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# **Report on the 2017 Line Cutting and IP Survey Program, South Abitibi Property, Latchford, Ontario**

**Larder Lake and Sudbury Mining Divisions  
Best, Brigstocke, Coleman, Gilles Limit South, Gilles Limit North and Kittson Townships,  
Ontario**

**47°21' N, 79°75' W  
UTM NAD 83 (Zone 17) 594 918 mE, 5 229 773 mN**

**NTS 31M04**

FOR



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March 7, 2019

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## **INTRODUCTION AND PROPERTY DESCRIPTION**

This report details the processes and results of the 2017 geophysical program on Tri Origin's South Abitibi Property. The South Abitibi Property is distributed between the Larder Lake and Sudbury Mining Districts, in north eastern Ontario (figure 1). The claim block is located five kilometers south of Latchford, Ontario and extends south approximately fifteen kilometers, with its southern limit approximately five kilometers northeast of Temagami, Ontario. South Abitibi is comprised of 798 contiguous single cell mining claims and 95 boundary cell mining claims. The single cell claims are 100% registered in the name of Tri Origin Exploration Ltd. All claims are in good standing until at least March 21, 2019. In 2017, all exploration work conducted by Tri Origin was under the guidance of an alliance between Tri Origin and Sumitomo Metal Mining Canada Ltd. ("SMMC"). The alliance agreement was abandoned in November 2019.

A line cutting program consisting of 14.6 kilometres cut over three north-south lines and three northeast-southwest lines was completed prior to conducting a 2D induced polarization (IP) survey. Surveying was followed by a variety of in-house data treatments and interpretation. Line cutting was performed by A Star Prospecting of Thunder Bay, ON, in October 2017. IP surveying was performed Abitibi Geophysics of Thunder Bay, ON, in October and November, 2017.

The line cutting and IP program was conducted in the central portion of the South Abitibi Property. Cell claims on which work was performed on are listed in Table 1 and shown in figure 2. Access to the all cut lines was via east-west side roads off Highway 11 and along the natural gas pipeline clearing.

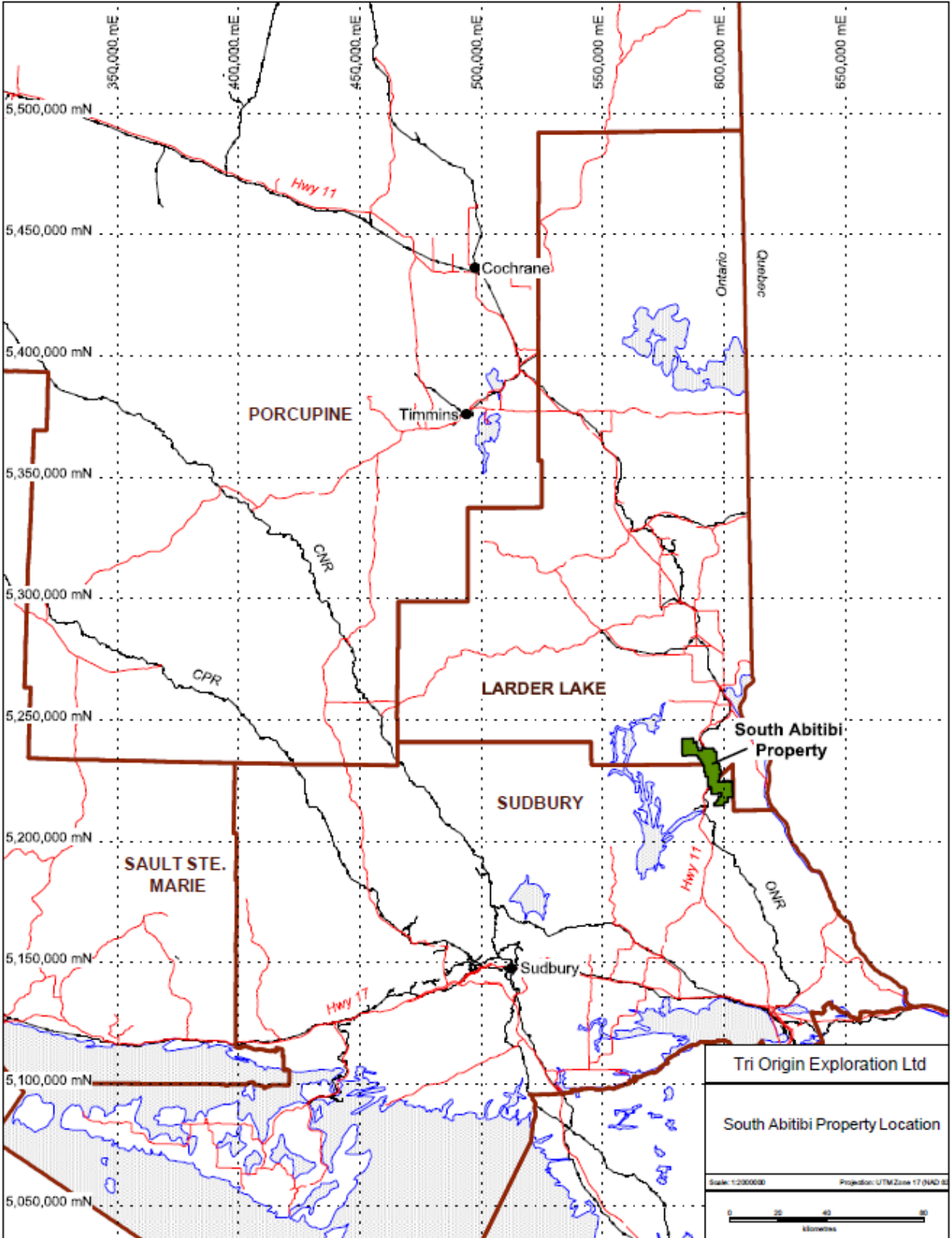


Figure 1. South Abitibi Property Location.

**Table 1. List of cell mining claims on which drilling and associated work was performed.**

<b>Mining Claim Number</b>	<b>Title Type</b>	<b>Anniversary Date (mm/dd/yyyy)</b>
275764	SCMC	3/21/2019
137763	SCMC	3/21/2019
306307	SCMC	3/21/2019
239021	SCMC	3/21/2019
206994	SCMC	6/29/2019
126444	SCMC	6/29/2019
336136	SCMC	6/29/2019
155649	SCMC	6/29/2019
102177	SCMC	6/29/2019
275685	SCMC	6/29/2019
228459	SCMC	6/29/2019
293815	SCMC	9/3/2019
219758	SCMC	9/3/2019
109949	SCMC	9/3/2019
326418	SCMC	9/3/2019
275024	SCMC	10/5/2019
117312	SCMC	10/5/2019
335444	SCMC	10/5/2019
294408	SCMC	10/5/2019
287102	SCMC	10/5/2019
267548	SCMC	10/5/2019
208937	SCMC	10/5/2019
155003	SCMC	10/5/2019
127042	SCMC	10/5/2019
285100	SCMC	10/26/2019
218340	SCMC	10/26/2019
169653	SCMC	10/26/2019
118378	SCMC	10/26/2019
157900	SCMC	10/26/2019
344040	SCMC	10/26/2019
323720	SCMC	10/26/2019
321650	SCMC	10/26/2019
225789	SCMC	10/26/2019
286997	SCMC	12/17/2019
227694	SCMC	12/17/2019
206993	SCMC	12/17/2019
154399	SCMC	12/17/2019

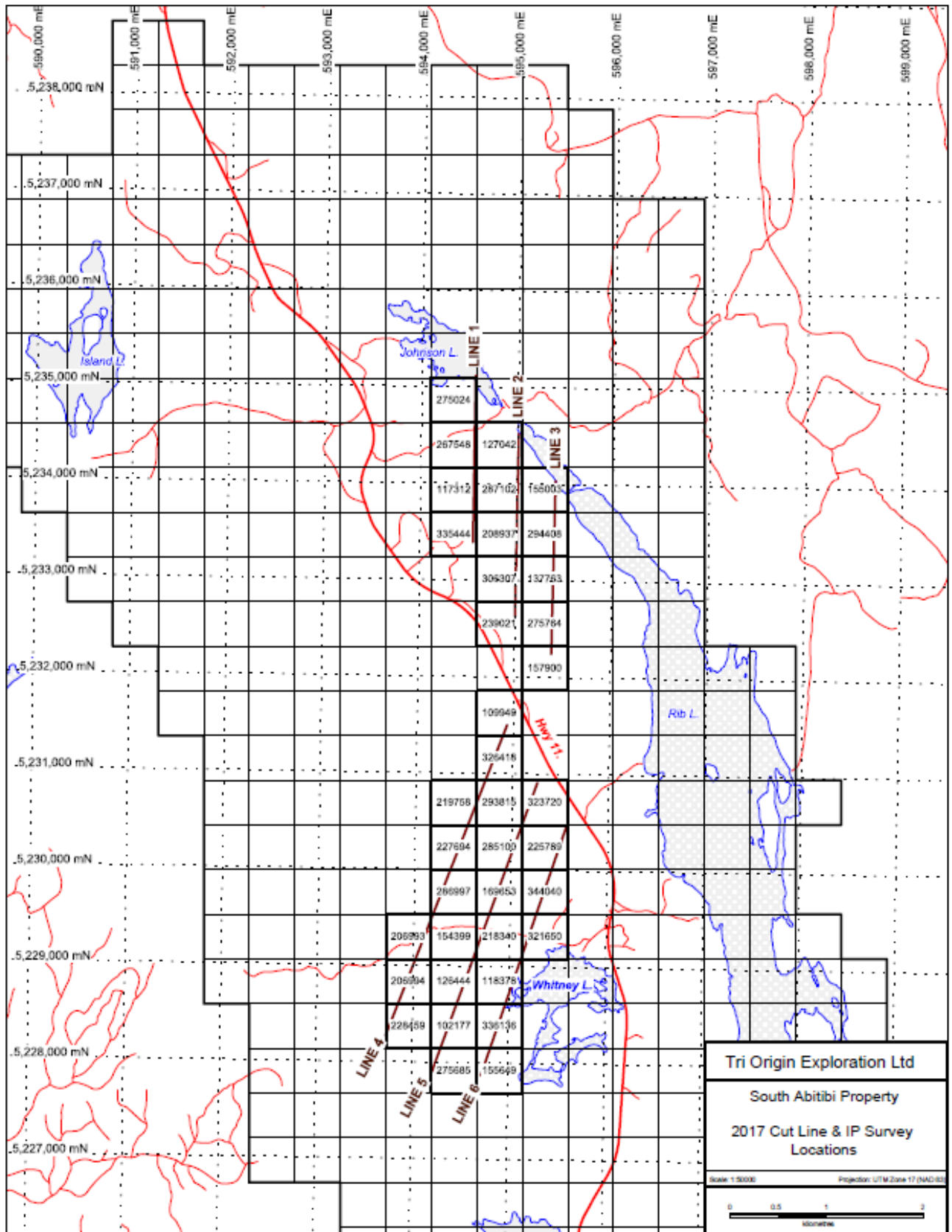


Figure 2. Mining claim tenure map.

## REGIONAL AND PROPERTY GEOLOGY

South Abitibi covers a large area spread out over portions of Coleman, Kittson, Brigstocke, Gillies Limit, Best, and Cassels townships. The most recent and comprehensive regional geological data comes from compilation Map P.3851 from Publication P.3851 Geology Compilation of the Cobalt-Temagami Area, Abitibi Greenstone Belt (Ayer et al., 2006). This map extends west from the Quebec boarder to McNish Township in the southwest and to Lady Evelyn Lake in the northwest and it extends south from Kirkland Lake South to the Grenville Front. Figure 3 shows the claim outline of South Abitibi imposed onto a clip of Map P.3851. In 2017, Tri Origin completed a 6 week long mapping program of the central portion of the property.

Several areas where Archean rocks outcrop on surface were visited, inspected, and sampled. Lithologic names used below to describe the rocks, such as felsic, intermediate, and mafic for volcanic and intrusive rocks, are field terms. The following geological descriptions have been summarized from the Report on the 2015-2016 Prospecting and Geology Programs: South Abitibi Property (not filed) and the Report on the 2017 Prospecting and Geology Program, South Abitibi Property (AFRI number 20000015190).

### *Johnson lake Inlier*

Most of this area is underlain by Proterozoic rocks of the Coleman member and comprised of matrix supported polymictic conglomerate. The Proterozoic rocks contain localized concentrations of quartz veinlets that are minimal in size and extent. Fractures within the Proterozoic on the east side of Highway 11 were mineralized with sulphides. These fractures did not display a consistent structural orientation. The Archean unconformity generally trends southeast and was mapped between the Proterozoic and granitic intrusive rock.

Archean rocks were mapped on the west side of Highway 11. The Archean rocks as mapped from south to north are comprised of a 400m thick east-west unit of gabbro. The gabbroic intrusions are either sills or dykes and are dark green to black with varying grain size, compositions and magnetism. Plagioclase is visible in percentages up to 30% and to the west there was some K-spar observed. North of the gabbro is a mix of mafic and intermediate volcanic rocks intruded by granitoids of varying composition.

The mafic volcanic rocks are green in colour, aphanitic and massive in appearance with little or no structures visible. The intermediate volcanic rocks are fine grained, grey green in colour and are more quartzo-feldspathic in composition than the mafic volcanics. Regional magnetic trends indicate that volcanic rocks extend to the north-west under Proterozoic cover.

The granite tends to be pink in colour to the north and west. The central area of the inlier appears to be a mix of granite, granodiorite, and often diorite. Both the gabbro and granitic intrusive rocks contain small mafic xenoliths within close proximity to the more regionally extensive mafic volcanic units. There still remains uncertainty of the extent of the volcanic units and whether they are continuous belts or large xenoliths within a regional granitic body. In either



case there are numerous xenolithic inclusions within the granite. It was also observed that the composition of the granitoids near mafic rock varies significantly.

