We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l'accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez nous contacter.

Abstract

Three previous geophysical surveys were examined and combined to form a new interpretation and to generate drill targets. These were combined and interpreted by Tom V Weis from Denver Colorado.

BATTERY MINERAL RESOURCES LTD.

McAra Project – SK2 Grid
Geophysical Interpretation Report

C Jason Ploeger, P.Geo.
Tom Weis

December 4, 2019

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

1. SURVEY DETAILS

1.1 Project Name

This project is known as the **McAra Project – SK2 Grid**.

1.2 Client

Battery Mineral Resources Limited

PO Box 219
14579 Government Road
Larder Lake, Ontario
P0K1L0

1.3 Overview

Consultant Geophysicist Tom Weis, was contracted by Battery Mineral Resources Limited to perform an independent interpretation of the geophysics performed over the SK2 target on the McAra Project. The data being used for the interpretation include the 3DIP, airborne magnetics and SkyTEM surveys that were performed by Battery Mineral Resources Limited.

1.4 Objective

The objective was to produce an interpretation of the geophysics, from the various surveys performed for Battery Mineral Resources, since 2016. This is being done to provide targets for additional exploration.

1.5 Survey & Physical Activities Undertaken

Survey/Physical Activity	Performed By	Dates	
3DIP, Magnetic and EM Interpretation and report writing	Tom Weis	October 21 – November 28, 2019	13 days

Table 1: Work Activity Details

1.6 Summary of Results, Conclusions & Recommendations

Three previous geophysical surveys were examined and combined to form a new interpretation and to generate drill targets. These were combined and interpreted by Tom V Weis from Denver Colorado.

Five geophysical targets have been identified. Recommendations on drill directions have been suggested for these targets however geological recommendations should be considered due to limited resolution of the airborne and ground geophysical data sets.

1.7 Co-ordinate System

Projection: UTM zone 17N
Datum: NAD83
UTM Coordinates near center of grid: 499948 Easting, 5253350 Northing

2. SURVEY LOCATION DETAILS

2.1 Location

The McAra Project – SK2 Grid is in North Williams Township, approximately 30 kilometres southwest of Gowganda, Ontario or 24 km southeast of Shining Tree, Ontario.

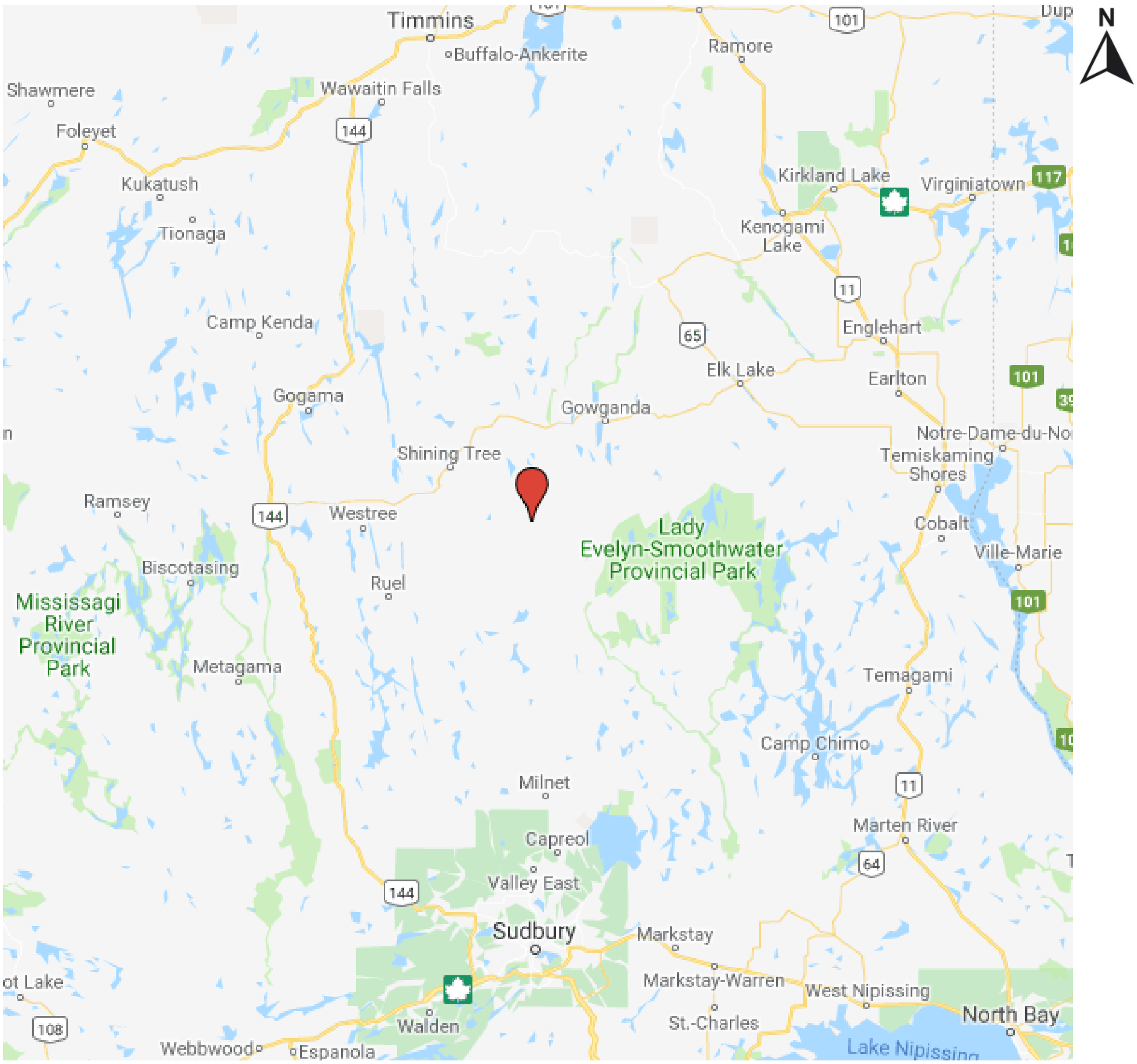


Figure 1: Location of the SK2 Grid (Map data ©2019 Google)

2.2 Access

Access to the property was attained with a 4x4 truck via Beauty Lake Road. Beauty Lake Road heads south from Hwy 560, approximately 23 kilometres west of Elk Lake, Ontario. Beauty Lake Road was travelled for approximately 50 kilometres to the trail. From here a series of trails were taken by snowmobiles for the final 10 kilometres to the survey area.

2.3 Mining Claims

The survey area covers a portion of mining claims 322300, 322299, 188543, 273660, 102821, 344675, 183110, 170296, 170298, 266197, 170297, 208256, 221117 and 155764 located in North Williams Township, within the Larder Lake Mining Division.

Cell Number	Provincial Grid Cell ID	Ownership of Land	Township
322300	41P06I299	Battery Mineral Resources Limited	North Williams
322299	41P06I300	Battery Mineral Resources Limited	North Williams
188543	41P07L281	Battery Mineral Resources Limited	North Williams
273660	41P07L282	Battery Mineral Resources Limited	North Williams
102821	41P06I319	Battery Mineral Resources Limited	North Williams
344675	41P06I320	Battery Mineral Resources Limited	North Williams
183110	41P07L301	Battery Mineral Resources Limited	North Williams
170296	41P07L302	Battery Mineral Resources Limited	North Williams
170298	41P06I339	Battery Mineral Resources Limited	North Williams
266197	41P06I340	Battery Mineral Resources Limited	North Williams
170297	41P07L321	Battery Mineral Resources Limited	North Williams
208256	41P07L322	Battery Mineral Resources Limited	North Williams
221117	41P06I360	Battery Mineral Resources Limited	North Williams
155764	41P07L341	Battery Mineral Resources Limited	North Williams

Table 2: Mining Lands and Cells Information

2.4 Property History

A lot of historical exploration has been carried out over the years all over the survey area. The following list describes details of the previous geoscience work which was collected by the Mines and Minerals division and provided by OGSEarth (MNDM & OGSEarth, 2018).

- **1998: Minescape Expl Inc (File 41P07NW2005)**

Airborne Geophysical Survey – Ray Township

Minescape was contracted with Geoterrex to fly airborne survey mag and EM in an area south of Shinning Tree. The survey was conducted January 5th to 14th, 1998. The magnetometer survey indicated a highly variable magnetic survey which is unlikely to be caused by granite as the government maps indicate.

- **1998: Minescape Expl Inc (File 41P07NW2001)**

Airborne Geophysical Survey – North Williams Township

Minescape contracted with Geoterrex to fly airborne survey mag and EM. The magnetic signature of the bedrock is highly variable which suggests that the bedrock is Archean green stone and not granite as the government maps indicate. The only distinguishable features are mafic dykes (olivine diabase) striking in southeasterly to northwesterly direction.

- **1998: Minescape Expl Inc (File 41P07NW2004)**

Line Cutting and Ground Geophysical Surveys – North Williams Township

The HLEM survey consisted of a total distance of 7 km and was surveyed February 23rd and 24th, 1998. Previous survey lines were not identifiable, so fresh lines had to be cut. Drilling of the two discovered anomalies was recommended.

- **1998–2001: Wallbridge Mining Company Limited (File 41P07NW2007)**

Diamond Drilling and Geochemical Assaying – North Williams Township

Two diamond drill holes were completed for Wallbridge Mining Company. DDH WLK-01 was drilled from November 27th to December 1st, 1999. DDH WLK-02 was drilled from December 2nd to December 5th, 1999.

- **2007: Roy Annett (File 20000002294)**

Overburden Stripping and Geochemical Sampling – Dufferin Township

During the period of April 11th to the 15th, 2007, Larry Salo, was in Dufferin Township and moved an excavator to the Kite Lake area to carry out stripping and trenching on the main Kite Lake showing. Also proceeding north of Kite Lake to attempt to locate the source of a discreet AER anomaly from the Wallbridge survey of 1998. The trenching effort returned significant values from the South Kite area while the North Kite area trenching was unable to reach the main AEM anomaly and did not return good values of copper and zinc near the south trace of the zone.

- **2008: Roy Annett (File 20000003224)**

Overburden Stripping – Dufferin Township

Roy Annett along with Larry Salo utilized Salo's Link Belt Excavator and other mobile equipment to carry out a stripping program in the North Williams and Dufferin townships. The work started April of 2008 and was carried out intermittently until early August.

- **2016: Battery Mineral Resources Limited (File 20000015781)**

Airborne Geophysical Survey – Donovan Townships

Precision GeoSurveys conducted an airborne magnetometer and radiometric surveys over 12 024 line-km of land for the Cobalt Project. Geophysical maps were generated with data obtained, but no solid interpretation was made. Additional geophysical surveying was recommended for accurate interpretation of airborne data collected.

2.5 General Regional/Local Geological Settings

Regional Geology:

The project area occurs within the Superior Province that is composed of northeast trending Paleo- to Neoarchean gneissic complexes, granite-greenstone terranes, and sedimentary basins that were assembled by repeated island arc-microcontinent collisions (Bauer et al., 2011). The McAra project partially comprises Paleoproterozoic (2.5-2.2 Ga) metasedimentary rocks of the Huronian Supergroup (HS) that form a ~60,000 km2 irregular-shaped siliciclastic paleo-basin, colloquially known as the Cobalt Embayment (Potter and Taylor, 2009). The HS unconformably overlies complexly folded and sub vertically dipping Neoarchean volcanic, intrusive, and sedimentary rocks of the Wawa-Abitibi terrane that forms the southernmost sub province of the Canadian portion of the Superior Province (Stott et al., 2010; Stott, 2011; Lodge, 2013). Both Archean rocks and the HS were intruded by Nipissing Diabase sills that are primarily tholeiitic and were sourced from MORB-type parental magma (Potter and Taylor, 2009). These intrusive rocks were emplaced along reactivated pre-HS faults at ca. 2,219 (Corfu and Andrews, 1986) and are envisioned as the heat source that drove hydrothermal fluid circulation responsible for Ag-Co mineralization.

Archean Rocks:

Archean rocks in the region are part of the Wawa-Abitibi sub province and dominantly comprise mafic to felsic volcanic and volcanoclastic rocks, syn- to post-volcanic intrusions and lesser siliciclastic and chemical sedimentary rocks deposited 2.7 Ga. The volcanic rocks were deposited in an oceanic arc setting during collision between the Wawa terrane and the Superior Craton in the Neoarchean time period. Paleotectonic settings (e.g., arc, back-arc, rifted arc) and crustal architecture and thickness varies both between and within greenstone belts in the Wawa-Abitibi terrane, which has resulted in a diverse petrogenesis of igneous rocks and related mineralization styles (Mercier-Langevin et al., 2014).

Deformation in the Archean resulted in tight folding and tilting of the rocks to sub-vertical dips. The stress field was also accommodated by thrust faulting as evidenced by duplication of rock sequences and implied in areas where strain intensity is too low to account for the subvertical rock orientations. Major thrust faults may have been reactivated as deep-seated normal faults developed during extension and deposition of the volcanic facies (Bleeker, 2015). After Archean deformation and deposition of the Huronian Supergroup, the rocks were deformed during the Penokean orogeny that resulted in local reactivation of faults developed in the Archean and Proterozoic (Potter and Taylor, 2009).

Paleoproterozoic Huronian Supergroup:

The Huronian Supergroup comprises a southward-thickening sequence of mainly siliciclastic sedimentary rocks that reach a maximum thickness of 12 km in the southern part of the basin but have an estimated thickness of ~6 km near Cobalt, Ontario (Young et al., 2001). The HS is subdivided in Lower and Upper Huronian. The Lower Huronian comprises, from top to bottom, the Elliot Lake, Hough Lake, and Quirke Lake groups, while the Upper Huronian is solely composed of the Cobalt group. The Lower Huronian has a restricted distribution and was deposited in a rift controlled, non-marine environment. After a significant hiatus, deposition of the more homogenous Upper Huronian is interpreted to have taken place at a passive margin under submarine conditions (Young et al., 2001).

Inversion of the Huronian basin resulted in lower greenschist metamorphism of the sedimentary rocks and caused basin-scale hydrothermal fluid flow that resulted in regionally extensive Na and Ca alteration of the rocks (Potter and Taylor, 2009).

Property Geology:

Most of the North Williams township is covered by flat lying sediments of the Huronian Supergroup. These are mainly quartzites and quartz-pebble conglomerates of the Lorrain Formation. Intruding these sedimentary sequences are dykes and sills of Nipissing diabase.

Archean basement rock is found as isolated outliers northwest of McKee Lake in Dufferin township and extend to the north into the southern part of North Williams township. These formations which consist mostly of mafic metavolcanic and metasedimentary rocks host most of the mineralization found in the area. Intruding these units and underlying the Huronian is a body of dark red, coarse grained granite.

2.6 Previous Survey Work Interpreted

Survey/Physical Activity	Performed By	Dates
Airborne Magnetics and Radiometrics	Precision GeoSurveys	November 2016
SkyTEM Airborne EM survey	SkyTEM Airborne Surveys Worldwide	September 2018
3D Distributed IP	Canadian Exploration Services Ltd	March 2019

Table 3: Interpreted Work

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.

2. I am a Practicing Member of the Association of Professional Geoscientists, with membership number 2172.

3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.

4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.

5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.

6. I do not have nor expect an interest in the properties and securities of **Battery Mineral Resources Ltd.**

7. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.

PROFESSIONAL GEOSCIENTIST
C. JASON PLOEGER
PRACTISING MEMBER
2172
ONTARIO

C. Jason Ploeger, P.Geo., B.Sc.
Geophysical Manager
Canadian Exploration Services Ltd.

Larder Lake, ON
December 4, 2019

APPENDIX A

STATEMENT OF QUALIFICATIONS

Qualifications of Thomas V. Weis:

Education:

1. BSc. Degree in Geology from Michigan Technological University.
2. MSc. Degree in Geophysics from Michigan Technological University.
3. Post MSc. Studies at University of Utah on EM and Electrical techniques under Ward and Holman.
4. Post MSc. Studies including visiting scientist position on reflection seismic techniques under Steeples and Miller.

Work Experience:

43 years of minerals exploration geophysical experience.

1. Including both Domestic and International work.
2. Chief Geophysicist for Normandy Mining in Australia.
3. Chief Geophysicist for Newmont Mining.

Thomas V Weis, M.Sc.
Geophysicist
Thomas V Weis and Associates Inc.

December 4, 2019

APPENDIX B

REFERENCES

Bauer, R.L., Czeck, D.M., Hudleston, P.J., and Tikoff, B., 2011, Structural geology of the subprovince boundaries in the Archean Superior Province of northern Minnesota and adjacent Ontario. In: Miller, J.D., Hudak, G.J., Wittkop, C., McLaughlin, P.I. (Eds.), Archean to Anthropocene: Field Guides to the Geology of the Mid-Continent of North America: Geological Society of America Field Guide 24, p. 203–241.

Bleeker, W., 2015, Synorogenic gold mineralization in granite-greenstone terranes: the deep connection between extension, major faults, synorogenic clastic basins, magmatism, thrust inversion, and long-term preservation, In: Targeted Geoscience Initiative 4: Contributions to the Understanding of Precambrian Lode Gold Deposits and Implications for Exploration, (ed.) B. Dubé and P. Mercier-Langevin; Geological Survey of Canada, Open File 7852, p. 24–47.

Corfu, F. and Andrews, A.J., 1986, A U-Pb age for mineralized Nipissing diabase, Gowganda, Ontario; Canadian Journal of Earth Sciences, v. 6, p. 117-132.

Google. (2019). *Location of the SK2 Grid.* Retrieved March 29, 2019 from https://www.google.com/maps/@47.4499378,-81.1667319,8.42z

Lodge, R.W.D. 2013.Geology and mineral potential of Aldina Towship, Wawa Subprovince; in Summary of Field Work and Other Activities 2012, Ontario Geological Survey, Open File Report 6290, p.6-1 to 6-13.

Mercier-Langevin, P., Gibson, H.L., Hannington, M.D., Goutier, J., Monecke, T., Dubé, B. and Houlé, M.G., 2014, A special issue on Archean magmatism, volcanism, and ore deposits: part 2. Volcanogenic massive sulfide deposits preface: Economic Geology, v. 109(1), p.1-9.

MNDM & OGSEarth., 2019, *OGSEarth*. Ontario Ministry of Northern Development and Mines.

Potter, E.G. and Taylor, R.P., 2009, The lead isotope composition of ore minerals from precious metal-bearing, polymetallic vein systems in the Cobalt Embayment, northern Ontario: metallogenetic implications: Economic Geology, v. 104(6), p.869-879.

Stott, G.M., Corkery, M.T., Percival, J.A., Simard, M. and Goutier, J., 2010, A revised terrane subdivision of the Superior Province; in Summary of Field Work and Other Activities 2010, Ontario Geological Survey, Open File Report 6260, p. 20-1–20-10.

Stott, G.M., 2011, A revised terrane subdivision of the Superior Province in Ontario; Ontario Geological Survey, Miscellaneous Release – Data 278.

Young, G.M., Long, D.G., Fedo, C.M., and Nesbitt, H.W., 2001, Paleoproterozoic Huronian basin: product of a Wilson cycle punctuated by glaciations and a meteorite impact: Sedimentary Geology, v. 141, p. 233-254.

APPENDIX C

Interpretation of 3-D IP/resistivity Inversion Models for SK-2 Project

Thomas V Weis and Associates Inc.

7767 South Poplar Way

Centennial, Colorado 80112 USA

Geophysical Report

Subject: Interpretation of 3-D IP/resistivity Inversion Models for SK-2 Project

Date: 27th November, 2019

Client: Battery Mineral Resources Ltd.

