82-83-14486

DIAMOND RESOURCES INC.

GEOPHYSICAL REPORT ON A MULTIPOLE INDUCED POLARIZATION SURVEY ON THE TOIL,ED 1 and ED 2 CLAIMS NEW WESTMINSTER M.D.

LAT.49°41.7'N, LONG.122°3.6'W, NTS92G/9E

AUTHOR: CLIFF CANDY,B.Sc.,
Geophysicist

DATE OF WORK: April 17-24, 1985

DATE OF REPORT: May 4, 1985

Owner/Operator: Diamond Resources Inc.

Part 2 of 2

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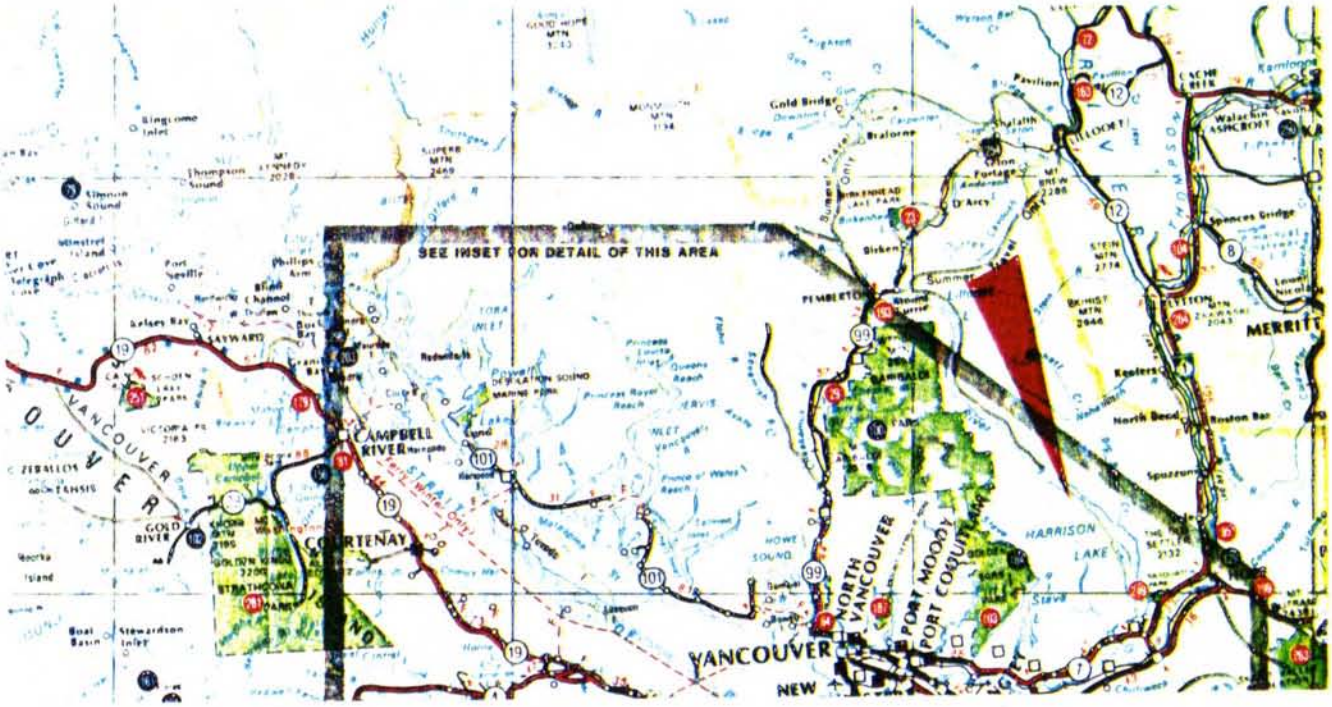

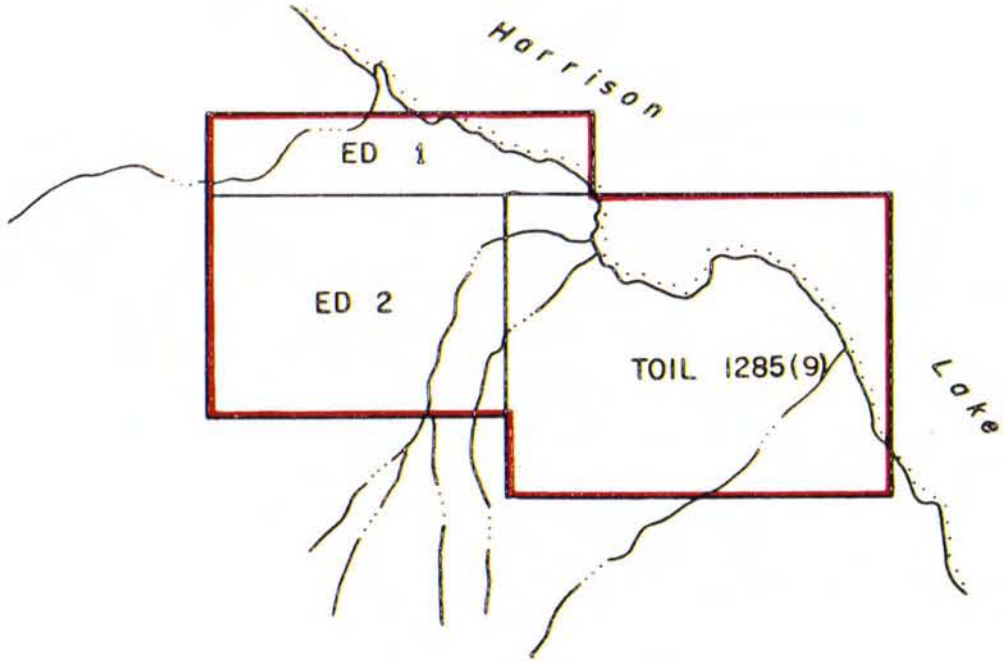

DIAMOND RESOURCES LTD.

— ED 1, ED 2, TOIL CLAIMS —

LOCATION AND CLAIMS MAP

WHITE GEOPHYSICAL INC.

FIG. 1

INTRODUCTION

During April of 1985, White Geophysical Inc. conducted a program of multipole induced polarization surveying on the Harrison Lake Project on behalf of Diamond Resources Inc. This survey consists of approximately eight kilometres of eleven separation coverage.

PROPERTY

The property consists of the following modified grid system claims.

