

LOG NO: DEC 18 1991	RD.
ACTION:	
FILE NO:	

**MAX PROPERTY**

<b>SUB-RECORDER RECEIVED</b>
<b>DEC 11 1991</b>
M.R. # _____ \$ _____
VANCOUVER, B.C.

Fort St James, British Columbia

NTS: 93K/16E

**INDUCED POLARIZATION SURVEY**  
**1991**

**Claims:**    **Max 1-29**  
              **Grif 1-2**  
              **GR 1-8**  
              **Sint 1**  
              **Fri #1**

**Owners:**    **A A Halleran, A D Halleran, U Schmidt**

**Operators:** **Rio Algom Exploration Inc**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**J A McClintock**

**21,949**

**December 1991**

## **SUMMARY**

During September 1991, a total of 21.5 line kilometres of pole-dipole induced polarization was carried out on the MAX property. The purposes of this work were to determine the extent of a zone of high chargeabilities present on the MAX 16 and 18 mineral claims; assess the extent of high chargeabilities present at the south end of line 115+00E on the MAX 23 claim and to test a large magnetic high anomaly on the MAX 14 and 15 claims.

Further surveying of the chargeability anomaly on the MAX 16 and 18 claims showed, at >30 milliseconds, the anomaly to be approximately 2000m by 500m. The anomaly at the south end of line 115+00E, when detailed by the September survey, was determined to be approximately 2000m by 500m as defined by >15 millisecond chargeabilities.

Surveying of the magnetic high anomaly on the MAX 14 and 15 claims found several small zones of >15 milliseconds, none of which are of sufficient dimensions to be sourced by extensive porphyry-type copper gold mineralization.

In 1992 it is recommended that the high chargeability anomalies at the southern end of line 115+00N and on the MAX 16 and 18 mineral claims be drilled to ascertain if their source is porphyry style copper gold mineralization. Because of the swampy nature of the terrain in the vicinity of both anomalies, drilling should be carried out in March 1992. Cost of the proposed drill programme is estimated to be \$95,000.

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## **1 INTRODUCTION**

This report describes the results of an induced polarization survey carried out by Rio Algom on the MAX property in September 1991. The purpose of the September IP survey was to define the extent of a still open zone of high chargeability on the MAX 16 mineral claim and to determine how extensive the high chargeabilities found at the south end of line 115+00E were. Reconnaissance-style IP surveying of portions of the Lynx grid was also carried because of a concern that transported overburden present might have nullified the soil survey results.

It was hoped that the IP survey might detect a broad zone high chargeability caused by sulphide minerals associated with porphyry-type copper-gold mineralization.

This report discusses the results of the induced polarization survey and makes recommendations.

### **1.1 Location, Access of Physiography**

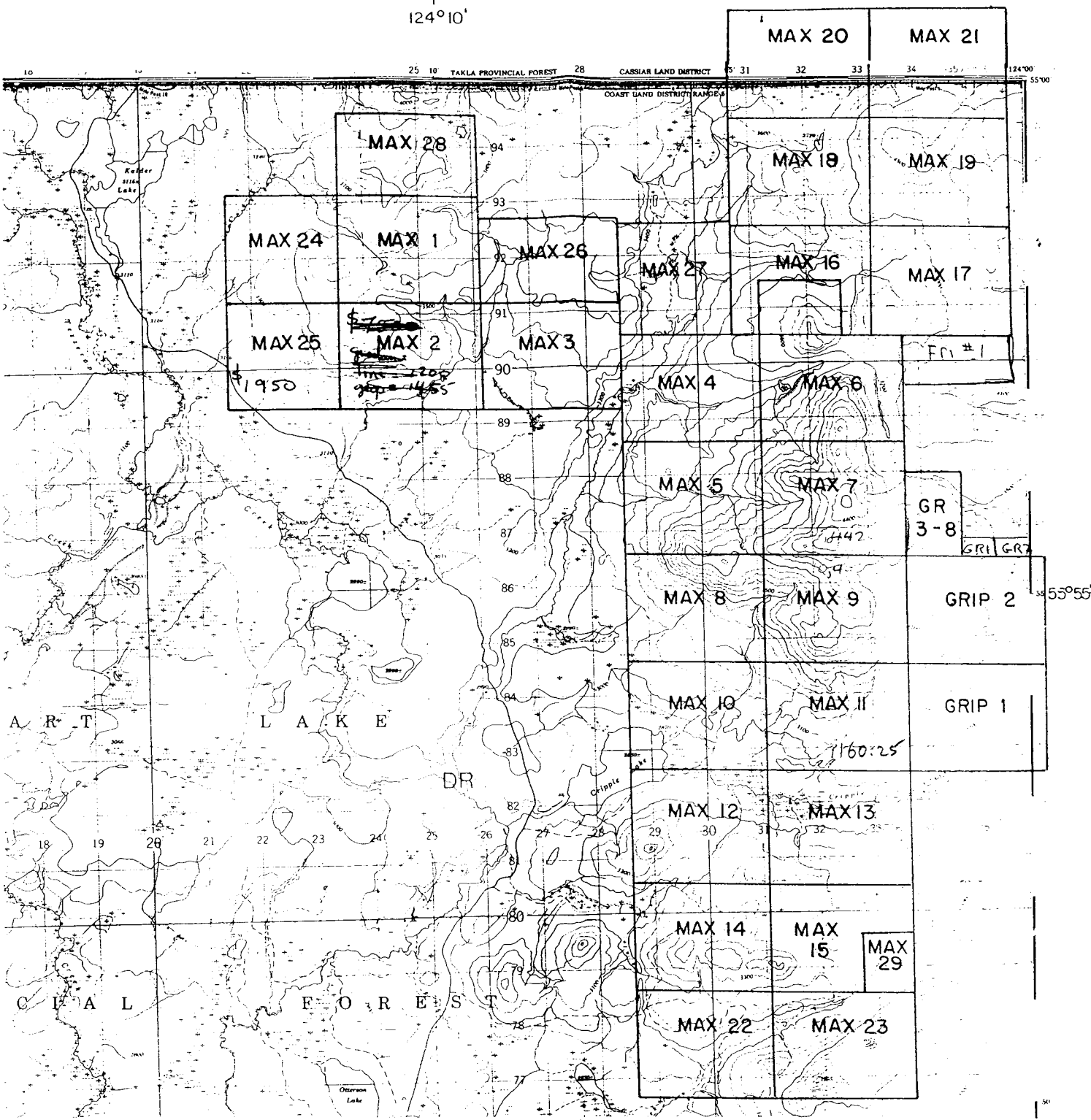
The claims are situated 57km north of Fort St James, British Columbia in the Omineca Mining Division. Geographic coordinates of the centre of the property are 54° 56'N latitude and 124° 02'W longitude (Map 1).

Access to the property is by two wheel drive vehicle via the Germansen Road from Fort St James and two major branch logging roads which pass through the north and south ends of the property. A third road, north of Cripple Lake, extends to the western claim boundary.

Recent clear cut logging in the north, west and south claims areas has afforded easy access to these portions of the claims. However, the central and eastern parts of the claims require helicopter access.

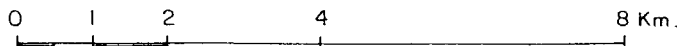
The property lies near the northern boundary of the Fraser Basin, a subdivision of the Interior Plateau. Typically, the Fraser Basin is characterized by low relief with flat to rolling surfaces which are, for the most part, lower than 900m in elevation (asl).

124° 10'



N.T.S. 93N-1E, 93K-16E

SCALE 1:100,000



**Rio Algom Exploration Inc.**

**MAX CLAIMS**

**LOCATION MAP**

DATE

OCT. 1990

DRAWN BY

J.M. / Chong

DWG.

1

Elevations on the property range from 875 to 1,370 metres asl. Bedrock exposure is variable, though outcrops are for the most part limited to elevations greater than 1,200m asl.

Where clear cut logging has not removed the trees, vegetation consists of thick growths of spruce, fir and pine interspersed with open swampy areas along the main drainage.

## 1.2 Property

The MAX property comprises the MAX 1-27, MAX 29, Grif 1 and 2, GR 3 to 8 and Sint 1 mineral claims totalling 575 units. The claims, which are owned jointly by Uwe Schmidt, Arthur A Halleran and Arthur A D Halleran, are held under option by City Resources (Canada) Limited. Under the terms of a joint venture agreement with City Resources, Rio Algom Exploration has a right to earn up to 70% of City Resources' interest in the property.

