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TECHNICAL REPORT  
*on the*  
**PINNACLE PROPERTY**

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OMINECA MINING DIVISION, BRITISH COLUMBIA, CANADA  
380,300 E / 6,130,500 N  
LONGITUDE -124.88° / LATITUDE 55.30°  
(NAD 83 - ZONE 10) NTS: 093N / 2 & 7



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*Prepared for*  
1111 ACQUISITION CORP.

*July 5, 2021*

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# 1 Summary

The Pinnacle Project is located 100 km north-northwest of Fort St. James and 200 km northwest of Prince George, in central British Columbia, Canada. It is comprised of 30 mineral claims covering 14,107 hectares, and is vehicle accessible via forest service roads whereby the driving time from Fort St. James to the Property is approximately 2 hours. The Pinnacle Project is situated within the Omineca Mining District.

The Pinnacle Project is subject to a Letter of Intent whereby 1111 Acquisition Corp. may earn a 70% interest in the mineral claims by completing certain share issuances, making certain cash payments and incurring certain exploration expenditures. The Pinnacle Project mineral claims are currently 100% owned by Pacific Empire Minerals Corp.

The Pinnacle Project is located within the Quesnel Terrane which is characterized by Late Triassic to Early Jurassic volcanic and sedimentary rocks of island arc affinity that have been intruded by a variety of intrusive phases related to the Late Triassic to Early Jurassic Hogen Intrusive Suite. The economic importance of the Quesnel arc is demonstrated by its rich endowment of porphyry copper-gold mineral deposits.

Geology on the Pinnacle Project can be summarized as intermediate volcanics locally intruded by syenitic to dioritic dikes. Previous exploration programs have encountered anomalous copper and gold mineralization that is dominated by pyrite. Alteration assemblages encountered in drilling and associated anomalous gold  $\pm$  copper mineralization suggest the presence of a large hydrothermal system, although no significant deposit of any economic importance has yet been found. Targeting information has led to the identification of at least two significant target areas.

The author concludes that the Pinnacle Project is prospective for porphyry copper-gold mineralization and merits further exploration in order to test for a potential deposit of economic interest. In particular, there exists potential at depth at both the Elbow and Aplite Creek target areas. A two-phase exploration program including diamond drilling and totaling \$934,000 is recommended by the author.

## 2 Introduction

### 2.1 Terms of Reference and Purpose of the Report

This report was commissioned by 1111 Acquisition Corp. (“1111 Acquisition”) and summarizes technical information pertaining to the Pinnacle Project (the “Property”). The Property is considered to be in the early exploration stage. The Property hosts a coincident copper-gold soil anomaly in addition to anomalous gold  $\pm$  copper and associated hydrothermal alteration encountered in diamond drilling. To date, ground geophysical surveys consisting of Induced Polarization (“IP”) have identified a large area of anomalous chargeability associated with anomalous mineralization and encouraging alteration. This report presents and comments on exploration results provided by Pacific Empire Minerals Corp. (“PEMC”) that were acquired during exploration programs completed between 2012 and 2019, as well as historical exploration data.

The report was prepared by Richard J. Haslinger, P. Eng., an independent Qualified Person as defined by National Instrument 43-101 (“NI 43-101”). The material included in this report or referenced herein is sourced from material provided by PEMC, previous assessment reports, government reports, selected publications, in addition to data verification information from the 2016 diamond drill program that was reviewed by the author and subsequent personal discussions with PEMC personnel. The author completed a personal inspection of the Property with Kristian Whitehead, a representative of 1111 Acquisition Corp.,

in July of 2020.

## 2.2 Qualified Persons

The following serve as the qualified persons (“QP’s”) for this Technical Report as defined in National Instrument 43-101, Standards of Disclosure for Mineral Projects, and in accordance with Form 43-101F1:

- Richard J. Haslinger, P. Eng

## 2.3 Site Visits and Scope of Personal Inspection

A 1-day field visit was completed by the author on July 21<sup>st</sup>, with Kristian Whitehead as a representative of 1111 Acquisition. At this time, access roads and trails were inspected and drill core located on the Property was reviewed. Select intervals of previously half-split drill core from a 2016 diamond drilling program were sampled by the author for data verification purposes, and the associated drill site was visited. A detailed description of the findings is included in Section 12.

## 2.4 Information Sources and Reference

The key information source for the Report was the 2015 Assessment Report (Ritchie, 2015a, AR#35824), entitled:

- 2015 Diamond Drilling Report on the Col - Later Property

Additional information used to support this Report was derived from previous assessment reports on the Project, and from the reports and documents listed in the References section. Additional information was sought from PEMC personnel where required, including digital data for 2012 to 2019 exploration programs.

## 2.5 Previous Technical Reports

No previous 43-101 technical reports have been filed on the Pinnacle Property.

# 3 Reliance on Other Experts

The QP author of this Report states that he is a qualified person for those areas as identified in the “Certificate of Qualified Person” for the QP, as included in this Report. The QP has relied on, and believes there is a reasonable basis for this reliance, information and statements provided to the author by PEMC management and by 1111 Acquisition management including information regarding mineral rights, surface rights, environmental status and Agreement terms in sections of this Report.

## 3.1 Mineral Tenure

The QP has reviewed the ownership of the Property mineral tenures through British Columbia’s Mineral Titles Online database, but has relied upon information provided by PEMC on September 1, 2020, regarding the legal status, ownership of the Pinnacle Property or underlying Property agreements.

## 3.2 Surface Rights

The QP has fully relied upon, and disclaims responsibility for, information supplied by PEMC management for information relating to the status of the current Surface Rights.

## 4 Property Description & Location

The Pinnacle Property is located in central British Columbia, approximately 100 km north-northwest of Fort St. James and 200 km northwest of Prince George. The Property can be accessed from Fort St. James via well-maintained Forest Service Roads (“FSR”). The Property is located on NTS map sheets 093N 2 & 7, and falls within the jurisdiction of the Omineca Mining Division. The Property currently consists of 30 mineral claims covering 14,107 hectares (Figure 4.2). Table 4.1 summarizes the claims as of the date of this report. All claims are on Crown Land and administered by the Government of British Columbia’s Mineral Titles Online system (“MTO”).

Certain mineral titles outlined in Table 4.1 have the current status of “protected”. The status classification stems from a recent order of British Columbia’s Chief Gold Commissioner dated March 27, 2020, whereby the expiry dates of mineral titles in existence prior to the date of the order and due to expire before December 31, 2021, have been extended to December 31, 2021. The order given on March 27, 2020 was a result of circumstances arising from the Covid-19 pandemic.

On August 25, 2020, 1111 Acquisition entered into a Letter of Intent (“LOI”) with PEMC to earn a 70% interest in the Property by incurring a total of \$5,700,000.00 in exploration expenditures, issuing a total of 3,500,000 shares of 1111 Acquisition (or a successor company) and making cash payments totaling \$375,000 to PEMC over a period of four years. Upon completion of the aforementioned expenditures, issuances and cash payments, 1111 Acquisition will be responsible for all expenses, taxes and fees related to the Property up until the date that they publish an NI 43-101 compliant Pre-Feasibility Study on the Property, after which point Joint Venture funding will be incurred by 1111 Acquisition and PEMC on a 70% and 30% basis, respectively.

The Property is subject to a 1% Net-Smelter Return royalty at this time, the rights to which are held by Nova Royalty Corp. None of the Pinnacle Property mineral claims are known to overlap any legacy or Crown granted mineral claims, or no-staking reserves. The Property, to the extent of the author’s knowledge, is not subject to any environmental liabilities.

To the extent of the author’s knowledge, a Multi-Year Area Based permit pertaining to the Pinnacle Property (Work Permit Number MX-13-256) is in place and is valid until December 15, 2021. Drilling, road construction and camp construction activities are permitted within the scope of the permit.

To the best of the author’s knowledge, there are no significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.





