

**BC Geological Survey  
Assessment Report  
37586**



TYPE OF REPORT [type of survey(s)]: \_\_\_\_\_

TOTAL COST: \_\_\_\_\_

AUTHOR(S): \_\_\_\_\_ SIGNATURE(S): \_\_\_\_\_

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): \_\_\_\_\_ YEAR OF WORK: \_\_\_\_\_

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): \_\_\_\_\_

PROPERTY NAME: \_\_\_\_\_

CLAIM NAME(S) (on which the work was done): \_\_\_\_\_

COMMODITIES SOUGHT: \_\_\_\_\_

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: \_\_\_\_\_

MINING DIVISION: \_\_\_\_\_ NTS/BCGS: \_\_\_\_\_

LATITUDE: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " LONGITUDE: \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " (at centre of work)

OWNER(S):  
1) \_\_\_\_\_ 2) \_\_\_\_\_

MAILING ADDRESS:  
\_\_\_\_\_  
\_\_\_\_\_

OPERATOR(S) [who paid for the work]:  
1) \_\_\_\_\_ 2) \_\_\_\_\_

MAILING ADDRESS:  
\_\_\_\_\_  
\_\_\_\_\_

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: \_\_\_\_\_

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping	_____	_____	_____
Photo interpretation	_____	_____	_____
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic	_____	_____	_____
Electromagnetic	_____	_____	_____
Induced Polarization	_____	_____	_____
Radiometric	_____	_____	_____
Seismic	_____	_____	_____
Other	_____	_____	_____
<b>Airborne</b>			
_____	_____	_____	_____
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil	_____	_____	_____
Silt	_____	_____	_____
Rock	_____	_____	_____
Other	_____	_____	_____
<b>DRILLING (total metres; number of holes, size)</b>			
Core	_____	_____	_____
Non-core	_____	_____	_____
<b>RELATED TECHNICAL</b>			
Sampling/assaying	_____	_____	_____
Petrographic	_____	_____	_____
Mineralographic	_____	_____	_____
Metallurgic	_____	_____	_____
<b>PROSPECTING (scale, area)</b>			
_____	_____	_____	_____
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)	_____	_____	_____
Topographic/Photogrammetric (scale, area)	_____	_____	_____
Legal surveys (scale, area)	_____	_____	_____
Road, local access (kilometres)/trail	_____	_____	_____
Trench (metres)	_____	_____	_____
Underground dev. (metres)	_____	_____	_____
Other	_____	_____	_____
		<b>TOTAL COST:</b>	_____

**GEOPHYSICAL, GEOLOGICAL AND GEOCHEMICAL  
ASSESSMENT REPORT**

on the

**PIL PROPERTY**

**Omineca Mining Division, British Columbia**

**NTS Map Sheets 094E/7W and 6E**

**Latitude 57° 18' North**

**Longitude 126° 52.5' West**

For

**FINLAY MINERALS LTD.**

**Suite 912- 510 West Hastings Street**

**Vancouver, B.C.**

**V6B 1L8**



Prepared By:

**GEOQUEST CONSULTING LTD.**

**9962 Cathedral Drive, PO Box 3079**

**Vernon, B.C.**

**V1B 3M1**

**W. Gruenwald, P. Geo**

**Sept 24, 2018**

## TABLE OF CONTENTS

	Page
<b>1.0 SUMMARY</b> .....	1
<b>2.0 INTRODUCTION</b>	
2.1 General Statement .....	5
2.2 Location and Access .....	5
2.3 Physiography, Climate and Vegetation .....	5
2.4 Mineral Claims.....	6
<b>3.0 HISTORY</b>	
3.1 Regional Exploration History .....	7
3.2 Pil Property Exploration History .....	8
<b>4.0 REGIONAL GEOLOGY AND MINERALIZATION</b>	
4.1 Geology .....	9
4.2 Intrusive Geology .....	11
<b>5.0 PIL PROPERTY GEOLOGY AND MINERALIZATION</b> .....	12
5.1 <b>Northwest (NW) Zone</b> .....	12
5.1.1 Geology .....	12
5.1.2 Alteration .....	13
5.1.3 Mineralization .....	14
5.1.4 Structure .....	14
5.2 <b>Atlas and Pillar East Zones</b> .....	14
5.2.1 Geology .....	14
5.2.2 Alteration .....	16
5.2.3 Mineralization .....	17
5.2.4 Structure .....	22
<b>6.0 EXPLORATION PROGRAMS - 2017</b> .....	22
6.1 Airborne Magnetic Survey.....	22
6.2 Geological Mapping.....	23
6.3 Geochemical Sampling .....	23
6.4 Induced Polarization Survey.....	23
<b>7.0 PROGRAM RESULTS</b>	
7.1 Airborne Magnetic Survey.....	24
7.2 Geological Mapping.....	24
7.3 Geochemical Sampling .....	25
7.4 Induced Polarization Survey.....	26
<b>8.0 CONCLUSIONS</b> .....	27
<b>9.0 RECOMMENDATIONS</b> .....	28

## TABLES

	<b>Page</b>
Table 1 Mineral Claim Details .....	6

## PHOTOGRAPHS

	<b>Page</b>
Photo 1 NW Zone Panorama .....	12
Photo 2 Pillar East Zone (Looking West) .....	15
Photos 3a, b Breccia Dike and Specimen .....	16
Photo 4 Atlas Zones Panorama .....	17
Photo 5 Blue-Green Quartz with Native Copper and Tangeite .....	18
Photo 6 High-Grade Sample RM06-A07 .....	19
Photo 7 Panned Concentrate (RMPC 06-01) .....	19
Photo 8 Rusty Zone in Metsantan Volcanics (Pillar East Zone) .....	20
Photo 9 Copper Cliff Mineralization (Sample W16R-30) .....	21
Photo 10 Epithermal Zone Sample W17R-01 .....	26

## FIGURES

	<b>After Page</b>
Figure 1 Location Map .....	4
Figure 2 Claim Map .....	6
Figure 3 Toodoggone Geology and Mineral Occurrences .....	9
Figure 4 Property Geology (L. Diakow – BC Geological Survey) .....	10
Figure 5 Exploration Areas .....	8
Figure 6 Airborne Magnetic Survey Lines .....	22
Figure 7 Atlas-Pillar East Geophysical Compilation Plan .....	24
Figure 8 Detailed Geological Plan (G. Febbo) .....	24
Figures 9a-c Pillar East Geochemical Plans (Cu, Au, Ag) .....	Appendix C
Figures 10a-c Atlas-Pillar East Airborne Magnetic and Geochemical Plans (Cu, Au, Ag) .....	Appendix F

## APPENDICES

Appendix A	Analytical Data, Analytical Certificates, Analytical Methods
Appendix B	Airborne Magnetic Survey Report (P.E. Walcott and Associates)
Appendix C	Figures 9a-c – Pillar East Geochemical Plans (Cu, Au, Ag)
Appendix D	Induced Polarization Report (P.E. Walcott and Associates)
Appendix E	Rock Sample Descriptions
Appendix F	Figures 10a-c – Airborne Magnetic Compilation Maps (Cu, Au, Ag)
Appendix G	Personnel
Appendix H	Statement of Expenditures
Appendix I	References
Appendix J	Certificate of Writer

## SUMMARY

*This report, prepared for Finlay Minerals Ltd., describes the results of an exploration program carried out in August-September of 2017 on its 100% owned Pil property in the Toodoggone region of north-central British Columbia. Work consisted of an airborne magnetic survey, geological mapping, soil, stream and rock sampling, and an induced polarization survey. Exploration work targeted newly discovered alkalic porphyry copper-silver (Cu-Ag) and epithermal gold-silver (Au, Ag) mineralization at the Pillar East area.*

*The Pil property comprises a contiguous block of 40 mineral claims covering 14,015 hectares or 140.15 km<sup>2</sup>. It is situated between 1200 and 2100 metre elevations in glaciated terrain of the Omineca Mountains. The property is 60 km by road from the Kemess Mine and 600 km from Prince George. Roads constructed in 2004-06 provide good access to key areas of the property. Exploration was based out of a centrally located camp that was built in 2004.*

*Mining activity in the region dates to the early 1900s with the search for placer gold. Prospecting led to discovery of numerous precious and base metal occurrences in an area that became known as the Toodoggone camp. In the 1960s and 1970s, several epithermal gold-silver and porphyry Cu-Au deposits were explored and developed. Some came into production such as Lawyers, Baker and the Kemess Cu-Au Mine. Work on the Pil property dates to the late 1960s. Electrum Resources and Finlay Minerals Ltd. completed most of the work since the mid 1990s.*

*The property is situated within the Toodoggone region, a 90 km long by 15 km wide northwest trending belt of early Jurassic diorite, granodiorite or monzonite phases of the Black Lake Intrusive Suite together with coeval Toodoggone Formation calc-alkaline volcanics. Block faulting and half-graben tectonics are important structural controls in the emplacement of the plutons, eruption of the Toodoggone Formation volcanics, and the various styles of porphyry copper-gold and epithermal gold-silver mineralization. Toodoggone Formation rocks underlie most of the Pil property. Black Lake intrusive rocks are found in several areas of the property. These rocks host porphyry copper ± molybdenum mineralization at the Northwest (NW), Northeast (NE) and Pil South zones.*

*Exploration potential for porphyry style deposits is exemplified at the Northwest Zone where Cu-Mo mineralization is delineated over a 400-metre long zone in Black Lake intrusive rocks. Mineralization was intersected by drilling over considerable lengths with several holes ending in significant copper-molybdenum mineralization. The full extent of this zone has yet to be determined. It is open to the north, west and to depth. Given the success of deep drilling at several BC mines and advanced exploration projects the Company believes that exploration targets such as the NW Zone warrant deep penetrating geophysics and potentially diamond drilling.*

*The Atlas East Zone presents potential for epithermal gold-silver mineralization. The former is a large gossanous area in altered Toodoggone volcanic rocks. Gold-silver mineralization in float, bedrock and drill core consisting of electrum, native gold, and acanthite (argentite) occur in silicified, veined and brecciated volcanics. Local bonanza grade Au-Ag mineralization grading up to 489 g/t Au and 6.5 kg/t Ag was found in silicified and brecciated volcanics. Potential indicators of hydrothermal sources for Au-Ag mineralization are evidenced by a large Thorium/Potassium airborne anomaly, granitic clasts in breccia dikes at Atlas East and a body of Black Lake intrusive rock at Pillar East. The mineralogy and alteration style suggest that the Atlas East Zone represents the upper part of a large epithermal system.*

*Although locally very high-grade gold-silver mineralization was found on surface, diamond drilling (2005-2007) did not encounter similar high-grade mineralization. Drill hole A07-03 yielded the most significant intercept with 14 metres of 2.48 g/t Au and 42.7 g/t Ag. Drilling in 2007 was constrained by the drill equipment's ability to access the steep terrain at some of the proposed sites. This meant that not all targets could be optimally drilled nor, could the possibility of southerly inclined mineralized zones be tested.*

*Exploration in 2006 and 2007 identified geochemical and geological evidence of epithermal gold-silver mineralization in an area referred to as Pillar East. Soil samples containing >1 g/t Au and >5 g/t Ag are not uncommon. Panning at the site of two gold anomalous stream samples recovered angular gold attached to quartz suggesting a very local source. In 2015 the writer and field technician Dean Mason conducted follow-up of the 2007 geochemical anomalies. Additional Au-Ag mineralization was discovered further confirming a north-northeast striking epithermal zone. Prospecting and soil sampling programs have to date delineated a north-northeast trending epithermal Au-Ag zone nearly 800-metre long.*

*While investigating a gold-in-soil anomaly near the south end of the epithermal Au-Ag zone several malachite and chalcopyrite bearing volcanic talus boulders were found at the base of a large talus slope. Rock sample WG15-04 returned a value of 12,680 ppm Cu and 33.8 g/t Ag. Traversing uphill on the talus slope identified similar material over a large enough area to suggest that it did not emanate from a small or point source. The amount and extent of the copper talus float was substantial and suggested more than just a point source.*

*A significant development in 2016 was the discovery of chalcopyrite mineralized bedrock uphill of the copper bearing talus. Referred to as "Copper Cliff" mineralization extends at least 40 meters east-west by 30 meters north-south. Of eleven rock samples collected in 2016 all contain disseminated chalcopyrite mineralization. Locally chalcopyrite content exceeds 5%. Copper and silver range from 0.05% to 1.04% Cu and 2.8 to 23.9 g/t Ag respectively. As with the mineralized talus pyrite content is very low.*

*Petrographic analysis of 2016 bedrock sample W16R-30 describes the rock as a hypabyssal (shallow depth) feldspar ± biotite porphyry of about monzonite composition. It is cut by strongly developed stockwork of chalcopyrite-minor bornite-pyrite veinlets associated with quartz, alkali feldspar suggesting this is alkaline porphyry copper-type mineralization in a low iron/high copper system. The petrographic descriptions also suggest that magnetite is absent or has been altered to hematite.*

*The 2017 work comprised of an airborne magnetic survey, geological mapping, soil and rock sampling and concluded with an Induced Polarization survey.*

*The **airborne survey** revealed magnetic highs that coincide with elevationally higher, younger, shallow dipping Toodoggone Formation lithologic units. In the eastern part of the survey magnetic highs form a circular anomaly that widens distinctly in the north and extends easterly into the adjacent property. The area where the magnetic high widens covers a body of Black Lake diorite and further east a rusty weathered area that may indicate the thermal effects of a buried intrusion. The Copper Cliff Zone is situated on the southwest edge of a distinct circular magnetic low within which is a small but distinct magnetic high. The southern portion of the epithermal Au-Ag zone falls along the boundary between the southwest part of the circular magnetic low and higher magnetics to the west. The Atlas epithermal zone presents as small, moderate magnetic highs bounded to the northwest by a magnetic low. Interestingly, a northeast trending fault is situated between the magnetic highs and low.*

**Geological mapping** interprets the Copper Cliff Zone as associated with the contact zone of hypabyssal monzonite bodies. A dolomitic conglomerate is intruded by the monzonite and trends north-south for 700 metres. Its trace coincides with copper mineralization and it appears that the conglomerate provides favourable sink for Cu mineralization allowing it to easily dump out. The very fine grain size of the chalcopyrite, the low amounts of pyrite and the presence of albite alteration are strong arguments for alkalic porphyry mineralization. Aside from local variations in epidote there is a lack of alteration zoning and a lack of porphyry stockwork and veins. The best access for drilling Copper Cliff would be from above on the ridge to the south.

The Pillar East epithermal zone is associated with quartz-sericite alteration that may be a shallow, high-temp system related to the hypabyssal monzonite and comagmatic flows. It also shows weak spatial correlation with rhyolite, so this may be a possible link. Lithologic contacts and bedding dips and “young” to the northwest interpreting Copper Cliff to underlie and intrude epithermal zone host rocks. Normal Fault (north-side-down) displacement interpreted between Copper Cliff and epithermal zone.

The Atlas Zone has an impressive alteration footprint and may be high sulphidation style due to the presence of kaolinite. The alteration is commonly part of an epithermal system, but possibly related to a porphyry at depth.

The airborne survey revealed magnetic highs that coincide with elevationally higher, younger, shallow dipping Toodoggone Formation lithologic units. In the eastern part of the survey magnetic highs form a circular anomaly that widens distinctly in the north and extends easterly into the adjacent property. The area where the magnetic high widens covers a body of Black Lake diorite and further east a rusty weathered area that may indicate the thermal effects of a buried intrusion. The Copper Cliff Zone is situated on the southwest edge of a distinct circular magnetic low within which is a small but distinct magnetic high. The southern epithermal Au-Ag zone falls along the boundary between the southwest part of the circular magnetic low and higher magnetics to the west.

Detailed geological mapping by geologist Gayle Febbo interpreted the Copper Cliff Zone as associated with the contact zone of hypabyssal monzonite bodies. Alteration typically contains albite, quartz, epidote and in places carbonate and garnet developed in wall rock and also in the monzonite as an endoskarn. A dolomitic conglomerate is intruded by the monzonite and the trend of its trace coincides with copper mineralization pods. It appears that conglomerate provides favourable sink for copper mineralization allowing it to easily dump out. The very fine grain size of the chalcopyrite, the low amounts of pyrite and the presence of albite alteration are strong arguments for alkalic porphyry mineralization. Evidence is however lacking for strong alteration zonation, porphyry stockwork and veins. Lithologic contacts map well between the Copper Cliff and epithermal showings and the Copper Cliff zone is interpreted to underlie and intrude epithermal zone host rocks. A normal fault (north-side-down) displacement interpreted between Copper Cliff and epithermal zone.

The Pillar East epithermal Au-Ag zone may be shallow, high-temp system related to the hypabyssal monzonite and comagmatic flows. A weak spatial correlation with the rhyolite may also be a possible link. The mineralization is associated with quartz-sericite alteration. Atlas East is described as an impressive alteration footprint that appears to be high sulphidation style due to the presence of kaolinite. Such alteration is commonly part of an epithermal system, but possibly related to a porphyry at depth (Febbo). Given what was observed it is difficult to argue a porphyry model however it was suggested that it would be worth identifying deeper exposures on the property.

*The soil survey south of the Copper Cliff Zone did not return any significant results for base and precious metals indicating that mineralization does not extend in this direction or to this elevation. Soil sampling conducted to follow-up on 2006 outcrop sample RM06-A03 at the Atlas Zone returned weakly anomalous gold and silver with coincident elevated values for arsenic, antimony, bismuth, copper, iron, lead and molybdenum. This distinctive geochemical signature may suggest a different (elevation?) epithermal mineralizing system than at Pillar East.*

*Two rock samples returned highly anomalous values. Sample W17R-01, collected from a discovery of quartz breccia subcrop along the trend of the Pillar East epithermal zone, assayed 19.95 g/t Au, 423 g/t Ag, the highest grade found to date. The sample also carried highly anomalous copper, molybdenum, lead and zinc. This sample is also significant in that it is 40 metres south of a 0.5 metre quartz breccia boulder found in 2016 that assayed 6.56 g/t Au and 13.1 g/t Ag and also contained anomalous amounts of copper, molybdenum, lead and zinc.*

*The unusual heterolithic breccia dike 1.5 km to the west-northwest in the Atlas Zone was re-examined. A selected grab sample (Tan 003a) containing a dark grey metallic mineral assayed 2.76% Cu and 52 g/t Ag. The absence of arsenic and antimony suggests the metallic mineral is likely chalcocite. A potentially significant aspect of the heterolithic dike is its anomalous vanadium content. The presence of anomalous vanadium also at Copper Cliff and Gossan C may suggest a relationship to mineralized bodies at depth and/or a major WNW trending structure.*

*The IP survey showed a general increase in chargeability values observed to the east culminating in a chargeability anomaly on the eastern margins of the survey and beyond the property boundary. This coincides with an airborne magnetic high thought to be related to an intrusion and/or the thermal effects and pyrite alteration of volcanic rocks. The Copper Cliff Zone and the epithermal did not present as strong chargeability anomalies.*

*A weak chargeability anomaly around 81+50E on Line 2700N coincides with an area of limonitic volcanics near the south end of the epithermal zone where several soil and rock samples contain anomalous gold and silver. Some rock samples show limonite staining, silicification and are locally brecciated. This chargeability anomaly is well defined and dips at roughly 45° east. The anomaly also correlates very well with a small, discreet magnetic high roughly centred within the large circular magnetic high.*

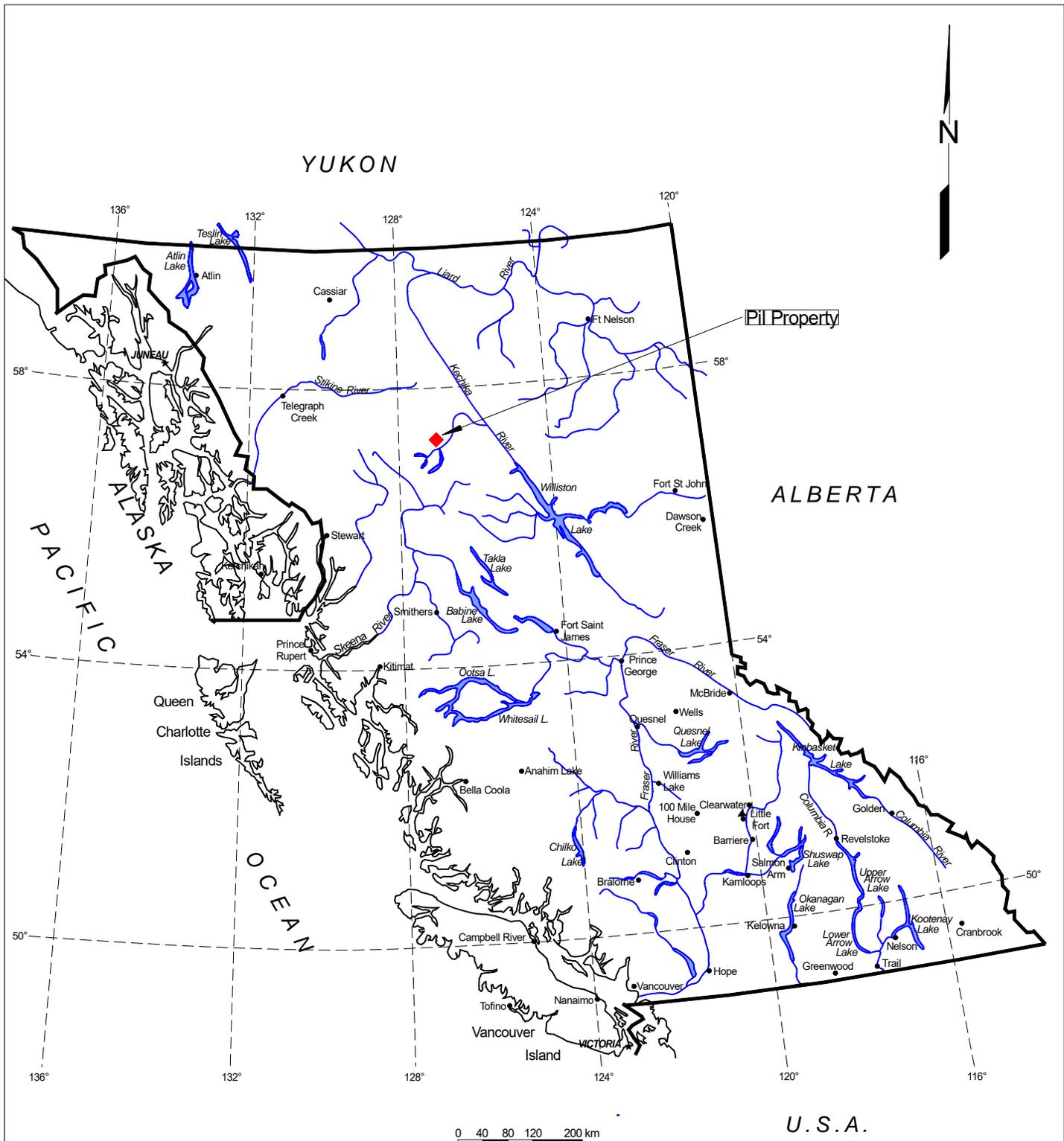
*In summary the Copper Cliff, Pillar East epithermal Au-Ag zone and Atlas East Zone present very worthy exploration targets. The proximity of one of the largest Th/K anomalies of the 2004 government airborne survey combined with evidence of buried intrusions (dike fragments) also suggest that this area of the property definitely warrants continued exploratory work.*

The expenditures for the 2017 exploration program totaled CDN \$105,795.

A recommended exploration program should comprise some or all of the following:

- 1) Continued geological mapping of Pillar East and Atlas Zones.
- 2) Induced Polarization surveys westerly across the Atlas East Zone.
- 3) Diamond drilling at 2-3 sites from the Copper Cliff Zone and along the epithermal Au-Ag zone. Holes to range from 150 to 300 metres. Drilling from 1,500 to 2,500 metres.
- 4) These programs would require helicopter support and ideally a camp at Pillar East.

The estimated cost of the such an exploration program would range from \$350,000 to \$500,000.



FINLAY MINERALS LTD.

**PIL PROPERTY**  
Location Map

Tech Work By: GEOQUEST  
Drawn By: EG

Date: Apr, 2018  
Figure: 1

To accompany a report by W. Gruenwald, P. Geo.

## 2.0 INTRODUCTION

### 2.1 General Statement

This report describes the results of an exploration programs carried out during 2017 on Finlay Minerals Pil property in the Toodoggone region of north-central British Columbia. The program was a direct follow-up from discoveries made in 2007 and 2015-16 exploration programs.

The 2017 programs consisted of airborne magnetics, geological mapping, geochemical sampling and an IP survey. The exploration targets were:

- Copper-silver alkalic porphyry deposits
- Epithermal gold-silver deposits.

### 2.2 Location and Access

The Pil property is located in north-central British Columbia approximately 34 kilometres NNW of the Kemess copper-gold mine and 460 air-kilometres north of Prince George, BC (Figure 1). Property co-ordinates (centre of 2016 work) are 57°18' north Latitude and 126°52.5' west Longitude on N.T.S. Map No. 94E/7W. The UTM (NAD 83) co-ordinates are Grid Zone 9V 628000E, 6352750N on Trim Maps 094E/026, 036.

The property is accessible by road from Prince George, approximately 600 kilometres and a drive of 10 to 12 hours. Travel from Prince George is 164 km north along Hwy 97 to Windy Point and thence along Hwy 39 toward Mackenzie. Before Mackenzie, the Finlay Forest Service Road heads westerly and crosses the southern end of Williston Lake. This road continues northerly along the west side of Williston Lake. Logging activity eventually ceases near Osilinka camp and travel continues north along the Omineca Mining (Kemess) road. At kilometre 166 is a junction with the right branch leading to the Kemess Mine. The left fork (Omineca Resource Access Road) heads northwesterly eventually crossing the Finlay River at 23 kilometres. This road continues past the Sturdee airstrip and then heads north-easterly along the north side of Black Lake to a junction with the Baker Mine road. Continuing north-easterly (right) the road passes Sable Resource's Shasta pit. From here, the Brenda exploration road follows the south side of Jock Creek. At 6.5 km from the Shasta pit, a road constructed by Finlay Minerals heads 7.6 km northerly along the east side of Pillar Creek to the "Pil" exploration camp. The driving distance from the Kemess Mine junction to the Pil camp is just over 60 kilometres.

### 2.3 Physiography, Climate and Vegetation

The Pil property is situated in the northern Omineca Mountains of northern BC. Slopes on the property are moderate with occasional steep slopes along and at the headwaters of drainages. Topographic relief is ~900 metres, ranging from 1200 metres along Jock Creek to just under 2,100 metres on several peaks in the northern and central portion of the property. A prominent peak known as "The Pillar", from which the property name is derived, is the most distinctive landmark in the area.

Seasonal temperatures range from lows of -35°C in winter to +30°C in July and August. January and July mean temperatures are -14°C and 15° to 20°C respectively. The property area receives moderate precipitation with winter snow pack reportedly around 1.5 to 2 metres. Access to the area is possible from June to September.

The property is forested with stands of balsam, spruce and pine. Timberline is around 1,500 metres. Steeper slopes, especially those prone to avalanches, are often covered with very thick mats of low growing and tangled balsam. Terrain above 1,500 metres consists of grassy alpine meadows interspersed with talus on steeper slopes.

## 2.4 Mineral Claims

The Pil property is comprised of a contiguous block of 40 mineral claims. Conversion of several of the claims to the new online system has resulted in fewer tenures and larger area. The property now covers an area of 13,542 hectares or 135.4 km<sup>2</sup> (Figure 2). The claims are located on NTS Maps 093A 07W and 6E in the Omineca Mining Division. The Trim Map (1:20,000) sheets are 094E 026, 035 and 036. Details of the claims downloaded from the Mineral Titles Online (MTO) website are listed below. None of the claims have been have been legally surveyed.

**Table 1. Mineral Claim Details**

Tenure Number	Claim Name	Map Number	Good to Date	Mining Division	Area (ha)
308128	PIL 2	094E036	2021/JAN/31	OMINECA	500.0
316952	PIL 6	094E026	2021/JAN/31	OMINECA	300.0
316953	PIL 7	094E036	2021/JAN/31	OMINECA	500.0
316955	PIL 9	094E036	2021/FEB/02	OMINECA	400.0
316956	PIL 10	094E036	2021/JAN/31	OMINECA	450.0
316957	PIL 11	094E036	2021/JAN/31	OMINECA	500.0
340215	PIL 20	094E026	2021/JAN/31	OMINECA	225.0
340216	PIL 21	094E026	2021/JAN/31	OMINECA	400.0
340217	PIL 22	094E036	2021/FEB/01	OMINECA	400.0
340218	PIL 23	094E036	2021/JAN/31	OMINECA	450.0
340226	PIL 31	094E036	2021/JAN/31	OMINECA	25.0
340228	PIL 33	094E036	2021/JAN/31	OMINECA	25.0
386615	GOLD 1	094E035	2019/MAY/17	OMINECA	100.0
386616	GOLD 2	094E035	2019/MAY/17	OMINECA	100.0
404834	PN 3	094E036	2021/JAN/31	OMINECA	400.0
405040	PN2	094E036	2021/JAN/31	OMINECA	375.0
405041	PN 9	094E035	2021/JAN/31	OMINECA	300.0
405042	PN 10	094E035	2021/JAN/31	OMINECA	300.0
405043	PN 11	094E035	2021/JAN/31	OMINECA	500.0
405073	PN7	094E036	2021/JAN/31	OMINECA	400.0
405074	PN8	094E026	2021/JAN/31	OMINECA	400.0
414305	GOLD 3	094E035	2019/SEP/09	OMINECA	25.0
414306	GOLD 4	094E035	2019/SEP/09	OMINECA	25.0
414307	GOLD 5	094E035	2019/SEP/09	OMINECA	25.0
414308	GOLD 6	094E035	2019/SEP/09	OMINECA	25.0
510672		094E	2018/AUG/04	OMINECA	523.7
515070		094E	2019/SEP/06	OMINECA	281.3
515084		094E	2018/AUG/06	OMINECA	349.7
516769		094E	2018/JUL/01	OMINECA	366.5
516773		094E	2018/AUG/07	OMINECA	1482.7
516783		094E	2018/AUG/30	OMINECA	1644.2
516792		094E	2018/AUG/17	OMINECA	87.5
516810		094E	2018/AUG/10	OMINECA	1502.0

620000 m

625000 m

630000 m

6365000 m

6360000 m

6355000 m

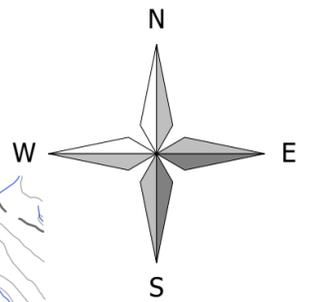
6350000 m

6365000 m

6360000 m

6355000 m

6350000 m



Map Datum (Zone 9)  
North American 1983 (Canada)

0 Scale: 1:50000 2500 m

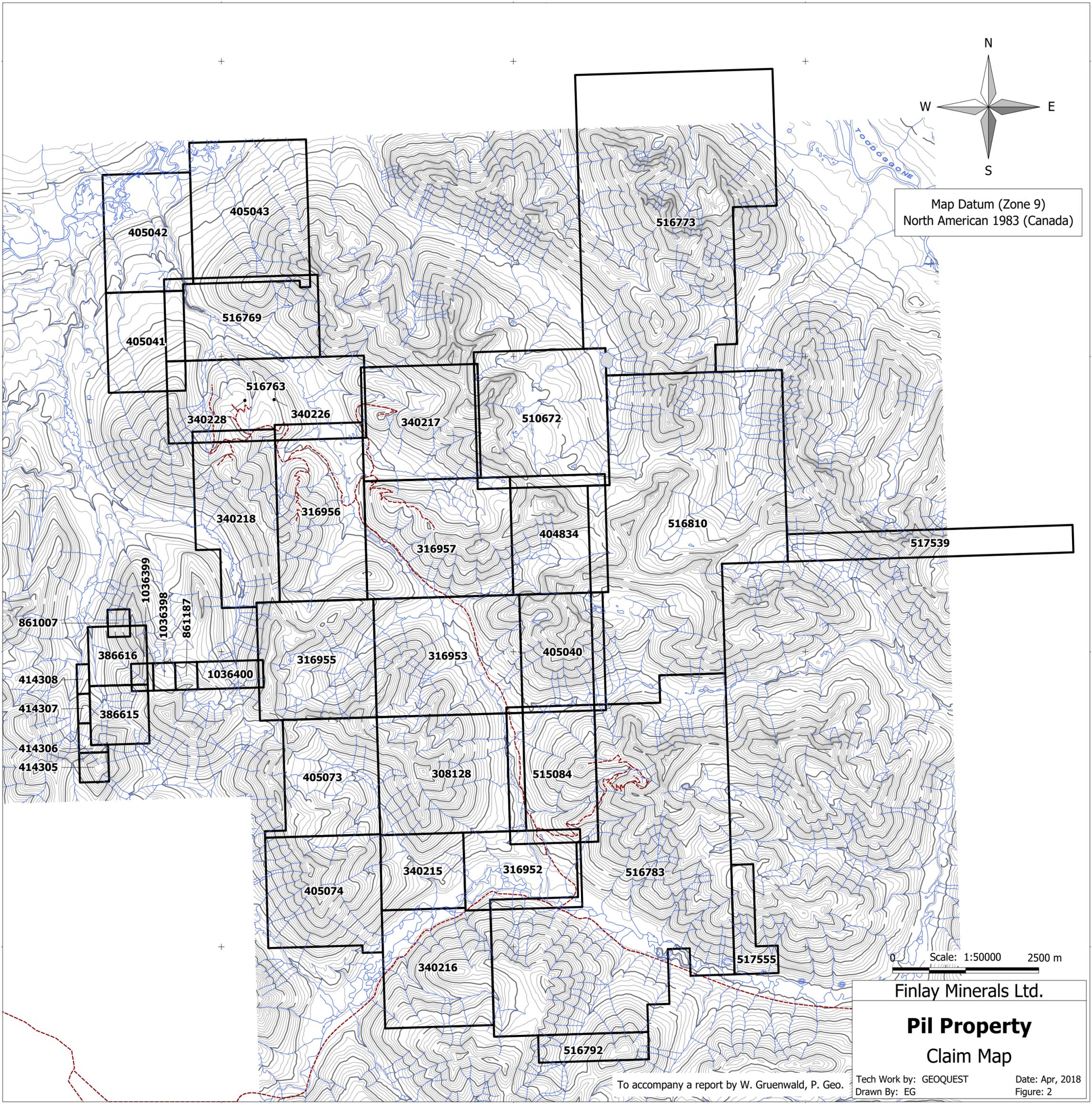
Finlay Minerals Ltd.

**Pil Property**  
**Claim Map**

Tech Work by: GEOQUEST  
Drawn By: EG

Date: Apr, 2018  
Figure: 2

To accompany a report by W. Gruenwald, P. Geo.



Tenure Number	Claim Name	Map Number	Good to Date	Mining Division	Area (ha)
517539	PN12	094E	2021/JAN/31	OMINECA	227.1
517555	PN13	094E	2021/JAN/31	OMINECA	87.5
861007	G2P-NORTH	094E	2018/SEP/26	OMINECA	17.5
861187	G2P-WEST	094E	2018/SEP/27	OMINECA	17.5
1036398	G2P WEST 2	094E	2018/SEP/28	OMINECA	17.5
1036399	G2P WEST 3	094E	2018/SEP/29	OMINECA	17.5
1036400	G2P EAST	094E	2018/SEP/30	OMINECA	52.4
<b>Total Area (Hectares):</b>					<b>13824.5</b>

### 3.0 HISTORY

#### 3.1 Regional Exploration History

Some of the earliest work dates to at least the early 1900s during the search for gold. This was prompted by the placer gold strikes in the Germansen, Manson Creek and McConnell Creek areas. Intensive exploration in the region commenced in the late 1960s, by Cominco and Kennco Exploration (Western) on numerous large gossanous zones within the camp representing both epithermal and porphyry copper-gold type targets. The Pil property is situated within a region of prospects and mines known as the Toodoggone mining camp. Exploration activity peaked through the late 1970s and the 1980s and witnessed the construction of the Baker and Cheni gold-silver mines. Little exploration took place during the 1990s except at several of the mines and advanced prospects.

Porphyry copper-gold deposits in the Toodoggone camp include AuRico Metal's Kemess Mine (Kemess South deposit), Kemess Underground (former Kemess North), and Stealth Mineral's Pine deposit. Since 2013 AuRico has conducted intensive drilling on the Kemess East alkalic porphyry copper-gold deposit. Exploration results have outlined a deep, higher-grade Cu-Au deposit. In 2016 and 2017 AuRico Metals Inc. focused exclusively on step out and in-fill drilling at Kemess East.

On January 13, 2017 AuRico announced an updated National Instrument (NI) 43-101 compliant resource estimate for the Kemess East deposit. The overall Kemess East deposit is estimated to contain Indicated Resources of 113.1 million tonnes grading 0.38% Cu and 0.46 g/t Au and Inferred Resources of 63.8 million tonnes grading 0.34% Cu and 0.31 g/t Au. The updated resource includes a high-grade core estimated to contain Indicated Resources of 67.2 million tonnes grading 0.43% Cu and 0.60 g/t Au as well as Inferred Resources of 15.2 million tonnes grading 0.41% Cu and 0.51 g/t Au

On January 8, 2018 Centerra Gold Inc. and AuRico Metals Inc. announced that they completed a previously announced plan of arrangement pursuant to which a direct wholly-owned subsidiary of Centerra acquired all of the issued and outstanding common shares of AuRico Metals.

Other porphyry exploration prospects include Finlay Mineral's 100% owned Atty property contiguous and directly to the north of Centerra Gold's Kemess Property. On March 5, 2018 Finlay announced the option of the Atty property to Serengeti Resources Inc.

Situated just southeast of the Pil property is the Brenda property owned by Canasil Resources Inc. Northgate (predecessor to AuRico) optioned the Brenda property and carried out exploration drilling until 2004. Canasil continued to explore the Brenda property in 2006 and 2007. The property has lain idle since 2007.

Epithermal precious metal deposits in the Toodoggone camp include the formerly producing Baker Mine owned by Sable Resources and former mines at the Lawyers and Cliff Creek properties, along with numerous small prospects.

### **3.2 Pil Property Exploration History**

Exploration in the Pil property area dates to the 1960s.

displays the exploration areas referenced below.

**1967:** Cordilleran Engineering drilled two holes on the Pil 12 claim just east of the Pil South Cu-Au target.

**1969:** Cominco focused on a copper porphyry target (*Theban*) on the south part of the Pil property (Cooke, 1969).

**1980-81:** Serem Ltd. conducted detailed stream sediment and contour soil sampling in the present day Pil property area. Exploration culminated in hand trenching of a gold-silver prospect known as *Atlas*.

**1992-98:** Electrum Resources Corp. acquired the Pil claims and began a long methodical period of stream sediment, soil sampling, prospecting, rock sampling, Landsat imaging, and limited geophysical (VLF and Magnetic) work (Staargaard, 1992 & 1994; Zastavnikovich, 1996 & 1997; Sterenberg, 1997; and Ronning, 1998).

**1999:** Finlay Minerals purchased the property and conducted a major exploration effort including IP and magnetic surveys, soil/rock sampling and detailed geological mapping (Ronning, 1999) over the Pil South target.

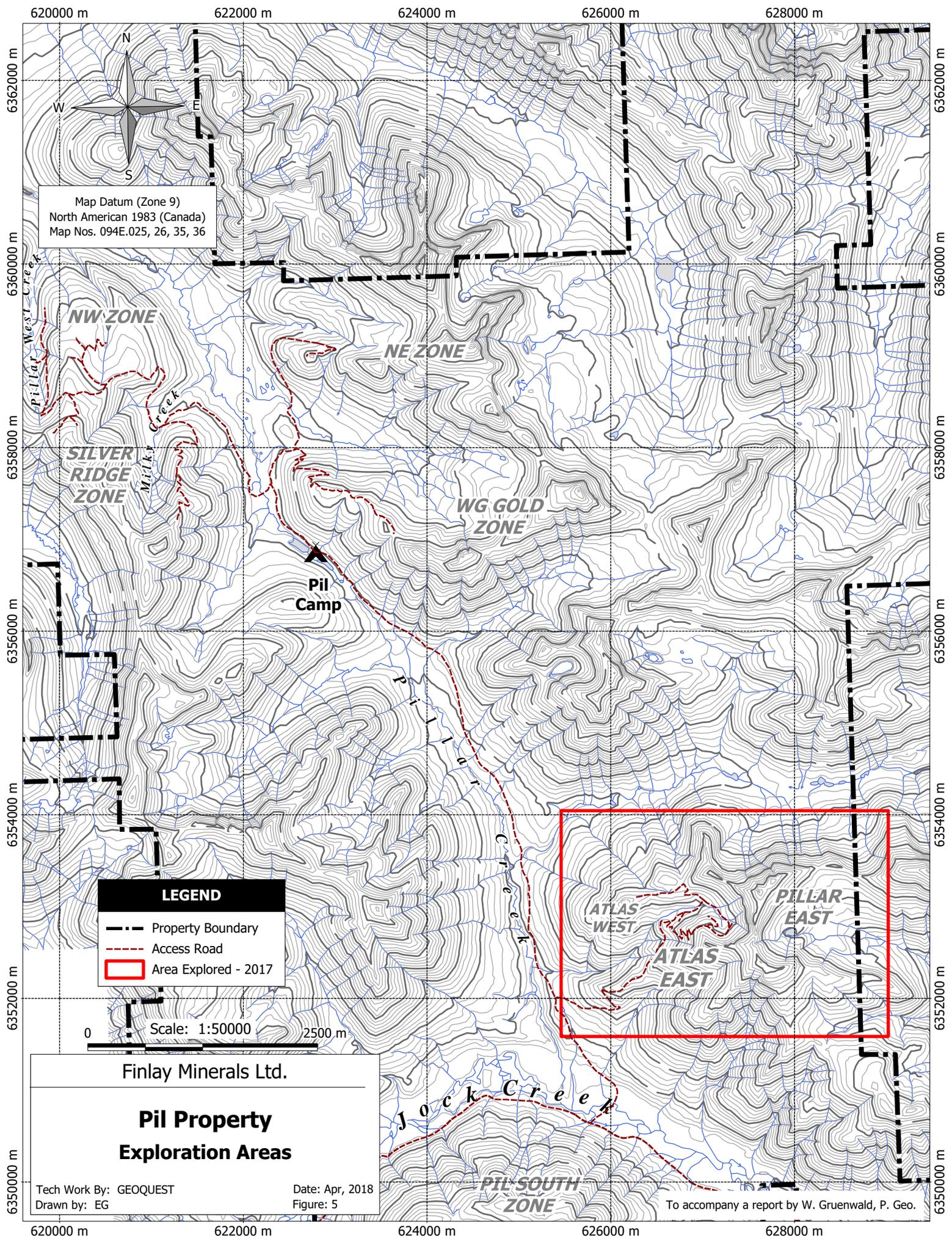
**2000:** Finlay Minerals work included rock sampling and hand trenching on the Pil South area and a geological and rock sampling traverse south of the Pil North target (Brown, 2000).

**2001:** Finlay Minerals focused exploration on the Pil North area (Brown, 2001), with the completion of 8.3 kilometres of induced polarization and magnetic surveys, soil and rock sampling, and geological mapping.

**2002:** Finlay Minerals continued exploration efforts on Pil North (Brown, 2002) with the completion of 13.1 kilometres of induced polarization and magnetic geophysical surveys (Lloyd, 2002), soil and rock sampling, trenching and geological mapping. Late in 2002, a lead-zinc silica-barite occurrence (WG Zone) was explored by hand and blast trenching. Prospecting in the area led to the discovery of quartz float containing 4.93 g/t gold.

**2003:** Finlay Minerals completed a helicopter supported drill program consisting of four NQ holes totalling 707 metres on the Pil South property. Drilling targets were geophysical and geochemical anomalies. Results were inconclusive and did not fully explain the geochemical and geophysical anomalous zones. A total of 16.6 km of IP and soil sampling were completed along eight newly cut lines on the Pil North property. Prospecting, mapping and hand trenching were completed on the Pil North property. Gold bearing float containing visible gold and grading up to 16.8 g/t was discovered at the WG Zone in late 2002.

**2004:** Finlay Minerals constructed a 7.5-kilometre access road, a fully serviced camp and 13.9 kilometres of drill access (exploration) trails. A reconnaissance diamond drilling program of 26 holes totalling 6,168 metres focused on five zones referred to as the Northeast, WG Zones, Northwest (NW), Milky Creek and Central Zones. Mr. Gerry Ray, P. Geo. conducted geological mapping and sampling over much of the property. Prospecting late in the season resulted in the discovery of boulders grading up to 3.22 g/t gold and 80.6 g/t silver near a large gossanous zone 800 metres east of the Serem trenches. This new area became known as the Atlas East Zone.



Map Datum (Zone 9)  
 North American 1983 (Canada)  
 Map Nos. 094E.025, 26, 35, 36

**LEGEND**

- Property Boundary
- Access Road
- Area Explored - 2017

0      Scale: 1:50000      2500 m

**Finlay Minerals Ltd.**

**Pil Property  
 Exploration Areas**

Tech Work By: GEOQUEST      Date: Apr, 2018  
 Drawn by: EG      Figure: 5

To accompany a report by W. Gruenwald, P. Geo.

**2005:** Finlay Minerals constructed 5 km of drill access roads on the NW Zone and established 10 km of grid along which prospecting, soil and rock sampling were completed. Geophysical surveys (Magnetometer, VLF-EM) were completed along new and historic grid lines from the Silver Ridge Zone to the NW Zone. Gerry Ray, P. Geo, completed geological mapping of the NW, Silver Ridge, NE, WG Upper and Atlas East Zones. Diamond drilling consisted of 12 holes totaling 3,090 metres. Ten drill sites and 3.3 km of roads from 2004 were reclaimed.

**2006:** Finlay Minerals constructed 5.2 km of drill access roads to the Atlas East Zone and 200 metres in the Northwest Zone. Minor trenching was conducted in the Atlas West (Serem) Zone. Detailed soil sampling, prospecting, rock sampling along with magnetometer and VLF-EM surveys were conducted on a 6.9 km grid over the Atlas East and West Zones. Prospecting, geological mapping and rock sampling were completed along the new roads. ***High-grade epithermal mineralization was discovered at Atlas East grading 489 g/t Au and 6,500 g/t Ag.*** Prospecting, mapping and sampling were completed over the SW Gossan and Pil South Zones. Fourteen drill holes totaling 1,945 metres were completed, ten at the Atlas East, two at Atlas West and two at the Northwest Zone.

**2007:** Exploration consisted of soil, stream and rock sampling, road construction, prospecting and mapping followed by 2,408 m of diamond drilling in seven holes. Most geochemical work was conducted over the Atlas East and the Pillar East Zones. Road building, soil and rock sampling were also conducted at the NW Zone while brief geochemical reconnaissance programs were completed on the South and Spruce Zones.

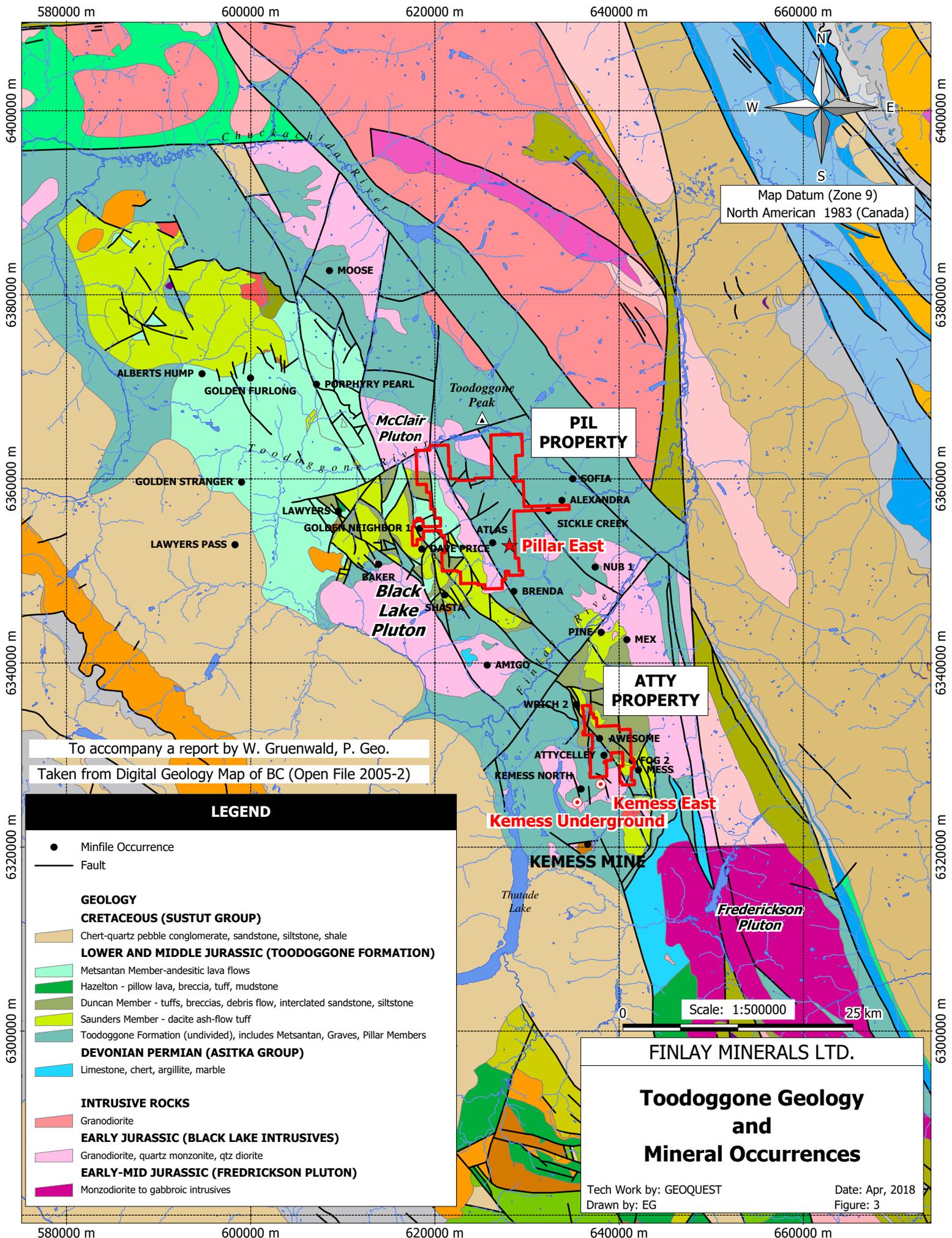
**2015:** A small program of prospecting, soil, stream and rock sampling was completed. A man-portable drill was used to complete a three-metre hole near the south end of the epithermal Au-Ag Zone. While evaluating gold-in-soil anomalies from 2007 tuffaceous volcanic talus with malachite and finely disseminated chalcopyrite were discovered near the south end of the epithermal zone. Prospecting and soil sampling traced mineralized talus over several hundred metres.

**2016:** Exploration consisted of prospecting along with soil, stream and rock sampling. Continued follow-up soil and rock sampling along the epithermal Au-Ag zone. A significant development of the 2016 program was the discovery of chalcopyrite mineralized bedrock uphill of the 2015 discovery of copper bearing talus. Referred to as “Copper Cliff” mineralization extends at least 40 meters east-west by 30 meters north-south. All rock samples collected contain disseminated chalcopyrite mineralization and very low pyrite. Copper and silver range from 0.05% to 1.04% Cu and 2.8 to 23.9 g/t Ag respectively. Petrographic analysis describes the bedrock as a hypabyssal (shallow depth) feldspar ± biotite porphyry monzonite.

## **4.0 REGIONAL GEOLOGY AND MINERALIZATION**

### **4.1 Geology**

The Toodoggone region is defined as a 90 km long by 15 km wide northwest trending belt of early Jurassic diorite, granodiorite or monzonite phases of the Black Lake Intrusive Suite together with coeval Toodoggone Formation calc-alkaline volcanics (Figure 3). These rocks extend northerly from Attycelley Creek near the Kemess mine to Chukachida River north of the Pil property. Toodoggone rocks unconformably overlie sedimentary and igneous arc rocks of the Permian Asitka and Upper Triassic Takla groups, which are in turn unconformably capped by Cretaceous continental Sustut Group sediments. Toodoggone rocks have not been folded, but with extension, rifting and tilting they now dip gently to moderately westward. Structurally the district is dominated by block faulting and half-graben tectonics which was an important controlling feature on the emplacement of the plutons,



the eruption of the Toodoggone volcanics and the various styles of Cu-Au or Au-Ag mineralization. Geology and mineralization at regional and property scale are fully described in assessment reports by the writer and Gerry Ray, P. Geo. Reports #28083 and 28984 covering exploration programs for 2005 and 2006 respectively are available online at: <https://www.finlayminerals.com/>. Figure 3 is compiled from the Digital Geology map of BC while Figure 4 displays the geology taken from Open File 2006-4 (L. Diakow). Lithologic assemblages are summarized as follows:

#### **Asitka Group (Carboniferous to Early Permian)**

- Oldest rocks in the region, form small erosional inliers or fault-bounded wedges of thrust-deformed sequences of predominantly limestone, siltstone and chert.
- Conformably overlain or in thrust contact with the Takla Group.
- Asitka rocks are not mapped on the Pil property.

#### **Takla Group (Upper Triassic)**

- Widespread north of the Toodoggone River and in the Finlay River area.
- Augite and plagioclase porphyritic basalts, andesites, tuffs, clastic volcanic sediments, minor limestones.
- Angular unconformity separates overlying Sustut Group and is often in fault contact with Toodoggone rocks.
- Takla rocks are economically important as they host part of the Kemess North and East Cu-Au porphyry deposits.
- These rocks occur in the Pil South Zone of the Pil property.

#### **Toodoggone Formation (Early Jurassic)**

- Largely calc-alkaline, non-marine volcanics formed in a sub-aerial continental-margin arc setting.
- Total thickness of 2200 metres consisting of red, maroon, and grey flows, tuffs with lesser sediments.
- ***Two distinct volcanic cycles are identified that are sub-divided into seven stratigraphic members.***
- Toodoggone rocks underlie ~70% of the Pil property.
- Mapped in most of the eastern part and in southwestern and western portions of the property.
- Diakow redefined some members of the Toodoggone Formation that are described below:

#### **Lower Volcanic Cycle**

##### **Duncan Member**

- Basal conglomerate overlain by lapilli tuffs unconformably overlies Takla Group rocks.
- Occur mainly north of the Toodoggone River but also in the southern part of the Pil property.

##### **Metsantan Member**

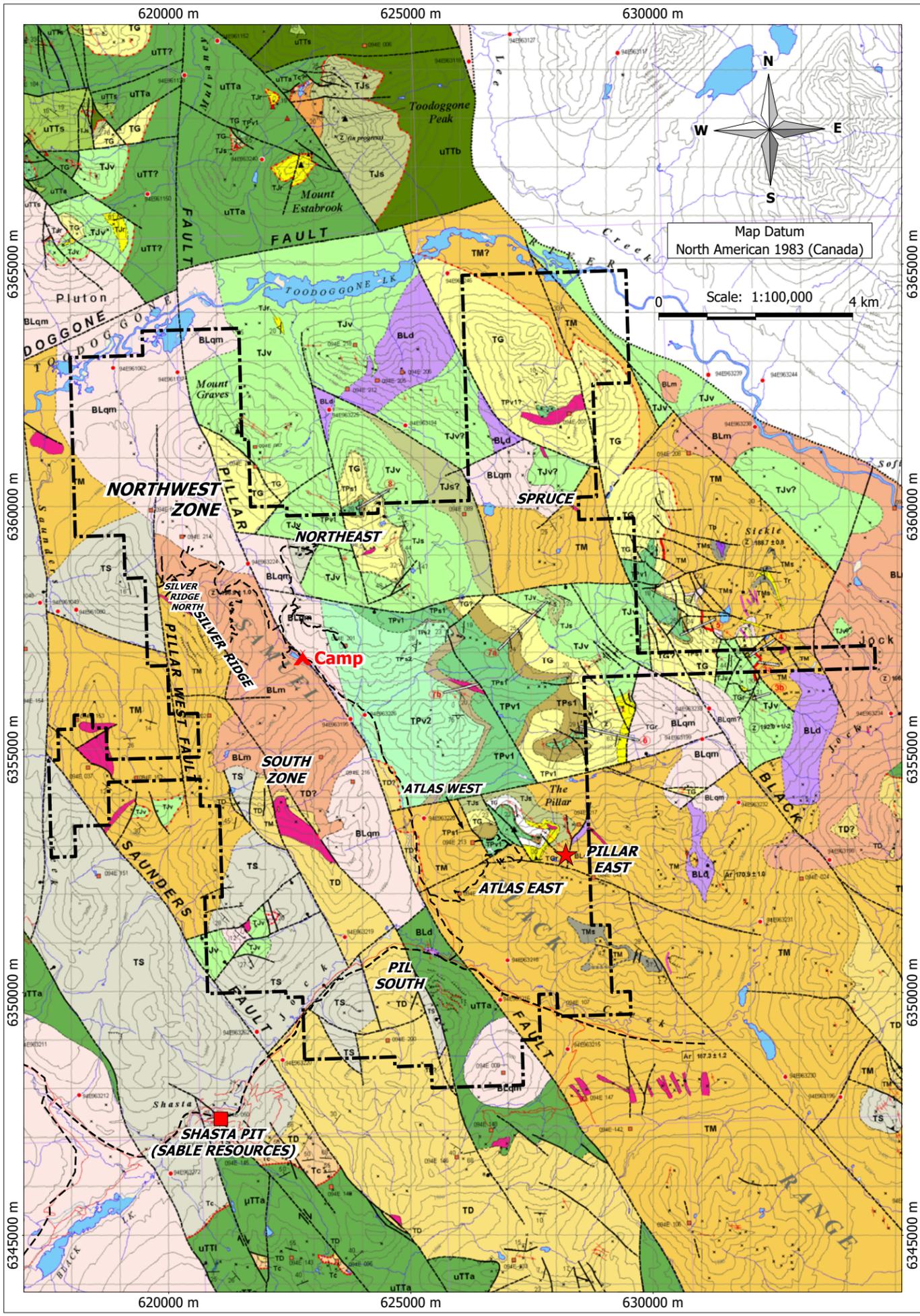
- Comprises hundreds of metres of massive andesite porphyry flows.
- Commonly found on the Pil property.
- Hosts the ***Atlas and Pillar gold-silver mineralization*** that are the focus of recent exploration.

##### **Saunders Member**

- Dacitic tuff and plagioclase-porphyritic lavas occur in NW and SW parts of the property.

##### **Junkers Member (formerly Quartz Lake)**

- Occurs south of the Toodoggone River.
- Basal unit comprises polymictic lapilli tuff, debris flows, volcanic conglomerate, sandstone-siltstone (TJs).
- Followed by pyroxene porphyritic basaltic andesite lava flows (TJv) and minor rhyodacitic flows (TJr).
- Upper sub-unit consists of debris flow or volcanic conglomerate comprising sub angular boulders of monolithic andesite porphyry with a reddish oxidized muddy matrix.
- Present in the Atlas area, the southwest, and more often N and NE parts of the Pil property.



