FALCONBRIDGE OPTION PROPERTY
SHAKESPEARE DEPOSIT EXTENSION
AGNEW LAKE AREA, ONTARIO
REPORT ON
JVX SPECTRAL IP/RESISTIVITY
MAGNETOMETER SURVEYS
FEBRUARY 2003
URSA MAJOR MINERALS INC.

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JVX Ltd.

REPORT

ON

SPECTRAL IP/RESISTIVITY AND MAGNETOMETER SURVEYS

CONDUCTED ON THE

FALCONBRIDGE OPTION PROPERTY
SHAKESPEARE DEPOSIT EXTENSION
AGNEW LAKE AREA
NORTHEASTERN ONTARIO
NTS 41 I/5

For: **URSA MAJOR MINERALS INC.**

110 Adelaide St. West Suite 405
Toronto, Ontario
M5H 1S3V6C 1V5
Tel: (416) 864 0615
Fax: (416) 864-0620
Attention: Richard Sutcliffe

By: JVX Ltd.
60 Wilmot Street West, Unit #22
Richmond Hill, Ontario L4B 1M6
Tel: (905) 731-0972
Fax: (905) 731-9312
Contact: Blaine Webster

JVX Ref: 3-4
February, 2003

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

LIST OF PLATES

Plan Maps

Plate 9:	Chargeability M7, (n=2) Plan Map, Scale 1"=150ft.
Plate 10:	Apparent Resistivity (n=2) Plan Map, Scale 1"=150ft
Plate 11:	Total Field Magnetics Plan Map, Scale 1"=150ft

Inversions

Plate 12:	L. 1500 E Mx Chargeability/Resistivity, Scale 1"=150ft.
Plate 13:	L. 1700 E Mx Chargeability/Resistivity, Scale 1"=150ft.
Plate 14:	L. 2300 E Mx Chargeability/Resistivity, Scale 1"=150ft.

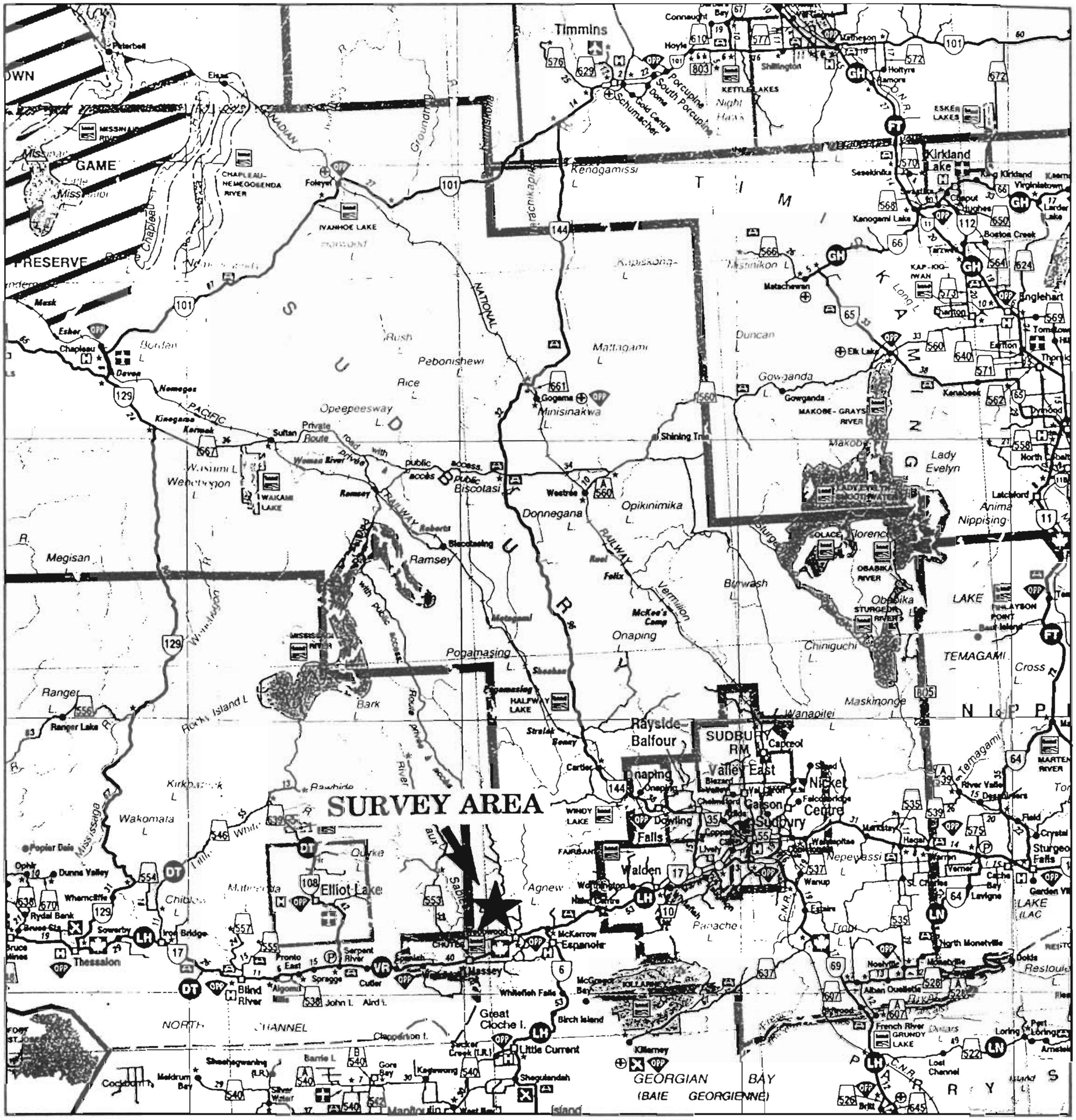
1. INTRODUCTION

JVX Ltd. conducted Time-Domain ***Spectral*** Induced Polarization (IP)/Resistivity and Magnetometer surveys from January 30 through February 4, 2003 on behalf of Ursa Major Minerals Inc. The work was positioned on the Falconbridge Option Property, which is located in the Agnew Lake area, Shakespeare Twp., Northeastern Ontario. The property is located approximately 60 kilometres west of Sudbury. The survey location is shown in Figure 1 and the survey grid with claims is shown in Figure 2.

The purpose of these surveys was to locate Cu/Ni/PGM mineralization associated with disseminated and interconnected sulphides. The surveys follow IP/Resistivity and Magnetometer surveys conducted in the fall of 2000.

The grid covered the following claims:

35592	35594	35595	35596	35597
35601	35602	35603	35604	35609
36048	36049	1231440	1231441	



LOCATION MAP

URSA MAJOR MINERALS INC

FALCONBRIDGE OPTION PROPERTY

Shakespeare Deposit Extension Zone, Agnew Lake Area

Shakespeare & Baldwin Twps., Ontario

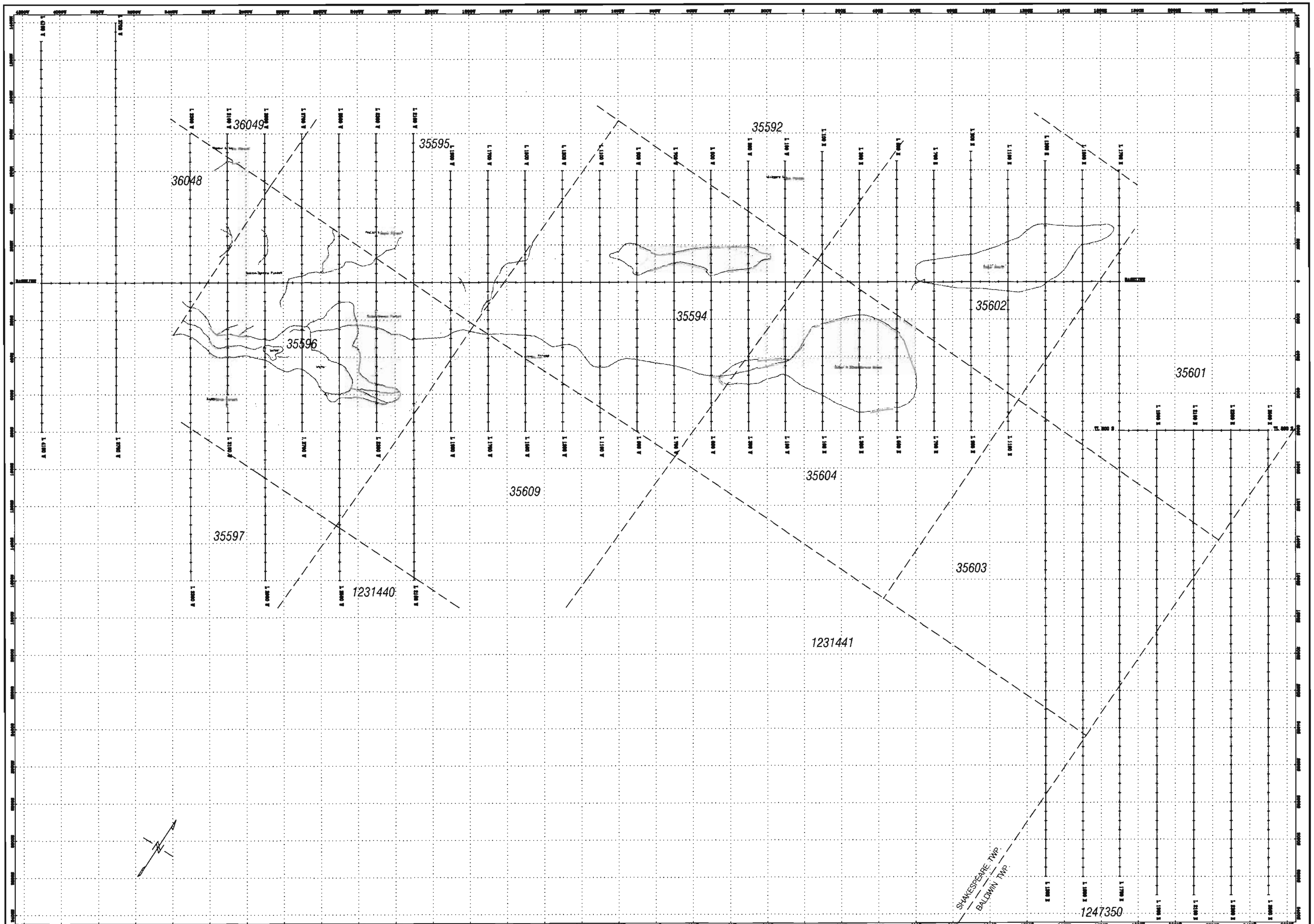
NTS 41 I/5

GROUND GEOPHYSICAL SURVEY

Scale: 1 : 1,600,000

Survey by **JVX Ltd.**
February 2003

Figure 1



GRID / CLAIM MAP
URSA MAJOR MINERALS INC.
FALCONBRIDGE OPTION
Agnew Lake Area, Shakespeare and Baldwin Twps., Ontario
NTS 41 I/5
GROUND GEOPHYSICAL SURVEY

JVX Surveyed by JVX Ltd.
Oct. 2000, April 2002 and Feb. 2003

Figure 2

2. SURVEY SPECIFICATIONS and PRODUCTION SUMMARIES

IP/Resistivity	
Transmitter	Scintrex IPC-7 2.5 kW
Receiver	Scintrex IPR-12
Array Type	pole-dipole
Transmit Cycle Time	2 sec
Receive Cycle Time	2 sec
Number of Potential Electrode Pairs	6
Electrode Spacing	100 ft.
Number of Lines Surveyed	7 lines
Survey Coverage	20,000 ft.

Table 1: Specifications for the IP/Resistivity Surveys

Line	Array "a"-spacing	From Station	To Station	Distance (ft.)	No. of Readings
1300E	100 ft.	3200S	400N	3600	31
1500E	100 ft.	3100S	100S	3000	29
1700E	100 ft.	3100S	400N	3500	33
1900E	100 ft.	3200S	800S	2400	22
2100E	100 ft.	3300S	800S	2500	19
2300E	100 ft	3300S	800S	2500	20
2500E	100 ft	3300S	800S	2500	21
Total				**20000**	**175**

Table 2: Summary for Pole-Dipole IP/Resistivity

MAGNETICS	
Instrument-base station	Scintrex Envimag
Sensor Type	Proton Precession
Instrument-rover	GSM-19
Sensor Type	Overhauser
Station Spacing	50 ft
Number of Lines Surveyed	13Lines,1 Base,1 Tie
Survey Coverage	28,200 ft

Table 3: Specifications for the Magnetometer Survey

Line	From Station	To Station	Distance (ft.)	No. of Readings
4100W	900S	1300N	2200	45
3700W	800S	1400N	2200	45
3300W	2000S	800S	1200	25
2900W	1600S	800S	800	17
2500W	1600S	800S	800	17
2100W	1600S	800S	800	17
1300E	3200S	150N	3350	60
1500E	3200S	200S	3000	61
1700E	3200S	200S	3000	61
1900E	3200S	800S	2400	49
2100E	3200S	850S	2350	48
2300E	3250S	800S	2450	56
2500E	3200S	750S	2450	53
BL 0N	4100W	3700W	400	9
TL800S	1700E	2500E	800	18
Total			**28200**	**581**

Table 4: Summary for Magnetometer Survey

3. PERSONNEL

Ted Lang (Geophysical Technician, Party Chief):
Mr. Lang acted as Party Chief and was responsible for day-to-day field operations and overall data quality.

