

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS
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**REPORT ON
AN INDUCED POLARIZATION/RESISTIVITY SURVEY
YELLOW MOOSE PROJECT, ARROW LAKE,
OMENICA MINING DIVISION,
VANDERHOOF AREA,
BRITISH COLUMBIA.**

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NTS 93 F/6 AND 93 F/11

PROJECT 249

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

24,766

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Toronto, Ontario
October, 1996

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1	W-2085-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 9600N, Arrow Grid East, Yellow Moose Project, Vanderhoof Area, BC	1:2500
2	W-2086-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 9800N, Arrow Grid East, Yellow Moose Project, Vanderhoof Area, BC	1:2500
3	W-2087-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 10000N, Arrow Grid East, Yellow Moose Project, Vanderhoof Area, BC	1:2500
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5	W-2089-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 10300N, Arrow Grid East, Yellow Moose Project, Vanderhoof Area, BC	1:2500
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8	W-2092-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 136E, Arrow Grid West, Yellow Moose Project, Vanderhoof Area, BC	1:2500

9	W-2093-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 138E, Arrow Grid West Yellow Moose Project, Vanderhoof Area, BC	1:2500
10	W-2094-D8-249	Induced Polarization/ Resistivity Survey, Pseudo-Sections of Apparent Resistivity, Apparent Charge -ability and Apparent Normalized Chargeability, Line 140E, Arrow Grid West, Yellow Moose Project, Vanderhoof Area, BC	1:2500
11	W-2095-D15-249	Induced Polarization/ Resistivity Survey, Interpretation Map, Arrow East Grid, Yellow Moose Project, Vanderhoof Area, BC	1:5000
12	W-2096-D15-249	Induced Polarization/ Resistivity Survey, Interpretation Map, Arrow West Grid, Yellow Moose Project, Vanderhoof Area, BC.	1:5000

1. INTRODUCTION

The Yellow Moose property consists of 11 four-post claims, totalling 173 units, recorded in the Omineca Mining Division and are within NTS Sheets 93F/6 and 93F/11. The claims were optioned to Phelps Dodge by Cogema Resources, Inc. in 1995.

During the late summer of the 1996, Phelps Dodge Corporation of Canada, Limited (PDC) conducted induced polarization/resistivity surveys over two grids, the Arrow East Grid and the Arrow West Grid. The Arrow East Grid covers the Arrow Showing in the north and extends towards south. The purpose of the survey was to search for southern extensions of the Arrow Showing. The Arrow West Grid covers an area west of the DG Showing and the intent was extend the DG Showing. The grids were prepared by Fox Geological Services Inc. The geophysical survey was carried out by Peter Walcott & Associates Ltd of Coquitlam BC during the period of August 18 to August 30, 1996. The survey statistics are in the following Table I.

The following report presents the survey data, the interpretation together with recommendations.

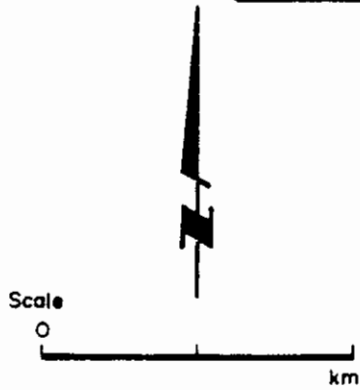
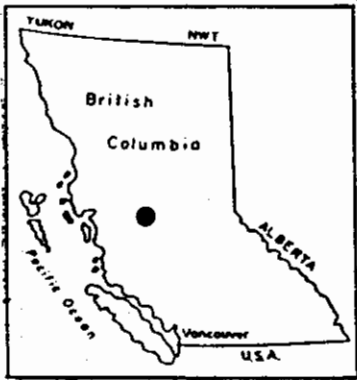
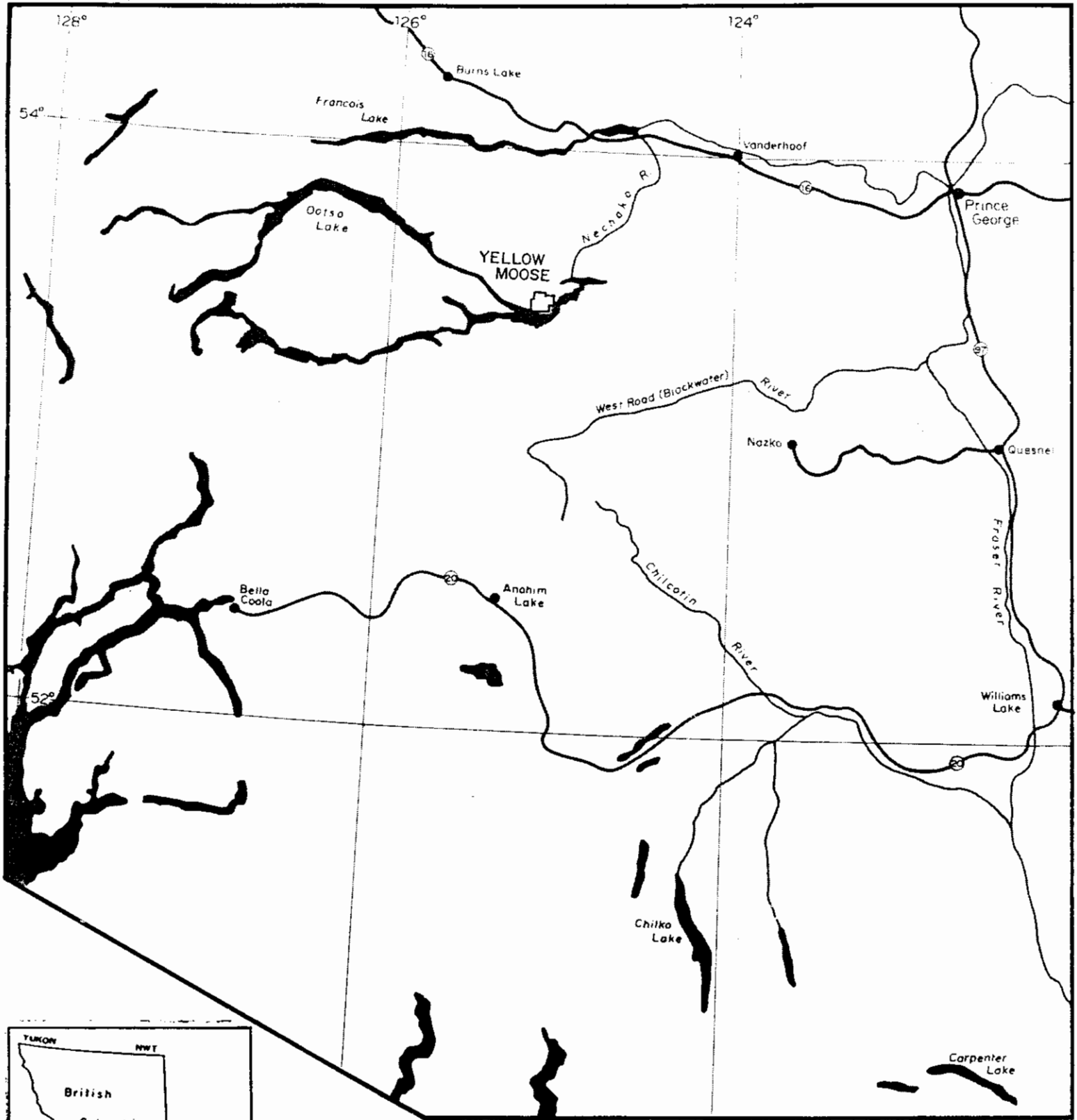
TABLE I
GEOPHYSICAL SURVEY STATISTICS

Grid	Grid Preparation	Induced Polarization/ Resistivity Survey
Arrow East	8.6 km	8.6 km
Arrow West	4.0 km	4.0 km

2. LOCATION AND ACCESS

The Yellow Moose property is located approximately 90 kilometres southwest of Vanderhoof in central British Columbia between Lucas and Natalkuz Lakes (Figure 1). It is centred about 53° 30'N latitude and 125° 06'30" W longitude. The claim block is bounded on the south by Yellow Moose Lake and associated drainages and on the north by Emmett Lake and the 500 Forest Service Road.

"The nearest amenities are available in the village of Fraser Lake, located some 70 kilometres to the north. Road access from Fraser Lake is via the Holy Cross Forest Service Road, south for 68 kilometres, then west along the 500 Forest Service Road to kilometre 46 where the Knewstubb Road leads south for six kilometres to the central portion of the property.



PHELPS DODGE CORP. OF CANADA LTD.			
PROJECT N ^o 140		OMINECA M.D.	
YELLOW MOOSE LOCATION & ACCESS			
Fox Geological Consultants Ltd.			
SCALE	DATE	NTS	Dwg N ^o
1:2,000,000			1

3. CLAIMS INFORMATION

The claims covering the project area are listed in Table II and are shown on Figure 2.

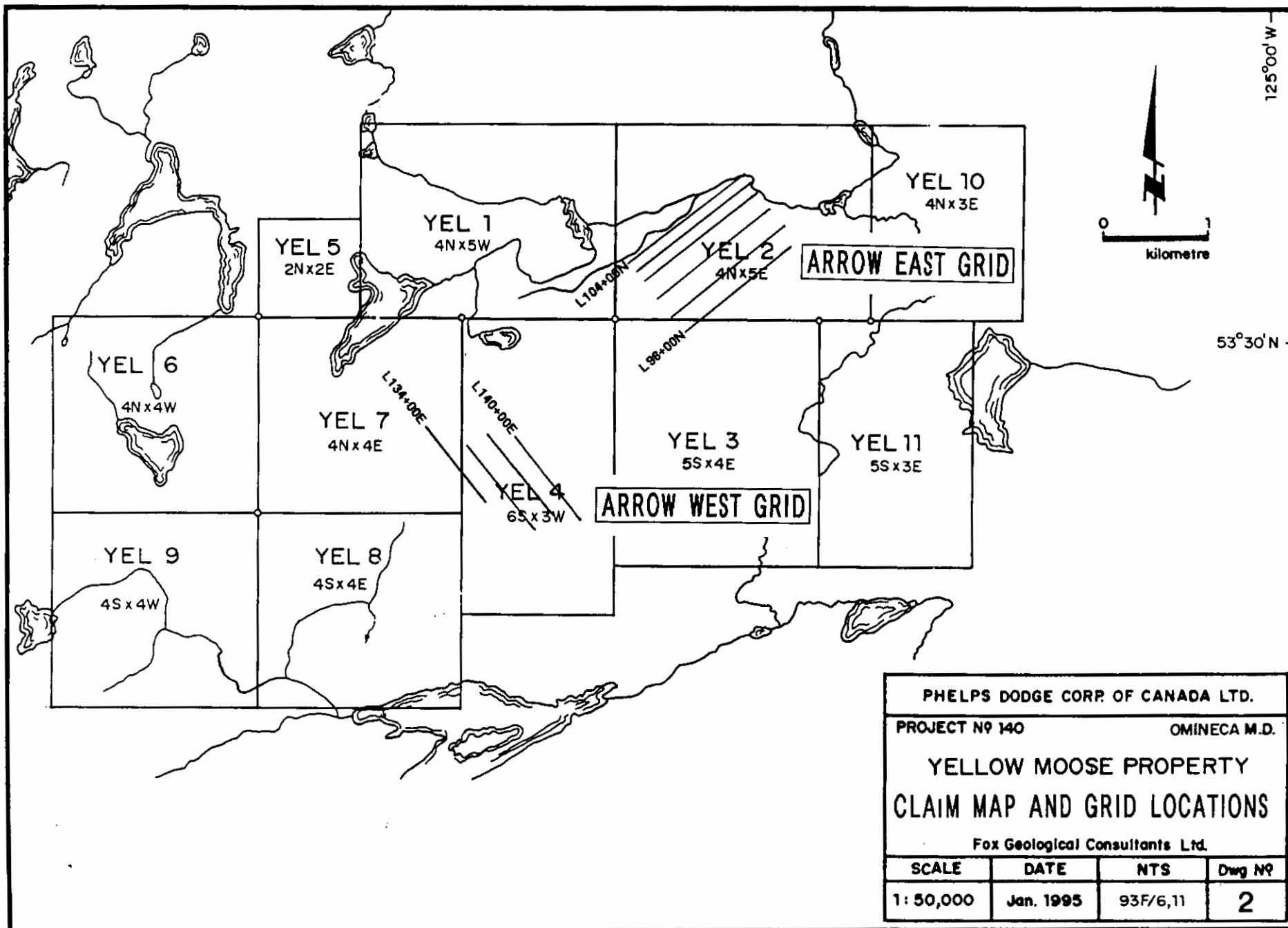
**TABLE II
LIST OF CLAIMS**

Claim Name	Tenure No.	Expiry Date	Units
Yel 1	314661	November 11, 1998	20
Yel 2	314662	November 11, 1998	20
Yel 3	314663	November 11, 1998	20
Yel 4	314664	November 11, 1998	18
Yel 5	314665	November 10, 1998	4
Yel 6	314666	November 10, 1998	16
Yel 7	314667	November 11, 1998	16
Yel 8	314668	November 10, 1998	16
Yel 9	314669	November 10, 1998	16
Yel 10	326473	June 1, 1998	12
Yel 11	326474	June 1, 1998	15