EARLY JURASSIC HAZELTON GROUP	
<b>UPPER TOODOGGONE FORMATION</b>	
<b>Belle member</b>	
<b>TB</b>	Rhyolite ignimbrite; locally very thick (150m minimum); welded columnar jointed exposures.
<b>Pillar member</b>	
<b>TPv2</b>	Andesite porphyry lava flows containing minor chlorite-altered pyroxene, scarce laminated dacitic flows.
<b>TPs2</b>	Lapilli tuff, lithic crystal tuff and minor accretionary lapilli tuff, minor tuffaceous sandstone and conglomerate; well bedded.
<b>TPv1</b>	Basaltic andesite and andesite porphyry lava flows containing up to 3% subvitreous clinopyroxene phenocrysts, rare limestone lenses near the base.
<b>TPs1</b>	Tuffaceous sandstone, siltstone and conglomerate; interlayered fine tuffs, lapilli tuffs and lesser tuff breccia, minor accretionary lapilli tuff, well bedded.
<b>Graves member</b>	
<b>TG</b>	Dacite ash-flow tuff, light green to maroon, texturally variable including nonwelded, locally lithic rich, and thick (100-150m) welded columnar jointed zones; diagnostic accidental pyroclasts include pink quartz-biotite dacite porphyry and biotite-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base.
<b>TGr</b>	Rhyolitic flows and related monolithic flow breccias; maroon to reddish-brown; flow laminated, spherulitic crystallization widespread; thin fallout ash tuff locally at the base yields a U-Pb date of 192.0±1.2 Ma.
<b>Junkers member (renamed after Quartz Lake member)</b>	
<b>TJv</b>	Basalt and andesite lava flows characterized by crowded plagioclase 1mm long or less and relatively fresh pyroxene.
<b>TJr</b>	Dacite to rhyolite lava flows; lenticular; commonly flow-laminated deposits.
<b>TJs</b>	Conglomerate and sandstone dominated by fine grained basaltic detritus that is presumably derived in part from units TJv or uTTa; reworked polymict lapilli tuffs and volcanic breccias; heterolithic unit comprising diffusely layered very thick beds.
<b>LOWER TOODOGGONE FORMATION</b>	
<b>TS</b>	Unassigned; lapilli tuff, tuff breccia and lesser dacitic lava flows containing trace amounts of quartz and titanite.
<b>Saunders member</b>	
<b>TM</b>	Andesite lava flows; grey-green to light purple, 15-25% plagioclase 2-5mm long; sparse chlorite-altered hornblende and pyroxene, trace amounts of biotite and rare quartz phenocrysts.
<b>TMs</b>	Feldspathic sandstone, minor mudstone.
<b>Duncan member</b>	
<b>TD</b>	Lapilli tuffs with volcanoclastic-epiclastic interbeds; greenish with oxidized reddish sections, pyroclasts commonly consist of reddish brown andesite porphyries mixed with plagioclase and up to 2% oxidized copper coloured biotite and quartz crystal fragments, interbeds of sandstone, siltstone and maroon mudstone, rare boulder conglomerate near the base.
<b>Tc</b>	Conglomerate locally at the base of the Toodoggone Formation; poorly sorted rounded clasts to boulder size dominated by crowded fine-grained hornblende andesite porphyry, locally contains distinctive megacrystic basalt porphyry (unit uTTb), limestone (unit PAI) and granitoid clasts; crudely layered thick beds interlayered with subordinate sandstone and siltstone.
<b>LATE TRIASSIC TAKLA GROUP</b>	
<b>uTTa</b>	Basalt and andesite lava flows; typically fine to medium grained clinopyroxene-plagioclase porphyries and aphanitic lavas; typically massive and inherently difficult to subdivide.
<b>uTTb</b>	Megacrystic basalt porphyry lava flows characterized by bladed plagioclase laths between 1 and 3 cm long.
<b>uTTs</b>	Sandstone and siltstone; drab olive green, dominated by plagioclase and lesser pyroxene grains; bedded section between lava flows of unit uTTa; rare discontinuous grey-black laminated limestone up to 1.5 metres thick (unit uTTi).
<b>LATE CARBONIFEROUS TO EARLY PERMIAN ASITKA GROUP</b>	
<b>PAs</b>	Grey chert interbedded with black siltstone and mudstone; gradationally overlies limestone at the top of the Asitka Group.
<b>PAI</b>	Limestone; off white, light grey weathering; recrystallized; contains poorly preserved rugose corals.
<b>PAv</b>	Dacitic lapilli tuff with aphanitic greyish-white felsic fragments, grey-green to dark purple, rare accretionary lapilli tuff, porphyritic sparse quartz-phyric andesite and dacite-rhyolite lava flows.
<b>EARLY JURASSIC BLACK LAKE INTRUSIVE SUITE STOCKS</b>	
<b>BLqm</b>	Quartz monzonite; pink, medium to coarse inequigranular subhedral plagioclase, potassium feldspar and 10-20% anhedral quartz, and variably chlorite-altered hornblende (10-15%) and biotite (3-5%).
<b>BLm</b>	Monzonite; orange to pink, coarse inequigranular to porphyritic texture, subhedral plagioclase enclosed by fine grained interstitial potassium feldspar and typically less than 5% quartz, anhedral chloritized hornblende and biotite.
<b>BLmd</b>	Hornblende monzodiorite; medium to coarse inequigranular texture; widespread epidote-chlorite-thematite alteration; minor malachite within fractures.
<b>BLg</b>	Granite; pink, medium-grained equigranular texture.
<b>BLd</b>	Undifferentiated diorite, quartz diorite, monzodiorite and quartz monzodiorite; clinopyroxene bearing with subordinate hornblende and trace biotite; biotite-rich variants occur locally. Possibly co-magmatic with clinopyroxene-bearing volcanic rocks from units TJv and TPv.
<b>DIKES AND SILLS</b>	
<b>Tb</b>	Undifferentiated monzonite to quartz monzonite porphyry, quartz-feldspar porphyry dikes; typical orange-pink oxidized plagioclase and groundmass; medium to coarse plagioclase and chlorite altered hornblende and biotite. (Note: Other dike varieties that are locally numerous but too narrow to portray on this map include dark green, aphanitic to amygdaloidal basalt, and flow-laminated rhyolite.)
<b>Tr</b>	Dacite to rhyolite sills, locally flow laminated.

SYMBOLS	
Limit of mapping	.....
Geological contact (defined, approximate, inferred, inferred from aeromag)	.....
Unconformity (defined, inferred)	.....
Normal Fault (ball on down-dropped side; defined, approximate, inferred)	.....
Reverse Fault (defined, approximate, inferred)	.....
Wrench Fault (defined, approximate, inferred)	.....
Bedding	.....
Welded fabric	.....
Flow lamination	.....
Field station	x
Isotopic Age determination (in millions of years, Ma)	.....
U/Pb (crystallization date)	.....
Ar/Ar (cooling date)	.....
Unreliable date or date not obtainable	.....
Regional Geochemistry Survey site (RGS)	.....
MINFILE occurrence and reference number	.....
Quartz veining (pyrite ± chalcopyrite, galena, pyrrhotite)	.....
Malachite with or without chalcopyrite	.....
Skarn (diopside-garnet-magnetite ± chalcopyrite ± pyrrhotite)	.....
Gossan	.....
Flooded land	.....
Ice	.....
Landslide scarp	.....
Road (all weather, seasonal)	.....
Stratigraphic section location (Keyed to inset diagram)	.....

After L. Diakow (OF 2006-4)

★ Target Explored in 2017

To accompany a report by W. Gruenwald, P. Geo.

**Finlay Minerals Ltd.**  
**Pil Property**  
**Property Geology**

Tech work by: GEOQUEST  
 Drawn By: EG

Date: April, 2018  
 Figure: 4

### Graves Member

- Lithic-rich ash flow tuffs within half-graben fault blocks southeast of Mt Graves on the property.
- Ash flow tuffs typically unstratified and display variations in their pyroclast content, welding and thickness.
- Lower unit (TGr) consists of maroon to reddish-brown, flow laminated rhyolitic flows and related breccias.
- Upper unit (TG) green to maroon, local dacite ash tuff and 100-150m thick welded, columnar jointed zones.
- Diagnostic pyroclasts include quartz-biotite dacite porphyry and biotite hornblende quartz monzonite.
- Occur east of the Pillar Fault in the northern and east-central parts of the property as well as the Atlas area.

### Pillar Member

- Consists of two cycles of lavas, epiclastic and volcanoclastic rocks.
- Lowermost (TPs1) comprise bedded tuffaceous siltstone to conglomerate, lapilli tuffs and lesser tuff breccia.
- Overlain by basalt-andesite flows with rare basal limestone (TPv1).
- Upper sediments (TPs2) are bedded lapilli-lithic crystal tuffs and minor tuffaceous sandstone, conglomerate.
- Upper volcanic interval (TPv2) represented by andesite porphyry lavas.

### Belle Member

- A newly proposed unit comprises locally thick (150m) rhyolite ignimbrite (TB).

### Sustut Group (Lower and Upper Cretaceous)

This group of rocks is a well bedded, near horizontal, succession of continental conglomerates, mudstones and some chert pebble sandstones in the western part of the Toodoggone River area. On the Pil property, Sustut Group rocks are found as scattered, often well rounded, glacially transported cobbles and boulders of conglomerate.

## 4.2 Intrusive Geology

Based on age dating and composition, the main intrusive rocks in the district can be separated into four categories. The oldest are small bodies of late Triassic diorite, gabbro, and hornblende related to the Takla Group volcanism. The next oldest suite is small granodioritic sub-volcanic porphyritic domes related to the Toodoggone Formation. The **Black Lake Intrusive Suite** comprises larger plutons and stocks as well as dikes and sills described below. *This widespread and economically important suite of early Jurassic (196.6 Ma) plutonic monzonites and granodiorites (Figures 3, 4) are genetically and temporally related to the Toodoggone Formation volcanics and host significant portions of the Kemess Cu-Au deposits.*

### Older Monzonites (BLm)

- Range from 198 to 202 Ma and comprise propylitically altered monzonites and quartz monzonites.
- Quartz is generally <2 %, hornblende and biotite are chloritized and comprise 4% to 10%. Retrograde and/or hydrothermal alteration manifested by epidote, chlorite, sericite, pyrite, and K-spar.
- Related to Cu-Au porphyry and Au-Ag epithermal deposits as seen at the Kemess and Baker mines.
- Occur on Pil property at Northwest Zone as grey “diorites” that may represent hydrothermally bleached and propylitically-altered facies of the monzonite suite.

### Younger Granodiorites (BLqm)

- Dated at 197 Ma this suite is typified by the 115 km<sup>2</sup> Black Lake Stock (Figure 3).
- Pink and white, coarse-grained massive rocks with up to 20% quartz and 15% mafic minerals.
- Less altered than the monzonites and is not considered economically important.
- Occur on the property with largest immediately north and northeast of the mineralized NW Zone.

## 5.0 PIL PROPERTY GEOLOGY AND MINERALIZATION

The property geology and mineralization has been described in the author's previous assessment reports and is kept here for context. The results of recent mapping work have been appended to update the geological picture.

Approximately 70% of the Pil property is underlain by early Jurassic Toodoggone Formation volcanics, while the remainder comprises Black Lake Intrusive rocks (units BLm, BLqm and BLd). Nearly all members of the Toodoggone Formation occur on the Pil property. Volcanics at lower elevations are generally floored by intrusive rocks particularly where exposed in and adjacent to Pillar Creek. One major problem to understanding the geology and structure on the property is the rarity of layering or bedding in the Toodoggone (especially Metsantan) volcanics and volcanoclastics. This presents challenges for drilling on volcanic-hosted targets such as the Atlas Zone.

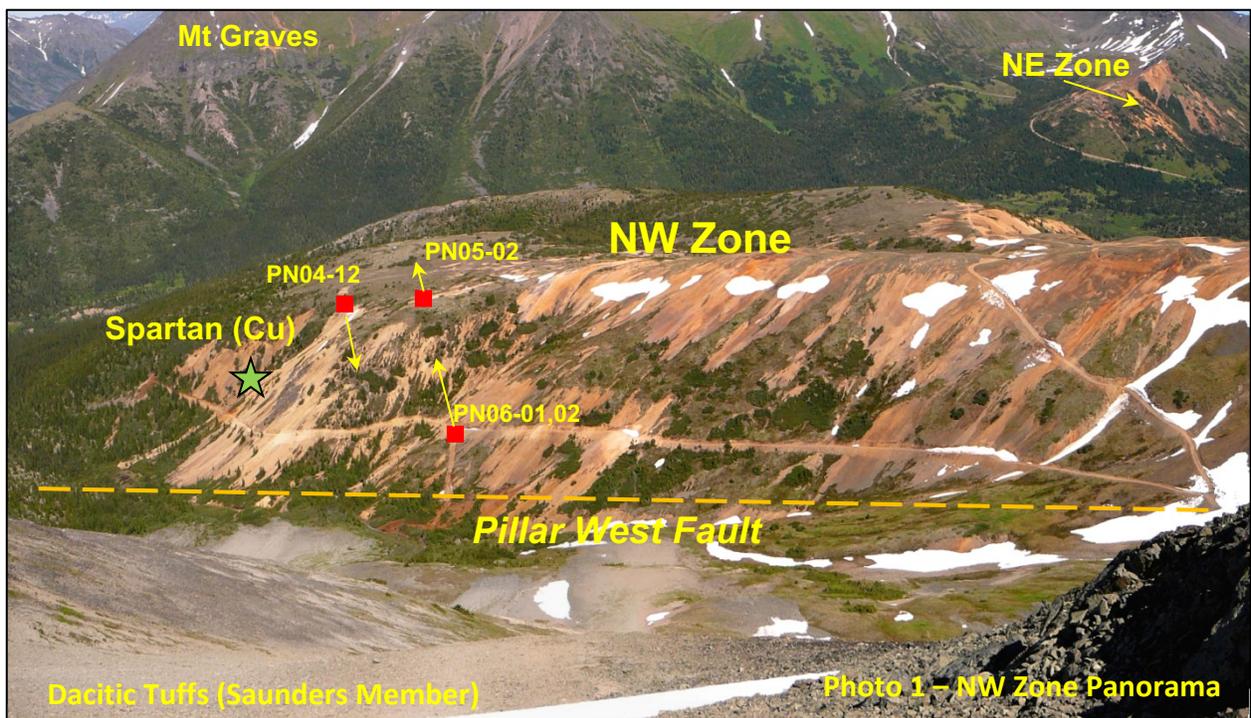
The Pil property hosts several areas of exploration potential and mineralization. These are displayed on Figure 5. Although not the subject of this report one of these is briefly described below due to its importance in the property's geological setting.

### 5.1 Northwest (NW) Zone

The NW Zone is as its name suggests situated in the northwest part of the property approximately six kilometres south of the Toodoggone River. This area was mapped by Gerry Ray and the following condensed outline is taken from a 2005 assessment report (Gruenwald and Ray).

#### 5.1.1 Geology

The area is mainly underlain by a variety of Early Jurassic plutonic rocks (BLm) that include large areas of gossanous, silicified and pyritic quartz diorite-quartz monzonite. The "Pillar West Fault" inferred along a north trending linear valley juxtaposes plutonic and Metsantan volcanic rocks in the east against Saunders Member volcanics (TS) to the west (Photo 1).



**Highly altered diorite-quartz diorite and monzonite-quartz monzonitic rocks** (BLm) are poorly exposed due to weathering caused by hydrothermal alteration and weathering but form part of a large body that underlies the NW Zone and are also seen in the adjacent Silver Ridge Zone. They are thought to be the oldest plutonic rocks in the area and are economically important as they host Cu-Mo ± Au porphyry style mineralization. The intrusive rocks are generally leucocratic, coarse-grained, equigranular and locally feldspar porphyritic. Biotite and hornblende are often chloritized. Diorites and quartz diorites are pale to dark grey coloured and are more altered than the monzonites. The most common alteration is pervasive, massive grey silicification together clay and up to 10% fine-grained disseminated pyrite. Monzonitic rocks tend to be pale pink coloured and moderately to strongly phyllic or epidote-altered. Other retrograde and/or hydrothermal alteration types include overprinting by epidote, chlorite, sericite, and lesser K-spar.

**Granodiorite** (BLqm) forms a large body immediately northeast of the NW Zone. Rocks are pink to pale grey, coarse-grained, massive, equigranular to weakly feldspar porphyritic and much less altered. They contain up to 20% quartz and 15% mafics (biotite > hornblende). These are among the youngest in the Black Lake suite and not related to any significant mineralization.

**Volcanic rocks** are not evident in the NW Zone, but Metsantan Member volcanics outcrop nearby in the Silver Ridge North area. Unlike the underlying plutonic rocks, no extensive silicification is noted. Saunders Member volcanic rocks are mapped west of the NW Zone and Pillar West Fault as a triangular area around a prominent 400 metre peak. Apart from fracture-controlled pink zeolites these rocks are unaltered.

### 5.1.2 Alteration

The Pil property is noted for its numerous large and visually spectacular yellow-brown coloured alteration zones (gossans) marked by intense jarosite-goethite-hematite staining. Prominent gossans in the region often parallel the north-northwest trending Pillar Fault. Many gossans are vegetation kill-zones that have very little rock outcrop. They locally contain jarosite-stained soil or float with silica-sericite ± pyrite ± K spar ± vein barite alteration assemblages. Gossanous zones are often spatially associated with various Cu, Mo, Pb, Zn, Au-Ag soil anomalies related to many of the property's mineralized areas such as the NW, Silver Ridge, Northeast and Atlas Zones. Alteration types specifically observed on the NW Zone include:

#### **Massive to weakly vuggy grey-green and pale to dark grey silica**

- Most widespread alteration often seen as float or sub crop accompanied by fine-grained clay-sericite ± feldspar and up to 10% fine-grained disseminated pyrite.
- Locally resembles the phyllic alteration present in some porphyry copper systems.

#### **Propylitic alteration (chlorite- epidote ± pyrite)**

- Pervasive, extensive, and overprints most plutonic stocks and may represent distal style of alteration.

#### **Fault-controlled white to pale grey quartz-silica-pyrite-clay ± rare magnetite**

- Common in the Silver Ridge North Zone as E-W to SE trending, south-dipping faults up to 6 metres wide.
- Often poorly exposed, and generally only seen as jarosite and/or hematite stained soil or silica-clay float.

#### **Quartz-magnetite veining**

- Seen in outcrop on a road cut at UTM 620057E – 6358461N where a SE to ESE trending, steeply south dipping series of magnetite-rich shears is hosted by chlorite-epidote altered monzonite.

### 5.1.3 Mineralization

**Disseminated Cu-Mo ± Au (Pb-Zn) porphyry style mineralization** hosted by plutonic rocks described above has been the main drill target in the NW Zone. Numerous drill holes intersected wide intervals of disseminated pyrite, chalcopyrite and minor molybdenite. Within these zones are intersections of disseminated and vein related galena and sphalerite. An example is hole PN05-03 where a 145 metre interval contains up to 727 ppm lead and 11,700 ppm zinc. The Pillar West Fault may have played a role in both the Pb-Zn and Cu-Mo mineralization. Mineralization consists of disseminated and vein related galena and sphalerite in highly altered monzonitic rocks. Barite is a common gangue mineral in Pb-Zn mineralized veins.

**Fault-controlled quartz-silica-pyrite ± magnetite mineralization** that is sporadically enriched in gold and lesser silver along with anomalous amounts of lead and zinc. This type, which may occur as jarosite and/or hematite stained soil and silica float also occurs further south in the Silver Ridge North Zone.

**Fault-controlled quartz-vein stockworks** with pyrite ± chalcopyrite ± galena ± sphalerite, and sporadic veins of barite and calcite. This is associated with the Pillar West Fault which marks the western boundary of the NW and Silver Ridge North zones and may be related to or a later overprint of the Cu-Mo mineralization.

### 5.1.4 Structure

The **Pillar Fault**, a major NNW trending regional structure, extends from near the Kemess Mine north through the Pil Property to just south of Chukachida Lake. On the Pil property, the Pillar Fault separates west inclined volcanoclastic and epiclastic rocks of the upper Toodoggone Formation in the east from older Toodoggone volcanics in the west. Several parallel and probably related structures occur west and east of the Pillar Fault (i.e. Pillar West Fault- Photo 1). Some of these structures transect the Northeast and Atlas Zones on the Pil property and may thus be of economic significance.

A set of economically important **southeast to east-southeast striking structures** that dip steeply to moderately south to southwest were mapped (Gerry Ray). These structures controlled the emplacement of the multiphase monzonite dyke swarm and may also have controlled the Cu-Mo porphyry mineralization in the NW Zone. The Pillar West Fault typifies north to north-northwest trending brittle structures where vertical movements resulted in west-side down dropping. As previously described this fault may be associated with the Pb-Zn mineralization in holes drilled in the Silver Ridge North Zone and the western portions of the NW Zone.

**East-northeast to northeast trending conjugate structures** are found either side of the Pillar Fault. These often are bounding faults that separate distinct members of Toodoggone rocks.

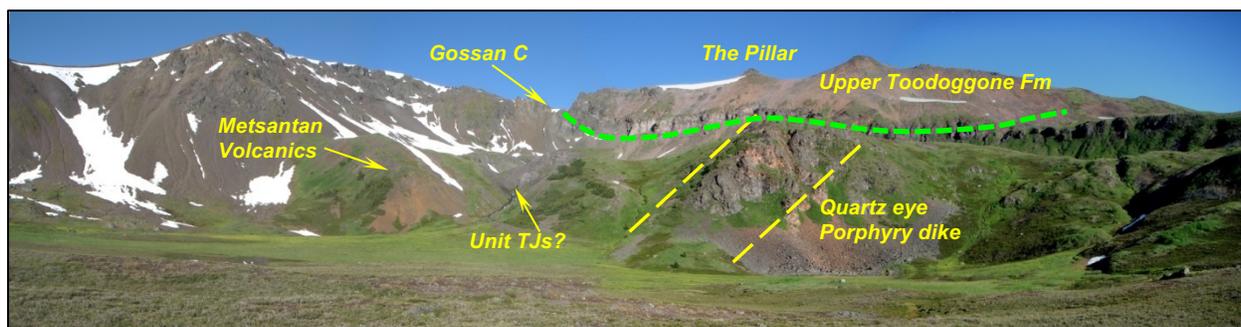
## 5.2 Atlas and Pillar East Zones

The Atlas and Pillar East Zones are situated in the southeast part of the property near a prominent peak named “The Pillar”. Geological mapping indicates the area as almost nearly wholly underlain by volcanics, tuffs and lesser epiclastic rocks of the Toodoggone Formation (Figure 4). This area is economically important as it hosts zones of epithermal gold-silver mineralization and recently discovered monzonite hosted chalcopyrite mineralization.

### 5.2.1 Geology

Toodoggone Formation rocks in this area consist of at least four stratigraphic assemblages, the **Metsantan, Pillar, Graves and Junkers Members**. When evident, volcanic flow layering or epiclastic bedding indicates gentle to moderate (20° to 45°) westerly dips although locally the dips vary from southwest to northwest.

**Metsantan** (TM), the most widespread member, underlies much of the western and southern parts of the Atlas area (Figure 4) and is host to the Atlas East and West and the Pillar East Zones. Andesitic flows, the dominant rock type, are generally massive, feldspar porphyritic and have a fine-grained ground mass. When unaltered, they vary in colour from dark greenish-brown to dark grey, but many weather to a dark purplish hue. These rocks contain up to 2% primary pyrite, which is commonly disseminated, relatively coarse-grained and of no economic significance. The other three members outcrop immediately east of a NNW trending fault that lies approximately 200 metres east of the Atlas West Zone. **Pillar** (TPv1, TPs1) and **Graves Member** (TG, TGr) volcanic flows and tuffaceous rocks underlie “The Pillar”. Well bedded, green to maroon, dacite ash flow tuffs of the Graves TG member are evident as gentle west dipping beds at Atlas East and especially Pillar East (Photo 2). Rhyolitic flows, flow breccias and thin ash tuff (TGr) are mapped along the east and north flank of the Pillar. These rocks are evident on the cliff face in the Pillar East valley (Photo 2). **Junkers Member** (TJs) rocks are visible as thick beds of basal conglomerate and sandstone east of the Pillar where it underlies unit TGr. Bedded, coarse conglomerate comprised of purplish-grey volcanics are observed below the lake at Pillar East. These rocks, believed to be part of the Junkers Member (TJs) are possibly those seen along the creek draining the cirque lake in the Pillar East Zone (Photo 2).



**Photo 2 – Pillar East Zone (Looking West)**

### **Intrusive Rocks**

No large intrusive bodies are mapped however Metsantan volcanics are cut by locally numerous NW to WNW trending (<25 m) dikes that include several generations of magmatism that are divided into three types (G. Ray).

- 1) An older suite that either predates or is coeval with the epithermal silica-pyrite-clay alteration at Atlas East.
- 2) A more abundant and varied suite that post-date the silicification. On Photo 2 a large (50 m±) wide northwest striking, pinkish quartz-feldspar dike is evident.
- 3) In 2016 Recent work by Gayle identified monzonitic intrusives in areas outside of the recently discovered Copper Cliff Zone.
- 4) Highly variable igneous rocks of uncertain status ranging from quartz monzonite to latite to andesite.

Diakow (OF 2006-4) mapped several intrusive bodies in the Pillar East Zone (Figure 4). The largest is a NNE trending 0.5 km long body of “Black Lake” (BLd) undifferentiated diorite, quartz diorite and monzonite. This was observed by the writer as a grey, fine-grained, magnetic rock. Approximately 0.5 km to the west on a ridge top is a 200 metre body mapped as undifferentiated dikes and sills of monzonite to quartz monzonite porphyry mapped within unit TGr. Very prominent in the Pillar East Zone is a 50+ metre wide northwest striking body (dike) of massive, fresh, pinkish “quartz eye” feldspar porphyry (Photo 2).

In 2004, an unusual polymictic breccia dike was found by Larry Diakow on “Serem Ridge” along which a drill access road was later constructed to the Atlas West Zone (Photo 4). The location of this dike is shown on Figures 7,10a-c.

The 25 cm dike cuts bedded, Pillar Member (TPs1) volcanics, strikes 290° and dips 57° N and has slickensided contacts (Photo 3a). In addition to a variety of volcanic clasts the dike contains fragments of granitic rock, quartz vein material along with fine-grained volcanics (Photo 3b). Interestingly similar looking granitic clasts were also found as xenoliths in mafic dikes 480 metres southeast at the bottom of drill hole AE05-02 and 540 metres south-southeast in drill hole A06-03. These findings imply the presence of a buried intrusion that could be a hydrothermal source for the Atlas East alteration and epithermal mineralization. The presence of copper bearing volcanics in the breccia dike could also suggest a mineralized porphyry underlying Atlas and Pillar East.



Photo 3a – Breccia Dike Outcrop

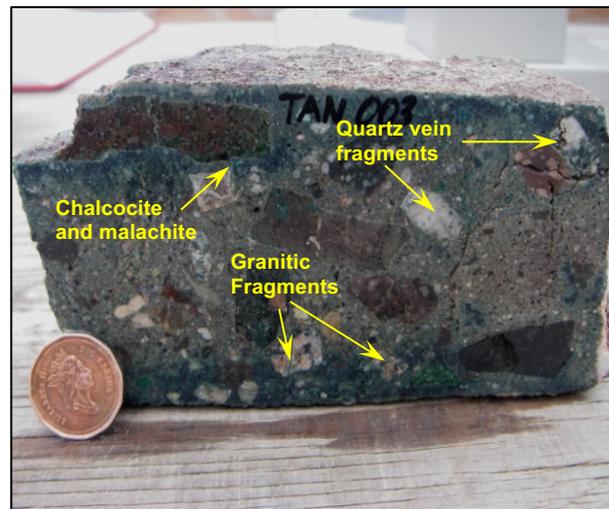


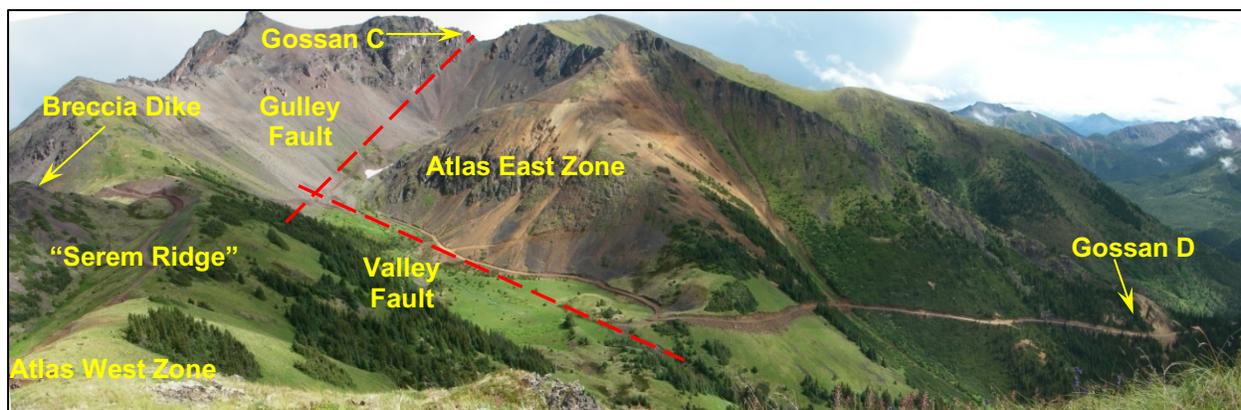
Photo 3b – Breccia Dike Specimen

### 5.2.2 Alteration

The **Atlas West Zone** (Photo 4) is not evident as a gossanous area with alteration limited to silicification and minor clay. A shallower epithermal environment is suggested by the presence of fine-grained chalcedony and vuggy, comb-textured quartz veins, as well as the low base metal content. Another distinctive feature at Atlas West is the presence of amethyst in veins and breccias.

**Atlas East** appears as a large, prominent yellow and orange-red gossan resulting from oxidation of pyrite to jarosite and hematite (Photo 4). A central white to yellowish area corresponds to intense clay-silica ± pyrite alteration. Alteration is marked by varying degrees of multiphase silicification and later quartz veining, along with hydrothermal clay assemblages and disseminated pyrite. Silica varies from white, pale grey to dark grey and occasionally black. It tends to be massive and even where strong silicification has occurred remnant volcanic textures such as feldspar phenocrysts are still visible. Vuggy cavities are uncommon in the central massive silica zone suggesting it may have formed below the original paleosurface. Locally, the massive silica is cut by thin veinlets or stockworks of pale silica, banded veinlets or irregular vuggy quartz veinlets. Pale purple amethyst is occasionally found but is much rarer than at Atlas West. Epithermal related pyrite generally comprises less than 5% by volume, but locally can exceed 10% of the rock. In contrast to primary pyrite, the epithermal pyrite is usually extremely fine-grained, and appears dark grey to black.

The mineralogical differences between various clay-silica zones and gossans probably reflect different erosional levels. A feature known as **Gossan D** is located along the access road several hundred metres southwest of Atlas East (Photo 4). Here the volcanic rocks are marked by a 40 by 100 metre prominent gossan zone of jarosite-staining and kaolin ± sericite ± quartz alteration along with trace pyrite. It is postulated to be a barren clay cap that may overlie mineralization. Another feature, **Gossan C**, is exposed in a notch on a ridge ~500 metres south of the “Pillar”. Gossan C and the Atlas West may represent “up-faulted” slices of very high-level alteration while the outcrops at Atlas East suggest this area to be at a slightly deeper erosional level (G.E. Ray).



**Photo 4 – Atlas Zones Panorama**

The Atlas East Zone is notable in that there are no large alteration or gossanous zones developed. Limonitic rocks are only noted near the southern end of the NNE trending epithermal Au-Ag zone. Here volcanic rocks are rusty and variably silicified. Elsewhere along the epithermal structure volcanic rocks are bleached and weakly limonitic due to pyrite oxidation. Silicification is evident as silica flooding, veining (<0.1 to 2 cm), quartz stockwork and quartz matrix in local breccia zones. Open spaces and vuggy cavities occur in quartz veinlets and stockwork.

### 5.2.3 Mineralization

Gold and silver mineralization is associated with low sulphidation (?) epithermal systems at Atlas West and East and potentially at Atlas East. Further work will be required to determine if Atlas East is low sulphidation.

#### Atlas West Zone

Epithermal mineralization was first identified in the area by Serem in the 1980s. Three hand dug trenches exposed north-northwest trending quartz breccias and chalcedonic – amethyst veining and shear zones over widths of 3-10 metres (**Minfile 094E 213**). Mapping (G. Ray) indicates quartz veinlets extending over an area of several hundred metres. Individual quartz veins reach a maximum thickness of 3 cm and consist of milky white, pale to dark grey chalcedonic silica and clear to grey crystalline quartz. **Amethyst** occurs as veinlets, breccias and with chalcedony. Trace amounts of very fine-grained pyrite occur sporadically in the veins. Rhythmic banding, brecciation and multi-stage fracturing indicate multiple episodes of silica deposition. For example, breccia fragments of early crystalline quartz are seen to be overgrown by layered or banded chalcedony, while elsewhere silica is cut by quartz veins. Textural evidence indicates that Atlas West is at a somewhat higher level in an epithermal system than Atlas East.

In 2006 during drill access road construction along “Serem Ridge” to the Atlas West Zone numerous angular quartz fragments up to 30 cm across were found over an area at least 100 by 150 metres. The blue-green, vuggy quartz is

unusual in that it contains chalcocite and native copper (Photo 5). A composite sample of this material assayed 477 ppb Au, 11.2 g/t Ag and 1,157 ppm Cu.



**Photo 5 – Blue-Green Quartz with Native Copper and Tangeite**

The blue-green quartz float was traced close to but does not source from the breccia dikes discovered by Larry Diakow in 2004. A 25-cm chip sample (Tan 003) collected across the breccia dike by the writer assayed 16.8 g/t silver and 0.83 % copper (Photo 3a, Section 5.2.1). The blue-green quartz float was also found to contain *tangeite*, a calcium copper vanadium mineral.

The blue-green quartz and breccia dike samples (Tan 001 to 004) all contain anomalous vanadium suggesting a possible genetic relationship between the quartz and dikes. The breccia dikes are

considered geologically and economically significant because they contain fragments of granitic rock, vein quartz and copper mineralized volcanics. Although none of these rock types is seen on surface it is conceivable that the breccia dikes and the copper mineralized quartz float reflect leakage upward from a buried intrusion(s) and mineralized system.

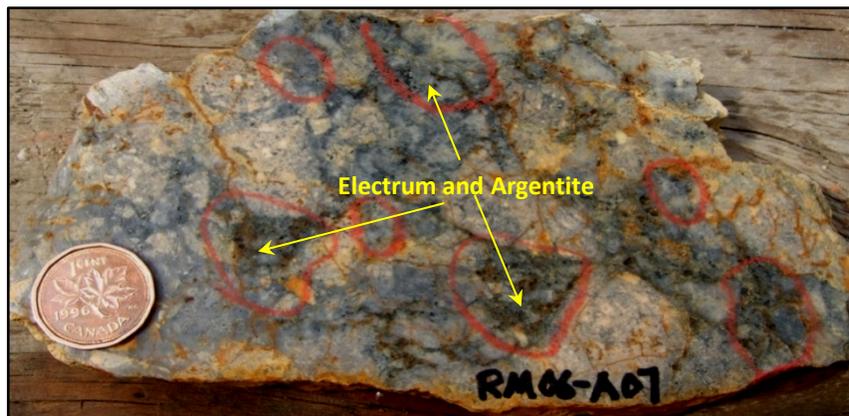
### **Atlas East Zone**

In late 2004, a prominent gossan 800 metres to the east of the Serem trenches was sampled by prospector Paul Watt. Two talus samples contained up to 3.2 g/t Au and 80 g/t Ag. In 2005 a program of sampling, prospecting, geological mapping and drilling took place. This led to further exploration in 2006 and 2007.

Gold and silver mineralization occurs in silicified, finely quartz veined and often pyritic Metsantan andesitic volcanic bedrock and talus float. Quartz veining, when developed, consists of weak to strong stockwork with individual veinlets usually less than 1 cm wide. No float or bedrock veins >20 cm across have yet been found. Veinlets range from translucent to milky white, and occasionally black. Cross cutting and small-scale displacements of veinlets likely indicate multiple episodes of veining. Vein gangue minerals include calcite and minor (<<10%) amounts of white barite. Calcite also occurs as infilling in vugs, veinlets and breccias. Amethyst is scattered in this zone but is far less common than at Atlas West. There is no direct relationship between amethyst and gold grade.

The sulphide mineralogy of veins, stockworks and breccias consists of pyrite (0.5 to 2%) and minor sphalerite, galena and chalcopyrite. The combined base metal content (Cu, Pb, Zn) of mineralized veins seldom exceeds 0.1%. Precious metal mineralization consists of native gold, electrum and acanthite (argentite). Numerous occurrences of

visible Au-Ag mineralization have been found. Quartz vein and/or silicified breccias are locally well developed and are important hosts for mineralization.



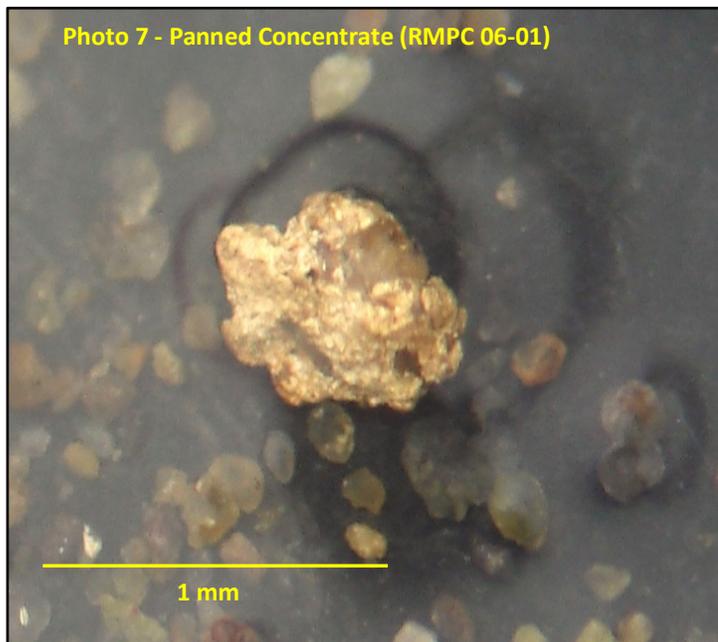
**Photo 6 – Atlas Zone High Grade Sample RM06-A07**

In 2006, abundant fine-grained argentite and electrum were discovered in silicified and brecciated volcanic bedrock. (Photo 6). **Sample RM06-A07B assayed 489 g/t Au and 6.5 kg/t Ag – the highest precious metal grades ever found on the Pil property.** Visible Au-Ag was also found in holes A06-10 and 12 located 250 metres to the east.

Geochemistry, mapping and drilling have delineated the Atlas East mineralization in a roughly east-west direction for at least 550 metres by nearly 350 metres north-south. Gerry Ray however inferred that it may potentially extend from the clay-rich Gossan D through to ridge top Gossan C – a length of 1,100 metres

#### **Pillar East Zone**

In 2007, an area ~1 km easterly of Atlas East was explored following the previous year’s discovery of anomalous gold in two stream samples. Panning at one site revealed hackly gold grains some with attached quartz implying a very local source (Photo 7). Prospecting revealed the presence of quartz veined, brecciated and silicified and stockwork veined Metsantan (?) volcanics in float and bedrock. Forty metres upstream of silt sample RMSL06-02 (Geochemical Plans), a small bedrock “window” of limonitic volcanics was found just below outcroppings of purplish-grey, coarse, bedded volcanoclastic rocks (Photo 8). Samples WG07-05, 05A and 06 consist of finely brecciated and/or silicified volcanics containing minor (<1%) disseminated pyrite. Microscope examination of sample WG07-06 revealed the presence of a metallic mineral thought to be electrum or fine gold. Panning of the rusty, crumbly surface material from this zone confirmed the presence of very fine-grained, angular gold.



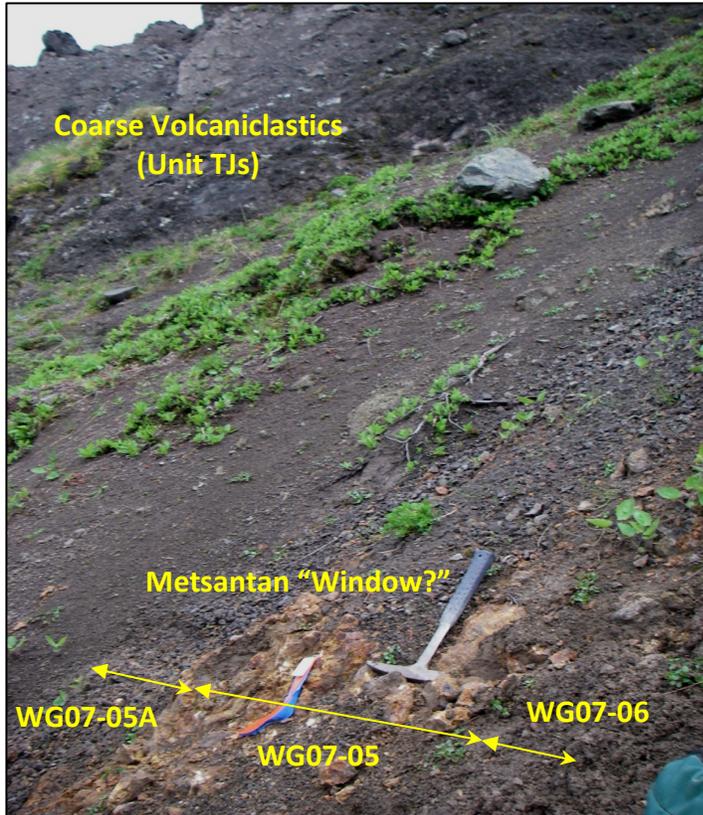


Photo 8 – Rusty Zone in Toodoggone Metsantan

The Atlas and Pillar East Zones display many characteristics of low sulphidation type epithermal deposits. Deposit features are outlined below with those corresponding to the Atlas-Pillar Zones displayed in italics. This information is largely derived from an excellent summary (Panteleyev) published by the BC Geological Survey under “Mineral Deposit Profiles”.

- **Host Rocks** most commonly are *calc-alkaline andesitic volcanics (Toodoggone Formation)*.
- **Deposit Form** - typically *localized in structures* but may occur in permeable lithologies.
- **Textures** including *open space fillings, comb structures, crustification, colloform banding*.
- **Ore Mineralogy** principally includes *pyrite, electrum, gold, silver, argentite with minor chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalts and/or selenide minerals*.
- **Gangue Mineralogy** principally *quartz, amethyst, chalcedony, quartz after calcite, adularia, sericite, barite, fluorite, Ca-Mg-Mn-Fe carbonates, rhodocrosite, hematite and chlorite*.
- **Alteration Mineralogy** dominated by *multiple generations of silicification seen as quartz, and chalcedony* commonly accompanied by *adularia and calcite*. Vein envelopes flanked by *sericite-illite-kaolinite assemblages (Atlas Zone)*. Intermediate argillic alteration (*kaolinite-illite-montmorillonite (smectite)*) adjacent to some veins. Advanced argillic alteration (kaolinite-alunite) may form along the tops of mineralized zones while *propylitic alteration* dominates at depth and peripherally.
- **Weathering** seen as resistant quartz ± alunite ledges, and *extensive flanking bleached, clay-altered zones* with supergene alunite, *jarosite and other limonite minerals*.

In 2015 the aforementioned small bedrock “window” was investigated with a gas-powered portable core drill. A hole was drilled at an angle of -75° to a depth of 10 ft. (3 metres). Drilling intersected very limonitic, silicified rock for the top 6-8 feet and then a gouge zone and less altered volcanic rocks. All but the last 2-foot sample contained gold and silver with values ranging from 0.083 to 2.8 g/t Au and 4.1 to 12.7 g/t Ag respectively. Based on outcrop observations and the drill hole it became evident that the rusty zone represented a steeply dipping structure.

Prospecting, soil and rock sampling have now revealed a distinct NNE trend of anomalous gold, silver and local copper, lead and zinc. The epithermal zone is often seen as talus that may be rusty, silicified, quartz veined, and quartz vein breccias. Sulphides in the quartz and volcanic host rocks include pyrite, chalcopyrite, galena and sphalerite. Sulphide content is generally low (<1%) however concentrations up to a few percent may be present.

Since 2007 several rock samples with multi-gram gold and silver have been collected. In 2015 sample WG15-03 (8,300 ppb Au) approximately 150 metres north of the rusty window and drill hole, was collected from an area with abundant rusty and quartz veined talus. Sampling in 2016 and 2017 also encountered high-grade epithermal material the most recent of which is described in Section 7.0.

In 2015 while investigating a gold-in-soil anomaly (1,081 ppb Au) near the south end of the epithermal Au-Ag zone several malachite and chalcocite stained volcanic talus boulders were found. Examination revealed disseminated chalcopyrite and very little pyrite. Discovery talus sample WG15-04 returned a value of 12,680 ppm Cu and 33.8 g/t Ag. Prospecting uphill on the large talus slope revealed many more malachite stained boulders. The amount and extent of the copper talus float suggested much more than just a point source. Petrographic analysis described the rock as strongly altered (chlorite-quartz-carbonate-sericite) felsic/alkalic lapilli tuff with abundant fine-grained chalcopyrite-hematite mineralization. This type of copper mineralization had never been seen on the property.

A significant development in 2016 was the discovery of copper mineralized alkalic-porphyry monzonite bedrock uphill of the copper bearing talus samples found in 2015. This area referred to as the “**Copper Cliff Zone**” revealed malachite and chalcopyrite mineralization in bedrock at least 40 meters east-west by 30 meters north-south. Of eleven rock samples collected in 2016 all contain disseminated chalcopyrite mineralization. In some areas chalcopyrite concentration exceeds 5% (Photo 9). Copper and silver assays ranged from 0.05% to 1.04% Cu and 2.8 to 23.9 g/t Ag respectively. As with the copper mineralized talus found in 2015 the pyrite content is very low.



**Photo 9 – Copper Cliff Chalcopyrite  
(Sample W16R-30)**

Petrographic analysis of Sample W16R-30 described the bedrock as a hypabyssal (shallow depth) feldspar ± biotite porphyry of about monzonite composition. It is cut by strongly developed stockwork of chalcopyrite-minor bornite-pyrite veinlets associated with quartz, alkali feldspar suggesting an alkaline porphyry copper-type mineralization in a low iron/high copper system. Petrographic descriptions also

suggest that magnetite is absent or has been altered to hematite. The latter is evidenced by hematitic slickensides seen in some samples.

#### **5.2.4 Structure**

As mentioned the northwest trending Pillar Fault is the major structural feature on the property (Figure 4). Parallel or splay structures such as the Pillar West Fault at the Northwest Zone are lithologic contacts that may have played an important role in mineralizing events. Conjugate structures to the Pillar Fault extend into the Atlas area. Mapping (G. Ray, 2005/06) indicate several structures including the E-W to ENE striking "**Valley Fault**" as well as a SE striking splay, the "**Gulley Fault**" (Photo 4). In the Atlas area, the dominant observed brittle fault structures trend NW to WNW, sub-parallel to the Gulley Fault and controlled the emplacement of most pre-and post-silica-mineral dikes. These faults are generally steeply inclined, dipping either SW or NE. Faults are commonly marked by pyrite, breccia, and gouge up to two metres in thickness, however most are less than 30 cm.

In the 2006 assessment report Gerry Ray states that for the Atlas East Zone: *"The strike and dip of the host rocks, barren silica-clay alteration and the mineralized shoots are unknown due to poor exposure and sometimes contradictory evidence. The host Metsantan rocks are unlayered so it is not known if they are horizontal or tilted. Mapping of Gossan D revealed it to be sub-horizontal, since it is floored and capped by unaltered volcanics. Within this overall E-W trending zone, most of the late faulting, dykes and some of the barren silicification strike NW to NNW. Likewise, the boundary faults to Gossan C also strike NW and dip moderately to steeply NE."*

Gerry Ray further suggested that the Atlas East mineralized zones could also dip northeast implying that some of the earliest (2005) drilling *"did not intersect mineralization because it was drilled above and possibly parallel to the mineralized shoots. The contradictory evidence could indicate a sub-vertical structural feeder zone(s) splaying outwards towards surface, with mineralization following gently to steeply-dipping structures or volcanic contacts. Epithermal mineralization at the Baker Mine is strongly controlled by structure. However, it is not known whether the alteration and mineralization in the Atlas area are controlled by the stratigraphy, lithologic permeability or structures, or a combination of all three"*.

Exploration at the Pillar East Zone first suggested the presence of epithermal mineralization in 2007. Since then prospecting and geochemical surveys suggested an Au-Ag epithermal structure believed to be steeply dipping with a strike of ~020°. Anomalous Au-Ag in soils and rock occur over a length of nearly 800 metres. Strong vein breccias in several areas would seem to indicate episodes of deformation.

## **6.0 EXPLORATION PROGRAMS - 2017**

Several exploration programs were conducted in 2017. Programs were helicopter supported with crews and helicopter based out of Black Lake Lodge and the Baker Mine site. Details of the programs are described as follows:

### **6.1 Airborne Magnetic Survey**

During the period June 5-7<sup>th</sup>, 2017 Peter E. Walcott and Associates conducted an airborne magnetic survey over the Atlas and Pillar Zones. The survey consisted of 25 east-west, 100 metre spaced flight lines along with 8 orthogonal tie lines. A total of 91 kilometres of survey was flown (Figure 6).

The magnetic survey was conducted using a bird type system on a 65-foot line by a Bell 206 B2 (CF-JOR) operated by Fireweed Helicopters Ltd. of Whitehorse, Yukon. Survey details and logistics are found in Appendix B.

626000 m

627000 m

628000 m

629000 m

6355000 m

6355000 m

6354000 m

6354000 m

6353000 m

6353000 m

6352000 m

6352000 m

6351000 m

6351000 m

626000 m

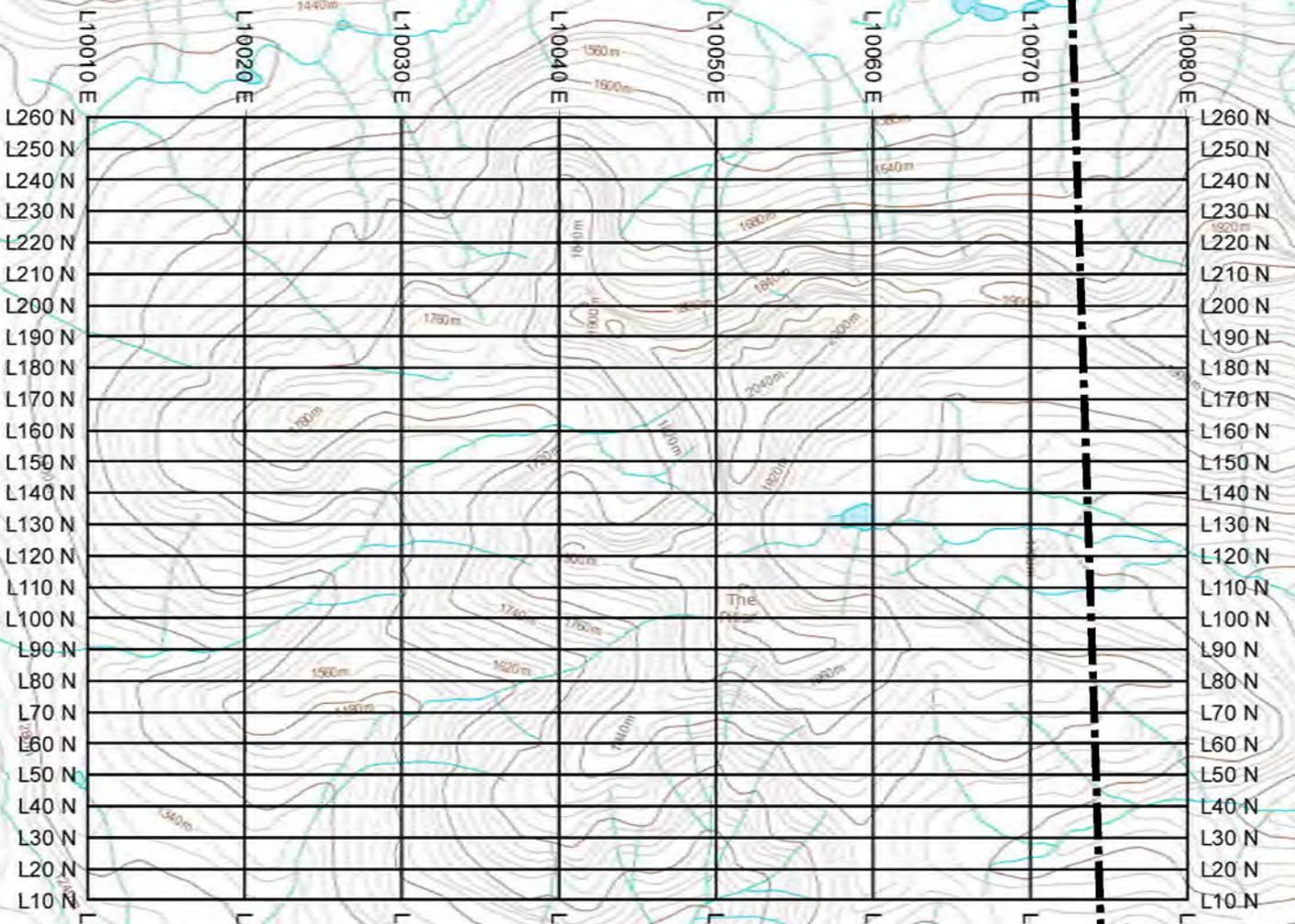
627000 m

628000 m

629000 m



Map Datum (Zone 9)  
North American 1983 (Canada)



Finlay Minerals Ltd.

**Pil Property**

Airborne Magnetic Survey Lines

Tech Work By: GEOQUEST  
Drawn By: EG

Date: Apr, 2018  
Figure: 6

To accompany a report by w. Gruenwald, P. Geo.

**FINLAY MINERALS LTD.**  
**AMARC RESOURCES LTD.**

## **6.2 Geological Mapping**

Geological mapping was conducted by Gayle Febbo during the period Sept 5-9, 2017. The focus of this work were the Copper Cliff Zone and the epithermal Au-Ag zone.

## **6.3 Geochemical Sampling**

Geochemical sampling was conducted in two periods. The first was the writer's reconnaissance on August 3-4, 2017 of the Pil property and Finlay's camp along with a prospecting traverse from Pillar East to Atlas. Prospecting was done to investigate soil geochemical anomalies along the epithermal Au-Ag zone and re-examine the aforementioned mineralized breccia dike in the western portion of the Atlas Zone.

The second round of geochemical work was conducted from Sept 5-9, 2017 and coincided with the geological mapping by Gayle Febbo. Two east-west grid lines (1 km each) spaced at 200 metres apart were sampled south of the Copper Cliff Zone to determine if the mineralization extended in this direction. Contour soils (talus fines) were also collected around a 2006 rock sample RM06-A03 in the Atlas Zone that assayed 1.94 g/t Au and 258 g/t Ag. In addition, several silt samples were collected most often as fines from poorly defined seasonal drainages. During the two programs rock samples were also collected.

Soil samples were collected from the "B" horizon when present however most samples consisted of hand sorted, fine-grained alpine soil or talus fines. Sample depths ranged from 15 to 50 cm. An average of 300 to 400 grams of soil was collected in Kraft paper bags identified by UTM based northing and easting grid co-ordinates.

Stream sampling was conducted in the Pillar East Zone. A -10 mesh silt sample was collected by screening and transferred to Kraft paper envelopes. Where feasible panned concentrates were collected. This entailed panning approximately 3-5 kg of stream to a concentrate of approximately 20-25 grams. Soil and stream sample sites were marked in the field by labelled flagging and recorded by Garmin Handheld GPS units using Nad 83 datum.

In all 91 soils, 8 silts, 6 panned concentrates and 5 rock samples were collected in 2017 and shipped to Bureau Veritas Labs in Vancouver for analysis. Analysis of the soil, stream and rock samples was by 36 element Inductively Coupled Plasma - Mass Spectrometry (ICP-MS). The analytical methodology for the samples is found in Appendix A.

## **6.4 Induced Polarization Survey**

Between August 30th, and September 8th, 2017, Peter E. Walcott & Associates Limited undertook Induced Polarization (IP) surveying on the Pillar East Zone. The objective was to test the response over the Copper Cliff and the epithermal Au-Ag zones.

Five UTM east-west oriented traverses were completed for a total of some 8.3 kilometres of 100 metre dipole and 600 metres of the 25 metre dipole induced polarization surveying. Survey lines were positioned and established on the ground by the geophysical crew. A logistics report describing the survey is found in Appendix D.

The expenditures for the 2017 exploration program totaled CDN \$105,795.

## 7.0 PROGRAM RESULTS

### 7.1 Airborne Magnetic Survey

The airborne magnetic logistics report and maps (P.E. Walcott) is found in Appendix B. For interpretive purposes a compilation of the airborne magnetic data with topography, geology, mineralized zones and Thorium/Potassium is shown below on Figure 7. Compilations of the same map with copper, gold and silver geochemistry are shown on Figures 10a-c in Appendix F

The airborne survey revealed magnetic highs that coincide with elevationally higher, younger, shallow dipping Toodoggone Formation lithologic units (Figure 7). In the eastern part of the survey magnetic highs form a circular anomaly that widens distinctly in the north and extends easterly into the adjacent property. The area where the magnetic high widens covers a body of Black Lake diorite (BLd – Figure 7) and further east a rusty weathered area that may indicate the thermal effects of a buried intrusion. The Copper Cliff Zone is situated on the southwest edge of a distinct circular magnetic low within which is a small but distinct magnetic high. The magnetic low coincides in part with a large area of outwash gravels that were deposited by an alpine glacier that once occupied the cirque to the west. Whether this is the primary cause of the anomaly is uncertain. The southern portion of the epithermal Au-Ag zone falls along the boundary between the southwest part of the circular magnetic low and higher magnetics to the west. The Atlas East epithermal Au-Ag zone presents as small, moderate magnetic highs bounded to the northwest by a magnetic low. Interestingly, a northeast trending fault is situated between the magnetic highs and low.

### 7.2 Geological Mapping

Mapping observations and comments made by Gayle Febbo are categorized and summarized below. Figure 8 displays the geology of the area mapped. For interpretive purposes anomalous rock samples (>1000 ppm Au and >1000 ppm Cu) are plotted.

#### Copper Cliff Zone

- Monzonite is hypabyssal and appears to penetrate at very shallow levels.
- Copper Cliff Zone interpreted as associated with the contact zone of hypabyssal monzonite bodies.
- Very fine grain size of the chalcopyrite, the low amounts of pyrite and the presence of albite alteration are strong arguments for alkalic porphyry mineralization.
- Lacks evidence for alteration zonation aside from local variations in epidote.
- Lacks porphyry stockwork and veins.
- Lithology contacts map well between the Copper Cliff and epithermal showings.
- Beds dip and young to the NW interprets Copper Cliff to underlie and intrude epithermal zone host rocks.
- Normal Fault (north-side-down) displacement interpreted between Copper Cliff and epithermal zone.
- Major point for interpretation of this setting hinges on the presence of a dolomitic conglomerate lens that extends north-south for ~700 m.
- Conglomerate intruded by the monzonite and the trend of its trace coincides with Cu mineralization pods. Appears that conglomerate provides favourable sink for Cu mineralization allowing it to easily dump out.

#### Epithermal Au-Ag Zone

- This zone may be shallow, high-temp system related to the hypabyssal monzonite and comagmatic flows.
- Shows weak spatial correlation also with the rhyolite so a possible link.

