LOGISTICAL AND INTERPRETIVE REPORT

MAGNETIC AND

SPECTRAL INDUCED POLARIZATION SURVEYS

TIMMINS WEST PROJECT, THE PYKE GRID,

WHITESIDES TWP., NORTHERN ONTARIO

JVX Ltd.

LOGISTICAL AND INTERPRETIVE REPORT
MAGNETIC AND SPECTRAL INDUCED POLARIZATION SURVEYS
TIMMINS WEST PROJECT, THE PYKE GRID
WHITESIDES TWP., NORTHERN ONTARIO

2.17180

For: **PROSPECTORS ALLIANCE CORPORATION**
Suite 1800, 95 Wellington Street West
Toronto, Ontario, M5J 2N7

Attention: PETER VAMOS
Tel: (416) 360-5333
Fax: (416) 360-4419

By: **JVX Ltd.**
60 West Wilmot St, Unit #22
Richmond Hill, Ontario
L4B 1M6

Contact: Blaine Webster
Tel: (905) 731-0972
Fax: (905) 731-9312

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1 INTRODUCTION

A time-domain spectral induced polarization survey was conducted by **JVX Ltd**. for **Prospectors Alliance Corporation** between October 15 to October 28, 1996, over several claims comprising the Property. The property is located west of Timmins, Ontario (Figure 1). The survey was undertaken to locate economic mineral exploration target areas.

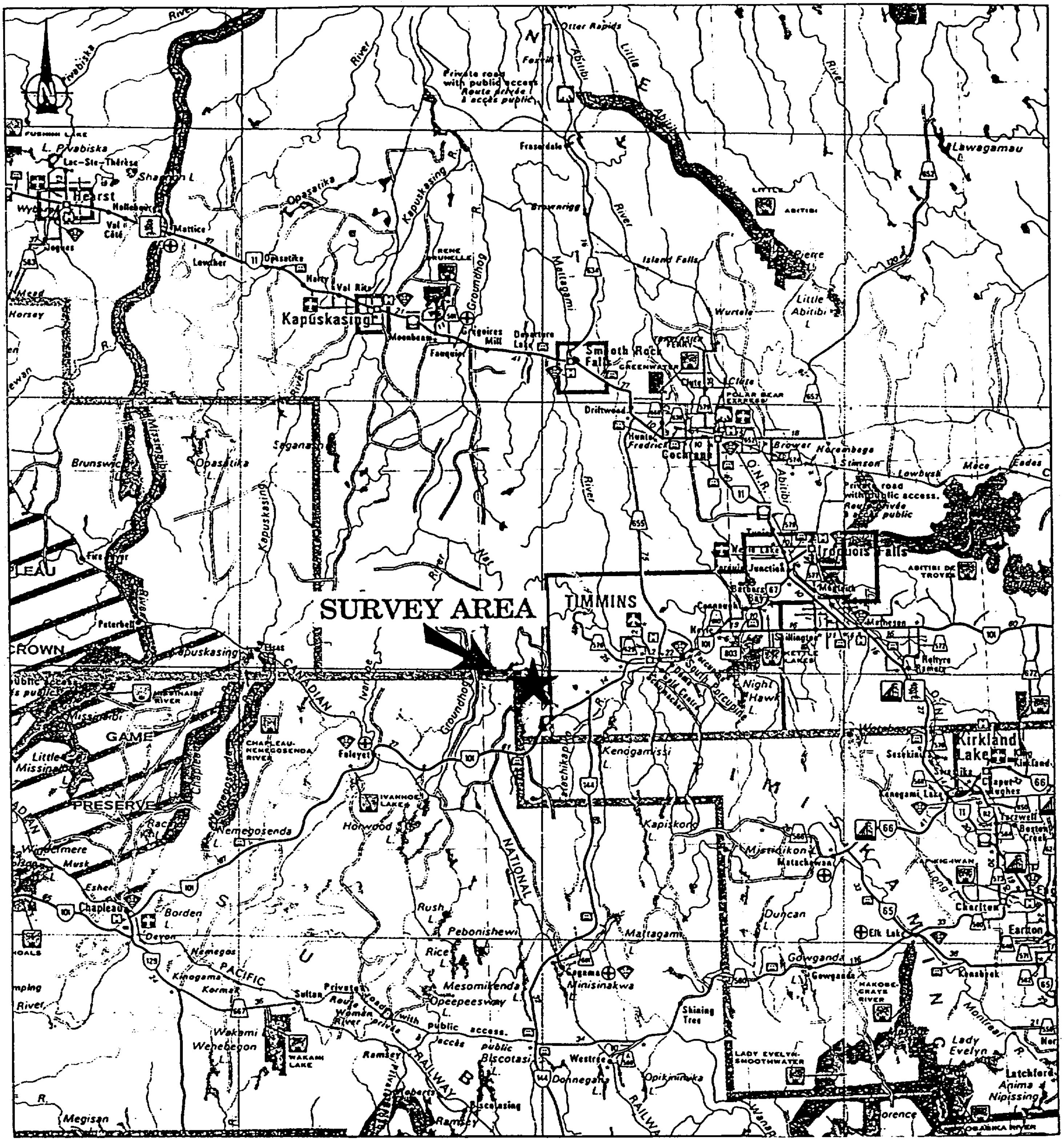
1.1 GENERAL

Time-domain spectral induced polarization surveys were conducted by **JVX** Ltd. on behalf of Ltd. between October 15 to October 28, 1996, over several claims comprising the Property. The property is located west of Timmins, Ontario (Figure 1). The survey was undertaken to locate economic mineral exploration target areas.

1.2 PROPERTY DESCRIPTION

The Property claims surveyed are as follows:

Claim # 's: 1193769 (4 units), 1193770 (4 units), 1193771 (6 units), 1193772 (4 units), 1193773 (6 units) 1193774 (4 units).

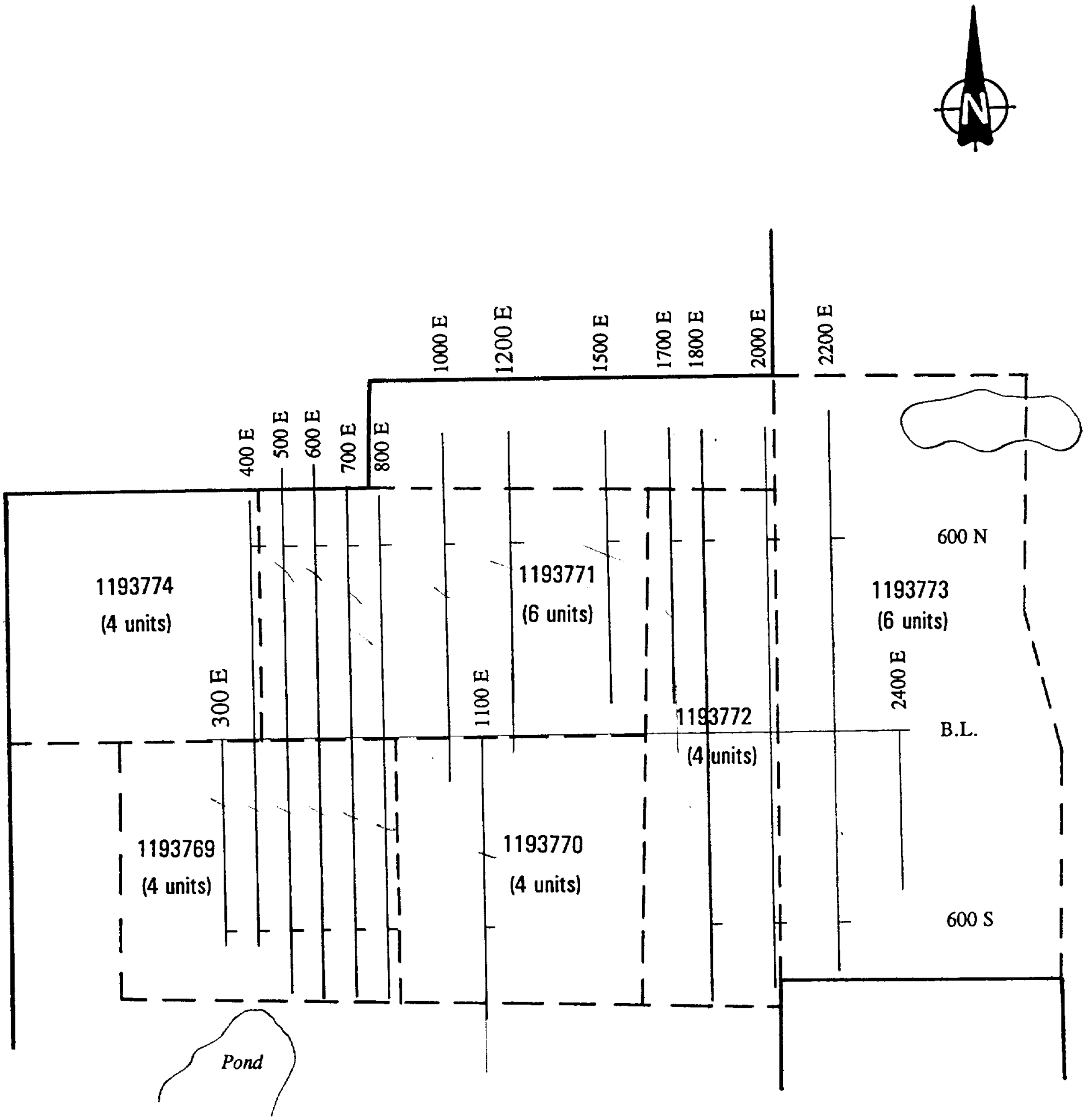


LOCATION MAP
PROSPECTORS ALLIANCE INC.
TIMMINS WEST PROJECT - PYKE GRID
Whitesides Twp., Ontario
N.T.S. 42 A/5

Scale : 1 : 1,600,000

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

Figure 1



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

Scale : 1 : 20,000

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

Figure 2

2 DATA ACQUISITION

2.1 SURVEY SPECIFICATIONS

2.1.1 MAGNETIC SURVEY

The magnetic survey data was turned over to **JVX Ltd**. for processing and interpretation. The data acquisition was performed by a geophysical consultant other than **JVX**. The following chart describes the field parameters and magnetic equipment used in this survey.

Total Field Magnetics Survey / PYKE GRID	
Field Magnetometer	GEM-19
Base Station Magnetometer	unknown
Magnetometer Base Field	unknown
Station Spacing	12.5m.
Number of Lines Surveyed	33
Survey Coverage	40.09km

Table 1 Magnetic Survey Field Parameters

2.1.2 IP/RESISTIVITY SURVEY

The following chart lists the field parameters and equipment used to collect the IP data.

I.P./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*)	50 (m)
Number of Lines Surveyed	15
Survey Coverage	21850 m

Table 2 Spectral IP/Resistivity Survey Field Parameters

2.2 GRID SPECIFICATIONS

The survey grid, located in Whitesides Township, northwestern Ontario, is shown in Figure 2.

2.3 PRODUCTION SUMMARY

2.3.1 MAGNETIC SURVEY

Total field magnetic survey coverage was 40090 metres with 4502 measurements taken. The following table lists the survey coverage in detail:

TOTAL FIELD MAGNETIC SURVEY COVERAGE				
Line	**From Station**	**To Station**	**Distance (m)**	**No. of Readings**
0 E	810 S	0 N	810	82
100 E	960 S	0 N	960	97
200 E	860 S	0 N	860	87
300 E	780 S	0 N	780	79
400 E	760 S	890 N	1650	167
500 E	1000 S	890 N	1890	190
600 E	1000 S	800 N	1800	181
700 E	1000 S	870 N	1870	188
800 E	1000 S	870 N	1870	188
900 E	1000 S	1000 N	2000	201
1000 E	0 N	1000 N	1000	101
1100 E	1000 S	0 N	1000	101
1200 E	0 N	1000 N	1000	101
1300 E	1000 S	0 N	1000	101
1400 E	0 N	1010 N	1010	102
1500 E	1000 S	1010 N	2010	202
1600 E	10 S	1010 N	1020	104
1700 E	1000 S	1020 N	2020	204
1800 E	1000 S	1020 N	2020	203
1900 E	1010 S	1020 N	2030	204

2000 E	1000 S	1020 N	2020	203
2100 E	1000 S	1020 N	2020	203
2200 E	960 S	1020 N	1980	199
2300 E	750 S	1020 N	1770	178
2400 E	600 S	10 N	610	62
2500 E	600 S	920 N	1520	153
2600 E	600 S	0 N	600	61
2700 E	600 S	0 N	600	61
2800 E	370 S	0 N	370	38
1000 W	420 N	2140 N	1720	173
0 E	0 N	900 N	900	90
800 E	420 N	900 N	480	49
1000 E	900 N	2310 N	1410	149
Total			**40090**	**4502**

Table 3 Magnetic Survey Production Summary

2.3.2 *SPECTRAL IP/RESISTIVITY SURVEY*

Total survey coverage was 21,850 metres of Spectral IP/Resistivity data with 417 stations measured. The following table lists the survey coverage in detail:

SPECTRAL IP/RESISTIVITY SURVEY COVERAGE				
Line	**From Station**	**To Station**	**Distance (m)**	**No. of Readings**
1000 E	250 S	1000 N	1250	24
1100 E	1000 S	50 N	1050	19
1200 E	0 N	1000 N	1000	19
1500 E	0 N	1000 N	1000	19
1700 E	0 N	1000 N	1000	20
1800 E	1000 S	1000 N	2000	39
2000 E	1000 S	1000 N	2000	39
2200 E	950 S	1050 N	2000	38
2400 E	600 S	50 N	650	12
300 E	750 S	50 N	800	15
400 E	750 S	800 N	1550	29
500 E	1000 S	900 N	1900	37
600 E	1000 S	900 N	1900	36
700 E	1000 S	900 N	1900	37
800 E	1000 S	850 N	1850	34
Total			**21850**	**417**

Table 4 Spectral IP/Resistivity Survey Production Summary

2.5 FIELD INSTRUMENTATION

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

2.5.1 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.

2.5.2 IP RECEIVER

The Scintrex IPR-12 Time Domain Receiver was used. This unit samples the voltage decay curve as measured by the potential electrodes at ten points in time. Readings were repeated until they converged to within a tolerance level, and the data were stored in solid-state 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.

3 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
- EPSON FX-80 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
- NICOLET ZETA 36 inch pen plotter
- TEKTRONIX COLORQUICK ink jet printer
- FUJITSU DL2400 colour dot-matrix printer
- TEXAS INSTRUMENTS MicroLaser Pro 600 Laser printer

The processing procedure is outlined below.

3.1 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 can 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 τ),

(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.

4 INTERPRETATION METHODOLOGY

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

4.1 IP/RESISTIVITY

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

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

━━━ *Very Strong* (> 30 mV/V) and well defined

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

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

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

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

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

These symbols are annotated above the anomalous source and the location of the centre of the body. Where possible, the location and the peak of the anomaly provide qualitative indications of the depth to the top of the anomaly. The dipole number of the peak is written beside the anomaly bar.