Summary

SK-2 is an EM anomaly target picked by Alan King from the 2018 Skytem EM survey. It is located within the McAra magnetic/radiometric (2016/2018) survey block immediately to the north of SK-3 (Kite Lake). It is located within Gowgonda sediments (regional mapping) adjacent to a number of WNW striking diabase dikes/structures. Its setting is similar to SK-3 (Kite Lake) and SK-5 (McAra). Although SK-2 is an EM target a number of 3-D IP anomalies have been identified which are also targets in the area.

The presence of Proterozoic Gowgonda sediments indicates the possibility of a graphitic/carbonaceous EM conductor/IP anomaly striking WNW at relatively shallow depths (150m or less) may be the source. 'Or' it may be the response of structurally controlled Proterozoic sulfides which are the current exploration targets. A single drill hole should test this primary EM conductor target. At greater depth a number of N-S to NNW striking IP anomalies may indicate the presence of Archean age massive sulfide bodies or structurally controlled Proterozoic sulfides within the basement rocks. The SK-2 IP anomalies appear to be controlled by, or at least bounded by, a series on NNW trending structures. They should be tested separately by drilling. These targets are not just the IP highs but also the coincident or adjacent structures associated with them.

A total of five drill targets are identified in this report and are prioritized by their indicated target numbers (T-1 highest to T-5 lowest).

SK-2 Prospect Location

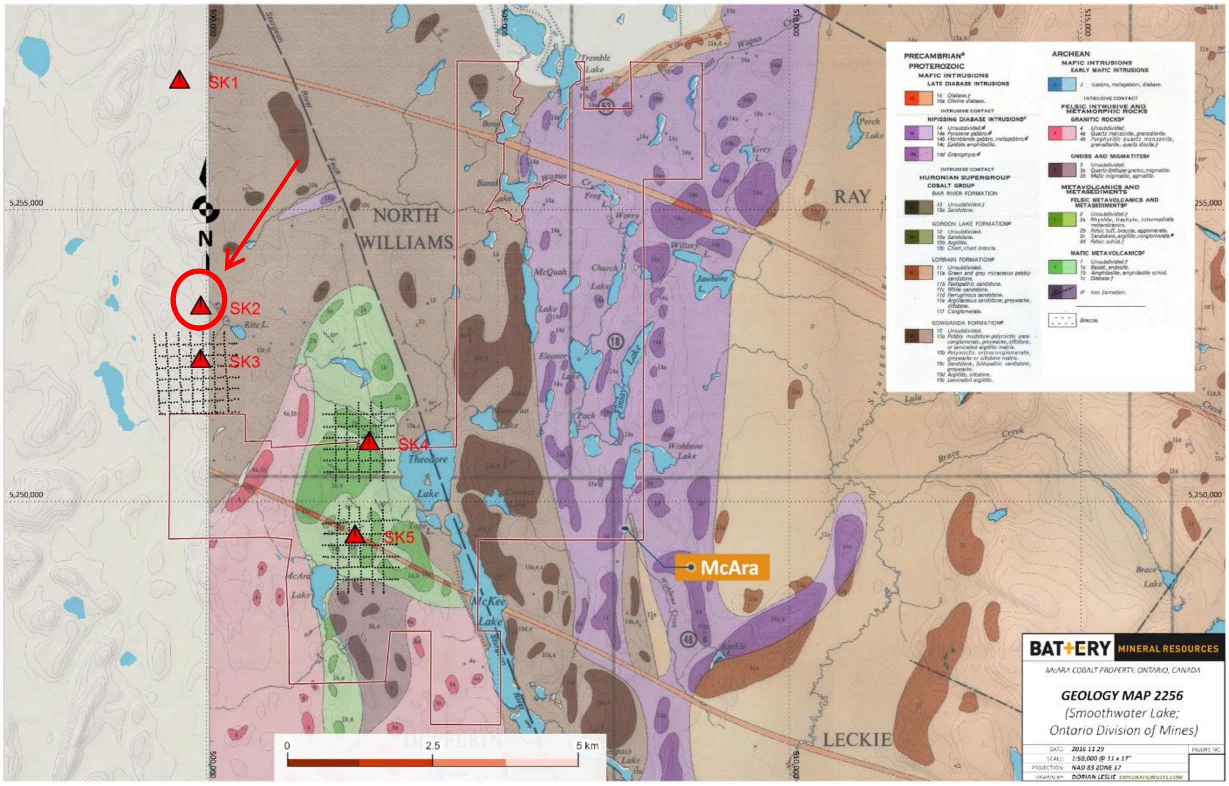


Figure 1 – The SK-2 prospect is located immediately to the north of the SK-3 prospect within the greater McAra survey area in the Cobalt Belt in Ontario Canada. The SK-2 target is an EM conductor picked by Alan King from the 2018 Skytem survey. This geologic map indicates the SK-2 conductor falls within the Proterozoic Gowgonda formation sediments. However the airborne magnetic data set indicates the geology in the SK-2 area is more complex than is shown in the government geology map.

Figures 1 through 5 show the location of the SK-2 project with respect to geology, the reduced to pole magnetics (RTP), the first vertical integral of the RTP magnetics (1vi) and the Skytem EM response.

Figure 2 shows SK-1 through SK-5 prospects which are all Skytem EM anomalies. Sk-5 is the McAra prospect. SK-3 is the Kite Lake prospect.

Figure 3 shows the relationship between SK-2, SK-3, SK-4 and SK-5 projects and a deep mafic intrusive body defined by the 1vi of the RTP magnetic dataset. Figure 4 is a close up of the 1vi image. The EM conductor SK-1 appears to be spatially unrelated to this mafic intrusion.

Figure 5 shows the location of the SK-2 conductor on the Skytem High Moment Channel 18 (HM 18) raw EM data set. Although not labeled in this image EM anomalies SK-1, SK-3, SK-4 and SK-5 are also visible in this image. An untargeted EM anomaly is also identified in Figure 5 (white arrow) which should be field checked.

This suggests additional work should be done with the McAra Skytem data set. A number of interesting EM features may not be the strongest EM responses but weaker responses in geologically interesting areas.

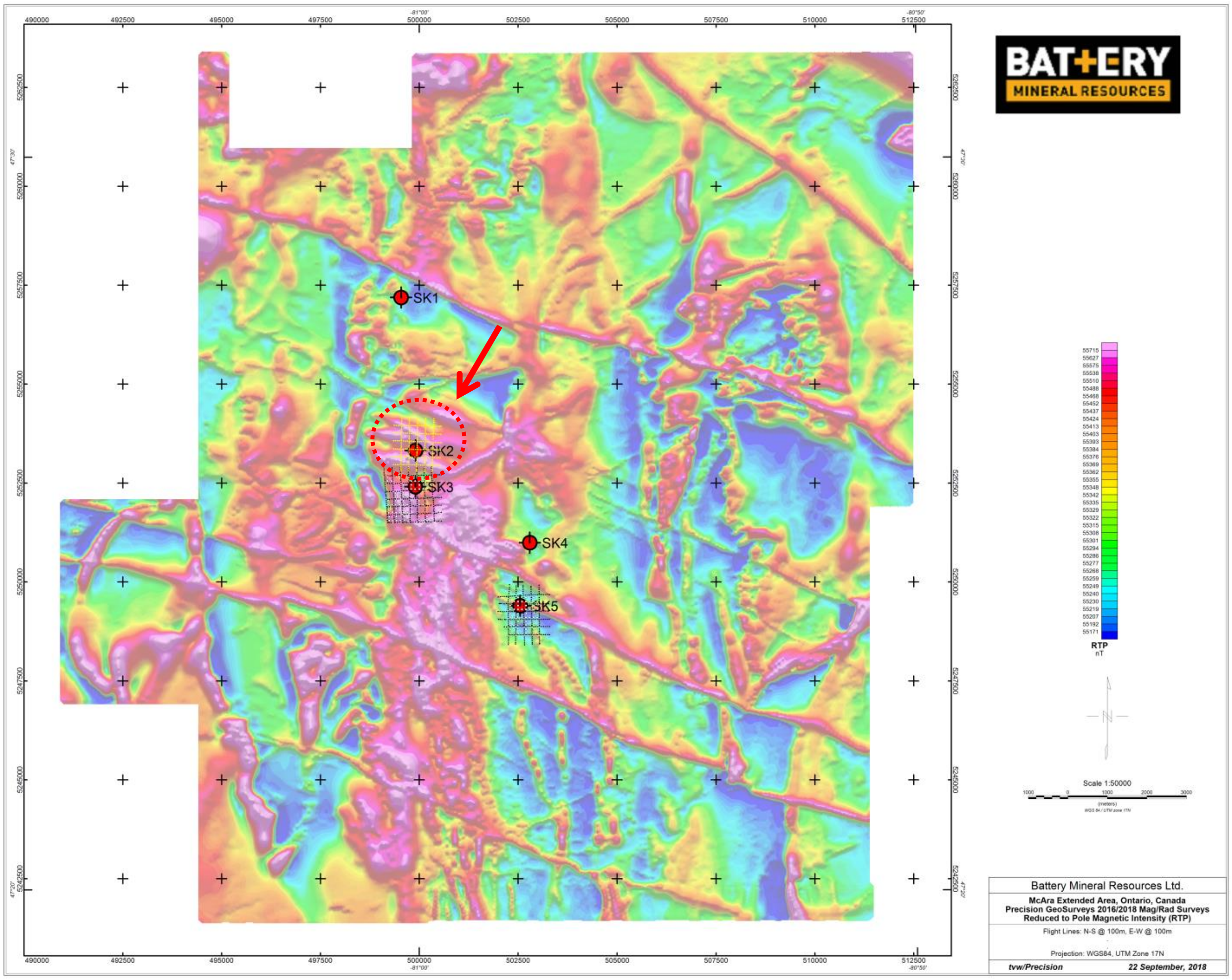


Figure 2 – The SK-2 target plotted on top of the 2016/2018 RTP magnetic image (red ellipse and arrow). Note the 3-D IP/resistivity grid is plotted as white dots in the SK-2 area.

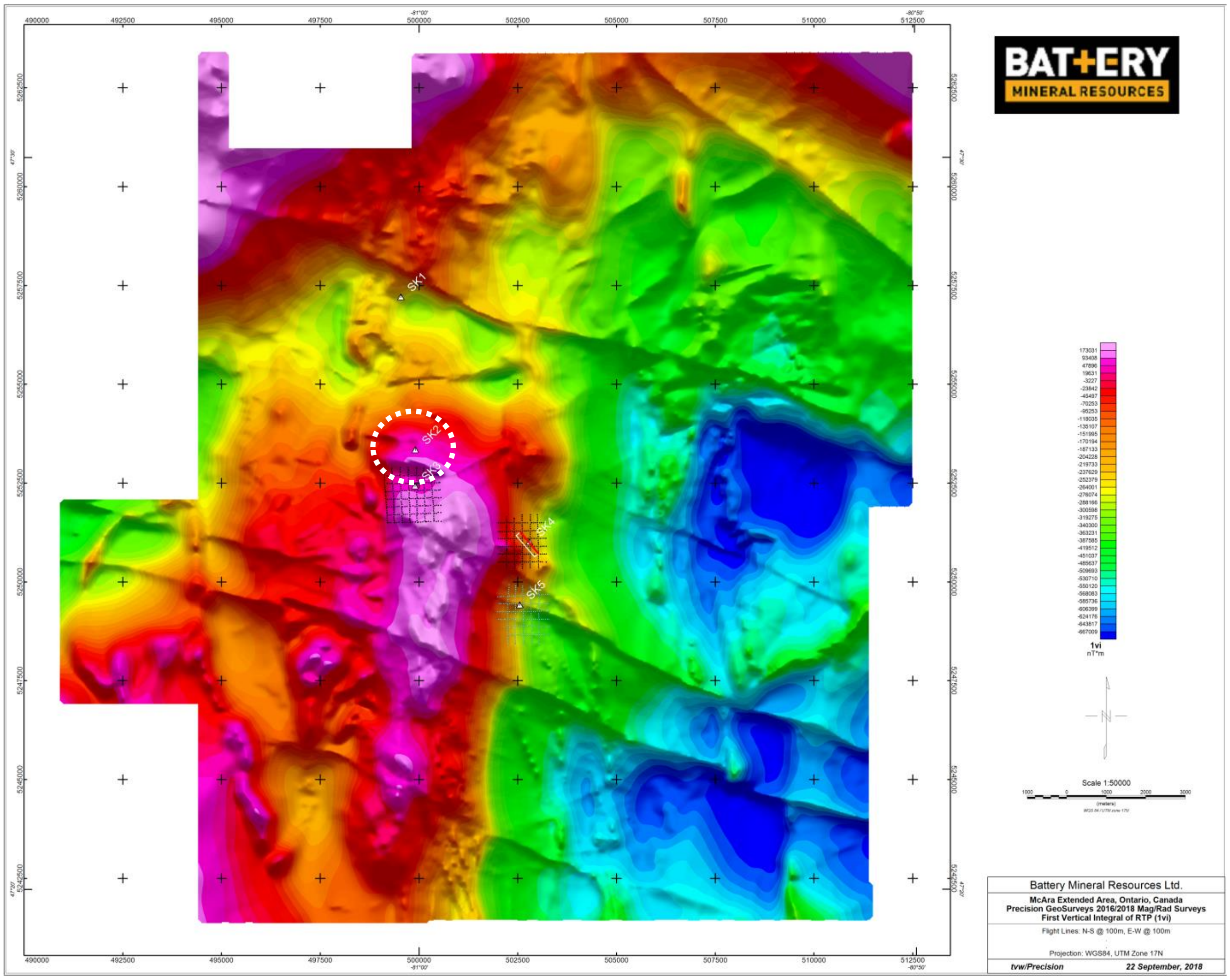


Figure 3 – The SK-2 EM anomaly plotted on top of the first vertical integral (1vi) of the RTP magnetic intensity image. Referring back to the SK-3 (Kite Lake), 4 and 5 (McAra) interpretations this large magnetic high (red to pink) is interpreted to be a deep seated magnetic mafic intrusion that may have acted as a heat source to drive mineralizing solutions.

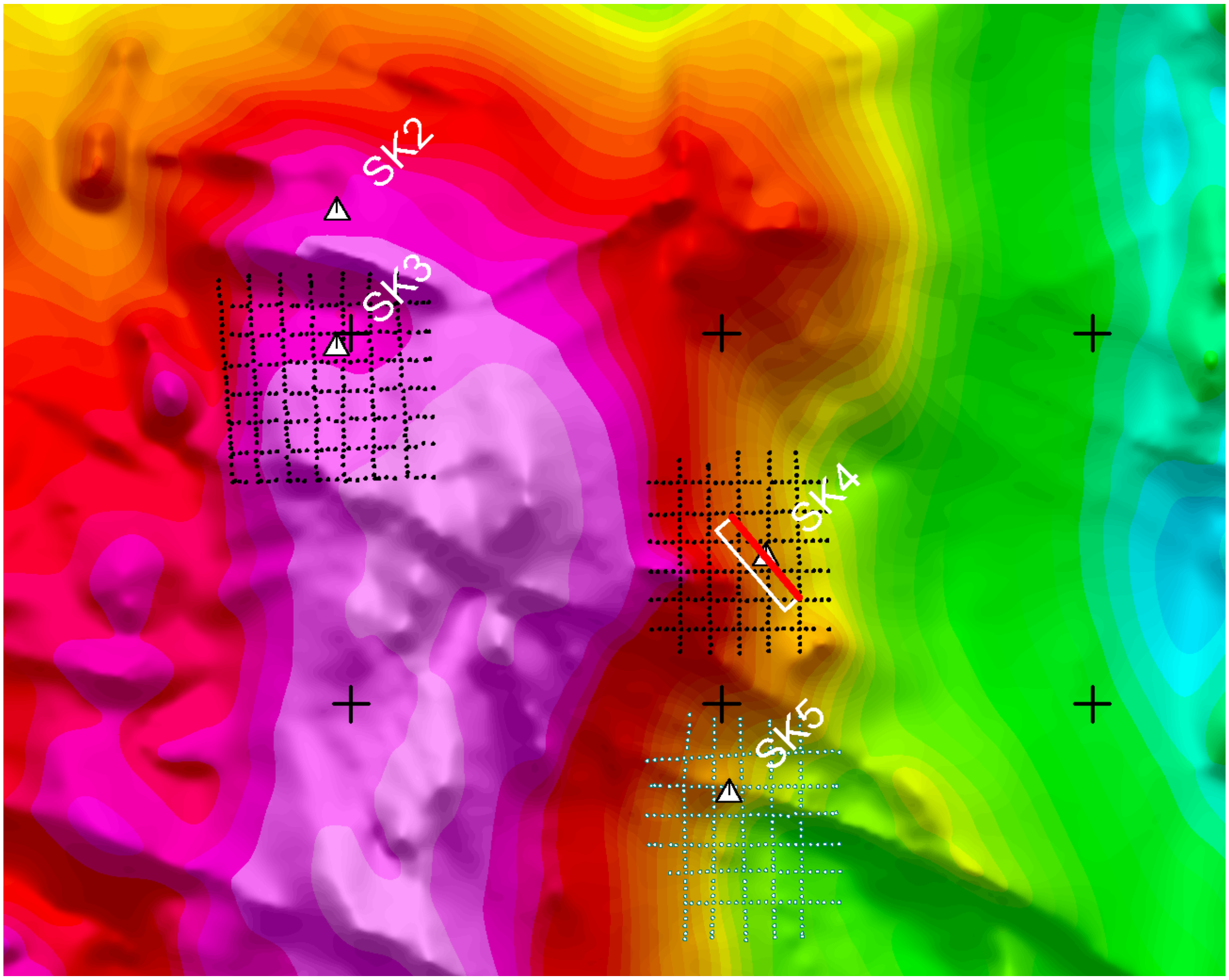


Figure 4 – An enlargement of a portion of Figure 3 showing the location of the SK-2 conductor plotted on the 1vi of the RTP image.

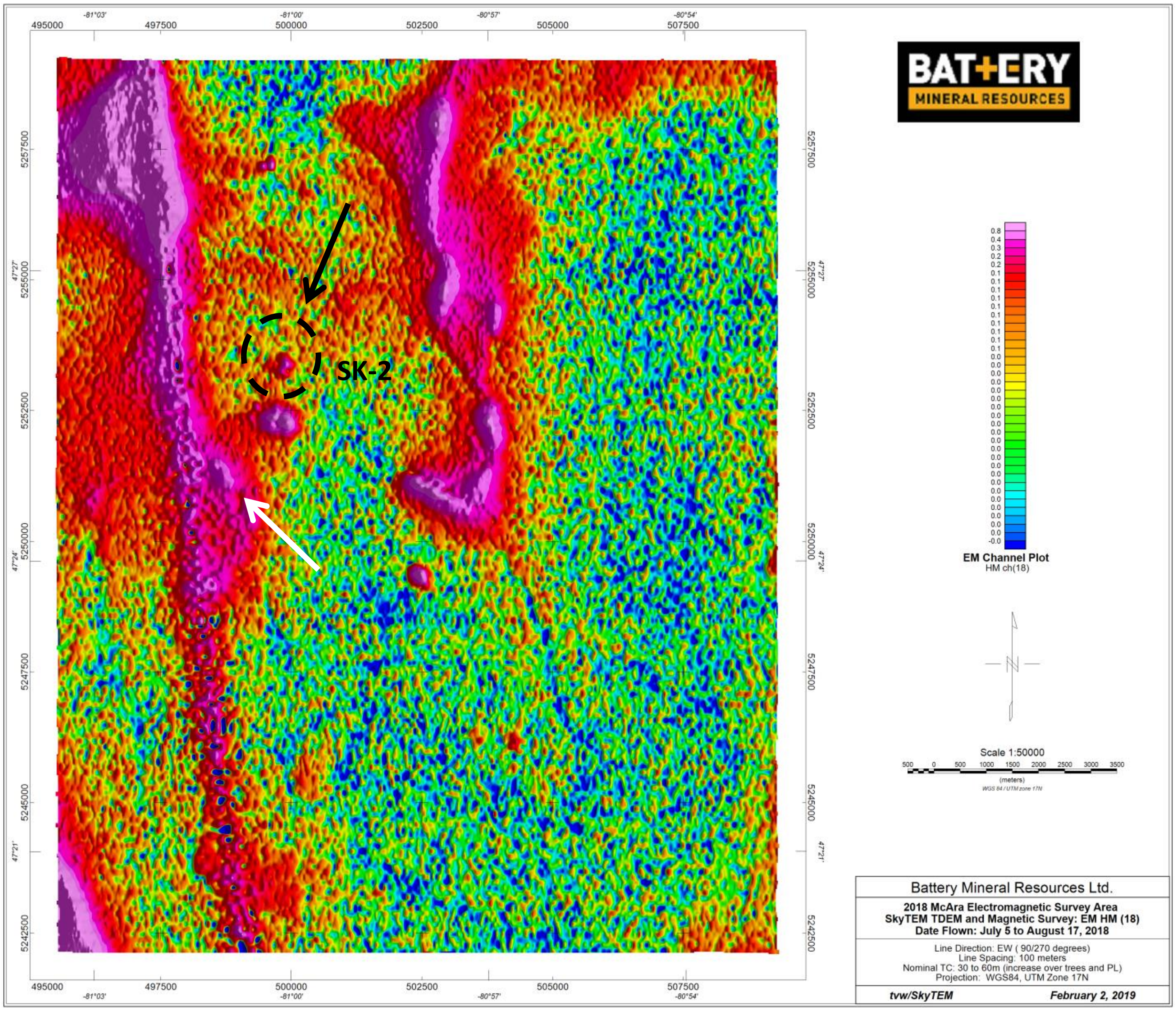


Figure 5 – The SK-2 EM anomaly from the Skytem High Moment Channel 18 time slice grid. This is the primary target at the SK-2 prospect area. Note the white arrow points towards an unexplored conductor located to the SW of SK-3 and on strike with McAra.

