LOGISTICAL AND INTERPRETIVE REPORT

SPECTRAL INDUCED POLARIZATION SURVEYS

TIMMINS WEST PROJECT

THE ALLERSTON GRID

BRISTOL TWP., NORTHERN ONTARIO

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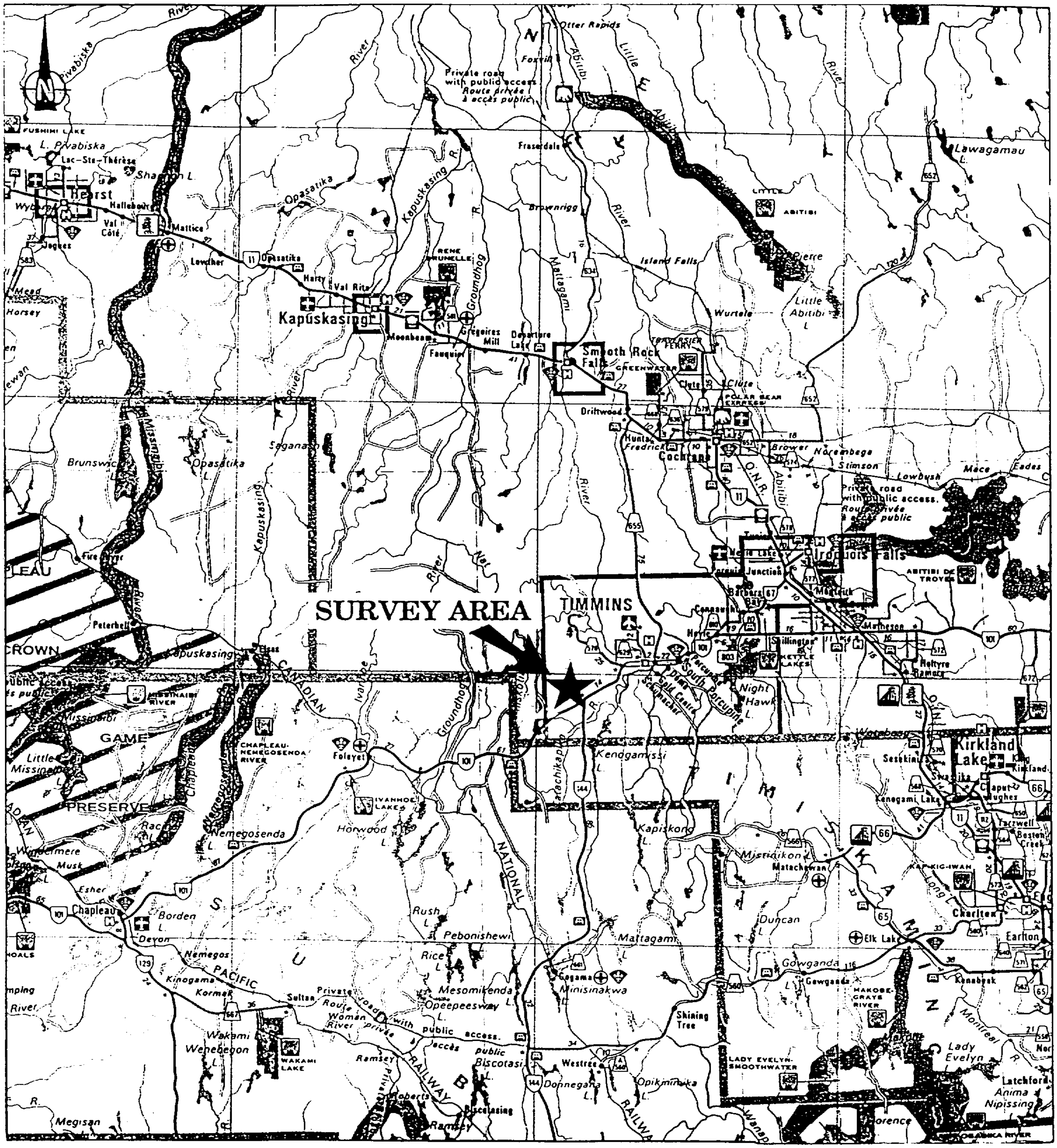
1. INTRODUCTION

A time-domain spectral induced polarization survey was conducted by **JVX Ltd.** for **Prospectors Alliance Corporation** in November, 1996, over several claims comprising the property. The property is located west of Timmins, Ontario (Figure 1) in Bristol Township (NTS 42A/5) on the following claims (Figure 2, Grid/Claim Map):

1213561	949638	949637	949636	413232	1190579	451547
454000	479503	1207716	1218645	363445	1203999	451546
451541	1201315	525965	363448	363446	949635	451545
451542	451543	451544	363447	413423	1154745	921758

The spectral IP survey was conducted to locate disseminated sulphide zones associated with weakly conductive anomaly trends detected in airborne surveys. IP trends are located in lithologies favourable for gold mineralization.

Magnetic data were obtained from the client.

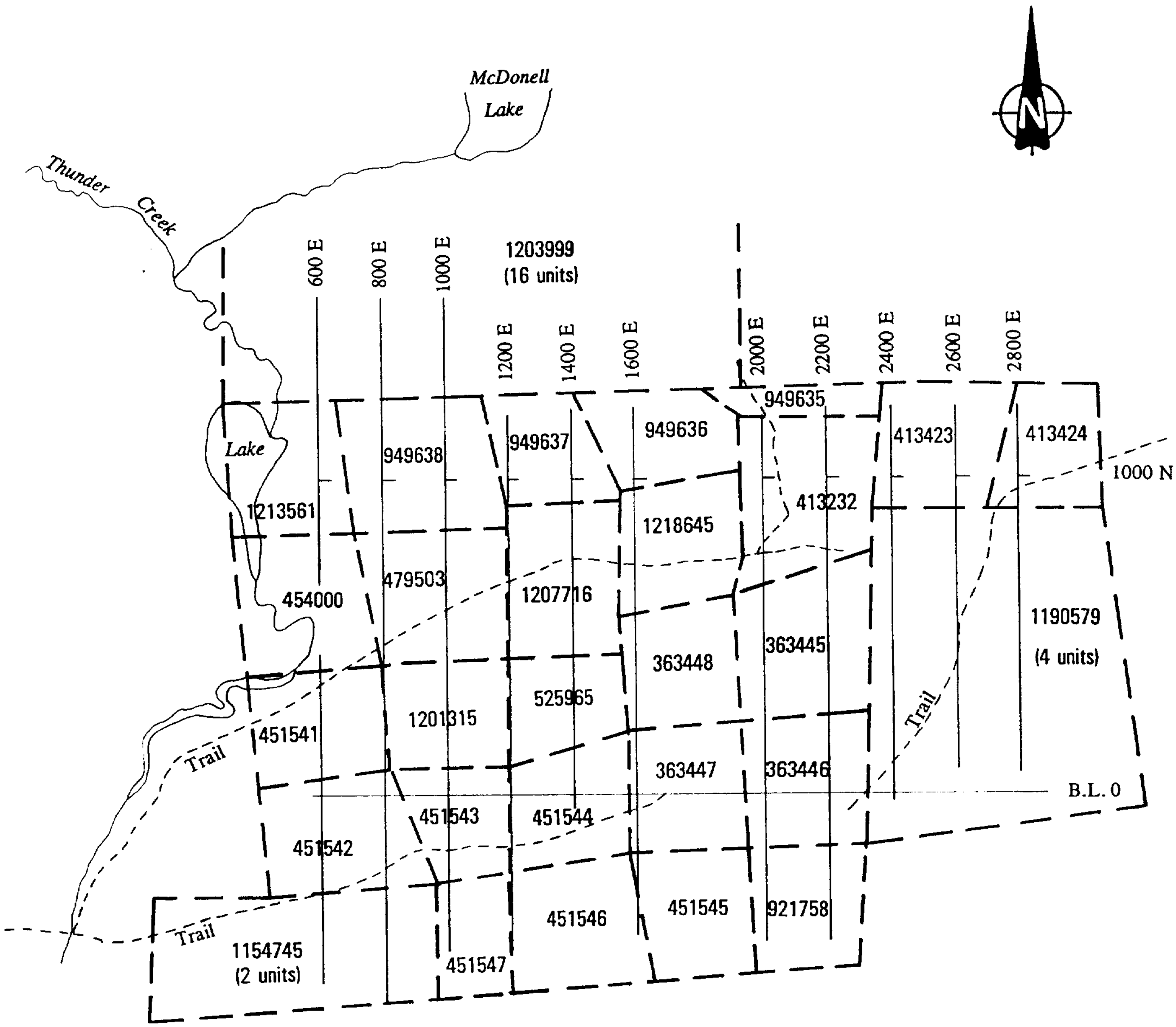


LOCATION MAP
PROSPECTORS ALLIANCE INC.
TIMMINS WEST PROJECT - ALLERSTON GRID
Bristol Twp., Ontario
N.T.S. 42 A/5, A/6

Scale : 1 : 1,600,000

Surveyed by **JVX Ltd.**
Nov.-Dec., 1996

Figure 1



GRID / CLAIM MAP
PROSPECTORS ALLIANCE INC.
TIMMINS WEST PROJECT - ALLERSTON GRID
Bristol Twp., Ontario
N.T.S. 42 A/5, A/6

