

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 92.08.07

ASSESSMENT REPORT 21678

MINING DIVISION: Nicola

PROPERTY: Ken
LOCATION: LAT 49 54 00 LONG 120 35 00
UTM 10 5530093 673551
NTS 092H15W
CLAIM(S): Big Six 1-4, A1 1-2
OPERATOR(S): MineQuest Ex. Assoc.
AUTHOR(S): Cartwright, P.
REPORT YEAR: 1991, 21 Pages
COMMODITIES
SEARCHED FOR: Copper
KEYWORDS: Triassic, Diorites, Basalts
WORK
DONE: Geophysical, Physical
IPOL 6.5 km
Map(s) - 1; Scale(s) - 1:5000
LINE 9.2 km
MINFILE: 092HNE085, 092HNE165, 092HNE175, 092HNE083

PACIFIC GEOPHYSICAL LIMITED

RECEIVED
SEP 26 1991
Gold Commissioner's Office
VANCOUVER, B.C.

REPORT ON THE

LINECUTTING AND

INDUCED POLARIZATION AND RESISTIVITY SURVEY

ON THE

KEN CLAIMS

NICOLA MINING DIVISION, BRITISH COLUMBIA

LOG NO. OCT 03 1991	RD.
ACTION:	
FILE NO:	

FOR

MINEQUEST EXPLORATION ASSOCIATES LTD.

LATITUDE : 49 54' N LONGITUDE : 120 35' W

N.T.S. 92H/15W

PROPERTY OWNERS: MINEQUEST EXPLORATION ASSOC. LTD.
: GEORGE VERNON
: PACIFIC GEOPHYSICAL LTD.

PROPERTY OPERATOR: MINEQUEST EXPLORATION ASSOC.

BY

PAUL A. CARTWRIGHT, P.Geoph.

Geophysicist

DATED: SEPTEMBER 17, 1991

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,678

SUMMARY

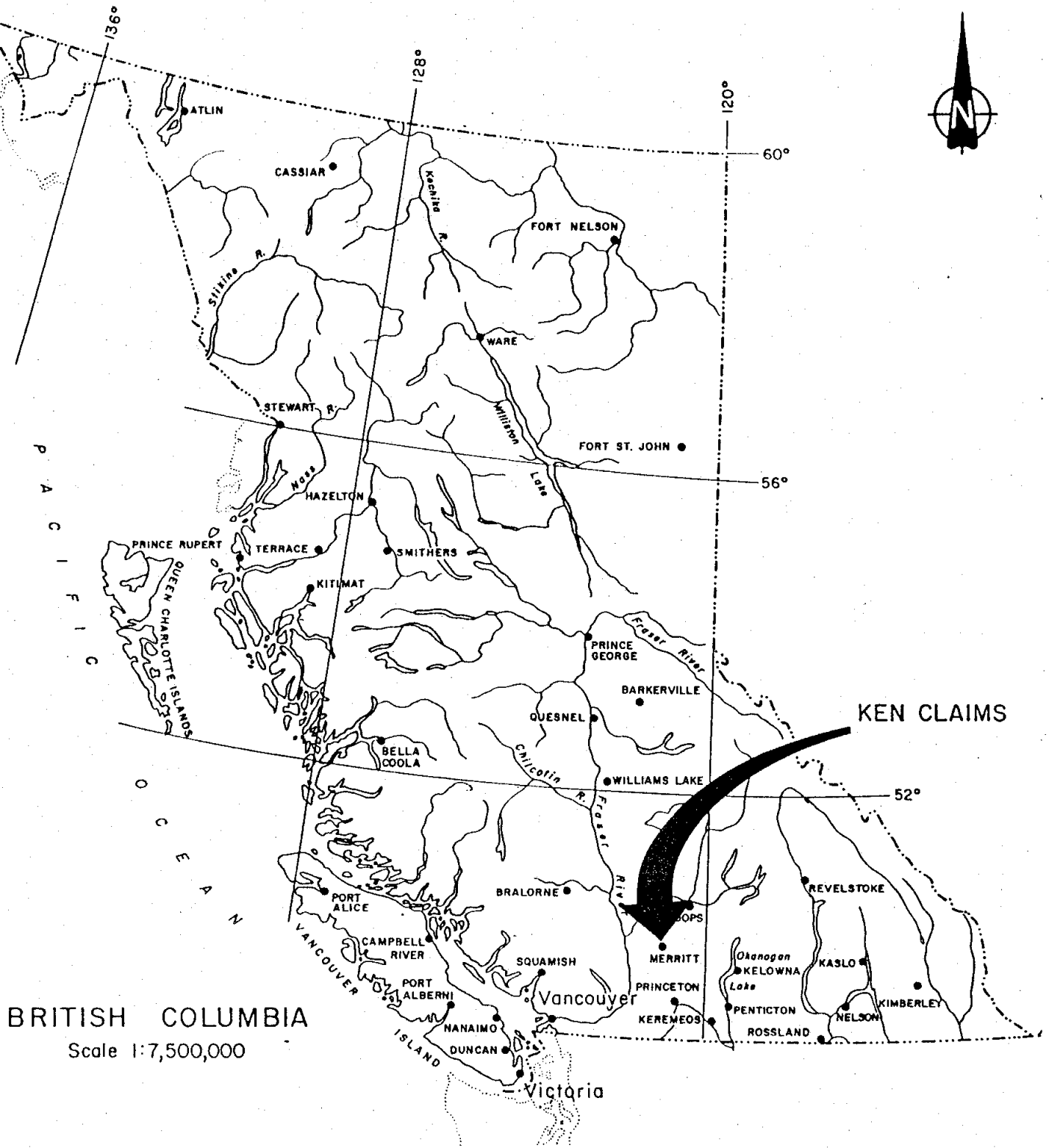
A limited program of line-cutting, and Induced Polarization(IP) and resistivity surveying has been carried out on the Ken Claims, Nicola M.D., B.C. Four zones of anomalous IP effects have been detected, which are probably caused by disseminated metallic sulphide mineralization. Interesting copper assays have been reported from trenches lying along the western margin of one of the IP Zones. Additional geophysical surveying is recommended to further evaluate the property.