3-D IP/Resistivity Dataset

Figure 6 shows a close up view of the SK-2 3-D IP/resistivity grid plotted on a Google Earth Image. Figure 7 shows the current electrode array (black dots) and potential electrode array (orthogonal cyan lines) used to collect the data set. The important point here is that the array is uniform across the area and no holes occur within the electrode arrays.

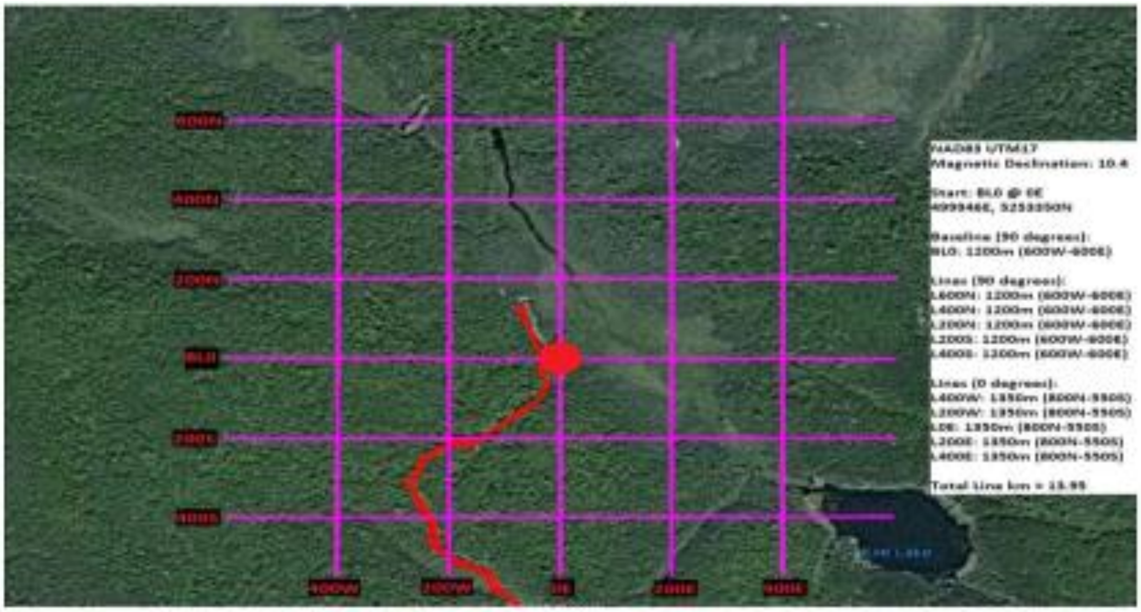


Figure 2: McAra Property - SK 2 Survey Grid

Figure 6 – The SK-2 3-D IP/resistivity grid layout as designed by CXS.

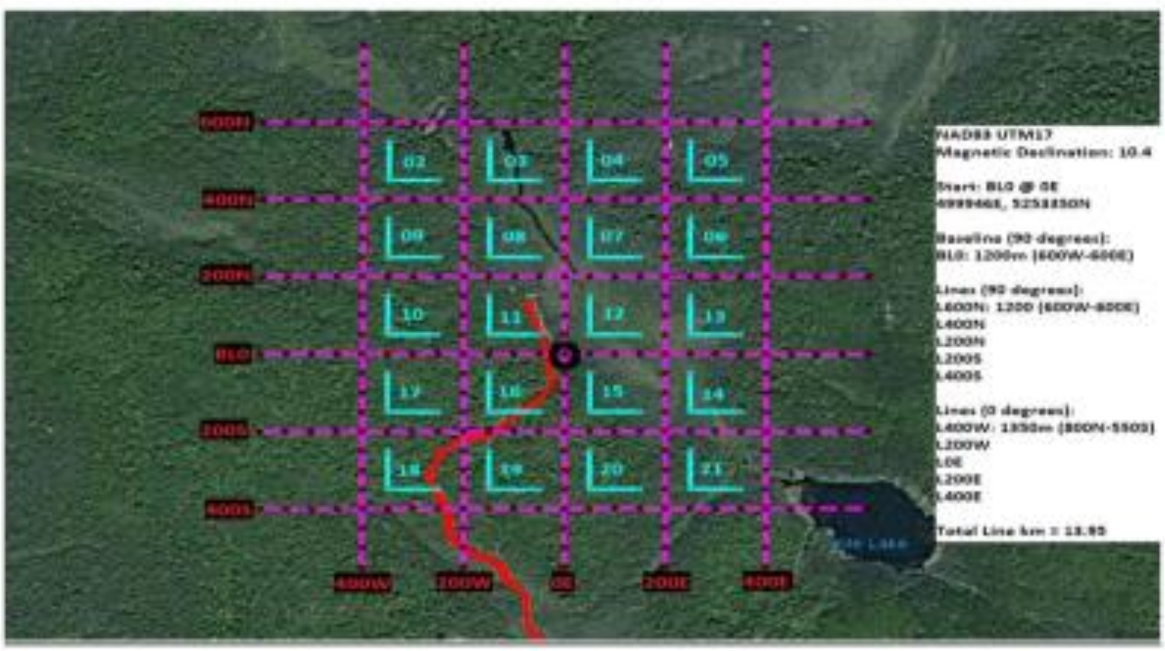


Figure 3: McAra Property - SK 2 3D IP Survey Configuration

Figure 7 – The SK-2 prospect 3-D IP/resistivity grid showing the current electrodes (black dots on purple lines) and potential electrode arrays (cyan colored orthogonal arrays).

Interpretation

Figures 8 through 12 are screen dumps of the 3-D IP and resistivity voxel models. Figure 8 shows the entire IP voxel viewed vertically downward. The upper edge of the SK-2 current filament model as proposed by Alan King is shown as a NW striking black line. The modeled current filament dips to the NE at 60 degrees. The depth to the top of the filament is approximately 41 meters from ground surface. Note that there is a good correlation between the top edge of the filament model and a shallow NW trending IP response.

Note that all IP/resistivity depths mentioned below are approximate. The elevations are accurate so depths will depend on drill hole placement.

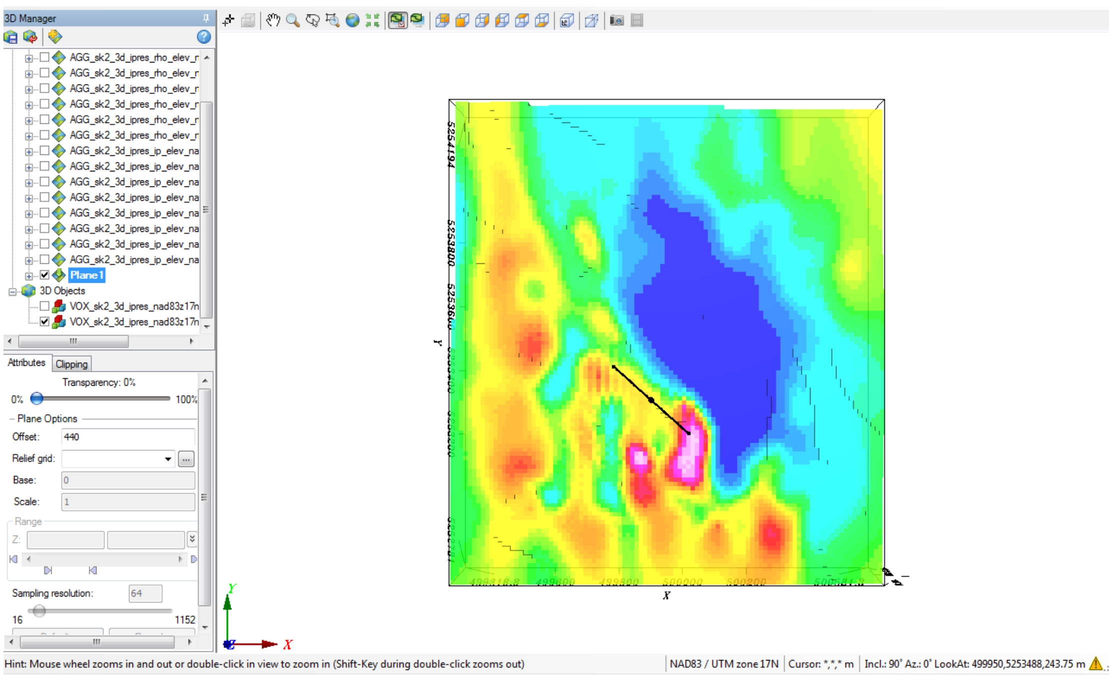


Figure 8 – The SK-2 3-D IP voxel viewed from above with the axis of the Alan King EM filament plotted on top (black line). The high IP response is shown by hot colors. This current filament is the primary SK-2 drill target. There is a weak IP response coincident with the interpreted EM current filament.

Figure 9 shows the same IP voxel model with all of the low chargeability material, <15 mV/V, clipped out of the image. This allows the observer to see the distribution of the higher chargeability responses. The view is down and to the NW.

Figure 10 shows this same IP voxel model clipped to show the higher response but viewed vertically downward. The interesting point here is that there occur several NW striking IP responses at depth in the SK-2 area as well as strong N-S responses at these depths (black arrows).

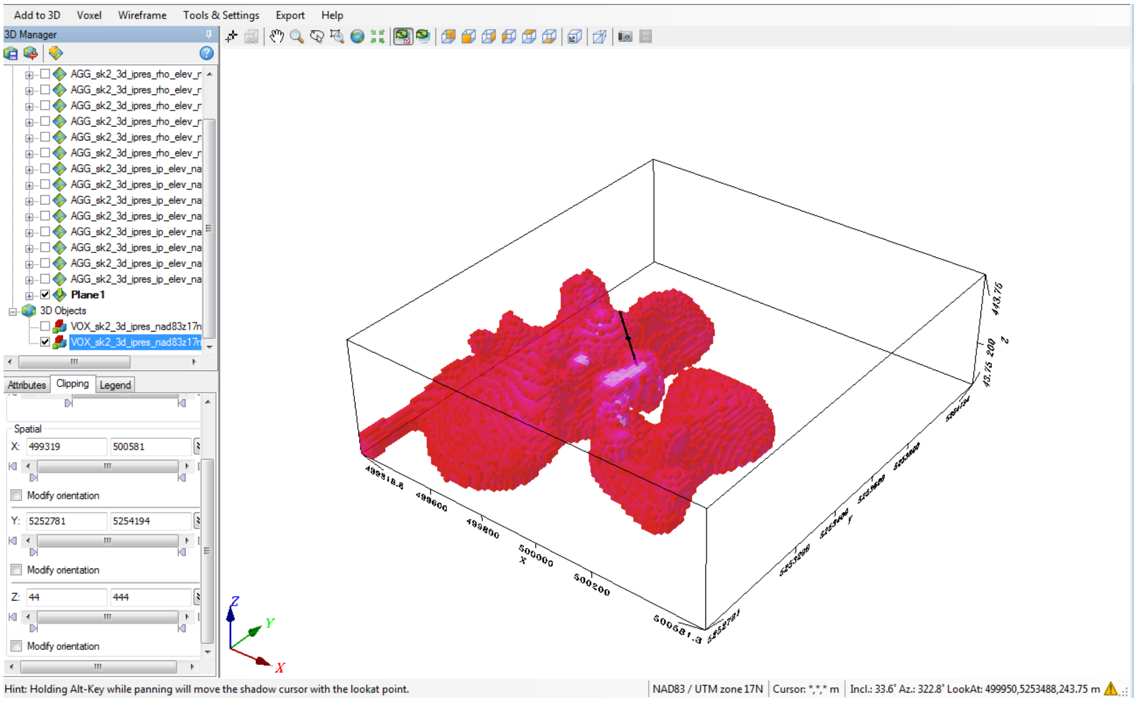


Figure 9 – The SK-2 3-D response clipped to show all values greater than 15 mV/V (IP > 15 mV/V). The view is down and to the NW. The EM current filament is shown as a black line.

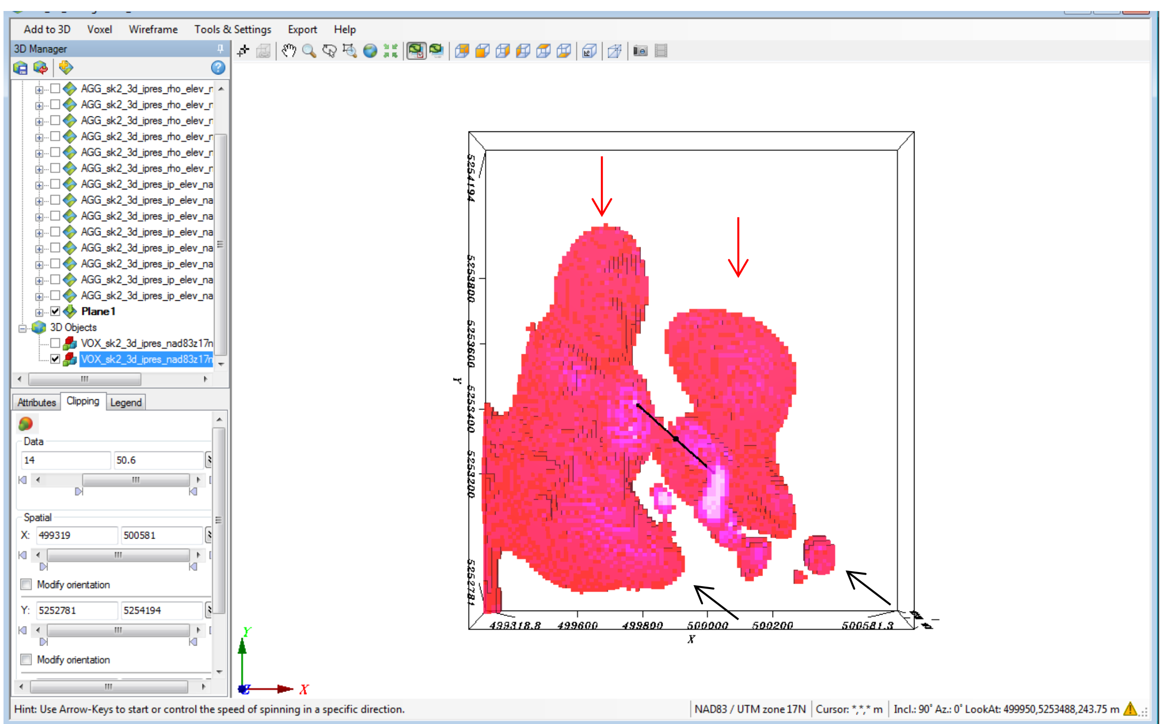


Figure 10 – The same SK-2 IP response as shown in Figure 9 above (IP > 15 mV/V) but viewed vertically downward. Note the NW-SE trend that occurs in the vicinity of the EM current filament. This is a similar trend direction as at the McAra prospect. Two NW-SE trends are indicated in this image and highlighted by black arrows. Two NS trends are indicated by red arrows.

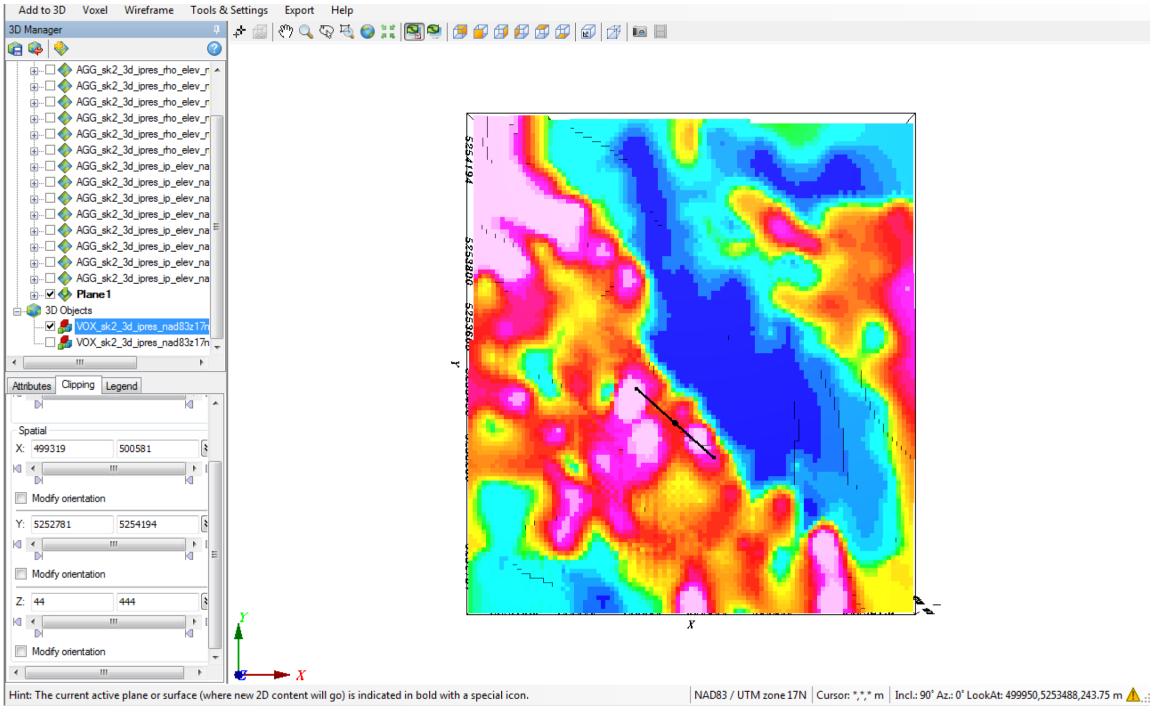


Figure 11 – The SK-2 resistivity voxel (elevation 350 meters) viewed vertically downward. The high resistivity rocks are colored red and low resistivity rocks (conductors) are colored blue. The EM filament does not come to surface. The upper edge of the filament is modeled at 41 meters depth.