2) The spectral characteristics of the anomalies are examined. The peak value of *M-IP* is noted, and *Tau (τ)* 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 Ωm) — highly silicified
no symbol	H(*n*)	*High* (> 10 000 Ωm) — probably silicified
no symbol	WH(*n*)	*Weak High* (< 10 000 Ωm) — 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 ; *n* is the dipole 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**'s 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.

- High chargeability values which are associated with a finger-shaped resistivity low and an increase in *Tau*, indicating a possible sulphide zone within an alteration zone

- Low *Tau* (τ)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 τ (Tau) are typically the most favourable spectral IP targets.

5 DISCUSSION OF RESULTS

The interpretation of the geophysical data was compiled onto one map which is summarized in the following section. Compilation Map (Plate 8) summarizes the results of the magnetic and IP/resistivity surveys. Magnetic highs are identified along with the chargeability highs, resistivity lows and highs on the Compilation Map (Plate 8).

The magnetic profiles and colour contour map as well as the IP/resistivity (ρ_a) and spectral IP (*M-IP* and τ) pseudosections are submitted in Appendix B. The compilation map is also included in Appendix B.

5.1 MAGNETIC SURVEY

The regional magnetic field in this area consists of an east-west magnetic high which runs across the north end of the Pyke Grid. Local trends **MH-1, 2, 3 & 4** have been identified and annotated on the Compilation Map (Plate 8).

Two north-northwest magnetic highs are outlined and labelled **MH-5** and **MH-7**. **MH-5** and **MH-7** may be extensions of **MH-3** and **MH-4** respectively. These NNW features are interpreted as cross-cutting dykes. The connection between **MH-4** and **MH-7** is speculative because of the lack of data in this area.

A third observation is that the east-west magnetic trend direction curves to the southwest on the west side of the grid. Similarly on the east side of the grid, **MH-4** turns to the southeast. The latter trend direction change is more abrupt and probably is a contouring artifact relating to the cross-cutting dykes.

5.2 IP/RESISTIVITY

The chargeability and resistivity trends are also east to west as demonstrated by **IP-1, 1a** and **RH-1, 2 & 5**. Whereas the IP and resistivity zones are east-west trending on the east side of the grid, there is a southwest break in the west area of the grid similar to that of the magnetic field.

In general, the central part of the grid is dominated by the lack of strong magnetic, chargeability and resistivity highs. This may indicate a granite or stable geological structure which is surrounded by anomalously chargeable and resistive zones. Conversely, this quiet area may also indicate an increase in depth to the bedrock.

The following chart summarizes the anomalous zones based on spectral IP/resistivity and magnetic data. These zones are labeled (e.g. Zone 2A)on the Compilation Map (Plate 8) and targets with medium or high priority are also indicated (e.g. **T-1A**)

PYKE GRID / WHITESIDE TWP./WEST TIMMINS /P.A.L.

Evaluation of Spectral IP/Resistivity and Magnetic data

JVX Reference # 9672

Zone	Location	Res. High Ohm.m	Res. Low Ohm.m	Mag High Nanoteslas	M7 mV/V	M.I.P mV/V	Tau msec	Diplole n	TARGETS Priorities	Remarks
1	400E/388N	NO	SL	TOP	71	541	S	1	**HIGH**	P.A.L. TARGET A
1a	400E/563N	VH	NO	NO	21	293	M	1	**MED.**	P.A.L. TARGET A
1b	500E/488N	VH	NO	NO	20	282	S	1	LOW	
1c	500E/363N	H	SL	FLANK	15	220	S	1	LOW	
1p	500E/288N	MH	WL	EDGE	18	251	S	3	LOW	P.A.L. TARGET B
1r	500E/838N	VH	WL	EDGE	11	168	S	2	LOW	E.O.L.
1d	600E/738N	MH	ML	NO	24	313	S-M	1	**MED.**	P.A.L. TARGET C3
1e	600E/488N	MH	ML	NO	17	236	M	1	LOW	
1q	600E/363N	MH	WL	EDGE	18	255	M	4	LOW	P.A.L. TARGET C2
1f	700E/538N	VH	SL	EDGE	17	242	M	1	LOW	
1g	800E/588N	NO	V. SL	TOP	80	550	M	1	**HIGH**	P.A.L. TARGET D
1s	1000E/663N	WH	NO	NO	8	120	S	2	LOW	
1t	1000E/363N	WH	V. WL	NO	4	84	S	6	LOW	DEEP
1u	1000E/138N	WH	NO	NO	4	73	S	5	LOW	DEEP
1v	1200E/688N	NO	WL	TOP	10	150	M	1	LOW	
1h	1500E/688N	NO	WL	FLANK	15	216	M	1	LOW	
1i	1700E/638N	NO	WL	TOP	30	382	M	1	**HIGH**	P.A.L. TARGET E
1j	1700E/938N	NO	WL	EDGE	20	345	M	1	LOW	
1k	1800E/888N	NO	WL	FLANK	27	350	M	1	**MED.**	
1o	1800E/663N	WH	WL	FLANK	21	286	S-M	4	LOW	

1l	2000E/838N	NO	WL	FLANK	30	360	S-M	1	**HIGH**	
1m	2000E/938N	NO	WL	EDGE	24	310	M	1	LOW	E.O.L.
1n	2200E/913N	NO	SL	EDGE	44	550	S-M	1	**HIGH**	
2	2000E/188N	VH	NO	FLANK	16	226	M	2	LOW	
2a	2000E/263N	VH	NO	EDGE	15	211	M	2	LOW	
2b	2200E/263N	VH	SL	NO	20	283	M	1	**HIGH**	P.A.L. TARGET G2
2c	2200E/113N	NO	WL	EDGE	18	245	S	1	LOW	P.A.L. TARGET G1
2d	2400E/138S	NO	WL	FLANK	11	168	M	1	LOW	
2e	2400E/288S	MH	WL	NO	10	142	S	2	LOW	
3	2000E/688S	NO	V. SL	NO	80	541	S	4	**HIGH**	P.A.L. TARGET F
3a	2000E/588S	NO	WL	TOP	28	368	S-M	2	**MED.**	Part of T-3
3b	2200E/613S	MH	NO	NO	9	171	M	1	LOW	SURFACE
3c	2200E/763S	NO	WL	FLANK	16	223	M	1	LOW	
3e	2200E/288S	MH	SL	EDGE	12	180	S-M	1	LOW	
3d	1800E/638S	WH	WL	EDGE	17	242	S-M	2	LOW	
4	600E/238N	H	ML	NO	18	244	M	1	**MED.**	
4a	700E/288N	VH	NO	EDGE	11	163	S	1	LOW	
4b	800E/338N	M-WH	ML	EDGE	10	150	M-S	1	LOW	
5	300E/113S	H	NO	EDGE	13	190	S-M	1	MED.	
5a	400E/13S	WH	NO	NO	8	120	S	1	LOW	
5b	500E/38N	M-WH	WL	NO	7	104	S-M	1	LOW	
5c	600E/88N	H	NO	NO	9	136	S	2	**MED.**	P.A.L. TARGET C1
5e	600E/163S	M-WH	NO	NO	3	130	S	2	LOW	
5d	700E/138N	M-WH	NO	NO	8	124	S	2	LOW	
6	400E/563S	NO	WL	EDGE	6	117	S	1	LOW	
6a	400E/413S	MH	NO	NO	7	117	S	1	LOW	
6b	500E/413S	WH	NO	NO	3	137	S	1	LOW	P.A.L. TARGET B
6c	700E/663S	NO	WL	NO	3	170	S	5	LOW	DEEP
6d	1100E/813S	WH	NO	EDGE	4	150	S	1	LOW	

Table 5: List of Exploration Targets and Their Priorities

5.3 TARGET DESCRIPTIONS

Thirteen drill hole targets have been identified and given priorities of "high" or "medium". Thirty-six additional zones have also been highlighted as "low" priority because they are along the same trends as the above targets. but not as good in terms of chargeability and their relative positions to magnetic highs.

Target T-1, 400E/388N, **HIGH**

This target is rated as high because it is on a magnetic top, has excellent chargeability and a short time constant indicating fine-grained texture. This anomaly is in a resistivity low and is interpreted as a conductive anomaly possibly associated with an alteration or shear zone. The high priority rating is also due to the high spectral MIP (total chargeability) and relatively high m7 chargeability which shows that the anomalous zone discharge rate is maintained at later time. This target is a **P.A.L.** target (**Target-A**). It is a near-surface target and because of the lower resistivity, a linked sulphide/graphite source is indicated.

Target T-1a, 400E/563N, **MEDIUM**

In comparison to **T-1**, both chargeability measurements are lower and the zone is located in a resistivity high. Because the host rock is resistive and non-magnetic it is likely quartz-rich. The spectral τ indicates a more coarse-grained texture. This is the weakest of the medium priority targets and would not have been rated as medium except that it was previously rated as a drill target. This anomaly joins **IP-1** at Line-600E. This is a near-surface target.

Target T-1d, 600E/738N, **MEDIUM**

This target is a smaller target at the interface between a resistivity high and resistivity low. Both chargeability values (m7=24 and MIP=313) are moderate and there is no magnetic anomaly. It was originally considered as a drill target **(C3)** by **P.A.L.**. It is situated on a branch of **IP-1** (i.e. **IP-1b**) which is similar to **T-1a. IP-1b** joins **IP-1** at Line 700E. This is a near-surface target.

Target T-1g, 800E/588N, **HIGH**

This is the best target on the northwest part of the grid and is marginally better than **T-3, T-1** and **T-1n** which also have high priorities. It is located on top of a magnetic high, between a resistivity low and a resistivity high and has a medium time constant (τ) indicating medium-grained texture. The encouraging result is that the spectral chargeability is high and chargeability remains high to the m7 (middle time slice) indicating that the sulphide is relatively high volume and possibly interconnected. This target has previously been identified as a drill target S (**P.A.L. Target D).** It is also at the break point of the previously discussed magnetic trend This is a near-surface target and the above description suggests this is a good economic mineralization zone.

Target T-1i, 1700E/638N, **HIGH**

This is a good target combining the top of a magnetic high, intersection of regional magnetic high and interpreted dyke, good chargeability and resistivity high. The time constant is medium which suggests a coarse-grained texture. This is a near-surface target which is on the main **IP-1** chargeability trend. This target is situated at the previously identified **P.A.L. Target E**

Target T-1k, 1800E/888N, **MEDIUM**

This is a good target with a medium priority rating because the chargeability is not fully developed along this new branch of the **IP-1** zone. In this area, the **IP-1** zone is fading and **IP-1a** is the main chargeability zone. This target is on the flank of a magnetic high making the target less prospective. Coarse-grained texture is indicated.

Target T-1l, 2000E/838N, **HIGH**

This target is slightly better than **T-1k** and mainly because it has slightly higher chargeability. It is similar in that it is near-surface and on the flank of a magnetic high (**MH-4**). This target is in a resistivity high and likely fine to medium-grained texture. These conditions are suggestive of a disseminated sulphide target.

Target T-1n, 2200E/913N, **HIGH**

This is a very good target, the best in the northeast corner of the grid. It is situated on a resistivity low and on the edge of a magnetic high. Chargeabilities are high at early time (spectral MIP = 550) and moderate at middle time (m7=44). This suggests that the discharge of energy in this anomaly decays at a faster rate than the other excellent targets (i.e. **T-1**, **T-1g**, **T-3**). This may indicate a large volume of fine to medium-grained sulphide

Target T-2b, 2200E/263N, **MEDIUM**

This target is located on a strong resistivity high and adjacent to a resistivity low. The chargeability values are moderate but the MIP values are close to 300 mV/V. There is no associated magnetic high and the time constant suggests a fine-to-medium-grained source. The resistivity indicates a silicified host rock and potential gold target. This is in the same location as **P.A.L. Target G2**. It is interesting to note that in this area, as the IP zone (**2a** and **2**) approaches the magnetic high labelled **MH-5**, chargeabilities decrease. The moderate to strong chargeabilities associated with very high resistivities, moderate MIP and short time constant, suggest a silicified fine-grained source. This is good mineralization target substantiated by excellent spectral IP measurements.

Target T-3, 2000E/688N, **HIGH**

This is the largest chargeable anomaly in this corner of the grid (southeast). It is ranked very high due to excellent early and late chargeability values and a fine-grained texture within a strong resistivity low. It differs from the other targets in that it is deep whereas all the other high and medium targets are at a dipole of n=1. So this chargeable source could have a high chargeability measurement if it were at surface. This is a good drill target for base metal. It is also adjacent to a small but strong magnetic high. It is in the same location as **P.A.L. Target F.** As in the case of target **T-2b**, this target has higher chargeability than its neighbouring target **T-3a** which is located on the top of a magnetic high.

Target T-3a, 2000E/588N, **MEDIUM**

This target is close to, and probably linked to **T-3**. It is situated on the top of **MH-8** within a generally weak resistivity low. Because the most of the other high priority targets are associated with the tops of the magnetic highs, this zone is given a target status and priority as distinct from **T-3**. However, the chargeabilities are significantly lower than its neighbour **T-3**. It is located at dipole n=2 or below the near-surface. The time constant indicates a fine to medium-grained texture. Base metal is the suggested target.

Target T-4, 600E/238N, **MEDIUM**

This target and the next are smaller targets on separate IP trends. **T-4** is located on **IP-4** within a medium resistivity high and adjacent to a weak to medium low resistivity zone. **IP-4** is part of a concentration of broadly resistive bedrock. This may be a moderately good gold target. There are no magnetic anomalies in this area of the grid.

Target T-5, 300E/113S, **MEDIUM**

T-5 along **IP-5** is a significantly better IP anomaly than the previously identified **P.A.L. Target C1.**. This is the case because **Zone 5** has a higher chargeability (approx. 50% higher), is adjacent to a magnetic high and is situated in the middle of a resistivity high. This is a fine-grained gold target.

Target T-5c, 600E/88N, **MEDIUM**

The zone **IP-5** parallels a strong resistivity high (**RH-3**, **3a**) and is adjacent to **RL-3a**. This zone seems to originate near a slight magnetic high. This target is weak to moderately chargeable with a short time constant. This target is situated near the previously identified **P.A.L. Target C1.**

6 RECOMMENDATIONS

There are a total of 49 zones and 14 of these have been given target status and designated **HIGH** or **MEDIUM** priority as a drilling location. However, successful drill intersections in any of these locations would improve our priority rating of adjacent zones with **LOW** priority.

Because all but two of the targets are near-surface targets, geochemical work and trenching in the area may serve to further delineate the targets in terms of base metal versus gold.

The grid area is characterized by clusters or linear trends of targets surrounding a central area which is geologically stable or non-descript. It is further recommended that the area be divided into three main target areas and a best target selected from each. The three best targets are T-1 or T-1g (grid northwest), T-1n (grid northeast) and T-3 (grid southeast).

7 CONCLUSIONS

This grid is a very prospective grid from many geophysical perspectives. There is a major magnetic trend axis with a change in trend direction and cross-cutting dykes. There is a circular central geological feature which is geophysically non-prospective and which is surrounded by both anomalously chargeable and resistive/conductive zones. The conclusion is that geological processes have occurred in the surrounding areas. An enrichment of base metal and probably gold has occurred to make the identified zones and targets highly prospective. This area warrants a major investment in drilling to further delineate the geology and determine the economic importance.

