



42H08NE0021 2.9441 BLAKELOCK

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GEOPHYSICAL REPORT
on the
Blakelock Township Property
for
DEERFOOT RESOURCES INC.

RECEIVED

OCT 03 1986

MINING LANDS SECTION

by

Greg Hodges

Robert S. Middleton Exploration Services Inc.
P.O. Box 1637 Timmins, Ontario P4N 7W8

August 6, 1986



	<u>Page</u>
INTRODUCTION.....	1
Location, Access and Facilities.....	1
Claim Status.....	1
Personnel and Equipment.....	2
Previous Work.....	2
 GEOLOGY	
Geology and Mineralization.....	4
Regional Geology.....	4
Property Geology.....	5
 SURVEY PROCEDURES	
Induced Polarisation/Resistivity	
Theory.....	7
Field Method.....	9
 INTERPRETATION.....	10
 RECOMMENDATIONS AND CONCLUSIONS.....	10
 CERTIFICATE	

LIST OF FIGURES

- Figure 1 Property Location
- Figure 2 Property Location (Casa Berardi)
- Figure 3 Claim Map
- Figure 4 Regional Geology and Previous Work

INTRODUCTION

An induced polarisation survey was conducted on the Blakelock Township grid of Deerfoot Resources Inc. by R. S. Middleton Exploration Services Inc. of Timmins, Ontario. The survey was conducted during the periods from June 24 to June 27 and July 24, 1986 to July 29, 1986.

The survey was conducted to increase knowledge of anomalies detected by a magnetic and electromagnetic survey, and to improve understanding of the sub-overburden geology.

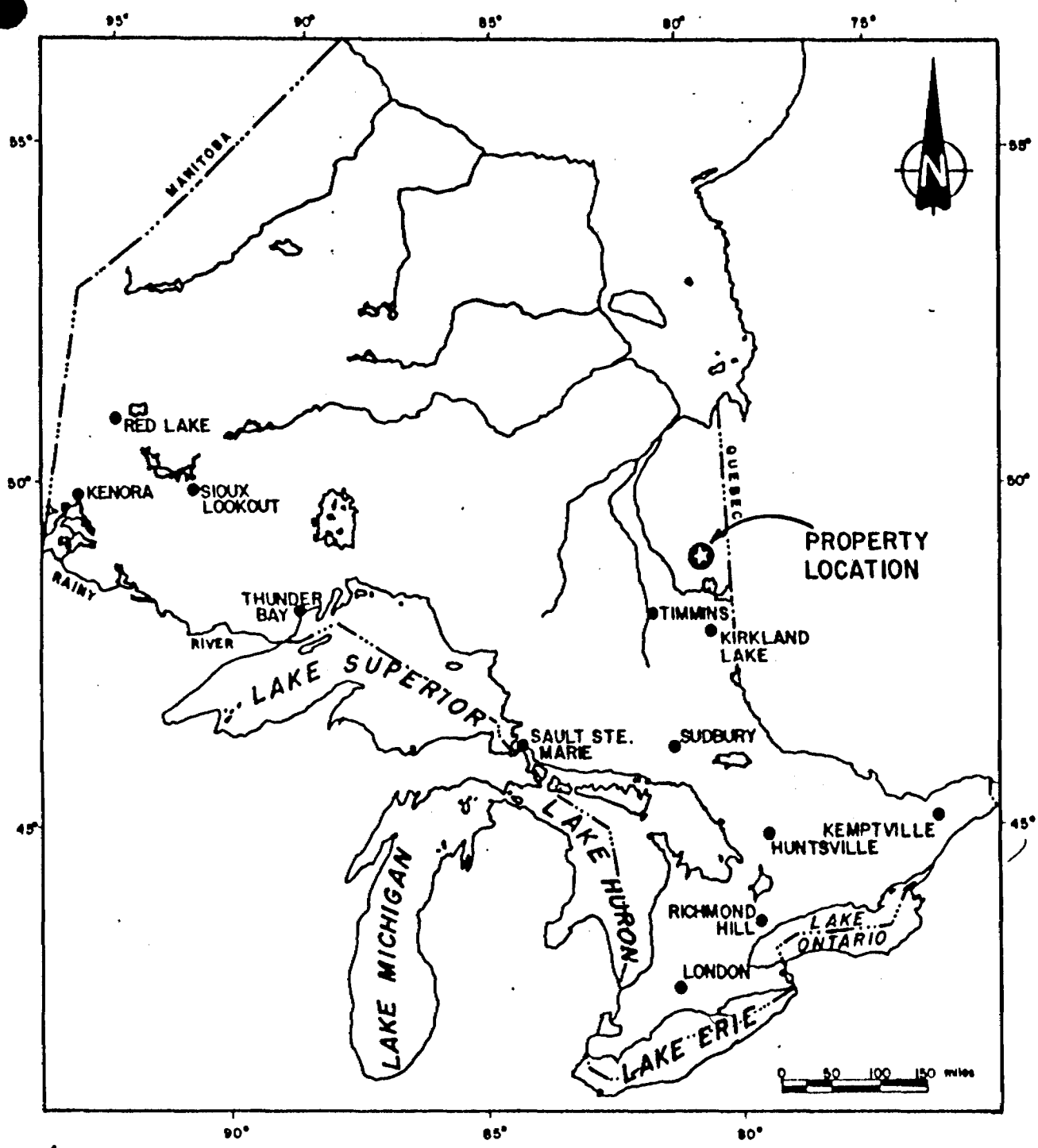
Location, Access and Facilities

The property is located in southern Blakelock township, 75 km by air northeast of Cochrane, Ontario (see Figures 1, 2). Access to the property is via fixed wing float equipped aircraft from Cochrane to Lake Mikwan, 2 km north of the property. In addition, the new Detour Mine road passes within 8 km to the northwest of the property.

Claim Status

The property consists of 25 unpatented mining claims as shown in Figure 3. The numbers are as follows:

<u>Claim Number</u>	<u>No.</u>	<u>Recording Date</u>
848384-848398	15	April 19, 1985
755543-755552	<u>10</u>	May 17, 1985
	25	



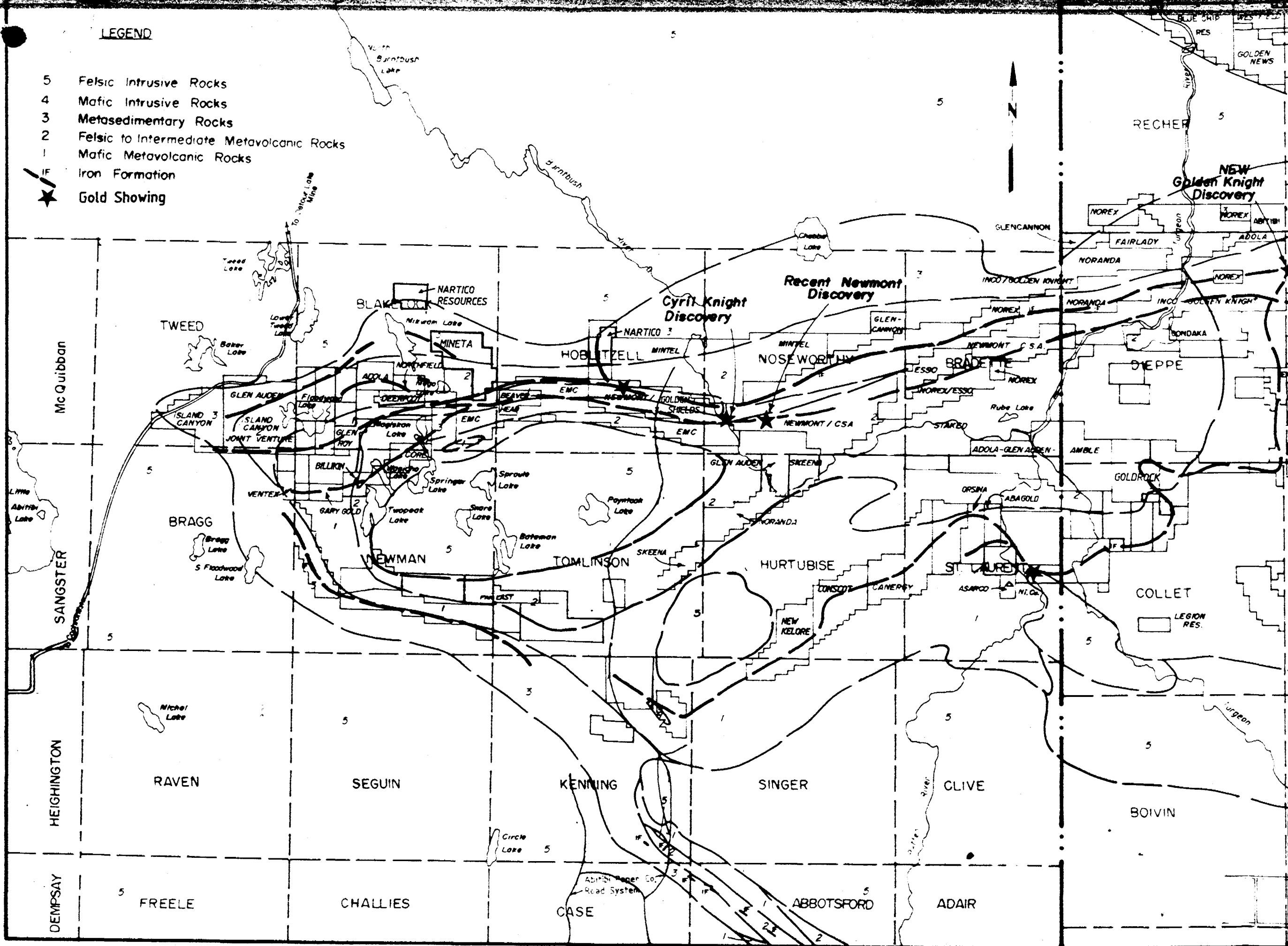
PROVINCE OF ONTARIO

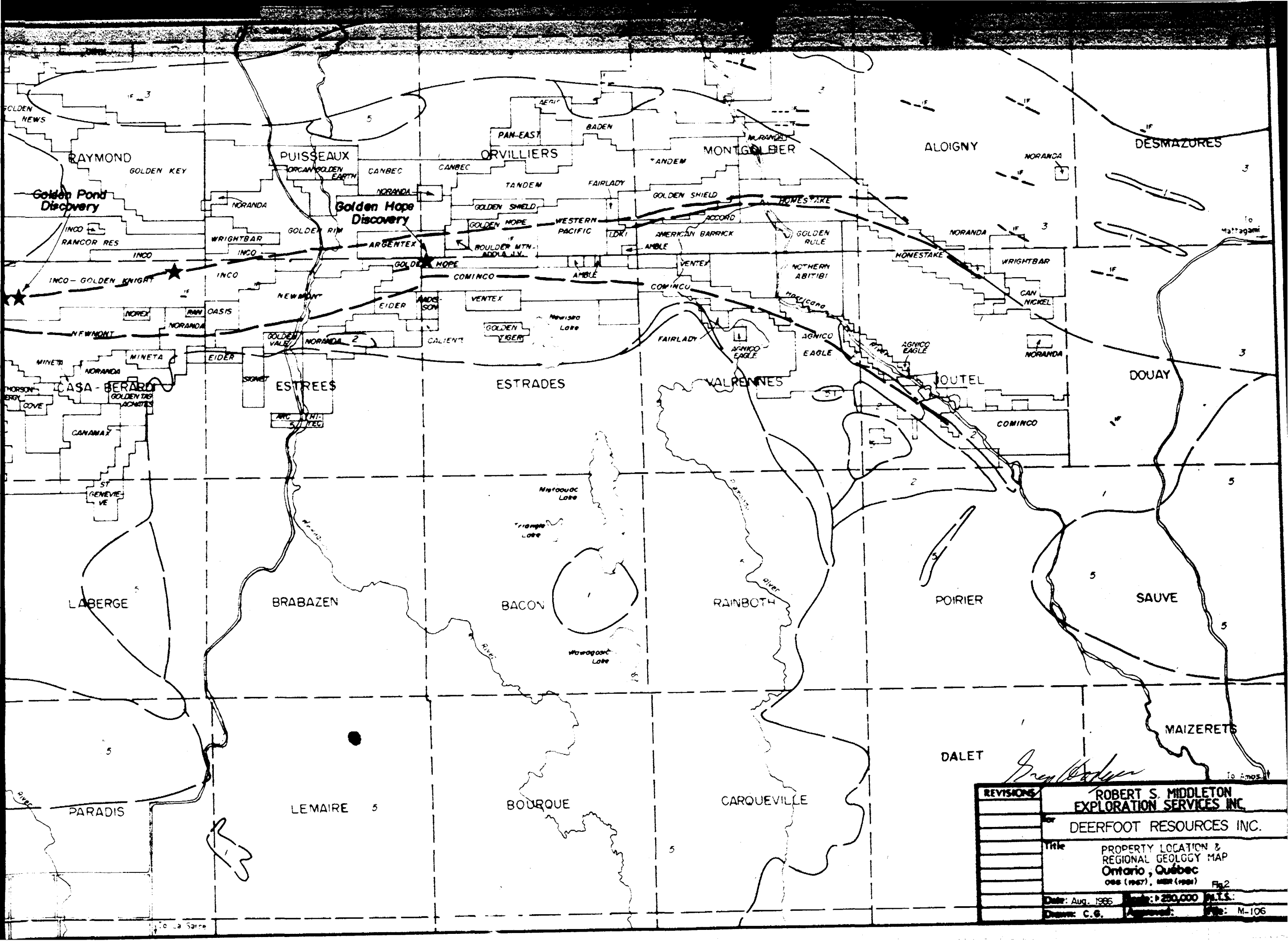
Robert S. Middleton

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.		
	for	Deerfoot Resources Inc.	
	Title Blakelock Twp. District of Cochrane		
	PROPERTY LOCATION		
	Larder Lake Mining Division, Ontario Fig 1		
	Date MAY, 1985	Scale: 1" = 160mi	N.T.S.
	Drawn: K. B.	Approved:	File: M-108

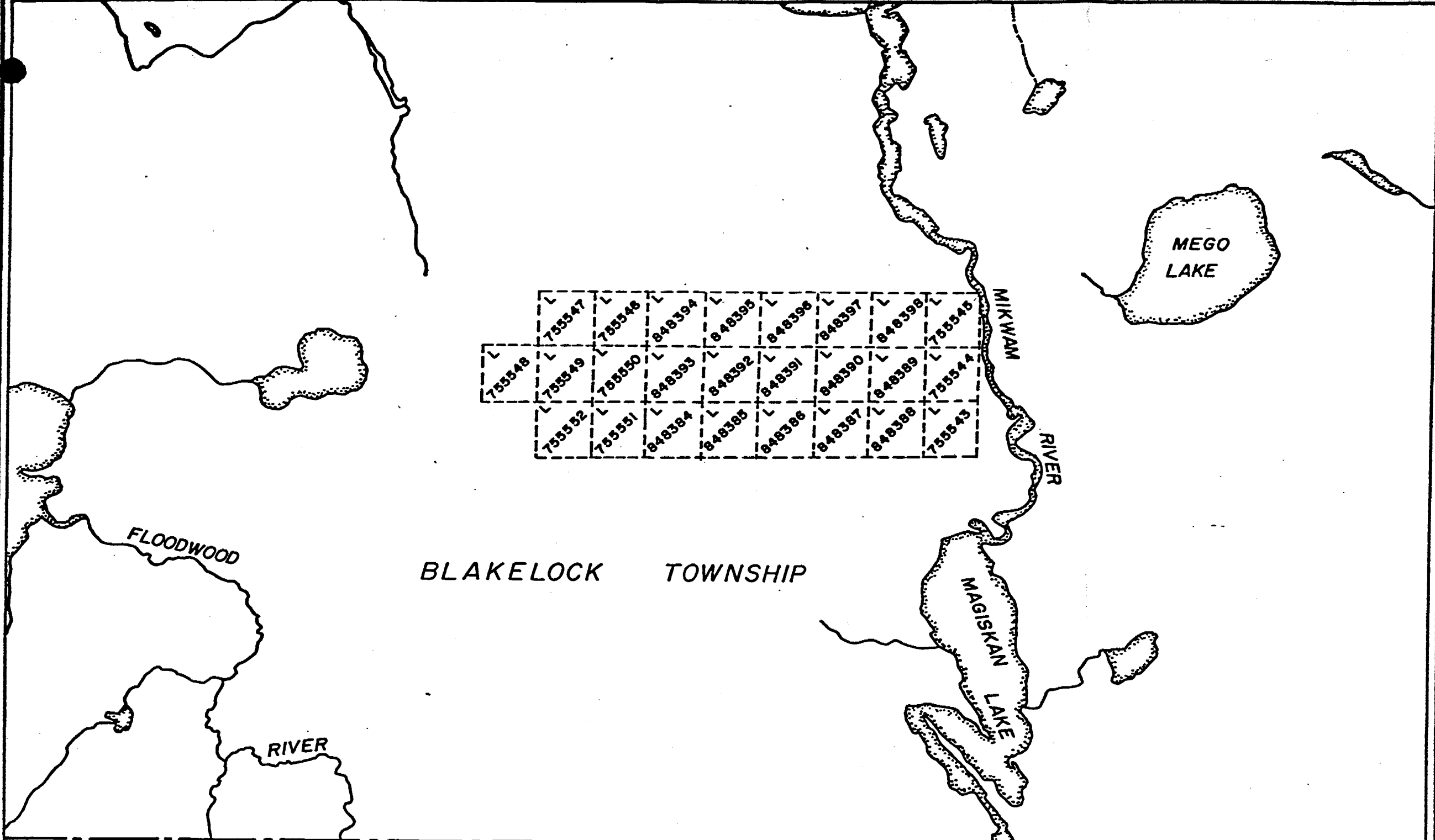
LEGEND

- 5 Felsic Intrusive Rocks
- 4 Mafic Intrusive Rocks
- 3 Metasedimentary Rocks
- 2 Felsic to Intermediate Metavolcanic Rocks
- 1 Mafic Metavolcanic Rocks
- IF Iron Formation
- ★ Gold Showing



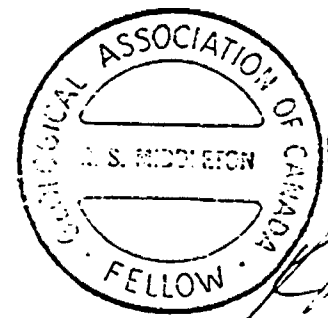



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
	DEERFOOT RESOURCES INC.	
Title	PROPERTY LOCATION & REGIONAL GEOLOGY MAP Ontario, Québec 088 (1987), 089 (1988)	
Date	Aug. 1985	Scale: 1:250,000 N.T.S.
Drawn	C.G.	Approved: <i>[Signature]</i> File: M-106



BLAKELOCK TOWNSHIP

NEWMAN TOWNSHIP



REVISIONS	 ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
	for Deerfoot Resources Inc.	
	Title Blakelock Twp. District of Cochrane	
	CLAIM MAP	
	Larder Lake Mining Division, Ontario Fig. 3	
	Date: MAY, 1985 Scale: 1" = 1/2 mi. N.T.S.	
	Drawn: K. B.	Approved: [Signature] File: M-106

The claims are currently held by Maurex Resources Ltd. in trust for Deerfoot Resources Inc.

Personnel and Equipment

Middleton Exploration provided a four man crew for each of the two phases of the work. For the first phase they were accomodated in a camp on Magiskan Lake, and for the second they stayed in a cabin on Lake Mikwam.

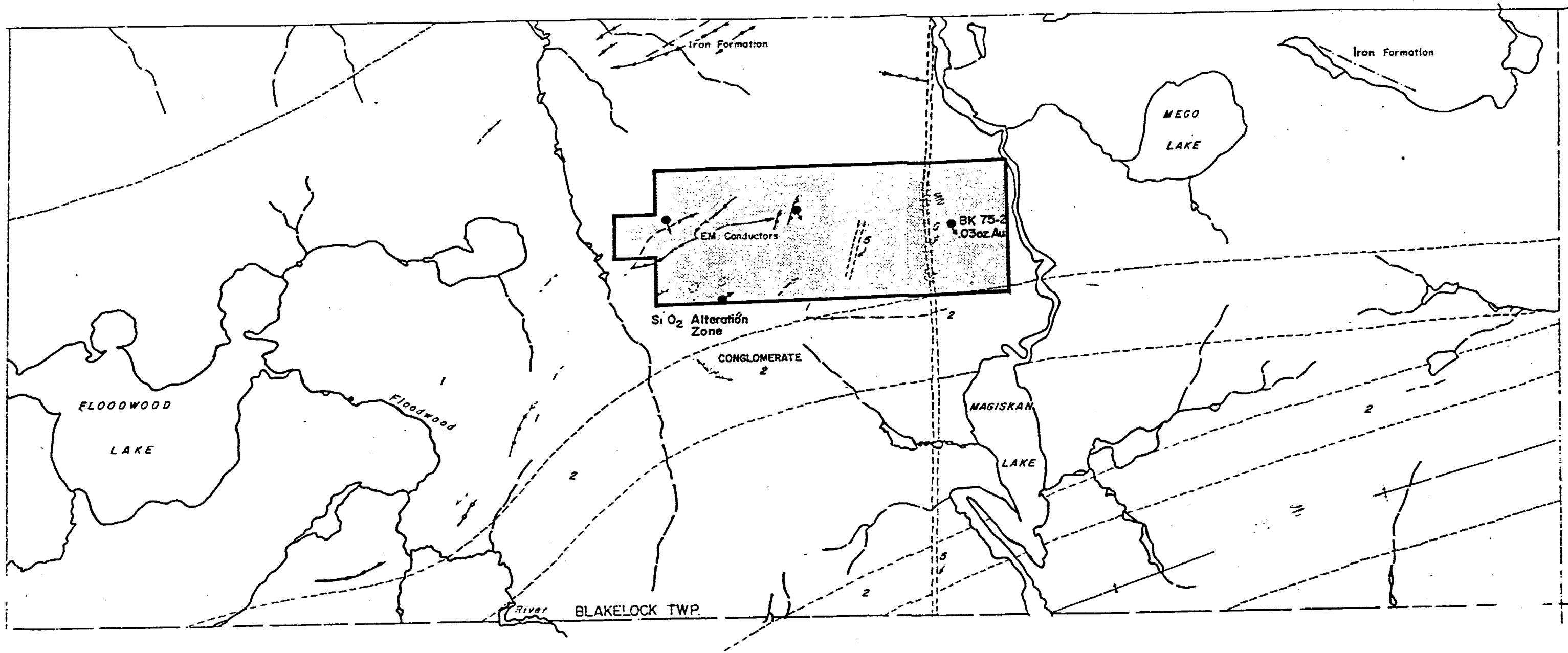
The survey was completed using a Scintrex IPR-11 Broadband Time Domain IP Receiver, and a Scintrex TSQ-3 3-kilowatt Transmitter. Specifications for these instruments are included in Appendix A.

