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ALEXANDRIA MINERALS CORPORATION

RESISTIVITY / INDUCED POLARIZATION SURVEY
POLE-DIPOLE CONFIGURATION

GULLROCK GOLD PROJECT

RANGER & WILLANS TOWNSHIPS,
RED LAKE, ONTARIO, CANADA

LOGISTICS AND INTERPRETATION REPORT

16N020 **APRIL 2016**

PGE C Fe Ag Cu Au Zn REE Li Mo U Ni Cr Pb

Abitibi Geophysics Inc. 1740 chemin Sullivan, Suite 1400, Val-d'Or, Québec J9P 7H1 T.: 819.874.8800 F : 819.874.8801 www.ageophysics.com

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Table 1. Maps produced

Map Number	Induced Polarization Survey	Scale
L 13+00W – L 1+00E (8 plates)	Pole-Dipole Colour Apparent Resistivity & Chargeability Pseudosections and ***Image2D***^{TM} True-depth Sections	1:5000
8.2	***Image2D***^{TM} Resistivity at a Depth of 75 m (Ohm-m)	1:5000
8.3	***Image2D***^{TM} Chargeability at a Depth of 75 m (mV/V)	1:5000
10.0	Geophysical Interpretation	1:5000

Pseudosection plates, vertical sections, and colour maps are bound or inserted in pouches at the end of this report. Our Quality Control System requires every final map to be inspected by at least two qualified persons before being approved and included within a final report.

1. RESULTS AND RECOMMENDATIONS

❑ *NOTE – PREVIOUS SURVEY*

The location of this survey is just east of a previous IP survey completed by Abitibi Geophysics in 2010. The survey configuration used provided a shallower depth of investigation (100 m) than the current survey (150 m) and this is very clear in the plan maps of both chargeability and resistivity shown in figures 1 and 2 below. You can see that much of the survey grid, outside of a small section in the southwest corner, is dominated by low resistivity values indicating a thick overburden cover. This is verified when looking at the chargeability map in figure 2. There is almost no penetration throughout much of the grid, except for the small area in the southeast.

There are two anomalies that look to carry on from the 2010 survey into the new survey. This includes anomaly **GL-03**, which has been given the same name in the current survey as well as anomaly **GL-02,** also given the same name in both surveys. Anomaly **GL-28** in the current survey may have a one line extension into the old grid on L 91+00E at approximately 25+12N.

❑ *RESISTIVITY*

The conductive response of the lake bottom sediments is observed throughout nearly the entirety of the grid, with thickness ranging from approximately 0 – 150 m below surface. This resistivity low, particularly in the northwest section of the grid, may be masking the response from any anomalous chargeability zones and causing observed anomalies to appear weak.

❑ *CHARGEABILITY*

Following a detailed interpretation of the pseudosections and with the help of the recovered Image2D vertical sections, a total of **10 chargeability anomalies** were interpreted. These anomalies are illustrated on the interpretation map 10.0. Many of these anomalies (**GL-27**, **GL-29**, **GL-30**, **GL-32** and **GL-03**) are associated with areas where resistivity values are slightly elevated, indicating a silicified host rock or environment.

The anomalies seem to have two distinct trends, those in the northern section of the grid above 13+00N have a more NNW trend whereas those in the southern portion are trending WNW. This trend pattern is also observed in the resistivity.