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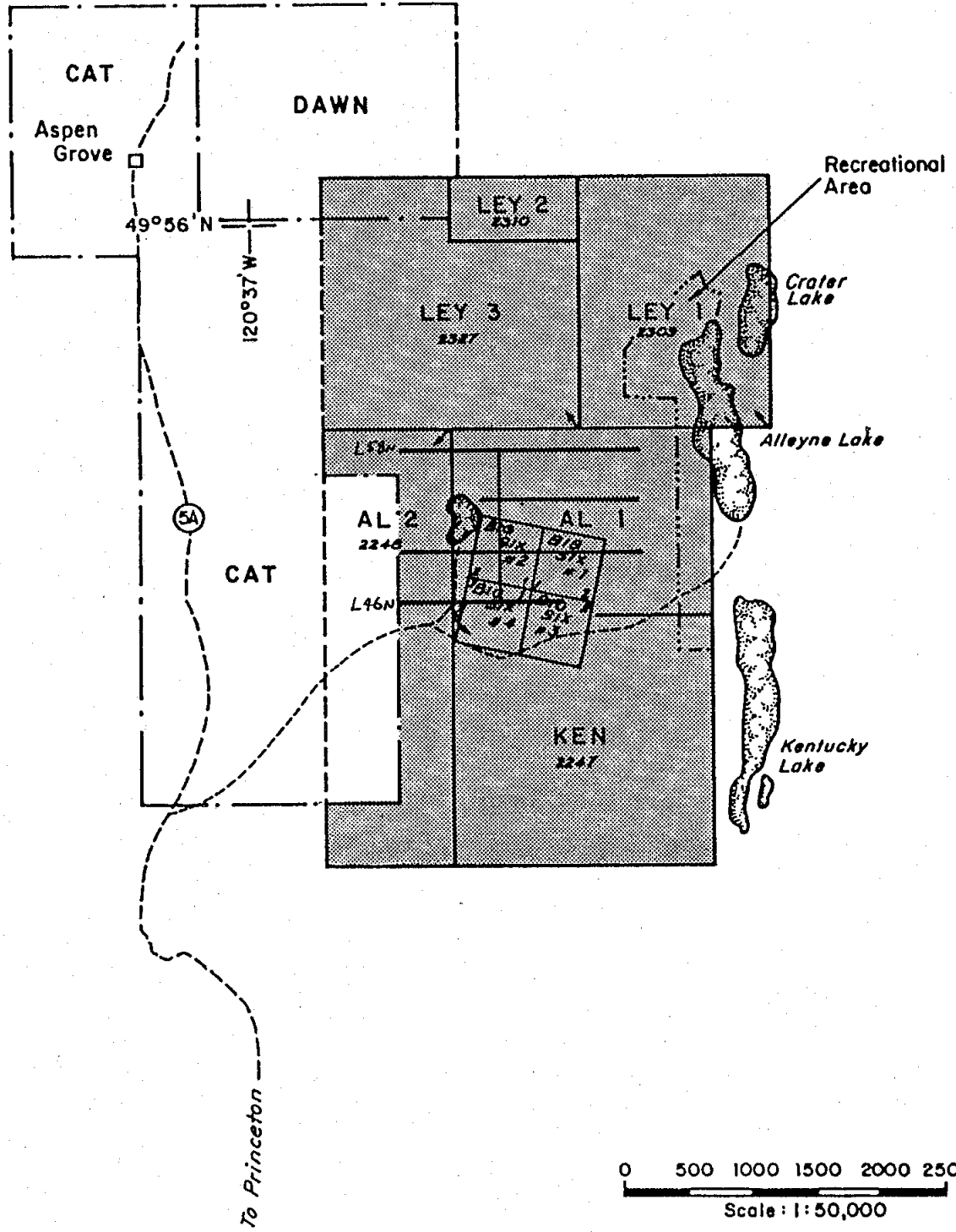
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PART B ILLUSTRATIONS

