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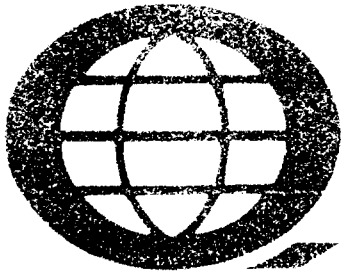
Quantec Geoscience Inc.

Geophysical Survey Logistical Report



Quantec

Regarding the
DIPOLE-DIPOLE TDIP SURVEY
at the RIVER VALLEY PROJECT,
near River Valley, ON
on behalf of
MUSTANG MINERALS CORPORATION
Toronto, Ontario

QGI-QGI-QGI-QGI

JM Legault,
K Blackshaw
D.MacGillivray
May, 2000
Project QG-112

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LIST OF TABLES AND FIGURES

1. INTRODUCTION

- **QGI Project No:** QG-112
- **Project Name:** River Valley PGM Property
- **Survey Period:** April 4TH to May 8TH, 2000
- **Survey Type:** Dipole-Dipole Time Domain Induced Polarization
- **Client:** **Mustang Minerals Corporation**
- **Client Address** 120 Adelaide Street West.
  Suite 514
  Toronto, Ontario
  M5H 1T1
- **Representatives:** Mr. Ken Lapierre
  Mr. Peter Wood
- **Objectives:**

  To define and delineate, using TDIP\Resistivity, favourable signatures associated with contact-type magmatic PGM-bearing sulphide mineralization. This survey targets the margins and floor of the River Valley intrusion that occurs on the property. The Dipole-Dipole array was chosen based on its high resolution and shallow mapping capability, due to the thin overburden cover and shallow nature of the drill targets sought after.

- **Report Type:** Logistical

2. GENERAL SURVEY DETAILS

2.1 LOCATION

- **General Location:** River Valley, NW of Sturgeon Falls ON.(see Fig. 1)
- **Country:** Canada
- **Township:** Crerar, Dana and McWilliams Townships
- **Province:** Ontario
- **Nearest Major Settlement:** River Valley, ON
- **NTS Map Reference:** North grid = 41-1/09
  South grid = 41-1/09

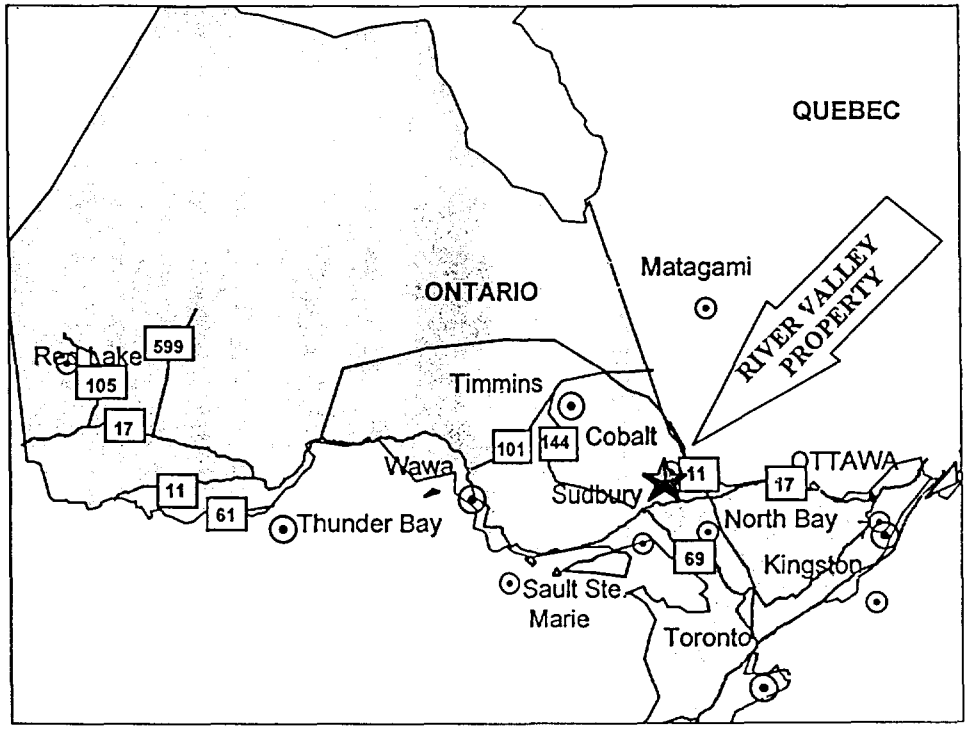

Figure 1: River Valley Project General Location Map

2.2 Access

- **Base of Operations:** Maurice Giroux's apartment, River Valley
- **Mode of Access:** 4x4 truck and a 4x4 quad

2.3 Survey Grid

- **Coordinate Reference System:** Local exploration grid
- **Established by:** Previously established by Mustang Minerals Corp.
- **Line Direction:** North Grid = Azimuth 110°(Grid N-S)
  South Grid = Azimuth 88°(Grid N-S)
- **Line Separation:** 200 metres
- **Station Interval:** 25 metres
- **Method of Chaining:** Metric, slope distance
- **Claims No. Surveyed[1]:** North Grid = 1214638, 1229152, 1229153, 1229154, 1229155, 1231265, 1231181
  South Grid = 1214609, 1214610, 1214771, 1214772, 1214773, 1229523, 1229526, 1229527, 1231119, 1231253

[1] Note, claim numbers from North /South Grid IP Survey, Mustang Minerals Corp., DWG. Ngrid_Quantec & SGrid_Quantec, 04/2000.

3. SURVEY WORK UNDERTAKEN

3.1 GENERALITIES

- **Survey Dates:** April 4TH to May 8TH, 2000
- **Survey Period:** 35 days
- **Survey Days (read time):** 30 days
- **Weather/Standby Days:** 5 days
- **Survey Coverage:** 61.150 km

3.2 PERSONNEL

- **Project Manager:** Kevin Blackshaw, Timmins, ON
  Richard Chasse, Kirkland Lake, ON
  David MacGillivray, Timmins, ON
- **Geophysical Technicians:** Eric Hotvedth, Ramore, ON
  Kyle Hawes, Parry Sound, ON
  Dennis Pressault, Notre Dame du Nord, QC
- **Field Technician:** Leno Thérien, Haileybury, ON.

3.3 SURVEY SPECIFICATIONS

- **Array:** Dipole Dipole (see Fig. 2)
- **Dipole spacing:** 50 metres
- **Rx-Tx Separation:** N = 1 to 6
- **Line Interval:** 200 metres
- **Sampling Interval:** 50 metres
- **Gradient Arial Coverage:** North grid – approx. 6.0 km^2
  South grid – approx. 6.0 km^2

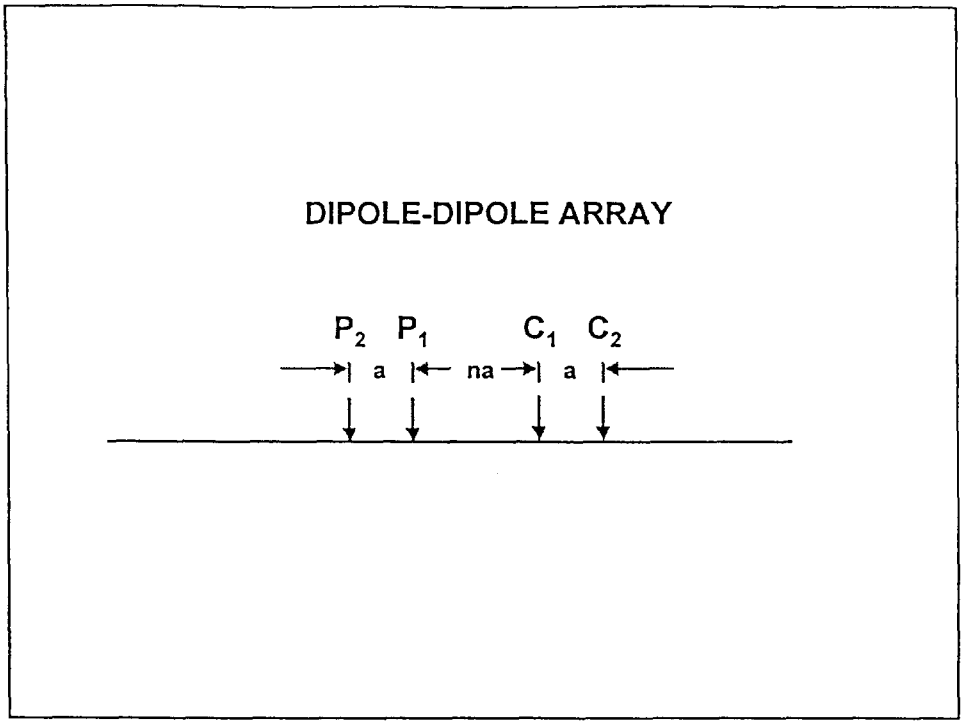

Figure 2: Dipole - Dipole Array Layout

3.4 SURVEY COVERAGE

- **North Grid:** 32.000 km (see Table I)
- **South Grid:** 29.150 km (see Table I)

LINE	MIN EXTENT	MAX EXTENT	TOTAL (m)
North Grid			
2+00E	0+50S	10+00N	1050
4+00E	0+00	10+50N	1050
6+00E	0+50S	10+00N	1050
8+00E	0+00	11+50N	1150
10+00E	0+50S	13+00N	1350
12+00E	0+00	15+50N	1550
14+00E	6+00N	14+50N	850
16+00E	5+00N	15+50N	1050
18+00E	6+00N	15+50N	950
20+00E	6+00N	15+50N	950
22+00E	4+50N	15+00N	1050
24+00E	3+00N	13+50N	1050
26+00E	Not Cut		0
28+00E	6+75S	10+75N	1750
30+00E	8+00S	12+50N	2050
32+00E	8+00S	11+50N	1950
34+00E	9+25S	0+25N	950
34+00E	3+00N	13+50N	1050
36+00E	8+00S	2+00N	1000
36+00E	3+00N	11+50N	850

Table I: Dipole-Dipole TDIP Survey Coverage

LINE	MIN EXTENT	MAX EXTENT	TOTAL (m)
38+00E	8+00S	5+50N	1350
40+00E	Was not cut		0
42+00E	12+00S	3+50N	1550
44+00E	13+00S	3+50N	1650
46+00E	12+00S	4+00N	1600
48+00E	9+50S	6+50N	1600
50+00E	8+00S	7+50N	1550
		North Grid Total	**32000**
South Grid			
0+00E	8+50S	7+50N	1600
2+00E	11+50S	7+00N	1850
4+00E	13+00S	7+00N	2000
6+00E	13+50S	8+00N	2150
8+00E	12+25S	7+75N	2000
10+00E	12+50S	7+00N	1950
12+00E	12+50S	7+00N	1950
14+00E	13+00S	2+00S	1100
16+00E	13+50S	1+00S	1250
18+00E	13+50S	1+50S	1200
20+00E	13+00S	1+00N	1400
22+00E	12+50S	1+00N	1350
24+00E	9+50S	3+00N	1250
26+00E	8+50S	2+50N	1100
28+00E	8+00S	2+00S	600
28+00E	Not chained north	of the pond	0
30+00E	7+50S	1+50S	600
30+00E	0+50S	4+00N	450
31+70E	2+50S	6+00N	850
34+00E	0+50S	7+50N	800
36+00E	3+50S	8+00N	1150
38+00E	4+00S	11+00N	1500
40+00E	0+50N	11+00N	1050
		South Grid Total	29150
		Total Coverage(m)	**61150**

Table II: Dipole-Dipole TDIP Survey Coverage

3.5 INSTRUMENTATION

- **Receiver:** IRIS IP-10 (10 channel / Time Domain)
- **Transmitter:** Phoenix IPT-1 (3 kW / 75 - 1200V output)
- **Power Supply:** MG-2 (400 Hz / 110V / 3 phase) + Honda Gx-60 (5.5hp)

3.6 PARAMETERS

- **Input Waveform:** 0.125 Hz square wave at 50% duty cycle (2 seconds On/Off)
- **Receiver Sampling Parameters:** IRIS IP-10 Cole-Cole (2 sec.) preset windows (see Table II)
- **Measured Parameters:**

1) Chargeability units are in milliVolts per Volt. The Total Chargeability is calculated (internally, within receiver) over the full integration period of 20 to 1850ms (20 time slices).

2) Primary Voltage in millivolts and Input Current in amperes for Resistivity calculation according to the dipole- dipole geometry factor (Appendix B).

Slice	Duration (msec)	Start (msec)	End (msec)	Mid-Point (msec)
T_d	20	0	20	10
T_1	20	20	40	30
T_2	30	40	70	55
T_3	30	70	100	85
T_4	30	100	130	115
T_5	40	130	170	150
T_6	40	170	210	190
T_7	50	210	260	235
T_8	60	260	320	290
T_9	70	320	390	355
T_{10}	80	390	470	430
T_{11}	90	470	560	515
T_{12}	100	560	660	610
T_{13}	110	660	770	715
T_{14}	120	770	890	830
T_{15}	130	890	1020	955
T_{16}	140	1020	1160	1090
T_{17}	150	1160	1310	1235
T_{18}	160	1310	1470	1390
T_{19}	180	1470	1650	1560
T_{20}	200	1650	1850	1750
Total T_G	1850			

Table III: Iris ELREC 10 Decay Curve Sampling.

3.7 MEASUREMENT ACCURACY AND REPEATABILITY

- **Chargeability:** generally< ± 0.5 mV/V but acceptable to ±1.0 mV/V.
- **Resistivity:** less than 5% cumulative error from Primary voltage and Input current measurements.

3.8 DATA PRESENTATION

- **Maps:**

Pseudosections: Stacked posted contoured dipole-dipole sections and profiles (a=50 / n=1-6) of the apparent resistivity, total chargeability, metal factor and profiled magnetics (Magnetic data collected by Dan Petrie Exploration, Fall, 1999 - ref. QG112 MMC file) at 1 5000 scale (4 maps).

Plans: Compiled posted contoured plans at filtered Total Chargeability and Resistivity, plotted at 1:5000 scale (2 maps: north and south grids).

- **Digital:**

Raw data: IP-10 digital dump file (See Appendix D).

Processed data: ASCII GEOSOFT .DAT format with files name relating to profile, for example: 7500.DAT = Line 75+00E using the following format:

Line 1:	Title
Line 2:	Header information, including Line, Array, Dipole, Units.
Line 3:	Column headings
Columns 1-4:	Electrode station positions (metres)
Column 5:	Primary Voltage (milliVolts)
Column 6:	Transmitted Current (amperes)
Column 7:	Spontaneous Potential
Column 8:	Chargeability Windows (msec)

RESPECTFULLY SUBMITTED
QUANTEC GEOSCIENCE INC.

per J.M.L.

Jean M. Legault, P.Eng.
Dir. Technical Service-QTS

DE per KB

Kevin Blackshaw
General Manager

David MacGillivray
Project Manager

Porcupine, ON

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, JEAN M. LEGAULT, DECLARE THAT:

1. I am a consulting geophysicist, with residence in South Porcupine, Ontario, and am presently employed in this capacity with Quantec Geoscience Inc. of Waterdown, Ontario.
2. I obtained a Bachelor's Degree, with Honors, in Applied Science (B.A.Sc.), Geological Engineering (Geophysics Option), from Queen's University at Kingston, Ontario, in spring 1982.
3. I am a registered professional engineer, since 1985, with license to practice in the Province of Ontario (#90534542).
4. I have practiced my profession continuously since May, 1982, in North America, South-America and North Africa.
5. I am a member of the Association of Professional Engineers of Ontario, the Prospectors and Developers Association of Canada, and the Society of Exploration Geophysicists.
6. I have no interest, nor do I expect to receive any interest in the properties or securities of **Mustang Minerals Corp.**
7. I have reviewed the survey results and logistical report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine, Ontario
May, 2000

per J.M.L.

Jean M. Legault, P.Eng. (ON)
Chief Geophysicist
Dir. Technical Services

Quantec Group

		LINE	MIN	MAX	TOTAL
	Survey	18+00E	1350S	150S	1200
		16+00E	100S	500S	400
	Total Production				1600
6-Apr-00	Survey - Dipole-Dipole	16+00E	500S	1350S	850
		14+00E	1300S	600S	700
	Total Production				1550
7-Apr-00	Survey - Dipole-Dipole	14+00E	6+00S	2+00S	400
		12+00E	12+50S	7+00N	1950
	Total Production				2350
8-Apr-00	Survey - Dipole-Dipole	10+00E	12+50S	7+00N	1950
	Total Production				1950
9-Apr-00	Survey - Dipole-Dipole	8+00E	12+25S	7+75S	2000
	Total Production				2000
	Note: chaining error across pond bet				
10-Apr-00	Survey - Dipole-Dipole	6+00E	13+50S	8+00N	2150
	Total Production				2150
11-Apr-00	Survey - Dipole-Dipole	4+00E	13+00S	0+50N	1350
	Dump file corrupted, data lost from 10 550m				1350
12-Apr-00	Survey - Dipole-Dipole	2+00E	11+50S	7+00N	1850
	Total Production				1850
	Note: Chaining error, picket 3+00S mi				
13-Apr-00	Survey - Dipole-Dipole	20+00E	13+00S	1+00N	1400
		24+00E	2+00S	3+00N	500
	Total Production				1900
14-Apr-00	Survey-Dipole-Dipole	24+00E	200S	950S	750
		26+00E	850S	250N	1100
	Total Production				1850
15-Apr-00	Heavy rain, unable to survey				
	Laid cable for line 28e & 30e				
	Total Production				0
16-Apr-00	Survey - Dipole-Dipole	28+00E	2+00S	8+00S	600
		30+00E	1+50S	7+50S	600
		4+00E	0+50N	7+00N	650
	Total Production				1850
17-Apr-00	Survey - Dipole-Dipole	0+00E	7+50N	8+50N	1600
	Relocated equipment to north east si				1600

DATE	DESCRIPTION	LINE	MIN	MAX	TOTAL
18-Apr-00	Survey - Dipole-Dipole	40+00E	0+50N	11+00N	1050
		38+00E	11+00N	0+50N	1050
	Total Production				2100
19-Apr-00	Survey - Dipole-Dipole				
	Rx dumping failure. Resurveyed, required to have digital data.				
	Total Production				0
20-Apr-00	Survey - Dipole-Dipole	34+00E	7+50N	0+50S	800
	Line 28e was cut between the two ponds, but was not chained.	31+70E	2+50S	6+00N	850
	Only 300m (approx.), not enough for a full array.	30+00E	4+00N	0+50S	450
	Total Production				2100
21-Apr-00	Survey - Dipole-Dipole	36+00E	8+00N	3+50S	1150
		38+00E	4+00S	0+50N	450
	Total Production				1600
22-Apr-00	Survey - Dipole-Dipole				
		22+00E	12+50S	1+00N	1350
	Total Production				1350
	NORTH GRID				
23-Apr-00	Generator is malfunctioning, blew regulator board on the gen.				
24-Apr-00	Survey - Dipole-Dipole				
	Using Androtex tx until a replacement IPT-1 is available.	50+00E	8+00S	7+50N	1550
	Total Production				1550
25-Apr-00	Survey- Dipole-Dipole	48+00E	9+50S	6+50N	1600
	IPT-1 replacement	46+00E	2+00S	12+00S	1000
	Total Production				2600
26-Apr-00	Survey- Dipole-Dipole	44+00E	13+00S	3+50N	1650
		46+00E	4+00N	2+00S	600
	Total Production				2250
27-Apr-00	Survey Dipole-Dipole.	42+00E	12+00S	3+50N	1550
	Total Production				1550
28-Apr-00	Survey-Dipole-Dipole	38+00E	5+50N	8+00S	1350
	L-36E pond at 2+00N	36+00E	8+00S	2+00N	1000
	L-34E pond at 0+25N	34+00E	0+25N	9+25S	950
	Total Production				3300
29-Apr-00	Survey-Dipole-Dipole	32+00E	8+00S	11+50N	1950
		30+00E	12+50N	6+00N	650
	Total Production				2600
30-Apr-00	Survey- Dipole-Dipole	30+00E	6+00N	8+00S	1400
		28+00E	6+75S	3+75N	1050
	Total Production				2450
1-May-00	Weather day-heavy rain. Cleaned and repaired equipment.				0
2-May-00	Survey-Dipole-Dipole	28+00E	3+75N	10+75N	700

DATE	DESCRIPTION	LINE	MIN	MAX	TOTAL
		24+00E	13+50N	3+00N	1050
		22+00E	4+50N	15+00N	1050
	Total Production				2800
3-May-00	Survey-Dipole-Dipole	20+00E	15+50N	6+00N	950
		18+00E	6+00N	15+50N	950
		16+00E	15+50N	5+00N	1050
	Total Production				2950
4-May-00	Survey-Dipole-Dipole	14+00E	6+00N	14+50N	850
		12+00E	15+50N	0+00	1550
		10+00E	50S	6+00N	650
	Total Production				3050
5-May-00	Survey-Dipole-Dipole	10+00E	6+00N	13+00N	700
		8+00E	11+50N	0	1150
		6+00E	50S	10+00N	1050
	Total Production				2900
6-May-00	Survey-Dipole-Dipole	4+00E	10+50N	0	1050
		2+00E	50S	10+00N	1050
	Total Production				2100
7-May-00	Survey-Dipole-Dipole	34+00E	13+50N	3+00N	1050
	North grid is complete, returned equipment to base of operations.	36+00E	3+00N	11+50N	850
	Total Production				1900
8-May-00	Packed equipment and Demob River Valley to Timmins				
	Total Production				**61150**

APPENDIX C

THEORETICAL BASIS AND SURVEY PROCEDURES

DIPOLE-DIPOLE TDIP

The collected data sets are reduced, using the Geosoft™ program IPRED™, to apparent resistivity, total chargeability and metal factor as explained in the following figures and equations: Using the following diagram (Fig. C1) for the electrode configuration and nomenclature:[2]

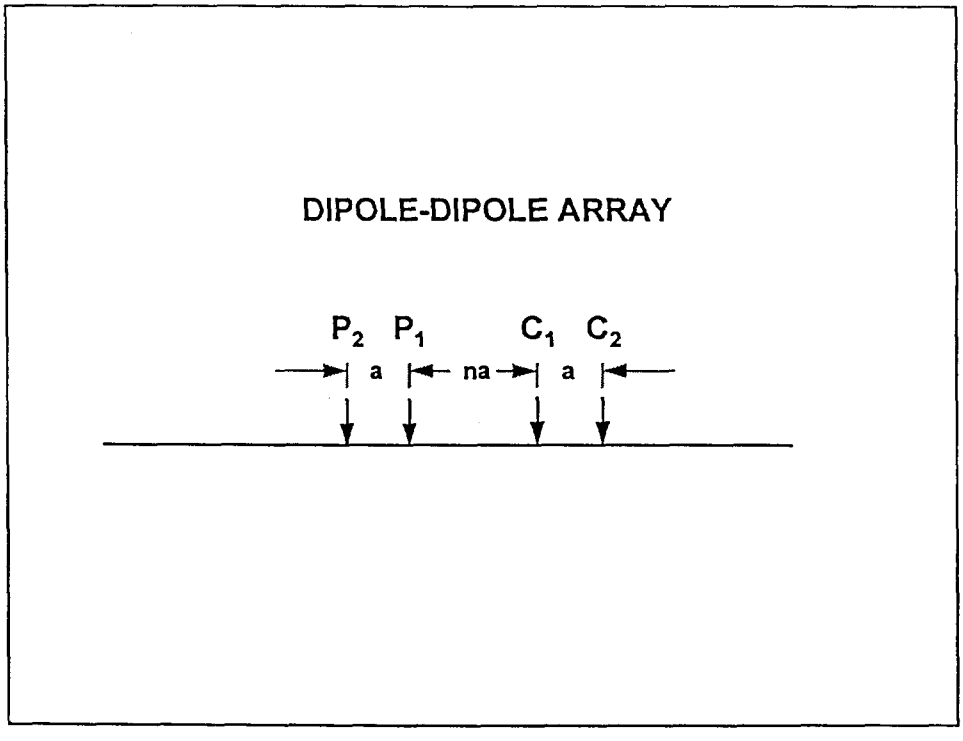

Figure C1: Dipole-Dipole Electrode Array

the apparent resistivity is given by:

$$\rho a = \pi n(n+1)(n+2)a \times \frac{VP}{I} \; ohm\text{-}metres$$

where: "a" is the MN dipole spacing (metres)
"n" is the separation parameter between C_1C_2 and P_1P_2
"V_P" is the primary voltage measured between P_1P_2 (volts)
"I" is the output current between C_1C_2 (amperes)

[2] From Telford, et al., Applied Geophysics, Cambridge U Press, New York, 1983..

Using the following diagram (Figure C2) for the Total Chargeability:[3]

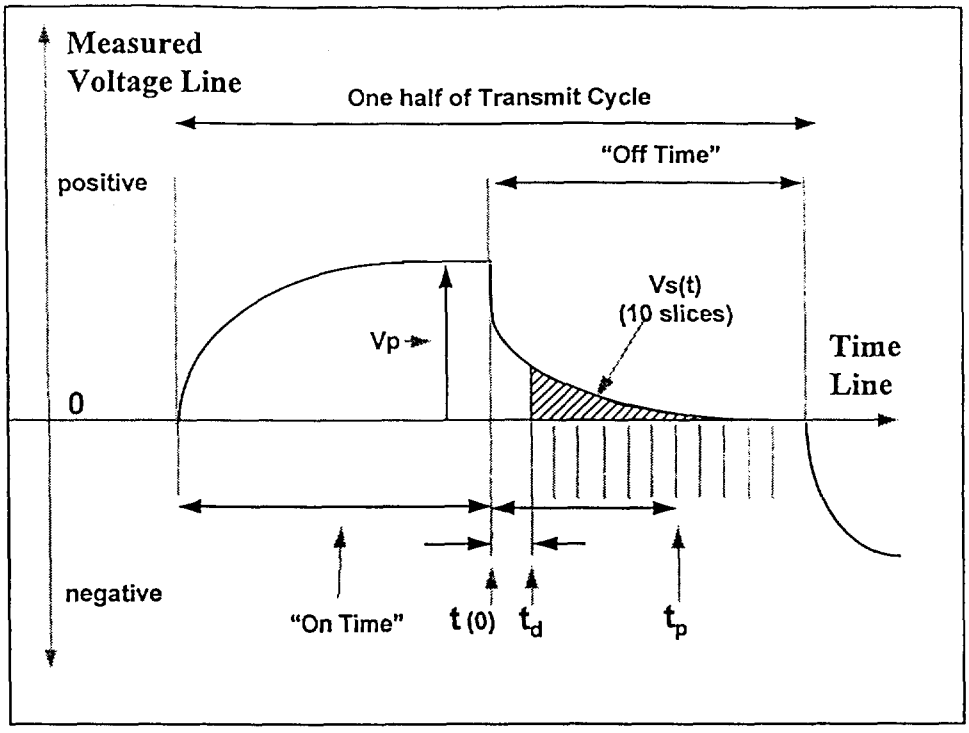

Figure C2: Measurement of the IP Effect in the Time-Domain

The total chargeability:[4] is given by:

$$M_{Total} = \frac{1}{Vp} \sum_{i=1 to 10} \int_{ti}^{ti+1} Vs \ (t)\, dt \qquad \text{millivolt-seconds per volt}$$

where t_j, t_{j+1} are the beginning and ending times for each of the chargeability slices.

The sets are then ready for plotting, profiling using the Geosoft Sushi™ program. The Apparent Resistivity, total Chargeability and Metal Factor results of the dipole-dipole surveys are presented in pseudo section format. All resistivities are in Ω-metres and the chargeabilities in mV/V.

[3] From Terraplus\BRGM, IP-6 Operating Manual, Toronto, 1987
[4] From Telford, et al., Applied Geophysics, Cambridge U Press, New York, 1983..

APPENDIX D

INSTRUMENT SPECIFICATIONS

PHOENIX IP TRANSMITTER MODEL IPT-1

Power Sources:	Phoenix MG-3 (2.5KVA, 60V, 3 phase, 400 Hz) motor generator
Output Voltage:	75 to 1200V in 5 steps. 75 - 150 - 300 - 600 - 1200V Voltage is continuously variable ± 20% from each nominal step value.
Output Power:	Maximum continuous output power is 2.5KW.
Maximum Current:	10 Amps
Ammeter Ranges:	50m A, 100m A, 500mA, 1A, 3A, and 10A full scale.
Meter Display:	A meter function switch selects the display of current level, regulation status, input frequency, output voltage, line voltage
Current regulation:	The change in output current is less than 0.2% for a 10% change in input voltage or electrode impedance. Regulation is achieved by feedback to the alternator of the motor generator unit.
Output waveform:	Either DC, single frequency, two frequencies simultaneously, or time domain (50% duty cycle). Frequencies of 0.078, 0.156, 0.313, 1.25, 2.5 and 5.0 Hz are standard, whereas 0.062, 0.125, 0.25, 1.0, 2.0 and 4.0 Hz are optionally available. The simultaneous transmission mode has 0.313 and 5.0 Hz as standard, whereas 0.156 and 2.5 Hz are optional.
Operating Temperature:	-40°C to +60°C
Frequency Stability:	±1% from -40°C to +60°C is standard. A precision time base is optionally available for coherent detection and phase IP measurements.
Transient Protection:	Current is turned off automatically if it exceeds 150% full scale or is less than 5% full scale.
Dimensions:	18cm x 40cm x 53cm
Weight:	4 kg

APPENDIX ID

INSTRUMENT SPECIFICATIONS:

Iris ELREC 10 Receiver
(From Iris ELREC 10 Operating Manual)

Weather proof case

Dimensions:	31.0 cm x 21.0 cm x 25.0 cm
Weight:	9.0 kg (with internal battery)
Operating temperature:	-30°C to 70°C
Storage:	(-30°C to 50°C)
Power supply:	1 x 12.0 V external battery (30 hr. @ 20°C) or 2 x 6.0 V NiCad rechargeable (20 hr. @ 25°C) or
Input channels:	10
Input impedance:	10 Mohm
Input over voltage protection:	up to 1000 volts
Input voltage range:	10 V maximum on each dipole 15 V maximum sum over ch. 1 to 10
SP compensation:	Automatic ± 15 V with linear drift correction
Noise rejection:	100 dB common mode rejection (for Rs= 0) automatic stacking
Primary voltage resolution:	1 μV after stacking
accuracy:	0.3% typically; maximum 1 over whole temperature range
Secondary voltage windows:	up to 20 windows; preset window specs for Cole-Cole parameter analysis.
Sampling rate:	10 ms
Synchronization accuracy:	10 ms, minimum 40 μV
Chargeability resolution:	0.1 mV/V
accuracy:	typically 0.6%. maximum 2% of reading ± 1 mV/V for V_p > 10 mV
Battery test:	manual and automatic before each measurement
Grounding resistance:	0.1 to 100 kohm
Memory capacity:	3200 records, 1 dipole/record
Data transfer:	serial link @ 300 to 19200 baud

APPENDIX D

IRIS ELREC 10 DUMP FILE FORMAT:

Channel: 1 Date: 12/15/1998 08:59:25
Spacing (foot): XP : 13500 li.P: 20400 D : 50 XA : 12900 XB : 16400 I.AB: 20400
Rs: 1.61 kohm

M1/5	M6/10	M11/15	M16/20
70.93	31.57	20.10	12.63
50.69	28.69	18.34	11.44
43.96	26.19	16.71	10.32
38.95	24.00	15.25	9.23
34.93	21.99	13.89	8.21

Sp: -2.05 mV
In: 1400.00 mA Rho: 6645.39 ohm.m #: 20
Vp: 652.204 mV Mg: 16.81 mV/V Q: 0.04 mV/V
Tau: 4.560 s Mcc: 199.87 mV/V rms: 0.25 %

Channel: 2 Date: 12/15/1998 08:59:25
Spacing (foot): XP : 13550 li.P: 20400 D : 50 XA : 12900 XB : 16400 I.AB: 20400
Rs: 2.54 kohm

M1/5	M6/10	M11/15	M16/20
69.98	31.53	20.15	12.70
50.36	28.68	18.39	11.52
43.75	26.20	16.78	10.39
38.82	24.03	15.32	9.31
34.86	22.03	13.96	8.28

Sp: -67.15 mV
In: 1400.00 mA Rho: 6504.35 ohm.m #: 20
Vp: 552.303 mV Mg: 16.85 mV/V Q: 0.05 mV/V
Tau: 5.378 s Mcc: 199.85 mV/V rms: 0.28 %

INTERPRETATION ADDENDUM TO GEOPHYSICAL SURVEY LOGISTICAL REPORT MUSTANG MINERALS CORP., TORONTO, ON RIVER VALLEY PROJECT, CRERAR, DANA, MCWILLIAMS TWPS., ON DIPOLE-DIPOLE TDIP INDUCED POLARIZATION SURVEYS QUANTEC GEOSCIENCE INC., PORCUPINE, ON SURVEY DATE: APRIL-MAY, 2000

by:

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INTRODUCTION

Prepared at the request of **Mustang Minerals Corporation**, the following interpretation summarizes the results of ground geophysical surveys over the **River Valley Project**, obtained during April-May 2000 by Quantec Geoscience Inc. The surveys consisted of Dipole-Dipole (dpdp) array, time domain induced polarization (TDIP) and resistivity. The survey objectives were to define and delineate favourable signatures associated with contact-type magmatic, PGM-bearing sulphide mineralization. The objective of the survey was to determine the margins and floor of the River Valley intrusion that occurs on the property. The Dipole-Dipole array was chosen based on its high resolution characteristics of shallow targets within a thin overburden environment.

4. RESULTS AND INTERPRETATION

The IP\Resistivity surveys at **River Valley** were designed to detect and delineate, at a semi-detailed scale, signatures associated with contact-type magmatic PGM-bearing sulphide mineralization at investigation depths from surface to 100 metres. The survey consisted of 61.15 line kilometers of TDIP\Resistivity coverage over the favourable contact margin of the River Valley intrusive complex, using the dipole-dipole array, with a dipole spacing of 50 meters, measuring n=1-6 dipole separations. The coverage was divided roughly equally over two grids, the South Grid, located in Crerar Township, and the North Grid, located approximately six kilometers to the northeast, straddling the boundary between Dana and McWilliams townships. The survey results have been interpreted with the primary objective of selecting targets for follow up exploration. In addition, Quantec conducted measurements of the physical properties on a suite of 8 rock samples from the River Valley Property in December, 1999, the results of which are included in Appendix D.

Mustang Minerals conducted total field magnetic surveys in the fall of 1999, the results of which were provided to the authors. Profiles of the total magnetic field, corresponding to the IP/Resistivity survey line coverage, have been plotted on the IP/Resistivity pseudo section maps, and have been utilized to assist in target definition and prioritization. Base maps showing the location of grid lines, topographic features, claim locations and the interpreted location of the favourable intrusive contacts were also provided by Mustang Minerals.

4.1 Geologic Overview

The **River Valley** property is variably overlain by thin glacio-lacustrine overburden, and exhibits low but locally rugged topographic relief with up to 25 m elevation changes. It is generally forest covered with areas of swamp and outcrop. Geologic mapping compiled by Geodigital Mapping Systems on behalf of Mustang Minerals, indicates that the survey areas are underlain by ultramafic intrusive rocks, of the River Valley Complex, in contact with syenitic to granitic rocks to the northeast (North Grid), and gneissic meta-sediments to the south (South Grid). Platinum Group Metals (PGM) mineralization is favourably hosted within the ultramafic intrusive rocks of the **River Valley Complex**, proximal to the intrusive contact margin and is associated with siliceous alteration and low percentage concentrations of metallic sulphides (personal communication K. Lapierre, P. Wood, Mustang Minerals). The geophysical property contrasts defining the target model were theorized to be moderately increased chargeability, due to the low percentage concentrations of metallic sulphides, increased resistivity due to silicification, and reduction in magnetic susceptibility due to magnetite destruction related to the alteration/mineralization process.

4.2 Geophysical Results and Interpretation

4.2.1 Results of Rock Sample Physical Property Analysis

The objective of the Rock Sample Physical Property Analysis was to quantify the intrinsic physical properties representative of the variety of lithology, alteration and mineralization within the area of exploration interest and to establish the physical property contrasts which discriminate mineralization of interest from their host geologic environment.

The results of physical property measurements conducted on samples from the **River Valley Property** are presented in Appendix D. The physical properties which were quantified included Magnetic Susceptibility, Density, Resistivity and Chargeability. Magnetic susceptibilities ranged from low (<100 SI units) to high (> 1,000 SI units). Densities were moderate (between 2.5 to 3.0 g/cm^3) to high (between 3.0 to 4.0 g/cm^3). The measured resistivities were high, with a range of 1,000 to 10,000 Ω-m while the chargeabilites ranged from very weak (< 5 mV/V) to strong (> 40 mV/V).

Of the samples evaluated, numbered 1 to 8, samples 1 and 2 represented samples known to host anomalous PGM mineralization (personal communciation K. Lapierre, P. Wood, Mustang Minerals), while the remaining samples were typical of the rock types underlying the **River Valley Property**. While extremely limited in scope due to the small number of samples, the results served to confirm basic concepts for the target model regarding the physical property contrasts anticipated for different rock types and mineralization underlying the property as follows:

- Ultramafic River Valley Complex intrusive rocks (3 samples): Characterized by high magnetic susceptibility, high density and strong chargeability with resistivites moderate within the range of the samples.
- Gneissic Metasedimentary country rocks (2 samples): Characterized by low magnetic susceptibility, moderate density and very weak chargeability, with resistivities low to moderate within the sample range.
- PGM Mineralized Ultramafic intrusive rocks (2 samples): Characterized by moderate magnetic susceptibility, moderate density, weak to moderate chargeability with resistivities high within the range of the samples.
- Diabase dyke rock (1 sample): moderate to high magnetic susceptibility, moderate density, very weak chargeability, with moderate resistivity.

The classifications assigned above are based purely upon the physical properties measurements, with the exception of those containing PGM mineralization. Geologic classification and description of the samples were not available to the authors.

4.2.2 Results of Dipole-Dipole IP/Resistivity Surveys

A total of **45 first priority** geophysical targets are identified on the property; **28** on the **North grid** and **17** on the **South grid**. In addition, a further 58 second priority targets, along with 14 third priority targets have been identified on the North Grid, while on the South grid there are 46 second priority and 17 third priority targets.

The IP/Resistivity responses measured at the **River Valley Property** range from very weak (<5 mV/V) to strong (up to 30 mV/V) chargeability and moderate (< 1,000 Ω-m) to very high (> 10,000 Ω-m) resistivity. The resistivities are similar on both the North and South grids, though the range is higher for the north grid by as much as a factor of 2. There are few zones of strong chargeabilities within the south grid while significant areas of strong chargeability occur within the north grid. In both survey areas, resistivity signatures associated with zones of increased chargeability include high, low and contact type resistivity signatures. At the south grid, zones of moderate to strong chargeability generally occur associated with zones of greater magnetic relief. While this association also occurs in the north grid, there is in addition a distinct region where moderate to strong chargeabilities occur in conjunction with lower total magnetic field magnitude and relief.

Plan maps of filtered apparent chargeability and resistivity are presented superimposed upon the provided base maps. The filter applied to yield the plotted values was an industry standard triangular spatial filter, based on the pseudosection plotting convention for measurements acquired using the dipole-dipole array. For this application the filter was designed to emphasize shallow contact type anomalies.

The pseudosection maps presenting the results of the surveys have been thoroughly examined to identify the location and magnitude of zones of increased chargeability, and identify the resistivity signature (high or low or contact type) associated with each chargeable zone. These are identified on the pseudosection maps accompanying the report, utilizing the symbols defined on the map legends. The resistivity classifications are based primarily on the local resistivity signatures which correlate with each defined chargeable zone as opposed to the absolute resistivity magnitude. Charge-

able zones which have a corresponding resistivity contact type signature have not been assigned a corresponding resistivity symbol designation.

5. CONCLUSION AND RECOMMENDATIONS

The IP/Resistivity results at the **River Valley Property** have, as predicted by physical property analysis of rock samples, identified zones of weak to strong chargeability, which frequently correspond with variably moderate to high total field magnetic response, consistent with the exploration model for the host-target characteristics. The chargeable zones are variably associated with high, low or contact type resistivity signatures. Many of these chargeable zones occur proximal to the interpreted favourable contact margin of the River Valley intrusive and are thus of great interest for further exploration to determine if the mineralized zones host PGM mineralization. In addition, moderate to strong chargeable zones of variable resistivity character, located within a region of lower total field magnetic response, in both magnitude and relief, have been delineated over the North grid. Located in the central area of the grid the, region occurs within granitic country rocks proximal to the River Valley intrusive contact, as it is presently interpreted. While the magnetic character of the region is consistent with rocks of felsic composition, further exploration of the region to validate the location of the contact is recommended. Regardless, these represent highly interesting exploration targets, though as yet uncharacterized by the exploration model being applied.

Targets recommended for further exploration, tabulated in Appendix C, have been selected from the chargeability anomalous zones identified on the pseudosection maps. These have been prioritized on the basis of the resistivity and magnetic signatures associated with the anomalous zones, and their proximity to the favourable contact margin. Higher priority has been given to anomalous zones with characteristics as follows:

- Locally reduced magnetic signature within regions of generally higher magnetic response and, to a lesser extent, magnetic contacts.
- Locally increased resistivity or equally resistivity contacts
- Proximity to the favourable intrusive contact

The strength of IP anomalies is considered less important than the favourable combined geophysical fingerprint. Zones of greater potential depth extent, as discernable from the geophysical signatures, are also considered higher priority.

Further exploration evaluation of these geophysical targets is strongly recommended. However, while the relatively large number of targets may be potentially encouraging, it may also indicate that the geophysical character of the exploration target is not highly distinctive within the host environment. We therefore recommend:

- further prioritization of the selected targets on the basis of integrated exploration data
- further quantification of the physical properties through borehole physical property logging, which may define a more definitive geophysical fingerprint of the exploration target and
- compilation of all exploration data for the property in a common database/interpretation platform to allow integrated, ongoing iterative interpretation of exploration results to most efficiently evaluate the property.

Respectfully Submitted
QUANTEC GEOSCIENCE INC.

Kevin Blackshaw
General Manager - Timmins

G. R. Jeff Warne
Senior Geophysicist

David Eastcott
Technical Services -Timmins

Porcupine, ON

APPENDIX A

Statement of Qualifications

I, G.R. Jeffrey Warne, hereby declare that:

1. I am a geophysicist with residence in South Porcupine, Ontario and am presently employed in this capacity with Quantec Geoscience Ltd. of Waterdown, Ontario.

2. I studied Engineering Geophysics in the Faculty of Applied Science at Queen's University in Kingston, Ontario, completing all but two of the course requirements for a B.Sc.(Eng.) in 1981.

3. I have practiced my profession continuously since May, 1981 in Canada, the United States, Mexico, Argentina, Australia and Chile.

4. I am a member of the Association of Geoscientists of Ontario and the Porcupine Prospectors and Developers Association.

5. I have no interest, nor do I expect to receive any interest in the properties or securities of **Mustang Minerals Corp.**

6. I interpreted the survey data, selected the exploration targets, prepared the text of the report and supervised the preparation of the maps. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine
June, 2000

G.R. Jeffrey Warne
Senior Geophysicist, QGI

APPENDIX A

Statement of Qualifications

I, Kevin Blackshaw, declare that:

1. I am a geophysicist, with residence in Timmins, Ontario, and am currently employed by Quantec Geoscience Inc. of Waterdown, Ontario, as General Manager of the Canadian operational office, in Porcupine, ON.

2. I graduated from Cambrian College in Sudbury, Ontario with a Geological Engineering Technology diploma in 1983.

3. I have continuously been employed in this field since graduation.

4. I have no interest nor do I expect to receive any interest in the properties or securities of **Mustang Minerals Corp.**

5. I was the project manager and was responsible for the data acquisition, validation and plotting in the field. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine, Ontario
June, 2000

Kevin Blackshaw
General Manager, Timmins

APPENDIX A

Statement of Qualifications

I, David Eastcott, hereby declare that:

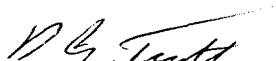
1. I am a staff geophysical operator with residence in Porcupine, Ontario and am presently employed in this capacity with Quantec Geoscience Ltd. of Porcupine, Ontario.

2. I have practiced my profession continuously since January of 1996.

3. I have no interest nor do I expect to receive any interest, direct or indirect, in the properties or securities of **Mustang Minerals Corp.**

4. I am the project manager for the survey, and am responsible for the data acquisition and validation of the survey results. I am the technical writer of the report and am responsible for the compilation and final map creation. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

Porcupine, Ontario
June, 2000



David Eastcott.
Project Manager
Quantec Geoscience Inc.

APPENDIX B

Theoretical Basis

INDUCED POLARIZATION SURVEY

The resistivity is among the most variable of all geophysical parameters, with a range exceeding 10^6. Because most minerals are fundamentally insulators, with the exception of massive accumulations of metallic and submetallic ores (electronic conductors) which are rare occurrences, the resistivity of rocks depends primarily on their porosity, permeability and particularly the salinity of fluids contained (ionic conduction), according to Archie's Law. In contrast, the chargeability responds to the presence of polarizeable minerals (metals, submetallic sulphides and oxides, and graphite), in amounts as minute as parts per hundred. Both the quantity of individual chargeable grains present and their distribution with in subsurface current flow paths are significant in controlling the level of response. The relationship of chargeability to metallic content is straightforward, and the influence of mineral distribution can be understood in geologic terms by considering two similar, hypothetical volumes of rock in which fractures constitute the primary current flow paths. In one, sulphides occur predominantly along fracture surfaces. In the second, the same volume percent of sulphides are disseminated throughout the rock. The second example will, in general, have significantly lower intrinsic chargeability.

APPENDIX C

North Grid Priority Exploration Targets

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
1	2+00E	100	150	Weak Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact. Likely subcropping,weaker at depth
2	2+00E	150	300	Weak Chargeability	Weakly Resistive	Moderate	3	Magnetite rich
3	2+00E	450	550	Weak Chargeability	Weakly Resistive	Low	3	
4	2+00E	650	700	Weak Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact
5	4+00E	450	500	Weak Chargeability	Weakly Resistive	Moderate	3	
6	4+00E	550	650	Moderate Chargeability	Weakly Conductive	Low	2	Possible diss. suphides along contact
7	4+00E	850	900	Moderate Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact
8	6+00E	200	250	Weak Chargeability		Low	2	
9	6+00E	500	550	Moderate Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact
10	6+00E	700	750	Weak Chargeability	Highly Resistive	Low	2	Possible diss. suphides along contact
11	8+00E	300	350	Weak Chargeability	Weakly Resistive	Low	3	
12	8+00E	350	400	Weak Chargeability	Weakly Resistive	Moderate	2	
13	8+00E	450	500	Moderate Chargeability	Moderately Resistive	Low	1	Possible diss. suphides along contact
14	10+00E	400	500	Weak Chargeability		Low	2	
15	10+00E	600	700	Moderate Chargeability	Weakly Conductive	Low	2	Stronger at depth
16	12+00E	250	300	Weak Chargeability	Moderately Resistive	Low	2	
17	12+00E	400	500	Moderate Chargeability		Low	2	
18	12+00E	650	700	High Chargeability		Low	2	
19	12+00E	850	950	Moderate Chargeability		Low	2	Possible diss. suphides along contact
20	12+00E	1300	1350	Weak Chargeability		Low	2	
21	14+00E	700	800	Weak Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact
22	14+00E	950	1050	Weak Chargeability		Low	2	
23	16+00E	700	800	Weak Chargeability		Low	2	
24	16+00E	950	1000	Weak Chargeability		Moderate	2	Possible diss. suphides along contact
25	16+00E	1000	1050	Moderate Chargeability		Low	1	
26	16+00E	1050	1150	Weak Charge-		Low	2	

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
				ability				
27	16+00E	1300	1400	Moderate Chargeability	Weakly Resistive	Low	1	
28	18+00E	950	1050	Weak Charge-ability		Low	3	
29	18+00E	1100	1250	Weak Charge-ability		Low	2	
30	18+00E	1300	1400	Weak Charge-ability		Low	2	
31	20+00E	1050	1200	Weak Charge-ability		Low	2	Possible diss. suphides along contact
32	20+00E	1200	1350	Weak Charge-ability		Low	2	
33	22+00E	550	600	Weak Charge-ability		Low	2	
34	22+00E	700	850	Weak Charge-ability		Low	2	Possible diss. suphides along contact
35	22+00E	1000	1050	Weak Charge-ability		High	3	
36	22+00E	1150	1300	Weak Charge-ability		Low	2	Possible diss. suphides along contact
37	24+00E	800	950	Weak Charge-ability		Moderate	3	Possible diss. suphides along contact
38	28+00E	175	225	Weak Charge-ability		High/low	1	Possible diss. suphides along contact
39	28+00E	525	625	High Chargeabil-ity	Weakly Conduc-tive	Low	2	
40	28+00E	725	775	Weak Charge-ability	Weakly Resistive	Low/high	2	
41	30+00E	-700	-600	Weak Charge-ability		No data	2	Possible diss. suphides along contact
42	30+00E	-450	-350	Weak Charge-ability		No data	2	
43	30+00E	-300	-200	Weak Charge-ability	Weakly Resistive	No data	1	
44	30+00E	-150	-100	Weak Charge-ability	Weakly Resistive	No data	1	
45	30+00E	-100	0	High Chargeabil-ity		No data	1	Possible diss. suphides along contact
46	30+00E	250	350	Weak Charge-ability		Moderate/low	1	
47	30+00E	350	400	Moderate Chargeability	Weakly Resistive	Low	1	Possible diss. suphides along contact
48	30+00E	400	500	High Chargeabil-ity	Weakly Conduc-tive	Moderate	2	
49	30+00E	500	550	Weak Charge-ability	Weakly Resistive	Low	1	
50	30+00E	550	600	Weak Charge-ability		High	2	
51	30+00E	650	700	Moderate Chargeability		Low	2	
52	30+00E	700	750	Weak Charge-ability		Low	2	
53	30+00E	750	800	Weak Charge-ability		Moderate	3	Possible diss. suphides along contact
54	30+00E	850	900	Weak Charge-ability		Moderate	3	
55	32+00E	-350	-250	Weak Charge-ability	Weakly Conduc-tive	Moderate	2	
56	32+00E	0	50	Weak Charge-	Weakly Conduc-	Very low	1	

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
				ability	tive			
57	32+00E	150	250	Moderate Chargeability	Mod Conductive/Low Res	Low	1	Possible diss. suphides along contact
58	32+00E	250	300	High Chargeability	Weakly Resistive	Low	3	
59	32+00E	450	550	High Chargeability	Weakly Conductive	Low	2	
60	32+00E	550	650	Moderate Chargeability		Low	1	
61	32+00E	800	850	Weak Chargeability	Weakly Resistive	Low	2	
62	34+00E	-575	-525	Weak Chargeability		High/low	1	
63	34+00E	-525	-425	Moderate Chargeability	Weakly Resistive	Low	2	Possible diss. suphides along contact
64	34+00E	-325	-275	Weak Chargeability		Moderate	2	
65	34+00E	-175	-75	Moderate Chargeability		Moderate	2	Possible diss. suphides along contact
66	34+00E	-75	-50	Weak Chargeability		Low	1	
67	34+00E	450	500	Weak Chargeability	Weakly Conductive	Low	2	
68	34+00E	1000	1050	Weak Chargeability	Weakly Resistive	Low	2	
69	34+00E	1150	1200	Weak Chargeability		Low	2	Possible diss. suphides along contact
70	36+00E	-600	-550	Weak Chargeability	Moderately Resistive	Moderate	1	Possible diss. suphides along contact
71	36+00E	-550	-450	Moderate Chargeability		Moderate	1	
72	36+00E	-300	-200	Moderate Chargeability	Weakly Conductive	High/moderate	2	
73	36+00E	-250	-200	Moderately Chargeability	Contact	Low	1	
74	36+00E	-150	-100	Weak Chargeability		Moderate	2	
75	36+00E	0	50	Weak Chargeability		High/low	1	
76	38+00E	-700	-650	Weak Chargeability		Low/moderate	2	
77	38+00E	-600	-550	Weak Chargeability		Moderate	2	
78	38+00E	-450	-400	Weak Chargeability		Moderate	2	Possible diss. Suphides along contact
79	38+00E	-300	-150	Moderately Resistive	Mod Conductive/Low Res	Moderate	2	
80	38+00E	-100	0	Moderate Chargeability	Weakly Resistive	High	2	Possible diss. Suphides along contact
81	38+00E	50	150	Weak Chargeability	Moderately Resistive	Low	3	
82	38+00E	200	250	Weak Chargeability	Moderately Resistive	Low	3	
83	42+00E	-400	-350	Weak Chargeability	Mod Conductive/Low Res	Low	2	
84	44+00E	-1050	-950	Weak Chargeability		No data	3	
85	44+00E	-550	-500	Weak Chargeability	Weakly Resistive	High/low	2	
86	44+00E	-300	-250	Weak Chargeability	Weakly Resistive	Low	2	
87	44+00E	-200	-100	Moderate	Moderately Re-	Low	2	

South Grid Priority Exploration Targets

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
1	0+00E	-650	-550	Moderate Chargeability	Contact	Low	1	Near surface to ~ 50 m depth
2	0+00E	-300	-250	Moderate Chargeability	Contact	Low	2	near surface to ~ 20 m depth.
3	0+00E	100	150	Weak Charge-ability	Contact	Low	1	Possible diss. Sulphides ~ 20 to 50 m depth
4	0+00E	350	450	Moderate Chargeability	Highly Resistive	Low	3	Possible diss. Sulphides best target potential may be 50-70 m depth.
5	2+00E	-850	-750	Moderate Chargeability	Contact	nil	2	At/near surface to ~30 m depth
6	2+00E	-600	-550	Moderate Chargeability	Weakly Resistive	Low	2	At near surface to ~ 50 m depth
7	2+00E	-350	-300	Weak Charge-ability	Weakly Resistive	Low	3	Near surface to ~ 30 m depth
8	2+00E	100	150	Weak Charge-ability	Contact	Low	2	Near surface to ~ 70 m depth
9	2+00E	250	300	Weak Charge-ability	Highly Resistive	Low	3	
10	2+00E	500	550	Moderate Chargeability	Highly Resistive	Low	2	
11	4+00E	-950	-850	Moderate Chargeability	Contact	Low	3	
12	4+00E	-650	-600	Weak Charge-ability	Mod Conduc-tive/Low Res	Low	3	
13	4+00E	0	100	Moderate Chargeability	Highly Resistive	Moder-ate/high	2	
14	6+00E	-50	0	Moderate Chargeability		Moder-ate/high	2	
15	6+00E	150	200	Weak Charge-ability		Low	1	
16	6+00E	300	350	Weak Charge-ability		Moderate	2	
17	6+00E	650	700	Weak Charge-ability		Low	2	
18	8+00E	-975	-925	Moderate Chargeability		Low	2	
19	8+00E	275	325	Moderate Chargeability	Weakly Conduc-tive	High/moderat e	2	
20	8+00E	325	425	Weak Charge-ability	Highly Resistive	High/moderat e	2	
21	8+00E	625	675	Moderate Chargeability	Moderately Re-sistive	Low/high	2	
22	10+00E	-900	-850	Moderate Chargeability		Low	2	
23	10+00E	-50	0	Weak Charge-ability		Low/moderat e	2	
24	10+00E	50	100	Moderate Chargeability	Moderately Re-sistive	Low	2	
25	10+00E	450	500	Moderate Chargeability	Moderately Re-sistive	Moder-ate/high	2	
26	12+00E	-600	-550	Weak Charge-ability		Low	2	
27	12+00E	-500	-450	Weak Charge-ability	Mod Conduc-tive/Low Res	Low	3	
28	12+00E	150	200	Moderate Chargeability	Moderately Re-sistive	Moderate	3	
29	12+00E	300	350	Moderate Chargeability	Mod Conduc-tive/Low Res	Low	2	
30	12+00E	450	500	Moderate Chargeability		Low/high	2	
31	14+00E	-1000	-950	Moderate Chargeability		Low	3	
32	16+00E	-1150	-1100	Weak Charge-ability		Low	3	

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
33	16+00E	-1050	-1000	Moderate Chargeability	Mod Conductive/Low Res	Low	2	
34	18+00E	-1050	-1000	Weak Chargeability	Weakly Resistive	Low	2	
35	18+00E	-950	-900	Moderate Chargeability	Weakly Resistive	Low	2	
36	18+00E	-850	-800	Moderate Chargeability	Mod Conductive/Low Res	Low	2	
37	18+00E	-700	-650	Weak Chargeability	Moderately Resistive	Low/moderate	1	
38	18+00E	-500	-450	Moderate Chargeability		Moderate	2	
39	18+00E	-450	-350	High Chargeability	Weakly Resistive	High	3	
40	20+00E	-1100	-1050	Weak Chargeability	Moderately Resistive	Low	2	
41	20+00E	-1000	-950	Weak Chargeability	Weakly Resistive	Low	2	
42	20+00E	-900	-850	Moderate Chargeability		Low	2	
43	20+00E	-850	-800	High Chargeability	Mod Conductive/Low Res	Low	3	
44	20+00E	-550	-500	Weak Chargeability	Weakly Resistive	Low/moderate	2	
45	22+00E	-950	-900	Moderate Chargeability		Low	2	
46	22+00E	-750	-700	Moderate Chargeability		Moderate	1	
47	22+00E	-650	-550	Weak Chargeability		Moderate/low	1	
48	24+00E	-750	-700	Weak Chargeability		Low	3	
49	24+00E	-600	-550	Moderate Chargeability		Low	2	
50	24+00E	-500	-450	Moderate Chargeability	Mod Conductive/Low Res	Low	2	
51	24+00E	-450	-400	Moderate Chargeability	Weakly Resistive	Low	1	
52	24+00E	-400	-350	Moderate Chargeability	Mod Conductive/Low Res	Low/moderate	1	
53	24+00E	-250	-200	Weak Chargeability		Low	2	
54	26+00E	-650	-600	Weak Chargeability		Moderate	1	
55	26+00E	-550	-500	Weak Chargeability		Moderate	1	
56	26+00E	-350	-300	Weak Chargeability	Weakly Conductive	Low	1	
57	26+00E	-200	-150	Moderate Chargeability	Weakly Resistive	Moderate/low	1	
58	26+00E	-100	-50	Weak Chargeability		Low	2	
59	28+00E	-550	-500	Weak Chargeability		Low	2	
60	28+00E	-450	-400	Moderate Chargeability	Weakly Resistive	Low	1	
61	30+00E	-675	-550	Weak Chargeability		Low	3	
62	30+00E	-450	-400	Weak Chargeability	Weakly Resistive	Low	2	
63	30+00E	-300	-200	Weak Chargeability	Moderately Resistive	Low	2	
64	30+00E	25	100	Weak Chargeability		Low	3	
65	32+00E	-100	-50	Weak Chargeability		Moderate/low	2	
66	32+00E	450	500	Weak Charge-	Moderately Re-	Low	1	

#	LINE	STN MIN	STN MAX	CHARACTER	RESISITIVITY	MAGNETIC	PRIORITY	COMMENTS
				ability	sistive			
67	34+00E	50	100	Moderate Chargeability		Moderate/low	1	
68	34+00E	150	200	Weak Charge-ability		Low	2	
69	36+00E	-150	-100	Weak Charge-ability		Low	2	
70	36+00E	0	50	Weak Charge-ability		Low	2	
71	36+00E	100	150	Weak Charge-ability		Low	2	
72	38+00E	-300	-250	Weak Charge-ability		Low	3	
73	38+00E	-250	-200	Weak Charge-ability		Low	3	
74	38+00E	0	50	Moderate Chargeability	Weakly Conduc-tive	Low	2	
75	38+00E	100	150	High Chargeabil-ity	Weakly Resistive	Low	1	
76	38+00E	250	300	Weak Charge-ability	Mod Conduc-tive/Low Res	Low	3	
77	38+00E	450	500	Weak Charge-ability	Moderately Re-sistive	Low	3	
78	38+00E	850	900	Weak Charge-ability	Mod Conduc-tive/Low Res	Moderate/low	2	
79	40+00E	50	100	Weak Charge-ability		Low/moderat e	1	
80	40+00E	100	150	Weak Charge-ability		Moderate/low	2	
81	40+00E	200	250	Weak Charge-ability		Low	3	

APPENDIX D

Rock Sample Physical Property Analysis

Quantec
GEOPHYSICS WORLDWIDE

PHYSICAL PROPERTY TEST MEASUREMENTS FOR GEODIGITAL MAPPING SYSTEMS INC.

