

LOG NO: 09/04	RD.
ACTION:	
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PACIFIC GEOPHYSICAL LIMITED

REPORT ON THE  
INDUCED POLARIZATION AND RESISTIVITY SURVEY

ON THE  
NEW GALAXY GROUP CLAIMS  
KAMLOOPS MINING DIVISION, BRITISH COLUMBIA  
LATITUDE : 50 37' N      LONGITUDE : 120 24' W  
N.T.S. 92 I/9W

FOR  
OPERATOR : GETCHELL RESOURCES INC.  
OWNER : ABERMIN CORPORATION

BY  
MICHAEL J. CORMIER, B.Sc.  
Geophysicist

AND  
PAUL A. CARTWRIGHT, P.Geoph.  
Geophysicist

DATED: June 6, 1990

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,241

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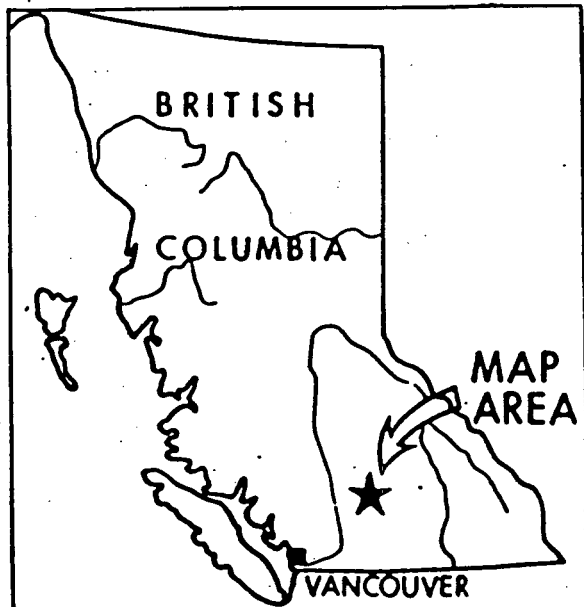
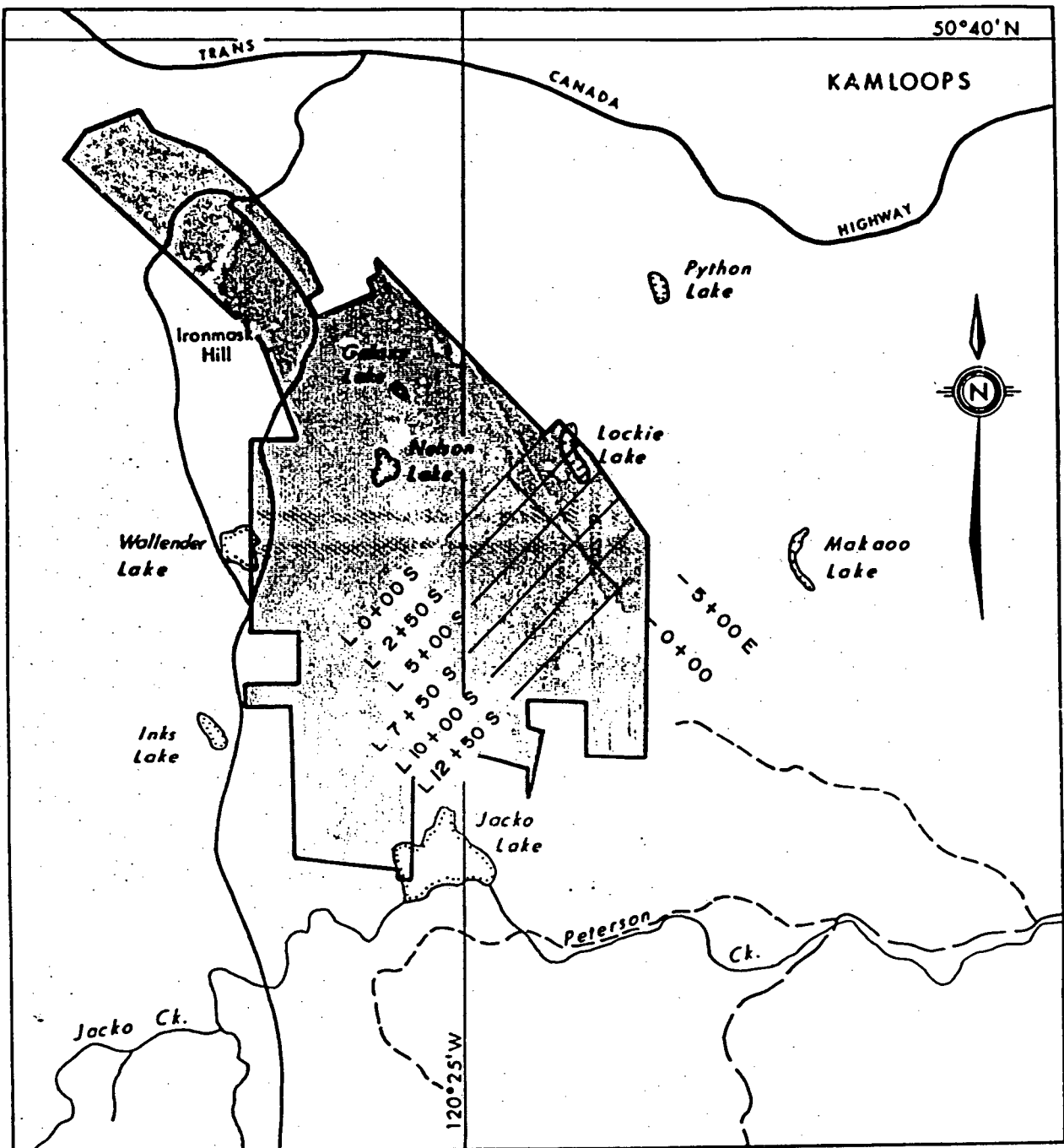


FIGURE 1

GETCHELL RESOURCES INC.

