



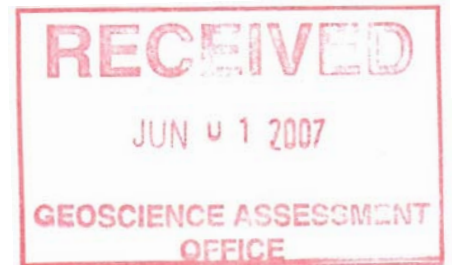
Western Kidd Resources Inc.

Loveland Project, **Areas "A" and "B"**

Timmins Area, N.E. Ontario

Loveland Township, Cochrane District

N.T.S. 42A/12



Report on Induced Polarization Surveys

2.35105

St-André-Avellin, Québec

January 9th, 2006

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TABLE OF CONTENTS

Introduction	2
Property description, location, access	2
Description of the geophysical surveys	5
Results and interpretation	7
Conclusion and recommendations	12

Appended:

	<u>Scale</u>
Resistivity / I.P. pseudo-sections	1:5,000
Apparent resistivity contour maps with I.P. anomalies superimposed	1:5,000
Polarization (Phase I.P.) contour maps with I.P. anomalies superimposed	1:5,000

Introduction

During the month of December 2005, ground geophysical investigations, consisting namely in **Induced Polarization (I.P.)** surveys, were carried out over portions of the Loveland Project in the Matheson area, Ont., for *Western Kidd Resources Inc.*

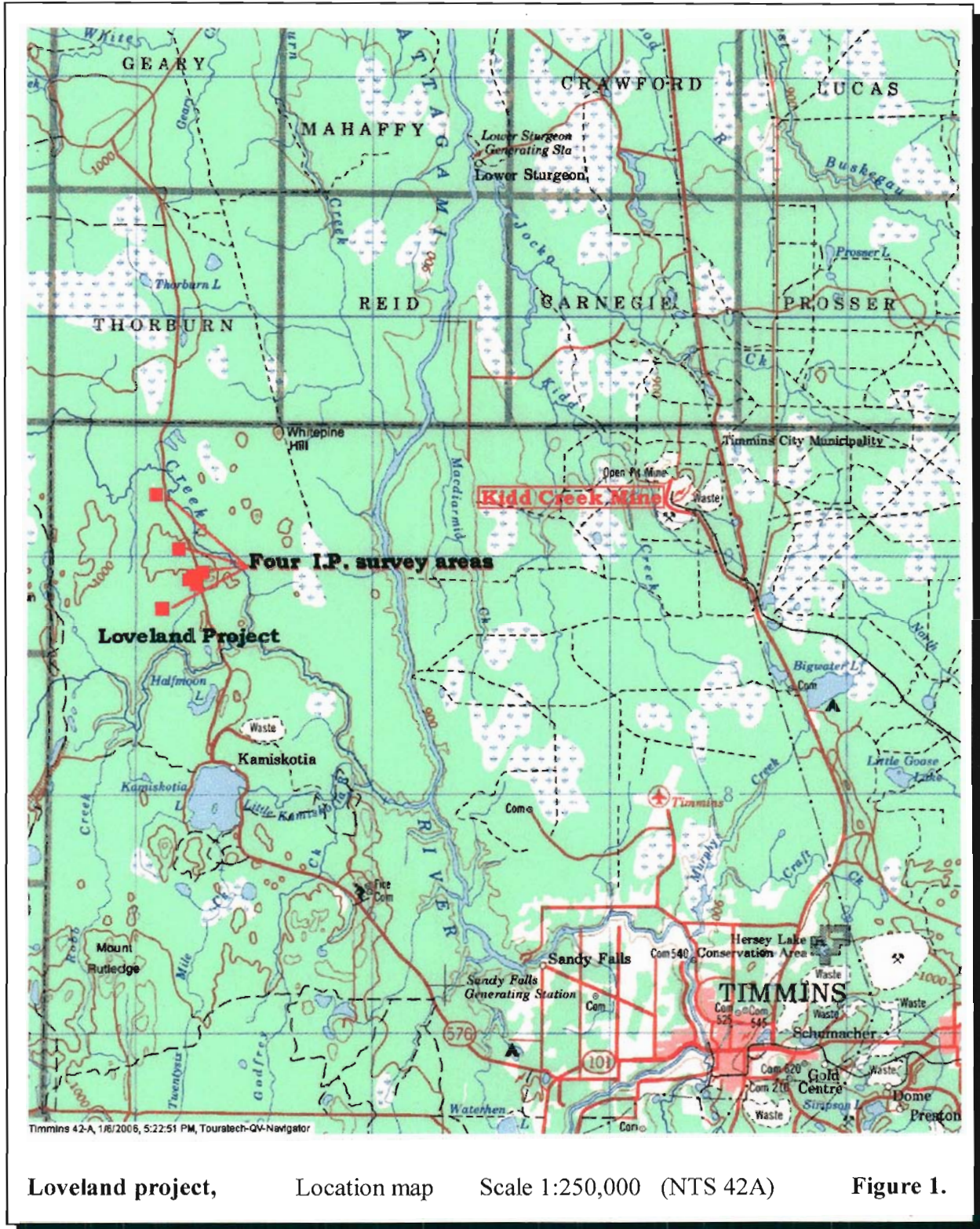
The purpose of these surveys was to provide appropriate geoscientific information about the underlying lithologies, investigate favourable zones of chlorite-sericite alteration and to map with a better accuracy the distribution of disseminated and stringer sulfides in the bedrock, these sulfides being potentially of economic interest if they are found to carry significant concentrations of base and/or precious metals. Considering the paucity of geophysical data on the property and the near-absence of bedrock outcrop within the survey area, the present I.P. surveys were thus meant to complement the geophysical coverage and understanding on the property.

This report describes the work done and discusses the results obtained and the interpretation of the data. Recommendations for any future work are presented in the conclusion.

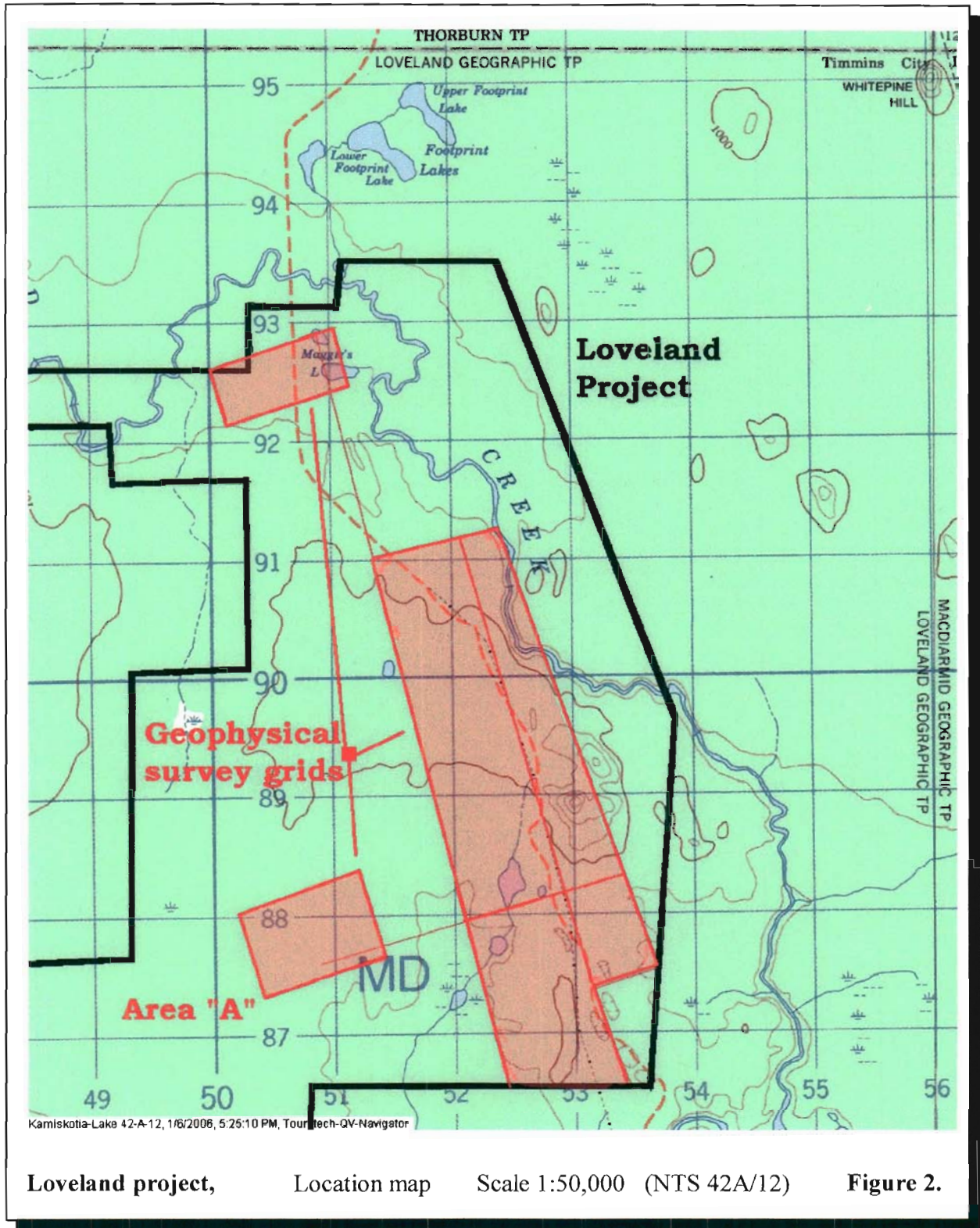
The I.P. surveys were carried out on Grids “A” and “B” between December 6th and 16th, 2005 by crews of Rémy Bélanger Geophysics of Rouyn-Noranda, Qué.

Property description, location and access

The **Loveland Project** area is located in the northwest quadrant of Loveland township, in northeastern Ontario. The “A” and “B” survey areas are situated at about 30 km (as the crow flies) to the northwest of **Timmins** and 23 km to the west of the **Kidd Creek Mine** and 9 km to the north of **Kamiskotia**. The survey areas are easily accessible by vehicle via the Kamiskotia mine access road (Hwy 576) leading northwest from highway 101, then several bush roads leading west and east to Grids “A” and “B”. Please refer to the following figures on the next pages, showing location maps of the property (scale 1:250,000 for Fig. 1, NTS 42A and scale 1:50,000 for Fig. 2, NTS 42A/12).



Loveland project, Location map Scale 1:250,000 (NTS 42A) Figure 1.



Loveland project, Location map Scale 1:50,000 (NTS 42A/12) Figure 2.

The **Loveland Project** consists of several contiguous mining claims, situated in the northwestern part of Loveland Township. The survey areas for Grids "A" and "B" cover portions of several claims as shown on the claim map on the next page. The geophysical maps appended to this report also show the claim lines and numbers for the survey areas Grid "A" and "B".

Description of the I.P. surveys

The I.P. survey was carried out over 22 grid lines spaced every 100 meters. On Grid "A": lines 89+00N to 97+00N and from 2150E to 3350E. On Grid "B": lines 98+00N to 106+00N, lines 113+00N and 114+00N, as well as lines 138+00N and 139+00N. Several tie lines (33+00E, 40+00E, 47+00E, 50+00E, 54+00E) were also established in order to turn the survey lines off. All the cross lines were oriented at 077°, chained/picketed at intervals of 25 meters.

The **Phase I.P.** survey was carried out using a **dipole-dipole** electrode configuration. The dipole dimension was 50 meters and successive separations at multiples of $n=1,2,3,4,5$ and 6 times the dipole dimensions were used, in order to investigate at depth. A total of approximately 25.35 line-km of I.P. data was thus gathered on Grids "A" and "B" by operator Rémy Bélanger and his crew, during the course of the survey.

The I.P. equipment used for the survey consisted of 1°) a **Phoenix IPT-1** transmitter operating at 1.0 Hz, powered by a 2 kilowatt, model MG-2 motor generator. The phase angle (measured in milliradians) between the transmitted current and the received voltage was measured by 2°) a **Phoenix Turbo V-5** Phase I.P. receiver, measuring the phase shift (induced polarization effect) and also the apparent resistivity of the earth at each "n". The phase angle is a direct measure of the polarization or chargeability of the underlying earth.

The results of the I.P. surveys are presented in the appendix, namely in the form of **pseudo-sections** of the apparent resistivities and the measured phase angles, at the scale 1:5,000 as well as on plan maps also at 1:5,000 scale, showing respectively the contours of the apparent resistivity at $n=3$ and the contours of the Phase shift (I.P. effect or polarization) at $n=3$. These maps display the interpreted I.P. anomalies using symbols which are explained in the accompanying legend.

Results and interpretation

The Induced Polarization method is probably the best geophysical prospecting tool when investigating for base and precious metals in geological environments such as the Timmins mining camp.

The I.P. technique can map most types of metallic sulfides, even when they do not conduct, which is often the case with structure-hosted, vein-type gold mineralization associated with disseminated and stringer sulfides. Furthermore, the I.P. technique can also discriminate between "poor" E.M. conductors associated with electrolytic conductivity such as porous shear zones and overburden depressions (causing no recognizable I.P. effect), and "poor" E.M. conductors caused by low-conductivity metallic mineralization, such as stringer sulfides or sphalerite-enriched sulfides (recognizable I.P. effect).

Referring to the I.P. pseudo-sections and the $N=3$ Phase (I.P. effect) contour map and its accompanying legend, it will be observed that the interpreted I.P. anomalies were classified according to their "strength" (i.e. the probable "massiveness" of the causative metallic or polarizable material) and their degree of definition (a well-defined I.P. anomaly is one which displays a clear, unambiguous triangular or trapezoidal shape on a pseudo-section), as well as according to the behavior of the apparent resistivity.

Conductive, semi-massive and massive metallic mineralization (graphite and/or massive sulfides) will typically cause a marked decrease in the measured apparent resistivity, in addition to causing a strong I.P. anomaly. So will a mineralized, porous shear corridor carrying heavily disseminated or stringer sulfides. As the concentration of these metallic materials decreases, the drop in the resistivity becomes more negligible, but the I.P. effect still remains. The symbols used in the interpretation of the data are explained on the compilation maps and on the pseudo-sections.

The performance of the I.P. method can occasionally be hampered, when present, by conductive overburden cover such as lacustrine clays, and sources of man-made cultural noise (power lines, metallic fences, etc.). In the present case, no particular sources of noise appear to have affected this survey.

In this particular case, a 50-meter dipole dimension was chosen because of its penetration capability through thick overburden and its ability for outlining potentially large, deep and wide pyrite-mineralized zones having a significant depth extent. With the $n=6$ expanders, this 50-meter dipole-dipole I.P. survey should be able to successfully detect metallic sulphide mineralization in the bedrock to depths in excess of 100 to 125 meters.

The thickness of the overburden layer is quite variable within the survey area of grids "A" and "B", but its largest range is not expected to exceed 30 to 50 meters, generally speaking.

- ***Resistivity measurements***

The apparent resistivity measurements, studied in both pseudo-sections and plan views, allow to evaluate the variations in thickness of the overburden layer and they also often provide very useful structural information and greatly help in mapping major lithological contacts and faults (the latter usually expressed as more or less linear resistivity lows).

The resistivity pattern, as shown on the N=3 apparent resistivity colour contour map, and also on the I.P./Resistivity pseudo-sections, provides a faithful image of the relief of the bedrock surface and of the intrinsic resistivities of the underlying sand/clay overburden and bedrock lithologies. The higher resistivity (> 2,000 ohm-meters at N=3) areas (about 20% of the entire survey areas) are most probably associated with bedrock ridges and related thinner overburden. See shades of reds on the resistivity map in the appendix. Some frozen esker sand was encountered on lines 113N and 114N and the phase I.P. readings are noisy in that area because of the high contact resistances. The apparent resistivities on these two lines are fairly high.

Sub-cropping bedrock probably exists east of the road between lines 102N and 106N as the resistivities there reach over 25,000 ohm-meters.

Quite often also, the definition of higher resistivity zones may provide helping guides in delineating harder lithologies (siliceous hydrothermal alteration), sometimes a good tracer tool for metal-enriched environments.

The resistivity of a rock is controlled by two main factors: water content and metallic sulphide content. Rocks are made in most part of silicates, which are electrically quite resistive. In fact, the vast majority of rock types are electrical insulators, i.e. they will not allow electrical current to flow.

The presence of water however, changes the resistivity of a geological material. Water will dissolve some minerals and will become a weak electrolyte. Electrolyte solutions containing dissolved ions normally have a much lower resistivity and allow some electrical current to flow. This is called the **electrolytic conductivity**. The low-resistivity zones are distributed according to the colour resistivity contour map (see shades of blue on the resistivity maps in the appendix).

Therefore the presence of interstitial water in porous or altered rocks reduces the bulk resistivity quite substantially. Typical low-resistivity rock units include: water-saturated tectonic structures (shear zones, open faults, etc), water-saturated serpentine-talc units in ultramafic geological environments, and overburden-covered bedrock depressions where meteoric water may accumulate and form surficial low-resistivity features (as lake-bottom sediments).

The other important contribution to lowering the bulk resistivity of rocks is of course the presence of carbonaceous material in the form of carbon and graphite and, more important to us, the presence of metallic sulphides (pyrite and pyrrhotite, most commonly). These materials are **electrical conductors** and even small amounts (say 5 to 10%) will lower the resistivity of rocks containing these materials. This is called **electronic conductivity**. Strong I.P. effects and low apparent resistivities are normally found to occur with these materials.

Rock units such as "dirty" shales, graphitic shales and slates, as well as sulphide mineralized zones (containing disseminated or stringer sulphides) will normally produce lower bulk resistivity measurements in addition to strong chargeability responses.

• *Phase shift (I.P. effect) measurements*

The results of the I.P. measurements have allowed the identification of several anomalous I.P. features on this survey, although none are of the "conductive" (massive sulphide) type. Most appear to originate from moderately-mineralized tabular-shaped bodies striking NNW-SSE and dipping sub-vertically to steeply to the east.

The best I.P. responses (in terms of anomaly definition, anomaly amplitude and probability of good width) are located as follows (going from south to north on the maps):

<u>Line</u>	<u>Station</u>	<u>Comments</u>
92N	25+75E	Grid "A": Disseminated/stringer sulphides at depth (30-40 meters to top)
99N	46+25E	Disseminated/stringer sulphides within a SiO ₂ altered unit(?) at moderate depth (\pm 30 meters depth to top)
100N	41+25E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
100N	45+00E	Stringer sulphides or better at moderate depth (40-60 meters to top)
101N	42+75E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
102N	42+00E	Disseminated sulphides at large depth (50-70 meters to top)

(Continued from page 10)

<u>Line</u>	<u>Station</u>	<u>Comments</u>
102N	45+75E	Stringer or semi-massive sulphides at moderate depth (25-40 meters to top). A definite drill target.
103N	45+50E	Same unit as above (102N / 45+75E), only weaker response amplitude
104N	45+00E	Same unit as above (103N / 45+50E) but probably wider
105N	46+35E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
106N	43+50E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
106N	44+75E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
106N	48+25E	Disseminated/stringer sulphides at moderate depth (25-40 meters to top). Hydro line interference??
114N	42+50E	Disseminated/stringer sulphides at large depth (50-70 meters to top)
138N	36+35E	Disseminated sulphides at moderate depth (25-40 meters to top)
138N	38+85E	Heavy stringer sulphides at shallow depth (15-30 meters to top)
139N	34+25E	Disseminated/stringer sulphides at large depth (40-60 meters to top). Strike direction appears to be WNW-ESE
139N	37+25E→37+75E	Wide heavy-stringer-sulphides zone at shallow depth (15-30 meters to top). An excellent drill target. Strike direction appears to be WNW-ESE

From the table above, it is not difficult to propose at least two direct exploration targets on the basis of the I.P. survey results alone, even if insufficient geoscientific data is at hand at this writing. A ground magnetometer map would be of help in determining the geological background of the I.P. anomalies described above. Existing drill hole data, inferred geology and known mineralized zones should also be used as calibration bases for both the magnetic (if a magnetic survey is available) and I.P. signatures before proceeding with testing the other exploration targets in the table above. Certainly the I.P. trend located between 102N/4575E and 104N/4500E and that located between 138N/3885E and 139N/3750E constitute two interesting target.

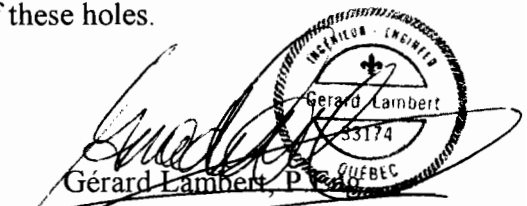
Conclusion and recommendations

The Induced Polarization surveys which were recently completed over the Loveland Project for **Western Kidd Resources** have successfully defined at least two zones or trends characterized by a moderately-strong I.P. effect with the best responses being on lines 102N and 139N. With only a limited knowledge of the detailed geology of property area, it is difficult from a geophysical point of view alone, to rate these two I.P. anomalies in terms of their **economic** potential, but it is very probable that they will be caused by disseminated, stringer or even possibly semi-massive metallic mineralization such as pyrite-sphalerite in the bedrock, at vertical depths of no less than 20 to 30 meters but no more than 60 to 80 meters below ground surface.