Previous Work

The following is taken from Mr. R. S. Middleton's report on the property, May 17, 1985.

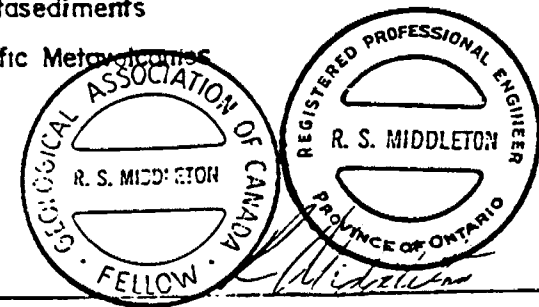
The first work done in the area was by the Conwest Exploration Company (Toronto File 63.1028) who carried out electromagnetic surveys in 1960 and drilled 2 short holes near the northern boundary of the property and 2 short holes near the southern boundary of the property (see Figure 4). Several zones of porphyritic rhyolite with disseminated sulphides were indicated but the core was not assayed. The object of the Conwest program and subsequent work by others described below was base metals.

In 1976 further limited ground EM surveys and drilling were



LEGEND

- 5 Mafic Intrusive Rocks
- 2 Metasediments
- 1 Mafic Metasandstones



REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
for	Deerfoot Resources Inc.
Title	Blake Lock Twp. District of Cochrane
	GEOLOGY
	Larder Lake Mining Division, Ontario F13.4
Date	MAY, 1985 Scale 1"=1/2mi. N.T.S.
Drawn	K. B. Approved
	M-106

carried out by Geophysical Engineering Limited and two holes CC-6 and CC-7 were drilled which intersected stratabound pyrite-chert (iron formation) mineralization hosted in intermediate to felsic tuffs. The host rocks were sericitized. Also in 1976 Hudson Bay Mining and Smelting outlined a series of conductors on the southwest portion of the property area, near the Floodwood River (H.B.M.S. Grid G) but there is no record of drilling on file (Toronto File 2.2395). Noranda Exploration Company Limited did a ground EM and magnetic survey in a small area 1 mile east of the property (Toronto File 2.1658) and one hole was drilled roughly 2,000 feet west of the Mikwam River (hole HK 75-2). Gold values of .03 oz Au over 3 feet at a depth of 106 - 109 feet were contained in a disseminated pyrite zone in porphyry in this hole.

In 1982 - 1985 Newmont Exploration have been carrying out an extensive overburden drilling, geophysical and diamond drill program 10 miles east of the property and have recently announced an important drill intersection of 4 gm/7.5m N. Miner, April 18, 1985. This hole is on the same iron formation trend that extends west through the Blakelock and Tweed Township area (see Figure 6). Extensive staking has taken place west of the Newmont property by Esso Resources, coming within 3 miles of the Deerfoot property.

GEOLOGY

Geology and Mineralization

Geological mapping of the property will be completed in June-July, 1986. At this time a geological report will be written and possibly some explanation of the ground geophysics will be attempted. The following is a description of the regional geology taken from Mr. Robert S. Middleton, P.Eng. qualifying report on the property dated May 17, 1985 (see Figure 4).

Regional Geology

A series of iron formations hosted in sediments, felsic-mafic volcanics extend from the Casa Berardi area of Quebec into the Burntbush greenstone belt area in Ontario. The geology is illustrated on Ontario Department of Mines Map 2161. These iron formations are closely related to the gold mineralization as shown by the new Casa Berardi discovery by Inco, see Northern Miner (1984a, b), but upon detailed examination gold occurs within several rock types including oxide and sulphide iron formation, argillites, greywackes, conglomerate and felsic tuffs. Carbonate and silica alteration - veining with pyritization is directly associated with the gold values within the various rock types at the Inco discovery. Bedded stratabound pyrite zones within the oxide iron formation also contain important gold values. Recent assays released by Inco give gold

grades and widths in widely spaced holes of .13/6.7 ft., .26/24.9 ft., .73/15.7 ft., .23/81.5 ft., Northern Miner (1984b).

The aeromagnetic data as shown on Figure 6 can be utilized to trace the iron formation markers, and zones where the magnetic gradient becomes less indicate areas of change from oxide (high magnetic gradient) to sulphide and or carbonate facies. In Noseworthy township a gold showing is reported to occur near the Burntbush River (Cyril Knight showing) which is situated along the same magnetic horizon that links the iron formation markers in Quebec with the area containing the property. Overburden cover and general lack of outcrop in the region has prevented conventional gold prospecting and the principle exploration effort in the past 25 years has been base metal exploration using electromagnetic methods for outlining conductors. Gold analysis was not routinely done during these base metal programs, and as a result the gold potential for the area was not assessed nor was the geological setting appreciated until recent gold discoveries were made elsewhere along the belt.

Property Geology

The geology underlying the property consists of felsic, intermediate and mafic volcanic tuffs and flows which are intruded by local high level porphyry bodies. The south edge of the property is underlain by a sedimentary unit containing a conglomerate horizon that contains traces of gold, Thompson,

R.(1936). Drilling done in the late 1960's to early 1970's was directed at a portion of a number of conductors within the bounds of the property with the purpose of base metal exploration. Examination of the drill logs and in some cases the drill core which is on file at the Resident Geologist office at Kirkland Lake has shown that a number of stratabound disseminated (non-conductive) sulphides occur within the volcanic section as well as massive sulphides. These sulphide zones are extensions of iron formation - exhalitive units in the area. This type of setting is similar to that of the Agnico Eagle mine in Quebec, portions of the Inco Casa Berardi discovery and Hemlo in Ontario. Siliceous and sericite alteration occurs in the host rocks (seen by the writer in both old drill core and outcrop) which act as guides to tracing out sulphide horizons that may contain concentrations of precious or base metals. In other words the areas with greatest alteration would likely occur near and adjacent to areas with metal concentrations.

Analysis of disseminated pyrite in a porphyritic unit in Noranda hole BK 75-2 which is situated 2,000 feet west of the Mikwam River (claim L 848 389) on the Deerfoot property assayed .03 oz Au/3 feet showing that gold is present and is anomalous in this sulphide and porphyry (possibly porphyritic rhyolite) environment (logs on file at MNR, Kirkland Lake). Therefore further exploration for stratabound sulphide and porphyry gold

deposits within this area is warranted.

Outcrops on the central part of the property contain intense silicification and brecciation indicating a center of hot spring activity within this section of volcanics. Nearby porphyry bodies may also indicate a volcanic centre area.

SURVEY PROCEDURE

INDUCED POLARISATION/RESISTIVITY

Theory

The induced polarisation (IP) and resistivity exploration methods are electrical methods based on measuring the response of the earth to an applied direct current.

The principle is to apply a known electric current to the earth, and measure the electric potential created by it at the survey location. The resistivity, a bulk property of the rock itself, is calculated from the difference between the applied current and the measured potential, corrected for the geometry of the current and potential electrode configuration.

The induced polarisation measurement is based on the "over-voltage" effect. Most of the electric current carried by the earth is conducted by the flow of ions in the solutions filling the pore spaces in the rock. At the surface of any metallic particle in the path of current flow, the ionic flow in the solution is changed to an electronic flow in the metal. In

the process of the change, an electric charge of trapped ions is built up at the surface of the metal, storing a small voltage. If the voltage increases, the apparent resistance of the rock also increases. If the applied current flow is decreased or stopped, the voltage will create a potential in the opposite direction to the original applied current, and start a current flowing in the opposite direction.

In time domain induced polarisation the applied current is abruptly stopped, and the reverse potential created by the over-voltage effect is measured over time as it quickly decays. The definition of chargeability is:

$$M = \frac{V(t = \infty) - V(t = 0)}{V(t = \infty)}$$

where $V(t = 0)$ is the voltage at turnoff, and $V(t = \infty)$ is the late-time voltage. This is usually measured over a certain time period after turn-off as an integral of voltage over time, corrected for the length of the time period, and normalised to the voltage at time 0. It is usually expressed in millivolts per volt (mV/V).

The over-voltage charge takes time to build-up or decay, so that if the applied current is caused to oscillate more and more frequently, the apparent resistance will decrease, as the over-voltage does not have time to build at higher frequencies. This effect is used to measure the IP effect in frequency domain

IP surveys, wherein the current is applied at two or more frequencies, and the "percent frequency effect" (PFE) is calculated from the change in resistivities (P) between the different frequencies.

$$\text{PFE} = \frac{\text{P (low freq)} - \text{P (high freq)}}{\text{P (high freq)}} \times 100 \%$$

Although not identical, for most purposes the PFE is approximately equal to the chargeability.

Because the IP effect responds to effects on small metallic particles, it is particularly useful for detecting disseminated metallic minerals. Also because of this, it will respond strongly to the "membrane polarisation" created by the electric charges resident on clay particles or layered or fibrous minerals.

Field Method

The survey was conducted using a pole-dipole array with a dipole length of 25 m and array spacings of $n = 1, 2, 3, 4$ dipoles. This array configuration involves having a dipole for the receiver measuring V_p , the potential and a single current transmitter electrode on the grid, separated from the receiver dipole by each 'n' interval in turn. The other current electrode, 'the infinity' is situated 2 kilometers or more from the grid.

For this survey the measurements were taken in the time

domain, so the transmitted current was a bipolar on-off square wave with each on or off lasting two seconds. Measurements of resistivity and chargeability were taken.

INTERPRETATION

The Induced Polarisation survey produced good results, highlighting several anomalous zones and showing the bedrock geology well. The results of the first stage of this work were used to place those geologic contacts which were geophysically inferred on Ian Coster's Geological Report of June 20, 1986. The second stage results generally confirmed and improved these inferences.

Included in the back of this report is a plan map showing these anomalies and the apparent contacts.

The major features are a strongly chargeable unit 200 to 300 metres wide centered on a line trending northeast from 800S on L35W to about 500S or L20W. Another significant anomaly trends northeast from 500S on L31W to 275S on L26W.

RECOMMENDATIONS AND CONCLUSIONS

There are a number of anomalies which should be investigated by a program of diamond drilling.

Major targets of interest are the anomaly just south of the resistivity contact at 500S on L26W, and the strong low

resistivity anomaly at 600S on L21W. Also significant for investigation are the anomaly at 300S on L28W, and at 950S on L31W, just south of the resistivity contact there, and 800S on L21W.


An initial four diamond drill holes is recommended, on the targets at 500S on L26W, 600S on L21W, at 300S on L28W, and at 800S on L21W.

Once the drilling has commenced, it may be possible to stretch the amount of drilling by reducing the length of the drill holes to include the fifth anomaly.

An initial budget for diamond drilling should allow for 1,200 feet of drilling at about \$18/foot, plus assaying, supervision, and mobilization charges.

Further drilling is contingent on the results of the program.

Respectfully Submitted,

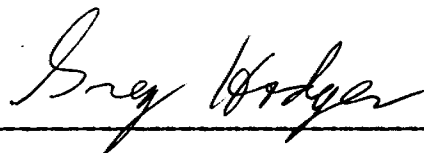

Greg Hodges, B.Sc.
Geophysicist

CERTIFICATION

I, D. Greg Hodges, of 136 Cedar Street South, in the city of Timmins, Province of Ontario, certify as follows concerning my report on the Deerfoot Resources Inc. property in Blakelock Township, Province of Ontario and dated August 6th, 1986:

1. I am a member in good standing of the Society of Exploration Geophysicists
2. I am a graduate of Queen's University at Kingston, Ontario, with a B.Sc. (Hons.) Geological Sciences with Physics, obtained in 1980.
3. I have been practising in Canada, and occasionally in the United States, Europe, and Australia for the past six years.
4. I have no direct interest in the properties, leases, or securities of Deerfoot Resources Inc., nor do I expect to receive any.
5. The attached report is a product of:
 - a) Examination of data included in the report which was collected on the property concerned.

Dated this August 6th, 1986
Timmins, Ontario



D. Greg Hodges, Geophysicist

SCALE : 1 : 1250

RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

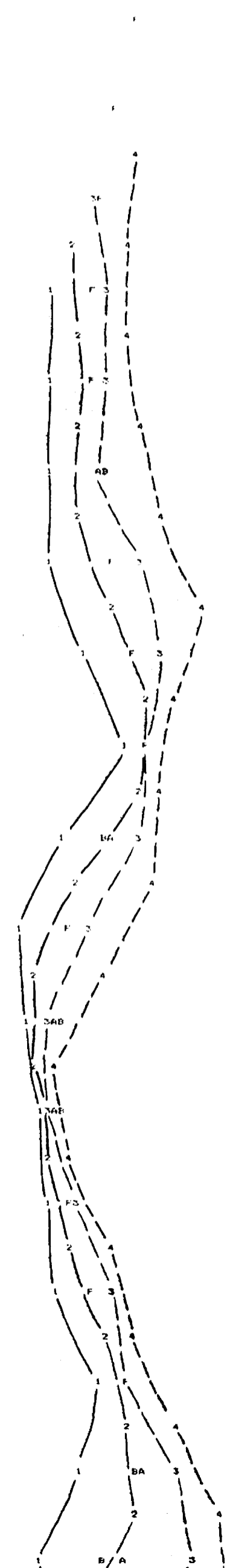
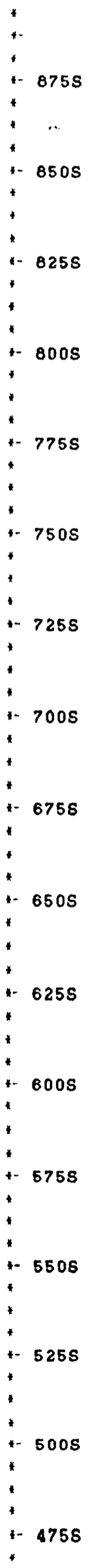
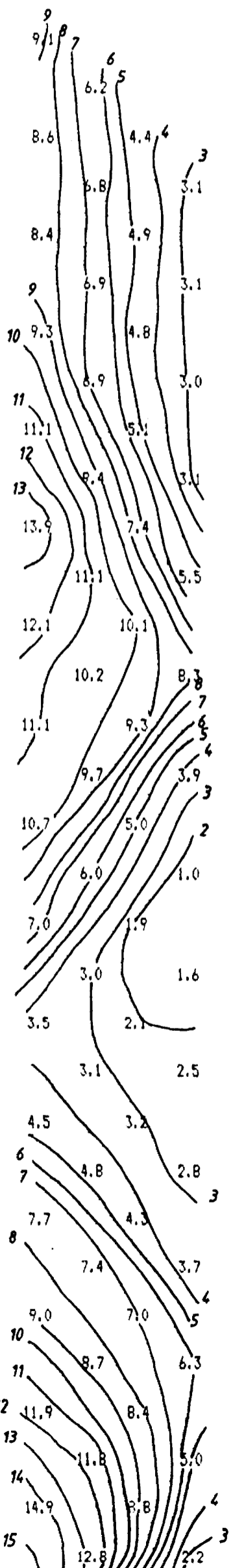
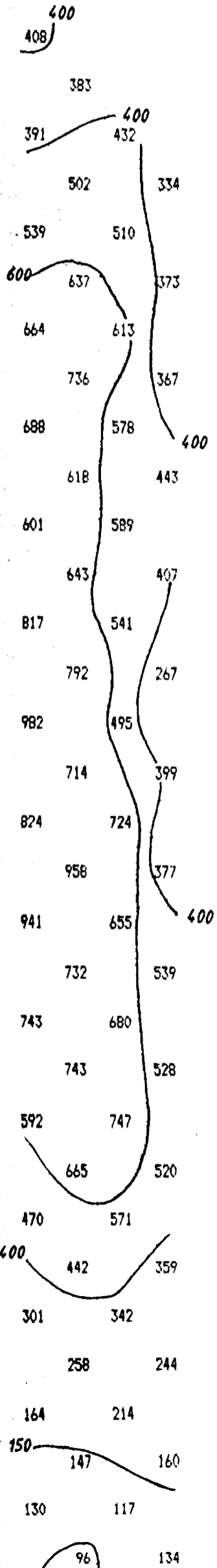
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S T
E E
R R

A B

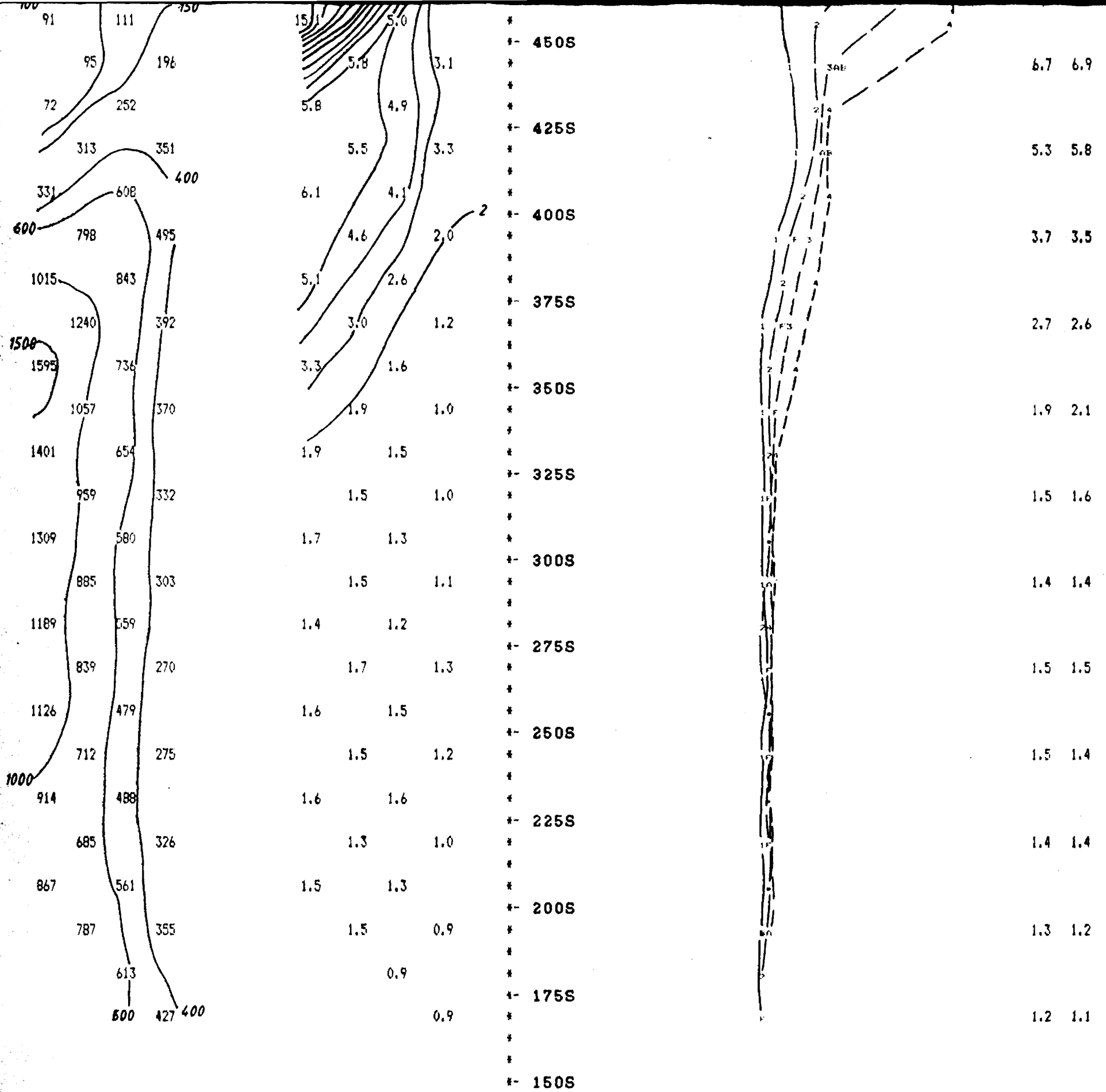
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N 4 N 2

N 3 N 1
* *
N 4 N 2
* *

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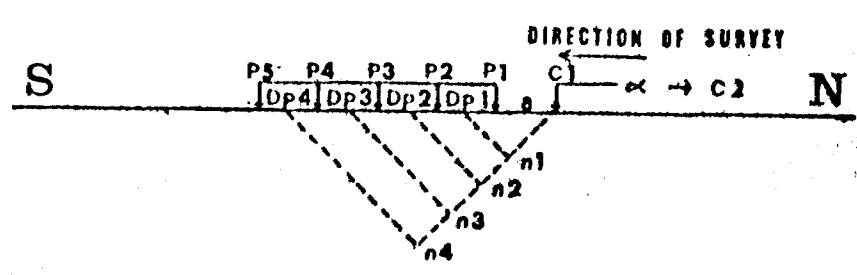


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7.6	7.4
6.5	6.5
5.8	5.9
6.1	6.2
6.6	6.8
7.5	7.3
9.2	8.8
10.1	10.2
7.5	7.2
4.7	4.5
3.5	3.9
3.6	4.1
4.5	4.5
6.2	6.1
8.6	8.7
9.4	9.1
7.8	6.7



Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 27/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSQ-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Ray Bridges

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

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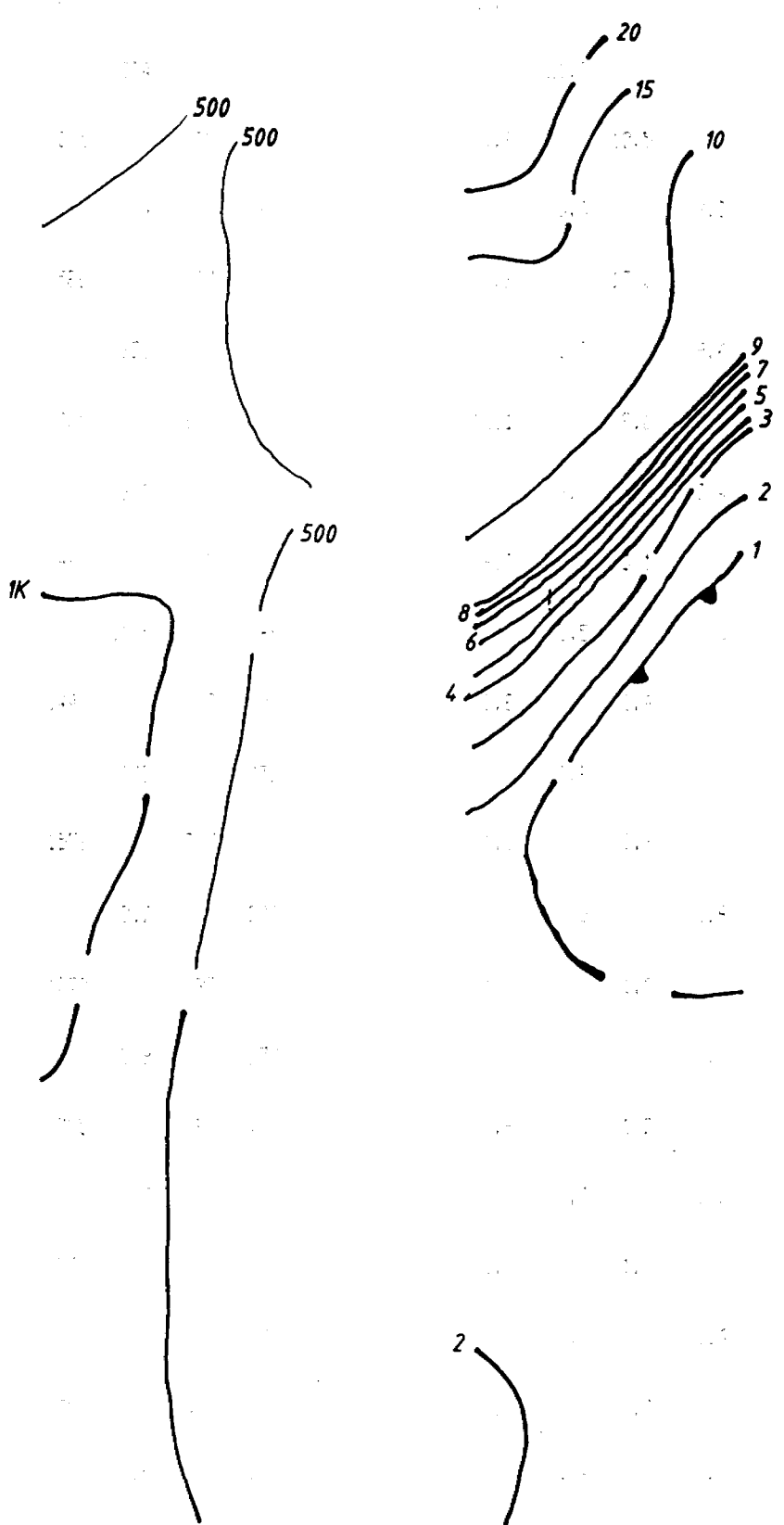
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SCALE = 1 : 1250