If there are any questions with regard to the conducting of the survey or the interpretation of the data, please call the undersigned at **JVX** Ltd.

Respectfully submitted,

JVX Ltd.

Gerald Ruygrok, B.Sc., M.Sc.
Geophysicist

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).

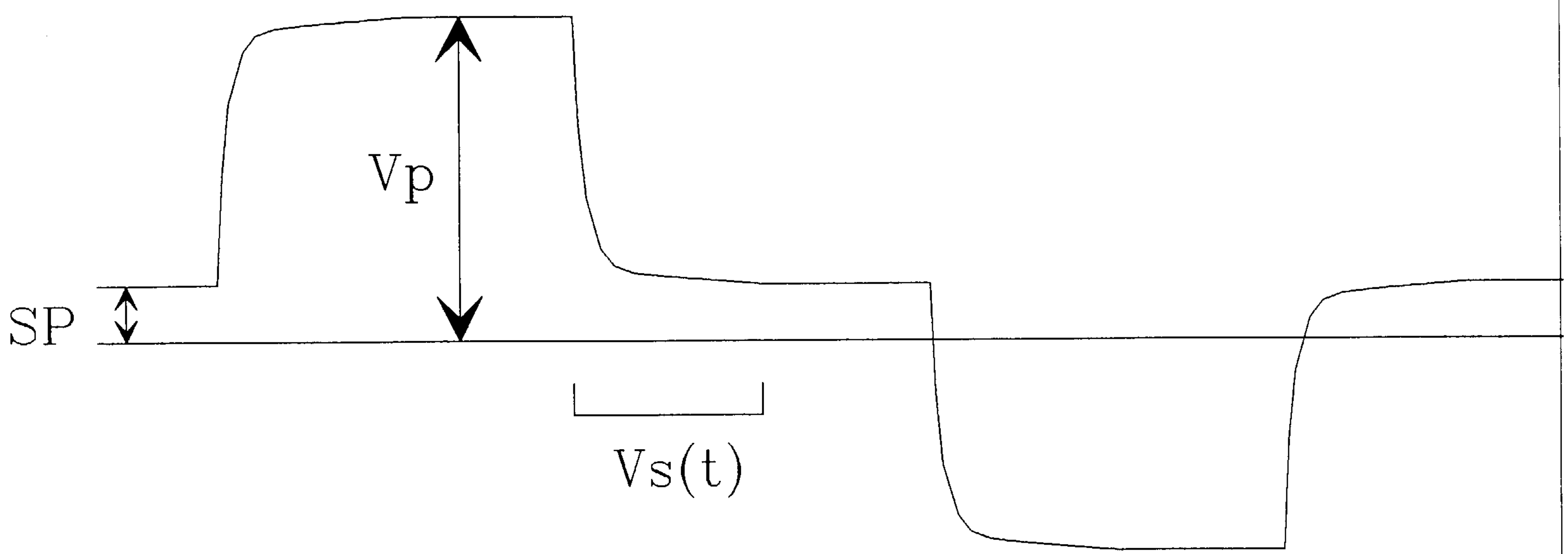


Figure IP−1 : The I.P. Waveform

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

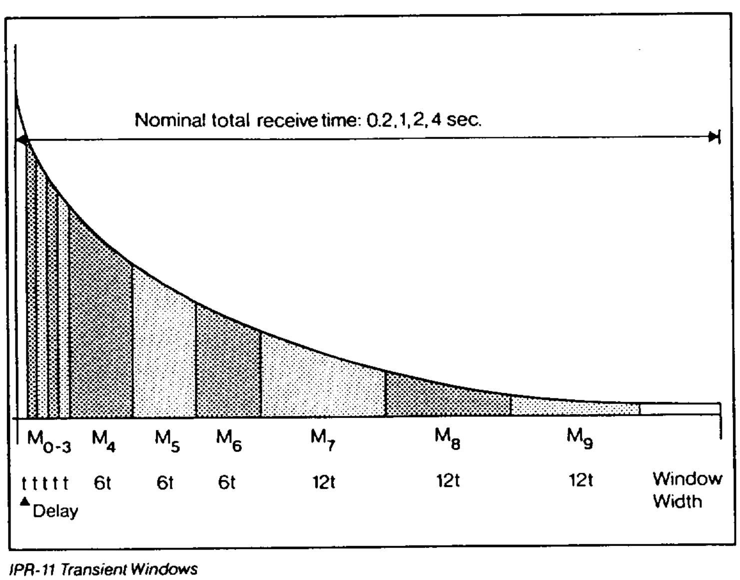


Figure IP-2 : IP effect decay curve with IPR-11 time slices

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

MAGNETIC METHOD

The magnetic field measured at any point on or above the earth's surface is a combination of:

1) the earth's magnetic field,

2) the induced magnetization of near-surface material, and

3) the remanent magnetization of near-surface material.

The total measured field is equal to the vector sum of the magnetic field arising from all three factors.

1 THE EARTH'S MAGNETIC FIELD

The earth's magnetic field is similar in form to that of a bar magnet. The flux lines of the geomagnetic field are vertical at the north and south magnetic poles where the strength is approximately 60 000 nT (or gammas). In the equatorial region, the field is horizontal and its strength is approximately 30 000 nT. This field can be considered to be constant in space and time for exploration surveys.

2 INDUCED MAGNETIZATION

An external magnetic field (for example, the earth's) induces the magnetization of a ferrous body. This magnetized body then produces an additional magnetic field, known as the *induced field*, which is given by the following formula:

$$\mathbf{I} = k\,\mathbf{H}$$

where:

$\mathbf{I}$ = the induced magnetic field (nT) — a vector
k = the volume magnetic susceptibility of the material
$\mathbf{H}$ = the external magnetic field (nT) — a vector

Thus, the strength of the induced magnetic field is a function of the susceptibility of the body. In turn, the susceptibility is a reflection of the content of ferrous minerals, most importantly magnetite. Note that the induced field is parallel to the external field.

3 REMANENT MAGNETIZATION

The remanent magnetization of rocks depends both on their composition and their previous history. Whereas the induced magnetization is nearly always parallel to the direction of the geomagnetic field, the natural remanent magnetization may bear no relation to the present direction and intensity of the earth's field. The remanent magnetization is related to the direction of the earth's field at the time the rocks were last magnetized. Generally, one can assume that there is no significant remanent magnetization when interpreting magnetic data.

4 DIURNAL CORRECTION

Although the earth's magnetic field is essentially constant, time-varying magnetic fields may result from atmospheric phenomena. Fields due to magnetic storms may vary by hundreds of nanoteslas in a few minutes. Therefore, it is necessary to monitor the background magnetic field constantly using a stationary base station magnetometer. The field measurements can then be corrected for the background magnetic variation. This process is known as diurnal correction.

5 INTERPRETATION

Magnetic data are used to map regions of different magnetic susceptibilities (i.e. ferrous content). The magnetic method cannot detect gold directly, but it can map structures which can aid in locating areas of silicification and carbonization. When used in conjunction with geological and other geophysical data, magnetic data can help select targets which are favourable for economic mineralisation.

APPENDIX B

Plates

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): W9860.00119

Assessment Files Research Imaging

42A05NW2002 2.18130 WHITESIDES 900

of subsections 65(2) and 66(3) of the Mining Act. Under section 8 of the review the assessment work and correspond with the mining land holder. Recorder, Ministry of Northern Development and Mines, 6th Floor,

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

2.18130

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

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

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

		Office Use	
Work Type	Induced Potential Survey	Commodity	
		Total $ Value of Work Claimed	$30,179
Dates Work Performed	From 15 (Day) 10 (Month) 1996 (Year) To 28 (Day) 10 (Month) 1996 (Year)	NTS Reference	
Global Positioning System Data (if available)	Township/Area: Whitesides	Mining Division	Porcupine
	M or G-Plan Number: G 3230	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	Gerald Kruggrok B.Sc. M.Sc. JVX Ltd	Telephone Number	(905) 731-0972
Address	60 West Wilmot Street, Richmond Hill On	Fax Number	(905) 731-9312
Name		Telephone Number	
Address		Fax Number	
Name		Telephone Number	
Address		Fax Number	

RECEIVED
FEB 17 1998
3:00
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: 13 Feb 98
Agent's Address: 19 Berry Hill Waterdown On	Telephone Number: (905) 689-6276	Fax Number: (905) 690-2175

Deemed March 18/98

0241 (02/96)

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

W9860.00119

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	1193769	4	6,551			6,551
2	1193770	4	1,454			1,454
3	1193771	6	9,349			9,349
4	1193772	4	6,454			6,454
5	1193773	6	3,670			3,670
6	1193774	4	1,108			1,108
7	1201465	3	1,247			1,247
8	1207588	12	346			346
9						
10						
11						
12						
13						
14						
15						
		Column Totals	30,179			30,179

RECEIVED FEB 17 1998 GEOSCIENCE ASSESSMENT OFFICE

I, Peter L. 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	Date
Peter Va[illegible]	13 Feb 98

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): W9860.00119

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

Work Type	Units of Work Depending on the type of work, list the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
Induced Potential Survey	21.6km	$1398	30,204
Associated Costs (e.g. supplies, mobilization and demobilization).			
Transportation Costs			
N/A			
Food and Lodging Costs			
N/A			
		Total Value of Assessment Work	30,204

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.

RECEIVED FEB 1 3 1998 GEOSCIENCE ASSESSMENT OFFICE

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
[signature]	13 Feb 98

0212 (02/96)

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

May 12, 1998

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

Dear Sir or Madam:

Submission Number: 2.18130

		Status
Subject: Transaction Number(s):	W9860.00119	Approval

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

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

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 Lucille Jerome by e-mail at jeromel2@epo.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

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

Correspondence ID: 12252

Copy for: Assessment Library

Work Report Assessment Results

Submission Number: 2.18130

Date Correspondence Sent: May 12, 1998 **Assessor:** Lucille Jerome

Transaction Number	First Claim Number	Township(s) / Area(s)	Status	Approval Date
W9860.00119	1193769	WHITESIDES	Approval	May 12, 1998

Section:
14 Geophysical IP

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

Correspondence ID: 12252

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY

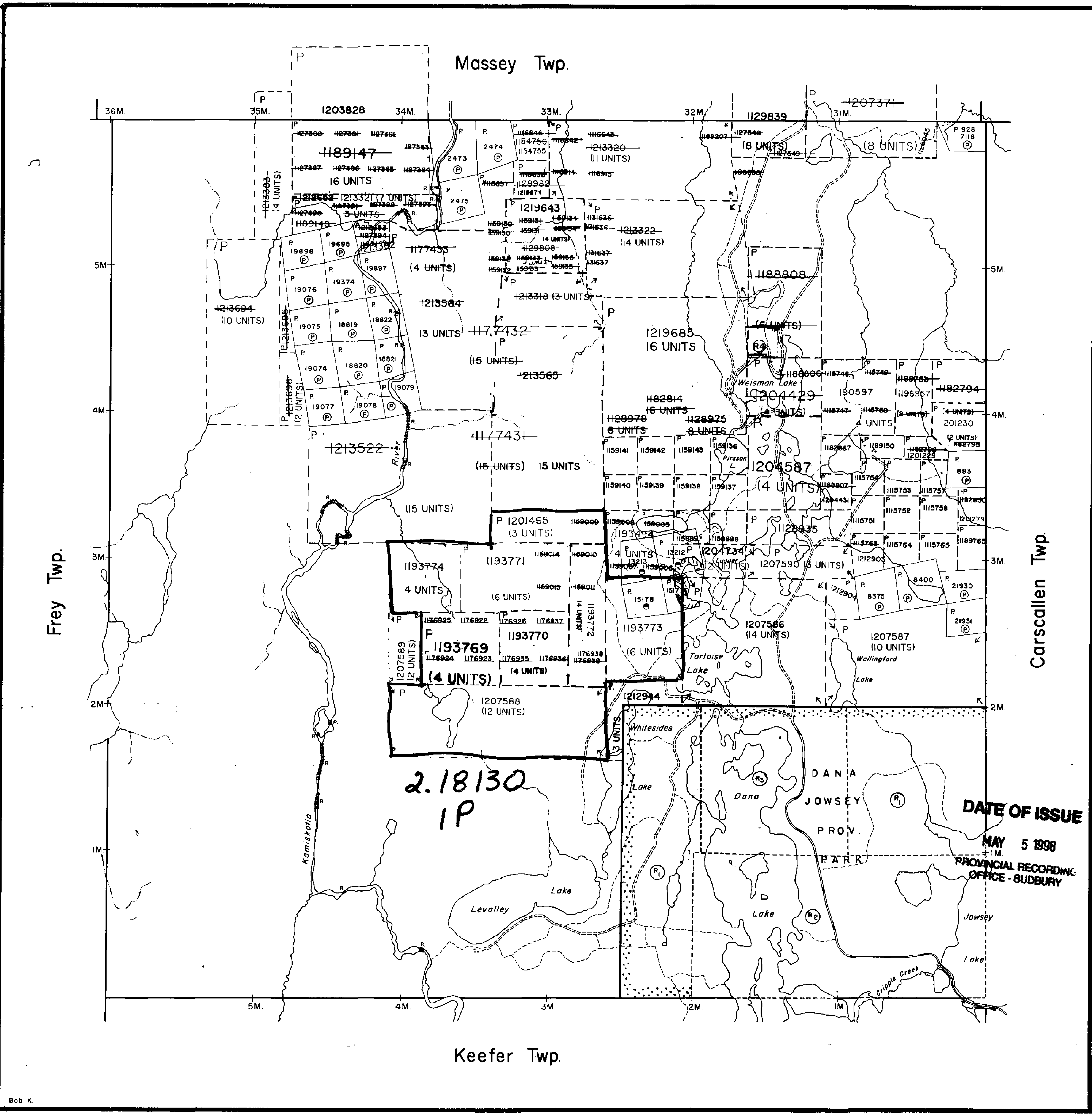
S.R.O. – SURFACE RIGHTS ONLY

M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
(R1) DANA AND JOWSEY LAKES PARK RES. SEC. 36/80	W.66/83		S.R.O. M.R.O.	171506
(R2) SEC. 43/70		FEB. 3/66	M. & S.R.	171506
(R3) SEC. 43/70		28/1/71	M. & S.R.	171506

(R4) MINING AND SURFACE RIGHTS WITHDRAWN FROM PROSPECTING, STAKING OUT, SALE OR LEASE UNDER SECTION 35 OF THE MINING ACT R.S.O. 1990 ORDER NO. W-P 49/94 HER DATED 94-MAY-02

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



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	Ⓟ or ●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	⬒
" , MINING RIGHTS ONLY	⬓
LICENCE OF OCCUPATION	▼
ORDER IN COUNCIL	OC
RESERVATION	Ⓡ
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000

METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

WHITESIDES

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

COCHRANE

Ontario Ministry of Natural Resources — Land Management Branch

Date FEBRUARY 1985

ACTIVATED JUNE 30, 1992 BY D.C.

