of 8 ROCK samples submitted SEP-25-90 by MICHAEL SUTTON.

Sample Number	Au g/tonne	Au check g/tonne	Cu ppm
121505	1.35	1.33	
121506	0.91		
121507	0.35		
121508	0.53		23
121509	0.35		
121510	NOT REC'D		
121511	0.10		
121512	0.35	0.47	
121513	Nil		

Certified by

G. Lebel / Manager

P. O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300



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Assay Certificate

0W-1031-RA1

Company: **TIM HANSON**

Date: JUL-25-90

Project:

Copy 1. 30 MAIN ST. KIRKLAND LAKE. ONT. P2N 3E1

Attn:

We hereby certify the following Assay of 6 ROCK samples submitted JUL-20-90 by .

Sample Number	Au oz/ton	Au check oz/ton	Au 2nd oz/ton	Ag oz/ton
1401	0.002	0.07 alt		0.01
1402	0.002			0.01
1403	0.090	3.1 alt		0.01
1404	0.136	4.6 alt	0.132	0.03
1405	0.038	1.3 alt		0.02
1406	Nil			0.01

Certified by

G. Lebel / Manager

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



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Tel.:(705) 567-9251 FAX:(705) 567-6867

Assay Certificate

No. of Determinations: 10
Lab ID: 90522-1x

Date: May 22, 1990
Acct. No.: Exploration

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
H-13	0.33				
14	0.41				
15	1.36				
16	0.20				
17	0.32				
18	0.84				
19	0.58				
20	0.41				
21	0.19				
22	6.51				

BTR



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Assay Certificate

No. of Determinations: 28
Lab ID: 90829-1m

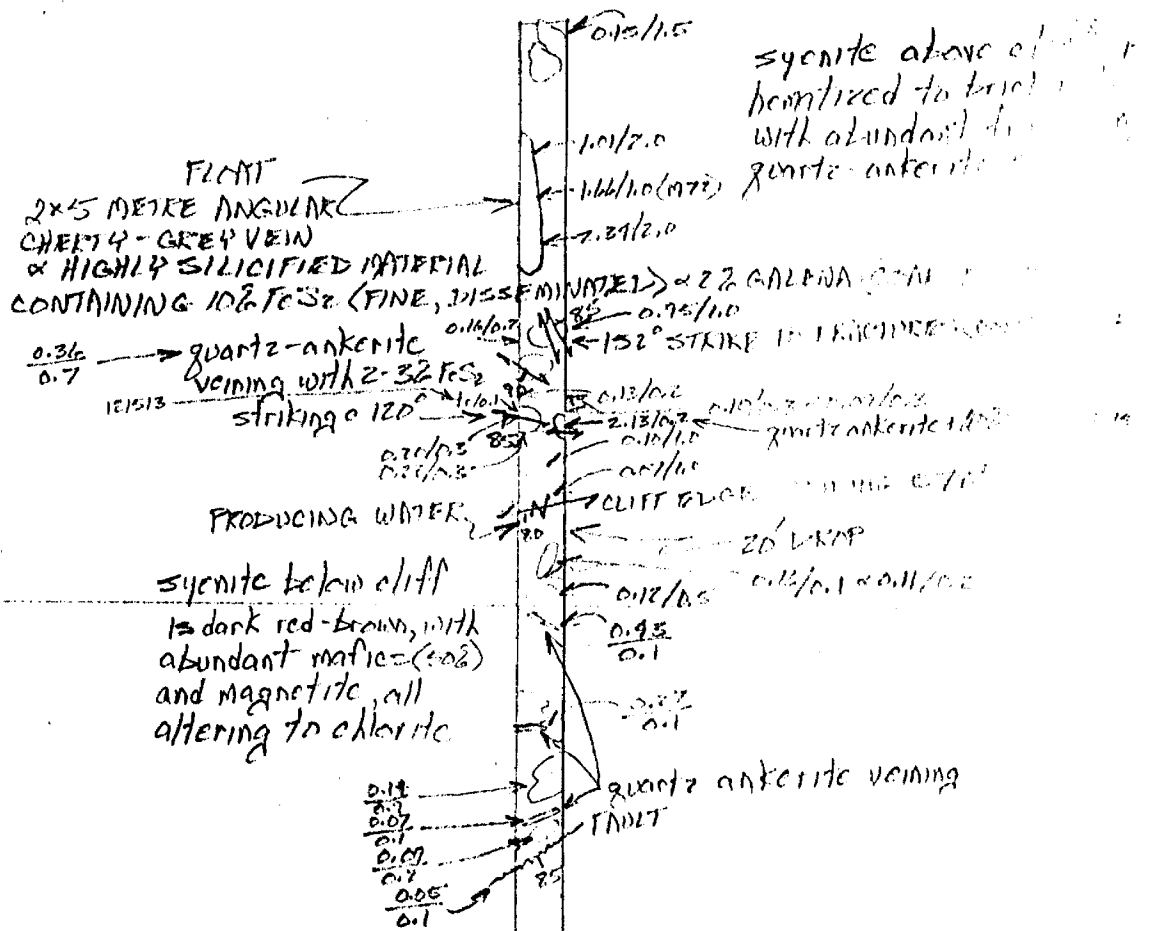
Date: Aug. 29, 1990
Acct. No.: Mike Sutton