4. HISTORY AND PREVIOUS WORK

“The Yellow Moose claim area was first staked by Newmont Exploration of Canada in 1987 when stibnite-bearing boulders were traced up-ice to their apparent source on the shore of Arrow Lake. During 1988 and 1989, Newmont explored their claims with mapping, sampling and geophysical surveys. Hand trenches revealed erratic gold mineralization (up to 795 ppb) with variable amounts of pyrite, arsenopyrite, stibnite, cinnabar and marcasite in silicified breccia structures showings near the south shore of Arrow Lake. Cogema Resources Inc. staked the Yel 1 to 9 claims over and along strike of Newmont’s showings in 1992. During 1993, Cogema flew an airborne EM/magnetic survey, located three additional showings and delineated several areas with anomalous till geochemistry. The Yel 10 and 11 claims were staked in 1994 to extend the property to the east. Six inclined diamond drill holes (626 metres) were collared during 1994 to test two mineralized zones coincident with geophysical chargeability anomalies.

Phelps Dodge Canada optioned the Yel 1 to 11 claims from Cogema on January 31, 1995 and continued exploration with soil and rock sampling, prospecting and geological mapping in 1995(Fox, 1996)”.



5. GEOLOGY

5.1 Regional Geology

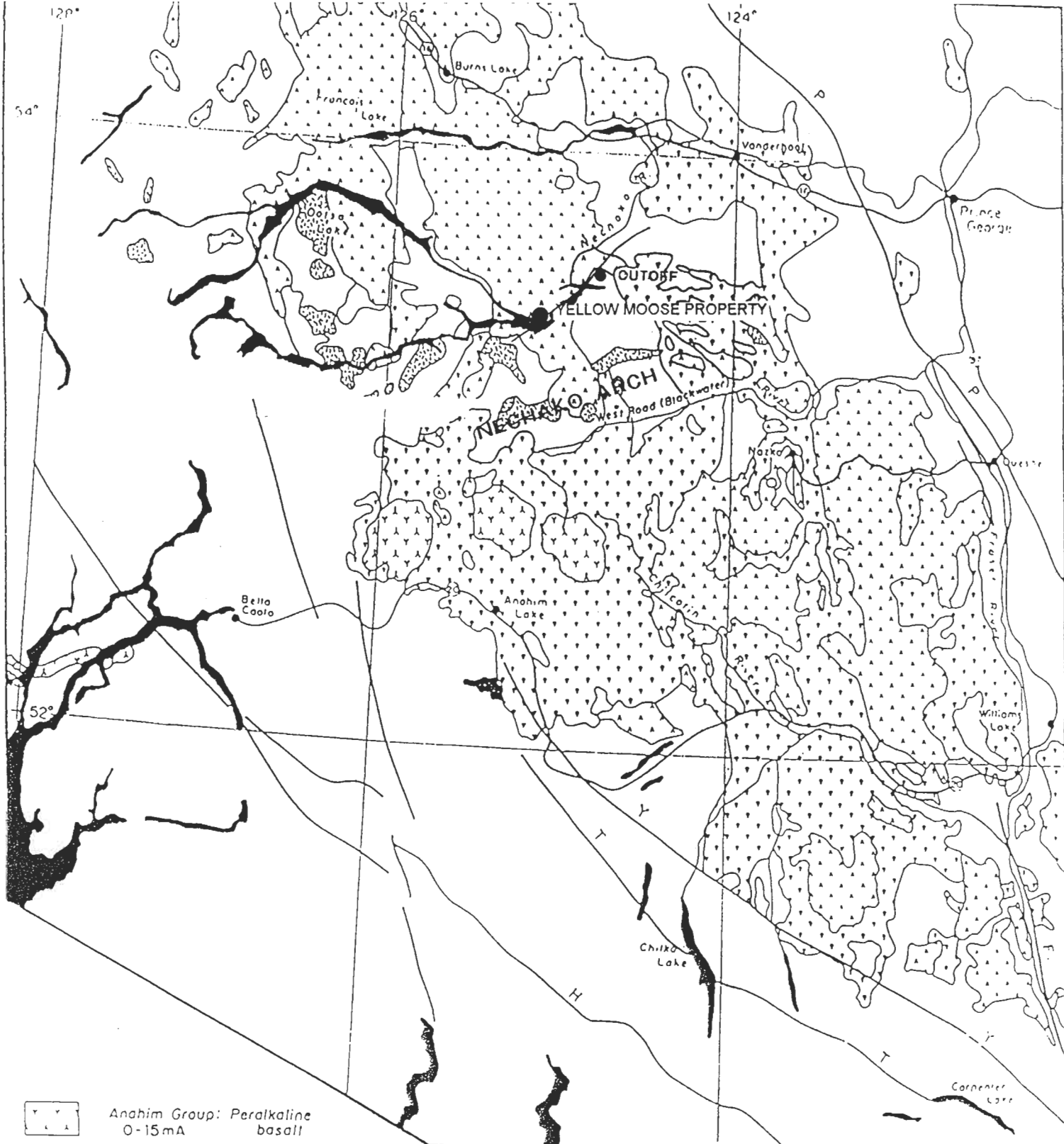
“The Yellow Moose Property is centrally located in the Interior Plateau of British Columbia within the Intermontaine Belt, which consists of late Paleozoic to late Tertiary sedimentary and volcanic rocks belonging to the Stikinia, Cache Creek and Qesnellia Terranes. The Yalakom and Frazer Fault systems bound the plateau to the southwest and northeast. A third fault has been inferred from oil exploration data to bisect the plateau. The Anaheim Volcanic Belt, which crosses the plateau in an east-west direction, is composed of series of alkaline and peralkaline volcanic centres of Miocene to Quaternary age which become younger from west to east.






The Yellow Moose claims lie within the central portion of the Stikine Terrane, which consists of three volcanic-stratigraphic groups ranging in age from upper Cretaceous to Miocene. An Eocene extensional tectonic vent, which resulted in basin and range type topography, is associated with epithermal, volcanic-hosted gold mineralization.

Mapping in the Natalkus lake area by B.C. Geological Survey Geologists Diakow, Green, Whittles and Perry in 1993 shows the immediate area of the property to be underlain by upper Cretaceous Kasalka Group ? porphyritic andesite which is unconformably overlain by lower to middle Eocene Ootsa Group rhyolite to dacite flows, associated pyroclastic rocks and locally derived sediments capped by flat lying upper Eocene to Oligocene Endako Group basalt and minor tuffaceous rocks (Payne, 1996).” The regional geology is illustrated on Figure 3.

5.2 Property Geology

“The oldest rocks on the property belong to the upper Cretaceous Kasalka Group, which outcrops in the west and the extreme southeast corner of the claims. These rocks consist of andesite porphyry, with minor basalt, lapilli tuff and conglomerate. Andesite units are grey and green and consists of lath-shaped plagioclase and hornblende phenocrysts set in a grey aphanitic groundmass. Locally the groundmass is weakly propylitic. Crowded feldspar-hornblende phyric flows are common in the southwest corner of the property. Overlying the volcanic sequence is lapilli tuff which is grey-maroon, with angular to subrounded fragments set in a fine grained locally feldspar phyric maroon matrix. The fragments range in size from <3 mm to 2 cm, the fragments consist of a medium grained grey porphyritic andesite to fine



-  Anahim Group: Peralkaline
0-15 mA basalt
-  Chilcotin Group: Backarc alkaline,
2-10 mA tholeiite basalt
-  Nanika, Quanchus Intrusives: Quartz monzonite,
60 mA granite
-  Ootsa Group: Calc-alkaline felsic
35-70 mA volcanics
-  Pre-Tertiary rocks and Coast Intrusions

- H - Harrison
- T - Tchaikozan
- Y - Yakom
- F - Fraser
- P - Pinchi

PHELPS DODGE CORP. OF CANADA LTD.			
PROJECT NO. 249		OMINECA MINING DIVISION	
YELLOW MOOSE PROPERTY			
REGIONAL GEOLOGY			
SCALE	DATE	NTS	FIG NO
1:2,000,000	Jan/96		3

grained, grey andesite. In the southwestern part of the property are several small outcrops northeast to east dipping sequence of maroon to red polymictic conglomerate with a mud rich sandy matrix. The conglomerate is matrix supported with rounded to subangular clasts of light grey porphyritic volcanic, maroon lapilli tuff, white to cream granite and smaller clasts of fine grained sediments.

Lower to middle Eocene, Ootsa Lake Group rhyolite (Eor) is exposed through the west-central, central and eastern areas of the property forming a series of east-west oriented incised knolls. Rhyolite in the west-central and central part of the property consist of a maroon to cream coloured feldspar phyrlic rock which is intercalated with flows which are banded. Locally within the sequence are quartz phyrlic flows but appear to be of limited lateral extent. When the rocks are unaltered they have euhedral plagioclase +/- quartz phenocrysts (rounded) set in a maroon to light grey vitreous matrix. On a local scale the rocks are flow banded, microbrecciated, spherulitic and sometimes perlitic. Generally the unaltered or weakly altered rhyolite occupies the tops of knolls through the western and central parts of the property while the topographic lows contain the moderate to strongly altered rhyolite. The east-central and southeastern areas of the property is underlain by maroon to grey quartz + feldspar phyrlic rhyolite with abundant intercalated thick sequences of shallow west dipping crystal tuff, ash flow tuff and coarse lapilli tuff. The various rhyolitic and pyroclastic rocks observed in the eastern part of the property commonly contain rounded quartz phenocrysts. Argillic alteration is not as pervasive or widespread in the eastern part of the property in comparison to the western part.

Within the east-central part of the property between the “western rhyolite sequence” and “eastern sequence” is an arcuate apron of intercalated lapilli tuff, sandstone, siltstone, minor conglomerate and lahar (Eot, Eos). Generally the stratigraphic sequence from west to east is as follows: Flanking the central rhyolite dome complex on the south, east and northeast is a thick sequence of coarse to fine lapilli tuff followed by local ash flow lahar (debris flows) on the north, followed by well laminated siltstone with plant impressions in the southeast followed by sandstone and minor siltstone followed by intercalated conglomerate-sandstone in the south.

The upper Eocene to Oligocene Endako Group (EEb) consists of dark to medium grey vesicular basalt and local intercalated flows of andesite. Endako Group rocks underlie the northern and northeastern area and comprises a lobe of vesicular basalt extending southwards through the west-central part of the property. The basalt is commonly vesicular with localized flows containing rounded light to medium green olivine phenocrysts and minor translucent

plagioclase phenocrysts set in a grey aphanitic matrix (Payne, 1996)".

6. INDUCED POLARIZATION/RESISTIVITY SURVEY

6.1 Instrumentation, Specifications and Presentation of the Data.

The time domain IP/resistivity system used for the survey consisted of a BRGM IP-6 receiver (BRGM Instruments, Orleans, France) and a Hunttec transmitter which provides a maximum of 7.5 kW d.c. to ground. It is powered by a 7.5 kW 400 cps three phase alternator driven by a gasoline engine. The cycling rate of the transmitter was 2 seconds "current-on" and 2 seconds "current -off" with the pulses reversing continuously polarity. The data recorded in the consists of careful measurements of the current (I) in amperes flowing through the current electrodes C₁ and C₂, the primary voltages (V) appearing between any two potential electrodes, P₁ through P₇ during the "current -on" part of the cycle, apparent chargeability, (M_a) presented as a direct readout in millivolts per volt (mV/V) using a 100 millisecond delay and a 1000 millisecond sample window, by the receiver, a digital receiver controlled by a micro-processor - the sample window is actually the total of ten individual windows of 100 milli- seconds width.