Details of the claims are as follows:

Claim Name	Units	Record Number	Date of Record
MAX 1	20	239224	August 13 1986
MAX 2	20	239225	August 13 1986
MAX 3	20	239226	August 13 1986
MAX 4	20	239227	August 13 1986
MAX 5	20	239228	August 13 1986
MAX 6	20	239229	August 13 1986
MAX 7	20	239230	August 13 1986
MAX 8	20	239231	August 13 1986
MAX 9	20	239232	August 13 1986
MAX 10	20	239233	August 13 1986
MAX 11	20	239234	August 13 1986
MAX 12	20	239235	August 13 1986
MAX 13	20	230236	August 13 1986
MAX 14	20	239237	August 13 1986
MAX 15	20	239238	August 13 1986
MAX 16	20	239581	August 13 1987
MAX 17	20	239582	August 13 1987

<b>Claim Name</b>	<b>Units</b>	<b>Record Number</b>	<b>Date of Record</b>
MAX 18	20	239583	August 13 1987
MAX 19	20	239584	August 13 1987
MAX 20	20	239585	August 13 1987
MAX 21	20	239586	August 13 1987
MAX 22	20	242076	May 15 1990
MAX 23	20	242077	May 16 1990
MAX 24	16	242078	May 18 1990
MAX 25	16	242079	May 20 1990
MAX 26	15	242080	May 17 1990
MAX 27	16	242081	May 19 1990
MAX 29	6	242082	May 17 1990
Fri #1	8	242456	July 19 1990
GR 1	1	242257	July 26 1990
GR 2	1	242458	July 26 1990
GR 3	1	240539	April 16 1989
GR 4	1	240540	April 16 1989
GR 5	1	240541	April 16 1989
GR 6	1	240542	April 16 1989
GR 7	1	240543	April 16 1989
GR 8	1	240544	April 16 1989
GRIF 1	20	239276	September 15 1986
GRIF 2	2	239277	September 15 1986
Sint 1	20	241909	April 20 1990

All in the Omineca Mining Division, British Columbia.

### **1.3 History**

Although the area of the MAX property was undoubtedly explored by a number of regional exploration projects for porphyry copper deposits during the 1960's and 1970's, the first documented work was by the Arthur A Halleran, Arthur A D Halleran and Uwe Schmidt syndicate who staked much of the present property in late 1986. The Halleran et al syndicate based their staking on the presence of a series of magnetic highs of similar magnitude to the nearby Tas and Mount Milligan properties and on the presence of placer gold in the creeks draining these magnetic anomalies.

In 1986, the property was optioned to United Pacific Gold Limited who carried out a preliminary programme of geological mapping, prospecting, soil sampling and collection of panned concentrated silt samples. This work, documented in a report by Uwe Schmidt (1988), confirmed the presence of anomalous gold in streams draining the magnetic anomalies and widespread propylitically altered andesitic flow and pyroclastic rocks. Several small intrusive breccias, ranging in composition from diorite to syenite were also noted. Grid soil sampling located areas of anomalous copper-in-soils on the Grif claims.

In 1988, further grid and reconnaissance soil sampling was carried out over portions of the MAX 16 and 18 claims. Because of limited financial resources, United Pacific Gold Limited were unable to carry out further work programmes and in 1990, sold their interest in the property to City Resources (Canada) Limited.

Prompted by the encouraging geochemical, geophysical and geological setting of the MAX claims, Rio Algom entered into a joint venture agreement with City Resources (Canada) Limited in May 1990. In 1990, subsequent to acquiring the property, Rio Algom conducted an airborne VLF EM and magnetic survey of the entire claim block, an airphoto interpretation of the surficial geology, grid soil sampling and geological mapping of the central grid, Lynx grid, NE and NW grid areas.

#### **1.4 Rio Algom Work Programme - September 1991**

The positive results of the June to August 1991 exploration programme prompted further reconnaissance-style induced polarization surveying in September 1991.

IP surveying along lines spaced 300m to 400m apart was carried out to close off the chargeability anomaly at the southern end of line 115+00E and two lines were surveyed south of line 173+00N to close off the still open chargeability anomaly on line 173+00N.

As glacio-fluvial gravels covered much of the northern and eastern portions of the Lynx Grid (MAX 14 and 15 claims), possibly rendering the soil survey ineffective, it was decided to evaluate these areas with reconnaissance IP surveying along lines spaced 400m apart.



## 2 REGIONAL GEOLOGY

The property occurs within the Quesnel Trough, a subdivision of the Intermontane tectonic belt. The Quesnel Trough is fault bounded on the west by Palaeozoic rocks of the Pinchi Belt and on the east by mid to upper Palaeozoic rocks of the Slide Mountain Group.

The Quesnel Trough was the site of extensive island-arc volcanic and sedimentary deposition from late Triassic to early Jurassic time. The base of Quesnel Trough is an Upper Triassic black argillite unit. This unit is exposed near the eastern margin of the trough where it commonly overlies ophiolitic rocks of the Slide Mountain Group. The basal black argillite is overlain by a series of augite porphyry flows, breccias and minor argillites. These rocks are overlain by a second sequence of argillites and volcanoclastic rocks of Upper Triassic to Lower Jurassic age. Subaerial volcanoclastics in the geologic record indicate that volcanic centres in the trough emerged in early Jurassic time. This is postulated to have occurred in conjunction with the rise and deformation of Omineca Crystalline Belt rocks to the east.

Block faulting and tilting are the dominant structural styles in the belt. Faults trend in a northwest and northeast direction. Folding is restricted to the eastern margin of the belt near its structural boundary with the Omineca Crystalline Belt.

Two major episodes of granitic intrusion are recognized along a northwest trending belt slightly oblique to Quesnel Trough. The intrusive events cluster around 200 and 100 million year ages. Gold and copper-gold deposits have an affinity for 200 million year old alkalic plutons and Triassic-Jurassic volcanic rocks. Molybdenum deposits, on the other hand, are associated with the 100 million year intrusive event.

The area around the property was remapped in 1990 by J L Nelson and others of the B C Geological Survey Branch and released as Open File 1991-3. Nelson divided the Takla Group into four informal formations, the Rainbow Creek, Inzana Lake, Witch Lake and Chuchi Lake formations. Two of these formations, the Inzana Lake and Witch Lake, underlie the MAX property.

Three grid areas on the MAX property were mapped in 1991 by geologists employed by Northwest Geological. These are referred to as the "Lynx",

"Northwest" and "Northeast". The Lynx grid is located at the south end of the property and is underlain by sedimentary, pyroclastic and volcanic rocks of the Inzana Lake Formation. The Northwest grid, located in the northwest corner of the property, is underlain by late Triassic to early Jurassic porphyritic diorite suite, while the Northeast grid is underlain volcanics and minor sedimentary rocks of the Witch Lake Formation.

### **3 GEOPHYSICS**

Under contract to Rio Algom, Euro Canadian Geological undertook a 21.5km induced polarization survey over selected portions of the MAX property. Areas chosen for induced polarization surveying were those magnetic anomalies which lay in areas of thick (>10m) or transported overburden and where grid soil sampling was deemed to be ineffective. The purpose of the survey was to locate sulphide mineralization which might be associated with stock-like intrusive bodies.

The survey employed a Sintrex IPR 8 receiver and a Hunter MK4 transmitter. Line spacings were either 300m or 400m and the survey utilized an "a" spacing of 75m with n separation of 1 and 2. Readings were taken at 25m intervals. Locations of the survey lines are displayed on Map 2 and pseudosections of the lines are presented in Appendix II.

#### **3.1 Theory of Induced Polarization**

##### **3.1.1 The Time Domain Induced Polarization Method**

The induced polarization method is one of the most powerful geophysical techniques ever developed to detect metallic mineral deposits. Credit for the discovery of the IP phenomenon must be given to Conrad Schlumberger who, in 1913 while prospecting for highly conductive metalliferous ore bodies utilizing his already proven resistivity techniques, noticed that after current shutoffs small but measurable voltage potential occurred for some time. No further work on the utilization of the IP phenomenon was conducted until 1942 when the US Navy constructed a beach mine detector based on the same principles. This work was abandoned in 1945 at the end of the war.

Post-war work on the IP method was preceded by the US Strategic and Critical Materials Stock Piling Act of 1946. Porphyry copper deposits in Arizona were important exploration targets at that time and there was no known geophysical technique that could detect these huge low grade deposits. Newmont Mining Corporation spearheaded the search for these deposits and, in 1946, hired Dr A A Brant for the University of Toronto to develop and conduct geophysical surveys to search for these huge deposits. In 1947, Brant asked Harry Siegel if he would like to study the IP phenomenon as a Master's Thesis at the University of Toronto. Extensive laboratory and field studies were conducted but it was not until Siegel

normalized the secondary voltages against the primary voltages that the results began to make sense. With this breakthrough Brant, under the auspices of Newmont Mining Corporation, assembled an exceptional team, mostly Canadians, including Harry Siegel, James Wait and Duncan Crone. Over the next ten years, this team developed the time domain IP survey into an exciting, highly successful exploration tool.

Today time domain IP surveys are conducted with a variety of receivers, transmitters and electrode configurations. The principle of all of the surveys is the same. An external current is applied to polarize the ground. The voltage potential caused by this current is measured (primary voltage). The current is then interrupted and the over-voltage decay is measured, normalized by the primary voltage and integrated over a time window. The resulting measurement is normally given as chargeability in millivolts per volt time second, (i.e. milliseconds).

### **3.1.2 The Induced Polarization Effect**

The IP effect is mainly electrochemical in origin and can be divided into two distinct components, membrane polarization and electrode polarization.