<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au	<u>SAMPLE</u>	g/t Au
#MS 1	0.39				
1467	0.61				
68	0.22				
69	0.41				
70	0.26				
71	0.62				
72	0.21				
73	0.52				
74	0.38				
75	0.54				
76	0.14				
77	0.13				
78	0.18				
79	0.38				
80	1.55				
81	0.33				
82	0.30				
83	0.45				
84	0.85				
85	0.83				
86	0.94				
87	0.57				
88	1.44				
89	0.56				
90	1.49				
91	0.13				
92	0.15				
93	0.42				

BTM

ASSAYS ON ASSAY SHEETS 70717-1M (M-01 TO M-72)

SITE #4



4505111

LINE 0

COLLAR DDH 89-1



SCALE 1:250

10 METRES

S

MAP #15

6" QUARTZ VEIN
M1455 0.57212

ASSAYS FROM 90723-1m
M1431-M1440

502.00110 (FELDSPAR, CHLORITE, MAGNETITE)
IN FINE BROWN SPERMITE

→ FRACTURES CONTAIN ASBESTOS (BLUE-GREEN)

0.07/0.1, 0.11/0.1
 GREEN-WHITE QUARTZ VEIN
 WITH S&I
 FELDSPATHIC PARTHY
 (TRACHTER)
 0.10/0.1
 0.27/0.05

0.07/0.1
 0.16/0.1
 SLIPS

← CONTACT ZONE

CHALCOPRITE ZONE (S2) 0.80/0.5
 CHERTY VEIN, NOT CO. V. VEIN 0.19/0.05
 QUARTZ VEIN 0.14/0.1
 WHITE-GREY; 22 FINE, DISSEMINATED FES2

GRANITE STAINING
SPERMITE (GLAUCOPHANE)
WITH LARGE NO. OF MAGNETIC
CRYSTALS (CHROMITE, QUARTZ)