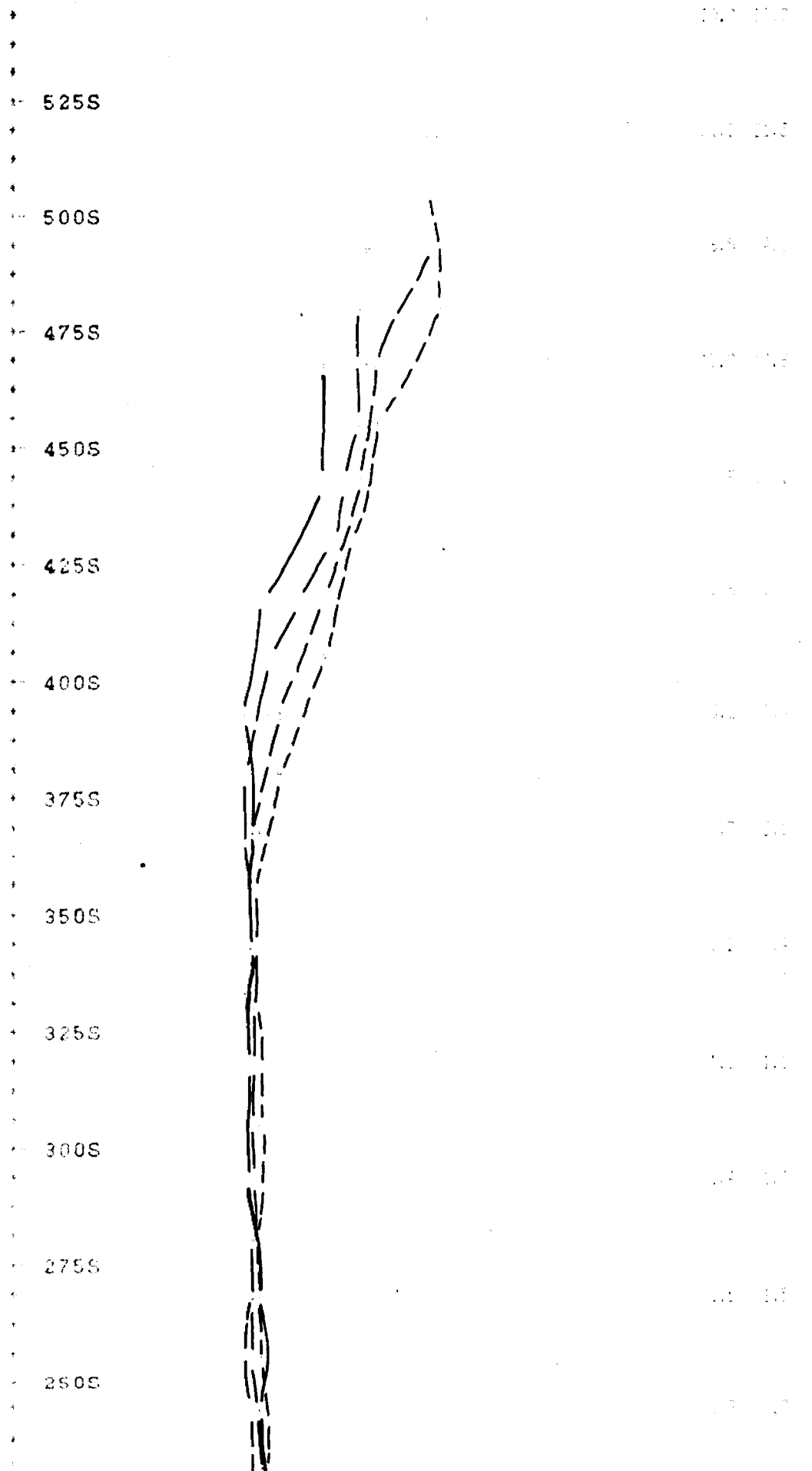
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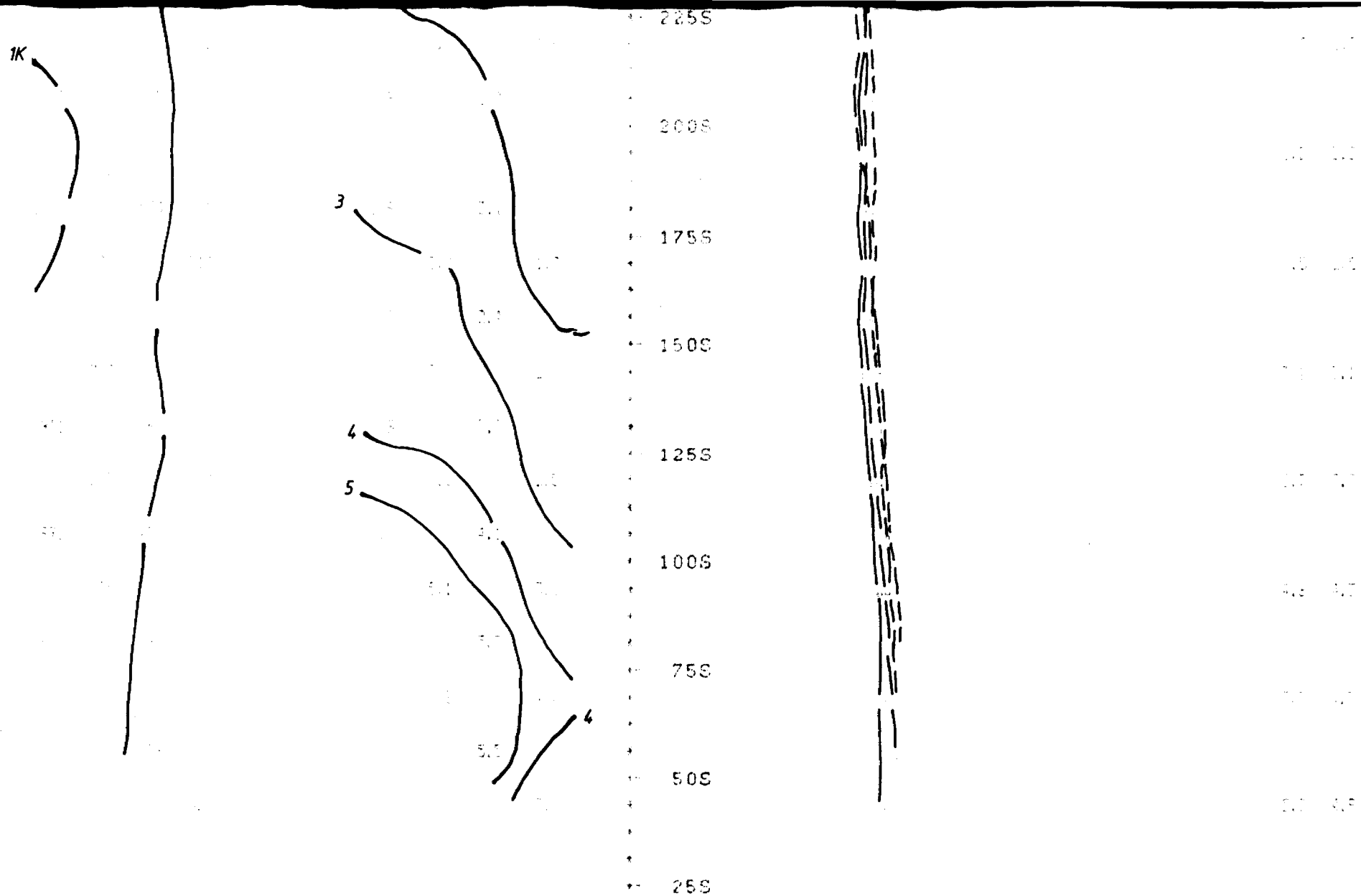
CONTINENTAL SHELF

CROSS-SECTION PROFILE



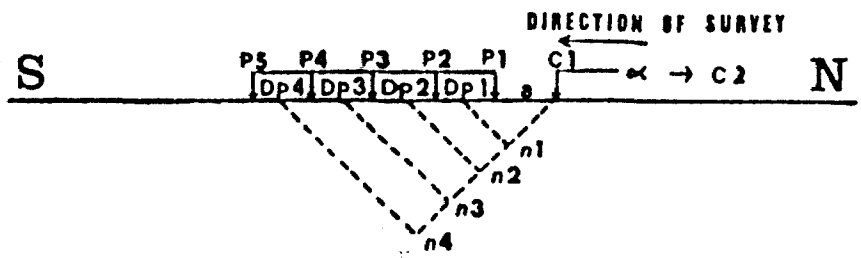
10 0 10 20 30 40 50





Property: BLUE HOLE TRACT
 City and County: ST. JOHNS, N.B.

Date of Survey: 12/8/84
 Title: CB
 File Name: 1001 - DIBOLF
 No. of Lines: 100
 Receiver: SONY
 Transmitter: SONY
 Pulse Rate: 1000
 Delay Time: 200
 Integration: 100



Handwritten signature

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4
 2' Spacing = 25 M

SCALE : 1 : 1250

RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

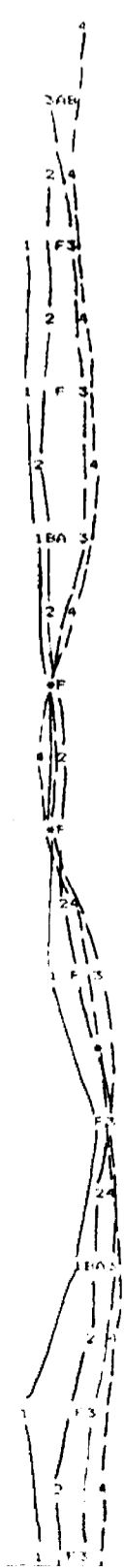
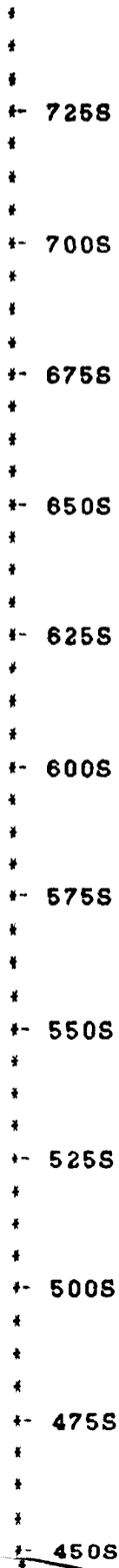
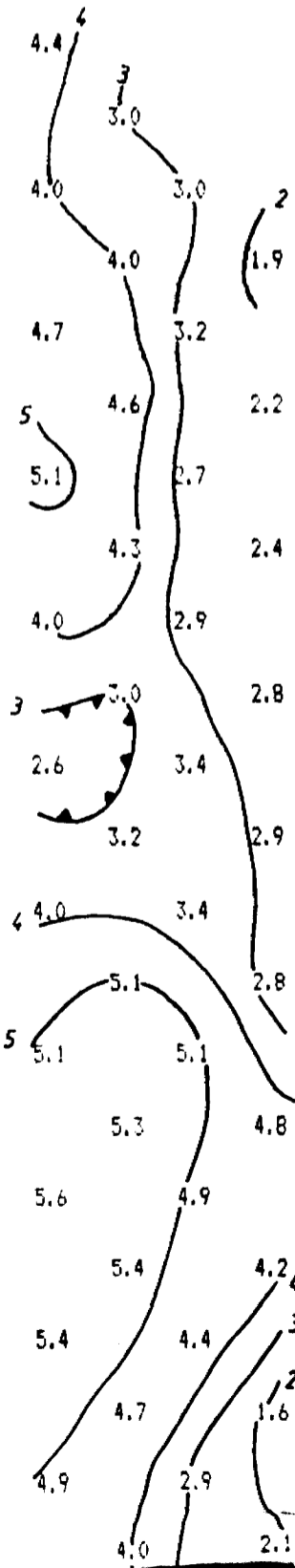
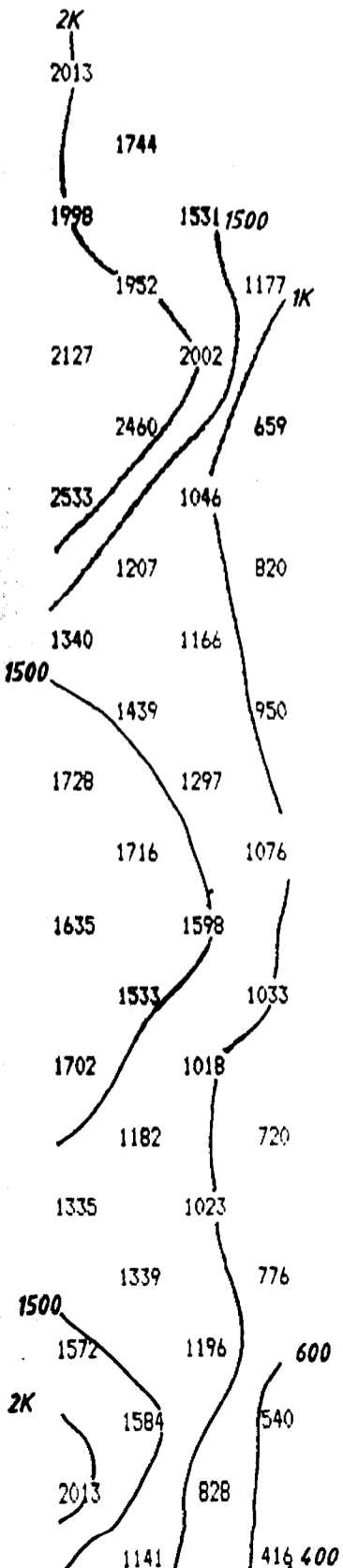
F I
R A
S L
E T
R E
R R

A B

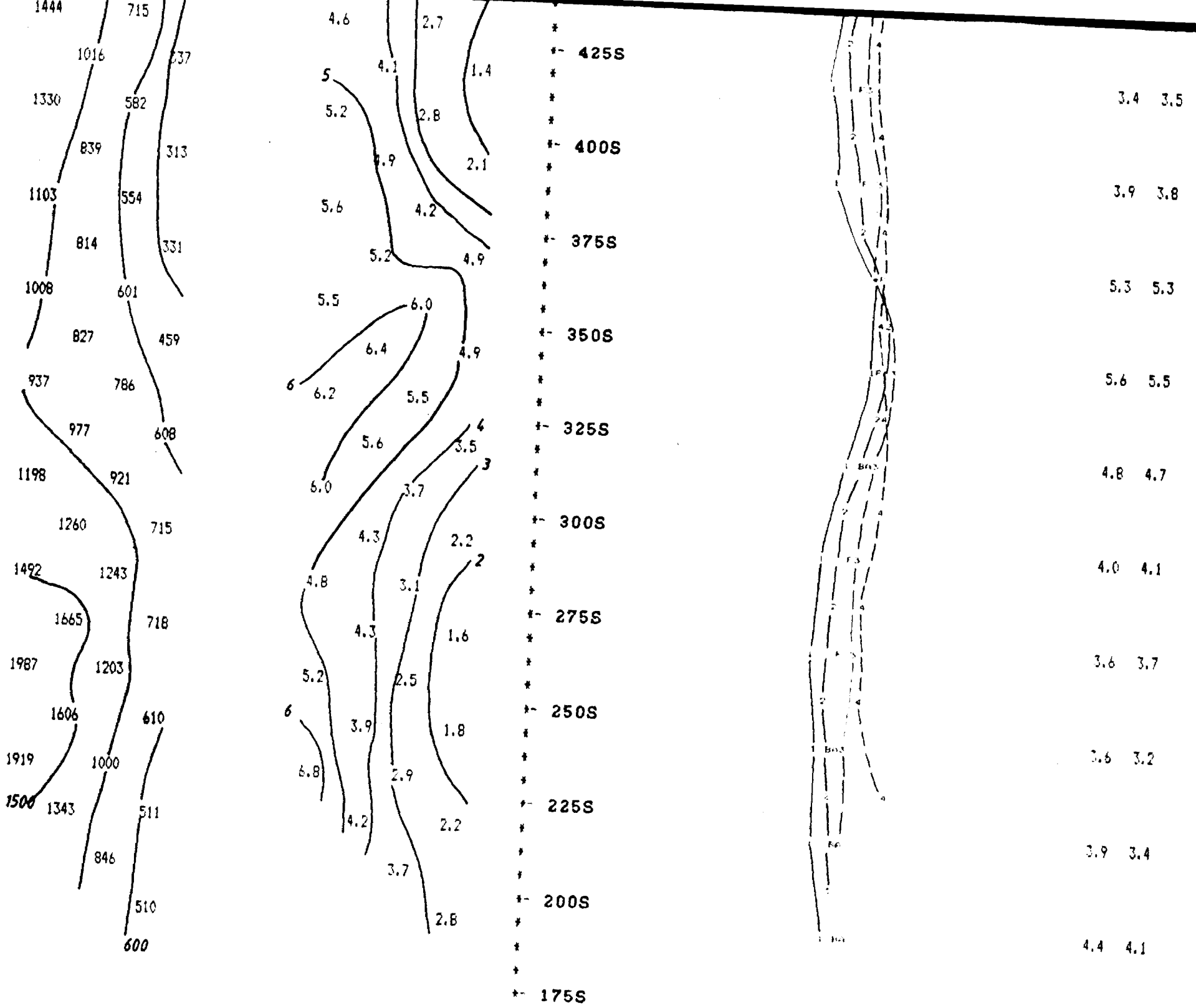
N 3 N 1
N 4 N 2

N 3 N 1
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N 4 N 2
* *

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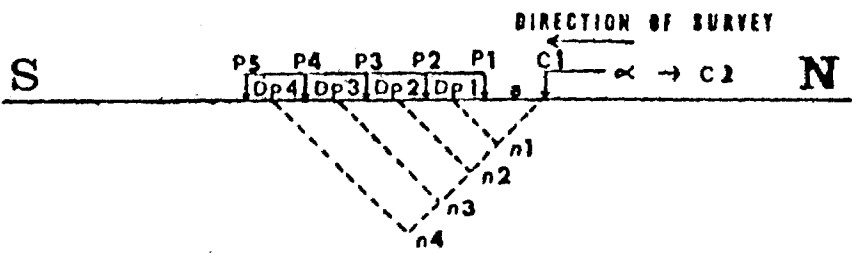


4.4	4.4
3.6	3.5
3.6	3.9
3.4	3.4
3.5	3.3
3.3	3.2
3.4	3.6
3.5	3.7
4.0	3.9
5.0	4.9
4.8	4.7
3.8	3.8
3.6	3.7



Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 26/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSO-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Greg Bodger