#### *Mountain Lake Inlier and associated roof pendants*

The Mountain Lake Inlier lies 5 km to the west of Highway 11, beneath and southeast of Mountain Lake in Brigstocke and Best townships. The central portion was mapped by Tri Origin geologists as Proterozoic rocks of the Firstbrook member, consisting of flat lying fine grained siltstones and argillites and the eastern area was found to be underlain by Proterozoic rocks of the Coleman member, comprised of matrix supported polymictic conglomerate.

There are two thin magnetic dykes that crosscut the entire area. The southern intrusion was observed in one outcrop and its extent was extrapolated using airborne magnetic data. No mineralization was observed.

Archean rocks of the Mountain Lake inlier underlie the western portion of the map sheet. The rocks consist of a green, fine to medium grained gabbro which makes very steep-sided hills. The medium grained gabbro is plagioclase rich and tended to grade into a dioritic composition. Minor amounts of intermediate volcanic rock were observed on the north–western extent of the traverses. Several of these intermediate rocks display a fair degree of alteration in the form of chlorite.

Previous exploration indicates a more extensive exposure of volcanic rocks to the north-west. Gabbroic rock observed near Mountain Lake may be an extension of rock units mapped north-west of Whitney Lake. The magnetic signature of this interpreted extension is dampened by Proterozoic cover.

#### *Whitney Lake Inlier*

The north-west and east areas of the Whitney Lake Inlier are underlain by Proterozoic rocks of the Coleman member composed of matrix supported polymictic conglomerate. No mineralization was observed within these Proterozoic rocks.

The central portion is underlain by Archean volcanic and intrusive rocks. Archean volcanic rocks ranged from felsic, intermediate, mafic to ultramafic in composition. Mafic volcanic rocks were very fine grained (aphanitic), green, chlorite rich, generally massive but occasionally showed pillow textures or were banded in appearance. Intermediate volcanic rocks were fine grained, grey-green, and slightly quartzo-feldspathic in composition. Rare breccia was observed in the intermediate volcanics. Felsic volcanic rocks were very fine grained, grey to black in colour with a weathered white surface. Felsic volcanic rocks often displayed volcanic textures such as brecciation, flow textures or fragmental beds. The ultramafic volcanic rocks are located at the northeast of the inlier and were very fine grained (aphanitic), dark green to black and strongly magnetic.

Archean intrusive rocks that are part of the Whitney Lake inlier were gabbro, diorite and granitoids. The granitoids were either medium grained white granite or pink granite which was located south and west of Whitney Lake. The diorite or intermediate intrusive tended to be medium grained and grey in colour and rich in plagioclase.

### *James Lake Inlier*

This central portion of this inlier includes the historic Northland Pyrite Mine. The stratigraphic nature of mineralization and association with volcanic and pyroclastic rocks at the Northland Pyrite Mine is typical of Archean volcanogenic massive sulphide deposits. Outside of the mine area, the geology is dominated by mafic to intermediate volcanic rocks to the north, south, and east and a biotite granite pluton to the west. To the east of the mine, along the access trail and road from Highway 11, the volcanic rocks are predominantly mafic to intermediate flows and tuffs. Foliation approximates bedding, and strikes generally north-south to north-northeast/south-southwest and is vertical to steeply dipping to the west. Rusty, fine- to medium-grained disseminated pyrite, chlorite alteration, minor epidote patches, and carbonate  $\pm$  quartz veins and stringers are common among all exposed outcrops; fine-grained disseminated chalcopyrite and bornite are rare. One outcrop near Highway 11 exposed well-preserved pillow basalts with tops to the east.

### *Cassels Inlier*

This inlier lies northeast of the Temagami greenstone belt in Cassels Township, and is overlain by pebbly wackes of the Gowganda Formation (Coleman Member) to the east and intruded by Nipissing quartz diabase and gabbro to the west. The dominant lithologies encountered by Tri Origin geologists in the Cassels Inlier are foliated and massive intermediate to felsic volcanics (andesite, dacite, rhyodacite, to rhyolite), intermediate to felsic tuffs, minor mafic volcanic flows and tuffs, and minor “dirty banded iron formation”. The predominant alteration assemblage of the volcanics was noted as iron carbonate flooding and veins, quartz - chlorite  $\pm$  magnetite veins, and K-feldspar - epidote  $\pm$  pyrite veins and flooding. The “dirty iron formation” was described as a well-banded but poorly developed iron formation, with banding on the order of 1 to 2 cm of dark black (magnetite-rich) and pink-white bands (feldspar-rich). The unit also has some cherty intervals associated with the more magnetic bands. The unit hosts less than 1% sulphide, including pyrite, rare bornite, and chalcopyrite, disseminated throughout. Alteration is dominated by quartz veins up to 1 cm wide, and radiating spots of a dark green to black amphibole (actinolite or hornblende). On the southwest shore of Sauve Lake, trenching, stripping and shaft-sinking in the early 1920's exposed Au-Co-Cu-As-bearing calcite-quartz veins cutting Nipissing diabase. Archean felsic volcanic rocks occur in the footwall of the shaft. Samples have returned assay values up to 36.9 g/t Au, 5.87% cobalt, 1.08% copper, and 10.39% arsenic (Born 1989). Tri Origin geologists did not visit the occurrence.

### *Temagami Greenstone Belt*

The Temagami greenstone belt outcrops outside of the South Abitibi Property. It is a narrow, north-east trending, southern-most extension of the Abitibi greenstone belt. Metavolcanic and metasedimentary rocks of the Temagami greenstone belt have been folded about the east-striking Tetapaga syncline. From south to north, the southern limb of the belt consists of north-facing massive, pillowed, and coarse-grained tholeiitic basalts at the base, overlain by calc-alkalic, effusive and pyroclastic andesite flows, coarse-grained resedimented andesitic debris deposits, and dacite and rhyolite flows and subaqueous pyroclastic flows. These lower units are overlain by pyrite- pyrrhotite and chert-magnetite-hematite iron formation and minor turbidite deposits. The core of the syncline consists of massive and pillowed, iron-rich tholeiitic basalt (Jackson and Fyon 1991). The whole sequence is repeated in reverse in the

north limb of the belt, but tops are generally south-facing. Tri Origin geologists conducted a south-to-north transect of the belt along Highway 11 to understand the lithologies and the structural nature of the belt.

### **Proterozoic Rock Types and Exposures**

The Proterozoic rocks of the Cobalt Embayment in the vicinity of the reconnaissance work area are comprised of a relatively flat-lying succession of diamictite, shale, siltstone, and sandstone belonging to the Cobalt Group which are intruded by Nipissing gabbro dykes and sills and Sudbury dykes. Metamorphic grade is low (sub-greenschist), except where intruded by the Nipissing gabbro and contact metamorphism locally increases the metamorphic grade to amphibolitic. Structurally, the Proterozoic strata are nearly flat-lying, but large-scale, broad, open folds have been mapped and north-west trending normal faults (ie. the Montreal River and Latchford faults) may locally distort or offset bedding vertically, though very little lateral displacement has been observed on these faults. Total thickness of all Proterozoic units may be as little as a couple of meters to over 1,300 m in the area of interest, but is generally no more than a few hundred meters thick in total throughout most of the region.

#### *Gowganda Formation*

The Gowganda Formation in the area of interest is divided into the Coleman and Firstbrook members. The Coleman Member unconformably drapes the Archean basement and is comprised of wide-spread poorly-sorted basal diamictites (both clast-supported and matrix-supported), massive and stratified diamictites, and pebbly and non-pebbly shaley mudstones with interlaminated siltstone and sandstone beds, which mark the top of the member. The Coleman Member was observed by geologists at a number of outcrops across the area of interest. North of the NE Temagami inlier, the Coleman Member can have a thickness of zero to 430 m (Born & Hitch 1988), but is generally no thicker than 100 m in the vicinity of Highway 11 (Thomson 1968). At the north end of Rib Lake (approximate UTM NAD83 coordinates 593,618 mE, 5,235,010 mN), the poorly-sorted, matrix-supported diamictite unit of the Coleman Member was observed to host a number of rounded massive sulphide clasts up to 15 cm in diameter, indicating probable proximity to a massive sulphide body. The diamictite also hosts abundant mafic, intermediate, and felsic volcanic clasts are presumably from a source in the underlying Archean Abitibi greenstone belt.

The Firstbrook Member conformably overlies the Coleman Member, and locally attains a maximum thickness of 260 m in the area north of the NE Temagami inlier (Born & Hitch 1988), and likely does not exceed 100 m around Highway 11 (Thomson 1968). The Firstbrook Member consists of a coarsening-upward sequence of mudstone, siltstone, and minor very fine sandstone. Interlaminated shaley mudstone and siltstone is the most common facies of the member, and colour ranges from greyish-green at the base of the member to purplish-red at the top of the member. The unit was most commonly seen by Tri Origin geologists as interlaminated grey-green and/or purple-red shaley mudstone and siltstone

#### *Lorrain Formation*

The Lorrain Formation conformably overlies the Firstbrook Member and consists of a lower well-sorted, horizontally laminated, fine-grained, thickly bedded arkose grading up into

laminated shaley mudstones, siltstones, and sandstones, which grade up into moderately- to poorly-sorted, medium grained coarsening-upward arkose and arenite. The Lorrain Formation is not very widespread and is only locally preserved, but is up to 610 m thick in the area north of the NE Temagami inlier (Born & Hitch 1988). The Lorrain Formation was observed only in one locality by Tri Origin geologists at a road cut on Highway 11, where it was observed as flat-lying thick beds of grey to pinkish-grey arkose, with both planar and large scale (up to 30 cm) cross-bedding sets.

#### *Intrusions and Dykes*

The Nipissing intrusions (2219 Ma) form dozens of dykes and sills across the entire Cobalt Embayment area. Within the Best area, the sills may reach a maximum thickness of 500 m. The intrusions are predominantly comprised of coarse-grained quartz diabase and hypersthene gabbro. Quartz gabbro, varied-textured gabbro, and granophyre are less common.

The Sudbury dykes (1235 Ma) are mentioned here as they are highly magnetic and are readily visible on airborne magnetic surveys. The dykes are reported to be between 3 and 30 m wide. Where observed by Tri Origin geologists, the dykes are no more than several meters wide and are vertically dipping.

Both the Huronian Supergroup sediments and Archean rocks have been intruded by Proterozoic-aged Nipissing diabase and gabbro sills. These are exposed throughout the South Abitibi Property (Ayers et al., 2006).

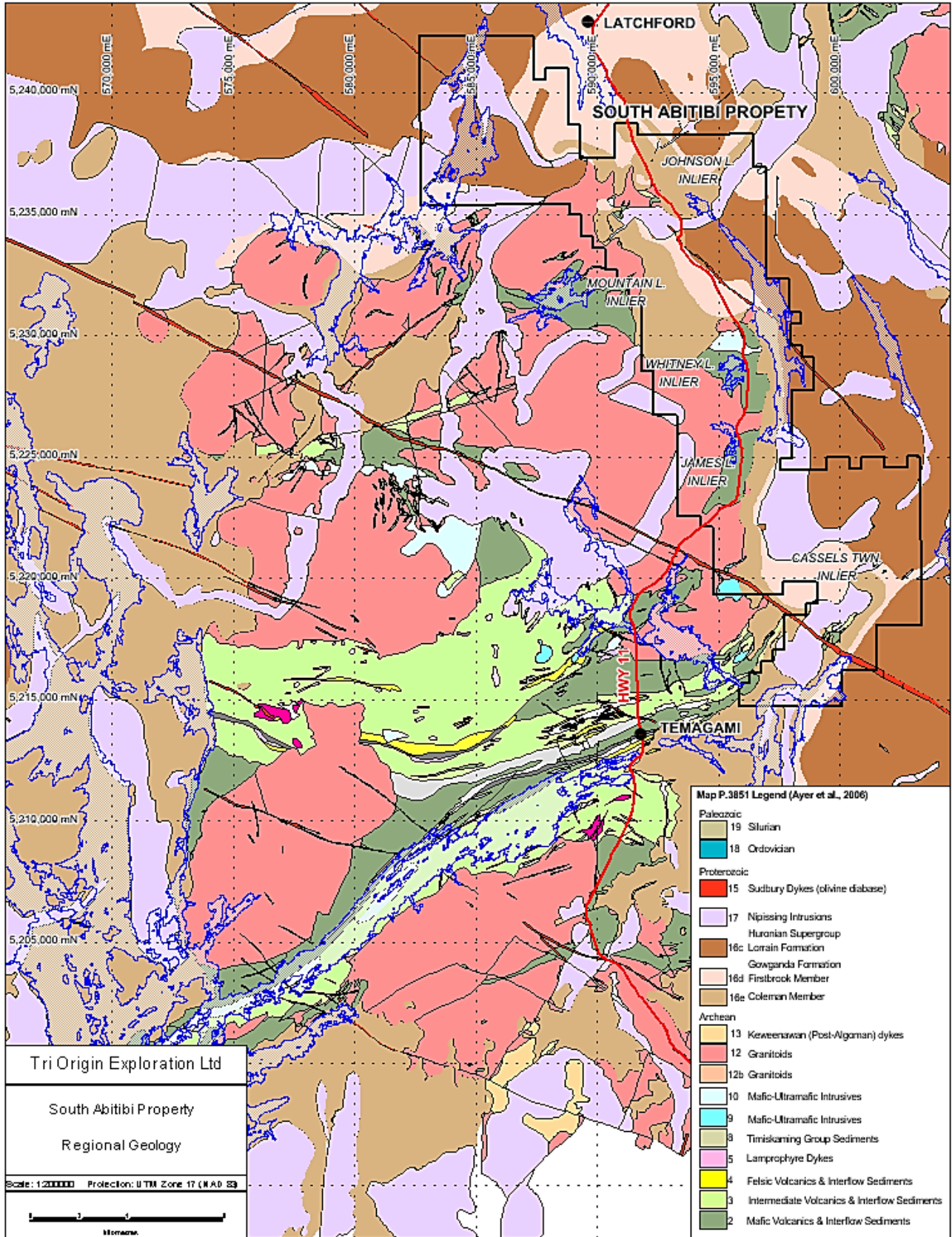


Figure 3. Regional geology of South Abitibi, clipped from Map P.3851 (Ayer et al., 2006)

## PREVIOUS WORK

Exploration on the South Abitibi Property has been recorded since the 1950s. This area garnered attention after the historic discovery and production of silver in the Cobalt Embayment in the early 20<sup>th</sup> century. Numerous copper, nickel, gold, and iron showings were identified, in addition to the polymetallic vein Cobalt-style mineralization observed north of the property. Between 1954 and 1972 diamond drilling and prospecting were the primary forms of exploration work, with few ground geophysical surveys conducted in the 1950s and 60s. The Temagami Land Caution prevented all claim staking and mineral exploration activities to be conducted on all townships where South Abitibi is located. Reopening of some townships began in the early 90s. After the land caution was lifted, several groups have since conducted prospecting, soil sampling, drilling, and geophysical programs. Most notably is the work performed by G Chitaroni and Bargold Resources and Temex Resources Corp.