ROCK SAMPLES FROM RIVER VALLEY PROPERTY

No	Sample mark	Mag. Susceptibility $X10^{-6}$ SI Units	Density Kg/m^3	Resistivity Ohm.m	IP Chargeability (mV/V)										
					M_{Total}	M_1	M_2	M_3	M_4	M_5	M_6	M_7	M_8	M_9	M_{10}
1	DSZ	130 - 140	2,990	8,140	17.5	37.05	34.18	31.87	29.94	26.01	21.54	18.52	15.43	12.62	10.70
2	T-1	120 – 750	2,880	9,130	8.42	19.52	17.81	16.45	15.32	13.07	10.55	8.88	7.22	5.74	4.75
3	7761	5,700 – 12,700	3,310	4,060	31.36	69.4	63.92	59.46	55.73	48.08	39.30	33.35	27.27	21.78	18.04
4	56864	< 100	2,860	4,040	2.56	6.44	5.80	5.30	4.89	4.09	3.21	2.66	2.14	1.68	1.37
5	56875	< 100	2,970	2,130	4.86	11.6	10.60	9.75	9.05	7.66	6.12	5.12	4.12	3.25	2.67
6	56913	2,260 – 4,650	3,310	6,220	21.74	46.69	43.16	40.27	37.83	32.82	27.06	23.17	19.08	15.39	12.87
7	57467	630 – 6,280	2,870	6,180	1.82	4.46	4.04	3.70	3.43	2.89	2.30	1.92	1.54	1.21	1.00
8	57468	2,510 – 16,300	3,020	7,740	42.05	86.67	80.94	76.21	72.17	63.53	52.47	44.54	36.93	30.14	25.49

JANUARY 5, 2000

Prof.Dr. PERPARIM ALIKAJ

APPENDIX E

List of Maps

- **Plan Maps at scale of 1:5000**

DESCRIPTION	DRAWING NUMBER
1. North Grid: Posted/Contoured Filtered Total Chargeability	QG-112-PLAN-CHG-NORTH1
2. South Grid: Posted/Contoured Filtered Total Chargeability	QG-112-PLAN-CHG-SOUTH1
3. North Grid: Posted/Contoured Filtered Total Resistivity	QG-112-PLAN-CHG-NORTH1
4. South Grid: Posted/Contoured Filtered Total Resistivity	QG-112-PLAN-CHG-SOUTH1
TOTAL PLANS	4

- **Posted/contoured Profiled Pseudosections at a scale of 1:5000**

LINE	Drawing Number
	NORTH GRID
2+00E	QG-112-IP-DD-LINE 2+00E
4+00E	QG-112-IP-DD-LINE 4+00E
6+00E	QG-112-IP-DD-LINE 6+00E
8+00E	QG-112-IP-DD-LINE 8+00E
10+00E	QG-112-IP-DD-LINE 10+00E
12+00E	QG-112-IP-DD-LINE 12+00E
14+00E	QG-112-IP-DD-LINE 14+00E
16+00E	QG-112-IP-DD-LINE 16+00E
18+00E	QG-112-IP-DD-LINE 18+00E
20+00E	QG-112-IP-DD-LINE 20+00E
22+00E	QG-112-IP-DD-LINE 22+00E
24+00E	QG-112-IP-DD-LINE 24+00E
28+00E	QG-112-IP-DD-LINE 28+00E
30+00E	QG-112-IP-DD-LINE 30+00E
32+00E	QG-112-IP-DD-LINE 32+00E
34+00E	QG-112-IP-DD-LINE 34+00E
36+00E	QG-112-IP-DD-LINE 36+00E
38+00E	QG-112-IP-DD-LINE 38+00E
42+00E	QG-112-IP-DD-LINE 42+00E
44+00E	QG-112-IP-DD-LINE 44+00E
46+00E	QG-112-IP-DD-LINE 46+00E
48+00E	QG-112-IP-DD-LINE 48+00E
50+00E	QG-112-IP-DD-LINE 50+00E
TOTAL	23
	SOUTH GRID
0+00E	QG-112-IP-DD-LINE 0+00E
2+00E	QG-112-IP-DD-LINE 2+00E
4+00E	QG-112-IP-DD-LINE 4+00E
6+00E	QG-112-IP-DD-LINE 6+00E
8+00E	QG-112-IP-DD-LINE 8+00E
LINE	Drawing Number
10+00E	QG-112-IP-DD-LINE 10+00E

12+00E	QG-112-IP-DD-LINE 12+00E
14+00E	QG-112-IP-DD-LINE 14+00E
16+00E	QG-112-IP-DD-LINE 16+00E
18+00E	QG-112-IP-DD-LINE 18+00E
20+00E	QG-112-IP-DD-LINE 20+00E
22+00E	QG-112-IP-DD-LINE 22+00E
24+00E	QG-112-IP-DD-LINE 24+00E
26+00E	QG-112-IP-DD-LINE 26+00E
28+00E	QG-112-IP-DD-LINE 28+00E
30+00E	QG-112-IP-DD-LINE 30+00E
32+00E	QG-112-IP-DD-LINE 32+00E
34+00E	QG-112-IP-DD-LINE 34+00E
36+00E	QG-112-IP-DD-LINE 36+00E
38+00E	QG-112-IP-DD-LINE 38+00E
40+00E	QG-112-IP-DD-LINE 40+00E
TOTAL	**21**
TOTAL SECTIONS	**44**

TOTAL PLANS= 4
TOTAL PSEUDOSECTIONS= 44

APPENDIX F

Maps and Sections

Ontario Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use)
W0070.0012.2
Assessment Files Research Imaging

41I09NE2010 2.20381 MCWILLIAMS 900

...f subsection 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, assesment work and correspond with the mining land holder. Questions about this Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury,

Instructions: - For work performed on Crown Lands before **recording** a claim, use form 0240.
- Please type or print in ink.

2.20381

1. Recorded holder(s) (Attach a list if necessary)

Name Mustang Minerals	Client Number 303851
Address 1351E Kelly Lake Rd. Unit 8 Sudbury, On 3PZ 5P5	Telephone Number 705 523 8220
	Fax Number 705 523-1194
Name	Client Number
Address	Telephone Number
	Fax Number

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2. Type of work performed: Check (✓) and report on ONLY ONE of the following groups for this declaration.

Geotechnical: prospecting, surveys, assays and work under section 18 (regs) | Physical: drilling stripping, trenching and associated assays | Rehabilitation

Work Type ~~Line~~ Induced Polarization Survey ✓	Office Use
	Commodity
	Total $ Value of Work Claimed 64,984
Dates Work Performed From 14 (Day) 04 (Month) 00 (Year) To 8 (Day) 05 (Month) 00 (Year)	NTS Reference
Global Positioning System Data (if available) Township/Area Crerar, McWilliams	Mining Division Sudbury
M or G-Plan Number	Resident Geologist District Sudbury

Please remember to: - obtain a work permit from the Ministry of Natural Resources as required;
- provide proper notice to surface rights holders before starting work;
- complete and attach a Statement of Costs, form 0212;
- provide a map showing contiguous mining lands that are linked for assigning work;
- include two copies of your technical report.

3. Person or companies who prepared the technical report (Attach a list if necessary)

Name Quantec GeoScience Inc.	Telephone Number 705 235-2165
Address PO Box 580, 101 Kins St. Porcupine, On P0N 1C0	Fax Number 705 235 2255
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

4. Certification by Recorded Holder or Agent

I, Ken Lapierre (Print Name), do hereby certify that I have personal knowledge of the facts set forth in this Declaration of Assessment Work having caused the work to be performed or witnessed the same during or after its completion and, to the best of my knowledge, the annexed report is true.

Signature of Recorded Holder or Agent Ken Lapierre			Date June 19/00
Agent's Address PO Box 1433 Timmins, On P4N 7K2		Telephone Number 705 268 8850	Fax Number (705) 523-1194

0241 (03/97)

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W0070.00122

	Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date
eg	TB 7827	16 ha	$26,825	N/A	$24,000	$2,825
eg	1234567	12	0	$24,000	0	0
eg	1234568	2	$ 8,892	$ 4,000	0	$4,892
1	1214638	15	6500	6000	500	
2	1229152	12	6900	4800	1700	
3	1229153	15	6900	6000	500	
4	1229154	15	6500	492	6008	
5	1229155	16	6492	6400	92	
6	1228800	13		5200		
7	1237522	1		400		
8	1231260	6		2400		
9	1231181	1	~~4000~~	400		
10	1237507	1		400		
11	1214609	4	1600	1600		
12	1214610	4	1600	1600		
13	1214771	12	4800	4800		
14	1214772	4	1600	1600		
15	1214773	4	2400	2400		
	Column Totals					

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GEOSCIENCE ASSESSMENT OFFICE

I, _____ (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing	Date

6. Instruction for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- ☐ 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- ☐ 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- ☐ 3. Credits are to be cut back equally over all claims listed in this declaration; or
- ☐ 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)

5. Work to be recorded and distributed. Work can only be assigned to claims that are contiguous (adjoining) to the mining land where work was performed, at the time work was performed. A map showing the contiguous link must accompany this form.

W0070. 00122

Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.		Number of Claim Units. For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of work to be distributed at a future date
eg	TB 7827	16 ha	$26,825	N/A	$24,000	$2,825
eg	1234567	12	0	$24,000	0	0
eg	1234568	2	$ 8,892	$ 4,000	0	$4,892
1	1229523	4	1600	1600		
2	1229526	16	3200	3200		
3	1229527	8	10392	~~3200~~ 0	~~6400~~ 7,192 KC	3992
4	1231119	4	1600	1600		
5	1231253	8	3200	3200		
6	1230564	6	—	2400		
7	1231262	10	/	4000		
8						
9						
10						
11						
12						
13						
14						
15						
	Column Totals		64984	60,992	~~6400~~ 15,200 KC	3992

RECEIVED
JUN 20 2000
GEOSCIENCE ASSESSMENT OFFICE

I, Ken Laperre (Print Full Name), do hereby certify that the above work credits are eligible under subsection 7 (1) of the Assessment Work Regulation 6/96 for assignment to contiguous claims or for application to the claim where the work was done.

Signature of Recorded Holder or Agent Authorized in Writing	Date
Ken Laperre	June 19/00

6. Instruction for cutting back credits that are not approved.

Some of the credits claimed in this declaration may be cut back. Please check (✓) in the boxes below to show how you wish to prioritize the deletion of credits:

- ☑ 1. Credits are to be cut back from the Bank first, followed by option 2 or 3 or 4 as indicated.
- ☐ 2. Credits are to be cut back starting with the claims listed last, working backwards; or
- ☐ 3. Credits are to be cut back equally over all claims listed in this declaration; or
- ☐ 4. Credits are to be cut back as prioritized on the attached appendix or as follows (describe):

Note: If you have not indicated how your credits are to be deleted, credits will be cut back from the Bank first, followed by option number 2 if necessary.

For Office Use Only

Received Stamp	Deemed Approved Date	Date Notification Sent
	Date Approved	Total Value of Credit Approved
	Approved for Recording by Mining Recorder (Signature)	

0241 (03/97)

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use): W0070.00122

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 6B5.

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Induced Polarization + report	61.15 km	1,018.55/km	62,284.33
Supervision	4 days	350/day	1,400.00
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
truck rental		1000/month	1,000.00
Food and Lodging Costs			
$75/day room/board		4 days	300.00
		Total Value of Assessment Work	64,984.33

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JUN 20 2000
GEOSCIENCE ASSESSMENT OFFICE

Calculations of Filing Discounts:

1. Work filed within two years of performance is claimed at 100% of the above Total Value of Assessment Work.
2. If work is filed after two years and up to five years after performance, it can only be claimed at 50% of the Total Value of Assessment Work. If this situation applies to your claims, use the calculation below:

TOTAL VALUE OF ASSESSMENT WORK x 0.50 = Total $ value of worked claimed.

Note:
- Work older than 5 years is not eligible for credit.
- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days of a request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying costs:

I, Ken Laperrie (please print full name), do hereby certify, that the amounts shown are as accurate as may reasonably be determined and the costs were incurred while conducting assessment work on the lands indicated on the accompanying Declaration of Work form as Ken Laperrie - VP Exploration Mustang Minerals (recorded holder, agent, or state company position with signing authority) I am authorized to make this certification.

Signature: Ken Laperrie Date: June 19/00

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Ontario

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (888) 415-9845
Fax: (877) 670-1555

Visit our website at:
www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

July 11, 2000

MUSTANG MINERALS CORP.
1351 E. KELLY LAKE RD. UNIT 8
SUDBURY, ONTARIO
P3E-5P5

Dear Sir or Madam:

Submission Number: 2.20381

Subject: Transaction Number(s):		**Status**
	W0070.00122	Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact BRUCE GATES by e-mail at bruce.gates@ndm.gov.on.ca or by telephone at (705) 670-5856.

Yours sincerely,

Steven B. Beneteau

ORIGINAL SIGNED BY
Steve B. Beneteau
Acting Supervisor, Geoscience Assessment Office
Mining Lands Section

Correspondence ID: 15053
Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.20381

Date Correspondence Sent: July 11, 2000 **Assessor:** BRUCE GATES

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W0070.00122	1214638	CRERAR, MCWILLIAMS	Approval	July 11, 2000

Section:
14 Geophysical IP

Correspondence to:

Resident Geologist
Sudbury, ON

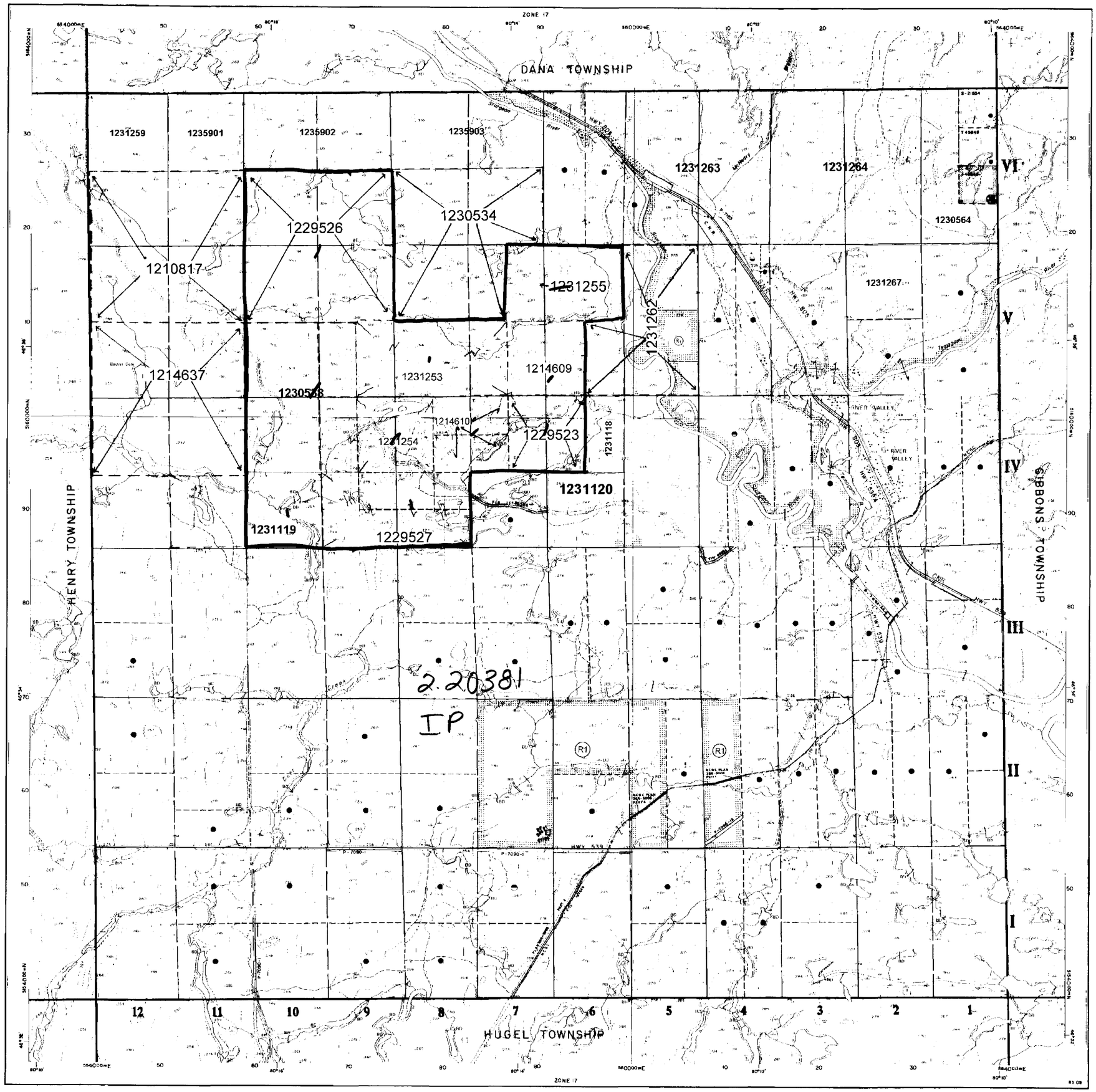
Assessment Files Library
Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Ken Lapierre
TIMMINS, ONT, CANADA

MUSTANG MINERALS CORP.
SUDBURY, ONTARIO

Correspondence ID: 15053



Ministry of Natural Resources
Ontario

Ministry of Northern Development and Mines

January 1986

INDEX TO LAND DISPOSITION

PLAN
G-2903

TOWNSHIP
CRERAR

M.N.R. ADMINISTRATIVE DISTRICT
NORTH BAY

MINING DIVISION
SUDBURY

LAND TITLES/REGISTRY DIVISION
NIPISSING

Scale 1:20 000

Contour Interval 10 Metres

SYMBOLS

Boundary
- Township, Meridian, Baseline
- Road allowance; surveyed
- shoreline
- Lot/Concession; surveyed
- unsurveyed
- Parcel; surveyed
- unsurveyed
- Right-of-way; road
- railway
- utility
- Reservation
- Cliff, Pit, Pile
- Contour — 20 —
- Interpolated
- Approximate
- Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway; single track
- double track
- abandoned
- Road; highway, county, township
- access
- trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+S. - MINING AND SURFACE RIGHTS

	Description	Order No.	Date	Disposition	File
R1	Reforestation		13/10/89	S.R.	160707 Vol 2
R4	SEC 36/80	W 8/81	9/12/81	S.R.	160707

Part of order W 8/84 RESCINDED by order O-ML 01/90 NSR effective April 3,1990 at 7:00 AM E.S.T.

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER MINISTRY OF NORTHERN DEVELOPMENT AND MINES. FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

DISPOSITION OF CROWN LANDS

Patent
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Lease
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

- Licence of Occupation
- Order-in-Council
- Cancelled
- Reservation
- Sand & Gravel

LAND USE PERMIT

JUNE 1ST. OPENINGS

ONTARIO GAZETTE VOL.122-18

MAY 6, 1989

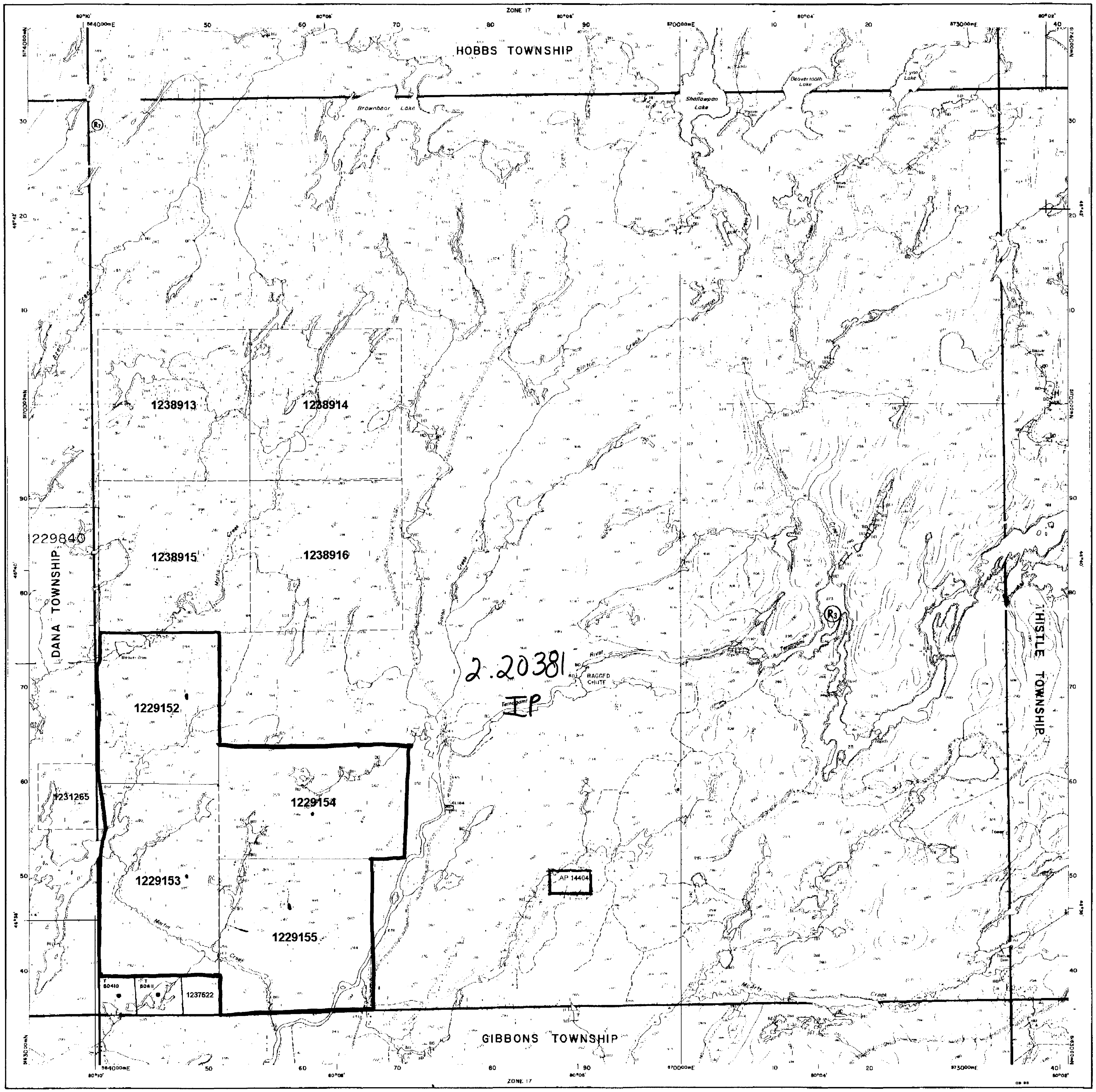
W.1/2 OF N 1/2 LOT 7 CON.4
NW 1/4 OF N 1/2 LOT 8 CON.4
S 1/2 OF N 1/2 LOT 8 CON.4
N 1/2 OF S 1/2 LOT 8 CON.4
SW 1/4 OF S 1/2 LOT 8 CON.4
SE 1/4 OF N 1/2 LOT 9 CON.4
E 1/2 OF S 1/2 LOT 8 CON.4

JUNE 1, 1996 OPENINGS

T 49848

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources.

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only.



Ministry of Natural Resources

Ministry of Northern Development and Mines

Ontario

INDEX TO LAND DISPOSITION

PLAN

G-2910

TOWNSHIP

McWILLIAMS

M.N.R. ADMINISTRATIVE DISTRICT

NORTH BAY

MINING DIVISION

SUDBURY

LAND TITLES/REGISTRY DIVISION

NIPISSING

Scale 1:20 000

Contour Interval 10 Metres

SYMBOLS

Boundary
- Township, Meridian, Baseline
- Road allowance; surveyed
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  - railway
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  - Approximate
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- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway; single track
  - double track
  - abandoned
- Road; highway, county, township
  - access
  - trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

REFERENCES

AREAS WITHDRAWN FROM DISPOSTION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Part of order W [illegible] RESCINDED by order O-ML [illegible] effective April [illegible] at 7.00 AM E.S.T.

(R) Sec. 35 W-LL-C182/99 ONT 11/05/99 M & S

(R) SEC 35. W-LL-P139/99 ONT MAY 11/99 M&S (200 METERS FROM WATERS EDGE)

NOTES

SUBDIVISION OF THIS TOWNSHIP INTO LOTS AND CONCESSIONS WAS ANNULLED 6 DECEMBER, 1963

DISPOSITION OF CROWN LANDS

Patent
- Surface & Mining Rights ●
- Surface Rights Only
- Mining Rights Only

Lease
- Surface & Mining Rights ■
- Surface Rights Only
- Mining Rights Only

Licence of Occupation ▲

Order-in-Council OC

Cancelled ⊗

Reservation (R)

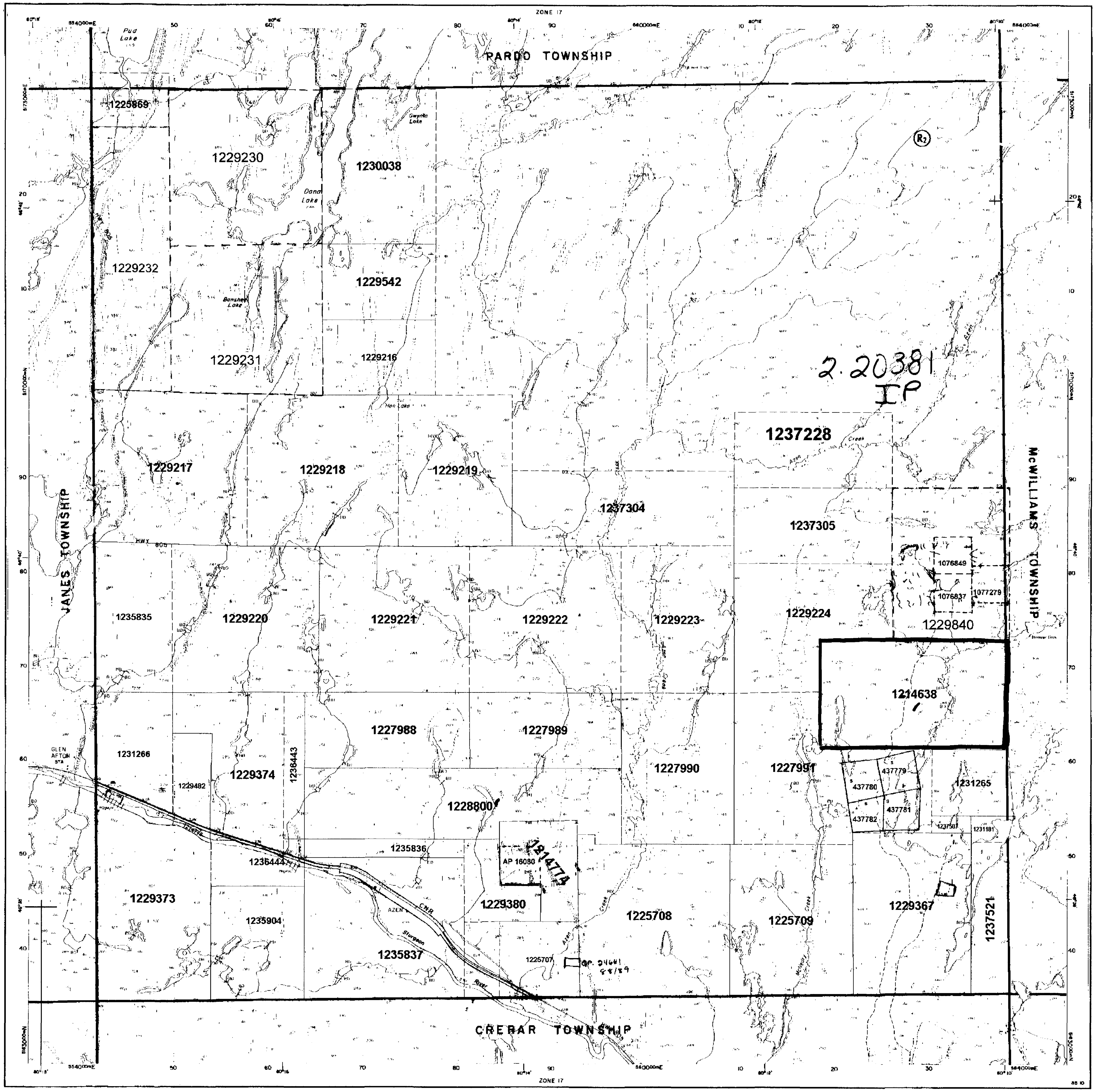
Sand & Gravel (G)

LAND USE PERMIT

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER MINISTRY OF NORTHERN DEVELOPMENT AND MINES. FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only



Ministry of Natural Resources

Ontario

Ministry of Northern Development and Mines

INDEX TO LAND DISPOSITION

PLAN

G-2904

TOWNSHIP

DANA

M.N.R. ADMINISTRATIVE DISTRICT

NORTH BAY

MINING DIVISION

SUDBURY

LAND TITLES/REGISTRY DIVISION

NIPISSING

Scale 1:20 000

Contour Interval 10 Metres

SYMBOLS

Boundary
- Township, Meridian, Baseline
- Road allowance; surveyed
  - shoreline
- Lot/Concession; surveyed
  - unsurveyed
- Parcel; surveyed
  - unsurveyed
- Right-of-way; road
  - railway
  - utility
- Reservation
- Cliff, Pit, Pile
- Contour
  - Interpolated
  - Approximate
  - Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway; single track
  - double track
  - abandoned
- Road; highway, county, township
  - access
  - trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

AREAS WITHDRAWN FROM DISPOSTION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
(R1) SEC.35/80	[illegible]	[illegible]	M+S	[illegible]

Part of order W [illegible] RESCINDED by order [illegible] effective April [illegible] at 7:00 AM E.S.T.

(R2) Sec. 35 W-LL-C182/99 ONT 11/05/99 M & S

A.P. 16080 JUNE 1/89 TO MAY 31/94

NOTES

SUBDIVISION OF THIS TOWNSHIP INTO LOTS AND CONCESSIONS WAS ANNULLED.

DISPOSITION OF CROWN LANDS

Patent
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Lease
- Surface & Mining Rights
- Surface Rights Only
- Mining Rights Only

Licence of Occupation

Order-in-Council OC

Cancelled

Reservation

Sand & Gravel

LAND USE PERMIT

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER MINISTRY OF NORTHERN DEVELOPMENT AND MINES. FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources

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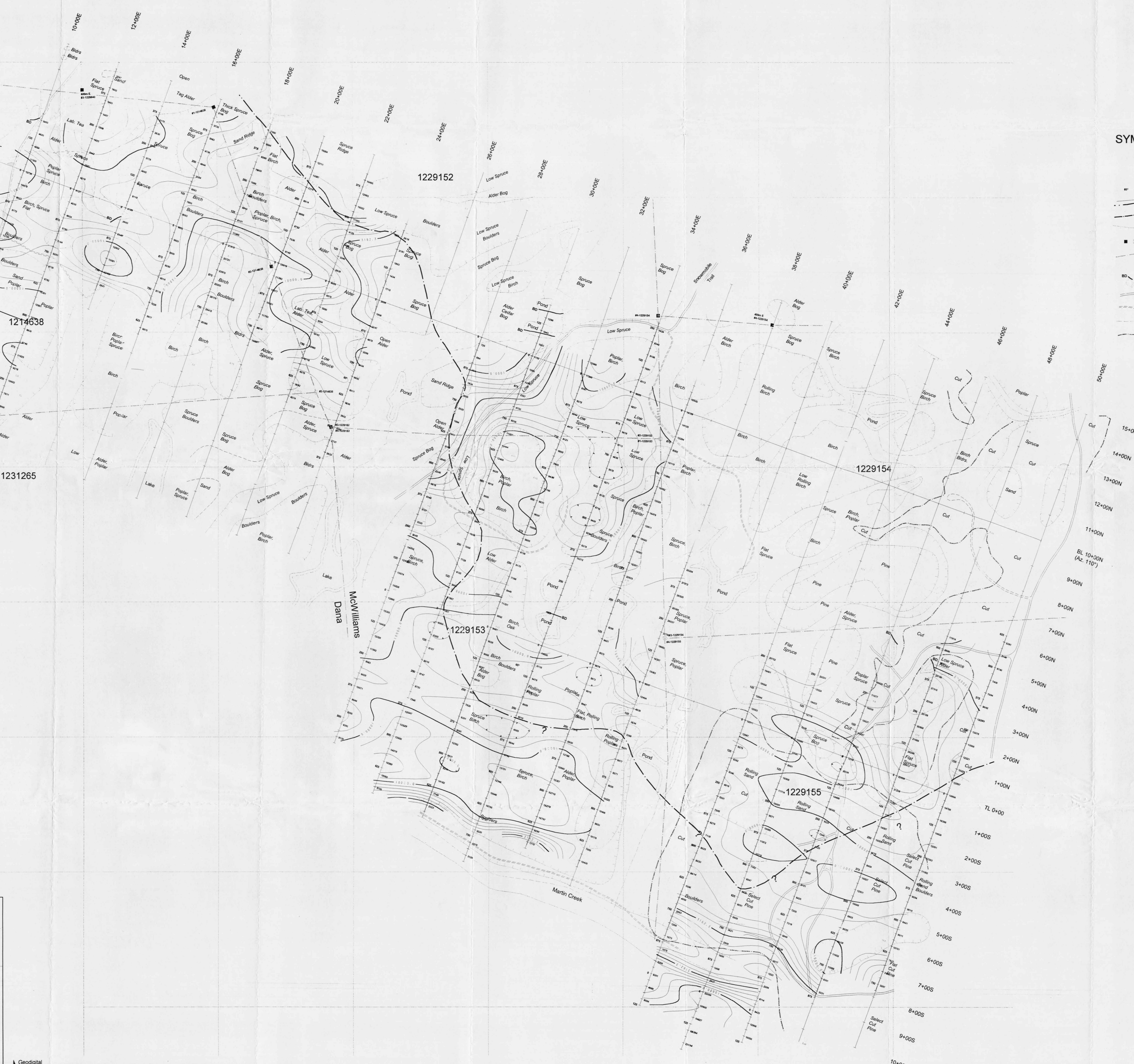
RIVER VALLEY PGM PROPERTY - FILTERED APPARENT RESISTIVITY (ohm-m)



SYMBOLS

- Outcrop, outcrop area; small outcrop
- Magnetic susceptibility
- Gneissosity
- Contact as interpreted by Mustang Minerals (defined, infered)
- Fault as interpreted by Mustang Minerals (geophysically inferred)
- Positive topographic feature
- Claim post (located, inferred)
- Claim line
- Swamp
- Pond with Beaver dam
- Road
- Trail
- Creek
- Clear cut

Dipole-Dipole Array

a na a

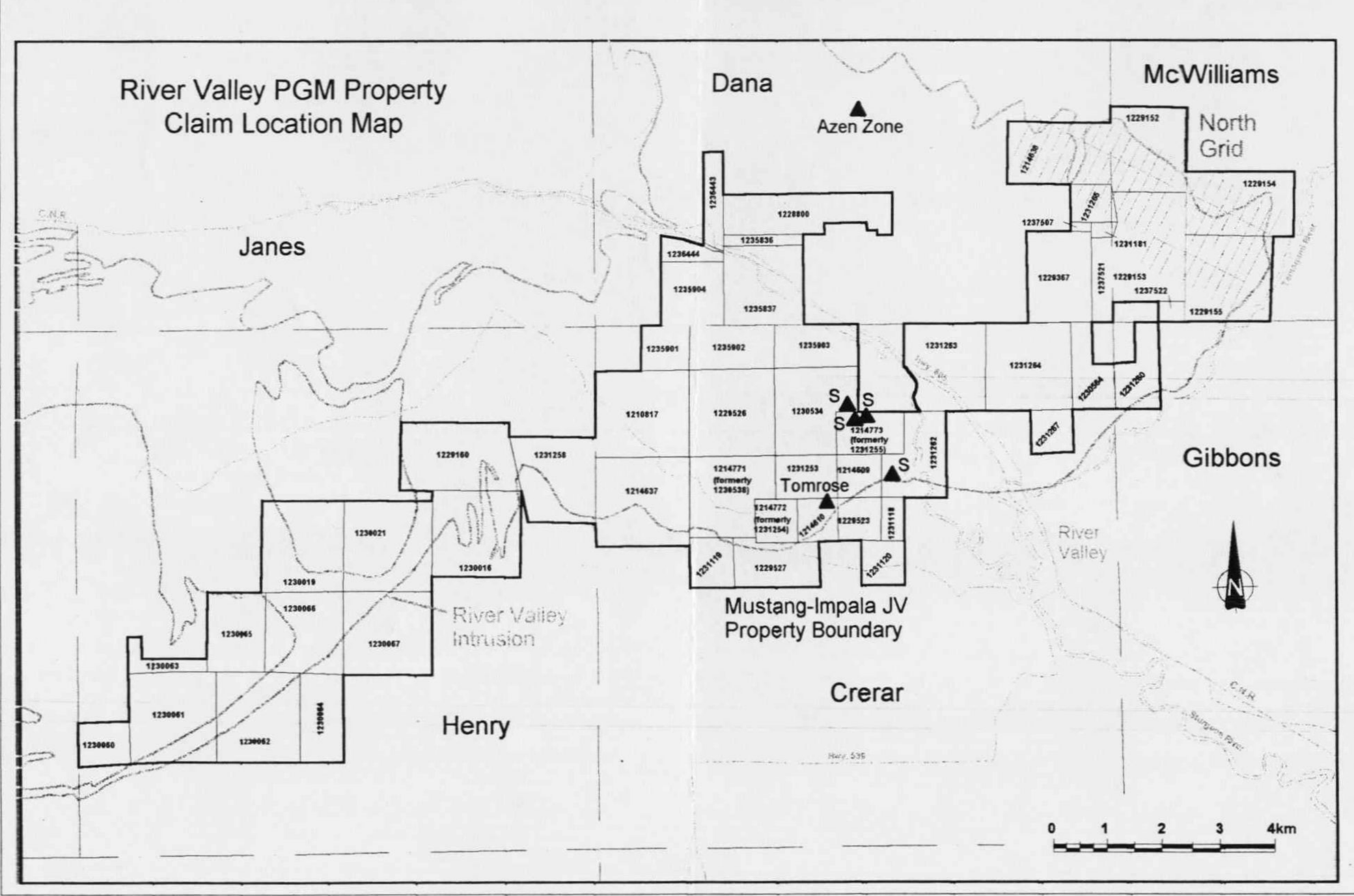
Filter

plot point

Scale 1:5000

50 0 50 100 150 200 250 300 (metres)

2.20381



Geodigital Mapping Systems Inc.
Timmins, Ontario, Canada
(705) 267-7128

41I09NE2010 2.20381 MCWILLIAMS 230

MUSTANG MINERALS CORP.

RIVER VALLEY PGM PROPERTY

North Grid, McWilliams & Dana Twps., ON

TIME DOMAIN IP SURVEY

DIPOLE - DIPOLE ARRAY (a=50m n=1-6)

FILTERED APPARENT RESISTIVITY

Transmitter Frequency:	0.125 Hz (50% duty cycle)
Transmitter Current:	0.1 to 1.0 Amps
Decay Curve:	QIP IP-10 Cole-Cole Windows 20 Gates (20ms to 1850ms)
Station Interval:	50 metres
Gridding Method:	Bi-Directional
Grid Cell Size:	25 units (2x Hanning Filter Applied)
Contour Interval:	10 levels/log decade
Colour Scale:	Equal Area Zoning
Survey Date:	April, 2000
Instrumentation:	Rx = IRIS / BRGM IP-10 Tx = Phoenix IPT-1

DWG. #: QG-112-PLAN-RES-1

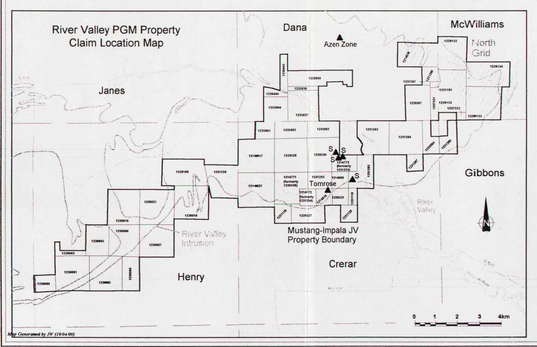
Surveyed & Processed by:

Quantec GEOPHYSICS WORLDWIDE

Map created by D Eastcott 06/05/00

Topological information provided by Mustang Minerals Corporation

RIVER VALLEY PGM PROPERTY - FILTERED TOTAL CHARGEABILITY (mV/V)



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Timmins, Ontario, Canada
(705) 267-7128

41I09NE2010 2.20381 MCWILLIAMS 240

2.20381

MUSTANG MINERALS CORP.

RIVER VALLEY PGM PROPERTY

North Grid, McWilliams & Dana Twps., ON

TIME DOMAIN IP SURVEY

DIPOLE - DIPOLE ARRAY (a=50m n=1-6)

FILTERED TOTAL CHARGEABILITY

Transmitter Frequency:	*0.125 Hz (50% duty cycle)*
Transmitter Current:	0.1 to 1.0 Amps
Decay Curve:	GIP IP-10 Cole-Cole Windows
	20 Gates (20ms to 1850ms)
Station Interval:	50 metres
Gridding Method:	Bi-Directional
Grid Cell Size:	25 units (2x Hanning Filter Applied)
Contour Interval:	1, 5 mV/V
Colour Scale:	Equal Area Zoning
Survey Date:	April, 2000
Instrumentation:	Rx = IRIS / BRGM IP-10
DWG. #: QG-112-PLAN-CHG-1	Tx = Phoenix IPT-1

Surveyed & Processed by:

Quantec GEOPHYSICS WORLDWIDE

Map created by D.Eamon 06/03/00

Topological information provided by Mustang Minerals Corporation

RIVER VALLEY PGM PROPERTY - FILTERED TOTAL CHARGEABILITY (mV/V)

SYMBOLS

- Outcrop, outcrop area; small outcrop
- Magnetic susceptibility
- Gneissosity
- Contact as interpreted by Mustang Minerals (defined, inferred)
- Positive topographic feature
- Claim post (located, inferred)
- Claim line
- Swamp
- Pond with Beaver dam
- Road
- Trail
- Creek
- Clear cut

Dipole-Dipole Array

Filter

plot point

Scale 1:5000

50 0 50 100 150 200 250 300 (metres)

2.20381

MUSTANG MINERALS CORP.

RIVER VALLEY PGM PROPERTY

South Grid, Crerar Twp., ON

TIME DOMAIN IP SURVEY

DIPOLE - DIPOLE ARRAY (a=50m n=1-6)

FILTERED TOTAL CHARGEABILITY

Transmitter Frequency:	0.125 Hz (50% duty cycle)
Transmitter Current:	0.1 to 1.0 Amps
Decay Curve:	GIP IP-10 Cole Cole Windows
	20 Gates (20ms to 1950ms)
Station Interval:	50 metres
Gridding Method:	Bi-Directional
Grid Cell Size:	25 units (2x Hanning Filter Applied)
Contour Interval:	1, 5 mV/V
Colour Scale:	Equal Area Zoning
Survey Date:	April, 2000
Instrumentation:	Rx = IRIS / BRGM IP-10
DWG. #: QG-112-PLAN-CHG-2	Tx = Phoenix IPT-1

Surveyed & Processed by:

Quantec GEOPHYSICS WORLDWIDE

River Valley PGM Property Claim Location Map

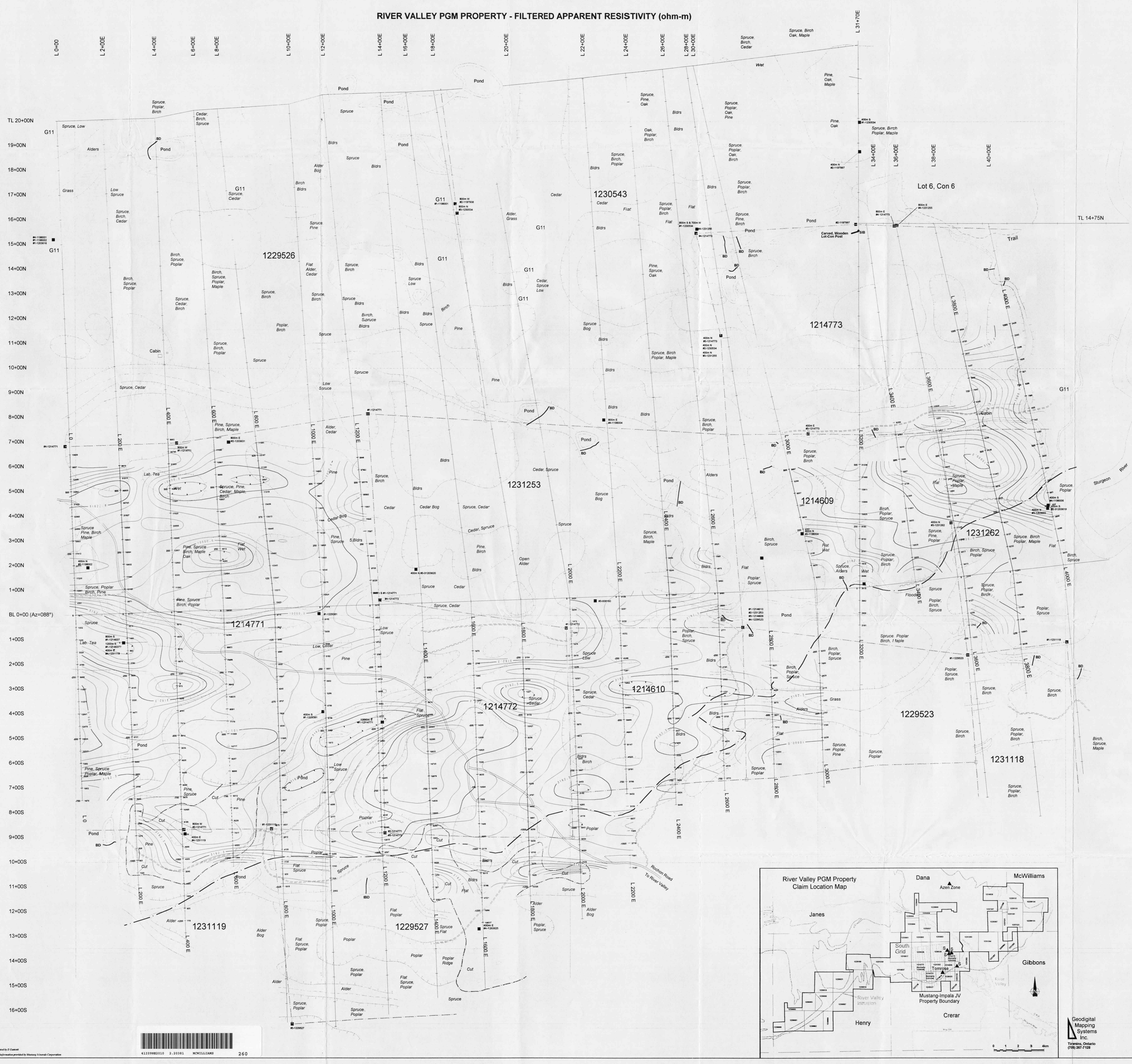
Janes · Dana · Azen Zone · McWilliams · Gibbons · Henry · Crerar · South Grid · Tomroese · River Valley Intersection · Mustang-Impala JV Property Boundary

0 1 2 3 4km

Geodigital Mapping Systems Inc.
Timmins, Ontario
(705) 267-7128

Map generated by D Eastcott
Topological Information provided by Mustang Minerals Corporation

411098NE2010 2.20381 MCWILLIAMS 250



SYMBOLS

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- Gneissosity
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- Claim post (located, inferred)
- Claim line
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- Pond with Beaver dam
- Road
- Trail
- Creek
- Clear cut

Dipole-Dipole Array

a na a

Filter

plot point

Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

Geodigital Mapping Systems Inc.
Timmins, Ontario
(705) 267-7128

2.20381

MUSTANG MINERALS CORP.

