

**Ministry of Energy, Mines & Petroleum Resources**  
Mining & Minerals Division  
BC Geological Survey

**Assessment Report**  
**Title Page and Summary**

**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:**

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'

"

**LONGITUDE:**

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'

"

(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)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
TOTAL COST:			

**GEOCHEMICAL AND  
PROSPECTING 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.**

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March 31, 2017

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## SUMMARY

This report, prepared for Finlay Minerals Ltd., describes the results of an exploration program carried out in August 2016 on its 100% owned Pil property in the Toodoggone region of north-central British Columbia. Work consisted of prospecting along with rock, soil and silt geochemical sampling. 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 NW, NE and Pil South zones.

The northwest trending "Pillar Fault" and related structures transects the Pil property. At the Northwest Zone, a north trending splay structure referred to as the Pillar West Fault separates Toodoggone volcanics to the west from copper- molybdenum mineralized Black Lake intrusive rocks to the east. Parallel and conjugate structures may have also acted as pathways for hydrothermal fluids that formed the property's epithermal precious metal zones.

Exploration potential for porphyry style deposits is 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 lengths of 300 metres. The full extent of this zone has yet to be determined. It is open to the north, west and to depth.

Significant precious metal potential exists at the Atlas East and Pillar East Zones. 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 hydrothermal sources for Au-Ag mineralization are evidenced by granitic clasts in breccia dikes at Atlas East and a body of Black Lake intrusive rock at Pillar East.

Overall the Atlas East Au-Ag mineralization and soil geochemical anomalies cover an area measuring 550 metres east-west by nearly 350 metres north-south. 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 or mineralized structures. 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 unfortunately 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. Panning at the site of two gold anomalous stream samples recovered angular gold attached to quartz suggesting a very local source. A soil sampling program over the Pillar East Zone delineated a north-northeast trending nearly 500-metre long area of anomalous gold and silver. Soil values range up to 6,748 ppb and 29 ppm respectively. Prospecting and rock sampling within the grid resulted in the discovery of gold and silver mineralization in float and bedrock grading up to 4,650 ppb Au and 102 ppm Ag.*

*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. While exploring near a 1 g/t Au soil sample near the south end of the epithermal zone disseminated chalcopyrite mineralization was discovered in lapilli tuff at the base of a large talus slope. 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. Soil sampling across the talus slope also indicated that the source of the mineralization is sizeable.*

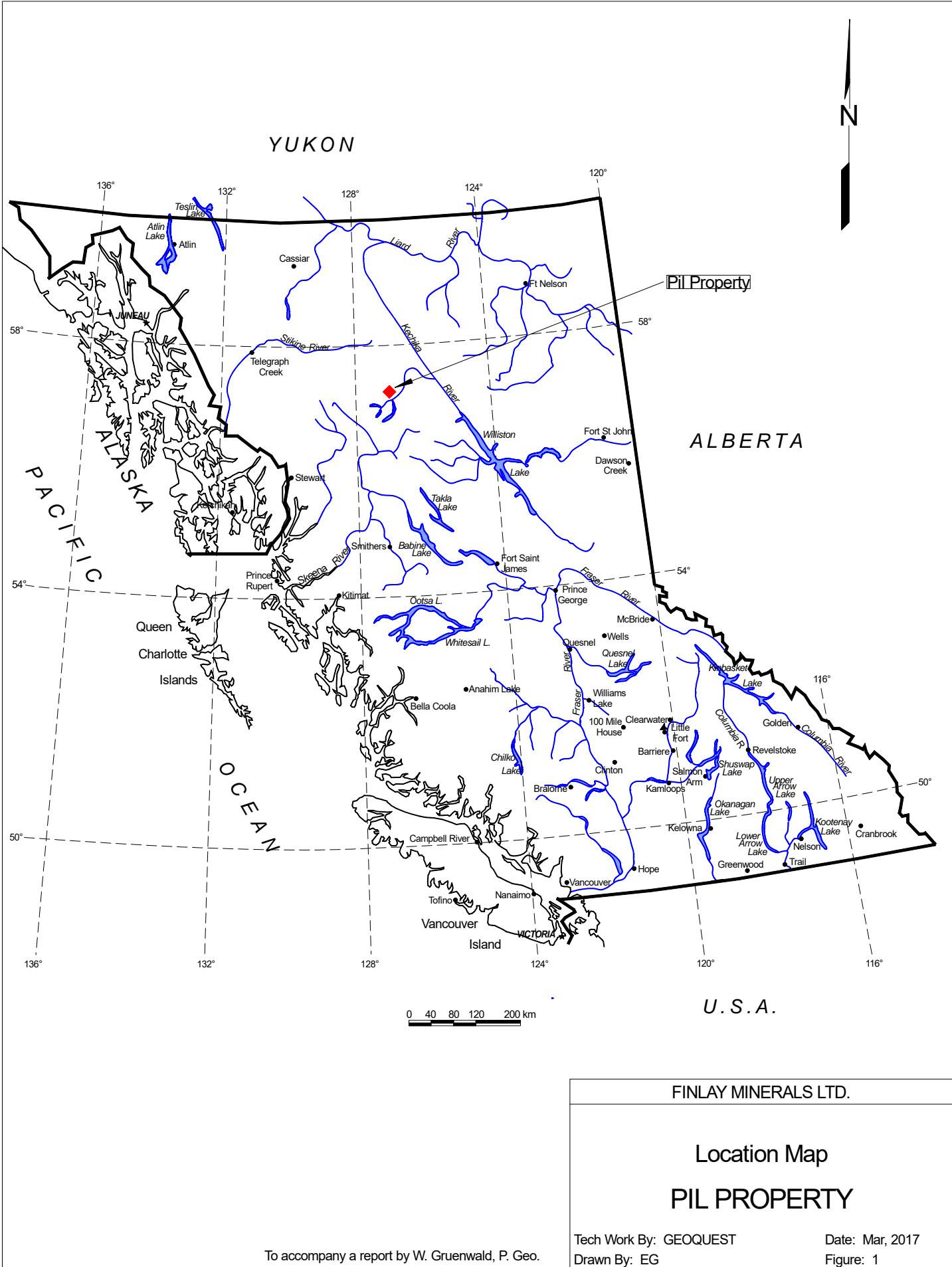
*The 2016 Pillar East exploration program consisted of prospecting along with soil, stream and rock sampling. Continued follow-up soil and rock sampling along the epithermal Au-Ag zone revealed more anomalous sites further defining a significant mineralized structure.*

*The most significant development of the 2016 program 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. Malachite on rock faces to the east and the copper mineralization in lapilli tuff talus below (north) indicates that mineralization is probably more extensive. 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 latter is evidenced by hematitic slickensides seen in some samples.*

*The Pillar East discovery of copper mineralization in clastic volcanic talus and alkalic porphyry bedrock at Copper Cliff Zone as well as a proximal epithermal Au-Ag bearing structure present intriguing exploration targets. Future exploration should consist of camp construction, geological mapping, IP/mag surveys and diamond drilling. This program would require helicopter support. The estimated program cost is \$CDN 600,000.*

*Total expenditures for the 2016 program were \$31,118.68.*



## 2.0 INTRODUCTION

### 2.1 General Statement

This report describes the results of a small exploration program carried out during 2016 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 programs.

The 2016 program consisted of prospecting and geochemical sampling.

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/JAN/31	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/JAN/31	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	2017/OCT/01	OMINECA	523.7
515084		094E	2017/OCT/03	OMINECA	349.7
516763		094E	2017/OCT/05	OMINECA	471.3
516769		094E	2017/OCT/07	OMINECA	366.5
516773		094E	2017/OCT/09	OMINECA	1482.7
516783		094E	2017/OCT/11	OMINECA	1644.2
516792		094E	2017/OCT/13	OMINECA	87.5
516810		094E	2017/OCT/15	OMINECA	1502.0

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
517539	PN12	094E	2017/OCT/30	OMINECA	17.5
517555	PN13	094E	2017/OCT/31	OMINECA	17.5
861007	G2P-NORTH	094E	2017/NOV/03	OMINECA	17.5
861187	G2P-WEST	094E	2017/NOV/05	OMINECA	17.5
1036398	G2P WEST 2	094E	2017/NOV/07	OMINECA	52.4
<b>Total Area (Hectares):</b>					<b>14,015.5</b>

### 3.0 HISTORY

#### 3.1 Regional Exploration History

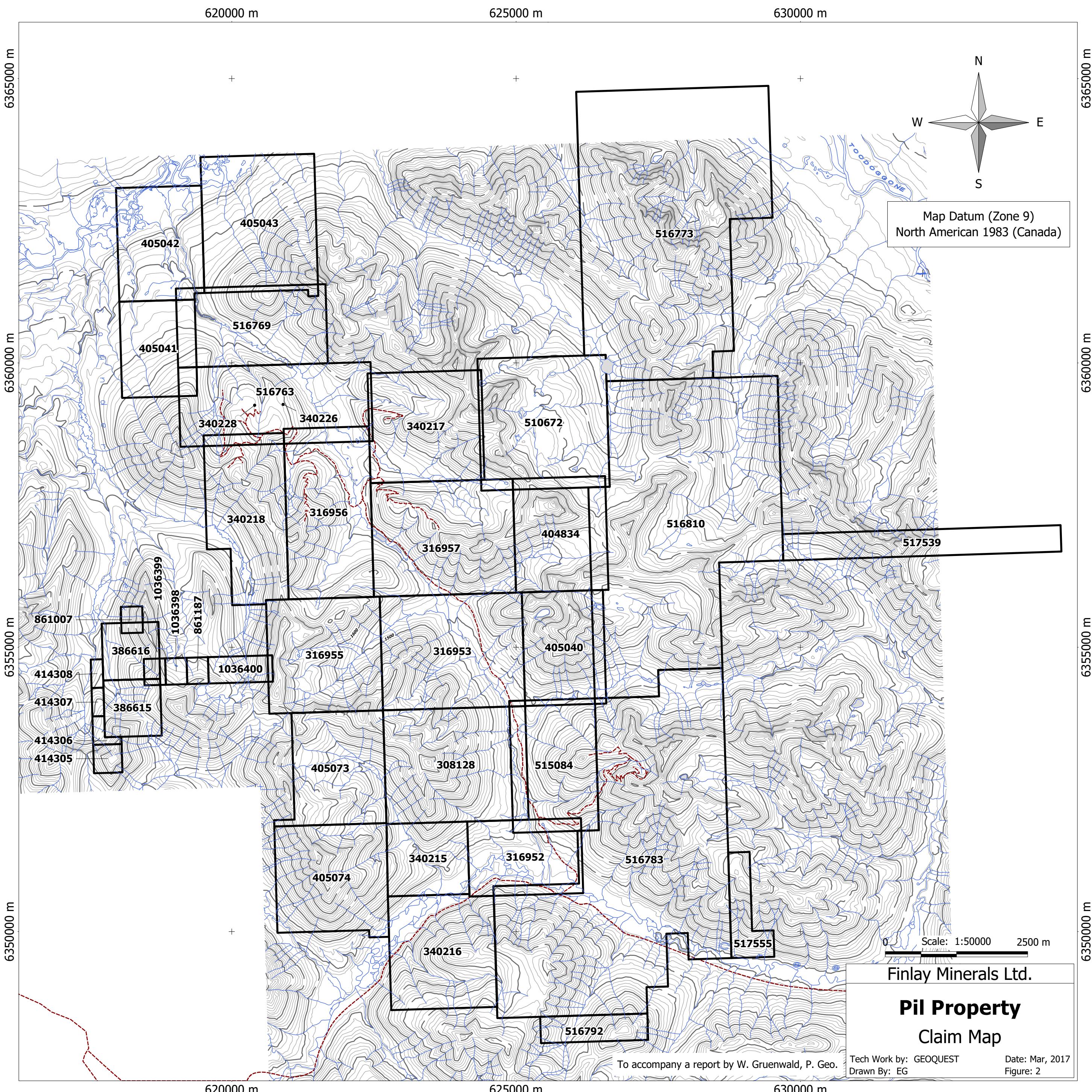
Some of the earliest work dates to at least the early 1900s during the search for gold. This was prompted by the placer gold strikes in the Germansen, Manson Creek and McConnell Creek areas. Intensive exploration in the region commenced in the late 1960s, by Cominco and Kennco Exploration (Western) on 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 AuRico Metals Inc. focused exclusively on step out and in-fill drilling at Kemess East. An additional thirteen holes totaling 18,544 metres were completed. This brings the total reported drilling at Kemess East to 44 holes totaling 63,117 metres.

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.

Other porphyry exploration prospects include Finlay Mineral's Atty property adjacent and north of AuRico's Kemess East deposit. 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.

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 and is outlined as follows:*

**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 (Staargard, 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.

**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, two at the Northwest, two at Atlas West and ten at the Atlas East Zones.

**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 portable drill completed 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.

## 4.0 REGIONAL GEOLOGY AND MINERALIZATION

### 4.1 Geology

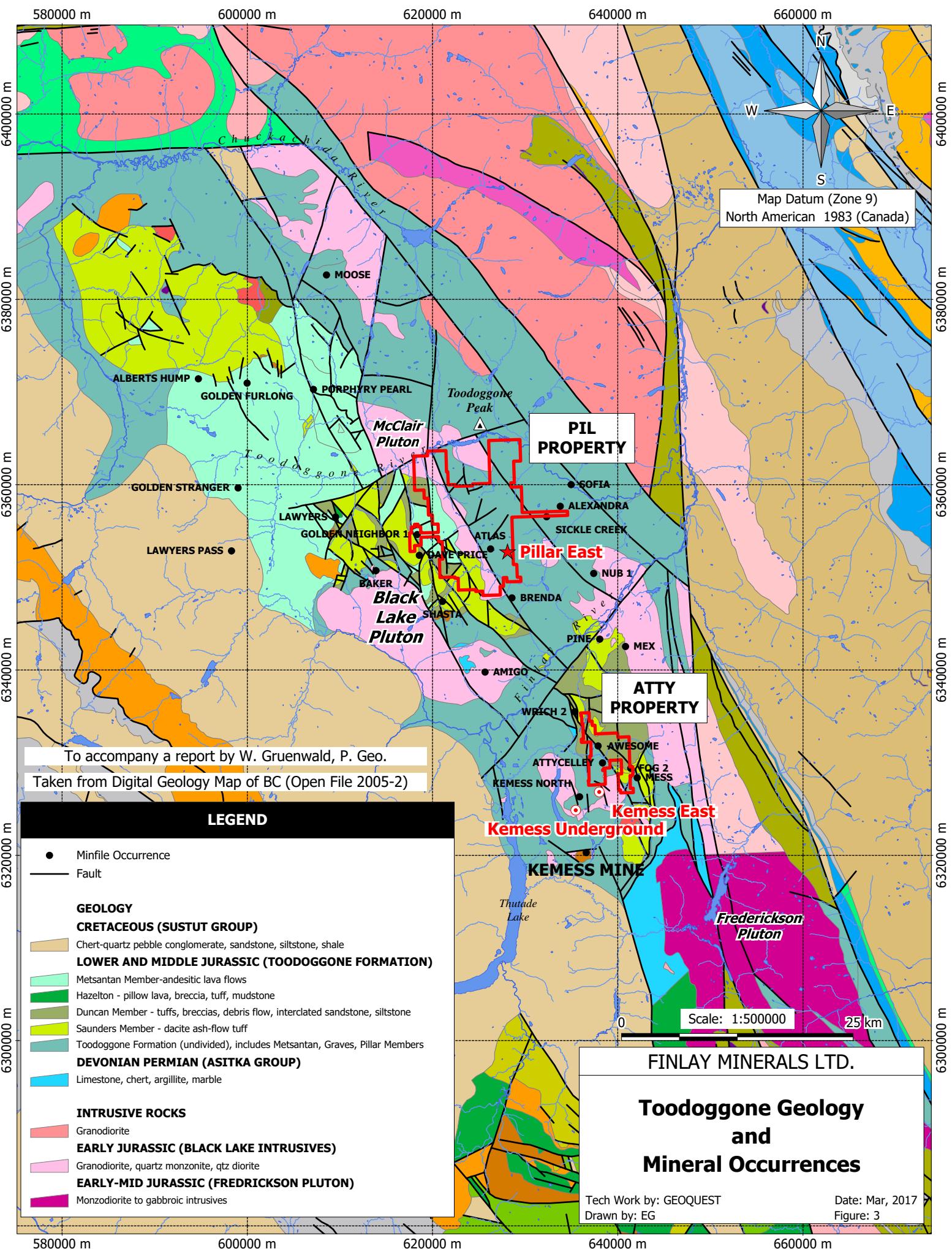
The Toodoggone region is defined as a 90 km long by 15 km wide northwest trending belt of early Jurassic diorite, granodiorite or monzonite phases of the Black Lake Intrusive Suite together with coeval Toodoggone Formation calc-alkaline volcanics (Figure 3). These rocks extend northerly from Attycelley 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:

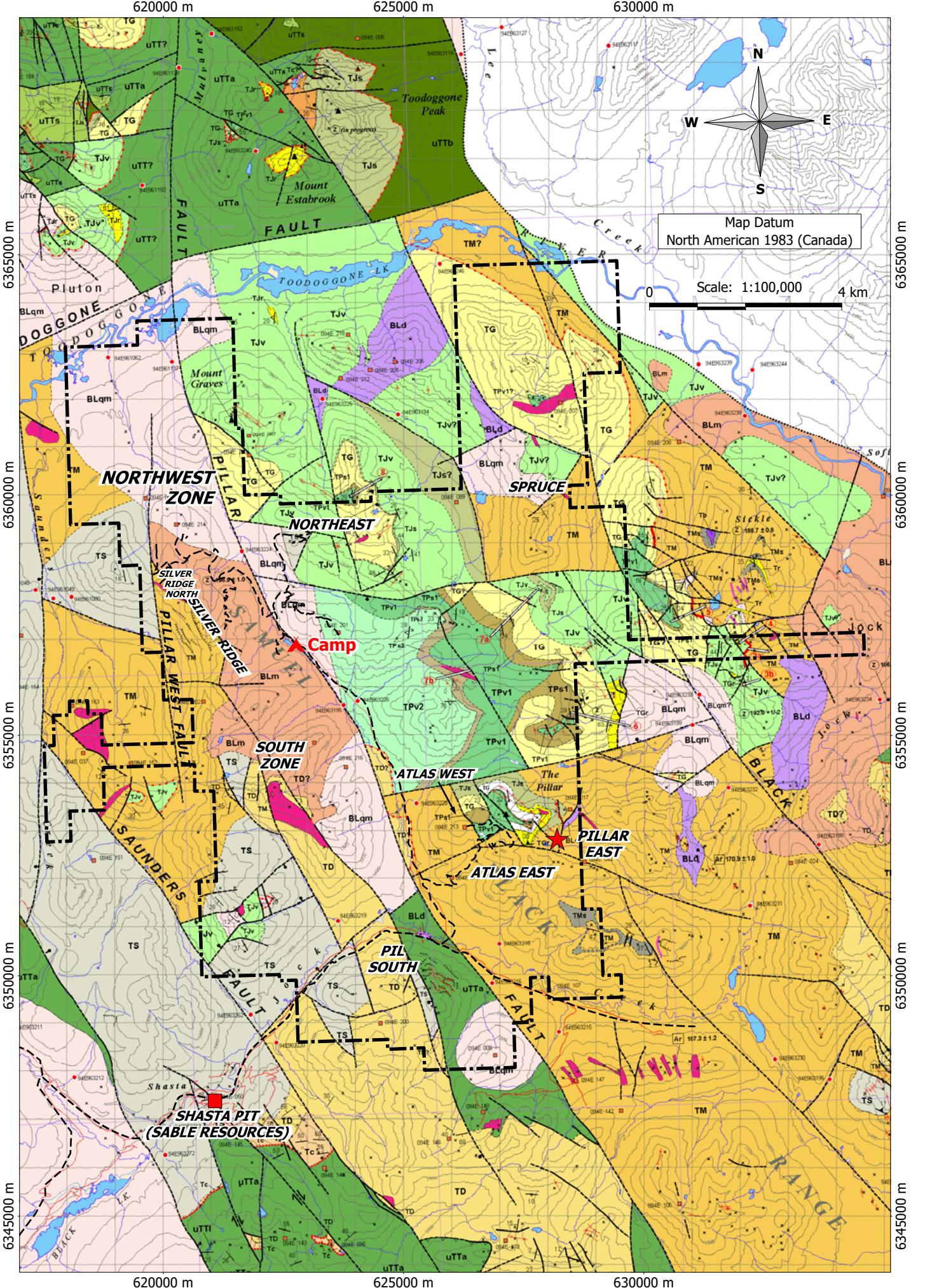
#### Asitka Group (Carboniferous to Early Permian)

- 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.





EARLY JURASSIC	
HAZELTON GROUP	
UPPER TOODOGGONE FORMATION	
Belle member	Rhyolite ignimbrite; locally very thick (150m minimum); welded columnar jointed exposures.
Pillar member	Andesite porphyry lava flows containing minor chlorite-altered pyroxene, scarce laminated dacitic flows.
TPv2	Lapilli tuff, lithic crystal tuff and minor accretionary lapilli tuff, minor tuffaceous sandstone and conglomerate; well bedded.
TPs2	Basaltic andesite and andesite porphyry lava flows containing up to 3% subvitreous clinopyroxene phenocrysts, rare limestone lenses near the base.
TPv1	Tuffaceous sandstone, siltstone and conglomerate; interlayered fine tuffs, lapilli tuffs and lesser tuff breccia; minor accretionary lapilli tuff; well bedded.
TPs1	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.
Graves member	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 (renamed after Quartz Lake member)	Debris flow or volcanic conglomerate; subangular to rounded boulders of monolithic medium-grained andesite porphyry, reddish oxidized muddy matrix, interbeds of sandstone and siltstone; similar conglomeratic rocks west of the Pillar Fault are unconformable on unit TS.
TG	Basalt and andesite lava flows characterized by crowded plagioclase 1mm long or less and relatively fresh pyroxene.
TGr	Dacite to rhyolite lava flows; lenticular; commonly flow-laminated deposits.
TJv	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.
LOWER TOODOGGONE FORMATION	
Unassigned	lapilli tuff, tuff breccia and lesser dacitic lava flows containing trace amounts of quartz and titanite.
Saunders member	Dacite ash-flow tuff: grey-green, up to 55% crystal fragments of plagioclase, quartz, hornblende and biotite; diagnostic juvenile porphyritic vitridasts; widespread moderate to strong welded fabric.
TS	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.
TM	Feldspathic sandstone, minor mudstone.
Metsantan member	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.
TMs	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 PA1) and granitoid clasts; crudely layered thick beds interlayered with subordinate sandstone and siltstone.
Duncan member	Andesite lava flows; grey-green, up to 55% crystal fragments of plagioclase, quartz, hornblende and biotite; diagnostic juvenile porphyritic vitridasts; widespread moderate to strong welded fabric.
TD	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).
LATE TRIASSIC	
TAKLA GROUP	
uTTa	Basalt and andesite lava flows; typically fine to medium grained clinopyroxene-plagioclase porphyries and aphanitic lavas; typically massive and inherently difficult to subdivide.
uTTb	Megacrystic basalt porphyry lava flows characterized by bladed plagioclase laths between 1 and 3 cm long.
uTTs	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).
LATE CARBONIFEROUS TO EARLY PERMIAN	
ASITKA GROUP	
PAa	Grey chert interbedded with black siltstone and mudstone; gradationally overlies limestone at the top of the Asitka Group.
PAI	Limestone; off white, light grey weathering; recrystallized; contains poorly preserved rugose corals.
PAv	Dacitic lapilli tuff with aphanitic greyish-white felsic fragments, grey-green to dark purple, rare accretionary lapilli tuff, porphyritic sparse quartz-phryc andesite and dacite-rhyolite lava flows.
EARLY JURASSIC	
BLACK LAKE INTRUSIVE SUITE STOCKS	
BLqm	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%).
BLm	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.
BLmd	Hornblende monzodiorite; medium to coarse inequigranular texture; widespread epidote-chlorite±hematite alteration; minor malachite within fractures.
BLg	Granite; pink, medium-grained equigranular texture.
BLd	Undifferentiated monzonite, quartz diorite, monzodiorite and quartz monzodiorite; clinopyroxene bearing with subordinate to minor hornblende and trace biotite; biotite-rich variants occur locally. Possibly co-magmatic with clinopyroxene-bearing volcanic rocks from units TJv 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. (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.)
Tb	Dioritic sills.
Tr	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 . . . . .	—
Isotopic Age determination (in millions of years, Ma)	
U/Pb (crystallization date). . . . .	(Z) 201.3 ± 0.5
Ar/Ar (cooling date) . . . . .	(Ar) 200.3 ± 1.2
Unreliable date or date not obtainable . . . . .	(Z)
Regional Geochemistry Survey site (RGS) . . . . .	● S4E93432
MINFILE occurrence and reference number. . . . .	■ 034E 131
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). . . . .	①

**After L. Diakow (OF 2006-4)**

★ Target Explored in 2015/16

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

Finlay Minerals Ltd.

# Pil Property

## Geology

Tech work by: GEOQUEST  
Drawn By: EG

- 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.

### **Upper Volcanic Cycle (Separated from lower cycle by an unconformity)**

#### **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.

#### **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 volcaniclastic 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 hornblendite related to the Takla Group volcanism. The next oldest suite is small granodioritic sub-volcanic porphyritic domes are related to the Toodoggone Formation. The **Black Lake Intrusive Suite** comprises larger plutons and stocks as well as dikes and sills described below. *It is a widespread and economically important suite of early Jurassic (196.6 Ma) plutonic monzonites and granodiorites (Figures 3, 4). They 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 of 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 a hydrothermally bleached and propylitically-altered facies of the monzonite suite.

#### Younger Granodiorites (BLqm)

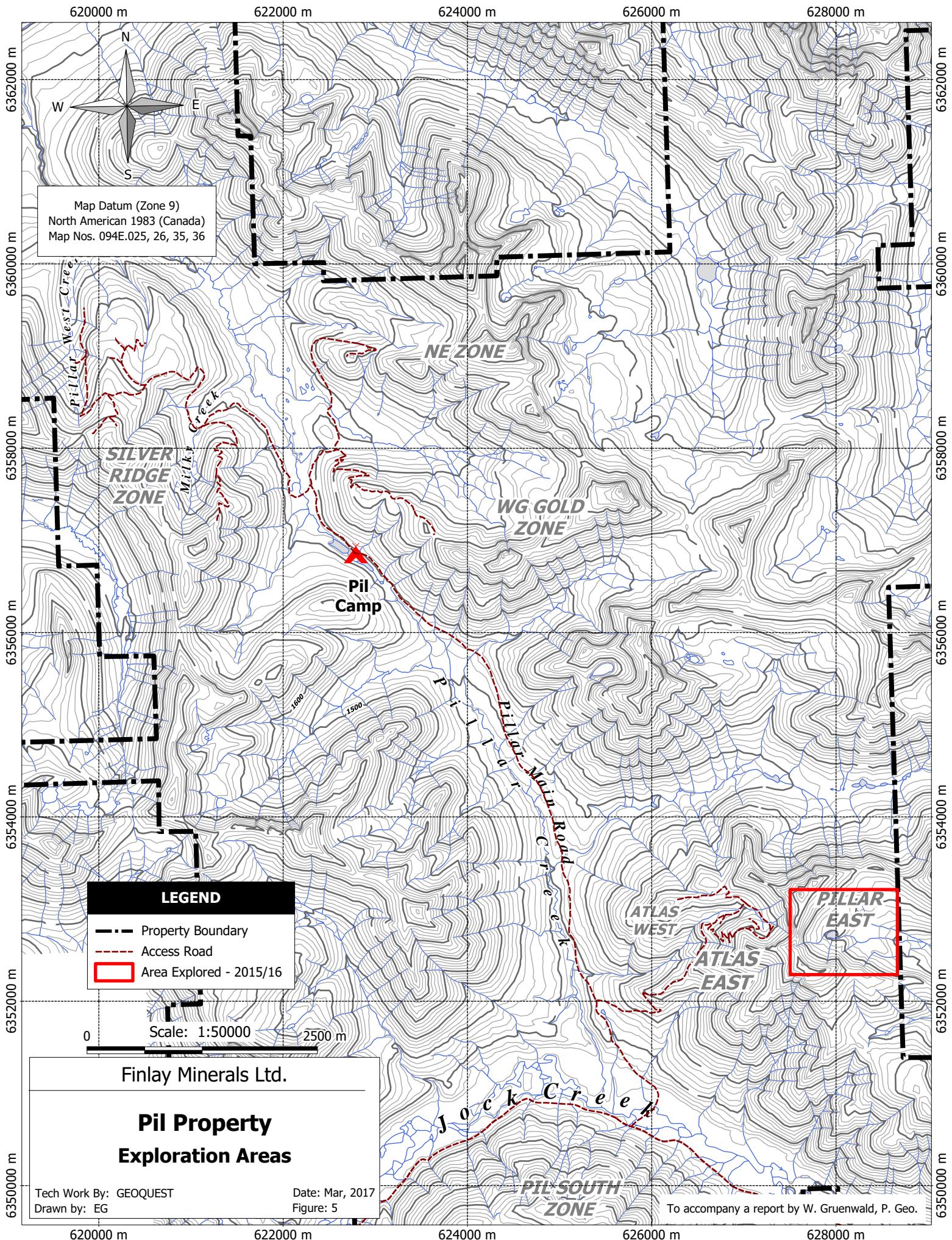
- Dated at 197 Ma this suite is typified by the 115 km<sup>2</sup> Black Lake Stock (Figure 3).
- Pink and white, coarse-grained massive rocks with up to 20% quartz and 15% mafic minerals.
- Less altered than the monzonites and is not considered economically important.
- Occur on the property with largest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

## 5.0 PIL PROPERTY GEOLOGY AND MINERALIZATION

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 volcaniclastics. This presents challenges for drilling on volcanic-hosted targets such as the Atlas Zone.