Figure 4.1: Location Map

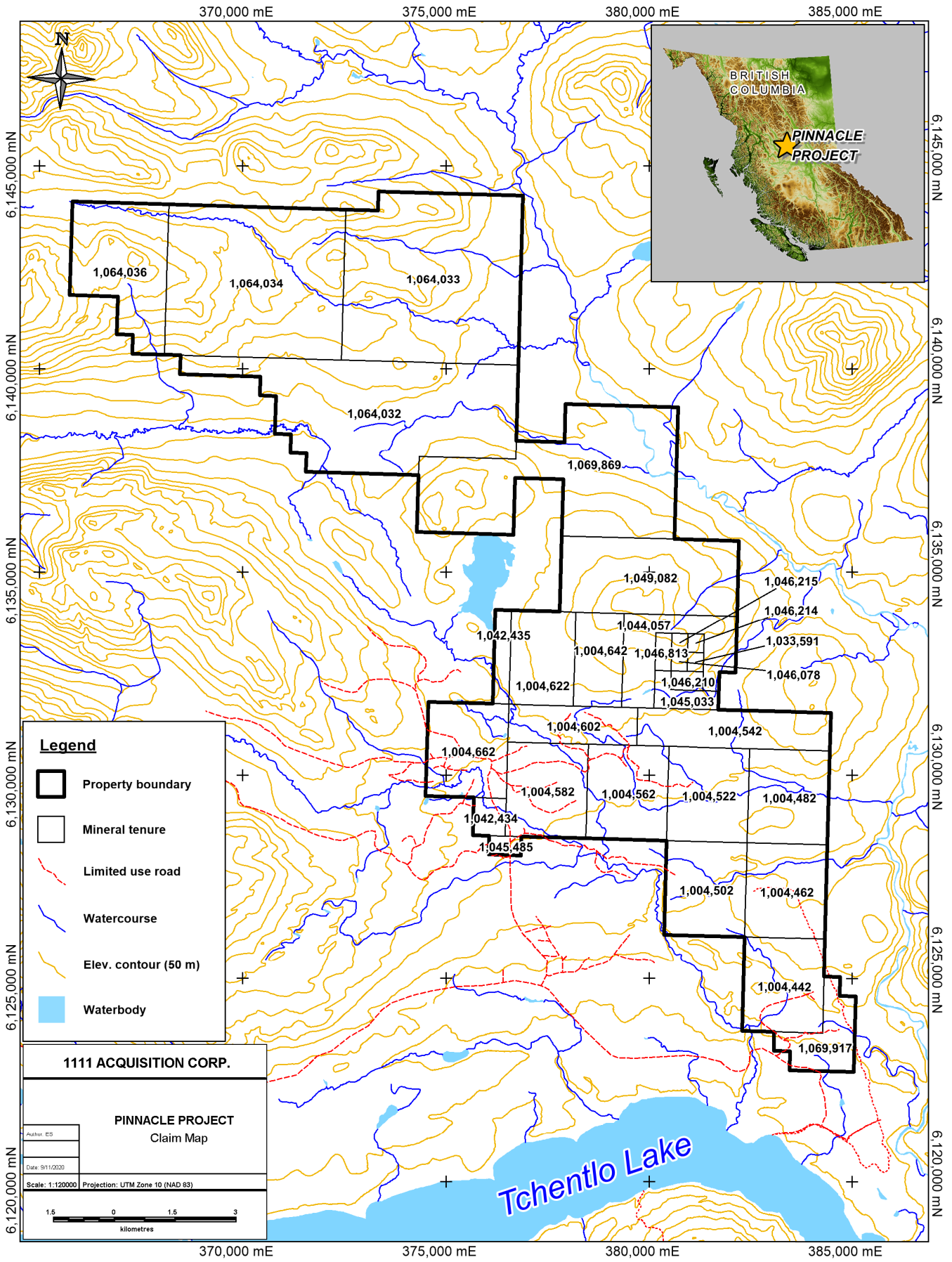


Figure 4.2: Claim Map

**Table 4.1:** Details of Pinnacle Property mineral claims.

Claim ID	Name	Owner name	Claim type	Good To Date	Status	Area (ha)
1004442	LATER 1	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.9043
1004462	LATER 2	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.6649
1004482	LATER 3	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.4242
1004502	LATER 4	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.6662
1004522	LATER 5	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.4261
1004542	LATER 6	PEMC (100%)	Mineral	2026/DEC/22	GOOD	441.8467
1004562	LATER 7	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.4254
1004582	LATER 8	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.4204
1004602	LATER 9	PEMC (100%)	Mineral	2026/DEC/22	GOOD	294.5632
1004622	LATER 10	PEMC (100%)	Mineral	2026/DEC/22	GOOD	368.0686
1004642	LATER 11	PEMC (100%)	Mineral	2026/DEC/22	GOOD	276.0529
1004662	LATER 12	PEMC (100%)	Mineral	2026/DEC/22	GOOD	460.3218
1033591	APLITE CREEK NORTH	PEMC (100%)	Mineral	2026/DEC/22	GOOD	18.4036
1042434	L1	PEMC (100%)	Mineral	2026/DEC/22	GOOD	73.6783
1042435	L2	PEMC (100%)	Mineral	2026/DEC/22	GOOD	92.0168
1044057	L4	PEMC (100%)	Mineral	2026/DEC/22	GOOD	368.0493
1045033	L3	PEMC (100%)	Mineral	2026/DEC/22	GOOD	92.0353
1045485	L5	PEMC (100%)	Mineral	2026/DEC/22	GOOD	36.8449
1046078		PEMC (100%)	Mineral	2026/DEC/22	GOOD	18.4036
1046210		PEMC (100%)	Mineral	2026/DEC/22	GOOD	36.8111
1046214		PEMC (100%)	Mineral	2026/DEC/22	GOOD	18.4016
1046215		PEMC (100%)	Mineral	2026/DEC/22	GOOD	18.4017
1046813	L6	PEMC (100%)	Mineral	2026/DEC/22	GOOD	36.8052
1049082	L7	PEMC (100%)	Mineral	2024/DEC/22	GOOD	809.3694
1064032	NWT 1	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	1617.2594
1064033	NWT 2	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	1781.3664
1064034	NWT 3	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	1616.112
1064036	NWT 4	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	697.7988
1069869	GOLDEN LINK	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	1452.4042
1069917	GOLDEN GUN	PEMC (100%)	Mineral	2021/JAN/03	PROTECTED	258.1749

## 5 Accessibility, Climate, Local Resources, Infrastructure & Physiography

### 5.1 Accessibility

The Pinnacle Property is accessible via well maintained logging roads from Fort St. James. To access the Property, proceed north from the community of Fort St. James on the “North Road” for 9 km, then turn left on the Tachie Road and continue for 40 km on paved road to the turnoff for the Leo Creek FSR. Turn north onto the Leo Creek-Grostete FSR and continue for 68 km before turning right onto the Driftwood FSR, heading northwest. Follow the Driftwood FSR for 15.5 km, then turn right onto the Tchentlo FSR. Follow the Tchentlo FSR through Nation Lake Provincial Park for 7.5 km, and proceed south, continuing on the Tchentlo FSR for 22 km. At this location the Tchentlo FSR continues east towards the Later 1 claim and the southwestern portion of the Property, and the Valleau Main FSR continues north towards the Later 12 claim and the northwest portion of the Property. There is currently active logging in this area, and additional roads and bridges are being constructed on the Property. Travel by road to the site is 172 km from Fort St. James.

### 5.2 Climate

The following data has been taken from Environment Canada’s National Climate Data and Information Archive for the Fort St. James area and contains climate data collected beginning in 1971.

The area has short cool summers and long cold winters with an annual average temperate of 3.1°C. The

highest daily average temperatures of 15.3°C occur in July and the lowest daily average temperatures of -11.3°C occur in January.

The region receives an average of 295 mm rainfall and 192 cm of snowfall annually, with 138 days per year where precipitation exceeds 0.2 mm. The Property is snow covered from early November to late May. As such, the ideal operating period on the Property is late May to early November.

### **5.3 Local Resources**

Labour and services are readily available from Prince George, Fort St. James and Vanderhoof. Trucking, expediting, industrial supply, heavy machinery and operators are available in Fort St. James, as are personnel for line-cutting, core-cutting and other exploration services.

### **5.4 Infrastructure**

There are no permanent structures or facilities located on the Property, and the sufficiency of surface rights for mining operations is not known at this time, due to the early stage nature of the project.

Infrastructure on the Property consists of logging roads accessing the Property from the south. Electric power can be accessed from the BC Hydro Kennedy Substation south of Mackenzie, where hydro electric power lines have been extended to the Mt. Milligan Mine site, approximately 55 km east of the Property.

### **5.5 Physiography**

The Property lies near the northern boundary of the Southern Plateau and Mountain Region of the Canadian Cordilleran Interior System. More specifically, the Property is within the Nechako Plateau near the southern limits of the Swannell Range of the Omineca Mountains.

The Nechako Plateau was covered by the Cordilleran ice cap, which moved eastward from the Coast Ranges towards the Rocky Mountains near McLeod Lake, over-riding the mountains, coating the landscape with a blanket or veneer of glacial drift, and altering the pre-glacial drainage patterns.

Drainage from this area is to the northeast via the Nation River into Williston Lake, which forms part of the Peace-Mackenzie River basin.

The Property occupies a broad, till-blanketed low lying area which ranges in elevation from 1000 m to 1250 m. The local topography is gently sloping, with sparse bedrock exposure.

The area is characterized by swamps and forests consisting of spruce and lodgepole pine, broad-leaf deciduous trees and shrubs, such as alder, birch and aspen, cottonwood, and underlying lichen and mosses.

## 6 History

In the 1930's and 1940's the discovery of mercury at Pinchi Lake spurred exploration concentrated on prospecting for mercury along the Pinchi fault and for placer gold in Kwanika Creek. Exploration for copper porphyry deposits in the area began in the 1950's with the discovery of the Lorraine deposit. Exploration continued through the 1970's and 1980's when favorable gold and copper prices renewed interest in alkaline porphyry deposits, resulting in the discovery of the Mt. Milligan deposit 55 km east of the Pinnacle Project.

In the area of the Property the topography is low and flat and outcrop is sparse. As a consequence historical exploration programs prior to 2014 have focused on areas of topographic relief in the vicinity of the Aplite Creek Showing (Minfile # 093N 085).

Diamond drilling by Noranda Exploration Company, Limited ("Noranda") at the Sooner Showing (Minfile 093N 169) in 1972-73 consisted of 266 metres in 4 holes (BC Geological Survey, 2013b) and drilling by BP Resources Canada Limited ("BP") at the Aplite Creek Showing (Minfile # 093N 085) in 1990 (BC Geological Survey, 2013a) encountered 6.4 g/t Au over 6 m from mixed volcanic/intrusive "hybrid" rock (Paterson and Barrie, 1991, AR#20943).

**Table 6.1:** Summary of Historical Exploration

Year	Operator	Description	Relevant Results
1970	Luc Syndicate	No drilling	Aplite Creek
1971	Denison Mines Ltd.	1,781 soils	Copper anomaly at Later target.
1972	Calico Silver Mines	Geochemistry	"Potential for significant deposit"
1972-1973	Noranda Exploration Co.	Geochemistry & Drilling	Copper-molybdenum
1972-1974	Pechiney Development Ltd.	Geochemistry & Drilling	Assays removed from report
1983-1984	BP Exploration Canada	Geochemistry & Mapping	1500 ppb Au & 11,450 ppm Cu (rock)
1989-1990	BP Exploration Canada	Geophysics & Drilling	6.4 g/t Au over 6m
2001	Peregrine Syndicate	Ground magnetics	No significant results.
2007	Solomon Resources Ltd.	Airborne DIGHEM	Resistivity anomalies along contact
2012	PEMC	Soil sampling	Weakly anomalous gold geochemistry
2014	PEMC / OZE Exploration	Induced Polarization	Chargeability anomalies along contact
2015	PEMC / OZE Exploration	Diamond Drilling	94m @ 0.34 g/t Au (DD15ELB001)
2016	PEMC / ML Gold	Diamond Drilling	41.3m @ 0.42 g/t Au (DD16ELB007)
2017	PEMC / ML Gold	Diamond Drilling	3m @ 0.21 g/t Au & 772 ppm Cu (DD16ELB007)
2019	PEMC	RC Drilling	77.5m @ 0.18 g/t Au (DD16ELB007)

### 6.1 Luc Syndicate - 1970 (Luc Claims)

The first claims to be recorded in the area were the Luc Claims 1-4, and in 1970 a work program consisting of a magnetometer survey and soil geochemistry was completed by the Luc Syndicate (Bacon, 1970, AR#2450). A 20-foot wide pyrite rich zone was observed cutting a rhyolite unit with malachite, chalcopyrite, calcite and hematite. Chalcopyrite was observed primarily occurring as blebs in andesites. Results from the soil geochemistry survey concluded that there was a background copper distribution of 40 ppm with an erratic distribution of higher values. The geology of the work area was described as primarily underlain by andesites with minor rhyolites. A near vertical, barren, feldspar porphyry dike was also observed. The location of this

work program is approximately 1100 m north of the Later 6 claim on the Aplite Creek North Claim in the vicinity of the Aplite Creek Showing.