### Exploration Work Conducted by Tri Origin

- 2015 Reconnaissance and Prospecting Program. In the summer of 2015 Tri Origin sent a field crew to the South Abitibi Property to become familiarized with logistics, access, and geology of the area. This field program was designed to pick areas suitable for more detailed future work. Some outcrop mapping and prospecting was conducted proximal to major roads and trails.
- 2015 Geophysical Program. From fall 2015 to early 2016, Tri Origin contracted Geotech to conduct airborne electromagnetic and magnetic surveys over selected areas of the South Abitibi Property. EM anomalies were found northwest and just west of Whitney Lake, some of which are consistent with known sulphide mineralization zones.
- 2016 Prospecting and Geology Program. In the summer of 2016 Tri Origin sent a field crew to the South Abitibi property to (1) investigate and sample reported and historic mineralization on the property, (2) identify and georeference historic workings, and (3) investigate sources of airborne EM and magnetic anomalies.
- 2017 Prospecting and Geology Program. In the summer of 2017 Tri Origin sent a field crew to the South Abitibi property to (1) determine the extent and nature of Archean volcanic rocks in the targeted area, (2) verify gold values from previous exploration from other companies, and (3) characterize the nature of Archean mineralization. It was discovered that greenstone belts in the area cover a more extensive area and contain a wider variety of rocks than previously reported and mapped. It was determined that the majority of anomalously high gold samples are restricted to veins and veinlets and gold was generally absent from host rock adjacent to veins.
- 2017 Geophysical Program. Tri Origin contracted A-Star Prospecting to cut six lines. Three lines spaced approximately 400m apart, between 1725 and 2060m in length, and trending 360° were cut south of Johnson Lake and southwest of the northern part of Rib Lake. Three lines spaced approximately 400m apart, between 2737 and 3450m in length, and trending 200° were cut north and west of Whitney Lake. Induced Polarization surveys were conducted along each cut line by Abitibi Geophysics, contracted by Tri Origin. Results from the northern 3 lines were not significant. A drill program was planned to drill targets selected from the southern lines near Whitney Lake.

2018 Whitney Lake Drill Program. Five holes were drilled, totaling 2878m on Whitney Lake Area. Each hole drilled into Archean volcanic and intrusive rocks.

## 2017 LINE CUTTING AND IP SURVEYING PROGRAM

Line cutting was contracted to A-Star Prospecting of Thunder Bay, ON. Field work was conducted in October 2017. A total of 14.6 kilometres was cut over three lines oriented south-north at 400 and 450 metre spacing at the Johnson Lake inlier, and three lines oriented northeast-southwest spaced between 450 and 530 metres apart at the Whitney Lake inlier. Wooden pickets were placed every 25 m and their locations were controlled using Garmin hand-held global positioning systems (GPS) and based on the UTM coordinate system (UTM NAD 83, zone 17). Select picket locations were checked and georeferenced using handheld GPS devices by Tri Origin geologists. Details on cutline coordinates and lengths are reported in Table 2 and shown in Figure 4. All line cutting activities were supervised by Tri Origin Exploration Ltd. Lines were cut in order to facilitate the IP survey.

An OreVision® Time Domain Resistivity/Induced Polarization (IP) survey was conducted by Abitibi Geophysics, based out of Val d'Or PQ and supervised from an office in Thunder Bay, ON, between October and November 2017. A total of 15 kilometres was surveyed, and 8.7 kilometres were resurveyed over the cut lines located near Johnson Lake. All survey acquisition data and processed data was acquired from Abitibi Geophysics, as well as a technical report which is included in Appendix A. The survey lines were set up by the geophysical crew using an idealized grid and hand-held GPS in conjunction with the line-cutting and chaining. All geophysical activities were supervised by Tri Origin Exploration Ltd.

The IP survey on the northern lines was conducted in an attempt to investigate the relationship between gold rich veinlets in Proterozoic sediments and the underlying Archean rocks. The IP survey on the southern lines was conducted to investigate unexplored AEM anomalies, as well as trace the extent of copper and nickel-bearing sulphidic rocks mapped on surface.

**Table 2. Cut line co-ordinates, UTM NAD83, Zone 17.**

<b>Line Number</b>	<b>Picket Start</b>	<b>Picket End</b>	<b>UTM Start Northing/easting</b>	<b>UTM End Northing/easting</b>	<b>Length (m)</b>
1+00E	L1S	L1N	5233375/594550	5235075/594550	1700
2+00E	L2S	L2N	5232525/595000	5234525/595000	2000
3+00E	L3S	L3N	5232300/595400	5234000/595400	1700
4+00E	0+00m	8+75N	5228327/593721	5231500/594935	3400
5+00E	0+00m	7+75N	5227990/594220	5230910/595260	3100
6+00E	0+00m	6+75N	5227925/594730	5230455/595570	2700



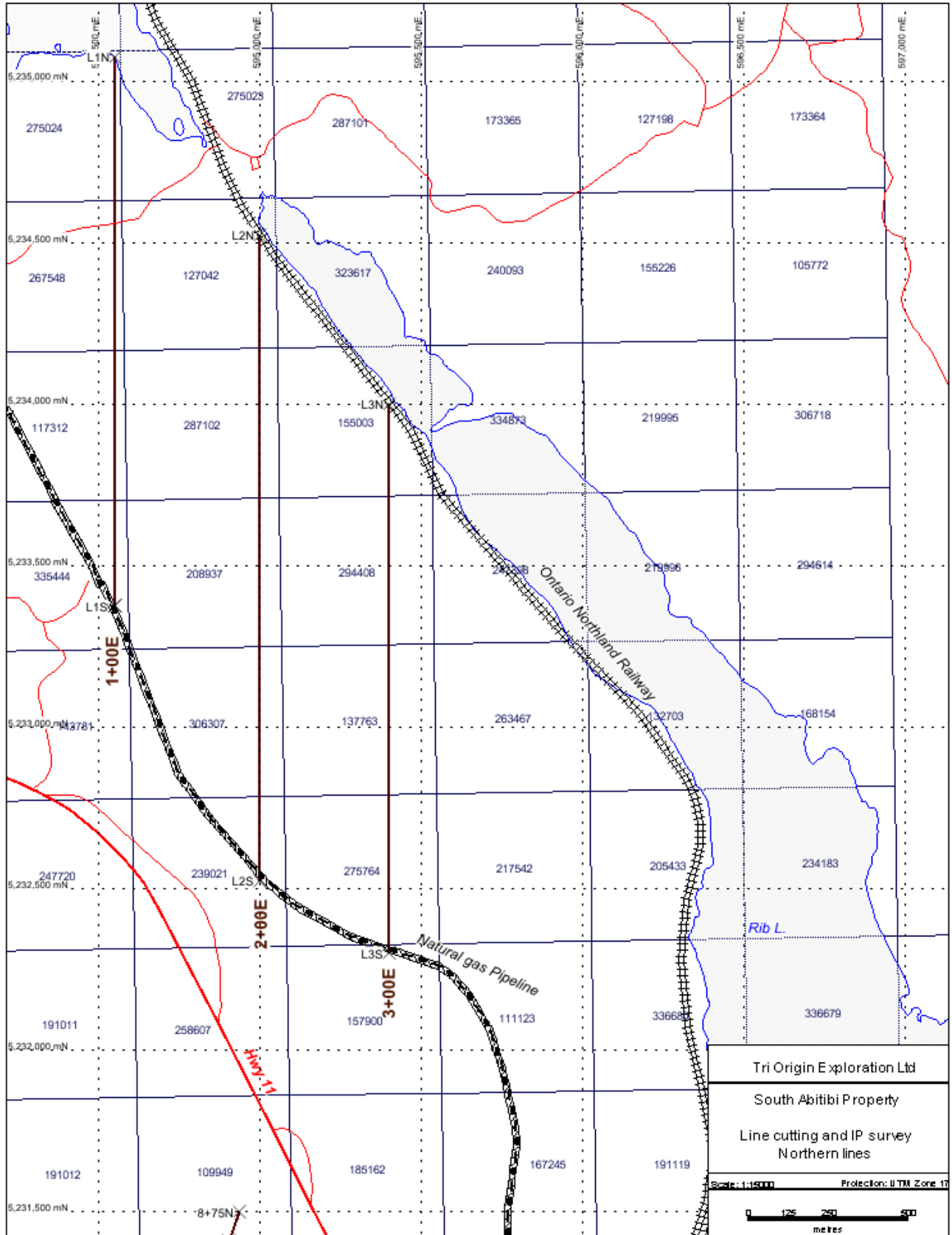
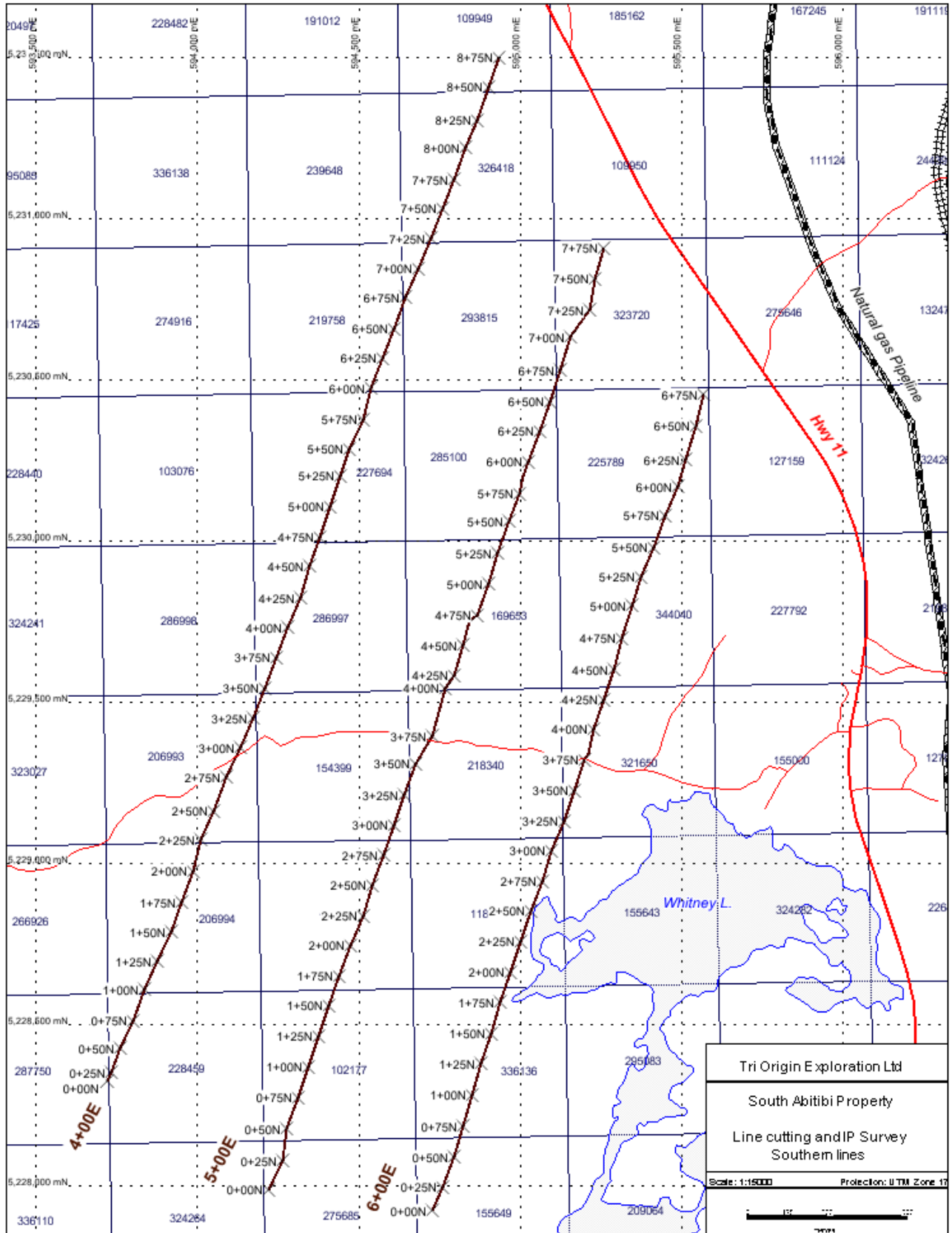


Figure 4. (A) Northern cut line and IP survey locations.