Number G-3230

42A05NW2002 2.18130 WHITESIDES 200

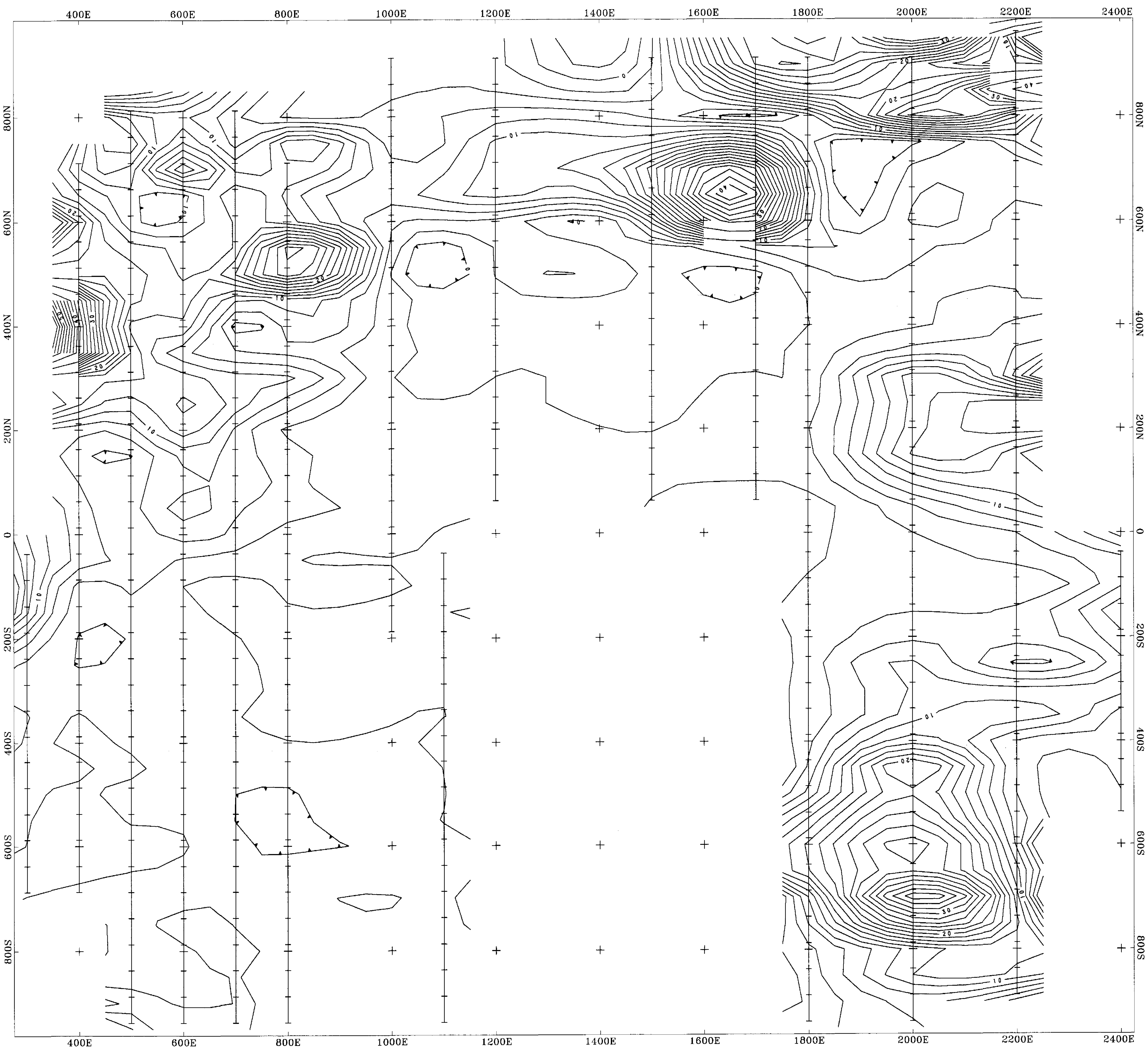
Plate 1

TOTAL FIELD MAGNETICS

PROSPECTORS ALLIANCE CORPORATION
TIMMINS WEST PROJECT
PYKE GRID – WHITESIDES TWP

NTS 42A/5
BASE FIELD 57 000 nT
Profile Scale: 1 cm = 250 nT

JVX Ltd. ref. no. 9672–PYKE



Scale 1:5000

100 0 100 200 300

(metres)

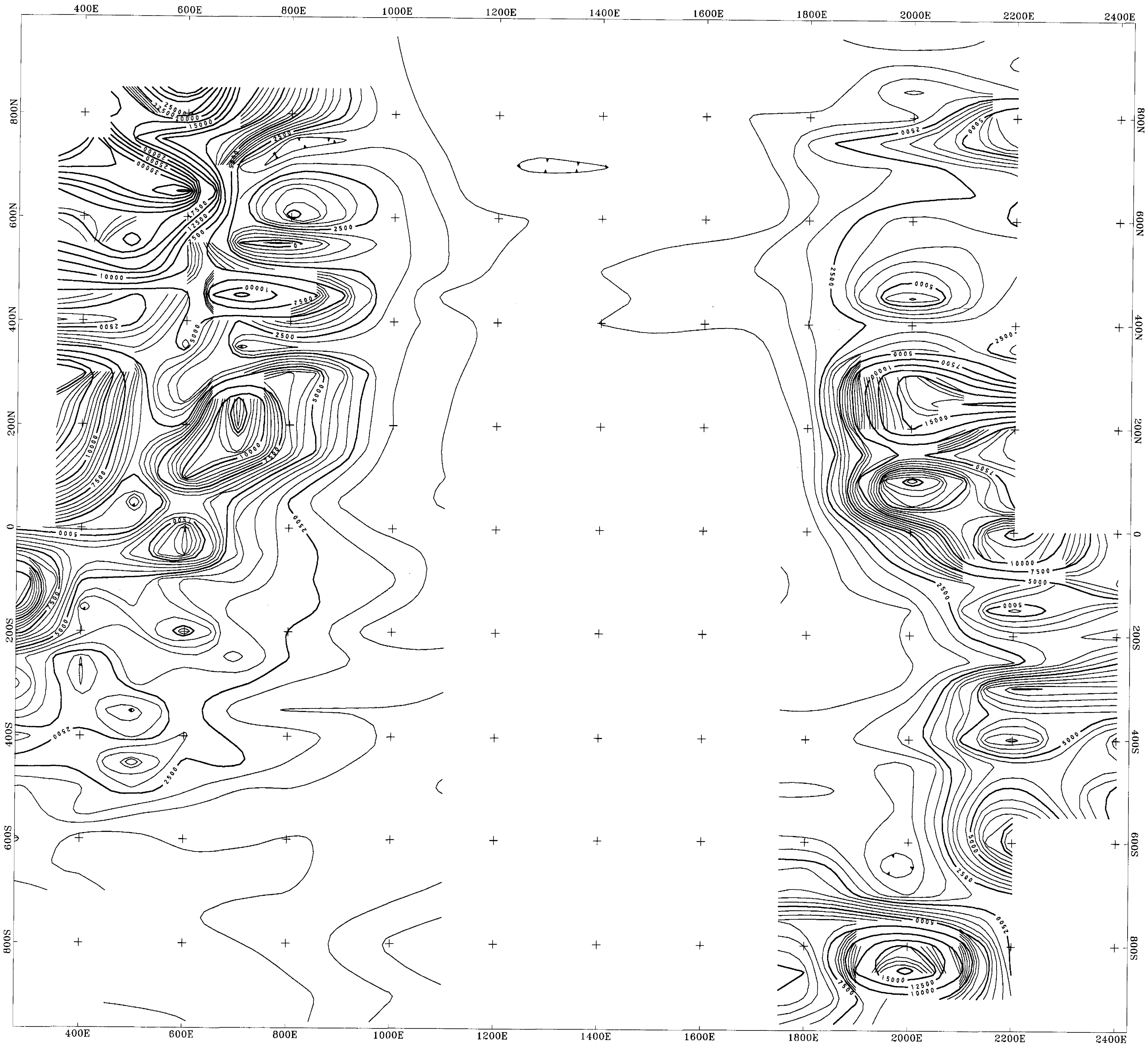
Plate 6

PROSPECTORS ALLIANCE CORP.

TIMMINS WEST PROJECT
PYKE GRID, WHITESIDES TWP., ONTARIO
NTS: 42A/5

CHARGEABILITY (n=2) CONTOUR MAP

JVX LTD. (Ref. 9672, Jan 1997)



Scale 1:5000
100 0 100 200 300
(metres)

Plate 7

PROSPECTORS ALLIANCE CORP.

TIMMINS WEST PROJECT
PYKE GRID, WHITESIDES TWP., ONT.
NTS: 42A/5

RESISTIVITY (n=2) CONTOUR MAP
Contour Levels: 500, 2500 Ohm.m

JVX LTD. (REF. 9672, Jan. 1997)

Plate 8

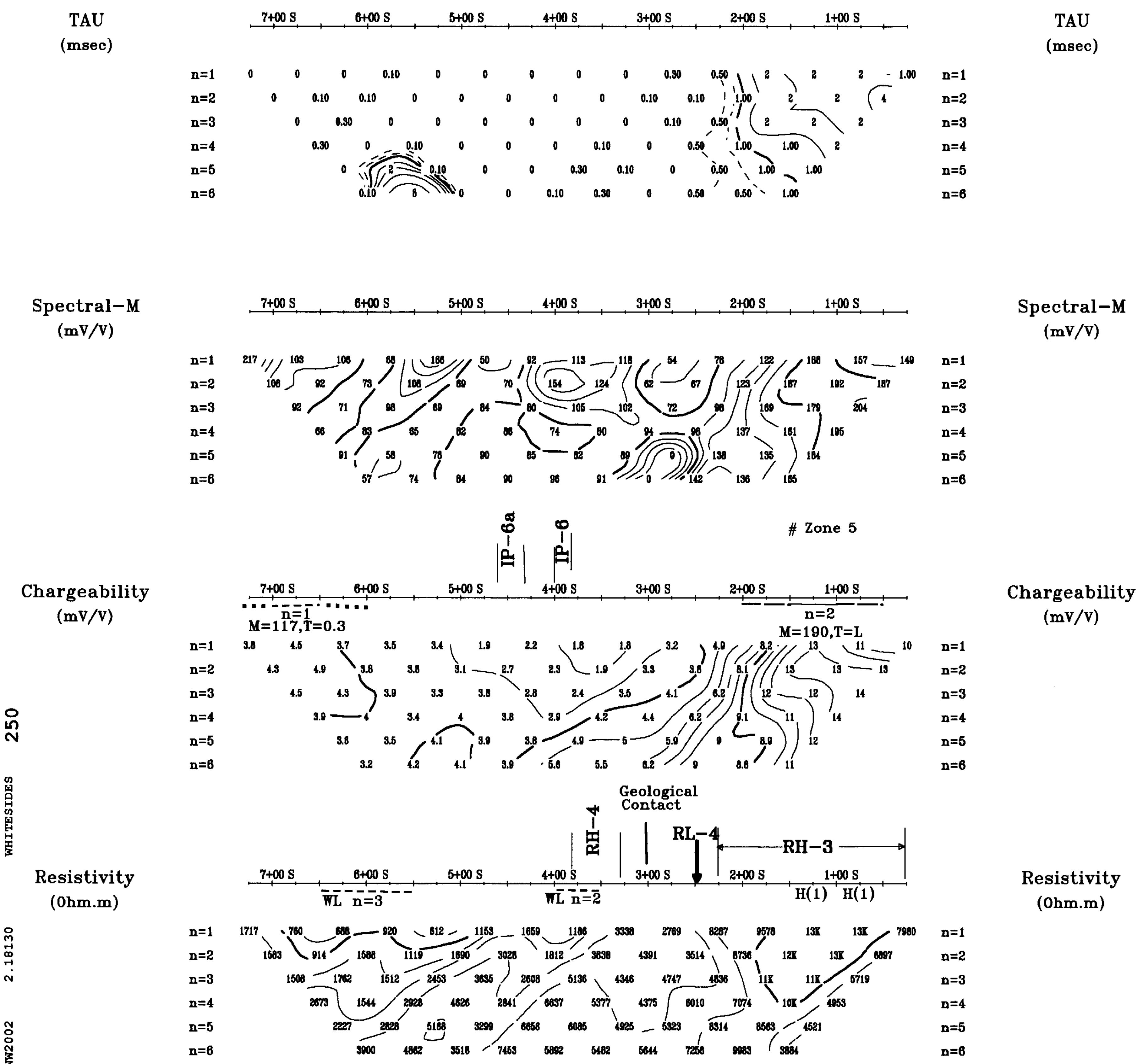
COMPILATION MAP

PROSPECTORS ALLIANCE CORPORATION
TIMMINS WEST PROJECT
PYKE GRID – WHITESIDES TWP

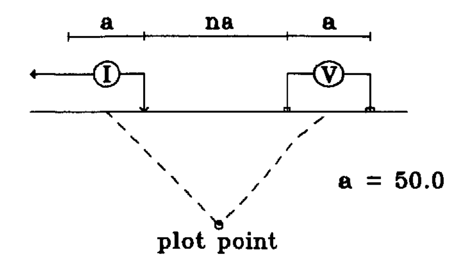
NTS 42A/5

JVX Ltd. ref. no. 9672–PYKE

Line 300 E



Pole−Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

WHITHESIDES TWP.