PROPERTY LOCATION  
 GALAXY PROJECT  
 KAMLOOPS MINING DIVISION

Date MAY 1990	Scale 1:50 000	NTS 92I/9	Drwg No. 1
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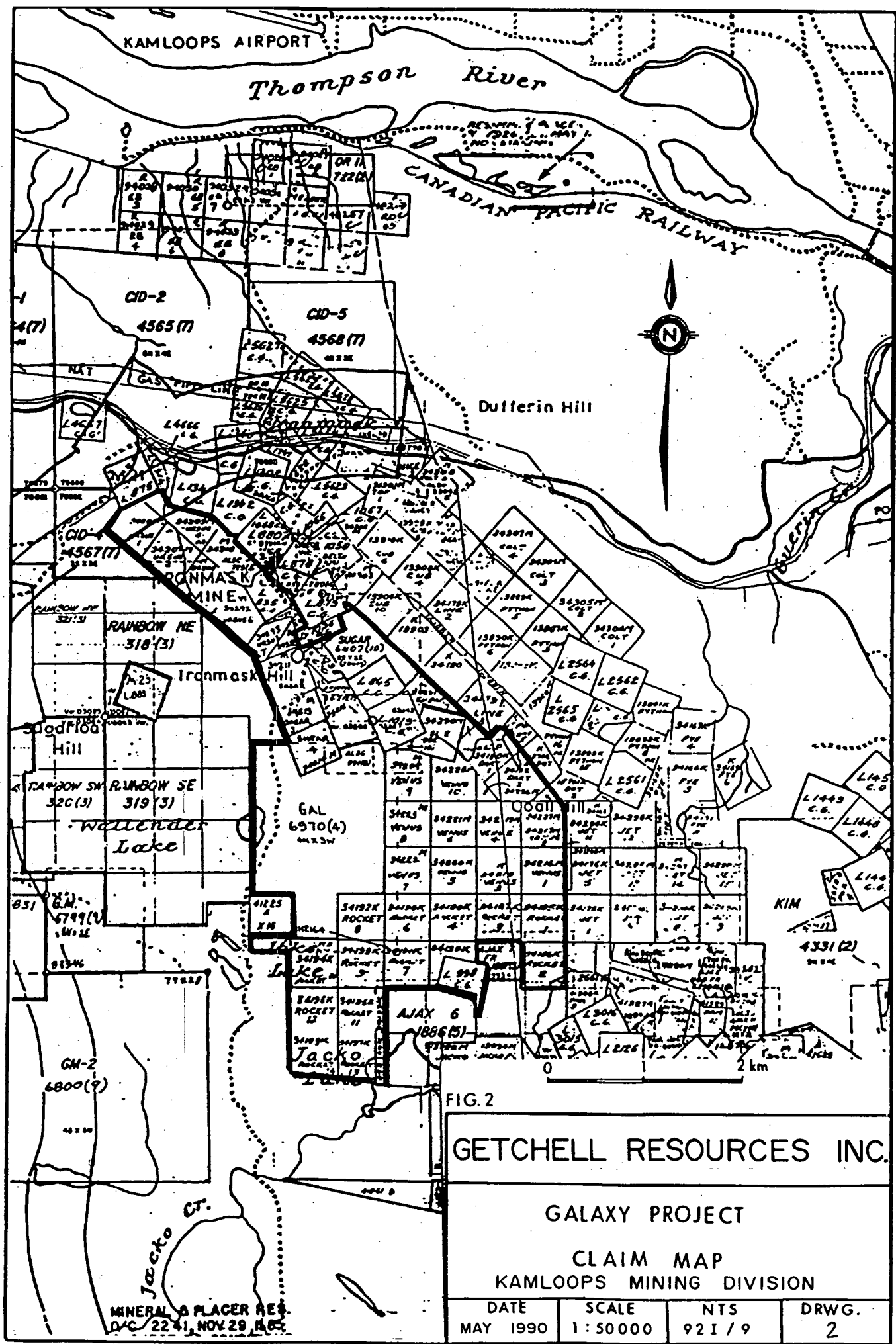


FIG. 2

<b>GETCHELL RESOURCES INC.</b>			
<b>GALAXY PROJECT</b>			
<b>CLAIM MAP</b>			
<b>KAMLOOPS MINING DIVISION</b>			
DATE	SCALE	NTS	DRWG.
MAY 1990	1:50000	921/9	2

MINERAL & PLACER RES.  
D/C 2241, NOV 29, 1985

## 1. INTRODUCTION

An Induced Polarization (IP) and resistivity survey has been completed on the New Galaxy Group of Claims on behalf of Getchell Resources Inc., operator for Abermin Corporation, by Pacific Geophysical Ltd.

The Galaxy property is located approximately 8 kilometers southwest of Kamloops, B.C. The geophysical grid area is accessible via the Trans Canada Highway, 8 kilometers west of Kamloops then south on the Lac Le Jeune Highway for approximately 2 kilometers. Finally, a system of mining and ranching roads leads southeast for approximately 3 kilometers.

In general, the area has been widely explored for copper (often occurring with gold and silver) going back as far as the late 1800's. Typically, the deposits discovered (Ajax, Iron Mask, Evening Star) have not been significant producers. The exception to this pattern, however, is the Afton Mine discovered in 1971. The New Galaxy claim group has been subjected to IP, VLF-EM and magnetic surveys conducted by Abermin Corporation in April of 1988. Later that year, Abermin drilled thirteen holes totalling 1,942.69 meters.

The objective of the present geophysical surveying was to further evaluate the grid area for a possible porphyry system.

An EDA Model IP-6 six channel time domain IP/resistivity

receiver using "mode 3", together with a Phoenix Model IPT-1 transmitter, that produced a two second on/two second off square wave signal of alternating polarities, 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 recording five separations at each station. In addition, measurements using an interelectrode distance of 100 meters, and recording five separations at each station, were made on Line 500S.

IP field work took place during the period May 15, 1990 to May 18, 1990, under the direction of Michael J. Cormier, geophysicist. Other crew members included Grant D. Lockhart, geophysicist, Martin St. Pierre, geophysicist and Matthew Cormier. Certificates of qualification are included in this report.

## 2. DESCRIPTION OF CLAIMS

The New Galaxy Group consists of 45 two post claims and 4 modified grid claims, together totalling 64 units. Details are as follows:

Claim No.	Units	Record No.	Expiry Date
Gal	12	6970	1 April 1999
Sugar	4	6407	21 October 1999
GL 1-2	2	991-992	22 August 1999
Ursus 1-3, 4FR, 5FR	5	34206-34210	1 September 1999

Claim No.	Units	Record No.	Expiry Date
Ursus 6, 7FR	2	34292-34293	19 September 1999
Shear 1-4, 5FR	5	34211-34215	1 September 1999
Shear 6	1	34290	19 September 1999
Shear 7FR	1	34291	19 September 1999
Venus 1	1	34216	1 September 1999
Venus 2-9	8	34217-34224	1 September 1999
Venus 10, 11FR	2	34225-34226	1 September 1999
Dart 1-2	2	34181-34182	30 August 1999
Dart 3	1	34227	1 September 1999
Rocket 1, 2FR, 3	3	34185-34187	30 August 1999
Rocket 4-16	13	34188-34200	30 August 1999
Key 1FR	1	34183	30 August 1999
Key 2FR	1	34184	30 August 1999

Abermin Corporation of Vancouver, B.C. is the owner of these claims. Getchell Resources Inc. is the current operator of the claims.

### 3. PROPERTY GEOLOGY

The following geological description of the survey area has been provided by Gary Belik of Getchell Resources Inc.:

"The New Galaxy Group is underlain predominantly by the Iron Mask Batholith. This Triassic - Jurassic batholith is an elongate northwest trending body composed of two plutons; the Iron Mask and the later Cherry Creek. The Cherry Creek pluton consists wholly of the Cherry Creek phase. The intrusion is an alkaline complex that has evolved from diorite in the early Iron Mask Hybrid phase to locally syenitic in the last Cherry Creek phase.

The batholith has been emplaced and is comagmatic with the Upper Triassic Nicola Group. This group comprises andesitic basaltic volcanics and accompanying volcanoclastics. Locally picrite intrusives are present possibly related to the Nicola Group.

Unconformably overlying this batholith-volcanic suite are volcanics and sediments of the Tertiary Kamloops Group.

Major northwest, north and northeast trending faults have

controlled and modified the emplacement of various units of the batholith. Post batholith movement on marginal faults have resulted in graben-like structures with the country rock on the down thrown side (Northcote, 1977).

Numerous copper (+/- gold) prospects, including the Afton Deposit, are located throughout the batholith. The mineralization is structurally controlled; especially important are the northwest trending faults. It is likely related to hydrothermal activity during the final Cherry Creek phase. Primary mineralization consists of chalcopyrite and bornite veinlets and fracture coatings. Later supergene modification has generated a chalcocite - native copper assemblage. Gold and silver are present in both types."

#### 4. PRESENTATION OF DATA

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

Line	Electrode Interval	Reading Interval
0	50 meters	700W - 400E
250S	50 meters	700W - 400E
500S	50 meters	900W - 500E
500S	100 meters	900W - 500E
750S	50 meters	1200W - 500E
1000S	50 meters	1200W - 400E
1250S	50 meters	1200W - 100E

The anomalies interpreted to be present are illustrated on these pseudo-sections in the manner shown on the legend. A contoured, 1:5000 scale plan map with posted  $n=2$  chargeability values labelled MGALI2 is also included with this report. The above mentioned anomalies are shown on this map, as well as a zoned, line to line interpretation of the data. The nature of the anomalization and zoning is shown in the legend. Also enclosed is a contoured, 1:5000 scale plan map of the posted  $n=2$  apparent resistivity values. This map is labelled MGALR2.