Scale : 1 : 20,000

Surveyed by **JVX Ltd.**
Nov.-Dec., 1996

Figure 2

2. SURVEY SPECIFICATIONS

Instrumentation and survey specifications for the Allerston Grid are outlined in the following table:

IP/RESISTIVITY SURVEY	
Transmitter	Scintrex TSQ3/3.0 kW
Receivers	Scintrex IPR-12
Array Type	Pole-Dipole
Transmit Cycle Time	2 sec
Receive Cycle Time	2 sec
Number of Potential Electrode Pairs	6
Electrode Spacing ("a" *spacing*)	25 m & 50 m
Number of Lines Surveyed	11
Survey Coverage	19100 (m)

Table 1: Spectral IP/Resistivity Survey Parameters

Total coverage was 19100 metres of Spectral IP/Resistivity data with 717 stations surveyed. The following table lists the survey coverage in detail:

SPECTRAL IP/RESISTIVITY SURVEY COVERAGE				
Line	From Station	To Station	Distance (m)	No. of Readings
600E	1575N	600S	2225	88
800E	1575N	650S	2275	90
1000E	1575N	500S	2125	84
1200E	1225N	800N	450	18
1200E (a=50m)	1200N	500S	1800	35
1400E	1225N	50S	1325	52
1600E	1225N	450S	1725	68
2000E	1225N	475S	1750	69
2200E	1225N	450S	1725	68
2400E	1225N	25S	1300	51
2600E	1225N	75N	1200	47
2800E	1225N	75N	1200	47
Total			**19100**	**717**

Table 2: Spectral IP/Resistivity Survey Production Summary

3. PERSONNEL

Fred Moher (Operator)
Mr. Moher operated the *Scintrex TSQ3* transmitter system, and was responsible for field data processing.

Alec Jelenic (Geophysical Technician):
Mr. Jelenic operated the *Scintrex IPR-12* receiver and was responsible for data quality.

Three field assistants were also engaged by JVX for the IP/resistivity survey.

Aleksandra Savic (Geophysicist)
Ms. Savic interpreted the data, plotted the data and wrote the body of this report.

Joe Mihelcic (Geophysicist):
Mr. Mihelcic assisted in interpretation of the data and wrote the interpretation section in the report.

Dagmar Piska (Draftsperson):
Ms. Piska carried out the manual and ACAD drafting on the compilation map and figures/plates and assembled this report.

Vaso Lymberis (Draftsperson):
Ms. Lymberis carried out the manual and ACAD drafting and assembled this report.

Blaine Webster (President, JVX Ltd.):
Mr. Webster provided overall supervision of the survey.

4. FIELD INSTRUMENTATION

JVX supplied the geophysical instruments described below. Additional information about the geophysical methods may be found in Appendix A.

IP Transmitter

The Scintrex TSQ3/3.0 kW Time Domain Transmitter powered by a ten-horsepower motor generator was used. The transmitter generated square wave current output with a period of 8 seconds. A digital multimeter in series with the transmitter was used to measure the magnitude of the variable current output.

IP Receiver

The Scintrex IPR-12 Time Domain Receiver was used. This unit sampled the voltage decay curve as measured by the potential electrodes at ten points in time. Readings were repeated until they converged to within a tolerance level, and the data were stored in solidstate memory. The resulting chargeability response is a measurement of the potential decay of conductive particles during the transmitter turn-off times. The apparent resistivity is a measure of the ratio of the input voltage and the transmitter current times a factor. This so-called K-factor is an array geometric factor.

5. DATA PROCESSING

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

- STAR NX-80 colour dot-matrix printer

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

The data were sent by courier and fax modem 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 5L Laser printer

The processing procedure is outlined below.

5.1 IP/RESISTIVITY

Steps 1 and 2 were performed both in the field and in the head office. Steps 3 and 4 were performed at the head office.

1) The GEOSOFT IP PROCESSING Package was used to generate colour pseudosections of chargeability and resistivity data as well as colour contour maps.

2) GEOSOFT software was also used to perform spectral analysis of the time-domain data. This step was crucial to maximizing the information that may be obtained from IP data. This software analyses the shape of the IP decay curve, giving information about:

(a) the grain size (indicated by the parameter *tau*),
(b) the uniformity of the grain size (indicated by *c*), and
(c) the magnitude of the chargeable source (indicated by *M-IP*).
(Please see Appendix A for more information about spectral analysis.)

3) Individual pseudosections of each IP parameter from 2 above were aligned in plan view using GEOSOFT, then plotted as stacked pseudosection maps of IP and Spectral IP chargeability, resistivity and IP time constant data.

4) Contoured plan maps of chargeability data from one dipole (n=2) were produced using JVX in-house software and the GEOSOFT IP Processing Package. Additional drafting on these maps was done manually and AUTOCAD was used to annotate the colour pseudosections.

6. INTERPRETATION METHODOLOGY

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

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* (Mx sample window = 680 ms to 1050ms)

——— *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

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

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

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:

L *Long* (> 10.0 sec)

M *Medium* (1.0 to 10.0 sec)

S *Short* (< 1.0 sec)

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

no symbol	**VH(*n*)**	*Very High* (> 25 000 ohm m) — highly silicified
no symbol	**H(*n*)**	*High* (> 10 000 ohm m) — probably silicified
no symbol	**WH(*n*)**	*Weak High* (< 10 000 ohm m) — relative increase compared to surrounding material
—— ——	**SL(*n*)**	*Strong Low* — strong decrease in resistivity
– – –	**ML(*n*)**	*Medium Low* — medium decrease in resistivity
· · · · · ·	**WL(*n*)**	*Weak Low* — slight 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) Resistivity anomalies on the compilation map are joined into conductive and resistive zones.

6) Zones of high chargeability are interpreted based on spectral, resistivity, and geometric information.

7) The anomalies are rated according to JVX' past experience. The following are some of the characteristics that may be indicative of economic mineralization:

- A moderate to high chargeability anomaly flanked by a narrow finger-shaped resistivity high.
- High *M-IP* values (> 300 mV/V), which are not associated with a resistivity low, indicating a large quantity of metallic sulphides.
- Low *tau* values (short time constant) which indicate that the chargeable source is disseminated and fine-grained. Gold mineralization is generally associated with fine-grained sulphides. However, in environments where the sulphides have been remobilized, gold mineralization may be associated with coarse-grained sulphides (long time constant).
- In particular, very high *M-IP* values (> 900 mV/V) with short *tau* are typically the most favourable spectral IP targets.

7. DISCUSSION

The interpretation of the geophysical data was compiled onto a single map, and is summarized in the sections following. The Compilation Map and all data plots are included in Appendix B.

The IP **chargeability** zones are quite weak throughout the grid. Mx (~M7 for IPR-11) chargeability data are less than 5 or 6 mV/V for even the relatively well-defined zones. Using the classification scheme described in *Section 6* of this report, the anomalies are weak at best. Several zones have been identified and are indicated on the Compilation Map. A large number of splays and sub-zones are indicated as a result of picking very weak anomalies.

The **apparent resistivity** data were primarily interpreted using anomalously low readings. Apparent resistivity high zones of greater than 10,000 ohm-m are typical for silicification. Most of the resistivity high anomalies are much less than this and are interpreted to represent geological and structural variations. The apparent resistivity low data are more useful for identifying areas of alteration or faulting which may be associated with economic mineralization.

Magnetics data indicate three strong magnetic high zones trending north/south. These are likely indicative of magnetic dykes. Of more significance for economic mineralization is the presence of a predominant northeast/southwest trend related to geology. This is indicated on the Compilation Map as highlighted weak magnetic high trends. The dyke anomalies consist of anomalies of up to 1,500 nT above the local background geologic response whereas the weak magnetic trends are less than plus or minus 200 nT. For comparison, pyrrhotite can create magnetic anomalies of greater than 3,000 nT above local background.

A summary of the individual anomalies that may be important for further economic mineral exploration follows:

IP-1, Res-1, Res-2:

This broad chargeability zone is located west of L1000E. ***IP-1*** chargeability anomalies on L600E and L800E are related to both apparent resistivity high and low zones. The low zones are typical of alteration and are indicated on the Compilation Map as apparent resistivity low axes ***Res-1*** and ***Res-2.*** ***IP-1*** is located within a weak magnetic low area (see Total Field Magnetics maps) which might be expected in less mafic areas or areas of geologic alteration.