Plate 9

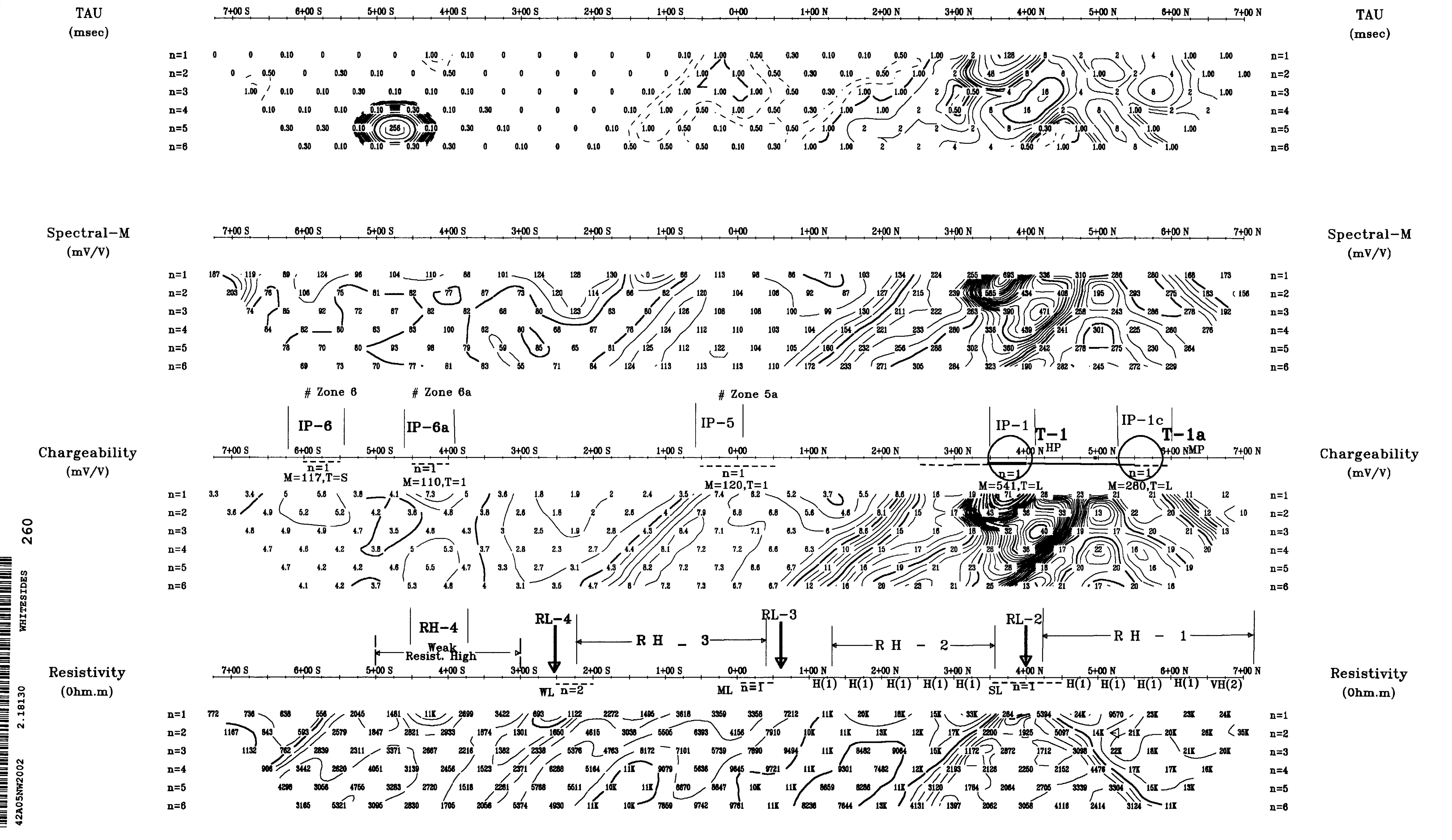
PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

Date: 96/11/01
Interpretation:

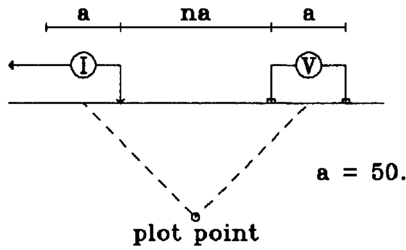
JVX LTD. (Ref.9672, Oct.1996)

Software for the Earth Sciences



Line 400 E

Pole-Dipole Array



a = 50.0 M

Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

Plate 10

PROSPECTORS ALLIANCE CORP.

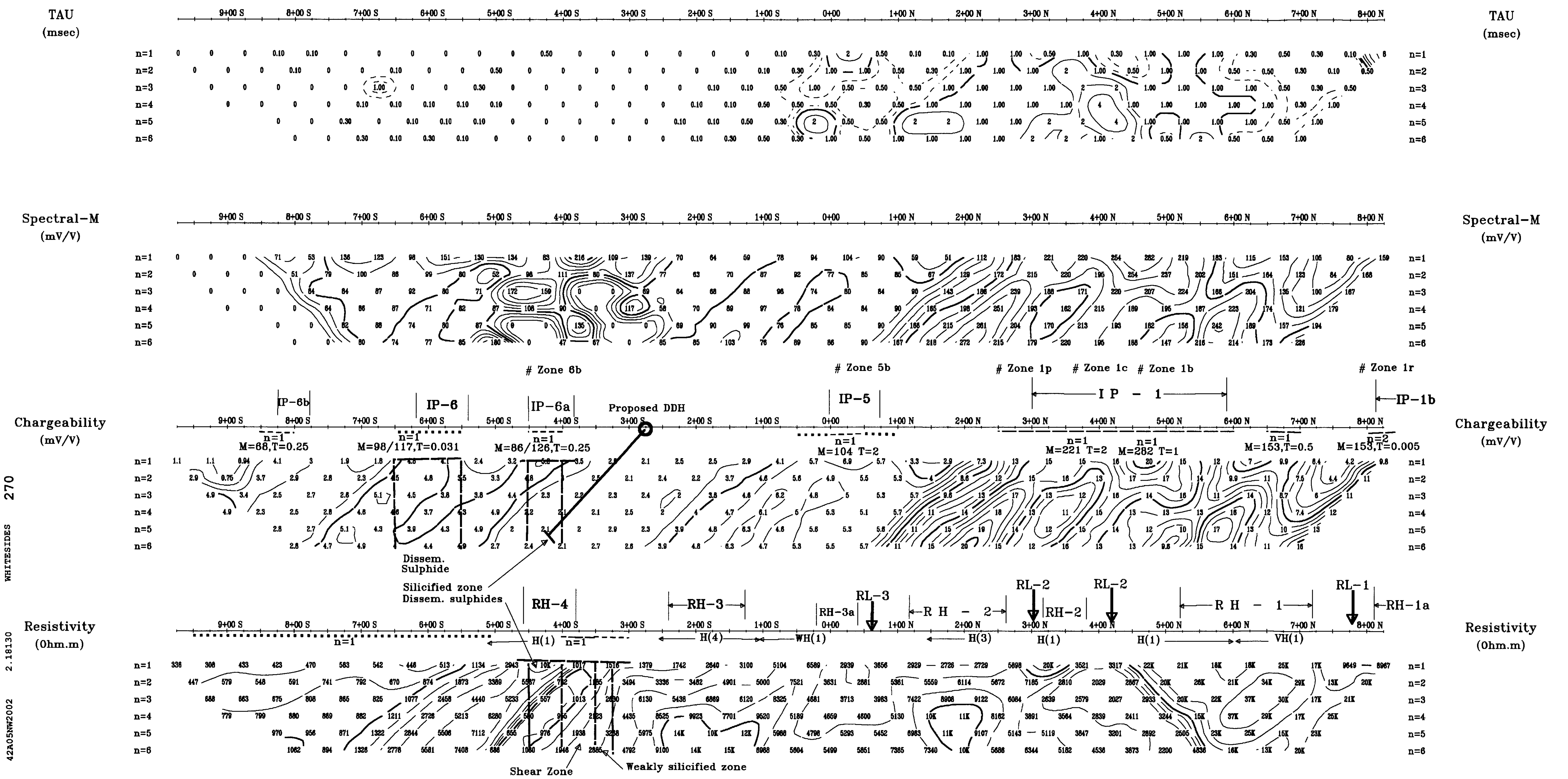
INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (NTS: 42A?5)

Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)

Geosoft Software for the Earth Sciences

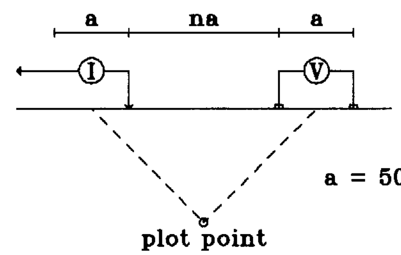
260 WHITESIDES 2.18130 42A05NW2002



Geosoft Software for the Earth Sciences

Line 500 E

Pole–Dipole Array



2.18130

Scale 1:5000

50 0 50 100 150 200 250 300
(metres)

Plate 11

WHITESIDES TWP

PROSPECTORS ALLIANCE CORP.

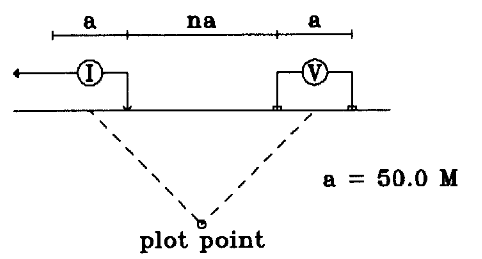
INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

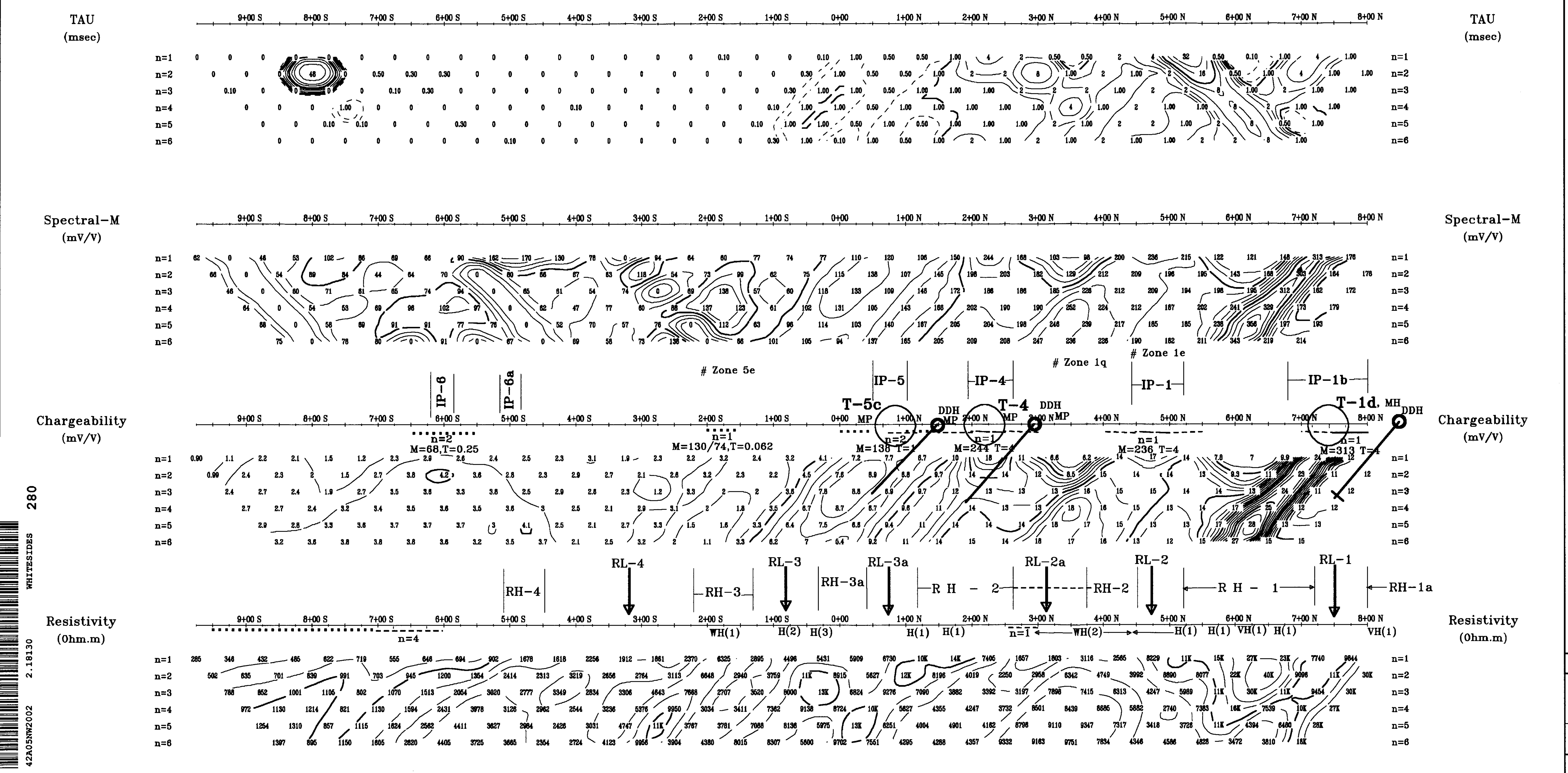
Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)

Line 600 E

Pole–Dipole Array





Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

Plate 12

WHITESIDES TWP.

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)

280

WHITESIDES

42A05NW2002 2.18130

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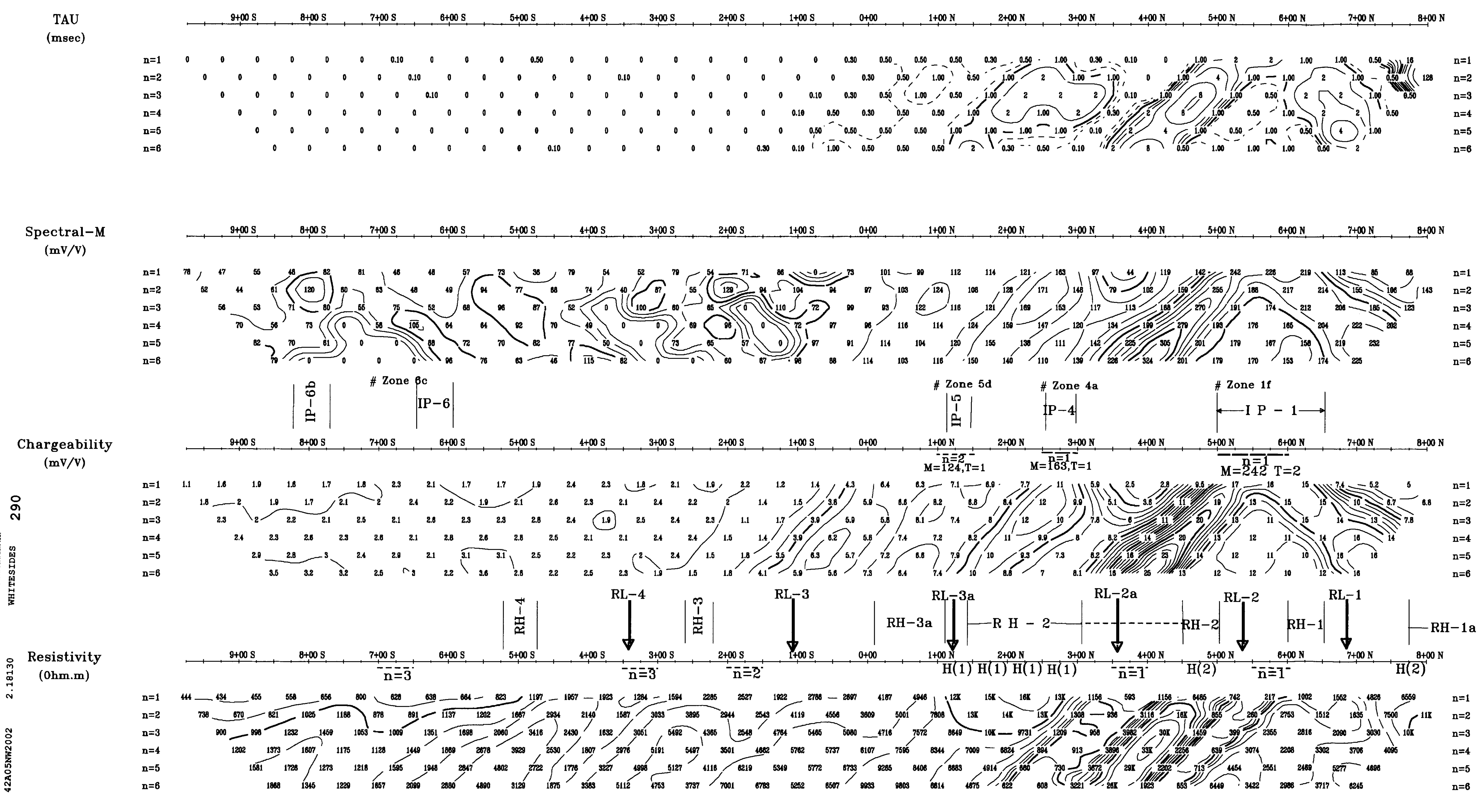
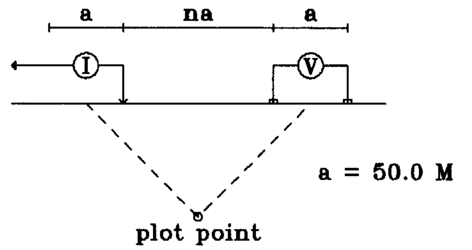


Geosoft Software for the Earth Sciences

42A05NW2002 2.18130 WHITESIDES 290

Line 700 E

Pole-Dipole Array



2.18130

Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

WHITESIDES TWP.