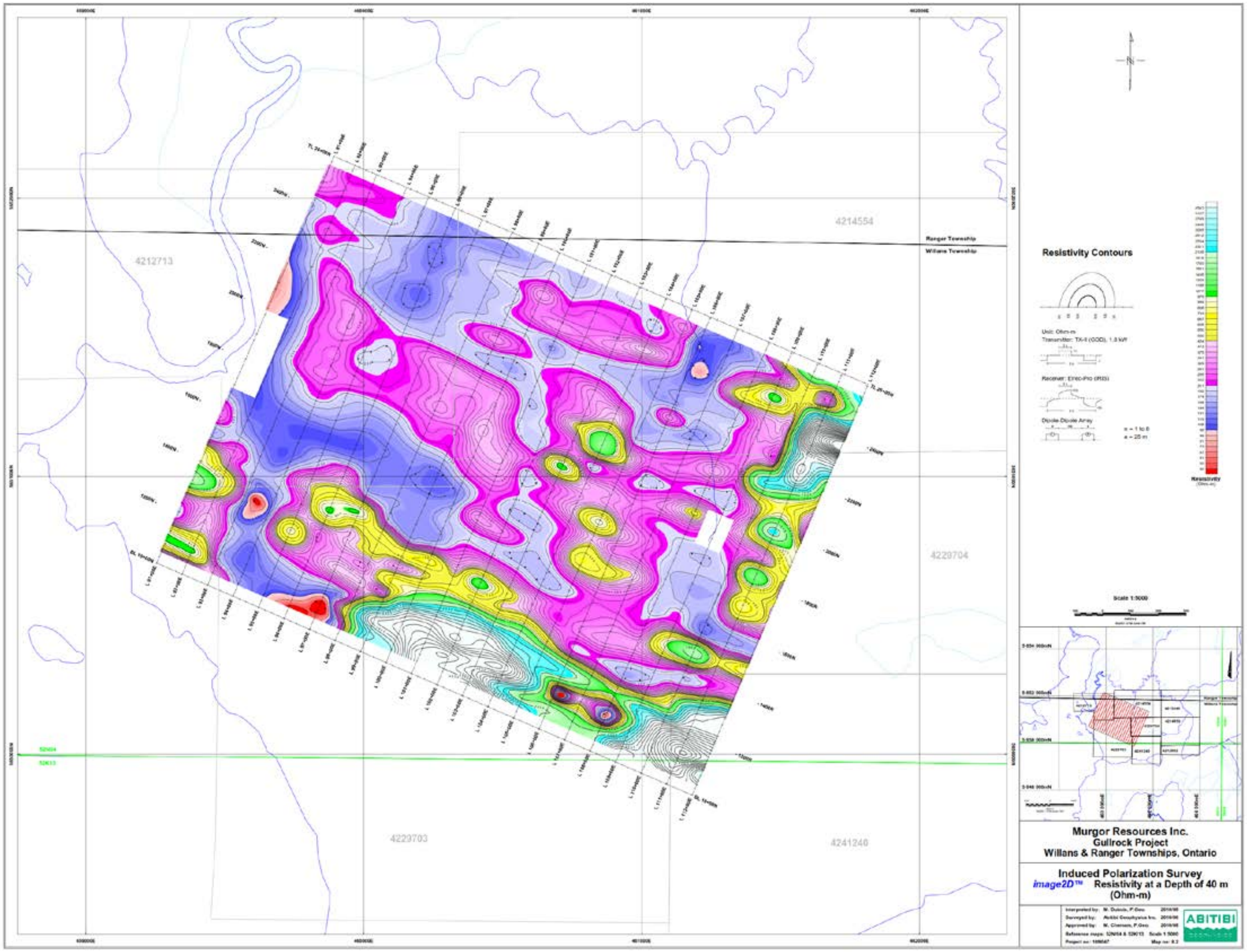


Figure 1. Inverted resistivity at -40 m from prior 2010 IP survey

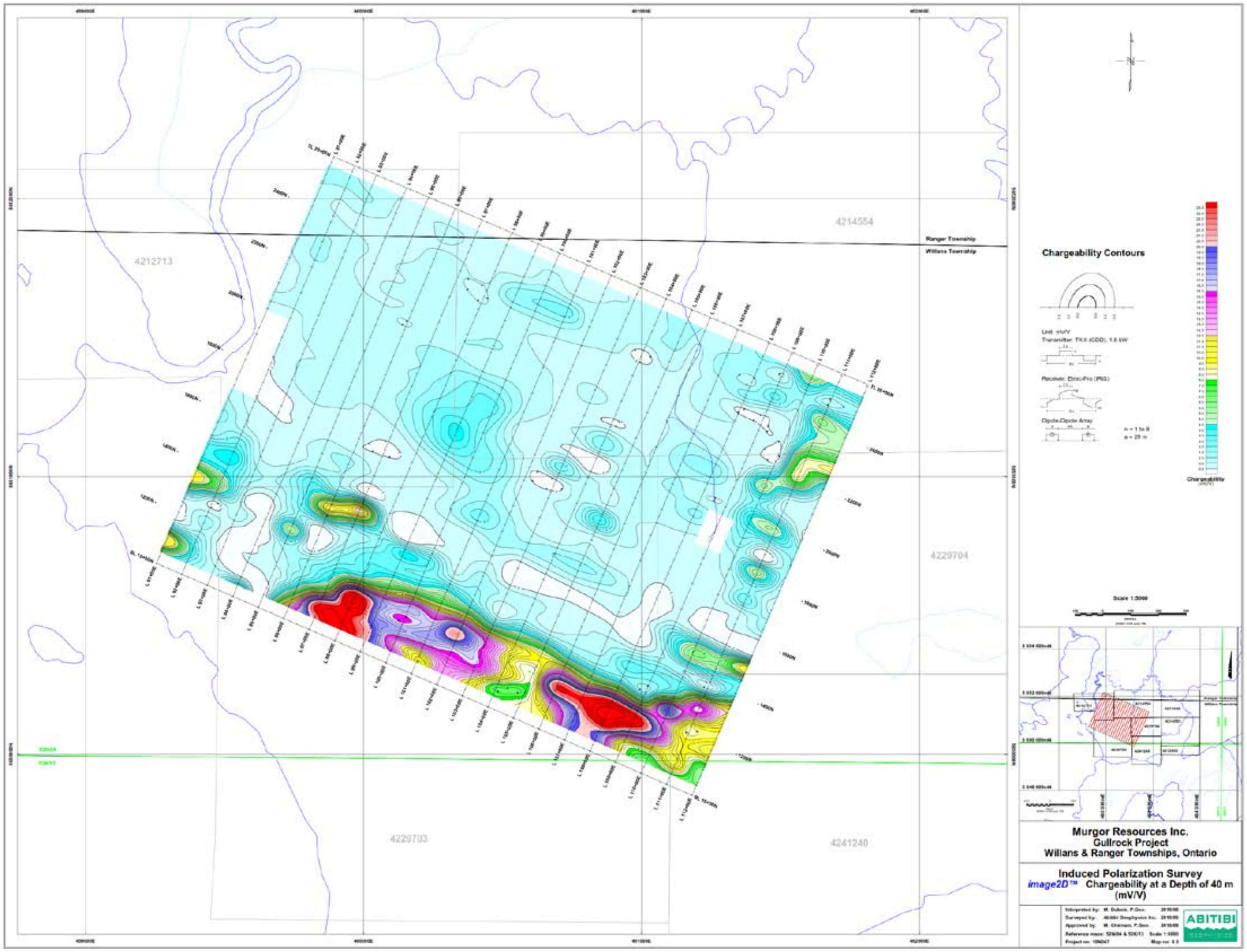


Figure 2. Inverted chargeability at -40 m from prior 2010 IP survey

- *Follow Up*

  - *Survey extension*

This survey has identified interesting anomalies near the edges of the survey grid. It is recommended that additional survey lines be added with highest priority to the south and west of the survey grid to fully delineate the extent of the chargeable responses. Successful DDH results for high priority targets increases the potential benefit of survey extension.

Completing the current survey grid as well as the old survey grid with a deep IP system such as Abitibi's OreVision® is also suggested to cut through the conductive cover and properly delineate the weak chargeable trends here, and to possibly bring out things that are not able to be seen with this survey configuration.

  - *Prospecting / Trenching*

Being that much of the grid seems to be dominated by low resistivity values and a potentially thick overburden, there are few chargeable responses that seem to be outcropping or near surface throughout the grid.

The inversion results indicate that anomaly GL-27 potentially outcrops or passes very near surface, in an area of little to no overburden, on L 7+00W between 25+50N and 27+00N.

Anomaly GL-29 potentially outcrops on several occasions, L 1+00W between 17+50N and 18+75N, L 3+00W between 18+50N and 20+00N and on L 5+00W between 19+50N and 20+50N.

Anomaly GL-32 potentially outcrops or passes very near surface, in an area of little to no overburden, on L 13+00W between 14+50N and 15+75N.

Anomaly GL-03 potentially outcrops on several occasions, L 1+00E between 10+50N and 11+50N, L 1+00W between 10+50N and 12+50N, L 3+00W between 10+50N and 13+50N and on L 5+00W between 11+50N and 12+50N.

There is a weak, single line anomaly on L 1+00E at approximately 27+50N to 28+50N that potentially outcrops, or comes near to surface as well. This is also recommended for prospecting if possible.

  - *Drilling*

A drilling program has been recommended to test the chargeable targets outlined in this report. Table 2 below lists DDH coordinates, target locations and anomaly descriptions. The pages following this table are 2D, along line, images of the selected drill targets.

Table 2. Drilling Targets on Gullrock Gold Property

DRILL HOLE (Priority_ Anomaly)	Type / Target Interest	Location of the Target			Proposed DDH					Figure	Page
		Line	Station	Depth	Line	Station	Az.	Dip	Length		
1_GL-33	Bulbous, with a WNW trend, strong chargeability, and the strongest observed on the grid, with a conductive trend sitting to the south. Target is deep and not fully resolved with this survey, ranging from 100 – 150 m depth. Mineralization potentially related to a faulted or shear zone.	7+00W	10+50N	125 m	7+00W	9+40N	18°	52°	230 m	3	6
1_GL-03	Moderate chargeability / high resistivity target. Target matches up with an observed anomaly on the old survey grid in the same area. It is quite shallow, ranging from 0 – 75 m depth. This anomaly sits above GL-33 and is potentially related to or merging with it at depth. This anomalous zone has potential for disseminated sulphide mineralization within a silicified zone.	1+00W	11+25N	75 m	1+00W	10+25N	18°	48°	160 m	4	6
2_GL-30	Bulbous, with a NNW trend, weak chargeability response with a conductive trend sitting to the north. Target is deep and not fully resolved with this survey, ranging from 100 – 150 m depth. Mineralization potentially related to a faulted or shear zone.	7+00W	17+33N	150 m	7+00W	16+25N	18°	55°	225 m	5	7
3_GL-29	Weak chargeability response / high resistivity target with a NNW trend. It is quite shallow, ranging from 0 – 100 m depth. This anomalous zone has potential for disseminated sulphide mineralization within a silicified zone.	1+00W	18+50N	60 m	1+00W	17+75N	18°	47°	140 m	6	7
3_GL-27	Weak chargeability response / sometimes associated with a slight rise in resistivity with a NNW trend. It is quite shallow, ranging from 0 – 100 m depth. This anomalous zone has potential for disseminated sulphide mineralization within a silicified zone.	7+00W	26+25N	75 m	7+00W	25+75N	18°	48°	140 m	7	8