Theoretical spectral MIP values are quite low (<100 mV/V) because these are weak and very weak chargeabilities. ***IP-1*** is the result of minor sulphides. Calculated spectral tau values are short (<1 second). Sulphide grain size is likely medium because the respective tau values are longer than the values collected adjacent to the anomaly and because spectral tau values are typically shorter for weak anomalies.

IP-1a, IP-1b, Res-3 through Res-6, Res Low Area:

IP-1a and ***IP-1b*** are northeast extensions of ***IP-1*** discussed previously. They may extend through the interpreted north/south magnetic dykes. As was the case for ***IP-1***, these zones coincide with magnetic low data. Apparent resistivity low axes ***Res-3, Res-4, Res-5 and Res-6*** all appear to be related to these chargeability zones and splays. Whether the weak and very weak anomalies are the result of minor sulphides and/or overburden thickness to bedrock variations is uncertain. The continuation of the IP and resistivity zones through the interpreted dykes is also uncertain.

A broad area of apparent resistivity low values is indicated as ***Res Low Area*** on the Compilation Map. It is located immediately south of the chargeability zones. It is likely that this area coincides with relatively conductive overburden which may be 'masking' additional subtle IP anomalies.

alteration. ***IP-2d*** coincides with a very weak magnetic high trend which could result from an adjacent unaltered geologic horizon or more mafic mineralization.

Spectral MIP values are, overall, quite low (<100 mV/V). A value of 172 mV/V is indicated on L1000E which indicates moderate sulphides; however, the Mx chargeability slice is very weak indicating very minor sulphides. The Mx value is more reliable for qualitative estimates of sulphide quantities when the chargeability anomalies are weak and very weak (therefore ***IP-2c*** and ***IP-2d*** result from very minor sulphides).

IP-3, Res-11:

Several additional single line and multi-line chargeability anomalies are indicated on the Compilation Map. The strongest of these is ***IP-3*** located between the ***IP-1*** and ***IP-2*** series of chargeability zones in the vicinity of 600N. An apparent resistivity low axis ***Res-11*** coincides with the lower part of ***IP-3***. As with the previously discussed anomalies, it it likely related to very minor sulphides and alteration of mineralization.

8. RECOMMENDATIONS

Several target areas have been identified and prioritized for further exploration:

— High Priority —

T-H1 (L800E/stn.50S and stn.25N):

Targeting should aim to intersect both chargeability anomalies indicated on the Compilation Map. Boreholes should attempt to include apparent resistivity high and low anomalies in order to identify economic mineral horizon(s).

T-H2 (L1000E/stn.50S and stn.25 N):

This target appears to be the eastern extension of the ***T-H1*** targeted anomalies except that the anomalies are slightly weaker and the apparent resistivity low axes are absent. For this reason, and because it is located at the edge of the ***Res Low Area*** which may be suppressing its true strength, ***T-H2*** is given a high priority for further exploration work.

T-H3 (L2400E/stn.1200N):

Target ***T-H3*** is located at the edge of the eastern-most interpreted dyke in the northeast corner of the grid. It is located within an apparent resistivity low area visible on the pseudosections. MIP values are relatively high, up to ~147 mV/V, for this grid. The value is indicative of minor sulphides. This qualitative MIP analysis is interpreted to be reliable since the Mx values are consistant and well defined (approximately 6 mV/V). This target may be additionally favourable if the interpreted dyke provides a conduit for economic mineralization.

— Medium Priority —

T-M1 (L2000E/stn.1000N):

This medium priority chargeability target is located within ***IP-2*** in the northeast part of the grid. Although chargeability Mx slice values are well-defined, MIP values are quite low (<100 mV/V) a fact which suggests very minor sulphides. It should be tested because there appear to be several individual sulphide horizons that may be of interest for economic mineral exploration.

T-M2 (L1400E/stn.925N):

T-M2 is an interesting target since the chargeability anomaly is located at an apparent resistivity low break, ***Res-9***, located immediately north of a weak apparent resistivity high anomaly. It is also interesting since it is located within a weak magnetic low area immediately east of a weak magnetic high trend (which coincides approximately with ***IP-2d***). If structural folding is responsible for the magnetic disruption of the magnetic high trend, then the sulphide mineralization could be concentrated.

— Low Priority —

T-L1 (L600E/stn.1100N):

This target is located north of the main ***IP-2*** zones and sub-zones. It consists of a very weak chargeability anomaly. It should be tested at a depth of approximately 25 m if available geologic information warrants further testing.

Before any further evaluation of this grid additional geological and geochemical evaluation of targets is recommended.

If there are any questions with regard to the survey or the interpretation please call the undersigned.

Respectfully submitted,

JVX Ltd.

Joe Mihelcic, P.Eng., M.B.A.
Geophysicist

C. Webster, for

Blaine Webster, B.Sc.
President

APPENDIX A

Background

to the

Geophysical Methods

INDUCED POLARIZATION AND RESISTIVITY

1 THE IP EFFECT

The induced polarization (IP) phenomenon is primarily caused by:

1) electrical polarization at the boundary between the rock or soil and the pore fluids, and

2) electrical polarization at the boundary between metallic minerals (particularly sulphides) within pores and the pore fluids.

This polarization occurs when a current is applied across these boundaries. Its magnitude can be measured in two ways:

1) in the frequency domain (also known as phase IP), in which the applied current is sinusoidal, or

2) in the time domain, in which the applied current is a modified square wave.

JVX conducts IP surveys in the time domain because spectral analysis, a powerful interpretive tool, can only be performed in the time domain.

Generally, the current is transmitted as a modified square wave with a period of eight seconds (two seconds positive, two seconds off, two seconds negative, two seconds off). The voltage measured in the ground will have the form shown in figure IP-1. The IP effect is manifested as a roughly exponential voltage decay after the current is turned off, similar to the relaxation effect of a discharging capacitor. The IP receiver samples this voltage decay curve at a number of points.

The **SCINTREX IPR-11** receiver repeats and averages the following measurements until they converge:

V_p The primary voltage (the steady-state amplitude of the voltage while the current is being transmitted).

SP — The self-potential (the steady state voltage when no current is being transmitted).

m0 to m9 — The chargeabilities (measures of the IP effect at different times along the decay voltage curve $V_s(t)$).

Each chargeability value (m0 to m9) is the ratio of the average secondary voltage over a time window to the primary voltage. Mathematically, this is given by:

$$m = \frac{1000}{V_p(t_2-t_1)} \int_{t_1}^{t_2} V_s(t)\, dt$$

where

m = chargeability (in mV/V)
$V_s(t)$ = secondary voltage (i.e. the voltage decay)
V_p = primary voltage
t_1 = beginning of time window
t_2 = end of time window

The IPR-11 uses the ten time windows, also known as time slices, listed in table IP-1 and shown in figure IP-2. Unless otherwise stated, the term chargeability refers to the eighth time window (m7).

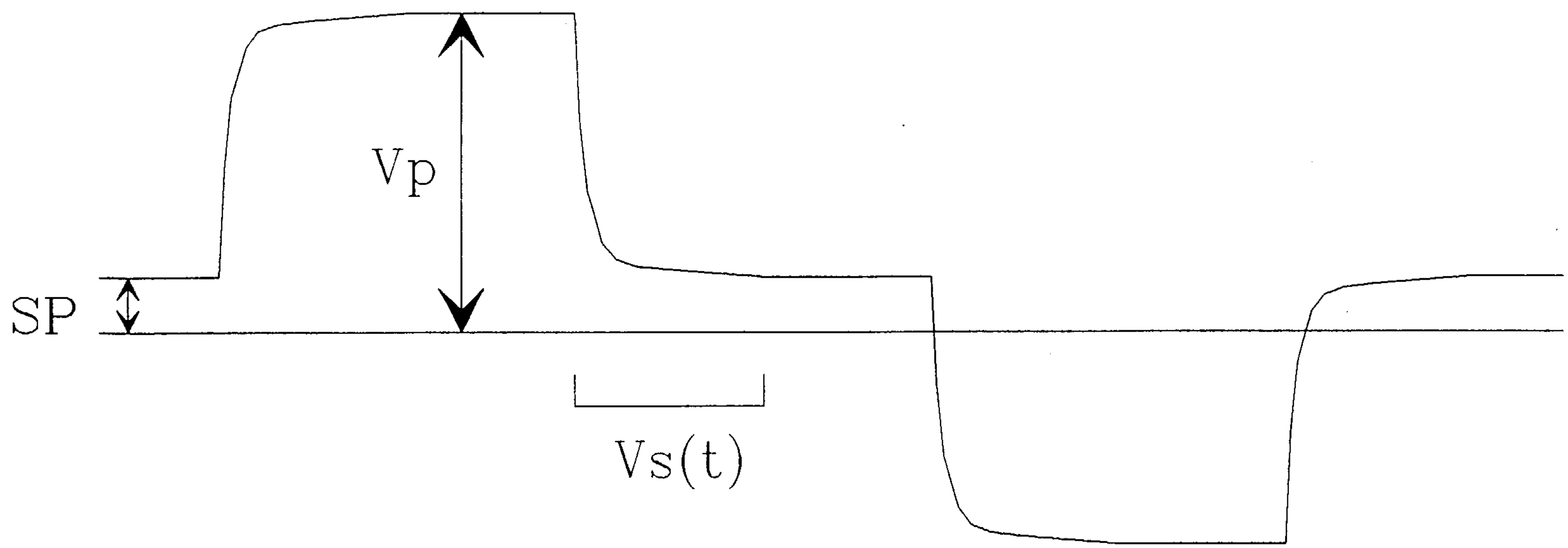
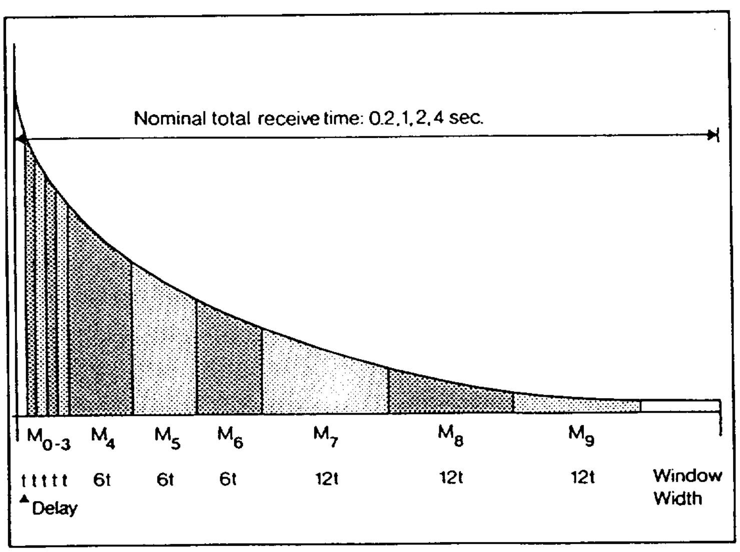