In most rocks, the predominant form of current flow is electrolytic conduction. This is the only form of conduction when no metallic minerals are present, thus the rock structure must be somewhat porous to permit current flow. Most rock minerals have a net negative charge at the interface between rock surface and pore fluid attracting positive ions and repelling negative ones. This positive ion concentration may extend into the fluid zone to a depth of 0.001mm. When a DC potential is applied, the negative ions accumulate at one end of the zone and leave the other. When the potential is turned off, the ions take a finite amount of time to return to their original distribution. This is known as the membrane IP effect and is considered the background chargeability.

Electrode polarization is similar to membrane polarization and occurs when metallic minerals are present in the rock. Electrical conduction is partly electrolytic and partly electronic, resulting in a chemical reaction at the interface between the mineral and the fluid. Consider the presence of a metallic mineral in a pore. Upon the application of an electric potential, the metallic mineral will develop net surface charges of opposite sign. This results in the accumulation of ions of opposite sign adjacent to each face. The resulting current flow is achieved by electron exchange taking place between the metal and the solution ions at the interface

(electrolysis). Since conduction in the electrolyte is much less than in the metal. The pile-up of ions is maintained by the external voltage. When the external potential is interrupted, the residual voltage (over voltage) decays as the ions diffuse back to their original equilibrium state.

Minerals which are electronic conductors exhibit electrode polarization. These include almost all sulphides (excepting sphalerite and possibly cinnabar and stibnite) some oxides such as magnetite, ilmenite, pyrolusite and cassiterite but unfortunately also graphite.

The magnitude of the response depends on the external current source and the characteristics of the medium. It varies with mineral concentration but since it is a surface response, it should be larger when the mineral is disseminated than when it is massive. The particle size to pore size ratio also affects the magnitude of the response as well as the general porosity of the rock. A very porous rock has many alternate paths for electrolytic conduction to take place thus diminishing the electrode polarization effect. Both forms of polarization are also dependant on the fluid content of the rock.

### **3.1.3 Electrode Configurations**

Many electrode configurations have been used to conduct IP surveys. Both linear and areal arrays have been used with the most commonly used being dipole-dipole, pole-dipole and gradient.

The survey carried out on the MAX claims utilized a pole-dipole array. The potential electrodes are a fixed dipole, separated from a single current electrode by some variable distance. The other current electrode is located remote from the survey area, a practical infinity. As with the dipole-dipole array, the separation between the current electrode and potential dipole is usually  $n \times a$ , with  $n$  being an integer normally ranging from 1-8. During the course of the survey, several  $n$ 's are used as both the potential dipole and current electrode are advanced down the line. The advantages of a pole-dipole array are good lateral resolution, good depth information, higher current densities than the dipole-dipole array along with the disadvantages are non-symmetric anomalies (the anomaly tends to shift toward the advancing near current pole), poor dip information, dropping current densities with increasing  $n$ , and relatively slow survey procedure.

### 3.1.4 Data Presentation

Dipole-dipole and pole-dipole induced polarization data are generally presented in pseudosection form. Each pseudosection consists of the resistivity and chargeability data from a particular line presented in a two-dimensional display. It is extremely important to remember that, although data collected with  $n=4$  contains a larger amount of information from a greater depth than the data collected with  $n=1$ , it does not represent the physical properties of the rock type at any particular depth but rather a bulk sampling of the physical properties of the rock with a larger component coming from a greater depth. Therefore, the pseudosection is merely a data presentation and interpretation tool rather than a one-to-one map of a true geological section. An areal representation of the data can be had by mapping individual  $n$  levels onto plan maps or by utilizing a weighted average of two or more of the  $n$  levels. Each has advantages under different conditions. For this survey, data is displayed on pseudosections.

## 3.2 Interpretation of Results

Induced polarization surveying of the Lynx soil grid located six separate zones of high chargeability. All of these zones are either less than 300m wide or localized to a single line. Of the chargeability anomalies, the best is on line 105+00E and occurs between stations 58+50N and 63+00N. The absence of this high chargeability zone on the line 101+00E and 109+00E indicates it to be of limited extent. None of the anomalies on the Lynx grid have the dimensions that indicate a large body of sulphide-bearing rock which might be associated with widespread porphyry style copper gold mineralization.

Induced polarization surveying west and east of the high chargeability anomaly at the extreme southern end of line 115+00E showed the anomaly to extend westward for over 800m and to have an average width of 500m. From the pseudosections, it appears that the anomaly strengthens with depth implying that the zone may be covered by up to 50m or more of overburden.

Unfortunately, due to a misunderstanding with the contractor, lines 115+00E and 119+00E were not extended to cover the anomaly. However, line 124+00E did test the eastern extension. Line 124+00E results show a broad zone of chargeability at depth which is the likely eastern extension of the zone. From the pseudosections, it is likely the anomaly is covered by at least 75m of non-chargeable

material, most likely lacustrine sediment or glacio-fluvial gravels. Based on results of this recent IP survey, this chargeability anomaly, referred to as the Lynx anomaly, has a minimum dimension of 2000m by 500m as defined by chargeabilities in excess of 15 milliseconds.

The additional induced polarization surveying carried out south of line 173+00N on the MAX 16 claim, showed the high chargeabilities to extend to 170+00N but no further. The anomaly, as defined by >30 milliseconds, extends for over 2000m, being still open to the north and has an average width of 400m. As the anomaly is completely overburden covered, determining its cause will require drilling.

#### 4 CONCLUSIONS

The September induced polarization survey has more precisely defined two large zones of anomalously high chargeability on the MAX property. At the northern end of the property, the very high chargeabilities on the MAX 16 claim were traced over a northerly trending distance of 2000m. This anomaly, at the 30 millisecond level, averages 400m wide and occurs in an overburden covered area. The nearest rock outcrops lie 100m east of the zone and are weakly propylitized andesite flows containing traces of pyrite. The very strong chargeabilities of the zone (up to 110 milliseconds) suggest a significant percentage of chargeable minerals, possibly as high as 10% or 20% sulphide. These high chargeabilities, combined with the well defined boundary, relatively narrow widths and linear nature of the anomaly, suggest its source may be a pyritic shear zone. Determining the exact cause of this chargeability anomaly will require drilling.

The Lynx anomaly situated south of the Lynx grid, is an elliptical zone of moderately strong chargeabilities having dimensions of 2000m by 500m. The zone is likely covered by variable amounts of overburden ranging from a few metres to in excess of 75m at its eastern end. This anomaly is a favourable target for porphyry copper-gold mineralization because of its size, its association with a small circular magnetic high and the presence of well propylitized andesite mineralized with pyrite and minor chalcopyrite at the southern end of line 119+00E. Testing of the Lynx anomaly will require diamond drilling.

IP surveying of the Lynx grid highlighted several small areas of high chargeabilities. None of these anomalies are of sufficient size to be sourced by widespread porphyry copper-gold mineralization and are therefore of no further interest.



## 5 RECOMMENDATIONS

The following exploration programme is recommended for the MAX property.

- 1) Three holes totalling 300m of NQ diamond drilling should be drilled into the chargeability anomaly on the MAX 16 claim. These holes should be located at stations:

189+00N and 138+00E;  
179+00N and 137+50E;  
173+00N and 144+75E.

- 2 Three holes totalling 300m of NQ diamond drilling should be drilled into the Lynx anomaly. Coordinates of the proposed holes are:

107+00E and 34+25N;  
111+00E and 33+25N;  
115+00E and 31+50N.

All drill holes are to be vertical.

The estimated, all inclusive cost of the drilling is \$95,000.

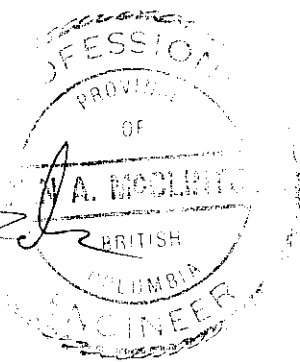
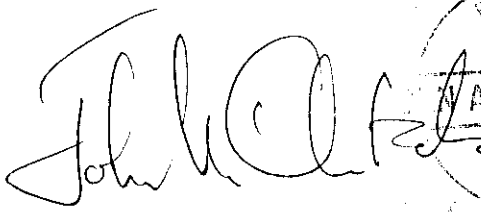
## 6 REFERENCES

- Dawson, J M (1988) Report on the MAX Property, Omineca Mining Division, British Columbia. Private report to United Pacific Gold Limited.
- Deighton, J R (1987) Memorandum on MAX Property Examination. Private report to United Pacific Gold Limited.
- McClintock, J A (1991) Max Property Geology, Geochemistry and Geophysics 1991. BCDM Assessment report.
- Nelson, J; Bellefontaine, K; K; MacLean, M; (1991) Regional Geological Mapping near Mount Milligan Green, Copper-Gold Deposit, BCDM Geological Field Work 1990 -Paper 1991-1.
- Nelson, J; Bellefontaine, K; Green, K; MacLean, M; (1991) Geology and Mineral Potential of Wittsichica Creek and Tezzeron Creek Map Areas. BCDM Open File 1991-3.
- Schmidt, U (1987) Summary Report on the MAX Property, Omineca Mining Division. Private report to United Pacific Gold Limited.
- Schmidt, U (1988) Report on the Geology and Geochemistry of the MAX Property, Omineca Mining Division. Private report to United Pacific Gold Limited.