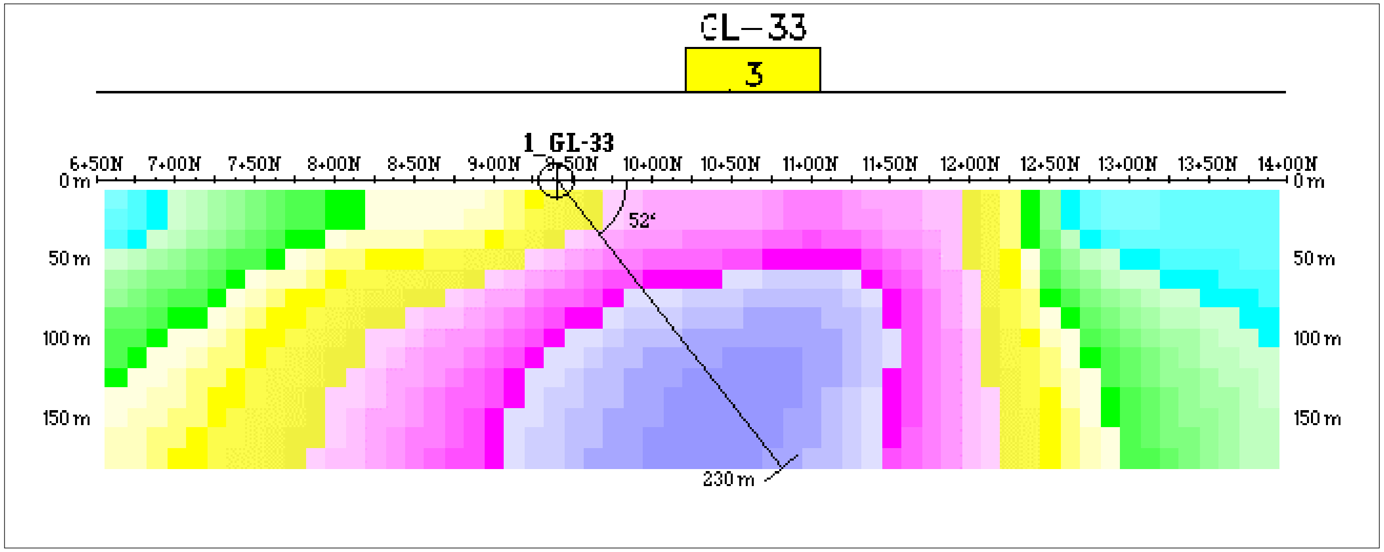


Figure 3. Proposed DDH 1_GL-33 on **L7+00W**

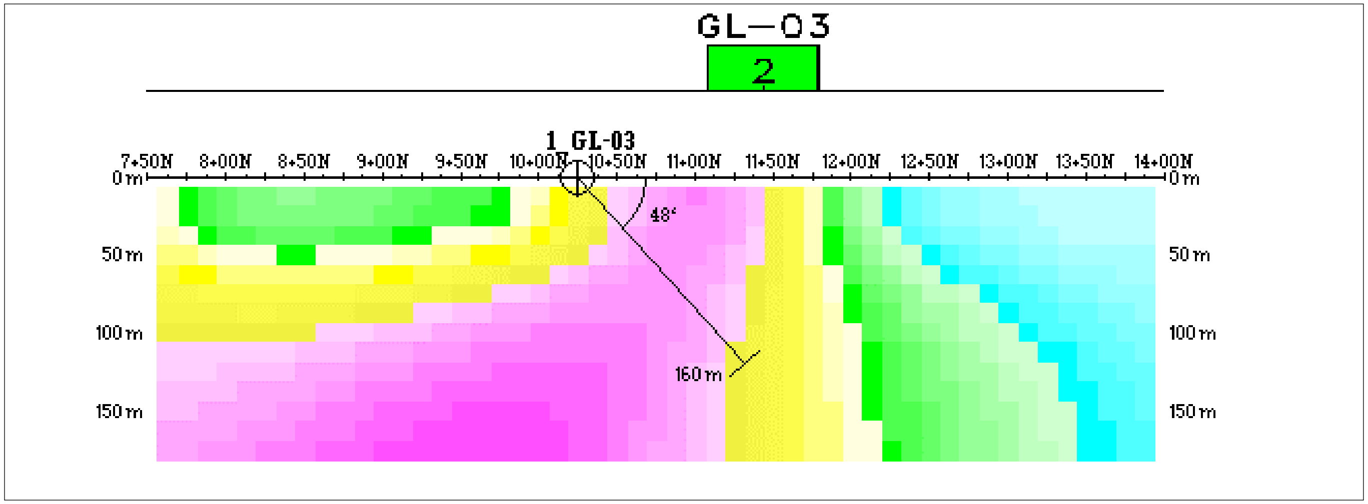


Figure 4. Proposed DDH 1_GL-03 on **L1+00W**

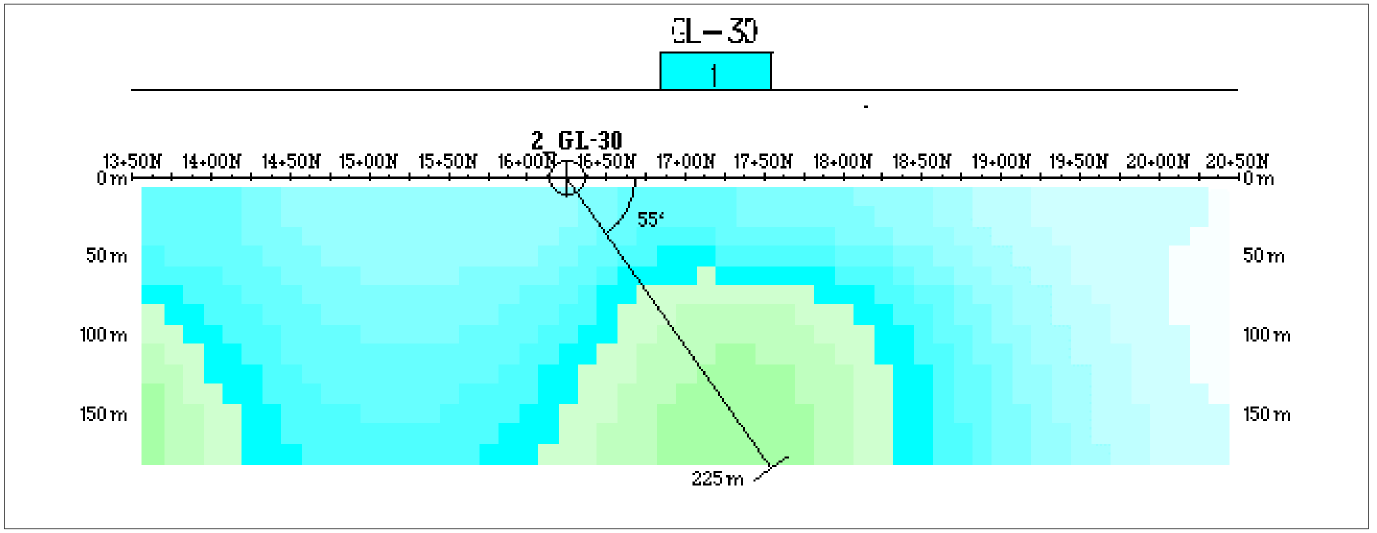


Figure 5. Proposed DDH 2_GL-30 on **L7+00W**

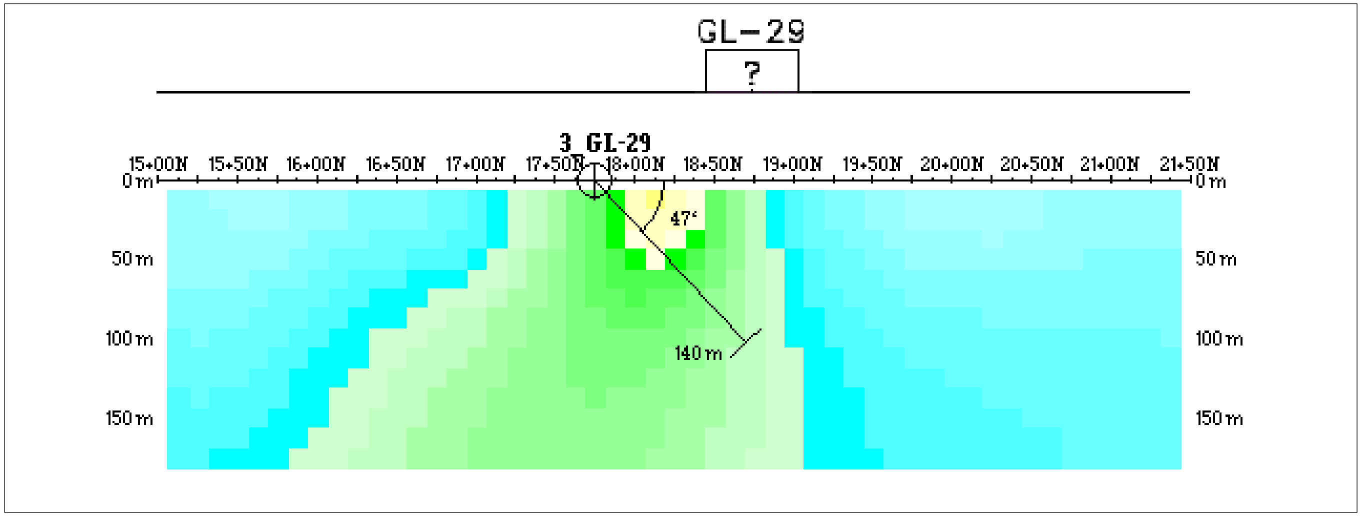


Figure 6. Proposed DDH 3_GL-29 on **L1+00W**

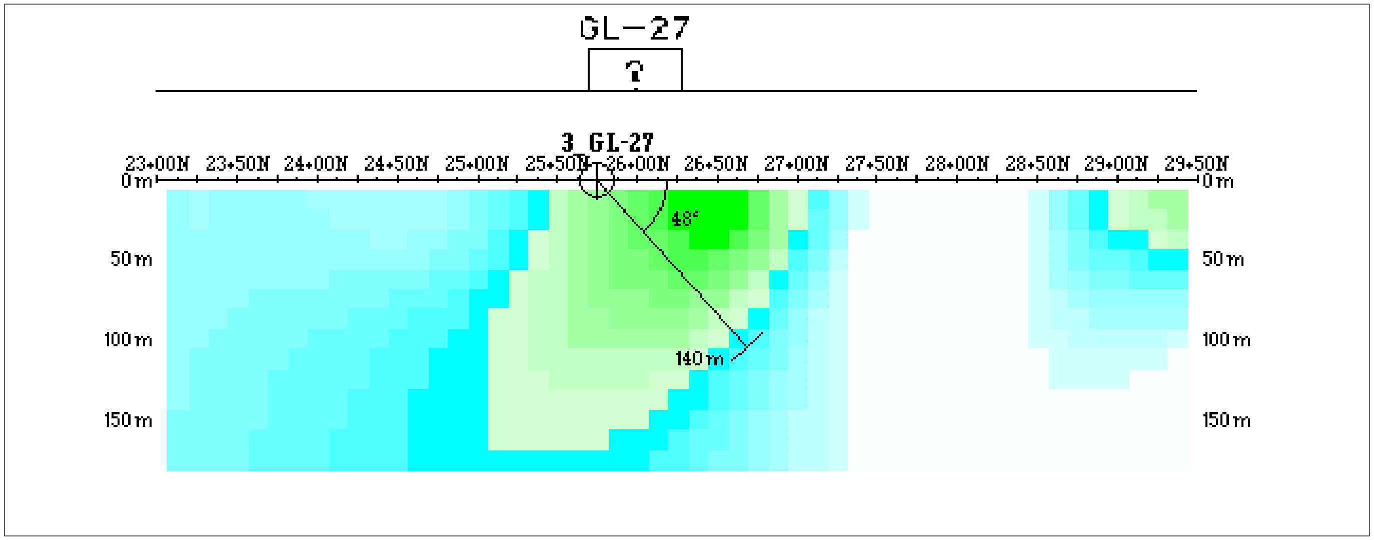
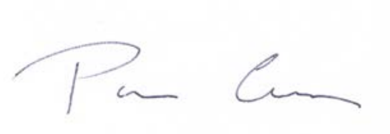


