



42A01NE0039 2.9901 MAISONVILLE

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GEOPHYSICAL REPORT  
on the  
Maisonville Township Property  
of  
GLEN AUDEN RESOURCES INC.  
by  
Greg Hodges  
September 30, 1986

RECEIVED

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MINING LANDS SECTION



42A01NE0039 2.9901 MAISONVILLE

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### INTRODUCTION

During the summer and fall of 1986, a geophysical survey was completed on the Maisonville property of Glen Auden Resources Inc by R.S. Middleton Exploration Services Inc.

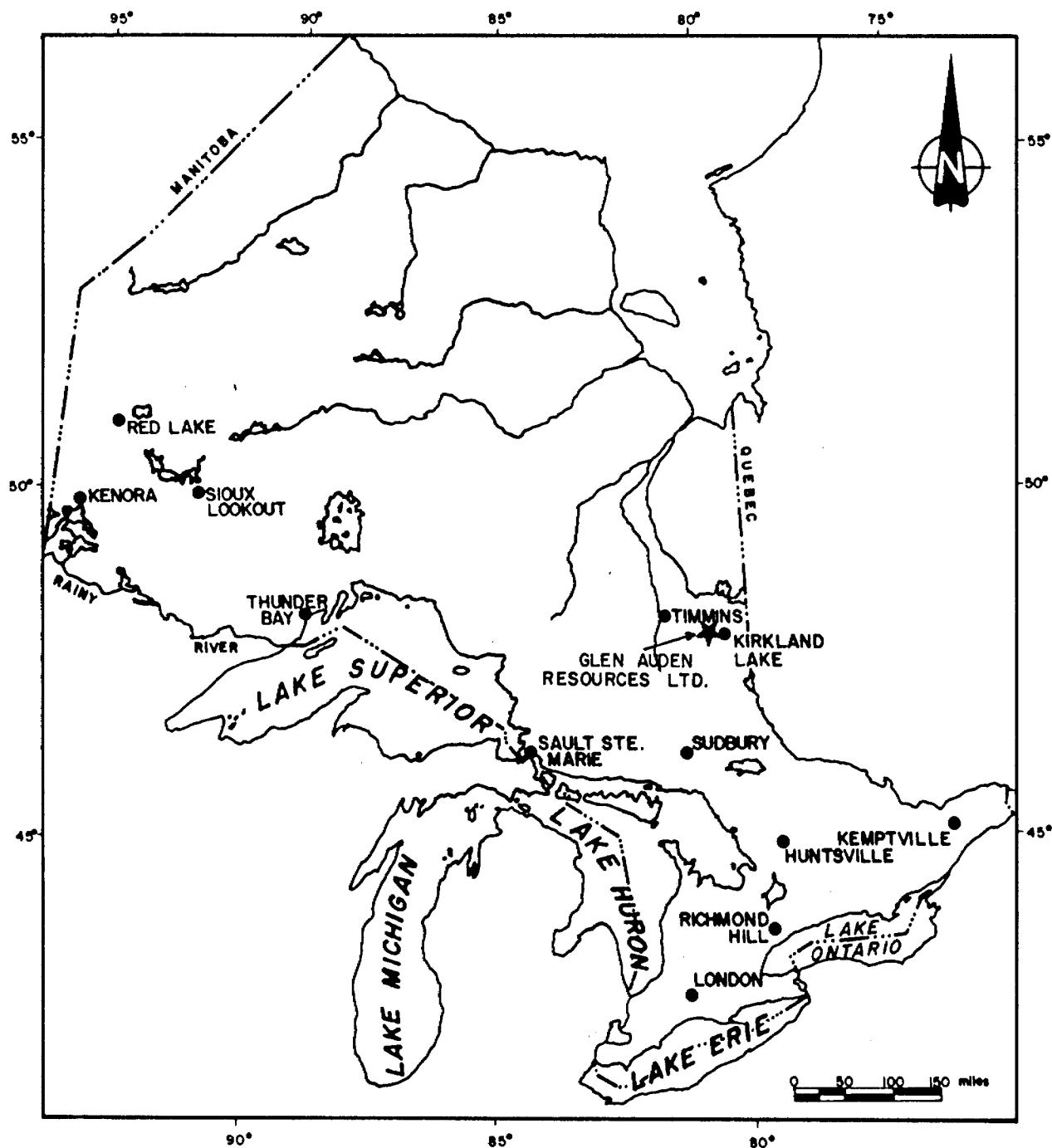
The project consisted of induced polarization surveying over several grids on the property, to investigate features of geological interest and previously detected airborne anomalies.

### LOCATION AND ACCESS

The grid is located in the south west portion of Maisonville Township, Ontario. Access to the grid is from Highway 11, which crosses the north-western corner of the claim block. Highway 570 extends east from Highway 11 through the village of Sesekeinika, and provides access via several bush roads and trails to the southern and eastern parts of the grid. (See Figure 1 and 2).

### CLAIM STATUS

The property consists of 122 un-patented mining claims in the Larder Lake Mining District (see Figure 3). These claims (listed below) are held by Glen Auden Resources Limited, Suite 2400-130 Adelaide St., West, Toronto.



PROVINCE OF ONTARIO

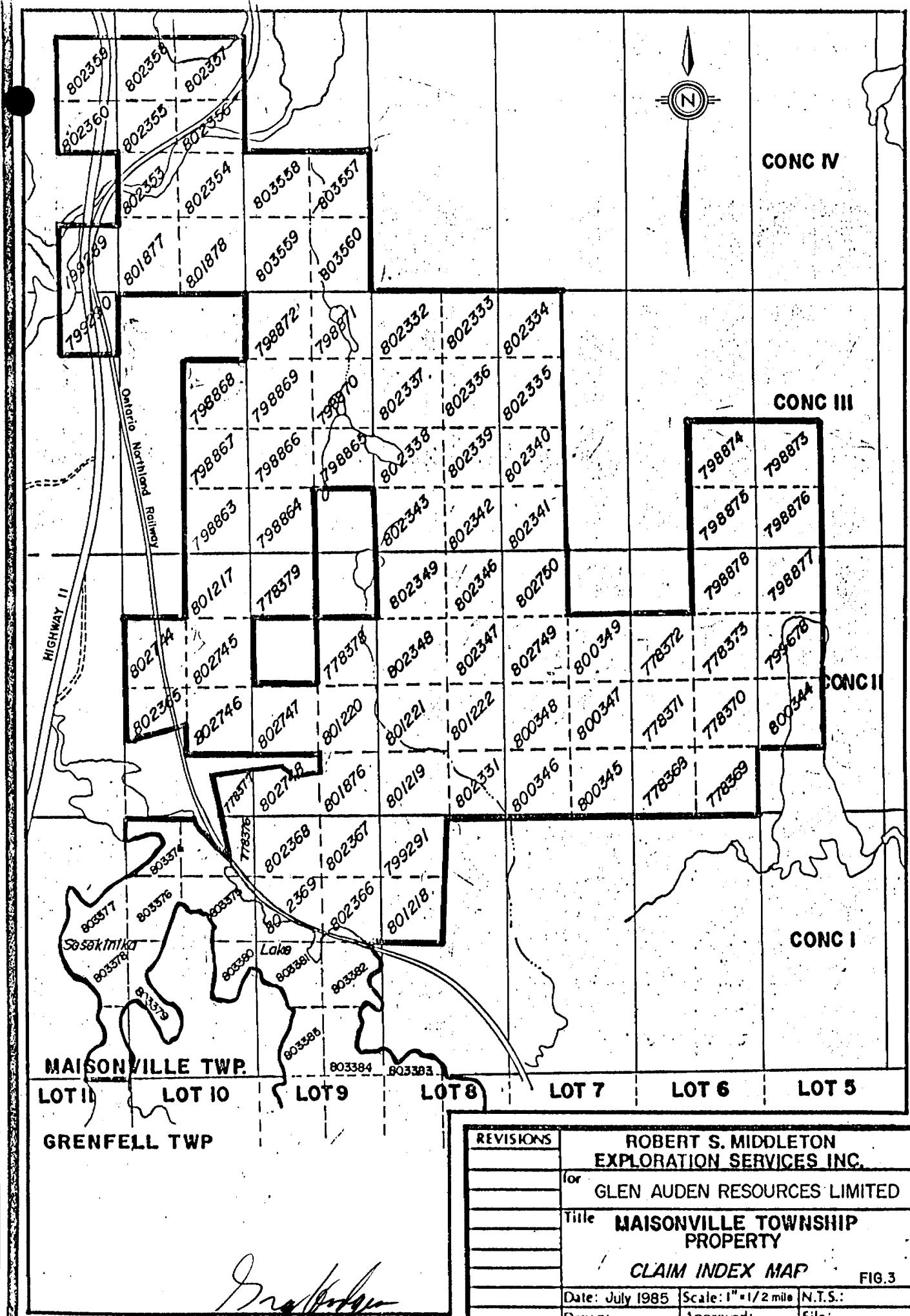
REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
	For	
	GLEN AUDEN RESOURCES LTD.	
	Title	
	LOCATION MAP	
	Fig. 1	
Date:	JULY / 85	Scale: 1 = 160 mi.
Drawn:		N.T.S.
	Approved:	File:

*Greg Walker*

<u>CLAIM NUMBER</u>	<u>EXPIRY DATE</u>
L 778 368	July 16, 1986
L 778 369	July 16, 1986
L 778 370	July 16, 1986
L 778 371	July 16, 1986
L 778 372	July 16, 1986
L 778 373	July 16, 1986
L 778 376	August 24, 1987
L 778 377	August 24, 1987
L 778 378	August 24, 1987
L 778 379	September 4, 1986
L 798 863	August 16, 1986
L 798 864	August 16, 1986
L 798 865	August 16, 1986
L 798 866	August 16, 1986
L 798 867	August 16, 1986
L 798 868	August 16, 1986
L 798 869	August 16, 1986
L 798 870	August 16, 1986
L 798 871	August 16, 1986
L 798 872	August 16, 1986
L 798 873	September 4, 1986
L 798 874	September 4, 1986
L 798 875	September 4, 1986
L 798 876	September 4, 1986
L 798 877	September 4, 1986
L 798 878	September 4, 1986
L 799 289	June 21, 1986
L 799 290	June 21, 1986
L 799 291	June 21, 1986
L 799 678	May 31, 1986
L 800 344	May 31, 1986
L 800 345	June 25, 1986
L 800 346	June 25, 1986
L 800 347	June 25, 1986
L 800 348	June 25, 1986
L 800 349	June 25, 1986

<u>CLAIM NUMBER</u>	<u>EXPIRY DATE</u>
- L 800 827	August 24, 1986
L 800 828	August 24, 1986
L 800 829	August 24, 1986
L 800 830	August 24, 1986
L 800 831	August 24, 1986
- L 800 832	August 24, 1986
 L 801 217	June 21, 1986
L 801 218	June 27, 1986
L 801 219	June 27, 1986
L 801 220	June 27, 1986
L 801 221	June 27, 1986
L 801 222	June 27, 1986
 L 801 876	June 25, 1986
L 801 877	June 21, 1986
L 801 878	June 21, 1986
 L 802 331	June 27, 1986
L 802 332	July 16, 1986
L 802 333	July 16, 1986
L 802 334	July 16, 1986
L 802 335	July 16, 1986
L 802 336	July 16, 1986
L 802 337	July 16, 1986
L 802 338	July 16, 1986
L 802 339	July 16, 1986
L 802 340	July 16, 1986
L 802 341	July 16, 1986
L 802 342	July 16, 1986
L 802 343	July 16, 1986
 L 802 346	September 4, 1986
L 802 347	September 4, 1986
L 802 348	September 4, 1986
L 802 349	September 4, 1986
 L 802 353	July 9, 1986
L 802 354	July 9, 1986
L 802 355	July 9, 1986
L 802 356	July 9, 1986
L 802 357	July 9, 1986
L 802 358	July 9, 1986
L 802 359	July 9, 1986
L 802 360	July 9, 1986

<u>CLAIM NUMBER</u>	<u>EXPIRY DATE</u>
L 802 365	August 13, 1986
L 802 366	August 14, 1987
L 802 367	August 14, 1987
L 802 368	August 14, 1987
L 802 369	August 14, 1987
L 802 744	August 3, 1986
L 802 745	August 3, 1986
L 802 746	August 3, 1986
L 802 747	August 3, 1986
L 802 748	August 3, 1986
L 802 749	August 3, 1986
L 802 750	September 10, 1986
L 803 374	August 24, 1986
L 803 375	August 24, 1986
L 803 376	August 24, 1986
L 803 377	August 24, 1986
L 803 378	August 24, 1986
L 803 379	August 24, 1986
L 803 380	August 24, 1986
L 803 381	August 24, 1986
L 803 382	August 24, 1986
L 803 383	August 24, 1986
L 803 384	August 24, 1986
L 803 385	August 24, 1986
L 803 386	August 24, 1986
L 803 387	August 24, 1986
L 803 388	August 24, 1986
L 803 389	August 24, 1986
L 803 390	August 24, 1986
L 803 391	August 24, 1986
L 803 392	August 24, 1986
L 803 393	August 24, 1986
L 803 394	August 24, 1986
L 803 395	August 24, 1986
L 803 396	August 24, 1986
L 803 397	August 24, 1986
L 803 398	August 24, 1986
L 803 399	August 24, 1986
L 803 400	August 24, 1986
L 803 401	August 24, 1986
L 803 402	August 24, 1986
L 803 403	August 24, 1986



<u>CLAIM NUMBER</u>	<u>EXPIRY DATE</u>
L 803 557	September 4, 1986
L 803 558	September 4, 1986
L 803 559	September 4, 1986
L 803 560	September 4, 1986

REGIONAL GEOLOGY

The following is quoted from the Geological Report on the Property of GLEN AUDEN RESOURCES LIMITED by Nadia Caira, B. Sc., October 2, 1985:

The Maisonville township property is located in the south part of the Kirkland Lake area (Figure 4) and is underlain by Archean volcanic, sedimentary, and intrusive rocks which are part of the Abitibi Greenstone Belt. In the south part of the Kirkland Lake area, the Archean rocks are unconformably overlain by Proterozoic sedimentary rocks of the Cobalt series. Diabase dikes cut all of the rock types in the area the Cobalt sediments, which occur in the northwest corner of the property of interest.

In the Kirkland Lake area, the volcanic rocks of the Abitibi Greenstone belt are preserved in a synclinorium located between the Lake Abitibi Batholith and the Round Lake Batholith. The north and south limbs of the synclinorium are cut by two



GRENFELL TWP.

NOTE: See next page for legend

*Gray Colyer*

REVISIONS

ROBERT S. MIDDLETON  
EXPLORATION SERVICES INC.

for GLEN AUDEN RESOURCES LIMITED

Title

General Geology  
Map

Fig. 4

Date: Oct. 1985	Scale: 1" = 1/2 mile	N.T.S.:
Drawn: C.G.	Approved:	File: M-78

large east-striking fault zones: the Destor-Porcupine Fault Zone, and the Kirkland Lake-Larder Lake Fault Zone, respectively.

Rocks in the area have been affected by subgreenschist regional metamorphism.

The volcanic rocks in the Kirkland Lake Region were formed during cycles of volcanism associated with sedimentation and plutonism. Each cycle consisted of komatiitic volcanism followed by the tholeiitic, calc-alkalic, and finally, alkalic volcanism (Jensen O.G.S., 1979).

The Lower Supergroup on the south limb of the synclinorium, southeast of Kirkland Lake, contains a cycle of komatiitic, tholeiitic, and calc-alkalic volcanics represented by the Wabewawa, Catherine, and Skead Groups, respectively (Jensen 1979).

The volcanic cycle represented by the Upper Supergroup consists of komatiitic lavas of the Larder Lake Group succeeded by tholeiitic rocks of the Kinojevis Group and calc-alkalic rocks of the Blake River Group. The Maisonville-Grenville Township property of Glen Auden Resources Limited is underlain by the tholeiitic rocks of the

Kinojevis Group and partly by interflow tuffs of calc-alkalic composition of the Blake River Group. This rock series is similar to the Tisdale Group in the Timmins area which contains numerous well known gold deposits. Alkalic volcanic rocks of the Timiskaming Group unconformably overlies the Blake River and Kinojevis Groups.

On the north limb of the synclinorium, the oldest rocks are calc-alkalic volcanic rocks of the Hunter Mine Group. Unconformably overlying the Hunter Mine Group is a komatiitic succession called the Stoughton-Roquemaure Group (Jensen, 1976a, 1978b, O.G.S.).

The sinking of volcanic rocks during their accumulation would explain the origin of the synclinorium. Various intrusive differentiates including monzonite, porphyritic syenite, mafic intrusive syenite, and augite syenite intruded the above mentioned rocks as plugs, dikes and/or sills. Gold mineralization frequently occurs around or within the syenite bodies as well as along north-south trending fault structures. Major north-south faults have been interpreted (Middleton 1976) based on the regional gravity

data. These features are also discernible from the aeromagnetic data, O.G.S. (1979).

#### PROPERTY GEOLOGY

The following description of the property geology is quoted from the Geological Report on the Property by Nadia Caira (1985):

The oldest rocks on the property are the tholeiitic basalts of the Kinojevis Group and are divided into iron-rich and iron-poor, tholeiitic basalts. The coarser-grained variety (2-5mm) of the basalts were previously mapped as coarse-grained gabbro intrusives, however, more recent mapping in the area by L. Jensen O.G.S., has discovered that these "gabbro intrusions" are in fact coarse-grained iron-rich tholeiitic basalt flows. Similar coarse-grained flows occur on the Maisonville-Grenfell township property, and it is probable that no gabbro intrusives exist on the property to the authors knowledge.

These tholeiitic basalts have been intruded by a series of felsic syenitic dikes and mafic diabasic dikes. Rocks of the felsic variety vary from earlier trondhjemite phases to porphyritic syenite, syenodiorite to a mafic syenite.

Alteration around these dikes includes silicification, epidotization and the introduction of hydrogarnet and carbonate along fractures.

The predominant rock units that occur on the Maisonville-Grenfell Township property are massive (2-5mm) coarse-grained, fine-grained, and pillowd iron-rich and iron-poor, tholeiitic basalts. These mafic volcanics are typically dark green to black in the more iron-rich varieties and a lighter green colour in the iron-poor basalts. The eastern portion of the property is underlain by predominantly iron-poor, tholeiitic basalts with a minor narrow iron-rich tholeiitic basalt sequence containing sheared chert, cherty tuffs and crystal tuff interflow units. Throughout the remainder of the property the coarse-grained iron-rich tholeiites form units 50 to 500m thick that alternate with finer grained units 2-5m thick. A few of the fine-grained map units represent a gradational and compositional change in the rocks from iron-rich tholeiite to an iron-poor tholeiite generally confirmed by the magnetism of the rock. The iron-rich tholeiites are strongly magnetic while the iron-poor tholeiites are weakly

magnetic. Some of the coarse-grained iron-poor, magnesium tholeiites appear to grade laterally into fine-grained pillow lavas of the same composition. Minor amounts of pillowd iron-rich tholeiitic basalt also occur.

These iron-rich tholeiitic basalt flows are thought to be the extrusive equivalents of the gabbros occurring in the townships north of the property. The claims covering most of Sesekinika Lake are underlain by predominantly iron-poor tholeiitic basalts that vary from massive coarse-grained (2-5mm) flows, to fine-grained massive flows, to pillowd flows with minor variolitic and hyaloclastite phases. These mafic volcanics are medium green and weakly magnetic. Minor syenitic dikes and diabasic dikes with varying amounts of magnetite cut the mafic volcanics. These may correspond to several magnetic anomalies that occur on the regional aeromagnetic map.

Several interflow units of chert, cherty tuff, cherty oxide iron formations, crystal tuff, and tuff breccia of calc-alkalic dacite composition occur on the property overlying the

iron-rich tholeiitic basalts. These may represent the waning phases of the volcanism. They may mark periods of quiescence the change from iron-rich tholeiitic basalt to iron-poor, tholeiitic basalts.

The shear zones consist of highly fractured, epidotized, material containing 5-15% pyrite as fine stratiform seams, stringer pyrite and as disseminations.

The lava flows are, in places pillowd, variolitic, amygdaloidal, and hyaloclastic. Little evidence of stretching or flattening is visible in the area. The only trace of movement is the presence of chlorite-carbonate rich slickensides at the flow contacts, and in some pillow selvages of the lava flows.

The presence of interflow tuff units of calc-alkalic composition may indicate an overlap of the later calc-alkalic Blake River Group into the Kinojevis Group. The crystal tuff unit seems, from field relationships, to occur along the contact between iron-rich and the iron-poor, tholeiite flow contacts, following bedding contacts as determined from pillow tops and from

other sedimentary horizon contacts.

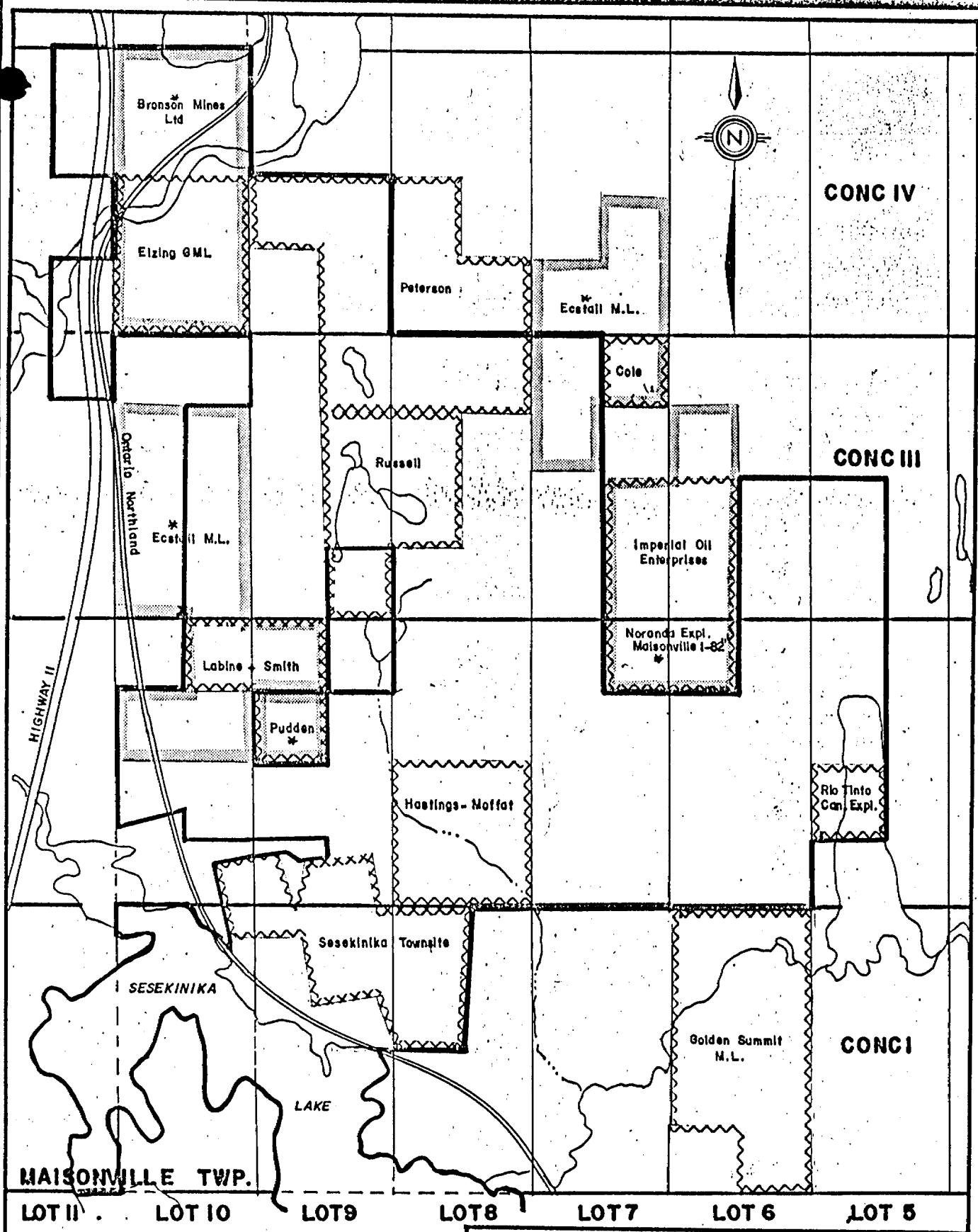
Major diabase dikes were found, predominantly in the eastern portion of the property around Kapakita Lake. At this location the dikes cut predominantly iron-poor, tholeiitic basalts. However, throughout the remainder of the property, the similarity between the diabase dikes and the iron-rich coarse-grained (2-5mm) tholeiitic basalts posed a constant problem throughout the mapping.

The major north trending diabase dikes are thought to follow fault zones and major joint directions.

#### HISTORY OF EXPLORATION

The following is quoted from the Report by Nadia Caira (1985):

The area was first prospected in the early days of the Kirkland Lake gold rush since some aspects of the geology were similar to that of Kirkland Lake area (syenite porphyry intrusives with associated gold-molybdenite mineralization). Gold was found in 1914 in Con. II, Lot 9 of Maisonneuve Township and considerable activity took place in the 1930's. Most of this work



NOTE: \* covered with

- No previous work in  
Grenfell Township Property

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
for	GLEN AUDEN RESOURCES LIMITED
Title	MAISONVILLE TOWNSHIP PROPERTY
PREVIOUS WORK	
Date: July 1986 Scale: 1" = 1/2 mile N.T.S.	

*Eng. R. L. Dyer*

FIG. 5

however, is unrecorded. Numerous pits and trenches occur on the Glen Auden Resources Limited property which contain abundant quartz and/or pyrite mineralization but no record of this work can be located in the assessment files.

The Golden Summit mine which is located approximately 200 metres south of the southern border of the Glen Auden Resources property in Maisonville Township in Lot 6 Concession I is reported to have produced gold. An unspecified amount of gold production is unofficially reported by previous workers in the area from the Bennett Mine in Lot 9, Con.II which is located on the Glen Auden Resources Limited property.

Descriptions of early exploration work and the properties on which work was done is given in the section on Economic Geology. Recent exploration work is described here.

The most recent work in the area was a magnetometer survey carried out on the "Bennett Claim" (Lot 9, Con. II, N 1/2, NW 1/4) by C. Forbes in 1984. This survey located a number of high gradient anomalies associated with magnetic phases of the tholeiitic volcanics. These rocks

are intruded by syenite porphyry and host north-south trending shallow dipping and vertical quartz zones. This area corresponds to AREA 12 on the property (see Economic Geology).

Prospecting by C. Forbes on various parts of the property has been successful in discovering a new gold bearing structure. Significant assays of up to .726 oz/ton gold were obtained from grab samples of pyrite bearing quartz vein material from Con. II, Lot 7, S 1/2 (claim 800 346). This unrecorded showing contains a 2' wide glassy brecciated quartz and pyrite vein possibly trending 110-130° with numerous parallel and branching veins and veinlets. Old pits 100 feet north of this old trench were observed to contain pyrite in both the quartz veins and in the iron-rich tholeiitic wallrocks. Considerable chloritization, silicification and carbonate alteration occurs in the vicinity of the quartz veins. The numerous poor exposures observed imply that a 50 foot wide quartz stockwork may be present.

A north-south trending chert horizon in Lot 6, Con. III, S 1/2 has also been prospected by C.

Forbes (1984). Assays as high as .143 oz Au/ton were obtained in grab samples of banded chert with pyrite. In 1983, trenching was performed by Harold Barry in Lot 9, Con. I, N 1/2 and filed as mechanical work, however, sampling was not reported.

In 1979, an airborne electromagnetic and magnetic survey was released by the Ontario Geological Survey (1979) which covered both Maisonville and Grenfell Townships. This data can be used to trace major structures on the property including major shear zones and graphitic chert horizons.

In 1975 Ecstall Mining (Texas Gulf) did ground electromagnetic and magnetic surveys on small grids in various parts of Maisonville Township. Part of this work actually took place on the margin of the property in Lot 6-7, Con. III and V., Slankis, J.L. (1974). Earlier work by Imperial Oil in the same area tested two north trending EM conductors which revealed the presence of graphite - pyrite zones containing sphalerite mineralization. Exploration results have been compiled by Ploeger, F. et al (1979). Description

of early exploration work and the properties on which the work was done is described here. An index of assessment work is shown in Figure 5.

Bennett Mining Company Limited (33)

In Maisonville Township, concession II, Lots 9 and 10, on former claim L3688, a two-compartment shaft was sunk to a depth of 530 feet and levels were cut at 125 foot intervals. Crosscutting and drifting were reported early in 1927, but in June the plant was dismantled (Kindle 1936, p.11)

About 800 feet (two holes, 133.5 and 174 feet) and 1,200 feet (one hole, 130 feet) southwest of the main shaft, diamond drilling was done in 1958 by Mr. S.A. Pain. The holes intersected diorite and volcanic rocks cut by syenite dikes and quartz veins (CLMNA files, Kirkland Lake).

C. Cole (34) (300 metres northeast of TL4800N/3500E)

In Maisonville Township, near the boundary between concession III, Lot 7, north half, northeast quarter and concession IV, Lot 7, south half, southeast quarter, four pits were sunk by Crown Reserve Mining Company Limited in 1914. The pits are in fractured silicified mafic volcanic rocks cut by a feldspar porphyry dike. The volcanic rocks contain disseminated pyrite and blebs and irregular stringers of pyrite and pyrrhotite with minor amounts of chalcopyrite. Two samples analyzed by The International Nickel Company of Canada Limited contained 0.03 and 0.04 percent nickel, according to notes by W.S. Savage (in CLMNA files, Kirkland Lake); also see Shklanka, R. (1969).

Elzina Mines Limited (35)

In Maisonville Township, concession IV, Lot 10, south half, narrow quartz-carbonate veins cut hornblende syenite and gabbro. The No. 1 vein, striking N60E and dipping 50 to 70N, ranges from 3

to 14 inches wide along its stripped length of 200 feet. Grab samples taken at intervals along the vein returned assays of: .02, .03, .02, .01, and .25 oz gold per ton (D.K. Burke 1938). Three holes have been drilled on the property, but no information on them is available.

The Golden Summit Mining Company Limited (36)  
(approximately 200 metres south of TL1576N 4480E)

In Maisonville Township, concession I, Lot 6, north half (formerly the Jensen farm) a gold-bearing quartz vein was discovered south of Kapakita Creek, in 1913. The vein was 6 inches wide and was traced for 150 feet. In 1919, the Golden Summit Mining Company Limited was incorporated to take over the property, and in 1921, a pit on the discovery vein was deepened to a depth of 27 feet. In 1924 the company was reorganized to Golden Summit Mines Limited. During 1929 and ensuing years a shaft collared 450 feet west of the old pit was deepened to 405 feet and lateral work was done on the 125-, 250-, and 375-foot levels. A small mill installed in 1935 produced during 1936 and 1937. By 1937, when mining ended, some stoping had been done on the 125-foot level. From 737 tons of ore, total production worth \$3,738 was recorded with the Ontario Department of Mines for 1936, 1937, and 1945, when mill clean-up was carried out (ODM 1953, p.16).

Most of the gold is in pyrite-containing quartz-carbonate veins cutting basalt, diorite, syenite, and lamprophyre. Assays of .16 oz gold and less were obtained in the shaft station at the 125-foot level, and .08 oz gold or less along the crosscut (Odell 1930). The shaft was sunk in the vicinity of two narrow east-trending quartz veins about 40 feet apart, the south vein being the discovery vein. Immediately east of the shaft is a strong shear zone trending north, parallel to the strike of the flow. The east wall of the shear is a lamprophyre dike about 50 feet wide. The most important vein encountered underground was exposed in the northwest crosscut on the 125-foot level. It was a high-grade quartz vein striking east and ranging in width from 2 inches

to 10 inches. It has been intersected and displaced by a flat fault dipping west. The wall rocks adjacent to the vein were highly fractured and veined with red feldspathic material; they contained gold.

Hastings-Moffat (37)

In Maisonville Township, concession II, Lot 8, south half, southwest quarter, five holes were drilled in 1934 by Erie Canadian Mines Limited, the exploration subsidiary of Sylvanite Gold Mines Limited. This drilling totalled 464 feet consisted of quartz veins striking and dipping in several directions, in an area having a diameter of about 400 feet. The host rock is syenite and altered mafic rocks. A few short intersections (average 2 feet) contained gold yielding about .02 oz gold per ton. The best assay of several samples from pits in Lot 8 and 9 yielded .17 oz gold per tone (Erie Canadian 1934 - ODMNA files, Kirkland Lake).

Labine-Smith (41) (Surrounded by the Glen Auden Resources property on Patented Ground-south and east of Area 12.)

In Maisonville Township, concession II, Lot 9, north half, southwest quarter and northwest quarter, and Lot 10, north half, northeast quarter, five pits and trenches were carefully sampled (ODMNA files, Kirkland Lake, report signed G.W. Dixon, August 10, 1914). Most assays for gold were less than .04 oz gold per ton and for silver were less than 1 ounce per ton.

A shaft with an average dip of 35 degrees, had been sunk to a depth of 80 feet on a narrow quartz vein carrying free gold and tellurides.

Sidney, A. Pain (45) (200 metres south of TL3191N/1000E 200 metres from property boundary)

In Maisonville Township, concession II, Lot 10, north half, northwest quarter, native gold was discovered in quartz veins and oxidized wall-rock on the former "Malouf" claim (Burrows and Hopkins 1914, p.35). The decomposed material from the

quartz veins, which are narrow and dip gently west, was treated in an arrastra at the base of the hill near the railway track.

Warren Peterson (46) (In the northwest corner of CL803558)

In Maisonville Township, concession IV, Lot 9, south half, northwest quarter, in the northwest quarter of the claim (formerly numbered L46158), is the main (copper) showing. The showing is on the east side of a north-trending ridge of mafic volcanic rocks and consists of syenite and mafic volcanic rocks cut by quartz stringers containing cubic pyrite and fine-grained chalcopyrite. A dike of "pebble" lamprophyre cut by a feldspar porphyry stringer occurs in the northeast corner of one pit. In 1952, three holes (totalling 1,000.5 feet) drilled near the showings intersected a number of weakly mineralized zones in sheared and massive mafic volcanic rocks cut by syenite dikes (ODMNA files, Kirkland Lake).

A. Pudden (47) LOT 8 in the vicinity of claim 778377

In Maisonville Township, concession II, Lot 8, north half, northwest quarter and southwest quarter, and in Lot 10, south half, southeast quarter, nine holes, totalling 416 feet, were drilled in 1955. The holes were spaced along a north-striking line about 1/2 mile long. Judging from the azimuth of eight of the nine holes, the veins dip east. The holes intersected quartz veins cutting mafic intrusive rocks containing sparsely disseminated pyrite and chalcopyrite (ODMNA files, Kirkland Lake).

J.G. Russell (48) (In a patented claim 100 metres south of CL 798865 southwest of Olson Lake)

In Maisonville Township, concession III, Lot 9, south half, southeast quarter, near the No. 1 post of claim L15833, a rusty silified shear zone has been exposed by pits on the west-facing slope of a hill adjacent to a swamp. The strike of the shear zone, which is in mafic volcanic rocks, is N10W and the dip is about 65W.

Irregular quartz stringers and feldspathic material cut the sheared rocks, which contain finely disseminated pyrite and minor molybdenite.

About 500 feet southwest, on the western side of a low outcrop, a quartz vein 4 to 6 inches wide strikes north and dips 20 to 40 west through pillowed volcanic rocks. A narrow streak of darker pyrite-bearing quartz on the footwall is said to have contained gold and tellurides, according to notes by W.S. Savage (in ODMNA files, Kirkland Lake). In the south trench the vein forms a zone having a maximum width of 4 feet.

About 150 feet east of the trench, on the eastern side of a low north-trending ridge of volcanic rocks near the centre of the claim, brecciated andesite is cemented with a fine network of quartz-carbonate-feldspar stringers reported to have contained molybdenite.

On knoll about 250 feet south of the above showing, quartz-carbonate-feldspar stringers, an average of 1 inch wide, cut brecciated andesite containing pyrite and epidote. The eastern side of the knoll is cut by a syenite dike, and a sample from a trench cut through the knoll from east to west is said to have yielded .14 oz gold per ton across 22 feet, according to Savage.

#### Sesekinika Townsite (49)

According to notes by Sylvanite Gold Mines Limited (in ODMNA files, Kirkland Lake), during 1914 some free gold was found by James L. Hughes on claim L4034 in Maisonneuve Township. The gold was in a narrow quartz vein dipping 15NW. About 1916, Hughes sold the property to Walter Young (of Toronto) and New York interests.

The part of the "Hastings-Moffat" claim L4035 (which is described separately but is redescribed here by Lovel since it is also part of this property) that is in Maisonneuve Township, concession II, Lot 8, south half, southwest quarter, was drilled during 1934 by Erie Canadian Mines Limited, the exploration subsidiary of Sylvanite. Five holes, totalling 464 feet, were

drilled to intersect a quartz vein 2 feet wide that strikes east and dips 60N. A few short intersections (average 2 feet) contained gold yielding about .02 oz per ton. The best assay from several samples from pits in Lots 8 and 9 yielded .17 oz gold per ton (Erie Canadian Mines Limited 1934).

## SURVEY PROCEDURES

### INDUCED POLARIZATION/RESISTIVITY

#### Theory

The induced polarization (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 polarization 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 polarization 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.

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

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

Parts of this survey were conducted using a dipole-dipole array with a dipole length of 50m and array spacings of  $n = 1, 2, 3, 4$  dipoles. This array configuration involves having two dipoles separated in turn by each 'n' interval moving in-line down each survey line. One dipole is the receiver measuring  $V_p$ , the potential, and the other dipole is the transmitter.

The survey was also conducted using a pole-dipole array with a dipole length of 50m 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.

#### PERSONNEL AND EQUIPMENT

Robert S. Middleton Exploration Services provided four-man crews to complete the IP surveying. The surveying was completed with either a Scintrex IPR-8 or IPR-11 at different stages of the survey. Specifications for this equipment are in Appendix A.

Transportation was provided by Middleton Exploration in the form of a 3/4-ton pick-up truck or a Suburban. The crews were accommodated at the Lava Mountain Lodge in Ramore, Ontario.

#### INTERPRETATION

##### GRID 1

A major anomalous chargeability zone occurs on this grid. It is one broad unit at 4550E on L3300N, and extends south in two "legs", at about 4450E to 2850N and at about 4600E to L2750N. (Further anomalies at 4475E on L2560N and 4500E on 2360N could be related to either leg). North of L3300N, at which line the anomaly is about 175m wide, it becomes narrow and extends north as a single anomaly.

The strongest parts of the anomaly occur in the region where several cherty sulphide-facies iron formations outcrop, and so is a significant location for possible gold mineralization.

If good drill results are obtained in this region, step-out

holes along one or both "legs" to the south should be considered.

GRID 7

The major anomaly on grid 7 occurs from 4000E on L2750N to 3950E on L2360N. It is roughly on strike with the conductors detected by the INPUT anomalies discovered north of this location by the government airborne survey. The anomaly on line 2360N occurs near outcrops of iron-poor tholeiitic basalts which show some silicification. These anomalies are significant drill targets to examine for alteration and gold mineralization. An anomaly also occurs at approximately 3500E on L2750N. This is very close to a large outcrop of iron-rich tholeiitic basalt from which samples showed maximum gold concentrations of 50ppb.

GRID 3

The major anomaly on grid 3 crosses the north end of the lines at about 2100N to 2200N. It is a strong anomaly in an area covered by overburden. Detailed geologic mapping of the area of the anomaly found several outcrops of both iron-rich and iron-poor tholeiitic basalts in the area but with insufficient (1-2%) amounts of pyrite mineralization to explain an anomaly of such strength.

Three other weaker anomalies were detected on grid 3, at 1950N on L3350E, 1900N on L150W, and at 2175N on L50W. These anomalies occur near an area of old trenching where exposed

quartz and quartz-pyrite veins with disseminated molybdenite assayed from 300ppb gold to as high as .96 oz/ton.

These anomalies, although small and isolated, probably indicate areas of greater pyrite mineralization in the quartz veins in the area, and so should be sampled by diamond drilling or trenching.

GRID 2

Grid 2 is located on a square four claim block north and west of the old Bennet shaft, from which an indeterminate amount of gold was reported to have been recovered in the 1930's. There are many IP anomalies on grid 2. The strongest is from 1300E on L3010N to 1500E on 3460N. It is broad and weak in the south, with a narrow strong zone forming in the centre of the weak zone. North of L3260N only the narrow, stronger zone continues to L3460N, where it appears to be lost at depth, rather than end. There is little outcrop along the length of the anomaly, except at L3260N where an outcrop shows the contact between iron-rich (east) and iron-poor (west) tholeiitic basalt pillows. There is evidence in samples from this zone of epidotization and carbonatization, both of which are often associated with gold mineralization.

This anomaly may continue north of line 3460N at 1625E on 3660N where an anomaly appears and continues to the north, but the relation is uncertain.

A moderate anomaly occurs at about 1700E from L3610N to 3260N. This anomaly has a well defined shape and thickness (about 50m).

A broad, anomalous zone occurs from L2810N at 1550E to 3210N at 1825E. It is a broad, weakly to moderately chargeable zone that varies greatly in thickness. This zone is of particular interest because there are a number of gold assays from 1500ppb to 1830ppb in the zone.

At 1700E-1725E on L2960N is a strong narrow low resistivity anomaly, which may represent a shear zone.

Line 3610 and those to the north were extended east to cross the INPUT anomaly at about 2075E, but this was not possible because of a large swamp. An anomaly was detected at 1950E leading into the swamp, but could not be completely detailed. Another weak zone was discovered at 2300E on 3610N and 3710N.

A moderate anomaly was detected at 1950E on 3360N and 3410N, after which it went off of the east boundary of the grid onto the patented claims. This anomaly is mentioned because it is on strike with the airborne anomaly just mentioned.

#### GRID 4

The induced polarization results for grid 4 are dominated by a broad high trending north east across the centre of the grid.

This anomaly is part of a wide weak zone, with two very

strong central axis, one at 1875E on 1600N to 1950E on 1650N, and then a parallel, offset axis from 2075E on 1650N to 2150E on 1750N.

The peaks of this anomaly appear to coincide with ridges where the bedrock (iron-rich tholeiite) shows through the overburden, but the strength and depth of these anomalies is due to more than just topographic ridges. Approximately 1% pyrite was observed in these outcrops, which is too little to create such a strong (40 msec +) chargeability anomaly.

GRID 6

The only anomalies detected on grid 6 were weak, near surface anomalies, at 2200E on L5050N and at 2150N on L5150N.

## CONCLUSIONS AND RECOMMENDATIONS

### GRID 1

The anomaly on grid 1 should be further investigated, by overburden stripping and diamond drilling. The cherty iron formations near 4550E on lines 3150N to 3350N create a good environment for gold mineralization. The north-south shear zone at 4575E is also a favourable target along the eastern "leg" of the anomaly.

### GRID 7

The major anomaly of interest on grid 7 is the one at 4000E on the northern three lines. Although no assays exist from the outcrops near this anomaly, drilling by Noranda on the airborne anomaly further north intersected cherty sulphide-facies iron formations, which are a good environment for gold mineralization. The anomaly at 4000E should therefore be tested by diamond drilling and trenching.

### GRID 3

The southern trio of anomalies (1950N, 1900N, and 2175N) should be further investigated by trenching and/or diamond drilling. They are in a region of quartz stringers, and a shear zone passes through between lines 50W and 150W, striking  $165^{\circ}$ - $175^{\circ}$ . There is strong silicification and pyrite mineralization, and significant carbonatization, sericitization, and molybdenite mineralization. Near the anomaly on line 150W at

1900N a sample was collected which assayed at 0.96 oz/ton of gold.

The anomaly at 2100N-2200N should be further investigated and sampled. The strength and continuity of this anomaly indicates that it is due to more than unaltered iron-rich tholeiites. A program of trenching to expose more rock over the anomaly is suggested, if overburden thicknesses allow.

GRID 2

There are several good targets on grid 2 for further work. The series of anomalies at 1600E on line 2810N to 2960N occur in an area of high gold assays (3 assays 1500ppb or greater) with many syenite porphyry dikes and quartz veins, often with intensely pyritized selvages.

The anomaly from 1300E to 1500E, L3010N to 3460N is significant as it is centered on an outcrop (L3260N) of tholeiitic basalts which has quartz stockwork and carbonatization. Further sampling by trenching or diamond drilling should be carried out near this outcrop, and if good assays for gold result, the work should be extended along the anomaly.

The anomaly at 1800E on L3010N should be further investigated as it occurs in an area with syenite dikes cutting through the tholeiites, and where a significant gold assay (1830ppb) was found.

GRID 4

Most of grid 4 shows high chargeability due to the iron-rich nature of the tholeiites, but the two highest value zones should be further investigated by trenching or drilling. The area has numerous porphyritic syenite dikes, and extensive quartz vein stockwork, and so is a good environment for gold mineralization.

GRID 6

There were no strong anomalies observed on grid 6, but the induced polarization coverage is minimal. Sample 67862 from a shear zone assayed 11,000ppb gold and significant syenite dikes, cherty iron formations and carbonatization were observed, so extension of the IP coverage is recommended.

Respectfully submitted



Greg Hodges  
Geophysicist

REFERENCES

Caira, Nadia  
October 2, 1985

Geological Report on the Property  
of GLEN AUDEN RESOURCES LIMITED,  
Maisonville and Grenfell Townships,  
Larder Lake Mining Division,  
District of Temiskaming.

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 Glen Auden Resources Inc. property in Maisonneuve Township, Province of Ontario and dated September 30, 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 Glen Auden 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 September 30, 1986  
Timmins, Ontario



D. Greg Hodges  
D. Greg Hodges, Geophysicist

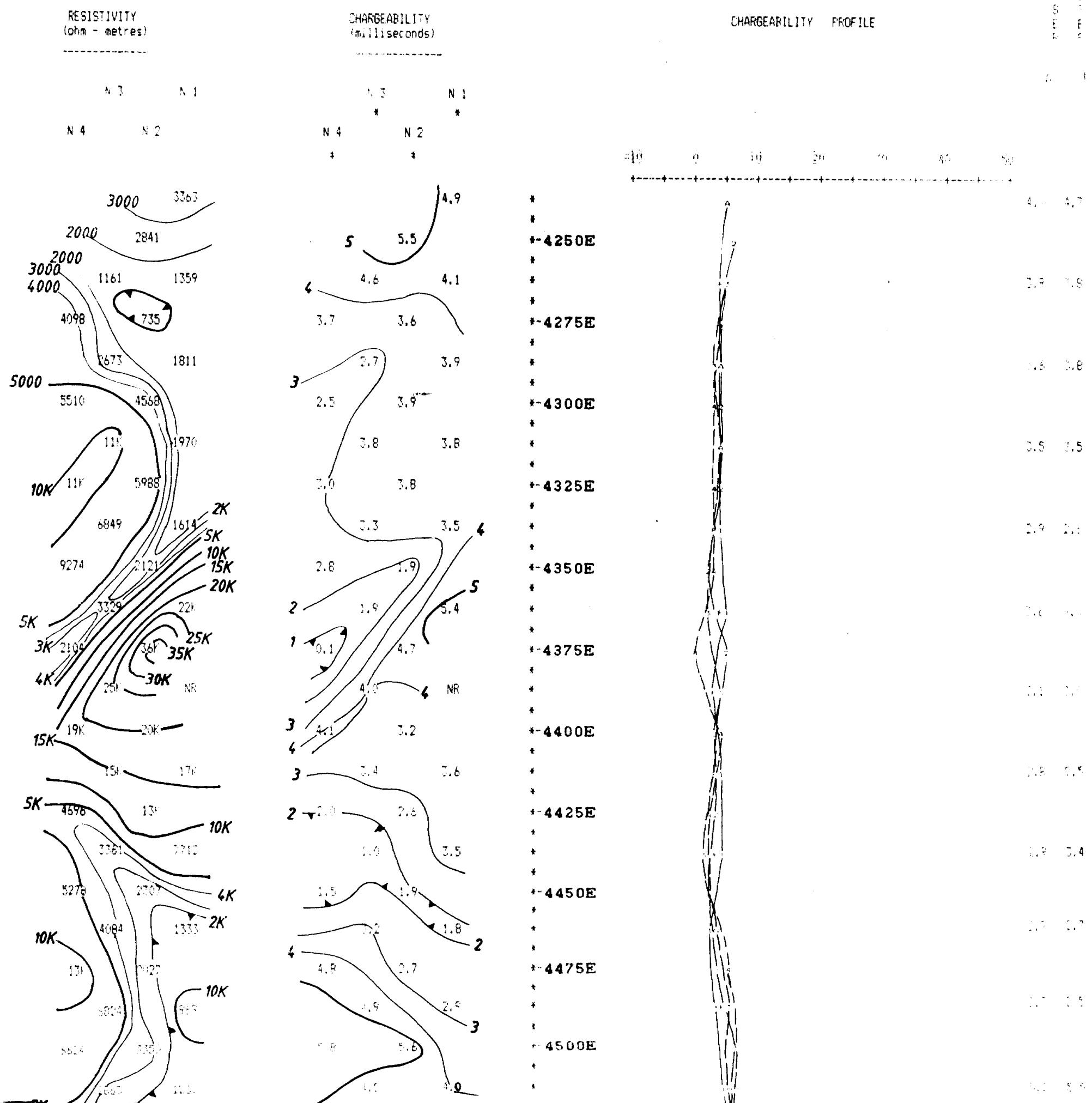
IP PSEUDOSECTIONS  
for  
GEOPHYSICAL REPORT  
on the  
Maisonville Township Property  
of  
GLEN AUDEN RESOURCES INC.  
by  
Greg Hodges  
September 30, 1986

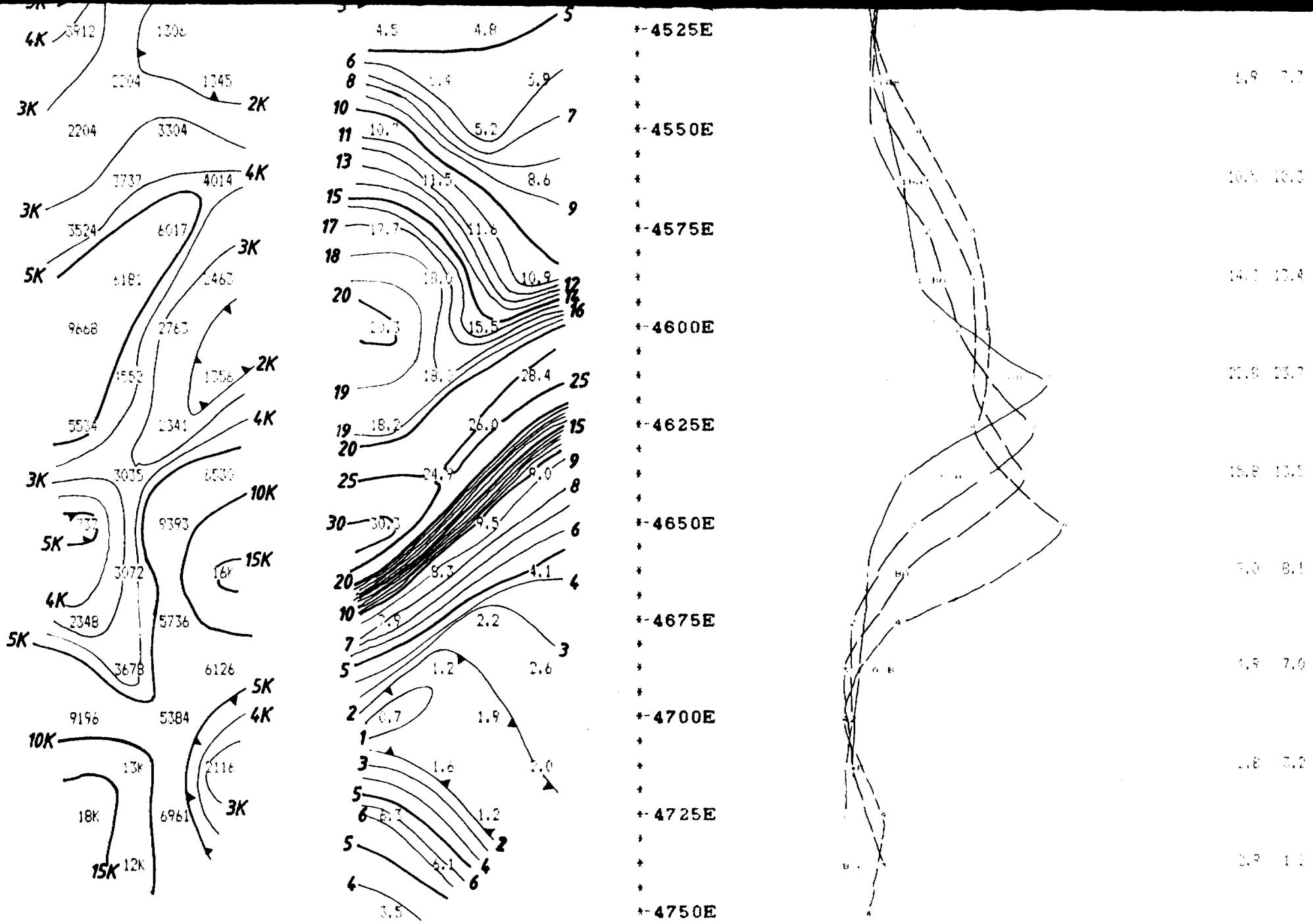
**RECEIVED**

MAR 25 1987

**MINING LANDS SECTION**

**SCALE : 1:1250**





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 10/6/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

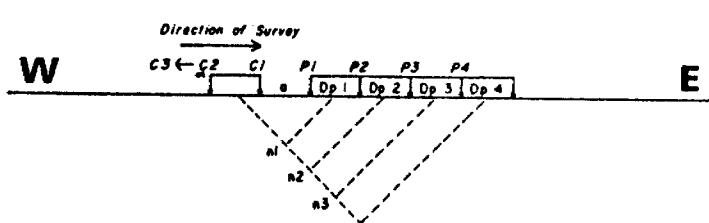
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

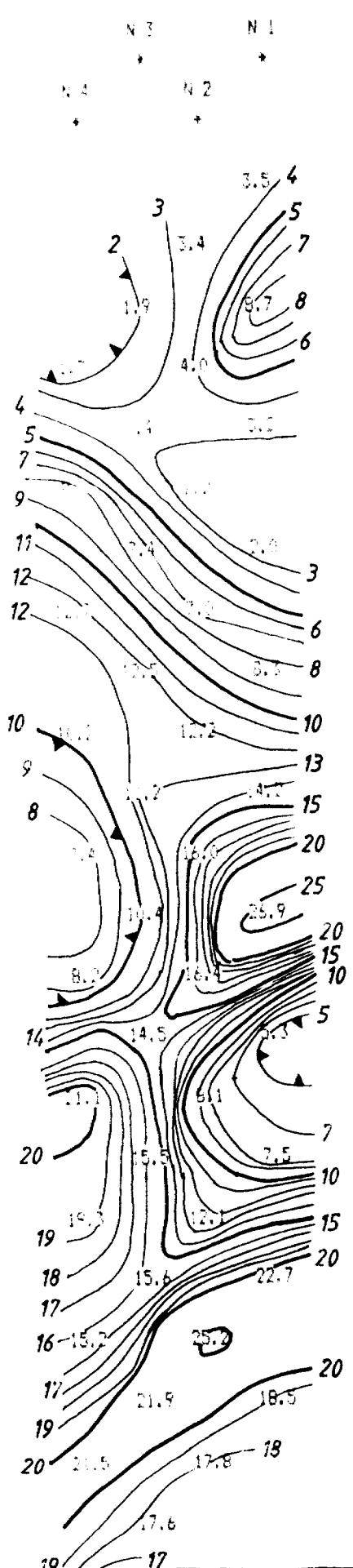
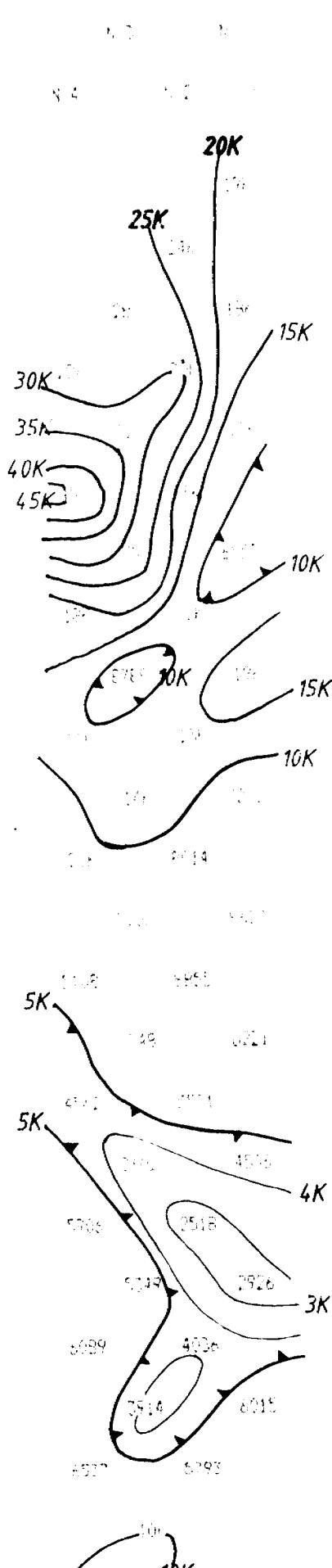
LINE 2750 N

SECTION E - 1 = 1:250

RESISTIVITY  
(ohm-meters)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY  
(milliseconds)



-10

+10

-20

+20

-30

+30

-40

+40

-50

+50

-60

+60

-70

+70

-80

+80

-90

+90

-100

+100

-110

+110

-120

+120

-130

+130

-140

+140

-150

+150

-160

+160

-170

+170

-180

+180

-190

+190

-200

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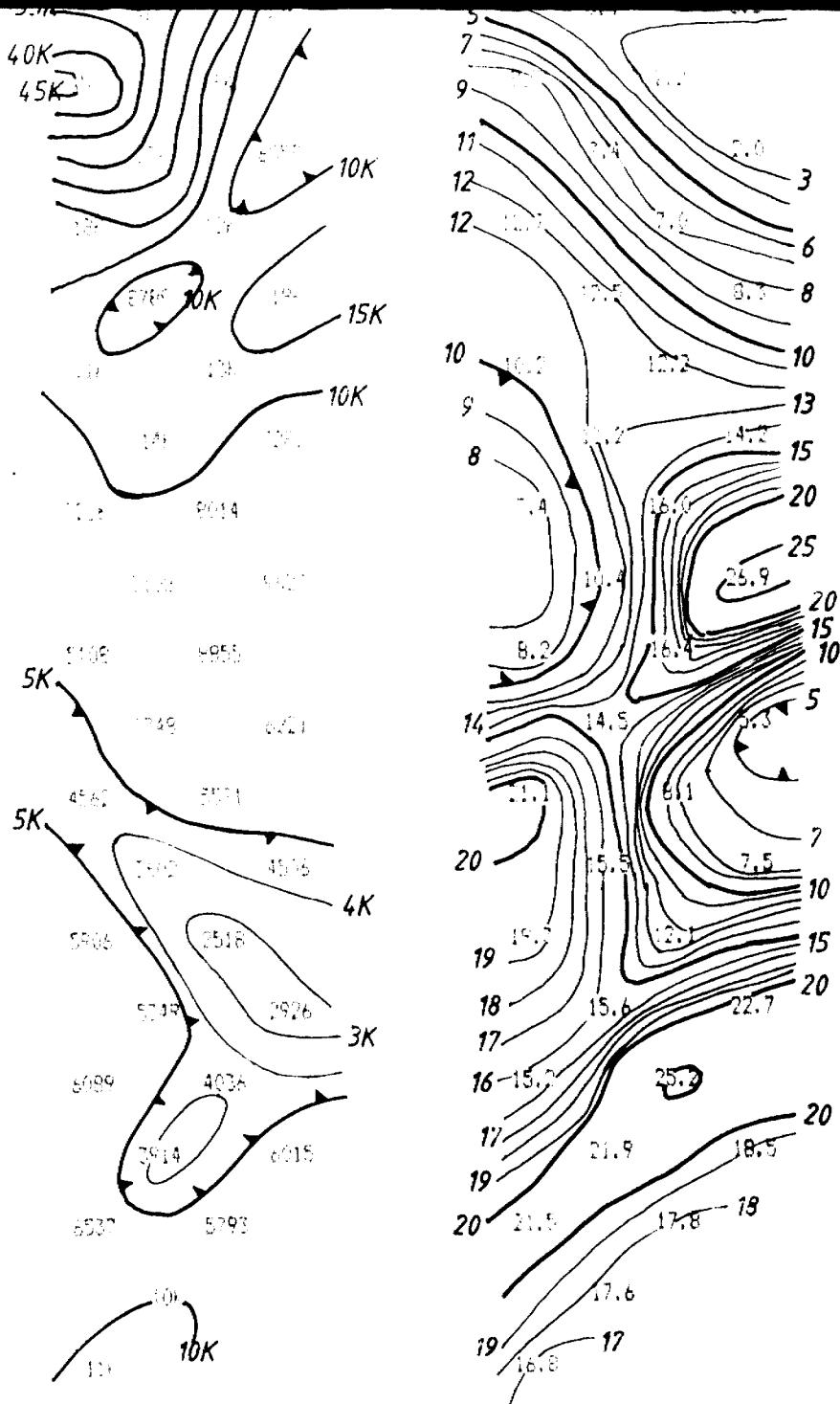
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+960

-970

+970

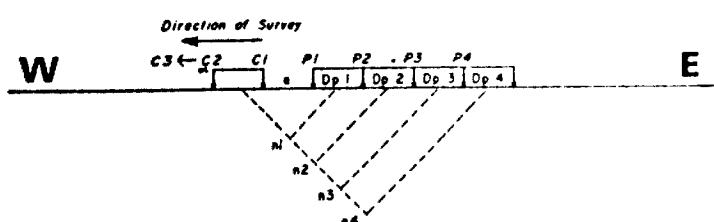
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+  
+  
+ 4450E  
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+  
+ 4475E  
+  
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+ 4500E  
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+ 4575E  
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+ 4600E  
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+  
+ 4625E  
+  
+  
+  
+  
+ 4650E

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Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 10/6/86  
Operator : CGK  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted

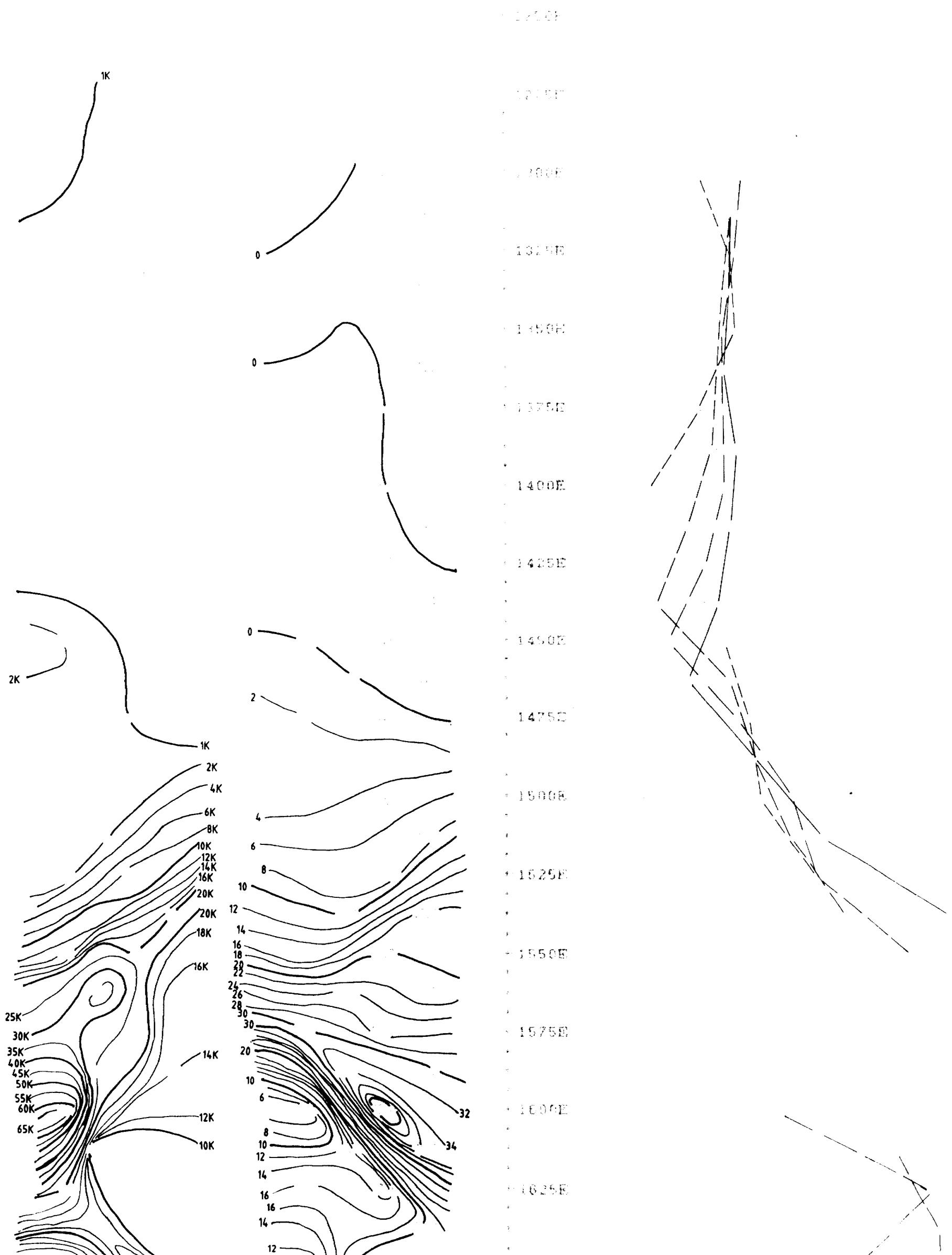


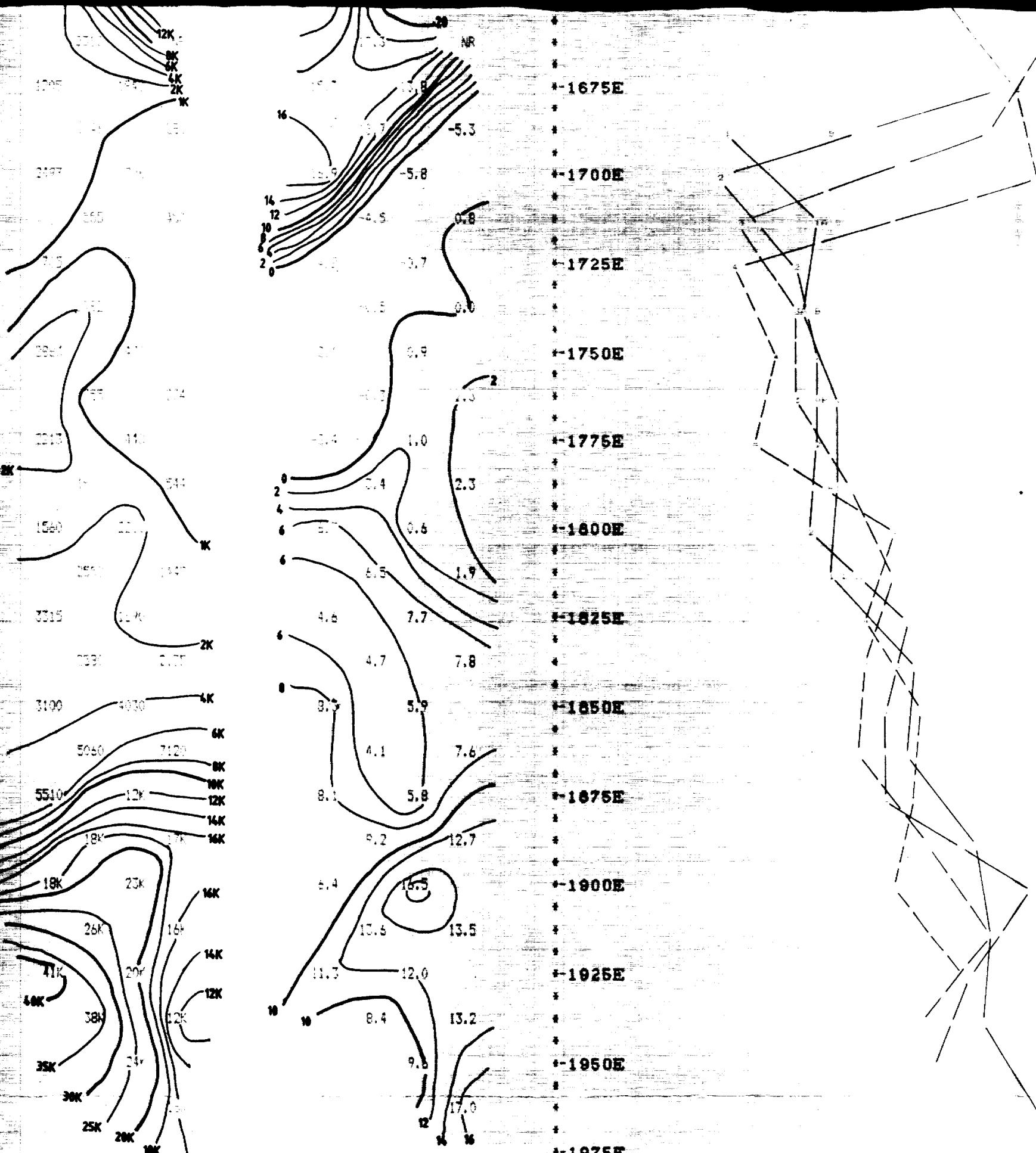
**R. S. MIDDLETON EXPLORATION  
SERVICES INC.**

## IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 2850 N





Property : MAISONVILLE TWP.

Client : GLEN AUDEN RESOURCES

Date of Survey : 14/8/86

Operator : CGK

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### Mode : TIME DOMAIN

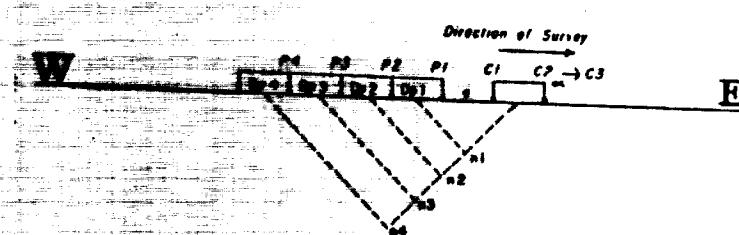
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Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec.

Delay time : 360 ms

Integration Time : 780 ms



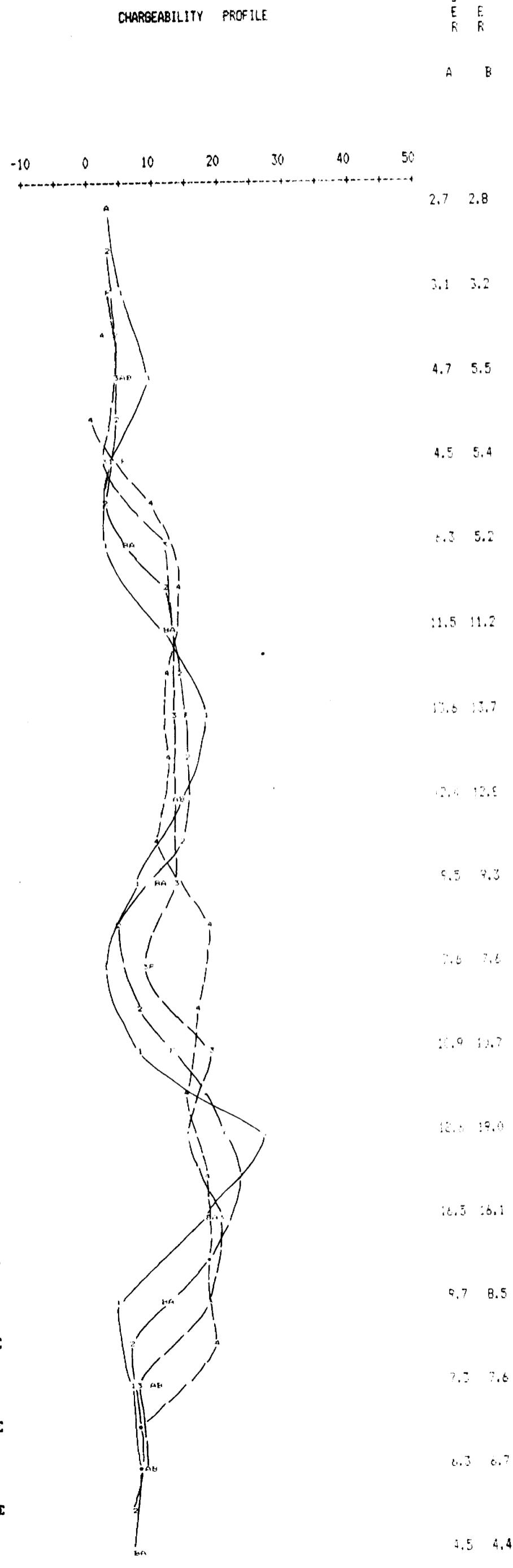
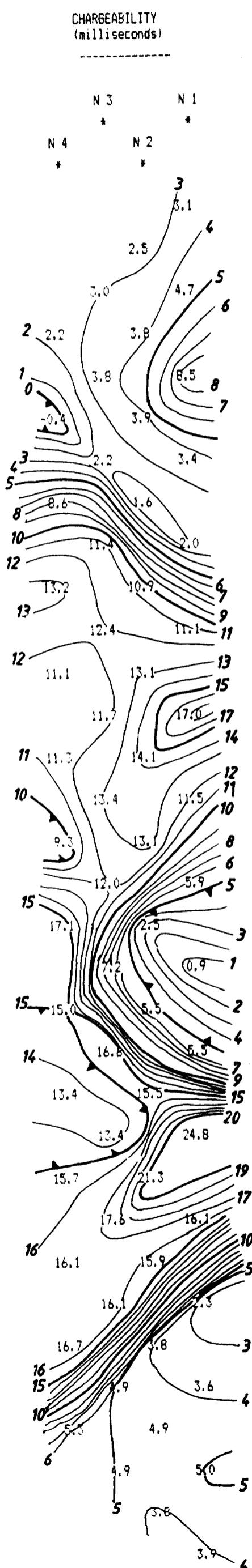
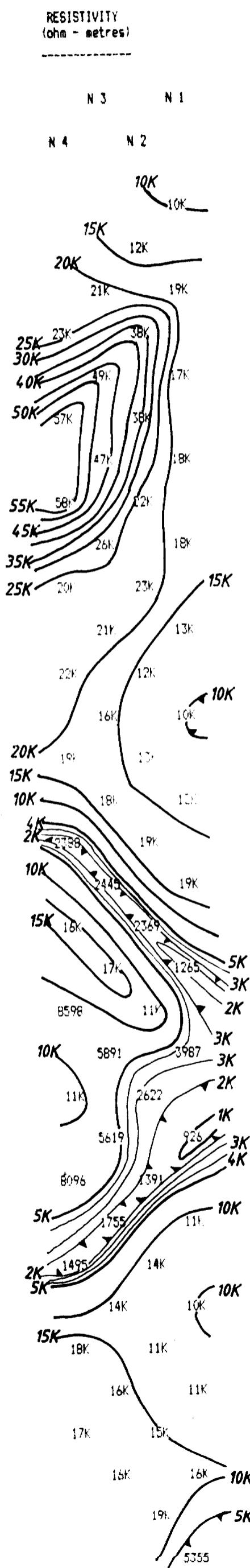
**R.S. MIDDLETON EXPLORATION  
SERVICES INC.**

IB-Encyclopedias/Encyclo-N = 1 to 4

**2000 EDITION** **25 M**

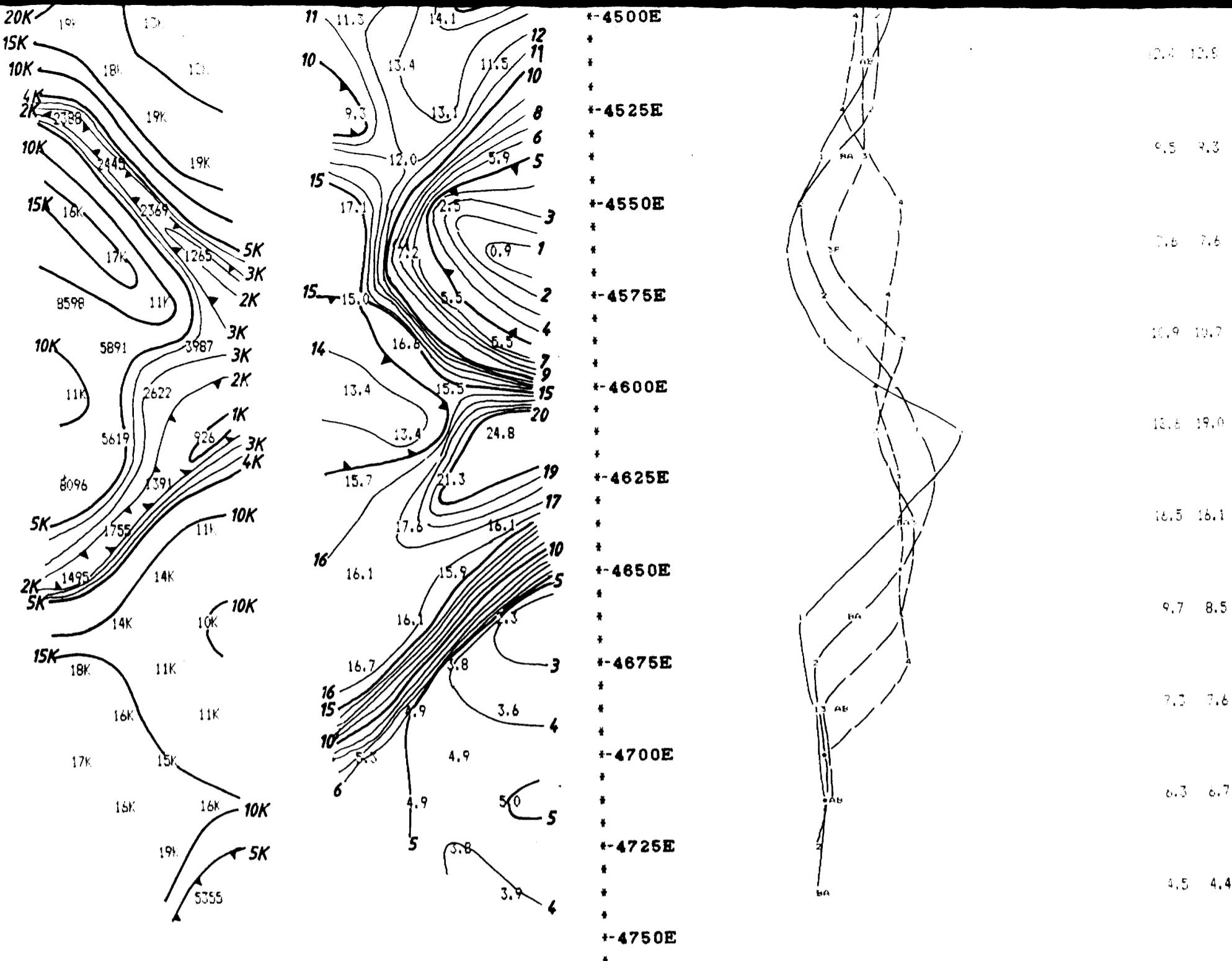
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SCALE = 1:1250



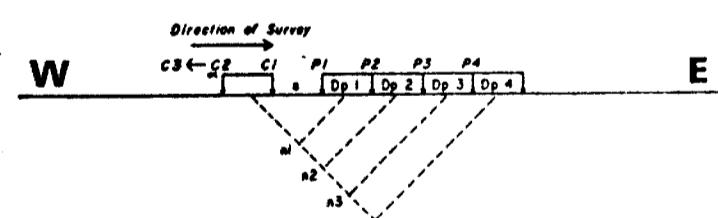
F  
I  
L  
T  
E  
R

4.5 4.4



Property : MAISONVILLE TWP. GRID 1  
 Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 11/6/86  
 Operator : CGK  
 Electrode Array : DIPOLE - DIPOLE  
 Mode : TIME DOMAIN  
 Receiver : SCINTREX IPR-11  
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 Slice # 7 Plotted



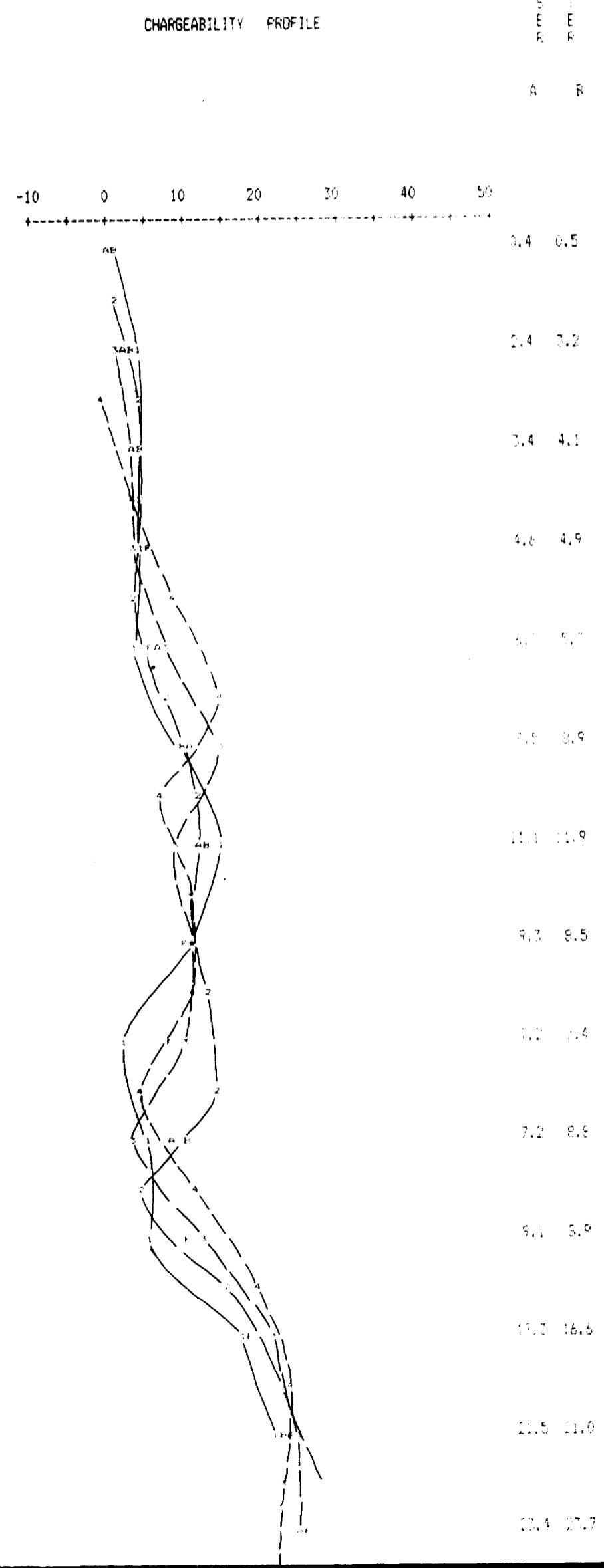
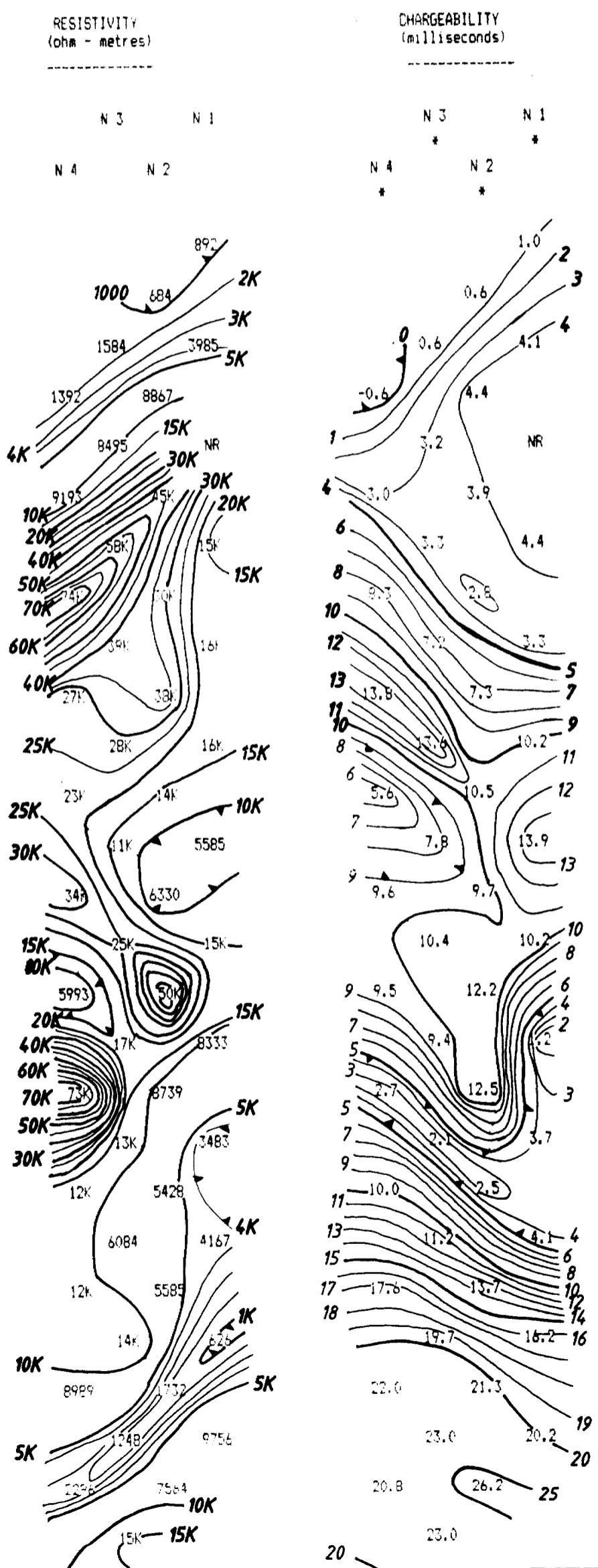
R. S. MIDDLETON EXPLORATION  
 SERVICES INC.

