Report on Spectral IP/Resistivity and Magnetic Surveys Stake Lake Copper and Gold Property Sturgeon Lake Area Ontario

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The results of the survey are presented as plan maps and stacked pseudosections at 1:2500. Plan maps show the true grid, line and station numbers, posted values, a UTM grid (NAD83, Z15N), latitude and longitude co-ordinates on a base map that shows drainage, claims and claim numbers from the claimap3 website of the Ministry of Northern Development and Mines of the Province of Ontario. Plan map types are

Total magnetic intensity, colour + line contours
Mx chargeability (n=2), colour + line contours
Apparent resistivity (n=2), colour + line contours
Compilation map

Stacked pseudosections show colour + line contoured pseudosections of apparent resistivity, Mx chargeability and the spectral parameters MIP and tau. There is one stacked pseudosection for each of the 13 lines surveyed (94+00E to 106+00E).

Spectral IP/Resistivity and Magnetic Surveys

Stake Lake Copper and Gold Property
Sturgeon Lake Area, Ontario
Tri-Gold Resources Corp.

Spectral IP/resistivity and magnetic surveys were done for Tri-Gold Resources Corp. on their Stake Lake copper and gold property in the Sturgeon Lake area of Ontario. The survey grid is within claim number 4205909. This is part of a claim block southwest of Sturgeon Lake and 200 km northwest of Thunder Bay. Provincial Highway 642 is 2 km north of the center of the grid. The southeast corner of the grid is over Stake Lake. Grid access from Ignace is north on highway 599 and west on highway 642.

The work was done by JVX Ltd. under JVX job number 7-20. The field work was done in the period March 30 to April 11, 2007. The IP survey was done in time domain with a pole-dipole array ('a' = 25 m, n=1,6). Total production was 14,075 m (IP/resistivity) and 15,150 m (magnetics).

The results have been presented as stacked pseudosections and plan maps at 1:2500. The regional setting of the grid is shown in figure 1. The layout and local setting of the grid is shown in figure 2.

Production summaries, the survey grid, survey methods, instrumentation, operator notes, water depths (Stake Lake), data processing, presentation and archives are described in Appendix 1. IP anomaly listings are in Appendix 2. A short note on IP anomaly forms and instrument specification sheets are attached. The results of the survey are discussed below.

1. Presentation

The results of the survey are presented as plan maps and stacked pseudosections at 1:2500. Plan maps show the true survey grid, line and station numbers, posted values, a UTM grid (NAD83, Z15N), latitude and longitude co-ordinates on a base that shows drainage, claims and claim numbers from the claimap3 website of the Ministry of Northern Development and Mines (copyright Queen's Printer for Ontario). Plan map types are

Total magnetic intensity, colour + line contours
Mx chargeability (n=2), colour + line contours
Apparent resistivity (n=2), colour + line contours
Compilation map

Plan maps of the total magnetic intensity and Mx chargeability are reproduced below as figures 3 and 4.

Stacked pseudosections show colour + line contoured pseudosections of apparent resistivity, Mx chargeability and the spectral parameters MIP and tau. There is one stacked pseudosection for each of the 13 lines surveyed (94+00E to 106+00E).

Digital results (this report, raw and processed ASCII data files, Geosoft database and map and AutoCAD map or drawing files) are archived on CD.

2. Geology

Reading from ~~www.Tri-Goldresources.com~~ –

Tri-Gold Resources has acquired 11 mineral claims in the Stake Lake area of Northern Ontario. The claims feature zones of massive sulphides hosting copper, zinc, gold and silver mineralization. The claims are just west of the Mattabi Mine in the Sturgeon Lake area of northern Ontario.

The Mattabi Mine (owned by Noranda Inc.) produced very high grade zinc, copper and silver from the southeast shore of Sturgeon Lake from the early 1970's to 1991.

Tri-Gold sampled the claims in the fall of 2006 and assayed copper values of between 2.3% to 4.16%, gold values of 0.5 to 2.7 grams per ton and silver values of 41 to 82 grams/ton. Benton Resources Corp, the joint venture partner on the Nipigon uranium claims, carries a 20% participating interest in the Stake Lake Project. At the present time, line cutting and trenching are being conducted on the main showing with induced polarization (IP) and MAG surveys to follow. Diamond drilling is expected in late spring.

Tri-Gold Resources has not provided further information about the property. From the operator notes (appendix 1), there is a showing from 99+75N to 100+10N on line 100+00E. On line 104+00E, operator notes show outcrop – visible quartz at the base line (100+00N).

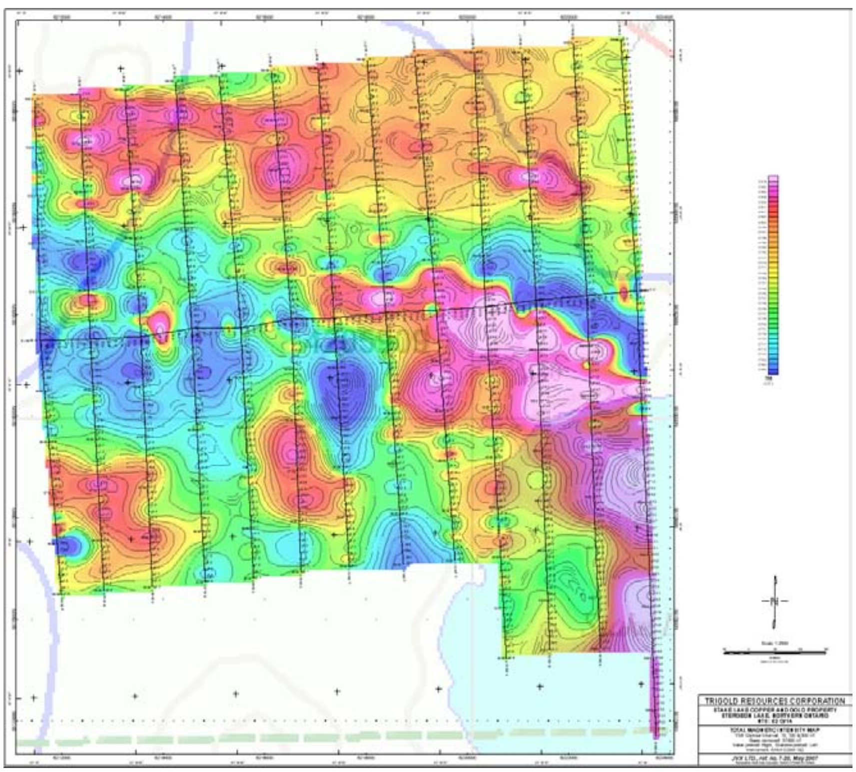


Figure 3. Total magnetic intensity

3. Survey Results : General Comments

The mean TMI reading is 57,770 nT with extreme values of 57,447 and 58,830 nT. The mean value is close to the IGRF value (58,040, 76° inclination at 2° west of north) - anything much below this may be due to reverse remnant polarization. Overall magnetic relief is not high. Over most of the grid, magnetic grain or texture is erratic and indecisive. The northwest trending magnetic high in the southeast part of the grid has peaks of 200 to 400 nT.

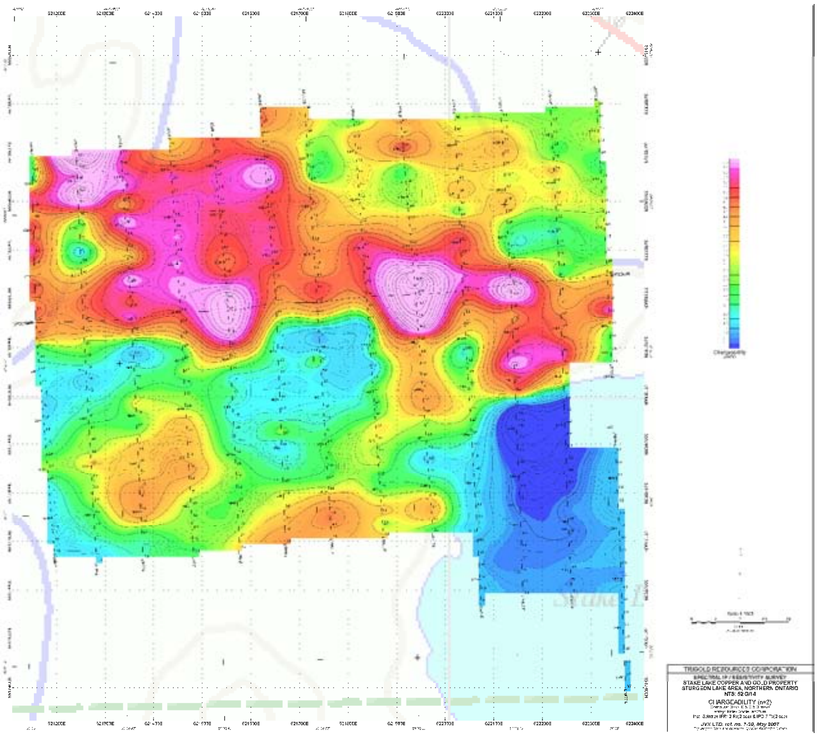


Figure 4. Mx chargeability

N=1 apparent resistivities range from 49 to 35,898 ohm.m. Low values suggest a thick layer of conductive overburden. High values suggest thin and resistive overburden and a higher probability of outcrop.

9 % of the n=1 resistivities are less than 125 ohm.m and most of these are over Stake Lake. 14 % of the n=1 resistivities are less than 500 ohm.m. Overburden masking may be severe when n=1 resistivities are less than 500 ohm.m. The amplitude of the IP anomalies from underlying chargeable bodies may be much reduced. As long as the overburden is thin (relative to the ‘a’ spacing), anomaly shape is unaffected.

Overburden masking may be a problem for n=1 resistivities in the range of 500 to 2500 ohm.m (39 %). This applies over much of the southern half of the grid and in the northeast corner. Only 9 of the 480 n=1 resistivities are over 25,000 ohm.m. Outcrop is probably scarce. The exploration record may be sparse - explanations for geophysical anomalies may lack certainty.

The mean of all 2897 Mx chargeability values is 3.6 mV/V. Extremes are -3.2 and +15.7 mV/V. 74 % of all Mx chargeabilities are less than 5 mV/V. 25 % are in the range of 5 to 10 mV/V (possible weak IP anomaly). 1 % are in the range of 10 to 20 mV/V (possible moderate IP anomaly). There are no readings more than 20 mV/V (possible strong IP anomaly).

92 % of the 2897 IP measured decays are of sufficient amplitude and quality to generate spectral parameters. This is good performance number given the number of very low amplitude decays over Stake Lake.

There are a number of weak to moderate IP anomalies in an east/west band through the center of the grid. Most are associated with resistivity highs. There is no evidence for bedrock conductors. But this should not be considered the last word – bedrock conductors with no clear resistivity expression are possible.

4. Showings

The operator notes put a showing at line 100+00E, stations 99+75N to 100+10N. There is a weak IP anomaly with centre top at 100+25N (n=1 dipole) – see figure 5. The n=1 resistivity at this station is 7820 ohm.m and this is a local high. Time constants are short. There is no evidence of a bedrock conductor.

It might be argued that the weak IP anomaly at 100+25N is due to a local reduction in overburden thickness, not an increase in disseminated sulphides in the bedrock. Chargeabilities are only marginally higher than background values to the north.

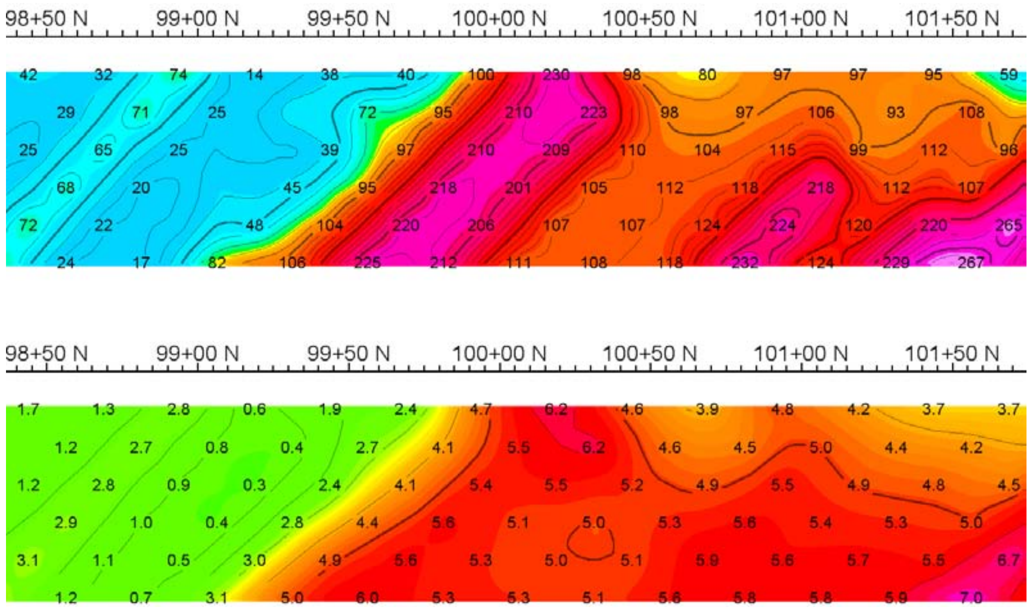


Figure 5. MIP and Mx chargeabilities, line 100+00E

The operator notes show outcrop with visible quartz on line 104+00E at the base line (100+00N). The Mx chargeability for this line segment is shown in figure 6. There is a moderate IP anomaly at this location. The n=1 resistivity here is 10,787 ohm.m.

The IP target is shallow and narrow. Dip (within ± 45° of vertical) is unknown. If drill testing, dip or dip sense must be taken from the geology or other geophysical methods. If not available, allowance should be made to drill test from both sides of the target.

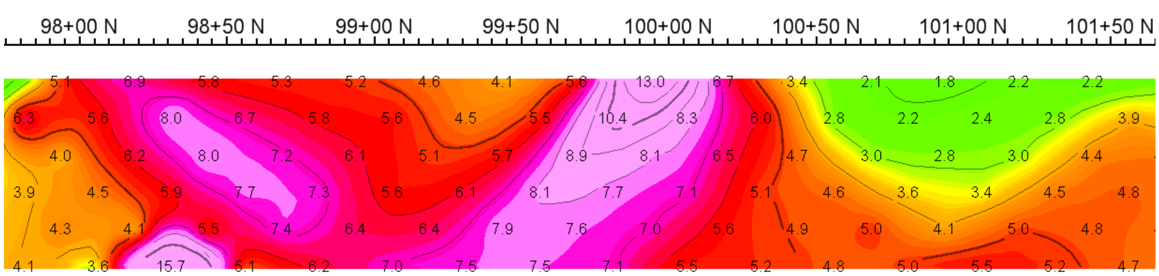


Figure 6. Mx chargeability, line 104+00E

5. IP Anomalies

The IP/resistivity pseudosections are reviewed. IP anomalies that are thought to represent a discrete body of chargeable material are identified. The location and extent of the anomaly centre-top, IP anomaly amplitude, dipole number of the centre–top, spectral IP features and the resistivity setting and expression are taken from the stacked pseudosections. IP anomalies are classed as weak, moderate or strong. The results are tabled in Appendix 2.

A total of 55 IP anomalies have been picked. 48 are weak and 7 are moderate. By standards used in glaciated Archean terrains, there are no strong IP anomalies on this grid. Most show moderate n=1 resistivities (5,000 to 15,000 ohm.m) with some promise of scattered outcrop. None of the IP anomalies has a coincident resistivity low and there is no evidence of bedrock conductors.