Figure IP-1 : The I.P. Waveform

SLICE	DURATION (msec)	FROM (msec)	TO (msec)	MIDPOINT (msec)
m0	30	30	60	45
m1	30	60	90	75
m2	30	90	120	105
m3	30	120	150	135
m4	180	150	330	240
m5	180	330	510	420
m6	180	510	690	600
m7	360	690	1050	870
m8	360	1050	1410	1230
m9	360	1410	1770	1590

Table IP-1 : Time slices recorded by the IPR-11 receiver



IPR-11 Transient Windows

Figure IP-2 : IP effect decay curve with IPR-11 time slices

2 SPECTRAL ANALYSIS

With the ability to sample the decay curve at a number of points, the shape of the decay curve can be analysed. This gives important information about the characteristics of the source.

Spectral analysis utilises the Cole-Cole model of the IP effect (Pelton et al., 1978). This model uses the following four parameters (described in Johnson, 1984) to calculate a theoretical IP decay curve:

ρ_a **Resistivity** (Ωm)
This quantity is described in detail later in this appendix.

M-IP **Chargeability Amplitude** (mV/V)
This quantity is related to the volume percent of the chargeable source, although there is no simple quantitative relationship.

τ **Time Constant** (seconds)
The time constant is related to the grain size of the source. A short time constant (0.01 to 0.3 s) indicates a fine-grained source. A long time constant (30 to 100 s) indicates a coarse-grained, interconnected, or massive source.

c **Exponent** (dimensionless)
A high value (e.g. 0.5) indicates that the grain size is uniform. A low value (e.g. 0.1) indicates that there is a mixture of grain sizes.

Conventional chargeability is a combination of these spectral parameters. A change in any one parameter will produce a change in the apparent chargeability. *In the absence of spectral analysis, such changes are always ascribed to a change in the volume percent of the chargeable source, even though the cause may be a shift from fine-grained to coarse-grained material.*

JVX has developed a software package called **SOFT II** which determines the spectral parameters by comparing the measured decay curve with a library of model curves. The quality of the fit is given as a root-mean-square difference (expressed as a percentage). A low value (e.g. 1 %) indicates high quality data of medium to high amplitude. A high value (e.g. greater than 10 %) indicates poor quality or low amplitude data. If the fit is greater than 5 %, the spectral parameters are considered to be of poor quality, and therefore are usually discarded.

3 ARRAY CONFIGURATION

As mentioned above, a current must be flowing through the ground in order for the IP effect to occur. This current is applied using two electrodes, which are called C1 and C2, and the voltage decay is measured using two potential electrodes, P1 and P2. The distance separating P1 and P2 is known as the *a-spacing*, or *a*, and generally remains constant during the survey.

The three most common electrode array configurations are:

1) **Gradient**
C1 and C2 are located at an "infinite" distance (i.e. very far) from the grid, with one on each side. The potential electrodes move throughout the grid.

2) **Dipole-Dipole**
C1 and C2 are separated by a distance of *a*, and move along with the potential electrodes.

3) **Pole-Dipole**
C2 is located at "infinity". C1 moves along with the potential electrodes throughout the grid.

The gradient array allows for fast reconnaissance surveys. However, no depth information is obtained (described below), and the resolution is much lower because all of the ground between C1 and C2 is energised. Furthermore, the current will be channelled through conductive zones, which could result in inaccurate chargeability and resistivity values. Thus, great care must be used when using a gradient array.

In JVX' experience, the pole-dipole array is superior to the dipole-dipole array. Since C2 is located at an infinite distance, a greater volume of ground is energised. This results in better depth penetration (i.e. higher quality data), and is particularly important in the presence of thick and/or conductive overburden. However, the pole-dipole array does not have the disadvantages of the gradient array. Since C1 is located near the potential electrodes, depth information is obtained (see below), and resolution is high.

4 A-SPACING AND NUMBER OF DIPOLES

The resolution of the data depends on *a*, the electrode spacing. The smaller *a* is, the greater the resolution. However, the depth of penetration is also smaller. A larger *a* results in greater depth, but less resolution. Thus, both factors must be considered when selecting the electrode spacing.

The standard pole-dipole array is shown in figure IP-2. Seven potential electrodes are used to measure the voltage simultaneously across six electrode pairs (P1-P2, P2-P3, P3-

P4, etc.). Each pair is labelled using an integer, *n*, where *na* is the distance between the first potential electrode and the nearest current electrode.

The depth of investigation is greater when the potential electrode pair is farther from the current electrode (i.e. larger *n*). However, a greater separation distance also results in greater signal attenuation, limiting the number of dipoles which could be used effectively.

5 RESISTIVITY

The DC apparent resistivity (ρ_a) is a measure of the bulk electrical resistivity of the subsurface. Electricity flows primarily through the groundwater within fractures and pore spaces. Therefore, fault zones can be detected as low resistivity zones. However, sulphide minerals, some oxides, and graphite are also good conductors and so produce low resistivity zones. The current flow is electronic in these minerals rather than electrolytic as it is in groundwater. Sometimes, the geometry of the low resistivity zone can distinguish between a fault zone and a mineral source. In other cases, additional geological information is needed. Silicates, the most common rock forming minerals, are very poor conductors of electricity, producing high resistivity zones.

The resistivity is measured simultaneously with the IP data. For a homogeneous and isotropic subsurface, it is given by the following formula:

$$\rho_a = \frac{k\,V_p}{I}$$

where

ρ_a = apparent resistivity (Ωm)
V_p = primary voltage (measured while current is on) (mV)
k = k-factor (m)

The *k-factor* is an array-dependant component. For a pole-dipole array, it is given by:

$$k = 2\pi n(n+1)a$$

where

n = dipole multiple (dimensionless)
a = electrode separation (m)

Although the assumption of a homogeneous and isotropic earth is unrealistic, the calculated value of ρ_a can be used qualitatively to map changes in rock type (even to identify the rock type in some cases), and to map low resistivity fault zones.

References

Johnson, I.M. Spectral I.P. Parameters as Determined through Time Domain Measurements, pp. 1993-2003 *Geophysics* **49**, 1984

Johnson, I.M., B. Webster, R. Mathews, and S. McMullan Time Domain Spectral IP Results from Three Gold Deposits in Northern Saskatchewan, *The Canadian Mining and Metallurgical Bulletin*, Feb. 1989

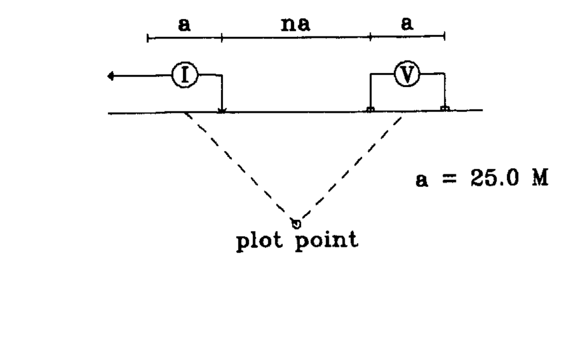
Pelton, W.H., S.H. Ward, P.G. Hallof, W.P. Sill, P.H.Nelson Mineral Discrimination and Removal of Inductive Coupling with Multifrequency IP, pp. 588-609, *Geophysics* **43**, 1978

APPENDIX B

Plates

Line 600 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150 (metres)

Plate 7

PROSPECTORS ALLIANCE CORP.