Figure 7. Proposed DDH 3_GL-27 on **L7+00W**

The interpretation of the geophysical data embodied in this report is essentially a geophysical appraisal of the Gullrock Gold Project. As such, it incorporates only as much geoscientific information as the author had on hand at the time. Geologists thoroughly familiar with the area may be in a better position to evaluate the geological significance of the various geophysical signatures. Moreover, as time passes and data provided by follow-up programs are compiled, the priority and significance of exploration targets reported in this study may be downgraded or upgraded.

Respectfully submitted,
Abitibi Geophysics Inc.



Pam Coles, P.Geo.,
Project Geophysicist
APGO # 2612

PC/sl

2. MANDATE

- ❑ *PROJECT ID* — **Gullrock Gold Project**
  (Our reference: **16N020**)

- ❑ *GENERAL LOCATION* — Red Lake Gold Mining District,
  North-Western Ontario, Canada

- ❑ *CUSTOMER* — **Alexandria Minerals Corporation**
  1952, 3e Ave
  Val-d'Or (Québec), J9P 7B2, Canada
  Telephone: (819) 874-1333

- ❑ *REPRESENTATIVES* — **Mr. Philippe Berthelot, geo**
  pberthelot@azx.ca

- ❑ *SURVEY TYPE*
  - **Time domain Resistivity / Induced polarization**
    Pole-Dipole configuration

- ❑ *GEOPHYSICAL OBJECTIVES* — Identify zones amenable to gold mineralization.
  Identify targets for further exploration.

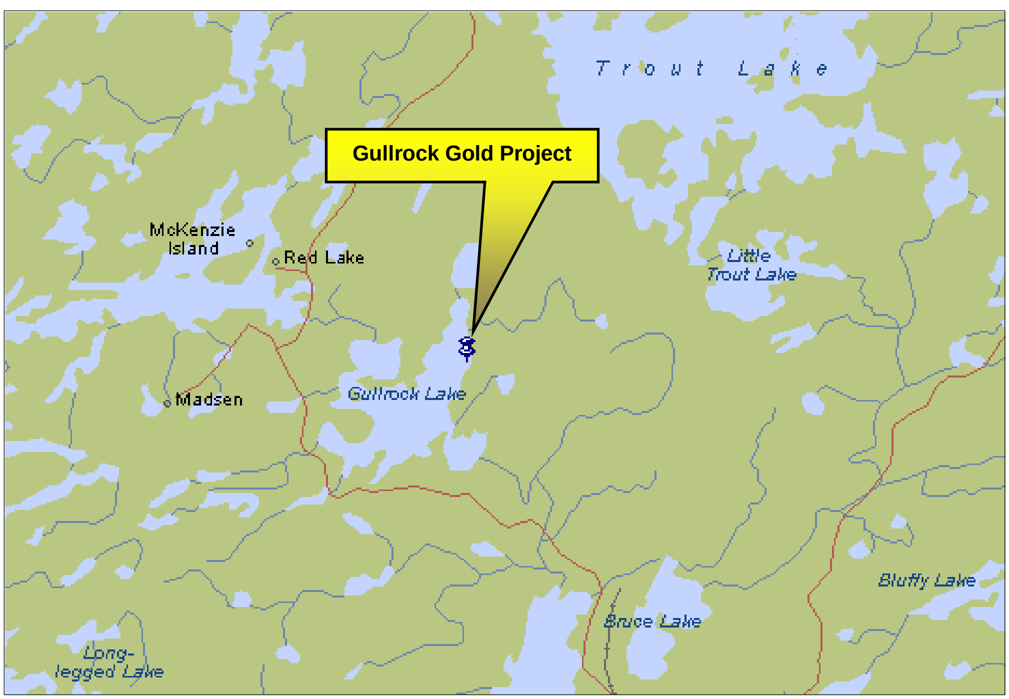


Figure 8. General location of the Gullrock Gold Project

3. GULLROCK GOLD PROJECT

❑ *LOCATION*	**Ranger & Willans Townships**, Ontario, Canada, Centred on, 51° 00' 54" N and 93° 35' 09" W NAD83 / UTM zone 15N: 459 000 mE, 5 651 650 mN NTS sheet: **52N/04**
❑ *NEAREST SETTLEMENT*	**Red Lake**: **13** km WNW
❑ *ACCESS*	From Red Lake, drive south-east on Road 105 for about 16 km to reach Gullrock Lake. The survey area is covering the northern section of Gullrock Lake. It can be reached from the highway by taking a snowmobile 16 km northeast.
❑ *GEOMORPHOLOGY*	Approximately 65% of the grid area encompasses Gullrock Lake itself. The remainder of the survey area that is on land shows modest topographic relief of approximately 20 m (360 – 375 m). There is a small meandering river in the northeast corner of the grid with a wetland area surrounding on the east side of the lake.
❑ *CULTURAL FEATURES*	There were no cultural features observed on the grid.
❑ *MINING LAND TENURE*	The Gullrock Gold property comprises 13 claims, all of which are wholly owned by Murgor with an ongoing acquisition by Alexandria Minerals. The claim numbers encompassed in the present survey are illustrated in figure 9 below.
❑ *SURVEY GRID*	This portion of the grid surveyed on the Gullrock Gold project consists of 8 lines at 18°, with a line length of 2400 m. There is a base line located at 10+00N, with a tie line located at 30+00N.
❑ *ENVIRONMENTAL HEALTH AND SAFETY*	As part of the Abitibi Geophysics EHS program crew members received first aid training and are provided with safety equipment and specialized training for the induced polarization technique. In addition, the crew was provided with a satellite telephone for emergency communication.
❑ *COORDINATE SYSTEM*	Projection: Universal Transverse Mercator, zone 15N Datum: NAD83