RIVER VALLEY PGM PROPERTY

South Grid, Crerar Twp., ON

TIME DOMAIN IP SURVEY

DIPOLE - DIPOLE ARRAY (a=50 n=1-6)

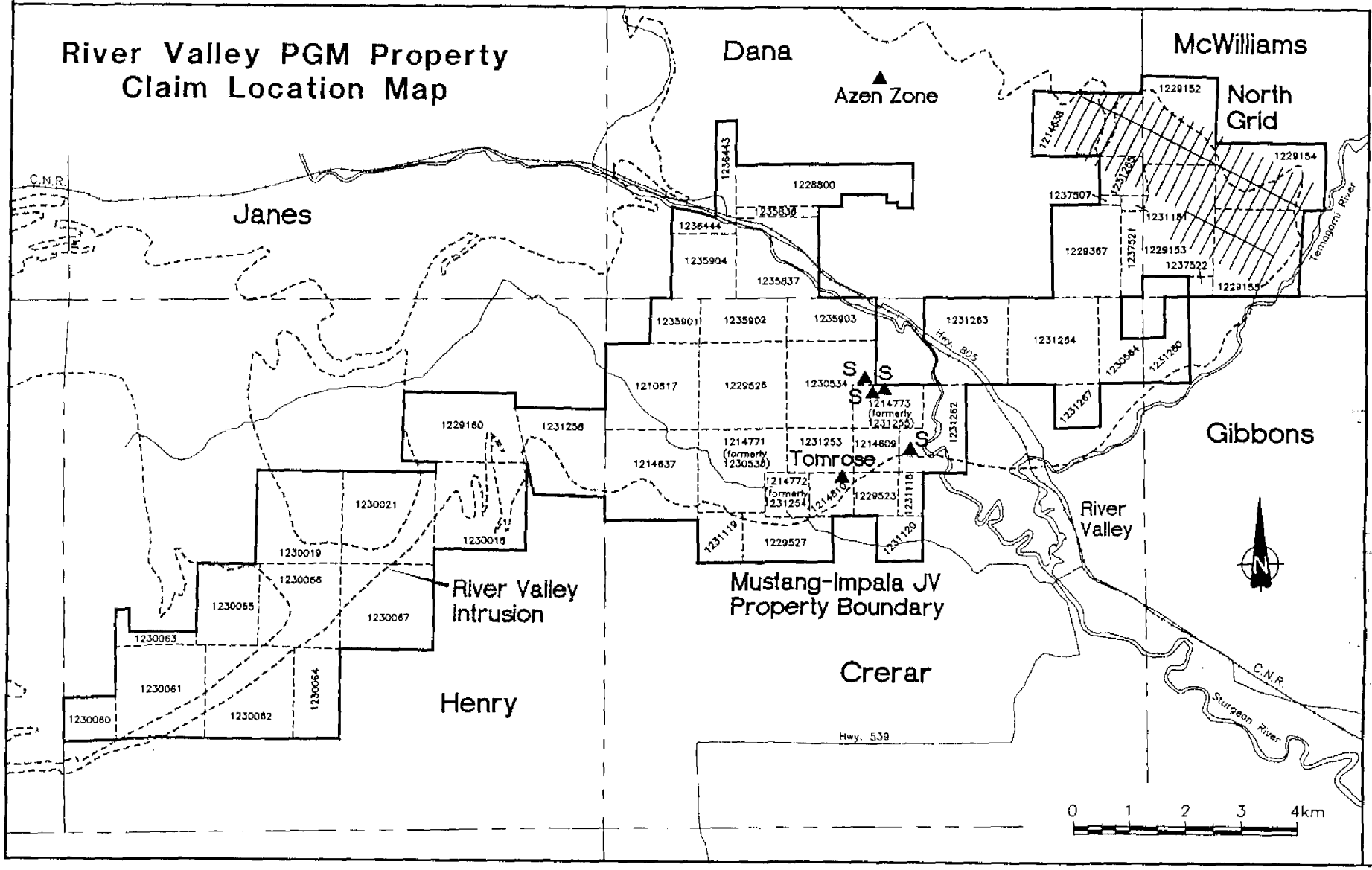
FILTERED APPARENT RESISTIVITY

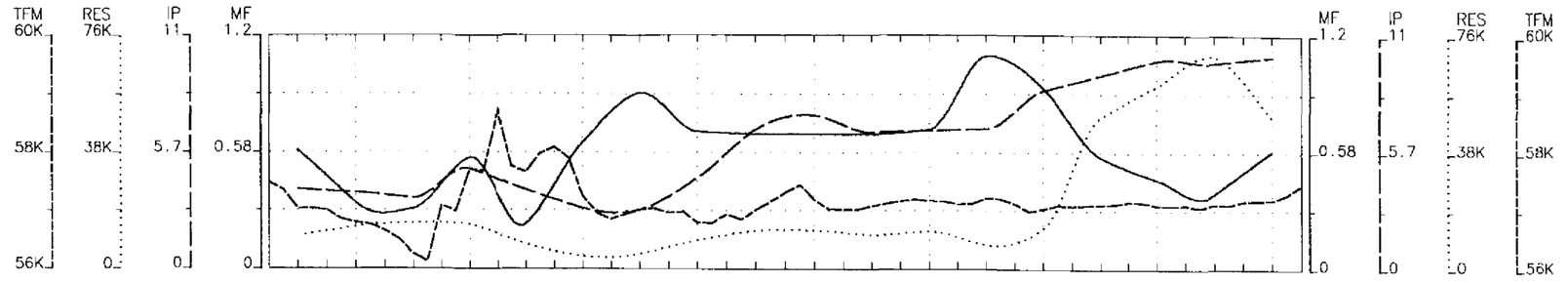
Transmitter Frequency:	0.125 Hz (50% duty cycle)
Transmitter Current:	0.1 to 1.0 Amps
Decay Curve:	QIP IP-10 Cole Cole Windows 20 Gates (20ms to 1850ms)
Station Interval:	50 metres
Gridding Method:	Bi-Directional
Grid Cell Size:	25 units (2x Hanning Filter Applied)
Contour Interval:	10 levels/log decade
Colour Scale:	Equal Area Zoning
Survey Date:	April, 2000
Instrumentation:	Rx = IRIS / BRGM IP-10
	Tx = Phoenix IPT-1

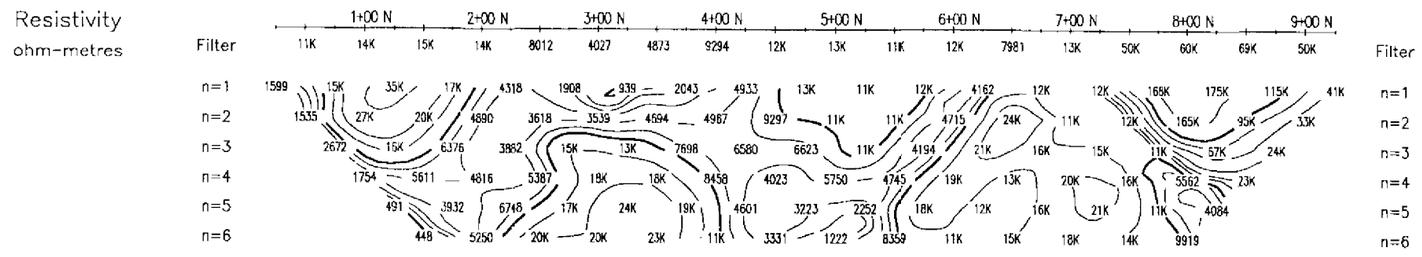
DWG. #: QG-112-PLAN-RES-2

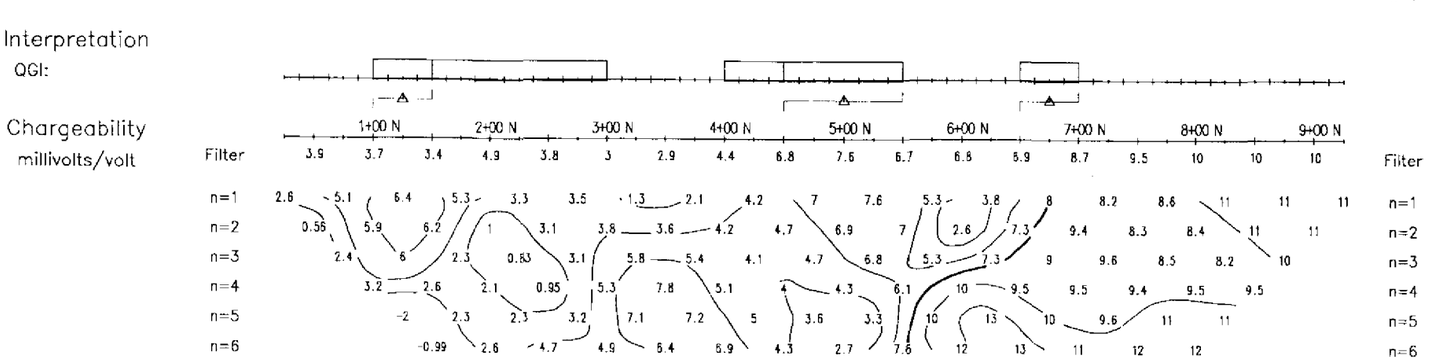
Surveyed & Processed by:

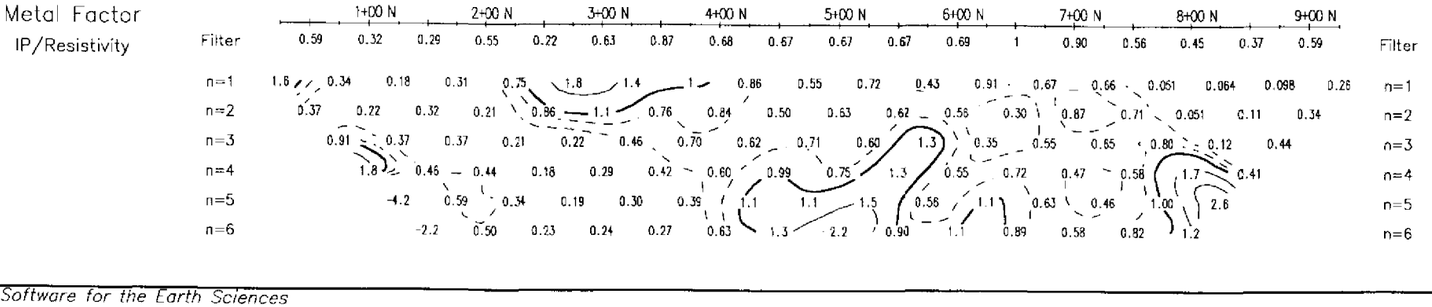
Quantec GEOPHYSICS WORLDWIDE



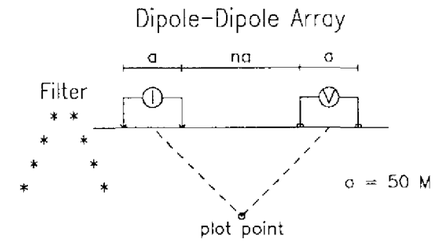








Line 200 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- Low resistivity feature, Strong, Moderate, Weak
- High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

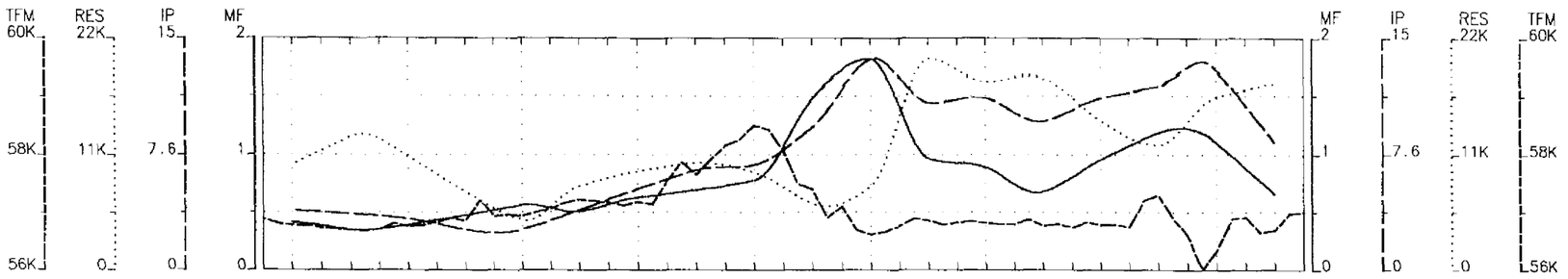
50 0 50 100 150 200 250 300
(metres)

MUSTANG MINERALS CORPORATION

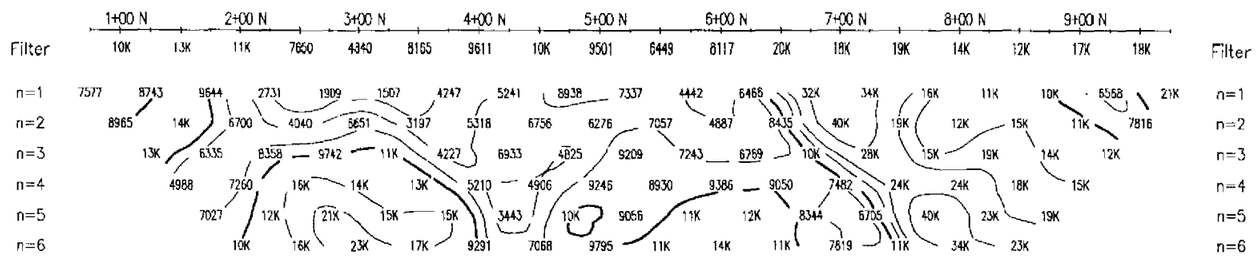
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 200 E

QUANTEC GEOSCIENCE INC.

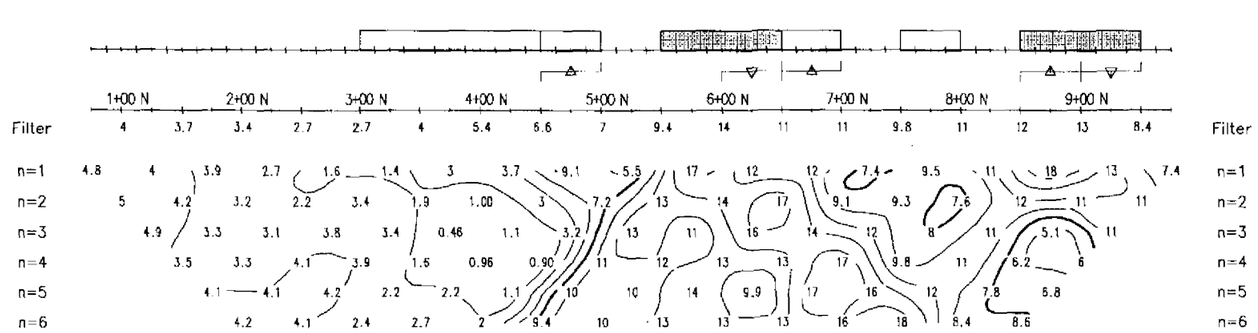


Resistivity
ohm-metres

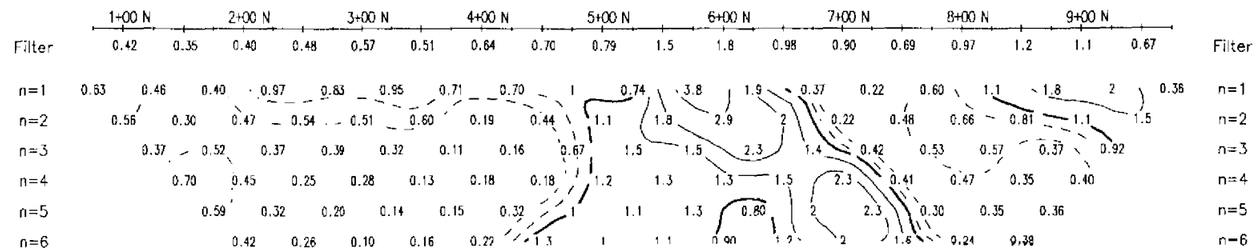


Interpretation
QGI:

Chargeability
millivolts/volt

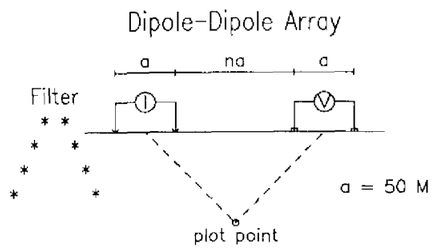


Metal Factor
IP/Resistivity



Line 400 E

Dipole-Dipole Array



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- Low resistivity feature. Strong, Moderate, Weak
- High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(metres)

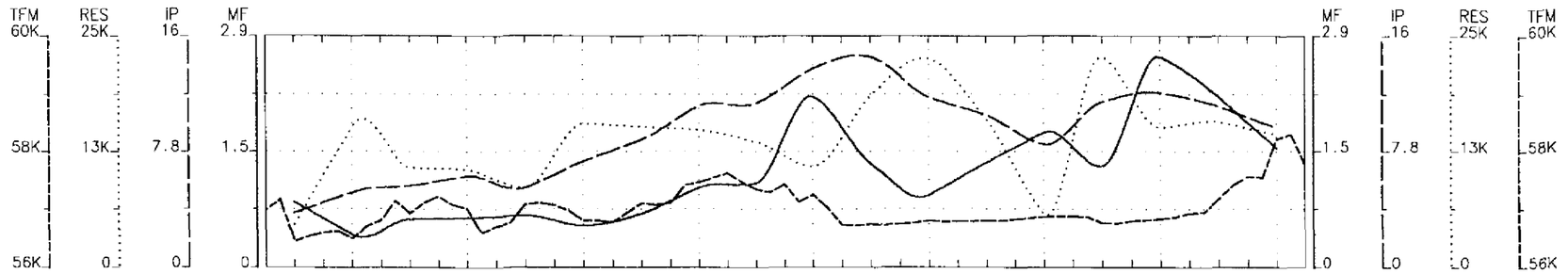
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

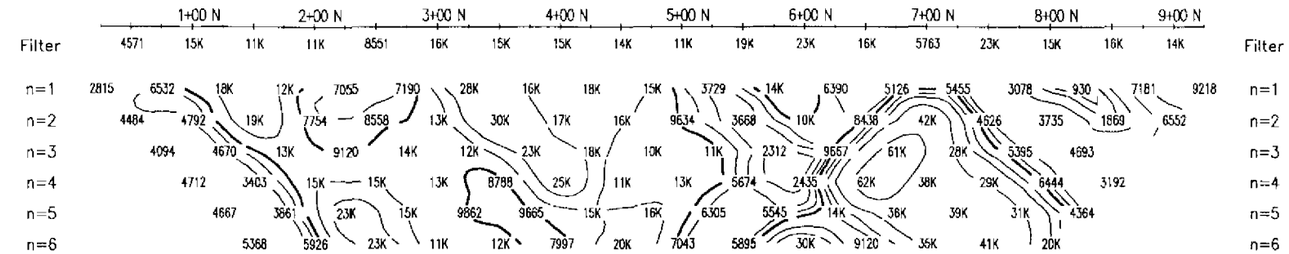
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 400 E

QUANTEC GEOSCIENCE INC.

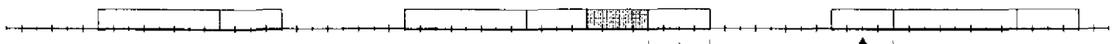
41I09NE2010 2.20381 MCWILLIAMS 300



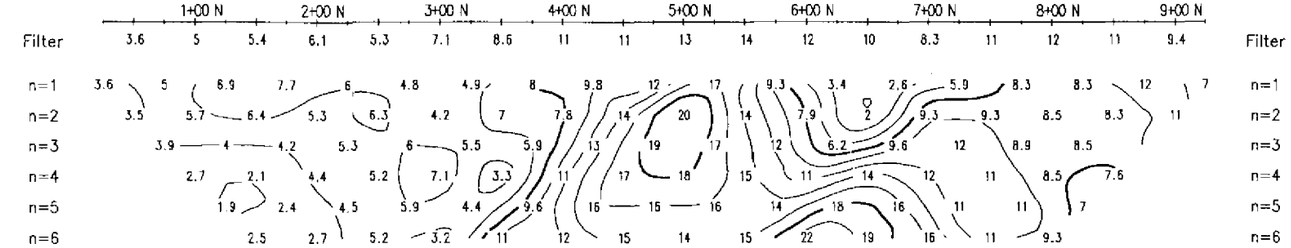
Resistivity
ohm-metres



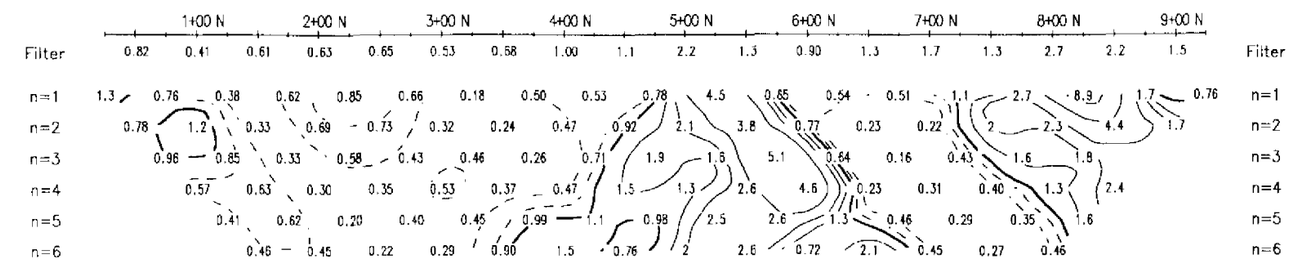
Interpretation
QGI:



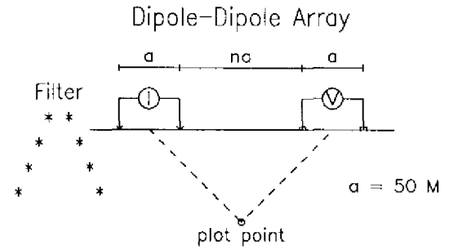
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity



Line 600 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▽ ▽ Low resistivity feature. Strong, Moderate, Weak
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SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

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Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

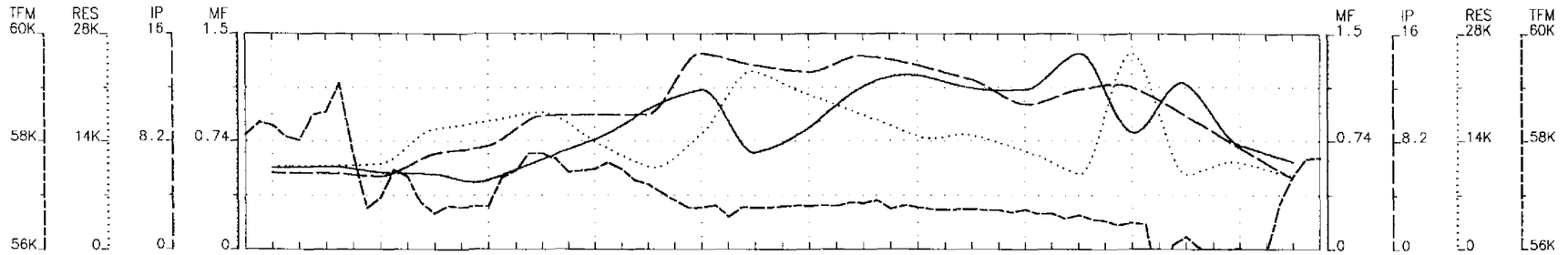
50 0 50 100 150 200 250 300
(metres)

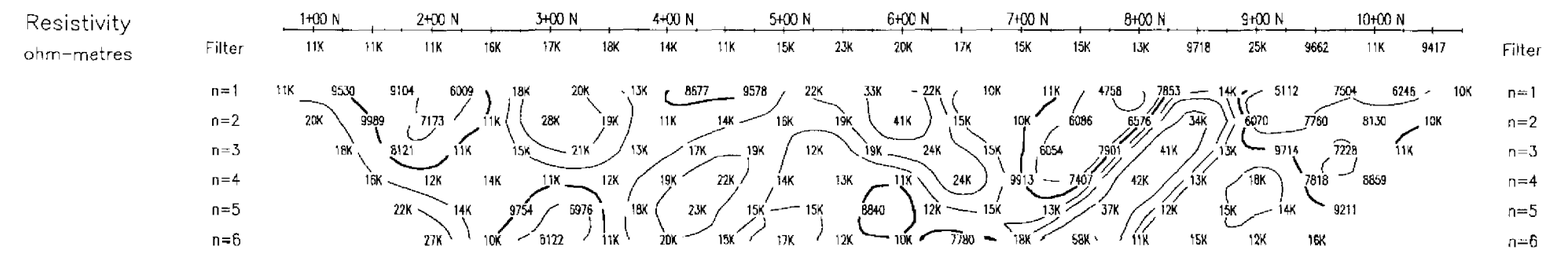
MUSTANG MINERALS CORPORATION

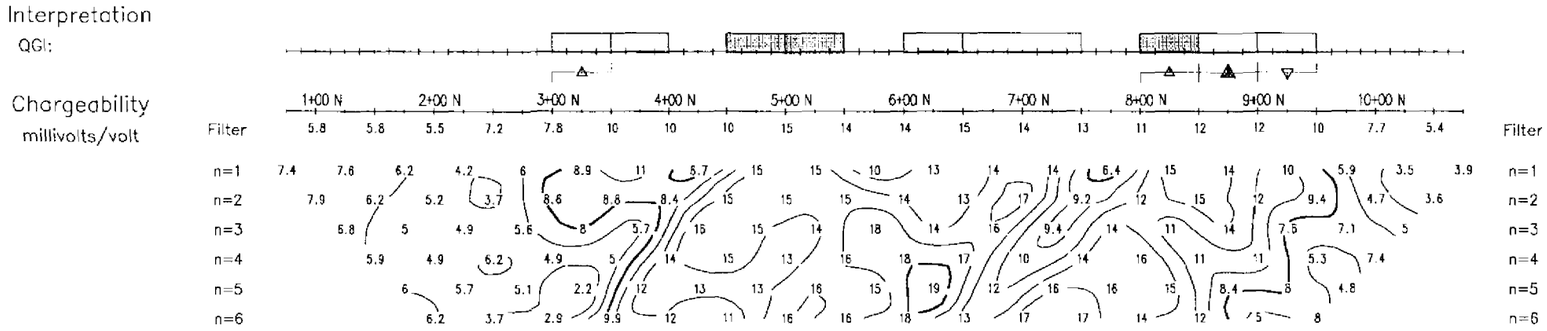
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

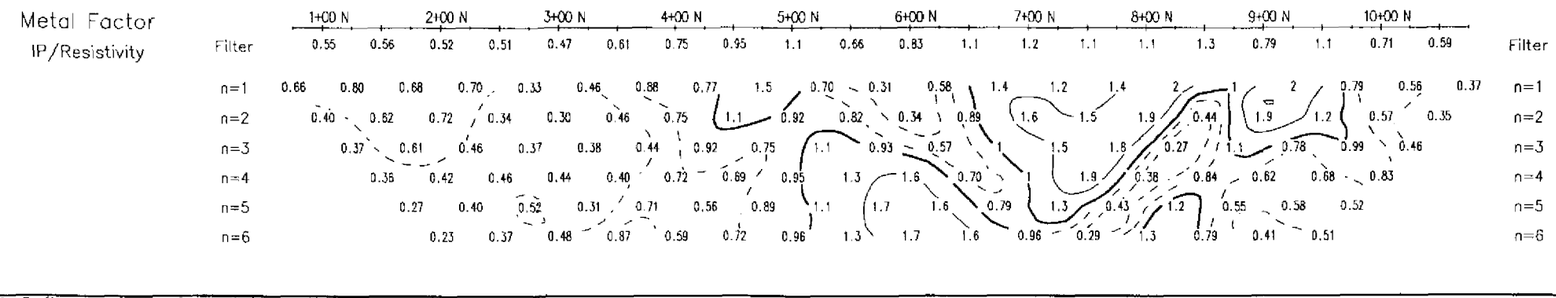
Processing Date: 00/06/04
Drawing Number: QC-112-IP-DD-Line 600 E

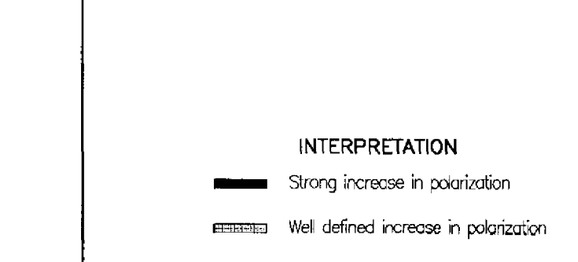
QUANTEC GEOSCIENCE INC.

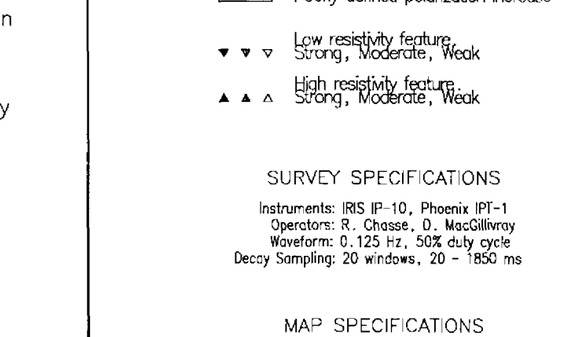


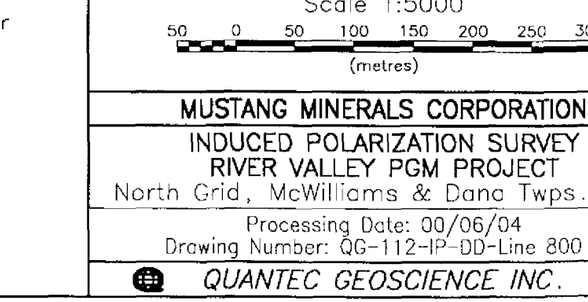




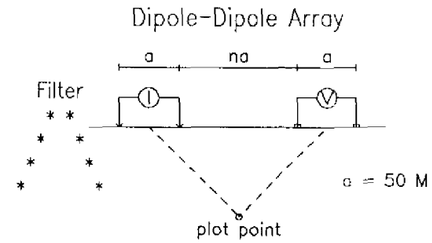








Line 800 E



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Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(metres)

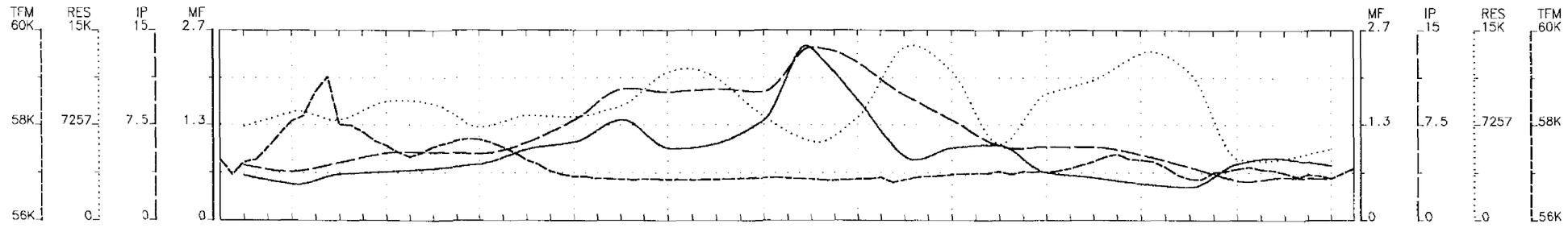
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

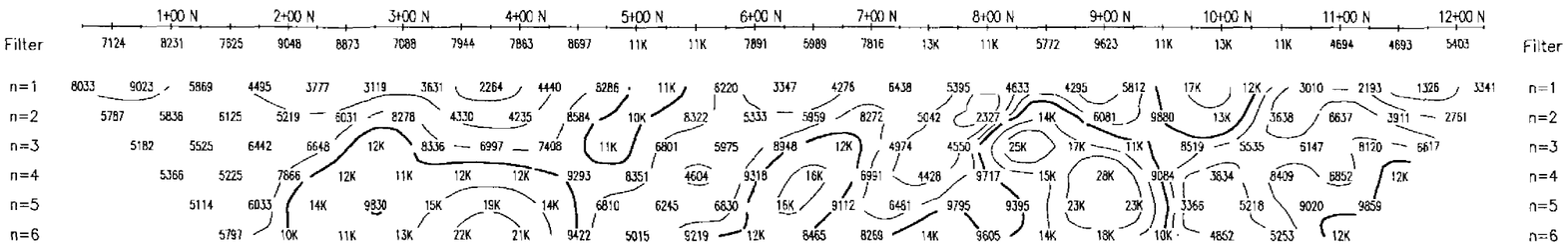
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 800 E

QUANTEC GEOSCIENCE INC.

41I09NE2010 2.20381 MCWILLIAMS 320



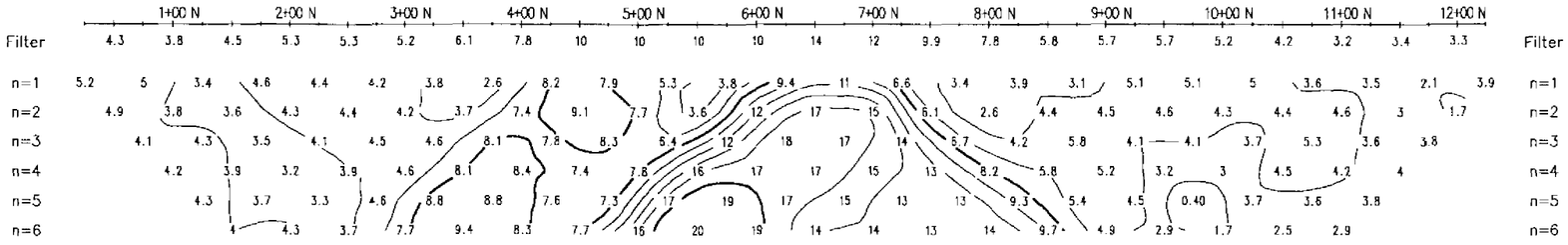
Resistivity
ohm-metres



Resistivity
ohm-metres

Interpretation
QGI:

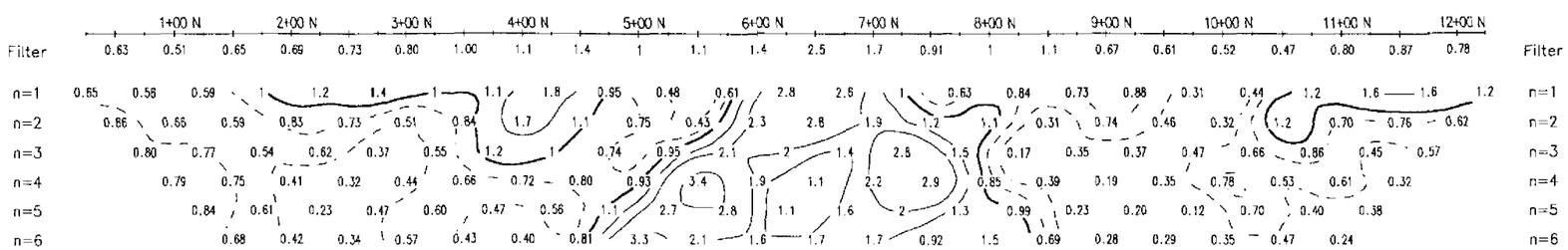
Chargeability
millivolts/volt



Interpretation
QGI:

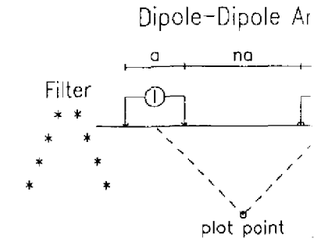
Chargeability
millivolts/volt

Metal Factor
IP/Resistivity



Metal Factor
IP/Resistivity

Line 1000 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polari.
- Poorly defined polarization inc
- Low resistivity feature, Strong, Moderate, Weak
- High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 m

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5,
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3,

Scale 1:5000

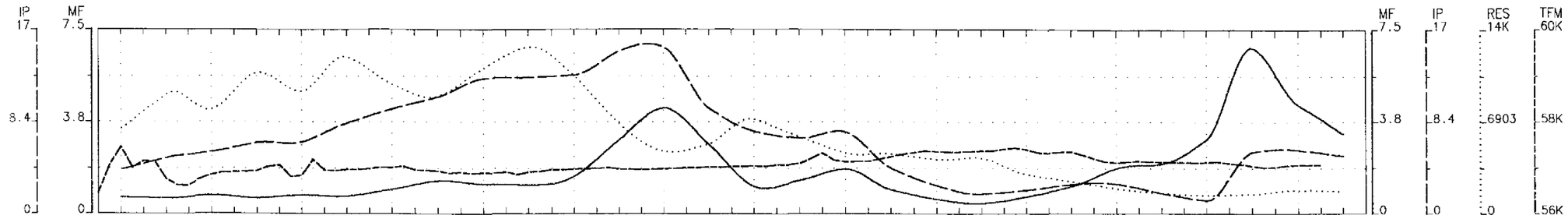
50 0 50 100 150 200
(metres)

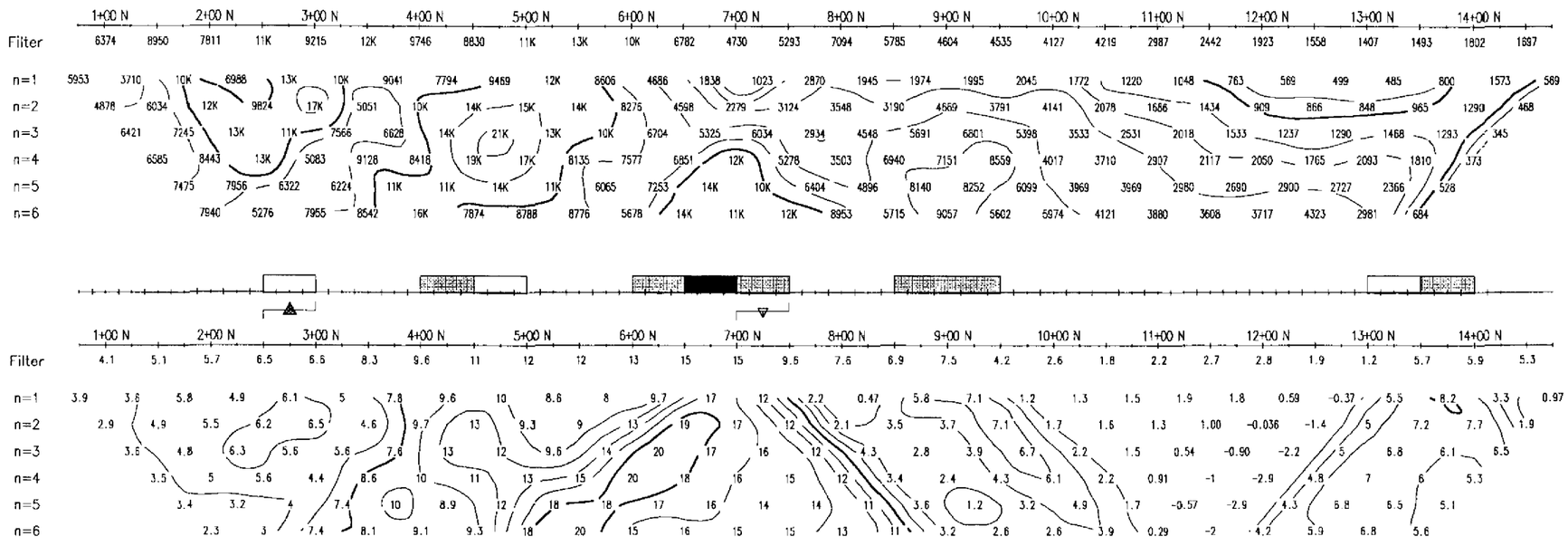
MUSTANG MINERALS CORPOR

INDUCED POLARIZATION SU
RIVER VALLEY PGM PROJ
North Grid, McWilliams & Dana

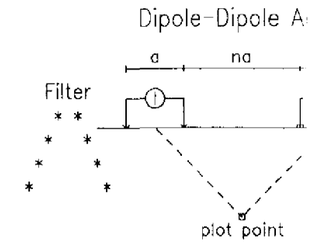
Processing Date: 00/06/0
Drawing Number: QG-112-IP-DD-Lir

QUANTEC GEOSCIENCE





Line 1200 E



INTERPRETATION

- Strong increase in polarizatio
- Well defined increase in polar
- Poorly defined polarization in
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivra
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 r

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3,

Scale 1:5000

50 0 50 100 150 200

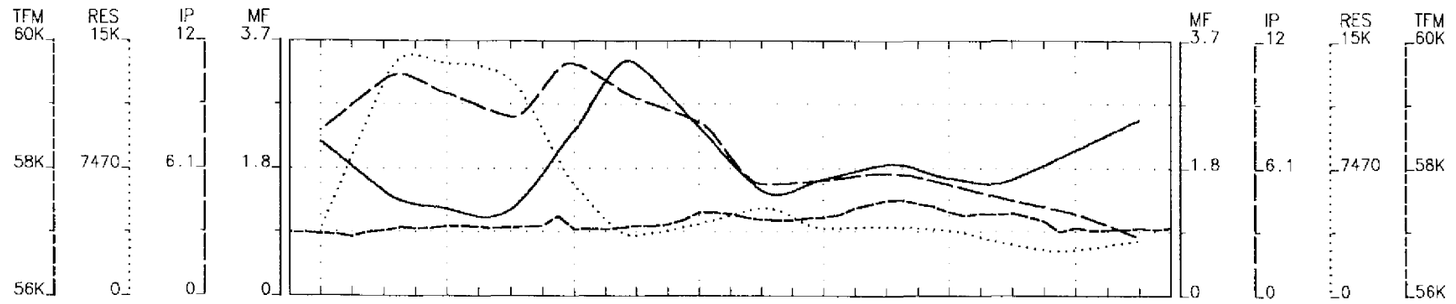
(metres)

MUSTANG MINERALS CORPO

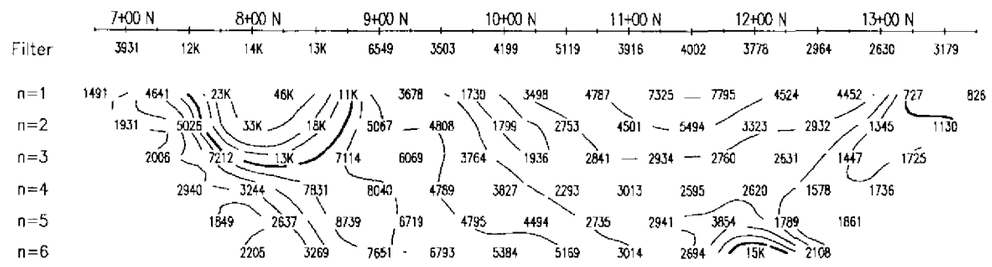
INDUCED POLARIZATION S
RIVER VALLEY PGM PRO
North Grid, McWilliams & Danc

Processing Date: 00/06/(
Drawing Number: QG-112-IP-DD-Li

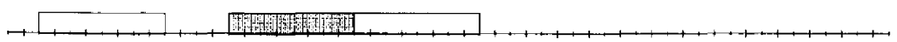
QUANTEC GEOSCIENCE



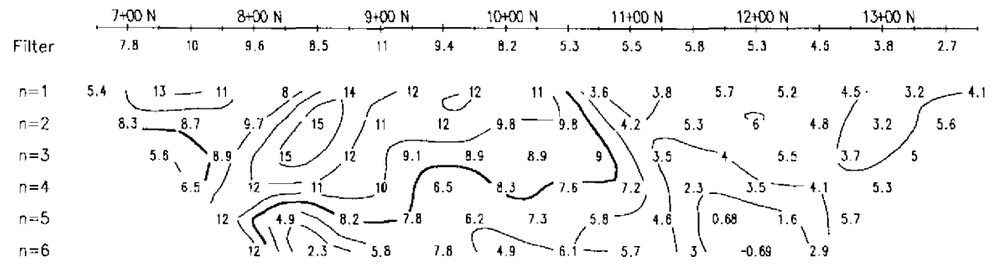
Resistivity
ohm-metres



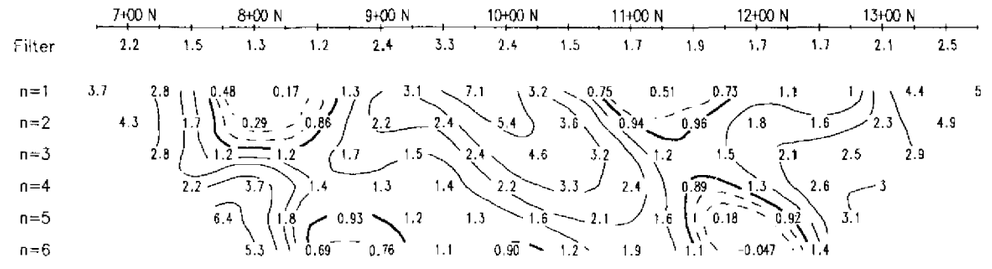
Interpretation
QGI:



Chargeability
millivolts/volt

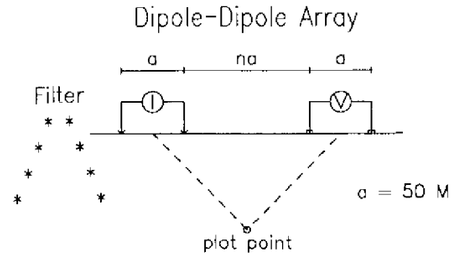


Metal Factor
IP/Resistivity



Resistivity
ohm-metres
Interpretation
QGI:
Chargeability
millivolts/volt
Metal Factor
IP/Resistivity

Line 1400 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▽ ▽ Low resistivity feature. Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(metres)

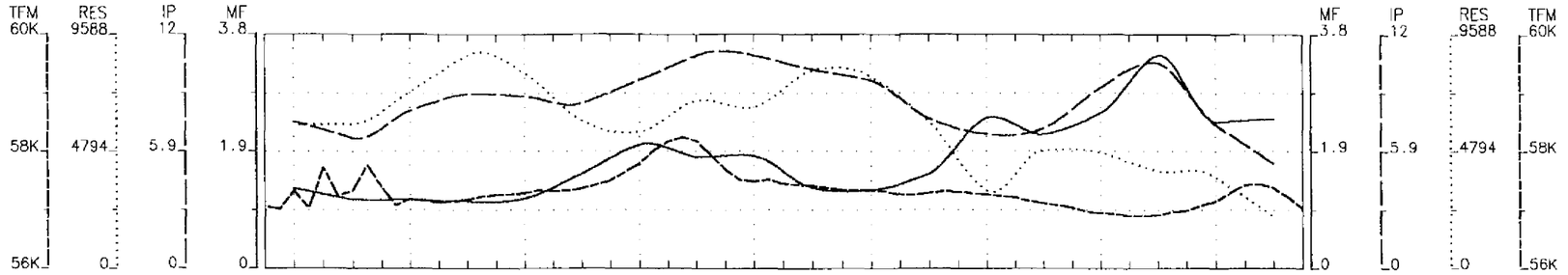
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

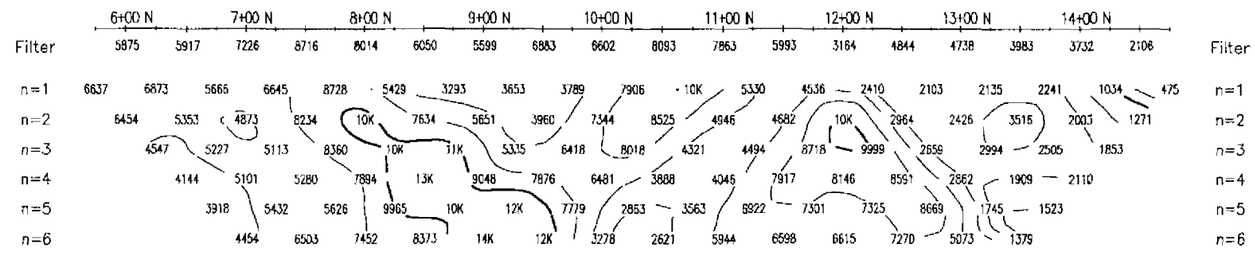
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 1400 E

QUANTEC GEOSCIENCE INC.

41I09NE2010 2.20381 MCWILLIAMS 350



Resistivity
ohm-metres

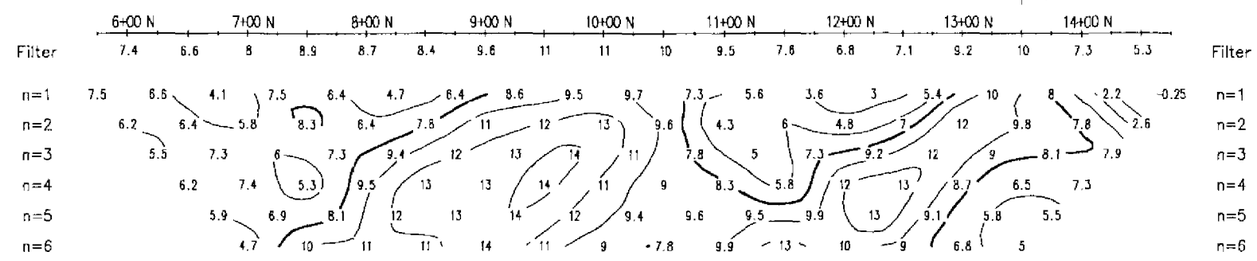


Resistivity
ohm-metres

Interpretation
QGI:

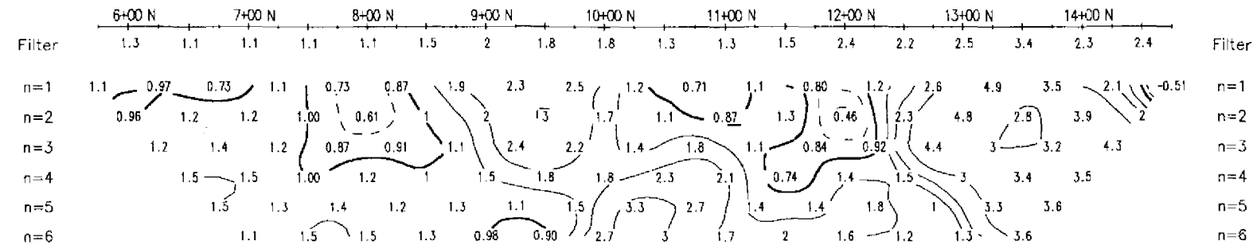
Interpretation
QGI:

Chargeability
millivolts/volt



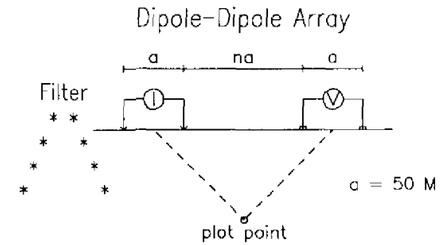
Chargeability
millivolts/volt

Metal Factor
IP/Resistivity



Metal Factor
IP/Resistivity

Line 1600 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▽ ▽ Low resistivity feature. Strong, Moderate, Weak
- ▲ △ △ High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

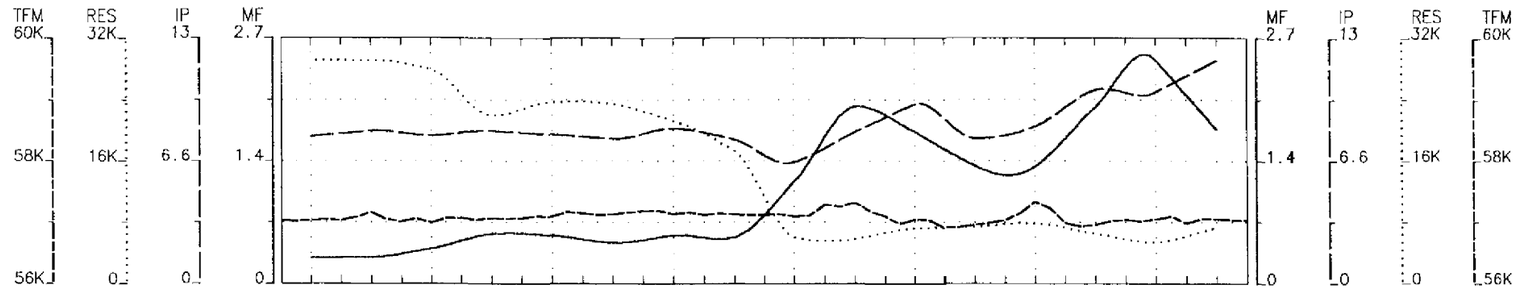
50 0 50 100 150 200 250 300
(metres)

MUSTANG MINERALS CORPORATION

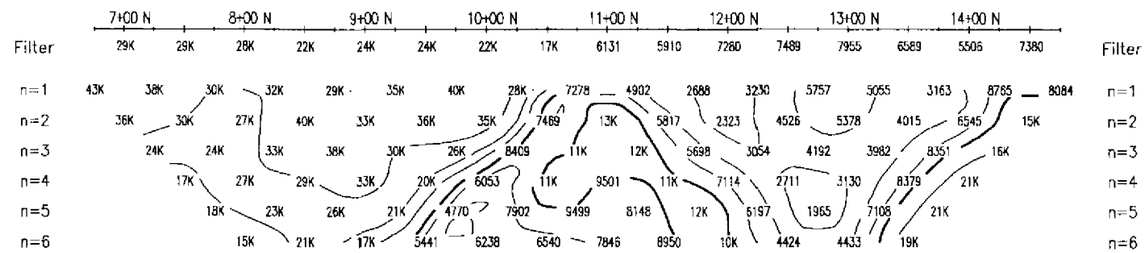
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 1600 E

QUANTEC GEOSCIENCE INC.