## **6.2 Calico Silver Mines Ltd. - 1972 (Cul 1-30 Claims)**

In 1971 Calico Silver Mines Ltd. (“Calico”) staked the Cul 1-30 mineral claims. An exploration program consisting of line-cutting, mapping, rock chip sampling and soil sampling was completed.

The following is taken verbatim from the report conclusions (Gutrath, 1972, AR#3865):

*“The geological mapping has located a copper mineralized zone on the Cul #17 and Cul #18 claim that by itself is of little economic importance. However, the mapping located relatively widespread pyrite mineralization associated with minor chalcopyrite indicating the possibility of a much more significant deposit in the general area.”*

## **6.3 Denison Mines Ltd. - 1971 (Gun, Mar, Bid & Pit Claims)**

On March 3, 1971 the Gun 1-20, Bid 1-46, Mar 1-48 and Pit 1-18 Claims were recorded. The claims covered the area associated with MINFILE 93N 122 (GUN). The GUN Showing is described as being underlain by slightly silicified and locally chlorite altered Early Jurassic granodiorite and syenite of the Late Triassic to Early Cretaceous Hogem Intrusive Complex (Pisani and Sanders, 1971, AR#3460). Malachite staining occurs at one location.

The claims were optioned to Denison Mines Limited and a work program consisting of soil sampling, a magnetometer survey and an IP survey was conducted from July to October of 1971. Assessment Report 3460 describes the results of the soil geochemistry survey and the magnetometer survey while a separate report, unknown to the author, describes the results of the IP survey. This work covered a portion of the Later 1 claim.

The geology was described as intrusive Hogem Batholith rocks consisting of a medium grained, locally porphyritic, grey to pink granodiorite, grading into syenite, indicated by a gradual increase in pink orthoclase, and a decrease in quartz and plagioclase. Numerous veins of coarse pink orthoclase, with some quartz, averaging 1” thick and oriented at random cut across the intrusive body. Rock exposure is described as sparse, representing less than 1% of the Property. Malachite staining was reported to be associated with pink orthoclase.

The soil sampling program collected and analyzed 1,781 soil samples for Cu. Both A and B horizon material was collected and analyzed. Several anomalies were outlined, having a limited surface extent and erratic values with no defined orientation. A very close correlation between areas of poor drainage and anomalous values was observed. The results also showed that for samples collected from the B horizon material the background and threshold levels were 15 and 40 ppm, respectively whereas samples collected from A horizon material had background and threshold values of 45 and 120 ppm respectively.

The magnetic survey was completed over the same area as the soil geochemistry grid and outlined a narrow, steeply dipping magnetic high trending N60W.

## **6.4 Noranda Exploration Company Ltd. - 1972 to 1973 (The Sooner Claims)**

Following a reconnaissance geochemical program in August of 1971, Noranda staked 52 contiguous mineral claims in October (Sooner 1-36 & Sooner 1-16 Fr.) called the Ahdatay Property.

The Property was believed to cover the contact between intrusive rocks of the Hogem Batholith and Takla Group volcanic rocks, but a blanket of glacial till masks almost all bedrock in the area. The Property was described as being underlain by glacial rubble and detritus of chiefly an intrusive nature with intrusive float being dominated by granodiorite, granodiorite porphyries, syenites and diorites. Volcanic float was described as andesite and andesite porphyry (Dirom and Howell, 1972, AR#3962).

Several small copper anomalies with associated molybdenum anomalies were identified and a ground IP survey was conducted over the area (Smith and Fountain, 1972, AR#4431). Although no further work was filed for assessment purposes, it is believed that Noranda followed up with diamond drilling because historic drill core has been observed at this location by several authors.

The 4 holes were reportedly drilled on Sooner 16 and 27, and Sooner 14 Fr. claims. Assessment Report 13342 describes abandoned core from an early 1970's drill program at a location near 379,215 E / 6,131,996 N.

## **6.5 Pechiney Development Ltd. - 1972 to 1974 (Ian Claims)**

From 1972 to 1974 Pechiney Developments Ltd. ("Pechiney") completed soil sampling, magnetometer (Berthault, 1973, AR#4430), IP, resistivity surveys (Guelpa et al., 1973, AR#4653) and 4 diamond drill holes (Hainsworth, 1974; Guelpa, 1974, AR#5148 & #5212) on the Ian Group of Claims. The historic Ian claims were located approximately 800 m north of the Later 11 mineral claim in the vicinity of what is now the L7 claim. Three of the holes were abandoned prematurely but one hole was completed to a depth of 500 feet. Copper mineralization was observed in the core and the geology was logged primarily as andesites and porphyritic andesites. Assay values for this drilling appear to have been removed from the drill logs prior to submission for assessment credit.

## **6.6 BP Exploration Canada Ltd., Selco Division - 1983 to 1984 (Phil 2 Claims)**

In the summer of 1983, a reconnaissance rock sample returned anomalous gold and copper values from altered Takla volcanics (Farmer and Rebegliati, 1984, AR#12149). BP Exploration Canada ("BP") staked a 20-unit claim (Phil 2) and conducted soil sampling. Following positive results an additional 72 units (5 claims) were staked (Phil 3-7).

The soil geochemistry program consisting of 1100 samples analyzed for gold, copper, zinc, silver and arsenic (Farmer and Rebegliati, 1984, AR#12149). Two anomalous zones were identified; the Aplite Creek Zone and the Hilltop Zone where anomalous copper and gold was associated with strongly sheared and altered rocks.

In 1984, a follow-up program consisting of geological mapping, prospecting and rock chip sampling was carried out to identify potential economically mineralized zones (Meyers, 1984, AR#13342). Rock sample values up to 1500 ppb gold and 11,450 ppm copper occur in potassic-quartz-carbonate-pyrite altered volcanics at the Aplite Creek Zone. On the Phil 3 claim, currently Later 11, a coincident copper soil anomaly and IP anomaly was identified. This anomalous zone corresponds to the zone of primary interest outlined in Assessment Report 3962 from Noranda's 1972 work program on the Sooner claims.

## **6.7 BP Exploration Canada - 1989 to 1991 (Phil A Claims)**

In 1989, an airborne magnetometer and VLF-EM survey was completed over the entire Phil 2-7 claim area in an attempt to delineate possible intrusive centers and/or major structures, (Wong, 1990, AR#19615).

Conclusions from the airborne survey describe an extremely broken magnetic pattern with no apparent trend and a vertical magnetic gradient signature suggesting an intensely complex lithologic structure. VLF-EM data revealed a general north-south striking trend.

In June of 1990, BP completed a ground IP survey over the Phil 2, 4 & 5 claims. The report notes that three zones of anomalous IP response were observed, one of the zones warranted immediate drilling (Wong, 1991, AR#20876).

In September of 1990, BP Resources completed 1067.8 m of drilling in six holes. Highlights include 6.4 g/t gold over 6 meters, (Paterson and Barrie, 1991, AR#20943). In addition, forty-one rock chip samples were collected and analyzed for copper and gold; one rock chip sample contained 9,450 ppb gold and 6,600 ppm copper. The geology from drill core was described as primarily andesitic to latitic Takla Group volcanic rocks cut by dikes and “hybrid” rock.

In 1991, BP completed a follow-up IP survey to expand upon the IP survey completed during 1990. The results from this survey were not published for assessment purposes and no further work is believed to have been completed by BP.

## **6.8 Peregrine Syndicate - 2001 (Aplite Claims)**

In 2001, Peregrine Syndicate staked the Aplite claims in the area of previous drilling by BP. A program consisting of ground magnetics was conducted. No work of significance was completed.

## **6.9 Solomon Resources Ltd. - 2007 (Col-Magnet Property)**

In 2006, Solomon Resources Ltd. (“Solomon”) optioned the Col Property from Indata Resources Ltd. and Nation River Resources Ltd. Solomon subsequently added to the Property by staking the Magnet West and Magnet East claims. The Col-Magnet Property consisted of 48 mineral claims totaling 19,926 hectares.

In the spring of 2007, Solomon contracted Fugro Airborne Systems Inc. (“Fugro”) to conduct an airborne DIGHEM survey over the Col-Magnet Property. The survey consisted of 1458 line-km and was filed for assessment in June 2008 (Lane, 2007b, AR#29339).

## **6.10 PEMC - 2012 (Later Claims)**

In late summer of 2012, PEMC conducted a limited soil geochemical survey consisting of two reconnaissance lines over an airborne magnetic anomaly of interest at the time (Ritchie, 2013, AR#34320). No significantly anomalous soils were sampled during this program.

## **6.11 PEMC / OZE Exploration - 2014 (Later Claims)**

Between September and late December of 2014, 3 IP grids were completed over coincident magnetic high and resistivity high anomalies referred to as the Later, Sooner and Elbow target areas. The program was funded by Oz Minerals Exploration Pty. Large IP chargeability high anomalies were outlined at the Elbow and Sooner targets, while the Later IP survey did not result in any well defined IP chargeability anomalies (Ritchie, 2015b, AR#35406).



## **6.12 PEMC / OZE Exploration - 2015 (Later Claims)**

Between May and July of 2015, 6 diamond drill holes were completed on the Later Claims, with drilling operated by PEMC and funded by Oz Minerals Exploration Pty (Ritchie, 2015a, AR#35824). 3 drill holes were completed at the Sooner target and three holes were completed at the Elbow target. Anomalous intervals of copper were intersected at both target areas, although no significant copper intercepts were achieved. The most significant result was a gold intercept of 94 m grading 0.34 g/t gold from drilling at the Elbow target.

## **6.13 PEMC / ML Gold - 2016 (Later Claims)**

In the summer of 2016, ML Gold completed three diamond drill holes at the Elbow zone. The Property was under option from PEMC at this time. Again, notable gold intercepts were achieved at the Elbow zone with only locally anomalous copper mineralization. Highlights include 41.3 m at 0.42 g/t gold in hole DD16ELB007.

## **6.14 PEMC / ML Gold - 2017 (Aplite Creek claims)**

In the summer of 2017, ML Gold completed 5 diamond drill holes immediately to the west of the historical Aplite Creek drilling by BP Selco in 1990. The focus of the 2017 drilling program was an annular IP chargeability anomaly measuring roughly 1.5 km diameter that was outlined in historical IP surveys completed by BP Selco between 1988 and 1990. The annular anomaly was further defined to depth by a 12 km deep-penetrating IP survey completed by ML Gold in March of 2017. No significant copper or gold intercepts were achieved over the course of the 2017 drilling program, although propylitic alteration, characterized by a chlorite-epidote-pyrite  $\pm$  carbonate  $\pm$  albite assemblage was apparent in all holes drilled, with localized potassic alteration comprised of a biotite-pyrite  $\pm$  chalcopyrite assemblage.