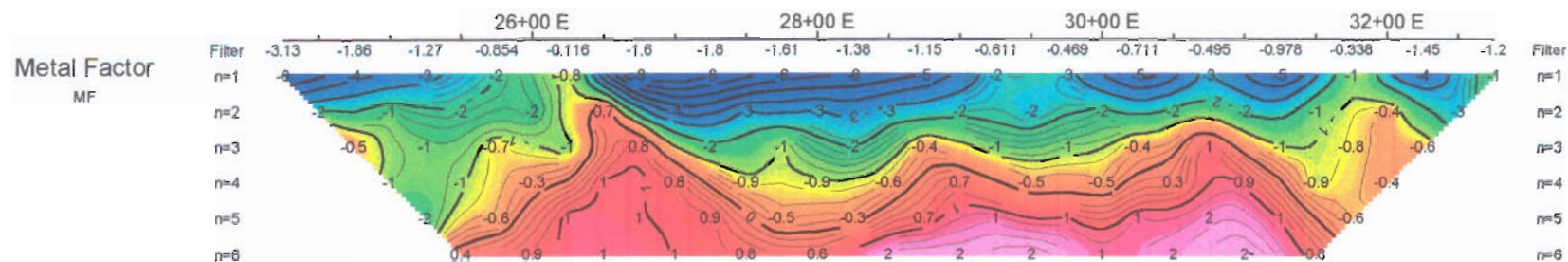
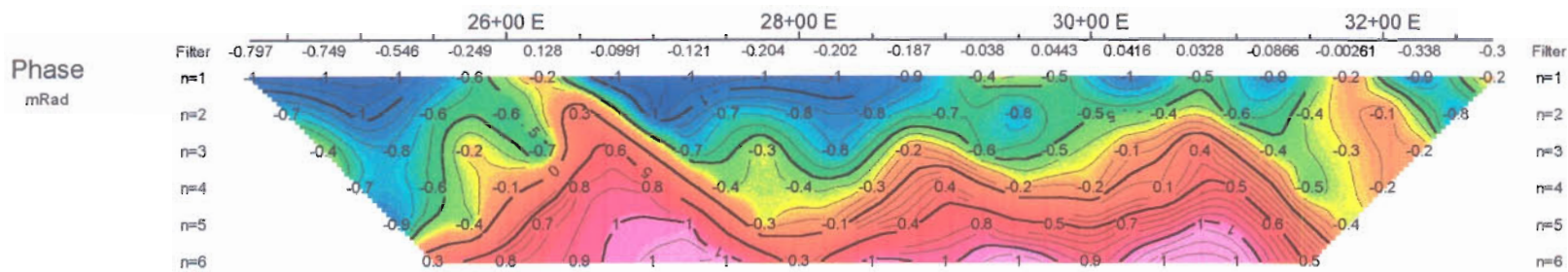
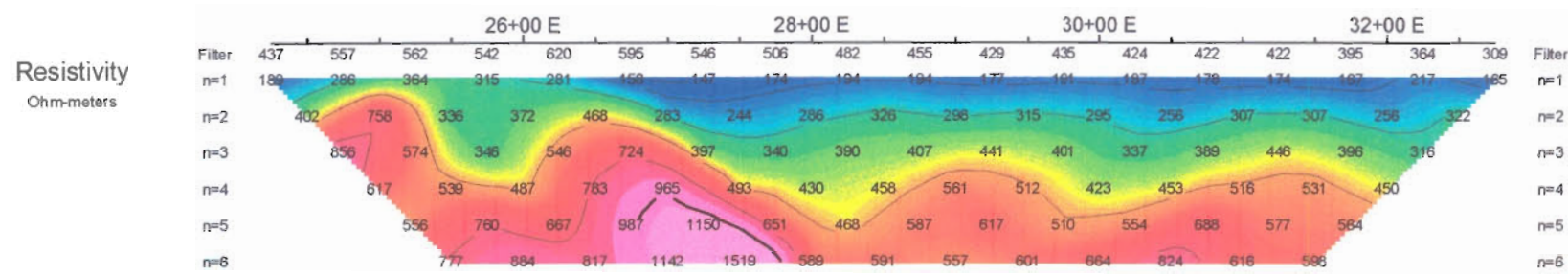
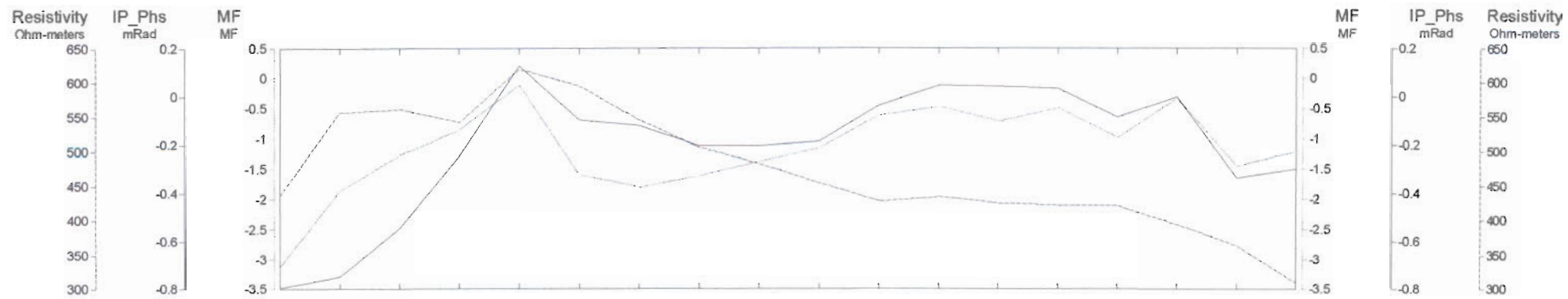
Recommending further work on this property, I certainly think that it would be worthwhile to check a compilation of past exploration work in that area, to see if the interpretation of the I.P. can be used to "calibrate" certain known mineralized zones and therefore allow some extrapolations. Two first-priority drill holes are justified, one on line 102N collared such as to intersect the cause of the I.P. anomaly located at 4575E at a vertical depth of about 100m vertically below the anomaly, drilling from east to west at -50°. Another hole is recommended on line 139N collared such as to intersect the cause of the wide I.P. anomaly located at 37+25E - 37+75E at a vertical depth of 100m vertically below the anomaly, drilling from northeast to southwest at -50°. The other I.P. anomalies listed in the table above would become contingent targets depending on the amount of success encountered in the first holes.

Additional fill-in I.P. surveys are also recommended, particularly between L-106N and L-113N and south of L-98N. Finally, downhole Pulse E.M. should be applied in exploration holes longer than 200 meters in order to increase the search radius of these holes.

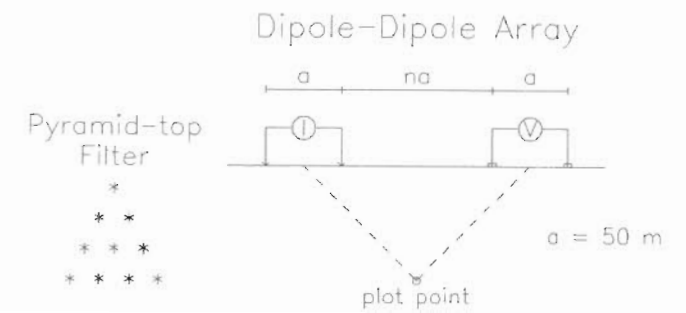
St-André-Avellin, Québec
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Pseudo Section Plot 89+00 N



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

INTERPRETATION

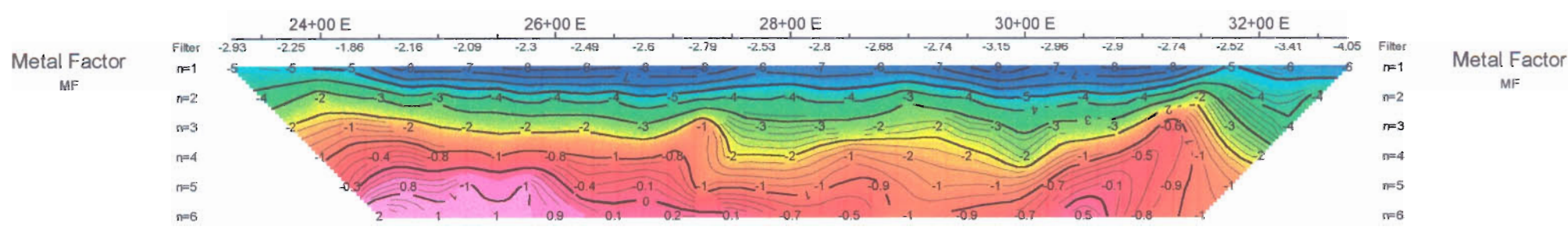
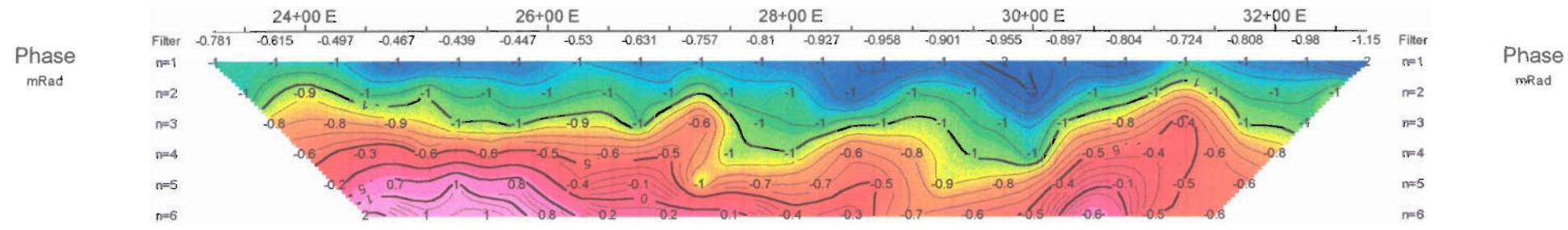
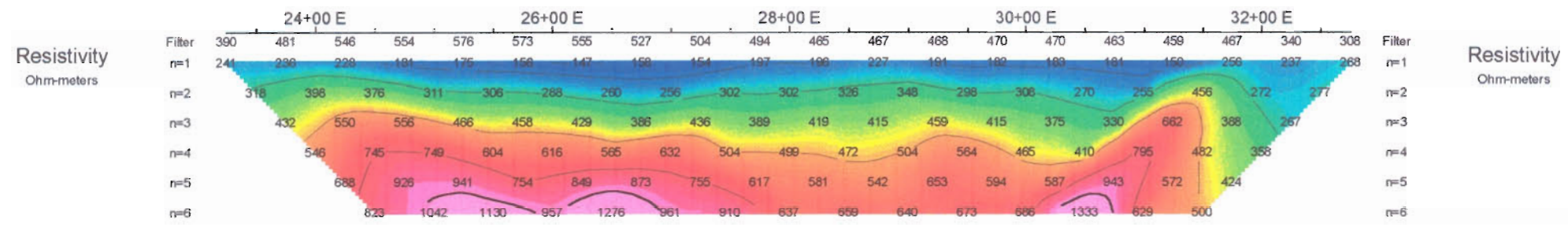
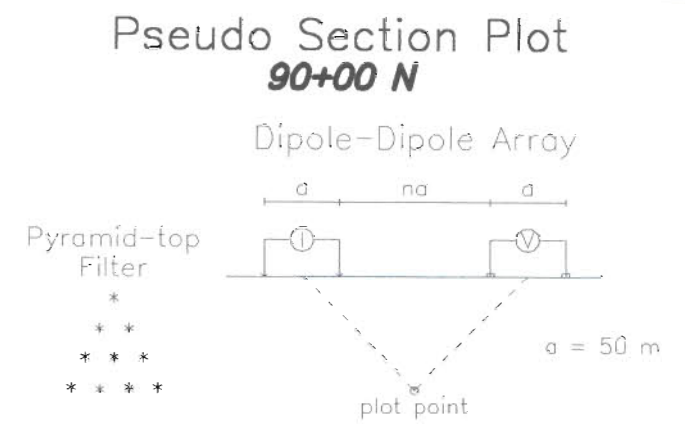
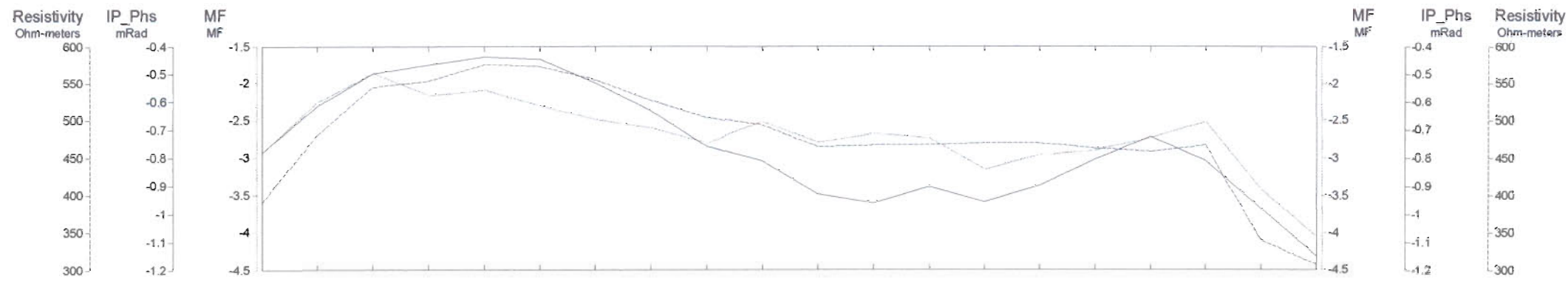
- Strong increase in polarization accompanied by marked decrease in resistivity.
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- ▼ Low resistivity feature.



WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 13/12/2005
Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)



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

INTERPRETATION

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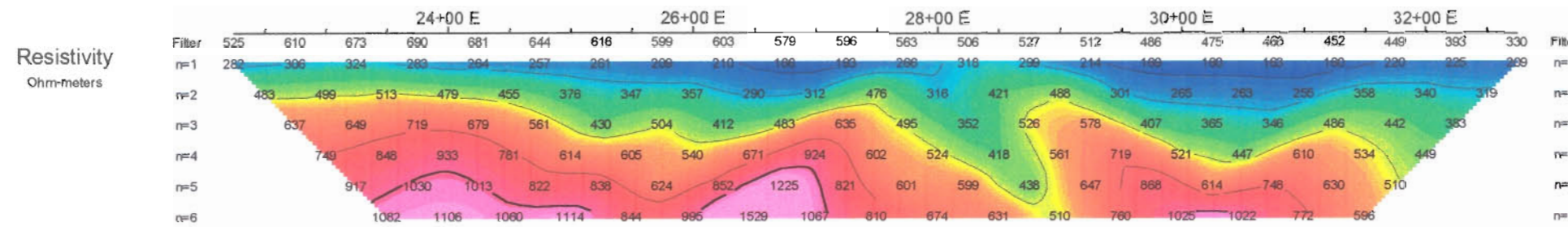
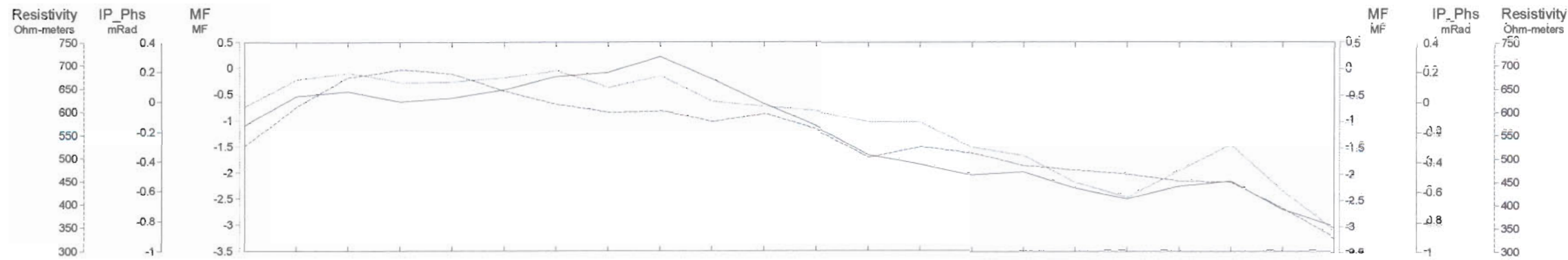
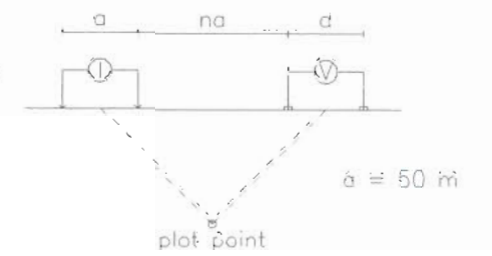
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REMY BELANGER (CONTRACTOR)

Pseudo Section Plot 91+00 N

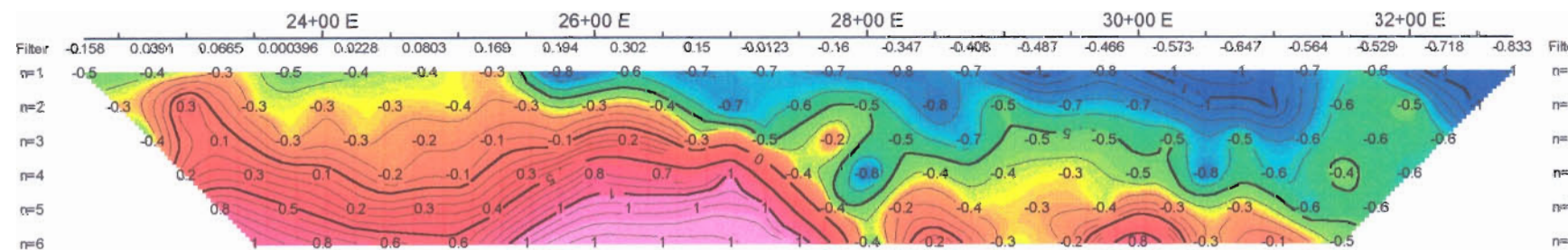
Dipole-Dipole Array

Pyramid-top Filter



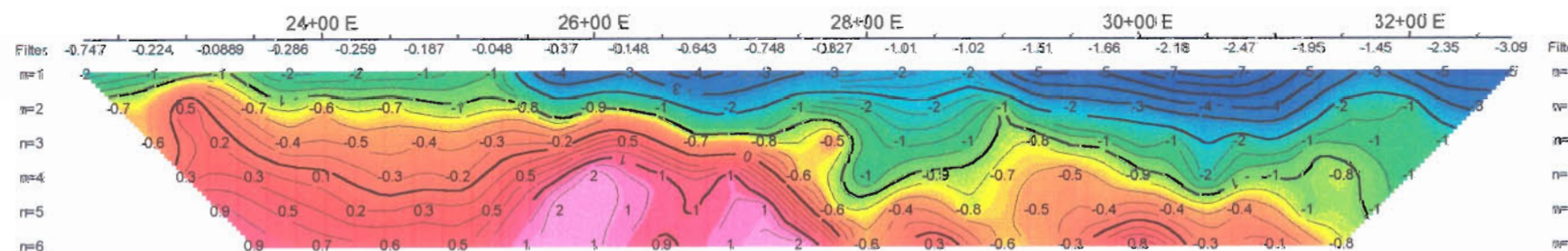
Resistivity
Ohm-meters

Phase
mRad



Phase
mRad

Metal Factor
MF



Metal Factor
MF

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

INTERPRETATION

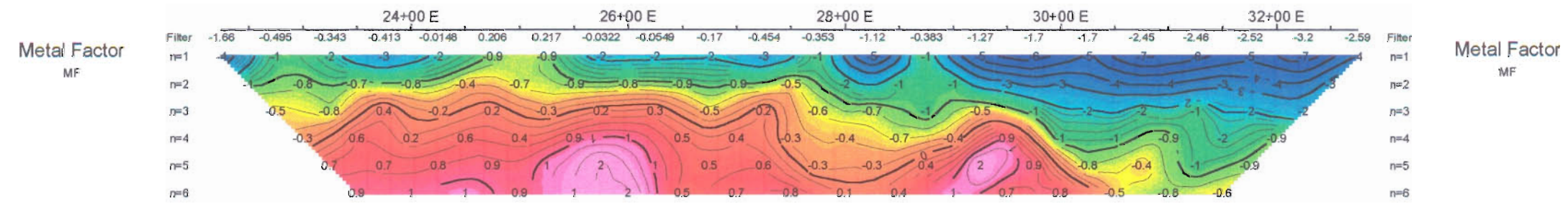
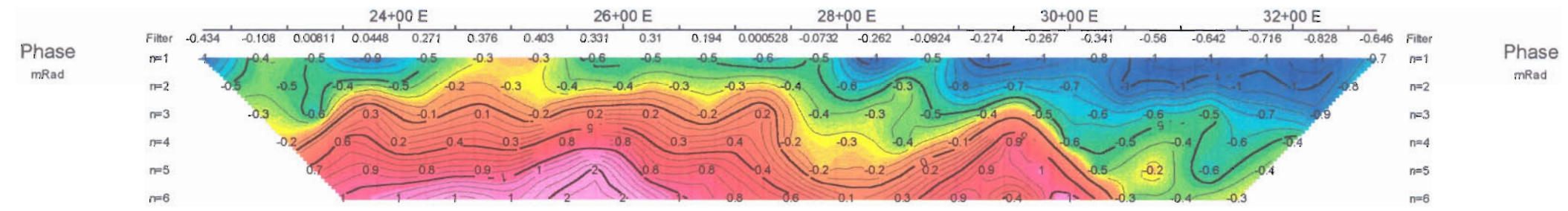
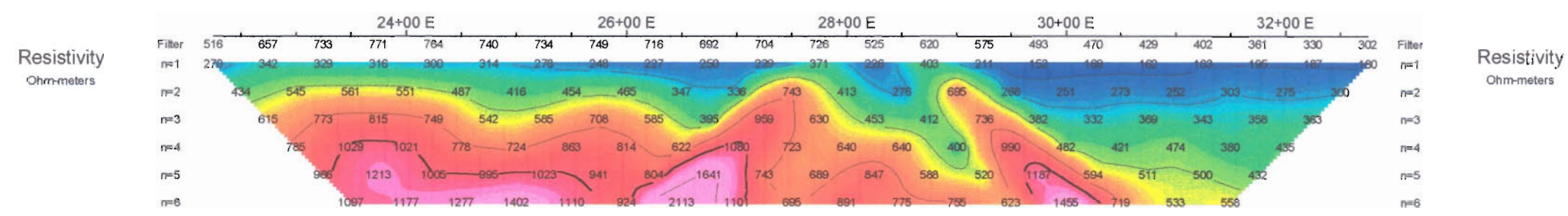
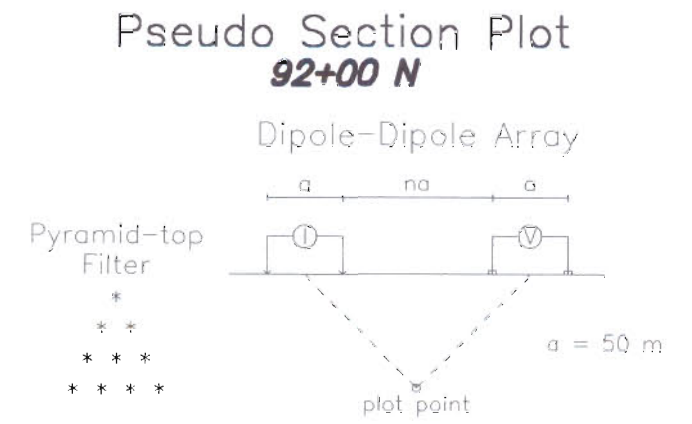
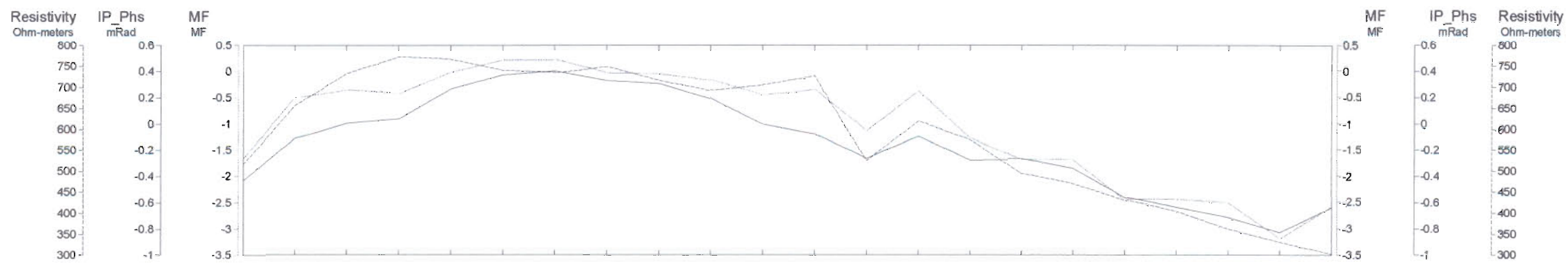
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INDUCED POLARIZATION SURVEY
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LOVELAND TWP. ONT.