The Pil property is host to 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.

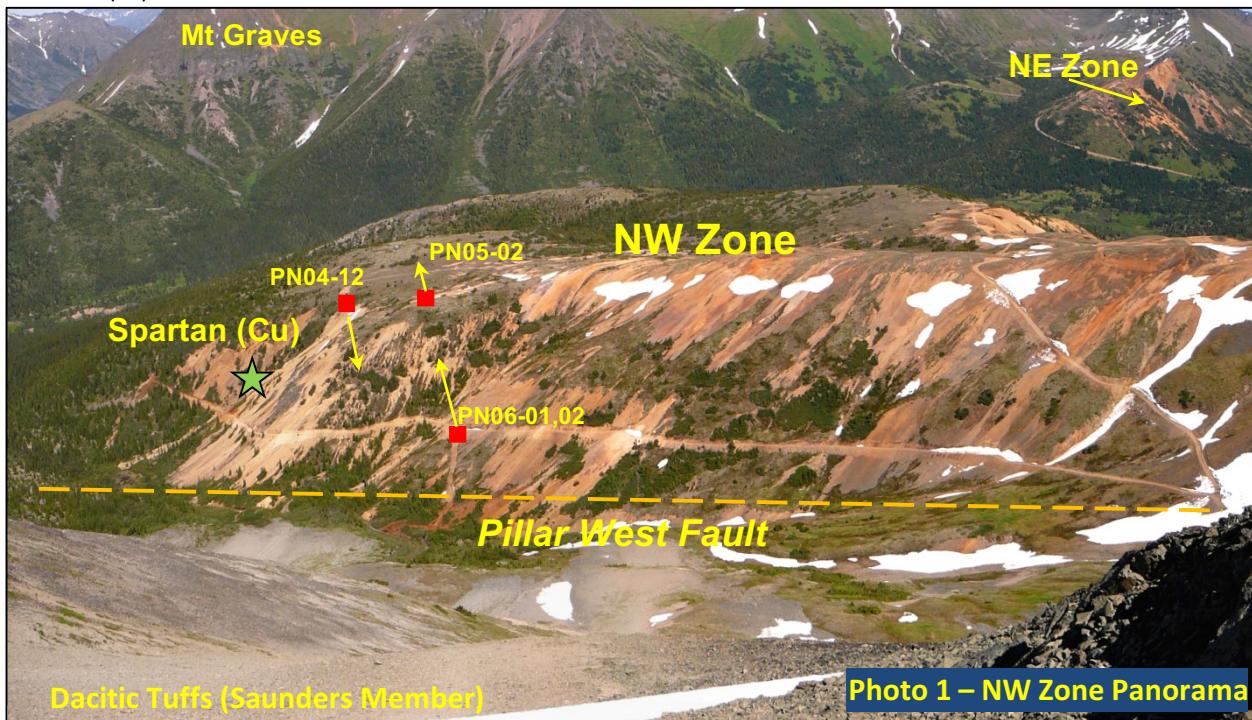


## 5.1 Northwest (NW) Zone

The NW Zone is situated in the northern 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.



**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 phyllitic 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 phyllitic 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 (up to 300m) of disseminated chalcopyrite, pyrite 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. Road building and prospecting resulted in the discovery of significant Pb-Zn mineralization proximal to the Pillar West Fault. 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 volcaniclastic 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). 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

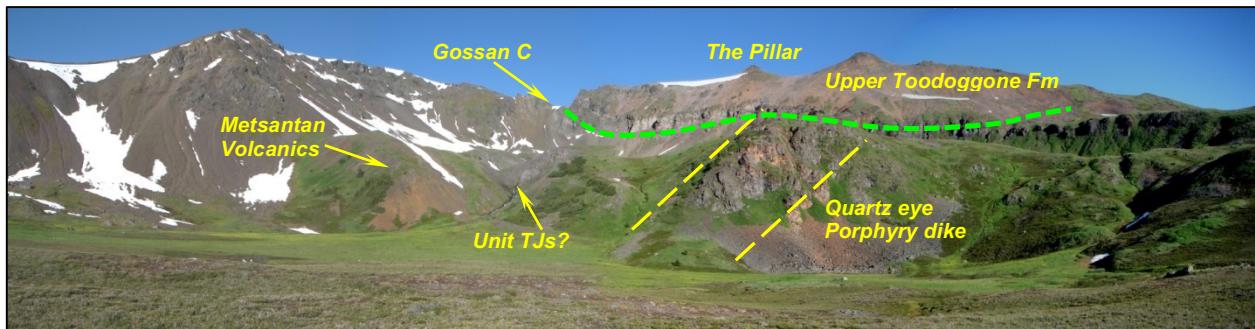
The Atlas and Pillar East Zones are situated in the southeast part of the property just west of a prominent peak named "The Pillar". Geological mapping indicates the area as almost wholly underlain by volcanics, tuffs and lesser epiclastic rocks of the Toodoggone Formation (Figure 4 - Diakow et al, 2004-2006). This area is economically important as it hosts zones of epithermal gold-silver 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 – 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).

- An older suite that either predates or is coeval with the epithermal silica-pyrite-clay alteration at Atlas East.
- A more abundant and varied suite that post-date the silicification. On Photo 2 a large ( $50 \text{ m} \pm$ ) wide northwest striking, pinkish quartz-feldspar dike is evident.
- 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 (Figures 4, 6a-e). 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, moderately magnetic rock containing trace pyrite. 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 30+ 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 along “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 6a-e. The 25 cm dike cuts bedded, Pillar Member (TPs1) volcanics, strikes  $290^\circ$ , dips  $57^\circ \text{ N}$  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

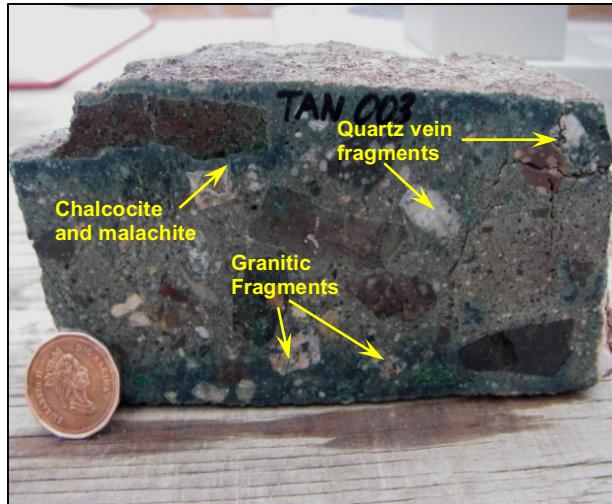


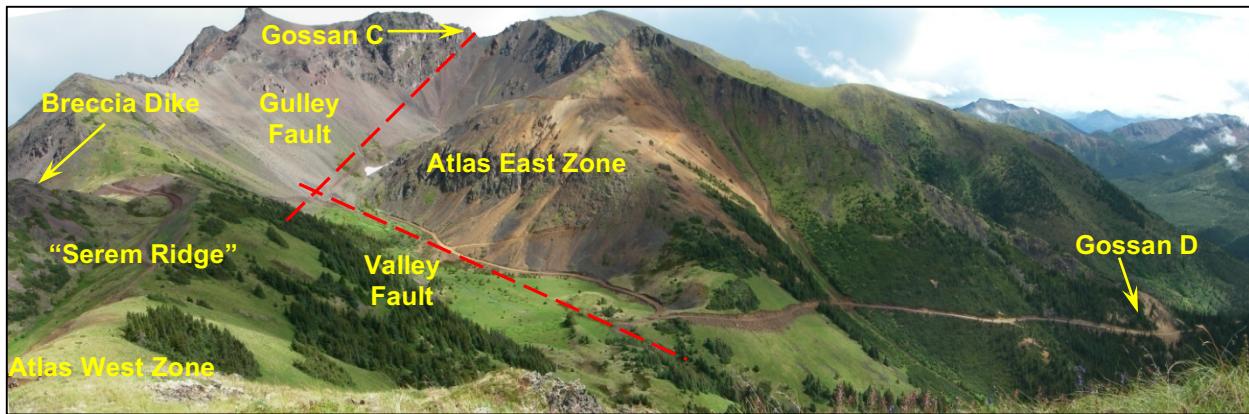
Photo 3b – Breccia Dike Specimen

### 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 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 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 found but is 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 type 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 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 meters south of “The Pillar”. Gossan C and the Atlas West Zone may represent “up-faulted” slices of very high-level alteration while the precious-metal-bearing outcrops at Atlas East suggest this area to be at a slightly deeper erosional level (G.E. Ray).



**Photo 4 – Atlas Zones Panorama**

Pillar East is notable in that there are no large alteration or gossanous zones developed. The only limonitic rocks noted are near the southern end of the NNE trending epithermal Au-Ag zone. Here volcanic rocks are limonite stained and variably silicified. Elsewhere along the epithermal structure volcanic rocks are bleached and weak to moderately limonitic due to pyrite alteration. 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 are seen in quartz veinlets and stockwork zones.

### 5.2.3 Mineralization

Gold and silver mineralization is associated with low sulphidation epithermal systems at Atlas West and East as well as the newly recognized Pillar East Zone.

#### 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 of 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**

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 were found to contain 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, acanthite (argentite) and electrum. Since 2005 numerous occurrences of visible Au-Ag mineralization have been found. Quartz vein and/or silicified breccias are locally well developed and are very important hosts for mineralization. In 2006, abundant fine grained argentite and electrum were discovered in grey patches in silicified and brecciated volcanic bedrock in the western part of Atlas East

The blue-green quartz float was traced up to but does not source from the breccia dikes discovered by Larry Diakow in 2004. A 25-cm chip sample collected by the writer (Photos 3a Section 5.2.1) across the breccia dike (Tan 003) assayed 16.8 g/t silver and 0.83 % copper. 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

(Photo 6). **Sample RM06-A07B contains 489 g/t Au and 6.5 kg/t Ag – the highest precious metal grades ever found on the property.** Visible Au-Ag was also found in holes A06-10 and 12 located 250 metres to the east.

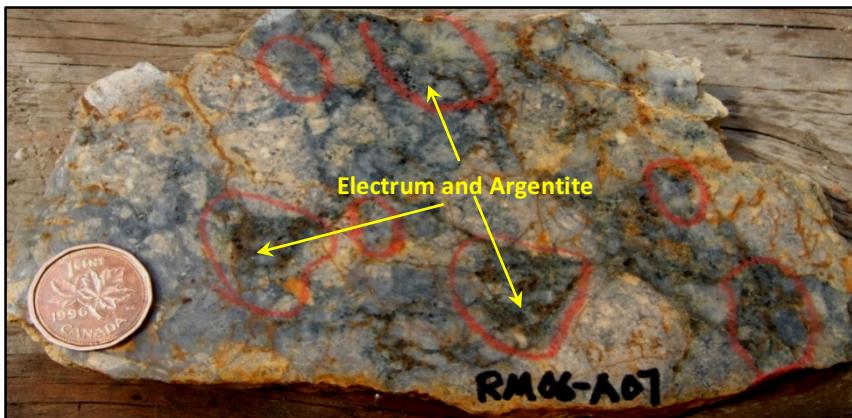


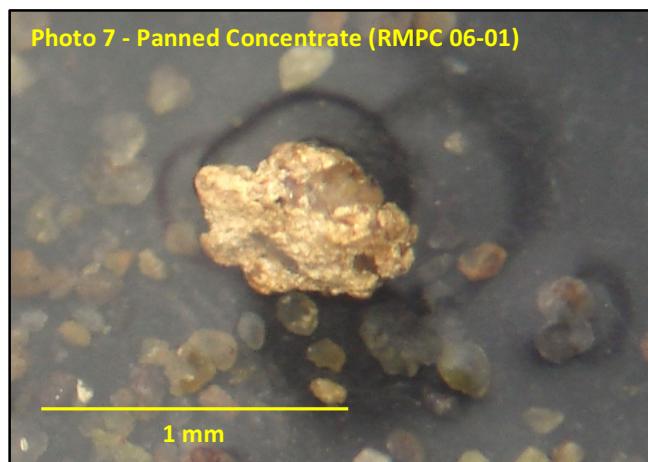
Photo 6 – High Grade Sample RM06-A07

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.

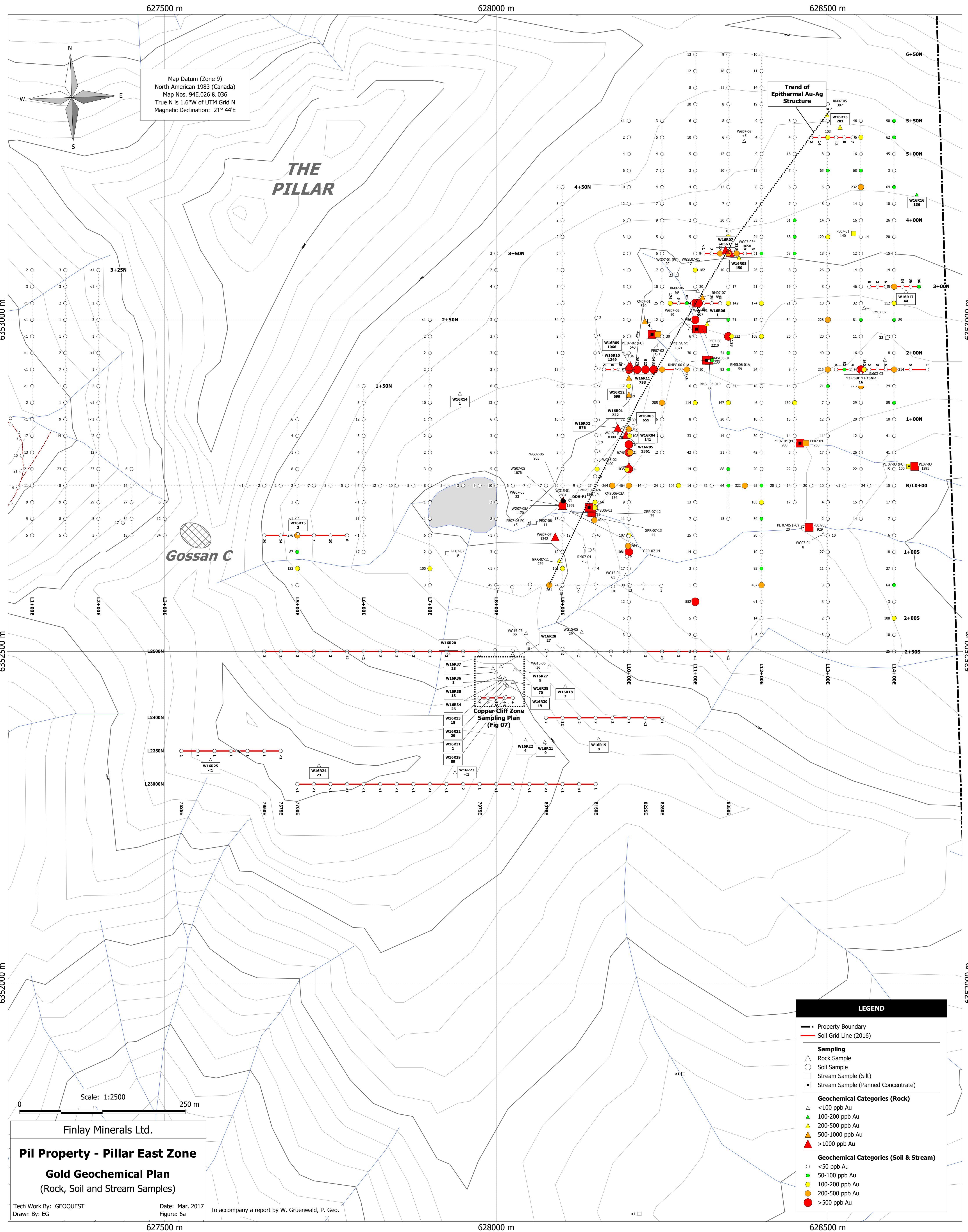
#### Pillar East Zone

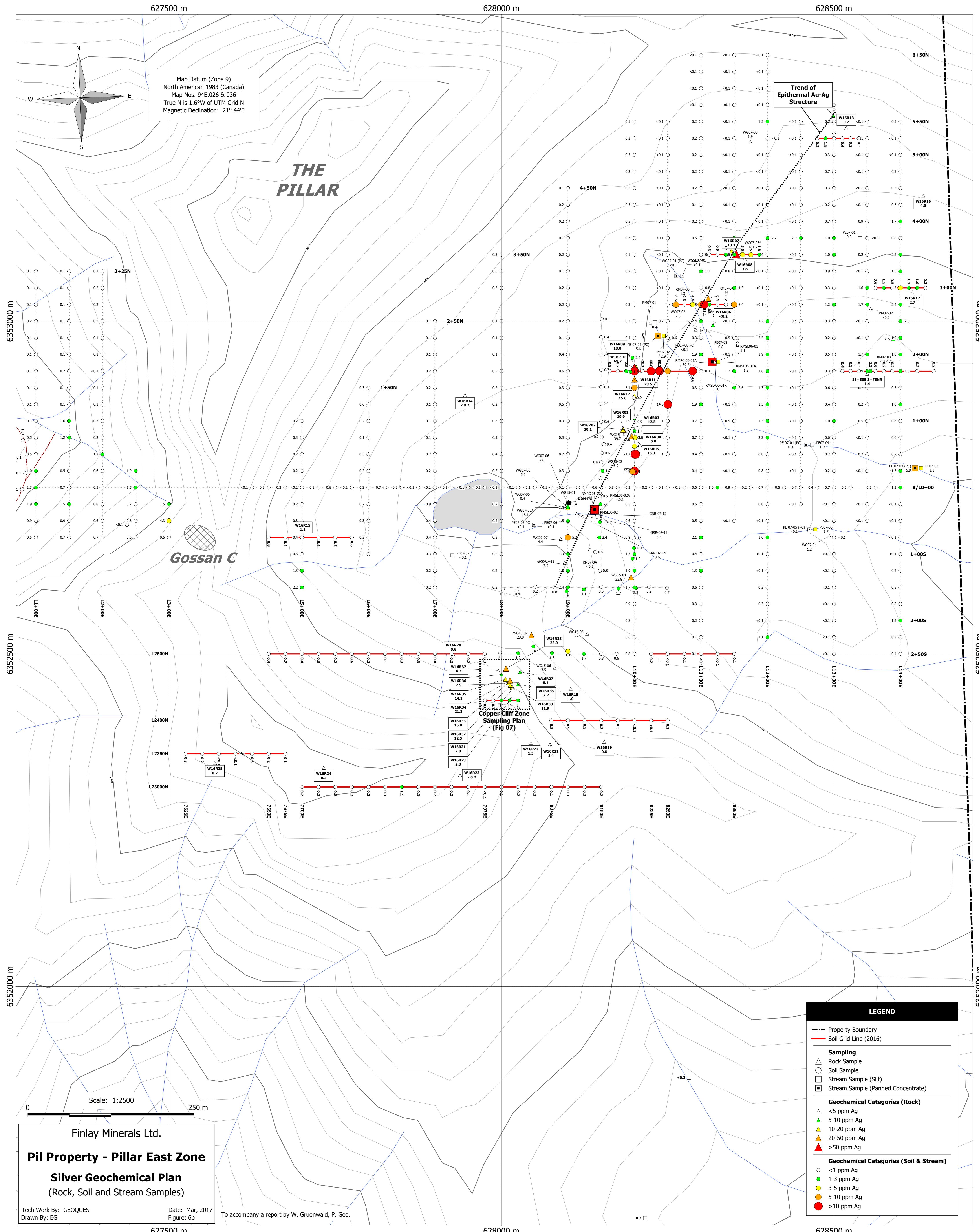
In 2007, an area ~1 km easterly of Atlas East was explored following the previous year's discovery of very anomalous gold in two stream samples (Figure 6a). Panning at one site revealed hackly gold grains some with attached quartz (Photo 7). This implies a very local source. Prospecting revealed the presence of quartz veined, brecciated and silicified and stockwork veined Metsantan (?) volcanics in float and bedrock. Forty metres upstream of silt sample RMSL06-02, a small bedrock "window" of limonitic volcanics was found just below outcroppings of purplish-grey, coarse, bedded volcaniclastic 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

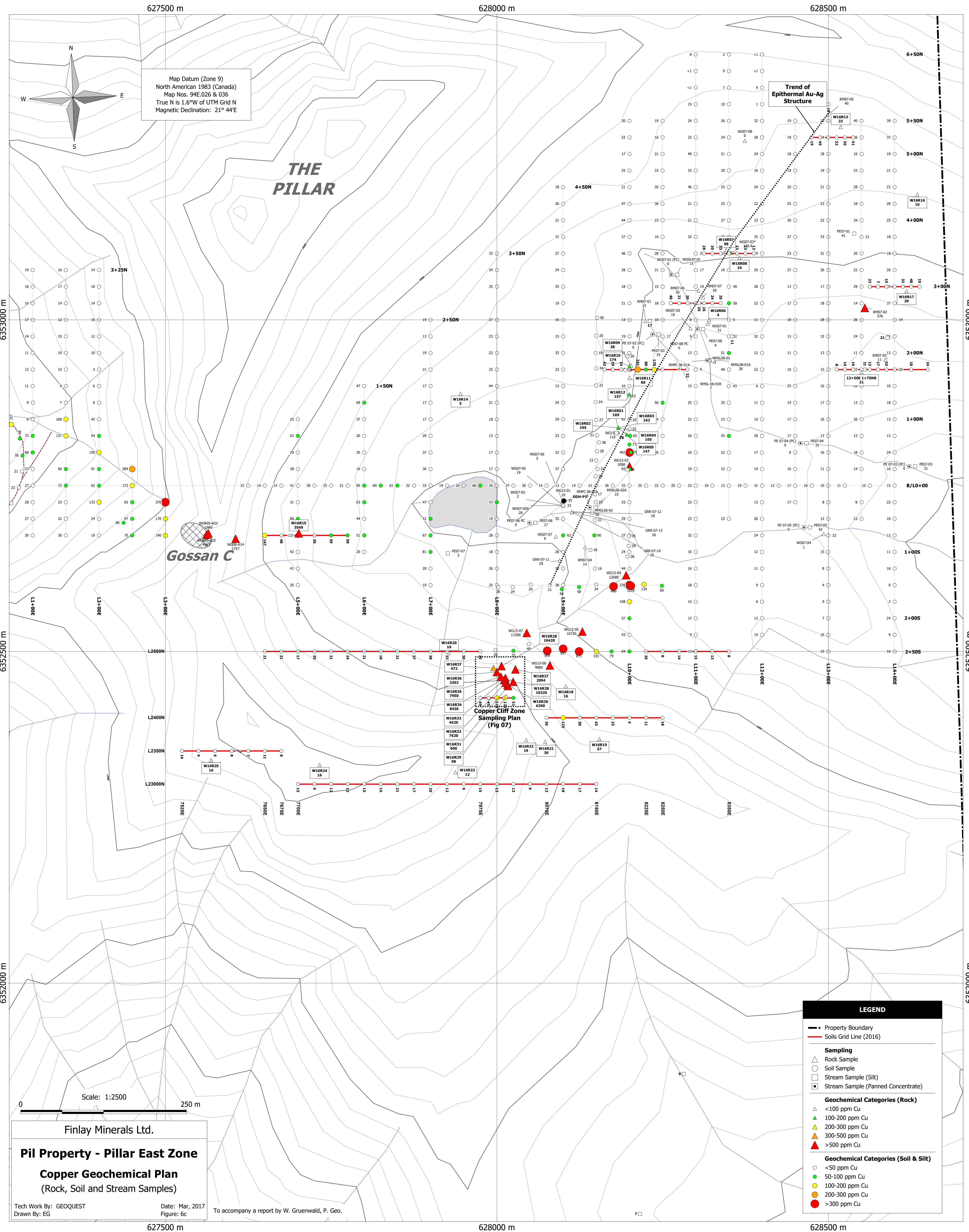
Photo 7 - Panned Concentrate (RMPC 06-01)

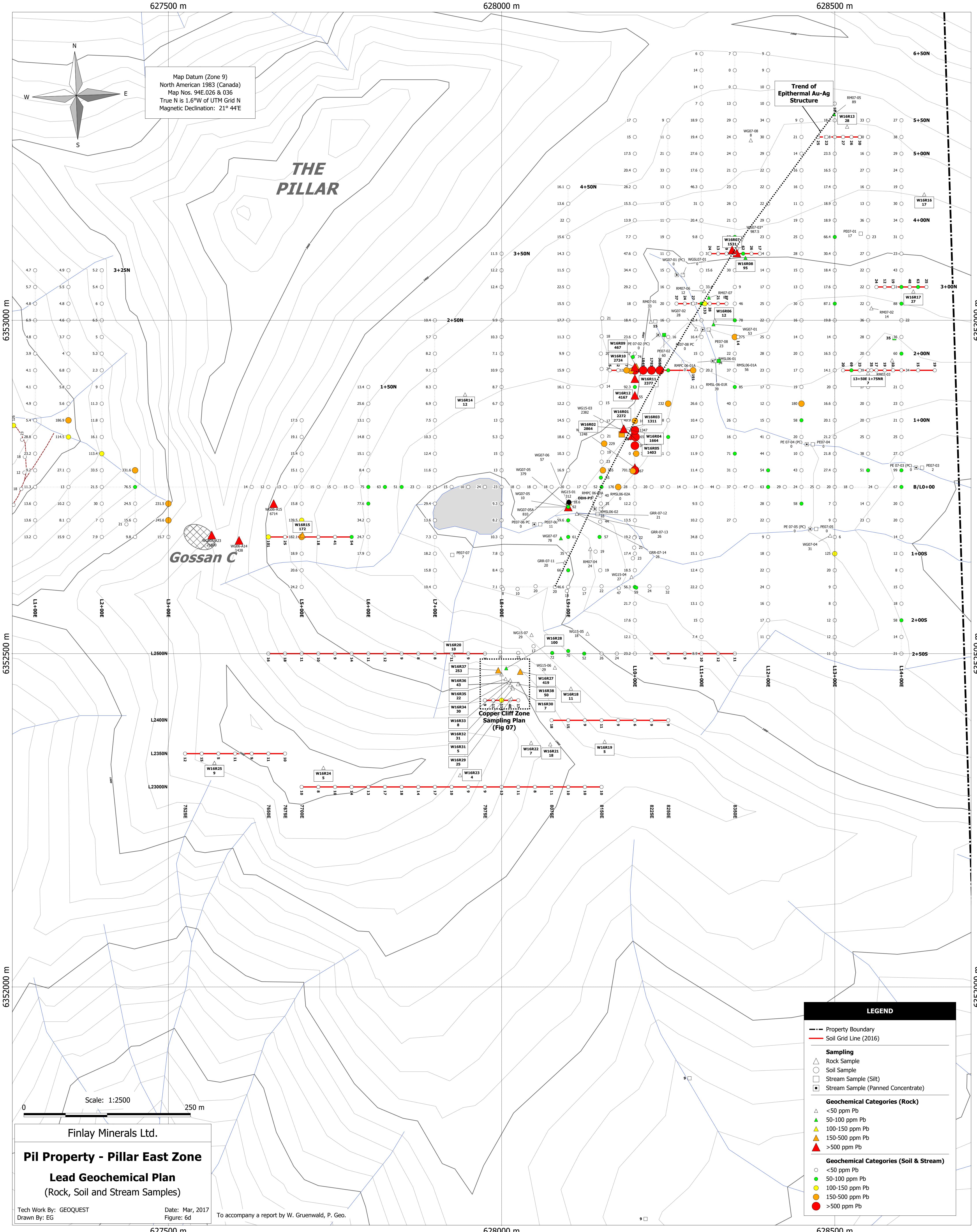


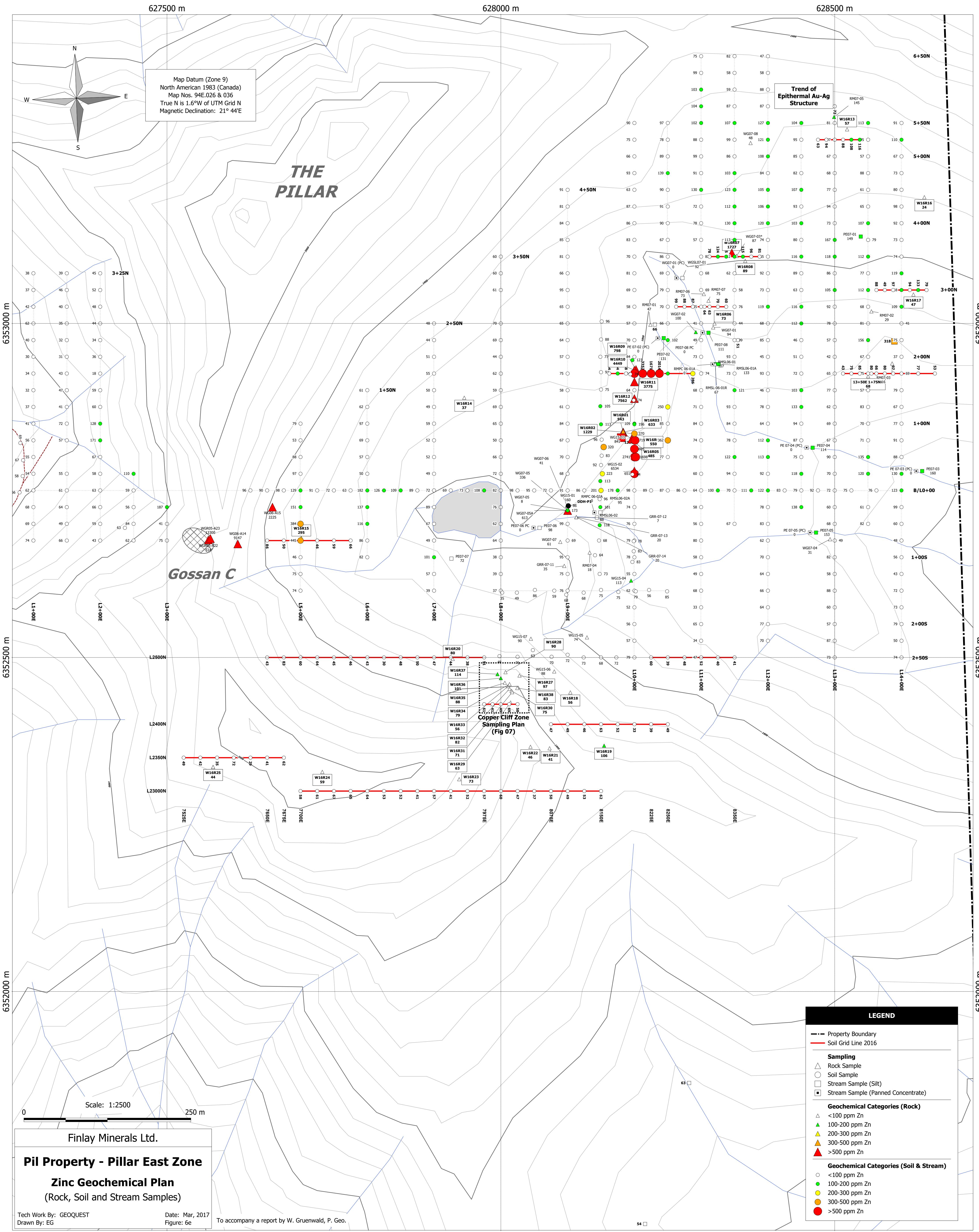
revealed the presence of a metallic mineral thought to be electrum or fine gold. Panning of the rusty, crumbly surface material from this zone in 2007 confirmed the presence of very fine-grained, angular gold.