6. Compilation Map

Selected features have been extracted from the pseudosections and plan maps and drafted onto a compilation map. Features shown are

- IP anomalies. Tops of chargeable bodies as picked on the pseudosections. Shown as an orange bar parallel to and above the survey line. Bar thickness is an indicator of anomaly strength. Symbols are

  Strong, Mx = 20 mV/V
  Moderate, 10 = Mx < 20 mV/V
  Weak, Mx < 10 mV/V

- Attached to the IP anomaly symbol are an anomaly identifier, the MIP peak value (mV/V), the spectral time constant range as S (short), M (medium or mixed) and L (long), and the 'n' value that best characterizes the top of the IP anomaly.

- Surficial resistivity lows. These represent overburden conditions. Classification is based on the n=1 value of apparent resistivity. Shown as a bar under the survey line with bar symbols

  ρ_a = 500 ohm.m
  500 < ρ_a < 2500 ohm.m

- IP zones. Two or more IP anomalies on neighbouring lines connected into zones. Isolated weak IP anomalies or two weak near-neighbours of uncertain connection are not shown as part of an IP zone.

- Prominent magnetic highs.

- IP anomalies or anomaly sets of interest. Circled. Labelled by line and ID letter.

7. Discussion

One moderate IP anomaly is discussed above (line 104+00E, station 100+00N). Of the remaining 6, five are highlighted below. Selection is based on amplitude, clarity and quality of the IP anomaly. Shallow IP anomalies are picked over those that are at depth.

In all cases, the anomaly forms are consistent with a tabular chargeable body that is within ± 45° of vertical. Dip or even dip sense must be presumed to be unknown. As in any profile IP survey, dip must be taken from the geology or other geophysical methods.

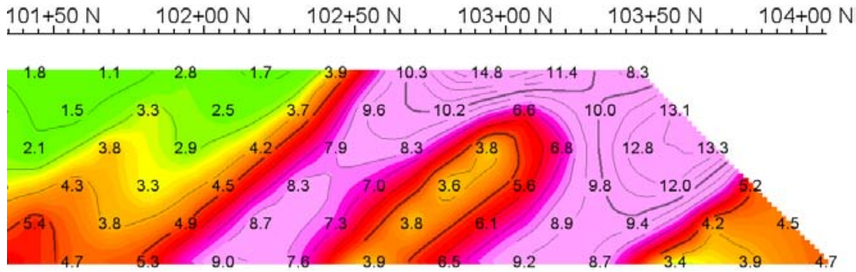


Figure 7. Mx chargeability, line 95+00E

There are at least two IP zones at the north end of line 95+00E. The center top for the first is 102+75N to 103+00N. The second is extrapolated at 103+75N to 104+00N. The second is associated with a local resistivity high. Somewhat higher chargeabilities make it the more interesting target.

n=1 apparent resistivities from 102+50N to end of line are 11,696 to 17,330 ohm.m. Overburden is thin and resistive – off-line outcrop is possible. These targets should be checked on the ground – stripping and/or trenching should be considered. Ground checks should focus on the 150 m from 102+50N to 104+00N.

There is a moderate IP anomaly centered at 100+00N on line 98+00E. It would be classified as weak but for one n=1 Mx value near this station. The n=1 resistivity here is 9102 ohm.m.

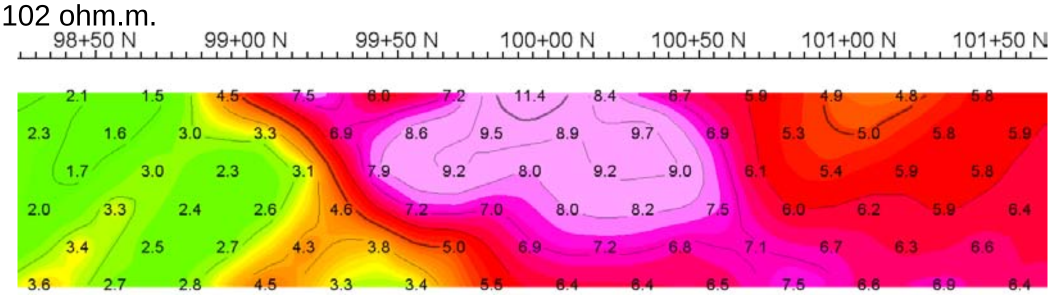


Figure 8. Mx chargeabilty, line 98+00E

There is a 100 m wide IP zone on line 102+00E (stations 99+50N to 100+50N). The target is shallow (n=1 dipole) and under thin and resistive overburden. N=1 apparent resistivities are 7,716 to 21,993 ohm.m.

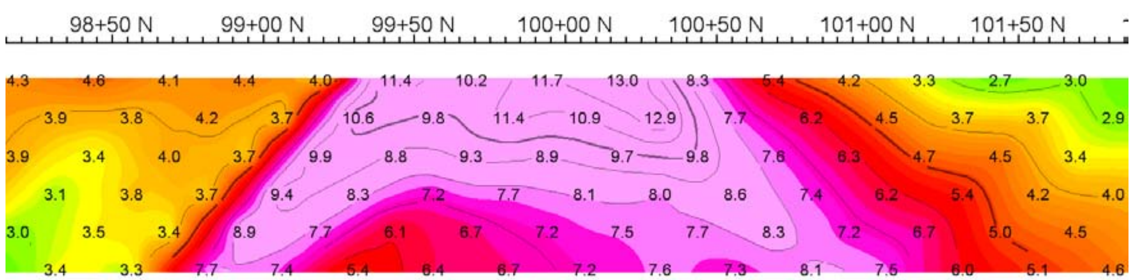


Figure 9. Mx chargeability, line 102+00E

8. Conclusions

A total of 55 IP anomalies have been picked. 48 are weak and 7 are moderate. By standards used in most glaciated Archean terrain, there are no strong IP anomalies on this grid. Most show moderate n=1 resistivities (5,000 to 15,000 ohm.m) with some promise of scattered outcrop. None of the IP anomalies has a coincident resistivity low and there is no evidence of bedrock conductors.

Four IP anomalies or anomaly sets have been highlighted. All are of moderate amplitude, at or near surface and under thin and resistive overburden. The best two of the four are line 95+00E, stations 102+50N to 104+00N and line 102+00E, stations 99+50N to 100+50N.

Ian Johnson Ph.D., P.Eng.   Blaine Webster, B.Sc., P. Geo.
June 1, 2007

SCINTREX

IPR-12 Time Domain Induced Polarization/Resistivity Receiver

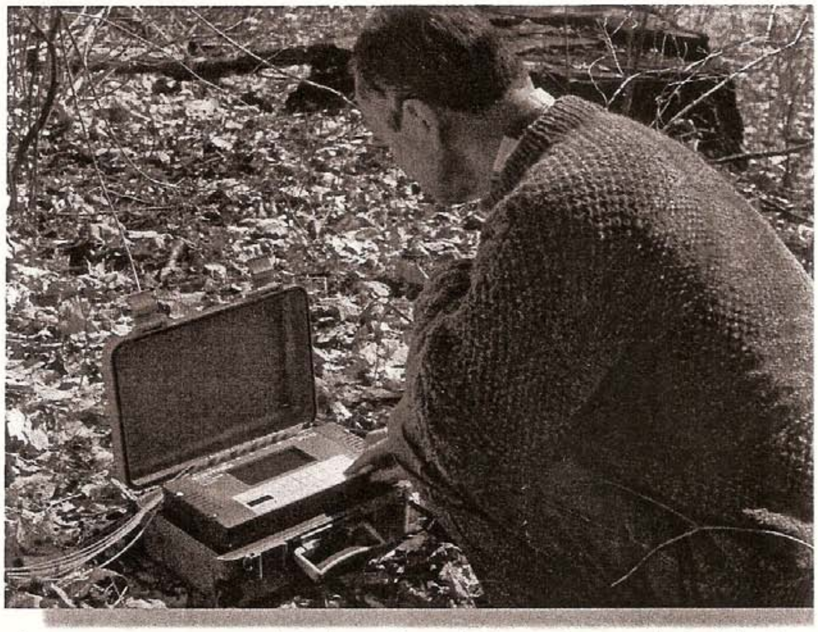
Brief Description

The IPR-12 Time Domain IP/Resistivity Receiver is principally used in exploration for precious and base metal mineral deposits. In addition, it is used in geoelectrical surveying for groundwater or geothermal resources, often to great depths. For these latter targets, the induced polarization measurements may be as useful as the high accuracy resistivity results since it often happens that geological materials have IP contrasts when resistivity differences are absent.

Due to its integrated, lightweight, microprocessor based design and its large, 16 line display screen, the IPR-12 is a remarkably powerful, yet easy to use instrument. A wide variety of alphanumeric and graphical information can be viewed by the operator during and after the taking of readings. Signals from up to eight potential dipoles can be measured simultaneously and recorded in solid-state memory along with automatically calculated parameters. Later, data can be output to a printer or a PC (direct or via modem) for processing into profiles and maps.

The IPR-12 is compatible with Scintrex IPC, TSQ and VERSA Transmitters, or others which output square waves with equal on and off periods and polarity changes each half cycle. The IPR-12 measures the primary voltage (Vp), self potential (SP) and time domain induced polarization (Mi) characteristics of the received waveform. Resistivity, statistical and Cole-Cole parameters are calculated and recorded in memory with the measured data, time and location.

Scintrex has been active in induced polarization research, development, manufacturing, consulting and surveying for over thirty years. We offer a full range of instrumentation, accessories and training.



The IPR-12 Receiver measures eight dipoles simultaneously then records measured and calculated parameters in memory.

BENEFITS

Speed Up Surveys

The IPR-12 saves you time and money in carrying out field surveys. Its capacity to measure up to eight dipoles simultaneously is far more efficient than older receivers measuring a single dipole. This advantage is particularly valuable in drillhole logging where electrode movement time is minimal.

The built-in, solid-state memory records all information associated with a reading, dispensing with the need for any hand written notes. PC compatibility means rapid electronic transfer of data from the receiver to a computer for rapid data processing.

Taking a reading is simple and fast. Only a few keystrokes are needed since the IPR-12 features automatic circuit resistance checks, SP buckout and gain setting.

High Quality Data

One of the most important features of the IPR-12 in permitting high quality data to be acquired, is the large display screen which allows the operator easy real time access to graphic and alphanumeric displays of instrument status and measured data. The IPR-12 ensures that the operator obtains accurate data from field work.

The number and relative widths of the IP decay curve windows have been carefully chosen to yield the transient information required for proper interpretation of spectral IP data. Timings are selectable to permit a very wide range of responses to be measured.

The IPR-12 stacks the information for each cycle and calculates a running average for Vp, SP and each transient window. This enhancement is equivalent to a noise decrease of $\sqrt{N}$ or a transmitter power increase of N where N is the number of values averaged. Since values are measured each few seconds, it does not take long for this signal enhancement technique to have great effect.

The automatic SP program bucks out and corrects completely for linear SP drift. Data are also kept noise free by: radio-frequency (RF) filters, low pass filters and statistical spheric noise spike rejection.

To prevent mistriggering, the IPR-12 does not accept trigger-line signals at inappropriate times.

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/volt

Tau Range
60 microseconds to 2000 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. An additional transient slice of minimum 10 ms width, and 10ms steps, with delay of at least 40 ms is keyboard selectable. Programmable windows also available.

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.

External Circuit Test
All dipoles are measured individually in sequence, using a 10 Hz square wave. The range is 0 to 2 Mohm with 0.1 kohm resolution. Circuit resistances are displayed 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 40 characters, 128 x 240 dots, Backlit SuperTwist 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 57.6 kBaud. Selectable carriage return delay to accommodate slow peripherals. Hand-shaking 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 backup 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 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 55 mm

Weights
Console: 5.8 kg 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
VERSA TX

SCINTREX
Earth Science Instrumentation

Scintrex is a division of IDS Intelligent Detection Systems

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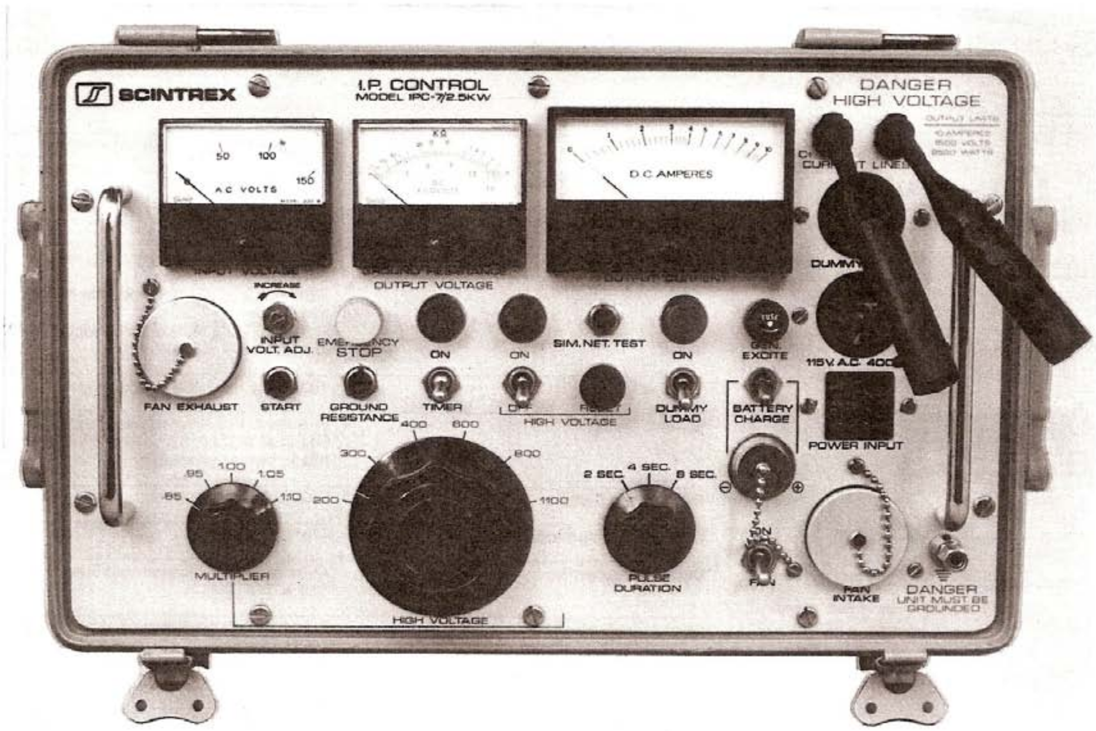
SCINTREX IPC-7/2.5kW Induced Polarization and Commutated DC Resistivity Transmitter System



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.

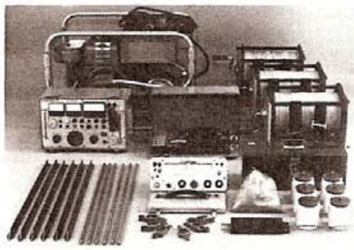
The open loop circuit protects workers by automatically cutting off the high voltage in case of a break in the current dipole circuit.

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.

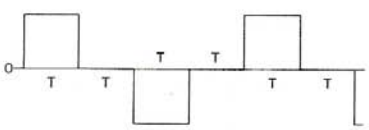
The programmer is crystal controlled for the very high stability required for broadband (spectral) induced polarization measurements using the Scintrex IPR-11 Broadband Time Domain Receiver.

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

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Concord Ontario Canada
L4K 1B5

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

Geophysical and Geochemical
Instrumentation and Services

Proton Precession

Magnetometer / Gradiometer / VLF (GSM-19T v7.0)

The new v7.0 system is the industry's latest innovation in proton precession design - with many new technologies that deliver significant benefits for earth science applications.