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

INTERPRETATION

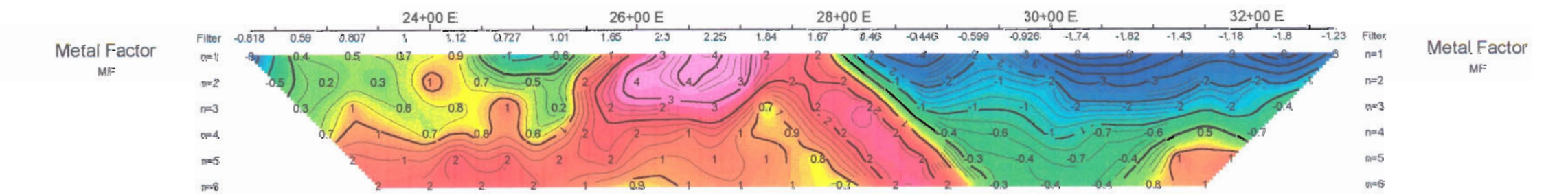
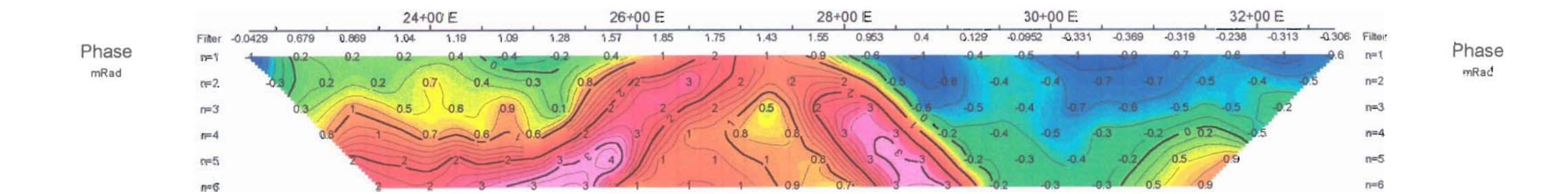
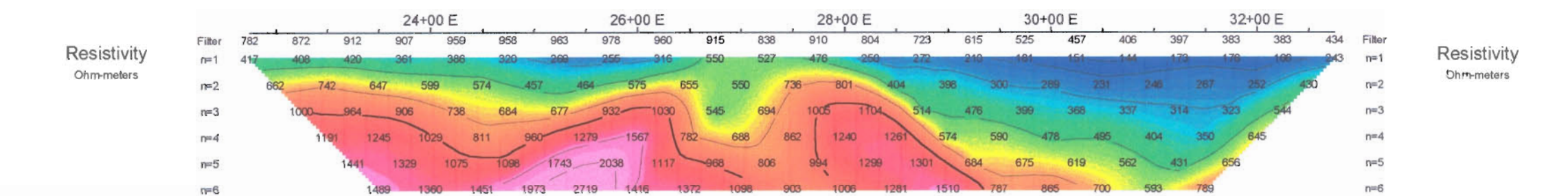
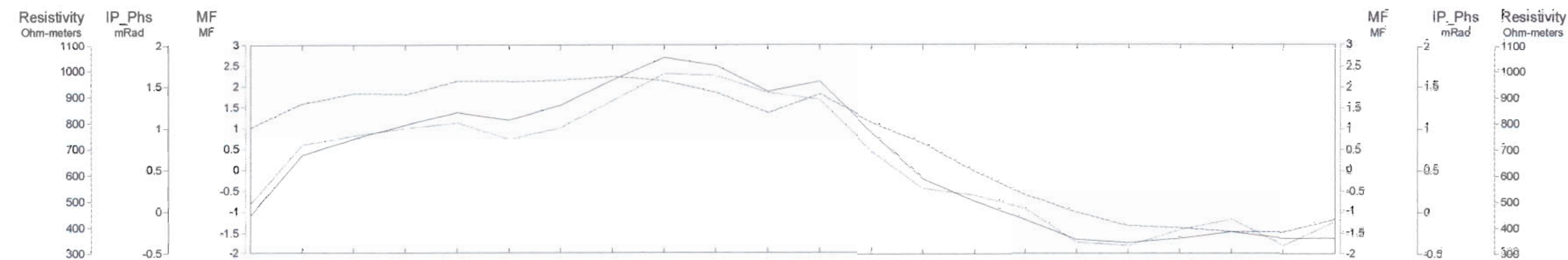
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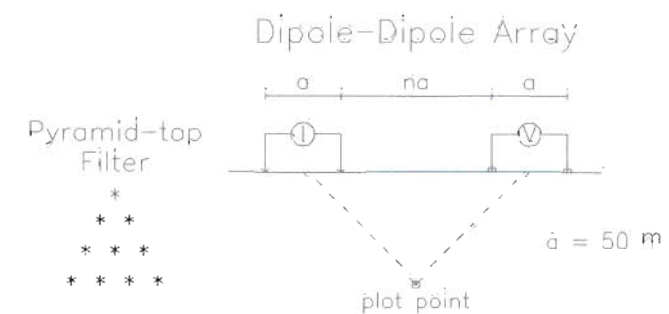
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REMY BELANGER (CONTRACTOR)



Pseudo Section Plot 93+00 N



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

INTERPRETATION

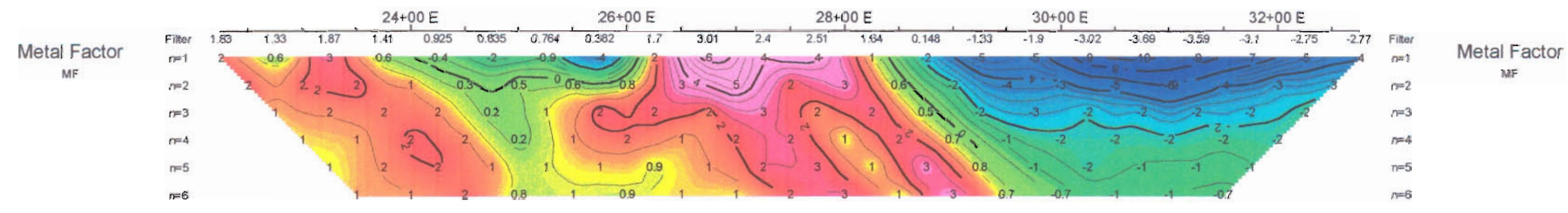
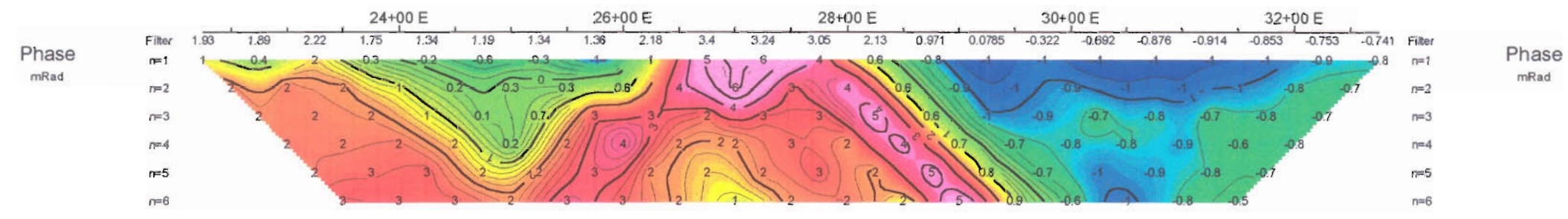
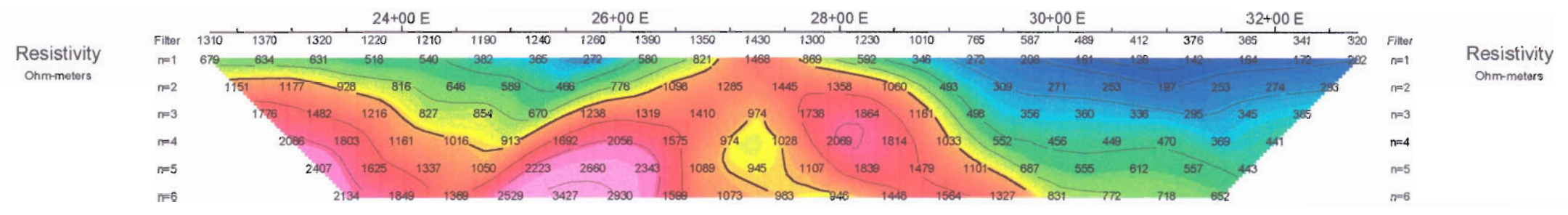
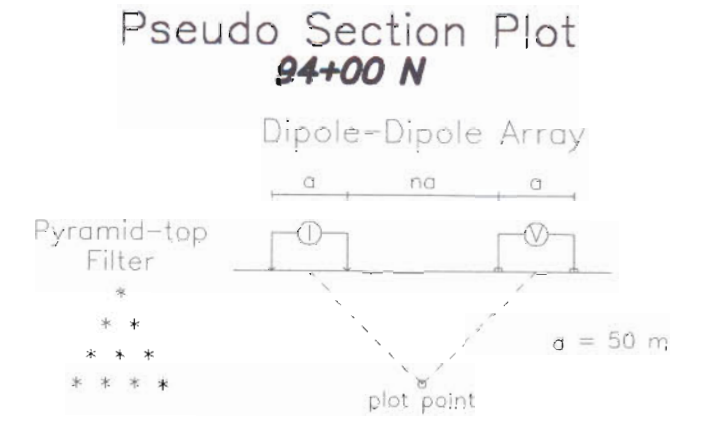
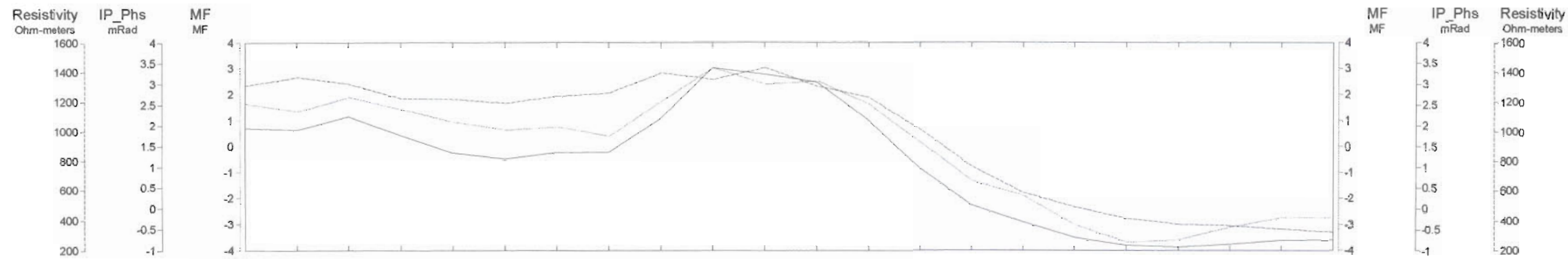
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INTERPRETATION

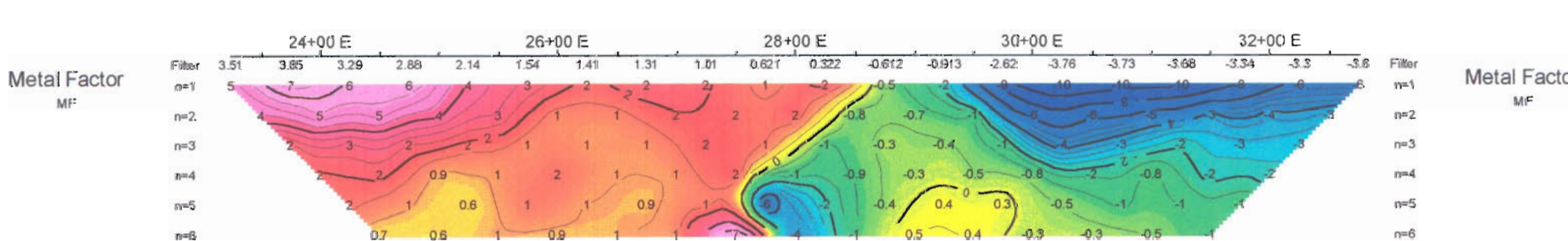
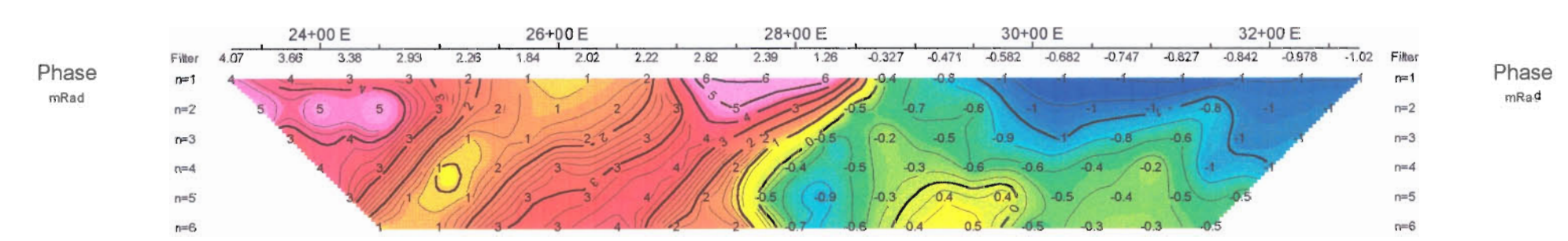
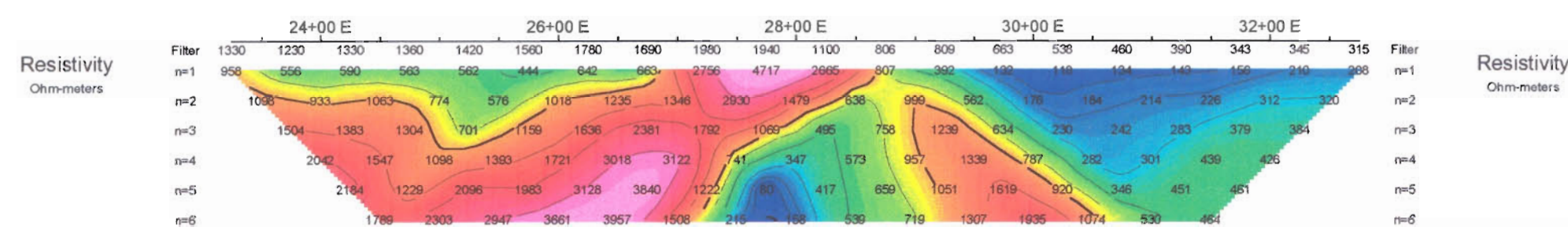
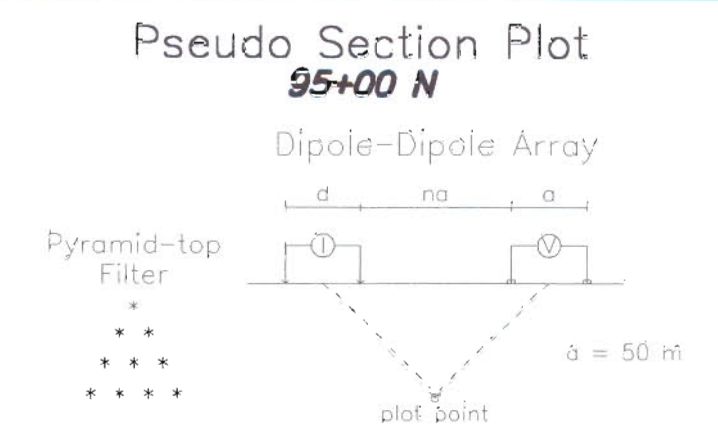
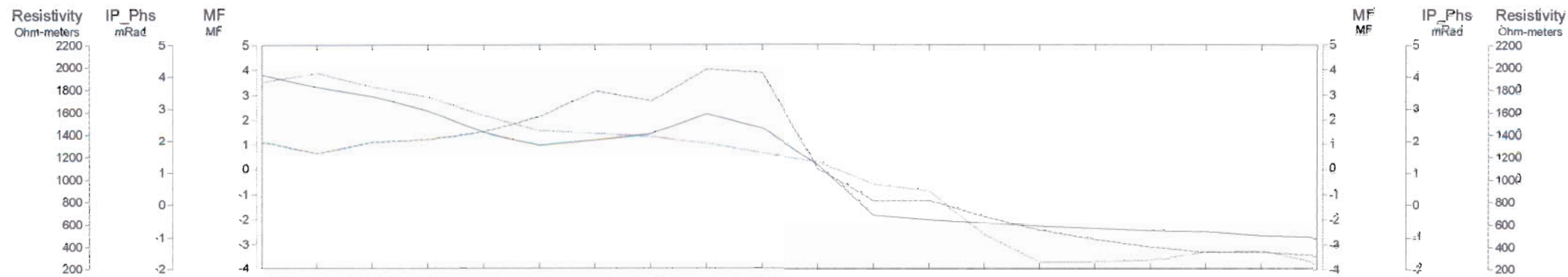
- Strong increase in polarization accompanied by marked decrease in resistivity.
- Well defined increase in polarization without marked resistivity decrease.
- Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.



WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
 TARQUET A & B
 LOVELAND TWP. ONT.

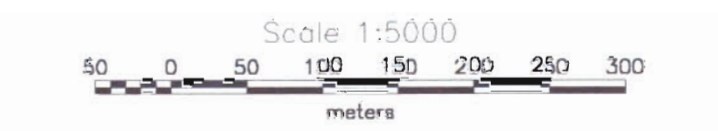
Date: 14/12/2005
 Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)

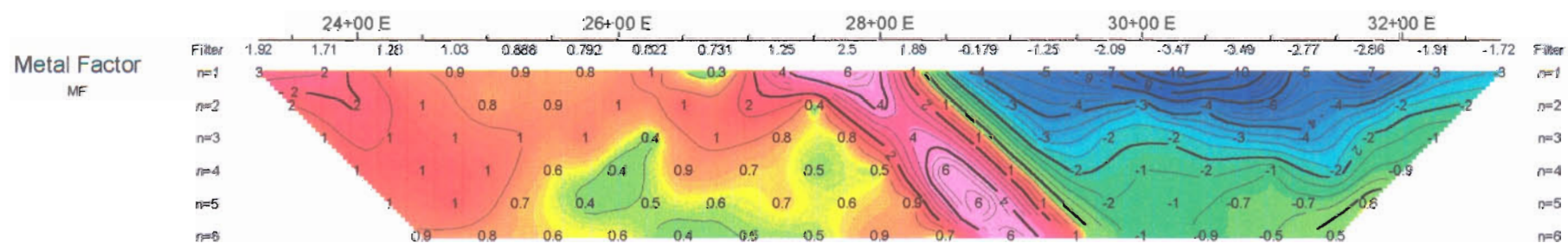
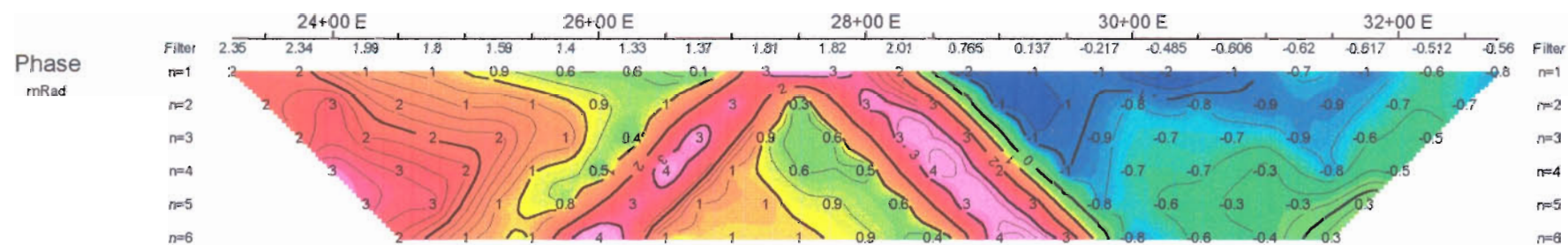
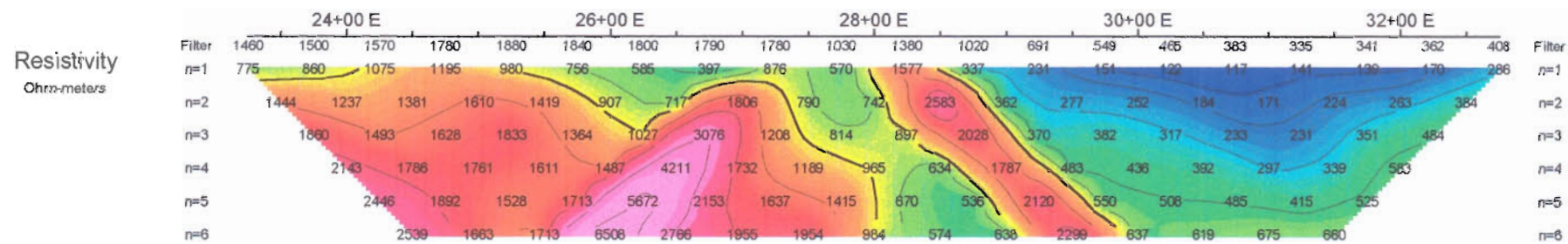
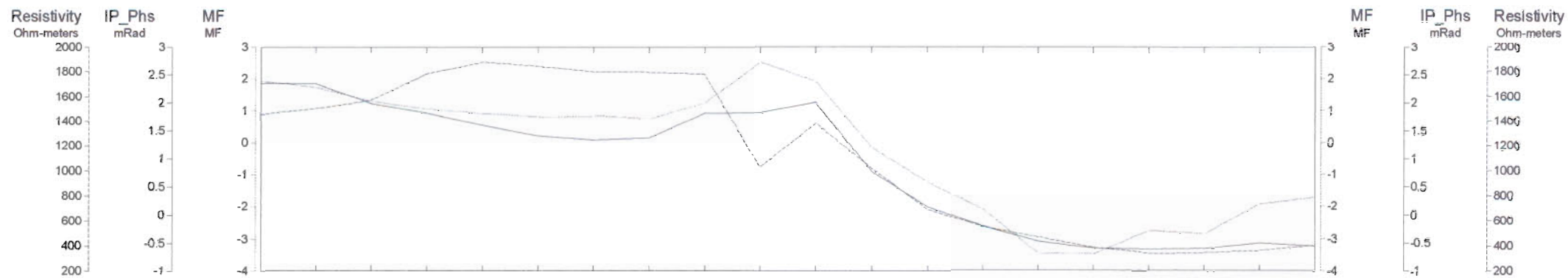


Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

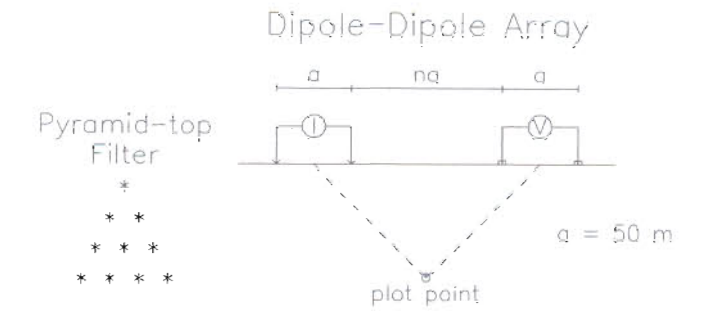
- #### INTERPRETATION
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WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.
 Date: 14/12/2005
 Interpretation: R. BELANGER
REMY BELANGER (CONTRACTOR)



Pseudo Section Plot 96+00 N



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

INTERPRETATION

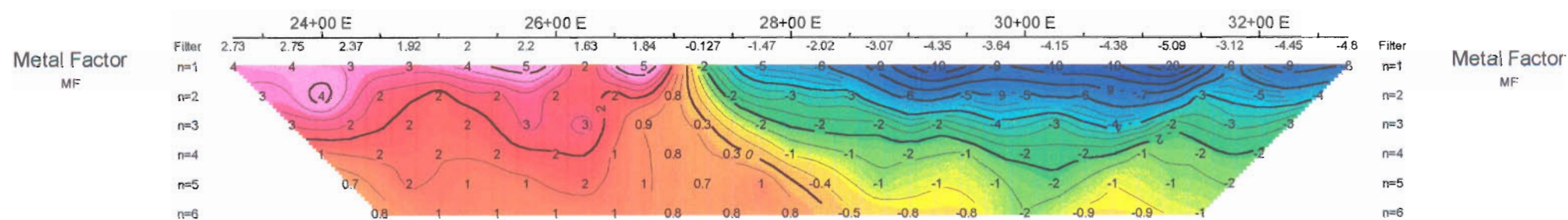
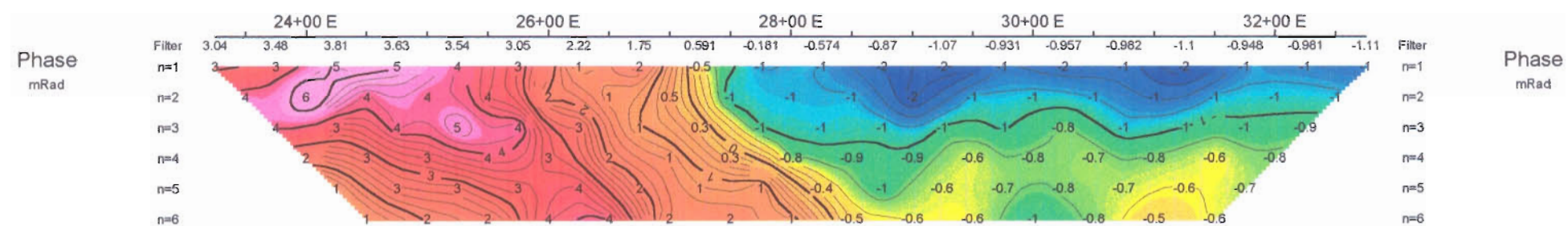
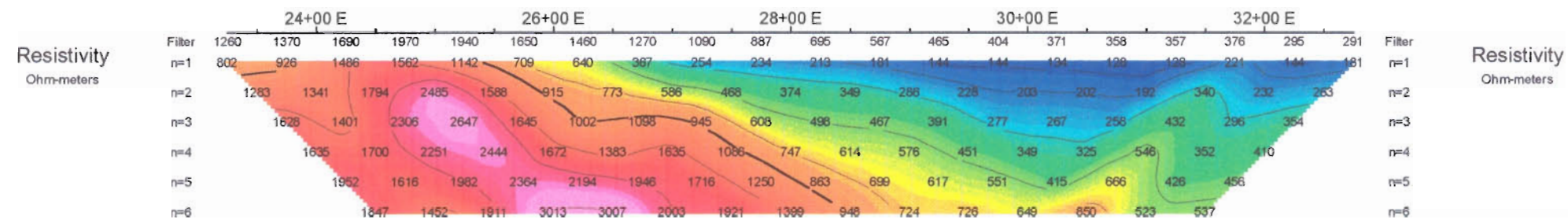
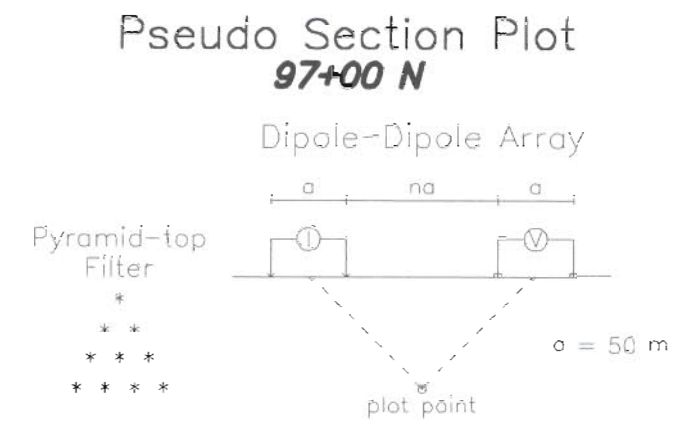
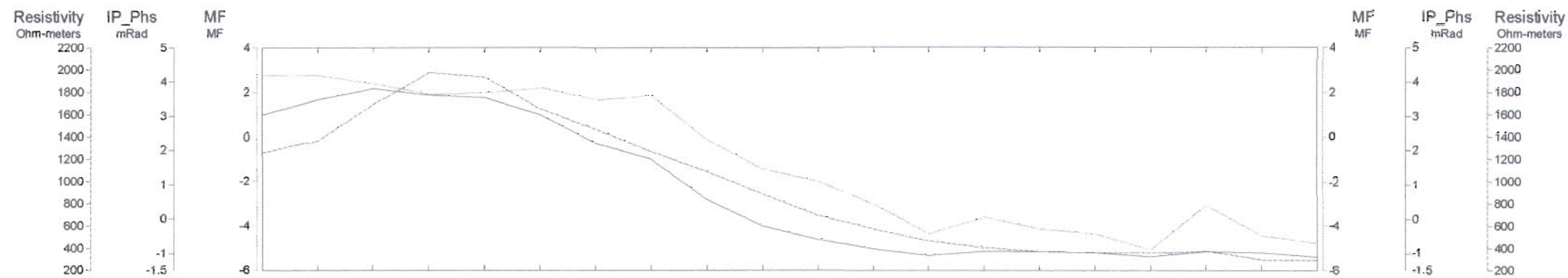
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WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 15/12/2005
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REMY BELANGER (CONTRACTOR)



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

INTERPRETATION

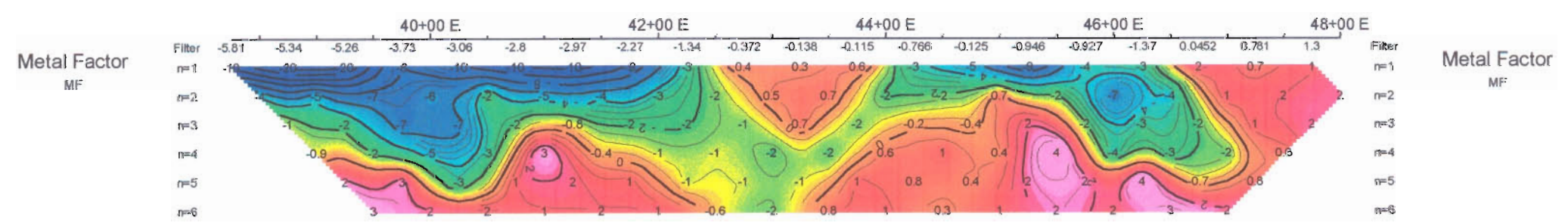
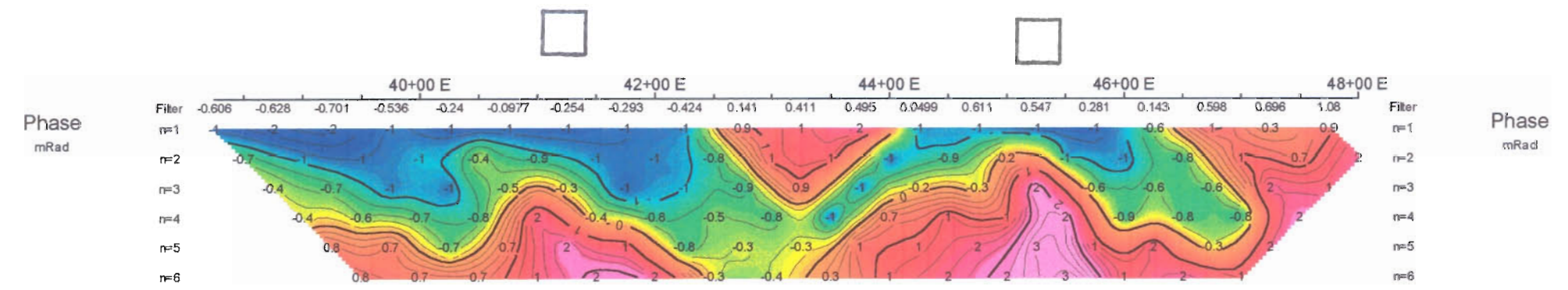
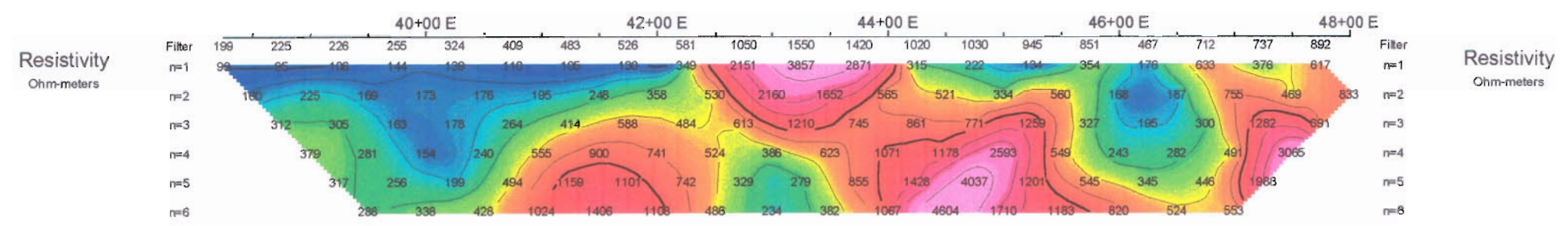
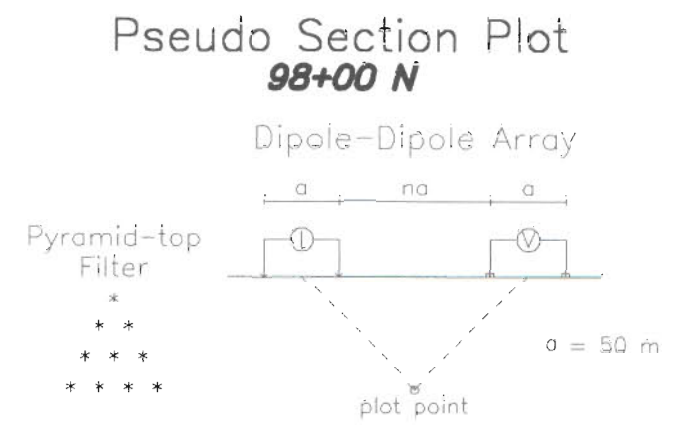
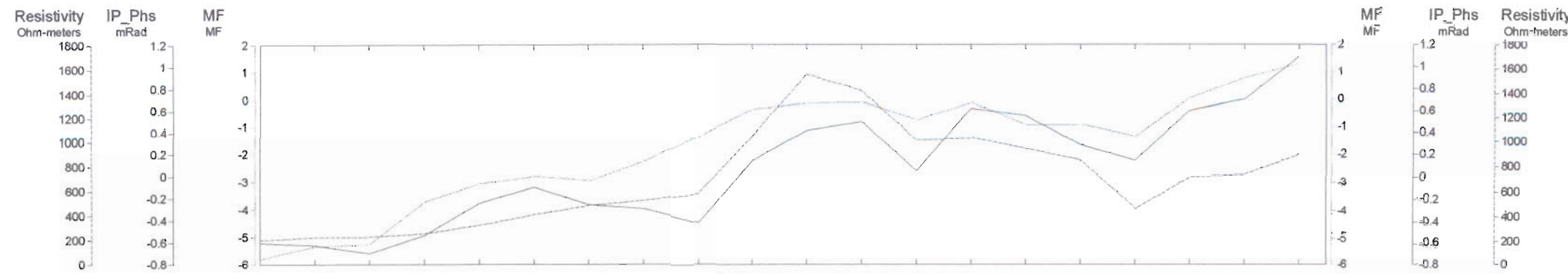
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 INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 15/12/2005
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Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

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WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 13/12/2005
 Interpretation: R. BELANGER

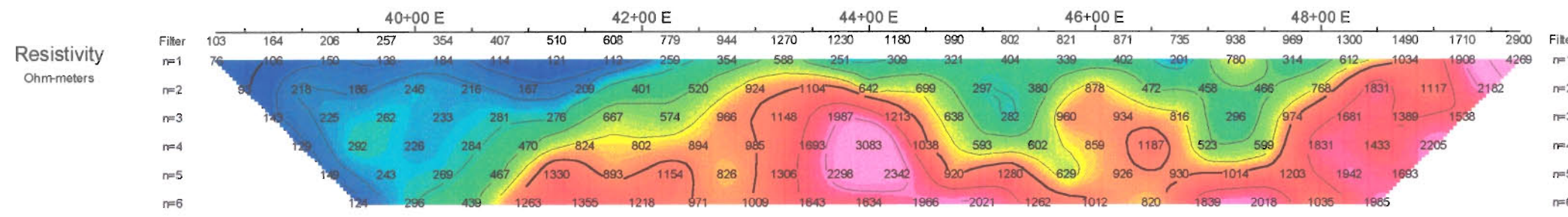
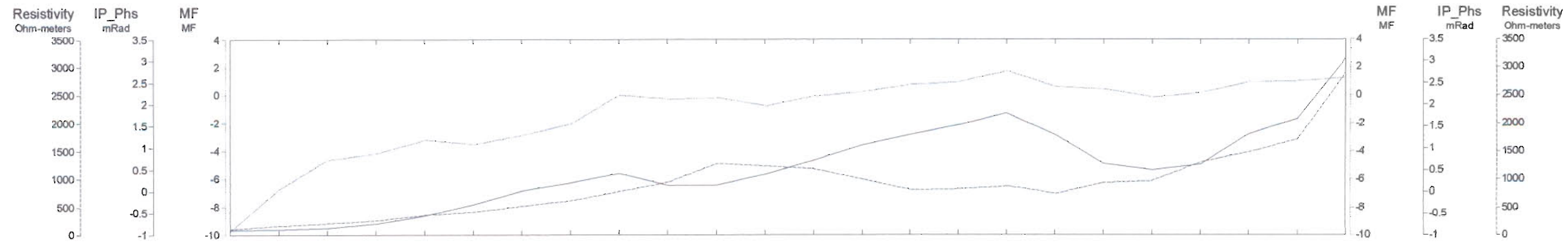
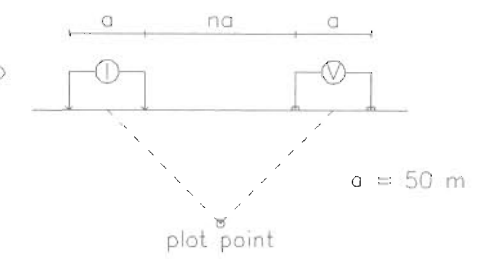
REMY BELANGER (CONTRACTOR)

Pseudo Section Plot 99+00 N

Dipole-Dipole Array

Pyramid-top Filter

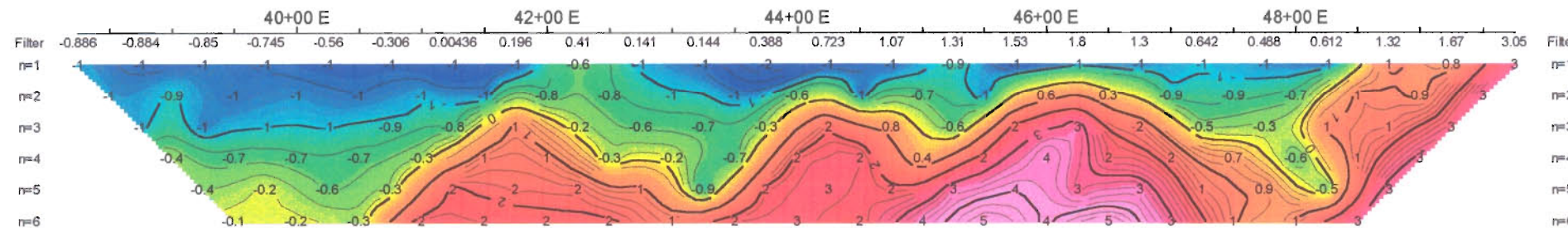
*
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Resistivity
Ohm-meters

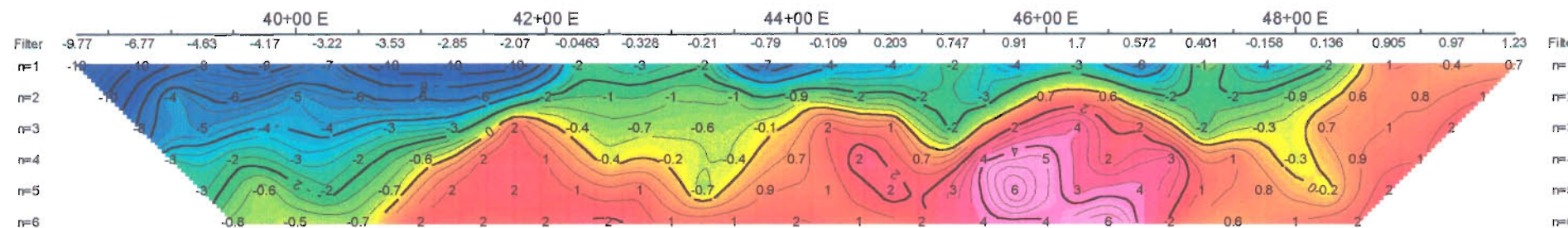
Resistivity
Ohm-meters

Phase
mRad



Phase
mRad

Metal Factor
MF



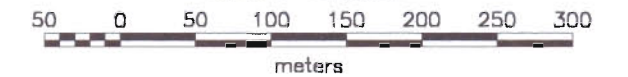
Metal Factor
MF

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

INTERPRETATION

- Strong increase in polarization accompanied by marked decrease in resistivity.
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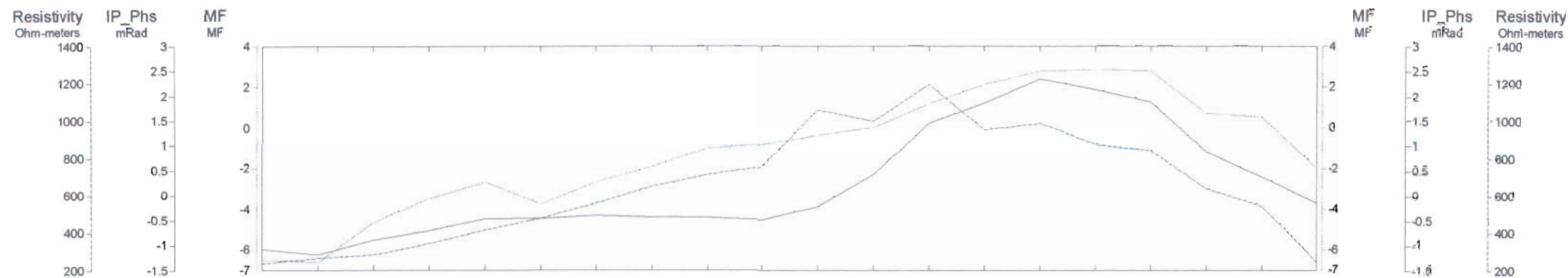
Scale 1:5000



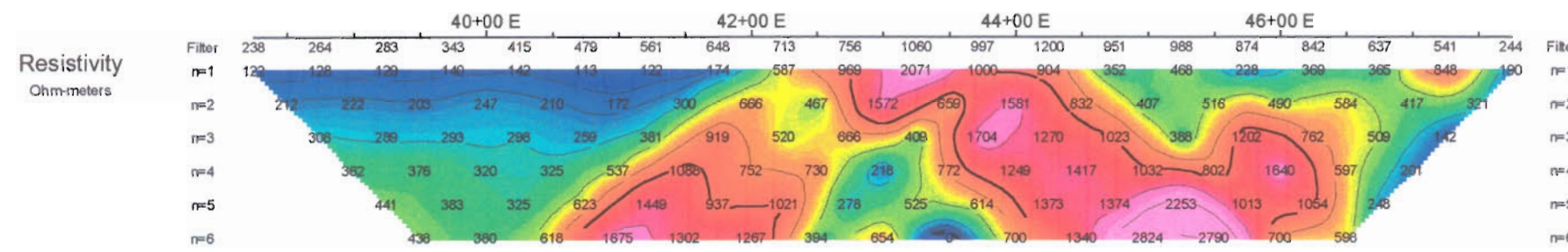
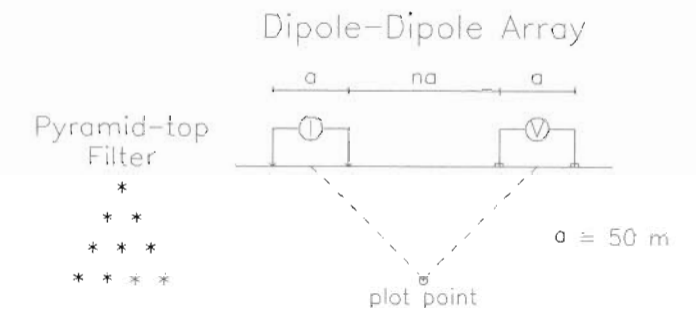
WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
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Date: 13/12/2005
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REMY BELANGER (CONTRACTOR)