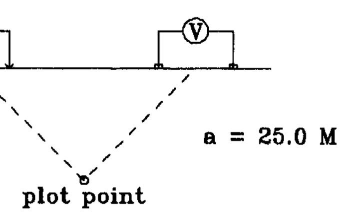
INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 800 E

Pole-Dipole Array



Scale 1:2500

(metres)

Plate 8

PROSPECTORS ALLIANCE CORP.

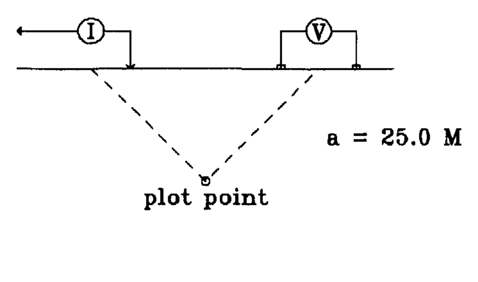
INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 1000 E

Pole–Dipole Array



Scale 1:2500

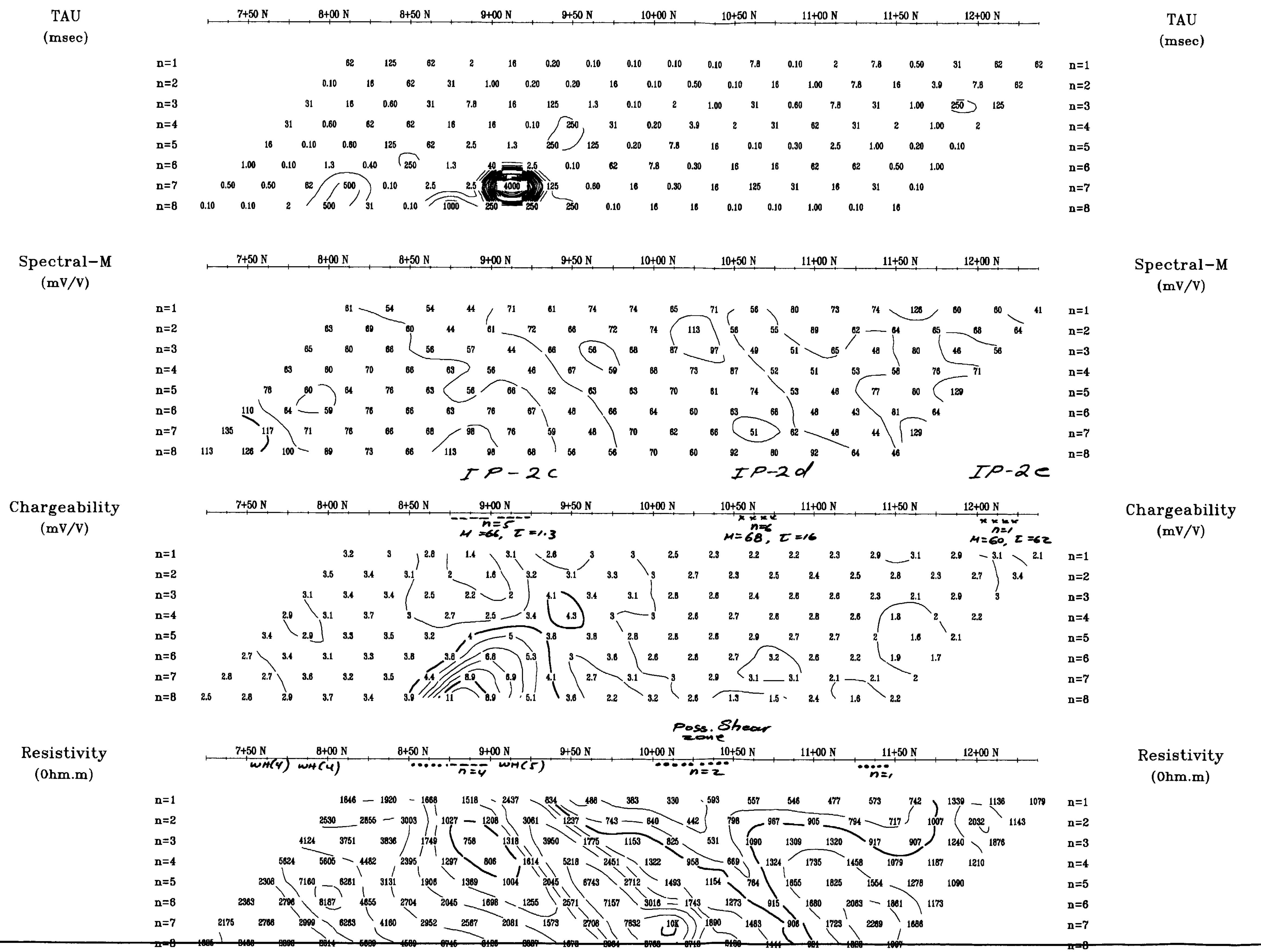
Plate 9

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
NTS: 42A/5

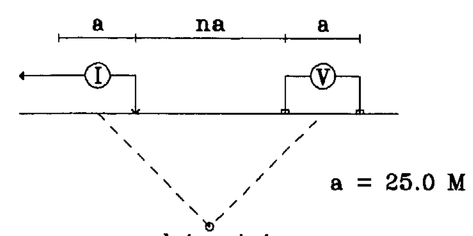
Date: 97/01/31

JVX LTD. (Ref. 9672)