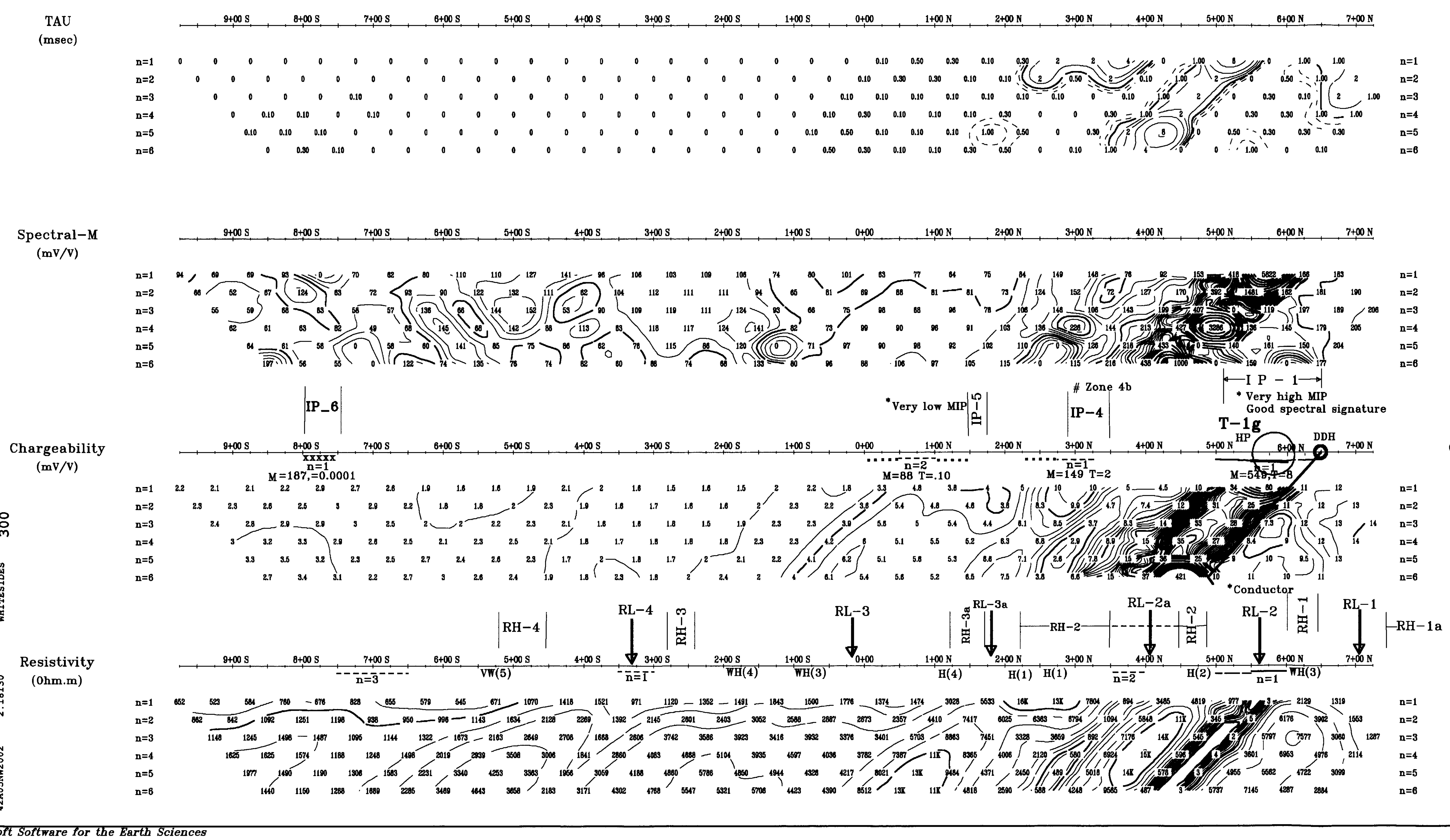
Plate 13

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 800 E

Pole-Dipole Array

a = 50.0 M

plot point

Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

Plate 14

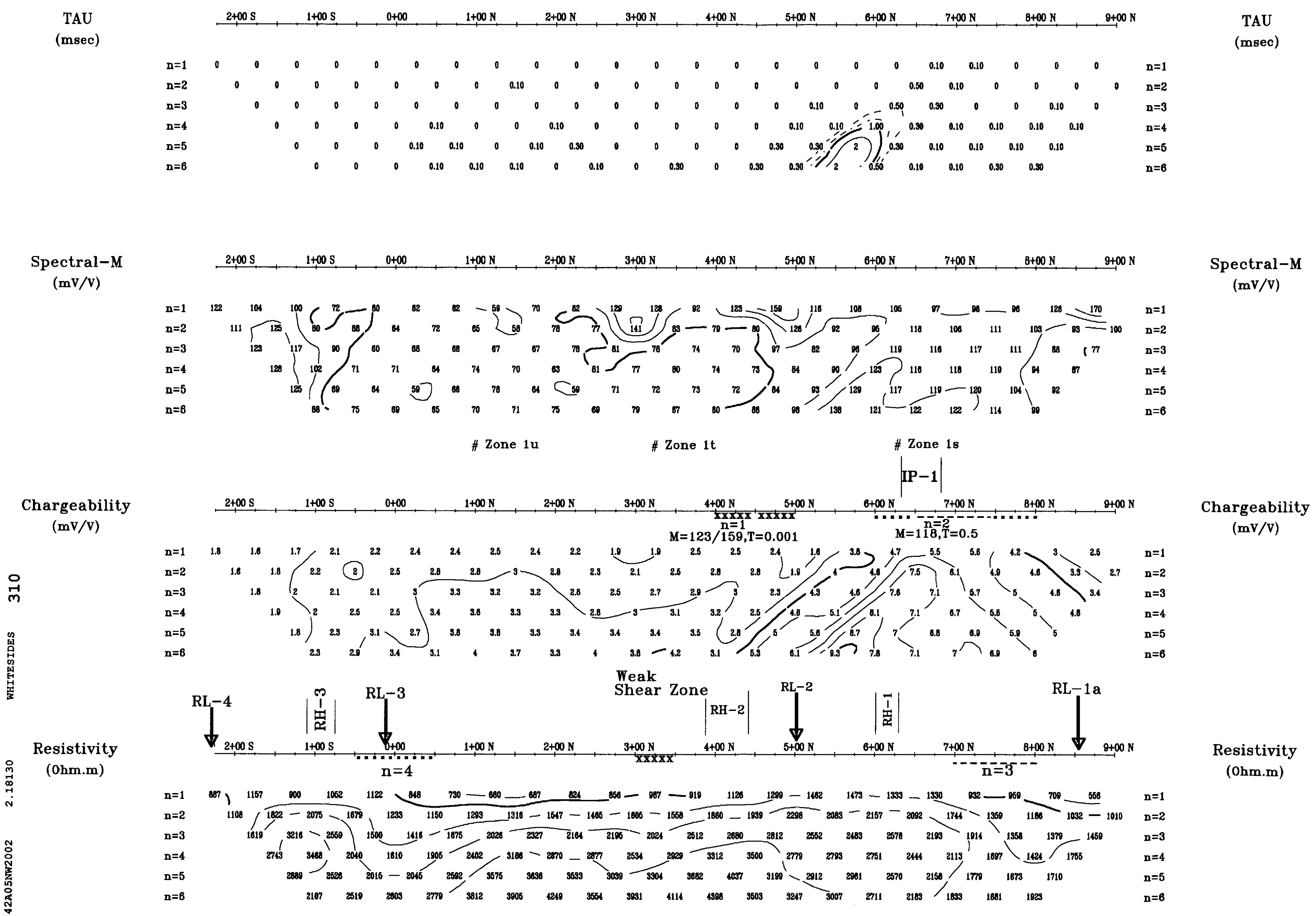
WHITESIDES TWP.

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins Ontario (NTS: 42A/5)

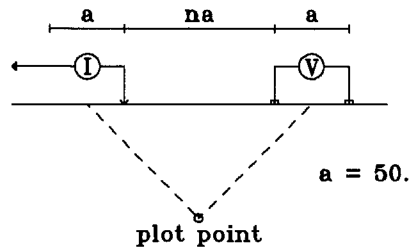
Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 1000 E

Pole-Dipole Array



a = 50.0 M

8.18130

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

Plate 15

PROSPECTORS ALLIANCE CORP.

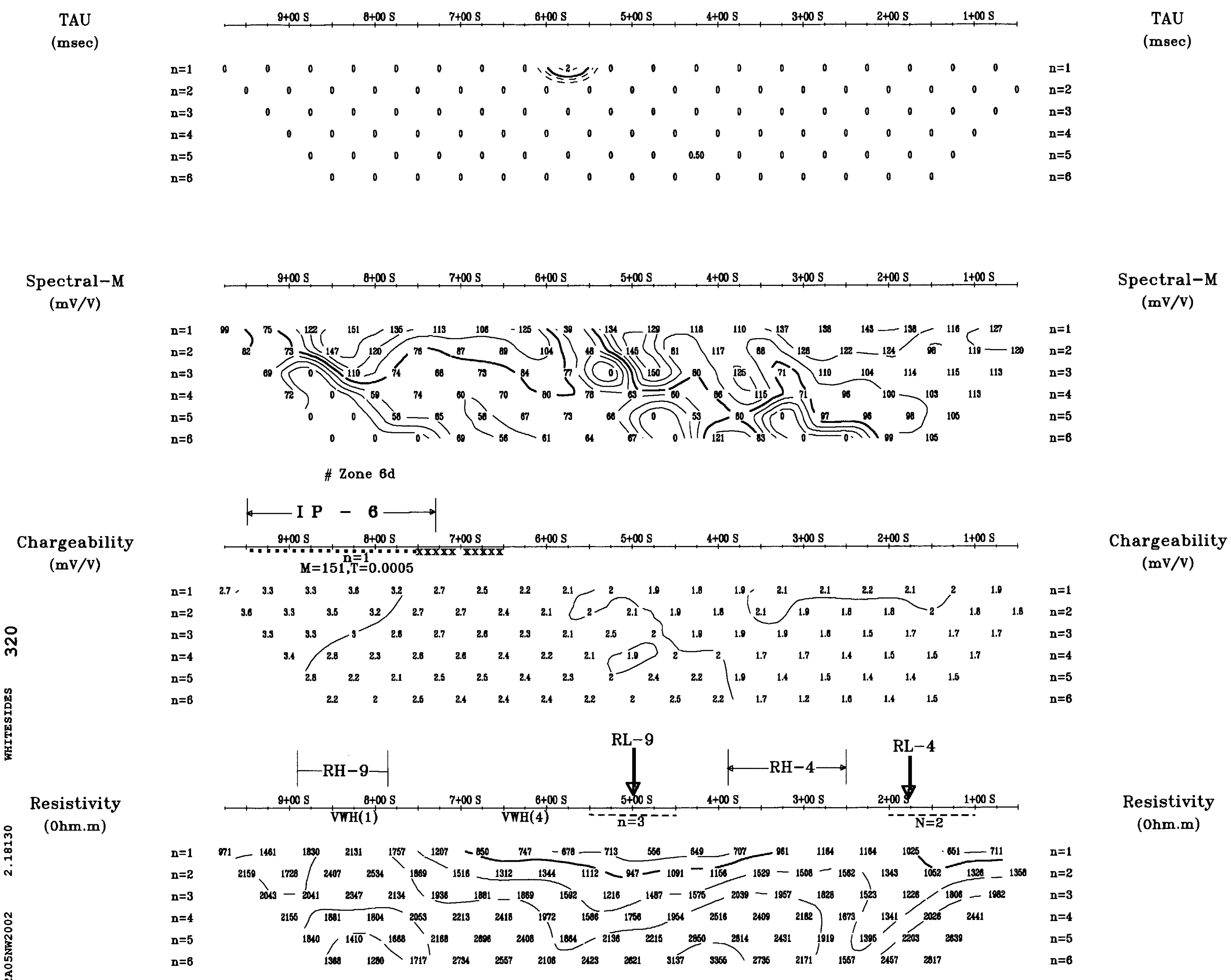
INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

Date: 96/11/12
Interpretation:

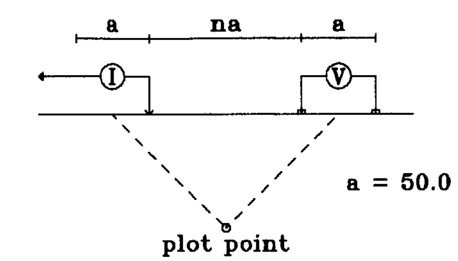
JVX LTD. (Ref.9672, Oct.1996)