CLAIM	UNITS	RECORD NO.	EXPIRY DATE
TOIL	20	1285	Sept. 21, 1990
ED 1	12	2598	March 12, 1986
ED 2	5	2599	March 12, 1986

LOCATION AND ACCESS

The Harrison Lake property is located at Five Mile Bay approximately 61 kilometres north of Harrison Mills and 160 kilometres northeast of Vancouver, in the New Westminster Mining Division. The claims are situated at latitude 49°21'N by longitude 122°03'W on NTS map sheet 92G/9.

Access to the property is via the West Harrison Forest access road to Five Mile Bay. This road is of variable condition, but is for the most part, passable for two wheel drive vehicles. Alternately, the Five Mile Bay camp is accessible by self propelled barge operated from the Rivtow docks at Harrison Hot Springs.

HISTORY

Prospecting and claim staking in 1897-1898 was focused on gold-silver discoveries on Fire Mountain and the west side of Harrison Lake at the Providence about 15 miles northwest of Harrison Hotsprings. About 55 tons of unknown value was produced from the Providence showing. Further work was done on the Providence in 1929 by the Harrison Gold Mining and Development Co., but without success. During the period 1930-1934, further underground exploration work was carried out on the Fire Mountain occurrences, but also without success.

In the early 1950's, exploration interest through the area along the southwest side of Harrison Lake was sparked with the discovery of copper-zinc sulphides. In 1971, Cominco geologists recognized the geological setting as similar to the Kuroko-type and Noranda-type environment which has been exceptionally productive in Japan. Since then, exploration activity has continued in varying degrees, and the SENECA prospect, No. 13 on the map, has received considerable effort by Noranda, Cominco and Chevron. In 1972 and 1973, the B.C. Mines Branch completed a mapping project which contributed to the understanding of the geological setting. A search of the records shows a number of assessment reports filed on prospects which consists of varying amounts of base metal sulphides hosted by the Harrison Lake volcanics.

The present interest in the area has been generated by the discovery of gold-silver mineralization approximately 3 miles northwest of the PROVIDENCE in the Doctor's Point area. Trenching and diamond drilling in 1982 has defined a significant zone of mineralization which occurs in a package of volcanic rocks.

REGIONAL GEOLOGY

The regional geology is described by G.E. Ray in his report "The Harrison Lake Project" which is excerpted as follows:

> "The Harrison Lake fracture system forms a major, southeasterly trending dislocation over 100 kilometres in length, which in parts passes along, and parallel to, Harrison Lake. The system separates highly contrasting geological regimes (Roddick, 1965; Monger, 1970). To the northeast, the rocks include well-deformed supracrustals of the Pennsylvanian to Permian Chilliwack Group (Monger, 1966), as well as highly foliated gneissic rocks and some younger granites. By contract, the rocks on the southwestern side of the fracture are generally younger, are less deformed, and have suffered lower metamorphic grade; they include a variety of volcanic, volcaniclastic, and sedimentary rocks, as well as intrusive granitic rocks and migmatites. These supracrustals are separable into a number of different groups of Jurassic/Cretaceous age. The most important regarding gold mineralization are the Fire Lake and Harrison Lake Groups which are well developed respectively northwest and southwest of Harrison Lake. The Fire Lake Group (Roddick, 1965) comprises a variety of coarse to fine-grained sedimentary rocks with lesser greenstone volcanic rocks, while the Harrison Lake Group (Crickmay, 1925; Roddick, 1865) is predominantly a volcanic sequence of andesitic to dacitic composition, with lesser amounts of volcaniclastic and sedimentary rocks. Both groups are intruded by younger plutonic rocks ranging from granite to diorite.
>
> The Harrison Lake fracture system is associated with regional hot spring activity; this includes two hot springs along the Lillooet River valley, northwest of the lake, as well as one situated at Harrison Hot Springs on the southeastern extremity of the lake. The gold mineralization along the system is hosted in rocks of various ages and lithologies. The Fire Lake gold camp, situated approximately 20 kilometres northwest of Harrison Lake, includes six mineralized occurrences, all of which are found in quartz-rich veins that cut the Fire Lake Group. Five of these veins are hosted in greenstones and carry chalcopyrite

and native gold. These quartz veins are not continuous but form lenses and gash fillings. The sixth mineral occurrence in the camp, the Dandy (Mineral Inventory 92G/NE-10), is hosted in brecciated sedimentary rocks and carries lead-zinc mineralization in a quartz-calcite vein.

At the RN mine (Geo), situated close to Harrison Hot Springs, the gold is hosted in sulphide-bearing quartz veins that cut both highly deformed metasedimentary rocks of the Chilliwack Group and intrusive diorite plutons.

The Providence mine, situated 5 kilometres southeast of Doctor's Point, represents a fracture-filled vein deposit hosted in andesitic rocks of the Harrison Lake Group. The rocks in the Doctor's Point area, where Rhyolite Resources Inc.'s mineralization was discovered, were originally assigned to the Fire Lake Group (Roddick, 1965) and the Mysterious Creek Formation (Monger, 1970). However, the prevalence of acidic to intermediate volcanic rocks in the area suggests they probably belong to the Harrison Lake Group. In the Providence mine vicinity, andesites and andesitic breccias predominte, but northward toward Doctor's Point they become less abundant and are replaced by volcanic rocks of more acidic composition, together with coarse volcanic breccias, tuffs, and a variety of sedimentary rocks. At Doctor's Point this supracrustal assemblage is intruded by several diorite-quartz diorite plutons which are surrounded by wide and prominent thermal metamorphic aureoles. The gold-bearing veins at Doctor's Point exhibit a pronounced spatial relationship to the diorite pluton margins, but current geological data suggest the intrusions were not necessarily genetically related to the gold mineralization."

PREVIOUS WORK

During 1981 JMT Services Corporation completed a limited program of prospecting, rock sampling and soil and silt geochemistry. It is reported that samples anomalous in gold, copper, arsenic, lead and zinc were recorded in this survey. The property was the subject of an investigation by J.R. Poloni which was documented in his report of January 3, 1983. Subsequent to this, a percussion drilling program was undertaken which is reported to have had inconclusive results. It is reported that a number of intersections of high pyrite concentration were evident in some drillholes.