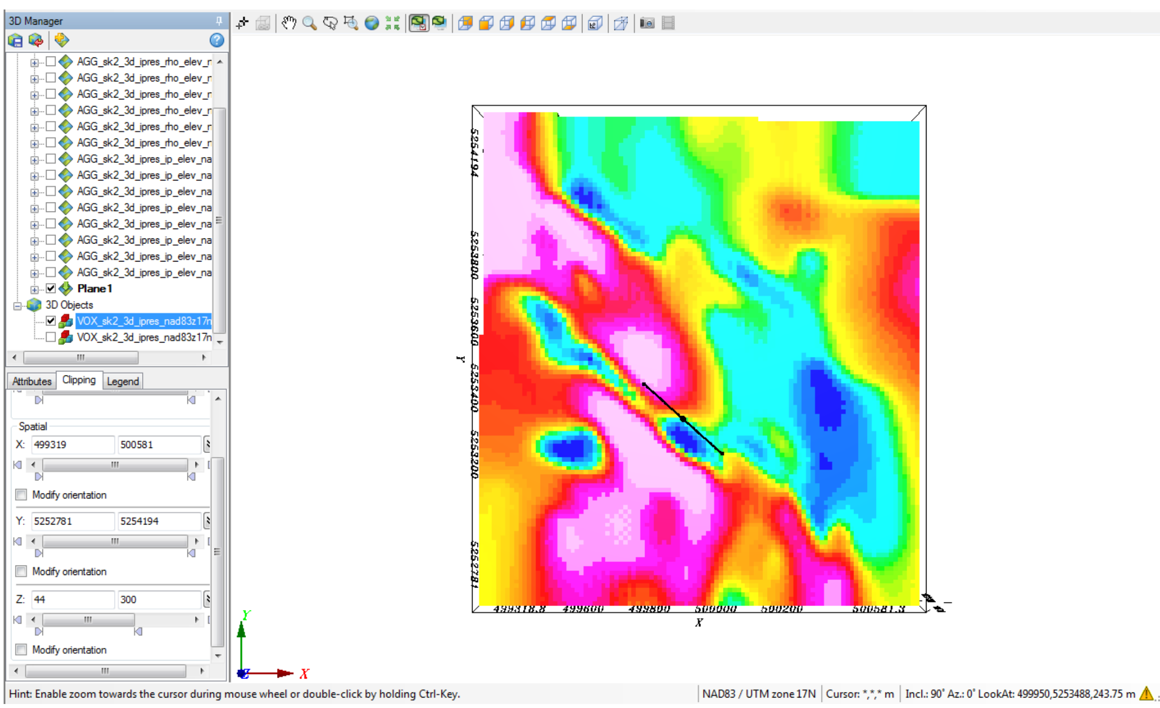


Figure 12 – The SK-2 resistivity voxel (elevation 300 meters) viewed vertically downward. The high resistivities are colored red and low resistivity (conductors) are colored blue. The interpretation is that the NW-SE low resistivity zone located immediately south of the upper edge of the current filament is the source of the EM anomaly. The 100 meter line spacing and E-W flight direction of the EM survey may account for this slight location discrepancy.

Figure 11 shows the top of the complete resistivity voxel viewed vertically downward. The EM current filament is plotted on top as a black line. Evidence of the conductor is not present in the shallowest data. Figure 12 is the same resistivity voxel clipped to an elevation of 300 meters (asl) which is a depth of approximately 50 to 100 meters. A NW striking conductor is observed at this depth and agrees quite well with the modeled current filament.

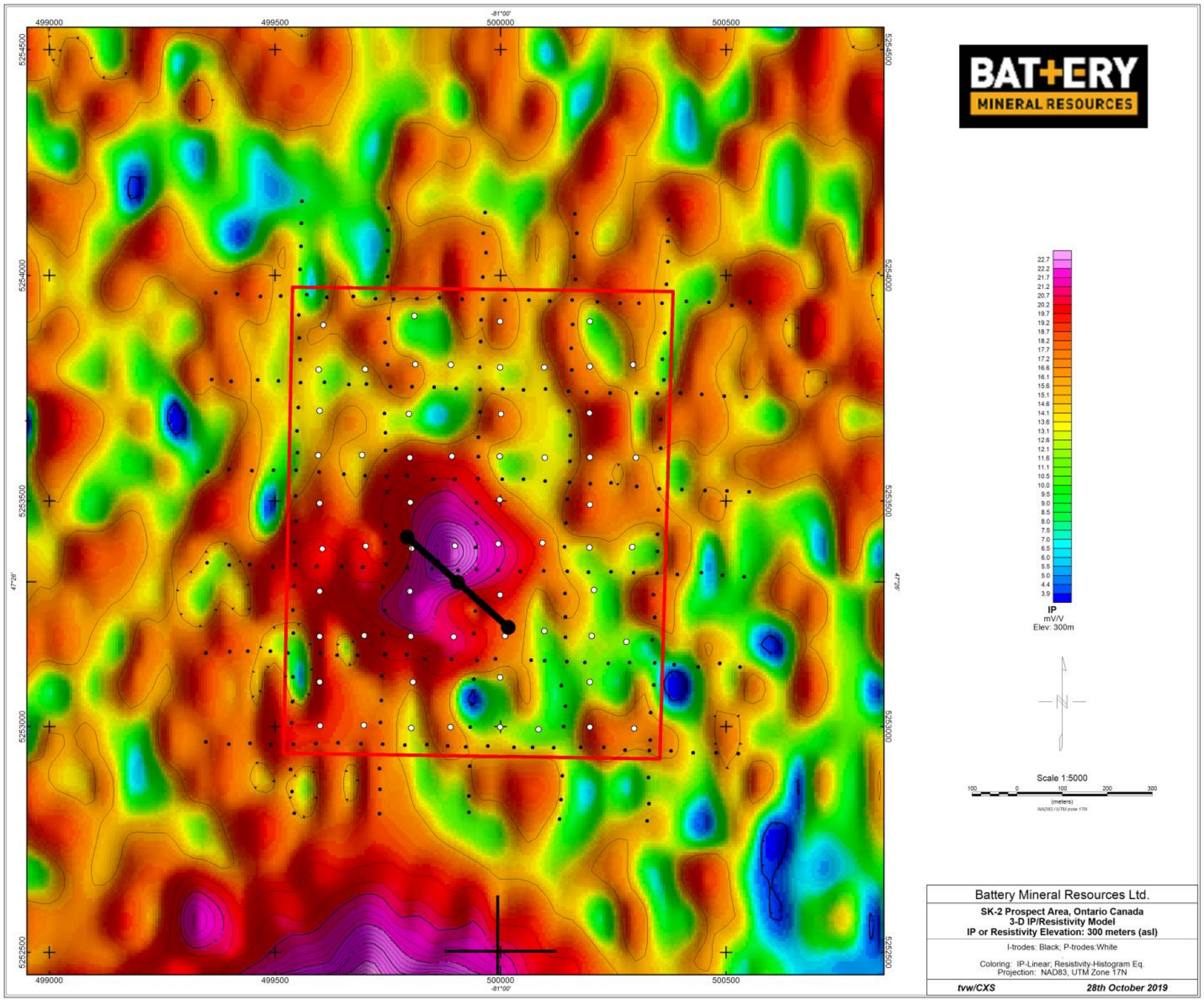


Figure 13 – The SK-2 Skytem EM response (HM Channel 18 raw data) with contours plotted in the SK-2 detailed map area. The interpreted EM current filament is plotted on top of the EM response. Keep in mind the Skytem survey was flown EW with a 100 meter line spacing which affects the EM anomaly shape. The EM data set detects the anomaly but does not define its shape or extent perfectly.

Figure 13 shows the HM Channel 18 EM response imaged and contoured with the modeled current filament plotted on top of it (black line). These contours will be used on subsequent images to show where the original target feature (SK-2 EM anomaly) falls in the prospect area.

Figure 14 shows the Channel 18 EM contours plotted on the 1VD magnetic data set. In general the EM anomaly falls in an area of low magnetic response. This low magnetic response may indicate the presence of Gowgonda sediments and could be host to a carbonaceous or graphitic conductor. However on closer inspection there is a weak 1VD magnetic high directly coincident with the EM conductor, possibly due to the presence of massive sulfides or a thin EW trending Nipissing dike. Therefor the SK-2 EM conductor remains a valid exploration target (Target-1, see below).

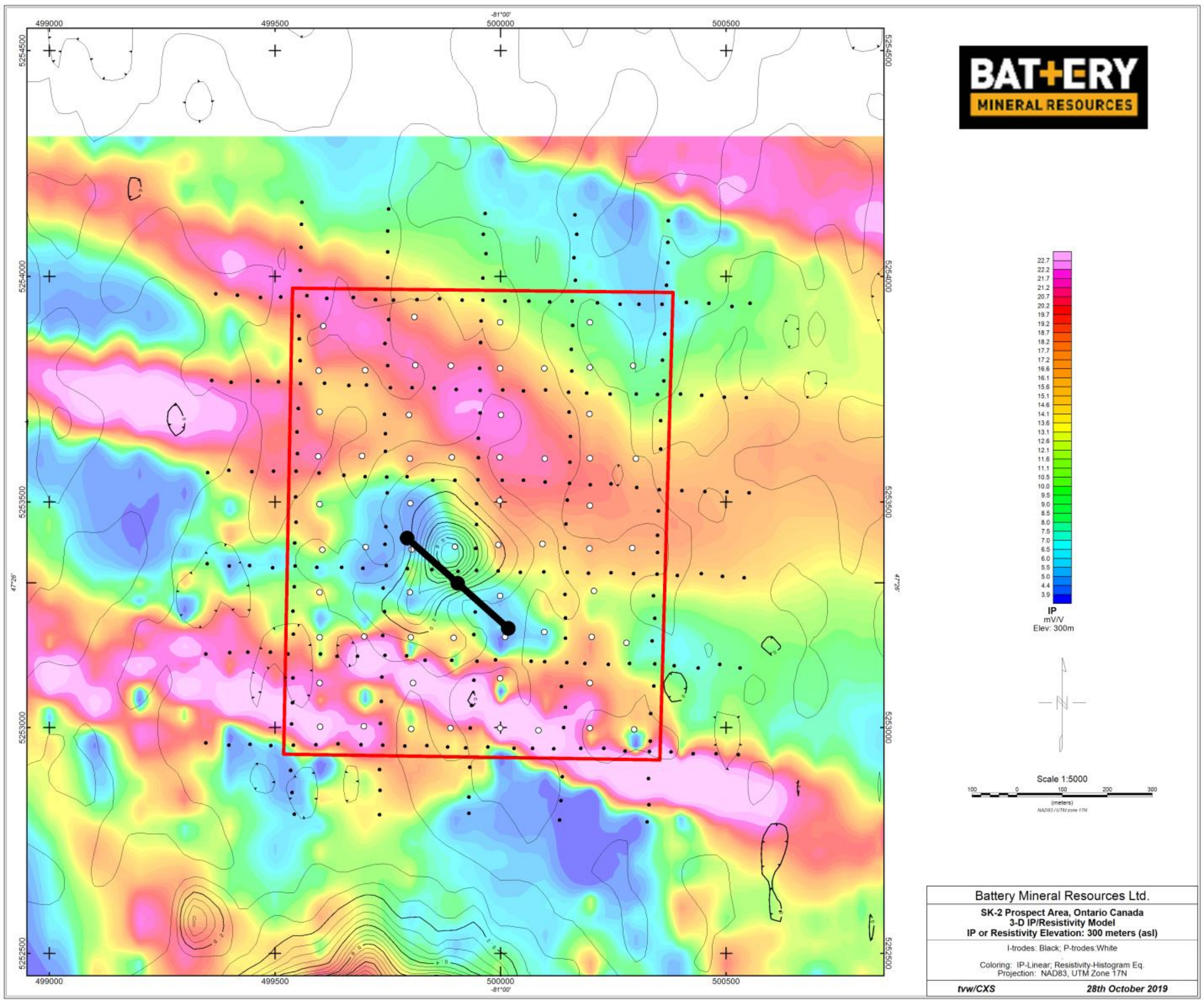


Figure 14 – The SK-2 EM contours plotted on top of the 1VD RTP magnetic data set. The EM conductor occurs in a magnetically low area which may indicate sediments (carbonaceous?). However there is a weak, thin magnetic feature directly coincident with the current filament which may indicate the presence of diabase or even massive sulfides (pyrrhotite). This feature requires drill testing.

3-D IP/resistivity Model Elevation Slices

A series of images, Figures 15 through 26 are used to display the shallow (350 and 300 meters elevation) and deep (150 meters elevation) IP and resistivity elevation slices used to select drill targets at the SK-2 prospect.

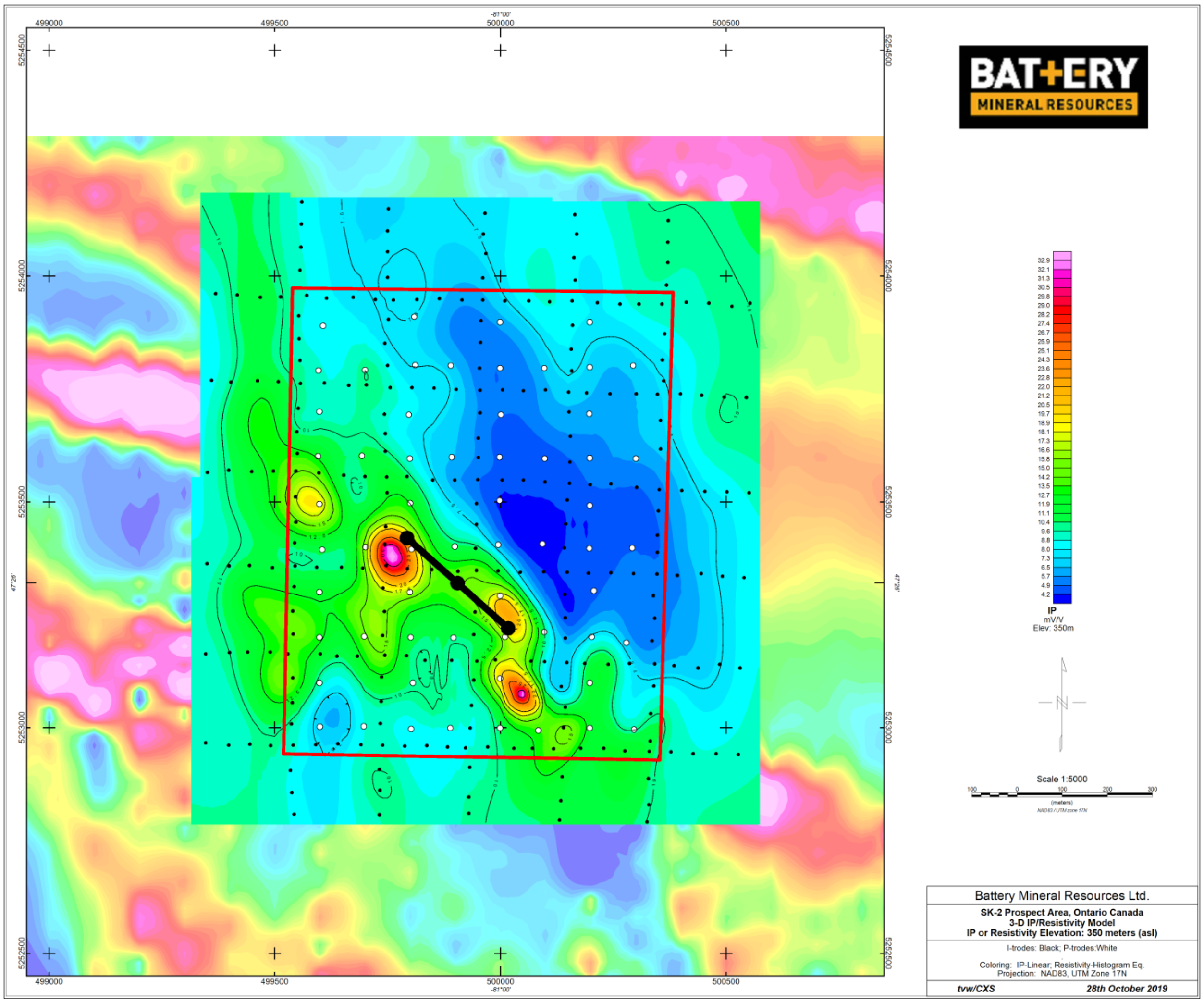


Figure 15 – The 350 meter IP elevation slice from the 3-D voxel model. This is the shallowest complete elevation slice that covers the entire SK-2 area. The modeled Skytem EM conductor filament top edge is shown in black. The filament dips to the NE at 60 degrees. The coincident EM and shallow IP anomaly is the primary drill target in this block. The IP contours from this image are shown on top of the 1VD RTP magnetic image below for location reference purposes (see Figure 16).

Figure 15 shows the EM current filament model plotted on the 350 meter IP elevation slice. At this shallow depth the IP response and the EM response appear to be related. Figure 16 shows the 350 meter IP contours plotted on the 1VD magnetic image. As mentioned above there is a weak 1VD magnetic high directly coincident with the EM conductor.

Figure 17 shows the SK-2 EM conductor (filament model) plotted on the shallow, 350 meter, resistivity elevation slice. Note the parallel conductor (low resistivity zone) starting to develop at this elevation. It is interpreted as the source of the EM response (black arrows).

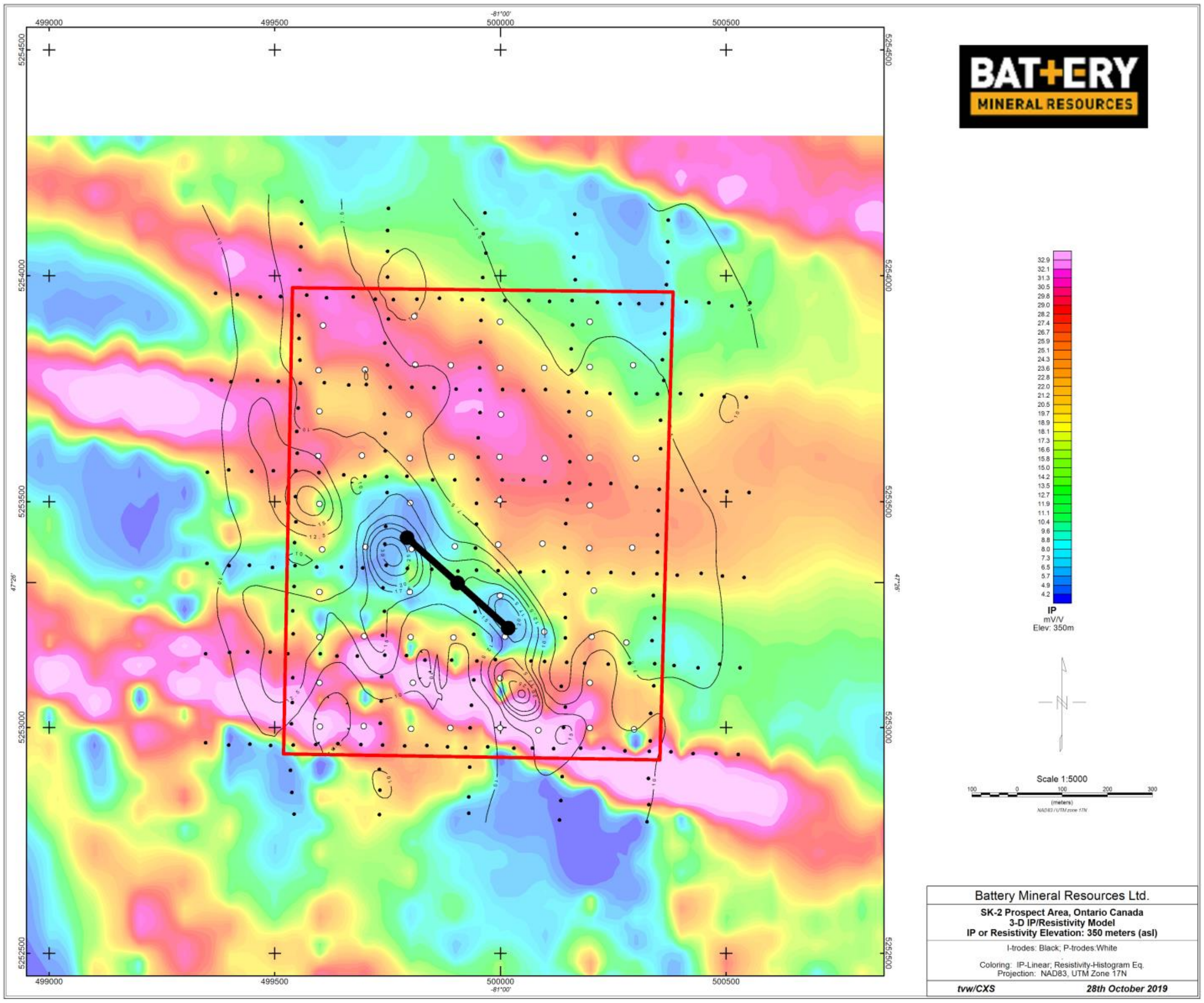


Figure 16 – The 350 meter elevation slice IP contours plotted on the 1VD of the RTP magnetic image. The coincident EM filament target, anomalous IP high response (contours) and weak magnetic high within a 1VD low makes a significant drill target.