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 5 W

SCALE : 1 : 1250

F F
R I
A L
S T
E E
R R

RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

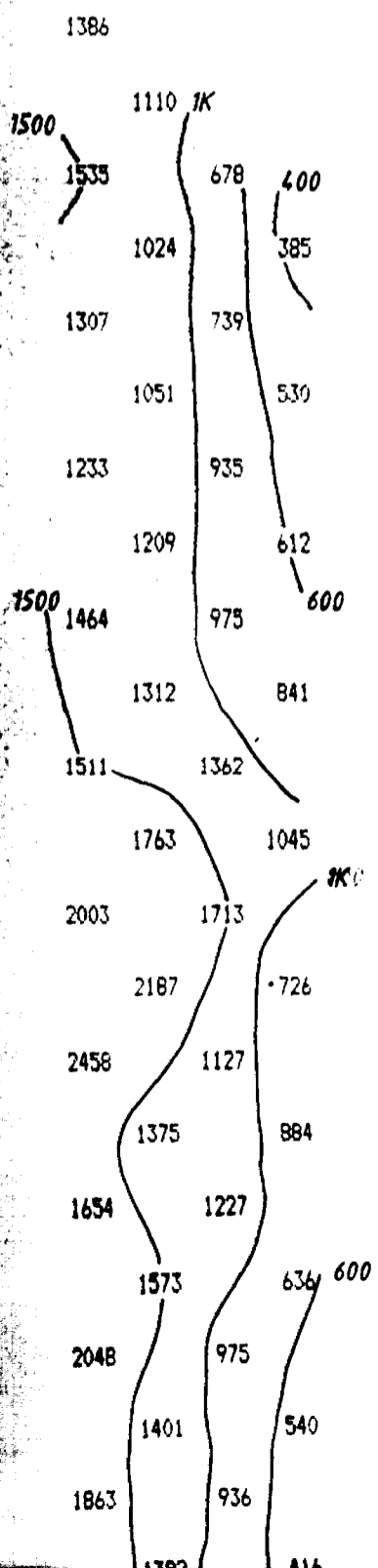
CHARGEABILITY PROFILE

A B

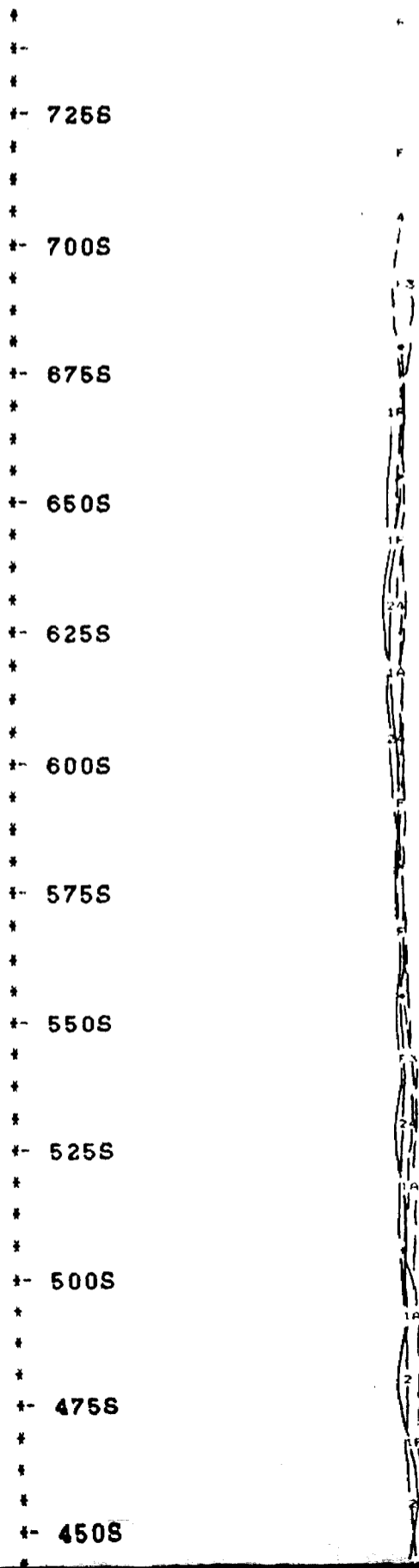
N 3 N 1
N 4 N 2

N 3 N 1
* *
N 4 N 2
* *

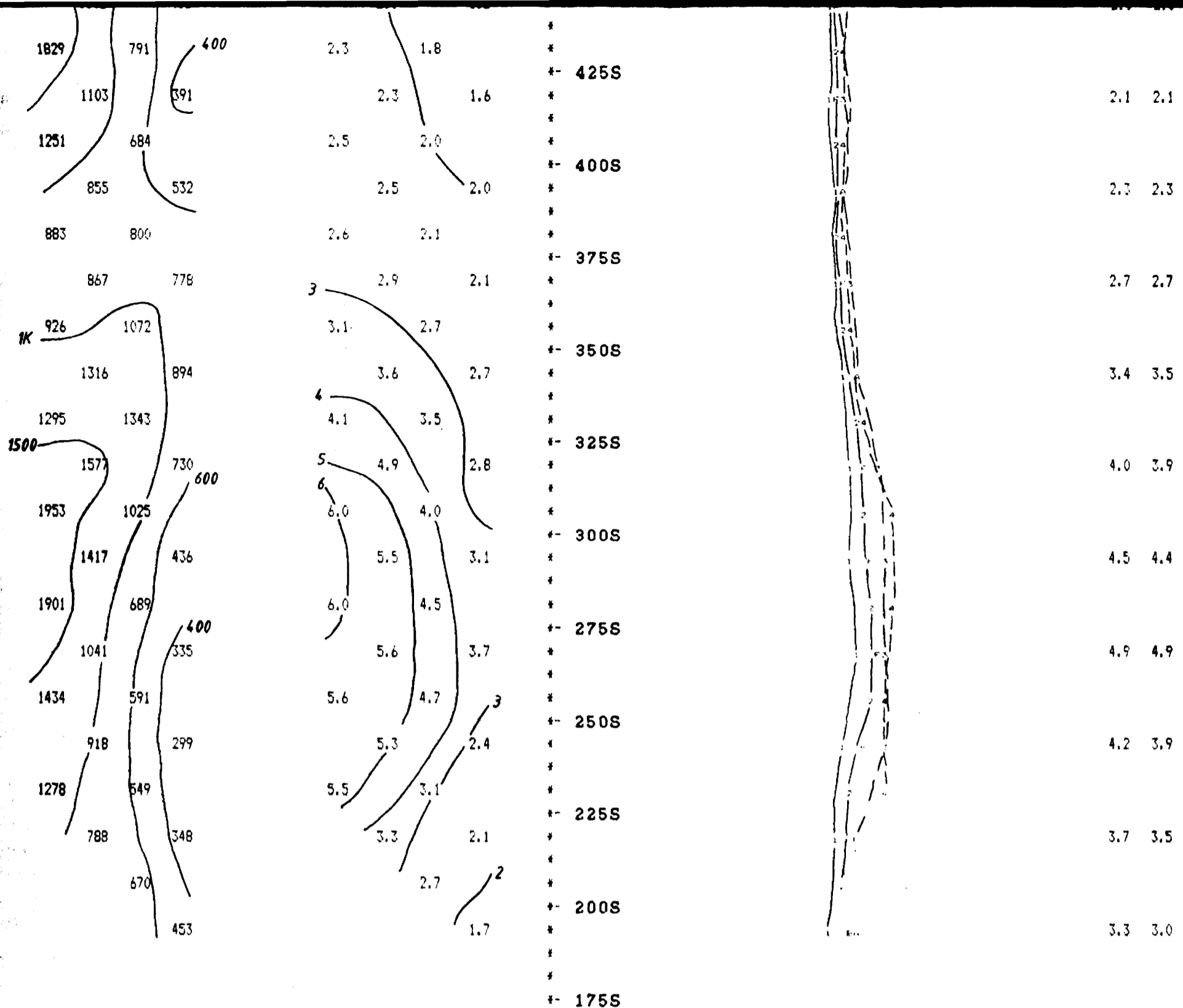
-10 -5 0 5 10 15 20



1386	1.4	
1110	1.9	
1533	1.4	1.3
1024	1.3	1.2
1307	1.7	1.3
1051	1.3	1.2
1233	1.3	1.1
1209	1.6	1.2
1464	1.3	1.1
1312	1.7	1.3
1511	1.6	1.3
1763	1.6	1.5
2003	1.7	1.5
2187	1.9	1.4
2458	1.8	1.3
1375	1.9	1.6
1654	1.7	1.6
1573	2.1	1.5
2048	2.3	1.7
1401	2.0	1.5
1863	2.3	1.7
1392	2.0	1.4

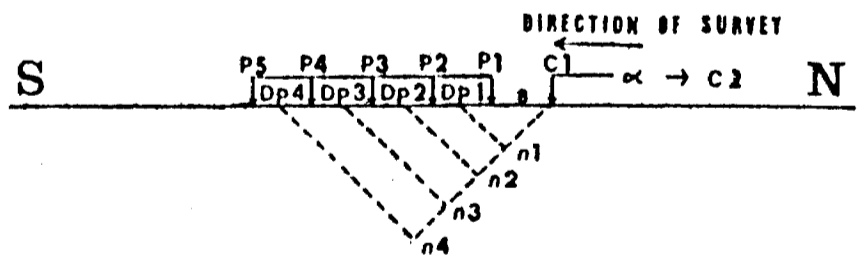


1.4	1.4
1.7	1.7
1.5	1.4
1.4	1.4
1.3	1.3
1.3	1.4
1.4	1.4
1.6	1.6
1.6	1.6
1.8	1.8
1.8	1.8
1.9	1.8
2.0	2.0



Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 25/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSO-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Handwritten signature

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 2 W

SCALE : 1 : 1250

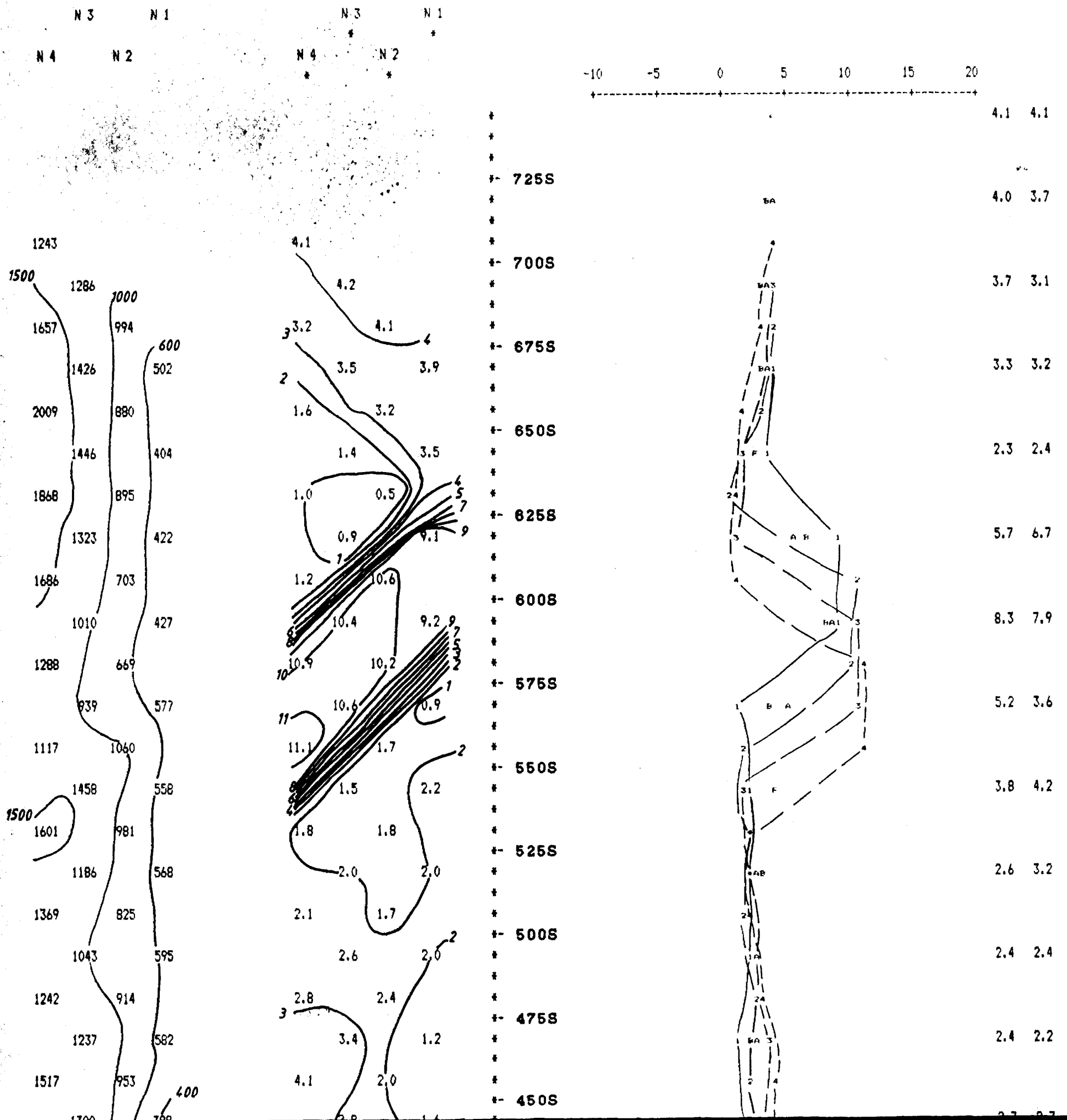
RESISTIVITY
(ohm - metres)

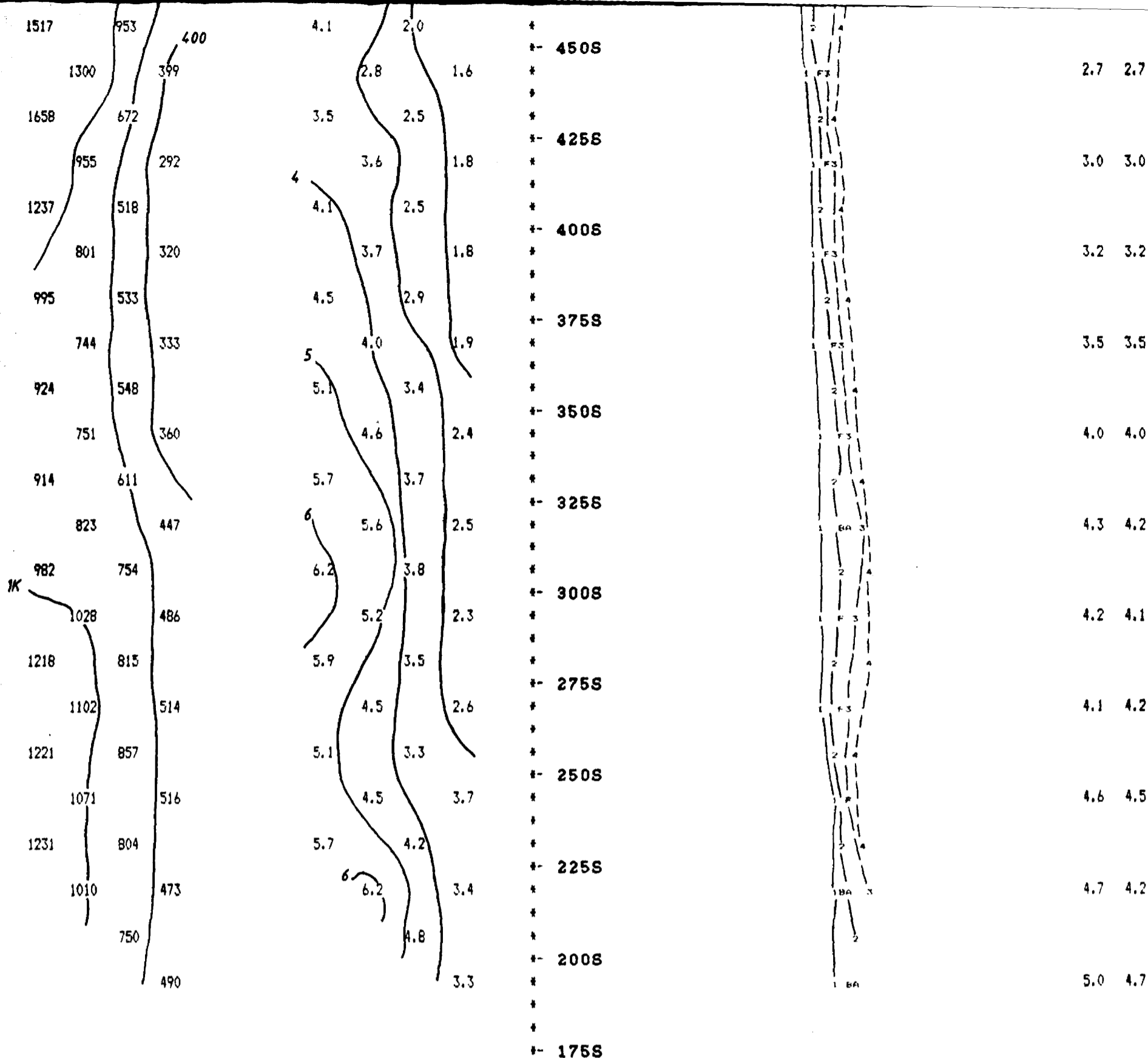
CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

F I
R A
S L
E T
R E

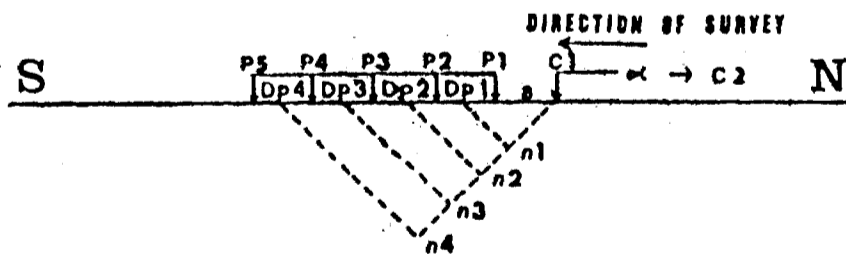
A B





Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 25/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSO-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Greg Wodges

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4
 'a' Spacing = 25 M

SCALE : 1 : 1250

RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

F I
R L
A B
S E
R R

N 3 N 1

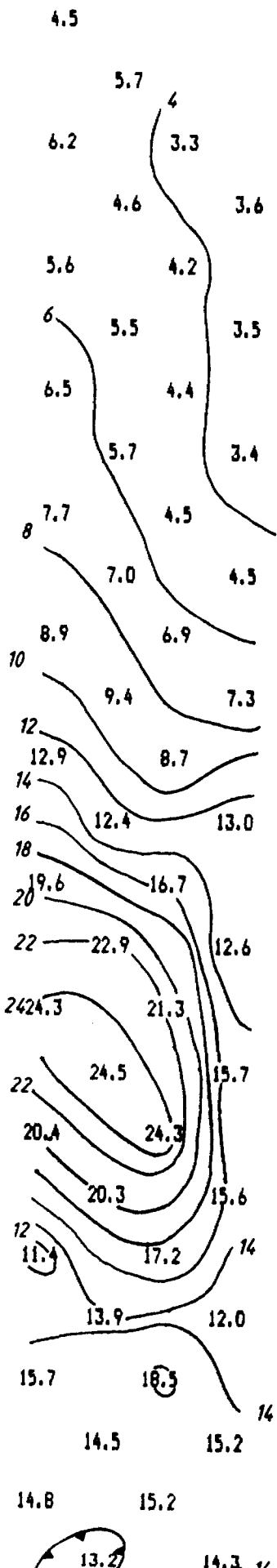
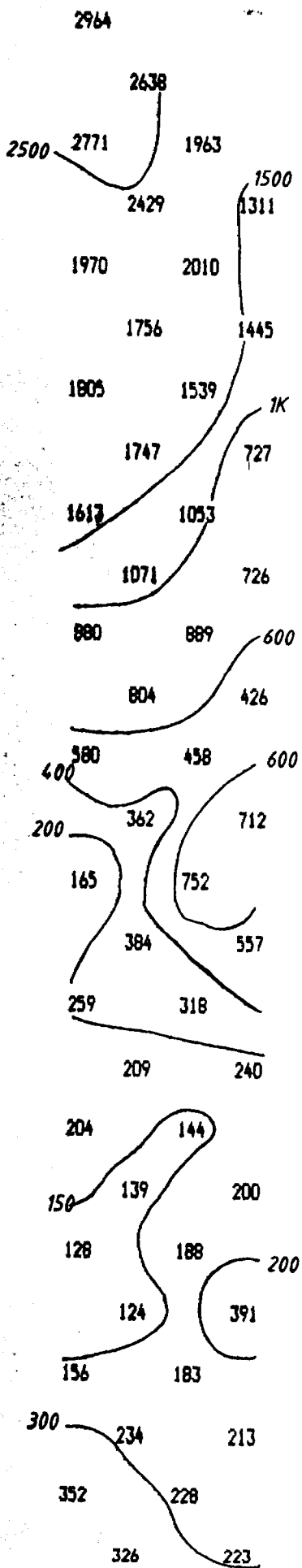
N 3 N 1

N 4 N 2

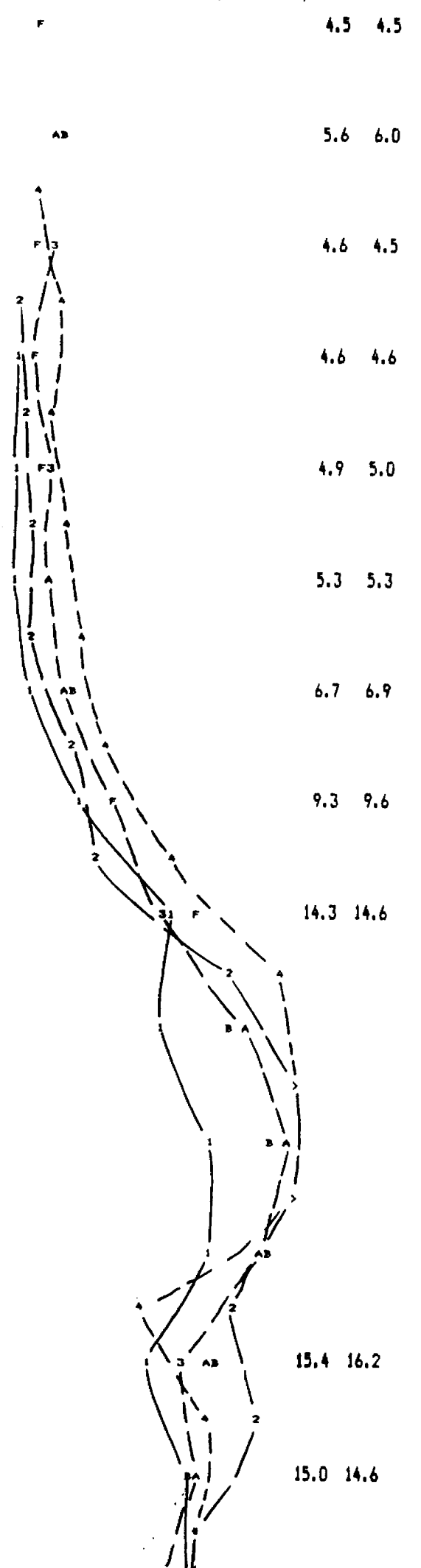
N 4 N 2

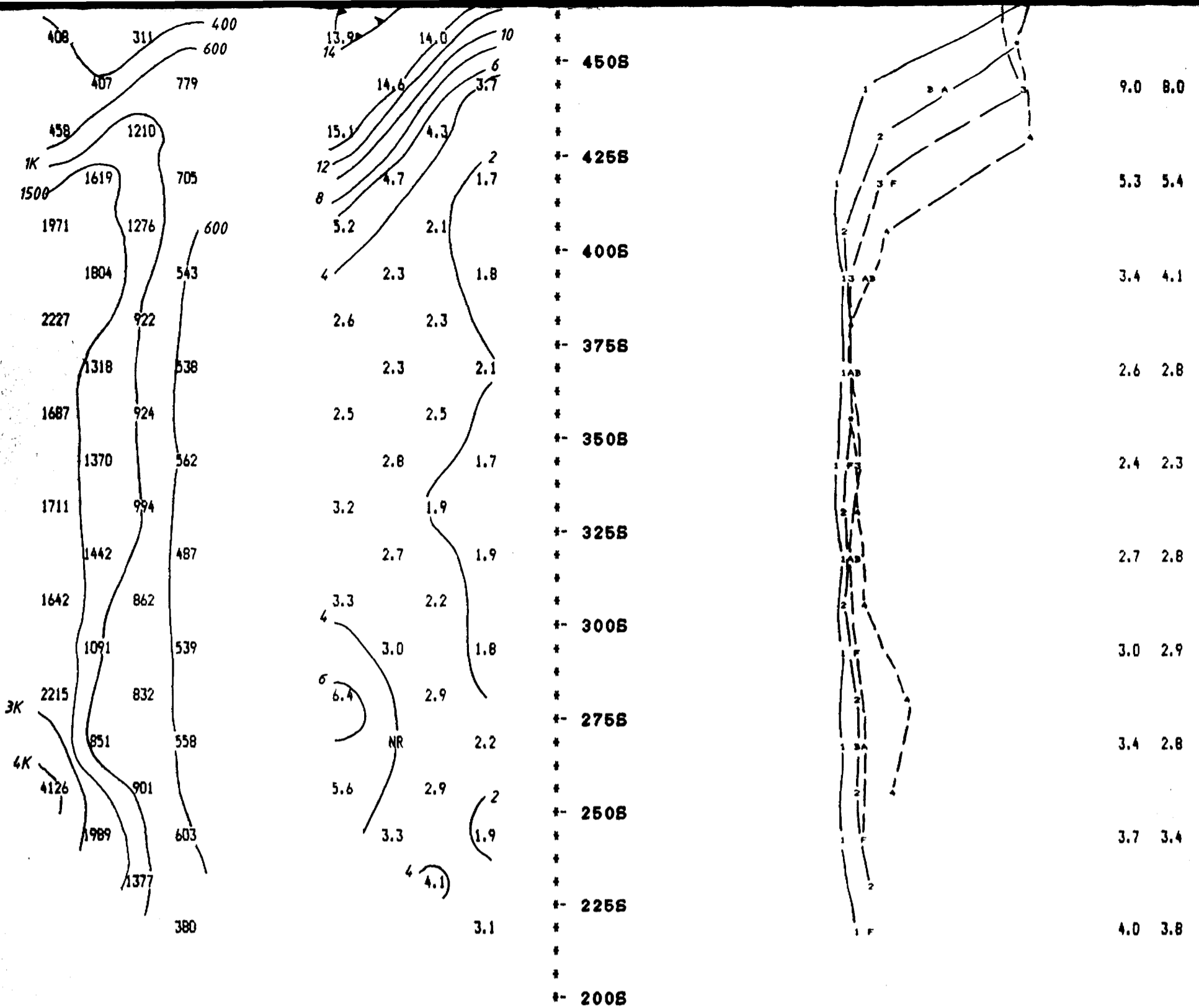
A B

-10 -5 0 5 10 15 20



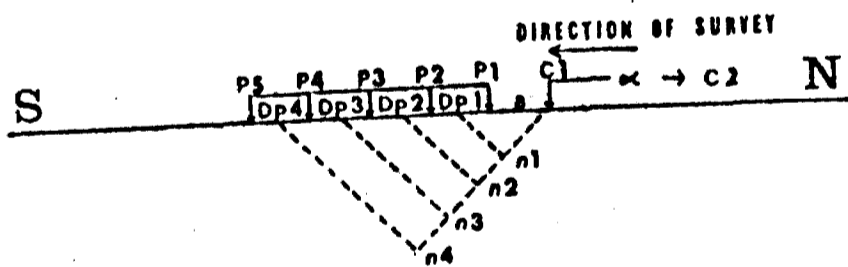
800S
775S
750S
725S
700S
675S
650S
625S
600S
575S
550S
525S
500S
475S





Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 29/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSQ-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Greg Hodges

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 26 W

SCALE : 1 : 1250

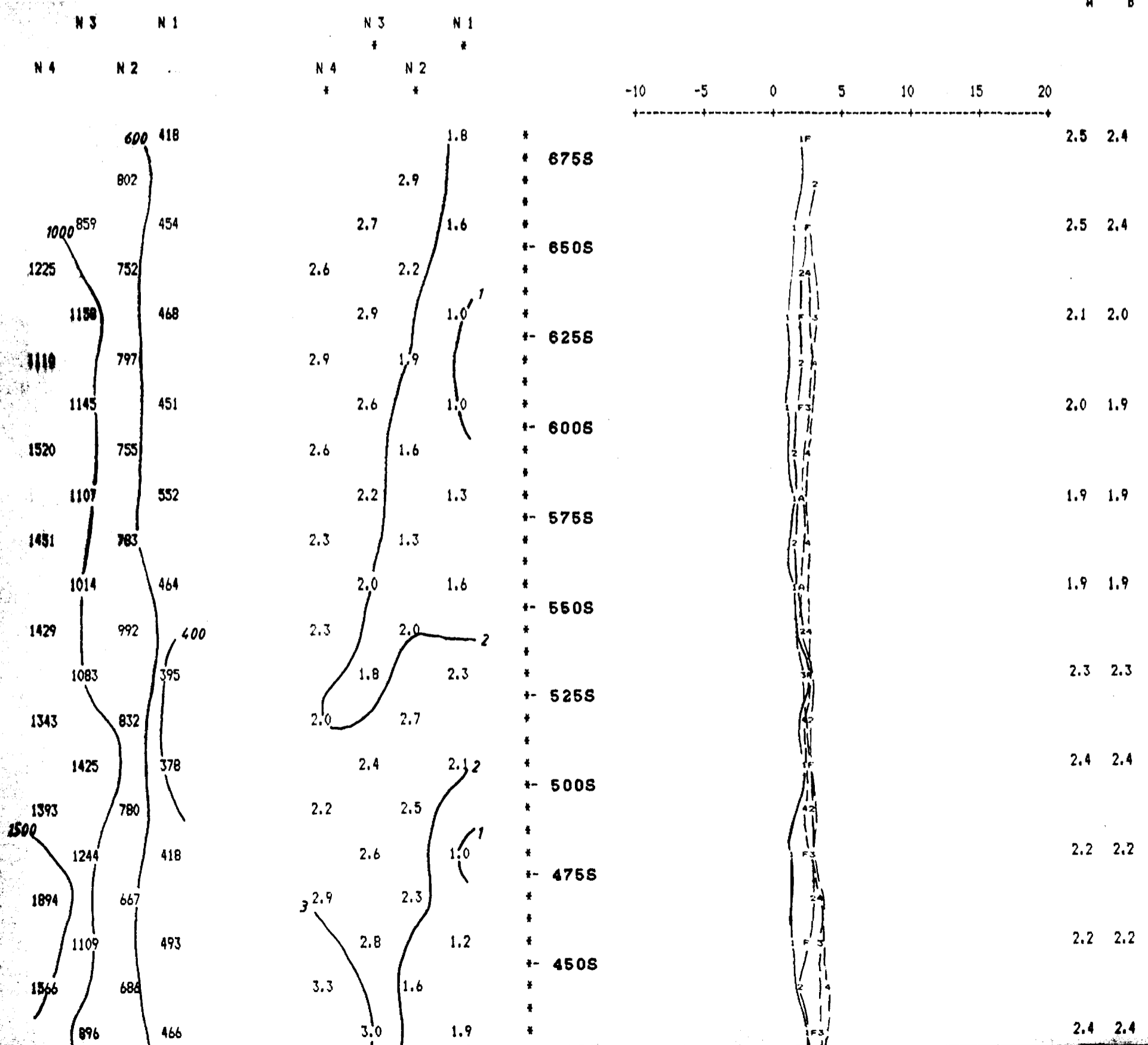
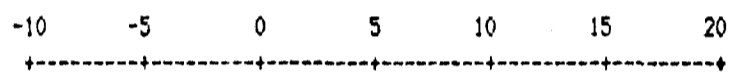
RESISTIVITY
(ohm metres)

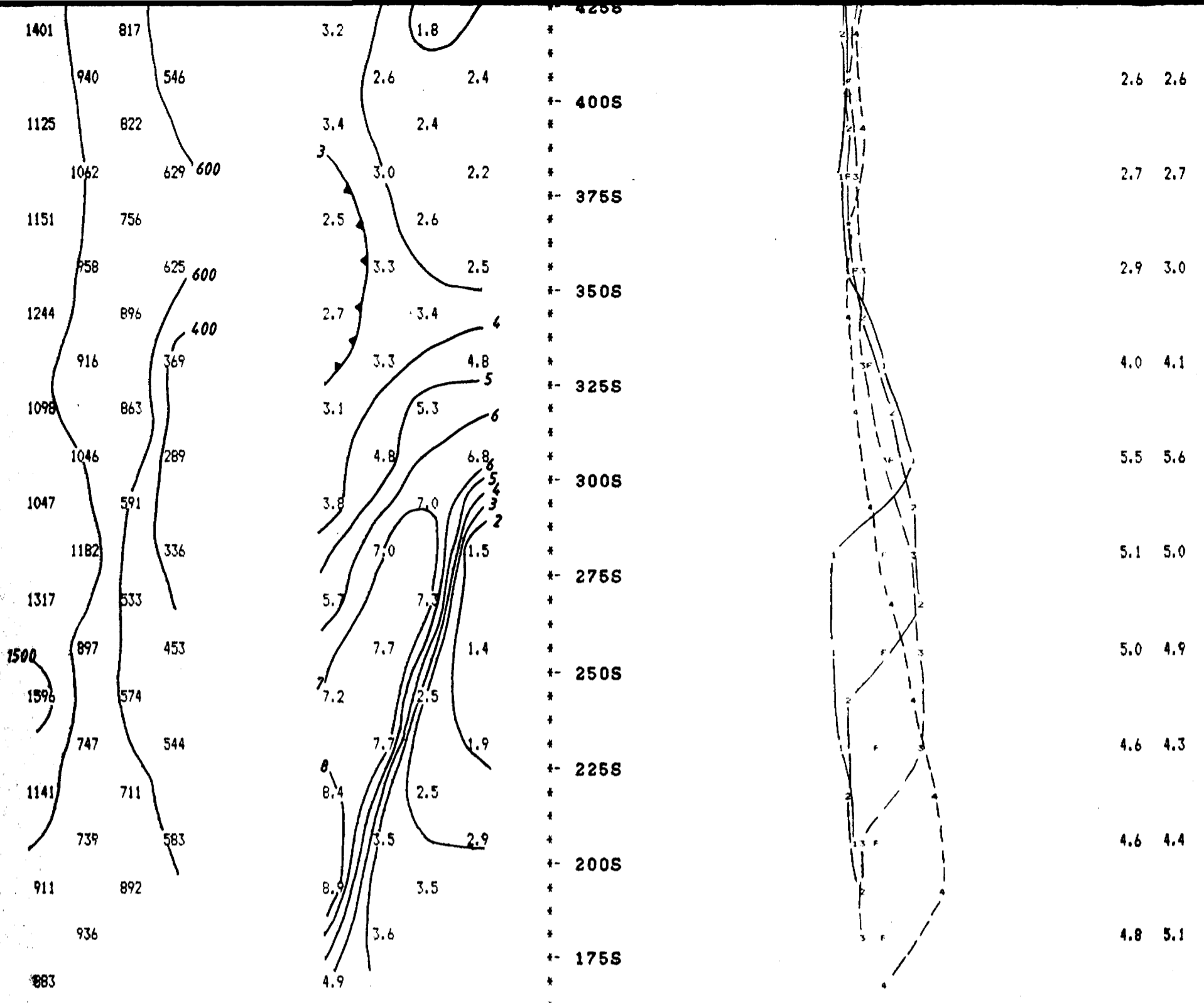
CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

F
R
A
B
E
R

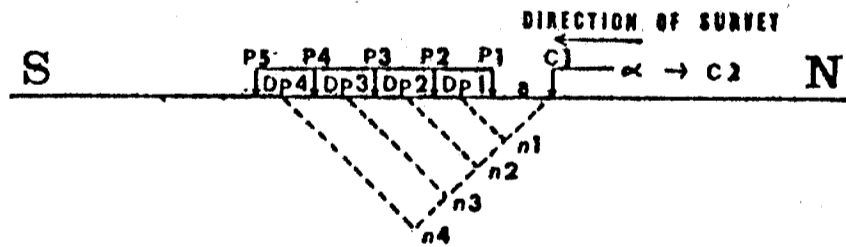
A B





Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 26/7/86
 Operator : CGK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSO-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Greg Bodger

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

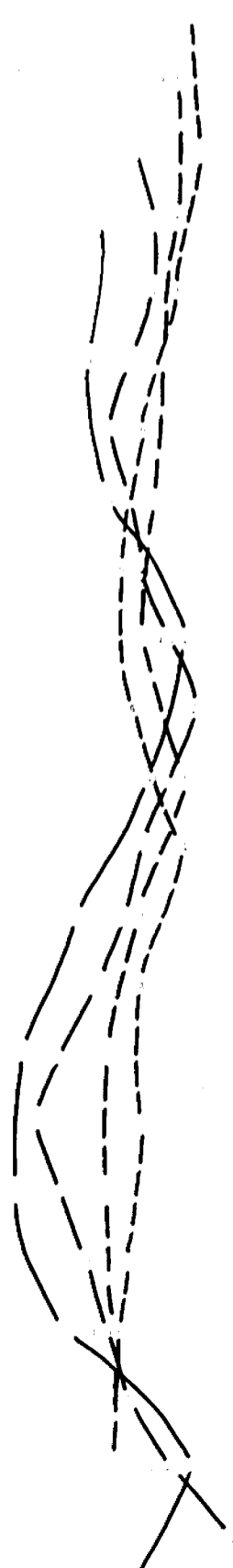
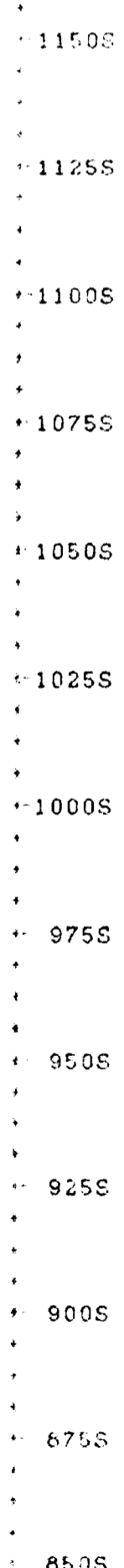
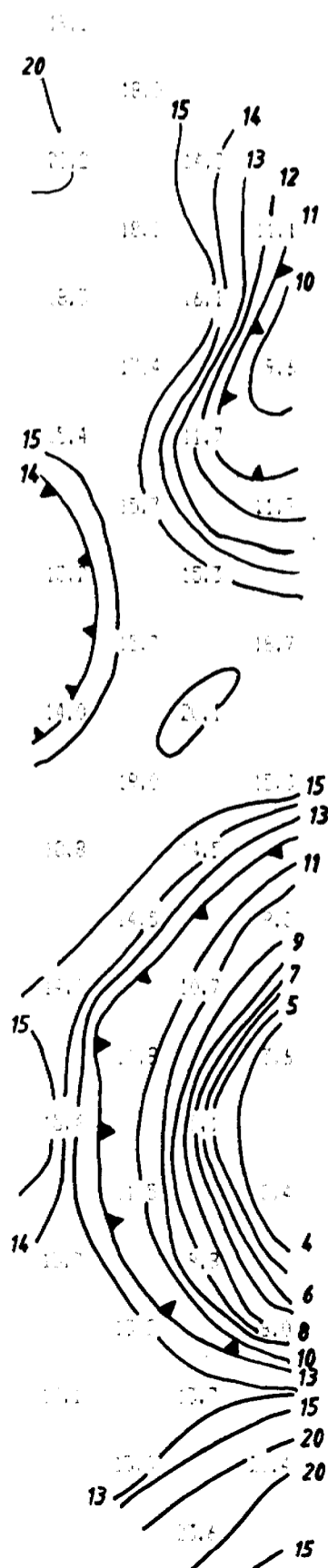
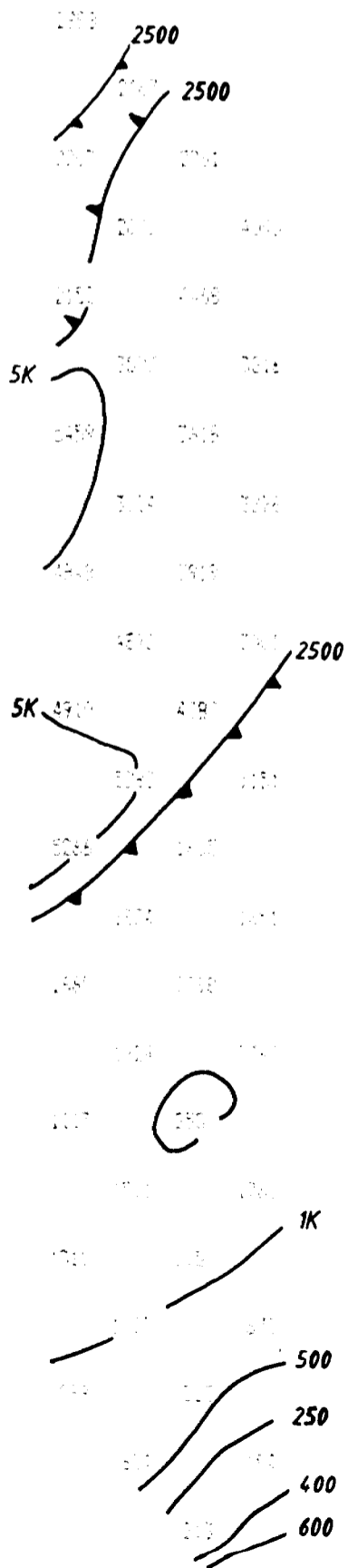
LINE 3 W

SCALE 1:10000

RES. 1971
1000 METERS

CONTINUITY
100 METERS

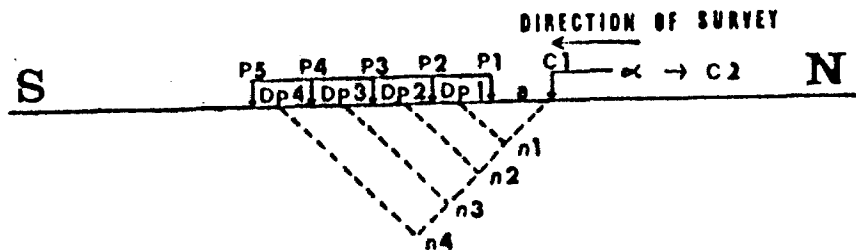
01-3-4-11-12-13-14-15



8255

Property : BLYDENOCK TWP.
Client : DEERFOOT RESOURCES LTD.

Date of Survey : 20/07/88
Operator : GIB
Electrode Array : POLE - DIPOLE
Mode : TIME DOMAIN
Receiver : MONTREX IPR 11
Transmitter : SCINTREX 180-3
Pulse Time : 2 Sec on 7 Sec off
Delay Time : 300 ms
Integration Time : 700 ms



Bryce Hodges

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

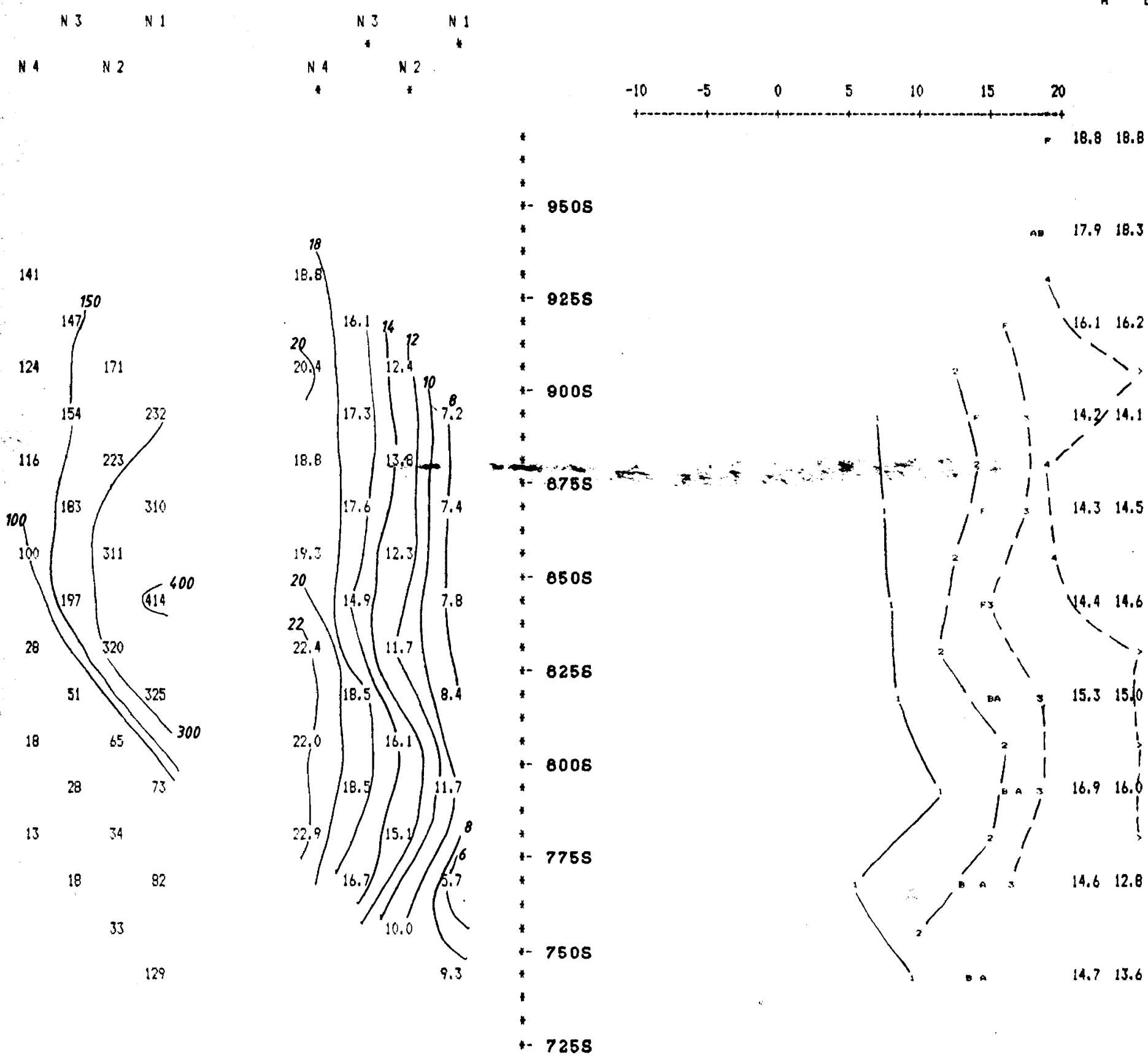
LINE 30 W

RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

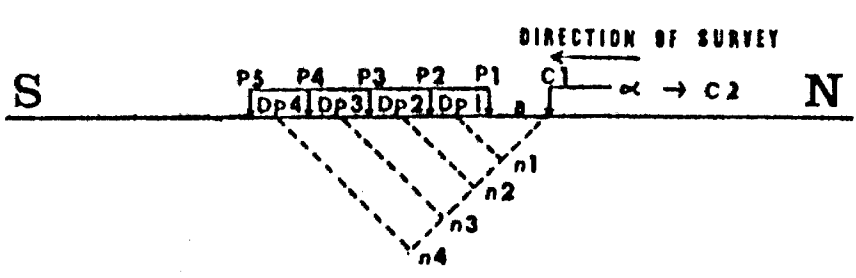
CHARGEABILITY PROFILE

A B



Property : BLAKELOCK TWP.
Client : DEERFOOT RESOURCES

Date of Survey : 27/7/86
Operator : DGH
Electrode Array : POLE - DIPOLE
Mode : TIME DOMAIN
Receiver : SCINTREX IPR-11
Transmitter : SCINTREX TSD-3
Pulse Time : 2 Sec on 2 Sec off
Delay Time : 360 ms
Integration Time : 780 ms