MULTIPOLE INDUCED POLARIZATION SURVEY

The multipole induced polarization method is a technique which exploits the rapid signal acquisition and processing capabilities available with current micro computer technology. With this technique the potential field information is obtained through a multiconductor cable having 36 takeouts at 25 metre intervals. The cable is presently configured as up to six end and position interchangeable cables of 150 metre length. The takeouts are addressed by the 40 channel multiplexer assembly in a specially configured HP-3497A data acquisition system as 25 metre to 275 metre dipoles. The data acquisition system is driven by a HP-85 computer, allowing the data to be stacked in the computer for a number of cycles at full precision until a criteria is reached. Ten windows on the secondary voltage are compiled, as well as the primary voltage information. Time zero is sensed by direct reference to the transmitter timing circuitry. The cable is scanned simultaneously in groups of five dipoles and the decay curves presented graphically for acceptance and logging or rejection and rescan by the operator. The data is logged on digital tape cartridges and is readily accessed in the field in order to produce pseudo-sections. These tapes are read by a HP-9845 computer for further processing and production of final report ready sections.

The primary field power is provided by a Huntec MK IV 2.5 kw transmitter operated in time domain mode which is driven by a 400 H_z, 120 volt three phase motor

generator. The transmitted signal is an alternate cycle reversing current pulse of two second on and two second off time. The current is introduced into the ground through two current electrodes for each scan of the potential cable. By scanning the cable for each of several current stake positions both along the cable and off the ends of the cable a strong measure of redundancy of coverage of a given depth point is assured. The stacking of this multiple scan information in the computer results in an improved determination of the geoelectric section.

The apparent resistivity is obtained from the ratio of the primary voltage measured on the potential dipole during the current on part of the cycle to the current flowing through the current electrodes. A geometric factor is computed from the electrode locations to arrive at the apparent resistivity, measured in ohm-metres.

The apparent chargeability is calculated from the ten secondary voltage windows as the area under the secondary decay curve and is measured in milliseconds.

DISCUSSION OF RESULTS

The induced polarization data is illustrated in pseudo-section format on Figures 3-10. The anomalous responses are illustrated in plan on Figure 2. With the exception of lines 3 and 4, the survey made use of the road network on the property.

The apparent chargeability background was found to be high in the survey data, indicating that a pervasive high level of disseminated sulphides exists in the survey area. Against this background of high apparent chargeability numerous anomalous chargeability highs are evident. Line 1 was covered in four segments, illustrated in pseudo-section Figures 3-6. Figure 3 shows the presence of a high apparent resistivity zone between stations 350W and 650W. This feature is flanked by two compact apparent chargeability anomalies. Figure 4 shows additional moderate responses, Zones C,D and E. Figure 5 displays the strongest anomalies observed on the line. Labelled F,G and H, these anomalies are complex, irregular zones evident as deep as ten separations. These responses occur in an environment of 1000-4000 ohm-metre apparent resistivities with some associated resistivity lows. Near station 2550W on line 1, Figure 6, the data shows a transition to very high apparent resistivities. Two additional anomalies, labelled I and J, occur in this area.

Line 2, Figure 7, shows several anomalies, labelled K-P. The best defined of these features are associated with an apparent resistivity low extending from approximately 230W to 675W. Of interest on this line is the detection of the Zone G response, extending this anomaly to the north. Anomaly Q occurs near the transition to high apparent resistivity rocks which appear to bound the survey area to the northwest

on this line, and line 1.

This Zone G anomaly is present on line 3 between 50N and 80S. This coverage limits the anomaly extent in all but the south-westerly direction. Also on this line, a somewhat attenuated apparent resistivity low is evident between approximately 175N and 400N. Apparent chargeability anomaly S occurs near the southern extent of this feature.

Coverage obtained on Line 4 shows the presence of four anomalous zones, labelled T-W on Figure 10. The strongest of these is Zone V which is spatially related to Zone N of line 2. A poorly defined apparent resistivity low near station 00N is related to a low traversed at 400W on line 2.

SUMMARY AND CONCLUSIONS

A multipole induced polarization survey was undertaken by White Geophysical Inc. on the Toil, Ed 1 and Ed 2 claims on behalf of Diamond Resources Inc. This survey, while not on a grid system, which would allow better spatial distribution of coverage, nevertheless provided a rapid and effective overview of the central property area.

The survey data shows the presence of a high background of disseminated sulphides against which a number of chargeability anomalies arise. The highest priority of these anomalies for diamond drill testing are those associated with apparent resistivity lows which may be related to areas of alteration. Zones L,M,N,V,O, and P are of this category. Zone G is also of interest as a target, although not strongly correlated with an apparent resistivity low, due to the strong chargeability response obtained.

Respectively submitted,

Cliff Candy

Cliff Candy, B.Sc.,
Geophysicist

REFERENCES

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POLONI, J.R.,

Report on the Toil Mineral Claim, New Westminster M.D., B.C., January 3, 1983.

STATEMENT OF QUALIFICATIONS

Name:	CANDY, Clifford, E.
Profession:	Geophysicist
Education:	B.Sc., Geophysics University of British Columbia
Professional Associations:	Society of Exploration Geophysicists British Columbia Geophysical Society
Experience:	Six years Geophysicist with Glen E. White Geophysical Consulting and Services Ltd., with work in B.C., Yukon, Quebec, Saskatchewan, southwestern U.S.A. and Ireland.

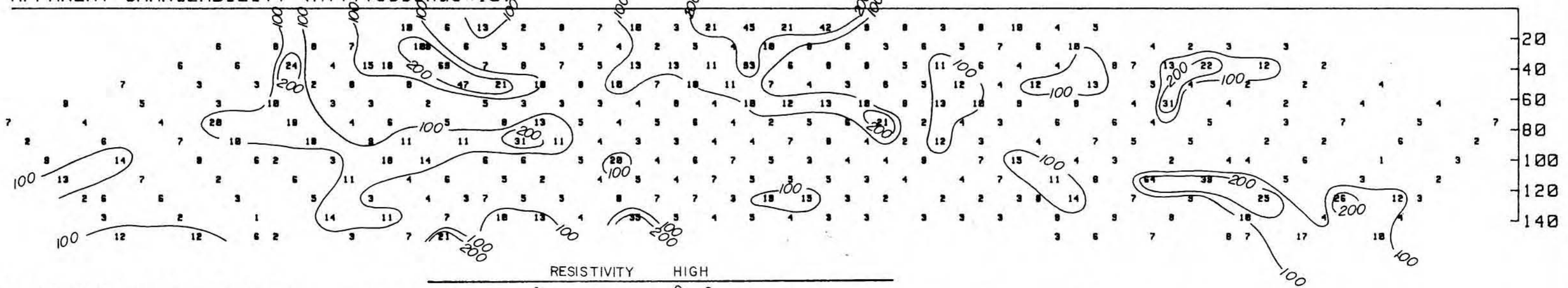
COST BREAKDOWN

C. CANDY:	Apr. 16-23, 8 days at 270/day	$2,160.00
D. ROBERTS:	Apr. 16-23, 8 days at 170/day	1,360.00
R. ACHESON:	Apr. 16-23, 8 days at 170/day	1,360.00
W. GOLDBECK:	Apr. 16-23, 8 days at 170/day	1,360.00
INSTRUMENT LEASE:	8 days at 130/day	1,040.00
4 X 4 VEHICLE:	8 days at 60/day	480.00
SURVEY MATERIALS		60.00
EXPENSES		387.69
DRAFTING, DATA PROCESSING, INTERPRETATION AND REPORT		1,200.00
	TOTAL	$9,407.69