626000 m

627000 m

628000 m

629000 m

6353000 m

6353000 m

6352000 m

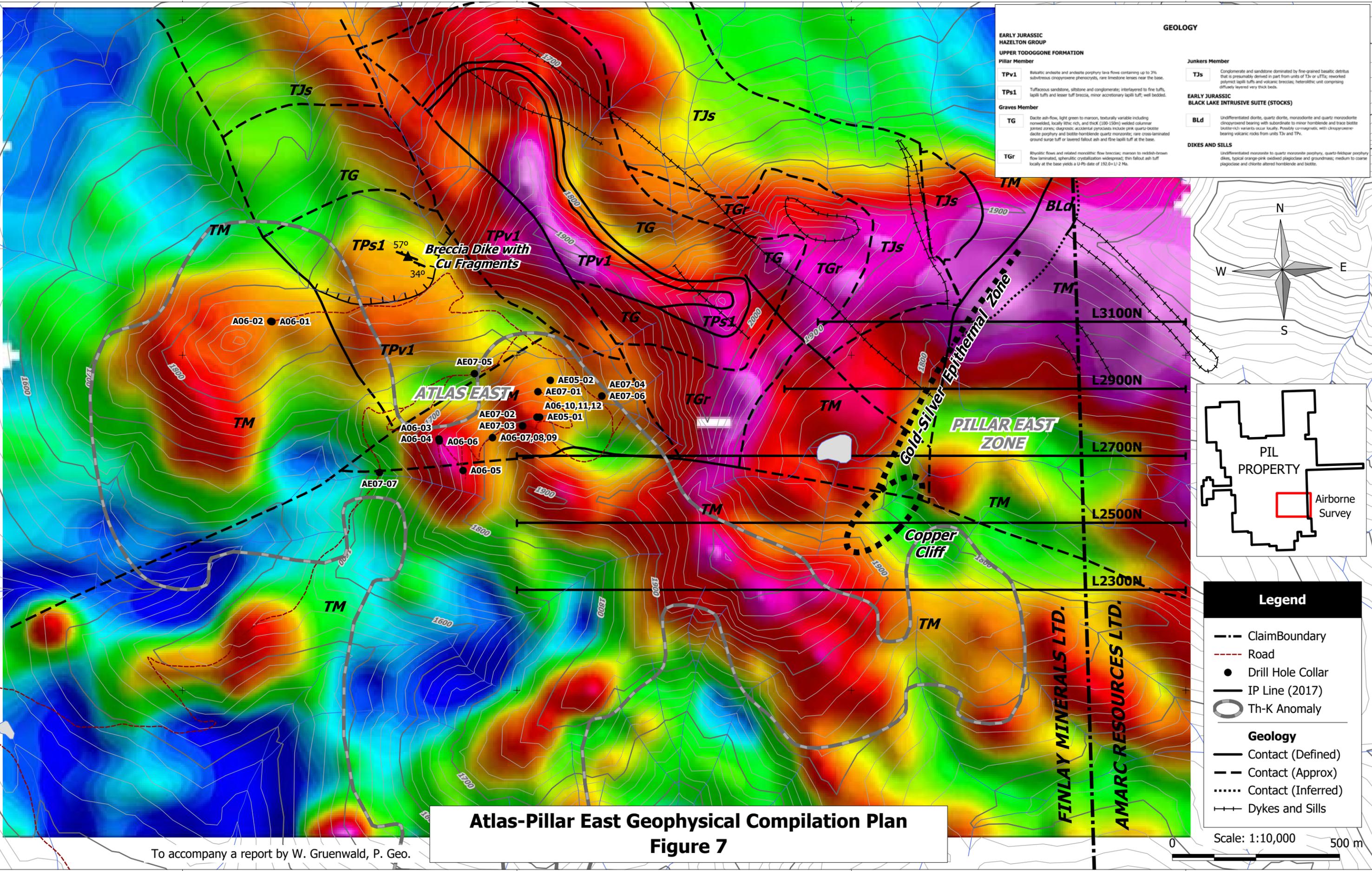
6352000 m

626000 m

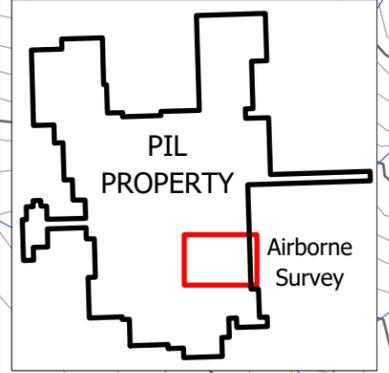
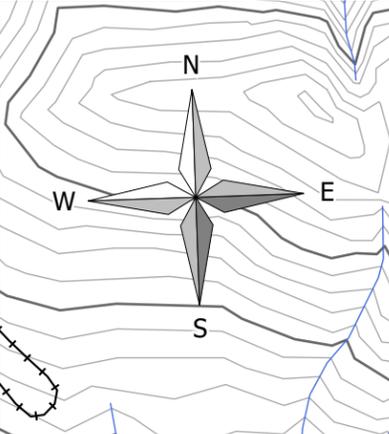
627000 m

628000 m

629000 m



EARLY JURASSIC HAZELTON GROUP		GEOLOGY	
<b>UPPER TODOGGONE FORMATION</b>		<b>Junkers Member</b>	
<b>Pillar Member</b>		<b>TJs</b>	
<b>TPv1</b>	Basaltic andesite and andesite porphyry lava flows containing up to 2% subvolcanic clinopyroxene phenocrysts, rare limestone lenses near the base.	Conglomerate and sandstone dominated by fine-grained basaltic debris that is presumably derived in part from units of TJs or uTAs; reworked polymict lapilli tuffs and volcanic breccias; heterolithic unit comprising diffusely layered very thick beds.	
<b>TPs1</b>	Tuffaceous sandstone, siltstone and conglomerate; interbedded to fine tuffs, lapilli tuffs and lesser tuff breccia, minor accretionary lapilli tuff; well bedded.	<b>EARLY JURASSIC BLACK LAKE INTRUSIVE SUITE (STOCKS)</b>	
<b>Graves Member</b>		<b>BLd</b>	
<b>TG</b>	Dacite ash-flow, light green to maroon, texturally variable including nonwelded, locally thic-rich, and thick (100-150m) welded columnar jointed cones; diagnostic, accidental pyroxenes include pink quartz-biotite dacite porphyry and biotite-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base.	Undifferentiated diorite, quartz diorite, monzonite and quartz monzonite clinopyroxene bearing with subordinate to minor hornblende and trace biotite (sulfide-rich) varieties occur locally. Possibly co-magmatic, with clinopyroxene-bearing volcanic rocks from units TJs and TPv.	
<b>TGr</b>	Rhyolitic flows and related monolithic flow breccias; maroon to reddish-brown flow laminated, spherulitic crystallization widespread; thin fallout ash tuff locally at the base yields a U-Pb date of 192.0 ± 1/-2 Ma.	<b>DIKES AND SILLS</b>	
		Undifferentiated monzonite to quartz monzonite porphyry, quartz-feldspar porphyry dikes, typical orange-pink oxidized plagioclase and groundmass; medium to coarse plagioclase and chlorite altered hornblende and biotite.	



Legend	
	Claim Boundary
	Road
	Drill Hole Collar
	IP Line (2017)
	Th-K Anomaly
<b>Geology</b>	
	Contact (Defined)
	Contact (Approx)
	Contact (Inferred)
	Dykes and Sills

**Atlas-Pillar East Geophysical Compilation Plan**  
**Figure 7**

To accompany a report by W. Gruenwald, P. Geo.

Scale: 1:10,000 500 m

627000 m

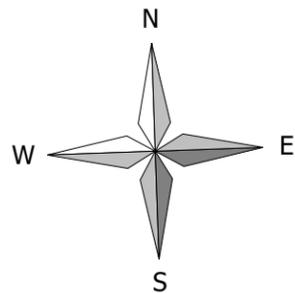
627500 m

628000 m

628500 m

**LEGEND**

<b>UPPER TOODOGGONE</b>	<b>ALTERATION</b>
<b>TGR-Graves Member</b> Rhyolite flow and subvolcanic feeders	Carbonate
<b>LOWER TOODOGGONE</b>	Quartz-sericite-clay
<b>BL-Black Lake Monzonite</b> Crowded, hypabyssal porphyry	Silica-sericite-clay
<b>TM-Metsantan Member</b> Crowded Plagioclase porphyry andesite flows	Sodic-calcic
<b>TM-Metsantan Member</b> Crowded andesite flows and subvolcanic feeders	Contact approx
<b>TJs-Junkers Member</b> Andesite clast-bearing boulder conglomerate; locally dolomitic	Contact defined
	Normal Fault
	Rock Sample (2017)
	Rock Sample >1000 ppb Au
	Rock Sample >1000 ppm Cu
	Claim Boundary
	Limit of Mapping



Map Datum (Zone 9)  
North American 1983 (Canada)

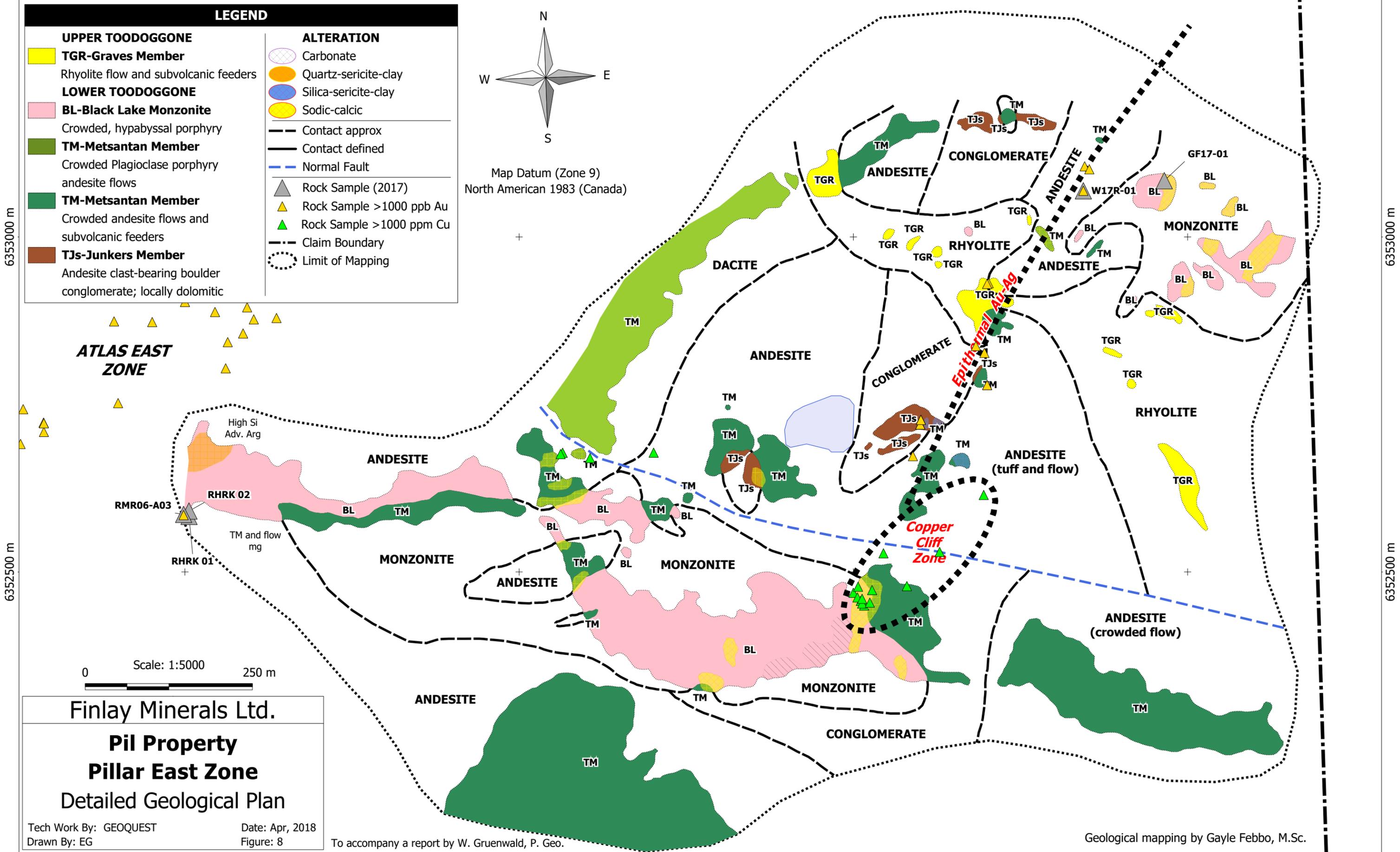
6353000 m

6353000 m

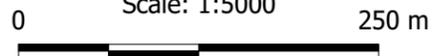
6352500 m

6352500 m

**ATLAS EAST ZONE**



Scale: 1:5000



**Finlay Minerals Ltd.**  
**Pil Property**  
**Pillar East Zone**  
**Detailed Geological Plan**

Tech Work By: GEOQUEST  
Drawn By: EG

Date: Apr, 2018  
Figure: 8

To accompany a report by W. Gruenwald, P. Geo.

Geological mapping by Gayle Febbo, M.Sc.

627000 m

627500 m

628000 m

628500 m

### **Atlas Zone**

- Impressive alteration footprint and appears to be high sulphidation style due to the presence of kaolinite
- This alteration is commonly part of an epithermal system, but possibly related to a porphyry at depth.

### **Alteration**

- Mapped alteration is proximal to contact zones between the monzonite and the volcanic and sediments.
- Alteration typically contain albite, quartz, epidote and in places carbonate and garnet. Developed in wall rock and also in the monzonite itself as an endoskarn.
- Epithermal mineralization is associated with quartz-sericite alteration.
- Both the contact and phyllic alterations appear to be part of a subvolcanic/shallow environment probably too shallow for a porphyry system.

### **Summary, Comments**

- Given the geological context it is difficult to argue a porphyry model.
- It would be worth identifying deeper exposures on the property.
- Pil area appears to be a basinal setting with active volcanism and high paleo relief.
- The basin was probably too active to support the development of a porphyry and destabilized (comagmatic volcanic rocks observed proximal to monzonite).
- Best drill intercept potential is Copper Cliff or the Gossan C as they have the most continuous surface expression of mineralization.
- Copper Cliff is undoubtedly the best access and could be drilled from the ridge to the south.
- Could likely get a modest grade copper intercept but given that the zone would likely grade into lower copper deeper in the intrusion it may be missed altogether.
- Much more work would be required to explore and map the Atlas Zones.

### **7.3 Geochemical Sampling**

The 2017 analytical data was compiled in a Microsoft Excel spreadsheet and is presented in Appendix A. Non-statistical colour coding (conditional formatting) of the data was employed to identify correlations and aid with interpretation. In addition, Appendix A includes the original Laboratory Certificates and Analytical Methods. The sample locations and geochemical data (Cu, Au, Ag) are displayed on Figures 9a to 9c (Appendix C). For interpretive purposes the historic (2006/07) and the 2015-16 samples are also shown on these figures.

The 2017 soil survey south of the Copper Cliff Zone did not return any significant results for base and precious metals indicating that mineralization does not extend or outcrop/subcrop in this direction or to this elevation. Soil sampling conducted to follow-up on 2006 outcrop sample RM06-A03 at the Atlas Zone returned weakly anomalous gold and silver with coincident elevated arsenic, antimony, bismuth, copper, iron, lead and molybdenum. This geochemical signature may suggest a different (elevation?) epithermal mineralizing system than at Pillar East.

Stream and panned concentrates samples did not yield significant results likely because they were collected outside of the Copper Cliff Zone. Two samples (RSL-07, 08) approximately 500+ metres easterly of Copper Cliff returned weakly anomalous gold and silver. These are located near the property boundary.

Two rock samples returned very highly anomalous values. Sample W17R-01, collected from a discovery of quartz breccia subcrop along the Au-Ag epithermal zone, assayed 19.95 g/t Au, 423 g/t Ag, the highest grade to date at Pillar East. The sample also contains anomalous copper, molybdenum, lead and zinc. This sample is significant as it is 40 metres south of a 50 cm quartz breccia boulder(?) that assayed 6.56 g/t Au and 13.1 g/t Ag and also containing anomalous copper, molybdenum, lead and zinc.



**Photo 10 - Sample W17R-01**

The unusual heterolithic breccia dike 1.5 km WNW in the Atlas Zone was re-examined. Selected grab sample (Tan 003a) containing a grey metallic mineral assayed 2.76% Cu and 52 g/t Ag. The absence of arsenic and antimony suggests chalcocite rather than tetrahedrite or tennantite. This dike is shown in Photos 3a, b in Section 5.2.1.

A potentially significant aspect of the heterolithic dike is its anomalous vanadium content (704 ppm V). This was noted in analysis of blue-green quartz found to contain *tangeite*, a copper-vanadium mineral. The presence of anomalous vanadium at Copper Cliff (bedrock and talus samples) and Gossan C may suggest a relationship to mineralized bodies at depth and/or a major WNW trending structure.

#### **7.4 Induced Polarization Survey**

A report on the survey is found in Appendix D. The survey results and comments are summarized as follows:

- 1) General increase in chargeability values observed to the east culminating in an anomaly on the eastern margins of the survey and beyond the property boundary. This coincides with the airborne magnetic high thought to be related to an intrusion and/or the thermal effects and pyrite alteration of volcanic rocks.
- 2) The Copper Cliff Zone and the epithermal did not present as strong chargeability anomalies.
- 3) A weak chargeability anomaly is present around 81+50E on Line 2700N. It is best observed in the detailed 25 metre dipole data where it is well defined from 81+50E to 82+50E. This coincides with an area of limonitic volcanics near the south end of the epithermal zone where several soil and rock samples contain anomalous gold and silver (Figures 9b, c). A case in point is rock sample W07-07 (1342 ppb Au, 4.4 ppm Ag) described as “Grab sample from subcrop of very angular, weak to moderately limonite stained, pale grey, very silicified volcanic (Metsantan formation). Variably brecciated. Fine crystalline limonitic vugs”.
- 4) This chargeability anomaly is well defined in the modelled section dipping at roughly 45° east and extending for some 200 metres. The chargeability anomaly correlates very well with a small, discreet magnetic high (~83+00E) roughly centred within the large circular magnetic high shown on Figures 10a-c. The centre of the magnetic high is directly above the modelled IP feature at a depth of 75 metres.
- 5) The western ends of Lines 2500N and 2700N show very high resistivity values near surface that are considered the result of attempting to measure across and within steep talus slopes.

## 8.0 CONCLUSIONS

The Pil property is situated in a highly prospective area of the Toodoggone district given its favorable geology, as well as the presence of numerous mineral showings and extensive zones of hydrothermal alteration. Moreover, the property is situated in a mineralized district host to formerly producing mines, including the Kemess copper-porphyry deposit, and the Baker and Lawyers gold-silver epithermal deposits.

The results to date at the Atlas and Pillar East Zones are very encouraging. The Atlas East Zone is a large alteration system that has yielded gold-silver mineralization in float, bedrock and drill core. The source of high-grade Au-Ag float has yet to be located but is thought to be locally derived. Some strategic drill targets remain untested. Work at Pillar East resulted in the discovery of epithermal Au-Ag mineralization proximal to copper mineralization in high level intrusive and related (co-magmatic?) volcanic rocks.

The 2016 Copper Cliff discovery of disseminated chalcopyrite in what is described as hypabyssal (shallow depth) feldspar ± biotite monzonitic porphyry bedrock and lapilli tuffs are positive developments that highlight a type of mineralization not previously seen on the property.

The presence of intrusive rocks at Pillar East is considered highly significant. In the Toodoggone region, porphyry copper mineralization is spatially and genetically associated with intrusive rocks, their co-magmatic volcanics and adjacent volcanics such as the Takla Group (i.e. Kemess). At Pillar East, a small body of Early Jurassic age Black Lake diorite is mapped near the northern portion of the epithermal Au-Ag zone. (BC Geological Survey). A breccia dike 1.5 km west-northwesterly at the Atlas Zone containing fragments of granitic rock and copper mineralized volcanics suggests that mineralized intrusive rocks and structures may underlie the Atlas and Pillar East Zones.

Multisensor airborne surveys over BC porphyry copper deposits such as Afton and Mt. Milligan have yielded positive results. Radiometric (Potassium, Thorium/Potassium – Th/K ratio) and magnetic (total field and calculated vertical gradient) maps are particularly useful in identifying potassic alteration and magnetite enrichment or depletion zones associated with these porphyry deposits and in mapping bedrock lithologies and structures. When viewed on the 2004 Toodoggone airborne survey the Atlas and Pillar East Zones are situated on the north flank of one of the survey's largest Th/K anomalies.

Collectively the geology, mineralization, geochemical and geophysical data at the Atlas-Pillar Zones present a favourable exploration scenario for the discovery of epithermal and porphyry copper deposits.

## 9.0 RECOMMENDATIONS

Exploration results have been very positive and amply justify the Company to continue exploring the Atlas and Pillar East Zones.

A recommended exploration program should comprise some or all of the following:

- 1) Continued geological mapping of Pillar East and Atlas Zones.
- 2) Induced Polarization surveys westerly across the Atlas East Zone.
- 3) Diamond drilling at 2-3 sites from the Copper Cliff Zone and along the epithermal Au-Ag zone. Holes to range from 150 to 300 metres. Drilling from 1,500 to 2,500 metres.
- 4) These programs would require helicopter support and ideally a camp at Pillar East.

The estimated cost of the such an exploration program would range from \$350,000 to \$500,000.

Respectfully Submitted By,

W. Gruenwald, P.Geo.

September 24, 2018

## **Appendix A**

---

**Analytical Data Summary**

**Analytical Certificates**

**Analytical Methodology**



Pillar East Soil Samples - 2017

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	V ppm	W ppm	Zn ppm
VAN17002055	2000N 7825E	627826	6352003	1.6	0.1	3.20	15	<20	113	<0.1	2.91	0.2	4.9	2	10.7	1.57	8	0.01	0.18	19	0.84	1316	0.2	0.010	0.9	0.150	5.6	<0.05	1.0	6.7	<0.5	131	<0.2	1.5	0.037	<0.1	49	0.2	42.0
VAN17002055	2000N 7850E	627851	6352001	2.3	<0.1	4.06	26	<20	109	0.1	2.08	0.1	5.1	5	9.5	1.81	9	0.01	0.10	16	0.64	894	0.4	0.025	4.5	0.137	7.6	<0.05	1.3	3.7	<0.5	152	<0.2	0.4	0.063	<0.1	58	0.3	41.0
VAN17002055	2000N 7875E	627876	6352001	1.2	0.2	2.51	11	<20	102	0.3	0.32	0.1	3.6	6	6.0	1.96	7	0.04	0.05	15	0.44	270	0.6	0.013	4.3	0.138	7.4	<0.05	1.1	0.5	<0.5	31	<0.2	<0.1	0.011	0.2	61	0.2	33.0
VAN17002055	2000N 7900E	627901	6352002	0.9	<0.1	2.61	24	<20	139	0.2	0.74	0.2	7.1	11	12.6	2.50	7	0.01	0.12	16	0.67	864	0.6	0.009	11.7	0.149	9.5	<0.05	1.5	4.5	<0.5	58	<0.2	1.2	0.069	<0.1	66	0.3	55.0
VAN17002055	2000N 7925E	627926	6352001	1.0	0.2	3.35	28	<20	77	0.1	1.16	0.2	5.9	6	9.8	1.94	11	0.01	0.13	16	0.66	1153	0.5	0.009	5.3	0.177	8.0	<0.05	1.0	2.4	<0.5	90	<0.2	0.2	0.035	<0.1	61	0.2	51.0
VAN17002055	2000N 7950E	627951	6351998	1.3	<0.1	2.40	37	<20	128	0.1	0.62	0.2	5.4	6	10.9	2.17	8	0.02	0.06	15	0.74	1021	0.4	0.014	6.1	0.134	8.8	<0.05	1.5	2.6	<0.5	39	<0.2	0.3	0.077	<0.1	69	0.3	45.0
VAN17002055	2000N 7975E	628000	6352001	0.7	<0.1	1.89	21	<20	96	0.2	0.61	0.1	7.1	7	11.4	2.98	6	<0.01	0.10	17	0.68	1035	0.5	0.007	7.0	0.150	10.4	<0.05	2.2	5.0	<0.5	35	<0.2	1.5	0.079	<0.1	79	0.4	55.0
VAN17002055	2000N 8000E	628025	6352000	1.4	0.1	2.10	23	<20	84	0.2	0.18	0.2	5.4	9	12.9	2.22	5	0.04	0.07	16	0.47	1006	0.5	0.006	7.8	0.134	10.1	<0.05	1.4	0.3	<0.5	14	<0.2	<0.1	0.011	<0.1	56	0.2	45.0
VAN17002055	2000N 8025E	628050	6351999	1.5	0.1	2.69	37	<20	81	0.1	0.47	0.2	5.9	9	11.3	2.48	8	0.06	0.07	14	0.53	696	0.6	0.009	7.8	0.164	9.2	<0.05	1.7	0.8	<0.5	35	<0.2	<0.1	0.039	<0.1	63	0.2	42.0
VAN17002055	2000N 8050E	628075	6352001	<0.5	<0.1	2.60	35	<20	64	<0.1	0.61	0.2	3.9	7	7.1	1.57	8	0.06	0.07	12	0.58	519	0.3	0.008	5.5	0.134	5.7	<0.05	1.5	0.7	<0.5	46	<0.2	<0.1	0.033	<0.1	47	0.2	35.0
VAN17002055	2000N 8075E	628099	6352000	0.5	0.1	2.14	29	<20	93	<0.1	0.80	0.3	6.5	9	8.4	2.46	10	0.02	0.11	12	0.85	864	0.5	0.007	6.1	0.177	7.6	<0.05	2.2	1.5	<0.5	51	<0.2	0.1	0.050	<0.1	66	0.2	64.0
VAN17002055	2000N 8100E	628124	6352002	<0.5	0.1	2.12	43	<20	129	0.2	0.33	0.2	6.6	12	10.3	2.77	8	0.03	0.08	18	0.83	1907	0.7	0.008	9.9	0.152	10.3	<0.05	1.3	0.8	<0.5	21	<0.2	<0.1	0.020	<0.1	63	0.2	57.0
VAN17002055	2000N 8125E	628150	6352000	<0.5	<0.1	1.60	21	<20	74	0.1	0.37	<0.1	6.2	8	10.0	2.64	5	<0.01	0.09	11	0.76	579	0.4	0.005	7.4	0.113	8.2	<0.05	1.8	1.9	<0.5	16	<0.2	0.3	0.046	<0.1	66	0.2	53.0
VAN17002055	2000N 8150E	628175	6352003	0.8	0.1	2.26	73	<20	106	0.3	0.39	0.3	7.9	11	13.1	3.50	7	0.05	0.09	16	0.53	1209	0.7	0.009	7.8	0.145	14.1	<0.05	1.9	1.6	<0.5	22	<0.2	0.2	0.046	<0.1	63	0.2	65.0
VAN17002055	2000N 8175E	628200	6352001	0.7	0.6	2.17	37	<20	312	0.2	0.93	0.2	4.3	9	19.4	1.86	5	0.04	0.09	46	0.54	569	0.4	0.009	5.7	0.287	8.9	<0.05	1.1	1.4	0.7	36	<0.2	0.2	0.009	<0.1	48	0.2	72.0
VAN17002055	2000N 8200E	628226	6352002	6.5	0.3	1.86	56	<20	221	0.1	0.63	0.1	6.5	11	32.2	2.59	5	0.03	0.11	23	0.56	701	0.6	0.006	10.6	0.139	8.8	<0.05	1.4	2.2	<0.5	33	<0.2	0.3	0.029	<0.1	69	0.3	47.0
VAN17002055	2000N 8225E	628251	6352002	0.6	0.1	1.65	29	<20	144	<0.1	0.17	0.2	5.4	6	10.4	2.79	5	0.03	0.07	11	0.44	477	0.5	0.005	5.4	0.145	7.2	<0.05	0.8	0.4	<0.5	11	<0.2	<0.1	0.010	<0.1	53	0.2	58.0
VAN17002055	2000N 8250E	628274	6352000	<0.5	0.1	1.73	36	<20	161	0.1	0.28	0.2	5.9	6	9.1	2.66	5	0.03	0.09	13	0.46	1309	0.7	0.006	4.7	0.143	9.3	<0.05	0.8	0.3	<0.5	17	<0.2	<0.1	0.007	<0.1	51	0.2	55.0
VAN17002055	2000N 8275E	628299	6352001	<0.5	<0.1	1.17	35	<20	84	<0.1	0.26	<0.1	5.6	3	4.2	2.83	4	0.01	0.09	10	0.42	525	0.6	0.005	2.0	0.102	9.4	<0.05	0.9	0.7	<0.5	11	<0.2	<0.1	0.016	<0.1	58	0.3	38.0
VAN17002055	2000N 8300E	628326	6352000	<0.5	0.1	1.75	58	<20	196	0.2	0.54	0.4	6.4	9	8.4	2.59	6	0.02	0.12	14	0.49	1066	0.6	0.008	5.4	0.200	11.8	<0.05	1.8	0.6	<0.5	28	<0.2	<0.1	0.019	<0.1	50	0.2	72.0
VAN17002055	2000N 8325E	628350	6351999	0.7	0.3	1.86	74	<20	920	<0.1	0.78	<0.1	5.4	8	11.8	1.85	3	0.04	0.12	63	0.42	981	0.3	0.006	4.1	0.146	6.2	<0.05	0.5	5.3	0.6	22	<0.2	0.7	0.007	<0.1	41	0.2	41.0
VAN17002055	2000N 8350E	628375	6351999	<0.5	<0.1	1.79	39	<20	199	<0.1	0.34	0.2	5.6	8	8.7	2.45	6	0.03	0.14	12	0.56	731	0.6	0.006	4.6	0.185	8.7	<0.05	1.0	0.2	<0.5	19	<0.2	<0.1	0.004	<0.1	54	0.1	62.0
VAN17002055	2000N 8375E	628402	6352000	<0.5	<0.1	1.93	84	<20	238	0.1	0.37	0.1	5.9	7	7.2	2.71	7	0.02	0.10	24	0.54	1170	0.6	0.005	5.3	0.205	8.6	<0.05	0.8	0.4	<0.5	16	<0.2	<0.1	0.006	<0.1	50	0.2	54.0
VAN17002055	2000N 8400E	628426	6352000	<0.5	<0.1	1.20	16	<20	185	<0.1	0.28	<0.1	4.6	3	3.0	2.38	4	<0.01	0.08	9	0.41	388	0.4	0.004	2.0	0.084	6.8	<0.05	1.3	0.6	<0.5	11	<0.2	<0.1	0.005	<0.1	55	0.3	35.0
VAN17002055	2000N 8425E	628450	6352001	1.0	0.1	1.71	24	<20	196	0.1	0.59	0.5	5.8	13	8.8	2.35	6	0.03	0.11	13	0.65	710	0.6	0.006	8.0	0.240	9.7	<0.05	1.1	0.5	<0.5	32	<0.2	<0.1	0.011	<0.1	52	0.1	89.0
VAN17002055	2000N 8450E	628475	6352001	0.7	<0.1	2.04	17	<20	178	<0.1	0.19	<0.1	5.8	4	2.0	1.79	6	0.01	0.06	16	0.62	618	0.4	0.005	1.9	0.134	5.8	<0.05	0.2	1.0	<0.5	10	<0.2	0.2	0.002	<0.1	40	0.1	50.0
VAN17002055	2000N 8475E	628500	6351999	<0.5	<0.1	2.02	41	<20	183	0.1	0.23	0.2	5.4	11	5.9	2.64	6	0.03	0.06	16	0.55	954	0.5	0.004	6.9	0.161	10.5	<0.05	0.7	0.2	<0.5	13	<0.2	<0.1	0.004	<0.1	55	0.2	43.0
VAN17002055	2000N 8500E	628525	6352002	<0.5	0.1	2.18	61	<20	290	0.1	0.48	0.3	4.9	11	5.5	2.74	8	0.04	0.07	25	0.47	976	0.8	0.007	7.0	0.171	10.6	<0.05	0.7	0.4	<0.5	18	<0.2	<0.1	0.006	<0.1	45	0.2	65.0
VAN17002055	2000N 8525E	628550	6352002	<0.5	<0.1	2.86	33	<20	474	0.1	0.47	0.1	4.3	15	5.5	1.76	7	0.03	0.06	32	0.56	482	0.4	0.007	9.0	0.288	7.1	<0.05	0.3	0.7	<0.5	24	<0.2	0.1	0.002	0.1	46	0.1	40.0
VAN17002055	2000N 8550E	628575	6352001	1.0	<0.1	1.70	22	<20	194	0.2	0.16	0.5	8.3	11	8.9	3.01	7	0.02	0.10	12	0.42	2557	0.7	0.005	7.0	0.187	14.6	<0.05	0.9	0.4	<0.5	13	<0.2	<0.1	0.012	<0.1	58	0.1	92.0
VAN17002055	2000N 8575E	628601	6352001	1.5	0.1	1.24	23	<20	265	<0.1	0.43	0.1	7.9	9	9.1	3.40	4	0.01	0.08	24	0.58	822	0.7	0.005	9.4	0.130	9.8	<0.05	1.0	4.1	<0.5	24	<0.2	0.9	0.029	<0.1	87	0.3	56.0
VAN17002055	2000N 8600E	628624	6352001	2.7	0.2	1.42	21	<20	180	0.1	0.08	0.4	7.2	5	9.8	2.58	4	0.02	0.12	10	0.35	1398	0.7	0.004	3.4	0.129	11.7	<0.05	0.4	0.2	<0.5	17	<0.2	<0.1	0.003	<0.1	37	<0.1	51.0
VAN17002055	2000N 8625E	628650	6351999	5.1	0.4	0.93	15	<20	295	<0.1	0.14	0.2	4.0	3	9.8	3.21	3	0.02	0.20	16	0.18	422	0.7	0.004	2.0	0.140	11												

Pillar East Soil Samples - 2017

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	V ppm	W ppm	Zn ppm
VAN17002055	2200N 8225E	628250	6352203	3.4	0.4	2.71	22	<20	106	0.1	0.21	0.3	5.3	13	17.4	1.82	5	0.07	0.08	18	0.39	909	1.0	0.010	8.6	0.181	9.2	0.07	0.6	0.4	<0.5	18	<0.2	<0.1	0.011	<0.1	54	0.1	47.0
VAN17002055	2200N 8250E	628275	6352201	0.6	0.2	2.26	19	<20	120	0.2	0.15	0.3	6.0	11	13.0	2.55	8	0.06	0.10	13	0.37	1469	0.9	0.011	6.0	0.198	14.0	0.11	0.9	0.4	<0.5	18	<0.2	<0.1	0.017	<0.1	57	0.1	70.0
VAN17002055	2200N 8275E	628299	6352200	4.2	0.3	2.96	39	<20	148	0.1	0.22	0.4	6.0	15	16.9	2.92	8	0.07	0.07	23	0.45	766	1.0	0.009	9.0	0.185	10.9	0.11	1.0	0.9	<0.5	19	<0.2	<0.1	0.037	0.1	59	0.2	59.0
VAN17002055	2200N 8300E	628326	6352197	3.8	0.1	2.19	14	<20	110	0.1	0.10	0.3	5.3	11	13.5	2.22	6	0.04	0.08	12	0.48	405	0.6	0.007	6.6	0.173	8.6	0.06	1.1	0.3	<0.5	11	<0.2	<0.1	0.005	<0.1	54	0.1	64.0
VAN17002055	2200N 8325E	628351	6352199	0.7	0.1	1.59	14	<20	88	<0.1	0.06	0.1	3.6	6	18.7	2.24	4	0.05	0.07	22	0.21	280	0.5	0.005	2.9	0.115	6.8	<0.05	0.7	0.3	<0.5	6	<0.2	<0.1	0.007	0.1	33	0.2	27.0
VAN17002055	2200N 8350E	628375	6352199	2.0	<0.1	2.14	5	<20	537	0.1	0.39	0.2	14.6	4	20.6	3.39	3	0.02	0.07	14	0.38	999	0.1	0.005	2.6	0.063	10.9	<0.05	0.1	2.7	<0.5	17	<0.2	0.7	0.004	0.3	57	0.1	84.0
VAN17002055	2200N 8375E	628400	6352199	<0.5	<0.1	2.24	27	<20	309	0.2	0.26	0.1	6.3	9	10.5	2.51	7	0.03	0.06	21	0.47	575	0.4	0.007	7.0	0.123	9.2	<0.05	0.9	1.0	<0.5	21	<0.2	<0.1	0.027	0.1	54	0.2	46.0
VAN17002055	2200N 8400E	628450	6352201	<0.5	<0.1	2.78	20	<20	238	0.1	0.37	0.2	6.5	11	16.3	2.51	6	0.03	0.07	30	0.54	685	0.5	0.012	6.5	0.138	10.7	0.05	0.5	1.0	<0.5	26	<0.2	0.1	0.013	0.2	61	0.2	48.0
VAN17002055	2200N 8425E	628476	6352201	1.1	<0.1	1.96	7	<20	168	0.2	0.34	0.2	7.2	11	9.6	2.24	5	0.04	0.08	12	0.55	1162	0.5	0.011	7.5	0.079	10.7	<0.05	0.4	1.9	<0.5	22	<0.2	0.2	0.089	<0.1	47	<0.1	52.0
VAN17002055	2200N 8450E	628499	6352200	<0.5	0.1	3.31	15	<20	223	0.1	0.80	0.1	7.8	17	17.0	2.93	7	0.04	0.06	17	0.47	654	0.8	0.011	11.2	0.124	14.6	0.14	0.5	2.2	<0.5	37	<0.2	0.2	0.081	<0.1	71	0.2	50.0
VAN17002055	2200N 8475E	628525	6352200	1.3	<0.1	2.58	19	<20	133	<0.1	0.41	0.3	8.0	16	12.9	2.42	4	0.04	0.10	20	0.59	1182	0.5	0.009	10.4	0.160	10.1	0.10	1.2	1.7	<0.5	23	<0.2	0.2	0.051	<0.1	65	0.2	53.0
VAN17002055	2200N 8500E	628549	6352198	0.8	<0.1	2.76	12	<20	253	0.2	0.34	0.1	6.0	15	12.8	2.92	11	0.03	0.06	22	0.49	893	0.8	0.013	8.1	0.111	13.2	0.09	0.6	0.9	<0.5	27	<0.2	<0.1	0.040	<0.1	52	0.1	56.0
VAN17002055	2200N 8525E	628576	6352200	1.7	<0.1	2.15	15	<20	141	<0.1	0.25	0.2	6.0	7	10.5	2.01	3	0.03	0.07	18	0.50	610	0.4	0.007	4.3	0.144	8.8	<0.05	0.4	0.9	<0.5	13	<0.2	<0.1	0.015	<0.1	49	0.2	40.0
VAN17002055	2200N 8550E	628600	6352202	0.6	0.1	1.76	10	<20	332	<0.1	0.73	0.2	7.0	9	11.7	1.73	3	0.05	0.08	55	0.78	875	0.5	0.009	6.8	0.133	10.7	0.08	0.3	3.2	<0.5	42	<0.2	0.3	0.018	<0.1	44	<0.1	50.0
VAN17002055	2200N 8575E	628625	6352200	2.2	0.1	1.79	9	<20	258	<0.1	0.95	0.2	6.0	6	9.2	1.03	3	0.02	0.07	29	0.69	694	0.3	0.009	3.5	0.181	8.5	0.11	<0.1	1.5	<0.5	54	<0.2	0.4	0.005	<0.1	64	<0.1	61.0
VAN17002055	2200N 8600E	628649	6352199	<0.5	<0.1	1.57	4	<20	391	<0.1	0.43	<0.1	7.8	3	11.3	1.53	3	0.01	0.07	29	0.82	596	0.3	0.006	1.6	0.097	7.1	<0.05	0.3	3.2	<0.5	20	<0.2	0.8	0.024	<0.1	51	0.1	55.0
VAN17002055	2200N 8625E	628676	6352201	2.7	0.1	1.68	7	<20	332	<0.1	0.69	0.2	9.5	4	17.9	2.07	4	<0.01	0.11	20	1.04	1245	0.2	0.014	5.4	0.139	15.4	<0.05	0.4	5.9	<0.5	31	<0.2	3.2	0.138	<0.1	43	0.3	75.0
VAN17002055	2200N 8650E	628701	6352203	0.7	<0.1	1.56	5	<20	168	0.1	0.45	0.2	7.7	8	17.7	1.96	4	<0.01	0.12	24	0.95	692	0.3	0.007	9.2	0.109	8.5	<0.05	0.3	4.9	<0.5	24	<0.2	1.5	0.038	<0.1	36	<0.1	74.0
VAN17002055	2200N 8675E	627727	6352201	0.9	0.1	1.53	12	<20	232	0.1	0.16	0.2	7.6	5	16.6	1.87	3	0.02	0.10	15	0.38	1199	0.3	0.005	5.8	0.138	9.7	<0.05	0.2	0.8	<0.5	15	<0.2	0.1	0.006	<0.1	35	0.1	50.0
VAN17002055	2200N 8700E	628423	6352200	1.6	0.4	2.28	13	<20	124	0.2	0.10	0.2	6.4	9	12.7	2.79	5	0.05	0.07	10	0.45	568	1.1	0.006	7.8	0.120	10.9	0.07	0.4	0.9	<0.5	15	<0.2	<0.1	0.015	<0.1	47	0.2	52.0
VAN17002055	CS-01	627001	6352644	47.1	2.2	0.83	67	<20	291	2.2	0.02	0.1	1.8	2	10.7	7.77	7	0.04	1.13	23	0.25	176	6.9	0.024	0.9	0.185	28.7	2.06	1.0	4.8	4.4	57	1.8	2.4	0.004	0.7	54	<0.1	17.0
VAN17002055	CS-02	626998	6352621	24.0	3.9	1.57	304	<20	142	0.3	0.09	0.5	4.3	2	13.3	6.95	9	0.02	0.84	19	0.68	399	13.4	0.008	1.0	0.230	10.7	1.55	1.3	5.1	1.0	33	0.5	1.4	0.004	0.5	90	0.1	44.0
VAN17002055	CS-03	626997	6352596	18.4	2.1	1.79	63	<20	148	0.2	0.47	0.6	16.9	3	40.1	3.76	6	0.05	0.18	27	0.68	2321	2.0	0.004	3.0	0.137	16.1	0.13	0.7	4.2	<0.5	17	<0.2	0.9	0.004	0.2	56	0.1	81.0
VAN17002055	CS-04	626977	6352586	43.1	3.2	0.61	159	<20	210	0.9	0.18	<0.1	7.3	<1	14.9	5.62	3	0.05	0.72	19	0.13	576	1.2	0.010	0.9	0.171	14.3	1.23	0.9	3.5	0.6	45	1.2	2.2	0.007	0.3	23	<0.1	23.0
VAN17002055	CS-05	626978	6352614	38.3	5.6	1.95	109	<20	134	0.3	0.49	1.5	21.4	8	20.8	4.83	8	0.08	0.30	32	0.86	2457	1.7	0.005	6.1	0.224	11.6	0.37	0.8	6.4	<0.5	26	0.3	1.0	0.008	0.2	79	0.3	88.0
VAN17002055	CS-06	626985	6352637	44.2	4.7	1.98	184	<20	206	0.7	0.04	0.6	10.8	2	21.4	10.39	9	0.05	1.04	29	0.66	513	17.8	0.014	2.0	0.470	20.0	1.87	1.2	9.8	2.4	78	1.2	3.0	0.009	0.7	102	0.2	74.0
VAN17002055	CS-07	626965	6352656	45.3	2.3	1.41	29	<20	236	1.2	0.02	0.4	1.6	1	17.4	8.80	8	0.03	1.22	23	0.60	248	5.5	0.023	0.5	0.289	19.7	2.24	0.5	6.5	2.6	41	1.3	2.8	0.004	0.7	73	<0.1	48.0
VAN17002055	CS-08	626960	6352629	23.1	3.7	1.25	244	<20	172	0.4	0.15	0.6	11.0	2	15.8	6.00	7	0.04	0.59	22	0.56	826	5.8	0.008	2.4	0.230	17.1	1.01	1.6	5.5	1.1	30	1.0	1.6	0.010	0.3	73	0.2	53.0
VAN17002055	CS-09	626955	6352598	11.8	1.0	0.45	38	<20	124	0.2	0.29	<0.1	1.8	<1	18.8	2.50	<1	<0.01	0.38	21	0.05	83	2.3	0.010	0.3	0.063	9.0	0.60	0.4	1.6	0.9	27	0.6	2.6	<0.001	0.2	6	<0.1	6.0
VAN17002055	CS-10	626950	6352570	7.1	0.7	0.83	39	<20	433	0.3	0.02	<0.1	7.6	2	11.1	9.89	5	0.05	0.94	38	0.19	843	0.4	0.017	1.2	0.262	11.4	1.58	0.4	3.4	3.1	45	0.9	2.4	0.009	0.5	21	0.1	39.0
VAN17002055	CS-11	626945	6352546	6.7	2.5	1.90	225	<20	135	<0.1	0.29	0.6	11.3	9	31.3	7.24	7	0.06	0.71	42	0.53	786	0.4	0.012	4.5	0.282	9.8	1.24	2.1	6.8	0.9	116	0.4	2.1	0.010	0.7	67	0.2	126.0
VAN17002055	CS-12	626980	6352557	9.5	2.6	1.43	64	<20	119	0.2	0.41	0.3	16.4	7	15.6	4.31	5	0.05	0.24	23	0.50	1862	0.7	0.007	5.8	0.108	11.3	0.32	0.7	3.9	<0.5	25	0.9	0.9	0.005	0.2	36	0.1	61.0
VAN17002055	CS-13	627006	6352564	3.1	0.8	1.88	26	<20	75	<0.1	0.43	0.1	7.5	6	6.7	2.31	6	0.04	0.17	16	0.72	1587	0.4	0.003	4.7	0.126	4.3	0.14	0.3	3.6	<0.5	14	<0.2	0.9	0.003	0.3	30	0.1	43.0
VAN17002055	CS-14	627025	6352578	9.4	1.8	1.78																																	

Pillar East Silt Samples - 2017

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P %	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	V ppm	W ppm	Zn ppm
VAN17002055	RSL-01	628656	6351952	3	0.9	0.91	17	<20	488	<0.1	0.47	3.7	10.2	5	19	3.13	2	0.06	0.12	20	0.31	1028	2.1	0.005	4.2	0.109	71	0.05	0.7	3.3	0.8	37	<0.2	0.5	0.010	<0.1	50	0.2	223
VAN17002055	RSL-02	628303	6351817	4	0.2	1.18	26	<20	228	<0.1	0.82	0.2	6.3	4	14	2.71	3	0.01	0.12	24	0.45	908	0.5	0.007	3.2	0.124	7	<0.05	1.9	3.9	1.3	30	<0.2	0.8	0.030	<0.1	70	0.5	47
VAN17002055	RSL-03	627792	6352621	2	0.3	1.36	21	<20	115	<0.1	0.61	0.3	9.5	3	18	2.98	6	<0.01	0.16	22	0.93	1801	1.0	0.005	2.3	0.142	11	<0.05	1.8	4.8	<0.5	24	<0.2	2.2	0.025	0.1	68	0.4	64
VAN17002055	RSL-04	627925	6352578	1	0.2	0.76	52	<20	118	<0.1	0.65	0.1	7.3	1	19	2.72	3	<0.01	0.19	19	0.32	720	0.9	0.007	1.5	0.136	10	<0.05	1.7	4.0	<0.5	21	<0.2	2.4	0.037	<0.1	61	0.5	32
VAN17002055	RSL-05	628371	6352514	1	0.1	2.00	5	<20	165	<0.1	1.26	0.1	5.4	1	12	1.83	4	0.02	0.15	19	0.62	843	0.4	0.010	1.7	0.121	8	<0.05	0.4	4.8	<0.5	56	<0.2	2.1	0.067	<0.1	40	0.2	40
VAN17002055	RSL-06	628697	6352392	1	<0.1	0.99	16	<20	270	0.1	0.48	<0.1	7.4	1	14	2.40	2	0.02	0.20	19	0.52	615	0.8	0.005	1.6	0.113	9	<0.05	0.3	3.9	<0.5	19	<0.2	1.9	0.007	<0.1	34	0.2	36
VAN17002055	RSL-07	628741	6352365	17	1.2	0.98	15	<20	314	0.2	0.37	0.4	14.1	3	21	3.53	3	0.03	0.18	23	0.57	1200	1.9	0.005	3.6	0.114	18	0.17	0.5	3.6	<0.5	27	<0.2	1.7	0.020	0.1	33	0.1	57
VAN17002055	RSL-08	628789	6352355	16	1.0	0.65	16	<20	181	0.5	0.42	0.4	16.0	<1	21	4.32	2	0.02	0.20	24	0.24	1102	3.7	0.008	2.4	0.126	26	0.33	0.4	4.2	<0.5	38	0.3	1.6	0.003	0.1	28	0.1	49

Au=50-100 ppb  
 100-200 ppb  
 200-500 ppb  
 >500 ppb

Ag=1-3 ppm  
 3-5 ppm  
 5-10 ppm  
 >10 ppm

Cu=50-100 ppm  
 100-200 ppm  
 200-300 ppm  
 >300 ppm

Pb=50-100 ppm  
 100-150 ppm  
 150-500 ppm  
 >500 ppm

Zn=100-200 ppm  
 200-300 ppm  
 300-500 ppm  
 >500 ppm

**Pillar East Panned Concentrates - 2017**

<b>Certificate Number</b>	<b>Sample Number</b>	<b>Easting (NAD 83)</b>	<b>Northing (NAD 83)</b>	<b>Au gm/t</b>	<b>Ag gm/t</b>
VAN17002054	RPC-1	628303	6351817	<0.9	<20
VAN17002054	RPC-2	627792	6352621	<0.9	<20
VAN17002054	RPC-3	627925	6352578	<0.9	<20
VAN17002054	RPC-4	628371	6352514	<0.9	<20
VAN17002054	RPC-5	628697	6352392	<0.9	<20
VAN17002054	RPC-6	626955	6352598	<0.9	<20



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Submitted By: Finlay  
Receiving Lab: Canada-Vancouver  
Received: August 15, 2017  
Report Date: September 18, 2017  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN17001766.1

## CLIENT JOB INFORMATION

Project: 97  
Shipment ID:  
P.O. Number  
Number of Samples: 2

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Finlay Minerals Ltd.  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8  
Canada

CC: Warner Gruenwald

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	2	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ201	2	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
MA404	2	4 Acid Digest AAS Finish Vancouver	0.5	Completed	VAN

## ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 18, 2017

Page: 2 of 2

Part: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN17001766.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P		
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%		
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001		
W17R-01	Rock	0.51	116.5	794.0	4793.1	1351	>100	0.6	3.4	1516	1.17	148.9	19950.9	0.5	27	367.1	13.2	0.7	8	3.06	0.021	
TAN-003A	Rock	0.40	1.0	>10000	27.3	85	53.1	4.5	13.5	1422	3.18	2.3	111.9	4.1	102	7.3	0.1	1.0	704	1.05	0.074	



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 18, 2017

Page: 2 of 2

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

**VAN17001766.1**

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	MA404	MA404
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	2	0.01	
W17R-01	Rock	5	1	0.11	76	<0.001	1	0.16	0.002	0.09	<0.1	0.60	1.9	<0.1	0.16	<1	2.8	0.2	423	0.08
TAN-003A	Rock	16	4	2.24	275	0.214	2	2.40	0.022	0.14	0.2	0.29	7.3	<0.1	0.32	7	0.9	0.5	52	2.76



# QUALITY CONTROL REPORT

VAN17001766.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201								
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%								
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Reference Materials																					
STD DS11 Standard		14.4	150.0	143.7	346	1.8	78.3	13.2	1006	3.11	43.7	102.2	8.6	69	2.6	9.6	12.5	48	1.02	0.072	
STD OREAS132A Standard																					
STD OREAS134B Standard																					
STD OXC129 Standard		1.2	28.2	6.9	41	<0.1	76.8	19.0	420	3.08	<0.5	198.8	2.1	196	<0.1	<0.1	<0.1	52	0.66	0.102	
STD OXC129 Expected		1.3	28	6.3	42.9		79.5	20.3	421	3.065	0.6	195	1.9					51	0.665	0.102	
STD DS11 Expected		14.6	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701	
STD OREAS132A Expected																					
STD OREAS134B Expected																					
BLK Blank		<0.1	0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	
BLK Blank																					
Prep Wash																					
ROCK-VAN Prep Blank		0.8	9.2	1.1	34	<0.1	0.7	4.4	579	2.00	2.6	<0.5	2.1	16	<0.1	<0.1	<0.1	27	0.58	0.041	



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 18, 2017

Page: 1 of 1 Part: 2 of 2

# QUALITY CONTROL REPORT

VAN17001766.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	MA404	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag	Cu
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	2	0.01	
Reference Materials																				
STD DS11	Standard	18	58	0.82	369	0.094	6	1.10	0.068	0.38	3.0	0.26	3.1	4.7	0.27	5	2.4	5.0		
STD OREAS132A	Standard																		55	0.05
STD OREAS134B	Standard																		203	0.13
STD OXC129	Standard	13	52	1.57	52	0.413	1	1.57	0.587	0.36	<0.1	<0.01	0.8	<0.1	<0.05	5	<0.5	<0.2		
STD OXC129 Expected		13	52	1.545	50	0.4	1	1.58	0.6	0.37			1.1			5.6				
STD DS11 Expected		18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.3	3.4	4.9	0.2835	5.1	1.9	4.56		
STD OREAS132A Expected																			58	0.0458
STD OREAS134B Expected																			209	0.1348
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																		<2	<0.01
Prep Wash																				
ROCK-VAN	Prep Blank	6	2	0.54	45	0.065	2	0.82	0.062	0.07	<0.1	<0.01	2.7	<0.1	<0.05	3	<0.5	<0.2		



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Submitted By: Finlay  
Receiving Lab: Canada-Vancouver  
Received: September 12, 2017  
Report Date: October 31, 2017  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN17002053.1

## CLIENT JOB INFORMATION

Project: 97  
Shipment ID:  
P.O. Number  
Number of Samples: 3

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Finlay Minerals Ltd.  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8  
Canada

CC: Warner Gruenwald

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	3	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ201	3	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
DRPLP	3	Warehouse handling / disposition of pulps			VAN
DRRJT	3	Warehouse handling / Disposition of reject			VAN

## ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: October 31, 2017

Page: 2 of 2

Part: 1 of 2

# CERTIFICATE OF ANALYSIS

**VAN17002053.1**

Method	WGHT	AQ201																			
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%								
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
RHRK-01	Rock	1.84	0.8	3.3	8.3	73	<0.1	1.3	4.2	585	3.28	8.9	<0.5	3.6	10	<0.1	0.3	0.2	93	0.31	0.078
RHRH-02	Rock	2.10	0.5	11.0	10.5	8	2.5	0.5	1.5	67	2.79	128.0	6.9	1.6	6	<0.1	0.8	<0.1	9	0.05	0.075
GF17-01	Rock	0.87	0.3	9.2	6.3	50	4.1	0.8	3.8	427	2.92	82.0	28.8	1.6	8	<0.1	0.5	<0.1	37	0.15	0.091



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: October 31, 2017

Page: 2 of 2

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

**VAN17002053.1**

Method	Analyte	AQ201																
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
RHRK-01	Rock	7	3	0.85	36	0.191	<1	1.40	0.047	0.11	0.3	<0.01	6.9	<0.1	0.61	7	0.8	<0.2
RHRH-02	Rock	9	1	0.05	91	0.007	<1	0.36	0.002	0.29	<0.1	0.03	1.8	0.1	0.35	2	<0.5	0.5
GF17-01	Rock	12	2	0.55	47	0.030	<1	0.96	0.003	0.20	0.1	0.02	3.4	<0.1	0.11	7	<0.5	<0.2



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: October 31, 2017

Page: 1 of 1

Part: 1 of 2

**QUALITY CONTROL REPORT** **VAN17002053.1**

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201								
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%								
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Reference Materials																					
STD DS11 Standard		15.0	138.6	143.0	323	1.8	81.5	14.5	1041	3.13	41.0	74.9	7.5	68	2.5	7.4	11.9	48	1.06	0.073	
STD OXC129 Standard		1.3	26.5	8.1	41	<0.1	84.8	22.7	402	3.15	0.8	198.2	1.8	197	<0.1	<0.1	<0.1	51	0.72	0.104	
STD OXC129 Expected		1.3	28	6.3	42.9		79.5	20.3	421	3.065	0.6	195	1.9					51	0.665	0.102	
STD DS11 Expected		14.6	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701	
BLK Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	
Prep Wash																					
ROCK-VAN Prep Blank		1.5	4.4	2.5	36	<0.1	1.2	4.1	551	1.58	1.4	<0.5	1.6	29	<0.1	<0.1	<0.1	17	0.79	0.038	

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: October 31, 2017

Page: 1 of 1

Part: 2 of 2

# QUALITY CONTROL REPORT

VAN17002053.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Reference Materials																		
STD DS11	Standard	18	61	0.84	393	0.088	7	1.15	0.072	0.40	3.0	0.27	3.3	5.2	0.27	5	2.3	4.9
STD OXC129	Standard	12	55	1.57	49	0.441	<1	1.60	0.598	0.37	0.1	<0.01	0.9	<0.1	<0.05	6	<0.5	<0.2
STD OXC129 Expected		13	52	1.545	50	0.4	1	1.58	0.6	0.37			1.1			5.6		
STD DS11 Expected		18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.3	3.4	4.9	0.2835	5.1	1.9	4.56
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
ROCK-VAN	Prep Blank	6	2	0.49	42	0.062	<1	1.08	0.076	0.08	<0.1	<0.01	2.8	<0.1	0.09	4	<0.5	<0.2



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Submitted By: Finlay  
Receiving Lab: Canada-Vancouver  
Received: September 12, 2017  
Report Date: November 07, 2017  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN17002054.1

## CLIENT JOB INFORMATION

Project: 97  
Shipment ID:  
P.O. Number  
Number of Samples: 6

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Finlay Minerals Ltd.  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8  
Canada

CC: Warner Gruenwald

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PUL85	6	Pulverize to 85% passing 200 mesh			VAN
PULSW	6	Extra Wash with Silica between each sample			VAN
FA530	6	Lead collection fire assay fusion - gravimetric finish	30	Completed	VAN
EN002	6	Environmental disposal charge-Fire assay lead waste			VAN
DRPLP	6	Warehouse handling / disposition of pulps			VAN

## ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: November 07, 2017

Page: 2 of 2

Part: 1 of 1

## CERTIFICATE OF ANALYSIS

VAN17002054.1

	Method	FA530	
		Ag	Au
Analyte		gm/t	gm/t
Unit			
MDL		20	0.9
RPC-1	Pan Con	<20	<0.9
RPC-2	Pan Con	<20	<0.9
RPC-3	Pan Con	<20	<0.9
RPC-4	Pan Con	<20	<0.9
RPC-5	Pan Con	<20	<0.9
RPC-6	Pan Con	<20	<0.9



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: November 07, 2017

Page: 1 of 1

Part: 1 of 1

## QUALITY CONTROL REPORT

VAN17002054.1

	Method	FA530	FA530
	Analyte	Ag	Au
	Unit	gm/t	gm/t
	MDL	20	0.9
Pulp Duplicates			
RPC-1	Pan Con	<20	<0.9
REP RPC-1	QC	<20	<0.9
Reference Materials			
STD AGPROOF	Standard	98	<0.9
STD SP49	Standard	58	18.3
STD SQ70	Standard	160	39.6
STD AGPROOF Expected		94	0
STD SP49 Expected		60.2	18.34
STD SQ70 Expected		159.5	39.62
BLK	Blank	<20	<0.9
Prep Wash			
ROCK-VAN	Prep Blank	<20	<0.9



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Submitted By: Finlay  
Receiving Lab: Canada-Vancouver  
Received: September 12, 2017  
Report Date: September 26, 2017  
Page: 1 of 5

# CERTIFICATE OF ANALYSIS

VAN17002055.1

## CLIENT JOB INFORMATION

Project: 97  
Shipment ID:  
P.O. Number  
Number of Samples: 99

## SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Finlay Minerals Ltd.  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8  
Canada

CC: Warner Gruenwald

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
DY060	99	Dry at 60C			VAN
SS80	99	Dry at 60C sieve 100g to -80 mesh			VAN
AQ200	99	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