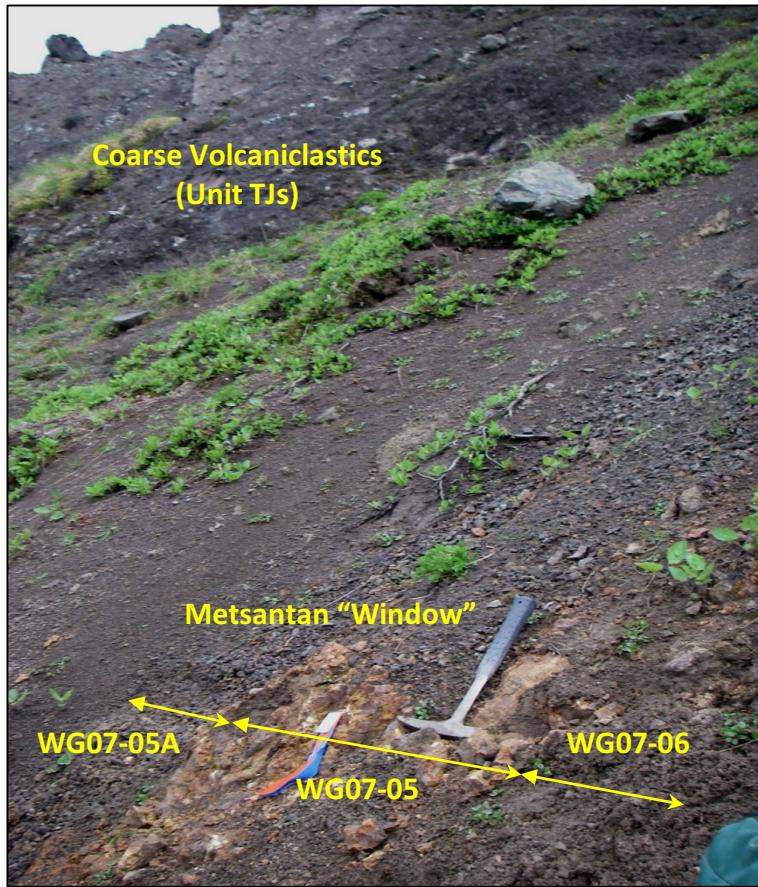












**Photo 8 – Rusty Zone in Toodoggone Metsantan Volcanics**

The Atlas and Pillar East Zones display many characteristics of low sulphidation type epithermal deposits as well as those in the Toodoggone region. Deposits 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*.
- **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*. 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*.

#### **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.

Recent exploration work on the Atlas East Zone suggests that important zones of silicification, mineralization and brittle structures occur along an easterly (conjugate) trend. In the 2006 assessment report Gerry Ray states “*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 suggested that the mineralized zones at Atlas East 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. 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*”.

## **6.0 EXPLORATION PROGRAM**

From August 11 to 16, 2016 the Pillar East Zone was revisited with the purpose of following up on the epithermal Au-Ag zone and newly discovered copper mineralization in Toodoggone volcanics. Although this report is for the 2016 program the 2015 work is summarized for context and the rationale for the 2016 work. The 2015 program is fully described in Assessment Report #35995 (S. Wetherup, W. Gruenwald, March 14, 2016).

### **6.1 Exploration Program Summary - 2015**

On September 14 and 15, 2015 prospecting along with soil and rock sampling was conducted by Warner Gruenwald, P. Geo and Field Technician Dean Mason. Work began with the evaluation of the small bedrock “window” of limonitic volcanics adjacent to the creek that drains the lake in the cirque (Photo 8). The 2015 work began by resampling of this rusty zone with rock chip sample WG15-01. Analysis returned values of 2,830 ppb Au and 6.4 ppm Ag. At this sample site Dean Mason tested a gas-powered Shaw Portable Core diamond drill from IRL Supplies. The hole was drilled at -75° to a depth of 10 ft. (3 metres). Five, two-foot samples were collected.

Drilling intersected very limonitic, silicified rock for the top 6-8 feet and then went into a gouge zone and less altered volcanic rocks. All but the last sample are quite anomalous for 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 observations from the outcrop area and in the drill hole it appears that the rusty zone or “window” as described earlier in Section 5.2.3 – Pillar East probably represents a steeply dipping, gold-silver mineralized structure of indeterminate width.

Soil sampling yielded significant precious and base metal results. Prospecting, soil and rock sampling results combined with the 2006/07 data reveal a distinct NNE trend of anomalous gold, silver and locally Pb, Zn. One rock 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. It therefore appears that the geochemical anomaly trend reflects a steeply dipping Au-Ag epithermal structure that strikes ~020°.



**Photo 9 - Mineralized Talus Float Sample WG15-05**

While investigating a gold-in-soil anomaly (1,081 ppb Au) near the south end of the epithermal Au-Ag structure several malachite and chalcocite stained volcanic talus boulders were found (Photo 9). Close examination revealed that chalcopyrite is disseminated throughout with very little pyrite seen. Rock sample WG15-04 returned a value of 12,680 ppm Cu. Four composite samples collected from the talus slope returned 0.99% to 1.67% Cu and up to 33.8 g/t Ag. Petrographic analysis of sample WG15-05 described the rock as strongly altered (chlorite-quartz-carbonate-sericite) felsic/alkalic lapilli tuff with abundant

fine-grained chalcopyrite-hematite mineralization. Although copper mineralization in volcanic rocks is not uncommon on the property it is often fracture and/or veinlet controlled. Prospecting uphill on the large talus slope revealed many more malachite stained boulders. The amount and extent of the copper talus float is substantial and suggested much more than just a point source.

Due to the extent and abundance of the copper mineralized float two UTM east west soil lines were run across the talus slope uphill of sample W16R-04 (Figures 6a-e). Anomalous copper-in-soil on Line 2500N (uppermost) extends for 100+ metres. Weather and budget constraints did not allow for further work however the copper discovery was deemed a high priority target for the next program.

## **6.2 Exploration Program – 2016**

From August 11 to 16th 2016, a program of prospecting along with rock, soil and stream sampling in the Pillar East Zone were completed by the writer and field technician Dean Mason. Access for the 2015/16 programs was by an A-Star helicopter based at the Kemess Mine site and operated by Silver King Helicopters of Smithers, BC.

*The exploration objectives were to:*

- 1) Further trace and sample the epithermal style Au-Ag mineralized zone.
- 2) Locate the source of the Cu mineralized talus near the south end of the epithermal Au-Ag zone in 2015.

Soil sampling was conducted in two categories as follows:

- 1) Along UTM east-west lines around gold-in-soil anomalies from the 2006/2007 grid. Sample spacing was 12.5 or 25 metres. In some cases, a sample was collected at the original sample site as a retest.
- 2) Along UTM east-west lines in the southern part of the Pillar East Zone specifically targeting the recently discovered talus copper mineralization.

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. Soil and stream sample sites were marked in the field by labelled flagging and recorded by Garmin Handheld GPS units using Nad 83 datum.

Prospecting along with rock sampling was a major component of the 2016 program. Two specific targets for rock sampling were:

- 1) areas of follow-up soil sampling on the 2006/07 grid specifically targeting the epithermal Au-Ag zone and,
- 2) around the copper mineralized talus discovered in 2015.

In the latter, the focus was to locate a bedrock source(s). Samples were collected in 6-mil plastic sample bags and secured by single use plastic ties. Hand specimens were collected for microscopic examination and possible petrographic work. Samples were marked by either aluminum tags or flagging and recorded by a Garmin handheld GPS. Sample UTM coordinates and descriptions are contained in Appendix B.

A total of 114 soil, 5 stream, and 39 rock samples were collected in 2016 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 all samples is found in Appendix A.

Expenditures for the 2016 program totaled CDN \$31,119.

## 7.0 PROGRAM RESULTS

The 2016 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 for the 2016 work are displayed on Figures 6a to 6e. For interpretive purposes the historic (2006/07) and the 2015 samples are also shown on these figures.

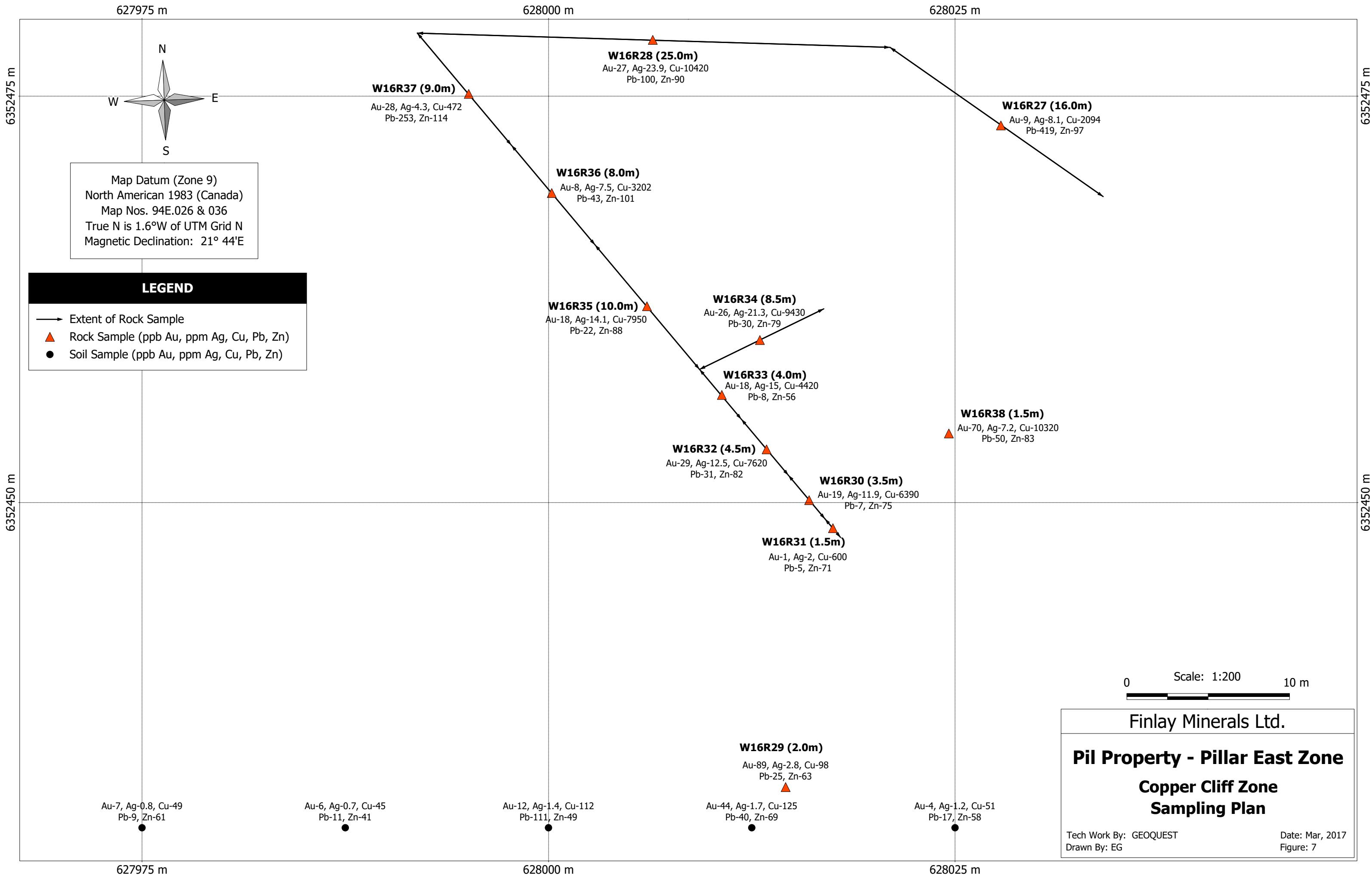
The 2016 soil survey along the epithermal Au-Ag zone yielded numerous gold-silver anomalies. In virtually every case anomalous gold-in-soil was confirmed by evidence of quartz veining, stockwork and/or quartz breccias. Soil samples collected across the gold anomalies returned from background to 2.88 g/t Au. Of the ten soil samples containing >0.1 g/t Au, nine yielded from 1.1 to 50.3 g/t Ag with one soil sample assaying 232 g/t Ag. Twelve of the sixteen rock samples collected during the follow-up work returned Au and Ag ranging up to 6.57 g/t Au and 69.7 g/t Ag respectively. Many of the most anomalous soil and rock samples also contain significant amounts of lead (Pb) and zinc (Zn) with some rock samples occasionally grading over 0.5% combined Pb-Zn.

The most significant development of the 2016 program was the discovery of copper mineralized alkalic-porphyry monzonite bedrock uphill of the copper bearing talus samples found in 2015. This area is referred to as the **"Copper Cliff Zone"**. Copper mineralization in bedrock extends at least 40 meters east-west by 30 meters north-south. Figure 7 details the sampling plan and assays of the Copper Cliff Zone. Visual indications of malachite on steep rock faces to the east and the talus copper mineralization discovered in 2015 below (north) indicates that copper mineralization is probably more extensive. Therefore, the full extent of this new zone of copper mineralization is yet unknown.

Of eleven rock samples collected in 2016 (continuous outcrop chip and composite base of cliff talus samples) all contain disseminated chalcopyrite mineralization. In some areas chalcopyrite concentration exceeds 5%. Copper and silver assays range from 0.05% to 1.04% Cu and 2.8 to 23.9 g/t Ag respectively. As with the copper mineralized talus the pyrite content is very low.

Petrographic analysis of bedrock sample W16R-30 describes the rock as a hypabyssal (shallow depth) feldspar ± biotite porphyry of about monzonite composition (Appendix C). 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 latter is evidenced by hematitic slickensides seen in some samples.

Rock sample descriptions for the 2016 samples are found in Appendix B.



## 8.0 CONCLUSIONS

The Pil property is 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-gold porphyry deposit, and the Baker and Lawyers gold-silver epithermal deposits.

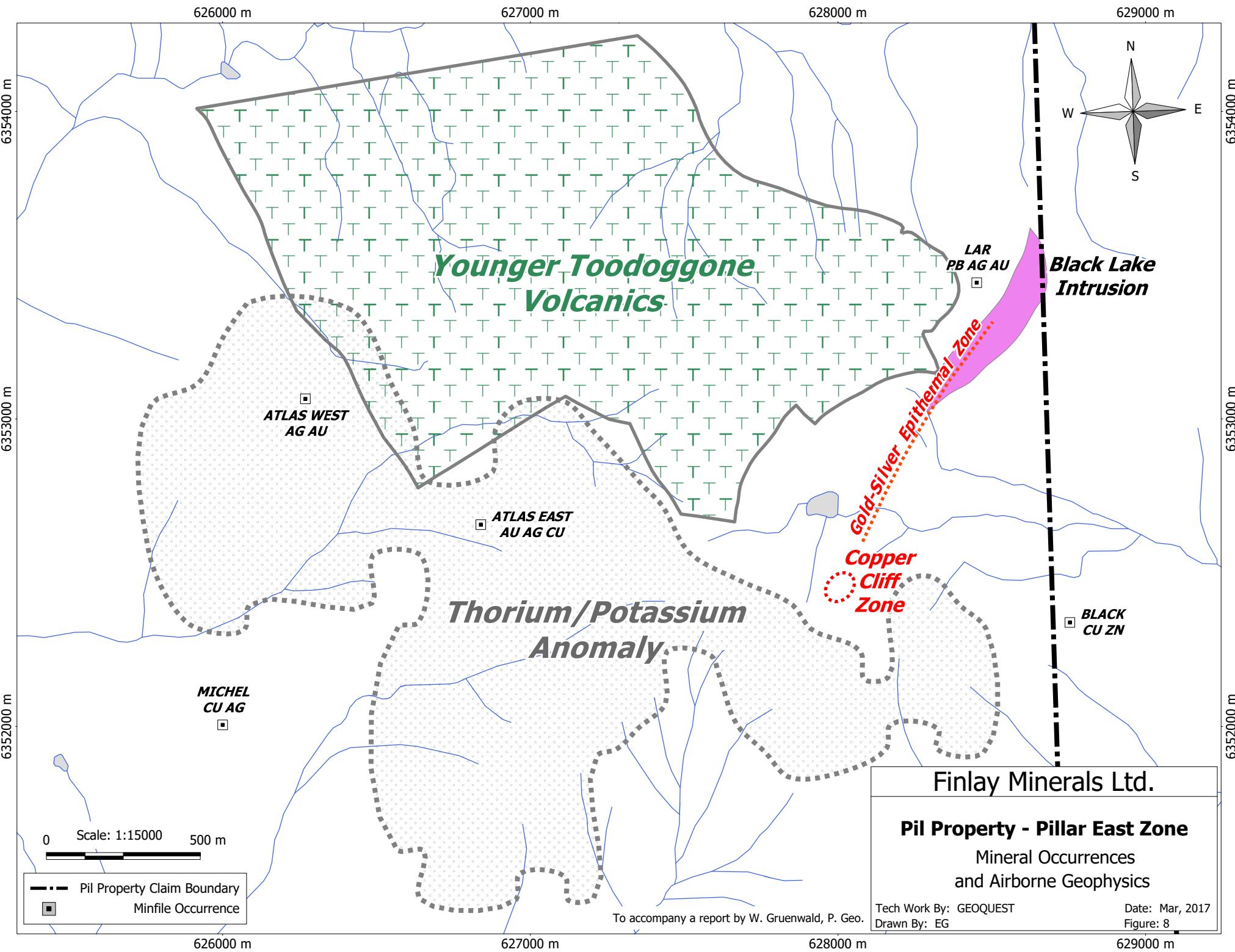
The results to date at Pillar East are very encouraging given the discovery of an epithermal Au-Ag mineralized structure proximal to copper mineralization in high level intrusive and related (co-magmatic?) volcanic rocks.

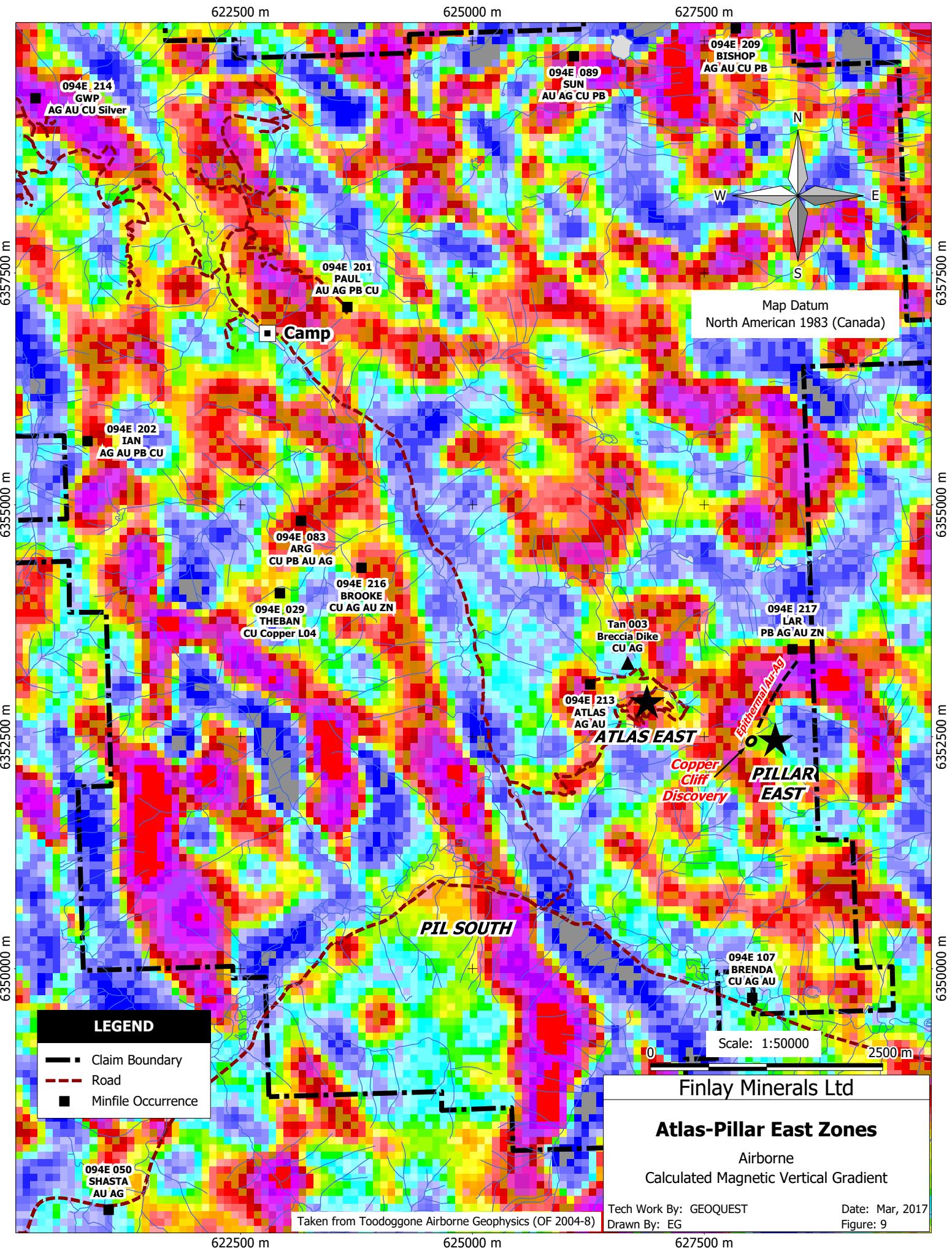
The presence of intrusive rocks at Pillar East is considered economically significant. In the Toodoggone region, porphyry copper mineralization is spatially and genetically associated with intrusive rocks, their co-magmatic volcanics and adjacent volcanics such as the Takla Group (i.e. Kemess). At Pillar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

The 2016 discovery of abundant disseminated chalcopyrite in what is described as hypabyssal (shallow depth) feldspar ± biotite monzonitic porphyry bedrock and nearby lapilli tuffs are extremely positive developments.

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 Zone areas of the Pil property are situated on the north flank of one of the survey's largest Th/K anomalies (Figure 8). A magnetic low in the area is evident (Figure 9). Such a feature could reflect magnetite destruction (field observations, petrography) resulting from: a) the hydrothermal effects of the epithermal Au-Ag zone and b) alteration of the hypabyssal intrusive and adjacent volcanics associated with the Copper Cliff Zone.





## **9.0 RECOMMENDATIONS**

The results of this work were very positive and amply justify the Company moving forward to aggressively explore these Pillar East discoveries.

A recommended program for 2017 would comprise the following:

- 1) Construct a camp north of the small lake at the head of the cirque. Utilize equipment from old camp.
- 2) Induced Polarization and magnetometer survey (5 east-west lines, 200 m spacing, total length ~6.5km).
- 3) Geological mapping and further sampling of the Copper Cliff Zone.
- 4) Diamond drilling at up to six sites from the Copper Cliff Zone in the south and northerly along the epithermal Au-Ag zone. Holes to range from 150 to 300 metres. Total drilling approximately 2,500 metres.

The estimated cost of the exploration program is \$600,000.