Resistivity
ohm-metres

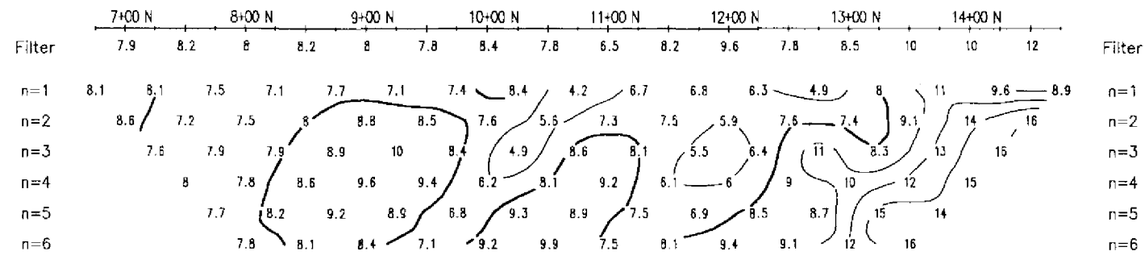


Resistivity
ohm-metres

Interpretation
QGI:

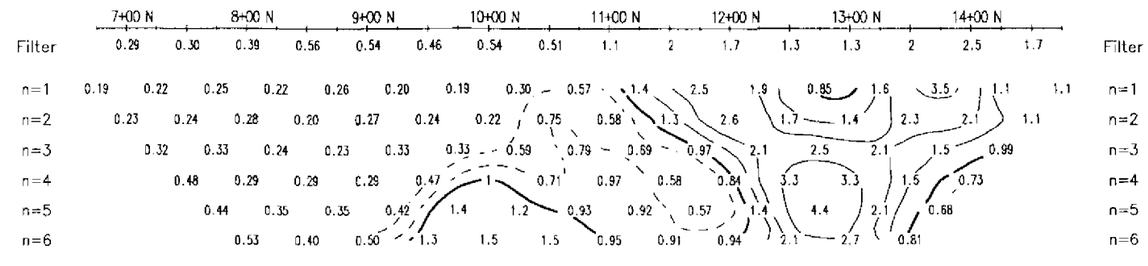
Interpretation
QGI:

Chargeability
millivolts/volt



Chargeability
millivolts/volt

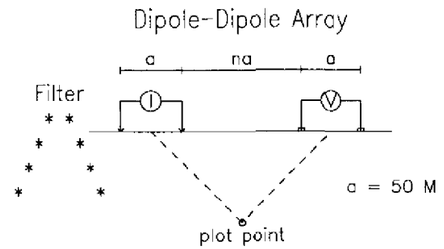
Metal Factor
IP/Resistivity



Metal Factor
IP/Resistivity

Line 1800 E

Dipole-Dipole Array



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

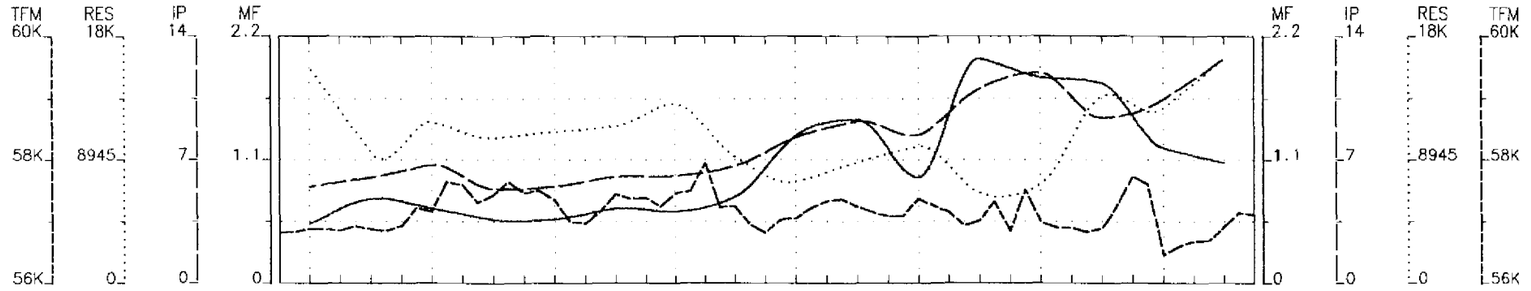
50 0 50 100 150 200 250 300
(metres)

MUSTANG MINERALS CORPORATION

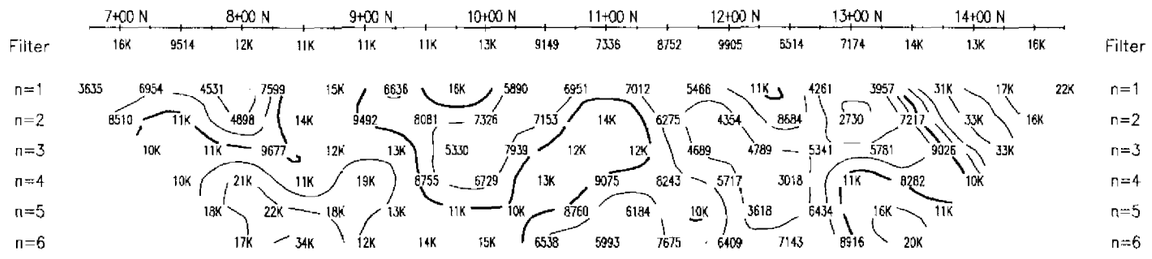
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 1800 E

QUANTEC GEOSCIENCE INC.

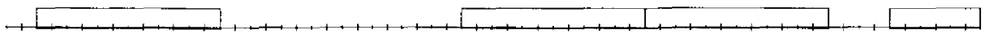


Resistivity
ohm-metres



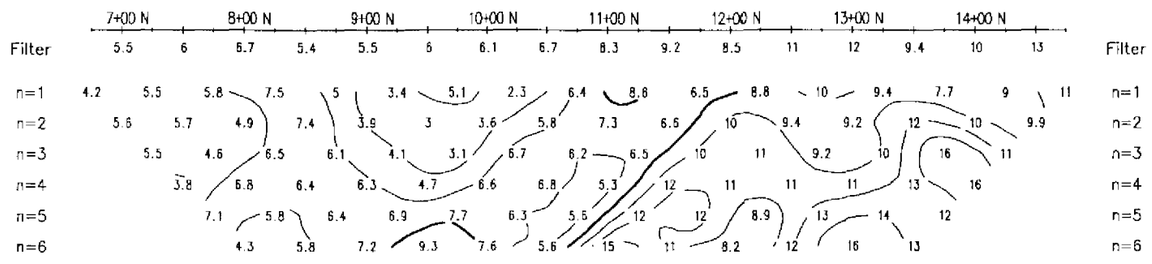
Resistivity
ohm-metres

Interpretation
QGI:



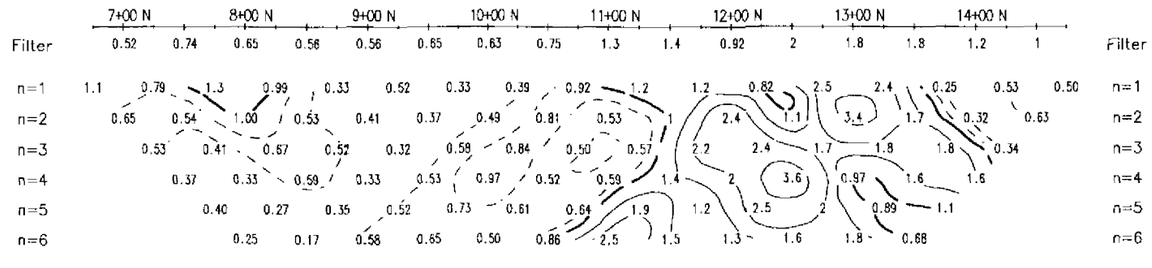
Interpretation
QGI:

Chargeability
millivolts/volt



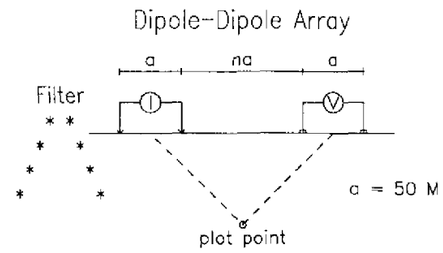
Chargeability
millivolts/volt

Metal Factor
IP/Resistivity



Metal Factor
IP/Resistivity

Line 2000 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature: Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature: Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

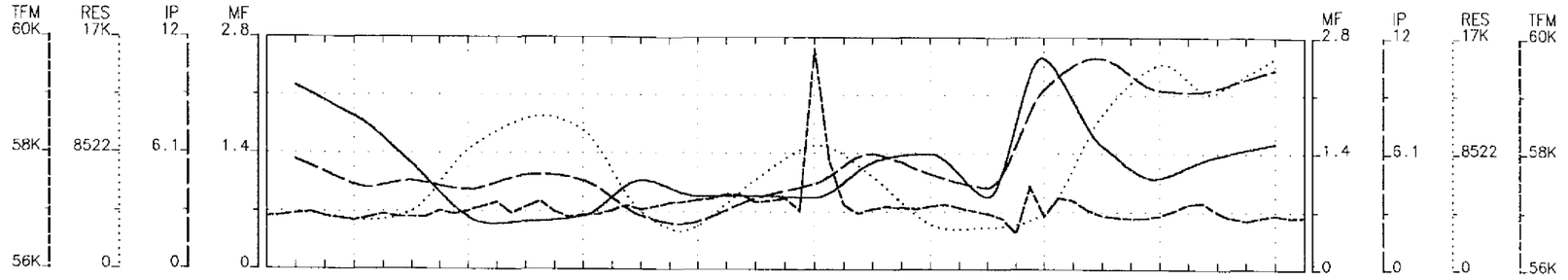
50 0 50 100 150 200 250 300
(metres)

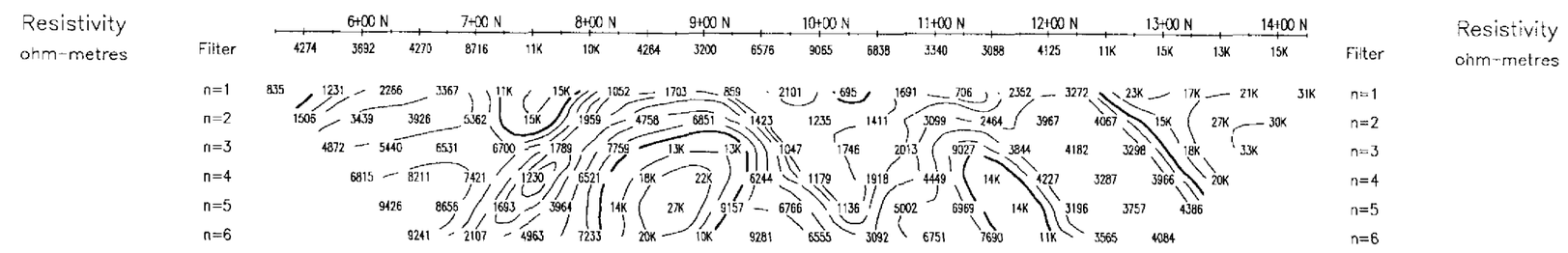
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

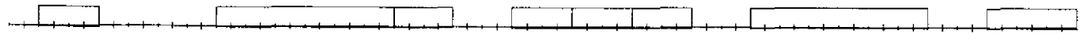
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 2000 E

QUANTEC GEOSCIENCE INC.

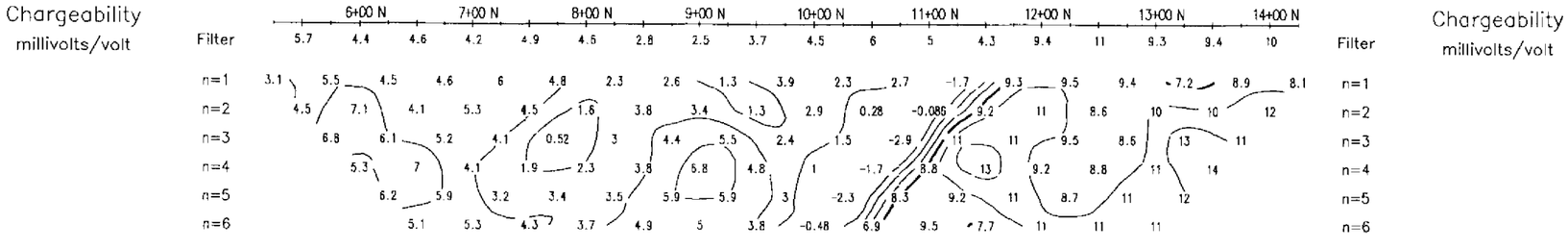


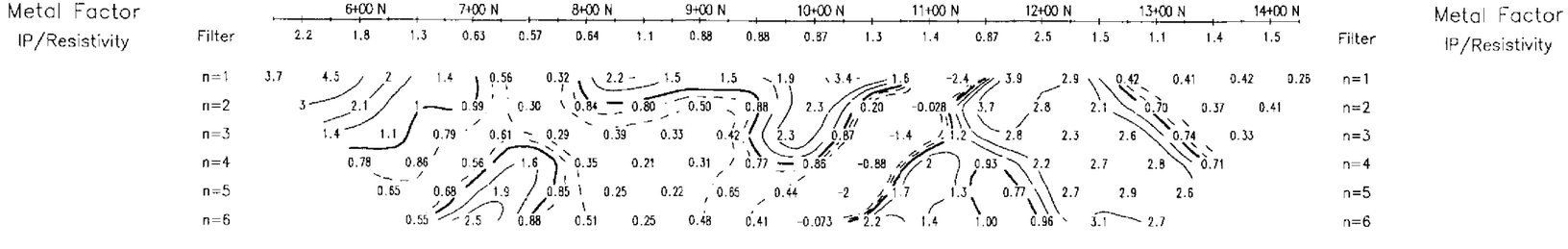


Interpretation
QGI:

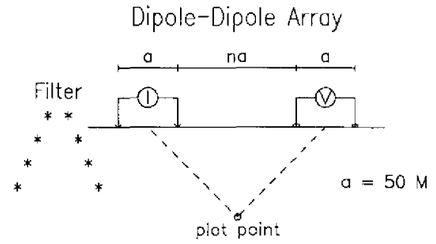


Interpretation
QGI:





Line 2200 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- Low resistivity feature, Strong, Moderate, Weak
- High resistivity feature, Strong, Moderate, Weak

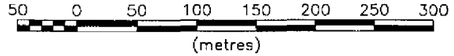
SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000



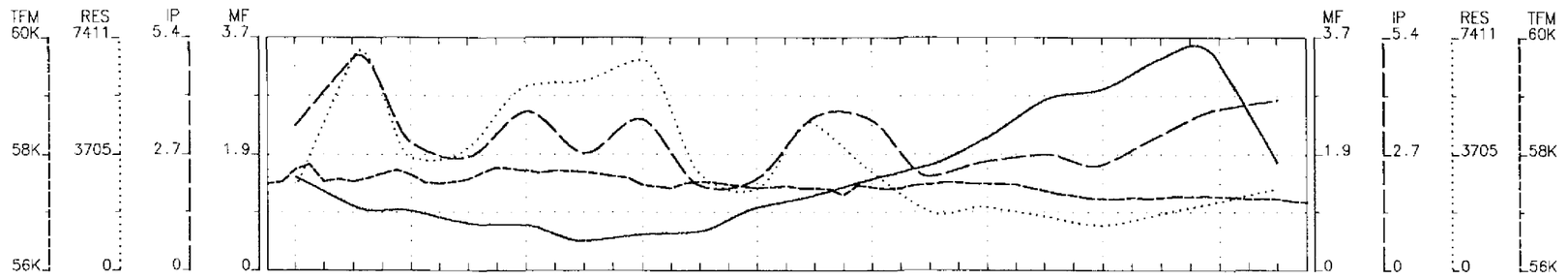
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

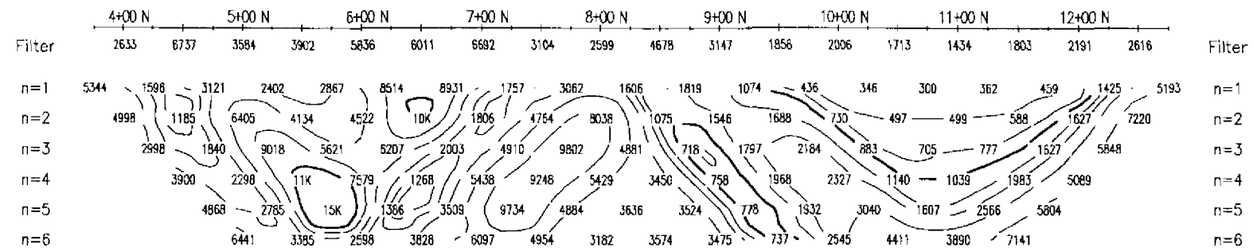
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 2200 E

QUANTEC GEOSCIENCE INC.

41I09NE2010 2.20381 MCWILLIAMS 390

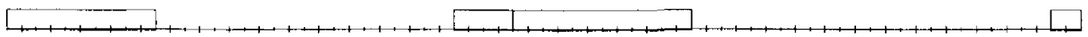


Resistivity
ohm-metres

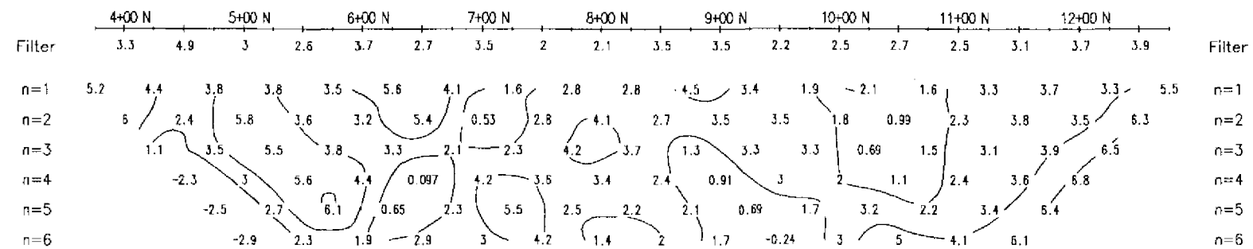


Resistivity
ohm-metres

Interpretation
QGI:



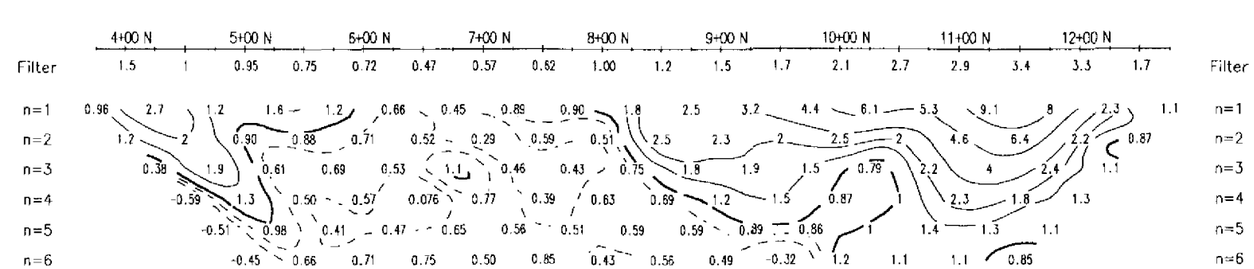
Chargeability
millivolts/volt



Chargeability
millivolts/volt

Interpretation
QGI:

Metal Factor
IP/Resistivity

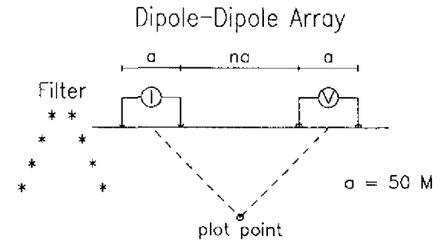


Metal Factor
IP/Resistivity

Interpretation
QGI:

Line 2400 E

Dipole-Dipole Array



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

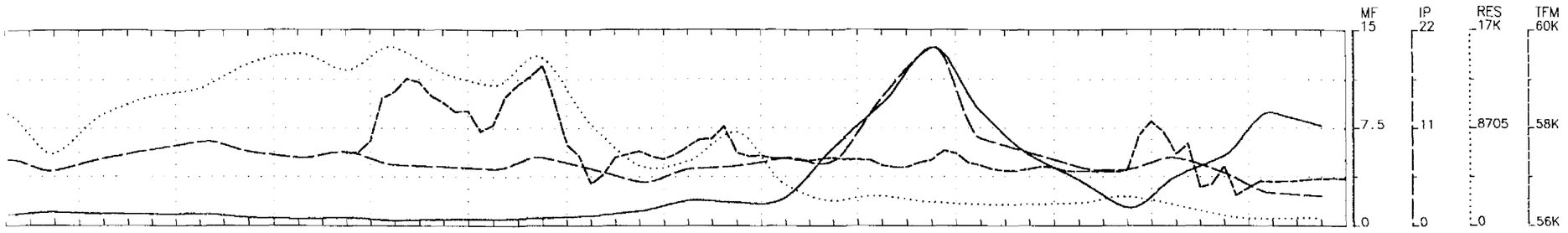
50 0 50 100 150 200 250 300
(metres)

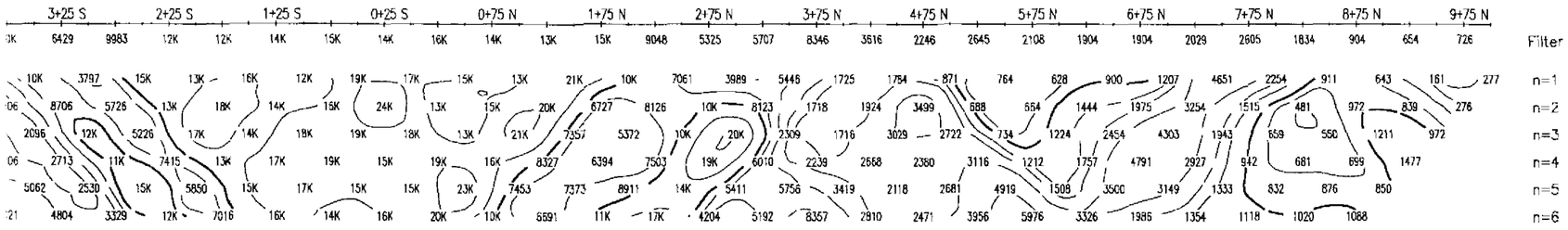
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

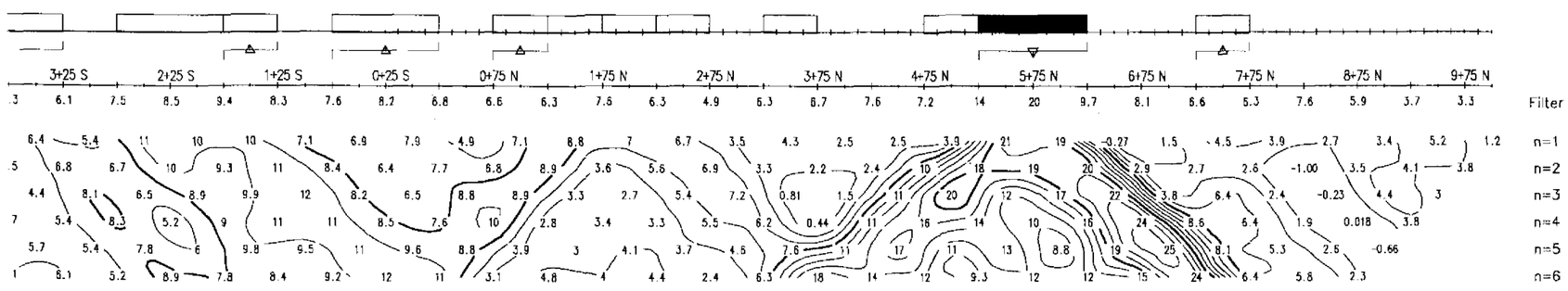
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 2400 E

QUANTEC GEOSCIENCE INC.



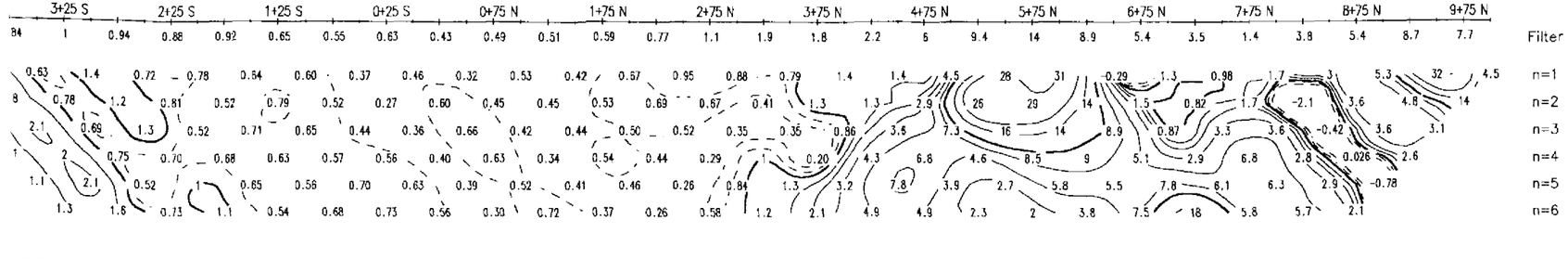


Resistivity
ohm-metres



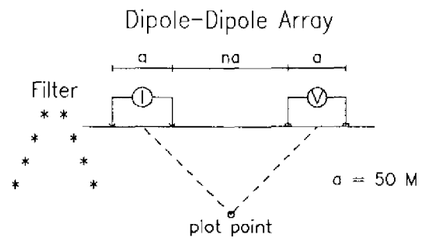
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 2800 E



INTERPRETATION

- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- Low resistivity feature: Strong, Moderate, Weak
- High resistivity feature: Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

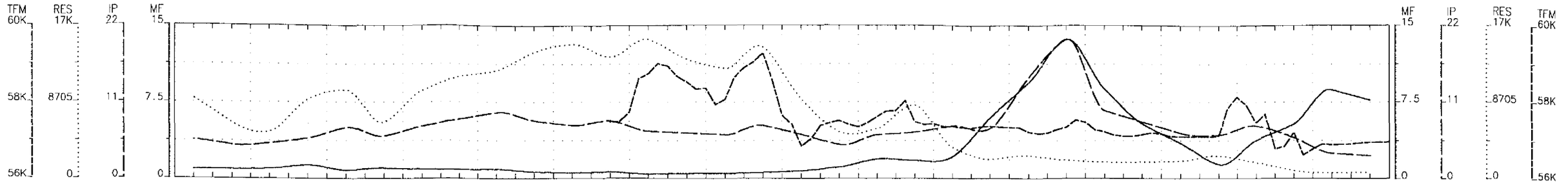
50 0 50 100 150 200 250 300
(metres)

MUSTANG MINERALS CORPORATION

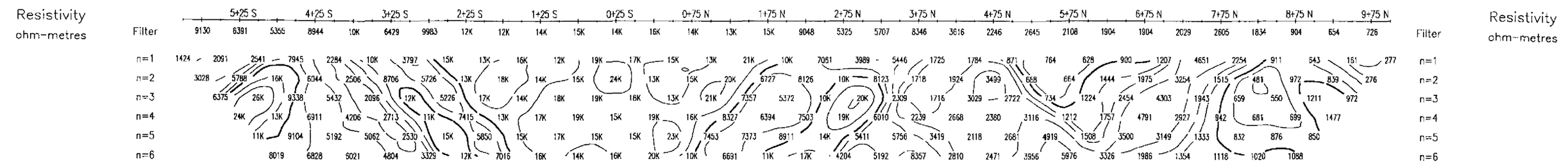
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

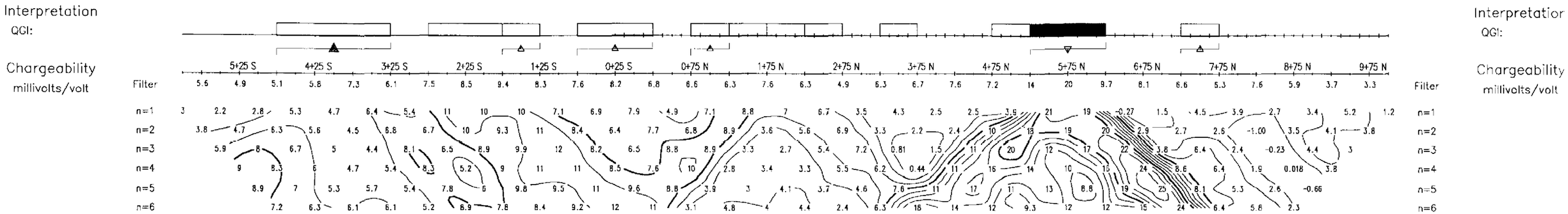
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 2800 E

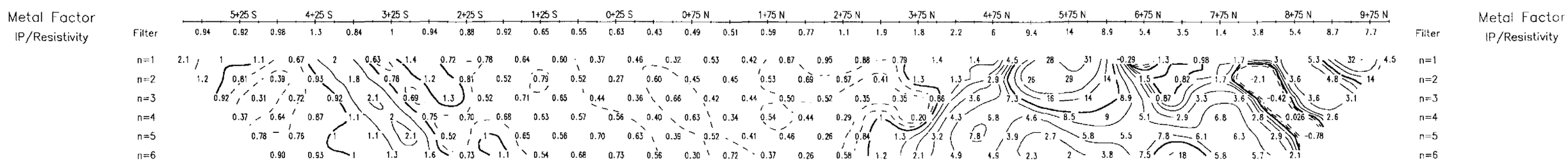
QUANTEC GEOSCIENCE INC.

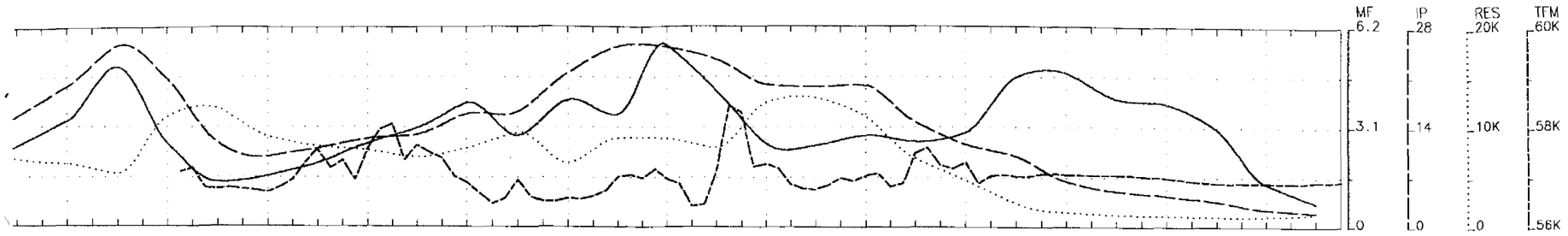


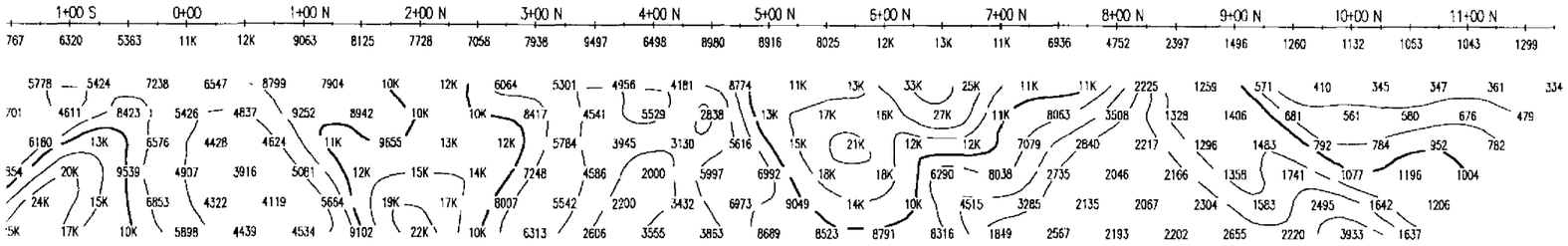
Line 2800E



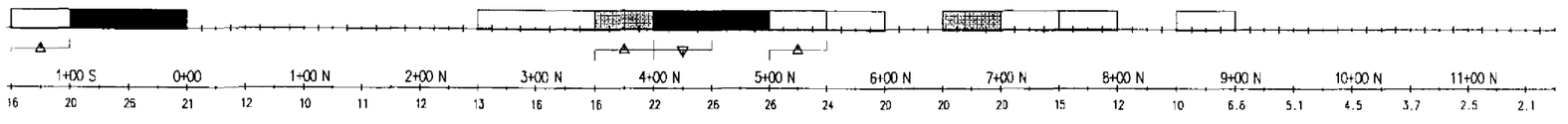




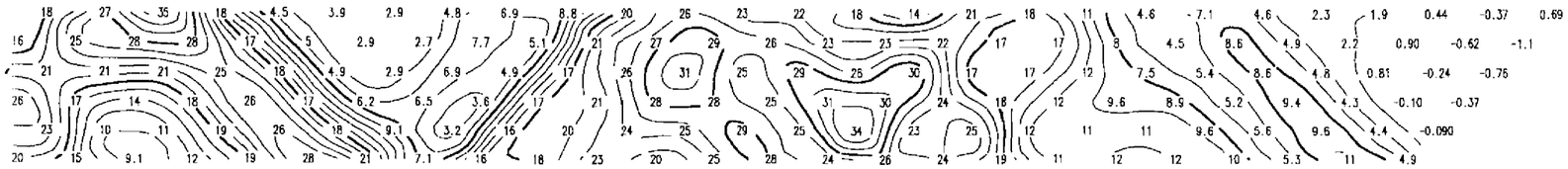




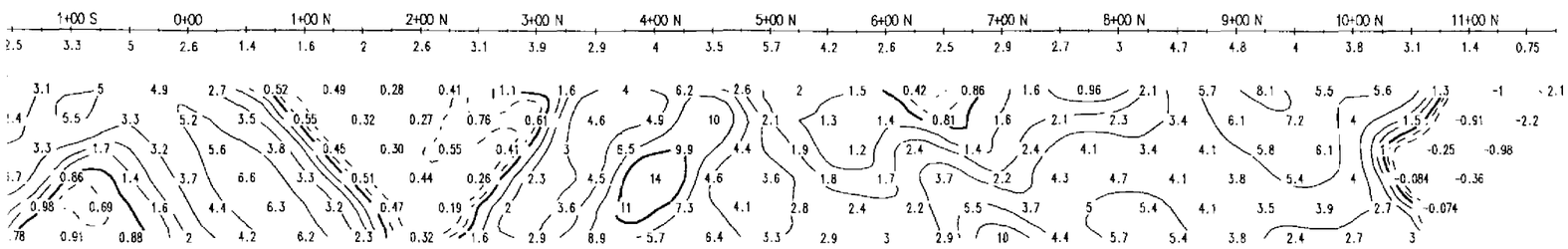
Resistivity
ohm-metres



Interpretation
QGI:

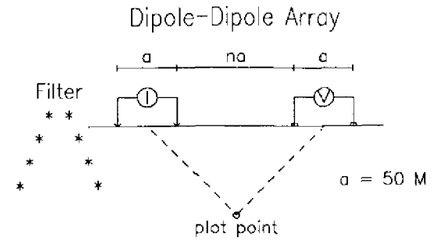


Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 3000 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

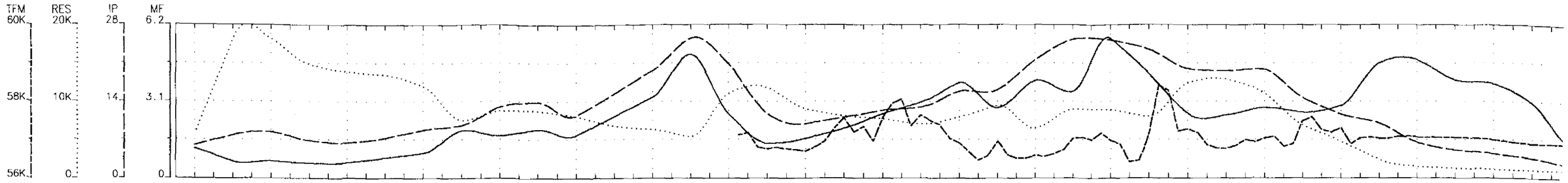
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

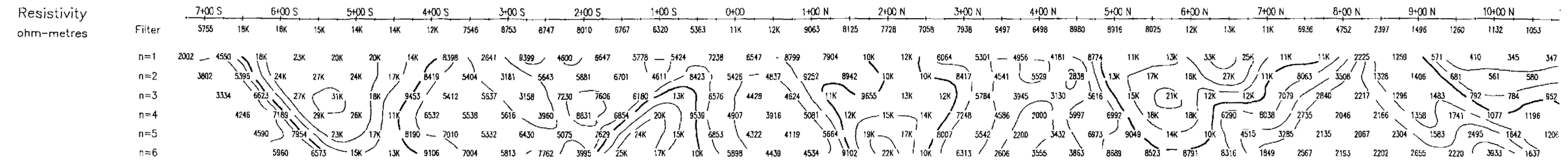
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

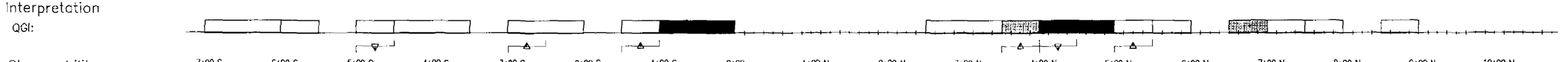
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 3000 E

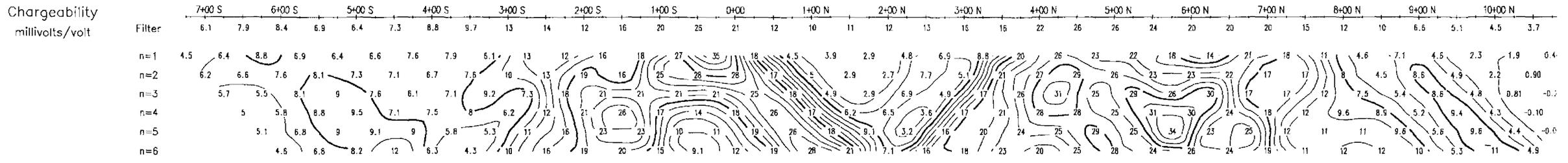
QUANTEC GEOSCIENCE INC.

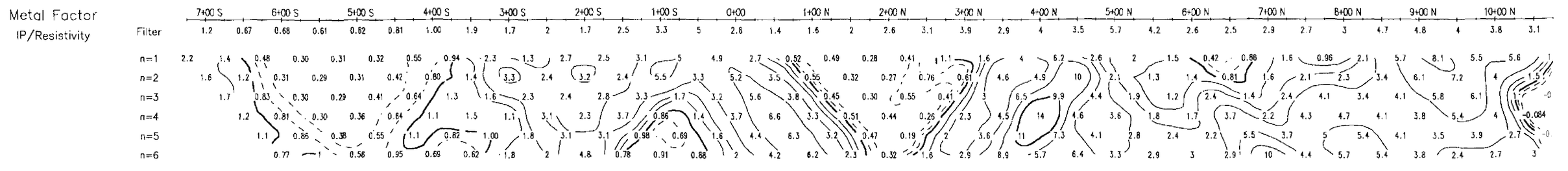


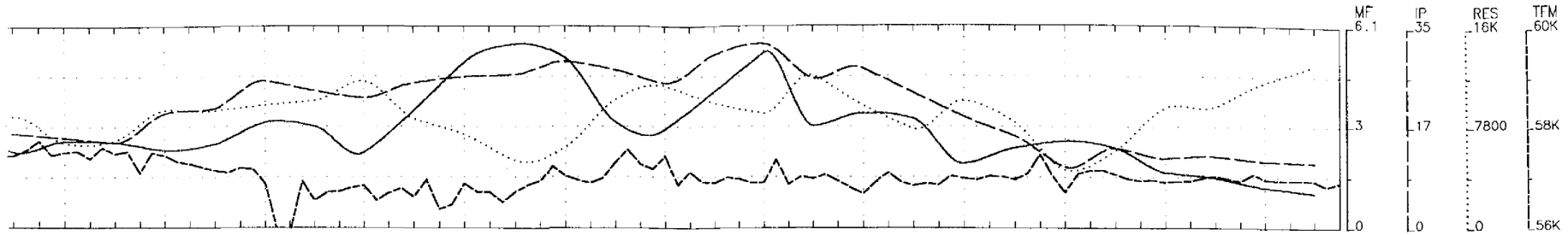
Line 30000E

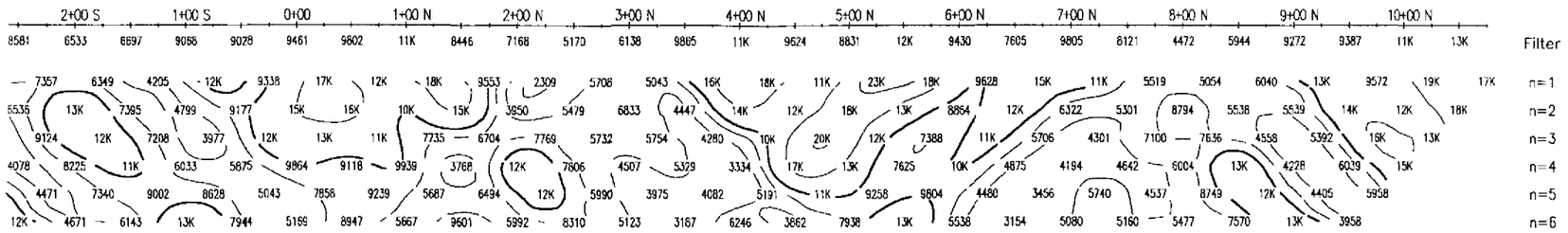




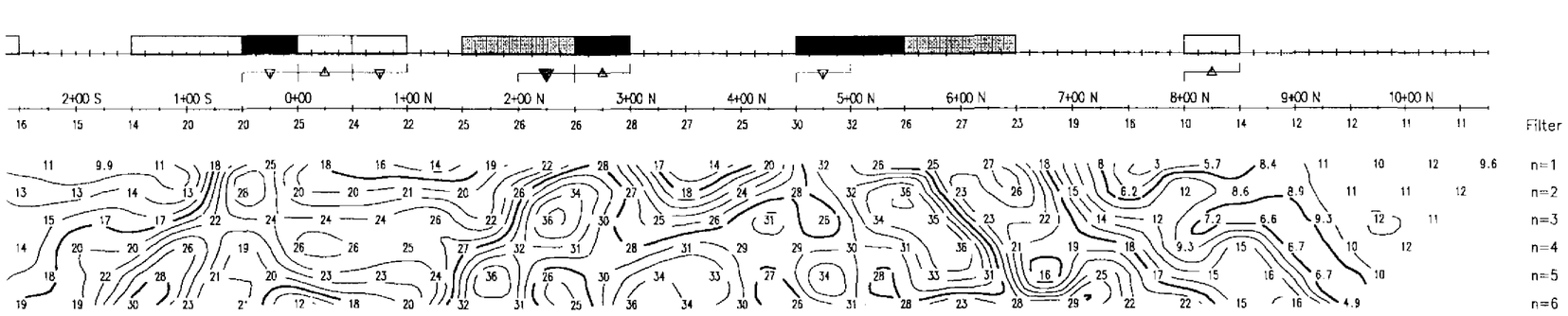






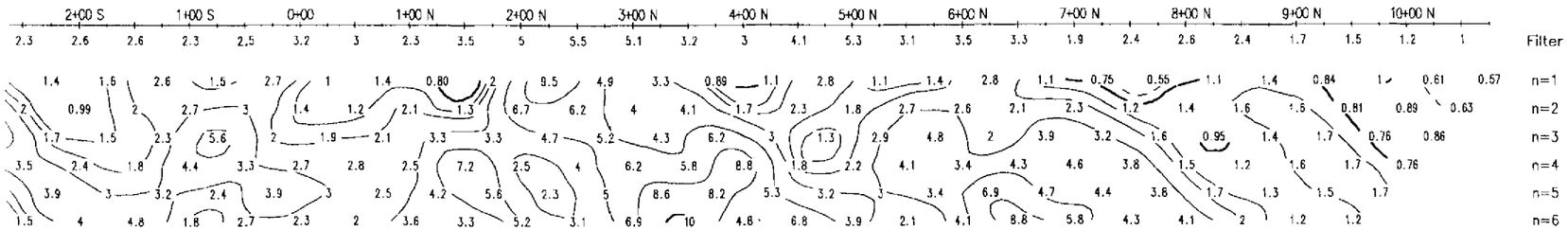


Resistivity
ohm-metres



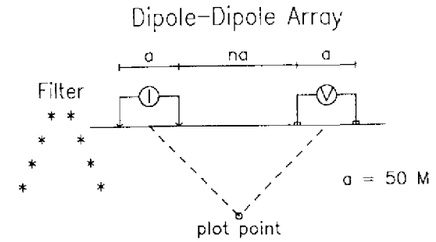
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 3200 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

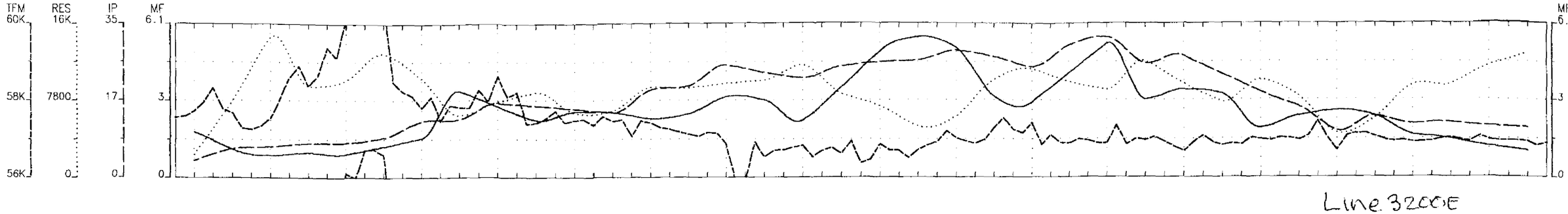
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

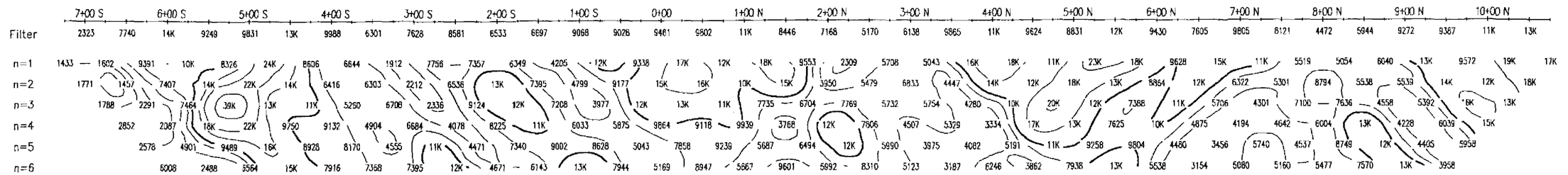
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 3200 E

QUANTEC GEOSCIENCE INC.



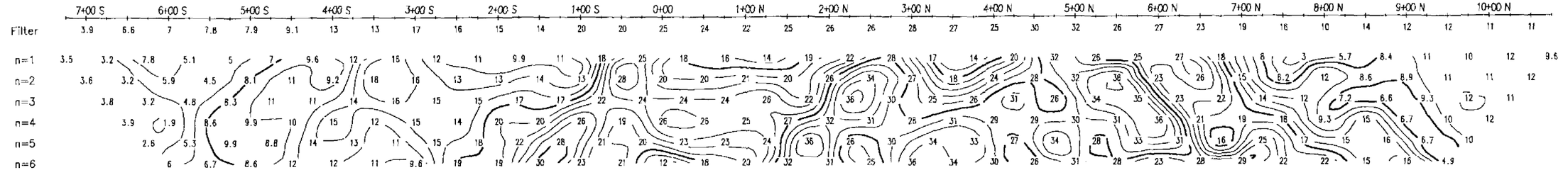
Line 3200E

Resistivity
ohm-metres

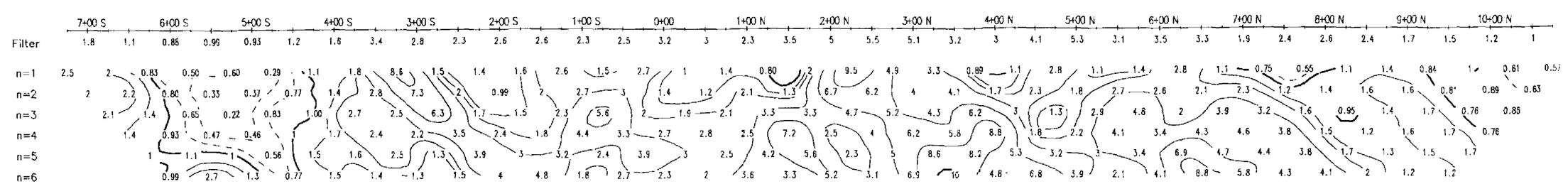


Interpretation
QGI:

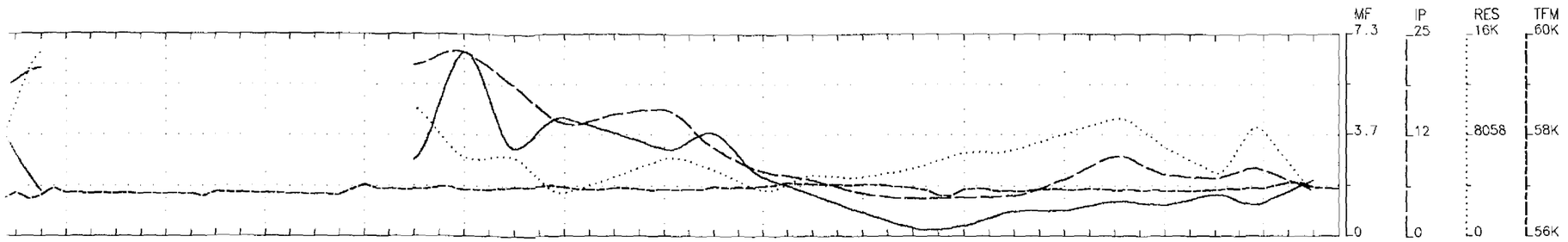
Chargeability
millivolts/volt

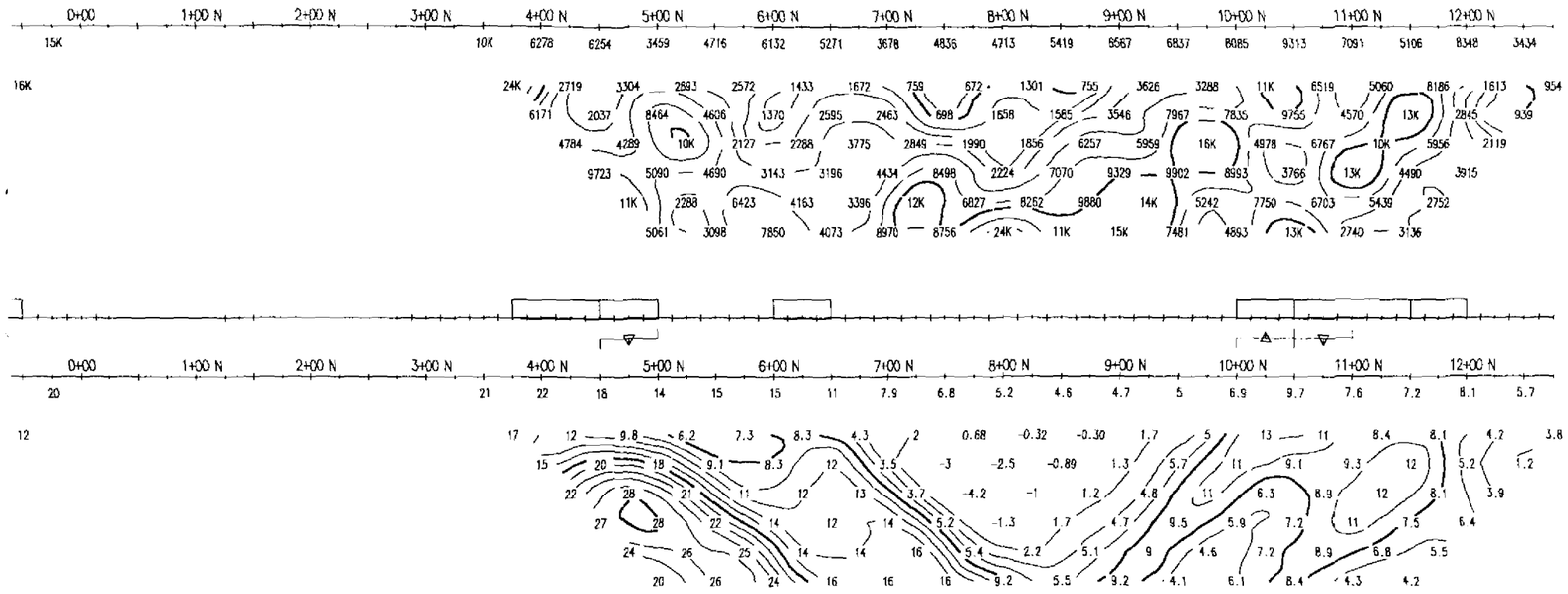


Metal Factor
IP/Resistivity



Geosoft Software for the Earth Sciences





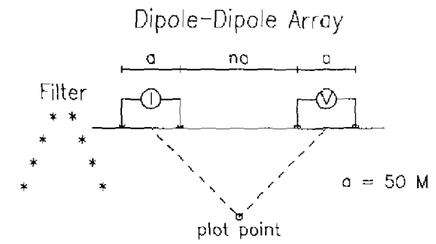
Resistivity
ohm-metres

Interpretation
QGI:

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 3400 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

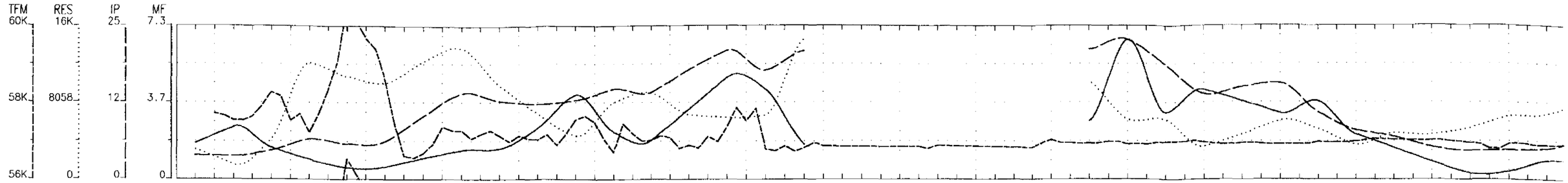
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

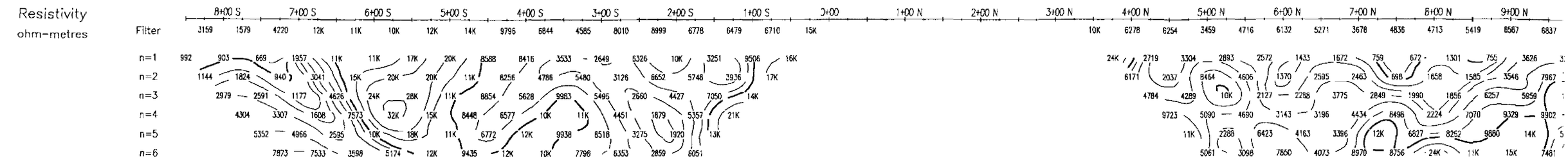
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

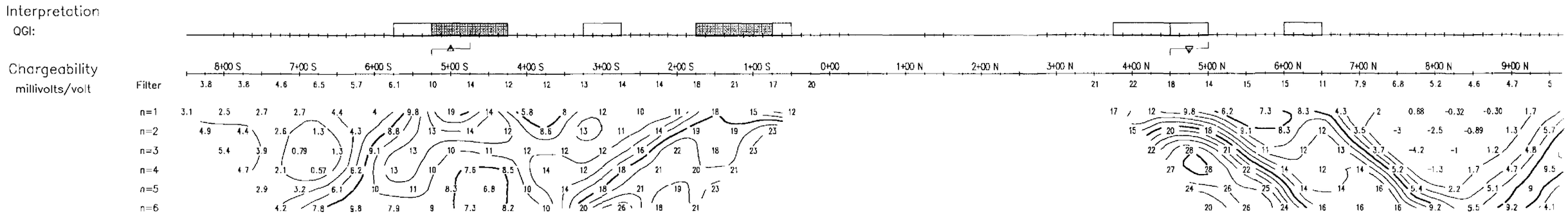
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 3400 E

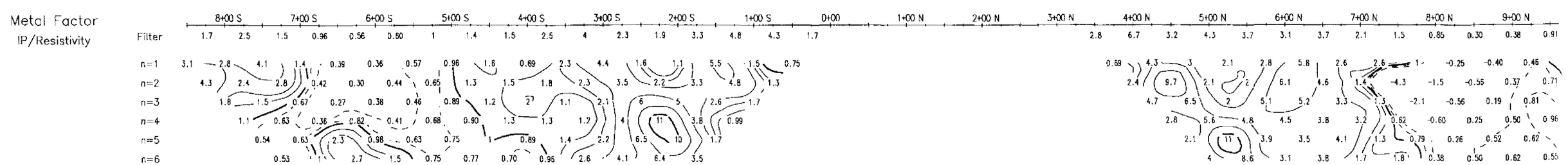
QUANTEC GEOSCIENCE INC.