## **6.15 PEMC - 2019 (Later Claims)**

Between October and December of 2019, PEMC completed a small RC drilling program. Drilling was preceded by passive seismic and soil geochemical surveys over the Elbow and Later target areas in September of 2019. Four short RC holes totaling 337 m were completed over the course of the snowmobile-assisted winter drill program.

Two short RC holes were drilled at the Elbow target area, roughly 1 km to the north and northwest of diamond drill hole DD15ELB001, which intersected propylitic and local phyllic alteration and achieved an intercept of 94 m grading 0.34 g/t Au. The two holes intersected weak to moderate propylitic alteration with 2-4% pyrite as disseminations and as medium grained fill within sporadic quartz  $\pm$  carbonate veins. One RC drill hole from the Elbow target area was sent for laboratory analysis, with the most notable intercept being 77.7 m grading 0.18 g/t gold from 29 metres to 106.7 metres.

Two short RC holes were drilled at the Later target area, which were targeting anomalous copper-in-soil coincident with a favourable magnetic “bull’s eye” signature and a weak IP chargeability response. No significant values were obtained from the two short RC holes drilled at the Later target area.

## 7 Geological Setting & Mineralization

### 7.1 Regional Geology

The Property lies within the Quesnel Terrane, part of the Intermontane Belt, a composite of low metamorphic grade magmatic arc segments of mixed oceanic and continental affinities, and oceanic plates, which amalgamated to the North American continental margin in the Early Jurassic Period (Figure 7.1).

The Quesnel Terrane formed along or near the western North American continental margin and accreted to the margin in the late Early Jurassic (186-181 Ma). Quesnellia is found along most of the length of the Canadian Cordillera and in the Nation Lakes area is characterized by Late Triassic to Early Jurassic volcanic and sedimentary rocks of island arc affinity (Nelson and Colpron, 2007).

The Quesnel Terrane is contacted to the east with Proterozoic and Paleozoic carbonate and siliciclastic rocks of the Cassiar Terrane, representing part of the ancestral North American miogeocline. In places, the Quesnel and Cassiar terranes are separated by an intervening assemblage of late Paleozoic oceanic rocks of the Slide Mountain Terrane. The boundary between the Quesnel and Cassiar terranes is a complex structural zone that includes late Early Jurassic east-directed thrust faults that juxtapose the Quesnel Terrane above the Cassiar Terrane.

Towards the west the Quesnel Terrane is in fault contact with the late Paleozoic through mid-Mesozoic oceanic rocks of the Cache Creek Terrane, interpreted to be part of the accretion-subduction complex that was responsible for generating the Quesnel Magmatic arc. Younger rocks commonly found in the region include Cretaceous granitic stocks and batholiths, Eocene volcanic and sedimentary rocks, and flat lying basalts of both Neogene and Quaternary age.

Intrusive units of a wide variety of sizes, ages, compositions and textures occur in the region. The largest bodies are the Hogem and Germansen batholiths. The Hogem Intrusive Suite is composed of many discrete plutons including mafic to syenitic Late Triassic to Early Jurassic intrusions, as well as mid-Cretaceous granites. A myriad of small intrusions and some larger ones are equivalent to the Early Jurassic volcanic units and to the late stages of Takla Group volcanism. Significant porphyry copper-gold deposits in the area are associated with “crowded porphyries”. In a typical crowded porphyritic monzonite, small blocky plagioclase phenocrysts (1-2 mm), with lesser hornblende, biotite and/or augite touch each other in a fine grained matrix of plagioclase, potassium feldspar, mafic and oxide minerals.

Volcanic units in the area have been assigned to the Upper Triassic Takla Group and consist of a number of distinguishable subunits, each of regional extent. In the Nation Lakes area the Takla Group has been subdivided into a number of units: the Slate Lake succession, the Plughat Mountain succession, the Inzana Lake succession and the Willy George succession. Superficially Takla stratigraphy seems to represent an upwards transition from basal sediments through increasing epiclastic and then pyroclastic components, into thick volcanic piles.

Bulletin 99 (Nelson and Bellefontaine, 1996) describes three new Lower Jurassic units, the Chuchi Lake, Twin Creek and Discovery Creek successions that were defined during the course of regional mapping in the Nation Lakes area from 1990 through 1992. These units had previously been assigned to the Triassic Takla Group but have been separated for the following reasons:

- The Chuchi Lake and Twin Creek successions are volcanic, but differ clearly from the Witch Lake and Plughat Mountain successions in their lithologic heterogeneity and the dominance of more felsic compositions.
- They overlie the Upper Triassic volcanic rocks. The base of the Twin Creek succession is a well-exposed, easily recognized unconformity.

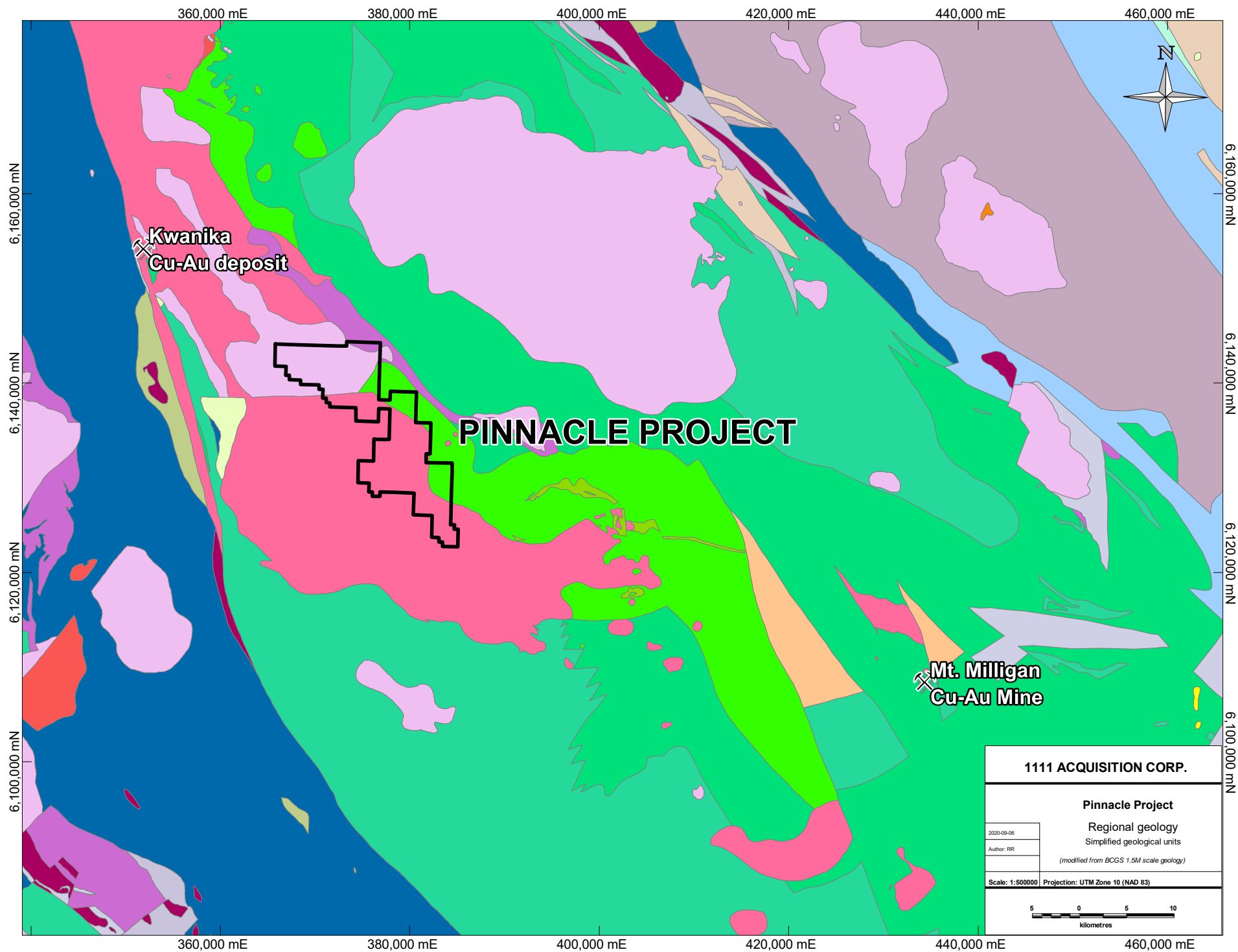


Figure 7.1: Regional Geology - simplified units. Modified from BCGS 1:1.5M scale digital geology.

### SEDIMENTARY ROCKS

Mainly shale, sandstone, siltstone, conglomerate, limestone and dolostone.

TERTIARY



CRETACEOUS +/- TERTIARY



UPPER CRETACEOUS



LOWER CRETACEOUS



JURASSIC



TRIASSIC



UPPER PALEOZOIC



LOWER PALEOZOIC



UPPER PROTEROZOIC



MIDDLE PROTEROZOIC



### VOLCANIC ROCKS

Mainly basalt, andesite, dacite and rhyolite.

LATE TERTIARY TO QUATERNARY



EARLY TERTIARY



CRETACEOUS



JURASSIC



TRIASSIC



PALEOZOIC



PROTEROZOIC



### METAMORPHIC ROCKS

Mainly slate, schist, gneiss, marble, greenstone and amphibolite.

CENOZOIC



MESOZOIC



PALEOZOIC



LATE PROTEROZOIC



EARLY TO MIDDLE PROTEROZOIC



AGE UNKNOWN



### INTRUSIVE ROCKS

Mainly granite, diorite and granodiorite.

MIDDLE TO LATE TERTIARY



LATE CRETACEOUS TO EARLY TERTIARY



EARLY CRETACEOUS



MIDDLE TO LATE JURASSIC



TRIASSIC TO EARLY JURASSIC



PALEOZOIC



PROTEROZOIC



AGE UNKNOWN



ULTRAMAFIC ROCKS (VARIOUS AGES)



**Figure 7.2:** Geological Legend for Regional Geology - simplified units. *Modified from BCGS 1:1.5M scale digital geology.*

- Fossils from the Chuchi Lake succession are early to late Pliensbachian in age ( $\approx 190\text{-}183\text{ Ma} \pm 1.5\text{ Ma}$ ), considerably younger than the youngest known Takla Group in the area.
- The upper unit in the Twin Creek succession is 199.7 Ma.
- The Discovery Creek clastic sedimentary beds contain upper Toarcian ( $\approx 178\text{-}183\text{ Ma}$ ) ammonites.
- In the McConnell Creek area, Upper Triassic rocks are included in the Takla Group, but Lower Jurassic aged rocks are included in the Hazelton Group.