Respectfully Submitted By,

W. Gruenwald, P.Geo.

March 31, 2017

**APPENDIX A**

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**Analytical Data Summary**

**Analytical Certificates**

**Analytical Methodology**

### Pillar East Rock Samples - 2016

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Elev (m)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca ppm	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
VAN16001433	W16R01	628183	6352837	1784	222	10.9	0.76	30	2	53	0.2	0.16	2.1	3.7	2	169	3.19	3	0.10	0.26	6	0.26	1576	10.7	0.001	1.1	0.071	2272	0.33	1.6	1.2	<0.5	4	<0.2	1.1	0.008	<0.1	10	0.3	543
VAN16001433	W16R02	628183	6352837	1784	576	20.1	1.07	13	2	43	0.7	0.39	6.1	9.6	3	195	3.26	3	0.08	0.26	12	0.45	4165	18.8	0.003	2.3	0.072	2864	0.42	1.5	1.4	<0.5	5	<0.2	1.2	0.022	0.2	14	0.5	1229
VAN16001433	W16R03	628183	6352837	1784	659	12.5	0.88	23	3	57	0.2	0.24	5.7	8.3	2	162	2.47	3	0.03	0.27	11	0.38	2820	30.8	0.002	1.7	0.063	1311	0.28	2.0	1.8	0.6	4	<0.2	1.1	0.028	0.2	9	0.5	633
VAN16001433	W16R04	628183	6352837	1784	141	5.0	1.10	8	4	44	<0.1	0.33	3.1	8.9	3	105	2.98	3	0.02	0.27	10	0.48	3848	5.5	0.002	2.6	0.069	1664	0.25	0.7	1.6	0.8	6	<0.2	1.2	0.031	0.1	16	0.5	550
VAN16001433	W16R05	628183	6352837	1784	1561	16.3	0.88	20	2	25	<0.1	0.16	2.9	8.4	2	147	2.61	3	0.05	0.25	10	0.34	2646	45.3	0.002	1.5	0.063	1403	0.11	2.5	1.6	<0.5	3	<0.2	1.0	0.021	0.2	10	0.4	485
VAN16001433	W16R06	628320	6353000	1	<0.1	0.64	2	2	745	<0.1	0.96	0.2	1.5	2	4	1.12	<1	<0.01	0.19	24	0.12	598	0.7	0.023	0.8	0.018	12	<0.05	<0.1	0.6	37	<0.2	2.1	0.001	<0.1	2	<0.1	73		
VAN16001433	W16R07	628346	6353105	1801	6563	13.1	1.04	43	2	61	<0.1	0.34	46.8	5.8	2	98	3.00	6	0.50	0.17	6	0.74	1222	123.0	0.018	1.3	0.065	1531	0.35	6.0	3.8	0.7	8	<0.2	3.4	0.078	0.1	47	0.3	1727
VAN16001433	W16R08	628366	6353094	1806	450	3.8	0.97	15	<1	145	<0.1	0.22	0.6	5.6	2	24	2.46	5	0.01	0.20	9	0.65	1176	13.4	0.018	1.4	0.063	95	0.31	0.6	2.6	<0.5	7	<0.2	3.2	0.073	<0.1	38	0.4	89
VAN16001433	W16R09	628202	6352931	1810	1066	13.0	0.94	54	1	84	<0.1	0.30	5.9	5.4	2	28	3.03	4	0.04	0.26	10	0.36	1808	8.5	0.004	1.3	0.062	467	0.40	0.7	1.1	<0.5	10	<0.2	1.2	0.001	<0.1	12	<0.1	798
VAN16001433	W16R10	628200	6352930		1249	69.7	0.77	51	2	110	0.2	0.97	32.0	5.9	2	174	2.46	3	0.42	0.20	9	0.32	2482	13.2	0.007	1.9	0.046	2724	0.85	1.4	1.5	1.0	11	<0.2	1.0	0.004	<0.1	14	0.2	4449
VAN16001433	W16R11	628200	6352913		753	29.5	0.82	44	<1	84	0.2	1.01	23.3	5.6	2	80	2.36	4	0.23	0.21	10	0.36	2588	14.2	0.005	1.2	0.037	2377	0.63	1.1	1.3	<0.5	9	<0.2	0.9	0.002	0.2	12	0.2	3775
VAN16001433	W16R12	628200	6352888		699	15.6	0.70	31	2	148	0.8	2.49	367.1	6.2	3	157	2.17	3	1.58	0.20	9	0.33	2638	98.9	0.005	1.8	0.048	4167	1.03	2.2	1.5	<0.5	27	<0.2	0.9	0.002	0.1	15	<0.1	7562
VAN16001433	W16R13	628519	6353291	1833	201	0.7	0.62	32	1	83	<0.1	0.17	0.8	2.9	2	23	1.54	4	<0.01	0.17	9	0.35	651	9.2	0.020	1.6	0.030	28	0.07	0.4	1.7	<0.5	7	<0.2	4.8	0.042	<0.1	19	0.2	57
VAN16001433	W16R14	627945	6352889	1822	1	<0.1	1.09	1	1	135	<0.1	1.21	0.5	2.2	2	5	1.04	2	<0.01	0.22	12	0.31	677	0.4	0.040	0.5	0.028	12	<0.05	0.1	2.1	<0.5	42	<0.2	1.4	0.018	<0.1	20	0.1	37
VAN16001433	W16R15	627701	6352678	1854	3	1.1	2.10	7	1	136	<0.1	0.93	2.9	12.9	1	3549	3.39	8	<0.01	0.01	10	2.15	1298	0.3	0.074	2.9	0.083	172	0.31	0.3	11.0	<0.5	27	<0.2	1.3	0.106	<0.1	94	0.2	295
VAN16001433	W16R16	628634	6353189	1821	136	4.0	0.48	35	1	185	<0.1	0.03	0.1	1.5	2	10	1.64	3	0.05	0.13	6	0.19	206	0.9	0.020	0.4	0.031	17	0.05	1.0	1.9	<0.5	9	<0.2	1.0	0.039	<0.1	35	0.1	24
VAN16001433	W16R17	628618	6353043	1792	44	2.7	1.05	56	2	251	0.3	0.39	0.3	4.4	2	20	2.23	3	<0.01	0.19	7	0.58	577	39.9	0.022	1.8	0.074	27	0.51	0.9	2.4	0.9	31	0.6	1.8	0.101	0.1	57	0.3	47
VAN16001433	W16R18	628104	6352448	1850	3	1.0	0.86	19	2	177	0.1	1.29	0.1	12.3	2	16	3.41	4	0.03	0.22	7	0.37	472	0.8	0.011	2.1	0.088	11	0.67	1.3	4.6	<0.5	22	<0.2	2.0	0.013	<0.1	75	0.1	56
VAN16001433	W16R19	628155	6352368	1863	8	0.8	1.38	4	3	1206	<0.1	3.95	0.2	15.4	2	57	4.06	4	0.06	0.21	13	0.72	1090	0.3	0.047	4.2	0.096	5	0.14	0.3	10.9	<0.5	98	<0.2	2.1	0.018	<0.1	80	<0.1	106
VAN16001433	W16R20	627928	6352498	1871	7	0.6	1.43	40	1	125	<0.1	2.87	0.2	14.1	3	16	4.16	8	0.01	0.18	13	0.71	1287	1.4	0.009	2.5	0.079	10	0.92	0.6	6.0	<0.5	35	<0.2	1.4	0.004	<0.1	111	<0.1	80
VAN16001433	W16R21	628073	6352364	1920	9	1.4	0.74	28	2	322	<0.1	0.36	<0.1	10.1	1	30	3.04	3	0.03	0.25	7	0.26	304	0.5	0.005	1.5	0.068	18	0.41	2.1	3.2	<0.5	10	<0.2	1.5	0.003	<0.1	28	0.1	41
VAN16001433	W16R22	628044	6352366	1930	4	1.5	0.74	21	2	427	<0.1	0.25	0.1	13.8	2	19	3.13	2	0.02	0.26	11	0.18	496	0.6	0.009	2.4	0.073	7	0.32	1.8	4.1	<0.5	10	<0.2	1.7	0.006	0.1	31	<0.1	46
VAN16001433	W16R23	627938	6352318	1969	<1	<0.1	0.80	11	1	76	<0.1	0.22	0.2	6.2	2	12	2.57	4	<0.01	0.22	9	0.43	696	0.5	0.008	0.9	0.078	4	<0.05	2.5	3.2	<0.5	6	<0.2	1.7	0.043	0.1	67	0.3	73
VAN16001433	W16R24	627733	6352329	2012	<1	0.2	1.03	8	<1	62	<0.1	1.77	0.5	6.1	3	16	2.05	6	0.02	0.09	9	0.82	1908	0.4	0.011	1.7	0.047	5	<0.05	1.1	3.1	<0.5	26	<0.2	1.0	0.049	<0.1	52	0.2	59
VAN16001433	W16R25	627569	6352336	1995	<1	0.2	0.76	7	2	41	<0.1	2.81	0.9	4.7	2	16	1.55	4	0.01	0.16	11	0.36	855	0.4	0.009	0.5	0.062	9	<0.05	0.9	2.7	<0.5	23	<0.2	1.2	0.056	<0.1	29	0.4	44
VAN16001433	W16R26	627569	6352336	1995	<1	0.7	1.13	18	2	110	<0.1	1.38	8.1	7.3	1	45	2.06	4	0.07	0.32	14	0.32	693	0.5	0.006	1.0	0.100	41	<0.05	1.4	3.7	<0.5	19	<0.2	2.3	0.042	0.1	36	0.3	46
VAN16001433	W16R27	628028	6352473	1899	9	8.1	1.72	7	2	397	0.2	1.05	0.6	9.7	3	2094	3.75	10	0.21	0.10	16	1.46	1104	0.5	0.077	2.7	0.092	419	0.40	0.4	8.5	<0.5	24	0.6	2.6	0.191	<0.1	116	0.4	97
VAN16001433	W16R28	628007	6352478	1899	27	23.9	1.33	4	1	150	0.5	1.53	0.4	11.7	3	10420	3.78	8	0.06	0.09	15	1.23	934	0.3	0.072	3.0	0.102	100	1.02	0.3	8.4	1.9	21	<0.2	3.6	0.148	<0.1	113	0.4	90
VAN16001433	W16R29	628015	6352433	1900	89	2.8	1.16	30	<1	204	<0.1	0.14	0.1	6.1	2	98	3.31	6	<0.01	0.21	11	0.49	628	0.4	0.008	1.1	0.056	25	0.38	0.5	3.8	<0.5	6	<0.2	1.8	0.006	<0.1	43	<0.1	63
VAN16001433	W16R30	628016	6352450	1894	19	11.9	1.19	1	2	324	0.4	0.9	0.1	12.1	3	6390																								

Pillar East Soil Samples - 2016

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca ppm	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
VAN16001434	2300N 7700E	627700	6352300	<1	0.2	2.03	12	<20	96	0.1	0.47	0.2	8.6	19	15	2.82	6	0.03	0.09	19	0.77	853	0.7	0.007	21.5	0.130	10	<0.05	1.1	4.5	<0.5	32	<0.2	0.9	0.066	<0.1	67	0.3	58
VAN16001434	2300N 7725E	627725	6352300	<1	0.3	1.80	6	<20	109	<0.1	0.21	0.5	5.8	6	9	1.96	7	0.06	0.10	11	0.56	1099	0.6	0.005	4.6	0.247	8	0.17	1.0	0.5	<0.5	15	<0.2	<0.1	0.005	<0.1	49	0.2	61
VAN16001434	2300N 7750E	627750	6352300	<1	0.2	1.98	7	<20	117	<0.1	0.27	0.5	8.3	6	12	2.48	8	0.05	0.10	12	0.79	2007	0.5	0.006	4.2	0.199	10	0.12	1.0	0.7	<0.5	15	<0.2	<0.1	0.011	0.1	62	0.1	67
VAN16001434	2300N 7775E	627775	6352300	<1	0.2	2.27	13	<20	101	0.2	0.13	0.4	6.2	8	12	3.09	10	0.04	0.10	16	0.51	1461	1.4	0.014	6.3	0.175	14	0.07	0.6	0.9	<0.5	12	<0.2	<0.1	0.015	0.1	60	0.1	65
VAN16001434	2300N 7800E	627800	6352300	<1	0.2	2.42	13	<20	105	0.2	0.20	0.3	7.3	10	15	2.79	8	0.04	0.11	19	0.67	1058	0.5	0.009	8.7	0.174	13	0.07	0.7	0.9	<0.5	13	<0.2	<0.1	0.012	0.2	59	0.2	64
VAN16001434	2300N 7825E	627825	6352300	<1	0.3	2.12	12	<20	153	0.2	0.27	0.7	7.9	10	15	2.30	7	0.07	0.11	16	0.53	1656	0.7	0.007	7.9	0.195	17	0.15	0.8	0.5	<0.5	21	<0.2	<0.1	0.008	0.1	58	0.1	53
VAN16001434	2300N 7850E	627850	6352300	<1	1.1	1.83	14	<20	145	0.1	0.42	0.3	9.5	12	21	2.58	6	0.03	0.11	17	0.61	1295	0.7	0.006	9.9	0.154	18	0.08	0.7	1.3	<0.5	23	<0.2	<0.1	0.017	0.1	68	0.1	52
VAN16001434	2300N 7875E	627875	6352300	<1	0.3	1.67	12	<20	191	0.1	0.39	0.5	10.9	7	17	2.09	6	0.06	0.12	11	0.38	2454	0.6	0.006	5.8	0.289	14	0.20	0.6	0.4	<0.5	24	<0.2	<0.1	0.004	0.2	58	<0.1	41
VAN16001434	2300N 7900E	627900	6352300	<1	0.2	1.97	39	<20	180	0.2	0.25	0.2	11.2	12	20	3.23	8	0.06	0.14	15	0.54	1909	0.8	0.007	10.5	0.173	17	0.13	0.7	0.8	<0.5	19	<0.2	<0.1	0.016	0.1	76	0.1	57
VAN16001434	2300N 7925E	627925	6352300	<1	0.2	2.02	27	<20	241	0.1	0.49	0.1	5.5	8	12	2.30	7	0.03	0.10	23	0.46	914	0.5	0.005	4.9	0.168	10	0.09	0.8	0.6	<0.5	15	<0.2	<0.1	0.006	0.2	54	0.1	41
VAN16001434	2300N 7950E	627950	6352300	2	0.1	1.82	21	<20	132	0.3	0.09	0.3	4.0	8	9	2.26	8	0.02	0.10	16	0.29	848	0.7	0.008	5.0	0.163	9	0.09	0.6	0.3	<0.5	9	<0.2	<0.1	0.006	0.1	44	0.1	52
VAN16001434	2300N 7975E	627975	6352300	1	<0.1	1.71	14	<20	199	<0.1	0.33	0.2	8.1	5	15	2.59	5	<0.01	0.13	17	0.59	1445	0.3	0.005	5.2	0.101	9	<0.05	0.5	2.1	<0.5	13	<0.2	0.2	0.014	<0.1	56	<0.1	57
VAN16001434	2300N 8000E	628000	6352300	<1	0.1	1.98	40	<20	118	0.2	0.08	0.2	6.6	10	13	3.17	10	0.03	0.11	16	0.32	1312	0.9	0.009	6.7	0.167	13	0.12	0.6	0.6	<0.5	9	<0.2	<0.1	0.011	<0.1	56	0.1	60
VAN16001434	2300N 8025E	628025	6352300	2	0.2	2.35	41	<20	84	0.2	0.07	0.2	5.5	8	12	2.80	8	0.05	0.08	14	0.24	1060	0.9	0.011	5.3	0.204	11	0.15	0.5	0.3	<0.5	9	<0.2	<0.1	0.005	0.1	43	0.1	47
VAN16001434	2300N 8050E	628050	6352300	<1	0.2	1.30	11	<20	90	0.1	0.09	0.2	3.9	6	9	1.87	5	0.05	0.10	8	0.17	757	0.9	0.006	2.8	0.142	8	0.13	0.6	0.3	<0.5	11	<0.2	<0.1	0.005	0.1	40	0.1	37
VAN16001434	2300N 8075E	628075	6352300	<1	0.1	2.51	19	<20	97	0.2	0.05	0.2	6.7	9	13	3.27	9	0.05	0.07	12	0.26	1155	1.1	0.008	4.9	0.180	11	0.14	0.7	0.4	<0.5	8	<0.2	<0.1	0.006	0.1	51	0.1	50
VAN16001434	2300N 8100E	628100	6352300	<1	0.3	2.52	31	<20	267	0.1	0.57	0.2	5.9	9	18	2.14	6	0.03	0.10	27	0.35	916	0.6	0.006	6.9	0.185	10	0.12	0.6	0.6	<0.5	26	<0.2	<0.1	0.004	0.1	49	<0.1	49
VAN16001434	2300N 8125E	628125	6352300	<1	0.2	1.55	24	<20	121	0.1	0.40	0.4	8.5	10	17	2.54	5	0.02	0.12	16	0.53	1340	0.5	0.006	6.8	0.135	10	<0.05	1.1	1.1	<0.5	20	<0.2	<0.1	0.022	<0.1	59	0.1	53
VAN16001434	2300N 8150E	628150	6352300	1	0.2	1.55	17	<20	143	0.1	0.21	0.3	5.6	9	14	2.73	6	0.05	0.10	9	0.27	758	0.7	0.005	4.8	0.149	10	0.15	0.5	0.3	<0.5	14	<0.2	<0.1	0.008	<0.1	54	<0.1	62
VAN16001434	2350N 7525E	627525	6352350	2	0.3	1.94	10	<20	112	0.1	0.74	0.2	6.1	9	14	1.89	6	0.04	0.12	30	0.66	1303	0.3	0.005	8.1	0.147	12	0.05	0.4	5.6	<0.5	28	<0.2	0.9	0.010	0.1	54	0.2	49
VAN16001434	2350N 7550E	627550	6352350	1	0.2	1.62	8	<20	152	0.1	0.76	0.4	6.3	7	9	1.59	5	0.08	0.12	23	0.39	1972	0.5	0.005	6.6	0.201	15	0.14	0.5	2.5	<0.5	27	<0.2	0.4	0.010	0.1	50	0.2	42
VAN16001434	2350N 7575E	627575	6352350	1	<0.1	1.54	7	<20	118	<0.1	0.57	0.3	4.4	8	6	1.34	4	0.02	0.14	14	0.54	1593	0.5	0.004	7.4	0.133	5	0.05	0.3	2.9	<0.5	18	<0.2	0.4	0.005	<0.1	38	0.2	35
VAN16001434	2350N 7600E	627600	6352350	1	<0.1	1.49	7	<20	139	<0.1	0.27	0.6	8.5	6	8	2.22	7	0.03	0.15	12	0.72	1679	0.6	0.009	7.3	0.128	11	<0.05	1.4	2.3	<0.5	10	<0.2	0.2	0.034	0.1	57	0.3	72
VAN16001434	2350N 7625E	627625	6352350	1	0.3	1.27	4	<20	134	<0.1	0.42	0.4	3.7	6	7	1.10	4	0.07	0.10	9	0.17	1024	0.6	0.005	3.7	0.277	9	0.24	0.6	0.4	<0.5	25	<0.2	<0.1	0.003	0.1	39	0.1	29
VAN16001434	2350N 7650E	627650	6352350	1	0.2	1.65	8	<20	136	0.1	0.29	0.3	5.6	12	11	1.95	6	0.03	0.09	12	0.40	1071	0.6	0.005	10.1	0.181	11	0.13	0.6	0.5	<0.5	19	<0.2	<0.1	0.006	0.1	55	0.1	41
VAN16001434	2350N 7675E	627675	6352350	<1	0.1	1.56	6	<20	122	<0.1	0.13	0.3	9.6	5	8	2.29	8	0.06	0.11	8	0.74	3205	0.5	0.006	3.6	0.102	10	0.07	1.5	1.6	<0.5	10	<0.2	<0.1	0.029	0.1	62	0.2	62
VAN16001434	2400N 8075E	628075	6352400	7	0.8	1.05	18	<20	270	<0.1	0.41	0.3	14.9	4	36	2.73	3	<0.01	0.19	36	0.41	1327	1.1	0.004	3.8	0.101	18	0.06	0.6	5.3	<0.5	11	0.2	42	<0.1	47			
VAN16001434	2400N 8100E	628100	6352400	12	0.9	1.35	24	<20	473	<0.1	0.46	0.1	14.8	7	125	3.27	4	0.03	0.21	36	0.60	1695	1.6	0.004	4.9	0.111	15	0.09	0.3	5.5	<0.5	30	<0.2	1.8	0.005	0.1	55	<0.1	49
VAN16001434	2400N 8125E	628125	6352400	2	0.3	1.54	13	<20	243	<0.1	0.38	0.1	10.7	7	30	2.54	5	<0.01	0.18	32	0.67	2465	0.3	0.004	4.7	0.088	9	<0.05	0.1	6.9	<0.5	9	<0.2	1.4	0.003	<0.1	46		
VAN16001434	2400N 8150E	628150	6352400	7	0.3	1.75	12	<20	225	<0.1	0.47	0.1	13.9	15	43	3.29	7	<0.01	0.17	30	1.11	1751	0.5	0.004	13.9	0.105	11	<0.05	0.2	5.8									

Pillar East Soil Samples - 2016

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca ppm	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
VAN16001434	2500N 8275E	628275	6352500	1	0.1	1.75	3	<20	175	<0.1	1.09	0.2	6.9	1	14	2.11	4	<0.01	0.15	19	0.63	1236	0.3	0.008	1.5	0.109	9	<0.05	0.5	4.4	<0.5	50	<0.2	3.3	0.077	<0.1	44	0.1	48
VAN16001434	2500N 8300E	628300	6352500	<1	<0.1	1.81	5	<20	147	<0.1	1.06	0.2	7.6	1	15	2.45	4	0.01	0.16	22	0.70	1250	0.4	0.008	1.7	0.119	10	<0.05	0.6	5.0	<0.5	48	<0.2	3.0	0.097	<0.1	60	0.2	52
VAN16001434	2500N 8325E	628325	6352500	3	<0.1	2.00	18	<20	183	<0.1	1.06	0.1	6.0	2	13	2.06	4	0.04	0.22	26	0.62	985	0.3	0.009	1.5	0.129	12	<0.05	0.4	4.6	<0.5	46	<0.2	1.8	0.052	<0.1	49	0.2	40
VAN16001434	2500N 8350E	628350	6352500	<1	0.1	2.14	4	<20	199	0.1	0.61	0.2	4.9	4	8	1.62	5	0.03	0.11	15	0.45	785	0.5	0.010	2.5	0.185	11	0.14	0.4	0.5	<0.5	42	<0.2	<0.1	0.012	<0.1	45	<0.1	41
VAN16001434	2430N 7975E	627975	6352430	7	0.8	1.59	10	<20	225	<0.1	1.00	0.1	13.7	10	49	2.72	5	0.02	0.26	28	0.88	1494	0.3	0.004	16.9	0.109	9	<0.05	0.4	6.9	<0.5	21	<0.2	1.8	0.032	0.1	54	<0.1	61
VAN16001434	2430N 7987E	627988	6352430	6	0.7	1.34	19	<20	152	<0.1	0.59	0.1	12.1	4	45	2.59	4	0.01	0.28	34	0.58	1247	0.4	0.004	6.4	0.095	11	<0.05	0.7	6.3	<0.5	20	<0.2	1.8	0.012	0.1	52	0.1	41
VAN16001434	2430N 8000E	628000	6352430	12	1.4	1.45	19	<20	122	0.1	0.56	0.4	15.2	5	112	2.89	5	0.01	0.30	33	0.59	1319	0.7	0.005	6.1	0.114	111	0.08	0.4	4.6	<0.5	14	<0.2	1.9	0.008	0.1	44	0.1	49
VAN16001434	2430N 8012E	628013	6352430	44	1.7	1.92	29	<20	298	0.1	0.53	0.2	25.2	5	125	3.26	5	0.03	0.32	31	0.66	1600	1.3	0.011	5.8	0.094	40	0.09	0.3	5.3	<0.5	20	<0.2	2.3	0.006	0.1	41	<0.1	69
VAN16001434	2430N 8025E	628025	6352430	4	1.2	1.42	15	<20	343	0.2	0.51	0.1	13.9	4	51	3.00	4	0.03	0.25	40	0.64	1549	1.1	0.005	4.2	0.120	17	0.08	0.4	3.9	<0.5	13	<0.2	2.0	0.006	0.1	40	<0.1	58
VAN16001434	0+75S 4+50E	627650	6352675	29	0.8	5.14	21	<20	86	0.2	3.19	2.7	20.9	8	147	3.77	15	0.03	0.13	16	1.43	1865	2.0	0.009	5.8	0.083	101	<0.05	0.2	9.1	<0.5	206	<0.2	1.9	0.131	<0.1	96	0.1	86
VAN16001434	0+75S 4+75E	627675	6352675	14	0.4	1.75	25	<20	240	0.1	1.01	0.8	12.5	4	48	3.03	5	0.02	0.17	17	0.72	1016	1.9	0.006	4.5	0.120	25	<0.05	0.9	5.5	<0.5	54	<0.2	2.9	0.064	<0.1	64	0.2	50
VAN16001434	0+75S 5+25E	627725	6352675	7	0.4	1.45	24	<20	255	0.2	0.88	0.4	11.0	3	36	3.10	4	0.03	0.22	20	0.64	947	1.9	0.006	3.4	0.129	18	<0.05	0.9	4.9	<0.5	39	<0.2	3.4	0.064	0.1	69	0.3	46
VAN16001434	0+75S 5+50E	627750	6352675	10	0.5	2.38	22	<20	161	0.1	1.39	1.0	14.7	6	59	3.12	7	0.03	0.13	16	0.89	1128	1.2	0.007	5.9	0.101	41	<0.05	0.6	6.6	<0.5	81	<0.2	2.3	0.089	<0.1	70	0.2	59
VAN16001434	0+75S 5+75E	627775	6352675	6	0.6	2.81	19	<20	185	0.1	1.68	0.9	15.0	6	58	3.18	8	0.02	0.13	16	1.00	1148	1.4	0.007	5.6	0.094	54	<0.05	0.6	7.6	<0.5	100	<0.2	2.2	0.107	<0.1	74	0.2	66
VAN16001434	1+75N 9+62E	628163	6352925	5	0.3	3.37	9	<20	86	<0.1	1.21	0.3	11.2	7	42	3.43	9	0.02	0.12	14	0.87	1380	0.4	0.012	5.8	0.131	15	<0.05	0.5	8.5	<0.5	78	<0.2	1.8	0.160	<0.1	92	0.1	64
VAN16001434	1+75N 9+75E	628175	6352925	6	0.2	2.93	9	<20	132	0.2	0.28	0.4	11.6	10	19	4.82	11	0.02	0.11	17	0.62	2113	1.0	0.013	6.8	0.101	32	<0.05	0.4	4.6	<0.5	31	<0.2	0.9	0.134	<0.1	118	0.1	104
VAN16001434	1+75N 9+87E	628188	6352925	28	2.5	2.19	4	<20	156	0.3	0.26	0.5	3.5	6	14	2.42	10	0.10	0.09	11	0.22	462	1.3	0.012	2.8	0.129	177	0.12	0.4	1.3	<0.5	33	<0.2	0.1	0.052	0.2	70	0.1	68
VAN16001434	1+75N 10+12E	628213	6352925	2879	232.0	2.42	58	<20	211	0.3	0.88	32.3	15.2	11	261	4.78	7	0.39	0.21	51	0.67	5810	8.5	0.012	10.5	0.100	1845	0.19	0.9	8.3	1.5	57	<0.2	2.1	0.105	0.2	56	0.1	352
VAN16001434	1+75N 10+25E	628225	6352925	927	40.8	1.76	53	<20	452	0.2	1.18	24.5	12.2	5	88	3.50	5	0.17	0.18	33	0.35	7046	8.2	0.005	4.0	0.190	1793	0.21	0.8	2.5	0.9	53	<0.2	0.3	0.014	0.2	36	0.2	1671
VAN16001434	1+75N 10+37E	628238	6352925	1482	50.3	1.93	57	<20	231	0.4	0.37	21.4	18.1	4	178	4.51	6	0.13	0.19	30	0.39	10000	10.2	0.004	4.0	0.168	3686	0.15	0.9	3.0	1.0	27	<0.2	0.3	0.015	0.2	38	0.2	2014
VAN16001434	1+75N 10+87E	628288	6352925	221	14.6	2.06	11	<20	119	0.3	0.37	3.0	6.6	7	32	2.89	12	0.06	0.12	13	0.44	1281	1.5	0.009	3.8	0.079	191	0.06	0.6	2.4	<0.5	29	<0.2	0.2	0.067	0.2	68	0.1	286
VAN16001434	1+75N 13+12E	628513	6352925	4	0.4	1.87	6	<20	97	0.4	0.06	0.2	2.6	9	8	2.45	15	0.05	0.07	13	0.16	353	1.5	0.009	2.9	0.089	20	0.07	0.4	0.9	<0.5	12	<0.2	<0.1	0.050	0.2	56	0.2	43
VAN16001434	1+75N 13+25E	628525	6352925	82	0.3	2.68	16	<20	134	0.3	0.09	0.4	9.0	7	14	4.00	10	0.06	0.10	14	0.38	2955	1.9	0.006	4.5	0.115	69	0.08	0.4	1.0	<0.5	12	<0.2	0.023	0.2	62	0.1	75	
VAN16001434	1+75N 13+37E	628538	6352925	4	0.3	2.69	15	<20	115	0.3	0.16	0.3	9.0	9	16	4.35	11	0.06	0.11	12	0.59	1085	1.0	0.009	5.7	0.101	23	0.06	0.7	2.5	<0.5	19	<0.2	0.2	0.067	0.1	96	0.1	85
VAN16001434	1+75N 13+62E	628563	6352925	2	0.6	3.07	12	<20	93	0.2	0.10	0.2	5.7	10	13	3.38	10	0.07	0.08	11	0.45	658	1.6	0.009	6.0	0.092	17	0.07	0.6	1.5	<0.5	14	<0.2	0.1	0.033	0.1	65	0.2	66
VAN16001434	1+75N 13+75E	628575	6352925	3	0.2	2.90	5	<20	100	0.2	0.03	0.2	11.4	5	17	4.39	10	0.06	0.13	7	0.81	2445	1.1	0.006	2.9	0.178	19	0.09	0.1	1.7	<0.5	6	<0.2	0.4	0.006	0.2	70	<0.1	80
VAN16001434	2+75N 10+75E	628275	6353025	5	0.3	2.81	16	<20	265	0.2	0.35	0.4	7.3	9	21	2.80	8	0.05	0.13	21	0.64	841	1.7	0.005	6.9	0.081	24	0.05	0.2	3.5	<0.5	30	<0.2	0.8	0.010	0.2	65	0.2	88
VAN16001434	2+75N 10+87E	628288	6353025	85	4.4	2.42	8	<20	513	0.2	0.70	0.4	7.2	6	20	2.76	8	0.05	0.13	34	0.76	662	2.4	0.007	4.5	0.106	27	<0.05	0.2	6.5	<0.5	53	<0.2	1.7	0.013	0.1	54	0.1	87
VAN16001434	2+75N 11+12E	628313	6353025	48	1.3	2.81	9	<20	74	0.2	0.20	0.3	7.1	10	26	3.40	11	0.10	0.07	12	0.52	645	2.7	0.013	7.2	0.120	28	0.13	0.5	2.0	<0.5	26	<0.2	0.1	0.064	0.2	87	0.2	63
VAN16001434	2+75N 11+25E	628325	6353025	28	0.4	3.32	12	<20	96	0.3	0.14	0.3	7.1	9	24	3.17	11	0.04	0.07	12	0.56	597	2.3	0.0															

Pillar East Soil Samples - 2016

Certificate Number	Sample Number	Easting (NAD 83)	Northing (NAD 83)	Au ppb	Ag ppm	Al %	As ppm	B ppm	Ba ppm	Bi ppm	Ca ppm	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
VAN16001434	13+00E 5+75N	628500	6353325	8	0.5	2.58	5	<20	139	0.1	0.25	0.3	7.0	6	15	3.06	8	0.07	0.09	13	0.40	1394	1.1	0.006	4.5	0.102	18	0.10	0.3	1.2	<0.5	26	<0.2	<0.1	0.064	0.1	66	0.2	72
VAN16001434	13+50E 1+75N D	628555	6352925	162	1.3	2.06	48	<20	408	0.3	0.14	0.4	21.1	6	21	5.31	7	0.09	0.12	11	0.39	6499	13.8	0.004	4.5	0.283	35	0.17	0.8	0.5	0.5	25	0.8	<0.1	0.011	0.4	60	<0.1	80
					Au=50-100 ppb	Ag=1-3 ppm										Cu=50-100 ppm										Pb=50-100 ppm									Zn=100-200 ppm				
					100-200 ppb	3-5 ppm										100-200 ppm										100-150 ppm									200-300 ppm				
					200-500 ppb	5-10 ppm										200-300 ppm										150-500 ppm									300-500 ppm				
					>500 ppb	>10 ppm										>300 ppm										>500 ppm									>500 ppm				

Pillar East Stream Samples - 2016



**BUREAU  
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Bureau Veritas Commodities Canada Ltd.  
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA  
PHONE (604) 253-3158

**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver BC V6B 1L8 CANADA

Submitted By: John Barakso  
Receiving Lab: Canada-Vancouver  
Received: August 18, 2016  
Report Date: August 26, 2016  
Page: 1 of 3

## CERTIFICATE OF ANALYSIS

VAN16001433.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 40

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	39	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ201	39	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days  
RTRN-RJT Return After 90 days

### ADDITIONAL COMMENTS

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 BC V6B 1L8  
CANADA

CC: Warner Gruenwald



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.