Figure 18 shows the 350 meter elevation slice resistivity contours plotted on the 1VD magnetic image. The low resistivity zone falls within a low magnetic response zone.

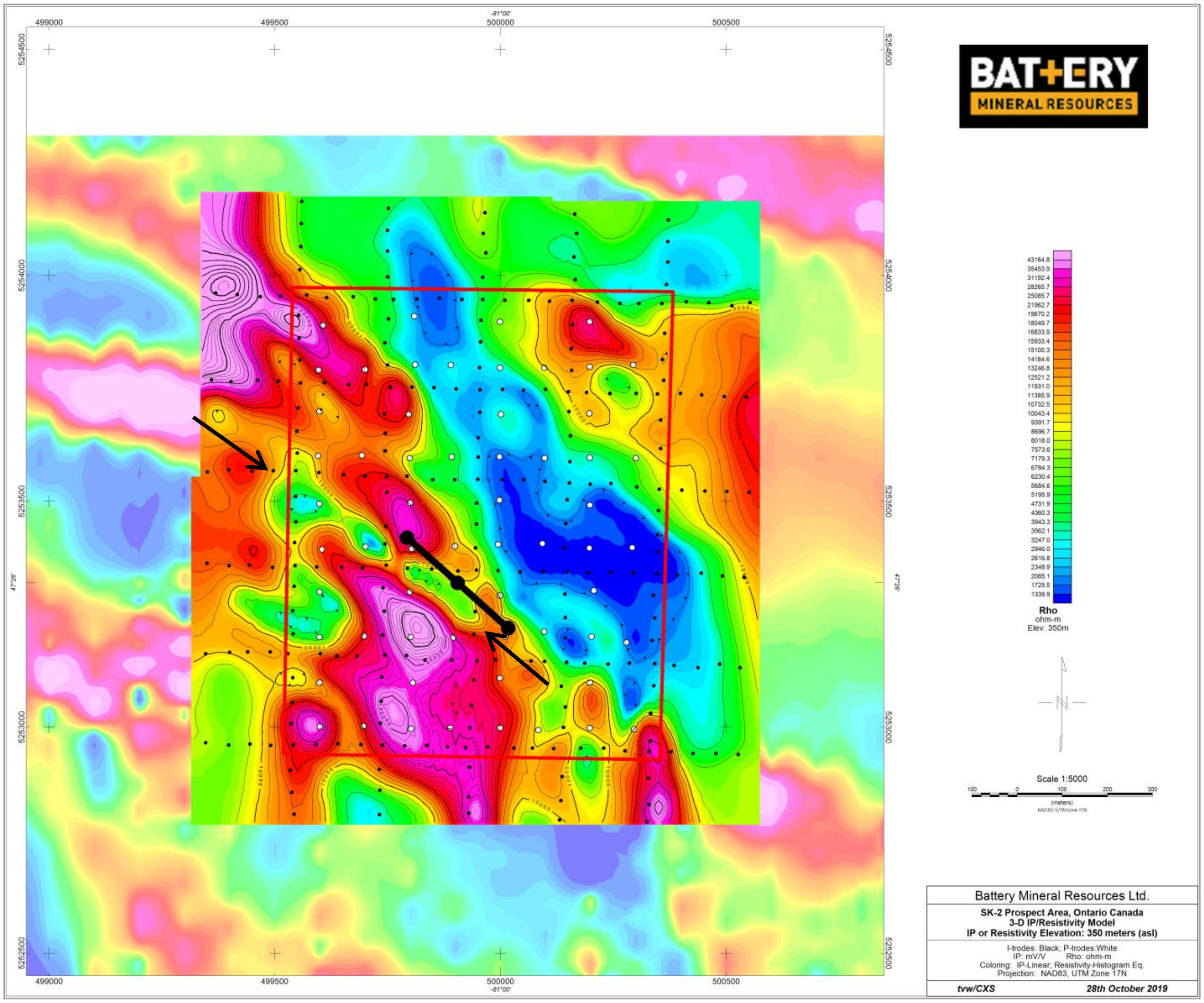


Figure 17 – The 350 meter resistivity elevation slice from the 3-D voxel model. This is the shallowest complete elevation slice that covers the entire SK-2 area. The modeled Skytem EM conductor filament top edge is shown in black. Note the parallel low resistivity zone located immediately to the south of the conductor filament. The interpretation is that this low resistivity zone is what the Skytem EM system detected at SK-2. The resistivity contours are shown below on the 1VD of the RTP magnetic image for location reference purposes (Figure 18).

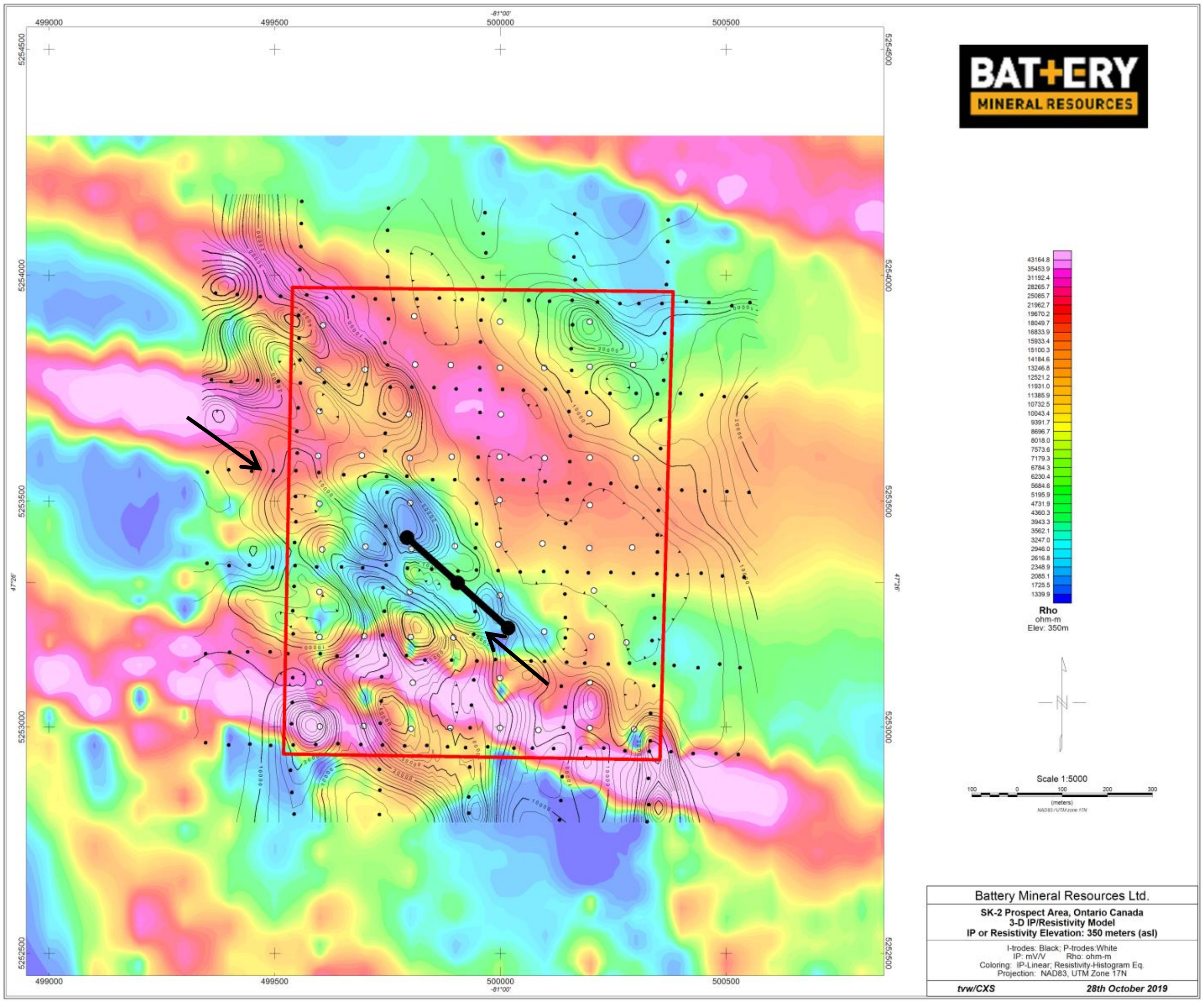


Figure 18 – The SK-2 resistivity contours from the 350 meter elevation slice plotted on top of the 1VD image.

Figure 19 shows the slightly deeper, 300 meter elevation IP response. The strengthening IP response strikes NW-SE and is parallel to and nearly coincident with the SK-2 EM conductor.

Figure 20 shows the 300 meter IP contours plotted on the 1VD magnetic image.

Figure 21 shows the Channel 18 EM contours plotted on the 300 meter IP response for position reference. It is important to remember that the Skytem EM survey was flown in the EW direction with 100 meter line spacing so that the shape of the EM anomaly does not represent the actual shape or lateral extent of the conductor. The importance of the EM data is that it detected the conductor and provided a ground follow-up target for testing with 3-D IP/resistivity.

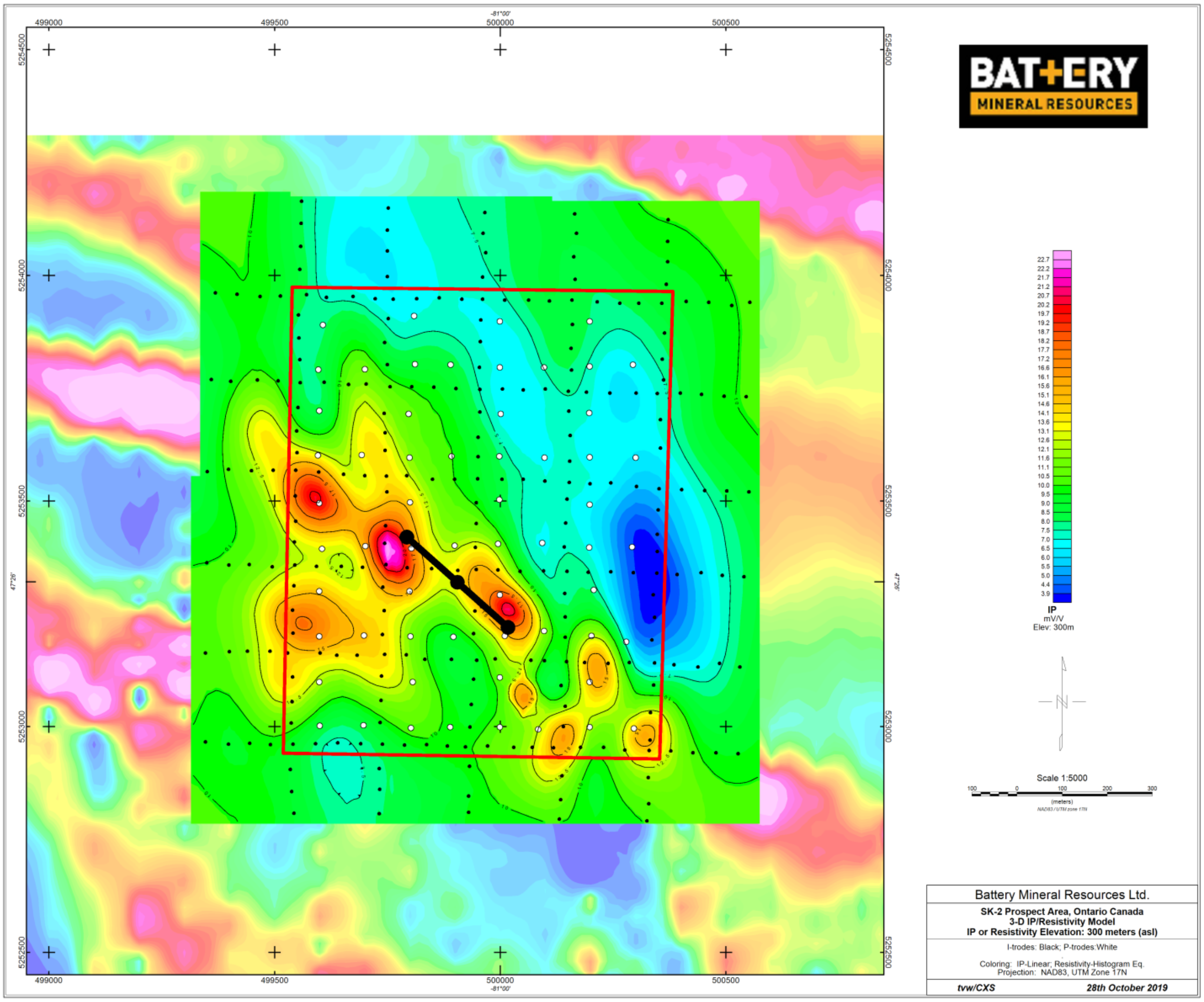


Figure 19 – The slightly deeper 300 meter IP elevation slice showing a strong coincident relationship between the shallow 3-D IP model and the EM filament model. The depth to top of the filament model is 41 meters which is roughly in agreement with the 300 to 350 meter IP slice elevation range.

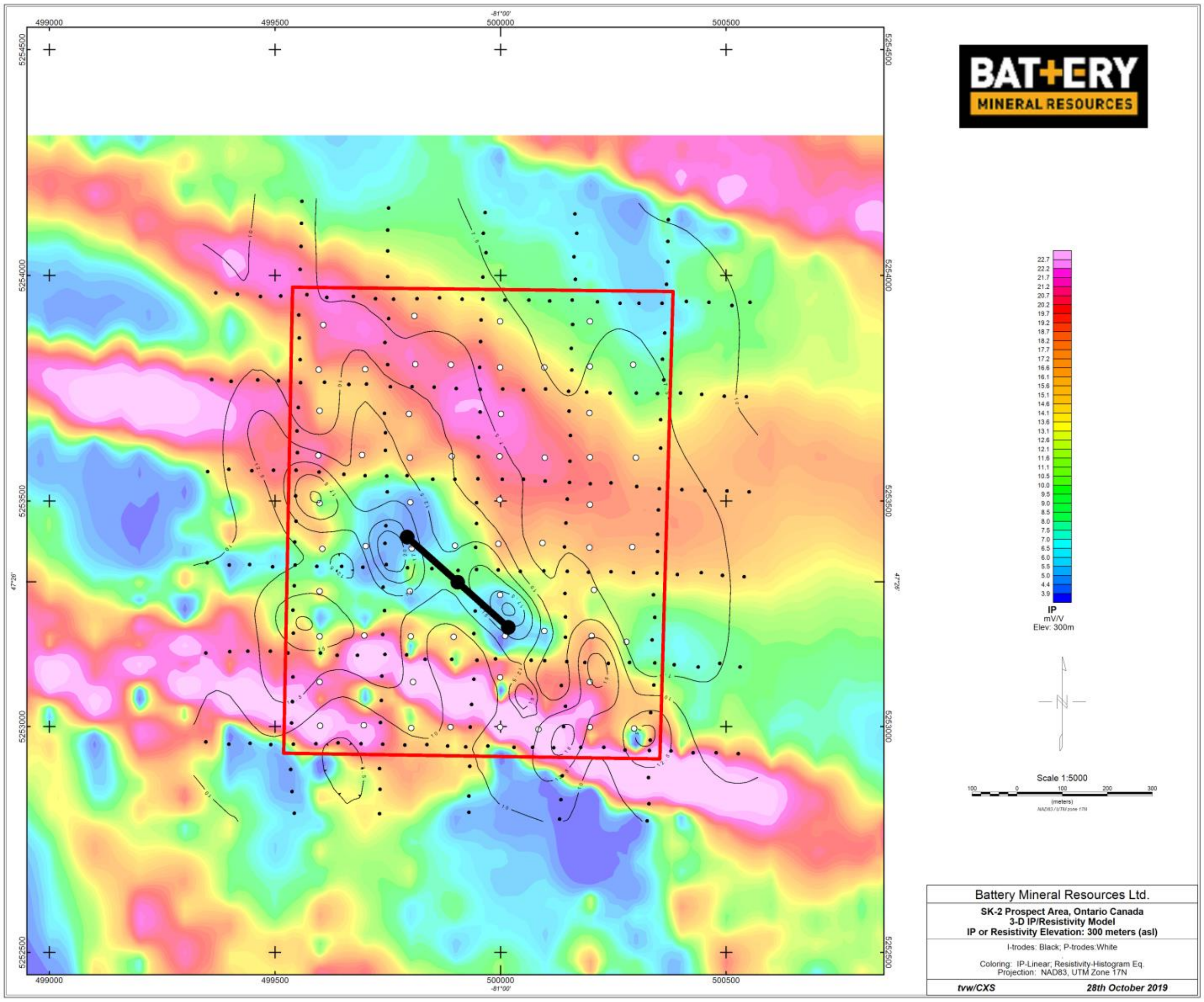


Figure 20 – The 300 meter IP elevation slice contours plotted on the 1VD magnetic image.