## 5. DISCUSSION OF RESULTS

For the following discussion of results, the reader is referred to the 1:5000 scale plan map labelled MGALI2. Here, the zones interpreted to be present are labelled alphabetically and illustrated along with their constituent anomalies.

The discussion which follows is based primarily on the chargeability data, although it should be noted that a fairly major apparent resistivity low does traverse the geophysical grid at approximately 100W. The positioning of this feature is consistent with the regional structure and is perhaps important from a sulphide emplacement point of view.

Another generality which should be pointed out is that while chargeability values deemed to be anomalous are fairly weak (on the order of 3 - 6 milliseconds), they are consistent with the relatively low concentrations of disseminated sulphides which characterize porphyry systems.

### Zones A,B,C

Zones A,B and C are the most prominent features outlined by the present survey. They exhibit relatively high chargeability values (to slightly lesser extent on Zone C) whose causative sources are generally felt to be well within 50 meters of surface, although in the case of Zones A and B the sources appear to be getting somewhat deeper at the southern end of the grid (Line 1000S, Line

1250S). The full extent of all three zones remain undefined to the south, while Zones A and C are open to the north.

#### Zones D,E,F

Zones D,E and F exhibit IP effects which are somewhat lower in magnitude than the zones discussed above. Again, the disseminated sulphides felt to be the cause of the anomalous readings are thought to extend within 50 meters of surface. It should be pointed out, though, that the present survey lines are not long enough to adequately assess Zones E and F. Zones D,E and F all remain open to both the north and south. Zones E and F are unbounded to the west and east respectively.

#### 6. SUMMARY AND RECOMMENDATIONS

Induced Polarization and resistivity survey coverage has been carried out on the New Galaxy Claim Group, southwest of Kamloops, B.C. on behalf of Getchell Resources Inc.

The IP/resistivity survey data has been interpreted, resulting in the six zones of interest illustrated on plan map MGALI2 and identified alphabetically. The source of their constituent anomalies is felt to be fairly low concentrations of disseminated metallic sulphides. This conclusion is consistent with the stated survey objective; i.e. to locate metallic sulphides possibly

associated with a porphyry system.

Broadly speaking, the interpreted zones may be viewed in two groups - A,B,C and D,E,F.

Zones A,B and C are located in the middle of the survey grid. They are characterized by elevated chargeability values, the source of which is generally felt to be within 50 meters of surface (except in the case of the southern end of Zones A and B, where more cover is felt to be present). It is recommended that Zone A be tested by several vertical drillholes across the interval 450W to 300W on Line 250S. In the event that results proved encouraging, further drilling on Zones B and C could be undertaken.

Zones D,E and F display weaker chargeability than the aforementioned zones but, again, are felt to be caused by polarizable material within 50 meters of surface. It should be mentioned that only the edges of Zones E and F appear to have been tested by the present survey. Therefore, it is also recommended that more IP/resistivity data be collected on additional lines, both north and south of the present geophysical grid, as well as on eastern and western extensions of the existing survey lines. This would define the full extent of Zones A,B,C and E as well as properly investigating the character and extent of Zones E and F. Further decisions regarding drilling and trenching could then be made.

PACIFIC GEOPHYSICAL LTD.

*Michael J. Cormier*

MICHAEL J. CORMIER, B.Sc.  
Geophysicist

*Paul A. Cartwright*

PAUL A. CARTWRIGHT, P.Geoph.  
Geophysicist

Dated: June 6, 1990.

7. PERSONNEL

## FIELD CREW:

M. St. Pierre, 8621 Tulsey Crescent East, Surrey, B.C.

G. Lockhart, 301 - 2232 West 5th Avenue, Vancouver, B.C.

M. R. Cormier, 666 W. Keith Road, North Vancouver, B.C.

M. J. Cormier, 5512 Kings Road, Vancouver, B.C.

## DRAFTSMAN:

G. Lockhart, 301 - 2232 West 5th Avenue, Vancouver, B.C.

## CONSULTANTS:

M. J. Cormier, 5512 Kings Road, Vancouver, B.C.

P. A. Cartwright, 4238 West 11th Avenue, Vancouver, B.C.

PACIFIC GEOPHYSICAL LTD.



Paul A. Cartwright, P.Geoph.  
Geophysicist

Dated: June 6, 1990.

8. STATEMENT OF COSTInduced Polarization and Resistivity Survey

Crew: M. St. Pierre, G. Lockhart, M.R. Cormier, M.J. Cormier

Period: May 15, 1990 to May 18, 1990.

3.75 Operating Days @ \$1350.00 .....	\$5062.50
Mobilization - Demobilization .....	<u>1000.00</u>
	\$6062.50

<u>Interpretation, Report Preparation, and</u> <u>Report Reproduction Costs .....</u>	<u>\$ 700.00</u>
	<u>\$6762.50</u>

PACIFIC GEOPHYSICAL LTD.

*Paul A. Cartwright*PAUL A. CARTWRIGHT, P.Geoph.  
Geophysicist

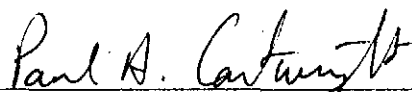
Dated: June 6, 1990.

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 4234 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 Association of Exploration Geophysicists and the Canadian Society of Exploration Geophysicists.
4. I have been practicing my profession for 20 years.
5. I am a Professional Geophysicist licensed in the Province of Alberta.
6. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Getchell Resources Inc. or any affiliates.
7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver, British Columbia this 6th day of June, 1990.



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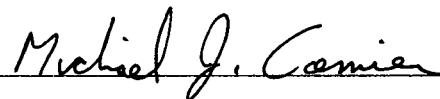
PAUL A. CARTWRIGHT, P.GEOPH.

10. CERTIFICATE

I, Michael J. Cormier, of the City of Vancouver, Province of British Columbia, do hereby certify:

1. I am a geophysicist residing at 5512 Kings Road, Vancouver, British Columbia.
2. I am a graduate of McGill University, Montreal, Quebec with a B.Sc. degree (1981).
3. I have been practising my profession for 9 years.
4. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Gatchell Resources Inc. or any affiliates.
5. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver, British Columbia this 6th day of June, 1990.



MICHAEL J. CORMIER, B.Sc.



11. 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 practicing my profession for three years.
5. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Getchell Resources Inc. or any affiliates.
6. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver, British Columbia this 6th day of June, 1990.

Grant D. Lockhart

GRANT D. LOCKHART, B.Sc.

PEAR  
MIC

12. CERTIFICATE

I, Martin St. Pierre, of the City of Surrey, Province of British Columbia, do hereby certify:

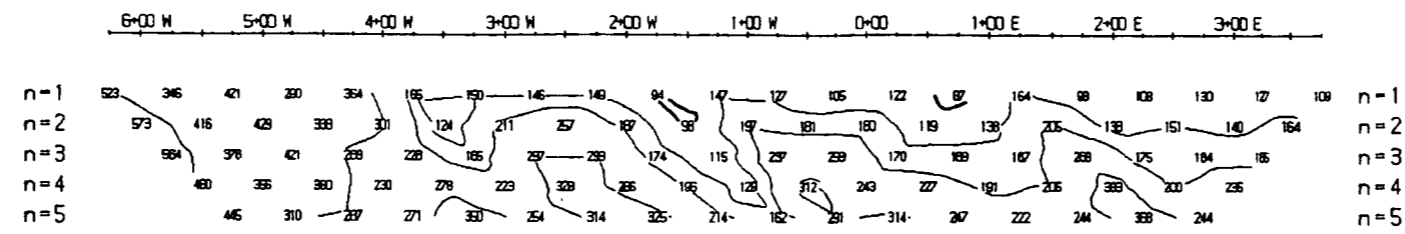
1. I am a geophysicist residing at 8621 Tulsey Crescent East, Surrey, British Columbia.
2. I am a graduate of McGill University, Montreal, Quebec with a B.Sc. degree (1984).
3. I have been practicing my profession for six years.
4. I have no direct or indirect interest, nor do I expect to receive any interest, directly or indirectly, in the property or securities of Gatchell Resources Inc. or any affiliates.
5. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Vancouver, British Columbia this 6th day of June, 1990.

