ANAconda project
river valley area
Dana Twp., NE Ontario
report on
Jvx spectral ip/resistivity
& magnetometer surveys
January 2002
aquiline resources Inc.
REPORT
ON

SPECTRAL IP/RESISTIVITY and
MAGNETOMETER SURVEYS
CONDUCTED ON THE
ANACONDA PROJECT
DANA TWP.
RIVER VALLEY AREA
NORTHEASTERN ONTARIO
NTS: 41 I/9

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JVX Ref: 2-3
February 2002
LIST OF FIGURES

Figure 1: Location Map
Figure 2: Grid Map

LIST OF TABLES

Table 1: Specifications for IP/Resistivity Survey (JVX Ltd) .........................................2
Table 2: Specifications for Magnetometer Survey ...........................................................3
Table 3: Production Summary for IP/Resistivity Survey (JVX Ltd.) ..................................3
Table 4: Production Summary for Magnetometer Survey ...............................................3

LIST OF APPENDICES

Appendix A: Instrument Specification Sheets
Appendix B: "Special Penetrating Array" Geometry
Appendix C: JVX Ltd. - Plates
## LIST OF PLATES

<table>
<thead>
<tr>
<th>Plate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate 1</td>
<td>Compilation map, Scale 1: 5,000</td>
</tr>
<tr>
<td>Plate 2</td>
<td>Chargeability, Resistivity, Spectral M-IP and Tau Pseudosection, L800E, Scale 1: 2500</td>
</tr>
<tr>
<td>Plate 3</td>
<td>Chargeability, Resistivity, Spectral M-IP and Tau Pseudosection, L1200 E, Scale 1:2500</td>
</tr>
<tr>
<td>Plate 4</td>
<td>Chargeability, Resistivity, Spectral M-IP and Tau Pseudosection, L1600 E, Scale 1:2500</td>
</tr>
<tr>
<td>Plate 5</td>
<td>Total Field Magnetic Contours, Scale 1: 5,000</td>
</tr>
<tr>
<td>Plate 6</td>
<td>IP Chargeability Contours, n=2, Scale 1:5,000</td>
</tr>
<tr>
<td>Plate 7</td>
<td>IP Resistivity Contours, n=2, Scale 1:5,000</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

JVX Ltd. refurbished gridlines and conducted Time-Domain Spectral Induced Polarization (IP) / Resistivity and Magnetometer surveys from January 25 to 31, 2002 on behalf of Aquiline Resources Inc. The surveys were conducted on the Anaconda Project, River Valley property. The property is located in Dana Twp. along the border of Crerar Twp. approximately 65 km northeast of Sudbury (N.T.S. 41 I/9). Direct access to the western part of the property is possible by travelling northwest for 5 km along HWY 805 from River Valley. An all-weather forestry road provides access to the north-central portion of the property.

The purpose of these surveys was to map disseminated sulphides associated with platinum group metals mineralization.

The Anaconda Project covers the following claims:

1225707    1225708    1225709
LOCATION MAP

AQUILINE RESOURCES INC.
ANACONDA PROJECT
River Valley Area
Dana Twp., NE Ontario
NTS 41 1/9
GROUND GEOPHYSICAL SURVEY
Scale: 1:1,725,000

Survey by JVX Ltd.
January, 2002

Figure 1
2. PROPERTY GEOLOGY

The Anaconda Project is located entirely within the River Valley Intrusive complex. The River Valley Intrusion (RV1) is situated south of the Superior Province and at the boundary of the Grenville and Southern Provinces of the Canadian Shield. The Superior province extends north and northwestwards from Sudbury and the River Valley areas and consists mainly of Archean age felsic intrusions and cuspate greenstone belts. The Southern Province, extending south and southeastwards from the River Valley area, consists primarily of the Paleoproterozoic (2.4 - 2.2 Ga) and the Huronina Supergroup. The Grenville Province is a complex orogenic belt containing different suites of gneissic rocks. The RV1 is situated almost entirely within this province.

The RV1 is a layered mafic intrusion of gabbro, norite, gabbro-norite and leucogabbro-norite composition. Concentrations of Ni-Cu-PGE mineralization have been discovered along inter-layering horizons.