## 7 STATEMENT OF QUALIFICATIONS

I, John A McClintock, do certify that:

- 1 I am a geologist residing at 4044 Mars Place, Port Coquitlam, British Columbia.
- 2 I am a graduate of the University of British Columbia with a degree of B Sc (Honours) in Geology.
- 3 I am a registered member of the Association of Professional Engineers of the Province of British Columbia, registration 12078.
- 4 I have practised my profession as an exploration geologist continuously for more than 16 years.
- 5 I supervised the exploration work described in this report on behalf of Rio Algom Exploration Inc.



The seal is circular with the text "PROFESSION OF" at the top, "OF" in the center, "A. MCCLINTOCK" in the middle, "BRITISH COLUMBIA" at the bottom, and "ENGINEER" at the very bottom.

John A McClintock  
December 1991

## **APPENDIX I - COST STATEMENT**

## **APPENDIX I - COST STATEMENT**

### **Report Preparation:**

J A McClintock - 2 days @ \$300/day	\$600.00	
Drafting	100.00	
Prints, typing and assembly	75.00	
<b>Sub total</b>		<b>\$775.00</b>

### **Induced Polarization Survey**

All inclusive cost - Euro Canadian	<b>17,477.50</b>
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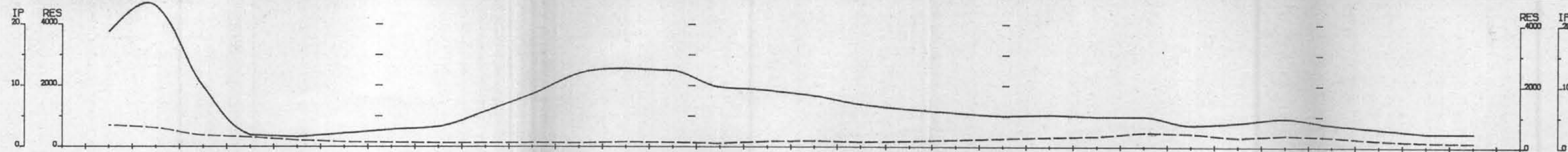
### **Line-cutting**

All inclusive cost - Durfeld Geological	<b>11,678.94</b>
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<b>TOTAL</b>	<b>\$29,931.44</b>
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## **COST APPORTIONED TO CLAIMS**

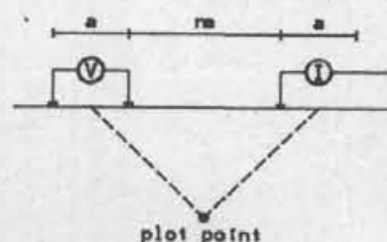
MAX 12	\$6,960.80
MAX 13	1,754.12
MAX 14	6,960.80
MAX 15	4,092.95
MAX 16	5,568.64
MAX 22	4,176.48
MAX 23	417.65
<b>TOTAL</b>	<b>\$29,931.44</b>



FILTERED PROFILES

Line 9300 E

Pole-Dipole Array

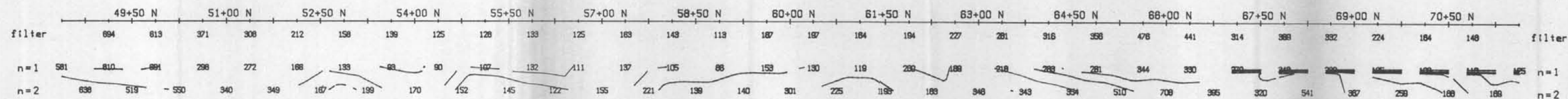


a = 75 m  
n = 1, 2

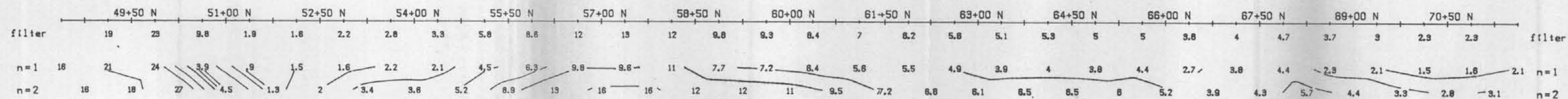
Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

Rio Algom Exploration Inc.

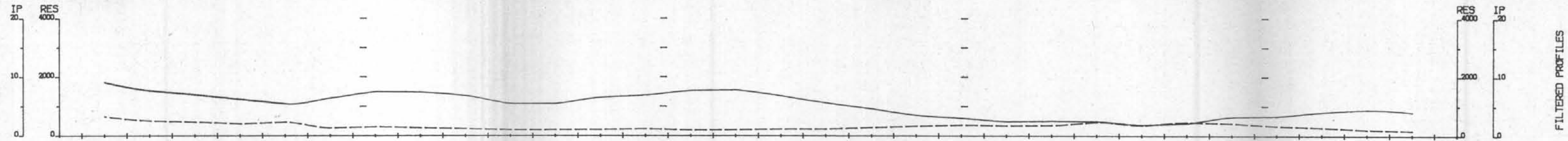
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

A.R. 21949

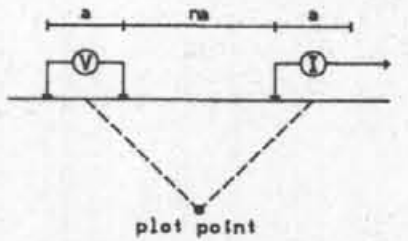




FILTERED PROFILES

Line 9700 E

Pole-Dipole Array

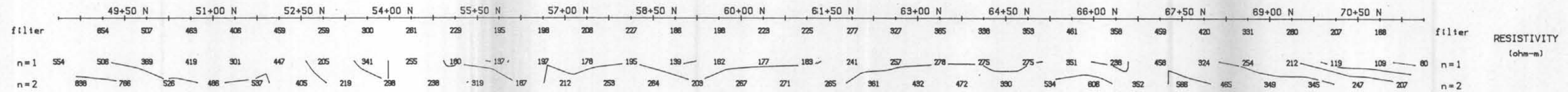


a = 75 m  
n = 1, 2

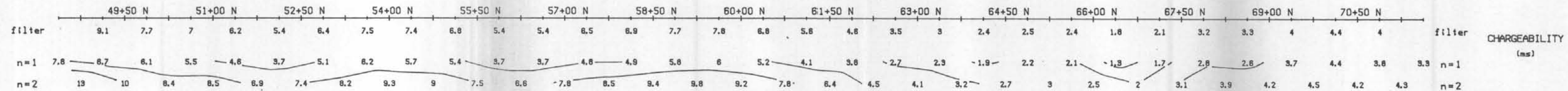
Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

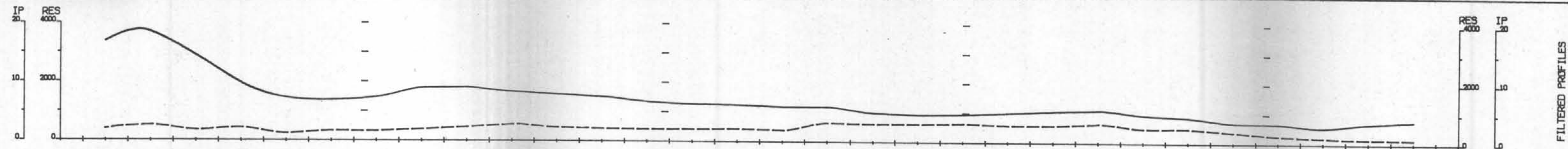
Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

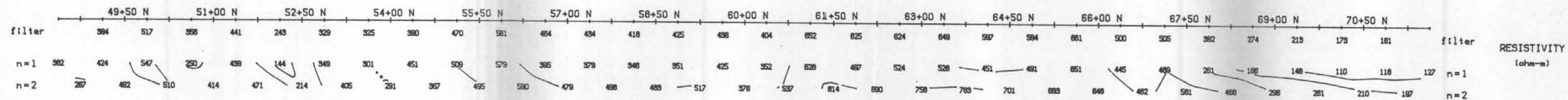
Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

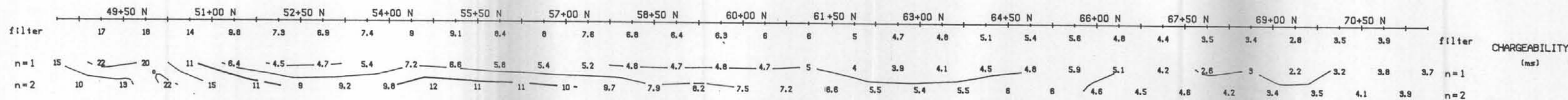
A.R. 21949



FILTERED PROFILES



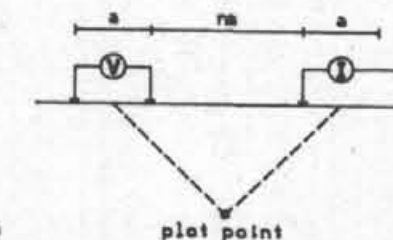
RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