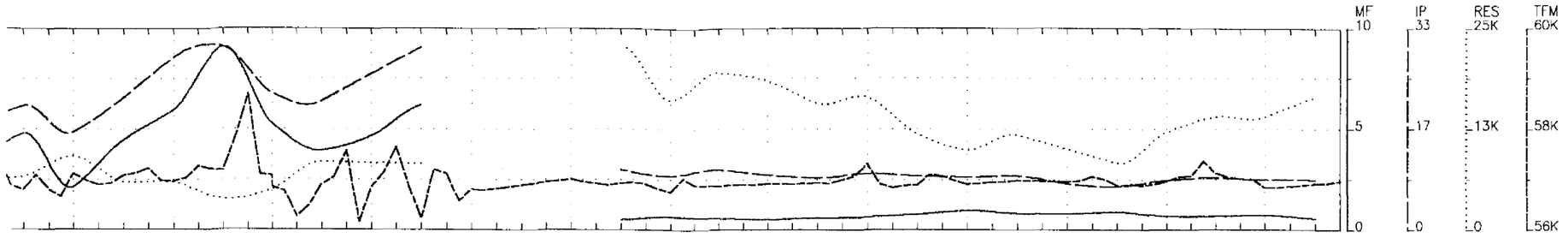


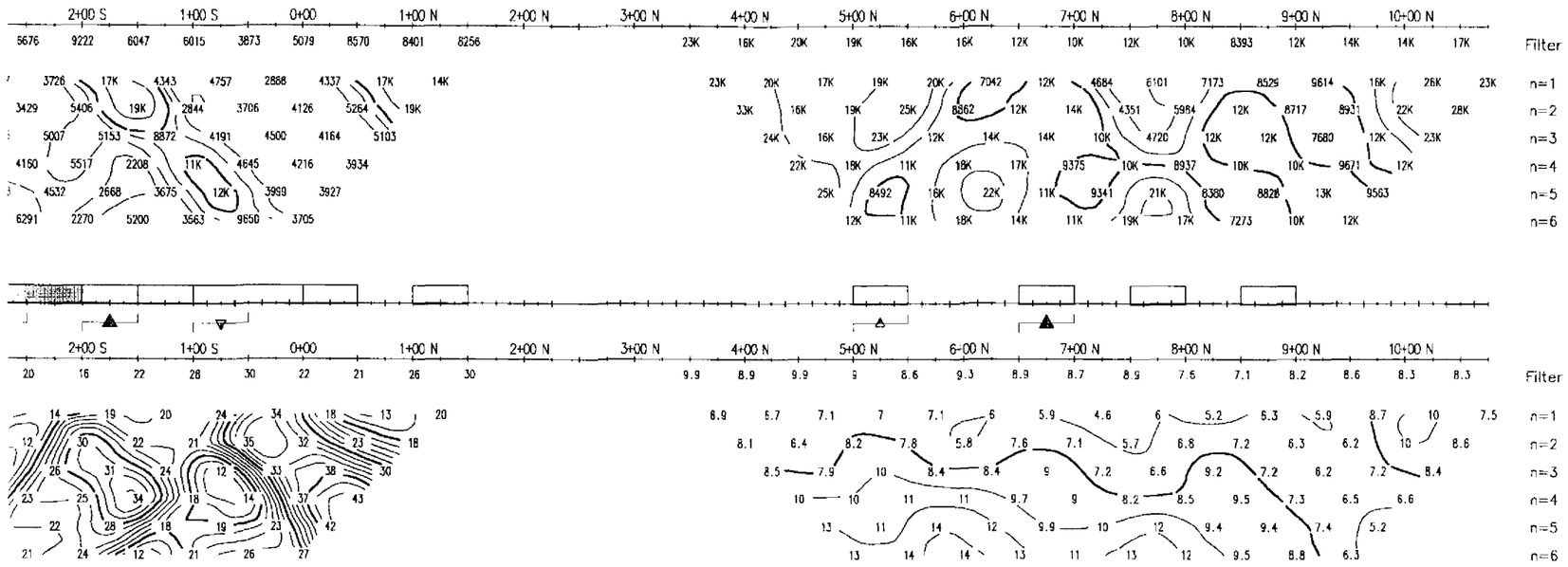
Line 3400 E







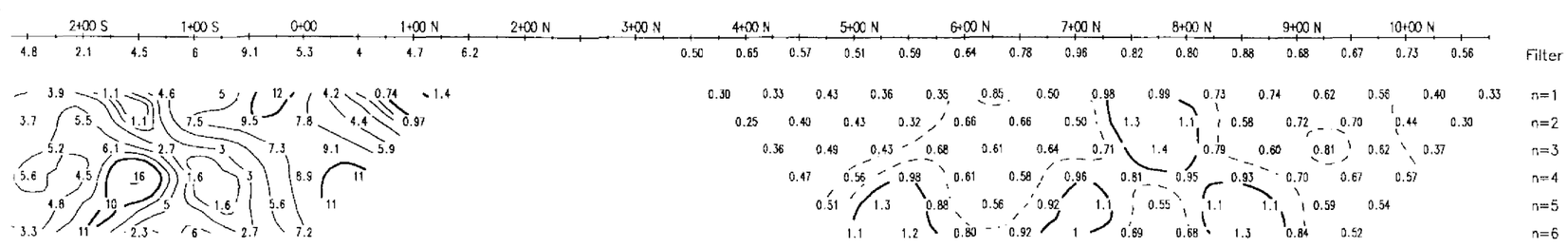




Resistivity
ohm-metres

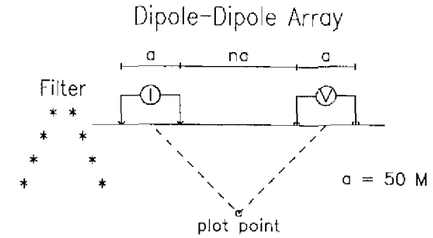
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 3600 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

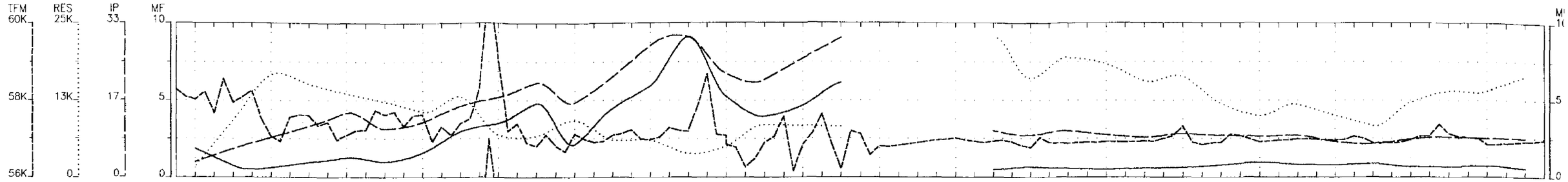
50 0 50 100 150 200 250 300
(meters)

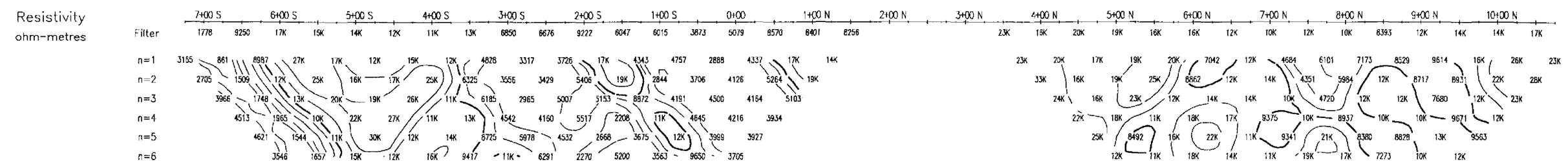
MUSTANG MINERALS CORPORATION

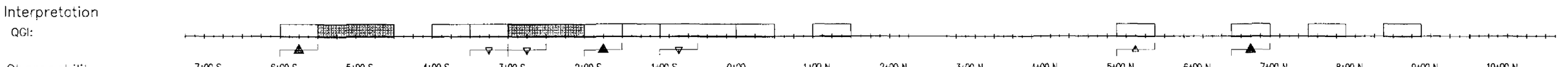
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

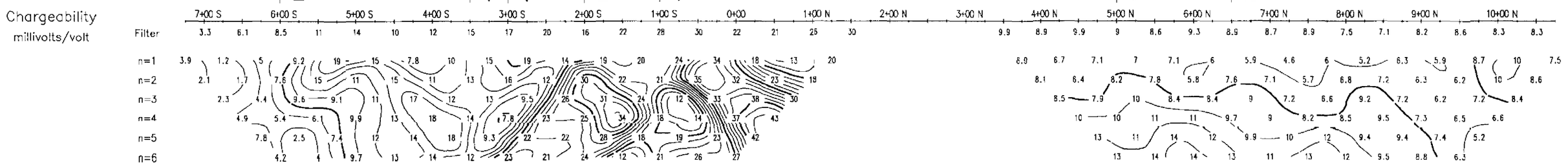
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 3600 E

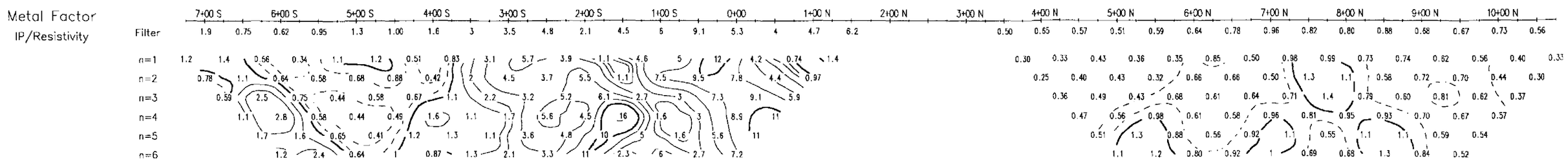
QUANTEC GEOSCIENCE INC.



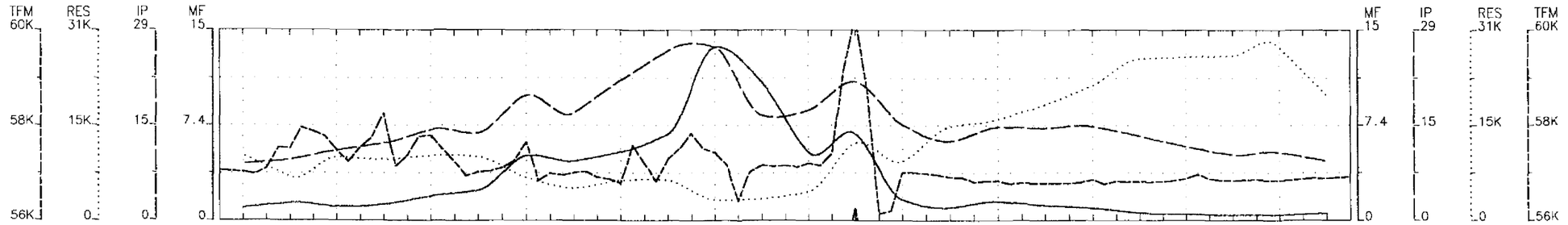




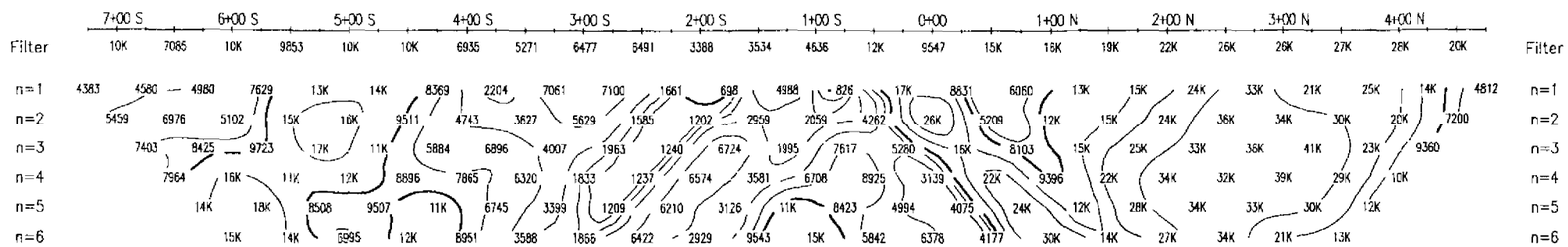




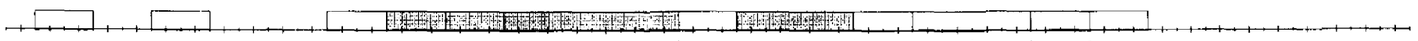
41I09NE2010 2.20381 MCWILLIAMS 500



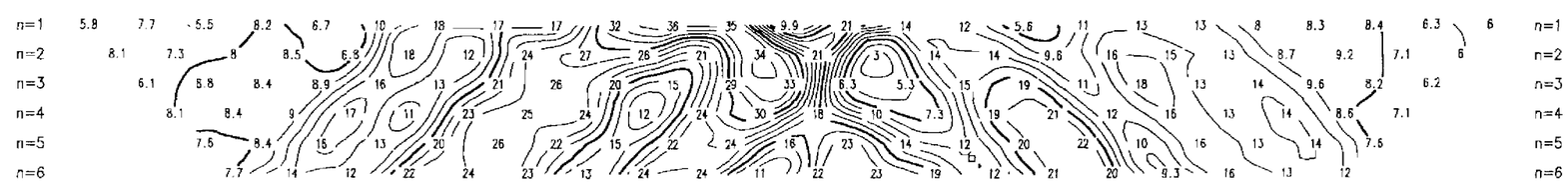
Resistivity
ohm-metres



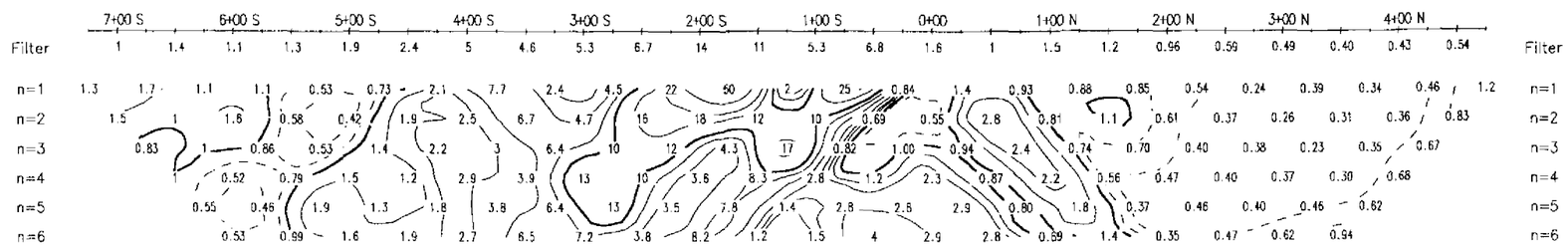
Interpretation
QGI:



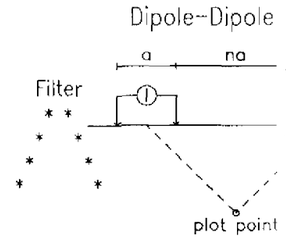
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity



Line 3800 E



Strong increase in polariz

Well defined increase in p

Poorly defined polarization

Low resistivity feature
▼ ▼ ▽ Strong, Moderate, Weak

High resistivity feature
▲ ▲ △ Strong, Moderate, Weak

SURVEY SPECIFICATION

Instruments: IRIS IP-10, Phoenix I
Operators: R. Chasse, D. MacG
Waveform: 0.125 Hz, 50% duty
Decay Sampling: 20 windows, 20 - 18

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2

Scale 1:5000

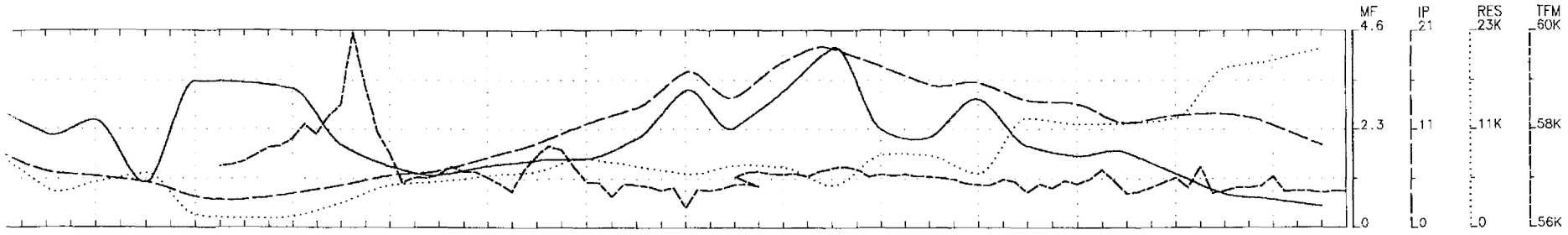
50 0 50 100 150 20
(meters)

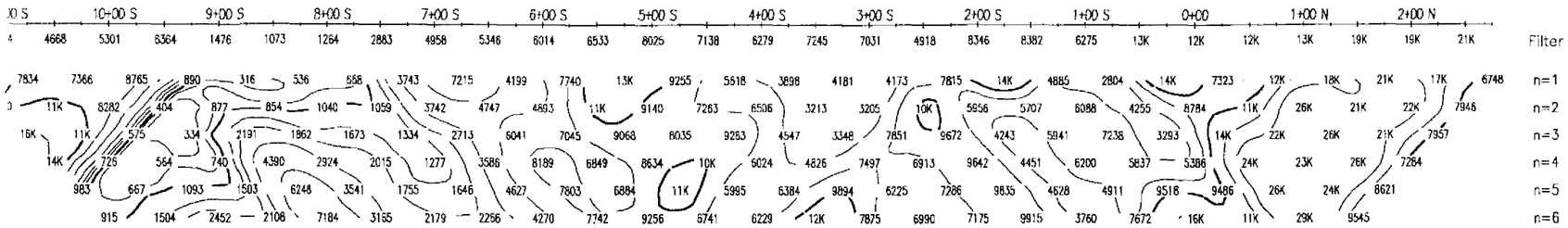
MUSTANG MINERALS COR

INDUCED POLARIZATION
RIVER VALLEY PGM PF
North Grid, McWilliams & Da

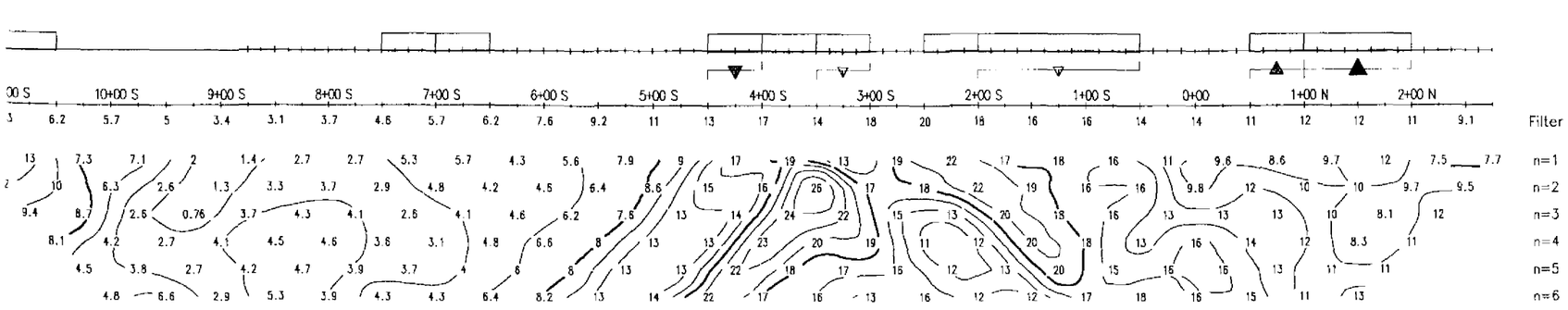
Processing Date: 00/0
Drawing Number: QG-112-IP-DD

QUANTEC GEOSCIENC



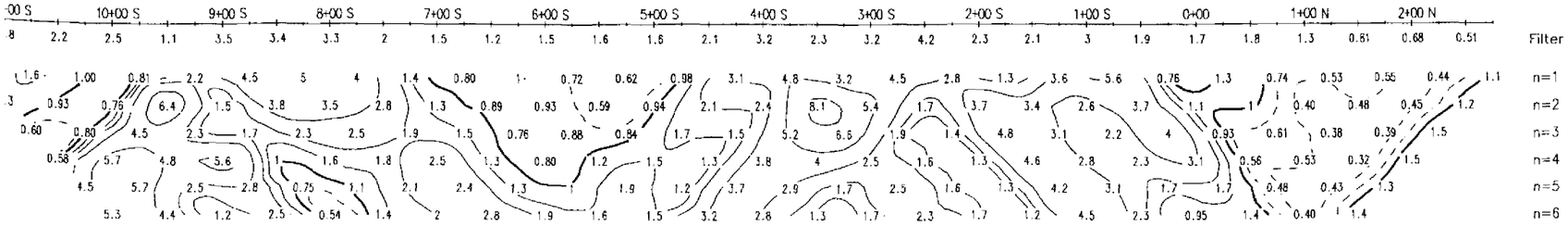


Resistivity
ohm-metres



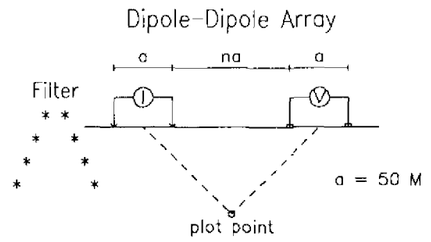
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 4200 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature
Strong, Moderate, Weak

High resistivity feature
Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

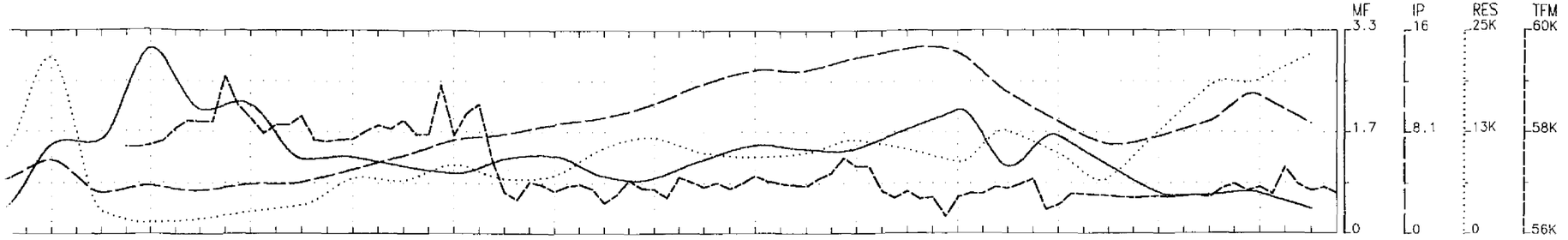
50 0 50 100 150 200 250 300
(meters)

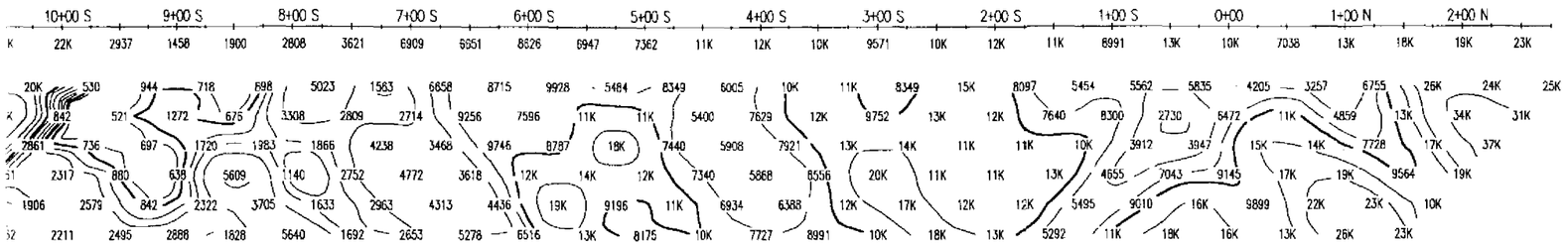
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

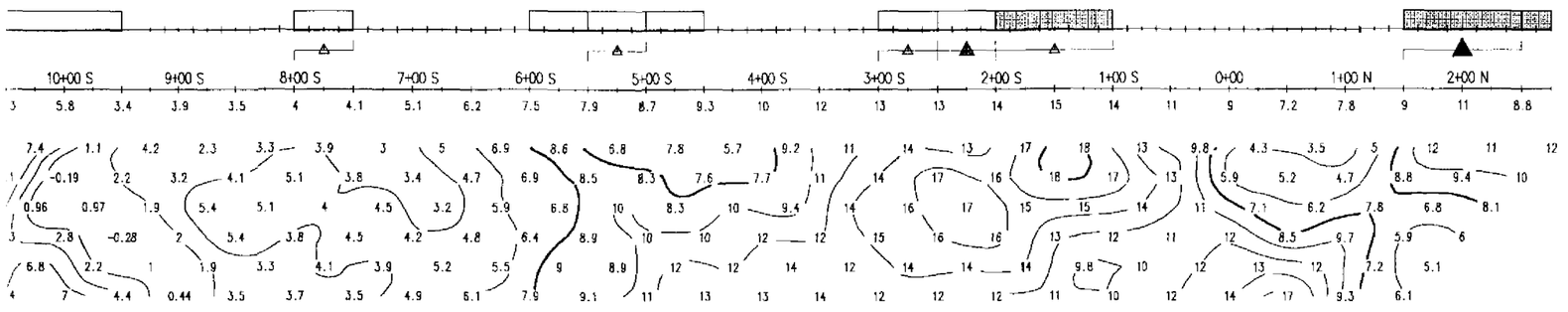
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 4200 E

QUANTEC GEOSCIENCE INC.



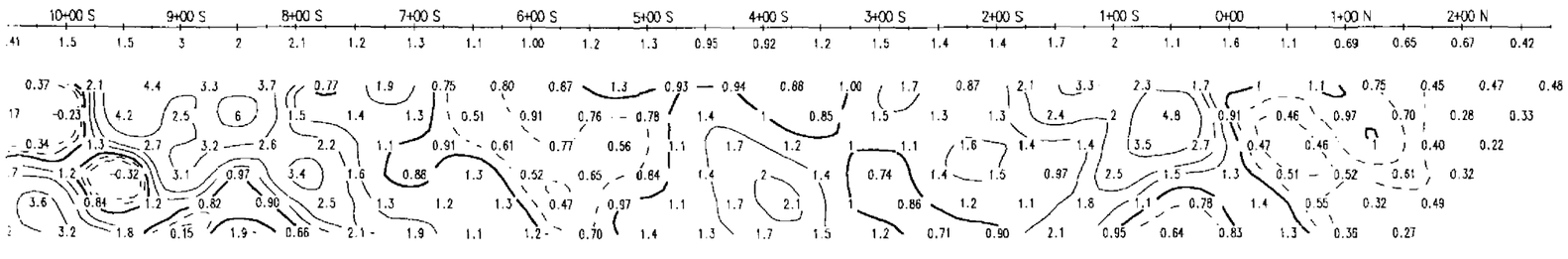


Resistivity
ohm-metres



Interpretation
QGI:

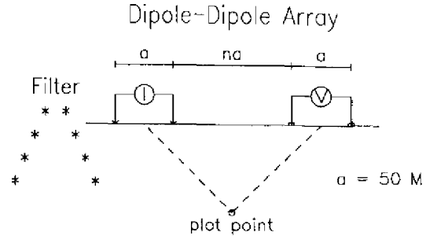
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 4400 E

Dipole-Dipole Array



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- Low resistivity feature Strong, Moderate, Weak
- High resistivity feature Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

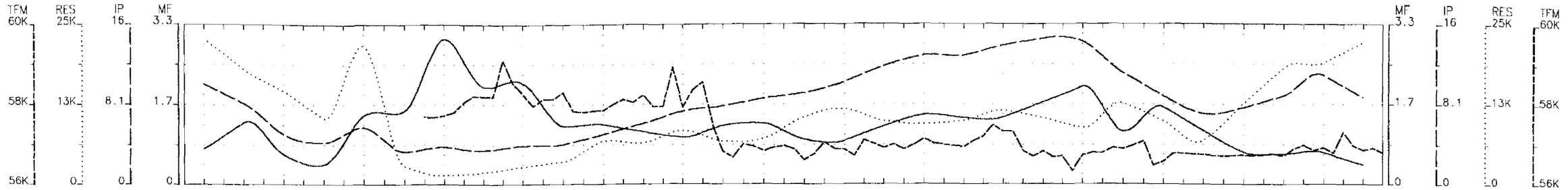
50 0 50 100 150 200 250 300
(meters)

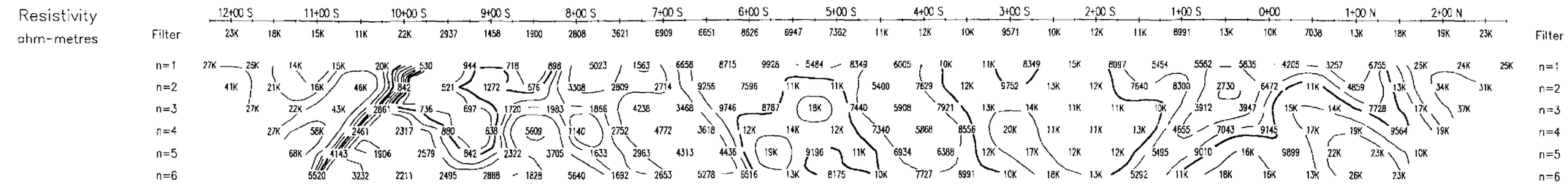
MUSTANG MINERALS CORPORATION

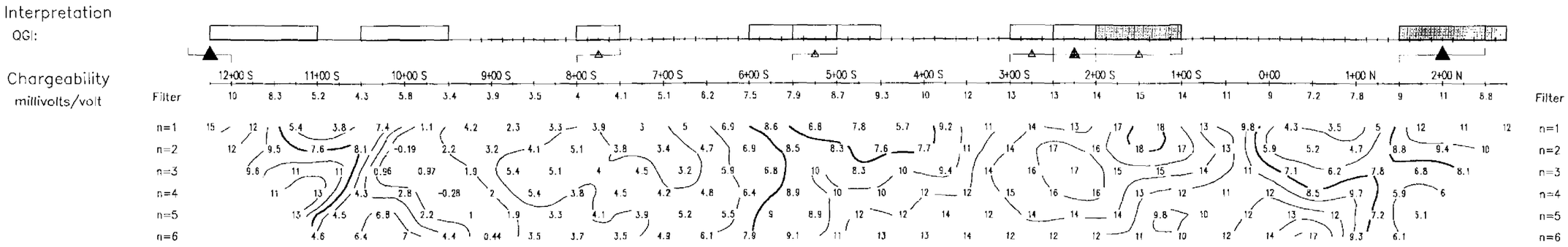
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

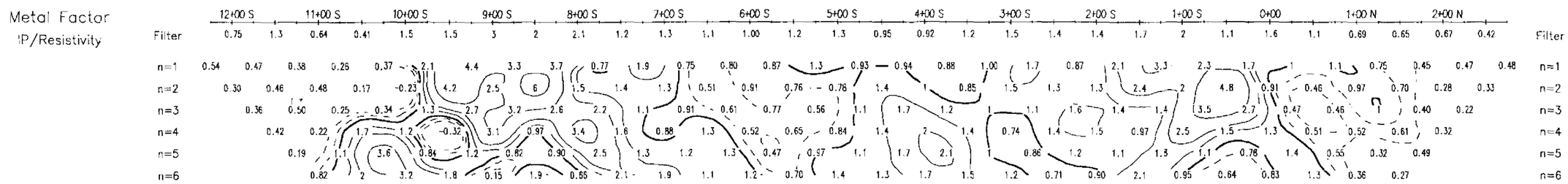
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 4400 E

QUANTEC GEOSCIENCE INC.

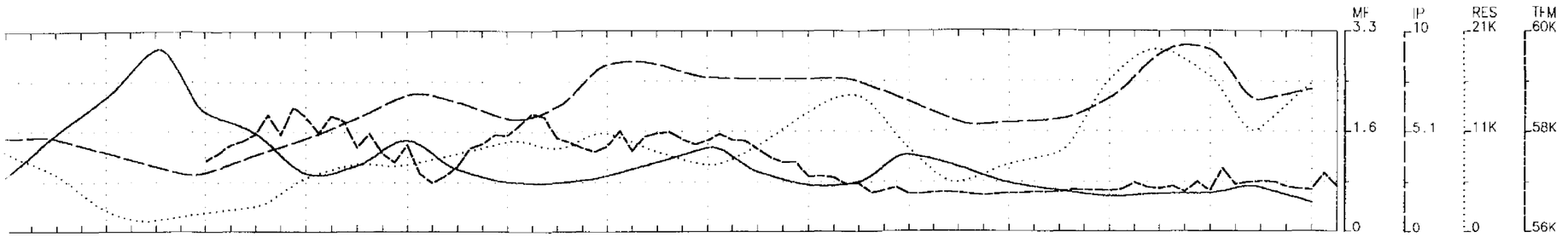


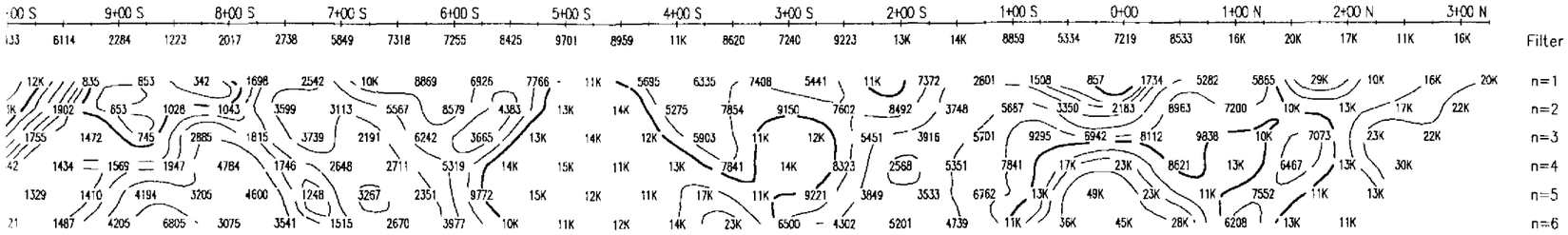




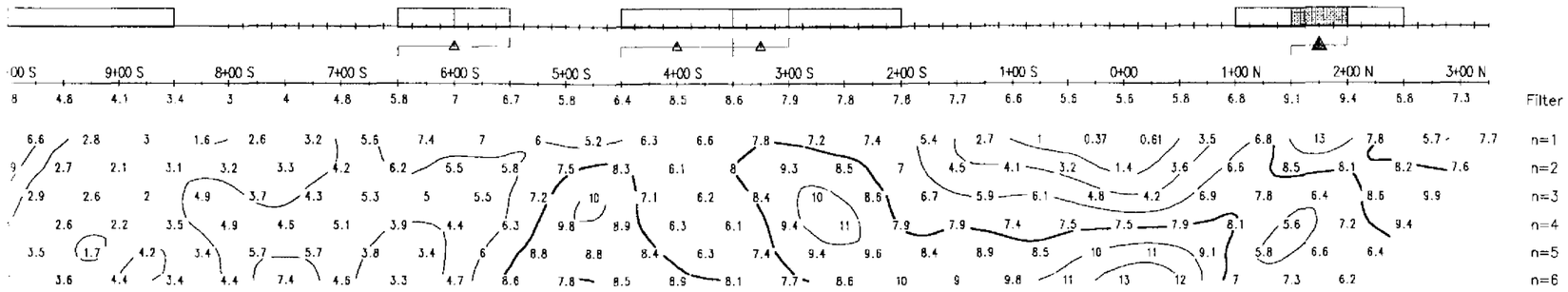


Resistivity
ohm-metres
Filter
Interpretation
QGI:
Chargeability
millivolts/volt
Metal Factor
IP/Resistivity



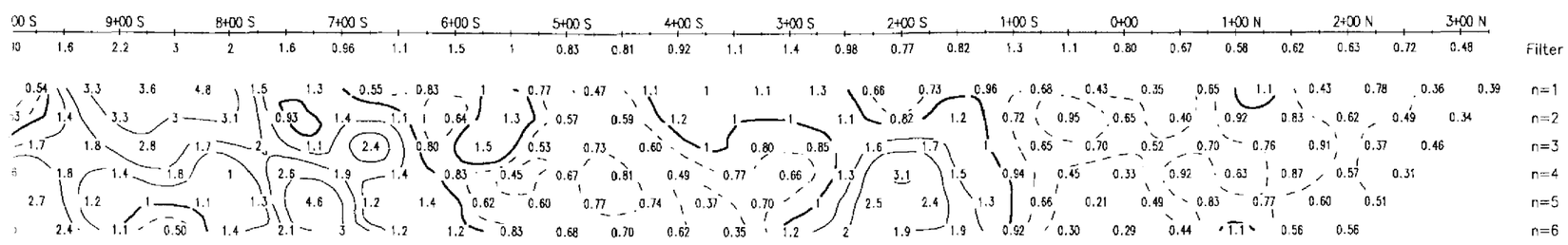


Resistivity
ohm-metres



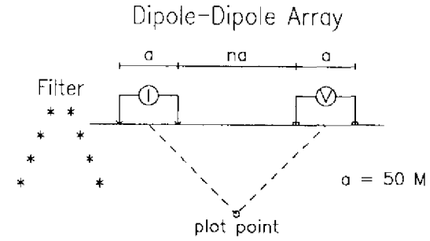
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 4600 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature
Strong, Moderate, Weak

High resistivity feature
Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

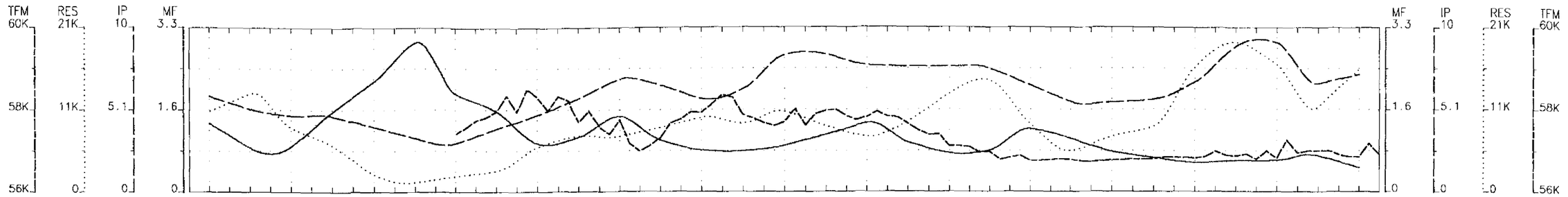
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

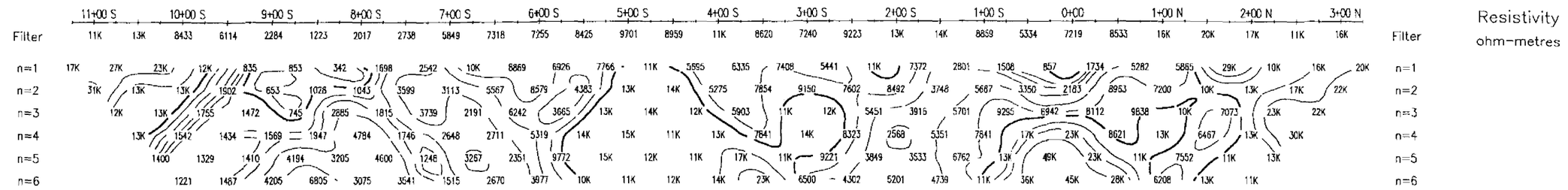
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 4600 E

QUANTEC GEOSCIENCE INC.

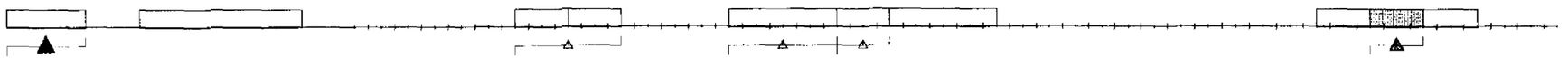


Resistivity
ohm-metres

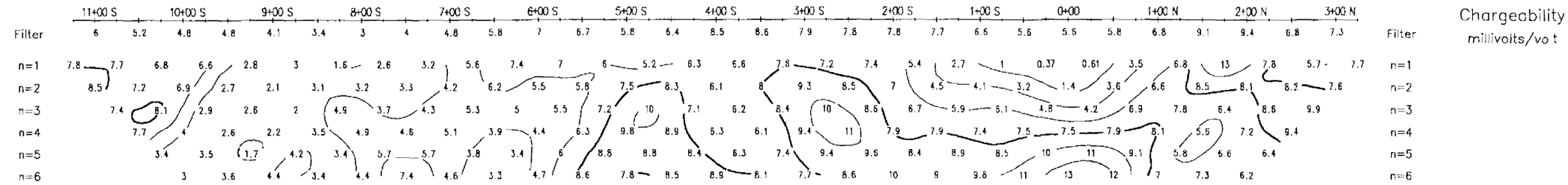


Resistivity
ohm-metres

Interpretation
QGI:

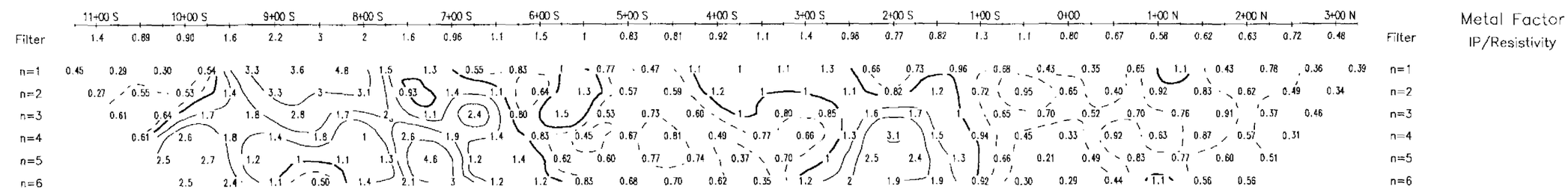


Chargeability
millivolts/volt

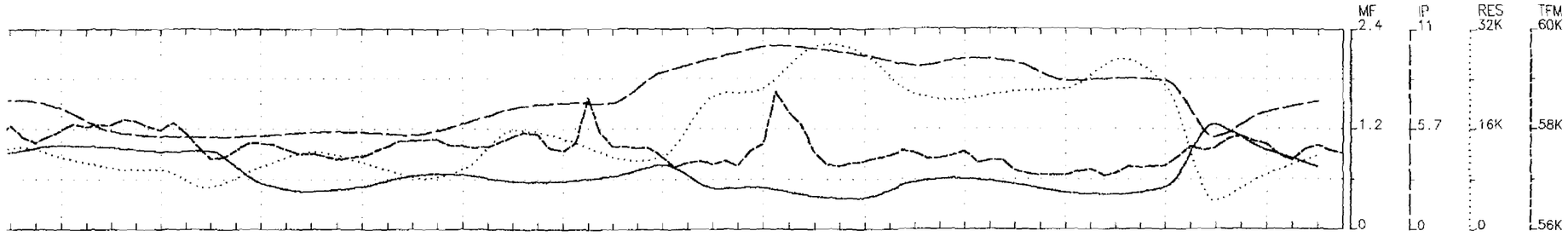


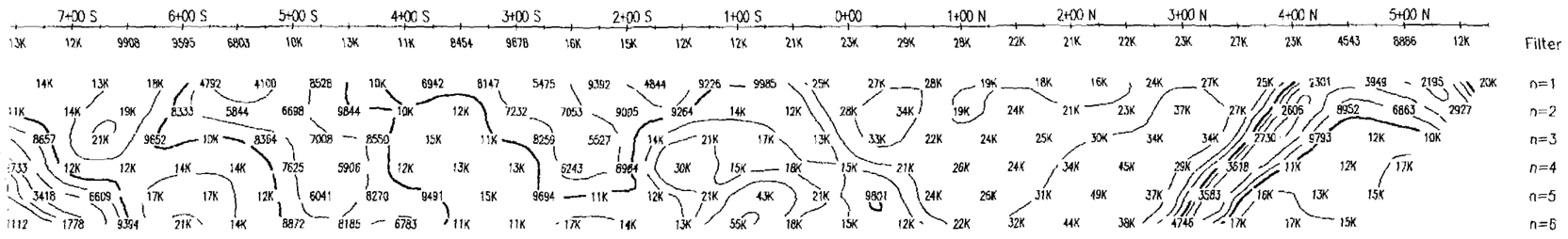
Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

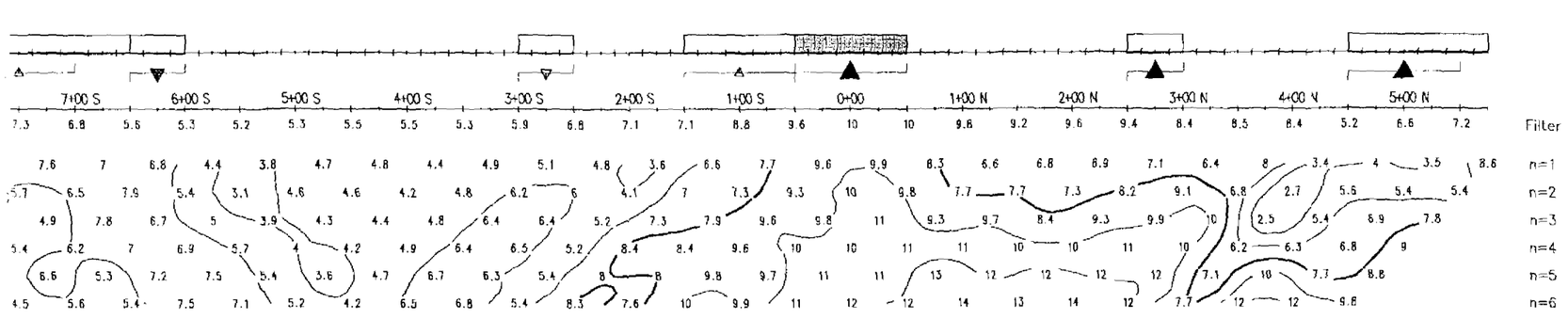


Metal Factor
IP/Resistivity



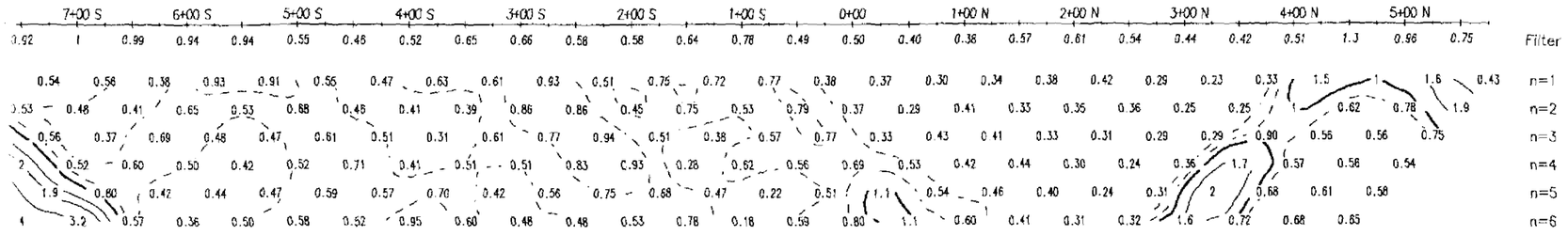


Resistivity
ohm-metres



Interpretation
QGI:

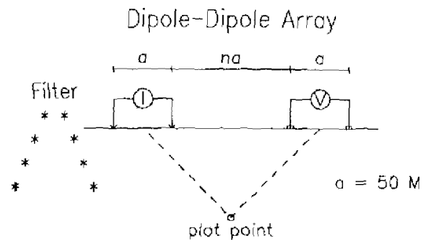
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 4800 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature. Strong, Moderate, Weak

High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

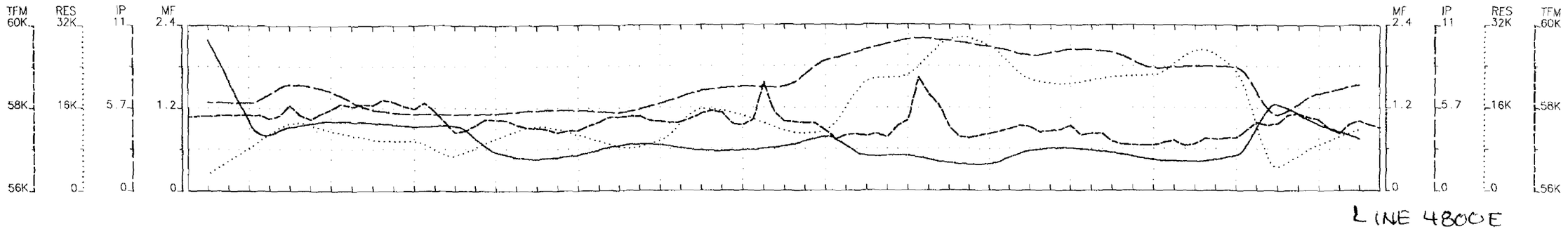
50 0 50 100 150 200 250 300
(meters)

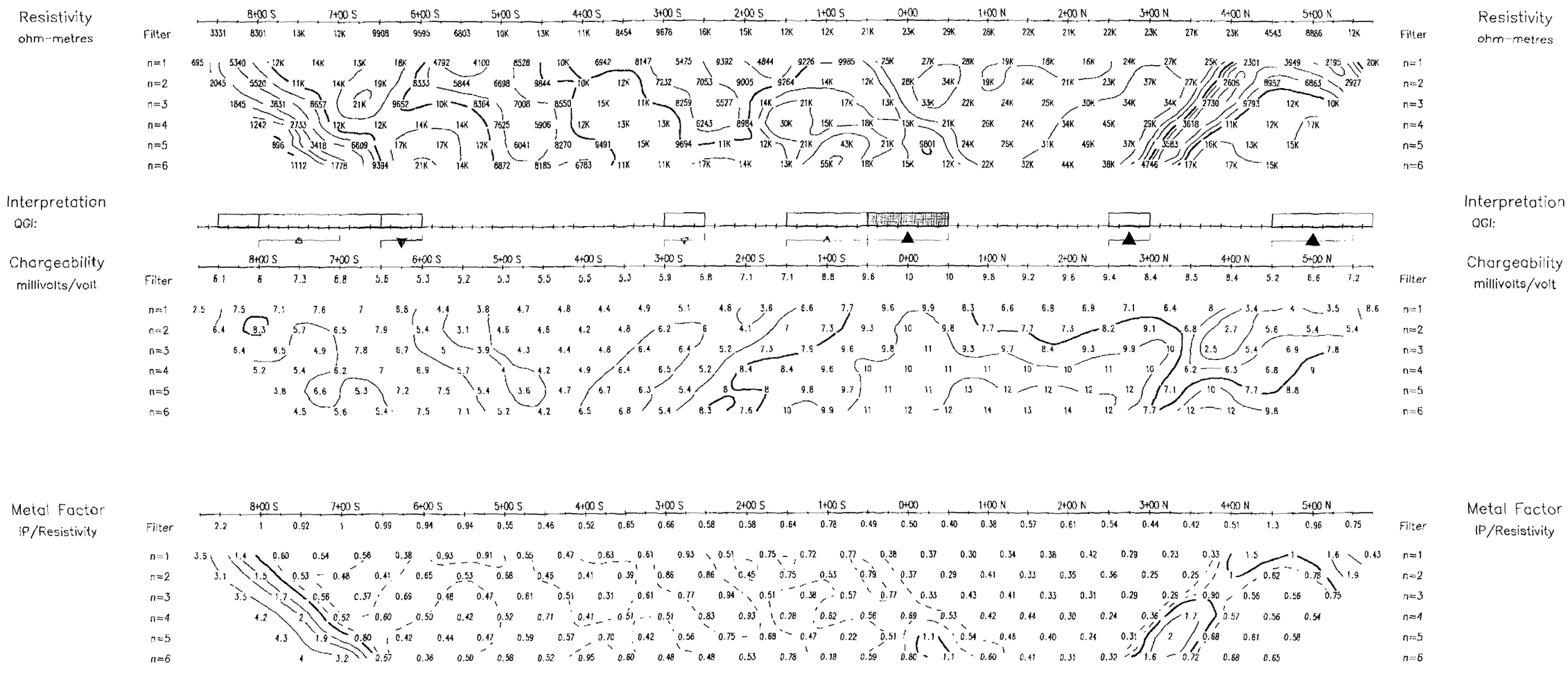
MUSTANG MINERALS CORPORATION

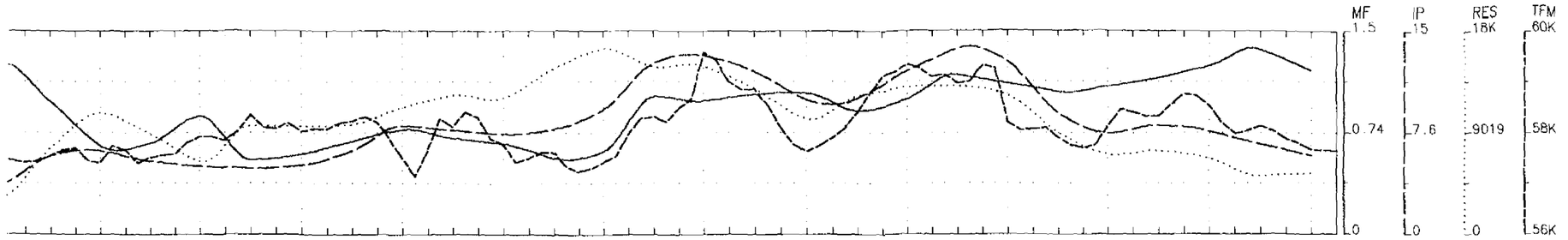
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

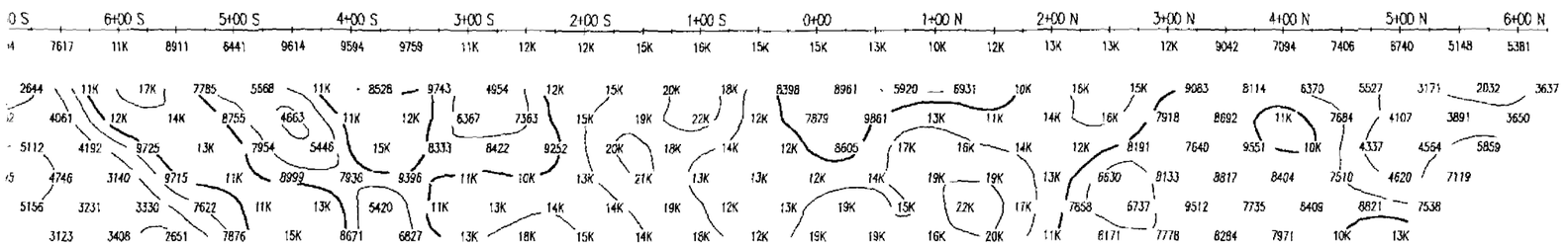
Processing Date: 00/06/04
Drawing Number: QG-112-IP-DD-Line 4800 E

QUANTEC GEOSCIENCE INC.