3. SURVEY SPECIFICATIONS and PRODUCTION SUMMARY

<table>
<thead>
<tr>
<th>IP/RESISTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transmitter</td>
</tr>
<tr>
<td>Receiver</td>
</tr>
<tr>
<td>Array Type</td>
</tr>
<tr>
<td>Transmit Cycle Time</td>
</tr>
<tr>
<td>Receive Cycle Time</td>
</tr>
<tr>
<td>Number of Potential Electrode Pairs</td>
</tr>
<tr>
<td>Electrode Spacing</td>
</tr>
<tr>
<td>Station Spacing</td>
</tr>
<tr>
<td>Number of Lines Surveyed</td>
</tr>
<tr>
<td>Survey Coverage</td>
</tr>
</tbody>
</table>

Table 1: Specifications for IP/Resistivity Survey
### Table 2: Specifications for Magnetometer Survey

The production summaries are listed in the following tables:

#### Table 3: Production Summary for IP/Resistivity Survey

<table>
<thead>
<tr>
<th>Line</th>
<th>Survey Configuration</th>
<th>From Station</th>
<th>To Station</th>
<th>Distance (m)</th>
<th>No. of Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>800E</td>
<td>25 m &amp; 50 m dipoles</td>
<td>1400S</td>
<td>300N</td>
<td>1700</td>
<td>56</td>
</tr>
<tr>
<td>1200E</td>
<td>25 m &amp; 50 m dipoles</td>
<td>1175S</td>
<td>600N</td>
<td>1775</td>
<td>60</td>
</tr>
<tr>
<td>1600E</td>
<td>25 m &amp; 50 m dipoles</td>
<td>875S</td>
<td>0N</td>
<td>875</td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>4,350</strong></td>
<td><strong>149</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Table 4: Production Summary for the Magnetometer Survey

<table>
<thead>
<tr>
<th>Line</th>
<th>From Station</th>
<th>To Station</th>
<th>Distance (m)</th>
<th>No. of Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>800E</td>
<td>1400S</td>
<td>275N</td>
<td>1675</td>
<td>68</td>
</tr>
<tr>
<td>1200E</td>
<td>1175S</td>
<td>550N</td>
<td>1725</td>
<td>70</td>
</tr>
<tr>
<td>1600E</td>
<td>900S</td>
<td>0</td>
<td>900</td>
<td>37</td>
</tr>
<tr>
<td>2000E</td>
<td>650S</td>
<td>650N</td>
<td>1300</td>
<td>53</td>
</tr>
<tr>
<td>BL0</td>
<td>400E</td>
<td>2000E</td>
<td>1600</td>
<td>66</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>7,200</strong></td>
<td><strong>294</strong></td>
</tr>
</tbody>
</table>
4. PERSONNEL

Graham Stone (Senior Geophysical Technician, Party Chief)
Mr. Stone acted as Party Chief, operated the Scintrex IPR-12 receiver, conducted the magnetometer surveys and was responsible for day-to-day field operations.

Chris Flowers (Geophysical Technician)
Mr. Flowers operated the Scintrex IPC-7 transmitter.

(4) Field assistants were also engaged by JVX for grid refurbishing and for the IP surveys.

John Gilliatt (Senior Geophysicist)
Mr. Gilliatt processed and plotted the IP/resistivity and magnetics data and prepared this report.

Dagmar Piska & Vaso Lymberis (Draftspersons):
Ms. Piska and Ms. Lymberis drafted the figures/plates and assembled this report.
5. FIELD INSTRUMENTATION

JVX supplied the geophysical instruments specified in Appendix A.

5.1 IP Transmitter

The Scintrex IPC-7/2.5 kW Time Domain Transmitter powered by an eight-horsepower motor generator was used. The transmitter provides an interrupted square wave current output with an alternating polarity and pulse duration of 2 seconds. Stabilization circuitry ensures that the output current is automatically controlled to within ±0.1% for up to 50% external load or ±10% input voltage variations. Voltage and circuit resistance were presented on an analog display while the current was monitored on an external digital multimeter. Circuit values were manually logged by the transmitter operator and the current was relayed to the receiver operator over a 2-way radio link.

5.2 IP Receiver

The Scintrex IPR-12 Time Domain Receiver was used. This unit samples the voltage present at up to nine potential electrodes at ten points in time, calculating the decay curve for the voltage on each electrode pair. Synchronous readings are repeated for a number of transmitter cycles until asynchronous noise deviations are averaged to less than a specified tolerance level. The data are stored in solid-state memory for subsequent downloading and processing.

5.2.1 Pole-Dipole "Special Penetrating Array"

The pole-dipole survey configuration was used. This array consisted of 9 mobile electrodes: one current electrode \( C_1 \) and eight potential electrodes \( P_1 \) to \( P_8 \) connected to the receiver by means of the "Snake", a multiconductor cable. The infinity current location \( C_2 \) was maintained approximately two kilometers southeast the grid at the shoreline of a small lake.