The pole-dipole array was applied with a 25 m electrode separation ("a"). Primary voltages and apparent chargeabilities and the primary current were measured every 25 m, for pole-dipole separations ("n") of 1 to 6.

The results are presented as pseudo-sections of the apparent resistivity, apparent chargeability and apparent normalized chargeability at a scale of 1:2 500. The pseudo-sections also include the profiles of the filtered parameters listed above. The interpretation is show on idialized grid maps at a scale of 1:5000.

6.2 Discussion of Results

6.2.1 General

The pseudo-section were studied and the anomalous areas were assigned one of the following ratings: 1st order (20-30 mV/V), 2nd order (15-20 mV/V), 3rd order (10-15 mV/V) and 4th order (8-10 mV/V). Anomalous sections exceeding 30 mV/V are identified as "1". Anomalies that are observed at the larger pole-dipole separations are shown with the symbol "D". Sources that may have limited depth extent are marked with "LD"; sources at mid-depth are noted with the symbol

“MD”. The apparent resistivities are sorted using the following divisions:

very low resistivity	VVL:	10 - 50 ohm-m
low resistivity	VL:	50 - 100 ohm-m
low-medium resistivity	L:	100 - 250 ohm-m
medium resistivity	LM:	250 - 500 ohm-m

The IP/resistivity anomalies were plotted on idealized grids at a scale of 1:5 000.

6.2.2 Arrow East Grid

Six lines, L-9600N, L-9800N, L-10000, L-10200, L-10300 and L-10400 were surveyed from 59+25E to 73+50E along Lines 9800N, 10200N, 10300N and 10400N. The most easterly pickets are 71+25E and 72+00E along Line 9600N and 10000N, respectively (Figure 2).

Two major geological features are clearly apparent:

- (a) an area of low apparent resistivity, less than 50 ohm-m along the eastern ends of the lines. The associated chargeabilities are in the 2.5 mV/V to 7 mV/V range but clustered around 5 mV/V.
- (b) the other is an anomalous IP zone that is believed to be caused by lithology changes. It is about 750 m wide in the south and its width increases to 1050 m in the north along Line 10300N. The zone is at or near surface along the two northernmost lines (L-10300N and L-10400N) and along the southwestern ends of the other lines. Elsewhere, the anomalous lithology is deeper. The two parts of the anomalous lithology are identified as IP-1 and IP-2 for the shallow and deeper parts respectively.

The “Arrow” showing is within IP-1; if the location of the Yellow Moose Grid is correct with respect to the White Grid the showing would be between Lines 10300N and 10400N.

The most anomalous line is 10400N where four “1⁺” anomalies were detected. The sources are at or near surface and the apparent resistivities vary from <100 ohm-m to about 300 ohm-m. The amplitude of the “1⁺” anomaly correlating with the “Arrow” showing is centred about 64+00E. The amplitude of the anomaly reaches an exemplary 68 mV/V and its associated with apparent resistivities ranging from 100 to 500 ohm-m. The anomaly pattern suggests that the source may a limited depth extent. The north-easternmost “1⁺” anomaly is suggestive a steeply

dipping source.

The high amplitude of the anomalies decrease along the lines to the south. Although the lithological unit is still shallow along Line 10300N, extensions of the two northeasterly "1⁺" anomalies cannot be recognized. However, the 1st order anomaly centred about 62+75E/10300N could represent an extension of the "Arrow" showing, albeit with a lower amplitude anomaly. The extension of southwesternmost "1⁺" of L-10400N can be clearly recognized, in fact, this feature continues forming the narrow southern extension of IP-1. This southerly extension correlates with the IP-2 zone of the earlier IP/resistivity survey (Jagodits, 1996).

6.2.3 Arrow West Grid

Four lines were surveyed: L-134E, L-136EN, L-138E and L-140E; the average length of the lines is 800 m (Figure 2). The apparent resistivities describe four lithologies:

- (a) a lithological unit with resistivities in the 150-500 ohm-m range along Lines 134E and 136E,
- (b) a mixed lithological unit along Line 138E, lower apparent resistivities dominate, but signatures of the previous lithological unit also occur,
- (c) the low apparent resistivity lithological unit of L-140E and
- (d) the increased apparent resistivity unit at the north end of Line 140E.

The amplitudes of the IP anomalies are markedly lower than those observed over the Arrow East Grid. The results once again describe a lithological source that is abruptly terminated between Lines 138E and 140E. The geological map (Fox, 1996) shows a fault at that location explaining the abrupt termination.

Most of the IP activity is along Lines 134E and 136E, where the 2nd order anomalies could be joined together to form Trend IP-3 that could be extended to Line 130E. The trend coincides with an IP anomaly that was defined by an earlier survey.

7. CONCLUSIONS AND RECOMMENDATIONS

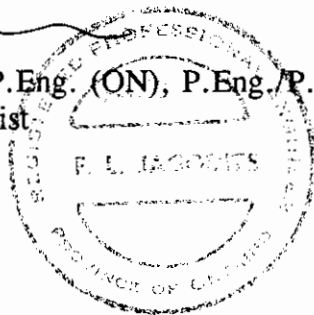
The IP/resistivity survey of the Arrow Grid East detected the "Arrow" showing along L-10400N with a possible extension to L-10300N. There are three other IP anomalies along L-10400N that are similar to the IP anomaly over the showing. The sources of the anomalies should be at or near surface. The anomaly of the "Arrow" showing and the other "1" anomalies of Line 10400N are open to the northwest, but investigation of a possible northwesterly extension using the IP/resistivity method would have to be done in winter using the ice of Arrow Lake. It is also recommended that sources of the southern, narrow extension of IP-1 should also be investigated.

The Arrow West Grid data describe four lithologies with differing electrical properties and one IP lithological unit. The IP lithological unit includes the IP-3 trend that could be investigated further.

Respectfully submitted,



Francis L. Jagodits, P.Eng. (ON), P.Eng./P. Geo. (NF).
Consulting Geophysicist



8. REFERENCES

Payne, C. W., 1966. Assessment Report, Geological and Soil Geochemical Report On the Yellow Moose Property, Yel 1 to Yel 11 Mineral Claims, Project 249, Omenica Mining Division, British Columbia. Fox Geological Services Inc. prepared for Phelps Dodge Corporation of Canada, Limited. January 1996.

Jagodits, F.L., 1996. Induced Polarization/ resistivity Survey, Yellow Moose Property, Arrow Lake Area, Omenica Mining Division, NTS F/6 and F/11 Internal memorandum. April 9, 1996.

Fox, P.E., 1996. Project Report, Yellow Moose Gold Property, Yel 1 to 11 Claims, Project 249, Omenica Mining Division, NTS 93 F6. Internal Report. April 11, 1996

Distribution

PDC Project File Vancouver - (1)

PDC Project File - Toronto - (1)

Vendor -. (1)

Government of British Columbia. (2)

9. APPENDIX

**Table III - List of Personnel
Disbursements
Certificate**

TABLE III**List of Personnel**

Name	Address	Activity
Fox Geological Services Inc.	Vancouver, BC	Grid preparation
Peter Walcott & Associates Ltd	Coquitlam, BC	IP/resistivity survey
R.T. Marcroft	R.T. Marcroft and Associates, Mississauga, ON	Drafting
H. Cook	Phelps Dodge Corporation of Canada, Limited, Toronto, ON	Word Processing
F.L. Jagodits, P.Eng.,	Savaria Geophysics Inc., Toronto, ON	Interpretation and reporting.

DISBURSEMENTS

Expenditures for the 1996 work program on the Yellow Moose Property total \$14,994.00, as itemized below.

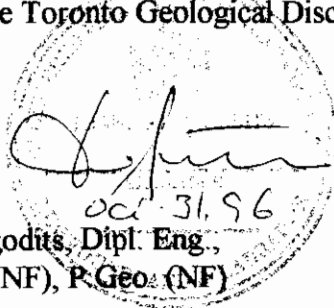
Contract Geophysics	
12.6 kilometres Induced Polarization @ \$1190.00/kilometre	<u>14,994.00</u>
Total	<u>\$14,994.00</u>

QUALIFICATIONS

Francis L. Jagodits, Dipl. Eng., P. Eng., P. Geo.

This is to certify that I, Francis L. Jagodits,

1. a Canadian citizen residing at 353 Berkeley Street in the City of Toronto, Province of Ontario,
2. maintain a consulting office at 353 Berkeley Street, in Toronto,
3. graduated with a degree of Diploma Engineer in geophysical engineering from the Technical University of Sopron, Hungary in 1956,.
4. working as professional geoscientist for the past forty years and as an independent consulting geophysicist for the eighteen years,.
5. am registered as a Professional Engineer in the Provinces of Ontario and Newfoundland.
6. am registered as a Professional Geoscientist, registered in the Province of Newfoundland.
7. am a member of the Society of Exploration Geophysicist, the European Association of Exploration Geophysicist, the Canadian Geophysical Union, Fellow of the Geological Association of Canada, the Canadian Institute of Mining and Metallurgy, the Canadian Exploration Geophysical Society and the Prospector and Developers Association of Canada.
8. belong to the Toronto Branch of the Canadian Institute of Mining and Metallurgy and the Toronto Geological Discussion Group.



Francis L. Jagodits, Dipl. Eng.,
P.Eng., (ON, NF), P. Geo. (NF)

ACCOMPANYING PSEUDO-SECTIONS

**Legend to Accompany
Induced Polarization
and Apparent Resistivity
Pseudo-Sections and Maps**

INDUCED POLARIZATION RESPONSES

 1st order

 2nd order

 3rd order

 4th order

? = Questionable


D = Deeper (observed at larger
dipole separations)

MD = Medium depth

LD = Limited depth extent

V = Vertical or steeply dipping
source

C = Contact

 Lithological source

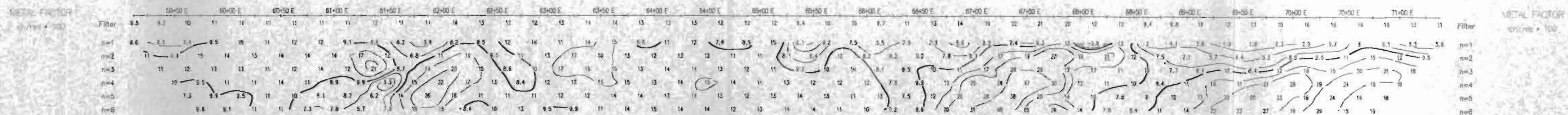
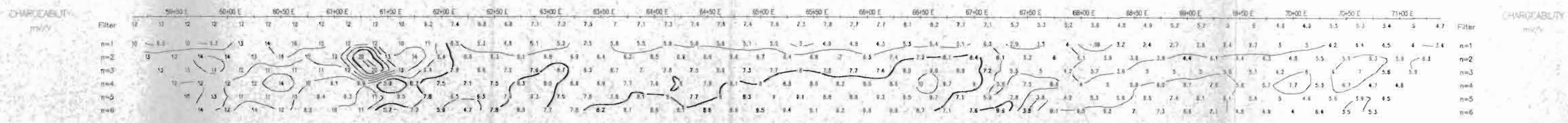
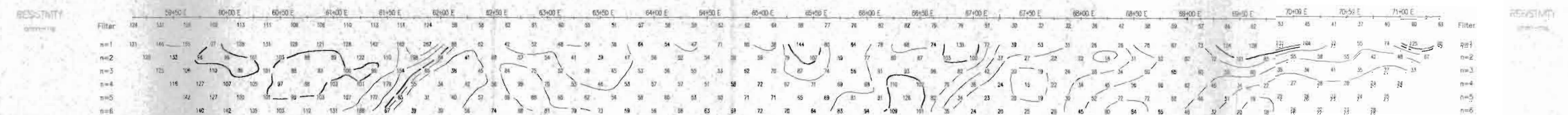
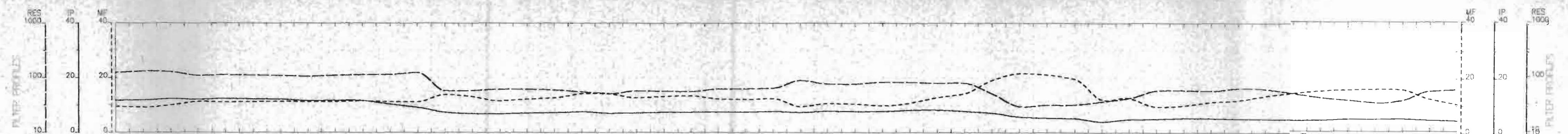
APPARENT RESISTIVITY RANGES (ohm-m)