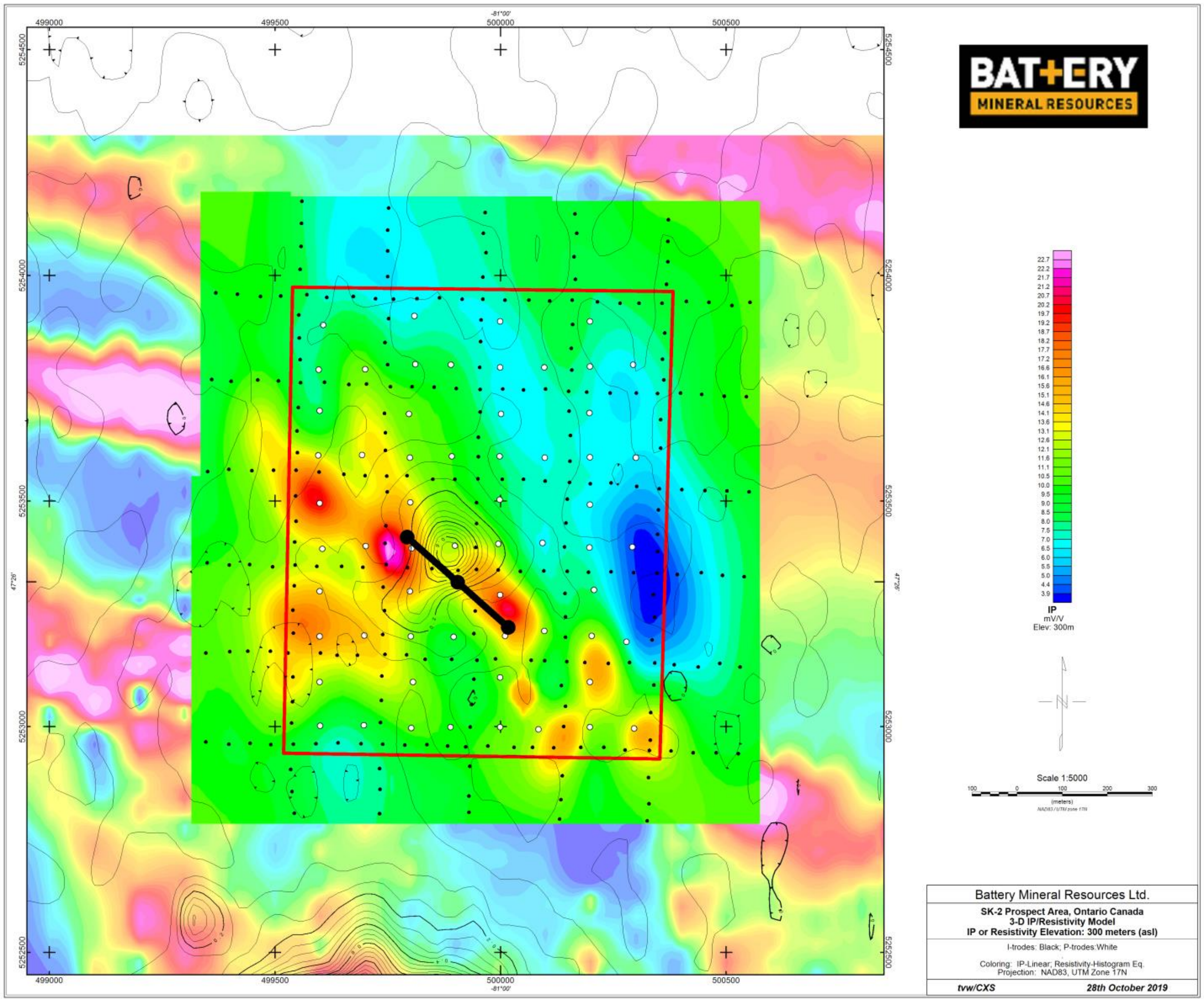


Figure 21 – This figure shows the relationship between the shallow IP response (elevation of 300 meters, depth of 50 to 100 meters), the EM current filament model depth to top of 41 meters and the raw EM data (HM Channel 18) contours.

Figure 22 shows the 300 meter resistivity elevation slice and it is considerably stronger than at 350 meters elevation. It is running parallel to the EM conductor and is interpreted to be the source of the EM anomaly.

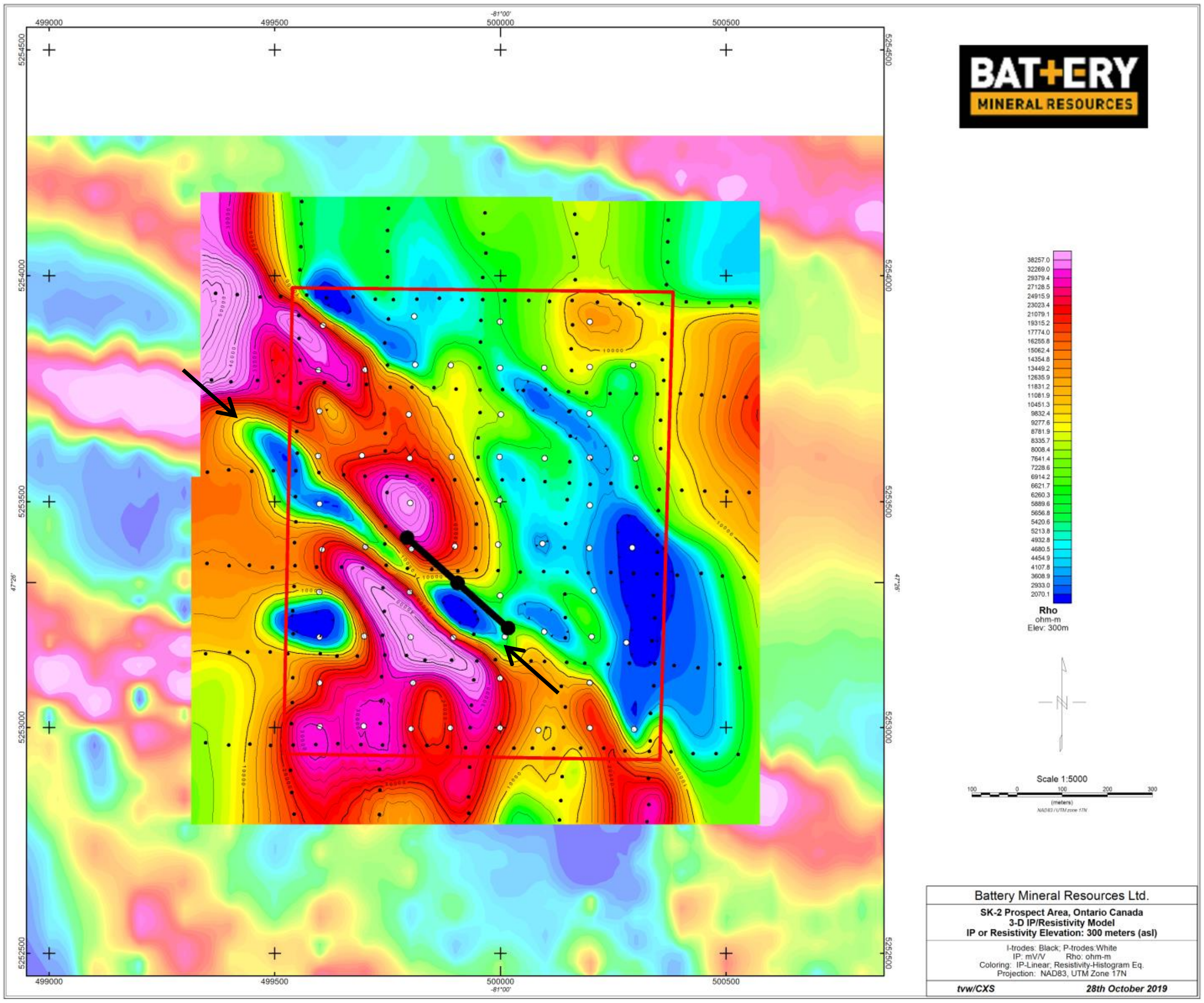


Figure 22 – The 300 meter resistivity elevation slice. The black arrows indicate the shallow low resistivity zone (conductor) of interest.

Figure 23 shows the deeper IP response at an elevation of 150 meters. That is at a depth of 200 to 250 meters from ground surface. Note the strongest IP trends are N-S however there is still an indication the NW-SE trends exist in the data. Although the location resolution of the IP sources at this depth is not well defined the indication of strike direction is unbiased by array setup and can be trusted. There are both N-S and NW-SE trends in this data set and they are real.

Figure 24 shows the 150 meter elevation IP contours plotted on the 1VD magnetic image. This suggests the IP responses are associated with NNW striking structures and so an independent structural interpretation of the magnetic data set was carried out (Figure 28). When overlaid on the IP and resistivity data sets it seems to explain a lot about the shape and limits of the IP and resistivity features.

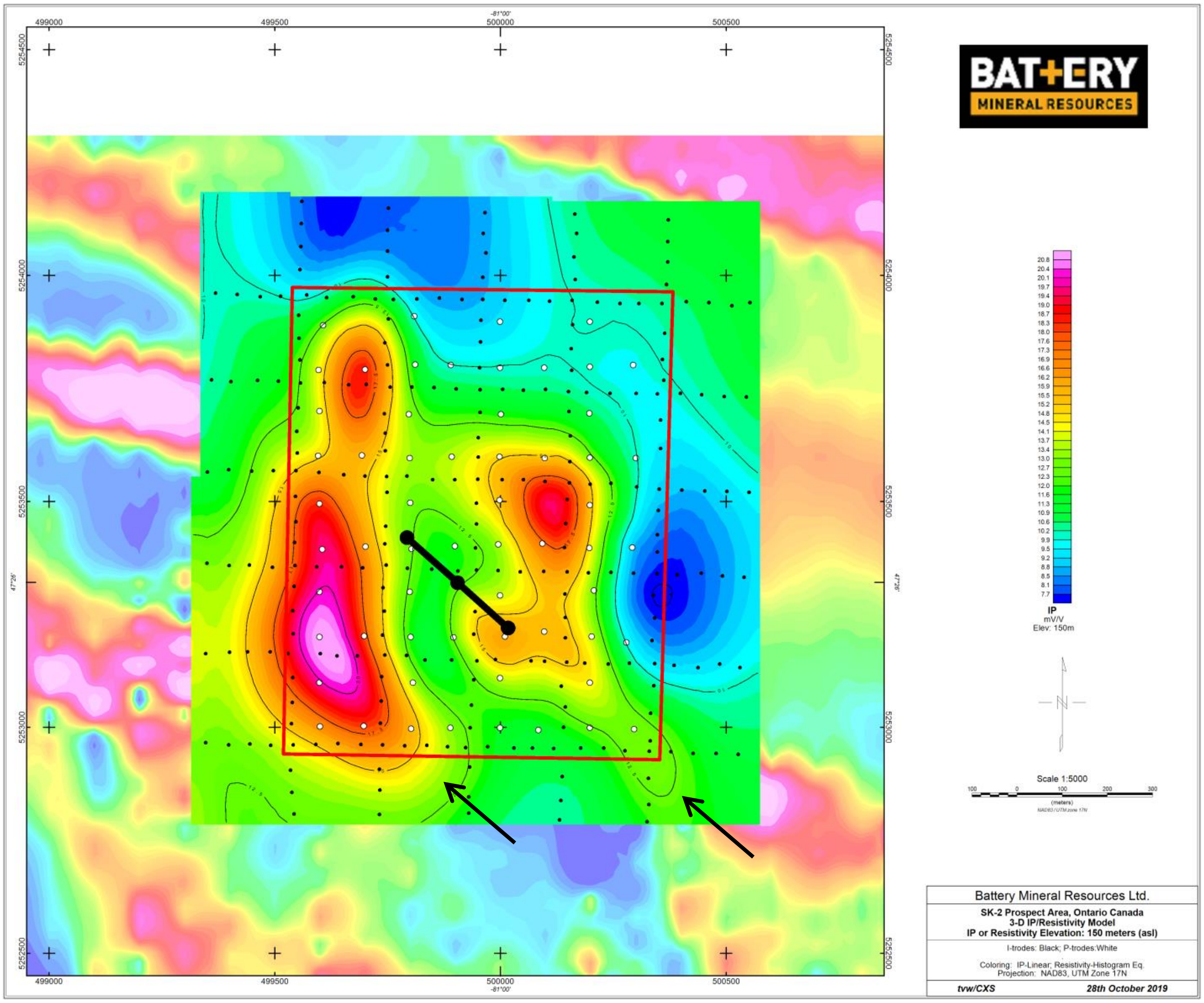


Figure 23 – A deeper, 150 meter IP elevation slice from the SK-2 3-D model. Note that the IP response at depth is oriented more N-S except in the SE and SW corners of the block where there is still a NW-SE trending character (black arrows). Other than Target 1, the shallow Skytem EM conductor, it is this elevation slice that is used to define Targets 2 through 5 (see below).

Figure 25 shows the 150 meter resistivity elevation slice with the SK-2 EM conductor (current filament model) plotted on top. Note both the NW-SE and N-S trends are observed in this data set. The relationship between the EM conductor and the resistivity data set is a little difficult to see in this image. Possibly the filament model dip is incorrect and results from multiple adjacent conductive bodies.

Figure 26 shows the resistivity contours plotted on the 1VD magnetic image. Once again suggesting structure may be important in controlling resistivity anomaly shape.

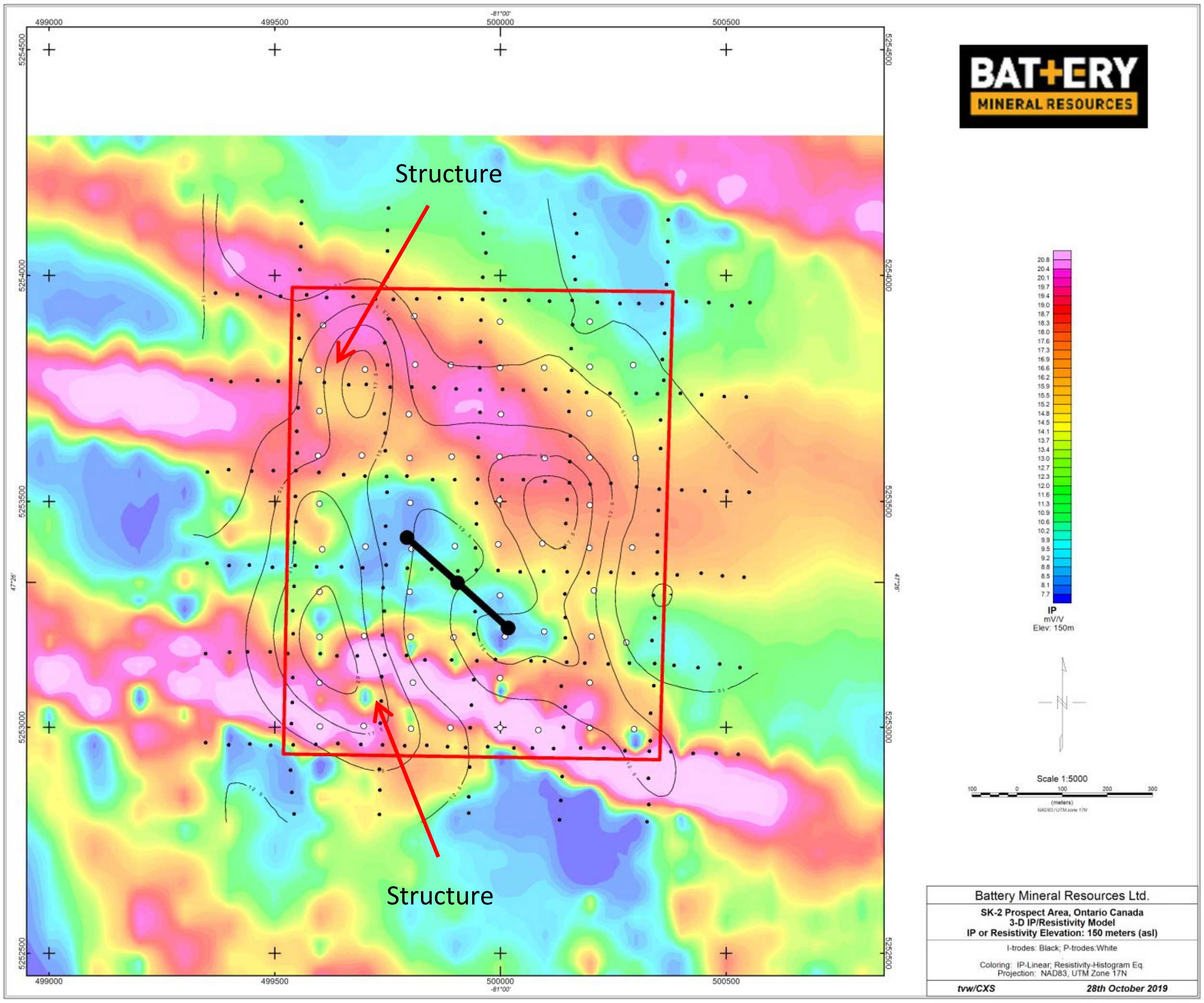


Figure 24 – The deeper, 150 meter IP elevation slice contours plotted on the 1VD of the RTP magnetic image. The relationship between IP response and suggested magnetic structure (red arrows) is clear enough in this image to require this interpreter to step back and complete a magnetic structural interpretation shown below in Figures 28 through 33.

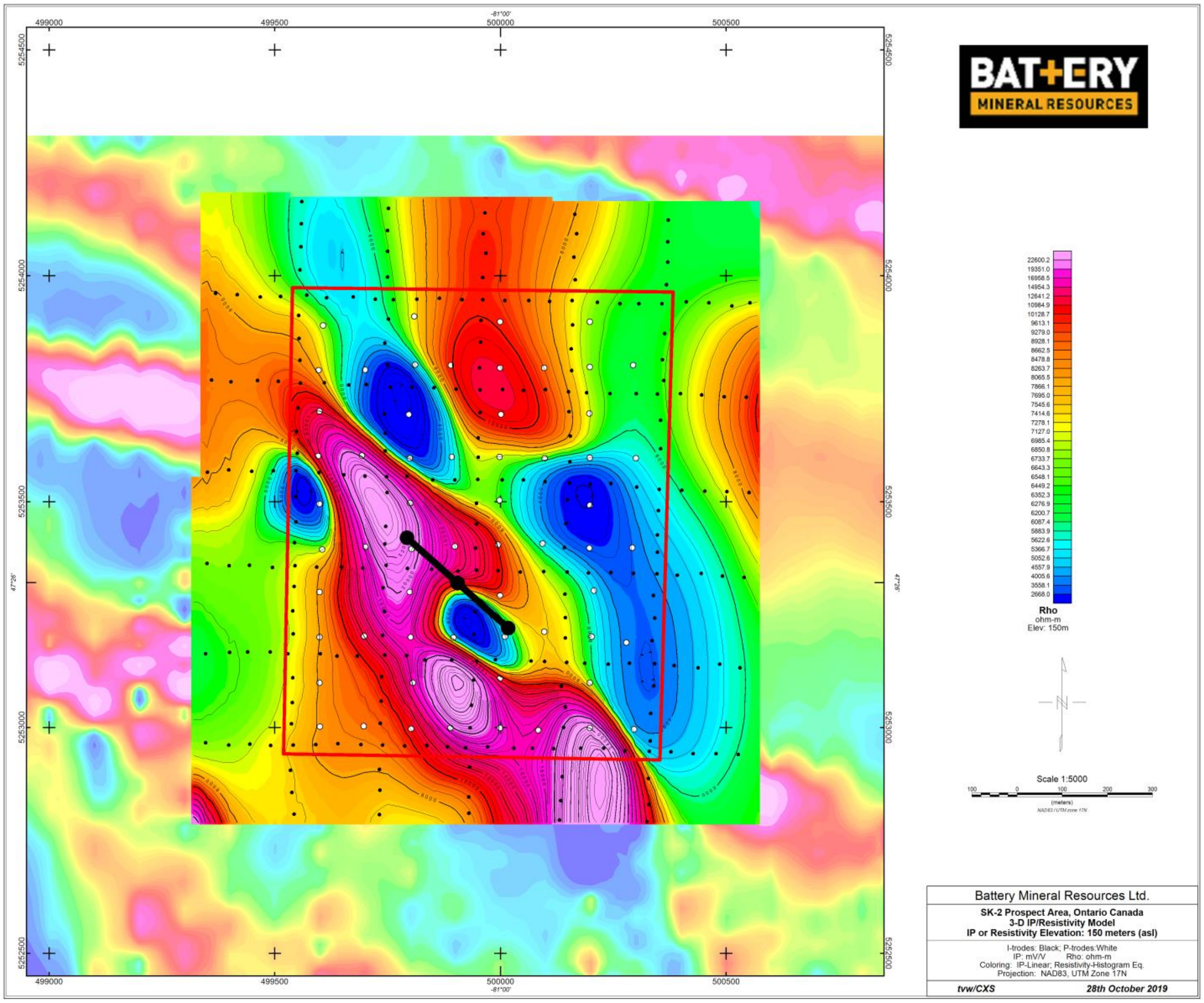


Figure 25 - A deeper, 150 meter resistivity elevation slice from the SK-2 3-D model. Note that unlike the IP response the resistivity response at depth is still primarily oriented in a NW-SE direction. This suggests the anomalous IP response may be associated with structure and not lithology.