Tim Charlebois (Geophysical Technician):
Tim Charlebois assisted Mr. Lang with the day-to-day field operations of the IP survey and carried out the magnetometer survey.

Three (3) additional technicians were employed to perform the fieldwork.

John Gilliatt (Senior Geophysicist):
Mr. Gilliatt processed and plotted the data and is responsible for data storage. He also liaised with the field party chief.

Ms.Dagmar Piska / Ms.Vaso Lymberis (Draftspersons):
Ms. Piska and Ms. Lymberis assisted with the plots, carried out the drafting on the figures/plates and assembled this report.

Blaine Webster (President):
Mr. Webster provided overall supervision of the survey, and prepared this report.

4. FIELD INSTRUMENTATION

JVX supplied the geophysical instruments specified in Appendix A.

4.1 IP TRANSMITTER

The **Scintrex IPC-7/2.5 kW Time Domain Transmitter** was used. The transmitter generates square wave current output with a period of 4, 8, or 16 seconds. A digital multimeter in series with the transmitter is used to measure the magnitude of the current output.

4.2 IP RECEIVER

The **Scintrex IPR-12 Time Domain Receiver** was used. This unit samples the voltage decay curve as measured by the potential electrodes at different points in time. Readings are repeated until they converge to within a tolerance level, and the data are stored in solid-state memory. Spectral parameters ***Tau*** and ***M-IP*** are also calculated and recorded automatically

4.2.1 The Pole-dipole Array

The "pole-dipole" survey configuration was used over the ground survey lines. This array consists of one current electrode C_1 and seven potential electrodes,P_1 to P_7 connected to the receiver by means of the "Snake" (field cable). The infinity current location C_2 is maintained at a large distance from the grid. This distance is about 10 times the potential electrode spacing "a" times 6 (the maximum number of "n" used in the pole-dipole survey).

4.3 Magnetometers

A **Scintrex ENVIMAG** proton precession magnetometer was used to measure the total magnetics over the grid.

Magnetic data were collected at 50 ft. intervals along gridlines.

A base station was also employed to monitor the diurnal variations in the earth's magnetic field.

5. DATA PROCESSING

After being transferred to a field computer at the end of each survey day, the data were examined, corrected, and organized by the instrument operator. The results were plotted on a

- STAR NX-80 colour dot-matrix printer

These plots were used to monitor progress and data quality, and to make an initial interpretation. Thus survey parameters and design were altered when necessary.

5.1 IP AND RESISTIVITY

The data were sent by courier or e-mail to the head office of JVX in Richmond Hill, Ontario. They were processed and results were plotted on the following printers as was necessary:

- HEWLETT PACKARD DESIGNJET 750C 36 inch colour plotter
- MINOLTA 2200 Laser printer

The processing procedure is outlined below:

1) **JVX** in-house software was used to spatially reference the time-domain data. Spectral ***Tau, M-IP*** and ***c*** were calculated - in addition to chargeability and apparent resistivity. The spectral parameters describe the shape of the IP decay curve, giving information about:
    - the grain size (indicated by the parameter ***Tau***),
    - the magnitude of the chargeable source (indicated by ***M-IP***),
    - the variability of grain size (indicated by ***c***).

   The spectral parameters were calculated internally in the IPR-12 and with JVX in-house software. This software works on IPR-11 format data and it also varies the spectral value *c*, whereas the IPR-12 circuitry uses a fixed value for *c*=0.25. **JVX'**s extensive experience with master-curve-matching provides more reliable interpretative results. In-house software was used to convert the time slices from IPR-12 windows to IPR-11 windows. The M0 slice was extrapolated based on the approximate straight-line character of the Log-Lin decay curve. This estimation proved satisfactory for our purposes, based on sensitivity analyses done on a test data sample.

2) The **GEOSOFT IP Package** was used to generate colour and black and white pseudosections of chargeability and resistivity data.

3) Plan maps of both chargeability and resistivity data were produced using **JVX** in-house software and the GEOSOFT Mapping Package. Additional drafting on the compilation map was done through **AutoCAD**.

Steps 1 through 3 were carried out in the Richmond Hill office.

5.2 Magnetics

Plan maps of the magnetic data were produced using the GEOSOFT Mapping package.

6. INTERPRETATION METHODOLOGY

JVX uses its many years of experience in geophysical interpretation to extract the most accurate information from the data. The procedures involved are simplified for the sake of clarity.

6.1 IP AND RESISTIVITY

The IP and resistivity data are interpreted using the following procedure:

1) Chargeability anomalies are picked on the pseudosections and classified using the following scheme *as a guide*:

Very Very Strong (> 40 mV/V) and well defined

Very Strong (30 to 40 mV/V) and well defined

Strong (20 to 30 mV/V) and well defined

Moderate (10 to 20 mV/V) and well defined

Weak (5 to 10 mV/V) and well defined

Very Weak (3 to 5 mV/V) and poorly defined

x x x x *Extremely Weak* (<3 mV/V) and very poorly defined

The peak of the anomaly provides a qualitative indication of the depth to the top of the anomalous source and the location of the centre of the body. Where possible, the location and dipole number of the peak are written beside the anomaly bar.

NOTE: Relatively deep pole-dipole anomalies (~ greater than n=3) should be inverted (**JVX** inversion software) to provide a better estimate of source characteristics, etc.

2) The spectral characteristics of the anomalies are examined. The peak value of *M-IP* is noted, and ***Tau*** is classified according to the following scheme:

IPR-12/JVX Scheme:

L *Long* (> 10 s)

M *Medium* (1 s to 10 s)

S *Short* (< 1 s)

3) Resistivity anomalies are picked on the pseudosections and classified using the following scheme *as a guide*:

no symbol	**VH(*n*)**	*Very High* (> 25 000 ohm m) — highly silicified
no symbol	**H(*n*)**	*High* (> 10 000 ohm m) — probably silicified
no symbol	**WH(*n*)**	*Weak High* (< 10 000 ohm m) — relative increase compared to surrounding material
— —	**SL(*n*)**	*Strong Low* — strong decrease in resistivity
– – –	**ML(*n*)**	*Medium Low* — medium decrease in resistivity
. . . . . .	**WL(*n*)**	*Weak Low* — weak resistivity decrease relative to surrounding material, where *n* is the dipole number at which the anomaly peak is located.

4) The anomalies from steps 1 to 3 are marked on the Compilation Map.

5) Zones of high chargeability are interpreted based on resistivity and geometric information.

6) The anomalies are rated according to JVX's past experience.

7) Interpretation of inversion models (not presented in this report) is done with basic shapes. As we gain practical experience carrying out and interpreting inversion models, the confidence level of interpreted source boundaries will naturally increase. The boundaries of the shapes are drawn with dotted lines to thick solid lines, representing the following:

——— *High confidence in source-core location*

——— *Good confidence in source-core location*

— — *Fair confidence in source-core location*

. . . . . . *Source-core location uncertain (main source in general vicinity)*

Note that the entire model depth-section is plotted, including regions where the inversion results are divergent. This is done because the cut off depth for divergence is non-uniform across the profile. The above interpreted source location serves to distinguish between interpreted true anomalies and these divergences.

7. DISCUSSION OF RESULTS

7.1 Shakespeare Extension Grid

Seven IP zones, IP-13, IP-14, IP-15, IP-16, IP-17 IP-18 and IP-19 have been located on the eight lines surveyed.

Magnetic data were collected by JVX Ltd.

The geophysical anomalies have been transferred to the Compilation Map (Plate 1). A brief discussion of the results follows:

IP-13 (1700E/00)

IP-13 is a single line anomaly that may extend off the north side of the grid. IP-13 is a moderate IP anomaly with an associated resistivity high. The spectral MIP is stronger at n=5 indicating the source to be improving at depth.

Recommendation: The adjacent lines should be extended and surveyed

T-1 (1700E/00) High priority target for follow-up.

IP-14 (1300E/200S to 1700E/400S)

IP-14 is a strong 400 foot long IP anomaly with an associated resistivity high occurring on the south flank of a resistivity low. A 200 nT magnetic anomaly is associated with IP-14.

IP-14 appears to be the eastern extension of the Shakespeare deposit however the anomaly is associated with a resistivity high. Therefore inversion should be done on the lines to determine if the source is a resistivity low.

A weak time domain electromagnetic conductor occurs near IP-14 indicating some conductive sulphides are associated with the IP anomaly.

Recommendation: The adjacent lines should be extended and surveyed.
EM surveys should be done when the drill hole EM is done to see if the conductor correlates with IP-14.

T-2A High Priority (1300E/200S) EM Conductor Axis @ (1300E/330S)
T-2B High Priority (1500E/300S) EM Conductor Axis @ (1500E/330S)
T-2C High Priority (1700E/350S) EM Conductor Axis @ (1700E/350S)

IP-15 (1300E/900S to 1700E/800S)

IP-15 is a 400 foot long moderate to strong IP response with associated high resistivities. The anomaly does not have a magnetic response therefore the source likely does not contain Cu/Ni/PGM.

Recommendation: The adjacent lines should be extended and surveyed.
The anomaly should be prospected to determine the anomaly source.

IP-16 (1700E/1100S to 2300E/1200S)

IP-16 is a 600 foot long moderate to very strong anomaly associated with a 300nT magnetic anomaly and a weak resistivity low located on line 1900E

Recommendation: IP-16 should be prospected and drilled on line 1900E.
T-3 Moderate to High priority (1900E/1000S)

IP-17 (1500E/900S to 2500E/1500S)

IP-17 is a 1000 foot long moderate to very strong anomaly associated with a 200nT magnetic anomaly on line 2300E and 2500E. IP-17 is associated with high resistivities.

Recommendation: IP-17 should be prospected.

IP-17a (1900E/1400S)

IP-17a is a one line moderate chargeability response with an associated resistivity low.
Recommendation: IP-17a should be prospected.

IP-18 (1500E/900S to 2500E/1500S)

IP-18 is a 1000 foot long moderate to very strong anomaly associated with a 200nT magnetic anomaly on line 2500E. IP-18 is associated with high resistivities.

Recommendation: IP-18 should be prospected.
T-4 Medium Priority (2500E/2000S)

IP-18a (1900E/1800S)

IP-18a is a single line, very strong chargeability response with very high resistivities.

Recommendation: IP-18a should be prospected.
Target 4a Medium Priority(1900E/1800S)

IP-19 (1300E/2600S to 2500E/2600S)

IP-19 is a 1200 foot long moderate to very strong anomaly associated with a 200nT to 600nT magnetic anomaly. IP-19 is associated with a resistivity low.

Recommendation: IP-19 should be prospected and drilled.
T-5 High Priority) (1500E/ 2600S) is a high priority target for drilling. IP-19 on line 1500E has a 100nT magnetic association with an associated resistivity low.
T-6 High Priority) (2300E/ 2600S) is a high priority target for drilling. IP-19 on line 2300E has a strong magnetic association with an associated resistivity low. The inversion confirms target.

8. CHARGEABILITY AND RESISTIVITY INVERSION

Line 2300E

The chargeability inversion indicates a wide shallow chargeability source from 2700S to 1500S. The non-inverted chargeability data indicate three IP anomalies in this same area. IP-19 (2700S to 2400S, IP-18 (2200S to 1800S) and IP-17 (1800S to 1400S) are part of one wide zone of mineralization. The resistivity inversion indicates three resistivity lows occur at 2600S, 2000S, and 1500S respectively. The resistivity low at 2600S correlates with a 400nT magnetic anomaly and IP anomaly IP-19. IP 19 is a high priority target for follow-up (T-6).

Line 1700E

The chargeability inversion indicates a wide shallow chargeability source from 2600S to 2000S with a weak magnetic anomaly. The resistivity inversion indicates a weak resistivity low associated with the inversion source at 2500S to 2600S. IP-19 is a high priority target at 1500E/2500N. The non-inverted chargeability data indicate two shallow IP anomalies in this same area. IP-19 (2800S to 2500S, IP-18 (2200S to 1900S). A second inversion source occurs at 1000S correlates with IP-16 and IP-15.