(B) Southern cut line and IP survey locations.

## INTERPRETATION OF IP RESULTS

Abitibi geophysical crews had significant difficulty in recording useful data on the three northern lines near Johnson Lake. A couple of attempts were made however difficulties in communications resulted in inconsistencies in data collection. Results from the survey lines west of Whitney Lake were more encouraging in that the data collected was considered of good quality and the chargeability and resistivity anomalies on pseudosection were broadly coincident with AEM anomalies. Table 3 summarizes Tri Origin's interpretation of the pole-dipole chargeability pseudosections. Response strengths were selected and categorized based on their relative response within each pseudosection, and were then ranked from very weak to very strong. The three southern lines picked up several medium to strong IP responses in the pseudosections. Strong chargeability responses on lines 5+00E and 6+00E are coincident with airborne AEM anomalies. The anomaly locations were projected vertically and approximated to surface. A plan map and pseudosections are appended.

**Table 3. Tri Origin IP pseudosection interpretation.**

Cut Line	Relative Response Strength	From (m north)	To (m north)
2+00E	Medium	3700	750
3+00E	Weak medium	2775	2825
3+00E	Medium	3100	3200
4+00E	Weak	1380	1400
4+00E	Medium strong	1500	1525
4+00E	Medium	1700	1750
5+00E	Weak	1275	1300
5+00E	Medium	1500	1525
5+00E	Strong	1725	1775
5+00E	Weak	2175	2200
5+00E	Weak	2275	2300
5+00E	Very weak	2500	2525
6+00E	Weak	700	825
6+00E	Very weak	1175	1190
6+00E	Weak	1300	1375
6+00E	Strong	1675	1775
6+00E	Medium	1900	1925
6+00E	Medium	2095	2120
6+00E	Weak	2270	2295

The three northern lines returned weak to medium IP responses presented in chargeability pseudosections. Poor and erratic data across lines 2+00E and 3+00E made it difficult to target responses.

Tri Origin's alliance partner, Sumitomo Metal Mining Canada also investigated the IP results and evaluated data using inversion modelling. A number of inversion anomalies were identified. These were also categorized as weak to strong and their depth extent was interpreted. In some cases the inversion anomalies matched the location of anomalies selected from primary pseudosections however in many cases the inversion anomalies did not correlate

with anomalies picked from pseudosection data. Anomalies selected from inversion modelling are listed in Table 4.

**Table 4. SMMC Modelled IP inversion anomaly targets.**

<b>Line</b>	<b>Strength</b>	<b>Centre (m north)</b>
4+00E	Medium strong	1350
5+00E	Medium	1750
5+00E	Medium	2150
6+00E	Medium	750
6+00E	Weak medium	2250

Ultimately, the alliance selected drill targets from inversion modelling. Drilling at a number of these targets failed to explain some of the more substantial anomalies. See Report on the 2018 Diamond Drill Program, South Abitibi Property filed by Tri Origin Exploration for full details.

## **CONCLUSIONS AND RECOMMENDATIONS**

Inversion models from geophysical data and detailed reviews of IP pseudosection were used to delineate drill targets for the 2018 drill program. The three northern surveys detected only weak to medium chargeability anomalies, whereas the three southern surveys returned more promising responses. As such, diamond drill holes were only planned on targets located along the southern cut lines. The targets were selected from inversion modelling of data. Drilling at many of these targets did not explain the inversion anomalies. At other anomalies, drilling revealed that strongly magnetic sediments, disseminated sulphide, and a zone of massive pyrrhotite were generally sufficient to explain medium strong to strong IP responses. It is recommended that in future programs drill targets be selected from primary data plotted on pseudosections. In particular, weak to medium IP responses did not show up in inversion modelling and should be considered for additional work. The wide IP response coincident with an AEM anomaly on line 4+00E was missed by a drill hole and should be revisited.

Additional IP surveying east of Whitney Lake, between Hwy 11 and Rib Lake, is recommended to investigate a north-south trend of unexplored AEM anomalies coincident with felsic rocks. As well as, an additional grid is recommended over the area north of Whitney Lake to extend an untested historic IP anomaly in an area entirely underlain by Proterozoic cover.

## REFERENCES

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## **PERSONNEL**

The following geologists were employed by Tri Origin to supervise the line cutting and IP surveying field work on the South Abitibi Property and interpret geophysical results:

Frank Kendle                      Sr Geologist    Queensville, Ontario

The following geologists were employed by Tri Origin to write a report on 2017 geophysical field program:

Monique Ruhl                      Contract Geologist    Beaverton, Ontario

## STATEMENT OF QUALIFICATIONS

I, **Monique Ruhl**, of 422 Bay St., Beaverton, ON, do hereby certify that:

1. I am employed as a geologist by Tri Origin Exploration Ltd.
2. I graduated with a bachelor's degree in earth science (BSc. Geology) from Dalhousie University in 2016
3. Hold a GIT (Geoscientist-in-Training) membership with the Association of Professional Geoscientists of Ontario (membership number 10457).
4. I have worked as a geologist for a total of two years.
5. I am responsible for the technical report titled "Report on the 2018 Diamond Drilling Program, South Abitibi".
6. My knowledge of the property as described herein was obtained by fieldwork and literature review.
7. I have no direct interest, nor do I expect to receive any interest in the mining claims that comprise the South Abitibi Property within Gillies Limit South Township in the Larder Lake Mining division.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 28<sup>th</sup> day of February, 2019.



Monique Ruhl, BSc, GIT



## APPENDIX

**APPENDIX A**

---

**TECHNICAL REPORT:**

**OREVISION IP**

**TRI ORIGIN EXPLORATION LTD.**

**SOUTH ABITIBI PROJECT**

**17N102**



 **OREVISION IP**

**TRI ORIGIN EXPLORATION LTD.**

**SOUTH ABITIBI PROJECT**

BEST & GILLIES LIMIT (SOUTH) TOWNSHIPS, ONTARIO, CANADA

LOGISTICS AND INTERPRETATION REPORT

**17N102**

**FEBRUARY 2018**



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**Table 1. Maps Produced**

Map Number	OreVision® Survey	Scale
5 Plates Lines 1 to 6	Vertical Sections from 2D inversions	1:10 000 1:20 000
5 Plates Lines 1 to 6	Colour Apparent Resistivity & Chargeability Pseudosections <b>(PDF format only)</b>	1:5000
10.0	Geophysical Interpretation	1:10 000

Vertical sections are bound 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 – SURVEY GRID

The survey grid consists of six lines separated by 400 m, over two zones (north and south). Due to the large spacing between lines, correlation of chargeable and conductive trends between lines was not possible. All information provided is in 2D format only.

The north zone (Line 1 to Line 3), is bound in the north end by a railroad track and in the south by a pipeline. The magnetic signature and the google earth trace of the pipeline can be seen in figure 1 below.

## □ RESISTIVITY

Resistivity features have been interpreted by studying the apparent resistivity pseudosections and the Res2DINV vertical sections.

Much of the grid is dominated by moderate resistivity values, with much of the values reaching 40 000 to 50 000  $\Omega m$  on most lines. There is a discrete resistivity high on *Line 5* at ~12+00N, exceeding 60 000  $\Omega m$ , and correlating with chargeable source **SA-17**.

There are several discrete resistivity lows present throughout the survey area. Many are shallow or near surface. The most notable trend is that associated with chargeable sources **SA-06**, **SA-15** and **SA-23** on *Lines 4* through *6*. This trend also follows a MAG high trend and it is likely that these chargeable sources follow this trend also.

## □ CHARGEABILITY

Following a detailed interpretation of the pseudosections and with the help of the recovered Res2DINV vertical sections, a total of **28 chargeable sources** were interpreted. Their surface projections are illustrated on the *Geophysical Interpretation map (10.0)*.

The strongest observed chargeable responses are found centrally on *Lines 4* through *6* (**SA-06**, **SA-07**, **SA-15**, **SA-23** and **SA-26**). Many of the other responses are shallow and/or weak and ill-defined, particularly in the northern 3 lines (*Line 1* to *Line 3*).

Many of the chargeable sources described above have been recommended for follow up DDH testing and are described in table 3 and on the images that follow.

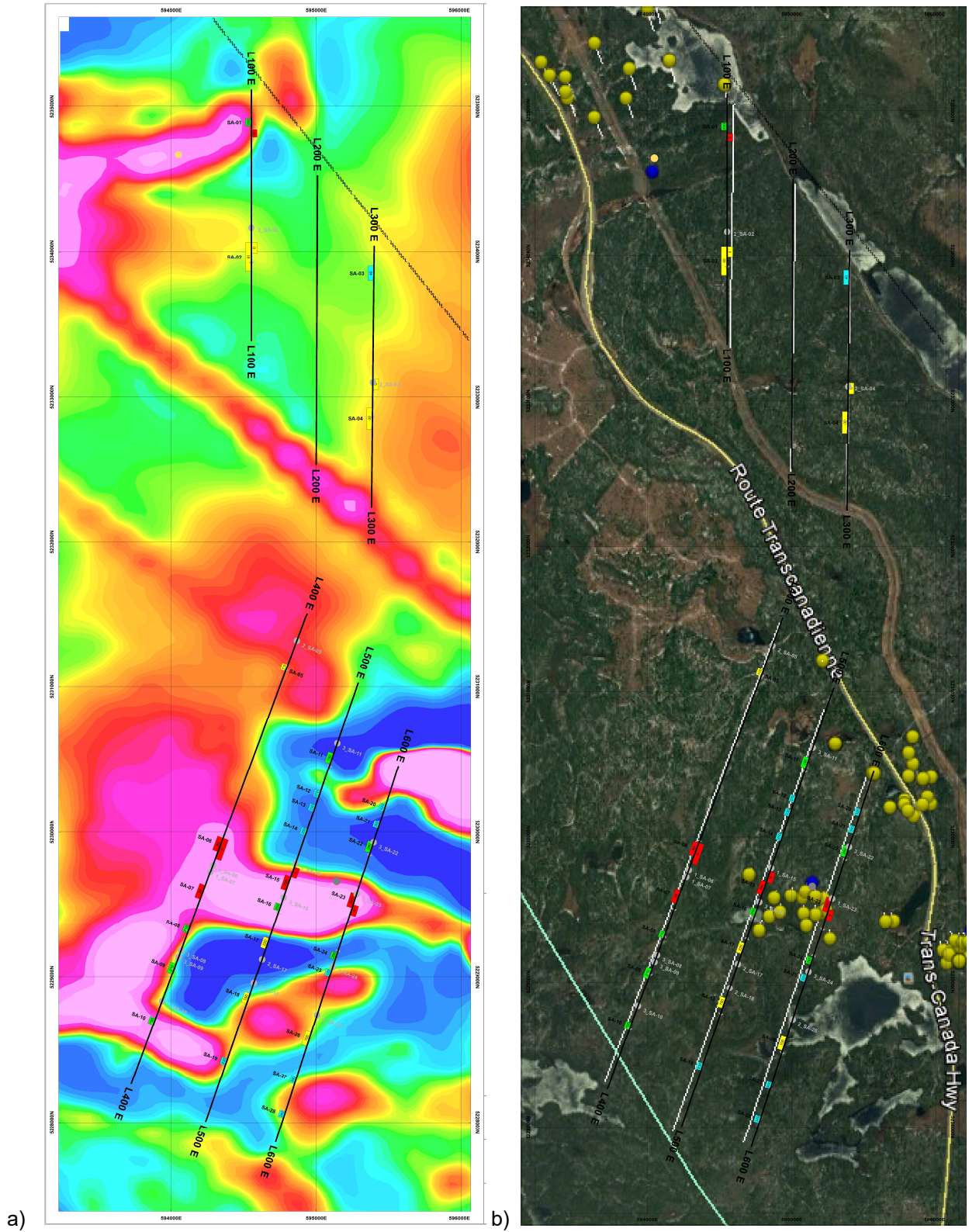


Figure 1. Survey grid lines with a) Magnetic grid, 1<sup>st</sup> vertical Derivative and b) with Google Earth topography



#### □ **METAL FACTOR**

From the recovered resistivity and chargeability dataset acquired from the 3D inversion, the *Metal Factor* has been calculated.

The *Metal Factor* was calculated as  $[(\text{chargeability} / \sqrt{\text{resistivity}}) * 1000]$ . It highlights regions of low resistivity and high chargeability which are amenable to hosting disseminated sulphides associated with gold in sheared or faulted environments, and/or semi-massive to massive sulphide occurrences. Although the *Metal Factor* can be helpful in the search for conductive and chargeable zones, it should be interpreted with caution, particularly in areas with moderate background chargeability and variable resistivity, as a conductive zone with moderate background chargeability may yield a high. The resistivity and chargeability data should always be consulted prior to drawing any conclusions from the *Metal Factor*.

*Metal Factor* sections are included with the vertical sections for each line.

#### □ **GOLD INDEX**

From the recovered resistivity / chargeability dataset acquired from the 3D inversion the *Gold Index* has been calculated.

The *Gold Index* was calculated as  $(\text{Chargeability}^2 * \text{Resistivity} / 1000)$ , which highlights regions of high resistivity and chargeability which are amenable to hosting disseminated sulphides associated quartz veining or silicified/carbonatized alteration zones. Although the Gold Index can be helpful in the search for resistive and chargeable zones, it should be interpreted with caution, particularly in areas with moderate background chargeability and variable resistivity, as a resistive zone with moderate background chargeability may yield a high. The resistivity and chargeability data should always be consulted prior to drawing any conclusions from the Gold Index. This technique does not highlight conductive, chargeable zones that may also be of interest.