D. G. H.

R. S. MIDDLETON EXPLORATION
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

SCALE : 1 : 1250

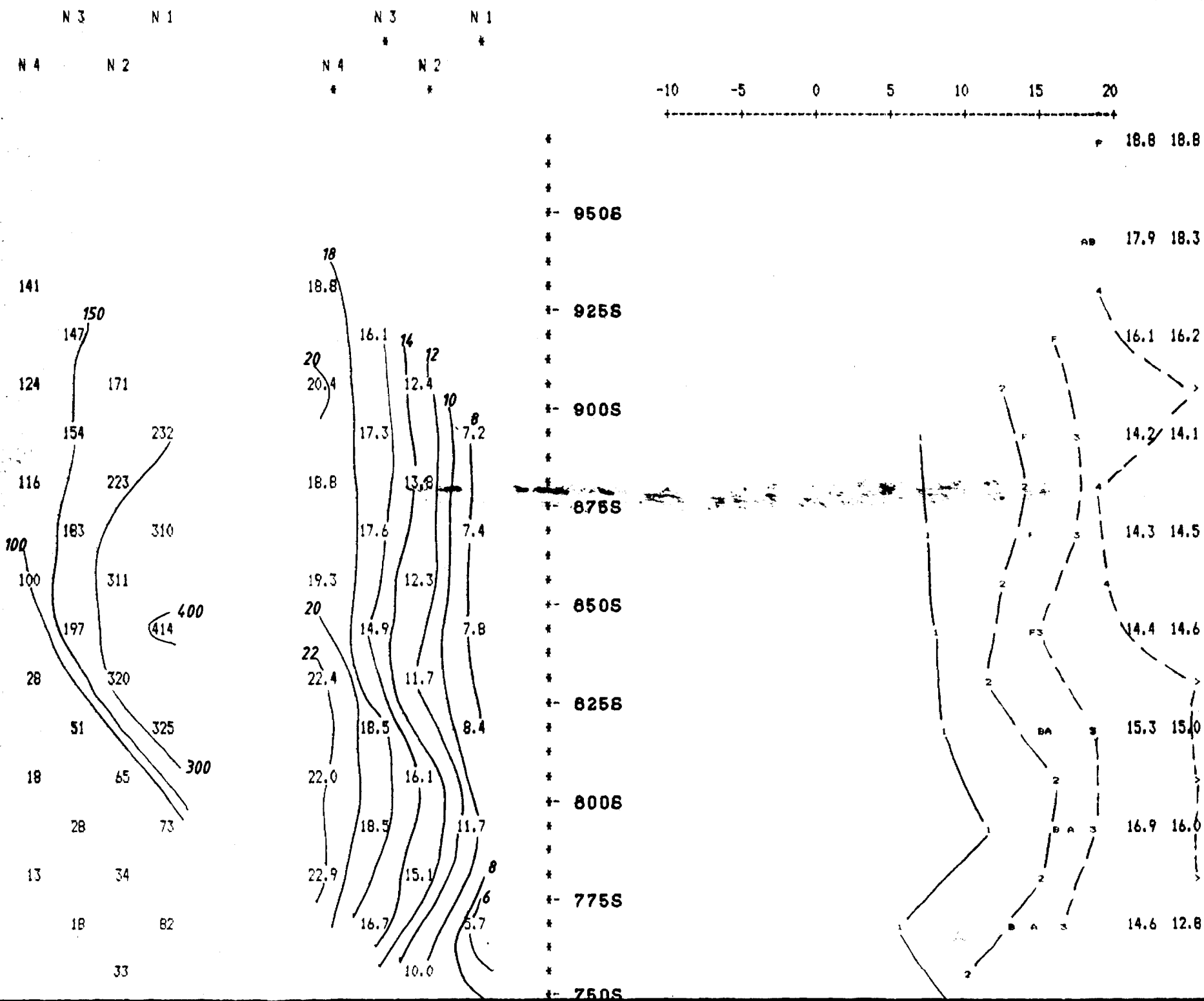
RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

F I
R I
A L
S T
E R
R

A B



Property : BLAKELOCK TWP.
Client : DEERFOOT RESOURCES

Date of Survey : 27/7/86

Operator : DGH

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

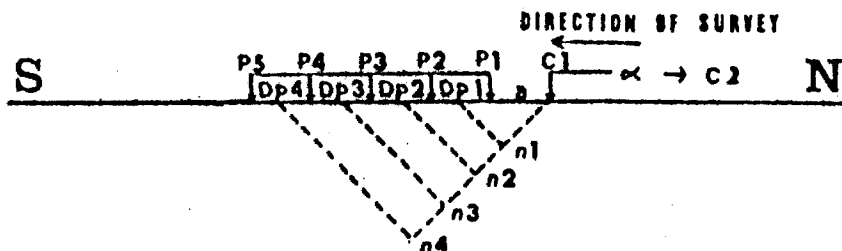
Receiver : SCINTREX IFR-11

Transmitter : SCINTREX TSD-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



Dery Rodger

R. S. MIDDLETON EXPLORATION
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

RESISTIVITY
(ohm-meters)

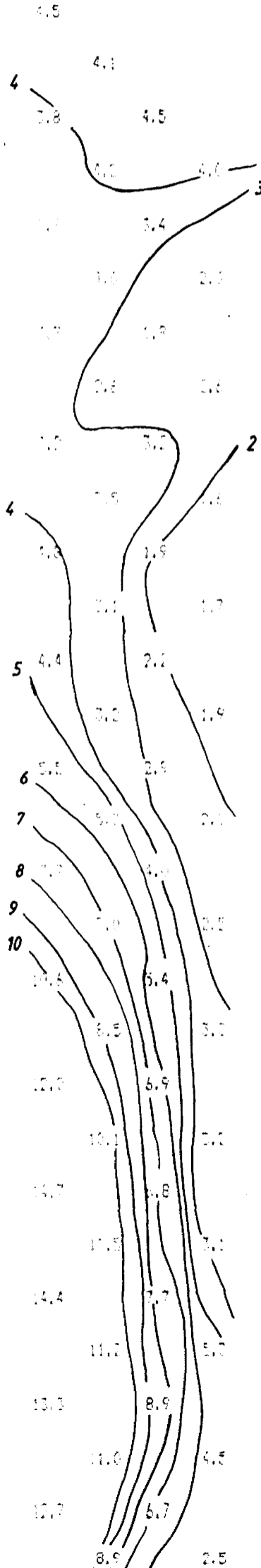
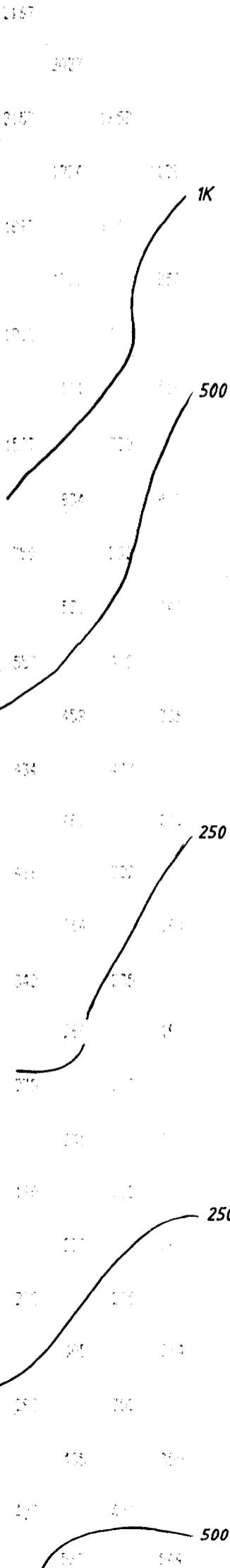
CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

N 3 N 1
N 4 N 2

N 3 N 1
N 4 N 2

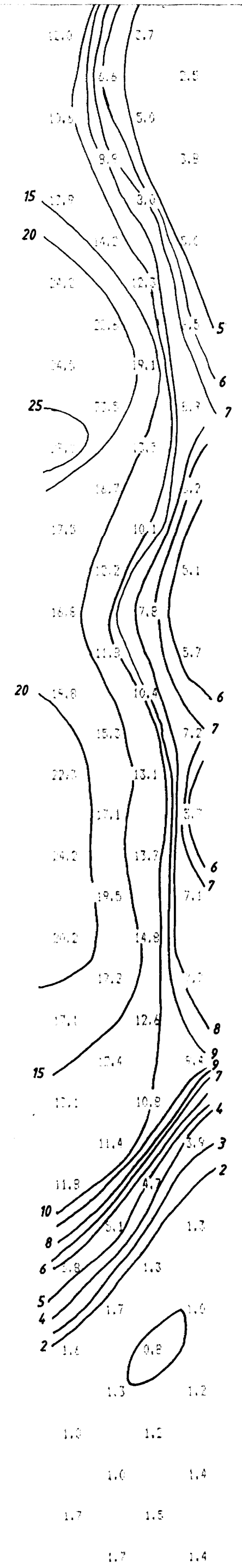
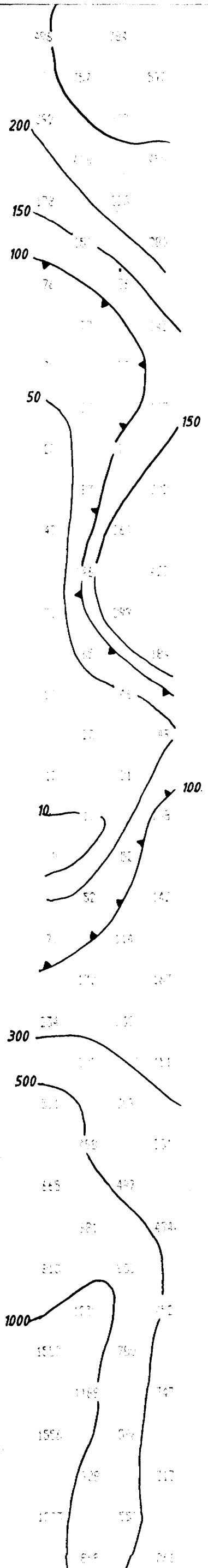
-10 0 10 20 30 40 50



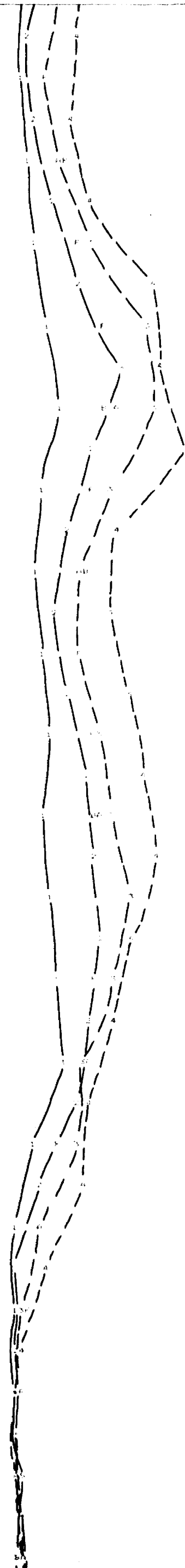
1125S
1100S
1075S
1050S
1025S
1000S
975S
950S
925S
900S
875S
850S
825S
800S
775S
750S



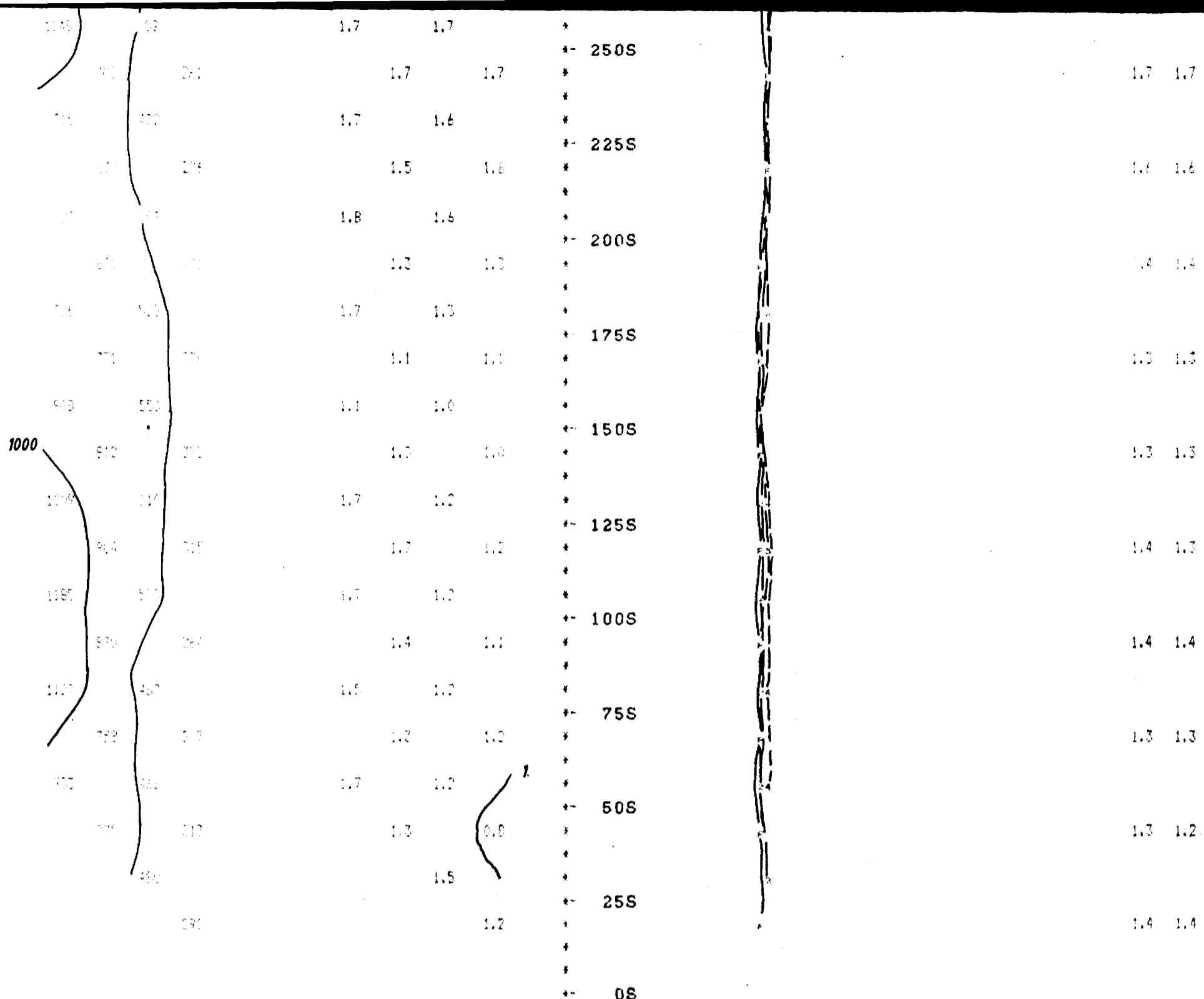
4.5 4.5
4.2 4.0
4.3 4.3
4.0 4.0
3.1 3.7
3.1 3.7
3.8 3.8
2.9 2.9
3.5 3.7
4.5 4.1
5.0 3.7
7.0 7.0
8.3 8.1
8.8 8.4
9.7 8.6
9.0 8.9
7.2 7.1



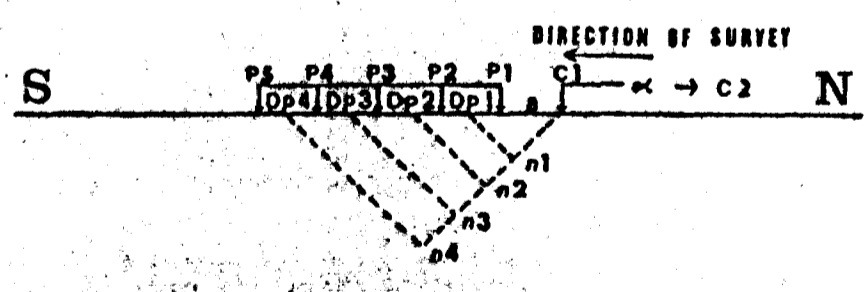
725S
 700S
 675S
 650S
 625S
 600S
 575S
 550S
 525S
 500S
 475S
 450S
 425S
 400S
 375S
 350S
 325S
 300S
 275S



5.8 7.3
 5.9 8.7
 11.2 13.1
 16.2 15.6
 17.5 18.4
 14.4 14.1
 10.1 13.2
 11.8 12.1
 10.5 13.5
 14.5 14.1
 15.1 14.6
 10.1 13.0
 12.6 13.9
 8.2 8.0
 4.6 4.6
 2.6 2.9
 1.5 1.8
 1.4 1.5
 1.5 1.4



Property : BEAUFORT TWP.
 Client : BEAUFORT RESOURCES LTD.
 Date of Survey : 07/16/86
 Operator : CDJ
 Electronic Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSC-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 760 ms
 Integration Time : 700 ms



Greg [Signature]

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

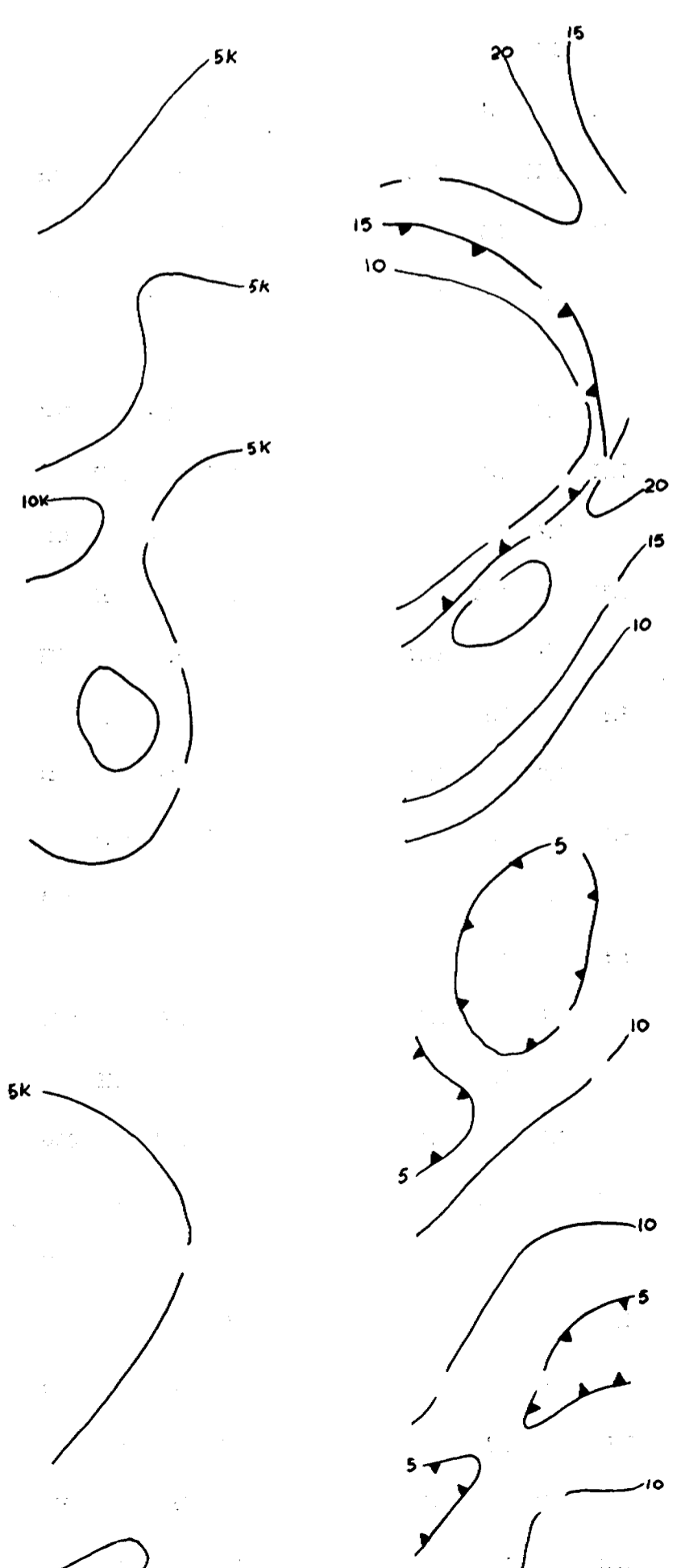
IF Pseudosections for N = 1 to 4

'a' Spacing = 25 M

100000 100000

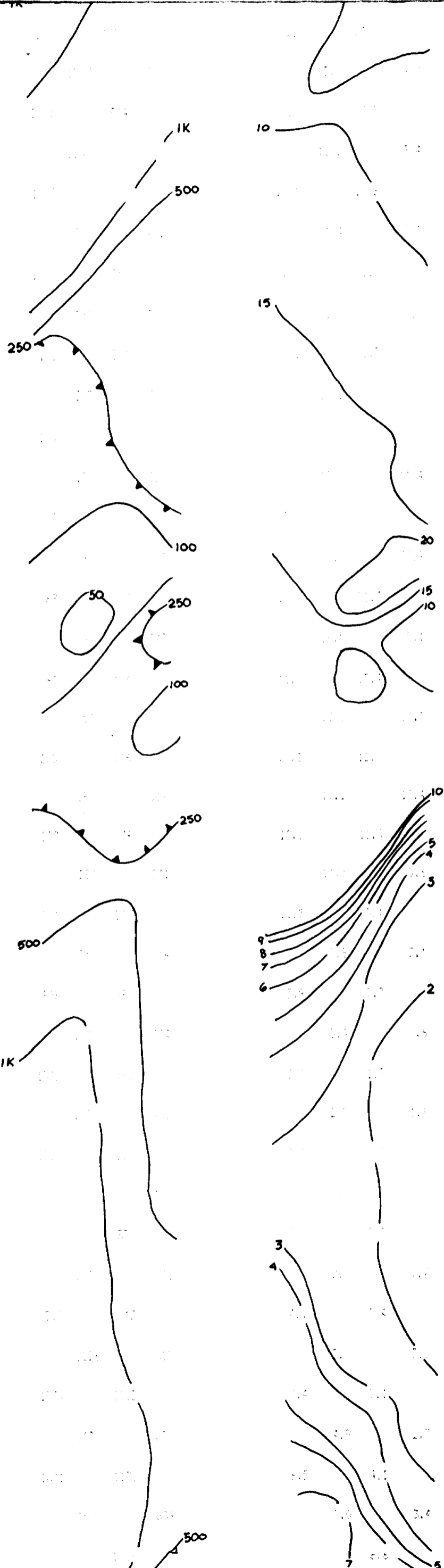
100000 100000

100000 100000



1125S
1100S
1075S
1050S
1025S
1000S
975S
950S
925S
900S
875S
850S
825S





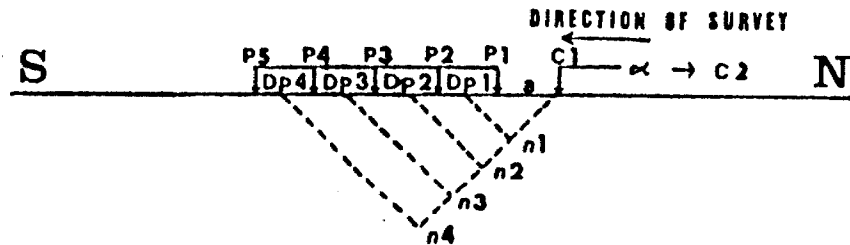
800S
 775S
 750S
 725S
 700S
 675S
 650S
 625S
 600S
 575S
 550S
 525S
 500S
 475S
 450S
 425S
 400S
 375S
 350S
 325S



3005

Property : PLATINUM LTD.
Client : INDEPENDENT RESOURCES LTD.