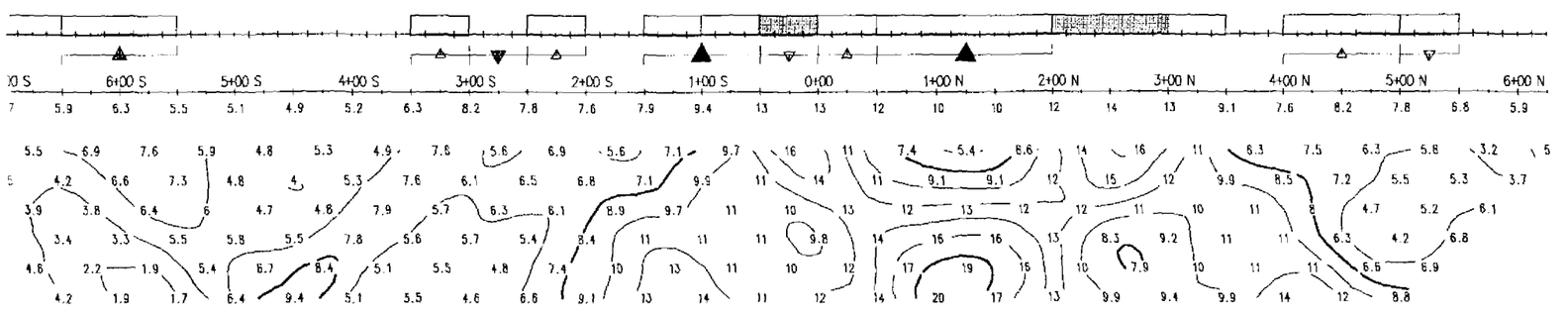






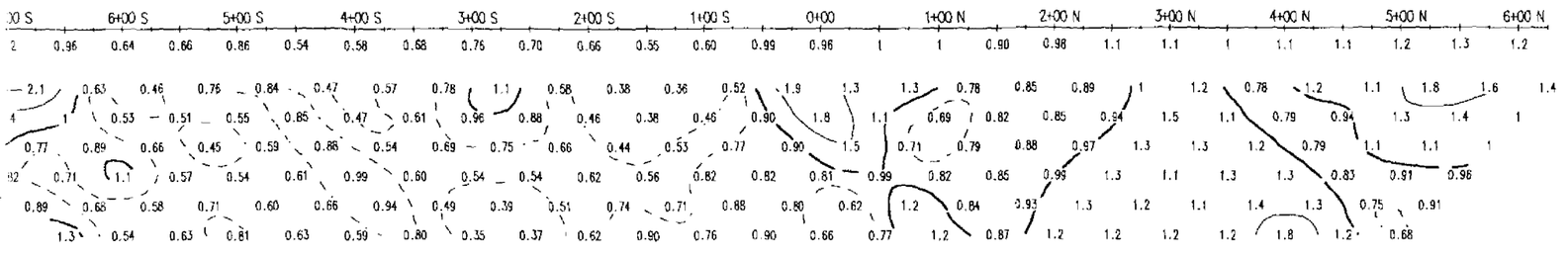


Resistivity
ohm-metres



Interpretation
QGI:

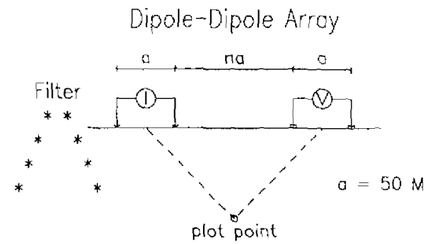
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 5000 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300

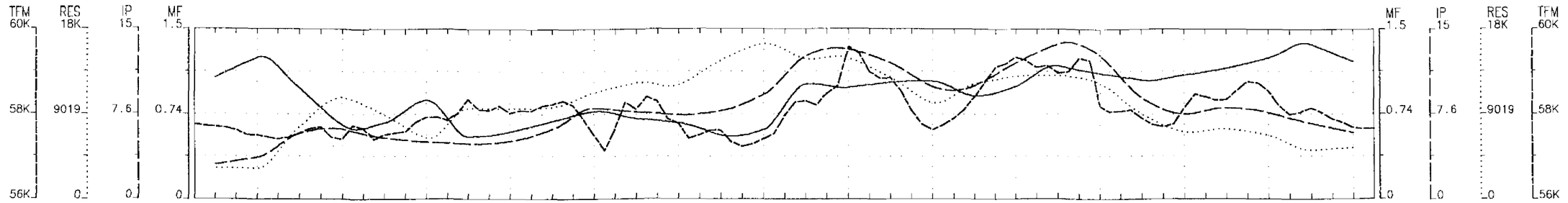
(meters)

MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
North Grid, McWilliams & Dana Twps., ON

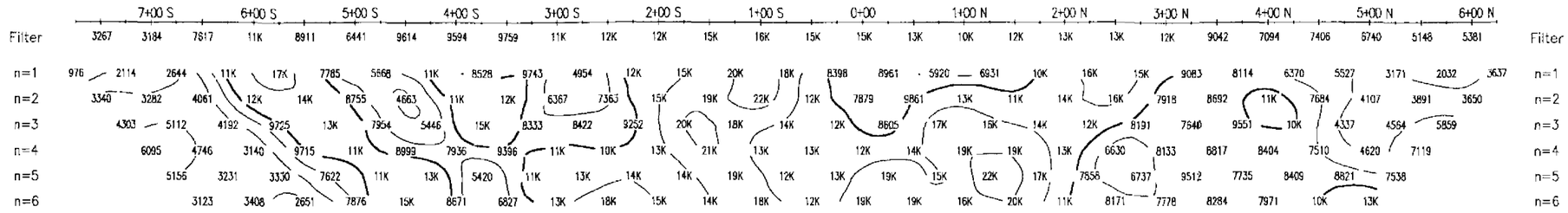
Processing Date: 00/06/04
Drawing Number: QG-112-IP-00-Line 5000 E

QUANTEC GEOSCIENCE INC.



LINE 5000E

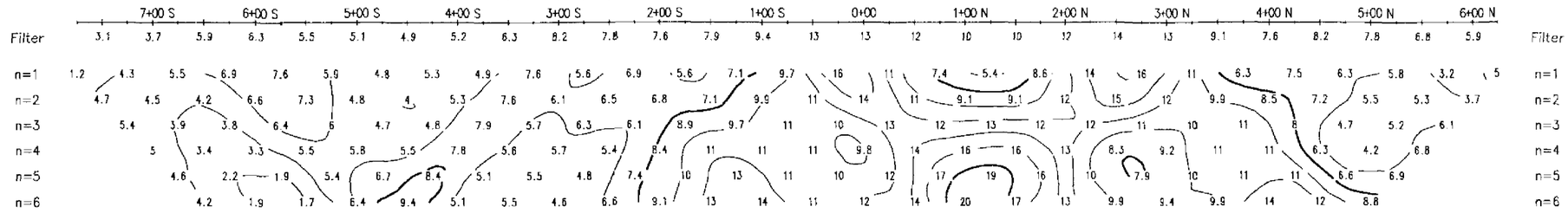
Resistivity
ohm-metres



Resistivity
ohm-metres

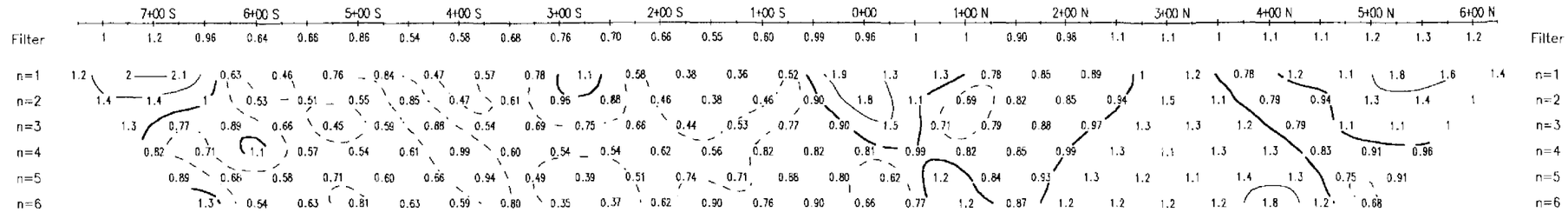
Interpretation
QGI:

Chargeability
millivolts/volt



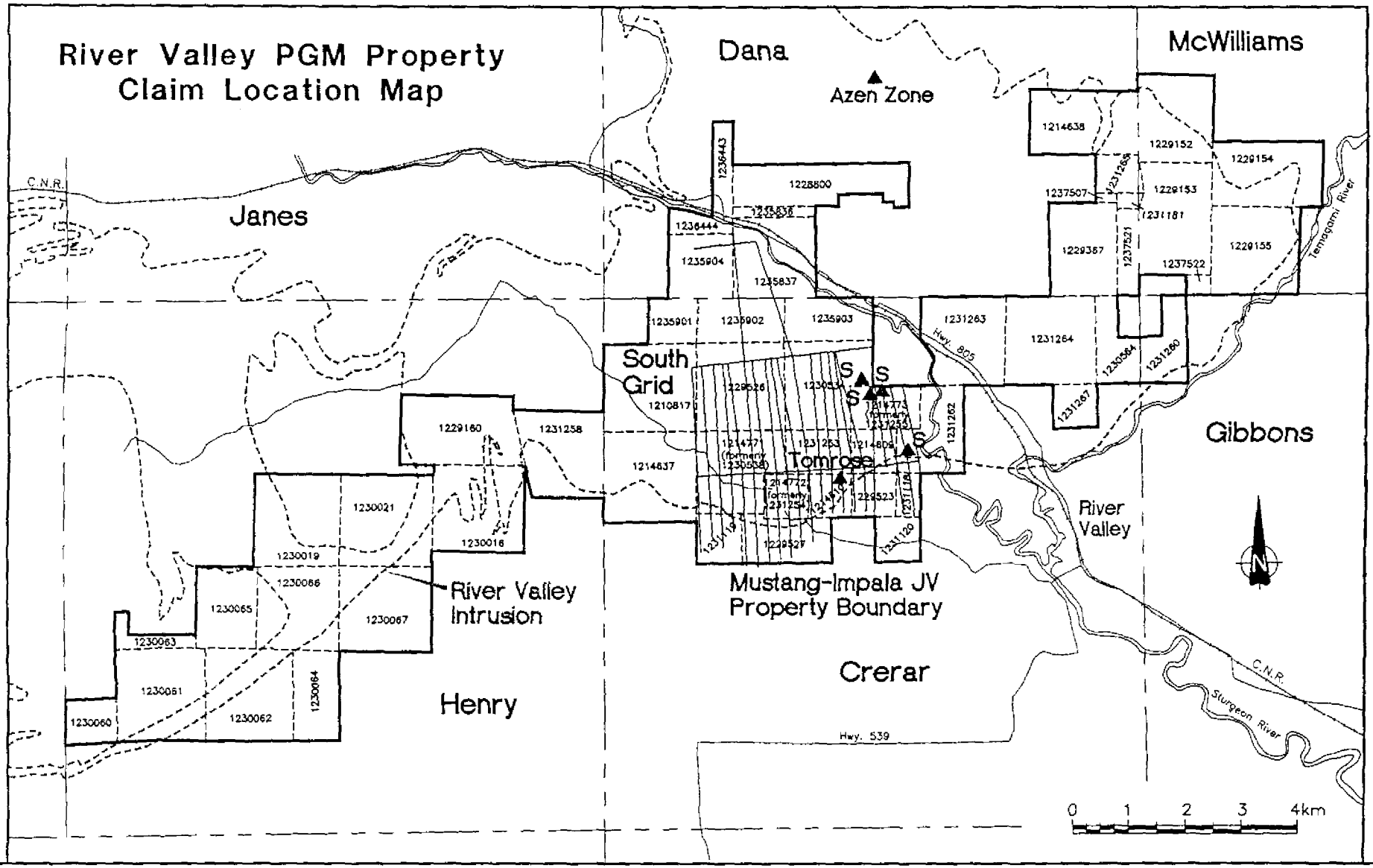
Chargeability
millivolts/volt

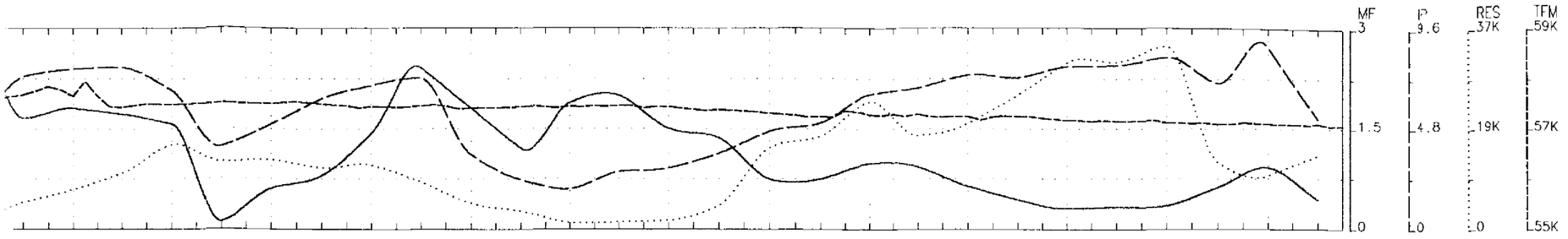
Metal Factor
IP/Resistivity

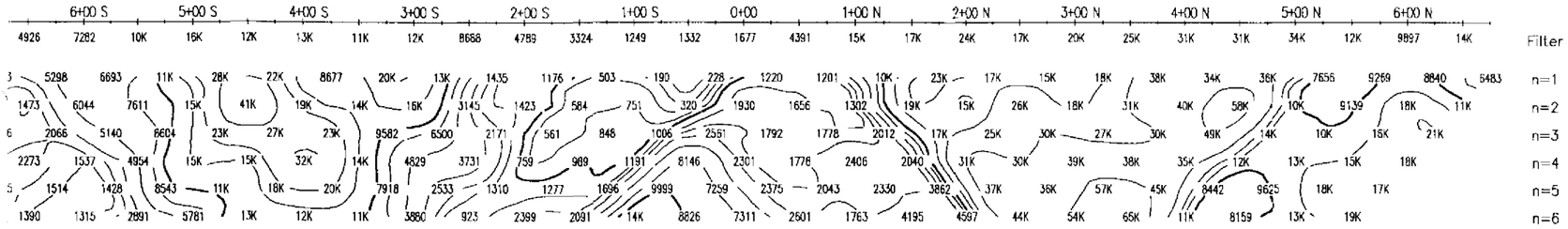


Metal Factor
IP/Resistivity

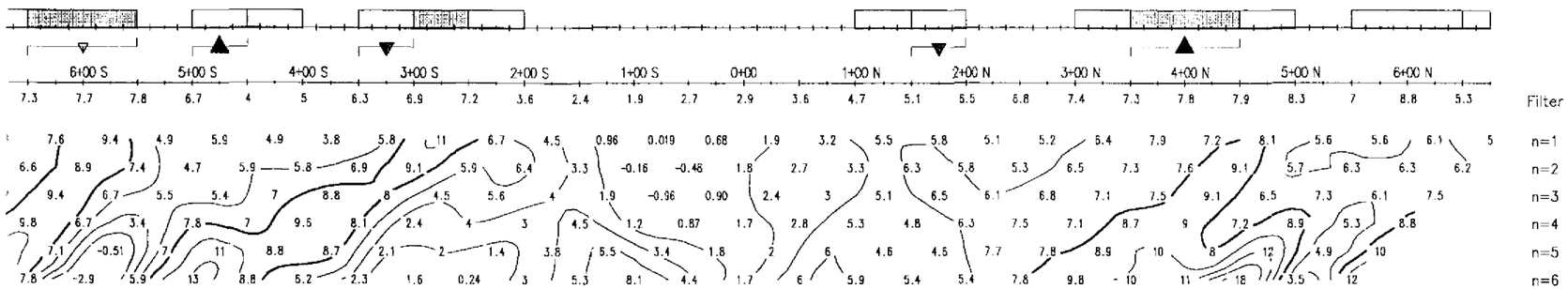
Geosoft Software for the Earth Sciences





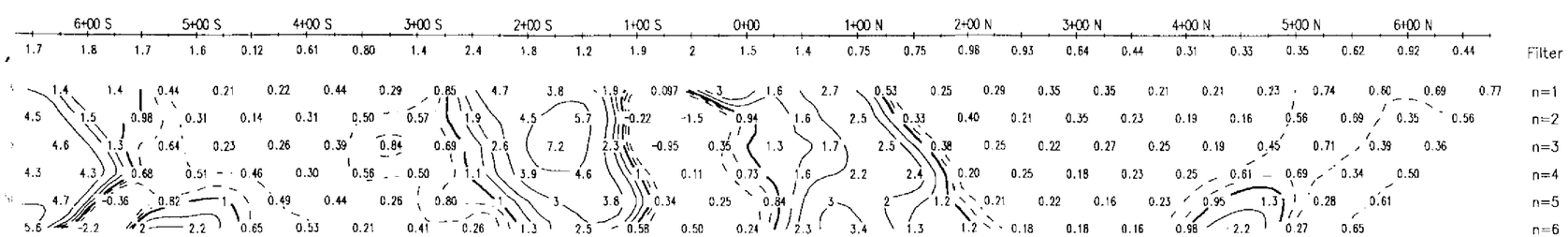


Resistivity
ohm-metres



Interpretation
QGI:

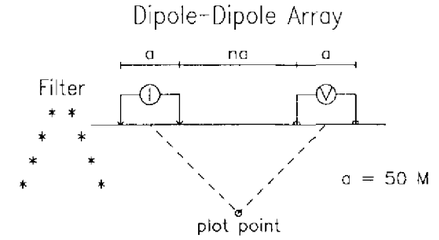
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 0

Dipole-Dipole Array



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

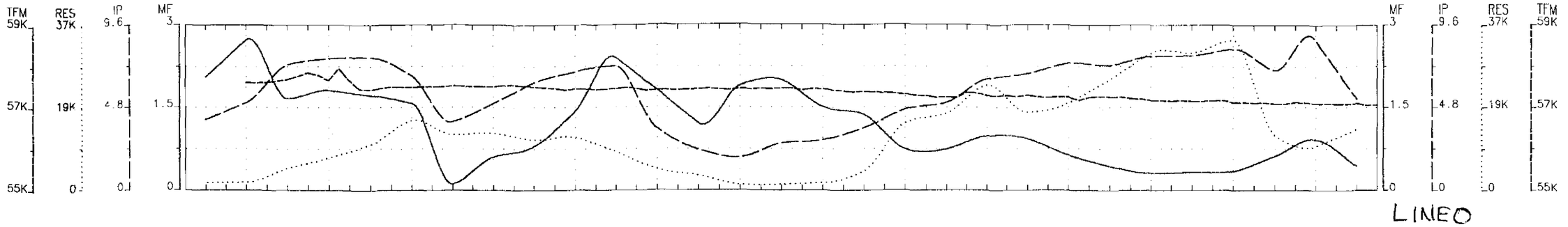
50 0 50 100 150 200 250 300
(meters)

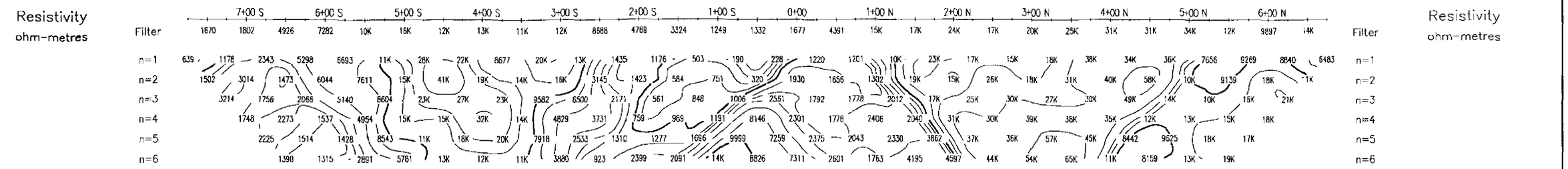
MUSTANG MINERALS CORPORATION

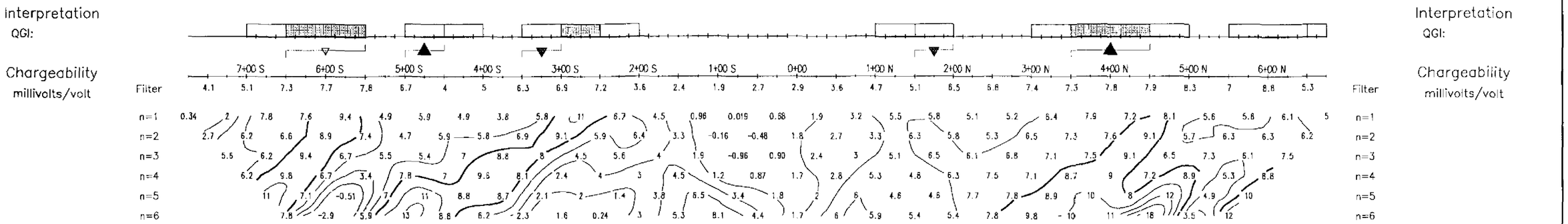
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

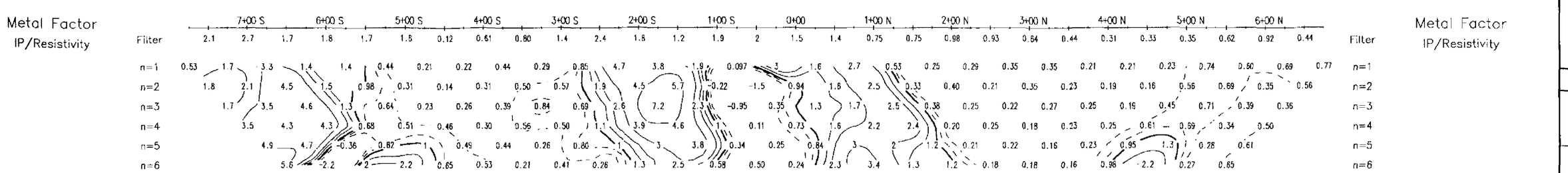
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 0

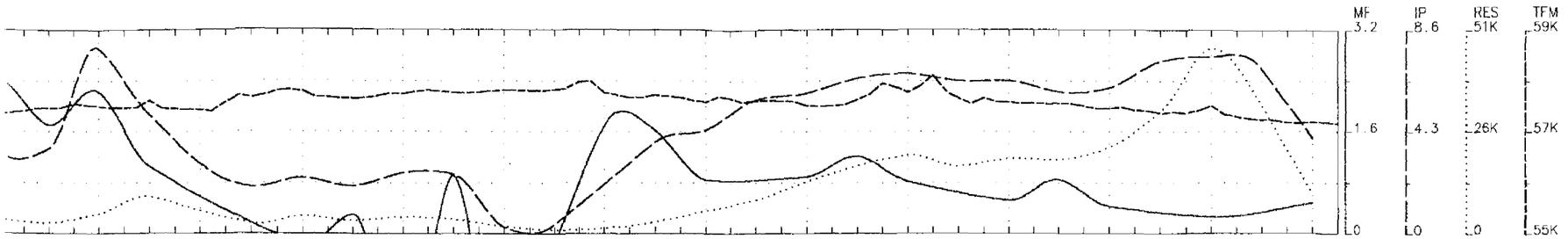
QUANTEC GEOSCIENCE INC.

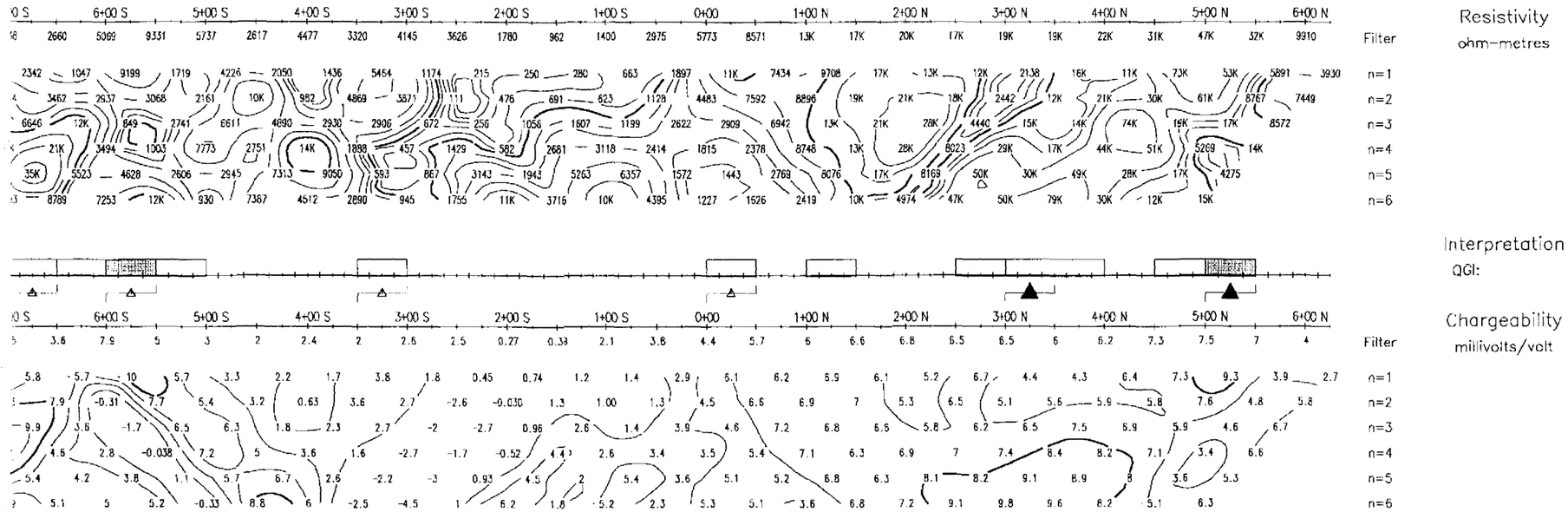


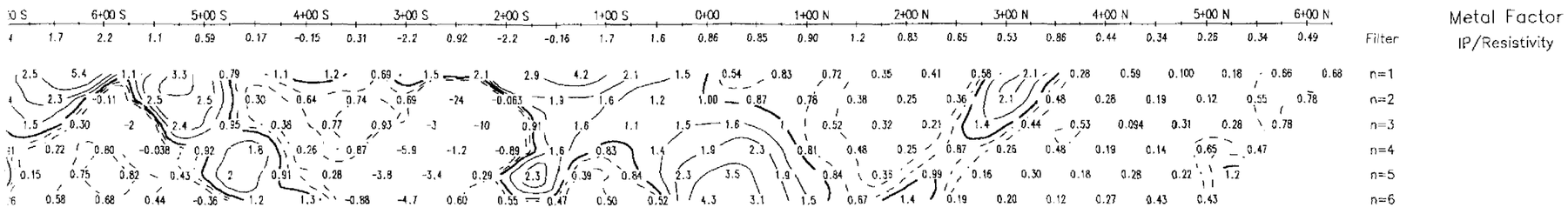






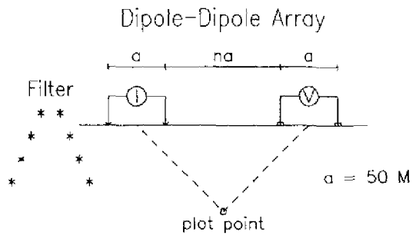






Interpretation
QGI:

Line 200 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

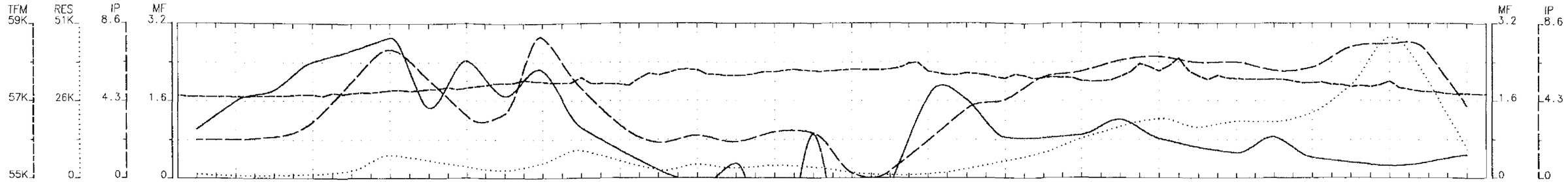
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

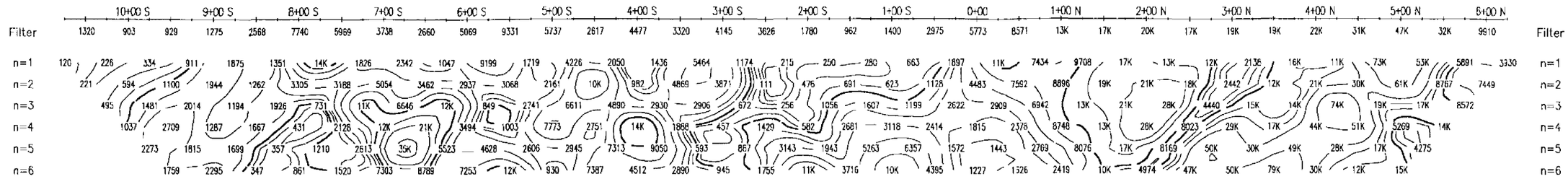
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 200 E

QUANTEC GEOSCIENCE INC.



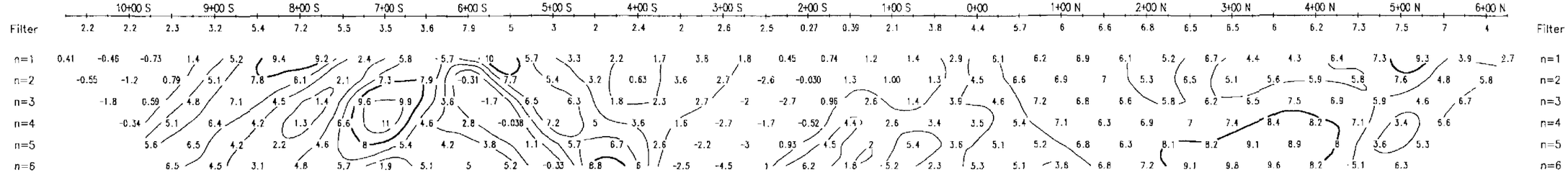
LINE 2006

Resistivity
ohm-metres

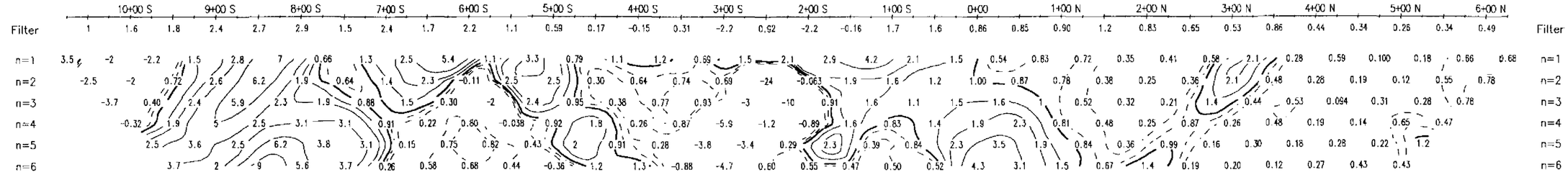


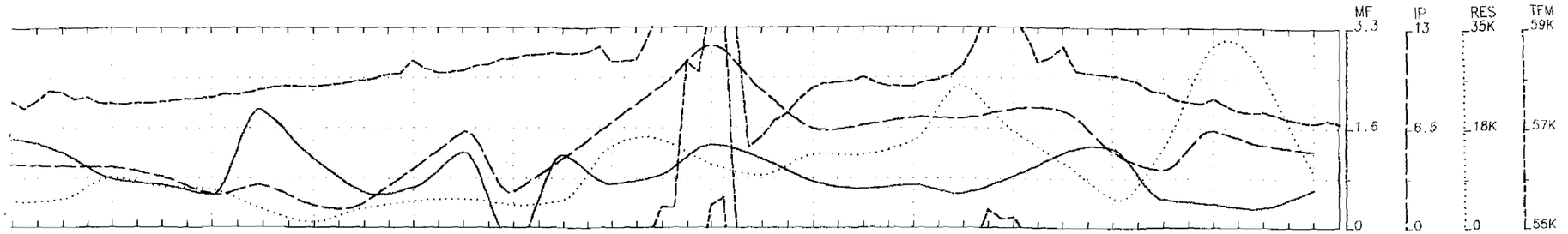
Interpretation
QGI:

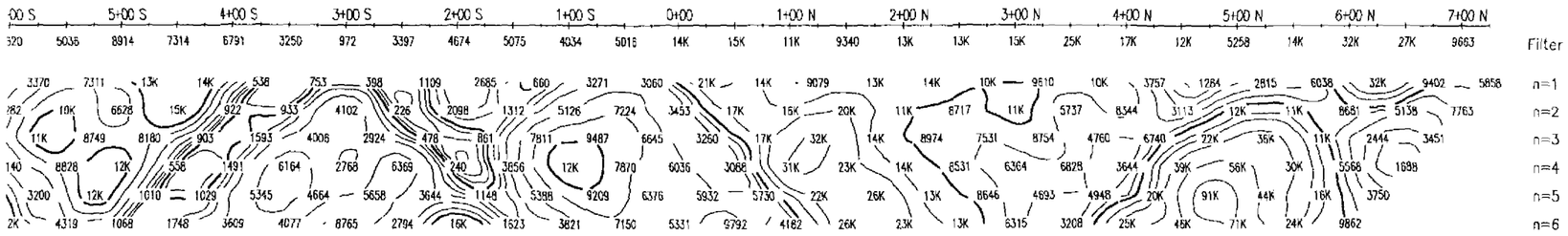
Chargeability
millivolts/volt



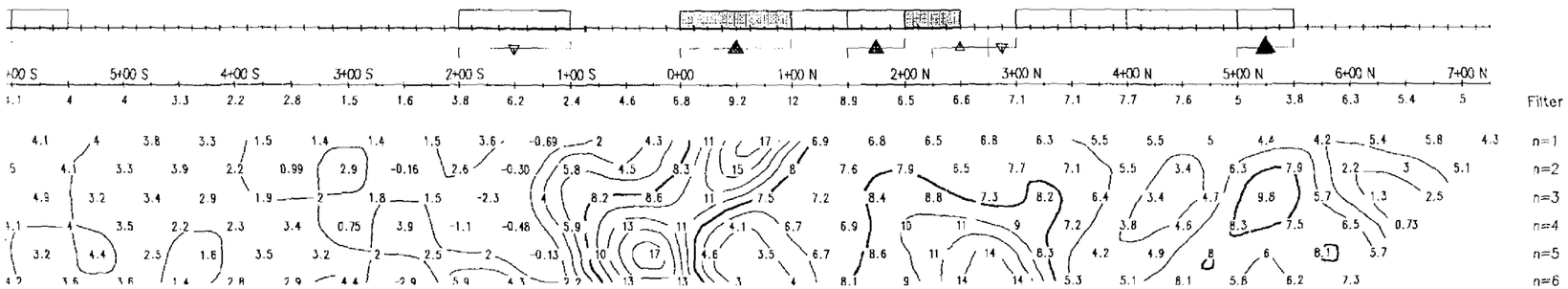
Metal Factor
IP/Resistivity



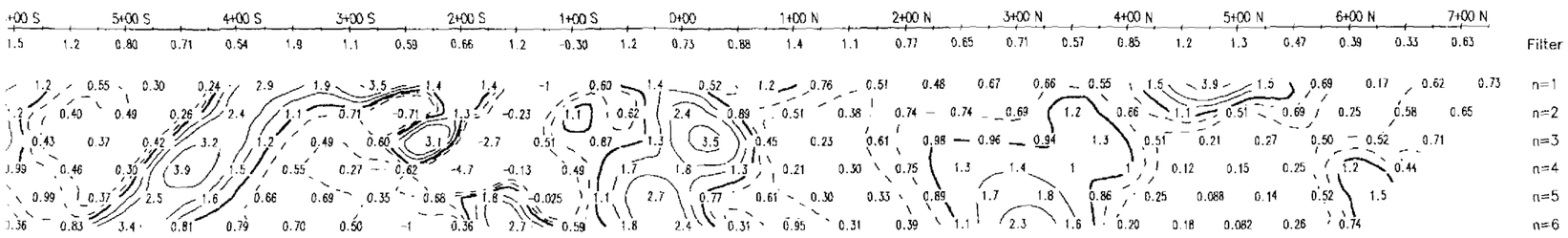




Resistivity
ohm-metres



Chargeability
millivolts/volt

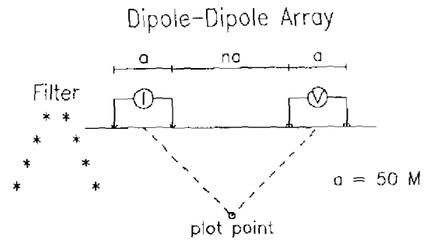


Metal Factor
IP/Resistivity

Interpretation
QGI:

Line 400 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

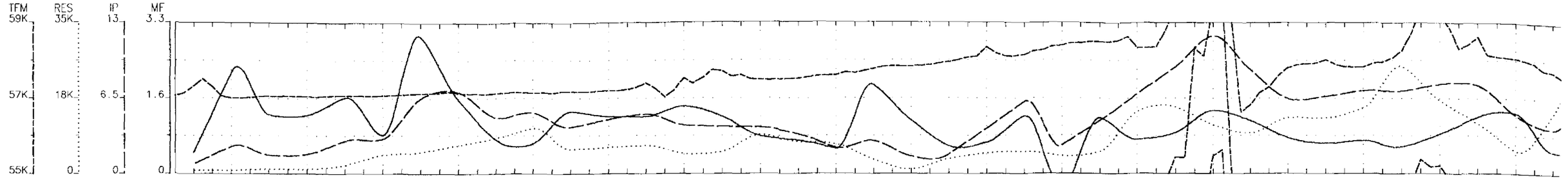
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

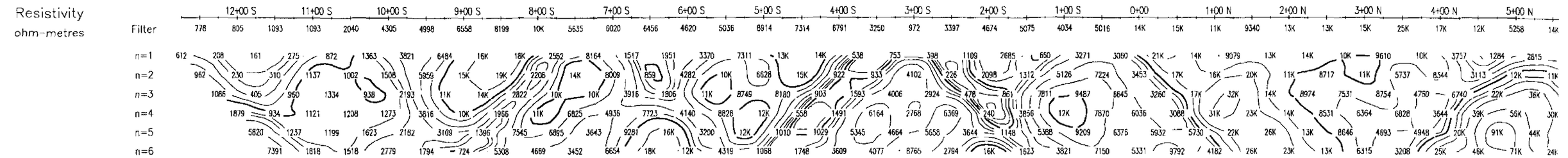
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

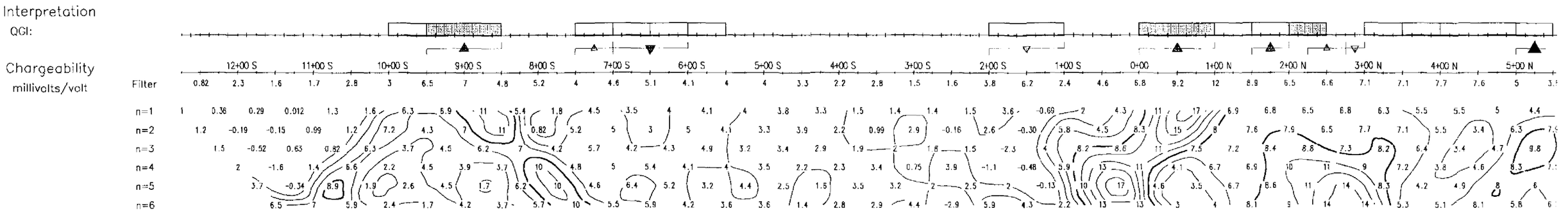
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 400 E

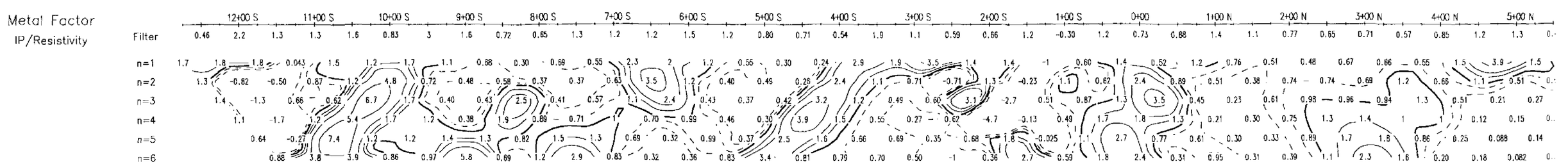
QUANTEC GEOSCIENCE INC.

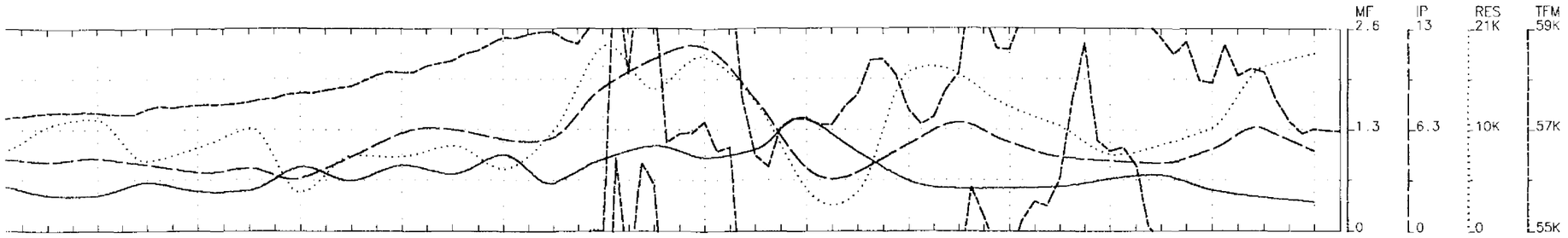


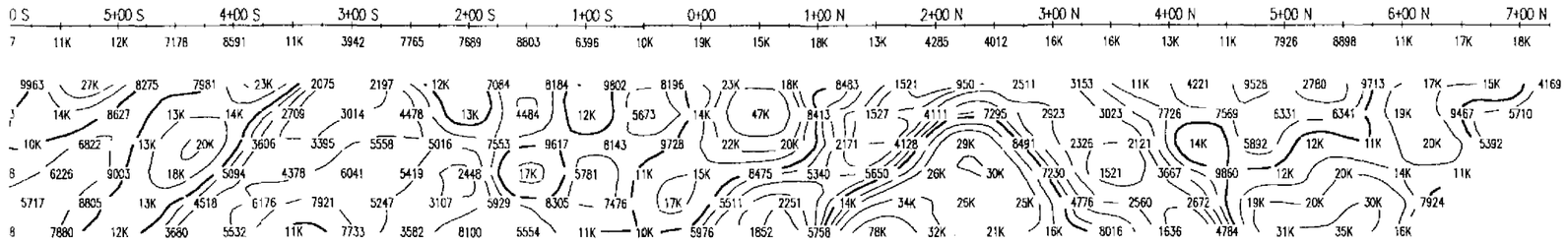
LINE 400E



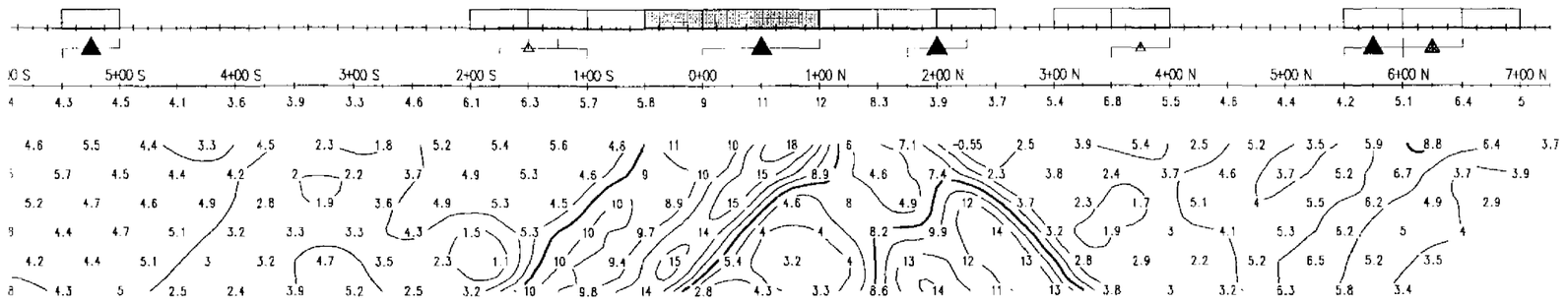






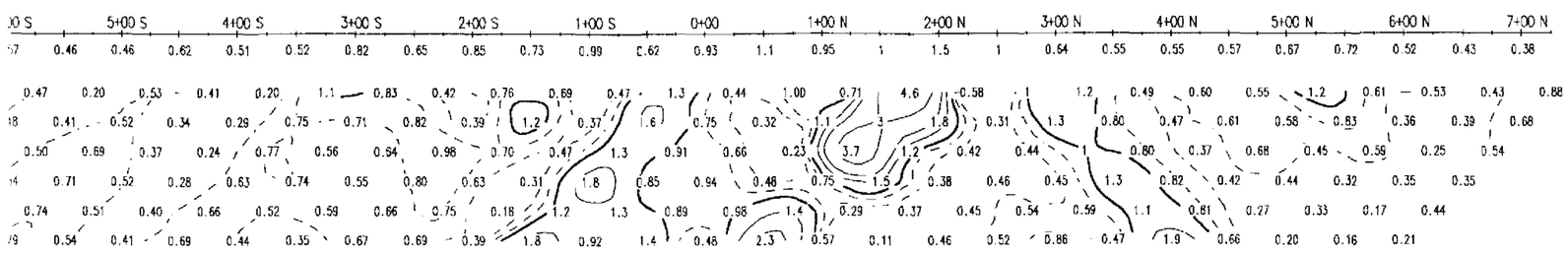


Resistivity
ohm-metres



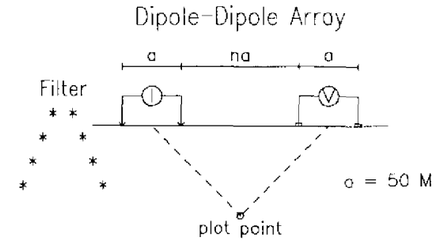
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 600 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
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SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

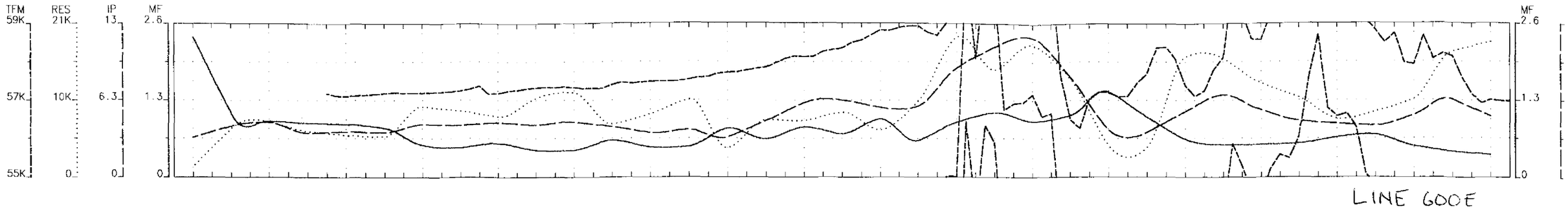
50 0 50 100 150 200 250 300
(meters)

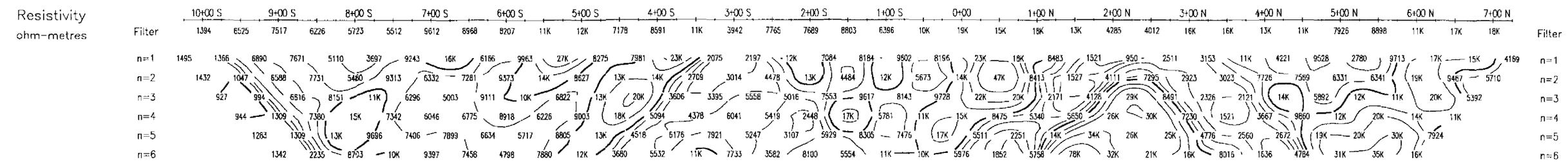
MUSTANG MINERALS CORPORATION

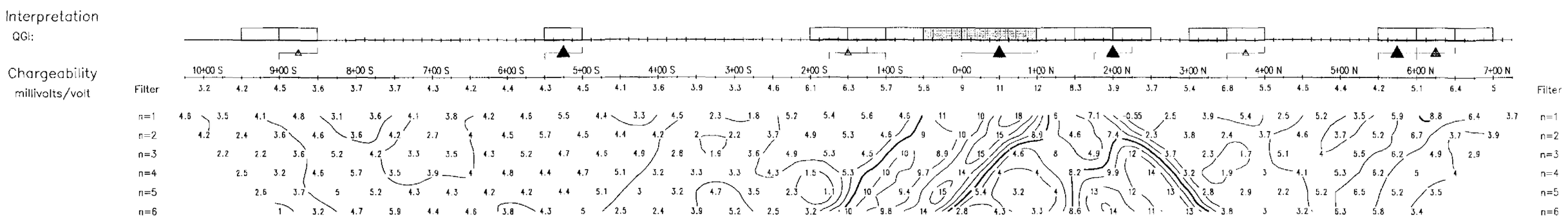
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

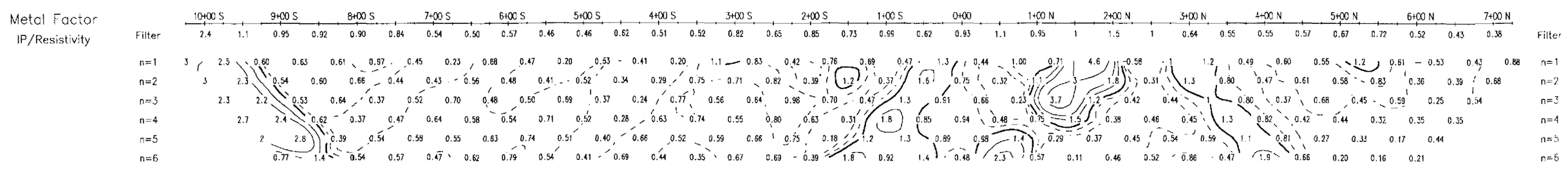
Processing Date: 00/06/05
Drawing Number: QC-112-IP-DD-Line 600 E

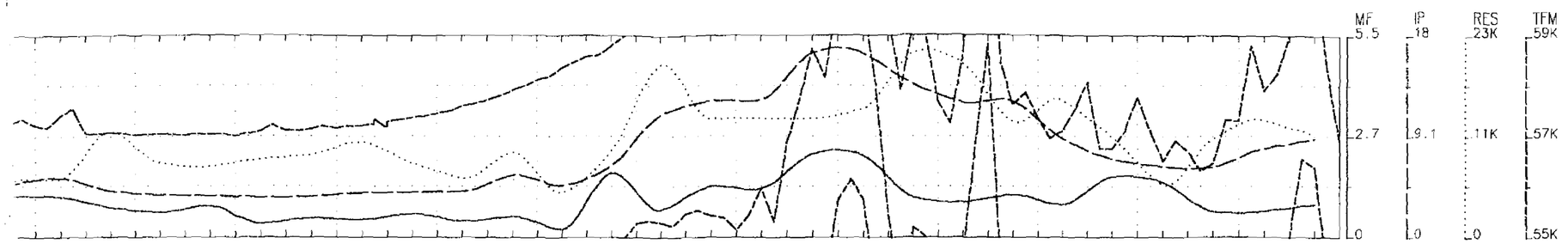
QUANTEC GEOSCIENCE INC.