The Quesnel arc had two phases of development, Late Triassic and Early Jurassic. The first, Late Triassic early arc development phase is dominated by augite phyric basalt and alkali basalt (shoshonitic) volcanism. Basal sediments of the Slate Creek succession (235-204 Ma) grade upwards into increasingly volcanic and volcanoclastic rocks of the Inzana, Willy George, Plughat Mountain and Witch Lake successions (230-204 Ma), collectively referred to as the Takla Group. A depositional hiatus marks a break in volcanic activity prior to the onset of renewed volcanic activity in the Early Jurassic.

The second phase of arc development began in the early Jurassic and is characteristic of a more mature arc, developed on thicker crust. These early Jurassic volcanic suites were compositionally more heterogeneous and dominated by plagioclase and plagioclase-augite phyric, sub-alkaline to shoshonitic lithologies. The Triassic arc successions are overlain paraconformably by the early Jurassic suites of the Chuchi Lake and Twin Creek successions.

The Hogem batholith differs from other Upper Triassic batholiths in the Quesnel terrane in two significant ways.

1. It is unusually long lived (Late Triassic to Cretaceous) rather than confined to a shorter interval near the Triassic-Jurassic boundary such as the Guichon and Iron Mask Batholiths.
2. The Guichon and Iron Mask Batholiths are calc-alkaline and alkaline respectively, whereas the Hogem Batholith is composed of four phases which alternate from alkaline to calc-alkaline, with each phase becoming progressively more felsic.

## 7.2 Local and Property Geology

The Pinnacle Project straddles the contact between intrusive rocks of the Hogem Intrusive Suite and volcanic rocks of the Chuchi Lake succession. Chuchi Lake succession volcanic flows, pyroclastics and associated rock are predominate to the north and Hogem intrusive rocks dominate to the south of this contact, as shown in Figure 7.3.

The early Jurassic Chuchi Lake succession is dominated by subaerial to submarine, maroon to green, plagioclase  $\pm$  augite phyric latite, trachyte and andesite flows and pyroclastics. Regional mapping has the Chuchi Lake succession dipping gently to the south at roughly 20 degrees.

Intrusive rocks of the early Jurassic Hogem Intrusive Suite in the area of the Property are highly differentiated, and span a range from hornblendites and pyroxenites to diorites and syenites, with a predominance of monzonites to monzodiorites.

Due to the presence of widespread glacial cover and lack of outcrop diamond drilling has provided additional information and detail of the geology underlying the Later Property.

The geology in the Elbow target area to the north of the contact, consists of variably altered andesitic heterolithic breccias, trachytic flows, latites and tuffs that are cut by feldspar porphyry and aplite dikes. Alteration was predominantly propylitic with localized zones of phyllic alteration consisting of silica-sericite  $\pm$  biotite. Localized potassic alteration as K-feldspar in veins and vein selvages increases at depth with coarse blebs of pyrite associated with quartz veins, which coincide spatially with aplite dikes. Intrusive

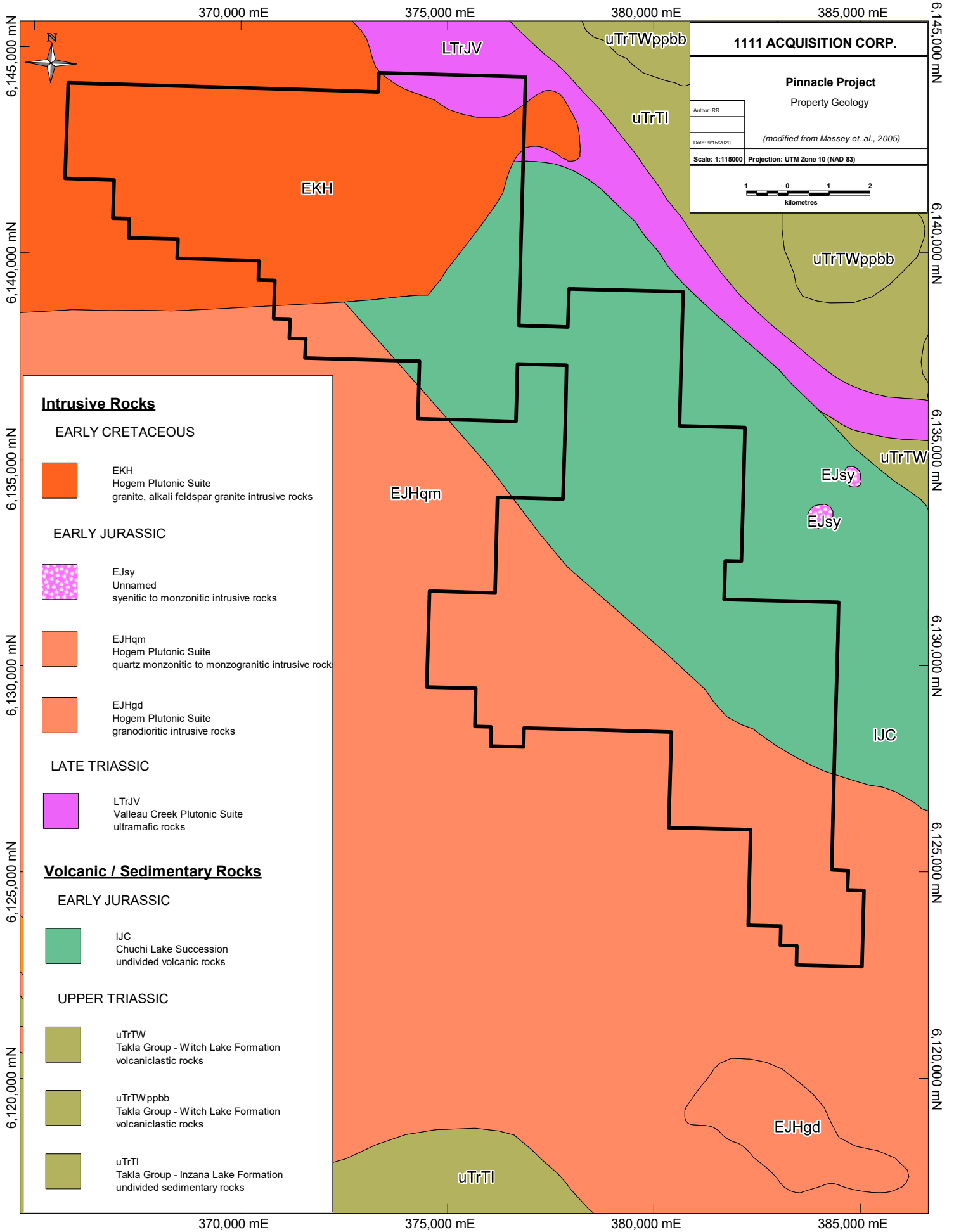


Figure 7.3: Local Geology. Modified from BCGS digital geology by Massey et. al. (2005).

rocks in the Elbow target area consist of variably altered monzonite with lesser syenite cut by basalt, feldspar porphyry, diorite and latite dikes.

At the Sooner target area drilling at DD15SON001 & 002 intersected variably altered monzonite, diorite and syenite with lesser feldspar porphyry, diorite and heterolithic andesite breccia that were cut by late mafic and aplitic dikes. Moderate to strong calc-silicate alteration with coarse grained magnetite alteration persists through roughly the first 200 m of DD15SON001 and is locally associated with thin bands of semi-massive pyrite and trace chalcopyrite. Alteration is variable and predominantly propylitic with lesser K-feldspar alteration. Drilling at hole DD15SON003 intersected fine grained andesitic volcanics at the top of the hole to a depth of 350 m. Below this intrusive lithologies characterized by variably altered syenite and monzonite were encountered. Once into the intrusives, coarse grained calc-silicate alteration persisted.

Geologic units encountered in historical drilling at the Aplite Creek area consists primarily of andesitic volcanics locally intruded by syenitic to dioritic dikes. Syenite and monzonite porphyry dikes have been encountered in this area, and are locally associated with alteration and copper-gold mineralization.

### 7.2.1 Property Mineralization & Alteration

Mineralization was first recognized on the Property in the 1970's in the area of Aplite Creek where chalcopyrite and secondary malachite occur in a calcite-quartz breccia zone that can be traced for approximately 30 m and is approximately 7 m in width. During 1990 BP Resources Canada Ltd. completed an exploration program in the area of Aplite Creek that consisted of 1067.8 m of diamond drilling in 6 holes. Highlights from this program include:

- DDH # AH90-3, 40-50 m (10 m) @ 0.4 g/t Au, 0.07% Cu;
- DDH # AH90-4, 60-64 m (4 m) @ 1.7 g/t Au, 0.004% Cu;
  - *incl.* 76-82 m (6 m) @ 0.4 g/t Au, 0.08% Cu;
  - *incl.* 106-112 m (6 m) @ 6.4 g/t Au, 0.098% Cu.

Alteration from the 1990 drilling was described as primarily propylitic but with moderate potassic alteration both in the intrusion and immediately adjacent (Paterson and Barrie, 1991).

Diamond drilling to the south and west of the Aplite Creek Target area in 2015 and 2016 encountered widespread pyrite mineralization and propylitic ± phyllic ± weak potassic alteration in addition to gold mineralization with intermittent copper values. At the Elbow Target Area, to the south of Aplite Creek, 2015 diamond drilling encountered 94 m @ 0.34 g/t Au with sporadic anomalous copper values that was associated with quartz-carbonate veining quartz-sericite-pyrite alteration overprinting early biotite alteration. 2016 drilling at the Elbow Zone returned 41.3 m @ 0.41 g/t Au.