*Gold Index* sections are included with the vertical sections for each line



□ FOLLOW UP

○ SURVEY EXTENSION

The survey grid lines are separated by a distance of 400 m. Infill lines are recommended to test the continuity of the chargeable sources observed and to provide enough data for 3D inversion. Additional lines to the east and west are also recommended to test the extent of these sources on the outer edges of the survey grid. Successful DDH results for high priority targets increases the potential benefit of survey extension.

○ PROSPECTING

Table 2 below lists chargeable sources observed that appear to be close enough to surface (outcropping or subcropping) for prospecting or trenching.

**Table 2. OreVision® Prospecting / Trenching Targets on South Abitibi Project**

Source (Priority_ Source)	Location of the Target			Prospecting/Trenching Stations
	Line	Station	Max Depth to Top of Source	
1_SA-23	Line 6	17+25N	5 m	16+25N – 18+00N
3_SA-01	Line 1	48+75N	5 m	48+00N – 49+50N
3_SA-09	Line 4	8+00N	25 m	7+00N – 8+50N
3_SA-10	Line 4	4+00N	25 m	3+50N – 4+50N
4_SA-12	Line 5	23+00N	5 m	22+50 N – 23+25N
4_SA-13	Line 5	22+00N	10 m	21+50N – 22+25N
4_SA-20	Line 6	24+00N	5 m	23+75N – 24+50N
4_SA-21	Line 6	22+75N	25 m	22+50 – 23+00N
4_SA-27	Line 6	4+25N	5 m	3+50N – 4+75N

○ DRILLING

A drilling program has been recommended to test the chargeable targets outlined in this report. Table 3 lists DDH coordinates, target locations and anomaly descriptions. The pages following this table are images of the selected drill targets.





**Table 3. OreVision® Drilling Targets on South Abitibi Project**

DRILL HOLE (Priority_ Source)	Type / Target Interest	Location of the Target			Proposed DDH				Figure	Page
		Line	Station	Elevation (to Center)	Station	Az.	Dip	Length		
1_SA-06	Strongly chargeable source. It is a deep source, sitting at 80 m elevation (apparent center of mass). Associated with a highly resistive zone, with a strong resistivity low sitting just south, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone, or with a structural boundary. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 4	17+00N	80 m	15+50N	20°	60°	450 m	4	11
1_SA-07	Strongly chargeable source. It is a large, deep source, sitting at 30 m elevation (apparent center of mass). Associated with a highly resistive zone, with a strong resistivity low sitting just north, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone, or with a structural boundary. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 4	13+50N	30 m	15+00N	200°	60°	500 m	4	11
1_SA-15	Strongly chargeable source. It is a sub-vertical, deep source, sitting at 150 m elevation (apparent center of mass). Directly associated with a resistivity low. Potential for mineralization associated with a faulted or sheared zone. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 5	16+50N	150 m	18+00N	200°	60°	500 m	6	13
1_SA-23	Strongly chargeable source. It is a large, mid-depth source, sitting at 310 m elevation (apparent center of mass). Associated with a highly resistive zone at depth and with a strong resistivity low near surface. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 6	16+75N	310 m	17+25N	200°	50°	300 m	7	14



**Table 3. OreVision® Drilling Targets on South Abitibi Project (continued)**

DRILL HOLE (Priority_ Source)	Type / Target Interest	Location of the Target			Proposed DDH				Figure	Page
		Line	Station	Elevation (to Center)	Station	Az.	Dip	Length		
2_SA-02	Moderately chargeable source. It is a large, deep source, sitting at 40 m elevation (apparent center of mass). Directly associated with a highly resistive zone, with a weak and shallow resistivity low sitting just north, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone.	Line 1	38+50N	40 m	41+50N	180°	60°	500 m	2	9
2_SA-04	Strongly chargeable source. It is a large, deep source, sitting at -30 m elevation (apparent center of mass). Associated with moderate resistivity values, with a resistivity low found to the immediate north. Potential for mineralization associated with an altered or silicified zone.	Line 3	28+50N	-30 m	31+00N	180°	60°	500 m	3	10
2_SA-05	Moderately chargeable source. It is a narrow, sub-vertical, and deep source, sitting at 110 m elevation (apparent center of mass). Directly associated with a highly resistive zone, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone.	Line 4	30+00N	110 m	32+00N	200°	60°	450 m	4	11
2_SA-17	Moderately chargeable source. It is a mid-depth source, sitting at 220 m elevation (apparent center of mass). Partially associated with a highly resistive zone, moderate <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone. Found within a MAG low zone, also indicating possibility of mineralization associated with alteration.	Line 5	12+00N	220 m	11+00N	20°	60°	400 m	5	12
2_SA-18	Moderately chargeable source. It is a large, mid-depth source, sitting at 150 m elevation (apparent center of mass). Associated with moderate resistivity values.	Line 5	8+00N	150 m	9+25N	200°	60°	400 m	5	12
2_SA-26	Strongly chargeable source. It is a large and deep source, sitting at 100 m elevation (apparent center of mass). Directly associated with a highly resistive zone, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone.	Line 6	7+25N	100 m	9+00N	200°	60°	500 m	7	14



**Table 3. OreVision® Drilling Targets on South Abitibi Project (continued)**

DRILL HOLE (Priority_ Source)	Type / Target Interest	Location of the Target			Proposed DDH				Figure	Page
		Line	Station	Elevation (to Center)	Station	Az.	Dip	Length		
3_SA-08	Moderately chargeable source. It is a small, mid-depth source, sitting at 210 m elevation (apparent center of mass). Associated with moderate resistivity values.	Line 4	10+75N	210 m	9+25N	20°	60°	300 m	4	11
3_SA-09	Moderately chargeable source. It is a small, mid-depth source, sitting at 270 m elevation (apparent center of mass). Directly associated with a highly resistive zone, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone.	Line 4	8+00N	270 m	8+75N	200°	60°	200 m	4	11
3_SA-10	Moderately chargeable source. It is a mid-depth source, sitting at 150 m elevation (apparent center of mass). Associated with moderate resistivity values. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 4	4+00N	150 m	5+50N	200°	60°	350 m	4	11
3_SA-11	Moderately chargeable source. It is a sub-vertical and mid-depth source, sitting at 150 m elevation (apparent center of mass). Associated with moderate resistivity values. Found within a MAG low zone, indicating possibility of mineralization associated with alteration.	Line 5	25+50N	150 m	26+75N	200°	60°	350 m	5	12
3_SA-16	Strongly chargeable source. It is a small and shallow source, sitting at 250 m elevation (apparent center of mass). Associated with moderate resistivity values. Directly associated with MAG high trend that is orientated perpendicular to the survey lines. This MAG high could be adding to the strength of the chargeable source.	Line 5	14+75N	250 m	15+50N	200°	60°	250 m	5	12
3_SA-22	Strongly chargeable source. It is a small and shallow source, sitting at 280 m elevation (apparent center of mass). Associated with moderate resistivity values. Found within a MAG low zone, indicating possibility of mineralization associated with alteration.	Line 6	21+00N	280 m	21+50N	200°	60°	200 m	7	14



**Table 3. OreVision® Drilling Targets on South Abitibi Project (continued)**

DRILL HOLE (Priority_ Source)	Type / Target Interest	Location of the Target			Proposed DDH				Figure	Page
		Line	Station	Elevation (to Center)	Station	Az.	Dip	Length		
3_SA-24	Strongly chargeable source. It is a small, shallow source, sitting at 260 m elevation (apparent center of mass). Directly associated with a highly resistive zone, good <i>Gold Index</i> target. Potential for mineralization associated with an altered or silicified zone. Found within a MAG low zone, also indicating possibility of mineralization associated with alteration.	Line 6	13+25N	260 m	12+50N	20°	60°	250 m	7	14

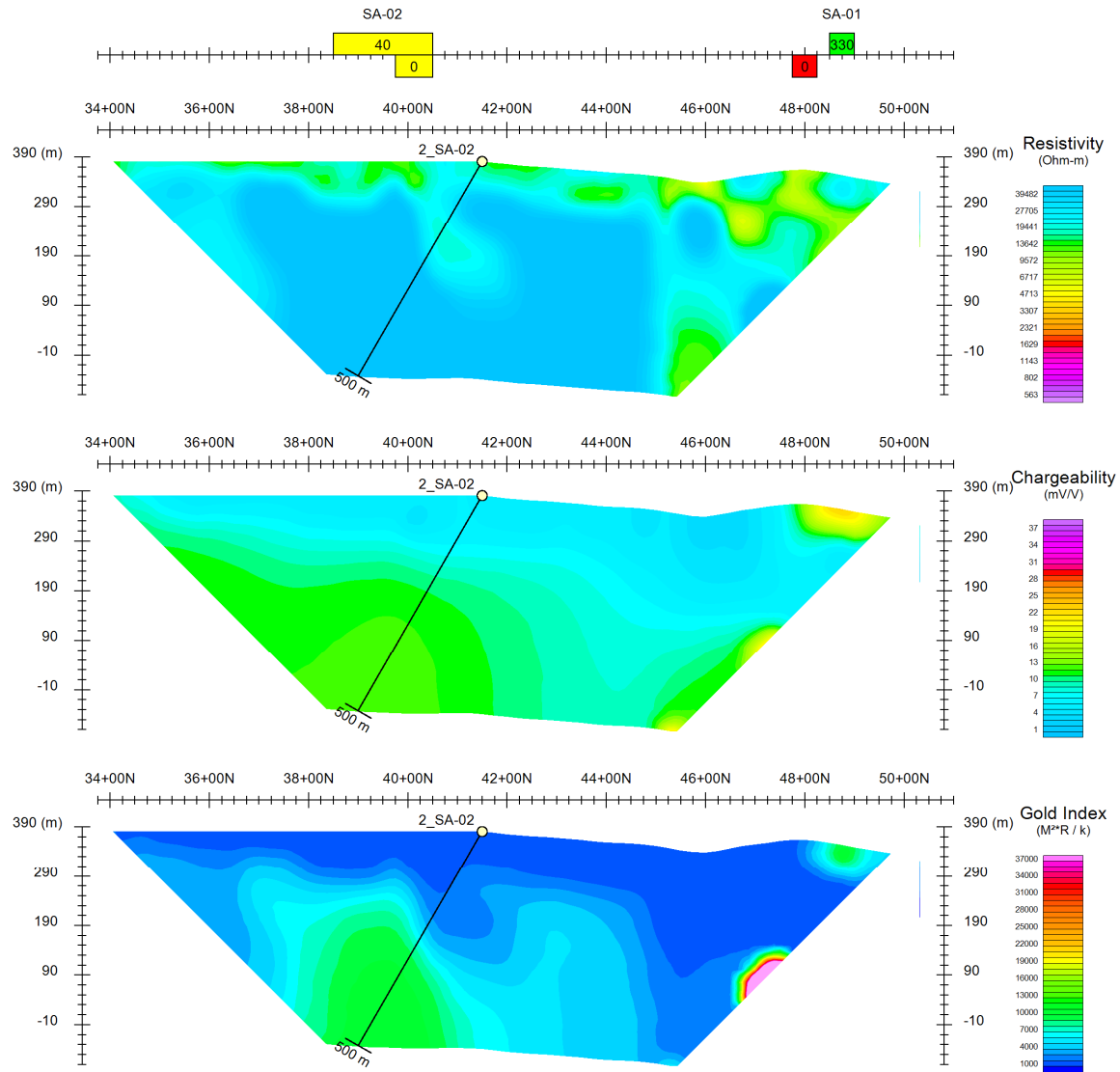


Figure 2. Recommended DDH on priority 2 Gold Index target SA-02 (Line 1)

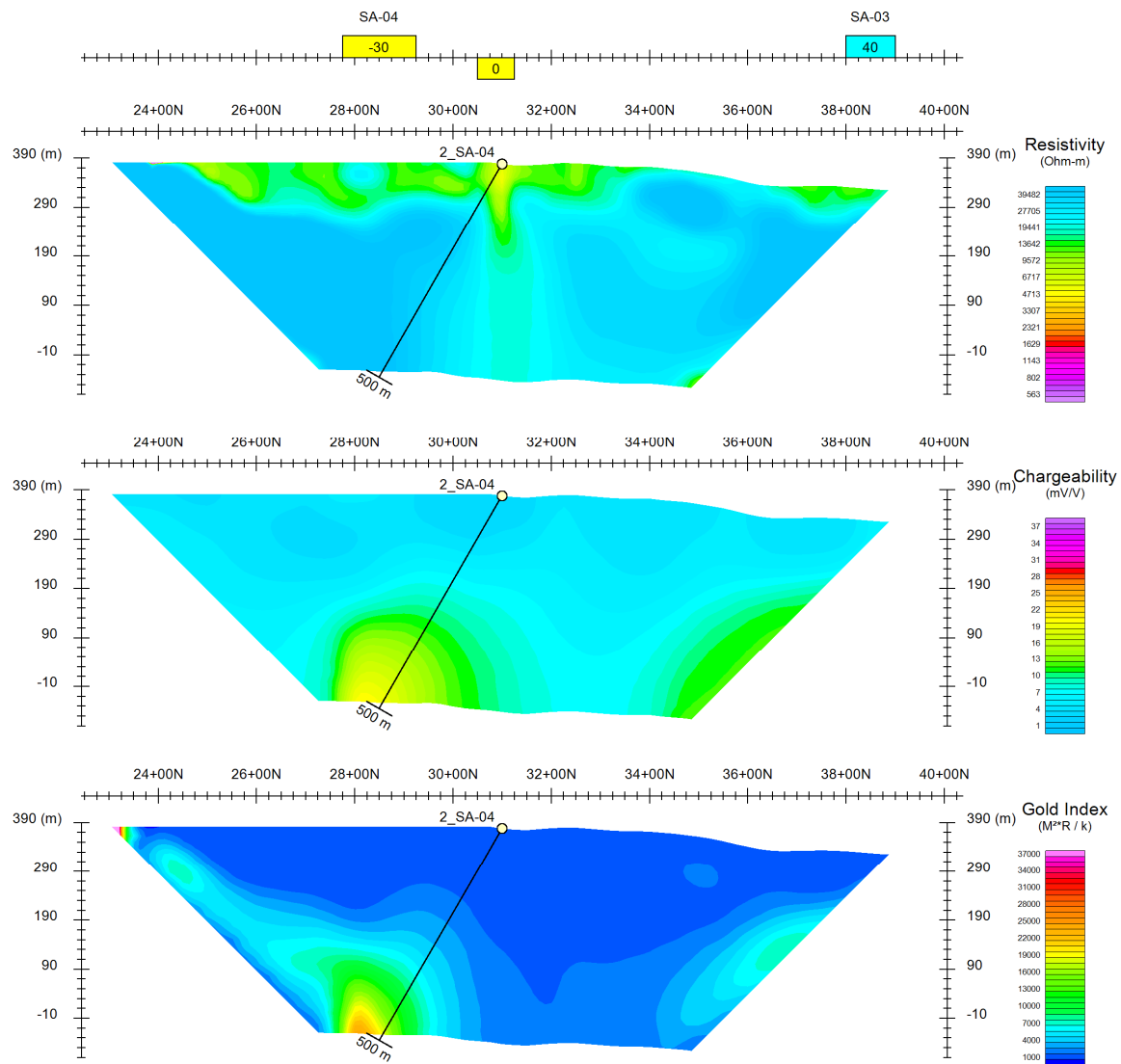


Figure 3. Recommended DDH on priority 2 Gold Index target SA-04 (Line 3)