Key technologies include:

Data export in standard XYZ (i.e. line-oriented) format for easy use in standard commercial software programs

Programmable export format for full control over output

GPS elevation values provide input for geophysical modeling

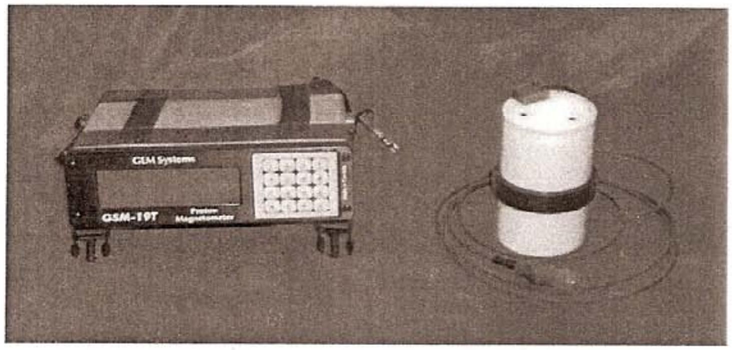
<1.5m standard GPS for high resolution surveying; higher resolutions also available

Enhanced GPS positioning resolution

Multi-sensor capability for advanced surveys to resolve target geometry

Picket marketing / annotation for capturing related surveying information on-the-go

And all of these technologies come complete with the most attractive savings and warranty in the business!



GSM-19T Proton Precession console with sensor and cable. Can also be configured with additional sensor for gradiometer(simultaneous) readings.

For earth science survey groups who require a complete solution for end-to-end magnetic data acquisition at an affordable price, the GSM-19T proton precession family is the proven choice - for even the most challenging environments.

From robust field units to efficient survey modes to fast data downloading, the GSM-19T is carefully designed to deliver the maximum value in a proton precession system.

The GSM-19T also provides numerous technologies that differentiate it from other systems. For example, it is the only proton precession system with ***integrated GPS*** (optional) for high-sensitivity, accurately-positioned ground surveys.

With other v7.0 upgrades, GEM's proton precession system also leads in sensitivity, memory, base station technology, and other key areas.

Designed From the Ground Up

Leading the list of advances is GEM's rover unit which features a 25% increase in ***sensitivity*** -- reflecting new processing algorithms and implementation of the latest RISC microprocessors.

In addition, v7.0 ***standard memory*** is 16 Mbytes (expandable in 4 Mybte increments) which translates into 838,860 readings of line / station data or more than 2,796,202 readings for base station units.

The new memory capacity sets an industry standard, but more importantly, it means that operators can now handle even the largest surveys with ease.

Another important innovation is GEM's unique ***programmable base station*** which you can enable via either a field unit *or a Personal Computer* as follows:

Daily scheduling (define working hours and minutes each day). This mode provides economy of memory and battery usage on a daily basis.

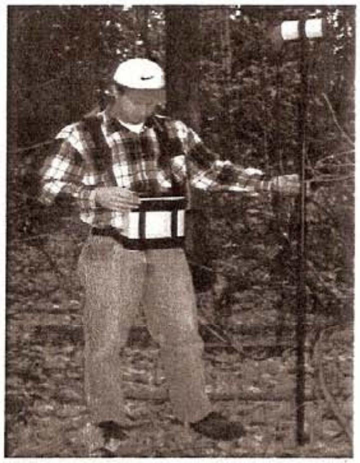
Flexible scheduling (up to 30 on / off periods). Simply define a series of intervals and the base station will turn itself on as you need. This mode provides the greatest flexibility for longer surveys where leaving your base station running increases efficiency.

Immediate start. This mode is the traditional mode of starting a base station unit and leaving it until the operator can return to turn off the unit.

Survey Planning and Efficiency

One of the traditional challenges in ground magnetometer / gradiometer surveys is ensuring that surveys are designed and implemented as effectively as possible.

With the v7.0 proton precession system, GEM addresses this challenge through



standard GEM capabilities, such as the Walking Mag option that enables the operator to sample while walking. Though there is some increase in noise, many users find this is balanced by improved field productivity. Having nearly continous data on survey lines also helps increase the accuracy of interpretations.

Another innovation is GPS way ***point pre-programming***. Now you can define a complete survey in the office on your Personal Computer and download this information directly to a rover unit via RS-232. Then, the operator simply performs the survey using the points as their survey guide -- with a resulting decrease in errors and more rapid survey completion.

Survey Operations

The GSM-19T also helps the operator on a daily basis while performing surveys. A key feature is the ***easy-to-read LCD*** data display in graphical (or text) format along with a signal quality indicator to determine when readings need to be repeated.

And, although GEM's proton precession unit is very tolerant to gradients, it also provides a warning indicator so that the operator can monitor data quality continuously. Other features operators appreciate include easy-to-use line and station incrementing -- as well as end-of-line indicators.

Fast Data Transfer

Another traditional area in which time is lost in surveys is in data transfer. In v7.0, GEM addressed this in several ways:

Data download is tripled to 115 KBaud (fastest rate possible with RS-232).

PC-based data reduction is now possible using an upgraded version of GEMLinkW, GEM's proprietary data transfer software.

GPS and Other Software

GEM Systems recently became the only manufacturer to provide a ***fully integrated*** GPS option for its line of proton precession products. Along with metre to sub-metre positioning options, the new processing functionality enables users to take advantage of the benefits of GPS.

Some of the capabilities include:

Pre-programming of way points.

Post-processing of GPS data. GEM's DGPS option enables transfer of GPS data for post-processing and merging via 3rd party software.

Precise ***time synchronization*** of field and base station units. This capability is particularly important for working in noisy magnetic conditions and provides the highest accuracy possible.

In addition to its own software, GEM is also pleased to offer a variety of data analysis and processing software from 3rd party developers.

Ongoing Maintenance and Support

As a potential user of a GSM-19T system -- the industry's end-to-end magnetometer / gradiometer solution -- you should also know that we stand by our technologies, products and services.

With a 25-year record of success and new innovations -- plus ***Internet-based upgrades*** that keep your system up-to-date and our ongoing support -- we believe that you will find that GEM offers the best solution in proton precession units today.

GEM Systems, Inc.
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Richmond Hill, ON
Canada L4B 1L9
Email: info@gemsys.on.ca
Web: www.gemsys.ca

Specifications

Performance

Sensitivity:	0.1 nT @ 1 Hz
Resolution:	0.01 nT
Absolute Accuracy:	1 nT (+/- 0.5 nT)
Dynamic Range:	20,000 to 120,000 nT
Gradient Tolerance:	Over 7000 nT/m
Sampling Rate:	1 reading per 3 to 60 sec
Operating Temperature:	-40C to +60C

Operating Modes

Manual: Coordinates, time, date and reading stored automatically at minimum 3 second interval.

Base Station: Time, date and reading stored at 3 to 60 second intervals.

Remote Control: Optional remote control using RS-232 interface.

Input / Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Storage - 16 MB (# of Readings)

Mobile:	838,860
Base Station:	2,796,202
Gradiometer:	699,050
Walking Mag:	1,677,721

Dimensions

Console:	223 x 69 x 240mm
Sensor:	170 x 71mm diameter cylinder

Weights

Console:	2.1 kg
Sensor and Staff Assembly:	2.2 kg

Standard Components

GSM-19T console, GEMLinkW software, batteries, harness, charger, sensor with cable, RS-232 cable, staff, instruction manual and shipping case.

Optional VLF

Frequency Range: Up to 3 stations between 15 to 30.0 kHz

Parameters: Vertical in-phase and out-of-phase components as % of total field. 2 relative components of the horizontal field.

Resolution:	0.1% of toal field

Appendix 1
Surveys, Data Processing, Presentation and Archives

Spectral IP/resistivity and magnetometer surveys were done on the Stake Lake property in the Sturgeon Lake area of Ontario. The work was done for Trigold Resources Corp. by JVX Ltd. under JVX job number 7-20. The field work was done in the period March 30 to April 11, 2007.

The IP/resistivity survey was done in time domain with a pole dipole array ('a' = 25 m, n=1,6). Total IP/resistivity coverage was 14,075 m (table 1). Coverage is from the station of the first current electrode (IP-From) to the station of the last potential electrode (IP-To). The magnetometer survey was done at a station spacing of 12.5 m. Total magnetic coverage was 15,150 m (table 2).

Line	IP-From	IP-To	Separation	Date
94+00E	95+00N	105+00N	1000	April 11, 2007
95+00E	94+75N	105+00N	1025	April 10/11, 2007
96+00E	94+75N	105+00N	1025	April 9, 2007
97+00E	94+75N	105+00N	1025	April 8, 2007
98+00E	94+75N	105+00N	1025	April 7/8, 2007
99+00E	94+75N	105+00N	1025	April 6/7, 2007
100+00E	94+75N	105+00N	1025	April 6, 2007
101+00E	94+75N	105+00N	1025	April 4/5, 2007
102+00E	94+75N	105+00N	1025	April 4, 2007
103+00E	93+25N	105+00N	1175	April 1/2, 2007
104+00E	93+25N	105+00N	1175	March 31, April 1, 2007
105+00E	93+25N	105+00N	1175	March 30, April 3, 2007
106+00E	91+50N	98+00N	650	April 3, 2007
	98+00N	105+00N	700	March 30/31, 2007
		Total	**14,075 m**	

Table 1. Production Summary – IP/Resistivity Survey

Line	Mag-From	Mag-To	Separation	Date
94+00E	95+00N	105+00N	1000	April 9, 2007
95+00E	95+00N	105+00N	1000	April 9, 2007
96+00E	95+00N	105+00N	1000	April10, 2007
97+00E	95+00N	105+00N	1000	April 9/10, 2007
98+00E	95+00N	105+00N	1000	April 9, 2007
99+00E	95+00N	105+00N	1000	April 8, 2007
100+00E	95+00N	105+00N	1000	April 8/9, 2007
101+00E	95+00N	105+00N	1000	April 8, 2007
102+00E	95+00N	105+00N	1000	April 8, 2007
103+00E	93+00N	105+00N	1200	April 8, 2007
104+00E	93+00N	105+00N	1200	April 7/8, 2007
105+00E	93+00N	105+00N	1200	April 7, 2007
106+00E	91+50N	105+00N	1350	April 7, 2007
100+00N	94+00E	106+00E	1200	April 10, 2007
		Total	**15,150 m**	

Table 2. Production Summary – Magnetic Survey

Grid

The survey grid is made up of 13 traverse lines numbered 94+00E to 106+00E. Lines are oriented 3° west of north. Line separation = 100 m. The grid is within claim number 4205909. This is part of a claim block southwest of Sturgeon Lake and 200 km northwest of Thunder Bay. Provincial Highway 642 is 2 km north of the center of the grid. The southeast corner of the grid is over Stake Lake.

Selected grid points were surveyed by JVX with a Garmin Etrex Legend GPS receiver. This unit is equipped with WAAS – Wide Area Augmentation System. At any control point, readings were averaged until convergence for a positional accuracy of around ± 5 m, better in open ground. Coordinates (NAD83, Z15N) of most of these points are listed in table 3.

Line	Station	UTM e	UTM n	Elevation
94+00E	100+00N	621157	5518150	
	105+00N	621146	5518625	
	95+00N	621198	5517649	
95+00E	100+00N	621255	5518152	409
	105+00N	621235	5518635	
	95+00N	621282	5517657	426
96+00E	100+00N	621355	5518157	432
	105+00N	621323	5518644	419
	95+00N	621378	5517664	435
97+00E	100+00N	621455	5518173	425
	105+00N	621423	5518660	
	95+00N	621482	5517674	429
98+00E	100+00	621553	5518175	426
	105+00N	621510	5518671	
	95+00N	621577	5517682	427
99+00E	100+00N	621652	5518192	431
	105+00N	621612	5518682	415
	95+00N	621671	5517694	
100+00E	100+00N	621736	5518193	426
	105+00N	621705	5518686	438
	95+00N	621766	5517705	425
101+00E	100+00N	621838	5518205	427
	105+00N	621801	5518703	415
	95+00N	621873	5517709	420
102+00E	100+00N	621939	5518209	430
	105+00N	621896	5518710	420
	95+00N	621975	5517717	421
103+00E	100+00N	622036	5518216	425
	105+00N	622013	5518717	421
	93+50N	622074	5517573	421
	95+00N	622066	5517722	419
104+00E	100+00N	622135	5518229	438
	105+00N	622107	5518717	
	93+50N	622160	5517589	
	95+00N	622155	5517735	
105+00E	100+00N	622236	5518238	424
	105+00N	622209	5518736	420
	93+50N	622260	5517593	422
	95+00N	622253	5517742	421

106+00E	100+00N	622334	5518247	431
	105+00N	622302	5518743	410
	92+00N	622370	5517422	426
	95+00N	622358	5517727	423

Table 3. GPS Control Points

Personnel

Rob St. Michel, senior geophysical operator from JVX acted as party chief. He operated the IP receiver and was responsible for all technical aspects of the field survey. Helpers included Jon Dufoe, Todd Huard, Dean McNichol, Sonny Pomerleau and Leo Villamor. Data processing and plotting was handled by Lily Manoukian at the JVX office in Richmond Hill, Ontario.

Surveys

Readings are taken at the pickets. Station label or chaining errors, if present, are noted. Total magnetic intensity readings were taken with GEM GSM-19 magnetometers every 12.5 m.

The IP/resistivity survey was done in time domain with a Scintrex IPR12 receiver. The pole-dipole array with ‘a’ = 25 m and n=1,6 was used. The current on time was 2 seconds. Unless otherwise noted, stainless steel electrodes were used for current and potential dipoles. The shape of IP anomalies in pole-dipole surveys depends on array orientation - the current / potential electrode orientation is fixed for any survey grid. The current electrode was always south of the potential electrodes.

For that part of the IP/resistivity survey over water, holes were drilled through the ice and stainless steel electrodes (current and potential) were lowered into the lake bottom sediment. Selected water depths are recorded (see below).

Operator Notes

Line 94+00E
- Wet area from 97+75N to 100+75N
- Outcrop at 103+00N
- Wet area starts 103+25N

Line 95+00E
- Wet area from 98+50N to 102+00N
- Top of hill at 103+50N

Line 96+00E
- Old road at 97+00N
- Wet area from 98+75N to 100+00N
- Wet area from 102+75N to 103+25N

Line 97+00E
- Wet area from 100+00N to 100+75N
- Wet area starts 103+75N
- Swampy area from 104+25N to eol

Line 98+00E
- Wet area from 97+25N to 98+25N
- Road at 98+75N
- Road at 102+10N
- Wet area starts at 104+50N

Line 99+00E
Wet area from 96+00N to 99+25N
No picket at 99+25N
Road at 102+00N
Line 100+00E
Wet area 95+25N to 97+00N
Wet area 98+00N to 98+90N
No picket at 98+75N
Showing 99+75N to 100+10N
Road at 101+80N
Wet spot from 102+75N to 104+50N
Line 101+00E
Wet area from line start to 96+50N
Wet area starts 99+25N
No picket at 99+75N
Wet area 10+350N to 10+400N
Line 102+00E
Wet area from line start to 96+75N
Wet area from 100+50N to 102+10N
No picket at 101+50N
Line 103+00E
Lake ends 95+30N
Lake starts 95+70N
Lake ends 96+75N
Wet area starts 103+00N
Line 104+00E
Lake ends 97+70N
Outcrop – visible quartz at base line
Wet spot from 100+00N to 101+25N
Wet area starts 102+25N
Line 105+00E
Wet area starts 100+25N
Swamp starts 102+00N
Lake ends 97+90N
Line 106+00E
Lake ends 98+00N
Picket at 98+25N reads 98+50N
Swamp from 100+25N to 104+60N
Rail line runs parallel with back of grid - good for access

The operator notes for lines 103+00E to 106+00E show these lines were extended further south at the request of Trigold Resources to cover an anomaly. No further explanations are recorded.

Water Depths

Line	Station	Depth (feet)
103+00E	93+50N	3
	94+00N	3
	94+50N	3
	95+00N	3
	96+00N	2
	96+50N	2
104+00E	93+50N	8

	94+00N	5
	94+50N	5
	95+00N	6
	95+50N	4
	96+00N	4
	96+50N	4
	97+00N	3
	97+50N	2
105+00E	93+50N	6
	94+00N	6
	94+50N	4
	95+00N	4
	95+50N	3
	96+00N	3
	96+50N	3
	97+00N	3
	97+50N	3
106+00E	92+00N	6
	92+50N	6
	93+00N	6
	93+50N	6
	94+00N	6
	94+50N	6
	95+00N	6
	95+50N	3
	96+00N	2
	96+50N	3

Table 4. Water depths over Stake Lake

Instrumentation

Scintrex IPR12 time domain receiver.