15

15

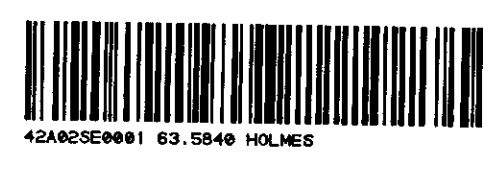
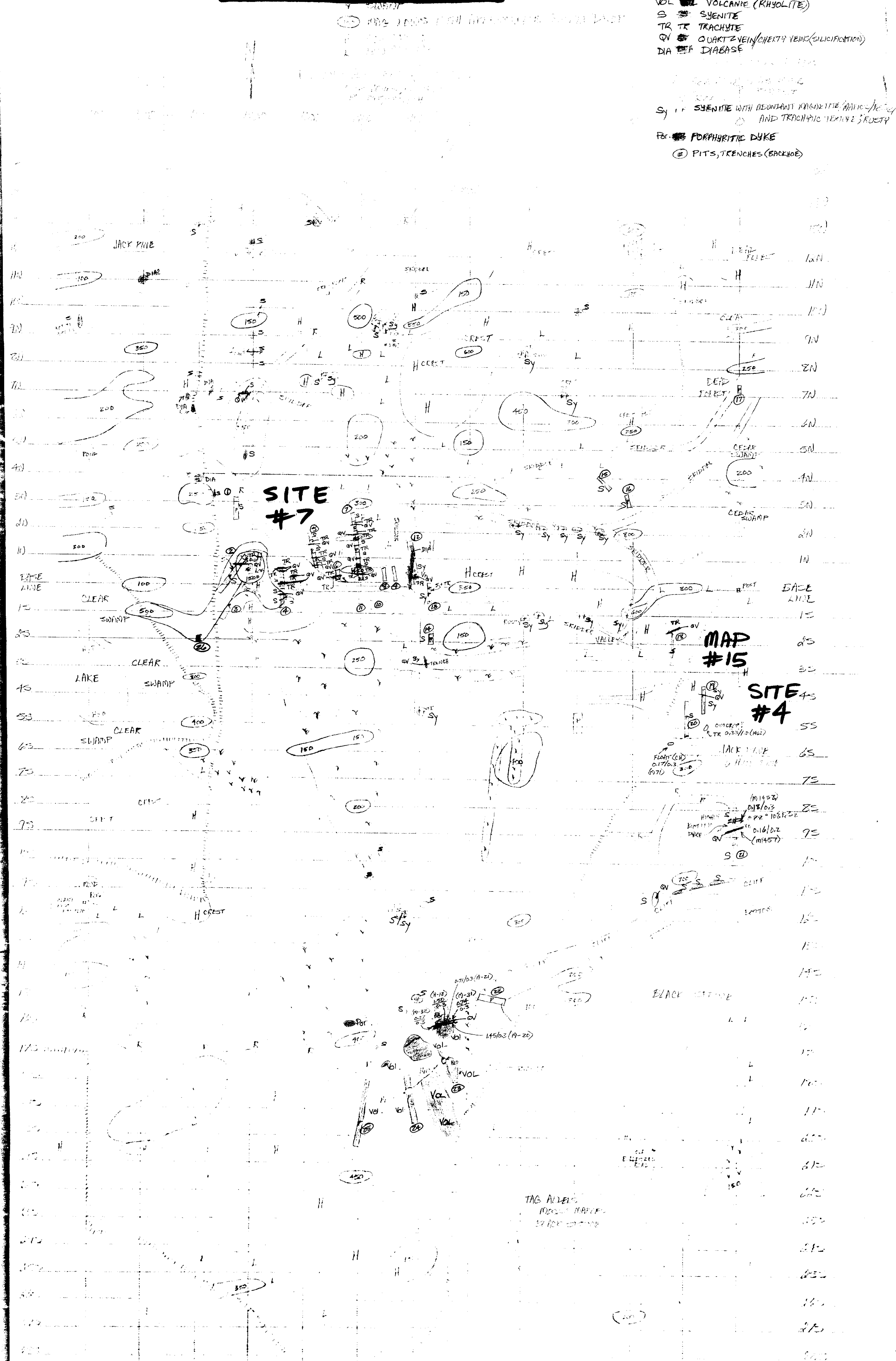
N

CLAIMS:

1047201	1047202
1047203	1047204
1047205	1047206

GEOLOGICAL MAP II

- 10/1/70
2/1/71
- VOL VOLCANIC (RYHOLITE)
 - S SYENITE
 - TR TRACHYTE
 - QV QUARTZ VEIN/CHELYTENE(SULPHATION)
 - DA DIABASE
- SY SYENITE WITH RESIDUAL KANONITE AND/OR AND TROILITE TEXTURE STRUCTURE
- PO PORPHYRITIC DYKE
- PITS, TRENCHES (BACKLOG)



I.F. (INCLINED POLARIZATION)
PROFESSOR DR. J. H. ...



CHARRELLON H. ...