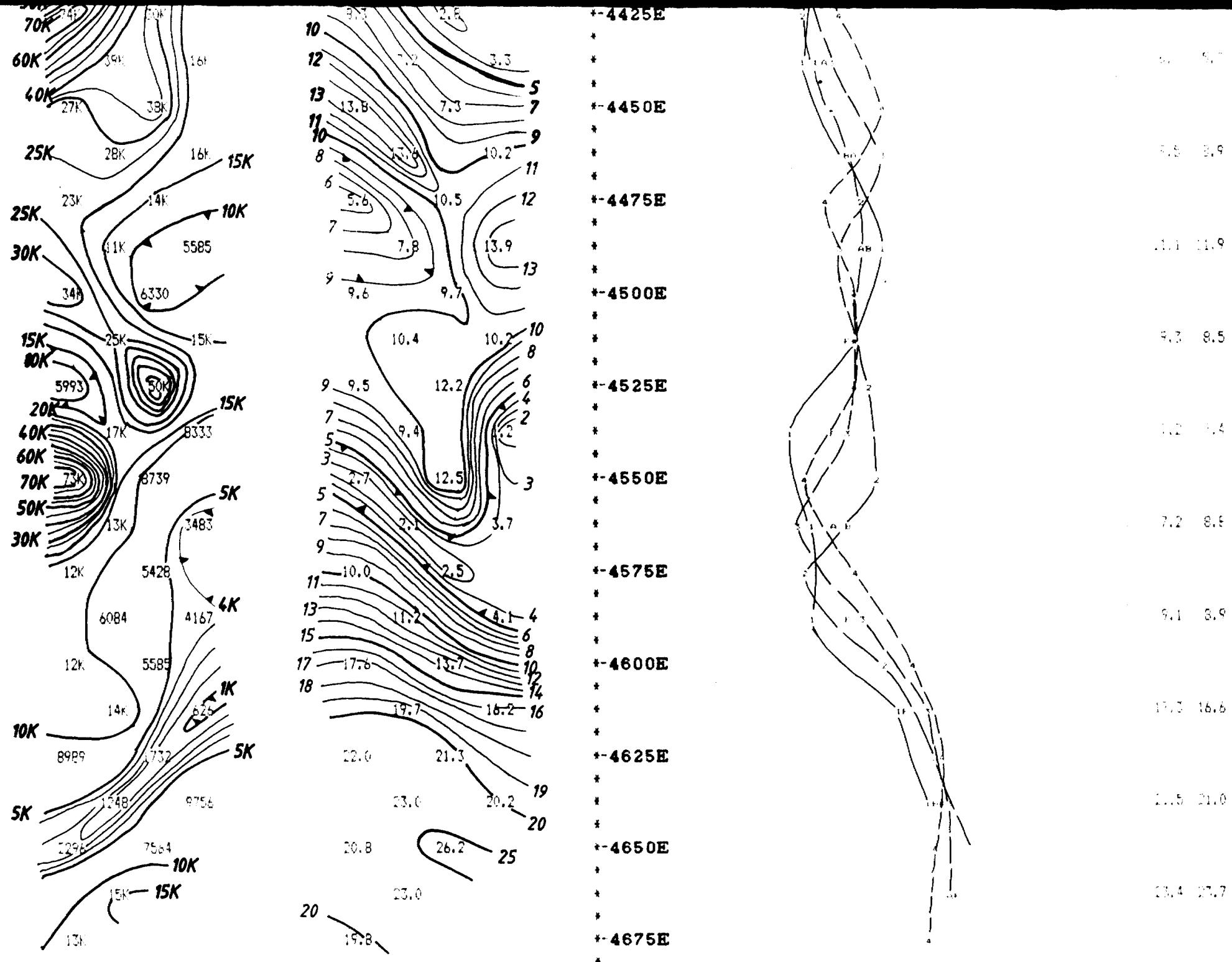
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

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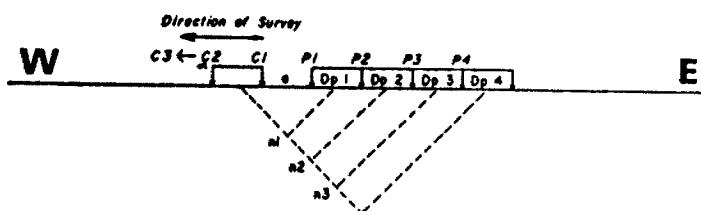
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Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 11/6/86  
Operator : CGK  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted



R. S. MIDDLETON EXPLORATION  
SERVICES INC.

## IP Pseudosections for N = 1 to 4

a. Spacing = 25 M

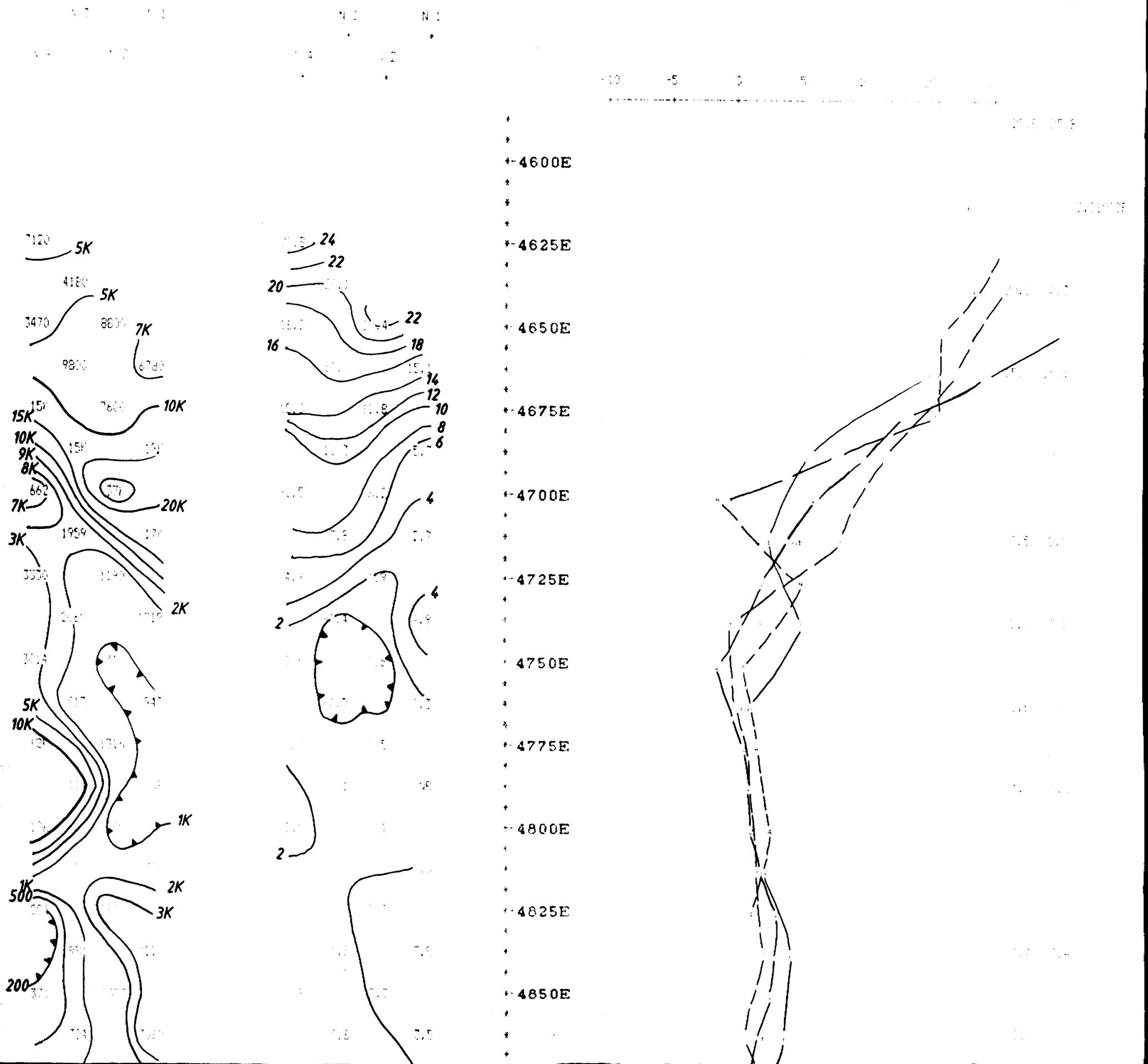
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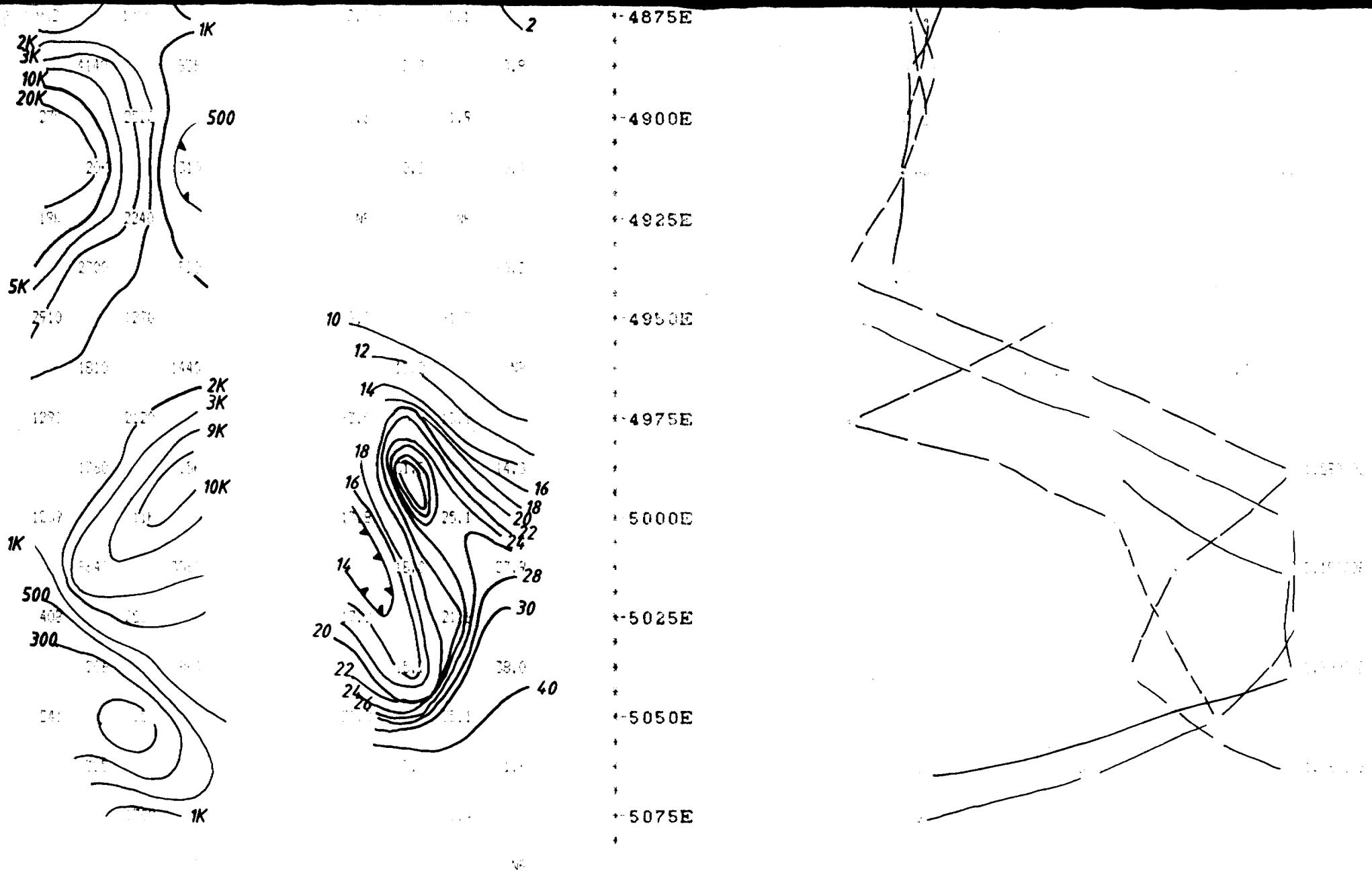
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RESISTIVITY  
ohm-meters

PERMEABILITY  
milli-seconds

CHARGEABILITY  
microvolts





SCALE : 1 : 1250

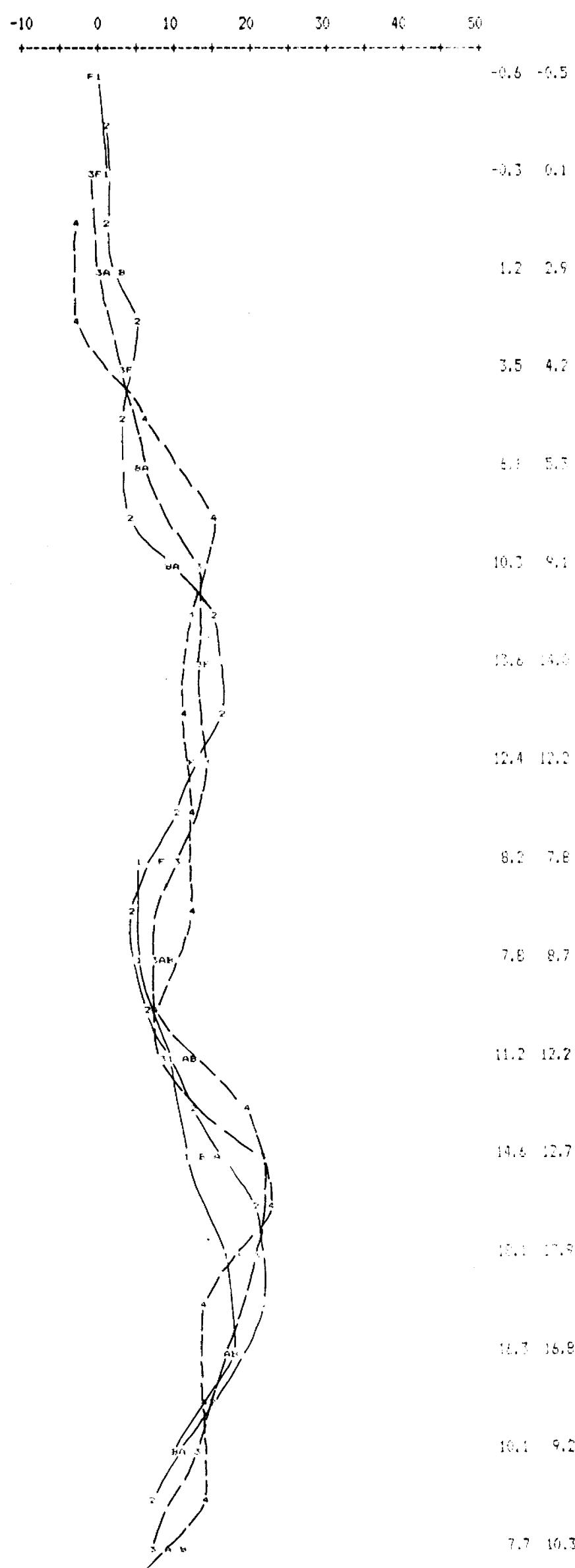
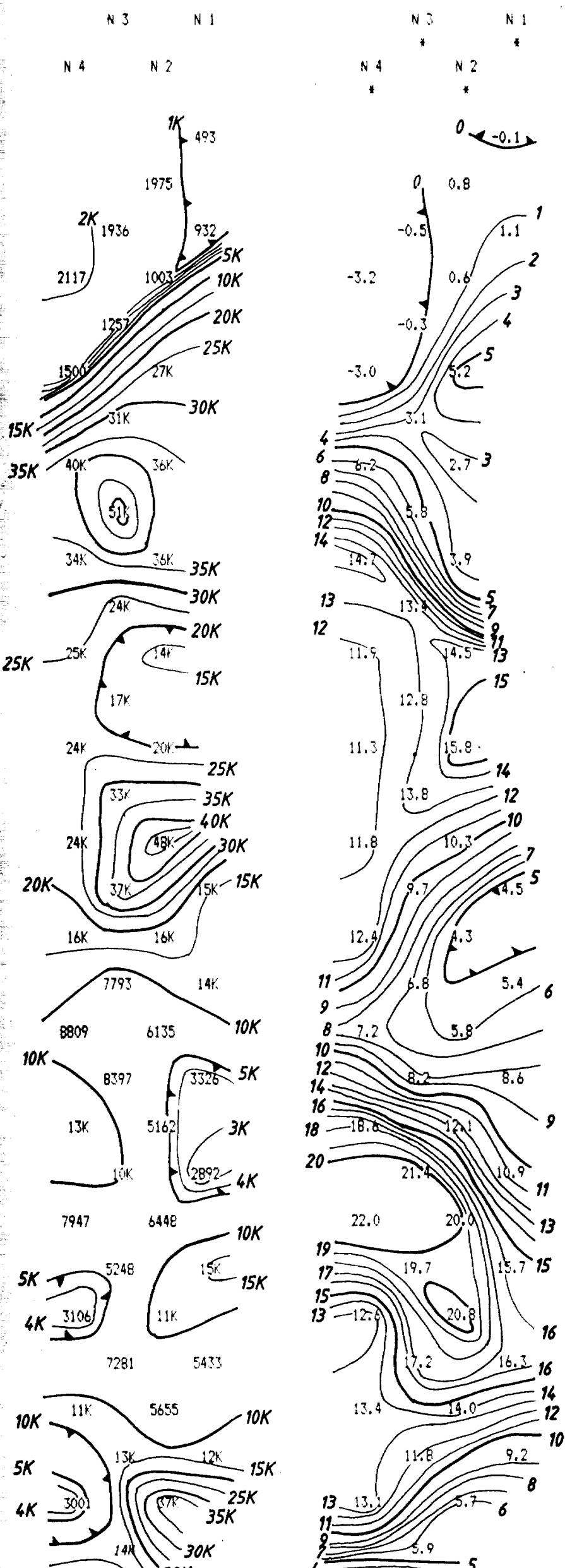
EASTING  
NORTHING

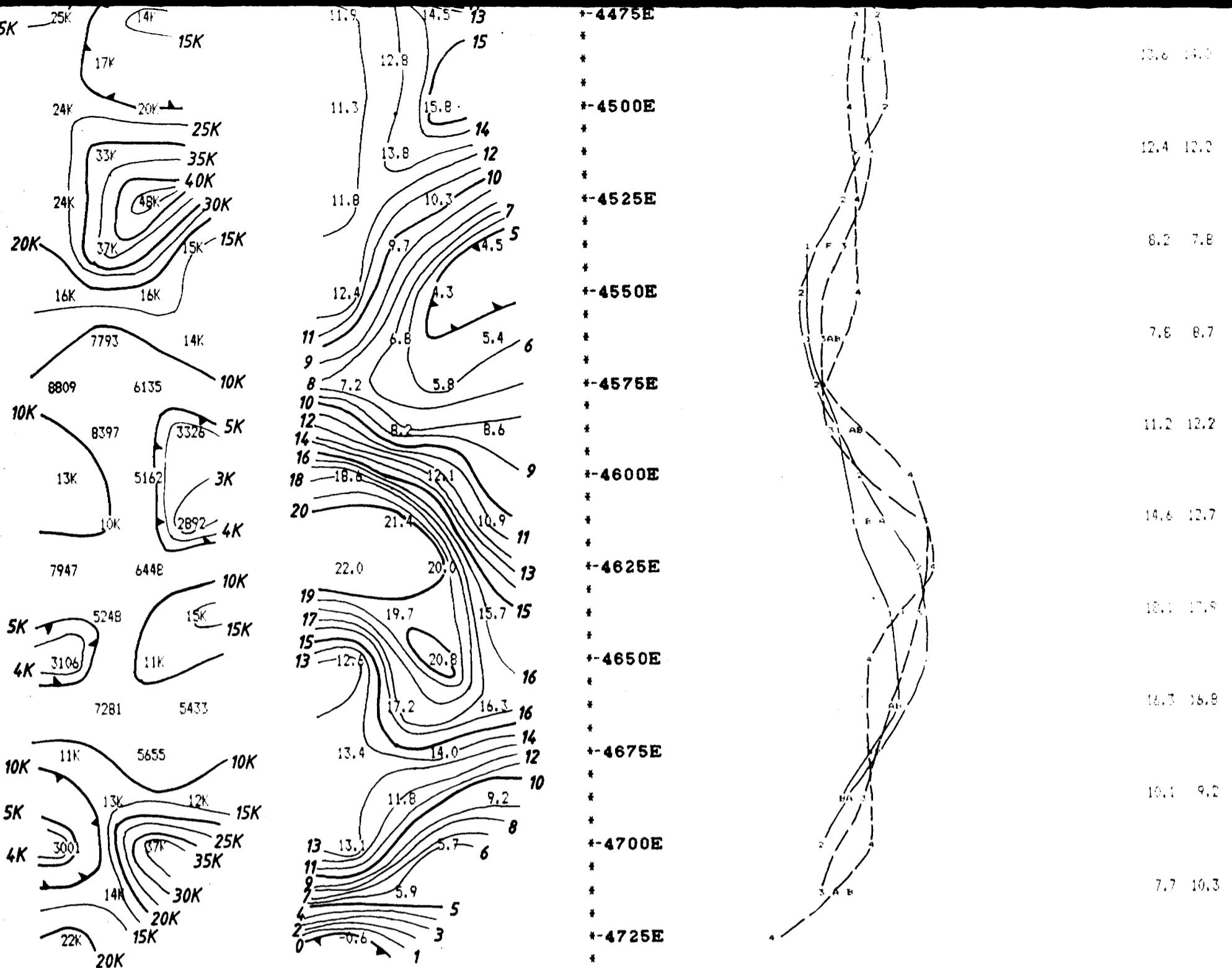
RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

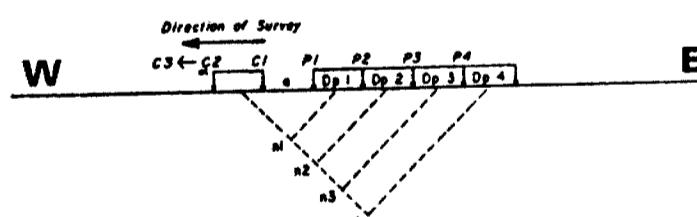
A B





Property : MAISONVILLE TWP. GRID 1  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 12/6/86  
Operator : CDJ  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted



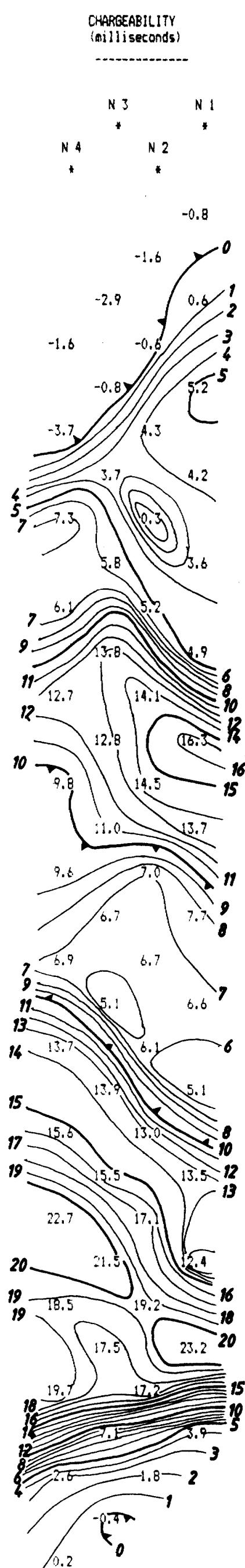
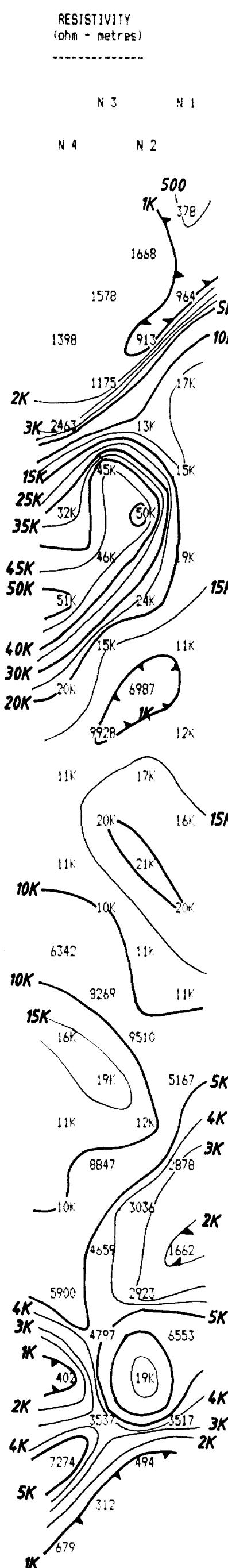
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

Figure 10. The effect of the number of hidden neurons  $N_h$  on the training error.

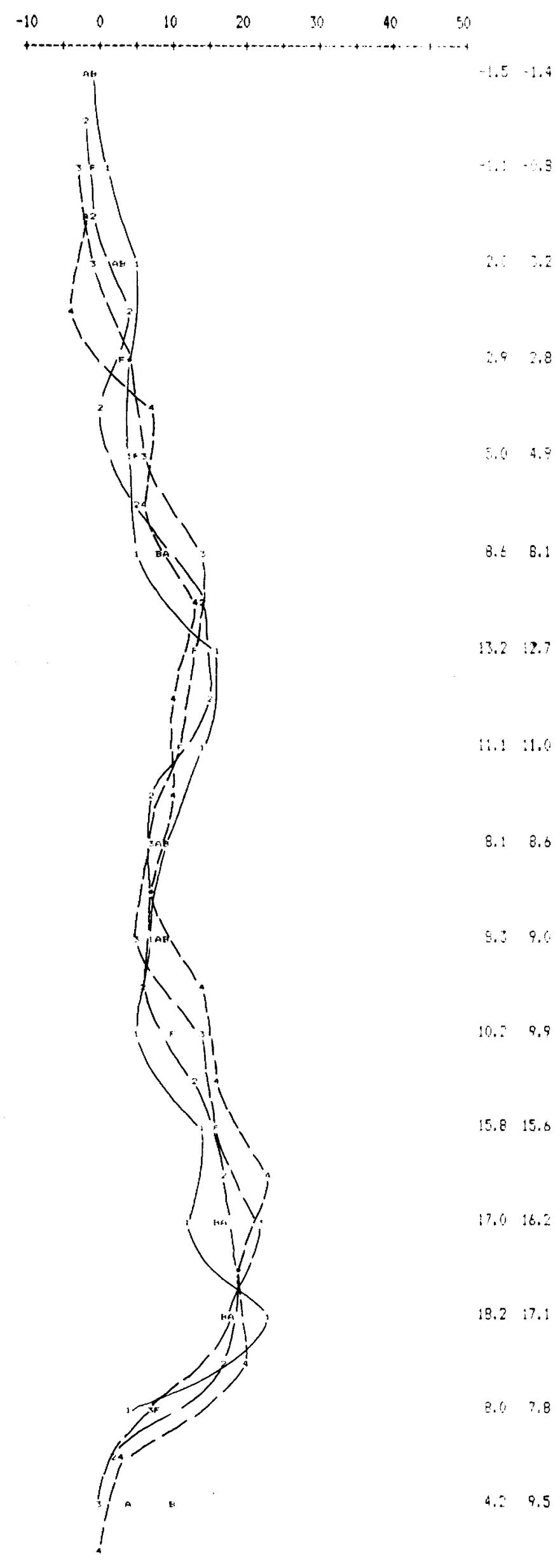
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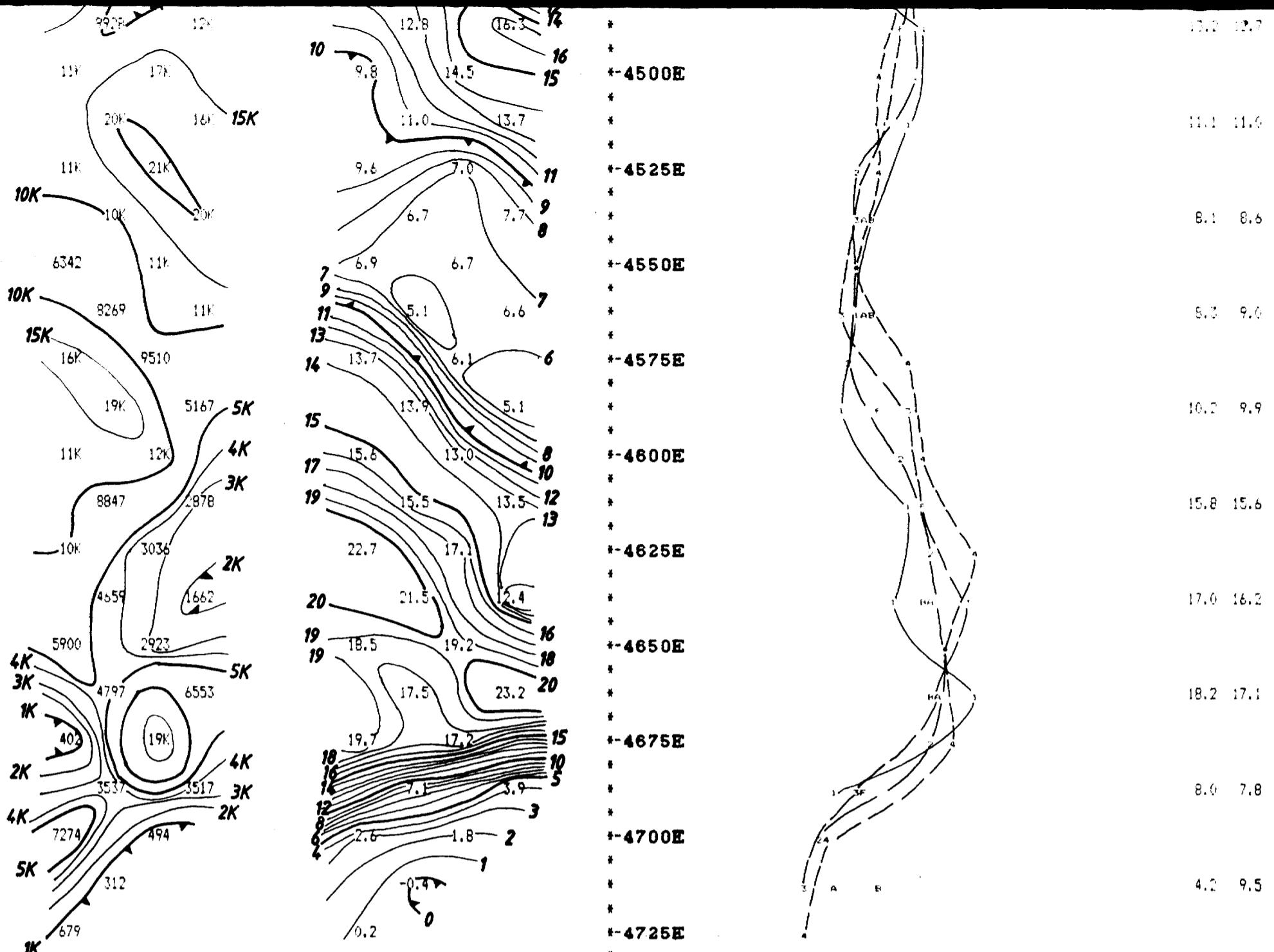
LINE 3100 N

SCALE = 1 : 1250



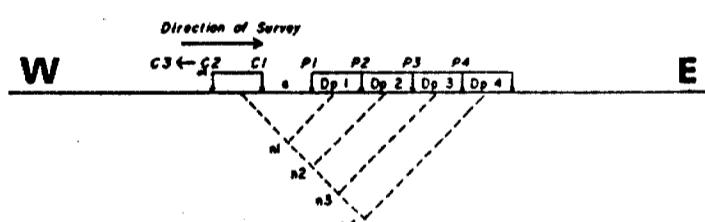
CHARGEABILITY PROFILE





Property : MAISONVILLE TWP. GRID 1  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 12/6/86  
Operator : CDJ  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted

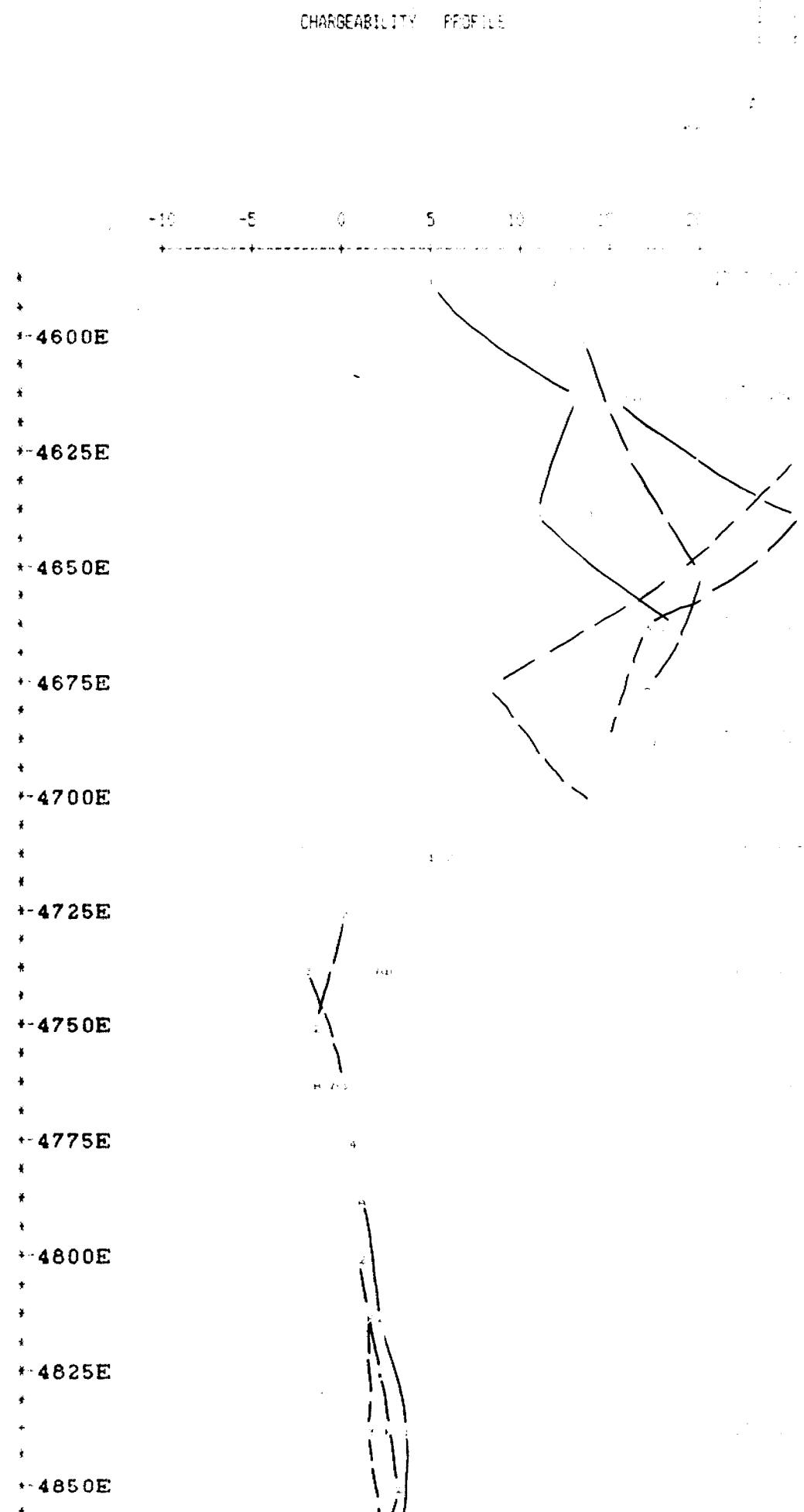
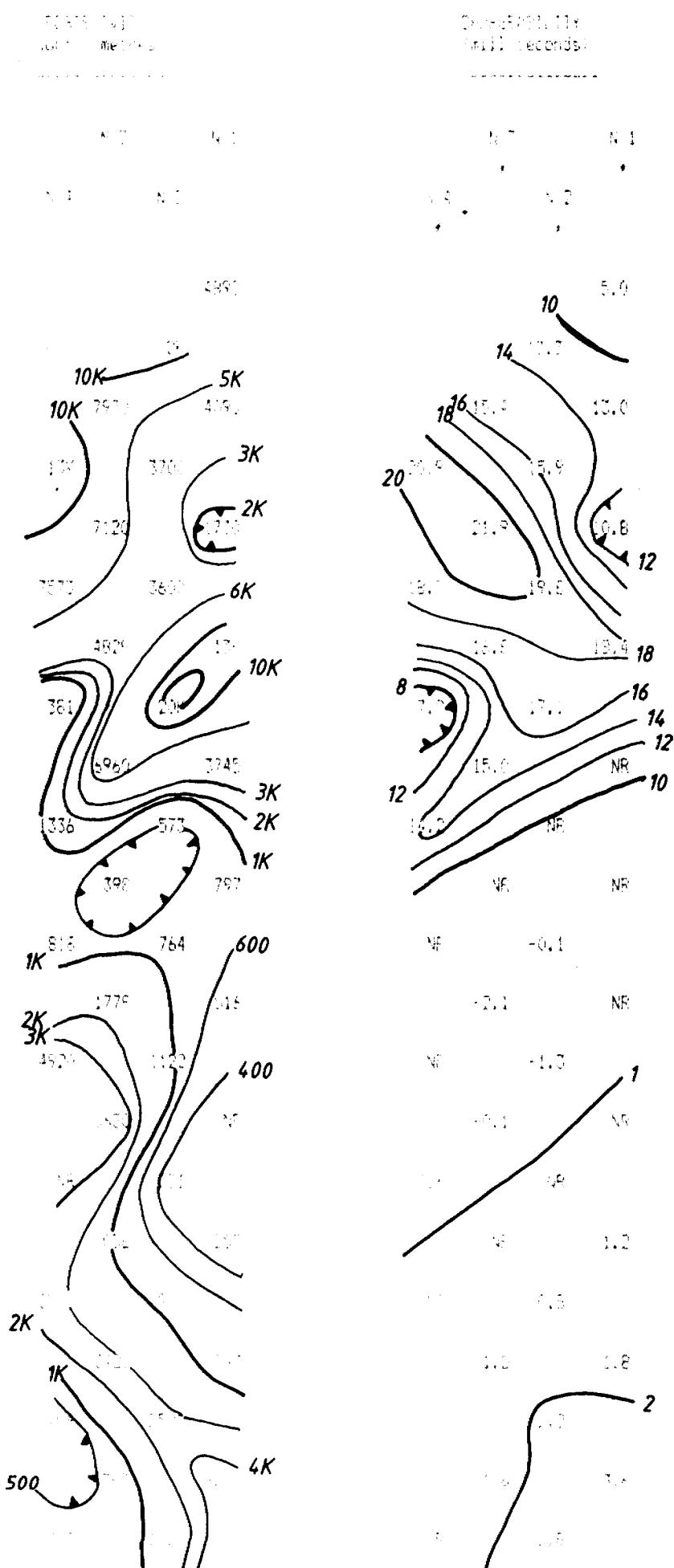


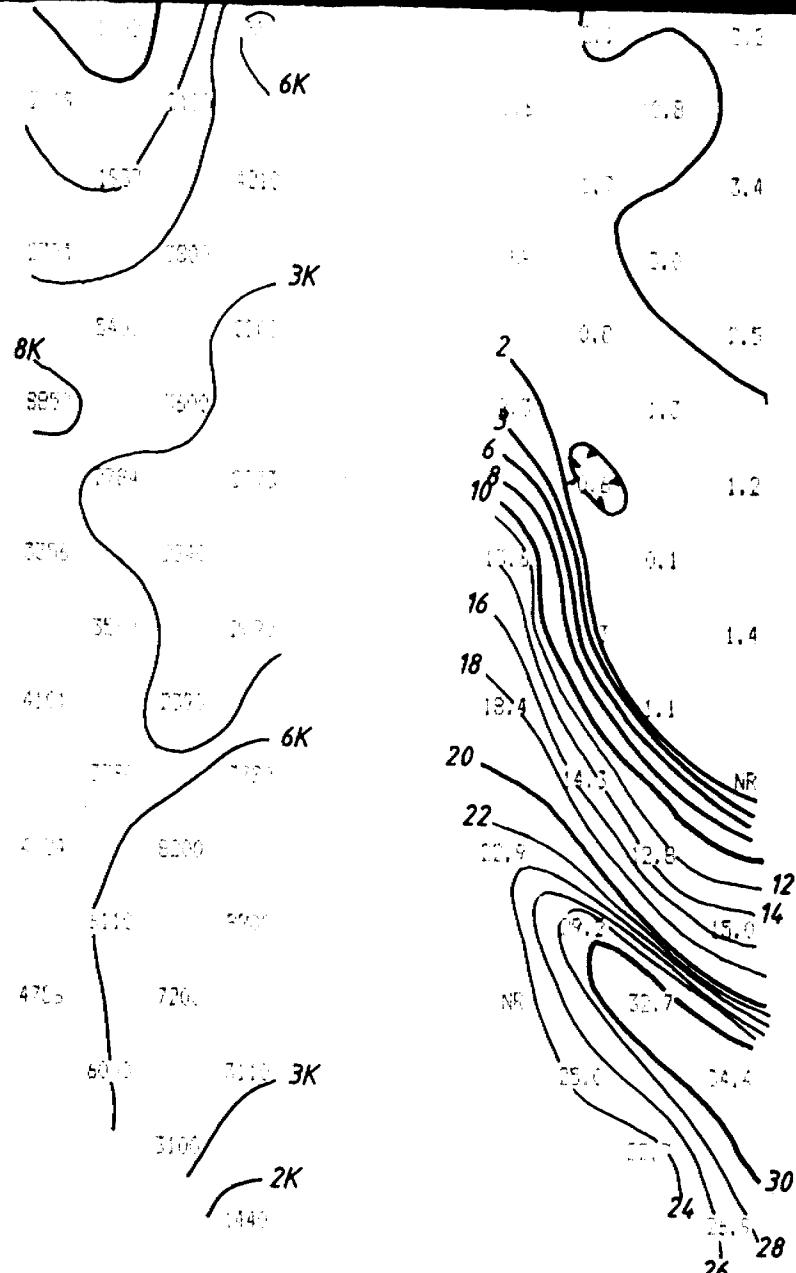
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

### IP Pseudosections for N = 1 to 4

Line Spacing = 25 M

SCOTT B. E. 12-1250





\*-4875E  
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\*-4900E  
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\*-4925E  
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\*-4950E  
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\*-4975E  
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\*-5000E  
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\*-5025E  
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\*-5050E  
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\*  
\*-5075E

Property : MAISONVILLE TWP. GRID 1  
Client : GLEN AIDEN RESOURCES

Date of Survey : 12/8/86

Operator : CGH

Electrode Array : DIPOLE = DIPOLE

Mode : TIME DOMAIN

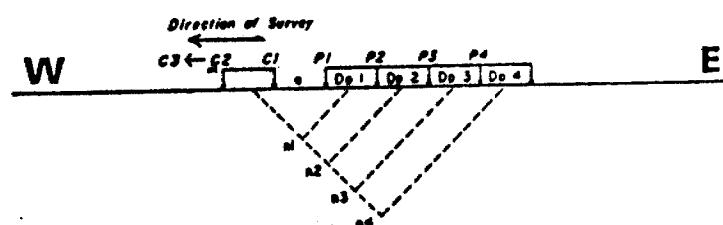
Receiver : SCINTREX TBR-11

Transmitter : SCINTBEX 1EC-B/250W

Pulse Time : 2 Sec on - 2 Sec off

Delay Time : 360 ms

Intersection Line 1: 380 m



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

## 1F Pseudosections for N = 1 to 4

Lat Spacing = 25 M

SCALE = 1:1250

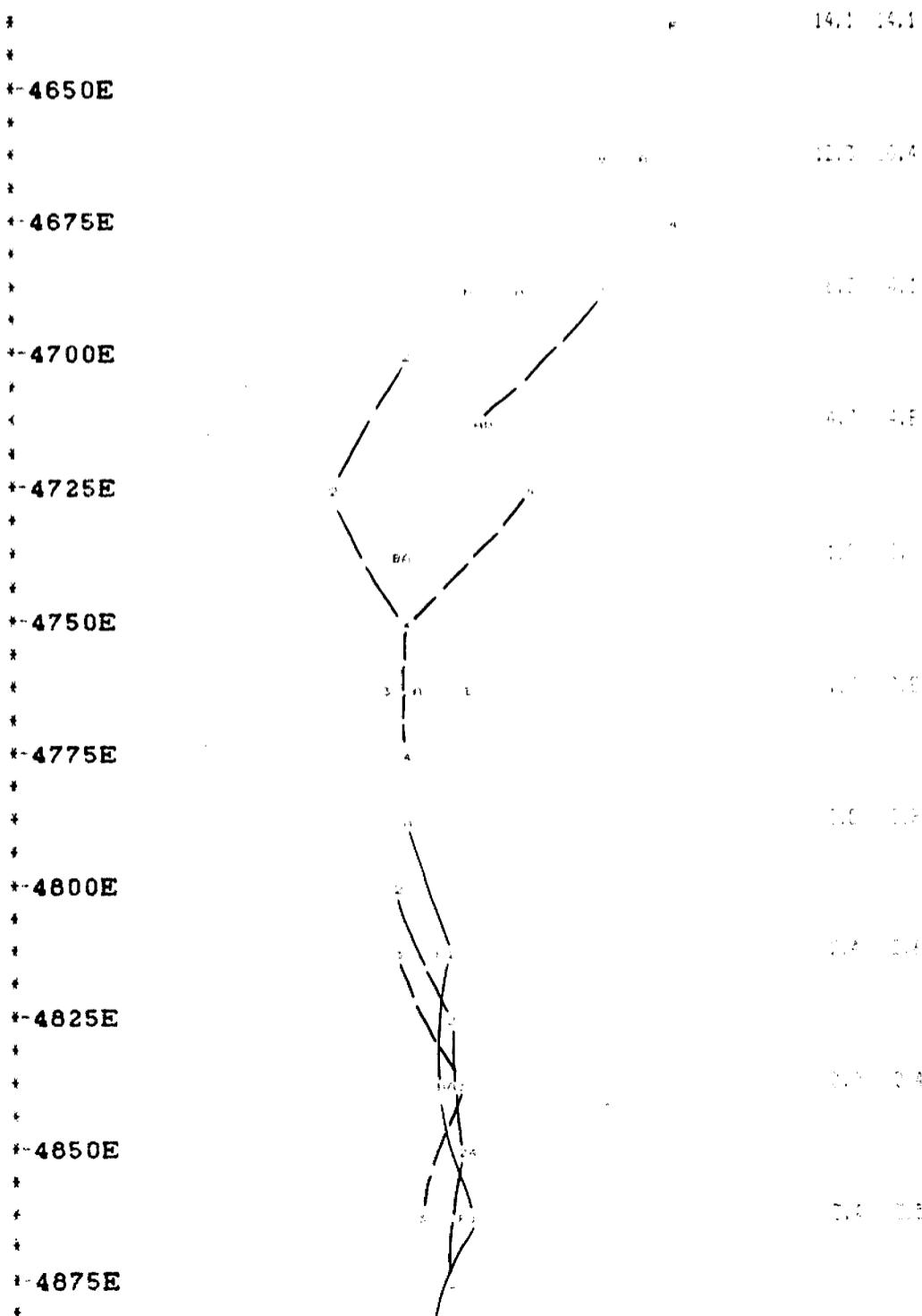
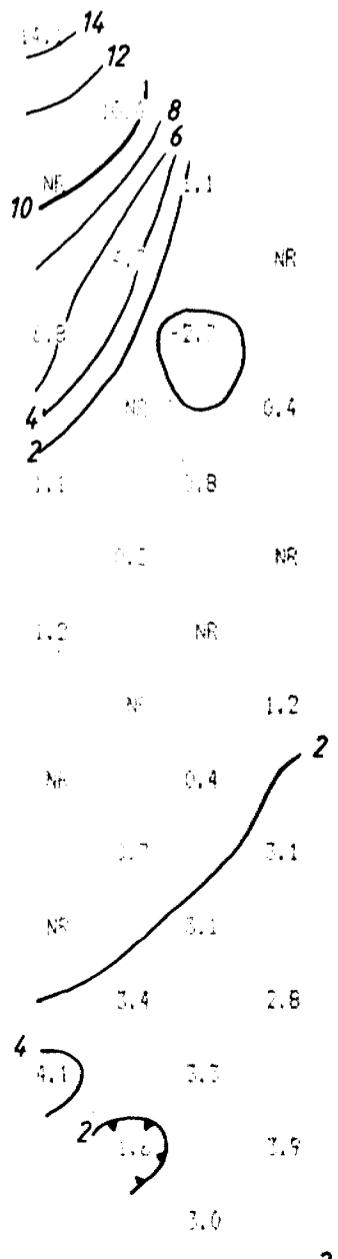
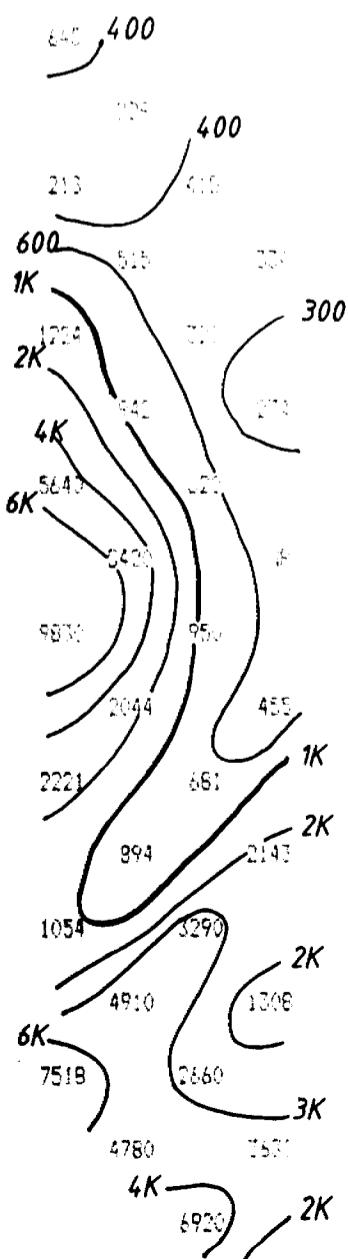
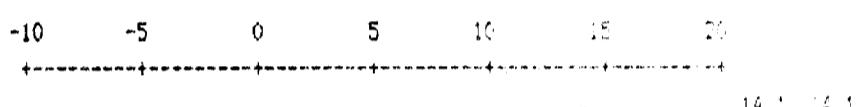
RESISTIVITY  
(ohm-metres)

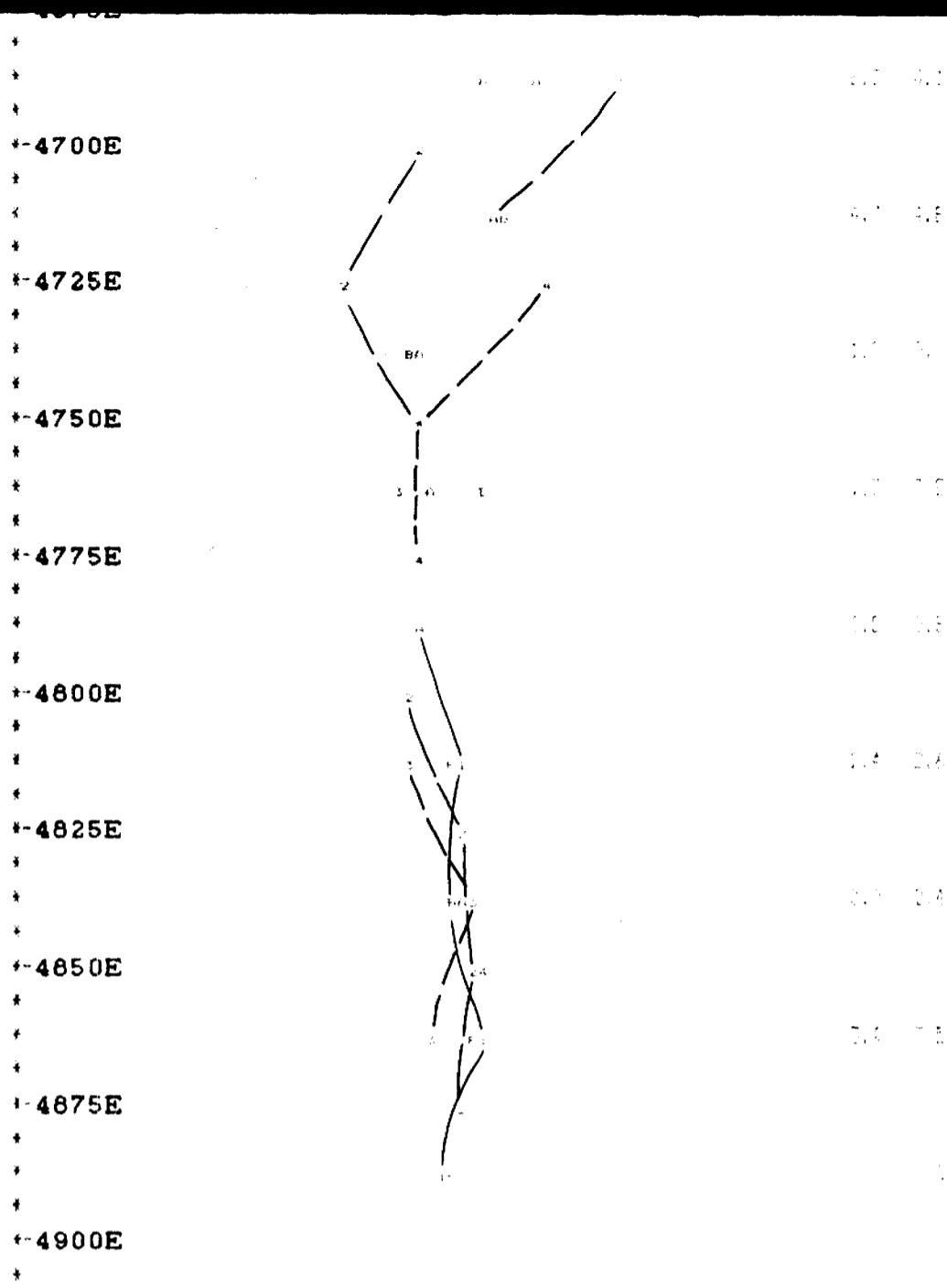
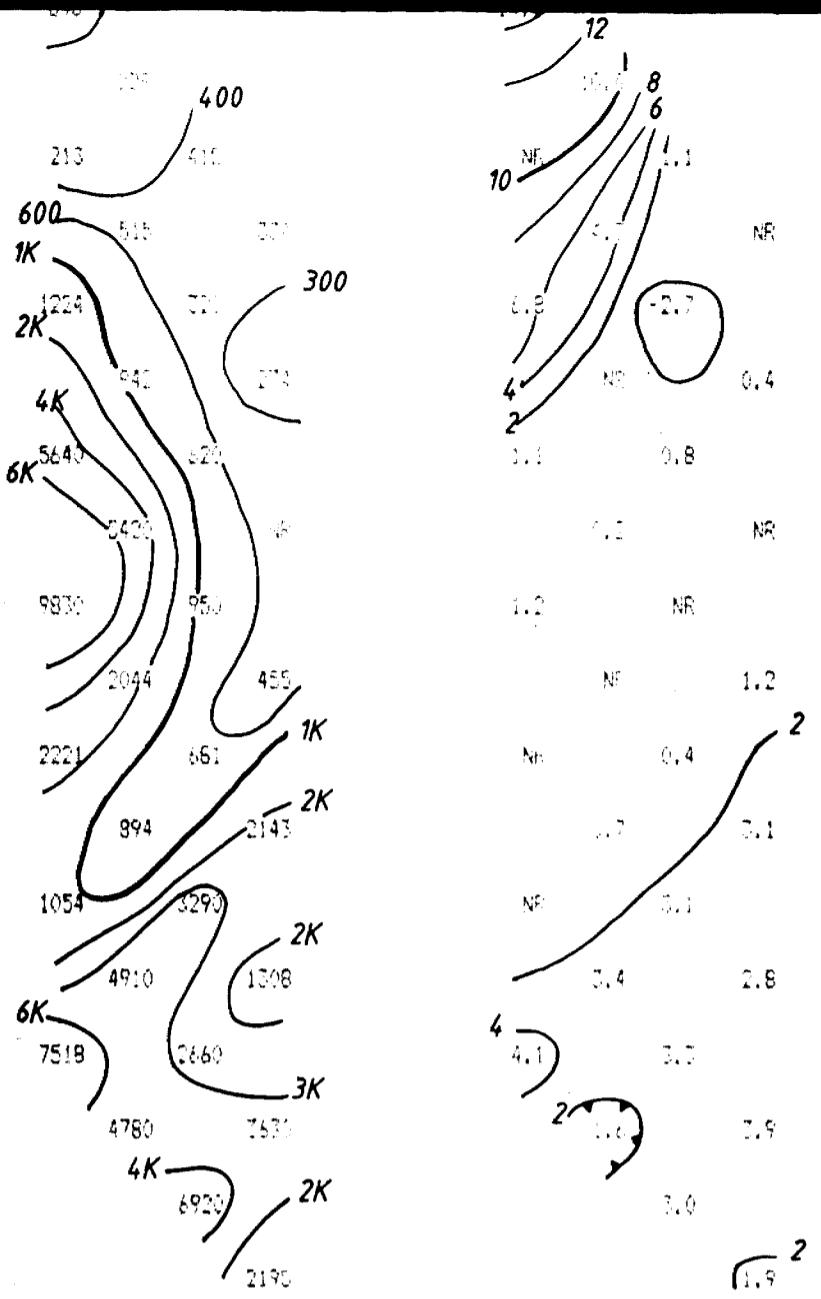
CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

N 3 N 1  
N 4 N 2

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





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES

Date of Survey : 10/8/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

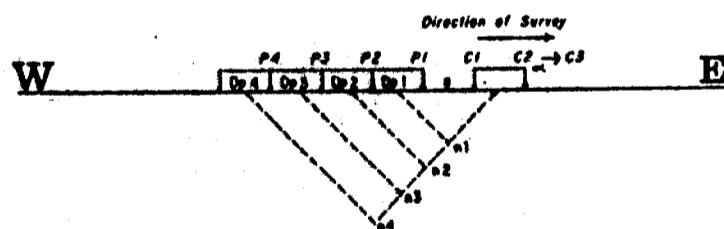
Receiver : SCINTREX IFR-11

Transmitter : SCINTREX IPC-8/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



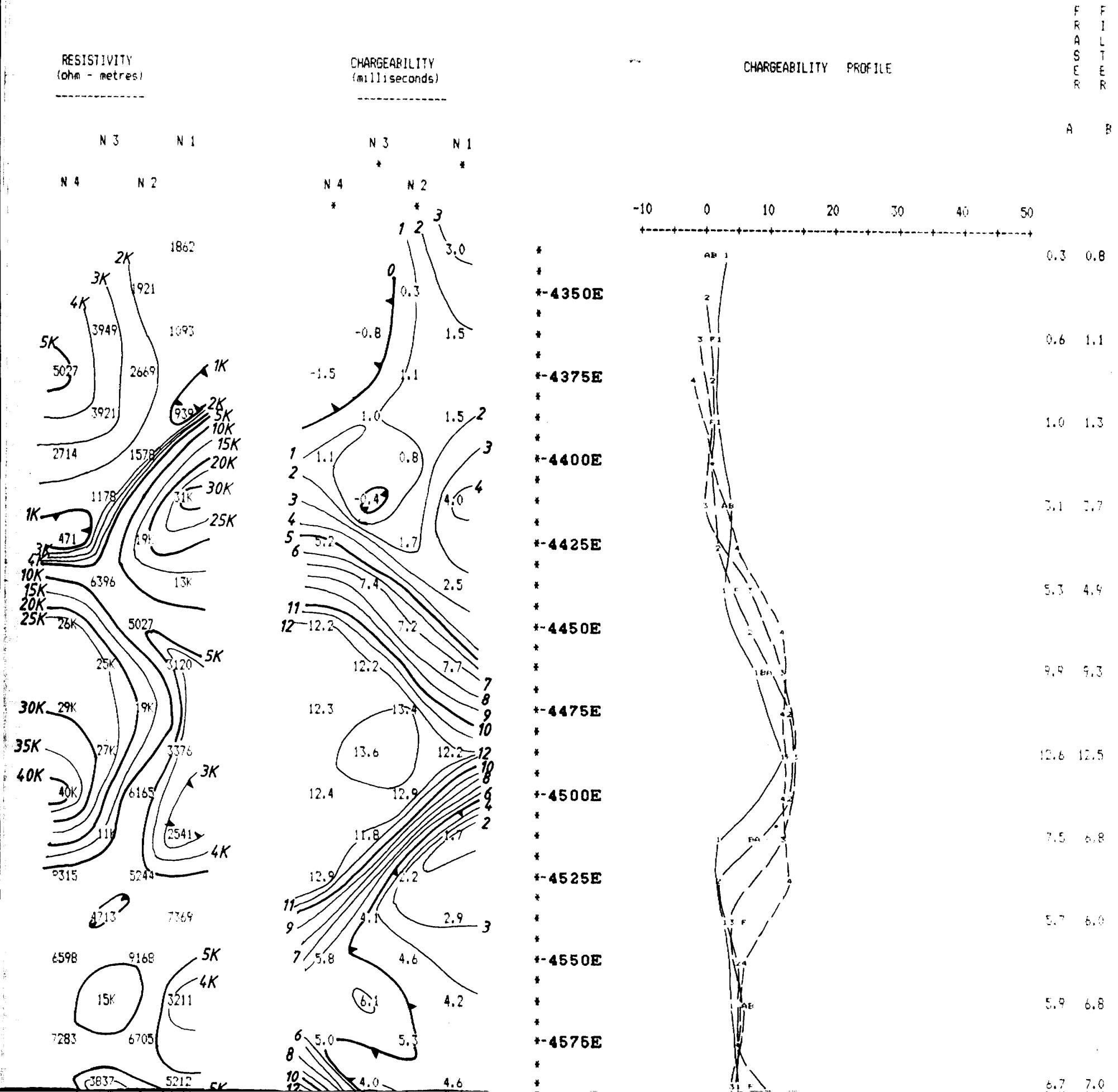
\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

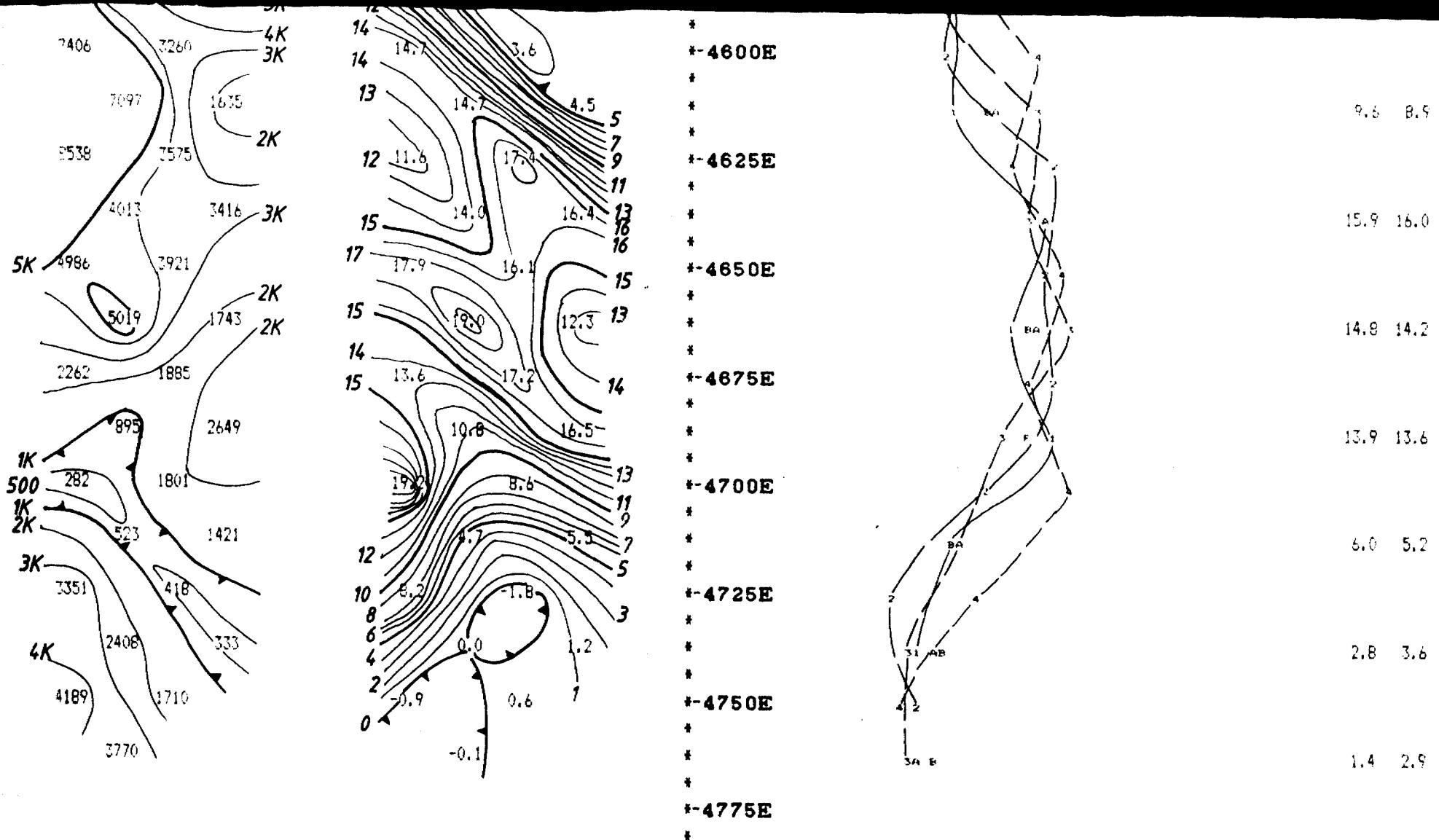
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 3200 N

**SCALE : 1:1250**





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 13/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

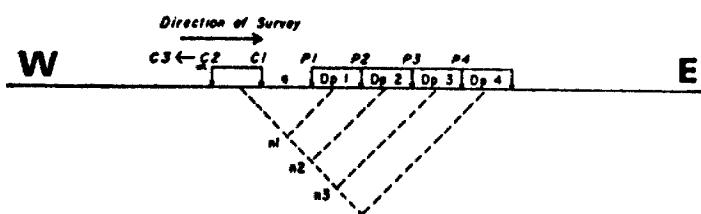
Transmitter : SCINTREX IPC-8/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



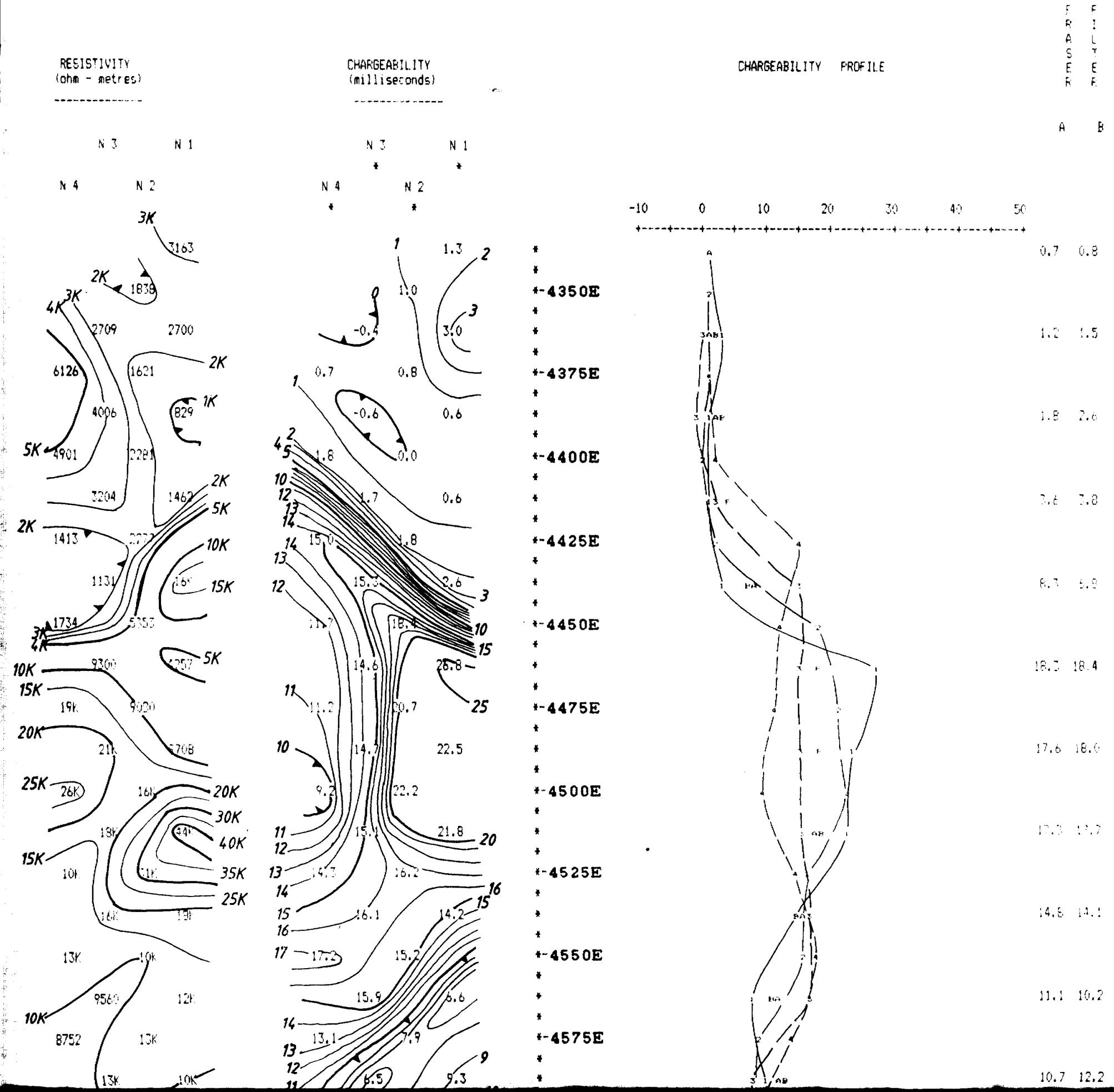
\*\*\*\*\*
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

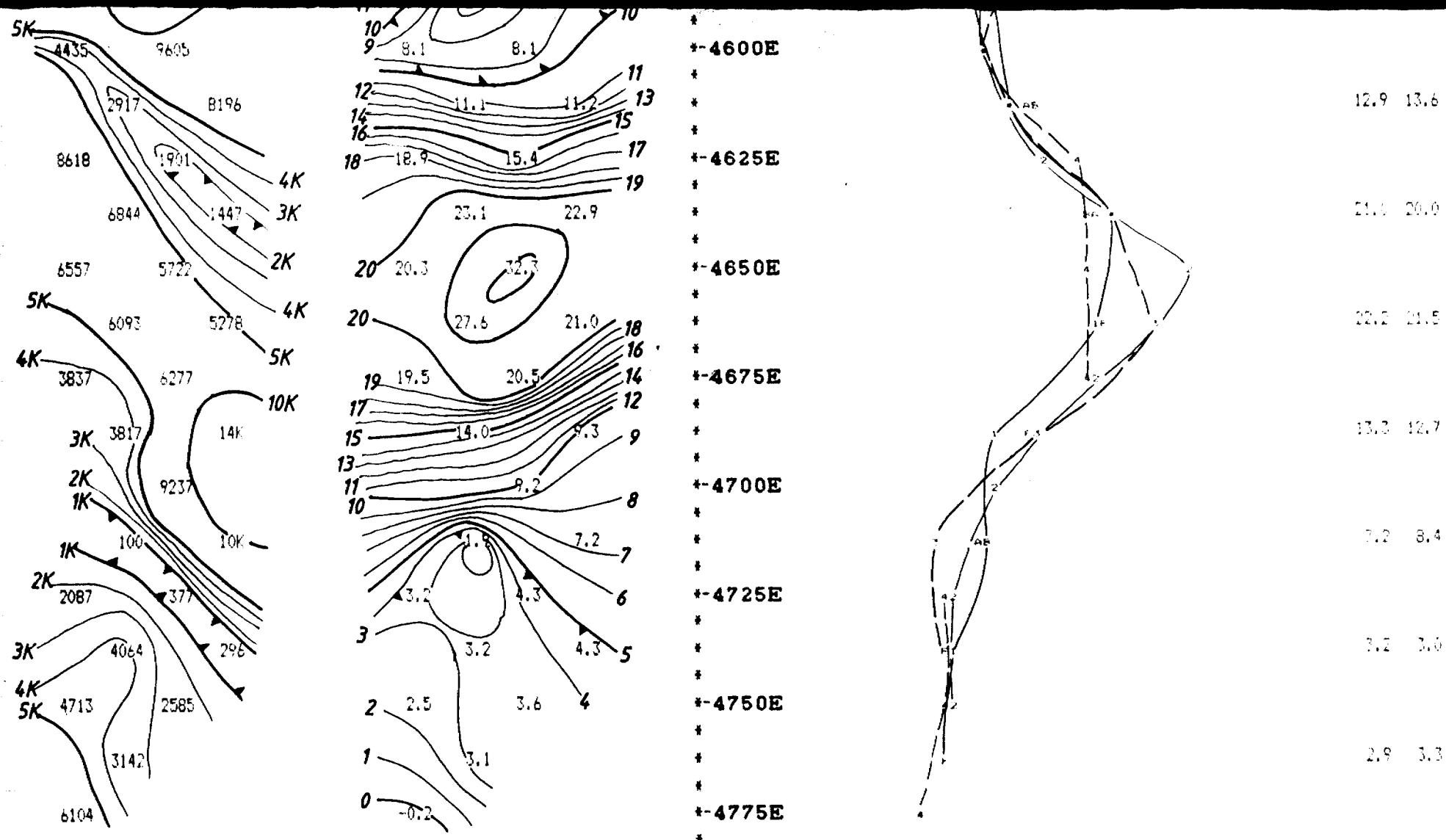
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 3200 N

**SCALE : 1:1250**





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 13/6/86

Operator : CDJ

### **Electrode Array : DIPOLE - DIPOLE**

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

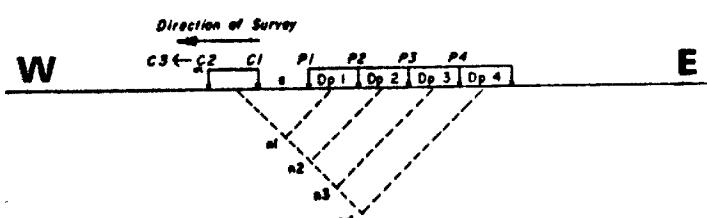
Transmitter : SCINTREX IPC-8/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted

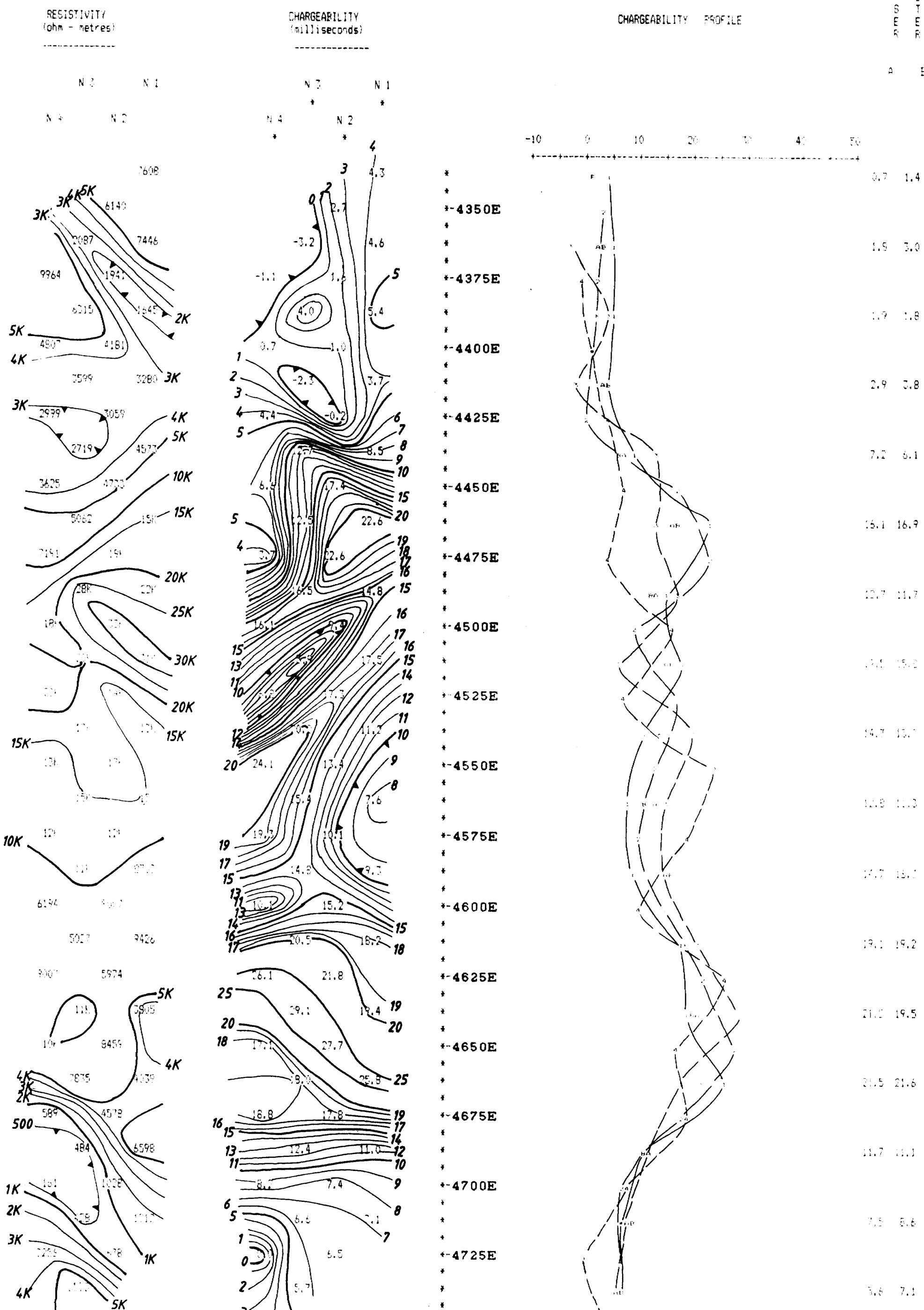


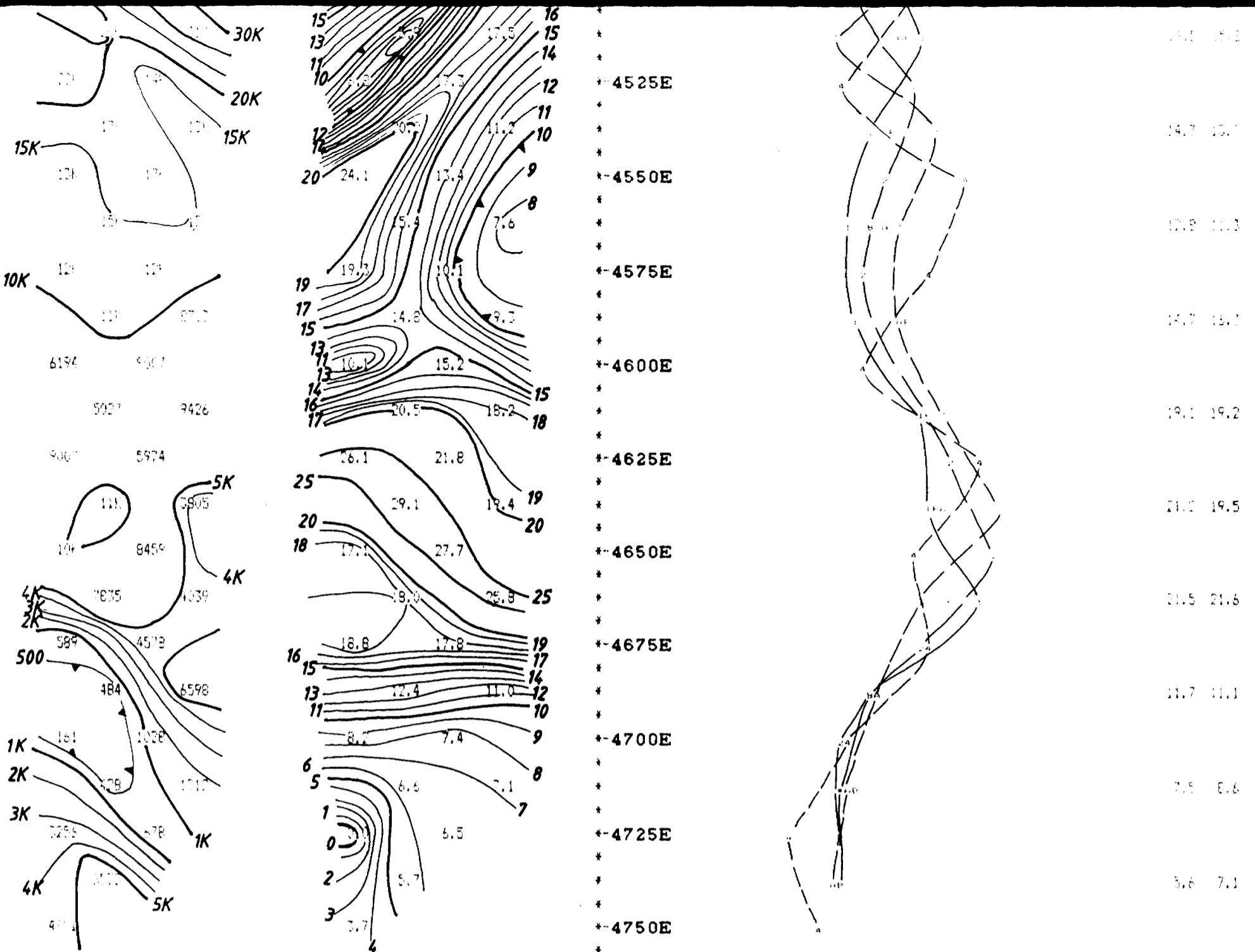
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

## 14 Pseudosections for $Z = 1$ to 4

• a Spacing = 25 M

SCALE : 1 : 1250





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 15/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

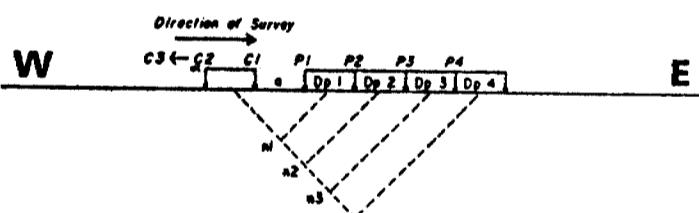
Transmitter : SCINTREX IPC-8/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