For each potential electrode pair, the IPR12 measures the primary voltage (Vp) and the ratio of secondary to primary voltages (Vs/Vp) at 11 points on the IP decay (2 second current pulse). These 11 points (slices or windows) are labeled M4 to M14. There is the option for an additional user defined slice (Mx). Units of measurement are millivolts for Vp and milliVolts/Volt (mV/V) for M4 to M14 and Mx. Time settings are

Vp : 200 to 1600 msec
M4 centered at 60 msec (50 to 70)
M5 centered at 90 msec (70 to 110)
M6 centered at 130 msec (110 to 150)
M7 centered at 190 msec (150 to 230)
M8 centered at 270 msec (230 to 310)
M9 centered at 380 msec (310 to 450)
M10 centered at 520 msec (450 to 590)
M11 centered at 705 msec (590 to 820)
M12 centered at 935 msec (820 to 1050)
M13 centered at 1230 msec (1050 to 1410)
M14 centered at 1590 msec (1410 to 1770)

Mx centered at 870 msec (690 to 1050)

The apparent resistivity is calculated from Vp, the transmitted current and the appropriate geometric or K factors. M4 to M14 define the IP decay curve. The M12 or Mx slice is commonly presented in contoured pseudosections.

JVX has chosen the above settings for Mx in order to better reflect an IP measurement (M7) from the older Scintrex IPR11 time domain receiver. In IPR11 surveys from the 1980s, this chargeability window was most often plotted and experience gained is based in part on this measurement.

The IPR12 also calculates the theoretical decay that best fits the measured decay. The theoretical decay is based on the Cole-Cole impedance model developed for applied geophysical surveys in the 1970s. The fit is based on a set of theoretical master curves with restrictions that limit the value of the calculation. JVX uses a different method to calculate impedance parameters (see below).

Scintrex IPC7 2.5 kW / TSQ3 3 kW time domain transmitters

These transmitters are powered by an 8 or 10 hp motor generator and produce a commutated square wave current output with current on times of 2, 4, 8, or 16 seconds. A 2 second current pulse was used (base frequency of .125 Hz). Output current is stabilized to within ±0.1% for up to 50% external load or ± 10% input voltage variations. Voltage, current and circuit resistance are displayed in analog and digital form.

Magnetometers

GEM Systems GSM-19 magnetometers were used for all mobile and base station readings. Reading resolution of these units is at least 0.1 nT. Base station total magnetic intensity readings were taken every 5 seconds. Copies of instrument specification sheets are attached.

Data Processing and Presentation

Grid

GPS control points are taken into a Geosoft database (normally called gps.gdb). UTM coordinates of line / stations in other databases (IP/resistivity, magnetics, etc.) are taken from gps.gdb using a lookup procedure. Values for intermediate stations are interpolated or extrapolated. Where there are less than 2 GPS control points on any survey line, synthetic control points may be added.

Chaining errors noted in the field are reported but no attempt is made to adjust the survey results. Unless otherwise noted, line / station values of GPS control points and of geophysical survey points are as recorded in the field.

Base Map

A topographic base map is been downloaded from the claimap3 website of the Ontario Ministry of Northern Development and Mines. These maps show drainage, elevation contours, claim boundaries and claim numbers. See www.mndm.gov.on.ca/mndm/mines/lands/claimap3/. Copyright Queen's Printer for Ontario. Unless otherwise noted, registration is based on the NAD83 (WGS84) datum.

Magnetics

At the end of every survey day, the mobile and base station magnetic data are dumped from the GSM-19s to a PC. Output are ASCII (text) *.dmp files identified by date and mobile (M) or base (B). The mobile data files show time, line, station and reading. The base station data files show time and reading.

Base station corrections are normally applied and the results gathered in ASCII *.xyz files (Geosoft format) with one *.xyz file per survey line. In this case, the base station records were incomplete or did not overlap times of the mobile readings. A form of tie line leveling based on repeated readings on line 100+00N was used instead.

The corrected total magnetic intensity data are merged with the position data and collected into a database (*.gdb extension, Geosoft montaj format). Grid (random gridding) and contour. Generate map (colour + line contours, lines, surrounds, title block, legend, etc.). Output is a *.map (Geosoft montaj) file.

IP/Resistivity

At the end of every survey day, the IP/resistivity data are dumped from the IPR12 to a PC. Output is an ASCII *.dmp file with the date as the file name. Raw data from each survey line are collected in an ASCII *.i12 file with the line number as the file name. The data are checked for quality and quantity. The data are archived for transfer to JVX Ltd. in Toronto.

Office data processing is based largely on Geosoft Oasis Montaj v6.3 (see www.geosoft.com). Impedance modelling software (see below) is based on a suite of programs developed by JVX for the IPR12. The compilation map is prepared using AutoCAD drafting software (see www.autodesk.com).

The *.i12 files are loaded into Geosoft database. Line / station UTM coordinates are taken from gps.gdb using a lookup procedure. The IP decays are analysed for spectral content (see below). Stacked pseudosections (see below) and plan maps of the n=2 Mx chargeability and apparent resistivity are prepared with Montaj.

After review of preliminary maps, high, erratic and/or isolated values of Mx chargeability may be identified and arbitrarily removed from the database (and final maps). The offending value(s) can be recovered from the full IP decay.

Pseudosections assume an ideal survey line. Plan maps show the true grid layout (GPS surveyed), station numbers, posted values and line + colour contours. Plan maps of n=2 chargeability and apparent resistivity show tick marks at n=2 plot points.

Colour contour intervals are decided by an equal area distribution of all of the chargeability or apparent resistivity readings. These colour contour intervals are then applied to all pseudosections. They may or may not be used for the n=2 Mx plan map.

Impedance Modelling

The Cole-Cole impedance model was developed in the 1970s after it became clear that chargeability is a complex property that includes amplitude (volume percent electronic conductors), grain size and grain size uniformity. In this model, the low frequency electrical impedance Z(ω) of rocks and soils is defined by 4 parameters. They are

- r_0 : DC resistivity in ohm.m
- m : true chargeability amplitude in V/V (also called MIP)
- t : tau - time constant in seconds

c : exponent

The form of the model is

$$Z(\omega) = r_0 \{1 – m [1 - (1+(i\omega t)^c)^{-1}]\} \text{ ohm.m}$$

where ω is the angular frequency (2pf).

The true chargeability (m or MIP) is a better measure of the volume percent electronic conductors (some metallic sulphides, magnetite, graphite). The time constant is a measure of the square of the average grain size. The exponent is a measure of the uniformity of the grain size. Common or possible ranges are 0 to 1 (m), .01 to 100 seconds (tau) and .1 to .5 (c).

In time domain IP surveys, impedance model parameters may be estimated using a best fit between theoretical and measured decays. The simplest approach (and the one used here) is to use a set of master decay curves, pre-calculated for selected values of time constant and exponent. For a 2 second current pulse, the master curve set is for time constant values of .01, .03, .1, .3, 1, 3, 10, 30 and 100 seconds and exponent values of 0.1, 0.2, 0.3, 0.4 and 0.5. This gives a total of 45 master curves.

The spectral analysis program operates on decays (*.xyz) exported from the Geosoft database. Output from the spectral analysis program are two files : a file that contains the spectral parameters (*.sip) and a report file (*.rpt). The report file shows the total number of decays, the number that have returned spectral parameters and the number of negative and bipolar decays. It also shows the c / tau distribution of all spectral parameters.

All decays that give an RMS fit between measured and master decay of less than 5% yield spectral parameters. Spectral parameters are taken from decays that are all negative and give an RMS fit of better than 5 %. In this case, the true chargeability is negative. Bipolar decays are not analyzed for spectral content.

Under ideal conditions, more than 90 % of the IP decays in any survey are of sufficient amplitude and quality to yield spectral parameters. 80 % is probably average for most surveys. The most common reason for the lack of spectral parameters is very low decay amplitudes – often seen in areas of thick and/or conductive overburden. Instrumentation and/or noise problems can occur over long sections of outcrop or at an abrupt boundary between outcrop and conductive ground.

Pseudosections

The pseudosections are plotted using standard depth and position conventions. The plot position for any measured quantity for the n^{th} potential dipole pair is (n+½)a/2 m forward of and below the current electrode. Pole-dipole anomaly shapes depend on array orientation. The array sketch shown with each pseudosection shows the correct array orientation.

These plot forms have been found to give a reasonable image of target-top location, width and depth where 1) the anomalously chargeable and/or resistive body is an isolated, near-vertical tabular body, 2) where background chargeabilities and resistivities (overburden and host rock) are uniform and 3) where the terrain is relatively flat. They are more difficult to interpret for irregular or nearby chargeable bodies and where there is any amount of conductive cover or topographic relief. Forward or inverse modelling may be useful in such cases.

For Mx, MIP and apparent resistivity, colour contour intervals in the pseudosections are taken from equal area distribution for the whole grid. Colour assignments for the spectral 'tau' are fixed.

Archives

The results of the survey are archived on CD. Included on the CD is the Oasis Montaj viewer. File types include

ASCII *.dmp – original instrument dumps
ASCII *.i12 – IPR12 collated raw data dumps
ASCII *.sip, *.rpt – spectral analysis results
*.gdb - Geosoft databases
*.map – Geosoft format maps included with this report
MS WORD *.doc – report
Image files*.jpg - figures in the report

Appendix 2
IP Anomaly Listings

IP anomalies are manually picked from pseudosections of Mx chargeability. The spectral IP amplitude is used when the Mx anomaly is weak or uncertain. Overlying resistivities and any coincident resistivity expression of the IP anomaly are taken from the pseudosection of apparent resistivity. The spectral time constant and MIP amplitude are added.

IP anomaly characteristics are

1. ID : anomaly identifier
2. Centre-Top : centre-top of the IP anomaly and best estimate for location of the centre-top of the chargeable body.
3. Mx : peak Mx chargeabilities at and near centre-top, mV/V
4. C : classification by Mx peak amplitudes – w or weak (Mx = 10 mV/V), M or Moderate (10 < Mx = 20 mV/V) and S or Strong (Mx > 20 mV/V).
5. n : dipole number of IP anomaly top
6. MIP : peak spectral chargeability amplitude at anomaly centre-top, mV/V
7. TC : spectral time constant range as S for short (0.01 to 0.1 sec.), M for moderate or mixed and L for long (10 to 100 sec.).
8. Rho1 : n=1 apparent resistivity at or over IP anomaly centre-top, ohm.m.
9. Resis. : coincident relative resistivity anomaly (if any)

A blank entry means the results were incomplete, inconclusive or unavailable. A question mark means the quantity is uncertain or the anomaly is at the end of line and not fully defined. The centre-top location is the station of the nearest P1 potential electrode and therefore 6.25 m from the standard pole-dipole plot point.

Line	ID	Centre-Top	Mx	C	n	MIP	TC	Rho1	Resis
94+00E	A	100+00N	5.2	w	1	100	S	650	-
	B	100+25N – 100+50N	5.5	w	2	141	S	867 – 1072	-
	C	100+75N	6.7	w	3	284	S	1499	high
	D	101+00N	7.1	w	4	134	S	3756	-
	E	101+50N – 102+00N	7.7 – 12.7	M	1	280	L	5437 – 20381	-
	F	102+75N – 103+00N	4.5 – 5.1	w	1	102	S	24151	high
95+00E	A	100+25N – 100+50N	5.1 – 5.3	w	2	82	S	1101-1106	-
	B	101+50N	5.4	w	5	138	S	1325	-
	C	102+75N – 103+00N	10.3 – 14.8	M	1	345	M	16463	-
	D	103+25N	11.4	M	1	371	L	12301	-
	E	103+50N – 104+00N	8.3 – 13.1	M	1	416	L	11696	high
96+00E	A	96+25N	5.2	w	1	134	M	2031	-
	B	100+00N – 100+25N	7.1	w	2	148	S	5088	high
	C	100+75N – 101+00N	6.1 - 8.0	w	2	308	S	6171 – 18682	high
	D	102+25N	9.9	w	1	350	S	22105	high
	E	102+75N – 103+00N	7.9	w	2	307	S	4436 – 7036	high
	F	103+75N	7.1	w	1	149	S	?	high

Appendix 4 JVX 7-09. IP Anomaly Listings

Line	ID	Centre-Top	Mx	C	n	MIP	TC	Rho1	Resis
97+00E	A	100+00N	5.1	w	1	206	S	3603	-
	B	100+25N – 100+75N	7.1 – 7.5	w	2	278	M	4691 – 7292	-
	C	101+25N	7.2	w	1	282	S	18792	-
	D	101+75N – 102+25N	7.1 – 7.5	w	3	288	S	25548	-
	E	103+00N	6.8	w	1	143	S	28843	-
98+00E	A	99+25N	7.5	w	1	294	S	6633	-
	B	99+75N – 100+25N	7.2 – 11.4	M	1	370	M	5818 – 13221	-
	C	101+75N – 102+00N	6.2	w	2	246	S	14019	-
	D	102+25N – 102+50N	6.8	w	2	142	S	15398	high
	E	102+75N – 103+00N	6.7	w	2	265	S	15677	high
	F	103+50N – 103+75N	6.0	w	3	242	S	17194	high
99+00E	A	95+00N	5.5	w	1	109	M	6493	-
	B	100+00N	5.1	w	1	109	S	7583	-
	C	100+50N – 100+75N	4.9 – 5.9	w	3	217	S	12763	-
	D	101+25N – 101+50N	6.2 – 6.5	w	1	257	S	10004	-
	E	102+00N – 102+25N	5.9	w	2	236	S	11528	-
	F	102+75N – 103+00N	7.4 – 7.5	w	1	281	S	17150	high
	G	103+50N – 105+75N	5.0	w	3	258	S	4305	high
100+00E	A	95+50N	4.4	w	1	114	S	2145	-
	B	100+25N	6.2	w	1	230	S	7820	high
	C	101+00N – 101+25N	5.0	w	3	218	S	6137	high
	D	102+00N – 102+50N	3.6 – 5.7	w	1	230	S	3456 – 11007	high
	E	103+50N	4.1	w	3	96	S	1519	high
101+00E	A	100+25N	6.7	w	1	264	S	9038	-
	B	100+75N – 101+00N	5.8 – 6.5	w	1	258	S	6625 – 10938	high
102+00E	A	99+50N – 100+50N	8.3 – 13.0	M	1	411	L	7716 – 21993	-
	B	103+25N	6.1	w	1	129	S	4396	high
103+00E	A	99+50N – 99+75N	4.7 – 6.3	w	3	258	S	11725	high
	B	100+25N – 100+50N	7.5	w	2	293	M	7311 – 10816	-
	C	101+00N	7.9	w	3	283	M	3085	high
	D	102+50N – 102+75N	4.3	w	3	100	S	2807	-
104+00E	A	98+25N – 98+50N	5.8 – 6.9	w	1	271	M	11757 – 18004	high
	B	99+00N	5.6	w	2	223	S	21267	-
	D	100+00N	13.0	M	1	411	S	10787	-
	C	101+50N	4.4	w	3	114	S	2225	high
105+00E	A	98+25N – 98+75N	6.2 – 7.9	w	1	306	S	10451 – 21674	high
	B	99+75N	5.6	w	3	118	S	13029	high
106+00E	A	99+50N – 99+75N	6.1 – 7.2	w	1	164	S	9727	-

Certificate of Qualifications

Blaine Webster
President - JVX Ltd.,
60 West Wilmot Street, Unit 22
Richmond Hill, Ontario L4B 1M6
Tel : (905) 731-0972 Email : bwebster@jvx.ca

I, Blaine Webster, B. Sc., P. Geo., do hereby certify that

1. I graduated with a Bachelor of Science degree in Geophysics from the University of British Columbia in 1970.

2. I am a member of the Association of Professional Geoscientists of Ontario.

3. I have worked as a geophysicist for a total of 36 years since my graduation from university and have been involved in minerals exploration for base, precious and noble metals and uranium throughout much of the world.