For this survey a modified version of the standard layout was employed. This is referred to as the "Special Penetrating Array". A diagram of the array is provided in Appendix C.

The potential electrodes were stainless steel rods ranging in length from 75-100 cm. At each station a hole was manually dug through the snow cover so that the rod could be driven below the frost level, ensuring good electrical contact. Lake stations were sampled with 40 cm stainless electrodes dropped to the lake bottom through ice holes.
5.3 Magnetometers

A Scintrex ENVIMAG proton precession magnetometer was used to measure the total magnetic field over the grid.

Magnetic data were collected in station mode at 25m intervals along gridlines.

Diurnal variations in the earth's magnetic field was corrected using the baseline looping method.

6. DATA PROCESSING

6.1 IP/Resistivity

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

- FUJITSU DL 2400 dot-matrix printer

These plots were used to monitor progress and data quality, and to make an initial interpretation.

The data were sent by 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
- HEWLETT PACKARD DESIGNJET 350C 24 inch colour plotter
- HEWLETT PACKARD 5L Laser printer

The processing procedure is outlined below:
1) **JVX** in-house software was used to spatially reference the time-domain data. Spectral $\tau_u$ and $M-IP$ 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 $\tau_u$),
- the magnitude of the chargeable source (indicated by $M-IP$),
- the variability of grain size (indicated by $c$, not presented/discussed here).

The spectral parameters were calculated internally in the IPR-12 for field plots. Final data for interpretation were processed with *SoftII* (Scintrex) and proprietary software developed by JVX Ltd.

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 these maps was done through **AutoCAD**.

### 6.2 Magnetics

1) Plan maps of the magnetic data were produced using the **GEOSOFT Mapping package**.
7. 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 here for the sake of clarity.

7.1 IP/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 Strong (> 30 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
- - - - - 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.

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/SoftII Scheme:**

<table>
<thead>
<tr>
<th>Letter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Long (&gt; 10 s)</td>
</tr>
<tr>
<td>M</td>
<td>Medium (0.5 s to 10 s)</td>
</tr>
<tr>
<td>S</td>
<td>Short (&lt; 0.5 s)</td>
</tr>
</tbody>
</table>
3) Resistivity anomalies are picked on the pseudosections and classified using the following scheme as a guide:

- **VH(n)** Very High (> 25,000 ohm m) — highly silicified
- **H(n)** High (> 10,000 ohm m) — probably silicified
- **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' past experience.
8. DISCUSSION OF RESULTS

Results of the geophysical surveys have been plotted as described in the previous section and are included in Appendix C of this report. Anomalous geophysical zones and trends have been identified and included on the compilation map (Plate 1).

Five (5) IP zones have been interpreted from the widely-spaced survey lines. Other than IP-4, chargeability responses within these zones generally range from moderate to very strong. Two broad high resistivity trends (RH-1 & RH-2) have been outlined. These trends contain values exceeding 15,000 ohm-m's. Four (4) high priority exploration targets (T-1 to T-4) have been identified. The targets are generally centered on the strongest anomalies within the IP zones.

A moderate to strong magnetic relief has been inferred from the results of the magnetometer surveys. Generally, magnetic values increase from northwest to southeast. Lower magnetic values observed along the southwestern part of line 800E could be resulting from high magnetic gradients interfering with the sensor head of the field magnetometer. Two (2) magnetic high zones have been identified.

A discussion of anomalous trends and features is provided in the following sections.

IP-1

IP-1 is a two-line anomaly observed at or near the baseline on lines 1200E and 1600E. On 1600E the zone consists of three moderately chargeable sources. The center of these sources is poorly defined as they occur at moderate depths. Resistivities are variable, ranging from 5000 to 15000 ohm-meters. Spectral MIP's are moderate to high with long Tau. On line 1200E, one strong, broad chargeable source along with a weaker source is observed. The strong chargeable source is associated with high MIP values and a mixture of medium to long Tau's. The zone coincides with a magnetic high an a weak resistivity low within a weak resistivity high zone. Medium to coarse-grained mineralization is likely. Mineralization could be sulphides or magnetite. A high priority target has been identified on this source and should be prospected before drilling.

Anomaly targeting:

T-1: High priority - L1200E/Stn 37S

IP-2
This is one-line anomaly located at approximately 400S on line 800E. The source is strongly chargeable associated with moderate to high MIP's and long Tau. It coincides with a weak resistivity low and a narrow magnetic high. Coarse-grained sulphides or magnetite could be the causative source. The zone represents a high priority exploration target that should be prospected before drilling.