-900W -875W -850W -825W -800W -775W -750W -725W -700W -675W -650W -625W -600W -575W -550W -525W -500W -475W -450W -425W -400W -375W -350W -325W -300W -280W -250W -230W -200W -180W -150W -130W -100W -75W -50W -30W -0E -30E -50E

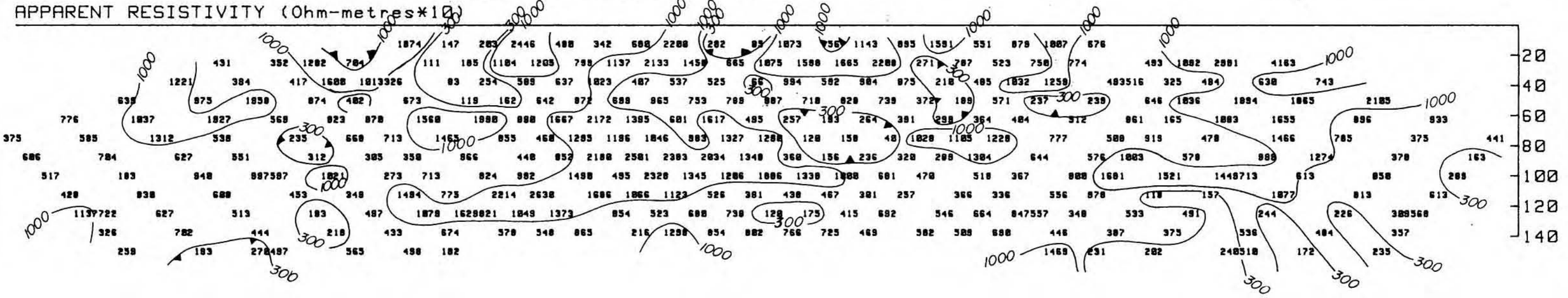
B A

APPARENT CHARGEABILITY (Milliseconds*10)



RESISTIVITY HIGH

APPARENT RESISTIVITY (Ohm-metres*10)



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

DIAMOND RESOURCES INC.

HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 1

WHITE GEOPHYSICAL INC.

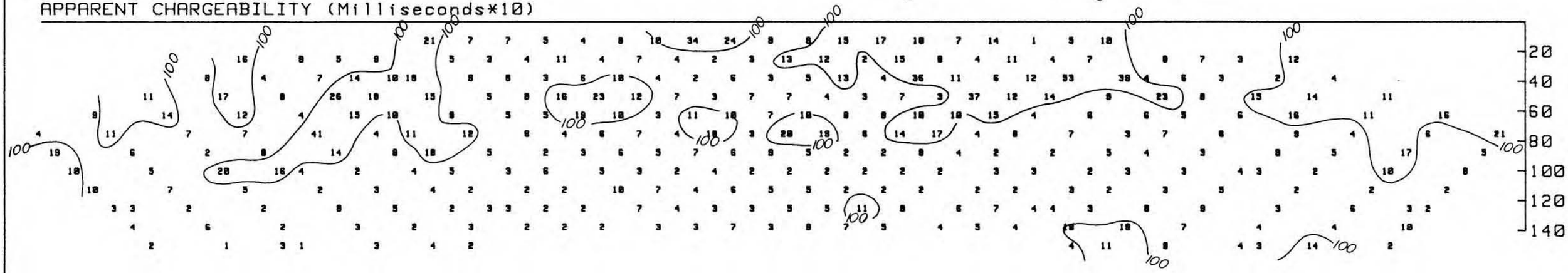
DATE: APR/85

FIG.: 3

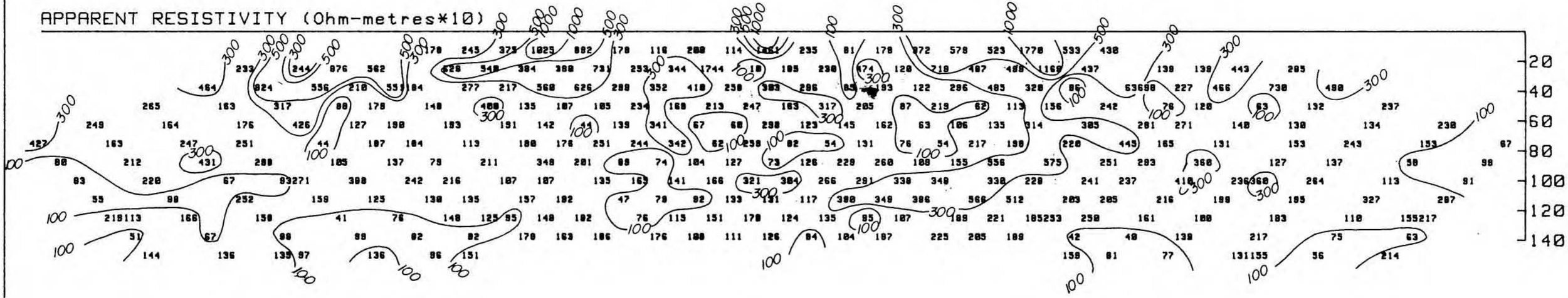
1780W 1750W 1730W 1700W 1680W 1650W 1630W 1600W 1580W 1550W 1530W 1500W 1480W 1450W 1430W 1400W 1380W 1350W 1330W 1300W 1280W 1250W 1230W 1200W 1180W 1150W 1130W 1100W 1080W 1050W 1030W 1000W 975W 950W 925W 900W 875W 850W 825W

E D C

APPARENT CHARGEABILITY (Milliseconds*10)



APPARENT RESISTIVITY (Ohm-metres*10)