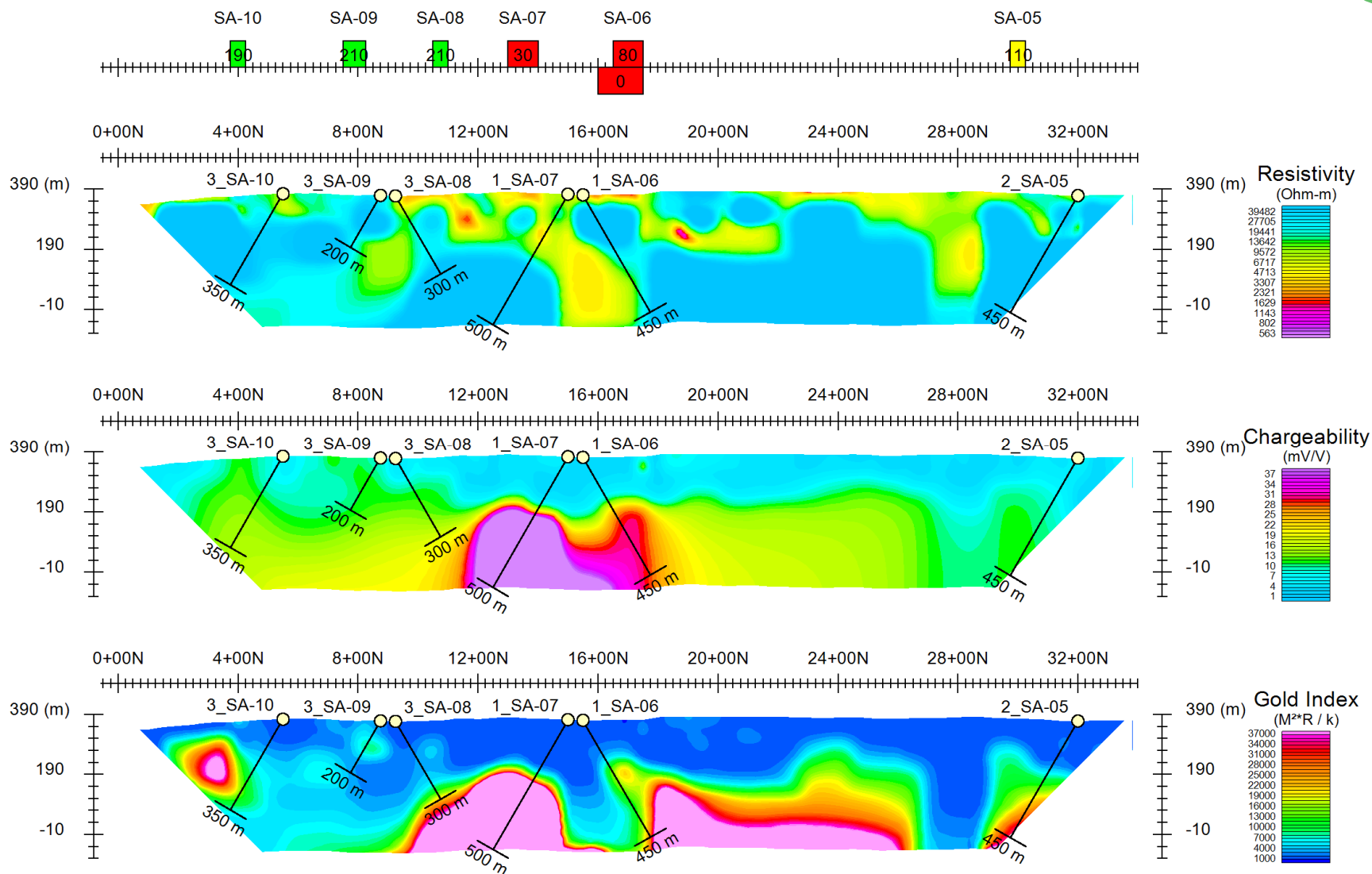


Figure 4. Recommended DDH on priority 1 Gold Index targets SA-06 and SA-07, priority 2 Gold Index target SA-05 and Priority 3 Gold Index targets SA-08, SA-09 and SA-10 (Line 4)

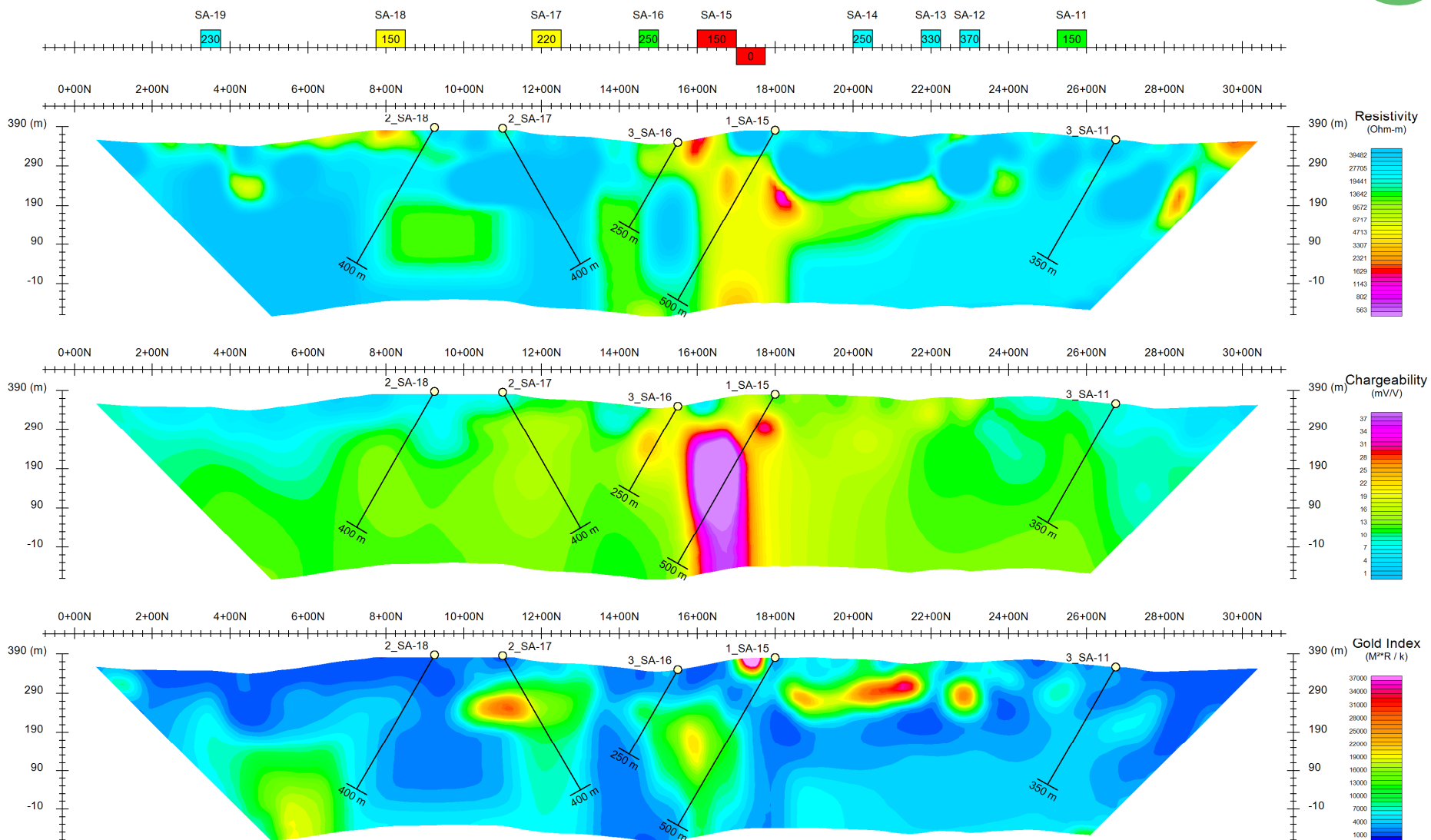


Figure 5. Recommended DDH on priority 2 Gold Index target SA-17, priority 2 target SA-18 and priority 3 targets SA-11 and SA-16 (Line 5)



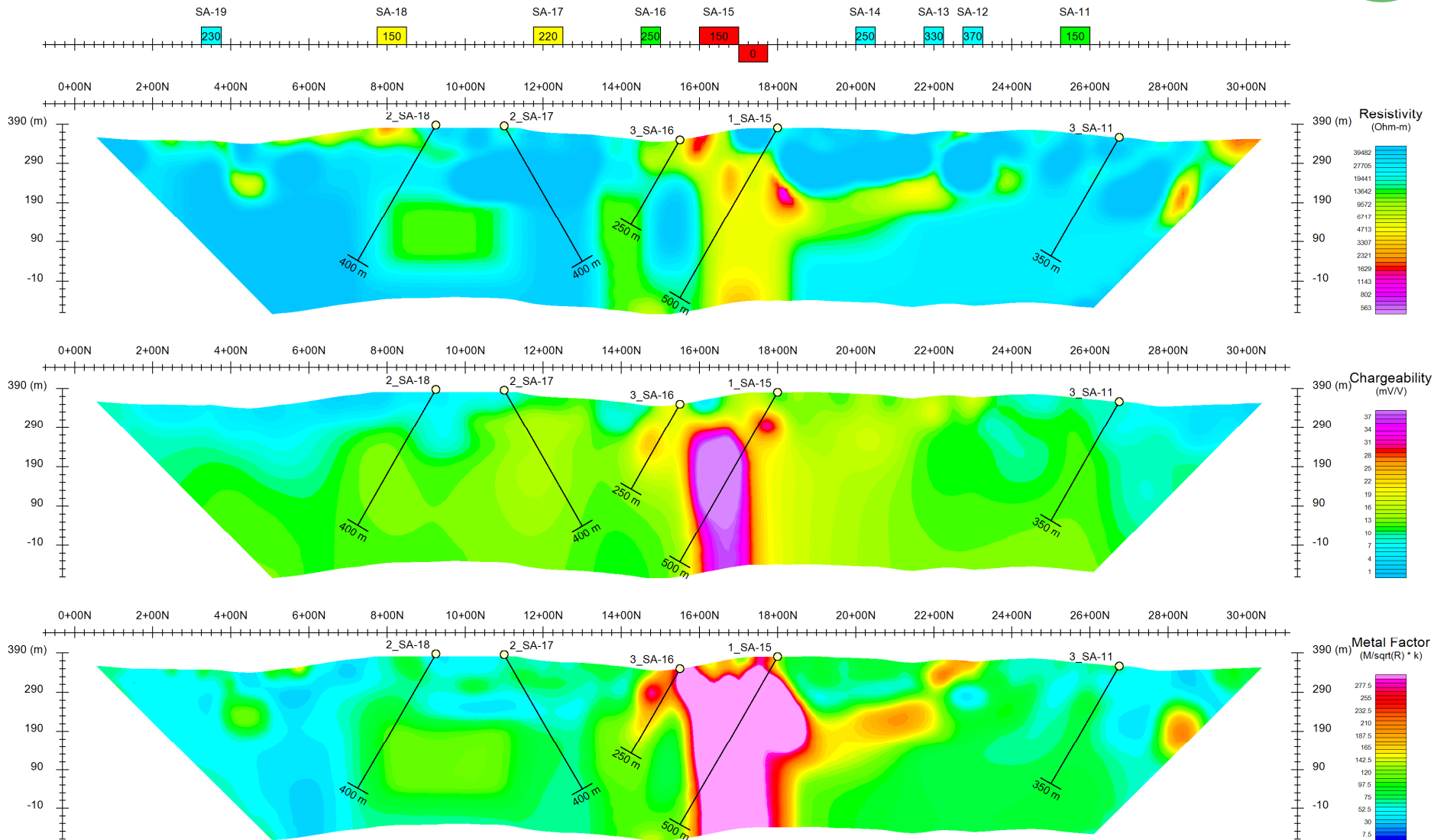


Figure 6. Recommended DDH on priority 1 Metal Factor target SA-15 (Line 5)