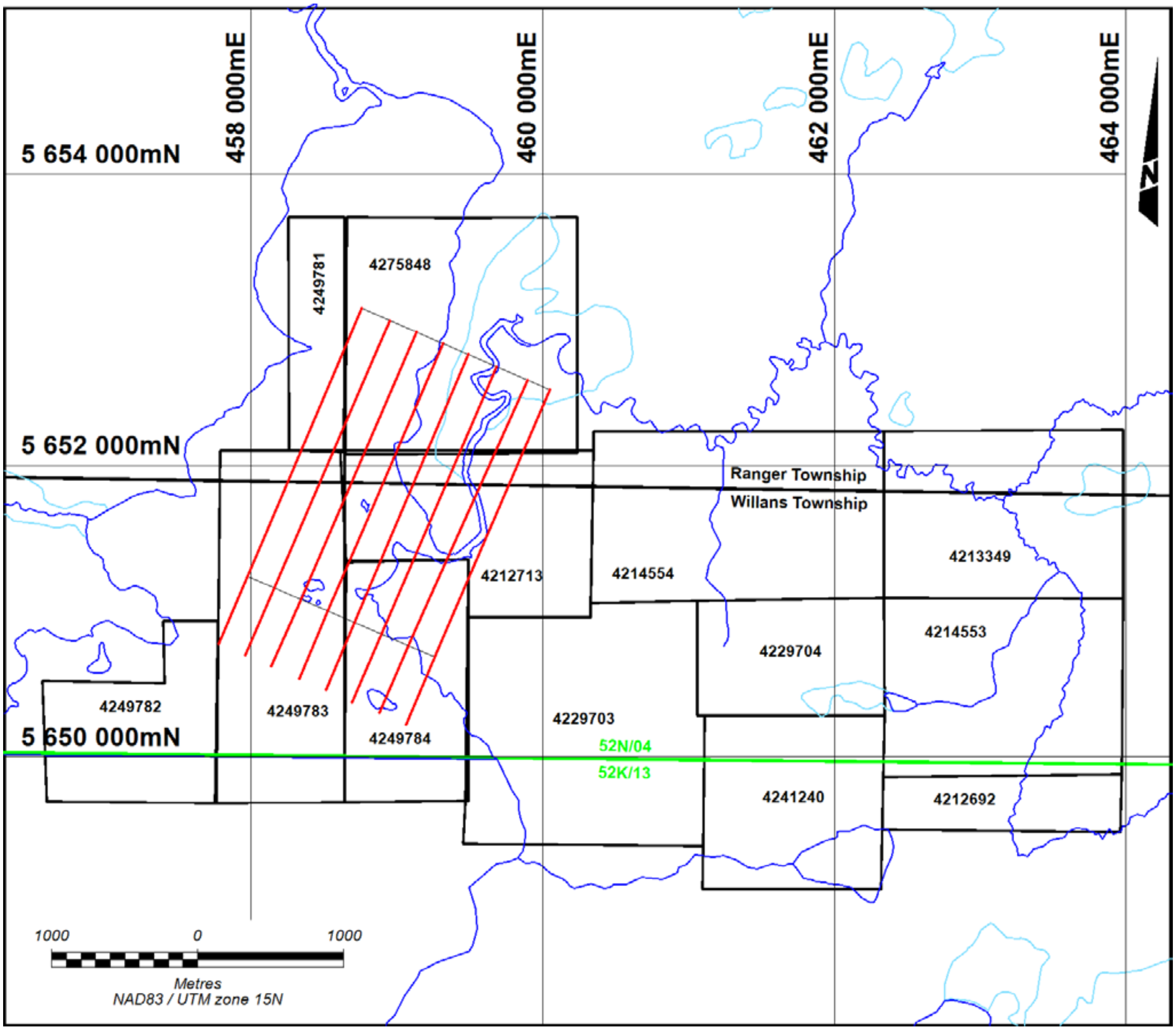


Figure 9. Index of claims covering the Gullrock Gold Project

4. Pole-Dipole Resistivity / Induced Polarization Survey

- *Type of Survey Configuration*

Time domain Resistivity / Induced polarization
Pole-dipole array:
"*a*" = **50 m**, "*n*" = **1 to 6**

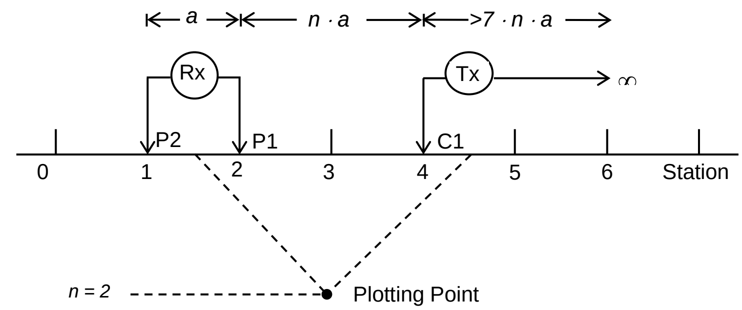


Figure 10. The pole-dipole array

- *Personnel*

Cédrick Brunelle ,	Crew Chief, Operator
Hakim Saphar,	Assistant
Yannick Sawyer,	Assistant
Dominic Vigneux,	Assistant
Justin Saucier-Cloutier,	Assistant
Carole Picard, Tech.,	Production of maps
Pam Coles, P.Geo.,	Quality Control, Processing, and report
Pierre Bérubé, P. Eng.,	Final verification of product conformity

- *Survey Coverage*

20.4 km

- *Data Acquisition*

March 7 to 12, 2016

- *IP Transmitters (Tx)*

GDD Instruments Tx II, s/n 258 & IRIS TIPIX, s/n 7

Power supply:	Honda 2000 kVA
Maximum output:	up to 2.0 kW or 15 A or 2400 V
Electrodes:	shape memory alloy
Resolution:	1 mA on output current display
Waveform:	bipolar square wave with 50% duty cycle
Pulse duration:	1 second

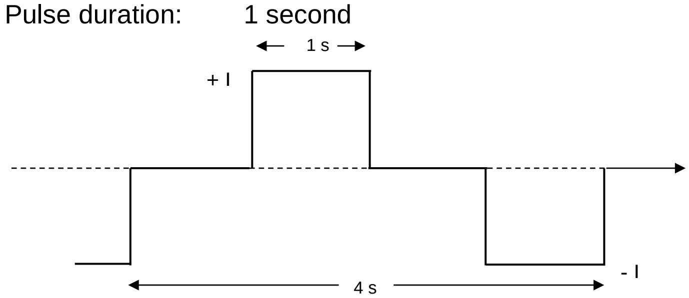


Figure 11. Transmitted signal across $C_1 - C_2$

- *IP RECEIVER (RX)*

IRIS Elrec-PRO, s/n 187 with 10 input channels
Electrodes: shape memory alloy

V_P Primary voltage measurement:
- Input impedance: 100 MΩ
- Resolution: 1 µV
- Typical accuracy: **0.2%**

M_a Apparent chargeability measurement:
- Resolution: 0.01 mV/V
- Typical accuracy: **0.4%**
- Linear sampling mode, 20 time slices (M_1 to M_{20}).
- All windows are normalized with respect to a standard decay curve for QC in the field.

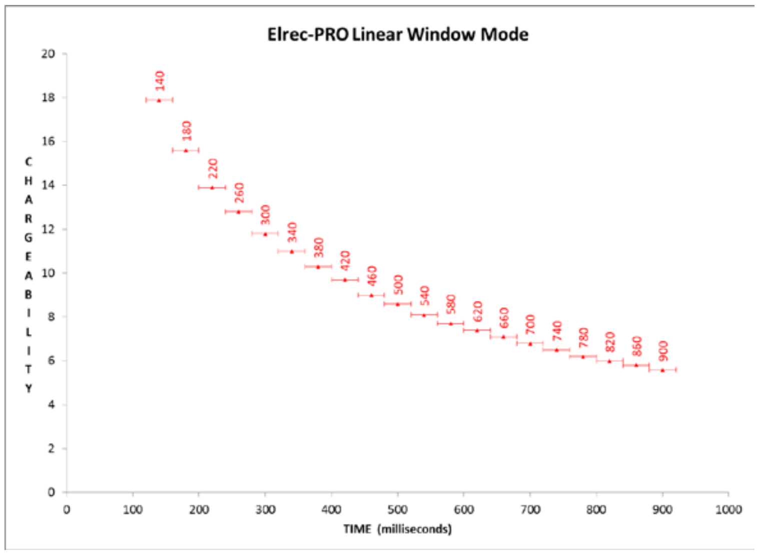


Figure 12. Linear windows (1 sec pulse)

- *APPARENT RESISTIVITY CALCULATION*

Pole-dipole array:

$$\rho_a = 2 \cdot \pi \cdot \frac{V_p}{I} \cdot n \cdot (n+1) \cdot a \qquad (\Omega \cdot m)$$

Cumulative error: 5% max, mainly due to chaining accuracy.

- ❑ *QUALITY CONTROLS (RECORDS AVAILABLE UPON REQUEST)*

Before the survey:

- ✓ Transmitter & motor generator were checked for maximum output using calibrated loads.
- ✓ Receiver was checked using the Abitibi Geophysics SIMP™ certified and calibrated V_P & M signal simulator.

During data acquisition:

- ✓ Rx & Tx cable insulation was verified every morning.
- ✓ Proprietary Software Refusilo® allowed a daily thorough monitoring of data quality and survey efficiency.
- ✓ Enough pulses were stacked: 6 pulses for every reading.

At the base of operations:

- ✓ Field QCs were inspected & validated.
- ✓ Each IP decay curve was analyzed with Refusilo®. The few windows that were rejected were not included in the calculation of the plotted M_a.

- ❑ *QUALITY STATISTICS*

Table 3. Quality Statistics – Pole-Dipole

Gullrock Gold Project		
Pole-Dipole array: a = 50 m, n = 1 to 6		
Average contact resistance at the R_x	3.77 kΩ	
Average output current across C_1-C_2	2128 mA	
Average measured voltage Vp across P_1-P_2	n = 1	992 mV
	n = 6	126 mV
Observed windows found to fit a pure electrode polarization relaxation curve	95.6 %	
Average deviation of the validated normalized windows with respect to the plotted mean chargeabilities	n = 1	0.35 mV/V
	n = 6	0.45 mV/V

5. DATA PROCESSING AND DELIVERABLES

- *TRUE-DEPTH IP SECTIONS POLE-DIPOLE*

The pole-dipole, apparent resistivity and chargeability pseudosections were inverted using our proprietary ***image2D***™ package. The process is fully automated as there is no need to guess a starting model or to filter the pseudosection to generate one. The ground is divided in cells of $^{a}/_{4}$ side and a back-projection of the raw data is performed.