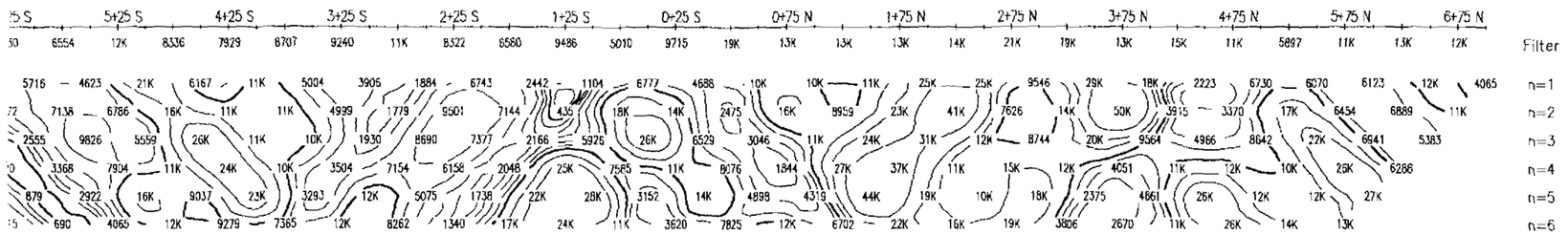




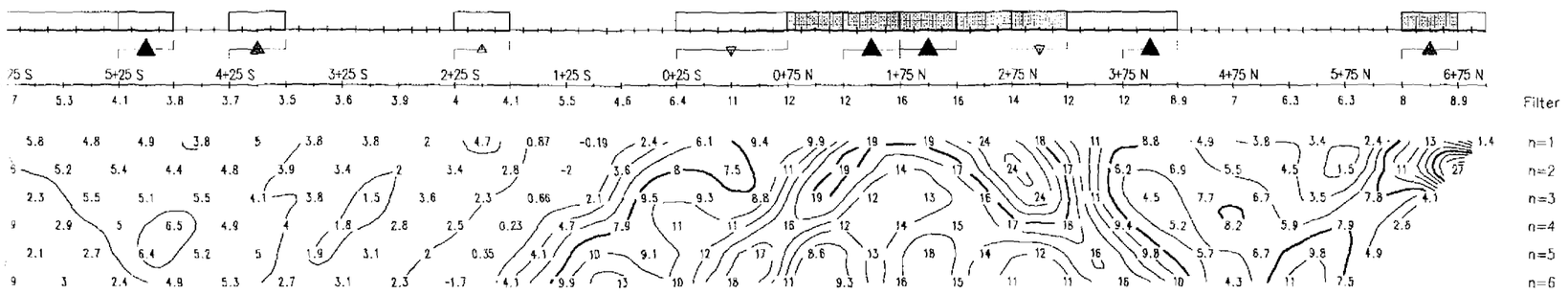






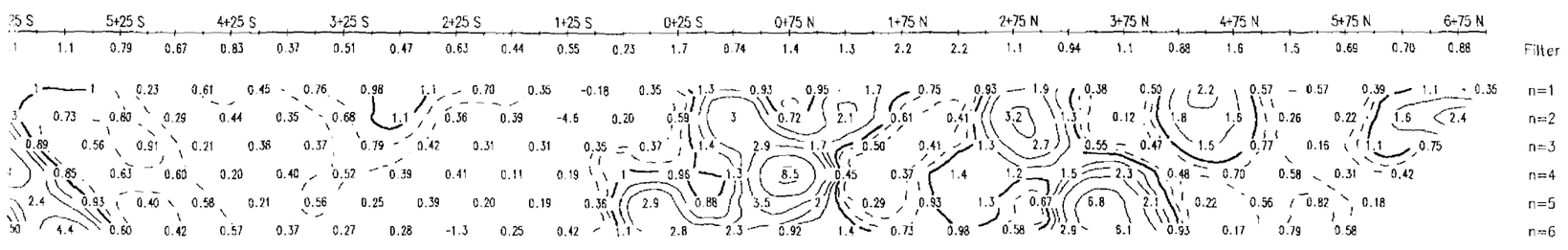


Resistivity
ohm-metres



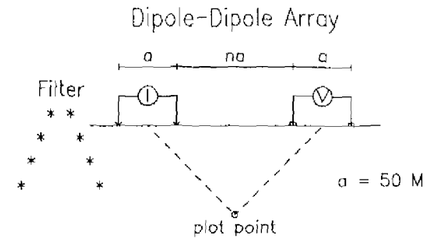
Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 800 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

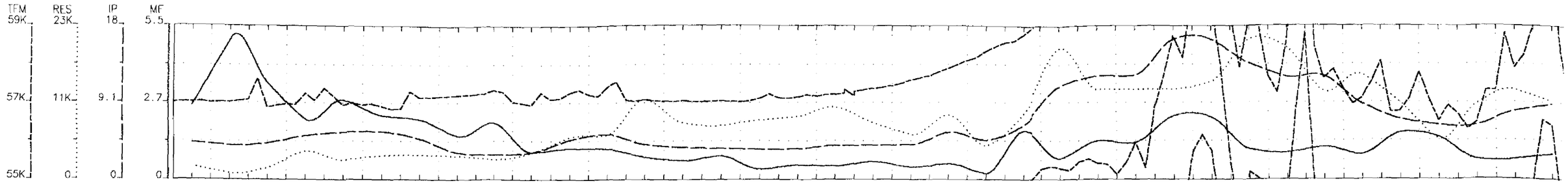
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

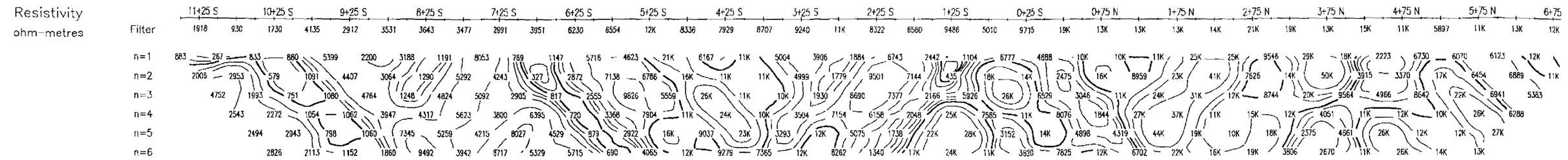
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

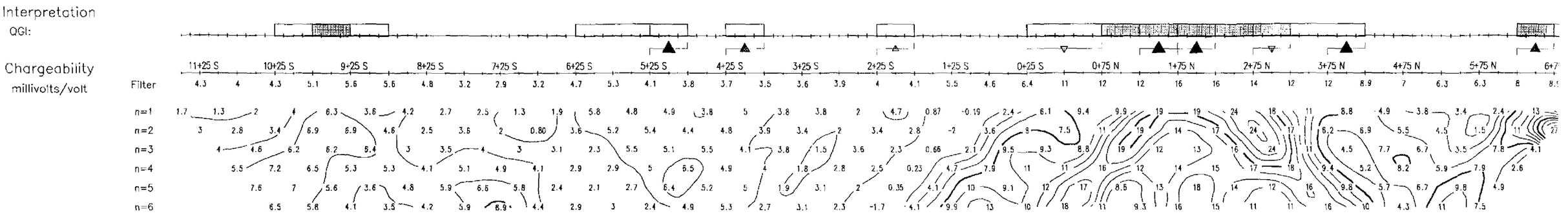
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 800 E

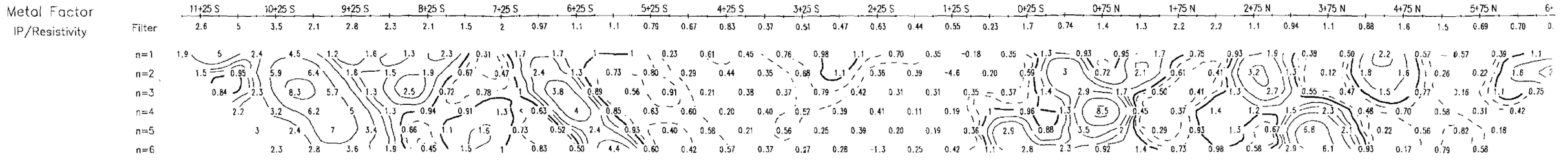
QUANTEC GEOSCIENCE INC.

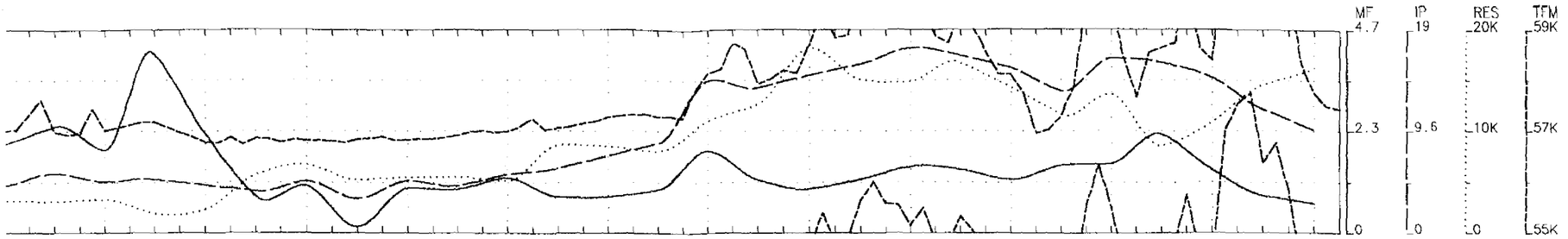


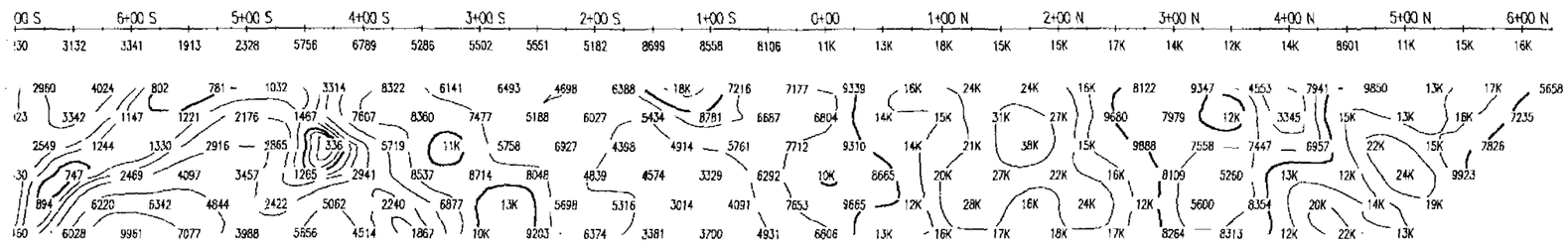
LINE 800E



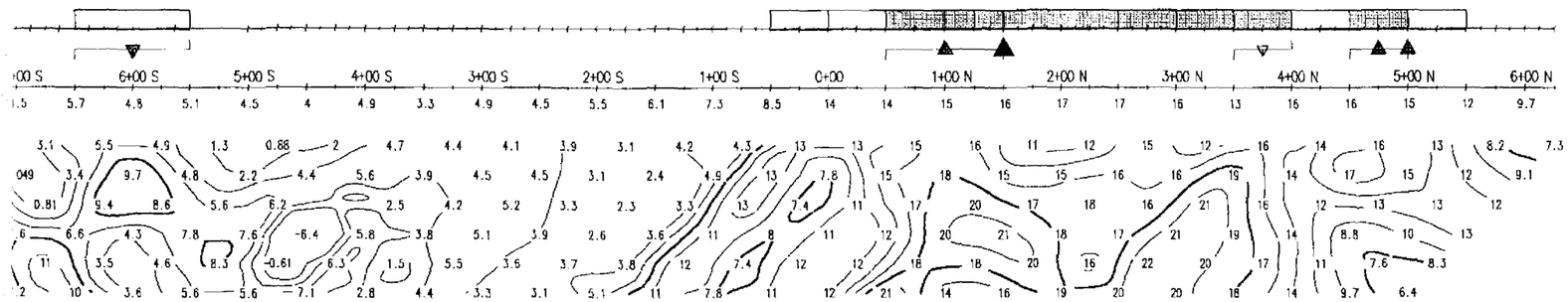






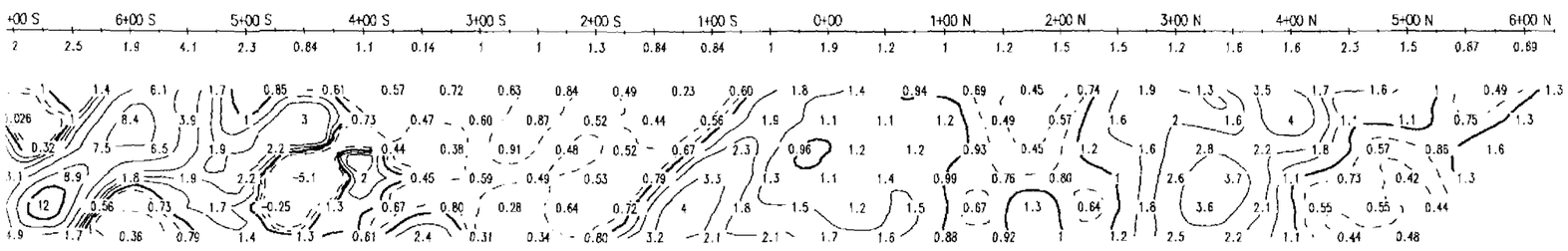


Resistivity
ohm-metres



Interpretation
QG!:

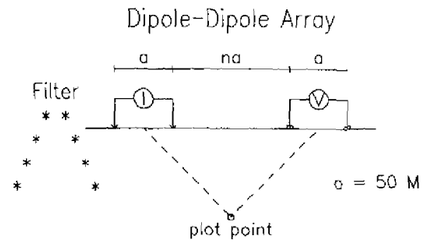
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 1000 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature. Strong, Moderate, Weak

High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
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MAP SPECIFICATIONS

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Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

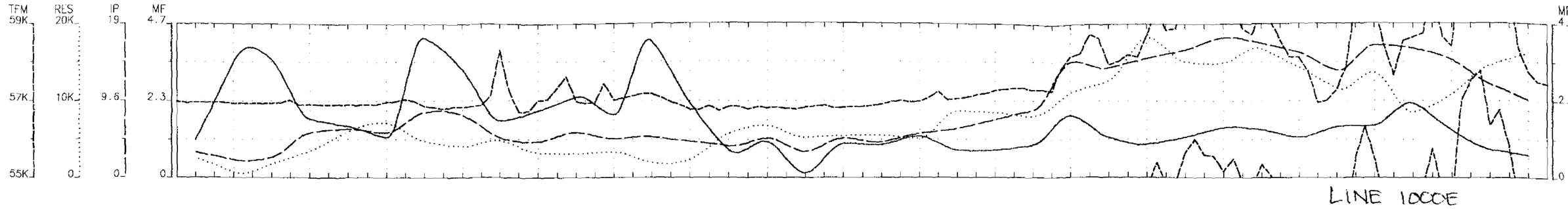
50 0 50 100 150 200 250 300
(meters)

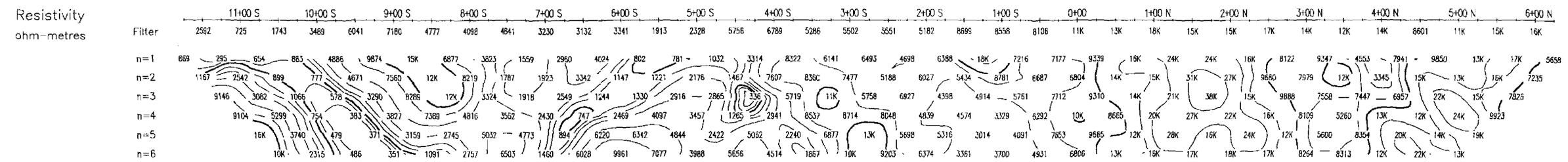
MUSTANG MINERALS CORPORATION

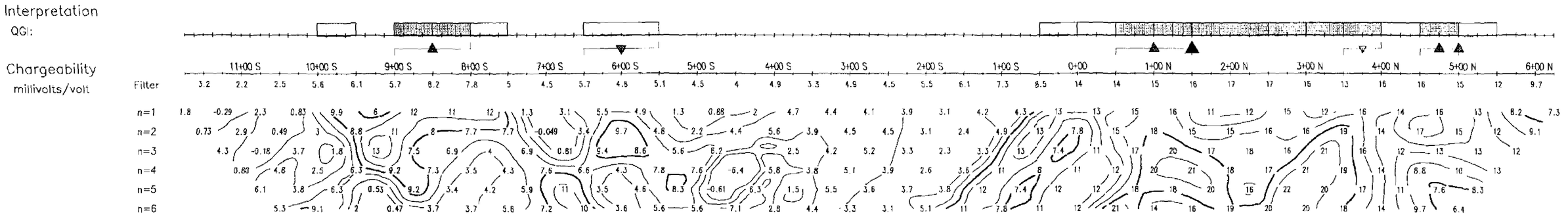
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

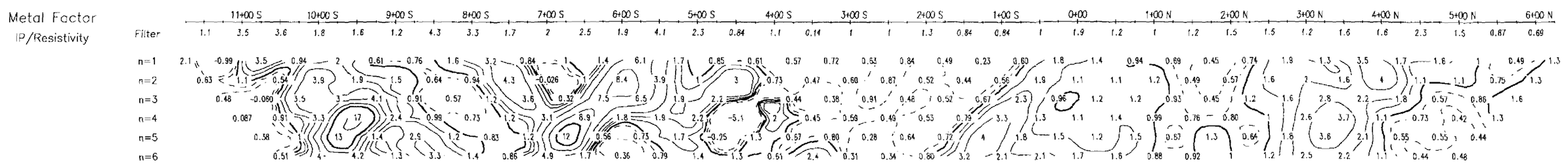
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 1000 E

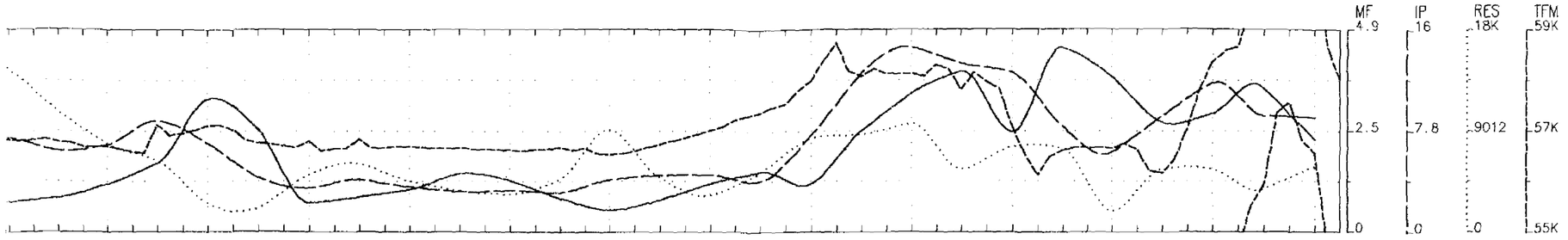
QUANTEC GEOSCIENCE INC.

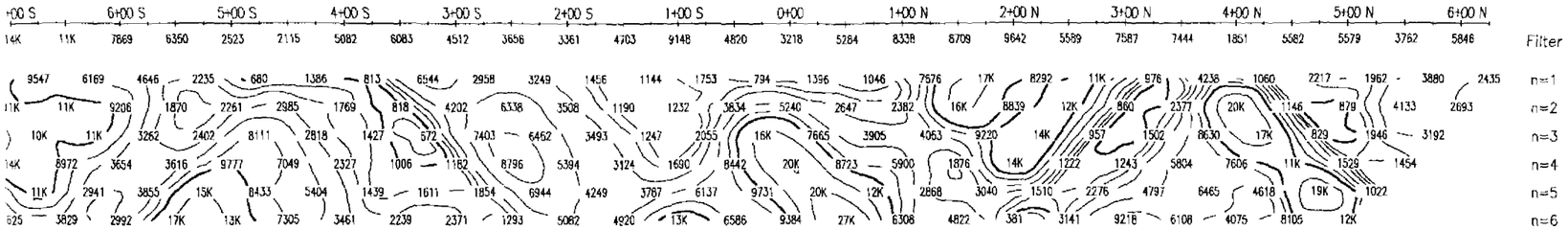




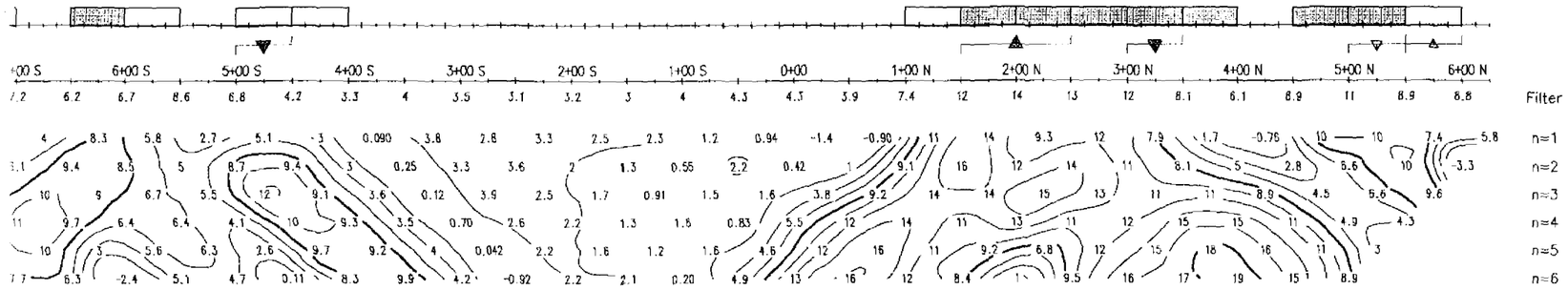






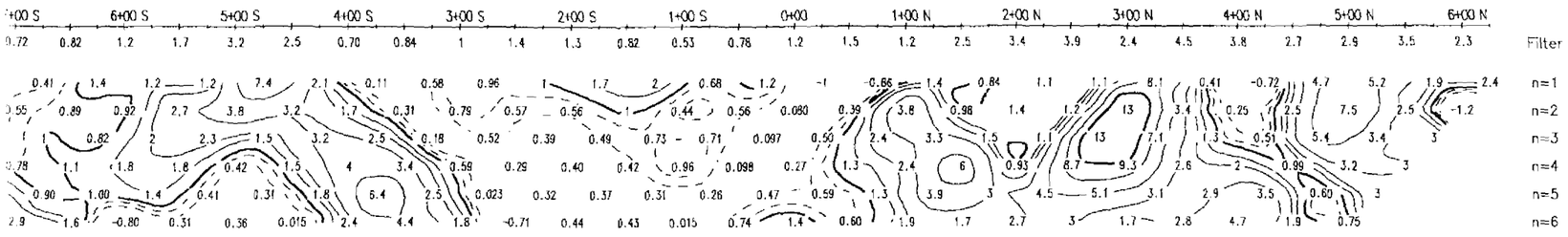


Resistivity
ohm-metres



Interpretation
QGI:

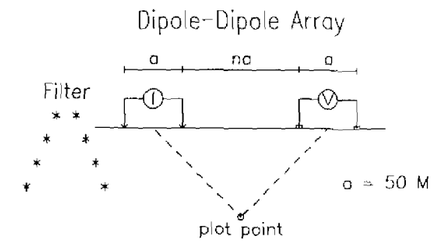
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 1200 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature
Strong, Moderate, Weak

High resistivity feature
Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

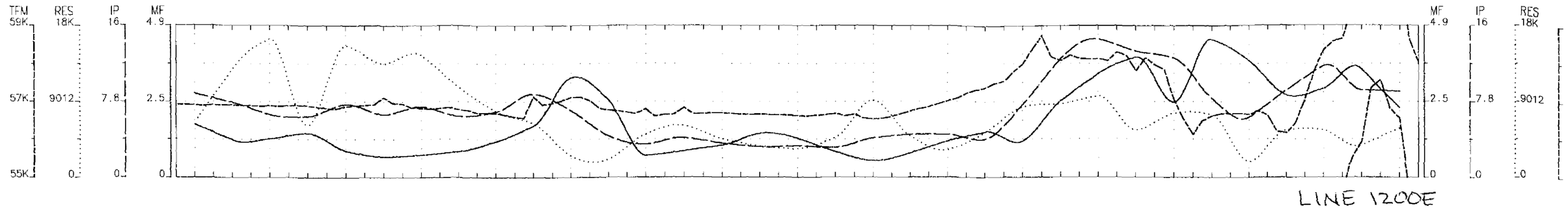
50 0 50 100 150 200 250 300
(meters)

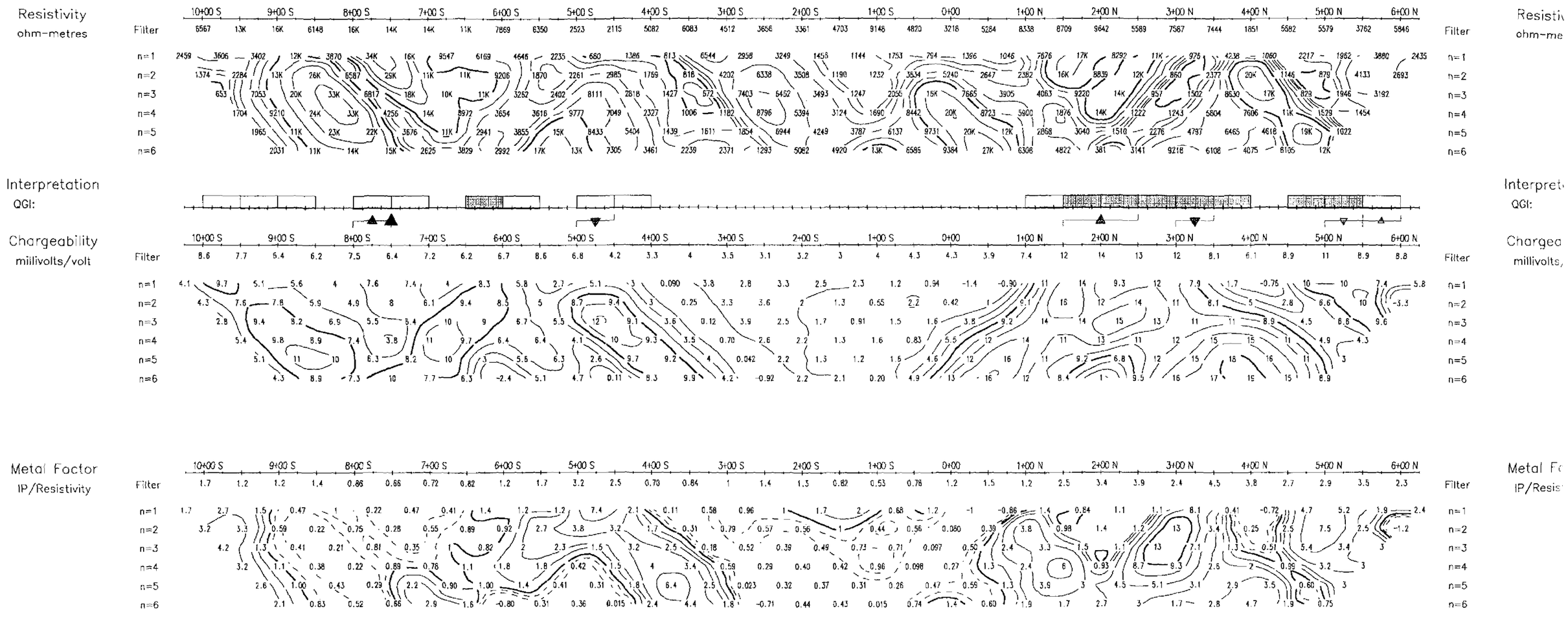
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 1200 E

QUANTEC GEOSCIENCE INC.





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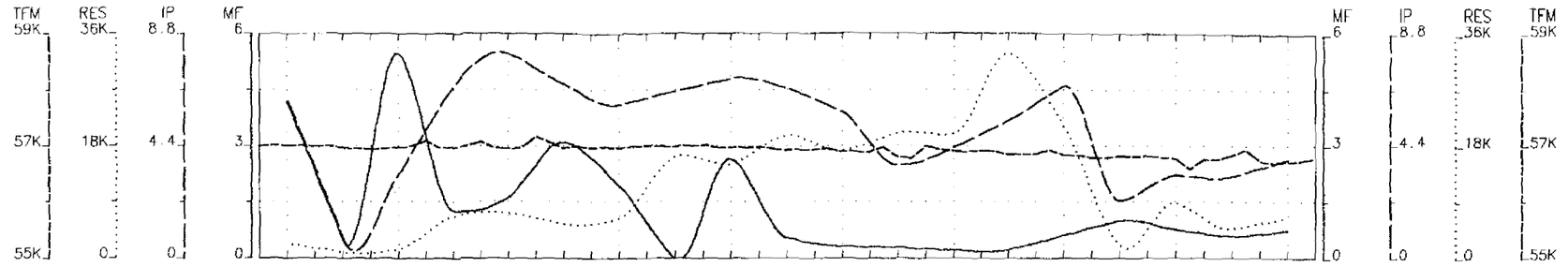
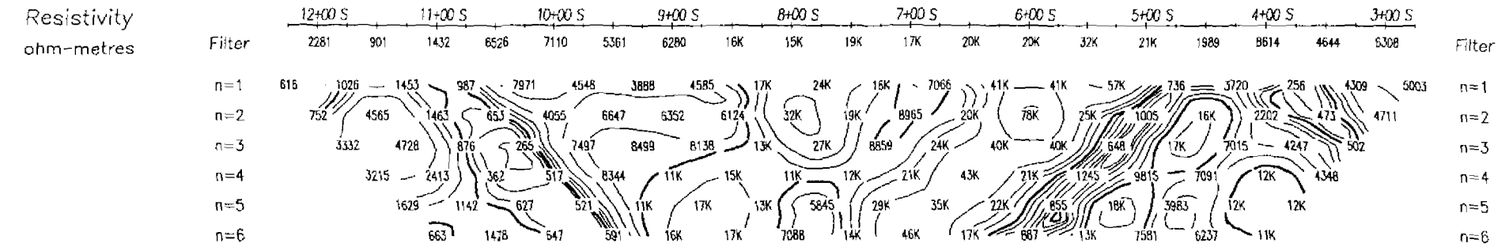
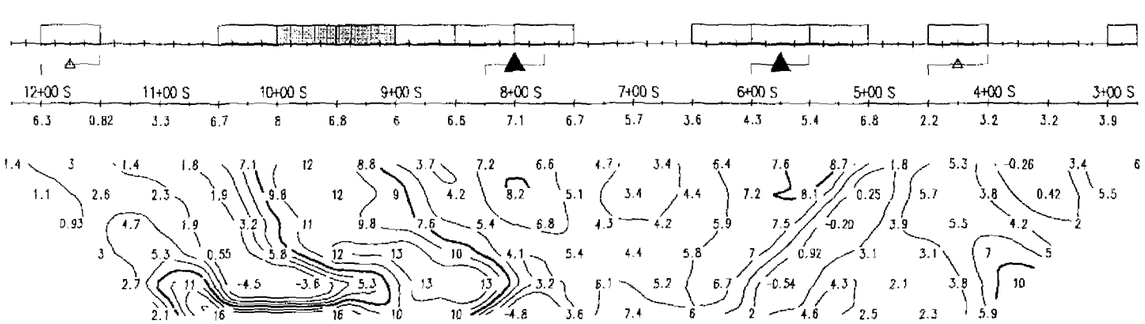
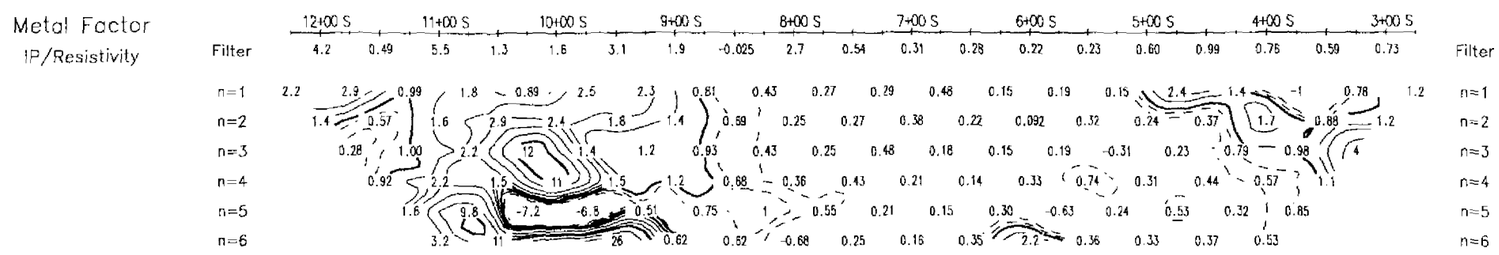
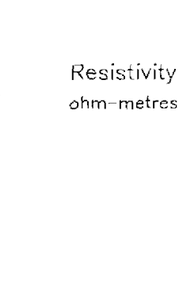
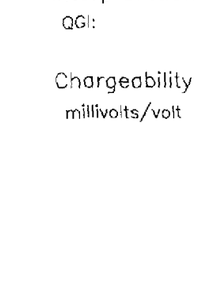


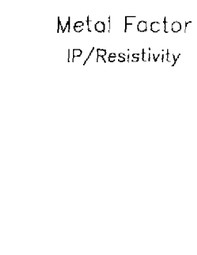




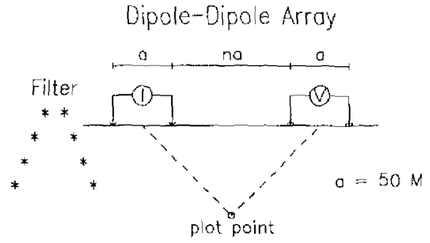








Line 1400 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10...)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10...)

Scale 1:5000

50 0 50 100 150 200 250 300

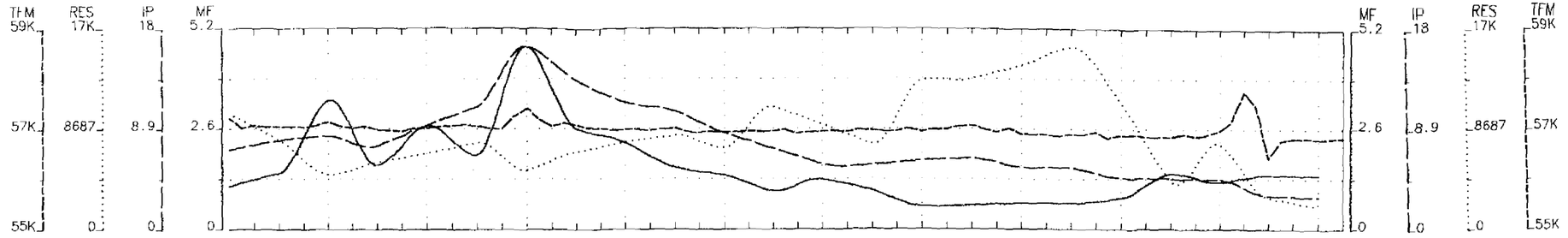
(meters)

MUSTANG MINERALS CORPORATION

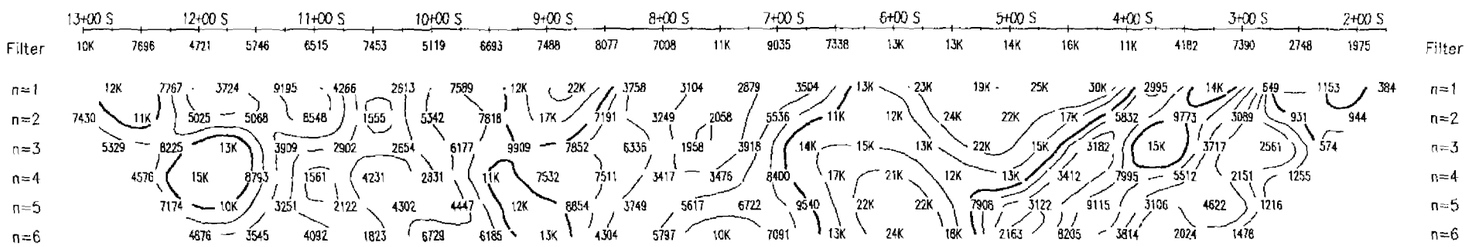
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 1400 E

QUANTEC GEOSCIENCE INC.

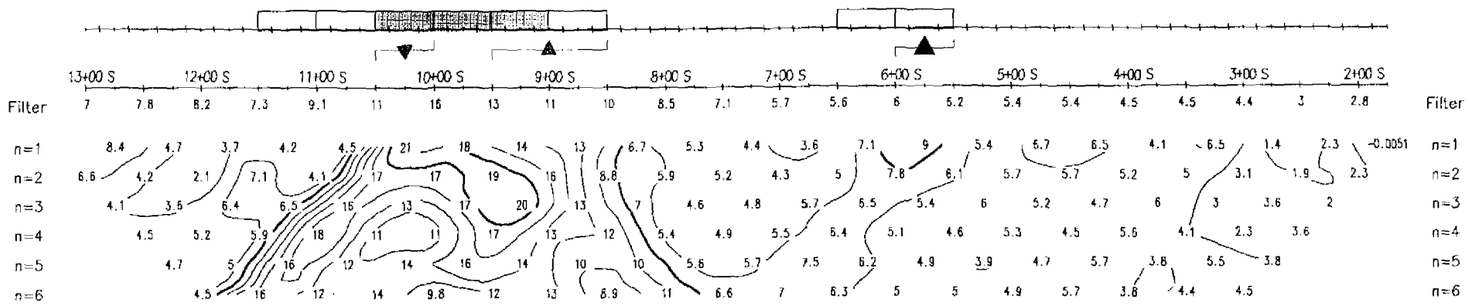


Resistivity
ohm-metres

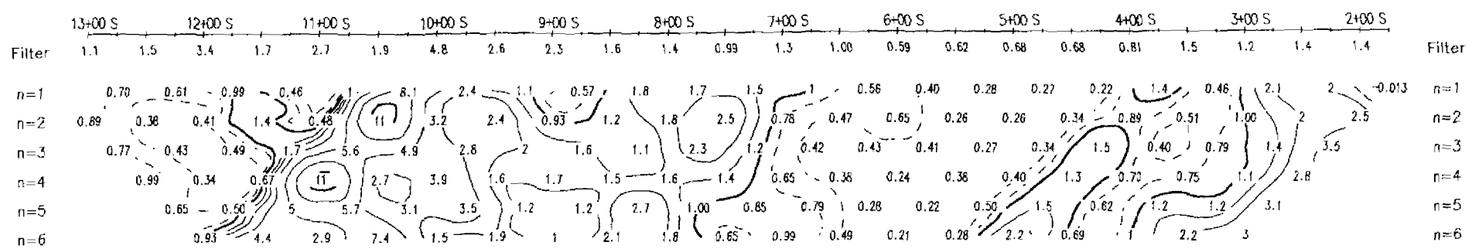


Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity



Resistivity
ohm-metres

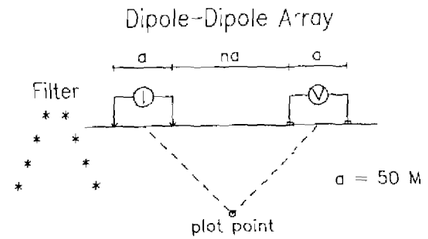
Interpretation
QGI:

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 1600 E

Dipole-Dipole Array



- Strong increase in polarization
- Well defined increase in polarization
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SURVEY SPECIFICATIONS

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Scale 1:5000

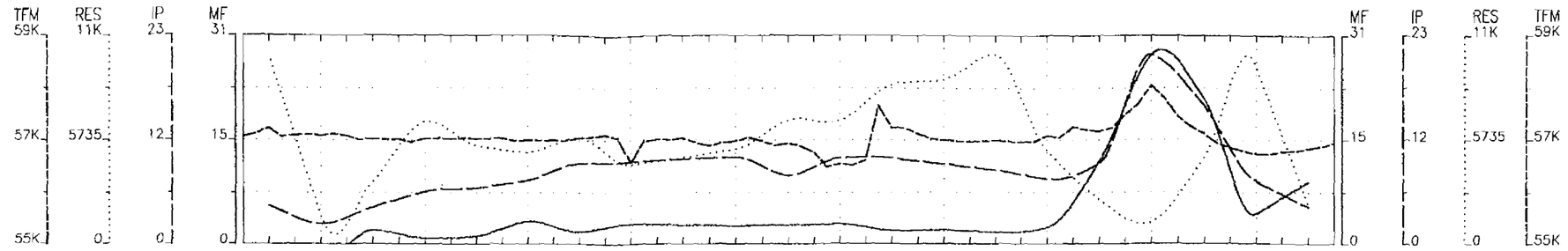
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

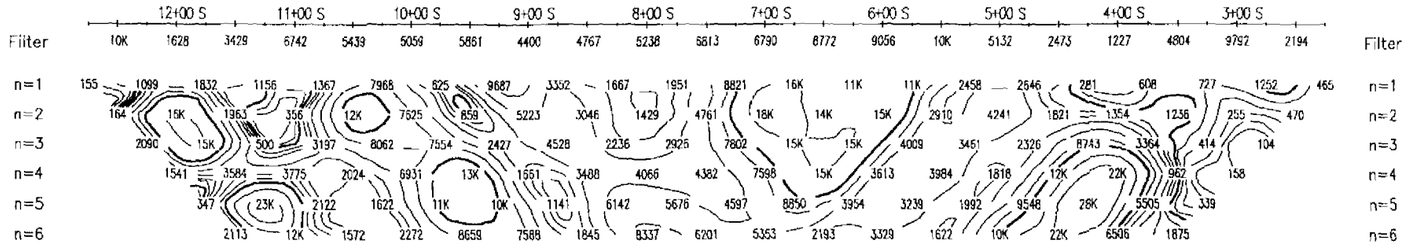
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 1600 E

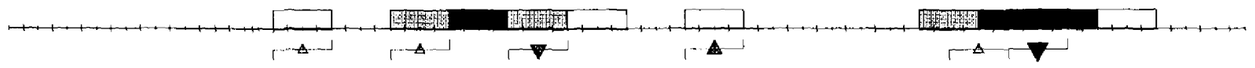
QUANTEC GEOSCIENCE INC.



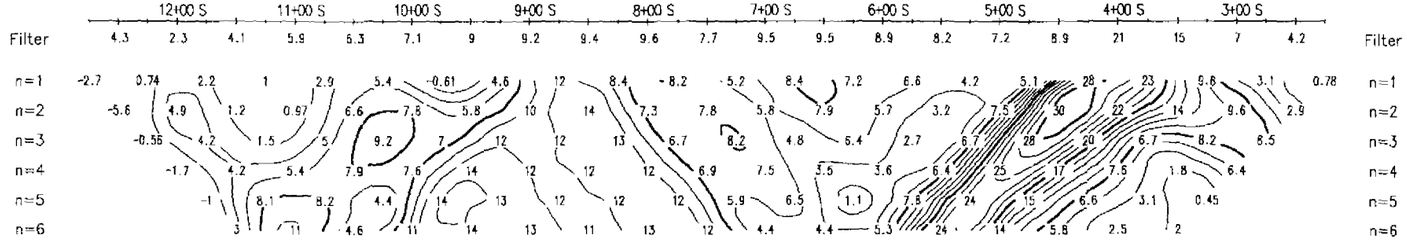
Resistivity
ohm-metres



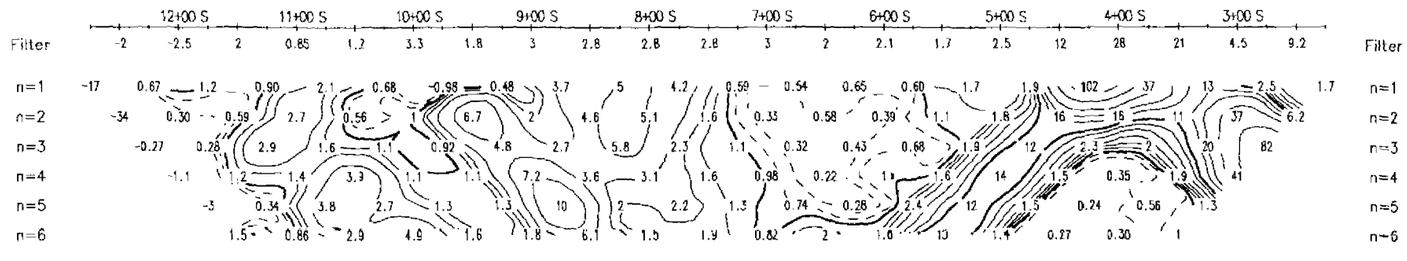
Interpretation
QGI:



Chargeability
millivolts/volt



Metal Factor
IP/Resistivity



Resistivity
ohm-metres

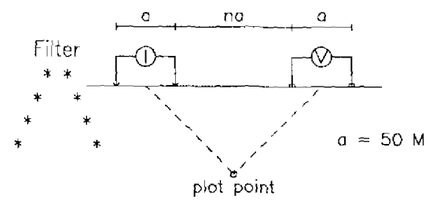
Interpretation
QGI:

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 1800 E

Dipole-Dipole Array



Strong increase in polarization

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(meters)

MUSTANG MINERALS CORPORATION

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RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 1800 E

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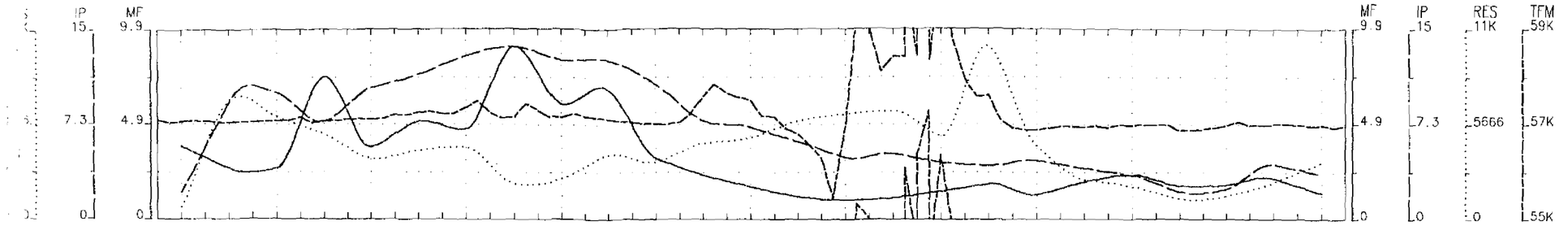
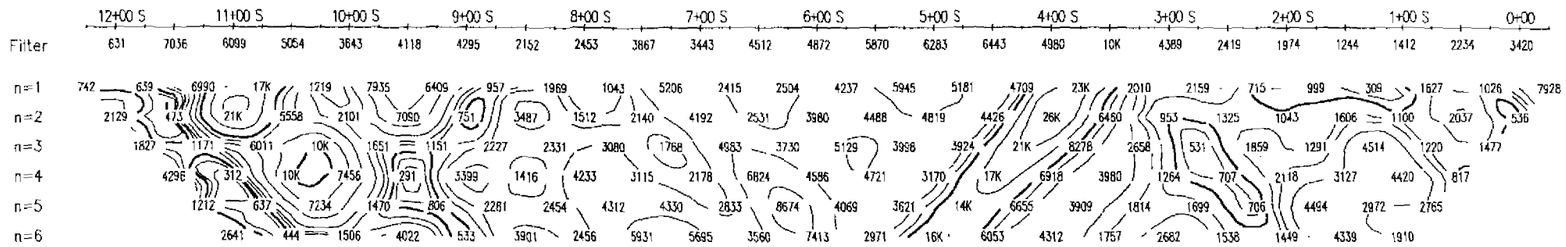
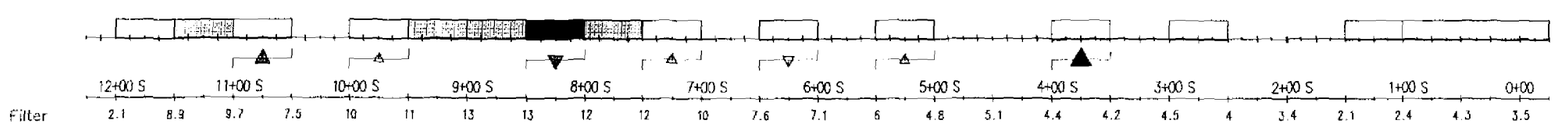


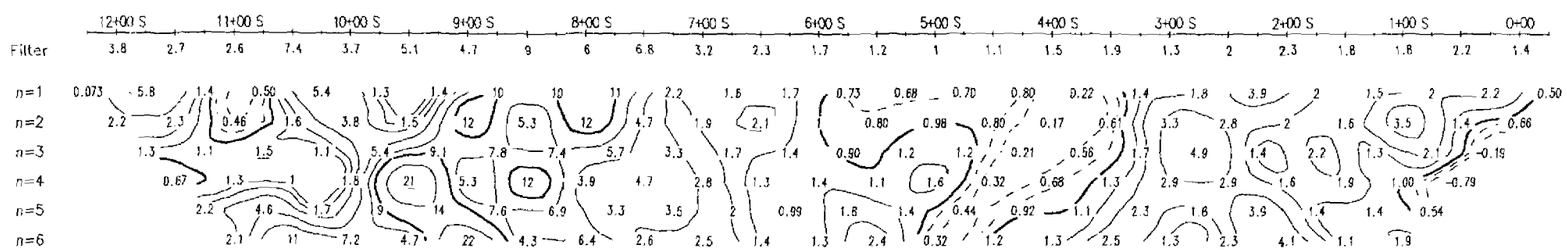


Resistivity
ohm-metres



Interpretation
QGI:

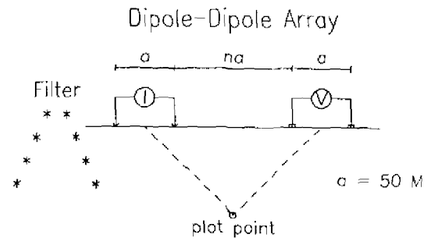
Chargeability
millivolts/volt



Metal Factor
IP/Resistivity

Line 2000 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

▼ ▼ ▽ Low resistivity feature. Strong, Moderate, Weak

▲ ▲ △ High resistivity feature. Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(meters)

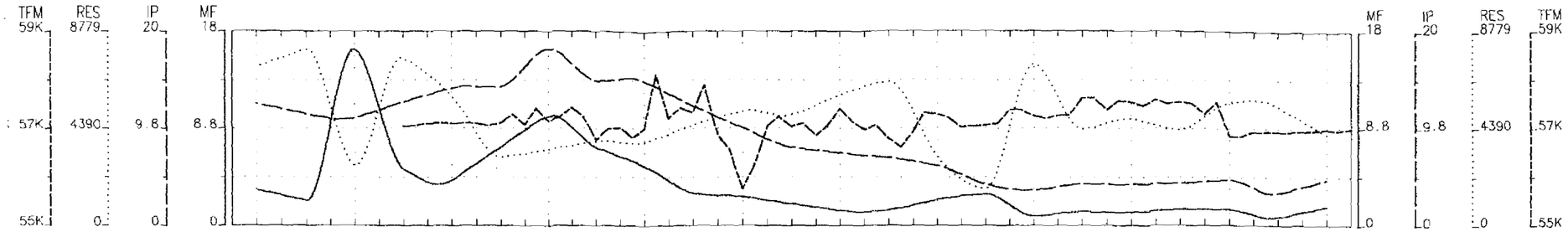
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

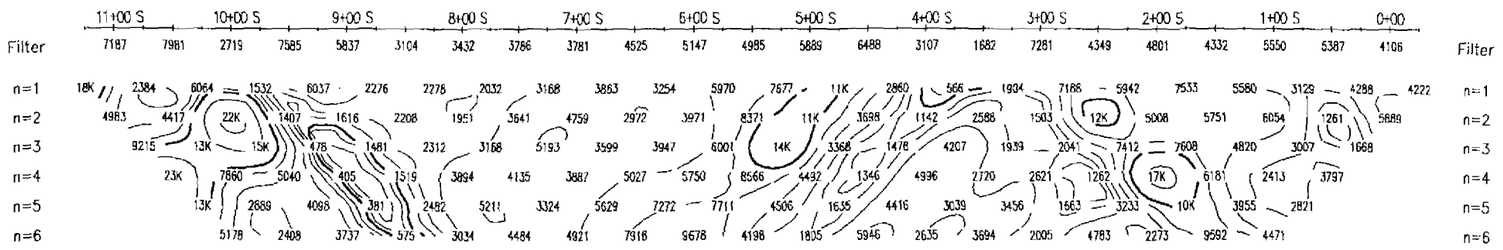
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 2000 E

QUANTEC GEOSCIENCE INC.