VVL = 10 - 50 L = 100 - 250

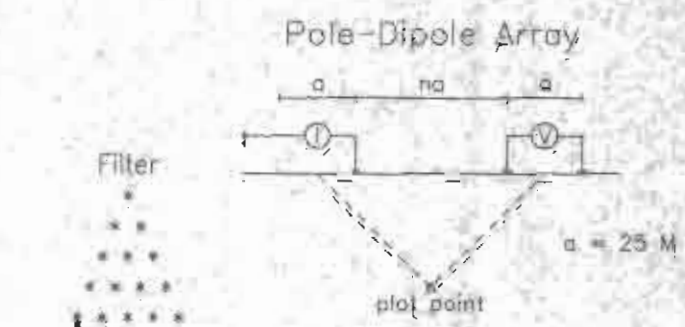
VL = 50 - 100 LM = 250 - 500



IP/Resistivity trend and
identification



Line 9600 N



Instrument: Androtex 7.5 kw, Tx., BRGM IP6 Rx.
 Frequency: 0.125 Hz.
 Operators: B.H., A.W., G.M.

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

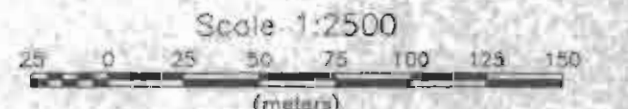
INTERPRETATION

We defined a line resistivity polarization with or without marked discharge in resistivity.

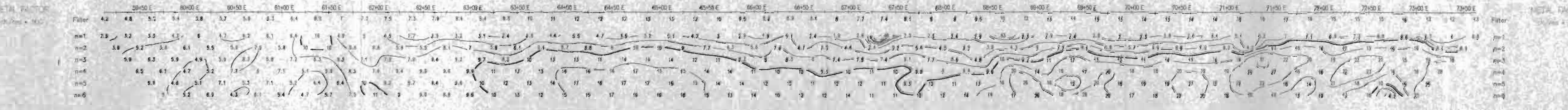
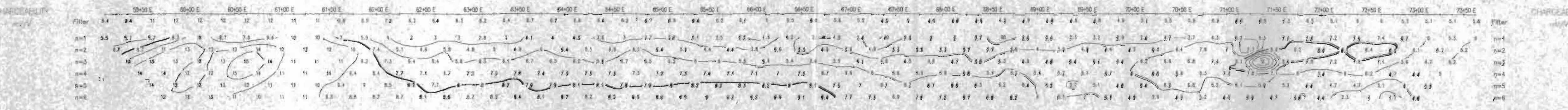
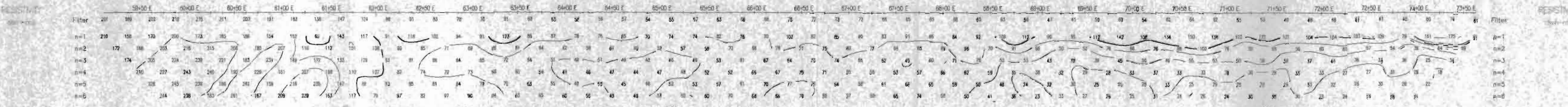
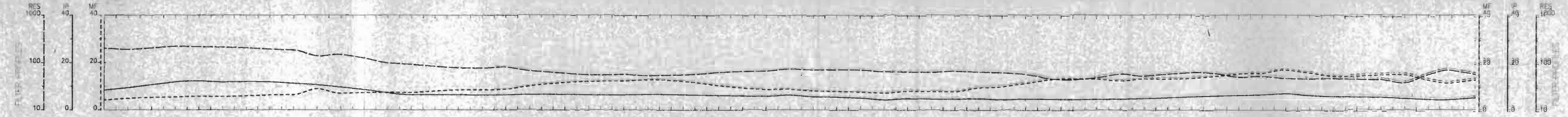
For a well defined resistivity polarization.

For a well defined resistivity polarization.

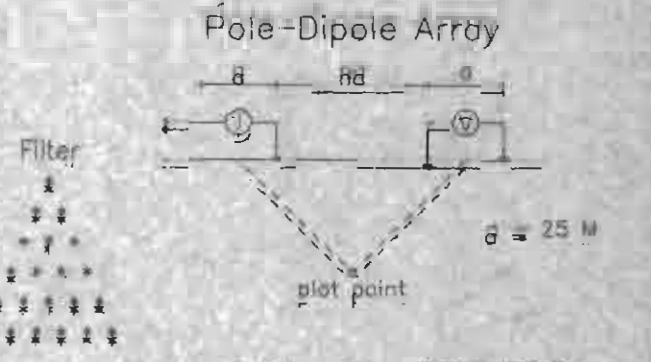
Resistivity features.



DWG. No. W-2085-D8-249 PLATE No. 1
 PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID EAST, OMINECA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA
 Date: AUGUST - SEPTEMBER, 1996
 Interpretation:
 PETER E. WALCOTT & ASSOC. LTD.



Line 9800 N



Instrument: Andrestex 7.5 kv. Tx.; BRCM IP6 Rx.
 Frequency: 8.125 Hz.
 Operators: D.H., A.W., G.M.

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

INTERPRETATION

See notes on page 1 for details of interpretation.

CHARGEABILITY

See notes on page 1 for details of interpretation.



DWG. No. W-2686-D8-249 PLATE No. 2

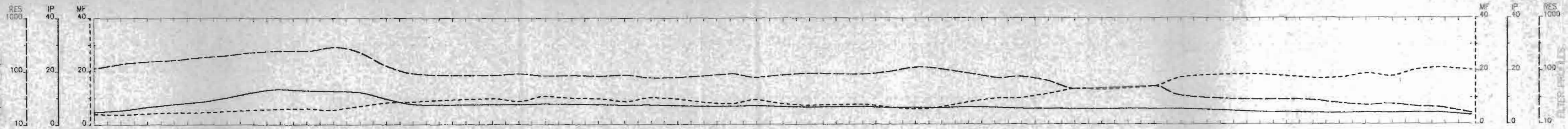
PHELPS DODGE CORP. OF CANADA

INDUCED POLARIZATION SURVEY
 ARROW GRID EAST, OMINCA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA

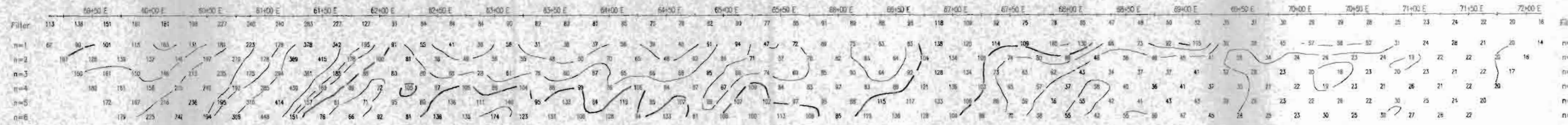
Date: AUGUST - SEPTEMBER, 1995

Interpretation:

PETER E. WALGOTT & ASSOC. LTD.



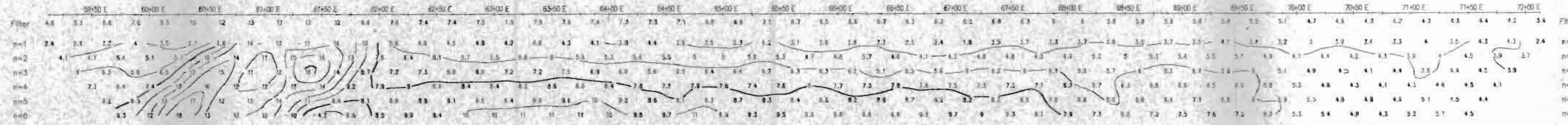
RESISTIVITY
ohm-m



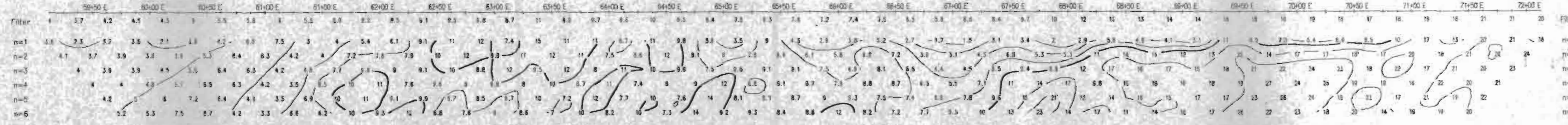
INTERPRETATION



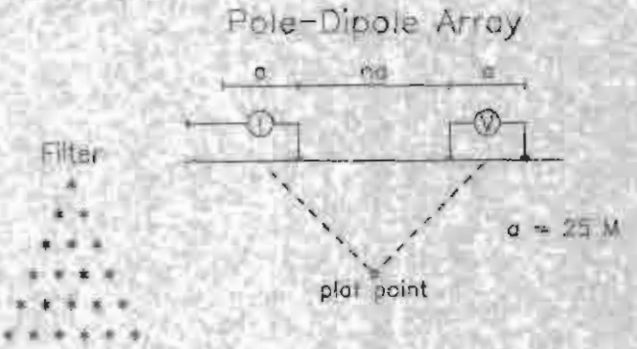
CHARGEABILITY
mV/V



METAL FACTOR
ohm-m / 100



Line 10000 N



Instrument: Androlex 7.5 kw. Tx., BRGM IP6 Rx.
Frequency: 0.125 Hz.
Operators: D.H., A.W., G.M.

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

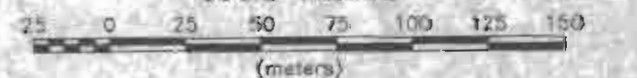
INTERPRETATION

Not defined areas shown in interpretation with or without resistivity contours in red.

Only well defined topographic contours are shown.

Only well defined well traces are shown in red.

Scale 1:2500



DWG. No. W-2087-D8-249 PLATE No. 3

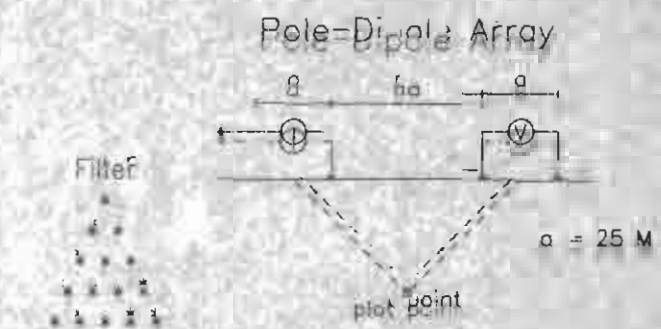
PHELPS DODGE CORP. OF CANADA

INDUCED POLARIZATION SURVEY
ARROW GRID EAST, OMINICA MINING DIVISION
VANDERHOOF AREA, BRITISH COLUMBIA

Date: AUGUST - SEPTEMBER, 1996
Interpretation:

PETER E. WALCOTT & ASSOC. LTD.

Line 10200 N



Instrument: Andromed 7.5 kw Tx, BRGM IP6 Rx.
 Frequency: 8.125 Hz.
 Operator: B.H.; A.W.; G.M.