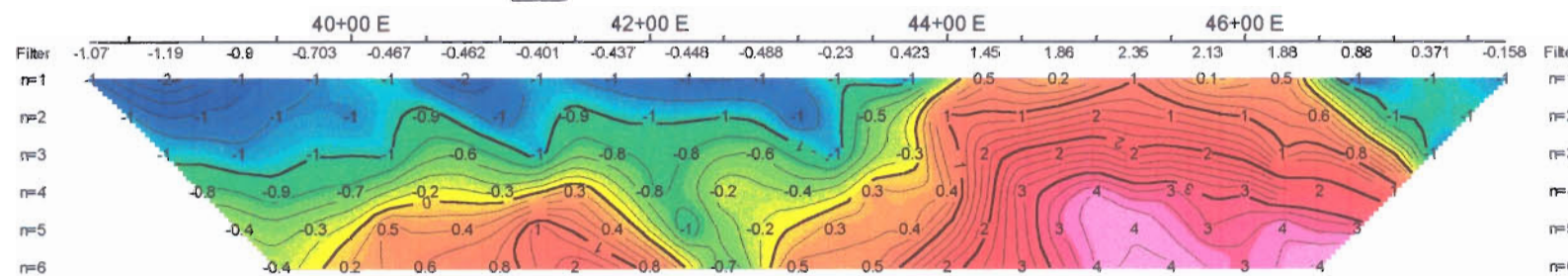


Pseudo Section Plot 100+00 N



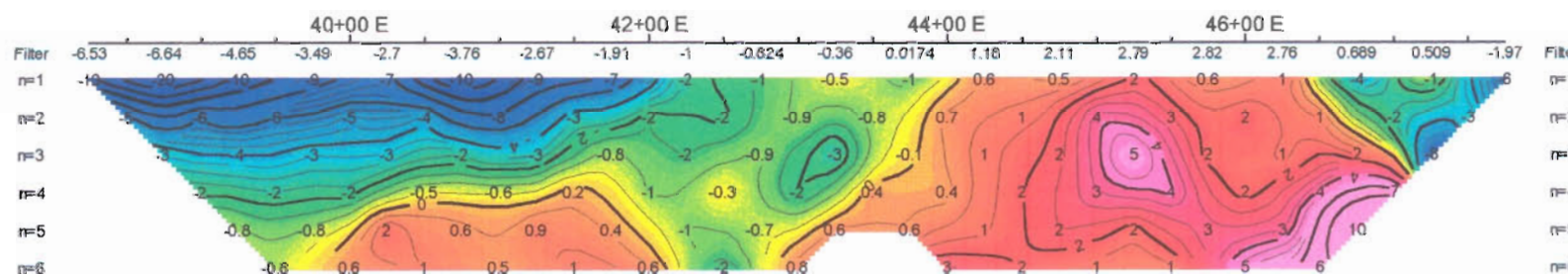
Resistivity
Ohm-meters

Phase
mRad



Phase
mRad

Metal Factor
MF



Metal Factor
MF

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

INTERPRETATION

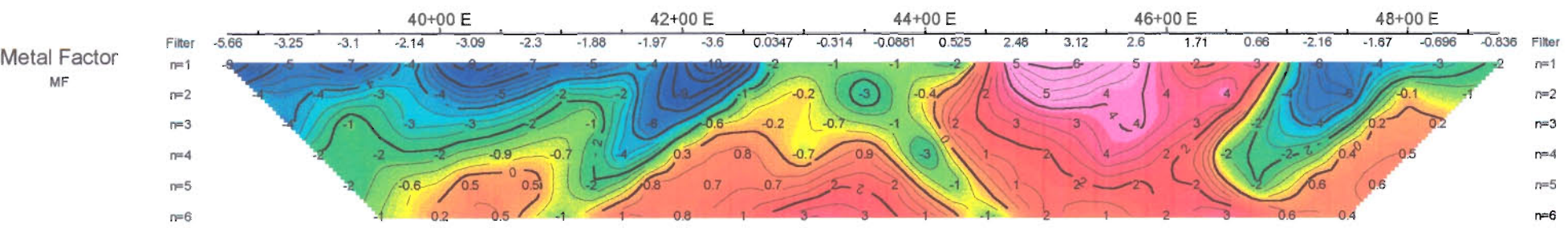
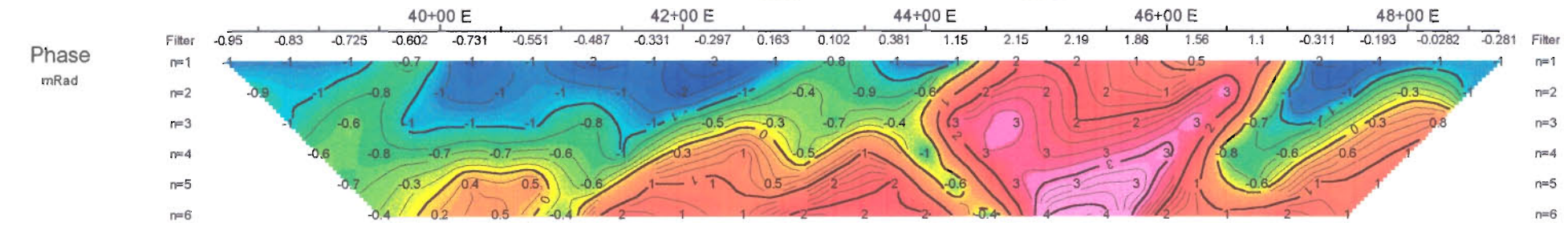
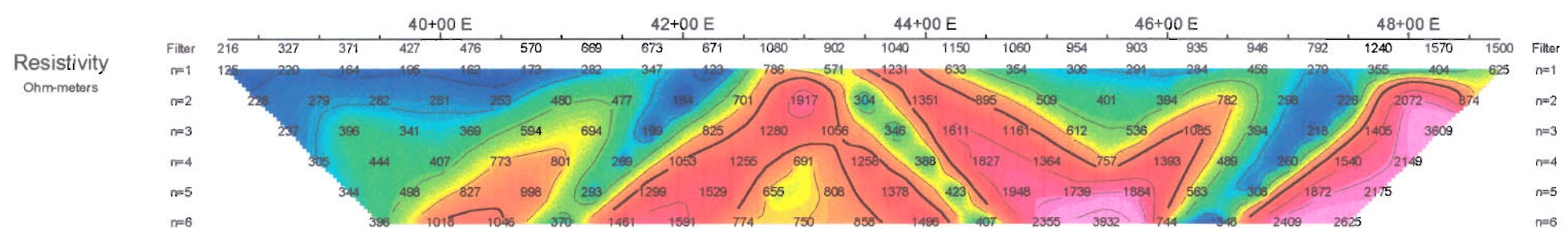
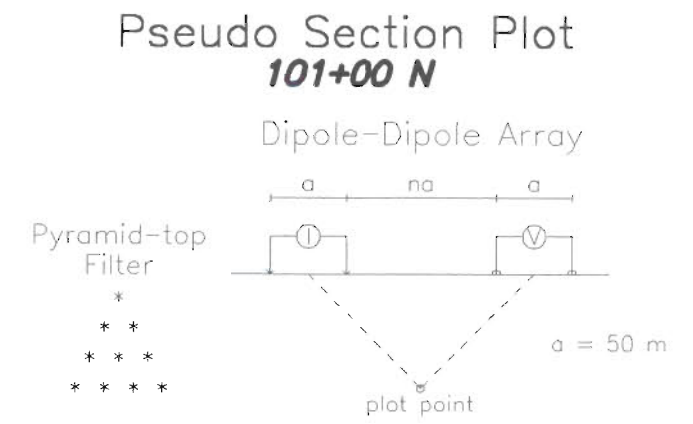
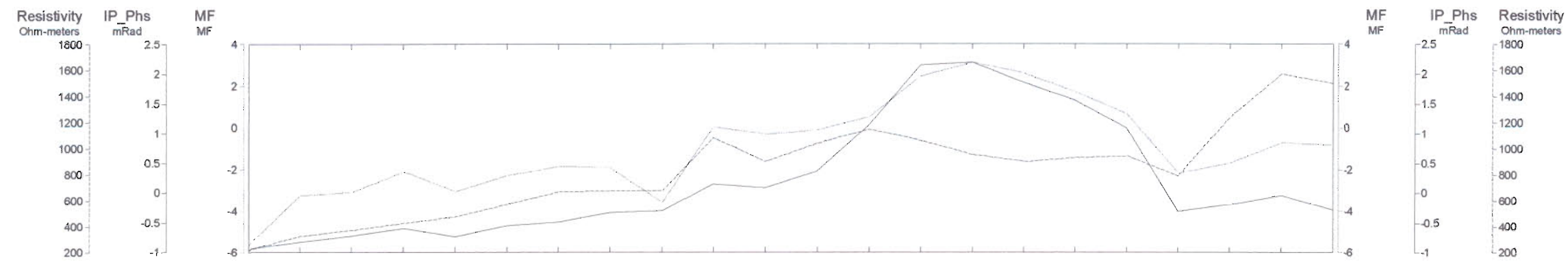
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WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 13/12/2005
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Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

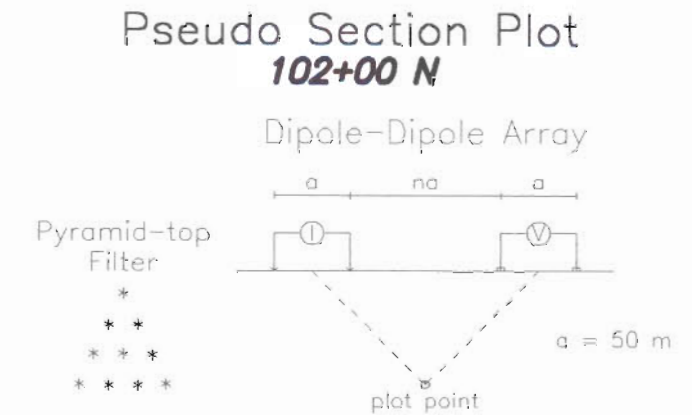
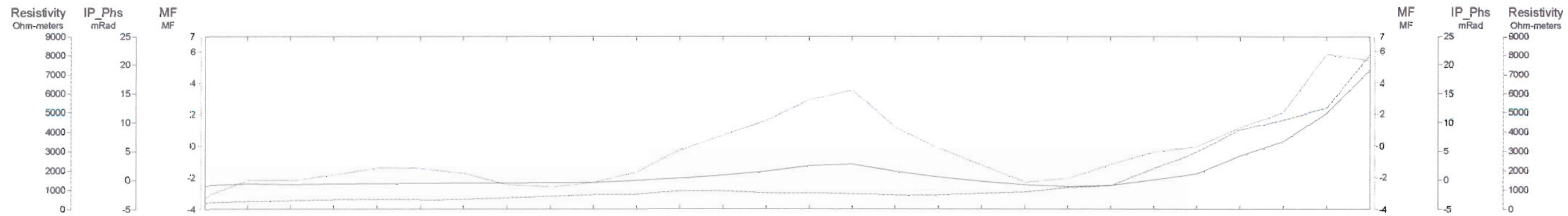
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LOVELAND TWP. ONT.

Date: 13/12/2005
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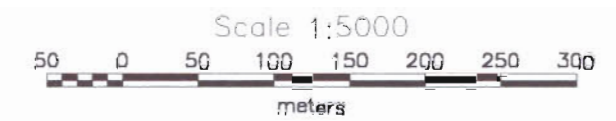
REMY BELANGER (CONTRACTOR)



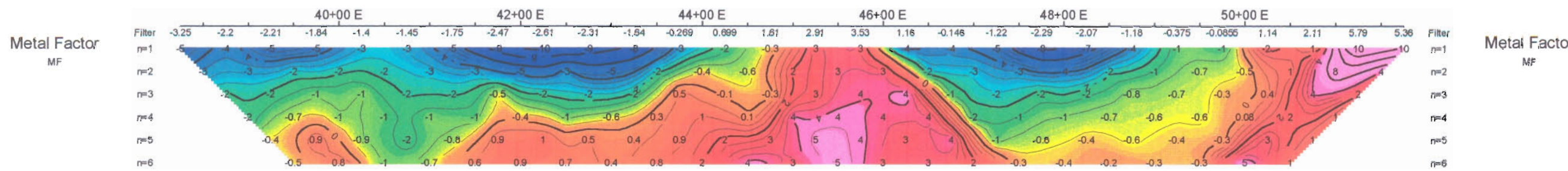
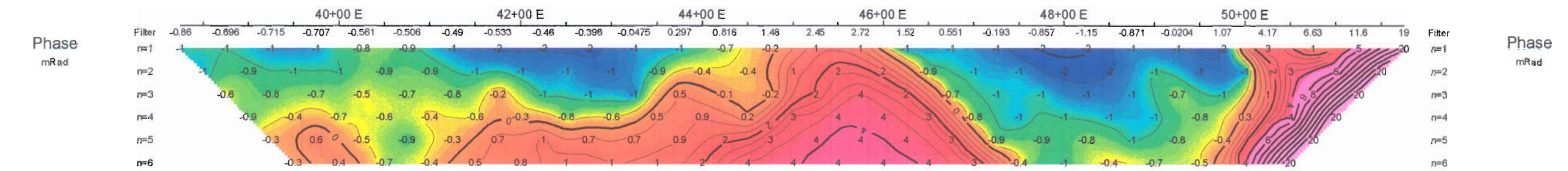
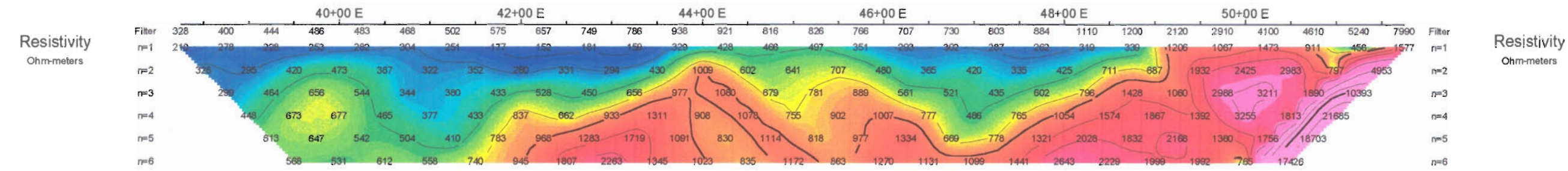
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

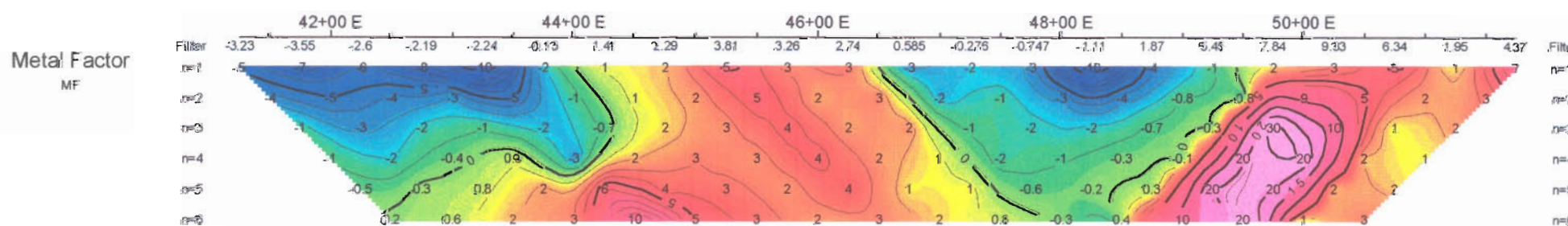
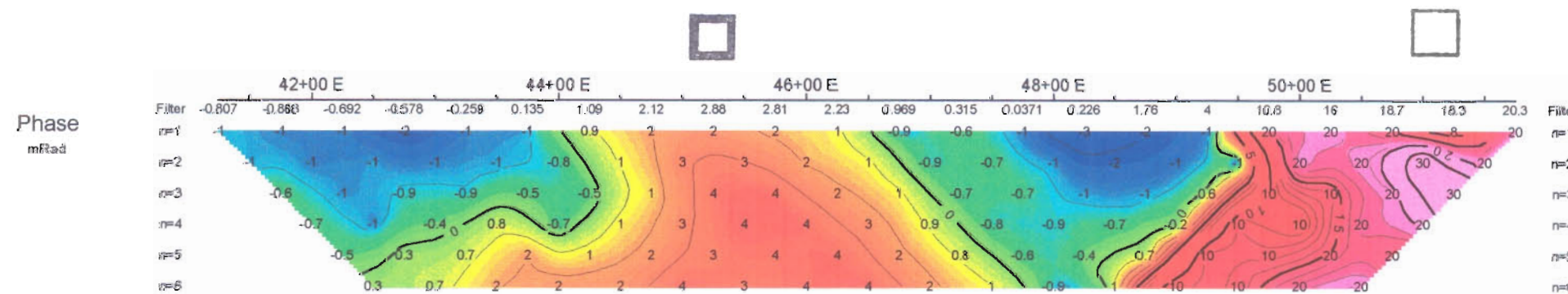
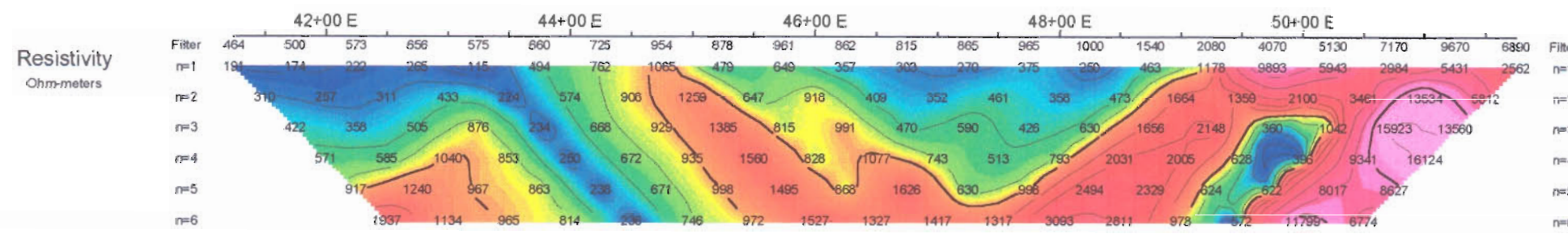
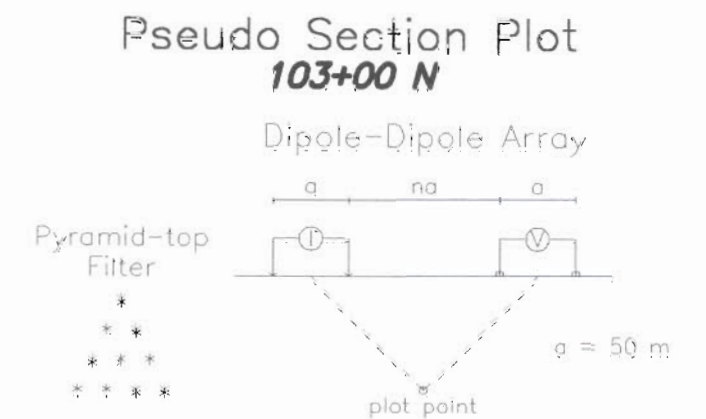
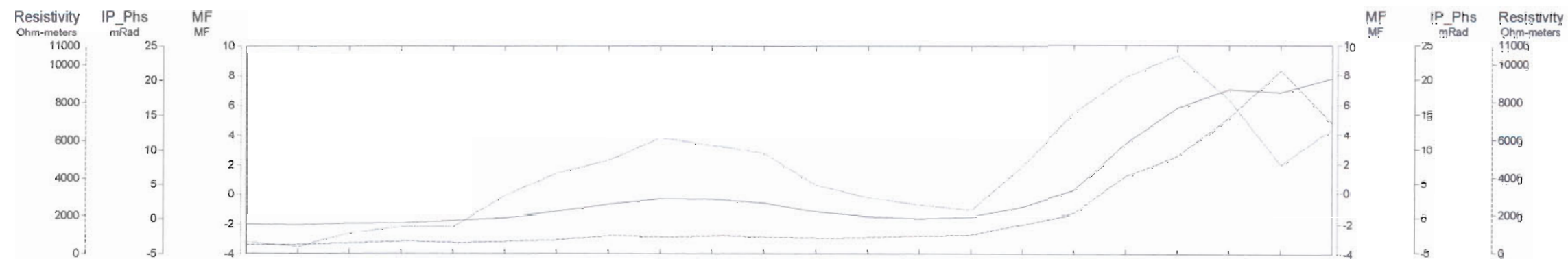
INTERPRETATION

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WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.
 Date: 13/12/2005
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Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

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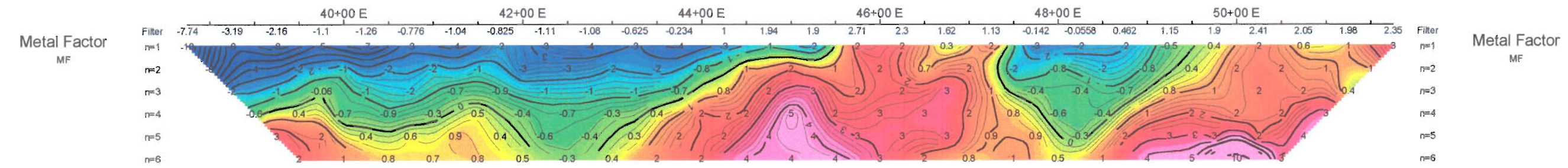
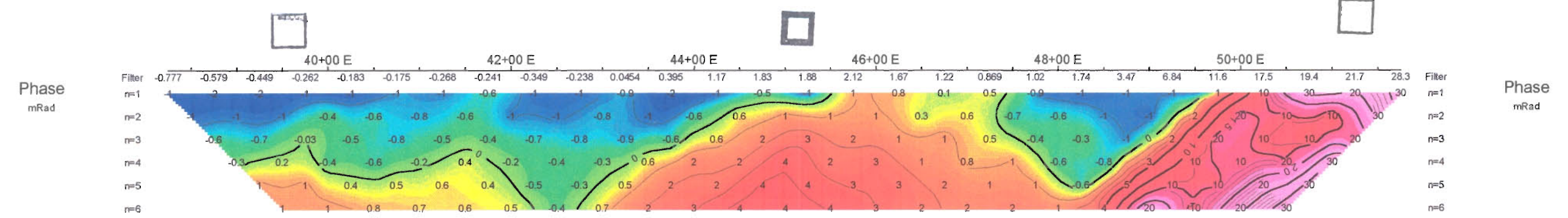
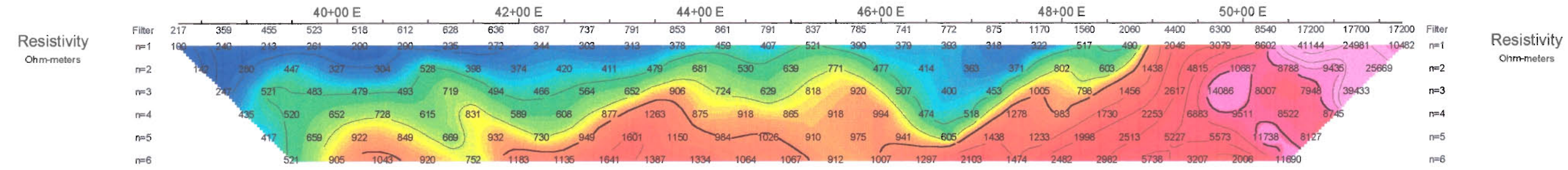
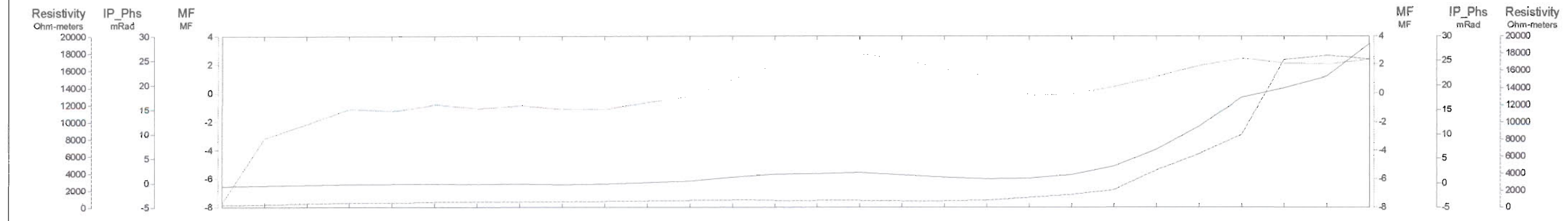
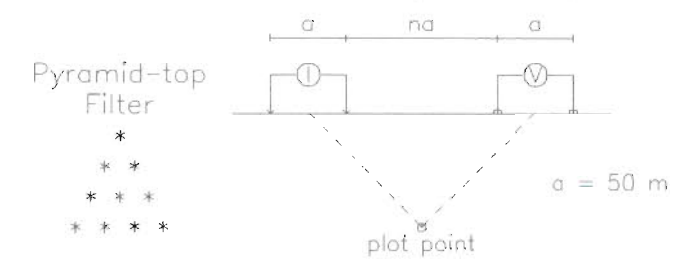
WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
 TARQUET A & B
 LOVELAND TWP. ONT.