Anomaly targeting:

T-2: *High priority - L800E/Stn 387S*

**IP-3**

This zone consists of three closely-spaced, strong to very strong chargeable sources located on line 1600E. The zone is located on the southwestern portion of a broad magnetic high. Resistivities are generally low with higher resistivities at depth. Spectral MIP's are high to very high with corresponding long Tau's. A high priority target has been selected on the chargeable source with the highest MIP value. This source would likely have the highest concentration of mineralization. Mineralization could be sulphides or magnetite given the strong magnetic correlation.

Anomaly targeting:

T-3: *High priority - L1600E/Stn 575S*

**IP-4**

This zone is located in the southwest part of the grid on lines 800E and 1200E. Two weak chargeable sources are observed on each line. The zone is coincident with the resistivity high zone (*RH-2*). Spectral MIP values are moderate with generally short Tau's. The elevated chargeabilities are likely resulting from the increased resistivities and not sulphides. Prospecting should be considered to determine the causative source.

**IP-5**

This zone is located southwest of IP-4 on line 800E. The zone consists of three strong to very strong chargeable sources. The Spectral MIP values are high with long Tau's. The underlying rock units appear to be of low resistivity. Magnetic values are variable with the center of the chargeability zone coinciding with low magnetic values whereas elevated magnetic values are observed along both northeast and southwest boundaries. It is possible that near surface magnetic minerals are interfering with the magnetometer
sensor and thereby producing erroneously low readings. An exploration target has been selected. Prospecting should be considered prior to drilling.

Anomaly targeting:

T-4: High priority - L800E/Stn 1000S

9. SUMMARY AND RECOMMENDATIONS

Several chargeability sources have been identified. Many of these sources have been grouped into a total of five (5) IP zones. The IP zones are generally moderate to very strong associated with high Spectral MIP's and long Spectral Tau's. In addition, the IP trends exhibit a strong correlation to weak resistivity lows and magnetic highs. Four (4) high priority exploration targets have been identified. All of the targets should be prospected prior to drilling to determine if the causative source is sulphides and/or magnetite.

The following targets have been recommended for follow-up.

<table>
<thead>
<tr>
<th>TARGET</th>
<th>PRIORITY</th>
<th>IP-ZONE</th>
<th>LOCATION and COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-1</td>
<td>High</td>
<td>IP-1</td>
<td>L1200E, 37S - strong broad chg. Response, Coincident with mag high and weak res. Low</td>
</tr>
<tr>
<td>T-2</td>
<td>High</td>
<td>IP-2</td>
<td>L800E, 387S - coincident with narrow mag high and weak res low.</td>
</tr>
<tr>
<td>T-3</td>
<td>High</td>
<td>IP-3</td>
<td>L1600E, 575S - moderate depth strong chg. Response, coincident with mag high/res. low</td>
</tr>
<tr>
<td>T-4</td>
<td>High</td>
<td>IP-5</td>
<td>L800E, 1000S - strong chg. Response with a broad chg. Zone. Coincident with mag low?</td>
</tr>
</tbody>
</table>
If there are questions with regard to the survey please call the undersigned.

Respectfully submitted,

JVX Ltd.

John Gilliatt, B.Sc.
Senior Geophysicist

Blaine Webster, B.Sc.
President
APPENDIX A
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 case. 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.

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.

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 (ultra-induction) induced polarization measurements using the Scintrex IPR-11 Broadband Time Domain Receiver.
Technical Description of IPC-7/2.5 kW Transmitter System

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

**Transmitter Console**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Output Power</td>
<td>1.85 kW maximum, defined as VI when current is on, into a resistive load</td>
</tr>
<tr>
<td>Output Current</td>
<td>10 amperes maximum</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>Switch selectable up to 1210 volts DC</td>
</tr>
<tr>
<td>Automatic Polarity Change</td>
<td>Each 2T</td>
</tr>
<tr>
<td>Pulse Durations</td>
<td>Standard: T = 2.4 or 8 seconds; switch selectable</td>
</tr>
<tr>
<td></td>
<td>Optional: T = 1, 2, 4 or 8 seconds, switch selectable</td>
</tr>
<tr>
<td></td>
<td>Optional: T = 8, 16, 32 or 64 seconds, switch selectable</td>
</tr>
<tr>
<td>Voltage Meter</td>
<td>1500 volts full scale logarithmic</td>
</tr>
<tr>
<td>Current Meter</td>
<td>Standard: 10.0 A full scale logarithmic</td>
</tr>
<tr>
<td></td>
<td>Optional: 0.3, 1.0, 3.0 or 10.0 A full scale linear</td>
</tr>
<tr>
<td>Period Time Stability</td>
<td>Crystal controlled to better than .01%</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-30°C to +55°C</td>
</tr>
<tr>
<td>Overload Protection</td>
<td>Automatic shut-off at output current above 10.0 A</td>
</tr>
<tr>
<td>Open Loop Protection</td>
<td>Automatic shut-off at current below 100 mA</td>
</tr>
<tr>
<td>Undervoltage Protection</td>
<td>Automatic shut-off at output voltage less than 95 V</td>
</tr>
<tr>
<td>Dimensions</td>
<td>280 mm x 460 mm x 310 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>30 kg</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>41 kg includes reusable wooden crate</td>
</tr>
</tbody>
</table>