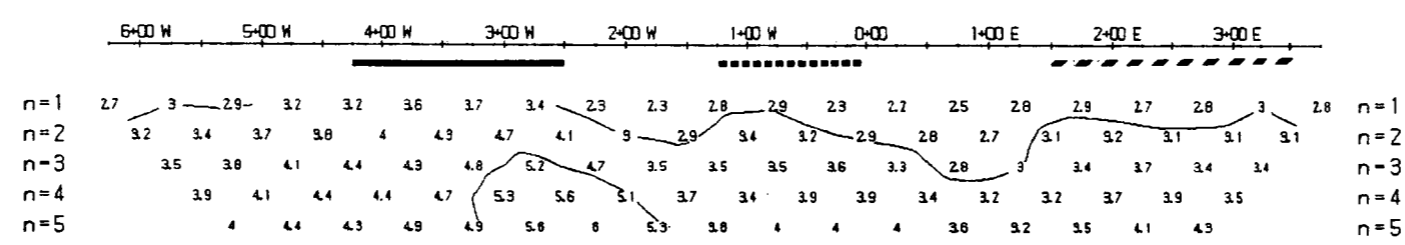
Martin St. Pierre

MARTIN ST. PIERRE, B.Sc.

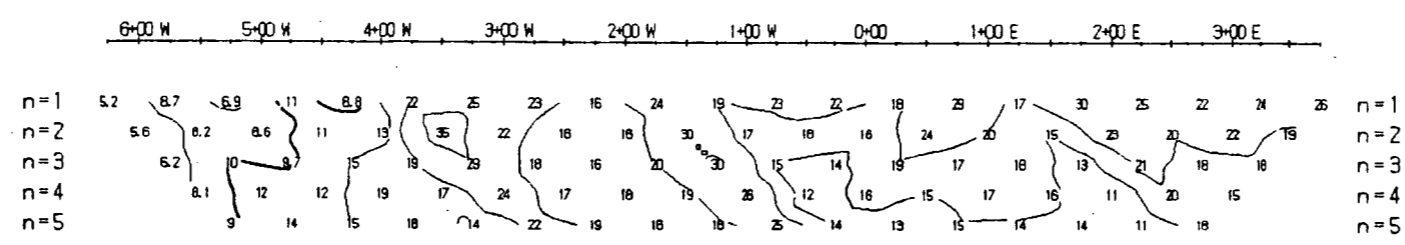
PER  
MIC



RESISTIVITY  
(ohm.m)

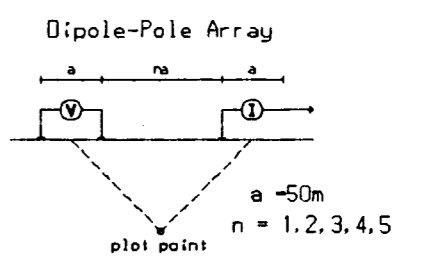


OBS. CHARGEABILITY  
(msec)



METAL FACTOR  
(ip/res \* 1000)

### Line 0



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

Instrument : EDA IP 6  
Frequency : 2s ON / 2s OFF  
Operators : MJC

#### INTERPRETATION

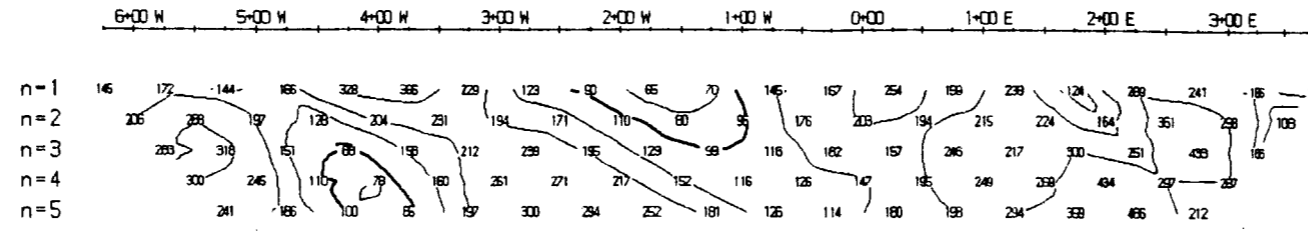
- Strong increase in polarization
- Moderate increase in polarization
- Weak increase in polarization

GETCHELL RESOURCES INC.

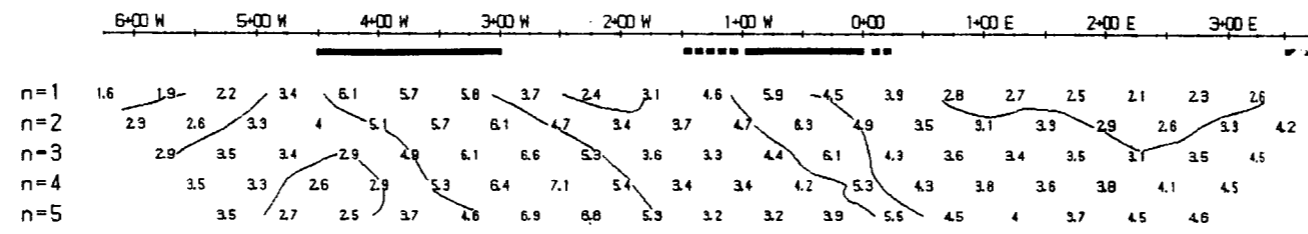
INDUCED POLARIZATION SURVEY  
Line 0  
Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
NTS: 92 1/9W

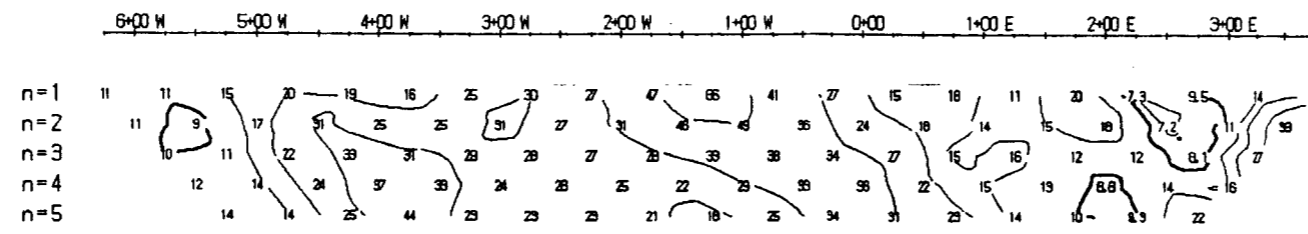
Pacific Geophysical



RESISTIVITY  
(ohm-m)



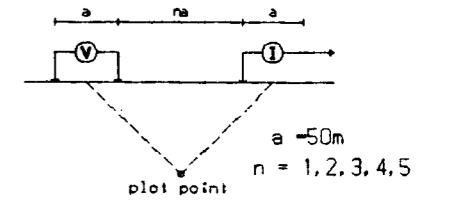
OBS. CHARGEABILITY  
(msec)