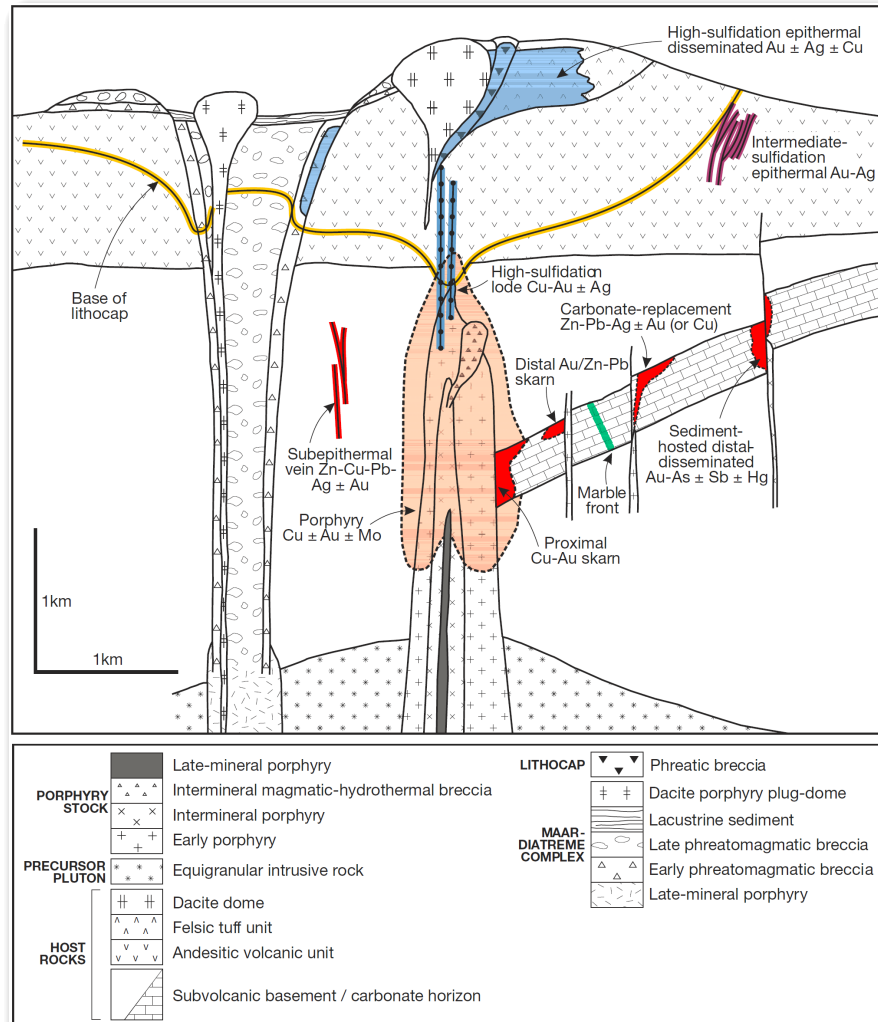
Drilling to the west of the Aplite Creek Target area in 2015 encountered propylitic and calc-silicate altered intrusive rocks, locally with anomalous copper values. One hole, DD15SON003, encountered phyllic and lesser argillic alteration in volcanic and volcanoclastic units with abundant pyrite.

The length, width, depth and continuity of the mineralization of the Aplite Creek and Elbow target areas cannot be ascertained given the limited exploration completed by historical operators to date.

## 8 Deposit Types

### 8.1 Porphyry Copper-Gold Deposits

Porphyry deposits are large, low- to medium-grade deposits in which primary ore minerals are dominantly structurally controlled and which are spatially and genetically related to felsic to intermediate porphyritic intrusions (Sinclair, 2007). Their formation is related to magma emplacement at relatively high levels in the crust, where the circulation of hydrothermal fluids facilitates scavenging, mobilizing and deposition of metals.



**Figure 8.1:** Anatomy of a telescoped porphyry Cu system (Sillitoe, 2010).

Porphyry copper systems are defined as large volumes of hydrothermally altered rock centered on porphyry copper stocks that may also contain skarn, carbonate-replacement, sediment-hosted, and high- and intermediate-sulphidation epithermal base and precious metal mineralization (Sillitoe, 2010).

The metal content of this class of deposits is diverse, but within the scope of this report can be narrowed down to those grouped as Copper ± Molybdenum ± Gold (Cu ± Mo ± Au).



### **8.1.1 Importance**

Porphyry copper deposits account for approximately two-thirds of global copper production and more than 95% of world molybdenum production. Porphyry deposits are also major sources of gold, silver, and tin; significant byproducts include Re, W, Pd, Pt, Te and Se.

### **8.1.2 Geographic Distribution**

Porphyry deposits occur throughout the world in a series of extensive, relatively narrow, linear metallogenic provinces. They are predominantly associated with Mesozoic to Cenozoic orogenic belts in western North and South America, around the western margin of the Pacific Basin, and in the Tethyan orogenic belt in eastern Europe and southern Asia. However, major deposits also occur within Paleozoic orogens in Central Asia and eastern North America and, to a lesser extent, within Precambrian terranes (Sinclair, 2007).

### **8.1.3 Geographic Distribution within British Columbia**

Late Triassic to Early Jurassic Cu-Au and Cu-Mo porphyry deposits of the Stikine and Quesnel terranes are collectively the most important group of deposits in British Columbia (Nelson and Colpron, 2007). They include such long time producers as Highland Valley, Gibraltar, Copper Mountain, Brenda, and Afton; projects such as Mt. Milligan, Red Chris, Schaft Creek, Brucejack, and Kerr-Sulphurets-Mitchell (KSM) are also moving towards production. Host intrusions range from 210 Ma (Galore, Highland Valley) to 183 Ma (Mt. Milligan). The abundance of porphyry and other deposits marks Stikinia and Quesnelia as remarkably rich metallogenetic areas, comparable to the modern arc setting of Papua New Guinea.

### **8.1.4 Tectonic Setting**

Porphyry Cu systems are generated mainly in magmatic arc environments subjected to broadly contractional settings, marked by crustal thickening, surface uplift and rapid exhumation (Sillitoe, 2010). Porphyry Cu deposits are typically located in volcanic or sub-volcanic environments in subduction-related, continental and island-arc settings.

Fault and fault intersections are invariably involved in determining the formational sites and geometries of porphyry Cu systems and their constituent parts. Some investigators emphasize the importance of intersections between continental-scale transverse fault zones and arc-parallel structures for porphyry Cu formation (Richards et al., 2001).

### **8.1.5 Geological Setting**

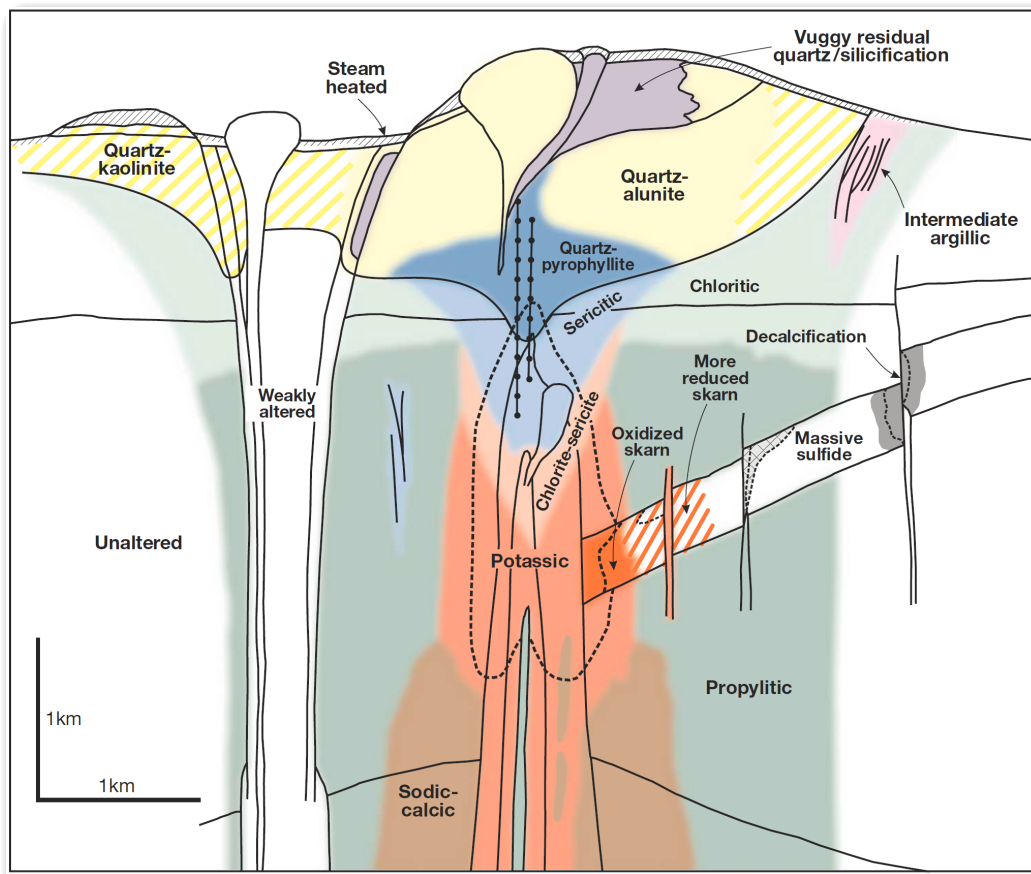
Porphyry deposits occur in close association with porphyritic epizonal and mesozonal intrusions. There is a close temporal relationship between magmatic activity and hydrothermal mineralization. Commonly located in volcanic or sub-volcanic environments, host rocks typically include volcanics, intrusives (which may or may not be coeval with country rock) and volcano-sedimentary, epiclastic and pyroclastic rocks.

The composition of intrusions associated with porphyry deposits varies widely and appears to exert a fundamental control on the metal content of the deposits. Intrusive rocks associated with porphyry Cu-Au and porphyry Au deposits tend to be low-silica, relatively mafic and primitive in composition, ranging from calc-alkaline dioritic and granodioritic plutons to alkalic monzonitic rocks. Porphyry Cu and Cu-Mo deposits are associated with intermediate to felsic, calc-alkaline intrusive rocks ranging from granodiorite to granite in composition (Richards, 1990).

### 8.1.6 Alteration

Hydrothermal alteration is extensive and typically zoned on a deposit scale as well as around individual veins and fractures. Alteration zones on a deposit scale commonly consist of an inner potassic ± sodic core characterized by K-feldspar and/or biotite (± amphibole ± magnetite ± anhydrite), and an outer, more extensive zone of propylitic alteration that consists of quartz, chlorite, epidote, calcite and, locally, albite associated with pyrite. Zones of phyllic (quartz + sericite + pyrite) and argillic alteration (quartz + illite + pyrite ± kaolinite ± montmorillonite ± calcite) may be part of the zonal pattern between the potassic and propylitic zones, or can be irregular or tabular, younger zones superimposed on older alteration and sulphide assemblages (Moyle et al., 1990).