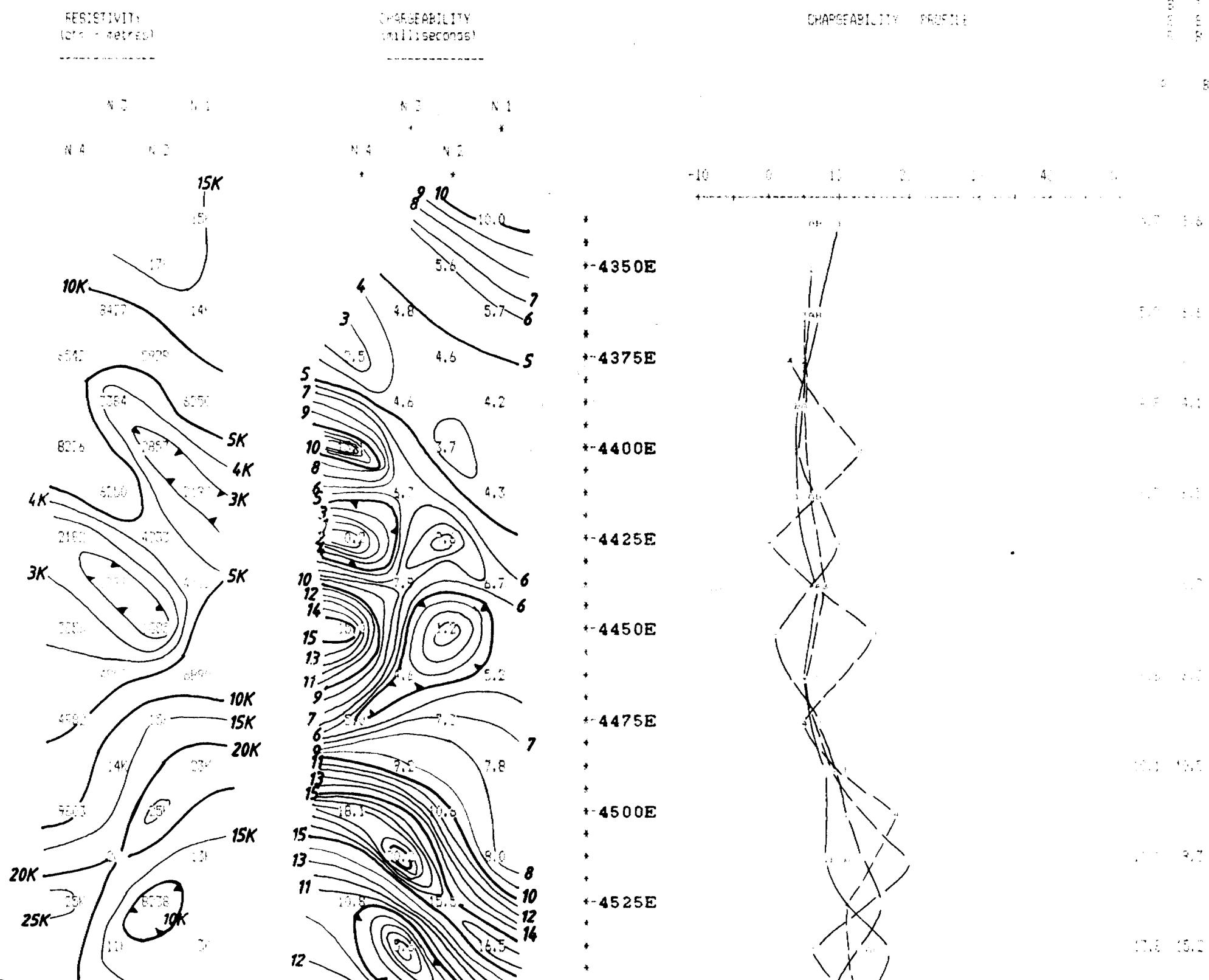
IP Pseudosections for N = 1 to 4

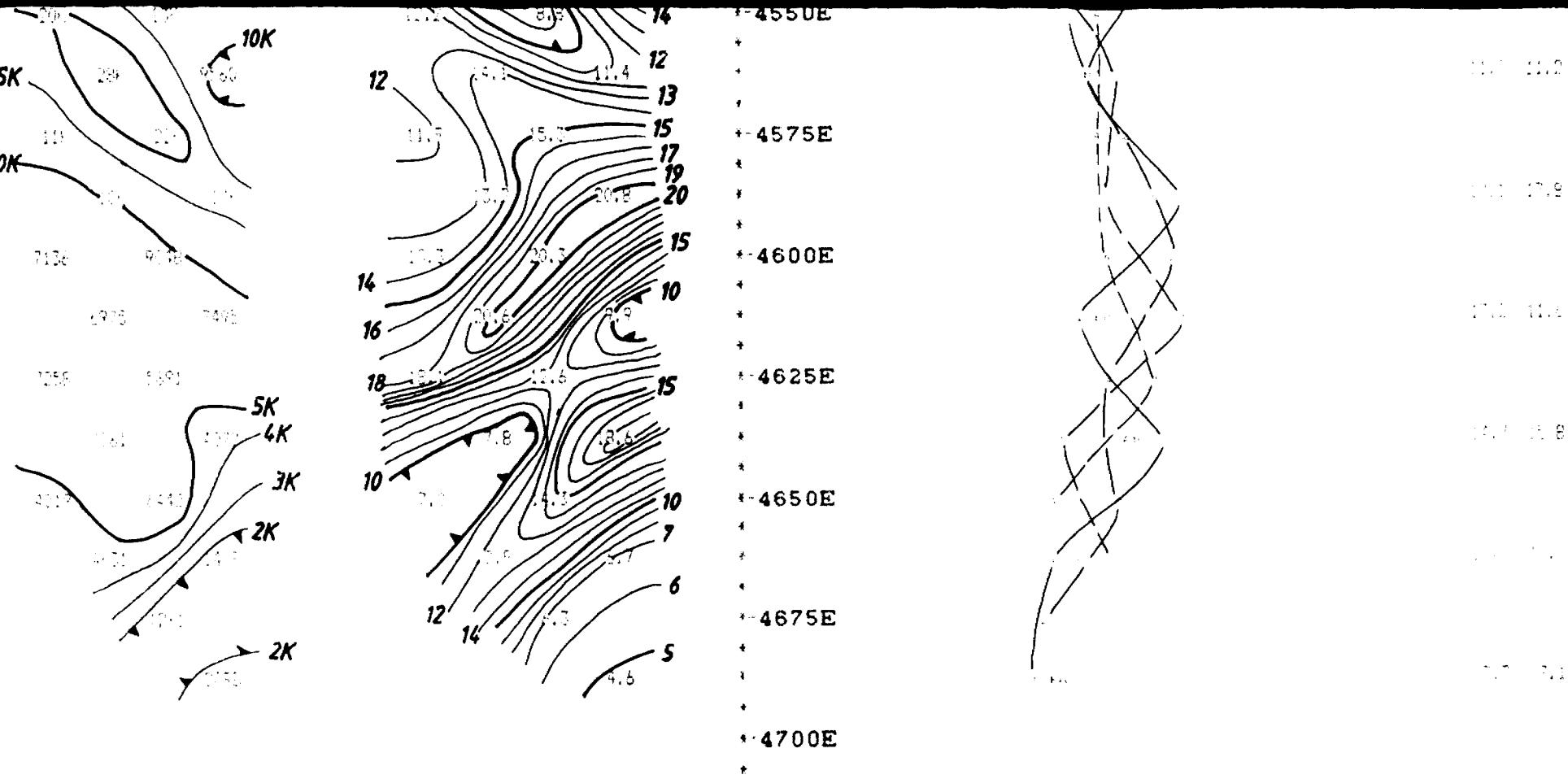
'a' Spacing = 25 M

LINE 3300 N

*Bry Boden*

SCALE = 1:1250





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 17/6/86

Operator : CBJ

### **Electrode Array : DIPOLE - DIPOLE**

### Mode : TIME DOMAIN

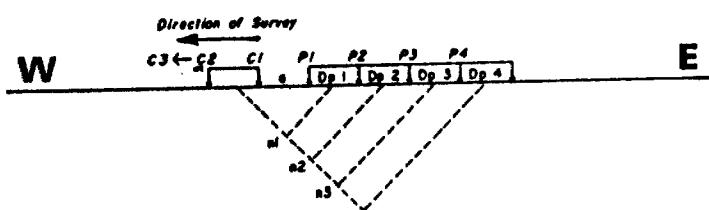
Receiver : SCINTREX TFR-11

Transmitter : SCINTREX IEC-B/250W

Pulse Time: 2 Sec on 2 Sec off

Delay Time : 360 ms

Interruption Time : 280 ms



*Henry Hodges*

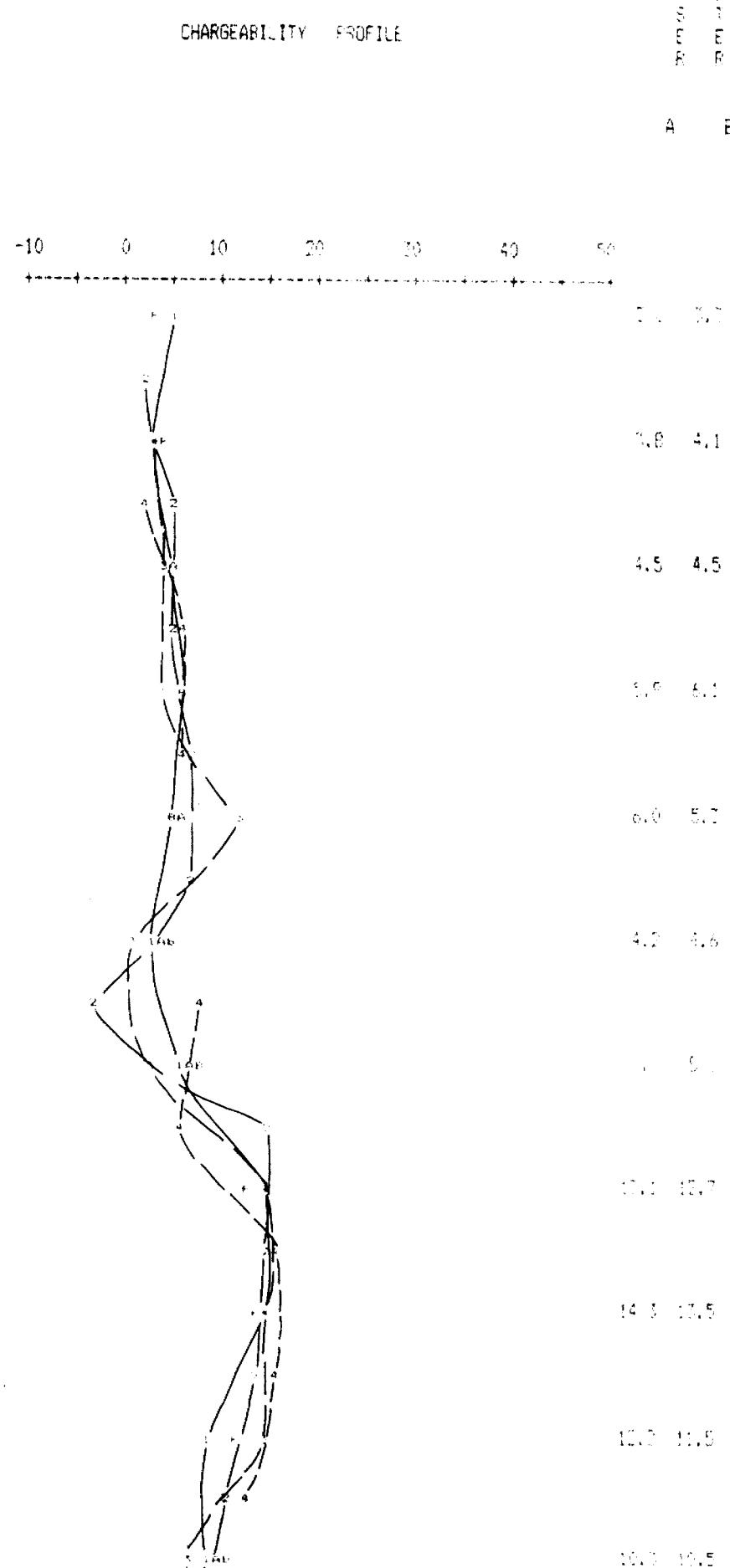
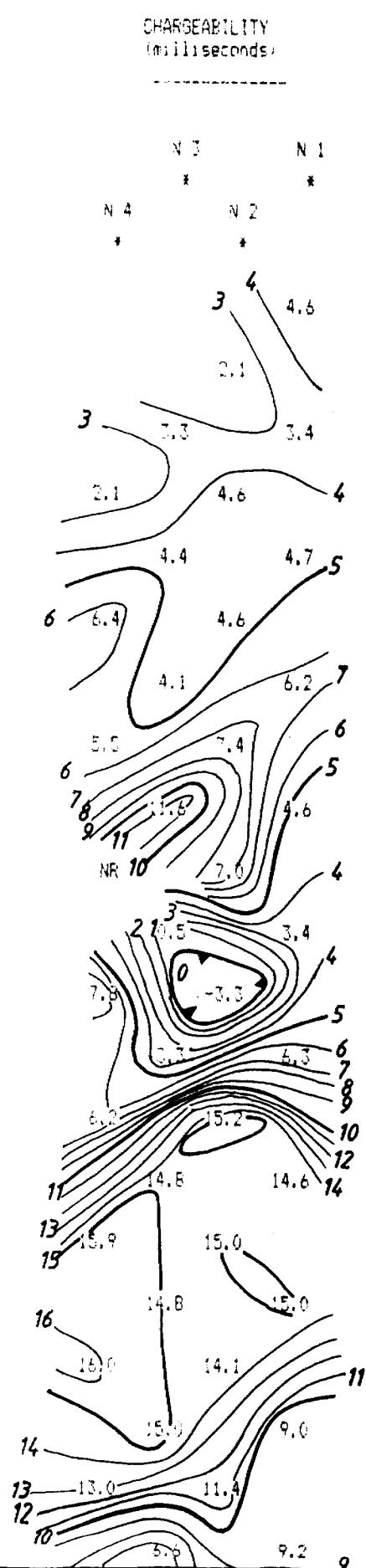
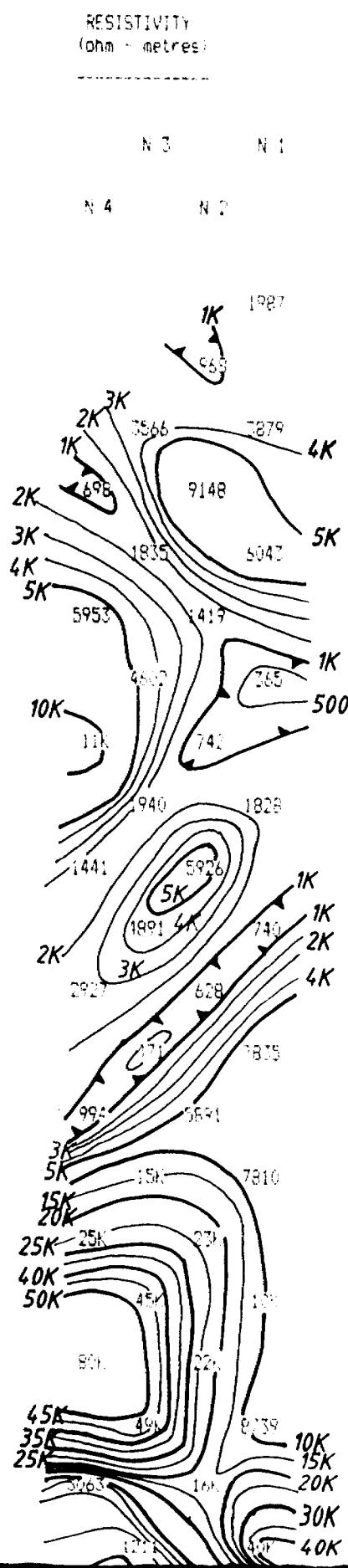
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

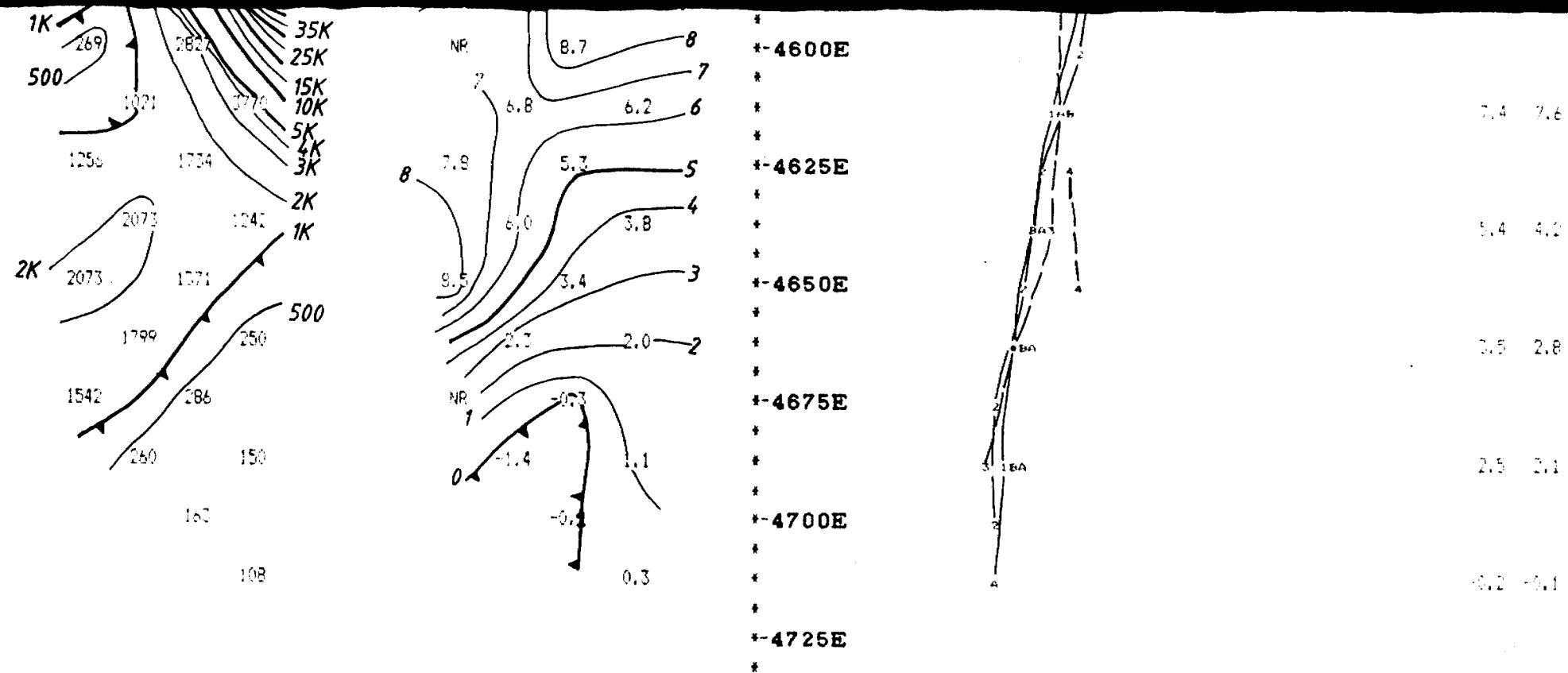
18. Escudosectiōnes ferazas de la 4

Spacing = 25 M

LINE 18350 Z

**SCALE : 1:1250**





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 15/6/86

Operator : DGH

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

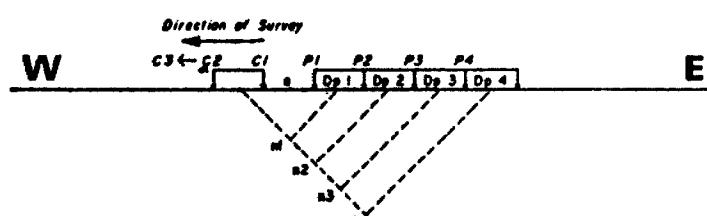
Transmitter : SCINTREX IPC-8/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



\*\*\*\*\*
 **R.S. MIDDLETON EXPLORATION  
SERVICES INC.**

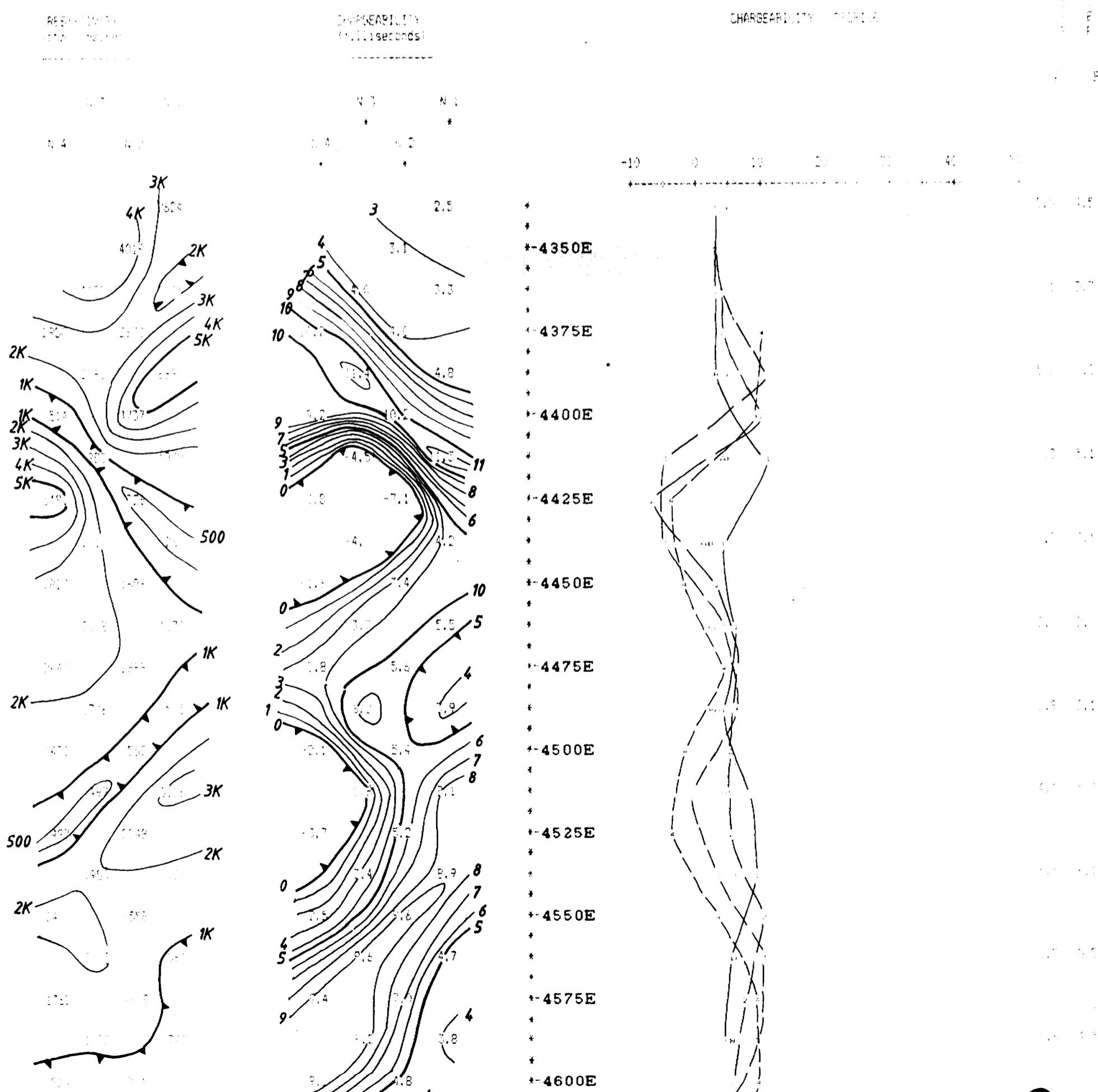
\*\*\*\*\*

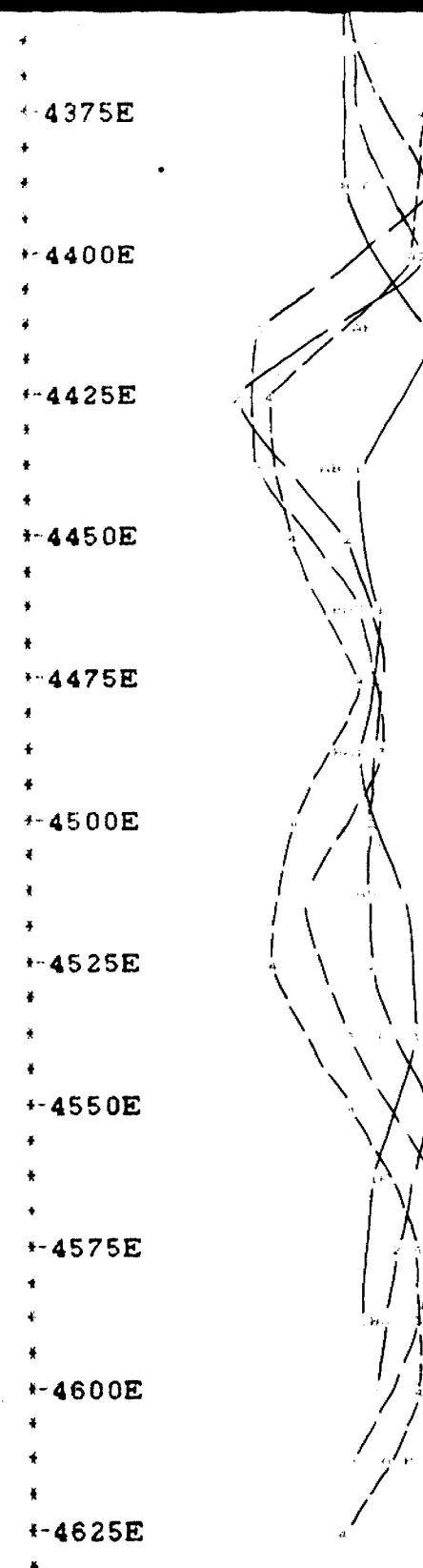
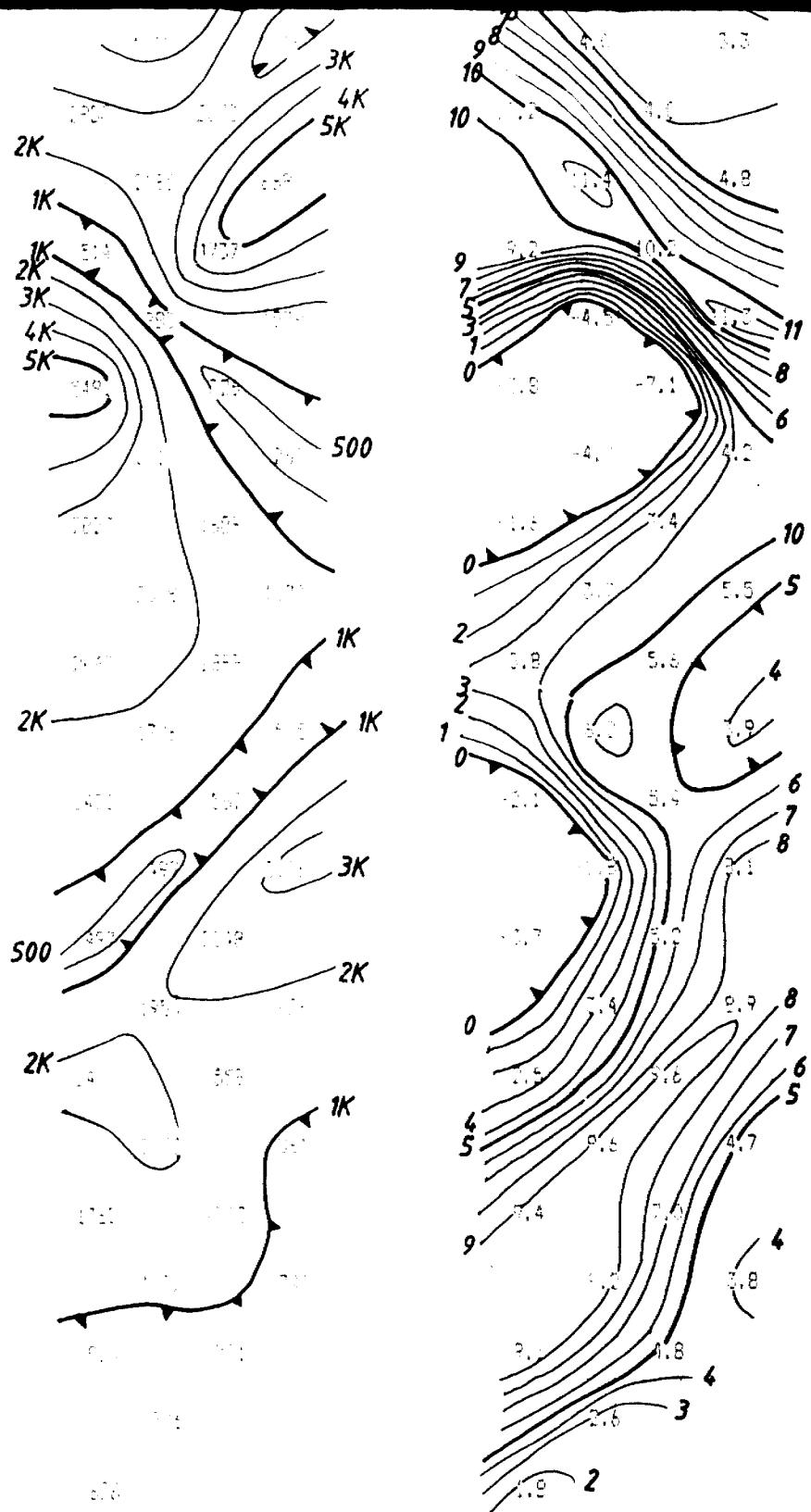
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 3400 N

SCALE : 1 : 1250





Property : MAISONVILLE TWP. GRID 1

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 17/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

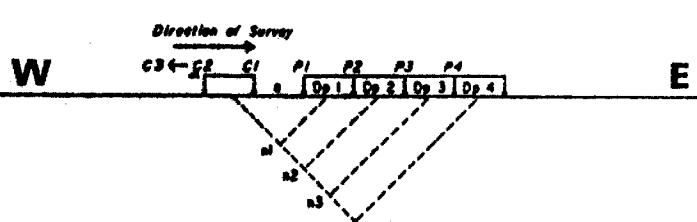
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX IPC-B/250W

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



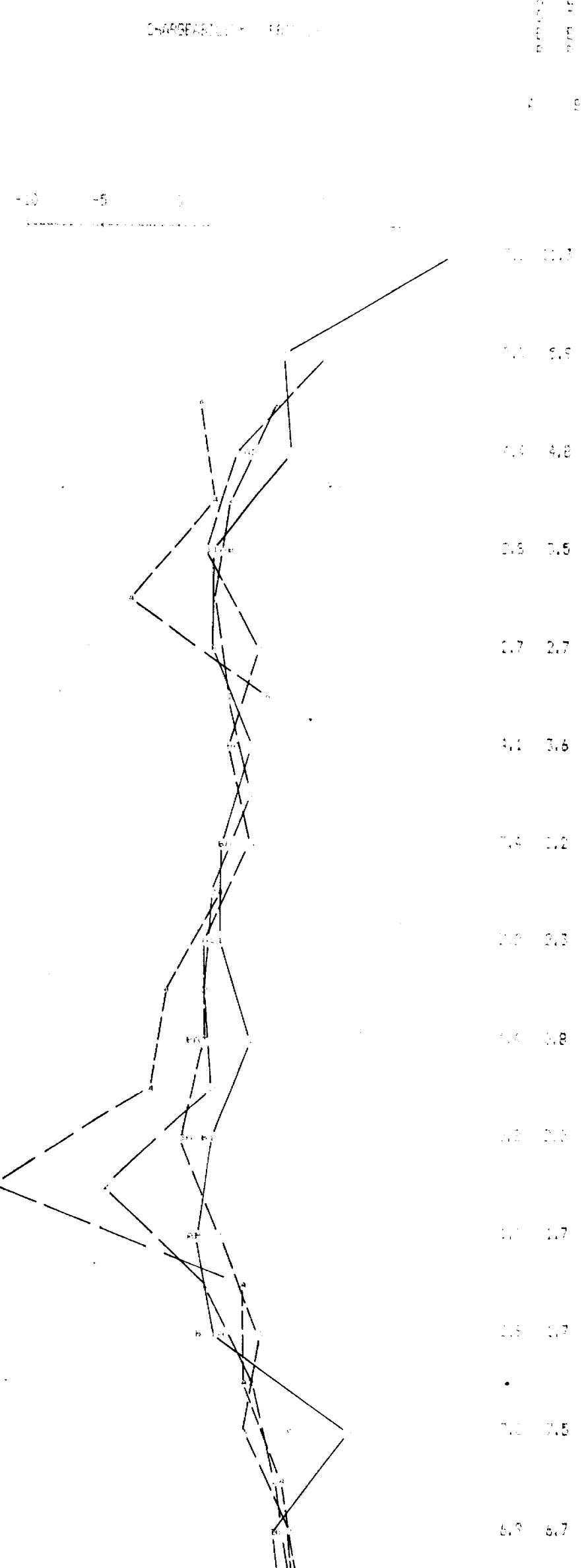
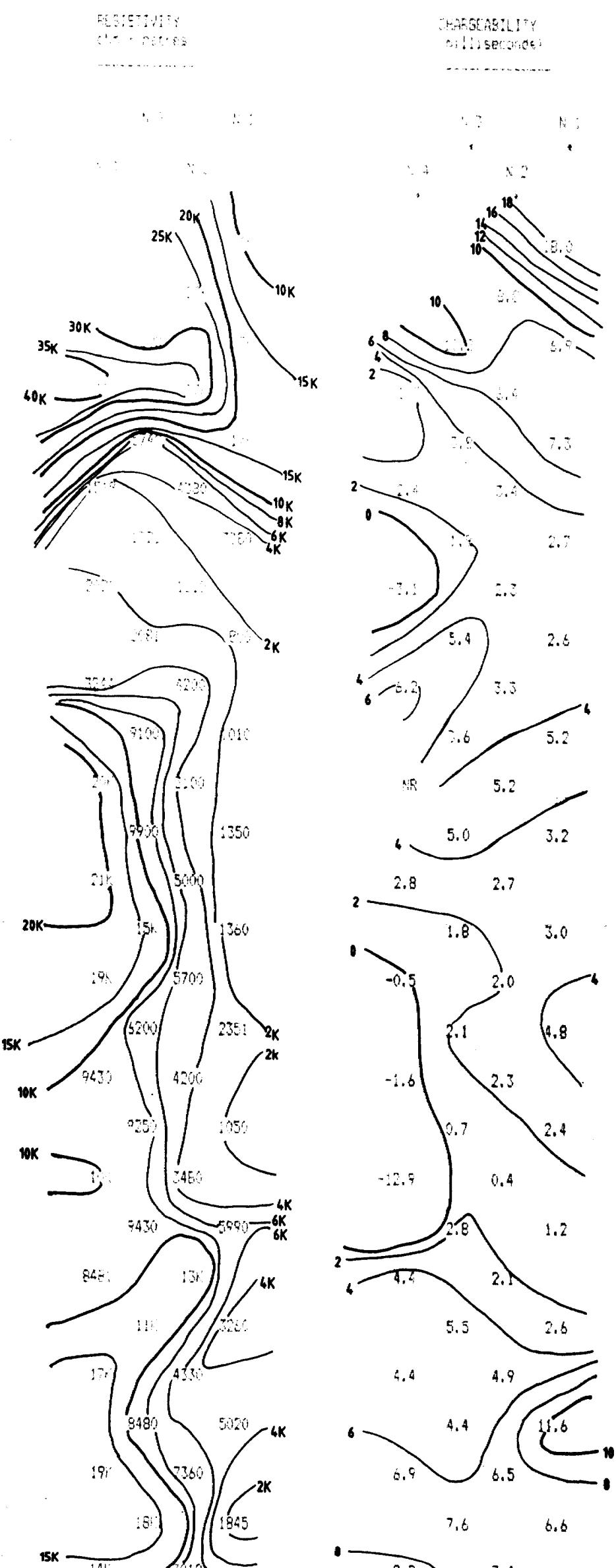
\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

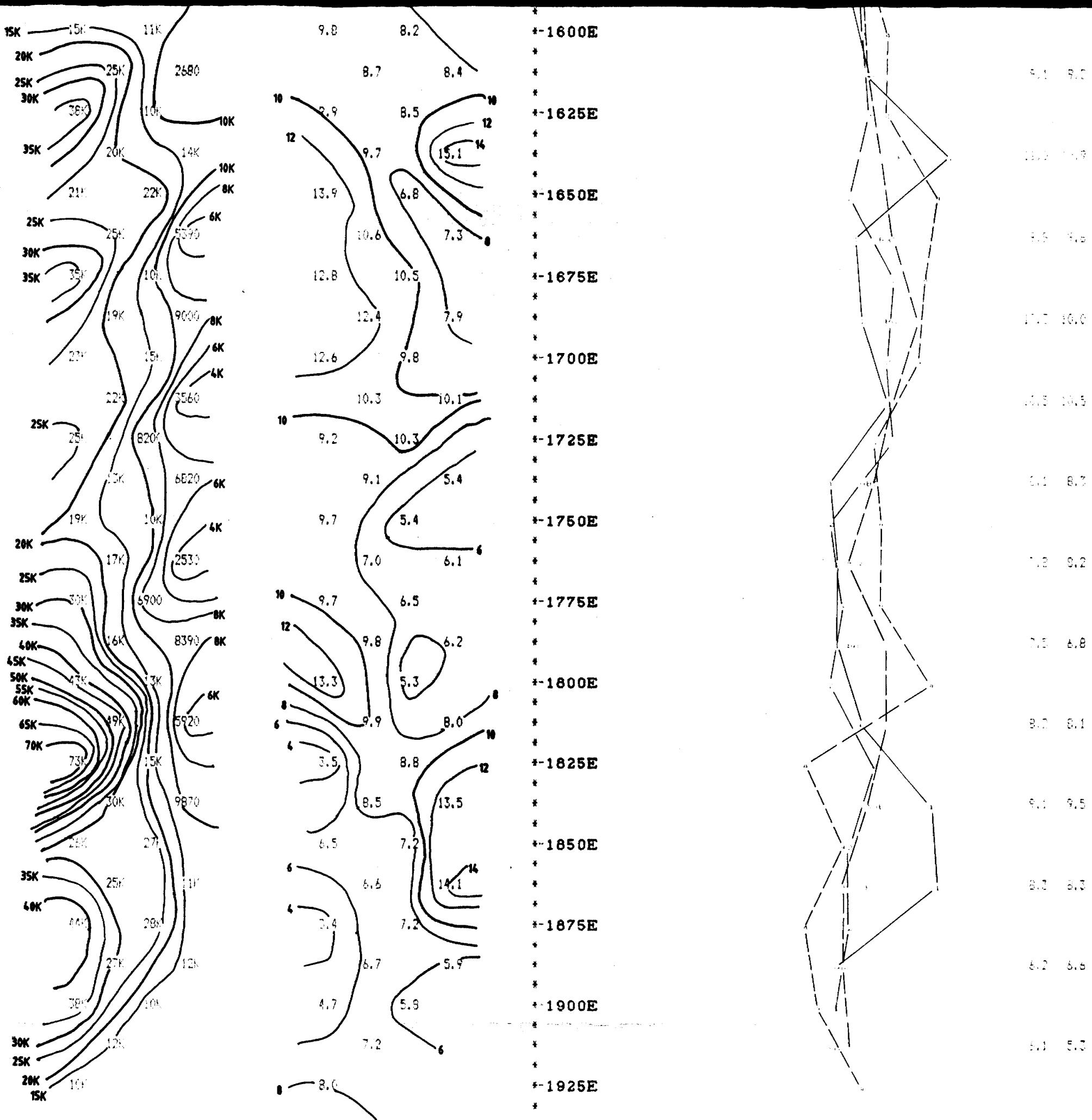
IP Pseudosections for N = 1 to 4

'a' Spacing = .25 M

LINE 3500 N

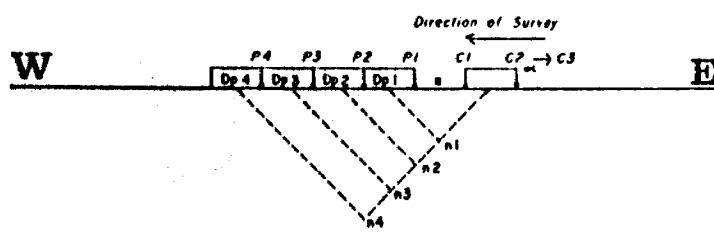
SCOTT - 1-1250





Property : MAISONVILLE TWP.  
Client : GLEN AUDEN RESOURCES

Date of Survey : 21/8/86  
Operator : CGK  
Electrode Array : DIPOLE - 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



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

1000 1000 1000 1000

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1300E

1325E

1350E

1375E

1400E

1425E

1450E

1475E

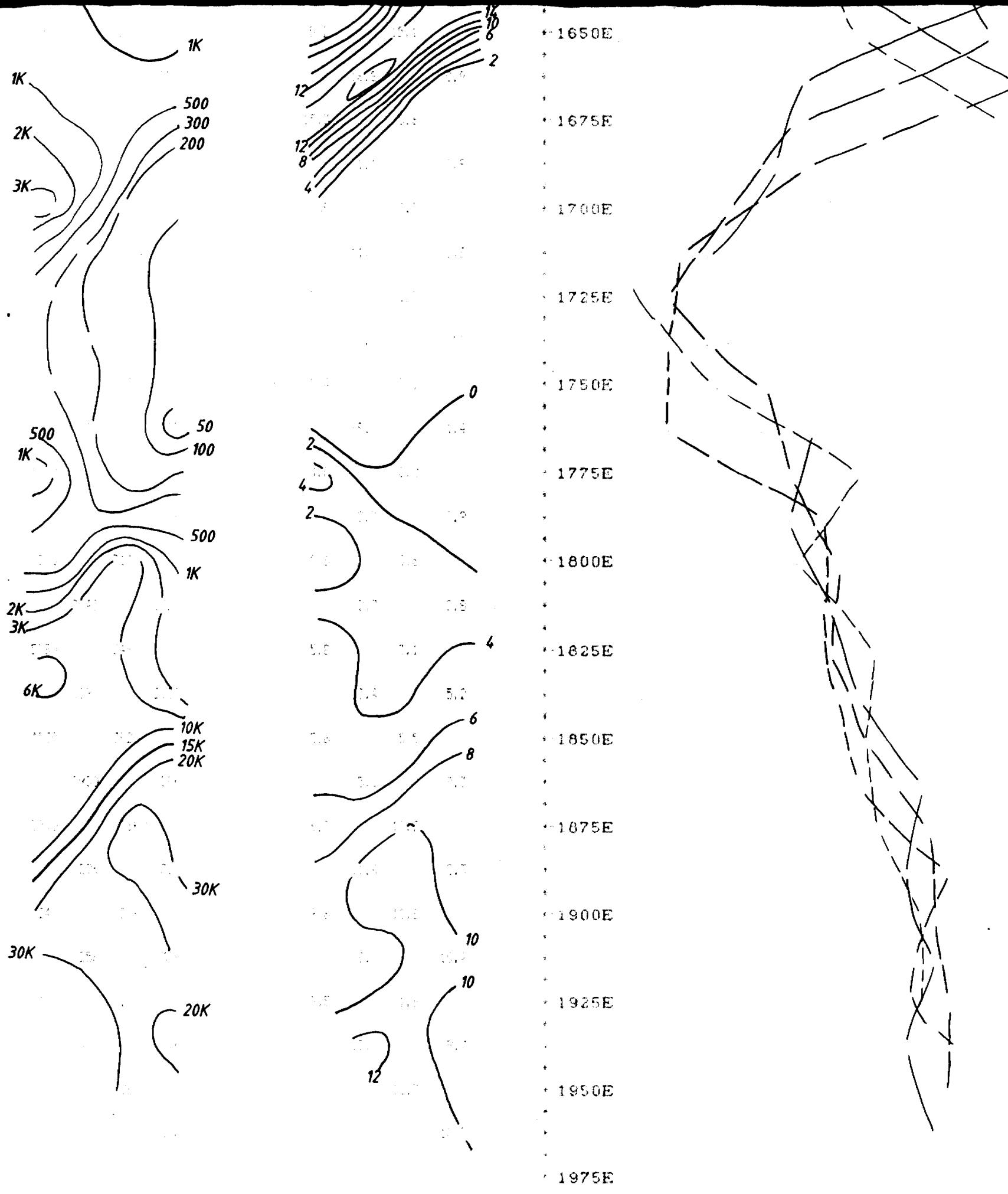
1500E

1525E

1550E

1575E

1600E



Property : MIDDLETON 3881, GRID 2

Client : GREEN RIDGE RESOURCES

Date of Survey : 12/8/06

Orientation : NCGK

Electrode Array : 1D100E - DIPOLAR

Mode : TIME DOMAIN

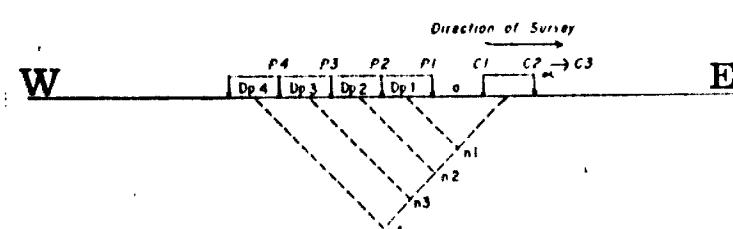
Receiver : SCINTREX IFR 11

Transmitter : SCINTREX ITC-8/10-16

Pulse Time : 2 Sec on 1 Sec off

Delay Time : 250 ms

Integration Time : 760 ms



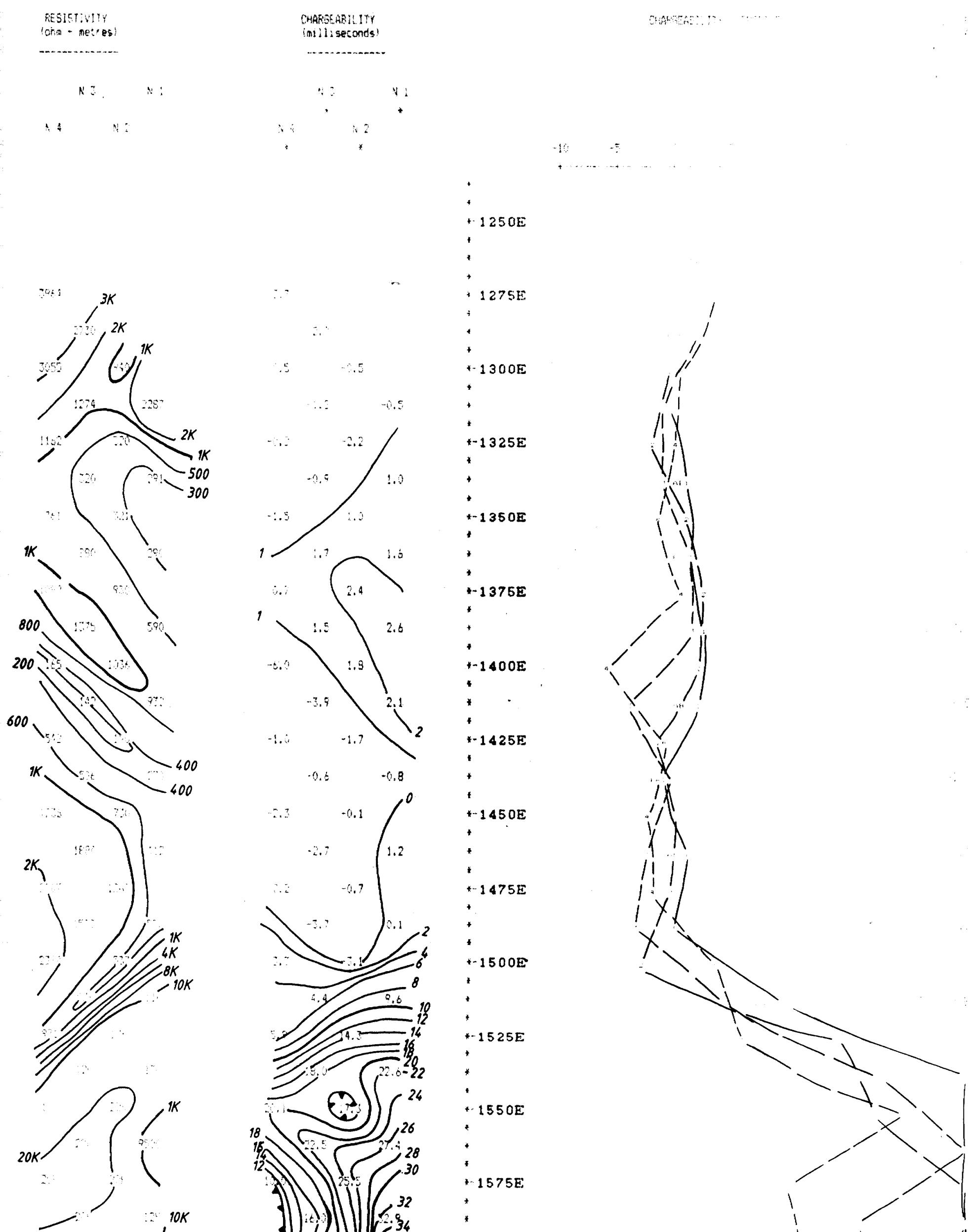
\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

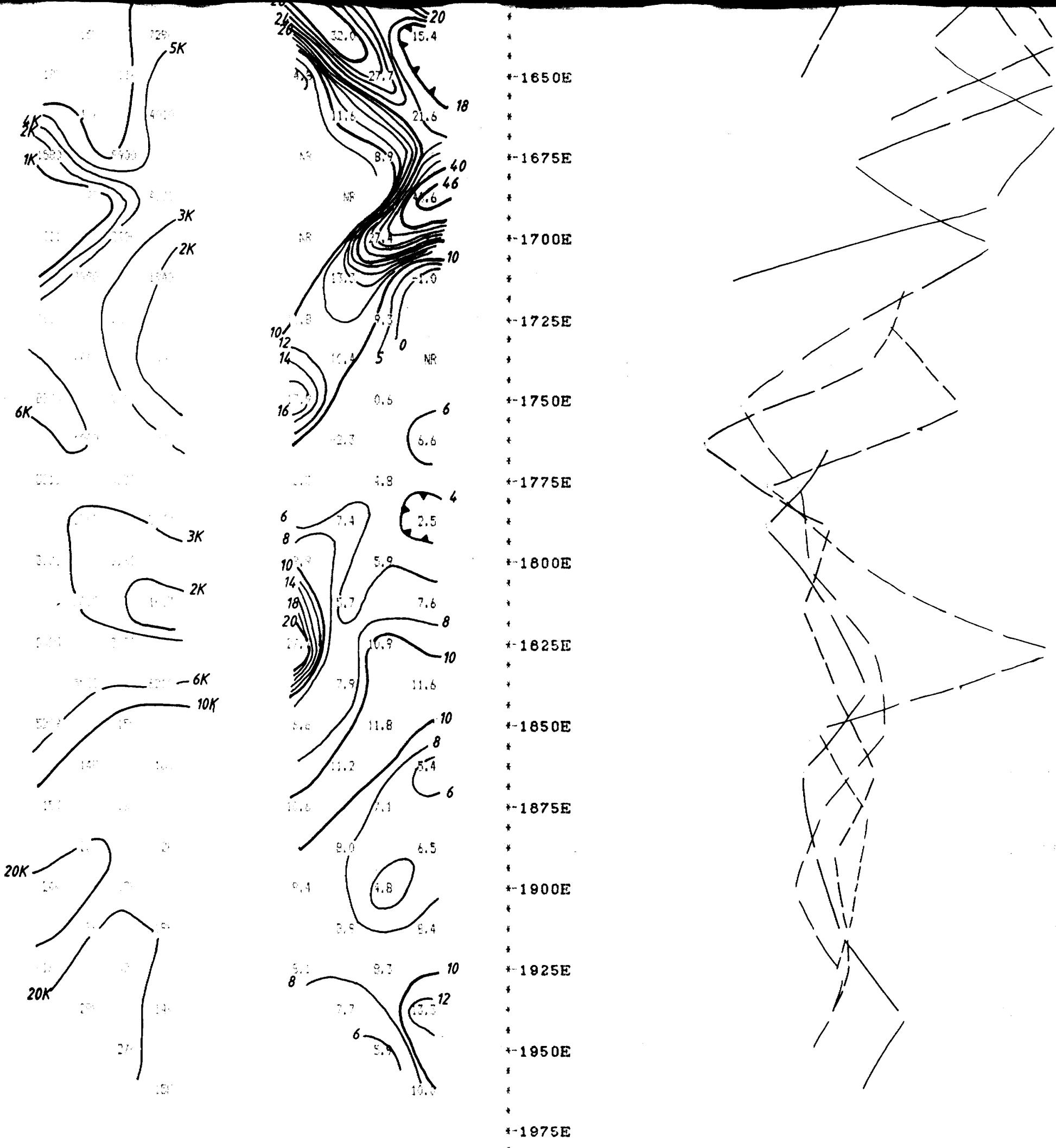
1D100E Profile sections for N = 1 to 9

Line Spacing = 25 M

*Gary Hodges*

SCALE : 1 : 1250





Property : MAISONVILLE TWP. GRID 2

Client : GLEN AUDEN RESOURCES

Date of Survey : 14/8/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

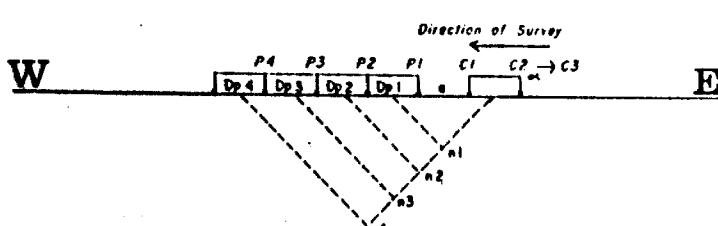
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TS0-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 350 ms

Integration Time : 780 ms



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

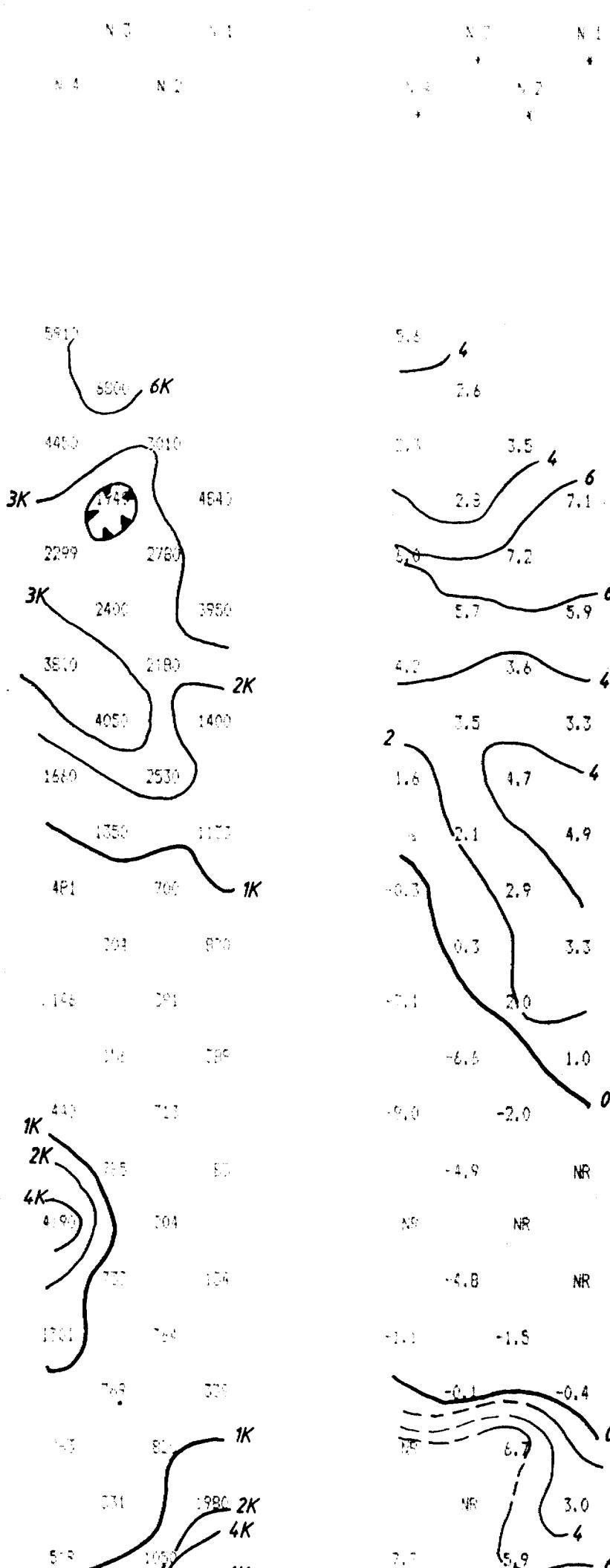
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

*Gregory*

SCALE = 1 : 1250

RESISTIVITY  
(ohm-metres)



CHARGEABILITY  
(milliseconds)

DISSEMINATION

\*-1250E

\*-1275E

\*-1300E

\*-1325E

\*-1350E

\*-1375E

\*-1400E

\*-1425E

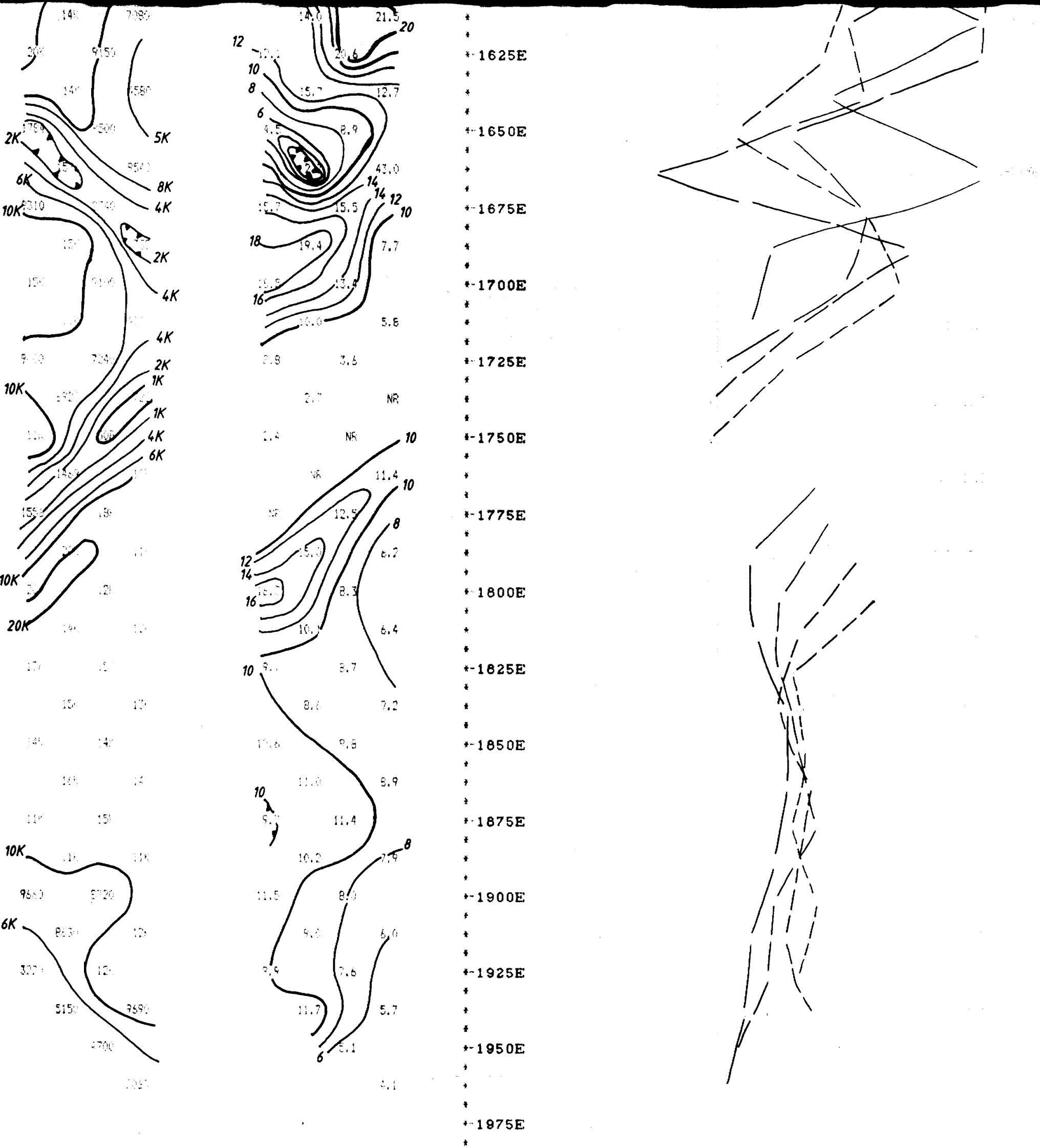
\*-1450E

\*-1475E

\*-1500E

\*-1525E

\*-1550E



Property : MATSONVILLE TWP. GRID 2

Client : GLEN AUDEN RESOURCES

Date of Survey : 15/8/96

Operator : EGR

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

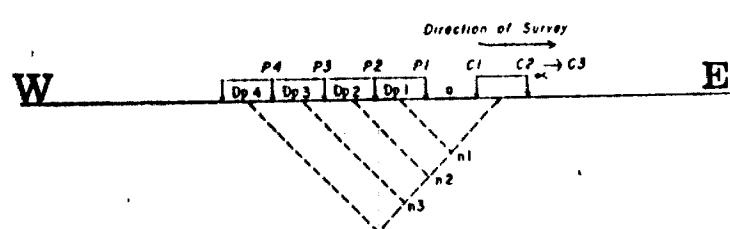
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

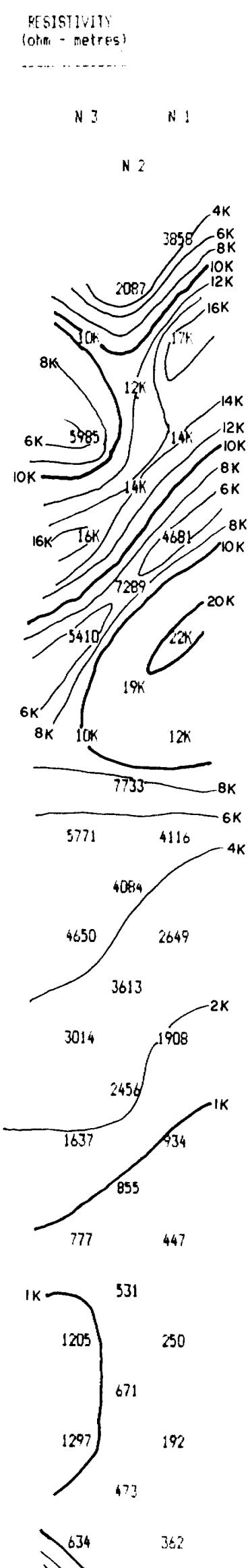
Integration Time : 780 ms



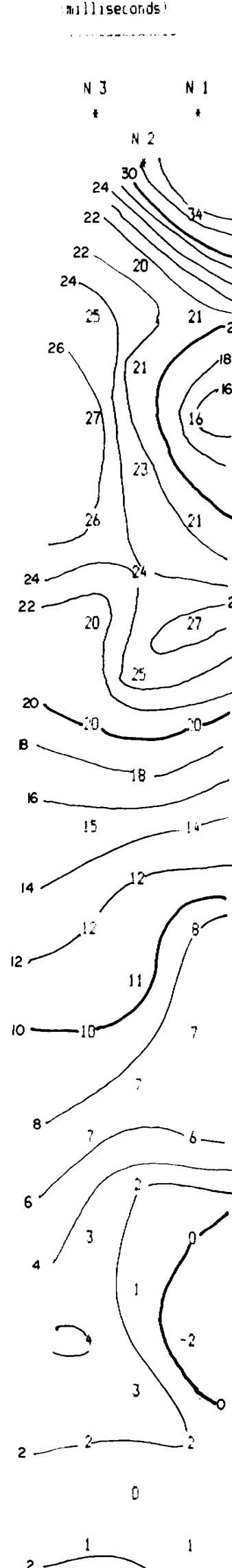
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

*Bry Loder*

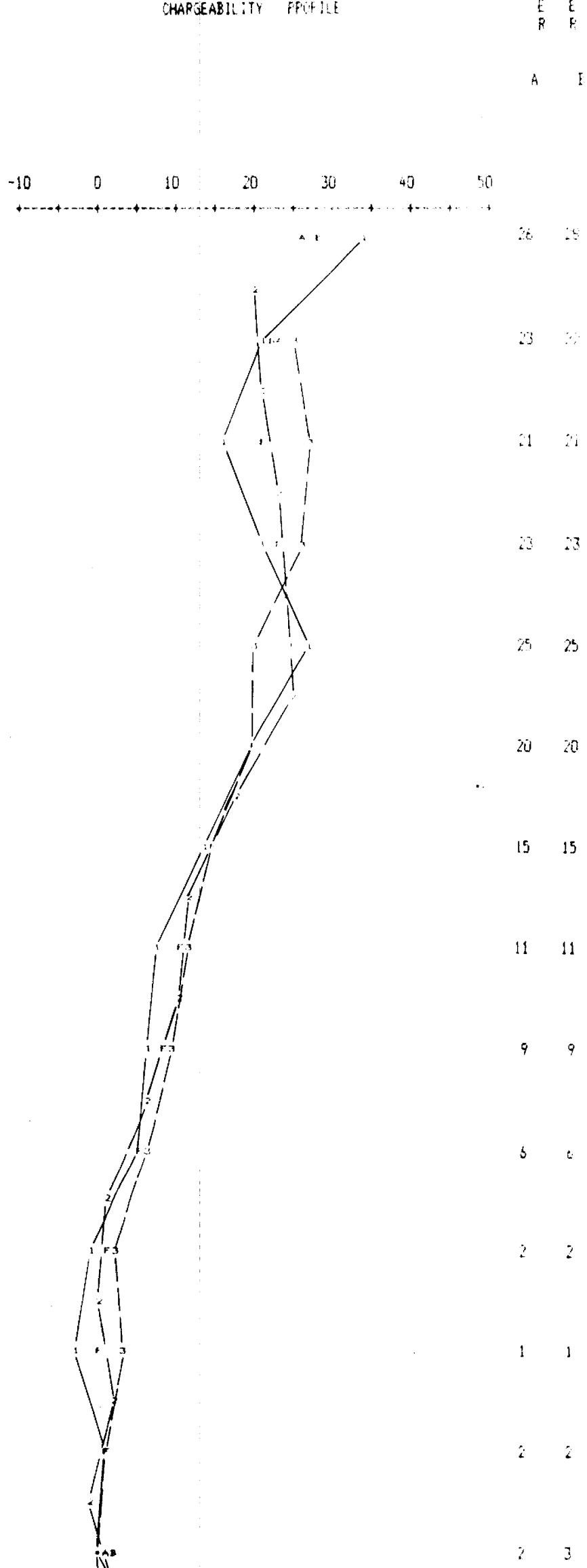
SCALE = 1 : 1250



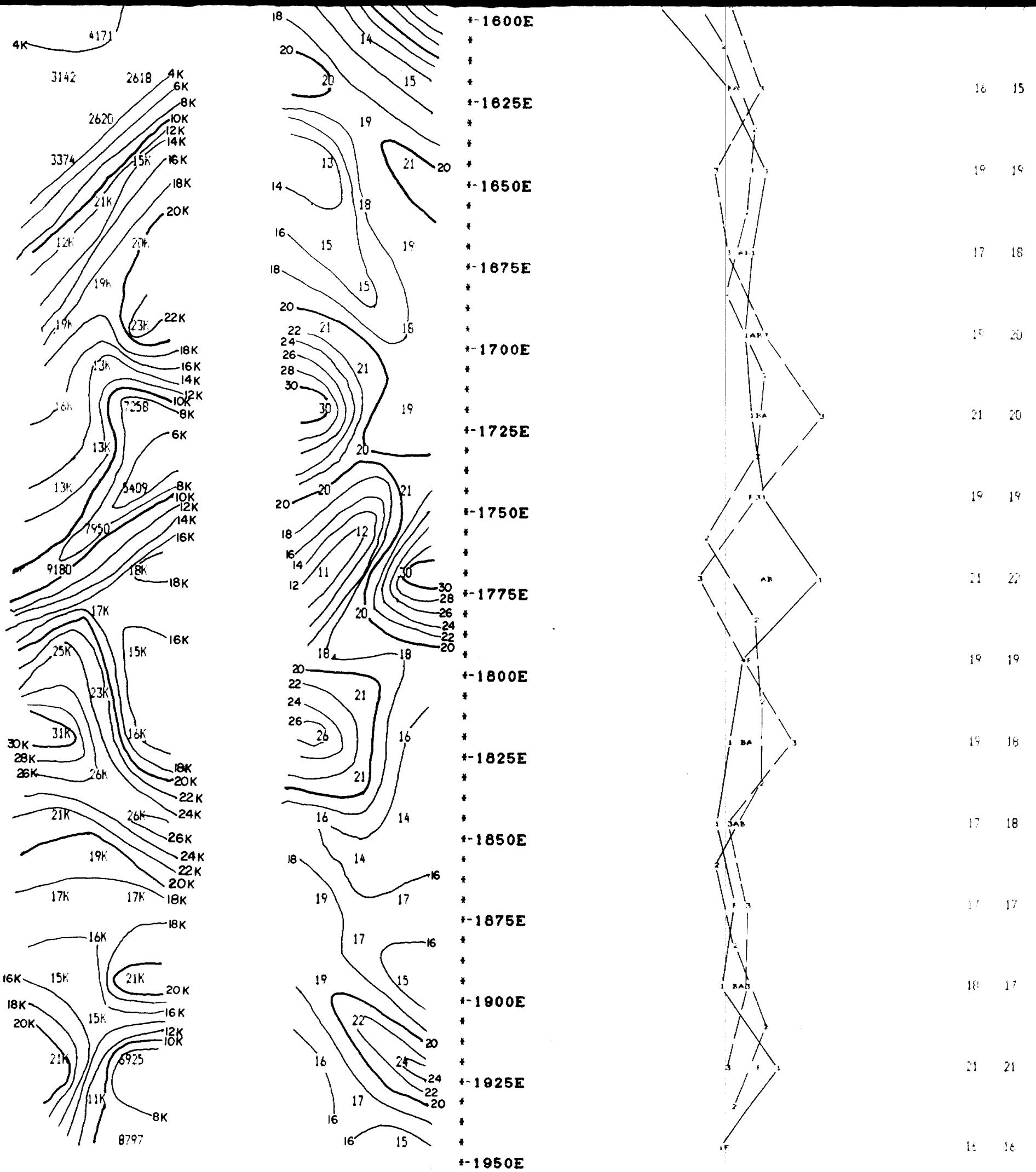
CHARGEABILITY  
(milliseconds)



CHARGEABILITY PROFILE



CHARGEABILITY  
E



Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 18/3/86

Operator : BM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

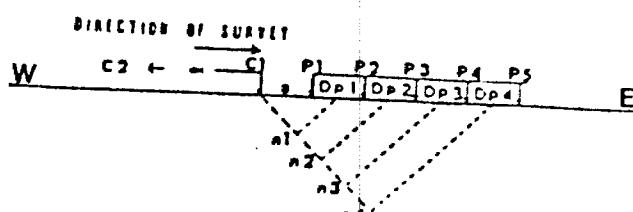
Receiver : SCINTREX IPR-8

Transmitter : PHOENIX IPT-1

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms

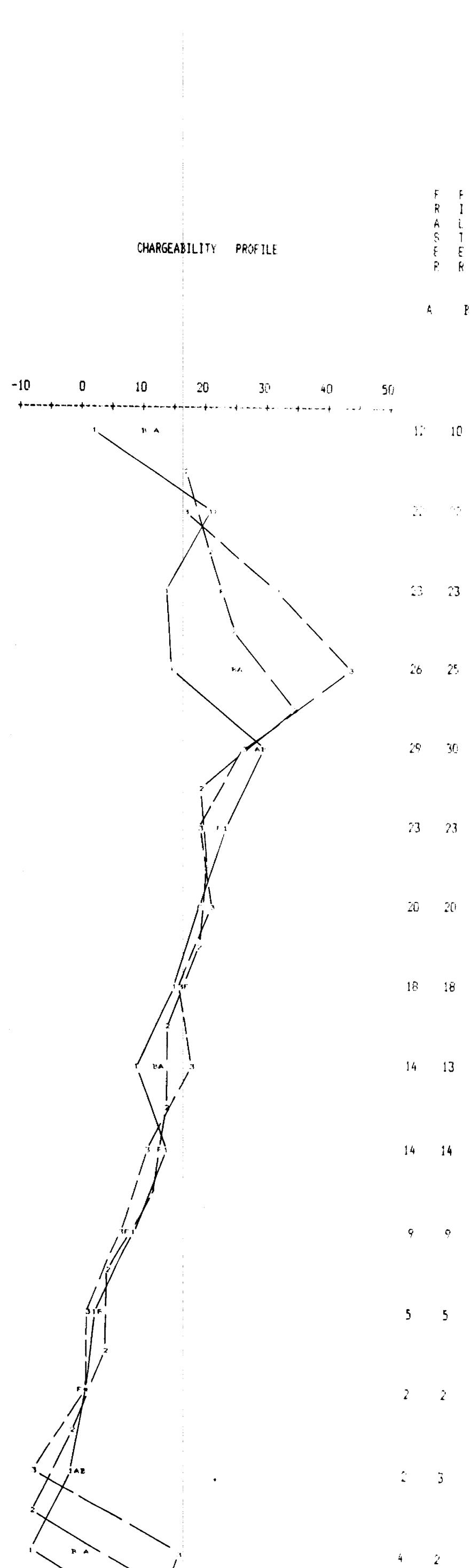
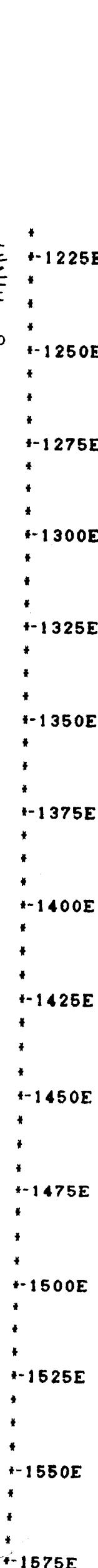
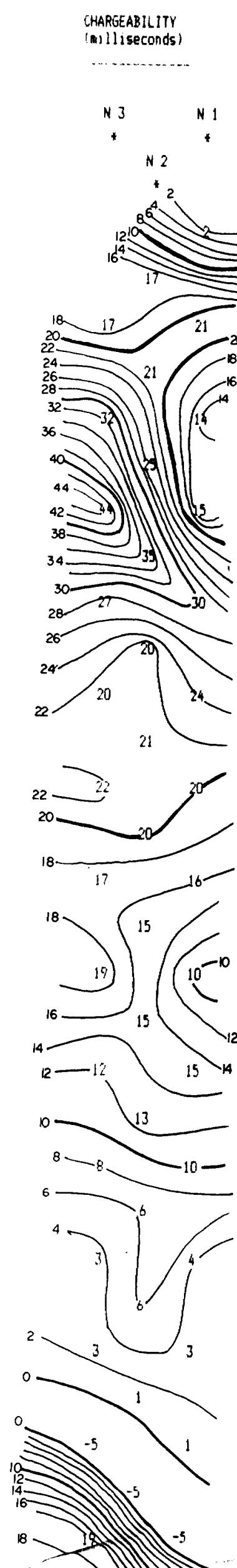
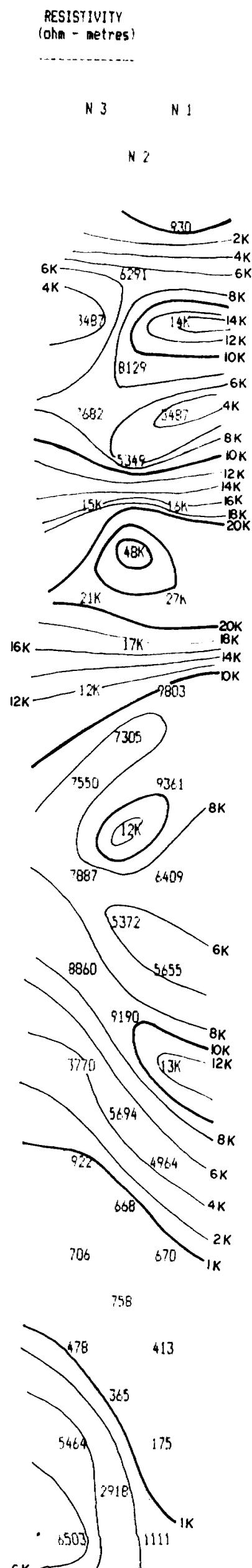


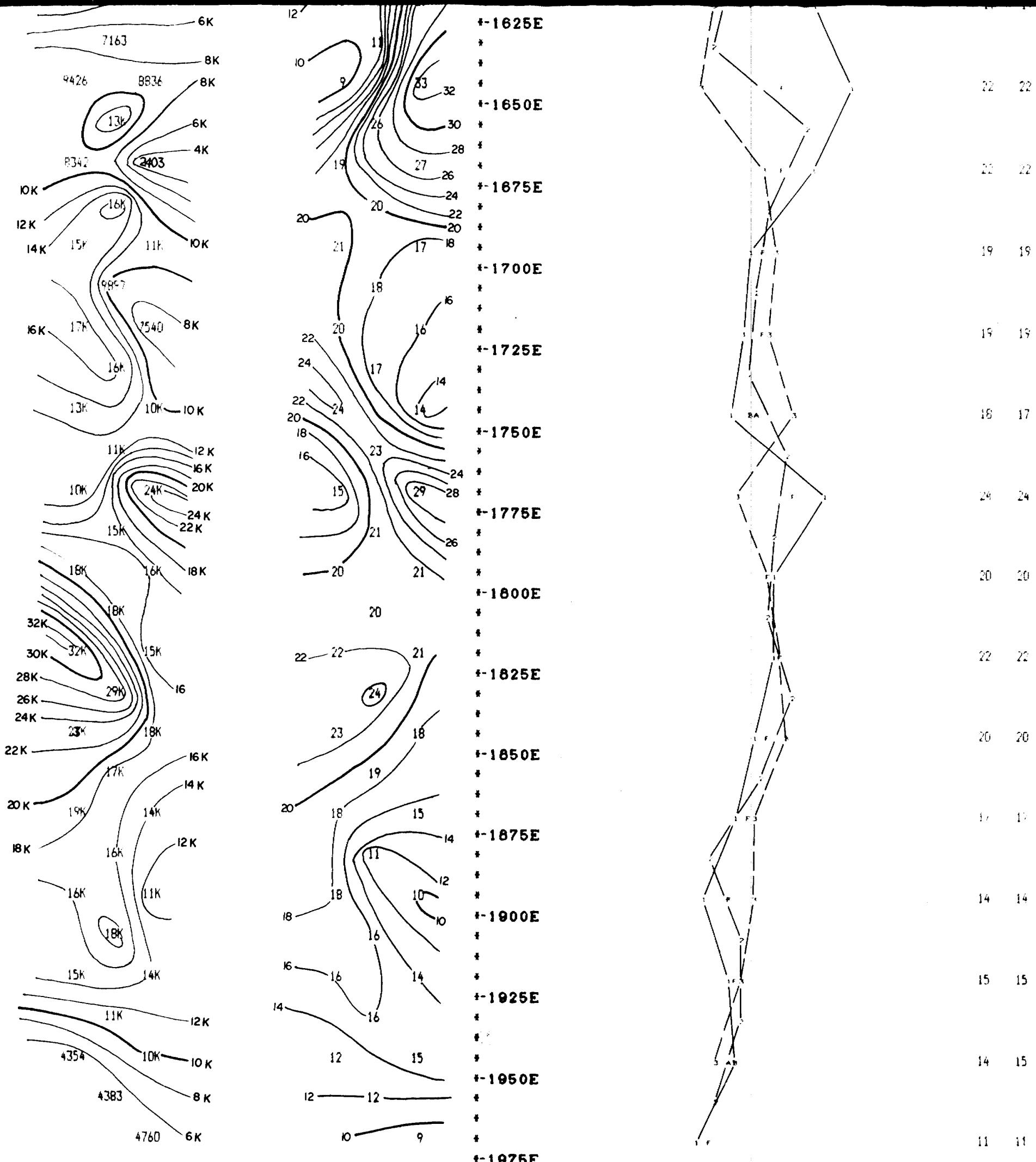
\*\*\*\*\*  
 R.S. MIDDLETON EXPLORATION  
 SERVICES INC.  
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IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

SCALE = 1 : 1250





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 21/3/86

Operator : RAM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

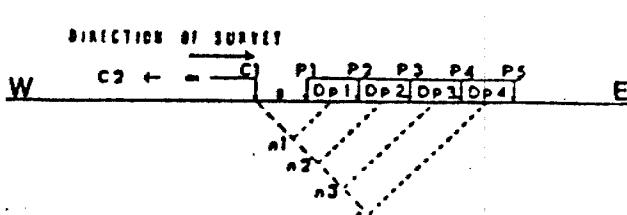
Receiver : CRONE IP-4

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 450 ms

Integration Time : 900 ms

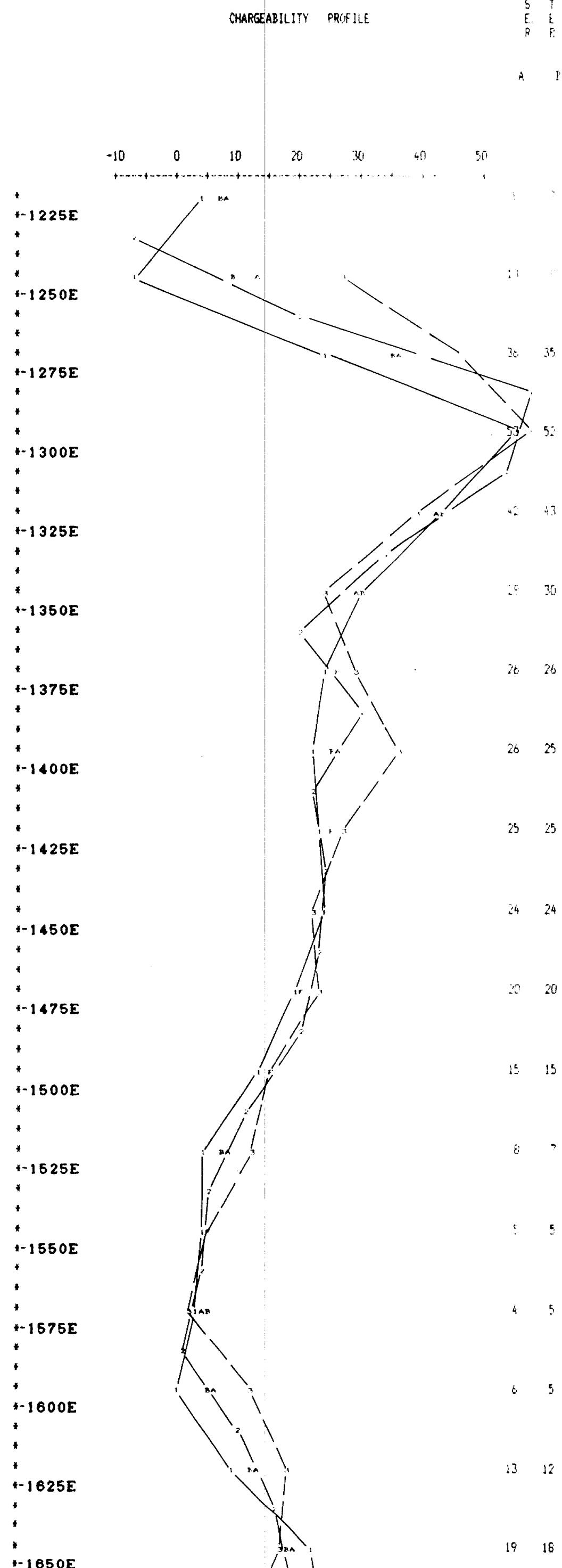
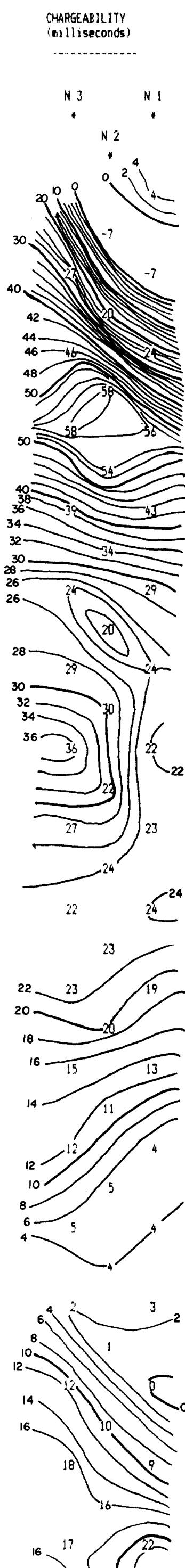
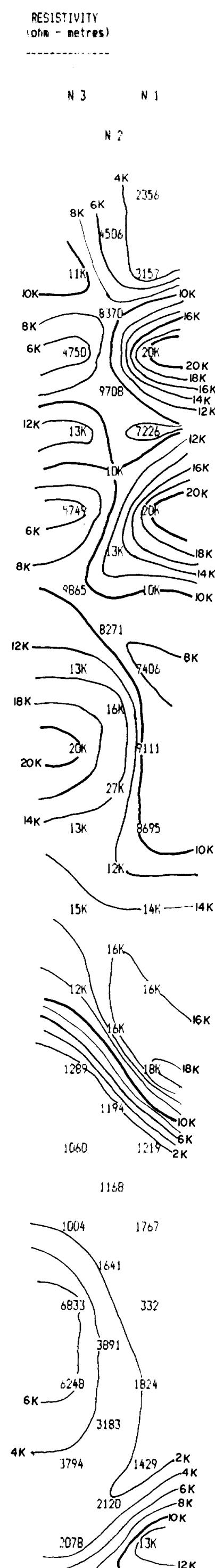


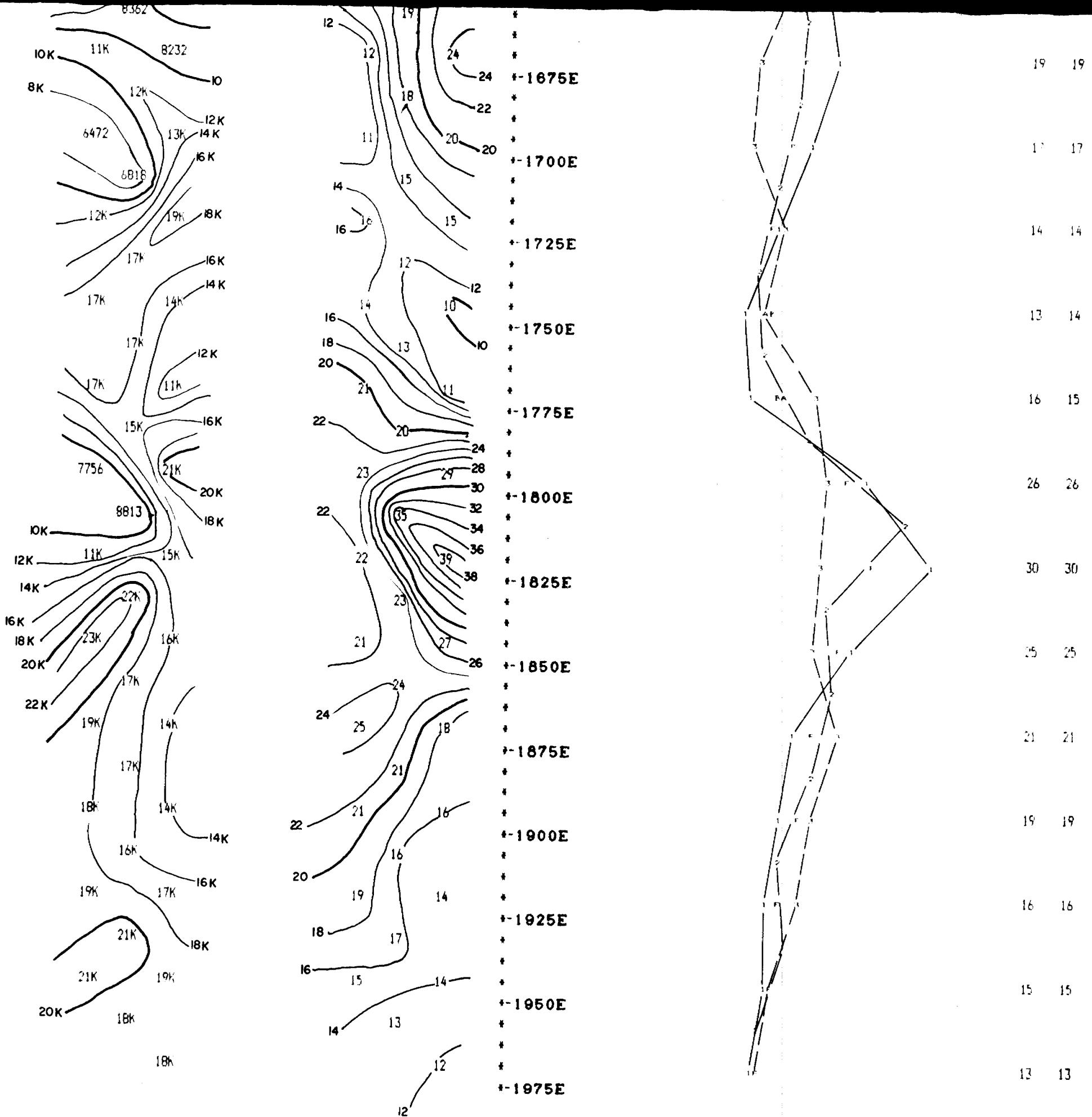
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

1 m Spacing = 25 m

SCALE : 1 : 1250





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 21/3/86

Operator : RAM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

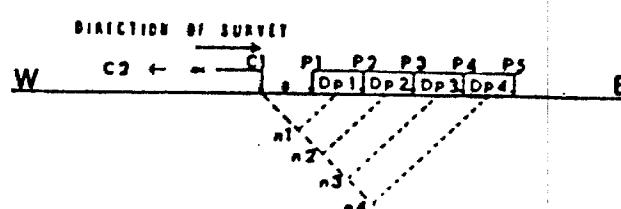
Receiver : CRONE IP-4

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 450 ms

Integration Time : 900 ms



R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

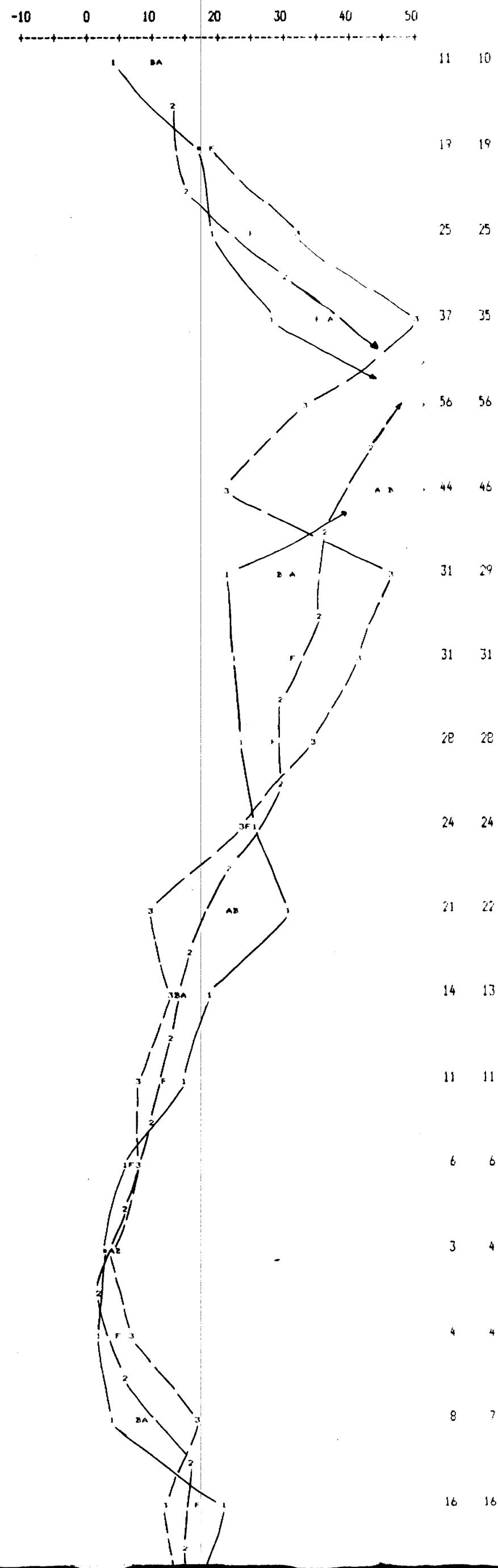
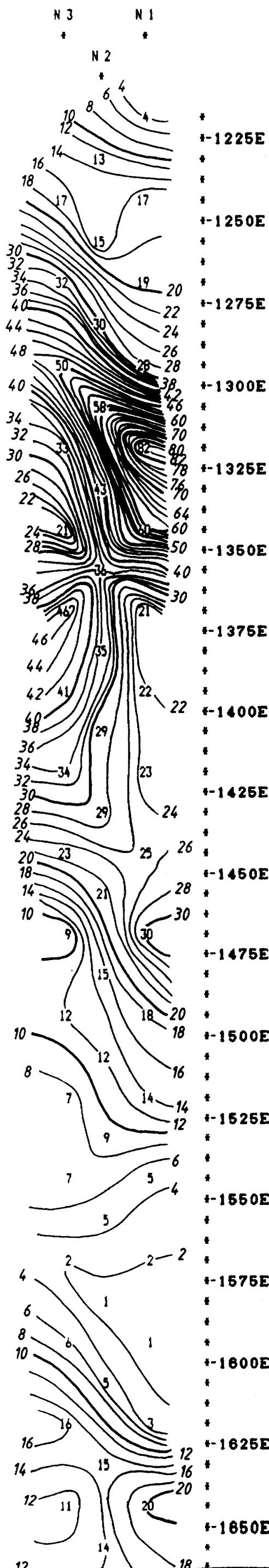
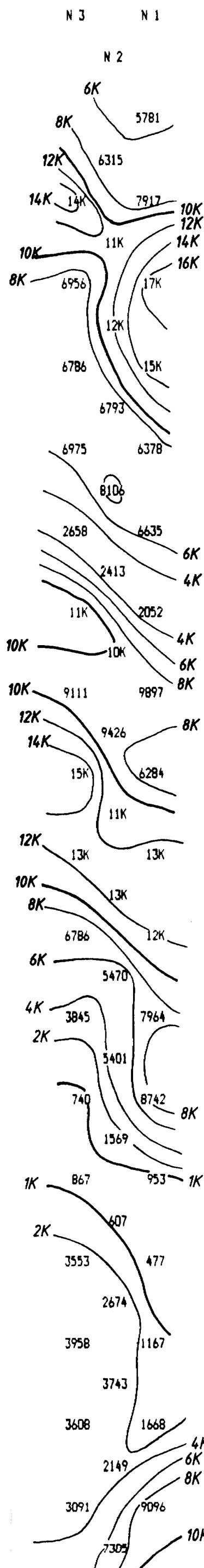
'a' Spacing = 25 M