METAL FACTOR  
( $i_p/res \times 1000$ )

### Line 250 S

Dipole-Pole Array



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

Instrument : EDA IP 6  
Frequency : 2s ON / 2s OFF  
Operators : MJC

#### INTERPRETATION

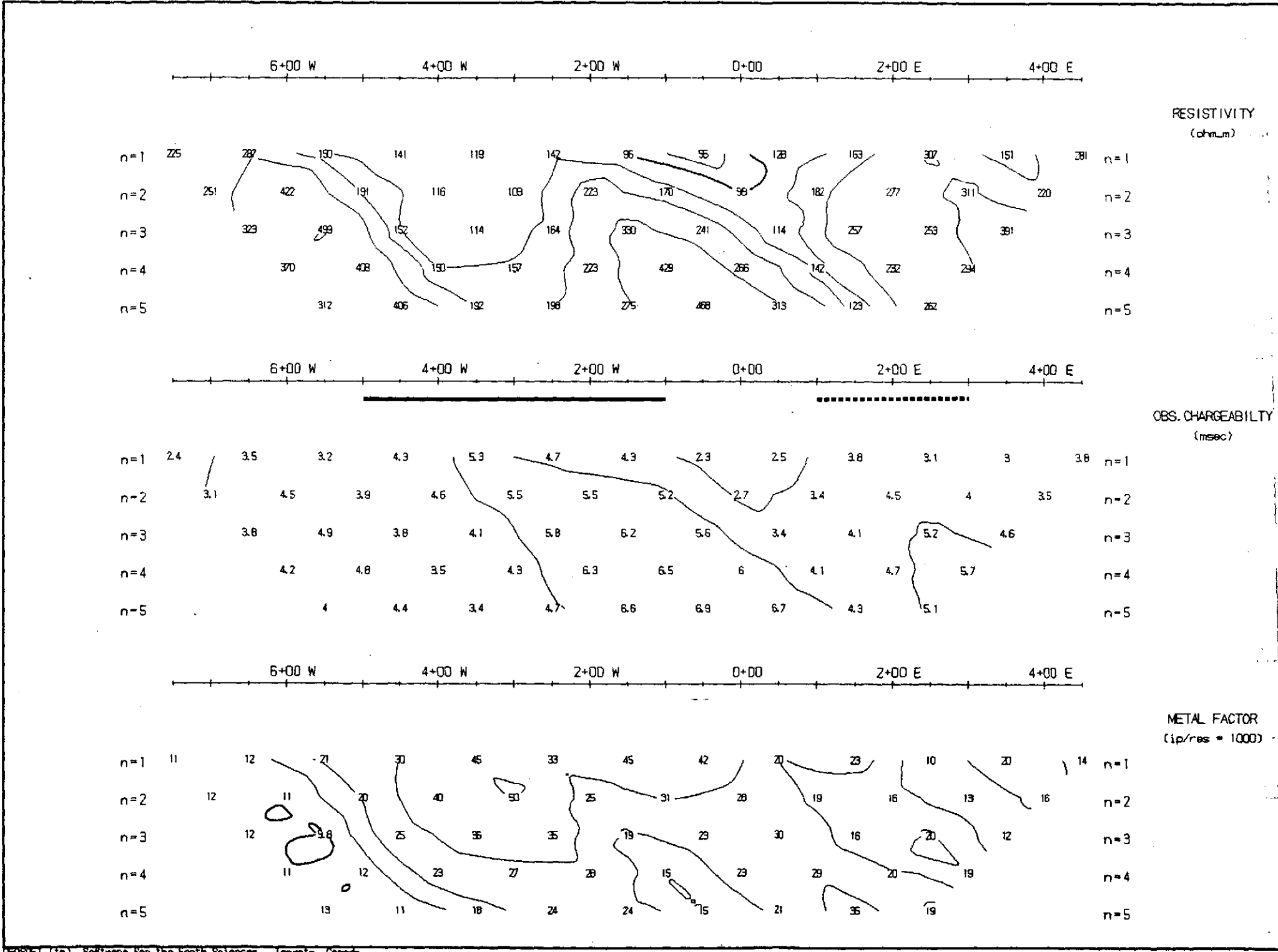
- ████████ Strong increase in polarization
- Moderate increase in polarization
- //// Weak increase in polarization

GETCHELL RESOURCES INC.

INDUCED POLARIZATION SURVEY  
Line 250 S  
Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
NTS: 92 1/9W

Pacific Geophysical



### Line 500 S

Dipole-Pole Array

RESISTIVITY (ohm-m)

OBS. CHARGEABILITY (msec)

METAL FACTOR (ip/res = 1000)

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

Instrument : EDA IP 6  
 Frequency : 2s ON / 2s OFF  
 Operators : MJC

INTERPRETATION

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

GETCHELL RESOURCES INC.

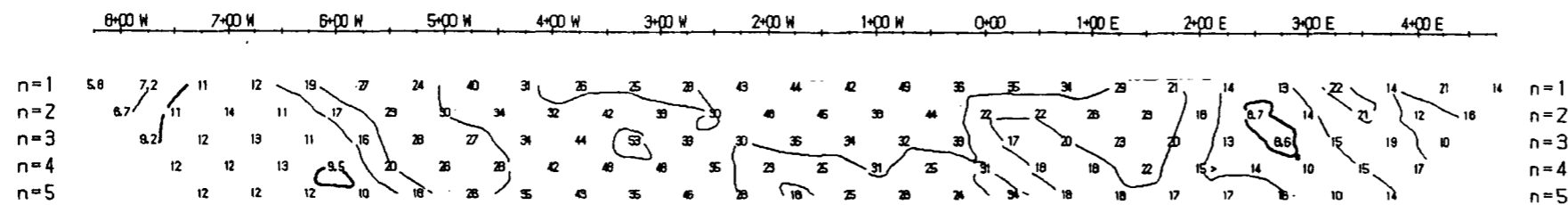
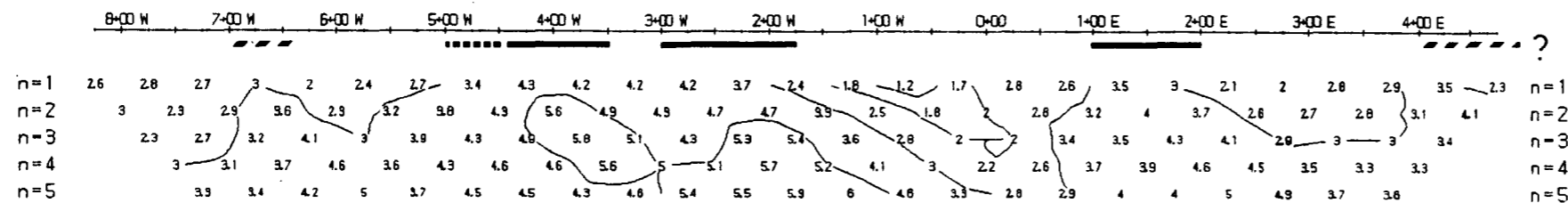
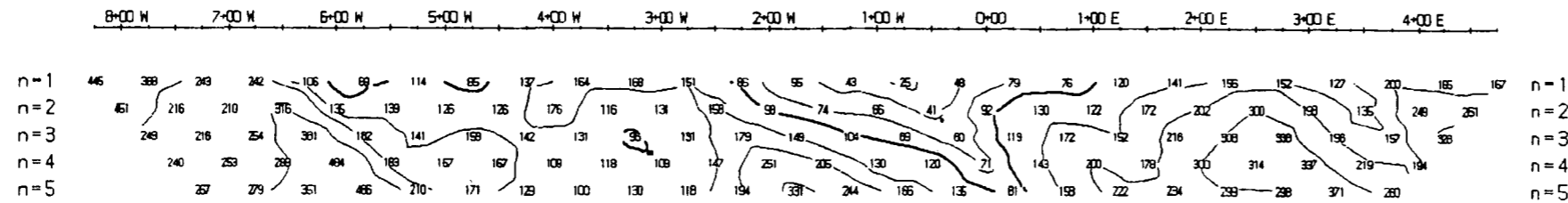
INDUCED POLARIZATION SURVEY