LINE
2400W

LINE
2000W

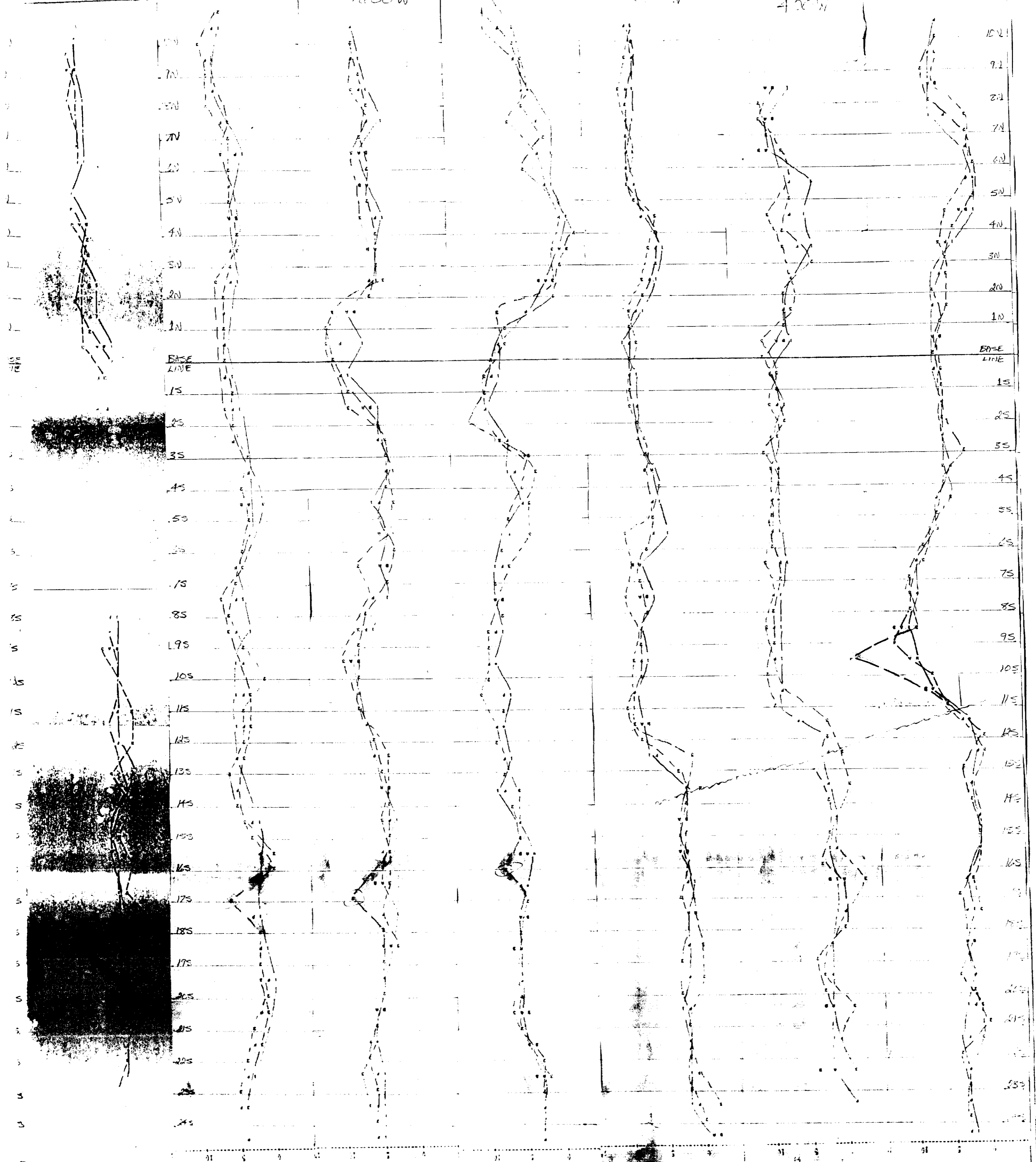
LINE
1600W

LINE
1300W

LINE
900W

LINE
400W

LINE
0



42A02SE0001 03.5846 HOLMES

CHARRELLON H. ...