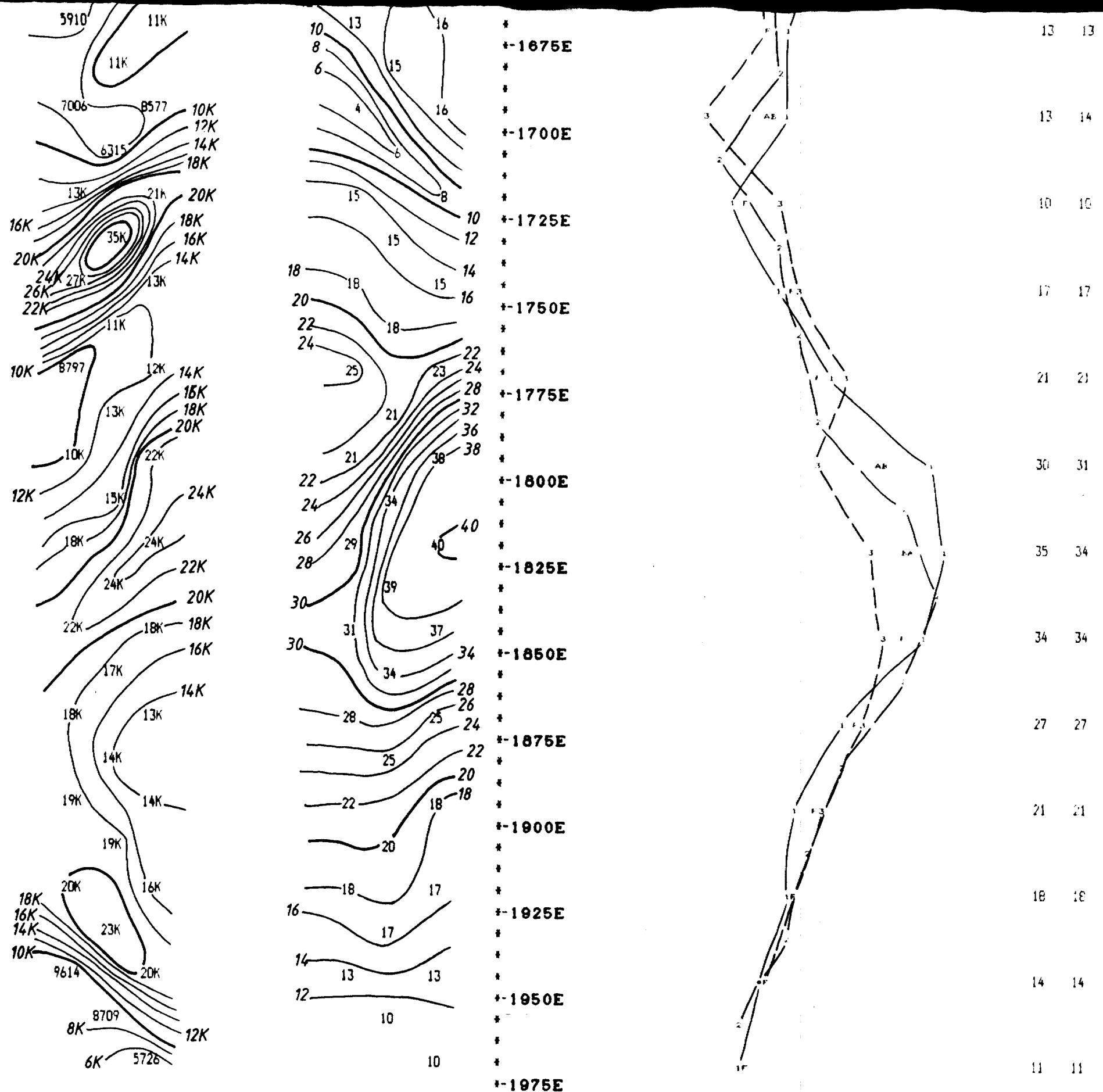
LINE 3110 N

SCALE = 1:1250

F  
P  
A  
S  
E  
RRESISTIVITY  
(ohm-metres)CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 18/3/86

Operator : BM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

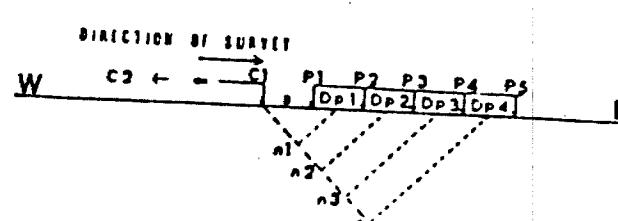
Receiver : SCINTREX IPR-8

Transmitter : PHOENIX IPT-1

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

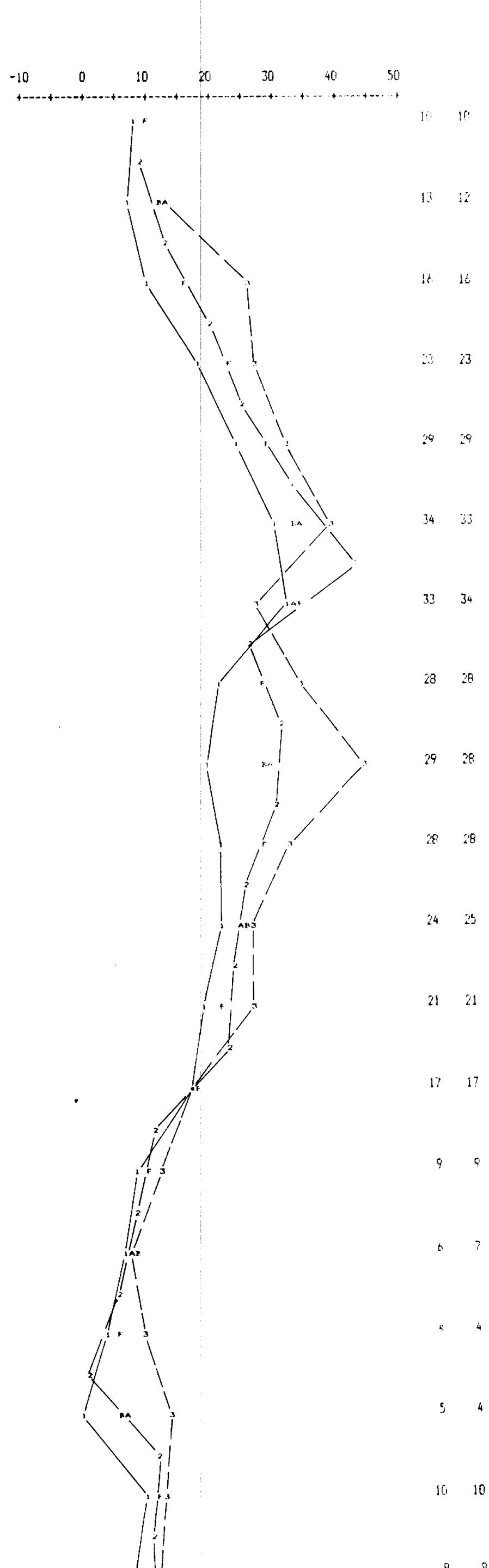
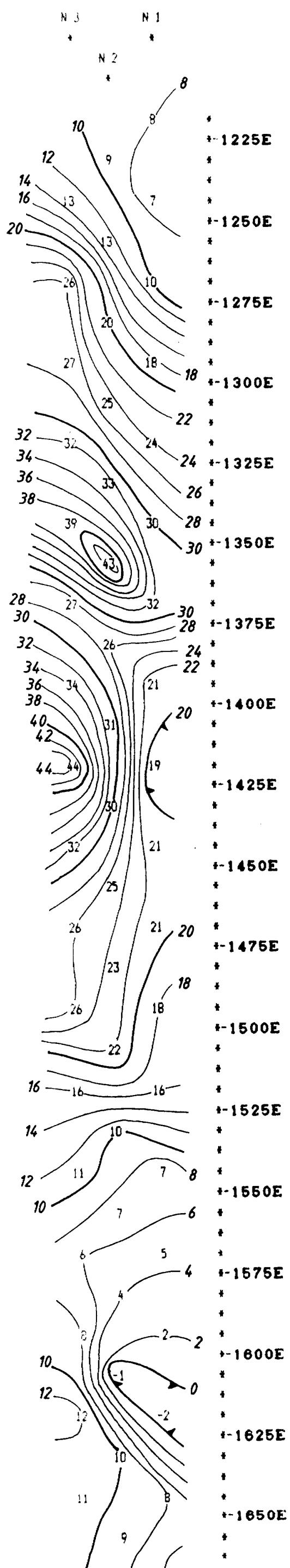
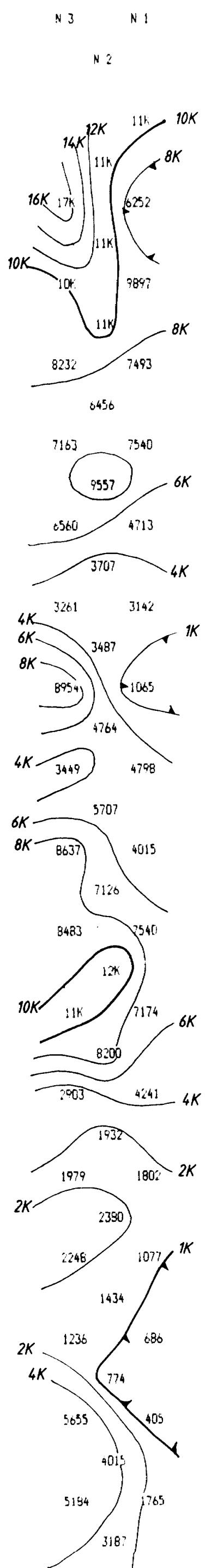
LINE 3160 N

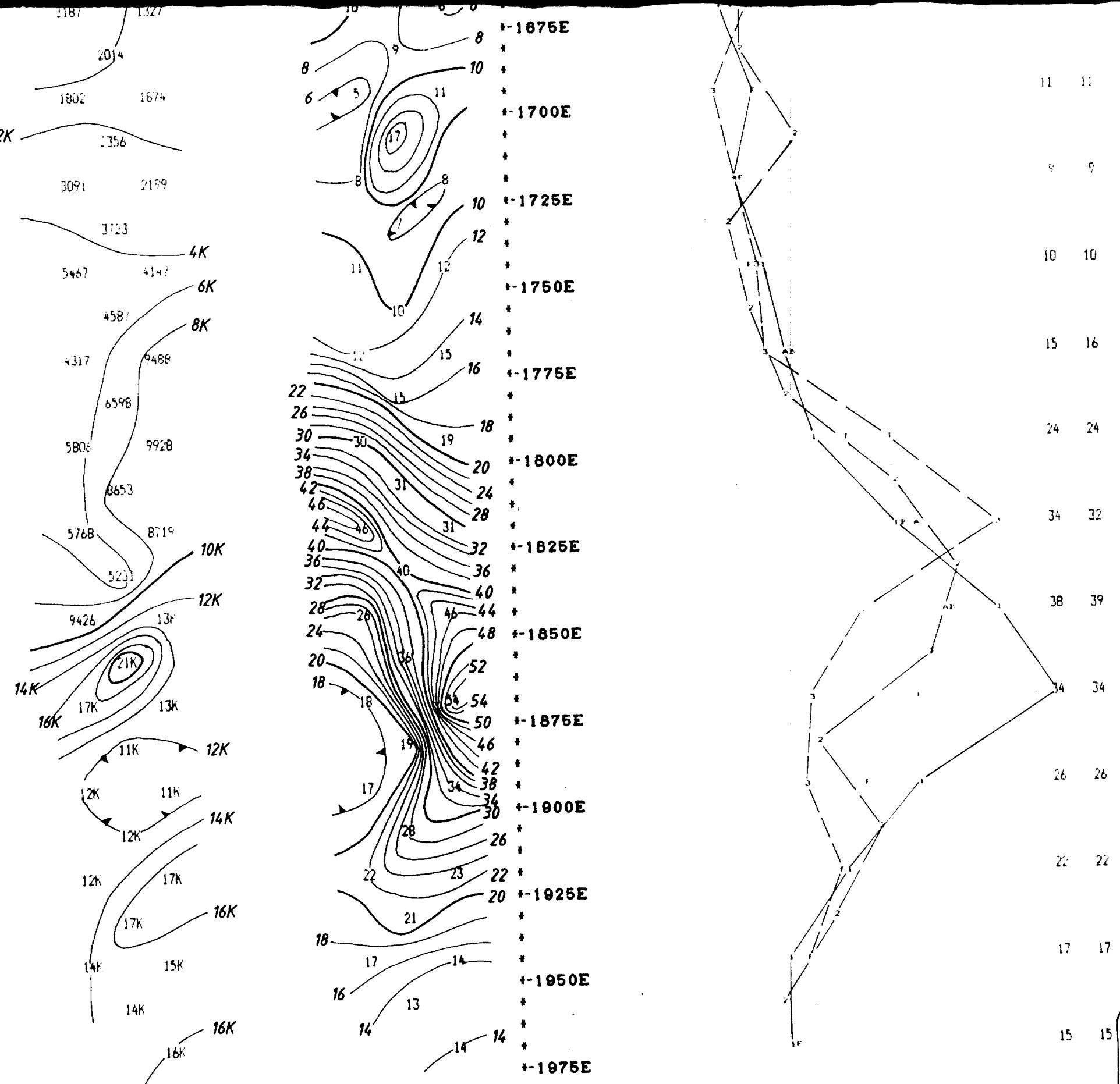
*Gregor Hodges*

SCALE = 1 : 1250

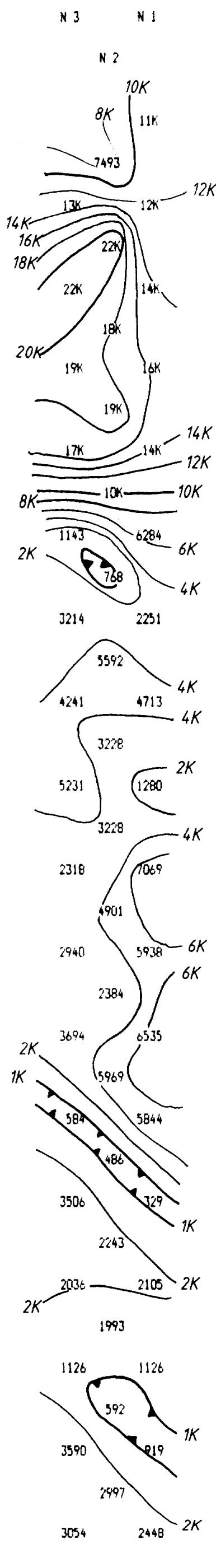
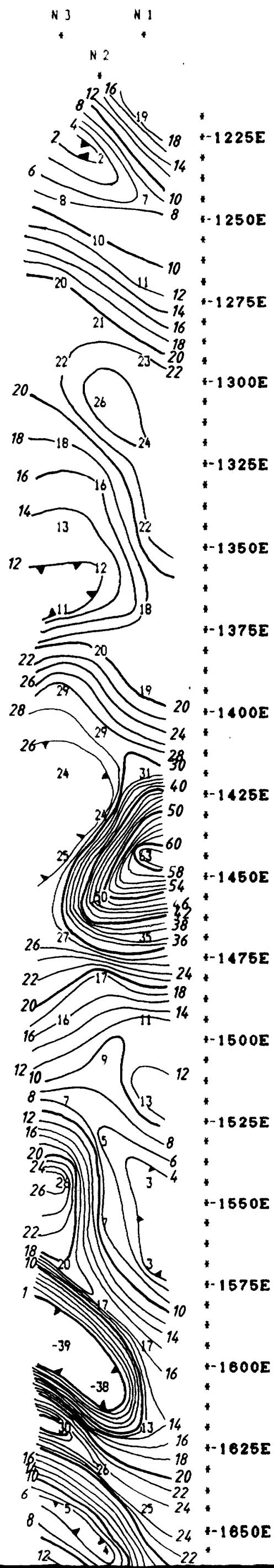
RESISTIVITY  
(ohm - metres)CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

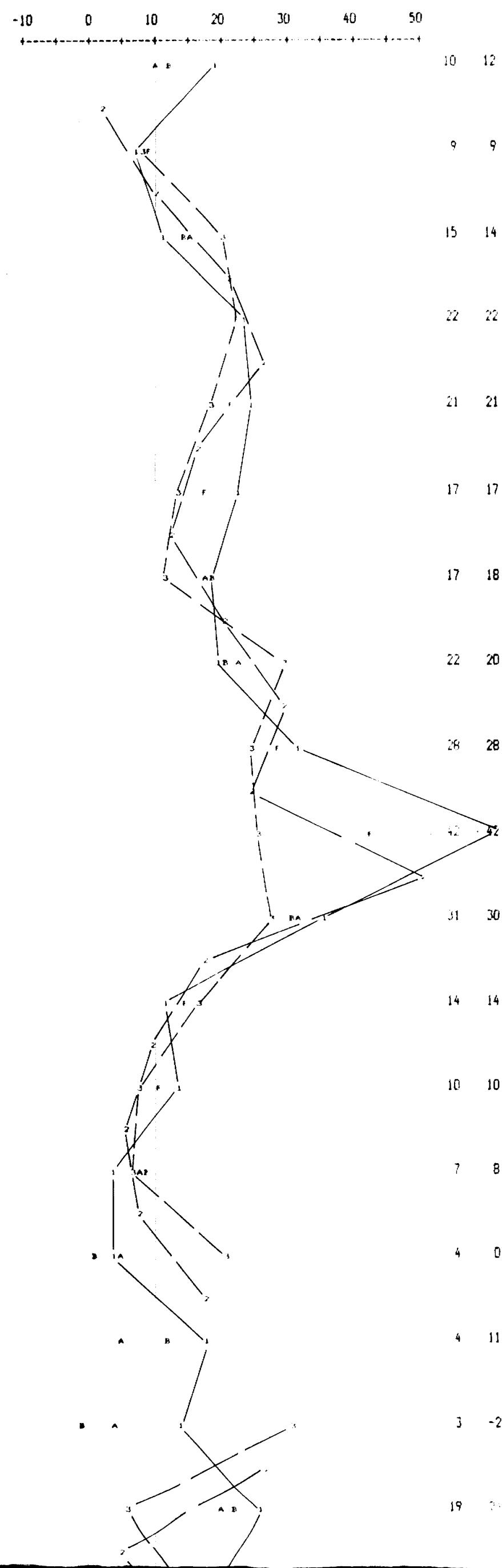
F  
S  
I  
L  
T  
E  
R  
S  
E  
R  
P  
A  
B



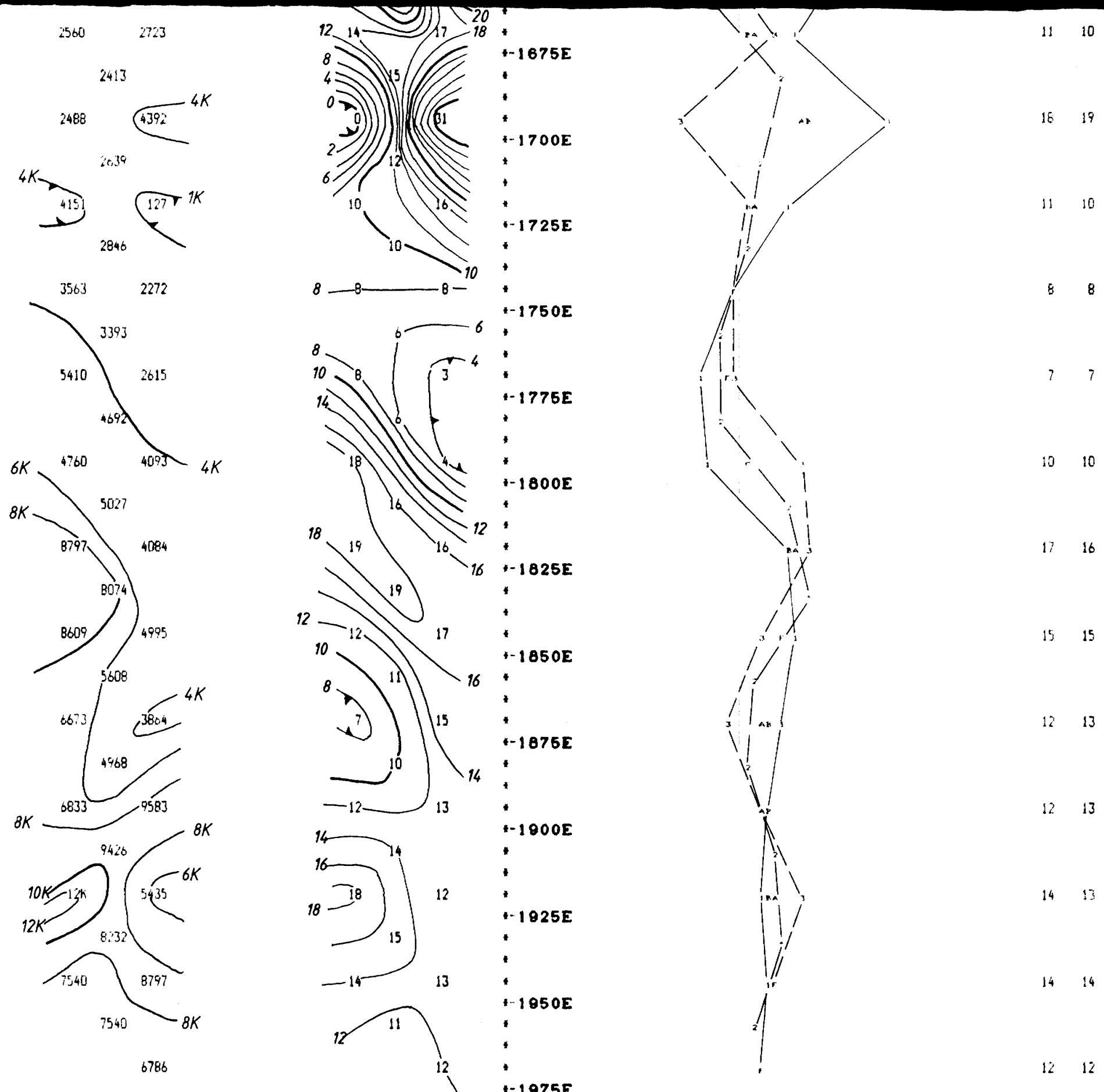
SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

F  
I  
L  
T  
E  
R  
S  
E  
R

A    B



Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 18/3/86

Operator : BM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

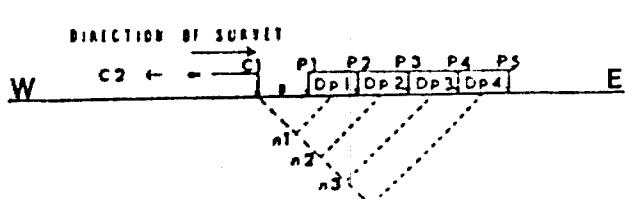
Receiver : SCINTREX IPR-8

Transmitter : PHOENIX IPT-1

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

LINE 3260 N

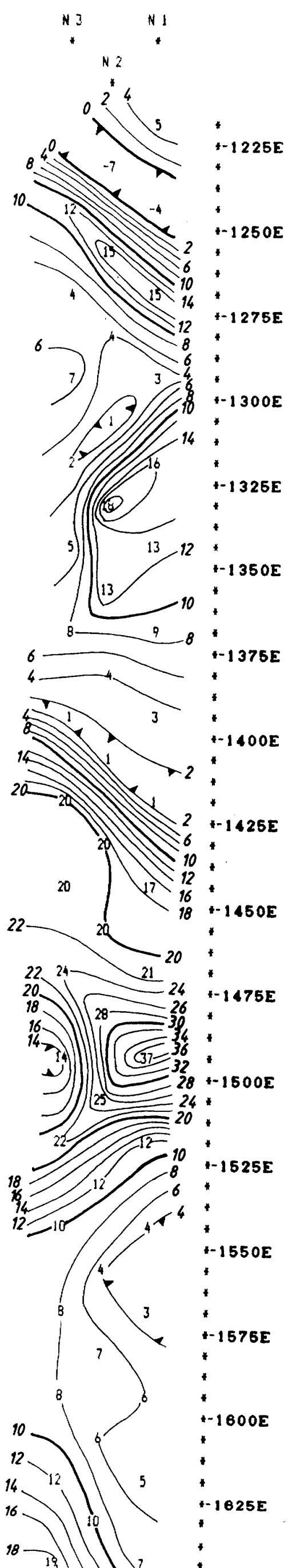
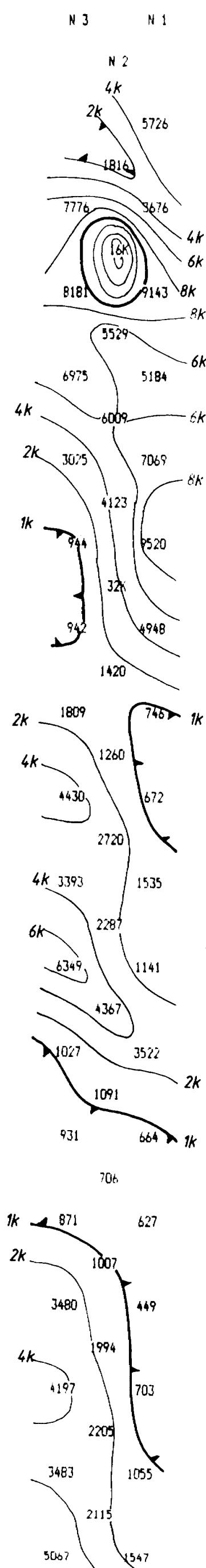
SCALE : 1 : 1250

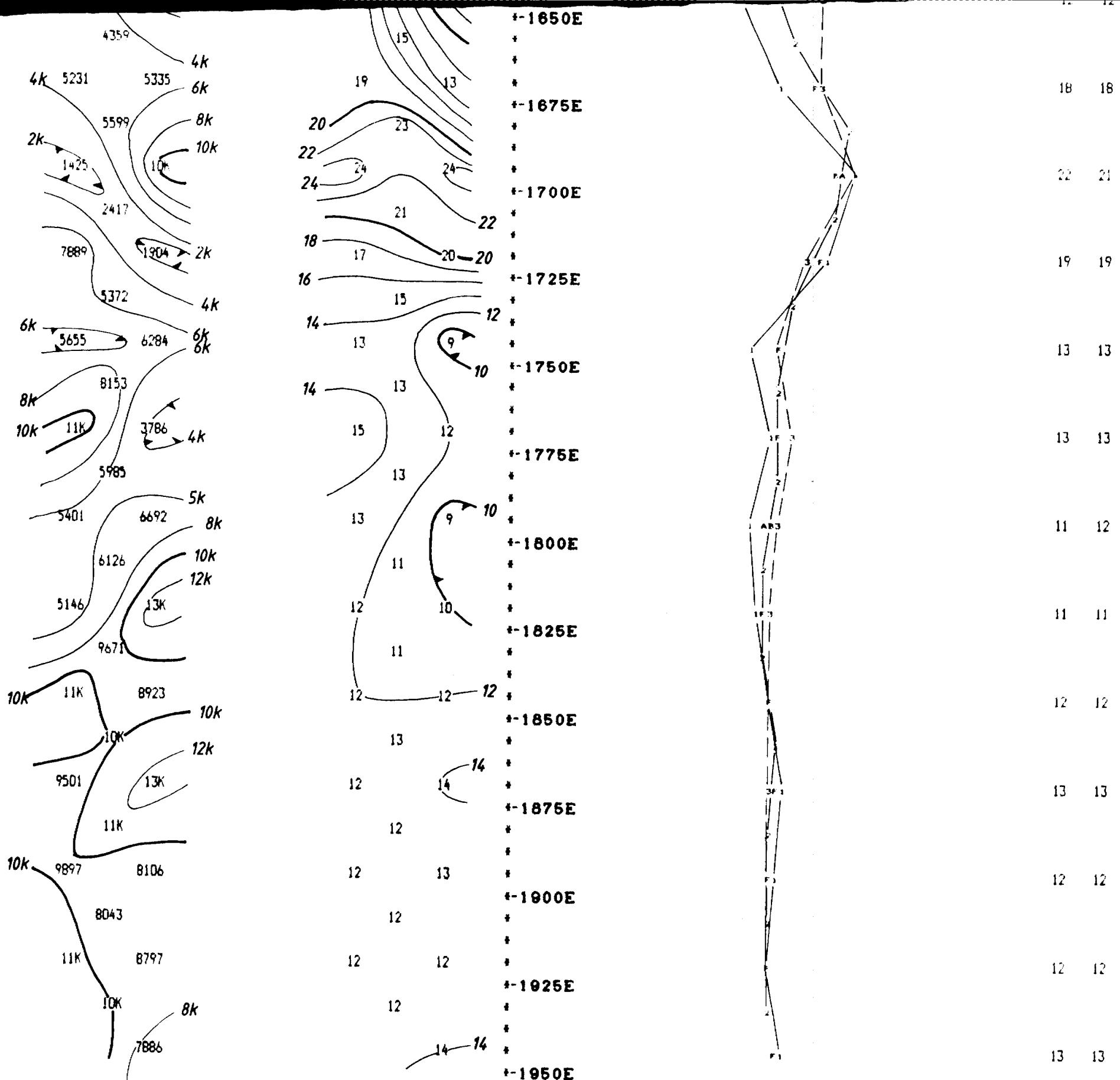
F  
I  
L  
I  
E  
R

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 17/3/86

Operator : RJL

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

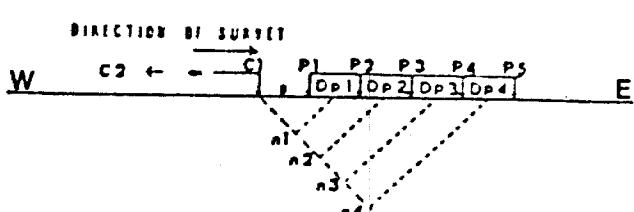
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



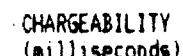
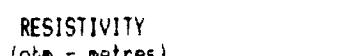
\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 3

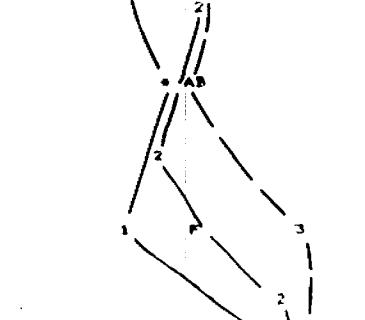
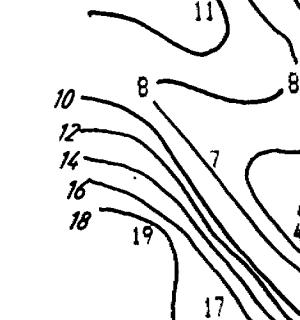
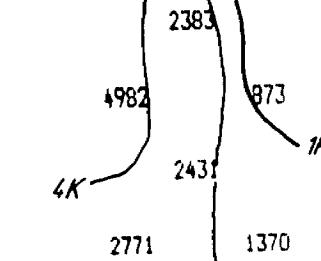
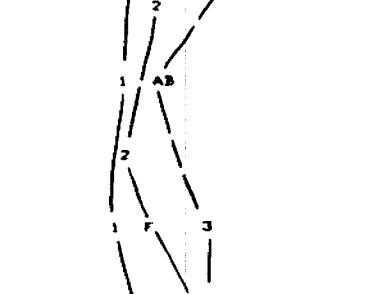
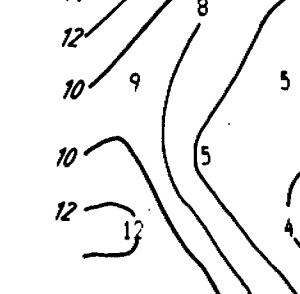
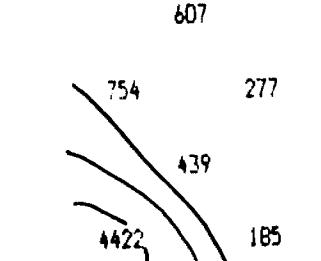
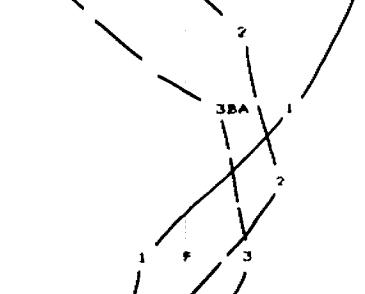
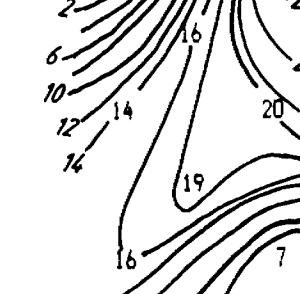
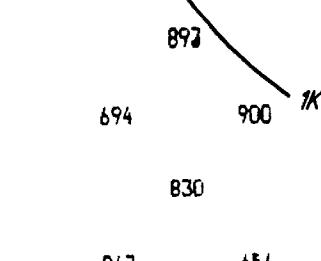
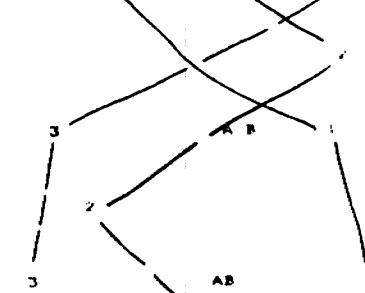
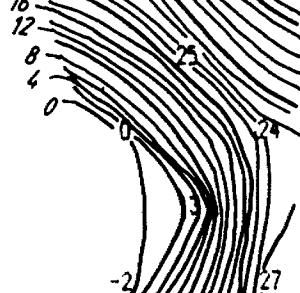
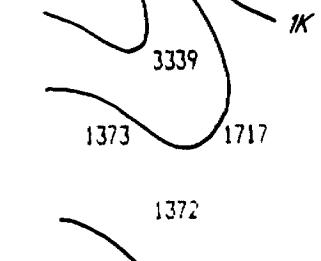
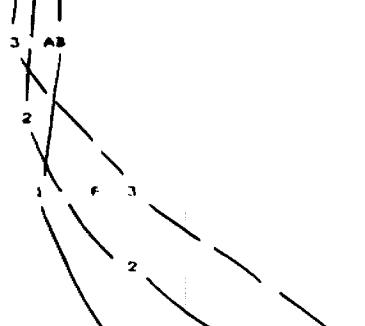
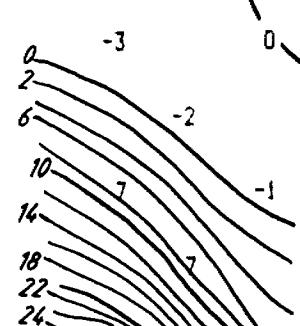
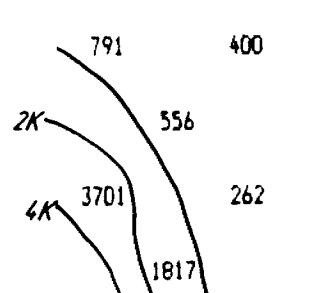
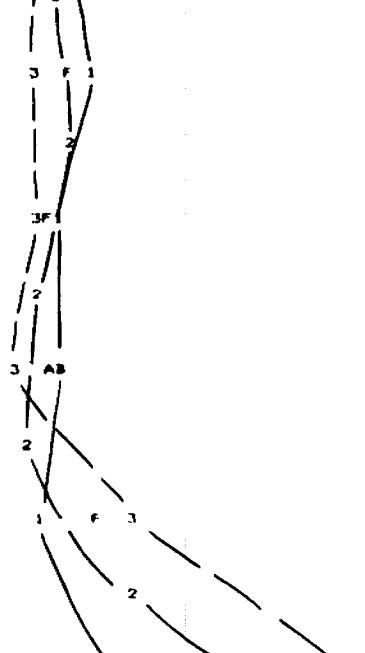
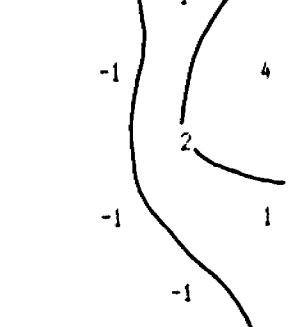
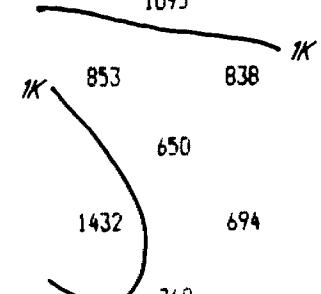
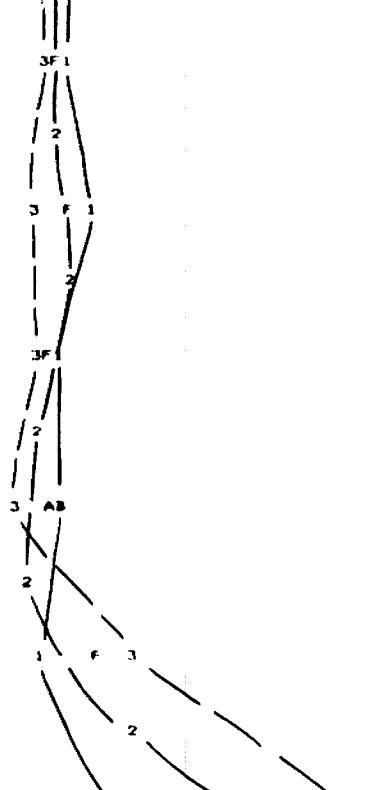
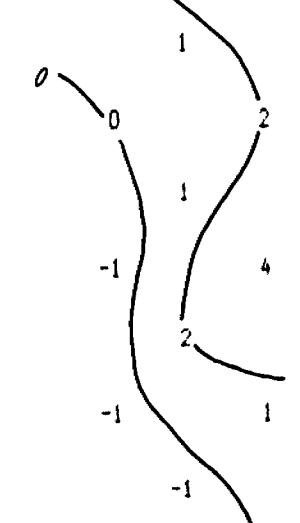
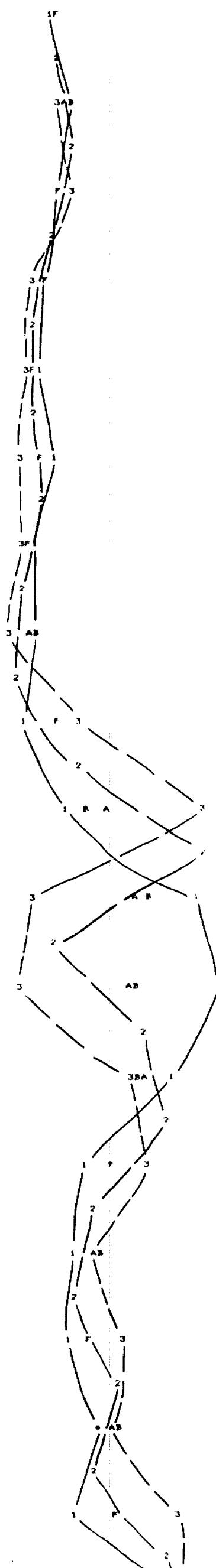
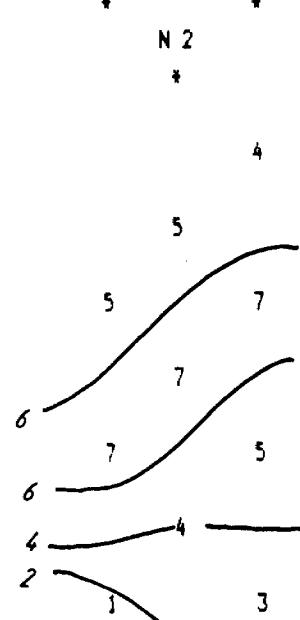
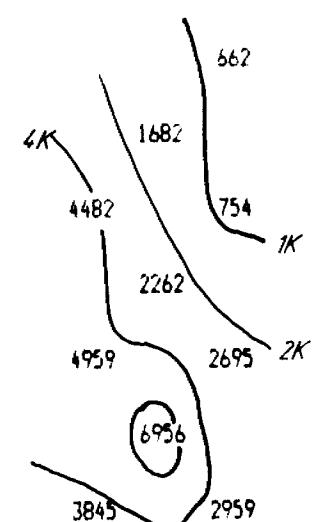
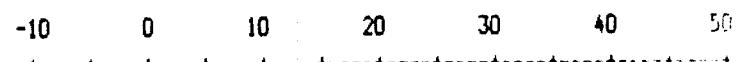
'a' Spacing = 25 M

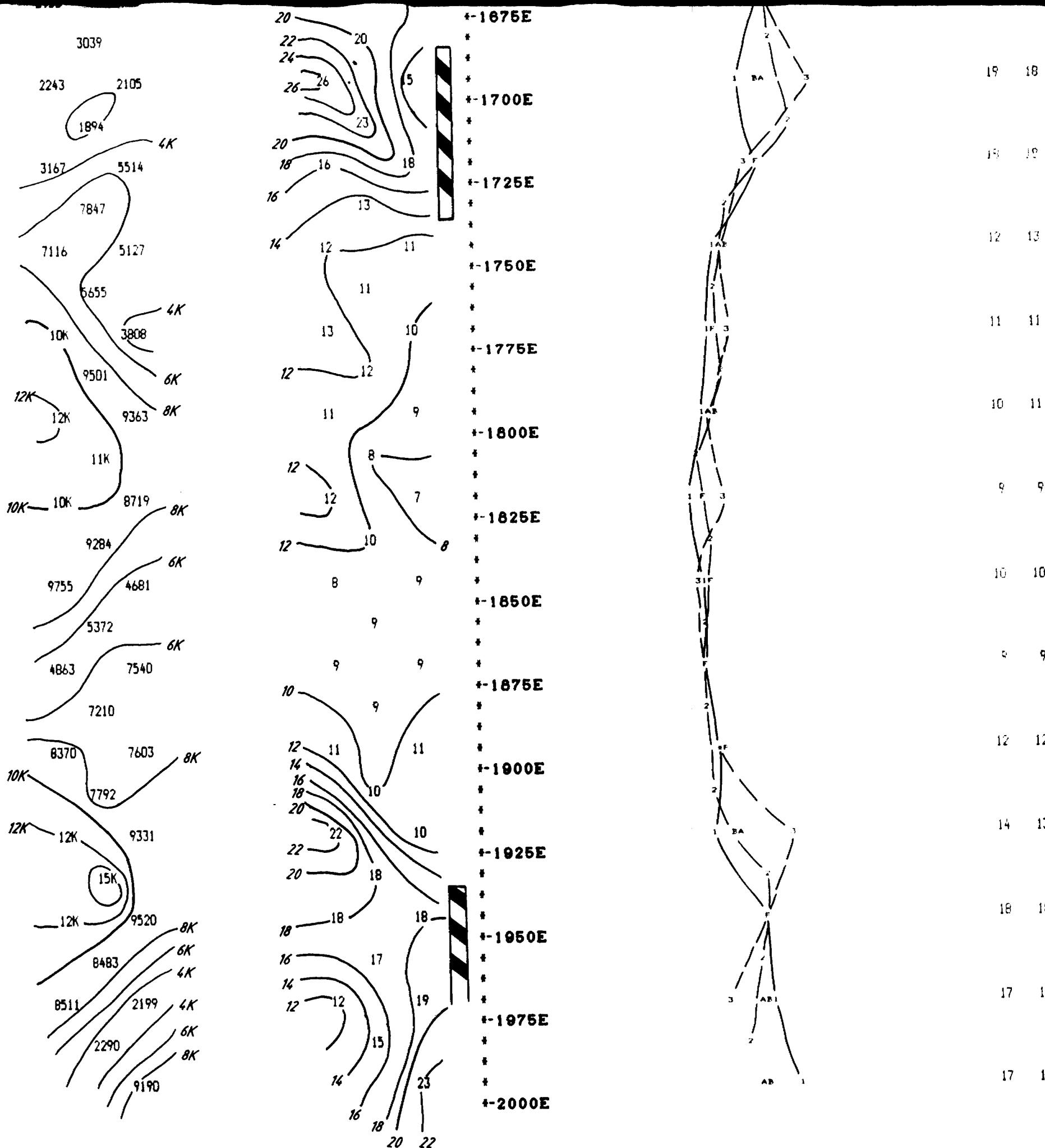
LINE 3310 N

**SCALE : 1:1250**



FRAZER





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 16/3/86

Operator : RJL

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

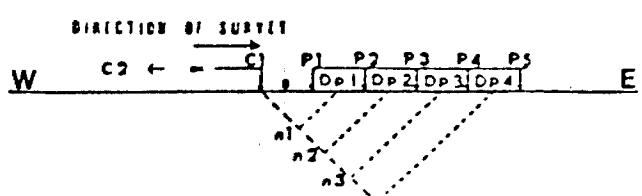
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

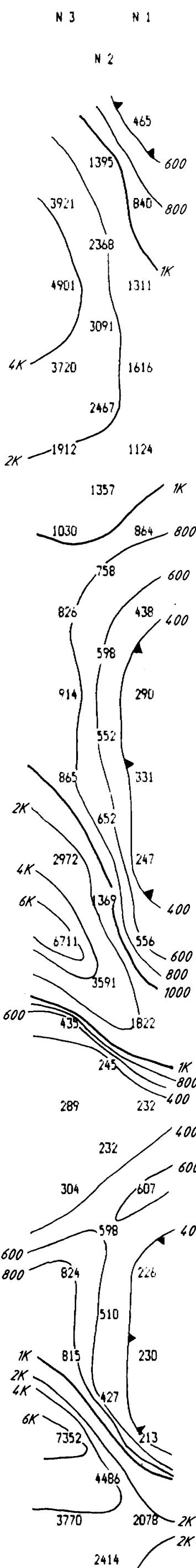
IP Pseudosections for N = 1 to 3

\*a\* Spacing = 25 M

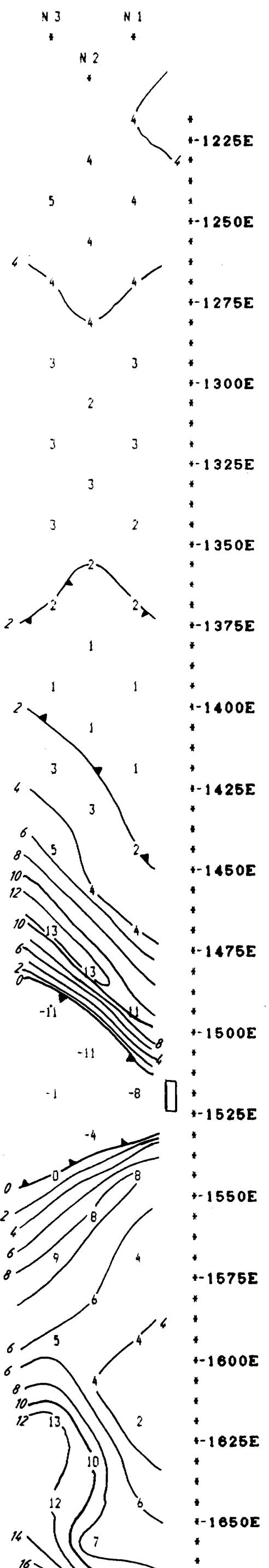
LINE 3360 N

SCALE = 1 : 1250

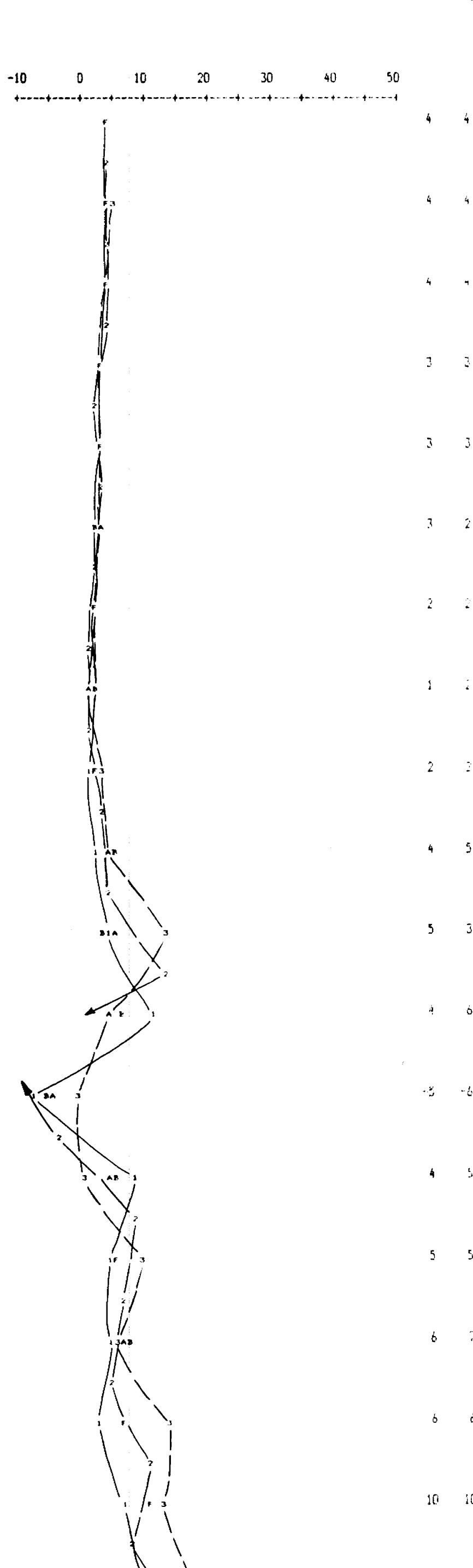
RESISTIVITY  
(ohm-metres)



CHARGEABILITY  
(milliseconds)

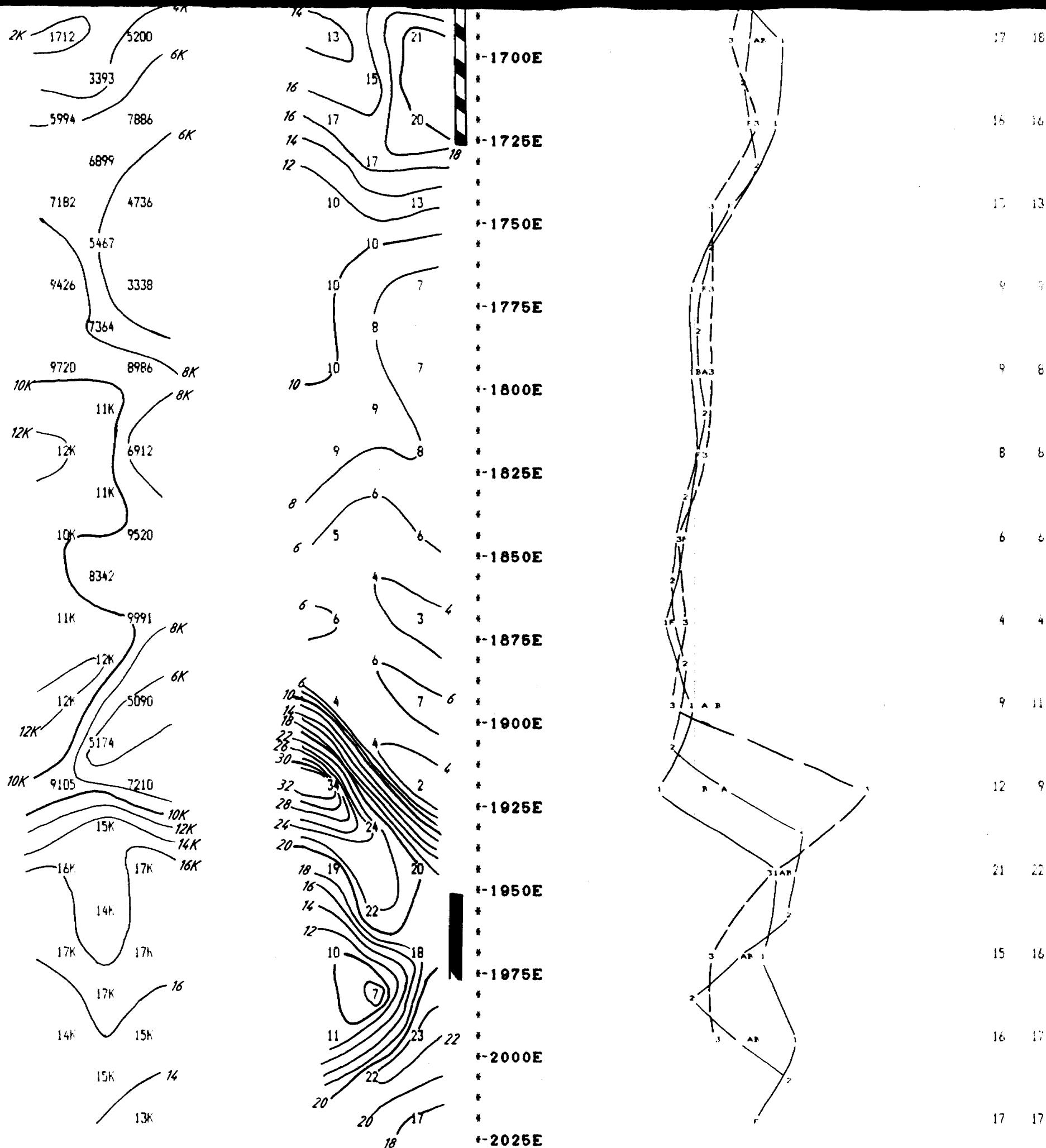


CHARGEABILITY PROFILE



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

A      B



Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 15/3/86

Operator : RJL

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

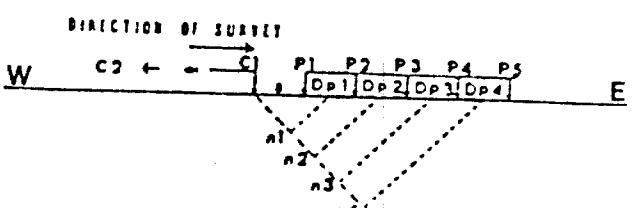
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



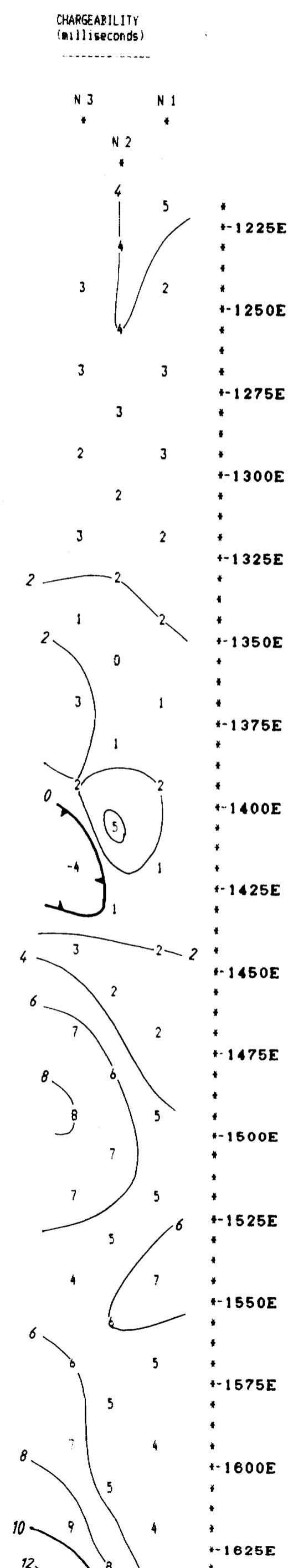
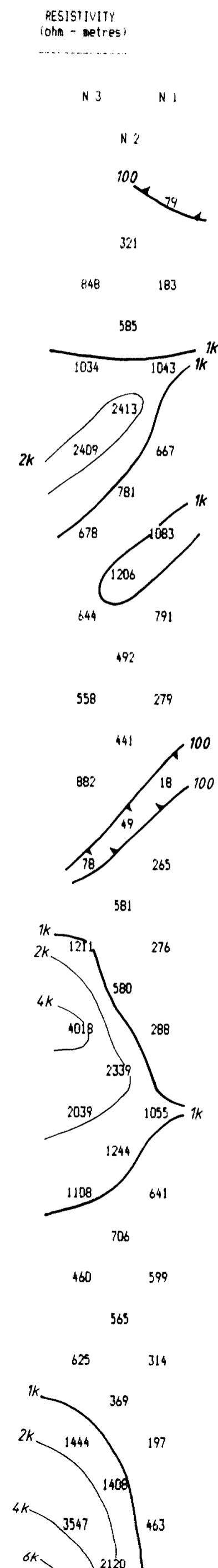
R. B. MIDDLETON EXPLORATION  
SERVICES INC.

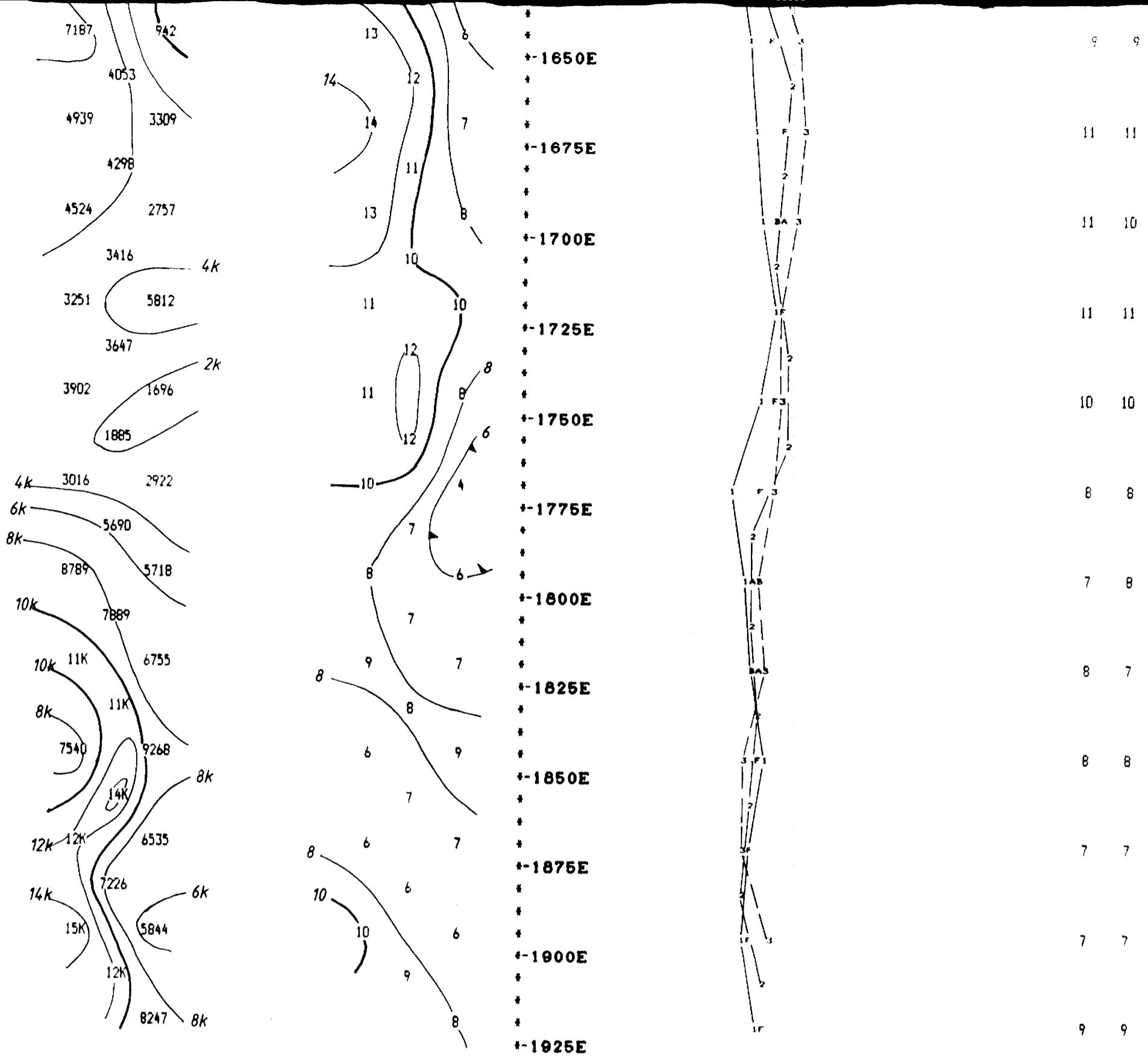
IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

*Bryant Hodges*

SCALE : 1 : 1250





Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 14/3/86

Operator : RJL

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

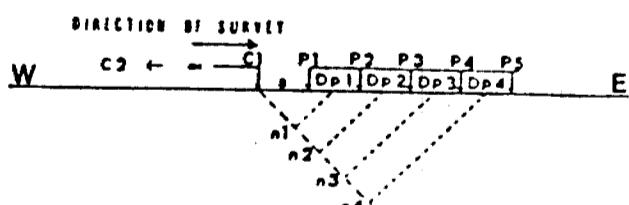
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

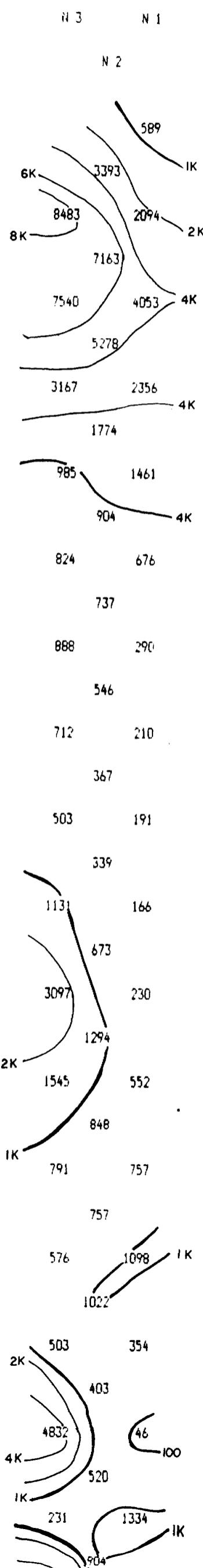
IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

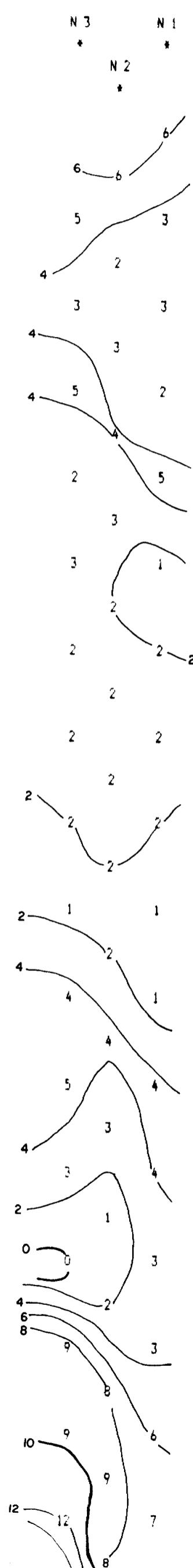
LINE 3460 N

SCALE : 1 : 1250

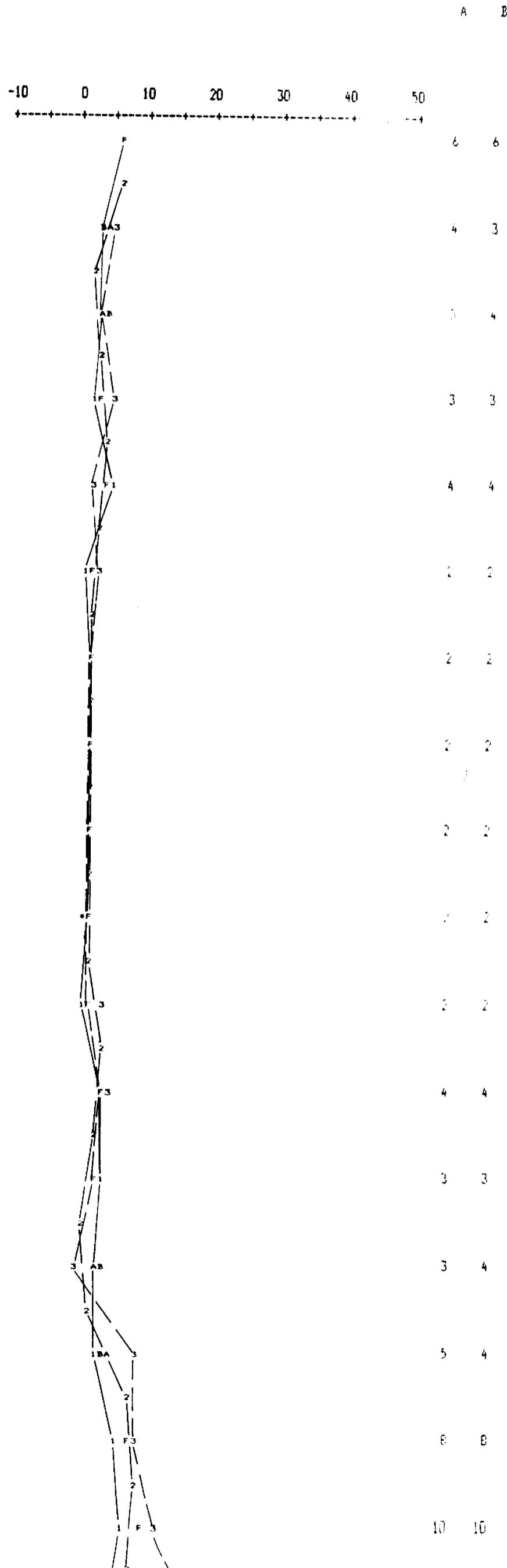
RESISTIVITY  
(ohm - metres)



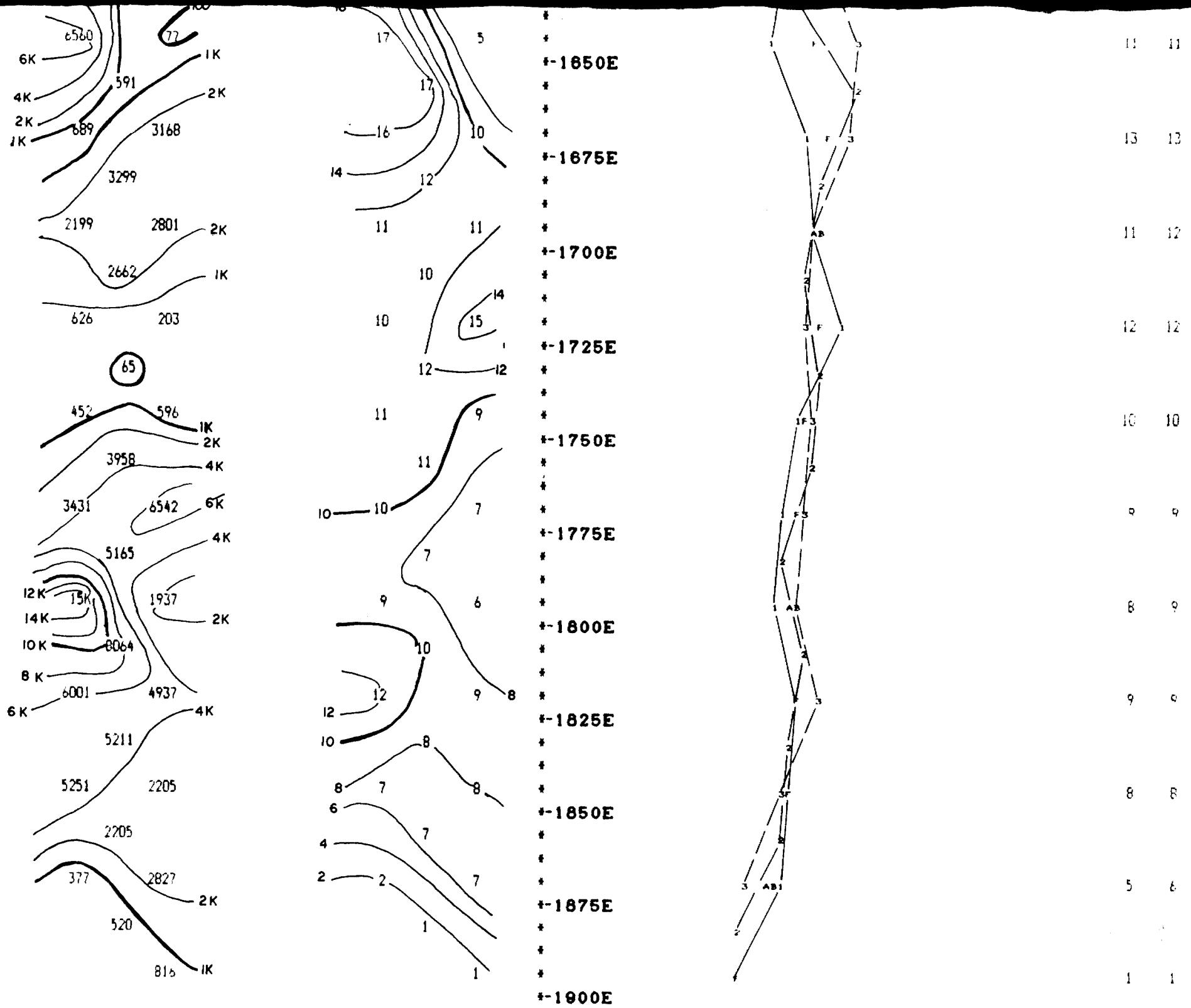
CHARGEABILITY  
(milliseconds)



CHARGEABILITY PROFILE



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



Property : MAISONVILLE GRID 2

Client : GLEN AUDEN

Date of Survey : 13/3/86

Operator : RJL

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

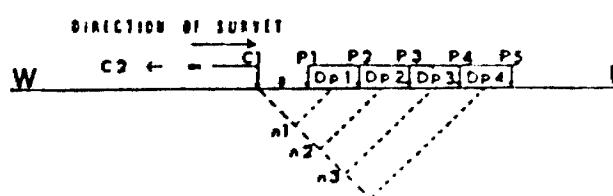
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



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R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

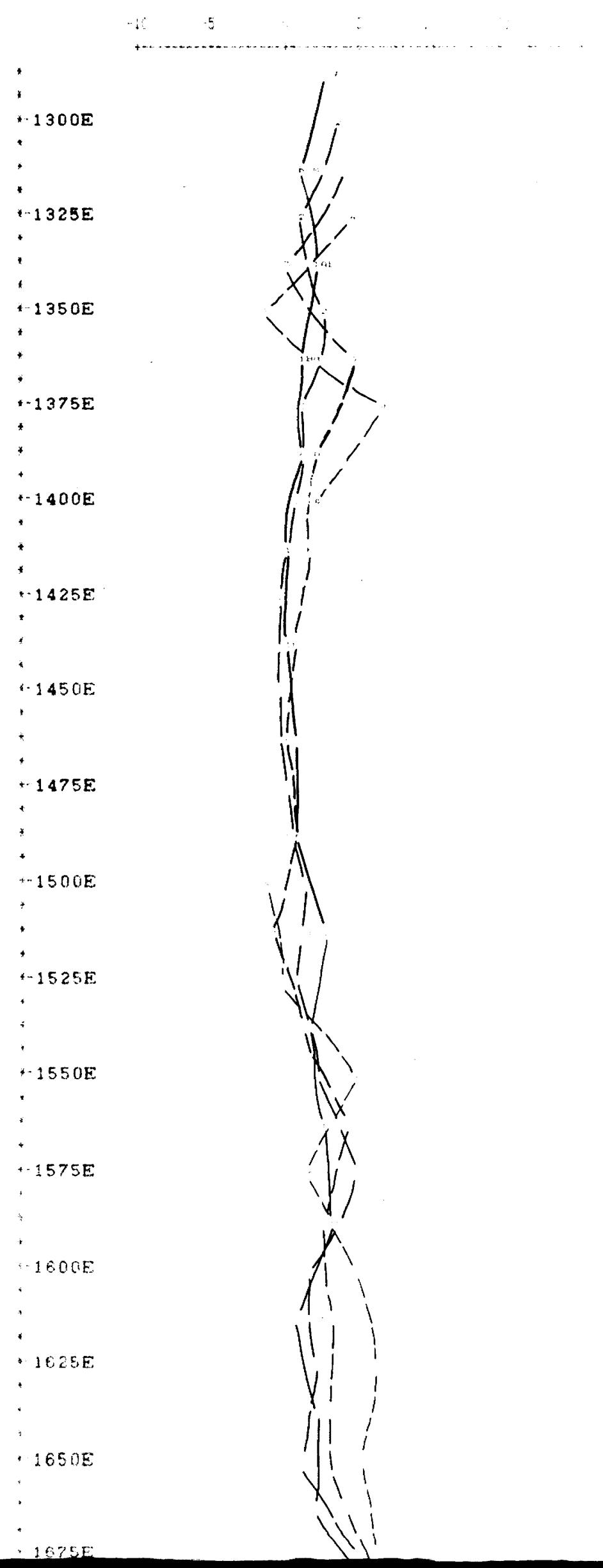
IP Pseudosections for N = 1 to 3

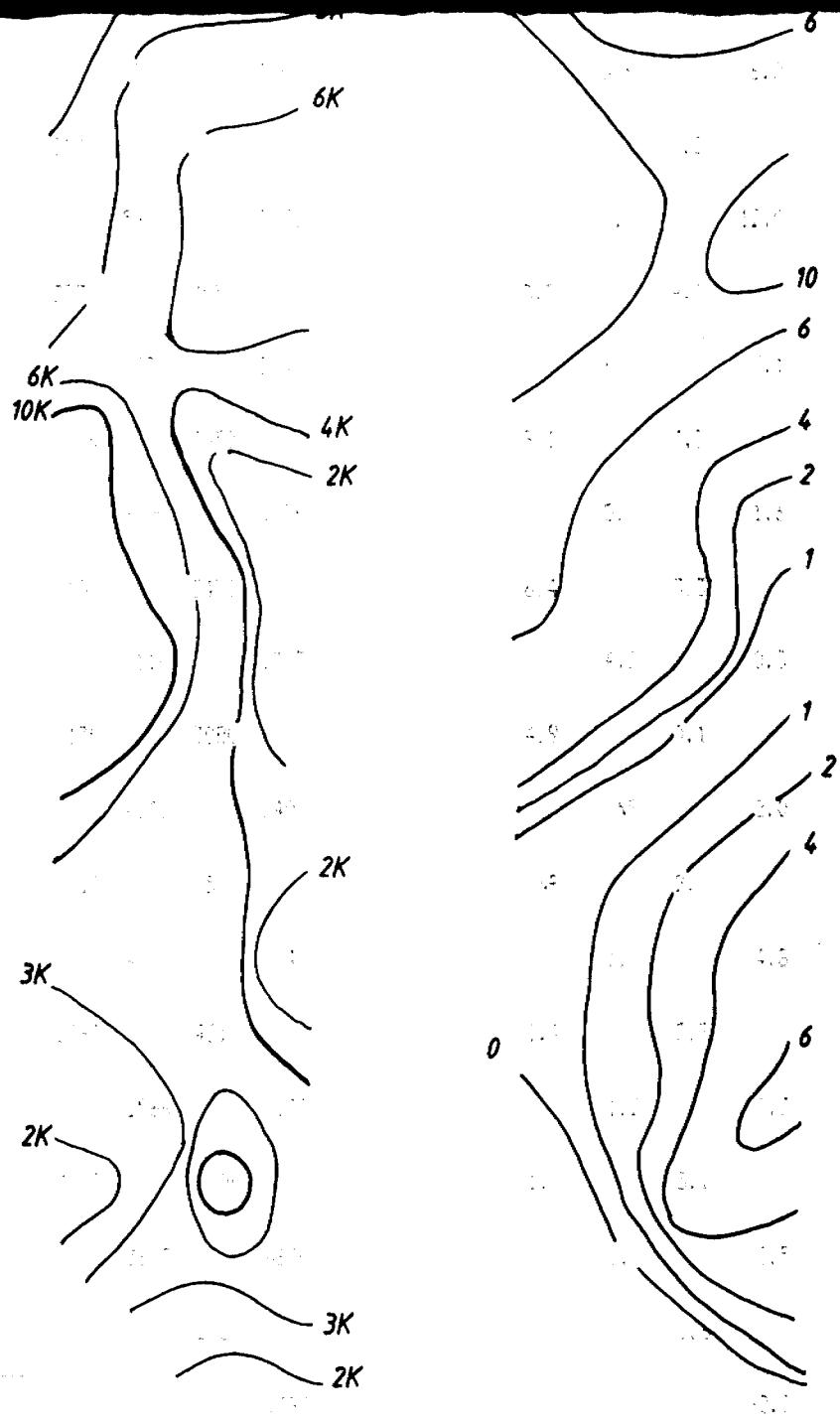
'a' Spacing = 25 M

LINE 3510 N

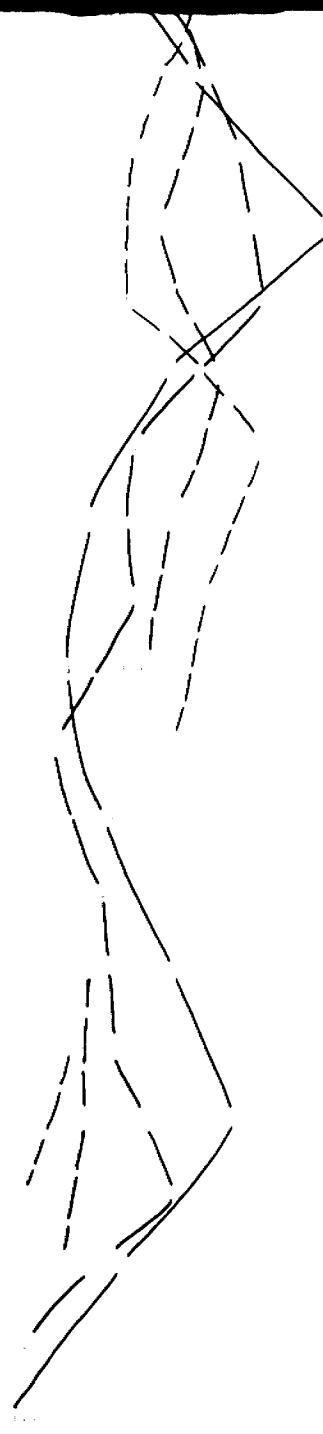
RESISTIVITY  
(OHM-METERS)CAPACITANCE  
(MICROFARADS)

IMPEDANCE (OHM)





-1700E  
-1725E  
-1750E  
-1775E  
-1800E  
-1825E  
-1850E  
-1875E  
-1900E  
-1925E



Property : MAISBONVILLE TWP. GRID 2

Client : GLEN AUDEN RESOURCES

Date of Survey : 22/8/96

Operator : D.J.M

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

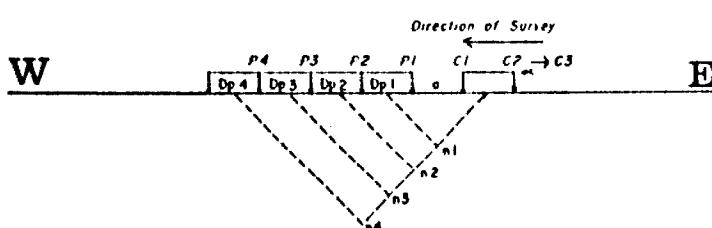
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSM-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 350 ms

Integration Time : 700 ms



\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

*Gary Kehler*

1D Pseudosections for N = 1 to 4

Line Spacing = 25 m

L O N E   C E S I O N

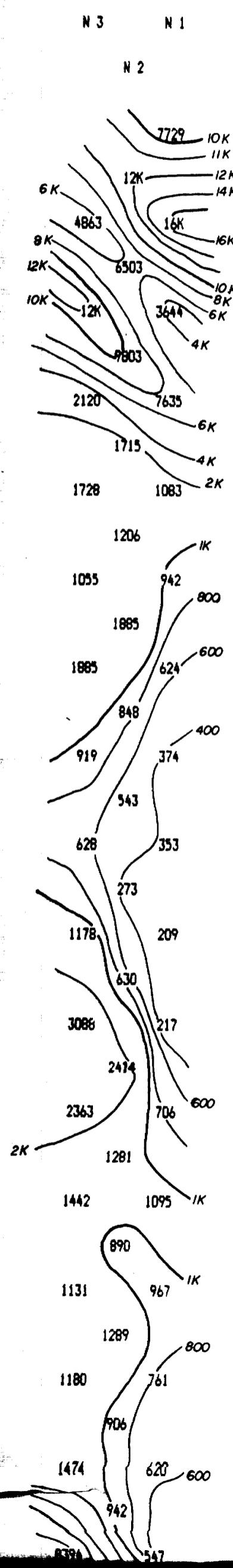
SCALE = 1 : 1250

RESISTIVITY  
(ohm-metres)

CHARGEABILITY  
(milliseconds)

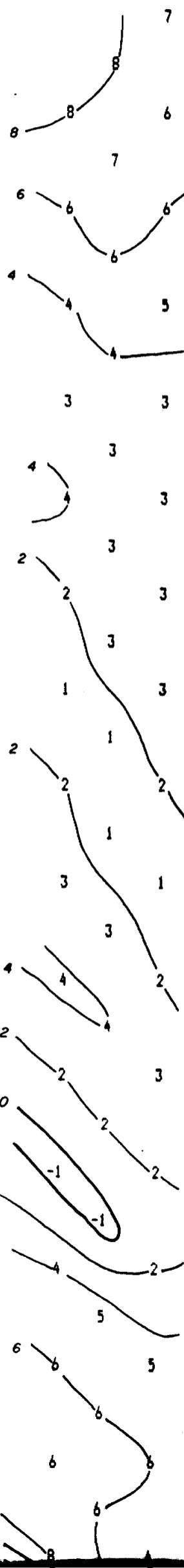
CHARGEABILITY PROFILE

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



N 3      N 1

N 2



-10      0      10      20      30      40      50

+-----+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+-----+

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+-----+-----+-----+-----+-----+-----+-----+

+-----+-----+-----+-----+-----+-----+-----+

A      B

B      B

7      7

6      6

5      5

4      4

3      3

3      3

2      2

2      2

3      3

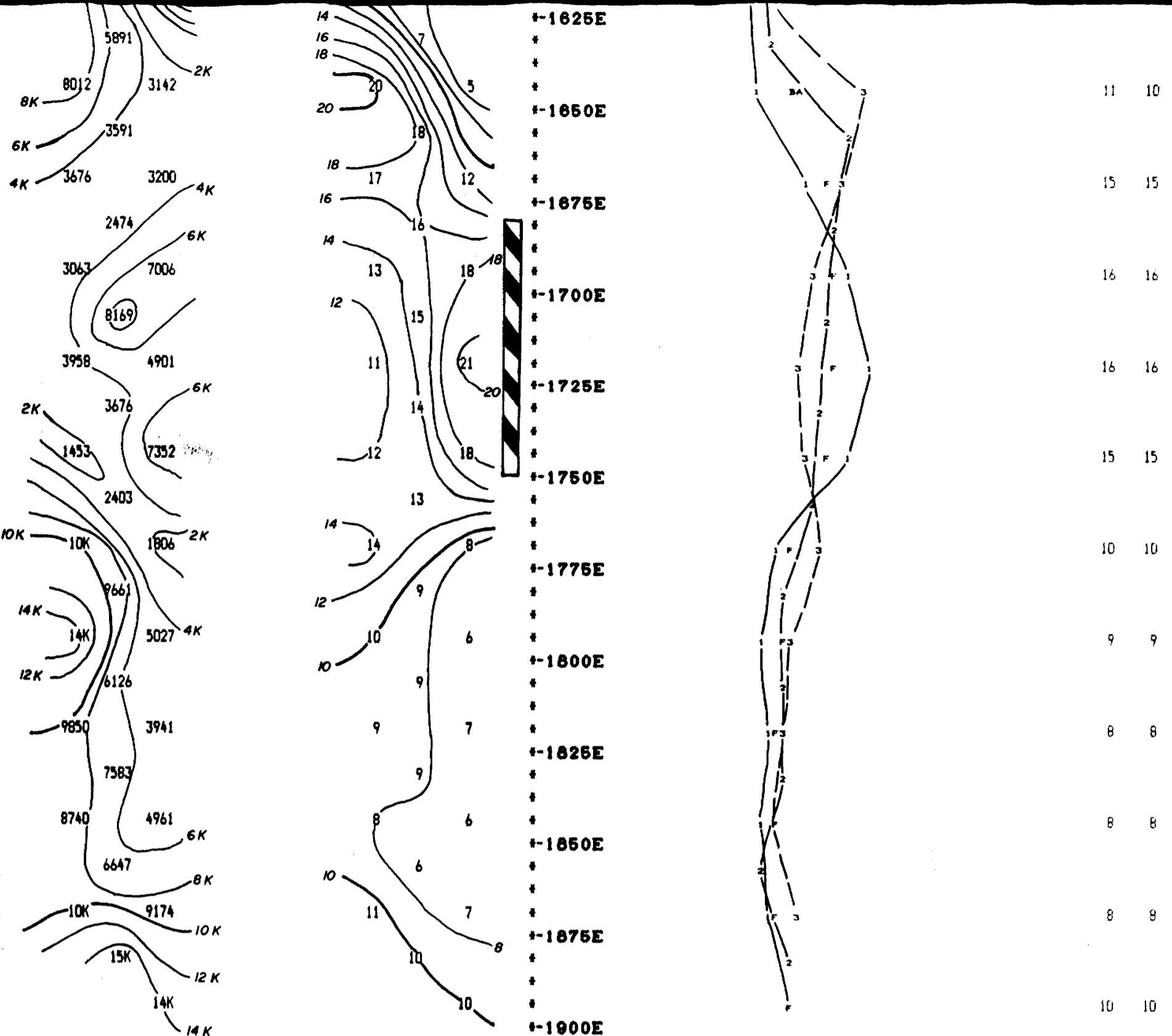
3      3

2      2

2      2

5      5

6      6



**Property : MAIBONVILLE GRID 2**

**Client : GLEN AUDEN**

**Date of Survey : 9/3/86**

**Operator : RJL**

**Electrode Array : POLE - DIPOLE**

**Mode : TIME DOMAIN**

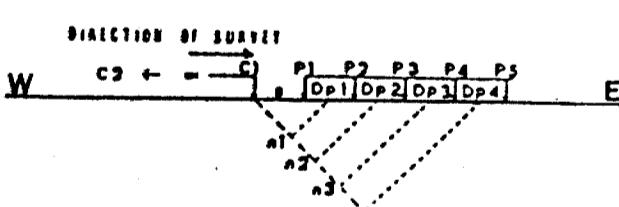
**Receiver : SCINTREX IPR-8**

**Transmitter : SCINTREX IPC-8**

**Pulse Time : 2 Sec on 2 Sec off**

**Delay Time : 650 ms**

**Integration Time : 520 ms**



\*\*\*\*\*  
**R. S. MIDDLETON EXPLORATION  
SERVICES INC.**  
\*\*\*\*\*

**IP Pseudosections for N = 1 to 3**

**\* Spacing = 25 M**

**LINE 3560 N**

SCALE : 1 : 1250

RESISTIVITY  
(ohm-metres)

N 3 N 1  
N 4 N 2

10K 2K

10K 6590 6K

10K 6193 757

2036 6193 6K

13.2 7186 6K

1522 7186 2K

2K 1890 1K

1890 757 600

1727 757 400

1141 910 400

900 151 200

960 165

162 215 200

169 225

242 148

600 177

600 205

161 150

694 30

100

476 174

173 112

774 279

121 300

500

300

180 600

1K 709

2K 408

4K 392

4078 300

347

CHARGEABILITY  
(milli-seconds)

N 3 N 1  
N 4 N 2

3.4

4.1

3.7 3.5

2.1 1.7

5.4 2.4

6 2.5

2.1 0.9

2.1 0.5

NR

-0.2 NR

NR -0.3

-1.1 1.3

-1.5 0.4

0.1 1.2

-1.3 0.7

-0.8 1.0

-0.5 0.1

0.4 0.6

0.1 1.4

0.1 1.5

0.7 0.4

0.2 1.7

0.1 0.7

1.1 1.9

1.6 3.5

3.1 3.4

2.0 3.0

1.5 3.1

4.3 0

CHARGEABILITY  
(milli-seconds)