T-2c a high priority target did not give a good inversion source.

Line 1500E

The chargeability inversion indicates a wide shallow chargeability source from 2800S to 1300S with a weak magnetic anomaly. The resistivity inversion indicates a weak resistivity low associated with the inversion source at 2500S to 2600S. IP-19 is a high priority target at 1500E/2500N. The non-inverted chargeability data indicate three shallow IP anomalies in this same area. IP-19 (2700S to 2300S, IP-18 (2100S to 1800S), and IP-17 (1800S to 1500S). A second inversion source occurs at 1000S correlates with and IP-15.

T-5 at 1500E/2600S is a high priority target that did give a good inversion source.

9. SUMMARY AND RECOMMENDATIONS

9.1 Shakespeare East Extension

Nine chargeability zones have been outlined by the IP/Resistivity surveys.

Six targets have been selected for follow-up:

IP-13 (T-1), a one line medium strength anomaly high priority target on the northern flank of IP-14 which may be the eastern extension of the Shakespeare deposit.

IP-14 (T-2a, T-2b, T-2c) are three high priority targets on IP-14 that may be the eastern extension of the Shakespeare deposit.

IP-18 (T-4) is a medium priority target with an associated magnetic anomaly.

IP-18a (T-4a) is a medium priority target with an associated magnetic anomaly.

IP-19 (T-5 and T-6) are two high priority targets each having associated high magnetics and resistivity low.

TARGET	LINE	STN	PRIORITY	COMMENTS
T-1	1700E	00	High	High priority target coarse-grained non-magnetic source located on north flank of resistivity low. Drill Target.
T-2a	1300E	200S	High	High priority target coarse-grained weakly associated with a weak resistivity low. Drill Target weak. EM Conductor.
T-2b	1500E	300S	High	High priority target coarse-grained weakly associated with a weak resistivity low. Drill Target weak. EM Conductor.
T-2c	1700E	250S	High	High priority target coarse-grained weakly associated with a weak resistivity low. Drill Target weak. EM Conductor. MIP=612. Did not give a good inversity.
T-3	1900E	1000S	Med to High	High chargeabilty with resistivity low and associated 300nT magnetic anomaly. Drill Target. Check with EM.
T-4	2500E	2000S	Medium	Very strong chargeability with 200nT magnetic response on north flank of resistivity low. May want to check with EM. Prospect.
T-4a	1400E	1800S	Medium	Very strong chargeability. Prospect.
T-5	1500E	2600S	High	Very strong chargeability with 100nT magnetic response that correlates with resistivity low. Check with EM. Drill Target.
T-6	2300E	2600S	High	Very strong chargeability with 100nT magnetic response that correlates with resistivity low. Check with EM. Drill Target.

Table 5: Shakespeare East Extension Exploration Targets

Prior to drilling please contact JVX for final drill collar locations.

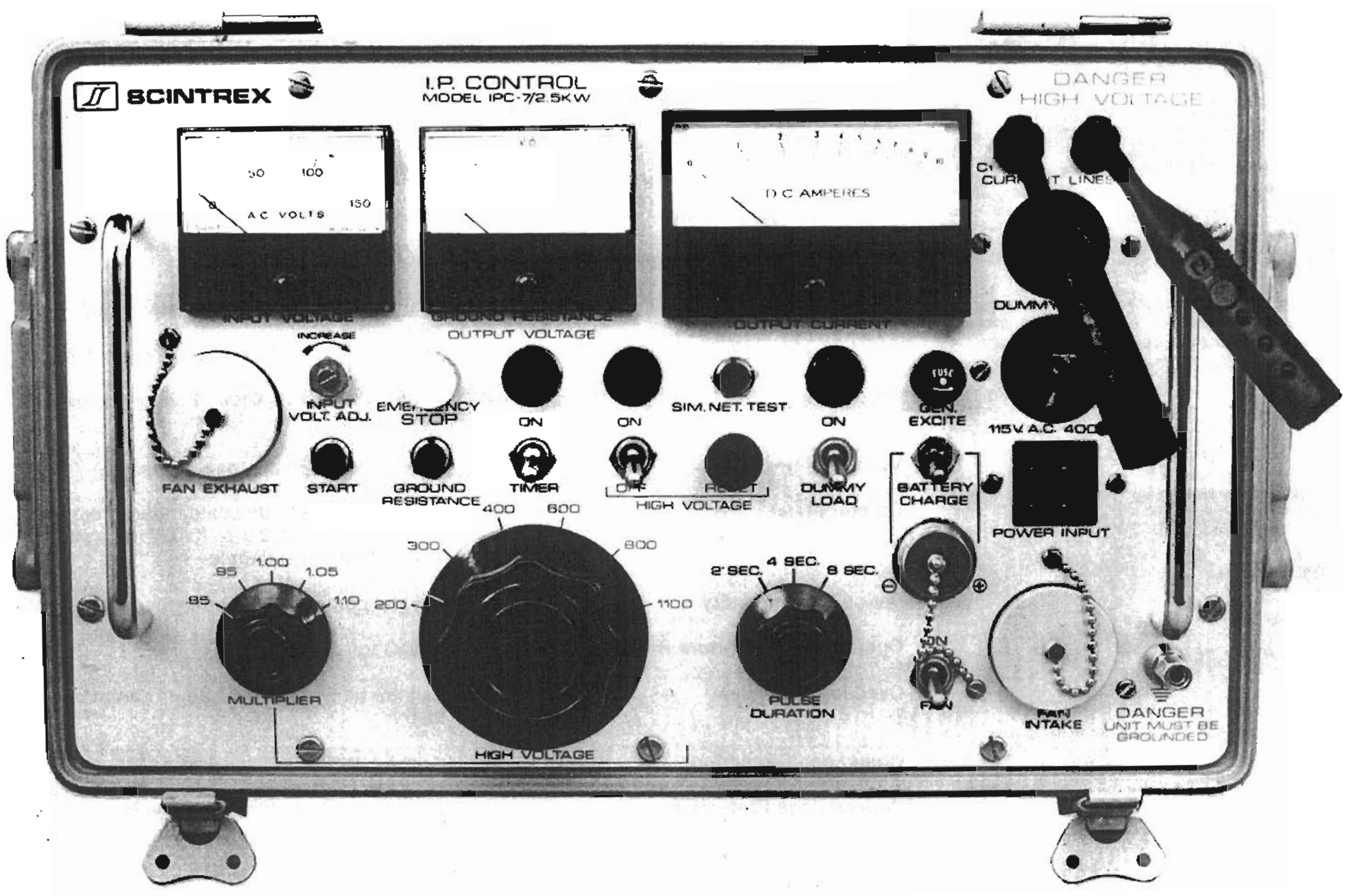
Respectfully submitted,

JVX Ltd.

Blaine Webster
President

APPENDIX A

SCINTREX IPC-7/2.5kW Induced Polarization and Commutated DC Resistivity Transmitter System



Function

The IPC-7/2.5 kW is a medium power transmitter system designed for time domain induced polarization or commutated DC resistivity work. It is the standard power transmitting system used on most surveys under a wide variety of geophysical, topographical and climatic conditions.

The system consists of three modules: A Transmitter Console containing a transformer and electronics, a Motor Generator and a Dummy Load mounted in the Transmitter Console cover. The purpose of the Dummy Load is to accept the Motor Generator output during those parts of the cycle when current is not transmitted into the ground, in order to improve power output and prolong engine life.

The favourable power-weight ratio and compact design of this system make it portable and highly versatile for use with a wide variety of electrode arrays.

Features

Maximum motor generator output, 2.5 kW; maximum power output, 1.85 kW; maximum current output, 10 amperes; maximum voltage output, 1210 volts DC.

Removable circuit boards for ease in servicing

Automatic on-off and polarity cycling with selectable cycling rates so that the optimum pulse time (frequency) can be selected for each survey.

The overload protection circuit protects the instrument from damage in case of an overload or short in the current dipole circuit.

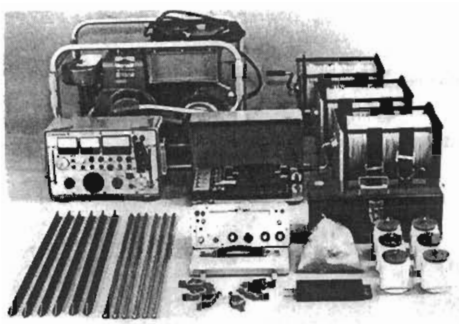
The open loop circuit protects workers by automatically cutting off the high voltage in case of a break in the current dipole circuit.

Both the primary and secondary of the transformer are switch selectable for power matching to the ground load. This ensures maximum power efficiency.

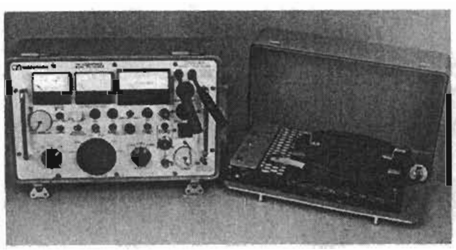
The built-in ohmmeter is used for checking the external circuit resistance to ensure that the current dipole circuit is grounded properly before the high voltage is turned on. This is a safety feature and also allows the operator to select the proper output voltage required to give an adequate current for a proper signal at the receiver.

The programmer is crystal controlled for the very high stability required for broadband (spectral) induced polarization measurements using the Scintrex IPR-11 Broadband Time Domain Receiver.

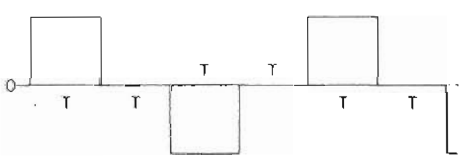
Technical Description of IPC-7/2.5 kW Transmitter System



Complete 2.5kW induced polarization system including motor-generator, reels with wire, tool kit, porous pots, simulator circuit, copper sulphate, IPR-8 receiver, dummy load, transmitter, electrodes and clips



IPC-7 / 2.5kW transmitter console with lid and dummy load



Time Domain Waveform

Transmitter Console	
Maximum Output Power	1.85 kW maximum, defined as VI when current is on, into a resistive load
Output Current	10 amperes maximum
Output Voltage	Switch selectable up to 1210 volts DC
Automatic Cycle Timing	T:T:T:T; on:off:on:off
Automatic Polarity Change	Each 2T
Pulse Durations	Standard: T = 2,4 or 8 seconds, switch selectable Optional: T = 1,2,4 or 8 seconds, switch selectable Optional: T = 8,16,32 or 64 seconds, switch selectable
Voltage Meter	1500 volts full scale logarithmic
Current Meter	Standard: 10.0 A full scale logarithmic Optional: 0.3, 1.0, 3.0 or 10.0 A full scale linear, switch selectable
Period Time Stability	Crystal controlled to better than .01%
Operating Temperature Range	-30°C to +55°C
Overload Protection	Automatic shut-off at output current above 10.0 A
Open Loop Protection	Automatic shut-off at current below 100 mA
Undervoltage Protection	Automatic shut-off at output voltage less than 95 V
Dimensions	280 mm x 460 mm x 310 mm
Weight	30 kg
Shipping Weight	41 kg includes reusable wooden crate
Motor Generator	
Maximum Output Power	2.5 kVA, single phase
Output Voltage	110 V AC
Output Frequency	400 Hz
Motor	4 stroke, 8 HP Briggs & Stratton
Weight	59 kg
Shipping Weight	90 kg includes reusable wooden crate

SCINTREX

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

Telephone: (416) 669-2280
Cable: Geoscint Toronto
Telex: 06-964570

Geophysical and Geochemical Instrumentation and Services

SCINTREX

IPR-12 Time Domain Induced Polarization/Resistivity Receiver

Specifications

nputs
1 to 8 dipoles are measured simultaneously.

nput Impedance
16 Megohms

;P Bucking
±10 volt range. Automatic linear correction)perating on a cycle by cycle basis.

nput Voltage (Vp) Range
;0 µvolt to 14 volt

:hargeability (M) Range
) to 300millivolt

'au Range
millisecond to 1000 seconds

leading Resolution of Vp, SP and M
/p, 10 microvolt; SP, 1 millivolt; M, 0.01 nillivolt/volt

.bsolute Accuracy of Vp, SP and M
letter than 1%

ommon Mode Rejection
.t input more than 100db

p Integration Time
0% to 80% of the current on time.