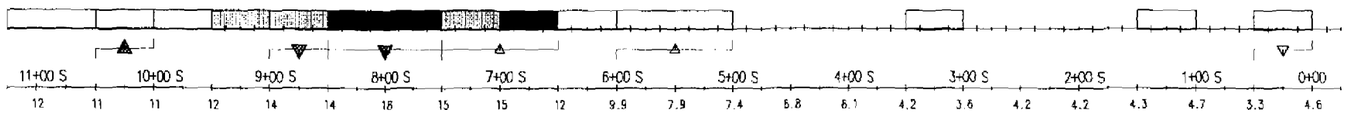
the Earth Sciences



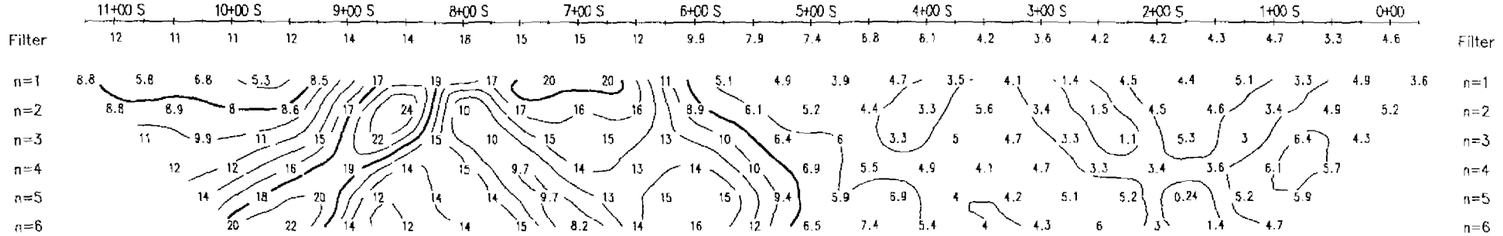
Resistivity
ohm-metres



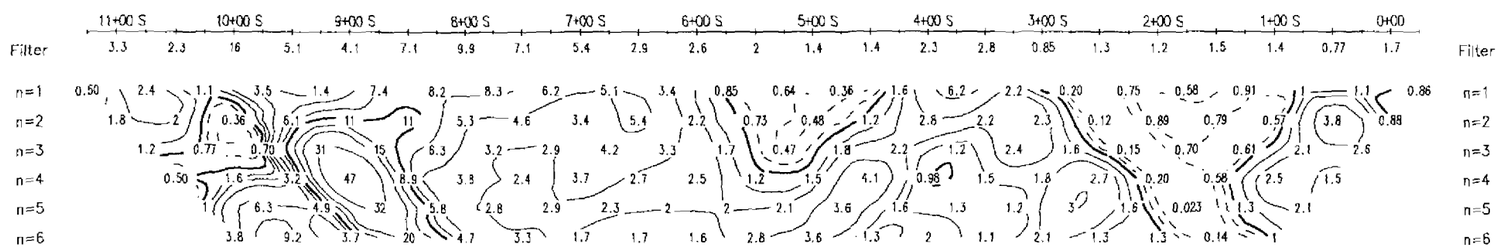
Interpretation
QGI:



Chargeability
millivolts/volt

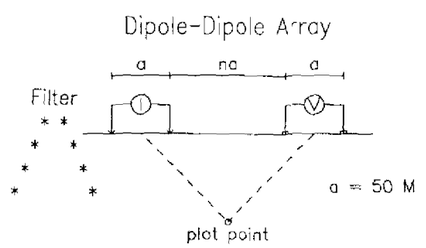


Metal Factor
IP/Resistivity



Resistivity
ohm-metres
Interpretation
QGI:
Chargeability
millivolts/volt
Metal Factor
IP/Resistivity

Line 2200 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature, Strong, Moderate, Weak

High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(meters)

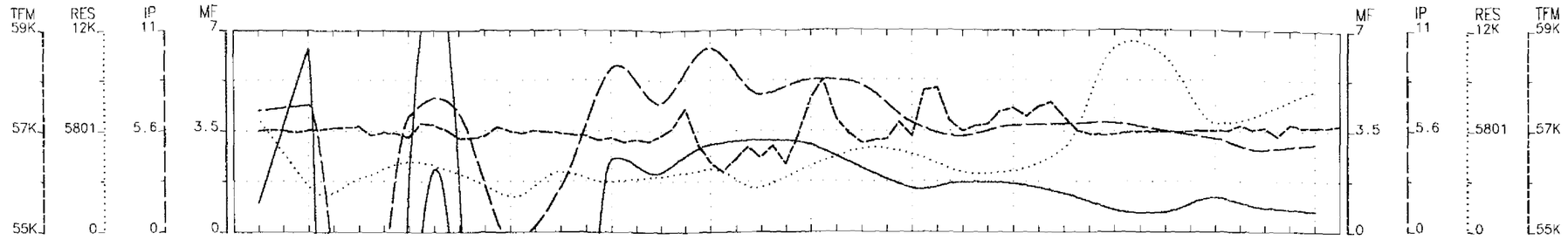
MUSTANG MINERALS CORPORATION

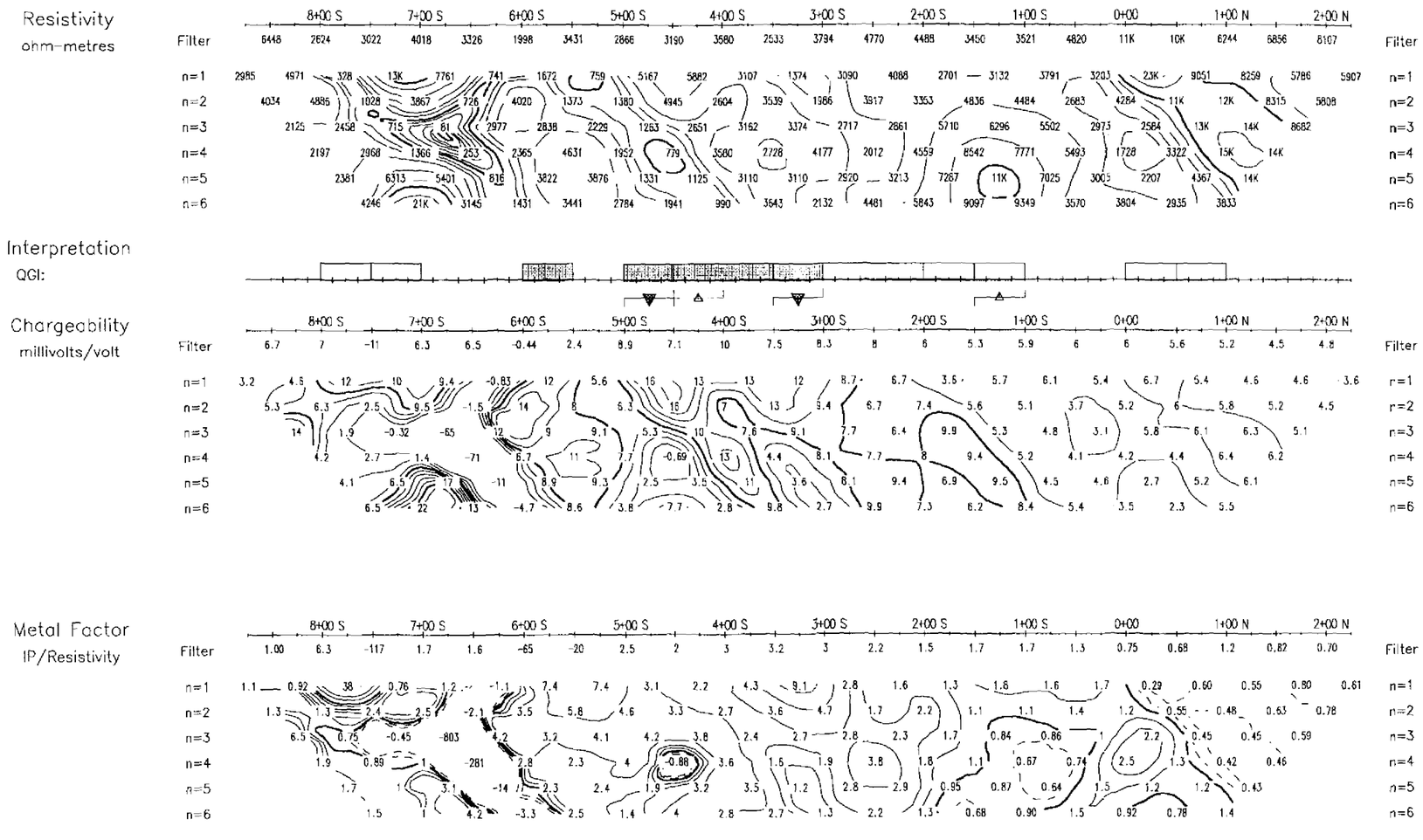
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

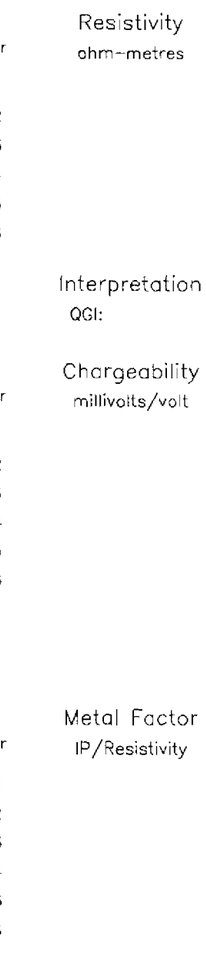
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 2200 E

QUANTEC GEOSCIENCE INC.

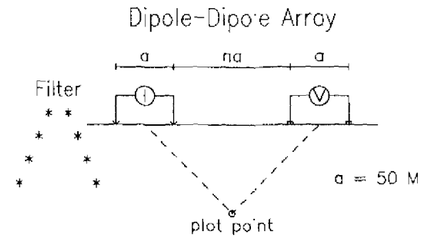
Software for the Earth Sciences







Line 2400 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▽ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

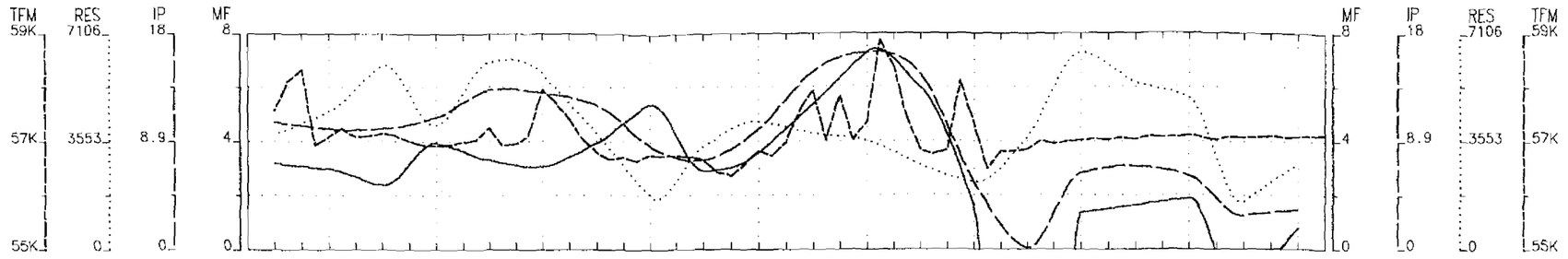
50 0 50 100 150 200 250 300
(meters)

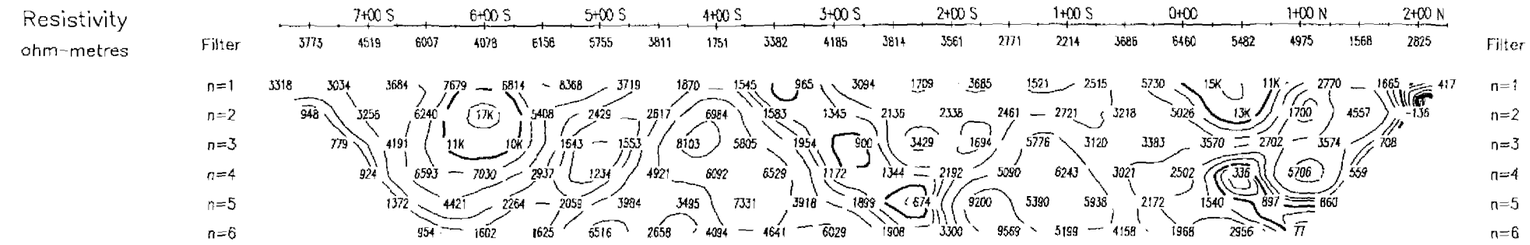
MUSTANG MINERALS CORPORATION

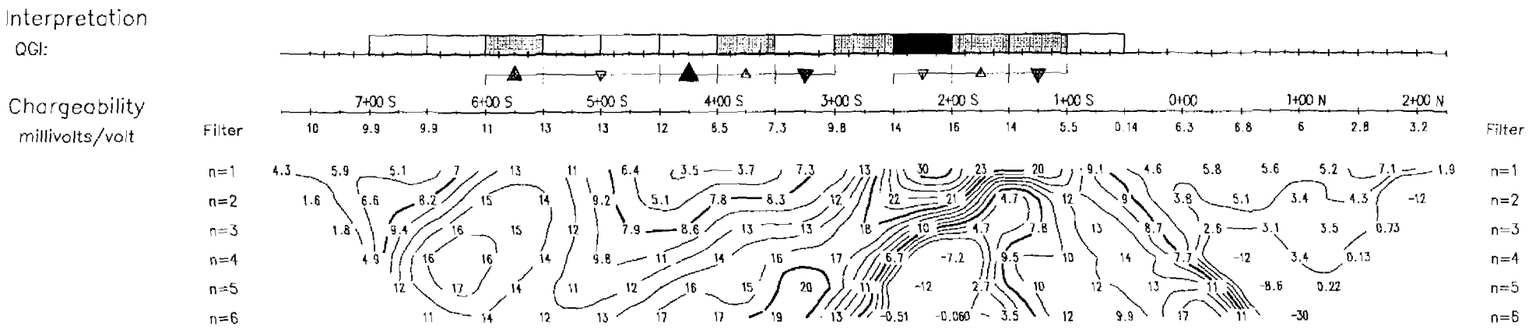
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

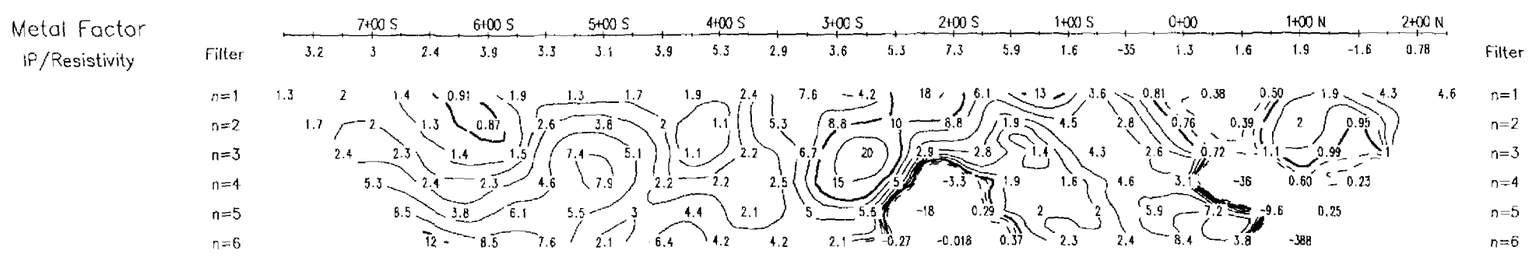
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 2400 E

QUANTEC GEOSCIENCE INC.





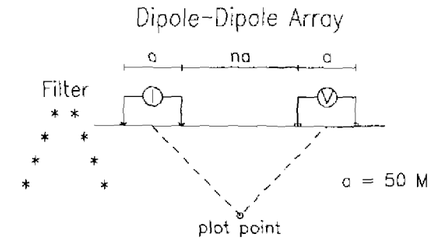




Interpretation
QGI:

Resistivity
ohm-metres
Chargeability
millivolts/volt
Metal Factor
IP/Resistivity

Line 2600 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

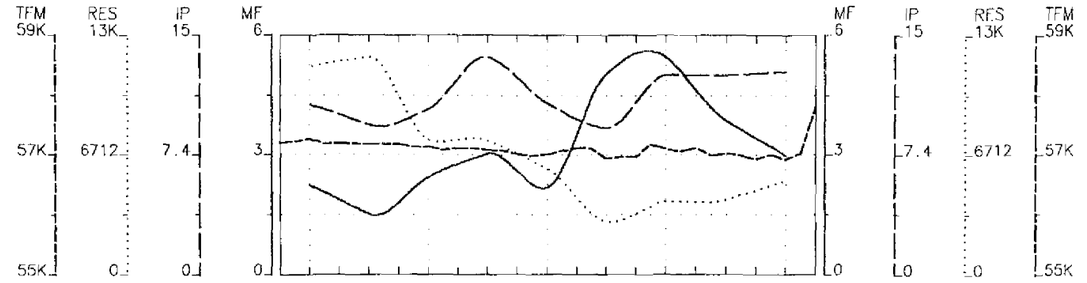
50 0 50 100 150 200 250 300
(meters)

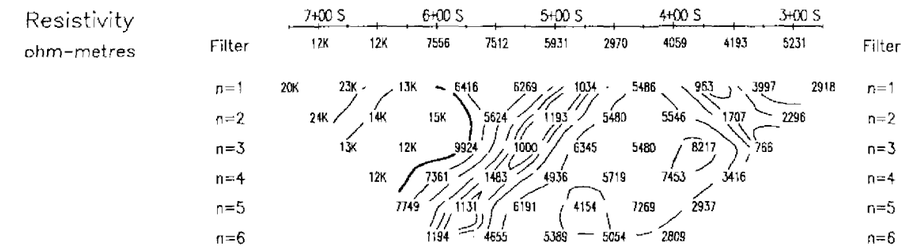
MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

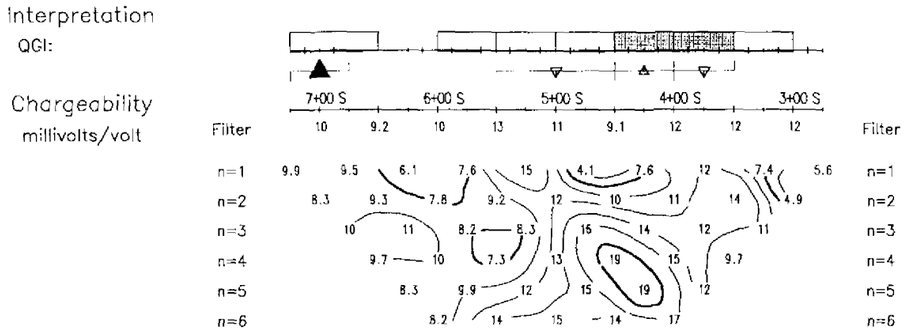
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 2600 E

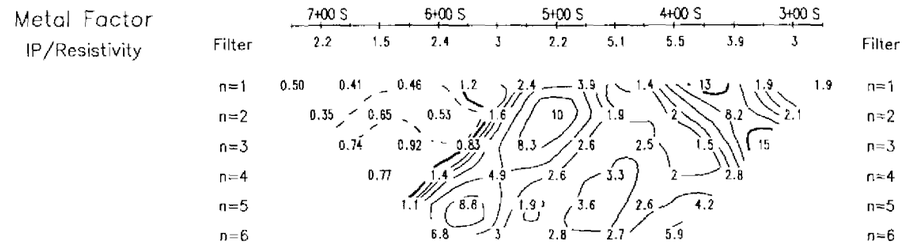
QUANTEC GEOSCIENCE INC.





Interpretation
QGI:





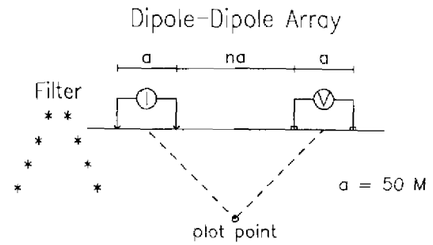
Resistivity
ohm-metres

Interpretation
QGI:

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 2800 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

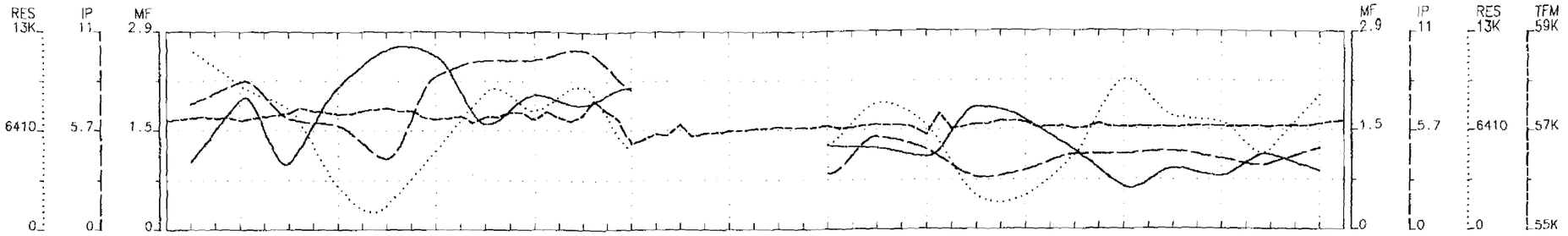
50 0 50 100 150 200 250 300
(meters)

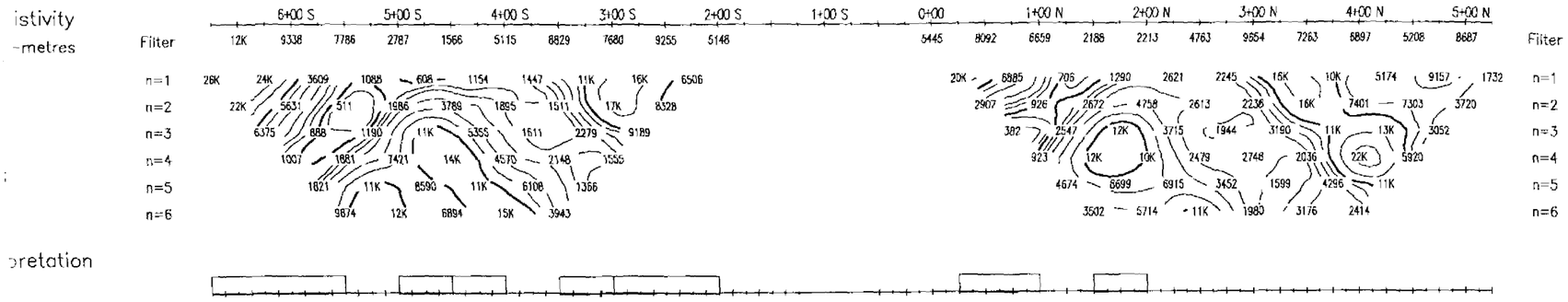
MUSTANG MINERALS CORPORATION

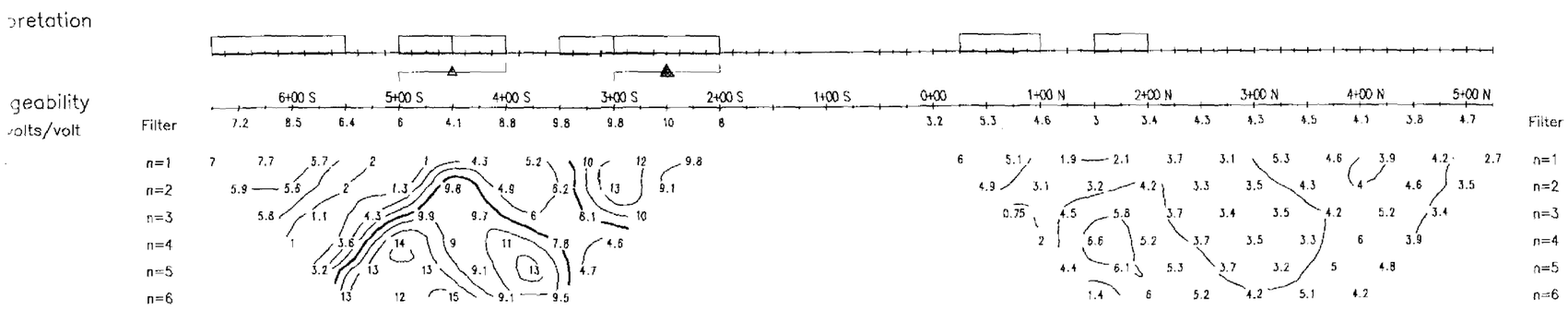
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

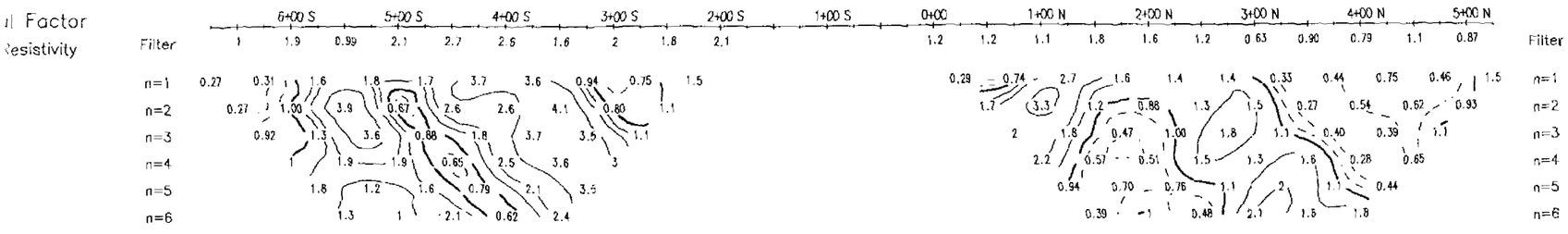
Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 2800 E

QUANTEC GEOSCIENCE INC.

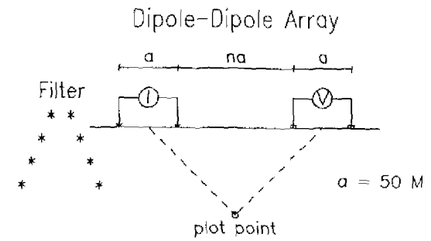








Line 3000 E



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature
Strong, Moderate, Weak

High resistivity feature
Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

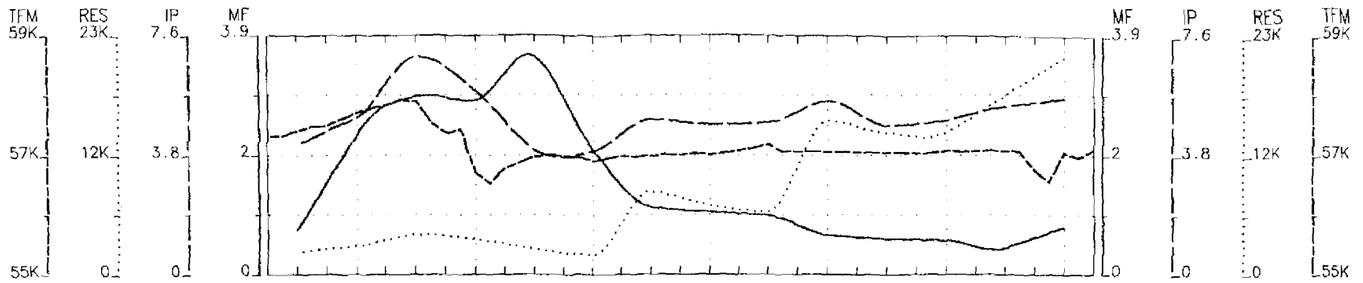
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

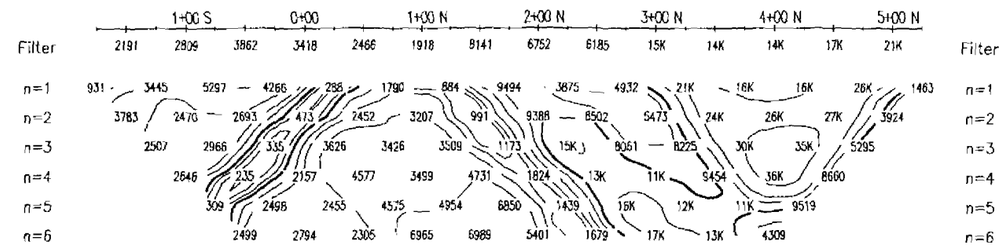
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-00-Line 3000 E

QUANTEC GEOSCIENCE INC.

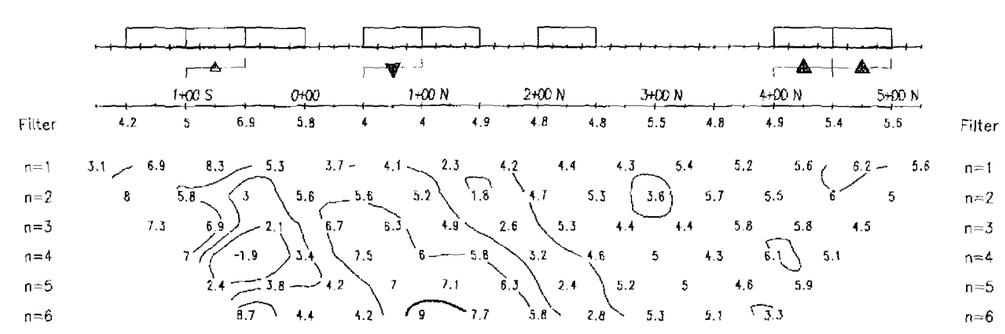


Resistivity
ohm-metres

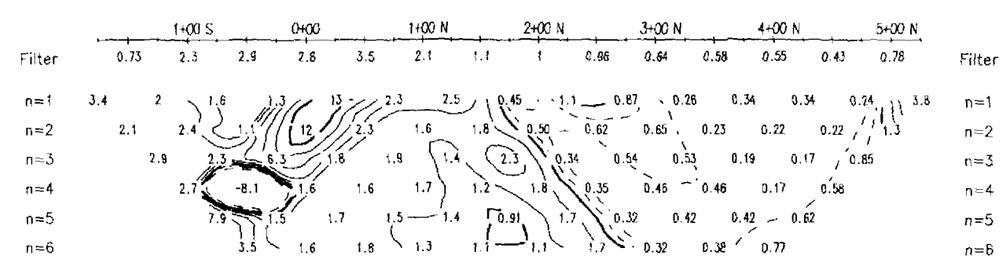


Interpretation
QGI:

Chargeability
millivolts/volt



Metal Factor
IP/Resistivity



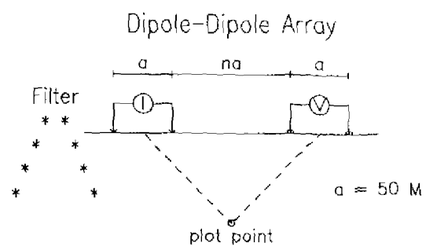
Resistivity
ohm-metres

Interpretation
QGI:

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 3170 E



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

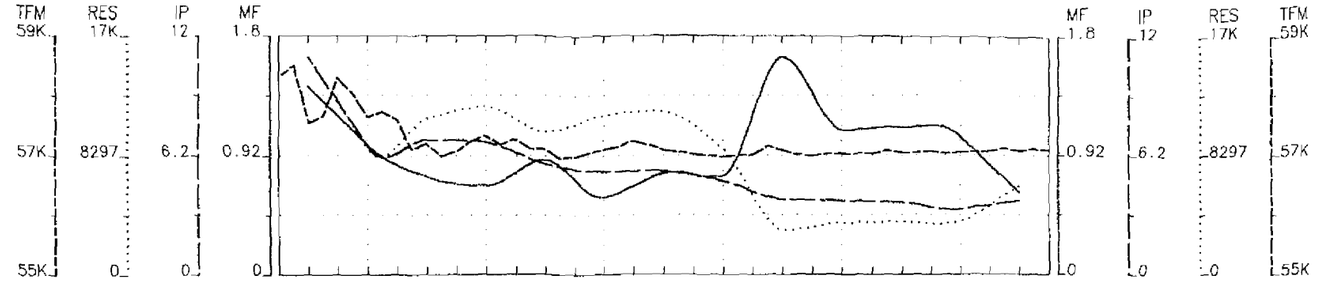
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

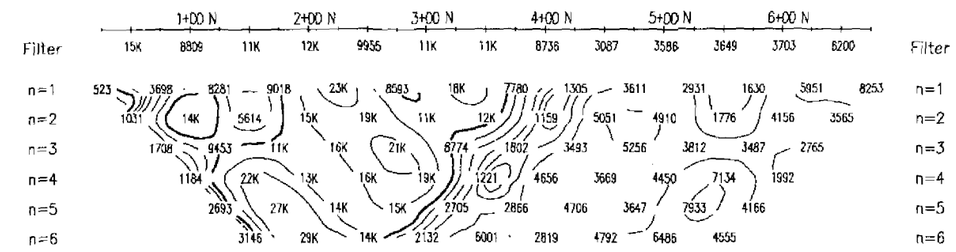
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 3170 E

QUANTEC GEOSCIENCE INC.

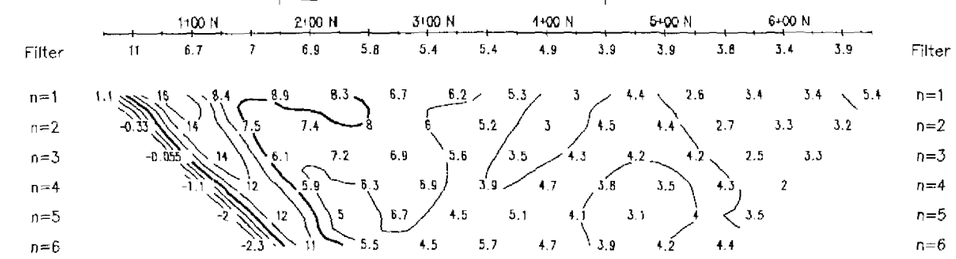


Resistivity
ohm-metres

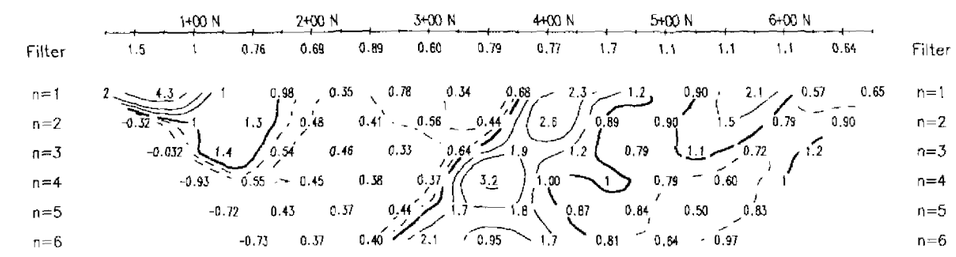


Interpretation
QGI:

Chargeability
millivolts/volt



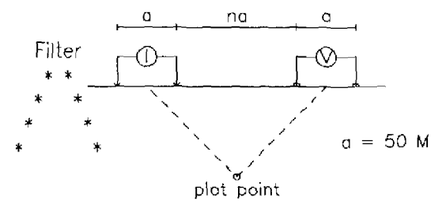
Metal Factor
IP/Resistivity



Resistivity
ohm-metres
Interpretation
QGI:
Chargeability
millivolts/volt
Metal Factor
IP/Resistivity

Line 3400 E

Dipole-Dipole Array



- Strong increase in polarization
- Well defined increase in polarization
- Poorly defined polarization increase
- ▼ ▼ ▽ Low resistivity feature, Strong, Moderate, Weak
- ▲ ▲ △ High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

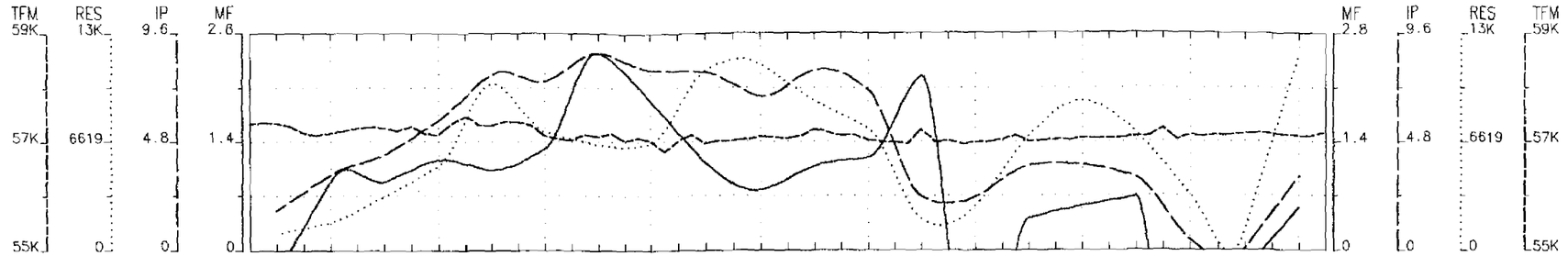
50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

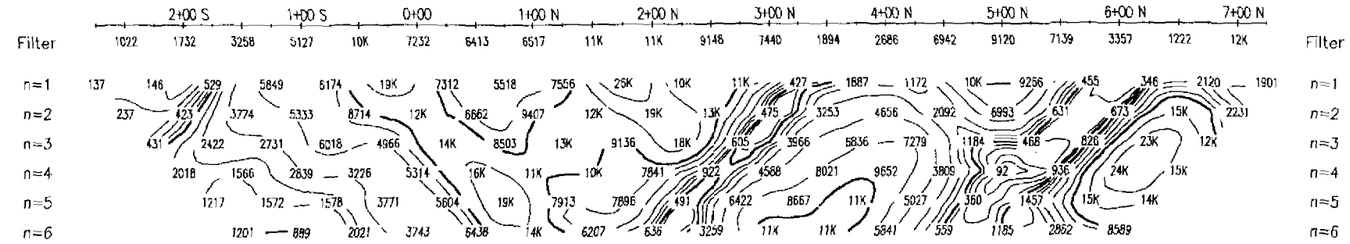
INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 3400 E

QUANTEC GEOSCIENCE INC.

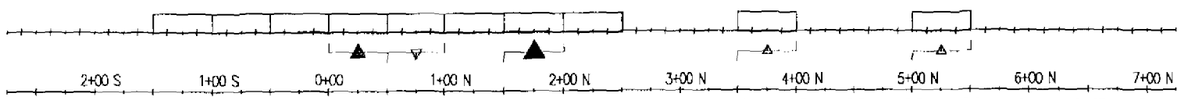


Resistivity
ohm-metres

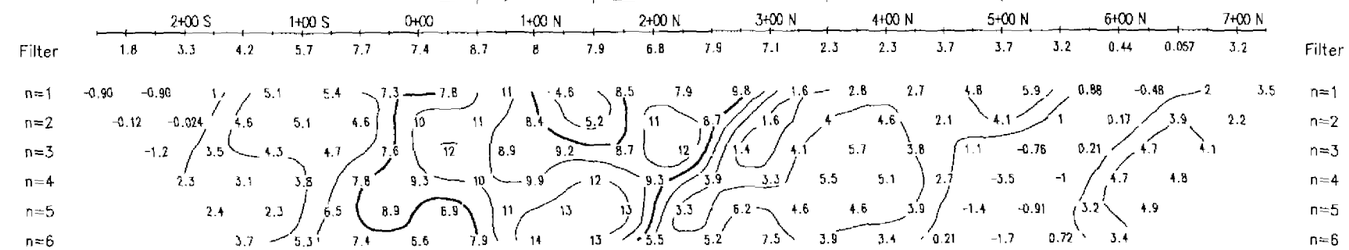


Resistivity
ohm-metres

Interpretation
QGI:

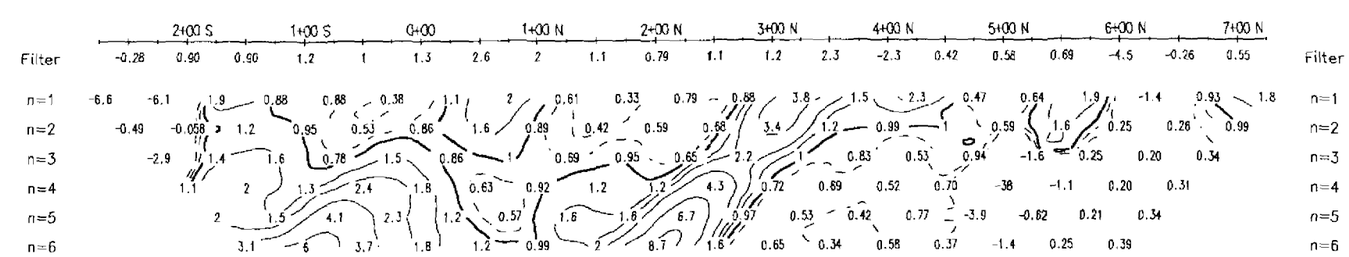


Chargeability
millivolts/volt



Chargeability
millivolts/volt

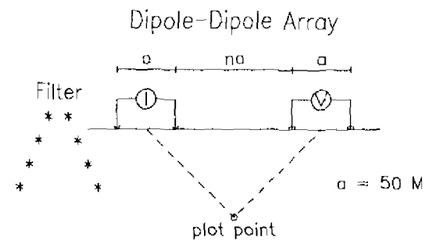
Metal Factor
IP/Resistivity



Metal Factor
IP/Resistivity

Line 3600 E

Dipole-Dipole Array



Strong increase in polarization

Well defined increase in polarization

Poorly defined polarization increase

Low resistivity feature
Strong, Moderate, Weak

High resistivity feature
Strong, Moderate, Weak

SURVEY SPECIFICATIONS

Instruments: IRIS IP-10, Phoenix IPT-1
Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 3600 E

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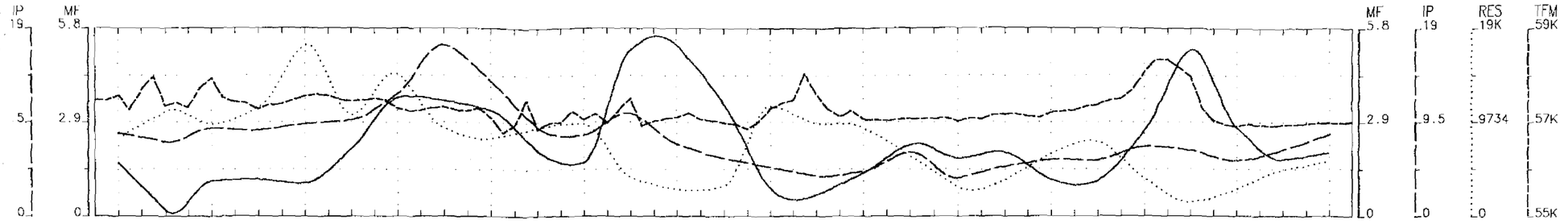
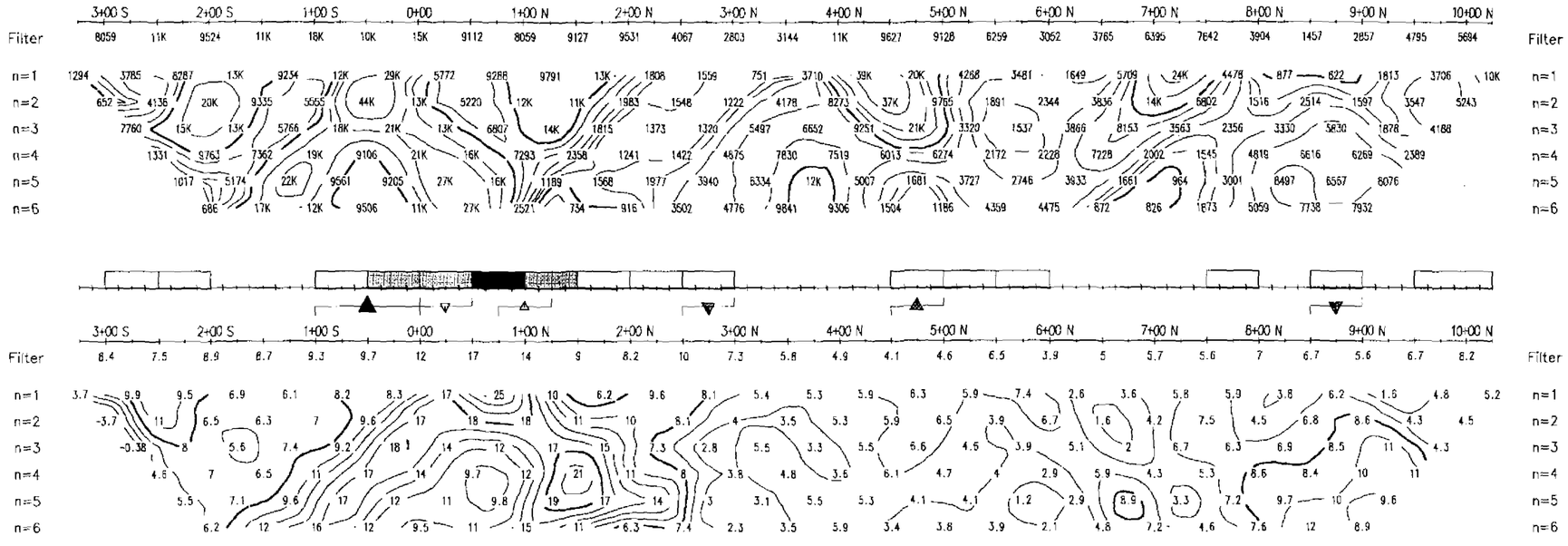
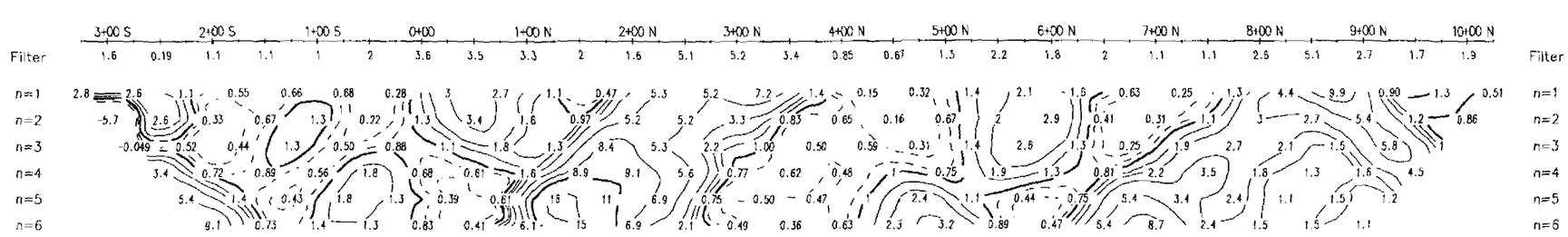




Resistivity
ohm-metres

Interpretation
QGI:

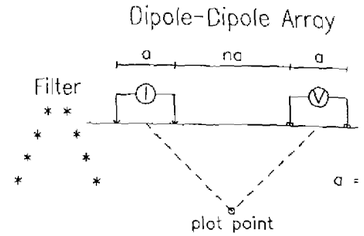
Chargeability
milliVolts/volt



Metal Factor
IP/Resistivity

Line 3800 E

Dipole-Dipole Array



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MAP SPECIFICATIONS

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Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5,

Scale 1:5000

50 0 50 100 150 200 250

(meters)

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INDUCED POLARIZATION SURVE
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 38

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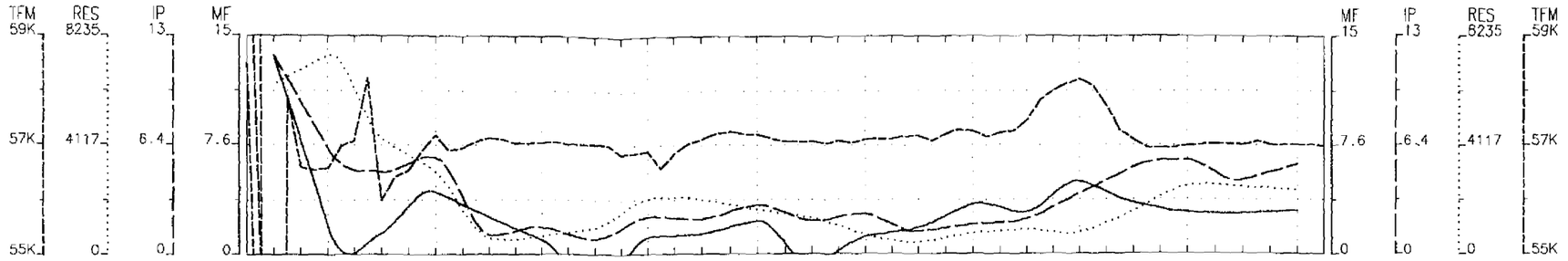
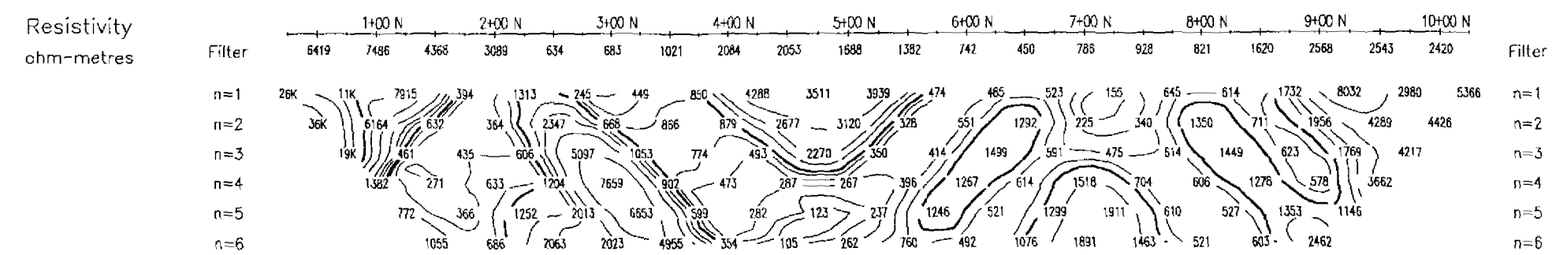
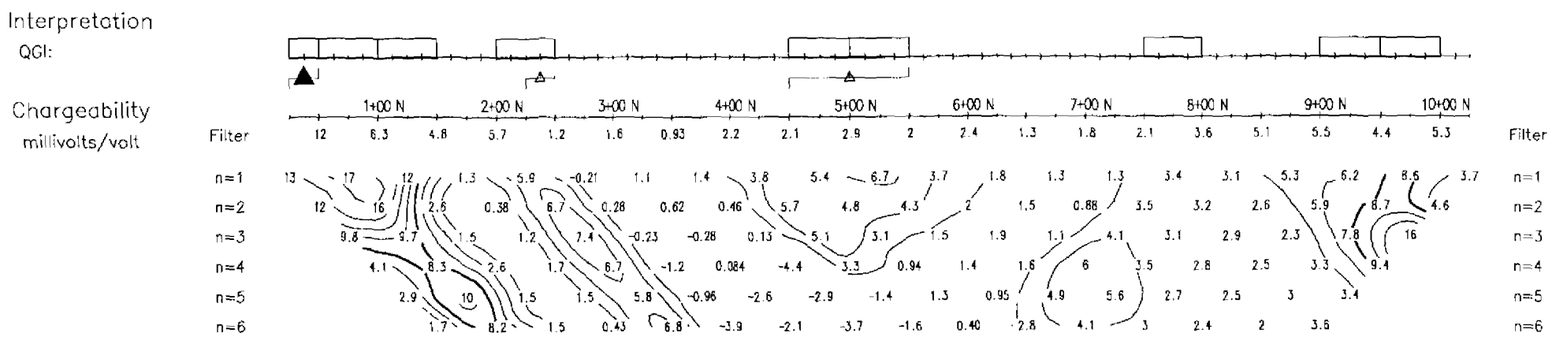
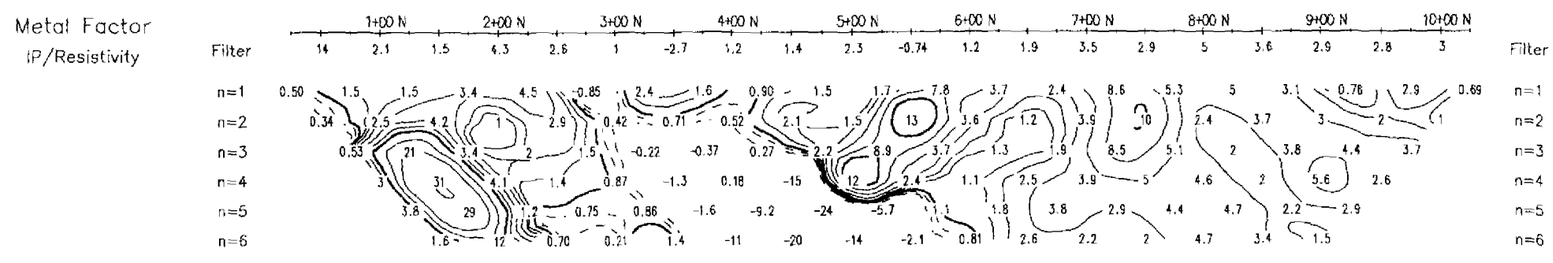








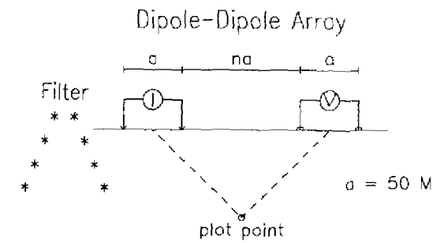
Interpretation
QGI:

Resistivity
ohm-metres

Chargeability
millivolts/volt

Metal Factor
IP/Resistivity

Line 4000 E



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Well defined increase in polarization

Poorly defined polarization increase

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High resistivity feature, Strong, Moderate, Weak

SURVEY SPECIFICATIONS

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Operators: R. Chasse, D. MacGillivray
Waveform: 0.125 Hz, 50% duty cycle
Decay Sampling: 20 windows, 20 - 1850 ms

MAP SPECIFICATIONS

Resistivity: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)
Chargeability: Linear Contours (2 mV/V)
Metal Factor: Logarithmic Contours (1, 1.5, 2, 3, 5, 7.5, 10,..)

Scale 1:5000

50 0 50 100 150 200 250 300
(meters)

MUSTANG MINERALS CORPORATION

INDUCED POLARIZATION SURVEY
RIVER VALLEY PGM PROJECT
South Grid, Crerar Twp., ON

Processing Date: 00/06/05
Drawing Number: QG-112-IP-DD-Line 4000 E

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