4. I am partly responsible for the overall preparation of this report. Most of the technical information in this report is derived from geophysical surveys conducted by JVX Ltd. for Trigold Resources Corp. and information provided by Trigold Resources Corp.

Blaine Webster, B. Sc., P. Geo.

Certificate of Qualifications

Ian Johnson
R R 2 Aylmer, Ontario N5H 2R2
Tel : (519) 773-2932 Email : ianjohnson@auracom.com

I, Ian Johnson, Ph. D., P. Eng., do hereby certify that

1. I graduated with a Bachelor of Science degree in Geophysics from the University of Western Ontario in 1968 and a Doctorate degree in Geophysics from the University of British Columbia in 1972.

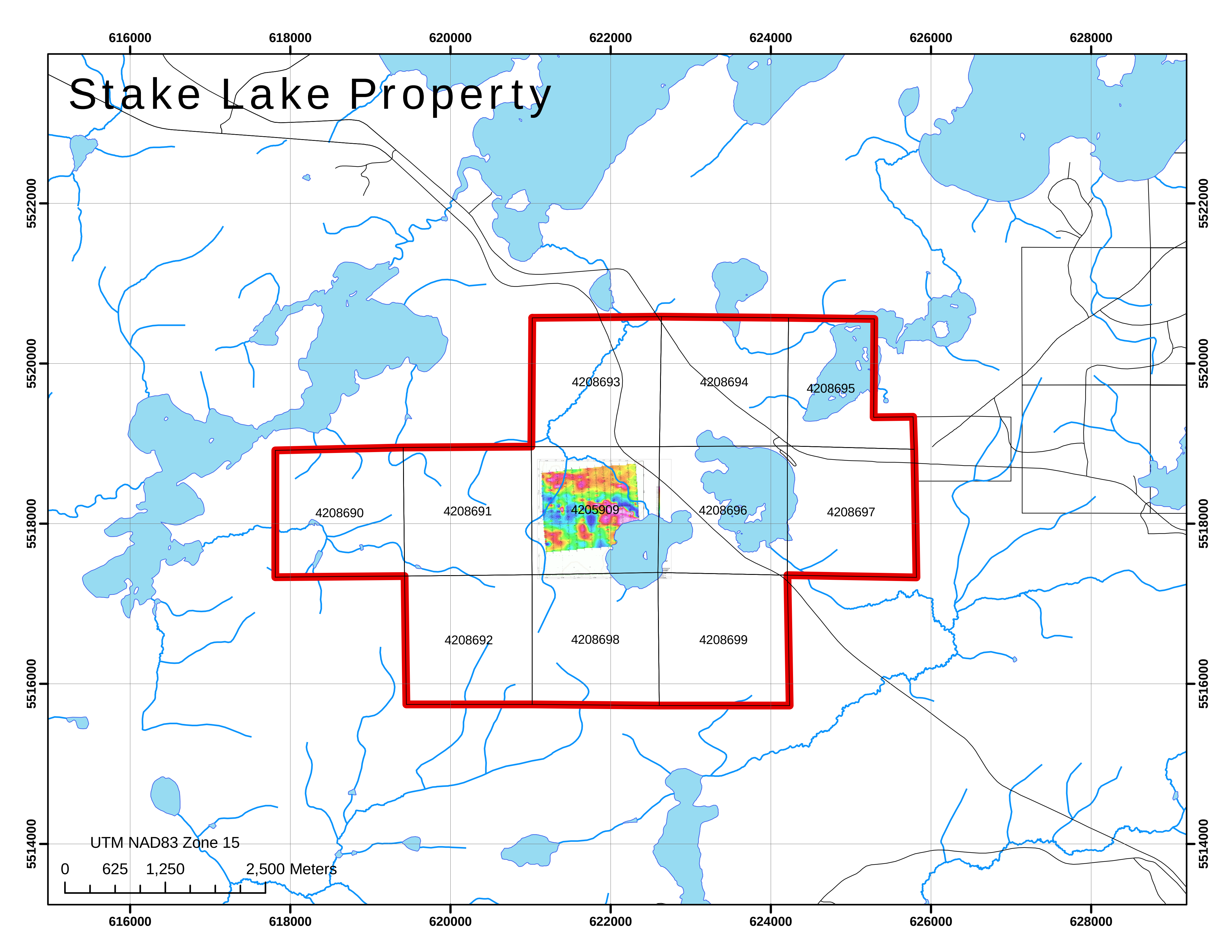
2. I am a member of the Association of Professional Engineers of Ontario.

3. I have worked as a geophysicist for a total of 31 years since my graduation from university and have been involved in minerals exploration for base, precious and noble metals and uranium throughout North America and South America.

4. I am partly responsible for the overall preparation of this report. Most of the technical information in this report is derived from geophysical surveys conducted by JVX Ltd. for Trigold Resources Corp. and information provided by Trigold Resources Corp.

____

Ian Johnson, Ph. D., P. Eng.



Stake Lake Property
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618000
620000
622000
624000
626000
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4208693
4208694
4208695
4208690
4208691
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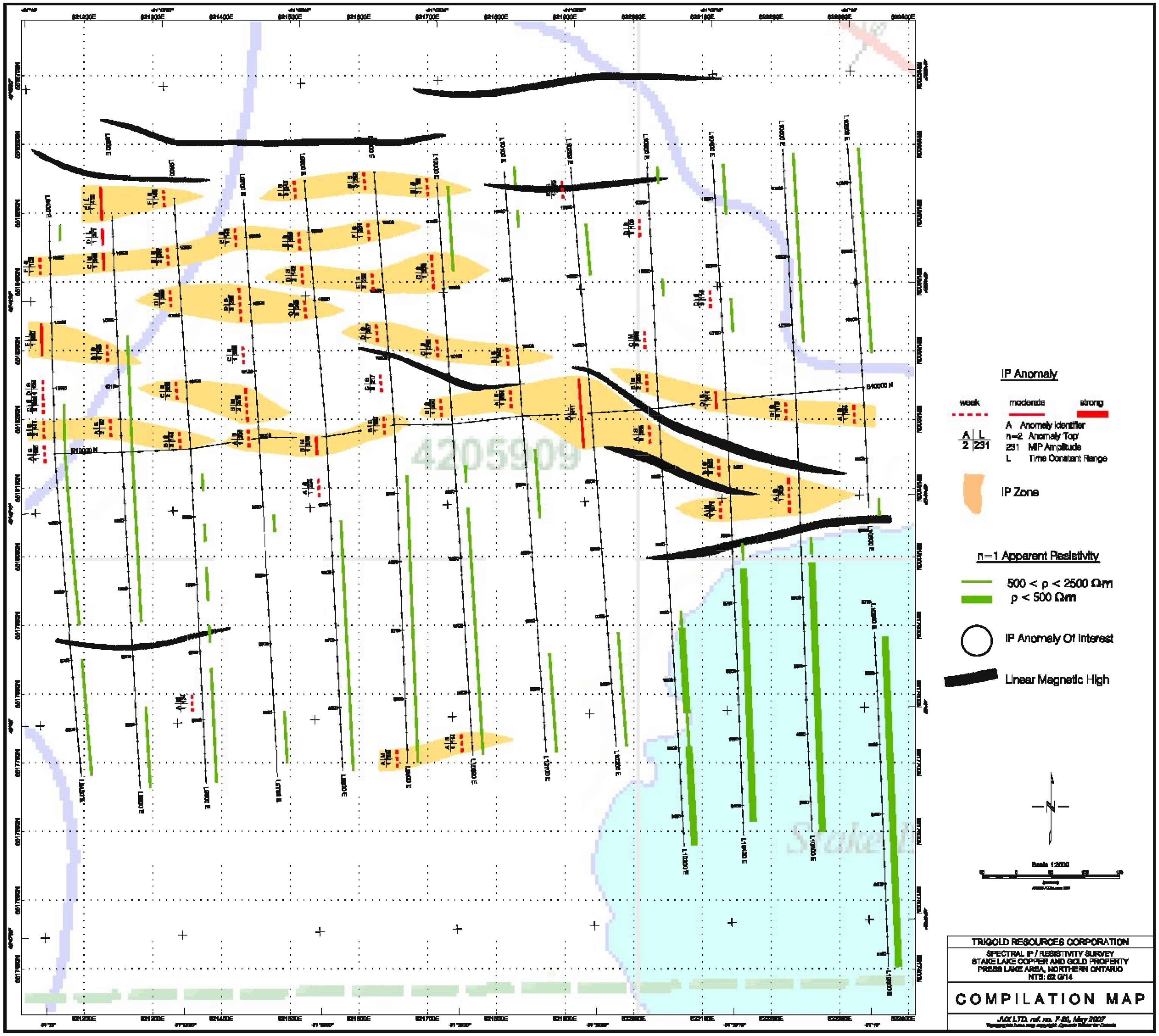
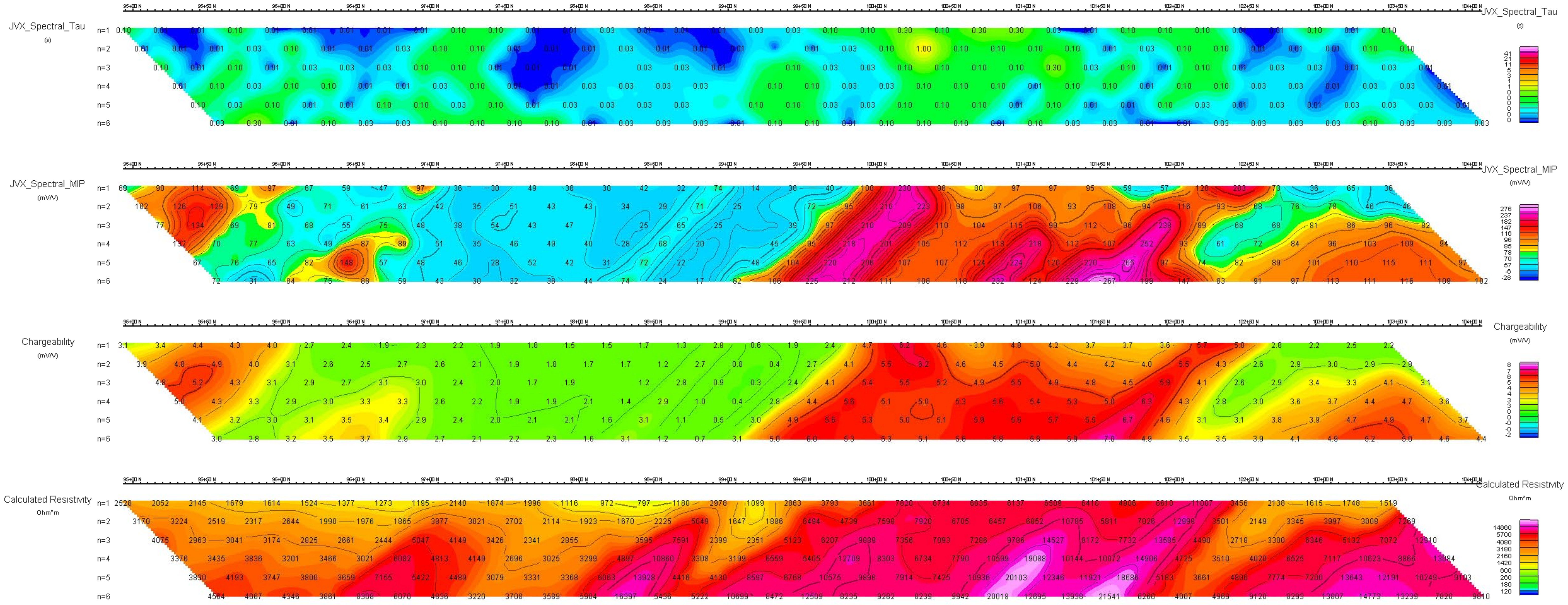
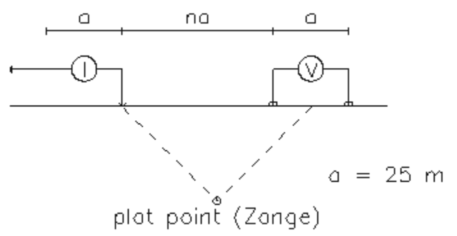
4208699
UTM NAD83 Zone 15
0
625
1,250
2,500 Meters


4205909
Stake L
IP Anomaly
weak
moderate
strong
A Anomaly Identifier
n=2 Anomaly Top
231 MIP Amplitude
L Time Constant Range
IP Zone
n=1 Apparent Resistivity
500 < ρ < 2500 Ωm
ρ < 500 Ωm
IP Anomaly Of Interest
Linear Magnetic High
Scale 1:2500
TRIGOLD RESOURCES CORPORATION
SPECTRAL IP / RESISTIVITY SURVEY
STAKE LAKE COPPER AND GOLD PROPERTY
PRESS LAKE AREA, NORTHERN ONTARIO
NTS: 52 G/14
COMPILATION MAP
JVX LTD. ref. no. 7-26, May 2007



Pseudo Section Plot
100+00 E

Pole-Dipole Array



Scale 1:2500

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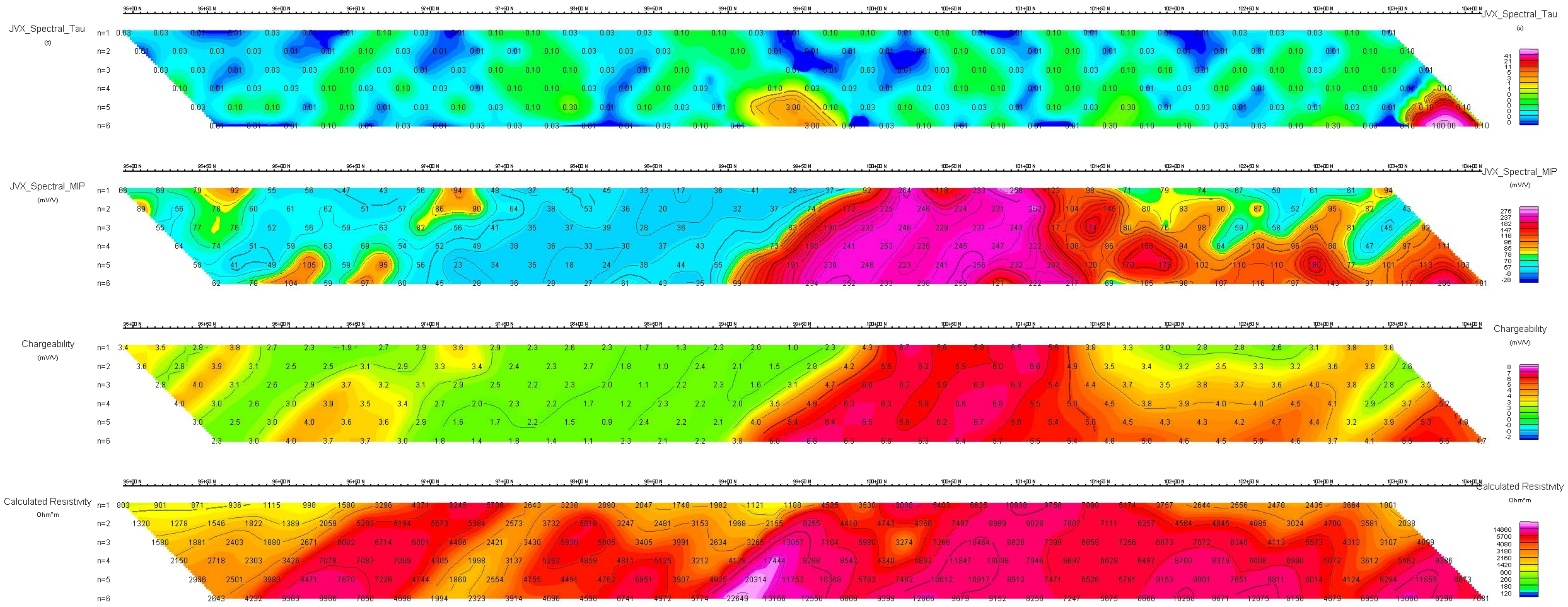
(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