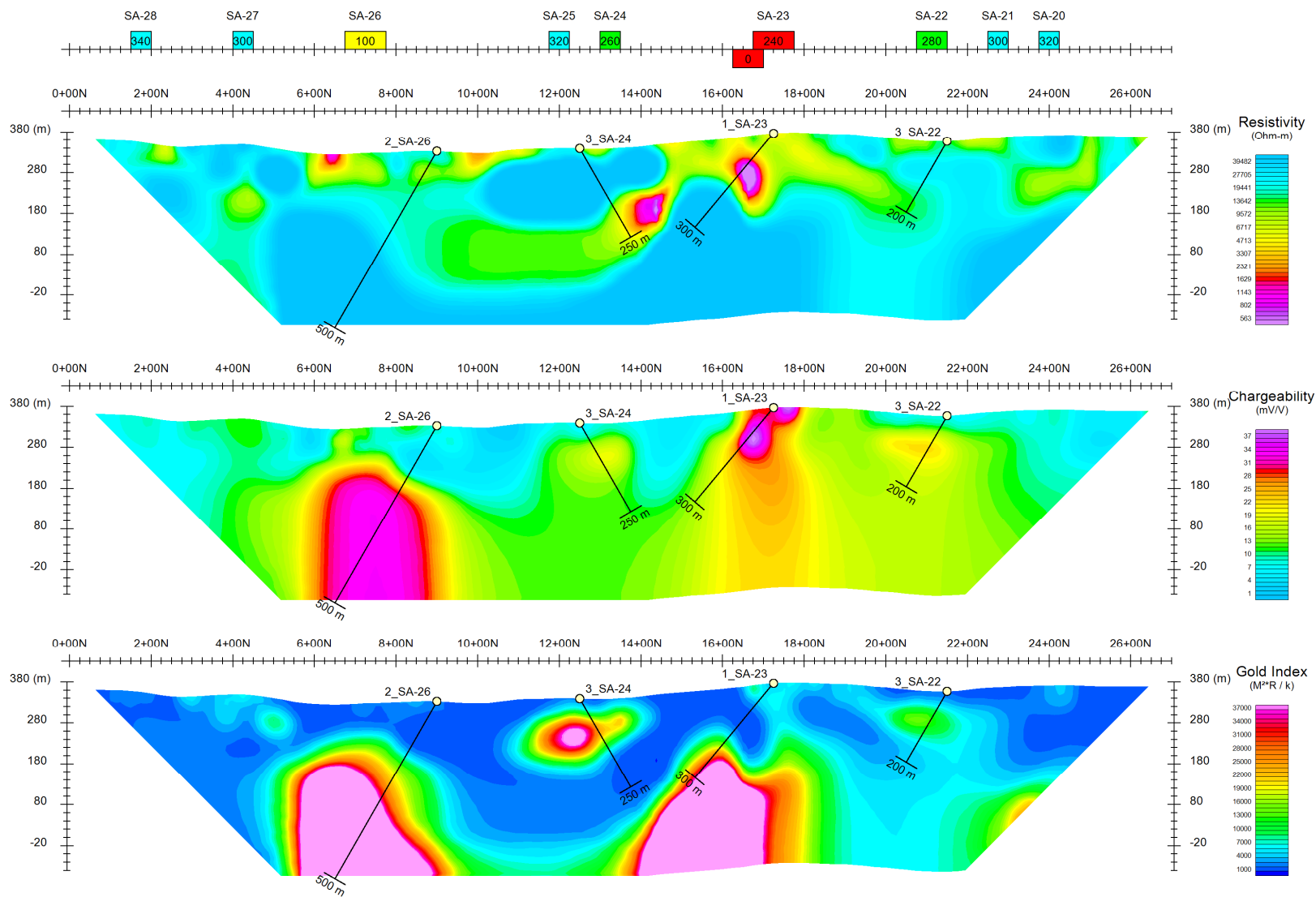


Figure 7. Recommended DDH on priority 1 Gold Index target SA-23, priority 2 target SA-26 and priority 3 Gold Index target SA-22 and SA-24 (Line 6)



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

Respectfully submitted,  
Abitibi Geophysics Inc.



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

PC/sl



## 2. THE MANDATE

- PROJECT ID* **South Abitibi**  
(Our reference: **17N102**)
  
- GENERAL LOCATION* Latchford, Ontario, Canada
  
- CUSTOMER* **Tri Origin Exploration Ltd.**  
125 Don Hillock Drive, Unit 18  
Aurora, ON, L4G 0H8  
**Telephone:** (905) 727-1779  
**Fax:** (905) 727-8779  
[explore@triorigin.com](mailto:explore@triorigin.com)
  
- REPRESENTATIVE* **Mr. Robert Valliant**  
[rvalliant@triorigin.com](mailto:rvalliant@triorigin.com)
  
- SURVEY TYPE* **OreVision® Survey**
  
- GEOPHYSICAL OBJECTIVE* To define and prioritize targets for further exploration



Figure 8. General location of the South Abitibi Project



### 3. SOUTH ABITIBI PROJECT

- LOCATION* **Gillies Limit (South) Township, Ontario, Canada**  
Centred on 47°13'48" N and 79°44'58" W  
NAD83 / UTM zone 17N: 594 650 mE, 5 231 500 mN  
NTS sheets: 31M/04-05
  
- NEAREST SETTLEMENT* **Latchford: 25 km northwest**
  
- ACCESS* The survey lines are located on either side of the TCH 11 between the towns of Latchford to the north and Owaissa to the south.
  
- GEOMORPHOLOGY* The property is located within the Superior Province of the Canadian Shield. The landscape is typical of the region and is dominated by mixed boreal forests. Rib Lake is found at the north end of *Lines 1* through *3* and runs south on the east side of the survey area. The topography over the survey grid is variable, ranging from *312 m* to *411 m* above sea level.
  
- CULTURAL FEATURES* Several cultural features were observed through the grid. Most notably a pipe line bordering the south end of *Lines 1* through *3*. There is also a railroad bordering the north end of *Lines 1* through *3*. *Lines 4* through *6* are bordered by TCH 11 in the north. The pipeline is thought to have significantly affected the data quality of the 3 northern lines, particularly *Line 2*; the data collected on this line is not useable, despite several attempts to minimize interference.
  
- MINING LAND TENURE* The claims covered by this survey are 100% owned by Tri Origin Exploration Ltd. and are illustrated in the figure below.
  
- SECURITY AND ENVIRONMENT* As part of the Abitibi Geophysics Inc. EHS program, crew members received first aid training and are provided with the safety equipment and specialized training for the induced polarization technique.  
  
No incidents were reported during this project.
  
- SURVEY LINES* **Line 1 to Line 3 (north)**  
AZ. = 0°  
Length = 1725 m – 2062.5 m  
  
**Line 4 to Line 6 (south)**  
AZ. = 200°  
Length = 2737.5 m – 3450 m
  
- COORDINATE SYSTEM* Projection : Universal Transverse Mercator, zone 17N  
Datum: NAD83

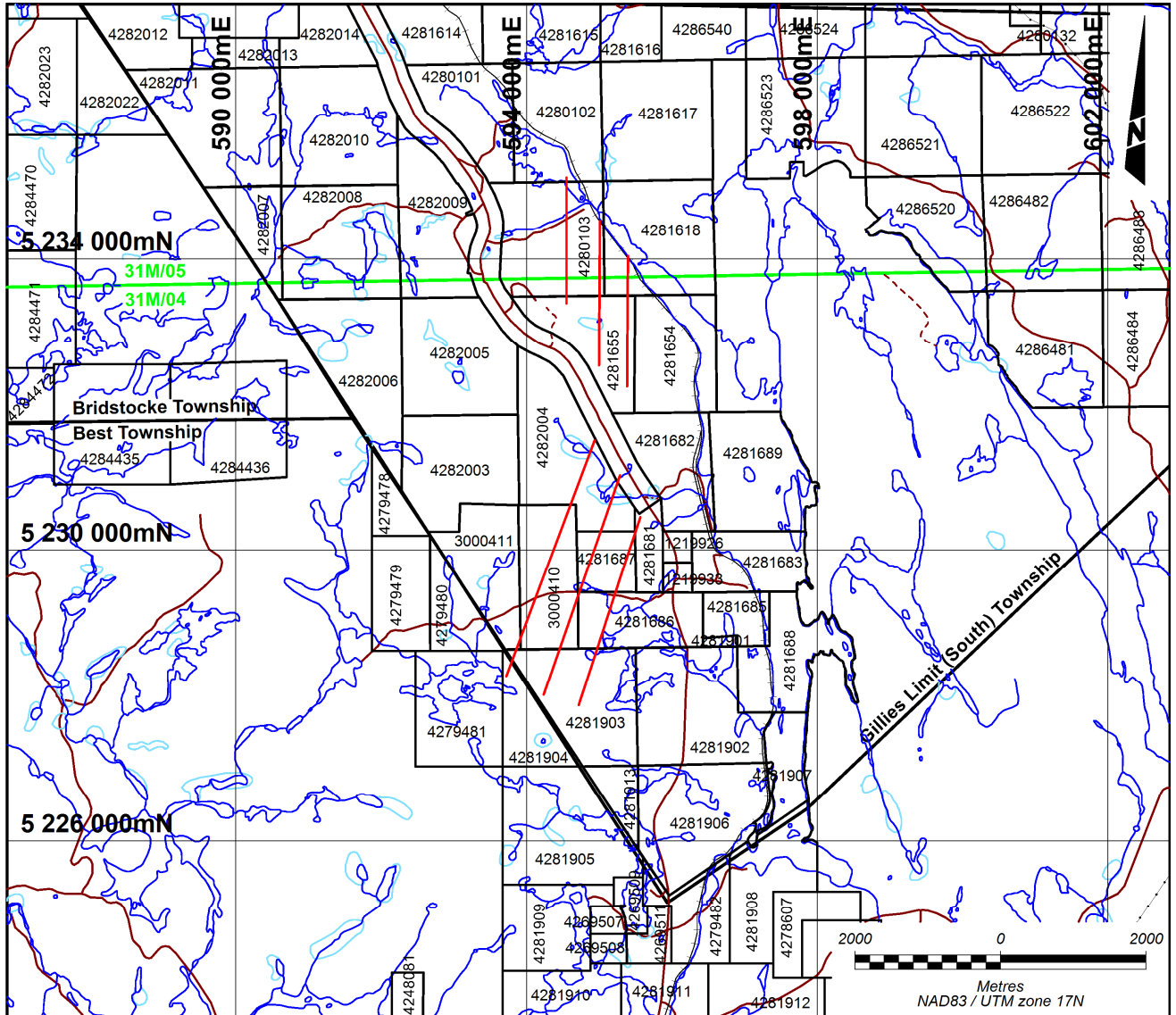


Figure 9. Index of claims and OreVision® survey coverage over the South Abitibi Project



## 4. OREVISION® SURVEY

### ☐ TYPE OF SURVEY

**OreVision®** Time Domain Resistivity / Induced Polarization  
"a" = 37.5 / "n" = 1 to 30

### ☐ PERSONNEL

Étienne Larose,	Crew chief & Rx operator
Mathieu Campeau,	Crew chief & Rx operator
Steve Nadon,	Field assistant
Guillaume-Olivier Poirier,	Field assistant
David Sarazin,	Field assistant
Ghislain Lafond,	Field assistant
Tommy Lessard,	Field assistant
Louis Miron,	Field assistant
Marc-Antoine Blais,	Field assistant
Brian Willard,	Field assistant
Jonathan Simoneau,	Logistics
Carole Picard, Tech.,	QC, Plotting
Pam Coles, P. Geo.,	QC, Interpretation, Report
Pierre Bérubé, P. Eng.,	Final validation of product conformity

### ☐ ACQUISITION

October 31, 2017 to November 21, 2017  
December 7, 2017 to December 9, 2017

### ☐ SURVEY COVERAGE

**15.0 km**  
**8.7 km (resurveyed)**

### ☐ IP TRANSMITTER (TX)

**IRIS Instruments TIPIX**, s/n 6, 7 & 19  
Maximum output: up to 2.0 kW or 13 A or 1800 V  
Power supply: Honda 2000 VA  
Electrodes: stainless steel  
Resolution: 1 mA on output current display  
Waveform: bipolar square wave with 50% duty cycle  
Pulse duration: 2 second

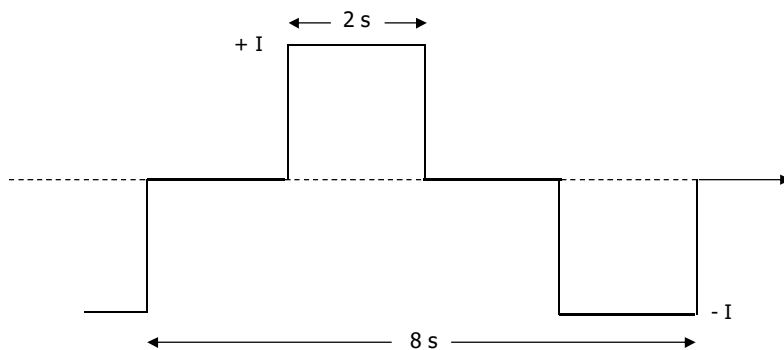


Figure 10. Transmitted signal across C<sub>1</sub> – C<sub>2</sub>



❑ *IP RECEIVER (Rx)*

**IRIS Elrec-PRO**, (10 input channels), s/n 187 & 368  
**IRIS Elrec-PRO with integrated switch pro**, (10 input channels), s/n 479  
 Electrodes: stainless steel

**V<sub>p</sub>** Primary voltage measurement:

- ✧ Input impedance: 100 MΩ
- ✧ Resolution: 1 μV
- ✧ Typical accuracy: **0.2%**

**M<sub>a</sub>** Apparent chargeability measurement:

- ✧ Resolution: 0.01 mV/V
- ✧ Typical accuracy: **0.4%**
- ✧ Linear sampling mode, 20 time slices (M<sub>1</sub> to M<sub>20</sub>)
- ✧ All gates are normalized with respect to a standard decay curve for QC in the field.