Line 500 S  
 Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
 NTS: 92 1/9W

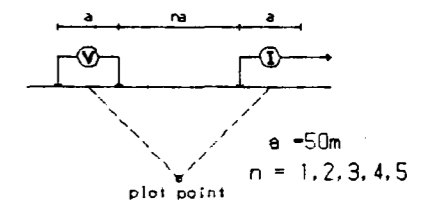
Pacific Geophysical

GEOSURF (tm) Software for the Earth Sciences, Toronto, Canada



### Line 500 S

Dipole-Pole Array



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

Instrument : EDA IP 6  
Frequency : 2s ON / 2s OFF  
Operators : MJC

#### INTERPRETATION

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

GETCHELL RESOURCES INC.

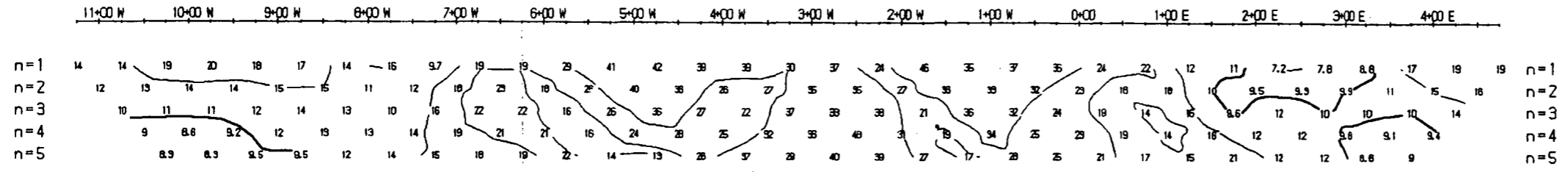
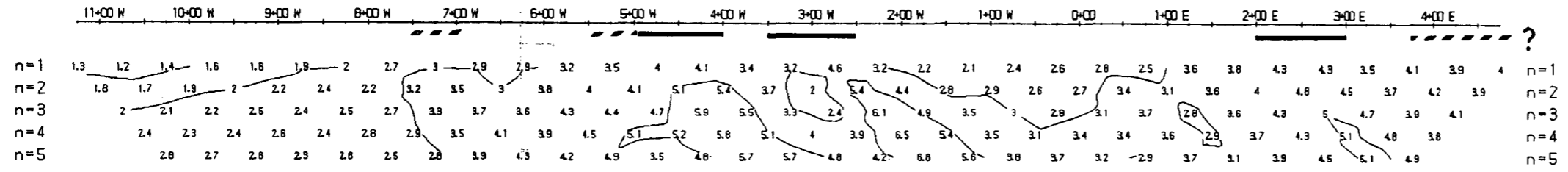
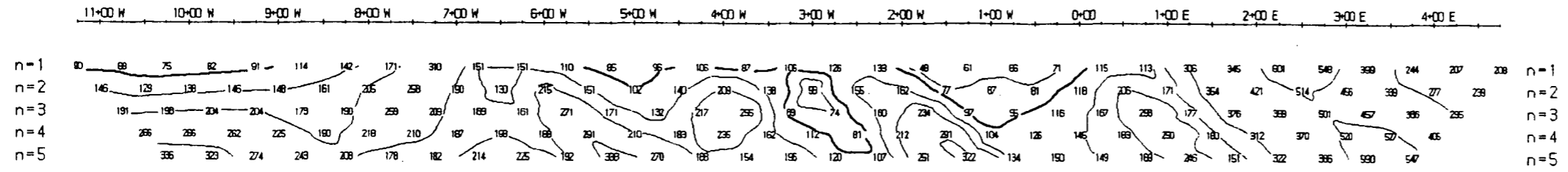
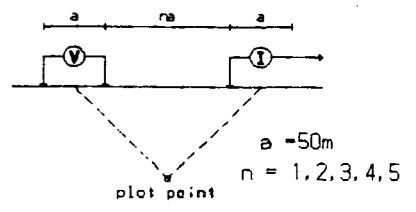
INDUCED POLARIZATION SURVEY  
Line 500 S  
Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
NTS: 92 1/9W

Pacific Geophysical

# Line 750 S

Dipole-Pole Array



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

Instrument : EDA IP 6  
 Frequency : 2s ON / 2s OFF  
 Operators : MJC

### INTERPRETATION

- ████████ Strong increase in polarization
- Moderate increase in polarization
- //// Weak increase in polarization

GETCHELL RESOURCES INC.

### INDUCED POLARIZATION SURVEY

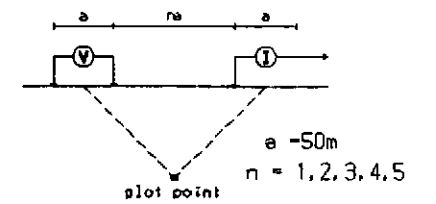
Line 750 S  
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Interpretation by: PAC Date: May 1990  
 NTS: 92 1/9W

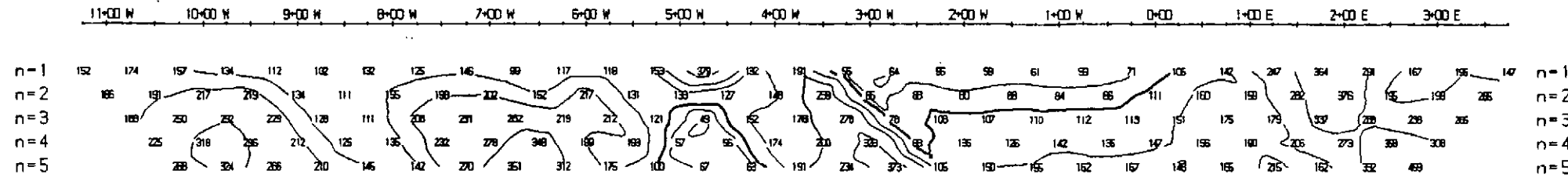
Pacific Geophysical

# Line 1000 S

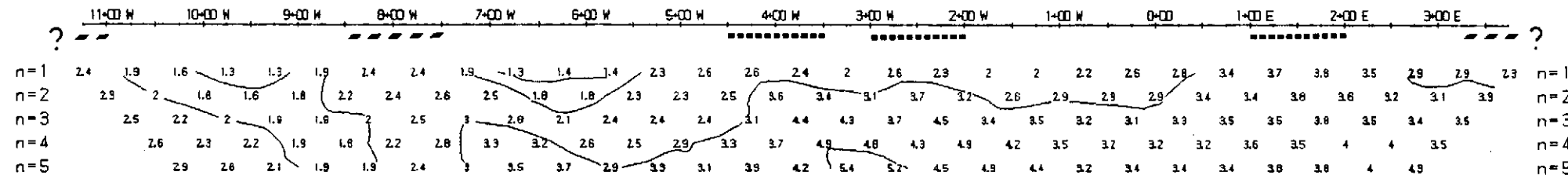
Dipole-Pole Array



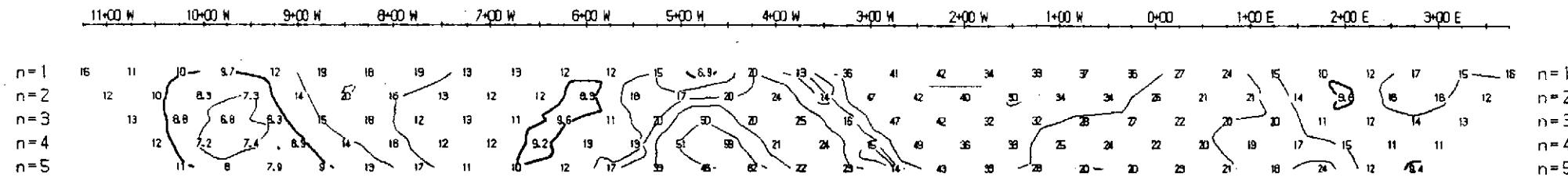
RESISTIVITY  
(ohm.m)



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 : MJC

### INTERPRETATION

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

GETCHELL RESOURCES INC.