## ADDITIONAL COMMENTS

  
JEFFREY CANNON  
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 2 of 5

Part: 1 of 2

# CERTIFICATE OF ANALYSIS

## VAN17002055.1

Method	Analyte	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm								
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
2000N 7825E	Soil	0.2	10.7	5.6	42	0.1	0.9	4.9	1316	1.57	15.2	1.6	1.5	131	0.2	1.0	<0.1	49	2.91	0.150	19
2000N 7850E	Soil	0.4	9.5	7.6	41	<0.1	4.5	5.1	894	1.81	26.3	2.3	0.4	152	0.1	1.3	0.1	58	2.08	0.137	16
2000N 7875E	Soil	0.6	6.0	7.4	33	0.2	4.3	3.6	270	1.96	11.1	1.2	<0.1	31	0.1	1.1	0.3	61	0.32	0.138	15
2000N 7900E	Soil	0.6	12.6	9.5	55	<0.1	11.7	7.1	864	2.50	24.2	0.9	1.2	58	0.2	1.5	0.2	66	0.74	0.149	16
2000N 7925E	Soil	0.5	9.8	8.0	51	0.2	5.3	5.9	1153	1.94	27.9	1.0	0.2	90	0.2	1.0	0.1	61	1.16	0.177	16
2000N 7950E	Soil	0.4	10.9	8.8	45	<0.1	6.1	5.4	1021	2.17	36.9	1.3	0.3	39	0.2	1.5	0.1	69	0.62	0.134	15
2000N 7975E	Soil	0.5	11.4	10.4	55	<0.1	7.0	7.1	1035	2.98	21.3	0.7	1.5	35	0.1	2.2	0.2	79	0.61	0.150	17
2000N 8000E	Soil	0.5	12.9	10.1	45	0.1	7.8	5.4	1006	2.22	23.2	1.4	<0.1	14	0.2	1.4	0.2	56	0.18	0.134	16
2000N 8025E	Soil	0.6	11.3	9.2	42	0.1	7.8	5.9	696	2.48	36.7	1.5	<0.1	35	0.2	1.7	0.1	63	0.47	0.164	14
2000N 8050E	Soil	0.3	7.1	5.7	35	<0.1	5.5	3.9	519	1.57	34.7	<0.5	<0.1	46	0.2	1.5	<0.1	47	0.61	0.134	12
2000N 8075E	Soil	0.5	8.4	7.6	64	0.1	6.1	6.5	864	2.46	28.8	0.5	0.1	51	0.3	2.2	<0.1	66	0.80	0.177	12
2000N 8100E	Soil	0.7	10.3	10.3	57	0.1	9.9	6.6	1907	2.77	43.1	<0.5	<0.1	21	0.2	1.3	0.2	63	0.33	0.152	18
2000N 8125E	Soil	0.4	10.0	8.2	53	<0.1	7.4	6.2	579	2.64	20.8	<0.5	0.3	16	<0.1	1.8	0.1	66	0.37	0.113	11
2000N 8150E	Soil	0.7	13.1	14.1	65	0.1	7.8	7.9	1209	3.50	73.1	0.8	0.2	22	0.3	1.9	0.3	63	0.39	0.145	16
2000N 8175E	Soil	0.4	19.4	8.9	72	0.6	5.7	4.3	569	1.86	37.2	0.7	0.2	36	0.2	1.1	0.2	48	0.93	0.287	46
2000N 8200E	Soil	0.6	32.2	8.8	47	0.3	10.6	6.5	701	2.59	56.1	6.5	0.3	33	0.1	1.4	0.1	69	0.63	0.139	23
2000N 8225E	Soil	0.5	10.4	7.2	58	0.1	5.4	5.4	477	2.79	29.2	0.6	<0.1	11	0.2	0.8	<0.1	53	0.17	0.145	11
2000N 8250E	Soil	0.7	9.1	9.3	55	0.1	4.7	5.9	1309	2.66	36.2	<0.5	<0.1	17	0.2	0.8	0.1	51	0.28	0.143	13
2000N 8275E	Soil	0.6	4.2	9.4	38	<0.1	2.0	5.6	525	2.83	35.4	<0.5	<0.1	11	<0.1	0.9	<0.1	58	0.26	0.102	10
2000N 8300E	Soil	0.6	8.4	11.8	72	0.1	5.4	6.4	1066	2.59	57.5	<0.5	<0.1	28	0.4	1.8	0.2	50	0.54	0.200	14
2000N 8325E	Soil	0.3	11.8	6.2	41	0.3	4.1	5.4	981	1.85	73.9	0.7	0.7	22	<0.1	0.5	<0.1	41	0.78	0.146	63
2000N 8350E	Soil	0.6	8.7	8.7	62	<0.1	4.6	5.6	731	2.45	38.7	<0.5	<0.1	19	0.2	1.0	<0.1	54	0.34	0.185	12
2000N 8375E	Soil	0.6	7.2	8.6	54	<0.1	5.3	5.9	1170	2.71	84.0	<0.5	<0.1	16	0.1	0.8	0.1	50	0.37	0.205	24
2000N 8400E	Soil	0.4	3.0	6.8	35	<0.1	2.0	4.6	388	2.38	15.5	<0.5	0.1	11	<0.1	1.3	<0.1	55	0.28	0.084	9
2000N 8425E	Soil	0.6	8.8	9.7	89	0.1	8.0	5.8	710	2.35	23.5	1.0	<0.1	32	0.5	1.1	0.1	52	0.59	0.240	13
2000N 8450E	Soil	0.4	2.0	5.8	50	<0.1	1.9	5.8	618	1.79	17.1	0.7	0.2	10	<0.1	0.2	<0.1	40	0.19	0.134	16
2000N 8475E	Soil	0.5	5.9	10.5	43	<0.1	6.9	5.4	954	2.64	41.4	<0.5	<0.1	13	0.2	0.7	0.1	55	0.23	0.161	16
2000N 8500E	Soil	0.8	5.5	10.6	65	0.1	7.0	4.9	976	2.74	60.5	<0.5	<0.1	18	0.3	0.7	0.1	45	0.48	0.171	25
2000N 8525E	Soil	0.4	5.5	7.1	40	<0.1	9.0	4.3	482	1.76	33.3	<0.5	0.1	24	0.1	0.3	0.1	46	0.47	0.288	32
2000N 8550E	Soil	0.7	8.9	14.6	92	<0.1	7.0	8.3	2557	3.01	22.3	1.0	<0.1	13	0.5	0.9	0.2	58	0.16	0.187	12



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 2 of 5

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

# VAN17002055.1

Method	Analyte	AQ200															
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
2000N 7825E	Soil	2	0.84	113	0.037	<20	3.20	0.010	0.18	0.2	0.01	6.7	<0.1	<0.05	8	<0.5	<0.2
2000N 7850E	Soil	5	0.64	109	0.063	<20	4.06	0.025	0.10	0.3	0.01	3.7	<0.1	<0.05	9	<0.5	<0.2
2000N 7875E	Soil	6	0.44	102	0.011	<20	2.51	0.013	0.05	0.2	0.04	0.5	0.2	<0.05	7	<0.5	<0.2
2000N 7900E	Soil	11	0.67	139	0.069	<20	2.61	0.009	0.12	0.3	0.01	4.5	<0.1	<0.05	7	<0.5	<0.2
2000N 7925E	Soil	6	0.66	77	0.035	<20	3.35	0.009	0.13	0.2	0.01	2.4	<0.1	<0.05	11	<0.5	<0.2
2000N 7950E	Soil	6	0.74	128	0.077	<20	2.40	0.014	0.06	0.3	0.02	2.6	<0.1	<0.05	8	<0.5	<0.2
2000N 7975E	Soil	7	0.68	96	0.079	<20	1.89	0.007	0.10	0.4	<0.01	5.0	<0.1	<0.05	6	<0.5	<0.2
2000N 8000E	Soil	9	0.47	84	0.011	<20	2.10	0.006	0.07	0.2	0.04	0.3	<0.1	<0.05	5	<0.5	<0.2
2000N 8025E	Soil	9	0.53	81	0.039	<20	2.69	0.009	0.07	0.2	0.06	0.8	<0.1	<0.05	8	<0.5	<0.2
2000N 8050E	Soil	7	0.58	64	0.033	<20	2.60	0.008	0.07	0.2	0.06	0.7	<0.1	<0.05	8	<0.5	<0.2
2000N 8075E	Soil	9	0.85	93	0.050	<20	2.14	0.007	0.11	0.2	0.02	1.5	<0.1	<0.05	10	<0.5	<0.2
2000N 8100E	Soil	12	0.83	129	0.020	<20	2.12	0.008	0.08	0.2	0.03	0.8	<0.1	<0.05	8	<0.5	<0.2
2000N 8125E	Soil	8	0.76	74	0.046	<20	1.60	0.005	0.09	0.2	<0.01	1.9	<0.1	<0.05	5	<0.5	<0.2
2000N 8150E	Soil	11	0.53	106	0.046	<20	2.26	0.009	0.09	0.2	0.05	1.6	<0.1	<0.05	7	<0.5	<0.2
2000N 8175E	Soil	9	0.54	312	0.009	<20	2.17	0.009	0.09	0.2	0.04	1.4	<0.1	<0.05	5	0.7	<0.2
2000N 8200E	Soil	11	0.56	221	0.029	<20	1.86	0.006	0.11	0.3	0.03	2.2	<0.1	<0.05	5	<0.5	<0.2
2000N 8225E	Soil	6	0.44	144	0.010	<20	1.65	0.005	0.07	0.2	0.03	0.4	<0.1	<0.05	5	<0.5	<0.2
2000N 8250E	Soil	6	0.46	161	0.007	<20	1.73	0.006	0.09	0.2	0.03	0.3	<0.1	<0.05	5	<0.5	<0.2
2000N 8275E	Soil	3	0.42	84	0.016	<20	1.17	0.005	0.09	0.3	0.01	0.7	<0.1	<0.05	4	<0.5	<0.2
2000N 8300E	Soil	9	0.49	196	0.019	<20	1.75	0.008	0.12	0.2	0.02	0.6	<0.1	<0.05	6	<0.5	<0.2
2000N 8325E	Soil	8	0.42	920	0.007	<20	1.86	0.006	0.12	0.2	0.04	5.3	<0.1	<0.05	3	0.6	<0.2
2000N 8350E	Soil	8	0.56	199	0.004	<20	1.79	0.006	0.14	0.1	0.03	0.2	<0.1	<0.05	6	<0.5	<0.2
2000N 8375E	Soil	7	0.54	238	0.006	<20	1.93	0.005	0.10	0.2	0.02	0.4	<0.1	<0.05	7	<0.5	<0.2
2000N 8400E	Soil	3	0.41	185	0.005	<20	1.20	0.004	0.08	0.3	<0.01	0.6	<0.1	<0.05	4	<0.5	<0.2
2000N 8425E	Soil	13	0.65	196	0.011	<20	1.71	0.006	0.11	0.1	0.03	0.5	<0.1	<0.05	6	<0.5	<0.2
2000N 8450E	Soil	4	0.62	178	0.002	<20	2.04	0.005	0.06	0.1	0.01	1.0	<0.1	<0.05	6	<0.5	<0.2
2000N 8475E	Soil	11	0.55	183	0.004	<20	2.02	0.004	0.06	0.2	0.03	0.2	<0.1	<0.05	6	<0.5	<0.2
2000N 8500E	Soil	11	0.47	290	0.006	<20	2.18	0.007	0.07	0.2	0.04	0.4	<0.1	<0.05	8	<0.5	<0.2
2000N 8525E	Soil	15	0.56	474	0.002	<20	2.86	0.007	0.06	0.1	0.03	0.7	0.1	<0.05	7	<0.5	<0.2
2000N 8550E	Soil	11	0.42	194	0.012	<20	1.70	0.005	0.10	0.1	0.02	0.4	<0.1	<0.05	7	<0.5	<0.2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 3 of 5

Part: 1 of 2

# CERTIFICATE OF ANALYSIS

# VAN17002055.1

Method	Analyte	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm								
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
2000N 8575E	Soil	0.7	9.1	9.8	56	0.1	9.4	7.9	822	3.40	22.6	1.5	0.9	24	0.1	1.0	<0.1	87	0.43	0.130	24
2000N 8600E	Soil	0.7	9.8	11.7	51	0.2	3.4	7.2	1398	2.58	20.7	2.7	<0.1	17	0.4	0.4	0.1	37	0.08	0.129	10
2000N 8625E	Soil	0.7	9.8	11.0	32	0.4	2.0	4.0	422	3.21	15.4	5.1	0.1	37	0.2	0.4	<0.1	25	0.14	0.140	16
2000N 8650E	Soil	0.6	10.8	10.9	57	0.4	4.2	6.8	472	3.50	16.5	2.8	<0.1	16	0.2	0.4	0.1	33	0.11	0.155	9
2000N 8675E	Soil	0.7	15.7	8.5	47	0.5	6.2	6.7	495	2.68	11.0	7.3	1.0	31	0.1	0.2	<0.1	41	0.45	0.068	28
2000N 8700E	Soil	0.8	12.0	10.7	58	0.2	6.4	6.9	1929	2.45	15.1	3.8	<0.1	22	0.6	0.5	0.2	41	0.15	0.155	11
2200N 7725E	Soil	0.5	12.3	13.3	55	0.1	8.6	8.2	1886	2.01	10.8	<0.5	0.3	24	0.3	0.6	0.2	69	0.56	0.183	29
2200N 7750E	Soil	0.7	13.9	14.0	58	0.3	10.1	7.5	1571	2.16	10.3	1.5	0.4	30	0.3	0.7	0.2	71	0.65	0.285	42
2200N 7775E	Soil	0.7	10.6	9.2	56	0.2	7.3	6.9	1219	2.08	6.3	<0.5	<0.1	20	0.3	0.8	0.2	72	0.49	0.252	24
2200N 7800E	Soil	0.8	16.0	9.8	58	<0.1	21.0	8.7	660	2.85	12.5	0.9	0.6	22	0.2	1.0	0.1	77	0.36	0.125	14
2200N 7825E	Soil	0.9	17.6	12.6	79	0.2	15.5	12.1	1397	3.47	12.8	<0.5	0.2	13	0.4	1.0	0.1	83	0.24	0.148	17
2200N 7850E	Soil	0.8	14.3	11.5	53	<0.1	11.1	7.8	779	2.51	14.0	1.0	<0.1	12	0.3	0.9	0.1	69	0.24	0.145	20
2200N 7875E	Soil	0.9	21.6	16.6	65	0.2	12.9	10.0	976	2.84	20.7	1.0	0.2	26	0.4	1.0	0.2	76	0.36	0.139	19
2200N 7900E	Soil	0.6	16.5	11.2	61	0.2	10.5	6.8	740	2.40	14.5	<0.5	<0.1	24	0.5	0.8	0.2	71	0.46	0.227	19
2200N 7925E	Soil	0.5	21.5	9.7	55	0.2	13.7	9.2	1327	2.83	13.2	3.0	0.6	25	0.2	1.1	0.1	86	0.46	0.085	18
2200N 7950E	Soil	0.8	27.3	11.8	49	1.3	11.0	8.3	1171	2.45	16.0	1.3	0.3	30	0.4	0.7	0.1	75	0.88	0.229	42
2200N 7975E	Soil	0.9	21.5	15.1	58	0.3	10.6	9.8	1041	3.04	22.3	<0.5	<0.1	14	0.4	0.9	0.1	74	0.21	0.113	11
2200N 8000E	Soil	0.5	27.4	9.2	78	0.2	7.2	10.3	1531	2.68	12.8	1.7	<0.1	12	0.3	0.4	0.1	63	0.29	0.172	15
2200N 8025E	Soil	0.5	22.7	8.6	46	0.1	7.2	6.1	1015	1.99	17.0	1.6	0.3	23	0.3	0.4	<0.1	66	0.78	0.165	38
2200N 8050E	Soil	0.6	9.5	8.7	53	<0.1	5.2	4.8	477	1.75	11.7	<0.5	0.2	15	<0.1	0.4	<0.1	51	0.37	0.133	17
2200N 8075E	Soil	1.3	38.9	24.4	86	0.2	7.0	23.5	6996	2.66	12.8	<0.5	<0.1	15	0.9	0.9	0.3	61	0.21	0.223	12
2200N 8100E	Soil	0.6	16.5	9.0	32	0.2	4.3	4.5	533	2.27	36.3	<0.5	<0.1	27	<0.1	0.3	0.1	62	0.50	0.167	36
2200N 8125E	Soil	0.6	15.6	10.2	69	0.1	6.9	6.9	1317	2.19	24.7	2.2	<0.1	26	0.2	0.8	0.1	58	0.39	0.173	17
2200N 8150E	Soil	0.4	14.8	9.5	57	<0.1	7.0	7.4	1135	2.51	26.4	<0.5	0.1	16	0.2	0.5	<0.1	62	0.28	0.116	19
2200N 8175E	Soil	0.5	20.0	9.2	52	0.1	11.4	7.8	586	2.78	39.3	0.8	0.5	33	0.2	1.3	0.1	74	0.57	0.122	20
2200N 8200E	Soil	0.7	27.3	9.4	68	0.4	8.0	5.2	430	1.93	27.3	2.9	<0.1	32	0.1	0.4	0.1	62	0.40	0.150	20
2200N 8225E	Soil	1.0	17.4	9.2	47	0.4	8.6	5.3	909	1.82	22.1	3.4	<0.1	18	0.3	0.6	0.1	54	0.21	0.181	18
2200N 8250E	Soil	0.9	13.0	14.0	70	0.2	6.0	6.0	1469	2.55	19.1	0.6	<0.1	18	0.3	0.9	0.2	57	0.15	0.198	13
2200N 8275E	Soil	1.0	16.9	10.9	59	0.3	9.0	6.0	766	2.92	39.3	4.2	<0.1	19	0.4	1.0	0.1	59	0.22	0.185	23
2200N 8300E	Soil	0.6	13.5	8.6	64	0.1	6.6	5.3	405	2.22	13.5	3.8	<0.1	11	0.3	1.1	0.1	54	0.10	0.173	12



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

www.bureauveritas.com/um

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 3 of 5

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

VAN17002055.1

Method	Analyte	AQ200															
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
2000N 8575E	Soil	9	0.58	265	0.029	<20	1.24	0.005	0.08	0.3	0.01	4.1	<0.1	<0.05	4	<0.5	<0.2
2000N 8600E	Soil	5	0.35	180	0.003	<20	1.42	0.004	0.12	<0.1	0.02	0.2	<0.1	<0.05	4	<0.5	<0.2
2000N 8625E	Soil	3	0.18	295	0.003	<20	0.93	0.004	0.20	<0.1	0.02	0.7	<0.1	<0.05	3	<0.5	<0.2
2000N 8650E	Soil	8	0.29	221	0.005	<20	1.65	0.004	0.14	<0.1	0.03	0.4	0.1	<0.05	5	<0.5	<0.2
2000N 8675E	Soil	8	0.53	529	0.005	<20	2.16	0.007	0.13	<0.1	0.05	6.0	0.2	<0.05	5	<0.5	<0.2
2000N 8700E	Soil	10	0.28	270	0.009	<20	1.25	0.007	0.09	<0.1	0.02	0.3	0.1	<0.05	6	<0.5	<0.2
2200N 7725E	Soil	11	0.81	136	0.014	<20	2.11	0.006	0.12	0.3	0.04	2.5	0.1	0.10	7	<0.5	<0.2
2200N 7750E	Soil	13	0.76	131	0.013	<20	2.53	0.007	0.12	0.2	0.06	2.9	<0.1	0.20	6	<0.5	<0.2
2200N 7775E	Soil	13	0.84	100	0.008	<20	2.08	0.006	0.09	0.2	0.05	0.9	<0.1	0.16	8	<0.5	<0.2
2200N 7800E	Soil	21	0.86	78	0.048	<20	1.90	0.008	0.08	0.3	0.02	3.3	<0.1	<0.05	6	<0.5	<0.2
2200N 7825E	Soil	18	1.02	117	0.048	<20	2.58	0.008	0.11	0.1	0.04	1.9	0.1	<0.05	9	<0.5	<0.2
2200N 7850E	Soil	13	0.66	86	0.016	<20	1.95	0.007	0.07	0.2	0.03	0.8	0.1	0.06	6	<0.5	<0.2
2200N 7875E	Soil	15	0.76	120	0.030	<20	2.19	0.010	0.11	0.2	0.03	1.9	0.1	<0.05	6	<0.5	<0.2
2200N 7900E	Soil	14	0.61	139	0.010	<20	2.16	0.007	0.10	0.2	0.03	0.6	<0.1	0.16	6	<0.5	<0.2
2200N 7925E	Soil	15	0.74	144	0.049	<20	1.91	0.010	0.07	0.2	0.01	4.4	0.1	<0.05	6	<0.5	<0.2
2200N 7950E	Soil	15	0.55	282	0.014	<20	2.19	0.006	0.13	0.1	0.06	2.1	0.1	0.21	6	<0.5	<0.2
2200N 7975E	Soil	14	0.61	143	0.016	<20	1.83	0.006	0.14	0.1	0.03	0.9	0.1	0.08	7	<0.5	<0.2
2200N 8000E	Soil	12	0.82	153	0.007	<20	2.16	0.005	0.11	<0.1	0.02	0.6	<0.1	0.09	6	<0.5	<0.2
2200N 8025E	Soil	11	0.52	226	0.009	<20	2.32	0.008	0.10	0.1	0.03	2.9	0.1	0.09	5	<0.5	<0.2
2200N 8050E	Soil	10	0.37	193	0.005	<20	1.86	0.007	0.08	0.2	<0.01	1.0	0.2	<0.05	4	<0.5	<0.2
2200N 8075E	Soil	13	0.35	329	0.016	<20	1.69	0.008	0.11	0.2	0.02	0.7	0.2	0.13	6	<0.5	<0.2
2200N 8100E	Soil	8	0.28	555	0.008	<20	1.60	0.007	0.08	0.4	0.01	0.6	<0.1	<0.05	5	<0.5	<0.2
2200N 8125E	Soil	10	0.46	172	0.015	<20	1.82	0.009	0.09	0.2	0.01	0.6	<0.1	<0.05	6	<0.5	<0.2
2200N 8150E	Soil	10	0.51	125	0.019	<20	1.73	0.006	0.10	0.2	0.01	1.6	<0.1	<0.05	5	<0.5	<0.2
2200N 8175E	Soil	13	0.53	114	0.060	<20	1.82	0.011	0.10	0.3	0.02	3.5	<0.1	<0.05	5	<0.5	<0.2
2200N 8200E	Soil	13	0.49	513	0.006	<20	2.59	0.009	0.14	0.1	0.03	0.6	0.1	0.05	6	<0.5	<0.2
2200N 8225E	Soil	13	0.39	106	0.011	<20	2.71	0.010	0.08	0.1	0.07	0.4	<0.1	0.07	5	<0.5	<0.2
2200N 8250E	Soil	11	0.37	120	0.017	<20	2.26	0.011	0.10	0.1	0.06	0.4	<0.1	0.11	8	<0.5	<0.2
2200N 8275E	Soil	15	0.45	148	0.037	<20	2.96	0.009	0.07	0.2	0.07	0.9	0.1	0.11	8	<0.5	<0.2
2200N 8300E	Soil	11	0.48	110	0.005	<20	2.19	0.007	0.08	0.1	0.04	0.3	<0.1	0.06	6	<0.5	<0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

**Project:** 97  
**Report Date:** September 26, 2017

**Page:** 4 of 5

**Part:** 1 of 2

# CERTIFICATE OF ANALYSIS

**VAN17002055.1**

Method	Analyte	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm								
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	0.01	0.001	1	
2200N 8325E	Soil	0.5	18.7	6.8	27	0.1	2.9	3.6	280	2.24	14.1	0.7	<0.1	6	0.1	0.7	<0.1	33	0.06	0.115	22
2200N 8350E	Soil	0.1	20.6	10.9	84	<0.1	2.6	14.6	999	3.39	5.4	2.0	0.7	17	0.2	0.1	0.1	57	0.39	0.063	14
2200N 8375E	Soil	0.4	10.5	9.2	46	<0.1	7.0	6.3	575	2.51	26.8	<0.5	<0.1	21	0.1	0.9	0.2	54	0.26	0.123	21
2200N 8400E	Soil	0.5	16.3	10.7	48	<0.1	6.5	6.5	685	2.51	19.5	<0.5	0.1	26	0.2	0.5	0.1	61	0.37	0.138	30
2200N 8425E	Soil	0.5	9.6	10.7	52	<0.1	7.5	7.2	1162	2.24	6.6	1.1	0.2	22	0.2	0.4	0.2	47	0.34	0.079	12
2200N 8450E	Soil	0.8	17.0	14.6	50	0.1	11.2	7.8	654	2.93	14.7	<0.5	0.2	37	0.1	0.5	0.1	71	0.80	0.124	17
2200N 8475E	Soil	0.5	12.9	10.1	53	<0.1	10.4	8.0	1182	2.42	19.0	1.3	0.2	23	0.3	1.2	<0.1	65	0.41	0.160	20
2200N 8500E	Soil	0.8	12.8	13.2	56	<0.1	8.1	6.0	893	2.92	11.9	0.8	<0.1	27	0.1	0.6	0.2	52	0.34	0.111	22
2200N 8525E	Soil	0.4	10.5	8.8	40	<0.1	4.3	6.0	610	2.01	14.6	1.7	<0.1	13	0.2	0.4	<0.1	49	0.25	0.144	18
2200N 8550E	Soil	0.5	11.7	10.7	52	0.1	6.8	7.0	875	1.73	10.1	0.6	0.3	42	0.2	0.3	<0.1	54	0.73	0.133	55
2200N 8575E	Soil	0.3	9.2	8.5	61	0.1	3.5	6.0	694	1.03	8.6	2.2	0.4	54	0.2	<0.1	<0.1	64	0.95	0.181	29
2200N 8600E	Soil	0.3	11.3	7.1	55	<0.1	1.6	7.8	596	1.53	4.3	<0.5	0.8	20	<0.1	0.3	<0.1	51	0.43	0.097	29
2200N 8625E	Soil	0.2	17.9	15.4	75	0.1	5.4	9.5	1245	2.07	6.6	2.7	3.2	31	0.2	0.4	<0.1	43	0.69	0.139	20
2200N 8650E	Soil	0.3	17.7	8.5	74	<0.1	9.2	7.7	692	1.96	4.7	0.7	1.5	24	0.2	0.3	0.1	36	0.45	0.109	24
2200N 8675E	Soil	0.3	16.6	9.7	50	0.1	5.8	7.6	1199	1.87	11.8	0.9	0.1	15	0.2	0.2	0.1	35	0.16	0.138	15
2200N 8700E	Soil	1.1	12.7	10.9	52	0.4	7.8	6.4	568	2.79	12.6	1.6	<0.1	15	0.2	0.4	0.2	47	0.10	0.120	10
CS-01	Soil	6.9	10.7	28.7	17	2.2	0.9	1.8	176	7.77	66.9	47.1	2.4	57	0.1	1.0	2.2	54	0.02	0.185	23
CS-02	Soil	13.4	13.3	10.7	44	3.9	1.0	4.3	399	6.95	303.8	24.0	1.4	33	0.5	1.3	0.3	90	0.09	0.230	19
CS-03	Soil	2.0	40.1	16.1	81	2.1	3.0	16.9	2321	3.76	63.4	18.4	0.9	17	0.6	0.7	0.2	56	0.47	0.137	27
CS-04	Soil	1.2	14.9	14.3	23	3.2	0.9	7.3	576	5.62	158.7	43.1	2.2	45	<0.1	0.9	0.9	23	0.18	0.171	19
CS-05	Soil	1.7	20.8	11.6	88	5.6	6.1	21.4	2457	4.83	108.7	38.3	1.0	26	1.5	0.8	0.3	79	0.49	0.224	32
CS-06	Soil	17.8	21.4	20.0	74	4.7	2.0	10.8	513	10.39	184.1	44.2	3.0	78	0.6	1.2	0.7	102	0.04	0.470	29
CS-07	Soil	5.5	17.4	19.7	48	2.3	0.5	1.6	248	8.80	28.8	45.3	2.8	41	0.4	0.5	1.2	73	0.02	0.289	23
CS-08	Soil	5.8	15.8	17.1	53	3.7	2.4	11.0	826	6.00	243.5	23.1	1.6	30	0.6	1.6	0.4	73	0.15	0.230	22
CS-09	Soil	2.3	18.8	9.0	6	1.0	0.3	1.8	83	2.50	38.0	11.8	2.6	27	<0.1	0.4	0.2	6	0.29	0.063	21
CS-10	Soil	0.4	11.1	11.4	39	0.7	1.2	7.6	843	9.89	39.4	7.1	2.4	45	<0.1	0.4	0.3	21	0.02	0.262	38
CS-11	Soil	0.4	31.3	9.8	126	2.5	4.5	11.3	786	7.24	225.0	6.7	2.1	116	0.6	2.1	<0.1	67	0.29	0.282	42
CS-12	Soil	0.7	15.6	11.3	61	2.6	5.8	16.4	1862	4.31	63.5	9.5	0.9	25	0.3	0.7	0.2	36	0.41	0.108	23
CS-13	Soil	0.4	6.7	4.3	43	0.8	4.7	7.5	1587	2.31	25.7	3.1	0.9	14	0.1	0.3	<0.1	30	0.43	0.126	16
CS-14	Soil	1.6	24.5	15.7	50	1.8	6.4	11.0	1775	4.14	74.6	9.4	0.2	21	0.3	0.8	0.2	60	0.18	0.187	20



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 4 of 5

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

VAN17002055.1

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
2200N 8325E	Soil	6	0.21	88	0.007	<20	1.59	0.005	0.07	0.2	0.05	0.3	0.1	<0.05	4	<0.5	<0.2
2200N 8350E	Soil	4	0.38	537	0.004	<20	2.14	0.005	0.07	0.1	0.02	2.7	0.3	<0.05	3	<0.5	<0.2
2200N 8375E	Soil	9	0.47	309	0.027	<20	2.24	0.007	0.06	0.2	0.03	1.0	0.1	<0.05	7	<0.5	<0.2
2200N 8400E	Soil	11	0.54	238	0.013	<20	2.78	0.012	0.07	0.2	0.03	1.0	0.2	0.05	6	<0.5	<0.2
2200N 8425E	Soil	11	0.55	168	0.089	<20	1.96	0.011	0.08	<0.1	0.04	1.9	<0.1	<0.05	5	<0.5	<0.2
2200N 8450E	Soil	17	0.47	223	0.081	<20	3.31	0.011	0.06	0.2	0.04	2.2	<0.1	0.14	7	<0.5	<0.2
2200N 8475E	Soil	16	0.59	133	0.051	<20	2.58	0.009	0.10	0.2	0.04	1.7	<0.1	0.10	4	<0.5	<0.2
2200N 8500E	Soil	15	0.49	253	0.040	<20	2.76	0.013	0.06	0.1	0.03	0.9	<0.1	0.09	11	<0.5	<0.2
2200N 8525E	Soil	7	0.50	141	0.015	<20	2.15	0.007	0.07	0.2	0.03	0.9	<0.1	<0.05	3	<0.5	<0.2
2200N 8550E	Soil	9	0.78	332	0.018	<20	1.76	0.009	0.08	<0.1	0.05	3.2	<0.1	0.08	3	<0.5	<0.2
2200N 8575E	Soil	6	0.69	258	0.005	<20	1.79	0.009	0.07	<0.1	0.02	1.5	<0.1	0.11	3	<0.5	<0.2
2200N 8600E	Soil	3	0.82	391	0.024	<20	1.57	0.006	0.07	0.1	0.01	3.2	<0.1	<0.05	3	<0.5	<0.2
2200N 8625E	Soil	4	1.04	332	0.138	<20	1.68	0.014	0.11	0.3	<0.01	5.9	<0.1	<0.05	4	<0.5	<0.2
2200N 8650E	Soil	8	0.95	168	0.038	<20	1.56	0.007	0.12	<0.1	<0.01	4.9	<0.1	<0.05	4	<0.5	<0.2
2200N 8675E	Soil	5	0.38	232	0.006	<20	1.53	0.005	0.10	0.1	0.02	0.8	<0.1	<0.05	3	<0.5	<0.2
2200N 8700E	Soil	9	0.45	124	0.015	<20	2.28	0.006	0.07	0.2	0.05	0.9	<0.1	0.07	5	<0.5	<0.2
CS-01	Soil	2	0.25	291	0.004	<20	0.83	0.024	1.13	<0.1	0.04	4.8	0.7	2.06	7	4.4	1.8
CS-02	Soil	2	0.68	142	0.004	<20	1.57	0.008	0.84	0.1	0.02	5.1	0.5	1.55	9	1.0	0.5
CS-03	Soil	3	0.68	148	0.004	<20	1.79	0.004	0.18	0.1	0.05	4.2	0.2	0.13	6	<0.5	<0.2
CS-04	Soil	<1	0.13	210	0.007	<20	0.61	0.010	0.72	<0.1	0.05	3.5	0.3	1.23	3	0.6	1.2
CS-05	Soil	8	0.86	134	0.008	<20	1.95	0.005	0.30	0.3	0.08	6.4	0.2	0.37	8	<0.5	0.3
CS-06	Soil	2	0.66	206	0.009	<20	1.98	0.014	1.04	0.2	0.05	9.8	0.7	1.87	9	2.4	1.2
CS-07	Soil	1	0.60	236	0.004	<20	1.41	0.023	1.22	<0.1	0.03	6.5	0.7	2.24	8	2.6	1.3
CS-08	Soil	2	0.56	172	0.010	<20	1.25	0.008	0.59	0.2	0.04	5.5	0.3	1.01	7	1.1	1.0
CS-09	Soil	<1	0.05	124	<0.001	<20	0.45	0.010	0.38	<0.1	<0.01	1.6	0.2	0.60	<1	0.9	0.6
CS-10	Soil	2	0.19	433	0.009	<20	0.83	0.017	0.94	0.1	0.05	3.4	0.5	1.58	5	3.1	0.9
CS-11	Soil	9	0.53	135	0.010	<20	1.90	0.012	0.71	0.2	0.06	6.8	0.7	1.24	7	0.9	0.4
CS-12	Soil	7	0.50	119	0.005	<20	1.43	0.007	0.24	0.1	0.05	3.9	0.2	0.32	5	<0.5	0.9
CS-13	Soil	6	0.72	75	0.003	<20	1.88	0.003	0.17	0.1	0.04	3.6	0.3	0.14	6	<0.5	<0.2
CS-14	Soil	8	0.41	206	0.006	<20	1.78	0.006	0.28	0.1	0.06	1.1	0.2	0.39	7	0.6	0.3



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 5 of 5

Part: 1 of 2

# CERTIFICATE OF ANALYSIS

**VAN17002055.1**

Method	Analyte	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm								
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
CS-15	Soil	0.9	13.7	14.6	70	1.2	5.6	21.6	4973	3.74	47.4	3.6	<0.1	19	1.5	0.5	0.2	68	0.16	0.262	14
RSL-01	Silt	2.1	19.2	71.2	223	0.9	4.2	10.2	1028	3.13	16.7	3.4	0.5	37	3.7	0.7	<0.1	50	0.47	0.109	20
RSL-02	Silt	0.5	14.0	7.2	47	0.2	3.2	6.3	908	2.71	26.2	4.4	0.8	30	0.2	1.9	<0.1	70	0.82	0.124	24
RSL-03	Silt	1.0	17.9	11.3	64	0.3	2.3	9.5	1801	2.98	20.7	1.7	2.2	24	0.3	1.8	<0.1	68	0.61	0.142	22
RSL-04	Silt	0.9	19.4	10.1	32	0.2	1.5	7.3	720	2.72	52.3	1.1	2.4	21	0.1	1.7	<0.1	61	0.65	0.136	19
RSL-05	Silt	0.4	12.2	8.2	40	0.1	1.7	5.4	843	1.83	4.9	1.1	2.1	56	0.1	0.4	<0.1	40	1.26	0.121	19
RSL-06	Silt	0.8	14.1	9.2	36	<0.1	1.6	7.4	615	2.40	16.3	1.4	1.9	19	<0.1	0.3	0.1	34	0.48	0.113	19
RSL-07	Silt	1.9	21.0	18.1	57	1.2	3.6	14.1	1200	3.53	15.3	17.2	1.7	27	0.4	0.5	0.2	33	0.37	0.114	23
RSL-08	Silt	3.7	20.8	25.5	49	1.0	2.4	16.0	1102	4.32	16.2	16.0	1.6	38	0.4	0.4	0.5	28	0.42	0.126	24



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 5 of 5

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

**VAN17002055.1**

Method	Analyte	AQ200															
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
CS-15	Soil	8	0.33	258	0.006	<20	1.59	0.005	0.16	<0.1	0.06	0.7	0.3	0.34	8	<0.5	<0.2
RSL-01	Silt	5	0.31	488	0.010	<20	0.91	0.005	0.12	0.2	0.06	3.3	<0.1	0.05	2	0.8	<0.2
RSL-02	Silt	4	0.45	228	0.030	<20	1.18	0.007	0.12	0.5	0.01	3.9	<0.1	<0.05	3	1.3	<0.2
RSL-03	Silt	3	0.93	115	0.025	<20	1.36	0.005	0.16	0.4	<0.01	4.8	0.1	<0.05	6	<0.5	<0.2
RSL-04	Silt	1	0.32	118	0.037	<20	0.76	0.007	0.19	0.5	<0.01	4.0	<0.1	<0.05	3	<0.5	<0.2
RSL-05	Silt	1	0.62	165	0.067	<20	2.00	0.010	0.15	0.2	0.02	4.8	<0.1	<0.05	4	<0.5	<0.2
RSL-06	Silt	1	0.52	270	0.007	<20	0.99	0.005	0.20	0.2	0.02	3.9	<0.1	<0.05	2	<0.5	<0.2
RSL-07	Silt	3	0.57	314	0.020	<20	0.98	0.005	0.18	0.1	0.03	3.6	0.1	0.17	3	<0.5	<0.2
RSL-08	Silt	<1	0.24	181	0.003	<20	0.65	0.008	0.20	0.1	0.02	4.2	0.1	0.33	2	<0.5	0.3



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 1 of 1 Part: 1 of 2

# QUALITY CONTROL REPORT

VAN17002055.1

Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1	
Pulp Duplicates																					
2000N 8050E	Soil	0.3	7.1	5.7	35	<0.1	5.5	3.9	519	1.57	34.7	<0.5	<0.1	46	0.2	1.5	<0.1	47	0.61	0.134	12
REP 2000N 8050E	QC	0.3	7.5	6.1	34	0.1	6.0	3.9	553	1.69	34.9	1.4	<0.1	48	0.2	1.6	<0.1	50	0.62	0.132	12
2200N 7950E	Soil	0.8	27.3	11.8	49	1.3	11.0	8.3	1171	2.45	16.0	1.3	0.3	30	0.4	0.7	0.1	75	0.88	0.229	42
REP 2200N 7950E	QC	0.7	25.7	11.2	48	1.2	10.3	7.7	1098	2.28	15.0	2.6	0.3	28	0.4	0.6	0.1	71	0.83	0.237	40
CS-06	Soil	17.8	21.4	20.0	74	4.7	2.0	10.8	513	10.39	184.1	44.2	3.0	78	0.6	1.2	0.7	102	0.04	0.470	29
REP CS-06	QC	19.2	21.2	19.2	76	4.5	1.9	10.8	535	10.68	183.2	47.8	3.0	77	0.5	1.3	0.6	98	0.04	0.461	29
Reference Materials																					
STD DS11	Standard	12.5	148.5	130.8	329	1.7	73.6	13.4	992	2.97	41.4	84.4	7.0	62	2.3	7.8	11.9	49	1.03	0.065	16
STD DS11	Standard	14.9	156.3	141.6	348	1.8	79.0	14.7	1065	3.15	42.0	99.2	6.9	64	2.0	7.1	11.7	59	1.03	0.066	18
STD DS11	Standard	12.2	137.5	136.4	345	1.6	70.7	12.6	1060	3.07	42.9	58.9	7.3	64	2.3	6.7	11.9	48	1.04	0.070	16
STD OREAS45EA	Standard	1.7	655.5	13.5	28	0.3	341.4	50.1	405	22.69	11.4	49.1	9.9	4	<0.1	0.5	0.3	256	0.03	0.028	7
STD OREAS45EA	Standard	1.3	656.7	13.5	29	0.2	347.6	49.9	374	20.28	9.0	44.6	10.0	3	<0.1	0.2	0.3	266	0.03	0.027	6
STD OREAS45EA	Standard	1.4	593.2	13.0	30	0.2	334.9	46.2	374	20.86	10.2	53.8	9.8	4	<0.1	0.3	0.3	270	0.04	0.030	6
STD OREAS45EA Expected		1.6	709	14.3	31.4	0.26	381	52	400	23.51	10.3	53	10.7	3.5	0.03	0.32	0.26	303	0.036	0.029	7.06
STD DS11 Expected		13.9	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701	18.6
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	3	<0.01	<0.001	<1
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	<1



Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

**Client: Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver British Columbia V6B 1L8 Canada

Project: 97  
Report Date: September 26, 2017

Page: 1 of 1

Part: 2 of 2

# QUALITY CONTROL REPORT

VAN17002055.1

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																	
2000N 8050E	Soil	7	0.58	64	0.033	<20	2.60	0.008	0.07	0.2	0.06	0.7	<0.1	<0.05	8	<0.5	<0.2
REP 2000N 8050E	QC	7	0.59	66	0.035	<20	2.80	0.008	0.07	0.2	0.05	0.9	<0.1	<0.05	8	<0.5	<0.2
2200N 7950E	Soil	15	0.55	282	0.014	<20	2.19	0.006	0.13	0.1	0.06	2.1	0.1	0.21	6	<0.5	<0.2
REP 2200N 7950E	QC	14	0.53	269	0.013	<20	2.10	0.006	0.13	0.1	0.08	2.3	0.1	0.09	6	<0.5	<0.2
CS-06	Soil	2	0.66	206	0.009	<20	1.98	0.014	1.04	0.2	0.05	9.8	0.7	1.87	9	2.4	1.2
REP CS-06	QC	2	0.63	208	0.009	<20	1.99	0.014	1.02	<0.1	0.04	9.9	0.6	1.86	9	2.7	1.1
Reference Materials																	
STD DS11	Standard	57	0.85	423	0.086	<20	1.07	0.057	0.38	3.1	0.23	3.2	4.7	0.27	5	1.9	5.2
STD DS11	Standard	60	0.81	424	0.095	<20	1.05	0.067	0.38	2.5	0.24	3.2	5.0	0.25	4	1.8	4.6
STD DS11	Standard	54	0.81	433	0.079	<20	1.07	0.066	0.39	2.9	0.25	2.9	4.8	0.28	5	2.2	4.9
STD OREAS45EA	Standard	799	0.09	139	0.093	<20	2.89	0.019	0.05	<0.1	<0.01	77.7	<0.1	<0.05	12	0.9	<0.2
STD OREAS45EA	Standard	813	0.10	130	0.095	<20	2.78	0.021	0.05	<0.1	<0.01	75.3	<0.1	<0.05	11	0.7	<0.2
STD OREAS45EA	Standard	807	0.09	142	0.085	<20	2.83	0.021	0.05	<0.1	<0.01	72.5	<0.1	<0.05	12	1.2	<0.2
STD OREAS45EA Expected		849	0.095	148	0.0984		3.13	0.02	0.053			78	0.072	0.036	12.4	0.78	0.07
STD DS11 Expected		61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	0.3	3.1	4.9	0.2835	4.7	1.9	4.56
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



**BUREAU  
VERITAS**

MINERALS

## ► AQ300, AQ200

<b>Package Description</b>	Geochemical aqua regia digestion
<b>Sample Digestion</b>	HNO <sub>3</sub> -HCl acid digestion
<b>Instrumentation Method</b>	ICP-ES (AQ300, AQ200), ICP-MS (AQ200)
<b>Legacy Code</b>	1D, 1DX
<b>Applicability</b>	Sediment, Soil, Non-mineralized Rock and Drill Core

## ► METHOD DESCRIPTION

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO<sub>3</sub> and DI H<sub>2</sub>O for one hour in a heating block or hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g are analyzed optional 15g or 30g digestion available for AQ200.

### Limitations:

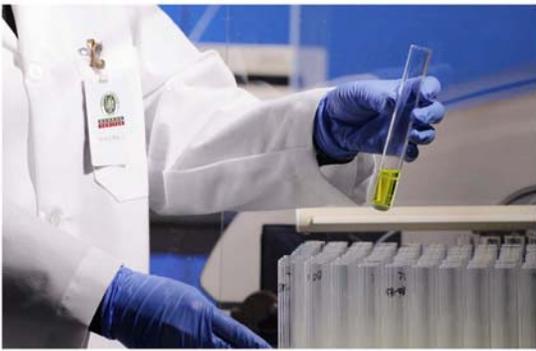
Au solubility can be limited by refractory and graphitic samples.

ELEMENT	AQ300 DETECTION	AQ200 DETECTION	UPPERLIMIT
Ag	0.3 ppm	0.1 ppm	100 ppm
Al*	0.01 %	0.01 %	10 %
As	2 ppm	0.5 ppm	10000 ppm
Au	-	0.5 ppb	100 ppm
B*^	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	2000 ppm
Ca*	0.01 %	0.01 %	40 %
Cd	0.5 ppm	0.1 ppm	2000 ppm
Co	1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	10000 ppm
Fe*	0.01 %	0.01 %	40 %
Ga*	-	1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	50 ppm
K*	0.01 %	0.01 %	10 %
La*	1 ppm	1 ppm	10000 ppm
Mg*	0.01 %	0.01 %	30 %

ELEMENT	AQ300 DETECTION	AQ200 DETECTION	UPPERLIMIT
Mn*	2 ppm	1 ppm	10000 ppm
Mo	1 ppm	0.1 ppm	2000 ppm
Na*	0.01 %	0.001 %	5 %
Ni	1 ppm	0.1 ppm	10000 ppm
P*	0.001 %	0.001 %	5 %
Pb	3 ppm	0.1 ppm	10000 ppm
S	0.05 %	0.05 %	10 %
Sb	3 ppm	0.1 ppm	2000 ppm
Sc	-	0.1 ppm	100 ppm
Se	-	0.5 ppm	100 ppm
Sr*	1 ppm	1 ppm	10000 ppm
Te	-	0.2 ppm	1000 ppm
Th*	2 ppm	0.1 ppm	2000 ppm
Ti*	0.01 %	0.001 %	5 %
Tl	5 ppm	0.1 ppm	1000 ppm
U*+	8 ppm	0.1 ppm	2000 ppm
V*	1 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	100 ppm
Zn	1 ppm	1 ppm	10000 ppm

\* Solubility of some elements will be limited by mineral species present. ^Detection limit = 1 ppm for 15g / 30g analysis. + Available upon request





**BUREAU  
VERITAS**

MINERALS

## ► FA100, FA300, FA400 & FA500

<b>Package Description</b>	Precious Metals by Lead Collection Fire Assay
<b>Samples Digestion</b>	Lead-collection fire assay fusion
<b>Instrumentation Method</b>	ICP-MS (FA100), ICP-ES (FA300), AAS (FA400), Gravimetric (FA500)
<b>Legacy Code</b>	3B, G6
<b>Applicability</b>	Rock, Drill Core

## ► METHOD DESCRIPTION

30 or 50g of prepared sample is custom-blended with fire-assay fluxes, PbO litharge and a silver inquart. Firing the charge at 1050°C liberates Ag, Au and PGEs that report to the molten Pb-metal phase. After cooling the Pb button is recovered, placed in a cupel and fired at 950°C to render a Ag, Au and PGEs dore bead. The bead is then either digested with nitric and hydrochloric acids for instrumentation determination or weighed and parted with nitric acid to dissolve Ag leaving gold which is weighed directly. Ag is determined by difference of the dore bead from the gold in gravimetric analysis.

ELEMENT	DETECTION LIMIT	UPPER LIMIT
<b>FA100 – ICP-MS</b>		
<b>Au</b>	1 ppb	1 ppm
<b>Pt</b>	0.1 ppb	1 ppm
<b>Pd</b>	0.5 ppb	1 ppm
<b>FA300-ICP-ES</b>		
<b>Au</b>	2 ppb	10 ppm
<b>Pt</b>	3 ppb	10 ppm
<b>Pd</b>	2 ppb	10 ppm
<b>FA400-AAS</b>		
<b>Au</b>	5 ppb	10 ppm
<b>FA500-Gravimetric</b>		
<b>Au</b>	0.9 ppm	
<b>Ag</b>	20 ppm	

Note: Sulphide rich samples may require a 15g or smaller sample charge for proper fusion.



**Appendix B**

---

**Airborne Magnetic Survey Logistics Report  
(P.E. Walcott and Associates)**

**A LOGISTICS REPORT**

**ON**

**AIRBORNE MAGNETIC SURVEYING**

**PIL PROJECT  
OMINECA MINING DIVISION  
BRITISH COLUMBIA  
57° 18'N, 126° 35'W  
NTS 94E/07**

**Claim Surveyed**

**316952,515084,516783**

**Work Dates**

**June 5<sup>th</sup>-7<sup>th</sup>, 2017**

**for**

**FINLAY MINERALS LTD.**

**Vancouver, British Columbia**

**by**

**PETER E. WALCOTT & ASSOCIATES LIMITED**

**COQUITLAM, BRITISH COLUMBIA  
SEPTEMBER 2018**

## **TABLE OF CONTENTS**

	<b><u>Page</u></b>
INTRODUCTION	3
PROPERTY LOCATION AND ACCESS	4
SURVEY SPECIFICATIONS	6

### **APPENDIX**

COST OF SURVEY  
PERSONNEL EMPLOYED ON SURVEY

### **ACCOMPANYING MAPS**

Line Location and Claim Map	1:10,000
Contours of Total Field Intensity (nT)	1:10,000
Contours of Calculated 1 <sup>st</sup> Order Vertical Derivative of TMI	1:10,000

## **INTRODUCTION.**

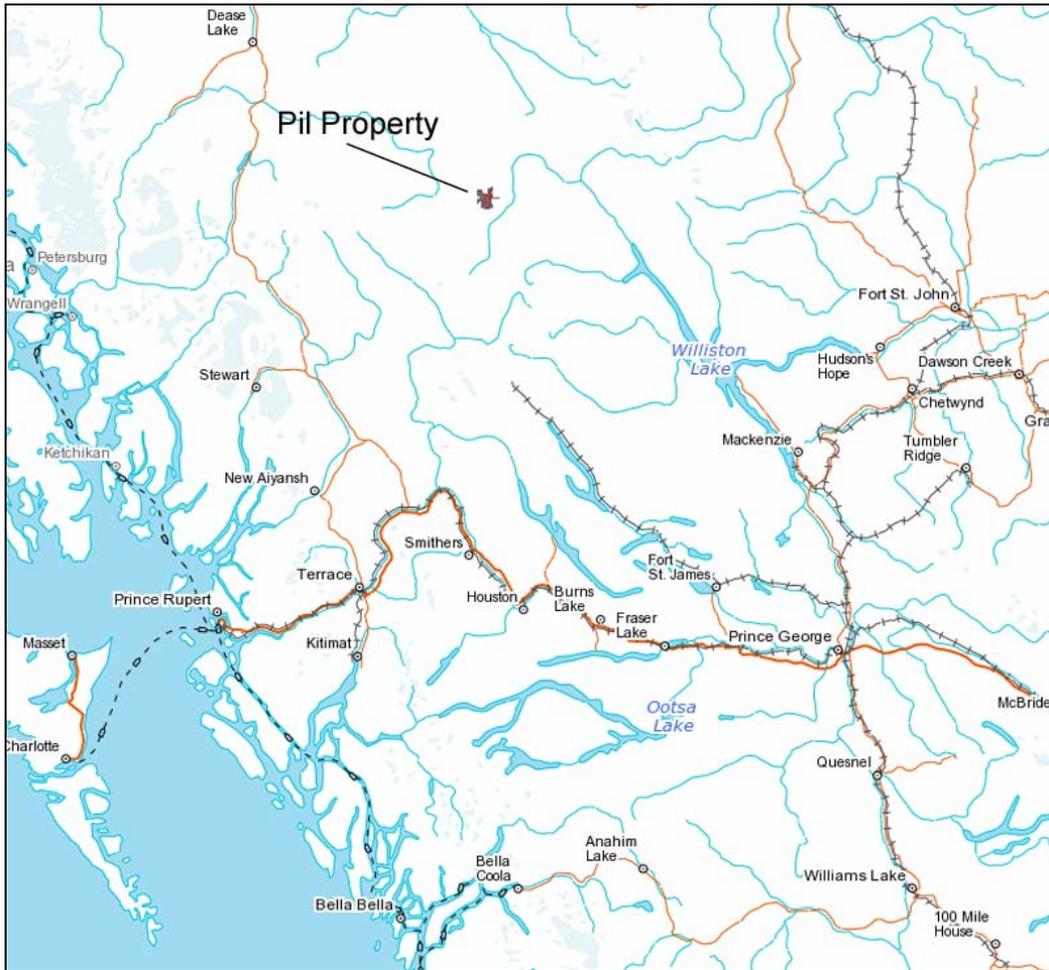
Between June 5<sup>th</sup> and 7<sup>th</sup>, 2017, Peter E. Walcott & Associates Limited undertook airborne magnetics surveying for Finlay Resources Inc. on portions of their Pil property located in north-central, British Columbia.

The surveying was carried out on east-west flight lines with orthogonal north-south tie lines. The spacing for the flight lines and tie lines was 100 meters and 500 meters respectively.

**PROPERTY LOCATION AND ACCESS.**

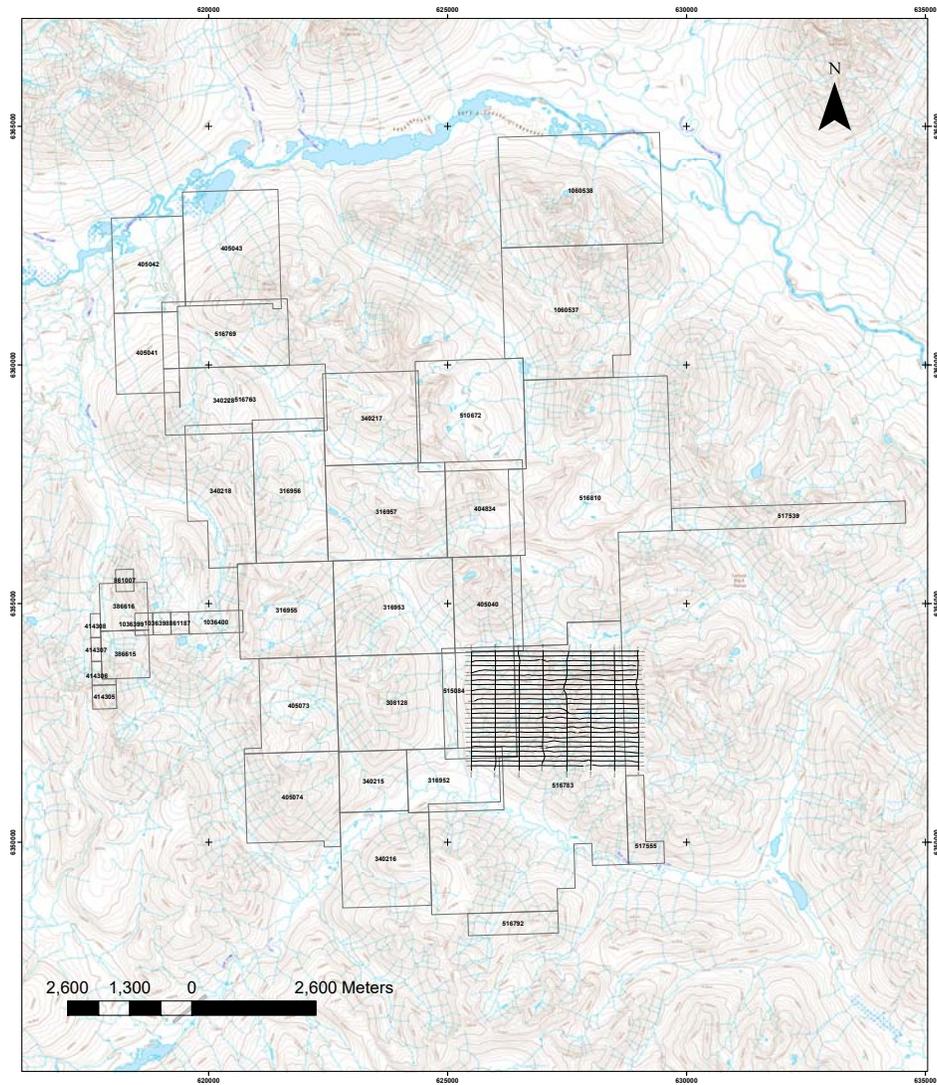
The Pil project is located some 50 kilometers NNW of the Kerness copper-gold mine within the Omineca Mining Division of British Columbia.

Access to the property is gained by way of the Omineca resource road. Parts of the property are accessible by road, however access to the Pillar East Zone is by way of helicopter.



*Property Location Map*

**PROPERTY LOCATION AND ACCESS con't**



*Claim & Flight Line Location Map*

## **SURVEY SPECIFICATIONS.**

### *The Airborne Magnetic Survey.*

The airborne magnetic survey was conducted using a bird type system towed on a 65' line by a Bell 206 B2 CF-JOR operated by Fireweed Helicopters Ltd of Whitehorse, Yukon.

The bird unit consists of three main components – C-824 Cesium Magnetometer manufactured by Geometrics San Jose, California, AR3000 Laser Range Finder manufactured by Acuity of Portland, Oregon and a 19x GPS manufactured by Garmin International Inc. of Kansas City, Kansas.

The C-824 Cesium Magnetometer is a highly sensitive magnetic sensor capable of providing sensitivity up to 0.01 nT and sampling rates up to 1000 Hz. On this survey a sampling rate of 10 Hz was employed.

The respective components were in turn connected to the helicopter via a shielded multi-conductor cable within the tow line for power and data transmission to the logging units on the helicopter.

Flight line navigation data was obtained using Hemisphere R330 GNSS receiver with a 10 Hz update rate.

Data logging and navigation were carried out utilizing Geometrics MagLogPro software on a Panasonic CF-19 Toughbook computer with a secondary 7" daylight viewable pilot navigation monitor.

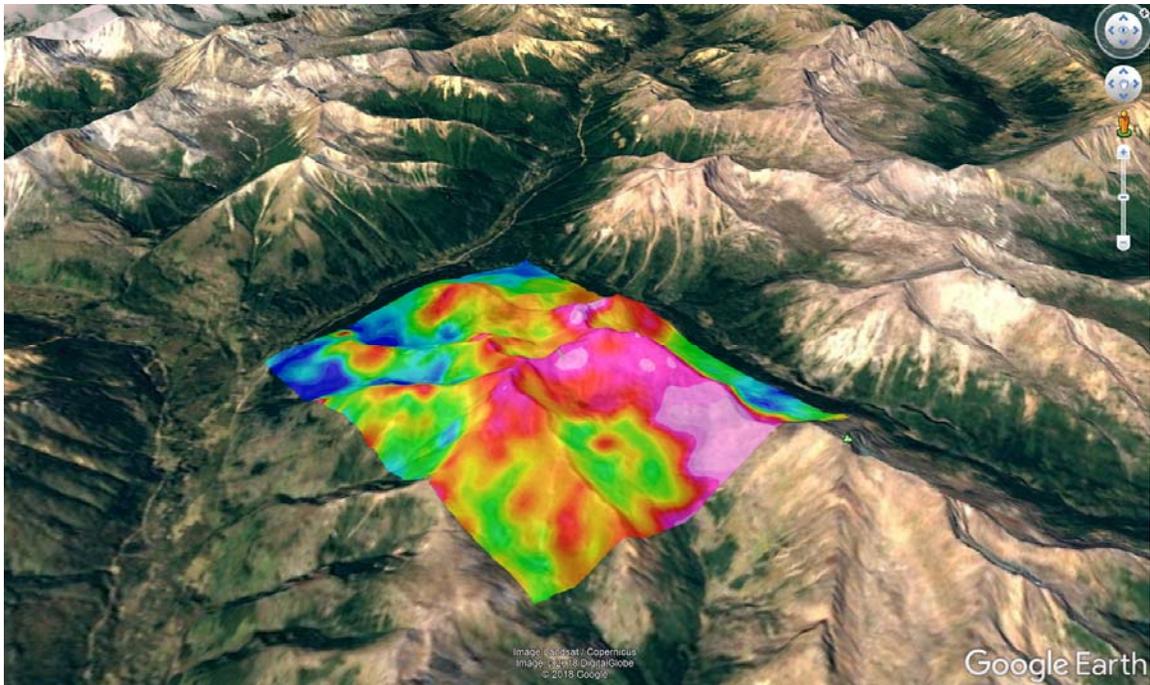
In addition to the airborne unit the survey also utilized two GSM 19 proton precession magnetometer manufactured by GEM Instruments of Richmond Hill, Ontario as base magnetometers. These instruments measure variations in the total intensity of the earth's magnetic field to an accuracy of plus or minus one nanotesla.

## SURVEY SPECIFICATIONS cont'd

The survey coverage consisted of some 25 east-west orientated flight lines and 8 orthogonal tie lines.

The survey was carried out with a mean bird height of some 53.9 meters.

Survey Area	# of Lines	# of Tie Lines	Total Distance
Block 1	25	8	106 km



Block 1 – Survey Area

## **DATA PROCESSING AND PRESENTATION.**

The data was first exported from MagLogPro, where the various sensor inputs were merged into Geosoft compatible ascii files. This merged dataset was then loaded into Geosoft Oasis Montaj for data reduction and processing.

The data was first corrected for diurnal magnetic drift, utilizing the magnetic base stations. The data was then lag corrected to account for positioning errors due to instrument delay and other positional errors. Tie line levelling was then undertaken prior to gridding.

Gridding was then undertaken on the levelled line data utilizing Geosoft's rangrid algorithm using a 15 meter cell size.

The reduced and leveled data set was then subject to several filtering techniques using the Geosoft MagMap module for evaluation and presentation.

The magnetic data for each of the respective blocks presented in this report is Contours of Total Magnetic Intensity, and Contours Calculated First Vertical Derivative, at a scale of 1:10,000.