Line 10100 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

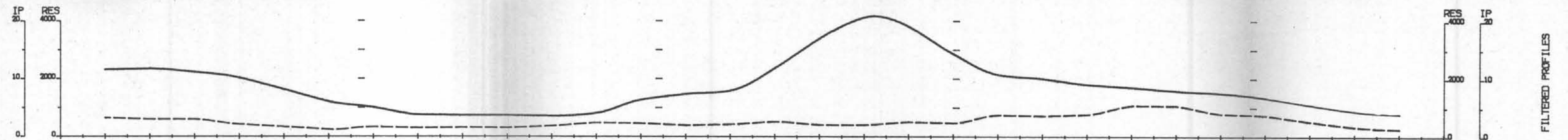
Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

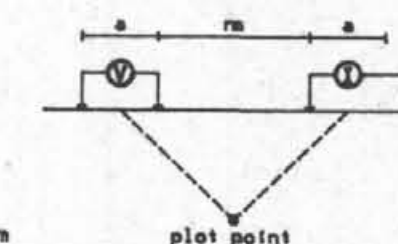




FILTERED PROFILES

Line 10500 E

Pole-Dipole Array

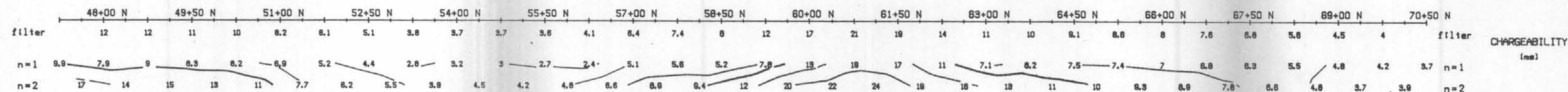
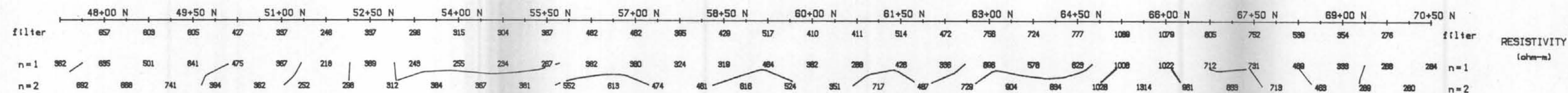


a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



CHARGEABILITY  
(ms)

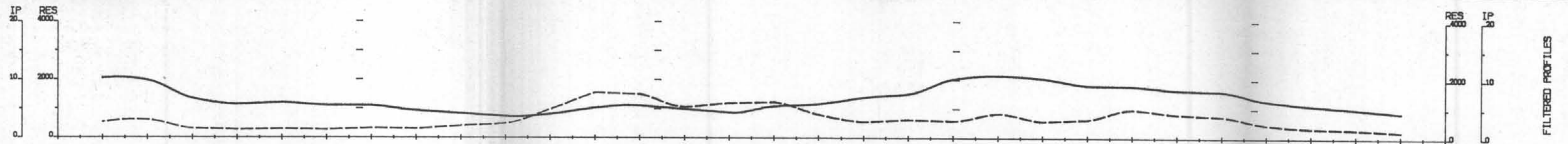
Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

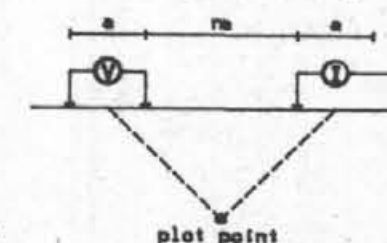
EURO-CANADIAN GEOLOGICAL SERVICES INC.

A.R. 21949



Line 10900 E

Pole-Dipole Array

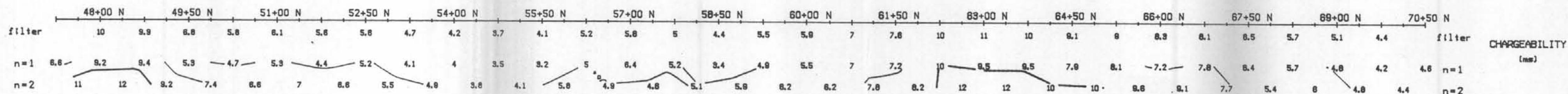
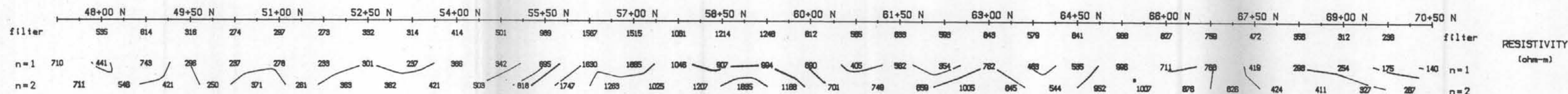


a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



Rio Algom Exploration Inc.

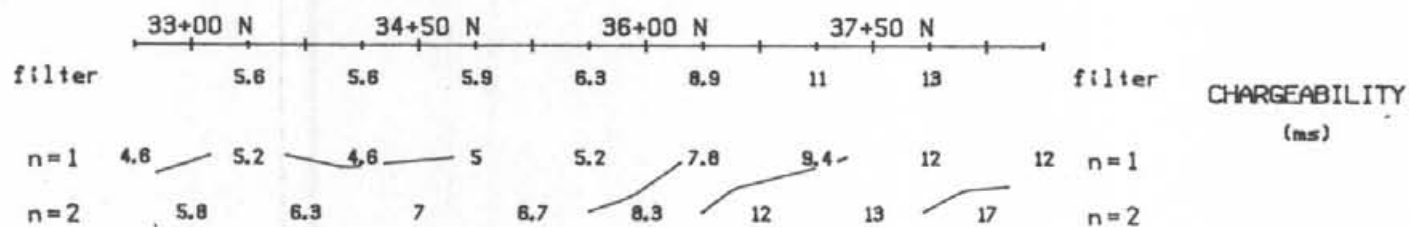
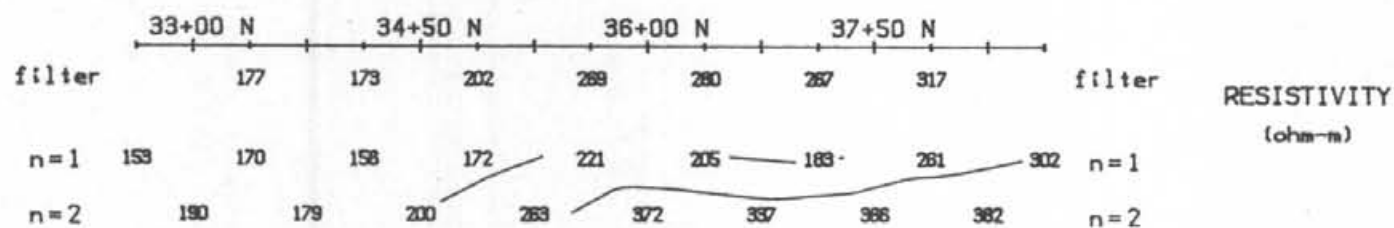
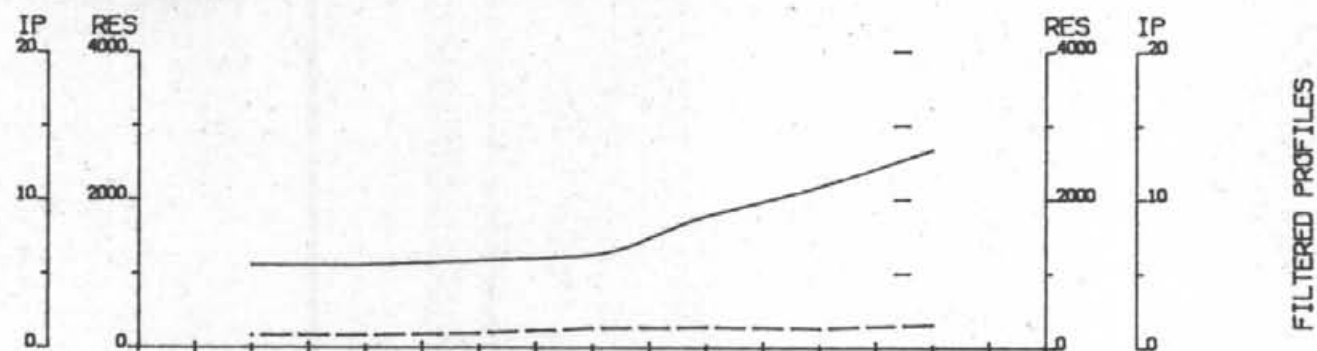
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

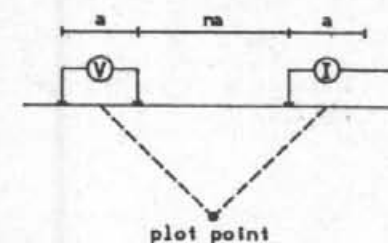
A.R. 21949





Line 10300 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter \*  
Polarization ——— \*\*