RESISTIVITY

LINE 24

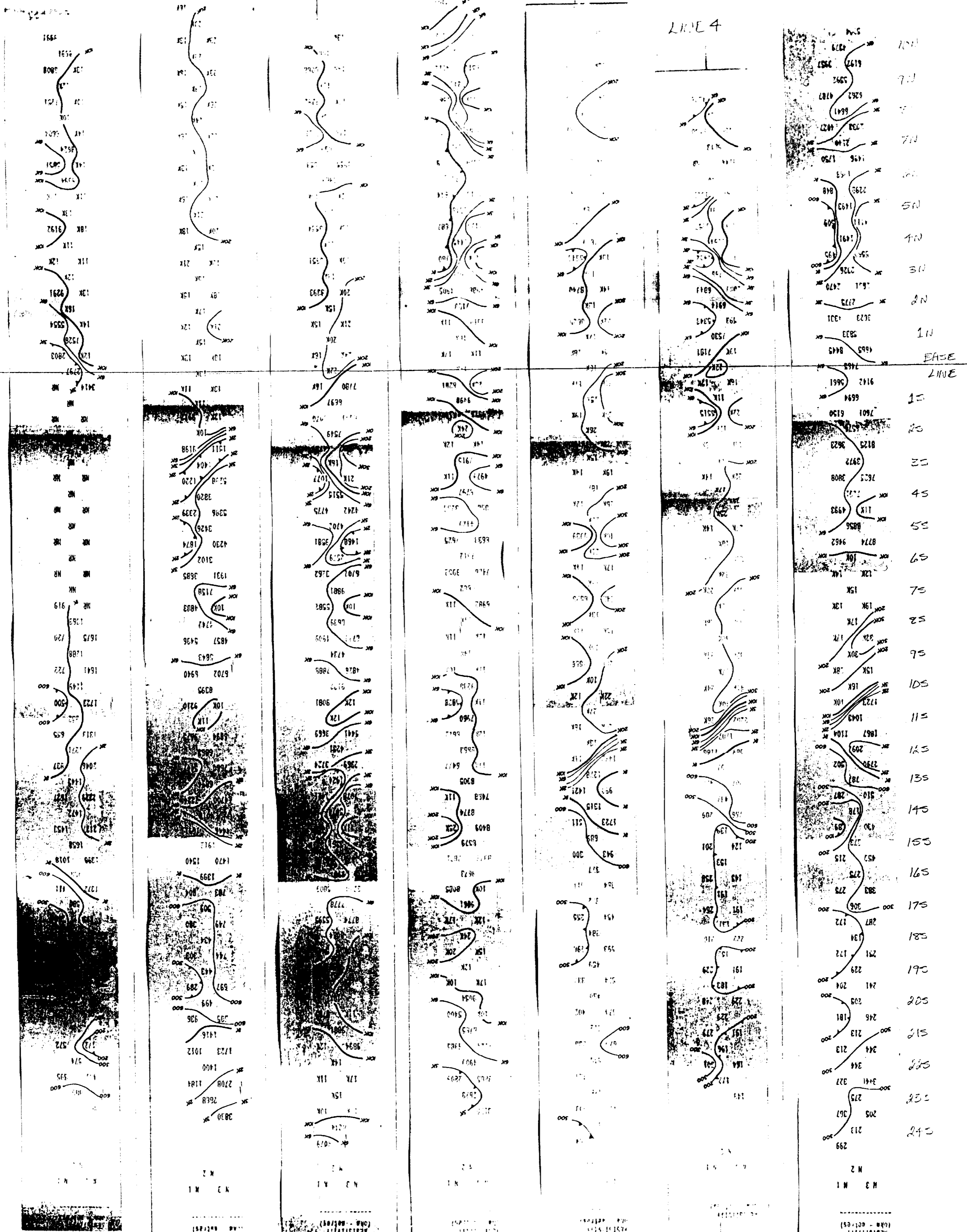
LINE 22

LINE 16

LINE 12

LINE 8

LINE 4



CHARGEABILITY