' Transient Program
otal measuring time keyboard selectable t 1, 2, 4, 8, 16 or 32 seconds. Normally 4 windows except that the first four are ot measured on the 1 second timing, the 'st three are not measured on the 2 sec-nd timing and the first is not measured on e 4 second timing. (See diagram on age 2.) An additional transient slice of inimum 10 ms width, and 10ms steps, ith delay of at least 40 ms is keyboard :lectable.

ansmitter Timing
qual on and off times with polarity change ich half cycle. On/off times of 1, 2, 4, 8, ; or 32 seconds. Timing accuracy of 00 ppm or better is required.

ternal Circuit Test
dipoles are measured individually in quence, using a 10 Hz square wave. e range is 0 to 2 Mohm with 0.1kohm ;olution. Circuit resistances are dis-iyed and recorded.

Synchronization
Self synchronization on the signal received at a keyboard selectable dipole. Limited to avoid mistriggering.

Filtering
RF filter, 10 Hz 6 pole low pass filter, statistical noise spike removal.

Internal Test Generator
1200 mV of SP; 807 mV of Vp and 30.28 mV/V of M.

Analog Meter
For monitoring input signals; switchable to any dipole via keyboard.

Keyboard
17 key keypad with direct one key access to the most frequently used functions.

Display
16 lines by 42 characters, 128 x 256 dots, Backlit Liquid Crystal Display. Displays instrument status and data during and after reading. Alphanumeric and graphic displays.

Display Heater
Available for below -15°C operation.

Memory Capacity
Stores approximately 400 dipoles of information when 8 dipoles are measured simultaneously.

Real Time Clock
Data is recorded with year, month, day, hour, minute and second.

Digital Data Output
Formatted serial data output for printer and PC etc. Data output in 7 or 8 bit ASCII, one start, one stop bit, no parity format. Baud rate is keyboard selectable for standard rates between 300 baud and 51.6 kBaud. Selectable carriage return delay to accommodate slow peripherals. Handshaking is done by X-on/X-off.

Standard Rechargeable Batteries
Eight rechargeable Ni-Cad D cells. Supplied with a charger, suitable for 110/230V, 50 to 60 Hz, 10W. More than 20 hours service at +25°C, more than 8 hours at -30°C.

Ancillary Rechargeable Batteries
An additional eight rechargeable Ni-Cad D cells may be installed in the console along with the Standard Rechargeable Batteries. Used to power the Display Heater or as back up power. Supplied with a second charger. More than 6 hours service at -30°C.

Use of Non-Rechargeable Batteries
Can be powered by D size Alkaline batteries, but rechargeable batteries are recommended for longer life and lower cost over time.

Operating Temperature Range
-30°C to +50°C

Storage Temperature Range
-30°C to +50°C

Dimensions
Console: 355 x 270 x 165 mm
Charger: 120 x 95 x 55mm

Weights
Console: 5.8 kg
Standard or Ancillary Rechargeable Batteries: 1.3 kg
Charger: 1.1 kg

Transmitters available

IPC-9	200 W
TSQ-2E	750 W
TSQ-3	3 kW
TSQ-4	10 kW

SCINTREX

In Canada

222 Snidercroft Rd.
Concord, Ontario
Canada, L4K 1B5
Tel.: (905) 669-2280
Fax: (905) 669-6403
Telex: (905) 06-964570

In the U.S.A.

85 River Rock Drive
Unit # 202
Buffalo, N.Y.
U.S.A. 14207
Tel.: (716) 298-1219
Fax: (716) 298-1317

SCINTREX

ENVI GEOPHYSICAL SYSTEM

Total Field Operating Range
20,000 to 100,000 nT (gammas)

Total Field Absolute Accuracy:
±1 nT

Sensitivity:
0.1 nT at 2 second sampling rate

Tuning
Fully solid state. Manual or automatic keyboard selectable

Cycling (Reading) Rates
0.5, 1 or 2 second sensor, 1/2m (20 inch) staff extender and processor module

Gradiometer Option
Includes a second sensor, 1/2m (20 inch) staff extender and processor module

VLF Option
Includes a VLF sensor and harness assembly

'WALKMAG' Mode
0.5 seconds for walking surveys, variable rates for hilly terrain

Digital Display
LCD 'Super Twist', 240 x 64 dots graphics, 8 line x 40 characters alphanumerics

Display Heater
Thermostatically controlled, for cold weather operations

Keyboard Input
17 keys, dual function, membrane type

Notebook Function
32 characters, 5 user-defined MACRO's for quick entry

Standard Memory
Total Field Measurements: 28,000 readings
Gradiometer Measurements: 21,000 readings
Base Station Measurements: 151,000 readings
VLF Measurements: 4,500 readings for 3 frequencies

Expanded Memory
Total Field Measurements: 140,000 readings
Gradiometer Measurements: 109,000 readings
Base Station Measurements: 750,000 readings
VLF Measurements: 24,000 readings for 3 frequencies

Real-Time Clock
Records full date, hours, minutes and seconds with 1 second resolution, ±1 second stability over 24 hours

Digital Data Output
RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off. High speed Binary Dump

Analog Output
0-999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1000 or 10,000 full scale

Power Supply
Rechargeable 'Camcorder' type, 2.3 Ah, Lead-acid battery
12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer
External 12 Volt input for base station operations
Optional external battery pouch for cold weather operations

Battery Charger
110 Volt-230 Volt, 50/60 Hz

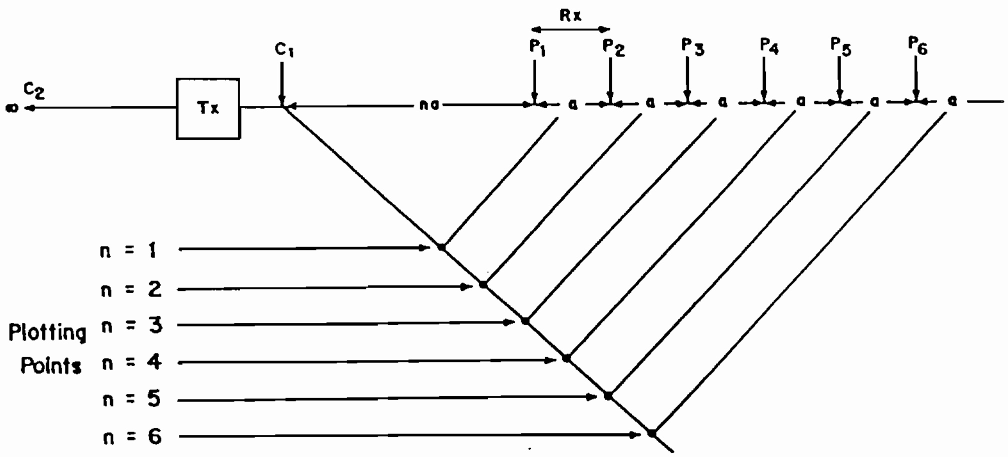
Operating Temperature Range
Standard: -40° to 60°C

Dimensions & Weight

Console:	250mm x 152mm x 55mm 10" x 6" x 2.25" 2.45 kg (5.4 lbs) with rechargeable battery
T.F. sensor:	70mm x 175mm 2.75"d x 7" 1 kg (2.2 lbs) (sensor)
Gradiometer sensor and staff extender:	70mm x 675mm 2.75"d x 26.5" 1.15 kg (2.5 lbs) (sensor)
T.F. staff:	25mm x 2m 1"d x 76" .8 kg (1.75 lbs)
VLF sensor Head:	140mm x 130mm 5.5"d x 5.1" .9kg (2 lbs)
VLF Electronics Module:	280mm x 190mm x 75mm 11" x 7.5" x 3" 1.7kg (3.7 lbs)

SCINTREX

Head Office
222 Snidercroft Road, Concord, Ontario, Canada L4K 1B5
Tel.: (905) 669-2280 • Fax: (905) 669-6403 • Telex: 06-964570
In the U.S.A.
525 Fort Worth Drive, Suite 216, Denton, Texas U.S.A. 76201
Tel.: (817) 591-7755 • Fax: (817) 591-1968
In Australia
1031 Wellington St., West Perth, West Australia 6005
Tel.: (619) 321-6934 • Fax: (619) 481-1201



ARRAY GEOMETRY

Apparent Resistivity:

$$\rho_a = 2\pi \; na(n+1) \; Vp/I$$

where ρ_a = apparent resitivity (ohm.m)
n = dipole number (dimensionless)
a = dipole spacing (m)
Vp = primary voltage (mV)
I = primary current (mA)

Pole-Dipole Array
Array Geometry and Formula for Apparent Resistivity

APPENDIX B

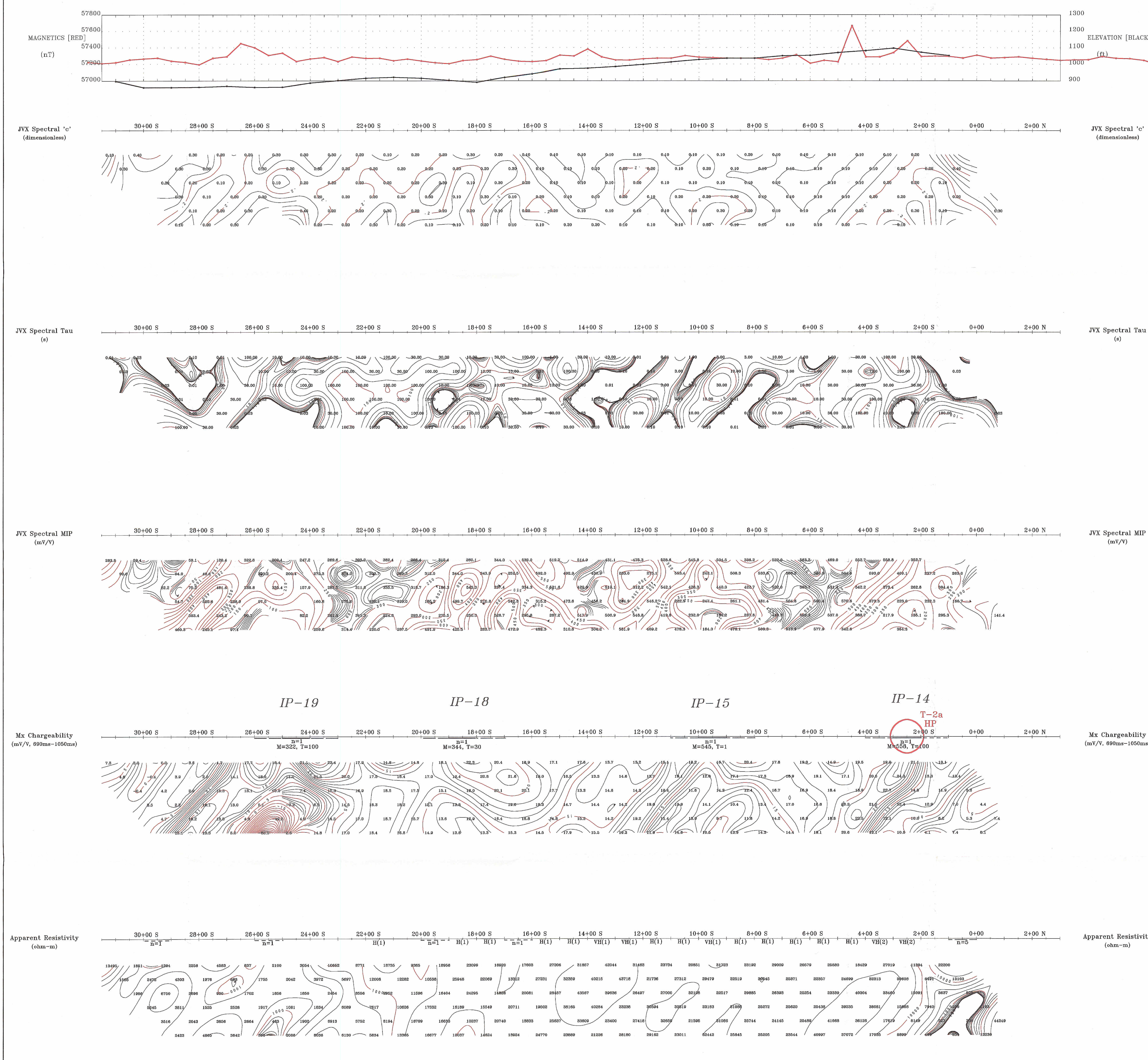
PLATE 1

2.30700

URSA MAJOR MINERALS INC.