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IP Pseudosection Data Plots	4 Sections



KEN CLAIMS			
LOCATION MAP			
Originator	Drawn c.d.	Plan No.	FIG.
Revised	Date Oct. '90	NTS	1



KEN CLAIMS			
CLAIMS			
Originator e.v.	Drawn c.d.	Plan No.	FIG. 2
Revised	Date Oct.'90	NTS 92H/15	
- MINEQUEST EXPLORATION ASSOCIATES LTD. -			

1. INTRODUCTION

Induced Polarization(IP) and resistivity surveys have been completed on the Ken Claims, Nicola M.D., British Columbia, on behalf of MineQuest Exploration Associates Ltd. by Pacific Geophysical Ltd. Line-cutting in support of the IP/resistivity work has been carried out by employees of MineQuest Exploration Associates Ltd.

The Ken Claims are located approximately 25 kilometres southeast of Merritt, British Columbia. Access to the property is by BC Highway 5, and then eastward via a system of logging roads that traverse the property.

The Ken Claims are located within the Aspen Grove Mining Camp, which was actively explored for copper between 1901 and 1916, and then again during the copper porphyry search of the 1970's. More recently, Laramide Resources has discovered interesting gold mineralization on properties located both to the north, and to the south of the claims.

The objective of the present survey was to test the Ken Claims for the presence of a large scale copper-gold porphyry, similar to the Copper Mountain deposit, 70 km to the south, and the Mt. Milligan deposit, located approximately 600 kilometres to the north.

An EDA Model IP-6 six channel time domain IP/resistivity receiver using "mode 2 (Td=120ms,M1-M10=10X90ms)", together with a Phoenix Model IPT-1 transmitter and 2.0 kw motor-generator, that produced a two second on/two second off square wave signal of alternating polarity, were used to make all the IP and resistivity measurements. IP effects were recorded as chargeability in milliseconds while apparent resistivity values were normalized in units of ohm-meters. Pole-dipole array was utilized to make all of the measurements using an interelectrode distance of 50 meters and recording four separations at each station.

Line cutting commenced on July 7, 1991, under the supervision of G.Vernon of MineQuest Exploration Assoc.Ltd., and was completed on July 13, 1991. Line cutting totals are as follows: Baseline - 1.2 Kms, crosslines - 8.00 Kms.

Geophysical field operations commenced on July 11, 1991 and were completed on July 13, 1991, under the direction of Grant D. Lockhart, B.Sc., geophysicist. A total of 6.35 Kms. of IP and resistivity data were acquired on the Ken Claims.

2. PROPERTY GEOLOGY

The following geological description of the Ken Claims has been provided by the staff of MineQuest Exploration Assoc. Ltd.;

" The mineral occurrences of Aspen Grove fall within the main trend of the Quesnel Trough, a belt of alkaline volcanic rocks and related intrusives known for their association with Copper-gold Alkaline Porphyry deposits."

" Mapping by Preto (1979) shows a sequence of Triassic volcanics of intermediate and basaltic composition. Subvolcanic diorites are shown on Preto's map at the north and south of the claims, and (as a small plug) in the south centre. Imaged magnetic data suggests the latter may be larger than indicated by the geologic map."

3. DESCRIPTION OF CLAIMS

The Ken Claims consist of the following claims:

<u>Claim Name</u>	<u>Units</u>	<u>Record No</u>	<u>Due Date</u>
Big Six #1	01	2201	April 21, 1992
Big Six #2	01	2202	April 21, 1992
Big 6 #3	01	2203	April 21, 1992
Big 6 #4	01	2204	April 21, 1992
Al 1	12	2246	August 31, 1991
Al 2	14	2248	August 31, 1991
Ken	16	2247	August 19, 1991
Ley 1	12	2309	Dec. 10, 1991
Ley 2	02	2310	Dec. 10, 1991
Ley 3	16	2327	Feb. 08, 1992

The current property ownership is as follows:

MineQuest Exploration Assoc. Ltd.	45.9%
George Vernon	44.1%
Pacific Geophysical Ltd.	10.0%

Property Operator is MineQuest Exploration Associates Ltd.

4. PRESENTATION OF DATA

The IP and resistivity results are shown on the following data plots in pseudo-section format.

<u>Line</u>	<u>Electrode Int.</u>	<u>Reading Int. (outermost electrodes)</u>
5800N	50 Meters	4200E - 6100E
5400N	50 Meters	4850E - 6100E
5000N	50 Meters	4200E - 6100E
4600N	50 Meters	4200E - 5500E

Also included with this report is Plan MKENIP, a 1:5000 scale Induced Polarization Survey plan map, which illustrates the interpreted IP anomalies and zones. These IP anomalies are indicated by bars in the manner shown on the plan map legend, as well as on the pseudo-sections. These bars represent the surface projection of the anomalous zones interpreted from the transmitter and receiver electrode locations when the anomalous values were measured, and should not be taken as representing the exact limits of the causative source.

5. DISCUSSION OF RESULTS

Four anomalous zones have been detected by the induced polarization and resistivity survey carried out on the Ken Claims on four widely spaced lines. Zones A, B, C, & D are illustrated on plan map MKENIP.