-10 -5 0

1.1 1.2

1.1 1.7

3.3 4.1

2.4 2

2.5 0.9

2.1 0.5

0.3 NR

0.1 0.9

NR -0.3

0.1 1.3

0.1 1.2

0.1 1.5

0.1 1.2

0.1 1.0

0.1 0.1

0.1 0.6

0.1 0.6

0.1 1.4

0.1 1.5

0.1 1.2

0.1 0.7

0.1 1.9

0.1 2

0.1 3.5

0.1 3.4

0.1 3.0

0.1 3.1

0.1 0

0.1 1.4

10 5 0

1.1 1.2

1.1 1.7

3.3 4.1

2.4 2

2.5 0.9

2.1 0.5

0.3 NR

0.1 0.9

NR -0.3

0.1 1.3

0.1 1.2

0.1 1.5

0.1 1.2

0.1 1.0

0.1 0.1

0.1 0.6

0.1 0.6

0.1 1.4

0.1 1.5

0.1 1.2

0.1 0.7

0.1 1.9

0.1 2

0.1 3.5

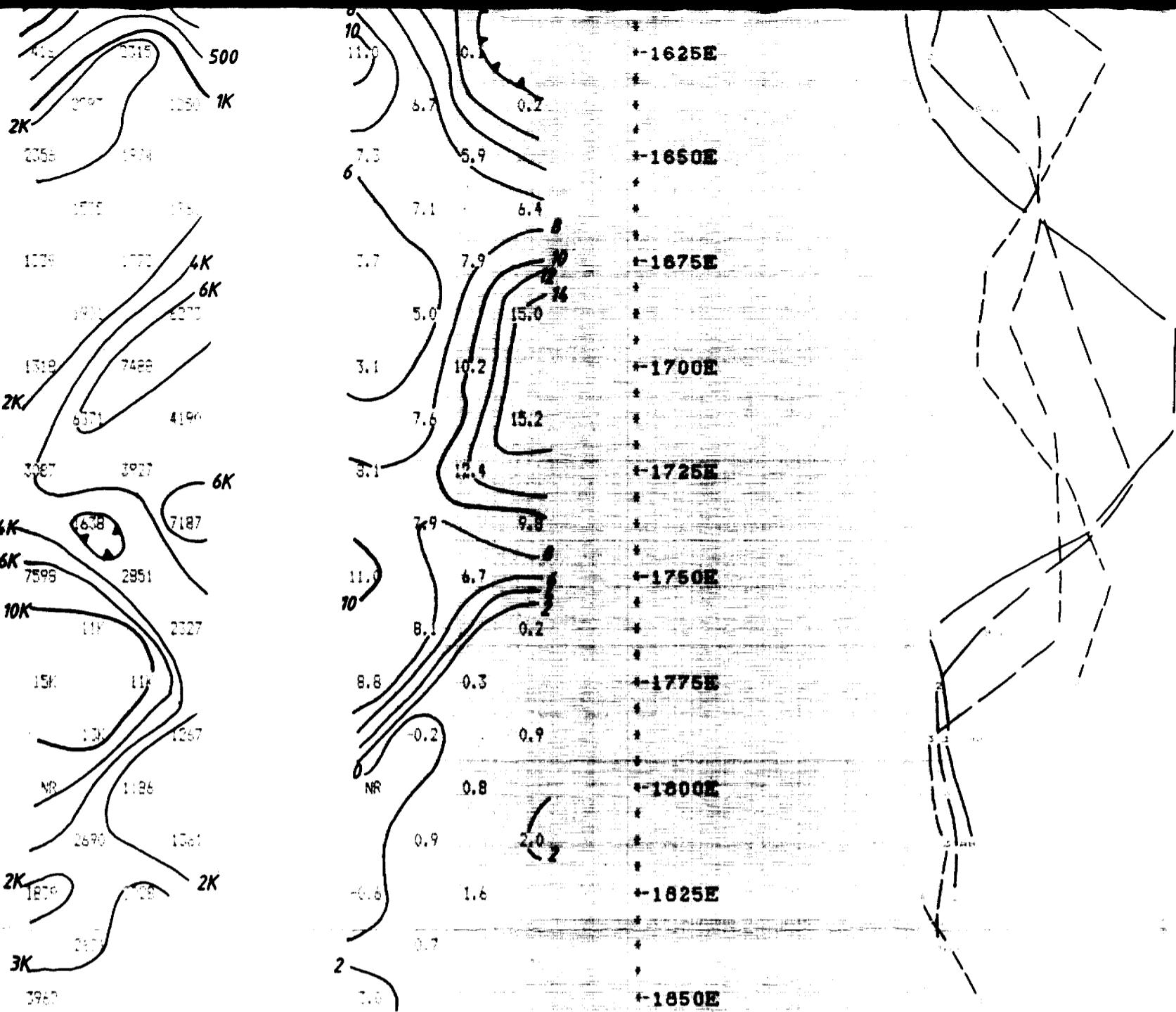
0.1 3.4

0.1 3.0

0.1 3.1

0.1 0

0.1 1.4



Property : MAISONVILLE TWP. **GRID 2**

Client : GLEN AUDEN RESOURCES

Date of Survey : 26/8/86

Operator : DJM

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

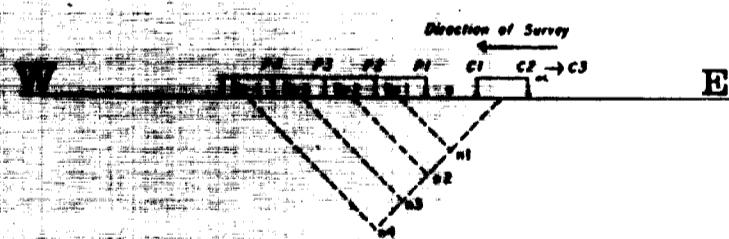
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



\*\*\*\*\*  
**R. S. MIDDLETON EXPLORATION  
SERVICES INC.**  
\*\*\*\*\*

IP Pseudosections FEB N = 1 to 4

Line Spacing = 25 M

LINE 3560 N

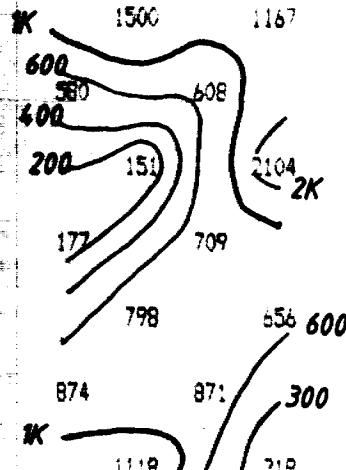
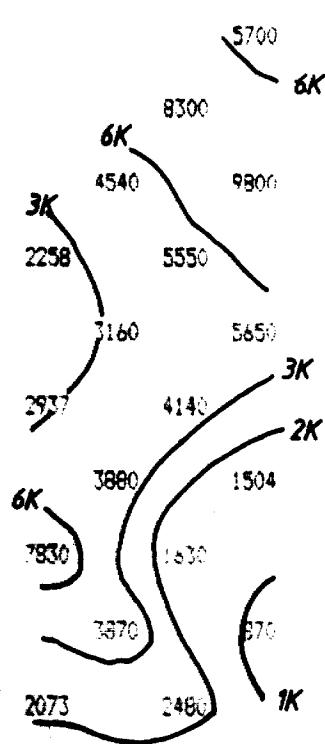
Dryden

SCALE : 1 : 1250

RESISTIVITY  
(ohm-metres)

N 3 N 1

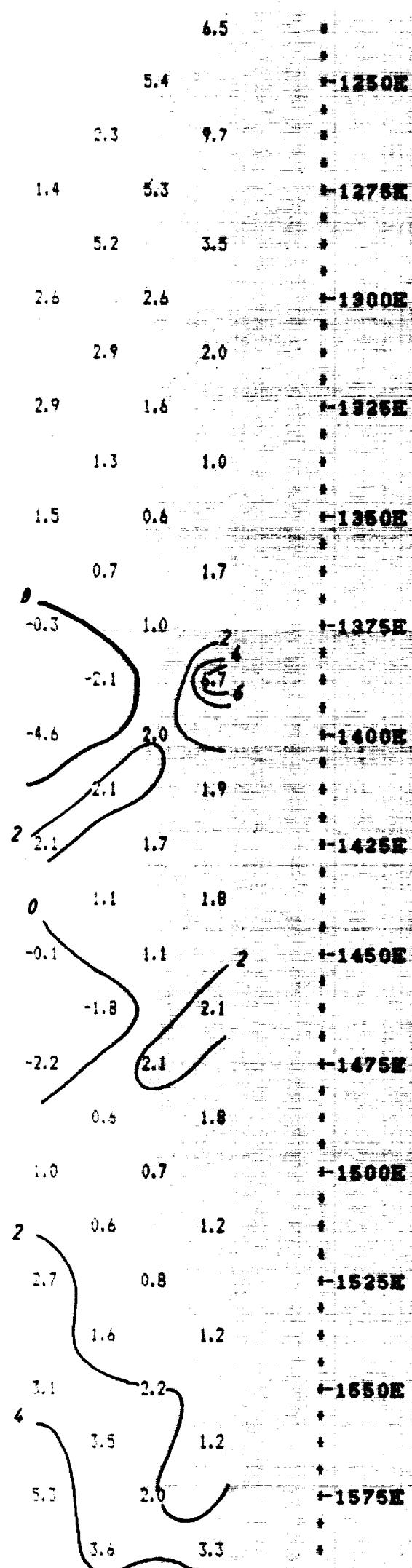
N 4 N 2



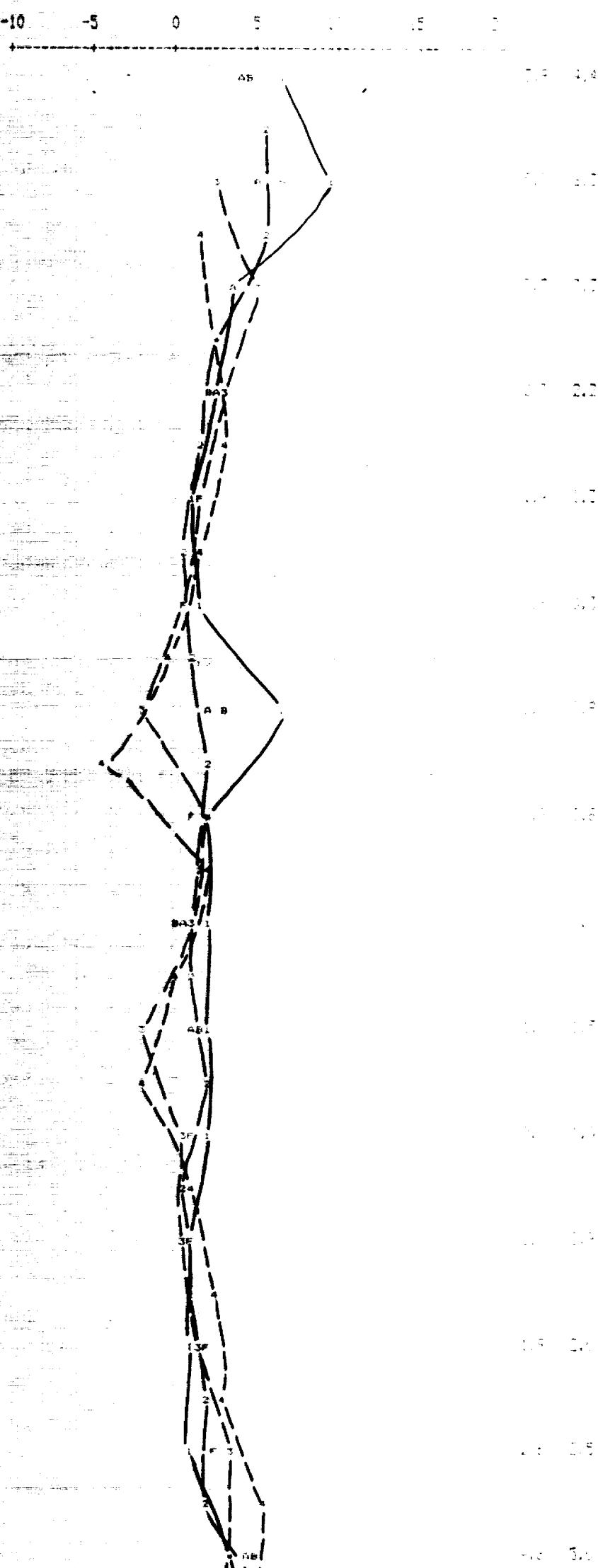
CHARGEABILITY  
(milliseconds)

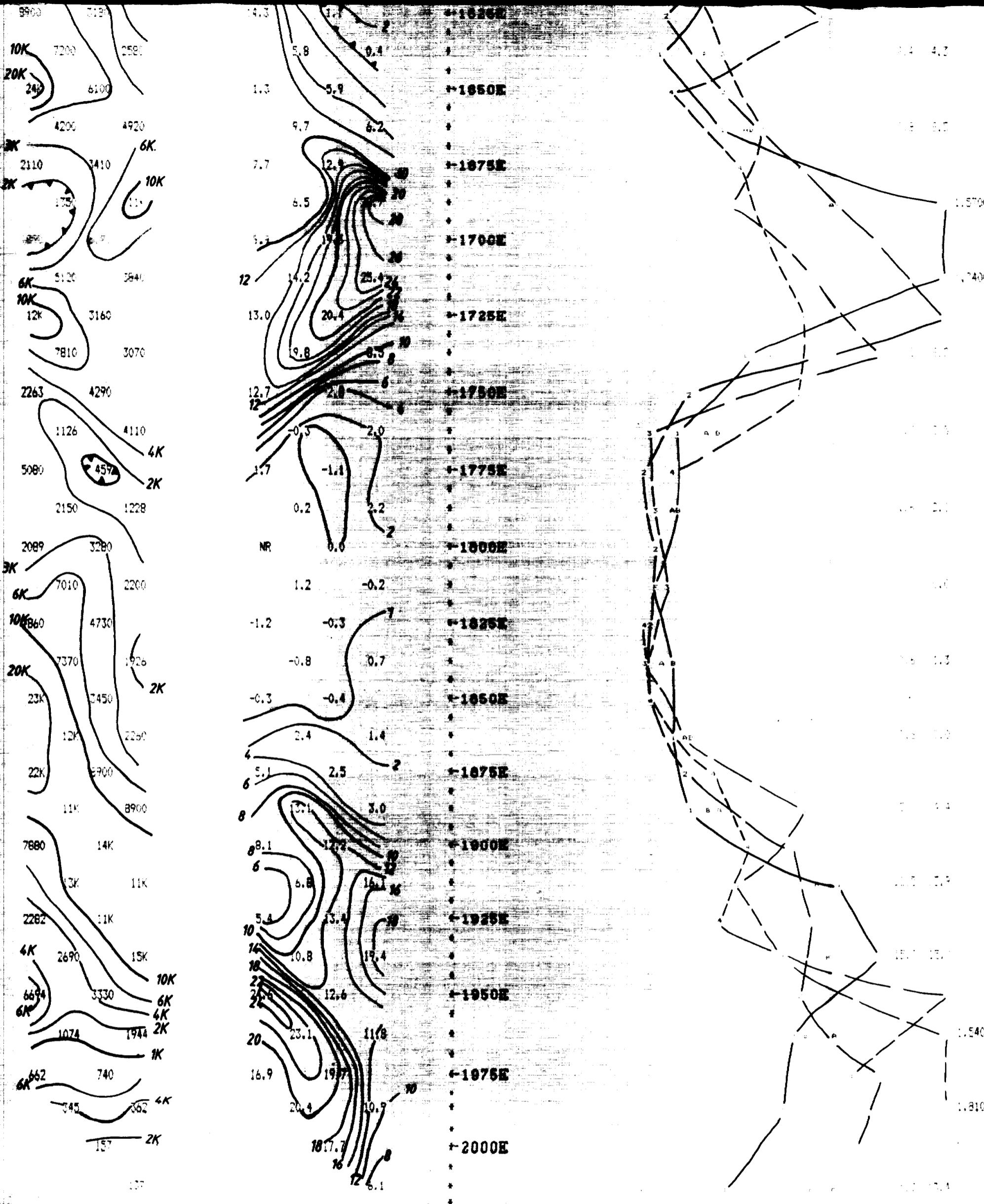
N 3 N 1

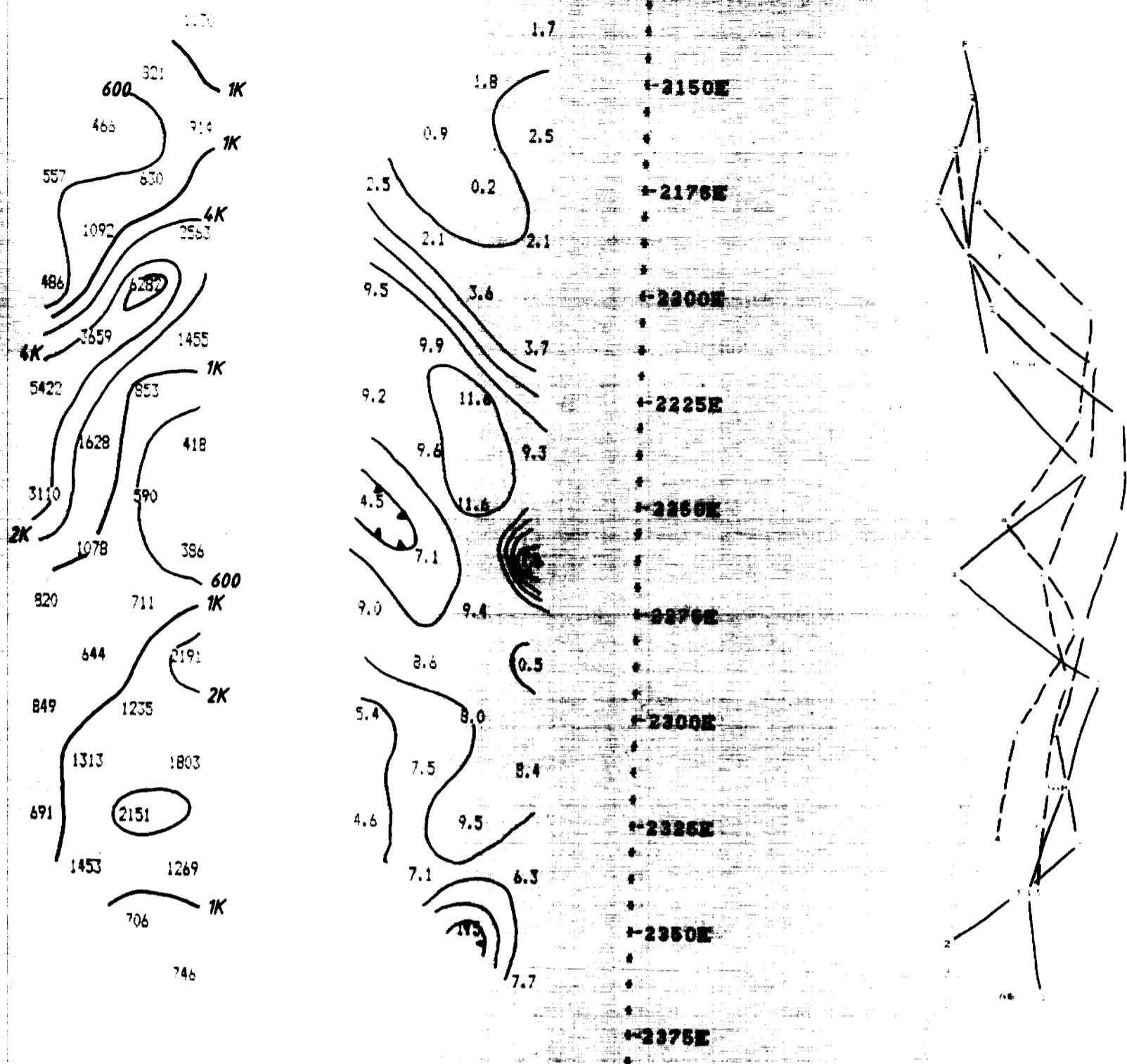
N 4 N 2



CHARGEABILITY PROFILE







Property : MAISONVILLE TWP. GRID 2

Client : GLEN AUDEN RESOURCES

Date of Survey : 25/8/86

Operator : DJM

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

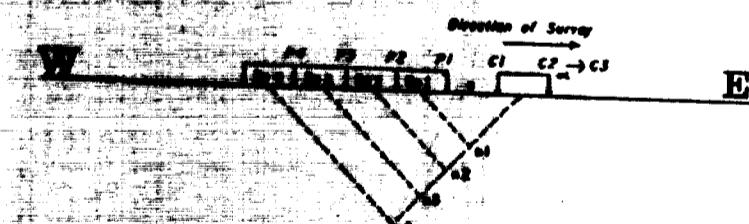
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 4

• Specimen = 25 m

LINES 1, 2, 3, 4

3K

8

3.6

1

CHARGEABILITY (%)

-10 -5 0 +5

1250E

1275E

1300E

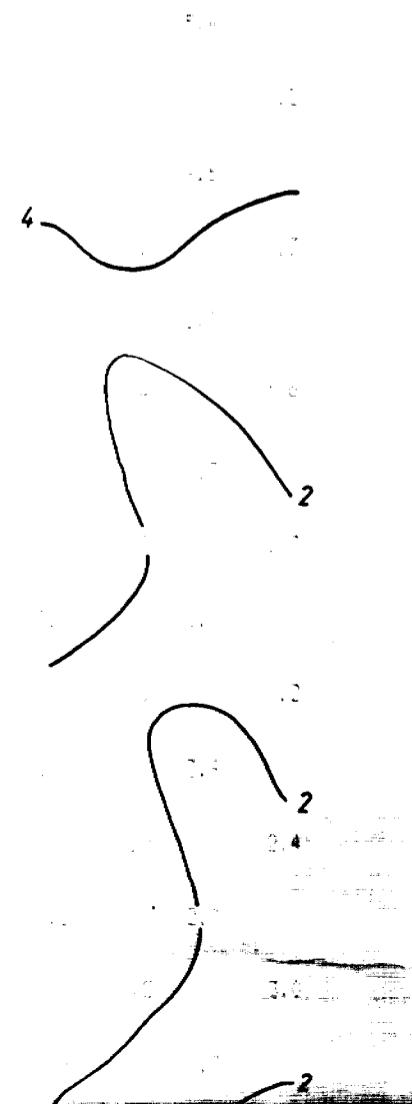
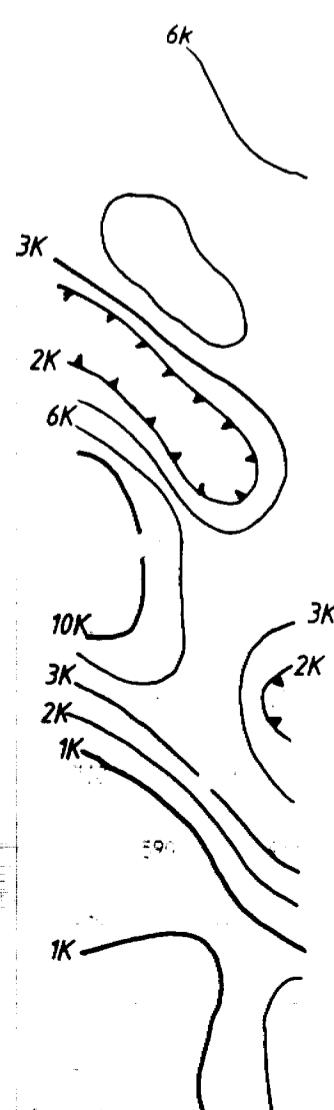
1325E

1350E

1375E

1400E

1425E



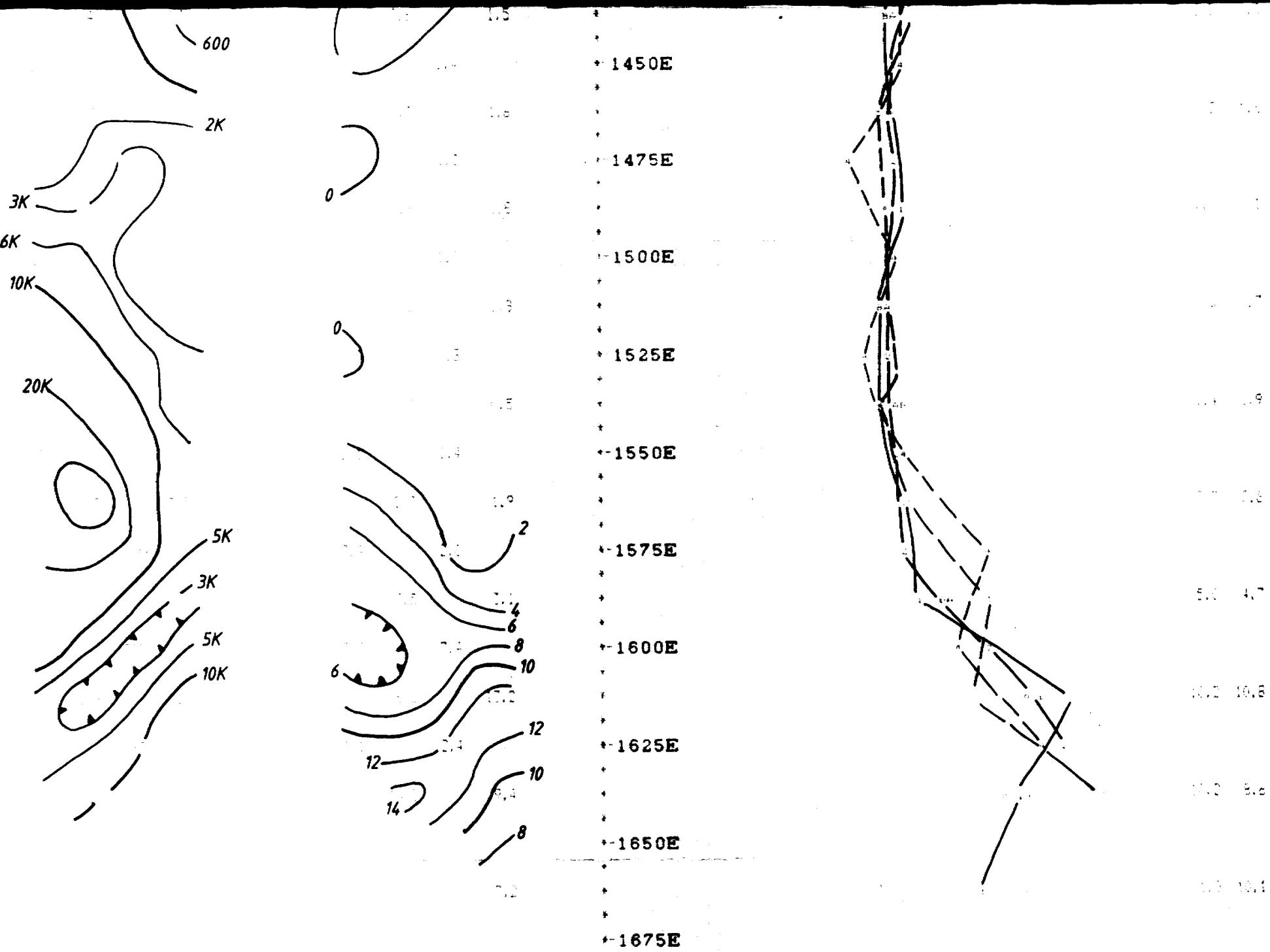


FIGURE 2. ERT SURVEY GRID. GRID 2

Location: Middleton, N.W.T.

Survey Area: 100' x 100'

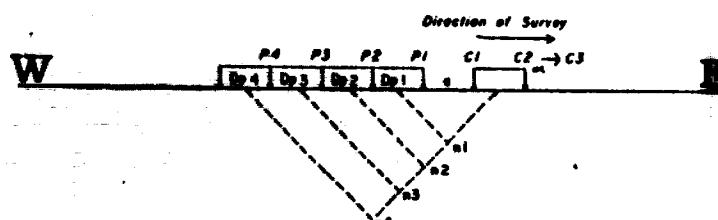
Instrument Used: GEM-D DIPOLE

Survey Method: 1D

Number of Survey Lines: 10

Number of Survey Points: 100

Point Spacing: 25 M



MIDDLETON EXPLORATION  
SERVICES INC

100' Spacing Sections for N = 1 to 4

Point Spacing = 25 M

LINE 3660 N

SCALE : 1 : 1250

RESISTIVITY  
(ohm-metres)

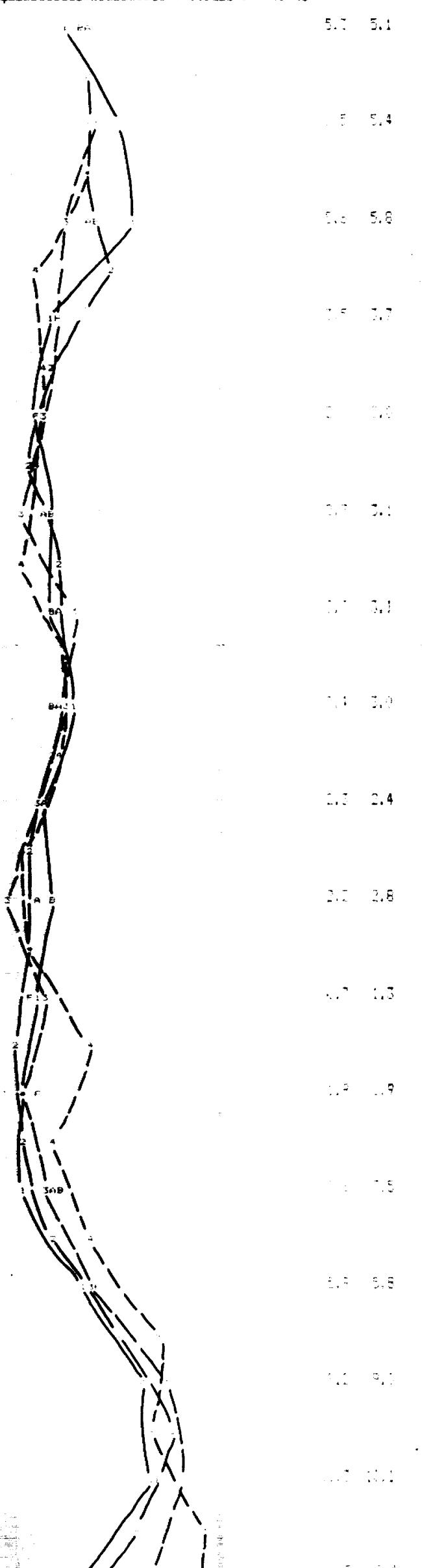
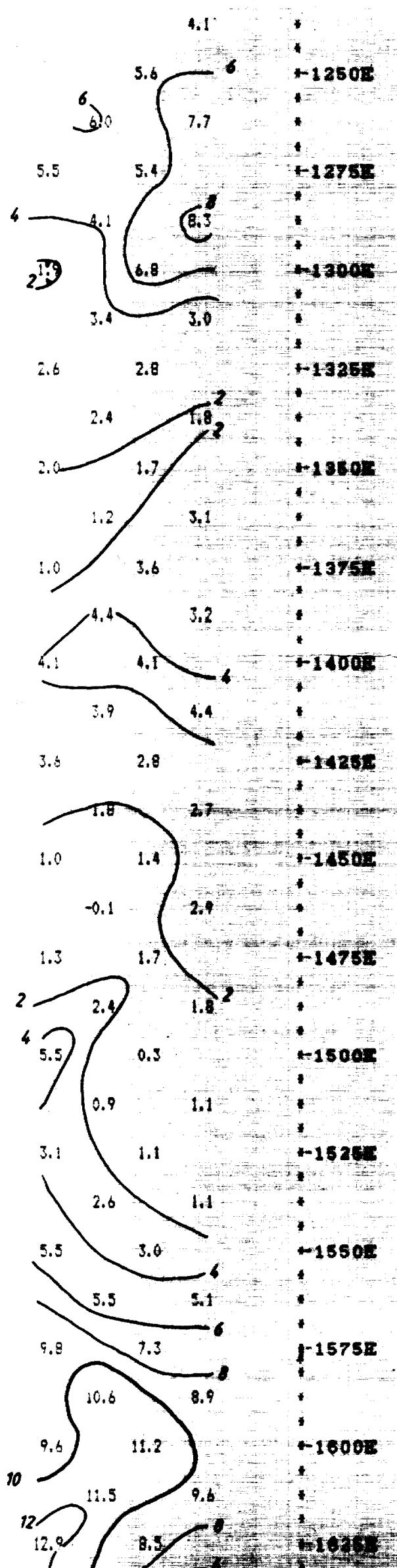
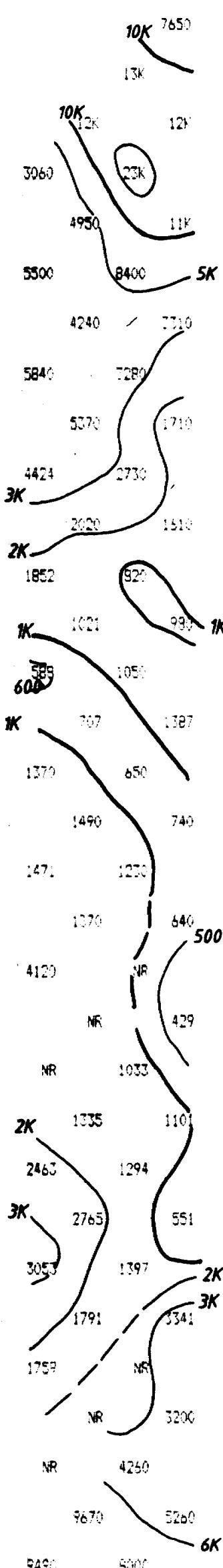
CHARGEABILITY  
(milliseconds)

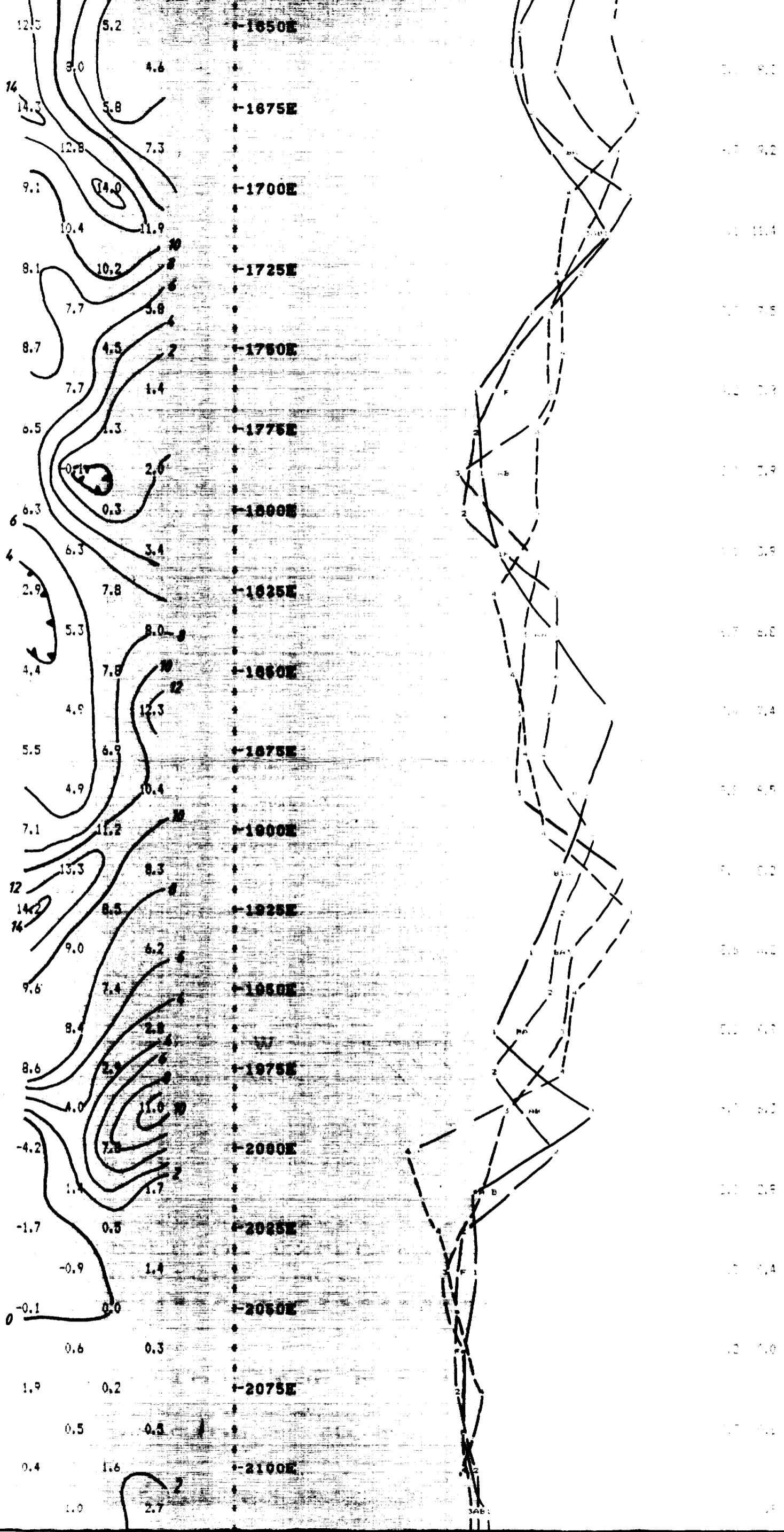
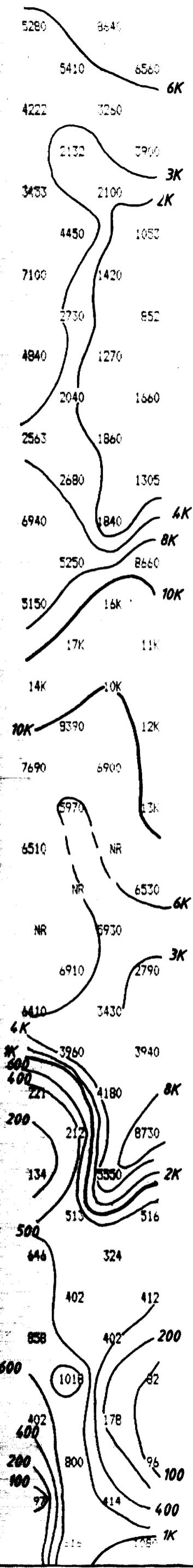
CHARGEABILITY PROFILE

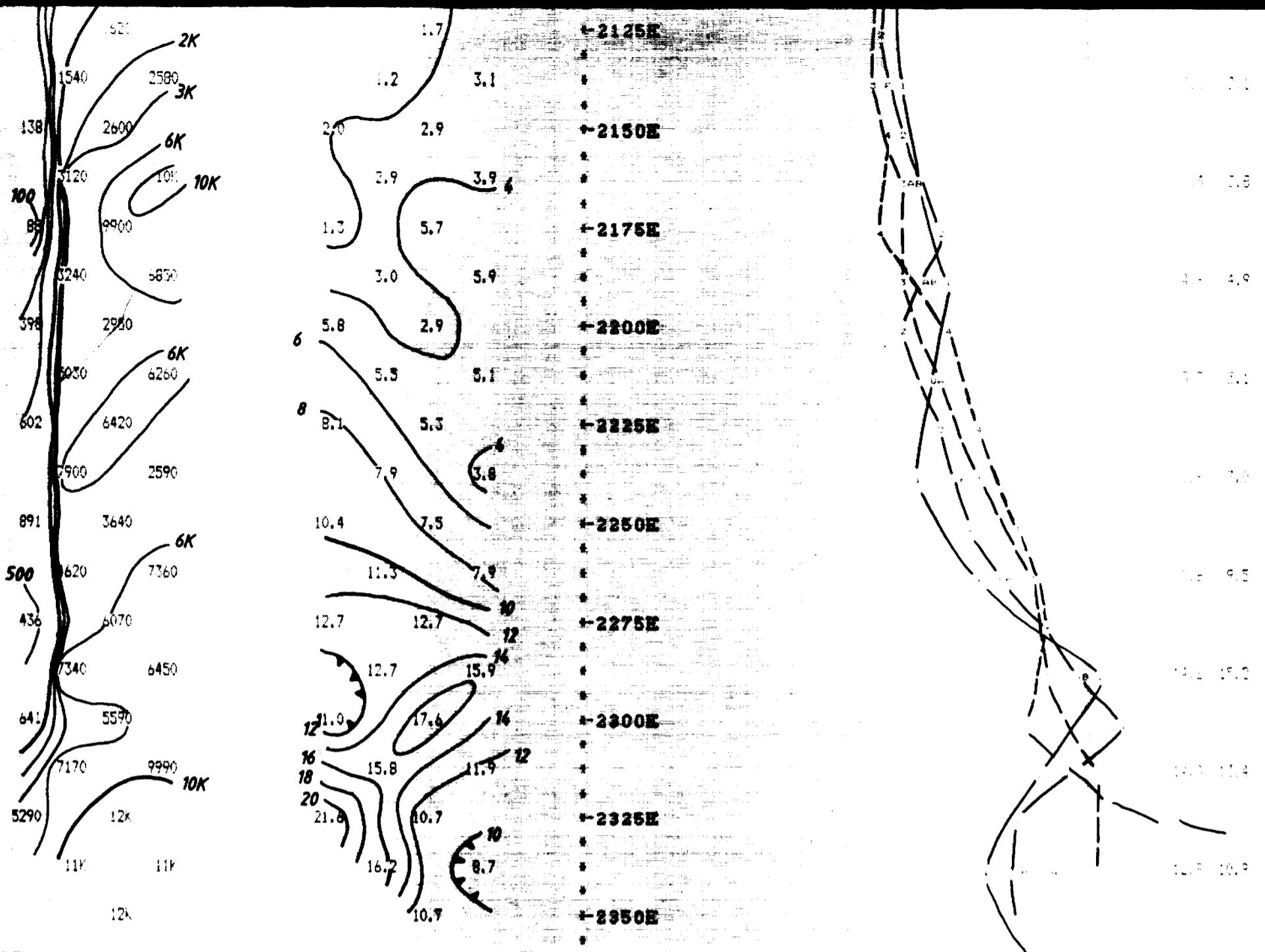
N3 N1  
N4 N2

N3 N1  
N4 N2

-10 -5 0 5 10 15 20







Property : MAISONVILLE TWP. GRID 2

Client : GLEN AUDEN RESOURCES

Date of Survey : 24/8/86

Operator : DJM

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

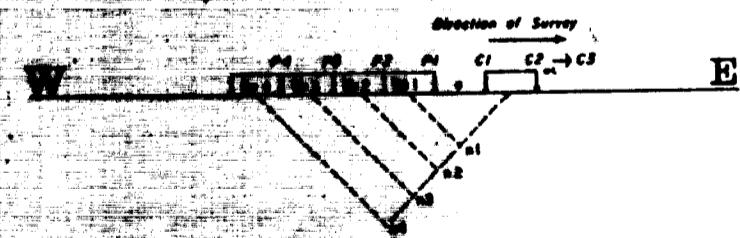
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 7710 N

SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

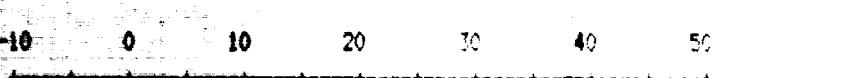
F  
R  
A  
S  
E  
R

N 3 N 1

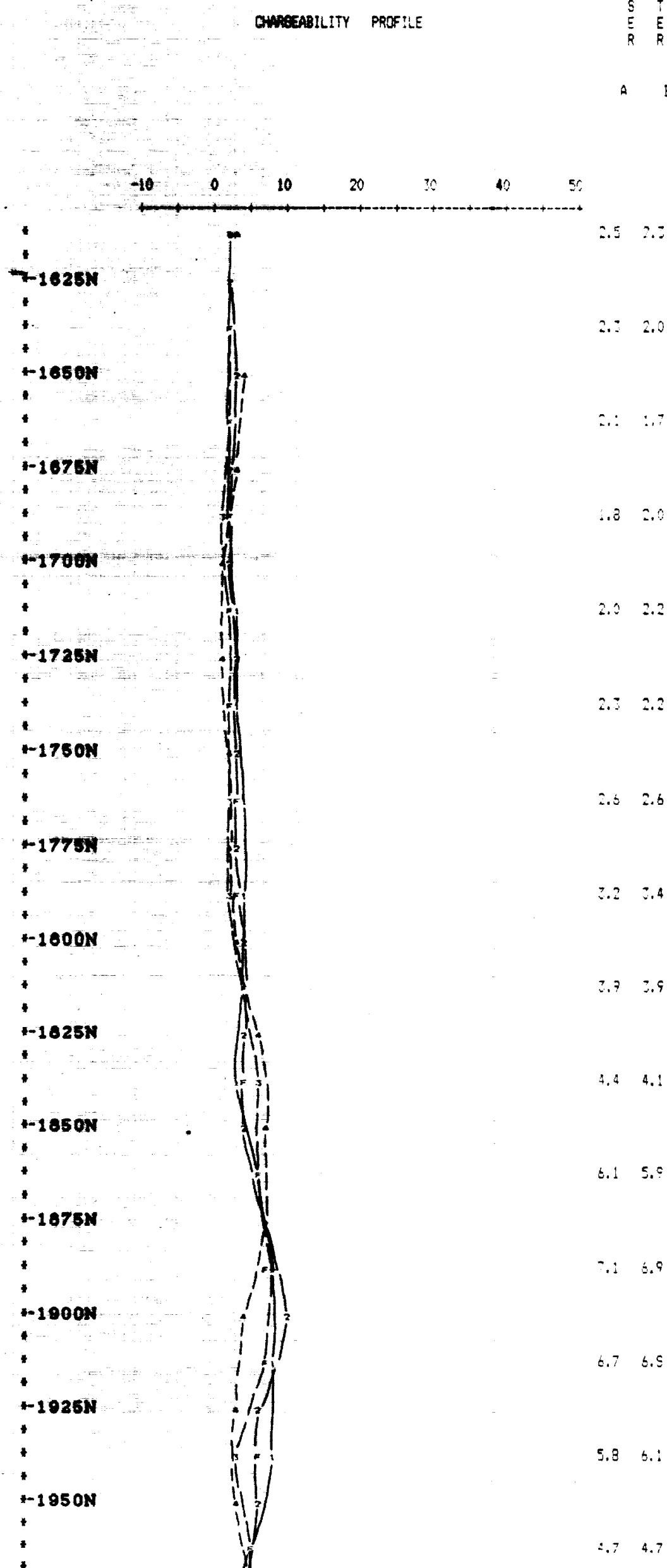
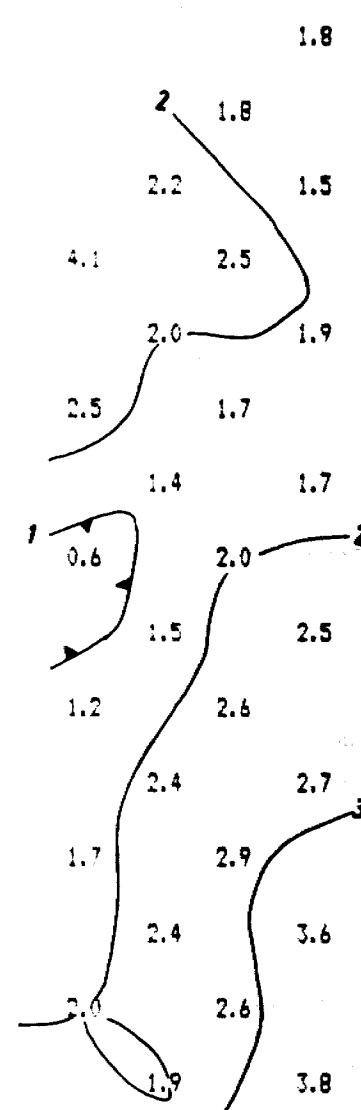
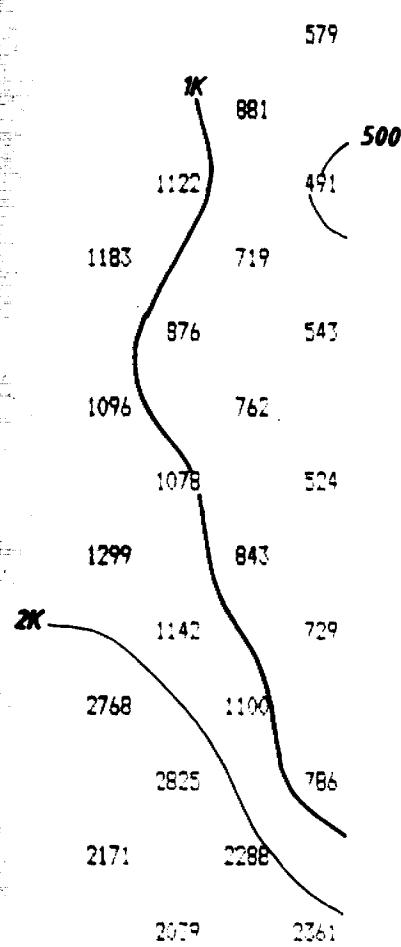
N 3 N 1

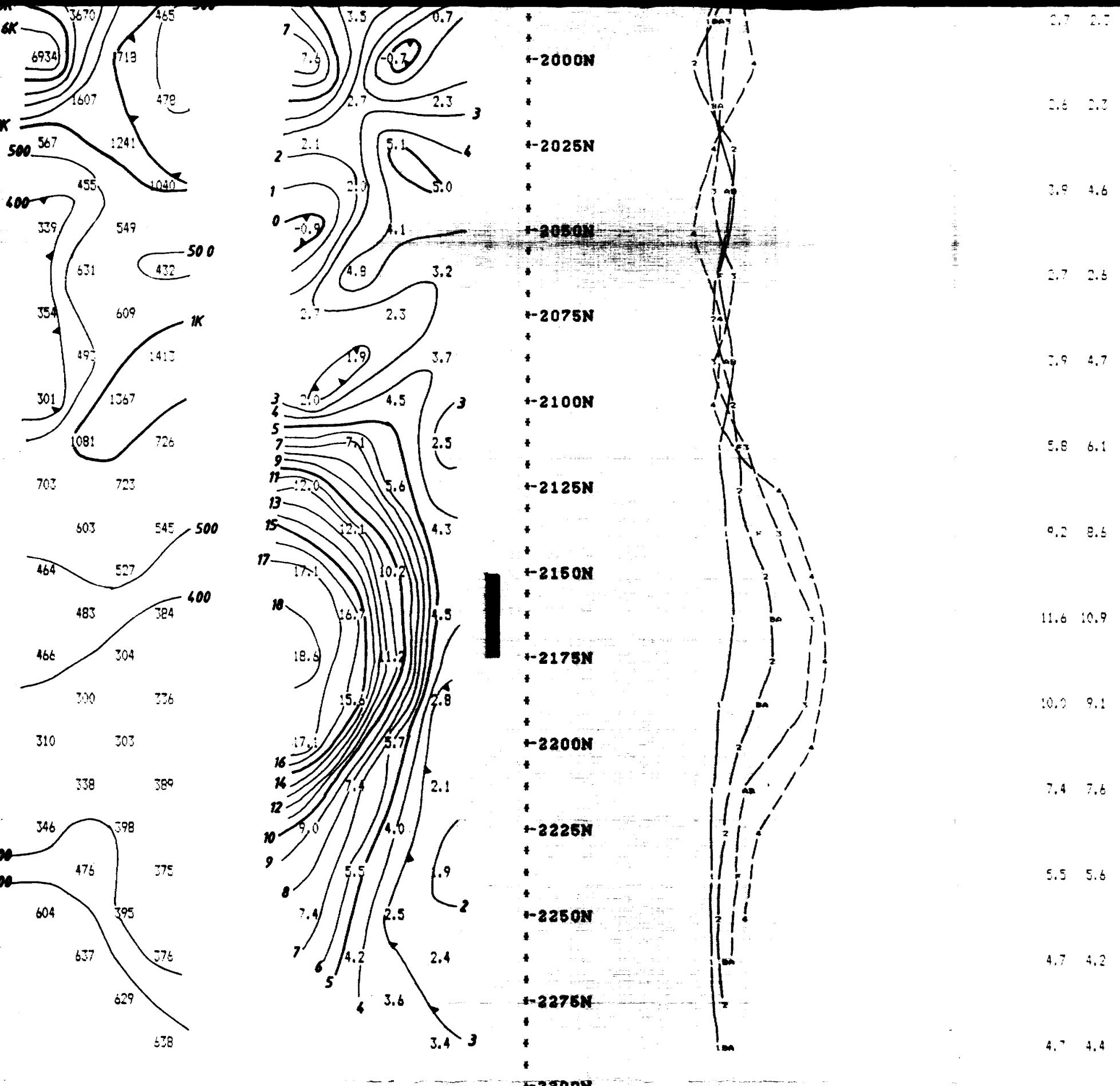
N 4 N 2

N 4 N 2



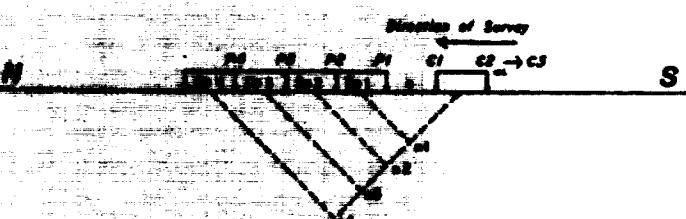
A B





Property : MAISONVILLE GRID 3  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 6/6/86  
Operator : CDJ  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted



R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

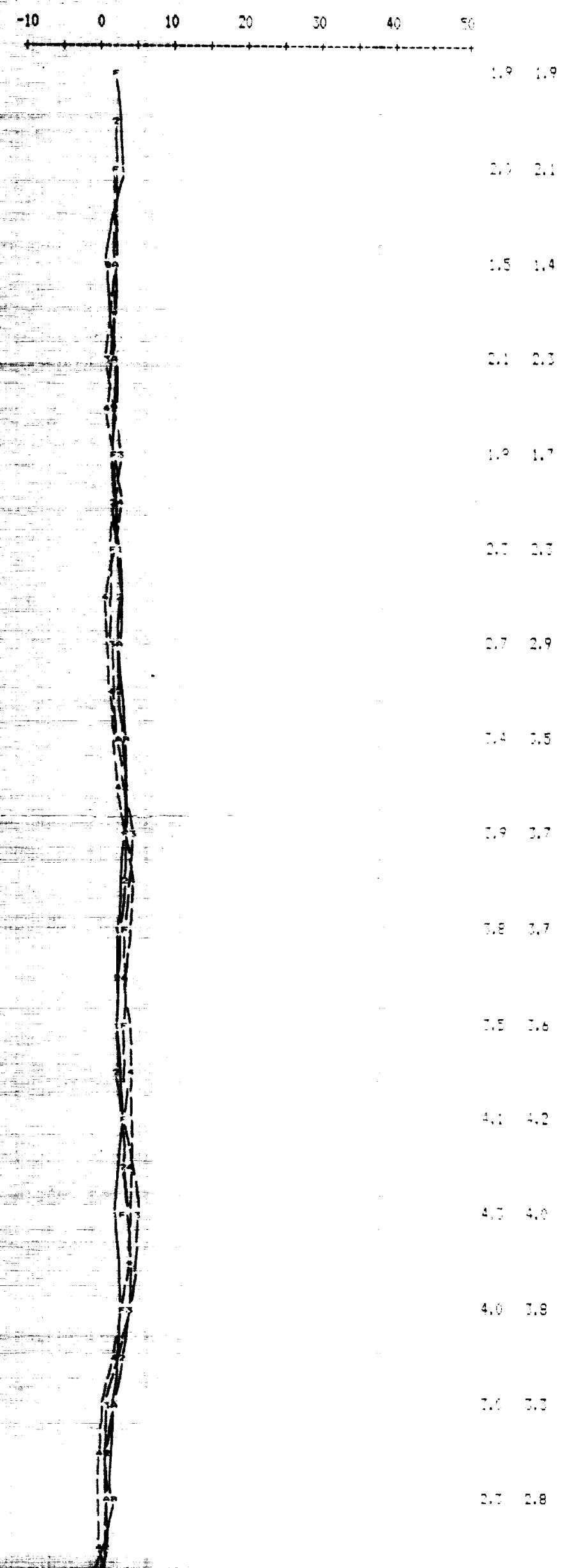
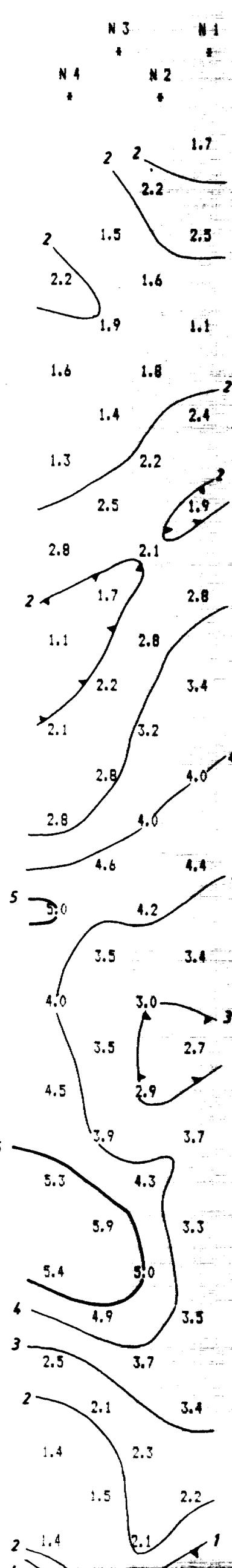
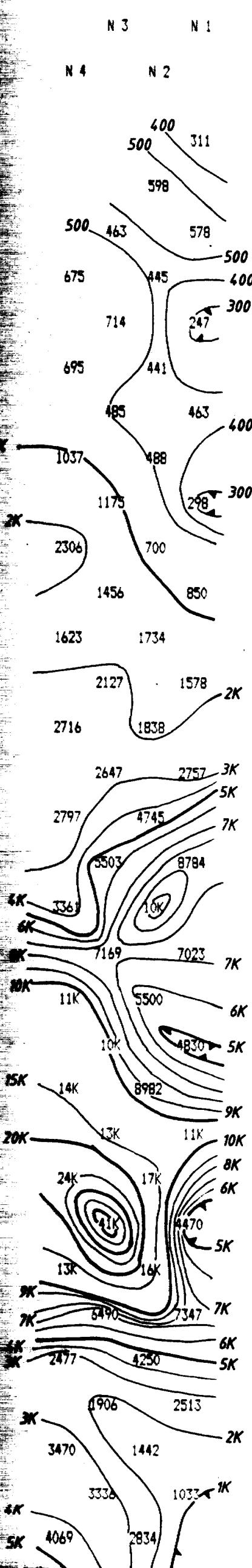
'a' Spacing = 25 M

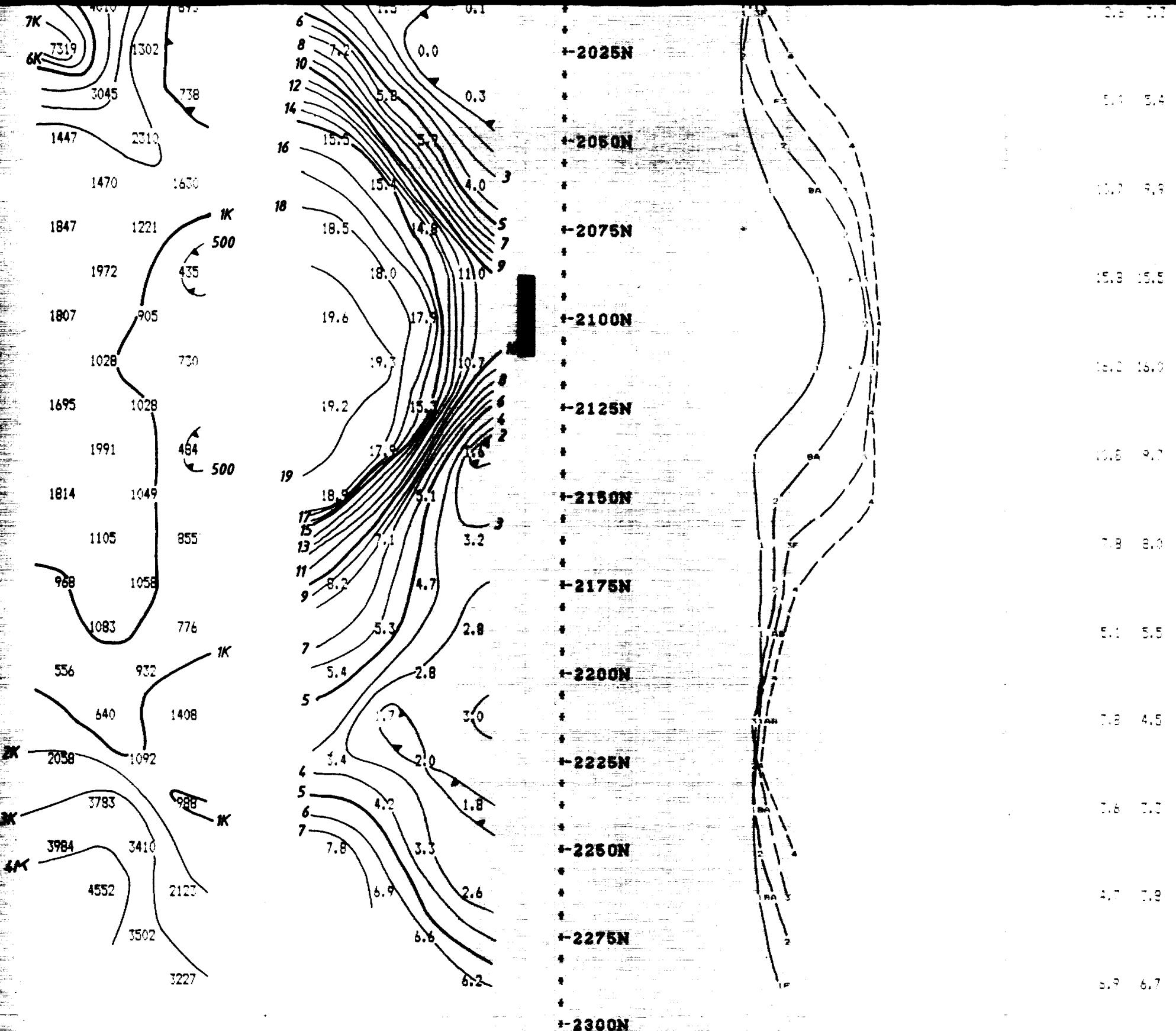
SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 3

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 5/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

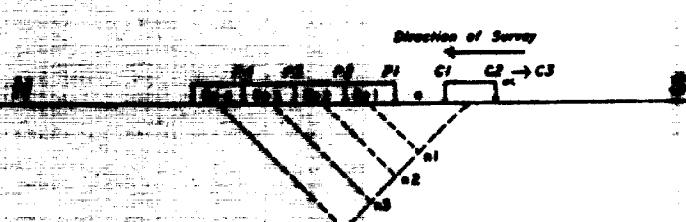
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



*Doug Baden*

R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

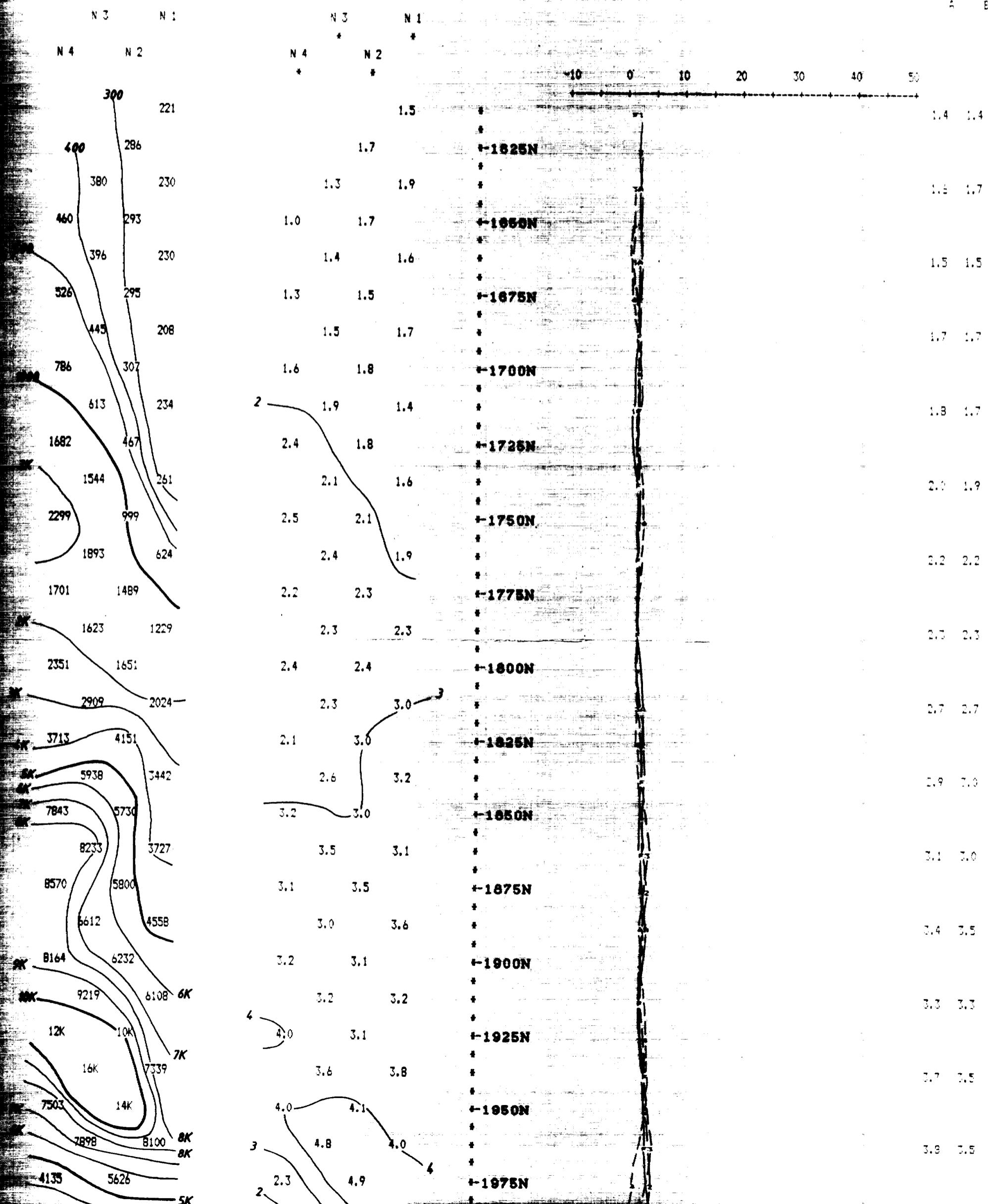
LINE 3300 E

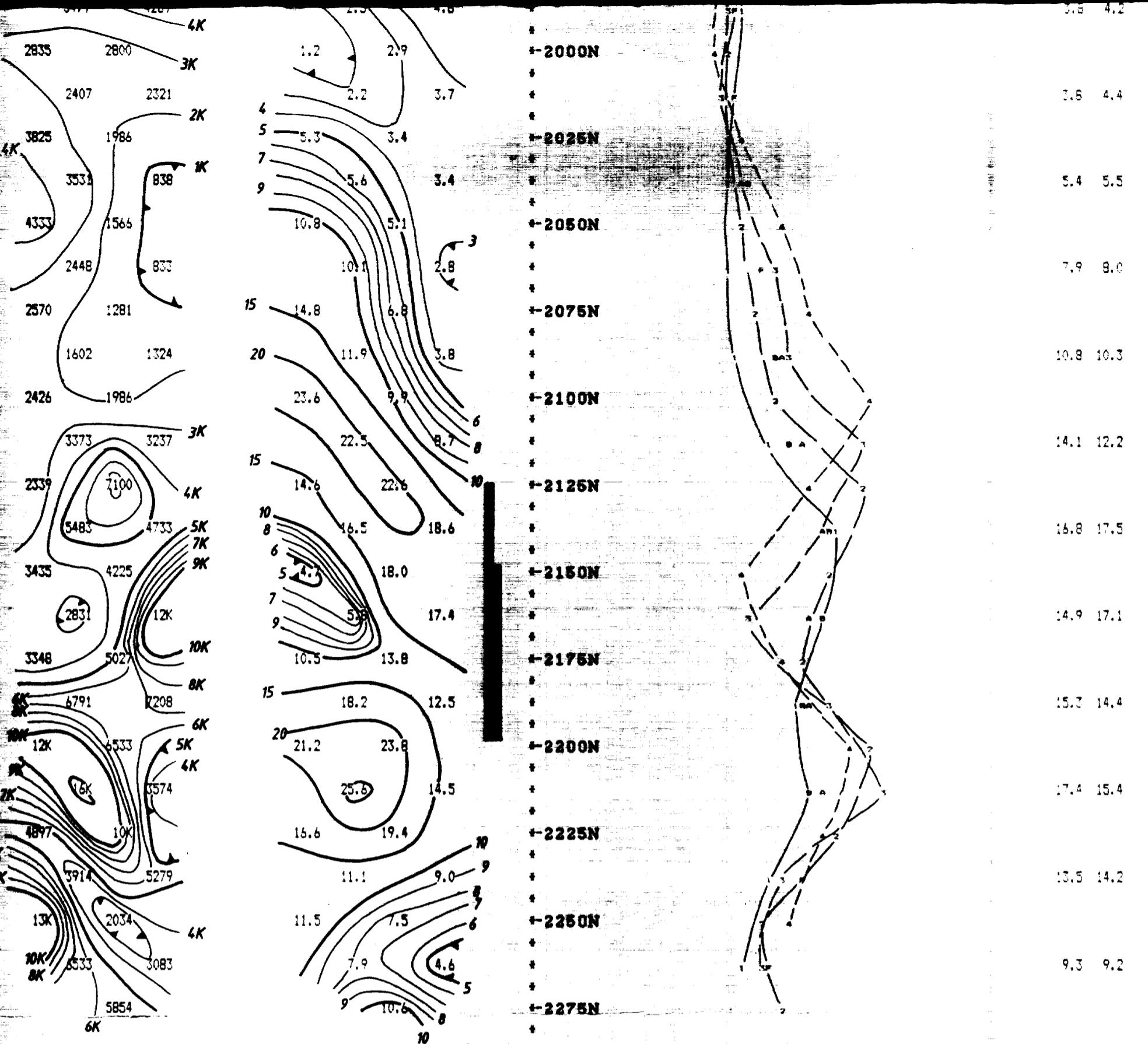
SCALE = 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

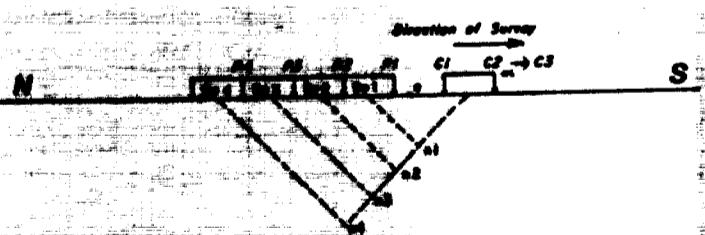
CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 3  
 Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 5/6/86  
 Operator : CDJ  
 Electrode Array : DIPOLE - 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  
 Slice # 7 Plotted



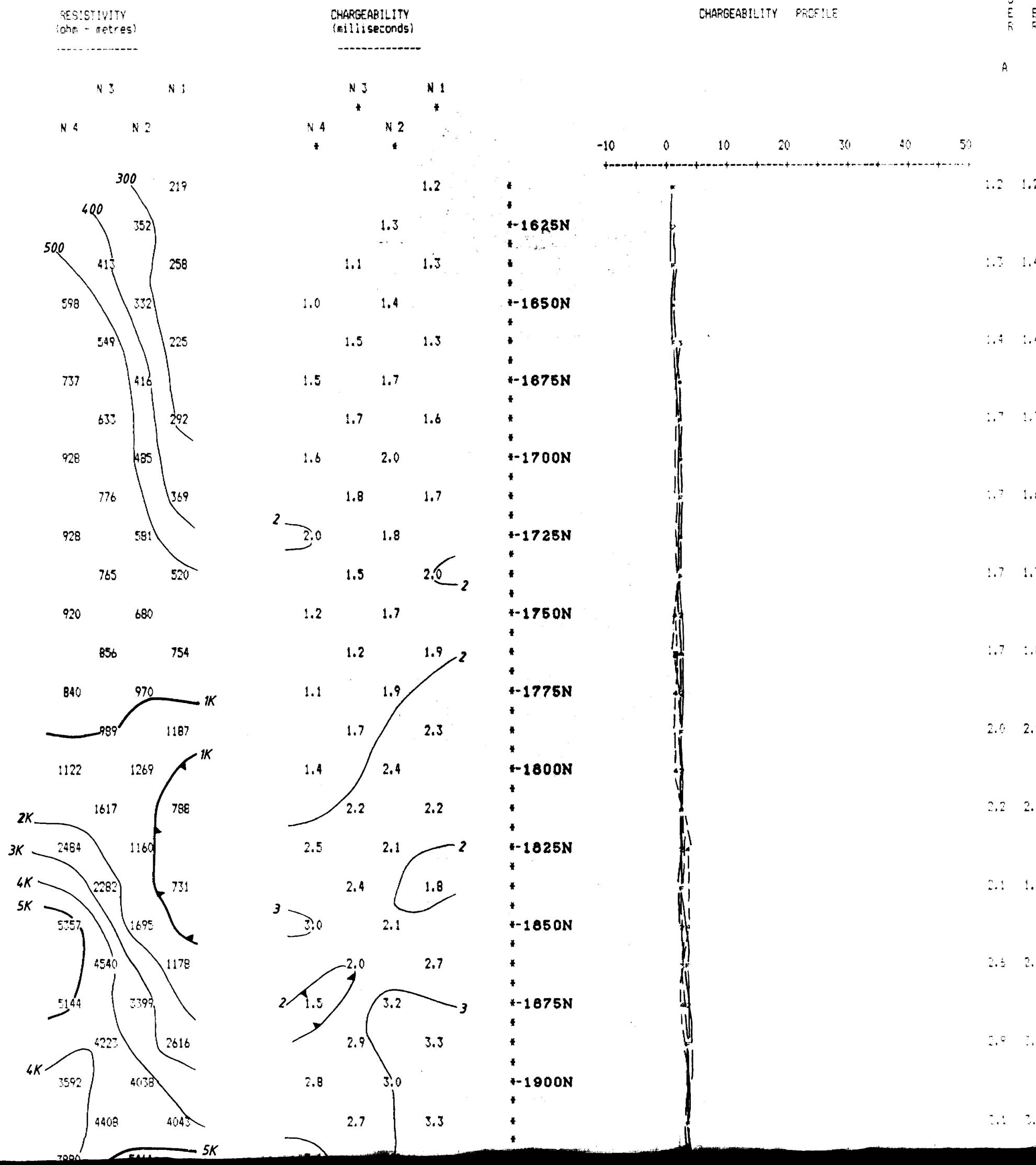
\*\*\*\*\*  
 R. S. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*\*

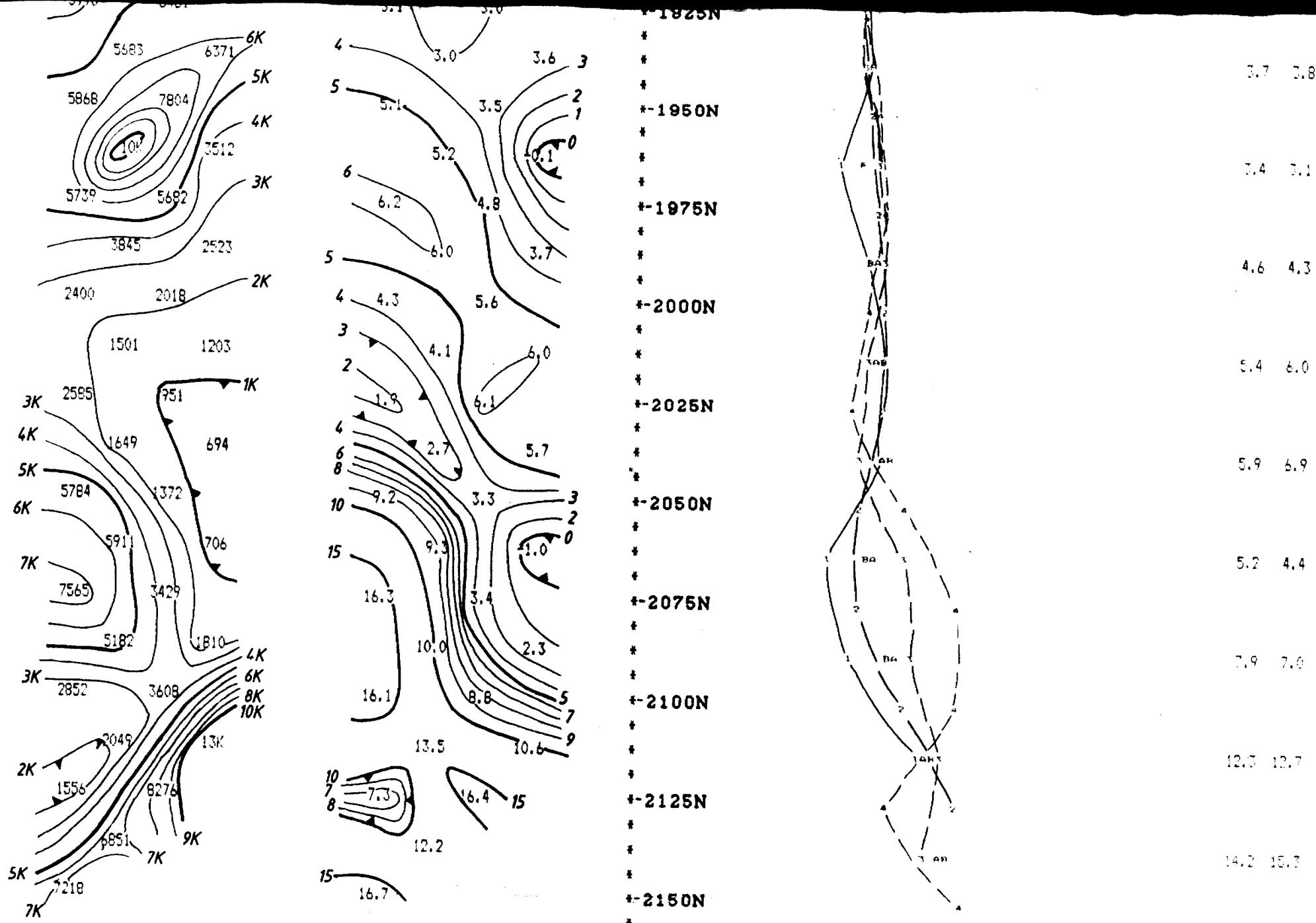
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 3250 E

SCALE = 1 : 1250





Property : MAISONVILLE GRID 3

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 4/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

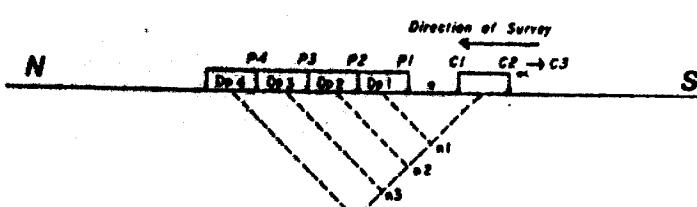
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



\*\*\*\*\*
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 3220 E

SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

F  
R  
A  
S  
E  
R

SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

F  
R  
A  
S  
E  
R

N 3 N 1

N 3 N 1

A E

N 2

N 2

A E

10K

13

12 13

5K

14

9 8

14K

13

8 8

18K

12

6 6

15K

11

8 9

5146

9967

4760

7564

6831

9133

6645

4854

7493

7564

2635

1835

1779

3367

1779

4427

2577

8

1154

8

1115

8

1386

7

1252

7

1555

NR

791

5

1435

6

770

6

936

7

302

7

417

8

625

7

725

8

679

9

670

9

699

10

834

9

377

9

462

10

679

11

CHARGEABILITY  
(milliseconds)

-10 0 10 20 30 40 50

50N

12 13

75N

9 8

100N

8 8

125N

6 6

150N

8 9

175N

8 8

200N

8 8

225N

6 6

250N

7 6

275N

7 7

300N

7 7

325N

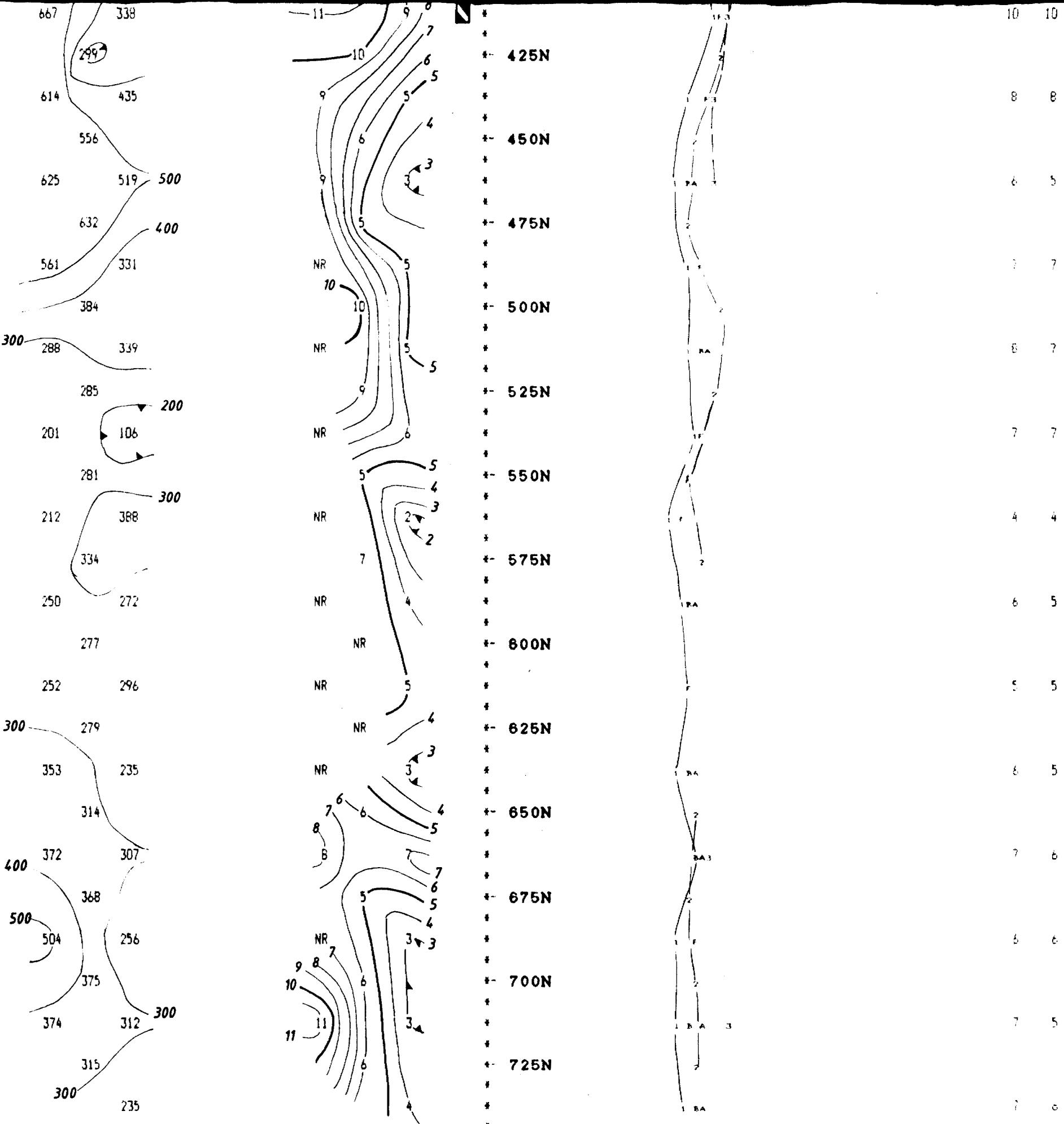
7 7

350N

9 9

375N

10 10



Property : MAISONVILLE GRID 3

Client : GLEN AUDEN

Date of Survey : 28/3/86

Operator : SDA

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

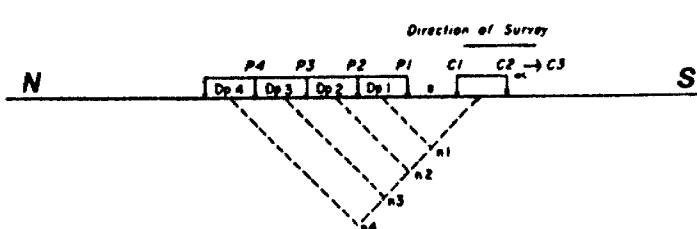
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

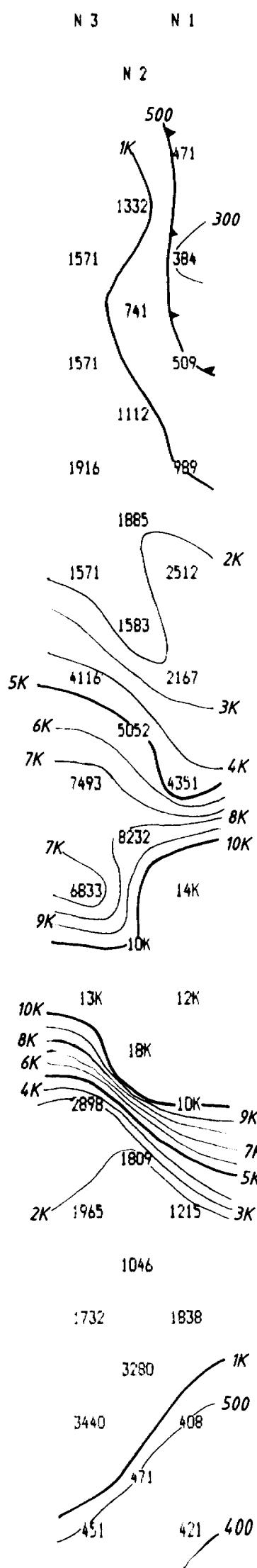
IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

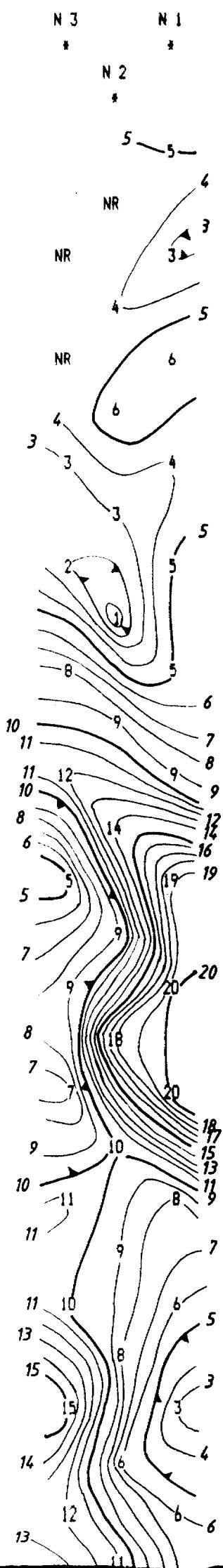
*Glen Auden*

SCALE : 1 : 1250

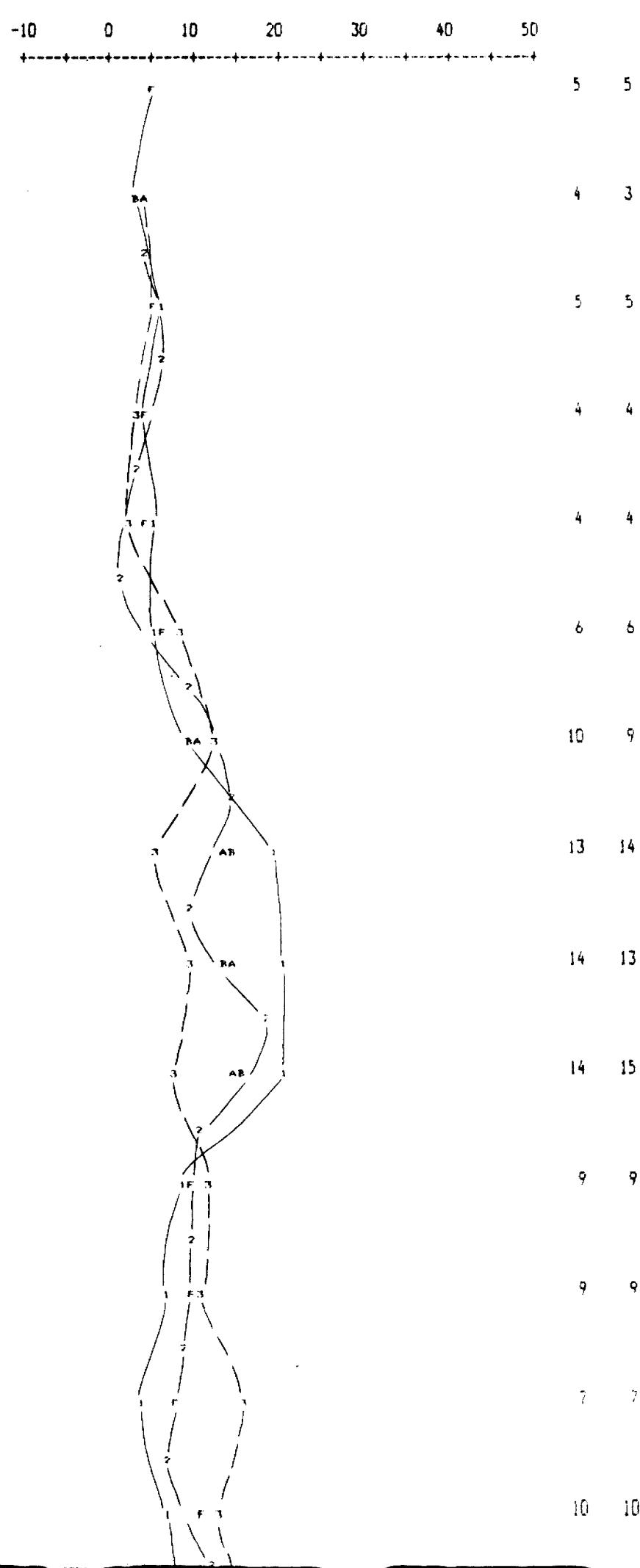
RESISTIVITY  
(ohm - metres)