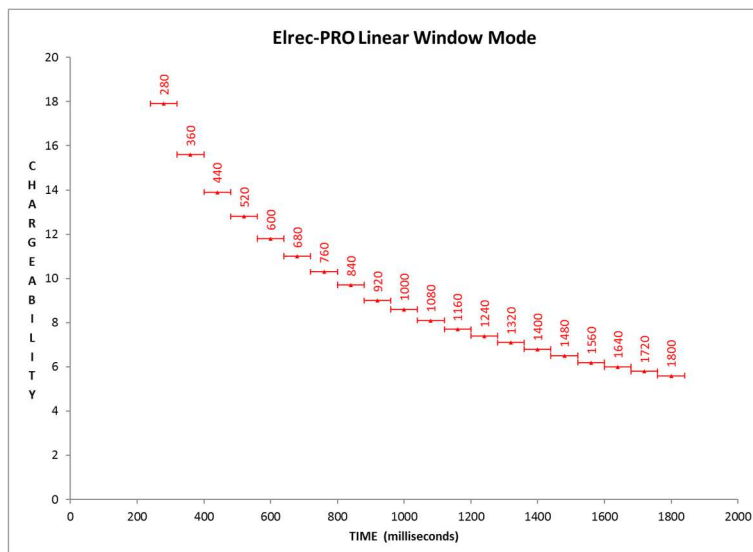


Figure 11. Linear windows (2 s pulse)

❑ *APPARENT RESISTIVITY CALCULATION*

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

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





☐ **QUALITY CONTROL**  
(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  $V_p$  &  $M_a$  signal simulator.

**During data acquisition:**

- ✓ Rx & Tx cable insulation was verified every morning.
- ✓ Data was reviewed using Prosys II® allowing a daily, thorough monitoring of data quality and survey efficiency.
- ✓ Sufficient pulses were stacked: a minimum of 8 pulses for every reading.

**At the Base of Operations:**

- ✓ Field QCs were inspected & validated.
- ✓ Each IP decay curve was analyzed with our proprietary Geosoft GX, *InteractiveAnomaly*®. The gates that were rejected were not included in the calculation of the plotted  $M_a$ .

☐ **QUALITY STATISTICS**

**Table 4. Quality Statistics – OreVision®**

<b>South Abitibi Project OreVision®</b>	
Average contact resistance across $R_x$ dipole ( $P_1$ - $P_2$ )	13.0 k $\Omega$
Average current applied to $T_x$ dipole ( $C_1$ - $C_2$ )	470 mA
Average $V_p$ measured across $R_x$ dipole ( $P_1$ - $P_2$ )	701 mV
Observed windows found to fit a pure electrode polarization relaxation curve	91.2 %
Average deviation of the validated, normalized windows with respect to the mean chargeability	1.25 mV/V



## 5. DATA PROCESSING AND DELIVERABLES

### ❑ QUALITY CONTROL

The first step in processing OreVision® data is quality control. To ensure consistent and efficient quality control Abitibi Geophysics has developed *InteractiveAnomaly*®. This Geosoft GX analyses the normalized decay curve for each reading within the data set. Only readings that successfully pass quality control will be used to calculate the final chargeability. Following this automated procedure, the apparent resistivity and apparent chargeability pseudosections are reviewed and further, manual QC is conducted.

### ❑ RES2DINV INVERSION

Apparent resistivity and chargeability values were inverted using Res2Dinv x 64, version 3.10.33 from GEOTOMO ([www.goelectrical.com](http://www.goelectrical.com)). This software calculates two dimensional patterns of resistivity and chargeability of the subsurface that best explain the values recorded at surface. The software generates a model consisting of rectangular blocks and applies a nonlinear algorithm to minimise the difference between the calculated model and field measurements.

### ❑ LIMITATIONS OF 2D INVERSION TECHNIQUE

Inversions 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.

In the absence of hard constraining data about the subsurface geometry of the mineralization and considering the non-uniqueness of the geophysical inversion methods, any recovered electrical distribution is only one of an infinite number of possible distributions that could explain the observed data.

### ❑ DIGITAL DATA

The maps, pseudosections and true depth sections described below are delivered in the Oasis Montaj map file format on DVD-Rom.

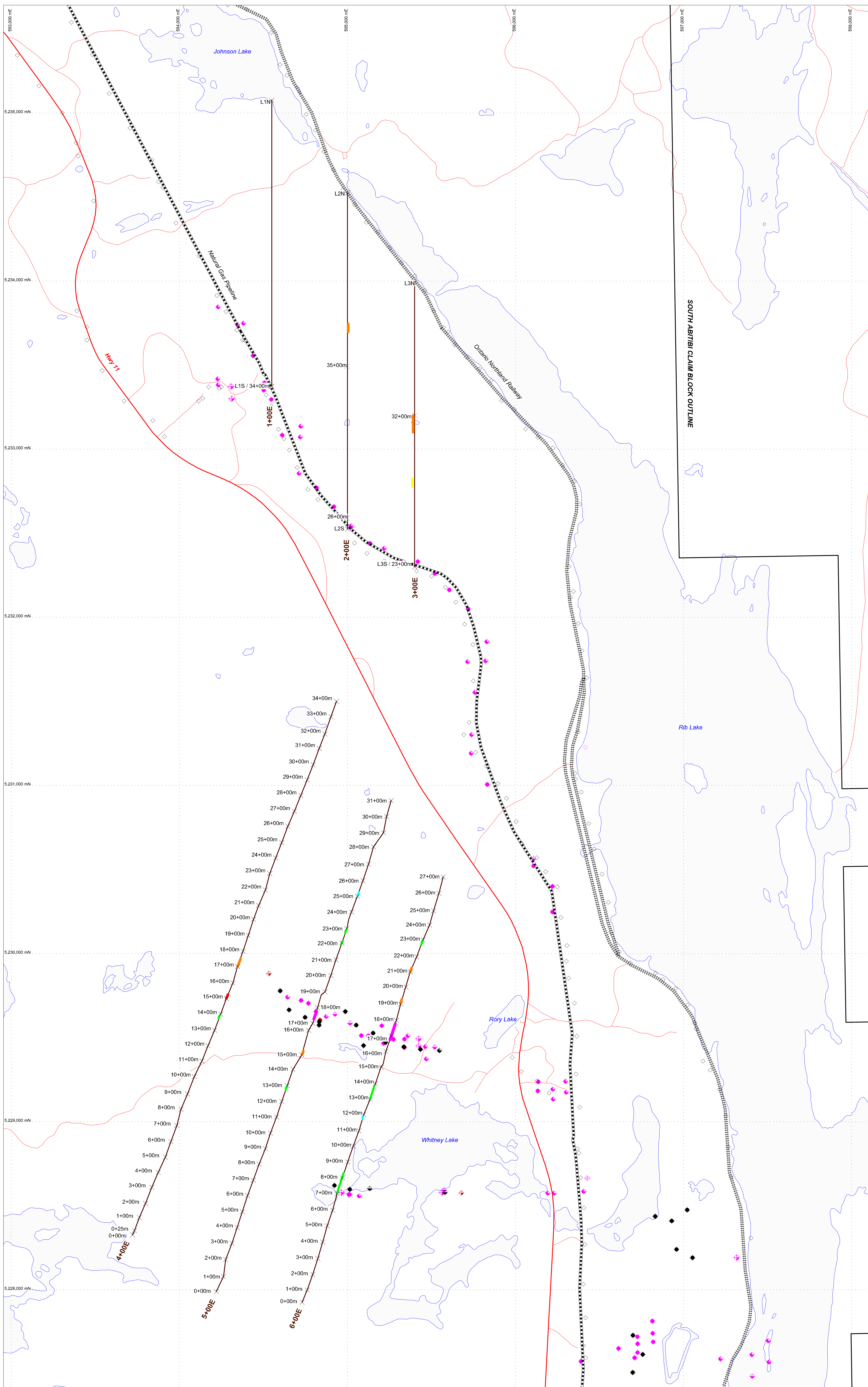
A copy of all survey acquisition data (ASCII text format) and processed data (Geosoft Montaj databases) are also delivered on DVD-Rom.



## **OREVISION<sup>®</sup> SURVEY**

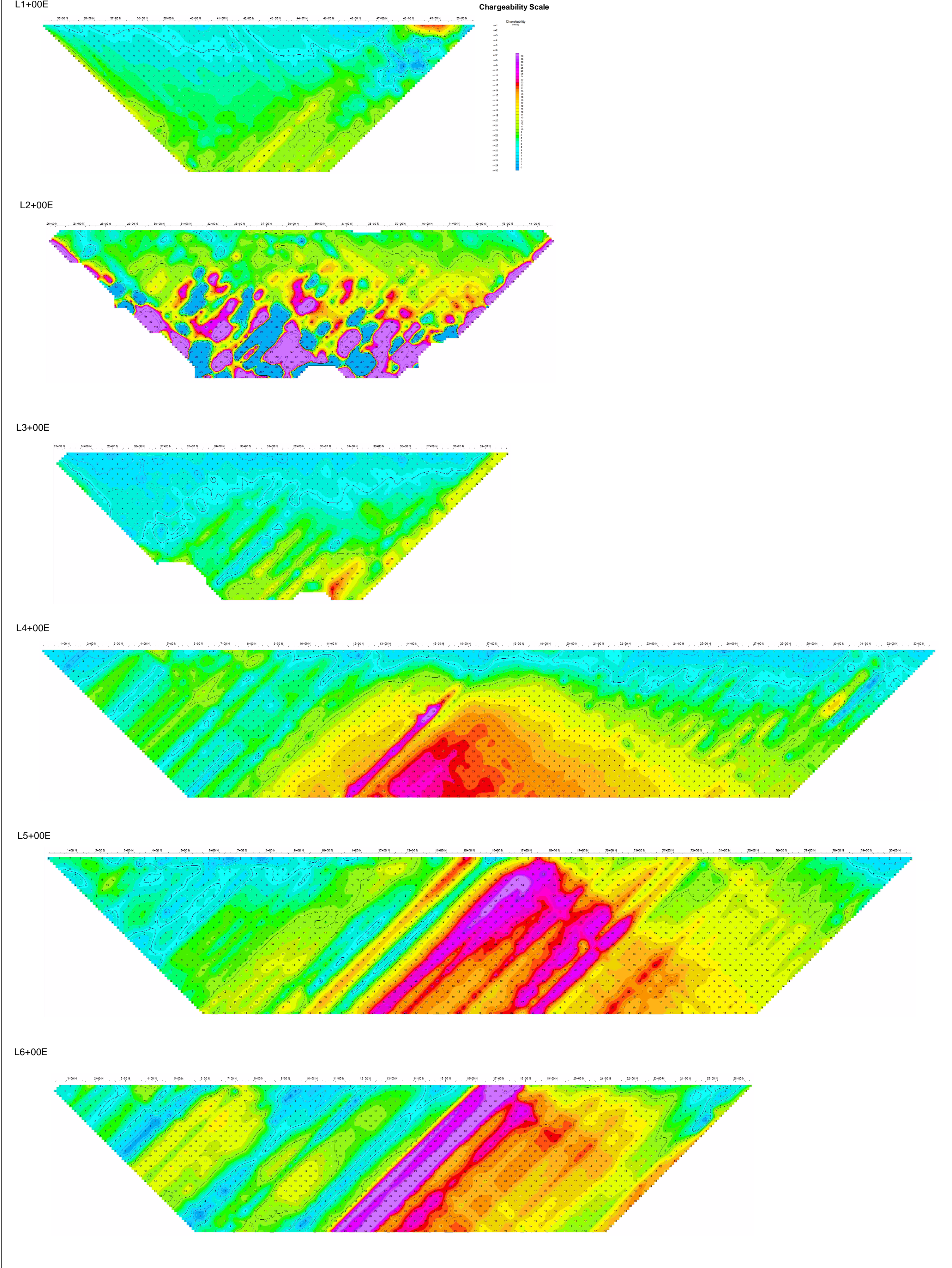
**VERTICAL SECTIONS FROM 2D INVERSIONS  
WITH PROPOSED DDH**

## MAPS



**Abitibi Geophysics Pole-Dipole Chargeability Pseudosections**

1:10 000



**Tri Origin Chargeability Anomaly Picks**

- Strength
- strong
  - medium strong
  - medium
  - weak medium
  - weak
  - very weak

**Tri Origin - Geotech VTEM Anomalies**

- Conductance siemens - sFz
- > 10
  - ◆ 7.5 to 10
  - ◆ 5 to 7.5
  - ◆ 2.5 to 5
  - ◆ 1 to 2.5
  - ◆ < 1

**Temex - AeroTEM Blocks A and B**

- conductance siemens
- > 50
  - ◆ 7.5 to 50
  - ◆ 5 to 7.5
  - ◆ 2.5 to 5
  - ◆ 1 to 2.5
  - ◆ < 1
  - all others

**OGS - B Lo AEM Anomale Picks**

- Tau x
- 325 to 1000
  - ◆ 275 to 325
  - ◆ 225 to 275
  - ◆ 175 to 225
  - ◆ 125 to 175
  - 60 to 125

<b>Tri Origin Exploration Ltd</b>	
South Abitibi Property	
2017 Line cutting locations & IP Survey Interpretations	
Date: 13/02/2019	Author: M Ruhl
Office:	Drawing:
Scale: 1:10000	Projection: UTM Zone 17 (NAD 83)