Date: 13/12/2005
 Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)

Pseudo Section Plot 104+00 N

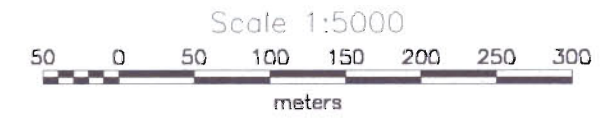
Dipole-Dipole Array



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

INTERPRETATION

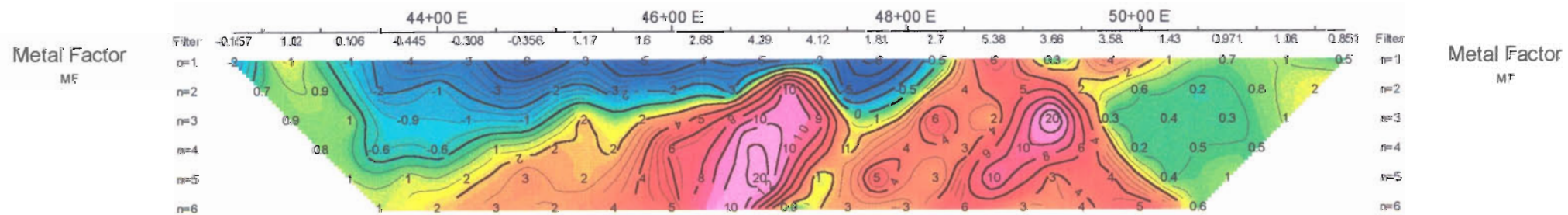
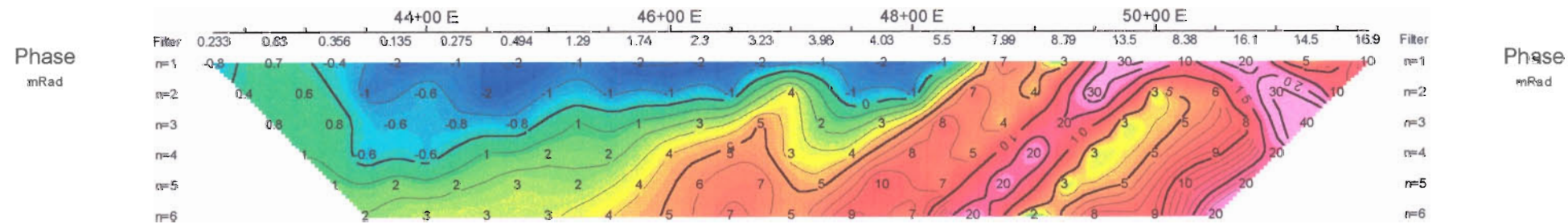
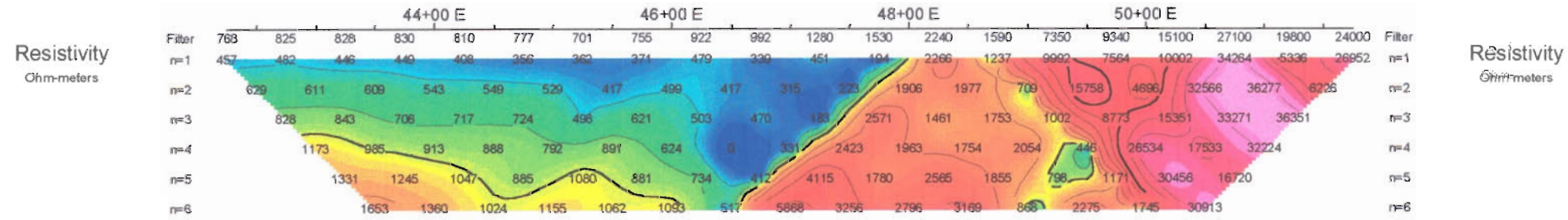
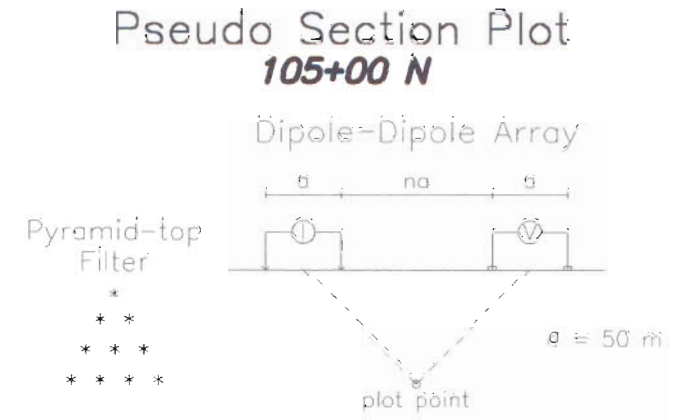
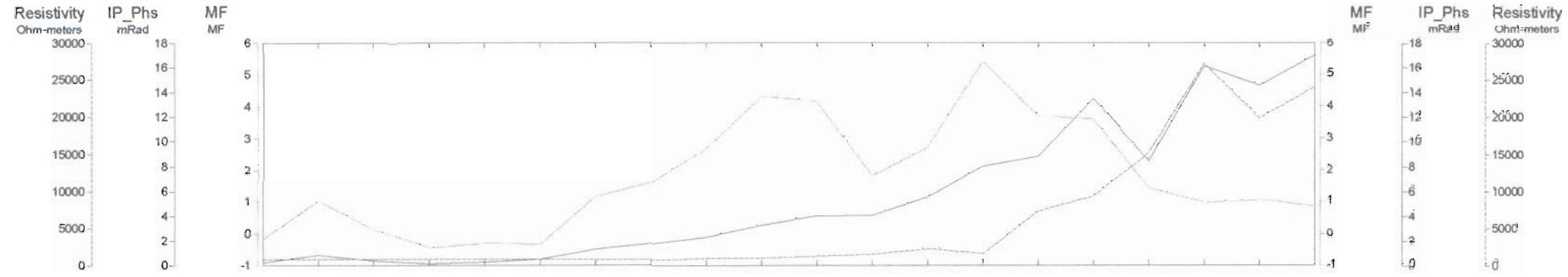
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WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 13/12/2005
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Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

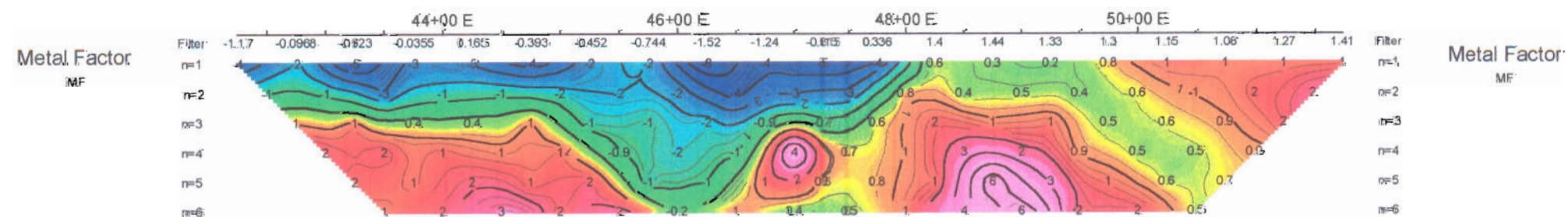
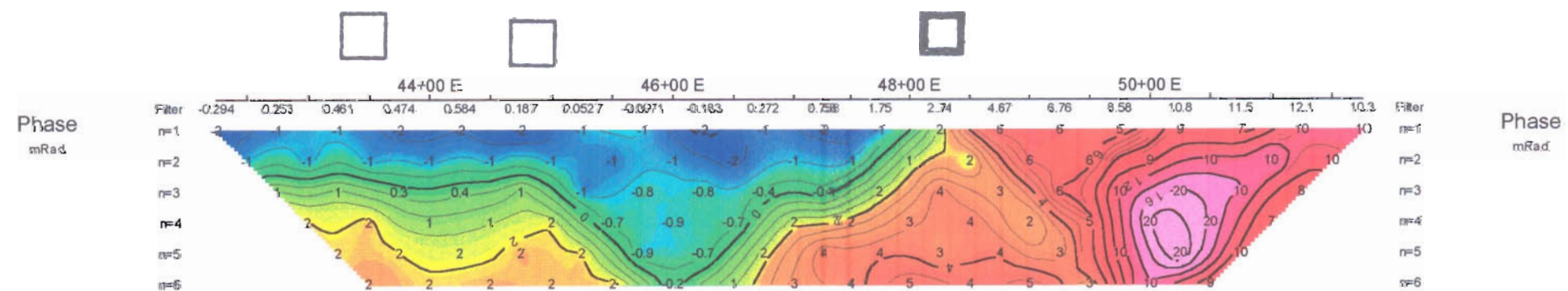
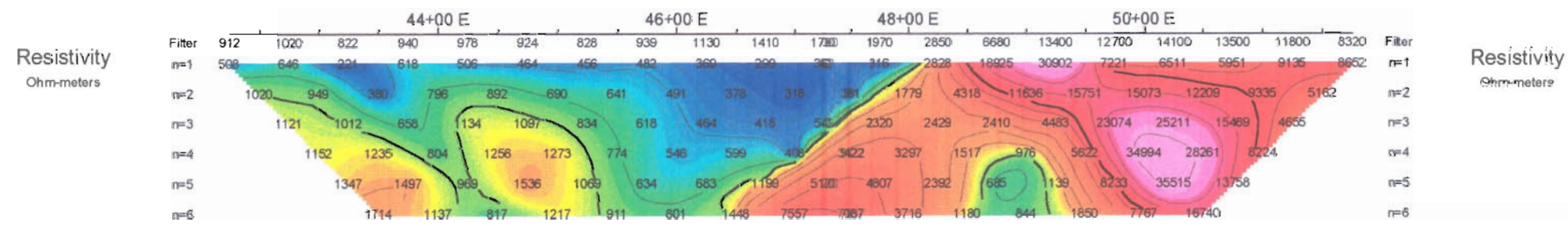
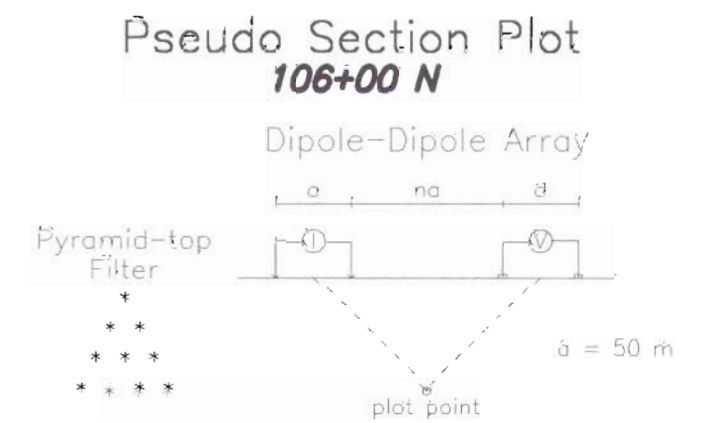
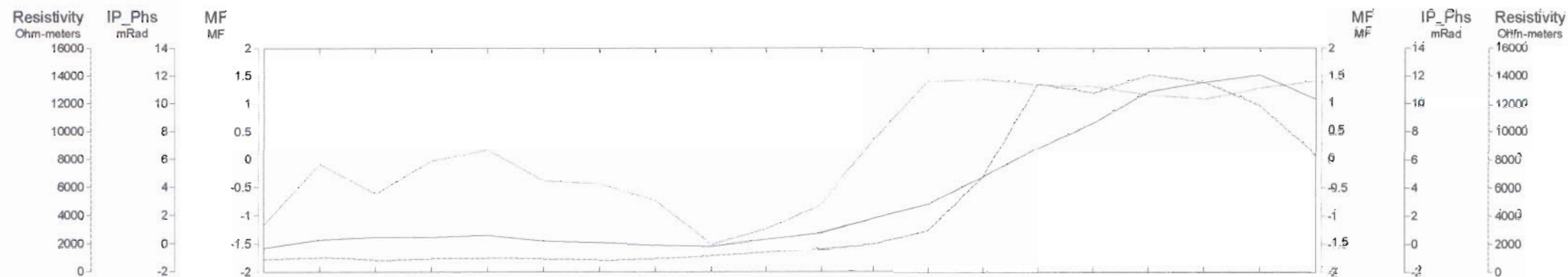
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 INDUCED POLARIZATION SURVEY
 TARQUET A & B
 LOVELAND TWP. ONT.

Date: 13/12/2005
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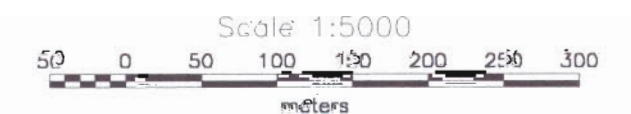
REMY BELANGER (CONTRACTOR)



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

INTERPRETATION

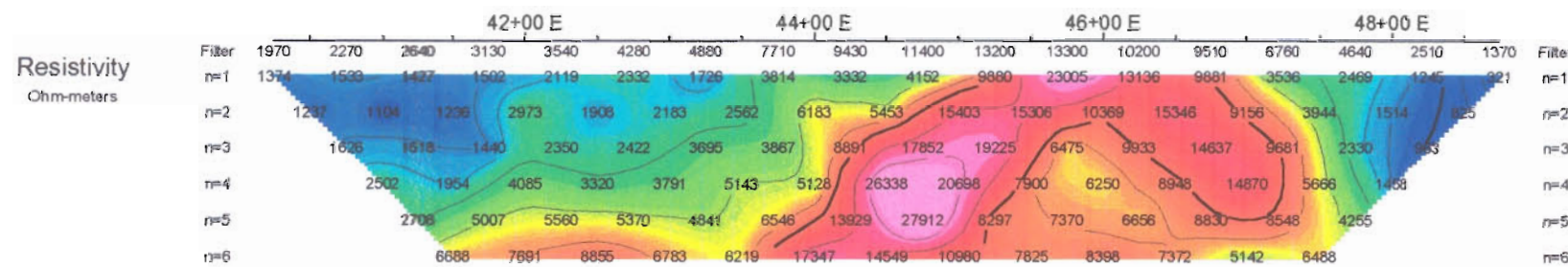
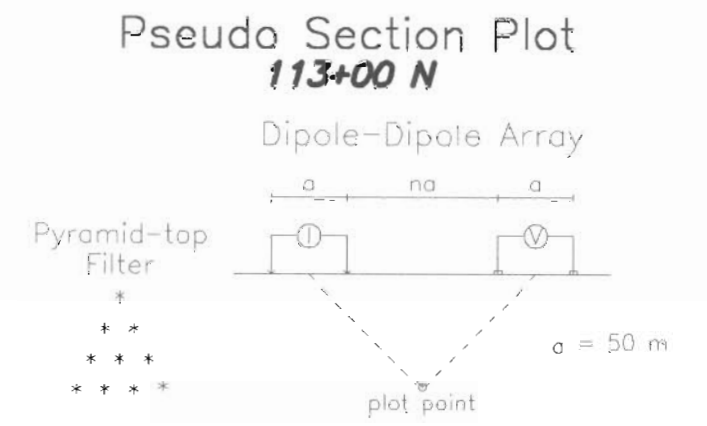
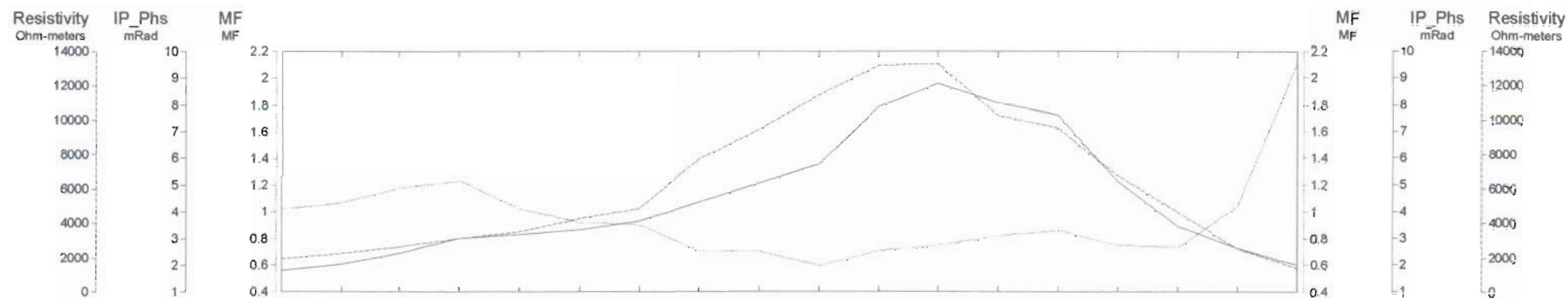
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INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

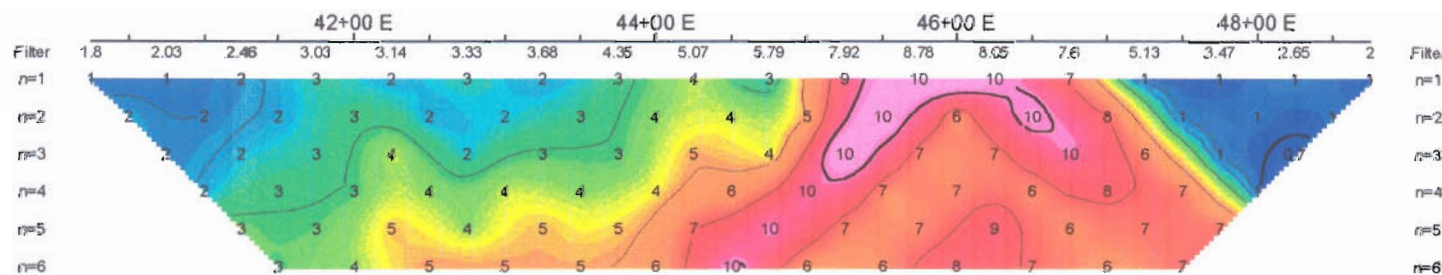
Date: 13/12/2005
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REMY BELANGER (CONTRACTOR)