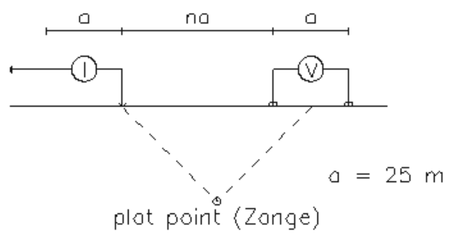
Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
101+00 E

Pole-Dipole Array



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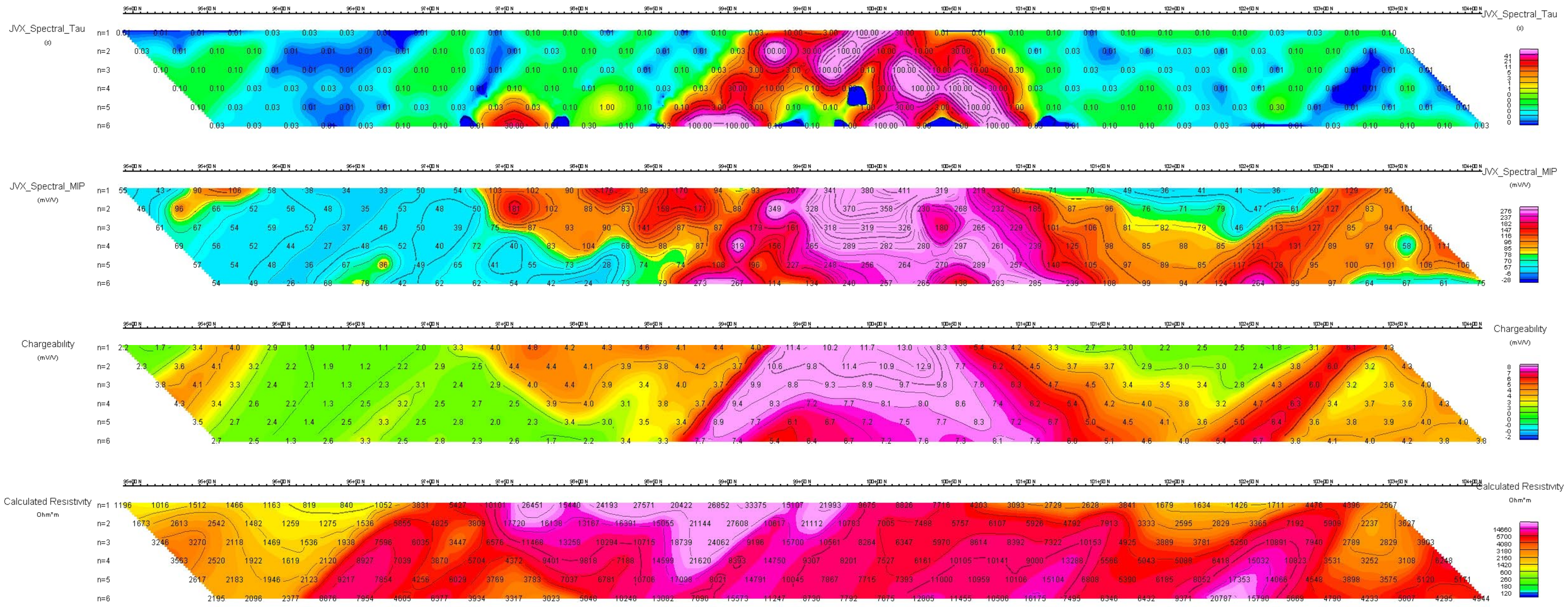
(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

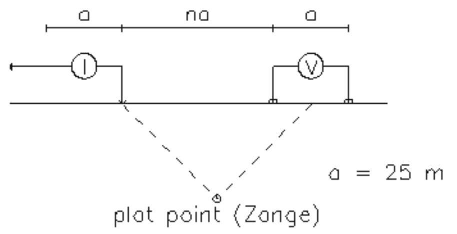
Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
102+00 E

Pole-Dipole Array



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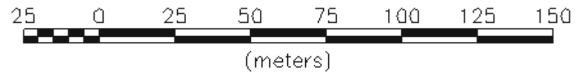
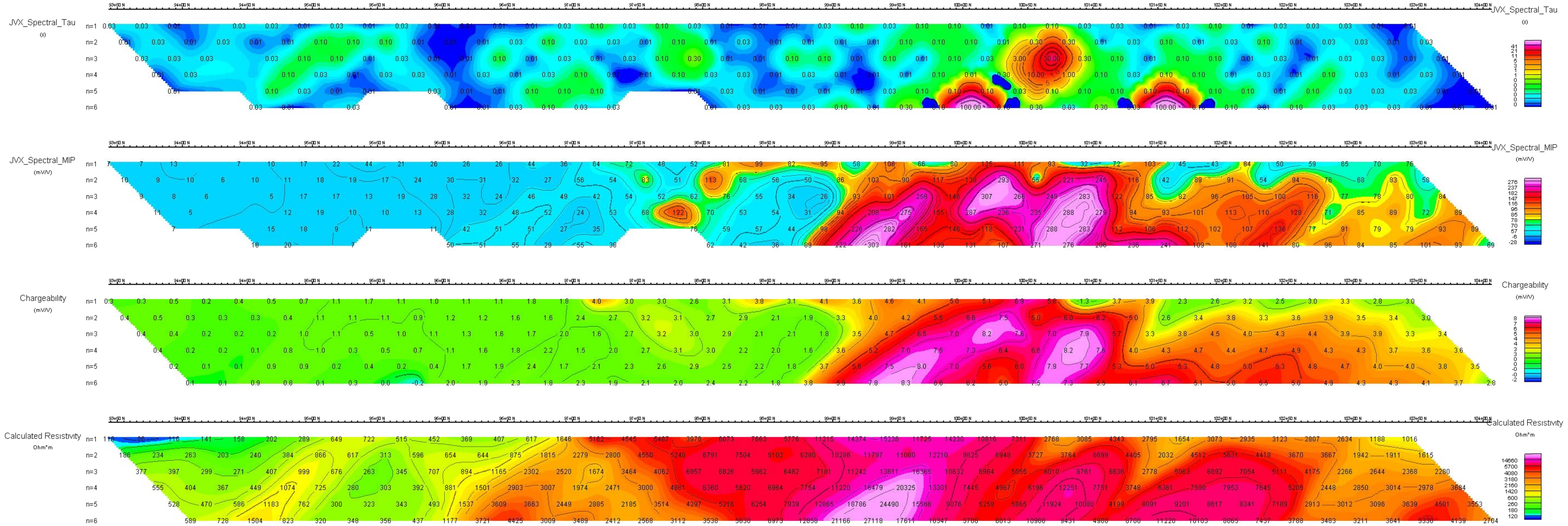


TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

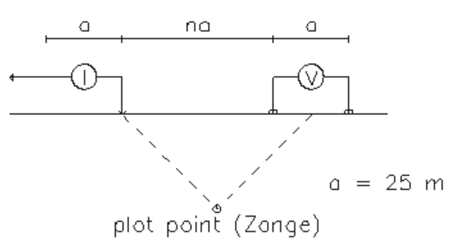
Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
103+00 E

Pole-Dipole Array



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(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

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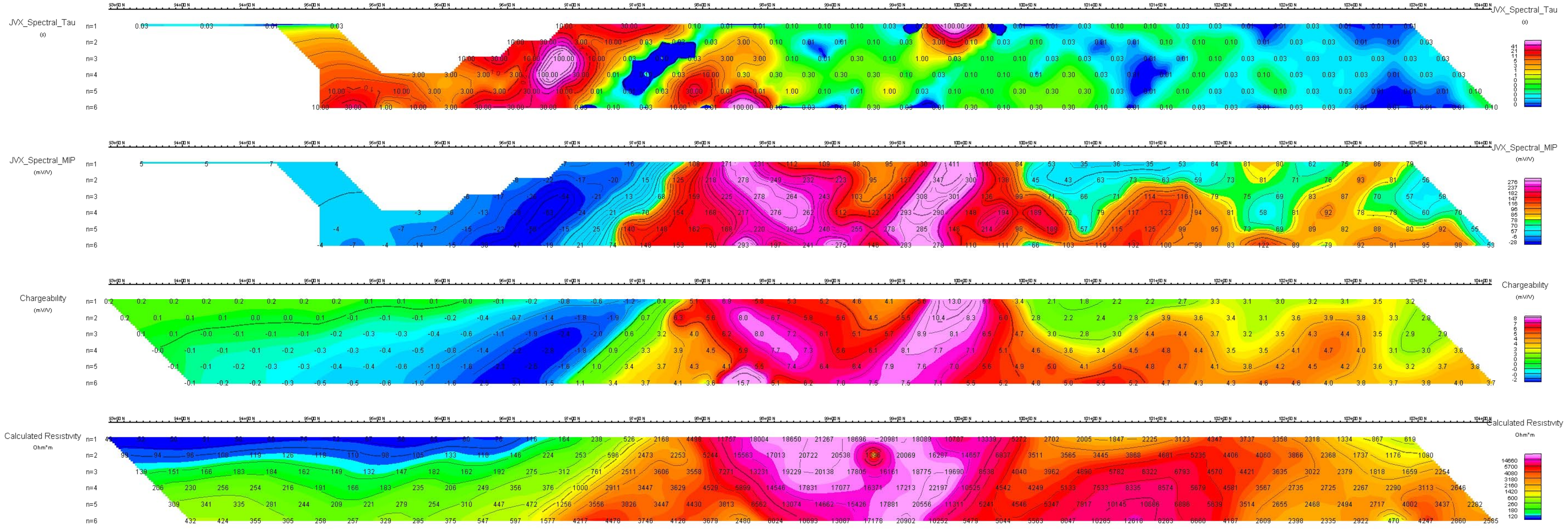
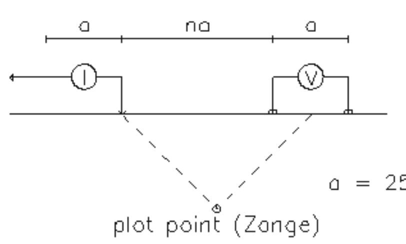
JVX LTD., ref. 7-20



Pseudo Section Plot
104+00 E

Pole-Dipole Array



Scale 1:2500

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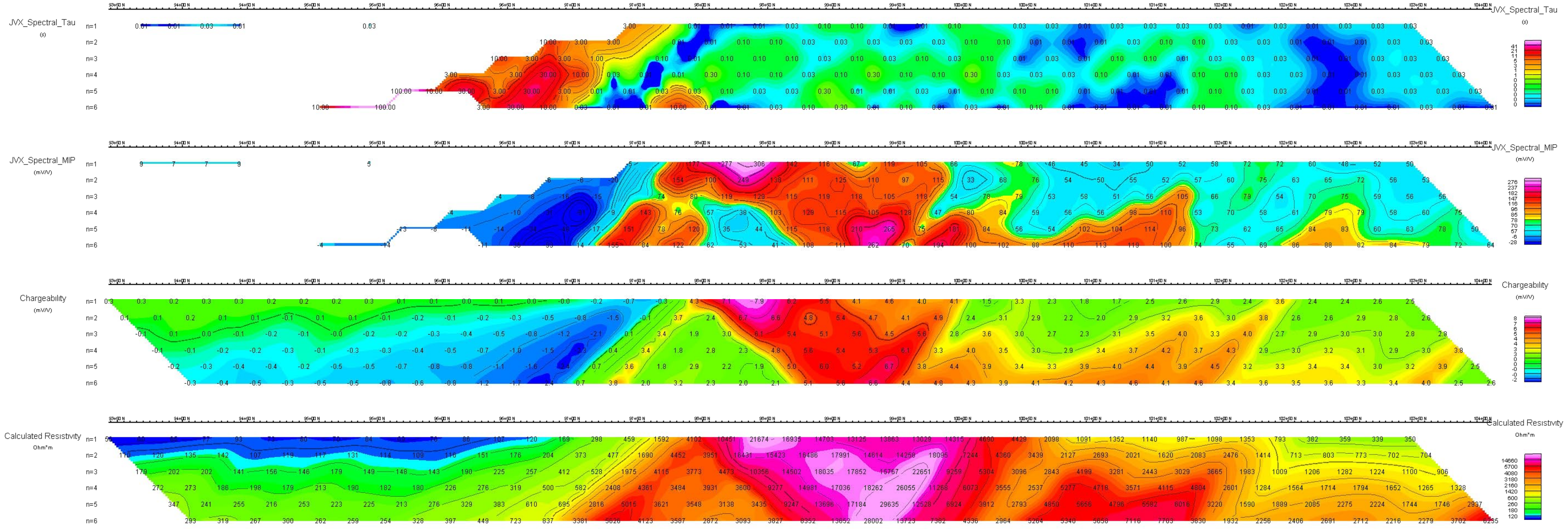
(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
105+00 E

Pole-Dipole Array

a = 25 m

plot point (Zonge)

Scale 1:2500

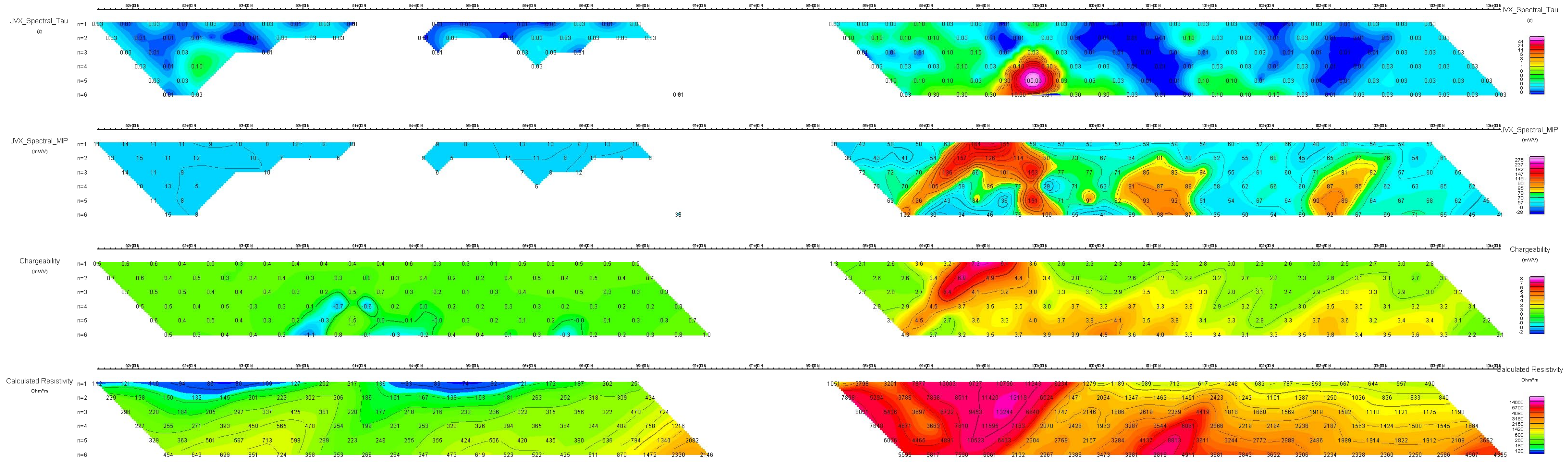
(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