Line 1200 E

Pole-Dipole Array



Scale 1:2500

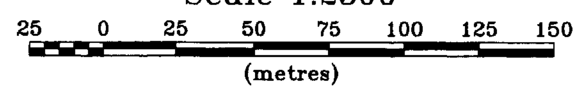


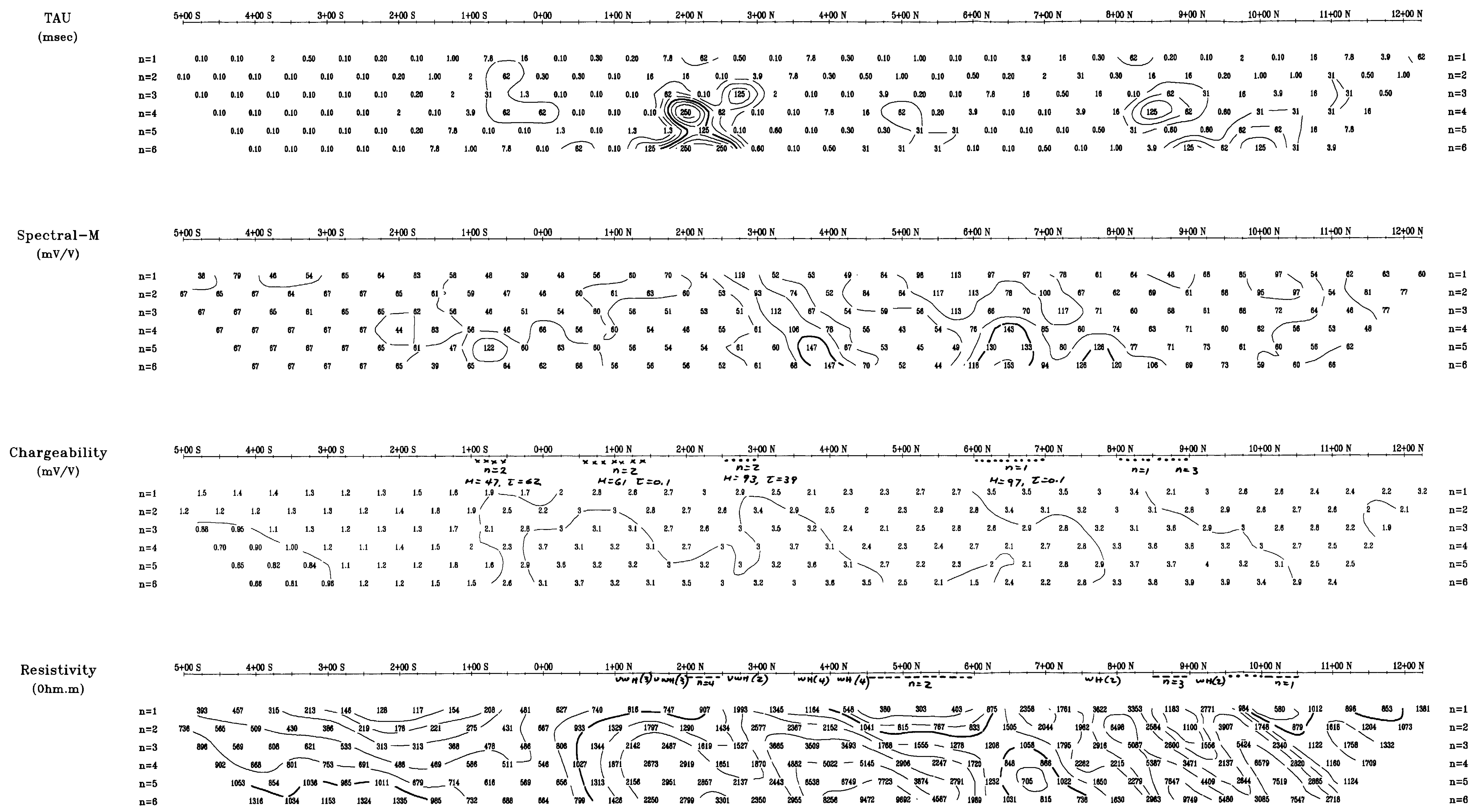
Plate 10

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

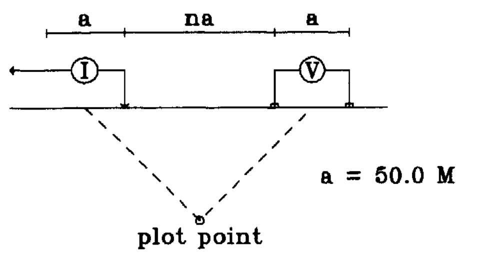
Date: 97/02/06

JVX LTD. (Ref. 9672)



Line 1200 E

Pole-Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

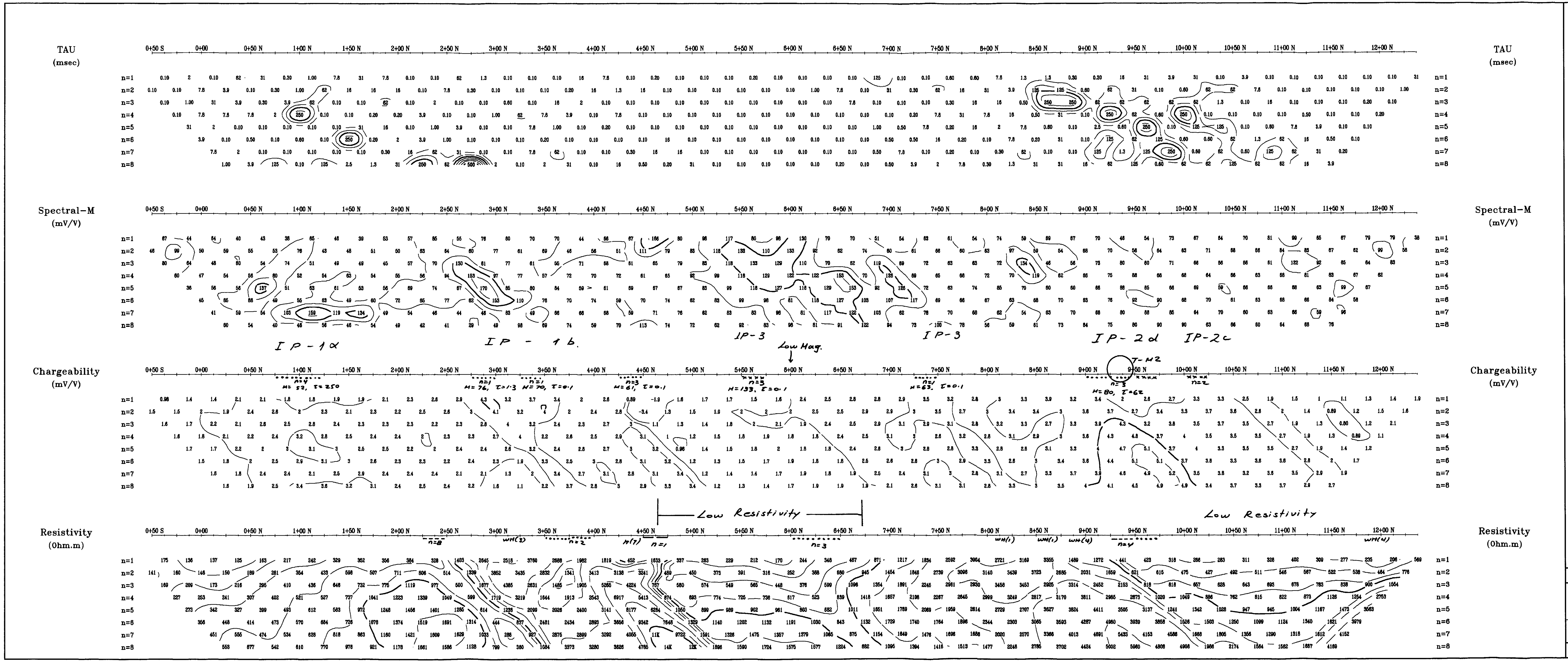
Plate 11

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/02/06

JVX LTD. (Ref. 9672)



Line 1400 E

Pole-Dipole Array

a = 25.0 M

plot point

Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

Plate 12

PROSPECTORS ALLIANCE CORP.

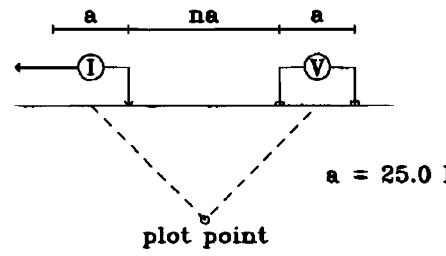
INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 1600 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

Plate 13

PROSPECTORS ALLIANCE CORP.

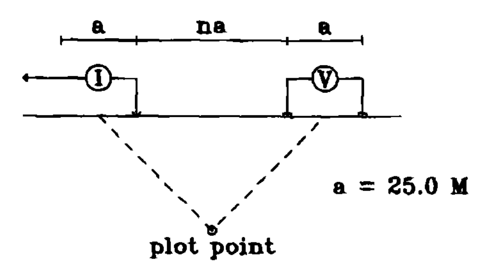
INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 2000 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

Plate 14

PROSPECTORS ALLIANCE CORP.

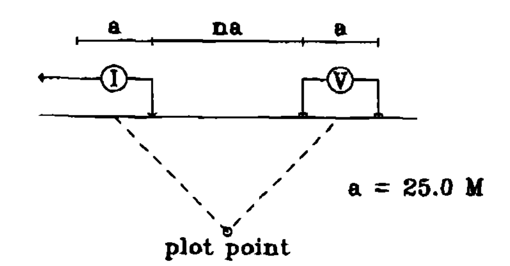
INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 2200 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