Geosoft Software for the Earth Sciences

Line 1100 E



Pole-Dipole Array



Scale 1:5000

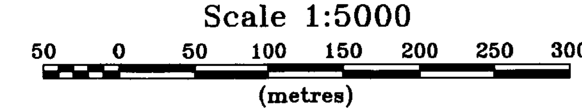


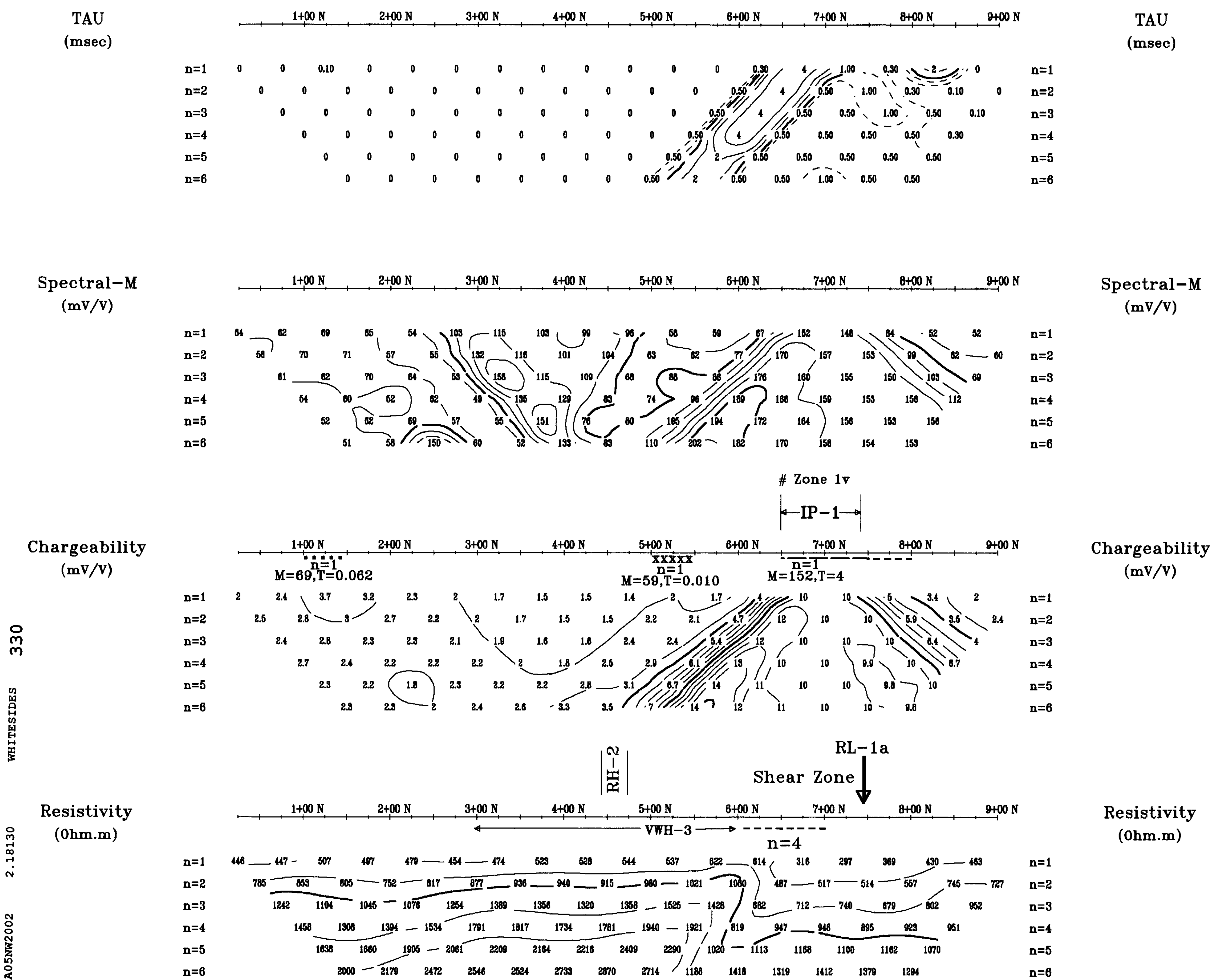
Plate 16

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

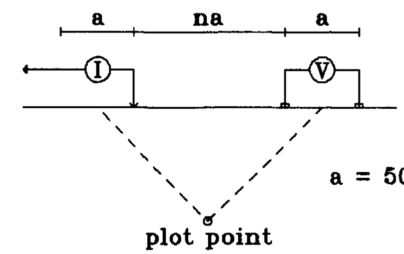
Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 1200 E

Pole−Dipole Array



a = 50.0 M

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

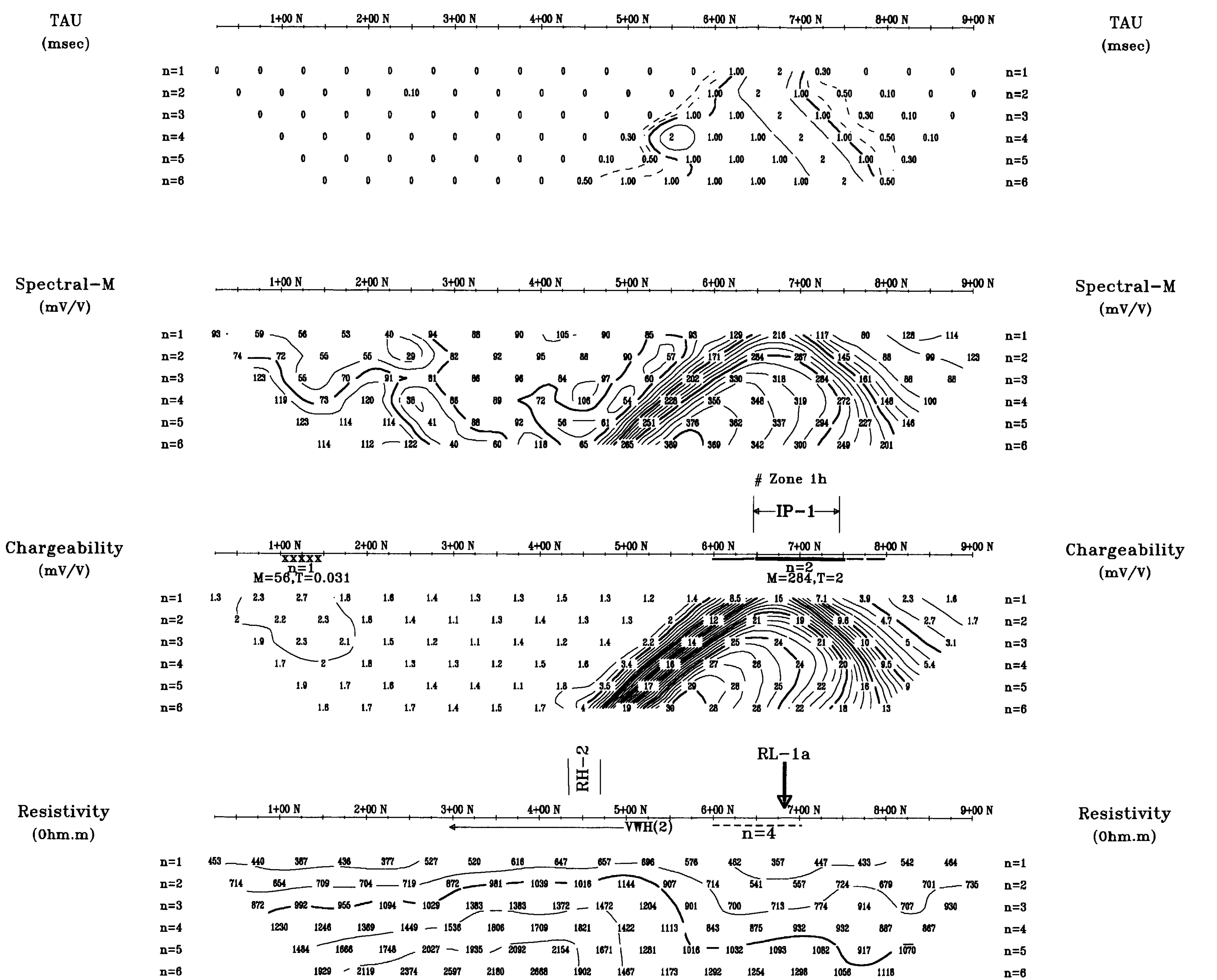
Plate 17

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

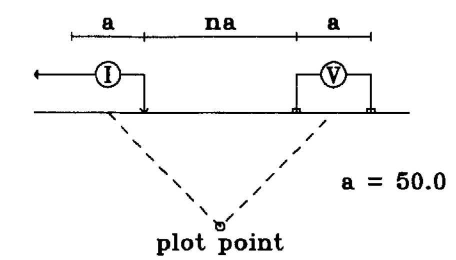
Date: 96/11/12
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 1500 E

Pole−Dipole Array



a = 50.0 M

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

Scale 1:5000

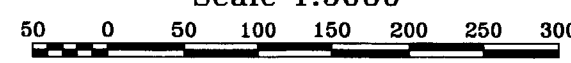


Plate 18

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

Date: 96/11/12
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)

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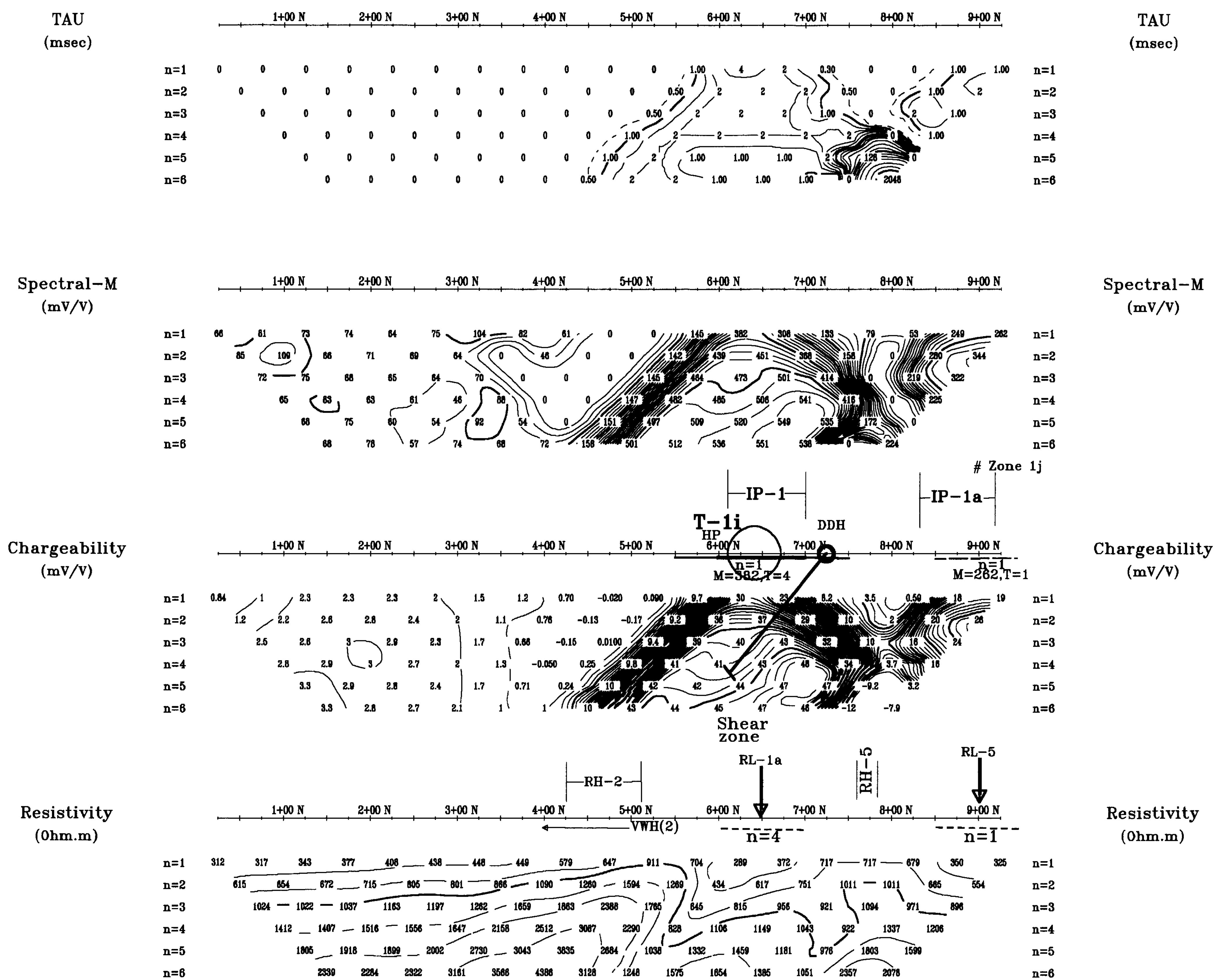
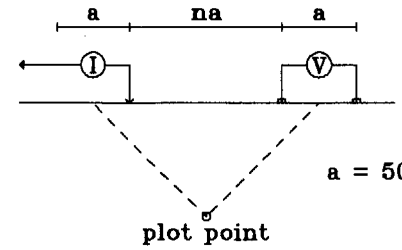


Line 1700 E

Pole−Dipole Array



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10,..

Scale 1:5000

50 0 50 100 150 200 250 300

(meters)

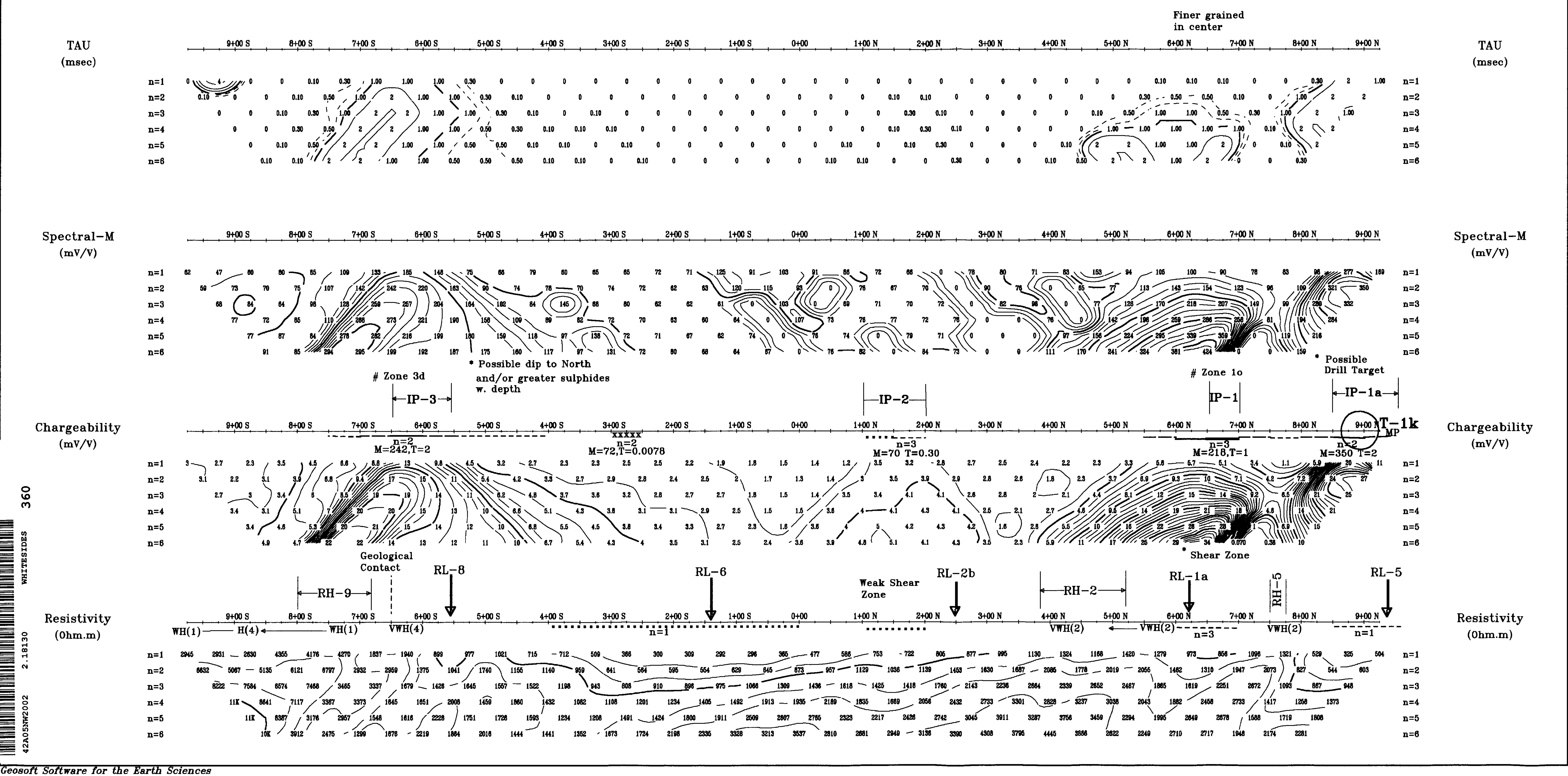
Plate 19

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

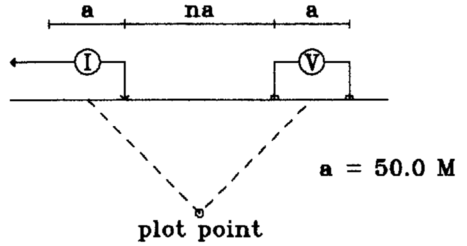
Date: 96/11/12
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 1800 E