CHARGEABILITY  
(milliseconds)

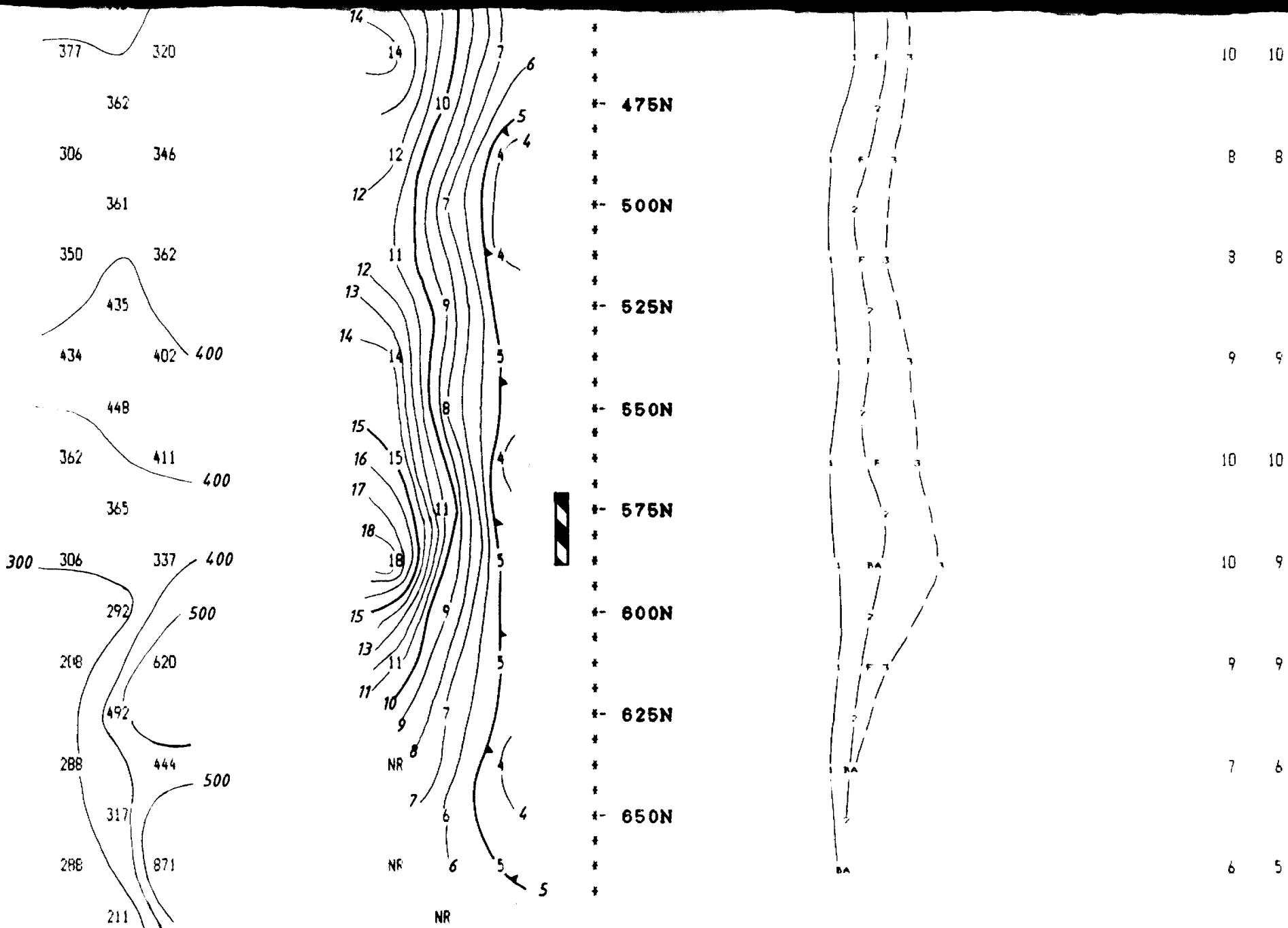


CHARGEABILITY PROFILE



F R A S E R      F I L T E R

A      B



Property : MAISONVILLE GRID 3

Client : GLEN AUDEN

Date of Survey : 29/3/86

Operator : SDA

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

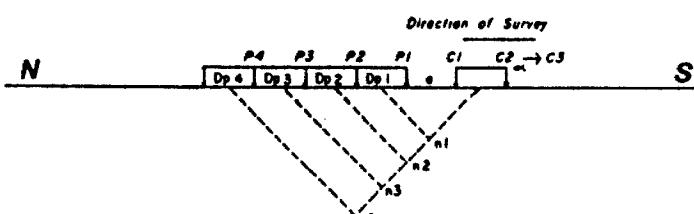
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-8

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



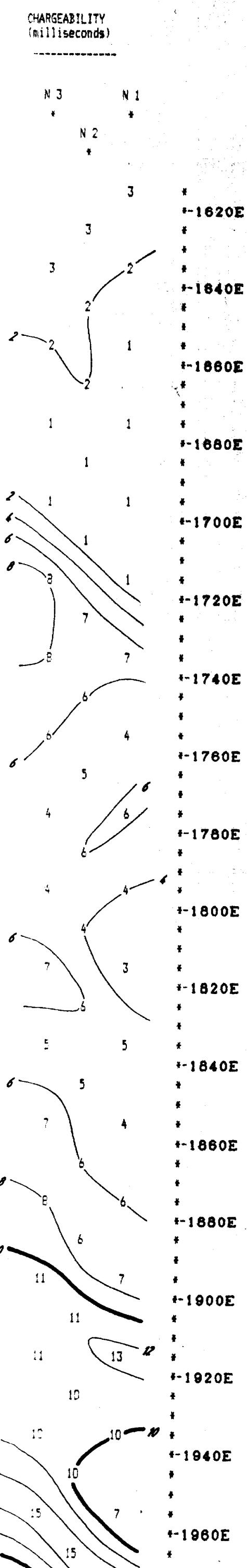
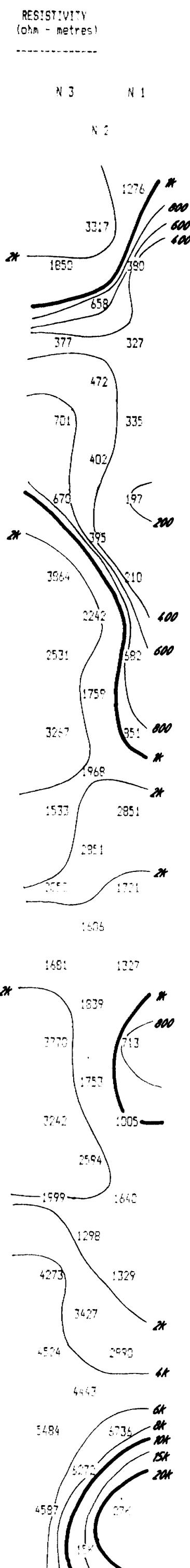
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

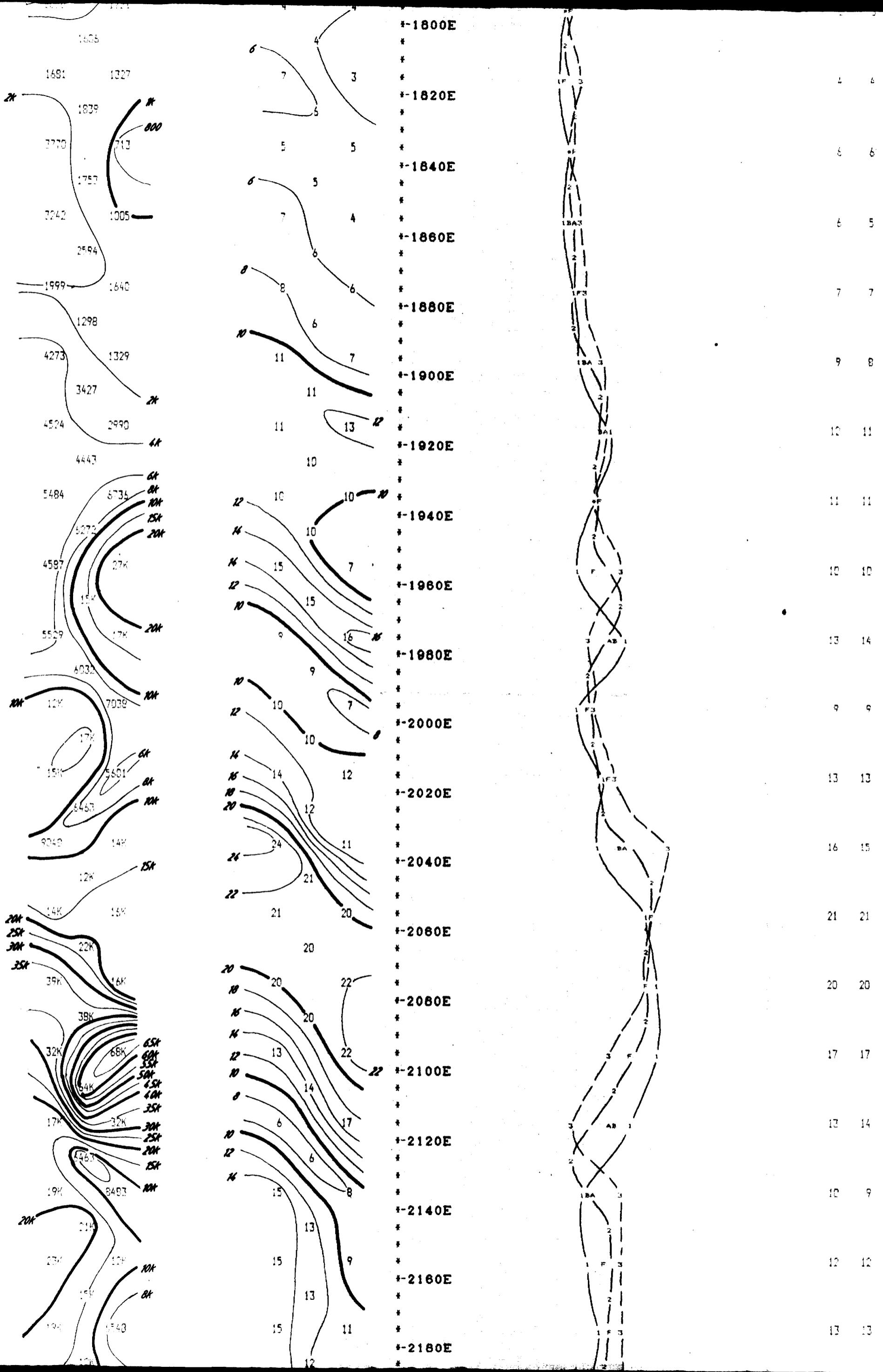
'a' Spacing = 25 M

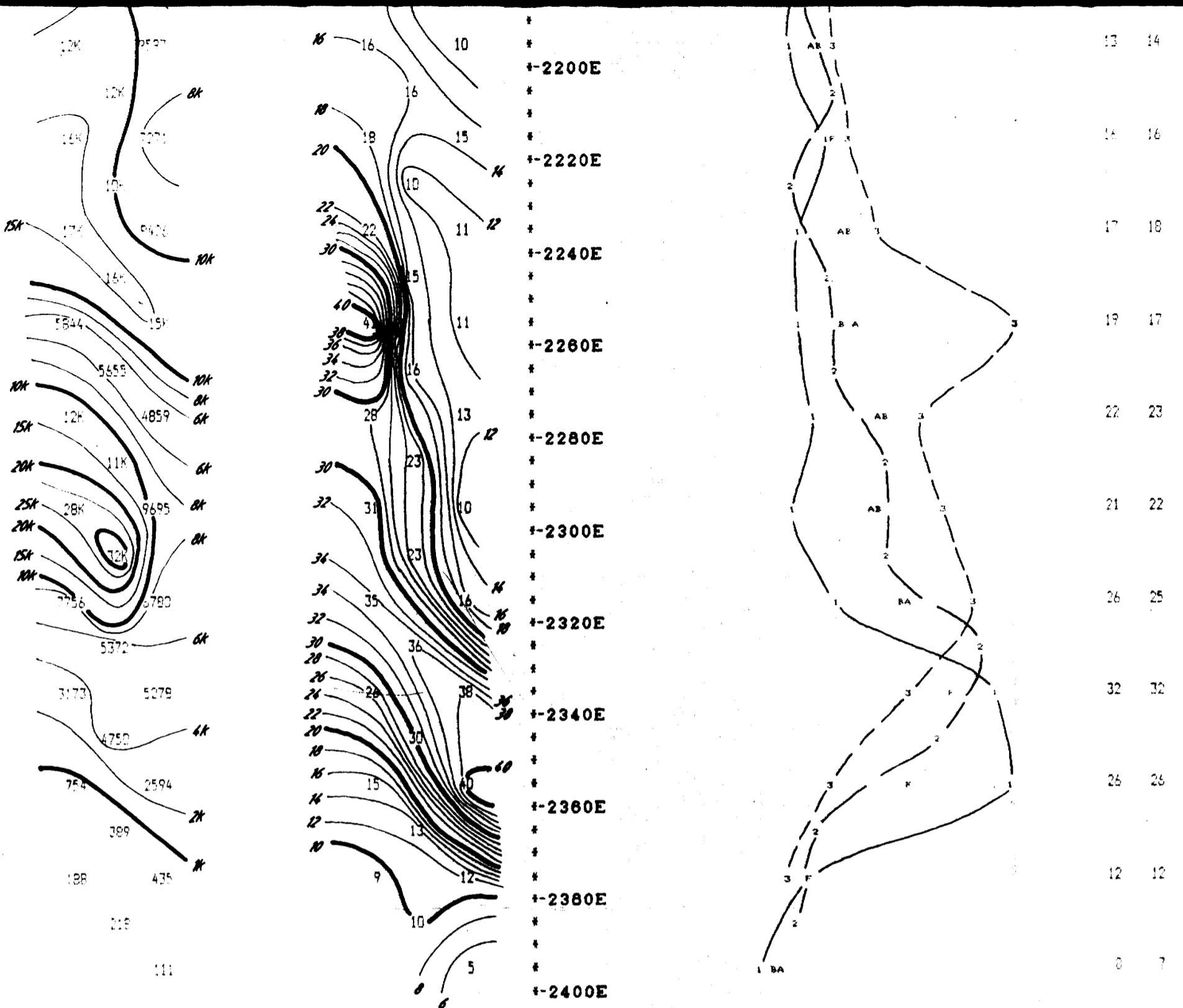
LINE 150 W

**SCALE : 1:1000**



卷之三





Property : MAISONVILLE GRID 4

Client : GLEN AUDEN

Date of Survey : 4/3/86

Operator : RRM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-B

Transmitter : SCINTREX IPC-7

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms

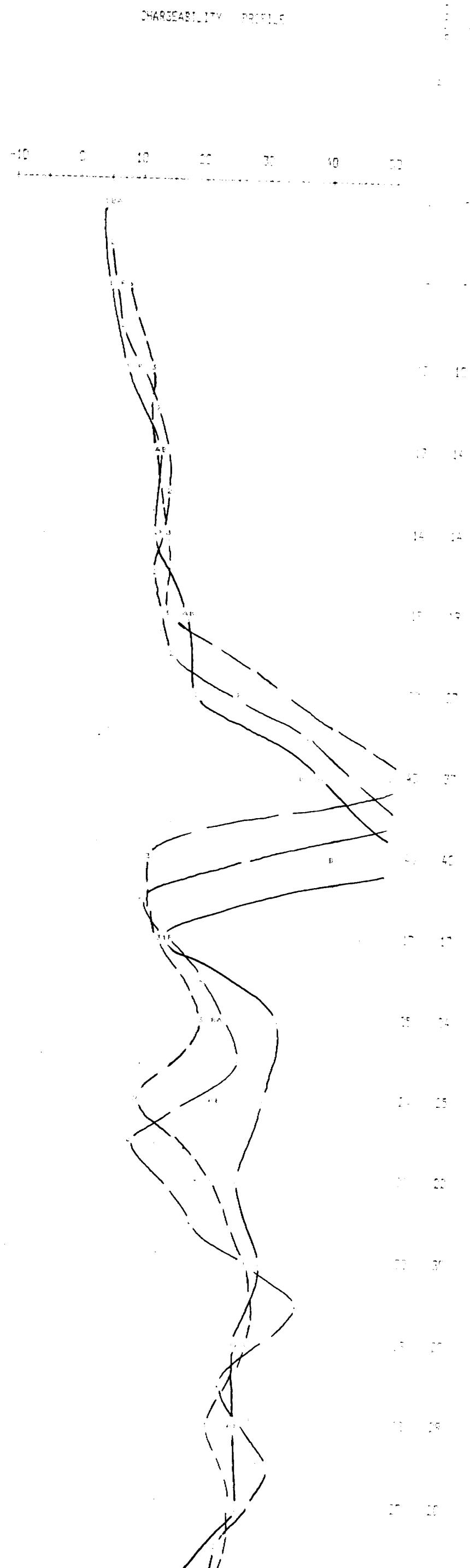
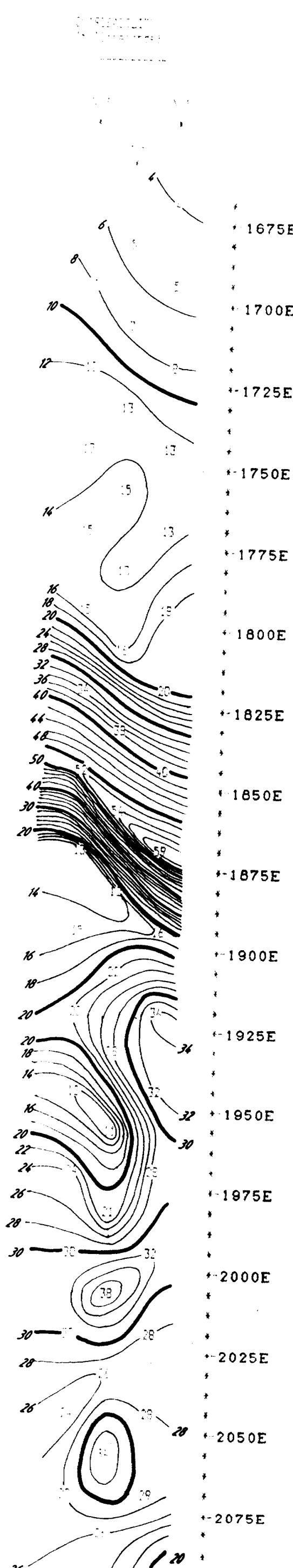
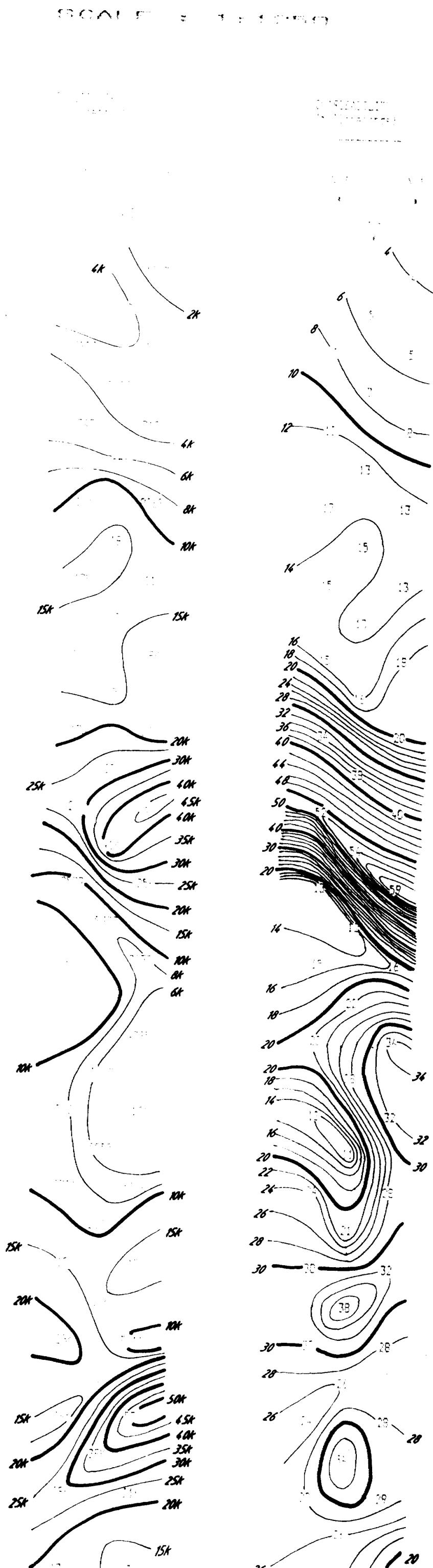


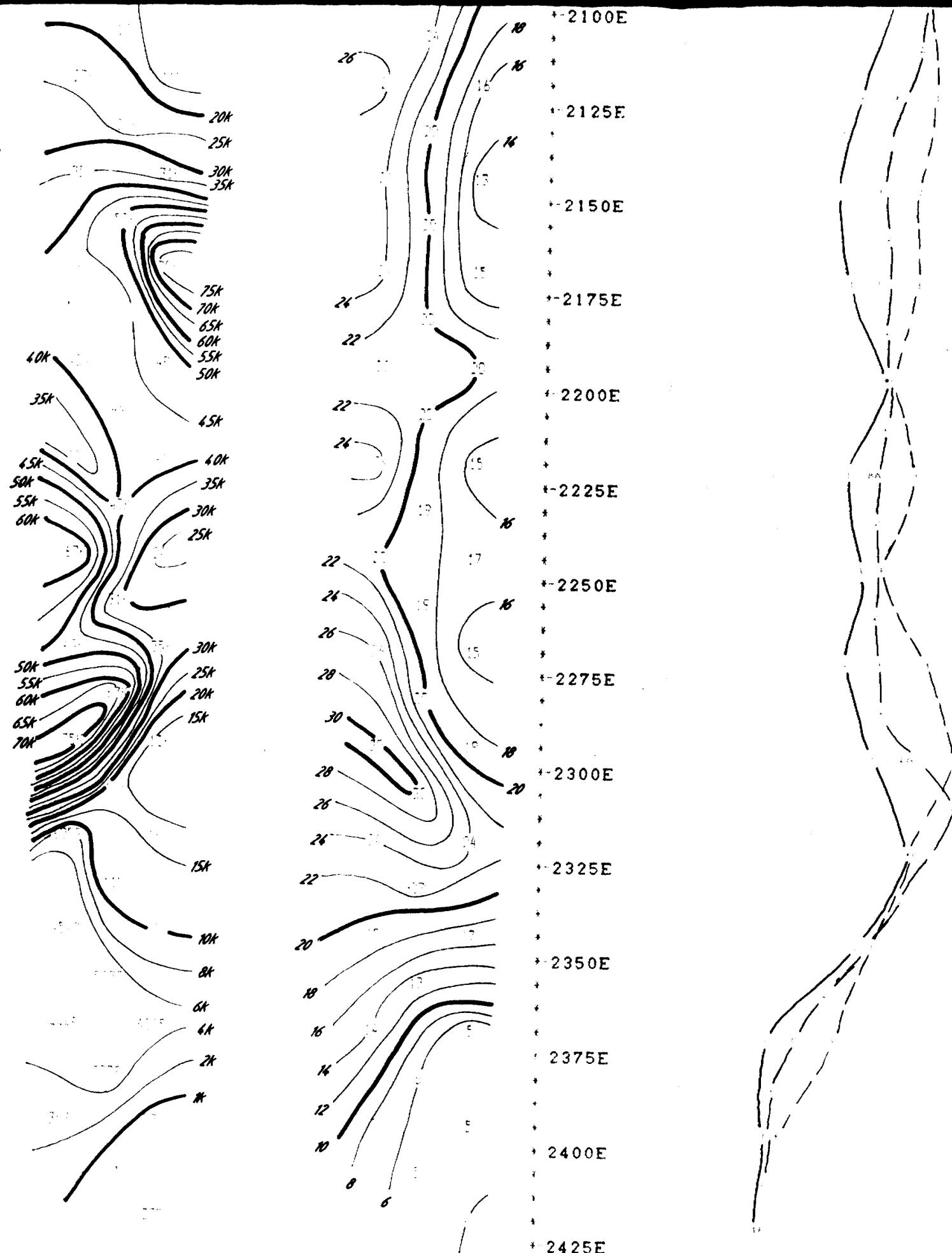
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

"a" Spacing = 20 M

LINE 1550 N





Property : MAISONVILLE GRID 4

Client : JEAN AUDEN

Date of Survey: 8/2/86

Operator : ROM

## **Electrode Arrays : POLE DIPOLE**

Mode : TIME DOMAIN

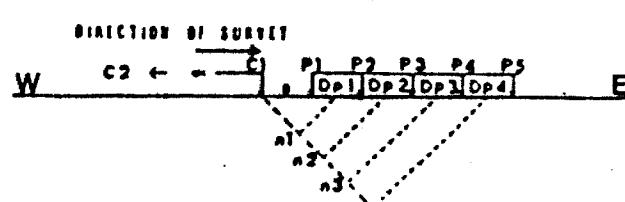
Receiver : SCINTREX IRR-8

Transmitter : SCINTREY 120-2

Pulse Time: 1.2 Sec. on - 2 Sec. off

### Delay Time : 450 ms

Integration time : 500 ms



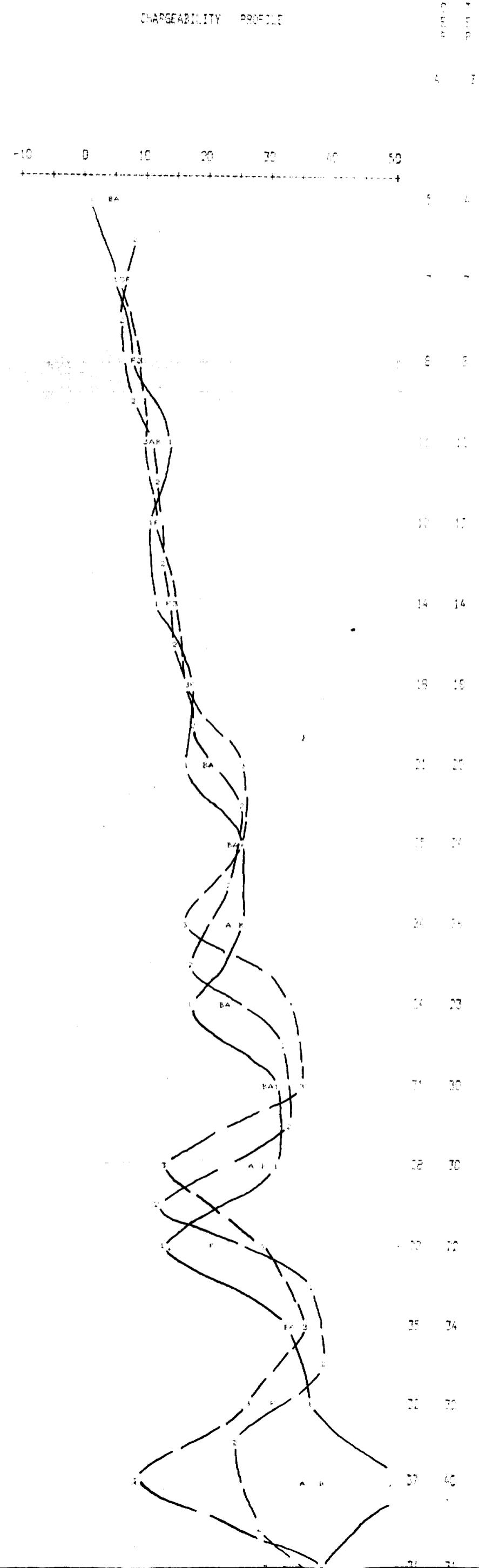
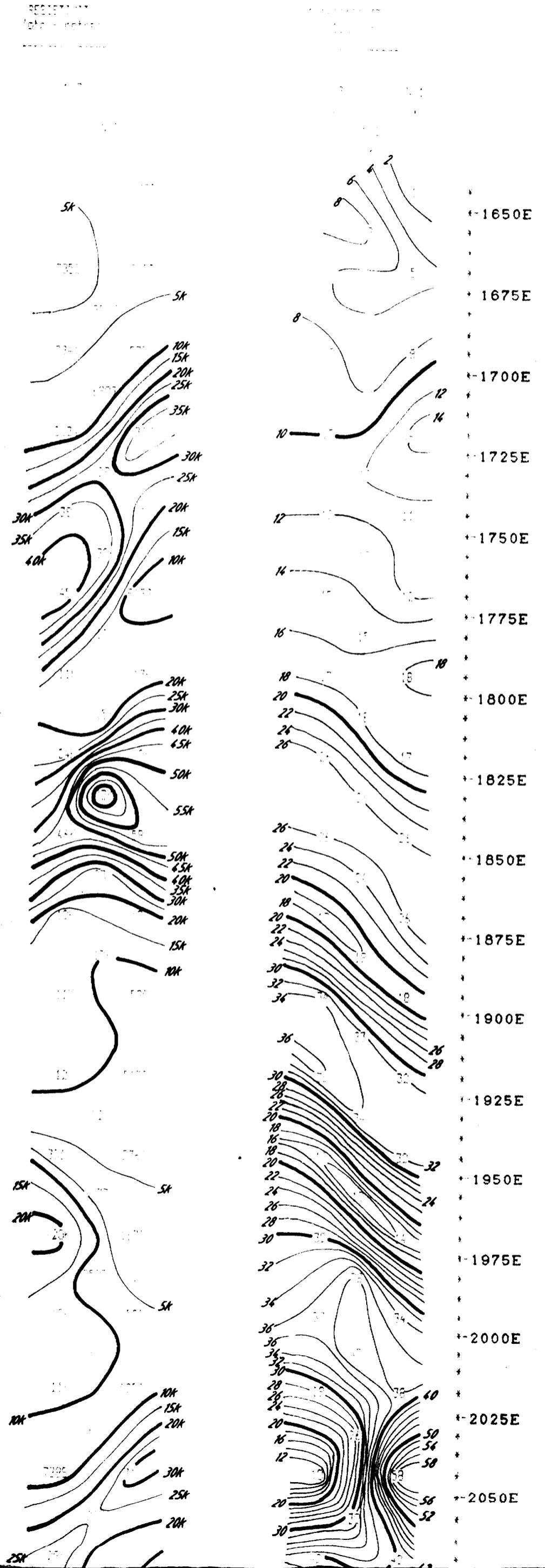
R.S. MIDDLETON EXPLORATION  
SERVICES INC

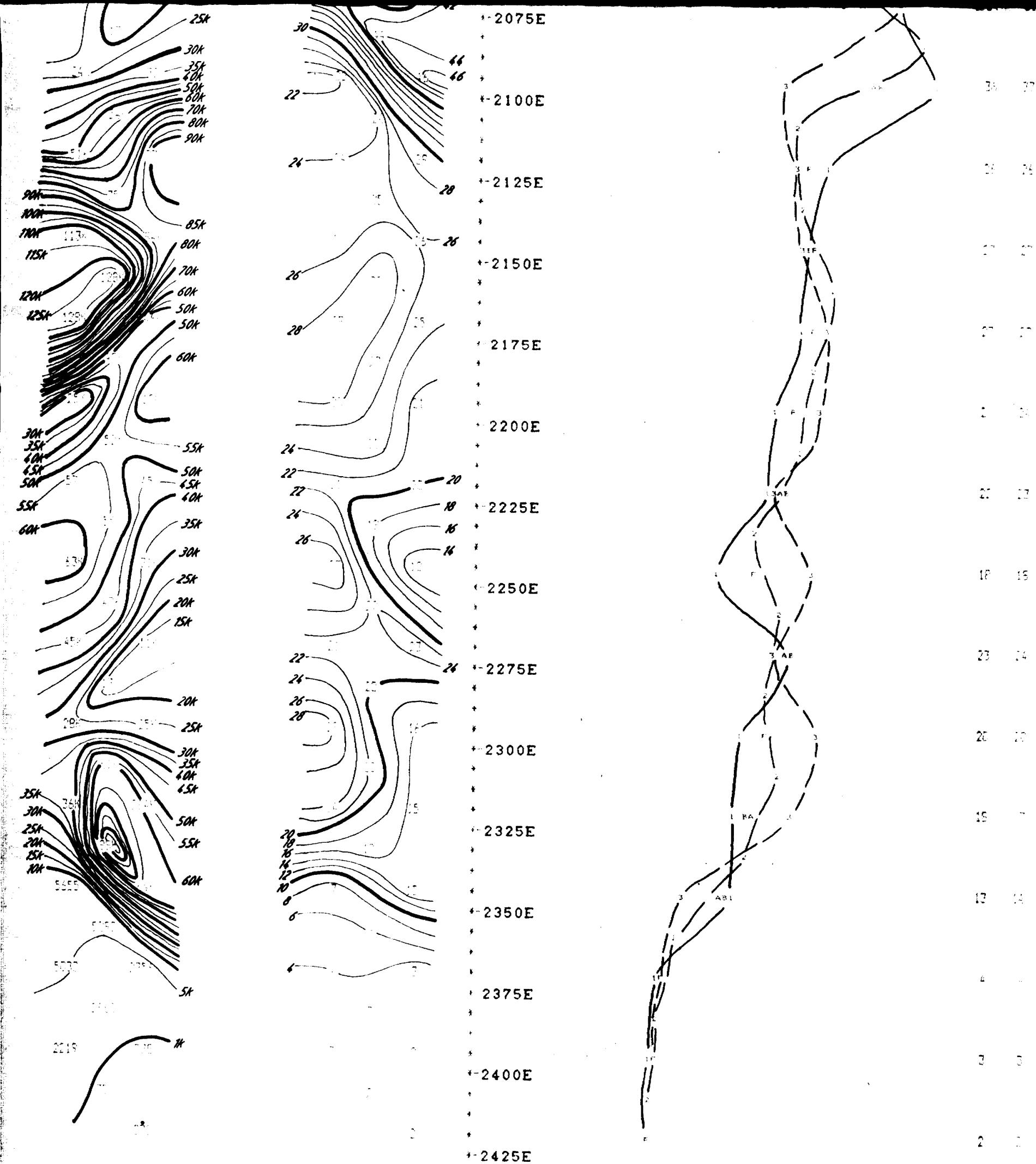
J.P. Escudero et al. / Journal of Economic Dynamics and Control 35 (2011) 106–126

Specimen = 25 m

LINE 1600 N

SCALE: 1:1000000





Property : MAISONVILLE AREA A

Client : GLEN AUDEN

Date of Survey : 7/13/96

Operator : RRM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

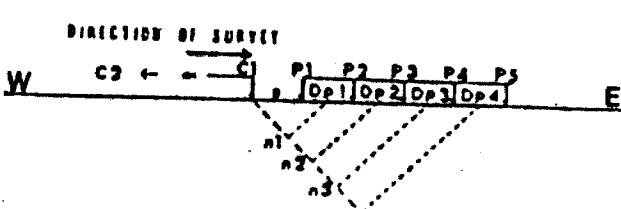
Receiver : SCINTREY TDP-8

Transmitter : SCINTREY TDP-7

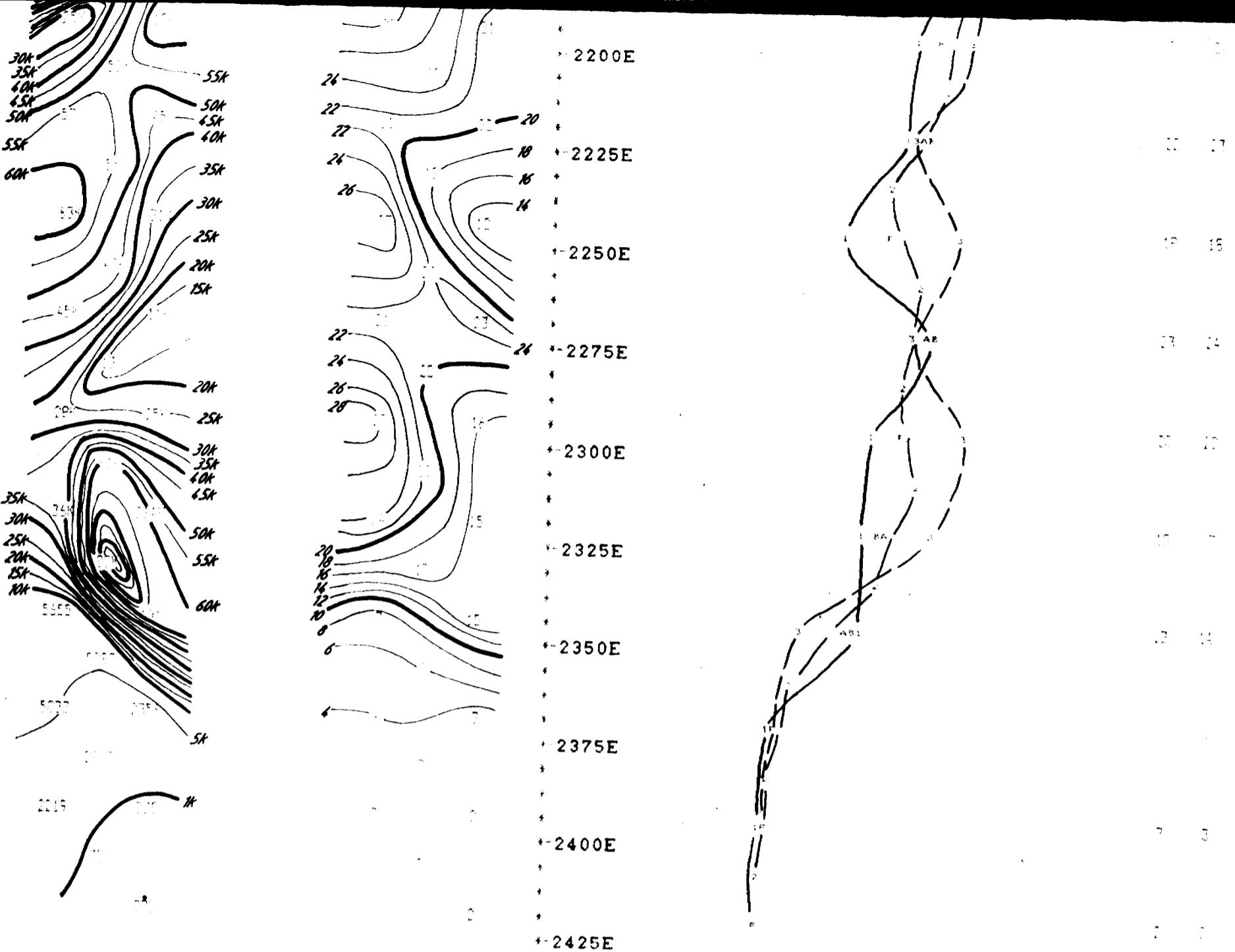
Pulse Time : 2 Sec on / 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



R. S. MIDDLETON EXPLORATION  
SERVICES INC.



Property : MAISONVILLE QUARRY

Client : GLEN AUDEN

Date of Survey : 8/13/84

Operator : RRM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

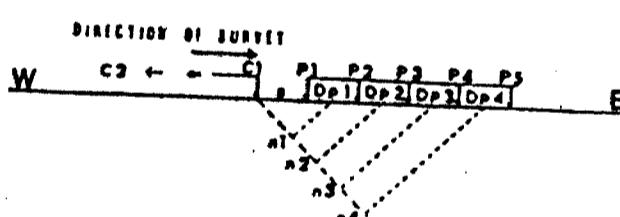
Receiver : SCINTREX IPP-B

Transmitter : SCINTREX IPP-A

Pulse Time : 0 Sec on / 2 Sec off

Delay Time : 650 ns

Integration Time : 520 ns



R.G. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

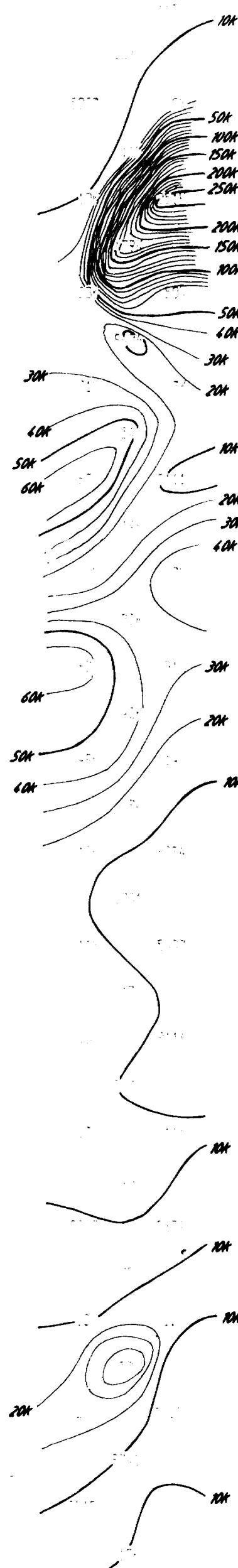
LINE 1650 N

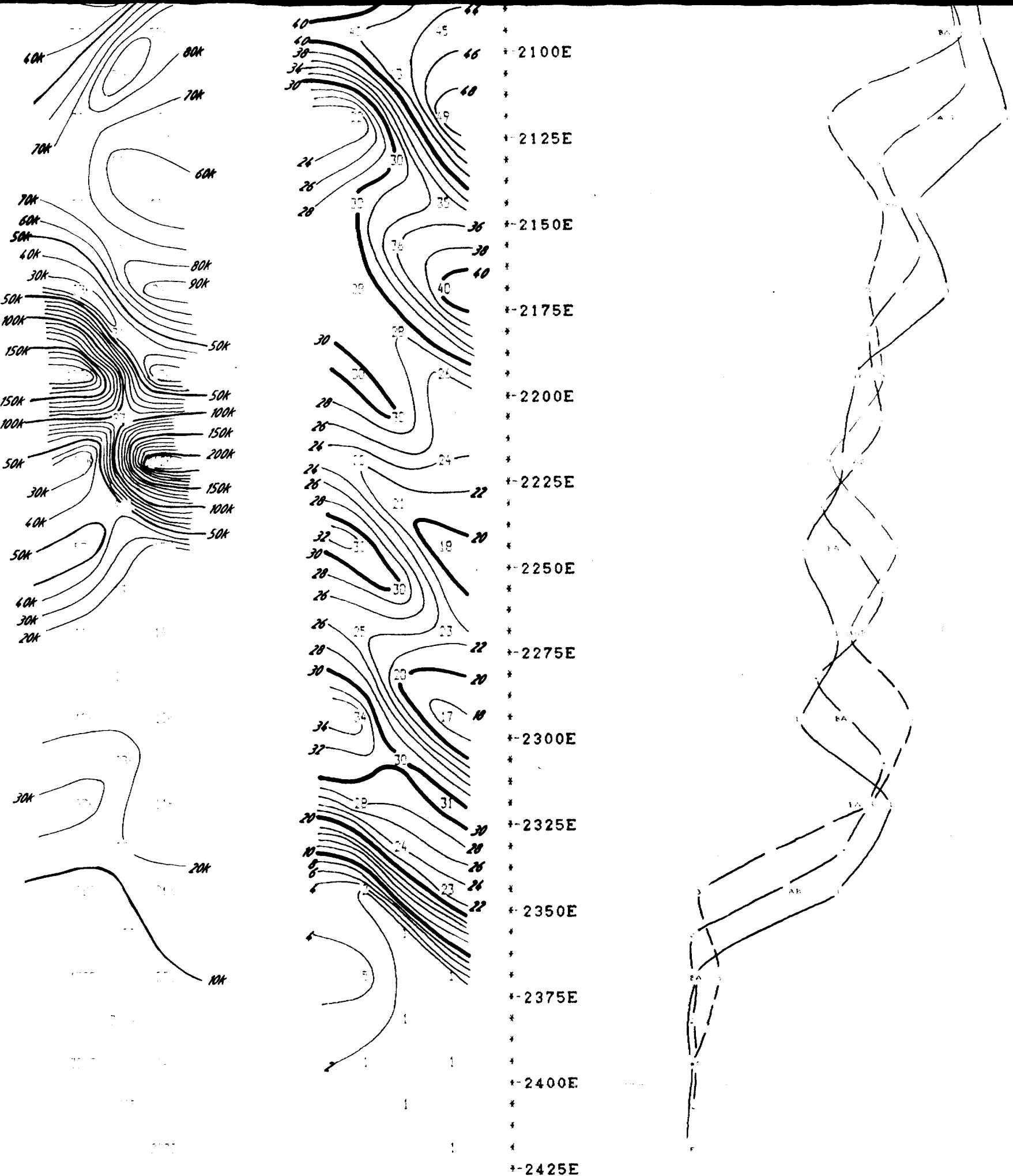
SCALE 1:100,000

CHARGEABILITY  
CONTURS

CHARGEABILITY  
CONTURS

CHARGEABILITY PROFILE





Property : MATSONVILLE GRID 4

Client : GLEN AUDEN

Date of Survey : 8/13/84

Operator : RRM

Electrode Array : POLE - DIPOLE

Mode : TIME DOMAIN

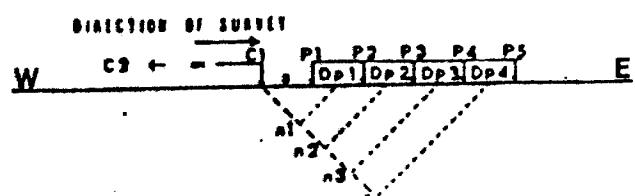
Receiver : SCINTREX TPR-B

Transmitter : SCINTREX IPC-7

Pulse Time : 2 Sec on - 2 Sec off

Delay Time : 450 ns

Integration Time : 500 ms



R.G. MIDDLETON EXPLORATION  
SERVICES INC.

TP Pseudosections for N = 1 to 3

\*a\* Spacing = 25 M

*Sig. Noddy*

SCALE = 1 : 1250

RESISTIVITY  
(ohm-metres)

N 3 N 1

N 2

xx

4634

xx

7422

xx

3016

xx

8037

xx

2693

xx

5261

xx

2271

xx

1670

xx

4270

xx

2072

xx

2150

xx

9626

xx

2718

xx

5521

xx

3911

xx

4585

xx

7635

xx

4121

xx

3265

xx

7395

xx

11K

xx

6480

xx

8153

xx

4477

xx

2452

xx

174

xx

3910

xx

108

xx

109

xx

108

xx

148

xx

150

xx

148

xx

174

xx

5797

xx

7540

xx

5657

xx

6544

CHARGEABILITY  
(milliseconds)

N 3 N 1

\* \* \*

N 2

\* \* \*

7

8

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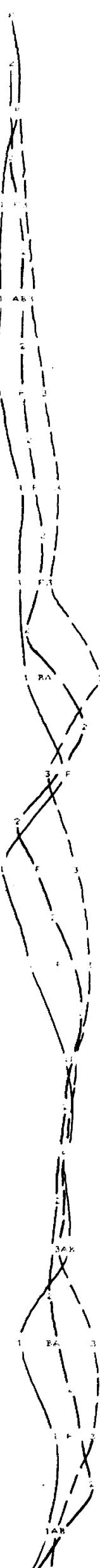
53

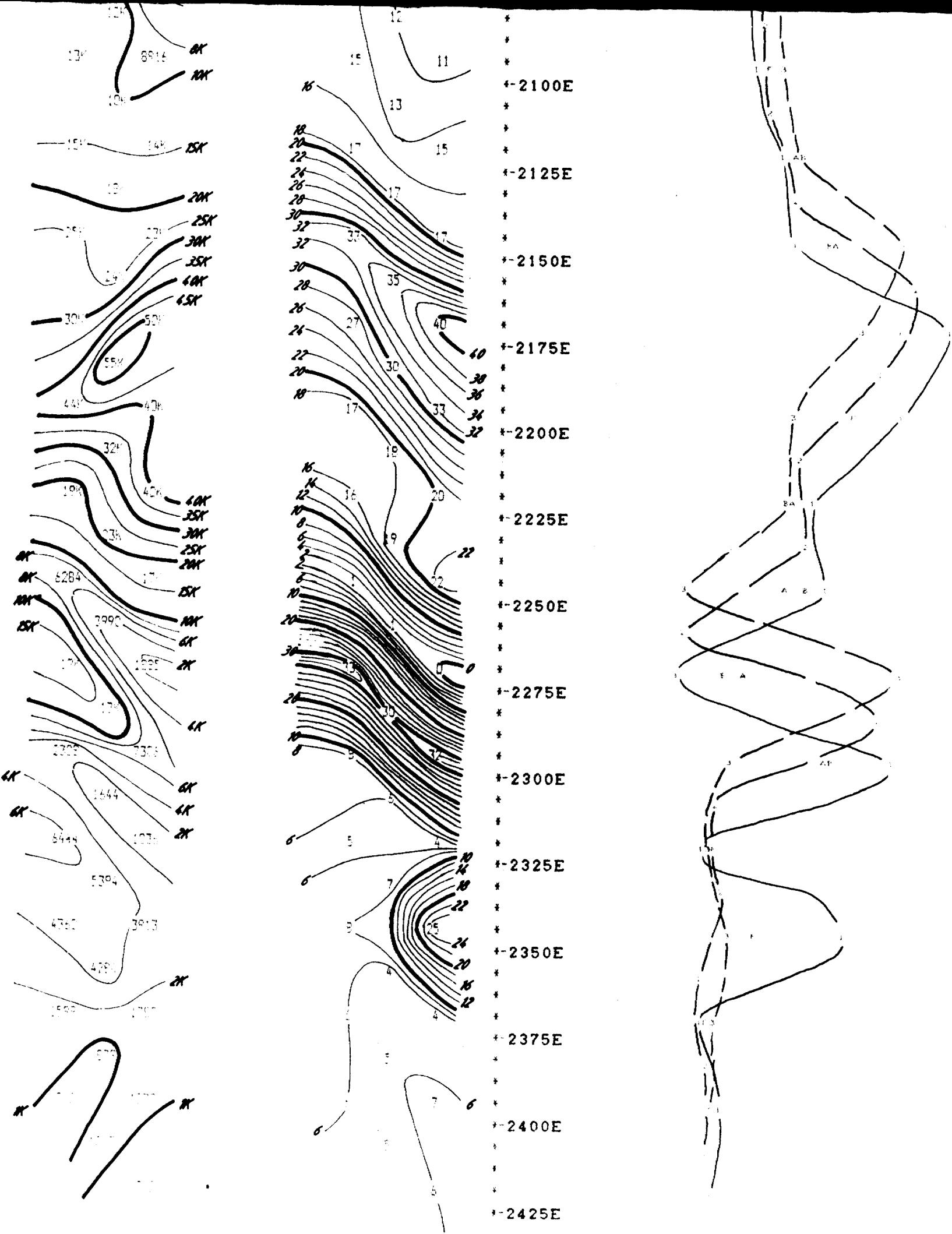
54

55

CHARGEABILITY PROFILE

-10 0 10 20 30 40 50





Property : MATTONVILLE GRID 4

Client : GLEN ALDEN

Date of Survey : 8/3/84

Operator : DPM

Electrode Array : POLE + DIPOLE

Mode : TIME DOMAIN

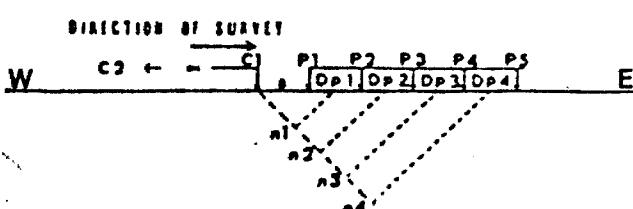
Receiver : SCINTREX TPR-8

Transmitter : SCINTREX TPC-7

Pulse Time : 2 Sec on - 2 Sec off

Delay Time : 650 ms

Integration Time : 500 ms

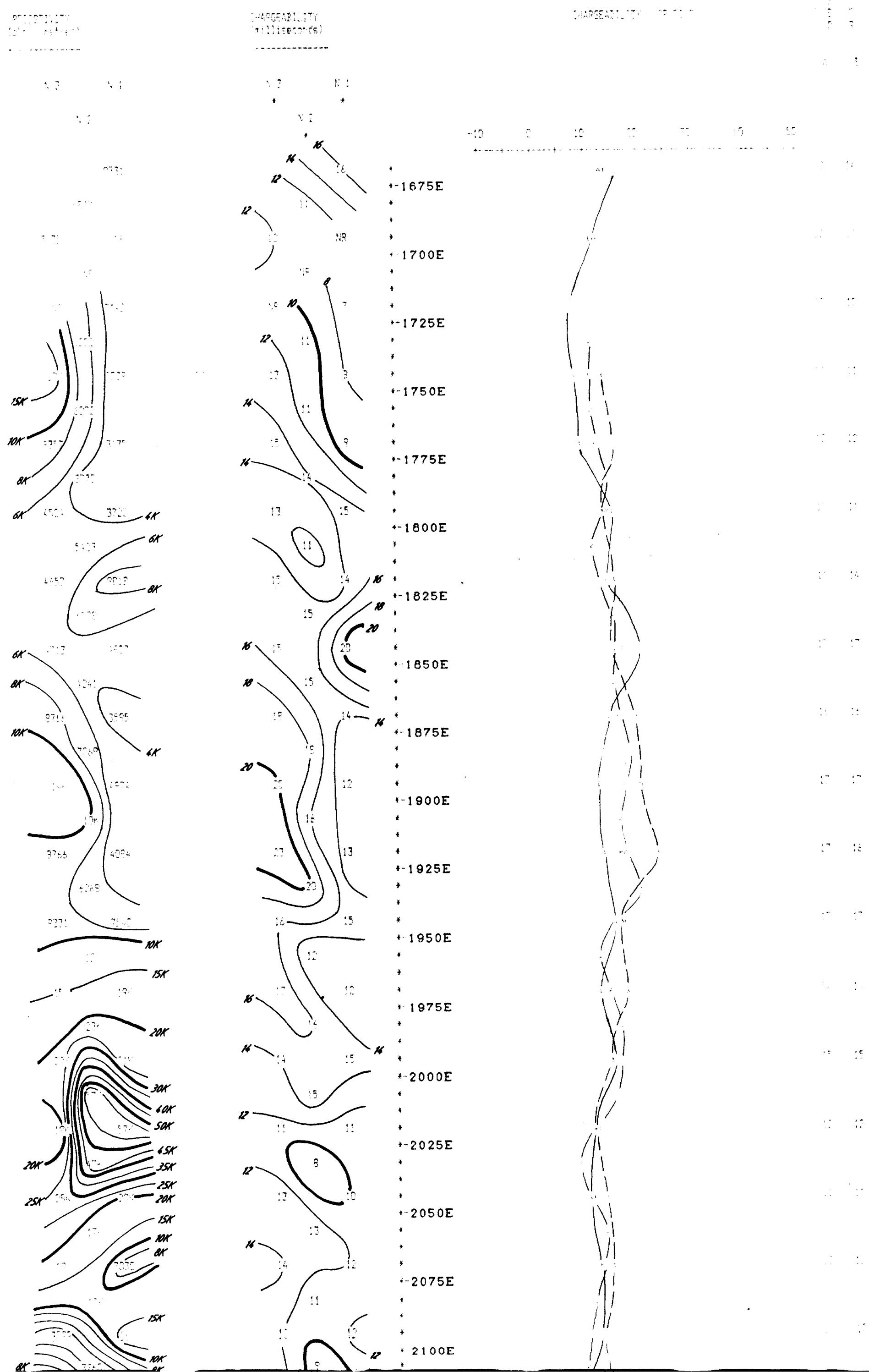


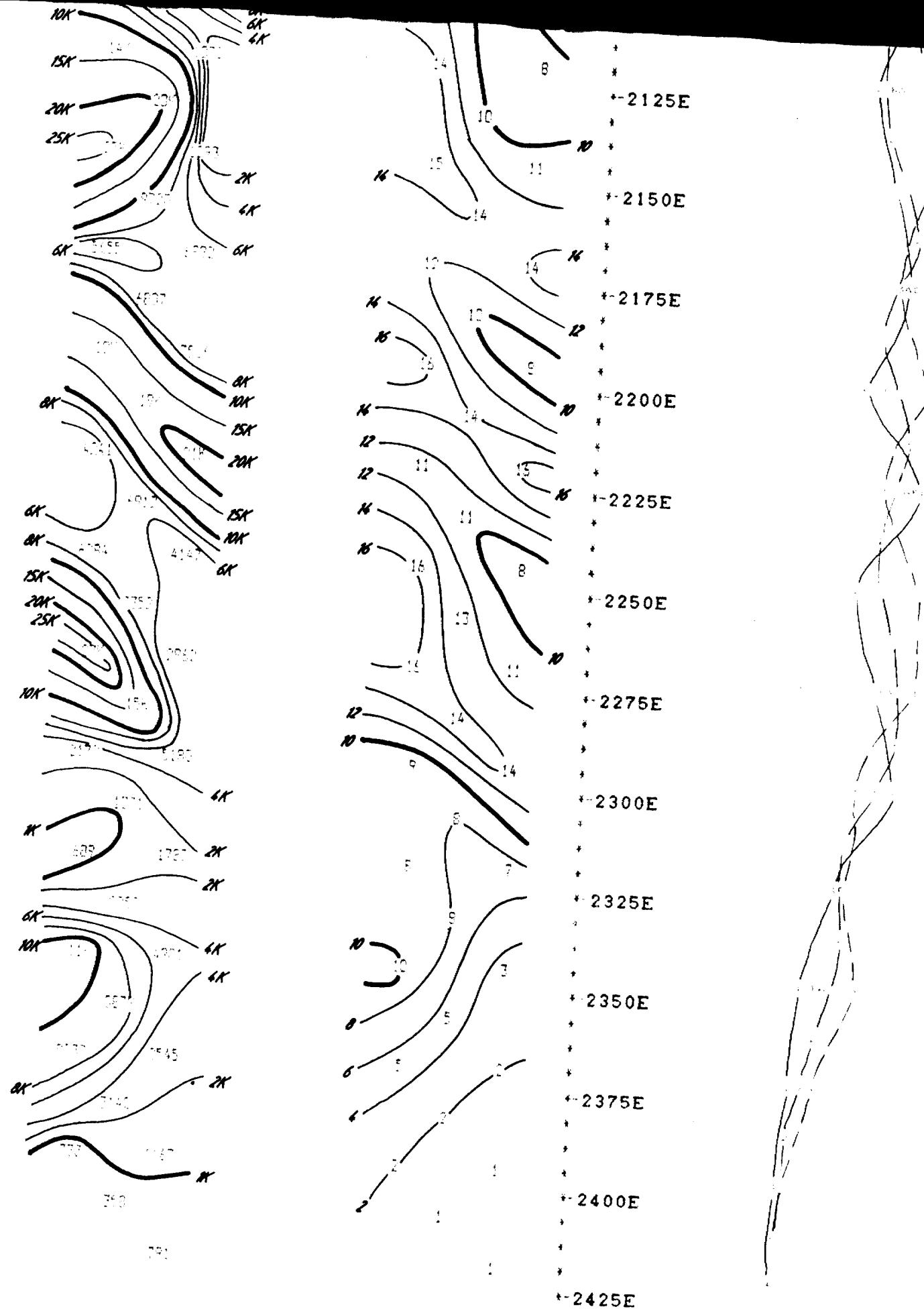
\*\*\*\*\*  
R.S.L. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

T.P. Pseudosections for N = 1 to 3

\* Spacing = 25 M

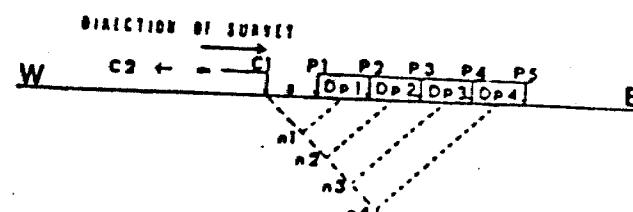
SCALE : 1 : 1250





Property : MAISONVILLE GRID 4  
Client : GLEN AUDEN

Date of Survey : 8/3/86  
Operator : RPM  
Electrode Array : POLE - DIPOLE  
Mode : TIME DOMAIN  
Receiver : SCINTREX TPR-B  
Transmitter : SCINTREX IPC-7  
Pulse Time : 2 Sec on - 2 Sec off  
Delay Time : 650 ms  
Integration Time : 520 ms



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 3

\*a\* Spacing = 25 M

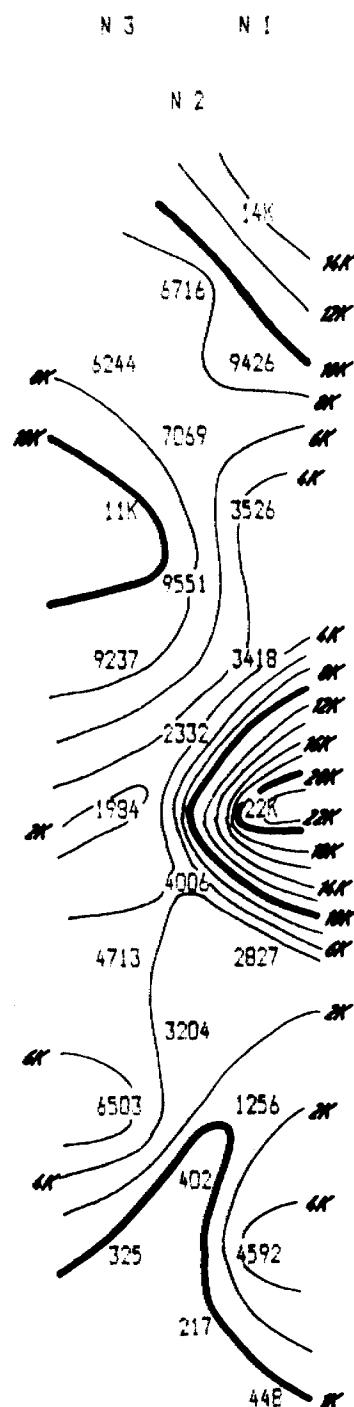
LINE 1800 N

SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

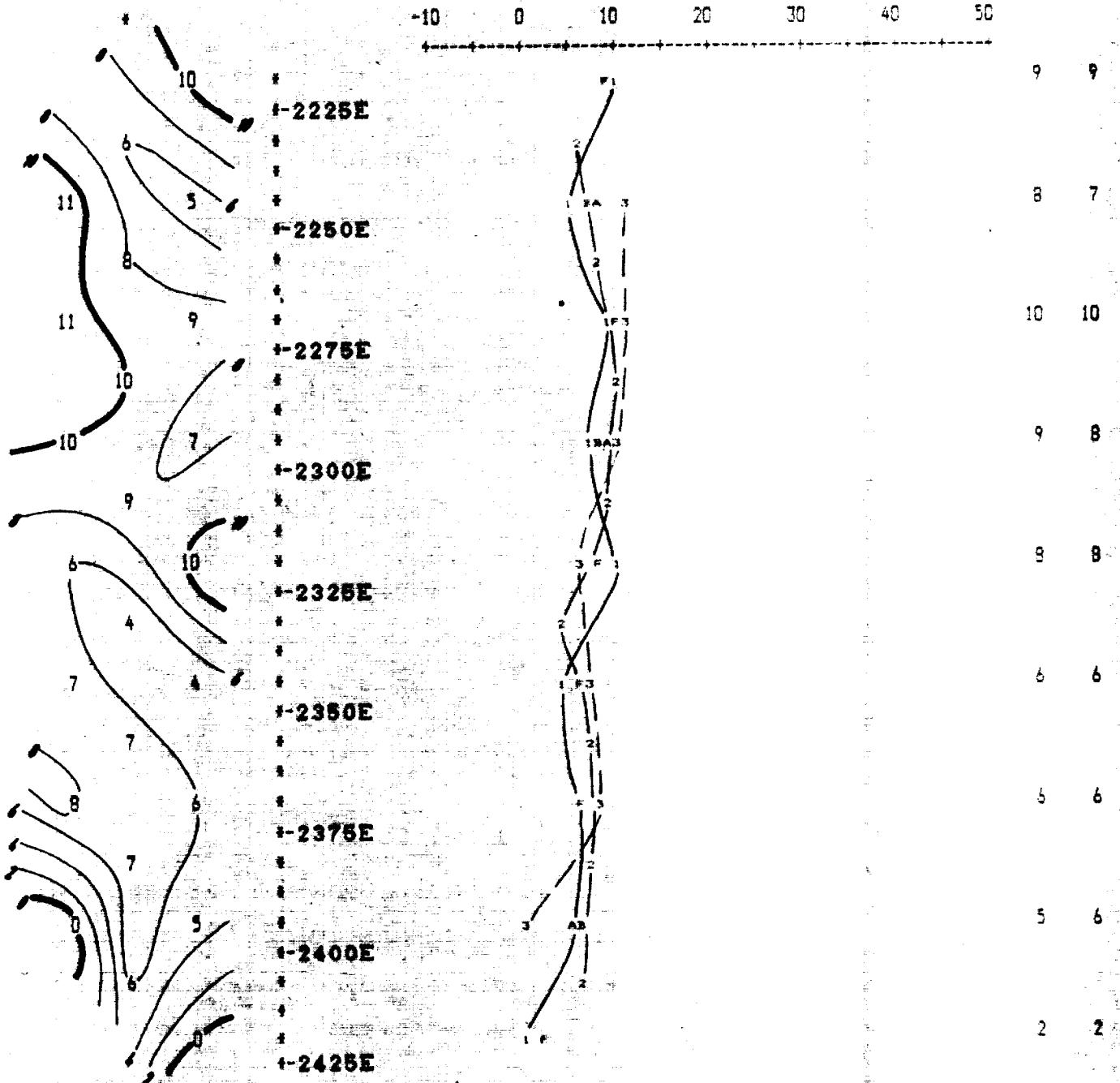
CHARGEABILITY PROFILE



N 3      N 1

N 2

-10    0    10    20    30    40    50



Property : MAISONVILLE GRID 4

Client : GLEN AUDEN

Date of Survey : 8/3/86

Operator : RRM

Electrode Array : POLE = DIPOLE

Mode : TIME DOMAIN

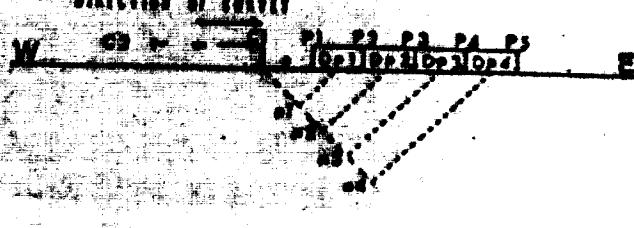
Receiver : SCINTREX IPR-8

Transmitter : SCINTREX IPC-7

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 650 ms

Integration Time : 520 ms



R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 3

\*a\* Spacing = 25 M

FILTER  
GRASSER

A      B

9      9

8      7

10     10

9      8

8      8

6      6

5      6

5      6

2      2

SCALE = 1 : 1250

RESISTIVITY  
(ohm-metres)

CHARGEABILITY  
(milli-seconds)

CHARGEABILITY PROFILE

N 3 N 1

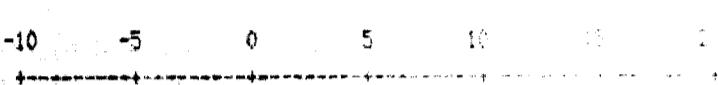
N 3

N 1

N 4 N 2

N 4

N 2



6110  
6K 6400

2.6

\*  
\*-1650E

5770 4910

3.6

\*

5810 4720

3.5

\*  
\*-1675E

4770 6780  
6K  
6794 6780

2.0

\*

4.5

\*  
\*-1700E

4370 5210

2.8

\*  
\*-1725E

4340 3460

2.7

\*  
\*-1750E

3710 1810  
2020 3430  
3K 2045 6210 6K  
5060 5720  
6K 7320 2620  
4050 1660 2K

2.1

2.1

\*  
\*-1775E

2.2

1.8

\*  
\*-1800E

2120 2600 3K  
2150 3900

2.2

2.2

\*  
\*-1825E

2250 2410  
2290 4210

2.4

1.9

\*  
\*-1850E

3580 5110  
6680 3340  
5410 4650 5K

2.6

2.2

\*  
\*-1675E

4900 9060  
1065 10K  
1920 1760  
1153 1180 4K  
1065 1930 2K  
1111 1100 1K  
600

3.1

2.6

\*  
\*-1900E

2.9

3.1

\*  
\*-1925E

2.2

1.8

\*  
\*-1950E

1.0

1.5

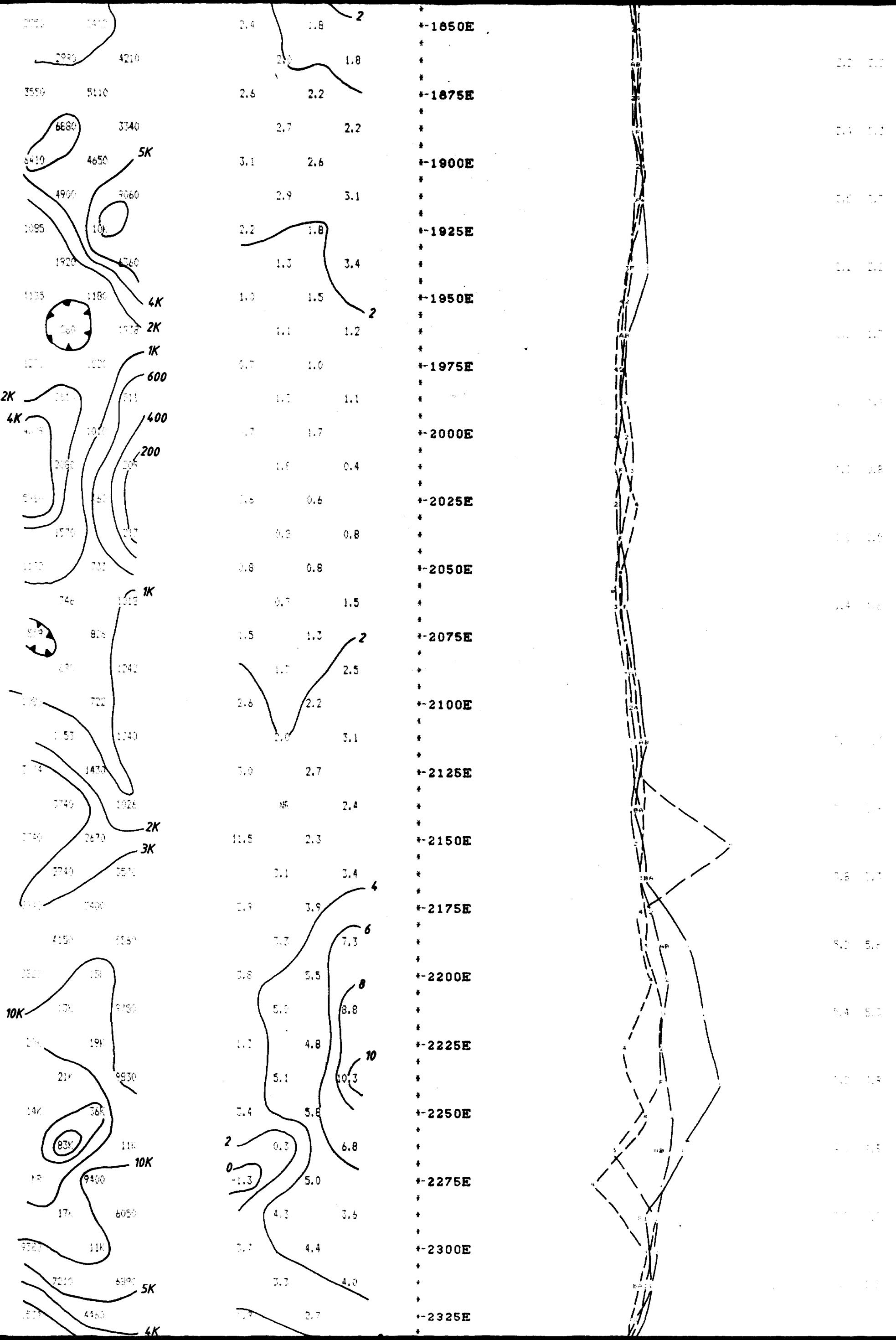
\*  
\*-1975E

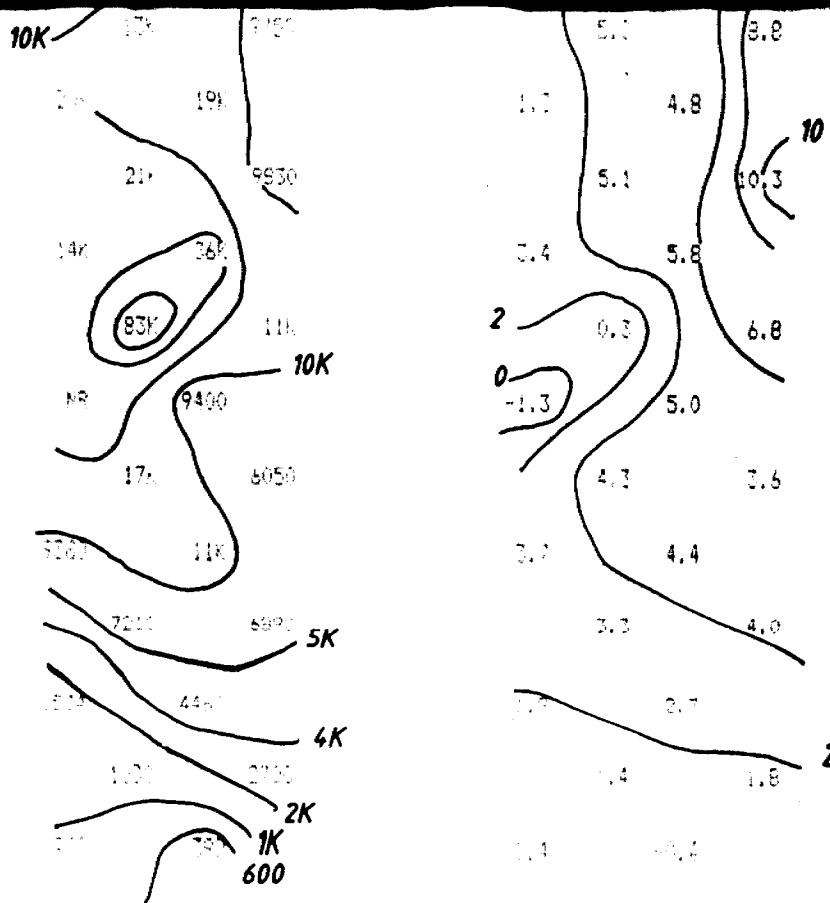
0.7

1.0

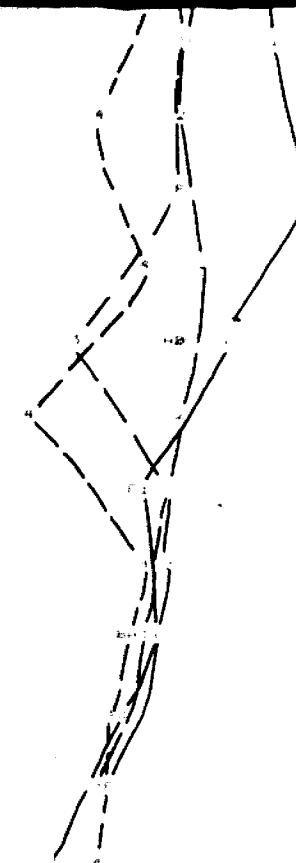
\*  
\*-1975E







+2225E  
+2250E  
+2275E  
+2300E  
+2325E  
+2350E



### Property : MARIPOSAVILLE C. TWIN, GRID 6

Instrument : GEMINI GEMINI FREQUENCIES

Depth : 1000 ft. Survey : 1000 ft. S.G.

Transmitter : 1000 ft.

Antenna : 1000 ft. by 1000 ft. Dipole

Model : TIME INVERSION

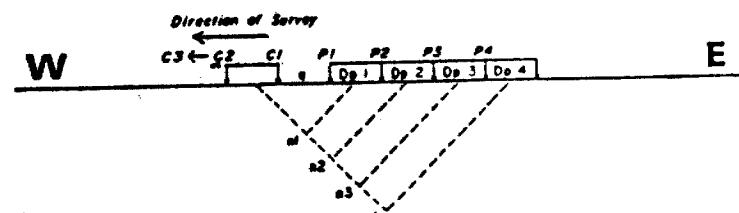
Receivers : 1000 ft. by 1000 ft.

Transmitter : SCINTERR 1000 ft.

Survey Time : 0 Sec on 0 Sec off

Delay Time : 1000 ms

Integration Time : 780 ms



*Gary K. Johnson*

\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 6

'a' Spacing = 25 M

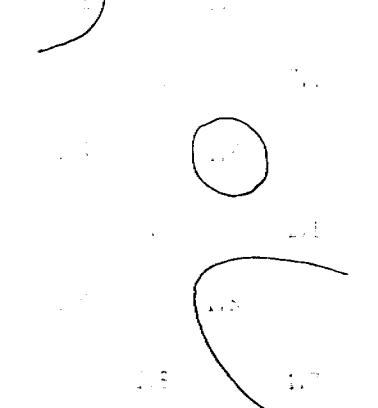
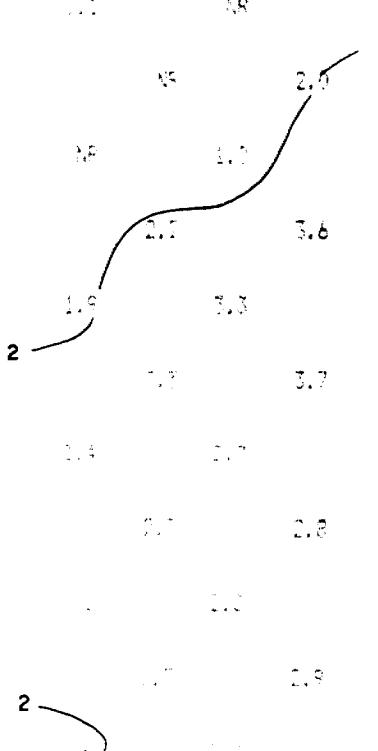
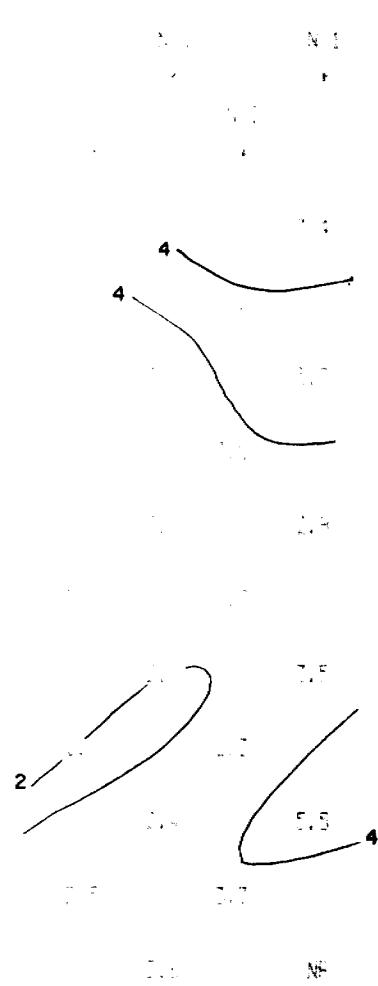
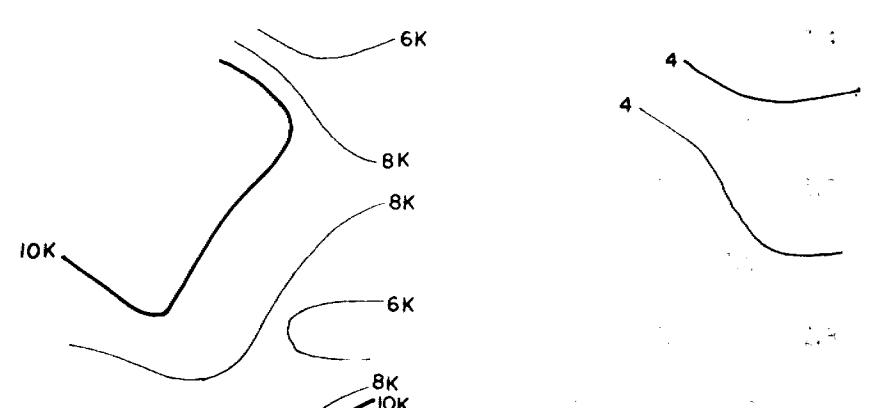
LINE 5050 N

SCALE: 1:1250

REF ID:

CHARGEABILITY  
milli seconds

CHARGEABILITY PROFILE



1650E

1675E

1700E

1725E

1750E

1775E

1800E

1825E

1850E

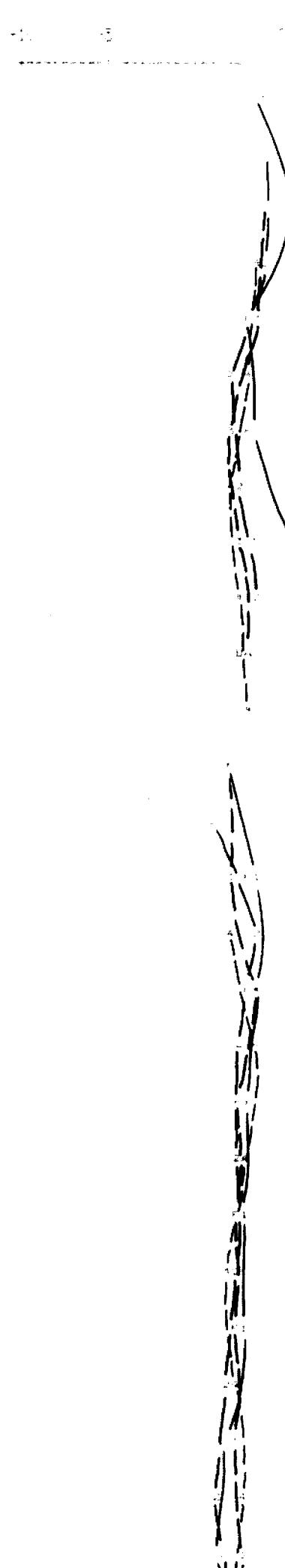
1875E

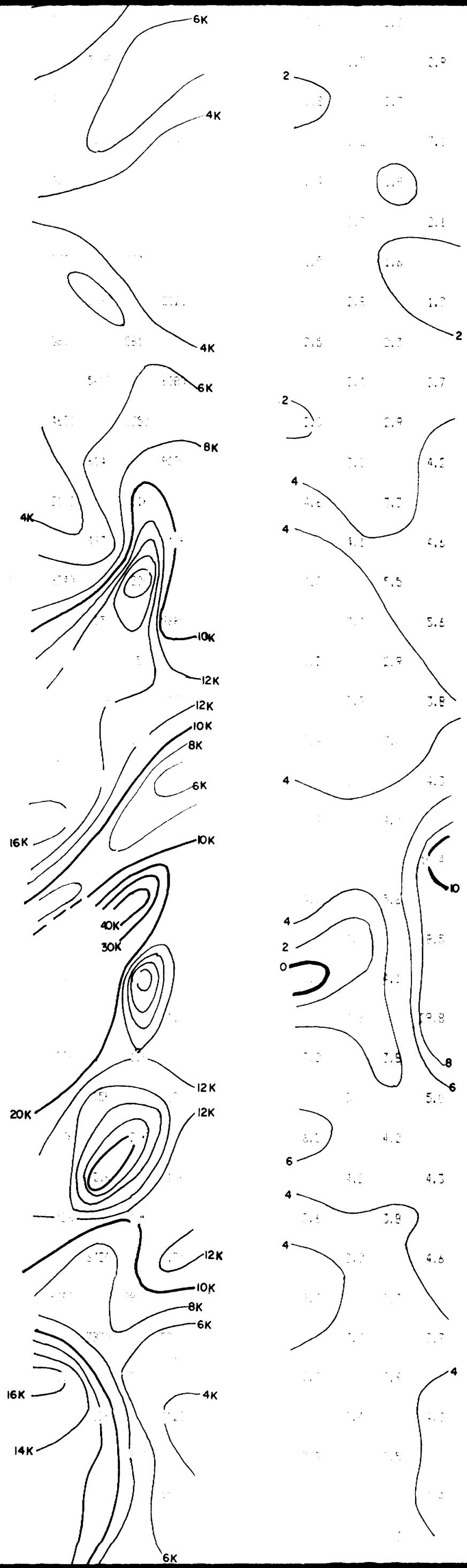
1900E

1925E

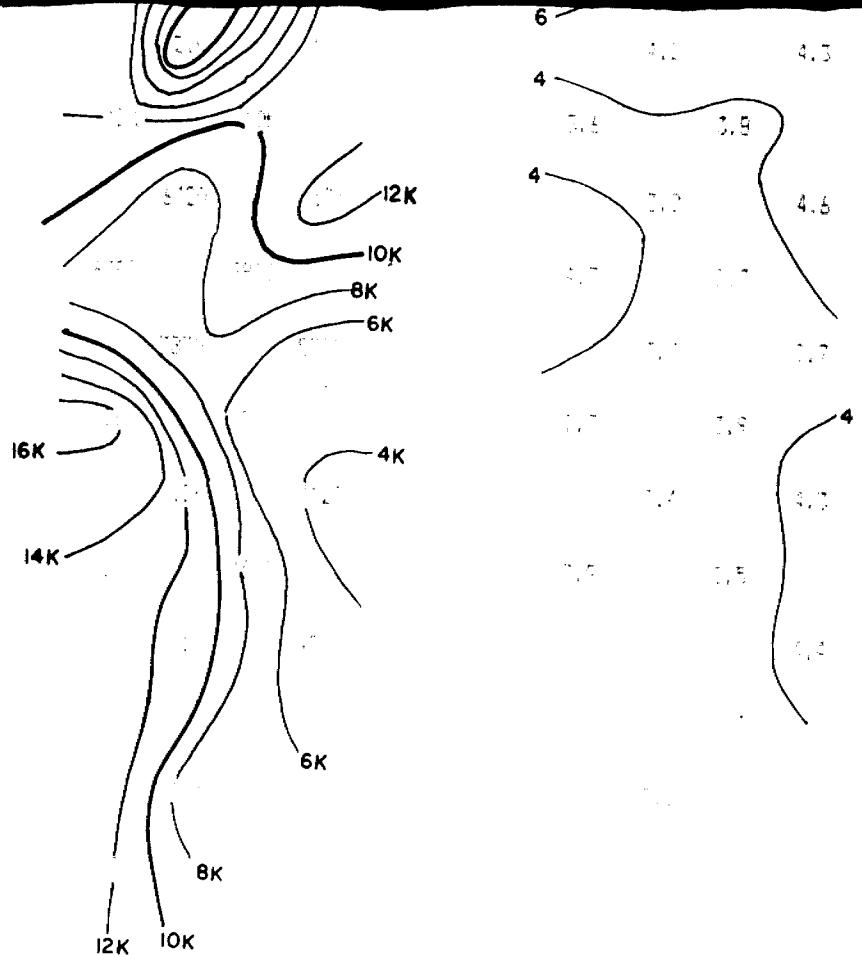
1950E

CHARGEABILITY PROFILE





\*-1875E  
\*-1900E  
\*-1925E  
\*-1950E  
\*-1975E  
\*-2000E  
\*-2025E  
\*-2050E  
\*-2075E  
\*-2100E  
\*-2125E  
\*-2150E  
\*-2175E  
\*-2200E  
\*-2225E  
\*-2250E  
\*-2275E  
\*-2300E  
\*-2325E  
\*-2350E



\*-2250E

\*-2275E

+ 2300E

+ 2325E

- 2350E

\* 2375E

— 2 —

1970-1971  
1971-1972  
1972-1973  
1973-1974  
1974-1975  
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2056-2057  
2057-2058  
2058-2059  
2059-2060  
2060-2061  
2061-2062  
2062-2063  
2063-2064  
2064-2065  
2065-2066  
2066-2067  
2067-2068  
2068-2069  
2069-2070  
2070-2071  
2071-2072  
2072-2073  
2073-2074  
2074-2075  
2075-2076  
2076-2077  
2077-2078  
2078-2079  
2079-2080  
2080-2081  
2081-2082  
2082-2083  
2083-2084  
2084-2085  
2085-2086  
2086-2087  
2087-2088  
2088-2089  
2089-2090  
2090-2091  
2091-2092  
2092-2093  
2093-2094  
2094-2095  
2095-2096  
2096-2097  
2097-2098  
2098-2099  
2099-20100

## THE CLOTHES LINE - DICKIE'S TROUSERS

BROWNSVILLE DOMAIN

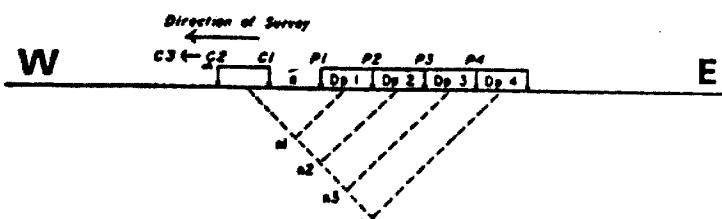
## RECORDED IN GENEINDEX (P6-11)

## Fracture-tolerant materials

© 1996 The Authors. Journal compilation © 1996 British Ecological Society, *Journal of Ecology*, **84**, 60–67

### Dependency Table for Macroeconomics

Integration Factor: 79



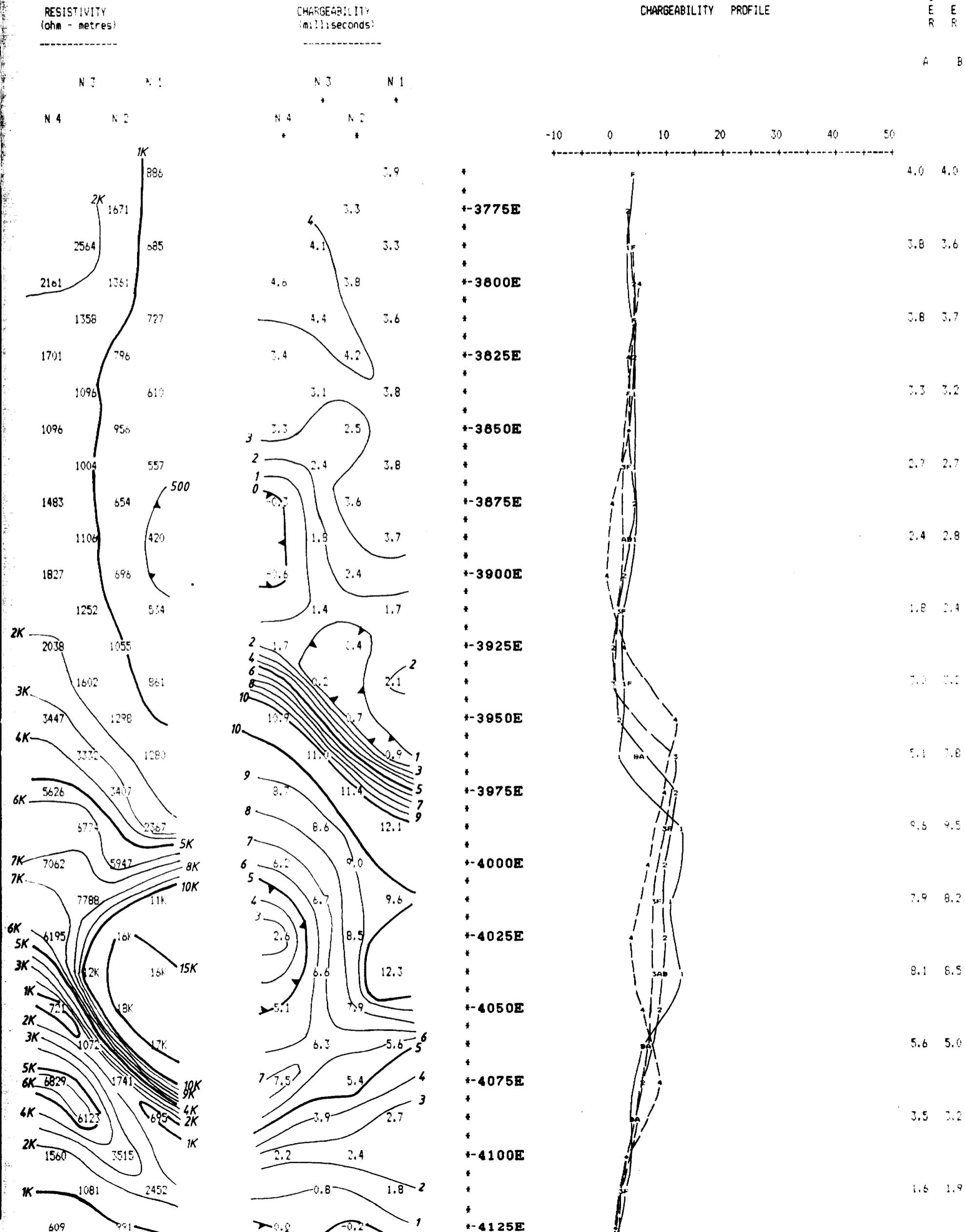
R. S. MIDDLETON EXPLORATION  
SERVICES INC.