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**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver BC V6B 1L8 CANADA

**Project:** None Given  
**Report Date:** August 26, 2016

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA

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**Page:** 2 of 3

**Part:** 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433.1

Method	Analyte	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	
		MDL	0.01	0.1	0.1	0.1	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
W16R01	Rock	0.77	10.7	169.3	2271.7	543	10.9	1.1	3.7	1576	3.19	29.5	221.8	1.1	4	2.1	1.6	0.2	10	0.16	0.071
W16R02	Rock	0.98	18.8	194.8	2864.3	1229	20.1	2.3	9.6	4165	3.26	13.4	576.4	1.2	5	6.1	1.5	0.7	14	0.39	0.072
W16R03	Rock	0.89	30.8	161.7	1310.5	633	12.5	1.7	8.3	2820	2.47	22.9	658.5	1.1	4	5.7	2.0	0.2	9	0.24	0.063
W16R04	Rock	0.90	5.5	105.1	1664.2	550	5.0	2.6	8.9	3848	2.98	7.6	141.1	1.2	6	3.1	0.7	<0.1	16	0.33	0.069
W16R05	Rock	1.06	45.3	146.5	1403.4	485	16.3	1.5	8.4	2646	2.61	20.0	1561.0	1.0	3	2.9	2.5	<0.1	10	0.16	0.063
W16R06	Rock	0.75	0.7	3.6	12.1	73	<0.1	0.8	1.5	598	1.12	1.8	1.2	2.1	37	0.2	<0.1	<0.1	2	0.96	0.018
W16R07	Rock	0.85	123.0	98.3	1531.1	1727	13.1	1.3	5.8	1222	3.00	42.8	6563.2	3.4	8	46.8	6.0	<0.1	47	0.34	0.065
W16R08	Rock	0.39	13.4	24.4	95.4	89	3.8	1.4	5.6	1176	2.46	14.7	449.6	3.2	7	0.6	0.6	<0.1	38	0.22	0.063
W16R09	Rock	1.19	8.5	27.7	466.7	798	13.0	1.3	5.4	1808	3.03	53.8	1065.6	1.2	10	5.9	0.7	<0.1	12	0.30	0.062
W16R10	Rock	2.75	13.2	173.5	2724.0	4449	69.7	1.9	5.9	2482	2.46	50.9	1249.2	1.0	11	32.0	1.4	0.2	14	0.97	0.046
W16R11	Rock	1.28	14.2	80.0	2376.8	3775	29.5	1.2	5.6	2588	2.36	44.2	752.5	0.9	9	23.3	1.1	0.2	12	1.01	0.037
W16R12	Rock	2.15	98.9	157.1	4166.8	7562	15.6	1.8	6.2	2638	2.17	31.3	698.8	0.9	27	367.1	2.2	0.8	15	2.49	0.048
W16R13	Rock	1.11	9.2	22.5	28.2	57	0.7	1.6	2.9	651	1.54	31.6	200.9	4.8	7	0.8	0.4	<0.1	19	0.17	0.030
W16R14	Rock	1.24	0.4	5.3	11.7	37	<0.1	0.5	2.2	677	1.04	1.3	0.6	1.4	42	0.5	0.1	<0.1	20	1.21	0.028
W16R15	Rock	0.86	0.3	3549.1	172.2	295	1.1	2.9	12.9	1298	3.39	7.1	3.2	1.3	27	2.9	0.3	<0.1	94	0.93	0.083
W16R16	Rock	0.82	0.9	10.1	17.2	24	4.0	0.4	1.5	206	1.64	34.6	136.4	1.0	9	0.1	1.0	<0.1	35	0.03	0.031
W16R17	Rock	0.94	39.9	20.1	26.8	47	2.7	1.8	4.4	577	2.23	55.6	43.7	1.8	31	0.3	0.9	0.3	57	0.39	0.074
W16R18	Rock	0.76	0.8	15.9	10.5	56	1.0	2.1	12.3	472	3.41	18.7	3.1	2.0	22	0.1	1.3	0.1	75	1.29	0.088
W16R19	Rock	0.69	0.3	57.4	4.9	106	0.8	4.2	15.4	1090	4.06	3.6	8.1	2.1	98	0.2	0.3	<0.1	80	3.95	0.096
W16R20	Rock	0.77	1.4	15.8	10.0	80	0.6	2.5	14.1	1287	4.16	39.5	6.7	1.4	35	0.2	0.6	<0.1	111	2.87	0.079
W16R21	Rock	0.61	0.5	30.2	17.6	41	1.4	1.5	10.1	304	3.04	27.6	8.7	1.5	10	<0.1	2.1	<0.1	28	0.36	0.068
W16R22	Rock	0.65	0.6	18.5	6.6	46	1.5	2.4	13.8	496	3.13	21.2	4.1	1.7	10	0.1	1.8	<0.1	31	0.25	0.073
W16R23	Rock	0.73	0.5	11.6	3.9	73	<0.1	0.9	6.2	696	2.57	11.2	<0.5	1.7	6	0.2	2.5	<0.1	67	0.22	0.078
W16R24	Rock	0.82	0.4	15.7	5.2	59	0.2	1.7	6.1	1908	2.05	7.8	<0.5	1.0	26	0.5	1.1	<0.1	52	1.77	0.047
W16R25	Rock	1.08	0.4	16.3	8.5	44	0.2	0.5	4.7	855	1.55	7.0	<0.5	1.2	23	0.9	0.9	<0.1	29	2.81	0.062
W16R26	Rock	0.76	0.5	45.1	41.1	46	0.7	1.0	7.3	693	2.06	18.2	<0.5	2.3	19	8.1	1.4	<0.1	36	1.38	0.100
W16R27	Rock	2.01	0.5	2094.2	418.5	97	8.1	2.7	9.7	1104	3.75	6.5	9.4	2.6	24	0.6	0.4	0.2	116	1.05	0.092
W16R28	Rock	1.46	0.3	9910.6	99.8	90	23.9	3.0	11.7	934	3.78	3.6	27.0	3.6	21	0.4	0.3	0.5	113	1.53	0.102
W16R29	Rock	1.10	0.4	97.7	24.9	63	2.8	1.1	6.1	628	3.31	29.9	89.3	1.8	6	0.1	0.5	<0.1	43	0.14	0.056
W16R30	Rock	0.86	0.3	6392.1	6.8	75	11.9	2.4	12.1	682	3.82	1.1	18.6	3.4	19	0.1	0.3	0.4	152	0.94	0.098

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**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver BC V6B 1L8 CANADA

Project: None Given  
Report Date: August 26, 2016

Bureau Veritas Commodities Canada Ltd.

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Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433.1

Method	Analyte	AQ201																
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
		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	0.1	0.05	1	0.5	0.2
W16R01	Rock	6	2	0.26	53	0.008	2	0.76	0.001	0.26	0.3	0.10	1.2	<0.1	0.33	3	<0.5	<0.2
W16R02	Rock	12	3	0.45	43	0.022	2	1.07	0.003	0.26	0.5	0.08	1.4	0.2	0.42	3	<0.5	<0.2
W16R03	Rock	11	2	0.38	57	0.028	3	0.88	0.002	0.27	0.5	0.03	1.8	0.2	0.28	3	0.6	<0.2
W16R04	Rock	10	3	0.48	44	0.031	4	1.10	0.002	0.27	0.5	0.02	1.6	0.1	0.25	3	0.8	<0.2
W16R05	Rock	10	2	0.34	25	0.021	2	0.88	0.002	0.25	0.4	0.05	1.6	0.2	0.11	3	<0.5	<0.2
W16R06	Rock	24	2	0.12	745	0.001	2	0.64	0.023	0.19	<0.1	<0.01	0.6	<0.1	<0.05	<1	0.6	<0.2
W16R07	Rock	6	2	0.74	61	0.078	2	1.04	0.018	0.17	0.3	0.50	3.8	0.1	0.35	6	0.7	<0.2
W16R08	Rock	9	2	0.65	145	0.073	<1	0.97	0.018	0.20	0.4	0.01	2.6	<0.1	0.31	5	<0.5	<0.2
W16R09	Rock	10	2	0.36	84	0.001	1	0.94	0.004	0.26	<0.1	0.04	1.1	<0.1	0.40	4	<0.5	<0.2
W16R10	Rock	9	2	0.32	110	0.004	2	0.77	0.007	0.20	0.2	0.42	1.5	<0.1	0.85	3	1.0	<0.2
W16R11	Rock	10	2	0.36	84	0.002	<1	0.82	0.005	0.21	0.2	0.23	1.3	0.2	0.63	4	<0.5	<0.2
W16R12	Rock	9	3	0.33	148	0.002	2	0.70	0.005	0.20	<0.1	1.58	1.5	0.1	1.03	3	<0.5	<0.2
W16R13	Rock	9	2	0.35	83	0.042	1	0.62	0.020	0.17	0.2	<0.01	1.7	<0.1	0.07	4	<0.5	<0.2
W16R14	Rock	12	2	0.31	135	0.018	1	1.09	0.040	0.22	0.1	<0.01	2.1	<0.1	<0.05	2	<0.5	<0.2
W16R15	Rock	10	1	2.15	136	0.106	1	2.10	0.074	0.01	0.2	<0.01	11.0	<0.1	0.31	8	<0.5	<0.2
W16R16	Rock	6	2	0.19	185	0.039	1	0.48	0.020	0.13	0.1	0.05	1.9	<0.1	0.05	3	<0.5	<0.2
W16R17	Rock	7	2	0.58	251	0.101	2	1.05	0.022	0.19	0.3	<0.01	2.4	0.1	0.51	3	0.9	0.6
W16R18	Rock	7	2	0.37	177	0.013	2	0.86	0.011	0.22	0.1	0.03	4.6	<0.1	0.67	4	<0.5	<0.2
W16R19	Rock	13	2	0.72	1206	0.018	3	1.38	0.047	0.21	<0.1	0.06	10.9	<0.1	0.14	4	<0.5	<0.2
W16R20	Rock	13	3	0.71	125	0.004	1	1.43	0.009	0.18	<0.1	0.01	6.0	<0.1	0.92	8	<0.5	<0.2
W16R21	Rock	7	1	0.26	322	0.003	2	0.74	0.005	0.25	0.1	0.03	3.2	<0.1	0.41	3	<0.5	<0.2
W16R22	Rock	11	2	0.18	427	0.006	2	0.74	0.009	0.26	<0.1	0.02	4.1	0.1	0.32	2	<0.5	<0.2
W16R23	Rock	9	2	0.43	76	0.043	1	0.80	0.008	0.22	0.3	<0.01	3.2	0.1	<0.05	4	<0.5	<0.2
W16R24	Rock	9	3	0.82	62	0.049	<1	1.03	0.011	0.09	0.2	0.02	3.1	<0.1	<0.05	6	<0.5	<0.2
W16R25	Rock	11	2	0.36	41	0.056	2	0.76	0.009	0.16	0.4	0.01	2.7	<0.1	<0.05	4	<0.5	<0.2
W16R26	Rock	14	1	0.32	110	0.042	2	1.13	0.006	0.32	0.3	0.07	3.7	0.1	<0.05	4	<0.5	<0.2
W16R27	Rock	16	3	1.46	397	0.191	2	1.72	0.077	0.10	0.4	0.21	8.5	<0.1	0.40	10	<0.5	0.6
W16R28	Rock	15	3	1.23	150	0.148	1	1.33	0.072	0.09	0.4	0.06	8.4	<0.1	1.02	8	1.9	<0.2
W16R29	Rock	11	2	0.49	204	0.006	<1	1.16	0.008	0.21	<0.1	<0.01	3.8	<0.1	0.38	6	<0.5	<0.2
W16R30	Rock	17	3	0.96	324	0.033	2	1.19	0.091	0.06	0.1	0.01	7.0	<0.1	0.45	7	<0.5	0.3

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**Client:** **Finlay Minerals Ltd.**  
912 - 510 W. Hastings St.  
Vancouver BC V6B 1L8 CANADA

Project: None Given  
Report Date: August 26, 2016

Bureau Veritas Commodities Canada Ltd.

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Part: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433.1

Method	Analyte	WGHT	AQ201																		
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
		kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%								
		MDL	0.01	0.1	0.1	0.1	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
W16R31	Rock	0.81	0.6	599.9	5.4	71	2.0	4.4	17.8	835	4.34	2.9	1.4	3.3	29	<0.1	0.7	0.1	194	1.52	0.094
W16R32	Rock	0.88	0.4	7280.5	30.9	82	12.5	2.8	13.0	786	3.76	1.6	28.8	3.7	17	<0.1	0.3	0.6	135	1.33	0.094
W16R33	Rock	1.33	<0.1	4541.5	8.3	56	15.0	2.2	9.3	670	3.50	4.3	18.1	3.1	44	<0.1	6.3	0.4	107	1.79	0.096
W16R34	Rock	1.57	0.3	8889.8	30.4	79	21.3	3.2	12.0	796	3.77	1.9	26.2	3.8	18	<0.1	0.4	0.6	122	1.39	0.100
W16R35	Rock	2.45	0.3	7425.3	21.9	88	14.1	2.6	12.2	991	3.77	2.6	17.9	3.2	30	<0.1	0.4	0.3	116	1.91	0.097
W16R36	Rock	2.33	0.3	3201.7	42.6	101	7.5	2.5	11.4	1112	3.80	4.0	7.8	2.8	18	0.3	0.3	<0.1	122	1.23	0.092
W16R37	Rock	2.97	0.3	471.8	253.0	114	4.3	2.7	12.1	1234	4.14	6.4	28.1	2.6	14	1.6	0.4	0.1	133	1.00	0.099
W16R38	Rock	1.00	0.3	9622.2	49.9	83	7.2	3.5	10.2	776	4.11	1.5	69.7	3.4	13	<0.1	0.2	0.5	132	0.36	0.105
13+50E 1+75DR	Rock	L.N.R.																			
13+50E 1+75NR	Rock	0.33	3.1	21.2	7.2	68	1.4	1.5	5.0	706	2.95	15.2	15.5	2.8	12	<0.1	0.4	0.1	24	0.24	0.105



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912 - 510 W. Hastings St.  
Vancouver BC V6B 1L8 CANADA

Project: None Given  
Report Date: August 26, 2016

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Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433.1

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	
		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
W16R31	Rock	45	2	1.13	586	0.056	1	1.28	0.089	0.08	0.3	<0.01	9.3	<0.1	<0.05	7	<0.5	<0.2
W16R32	Rock	19	2	1.08	265	0.026	2	1.31	0.067	0.09	0.2	<0.01	6.4	<0.1	0.45	8	1.4	0.2
W16R33	Rock	20	2	0.67	458	0.050	1	0.88	0.095	0.08	0.2	<0.01	6.9	<0.1	0.31	5	0.9	0.3
W16R34	Rock	17	3	1.05	252	0.040	2	1.25	0.061	0.11	0.2	<0.01	5.8	<0.1	0.53	7	1.5	<0.2
W16R35	Rock	20	3	1.25	294	0.139	2	1.46	0.072	0.11	0.3	<0.01	7.8	<0.1	0.48	9	1.6	<0.2
W16R36	Rock	15	3	1.48	221	0.218	2	1.66	0.068	0.10	0.5	0.07	9.2	<0.1	0.26	10	<0.5	0.3
W16R37	Rock	16	3	1.70	85	0.255	<1	1.86	0.067	0.09	0.3	0.18	11.1	<0.1	0.29	11	0.6	0.5
W16R38	Rock	16	3	1.34	237	0.022	<1	1.51	0.059	0.11	0.1	<0.01	5.5	<0.1	0.49	7	1.8	0.7
13+50E 1+75DR	Rock	L.N.R.																
13+50E 1+75NR	Rock	7	2	0.74	326	0.066	<1	1.47	0.018	0.34	0.3	0.02	2.3	0.1	0.08	4	<0.5	1.4



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PHONE (604) 253-3158

Project: None Given  
Report Date: August 26, 2016

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Part: 1 of 2

## QUALITY CONTROL REPORT

VAN16001433.1

Method Analyte Unit MDL	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201		
	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%		
	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	
Pulp Duplicates																					
W16R14	Rock	1.24	0.4	5.3	11.7	37	<0.1	0.5	2.2	677	1.04	1.3	0.6	1.4	42	0.5	0.1	<0.1	20	1.21	0.028
REP W16R14	QC		0.3	4.6	10.8	34	<0.1	0.5	2.2	660	1.03	1.5	<0.5	1.3	40	0.6	0.1	<0.1	20	1.20	0.029
13+50E 1+75NR	Rock	0.33	3.1	21.2	7.2	68	1.4	1.5	5.0	706	2.95	15.2	15.5	2.8	12	<0.1	0.4	0.1	24	0.24	0.105
REP 13+50E 1+75NR	QC		3.0	20.2	7.1	67	1.5	1.6	4.8	717	2.95	15.4	19.6	2.6	12	<0.1	0.5	<0.1	23	0.23	0.100
Core Reject Duplicates																					
W16R12	Rock	2.15	98.9	157.1	4166.8	7562	15.6	1.8	6.2	2638	2.17	31.3	698.8	0.9	27	367.1	2.2	0.8	15	2.49	0.048
DUP W16R12	QC		98.7	158.0	4088.7	7403	15.5	2.0	5.9	2643	2.10	32.1	1108.1	0.8	28	348.8	2.3	0.8	15	2.46	0.044
Reference Materials																					
STD DS10	Standard		13.8	145.2	146.4	355	1.8	66.7	11.9	874	2.73	45.1	79.2	7.1	65	2.7	10.0	12.3	41	1.06	0.067
STD DS10	Standard		14.9	152.1	150.2	357	1.9	74.4	12.7	870	2.76	44.2	99.0	7.2	69	2.1	9.7	12.2	42	1.09	0.073
STD OXC129	Standard		1.2	24.8	5.9	38	<0.1	68.6	18.7	405	2.94	<0.5	181.5	1.7	174	<0.1	<0.1	<0.1	48	0.61	0.085
STD OXC129	Standard		1.2	27.7	6.2	40	<0.1	77.3	19.8	414	3.01	0.5	203.7	1.8	187	<0.1	<0.1	<0.1	49	0.68	0.100
STD DS10 Expected			15.1	154.61	150.55	370	2.02	74.6	12.9	875	2.7188	46.2	91.9	7.5	67.1	2.62	9	11.65	43	1.0625	0.0765
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	
BLK	Blank		<0.1	<0.1	<0.1	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		<0.1	0.7	<0.1	<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	6.7	1.3	30	<0.1	2.0	4.0	486	1.85	1.6	2.4	1.9	20	<0.1	<0.1	<0.1	22	0.61	0.036
ROCK-VAN	Prep Blank		2.4	7.0	1.2	27	<0.1	1.6	3.6	481	1.86	1.1	<0.5	1.9	21	<0.1	<0.1	<0.1	22	0.61	0.038



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Project: None Given  
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Part: 2 of 2

## QUALITY CONTROL REPORT

VAN16001433.1

Method Analyte Unit MDL	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	
	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
	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	
Pulp Duplicates																		
W16R14	Rock	12	2	0.31	135	0.018	1	1.09	0.040	0.22	0.1	<0.01	2.1	<0.1	<0.05	2	<0.5	<0.2
REP W16R14	QC	11	2	0.30	123	0.016	<1	1.07	0.038	0.21	0.1	<0.01	1.6	<0.1	<0.05	2	<0.5	<0.2
13+50E 1+75NR	Rock	7	2	0.74	326	0.066	<1	1.47	0.018	0.34	0.3	0.02	2.3	0.1	0.08	4	<0.5	1.4
REP 13+50E 1+75NR	QC	7	2	0.74	321	0.066	1	1.44	0.018	0.33	0.3	0.02	2.2	0.1	0.08	4	0.6	1.1
Core Reject Duplicates																		
W16R12	Rock	9	3	0.33	148	0.002	2	0.70	0.005	0.20	<0.1	1.58	1.5	0.1	1.03	3	<0.5	<0.2
DUP W16R12	QC	9	3	0.32	147	0.001	2	0.68	0.005	0.20	<0.1	1.58	1.5	0.1	1.01	3	0.8	<0.2
Reference Materials																		
STD DS10	Standard	17	50	0.77	356	0.074	10	1.02	0.069	0.33	3.3	0.24	2.8	4.9	0.27	5	2.0	4.1
STD DS10	Standard	18	54	0.78	344	0.079	9	1.05	0.067	0.34	3.3	0.29	2.9	5.1	0.28	5	2.3	5.1
STD OXC129	Standard	12	45	1.49	45	0.374	3	1.46	0.582	0.37	<0.1	<0.01	0.6	<0.1	<0.05	5	<0.5	<0.2
STD OXC129	Standard	12	50	1.50	47	0.389	<1	1.51	0.588	0.36	<0.1	<0.01	1.0	<0.1	<0.05	5	<0.5	<0.2
STD DS10 Expected		17.5	54.6	0.775	359	0.0817		1.0755	0.067	0.338	3.32	0.3	3	5.1	0.29	4.5	2.3	5.01
STD OXC129 Expected		13	52	1.545	50	0.4	1	1.58	0.6	0.37			1.1			5.6		
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	<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	5	4	0.45	53	0.064	4	0.95	0.109	0.10	0.1	<0.01	2.6	<0.1	<0.05	4	<0.5	<0.2
ROCK-VAN	Prep Blank	5	4	0.45	61	0.064	4	0.97	0.125	0.11	0.1	<0.01	2.7	<0.1	<0.05	4	<0.5	<0.2



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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: John Barakso  
Receiving Lab: Canada-Vancouver  
Received: September 13, 2016  
Report Date: September 21, 2016  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433P.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 3

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SPTRF	3	Split samples by riffle splitter			VAN
PUL85	3	Pulverize to 85% passing 200 mesh			VAN
AQ201	3	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days  
RTRN-RJT Return After 90 days

### ADDITIONAL COMMENTS

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



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.



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

Project: None Given  
Report Date: September 21, 2016

Page: 2 of 2

Part: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433P.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Analyte	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
Unit	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	
MDL																					
W16R28	Rock	0.3	9895.4	108.1	91	23.2	2.8	12.7	896	3.82	3.1	30.5	3.6	18	0.3	0.3	0.5	109	1.51	0.102	15
W16R29	Rock	0.5	99.2	26.8	60	2.9	1.5	6.6	621	3.27	29.2	95.9	1.8	6	<0.1	0.5	<0.1	42	0.15	0.061	12
W16R30	Rock	0.4	6267.9	9.9	69	11.4	2.8	12.1	668	4.06	1.7	15.2	3.4	17	<0.1	0.2	0.4	158	0.90	0.104	17



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

Project: None Given  
Report Date: September 21, 2016

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Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001433P.1

Method	AQ201																
	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Analyte	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
Unit	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	
MDL																	
W16R28	Rock	3	1.24	114	0.154	<1	1.33	0.064	0.08	0.4	0.08	7.8	<0.1	1.04	8	1.5	0.3
W16R29	Rock	2	0.49	181	0.008	<1	1.10	0.007	0.19	<0.1	0.02	3.9	<0.1	0.40	6	<0.5	<0.2
W16R30	Rock	3	0.96	295	0.035	1	1.22	0.095	0.07	0.2	0.01	6.8	<0.1	0.46	6	1.4	0.3



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

**Project:** None Given  
**Report Date:** September 21, 2016

**Page:** 1 of 1

**Part:** 1 of 2

## QUALITY CONTROL REPORT

VAN16001433P.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
	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	2	0.01	0.001	1	
Pulp Duplicates																					
W16R30	Rock	0.4	6267.9	9.9	69	11.4	2.8	12.1	668	4.06	1.7	15.2	3.4	17	<0.1	0.2	0.4	158	0.90	0.104	17
REP W16R30	QC	0.4	6173.3	9.6	70	11.3	3.0	12.1	662	4.04	1.4	16.9	3.4	17	<0.1	0.2	0.4	158	0.90	0.103	16
Reference Materials																					
STD DS10	Standard	15.1	151.5	154.7	368	1.9	78.4	13.1	888	2.84	44.1	98.9	7.7	65	2.6	8.9	11.8	43	1.10	0.076	18
STD DS10	Standard	14.2	148.6	147.4	352	1.8	73.9	12.7	874	2.77	43.2	82.5	7.5	63	2.3	8.7	11.6	42	1.05	0.072	16
STD OXC129	Standard	1.4	27.6	6.3	42	<0.1	79.9	20.7	408	3.08	0.5	195.8	1.8	190	<0.1	<0.1	<0.1	51	0.72	0.100	12
STD OXC129	Standard	1.1	26.3	6.1	39	<0.1	77.9	19.8	405	3.02	0.6	182.9	1.8	170	<0.1	<0.1	<0.1	50	0.62	0.096	12
STD DS10 Expected		15.1	154.61	150.55	370	2.02	74.6	12.9	875	2.7188	46.2	91.9	7.5	67.1	2.62	9	11.65	43	1.0625	0.0765	17.5
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	13
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
Prep Wash																					
ROCK-VAN	Prep Blank	1.1	2.4	2.1	31	<0.1	0.8	3.8	517	1.92	0.8	<0.5	2.2	20	<0.1	<0.1	<0.1	22	0.61	0.040	6



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

**Project:** None Given  
**Report Date:** September 21, 2016

**Page:** 1 of 1

**Part:** 2 of 2

## QUALITY CONTROL REPORT

VAN16001433P.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
	Analyte	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	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																	
W16R30	Rock	3	0.96	295	0.035	1	1.22	0.095	0.07	0.2	0.01	6.8	<0.1	0.46	6	1.4	0.3
REP W16R30	QC	3	0.95	303	0.035	1	1.21	0.098	0.07	0.2	0.01	6.9	<0.1	0.46	6	1.1	0.3
Reference Materials																	
STD DS10	Standard	57	0.79	350	0.081	7	1.08	0.072	0.35	3.4	0.30	3.1	5.1	0.27	4	2.1	4.8
STD DS10	Standard	53	0.77	343	0.076	7	1.03	0.070	0.33	3.3	0.28	3.0	5.0	0.29	4	3.1	4.7
STD OXC129	Standard	53	1.55	48	0.412	1	1.64	0.612	0.38	<0.1	<0.01	0.9	<0.1	<0.05	6	<0.5	<0.2
STD OXC129	Standard	49	1.52	45	0.384	2	1.51	0.587	0.36	<0.1	<0.01	1.1	0.1	<0.05	5	<0.5	<0.2
STD DS10 Expected		54.6	0.775	359	0.0817		1.0755	0.067	0.338	3.32	0.3	3	5.1	0.29	4.5	2.3	5.01
STD OXC129 Expected		52	1.545	50	0.4	1	1.58	0.6	0.37			1.1			5.6		
BLK	Blank	<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	4	0.47	78	0.074	2	0.94	0.123	0.11	0.1	<0.01	4.2	<0.1	<0.05	4	<0.5	<0.2



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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: John Barakso  
Receiving Lab: Canada-Vancouver  
Received: August 19, 2016  
Report Date: September 28, 2016  
Page: 1 of 5

## CERTIFICATE OF ANALYSIS

VAN16001434.2

### CLIENT JOB INFORMATION

Project: None Given

Shipment ID:

P.O. Number

Number of Samples: 111

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days

DISP-RJT-SOIL Immediate Disposal of Soil Reject

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	111	Dry at 60C			VAN
SS80	111	Dry at 60C sieve 100g to -80 mesh			VAN
AQ200	111	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
DRPLP	111	Warehouse handling / disposition of pulps			VAN
AQ374-X	1	1:1:1 Aqua Regia digestion ICP-ES analysis	0.4	Completed	VAN

### ADDITIONAL COMMENTS

Version 2 : AQ374-Ag included.

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



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.