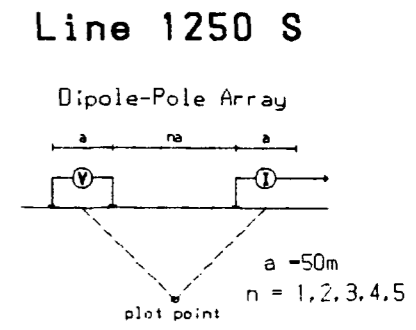
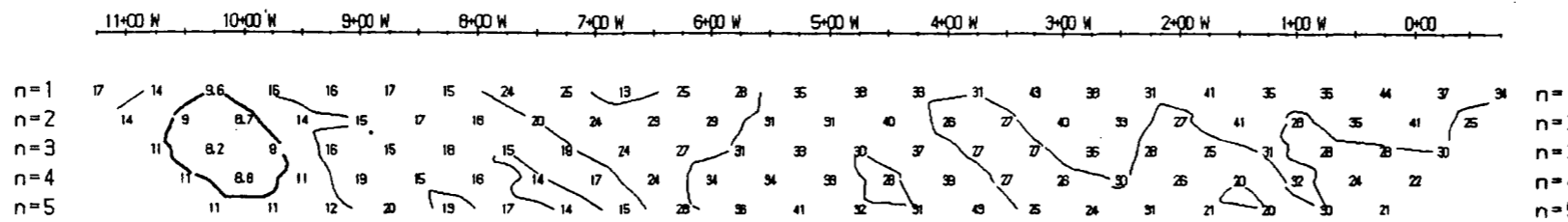
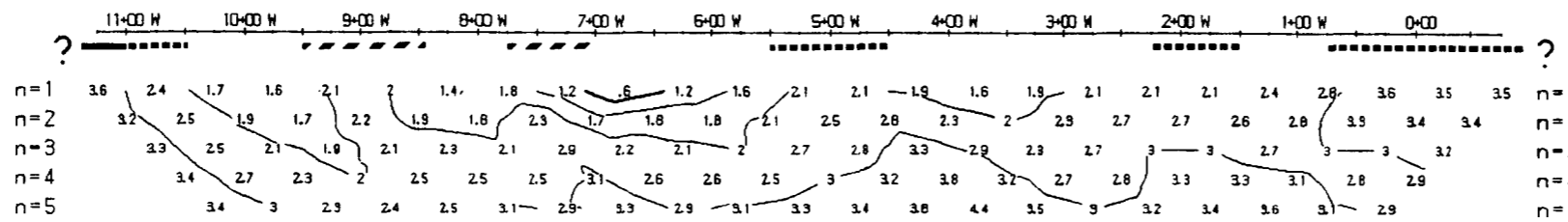
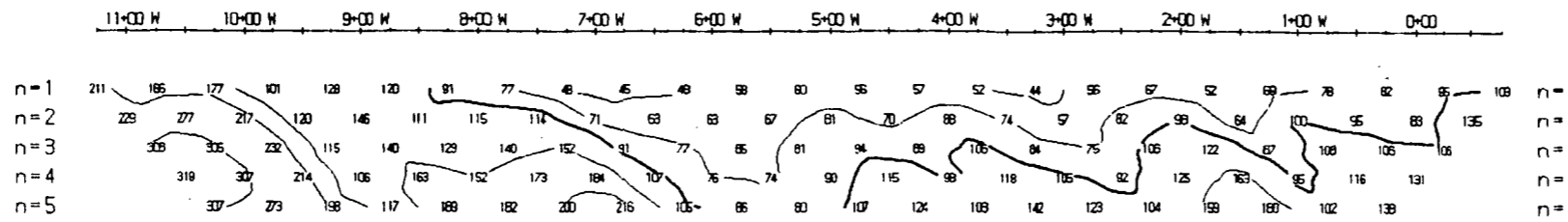
INDUCED POLARIZATION SURVEY

Line 1000 S  
Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
NTS: 92 1/9W

Pacific Geophysical





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

Instrument : EDA IP 6  
Frequency : 2s ON / 2s OFF  
Operators : MJC

#### INTERPRETATION

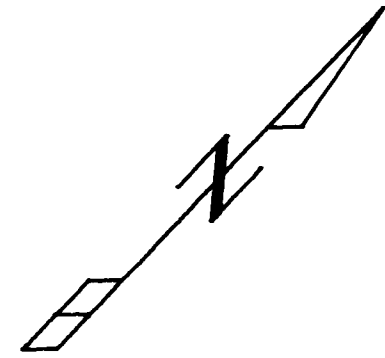
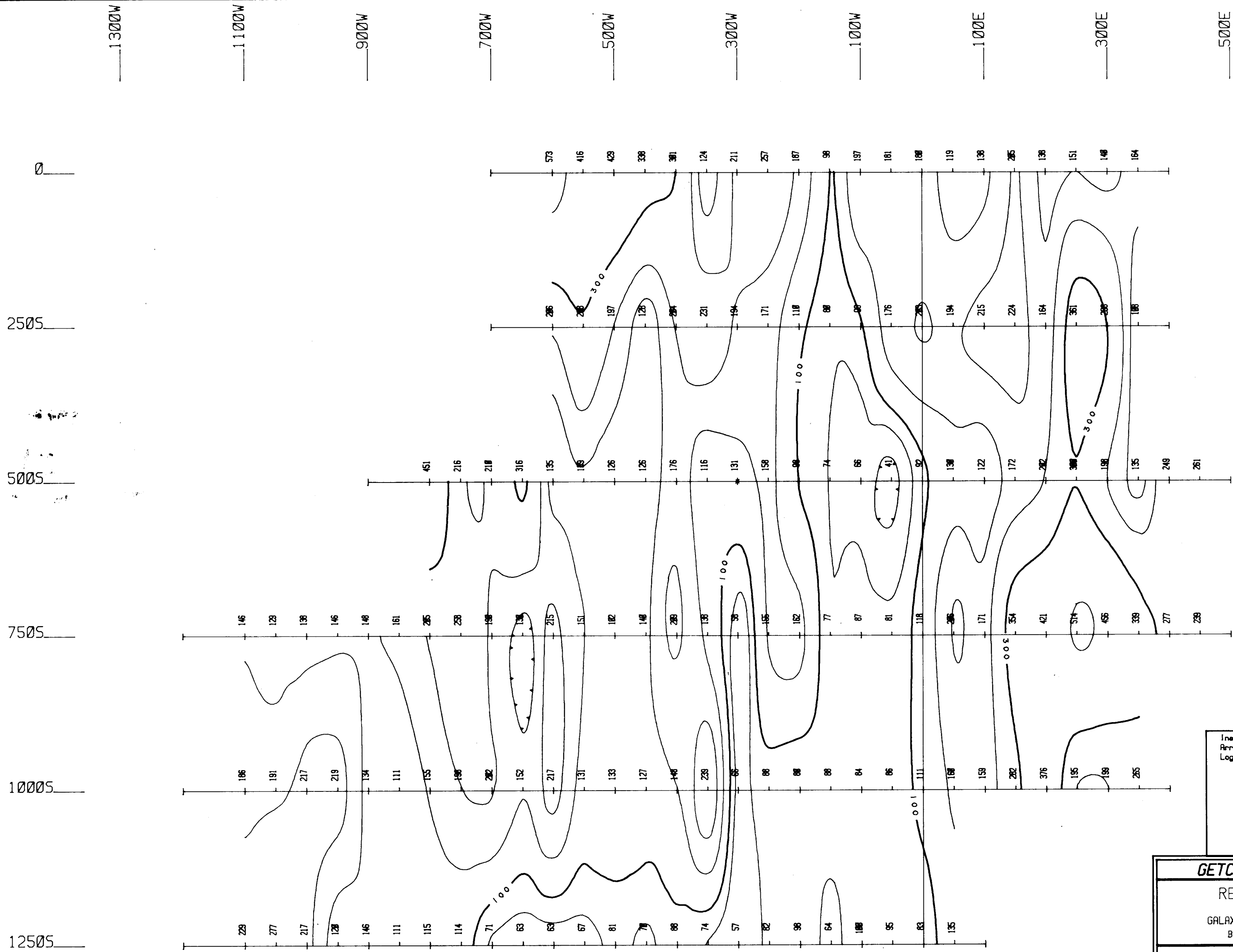
- ▬ Strong increase in polarization
- ▬ Moderate increase in polarization
- ▬ Weak increase in polarization