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

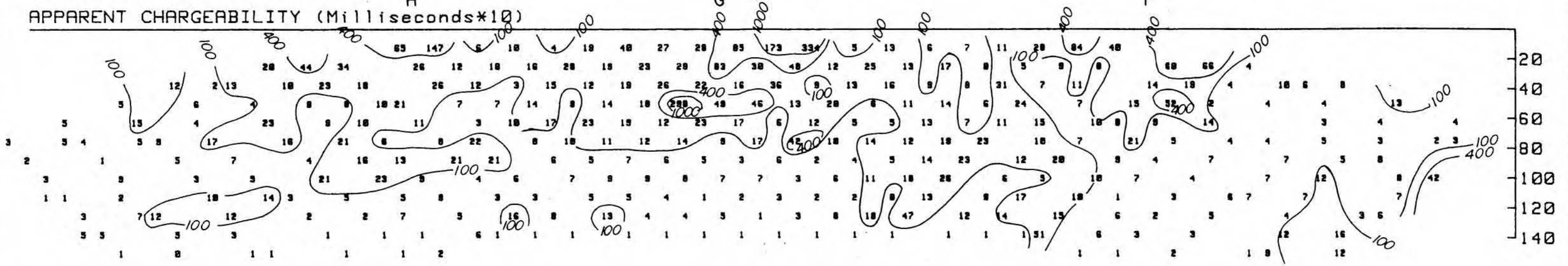
LINE 1

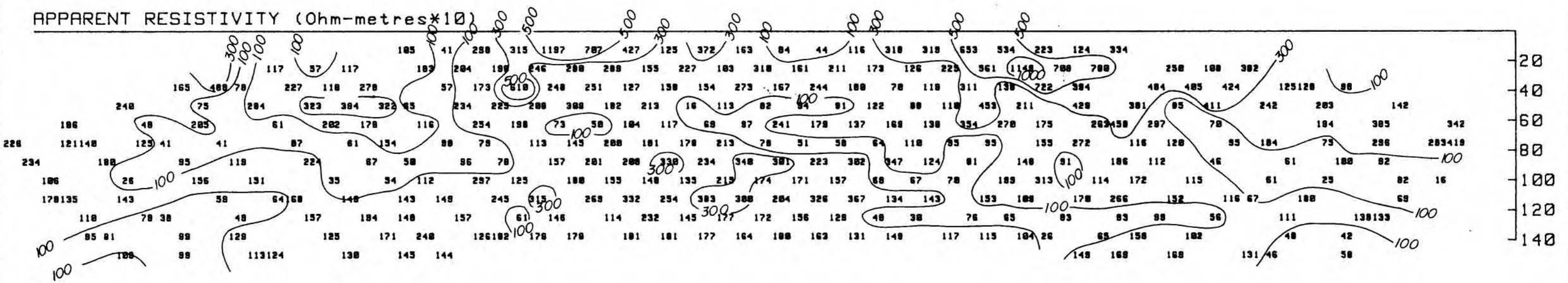
DATE: APR/85

FIG.: 4

2650W 2630W 2600W 2580W 2550W 2530W 2500W 2480W 2450W 2430W 2400W 2380W 2350W 2330W 2300W 2280W 2250W 2230W 2200W 2180W 2150W 2130W 2100W 2080W 2050W 2030W 2000W 1980W 1950W 1930W 1900W 1880W 1850W 1830W 1800W 1780W 1750W 1730W 1700W 1680W

H G F





INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 1

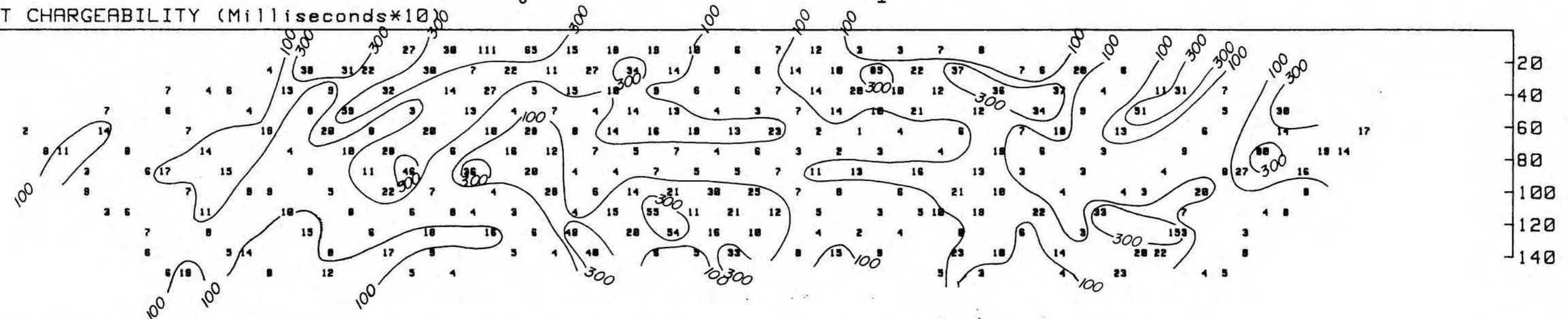
DATE: APR/85

FIG.: 5

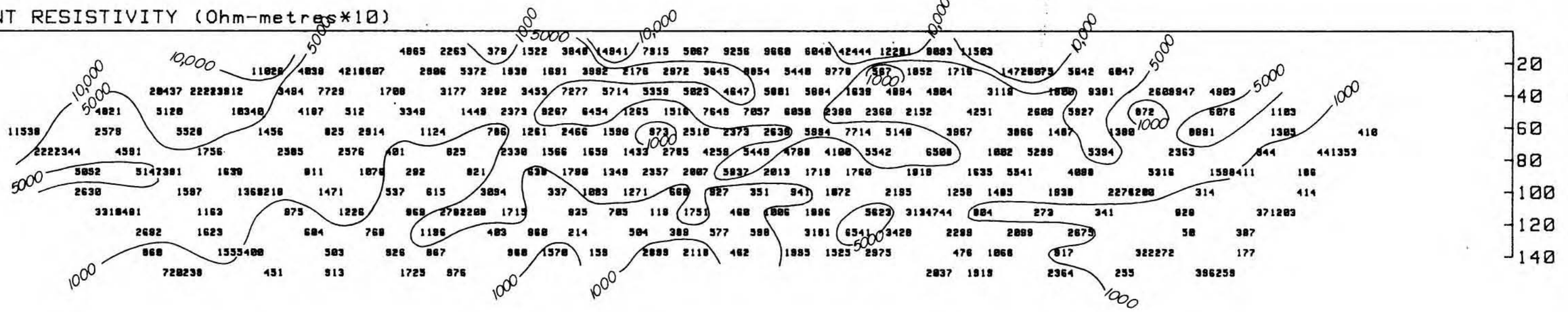
3325W 3300W 3275W 3250W 3225W 3200W 3175W 3150W 3130W 3100W 3080W 3050W 3030W 3000W 2980W 2950W 2930W 2900W 2880W 2850W 2830W 2800W 2780W 2750W 2730W 2700W 2680W 2650W 2630W 2600W 2580W 2550W 2530W 2500W 2480W 2450W 2430W 2400W 2380W

J I

APPARENT CHARGEABILITY (Milliseconds*10)



APPARENT RESISTIVITY (Ohm-metres*10)



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

DIAMOND RESOURCES INC.