Pole-Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300 (metres)

Plate 20

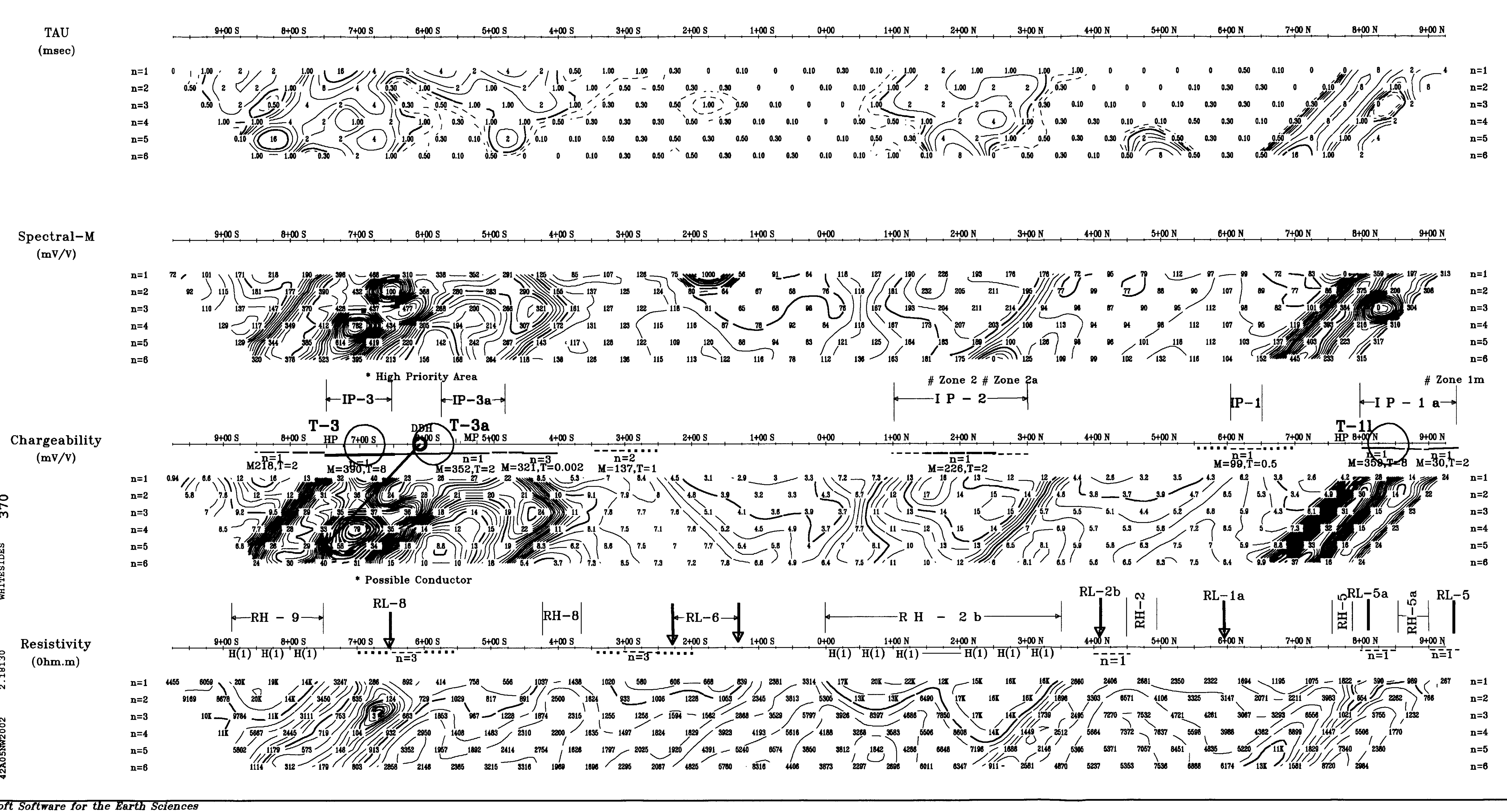
PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

Date: 96/11/01
Interpretation:

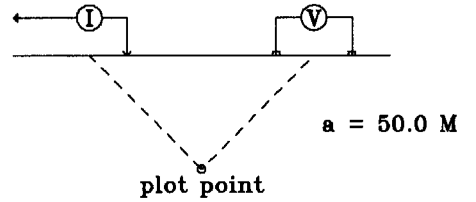
JVX LTD. (Ref.9672, Oct.1996)

42A05NW2002 2.18130 WHITESIDES 360



Line 2000 E

Pole-Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

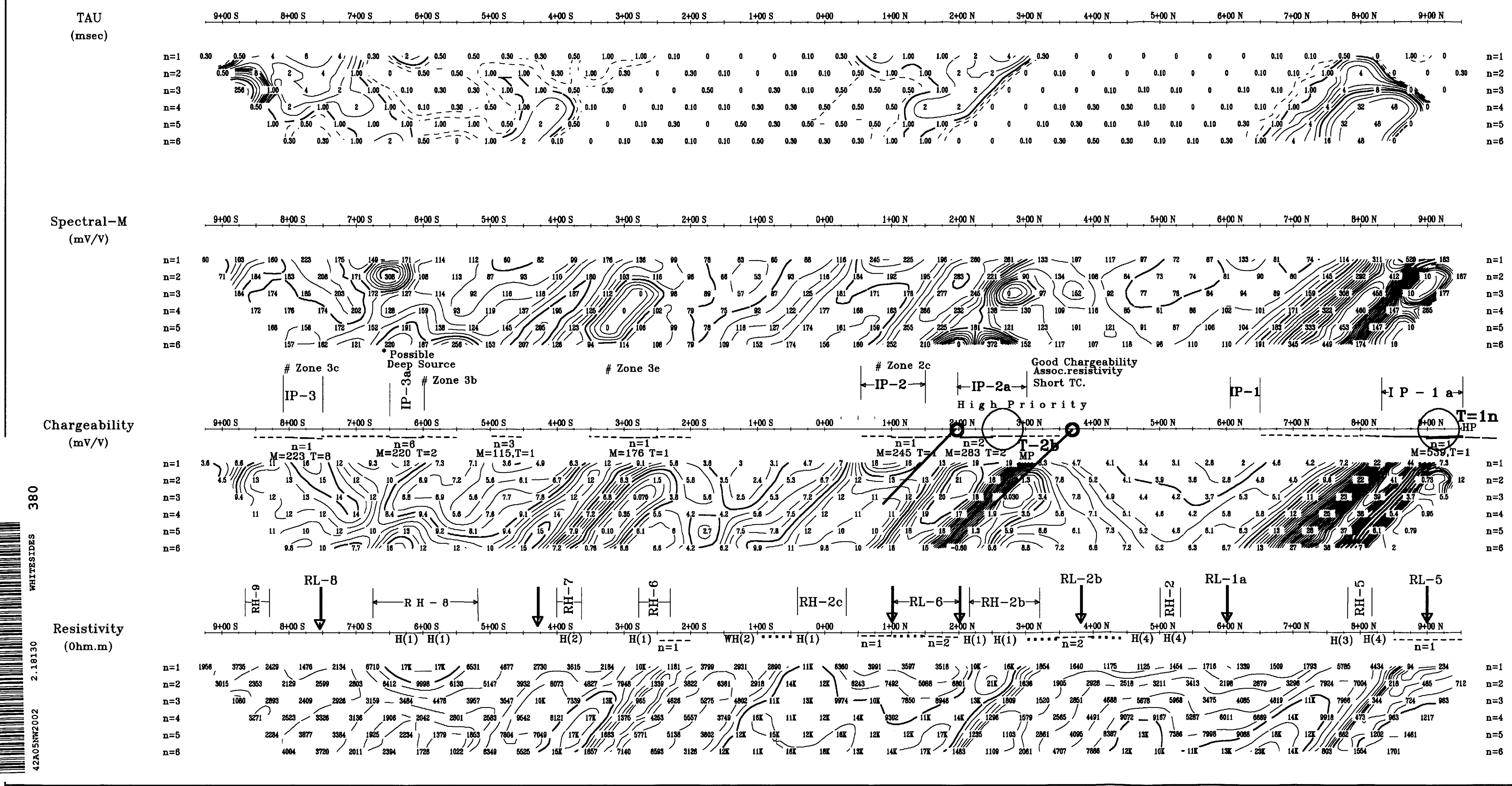
Plate 21

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Pyke Grid, Whitesides Twp.
Timmins, Ontario (42A/5)

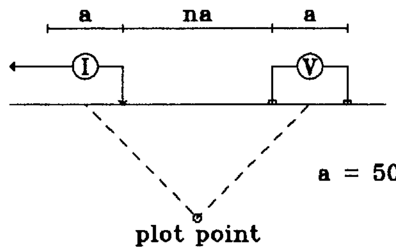
Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)



Line 2200 E

Pole-Dipole Array



Scale 1:5000

50 0 50 100 150 200 250 300

(metres)

WHITESIDES TWP. **Plate 22**

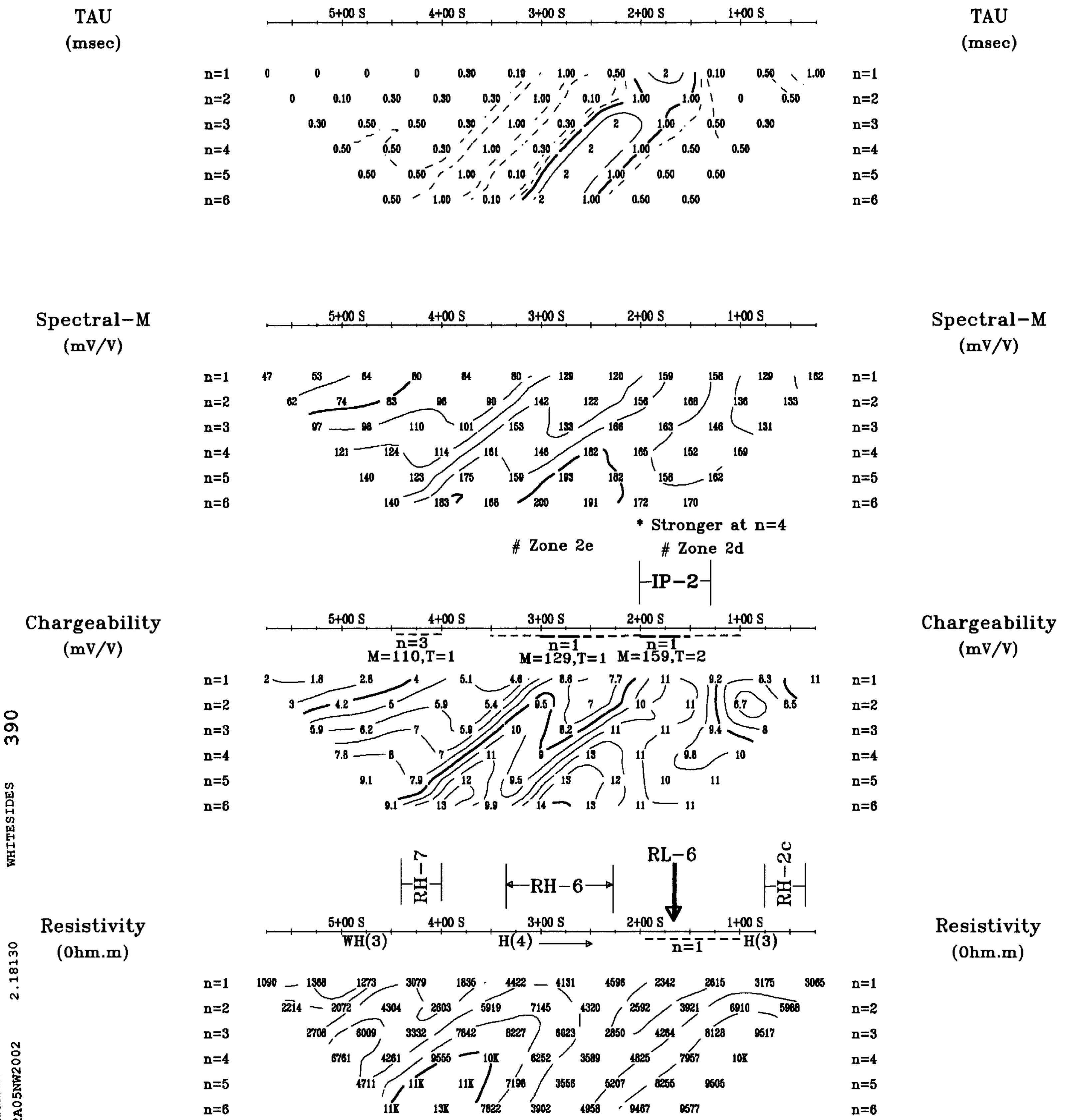
PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

Date: 96/11/01
Interpretation:

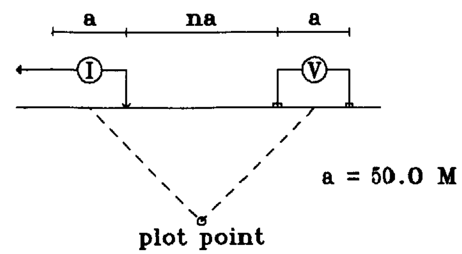
JVX LTD. (Ref.9672, Oct.1996)

Geosoft Software for the Earth Sciences



Line 2400 E

Pole−Dipole Array



Scale 1:5000

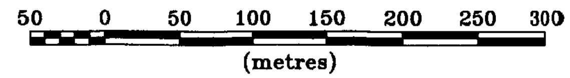


Plate 23

WHITESIDES TWP

PROSPECTORS ALLIANCE CORP.

INDUCED POLARIZATION SURVEY
Timmins West Project, Timmins
Ontario (NTS: 42A/5)

Date: 96/11/01
Interpretation:

JVX LTD. (Ref.9672, Oct.1996)

Geosoft Software for the Earth Sciences