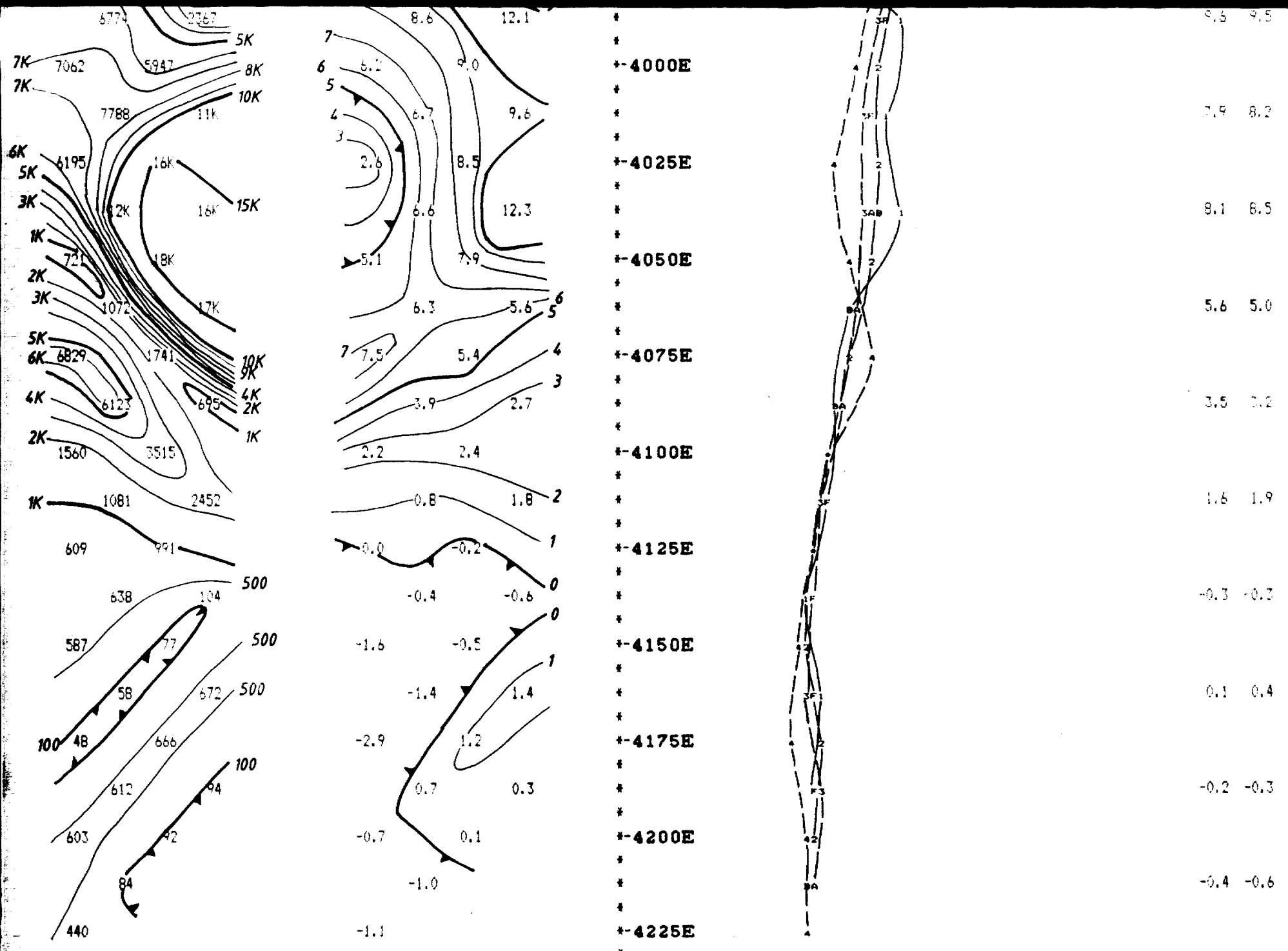
#### 1F Pseudosections for N = 1 to 4

Spreading = 25 M

LINE 5150 N

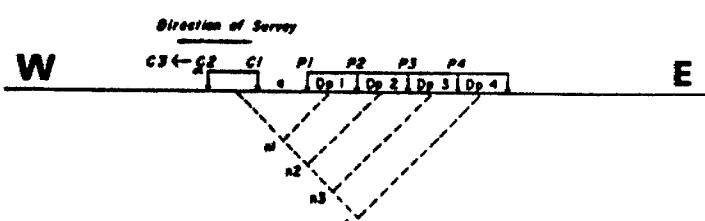
SCALE = 1 : 1250





Property : MAISONVILLE GRID 7  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 7/6/86  
Operator : CDJ  
Electrode Array : DIPOLE - 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  
Slice # 7 Plotted



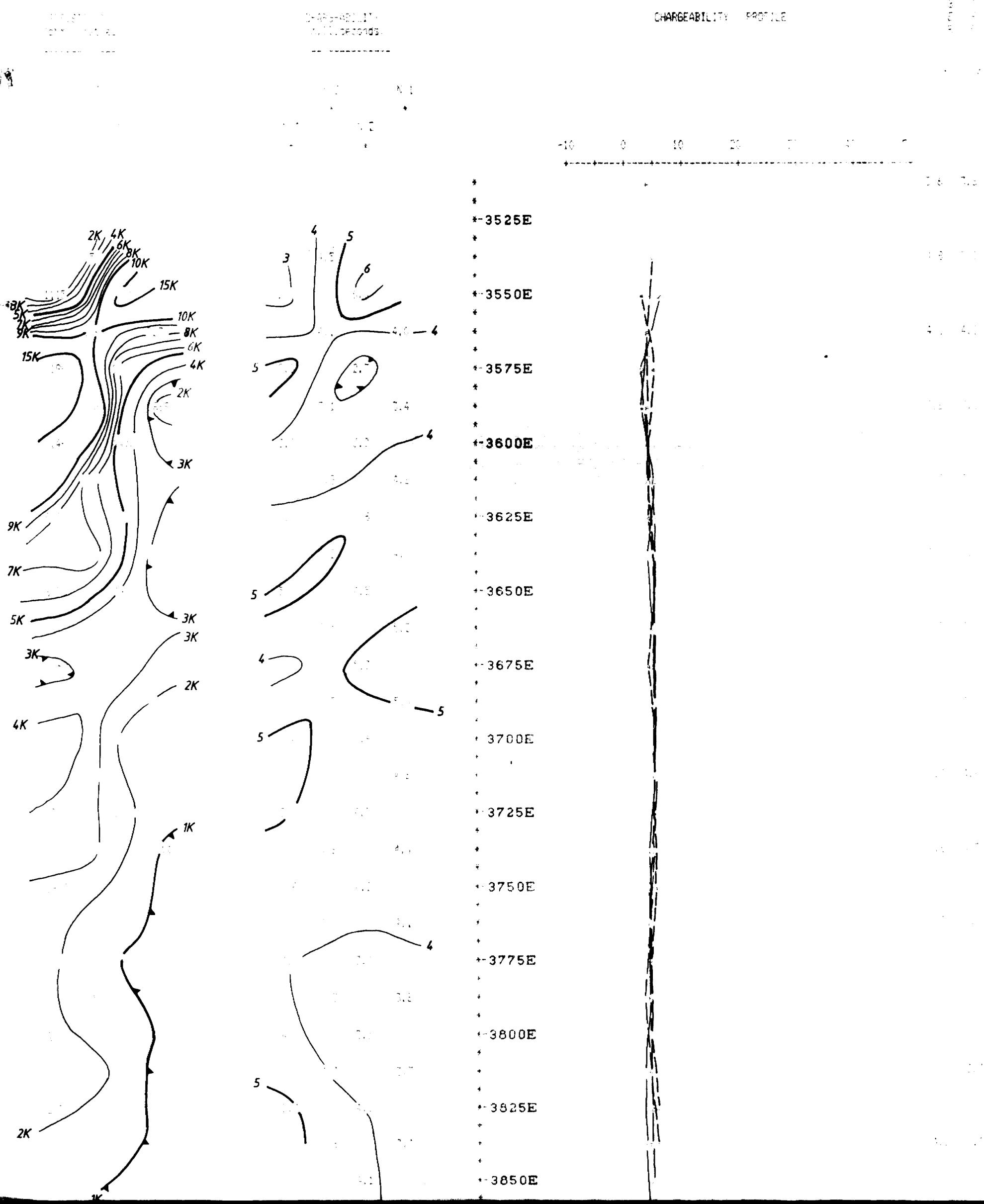
\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

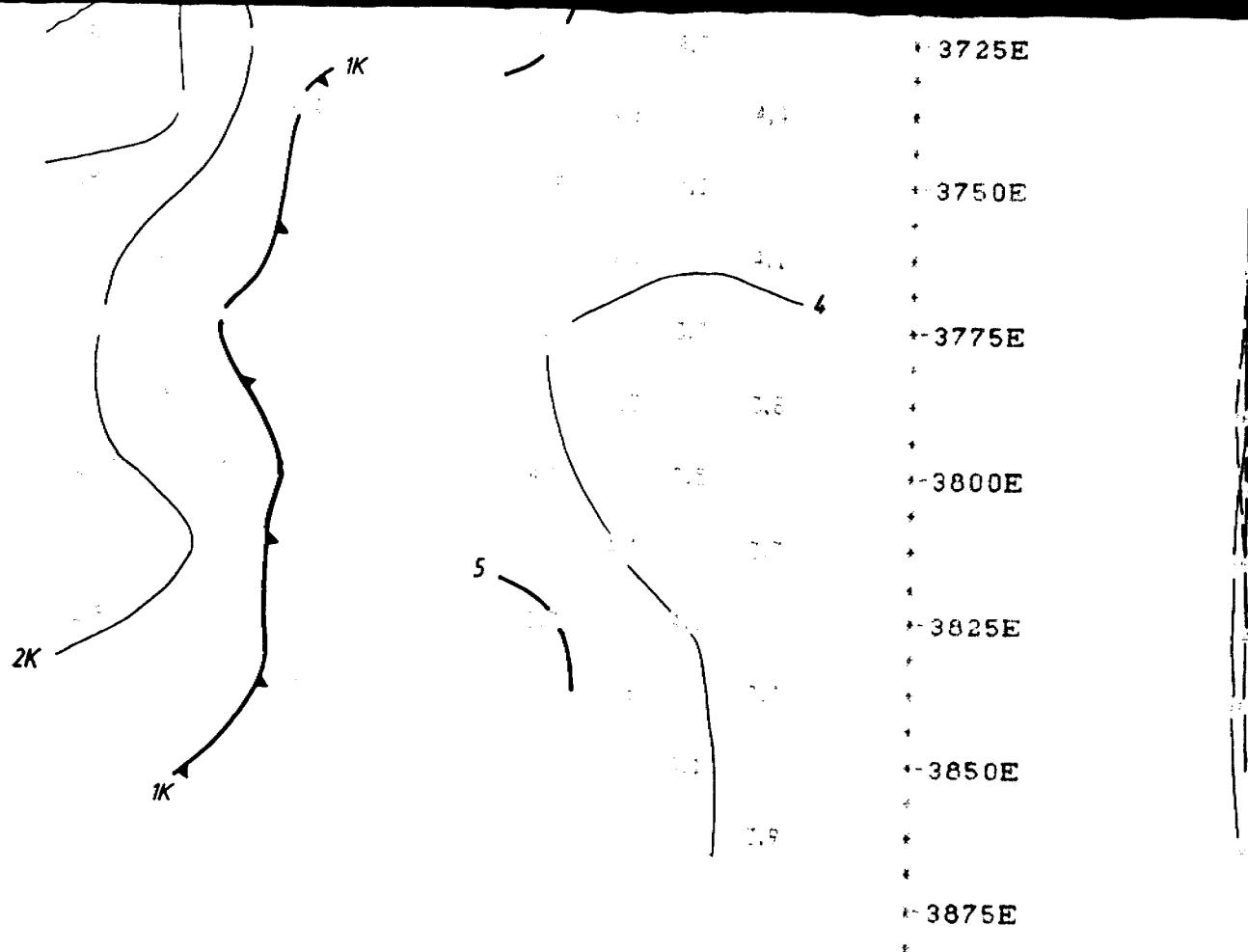
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 1575 N

SCALE 1:1 = 1/250





Estimated Survey Interval - 100 ft.

Distance Between Stations - 25 M.

Instrument Used - GPR

Operator - GPR

Electrode Array - DIPOLE - DIPOLE

Mode - TIME DOMAIN

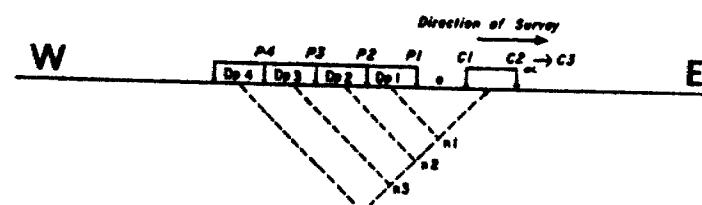
Receiver Gain - 100000, GPE - 11

Transmitter Gain - 500000, TPE - 17

Pulse Length - 1000 μs, GPE - 1000

Depth - 1000 m

Integration Time - 1000 μs



*Bry Kates*

R. S. MIDDLETON EXPLORATION  
SERVICES INC.

LFP Line sections for N = 1 to 4

\*\* Spacing = 25 M

LINE 1575 N

SCALE : 1 : 1250

RESISTIVITY  
(ohm-metres)

SEISMICITY  
(milliseconds)

CHARGEABILITY - PEGGY

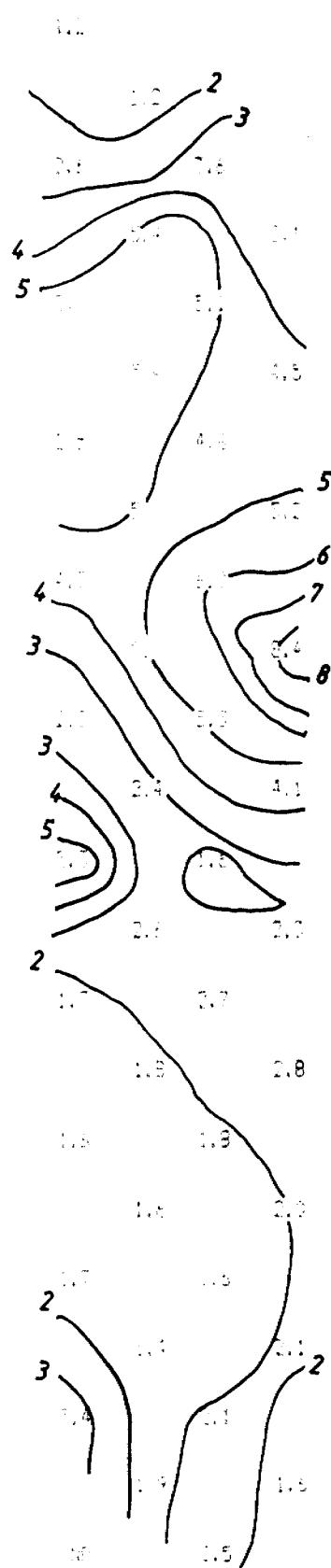
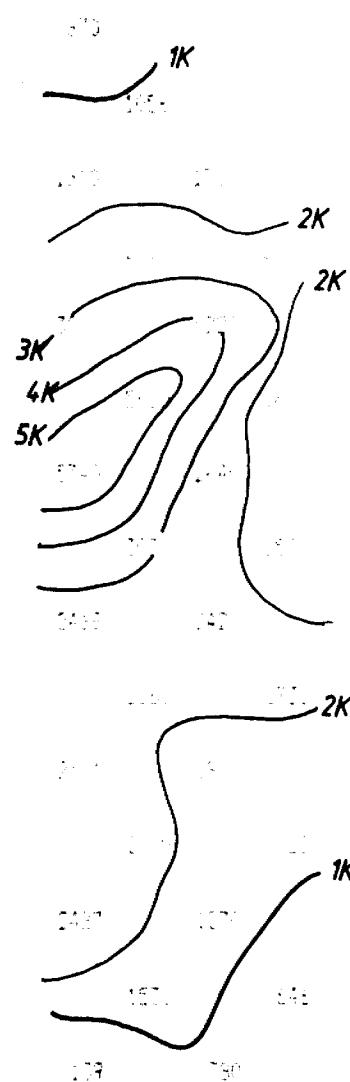
N 7 N 1

N 7 N 1

N 4 N 2

N 4 N 2

-10 -5 0 +5 +10 +15



+4300E

+4325E

+4350E

+4375E

+4400E

+4425E

+4450E

+4475E

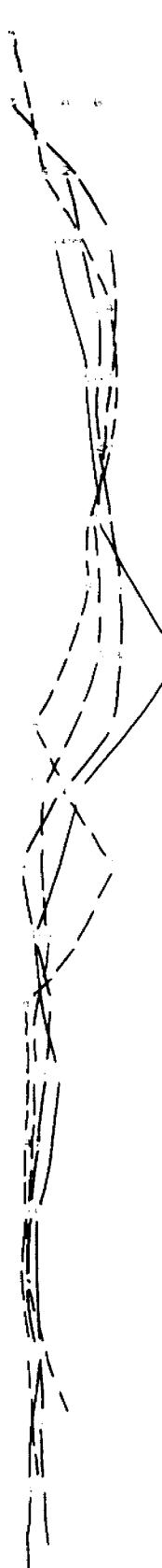
+4500E

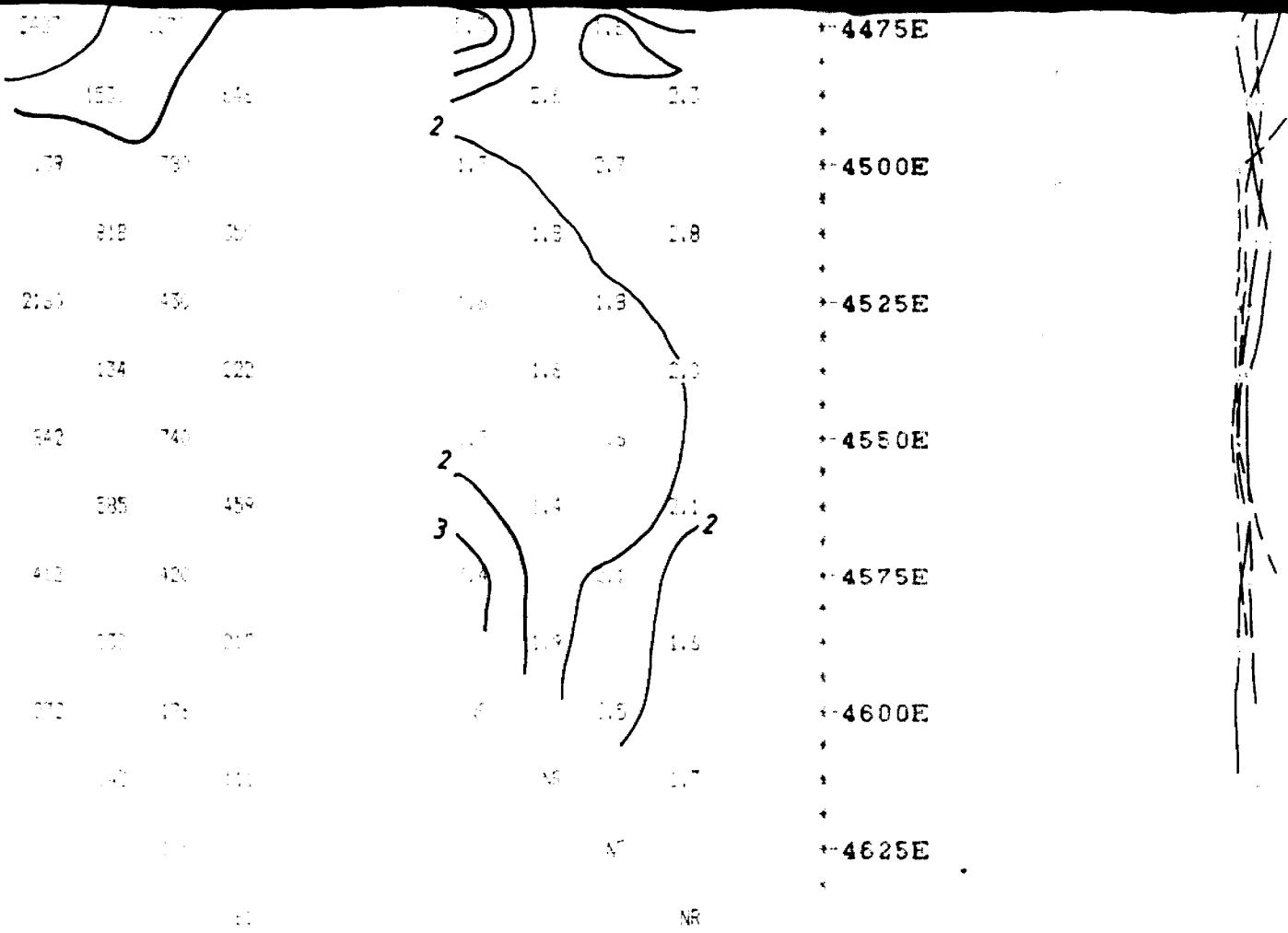
+4525E

+4550E

+4575E

+4600E





Property : MIDDLEFIELD TWP. GRID 7

Client : GREEN EARTH RESOURCES

Date of Survey : 11/20/94

Operator : CG

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

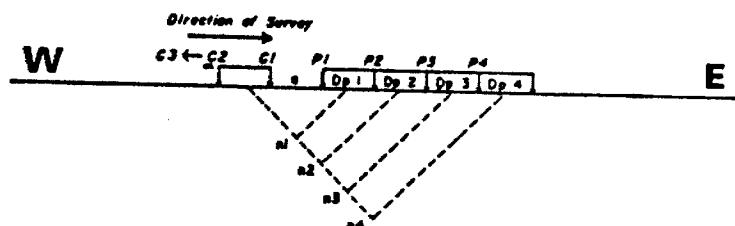
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX ITR-8/250W

Pulse Time : 2 Sec on, 2 Sec off

Delay Time : 100 ms

Integration Time : 700 ms



\*\*\*\*\*  
 R. G. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*\*

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 1760 N

SCALE : 1 : 1250

RESISTIVITY  
(ohm - metres)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE

FILTER  
20000 CPS

N 3 N 1

N 4 N 2

3K 2953

3K 3483

3K 3084

3220

2258 3559

2808 1975

3K 3456

2722 1083

1K

2985 1772

2387

1102

9174

4547

5367 3770

5459

2450

5K 3412

4644

3448

3299

5K

5274

2872

6K

7K

8K

5341 7705

17K

8402

9K

15K

20K

21K

14K

10K

13K

10K

9K

8K

7K

6K

5K

4K

3K

N 3 N 1

N 4 N 2

3K 2953

3483 3220

2258 3559

2808 1975

3456 1768

2722 1083

1083 1K

2985 1772

2387 722

1102 963

9174 4547

4547 3770

5367 5459

5459 2450

5K 3412

4644 3448

3448 3299

5K 5274

2872 2953

6K 5K

7K 7K

8K 8K

5341 7705

17K 17K

8402 8402

9K 9K

15K 15K

20K 20K

21K 21K

14K 14K

10K 10K

13K 13K

10K 10K

9K 9K

8K 8K

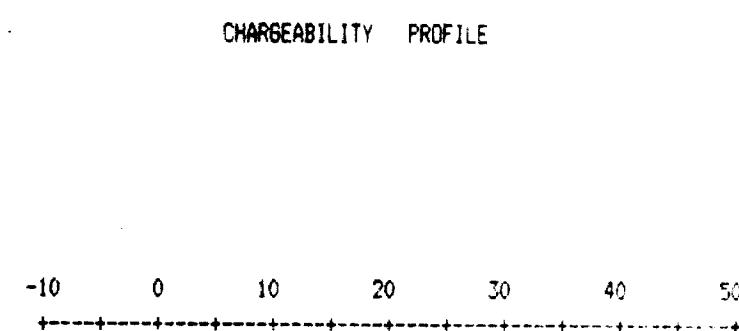
7K 7K

6K 6K

5K 5K

4K 4K

3K 3K



5.9 5.7

6.1 6.0

5.3 4.8

4.8 4.7

4.1 4.5

4.0 4.3

5.0 4.7

5.2 5.7

7.0 7.7

7.4 7.5

7.1 8.5

7.1 8.5

5.0 5.5

\*-3800E

\*-3825E

\*-3850E

\*-3875E

\*-3900E

\*-3925E

\*-3950E

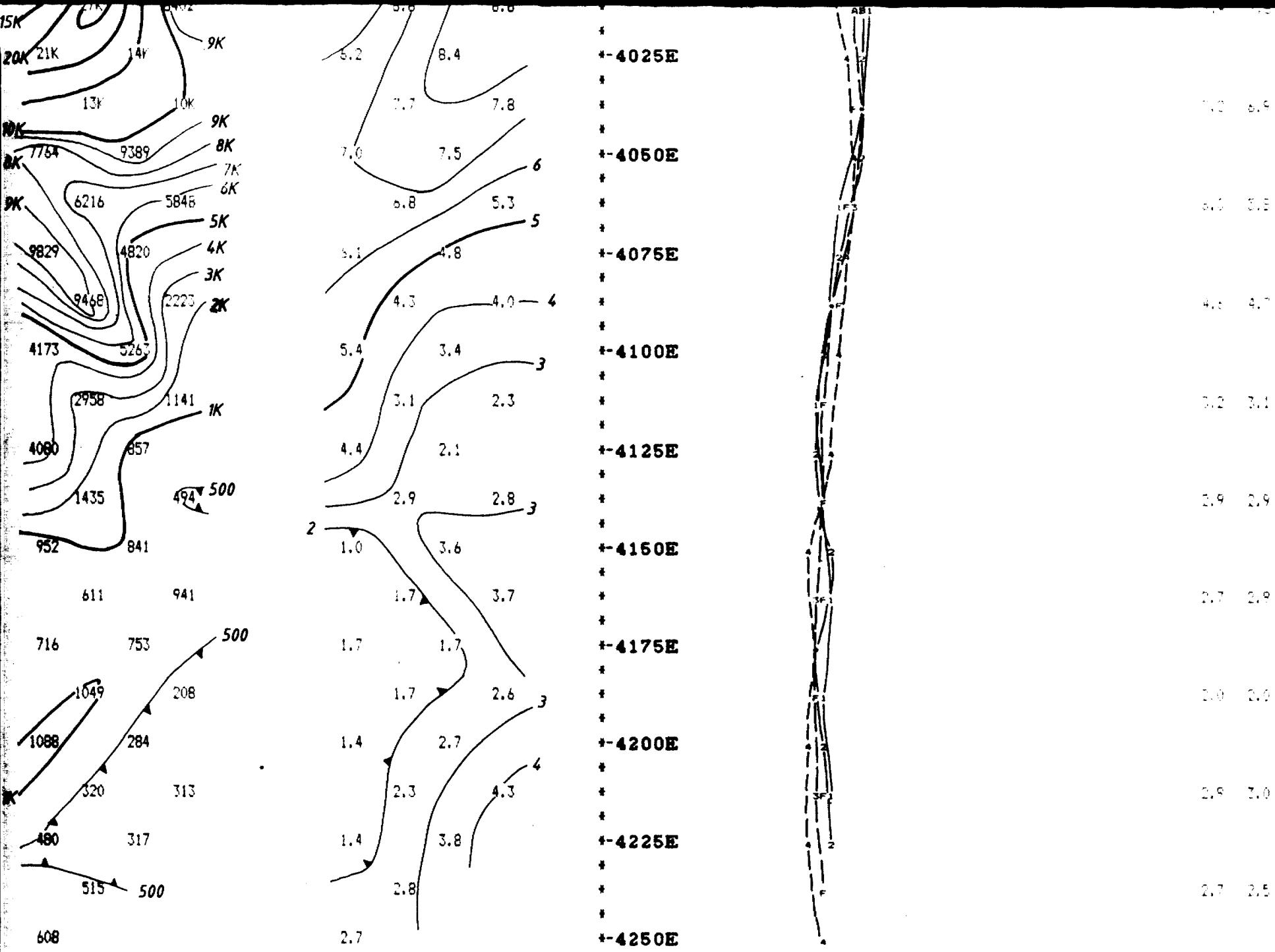
\*-3975E

\*-4000E

\*-4025E

\*-4050E

\*-4075E



Property : MAISONVILLE GRID 7  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 7/6/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

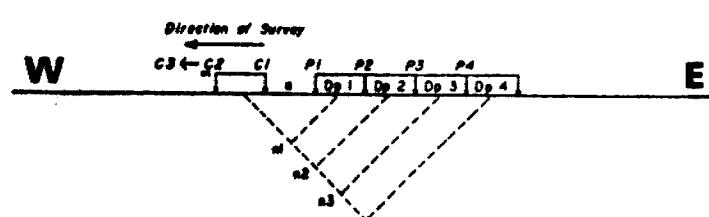
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



\*\*\*\*\*  
R. S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

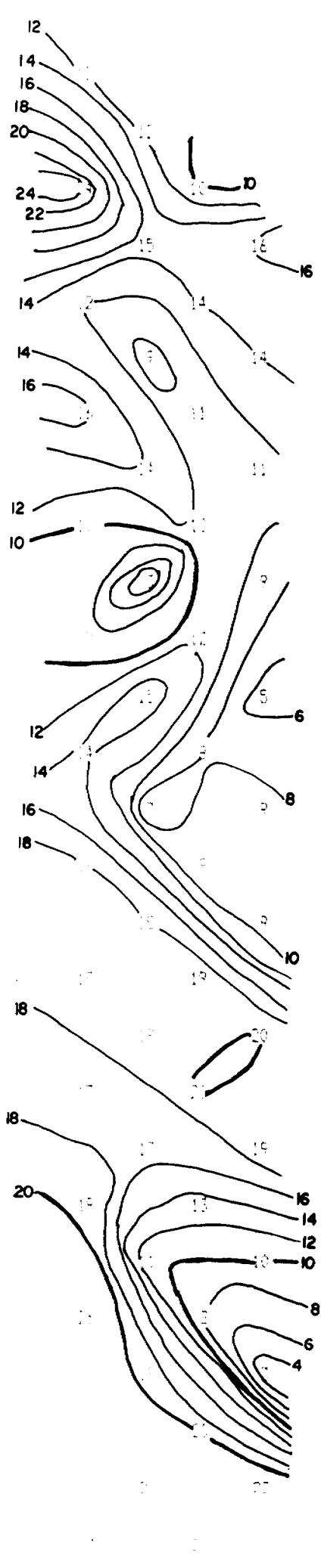
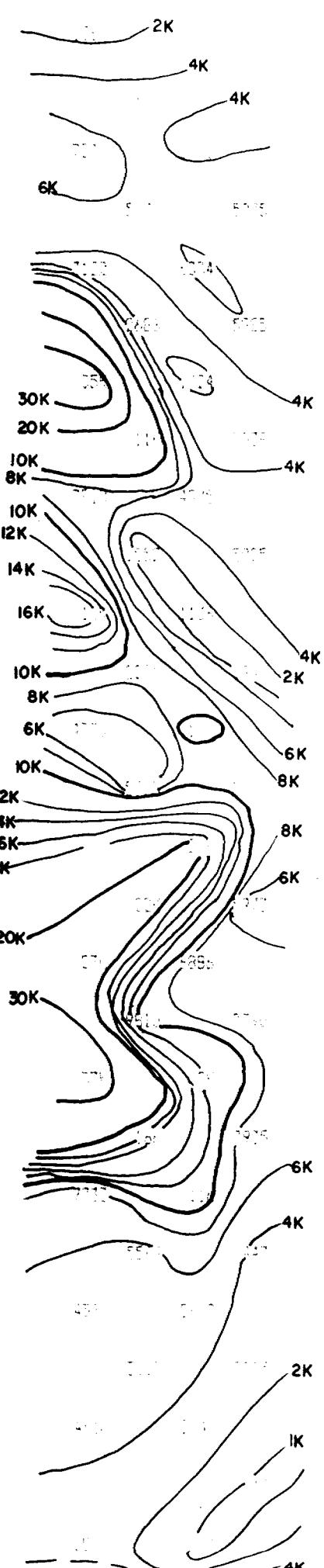
LINE 1825 N

SCALE = 1:1250

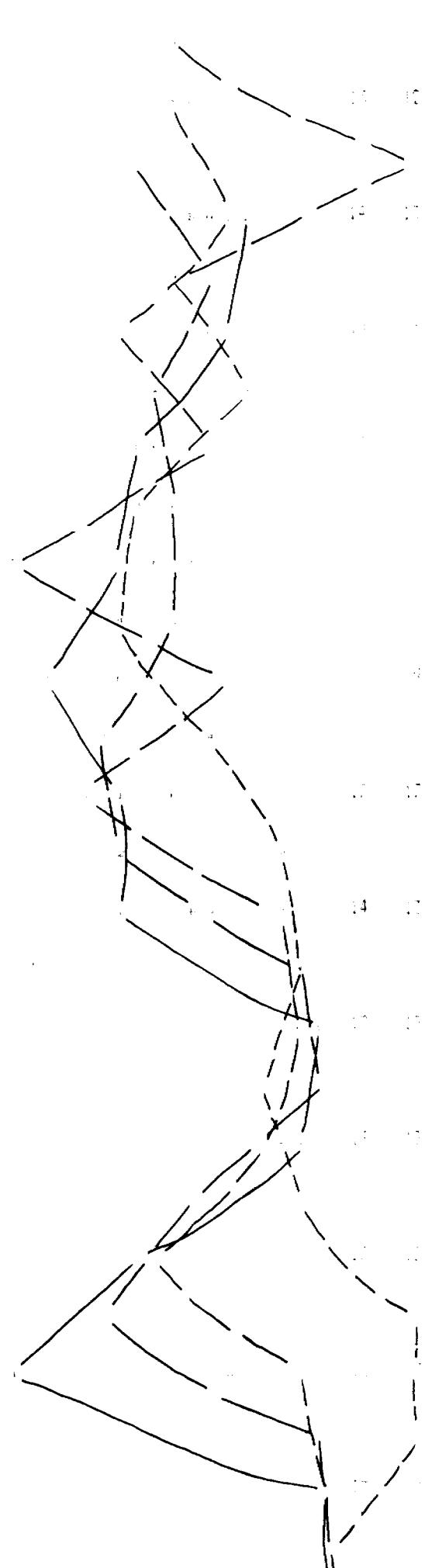
RESISTIVITY  
OHM-METERS

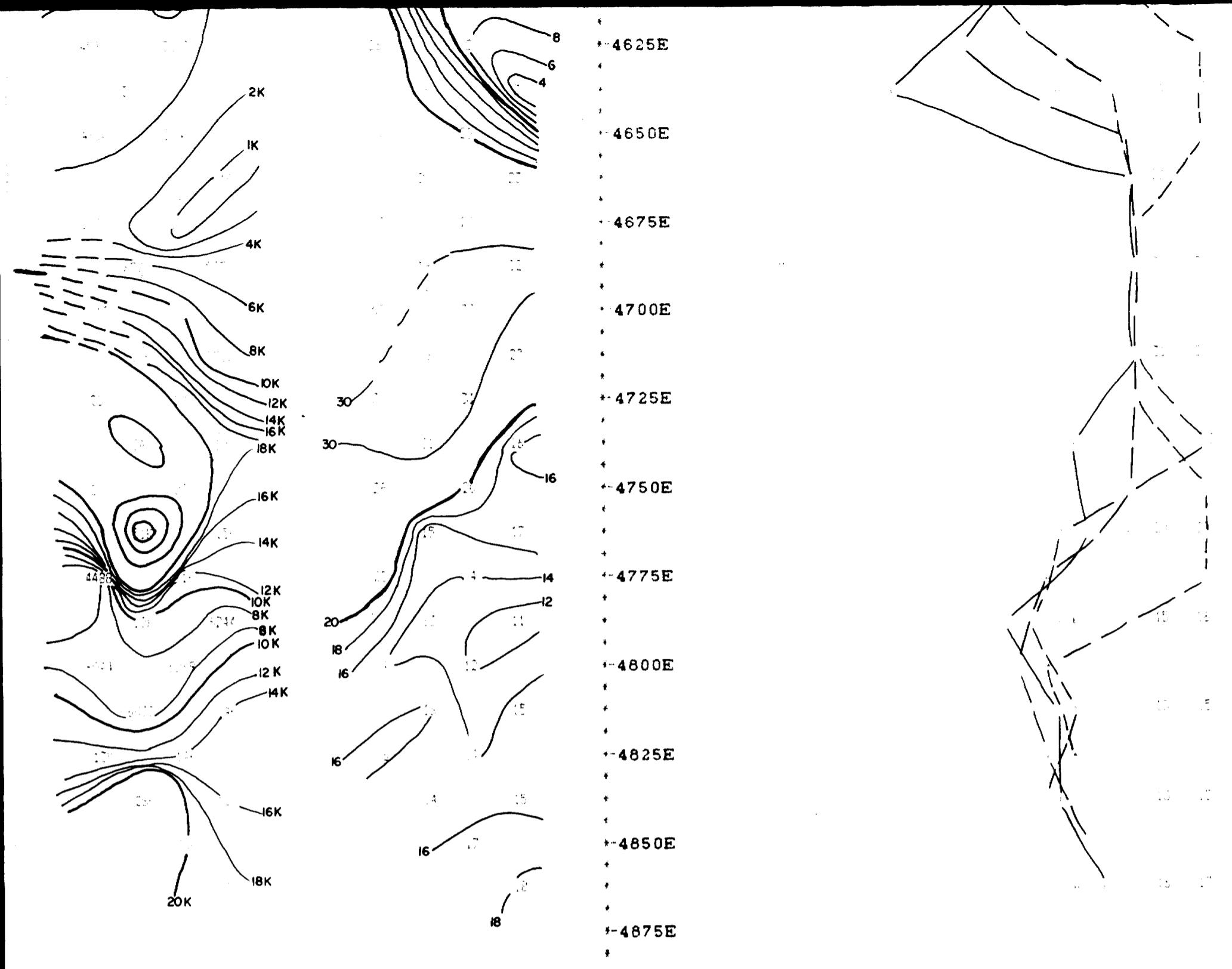
CHARGEABILITY  
milliseconds

CHARGEABILITY PROFILE



-4325E  
-4350E  
-4375E  
-4400E  
-4425E  
-4450E  
-4475E  
-4500E  
-4525E  
-4550E  
-4575E  
-4600E  
-4625E  
-4650E  
-4675E





SCALE = 1 : 1250

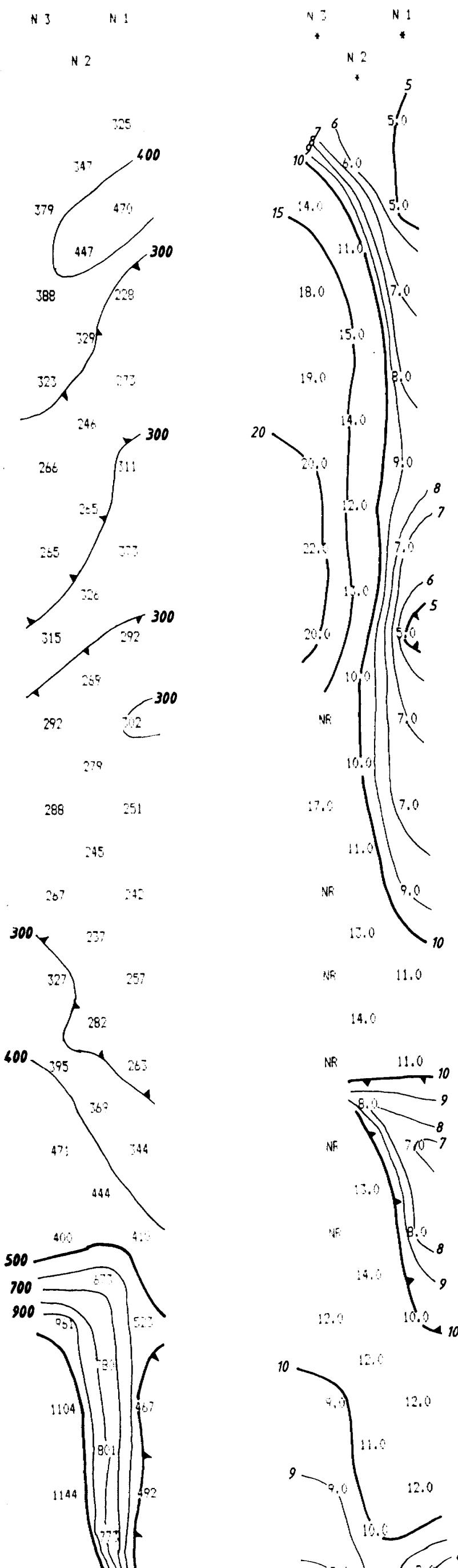
RESISTIVITY  
(ohm - metres)

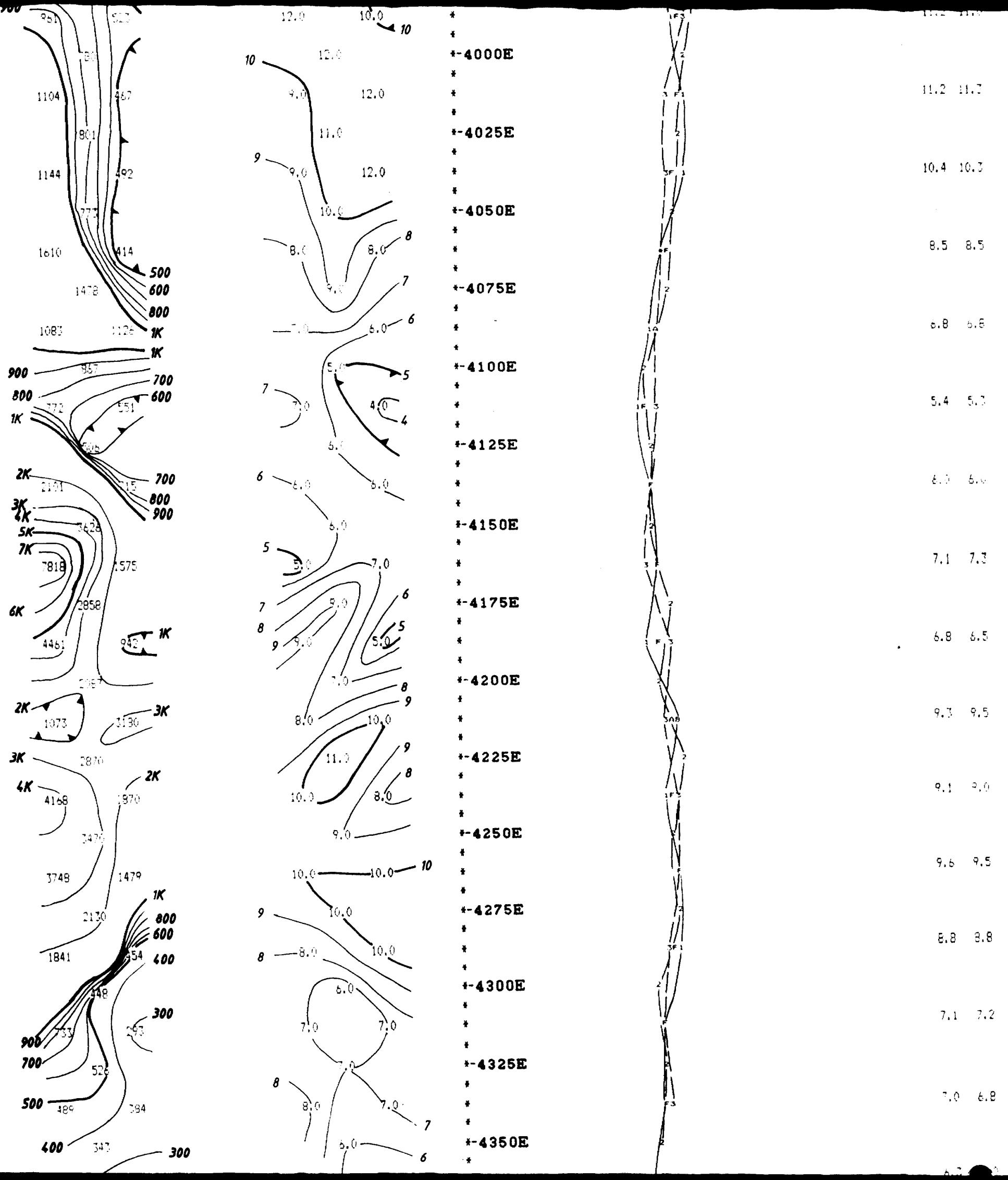
CHARGEABILITY  
(milliseconds)

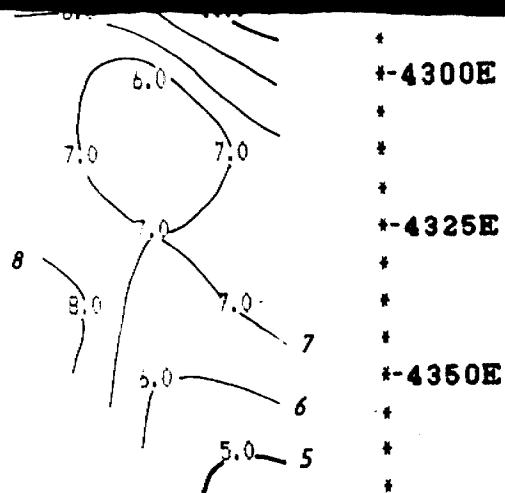
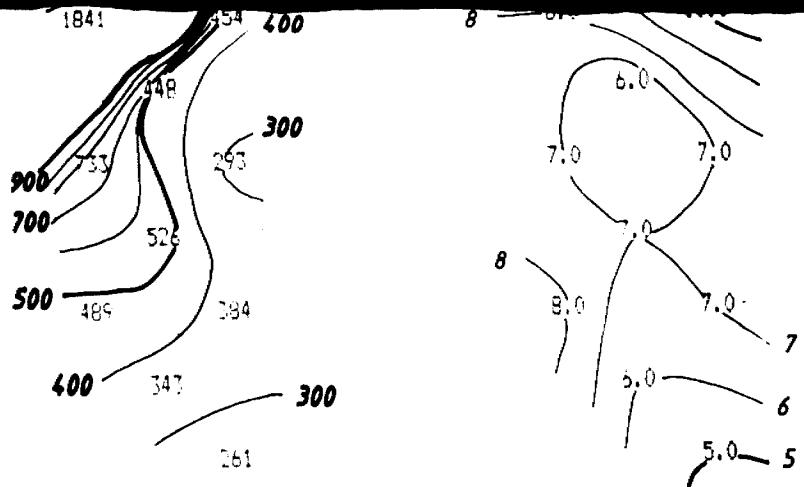
CHARGEABILITY PROFILE

F  
R  
A  
S  
E  
P  
R  
E  
R

A B







+4300E  
+4325E  
+4350E

2  
3  
4  
5  
6  
7  
8

7.1 7.2

7.0 6.8

6.3 0

Property : MAISONVILLE GRID 7  
Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 30/3/86

Operator : SA

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-8

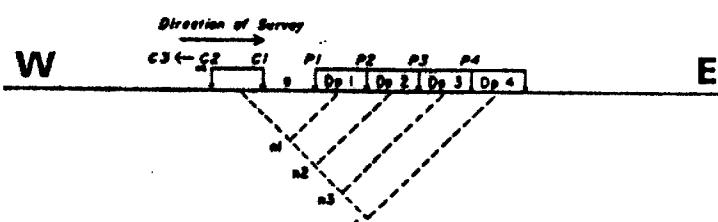
Transmitter : PHOENIX IPT-1

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 450 ms

Integration Time : 900 ms

Slice # 7 Plotted



\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

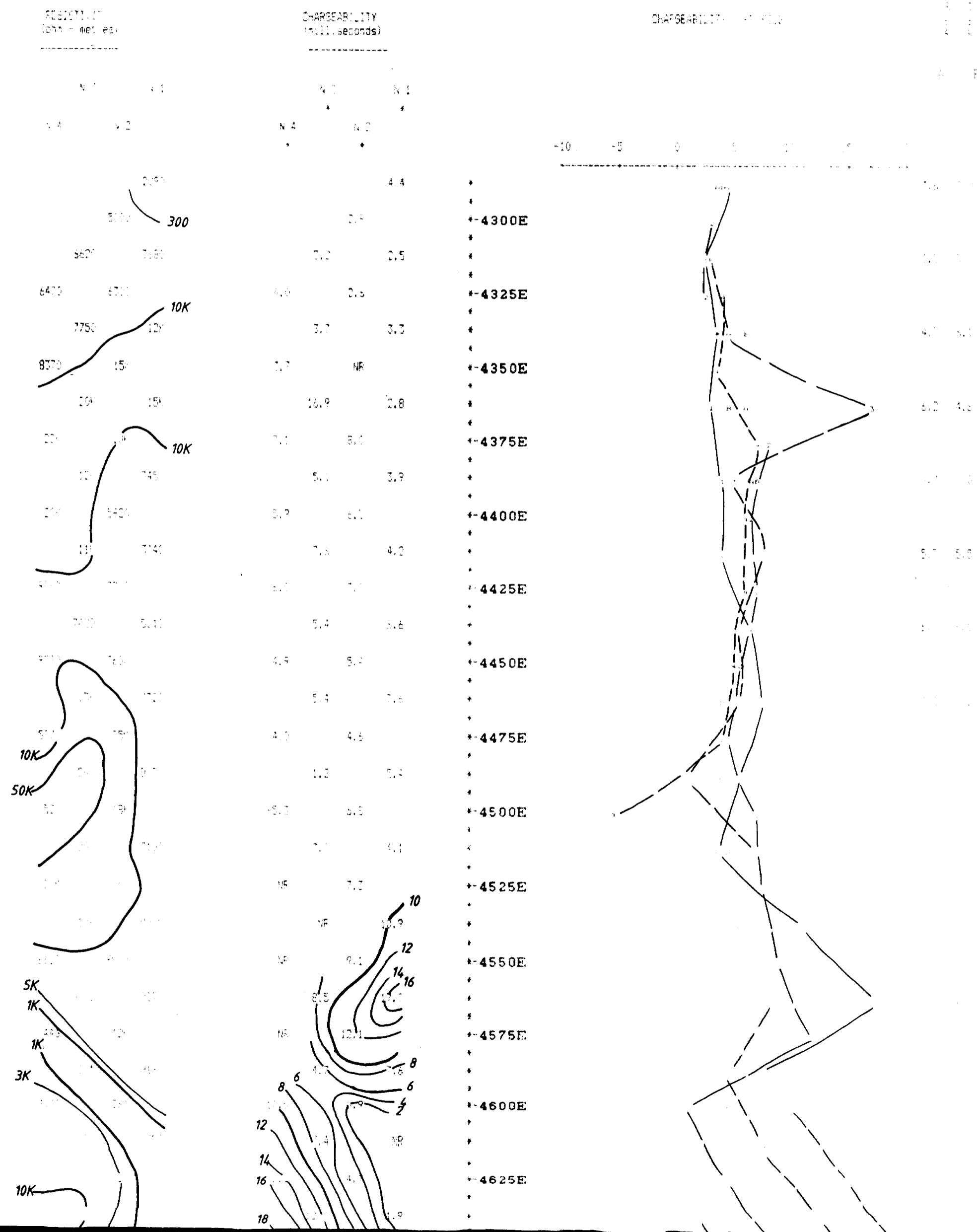
*Bryn Hodges*

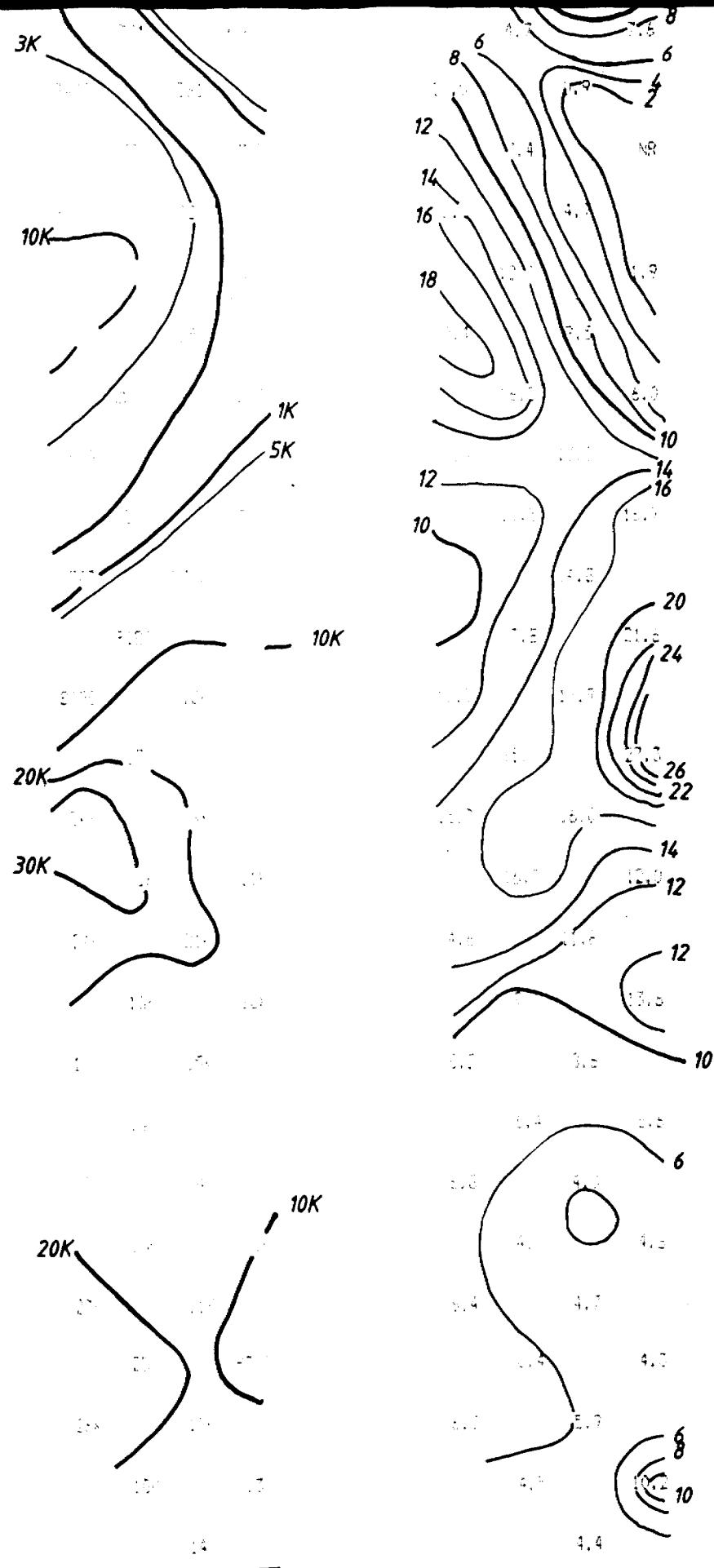
IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

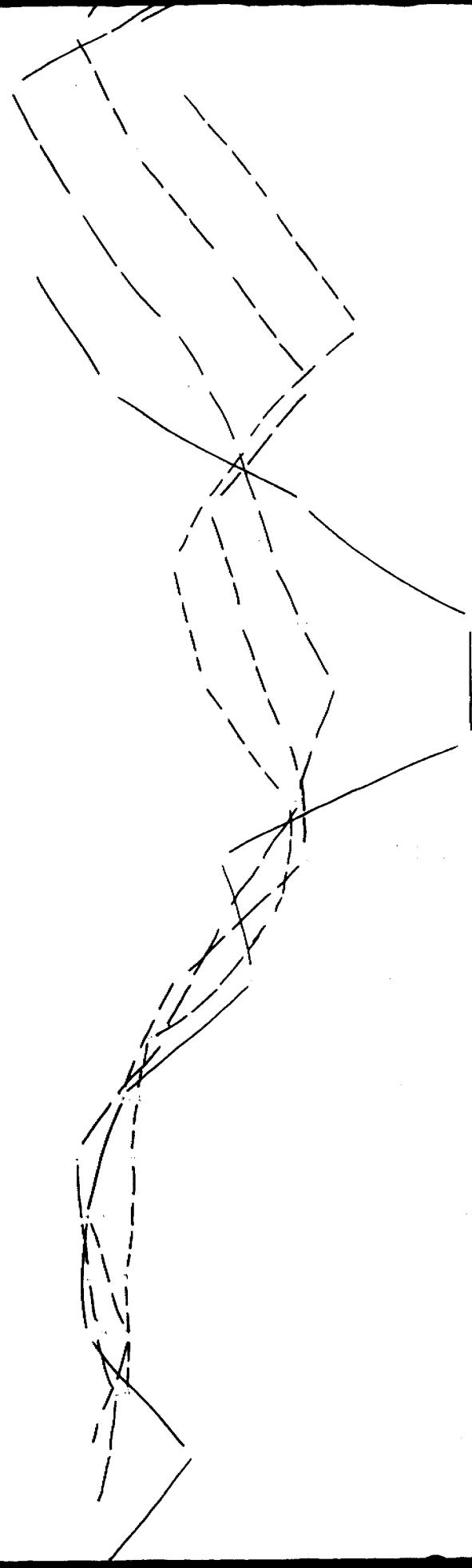
LINE 1960 N

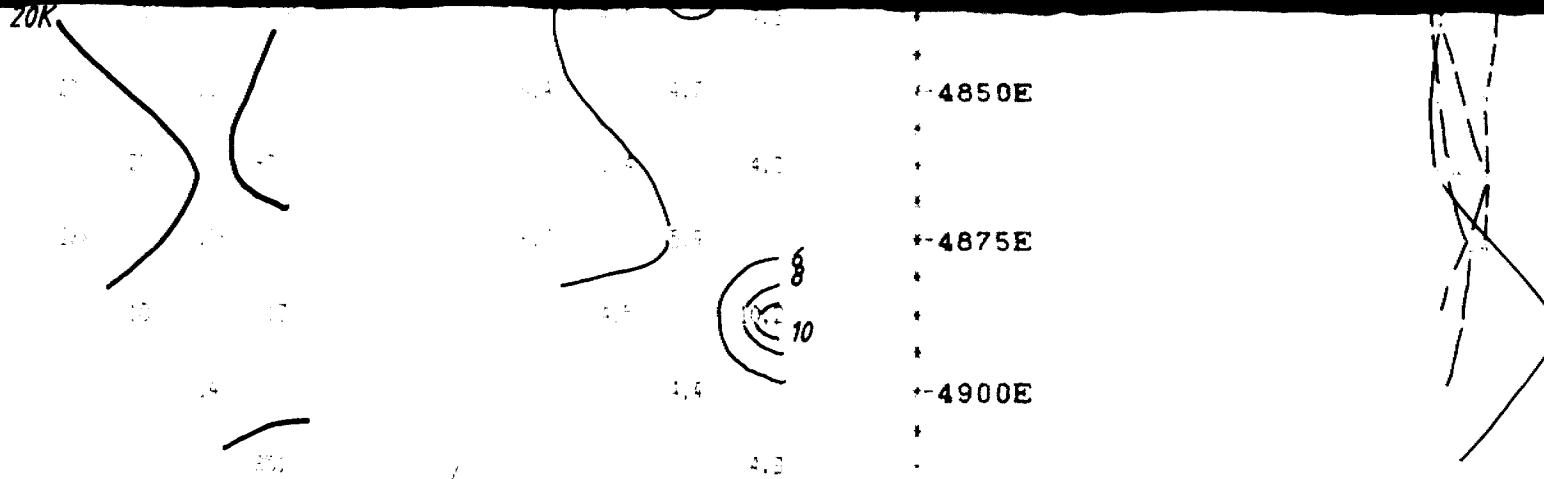
SCALE : 1:1250





+-4600E  
 +-4625E  
 +-4650E  
 +-4675E  
 +-4700E  
 +-4725E  
 +-4750E  
 +-4775E  
 +-4800E  
 +-4825E  
 +-4850E  
 +-4875E  
 +-4900E





Property : MAISONVILLE TWP. GRID 7

Client : GLEN AUDEN RESOURCES

Date of Survey : 6/8/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

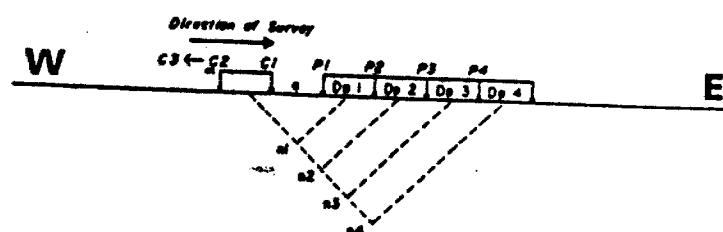
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSD-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



\*\*\*\*\*  
 R. S. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*\*

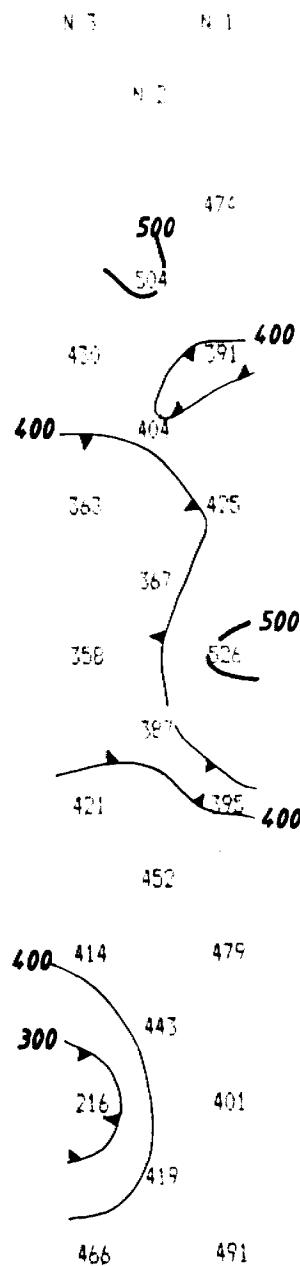
1D Pseudosections for N = 1 to 4

'a' Spacing = 25 M

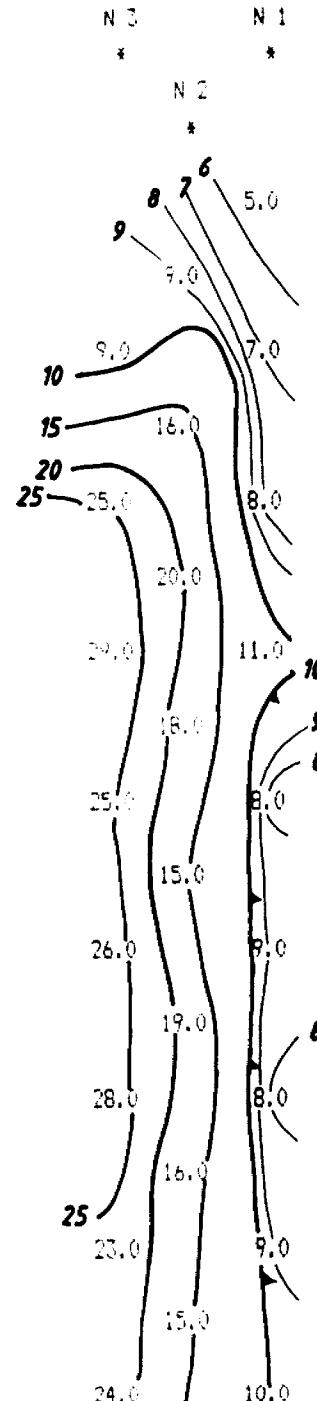
LINE 2150 N

SCALE = 1:1250

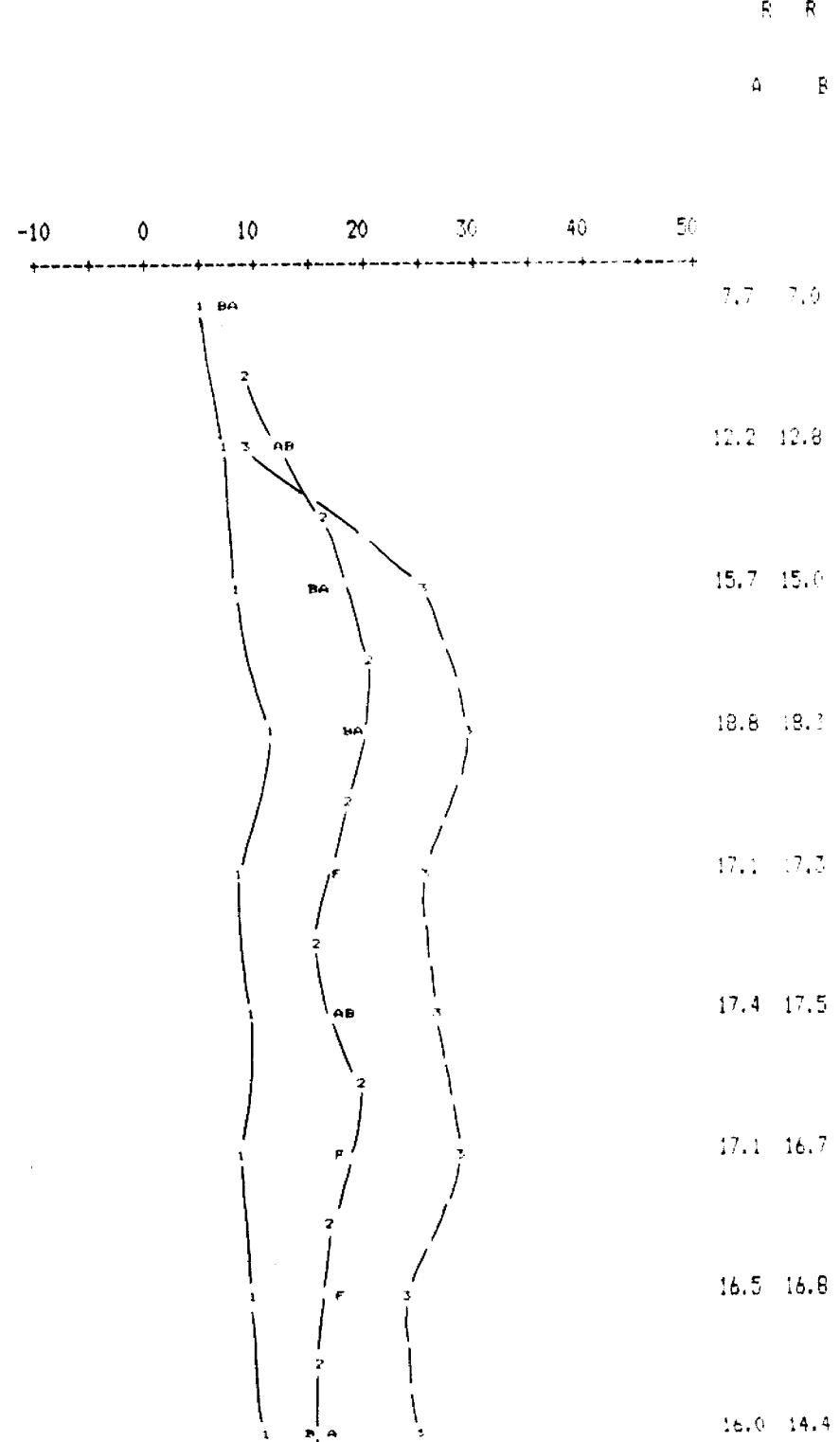
RESISTIVITY  
(ohm-metres)

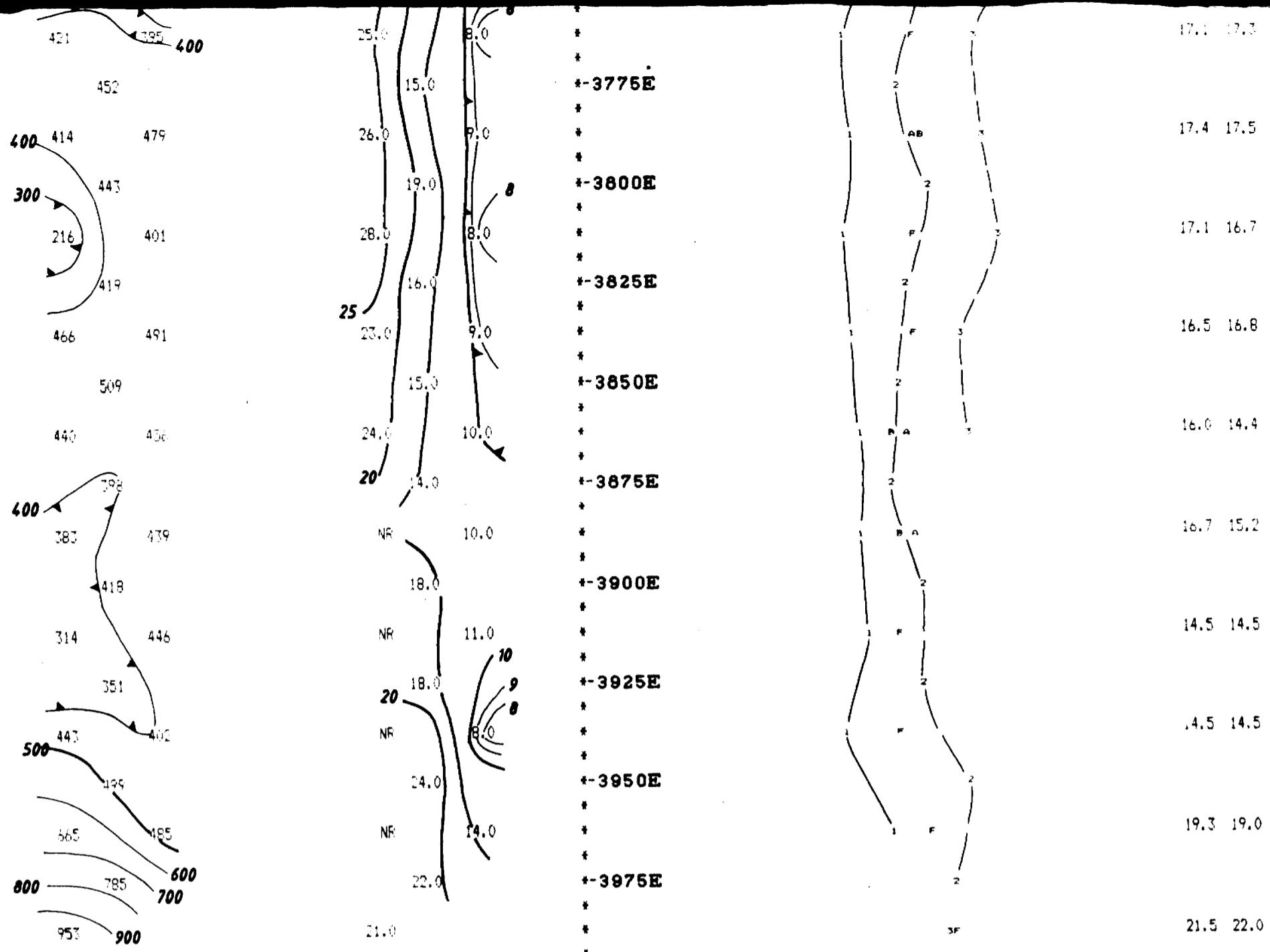


CHARGEABILITY  
(milliseconds)



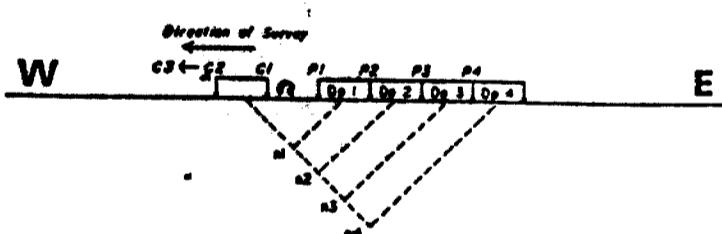
CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 7  
 Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 1/4/86  
 Operator : SA  
 Electrode Array : DIPOLE - DIPOLE  
 Mode : TIME DOMAIN  
 Receiver : SCINTREX IPR-8  
 Transmitter : PHOENIX IPT-1  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 450 ms  
 Integration Time : 900 ms  
 Slice # 7 Plotted



\*\*\*\*\*  
 R.S. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*\*

IP Pseudosections for N = 1 to 3

'a' Spacing = 25 M

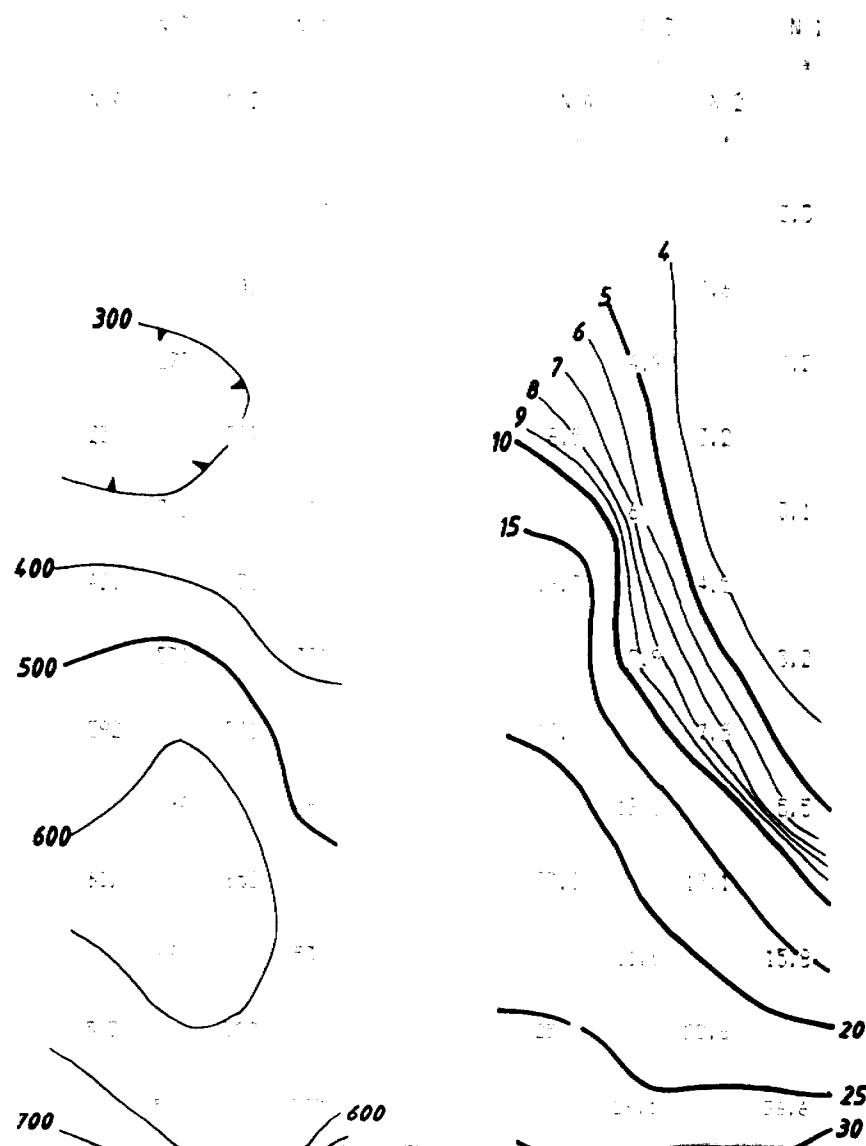
LINE 2160 N

SCALE = 1:1250

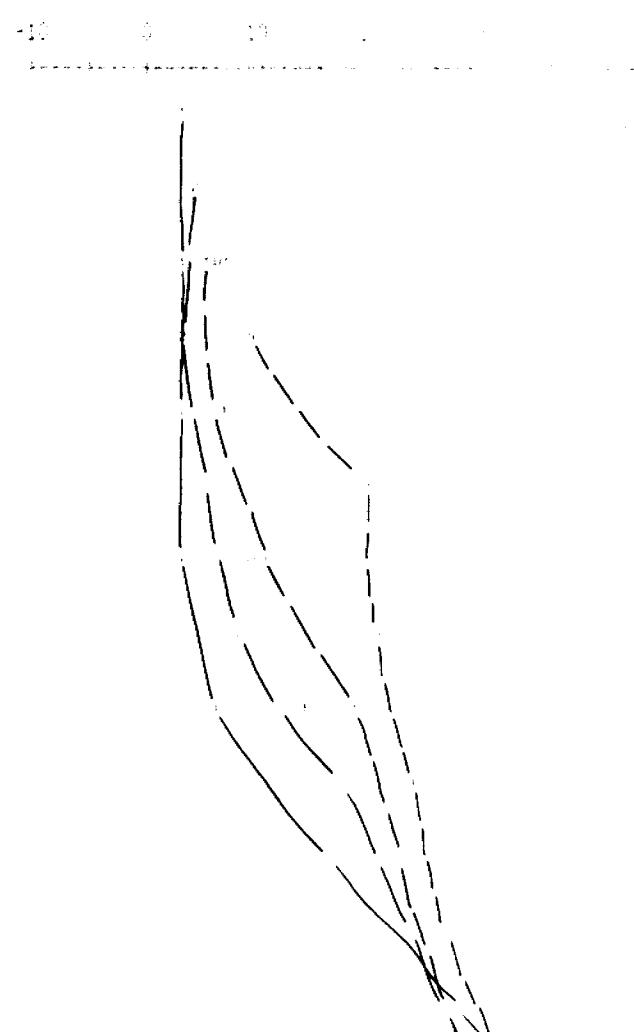
POSITIONING  
DATA (feet)

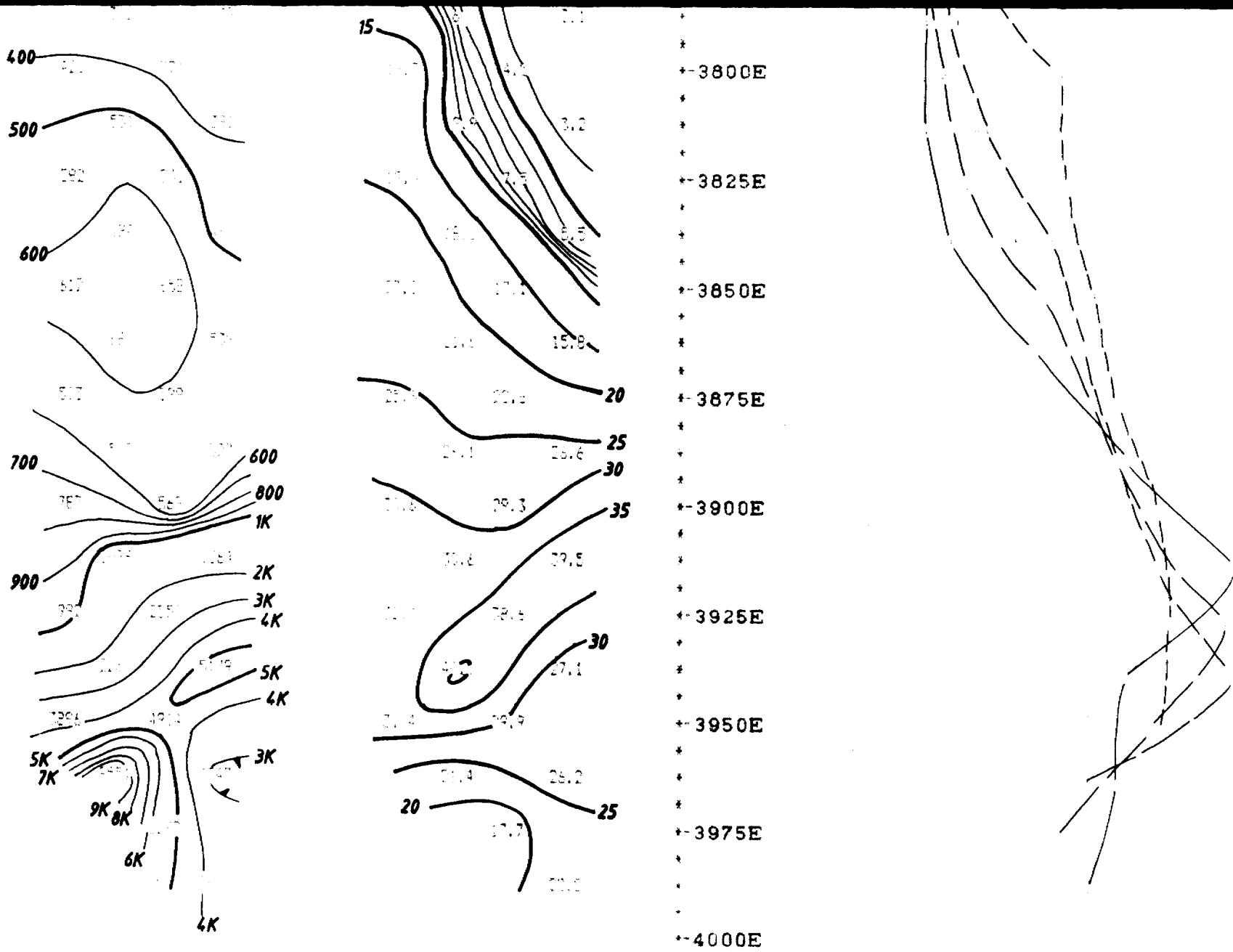
CHARACTERISTICS  
(miles/second)

CHARGE POINTS



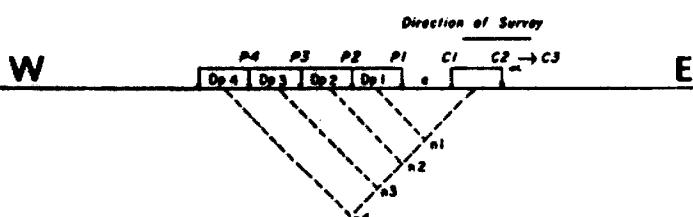
+ 3750E  
+ 3775E  
+ 3800E  
+ 3825E  
+ 3850E  
+ 3875E





Property : MAISONVILLE GRID 7  
 Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 9/6/84  
 Operator : CGJ  
 Electrode Array : DIPOLE - DIPOLE  
 Mode : TIME DOMAIN  
 Receiver : SCINTREX TPR-11  
 Transmitter : SCINTREX TSD-3  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 360 ms  
 Integration Time : 780 ms