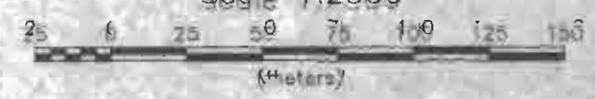
Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

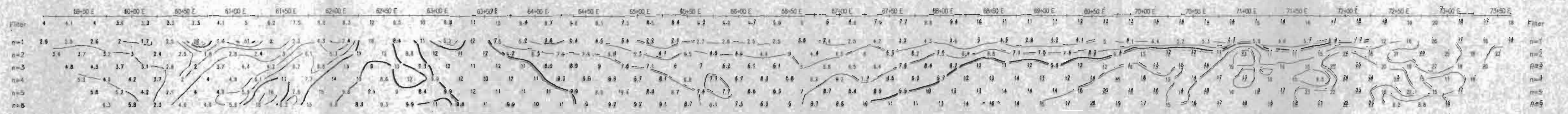
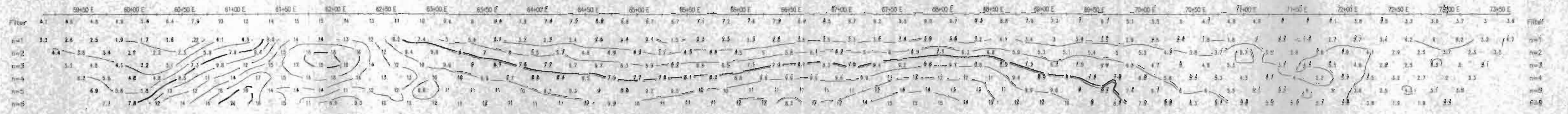
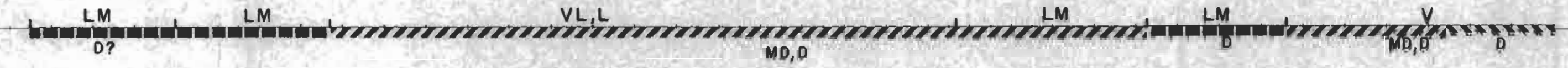
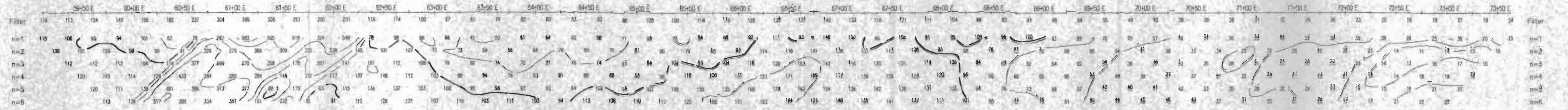
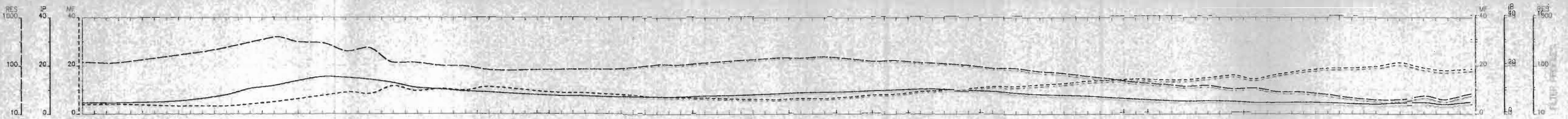
See notes on page 1 for interpretation of resistivity data.
 Only well defined features are shown.

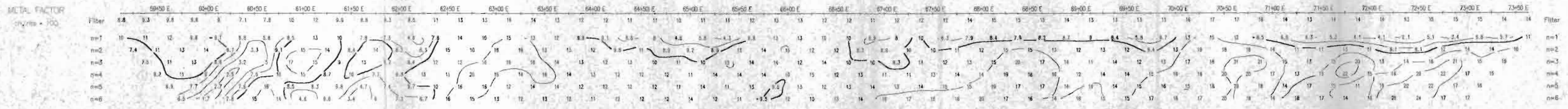
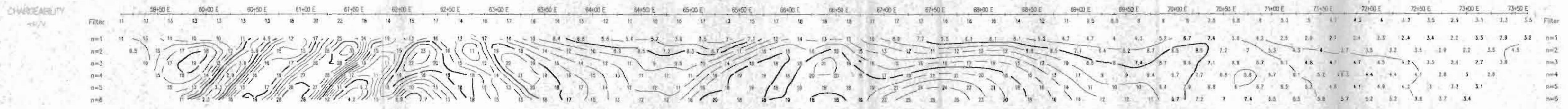
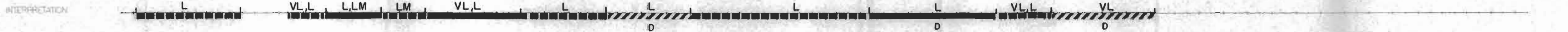
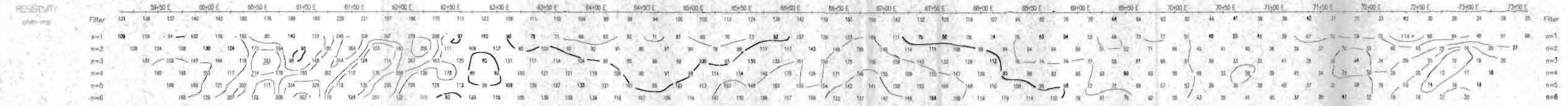
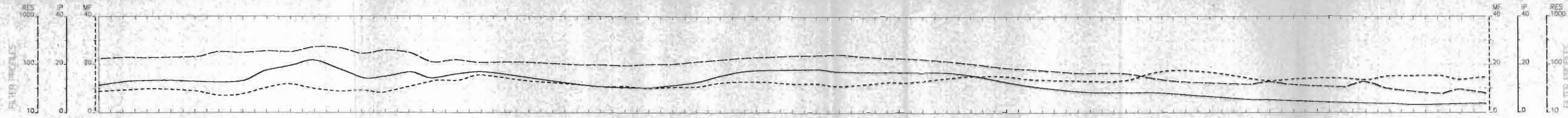
Positive features

Scale 1:2500

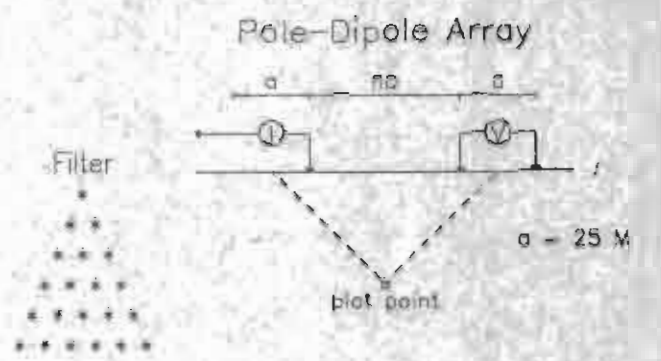


DWG. No. W-2988-D8-249 **PLATE No. 4**
PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID EAST, OMEGA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA
 Date: AUGUST - SEPTEMBER, 1996
 Interpretation:
PETER E. WALCOTT & ASSOC. LTD.





Line 10300 N



Instrument: Androtax 7.5 kw. Tx, BRGM IP6 Rx.
 Frequency: 0.125 Hz.
 Operators: D.H., A.W., G.M.

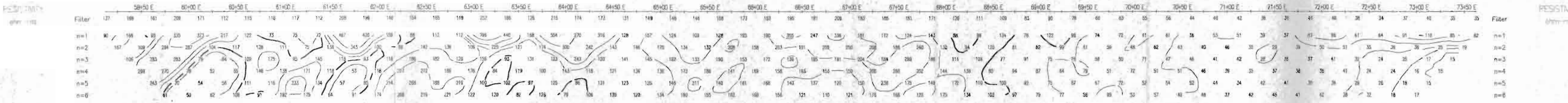
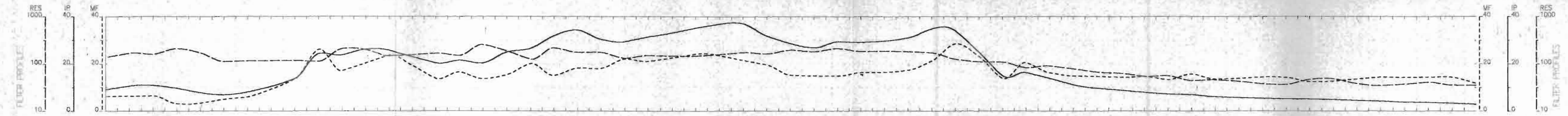
Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

- Well defined, strong increase in polarization with depth, indicating a massive sulfide body.
- Early well defined moderate increase in polarization.
- Lately well defined weak increase in polarization.
- Resistivity feature.

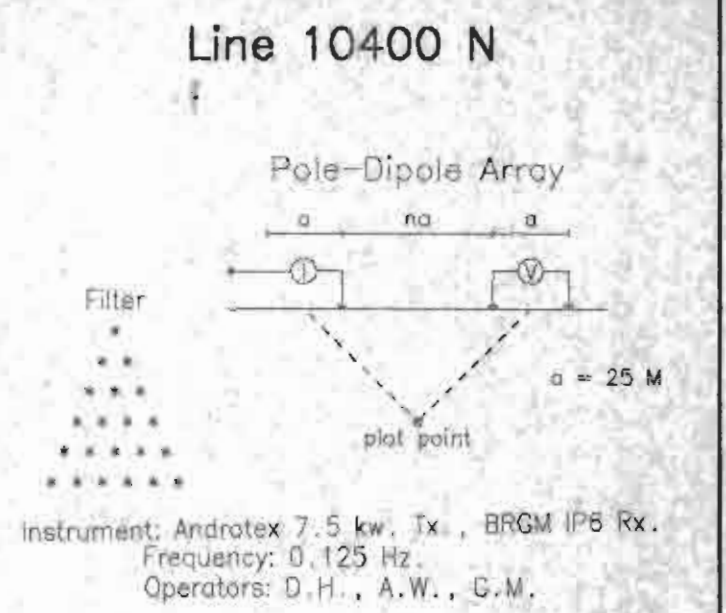
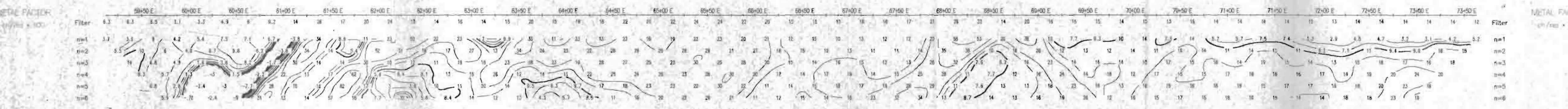
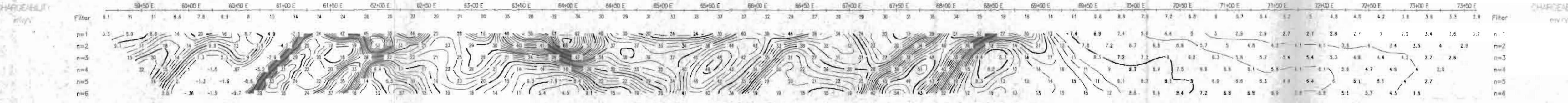


DWG. No. W-2089-D8-249 PLATE No. 5
 PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID EAST, OMECEA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA
 Date: AUGUST - SEPTEMBER, 1996
 Interpretation:
 PETER E. WALCOTT & ASSOC. LTD.



INTERPRETATION: LM, VL, L, LLM, L, LM, LM, VL

CHARGEABILITY (mv/v): I+, I+LD?, I+, I+V?

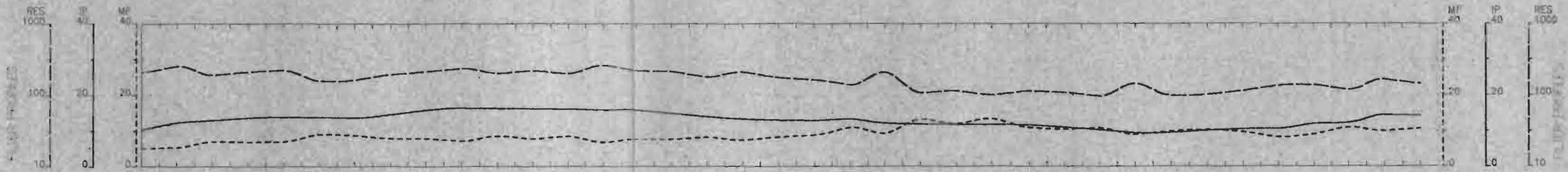


Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10, ...