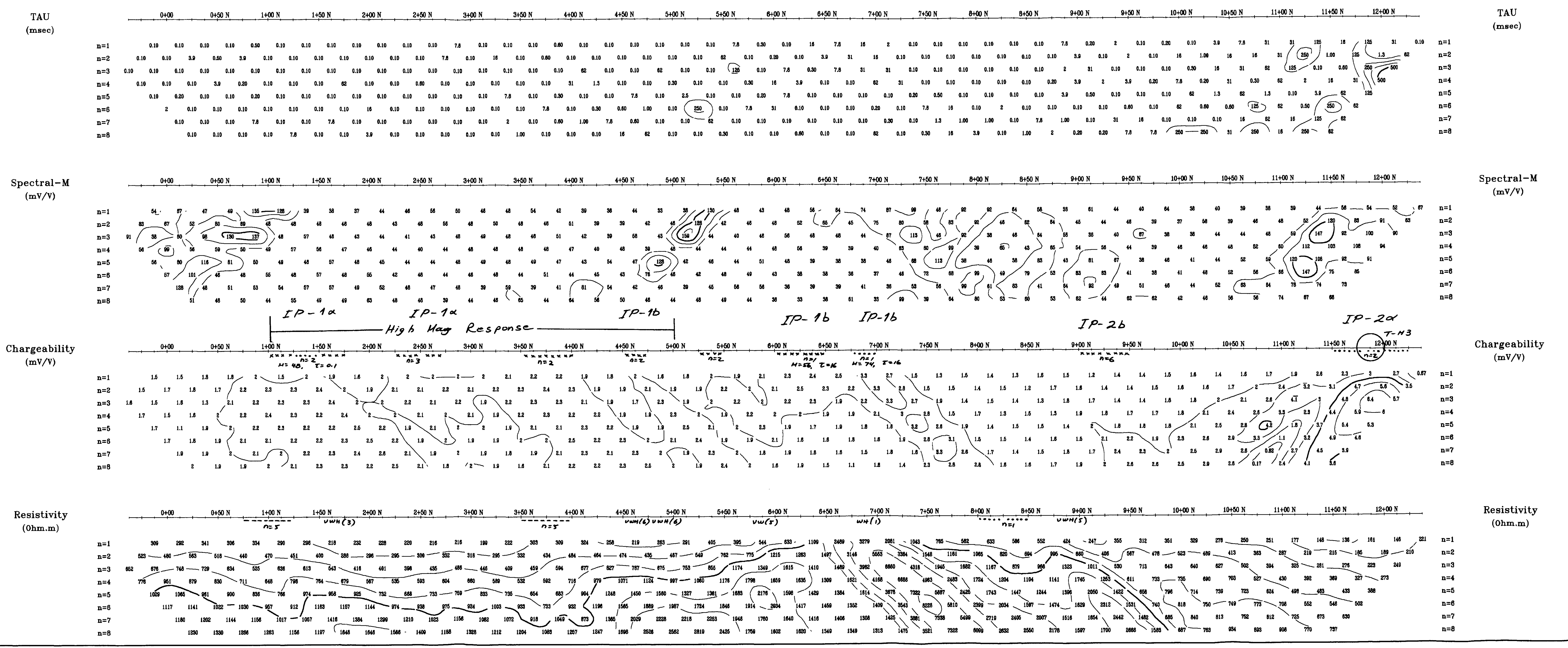
Plate 15

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

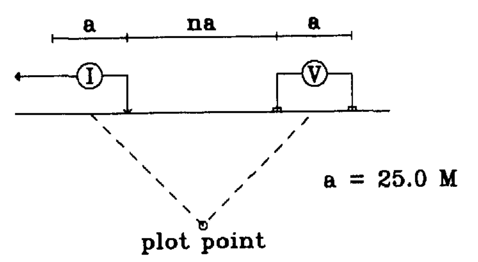
Date: 97/01/31

JVX LTD. (Ref. 9672)



Line 2400 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

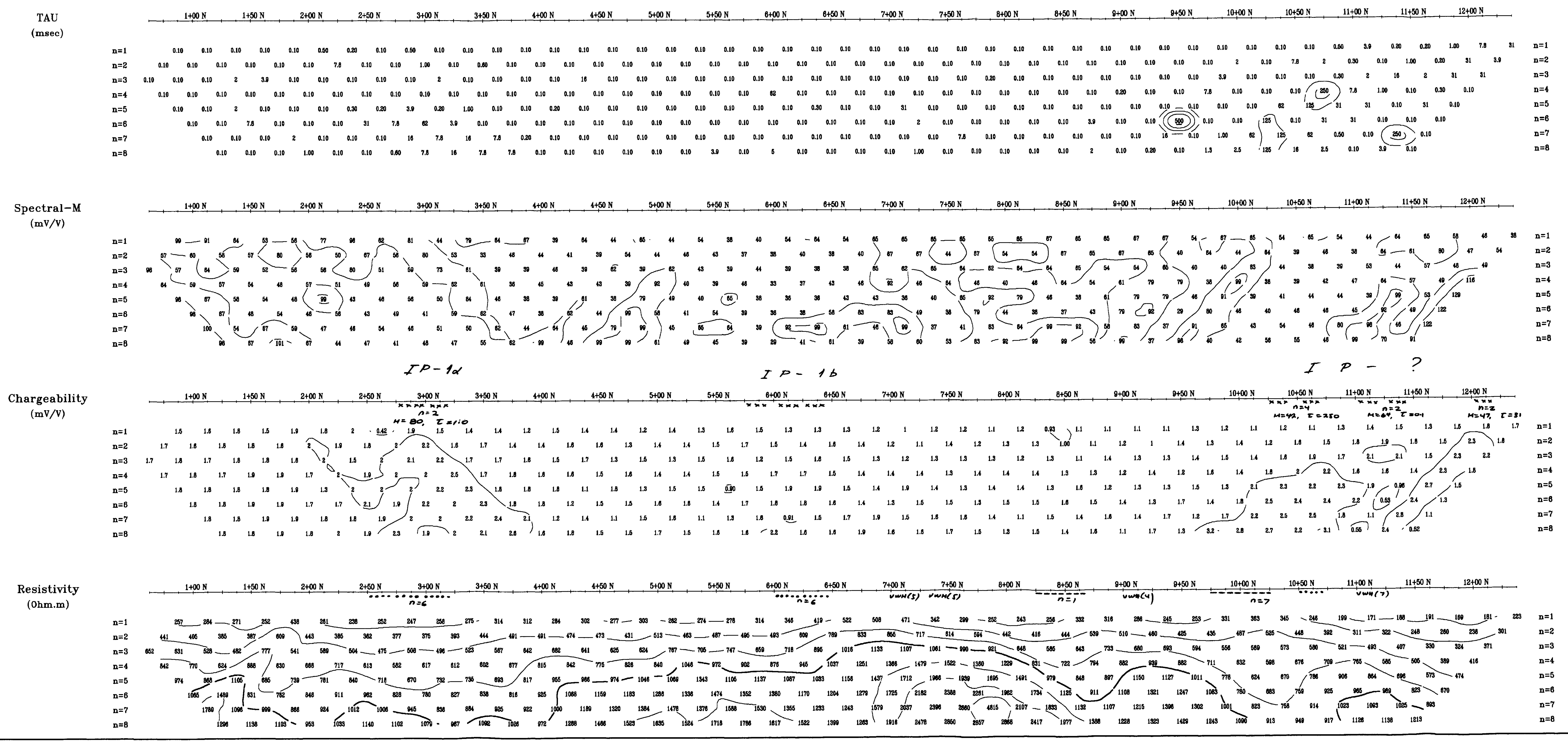
Plate 16

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

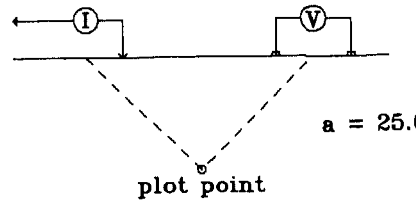
Date: 97/01/31

JVX LTD. (Ref. 9672)



Line 2600 E

Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

Plate 17

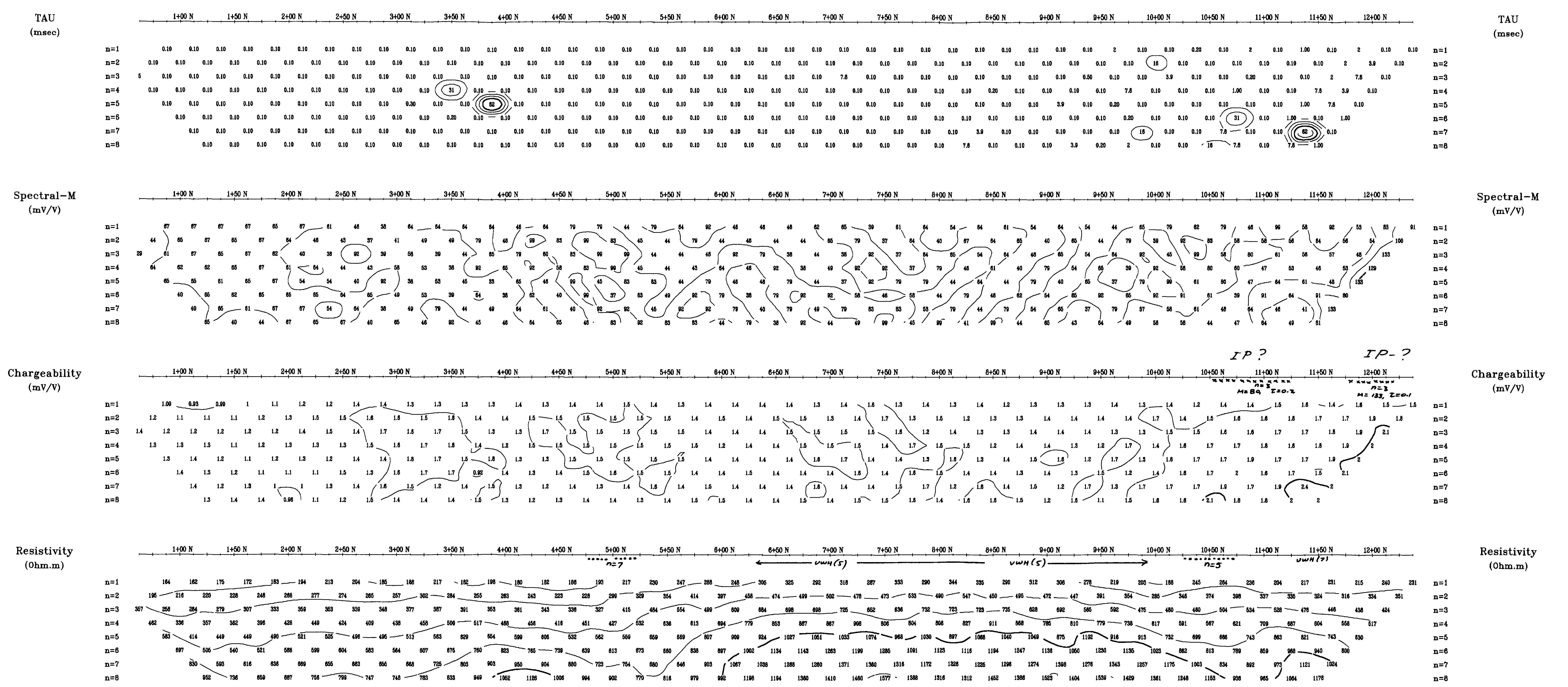
PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