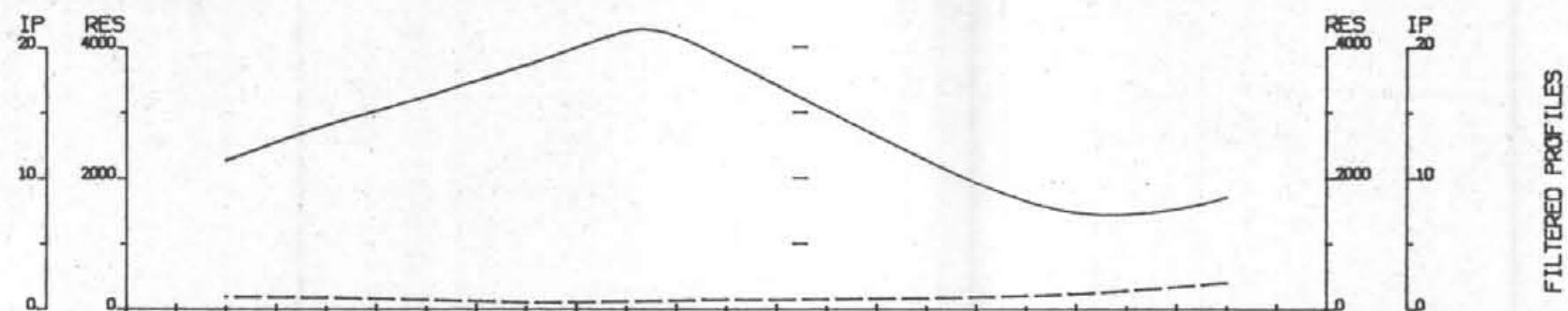
Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

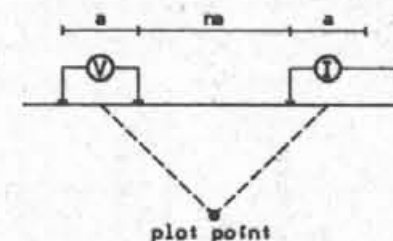
EURO-CANADIAN GEOLOGICAL SERVICES INC.



FILTERED PROFILES

Line 10700 E

Pole-Dipole Array

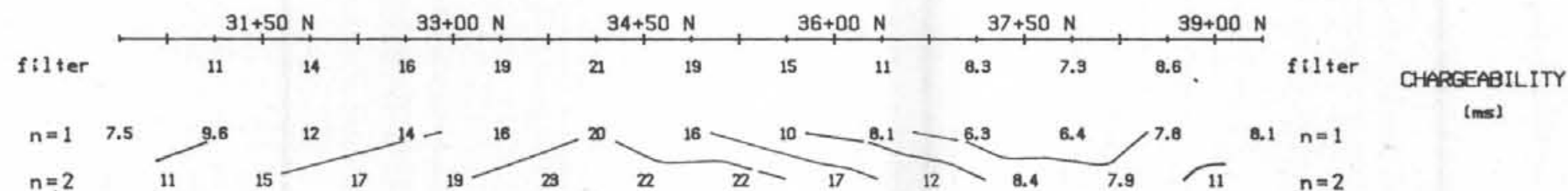
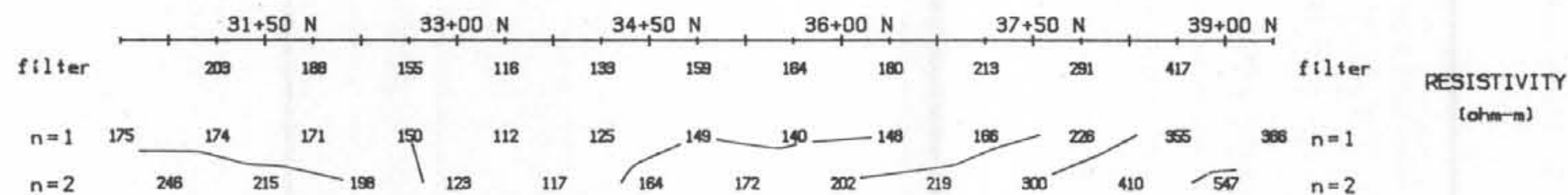


a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter \*  
Polarization ——— \*\*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

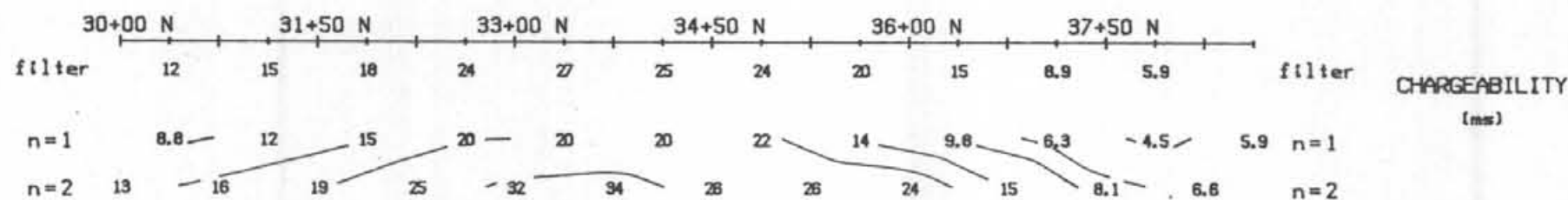
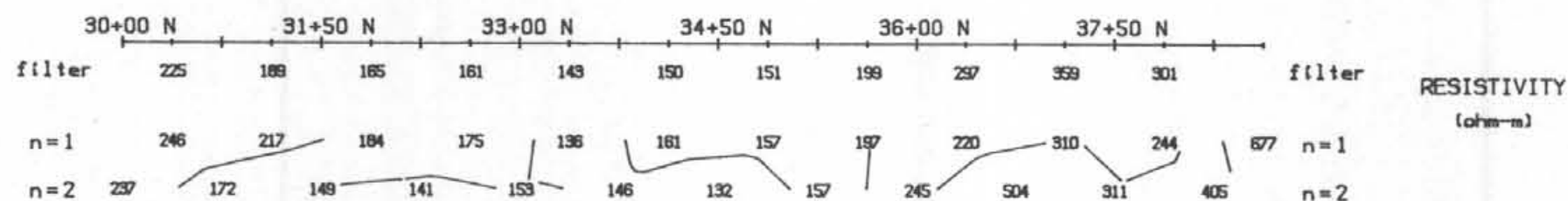
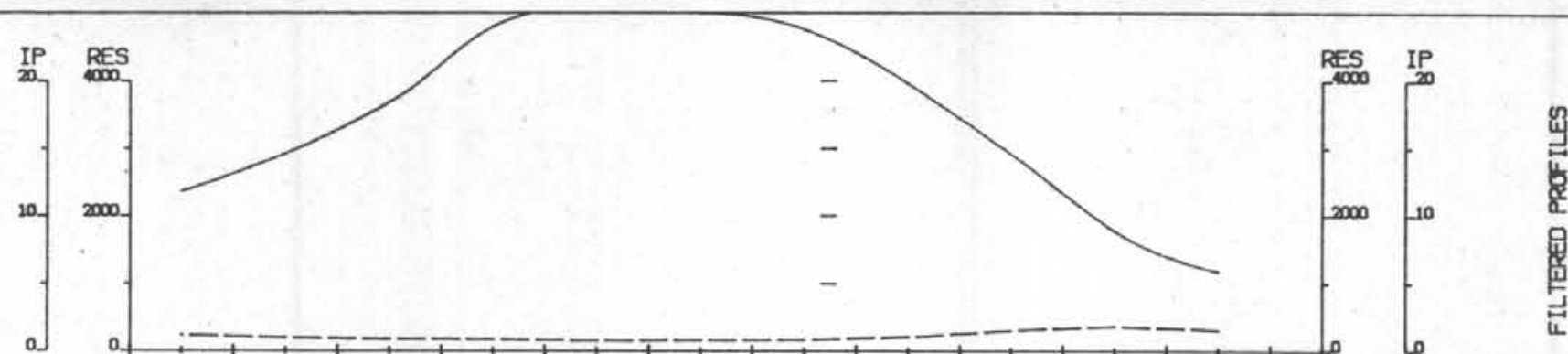


Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

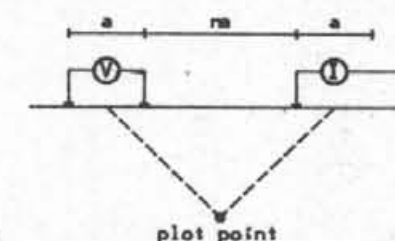
Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.



Line 11100 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter \*  
Polarization ——— \*\*

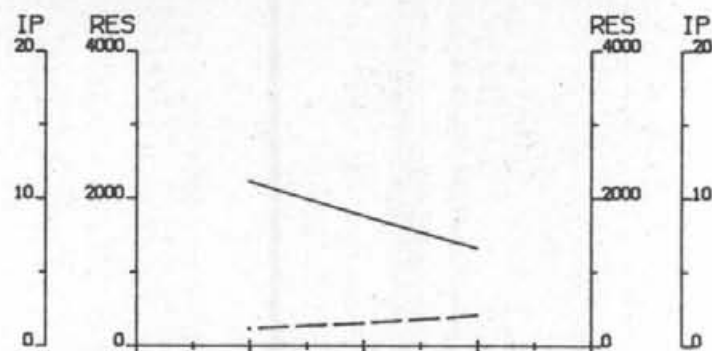
Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

Rio Algom Exploration Inc.