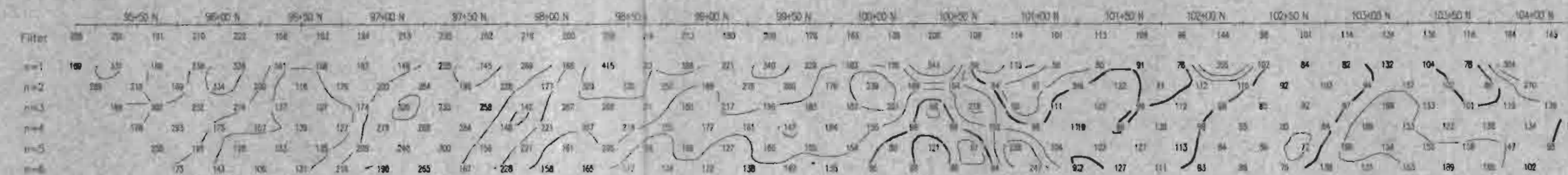
INTERPRETATION:
 Will define: strong increase in polarization with depth without marked decrease in resistivity.
 Fairly well defined moderate increase in polarization.
 Fairly well defined weak increase in polarization.
 Resistivity feature.



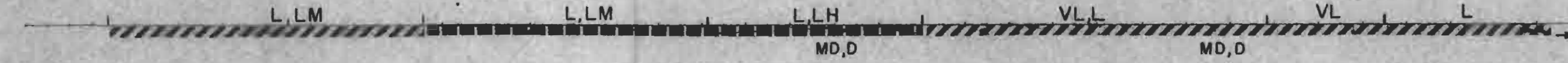
DWG. No. W-2090-D8-249 PLATE No. 6
PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID EAST, OMINEX MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA
 Date: AUGUST - SEPTEMBER, 1996
 Interpretation:
PETER E. WALCOTT & ASSOC. LTD.



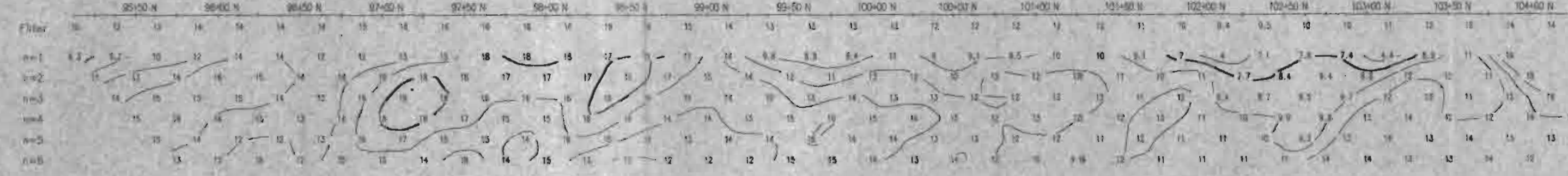
RESISTIVITY



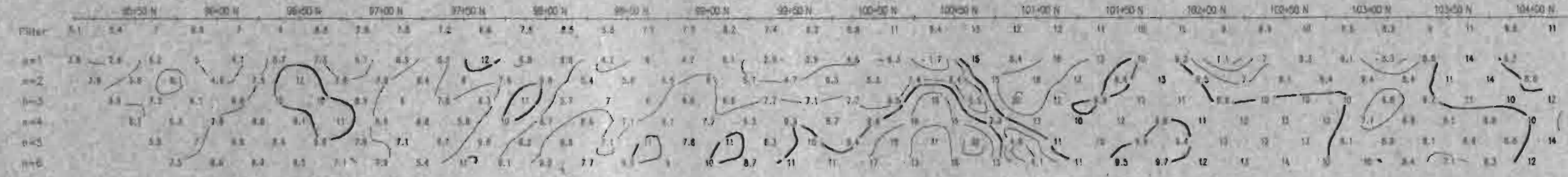
INTERPRETATION



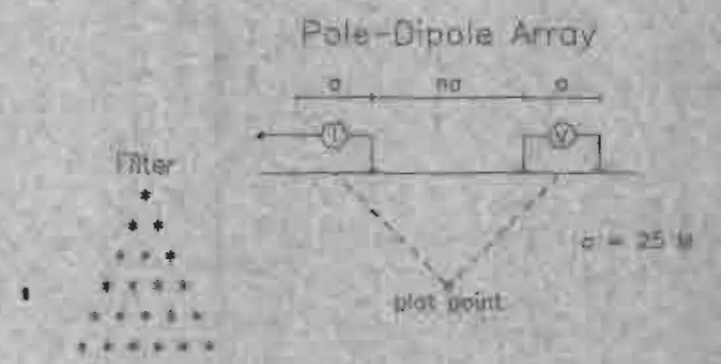
CHARACTERISTICS



METAL FACTOR



Line 134 E



Instrument: Androtex 7.5 kw. Tx., BRGM IP6 Rx.
 Frequency: 0.125 Hz.
 Operators: D.H., A.W., G.M.

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

INTERPRETATION

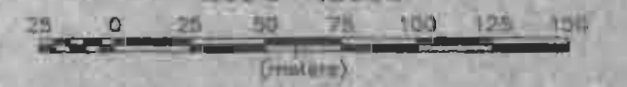
See notes on page 1 for details of pole-dipole array & related methods.

Filter will remove ground surface irregularities.

Filter will remove low frequency noise.

Stationing notes.

Scale 1:2500

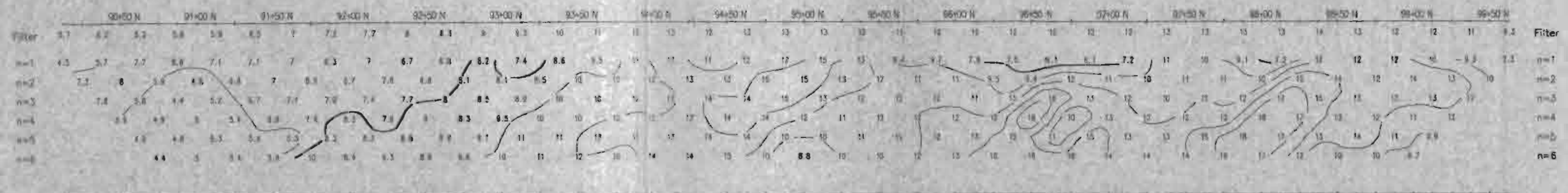
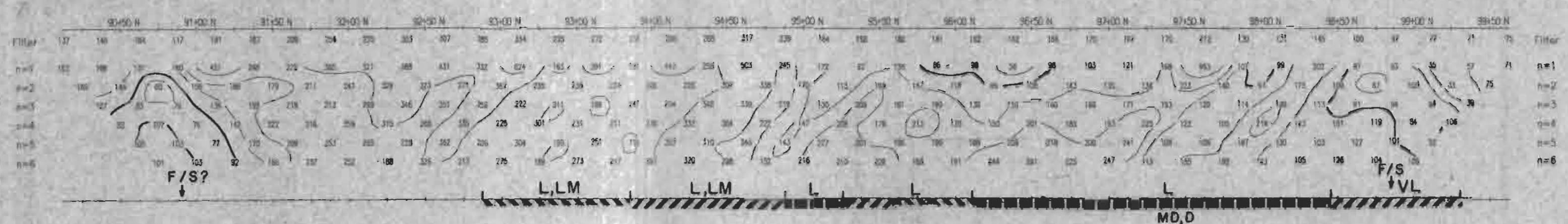
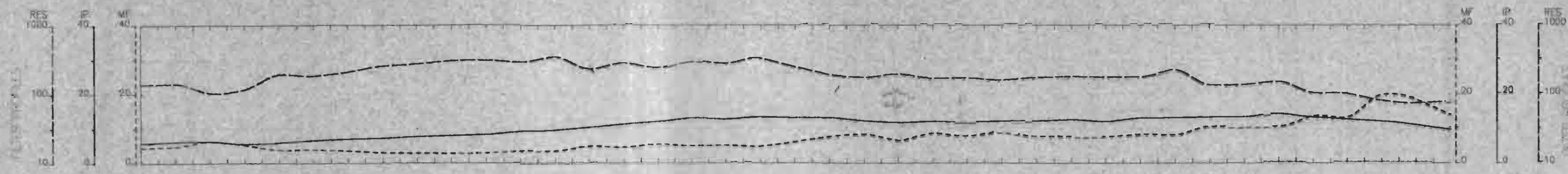


DWG. No. W-2001-D8-249 PLATE No. 7

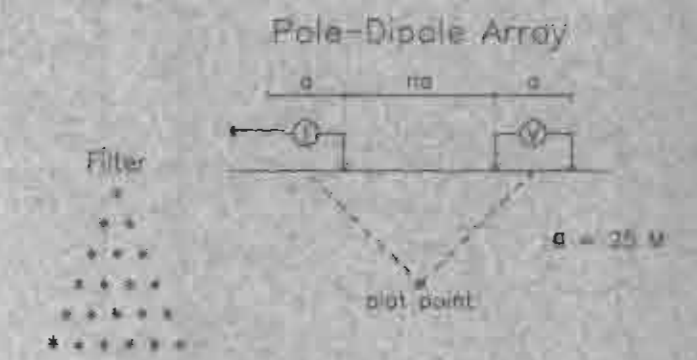
PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID WEST, OMINICA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA

Date: AUGUST - SEPTEMBER, 1996
 Interpretation:

PETER E. WALCOTT & ASSOC. LTD.



Line 136 E



Instrument: Androtex 7.5 kw. Tx., BRGM IP6 Rx.
 Frequency: 0.125 Hz.
 Operators: D.H., A.W., C.M.

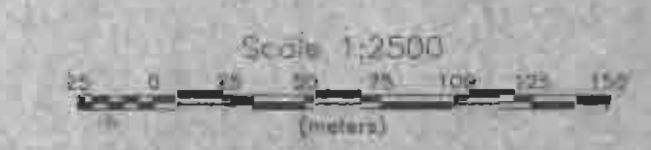
Logarithmic Contours: 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETER

Well defined, strong anomalies in
 resistivity, with or without marked
 frequency effect, usually
 indicate well defined, moderate to deep
 structures.

Large well defined, weak anomalies
 indicate deep structures.

Resistivity feature

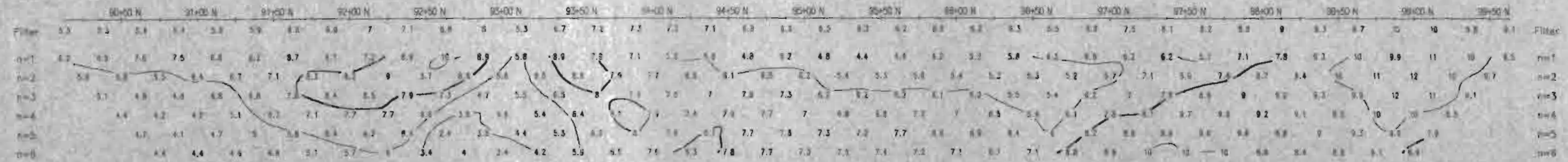
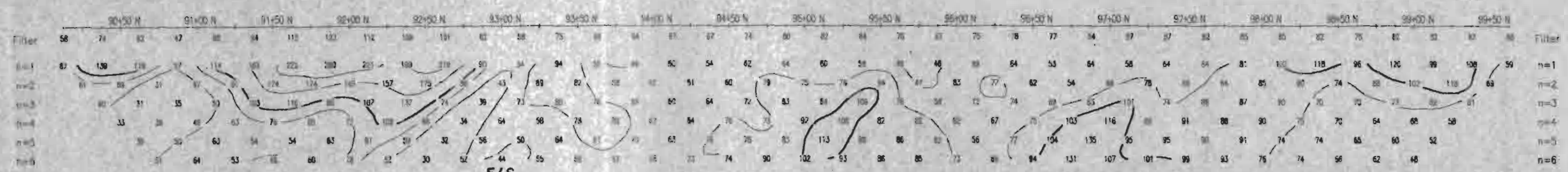
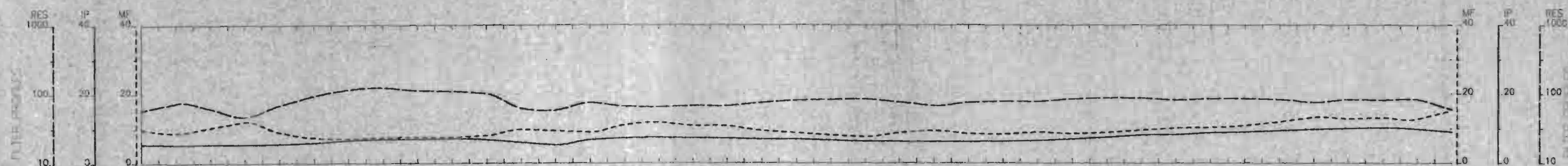