COMPILATION MAP
Falconbridge Option Property
Shakespeare Project
Shakespeare Twp., Ontario, NTS 41 I/5

JVX Ltd. ref. 3-4, FEBRUARY 2003



Line 1300 E

Pole-Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

100 0 100 200 300

(feet)

PLATE 2

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

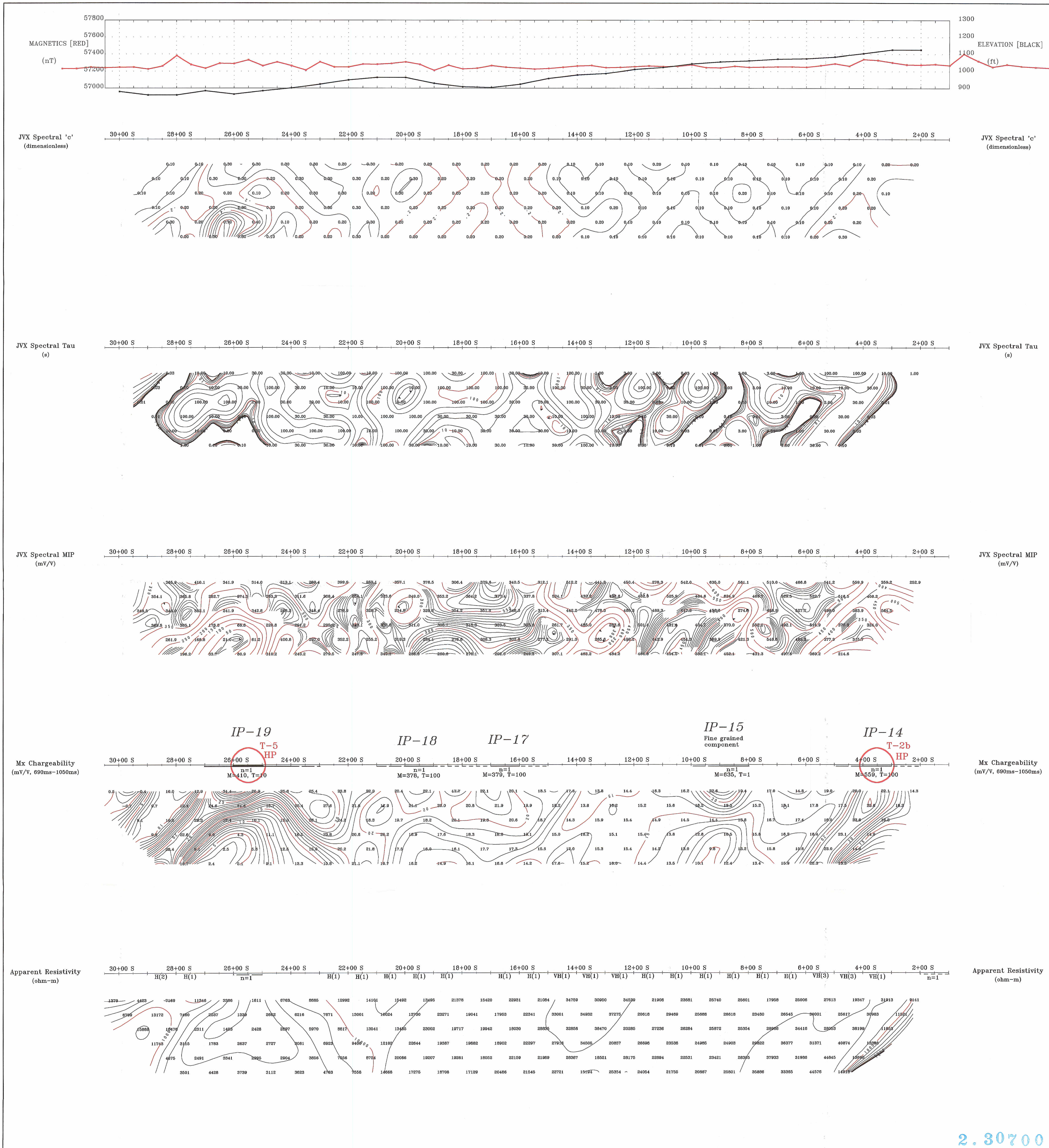
Line 1300 E

03/02/05

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4

2.30700



Line 1500 E

Pole-Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

100 0 100 200 300 (feet)

PLATE 3

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY

FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

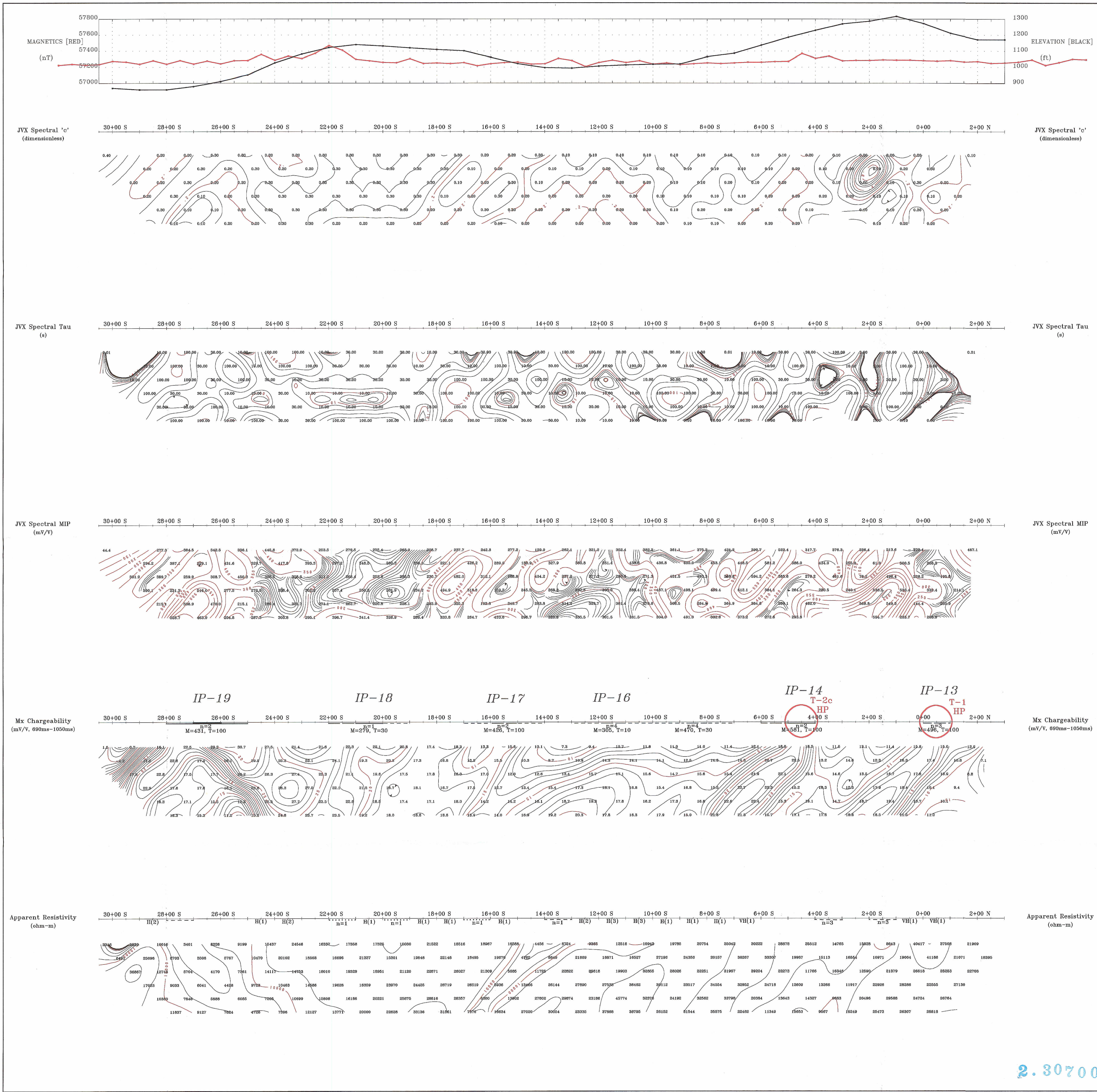
Line 1500 E

03/02/09

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4

2.30700



Line 1700 E

Pole-Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

(feet)

PLATE 4

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

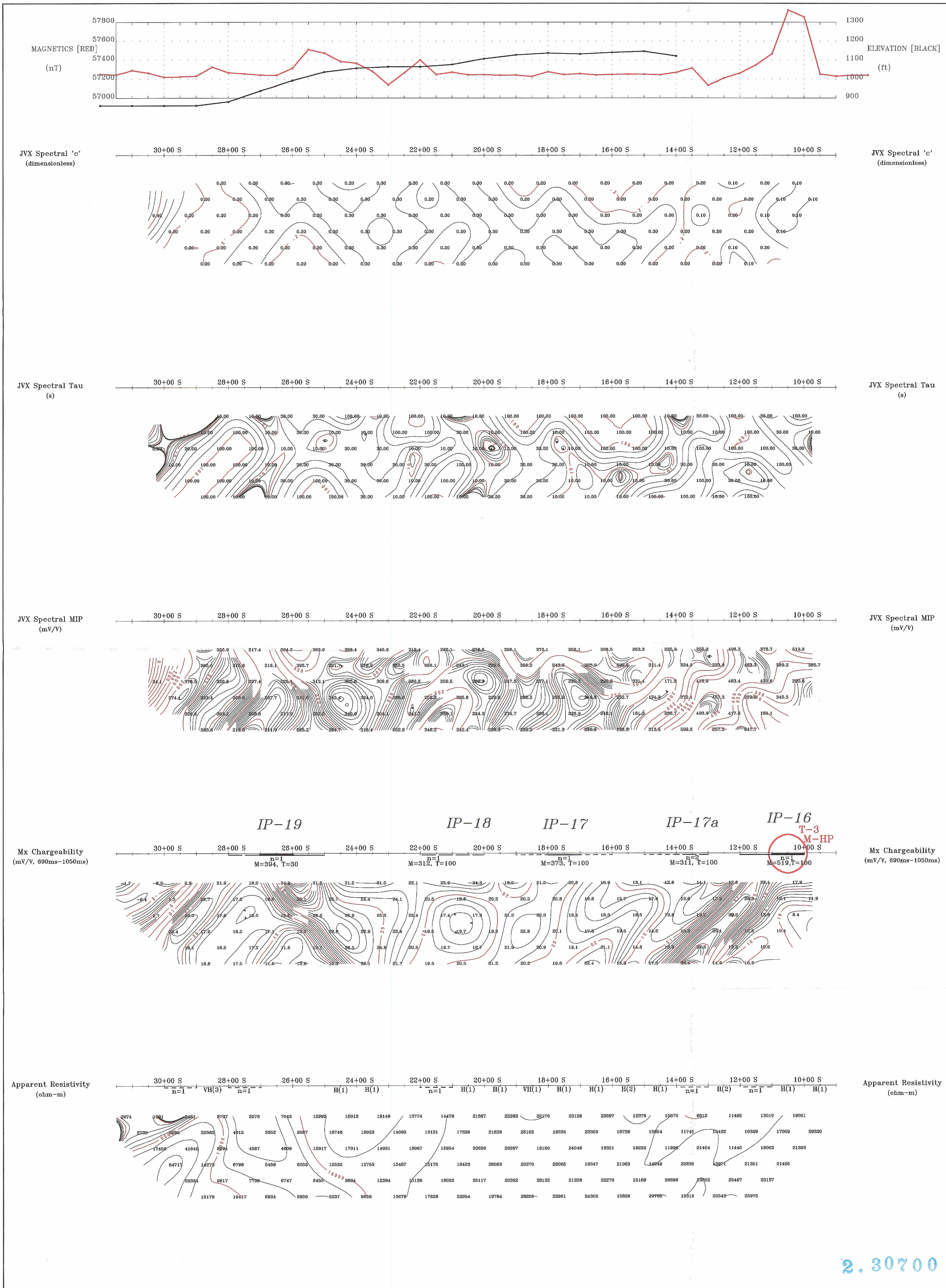
Line 1700 E

03/02/05

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4

2.30700



Line 1900 E

Pole-Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

100 0 100 200 300 (feet)