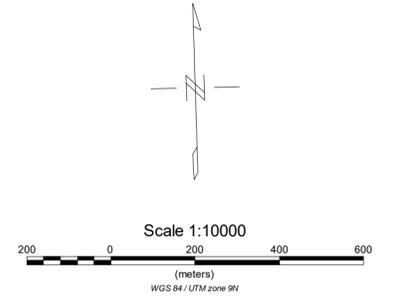
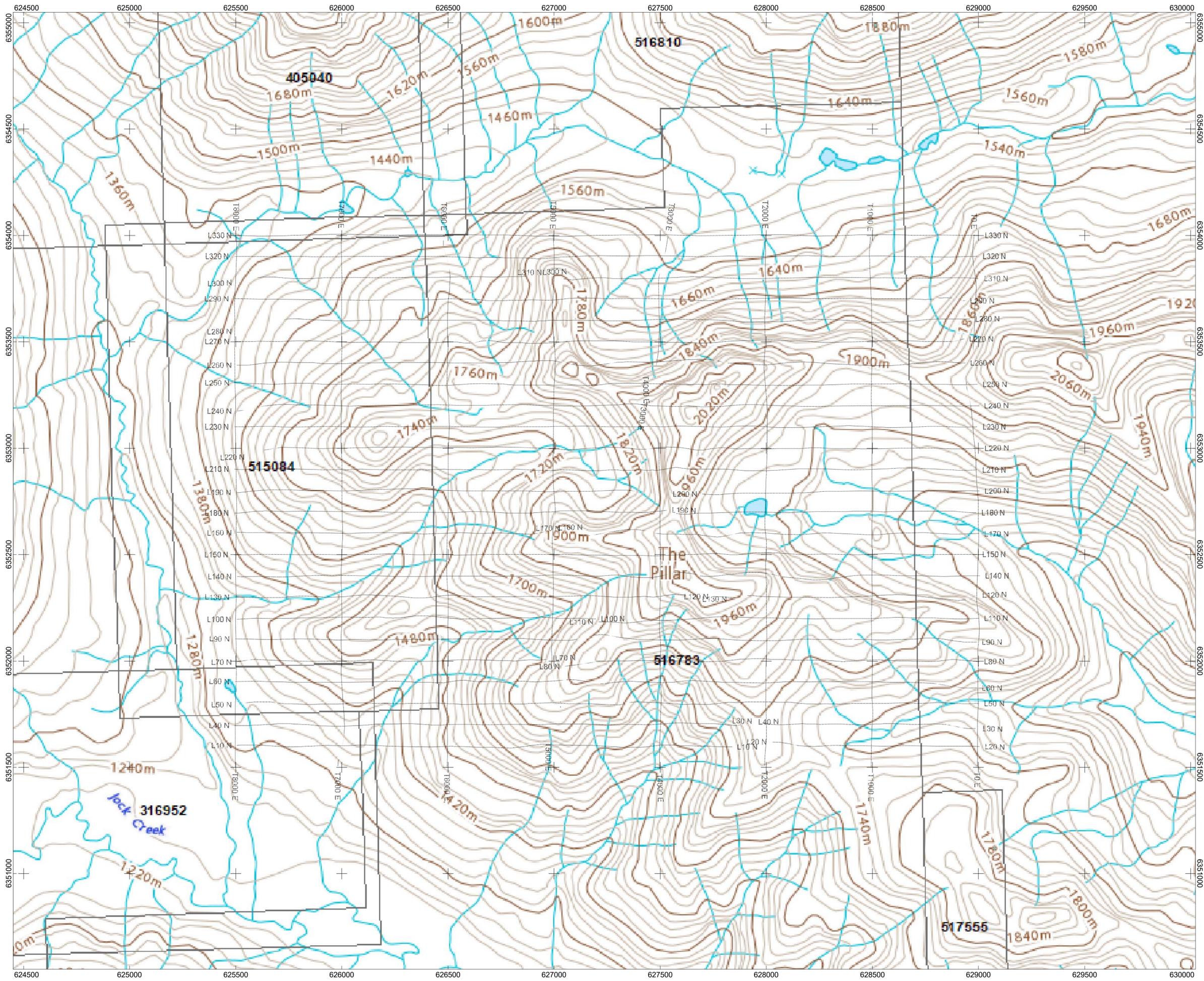
**APPENDIX**

## **COST OF SURVEY**

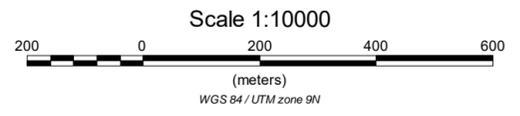
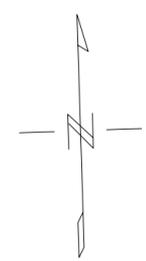
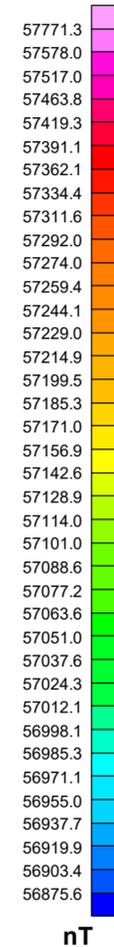
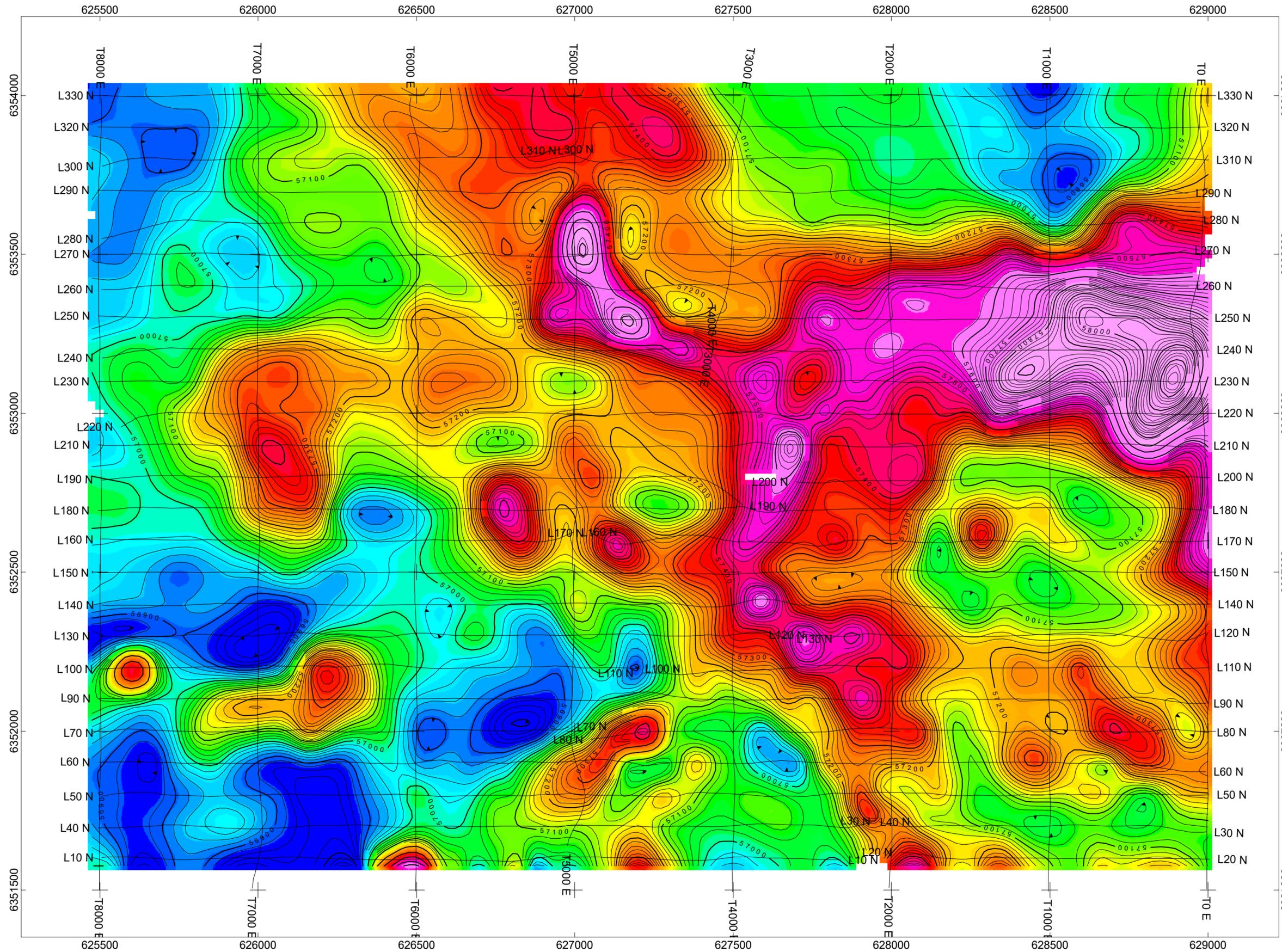
Peter E. Walcott & Associates Limited undertook the survey on a daily basis, with helicopter time bill directly. The total cost of the survey including mobilization and accommodation was \$7,193.87

**PERSONNEL EMPLOYED ON SURVEY.**

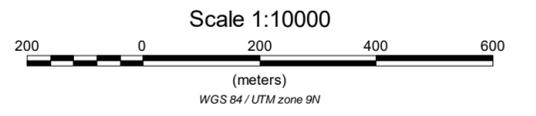
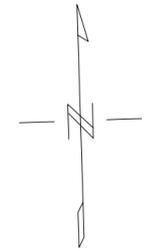
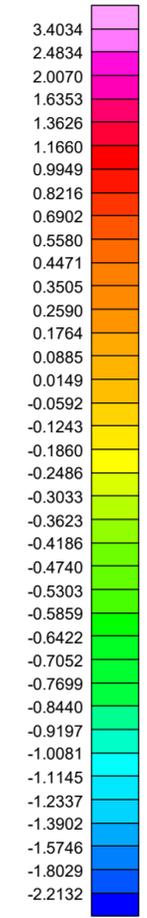
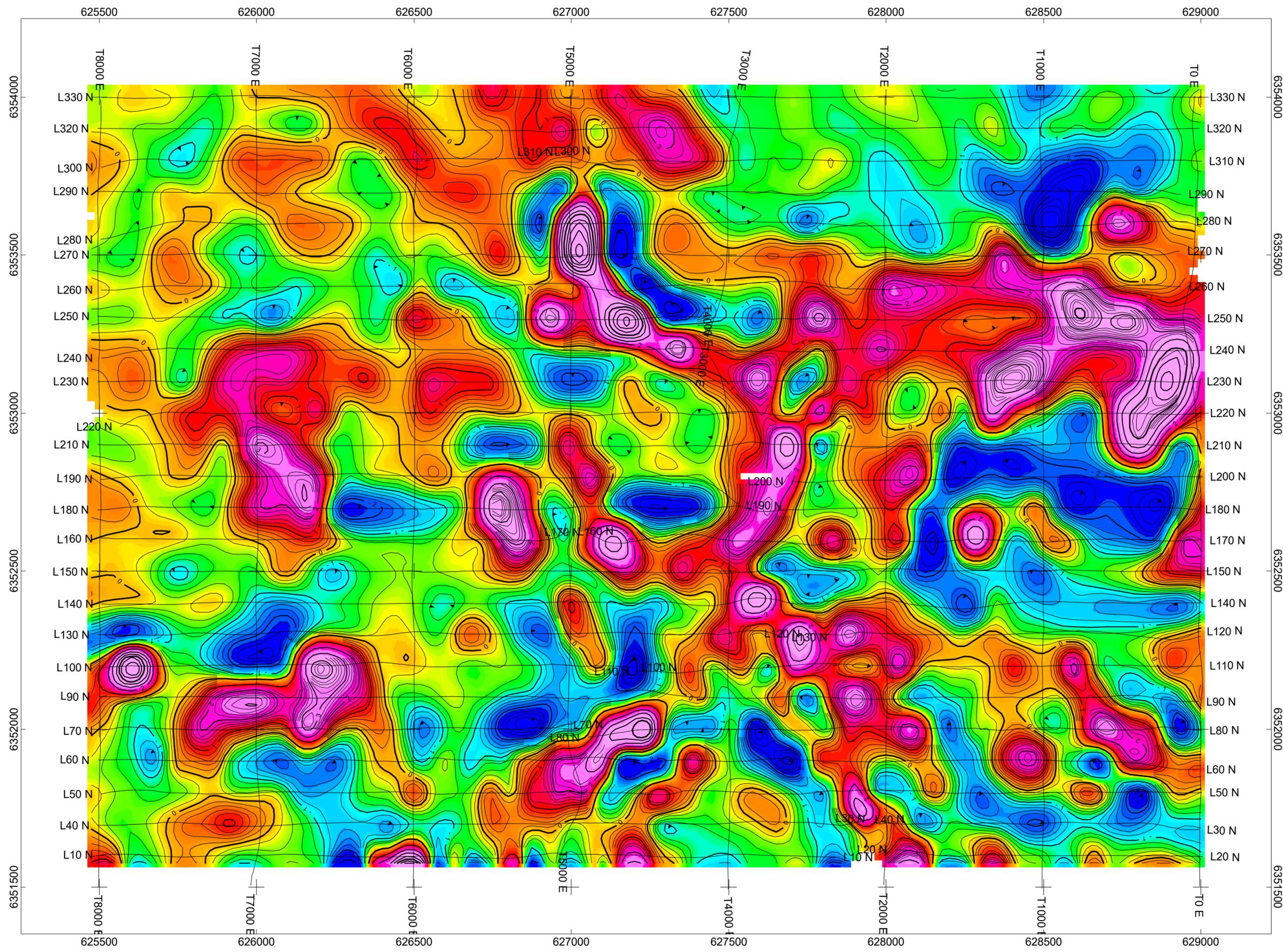
<b>Name</b>	<b>Occupation</b>	<b>Address</b>	<b>Dates</b>
Alex Walcott	Geophysicist	111-17 Fawcett Rd. Coquitlam, B.C. V3K 6V2	June 5 <sup>th</sup> -7 <sup>th</sup> 2017
West Luck	Pilot Fireweed Helicopters	Whitehorse, Yk	“



<b>FINLAY MINERALS LTD.</b>
<b>AIRBORNE MAGNETIC SURVEY CLAIM AND LINE LOCATION MAP</b>
PIL PROPERTY TOODOGGONE JUNE 2017
<b>PETER E. WALCOTT &amp; ASSOCIATES LIMITED</b>



<b>FINLAY MINERALS LTD.</b>
<b>AIRBORNE MAGNETIC SURVEY CONTOURS OF TOTAL FIELD INTENSITY (nT)</b>
PIL PROPERTY TOODOGGONE JUNE 2017
<b>PETER E. WALCOTT &amp; ASSOCIATES LIMITED</b>

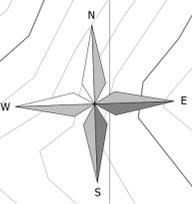
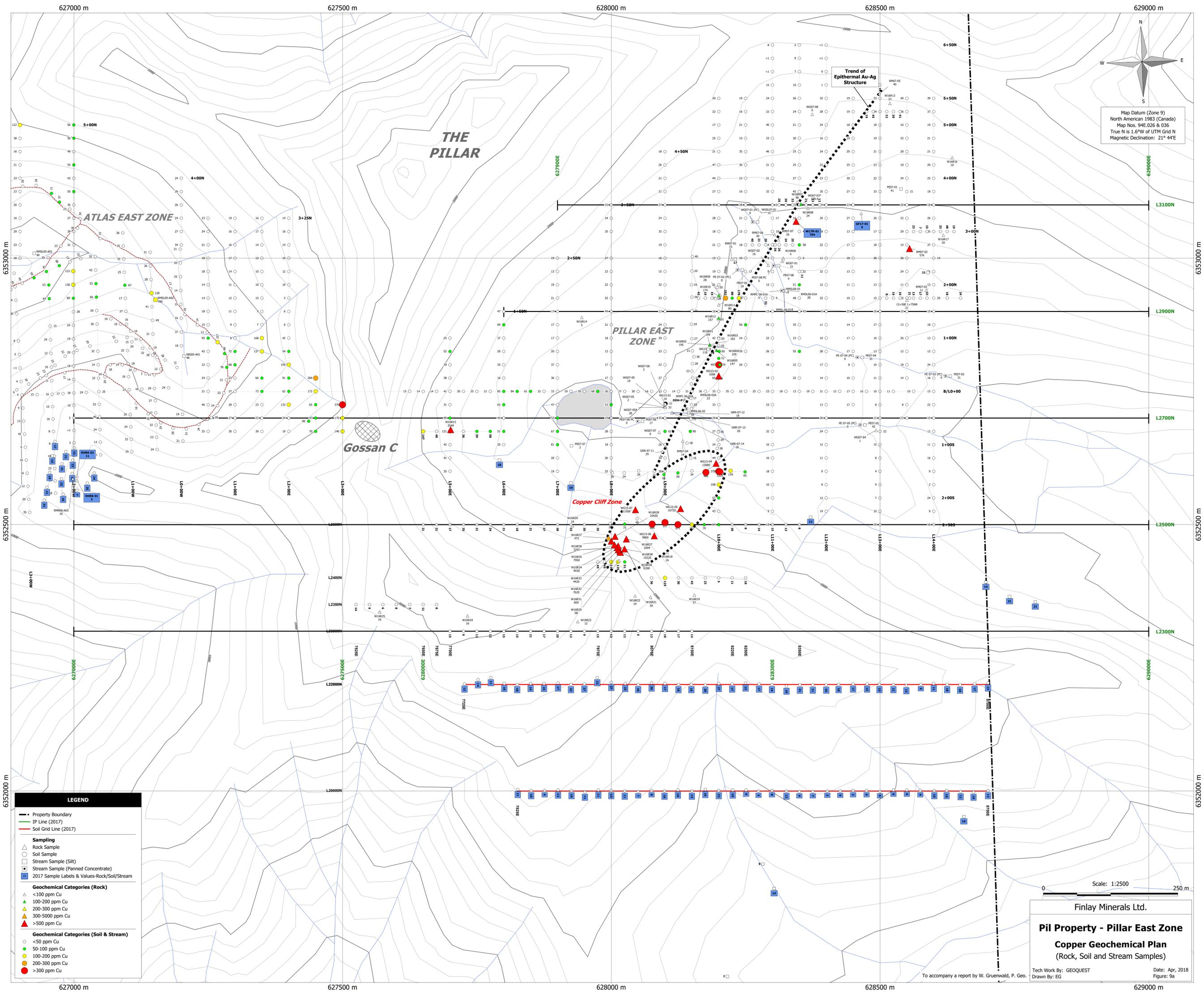


<b>FINLAY MINERALS LTD.</b>
<b>AIRBORNE MAGNETIC SURVEY CONTOURS OF TOTAL FIELD INTENSITY (nT)</b>
PIL PROPERTY TOODOGGONE JUNE 2017
<b>PETER E. WALCOTT &amp; ASSOCIATES LIMITED</b>

**Appendix C**

---

**Pillar East Geochemical Plans  
(Cu, Au, Ag)**



**LEGEND**

- Property Boundary
- IP Line (2017)
- Soil Grid Line (2017)

**Sampling**

- Rock Sample
- Soil Sample
- Stream Sample (Silt)
- Stream Sample (Panned Concentrate)
- 2017 Sample Labels & Values-Rock/Soil/Stream

**Geochemical Categories (Rock)**

- <100 ppm Cu
- 100-200 ppm Cu
- 200-300 ppm Cu
- 300-5000 ppm Cu
- >500 ppm Cu

**Geochemical Categories (Soil & Stream)**

- <50 ppm Cu
- 50-100 ppm Cu
- 100-200 ppm Cu
- 200-300 ppm Cu
- >300 ppm Cu

Scale: 1:2500

0 250 m

Finlay Minerals Ltd.

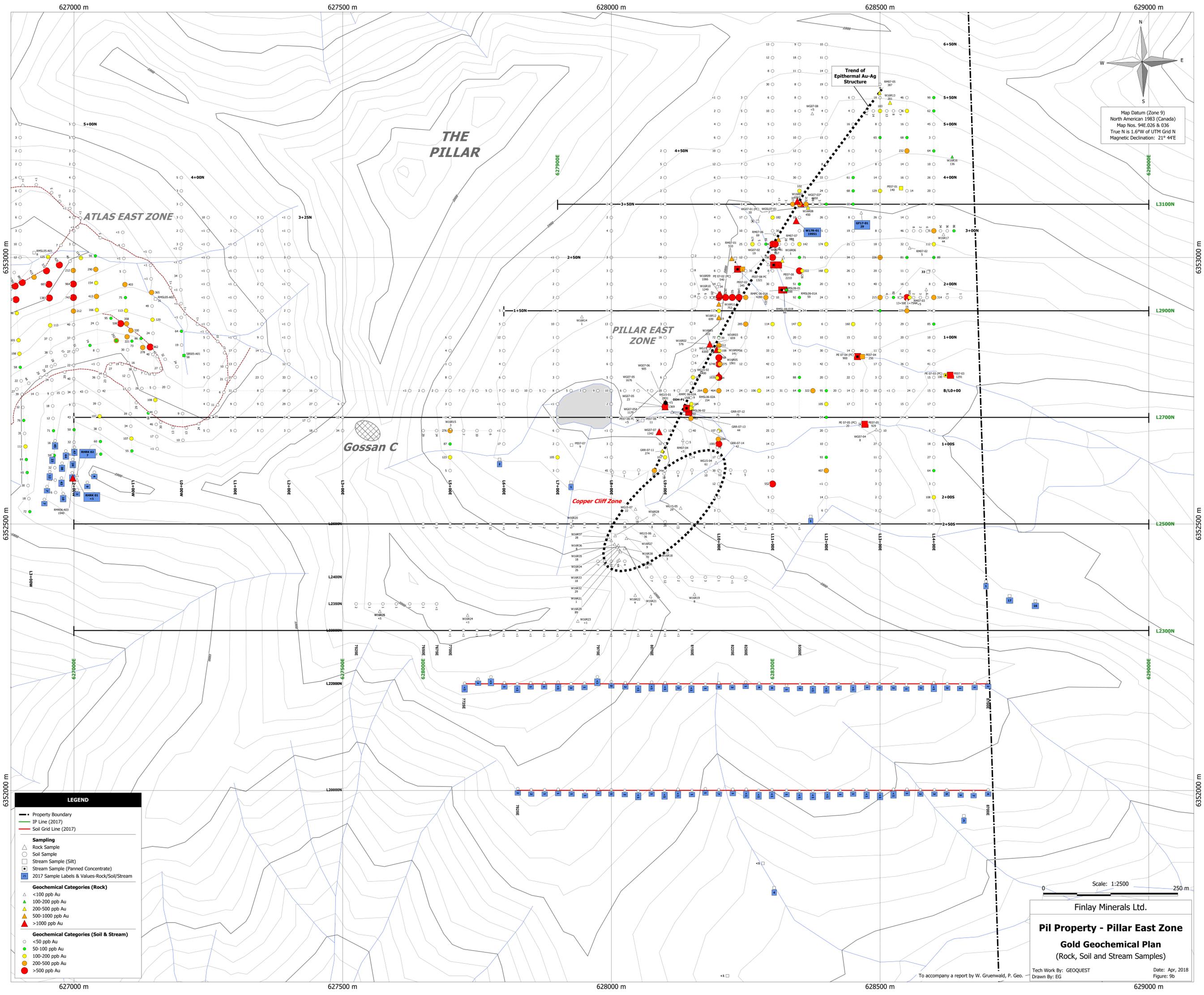
**Pil Property - Pillar East Zone**

**Copper Geochemical Plan**  
 (Rock, Soil and Stream Samples)

Tech Work By: GEOQUEST  
 Drawn By: EG

Date: Apr, 2018  
 Figure: 9a

To accompany a report by W. Gruenwald, P. Geo.



Map Datum (Zone 9)  
 North American 1983 (Canada)  
 Map Nos. 94E.026 & 036  
 True N is 1.6°W of UTM Grid N  
 Magnetic Declination: 21° 44'E

**LEGEND**

- Property Boundary
- IP Line (2017)
- Soil Grid Line (2017)

**Sampling**

- Rock Sample
- Soil Sample
- Stream Sample (Silt)
- Stream Sample (Panned Concentrate)
- 2017 Sample Labels & Values-Rock/Soil/Stream

**Geochemical Categories (Rock)**

- <100 ppb Au
- 100-200 ppb Au
- 200-500 ppb Au
- 500-1000 ppb Au
- >1000 ppb Au

**Geochemical Categories (Soil & Stream)**

- <50 ppb Au
- 50-100 ppb Au
- 100-200 ppb Au
- 200-500 ppb Au
- >500 ppb Au

Scale: 1:2500

0 250 m

Finlay Minerals Ltd.

**Pil Property - Pillar East Zone**

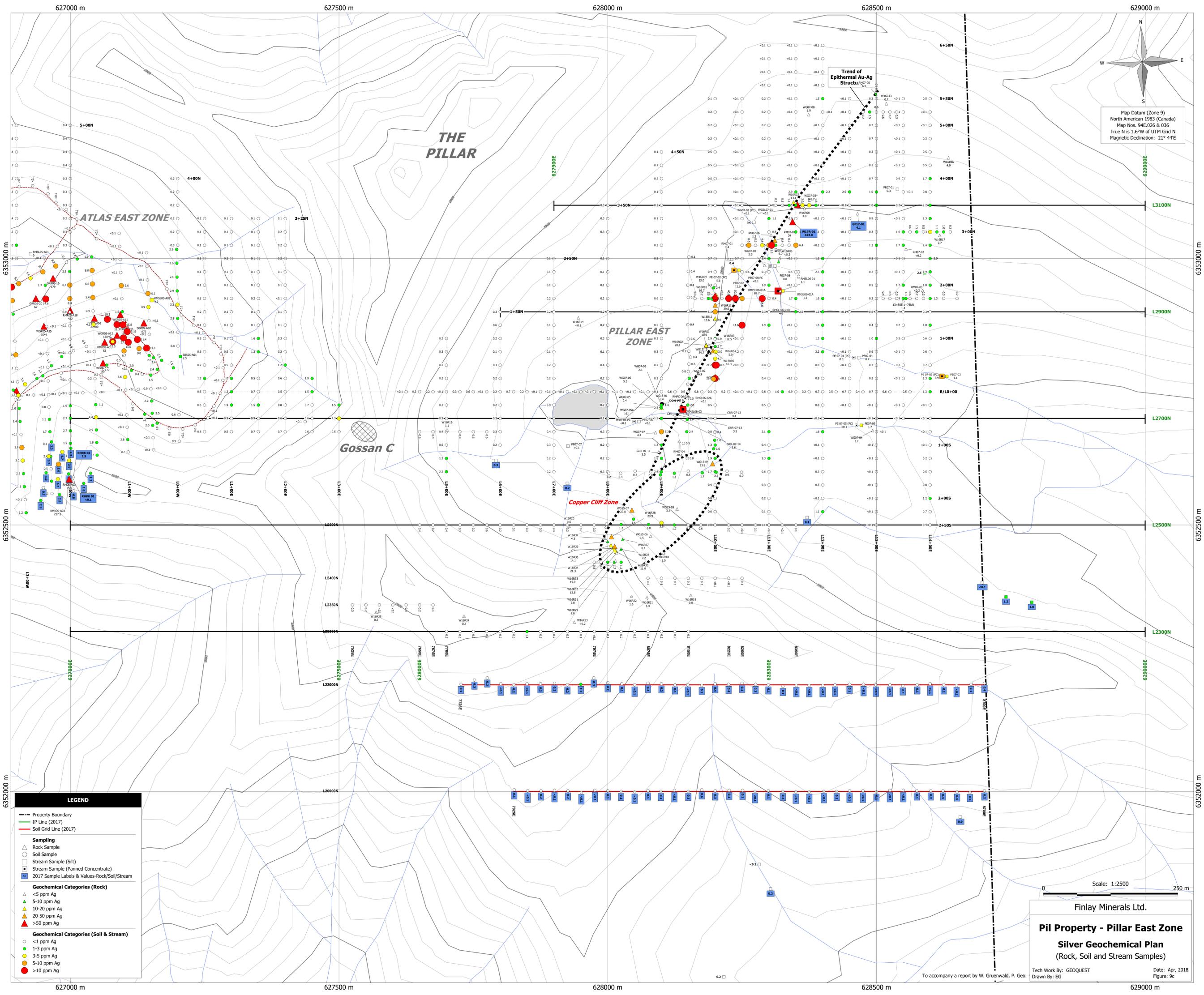
**Gold Geochemical Plan**

(Rock, Soil and Stream Samples)

Tech Work By: GEOQUEST  
 Drawn By: EG

Date: Apr, 2018  
 Figure: 9b

To accompany a report by W. Gruenwald, P. Geo.



Map Datum (Zone 9)  
 North American 1983 (Canada)  
 Map Nos. 94E.026 & 036  
 True N is 1.6°W of UTM Grid N  
 Magnetic Declination: 21° 44'E

**LEGEND**

- Property Boundary
- IP Line (2017)
- Soil Grid Line (2017)

**Sampling**

- Rock Sample
- Soil Sample
- Stream Sample (Silt)
- Stream Sample (Panned Concentrate)
- 2017 Sample Labels & Values-Rock/Soil/Stream

**Geochemical Categories (Rock)**

- <5 ppm Ag
- 5-10 ppm Ag
- 10-20 ppm Ag
- 20-50 ppm Ag
- >50 ppm Ag

**Geochemical Categories (Soil & Stream)**

- <1 ppm Ag
- 1-3 ppm Ag
- 3-5 ppm Ag
- 5-10 ppm Ag
- >10 ppm Ag

Scale: 1:2500  
 0 250 m

Finlay Minerals Ltd.  
**Pil Property - Pillar East Zone**  
**Silver Geochemical Plan**  
 (Rock, Soil and Stream Samples)

To accompany a report by W. Gruenwald, P. Geo. Tech Work By: GEOQUEST Date: Apr, 2018  
 Drawn By: EG Figure: 9c

**Appendix D**

---

**Induced Polarization Report  
(P.E. Walcott and Associates)**

**A REPORT**

**ON**

**INDUCED POLARIZATION SURVEYING**

**PIL PROJECT  
OMINECA MINING DIVISION  
BRITISH COLUMBIA  
57° 18'N, 126° 35'W  
NTS 94E/07**

**Claim Surveyed**

**516783**

**Work Dates**

**August 30<sup>th</sup> - September 8<sup>th</sup>, 2017**

**for**

**FINLAY MINERALS LTD.**

**Vancouver, British Columbia**

**by**

**PETER E. WALCOTT & ASSOCIATES LIMITED**

**COQUITLAM, BRITISH COLUMBIA  
DECEMBER 2017**

## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	3
PROPERTY LOCATION AND ACCESS	4
PREVIOUS WORK	6
PURPOSE	7
PROPERTY GEOLOGY	8
SURVEY SPECIFICATIONS	9
DISCUSSION OF RESULTS	11
SUMMARY, CONCLUSIONS & RECOMMENDATIONS	12

### APPENDIX

PERSONNEL EMPLOYED ON SURVEY

### ACCOMPANYING MAPS

Line Location and Claim Map	1:10,000
25 metre Dipole Pseudo Section - 27+00N	1:2,500
Pole-Dipole Pseudo Sections 23+00N, 25+00N, 27+00N, 29+00N, 31+00N	1:10,000
Dipole-Pole Pseudo Sections 23+00N, 25+00N, 27+00N, 29+00N, 31+00N	1:10,000
2D Inverted Pseudo Sections 23+00N, 25+00N, 27+00N, 29+00N, 31+00N	1:10,000
Plan Maps: Apparent Chargeability, PDP & DPP 23+00N, 25+00N, 27+00N, 29+00N, 31+00N	1:5,000
Plan Maps: Apparent Resistivity, PDP & DPP 23+00N, 25+00N, 27+00N, 29+00N, 31+00N	1:5,000

## **INTRODUCTION.**

Between August 30<sup>th</sup>, and September 8<sup>th</sup>, 2017, Peter E. Walcott & Associates Limited undertook induced polarization (IP) surveying for Finlay Resources Inc. on its Pil property located north-west of the Kemess Mine in north-central, British Columbia.

The surveying was conducted utilizing the pole-dipole technique measuring the 0.5<sup>th</sup> to 10.5<sup>th</sup> separations utilizing a 100 metre dipole separation in a bi-directional pole-dipole & dipole-pole configuration.

In addition, one short test line was conducted utilizing the pole-dipole technique measuring the 1<sup>st</sup> to 10<sup>th</sup> separations utilizing a 25 metre dipole separation in a dipole-geometry.

A total of 5 east-west traverses were completed for a total of some 8.3 kilometres of 100 metre dipole and 600 metres of the 25 metre dipole induced polarization surveying was completed.

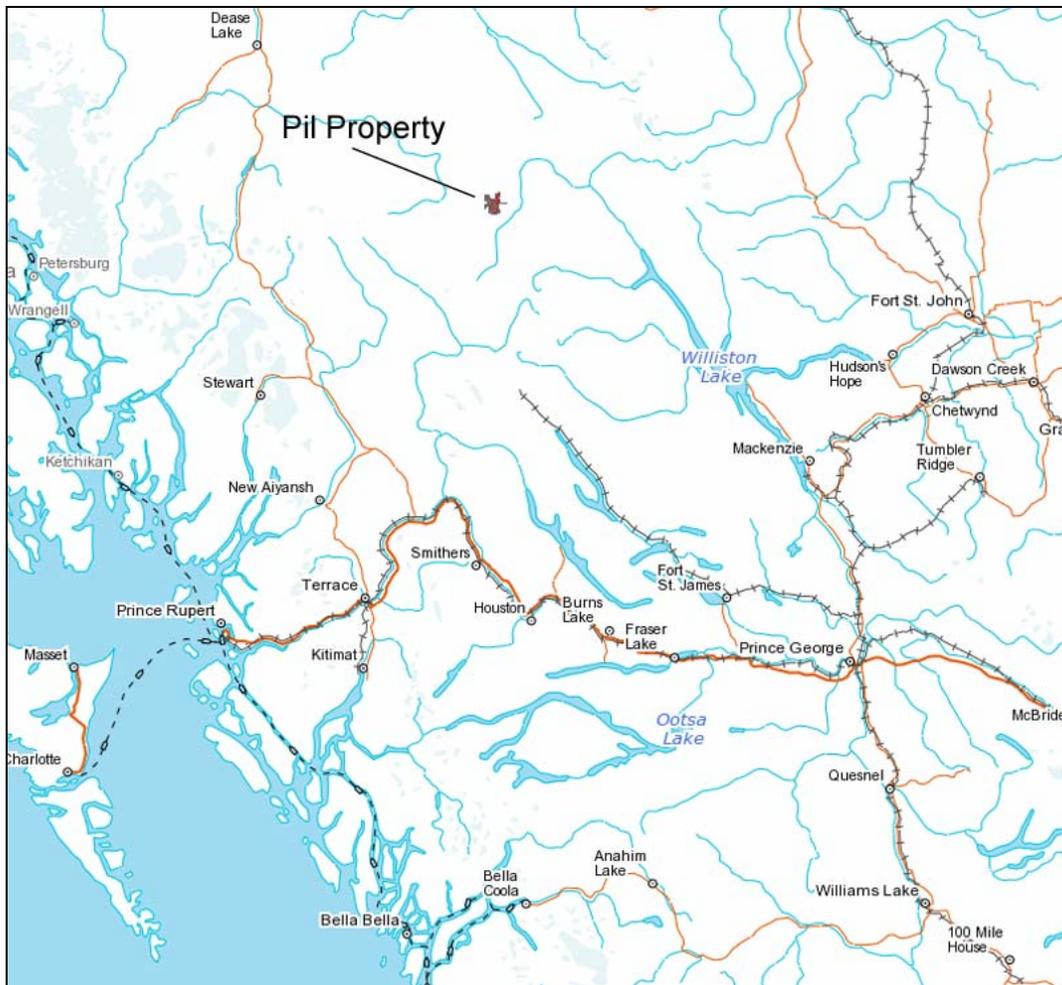
Survey lines were positioned and established on the ground by the geophysical crew.

In addition to induced polarization surveying, horizontal / vertical positions of the line stations were measured a Garmin handheld GPS unit.

**PROPERTY LOCATION AND ACCESS.**

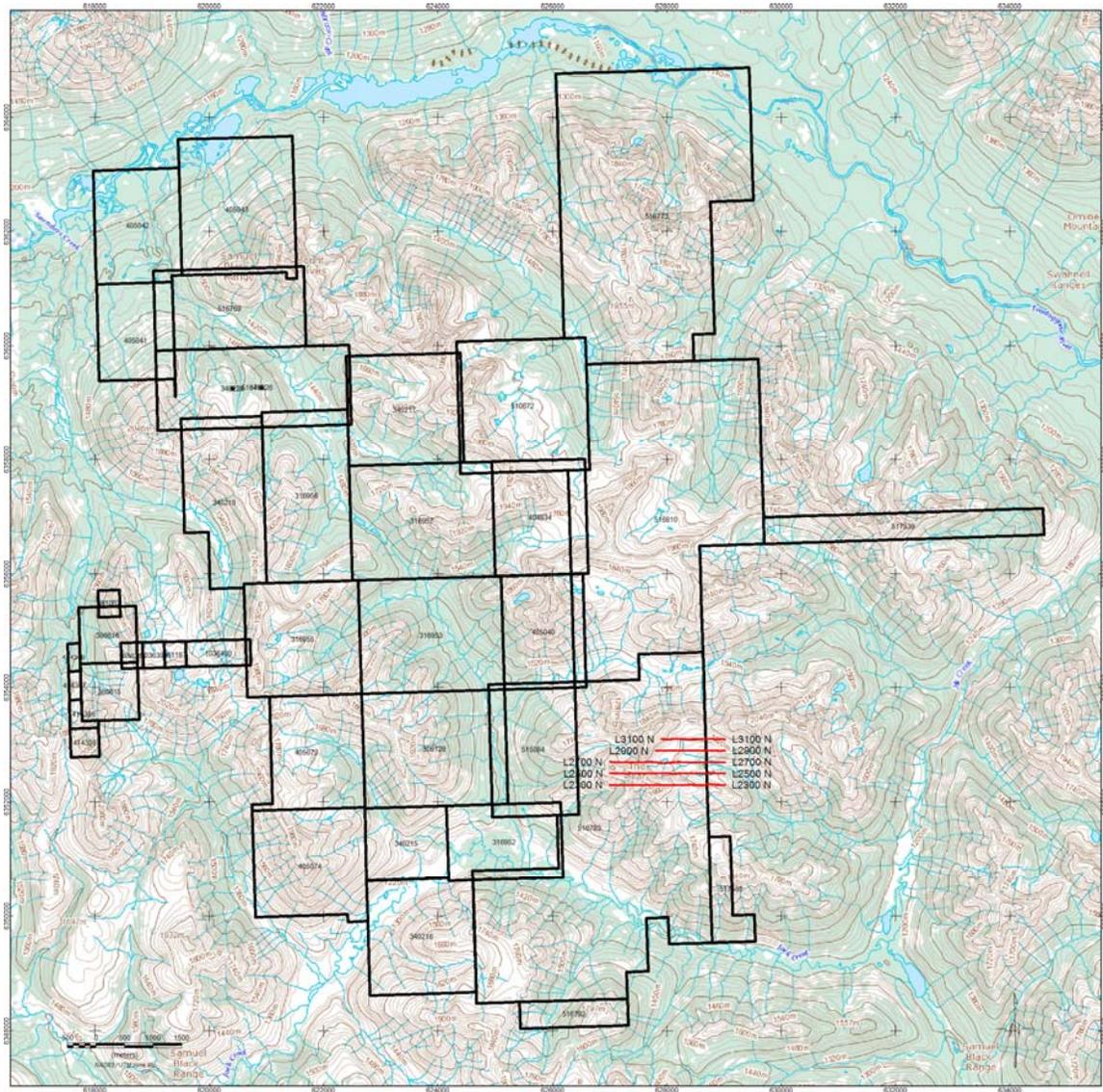
The Pil project is located some 34 mn NNW of the Kemess copper-gold mine within the Omineca Mining Division of British Columbia.

Access to the property is gained by way of the Omineca resource road. Parts of the property are accessible by road, however access to the Pillar East Zone is by way of helicopter.



Property Location Map

## PROPERTY LOCATION AND ACCESS con't



IP Grid and Claim Location Map

## **PREVIOUS WORK.**

The first recorded work done on the PIL claim block was in 1967 while most of the work has been done since the mid 1990's.

Finlay acquired the project in 1999 and has since systematically been exploring the property. Work done includes mapping, sampling, road building, drilling and a variety of geophysical surveys. Several zones of interest have been discovered to date.

During the 2016 field season a new discovery took place when the Pillar East prospect was found.

For further information, the reader is referred to the Government of British Columbia Aris website where several assessment reports on the Pil project can be found.

**PURPOSE.**

To test for a geophysical response indicative of mineralization over the Pillar East prospect and across a circular magnetic anomaly that surrounds the prospect.

## **PROPERTY GEOLOGY.**

Mineralization on the property consists of both low and high sulphidation epithermal style mineralization along with porphyry mineralization lower in the system.

For a detailed overview the author would refer the reader to the various assessment reports which contain detailed descriptions of the property geology.

## **SURVEY SPECIFICATIONS.**

### *The Induced Polarization Survey.*

The induced polarization (IP) survey was conducted using a pulse type system, the principal components of which were manufactured by Instrumentation GDD of Quebec, Canada and Walcer Geophysics Ltd. of Enniskillen, Canada.

The system consists basically of three units, a receiver (GDD), transmitter (Walcer) and a motor generator (Honda). The transmitter, which provides a maximum of 9.0 kw d.c. to the ground, obtains its power from a 20.0 kw 400 c.p.s. alternator driven by a Honda 24 h.p. gasoline engine. The cycling rate of the transmitter is 2 seconds “current-on” and 2 seconds “current-off” with the pulses reversing continuously in polarity. The data recorded in the field consists of careful measurements of the current (I) in amperes flowing through the current electrodes C<sub>1</sub> and C<sub>2</sub>, the primary voltages (V) appearing between any two potential electrodes, P<sub>1</sub> through P<sub>5</sub>, during the “current-on” part of the cycle, and the apparent chargeability, (M<sub>a</sub>) presented as a direct readout in millivolts per volt using a 200 millisecond delay and a 1000 millisecond sample window by the receiver, a digital receiver controlled by a micro-processor – the sample window is actually the total of twenty individual windows of 50 millisecond widths.

The apparent resistivity ( $\rho_a$ ) in ohm metres is proportional to the ratio of the primary voltage and the measured current, the proportionality factor depending on the geometry of the array used. The chargeability and resistivity are called apparent as they are values which that portion of the earth sampled would have if it were homogeneous. As the earth sampled is usually inhomogeneous the calculated apparent chargeability and resistivity are functions of the actual chargeability and resistivity of the rocks.

The bulk of the surveying was carried out using the “pole-dipole” / “dipole-pole” method of survey. With the pre-laid receiver array remaining stationary, the current C<sub>1</sub> is moved along the survey lines at a spacing of “a” (the dipole) apart, while the second current electrode, C<sub>2</sub>, is kept constant at “infinity”.

## **SURVEY SPECIFICATIONS cont'd**

As the current (C1) is injected between the respective potential electrodes, and the receiving array is stationary, both pole-dipole and dipole-pole geometries can be measured with the maximum “n”-separation a function of the length of the receiver array dependent on the injection placement. For data processing a maximum value of 10.5 was used.

A single line was surveyed using a more traditional “pole-dipole” method of surveying where the current electrode, C<sub>1</sub>, and the potential electrodes, P<sub>1</sub> through P<sub>5</sub>, are moved in unison along the survey lines at a spacing of “a” (the dipole) apart, while the second current electrode, C<sub>2</sub>, is kept constant at “infinity”. The distance, “na” between C<sub>1</sub> and the nearest potential electrode generally controls the depth to be explored by the particular separation, “n”, traverse. For this single line a 25 metre dipole separation was utilized.

In total, 8.3 line kilometres of 100 metre dipole surveying was conducted along with 600 metres of 25 metre dipoles.

### **Horizontal control.**

The horizontal positions of the stations were recorded using a Garmin GPSmap 60CSx.

### **Data Presentation.**

The data are presented as individual pseudo section plots of apparent resistivity and apparent chargeability at a scale of 1:10,000 generated using Geosoft Oasis Montaj. In addition, the 25 metre dipole data are presented at a scale of 1:2,500.

2D inversions of both resistivity and chargeability modelled using Res2DInv are also presented at a scale of 1:10,000.

## **DISCUSSION OF RESULTS.**

The induced polarization survey covered 5 east west traverses spaced at 200 metres. The southern 3 lines cover a full 2 km of length while the northern most 2 lines only cover 1200 and 1100 metres from the eastern survey limits respectively. Due to the small covered by the IP survey, with respect to dipole and array size, much of the modelled data is of low certainty at the margins of the data set.

A general increase in chargeability values is can be observed to the east culminating is a chargeability anomaly on the eastern margins of the survey and beyond the property boundary.

A weak chargeability anomaly is barely visible circa 81+50E on Line 2700N and is only well seen in the more detailed 25 metre dipole data where it is well defined over a width of 2 dipoles; 81+50E to 82+50E. Resistivity values here are generally flat and structure is not discernible. The anomaly is well defined in the modelled section dipping at roughly 45 and extending for some 200 metres. A sharp resistivity boundary is seen at depth directly below this chargeability anomaly. The chargeability anomaly correlates very well with a small, discreet magnetic high roughly centred within the circular magnetic high. The centre of the magnetic high is located at 83+00E which is directly above the modelled IP feature at a depth of 75 metres.

This anomaly comes right to surface and is assumed to be the centre of the Pillar East discovery. Better definition of this feature can be achieved by running parallel 25 metre dipole survey lines at a 50 metre line interval.

The western ends of Lines 2500N and 2700N show very high resistivity values near surface. This is likely the result of attempting to measure across and within talus slopes.

A possible correlation is seen between the Magnetic and resistivity highs along with topographic highs. This would be better defined with more IP coverage.

Depth slices of the 2D model data show a resistivity low nestled within the circular magnetic high.

## **SUMMARY, CONCLUSIONS & RECOMENDATIONS.**

Between August 30<sup>th</sup>, and September 8<sup>th</sup>, 2017, Peter E. Walcott & Associates Limited undertook induced polarization (IP) surveying for Finlay Resources Inc. on the Pil property which is located in the Toodoggone area of north-central, British Columbia.

One small and weak chargeability anomaly was noted within the property boundary. This anomaly is not seen on adjacent lines. This may be due to the subtle nature of it but is more likely to be truncated within 200 metres of either side. A coincident discreet magnetic high has very little extent. Should it be deemed worthy, 50 metre spaced lines employing a 25 metre dipole would be better suited to define the extents of the anomaly.

A weak correlation is seen between the resistivity and magnetic highs and the topography.

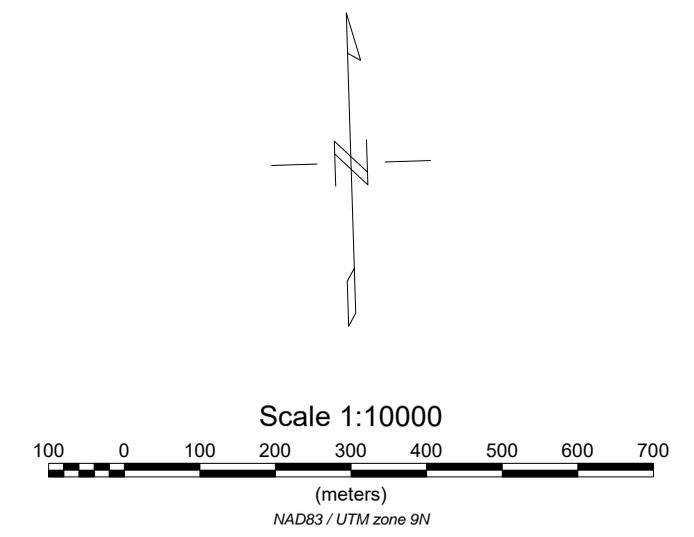
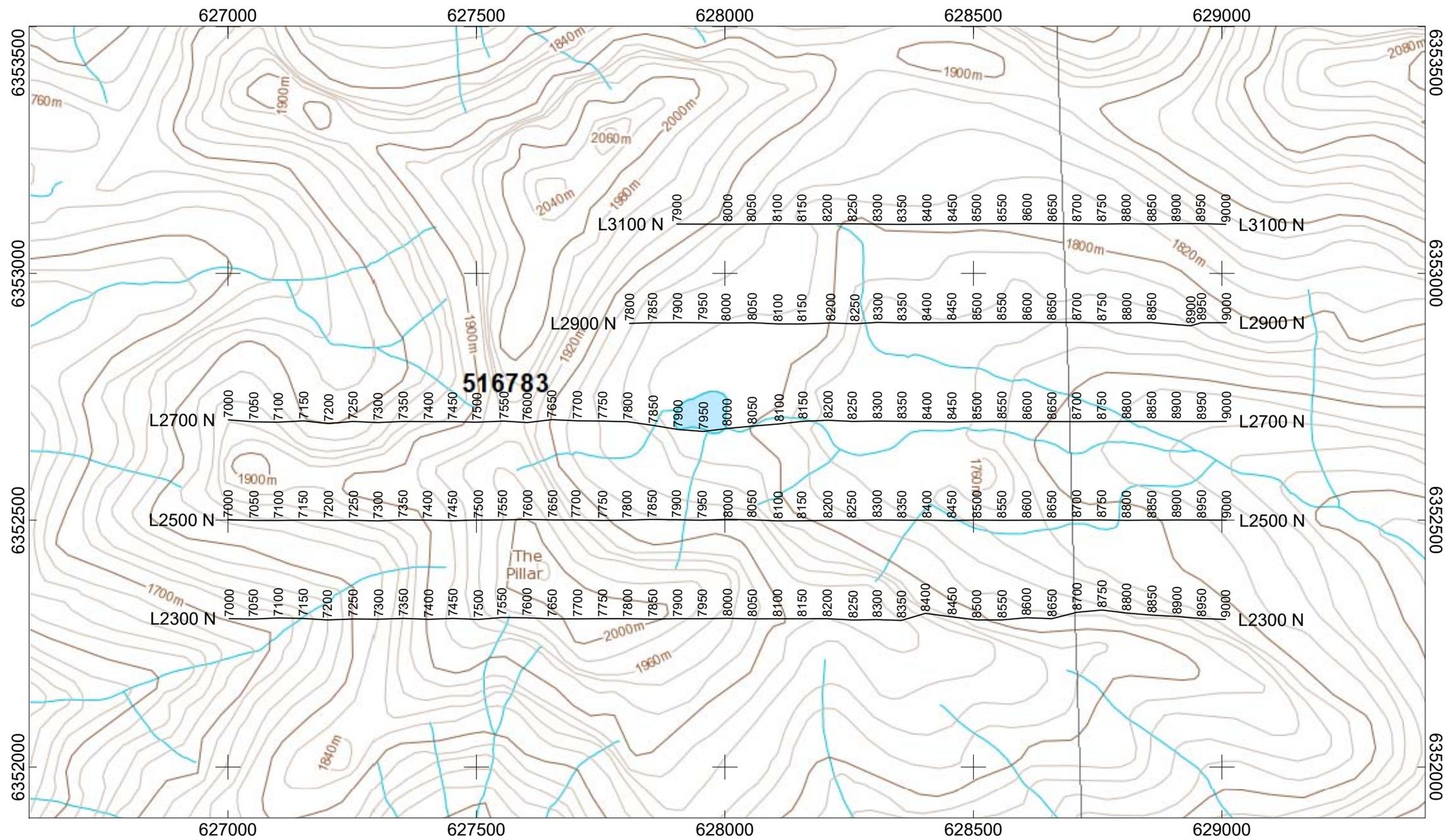
The survey area covered a very small piece of the Pil property. Larger scale surveying would help in better delineation of the geology on a property wide scale.