Zone A is the largest feature outlined by the present IP/resistivity survey, having dimensions in excess of 500 meters in width, and greater than 1200 meters in length. The trend is undefined towards the north, south and west. Moderately high magnitude chargeability values (13-16 msec) appear to define the core of the response, with lower magnitude readings forming the eastern flank. In general, higher than background apparent resistivity measurements are noted coincident with the anomalous IP effects. Such a signature is probably indicative of disseminated metallic sulphides.

Strongly anomalous IP effects (20-23 msec) form the southernmost part of Zone B. More moderate IP effects are detected as one progresses northward along the zone, until the trend is almost extinguished in the vicinity of Line 5800N. Considerably higher than background apparent resistivity readings are indicated coincident with the interesting IP results. As was the case with Zone A, the source of Zone B is probably disseminated metallic sulphide mineralization.

Moderately to weakly anomalous chargeability values outline Zone C. The source of this response is indicated to be relatively narrow; i.e., less than 50 meters wide, and is apparently somewhat resistive.

In general, weakly anomalous IP effects constitute Zone D; however, the zone is made more significant by the discovery of copper mineralization in old trenches located along the western edge of the trend. A two meter section of the circular trench located immediately north of Line 5400N, Station 5750E is reported to have assayed 2.16% Cu. A sample from this interval, which contained visible chalcocite, was measured by Pacific Geophysical using a Phoenix Model CT-1 IP/resistivity test unit, and returned the following results: IP effect - approx 4.5 msec; resistivity - approx 2500 ohm-m. This resistivity determination agrees quite well with the observed apparent resistivity values recorded on Line 5400N near the trench. The IP effects observed on Line 5400N immediately to the east of the trench are; however, somewhat higher in magnitude, suggesting that higher concentrations of chalcocite (assuming this is the primary source of the IP response) could be present in the centre of Zone D, rather than close to the western edge, where the trench is located.

Depths to the tops of the causative sources of all of the above zones are interpreted to be considerably less than 50 metres.

6. CONCLUSIONS AND RECOMMENDATIONS

Limited induced polarization and resistivity surveying has been carried out on the Ken Claims, on behalf of MineQuest Exploration Associates Ltd. Four zones of anomalous IP effects are interpreted to be present in the data. Higher than normal resistivity values accompany all four IP zones, which points to disseminated metallic mineralization being the cause of all four IP trends.

In the case of IP Zone D, copper mineralization has been found in old trenches that lie on the western margin of this zone. IP testing of a chalcocite sample taken from one trench detected a chargeability value somewhat lower in magnitude than chargeabilities measured in the centre of the IP zone. This suggests that higher copper grades may be present in the core of IP Zone D.

Therefore, additional IP and resistivity work is recommended to further evaluate the Ken Claims. Infill lines should be surveyed in the vicinity of Zone D, using a more detailed 25 meter array to better define possible drill targets.

The present program of reconnaissance IP/resistivity surveying should also be continued in order to more fully delineate some of the larger scale targets already detected, such as IP Zone A, and

IP Zone B.

Pacific Geophysical Ltd.

Paul A. Cartwright

Paul A. Cartwright, P.Geoph.

Dated: Sept. 17, 1991

7. PERSONNEL

Personnel employed during the line-cutting are listed below:

<u>Name</u>	<u>Occupation</u>	<u>Address</u>	<u>Date</u>
G.Vernon	Supervisor	Coquitlam, B.C.	July 7-13, 1991
K.Miller	Assistant	Vancouver, B.C.	July 9-12, 1991
R.Longe	Assistant	West Vancouver, B.C.	July 7-13, 1991
H.Zurloff	Assistant	212-744 W.Hastings St. Vancouver, B.C.	July 9, 1991

The personnel employed during the data acquisition and reporting stages of the Ken Claims IP and resistivity surveys are listed below.

<u>Name</u>	<u>Occupation</u>	<u>Address</u>	<u>Date</u>
G.Lockhart	Geophysicist	Pacific Geophysical	July 11-13/91
H.Zurloff	Technician	212 - 744 W.Hastings	"
S.Milia	Assistant	Vancouver, B.C.	"
D.Sinclair	"	"	"
S.Fleming	"	"	"
B.Page	"	"	"
P.Cartwright	Geophysicist	"	July 17/91 Sept. 4/91 Sept. 16, 17/91

PACIFIC GEOPHYSICAL LTD.

Paul A. Cartwright

Paul A. Cartwright, P.Geoph.

Dated: Sept. 17, 1991

8. STATEMENT OF COST

MineQuest Exploration Assoc.Ltd.
 Ken Claims
 Nicola Mining Division, B. C.
 NTS 92H/15W

IP & resistivity data acquisition

3 Operating Days (6 person crew) @ \$1600	\$ 4800.00
Mobilization-demobilization	\$ 1000.00
Meals & accommodation 3 Days @ \$50 X 6	\$ 900.00
Vehicle Charges	\$ 300.00

IP/resistivity interpretation and reporting \$ 500.00

Line-cutting charges (MineQuest)

Labour charges - 17 person days	\$ 3462.50
Meals & accommodation	\$ 837.20
Vehicle rental	\$ 610.57

Total	<u>\$12410.27</u>
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Pacific Geophysical Ltd.