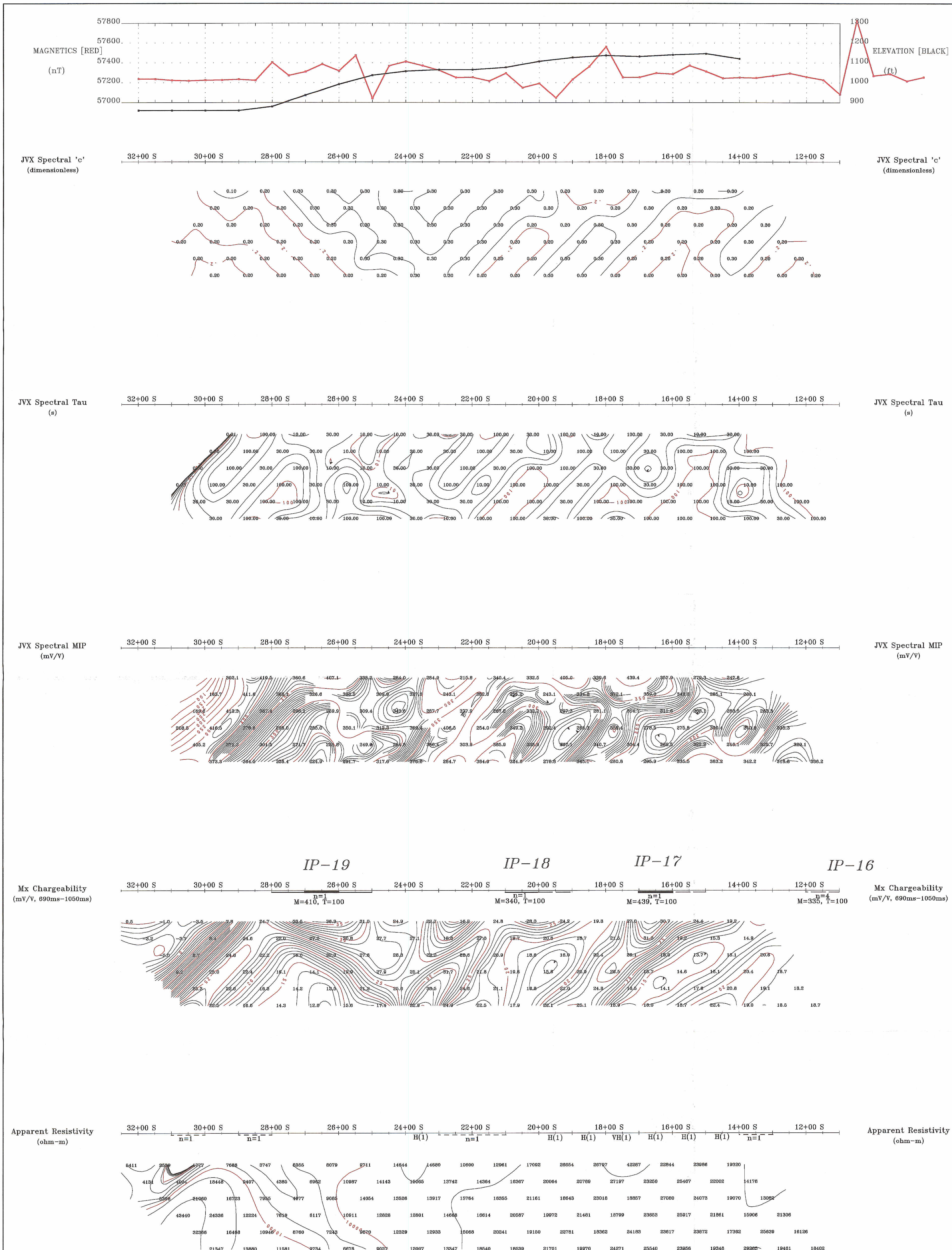
PLATE 5

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY
Shakespeare & Baldwin Twps., ON, NTS 41I/5

Line 1900 E
03/02/05
Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4



Line 2100 E

Pole–Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

(feet)

PLATE 6

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

Line 2100 E

03/02/06

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC–7

JVX Ltd., ref. 3–4

2.30700

Line 2300 E

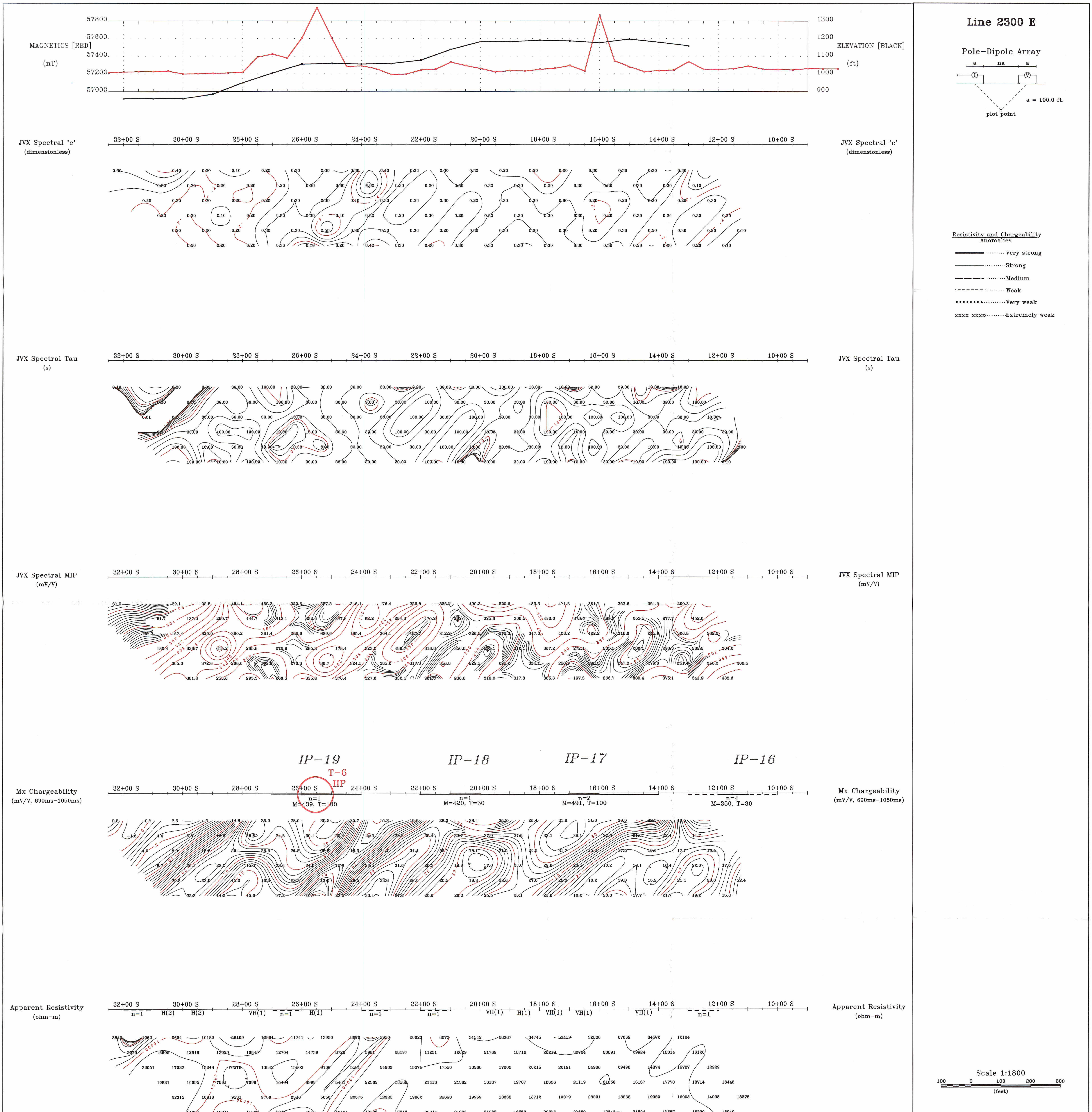


PLATE 7

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

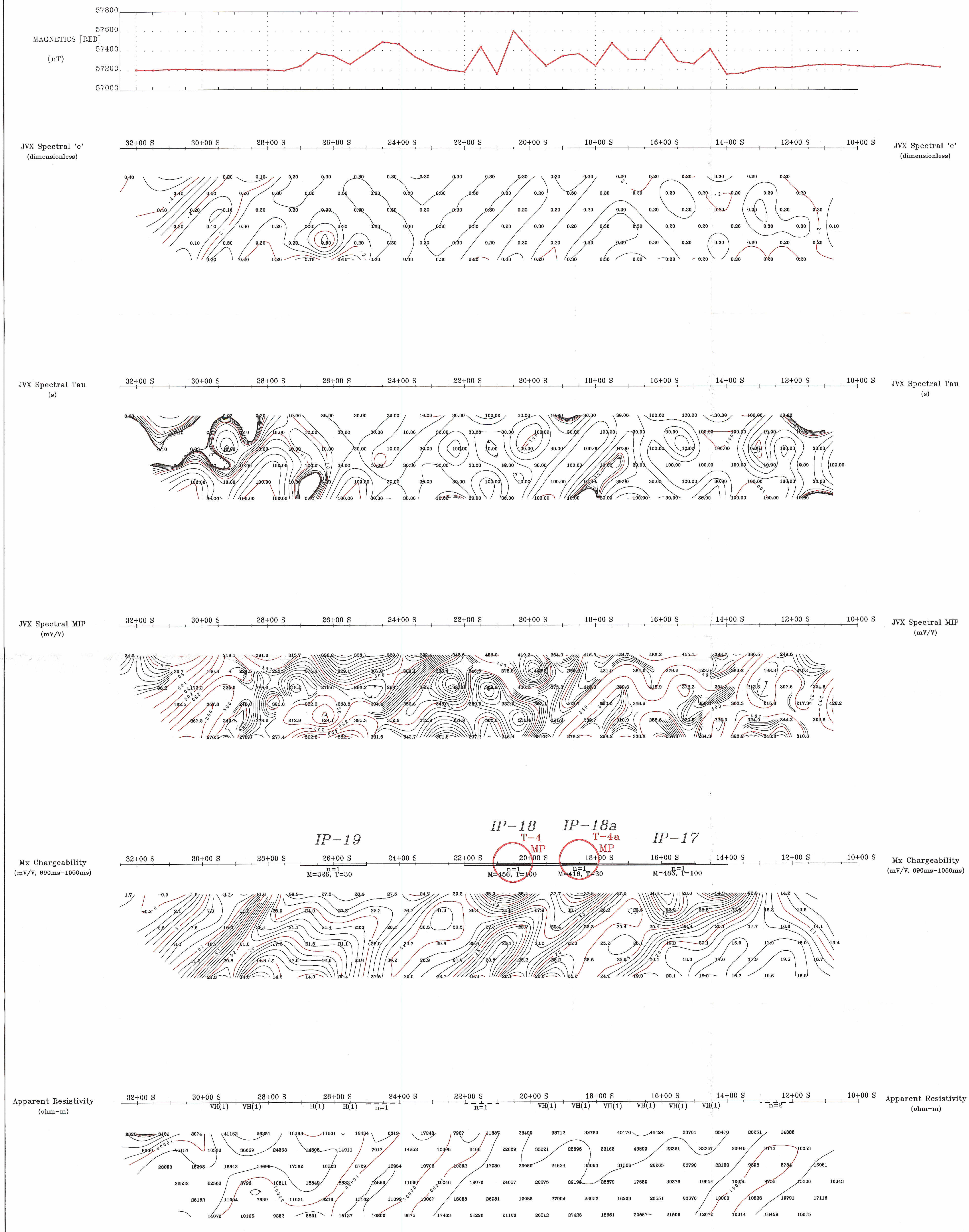
Line 2300 E

03/02/05

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4

2.30700



Line 2500 E

Pole–Dipole Array

a = 100.0 ft.

plot point

Resistivity and Chargeability Anomalies

- Very strong
- Strong
- Medium
- Weak
- Very weak
- xxxx xxxx Extremely weak

Scale 1:1800

100 0 100 200 300

(feet)

2.30700

PLATE 8

URSA MAJOR MINERALS INC.