The result is a smooth earth model showing all conductive, resistive and polarizable sources. The resulting true-depth sections integrate all possible solutions, highlighting the most probable ones.

A synthetic example showing the ability of ***image2D***™ to resolve sources and to facilitate the location of DDH is presented in figure 11 below.

- *ACCURACY CONCERNING* ***IMAGE2D***™

Imaging cannot create information that is not in the raw data set (pseudosections), i.e., the limitations of the technique and array that was used will still prevail. With pole-dipole, for instance, resolution is asymmetrical and vertical sources may show a false dip. However, noise is efficiently rejected, near-surface effects are easily identified and complex responses, such as two adjoining sources, a wide body or a dipping geological contact, are well resolved.

This imaging process will not recover intrinsic resistivities unless the source is very wide. However, as opposed to pseudosections, geological data from drill holes may be superimposed on ***image2D***™ true-depth sections.

- *DIGITAL DATA*

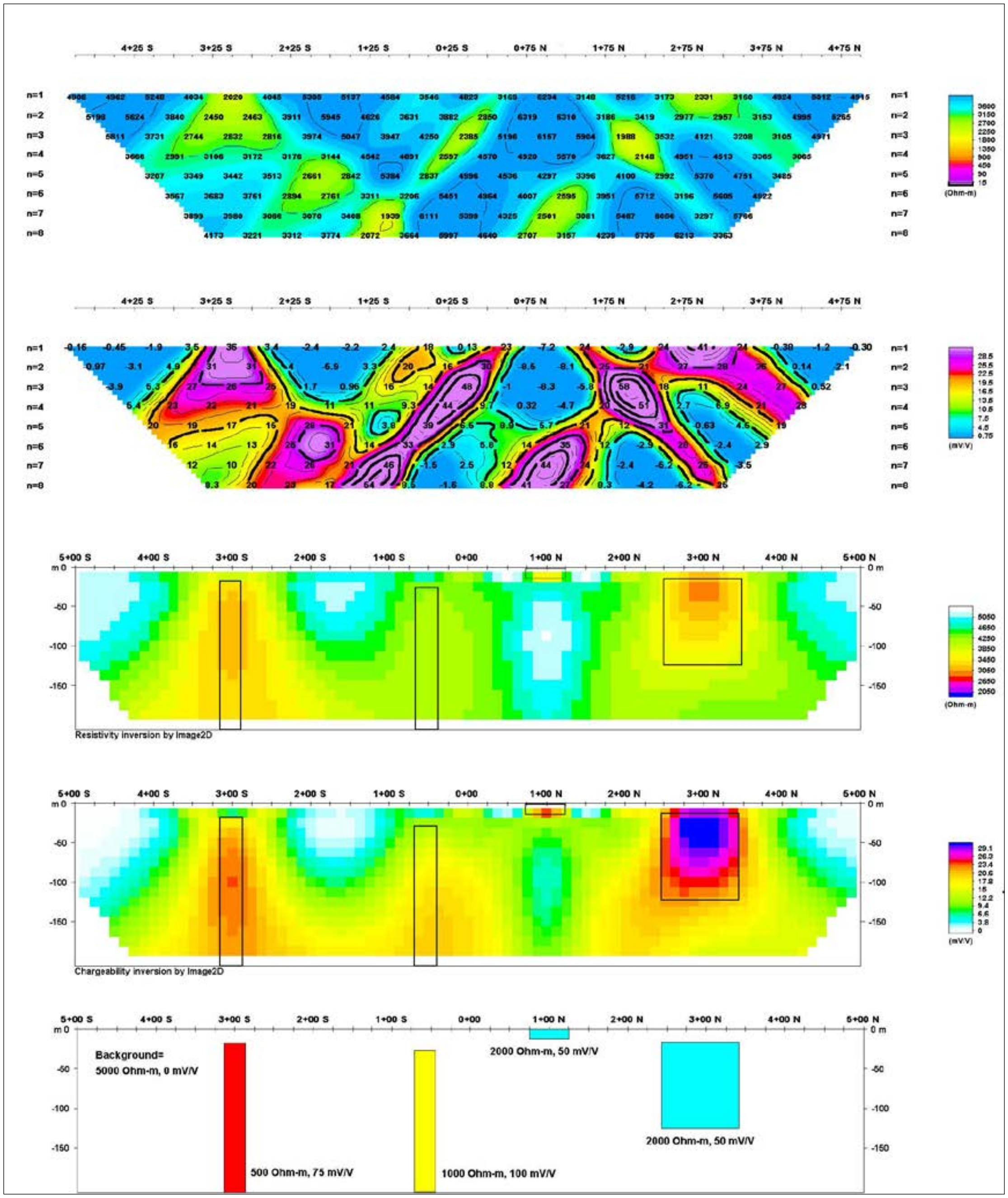
The maps are delivered in the Oasis Montaj map file format on DVD-Rom.

A copy of all survey acquisition data (ASCII text format) and processed data (Geosoft Montaj databases) are also delivered on DVD-Rom.

Top half of figure: classic apparent resistivity and chargeability pseudosections.

Centre of plate: the reconstructed resistivity and chargeability true-depth sections after inversion of the pseudosections using ***image2D***^{TM}.

The model is superimposed on these sections.