Paul A. Cartwright

Dated: Sept. 17, 1991

Paul A. Cartwright, P. Geoph.

9. CERTIFICATE

I, Paul A. Cartwright, of the City of Vancouver, Province of British Columbia, do hereby certify:

1. I am a geophysicist residing at 4238 West 11th Avenue, Vancouver, British Columbia.
2. I am a graduate of the University of British Columbia, with a B.Sc. degree (1970).
3. I am a member of the Society of Exploration Geophysicists, the European Society of Exploration Geophysicists and the Canadian Society of Exploration Geophysicists.
4. I have been practising my profession for 21 years.
5. I am a Professional Geophysicist licensed in the Province of Alberta.

Dated at Vancouver, British Columbia this 17th day of September, 1991.



Paul A. Cartwright, P. Geoph.

10. CERTIFICATE

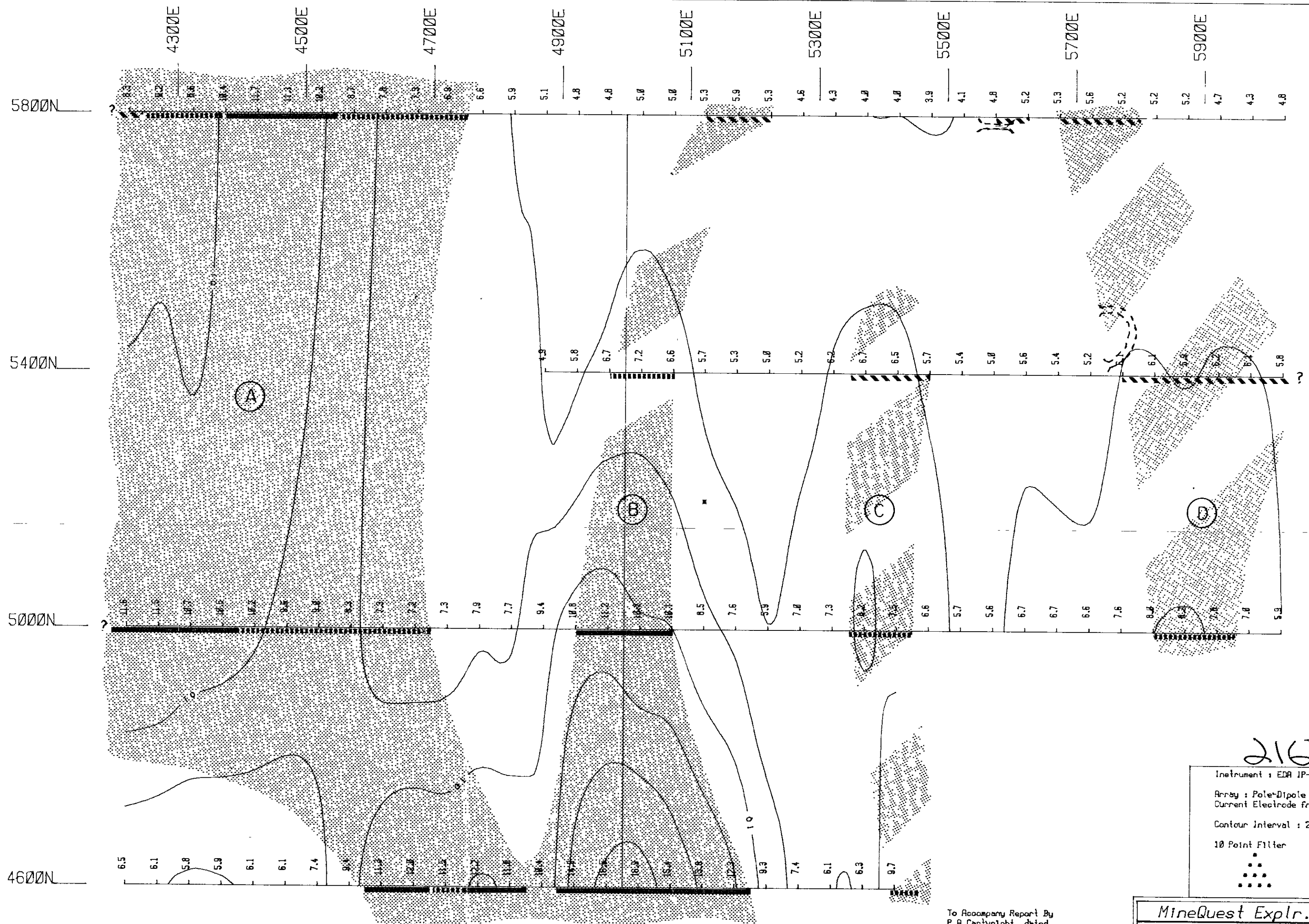
I, Grant D. Lockhart, of the City of Vancouver, Province of British Columbia, do hereby certify:

1. I am a geophysicist residing at 301 - 2232 West 5th Avenue, Vancouver, B.C.
2. I am a graduate of the University of British Columbia, with a B.Sc. degree (1987).
3. I am a member of the Society of Exploration Geophysicists, and the Canadian Society of Exploration Geophysicists.
4. I have been practising my profession for four years.