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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:** None Given  
**Report Date:** September 28, 2016

**Page:** 2 of 5

**Part:** 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	Unit	AQ200																			
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			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	
2300N 7700E	Soil		0.7	15.3	10.0	58	0.2	21.5	8.6	853	2.82	11.9	<0.5	0.9	32	0.2	1.1	0.1	67	0.47	0.130	19
2300N 7725E	Soil		0.6	9.0	7.9	61	0.3	4.6	5.8	1099	1.96	5.8	<0.5	<0.1	15	0.5	1.0	<0.1	49	0.21	0.247	11
2300N 7750E	Soil		0.5	11.5	10.2	67	0.2	4.2	8.3	2007	2.48	6.6	<0.5	<0.1	15	0.5	1.0	<0.1	62	0.27	0.199	12
2300N 7775E	Soil		1.4	11.6	14.3	65	0.2	6.3	6.2	1461	3.09	12.7	<0.5	<0.1	12	0.4	0.6	0.2	60	0.13	0.175	16
2300N 7800E	Soil		0.5	14.5	12.5	64	0.2	8.7	7.3	1058	2.79	12.8	<0.5	<0.1	13	0.3	0.7	0.2	59	0.20	0.174	19
2300N 7825E	Soil		0.7	15.0	16.9	53	0.3	7.9	7.9	1656	2.30	12.1	<0.5	<0.1	21	0.7	0.8	0.2	58	0.27	0.195	16
2300N 7850E	Soil		0.7	20.8	18.1	52	1.1	9.9	9.5	1295	2.58	13.9	<0.5	<0.1	23	0.3	0.7	0.1	68	0.42	0.154	17
2300N 7875E	Soil		0.6	16.7	13.5	41	0.3	5.8	10.9	2454	2.09	11.6	<0.5	<0.1	24	0.5	0.6	0.1	58	0.39	0.289	11
2300N 7900E	Soil		0.8	20.3	17.4	57	0.2	10.5	11.2	1909	3.23	38.6	<0.5	<0.1	19	0.2	0.7	0.2	76	0.25	0.173	15
2300N 7925E	Soil		0.5	11.5	9.6	41	0.2	4.9	5.5	914	2.30	26.6	<0.5	<0.1	15	0.1	0.8	0.1	54	0.49	0.168	23
2300N 7950E	Soil		0.7	9.0	9.4	52	0.1	5.0	4.0	848	2.26	20.7	1.9	<0.1	9	0.3	0.6	0.3	44	0.09	0.163	16
2300N 7975E	Soil		0.3	14.7	9.0	57	<0.1	5.2	8.1	1445	2.59	13.5	1.1	0.2	13	0.2	0.5	<0.1	56	0.33	0.101	17
2300N 8000E	Soil		0.9	12.6	12.7	60	0.1	6.7	6.6	1312	3.17	39.6	<0.5	<0.1	9	0.2	0.6	0.2	56	0.08	0.167	16
2300N 8025E	Soil		0.9	11.6	11.2	47	0.2	5.3	5.5	1060	2.80	41.1	1.5	<0.1	9	0.2	0.5	0.2	43	0.07	0.204	14
2300N 8050E	Soil		0.9	9.4	8.4	37	0.2	2.8	3.9	757	1.87	11.4	<0.5	<0.1	11	0.2	0.6	0.1	40	0.09	0.142	8
2300N 8075E	Soil		1.1	13.3	11.2	50	0.1	4.9	6.7	1155	3.27	19.2	<0.5	<0.1	8	0.2	0.7	0.2	51	0.05	0.180	12
2300N 8100E	Soil		0.6	17.7	10.1	49	0.3	6.9	5.9	916	2.14	30.9	<0.5	<0.1	26	0.2	0.6	0.1	49	0.57	0.185	27
2300N 8125E	Soil		0.5	17.3	9.9	53	0.2	6.8	8.5	1340	2.54	24.0	<0.5	<0.1	20	0.4	1.1	0.1	59	0.40	0.135	16
2300N 8150E	Soil		0.7	14.1	10.0	62	0.2	4.8	5.6	758	2.73	17.1	0.6	<0.1	14	0.3	0.5	0.1	54	0.21	0.149	9
2350N 7525E	Soil		0.3	13.5	12.2	49	0.3	8.1	6.1	1303	1.89	9.5	1.6	0.9	28	0.2	0.4	0.1	54	0.74	0.147	30
2350N 7550E	Soil		0.5	9.4	14.7	42	0.2	6.6	6.3	1972	1.59	8.2	0.8	0.4	27	0.4	0.5	0.1	50	0.76	0.201	23
2350N 7575E	Soil		0.5	5.8	4.9	35	<0.1	7.4	4.4	1593	1.34	6.9	1.0	0.4	18	0.3	0.3	<0.1	38	0.57	0.133	14
2350N 7600E	Soil		0.6	7.7	11.2	72	<0.1	7.3	8.5	1679	2.22	7.2	0.5	0.2	10	0.6	1.4	<0.1	57	0.27	0.128	12
2350N 7625E	Soil		0.6	6.9	8.5	29	0.3	3.7	3.7	1024	1.10	3.8	1.1	<0.1	25	0.4	0.6	<0.1	39	0.42	0.277	9
2350N 7650E	Soil		0.6	10.5	10.8	41	0.2	10.1	5.6	1071	1.95	7.5	1.0	<0.1	19	0.3	0.6	0.1	55	0.29	0.181	12
2350N 7675E	Soil		0.5	7.5	9.6	62	0.1	3.6	9.6	3205	2.29	6.3	<0.5	<0.1	10	0.3	1.5	<0.1	62	0.13	0.102	8
2400N 8075E	Soil		1.1	36.3	17.7	47	0.8	3.8	14.9	1327	2.73	18.4	6.5	1.4	11	0.3	0.6	<0.1	42	0.41	0.101	36
2400N 8100E	Soil		1.6	124.6	15.4	49	0.9	4.9	14.8	1695	3.27	23.5	11.8	1.8	30	0.1	0.3	<0.1	55	0.46	0.111	36
2400N 8125E	Soil		0.3	30.3	8.8	46	0.3	4.7	10.7	2465	2.54	13.4	1.6	1.4	9	0.1	0.1	<0.1	46	0.38	0.088	32
2400N 8150E	Soil		0.5	42.9	11.0	63	0.3	13.9	13.9	1751	3.29	11.5	6.9	1.6	12	0.1	0.2	<0.1	71	0.47	0.105	30

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Bureau Veritas Commodities Canada Ltd.

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PHONE (604) 253-3158

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

**Project:** None Given  
**Report Date:** September 28, 2016

**Page:** 2 of 5

**Part:** 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Method Analyte Unit MDL	AQ200	AQ374															
	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag
	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t
	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	2
2300N 7700E	Soil	19	0.77	96	0.066	<20	2.03	0.007	0.09	0.3	0.03	4.5	<0.1	<0.05	6	<0.5	<0.2
2300N 7725E	Soil	6	0.56	109	0.005	<20	1.80	0.005	0.10	0.2	0.06	0.5	<0.1	0.17	7	<0.5	<0.2
2300N 7750E	Soil	6	0.79	117	0.011	<20	1.98	0.006	0.10	0.1	0.05	0.7	0.1	0.12	8	<0.5	<0.2
2300N 7775E	Soil	8	0.51	101	0.015	<20	2.27	0.014	0.10	0.1	0.04	0.9	0.1	0.07	10	<0.5	<0.2
2300N 7800E	Soil	10	0.67	105	0.012	<20	2.42	0.009	0.11	0.2	0.04	0.9	0.2	0.07	8	<0.5	<0.2
2300N 7825E	Soil	10	0.53	153	0.008	<20	2.12	0.007	0.11	0.1	0.07	0.5	0.1	0.15	7	<0.5	<0.2
2300N 7850E	Soil	12	0.61	145	0.017	<20	1.83	0.006	0.11	0.1	0.03	1.3	0.1	0.08	6	<0.5	<0.2
2300N 7875E	Soil	7	0.38	191	0.004	<20	1.67	0.006	0.12	<0.1	0.06	0.4	0.2	0.20	6	<0.5	<0.2
2300N 7900E	Soil	12	0.54	180	0.016	<20	1.97	0.007	0.14	0.1	0.06	0.8	0.1	0.13	8	<0.5	<0.2
2300N 7925E	Soil	8	0.46	241	0.006	<20	2.02	0.005	0.10	0.1	0.03	0.6	0.2	0.09	7	<0.5	<0.2
2300N 7950E	Soil	8	0.29	132	0.006	<20	1.82	0.008	0.10	0.1	0.02	0.3	0.1	0.09	8	<0.5	<0.2
2300N 7975E	Soil	5	0.59	199	0.014	<20	1.71	0.005	0.13	<0.1	<0.01	2.1	<0.1	<0.05	5	<0.5	<0.2
2300N 8000E	Soil	10	0.32	118	0.011	<20	1.98	0.009	0.11	0.1	0.03	0.6	<0.1	0.12	10	<0.5	<0.2
2300N 8025E	Soil	8	0.24	84	0.005	<20	2.35	0.011	0.08	0.1	0.05	0.3	0.1	0.15	8	<0.5	<0.2
2300N 8050E	Soil	6	0.17	90	0.005	<20	1.30	0.006	0.10	0.1	0.05	0.3	0.1	0.13	5	<0.5	<0.2
2300N 8075E	Soil	9	0.26	97	0.006	<20	2.51	0.008	0.07	0.1	0.05	0.4	0.1	0.14	9	<0.5	<0.2
2300N 8100E	Soil	9	0.35	267	0.004	<20	2.52	0.006	0.10	<0.1	0.03	0.6	0.1	0.12	6	<0.5	<0.2
2300N 8125E	Soil	10	0.53	121	0.022	<20	1.55	0.006	0.12	0.1	0.02	1.1	<0.1	<0.05	5	<0.5	<0.2
2300N 8150E	Soil	9	0.27	143	0.008	<20	1.55	0.005	0.10	<0.1	0.05	0.3	<0.1	0.15	6	<0.5	<0.2
2350N 7525E	Soil	9	0.66	112	0.010	<20	1.94	0.005	0.12	0.2	0.04	5.6	0.1	0.05	6	<0.5	<0.2
2350N 7550E	Soil	7	0.39	152	0.010	<20	1.62	0.005	0.12	0.2	0.08	2.5	0.1	0.14	5	<0.5	<0.2
2350N 7575E	Soil	8	0.54	118	0.005	<20	1.54	0.004	0.14	0.2	0.02	2.9	<0.1	0.05	4	<0.5	<0.2
2350N 7600E	Soil	6	0.72	139	0.034	<20	1.49	0.009	0.15	0.3	0.03	2.3	0.1	<0.05	7	<0.5	<0.2
2350N 7625E	Soil	6	0.17	134	0.003	<20	1.27	0.005	0.10	0.1	0.07	0.4	0.1	0.24	4	<0.5	<0.2
2350N 7650E	Soil	12	0.40	136	0.006	<20	1.65	0.005	0.09	0.1	0.03	0.5	0.1	0.13	6	<0.5	<0.2
2350N 7675E	Soil	5	0.74	122	0.029	<20	1.56	0.006	0.11	0.2	0.06	1.6	0.1	0.07	8	<0.5	<0.2
2400N 8075E	Soil	4	0.41	270	0.006	<20	1.05	0.004	0.19	<0.1	<0.01	5.3	0.1	0.06	3	<0.5	<0.2
2400N 8100E	Soil	7	0.60	473	0.005	<20	1.35	0.004	0.21	<0.1	0.03	5.5	0.1	0.09	4	<0.5	<0.2
2400N 8125E	Soil	7	0.67	243	0.003	<20	1.54	0.004	0.18	<0.1	<0.01	6.9	<0.1	<0.05	5	<0.5	<0.2
2400N 8150E	Soil	15	1.11	225	0.007	<20	1.75	0.004	0.17	<0.1	<0.01	5.8	<0.1	<0.05	7	<0.5	<0.2

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PHONE (604) 253-3158

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

**Project:** None Given  
**Report Date:** September 28, 2016

**Page:** 3 of 5

**Part:** 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	Unit	AQ200																			
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			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	0.1	0.1	0.1	0.1	2	0.01	0.001	1
2400N 8175E	Soil		0.1	22.8	8.6	52	0.3	4.5	7.9	1330	2.08	25.1	3.4	3.6	22	0.1	1.0	<0.1	47	0.71	0.131	28
2400N 8200E	Soil		<0.1	4.7	5.7	33	<0.1	1.3	4.9	1106	1.33	23.7	0.5	3.4	74	0.1	0.5	<0.1	35	1.63	0.116	21
2400N 8225E	Soil		0.1	11.3	8.6	39	<0.1	1.3	5.8	869	1.73	9.1	<0.5	3.1	44	0.1	0.5	<0.1	32	1.23	0.115	19
2400N 8250E	Soil		0.3	17.9	9.0	49	0.1	1.9	6.2	1030	1.73	2.7	0.8	0.6	60	0.1	0.4	<0.1	40	1.28	0.121	25
2500N 7650E	Soil		1.1	20.5	15.7	43	0.4	1.9	8.0	1906	3.06	200.2	2.8	2.3	22	0.4	0.7	<0.1	59	0.80	0.178	26
2500N 7675E	Soil		3.0	21.3	17.6	83	0.7	2.6	13.8	2359	3.73	21.3	2.9	2.5	24	0.5	2.6	0.1	92	0.62	0.177	27
2500N 7700E	Soil		1.1	16.8	11.3	60	0.4	2.5	10.0	1542	2.74	25.1	2.3	2.2	44	0.4	1.7	<0.1	64	0.83	0.123	19
2500N 7725E	Soil		0.5	35.0	9.6	64	0.3	6.2	14.8	2242	3.26	10.8	4.5	2.1	19	0.4	0.7	<0.1	65	0.68	0.105	22
2500N 7750E	Soil		0.6	21.4	9.4	45	0.2	3.0	9.1	1632	2.94	24.6	1.7	2.3	27	0.4	1.6	<0.1	69	0.78	0.125	20
2500N 7775E	Soil		0.8	24.3	14.4	46	0.6	2.7	9.6	1332	3.93	33.7	11.5	2.7	24	0.2	1.9	<0.1	71	0.69	0.129	24
2500N 7800E	Soil		0.5	20.6	10.8	43	0.2	2.4	9.7	1104	3.75	43.0	<0.5	2.6	17	0.2	2.5	<0.1	93	0.69	0.137	22
2500N 7825E	Soil		1.0	18.4	12.3	30	0.1	1.6	7.1	750	2.77	89.7	1.5	2.5	45	0.1	1.9	0.3	69	1.11	0.157	20
2500N 7850E	Soil		0.4	20.6	9.3	48	0.3	2.0	8.7	915	2.97	34.1	2.4	1.6	22	<0.1	0.8	<0.1	67	0.69	0.114	34
2500N 7875E	Soil		0.4	37.2	7.7	50	0.3	3.4	11.0	1448	2.83	20.3	1.5	1.7	12	<0.1	0.5	<0.1	62	0.57	0.117	30
2500N 7900E	Soil		0.6	37.7	8.3	47	0.4	3.3	11.5	1229	3.04	27.1	2.8	1.9	12	0.1	0.7	<0.1	64	0.51	0.118	30
2500N 7925E	Soil		0.8	32.7	10.9	44	0.2	3.5	10.7	1033	3.37	33.0	2.7	1.4	14	<0.1	1.1	<0.1	67	0.44	0.119	35
2500N 7950E	Soil		0.4	30.4	8.8	38	0.2	2.3	10.6	1217	2.79	38.5	1.1	2.3	13	0.1	1.2	<0.1	52	0.54	0.129	27
2500N 7975E	Soil		0.4	34.9	7.4	51	0.3	3.5	10.8	1138	3.03	14.3	2.1	2.1	20	<0.1	1.8	0.1	62	0.71	0.111	28
2500N 8225E	Soil		0.1	20.2	8.1	60	0.2	7.4	9.6	1210	2.38	23.5	0.6	3.5	35	0.2	1.0	<0.1	50	0.83	0.123	20
2500N 8250E	Soil		0.1	8.2	8.3	39	<0.1	1.5	5.6	994	1.51	11.7	<0.5	2.6	42	0.1	0.7	<0.1	30	1.10	0.105	20
2500N 8275E	Soil		0.3	14.2	8.9	48	0.1	1.5	6.9	1236	2.11	3.0	0.9	3.3	50	0.2	0.5	<0.1	44	1.09	0.109	19
2500N 8300E	Soil		0.4	14.7	9.7	52	<0.1	1.7	7.6	1250	2.45	4.5	<0.5	3.0	48	0.2	0.6	<0.1	60	1.06	0.119	22
2500N 8325E	Soil		0.3	13.0	11.7	40	<0.1	1.5	6.0	985	2.06	18.3	3.2	1.8	46	0.1	0.4	<0.1	49	1.06	0.129	26
2500N 8350E	Soil		0.5	8.4	10.5	41	0.1	2.5	4.9	785	1.62	3.5	<0.5	<0.1	42	0.2	0.4	0.1	45	0.61	0.185	15
2430N 7975E	Soil		0.3	49.4	9.1	61	0.8	16.9	13.7	1494	2.72	9.9	6.5	1.8	21	0.1	0.4	<0.1	54	1.00	0.109	28
2430N 7987E	Soil		0.4	45.2	11.0	41	0.7	6.4	12.1	1247	2.59	19.0	6.1	1.8	20	0.1	0.7	<0.1	52	0.59	0.095	34
2430N 8000E	Soil		0.7	112.3	110.9	49	1.4	6.1	15.2	1319	2.89	19.3	12.3	1.9	14	0.4	0.4	0.1	44	0.56	0.114	33
2430N 8012	Soil		1.3	125.3	40.3	69	1.7	5.8	25.2	1600	3.26	28.9	43.8	2.3	20	0.2	0.3	0.1	41	0.53	0.094	31
2430N 8025E	Soil		1.1	50.5	16.9	58	1.2	4.2	13.9	1549	3.00	14.7	3.9	2.0	13	0.1	0.4	0.2	40	0.51	0.120	40
0+75S 4+50E	Soil		2.0	146.8	100.9	86	0.8	5.8	20.9	1865	3.77	20.7	28.9	1.9	206	2.7	0.2	0.2	96	3.19	0.083	16

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PHONE (604) 253-3158

Project: None Given  
Report Date: September 28, 2016

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Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	Unit	AQ200	AQ374														
			Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Ag	
			ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	gm/t	
		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
2400N 8175E	Soil		4	0.58	496	0.093	<20	1.31	0.006	0.19	0.2	0.03	4.7	<0.1	<0.05	3	<0.5	<0.2
2400N 8200E	Soil		<1	0.52	244	0.062	<20	2.32	0.010	0.18	<0.1	<0.01	4.0	<0.1	<0.05	4	<0.5	<0.2
2400N 8225E	Soil		<1	0.66	151	0.048	<20	1.77	0.006	0.18	0.1	<0.01	3.7	<0.1	<0.05	3	<0.5	<0.2
2400N 8250E	Soil		1	0.63	136	0.088	<20	1.92	0.009	0.15	0.2	0.04	3.7	<0.1	<0.05	4	<0.5	<0.2
2500N 7650E	Soil		2	0.58	201	0.012	<20	1.49	0.006	0.24	0.5	0.03	5.3	0.1	<0.05	5	<0.5	<0.2
2500N 7675E	Soil		3	1.15	142	0.028	<20	1.69	0.004	0.19	0.3	0.03	6.3	0.2	0.12	7	<0.5	<0.2
2500N 7700E	Soil		3	0.91	78	0.048	<20	1.84	0.006	0.17	0.2	0.02	5.1	0.1	0.05	6	<0.5	<0.2
2500N 7725E	Soil		10	0.87	102	0.010	<20	1.69	0.004	0.21	0.2	0.01	7.4	0.1	<0.05	5	<0.5	<0.2
2500N 7750E	Soil		4	0.77	116	0.032	<20	1.43	0.006	0.18	0.3	<0.01	6.0	<0.1	<0.05	5	<0.5	<0.2
2500N 7775E	Soil		3	0.57	270	0.058	<20	1.20	0.006	0.19	0.4	0.05	5.4	0.1	<0.05	4	<0.5	0.2
2500N 7800E	Soil		3	0.57	118	0.064	<20	1.20	0.006	0.19	0.6	<0.01	5.2	<0.1	<0.05	4	<0.5	<0.2
2500N 7825E	Soil		2	0.35	145	0.066	<20	1.38	0.009	0.19	0.6	<0.01	4.2	<0.1	<0.05	3	<0.5	<0.2
2500N 7850E	Soil		2	0.58	155	0.031	<20	1.39	0.006	0.17	0.4	0.02	5.5	<0.1	<0.05	5	<0.5	<0.2
2500N 7875E	Soil		5	0.80	112	0.022	<20	1.27	0.006	0.17	<0.1	<0.01	4.9	<0.1	<0.05	5	<0.5	<0.2
2500N 7900E	Soil		5	0.66	133	0.019	<20	1.11	0.006	0.16	0.1	<0.01	4.7	<0.1	0.06	4	<0.5	<0.2
2500N 7925E	Soil		5	0.51	119	0.014	<20	1.13	0.004	0.16	0.3	0.02	4.2	<0.1	<0.05	4	<0.5	<0.2
2500N 7950E	Soil		2	0.35	219	0.021	<20	0.89	0.006	0.22	0.1	<0.01	5.7	<0.1	<0.05	3	<0.5	<0.2
2500N 7975E	Soil		5	0.63	133	0.062	<20	1.30	0.007	0.22	0.2	<0.01	5.4	<0.1	<0.05	4	<0.5	<0.2
2500N 8225E	Soil		6	0.72	414	0.100	<20	1.58	0.008	0.18	0.2	0.02	5.3	<0.1	<0.05	4	<0.5	<0.2
2500N 8250E	Soil		1	0.57	156	0.069	<20	1.68	0.006	0.17	0.1	<0.01	4.2	<0.1	<0.05	3	<0.5	<0.2
2500N 8275E	Soil		1	0.63	175	0.077	<20	1.75	0.008	0.15	0.1	<0.01	4.4	<0.1	<0.05	4	<0.5	<0.2
2500N 8300E	Soil		1	0.70	147	0.097	<20	1.81	0.008	0.16	0.2	0.01	5.0	<0.1	<0.05	4	<0.5	<0.2
2500N 8325E	Soil		2	0.62	183	0.052	<20	2.00	0.009	0.22	0.2	0.04	4.6	<0.1	<0.05	4	<0.5	<0.2
2500N 8350E	Soil		4	0.45	199	0.012	<20	2.14	0.010	0.11	<0.1	0.03	0.5	<0.1	0.14	5	<0.5	<0.2
2430N 7975E	Soil		10	0.88	225	0.032	<20	1.59	0.004	0.26	<0.1	0.02	6.9	0.1	<0.05	5	<0.5	<0.2
2430N 7987E	Soil		4	0.58	152	0.012	<20	1.34	0.004	0.28	0.1	0.01	6.3	0.1	<0.05	4	<0.5	<0.2
2430N 8000E	Soil		5	0.59	122	0.008	<20	1.45	0.005	0.30	0.1	0.01	4.6	0.1	0.08	5	<0.5	<0.2
2430N 8012	Soil		5	0.66	298	0.006	<20	1.92	0.011	0.32	<0.1	0.03	5.3	0.1	0.09	5	<0.5	<0.2
2430N 8025E	Soil		4	0.64	343	0.006	<20	1.42	0.005	0.25	<0.1	0.03	3.9	0.1	0.08	4	<0.5	<0.2
0+75S 4+50E	Soil		8	1.43	86	0.131	<20	5.14	0.009	0.13	0.1	0.03	9.1	<0.1	<0.05	15	<0.5	<0.2

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**BUREAU**  
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**Client:** **Finlay Minerals Ltd.**  
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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Project: None Given  
Report Date: September 28, 2016

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## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	Unit	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
			Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
			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	2	0.01	0.001	1	
0+75S 4+75E	Soil		1.9	48.1	24.6	50	0.4	4.5	12.5	1016	3.03	24.8	14.0	2.9	54	0.8	0.9	0.1	64	1.01	0.120	17
0+75S 5+25E	Soil		1.9	36.4	17.8	46	0.4	3.4	11.0	947	3.10	23.9	6.7	3.4	39	0.4	0.9	0.2	69	0.88	0.129	20
0+75S 5+50E	Soil		1.2	58.7	40.6	59	0.5	5.9	14.7	1128	3.12	21.7	9.7	2.3	81	1.0	0.6	0.1	70	1.39	0.101	16
0+75S 5+75E	Soil		1.4	57.5	54.2	66	0.6	5.6	15.0	1148	3.18	18.5	5.9	2.2	100	0.9	0.6	0.1	74	1.68	0.094	16
1+75N 9+62E	Soil		0.4	42.1	15.2	64	0.3	5.8	11.2	1380	3.43	8.9	5.1	1.8	78	0.3	0.5	<0.1	92	1.21	0.131	14
1+75N 9+75E	Soil		1.0	18.8	31.9	104	0.2	6.8	11.6	2113	4.82	8.9	6.2	0.9	31	0.4	0.2	0.2	118	0.28	0.101	17
1+75N 9+87E	Soil		1.3	14.3	177.0	68	2.5	2.8	3.5	462	2.42	4.3	27.8	<0.1	33	0.5	0.4	0.3	70	0.26	0.129	11
1+75N 10+12E	Soil		8.5	260.5	1845.1	3352	>100	10.5	15.2	5810	4.78	58.1	2879.1	2.1	57	32.3	0.9	0.3	56	0.88	0.100	51
1+75N 10+25E	Soil		8.2	88.2	1792.6	1671	40.8	4.0	12.2	7046	3.50	52.9	927.4	0.3	53	24.5	0.8	0.2	36	1.18	0.190	33
1+75N 10+37E	Soil		10.2	178.0	3686.4	2014	50.3	4.0	18.1	>10000	4.51	56.6	1481.7	0.3	27	21.4	0.9	0.4	38	0.37	0.168	30
1+75N 10+87E	Soil		1.5	31.6	190.5	286	14.6	3.8	6.6	1281	2.89	10.8	220.8	0.2	29	3.0	0.6	0.3	68	0.37	0.079	13
1+75N 13+12E	Soil		1.5	8.0	19.7	43	0.4	2.9	2.6	353	2.45	6.2	3.6	<0.1	12	0.2	0.4	0.4	56	0.06	0.089	13
1+75N 13+25E	Soil		1.9	14.1	68.9	75	0.3	4.5	9.0	2955	4.00	15.5	81.5	<0.1	12	0.4	0.4	0.3	62	0.09	0.115	14
1+75N 13+37E	Soil		1.0	16.1	23.2	85	0.3	5.7	9.0	1085	4.35	14.5	4.2	0.2	19	0.3	0.7	0.3	96	0.16	0.101	12
1+75N 13+62E	Soil		1.6	13.2	16.7	66	0.6	6.0	5.7	658	3.38	12.1	2.3	0.1	14	0.2	0.6	0.2	65	0.10	0.092	11
1+75N 13+75E	Soil		1.1	16.8	18.7	80	0.2	2.9	11.4	2445	4.39	5.1	3.0	0.4	6	0.2	0.1	0.2	70	0.03	0.178	7
1+75N 13+87E	Soil		0.5	32.5	9.5	97	0.2	4.2	16.2	2070	4.73	9.2	5.6	1.0	10	0.3	0.2	0.1	100	0.18	0.132	12
1+75N 14+25E	Soil		4.0	18.4	14.8	77	0.3	4.8	9.7	1415	3.53	15.9	4.9	0.2	24	0.2	0.5	0.2	60	0.19	0.140	9
1+75N 14+50E	Soil		0.5	24.0	18.9	53	0.2	6.2	9.5	1025	3.35	7.5	0.7	0.2	103	0.5	0.4	0.1	89	1.12	0.161	12
2+75N 10+62E	Soil		4.1	40.1	37.2	99	8.5	7.2	4.5	605	2.83	12.6	174.3	0.7	38	1.5	0.3	0.3	39	0.55	0.193	103
2+75N 10+75E	Soil		1.7	20.6	24.1	88	0.3	6.9	7.3	841	2.80	15.8	5.4	0.8	30	0.4	0.2	0.2	65	0.35	0.081	21
2+75N 10+87E	Soil		2.4	20.4	26.9	87	4.4	4.5	7.2	662	2.76	7.7	85.2	1.7	53	0.4	0.2	0.2	54	0.70	0.106	34
2+75N 11+12E	Soil		2.7	25.5	28.3	63	1.3	7.2	7.1	645	3.40	9.4	47.8	0.1	26	0.3	0.5	0.2	87	0.20	0.120	12
2+75N 11+25E	Soil		2.3	23.5	21.4	70	0.4	6.5	7.1	597	3.17	11.5	27.9	0.1	19	0.3	0.3	0.3	87	0.14	0.083	12
2+75N 11+37E	Soil		3.6	24.8	27.1	60	0.7	6.6	7.2	722	3.35	30.1	16.6	0.1	20	0.3	0.6	0.4	89	0.11	0.094	11
3+00N 13+62E	Soil		6.9	23.4	23.6	88	0.6	11.0	8.5	811	3.24	9.6	8.0	0.5	63	0.5	0.5	0.3	54	0.99	0.132	15
3+00N 13+75E	Soil		7.0	7.4	12.4	49	1.5	1.7	3.6	505	1.44	6.2	2.4	<0.1	35	1.2	0.3	0.1	39	0.45	0.150	6
3+00N 13+87E	Soil		11.9	14.6	19.3	97	0.5	5.6	7.7	679	3.07	12.0	5.5	0.2	56	1.2	0.4	0.3	55	0.93	0.165	12
3+00N 14+12E	Soil		12.5	32.7	47.8	94	1.1	7.6	27.6	1752	4.20	51.4	33.6	0.7	19	0.3	0.6	0.4	73	0.12	0.149	12
3+00N 14+25E	Soil		15.5	48.2	63.2	133	1.0	14.8	59.0	3699	3.94	59.5	35.9	0.6	20	1.1	0.6	0.5	52	0.15	0.132	11

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Project: None Given  
Report Date: September 28, 2016