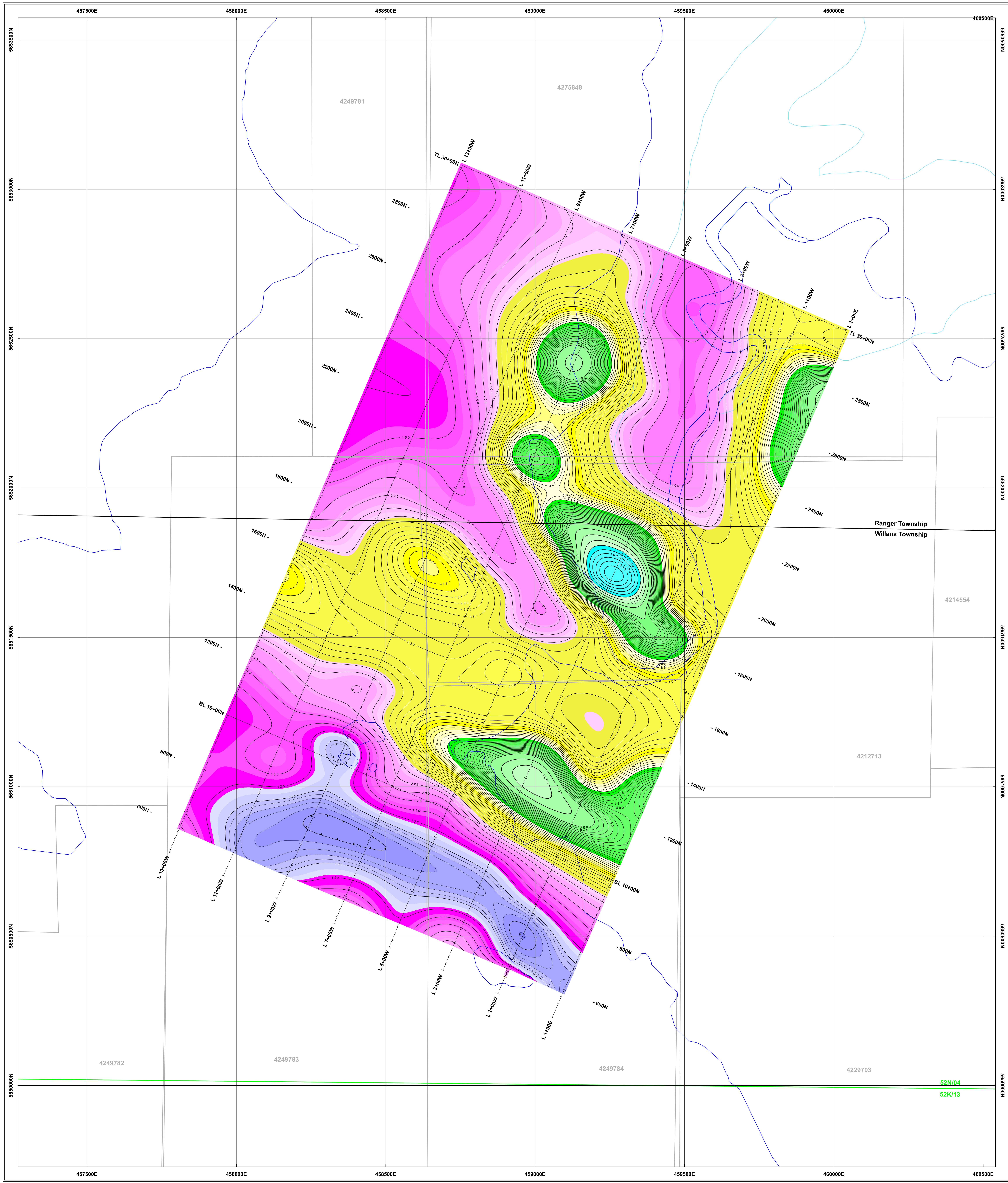


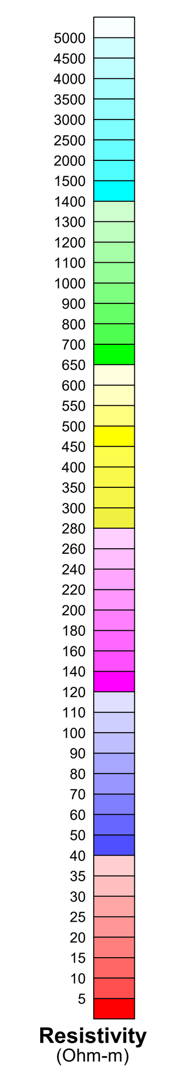
Bottom half of figure: the synthetic model that generates these pseudosections.

Figure 13. ***Image2D***^{TM} demo on synthetic datasets

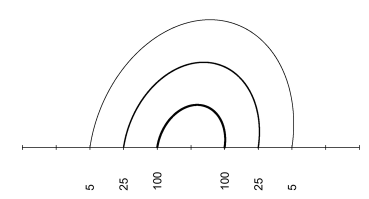
APPENDIX A

COLOUR APPARENT RESISTIVITY & CHARGEABILITY PSEUDOSECTIONS AND IMAGE2D TRUE-DEPTH SECTIONS WITH INTERPRETATION





Resistivity Contours



Unit: Ohm-m

Transmitter: TIPIX (IRIS), 1.8 kW

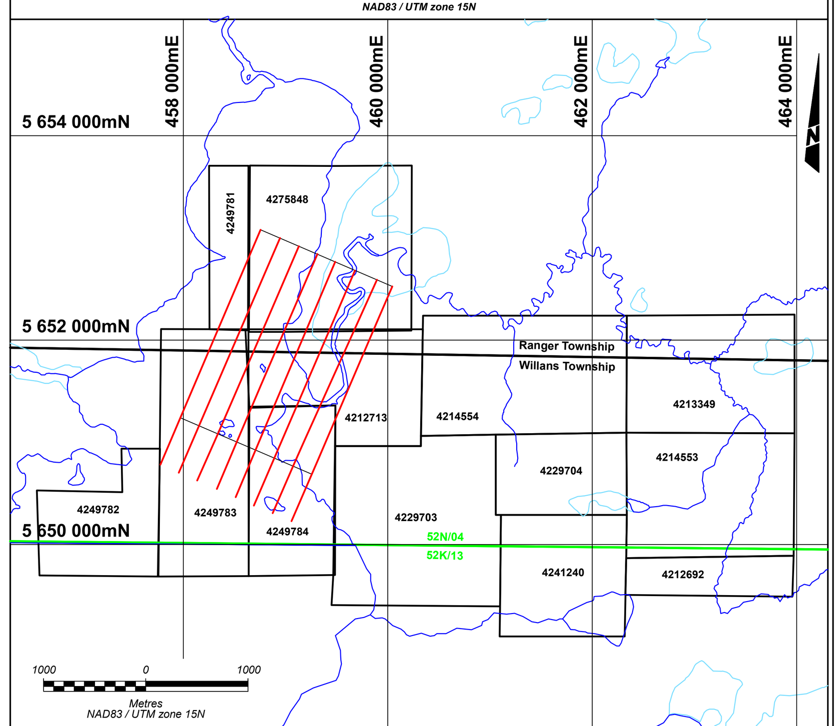
Receiver: Elrec-Pro (IRIS)