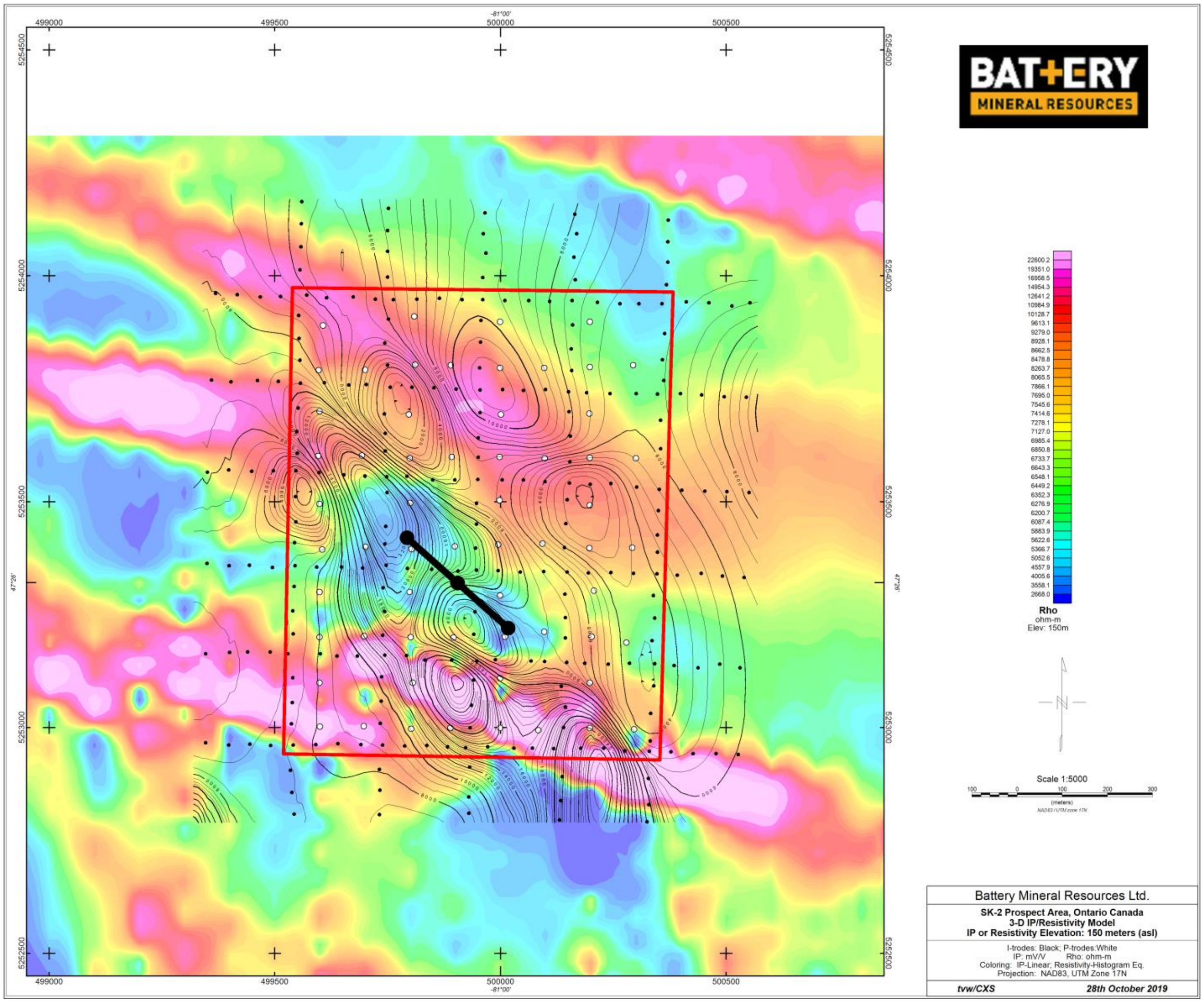


Figure 26 – The 150 meter elevation resistivity contours plotted on the 1VD of the RTP magnetic image.

Targets

Five drill targets have been selected from the Skytem helicopter EM survey and the CXS 3-D IP/resistivity model.

1. Target 1 – Shown in Figure 27, 29, 30 and Table 1. It is the SK-2 EM conductor identified and modeled by Alan King and confirmed by the shallow 3-D IP and resistivity data sets. The drill hole should be drilled in the SW direction and intersect the current filament axis at a depth of approximately 100 meters. If no conductor is intersected on the first hole it is recommended that a borehole EM survey be run to determine if the conductor is off hole and should be re-drilled.

The value of the borehole EM (or borehole IP) survey is that it expands the exploration distance away from the drill hole. Possibly as much as 50 meters from the hole. That is a significantly larger volume of rock that a 3 inch core.

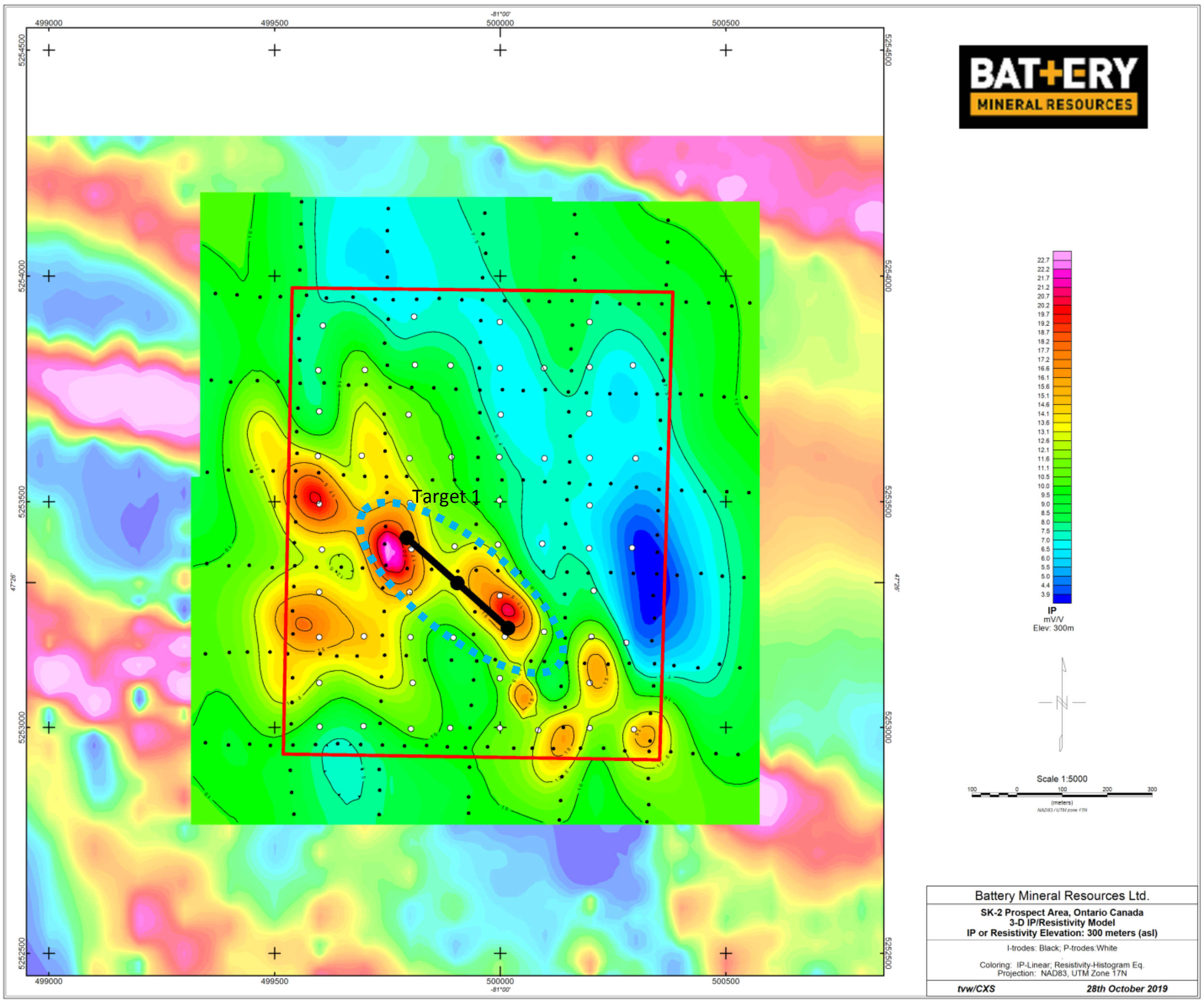


Figure 27 – Target 1 is the Skytem EM conductor SK-2 selected by Alan King in his EM interpretation of the 2018 Skytem survey. It is a shallow EM conductor with a NW-SE strike and a dip of 60 degrees to the NE. The estimated depth to top of the current filament is 50+ meters. It should be drilled from NE to SW and intersected at approximately 100+ meters depth.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Maxwell F	Anom ID	Reference	x	y	z	Depth_to_	Dip	Dip_Direc	Length	Depth_Ext	Conductiv	Conductiv	Thickness	
2	L 102101-I	SK1	Centre to	499540	5257190	355	-29.58	80	90	200	100	49	7	7	
3	SK2 TL100!	SK2 ←	Centre to	499905	5253320	350	-41.4664	60	42.5	300	100	40	-	-	←
4	SK3 TL100!	SK3	Centre to	499900	5252405	385	-20.9866	60	225	650	60	120	15	8	
5	SK4 L1008	SK4	Centre to	502795	5250990	375	-11.812	70	230	700	400	18	0.3	60	
6	SK5 L1099	SK5	Centre to	502550	5249395	300	-82.3378	10	270	400	200	40	-	-	
7															

Table 1 – The details of the SK-2 EM conductor interpreted by Alan King. The red arrows indicate the SK-2 conductor of interest.

Figure 28 shows the magnetic structural interpretation based on the RTP magnetic image. This structural interpretation is then dropped on the 1VD magnetic image, the 300 and 150 meter IP and resistivity elevation slices for targeting purposes.

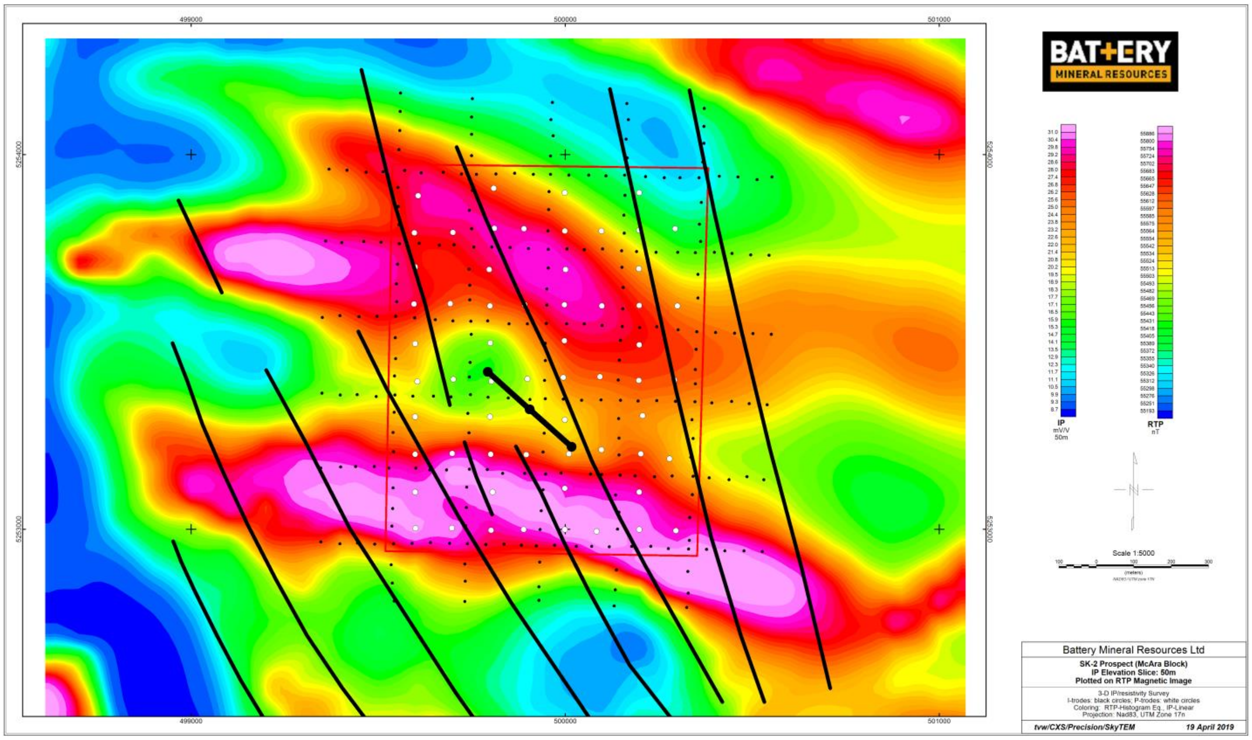


Figure 28 – The magnetic structural interpretation based on the RTP magnetic intensity data set. These NNW structures clearly control the magnetic response, the 3-D IP/resistivity response and the EM response in the SK-2 prospect area.

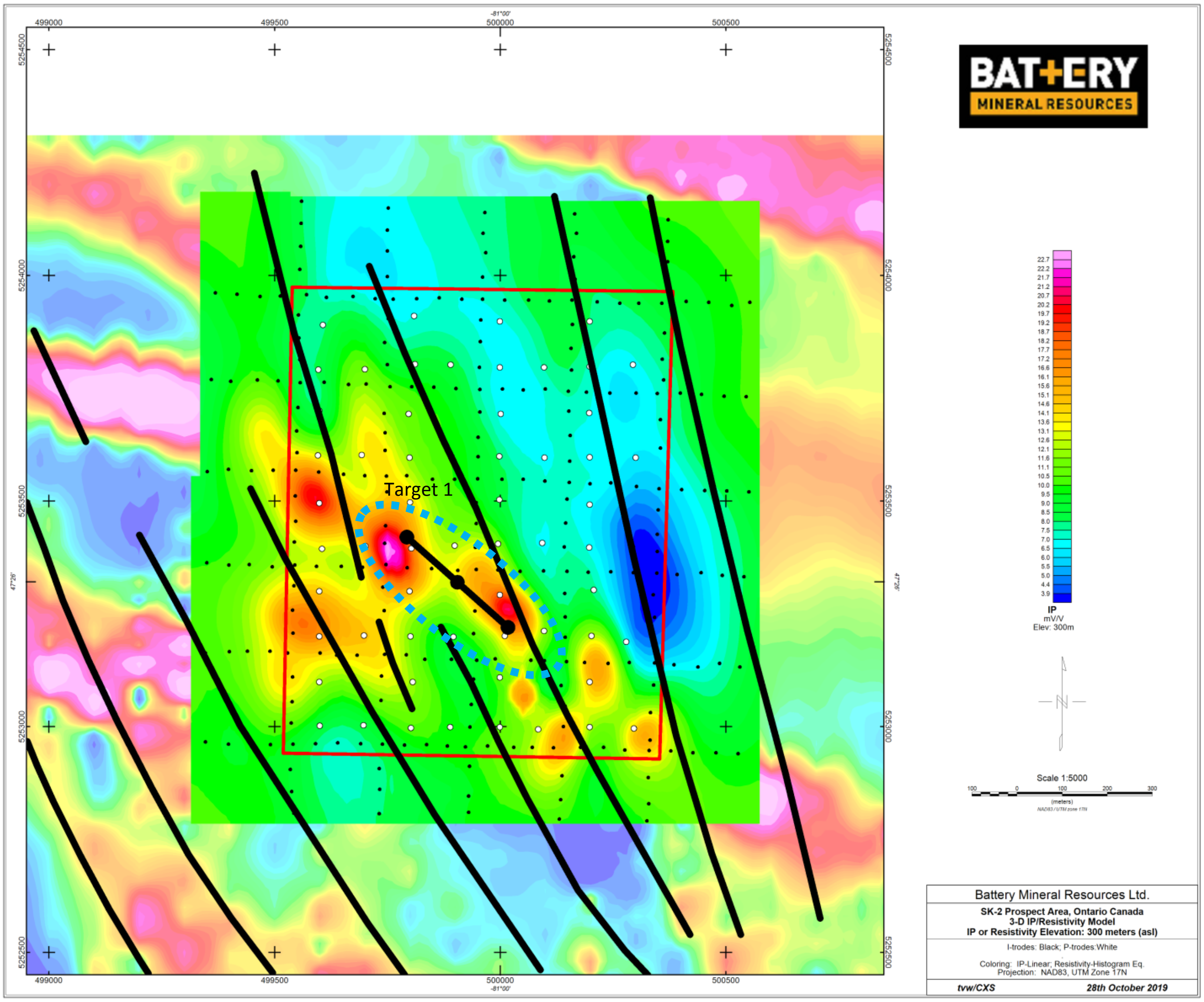


Figure 29 – The Target 1 anomaly plotted on the 300 meter IP elevation slice with magnetic structure superimposed on top of it. Note that the NNW structures appear to have some degree of control on the Target 1 EM feature.

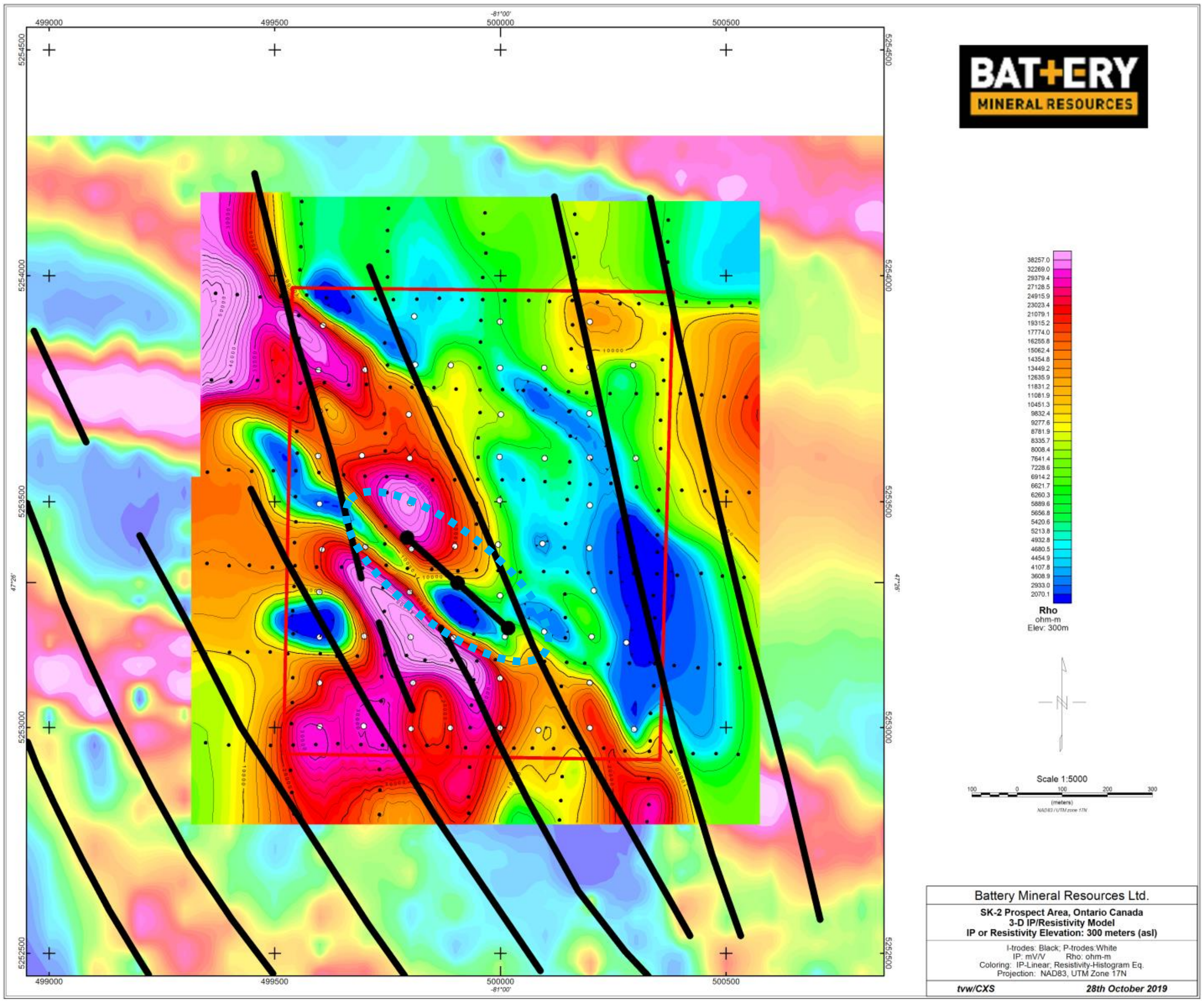


Figure 30 – The Target 1 EM feature plotted on resistivity (300 meter elevation slice).