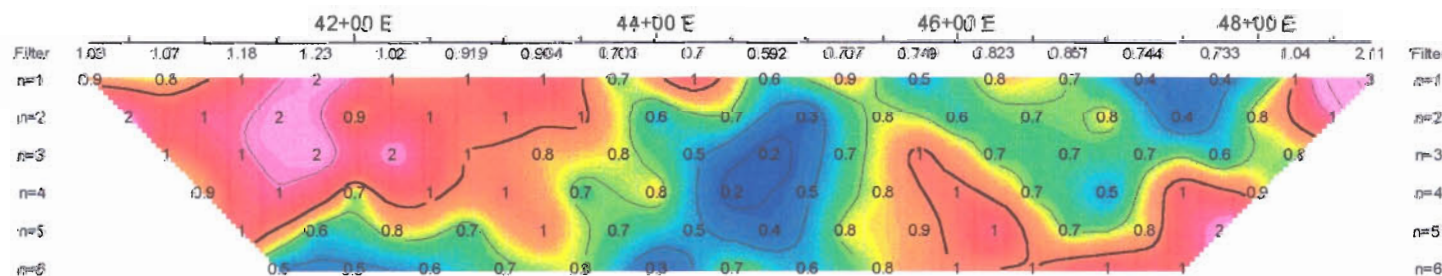
Resistivity
Ohm-meters

Phase
mRad



Phase
mRad

Metal Factor
MF



Metal Factor
MF

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

INTERPRETATION

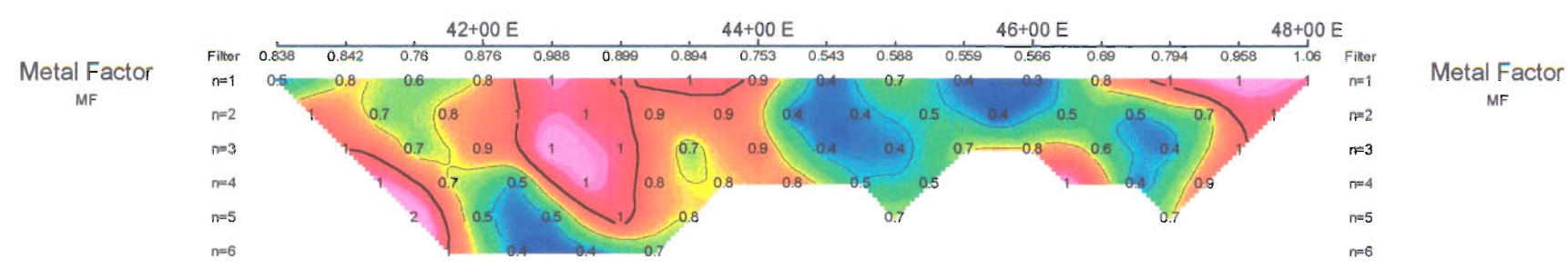
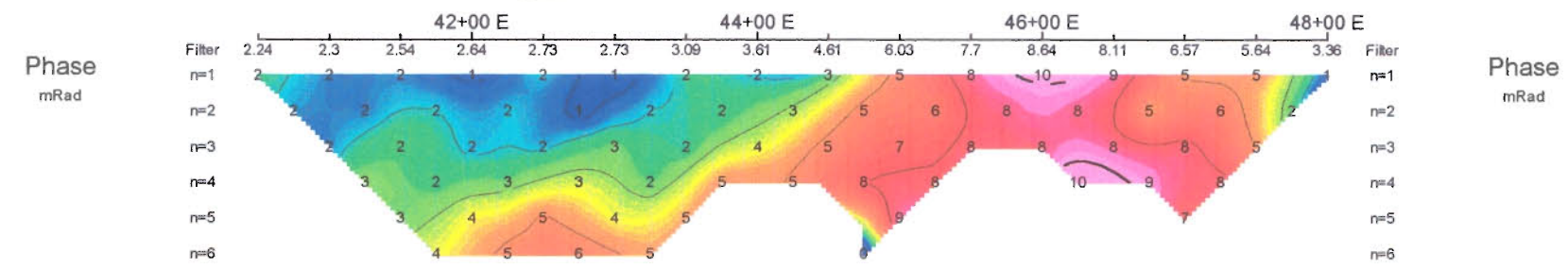
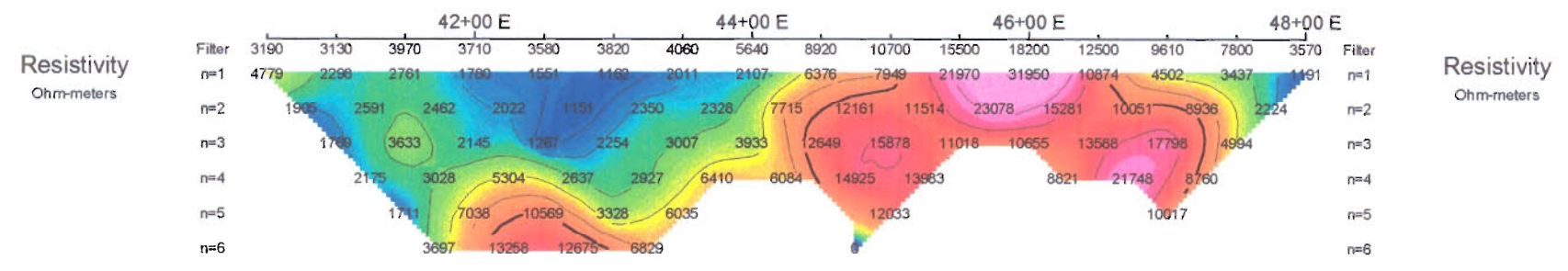
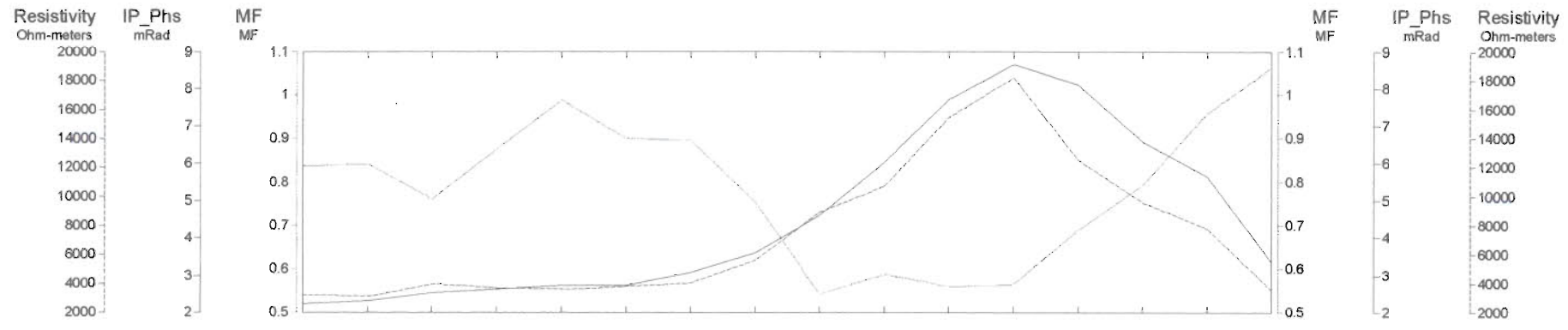
- Strong increase in polarization accompanied by marked decrease in resistivity.
- Well defined increase in polarization without marked resistivity decrease.
- Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.



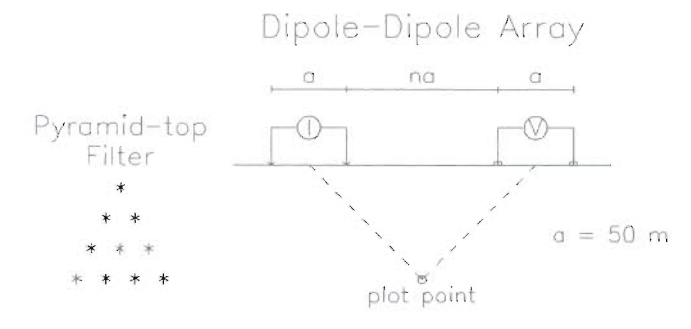
WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 16/12/2005
Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)



Pseudo Section Plot 114+00 N



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

INTERPRETATION

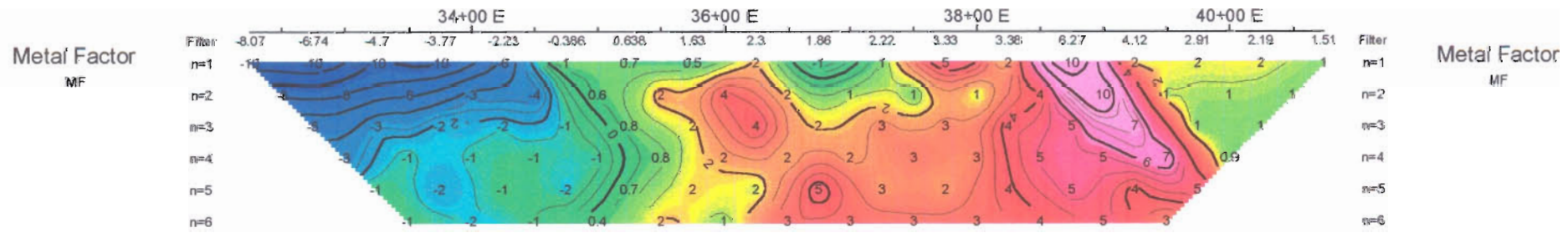
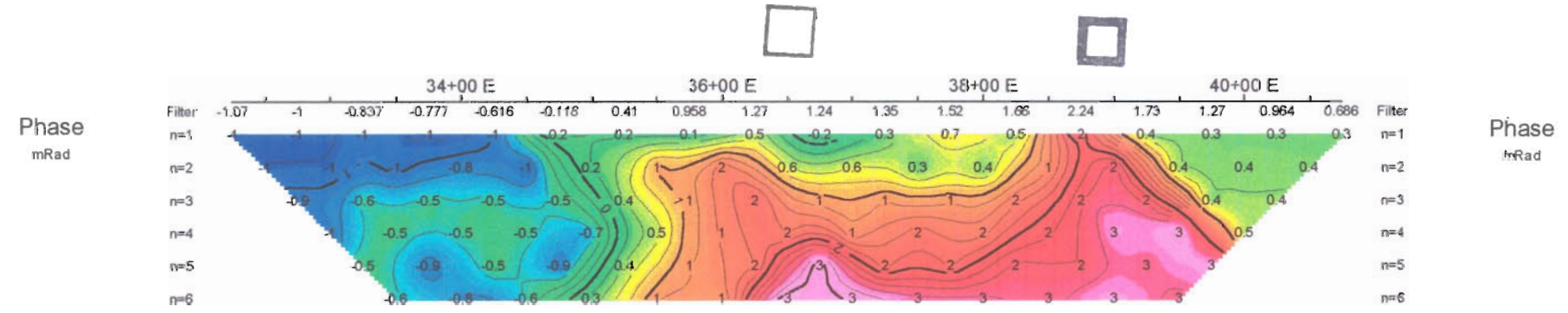
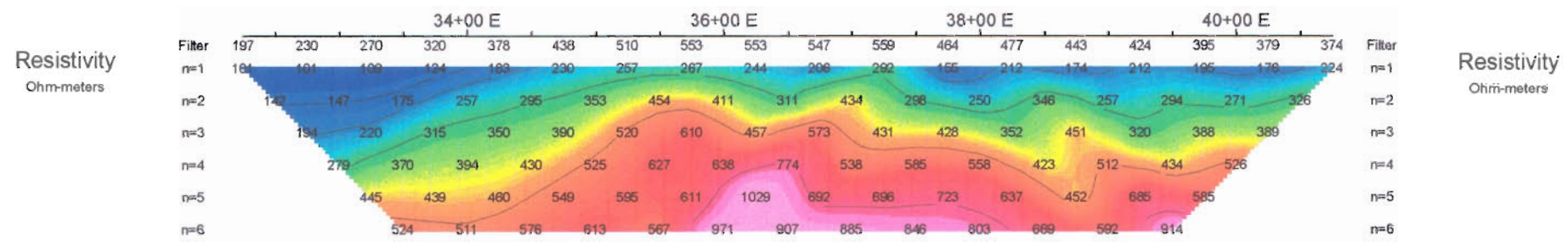
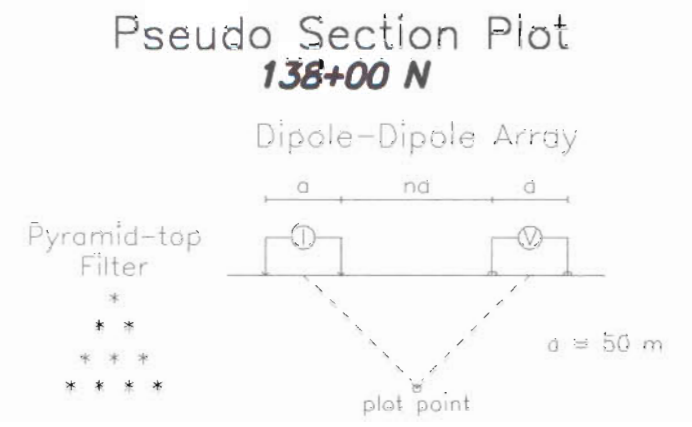
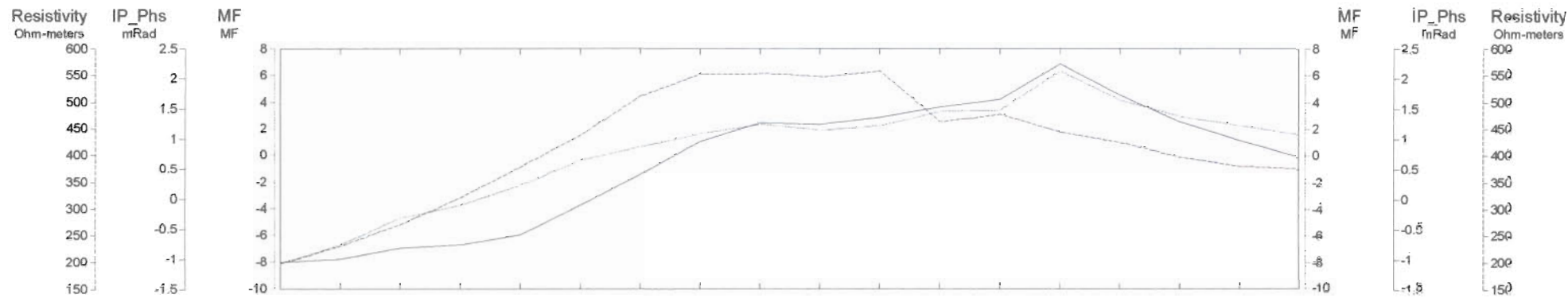
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WESTERN KIDD RESOURCES INC.
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REMY BELANGER (CONTRACTOR)



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

- #### INTERPRETATION
- Strong increase in polarization accompanied by marked decrease in resistivity.
 - Well defined increase in polarization without marked resistivity decrease.
 - Poorly defined polarization increase with no resistivity signature.
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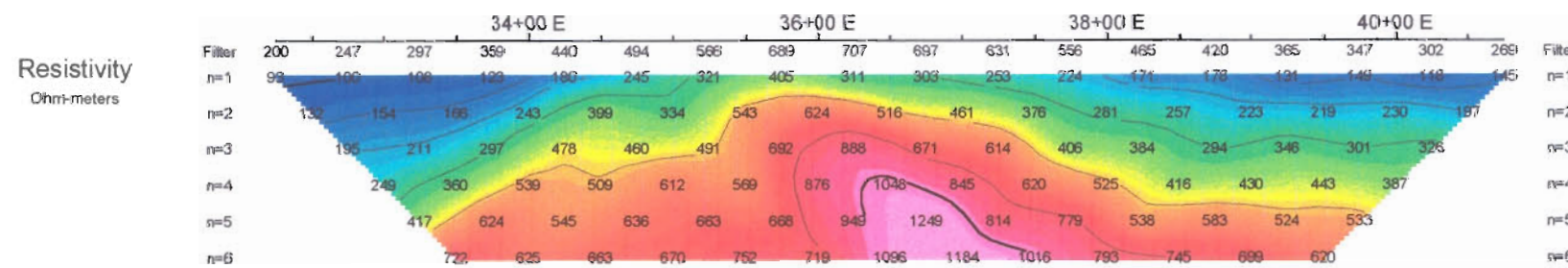
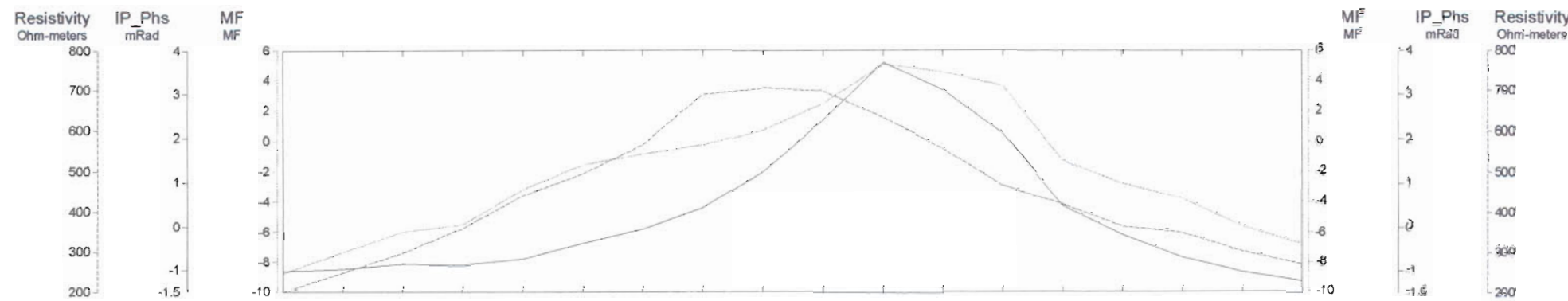
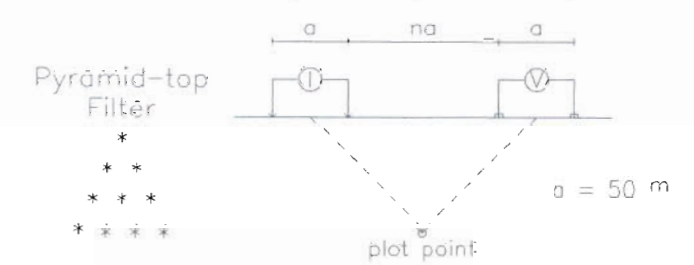
WESTERN KIDD RESOURCES INC.
 INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

Date: 15/12/2005
 Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)

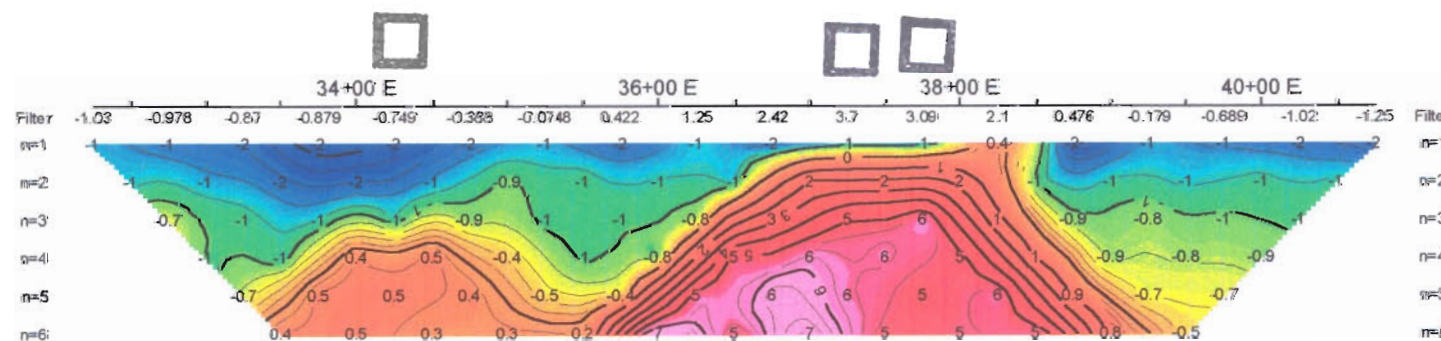
Pseudo Section Plot 139+00 N

Dipole-Dipole Array



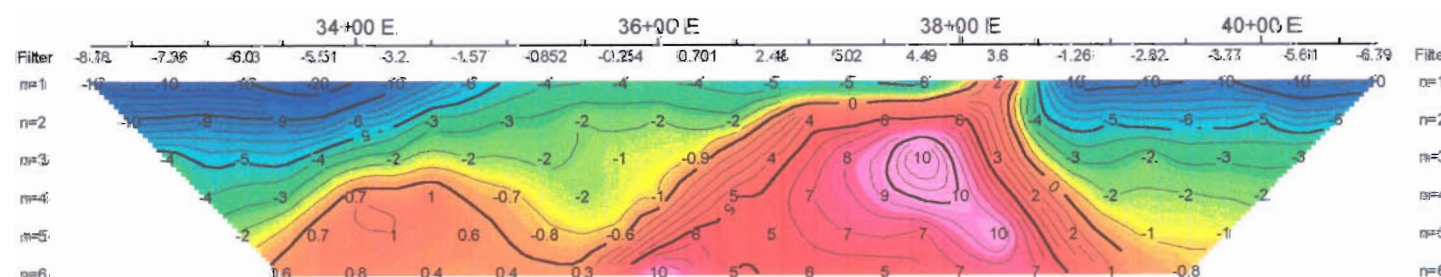
Resistivity
Ohm-meters

Phase
mRad



Phase
mRad

Metal Factor
MF



Metal Factor
MF

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

INTERPRETATION

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WESTERN KIDD RESOURCES INC.
INDUCED POLARIZATION SURVEY
TARQUET A & B
LOVELAND TWP. ONT.

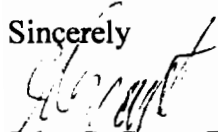
Date: 15/12/2005
Interpretation: R. BELANGER

REMY BELANGER (CONTRACTOR)

Line 102MN represents one line of a much larger grid that was done over a block of claims held by Western Kidd Resources in Loveland Township of the Porcupine Mining Division.

This IP survey was completed by Exsics Exploration Limited as a follow up to a previous IP survey. The line was read using different equipment which included the Elrec 10 Receiver and the G.D.D. Instrumentation 3.6 kilowatt Transmitter. Specifications for these units can be found as Appendix B, attached.

Sincerely



John C. Grant, FGAC, CETT
Exsics Exploration Limited.

APPENDIX B

Tx II Transmitter

3600 W

User's Guide



GDD

INSTRUMENTATION INC.

3700, boul. de la Chaudière, suite 200, Québec (Qc) Canada G1X 4B7

Tel.: (418) 877-4249 Fax: (418) 877-4054

E-Mail: gdd@gddinstrumentation.com



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Fugro Instruments

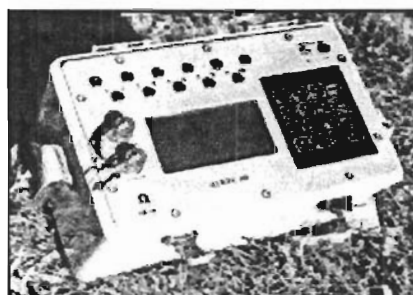
- [Company Profile](#)
- [Products](#)
- [Instrument Sales](#)
- [Software Sales](#)
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- [Related Services](#)
- [Technical Papers](#)
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Elrec 10 Specifications @ Fugro Instruments

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- [● Go Back](#)



Iris Instruments offer a comprehensive range of geophysical instruments, environmental monitoring equipment and geotechnical instruments. Information about IRIS Induced Polarization and Proton Magnetic Resonance systems may be viewed by following the links. For a complete listing of Iris Instruments products, click on the rotating Ohm symbol to visit the IRIS web site.