Alteration mineralogy is controlled in part by the composition of the host rocks, and by the composition of the mineralizing system. In mafic host rocks with significant iron and magnesium, biotite is the dominant alteration mineral in the potassic alteration zone, whereas K-feldspar dominates in more felsic rocks (Sinclair, 2007). In more oxidized environments, minerals such as pyrite, magnetite (± hematite), and anhydrite are common, whereas pyrrhotite is present in more reduced environments (Rowins, 2000).



**Figure 8.2:** Generalized alteration-mineralization zoning pattern for telescoped porphyry Cu systems (Sil-litoe, 2010).

### 8.1.7 Structure and Mineralization Styles

As mentioned above, faults and fault intersections are invariably involved in determining the formation and geometry of porphyry Cu systems. At the scale of ore deposits, associated structures can result in a variety of mineralization styles, including veins, vein sets, stockworks, fractures, “crackled zones”, and breccia pipes. Orientations of mineralized structures can be related to local stress environments around the tops of plutons or can reflect regional stress conditions.

### 8.1.8 Mineralogy

The mineralogy of porphyry deposits is highly varied, although pyrite is typically the dominant sulphide mineral in porphyry Cu ± Mo ± Au deposits. Principal ore minerals are chalcopyrite, bornite, chalcocite, tennantite, enargite, other Cu sulphides and sulphosalts, molybdenite, and electrum; associated minerals include pyrite, magnetite, quartz, biotite, K-feldspar, anhydrite, muscovite, clay minerals, epidote and chlorite.

### 8.1.9 Morphology and Architecture

The overall geometry of individual porphyry deposits is highly varied and includes irregular, ovoid, pipe-like or cylindrical shapes, which may or may not be “hollow”. Ore bodies are zoned, with often barren cores and crudely concentric metal zones, and may occur separately or overprint one another, vertically and laterally. Complex, irregular ore and alteration patterns arise from overprinting episodes of zoned mineralization and alteration of different ages.

### 8.1.10 Genetic Model

Porphyry Cu systems typically span the upper 4 km or so of the crust, with their centrally located stocks being connected downward to parental magma chambers at depths of perhaps 5 to 15 km. The water-rich parental magma chambers are the source of the heat and hydrothermal fluids throughout the development of the system. Large, poly-phase hydrothermal systems developed within and above genetically related intrusions are formed and are often long-lived ( $\approx 5\text{m.y.}$ ).

Convection of hydrothermal fluids throughout the country rock and intruding stocks results in a focusing of metals along conduits and within permeability networks where hydro-fracturing has taken place. Effective scavenging of metals is facilitated by “organized” hydrothermal systems in a state of convection, while efficient metal deposition is enhanced by pore-fluid over-pressurization resulting in catastrophic failure and rapid remobilization and de-pressurization of metalliferous hydrothermal fluids.

### 8.1.11 Porphyry Copper Subtypes

**8.1.11.1 Alkalic Copper-Gold Porphyry** Alkalic Cu-Au porphyry deposits are known in only a few mineral provinces worldwide, with British Columbia being the type area for such deposits (Chamberlain et al., 2006). Relatively unique, alkalic porphyry deposits are an especially Au-rich variety of porphyry deposits that still maintain good copper grades. Alkalic Cu-Au porphyry deposits differ from Cu or Cu-Mo dominant porphyry deposits in the following ways:

#### Alteration

Alkalic porphyry deposits have smaller and more cryptic alteration footprints (Figure 8.3). On the

deposit scale, phyllic alteration is typically restricted to fault zones that penetrate late in the hydrothermal system. Furthermore, alkalic deposits lack advanced argillic alteration in most cases (Chamberlain et al., 2006).

### **Tectonic and Geological Setting**

Porphyry deposits associated with alkaline intrusions typically form in an island-arc setting, possibly during periods of extension. Geological compositions vary between silica-saturated (diorite and monzonite) or silica-undersaturated (pyroxenite and syenite) complexes (Chamberlain et al., 2006). The volcano-plutonic suites are generally considered more primitive and less felsic than those associated with Cu ± Mo porphyry deposits.

### **Architecture**

Alkalic systems often consist of numerous discrete bodies that can exhibit complex and variable geometries, from high-level breccia-hosted bodies (Mt. Polley) to deeper level intrusive-centered sulphide accumulations (Mt. Milligan or Lorraine). Orebody geometries commonly mimic associated pipe-like intrusions (Deyell and Tosdal, 2004).

#### **8.1.12 Telescoped Intrusion Centered Ore Deposits**

Telescoping is the process of juxtaposing or overprinting early, deep mineralization, commonly of the porphyry type, and late, shallow, generally epithermal styles of precious- and base-metal mineralization. Telescoping is attributed to synhydrothermal degradation of volcanic paleosurfaces, as a result of either rapid erosion under pluvial conditions or sector (and, less probably, caldera) collapse of the volcanic edifices. Paleosurfaces may be lowered easily by 1 km during the ~ 1 m.y. total life spans of hydrothermal systems, leading to the vertical compression of any contained ore deposits by at least 1 km.

Sector collapse may be triggered by volcanic tumescence (Sillitoe, 1994) due to synmineralization intrusion, and it may be facilitated by hydrothermal weakening of volcanic edifices. Sector collapse causes extensive ingress of meteoric and/or ocean water to the magmatic environment and a decrease in confining pressure. The latter may induce hydrothermal brecciation, boiling and possible epithermal gold precipitation, and even accelerated efflux of magmatic fluids.

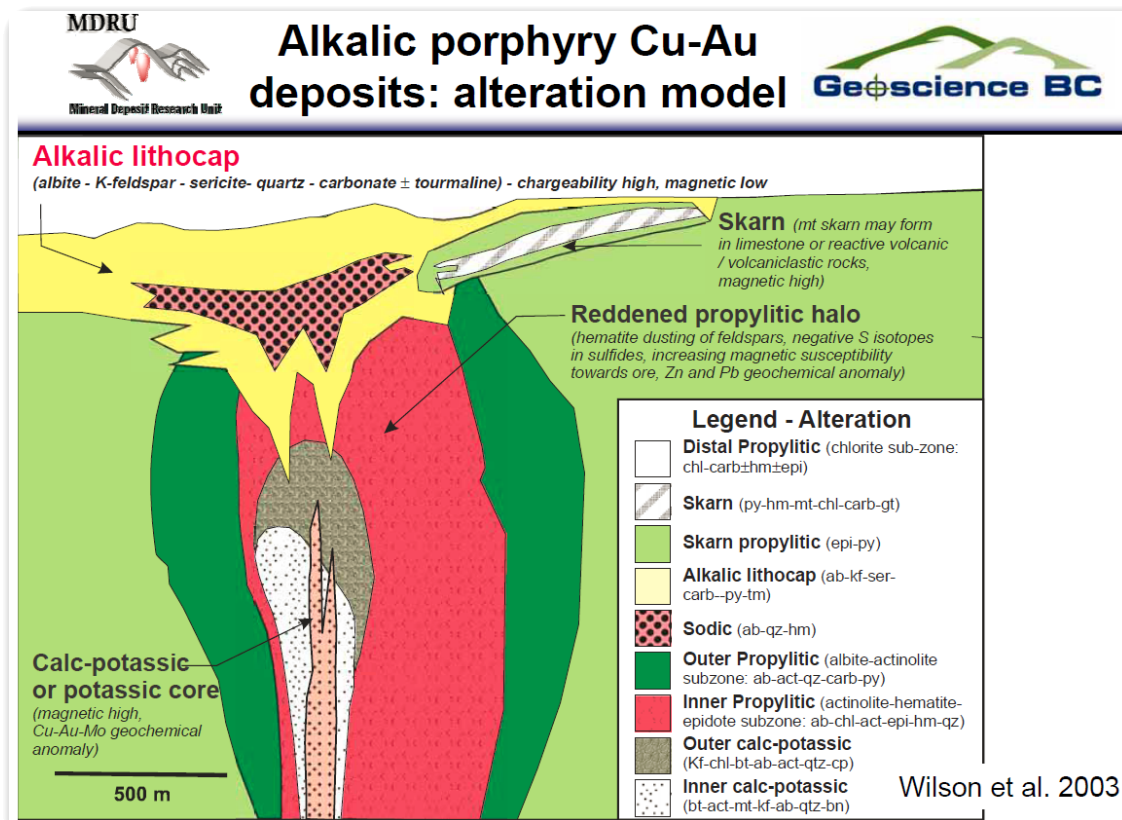
Telescoped systems (Figures 8.1 & 8.2) are believed to possess greater potential for the existence of both porphyry-type deposits at shallower than normal depths and giant ore deposits (Sillitoe, 1994).

#### **8.1.13 Exploration Models**

**8.1.13.1 Geophysical Targeting** Several geophysical techniques can be effectively utilized while exploring for porphyry Cu ± Mo ± Au deposits. Most notably, magnetic, electromagnetic and Induced Polarization surveys are considered highly effective tools for detection of characteristic anomalies.

At a regional scale, airborne magnetic surveys are useful for mapping out the geological framework and for identifying magmatic arcs and their constituent elements. At a local scale, both airborne and ground magnetic surveys can be effective at targeting intrusions and associated mineral deposits. Primary magnetite typically forms as an accessory mineral within intrusive bodies, and secondary magnetite may result from hydrothermal alteration and/or hornfelsing. It should be noted, however, that some deposits are characterized by magnetic lows due to the destruction of magnetite in phyllic alteration zones (Sinclair, 2007).

Electromagnetic airborne and ground surveys can be effective at delineating resistive, porphyritic intrusions as well as associated alteration haloes. In the search for porphyry deposits, large circular or ovate



**Figure 8.3:** Generalized alteration and mineralization zoning associated with alkalic systems in British Columbia.

resistivity highs are considered to be sources of potential interest (Lane, 2007b, AR#29339). A circular-like high resistivity anomaly directly coincides with the Mt. Milligan porphyry and might therefore reflect the potassic alteration halo (Devine, 2012; Geotech Ltd., 2009).

At a local scale, ground Induced Polarization surveys have proved to be the most effective at detecting metalliferous bodies. At Copper Mountain, this technique was responsible for the discovery or extension of several new zones, with resulting chargeability anomalies having a shape that generally corresponds with the known shape of the ore bodies (Stanley et al., 1995).

Chile is host to some of the world's most spectacular porphyry copper deposits. The aeromagnetic signature of porphyry copper systems in northern Chile was investigated by Behn et al., 2001. The authors proposed that transverse magnetic anomalies (lows) were responses to the loci of emplacement of intrusive bodies, and that all known porphyry copper deposits in northern Chile are spatially related to these transverse magnetic anomalies.