Figure 31 shows how the deeper IP responses (150 meter elevation slice) are controlled by the interpreted magnetic structure and identifies additional drill targets.

2. Target 2 is the highest priority deep drill target. It shows a structurally controlled IP response occurring at the bend of an IP anomaly where a N-S IP response bends to a NW-SE direction. The depth to this target is approximately 300 meters. The direction of drilling is not defined in this data set. It should be selected geologically. If the IP response is not detected a borehole IP survey should be run to determine the direction from the hole where the sulfides occur. As mentioned above, the goal is to expand the exploration distance away from the drill hole.

3. Target 3 is a N-S trending IP anomaly bounded to the east and west by magnetically interpreted structures. The depth to target should be approximately 300 meters vertically. The same comment on borehole IP.

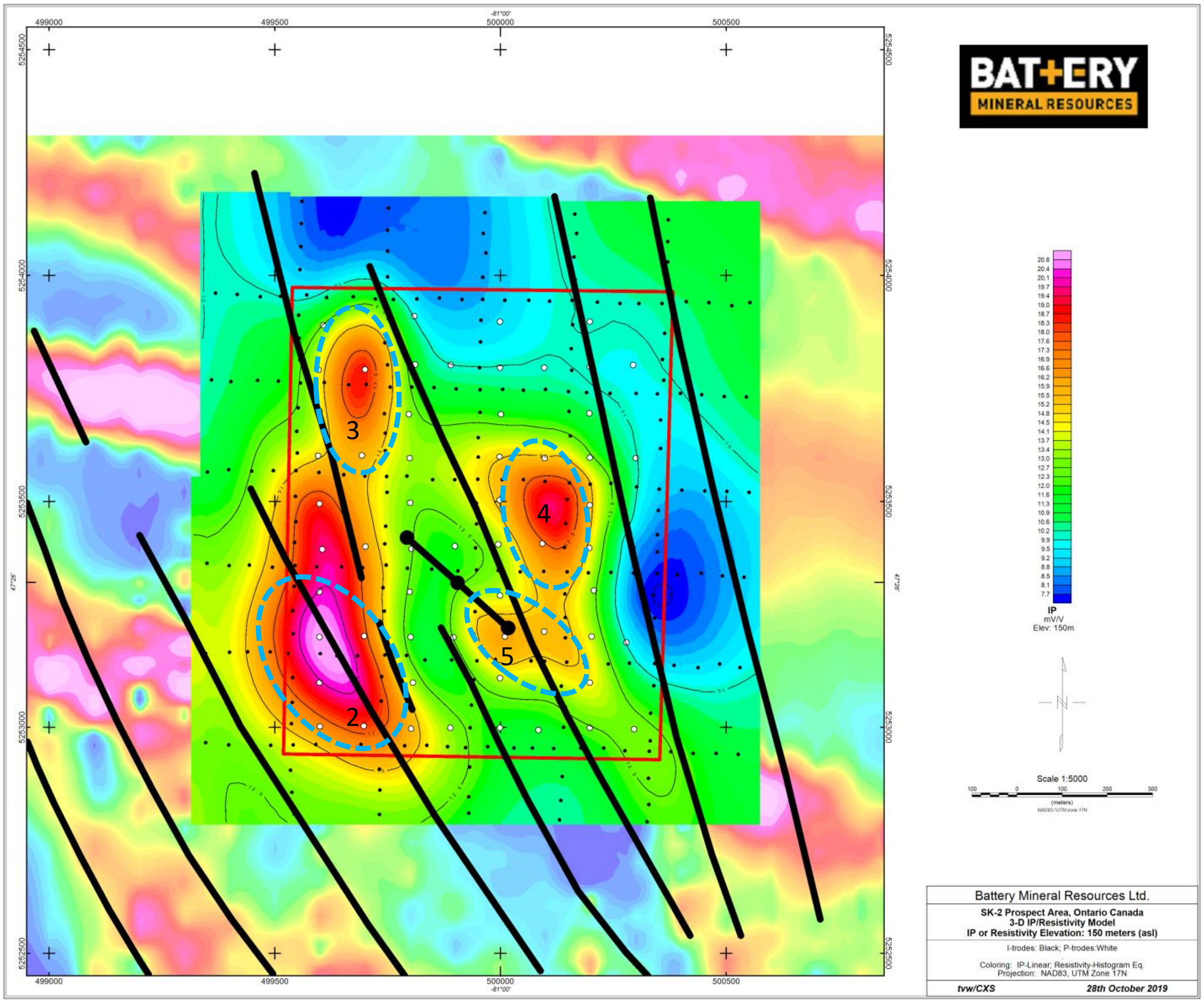


Figure 31 – The 150 meter IP elevation slice used to define and display the additional IP targets at SK-2. They are Targets 2, 3, 4, and 5 in order of priority. Target 2 is of particular interest as it appears that the IP response may be directly controlled by a NNW trending structure. Note the bend in the IP anomaly from N-S to NW-SE at the Target 2 structure.

4. Target 4 is a NNW trending IP anomaly bounded to the east and west by magnetically interpreted structures. The depth to target should be approximately 300 meters vertically. The same comment on borehole IP.
5. Target 5 is a WNW trending IP anomaly dissected by an interpreted structure. It may occur at the intersection of N-S and NW-SE IP responses. The depth to target should be approximately 300 meters vertically. The same comment on borehole IP.

The lateral resolution of the 3-D IP/resistivity array is poor relative to target size and bore hole geophysics may prove useful in targeting anomalies that are not intersected by the first drill hole.

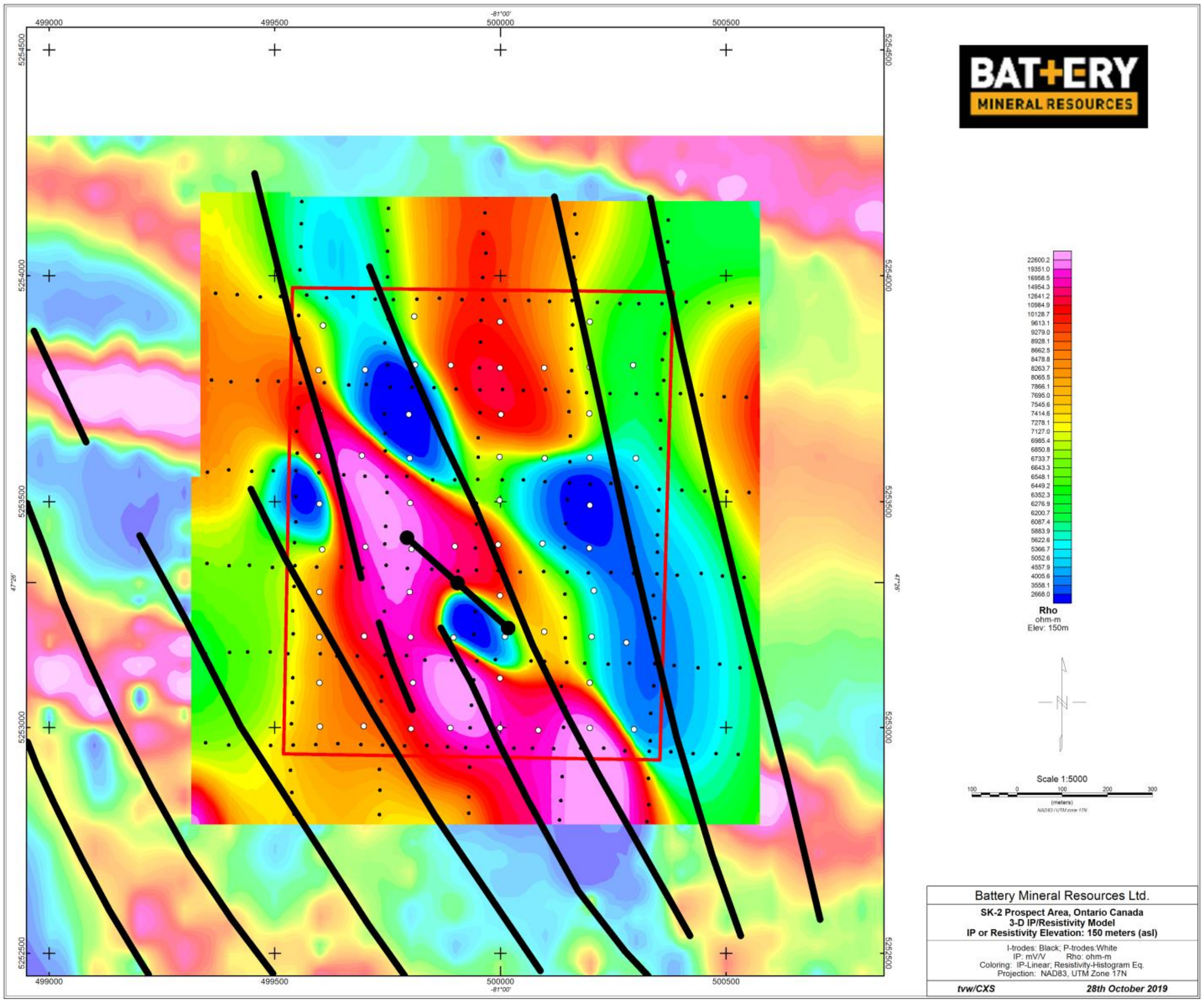


Figure 32 – The 150 meter resistivity elevation slice shown here to demonstrate the control that the interpreted magnetic structures appear to have on the resistivity data set.

Figure 32 shows the 150 meter resistivity elevation slice with magnetic structure plotted on top. As with the IP the magnetic structures appear to explain the resistivity distribution at depth quite well.

Target	East	North	Depth	Comments
T-1	499901	5253321	100m	Drill NE to SW, Intersect at 100m depth
T-2	499608	5253181	300m	Drill NE to SW through fault
T-3	499686	5253766	300m	Drill ?
T-4	500116	5253479	350m	Anomaly strengthens with depth
T-5	500062	5253195	300m	Drill SW to NE, on strike conductor, on fault

Table 2 – Target coordinates for the center of the IP anomalies. The drill coordinates may differ from these. Also any chance to drill across the structures adjacent to the chargeable bodies should be taken as these structures may control cobalt mineralization.

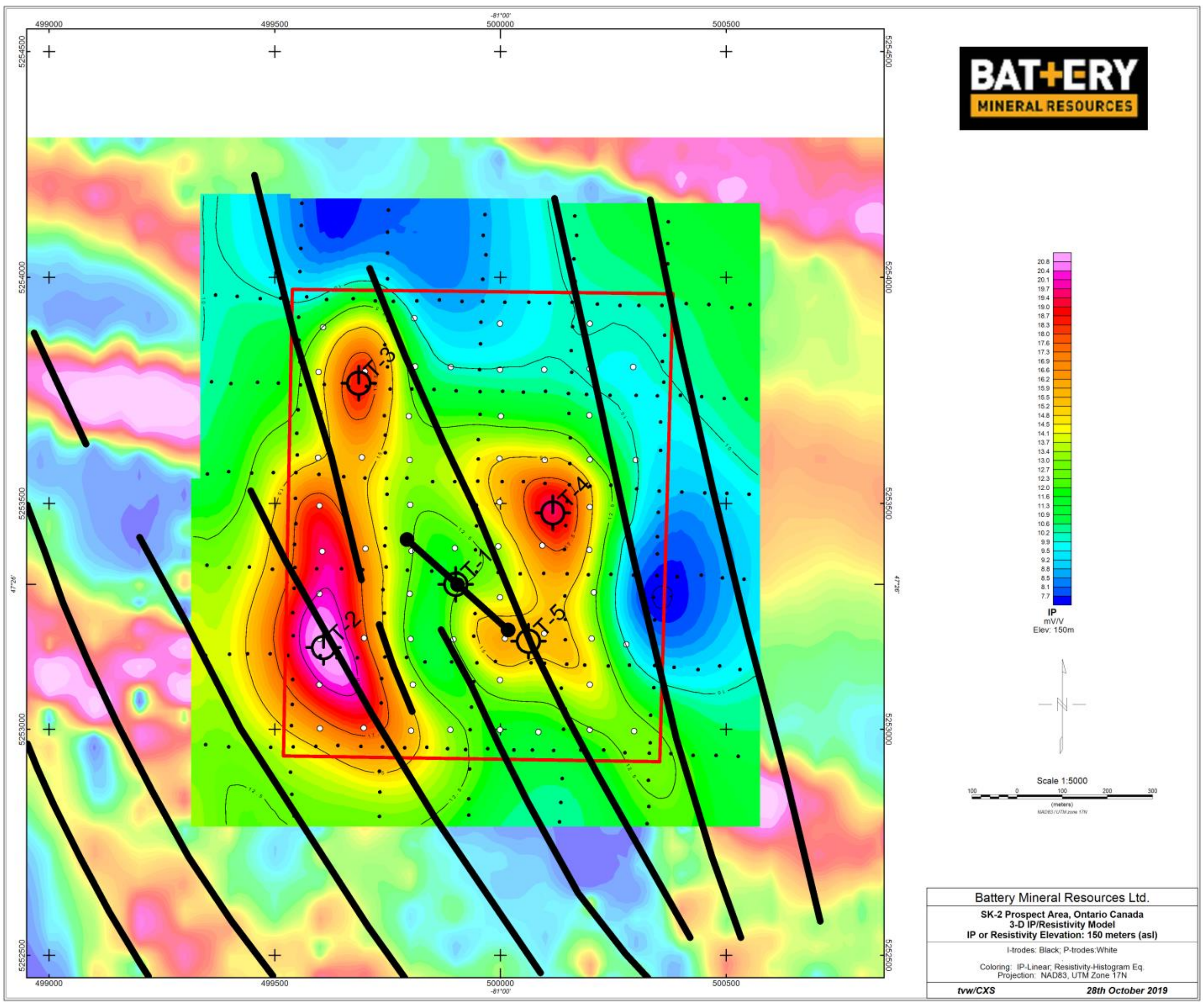


Figure 33 – SK-2 geophysical targets plotted on 150 meter IP elevation slice image (see Table 2).

Conclusion/Recommendations

Five geophysical targets have been identified. Recommendations on drill directions have been suggested for these targets however geological recommendations should be considered due to limited resolution of the airborne and ground geophysical data sets.

Target 1 is the highest priority target and is the SK-2 EM target identified by Alan King. Remember, this prospect is essentially an airborne EM target.

Targets 2 through 5, in order of priority, are the IP targets derived from the 3-D IP/resistivity survey and CXS modeling.

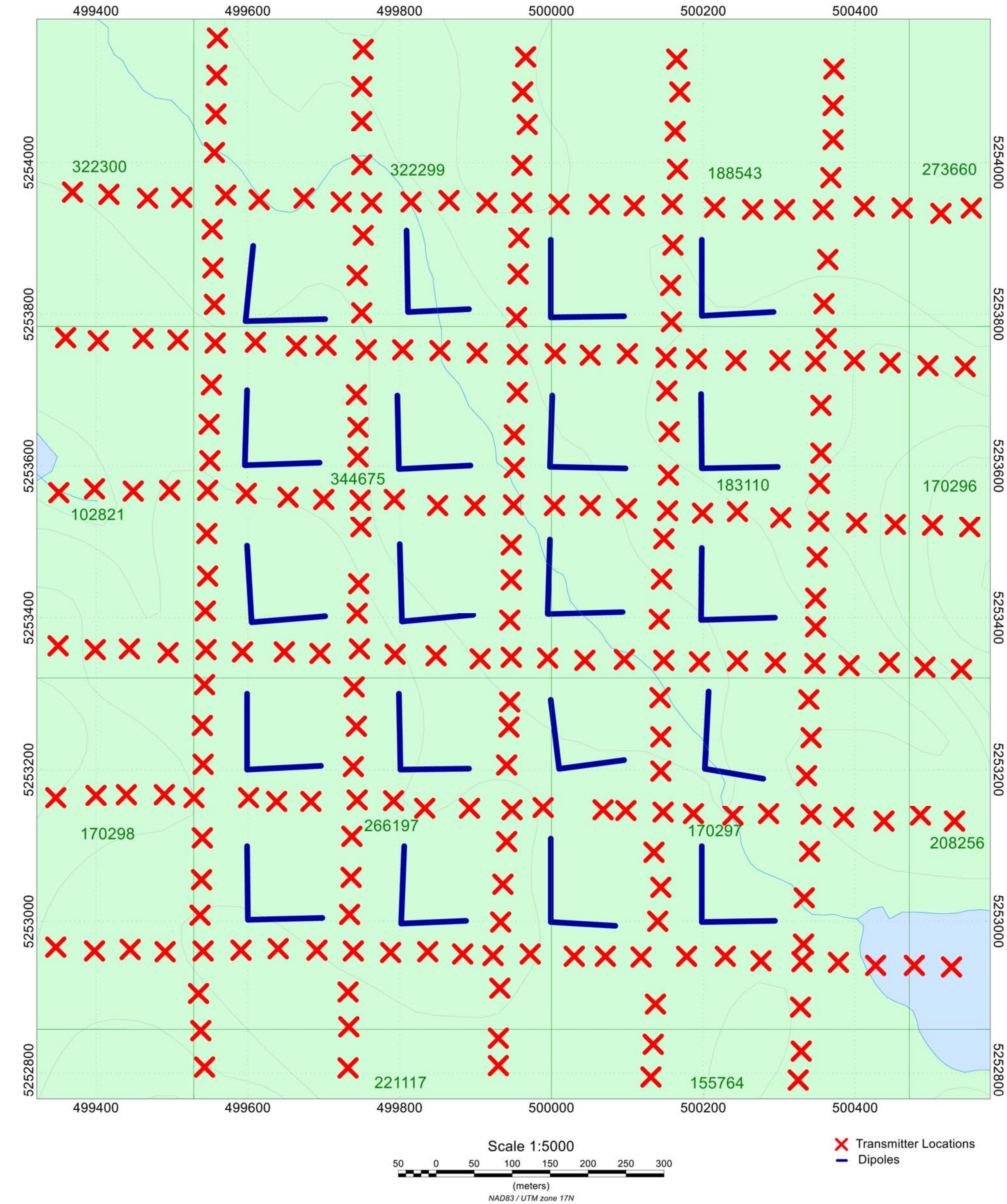
A structural interpretation was developed from the helicopter magnetic data without input from the IP/resistivity modeling. When it was overlaid on the IP and resistivity data the interpretation fit extremely well and will be useful in targeting cobalt mineralization at SK-2. The structures adjacent to the anomalous IP responses are targets in their own right.

It is recommended that borehole geophysics, in particular borehole EM and borehole IP/resistivity be used to resolve any discrepancies between the drilling and the geophysical interpretations in this report. Details on the borehole methods should be discussed if needed.

Thomas V Weis - Geophysicist

720 254-4695

tvweis@gmail.com



McAra Project - SK2 Grid
North Williams Township, Ontario

3D Distributed Induced Polarization Array
Survey Layout
Operational Claim Fabric

Processed By: Melanie Postman, GIT
Map Drawn By: Mandy Lim, GIT
April 2019

Drawing: Q2610-Battery-McAra-SK2-3DIP-Layout-Claims