HARRISON LAKE PROJECT

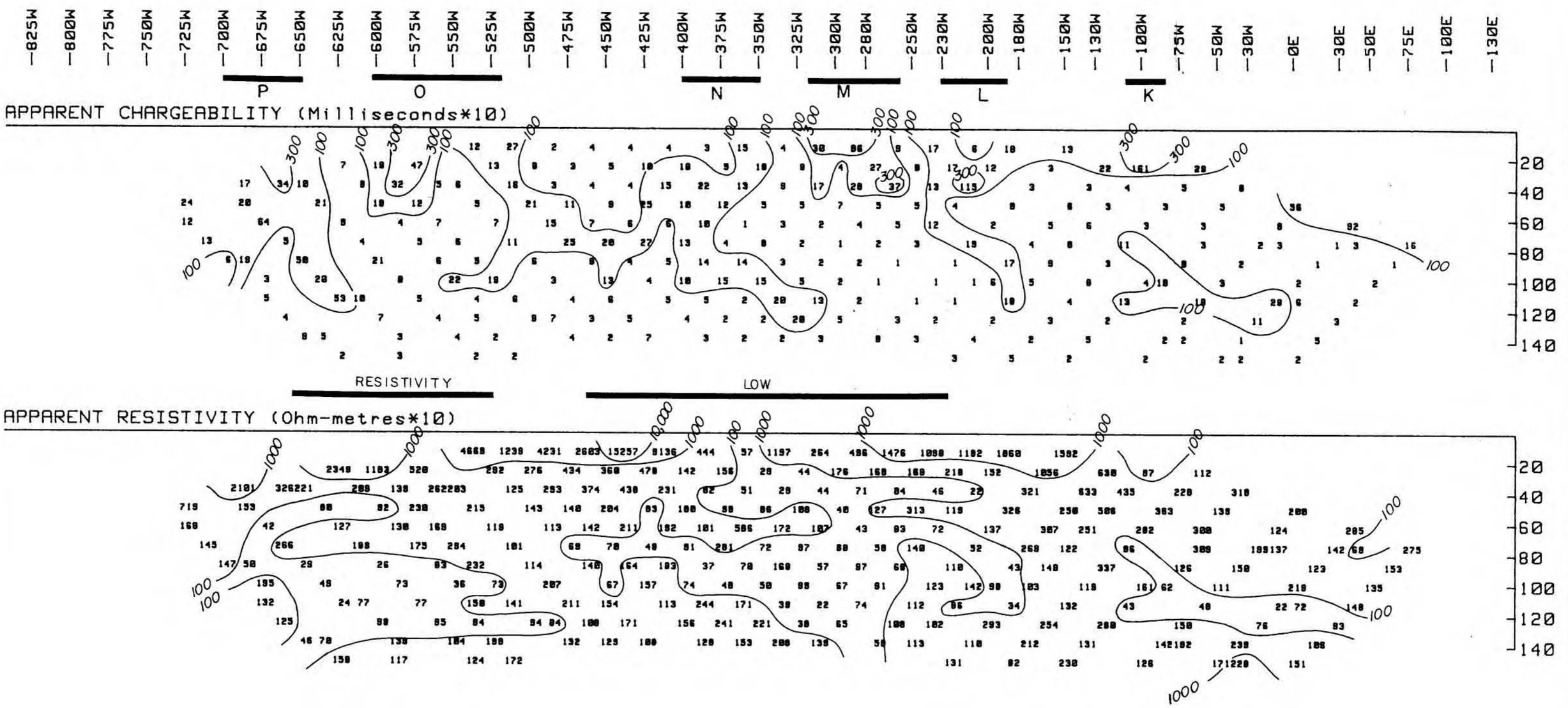
MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 1

WHITE GEOPHYSICAL INC.