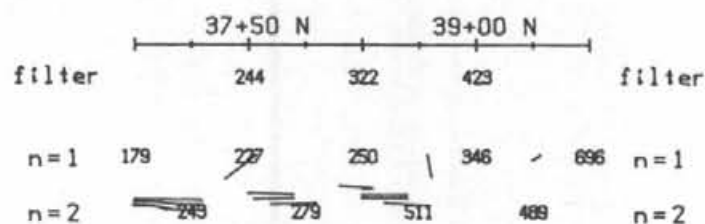
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

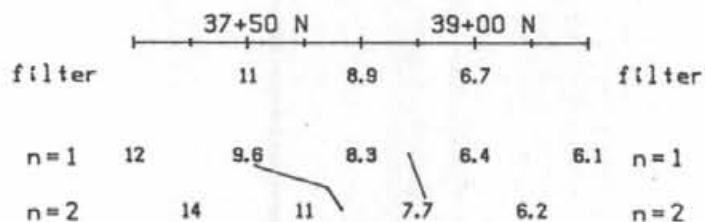
EURO-CANADIAN GEOLOGICAL SERVICES INC.



FILTERED PROFILES



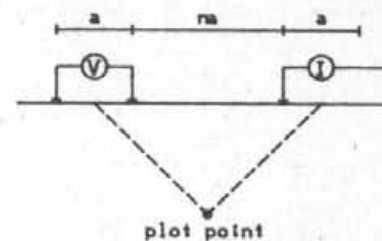
RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

Line 11500 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity      ————      filter  
Polarization      ————      \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

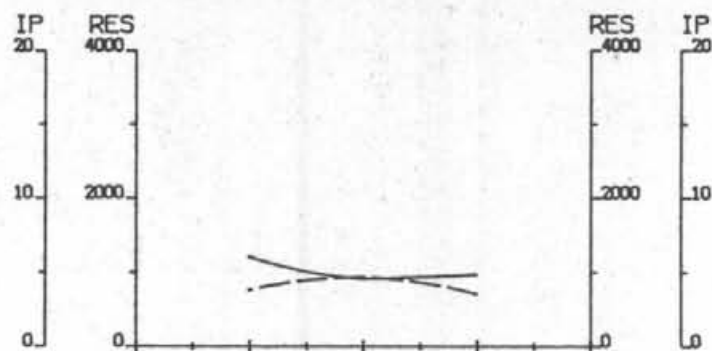
Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

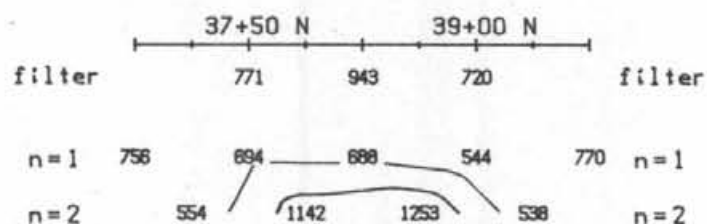
Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

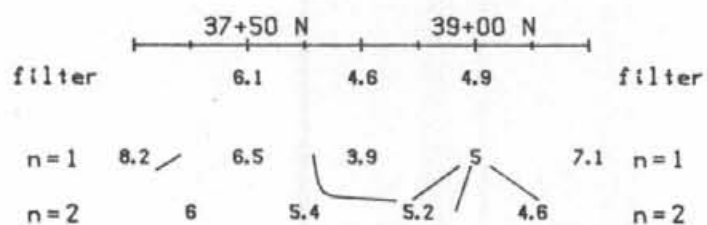




FILTERED PROFILES



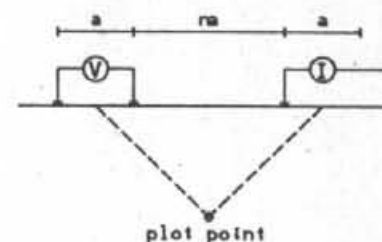
RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

Line 11900 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ----- filter  
Polarization ===== \*

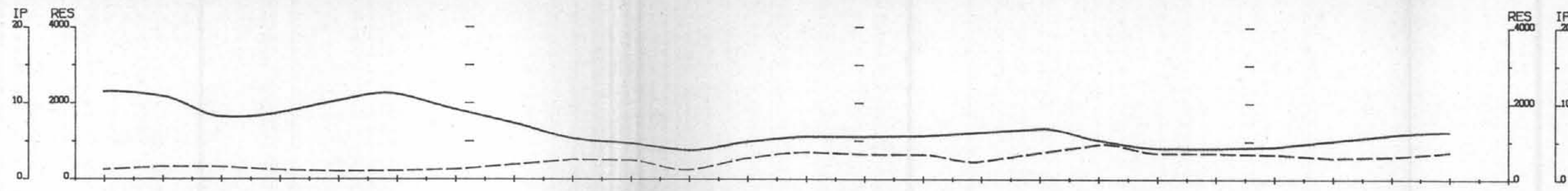
Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

Rio Algom Exploration Inc.

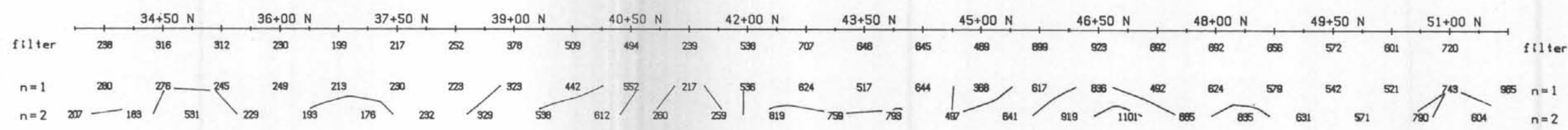
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

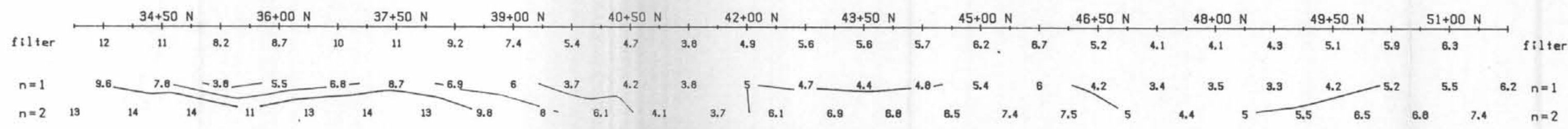
EURO-CANADIAN GEOLOGICAL SERVICES INC.



FILTERED PROFILES



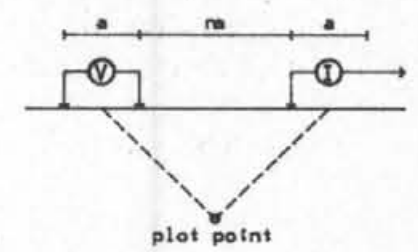
RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

### Line 12400 E

Pole-Dipole Array



a = 75 m  
n = 1, 2

Filtered Profiles

Resistivity ——— filter  
Polarization ——— \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec

Rio Algom Exploration Inc.

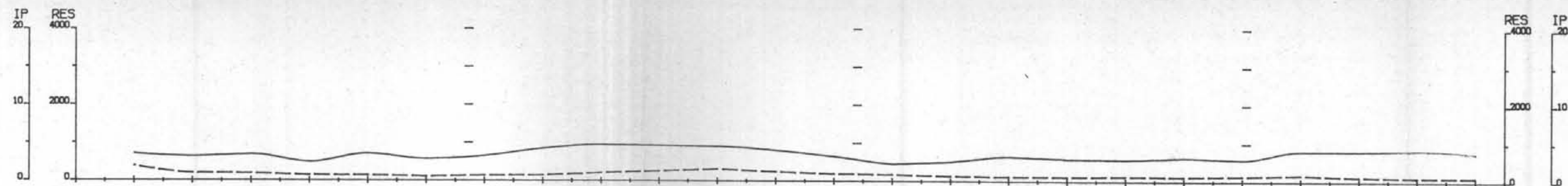
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

A.R. 21949

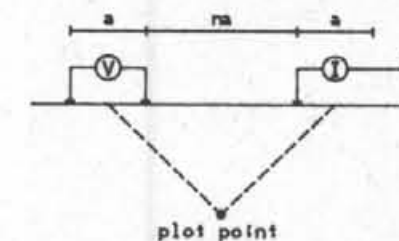




FILTERED PROFILES

Line 16700 N

Pole-Dipole Array

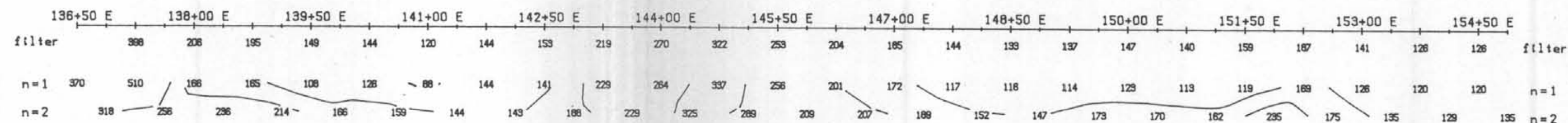


a = 75 m  
n = 1, 2

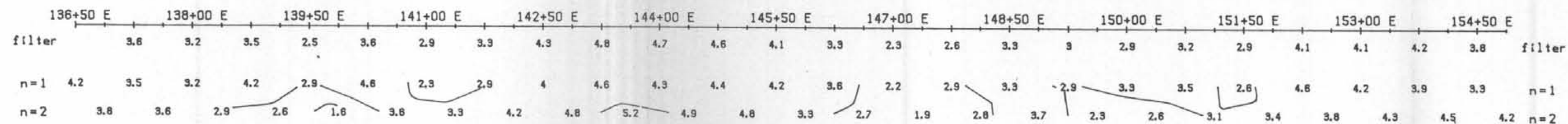
Filtered Profiles

Resistivity ——— filter \*  
Polarization ——— \*\*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