It is encouraged to conduct a thorough review of available data including geochemistry and geology prior to any further work on the Pillar East Prospect

**APPENDIX**

**PERSONNEL EMPLOYED ON SURVEY.**

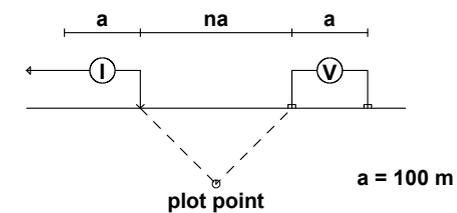
<b>Name</b>	<b>Occupation</b>	<b>Address</b>	<b>Dates</b>
Alex Walcott	Geophysicist	111-17 Fawcett Rd. Coquitlam, B.C. V3K 6V2	
Marek Welz	“	“	“
Matt Magee	Geophysical Operator	“	August 30 <sup>th</sup> — September 8 <sup>th</sup> 2017
B. Lajeunesse	“	“	“
M. Lebeda	“	“	“
	“	“	“



<b>FINLAY MINERALS LTD.</b>
<b>INDUCED POLARIZATION SURVEY CLAIM AND LINE LOCATION MAP</b>
PIL PROPERTY / PILLAR EAST PROSPECT TOODOGGONE AREA DECEMBER 2017
<b>PETER E. WALCOTT &amp; ASSOCIATES LIMITED</b>

23+00 N

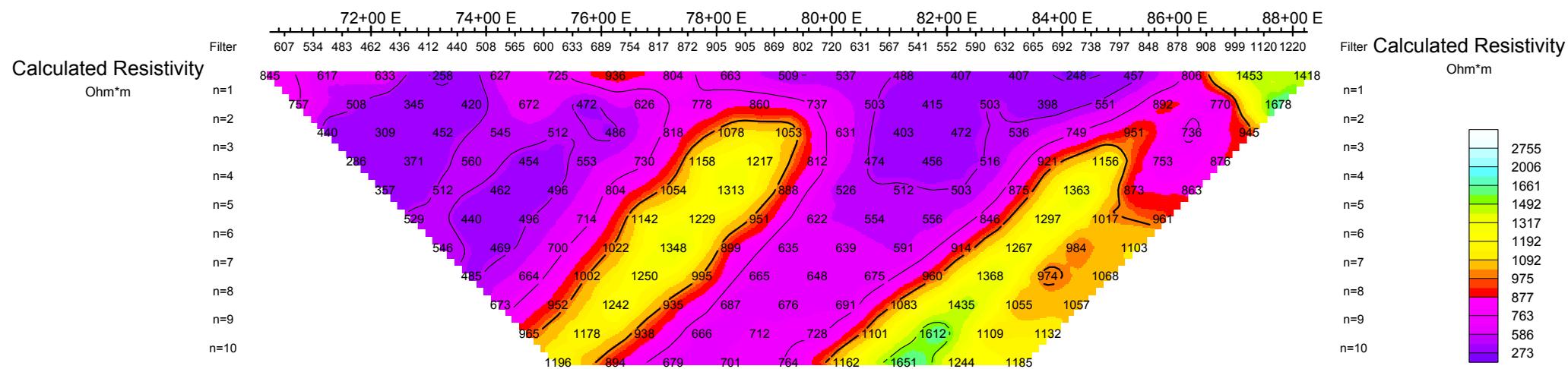
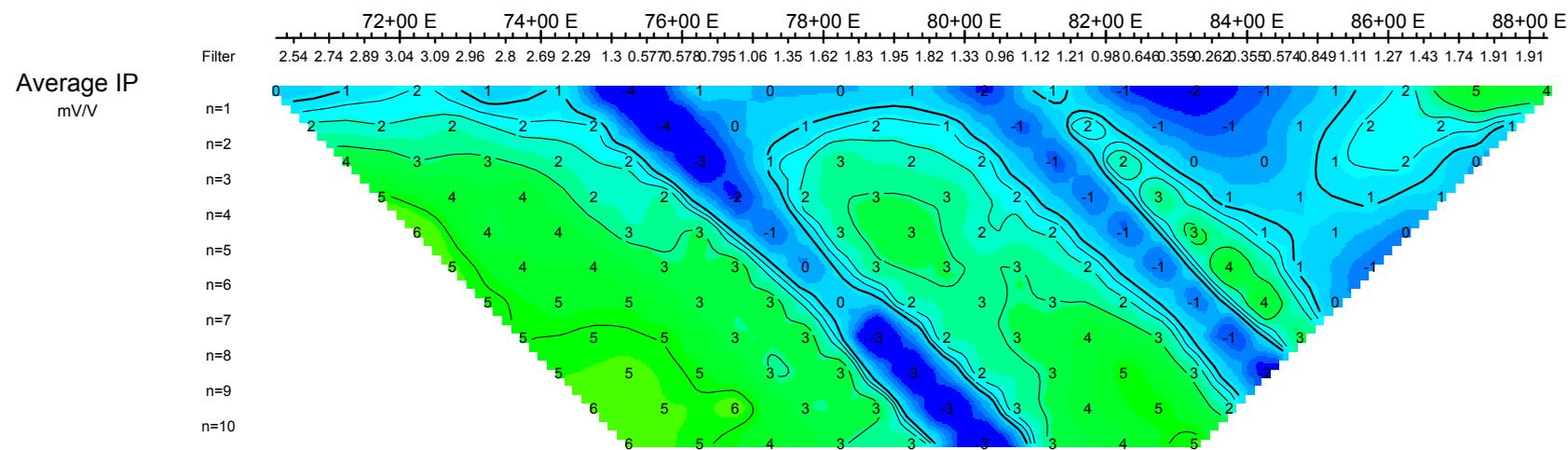
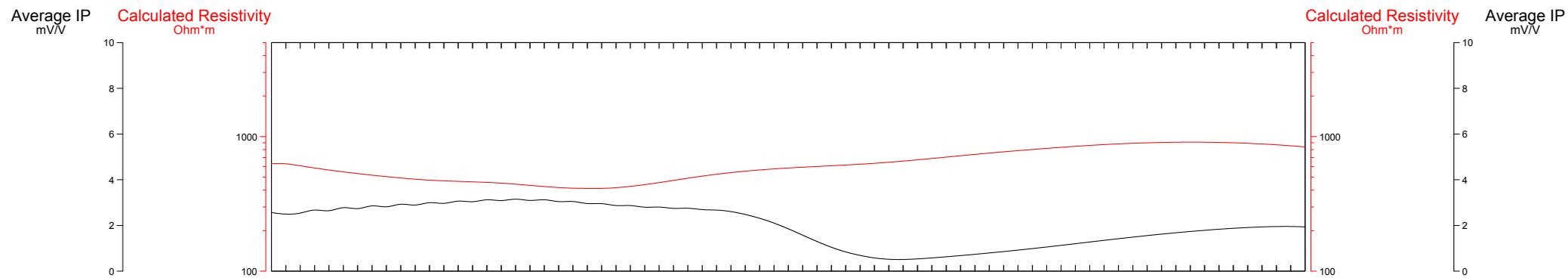
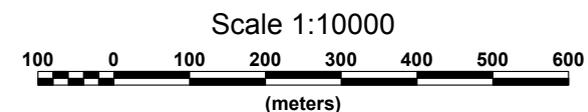
Pole-Dipole Array



Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

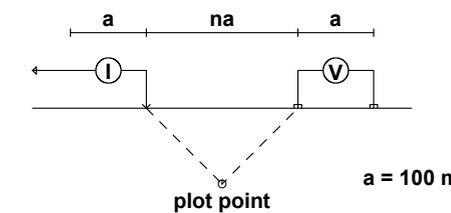
Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED

25+00 N

Pole-Dipole Array

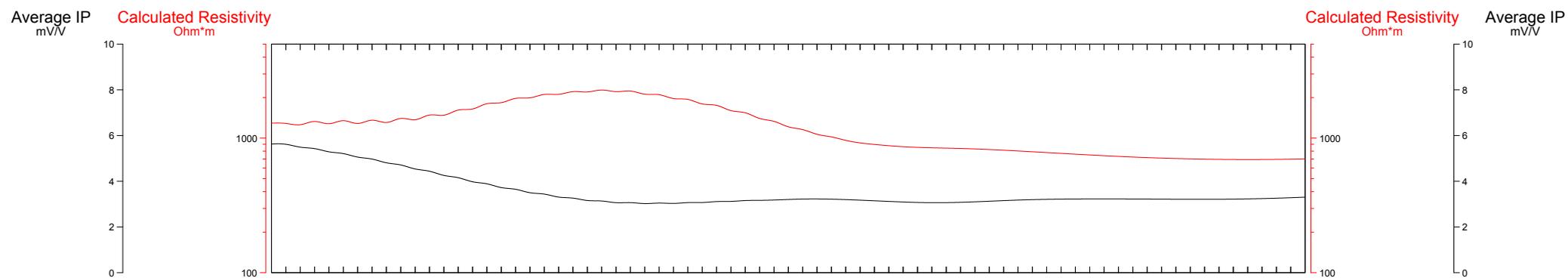


Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

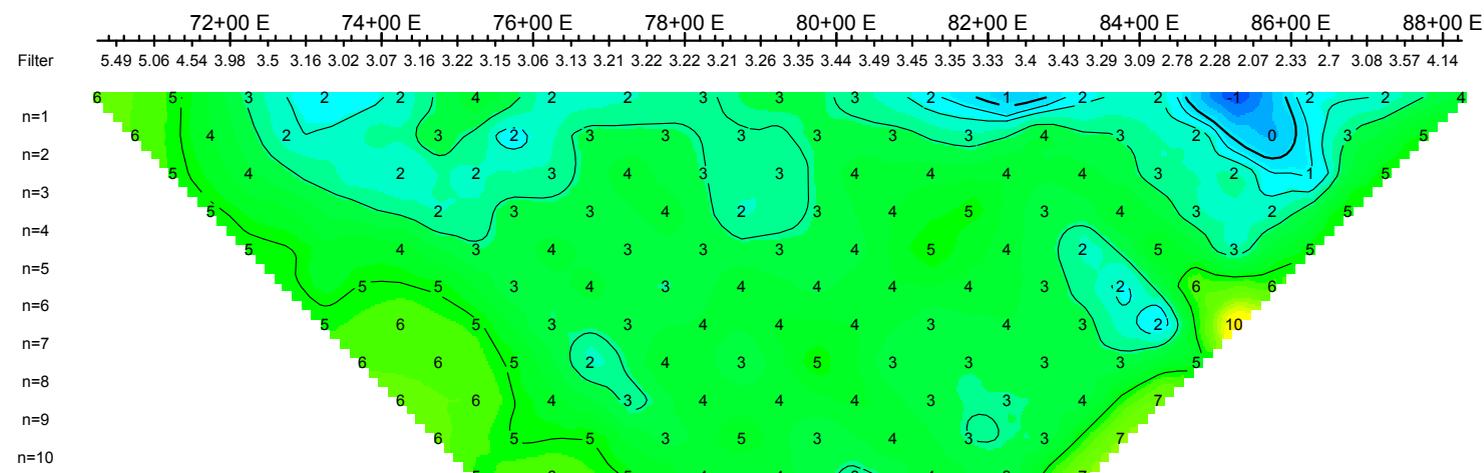
a = 100 m

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



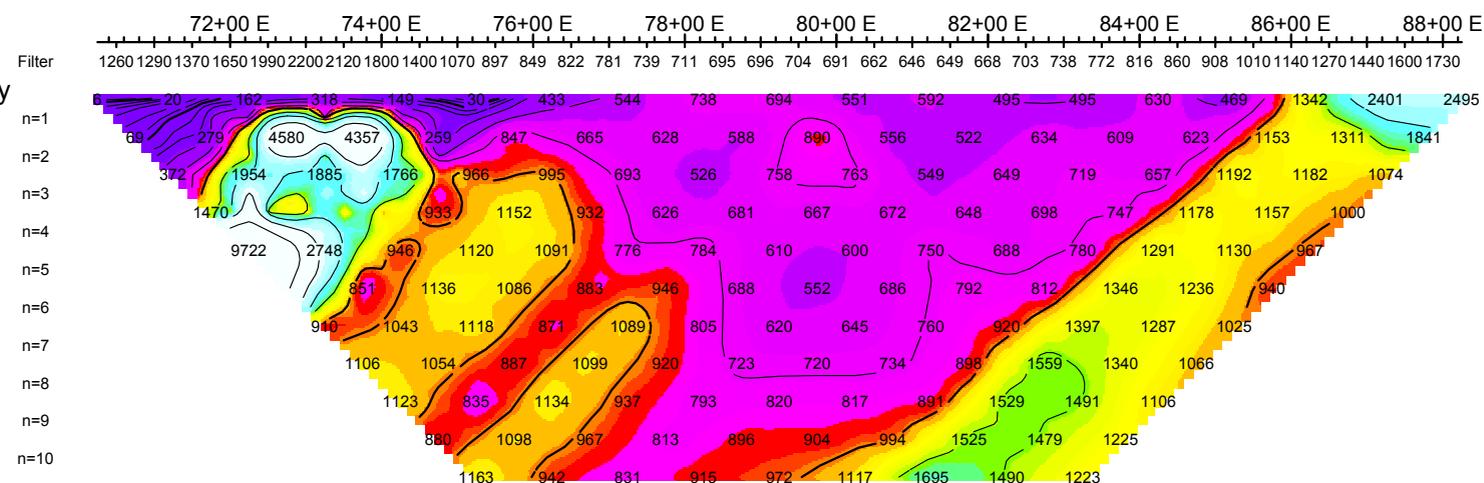
Average IP  
mV/V



Average IP  
mV/V

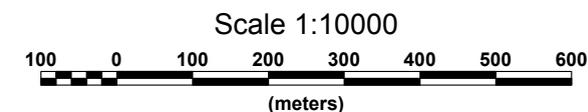
Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10

Calculated Resistivity  
Ohm\*m



Filter  
Calculated Resistivity  
Ohm\*m

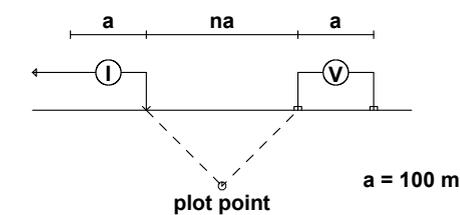
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10



FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED

27+00 N

Pole-Dipole Array

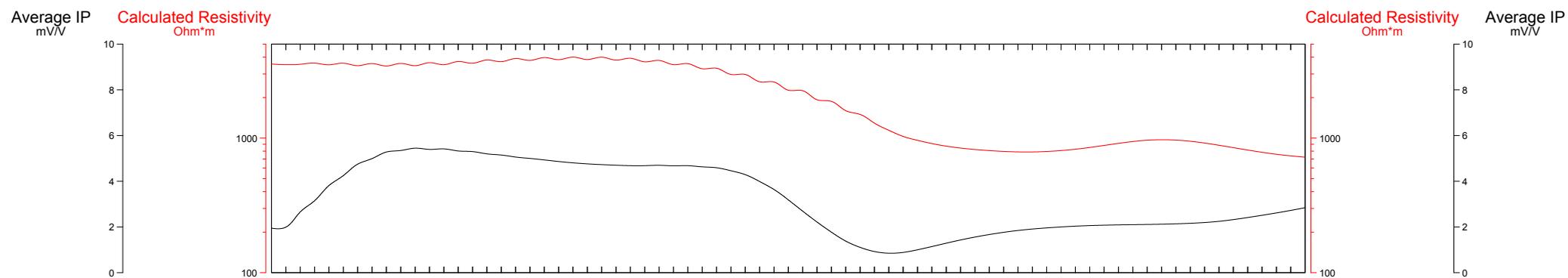


Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

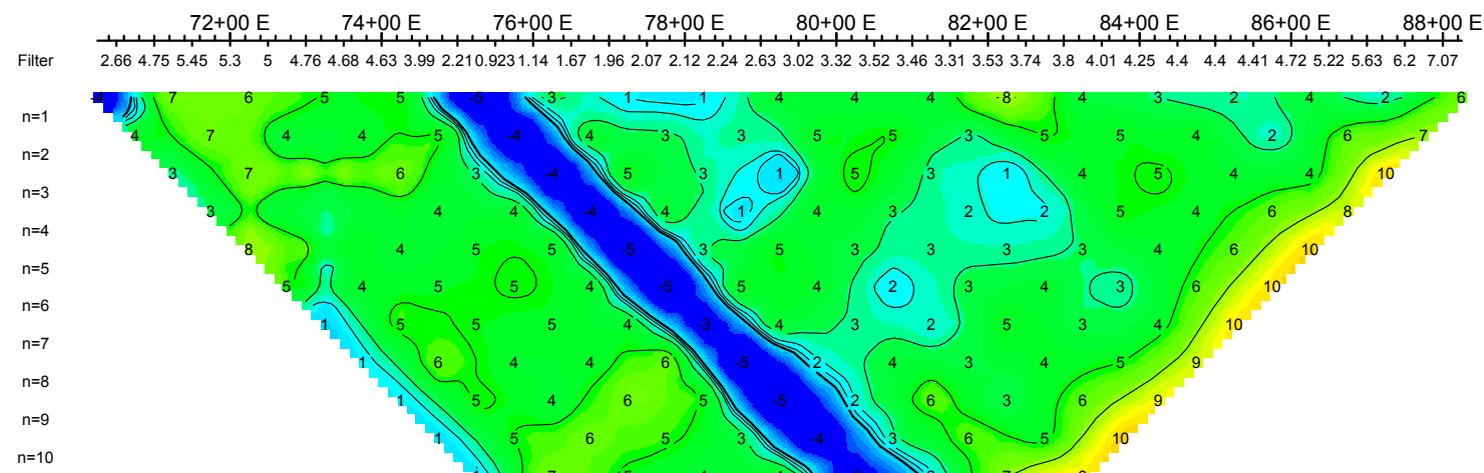
a = 100 m

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

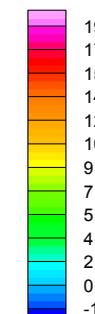
Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



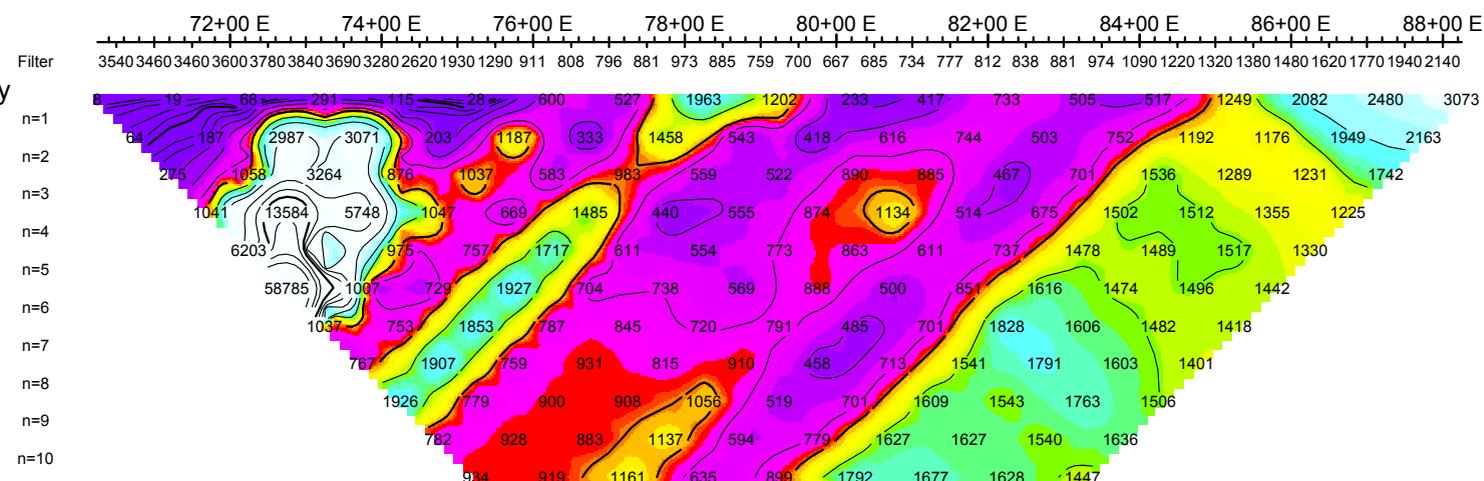
Average IP  
mV/V



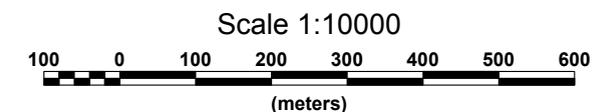
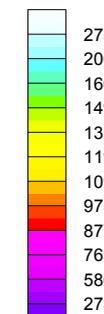
Average IP  
mV/V



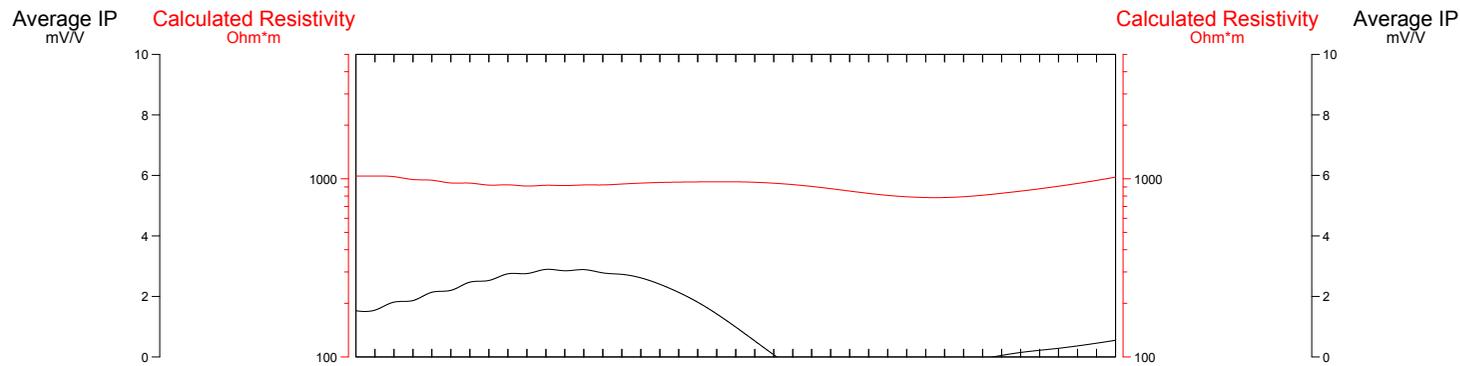
Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m

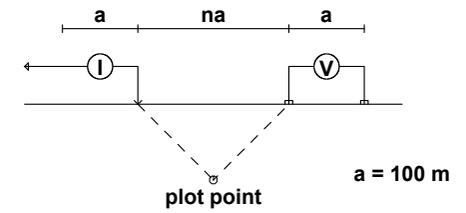


FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED



29+00 N

Pole-Dipole Array

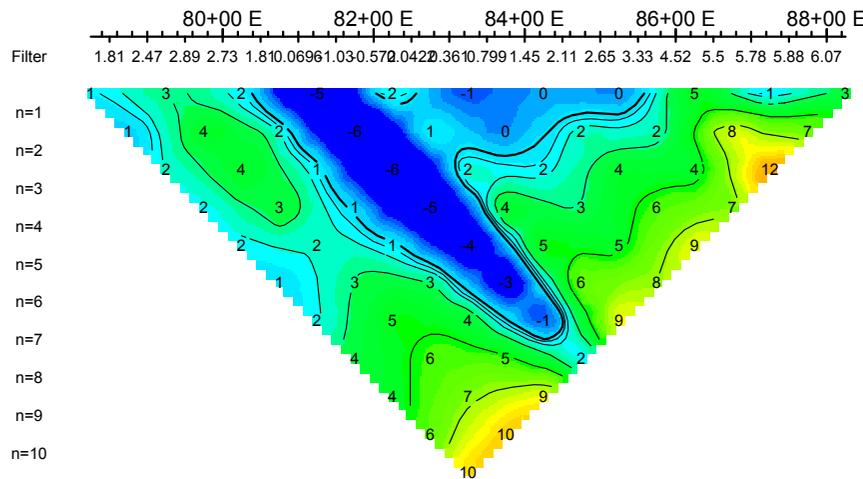


Filter  
\*  
\* \*  
\* \* \*  
\* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \* \*

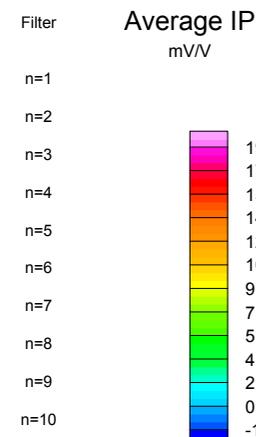
WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.

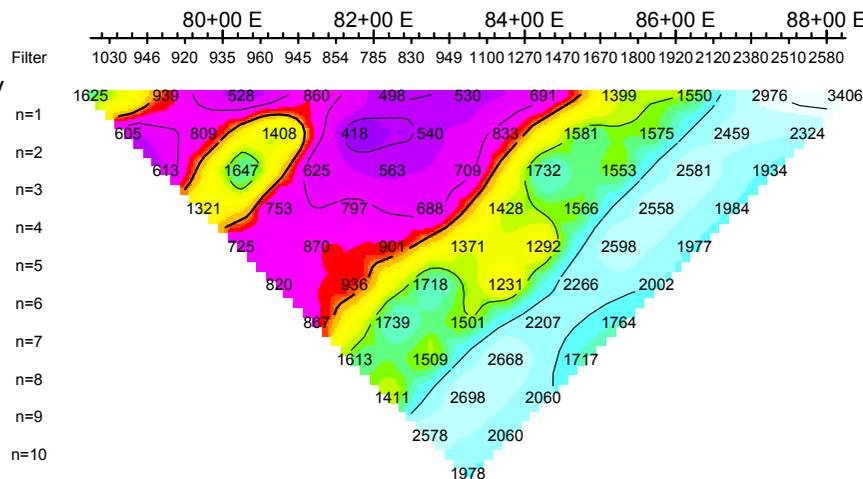
Average IP  
mV/V



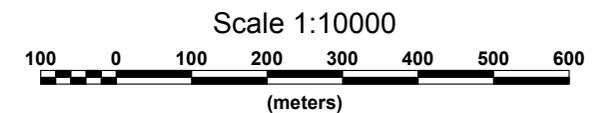
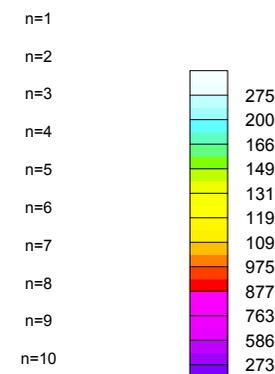
Average IP  
mV/V



Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m



FINLAY MINERALS LTD.

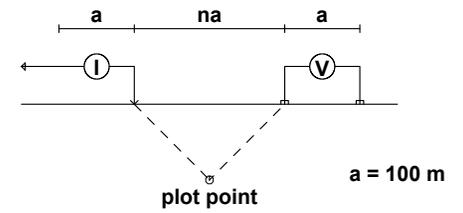
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT

DECEMBER 2017  
Interpretation:

PETER E. WALCOTT & ASSOCIATES LIMITED

31+00 N

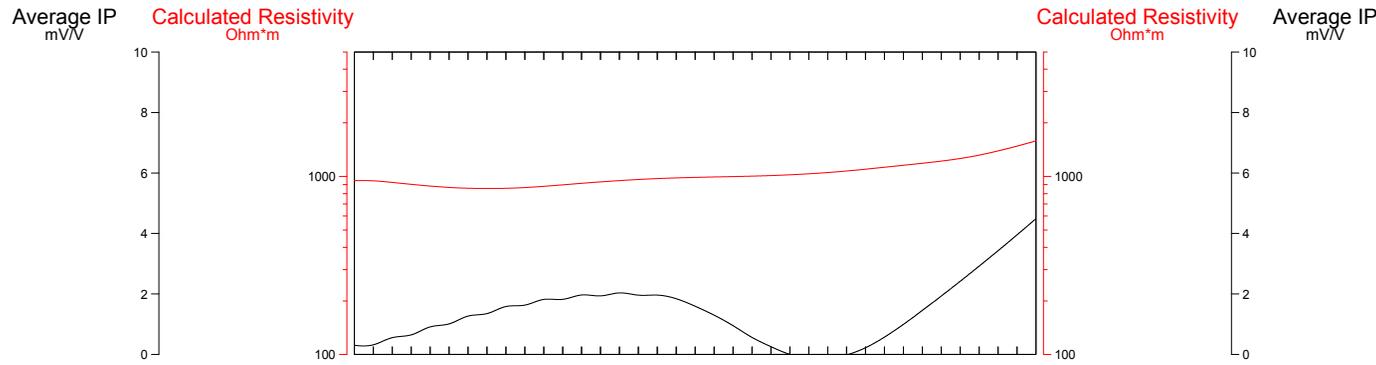
Pole-Dipole Array



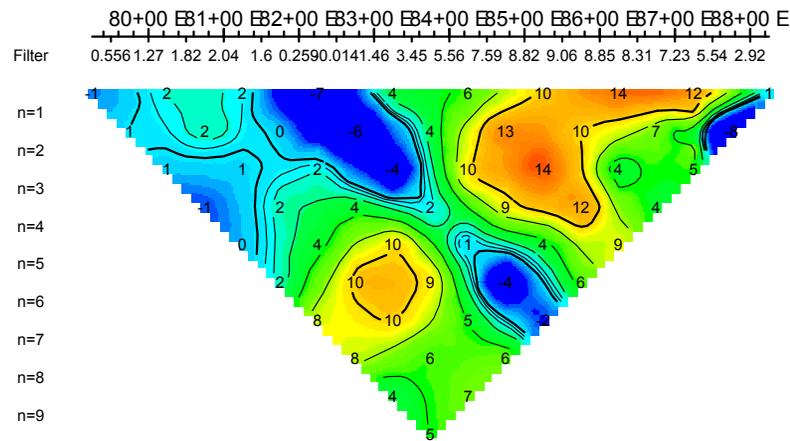
Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

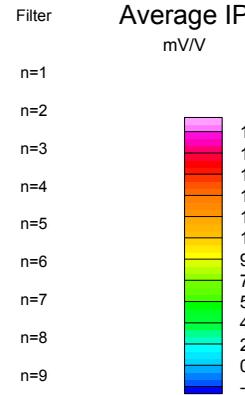
Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



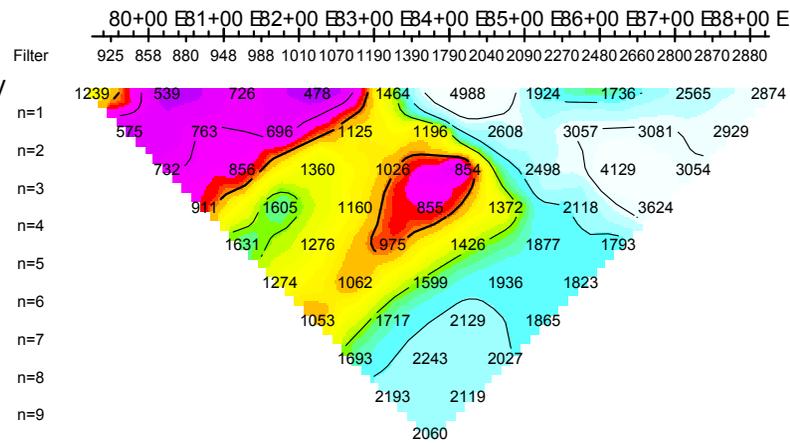
Average IP  
mV/V



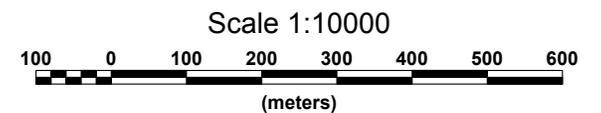
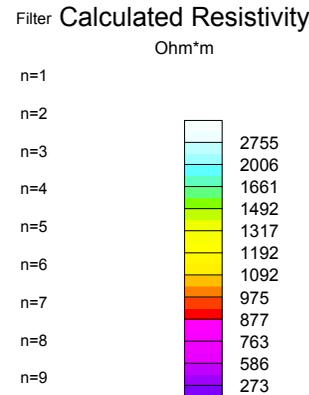
Average IP  
mV/V



Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m



FINLAY MINERALS LTD.

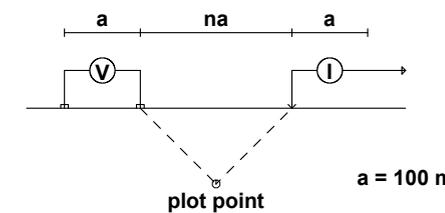
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT

DECEMBER 2017  
Interpretation:

PETER E. WALCOTT & ASSOCIATES LIMITED

23+00 N

Dipole-Pole Array

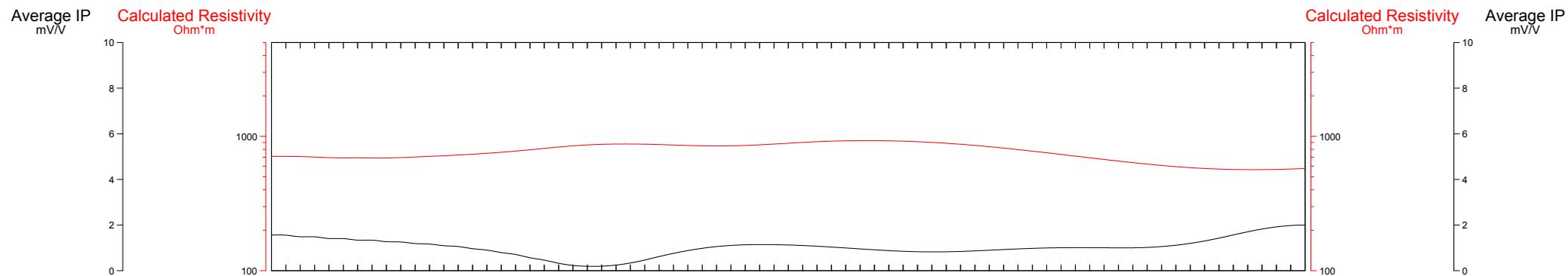


Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

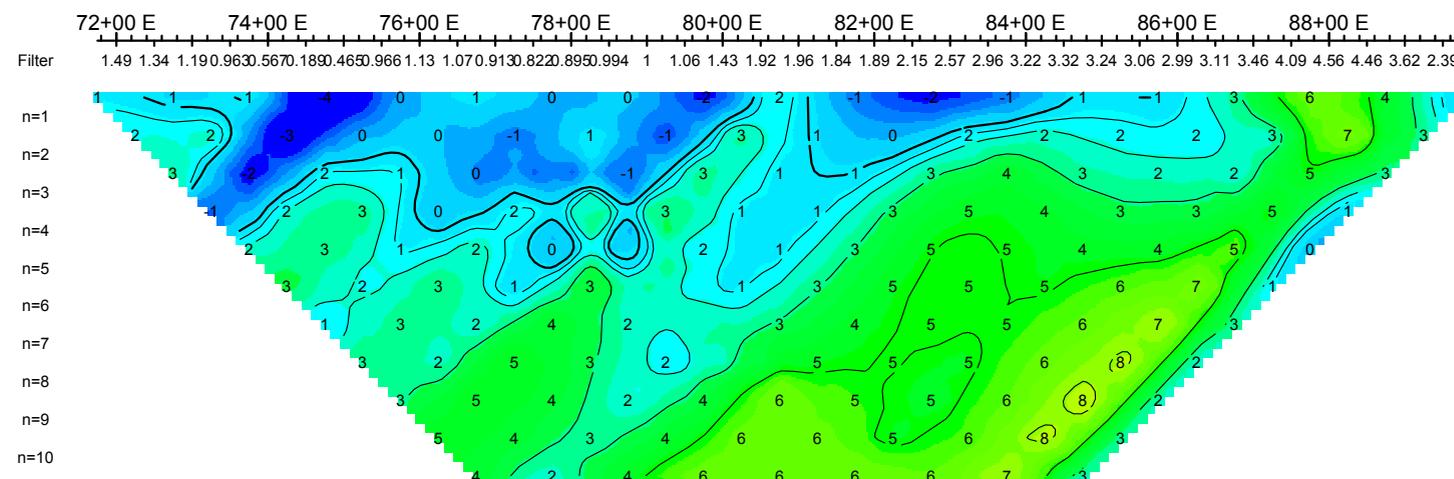
a = 100 m

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.

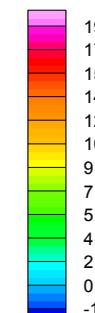


Average IP  
mV/V

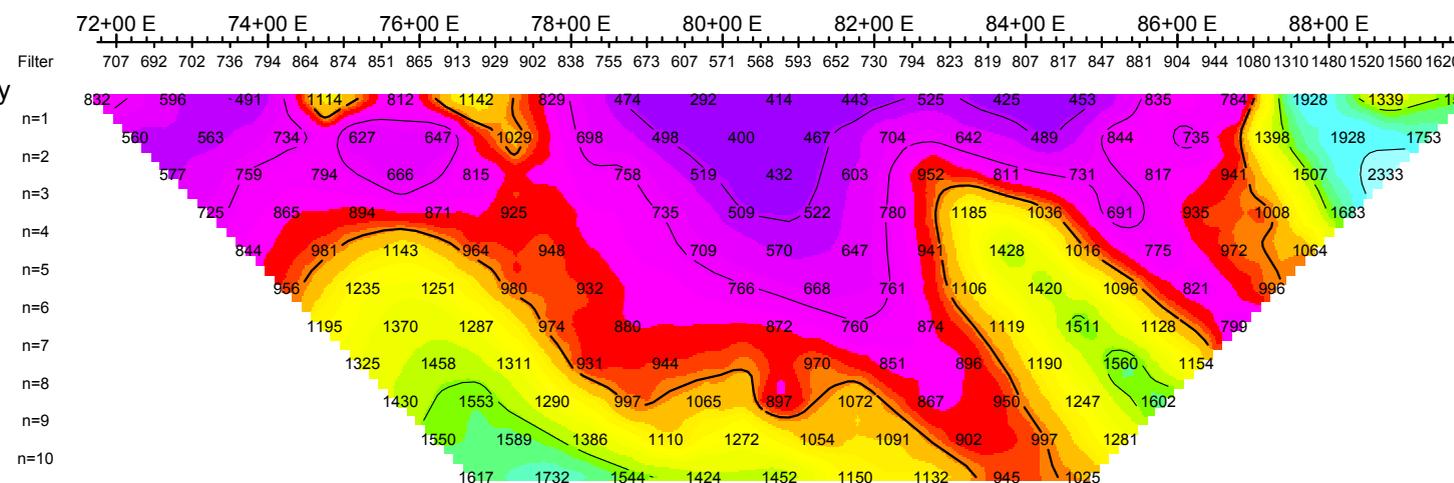


Average IP  
mV/V

Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10

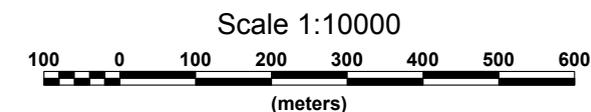
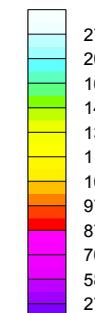


Calculated Resistivity  
Ohm\*m



Filter  
Calculated Resistivity  
Ohm\*m

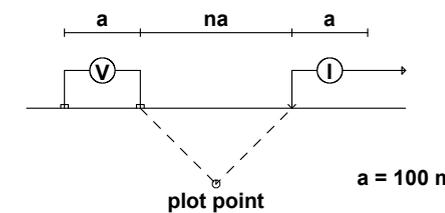
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10



FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED

25+00 N

Dipole-Pole Array

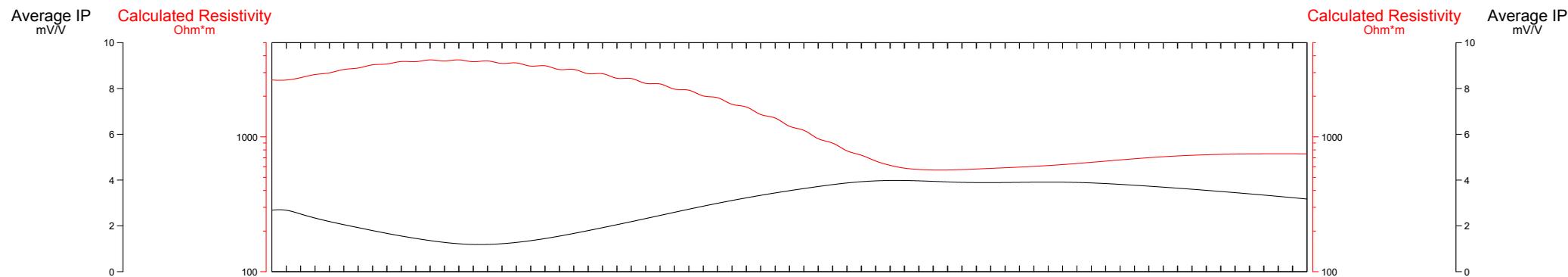


Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

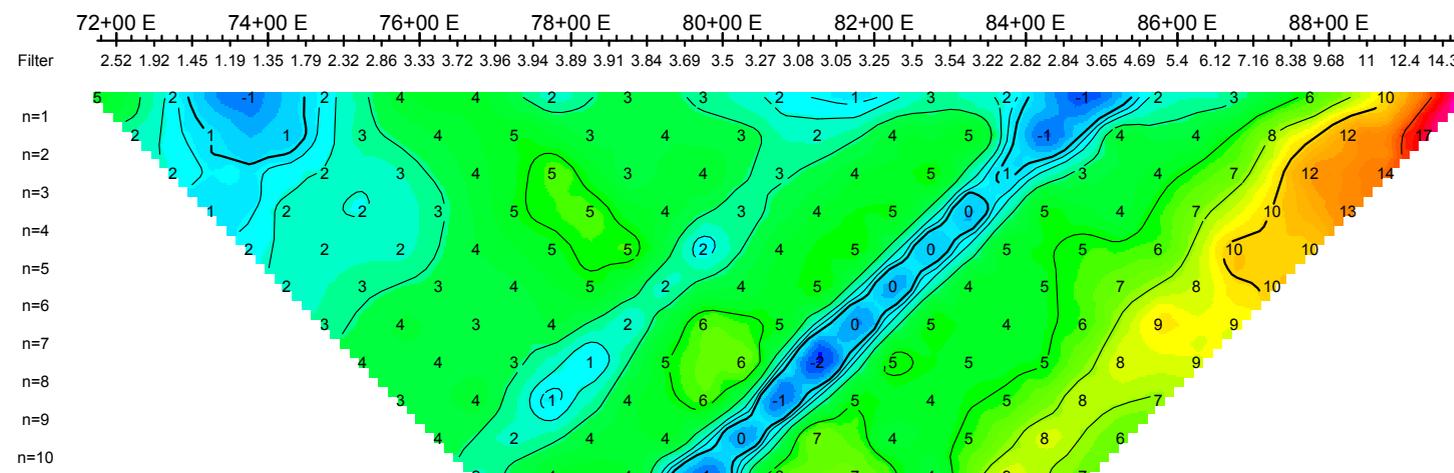
a = 100 m

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



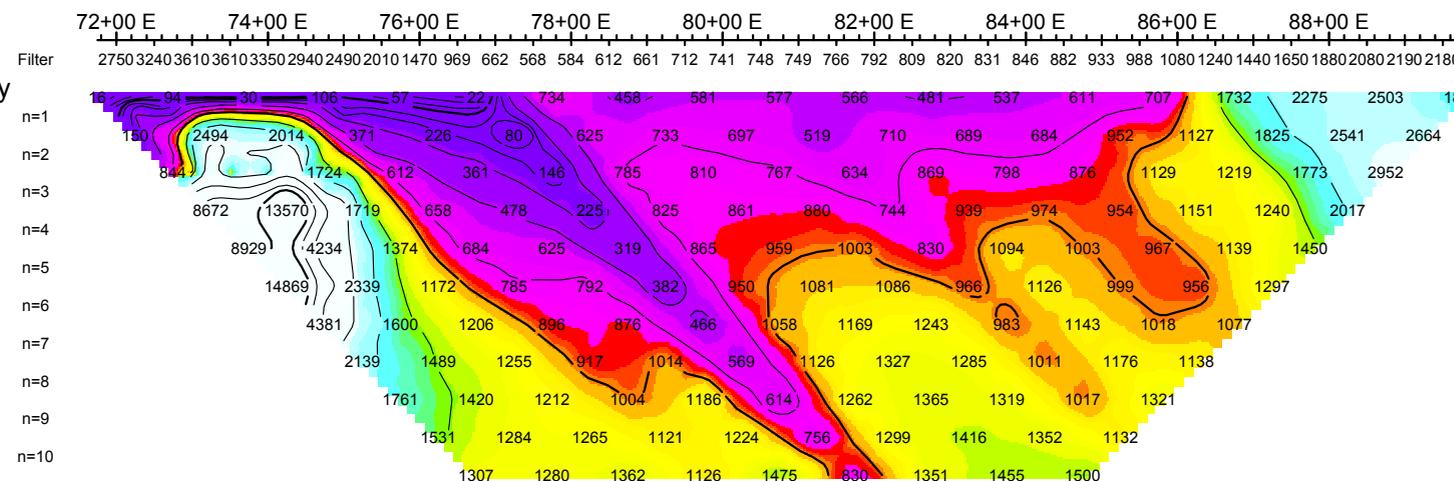
Average IP  
mV/V



Average IP  
mV/V

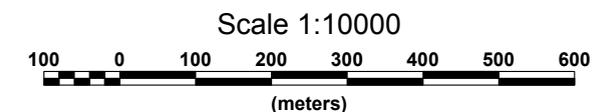
Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10

Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m

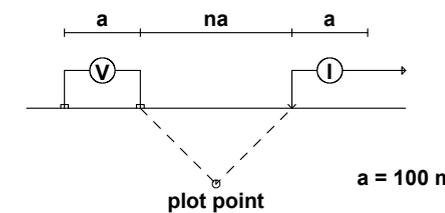
Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10



FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED

27+00 N

Dipole-Pole Array

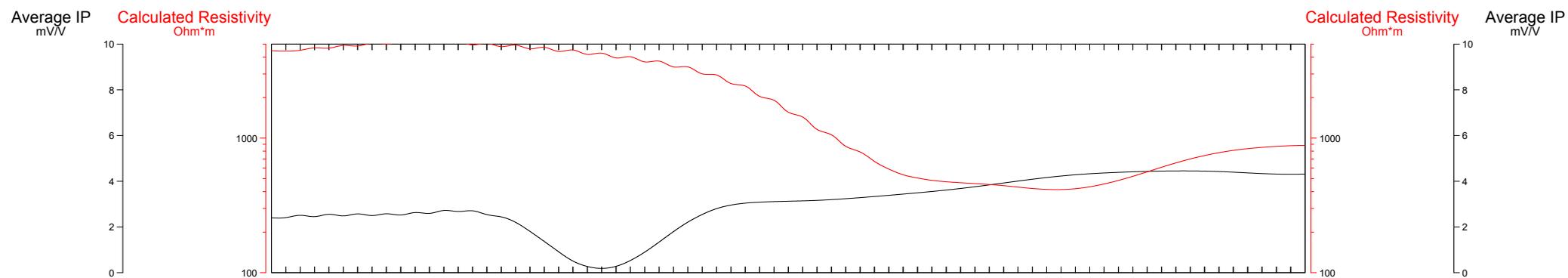


a = 100 m

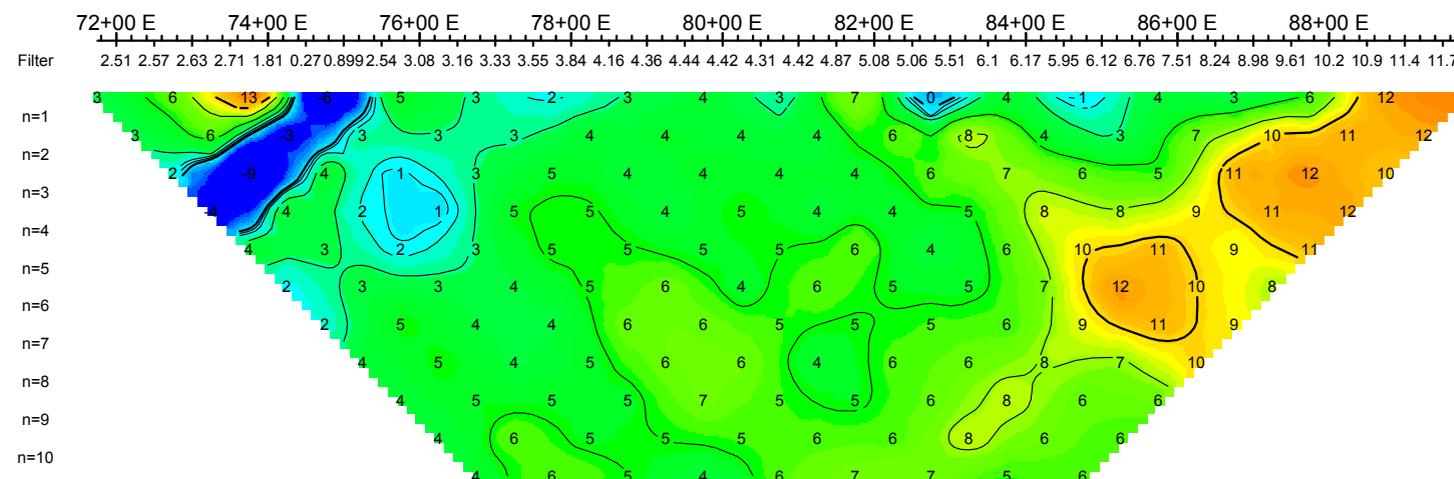
Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.

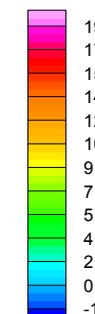


Average IP  
mV/V

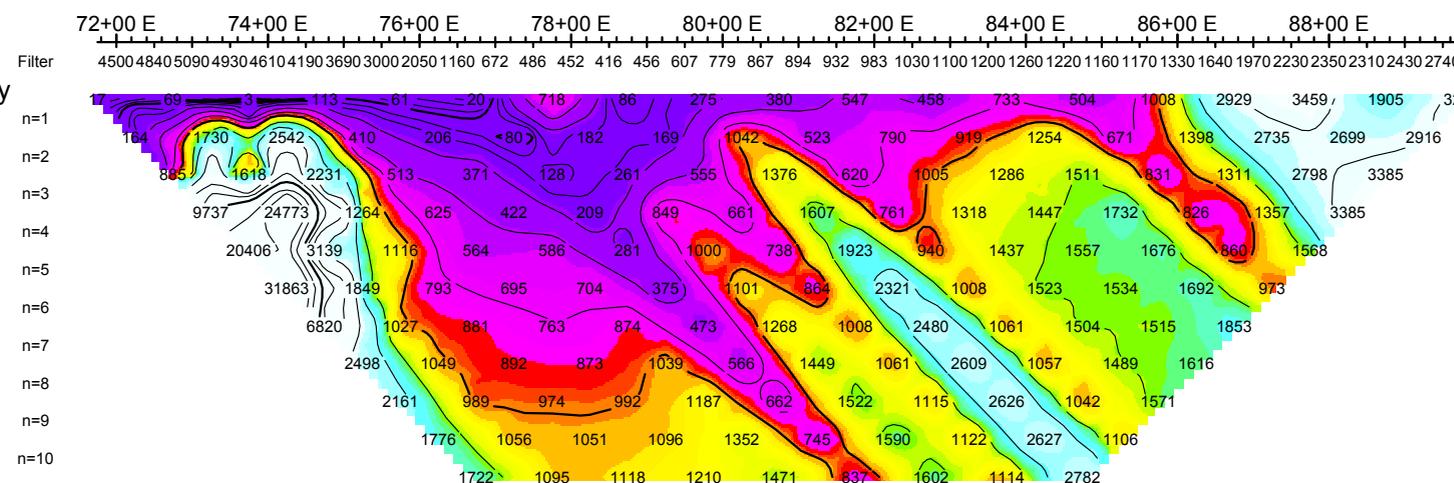


Average IP  
mV/V

Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10

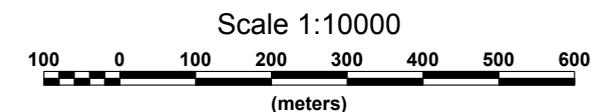
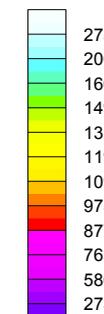


Calculated Resistivity  
Ohm\*m

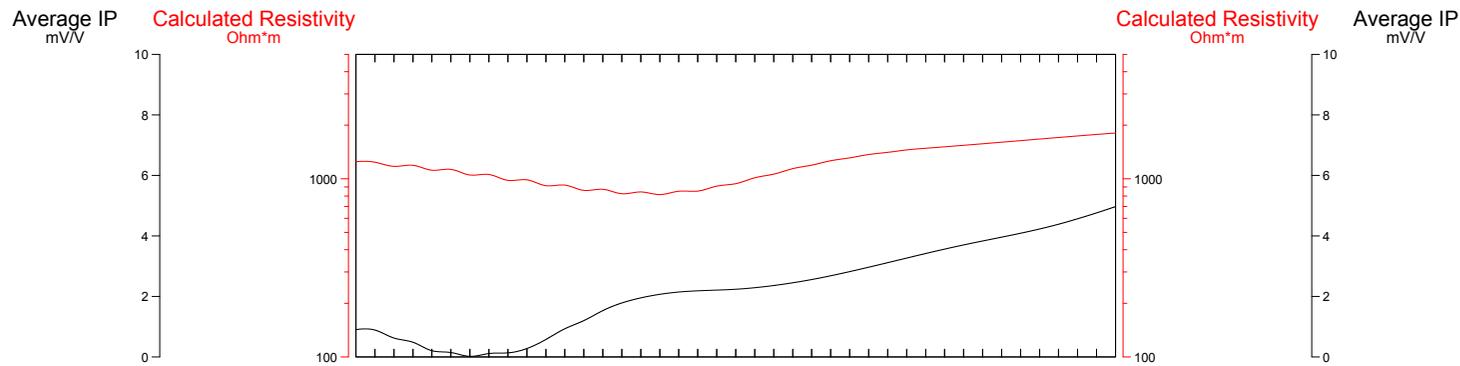


Calculated Resistivity  
Ohm\*m

Filter  
n=1  
n=2  
n=3  
n=4  
n=5  
n=6  
n=7  
n=8  
n=9  
n=10

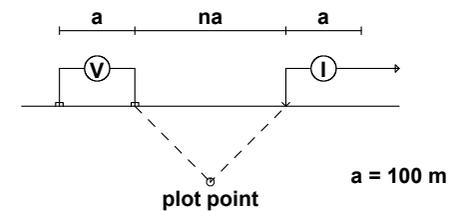


FINLAY MINERALS LTD.  
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT  
DECEMBER 2017  
Interpretation:  
PETER E. WALCOTT & ASSOCIATES LIMITED



29+00 N

Dipole-Pole Array

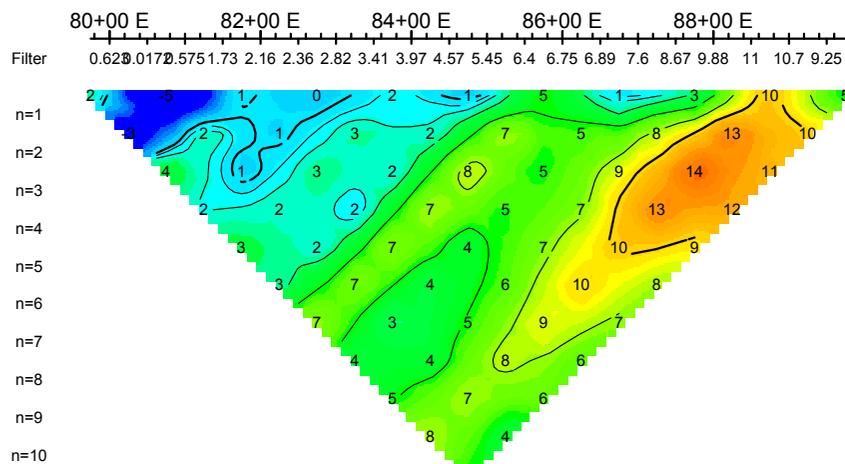


Filter  
\*  
\* \*  
\* \* \*  
\* \* \* \*  
\* \* \* \* \*  
\* \* \* \* \* \*

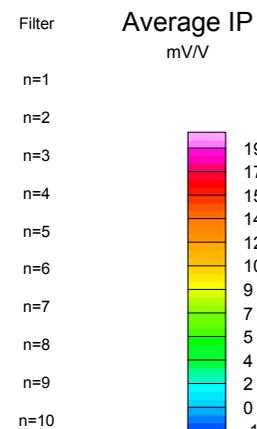
WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.

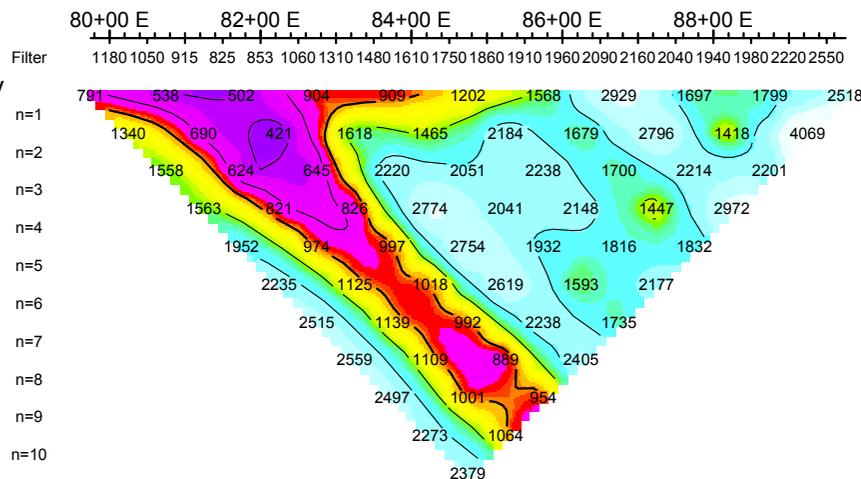
Average IP  
mV/V



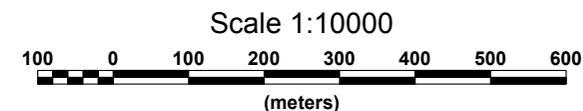
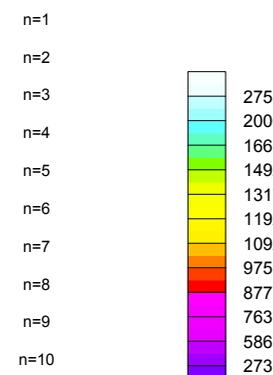
Average IP  
mV/V



Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m



FINLAY MINERALS LTD.

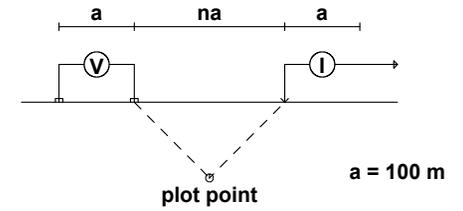
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT

DECEMBER 2017  
Interpretation:

PETER E. WALCOTT & ASSOCIATES LIMITED

31+00 N

Dipole-Pole Array

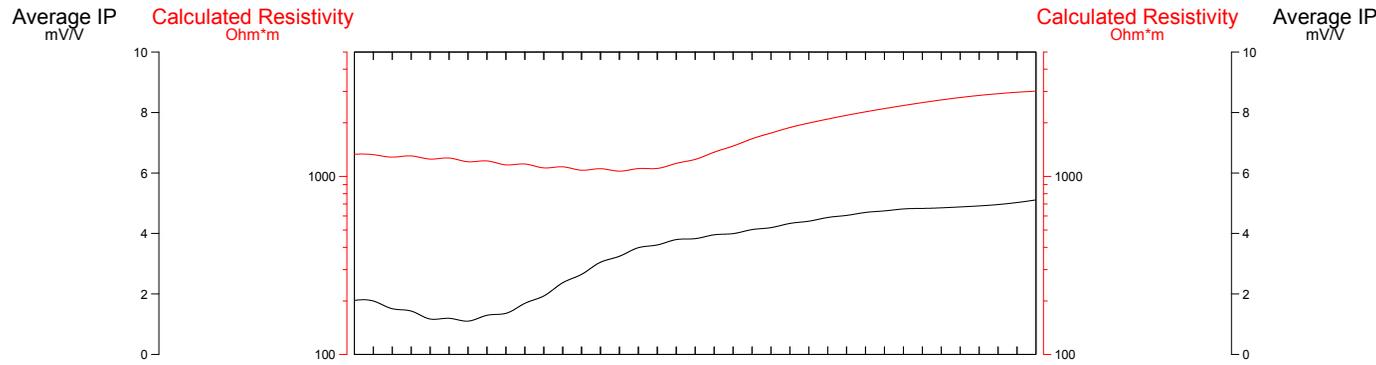


Filter  
\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*

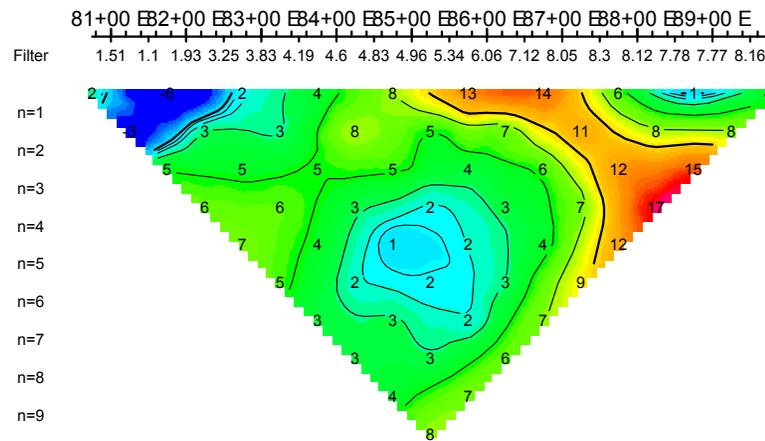
a = 100 m

WALCER 9.5 kw Tx  
3 x GDD 8 - 32 Rx

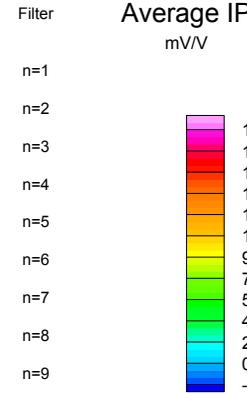
Frequency: 0.125 Hz.  
Operators: M.M., B.L.,  
O.K., M.L.



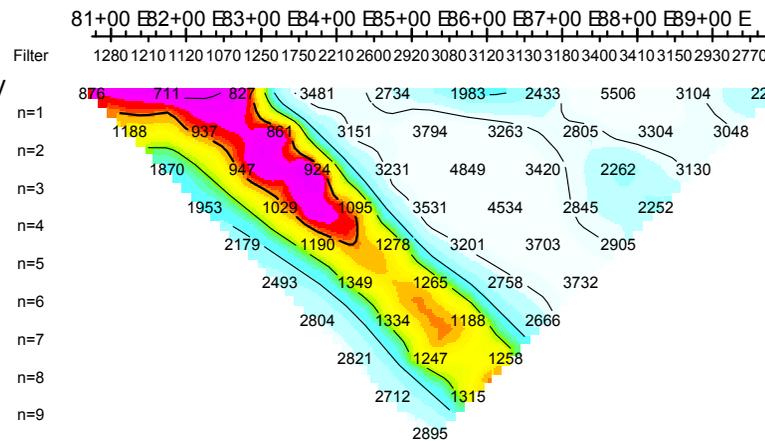
Average IP  
mV/V



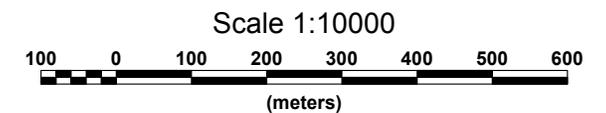
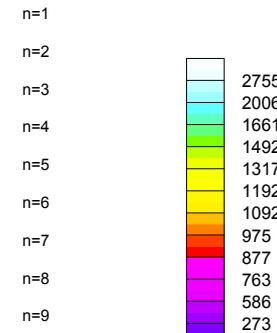
Average IP  
mV/V



Calculated Resistivity  
Ohm\*m



Calculated Resistivity  
Ohm\*m



FINLAY MINERALS LTD.