Technical specifications

- Ten input dipoles
- Signal waveform: Time Domain (ON+, OFF, ON
- OFF) with pulse duration of 0.5 , 1 , 2 , 4 or 8 seconds
- Up to twenty arithmetic, logarithmic or fully programmable IP chargeability windows
- Computation of apparent resistivity, average chargeability and standard deviation
- Input impedance: >50 Mohms
- Input overvoltage protection up to 1000 Volts
- Automatic SP bucking $\pm 15V$ with linear drift connection
- Internal calibration generator for a true calibration on request of the operator
- Automatic synchronization and re-synchronization process on primary voltage signals whenever needed
- Automatic stacking number in relation with a given standard deviation value
- Proprietary intelligent stacking process rejecting strong non-linear SP drifts
- Common mode rejection: more than 100 dB (for $R_s = 0$)
- Ground resistance measurement from 0.1 to 100 kohms
- Battery test: graphic plot of battery status
- Primary voltage: range: 10 μV to 1.5V, resolution: 1 μV , accuracy: typ. 0.3%
- Chargeability: range: 10 μV to 15V, accuracy: typ. 0.6%
- Self Potential: range: $\pm 1.5V$, resolution: 0.1 mV
- Time constant (τ) range: Cole-Cole inversion continuous from 10 milliseconds to 100 seconds ; Customized range on request
- Dimensions: 31x21x25 cm
- Display: 16 lines by 40 characters, 128 x 128 dots, LCD with a graphic representation

□ ELREC 10, Ten dipole IP receiver

The With graphics display for data quality monitoring

TEN SIMULTANEOUS DIPOLES
 TWENTY PROGRAMMABLE
 CHARGEABILITY WINDOWS
 HIGH ACCURACY AND SENSITIVITY

ELREC 10 is a ten dipole Time Domain Induced Polarization receiver designed for high productivity surveys in Mineral Exploration. ELREC 10 is a highly sensitive receiver and features a large graphic display for user friendly operation and a Cole-Cole parameter computation for in-the-field time constant analysis.

Ten dipoles:

The ten dipoles of ELREC 10 offer an increased productivity in the field for dipole-dipole, gradient or extended pole-pole arrays. It is also possible to measure five differential (non adjacent) dipoles, for special electrode configurations.

Twenty programmable windows:

Beside classical arithmetic and logarithmic modes, ELREC 10 also offers twenty fully programmable windows for a higher flexibility in the definition of the IP decay curve.

User Friendly Interface:

user friendly interface has been set up in ELREC 10 with a minimal number of key strokes for each operation.

Intelligent Stacking Process:

When the electric noise has strong non-linear effects, the standard arithmetic stacking process requires a long acquisition time to measure the IP effect ; a proprietary intelligent stacking

- Weight: 8 kg including internal battery
- Operating temperature: -30°C to +70°C
- Power supply: 12V internal rechargeable battery with more than 20 hours service at +20°C ; a 12V external battery can be also used.

SP bursts and minimize the acquisition time for a given reading accuracy

Monitoring Display:

A large graphic LCD (128x240 dots) permits the operator to display simultaneously the IP decay curves of the ten dipoles during the acquisition, for a global visualization of the readings and for better quality control. Before the acquisition, the ELREC 10 can be used as a one channel DC graphic display, for monitoring the noise level and checking the primary voltage waveform, through a continuous display process.

Cole-Cole Parameters:

An inversion procedure has been implemented to compute Cole-Cole time constant at the end of the acquisition. This allows a possible grain size discrimination analysis.

Internal Memory:

The memory can store up to 3200 dipole readings, each reading including the full set of parameters characterizing the measurements. An explicit data storage procedure has been developed including the display of warning messages for data not yet stored. File names are available for a better memory management of sets of readings.

Field proof Instrument:

ELREC 10 operates in a wide temperature range and features a fiber-glass case for resistance to field shocks and vibrations.

Copyright © 1998 IRIS Instruments

1.2 Transmitter description

In this section, the Tx II components are shown, named and explained.

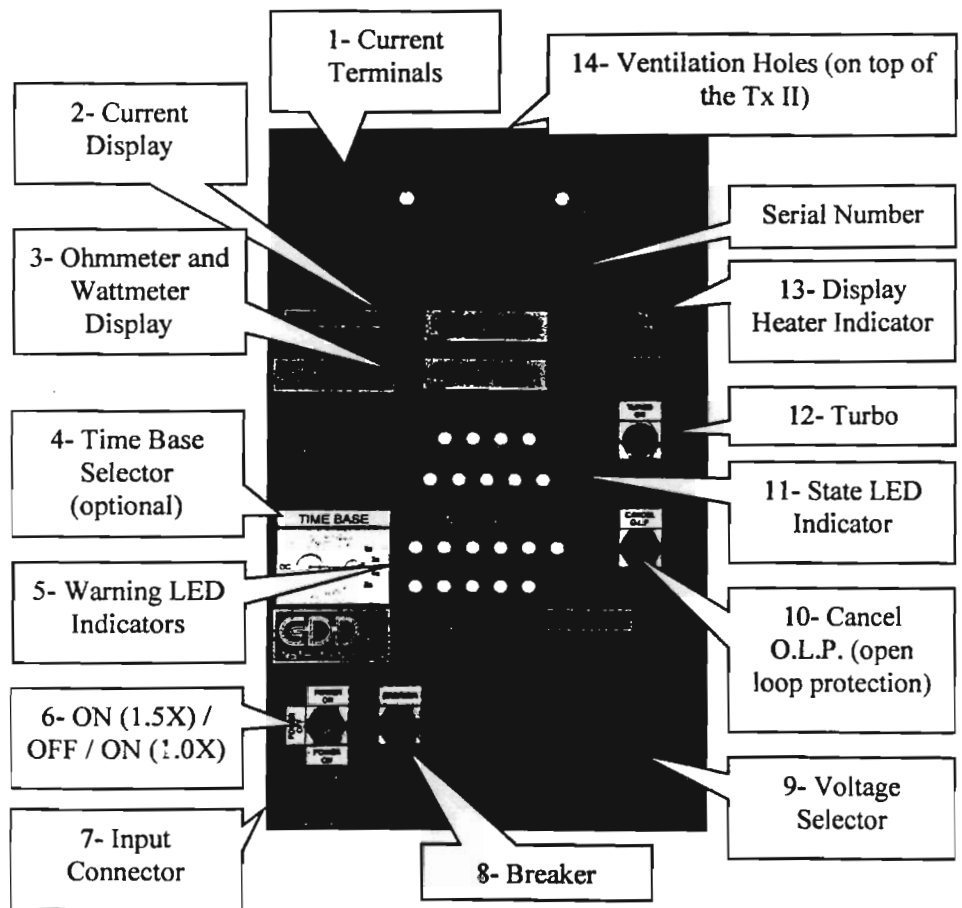


Figure 1 : Transmitter components

6. SPECIFICATIONS

Size : 51 x 41.5 x 21.5 cm- built in transportation box from Pelican

Weight : approximately 32 kg

Operating temperature : -40 °C to 65 °C

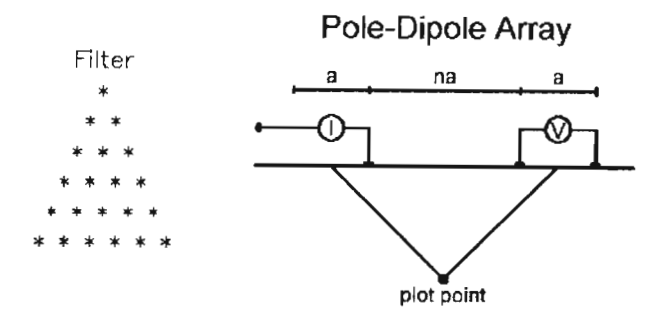
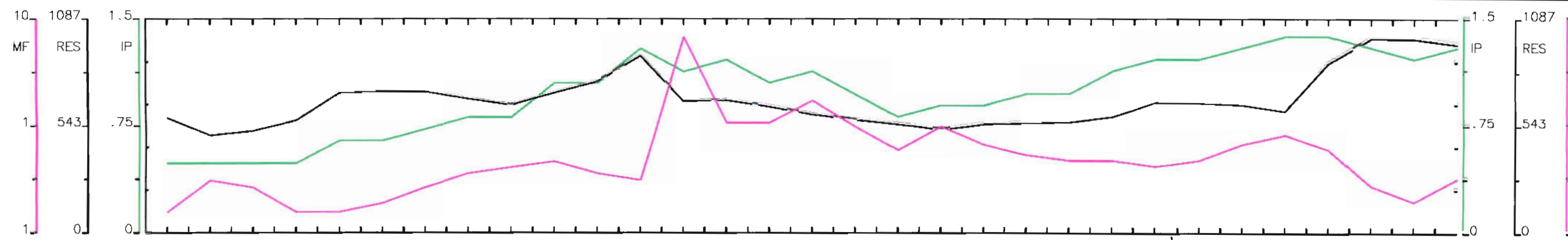
Cycle : time domain : 2 s ON, 2 s OFF
Optional: 1, 2, 4 or 8 s
0.5, 1, 2 or 4 s
DC

Output current : 0.030 A to 10 A (normal operation)
0.000 A to 10 A (cancel open loop)

Output voltage : 150 V to 2400 V

Display : LCD, reads to 0,001 A

Power source : 240 V / 60 Hz (220 V / 50 Hz)

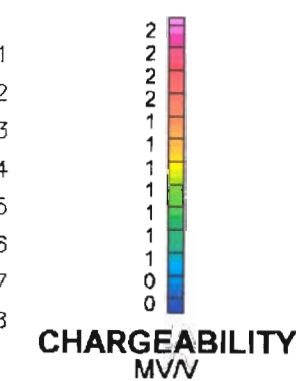
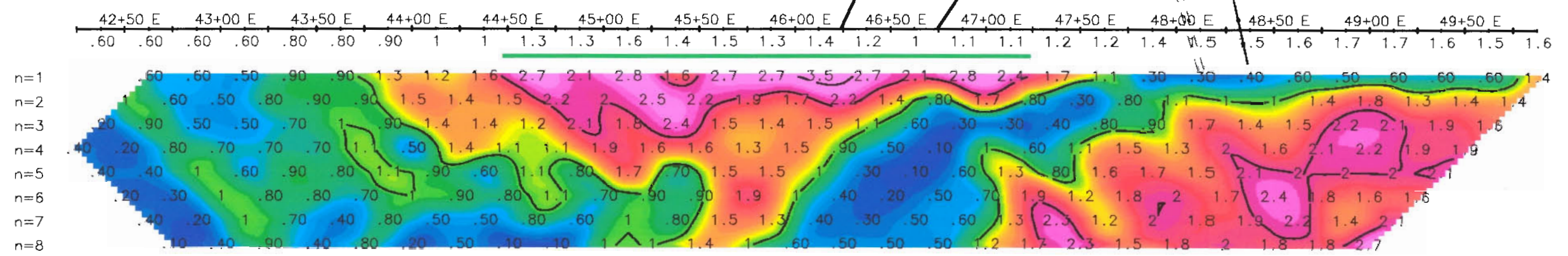


DIPOLE LENGTH : a=25M
 DIPOLE SPACINGS : n = 8
 FREQUENCIES :

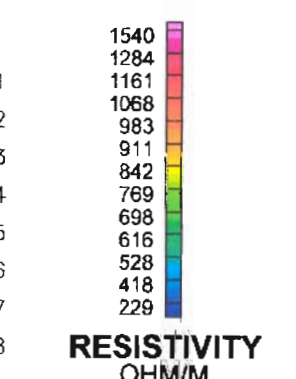
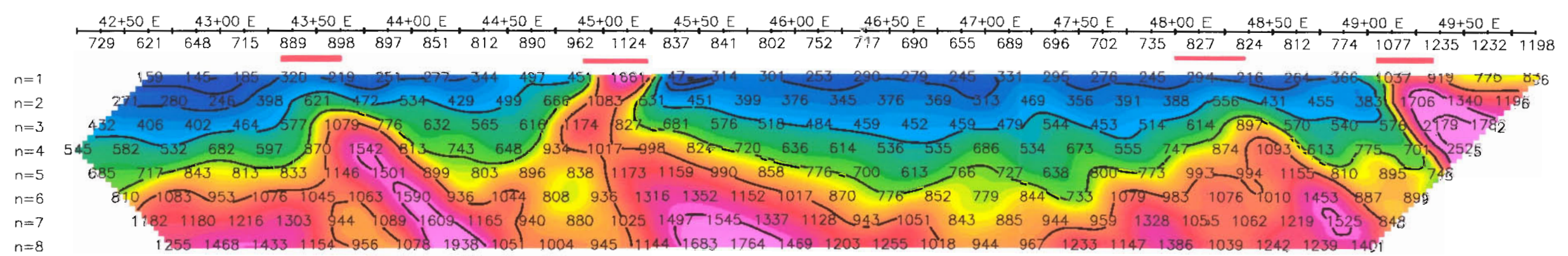
CHARGEABILITY
 Interval 1%, 10%
 RESISTIVITY
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...
 METAL FACTOR
 Logarithmic 1, 1.5, 2, 3, 5, 7.5, 10, ...

INSTRUMENTS
 RECEIVER : ELREC 10
 TRANSMITTER : GDD 3.6KWATT

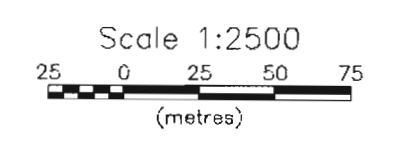
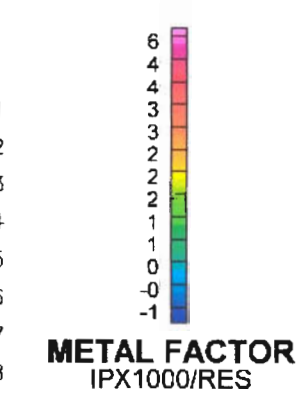
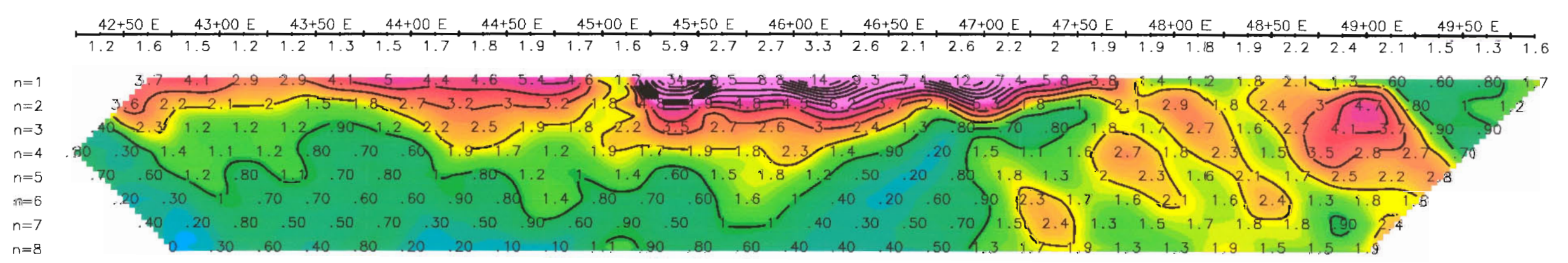
CHARGEABILITY
 mV/V



APPARENT
 RESISTIVITY
 ohm-m

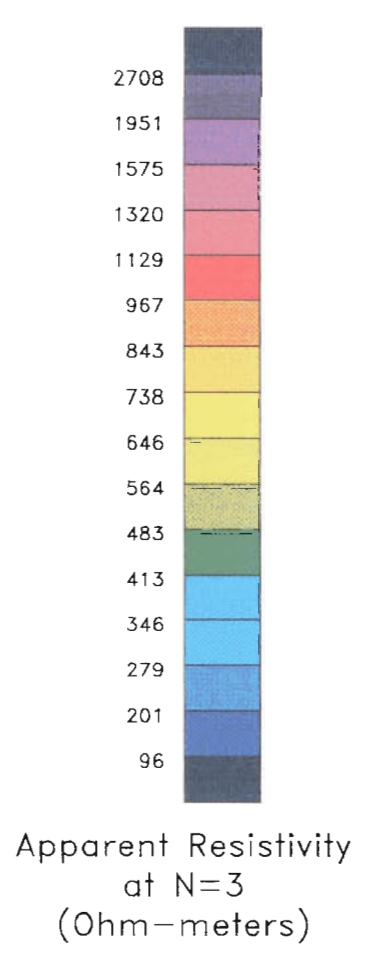
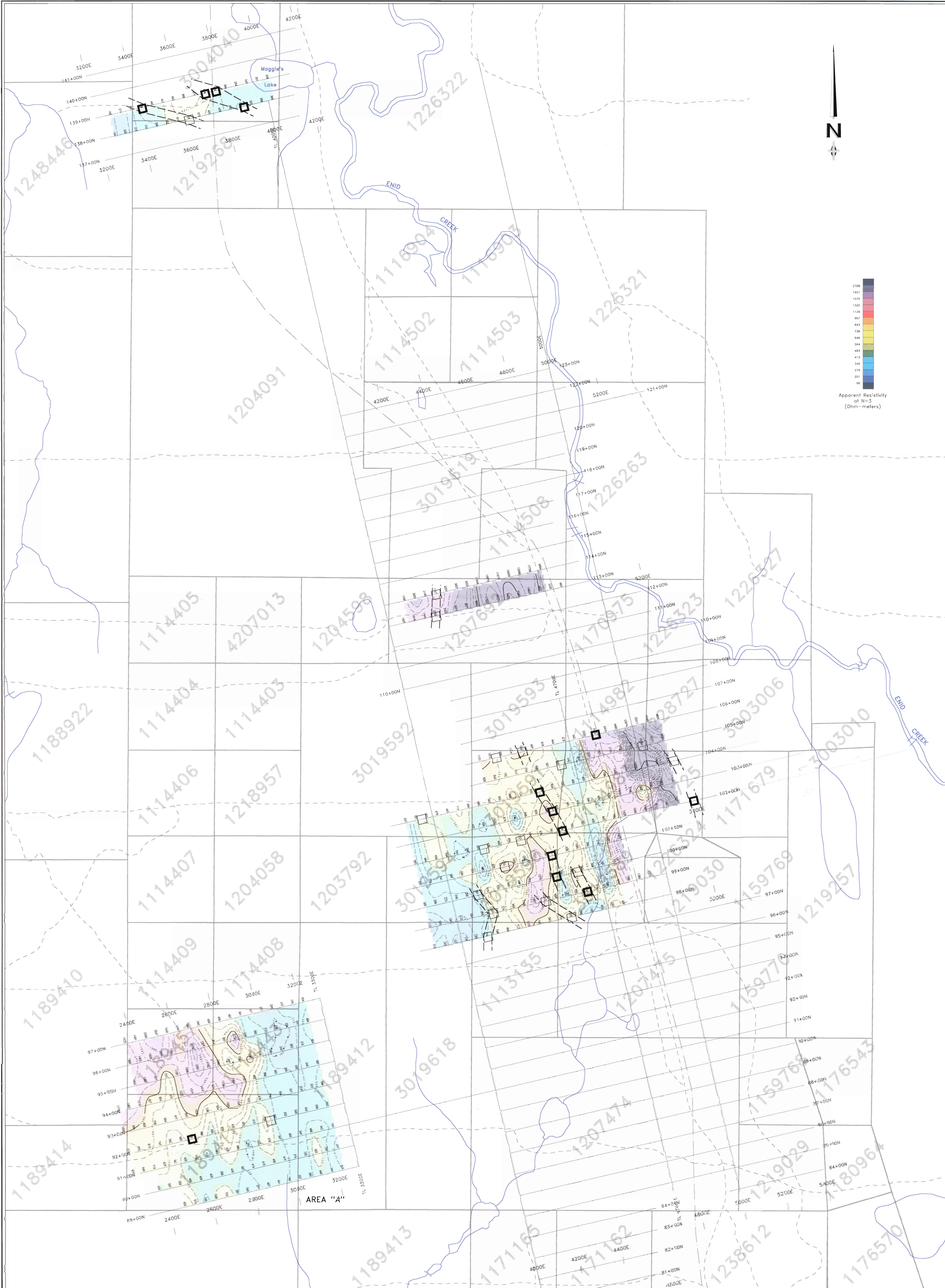


METAL
 FACTOR

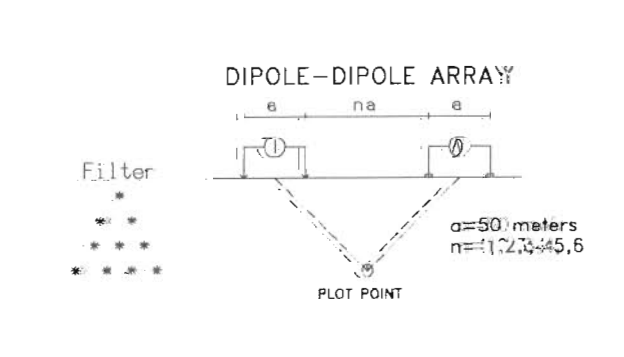


WESTERN KIDD RESOURCES
 INDUCED POLARIZATION
 LINE L102+00N

Date : December/06
 Property : LOVELAND PROPERTY
 Township : LOVELAND TOWNSHIP
 Survey by : EXSICS EXPLORATION LTD.



I.P. LEGEND



Instrument: Phoenix IPT-1 Tx, Turbo V-5 Rx
 Frequency: 1.0 Hertz
 Operator: Barry Belanger
 December 2005

INTERPRETATION

- Polarisation increase accompanied by a significant decrease of the apparent resistivity. Semi-conductive to massive sulphides, graphite. Normally will cause a conductor on an E.M. survey such as MAMM or Indipol.
- Polarisation increase without any significant decrease of the apparent resistivity. Dispersed to stringer to semi-massive sulphides, discontinuous graphite, sphalerite-rich sulphides. Also altered, pyritic structures, metallic minerals, massive magnetite, metallic wastes.
- Rarely defined polarisation increase with no apparent resistivity signature. Small quantities of sulphides, narrow mineralized veins, sometimes poorly resolved due to contact problems - weathered, clay or weathered wastes.

Apparent Resistivity (Ohm-meters)	Phase Shift (I.P. effect) (milliradians)
231.00	
318.42	
372.35	
416.01	
460.01	
472.10	



Western Kidd Resources Inc.

Loveland Project

Induced Polarization survey
 Contours of the apparent resistivity

Date processing and interpretation by	Loveland Township, Ontario
G. Lambert, P.E.I.	Scale 1:5,000
LAMBERT GEOSCIENCES LTD., St-André-Avellin, Qc.	N.T.S. 42A/12
December 2005	I.P. survey by: Barry Belanger Geophysics, Bayou-Bourgeois, Qc.