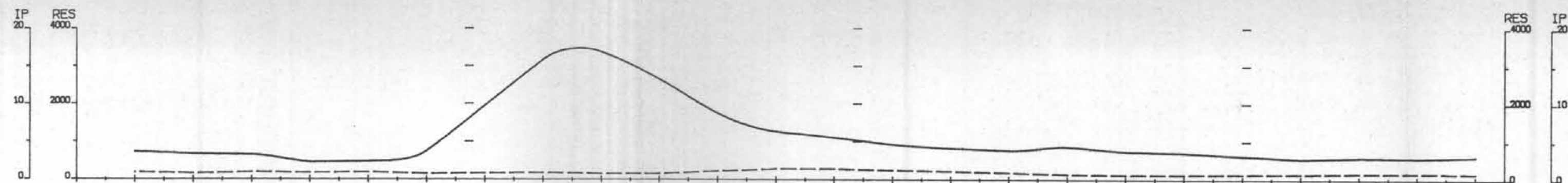
Rio Algom Exploration Inc.

Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

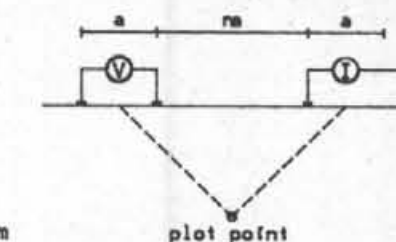
A.R. 21949



FILTERED PROFILES

Line 17000 N

Pole-Dipole Array

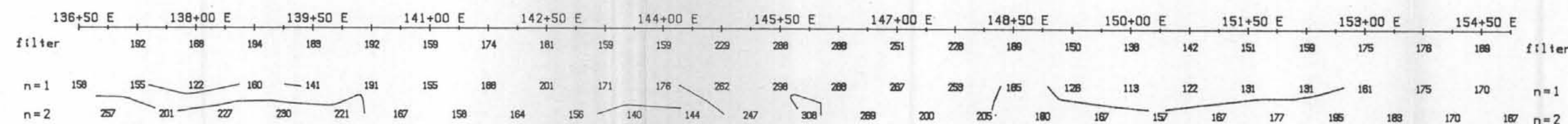


a = 75 m  
n = 1, 2

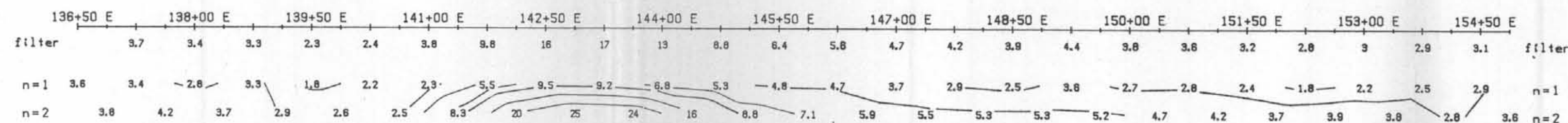
Filtered Profiles

Resistivity ----- filter  
Polarization ----- \*

Instrument: Scintrex IPRX-8  
Instrument: HUNTEC MK4 TRANSMITTER  
Time base: 2 sec



RESISTIVITY  
(ohm-m)



CHARGEABILITY  
(ms)

Rio Algom Exploration Inc.

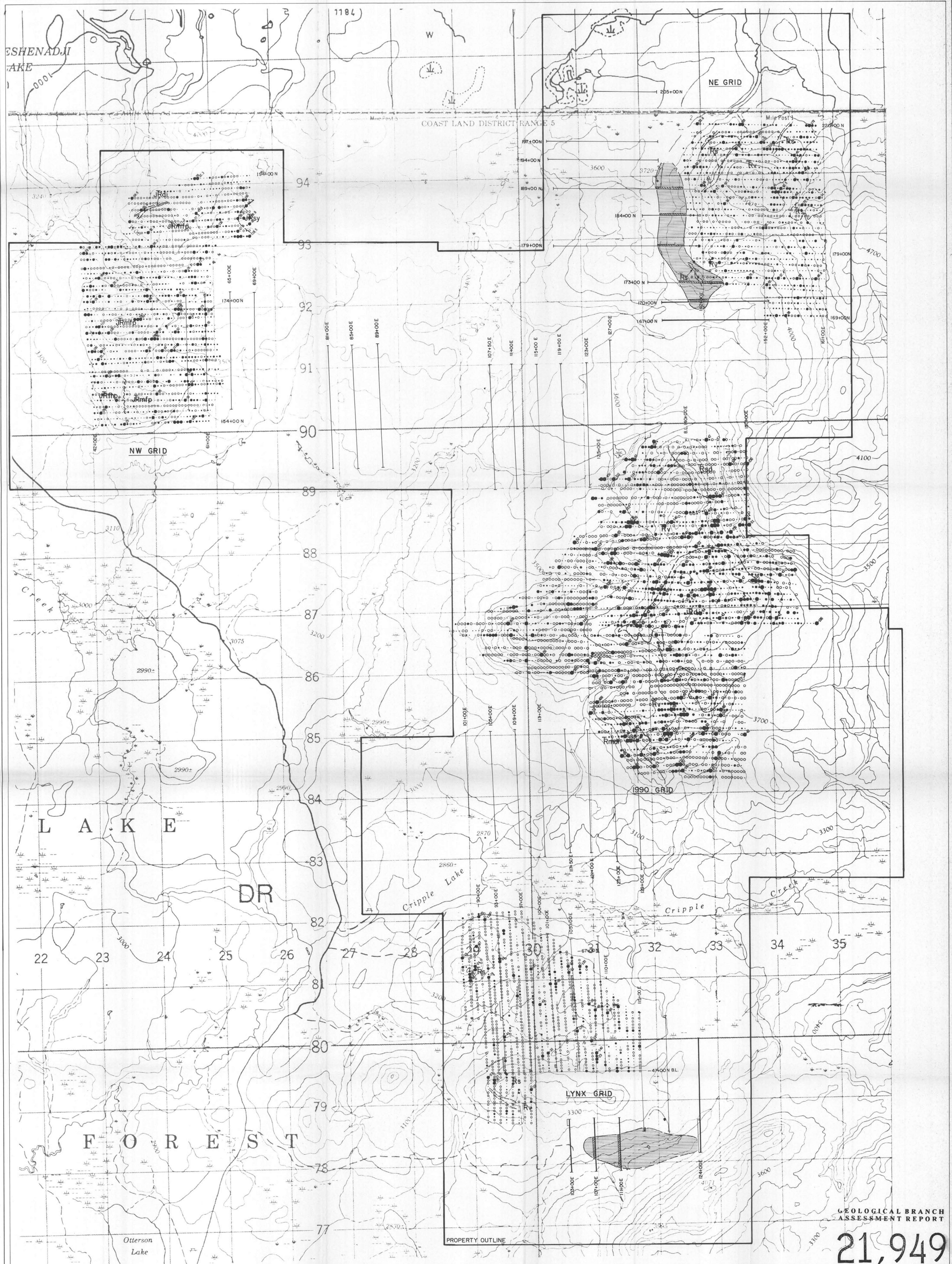
Max Claims  
INDUCED POLARIZATION SURVEY  
Omenica Mining Division

Date: 91/10/03  
Scale: 1 : 5000  
NTS : 93N/1E, 93K/16E

EURO-CANADIAN GEOLOGICAL SERVICES INC.

A.R. 21949





GEOLOGICAL BRANCH  
ASSESSMENT REPORT

**21,949**

SOIL GEOCHEMISTRY : NW GRID NE GRID LYNX GRID 1990 GRID

LP line  
Chargeability anomaly  
Deep anomaly

Jrty Syenite  
Jrdi Diorite  
Jrmd Monzonite  
Jrmp Megacrystic feldspar porphyry trachyte  
Jrth Feldspar + hornblende porphyry trachyte  
Rs Sediment rocks  
Rsd Greywacke / siltstone  
Rv Tuffite Group - volcanic  
Geological contact



NTS 93K-16E & 93N-1E  
Scale 1:20,000

0 200 400 600 800 METRES

Rio Algom Exploration Inc.

MAX CLAIMS

COMPILATION GOLD & I.P.  
CHARGEABILITY ANOMALIES  
OMINECA M.D., B.C.

DATE DEC. 1991 DRAWN BY J.A.M. / Chong DWG. MAP '2