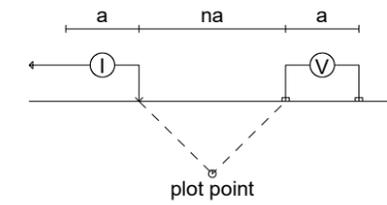
INDUCED POLARIZATION SURVEY  
PIL PROPERTY / PILLAR EAST PROSPECT

DECEMBER 2017  
Interpretation:

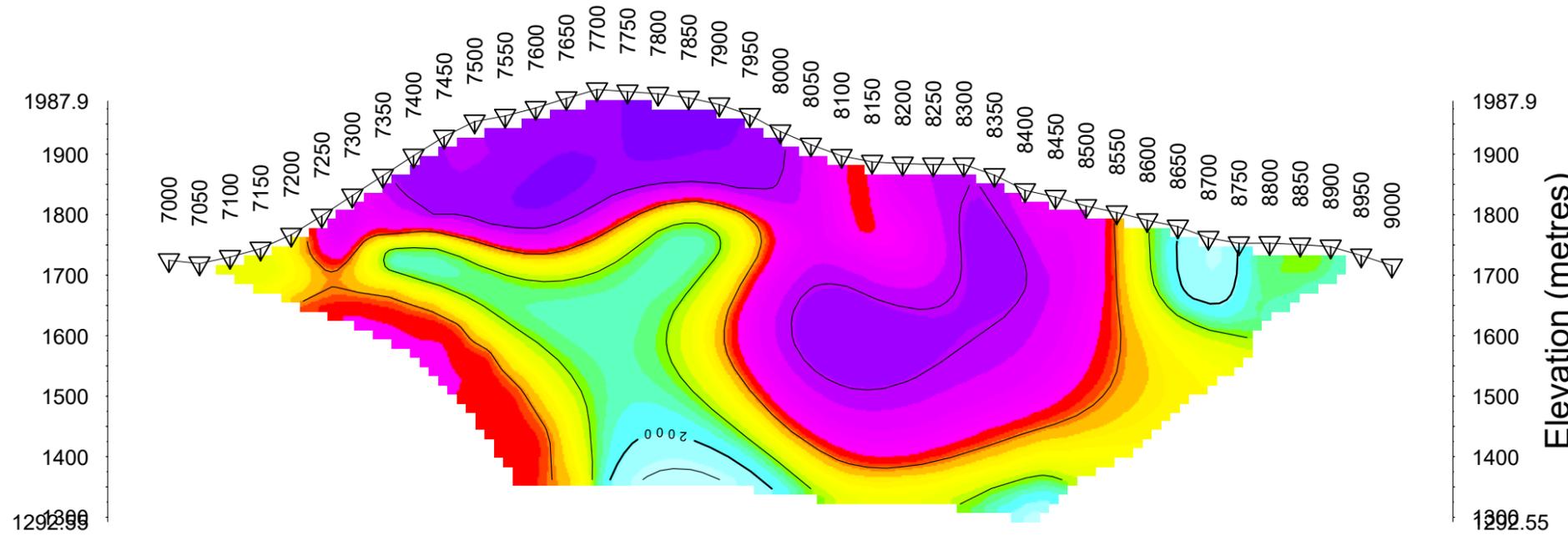
PETER E. WALCOTT & ASSOCIATES LIMITED

Line\_2300N

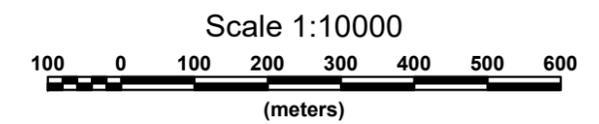
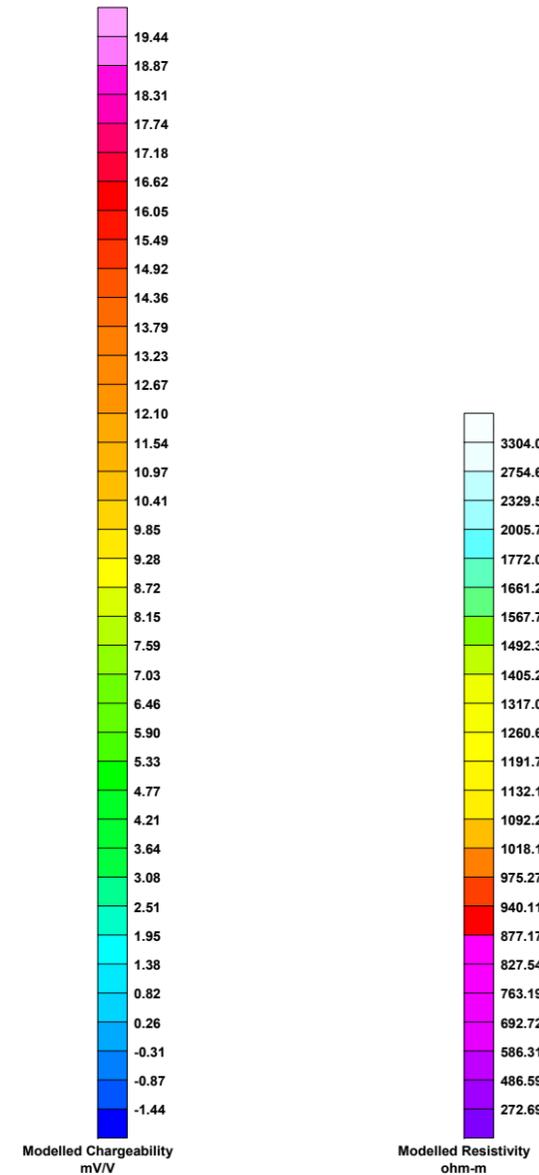
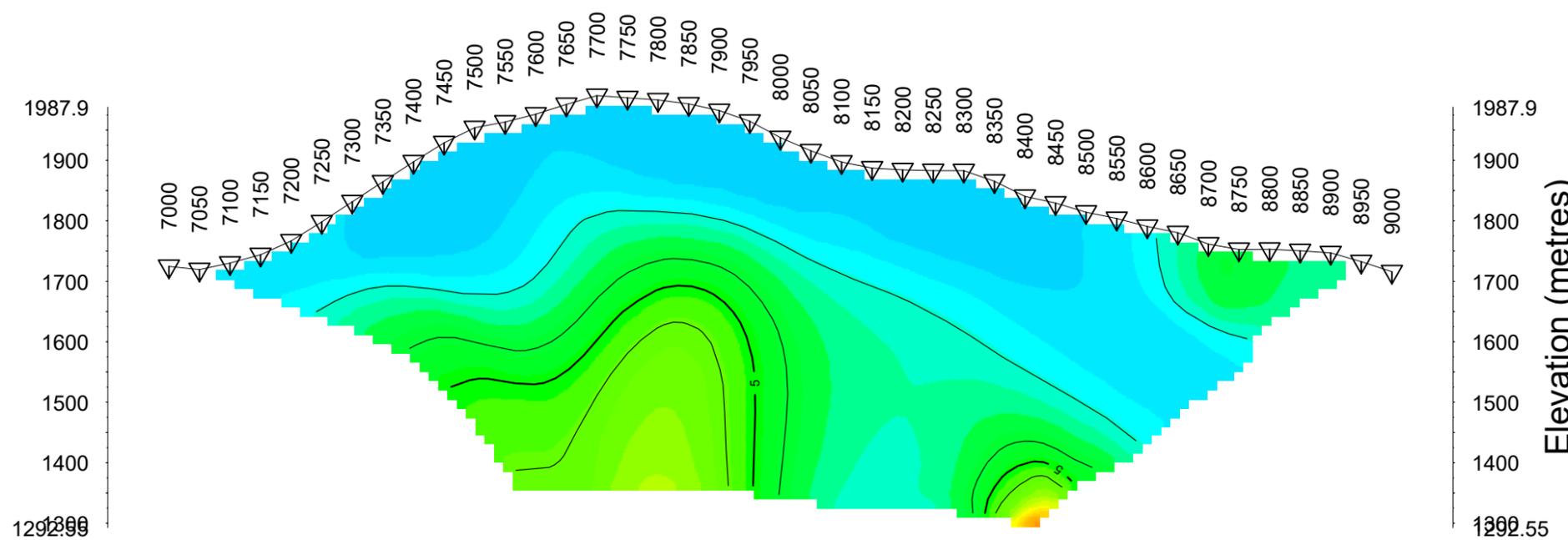
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



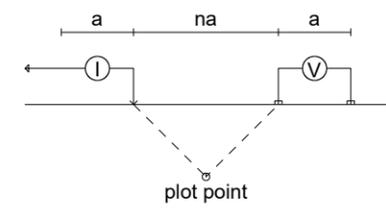
Modelled Chargeability (mV/V)



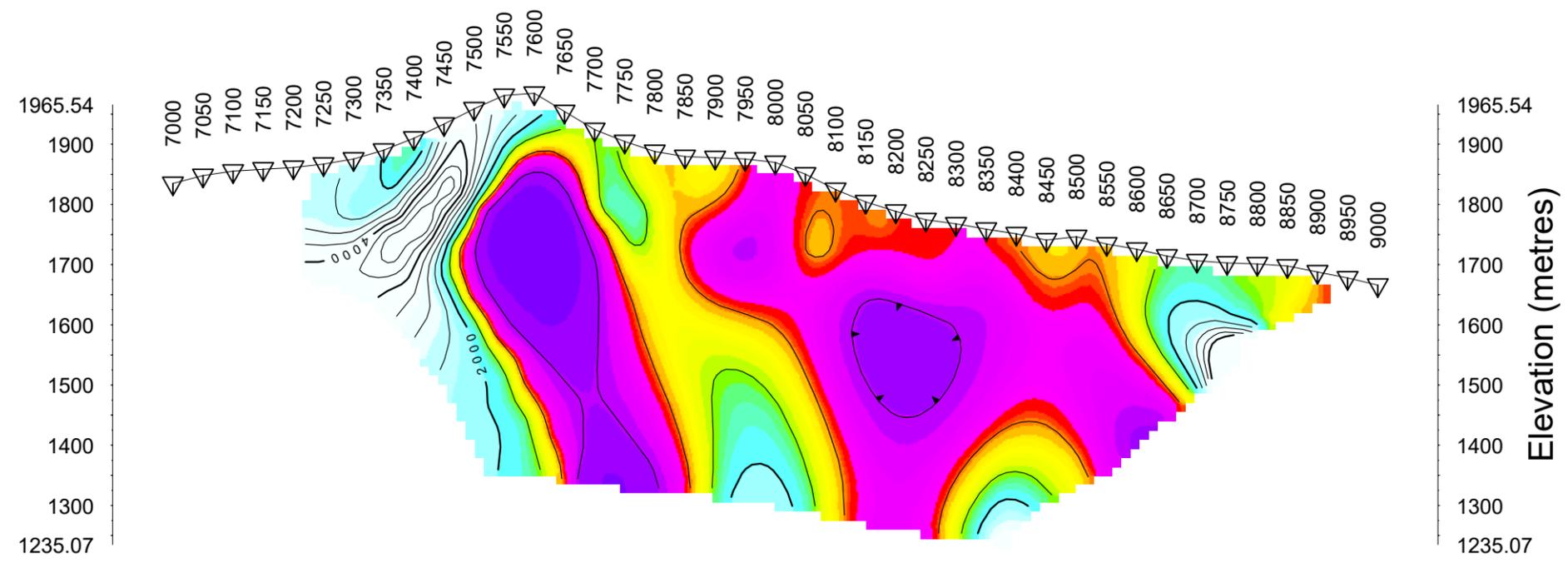
**FINLAY MINERALS LTD.**  
INDUCED POLARIZATION SURVEY  
PIL PROJECT  
DECEMBER 2017  
RES2DINV:  
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line\_2500N

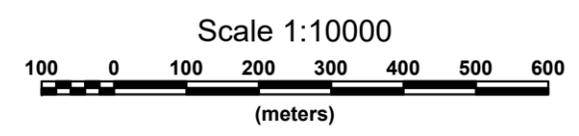
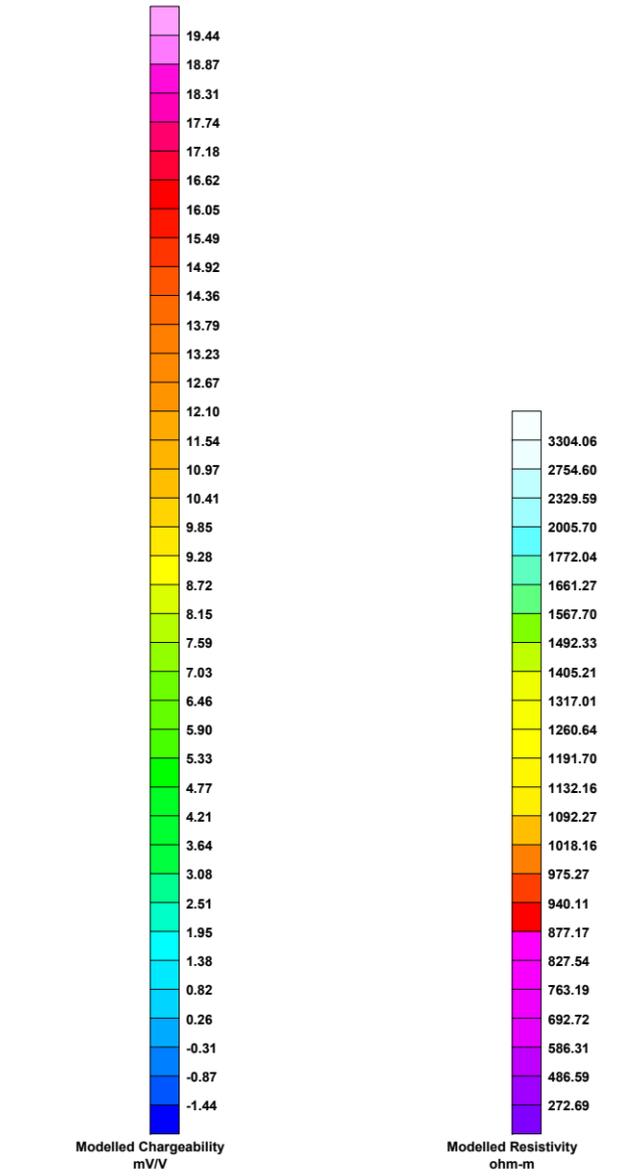
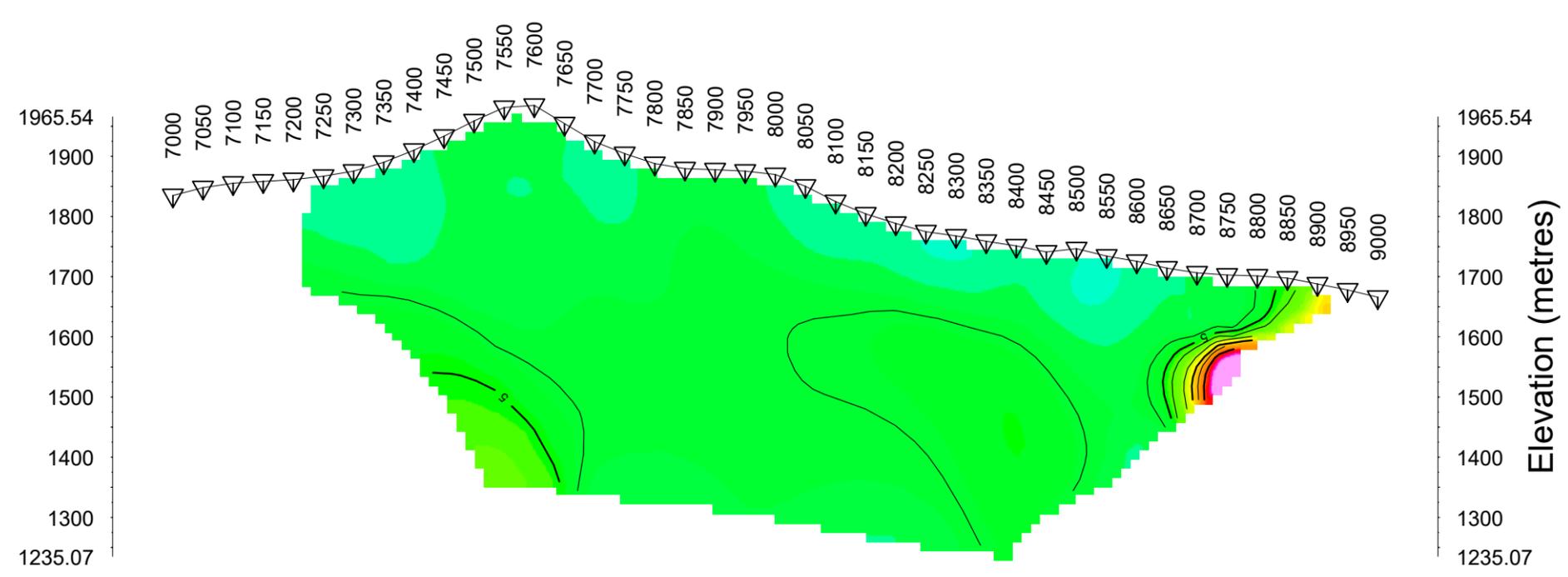
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



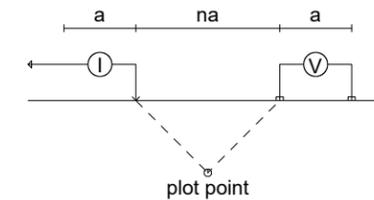
Modelled Chargeability (mV/V)



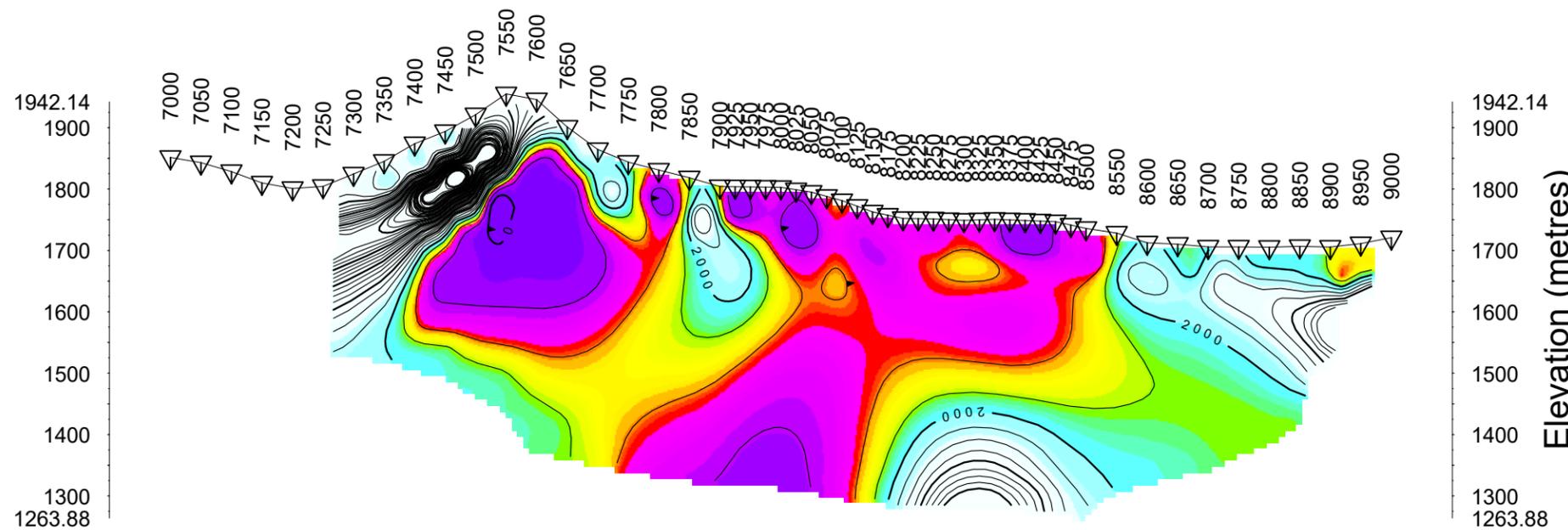
**FINLAY MINERALS LTD.**  
INDUCED POLARIZATION SURVEY  
PIL PROJECT  
DECEMBER 2017  
RES2DINV:  
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line\_2700N

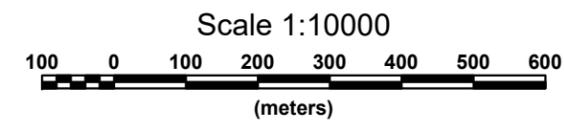
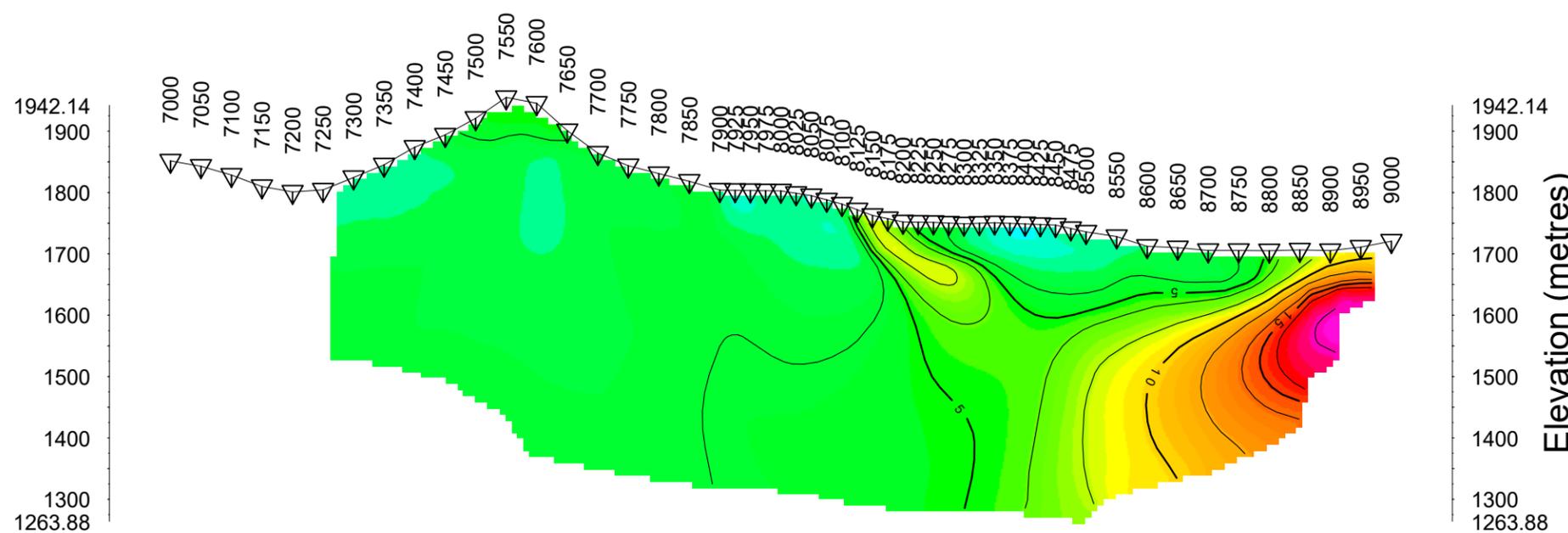
Pole-Dipole Array



Modelled Resistivity (Ohm-m)



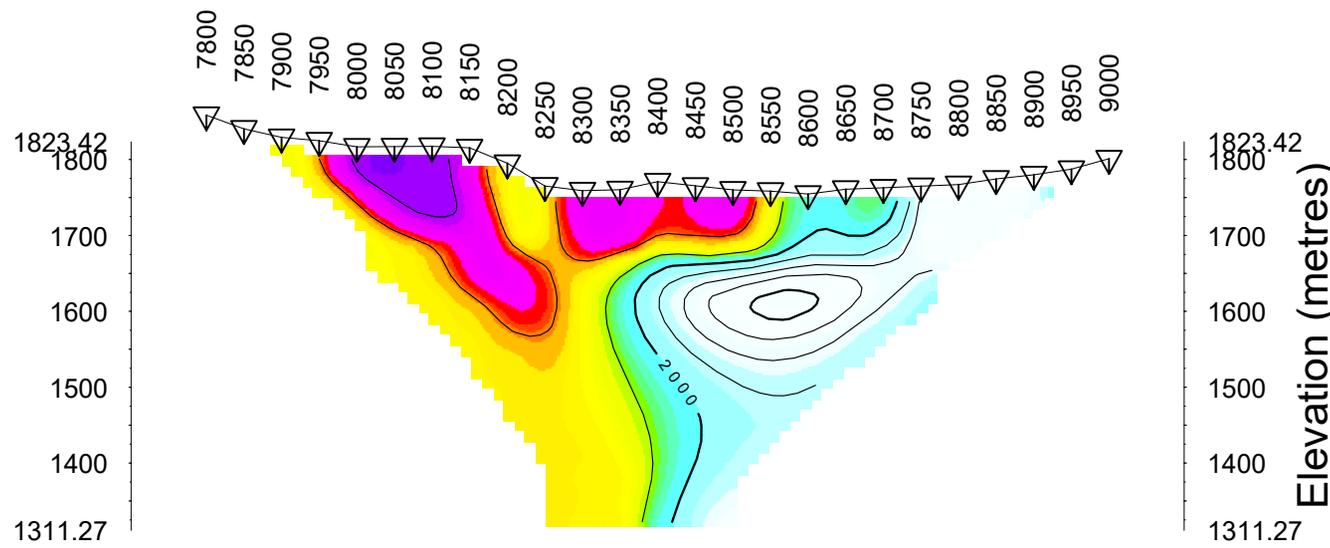
Modelled Chargeability (mV/V)



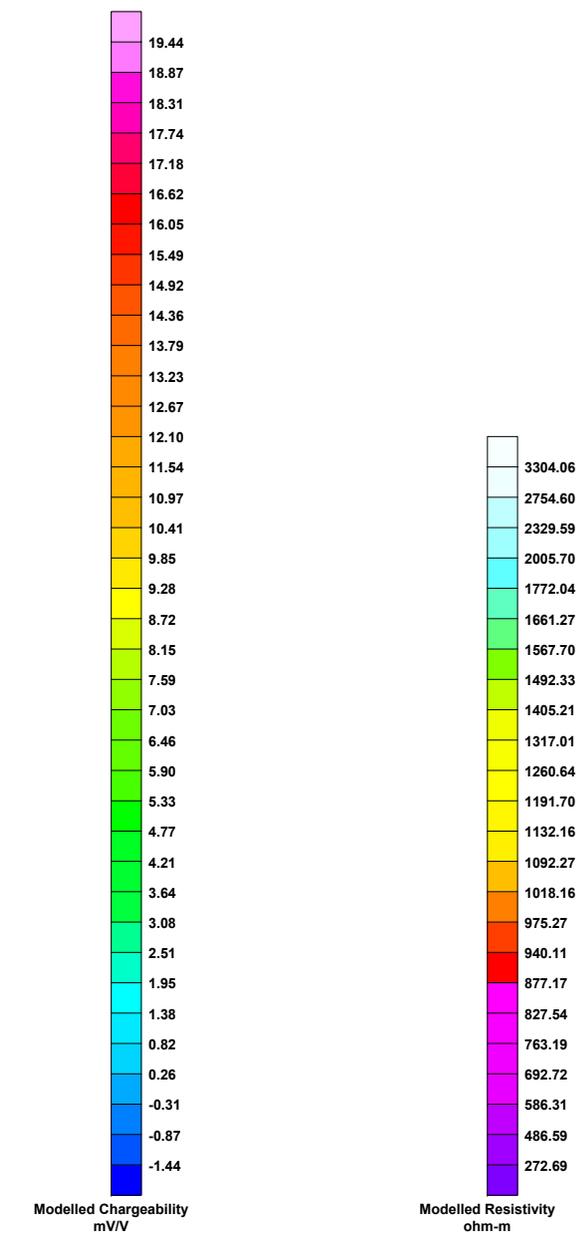
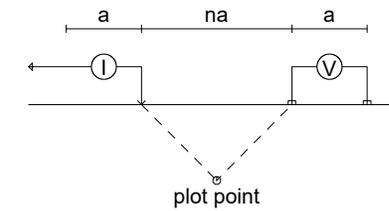
**FINLAY MINERALS LTD.**  
INDUCED POLARIZATION SURVEY  
PIL PROJECT  
DECEMBER 2017  
RES2DINV:  
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line\_2900N

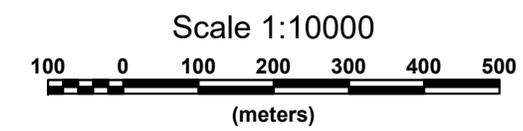
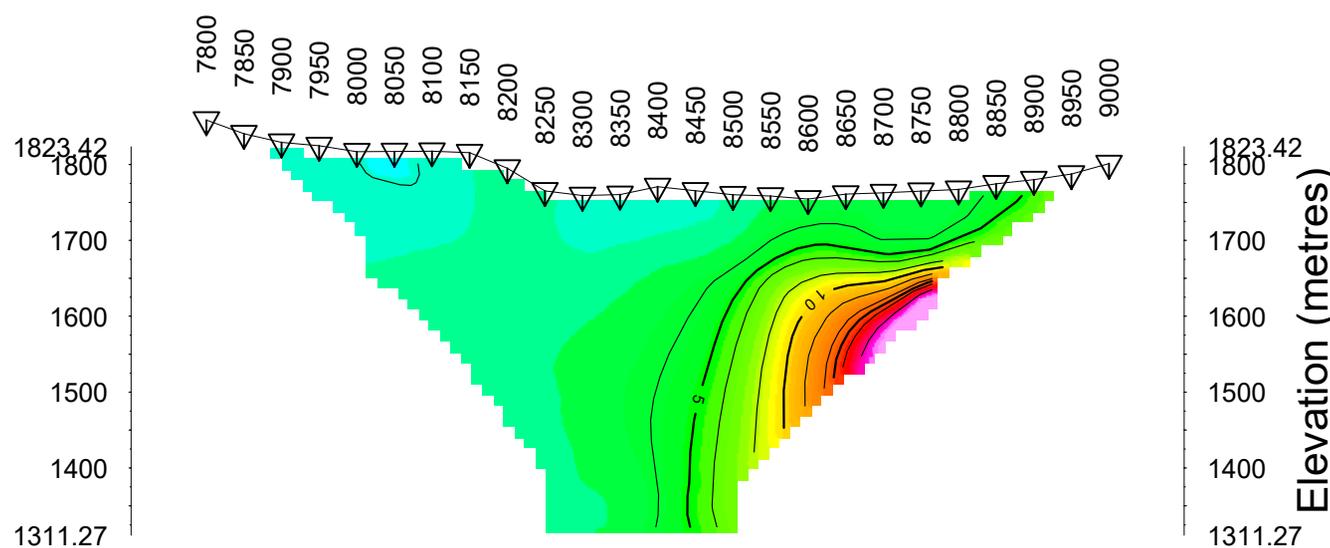
### Modelled Resistivity (Ohm-m)



### Pole-Dipole Array



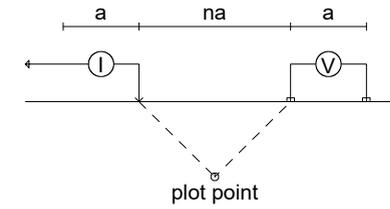
### Modelled Chargeability (mV/V)



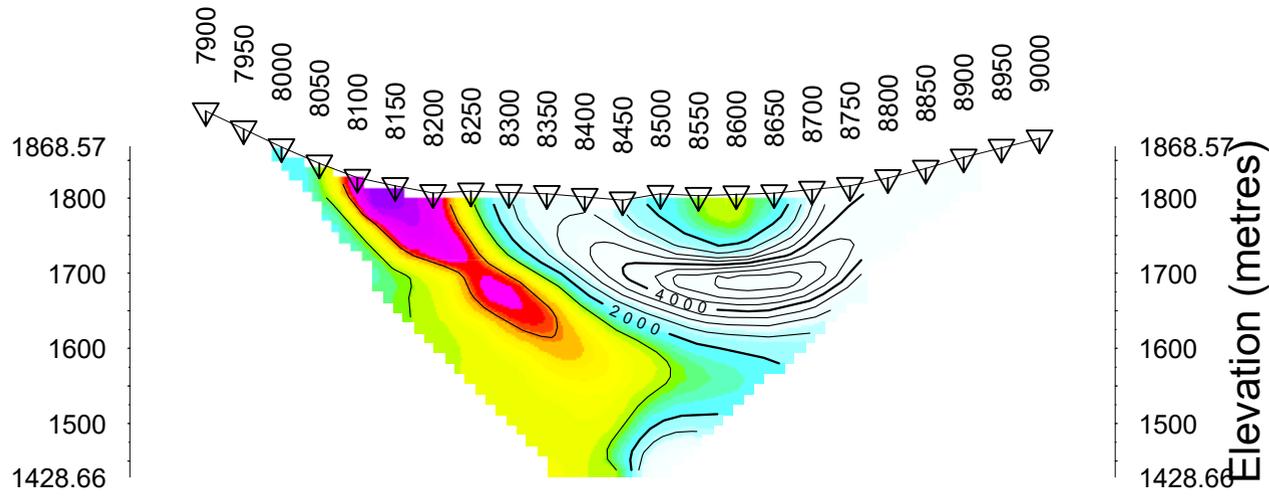
**FINLAY MINERALS LTD.**  
INDUCED POLARIZATION SURVEY  
PIL PROJECT  
DECEMBER 2017  
RES2DINV:  
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED

Line\_3100N

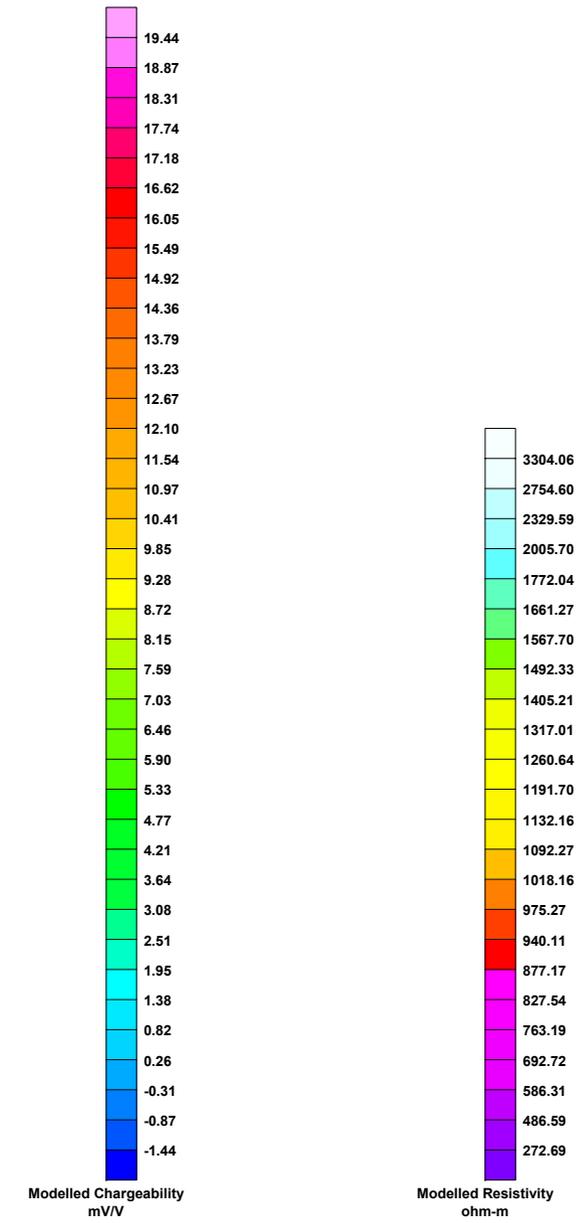
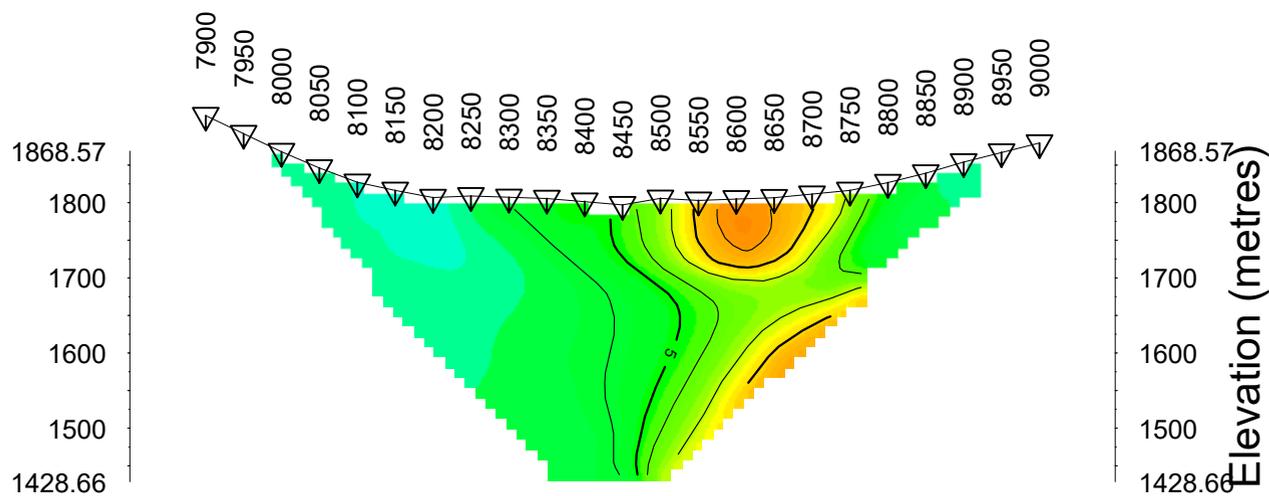
Pole-Dipole Array



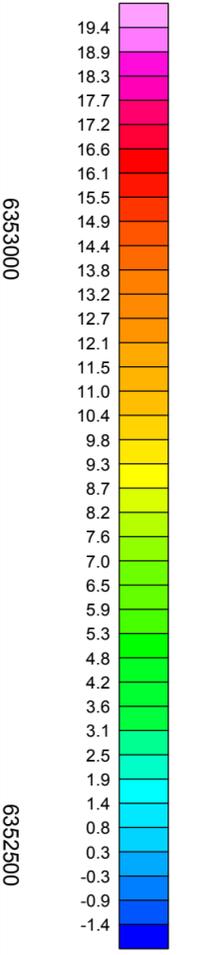
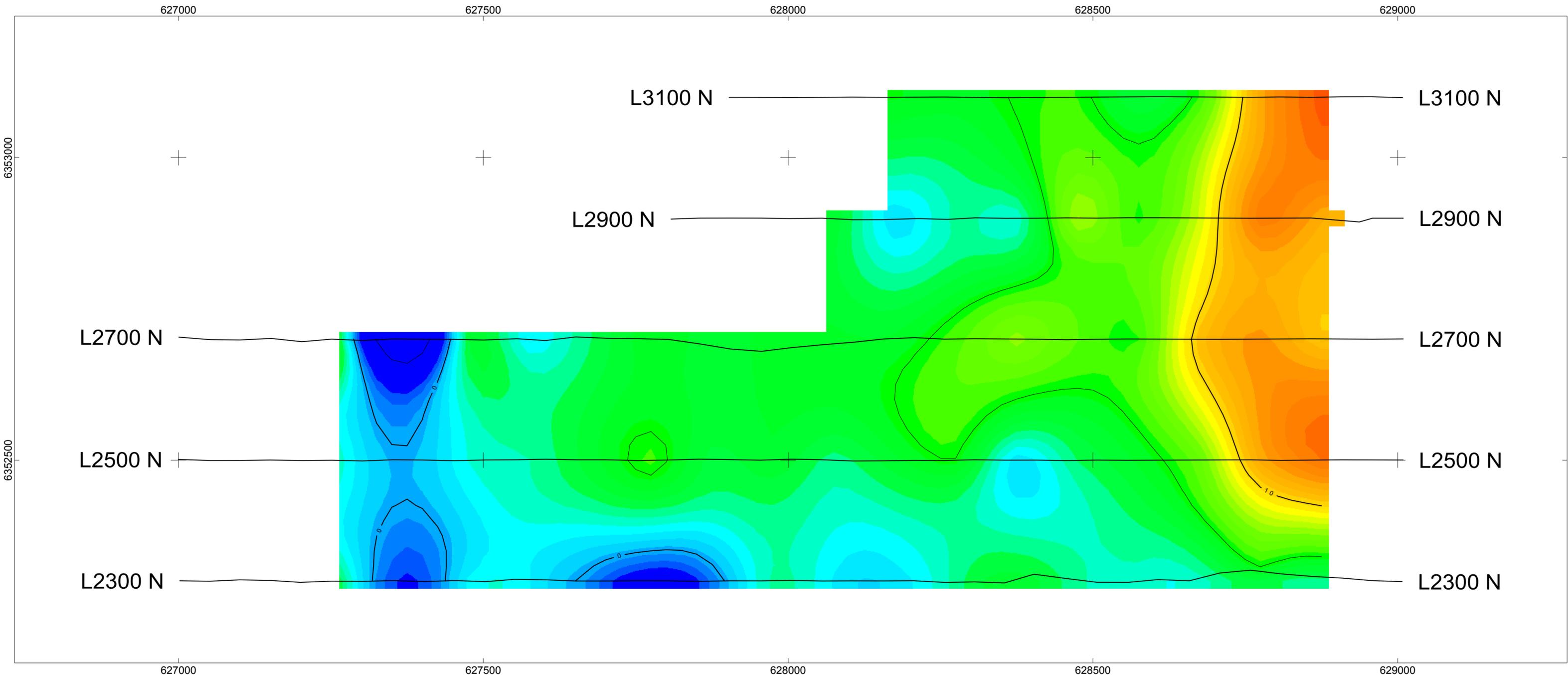
Modelled Resistivity (Ohm-m)



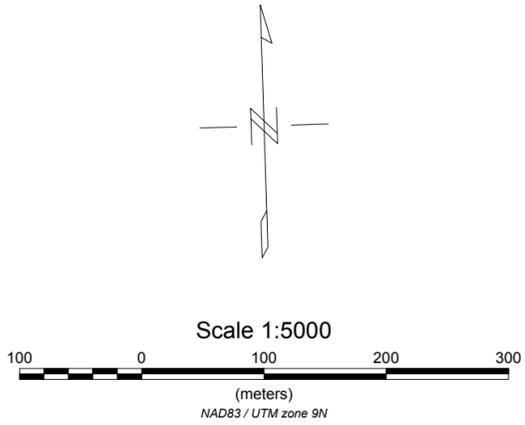
Modelled Chargeability (mV/V)



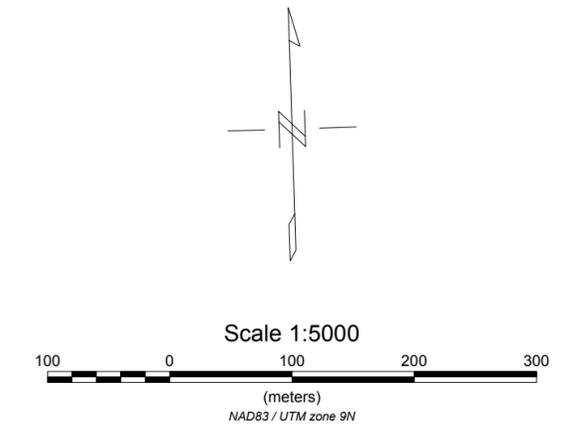
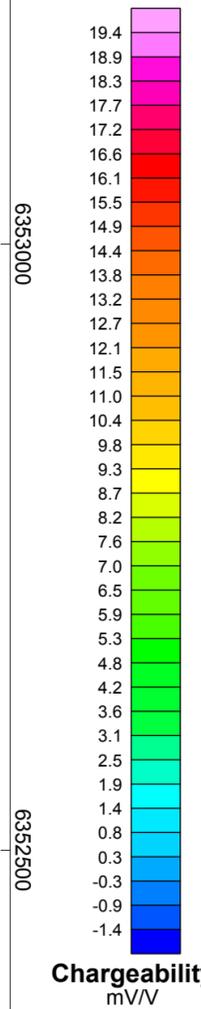
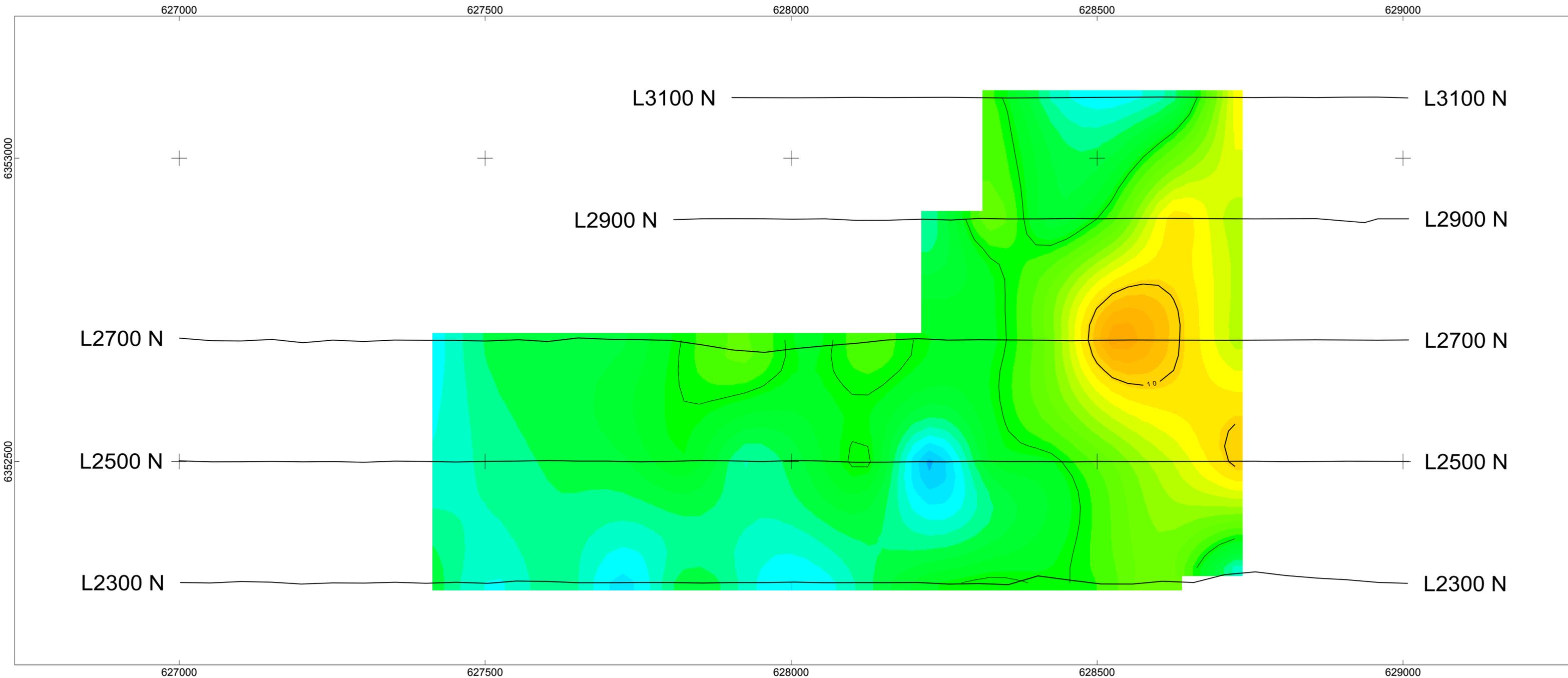
**FINLAY MINERALS LTD.**  
INDUCED POLARIZATION SURVEY  
PIL PROJECT  
DECEMBER 2017  
RES2DINV:  
Inversion By: PETER E. WALCOTT & ASSOCIATES LIMITED



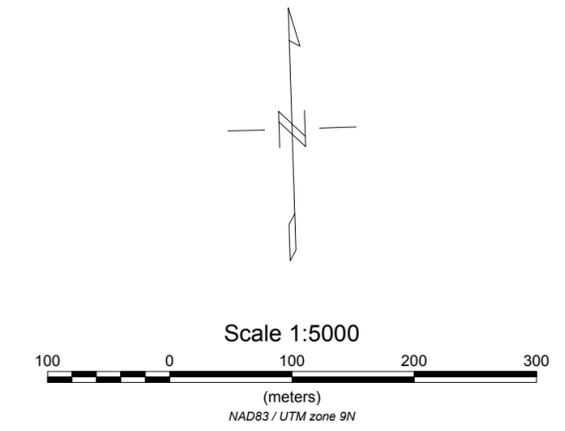
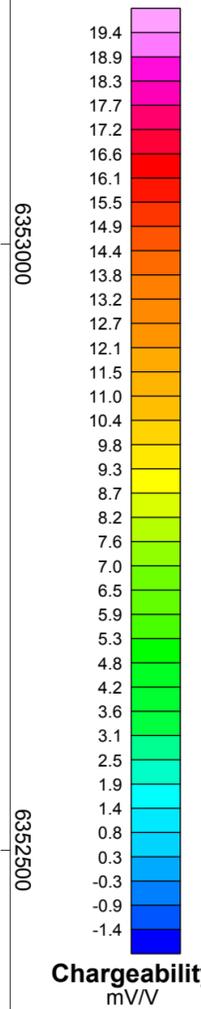
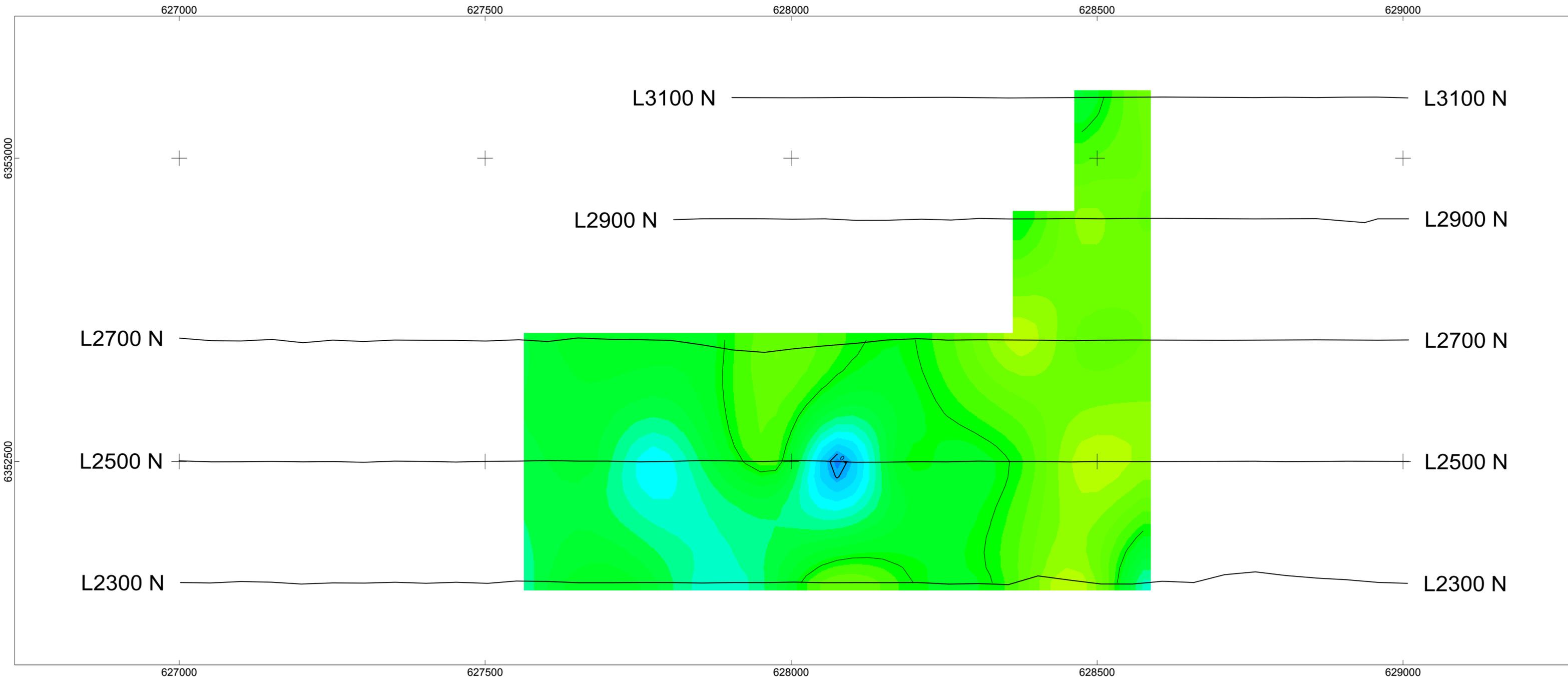
Chargeability  
mV/V



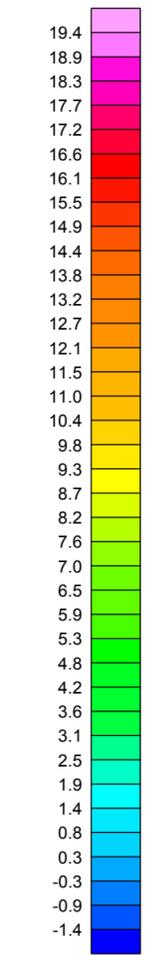
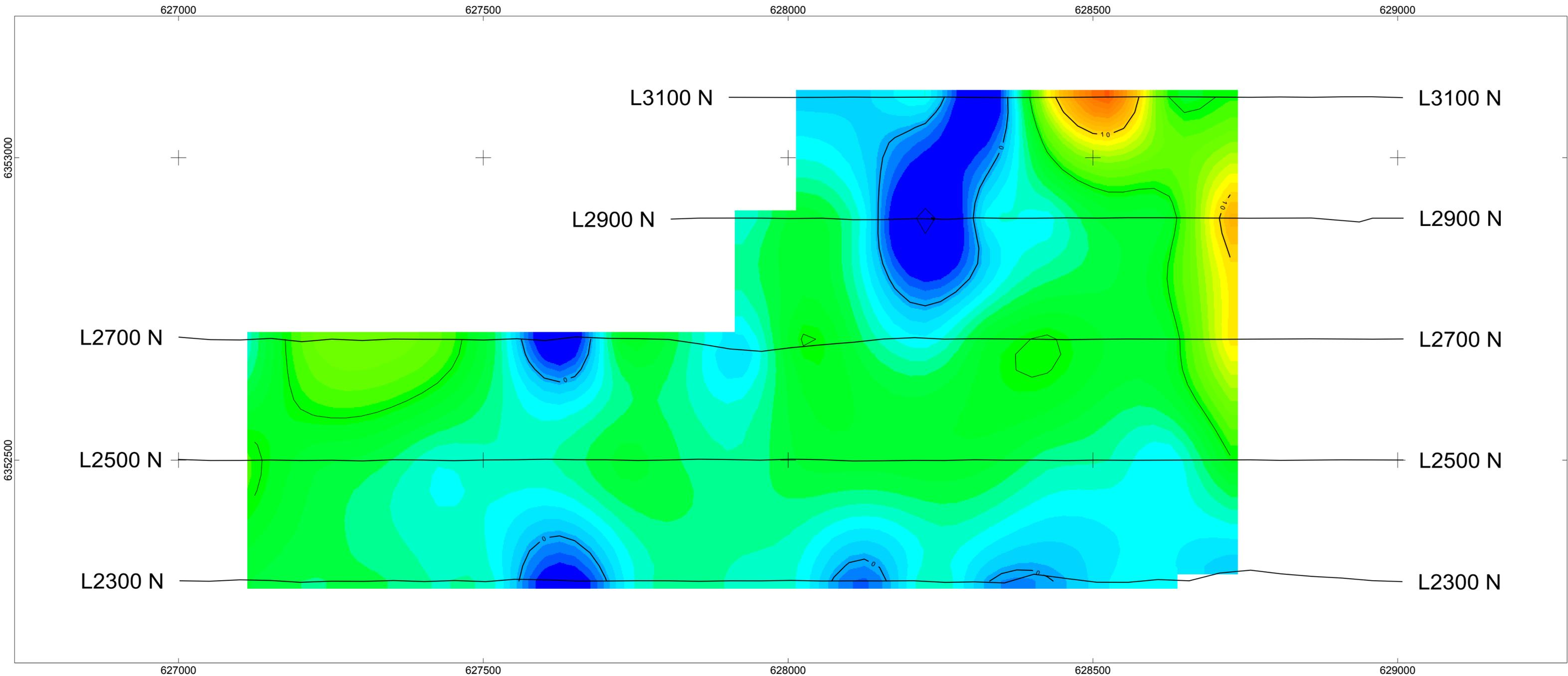
FINLAY MINERALS LTD.  
 PIL PROPERTY / PILLAR EAST PROSPECT  
 INDUCED POLARIZATION SURVEY  
 CONTOURS OF APPARENT CHARGEABILITY  
 DIPOLE-POLE CONFIGURATION: N2  
 DECEMBER 2017  
 PETER E. WALCOTT & ASSOCIATES LIMITED



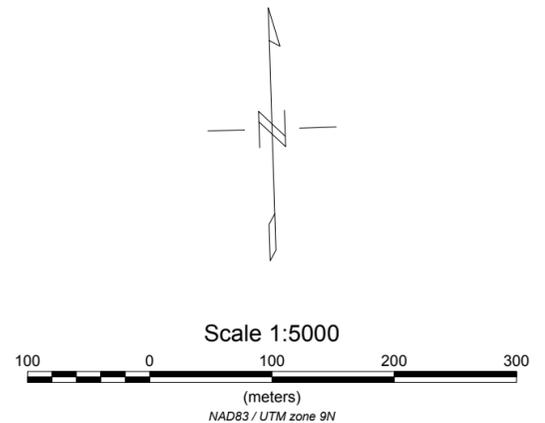
**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT CHARGEABILITY  
 DIPOLE-POLE CONFIGURATION: N5  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**



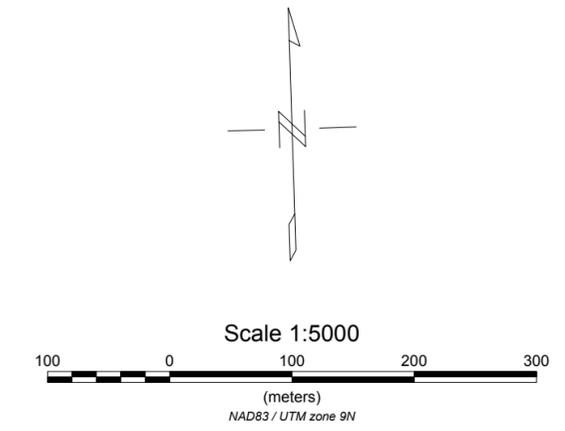
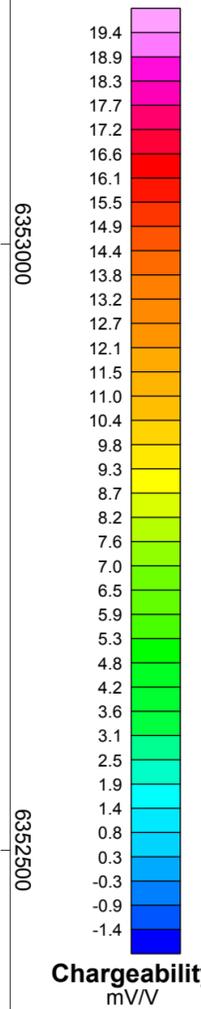
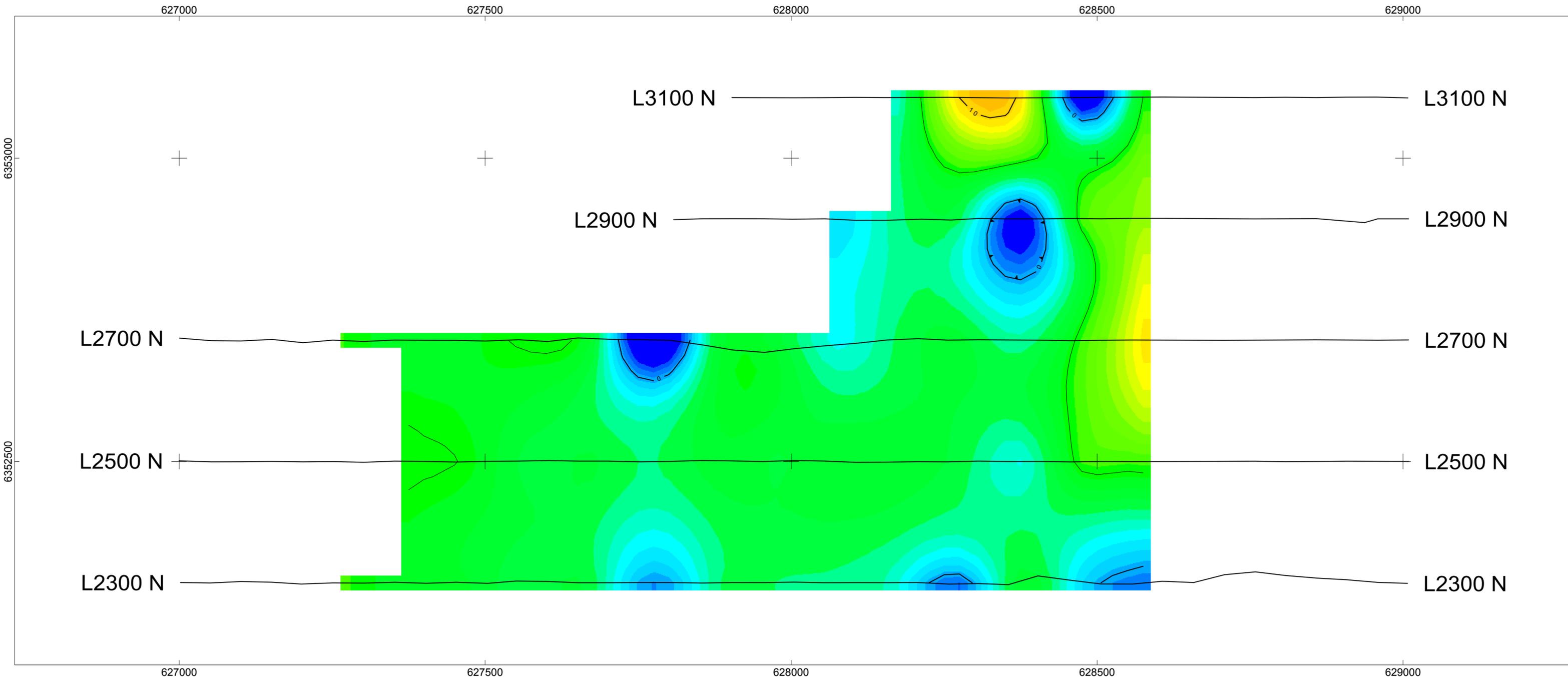
FINLAY MINERALS LTD.  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT CHARGEABILITY  
 DIPOLE-POLE CONFIGURATION: N8  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**