Date of Survey : 26/7/80
Operator : GDO
Electrode Array : FULL DIPOLE
Mode : TIME DOMAIN
Receiver : SCINTREX TRS 11
Transmitter : SCINTREX 300 3
Pulse Time : 2 Sec on 2 Sec off
Delay Time : 300 ms
Integration Time : 200 ms



Bryce Hodgson

R. S. MIDDLETON EXPLORATION
SERVICES INC.

IP Pseudosections for N = 1 to 4

Electrode Spacing = 25 M

SCALE : 1 : 1250

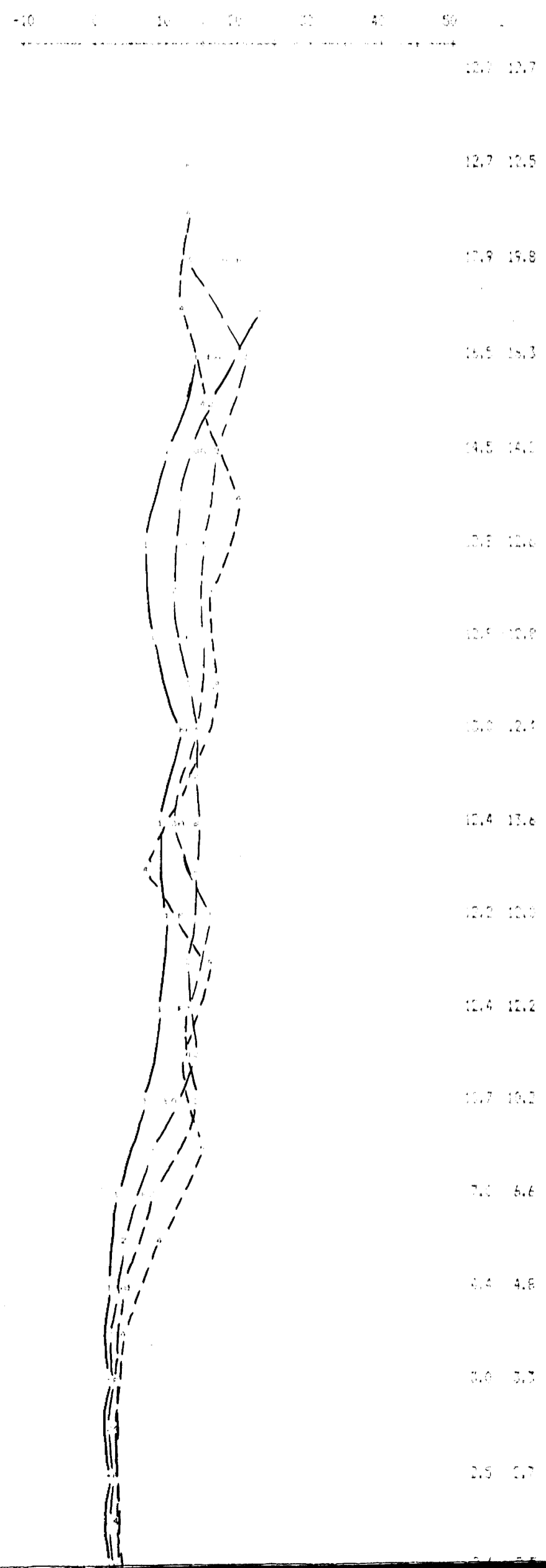
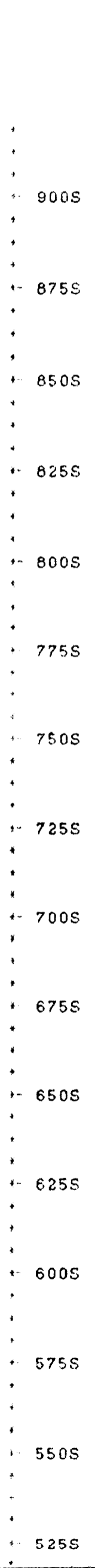
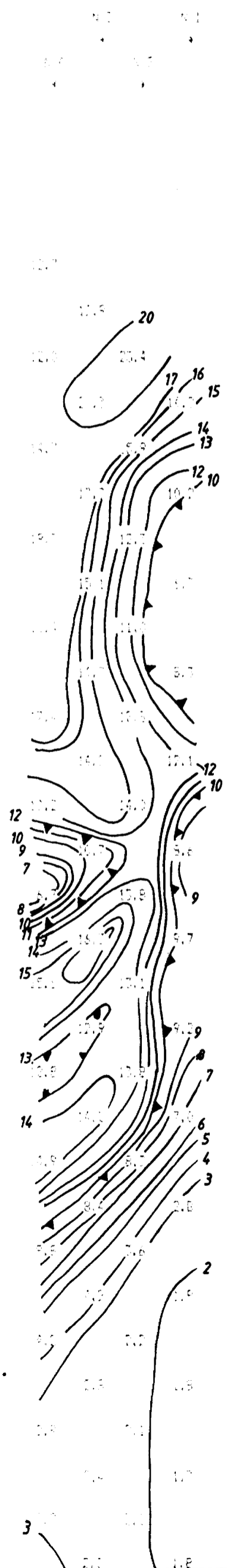
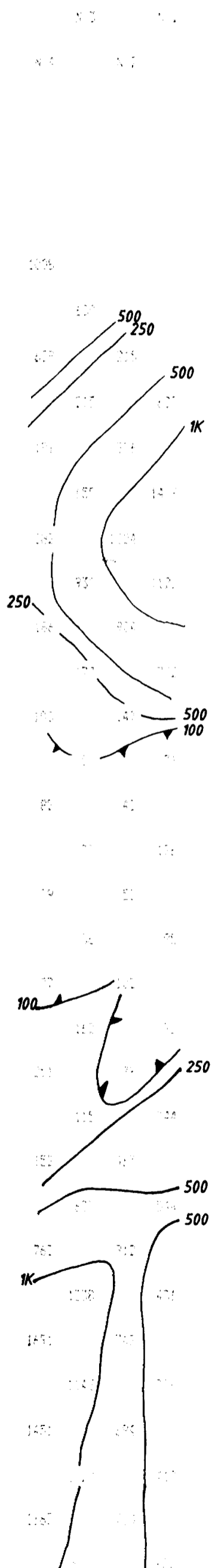
REF. ELEVATION
(000 - METERS)

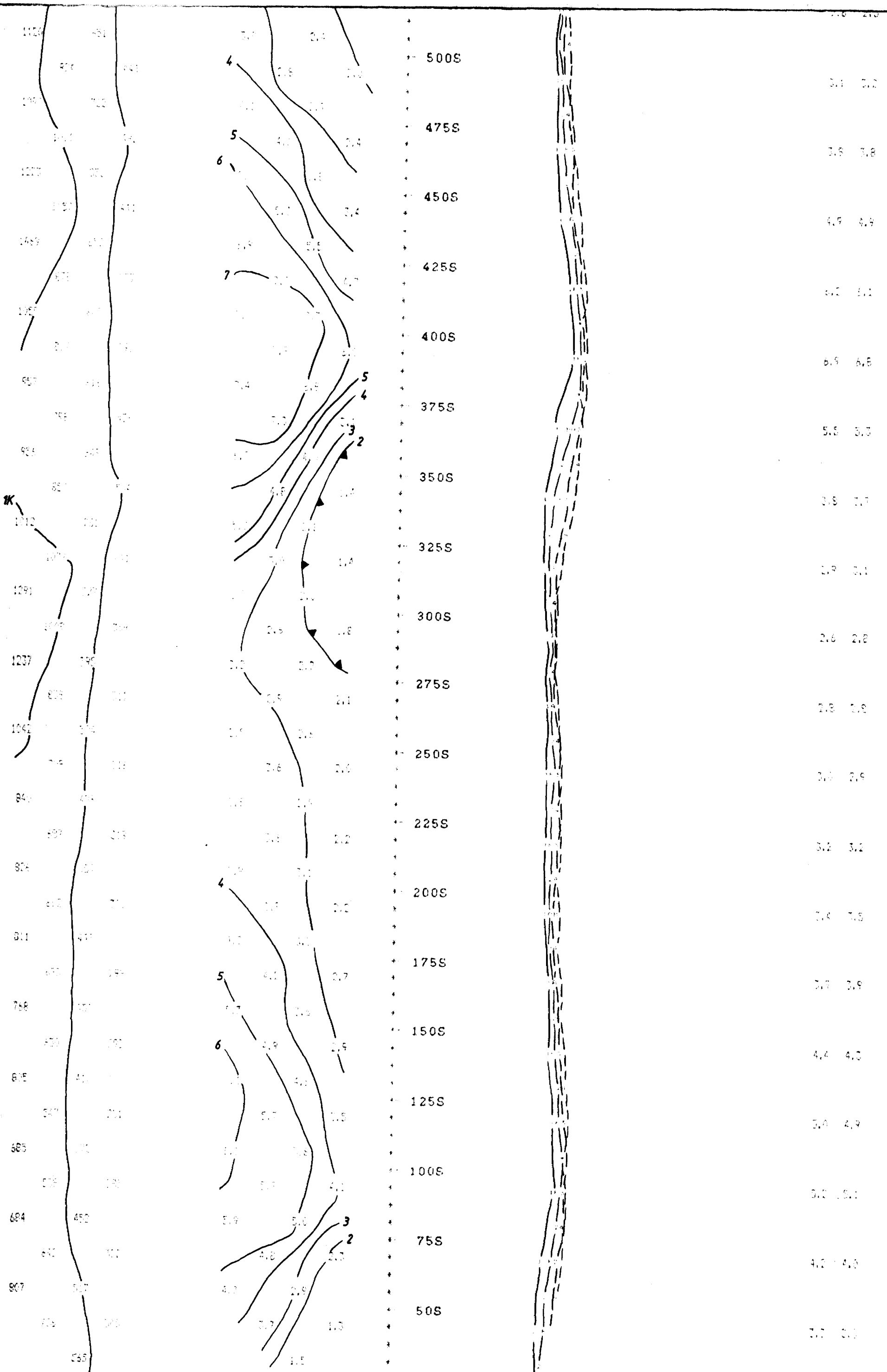
TEMPERATURE
(100 - DEGREES)

DENSITY PROFILE

TEMPERATURE
(100 - DEGREES)

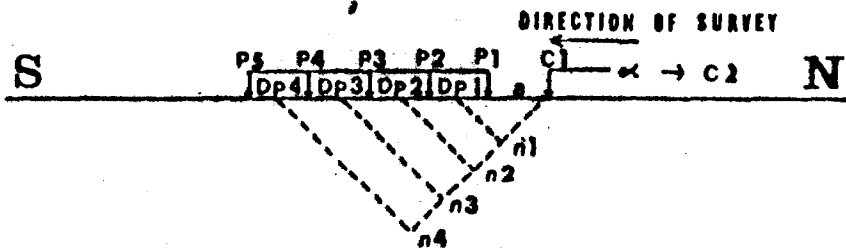
A B





Property : BLAKELOCK TWP.
Client : DEERFOOT RESOURCES LTD.

Date of Survey : 25/6/86
Operator : CBK
Electrode Array : POLE BIPOLE
Mode : TIME DOMAIN
Receiver : SCINTREX IPR-11
Transmitter : SCINTREX TSO-3
Pulse Time : 2 Sec on 2 Sec off
Delay Time : 360 ms
Integration Time : 780 ms



Ray Rodger

R. S. MIDDLETON EXPLORATION
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 30 W

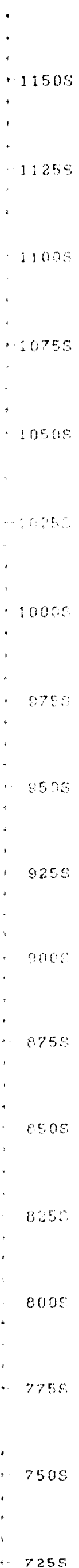
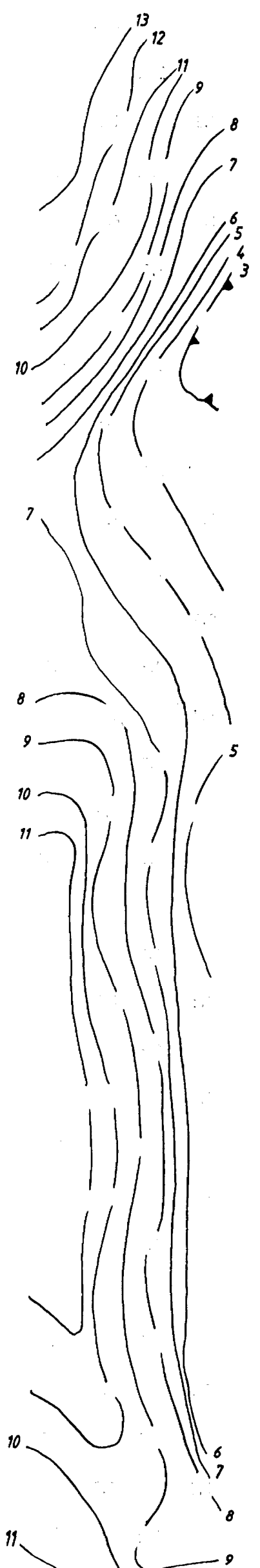
RESISTIVITY
IN OHMS PER FOOT

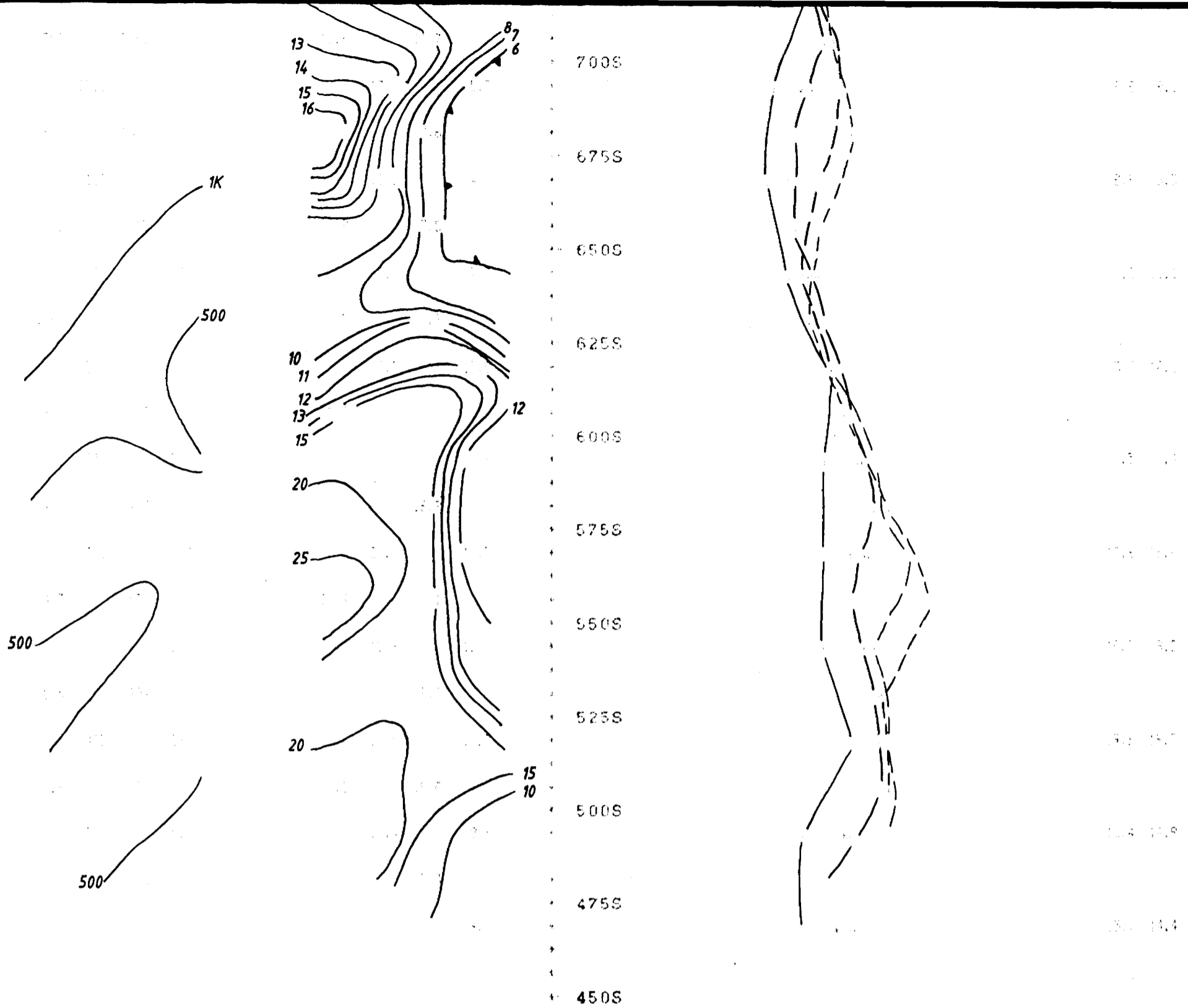
DEPTH IN FEET

IMPERMEABLE FACIES

RESISTIVITY IN OHMS PER FOOT
DEPTH IN FEET

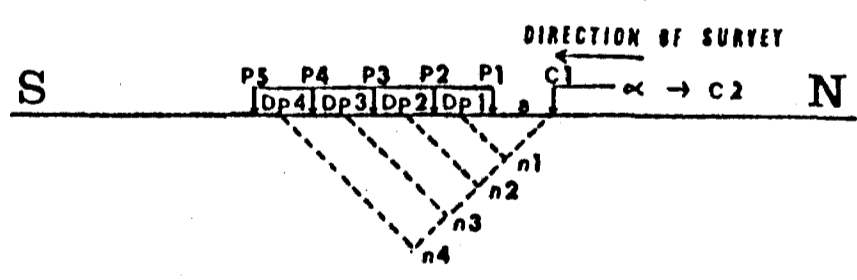
10 20 30 40 50 60 70 80 90 100





Franchise: R.S. MIDDLETON EXPLORATION SERVICES LTD.

Date: 14/01/78
 Operator: J.D.
 Equipment: GEOPHYSICS - DIPLE
 Model: TIME DOMAIN
 Recorder: SPINTER 101-11
 Tape: SQUIPPY 160-7
 Pole: 2 Section 2 Set of
 Delay Time: 240 ms
 Integration Time: 78 ms



Greg Bodger

 R.S. MIDDLETON EXPLORATION
 SERVICES INC.

11 pseudosections for N = 1 to 4

1a' Spacing = 25 M

LINE 24 W

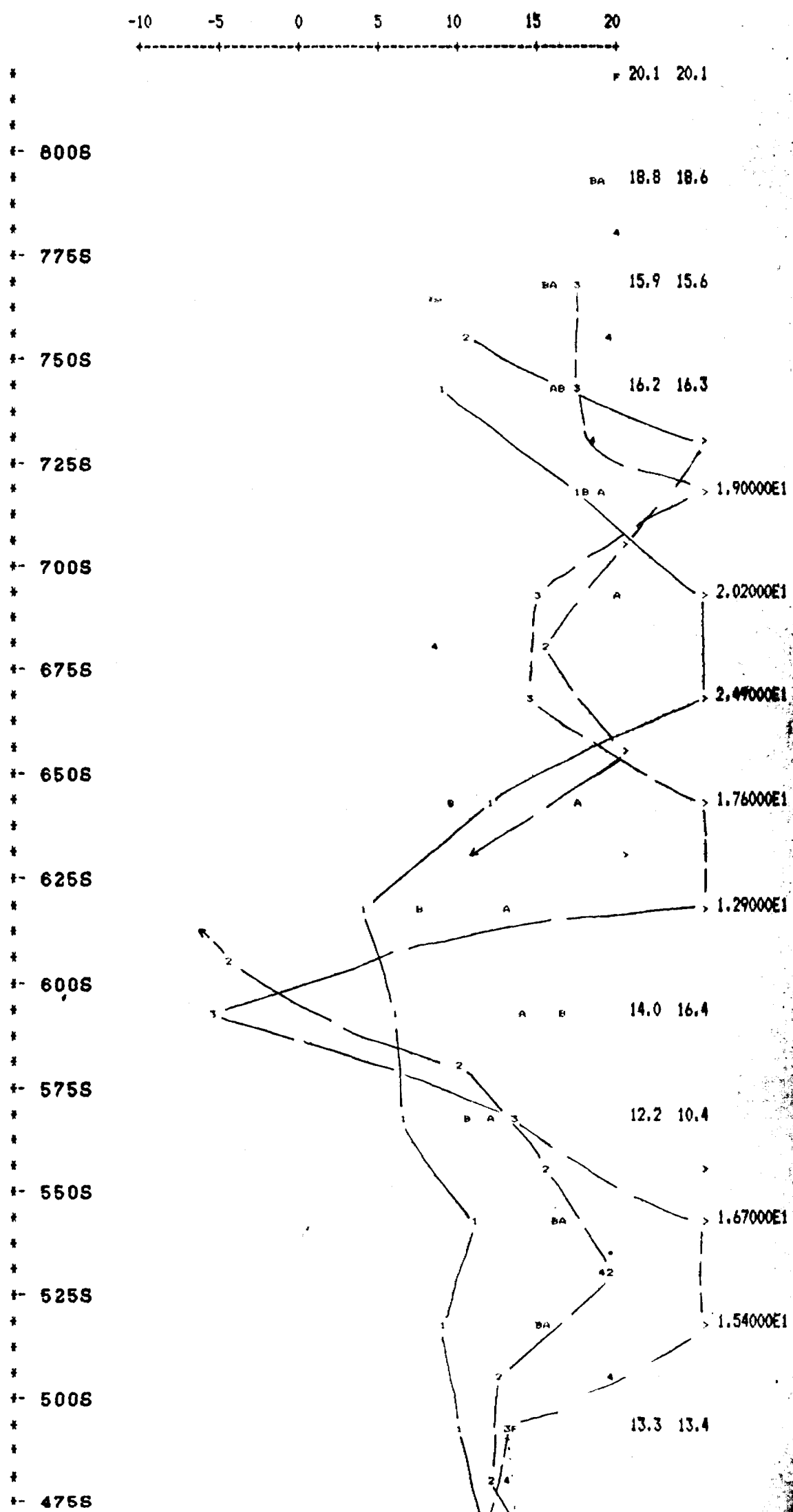
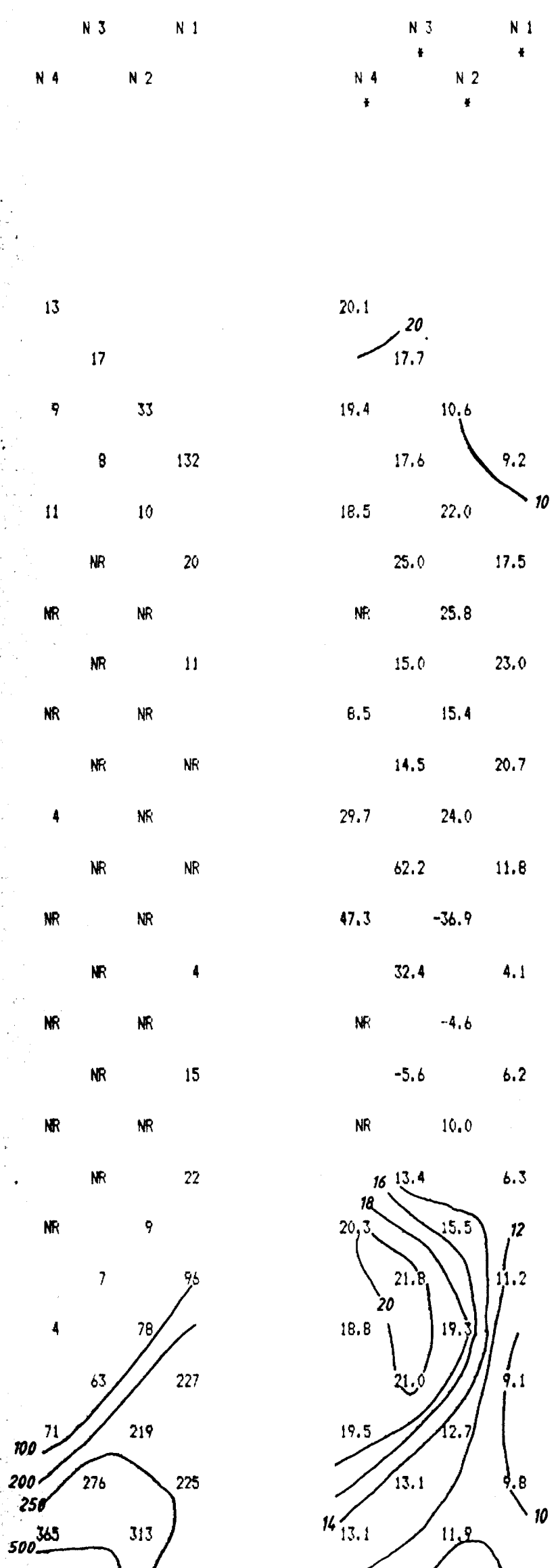
SCALE : 1 : 1250