GETCHELL RESOURCES INC.

INDUCED POLARIZATION SURVEY  
Line 1250 S  
Galaxy Property : Kamloops M.D., B.C.

Interpretation by: PAC Date: May 1990  
NTS: 92 1/9W

Pacific Geophysical

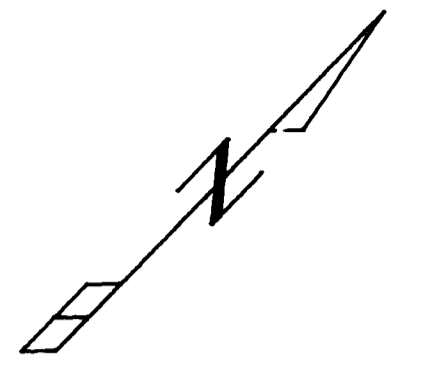
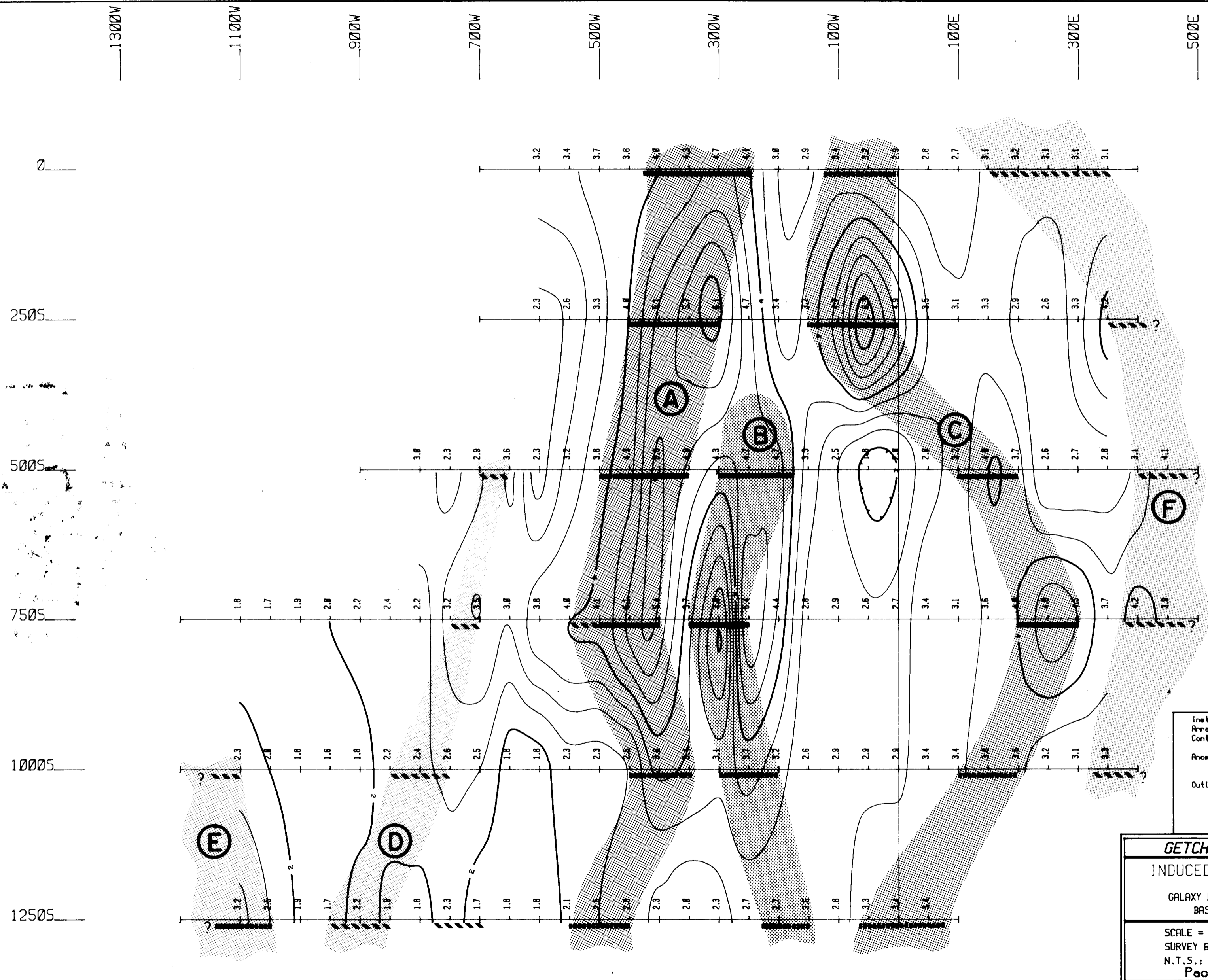


**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**20,241**

Instrument : EDA IP-6  
 Array : Pole-Dipole a=50m n=2  
 Logarithmic Contours : 1/1.5/2/3/5  
 7.5/10... ohm-m

<b>GETCHELL RESOURCES INC.</b>	
RESISTIVITY SURVEY	
GALAXY PROPERTY : KAMLOOPS M.D., B.C. BASELINE AZIMUTH : 135 Deg.	
SCALE = 1 : 5000	DATE : MAY 1990
SURVEY BY : MJC	FILE : MGALR2
N.T.S. : 92 1/9W	
Pacific Geophysical Ltd.	



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

# 20,241

Instrument : EDA IP-6  
 Array : Pole-Dipole  $\alpha=50m$   $n=2$   
 Contour Interval : 0.5 msec

Anomaly Class : Strong **|||||**  
 : Moderate **||||**  
 : Weak **|||**  
 Outline Of Anomalous IP Zone **-----**

**GETCHELL RESOURCES INC.**  
 INDUCED POLARIZATION SURVEY

GALAXY PROPERTY : KAMLOOPS M.D., B.C.  
 BASELINE AZIMUTH : 135 Deg.

SCALE = 1 : 5000      DATE : MAY 1990  
 SURVEY BY : MJC      FILE : MGAL12  
 N.T.S.: 92 1/9W  
**Pacific Geophysical Ltd.**