Pole-dipole Array

n = 1 to 6
a = 50 m

Scale 1:5000

(meters)
NAD83 / UTM zone 15N

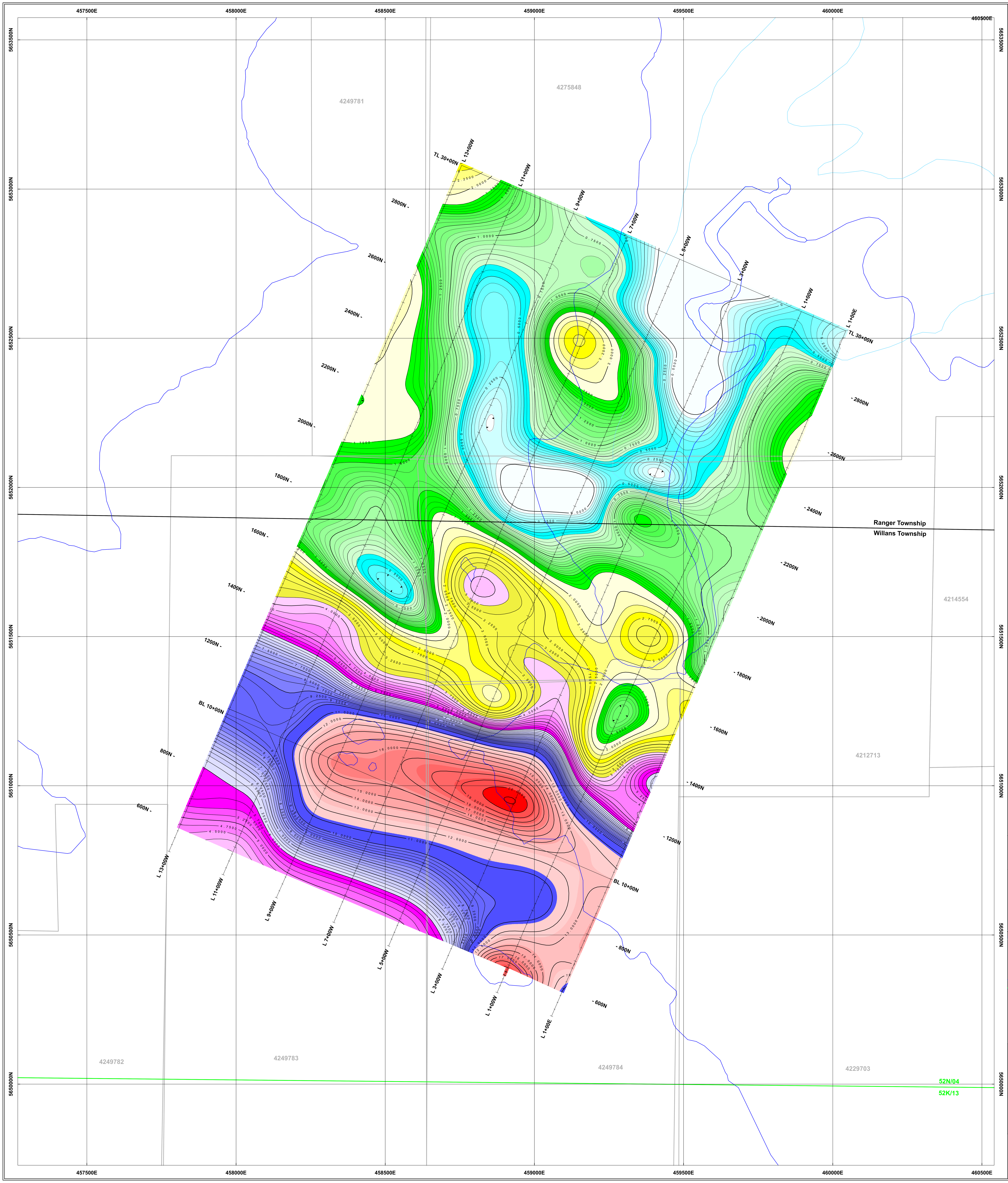


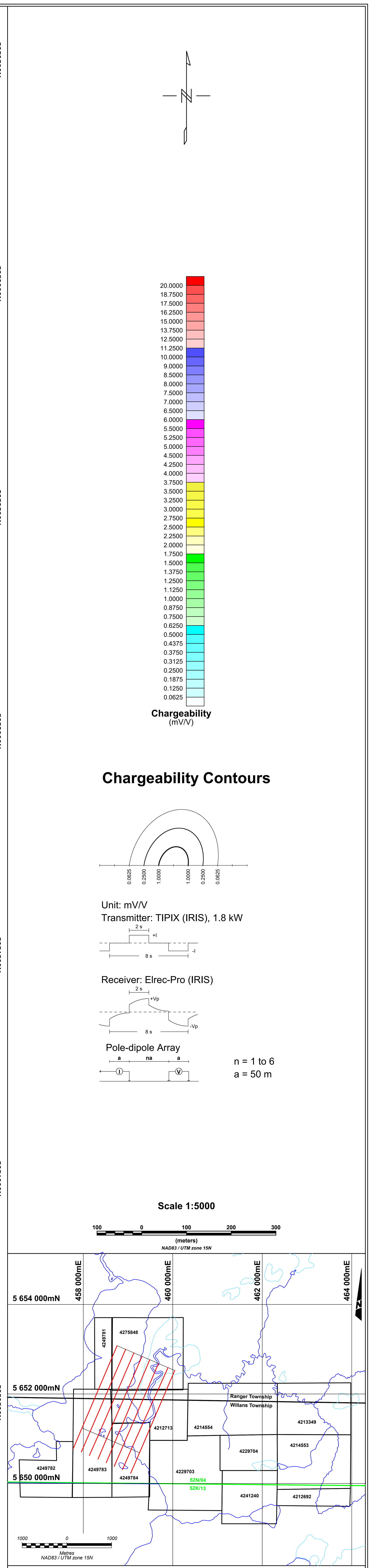
Alexandria Minerals Corp.
Gullock Gold Project
Ranger & Willans Townships, Ontario

Induced Polarization Survey
image2D™ Resistivity at a Depth of 75 m (Ohm-m)

Interpreted by:	P. Coles, P.Geo.	2016/04
Surveyed by:	Abitibi Geophysics Inc.	2016/03
Approved by:	P. Bérubé, Eng.	2016/04
Reference map: 52N/04		Scale 1:5000
Project no: 16N020		Map no: 8.2_75

ABITIBI GEOPHYSICS



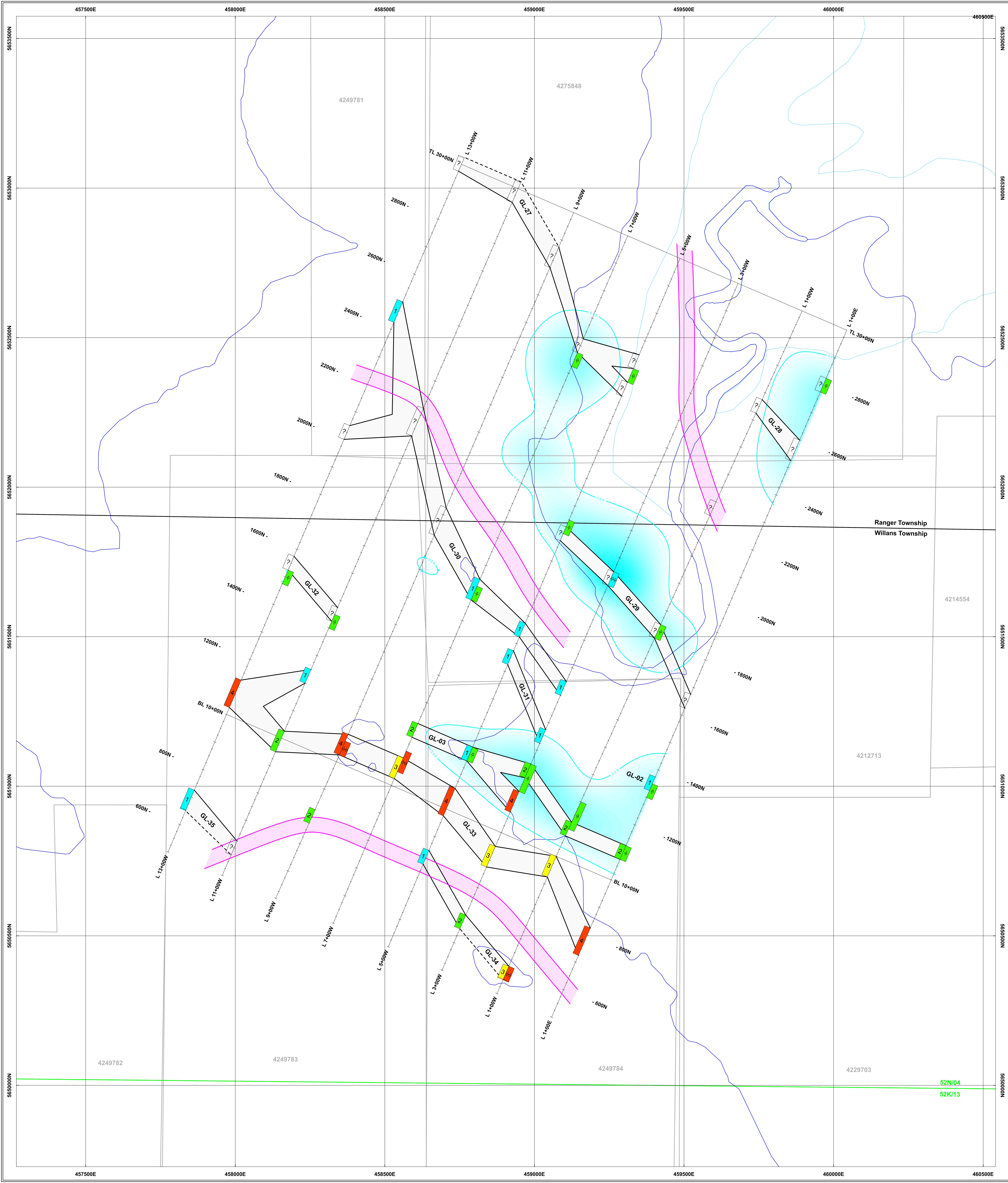


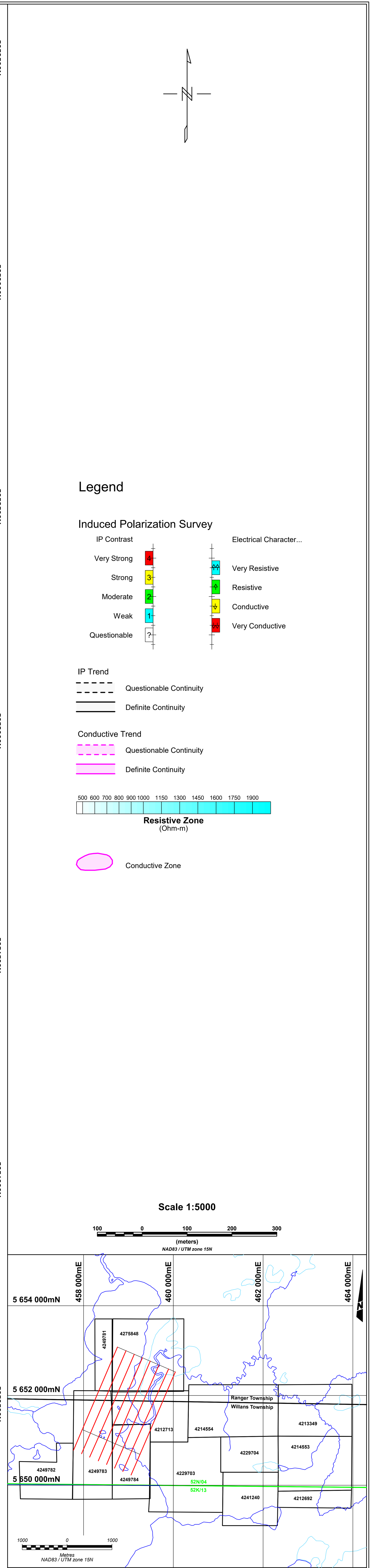
Alexandria Minerals Corp.
Gullock Gold Project
Ranger & Willans Townships, Ontario

Induced Polarization Survey
image2D™ **Chargeability at a Depth of 75 m**
(mV/V)

Interpreted by:	P. Coles, P.Geo.	2016/04
Surveyed by:	Abitibi Geophysics Inc.	2016/03
Approved by:	P. Bérubé, Eng.	2016/04
Reference map: 52N/04		Scale 1:5000
Project no: 16N020		Map no: 8.3_75

ABITIBI GEOPHYSICS





Alexandria Minerals Corp.
Gullock Gold Project
Ranger & Willans Townships, Ontario

Geophysical Interpretation

Interpreted by:	P. Coles, P.Geo.	2016/04
Surveyed by:	Abitibi Geophysics Inc.	2016/03
Approved by:	P. Bérubé, Eng.	2016/04
Reference map: 52N/04		Scale 1:5000
Project no: 16N020		Map no: 10.0