JVX SPECTRAL IP/RES SURVEY
FALCONBRIDGE OPTION PROPERTY

Shakespeare & Baldwin Twps., ON, NTS 41I/5

Line 2500 E

03/02/06

Rx (2 sec): Scintrex IPR12, Tx (2 sec): Scintrex IPC-7

JVX Ltd., ref. 3-4

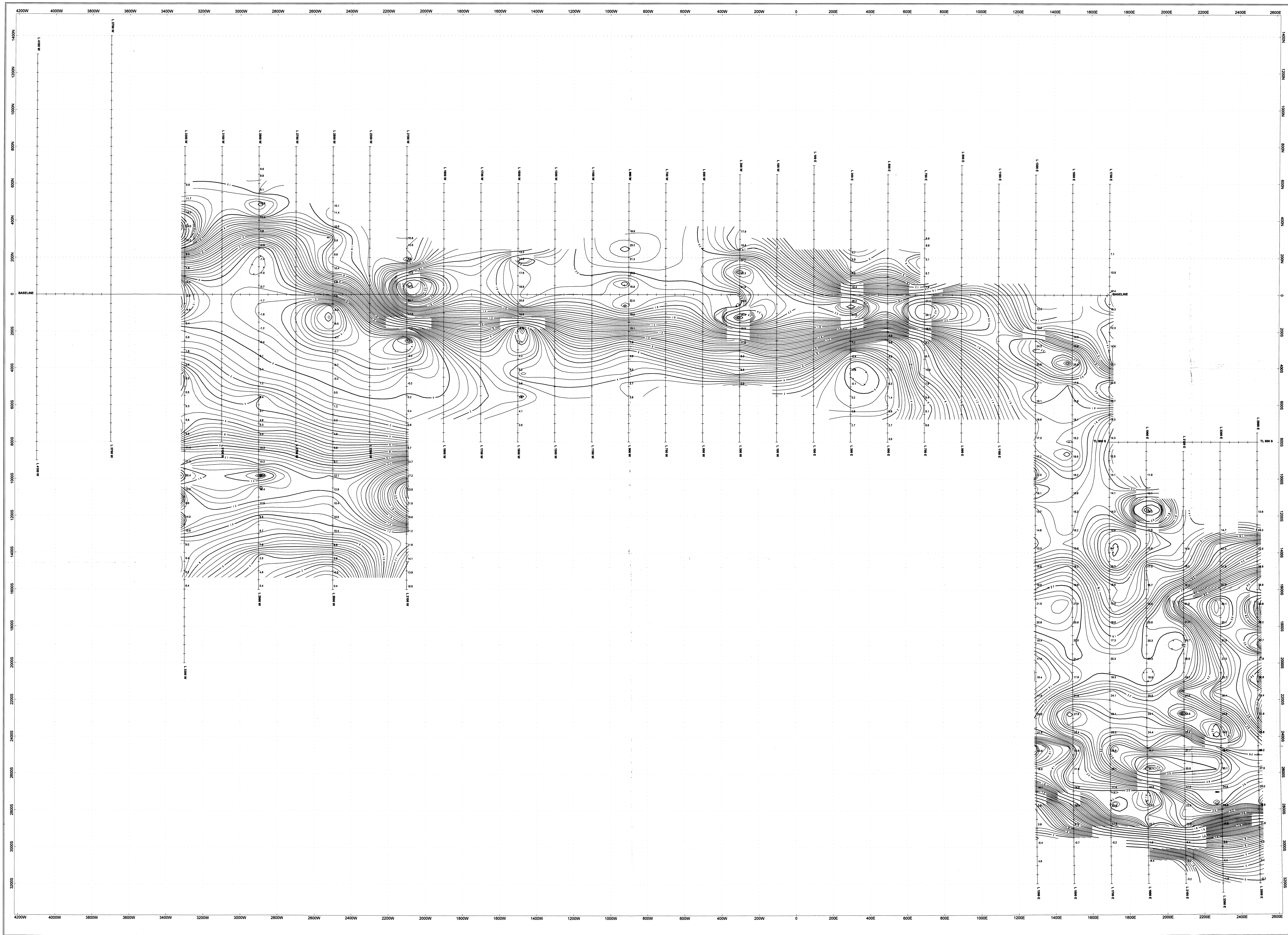


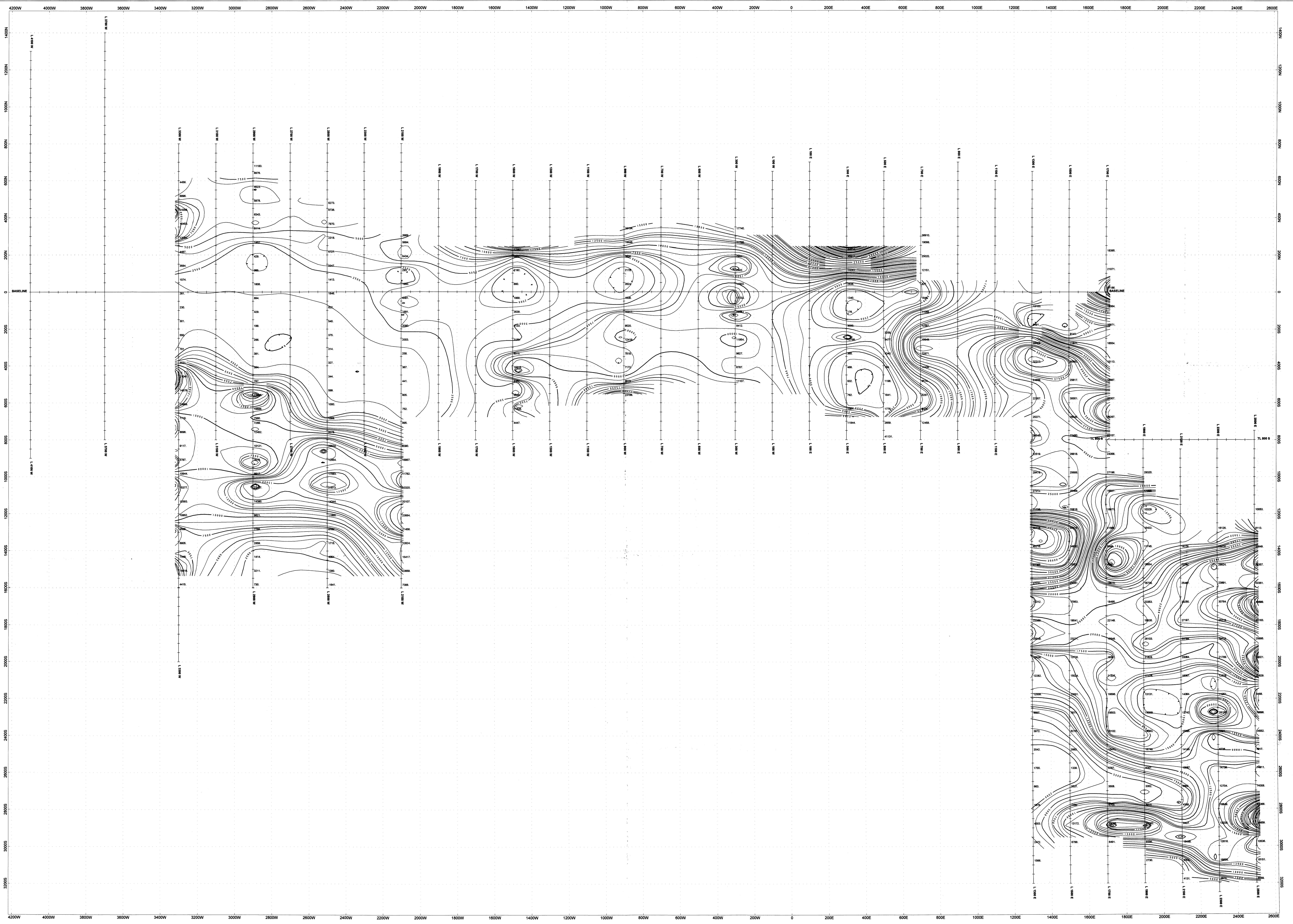
PLATE 9

URSA MAJOR MINERALS INC.

SPECTRAL IP/RESISTIVITY SURVEY
Falconbridge Option Property
Shakespeare Project
Shakespeare Twp., Ontario, NTS 41 I/5

CHARGEABILITY (n=2)
Contours: 0.5, 2 & 10 mV/V
Array: Pole-Dipole, a = 75 & 100 feet
Inst: Scintrex IPR12 Rx(2 sec) & IPC-7 Tx(2 sec)

JVX Ltd. ref. 3-4, FEBRUARY 2003



Scale 1:1800

100 0 100 200 300 400 (feet)

PLATE 10

URSA MAJOR MINERALS INC.

SPECTRAL IP/RESISTIVITY SURVEY
Falconbridge Option Property
Shakespeare Project
Shakespeare Twp., Ontario, NTS 41 I/5

APPARENT RESISTIVITY (n=2)
Contours: 1000, 2500 & 10000 ohm-m
Array: Pole-Dipole, a = 75 & 100 feet
Inst: Scintrex IPR12 Rx(2 sec) & IPC-7 Tx(2 sec)