**Motor Generator**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Output Power</td>
<td>2.5 kVA, single phase</td>
</tr>
<tr>
<td>Output Voltage</td>
<td>110 V AC</td>
</tr>
<tr>
<td>Output Frequency</td>
<td>400 Hz</td>
</tr>
<tr>
<td>Motor</td>
<td>4 stroke, 8 HP Briggs &amp; Stratton</td>
</tr>
<tr>
<td>Weight</td>
<td>59 kg</td>
</tr>
<tr>
<td>Shipping Weight</td>
<td>90 kg includes reusable wooden crate</td>
</tr>
</tbody>
</table>

Geophysical and Geochemical Instrumentation and Services

222 Snidercroft Road
Concord Ontario Canada
L4K 1B5

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

Inputs
1 to 8 dipoles are measured simultaneously.

Input Impedance
16 Megohms

SP Bucking
±10 volt range. Automatic linear correction operating on a cycle by cycle basis.

Input Voltage (Vp) Range
50 μvolt to 14 volt

Chargeability (M) Range
0 to 300 millivolt

Tau Range
1 millisecond to 1000 seconds

Reading Resolution of Vp, SP and M
Vp, 10 microvolt; SP, 1 millivolt; M, 0.01 millivolt/volt

Absolute Accuracy of Vp, SP and M
Better than 1%

Common Mode Rejection
At input more than 100db

Vp Integration Time
10% to 80% of the current on time.

IP Transient Program
Total measuring time keyboard selectable at 1, 2, 4, 8, 16 or 32 seconds. Normally 14 windows except that the first four are not measured on the 1 second timing, the first three are not measured on the 2 second timing and the first is not measured on the 4 second timing. (See diagram on page 2.) An additional transient slice of minimum 10 ms width, and 10ms steps, with delay of at least 40 ms is keyboard selectable.

Transmitter Timing
Equal on and off times with polarity change each half cycle. On/off times of 1, 2, 4, 8, 16 or 32 seconds. Timing accuracy of ±100 ppm or better is required.

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

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

In the U.S.A.
85 River Rock Drive
Buffalo, N.Y.
Tel: (716) 298-1219
Fax: (716) 298-1317
U.S.A. 14207
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
APPENDIX B
ARRAY GEOMETRY

APPARENT RESISTIVITY :

\[ \rho_a = 2\pi na (n+1) \frac{V_p}{I} \]

where

\( \rho_a \) = apparent resistivity (ohm-m)

n = dipole number

a = dipole spacing (m)

\( V_p \) = primary voltage (mV)

I = primary current (mA)

"Special Penetrating Array"

Array Geometry and Formula for Apparent Resistivity
**Work Report Summary**

**Transaction No:** W0270.00179  
**Status:** APPROVED

**Recording Date:** 2002-FEB-04  
**Approval Date:** 2002-FEB-04

**Work Done from:** 2002-JAN-25  
**to:** 2002-JAN-31

**Client(s):**  
392621  
COOK, JOHN FRANCIS

**Survey Type(s):**  
IP  
LC  
MAG

**Work Report Details:**

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**Total:**  
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$9,100  
$0  
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$1,802  
$1,802

Status of claim is based on information currently on record.
Dear Sir or Madam,

**Subject: Approval of Assessment Work**

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

Assessment work credit has been redistributed, as outlined on the attached Distribution of Assessment Work Credit sheet, to better reflect the location of the work.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at steve.beneteau@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,

Ron Gashinski
Senior Manager, Mining Lands Section

Cc: Resident Geologist
John Francis Cook
(Claim Holder)
Jvx Ltd.
(Agent)

Assessment File Library
John Francis Cook
(Assessment Office)