Dated at Vancouver, British Columbia this 17th day of September, 1991.

Grant D. Lockhart

GRANT D. LOCKHART, B.Sc. ^{per} *Mo*



To Accompany Report By
P.A. Cartwright, dated

Anomaly Class: Strong
 Moderate
 Weak

Outline of Anomalous IP Zone

21678

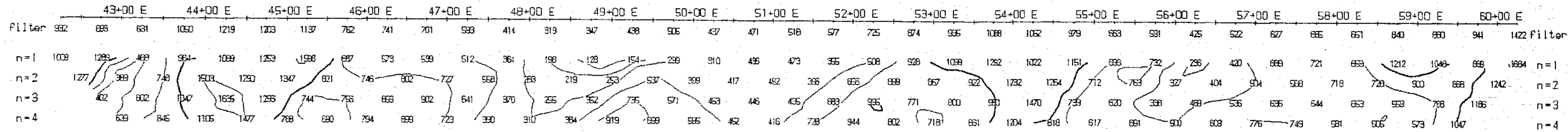
Instrument : EDA IP-6
 Array : Pole-Dipole 50m n=1,4
 Current Electrode from the West
 Contour Interval : 2.0 mSec
 10 Point Filter

MineQuest Explr. Assoc. Ltd.

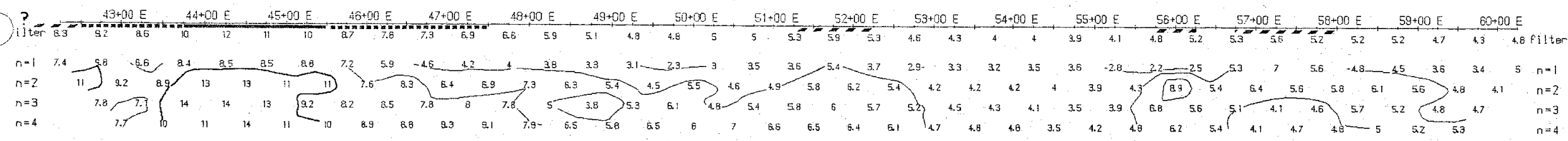
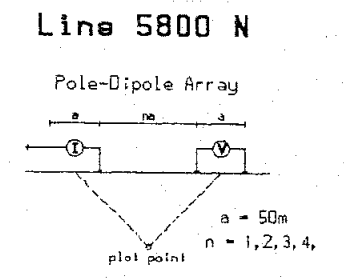
INDUCED POLARIZATION SURVEY

KEN CLAIM GROUP, Nicola M.D., B.C.
 BASELINE AZIMUTH : 0 Deg.

SCALE = 1:5000 DATE : JULY 1991
 SURVEY BY : GDL/HFZ NTS : 82H/15
 PLAN : MKENIP
 Pacific Geophysical Ltd.



RESISTIVITY
(ohm-m)



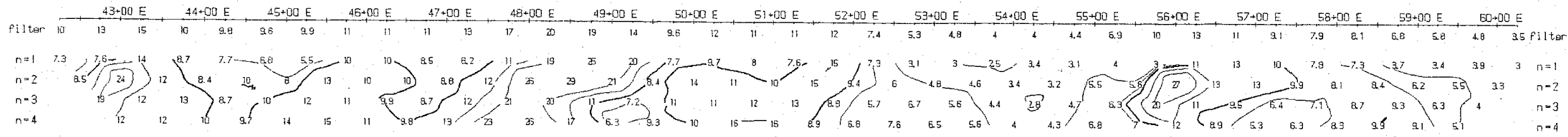
OBS. CHARGEABILITY
(msec)

Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instrument: EDA IP-6
Frequency: 2s ON / 2s OFF
Operators: GDL/HFZ

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Weak increase in polarization



METAL FACTOR
(cp/res = 1000)

MineQuest Explr. Associates Ltd.