DATE: APR/85

FIG.: 6



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES

0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 2

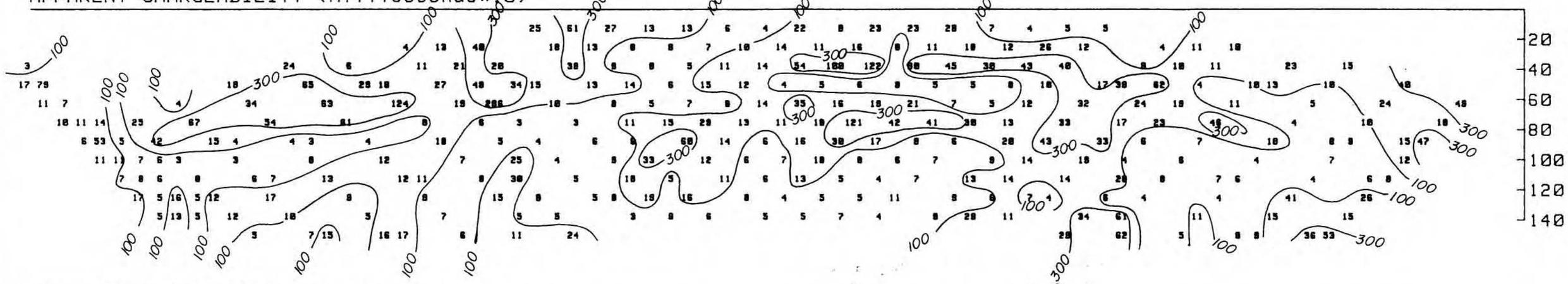
DATE: APR/85

FIG.: 7

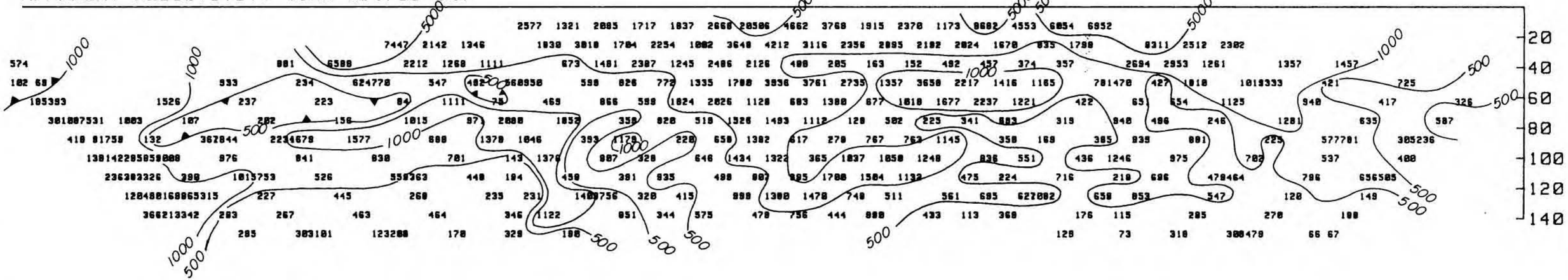
1600W 1580W 1550W 1530W 1500W 1480W 1450W 1430W 1400W 1380W 1350W 1330W 1300W 1280W 1250W 1230W 1200W 1180W 1150W 1130W 1100W 1080W 1050W 1030W 1000W 975W 950W 925W 900W 875W 850W 825W 800W 775W 750W 725W 700W 675W 650W

R Q G P

APPARENT CHARGEABILITY (Milliseconds*10)



APPARENT RESISTIVITY (Ohm-metres*10)



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES

0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

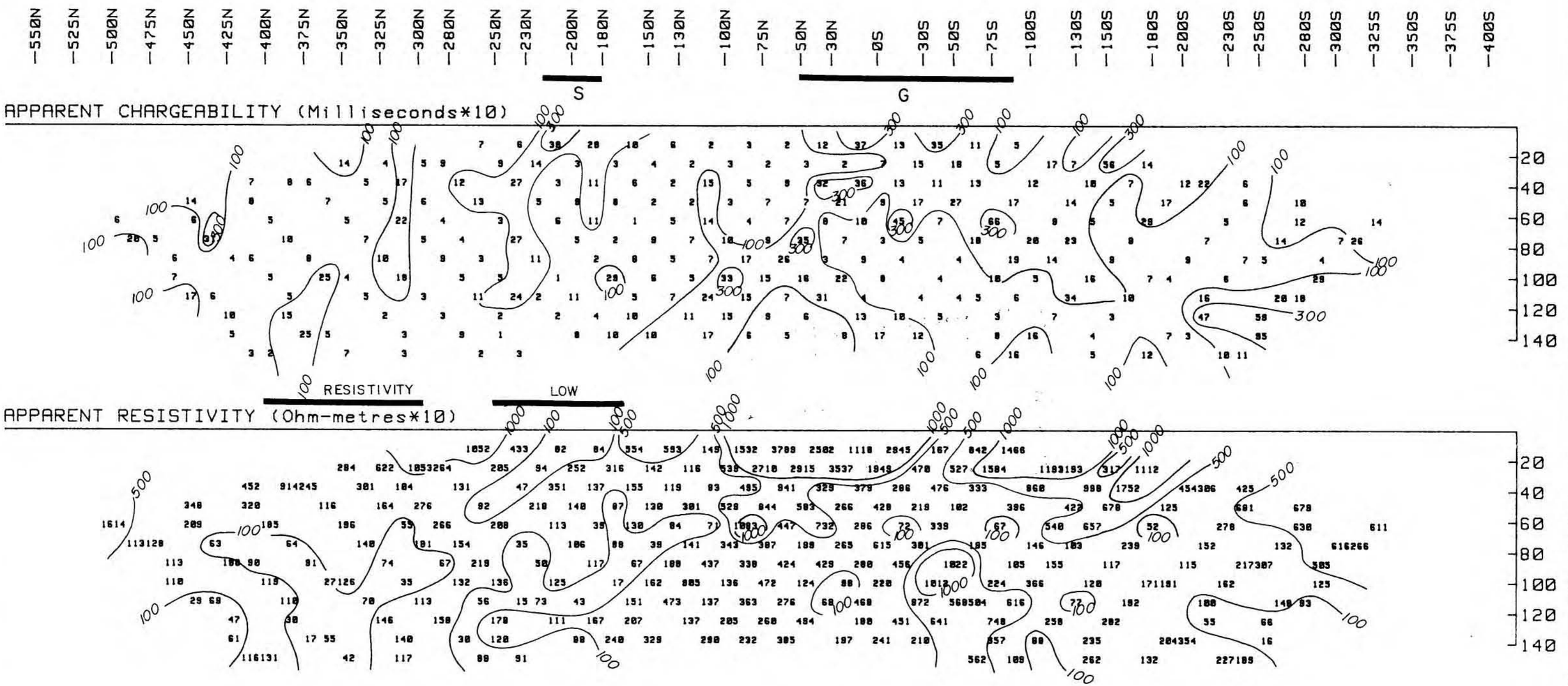
HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 2