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Part: 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	AQ200	AQ374															
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	gm/t	
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	
0+75S 4+75E	Soil	4	0.72	240	0.064	<20	1.75	0.006	0.17	0.2	0.02	5.5	<0.1	<0.05	5	<0.5	<0.2	
0+75S 5+25E	Soil	3	0.64	255	0.064	<20	1.45	0.006	0.22	0.3	0.03	4.9	0.1	<0.05	4	<0.5	<0.2	
0+75S 5+50E	Soil	6	0.89	161	0.089	<20	2.38	0.007	0.13	0.2	0.03	6.6	<0.1	<0.05	7	<0.5	<0.2	
0+75S 5+75E	Soil	6	1.00	185	0.107	<20	2.81	0.007	0.13	0.2	0.02	7.6	<0.1	<0.05	8	<0.5	<0.2	
1+75N 9+62E	Soil	7	0.87	86	0.160	<20	3.37	0.012	0.12	0.1	0.02	8.5	<0.1	<0.05	9	<0.5	<0.2	
1+75N 9+75E	Soil	10	0.62	132	0.134	<20	2.93	0.013	0.11	0.1	0.02	4.6	0.1	<0.05	11	<0.5	<0.2	
1+75N 9+87E	Soil	6	0.22	156	0.052	<20	2.19	0.012	0.09	0.1	0.10	1.3	0.2	0.12	10	<0.5	<0.2	
1+75N 10+12E	Soil	11	0.67	211	0.105	<20	2.42	0.012	0.21	0.1	0.39	8.3	0.2	0.19	7	1.5	<0.2	
1+75N 10+25E	Soil	5	0.35	452	0.014	<20	1.76	0.005	0.18	0.2	0.17	2.5	0.2	0.21	5	0.9	<0.2	
1+75N 10+37E	Soil	4	0.39	231	0.015	<20	1.93	0.004	0.19	0.2	0.13	3.0	0.2	0.15	6	1.0	<0.2	
1+75N 10+87E	Soil	7	0.44	119	0.067	<20	2.06	0.009	0.12	0.1	0.06	2.4	0.2	0.06	12	<0.5	<0.2	
1+75N 13+12E	Soil	9	0.16	97	0.050	<20	1.87	0.009	0.07	0.2	0.05	0.9	0.2	0.07	15	<0.5	<0.2	
1+75N 13+25E	Soil	7	0.38	134	0.023	<20	2.68	0.006	0.10	0.1	0.06	1.0	0.2	0.08	10	<0.5	<0.2	
1+75N 13+37E	Soil	9	0.59	115	0.067	<20	2.69	0.009	0.11	0.1	0.06	2.5	0.1	0.06	11	<0.5	<0.2	
1+75N 13+62E	Soil	10	0.45	93	0.033	<20	3.07	0.009	0.08	0.2	0.07	1.5	0.1	0.07	10	<0.5	<0.2	
1+75N 13+75E	Soil	5	0.81	100	0.006	<20	2.90	0.006	0.13	<0.1	0.06	1.7	0.2	0.09	10	<0.5	<0.2	
1+75N 13+87E	Soil	4	1.48	114	0.015	<20	3.66	0.006	0.13	0.1	0.04	5.8	0.1	<0.05	10	<0.5	<0.2	
1+75N 14+25E	Soil	6	0.57	109	0.058	<20	2.23	0.006	0.15	0.2	0.07	1.7	0.1	0.10	7	<0.5	0.5	
1+75N 14+50E	Soil	7	0.85	88	0.131	<20	4.50	0.017	0.17	0.1	0.11	4.4	<0.1	0.13	12	<0.5	<0.2	
2+75N 10+62E	Soil	10	0.30	242	0.023	<20	3.61	0.009	0.11	0.2	0.18	2.7	0.2	0.17	9	0.5	<0.2	
2+75N 10+75E	Soil	9	0.64	265	0.010	<20	2.81	0.005	0.13	0.2	0.05	3.5	0.2	0.05	8	<0.5	<0.2	
2+75N 10+87E	Soil	6	0.76	513	0.013	<20	2.42	0.007	0.13	0.1	0.05	6.5	0.1	<0.05	8	<0.5	<0.2	
2+75N 11+12E	Soil	10	0.52	74	0.064	<20	2.81	0.013	0.07	0.2	0.10	2.0	0.2	0.13	11	<0.5	<0.2	
2+75N 11+25E	Soil	9	0.56	96	0.045	<20	3.32	0.009	0.07	0.2	0.04	2.4	0.2	0.08	11	<0.5	<0.2	
2+75N 11+37E	Soil	9	0.39	125	0.069	<20	1.90	0.007	0.09	0.2	0.05	2.0	0.2	0.11	10	<0.5	<0.2	
3+00N 13+62E	Soil	13	0.65	219	0.041	<20	2.39	0.009	0.14	0.1	0.03	3.8	0.2	0.12	9	0.6	<0.2	
3+00N 13+75E	Soil	5	0.11	84	0.008	<20	1.11	0.005	0.09	0.1	0.09	0.4	<0.1	0.16	4	<0.5	<0.2	
3+00N 13+87E	Soil	9	0.34	162	0.039	<20	1.99	0.009	0.12	0.2	0.04	2.0	0.1	0.17	10	0.9	<0.2	
3+00N 14+12E	Soil	6	0.54	97	0.080	<20	2.56	0.005	0.13	0.2	0.02	3.2	0.2	0.05	7	0.5	0.6	
3+00N 14+25E	Soil	9	0.56	136	0.032	<20	2.54	0.004	0.15	0.1	0.03	3.0	0.4	<0.05	6	1.2	0.7	

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**Project:** None Given  
**Report Date:** September 28, 2016

**Page:** 5 of 5

**Part:** 1 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
		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
3+00N 14+37E	Soil	2.0	19.3	24.8	79	0.3	13.6	8.8	623	4.15	19.6	85.9	0.2	24	0.2	0.5	0.2	74	0.18	0.078	11
3+50N 11+12E	Soil	3.2	27.6	23.6	78	0.3	6.3	11.9	1063	4.04	8.5	<0.5	<0.1	40	0.5	0.4	0.2	78	0.59	0.145	21
3+50N 11+25E	Soil	1.1	30.1	13.4	124	0.5	3.3	13.2	2674	4.66	3.6	3.3	<0.1	21	0.5	0.1	0.2	67	0.39	0.248	30
3+50N 11+37E	Soil	14.3	32.5	29.0	135	1.1	5.1	12.3	1341	4.36	35.0	327.0	0.7	25	0.6	0.3	0.3	57	0.43	0.125	18
3+50N 11+62E	Soil	5.4	21.4	62.2	115	3.0	7.2	7.4	921	2.66	9.3	212.8	<0.1	46	1.8	0.5	0.3	65	0.54	0.175	11
3+50N 11+75E	Soil	4.0	22.6	25.7	96	3.5	6.9	8.3	876	3.34	13.4	38.4	<0.1	46	0.8	0.4	0.3	82	0.54	0.141	12
3+50N 11+87E	Soil	5.0	12.6	16.8	81	1.8	5.3	8.0	1458	3.04	8.5	2.6	<0.1	45	0.8	0.3	0.3	76	0.62	0.179	13
5+25N 12+75E	Soil	1.2	19.4	24.9	63	0.2	6.0	6.8	693	2.94	6.9	1.5	0.1	20	0.3	0.4	0.3	68	0.15	0.102	16
5+25N 12+87E	Soil	1.4	45.4	23.3	94	1.5	15.6	12.8	1297	3.78	11.2	14.4	0.8	46	0.4	0.4	0.2	81	0.59	0.101	21
5+25N 13+12E	Soil	2.0	31.9	26.8	88	0.6	9.2	10.5	1033	3.44	11.7	13.4	0.6	50	0.7	0.5	0.2	85	0.63	0.103	16
5+25N 13+25E	Soil	1.7	29.9	26.0	108	0.2	8.3	16.4	2108	4.73	12.7	7.9	1.1	38	0.4	0.9	0.2	122	0.49	0.172	12
5+25N 13+37E	Soil	1.9	40.8	29.7	116	0.3	9.3	17.2	2020	4.69	13.0	6.6	2.4	43	0.5	0.5	0.2	125	0.53	0.164	12
2+75N 11+00E D	Soil	7.3	36.4	132.7	64	21.1	1.3	9.0	927	2.60	30.5	1475.8	0.5	6	3.0	0.3	0.2	22	0.08	0.060	13
11+50E 2+25N D	Soil	8.8	11.0	13.6	51	0.2	1.9	7.9	594	2.08	17.6	127.7	<0.1	9	0.2	0.2	0.2	53	0.07	0.068	8
13+00E 5+75N	Soil	1.1	15.0	18.0	72	0.5	4.5	7.0	1394	3.06	5.4	7.6	<0.1	26	0.3	0.3	0.1	66	0.25	0.102	13
13+50E 1+75N D	Soil	13.8	20.5	35.4	80	1.3	4.5	21.1	6499	5.31	48.1	161.6	<0.1	25	0.4	0.8	0.3	60	0.14	0.283	11
W16SL-01	Silt	0.8	77.8	264.3	1366	0.6	5.9	12.3	1728	3.79	17.2	15.2	0.9	91	8.3	0.9	0.1	118	1.45	0.111	17
W16SL-02	Silt	1.6	17.3	15.4	66	0.4	2.9	11.2	849	3.98	21.3	3.7	1.0	44	0.1	0.5	0.2	104	0.89	0.075	13
W16SL-03	Silt	6.3	20.8	35.4	318	2.5	10.5	18.5	1386	3.84	24.4	32.8	0.9	38	1.8	0.4	0.2	57	0.55	0.088	16
W16SL-04	Silt	0.6	8.9	8.8	63	<0.1	2.8	8.8	1030	3.54	24.1	<0.5	1.7	24	0.1	1.8	<0.1	97	0.55	0.102	17
W16SL-05	Silt	0.3	7.1	9.3	54	0.2	2.8	6.6	618	2.68	37.9	<0.5	1.9	57	<0.1	1.2	<0.1	85	1.05	0.129	17



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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:** None Given  
**Report Date:** September 28, 2016

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**Part:** 2 of 2

## CERTIFICATE OF ANALYSIS

VAN16001434.2

Analyte	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ374								
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag
		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	gm/t	
		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	
3+00N 14+37E	Soil	17	0.60	143	0.080	<20	2.11	0.007	0.09	0.1	0.03	1.8	<0.1	0.08	10	<0.5	0.3	
3+50N 11+12E	Soil	8	0.70	130	0.018	<20	2.61	0.009	0.11	0.1	0.05	1.8	0.1	0.11	9	<0.5	<0.2	
3+50N 11+25E	Soil	5	0.19	473	0.003	<20	1.75	0.005	0.12	<0.1	0.07	1.0	0.1	0.13	4	<0.5	<0.2	
3+50N 11+37E	Soil	5	0.31	354	0.005	<20	1.55	0.003	0.16	<0.1	0.02	5.2	0.2	<0.05	5	<0.5	<0.2	
3+50N 11+62E	Soil	9	0.54	120	0.031	<20	2.21	0.006	0.13	0.1	0.09	1.3	0.1	0.14	9	<0.5	<0.2	
3+50N 11+75E	Soil	10	0.64	162	0.049	<20	2.74	0.011	0.10	0.2	0.09	1.8	0.1	0.15	12	<0.5	<0.2	
3+50N 11+87E	Soil	8	0.50	295	0.038	<20	2.01	0.009	0.12	0.1	0.05	1.2	0.1	0.16	10	<0.5	<0.2	
5+25N 12+75E	Soil	12	0.45	91	0.065	<20	3.05	0.014	0.08	0.1	0.07	1.7	0.1	0.07	14	0.6	<0.2	
5+25N 12+87E	Soil	14	0.83	188	0.127	<20	3.05	0.012	0.12	0.2	0.04	5.4	<0.1	<0.05	9	<0.5	<0.2	
5+25N 13+12E	Soil	10	0.65	147	0.120	<20	2.61	0.008	0.11	0.2	0.04	4.3	0.1	0.06	8	<0.5	<0.2	
5+25N 13+25E	Soil	8	1.01	72	0.176	<20	3.10	0.013	0.11	0.2	0.02	6.2	0.1	<0.05	12	<0.5	<0.2	
5+25N 13+37E	Soil	8	1.02	64	0.167	<20	3.10	0.013	0.11	0.2	<0.01	7.5	0.1	<0.05	12	<0.5	<0.2	
2+75N 11+00E D	Soil	1	0.09	95	0.002	<20	1.06	0.002	0.12	<0.1	0.05	1.3	0.2	<0.05	3	<0.5	<0.2	
11+50E 2+25N D	Soil	3	0.05	168	0.005	<20	1.31	<0.001	0.11	<0.1	0.01	0.4	0.2	<0.05	7	<0.5	<0.2	
13+00E 5+75N	Soil	6	0.40	139	0.064	<20	2.58	0.006	0.09	0.2	0.07	1.2	0.1	0.10	8	<0.5	<0.2	
13+50E 1+75N D	Soil	6	0.39	408	0.011	<20	2.06	0.004	0.12	<0.1	0.09	0.5	0.4	0.17	7	0.5	0.8	
W16SL-01	Silt	9	0.85	209	0.187	<20	3.08	0.015	0.13	0.2	0.03	7.8	<0.1	<0.05	10	0.5	<0.2	
W16SL-02	Silt	4	0.78	242	0.124	<20	1.88	0.015	0.13	0.2	0.03	5.5	<0.1	<0.05	7	1.0	<0.2	
W16SL-03	Silt	4	0.76	239	0.059	<20	2.44	0.009	0.13	0.2	0.03	4.4	0.1	<0.05	6	0.9	0.4	
W16SL-04	Silt	4	0.64	177	0.066	<20	1.24	0.007	0.10	0.3	<0.01	4.1	<0.1	<0.05	4	<0.5	<0.2	
W16SL-05	Silt	4	0.71	250	0.081	<20	1.69	0.009	0.10	0.2	0.04	4.6	<0.1	<0.05	6	<0.5	<0.2	



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## QUALITY CONTROL REPORT

VAN16001434.2

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		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	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
2400N 8200E	Soil	<0.1	4.7	5.7	33	<0.1	1.3	4.9	1106	1.33	23.7	0.5	3.4	74	0.1	0.5	<0.1	35	1.63	0.116	21
REP 2400N 8200E	QC	<0.1	5.1	6.1	35	<0.1	1.5	5.2	1165	1.48	25.2	0.9	3.6	77	0.2	0.6	<0.1	39	1.70	0.128	23
1+75N 10+12E	Soil	8.5	260.5	1845.1	3352	>100	10.5	15.2	5810	4.78	58.1	2879.1	2.1	57	32.3	0.9	0.3	56	0.88	0.100	51
REP 1+75N 10+12E	QC	9.1	261.7	1863.1	3443	>100	10.6	15.2	5901	4.85	59.6	2755.2	2.1	58	33.3	0.9	0.3	57	0.89	0.106	52
11+50E 2+25N D	Soil	8.8	11.0	13.6	51	0.2	1.9	7.9	594	2.08	17.6	127.7	<0.1	9	0.2	0.2	0.2	53	0.07	0.068	8
REP 11+50E 2+25N D	QC	9.2	10.8	13.1	50	0.3	2.3	7.4	572	2.10	17.7	330.9	<0.1	8	0.1	0.2	0.2	53	0.07	0.069	8
Reference Materials																					
STD DS10	Standard	15.4	153.7	155.6	359	1.8	74.7	13.2	911	2.82	46.3	54.0	7.9	75	2.8	9.3	13.5	45	1.07	0.078	19
STD DS10	Standard	15.9	166.2	161.8	383	2.2	79.2	13.7	973	3.01	50.1	60.3	8.8	80	2.8	8.7	14.3	46	1.12	0.082	20
STD DS10	Standard	15.2	161.0	159.1	383	2.0	78.9	13.4	919	2.90	50.3	56.6	8.3	79	2.5	8.9	14.1	44	1.11	0.082	19
STD DS10	Standard	14.6	148.6	147.2	347	1.7	71.7	12.1	852	2.68	43.8	100.6	7.2	66	2.5	7.4	12.1	42	1.04	0.072	17
STD GC-7	Standard																				
STD OREAS133B	Standard																				
STD OREAS45EA	Standard	1.8	768.5	16.4	34	0.3	432.1	57.0	439	23.85	12.8	58.8	11.4	4	<0.1	0.3	0.3	329	0.03	0.033	7
STD OREAS45EA	Standard	1.8	793.9	16.6	35	0.3	439.6	57.3	453	25.43	13.1	61.7	12.0	4	<0.1	0.3	0.3	333	0.03	0.035	8
STD OREAS45EA	Standard	1.7	744.6	15.4	30	0.3	402.2	55.0	451	22.32	11.5	48.5	11.1	4	<0.1	0.2	0.3	325	0.03	0.031	8
STD OREAS45EA	Standard	1.6	730.0	14.8	31	0.2	395.2	53.9	422	22.10	10.9	55.5	10.4	4	<0.1	0.2	0.2	299	0.03	0.030	7
STD DS10 Expected		13.6	154.61	150.55	370	2.02	74.6	12.9	875	2.7188	46.2	91.9	7.5	67.1	2.62	9	11.65	43	1.0625	0.0765	17.5
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 GC-7 Expected																					
STD OREAS133B 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	<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
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	0.3	<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	<2	<0.01	<0.001	<1
BLK	Blank																				



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Method Analyte Unit MDL	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ374	
	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag
	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t
	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	2
Pulp Duplicates																	
2400N 8200E	Soil	<1	0.52	244	0.062	<20	2.32	0.010	0.18	<0.1	<0.01	4.0	<0.1	<0.05	4	<0.5	<0.2
REP 2400N 8200E	QC	1	0.57	244	0.069	<20	2.58	0.009	0.18	0.1	0.01	4.2	<0.1	<0.05	4	<0.5	<0.2
1+75N 10+12E	Soil	11	0.67	211	0.105	<20	2.42	0.012	0.21	0.1	0.39	8.3	0.2	0.19	7	1.5	<0.2
REP 1+75N 10+12E	QC	11	0.68	217	0.106	<20	2.43	0.012	0.21	0.1	0.40	8.3	0.2	0.19	7	1.3	<0.2
11+50E 2+25N D	Soil	3	0.05	168	0.005	<20	1.31	<0.001	0.11	<0.1	0.01	0.4	0.2	<0.05	7	<0.5	<0.2
REP 11+50E 2+25N D	QC	3	0.05	163	0.006	<20	1.33	0.001	0.11	<0.1	0.02	0.4	0.2	<0.05	7	<0.5	<0.2
Reference Materials																	
STD DS10	Standard	55	0.78	433	0.085	<20	1.05	0.073	0.34	3.0	0.30	3.0	5.2	0.28	4	1.8	5.3
STD DS10	Standard	57	0.84	462	0.093	<20	1.14	0.075	0.37	2.9	0.31	3.3	5.7	0.30	5	2.5	5.4
STD DS10	Standard	57	0.81	454	0.083	<20	1.09	0.073	0.35	3.2	0.29	3.2	5.5	0.29	5	2.1	5.1
STD DS10	Standard	53	0.75	390	0.082	<20	1.02	0.070	0.33	3.2	0.25	2.7	4.9	0.28	4	2.5	4.5
STD GC-7	Standard																618
STD OREAS133B	Standard																102
STD OREAS45EA	Standard	894	0.11	153	0.113	<20	3.58	0.027	0.06	<0.1	<0.01	85.7	<0.1	<0.05	14	1.2	<0.2
STD OREAS45EA	Standard	929	0.11	163	0.113	<20	3.69	0.030	0.05	<0.1	<0.01	86.5	<0.1	<0.05	14	1.2	<0.2
STD OREAS45EA	Standard	865	0.10	149	0.102	<20	3.45	0.022	0.06	<0.1	<0.01	83.7	<0.1	<0.05	13	1.4	<0.2
STD OREAS45EA	Standard	841	0.10	143	0.105	<20	3.29	0.026	0.05	<0.1	<0.01	80.9	<0.1	<0.05	13	0.5	<0.2
STD DS10 Expected		54.6	0.775	412	0.0817		1.0259	0.067	0.338	3.32	0.3	2.8	5.1	0.29	4.3	2.3	5.01
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 GC-7 Expected																	624
STD OREAS133B Expected																	104
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
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																<2



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## ► AQ300, AQ200

Package Description	Geochemical aqua regia digestion
Sample Digestion	HNO <sub>3</sub> -HCl acid digestion
Instrumentation Method	ICP-ES (AQ300, AQ200), ICP-MS (AQ200)
Legacy Code	1D, 1DX
Applicability	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



**APPENDIX B**

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**Rock Sample Descriptions**

## Pillar East Rock Sample Descriptions - 2016

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
VAN16001433	W16R01	628183	6352837	1784	Outcrop	Sample across 0.7 m of rusty altered volcanics with weak qtz veining. Trace cpy, galena and sphalerite	222	10.9	169	2272	543
VAN16001433	W16R02	628183	6352837	1784	Outcrop	Sample across 1.0 m. Adjacent to above sample. Similar rock and mineralization.	576	20.1	195	2864	1229
VAN16001433	W16R03	628183	6352837	1784	Outcrop	Sample across 0.7 m. Adjacent to above sample. Similar rock and mineralization.	659	12.5	162	1311	633
VAN16001433	W16R04	628183	6352837	1784	Outcrop	Sample across 0.7 m at 90 deg (NW) to junction of W16R-02 and 03. Similar rock and mineralization.	141	5.0	105	1664	550
VAN16001433	W16R05	628183	6352837	1784	Outcrop	Sample across 0.75 m at 90 deg (SE) to junction of W16R-02 and 03. Similar rock and mineralization.	1561	16.3	147	1403	485
VAN16001433	W16R06	628320	6353000		Float	Chip grab sample of weak qtz veined pinkish fsp porphyritic volcanic. Milky veinlets to 2mm.	1	<0.1	4	12	73
VAN16001433	W16R07	628346	6353105	1801	Float	Chip sample from 50 cm angular boulder of rusty, qtz veined and vuggy volcanic (0.5% py). Collected 25 m East of soil sample 1150N; 3+50N (~1 g/t Au).	6563	13.1	98	1531	1727
VAN16001433	W16R08	628366	6353094	1806	Outcrop	Chip sample across 2.5m of finely qtz veined, moderately silicified volcanic (selected qtz rich chips)	450	3.8	24	95	89
VAN16001433	W16R09	628202	6352931	1810	Outcrop	Grab sample across 2.5 m rusty zone in volcanics. Distinct qtz veinlets, weak stockwork. Close to (2007) soil sample site 10E;1+75N that assayed 1,300 ppb Au. Noted trace galena.	1066	13.0	28	467	798
VAN16001433	W16R10	628200	6352930		Float	Composite grab sample of qtz vein and stockwork fragments collected along talus slope on Line 10E from 1+90N to 1+75N (15m). Source is uphill to the west probably <50m.	1249	69.7	174	2724	4449
VAN16001433	W16R11	628200	6352913		Float	Composite grab sample from L10E; 1+75 to 1+50N (25m). Similar float to above.	753	29.5	80	2377	3775
VAN16001433	W16R12	628200	6352888		Float	Composite grab sample from L10E; 1+50 to 1+25N (25m). Similar float to above. South end of sample is where talus changes to pink qtz eye porphyry (large dike). Galena and sphalerite in last 3 samples.	699	15.6	157	4167	7562
VAN16001433	W16R13	628519	6353291	1833	Float	Grab sample from several pieces of pinkish, locally rusty volcanic with fine quartz veinlets.	201	0.7	23	28	57
VAN16001433	W16R14	627945	6352889	1822	Float	Composite grab sample collected from 10-12 m area. Volcanics with milky, bluish chalcedonic quartz.	1	<0.1	5	12	37
VAN16001433	W16R15	627701	6352678	1854	Float	Grab sample of dark volcanic flows and fragmentals with malachite and disseminations of cpy.	3	1.1	3549	172	295
VAN16001433	W16R16	628634	6353189	1821	Float	Chip sample from 25 cm angular and silicified and veined volcanic. Within 50 m of property boundary.	136	4.0	10	17	24
VAN16001433	W16R17	628618	6353043	1792	Outcrop	Random chip sample from rusty otc and talus of grey-bluish wk to mod silicified porphyritic volcanic, pervasive epidote. Fine-grained pyrite (1-2%). Taken as followup to 325 ppb Au soil @ 14E;3+00N.	44	2.7	20	27	47
VAN16001433	W16R18	628104	6352448	1850	Float	Grab sample from 30 cm angular boulder of rusty feldspar porphyry (tuff?)	3	1.0	16	11	56
VAN16001433	W16R19	628155	6352368	1863	Outcrop	Chip grab sample from outcrop of tuffaceous volc, very low py, carbonate veinlets, weakly magnetic.	8	0.8	57	5	106
VAN16001433	W16R20	627928	6352498	1871	Outcrop	Grab sample from qtz veined feldspar porphyry or x'al tuff. Veinlets to 0.5 cm, 0.5 % py.	7	0.6	16	10	80
VAN16001433	W16R21	628073	6352364	1920	Outcrop	Grab sample from light brown, weakly limonitic x'al tuff or flow. From v. steep, crumbly slope	9	1.4	30	18	41
VAN16001433	W16R22	628044	6352366	1930	Outcrop	Grab sample from bright orange-brown oxidized otc of pinkish-green x'al tuff. Weak ep-chl alteration.	4	1.5	19	7	46
VAN16001433	W16R23	627938	6352318	1969	Float	Composite grab of pink-green, feldspar porphyry or x'al tuff with fine qtz veinlets and local stockwork	<1	<0.1	12	4	73
VAN16001433	W16R24	627733	6352329	2012	Outcrop	Composite grab of qtz veinlets, stockwork in x'al tuffs. Qtz from hairline to 2-3 cm, locally vuggy, no py.	<1	0.2	16	5	59
VAN16001433	W16R25	627569	6352336	1995	Outcrop	Chip sample across 2.5 m wallrock of fault structure.	<1	0.2	16	9	44
VAN16001433	W16R26	627569	6352336	1995	Outcrop	Chip sample across 1.0m of limonitic, grey fault gouge + broken fault gouge immediately E of W16R-25	<1	0.7	45	41	46
VAN16001433	W16R27	628028	6352473	1899	Talus	Random grab/chip sample across 16 metres from ledge below cliff. Represents mineralized rockfall from outcrop above. Not representative but indicates mineralization nearby. GPS coord is point between W16R-27 and 28.	9	8.1	2094	419	97
VAN16001433	W16R28	628007	6352478	1899	Talus	Similar to above but collected across 25 metres from ledge at base of outcrop. In the western 1/3 noted chalcopyrite in bedrock. Some pieces are high-grade (>2% chalcopyrite).	27	23.9	10420	100	90
VAN16001433	W16R29	628015	6352433	1900	Outcrop	Chip sample across 2 m of very limonitic zone in volcanics with 1-2% pyrite.	89	2.8	98	25	63
VAN16001433	W16R30	628016	6352450	1894	Outcrop	Chip sample across 3.5m of Cu mineralized volcanic. Upper end (ESE) marked by fault 030°/58° SSW. Sections within this sample contain 5-7% + chalcopyrite. Large specimen sample collected for display and petrographic analysis (appended in report).	19	11.9	6390	7	75

### Pillar East Rock Sample Descriptions - 2016

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
VAN16001433	W16R31	628017	6352448	1894	Outcrop	Chip sample across 1.5 m of marron volcanic on immediate hanging wall (south) of W16R-30. Taken to test the Cu content on this side of a distinct fault structure.	1	2.0	600	5	71
VAN16001433	W16R32	628013	6352453		Outcrop	Chip sample across 4.5 m downhill (N) of W16R-31. Some distinct fractures 042°/55° S.	29	12.5	7620	31	82
VAN16001433	W16R33	628011	6352457		Outcrop	Chip sample across 4 m downhill and continuous from W16R32.	18	15.0	4420	8	56
VAN16001433	W16R34	628013	6352460		Outcrop	Chip sample across 8-9 m at close to 90° to sampling line of samples W16R32 to 33. Abundant malachite over western 4m.	26	21.3	9430	30	79
VAN16001433	W16R35	628006	6352462		Outcrop	Chip sample along Cu mineralized outcrop for 10m. Locally abundant malachite, cpy and chalcocite. Note: the samples in this area are generally very fractured, often hematite stained especially on fractures. Local slickensides. Carbonate veinlets >> qtz veinlets. No silicification.	18	14.1	7950	22	88
VAN16001433	W16R36	628000	6352469	1898	Outcrop	Chip sample across 8 m and is continuous and below (N) of sample W16R-35. Near junction with sample W16R-35 noted hematite slickensides. Not major structures but may be a reflection of larger structure. Attitude 045°/90°	8	7.5	3202	43	101
VAN16001433	W16R37	626995	6352475		Outcrop	Chip sample across 9 m continuous and downhill from sample W16R-36. Lower end of sample is at W end of sample W16R28.	28	4.3	472	253	114
VAN16001433	W16R38	628025	6352454	1906	Outcrop	Grab/chip sample from 1.5 m square area. Well Cu mineralized volcanic. Abundant malachite/azurite. This is the furthest east that can be safely traversed.	70	7.2	10320	50	83
VAN16001433	13+50E 1+75NR	628550	6352921		Float	Composite sample of very rusty volcanics near soil 13+50E; 1+75N (1,254 ppb Au).	16	1.4	21	7	68

**APPENDIX C**  
**Petrographic Report**

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## PETROGRAPHIC REPORT ON TWO SAMPLES FROM PIL PROPERTY

Report for: John Barakso, Chairman  
Finlay Minerals Ltd.  
Suite 912, 510 West Hastings St.  
Vancouver, B.C. V6B 1L8 (604) 684-3099

Invoice 160576  
Sept. 24, 2016.

### SUMMARY:

The two samples are from the PIL property, located as described by Warner Gruenwald (W16R-30 from which the two sections are cut is the bedrock source of talus sample WG15-05, described last year in report 150814). The two samples are very similar, and do appear to contain more copper mineralization than suggested by the geochemical analysis (0.65% Cu). Geochemical analyses (presumably very partial extraction) for other elements such as Na, K, or V do not seem anomalous compared to the range exhibited by other samples in the suite. Alteration assemblage of alkali feldspar (albeit albitic), minor quartz, chlorite (after biotite?), hematite (after magnetite?), apatite, rutile and sericite, associated with the chalcopyrite-trace bornite (rare pyrite) mineralization, is strongly suggestive of an alkaline clan porphyry copper (high Cu/low Fe) setting.

Capsule descriptions are as follows:

W16R-30: hypabyssal feldspar porphyry of about monzonite composition, cut by strongly developed stockwork of chalcopyrite-minor bornite-pyrite veinlets associated with quartz, albitic alkali feldspar, plus local apatite and traces of chlorite (after biotite?) suggesting alkaline porphyry copper type mineralization in low Fe/high Cu system. Minor oxidation is to hematite/limonite and malachite.

2: hypabyssal feldspar ±biotite porphyry of about monzonite composition, with disseminated and discontinuous network of chalcopyrite (in part after hematite/original magnetite) associated with albitic alkali feldspar, chlorite (after biotite?), local apatite, trace quartz, suggesting alkaline porphyry copper type mineralization. Minor oxidation is to hematite, limonite and malachite.

Detailed petrographic descriptions and photomicrographs are appended (by email attachment). If you have any questions regarding the petrography, please do not hesitate to contact me.