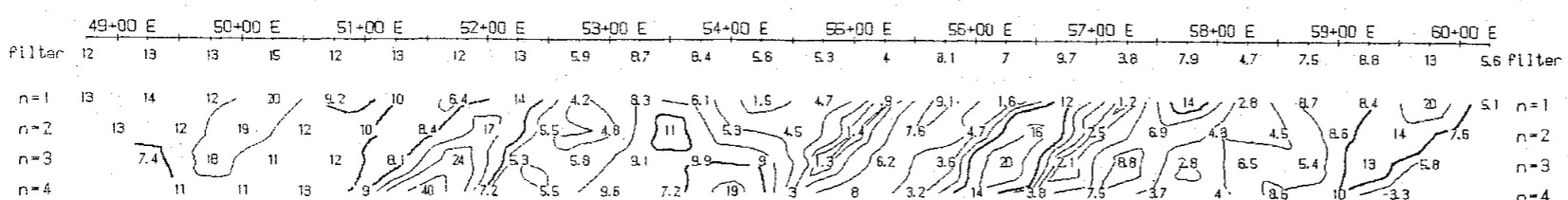
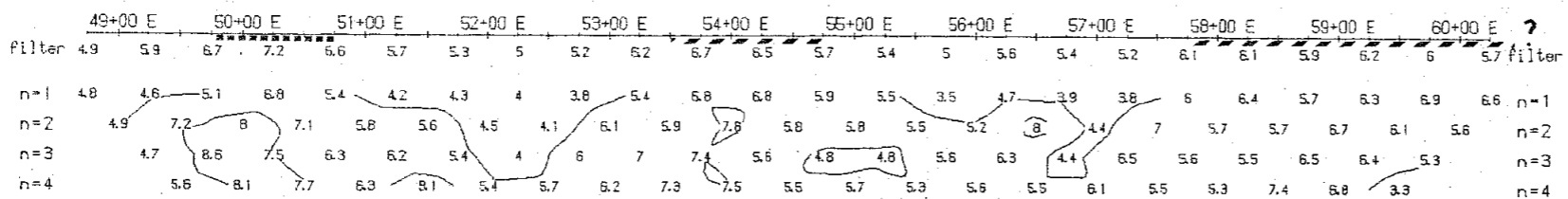
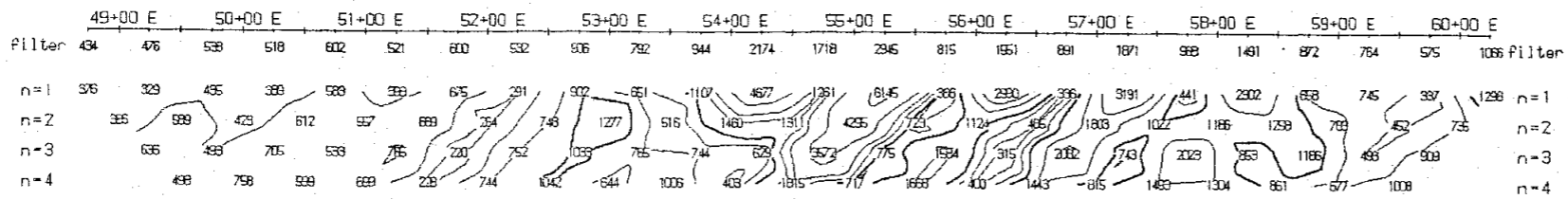
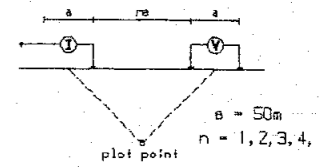
INDUCED POLARIZATION SURVEY
Ken Claim Group

Date: July 1991 NTS: 924/15
Interpretation by: PAC Scale 1:5000

Pacific Geophysical

Line 5400 N

Pole-Dipole Array



RESISTIVITY (ohm.m)

OBS. CHARGEABILITY (msec)

METAL FACTOR (1p/res * 1000)

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,...

Instrument : EDA IP-6
 Frequency : 2s ON / 2s OFF
 Operators : GDL/HFZ

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Weak increase in polarization

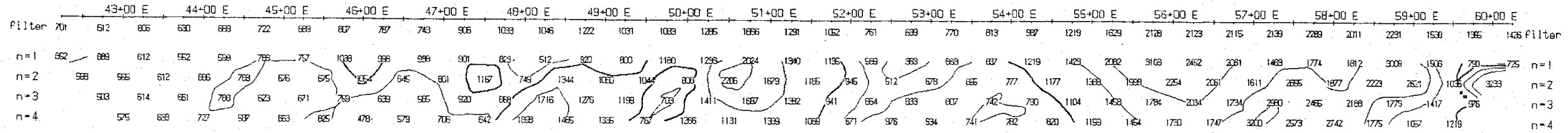
MineQuest Explr. Associates Ltd.

INDUCED POLARIZATION SURVEY

Ken Claim Group

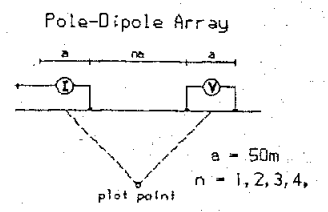
Date: July 1991 NTS: 92H/15
 Interpretation by: PAC Scale 1:5000

Pacific Geophysical



RESISTIVITY
(ohm.m)