JVX Ltd. ref. 3-4, FEBRUARY 2003

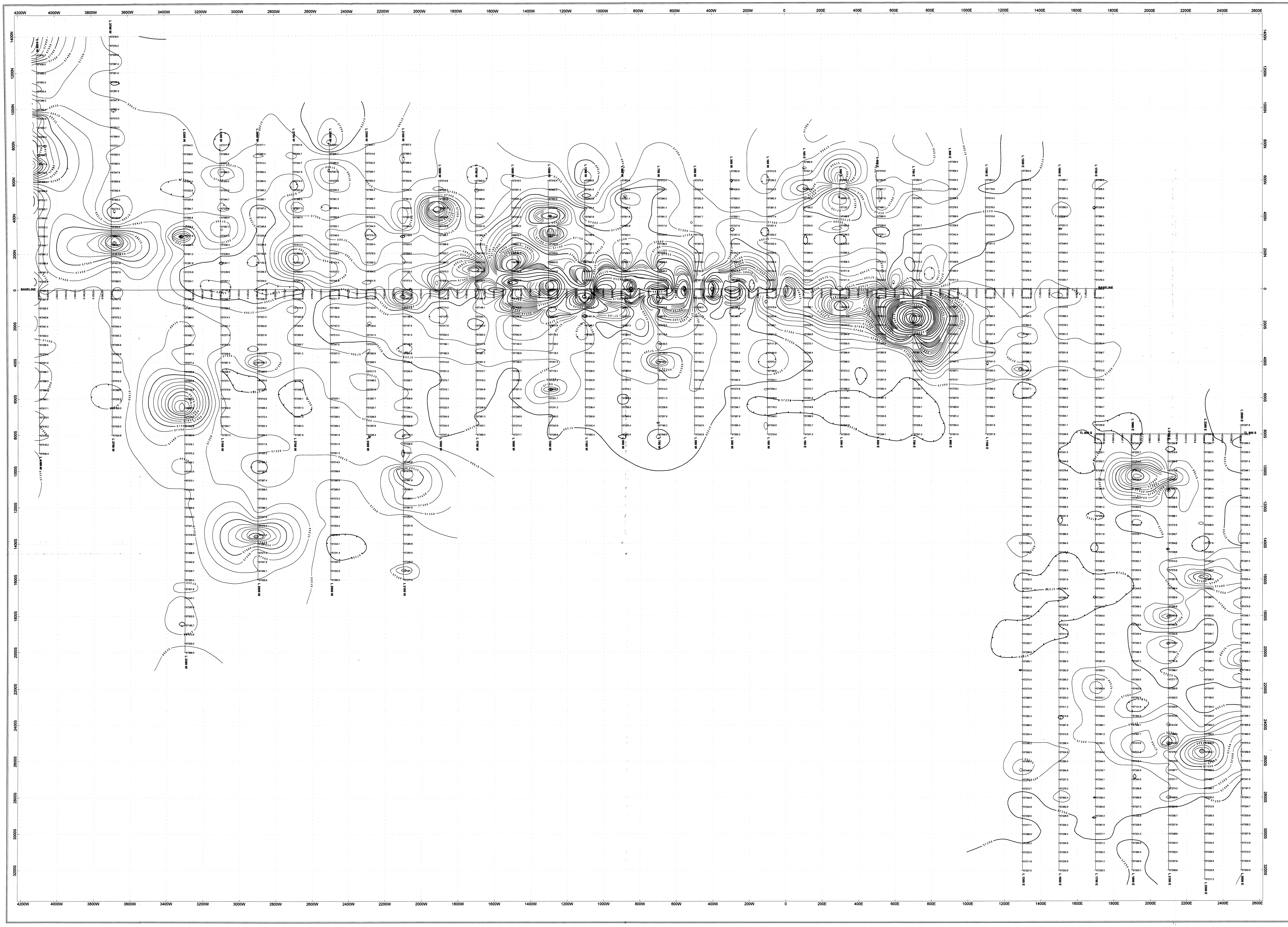


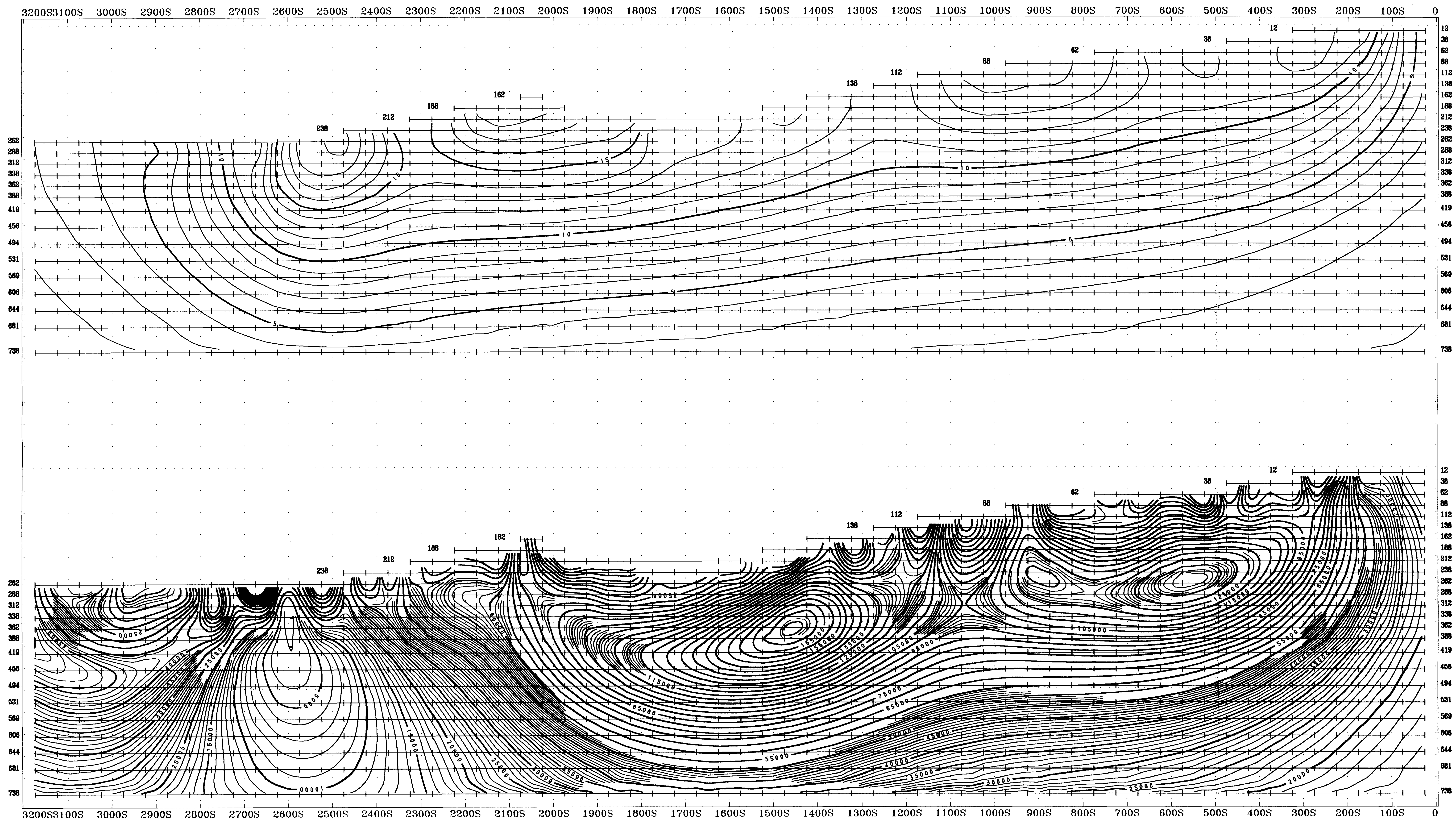
PLATE 11

URSA MAJOR MINERALS INC.

TOTAL FIELD MAGNETOMETER SURVEY
Falconbridge Option Property
Shakespeare Project
Shakespeare Twp., Ontario, NTS 41 I/5

TOTAL FIELD MAGNETIC CONTOURS
Contours: 50, 250 & 1000 nT
Inst: Scintrex ENVIMAG

JVX Ltd. ref. 3-4, FEBRUARY 2003



Scale 1:1800

100 0 100 200 300 400

(feet)

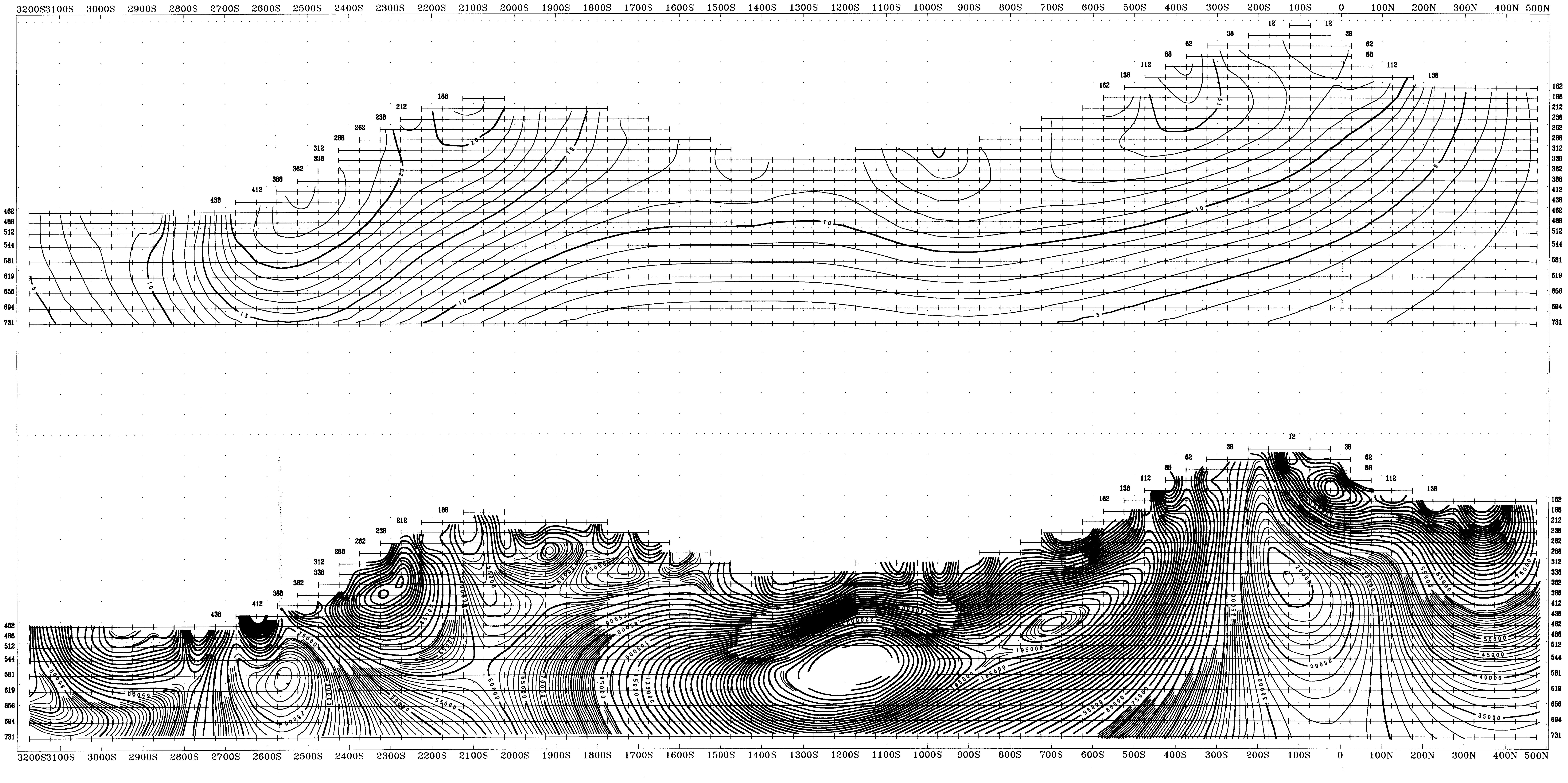
PLATE 12

URSA MAJOR MINERALS INC.

SPECTRAL IP/RES SURVEY
Falconbridge Option Grid
Agnew Lake Project
Baldwin Twp., Ontario, NTS 41 I/5

LINE 1500E
Results from DCIP2D Inversion
Mx Chargeability Contours: 1, 5 & 10 mV/V
Resistivity Contours: 1000, 5000 & 10000 ohm.m

JVX Ltd. ref. 3-4, MARCH 2003



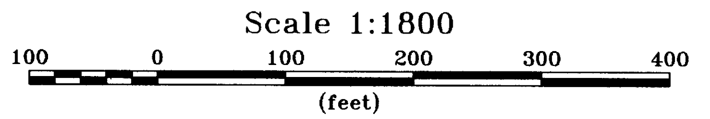


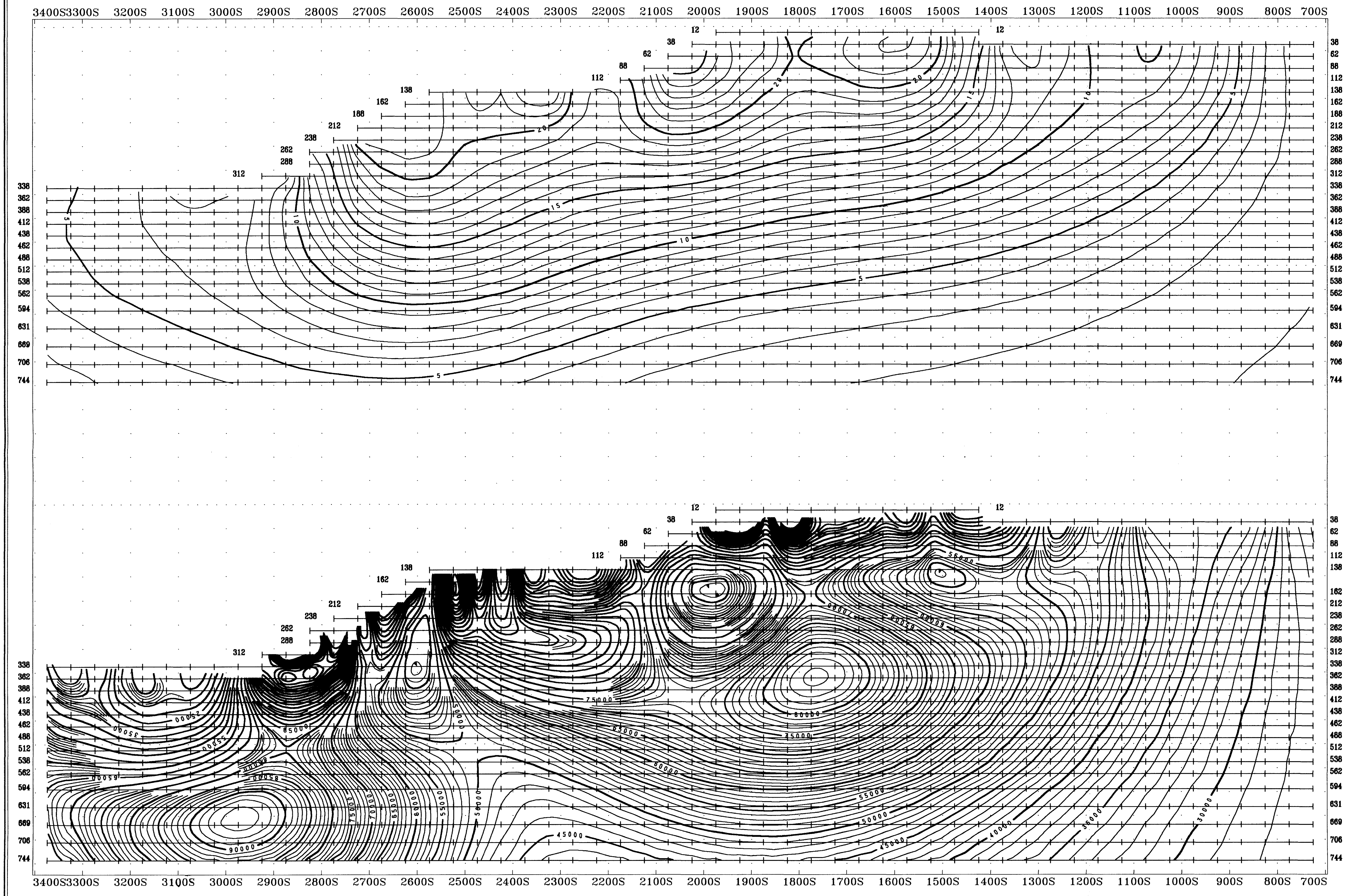
PLATE 13

URSA MAJOR MINERALS INC.

SPECTRAL IP/RES SURVEY
Falconbridge Option Grid
Agnew Lake Project
Baldwin Twp., Ontario, NTS 41 I/5

LINE 1700E
Results from DCIP2D Inversion
Mx Chargeability Contours: 1, 5 & 10 mV/V
Resistivity Contours: 1000, 5000 & 10000 ohm.m

JVX Ltd. ref. 3–4, MARCH 2003



Scale 1:1800

100 0 100 200 300 400

(feet)

PLATE 14

URSA MAJOR MINERALS INC.

SPECTRAL IP/RES SURVEY
Falconbridge Option Grid
Agnew Lake Project
Baldwin Twp., Ontario, NTS 41 I/5

LINE 2300E
Results from DCIP2D Inversion
Mx Chargeability Contours: 1, 5 & 10 mV/V
Resistivity Contours: 1000, 5000 & 10000 ohm.m

JVX Ltd. ref. 3-4, MARCH 2003