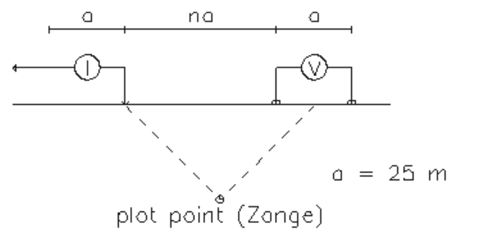
Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
106+00 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

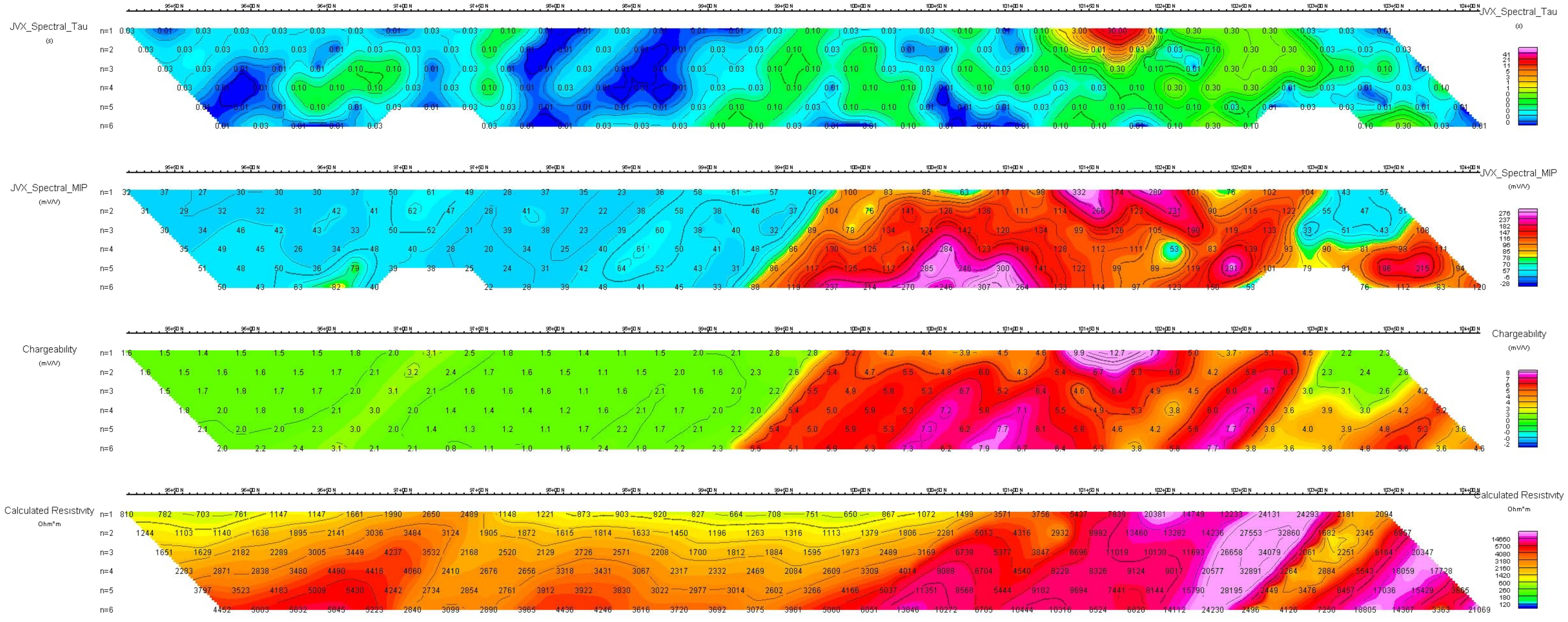
(meters)

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

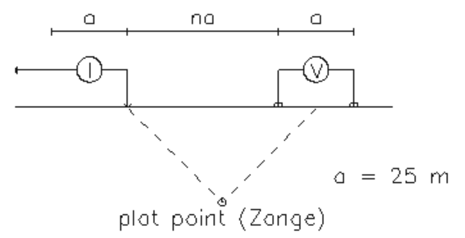
Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20

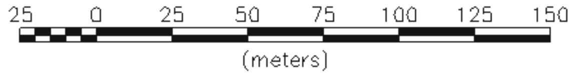


Pseudo Section Plot
94+00 E

Pole-Dipole Array



Scale 1:2500

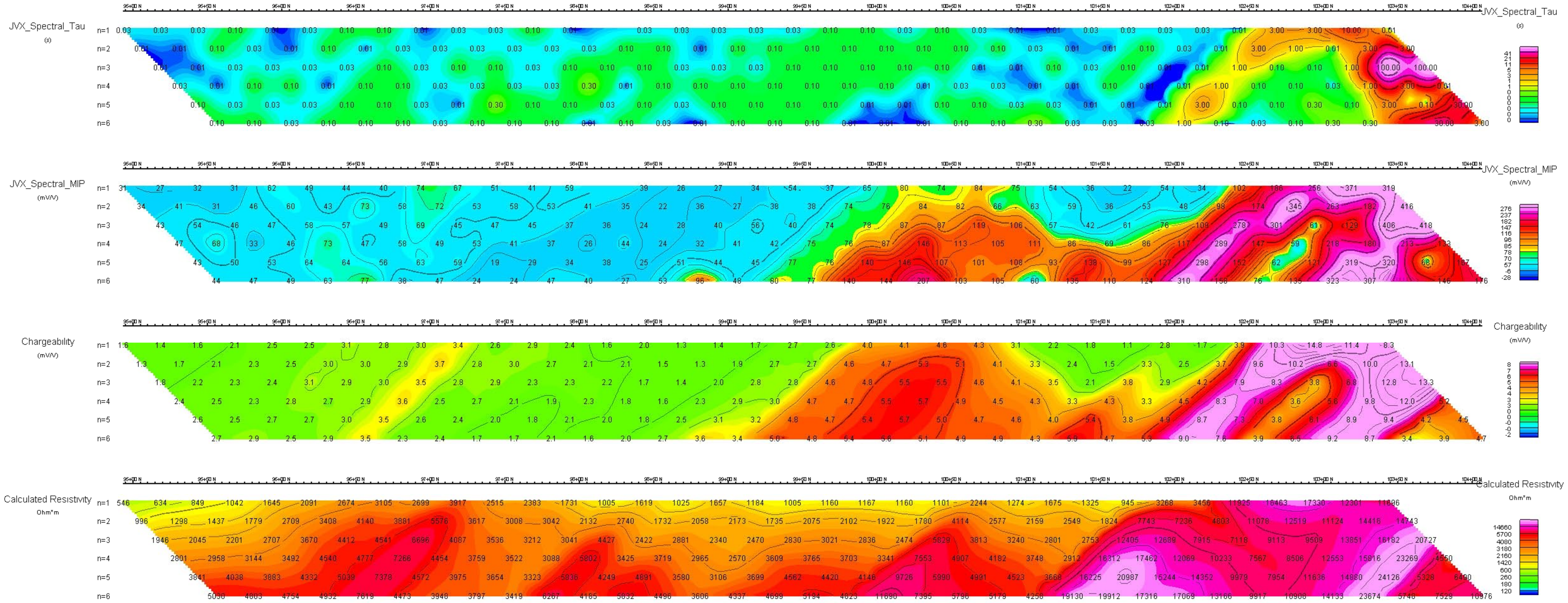


TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

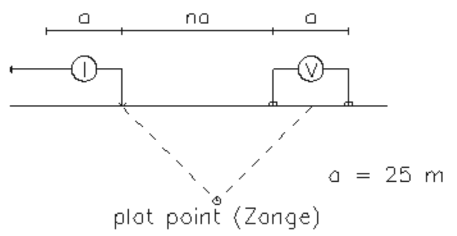
Date: 12/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20



Pseudo Section Plot
95+00 E

Pole-Dipole Array



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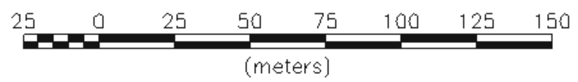

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

Date: 12/04/2007
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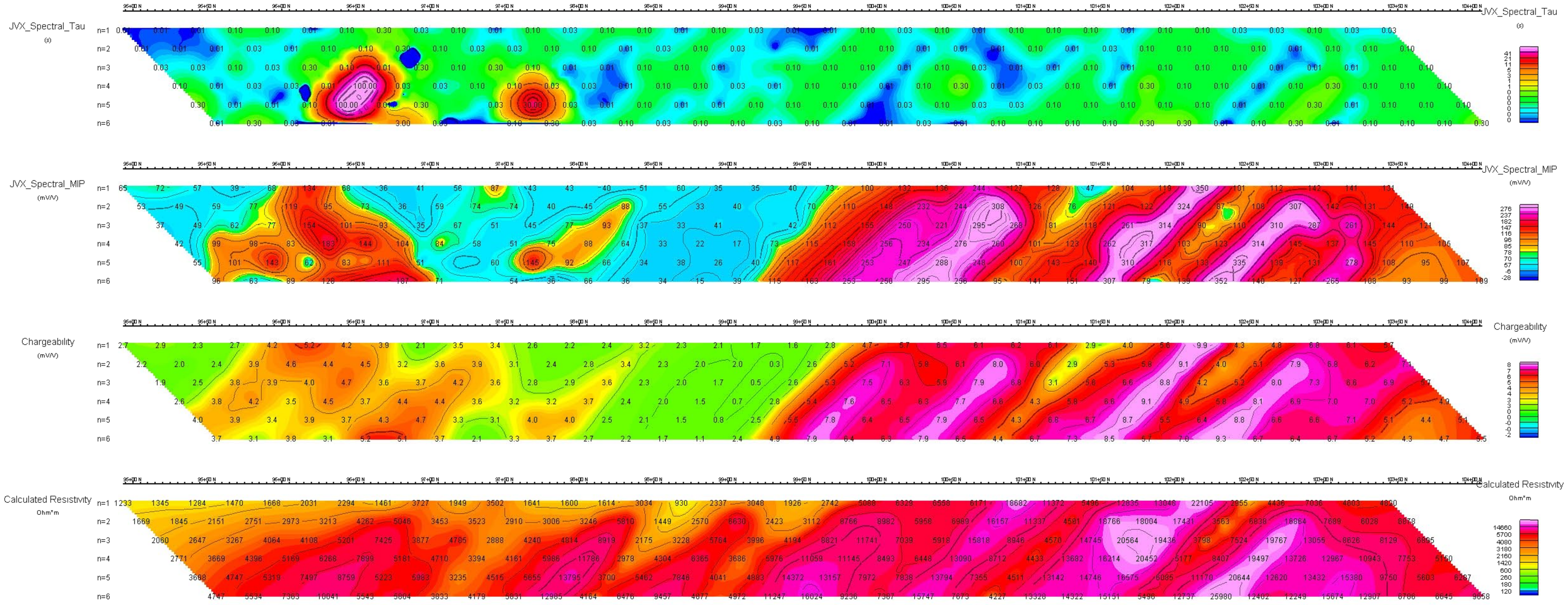
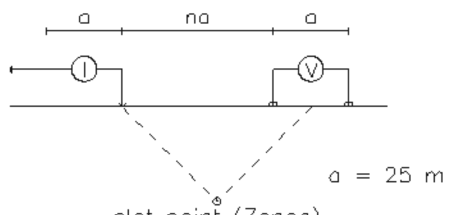
JVX LTD., ref. 7-20



Pseudo Section Plot
96+00 E

Pole-Dipole Array



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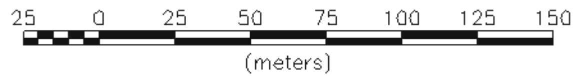

TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

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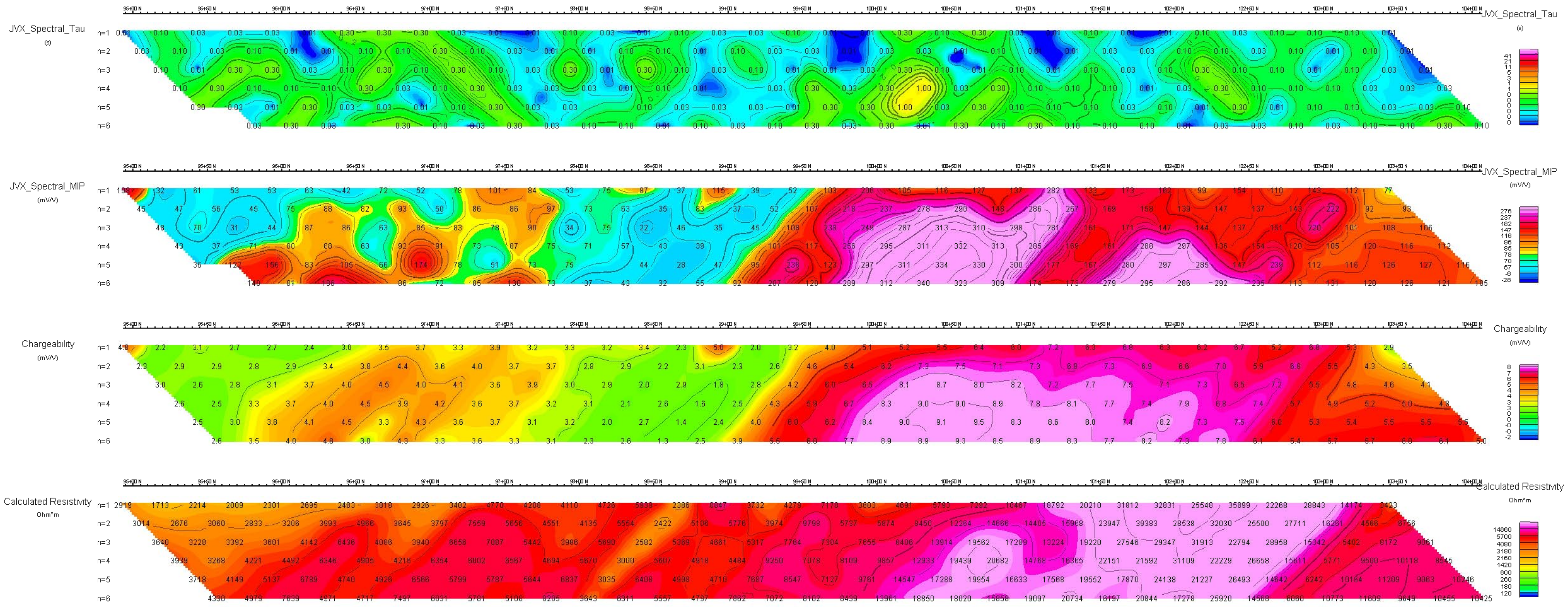
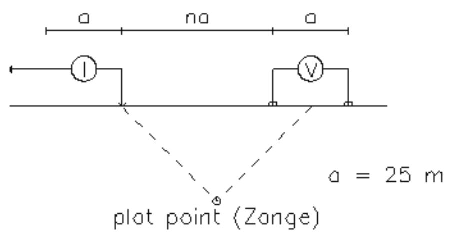
JVX LTD., ref. 7-20