W16R-30: HYPABYSSAL FELDSPAR PORPHYRY (MONZONITE), CUT BY A STRONGLY DEVELOPED STOCKWORK OF CHALCOPYRITE-TRACE BORNITE-PYRITE-MINOR QUARTZ, ALBITIC ALKALI FELDSPAR, PLUS LOCAL APATITE AND TRACES OF CHLORITE (AFTER BIOTITE?), SUGGESTING ALKALINE PORPHYRY COPPER TYPE MINERALIZATION. MINOR OXIDATION IS TO HEMATITE, LIMONITE AND MALACHITE

Hand sample shows reddish/purplish brown, finely porphyritic volcanic or hypabyssal intrusive rock cut by narrow discontinuous stringers of chalcopyrite (partly oxidized to malachite on fracture surfaces). The rock is not magnetic, and shows no reaction to cold dilute HCl, but there is extensive stain for K-feldspar in the etched offcut (mainly in the groundmass, surrounding white etched plagioclase phenocrysts). Modal mineralogy in polished thin section is approximately:

Plagioclase (phenocrysts, minor in groundmass, albitized?)	55%
K-feldspar (groundmass, likely mainly primary?)	30%
Chalcopyrite (trace pyrite, bornite partly altered to covellite)	5%
Quartz (mainly secondary?)	3%
Chlorite (after mafics such as secondary biotite?)	2%
Hematite (fine, disseminated or coarse, after magnetite?)	2%
Rutile	1%
Limonite, trace malachite (after chalcopyrite)	1%
Apatite	<1%
Sericite (after plagioclase)	<1%

This sample is composed of about 50-60% plagioclase phenocrysts in a groundmass of finely crystalline Kspar, plagioclase and minor chlorite and hematite, cut by a stockwork of anastamosing irregular sulfide-minor quartz-accessory apatite veinlets partly oxidized to limonite and malachite. Plagioclase is partly altered to secondary albite, especially along and near the veinlets.

Plagioclase phenocrysts have strongly euhedral but commonly broken outlines in the 1-3 mm (rarely to 5 mm) range, with partly aligned to random orientations. They show extinction Y^010 of 15°, and negative relief against quartz, indicative of composition near An0-5 (albite), likely secondary to judge by the cloudy appearance due to 1-3% replacement by minute flakes of sericite (euhedral, mainly <25 µm), or near veinlets, where twinned plagioclase is locally replaced by untwinned, clear albite associated with quartz that is likely secondary. The quartz forms irregular sub/anhedra to about 0.75 mm, with undulose extinction and ragged borders suggestive of secondary origin (although in a few cases the crystals may have overgrown original small, <0.5 mm, primary quartz crystals).

In the groundmass, small plagioclase and Kspar microlites mostly <0.2 mm long, more or less randomly oriented, variable hematite, minor chalcopyrite and accessory rutile (all subhedral, mainly <20 µm) and rare chlorite (very pale green sub/euhedra <0.1 mm, possibly after biotite?) are set in a matrix of K-feldspar (and plagioclase?) forming feathery subhedra mostly <50 µm.

Copper mineralization is abundant, mostly as chalcopyrite controlled along a stockwork of narrow, short discontinuous and anastamosing, irregular fracture veinlets rarely over 1 mm thick, in which the chalcopyrite forms subhedra up to 2 mm long. Rarely, very minor bornite as subhedra <0.45 mm is associated with chalcopyrite, but pyrite is rare (euhedra <0.2 mm: high Cu, low Fe ratio). Both sulfides are locally intergrown with, and appear to replace, hematite in the form of rounded sub/euhedra to ~0.6 mm that likely represent primary magnetite oxidized to hematite and limonite, associated with rutile as minute dark brown subhedra rarely over 45 µm. It is likely that the sulfides also replace former mafic sites with which the magnetite was associated. Minor chlorite (as above, after secondary biotite?) and apatite (euhedral prisms <0.8 mm long) appear related to the veining, so may be secondary. Dark brown (goethitic?) cryptocrystalline limonite is also common along the fracture veinlets, rarely with traces of pale green carbonate (malachite) as subhedra <50 µm.

In summary, this may be hypabyssal feldspar porphyry of about monzonite composition, cut by a strongly developed stockwork of chalcopyrite-minor bornite-pyrite veinlets associated with quartz, albitic alkali feldspar, local apatite and traces of chlorite (after biotite?) suggesting alkaline porphyry copper type mineralization. Minor oxidation is to hematite, limonite and malachite.

2: HYPABYSSAL FELDSPAR±BIOTITE PORPHYRY (MONZONITE), WITH DISSEMINATED/DISCONTINUOUS NETWORK OF CHALCOPYRITE (PART AFTER HEMATITE/MAGNETITE) ASSOCIATED WITH ALBITIC ALKALI FELDSPAR, CHLORITE (AFTER BIOTITE?), LOCAL APATITE, TRACE QUARTZ, SUGGESTING ALKALINE PORPHYRY COPPER MINERALIZATION. MINOR OXIDATION IS TO HEMATITE, LIMONITE AND MALACHITE

Hand sample shows pinkish/orange brown, finely porphyritic volcanic/hypabyssal intrusive rock cut by narrow discontinuous stringers of chalcopyrite (partly oxidized to malachite on fracture surfaces). The rock is not magnetic, and shows no reaction to cold dilute HCl, but there is extensive stain for K-feldspar in the etched offcut (mainly in the groundmass, surrounding white etched plagioclase phenocrysts). Modal mineralogy in polished thin section is approximately:

Plagioclase (phenocrysts, minor in groundmass, albitized?)	55%
K-feldspar (groundmass, likely mainly primary?)	30%
Chalcopyrite (stockwork, disseminated)	5%
Biotite (primary, secondary, altered to chlorite, trace sericite)	5%
Hematite (fine, disseminated or coarse, after magnetite?)	2%
Rutile	1%
Limonite, trace malachite (after chalcopyrite)	1%
Quartz (mainly secondary?)	<1%
Apatite	<1%
Sericite (after plagioclase, biotite)	<1%

This sample is composed of about 50-60% plagioclase, <5% biotite phenocrysts in a groundmass of fine Kspar, plagioclase and minor chlorite, hematite and chalcopyrite, cut by a stockwork of anastamosing irregular sulfide-accessory apatite-trace quartz veinlets, partly oxidized to limonite and malachite. Plagioclase is partly altered to secondary albite, especially along and near the veinlets.

Plagioclase phenocrysts have euhedral but commonly fractured/broken outlines in the 1-3 mm (rarely to 4 mm) range, with partly aligned to random orientations. They show extinction Y^010 of 15°, and negative relief against quartz, indicative of composition near An0-5 (albite), likely secondary to judge by cloudy appearance due to 1-3% replacement by minute flakes of clay?/sericite (euhedral, <25 µm), or near veinlets, where twinned plagioclase is locally replaced by untwinned, clear albite associated with trace quartz that is likely secondary. The quartz forms irregular anhedra <0.15 mm, with undulose extinction and ragged borders suggestive of secondary origin; primary quartz is absent).

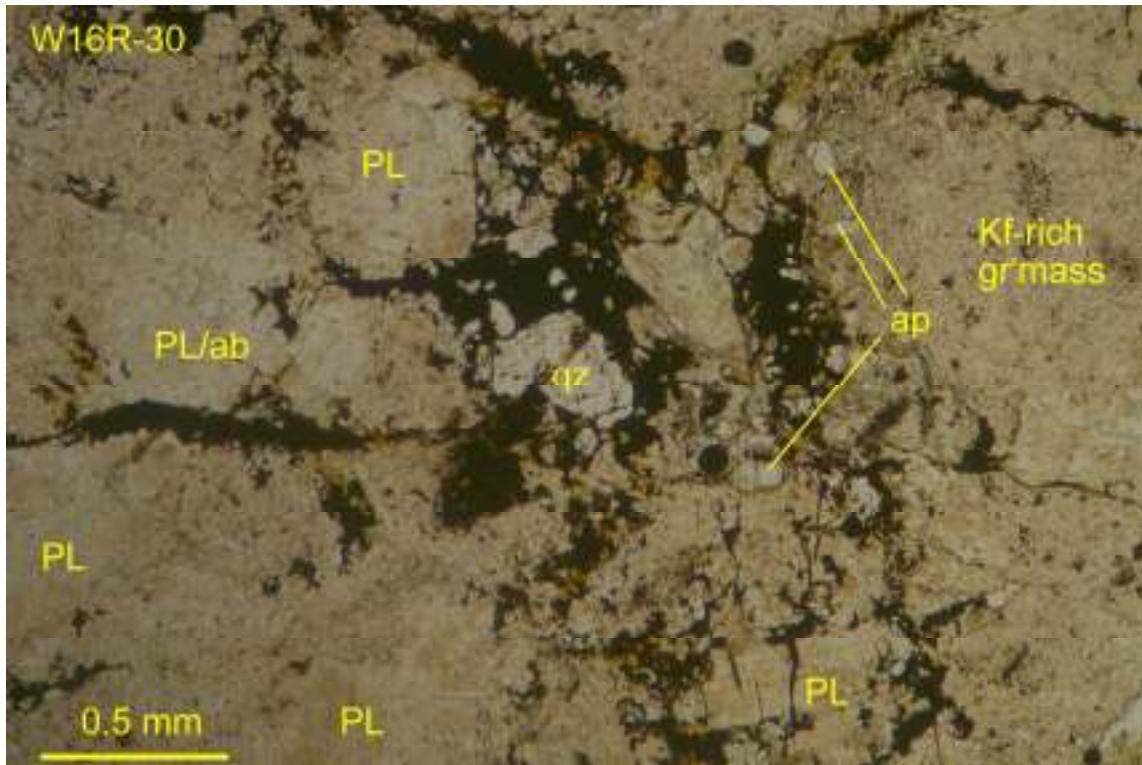
Relict biotite phenocrysts are ragged subhedral, up to 1.5 mm, with pale brown pleochroism, partly altered to chlorite ±sericite at margins, or almost completely replaced by chlorite near veinlets. Chlorite flakes are subhedral, mainly <0.1 mm, with very pale green colour/zero birefringence.

In the groundmass, small plagioclase and Kspar microlites mostly <0.2 mm long, more or less randomly oriented, variable hematite, significant chalcopyrite and accessory rutile (all subhedral, in the <20-50 µm range) and chlorite (very pale green sub/euhedra <0.1 mm, possibly after biotite?) are set in a matrix of K-feldspar (and plagioclase?) forming feathery subhedra mostly <50 µm.

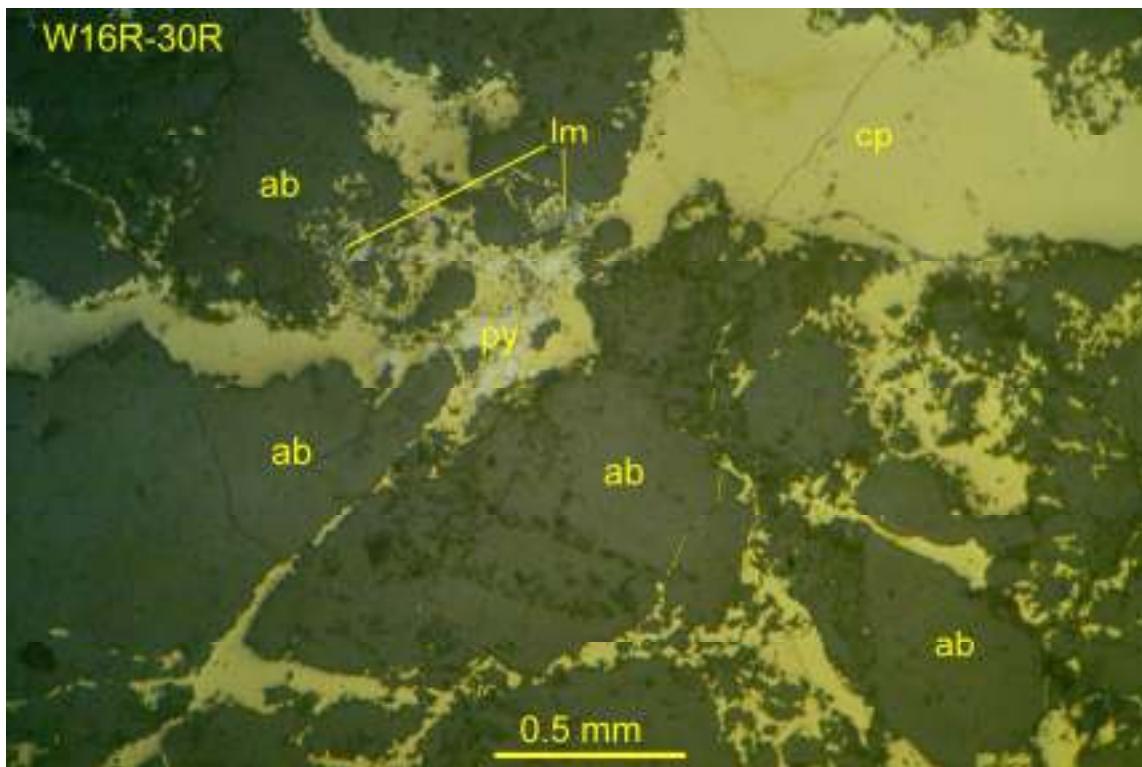
Copper mineralization is abundant, as chalcopyrite either disseminated or controlled along a stockwork of narrow, short discontinuous and anastamosing, irregular fracture veinlets mostly <1 mm thick, in which chalcopyrite forms anhedra <1 mm. Bornite and pyrite are not seen (high Cu, low Fe ratio). Both sulfides are locally intergrown with, and appear to replace, hematite in the form of rounded sub/euhedra to ~0.6 mm that likely represent primary magnetite oxidized to hematite and limonite, associated with rutile as minute dark brown subhedra rarely over 35 µm, associated with and likely replacing former mafic (biotite) sites with which the magnetite was associated. Minor chlorite (as above, after secondary biotite?) and apatite (stubby euhedra <0.5 mm) appear related to the veining, so may be secondary. Dark brown (goethitic?) cryptocrystalline limonite is common along the fracture veinlets, rarely with traces of pale green carbonate (malachite) as subhedra <50 µm.

In summary, this may be hypabyssal feldspar ±biotite porphyry of about monzonite composition, with disseminated/discontinuous network of chalcopyrite (in part after hematite/original magnetite) associated with albitic alkali feldspar, chlorite (after biotite?), local apatite, trace quartz,

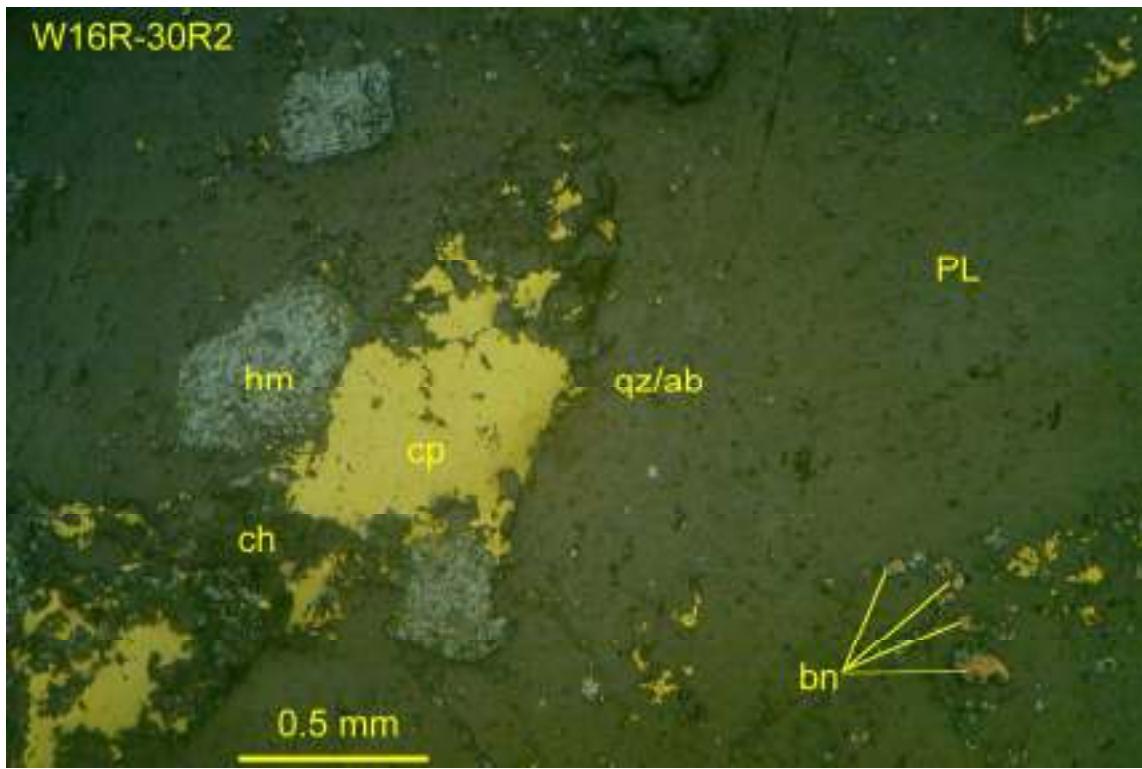
suggesting alkaline porphyry copper type mineralization. Minor oxidation is to hematite, limonite and malachite.



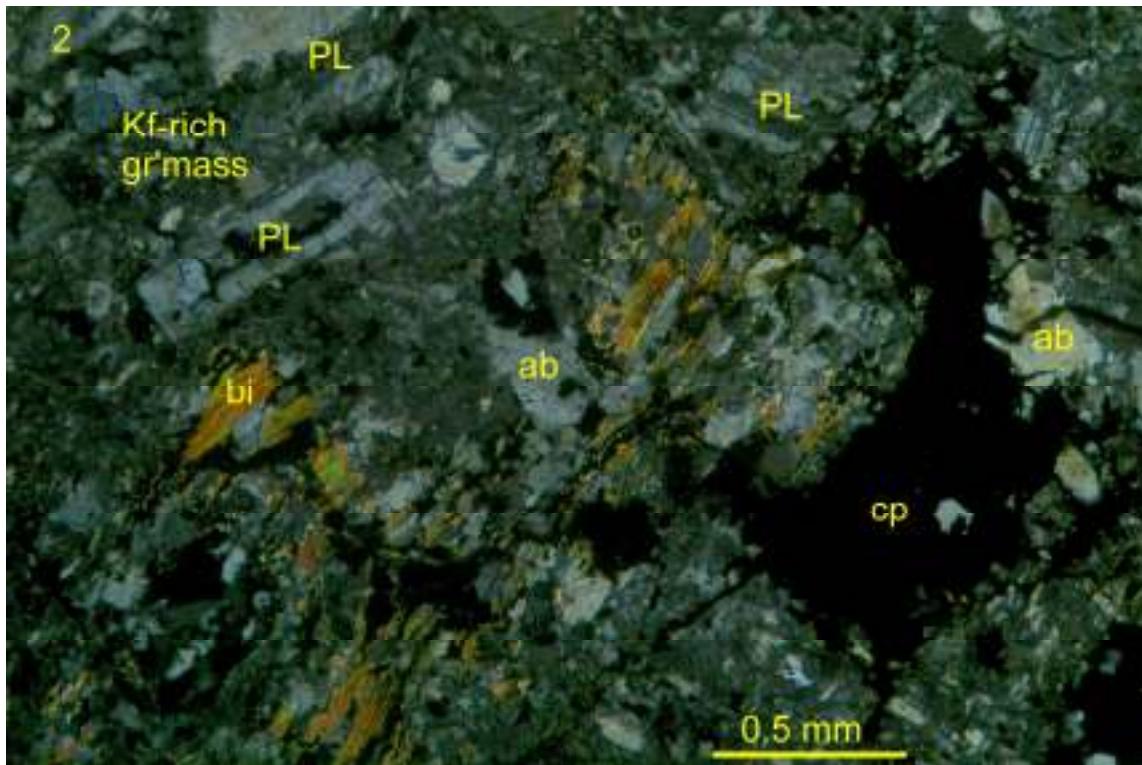
W16R-30: hypabyssal monzonitic feldspar porphyry composed of plagioclase phenocrysts (PL) in groundmass of Kspar-plagioclase, broken and cut by fracture network of copper sulfides-hematite (after magnetite?)–quartz (qz)–local apatite (ap). Sulfides are slightly oxidized to limonite along the fractures. Transmitted plane light, field of view ~3 mm wide.



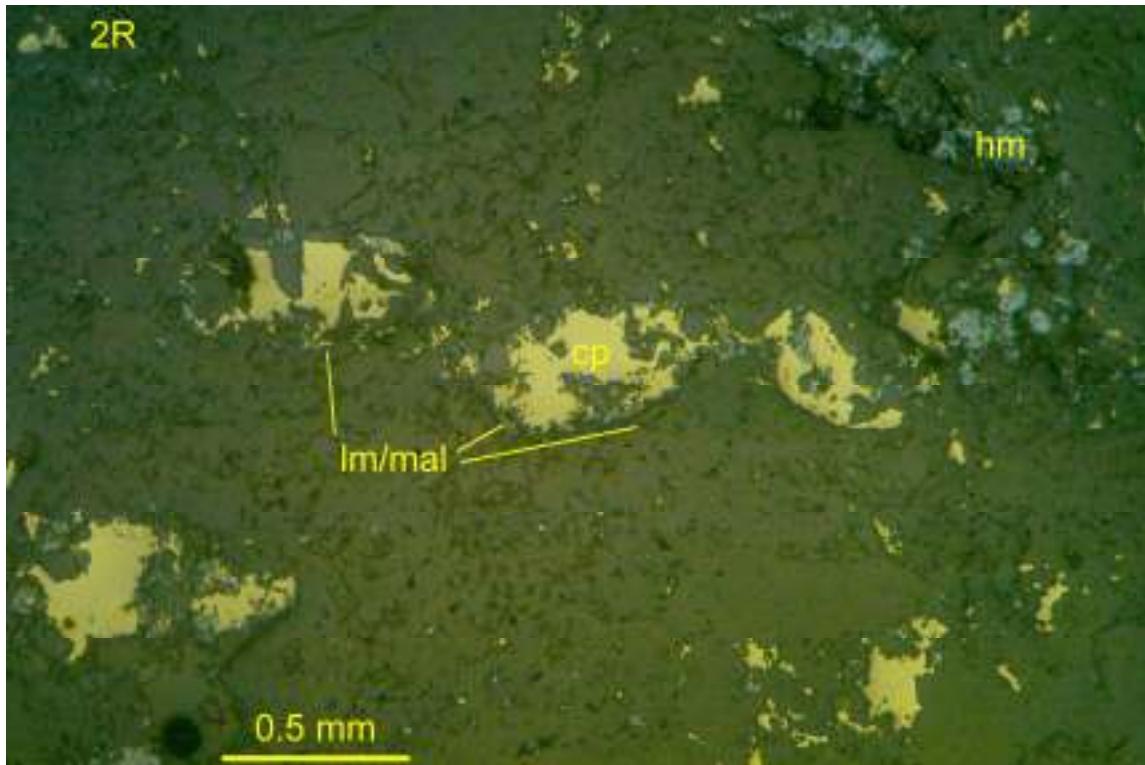
W16R-30R: strongly developed stockwork of chalcopyrite (cp; rare pyrite, py) associated with albitic secondary alkali feldspar (ab); there is minor oxidation of sulfides to limonite (lm). Reflected light, uncrossed polars, field of view ~3 mm wide.



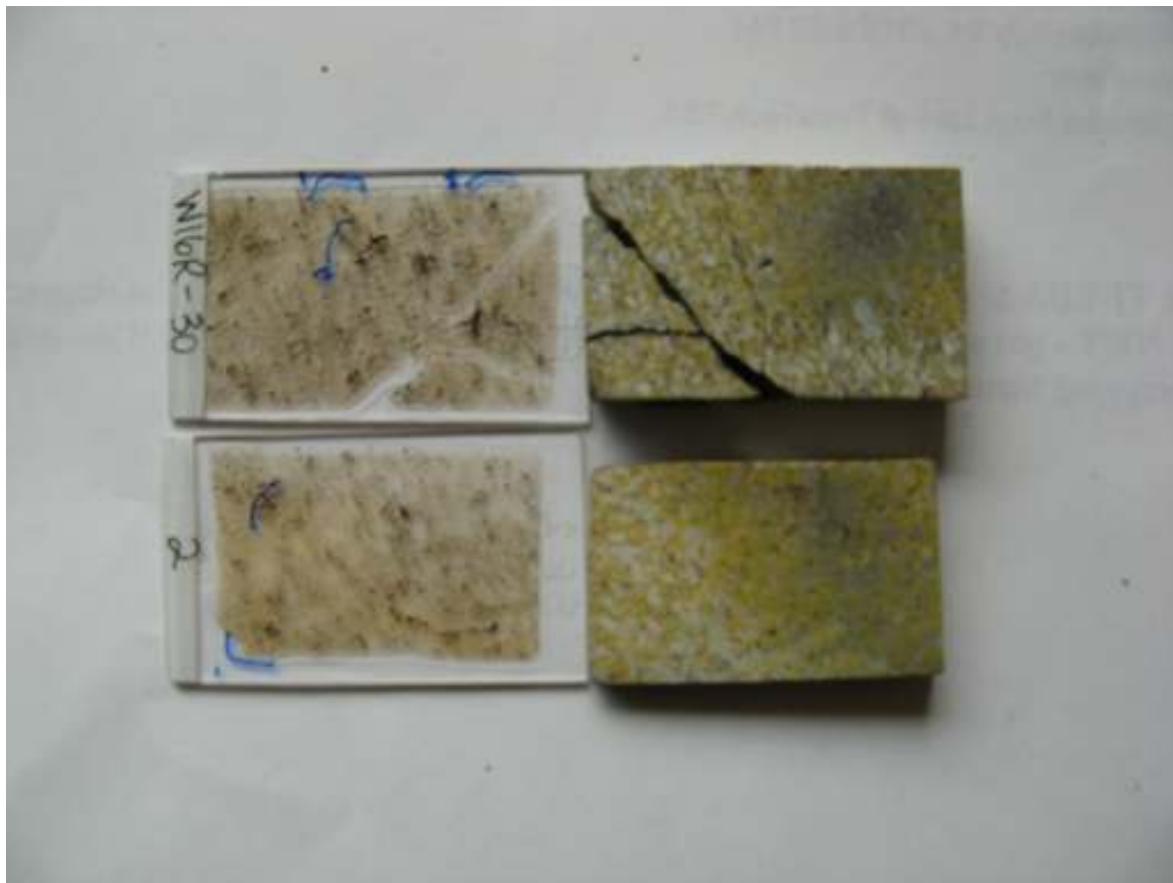
W16R-30R2: chalcopyrite and traces of bornite (bn) apparently replacing hematite (hm, after magnetite?), associated with minor chlorite (ch), likely after former mafic minerals (secondary biotite?) along discontinuous fracture network. Reflected light, uncrossed polars, field of view ~3 mm wide.



2: relict texture of altered feldspar ± biotite porphyry showing albitized plagioclase (twinned, PL) phenocrysts, ragged biotite (BI) remnants, and sulfides (opaque, partly after hematite/magnetite), in finely felted groundmass of alkali feldspar (Kspar and plagioclase), minor chlorite/disseminated chalcopyrite; hematite. Transmitted light, crossed polars, 3 mm wide.



2R: chalcopyrite partly along discontinuous networks and partly disseminated, in part after hematite (hm, after magnetite?). Chalcopyrite is slightly oxidized at rims to traces of limonite and malachite. Reflected light, uncrossed polars, field of view ~3 mm wide.



Overview of thin sections and offcuts (blue semi-circles mark photomicrograph locations).

## APPENDIX D

### Personnel

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**Geoquest Consulting Ltd.**

<b>Field:</b>	W. Gruenwald, P. Geo. (9-17 Aug 2016)	8.0 days
	D. Mason, Field Assistant (8-18 Aug 2016)	8.5 days

<b>Office:</b>	W. Gruenwald, P. Geo.	
	Program Preparation (29 Jun-8 Aug 2016)	1.5 days
	Assessment Report (25-31 March 2017)	2.75 days

E. Gruenwald		
	Data Compilation, Map Preparation, Report compilation	
	(2 Mar, 11 Sep – 18 Oct 2016, 26-31 Mar, 2017)	31 hours

**APPENDIX E**  
**Statement of Expenditures**

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<b>Labour</b>			
W. Gruenwald, P. Geo: 8.0 days @\$540/day	\$4,320.00		
Dean Mason, Field Assistant: - 8.5 days @\$390/day	<u>3,315.00</u>	\$7,635.00	
<b>Helicopter</b>			
SilverKing Helicopters Ltd., Smithers, B.C.		11,138.60	
<b>Analytical Costs</b>			
Bureau Veritas Laboratories, Vancouver, B.C.		2,875.95	
<b>Petrographic Analysis</b>			
Vancouver Petrographics		686.00	
<b>Equipment Rental</b>			
CP Communications (Truck Radio, Satellite Phone)		228.98	
<b>Vehicle Costs</b>			
4x4 Truck (Bow Mac Truck Rental, Prince George, BC)	714.88		
D. Mason (1,545 km @ \$0.35/km)	540.75		
Fuel (Car and truck gas)	<u>219.82</u>	1,475.45	
<b>Room and Board</b>			
Claw Mountain Outfitters, Prince George, BC (10-15 Aug 2016)	2,400.00		
Carmel Inn, Prince George (9, 16 Aug 2016)	184.80		
Meals and Groceries	<u>228.63</u>	2,813.43	
<b>Supplies</b>			
Sampling supplies, Gas siphon, maps		306.66	
<b>Freight</b>			
Greyhound Canada (Sample Shipping to Bureau Veritas, Finlay Minerals)		219.93	
<b>Travel</b>			
Greyhound Canada W. Gruenwald – Vernon to 100 Mile House (9 Aug 2016)		48.68	
<b>Field Program Preparation, Report Compilation</b>			
W. Gruenwald, P. Geo 4.25 days @\$540/day	\$2,295.00		
E. Gruenwald (drafting, report compilation) 31 hours @\$45/hr	<u>\$1,395.00</u>	3,690.00	
	<b>TOTAL:</b>		<b><u>\$31,118.68</u></b>

## APPENDIX F

### References

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**APPENDIX G**  
**Certificate of Author**

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**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 (1972).
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 44 years in western Canada and the US.
5. I supervised the 2015 and 2016 exploration program on the Pil property.

W. Gruenwald, P. Geo.

Dated: March 31, 2017