DWG. No. W-2082-08-240 PLATE No. 8

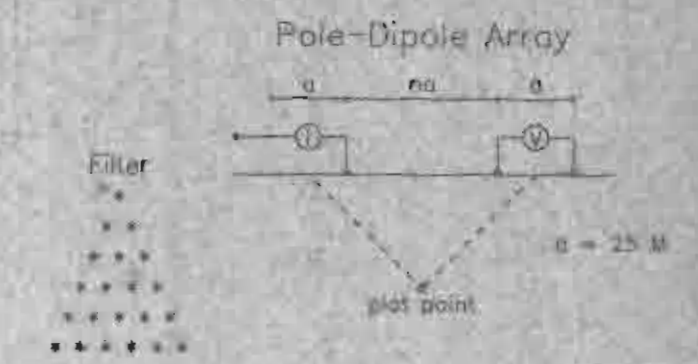
PHELPS DODGE CORP., OF CANADA

INDUCED POLARIZATION SURVEY
 ARROW GRID WEST, OMEGA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA

Date: AUGUST - SEPTEMBER, 1996
 Interpretation:
PETER E. WALCOTT & ASSOC., LTD.



Line 138 E

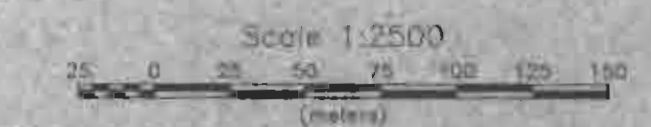


Instrument: Androtax 7.5 kw, Tx., BROM IP6 Rx.
 Frequency: 0.125 Hz
 Operators: D.H., A.W., G.M.

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

INTERPRETATION

Two defined, fairly narrow, low resistivity zones are present.
 Only one defined moderate chargeability zone is present.
 Only one defined high mutual friction zone is present.
 Relatively featureless.

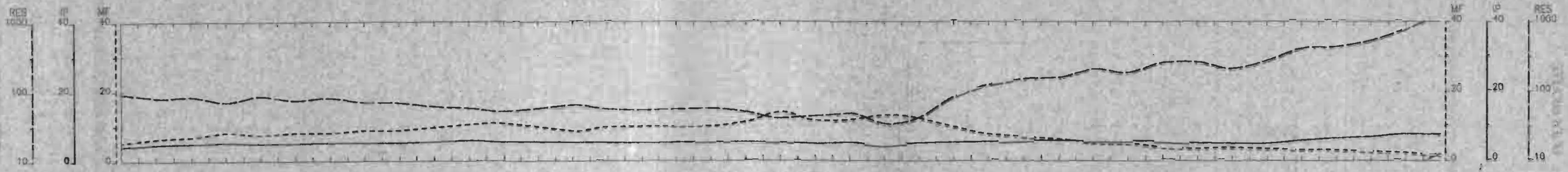


DWG. No. W-2093-08-248 PLATE No. 9

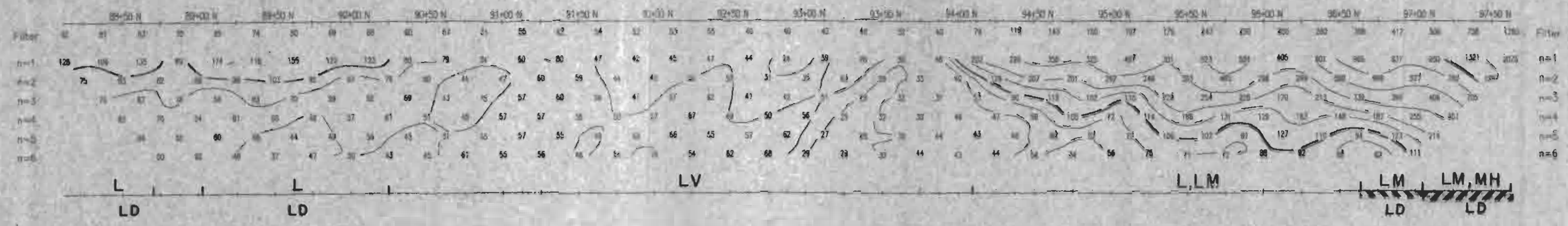
PHELPS DODGE CORP. OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID WEST, OMINCEA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA

Date: AUGUST - SEPTEMBER, 1996
 Interpretation:

PETER E. WALCOTT & ASSOC. LTD.

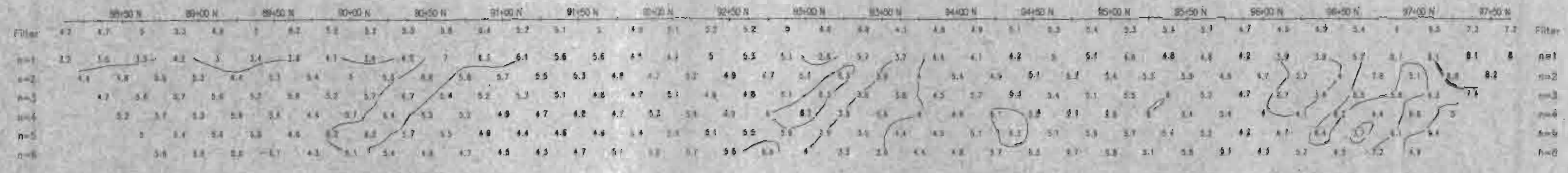


RESISTIVITY

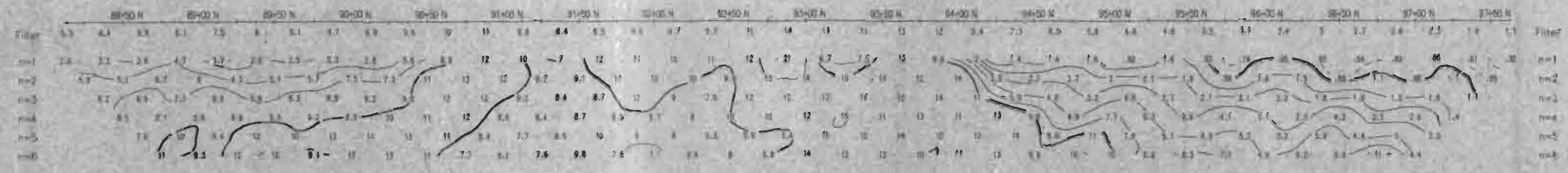


INTERPRETATION

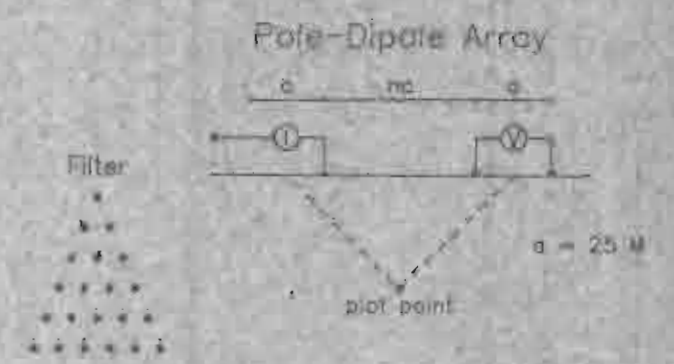
APPENDIX



METAL FACTOR



Line 140 E



Instrument: Androlex 7.5 kw. Tx., BRGM IP6 Rx.
 Frequency: 0.125 Hz.
 Operators: B.H., A.W., G.M.

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

INTERPRETATION

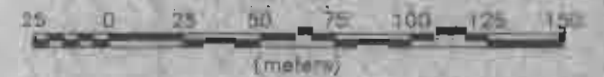
Will provide a rough estimate of the resistivity structure of the earth.

Time and depth resolution is poor.

Only well defined with average of stations.

Resistivity contours.

Scale 1:2500

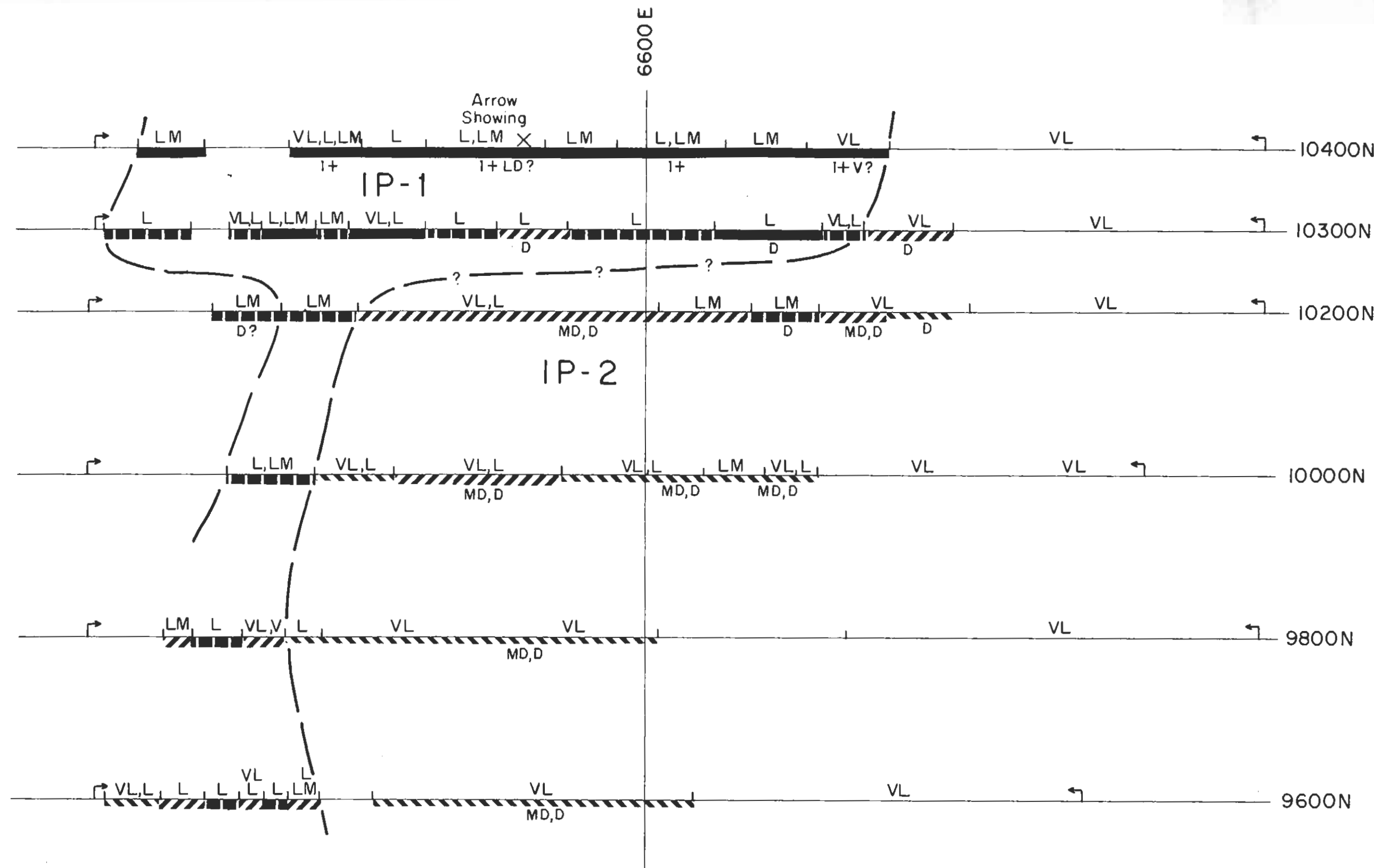


DWG. No. W-2004-09-240 PLATE No. 10

FHELPS DODGE CORP., OF CANADA
 INDUCED POLARIZATION SURVEY
 ARROW GRID WEST, OMEGA MINING DIVISION
 VANDERHOOF AREA, BRITISH COLUMBIA

Date: AUGUST - SEPTEMBER, 1998
 Interpretation:

PETER E. WALCOTT & ASSOC., LTD.