LINE 24

LINE 20

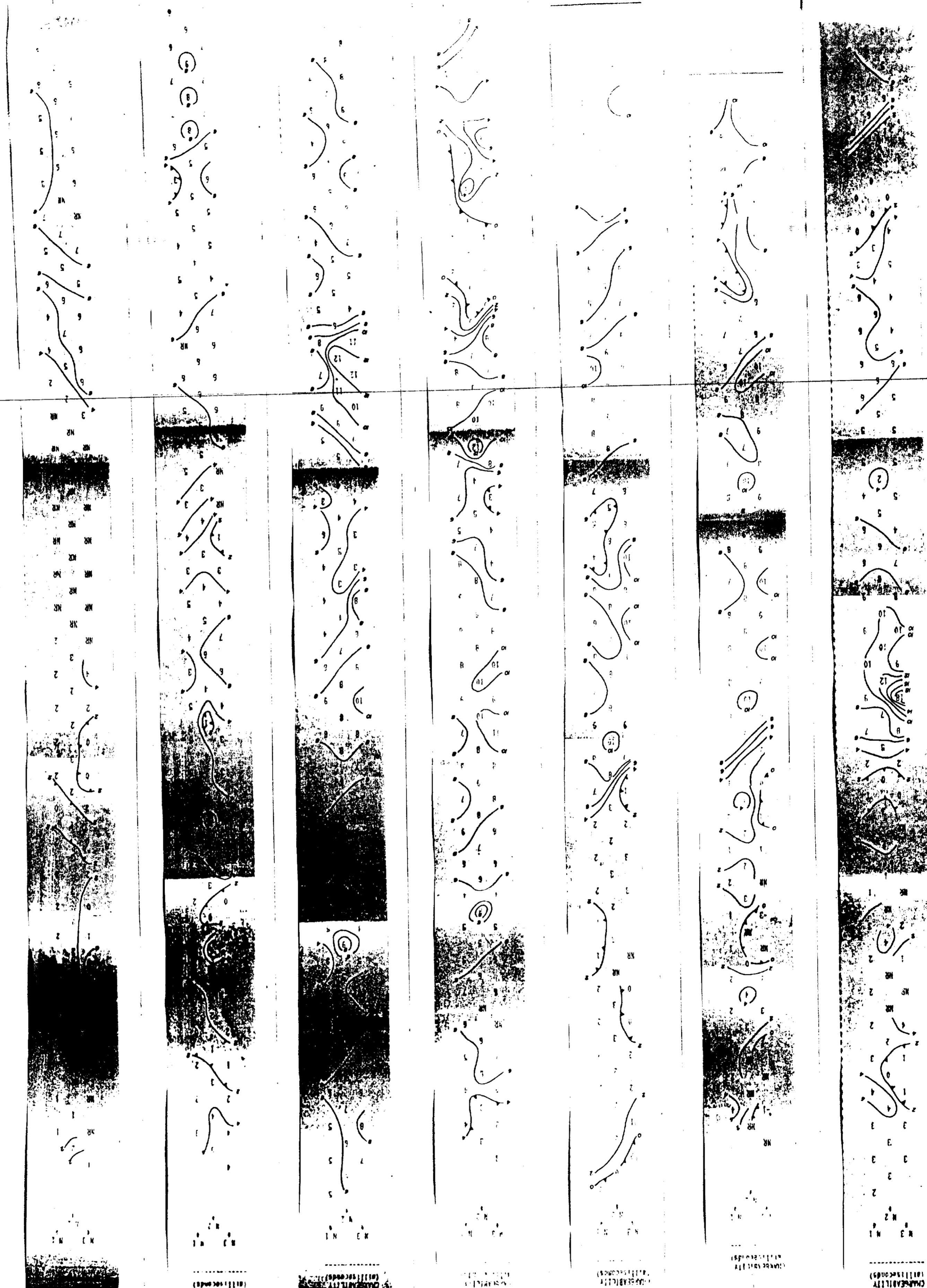
LINE 16

LINE 12

LINE 8

LINE 4

LINE 0



BASE
LINE