Pseudo Section Plot
97+00 E

Pole-Dipole Array



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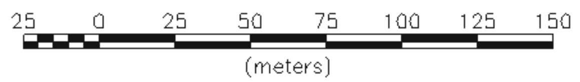
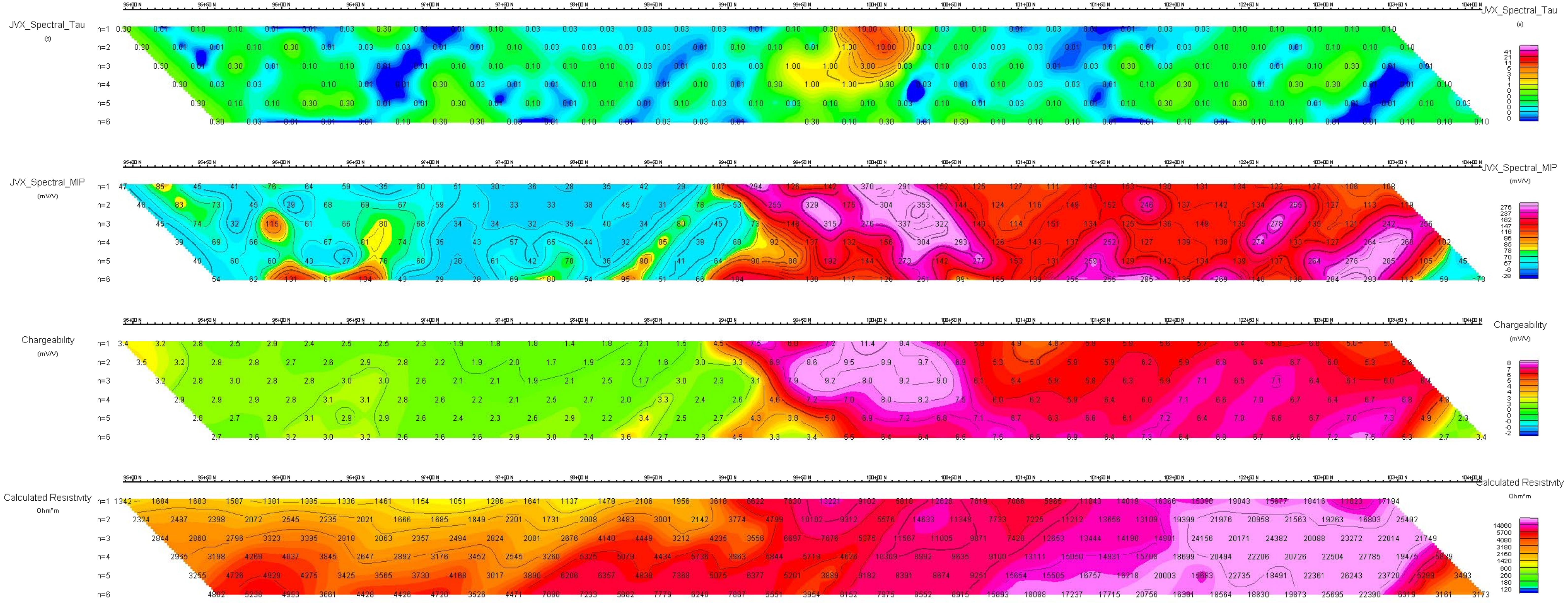


TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

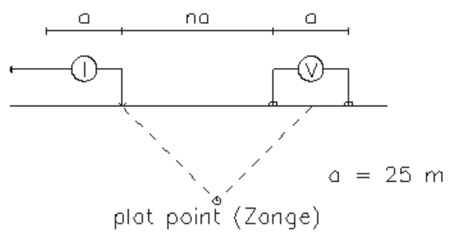
JVX LTD., ref. 7-20



Pseudo Section Plot

98+00 E

Pole–Dipole Array



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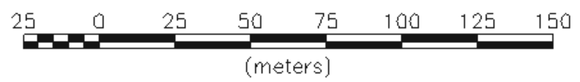


TRIGOLD RESOURCES CORPORATION

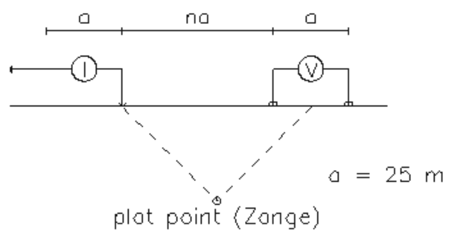
STAKE LAKE COPPER GOLD PROPERTY
STURGEON LAKE AREA, NORTHERN ONTARIO

Date: 09/04/2007
Instrument: Rx (2 sec): Scintrex IPR-12, Tx(2 sec): Scintrex IPC-7

JVX LTD., ref. 7-20

Pseudo Section Plot
99+00 E

Pole-Dipole Array



Scale 1:2500

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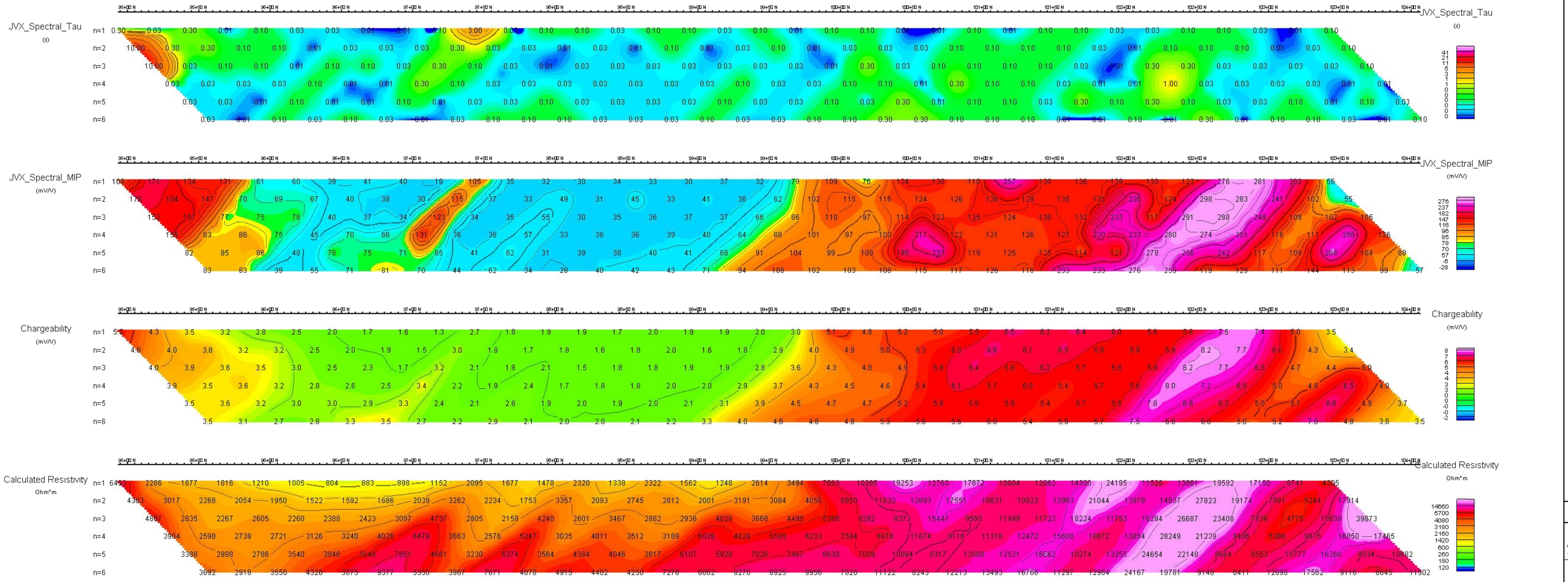
(meters)



TRIGOLD RESOURCES CORPORATION

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STURGEON LAKE AREA, NORTHERN ONTARIO

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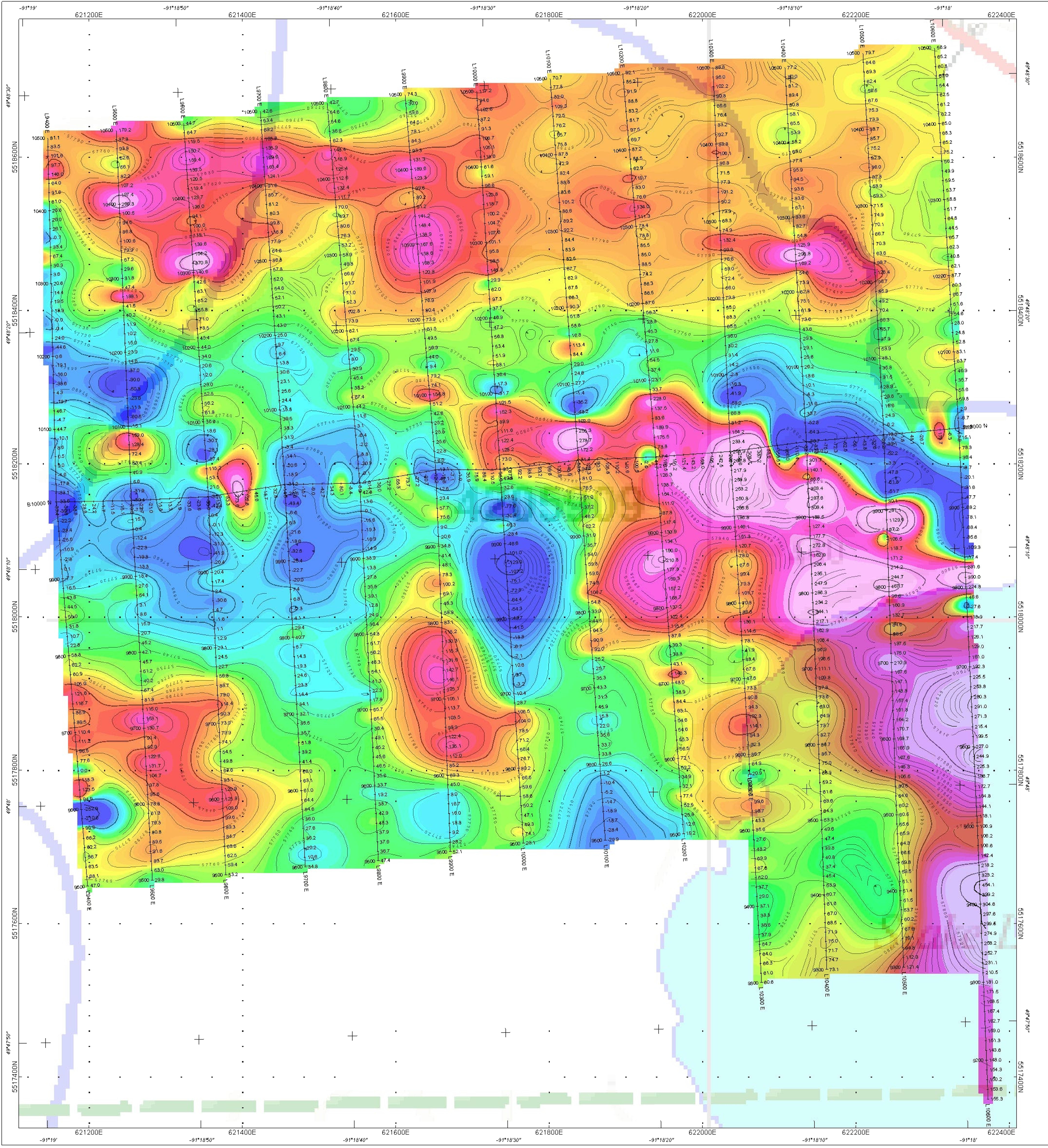
JVX LTD., ref. 7-20

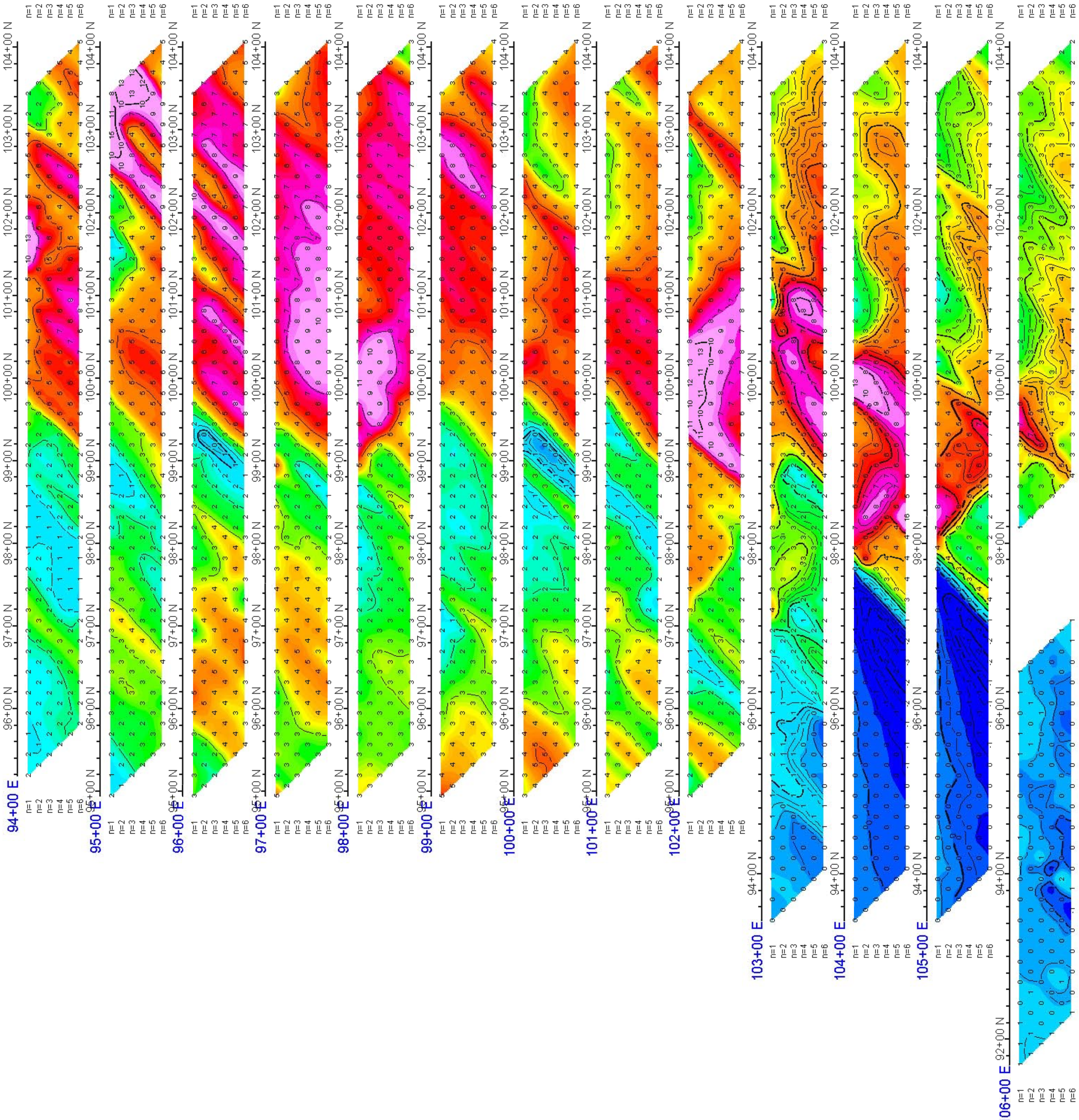


TRIGOLD RESOURCES CORPORATION

STAKE LAKE COPPER AND GOLD PROPERTY
STERGEON LAKE, NORTHERN ONTARIO
NTS: 52 G/14

TOTAL MAGNETIC INTENSITY MAP
TMI Contour Interval 10, 100 & 500 nT
Base removed 57400 nT
Value posted Right, Stations posted Left
Instrument ENVI GSM-19G

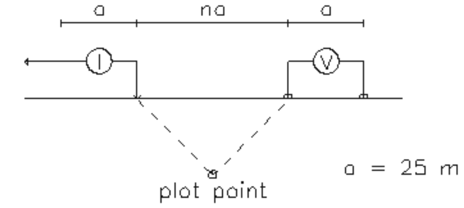
JVX LTD., ref. no. 7-20, April 2007
Topographic base map copyright Queen's Printer for Ontario



Stacked Section Map

Mx

Pole–Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

TRIGOLD RESOURCES CORPORATION

INDUCED POLARIZATION SURVEY

STAKE LAKE COPPER AND GOLD PROPERTY

STURGEON LAKE, NORTHERN ONTARIO

Date: 12/04/2007

Interpretation.

JVX LTD., ref. 7-20

Geosoft Software for the Earth Sciences