DATE: APR/85

FIG.: 8



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

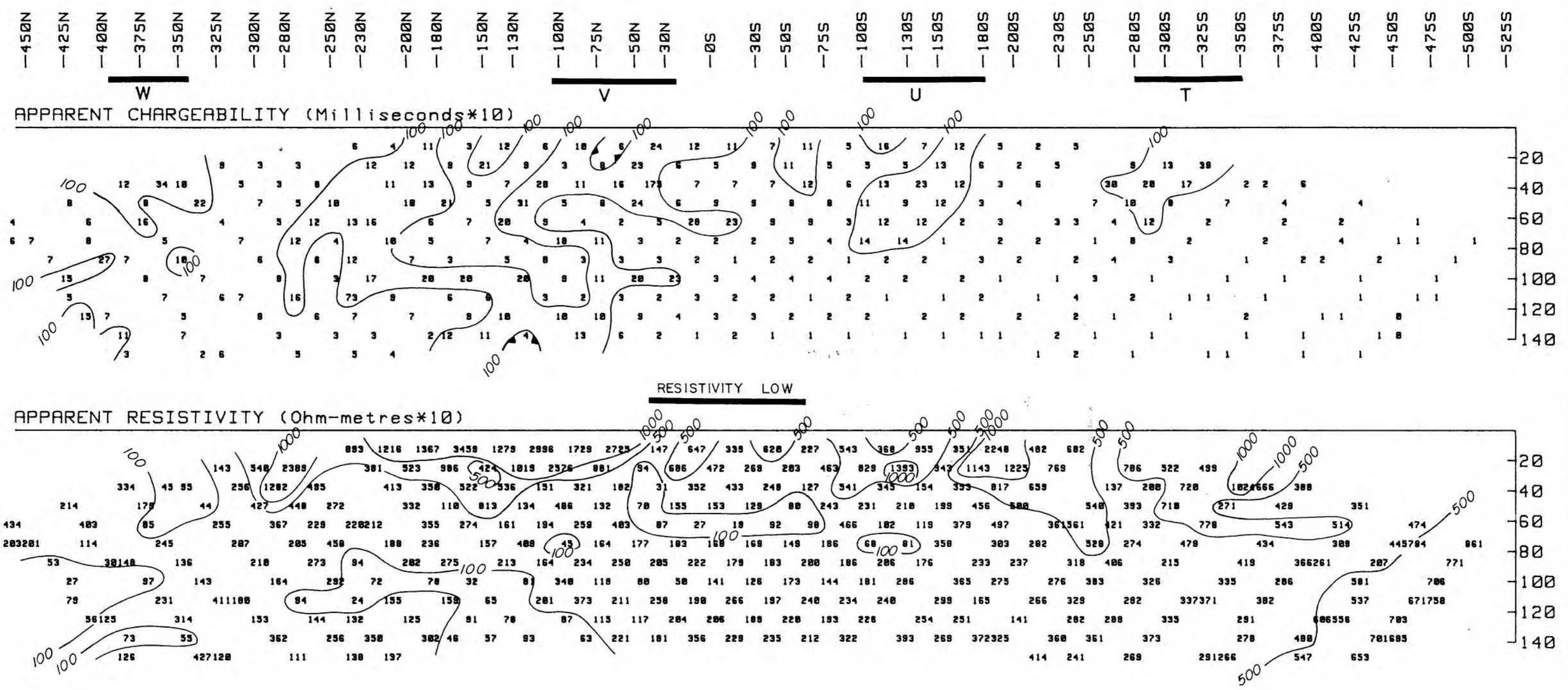
HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 3

DATE: APR/85

FIG.: 9



INSTRUMENT: 36 CHANNEL MULTIPOLE I.P.

METRES
0 25 50 75 100

WHITE GEOPHYSICAL INC.

DIAMOND RESOURCES INC.

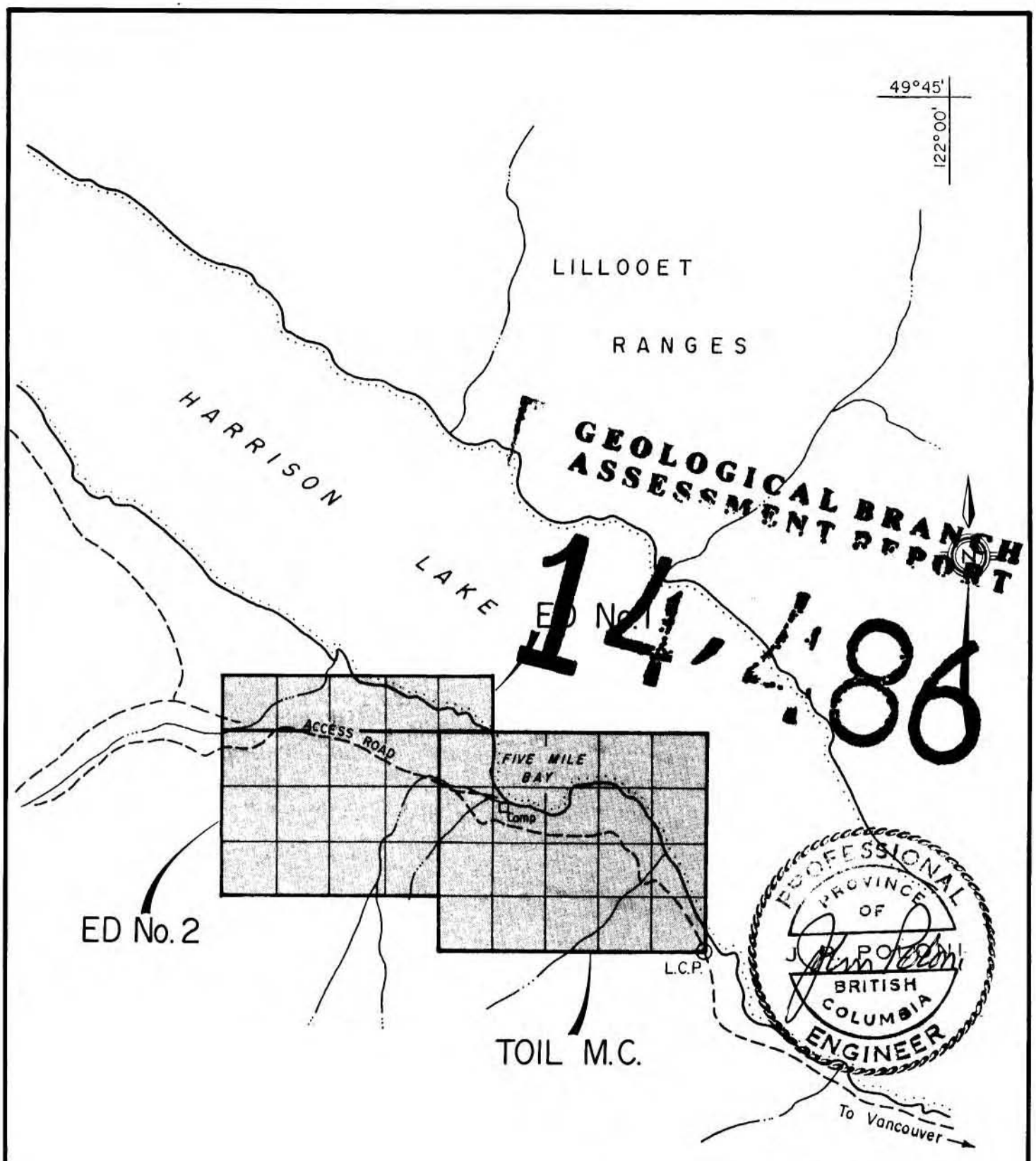
HARRISON LAKE PROJECT

MULTIPOLE INDUCED POLARIZATION SURVEY

LINE 4

DATE: APR/85

FIG.: 10



PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
J. R. POLONI

DIAMOND RESOURCES INC.

CLAIM MAP

TOIL, ED No. 1, ED No. 2

NEW WESTMINSTER M.D.

BRITISH COLUMBIA

JOHN R. POLONI & ASSOCIATES LTD.

Drawn : J.R.P.	Checked : J.R.P.	Plan No.
Scale : As shown	Date : June 13, 1985	2