R. S. MIDDLETON EXPLORATION  
 SERVICES INC.

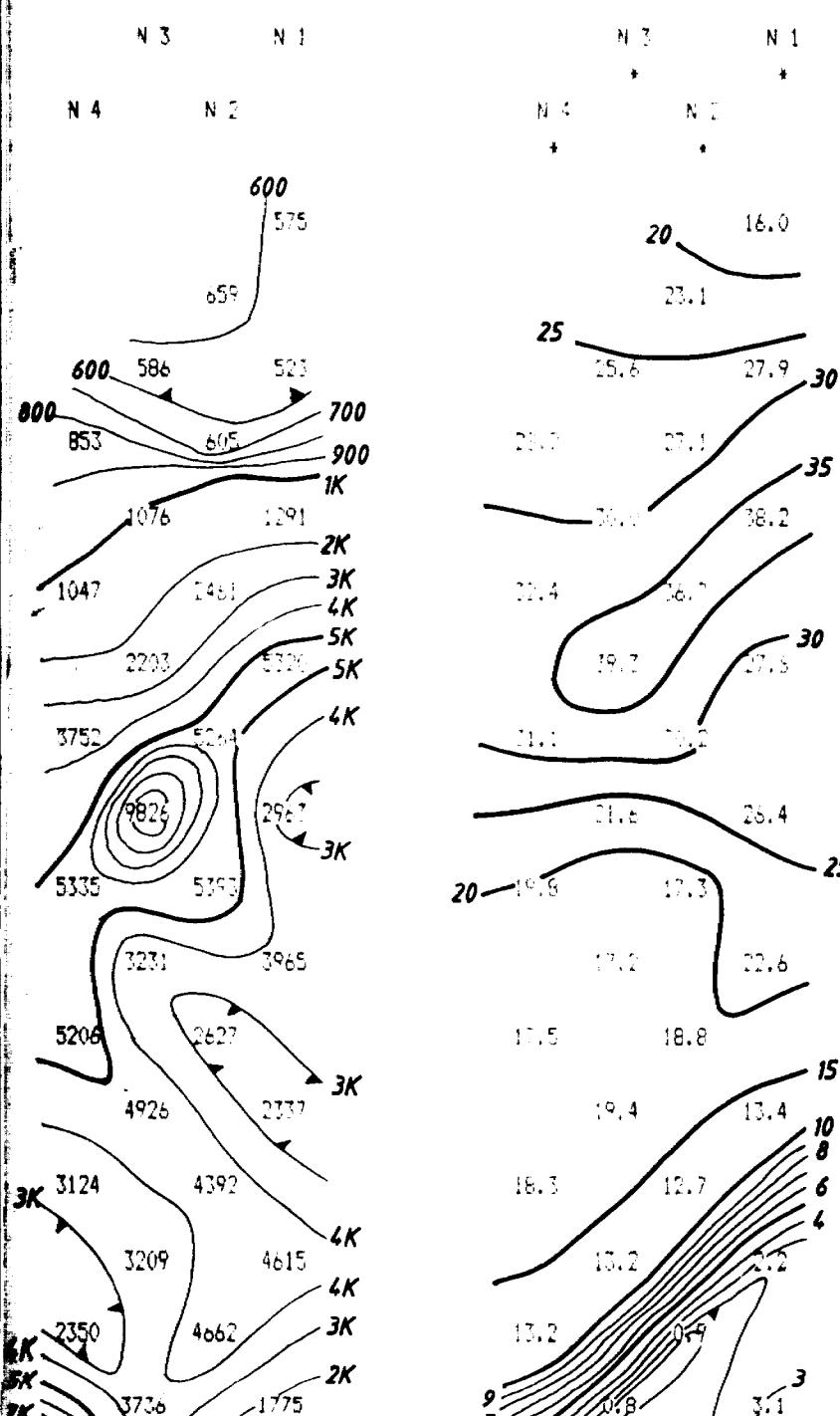
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

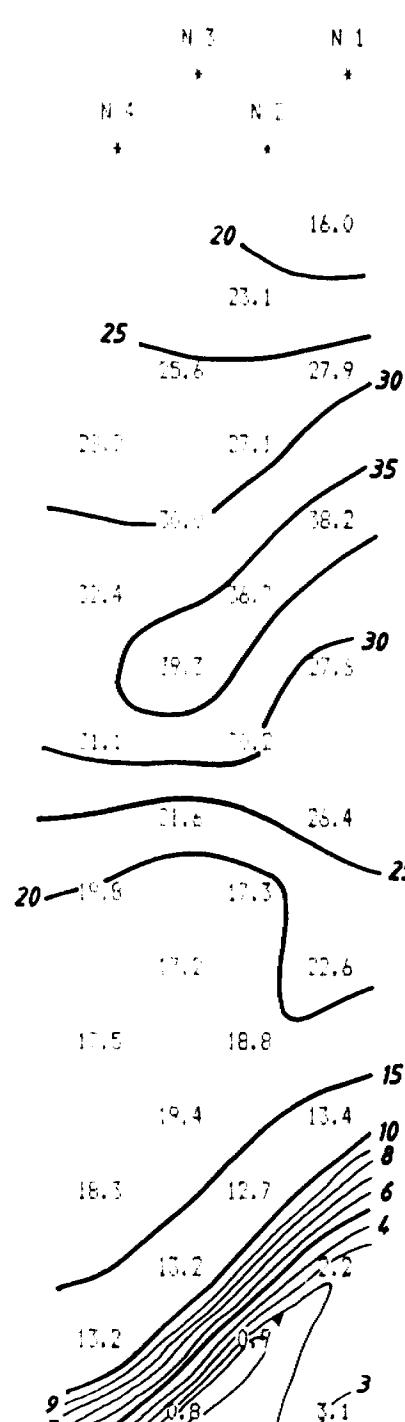
LINE 2350 N

SCALE : 1 : 1250

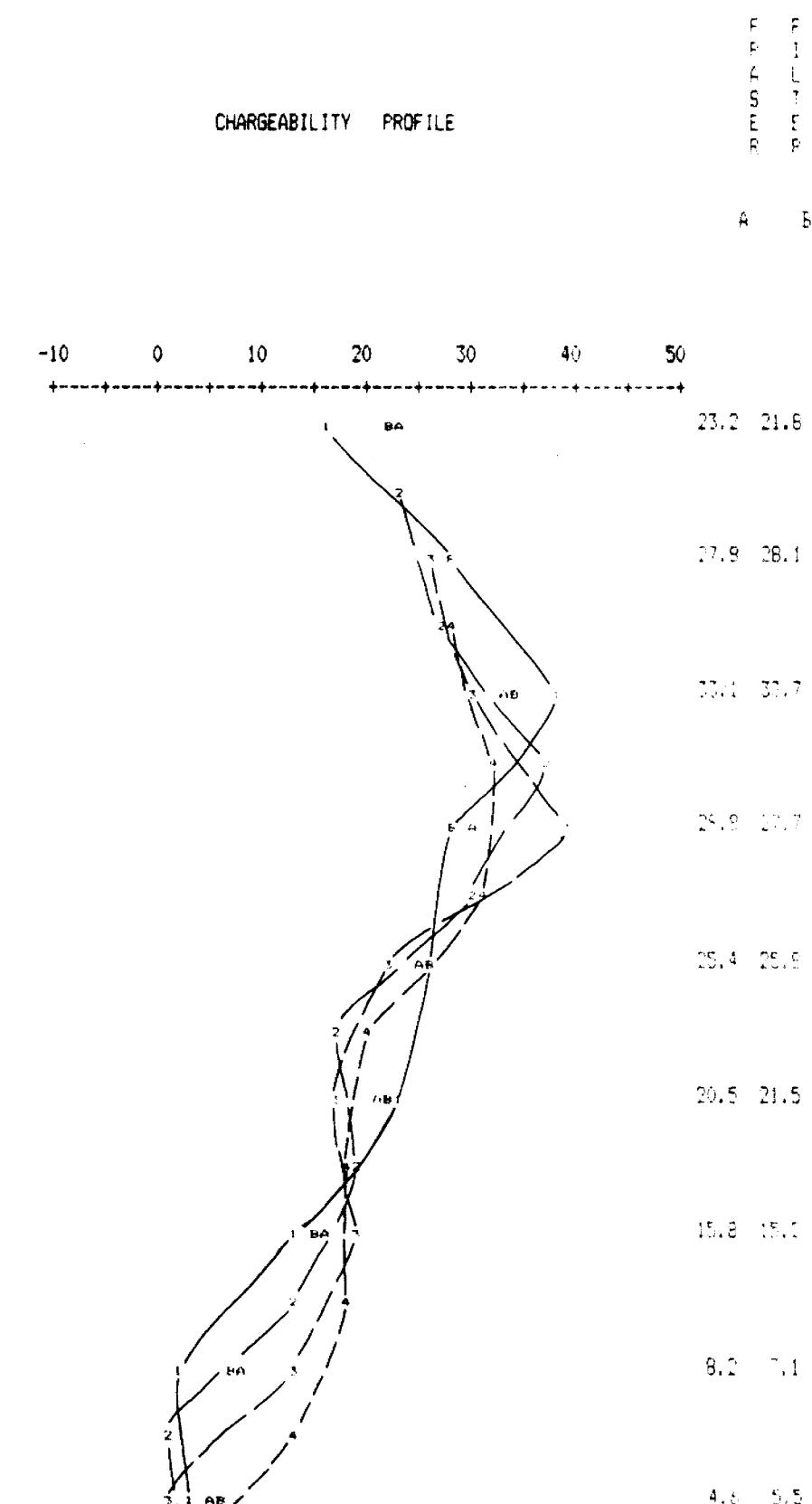
RESISTIVITY  
(ohm - metres)

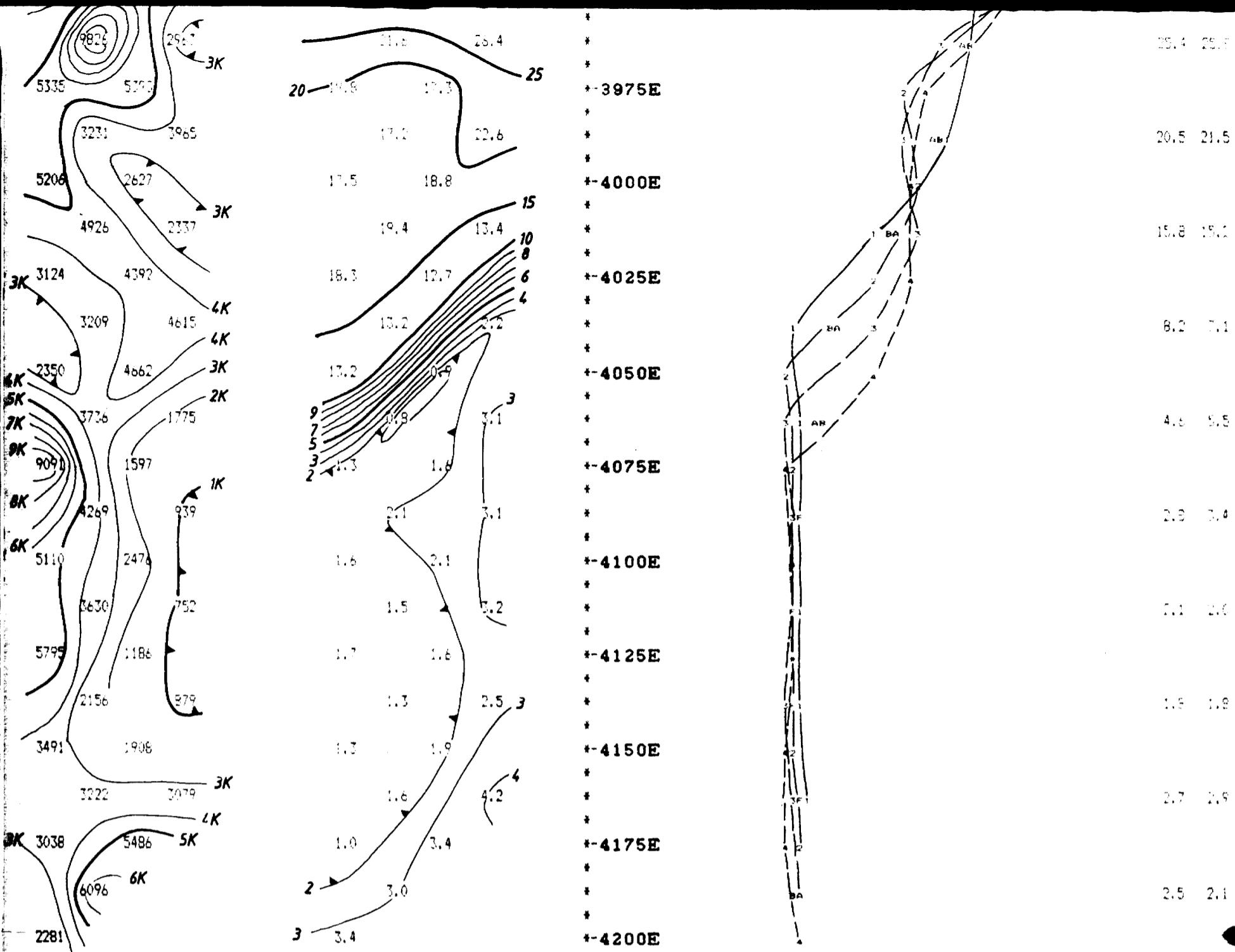


CHARGEABILITY  
(milliseconds)



CHARGEABILITY PROFILE





Property : MAISONVILLE GRID 7

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 8/6/86

**Operator : CGK**

### **Electrode Array : DIPOLE - DIPOLE**

Mode : TIME DOMAIN

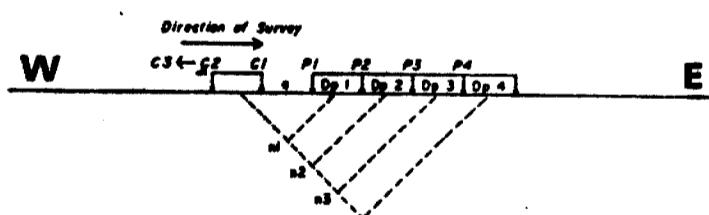
Receiver : SCINTREX IPR-11

Transmitter : SCINTREX TSO-3

Pulse Time : 2 Sec

Delay Time : 360 ns

#### Integration Time

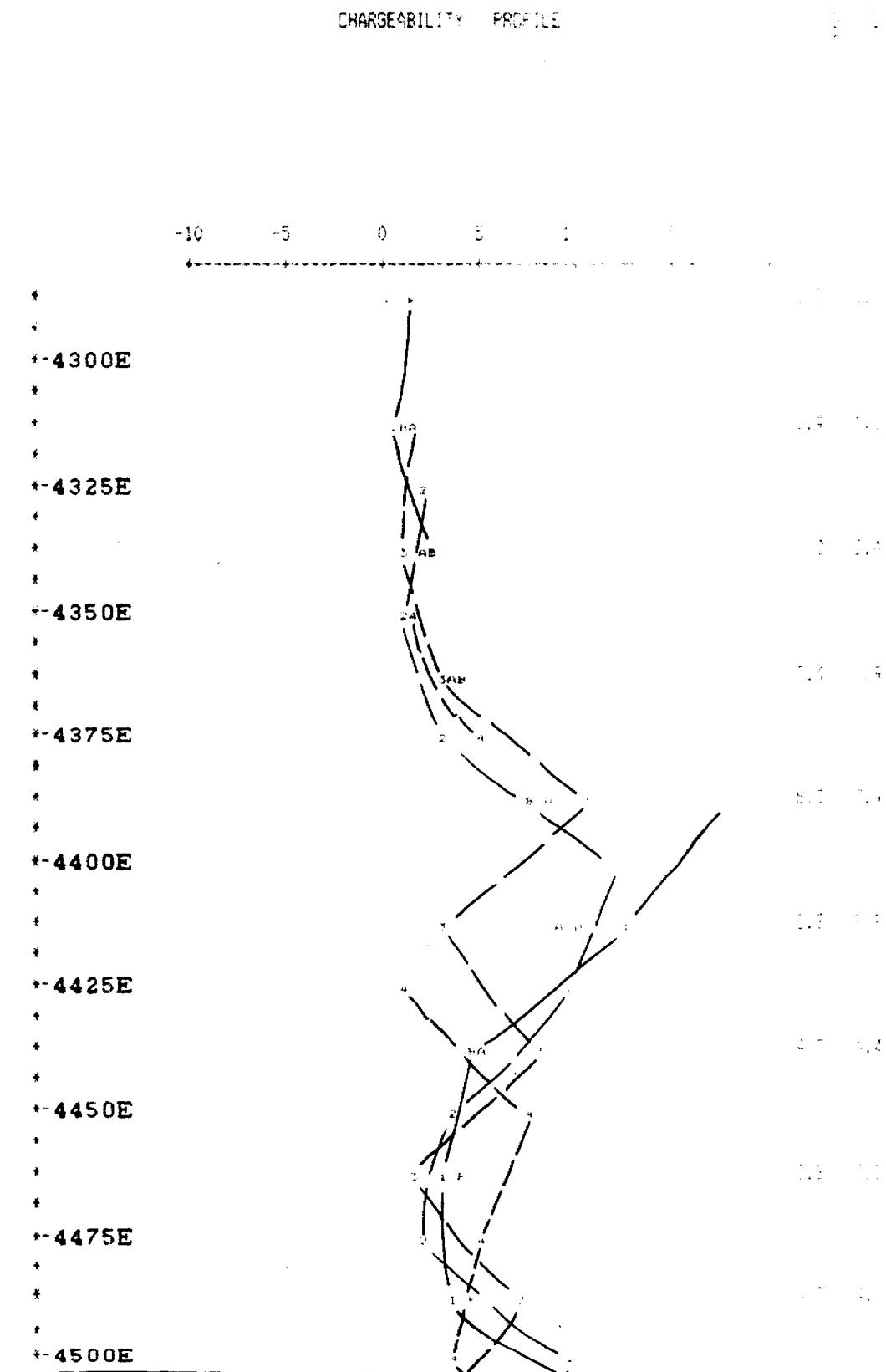
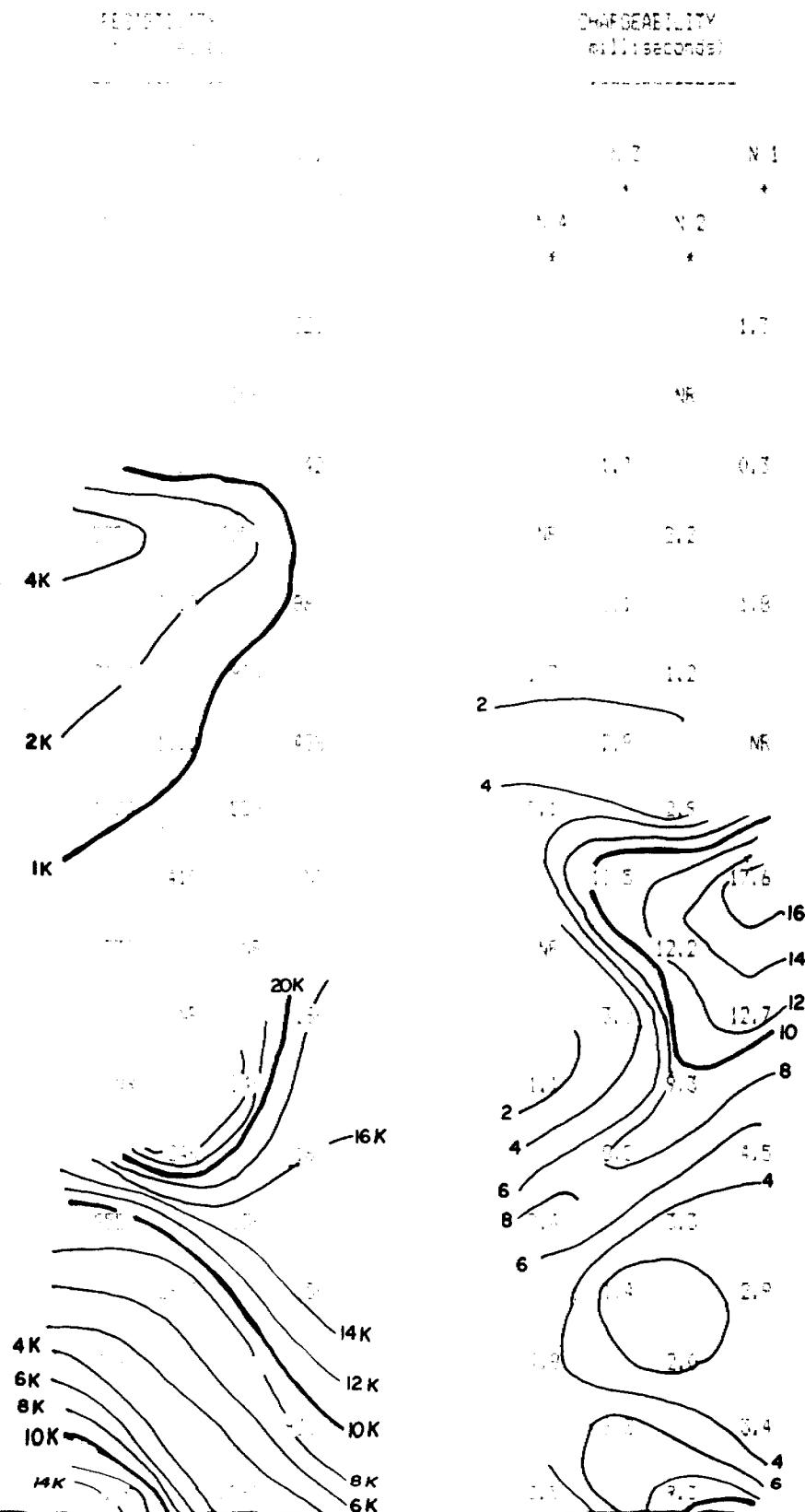


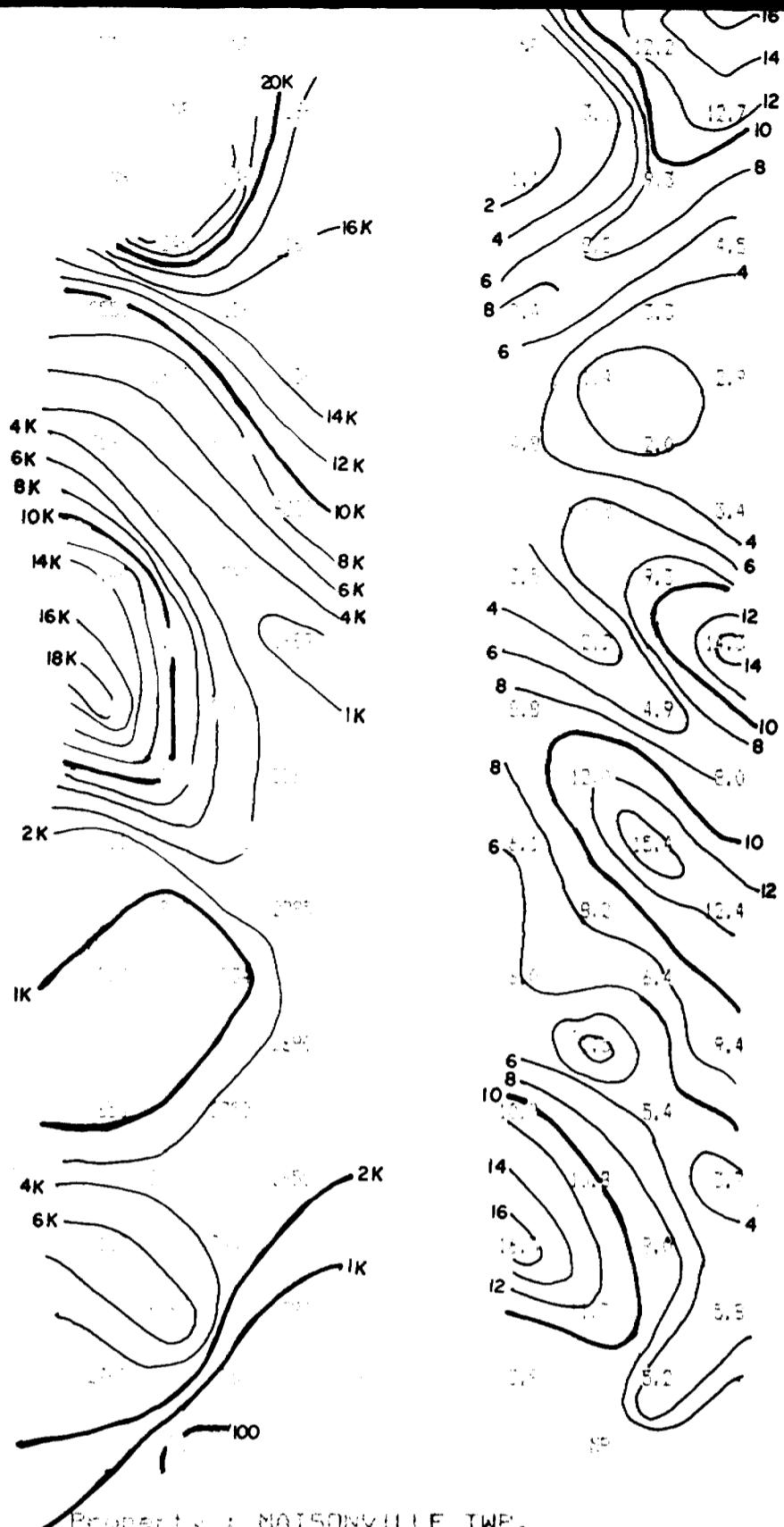
\*\*\*\*\*  
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

## IP Pseudosections for N = 1 to 4

Line Spacing = 25 M

SCALE = 1:1250





-4400E

-4425E

-4450E

-4475E

-4500E

-4525E

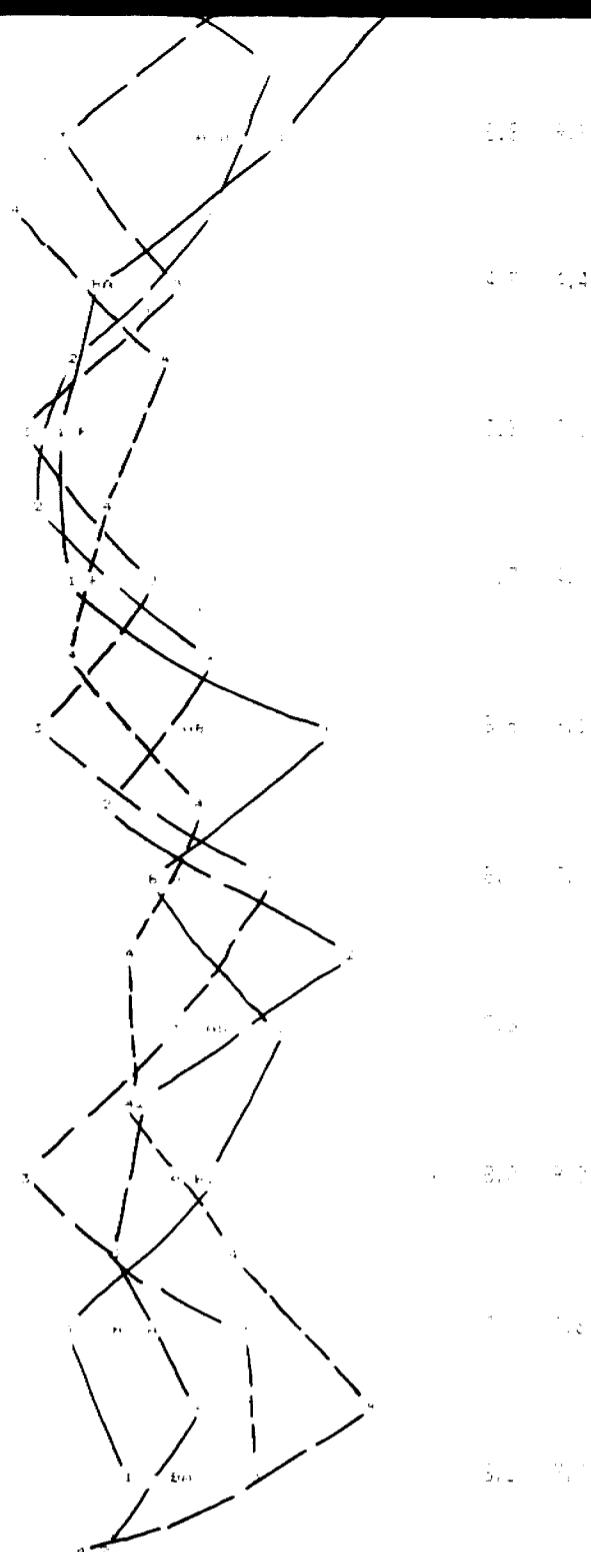
-4550E

-4575E

-4600E

-4625E

-4650E



Property : MATSONVILLE TWP.

Client : GREEN AUDEN RESOURCES

Date of Survey : 6/8/86

Operator : CGH

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

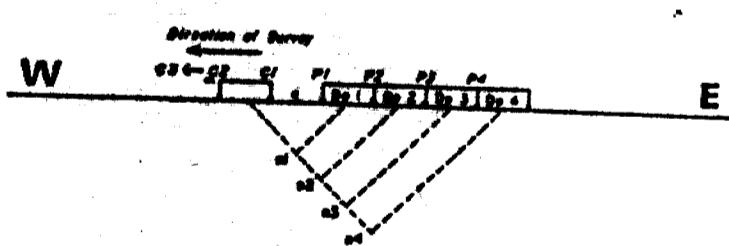
Receiver : SCINTREX IFR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



R. S. MIDDLETON EXPLORATION  
SERVICES INC.

IP Pseudosections for N = 1 to 4

\* \* \* \* \* Spacing = 25 M

\* LINE 2350-N

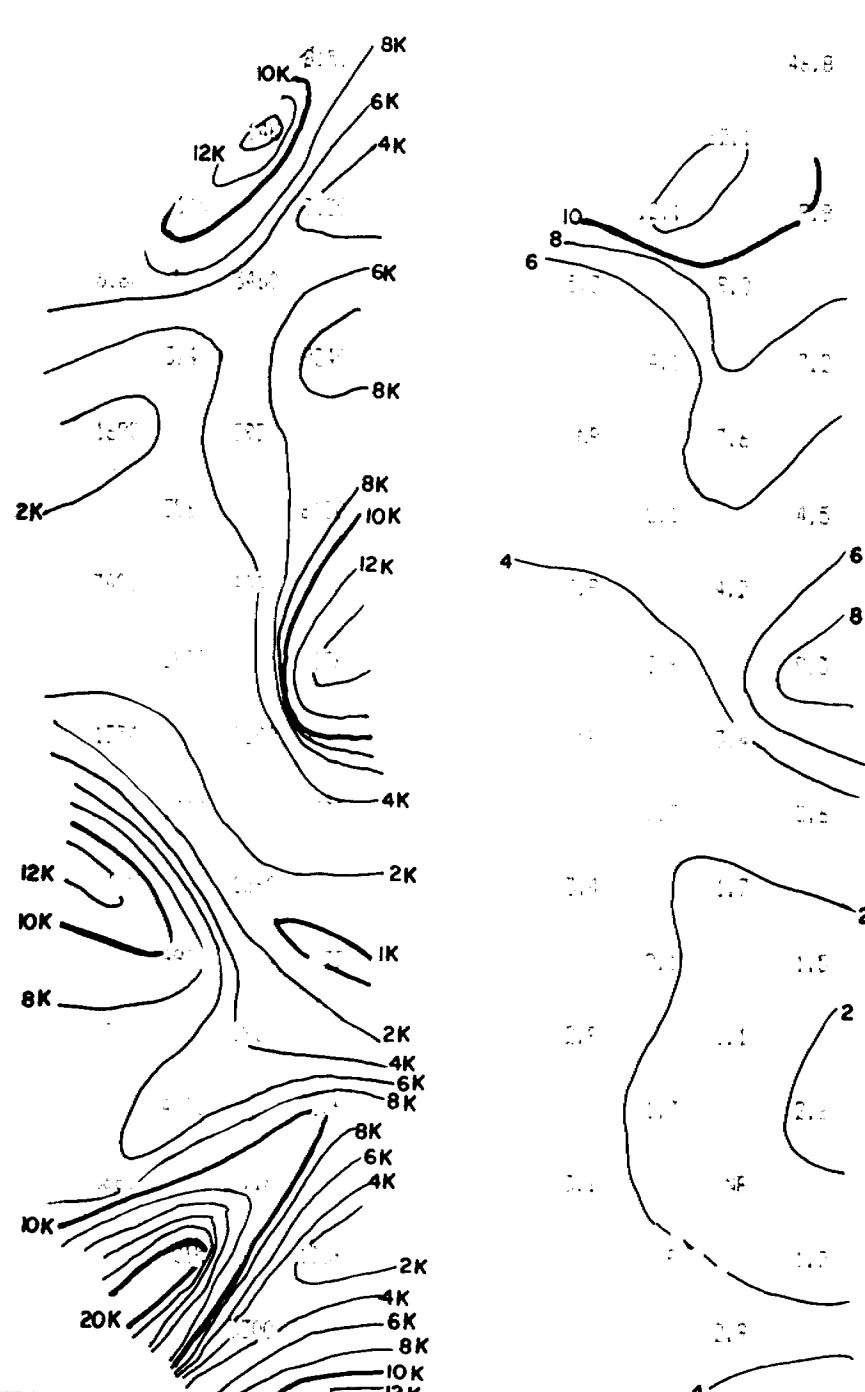
*D. Middleton*

SCALE = 1:1250

SEISMICITY  
(in seconds)

CHARGEABILITY  
(milliseconds)

CHARGEABILITY PROFILE



+ -4675E

+ -4700E

+ -4725E

+ -4750E

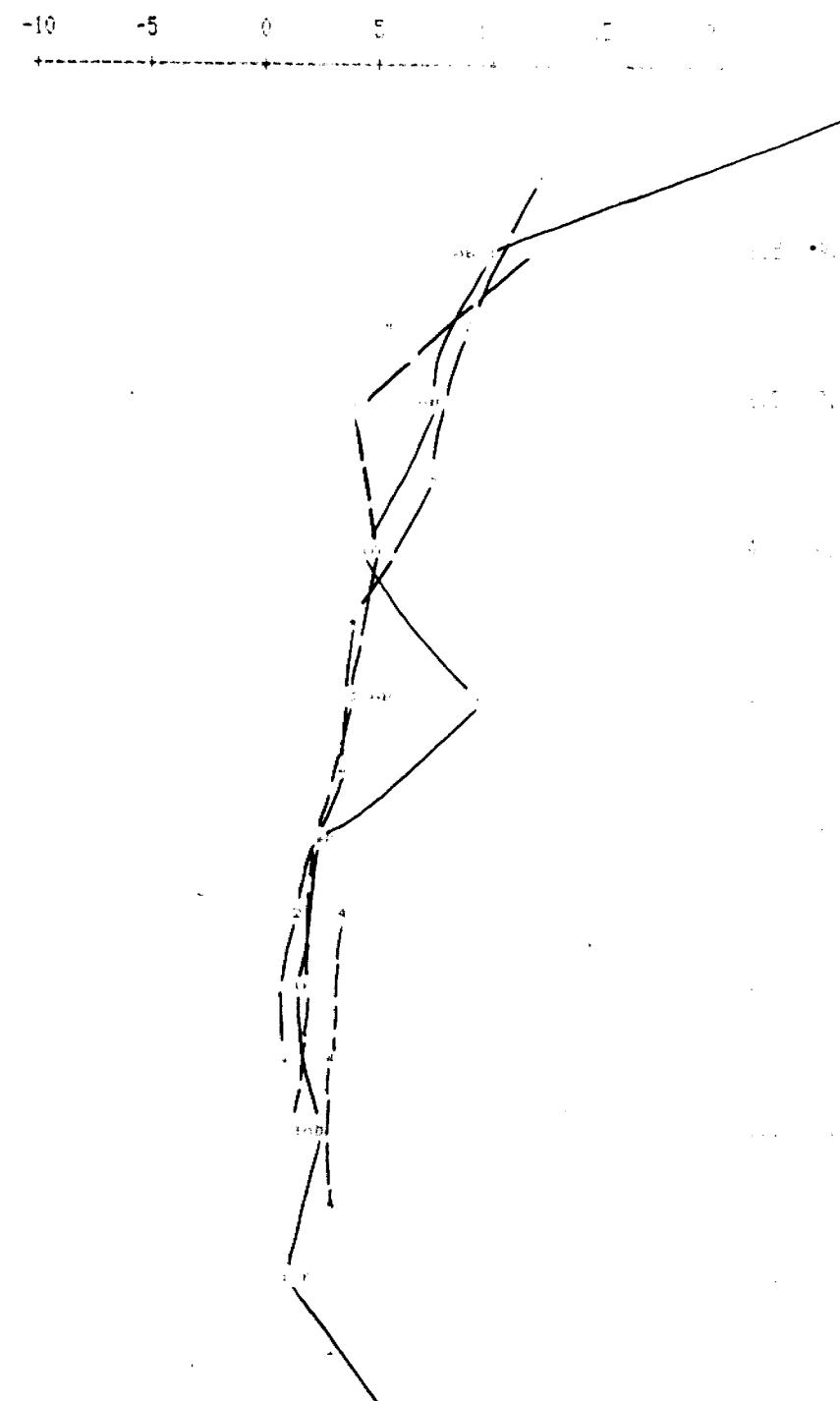
+ -4775E

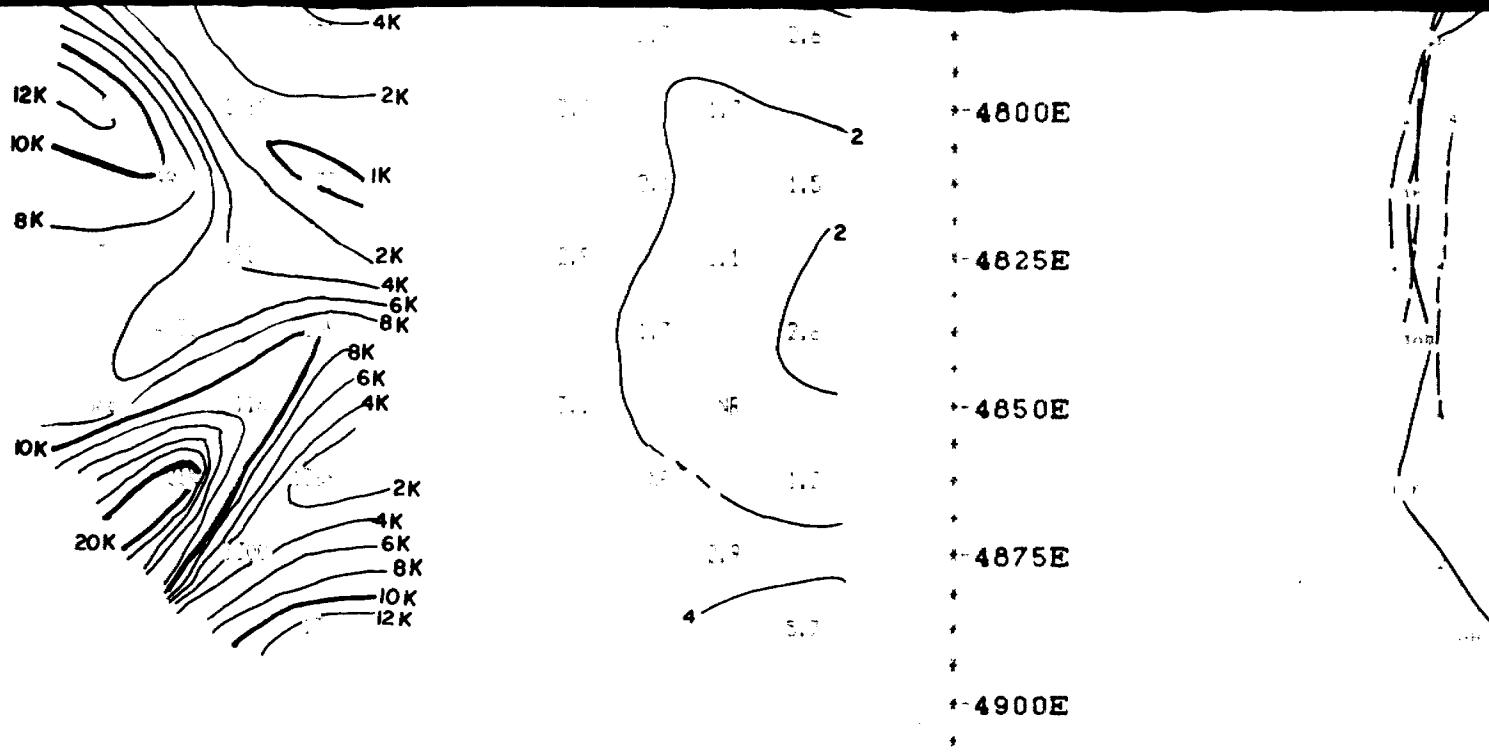
+ -4800E

+ -4825E

+ -4850E

+ -4875E





Property : MAISONVILLE TWP.

Client : GREEN AURORA RESOURCES

Date of Survey : 11/9/96

Operator : CGI

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

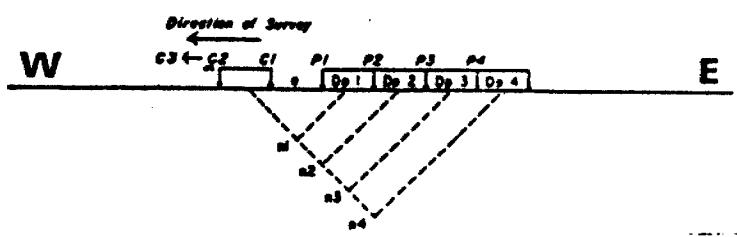
Receiver : SCINTREX IFR-11

Transmitter : SCINTREX TSD-3

Pulse Time : 1 Sec on 2 Sec off

Delay Time : 350 ms

Integration Time : 700 ms



\*\*\*\*\* R.S. MIDDLETON EXPLORATION SERVICES INC. \*\*\*\*\*

1D Pseudosections 1 through 1 to 4

'a' Spacing = 75 M

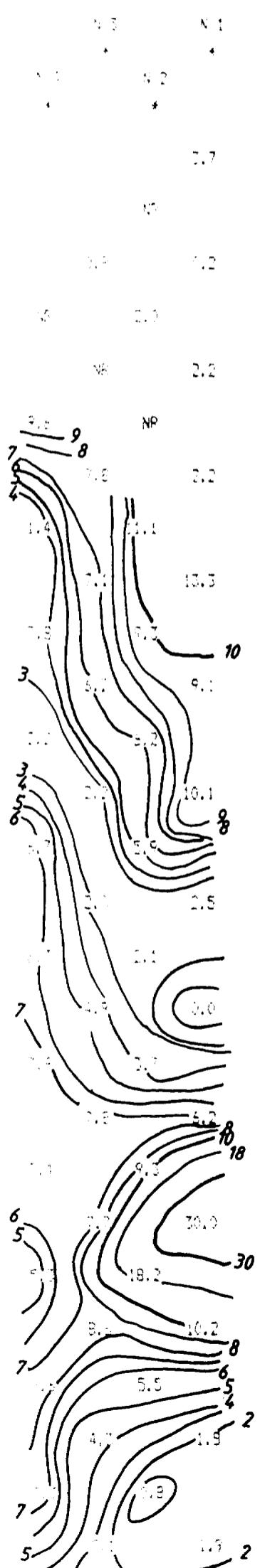
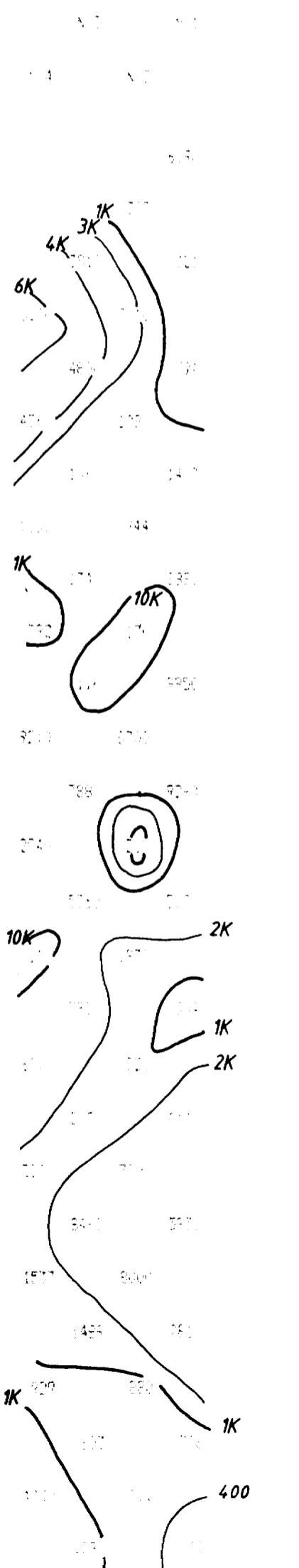
LINE 2350 N

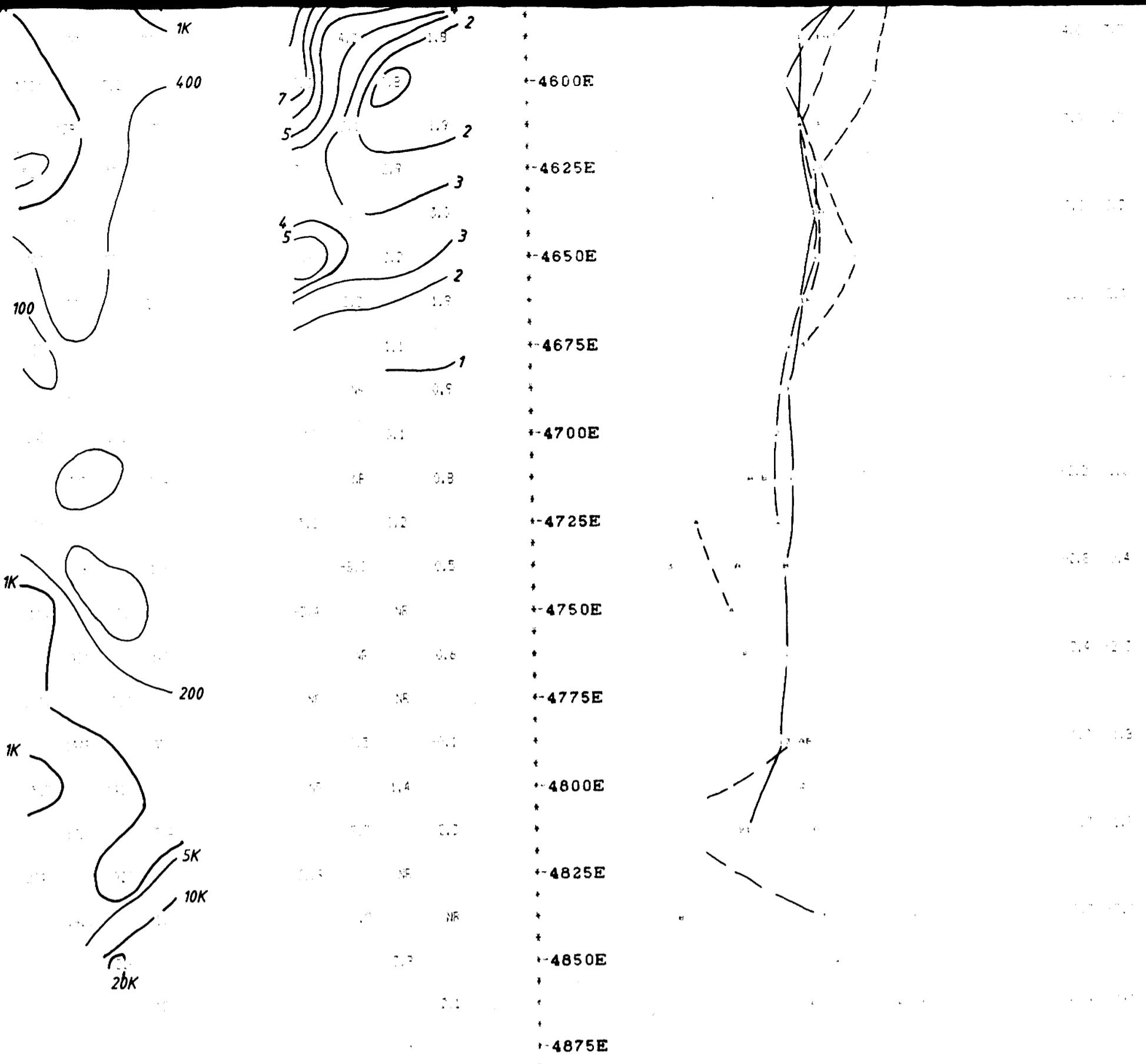
SCALED = 1 : 1 000 000

RESISTIVITY  
(ohm-meters)

T-REFLECTIVITY  
(milli-seconds)

CHARGEABILITY PROFILE





Property : MABSONVILLE TWP. GRID 7

Client : GLEN AUDEN RESOURCES

Date of Survey : 4/8/86

Operation : CGI

### ELECTRODE ARRAYS: DIPOLE - DIPOLE

Mode : TIME DOMAIN

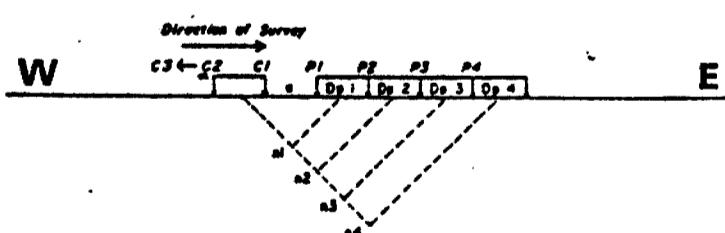
Receiver : SCINTREX TFR-11

Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms



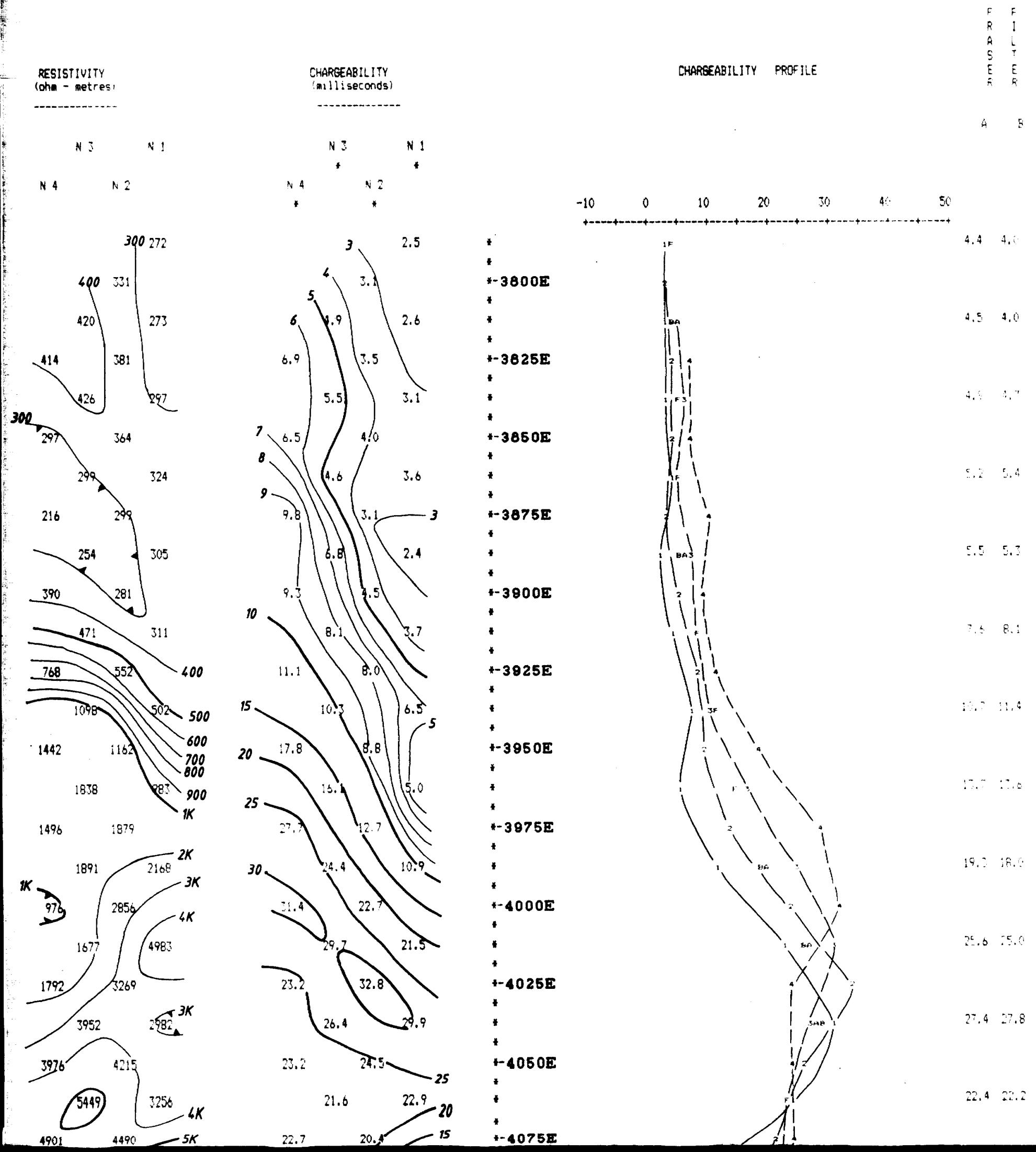
R.S. MIDDLETON EXPLORATION  
SERVICES INC.

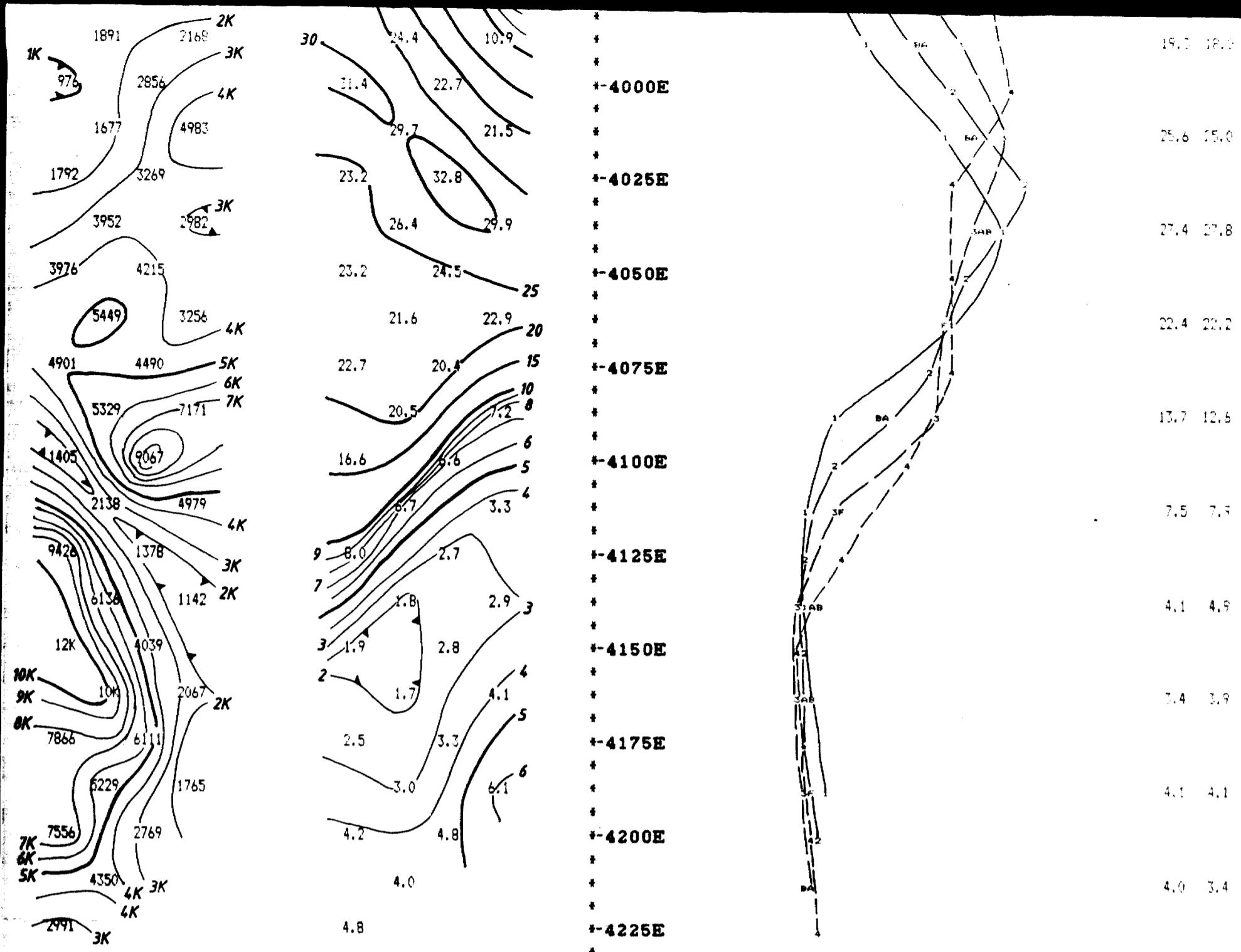
### 10. Extrapolations for $N = 1$ to 4

2. **Speed = m/s**

LINE 2550 N

**SCALE : 1:1250**





Property : MAISONVILLE GRID 7

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 8/6/86

Operator : CGK

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

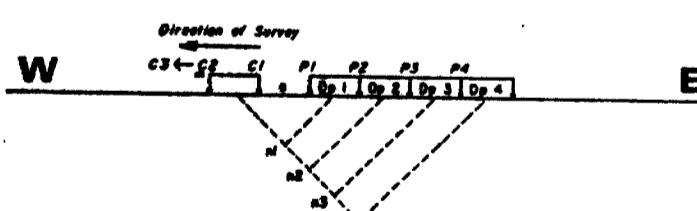
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



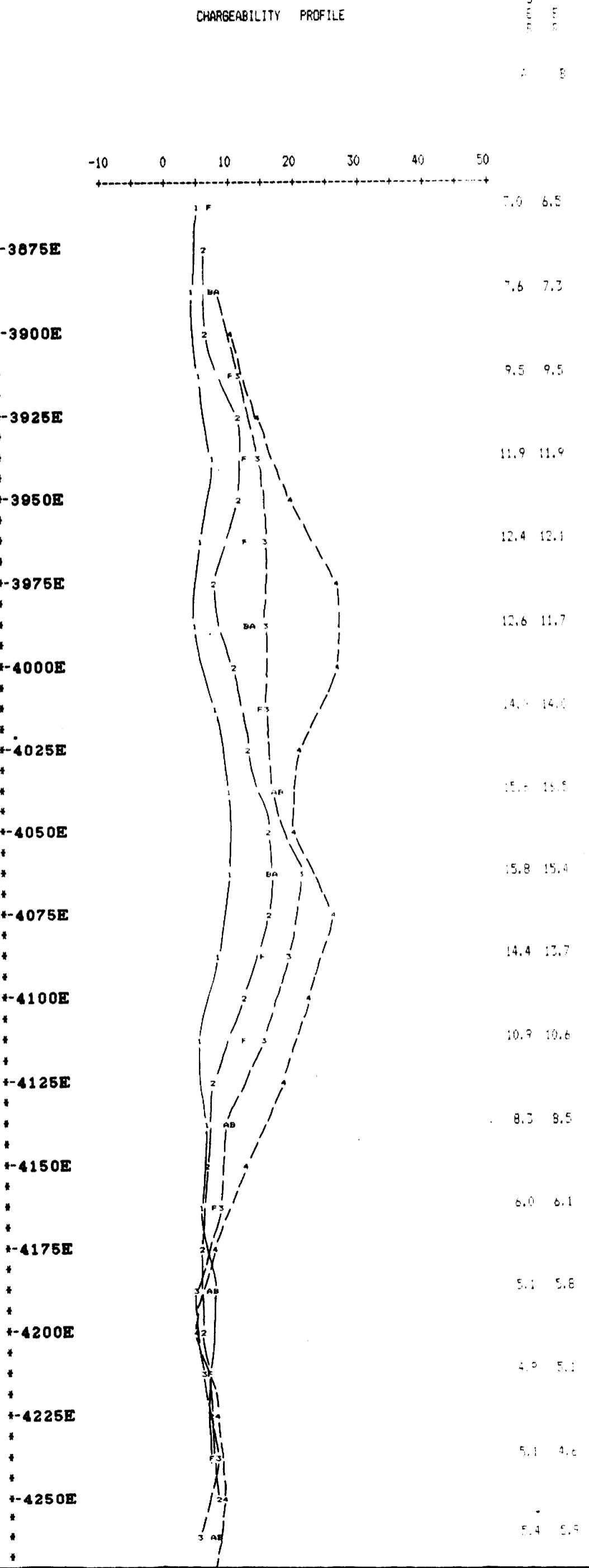
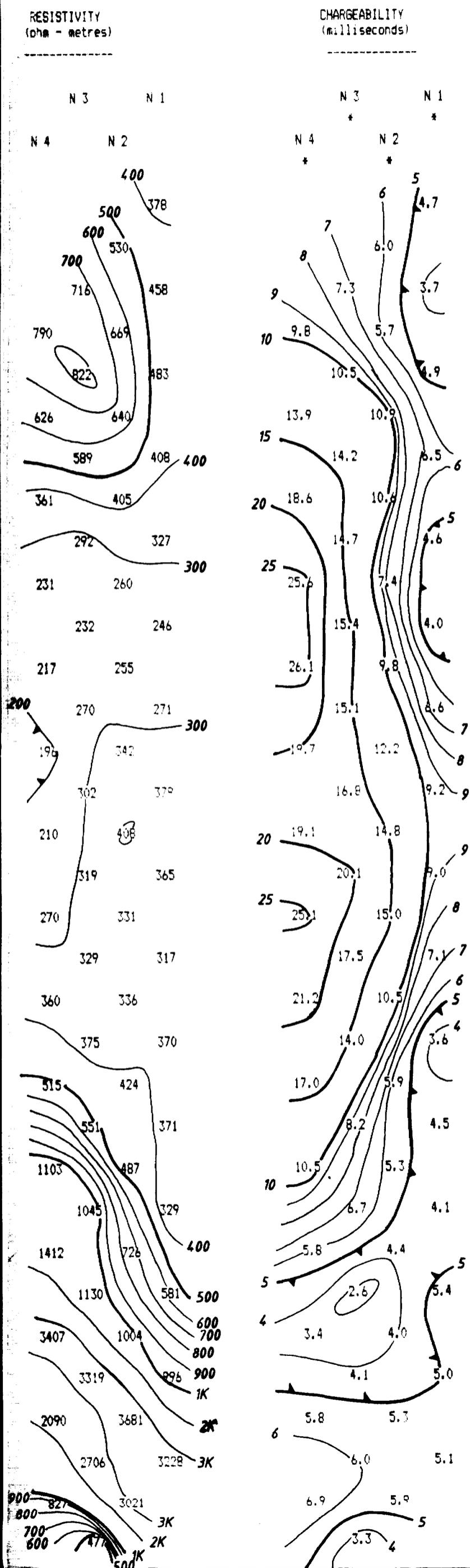
\*\*\*\*\*
R.S. MIDDLETON EXPLORATION  
SERVICES INC.  
\*\*\*\*\*

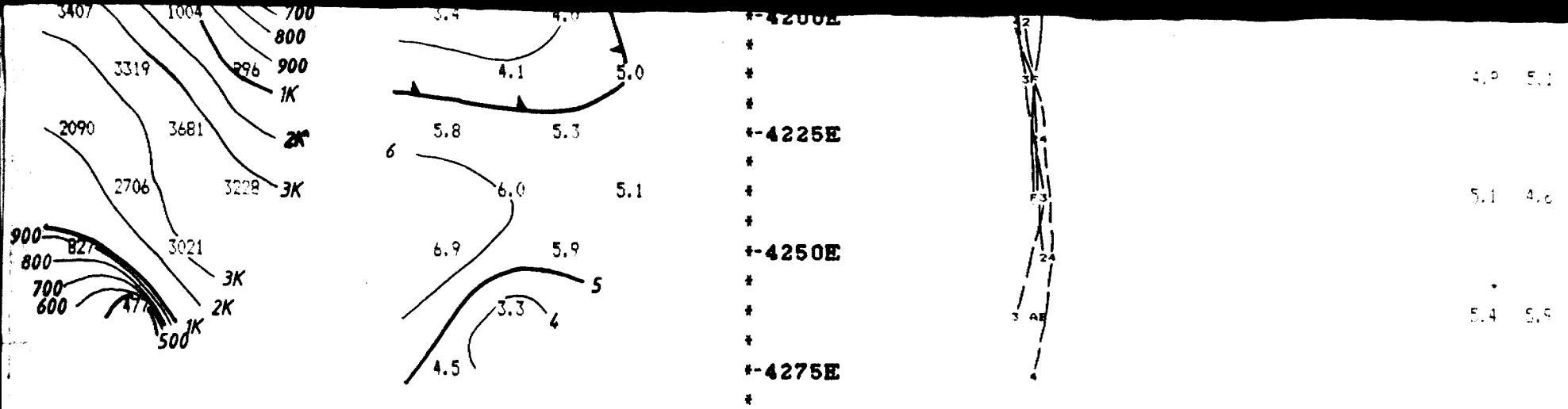
IP Pseudosections for N = 1 to 4

'a' Spacing = 25 M

LINE 2550 N

**SCALE : 1:1250**





Property : MAISONVILLE GRID 7

Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 9/6/86

Operator : CDJ

Electrode Array : DIPOLE - DIPOLE

Mode : TIME DOMAIN

Receiver : SCINTREX IPR-11

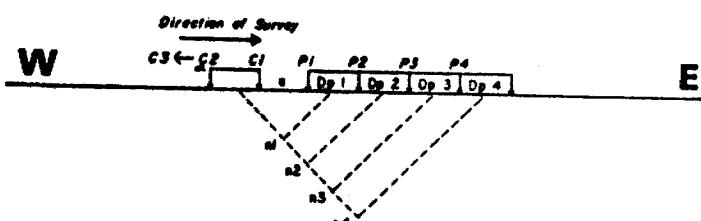
Transmitter : SCINTREX TSQ-3

Pulse Time : 2 Sec on 2 Sec off

Delay Time : 360 ms

Integration Time : 780 ms

Slice # 7 Plotted



\*\*\*\*\*
 R.S. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*

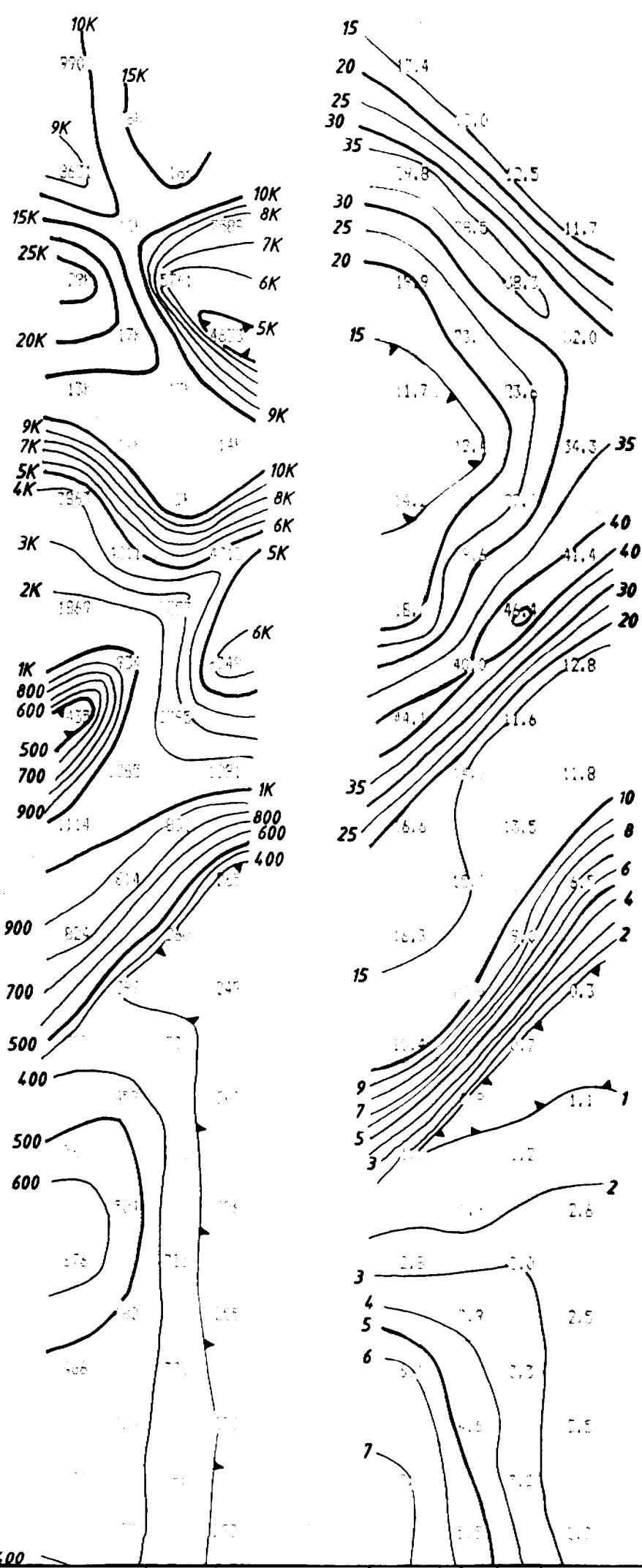
IP Pseudosections for N = 1 to 4

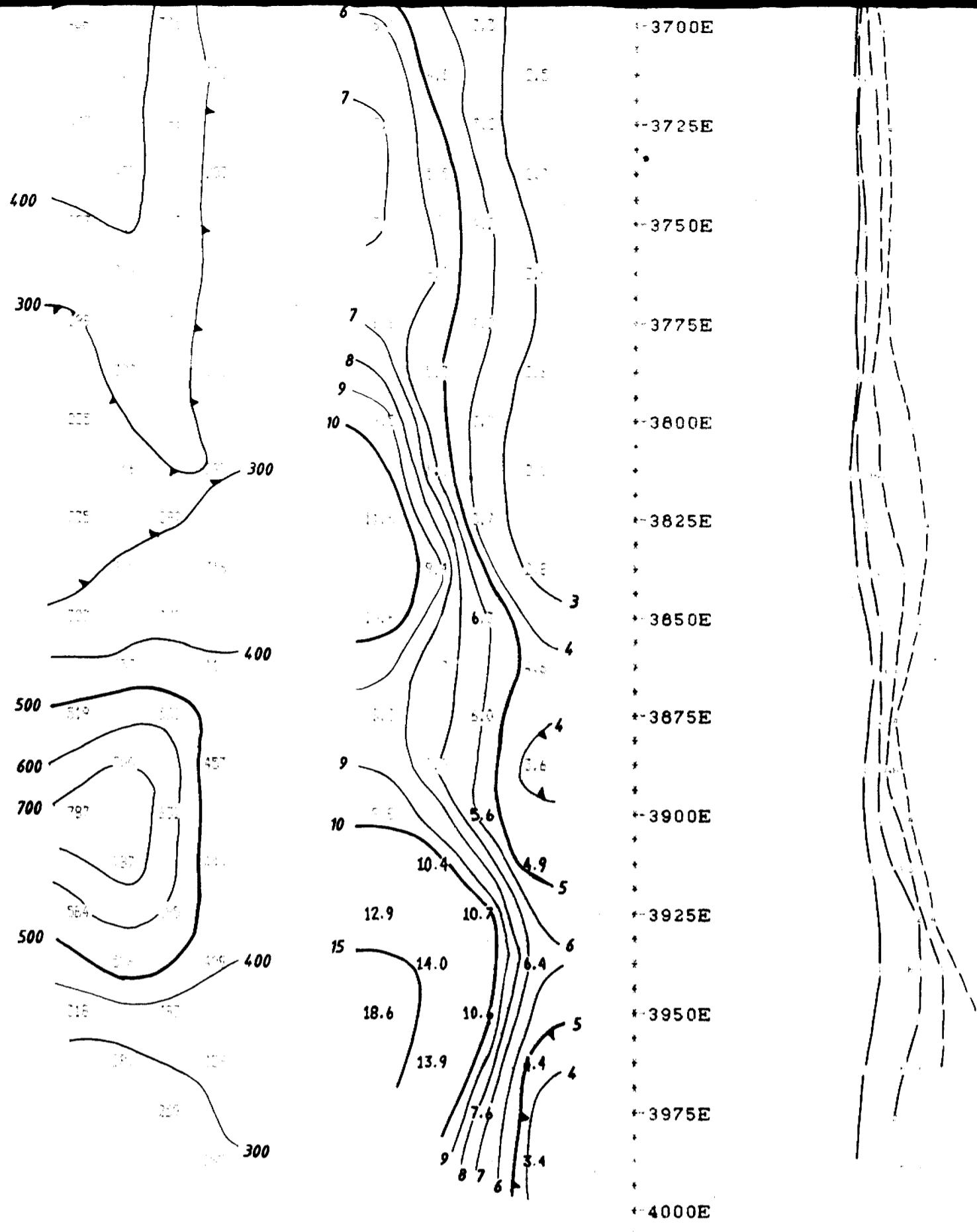
'a' Spacing = 25 M

LINE 2750 N

SCALE = 1:1250

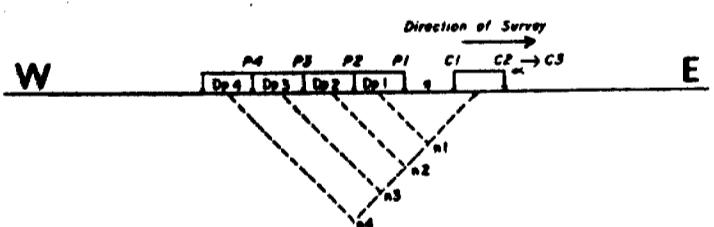
CHARGEABILITY  
(mV/second)





Property : MAISONVILLE GRID 7  
 Client : GLEN AUDEN RESOURCES LTD.

Date of Survey : 9/6/86  
 Operator : CDJ  
 Electrode Array : DIPOLE - DIPOLE  
 Mode : TIME DOMAIN  
 Receiver : SCINTREX TPR-11  
 Transmitter : SCINTREX TSD-3  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 360 ms  
 Integration Time : 780 ms



\*\*\*\*\*  
 F.S. MIDDLETON EXPLORATION  
 SERVICES INC.  
 \*\*\*\*\*

LF Pseudosections for N = 1 to 4

Line Spacing = 25 M

LINE 2750 N



Ontario



42A01NE0039 2.9901 MAISONVILLE

900

Ministry of  
Northern Development  
and Mines

March 27, 1987

File: 2.9901

AFRO  
Ministry of Northern Development and Mines  
8th Floor  
77 Grenville Street  
Toronto, Ontario  
M5S 1B3

Attention: Bob Owen

RE: Geophysical (I.P.) Survey submitted on  
Mining Claims L 778368, et al, in Maisonville  
Township

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This copy of the above-mentioned survey is forwarded to you as information only due to the generosity of Glen Auden Resources Limited. The 122 claims involved have reached the maximum 80 days geophysical assessment credits allowed by the Mining Act and therefore the submission was not reviewed or assessed within our guidelines.

Yours sincerely,

A handwritten signature in black ink, appearing to read "J.C. Smith".

J.C. Smith, A/Manager  
Mining Lands Section  
Mineral Development and Lands Branch  
Mines and Minerals Division

Whitney Block, Room 6610  
Queen's Park  
Toronto, Ontario  
M7A 1W3

AB Telephone: (416) 965-4888  
AB/mc  
cc: Mining Recorder - Kirkland Lake, Ontario  
cc: Resident Geologist - Kirkland Lake, Ontario  
cc: Glen Auden Resources Limited - Toronto, Ontario

Encl.

Mining Lands Section

File No 2.9901

Control Sheet

TYPE OF SURVEY       GEOPHYSICAL  
                         GEOLOGICAL  
                         GEOCHEMICAL  
                         EXPENDITURE

MINING LANDS COMMENTS:

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\_\_\_\_\_  
Signature of Assessor

L.D.

\_\_\_\_\_  
Date

ROBERT S. MIDDLETON EXPLORATION SERVICES INC.

TELEPHONE [705] 264-4246  
[705] 264-4247

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

March 24, 1987

Mr. Arthur Barr  
Ministry of Northern Development & Mines  
Room 6610  
Whitney Block  
99 Wellesley St. West  
Queen's Park  
TORONTO, Ontario  
M7A 1W3

Dear Mr. Barr:

Enclosed please find 2 copies of the Geophysical Survey on the 122 claims Maisonneuve Township property of Glen Auden Resources Limited by Greg Hodges. The property already has 80 days geophysical credit (Airborne survey), however, we will still submit the report for your records.

Sincerely

NC/lm

*Nadia Caira*  
Nadia Caira

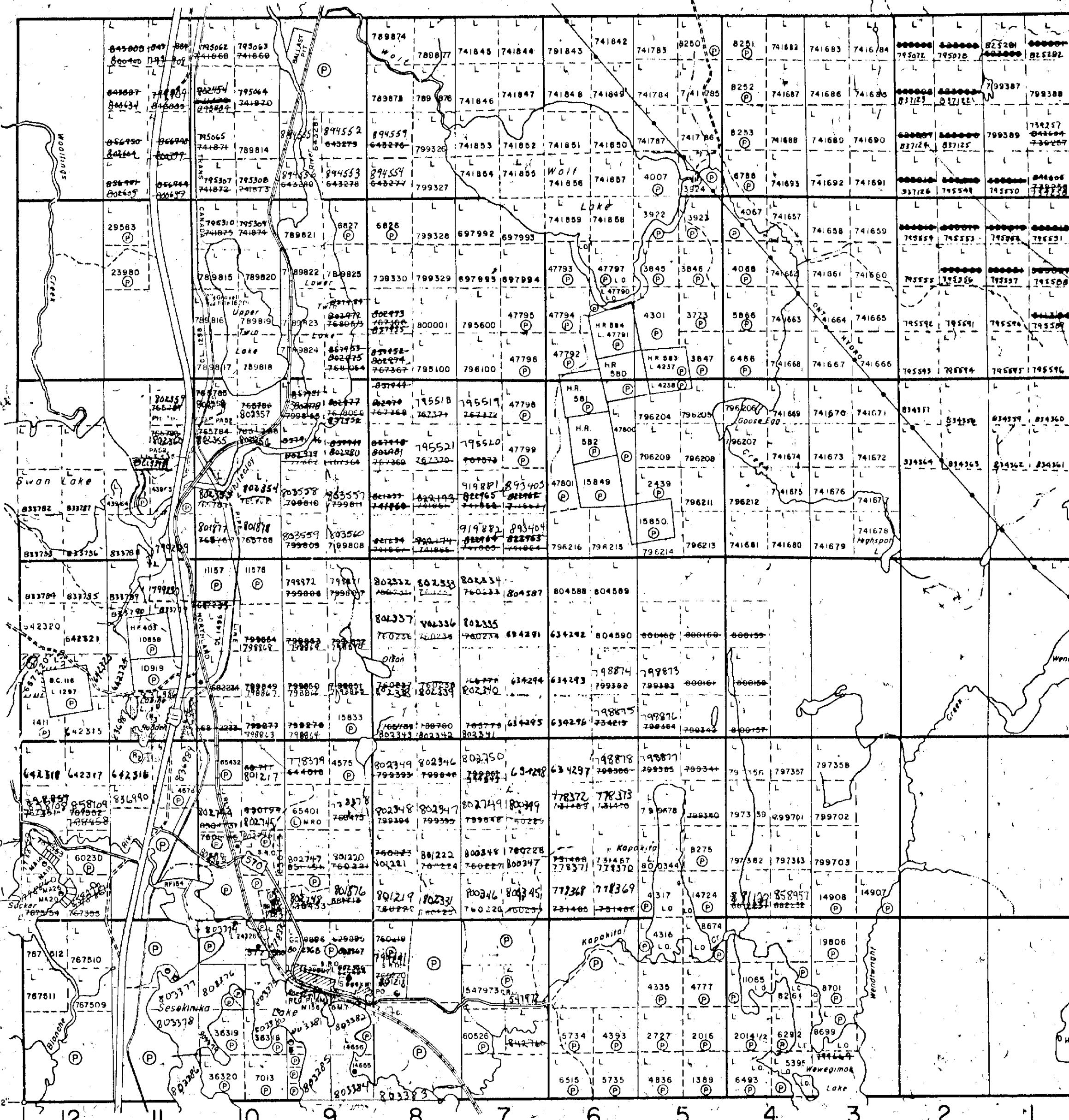
**RECEIVED**

MAR 25 1987

**MINING LANDS SECTION**

BENOIT TWP - M.326

LEE TWP. - M. 360



THE TOWNSHIP  
OF  
**MAISONVILLE**

# DISTRICT OF TIMISKAMING

# LARDER LAKE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

## LEGEND

- |                       |    |        |
|-----------------------|----|--------|
| PATENTED LAND         | or | (P)    |
| CROWN LAND SALE       |    | C.S.   |
| LEASES                |    | (L)    |
| LOCATED LAND          |    | Loc.   |
| LICENSE OF OCCUPATION |    | L.O.   |
| MINING RIGHTS ONLY    |    | M.R.O. |
| SURFACE RIGHTS ONLY   |    | S.R.O. |
| ROADS                 |    |        |
| IMPROVED ROADS        |    |        |
| KING'S HIGHWAYS       |    |        |
| RAILWAYS              |    |        |
| POWER LINES           |    |        |
| MARSH OR MUSKEG       |    |        |
| MINES                 |    |        |
| CANCELLED             |    | (C)    |
| PATENTED S.R.O.       |    | O      |

## NOTES

400' surface rights reservation along the shores  
of all lakes and rivers.

Areas withdrawn from staking under Section 43 of the Mining Act, R.S.O. 1970 (Sec. 42, R.S.O. '60)			
Order No.	File	Date	Disposition
NR.W.5/81	22032	11/8/70	S.R.O.
W.8/81	22032	23/1/81	S.R.O.
	See 36183	20/9/81	MRS

All islands in Seseckinika Lake are withdrawn from staking by Order-in-Council dated Dec. 7, 1921.

withdrawn from staking, see 31(6)  
Pending application for  
public tender

~~DATE OF ISSUE~~

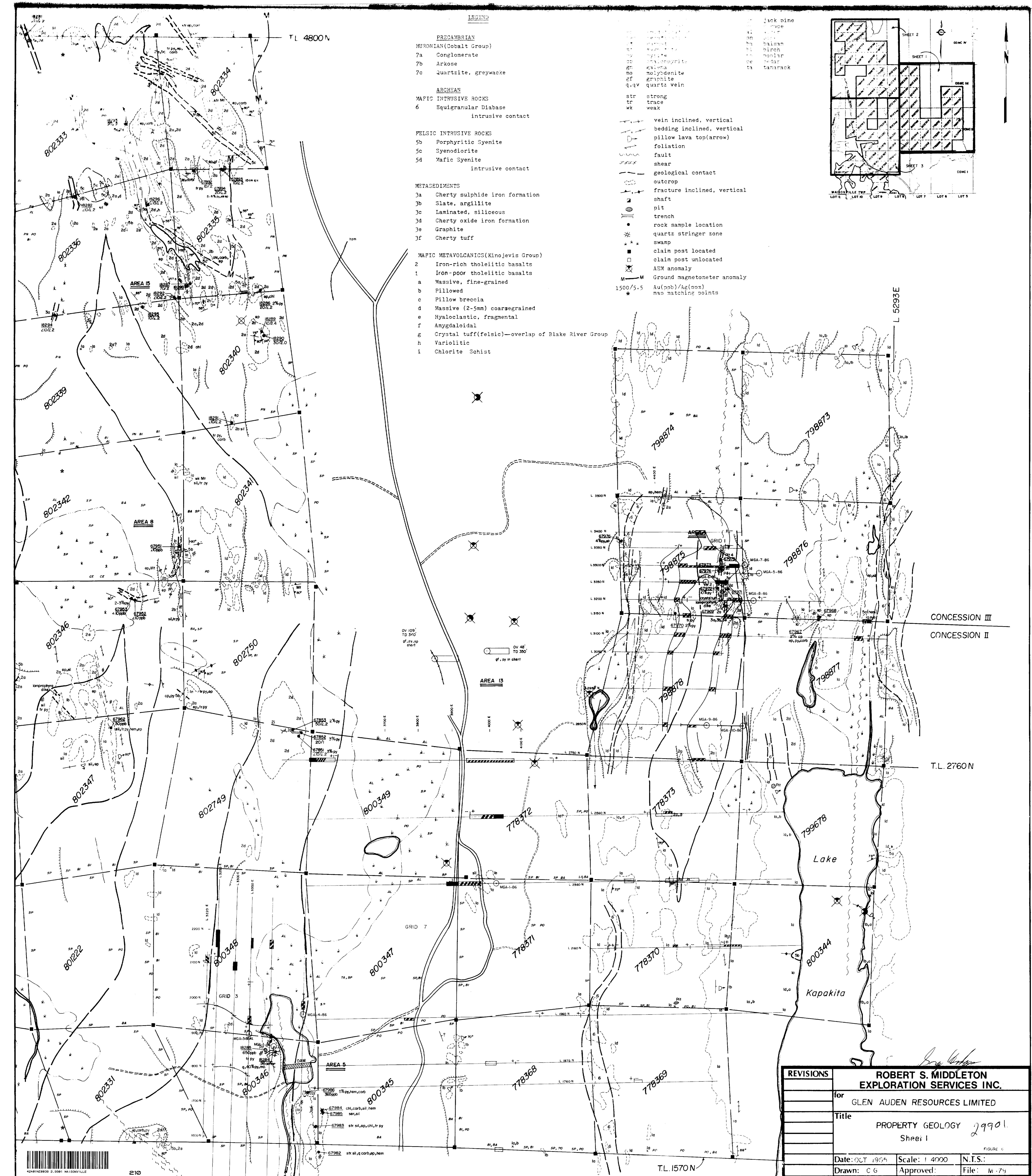
FEB 3 1987

LARDER LAKE  
NING RECORDER'S OFFICE

PLAN NO. M.361 2  
ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

GRENFELL TWP - M.351







\* L 3500 N

CONCESSION III  
CONCESSION II

L 3000 N

L 2500 N

L 2000 N

CONCESSION II  
CONCESSION I

SESEKINIKA

LAKE

L 1500 N

L 1000 N

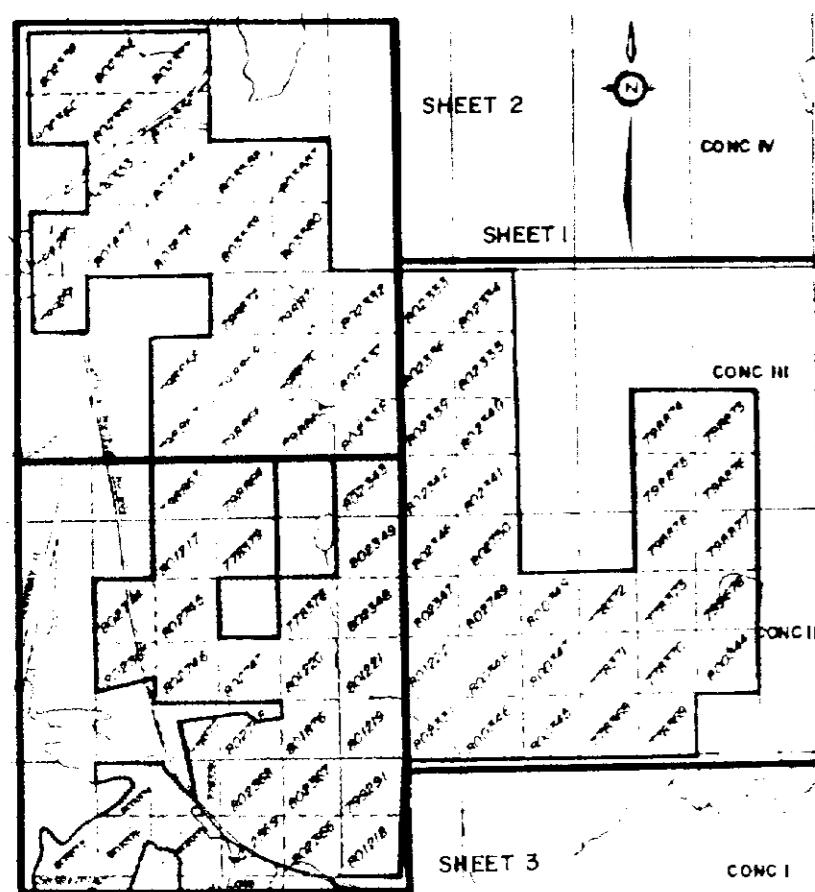
T.L. 1576 N

LOT 10

L 1600 E

LOT 9

LOT 8



NOTE: Refer to Sheet 1 for legend

REVISIONS	ROBERT S. MIDDLETON EXPLORATION SERVICES INC.
	for GLEN AUDEN RESOURCES LIMITED
	Title PROPERTY GEOLOGY Sheet 3
	Date: OCT 1985 Scale: 1:4000 N.T.S. Drawn: C.G Approved: File: M-78

FIGURE 8