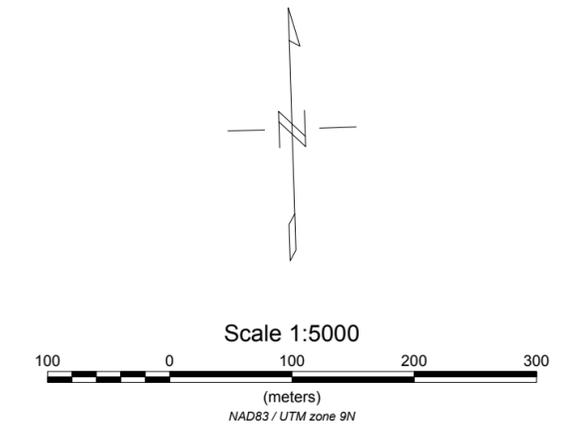
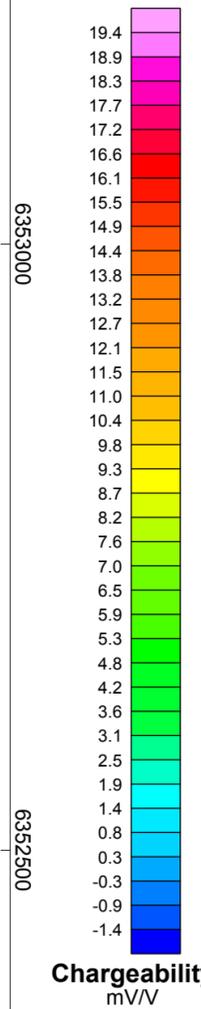
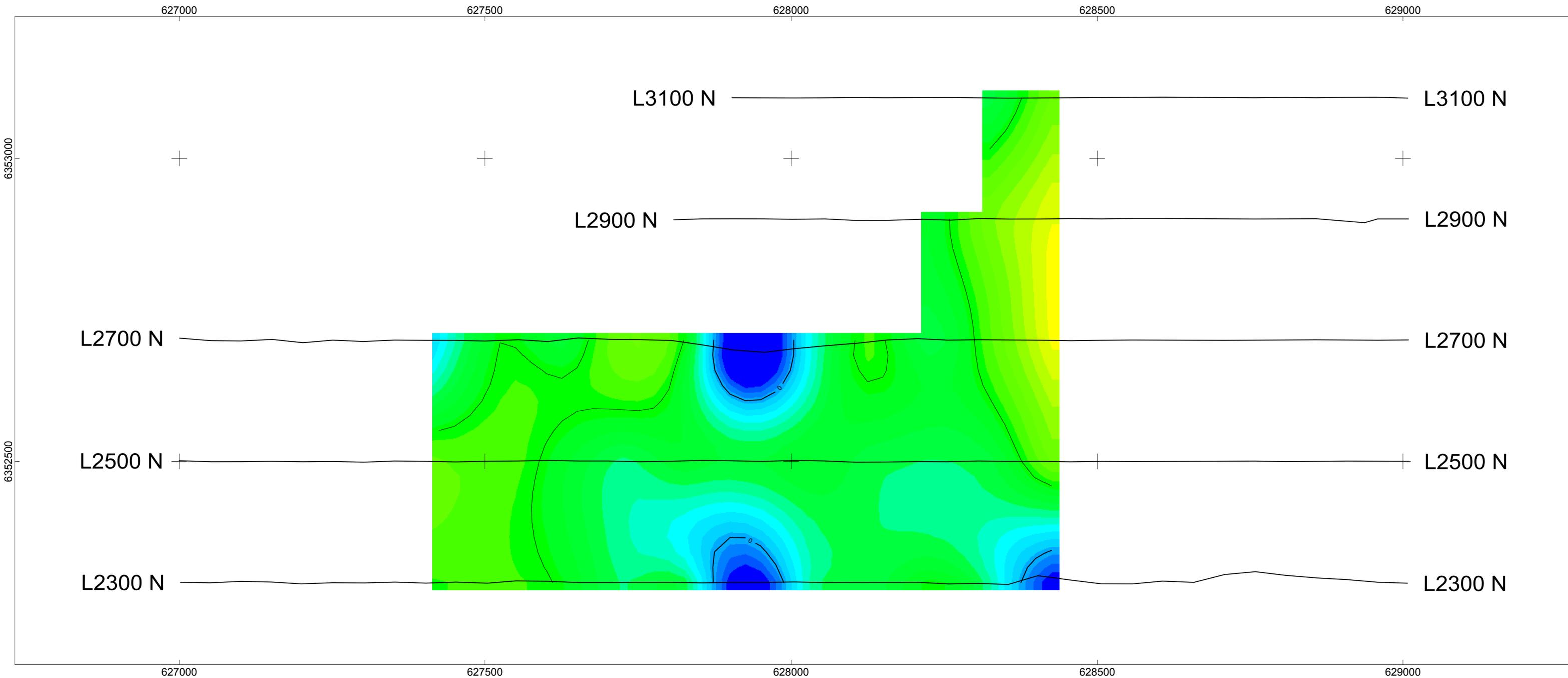
Chargeability  
mV/V



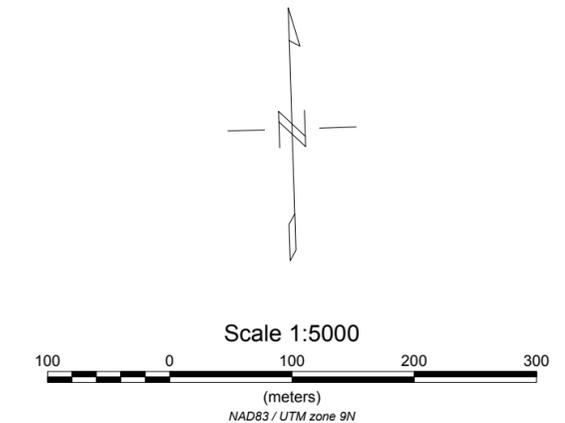
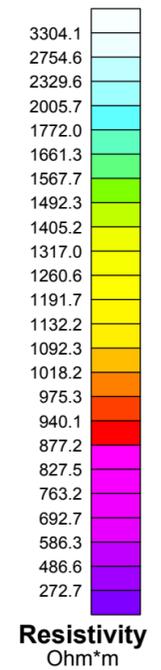
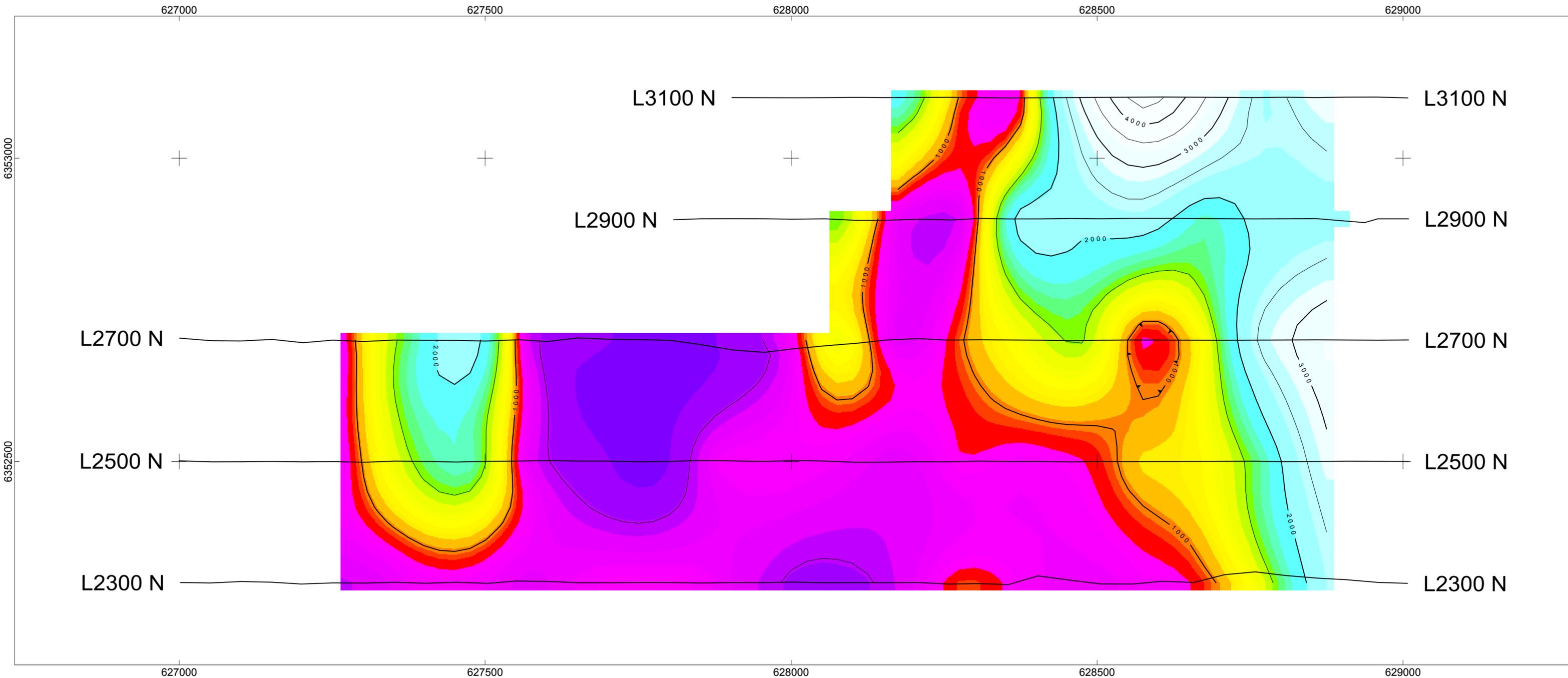
FINLAY MINERALS LTD.  
 PIL PROPERTY / PILLAR EAST PROSPECT  
 INDUCED POLARIZATION SURVEY  
 CONTOURS OF APPARENT CHARGEABILITY  
 POLE-DIPOLE CONFIGURATION: N2  
 DECEMBER 2017  
 PETER E. WALCOTT & ASSOCIATES LIMITED



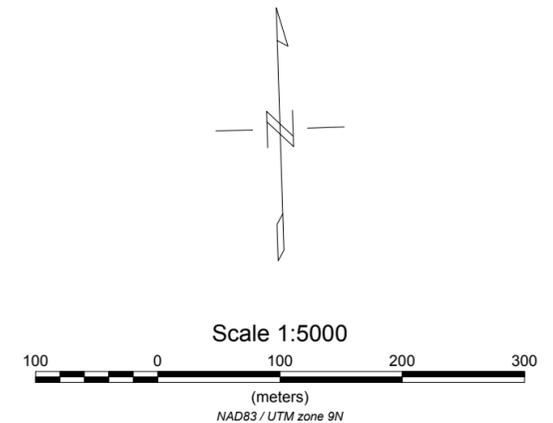
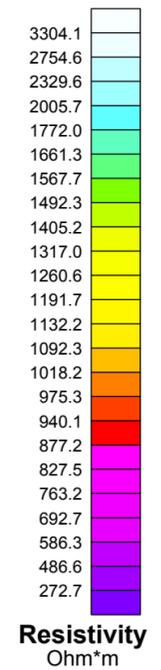
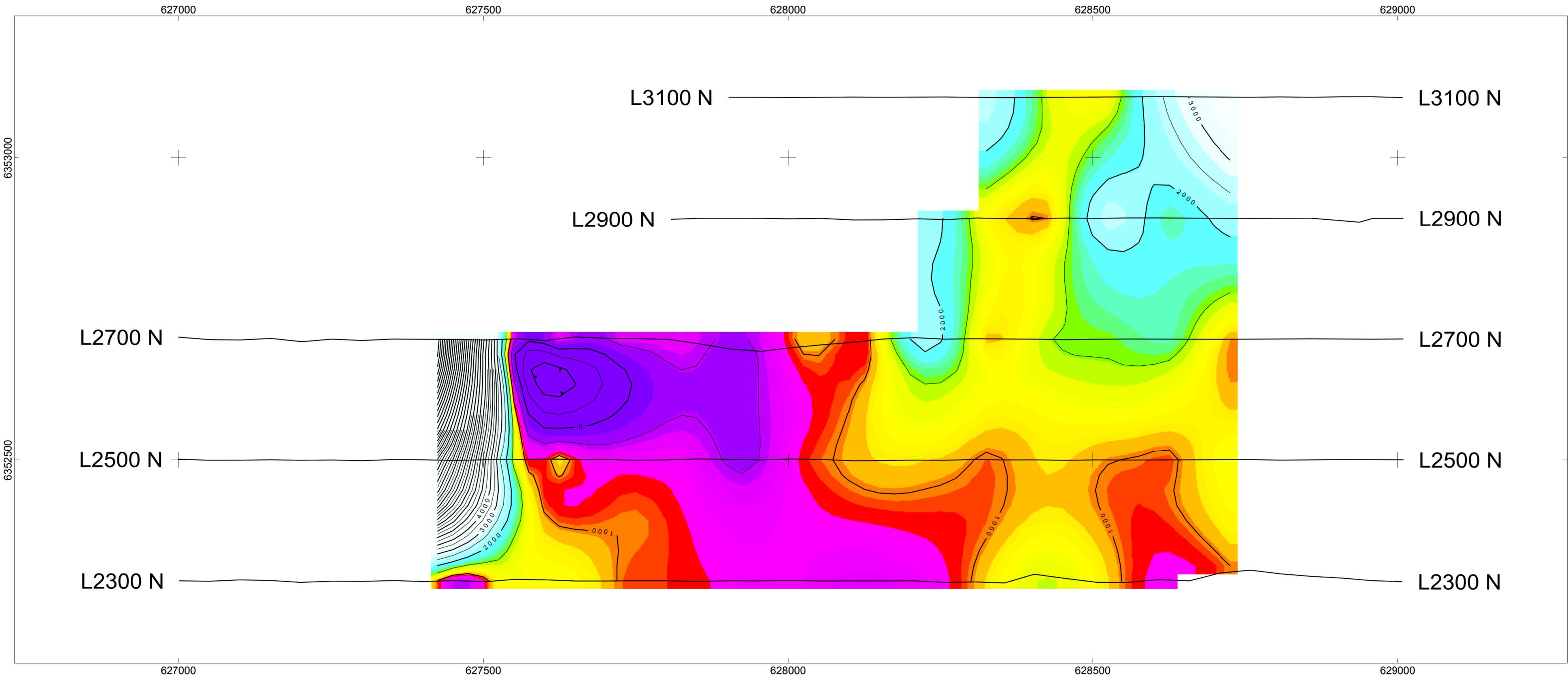
**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT CHARGEABILITY  
 POLE-DIPOLE CONFIGURATION: N5  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**



**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT CHARGEABILITY  
 POLE-DIPOLE CONFIGURATION: N8  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**



**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT RESISTIVITY  
 DIPOLE-POLE CONFIGURATION: N2  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**

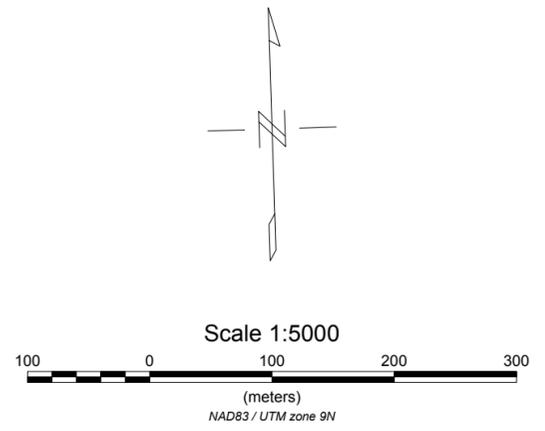
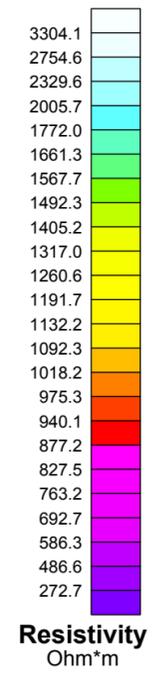
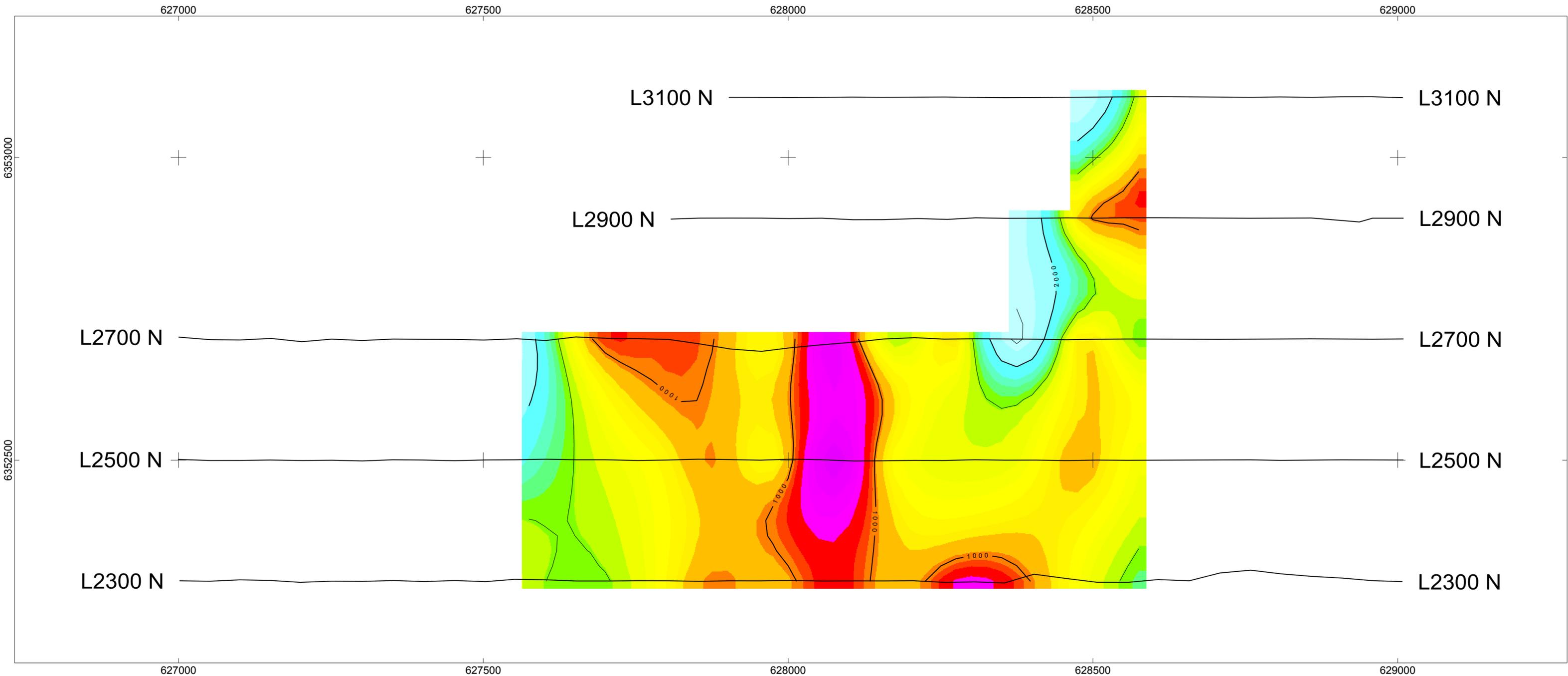


**FINLAY MINERALS LTD.**

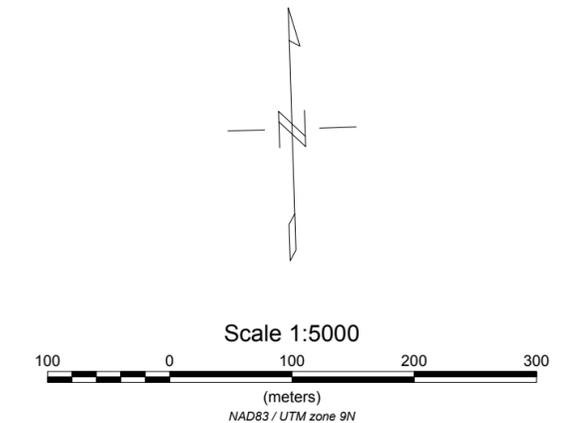
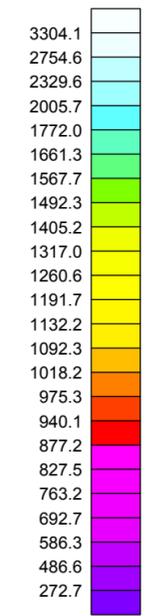
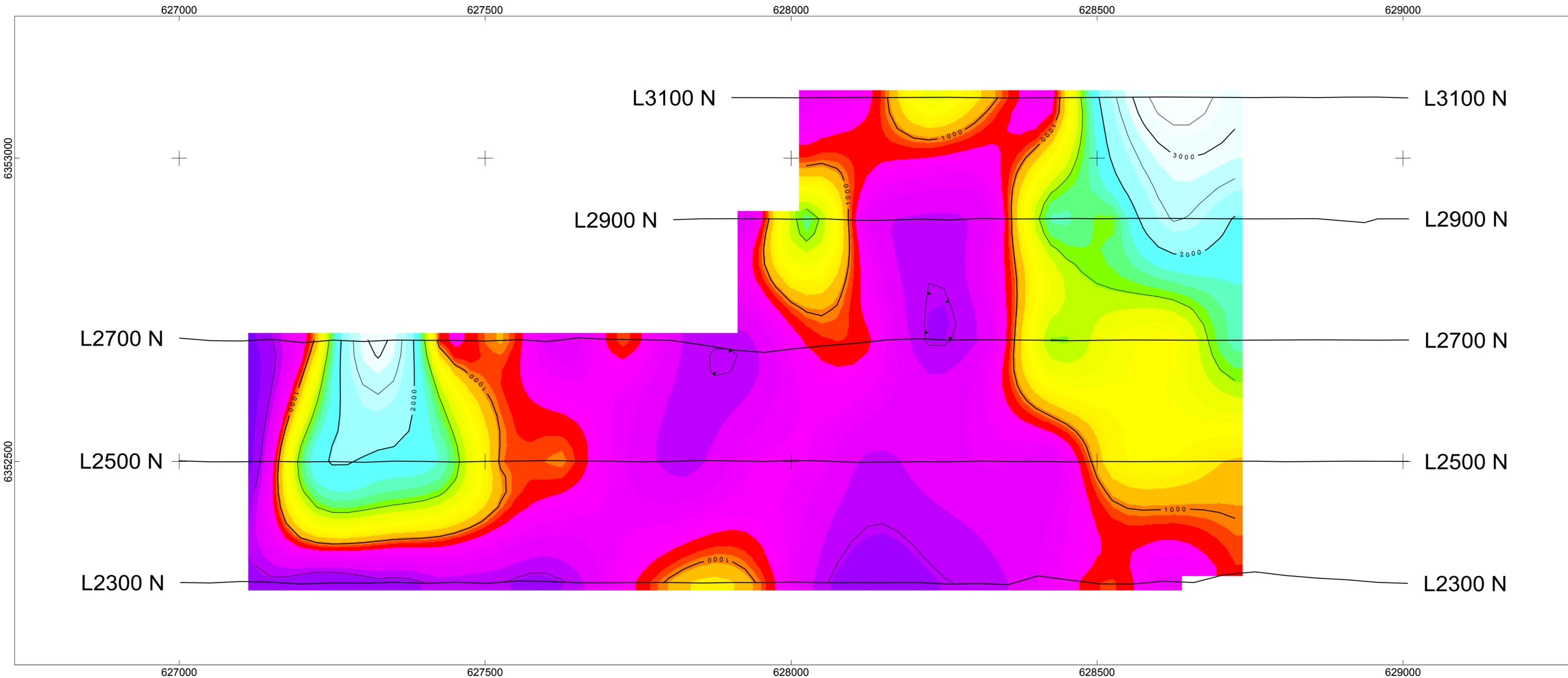
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT RESISTIVITY  
 DIPOLE-POLE CONFIGURATION: N5

DECEMBER 2017

**PETER E. WALCOTT & ASSOCIATES LIMITED**



**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT RESISTIVITY  
 DIPOLE-POLE CONFIGURATION: N8  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**

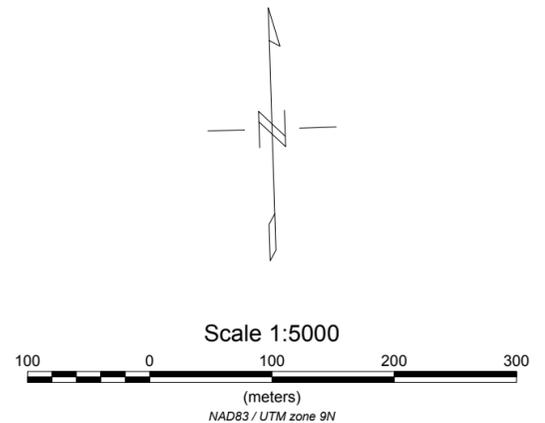
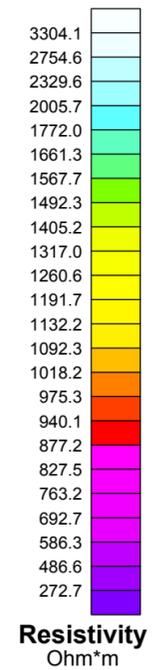
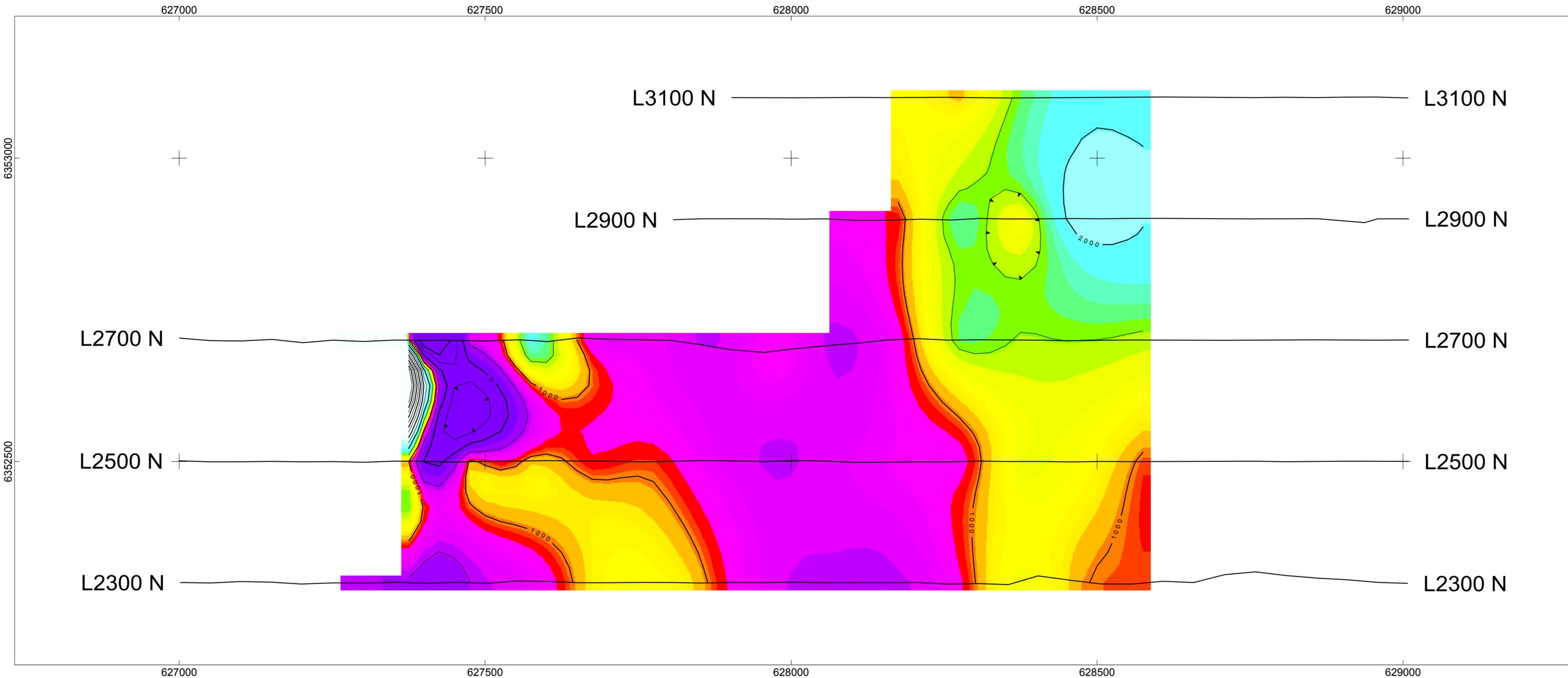


FINLAY MINERALS LTD.

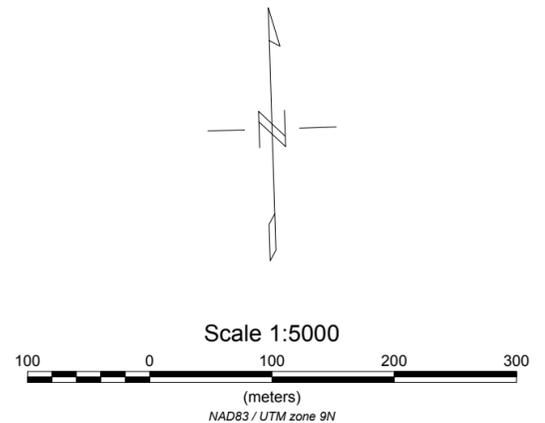
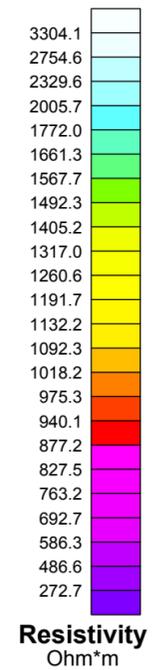
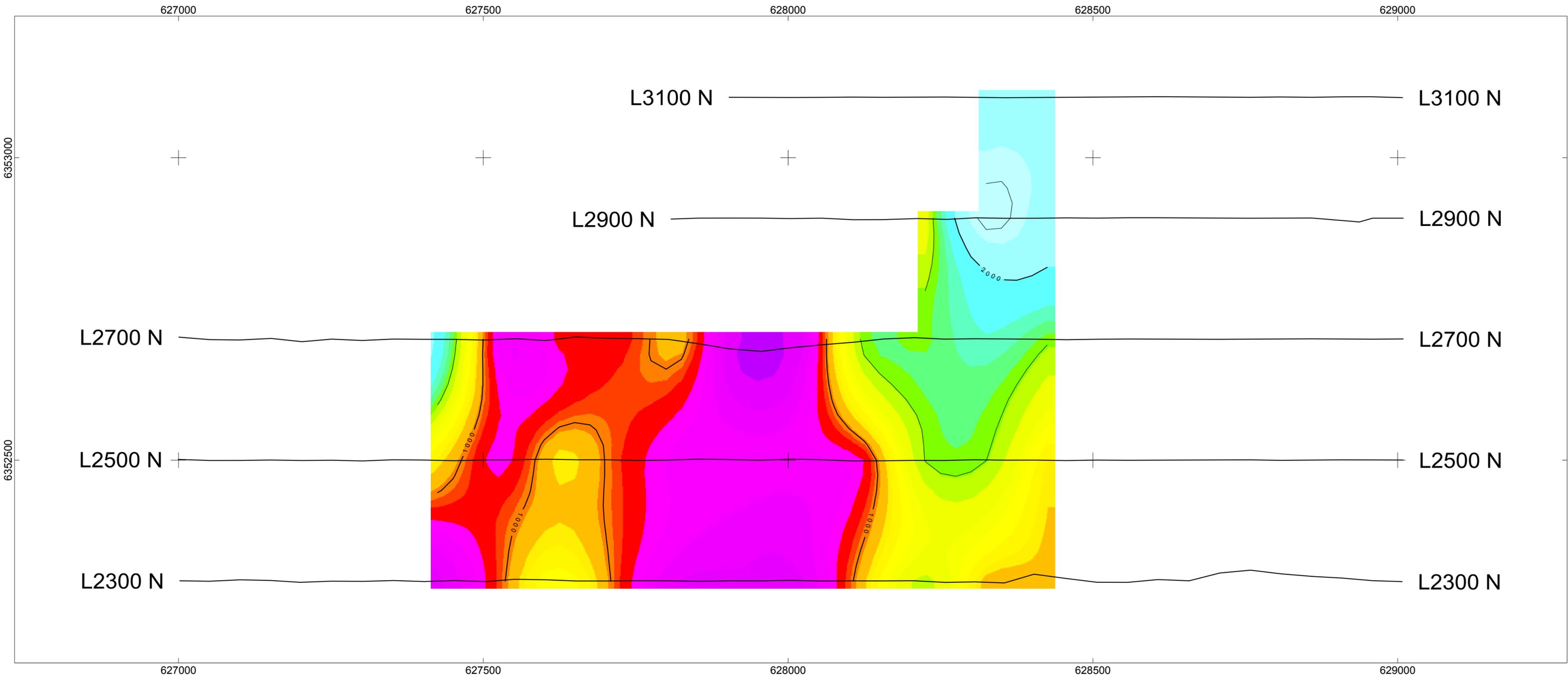
PIL PROPERTY / PILLAR EAST PROSPECT  
INDUCED POLARIZATION SURVEY  
CONTOURS OF APPARENT RESISTIVITY  
POLE-DIPOLE CONFIGURATION: N2

DECEMBER 2017

PETER E. WALCOTT & ASSOCIATES LIMITED



**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT RESISTIVITY  
 POLE-DIPOLE CONFIGURATION: N5  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**



**FINLAY MINERALS LTD.**  
**PIL PROPERTY / PILLAR EAST PROSPECT**  
**INDUCED POLARIZATION SURVEY**  
 CONTOURS OF APPARENT RESISTIVITY  
 POLE-DIPOLE CONFIGURATION: N8  
 DECEMBER 2017  
**PETER E. WALCOTT & ASSOCIATES LIMITED**

## **Appendix E**

---

### **Rock Sample Descriptions**

Pillar East Rock Sample Descriptions - 2017

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Elev (m)	Float/ Outcrop	Description	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm
VAN17001766	W17R-01	628344	6353069		Subcrop	Grab sample angular, vuggy quartz vein breccia. Minor pyrite, galena. Suspect Au. Traced 4 m N.	19951	423.0	794	4793	1351
VAN17001766	TAN-003A	626674	6353297		Outcrop	Select sample of the hanging wall of heterolithic breccia dike. Disseminated ~2% grey sulphide mineral. Sampled to test for chalcocite or tetrahedrite.	112	52.0	27600	27	85
VAN17002053	RHRK 01	627006	6352583	1868	Outcrop	Grey, fine-grained feldspar porphyry. Felspars mostly clay altered. No pyrite. Trace grey disseminated metallic - non magnetic (hematite?)	<0.5	<0.1	3	8	73
VAN17002053	RHRK 02	627006	6352591	1856	Outcrop	Pale grey-brown fine grained feldspar porphyry volcanic. Feldspars altered to clay and many pitted and limonitic. No sulphides. Non magnetic.	7	2.5	11	11	8
VAN17002053	GF17-01	628465	6353084		Outcrop	Medium-grained, pink, K-feldspar phyric porphyry, aphanitic groundmass. ~25% K-feld and replaced 5-7% plagioclase phenocrysts. Syenite porphyry. Alteration: Albite +/- silica pervasive moderate, selective replacement plag to pyrite, pyrite stringers. 1% pyrite disseminated, 0.1% cpy disseminated. Groundmass is alb-chl altered.	29	4.1	9	6	50

**Appendix F**

---

**Airborne Magnetic Compilation Plans  
(Cu, Au, Ag)**

626000 m

627000 m

628000 m

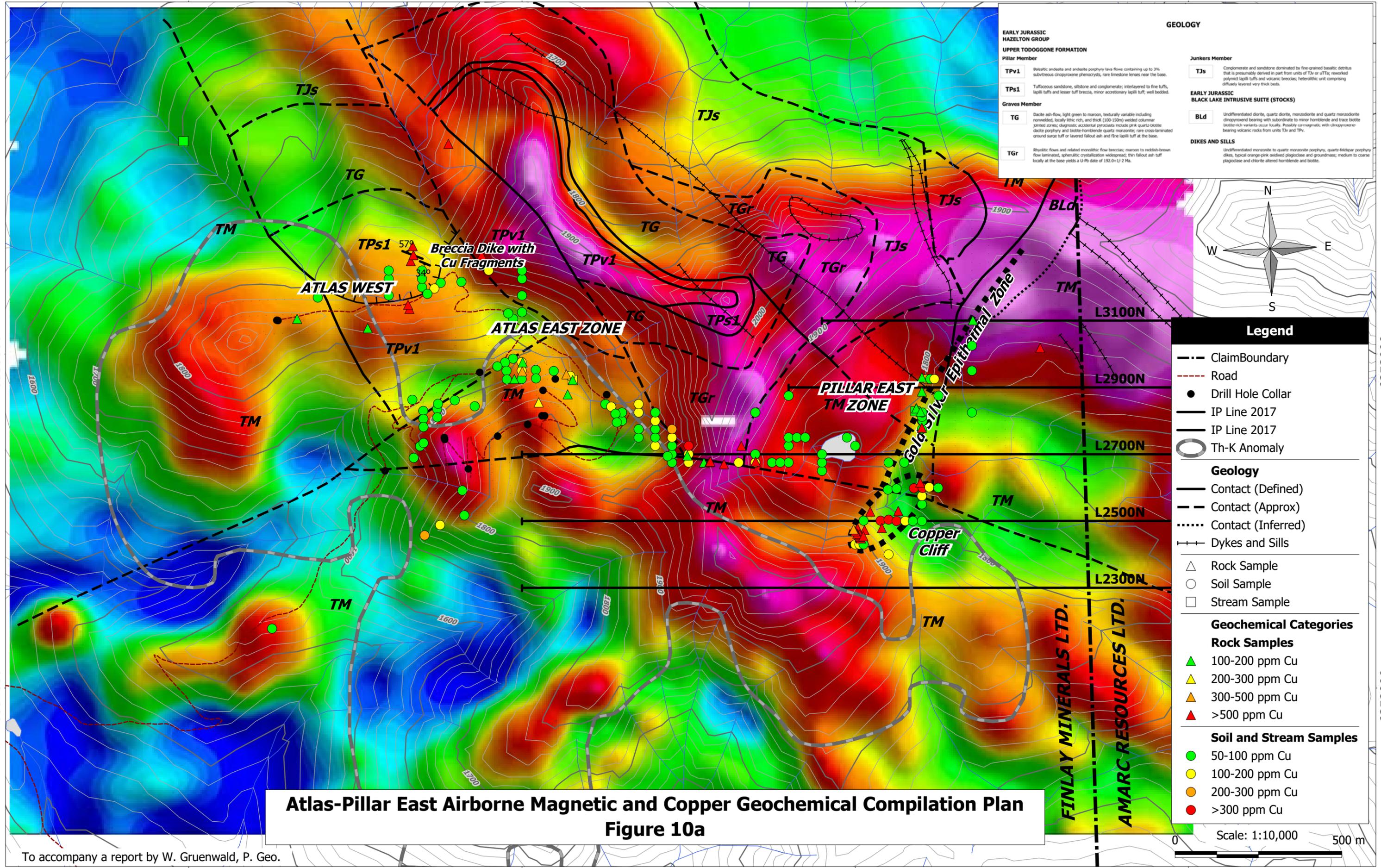
629000 m

6353000 m

6353000 m

6352000 m

6352000 m



**EARLY JURASSIC HAZELTON GROUP**  
**UPPER TODOGGONE FORMATION**  
**Pillar Member**

**TPv1** Basaltic andesite and andesite porphyry lava flows containing up to 3% subvolcanic clinopyroxene phenocrysts, rare limestone lenses near the base.

**TPs1** Tuffaceous sandstone, siltstone and conglomerate; interlayered to fine tuffs, lapilli tuffs and lesser tuff breccia, minor accretionary lapilli tuff, well bedded.

**Graves Member**

**TG** Dacite ash-flow, light green to maroon, texturally variable including nonwelded, locally lithic rich, and thick (100-150m) welded columnar jointed zones; diagnostic accidental pyroxenes include pink quartz-biotite dacite porphyry and bottle-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base.

**TGr** Rhyolitic flows and related monolithic flow breccia; maroon to reddish-brown flow laminated, spherulitic crystallization widespread; thin fallout ash tuff locally at the base yields a U-Pb date of 192.0 ± 1.2 Ma.

**Junkers Member**

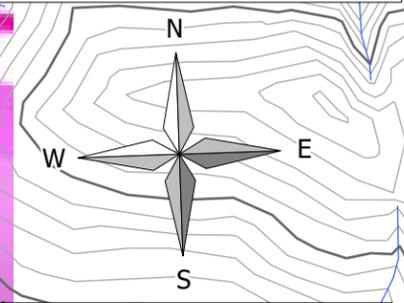
**TJs** Conglomerate and sandstone dominated by fine-grained basaltic detritus that is presumably derived in part from units of TPv or uTTA; reworked polymict lapilli tuffs and volcanic breccia; heterolithic unit comprising diffusely layered very thick beds.

**EARLY JURASSIC BLACK LAKE INTRUSIVE SUITE (STOCKS)**

**BLd** Undifferentiated diorite, quartz diorite, monzonite and quartz monzonite clinopyroxene bearing with subordinate to minor hornblende and trace biotite biotite-rich variants occur locally. Possibly cor-magmatic, with clinopyroxene-bearing volcanic rocks from units TPv and TPv.

**DIKES AND SILLS**

Undifferentiated monzonite to quartz monzonite porphyry, quartz-feldspar porphyry dikes, typical orange-pink oxidized plagioclase and groundmass; medium to coarse plagioclase and chlorite altered hornblende and biotite.



**Legend**

- Claim Boundary
- - - Road
- Drill Hole Collar
- IP Line 2017
- IP Line 2017
- Th-K Anomaly

**Geology**

- Contact (Defined)
- - - Contact (Approx)
- ..... Contact (Inferred)
- + + + Dykes and Sills

**Geochemical Categories**

**Rock Samples**

- ▲ 100-200 ppm Cu
- ▲ 200-300 ppm Cu
- ▲ 300-500 ppm Cu
- ▲ >500 ppm Cu

**Soil and Stream Samples**

- 50-100 ppm Cu
- 100-200 ppm Cu
- 200-300 ppm Cu
- >300 ppm Cu

Scale: 1:10,000 500 m

**Atlas-Pillar East Airborne Magnetic and Copper Geochemical Compilation Plan**  
**Figure 10a**

To accompany a report by W. Gruenwald, P. Geo.

626000 m

627000 m

628000 m

629000 m

626000 m

627000 m

628000 m

629000 m

**EARLY JURASSIC HAZELTON GROUP**  
**UPPER TODOGGONE FORMATION**  
**Pillar Member**

**TPv1** Basaltic andesite and andesite porphyry lava flows containing up to 3% subvolcanic enophyrene phenocrysts, rare limestone lenses near the base.

**TPs1** Tuffaceous sandstone, siltstone and conglomerate; interlayered to fine tuffs, lapilli tuffs and lesser tuff breccia, minor accretionary lapilli tuff, well bedded.

**Graves Member**

**TG** Dacite ash-flow, light green to maroon, texturally variable including nonwelded, locally lithic rich, and thick (100-150m) welded columnar jointed zones; diagnostic accidental pyroclasts include pink quartz-biotite dacite porphyry and bottle-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base.

**TGr** Rhyolitic flows and related monolithic flow breccias; maroon to reddish-brown flow laminated, spherulitic crystallization widespread; thin fallout ash tuff locally at the base yields a U-Pb date of 192.0 ± 1/2 Ma.

**Junkers Member**

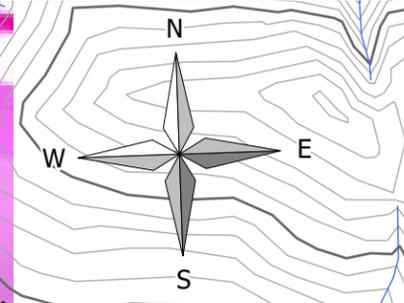
**TJs** Conglomerate and sandstone dominated by fine-grained basaltic detritus that is presumably derived in part from units of TPv or uTTa; reworked polymict lapilli tuffs and volcanic breccias; heterolithic unit comprising diffusely layered very thick beds.

**EARLY JURASSIC BLACK LAKE INTRUSIVE SUITE (STOCKS)**

**Bld** Undifferentiated diorite, quartz diorite, monzonite and quartz monzonite clinopyroxene bearing with subordinate to minor hornblende and trace biotite (biotite-rich) varieties occur locally. Possibly co-magmatic, with clinopyroxene-bearing volcanic rocks from units TJs and TPv.

**DIKES AND SILLS**

Undifferentiated monzonite to quartz monzonite porphyry, quartz-feldspar porphyry dikes, typical orange-pink oxidized plagioclase and groundmass; medium to coarse plagioclase and chlorite altered hornblende and biotite.

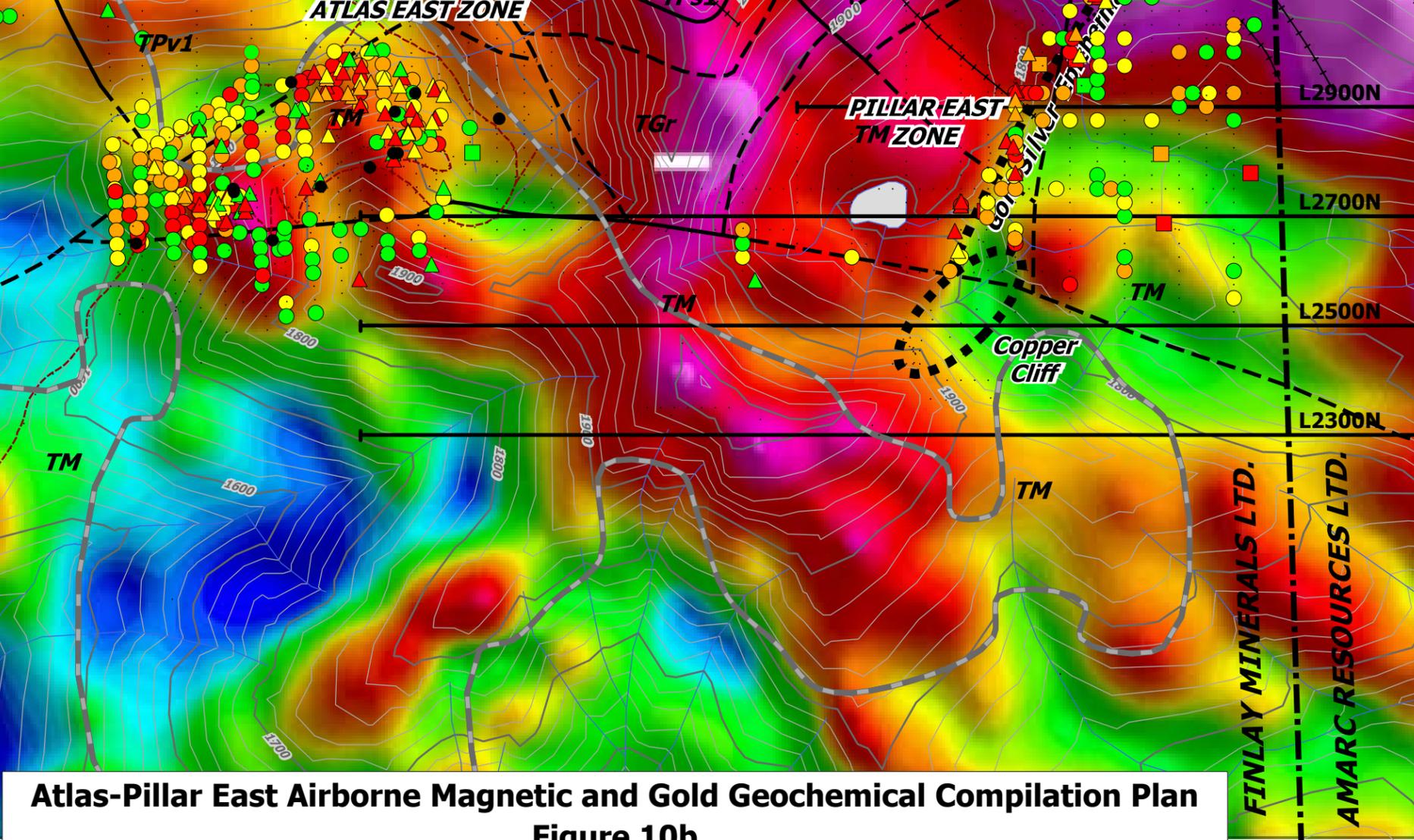


6353000 m

6353000 m

6352000 m

6352000 m



**Legend**

- Claim Boundary
- - - Road
- Drill Hole Collar
- IP Line 2017
- Th-K Anomaly

**Geology**

- Contact (Defined)
- - - Contact (Approx)
- ..... Contact (Inferred)
- + + Dykes and Sills

**Geochemical Categories**

**Rock Samples**

- ▲ 100-200 ppb Au
- ▲ 200-500 ppb Au
- ▲ 500-1000 ppb Au
- ▲ >1000 ppb Au

**Soil and Stream Samples**

- 50-100 ppb Au
- 100-200 ppb Au
- 200-500 ppb Au
- >500 ppb Au

**Atlas-Pillar East Airborne Magnetic and Gold Geochemical Compilation Plan**  
**Figure 10b**

Scale: 1:10,000  
 0 500 m

To accompany a report by W. Gruenwald, P. Geo.

626000 m

627000 m

628000 m

629000 m

FINLAY MINERALS LTD.

AMARC RESOURCES LTD.

626000 m

627000 m

628000 m

629000 m

6353000 m

6353000 m

6352000 m

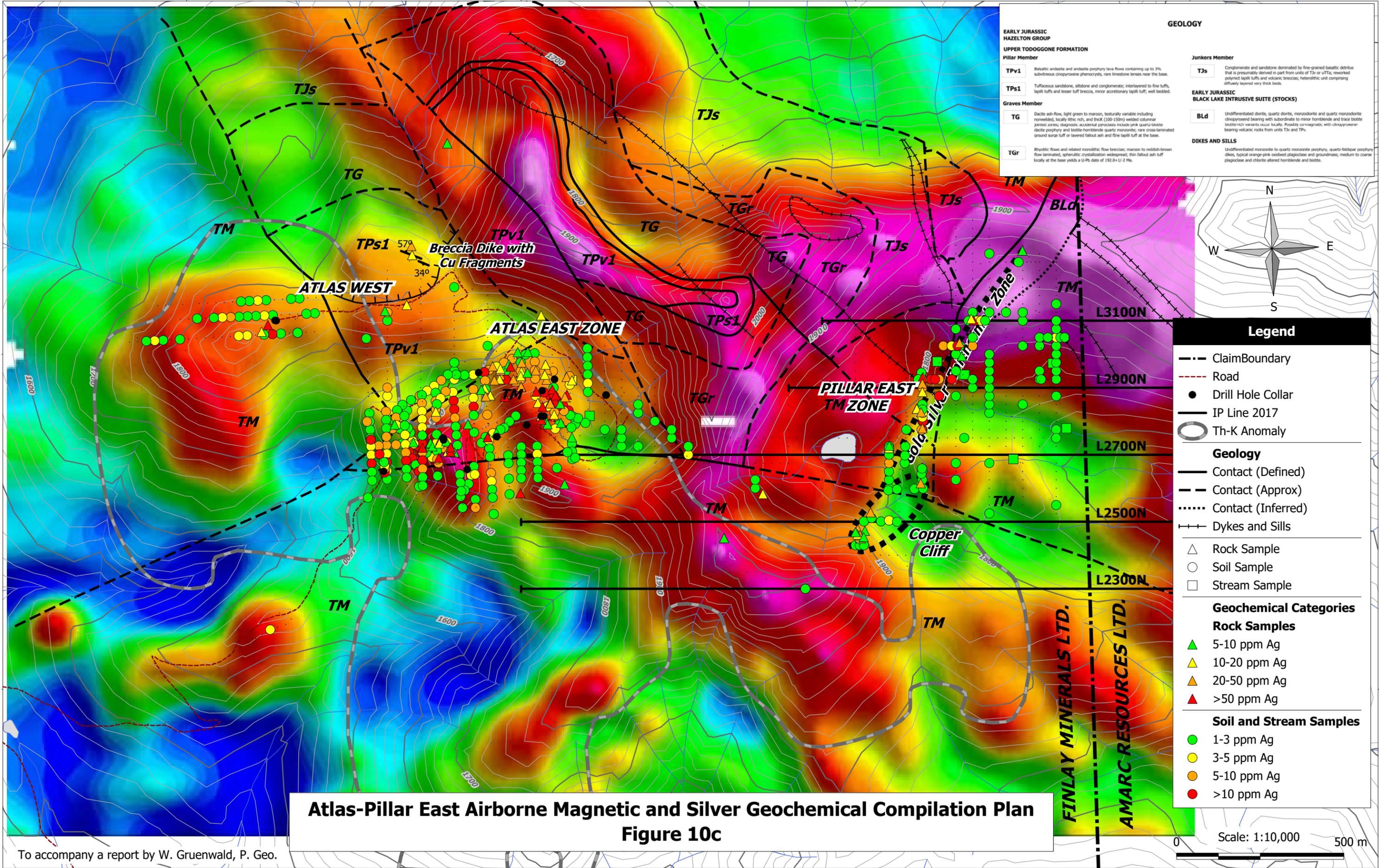
6352000 m

626000 m

627000 m

628000 m

629000 m



EARLY JURASSIC HAZELTON GROUP		GEOLOGY	
<b>UPPER TODOGGONE FORMATION</b>		<b>Junkers Member</b>	
<b>Pillar Member</b>		<b>TJs</b>	Conglomerate and sandstone dominated by fine-grained basaltic detritus that is presumably derived in part from units of Tjv or uTTa; reworked polymict lapilli tuffs and volcanic breccias; heterolithic unit comprising diffusely layered very thick beds.
<b>TPv1</b>	Basaltic andesite and andesite porphyry lava flows containing up to 3% subvolcanic clinopyroxene phenocrysts, rare limestone lenses near the base.	<b>Bld</b>	Undifferentiated diorite, quartz diorite, monzonite and quartz monzonite clinopyroxene bearing with subordinate to minor hornblende and trace biotite biotite-rich varieties occur locally. Possibly cor-magmatic with clinopyroxene-bearing volcanic rocks from units Tjv and TPv.
<b>TPp1</b>	Tuffaceous sandstone, siltstone and conglomerate; interlayered to fine tuffs, lapilli tuffs and lesser tuff breccias, minor accretionary lapilli tuff, well bedded.	<b>DIKES AND SILLS</b>	
<b>Graves Member</b>		Undifferentiated monzonite to quartz monzonite porphyry, quartz-feldspar porphyry dikes, typical orange-pink oxidized plagioclase and groundmass; medium to coarse plagioclase and chlorite altered hornblende and biotite.	
<b>TG</b>	Dacite ash-flow, light green to maroon, texturally variable including nonwelded, locally lithic rich, and thick (100-150m) welded columnar jointed zones; diagnostic, accidental pyroxenes include pink quartz-biotite dacite porphyry and bottle-hornblende quartz monzonite; rare cross-laminated ground surge tuff or layered fallout ash and fine lapilli tuff at the base.	<b>TGr</b>	
<b>TGr</b>	Rhyolitic flows and related monolithic flow breccias; maroon to reddish-brown flow laminated, spherulitic crystallization widespread; thin fallout ash tuff locally at the base yields a U-Pb date of 192.0 ± 1.2 Ma.		

Legend	
	Claim Boundary
	Road
	Drill Hole Collar
	IP Line 2017
	Th-K Anomaly
Geology	
	Contact (Defined)
	Contact (Approx)
	Contact (Inferred)
	Dykes and Sills
	Rock Sample
	Soil Sample
	Stream Sample
Geochemical Categories	
Rock Samples	
	5-10 ppm Ag
	10-20 ppm Ag
	20-50 ppm Ag
	>50 ppm Ag
Soil and Stream Samples	
	1-3 ppm Ag
	3-5 ppm Ag
	5-10 ppm Ag
	>10 ppm Ag

**Atlas-Pillar East Airborne Magnetic and Silver Geochemical Compilation Plan**  
**Figure 10c**

To accompany a report by W. Gruenwald, P. Geo.

Scale: 1:10,000  
 0 500 m

**FINLAY MINERALS LTD.**  
**AMARC RESOURCES LTD.**

## Appendix G

### Personnel

---

#### Geoquest Consulting Ltd.

<b>Field:</b> W. Gruenwald, P. Geo. (03, 04 Aug 2017)	2.0 days
G. Febbo, M. Sc. (03-10 Sep 2017)	8.0 days
R. Henderson (04-09 Sep 2017)	6.5 days

#### P. E. Walcott and Associates

Airborne Magnetic Survey (June 5-7, 2018)	3 days
IP Survey (Aug 30 to Sept 8, 2017)	10 days

#### **Office:** W. Gruenwald, P. Geo.

Program Preparation (01-14 Sep 2017)	1.5 days
Assessment Report (20-31 March 2018)	3.5 days

#### E. Gruenwald

Data Compilation, Map Preparation, Report compilation (29 Nov 2017 – Sept 24, 2018)	20 hours
--	----------

## Appendix H

### Statement of Expenditures

---

#### Contractors

##### Geoquest Consulting Ltd.

W. Gruenwald, P. Geo: 2.0 days @\$540/day \$1,080.00

##### Exploration Petrology Inc.

G. Febbo, M. Sc. - 8 days @\$450/day 3,600.00

##### Hendex Exploration Services

R. Henderson - 6 days/\$450/day 2,700.00

##### P. Walcott and Associates

Airborne Mag Survey 7,193.87

IP Survey 55,900.00 \$70,473.87

#### Helicopter

##### SilverKing Helicopters Ltd., Smithers, B.C.

IP Survey Crews 20,313.00

G. Febbo & R. Henderson 8,325.00 28,548.00

#### Analytical Costs

##### Bureau Veritas Laboratories, Vancouver, B.C.

99 soil samples, 2 rock samples 1,581.96

#### Equipment Rental

CP Communications (Truck Radio) 67.20

#### Vehicle Costs

##### Hendex Exploration Services

2 days @ \$125/day 250.00

Fuel 355.25 605.25

#### Room and Board

Carmel Inn, Prince George (9, 16 Aug 2016) 98.79

Meals and Groceries 73.48 172.27

#### Supplies

Flagging, sample bags, sampling tools 230.39

#### Freight

Greyhound Canada (Sample Shipping to Bureau Veritas) 130.64

#### Travel (G. Febbo)

Flight-Vancouver to Prince George 291.00

Baggage Fee 35.00

Taxis 59.72 385.72

#### Field Program Preparation, Report Compilation

W. Gruenwald, P. Geo 5.0 days @\$540/day 2,700.00

E. Gruenwald (drafting, report compilation) 20 hours @\$45/hr 900.00 3600.00

**TOTAL: \$105,795.30**

## Appendix I

### References

---

Brown, R.F. (2000): Assessment Report on the PIl Property Geological Mapping and Rock Sampling Program, internal report of Finlay Minerals Ltd., report filed for assessment credit.

Brown, R.F. (2001): 2001 Assessment Report on the Soil and Rock Geochemistry Sampling Program on the GOLD Project, internal report of Finlay Minerals Ltd., filed for assessment credits.

Diakow, L.J. (2004): Geology of the Samuel Black Range between the Finlay River and Toodoggone River, Toodoggone River Map Area, North-central British Columbia, Parts of NTS 94E/2, 6 and 7. B.C. Ministry of Energy and Mines, Open File Map 2004-4, 1: 50,000 scale.

Diakow, L.J., Nixon, G.T., Rhodes, R., and Lane, R. (2005): Geology between the Finlay and Toodoggone Rivers, Toodoggone River Map Area, north-central British Columbia (part of NTS 94E/2, 6 and 7). BC Geological Survey Branch Open File Map 2005-3, 1: 50,000 scale.

Gruenwald, W., and Ray, G.E. (2004): Assessment Report on the Geological, Geochemical and Diamond Drilling Programs, PIl Property, Omineca Mining Division, BC for Finlay Minerals Ltd., (AR #27602).

Gruenwald, W., and Ray, G.E. (2006, Jan): Assessment Report on the Geological, Geochemical and Diamond Drilling Programs, PIl Property, Omineca Mining Division, BC for Finlay Minerals Ltd. (AR #28083).

Gruenwald, W. (2006, Jan): Report on the Petrography, SEM and PIMA Analysis – Atlas East Zone. Internal Report for Finlay Minerals Ltd., 23 pages.

Gruenwald, W., and Ray, G.E. (2007, Feb): Assessment Report on the Geological, Geochemical and Diamond Drilling Programs, PIl Property, Omineca Mining Division, BC for Finlay Minerals Ltd. (AR #28984).

Gruenwald, W., (2017,): Geochemical and Prospecting Report, PIl Property, Omineca Mining Division, BC for Finlay Minerals Ltd. (AR #36861).

Leitch, C.H.B. (2005): Petrographic Report on 6 samples from the Atlas East Zone, Toodoggone. Unpublished report for Finlay Minerals Ltd., December 21st, 2005.

Panteleyev, A. (1986): Ore Deposit # 10. A Canadian Cordilleran Model for Epithermal Gold-Silver Deposits. Canada Geoscience, Volume 13, No. 2, pages 101-111.

Panteleyev, A. (2006): British Columbia Geological Survey “Epithermal Au: Ag Low Sulphidation Deposits” (H05)

Shives, R.B.K., Carson, J.M., Ford, K.L., Holman, P.B., GSC; Diakow, L., BC Ministry of Energy and Mines Toodoggone Multisensor Geophysical Survey (Parts of NTS 94D/15, E/2,3,6,7,10,11) BCMEMPR Open File 2004-08 and GSC Open Files 4606 – 4613.

Wetherup, S., Gruenwald, W (2015): Mapping and Geochemical Sampling, PIl Property (AR 35995).

## **Appendix J**

### **Certificate of Author**

---

**I, WARNER GRUENWALD OF THE CITY OF VERNON, BRITISH COLUMBIA HEREBY CERTIFY THAT:**

1. I am a graduate of the University of British Columbia with a B. Sc. degree in Geology.
2. I am a registered member of the Professional Engineers and Geoscientists of British Columbia (#23202).
3. I am employed as consulting geologist and president of Geoquest Consulting Ltd., Vernon, BC
4. I have practiced continuously as a Geologist for the past 45 years in western Canada and the US.
5. I have supervised the exploration programs on the Pil property since 2004.

W. Gruenwald, P. Geo.

Dated: September 24, 2018