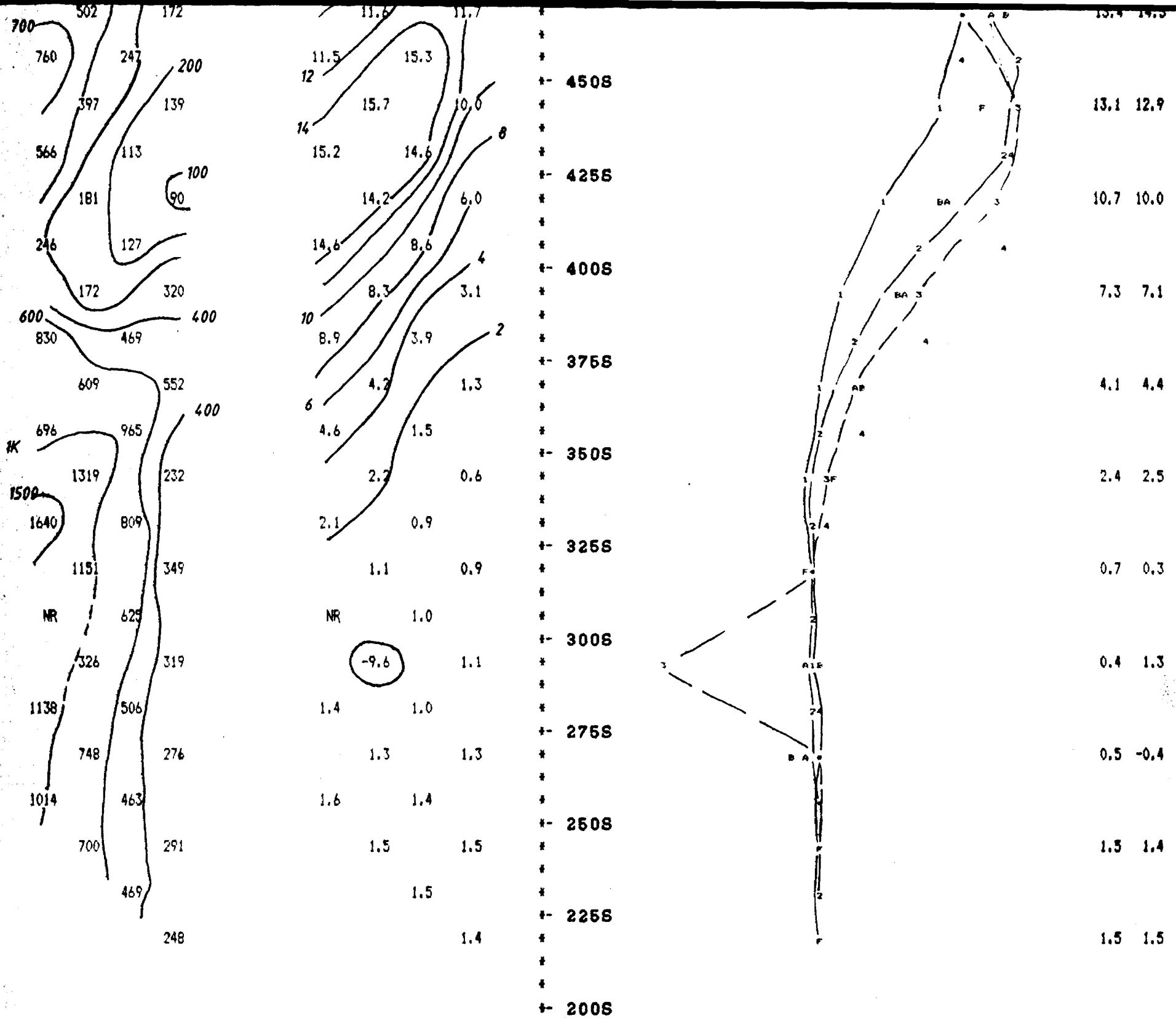
RESISTIVITY
(ohm - metres)

CHARGEABILITY
(milliseconds)

CHARGEABILITY PROFILE

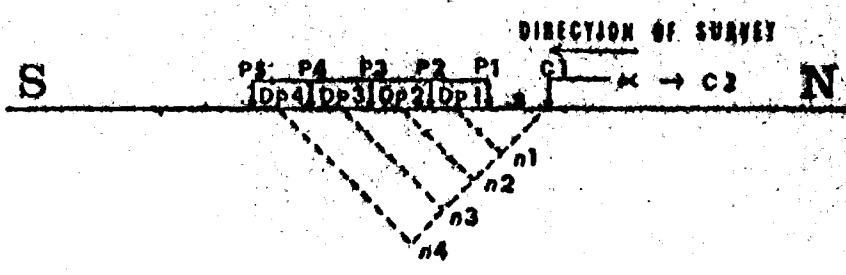
F I L T E R
A B





Property : BLAKELOCK TWP.
 Client : DEERFOOT RESOURCES

Date of Survey : 28/7/86
 Operator : CBK
 Electrode Array : POLE - DIPOLE
 Mode : TIME DOMAIN
 Receiver : SCINTREX IPR-11
 Transmitter : SCINTREX TSQ-3
 Pulse Time : 2 Sec on 2 Sec off
 Delay Time : 360 ms
 Integration Time : 780 ms



Greg Woodger

 R. S. MIDDLETON EXPLORATION
 SERVICES INC.

IP Pseudosections for N = 1 to 4
 'a' Spacing = 25 M
 LINE 21 W



419/86
Mining Act 29441

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

Type of Survey: **Induced Polarisation**
Holder(s):
Perfoot Resources Incorporated



42H08NE0021 2.9441 BLAKELOCK

900

Address: **18 Cedarbank Crescent, Don Mills, Ontario**
Survey Company: **Robert S. Middleton Exploration Services Inc.**
Date of Survey (from & to): **24 06 86 29 07 86**
Total Miles of line Cut: _____

Name and Address of Author (of Geo-Technical report):
Greg Hodges, P.O. Box 1637, Timmins, Ontario P4N 7J8

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other I.P.	20 38.9
	Geological	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Geophysical	Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
	755544	38.9			
	755546	38.9			
	755547	38.9			
	755549	38.9			
	755550	38.9			
	755551	38.9			
	848384	38.9			
	848392	38.9			
	848393	38.9			
	848394	38.9			
	848395	38.9			
	848389	38.9			
	755552	38.9			
	755545	38.9			
	755543	38.9			
	848398	38.9			

RECEIVED

900

*Credits reduced max credits allowed all 30 days per claim

Expenditures (excludes power stripping)

Type of Work Performed:
Performed on Claim(s):

Calculation of Expenditure Days Credits
Total Expenditures \$ _____ ÷ 15 = 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.

LARDER LAKE MINING DIV.
RECEIVED
OCT 15 1986

Total number of mining claims covered by this report of work: **16**

Date: **Sept. 30/86**
Recorded Holder or Agent (Signature): *Greg Hodges*

For Office Use Only
Total Days Cr. Recorded: **320**
Date Recorded: **OCT 6 - 1986**
Mining Recorder: *[Signature]*
Date Approved as Recorded: **10/1/86**
Branch Director: *[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:
Greg Hodges
Date Certified: **3/10/86**
Certification by (Signature): *Greg Hodges*
P.O. Box 1637, Timmins, Ontario P4N 7J8



Ministry of Natural Resources

File _____

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 Induced Polarization

Township or Area Blakelock

Claim Holder(s) Deerfoot Resources Incorporated

Survey Company Robert S. Middleton Exploration

Author of Report Greg Hodges

Address of Author 136 Cedar St. S., Timmins, Ontario

Covering Dates of Survey June 24 to July 29
(linecutting to office)

Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

.....755543.....	(prefix)	(number)
.....755544.....		
.....755545.....		
.....755546.....		
.....755547.....		
.....755548.....		
.....755550.....		
.....755551.....		
.....848384.....		
.....848392.....		
.....848393.....		
.....848394.....		
.....848395.....		
.....848389.....		
.....848398.....		
.....955552.....		

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

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

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

DATE: 24/9/96 SIGNATURE: Greg Hodges
Author of Report or Agent

Res. Geol. _____ Qualifications 2.5919

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

TOTAL CLAIMS 16

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval 25 m Line spacing variable
Profile scale 1:2500
Contour interval _____

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 Scintrex IPR 11, TSQ--3
Method [x] Time Domain [] Frequency Domain
Parameters - On time 2 sec Frequency _____
- Off time 2 sec Range _____
- Delay time _____
- Integration time _____
Power 3.0 KW
Electrode array Pole Dipole
Electrode spacing 25 m
Type of electrode Rods and Porous Pots

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____
(specify for each type of survey)

Accuracy _____
(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

ROBERT S. MIDDLETON EXPLORATION SERVICES INC.

TELEPHONE (705) 264-4246
(705) 264-4247

P.O. BOX 1637
TIMMINS, ONTARIO
P4N 7W8

September 25, 1986

Ministry of Natural Resources
4 Government Road East
Kirkland Lake,
Ontario
P2N 1A2

Dear Madam:

Enclosed is a report of work which we would like to file on behalf of our client Deerfoot Resources Incorporated.

For assessment purposes, we are filing 38.9 Induced Polarization man days. Our "Geophysical Technical Data Statement" and two copies of our geological report have been sent to the Mining Recorder's office in Toronto.

Would you kindly return to us, one stamped "Received" copy of the "Report of Work" for our files.

Sincerely

Sylvia David

Sylvia David

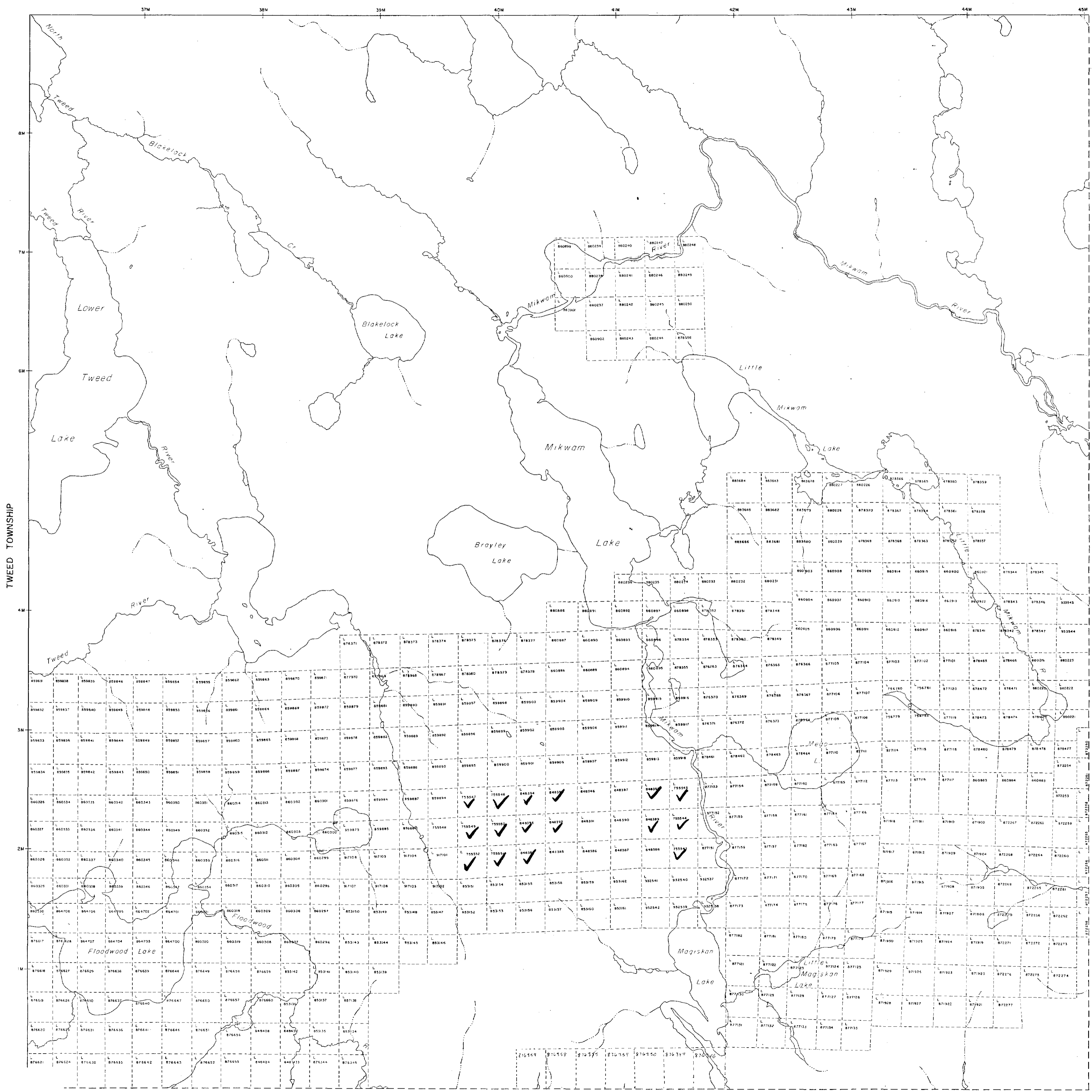
SD/lm

cc: Deerfoot Resources
Mining Recorder, Queen's Park

RECEIVED
OCT 03 1986
MINING LANDS SECTION

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
 S.R.O. - SURFACE RIGHTS ONLY
 M.S. - MINING AND SURFACE RIGHTS
 Description Order No. Date Drawn/Rev. File



LEGEND

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

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	●
SURFACE RIGHTS ONLY	○
MINING RIGHTS ONLY	○
LEASE SURFACE & MINING RIGHTS	○
SURFACE RIGHTS ONLY	○
MINING RIGHTS ONLY	○
LICENCE OF OCCUPATION	○
ORDER IN COUNCIL	○
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 363, SEC. 43, SUBSEC. 1.

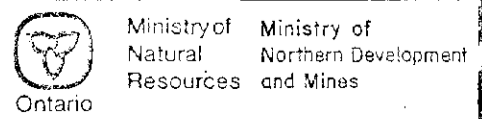


SCALE 1:20 000

HOBILTZELL TOWNSHIP

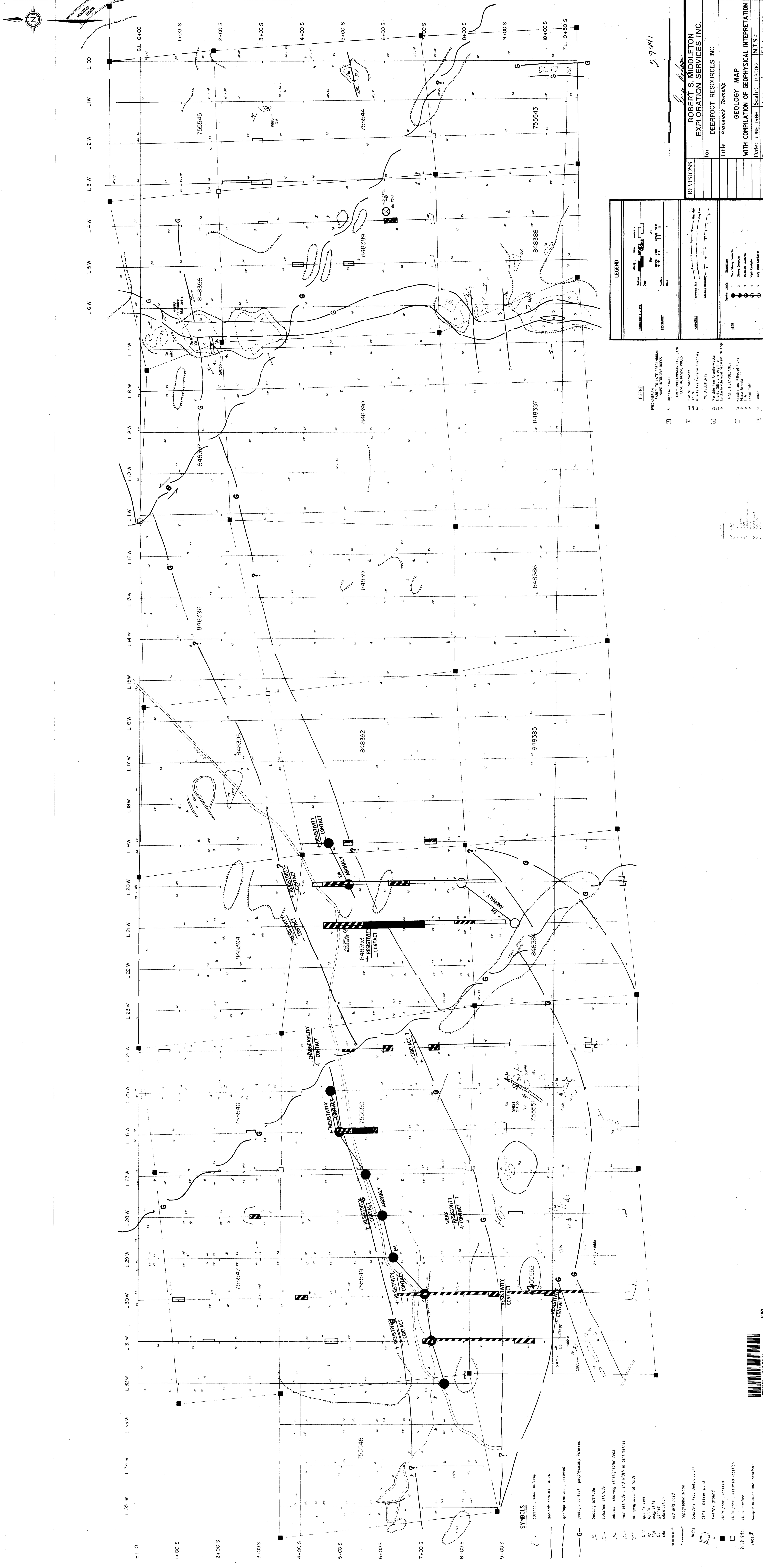
NOV 14 1986

TOWNSHIP
BLAKELOCK
 M.H.R. ADMINISTRATIVE DISTRICT
 COCHRANE
 MINING DIVISION
 LARDER LAKE
 LAND TITLES / REGISTRY DIVISION
 COCHRANE



Date: OCTOBER/1986 Number: G-3474





2.941

LEGEND

SYMBOLS	DESCRIPTION
(Symbol)	Geologic contact - known
(Symbol)	Geologic contact - assumed
(Symbol)	Geologic contact - geophysically inferred
(Symbol)	Bedding attitude
(Symbol)	Relation attitude
(Symbol)	pillows - showing stratigraphic tops
(Symbol)	seen attitude, and width in centimetres
(Symbol)	plunging isoclinal folds
(Symbol)	Q.V.
(Symbol)	quartz vein
(Symbol)	pyrite
(Symbol)	garnet
(Symbol)	silicification
(Symbol)	old dirt road
(Symbol)	topographic slope
(Symbol)	boulders (rounded, general)
(Symbol)	dams - beaver pond
(Symbol)	swampy ground
(Symbol)	claim post - located
(Symbol)	claim post - assumed location
(Symbol)	claim number
(Symbol)	sample number and location

REVISIONS

No.	Date	Description
1		
2		
3		
4		
5		

ROBERT S. MIDDLETON
EXPLORATION SERVICES INC.
 Title: *Blakeford Township*
 For: *Deerfoot Resources Inc.*

LEGEND

PRECAMBRIAN
 EARLY TO LATE PRECAMBRIAN
 MAJOR INTRUSIVE ROCKS

- 1: 5: Diabase (S.M.)
- 2: 14: Basalt
- 3: 15: Andite
- 4: 16: Quartzite (Foliated)

METAMORPHIC
 1: 17: Metapelite (S.M.)

METAVOLCANIC
 1: 18: Basalt

SYMBOLS

- (Symbol): outcrop - small outcrop
- (Symbol): geologic contact - known
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- (Symbol): geologic contact - geophysically inferred
- (Symbol): bedding attitude
- (Symbol): relation attitude
- (Symbol): pillows - showing stratigraphic tops
- (Symbol): seen attitude, and width in centimetres
- (Symbol): plunging isoclinal folds
- (Symbol): Q.V.
- (Symbol): quartz vein
- (Symbol): pyrite
- (Symbol): garnet
- (Symbol): silicification
- (Symbol): old dirt road
- (Symbol): topographic slope
- (Symbol): boulders (rounded, general)
- (Symbol): dams - beaver pond
- (Symbol): swampy ground
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