INDUCED POLARIZATION RESPONSES

- 1st order
- 2nd order
- ////// 3rd order
- ////// 4th order
- ? = Questionable
- D = Deeper (observed at larger dipole separations)
- MD = Medium depth
- LD = Limited depth extent
- V = Vertical or steeply dipping source
- C = Contact
- Lithological source

APPARENT RESISTIVITY RANGES ($\Omega\text{m-m}$)

VVL = 10 - 50 L = 100 - 250
 VL = 50 - 100 LM = 250 - 500

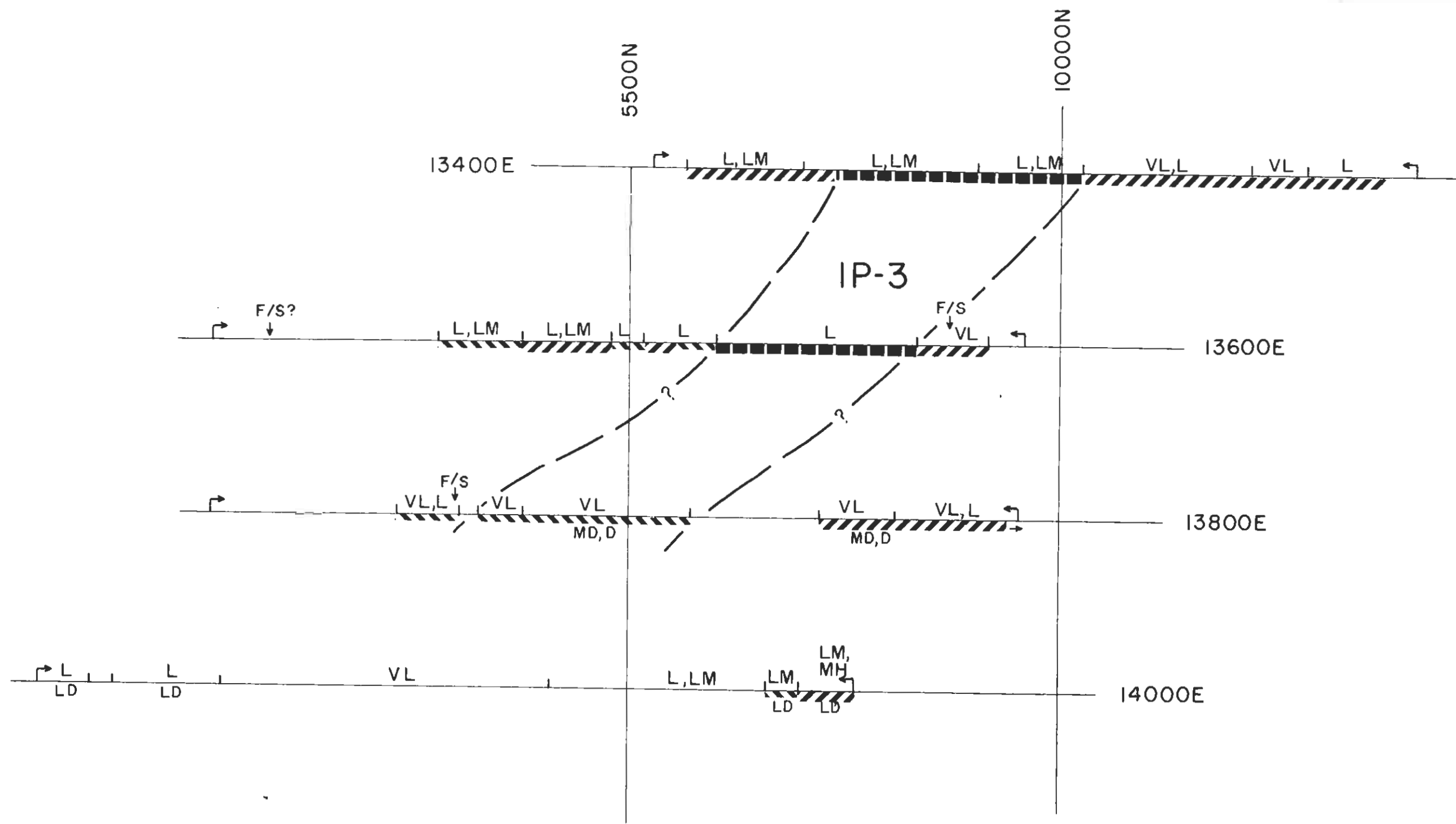
IP-2 IP/Resistivity trend and identification



DWG. No. W-2095-08-249

		ARROW GRID EAST Yellow Moose Project		
				Province: British Columbia Twp/Area: Vanderhoof N.T.S.
Prepared by: F.L.J. Drawn by: N.T.M.		Omicron M.D., British Columbia IP/Resistivity Survey INTERPRETATION MAP		
DATE	PRJ. No.	PROJ. No.	SCALE	PLATE No. 11
Oct 96		249	1" = 500'	

To accompany report by Francis L. Jagodits, P.Eng., Consulting Geophysicist



INDUCED POLARIZATION RESPONSES

- 1st order
- ▬▬▬▬▬▬ 2nd order
- ▨▨▨▨▨▨ 3rd order
- ▧▧▧▧▧▧ 4th order
- ? = Questionable
- D = Deeper (observed at larger dipole separations)
- MD = Medium depth
- LD = Limited depth extent
- V = Vertical or steeply dipping source
- C = Contact
- Lithological source

APPARENT RESISTIVITY RANGES (ohm-m)

- VVL = 10 - 50 L = 100 - 250
- VL = 50 - 100 LM = 250 - 500

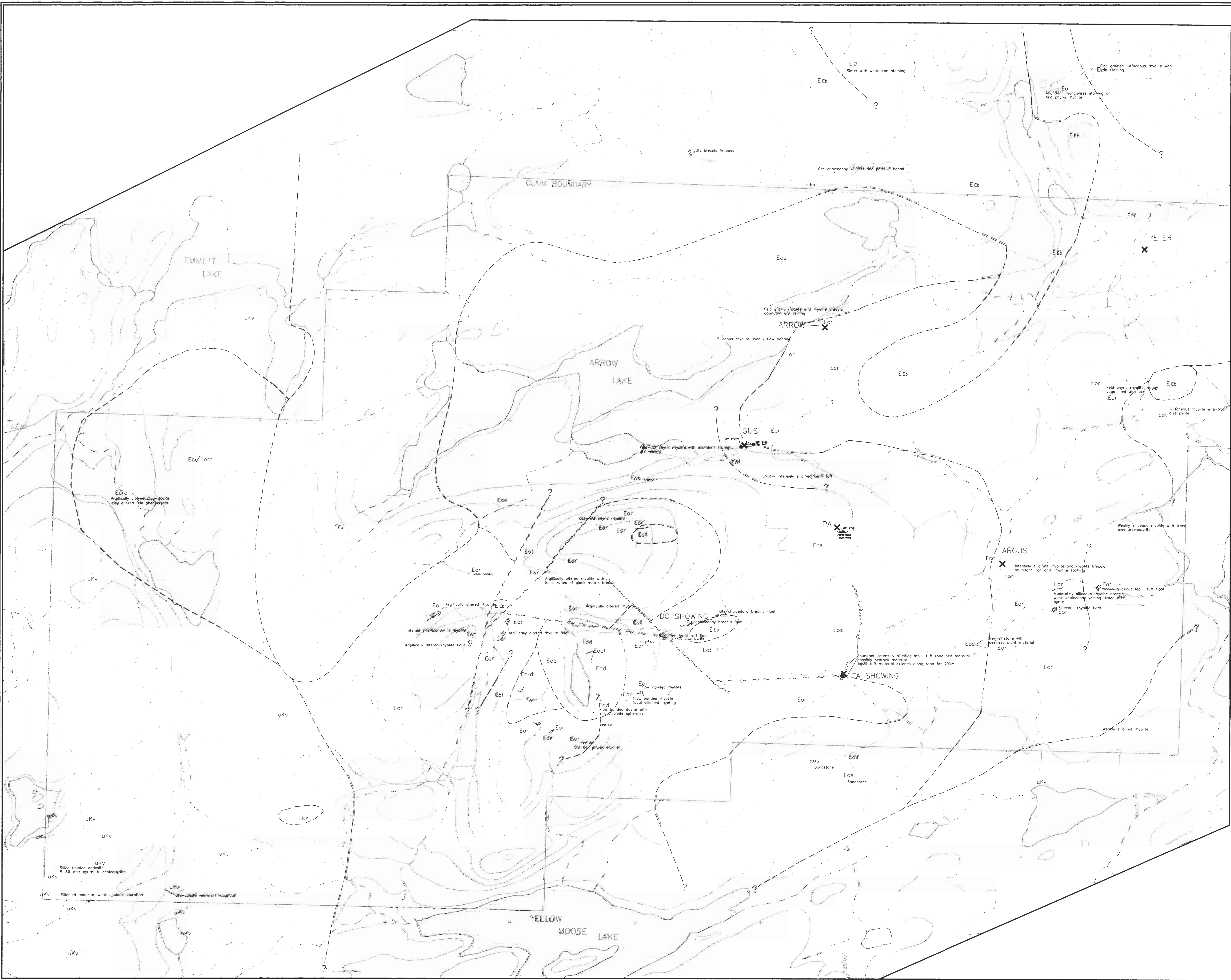
IP-3 IP/Resistivity trend and identification



DWG. No. W-2096-D8-249

		ARROW GRID WEST Yellow Moose Project	
Province: British Columbia Township: Vanderhoof N.T.S.		Omicron M.D., British Columbia	
Compiled by: F.L.J. Drawn by: R.Y.M.		IP/Resistivity Survey INTERPRETATION MAP	
DATE	FILE No.	PROJ. No.	SCALE
Oct 98		249	1 : 5000
			PLATE No. 12

To accompany report by Francis L. Jagodits, P.Eng., Consulting Geophysicist



LEGEND

- Eocene**
ENDAKO GROUP
 EEt Andesite, Tuff
 Eb Basalt, minor Andesite
Ootsa Lake Group
 Eos Lghr, sandstone, siltstone (plant fossils), minor matrix supported conglomerate
 Eodt Vitreous, light green, fine grained dacite tuff locally with white silico/calcite spherules
 Eot Maroon lapilli tuff, local fine grained tuff
 Eod Green dacite flows and flow breccias, locally vitreous
 Eor Maroon feldspar/- quartz phryic rhyolite, local flow breccia
Upper Cretaceous
KASALKA GROUP
 uKs Red matrix supported polymictic conglomerate
 uKt Grey-green fine grained tuff with minor lapilli tuff
 uKv Grey-green fine grained, siliceous porphyritic andesite

SYMBOLS

- Outcrop
 Geological contact (approximate)
 Fault (approximate)
 Flow banding (inclined)
 Ice direction
 Shearing (vertical)
 Flat
 Trench
 X GUS Mineral showing
 Area of Intense Silicification with Arsenopyrite and Pyrite
 Area of Argillic and Silica Alteration with Arsenopyrite and Pyrite
 Roads (main, secondary)
 Elevation contour (contour interval 100ft)
 Lake, creek
 UTM Coordinates
 Geological contacts are in part based on previous work by Cogema, 1993/1994.

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT
24,766
 0 200 400 600 800
 SCALE IN METRES

To Accompany 1995 Project Report on the Yellow Moose Gold Prospect, February 2, 1996.

PHELPS DODGE CORP. OF CANADA LIMITED
 PROJECT NO. 249 (YELLOW MOOSE PROPERTY) QUENICA MINING DIVISION

PROPERTY GEOLOGY

SCALE	DATE	BY	NTS. NO.	FIGURE
1:10000	FEB/96	CWP	93 F/6.11	4

FOX GEOLOGICAL SERVICES INC.