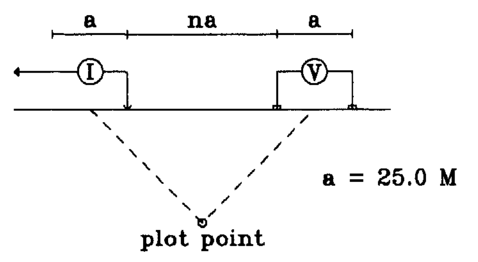
Date: 97/01/31

JVX LTD. (Ref. 9672)

Line 2800 E



Pole-Dipole Array



Scale 1:2500

25 0 25 50 75 100 125 150

(metres)

Plate 18

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
ALLERSTON GRID, BRISTOL TWP., ONT.
Timmins Project, NTS: 42A/5

Date: 97/01/31

JVX LTD. (Ref. 9672)

Ontario | Ministry of Northern Development and Mines

Declaration of Assessment Work Performed on Mining Land

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

Transaction Number (office use): W9760.00557
Assessment Files Research Imaging

42A05NE2001 2.17904 BRISTOL

900

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

2.17904

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

Name: John Huot	Client Number: 146892
Address: P.O. Box 1065, 36 Maple St. S.	Telephone Number: (705) 267-6464
Timmins Ont. P4N 7H9	Fax Number: (705) 264-3260
Name	Client Number
Address	Telephone Number
	Fax Number

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

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

	Office Use	
Work Type: Induced Polarization Survey and Interpretation - Report	Commodity	
	Total $ Value of Work Claimed	50,345
Dates Work Performed From: 15 (Day) Oct (Month) 1996 (Year) To: 15 (Day) Nov (Month) 1996 (Year)	NTS Reference	
Global Positioning System Data (if available) / Township/Area: Bristol	Mining Division	Porcupine
M or G-Plan Number	Resident Geologist District	Timmins

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

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

Name: Alexandra Savic & Joe Mihelcic JVX Ltd	Telephone Number: (905) 731-0972
Address: 60 West Wilmot St. Richmond Hill Ont	Fax Number: 731-9312
Name	Telephone Number
Address	Fax Number
Name	Telephone Number
Address	Fax Number

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OCT 29 1997
GEOSCIENCE ASSESSMENT OFFICE

4. Certification by Recorded Holder or Agent

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

Signature of Recorded Holder or Agent: [signature]		Date: 24 Oct 97
Agent's Address: 19 Berry Hill Waterdown	Telephone Number: (905) 689-6276	Fax Number: 690-2175

Deemed Jan 27/98

0241 (02/96)

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

	Mining Claim Number. Or if work was done on other eligible mining land, show in this column the location number indicated on the claim map.	**Number of Claim Units.** For other mining land, list hectares.	**Value of work performed** on this claim or other mining land.	**Value of work applied** to this claim.	**Value of work assigned** to other mining claims.	**Bank.** Value of work to be distributed at a future date.
eg	TB 7827	16 ha	$26, 825	N/A	$24,000	$2,825
eg	1234567	12	0	$24,000	0	0
eg	1234568	2	$ 8, 892	$ 4,000	0	$4,892
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
		Column Totals				

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

Signature of Recorded Holder or Agent Authorized in Writing: [signature]

Date: 24 Oct 97 PV

6. **Instructions for cutting back credits that are not approved.**

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

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

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

For Office Use Only

Received Stamp

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

Ontario Ministry of Northern Development and Mines

Statement of Costs for Assessment Credit

Transaction Number (office use)

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

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Spectral I.P. Survey	19.1km	2,721.00	51,978 -
		2.17904	
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs	N/A		
Food and Lodging Costs	N/A		
		Total Value of Assessment Work	$51,978

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Calculations of Filing Discounts:

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

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

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

Certification verifying costs:

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

Signature	Date
Peter [signature]	24 Oct 97

0212 (02/96)

2.17904

	A	B	C	D	E	F	G
1	Claim No	Units	Work perf.	Work applied	Work assig.	Where	Bank
2	P 363445	1	$1,624.00				$1,624.00
3	P 363446	1	$1,624.00				$1,624.00
4	P 363447	1	$1,624.00				$1,624.00
5	P 363448	1	$1,624.00				$1,624.00
6	P 413232	1	$1,624.00				$1,624.00
7	P 413423	1	$1,624.00				$1,624.00
8	P 413424	1					
9	P 413425	1					
10	P 451531	1					
11	P 451532	1					
12	P 451533	1					
13	P 451541	1	$1,624.00				$1,624.00
14	P 451542	1	$1,624.00				$1,624.00
15	P 451543	1	$1,624.00				$1,624.00
16	P 451544	1	$1,624.00				$1,624.00
17	P 451545	1	$1,624.00				$1,624.00
18	P 451546	1	$1,624.00				$1,624.00
19	P 451547	1	$1,624.00				$1,624.00
20	P 451548	1					
21	P 453999	1	$1,624.00				$1,624.00
22	P 454000	1	$1,624.00				$1,624.00
23	P 479503	1	$1,624.00				$1,624.00
24	P 479504	1					
25	P 479505	1					
26	P 479506	1					
27	P 479507	1					
28	P 479508	1					
29	P 479715	1					
30	P 480315	1					
31	P 480316	1					
32	P 480317	1					
33	P 525965	1	$1,624.00				$1,624.00
34	P 921756	1					
35	P 921757	1					
36	P 921758	1	$1,624.00				$1,624.00
37	P 949635	1	$1,624.00				$1,624.00
38	P 949636	1	$1,624.00				$1,624.00
39	P 949637	1	$1,624.00				$1,624.00
40	P 949638	1	$1,624.00				$1,624.00
41	P 1154744	2					
42	P 1154745	2	$3,248.00				$3,248.00
43	P 1190579	4	$6,497.00				$6,497.00
44	P 1201315	1	$1,624.00				$1,624.00
45	P 1203999	16					
46							
47							
48	PAL Claims						
49	P 1207716	1	$1,624.00				$1,624.00
50	P 1218645	1	$1,624.00				$1,624.00
51							
52							
53	*TOTAL*		$50,345.00				$50,345.00

6000244

6000246

6000245

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OCT 23 1997
GEOSCIENCE ASSESSMENT OFFICE

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

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

Telephone: (888) 415-9846
Fax: (705) 670-5881

April 24, 1998

JOHN PETER HUOT
36 MAPLE STREET, SOUTH
TIMMINS, ONTARIO
P4N-7H9

Dear Sir or Madam:

Submission Number: 2.17904

Subject: Transaction Number(s):		**Status**
	W9760.00557	Approval After Notice

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

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice.

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

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at benetest@epo.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

ORIGINAL SIGNED BY
Blair Kite
Supervisor, Geoscience Assessment Office
Mining Lands Section

Correspondence ID: 12144

Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.17904

Date Correspondence Sent: April 24, 1998 **Assessor:** Steve Beneteau

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9760.00557	413424	BRISTOL	Approval After Notice	April 19, 1998

Section:
14 Geophysical IP

The 45 days outlined in the Notice dated March 05, 1998 have passed. Assessment work credit has been approved as outlined on the attached Distribution of Assessment Work Credit sheet.

Correspondence to:

Resident Geologist
South Porcupine, ON

Assessment Files Library
Sudbury, ON

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

Peter J. Vamos
WATERDOWN, ON

JOHN PETER HUOT
TIMMINS, ONTARIO

JEAN-CLAUDE BONHOMME
TORONTO, ONTARIO

RALPH E. ALLERSTON
TIMMINS, ONTARIO

Correspondence ID: 12144

Distribution of Assessment Work Credit

The following credit distribution reflects the value of assessment work performed on the mining land(s).

Date: April 24, 1998

Submission Number: 2.17904

Transaction Number: W9760.00557

Claim Number	Value Of Work Performed
413424	714.00
413423	1,429.00
1190579	5,715.00
949635	67.00
413232	2,255.00
363445	2,009.00
363446	1,808.00
921758	1,340.00
949636	580.00
1218645	893.00
363448	871.00
363447	893.00
451545	268.00
949637	1,295.00
1207716	2,188.00
525965	1,362.00
451544	1,049.00
451546	268.00
949638	1,875.00
1203999	2,076.00
479503	1,875.00
1201315	1,116.00
451543	804.00
451547	491.00
454000	982.00
451541	1,206.00
451542	1,630.00
1154745	1,430.00
Total: $	38,489.00

Correspondence ID: 12144