Line 5000 N

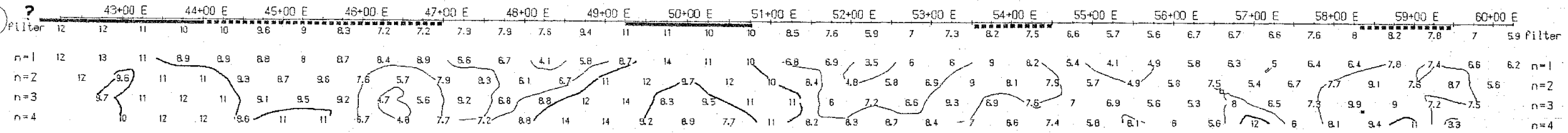


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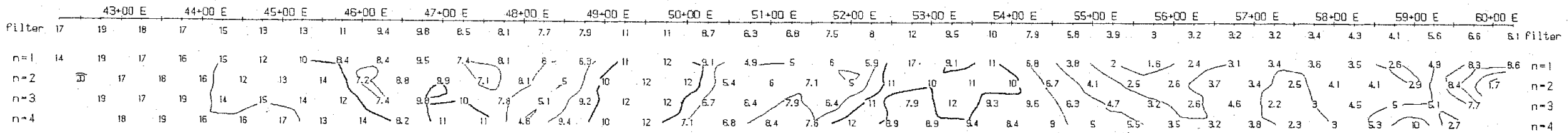
Instrument : EDA IP-6
Frequency : 2s ON / 2s OFF
Operators : GDL/HFZ

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Weak increase in polarization



GCS. CHARGEABILITY
(msec)



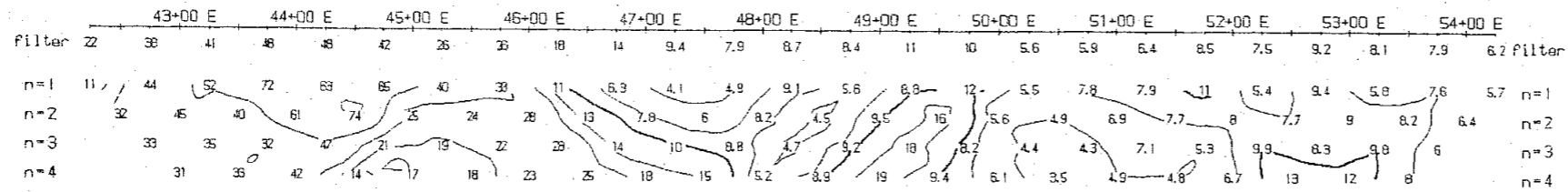
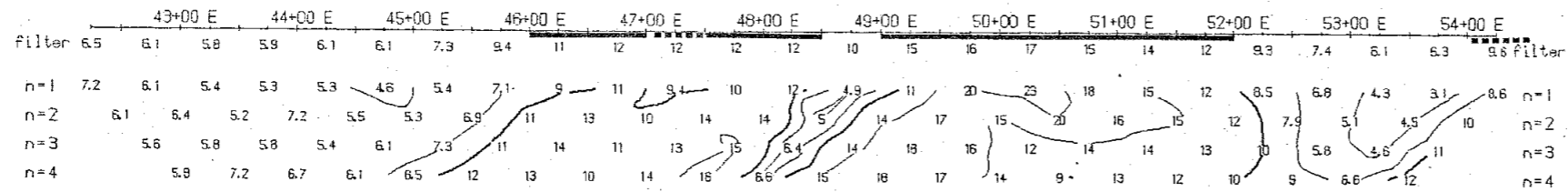
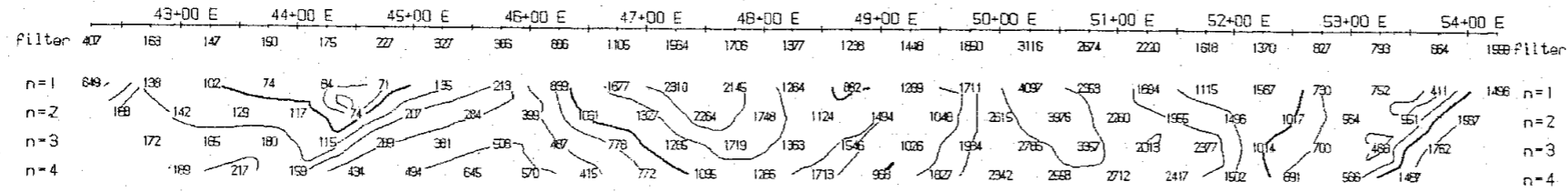
METAL FACTOR
(ip/res * 1000)

MineQuest Explr. Associates Ltd.

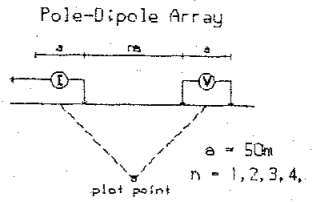
INDUCED POLARIZATION SURVEY
Ken Claim Group

Date: July 1991 NTS: 92H/15
Interpretation by: PAC Scale 1:5000

Pacific Geophysical



Line 4600 N



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instrument : EDA IP-6
Frequency : 2s ON / 2s OFF
Operators : GDL/HFZ

INTERPRETATION

- Strong increase in polarization
- Moderate increase in polarization
- Weak increase in polarization

MineQuest Explr. Associates Ltd.

INDUCED POLARIZATION SURVEY Ken Claim Group

Date: July 1991 NTS: 92H/15
Interpretation by: PAC Scale 1:5000

Pacific Geophysical