**8.1.13.2 Geological Targeting** Volcanic arc complexes are high priority exploration targets for intrusion related ore deposits. In British Columbia, the Stikine Terrane and the Quesnel Terrane represent Triassic-Jurassic volcanic arc complexes that were emplaced during the Jurassic and collectively represent the foundation for further geological targeting. Within these terranes, unconformities and contact faults represent prospective locations for the identification of mineralization. Due to the size of porphyry Cu deposits their associated alteration haloes, alteration zonation patterns over 10's to 1,000's of meters provide

a possible method of vectoring towards areas of highest priority.

The presence of glacial cover across large portions of BC make direct observation of alteration patterns in outcrop challenging. In these areas, local scale geological mapping is of limited effectiveness. At regional scales, however, regional mapping can be useful at narrowing in on prospective terranes and their constituent lithologies, and inferences can be made when used in conjunction with geophysical data.

**8.1.13.3 Geochemical Targeting** Regional silt sampling programs have been successful in narrowing in on prospective areas for porphyry associated mineralization, although the data is often too coarse for targeting at a local scale. Areas with glacial cover will not be conducive to silt sampling as water courses may not be cutting through and re-mobilizing any of the underlying rock.

At a local scale, soil geochemistry can be utilized as a means of direct detection of metalliferous bodies, though its effectiveness is invariably related to presence and thickness of cover and/or soils. New techniques in sampling and analysis have allowed for detection of buried deposits. By lowering thresholds with partial extractions of selectively sampled soil components, soil geochemistry can be effective in detecting porphyry Cu mineralization through transported glacial overburden of up to 100's of meters (Heberlein et al., 2010).

Traditional soil sampling (B-Horizon) performed over the Mt. Milligan deposits outlined numerous copper and gold anomalies within the area encompassing the vast majority of the deposits. However, extensive cover partially masked and dispersed the bedrock geochemical response, while geochemical values of colluvium samples were much higher (Sketchley et al., 1995).

## 9 Exploration

1111 Acquisition has not completed any exploration activities on the Pinnacle Project to date. All exploration conducted by previous operators is outlined in Section 6 of this Report.

## 10 Drilling

1111 Acquisition has not completed any drilling activities to date on the Pinnacle Project. All drilling outlined below has been conducted by previous operators. 15 diamond drill holes totaling 4,679.7 m were completed by various operators between 2015 and 2017 (Table 10.1), and 4 reverse circulation drill holes were completed by PEMC in 2019 (Table 10.2). 6 diamond drill holes were completed in 1990 by BP Resources Canada and 4 diamond drill holes were completed by Pechiney Development Corp. in 1974 (Table 10.5). Drill hole locations are illustrated in Figure 10.1.

### 10.1 Recent Drilling - 2015 to 2019

**Table 10.1:** Summary of 2015 to 2017 Diamond Drilling

Prospect	Hole ID	UTM East	UTM North	Elevation (m)	Azimuth (°)	Dip (°)	Depth (m)
ELBOW	DD15ELB001	382,000	6,129,582	1,102	357	-50	501.0
ELBOW	DD15ELB002	381,822	6,128,901	1,104	212.5	-50	501.0
ELBOW	DD15ELB003	381,209	6,129,913	1,117	33.5	-50	76.5
ELBOW	DD15ELB004	381,209	6,129,913	1,117	35	-60	303.0
SOONER	DD15SON001	377,553	6,132,245	1,211	19.1	-50	305.2
SOONER	DD15SON002	377,326	6,131,760	1,186	29.8	-51.8	305.2
SOONER	DD15SON003	378,096	6,132,638	1,226	209.2	-51.4	501.0
ELBOW	DD16ELB005	382,790	6,129,380	1,100	45	-70	447.1
ELBOW	DD16ELB006	382,381	6,129,397	1,095	0	-60	316.5
ELBOW	DD16ELB007	382,381	6,129,397	1,095	180	-60	343.5
APLITE CREEK	DD17PR001	379,875	6,132,110	1,194	135	-60	228.3
APLITE CREEK	DD17PR002	379,875	6,132,110	1,194	45	-60	211.6
APLITE CREEK	DD17PR003	379,829	6,132,519	1,220	135	-60	209.4
APLITE CREEK	DD17PR004	380,550	6,132,400	1,227	85	-50	205.7
APLITE CREEK	DD17PR005	380,550	6,132,400	1,227	270	-60	224.6
<b>Total metres</b>							<b>4,679.7</b>

#### 10.1.1 PEMC OZE Exploration - 2015

During May and June of 2015 a diamond drill program consisting of 2,492.9 meters in 7 holes was completed. Drilling focused on two target areas, the Elbow and Sooner areas where Induced Polarization surveys in 2014 identified areas of anomalous chargeability. Although four holes were drilled at the Elbow target area only three of the holes (DD15ELB001, 2 & 4) were completed to the target depth. Drill hole DD15ELB003 was terminated at 76.5m due to errors in the location of blocks used to accurately determine the location and depth of the hole. Due to a lack of accurate downhole drill location data this hole was not assayed or logged. Hole DD15ELB003 was subsequently re-collared as DD15ELB004 and drilled to a depth of 303 m.

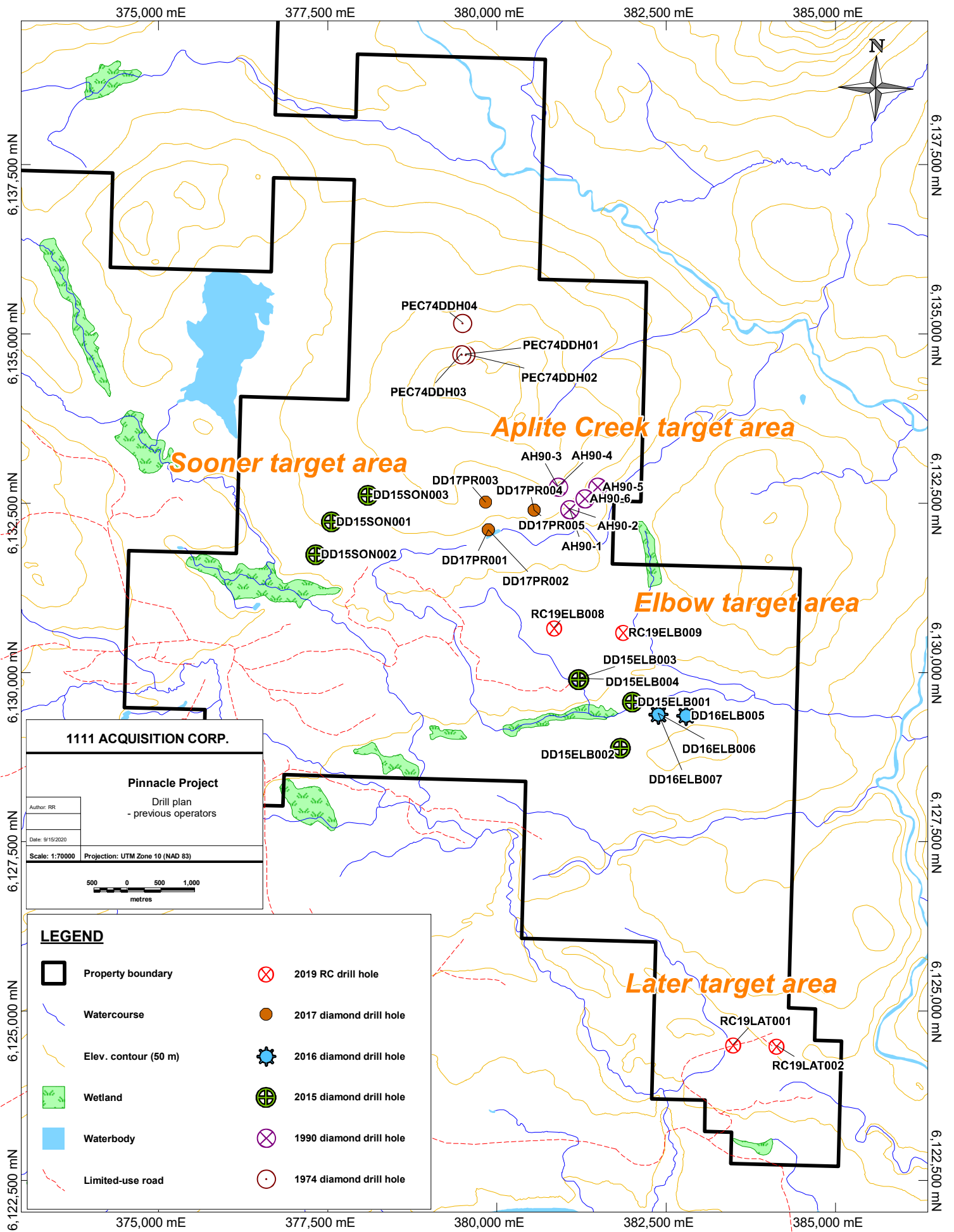


Figure 10.1: Drill plan - historical drilling.



**Table 10.2:** Summary of 2019 Reverse Circulation Drilling

Prospect	Hole ID	UTM East	UTM North	Elevation (m)	Azimuth (°)	Dip (°)	Depth (m)
ELBOW	DD19ELB008	380,843	6,130,665	1,137	0	-90	96.0
ELBOW	DD19ELB009	381,865	6,130,605	1,130	0	-90	112.8
LATER	DD19LAT001	383,490	6,124,510	1,090	0	-90	91.4
LATER	DD19LAT002	384,129	6,124,490	1,095	0	-90	36.6
<b>Total metres</b>							<b>336.8</b>

**Table 10.3:** Significant Intercepts of 2015 to 2017 Diamond Drilling (true thicknesses not known)

Hole ID	Operator	Year	From (m)	To (m)	Interval (m)	Copper (ppm)	Gold (g/t)	Silver (g/t)
DD15ELB001	PEMC/OZE	2015	206.0	318.0	112.0	253	0.29	2.60
DD15ELB002	PEMC/OZE	2015		Not assayed				
DD15ELB003	PEMC/OZE	2015		Not assayed				
DD15ELB004	PEMC/OZE	2015	78.0	108.0	30.0	121	0.23	1.59
DD15SON001	PEMC/OZE	2015	12.4	130.0	117.6	366	0.03	0.66
DD15SON002	PEMC/OZE	2015		Not assayed				
DD15SON003	PEMC/OZE	2015	350.0	400.0	50.0	378	0.01	0.35
DD16ELB005	PEMC/ML Gold	2016	194.2	297.8	103.6	133	0.14	0.79
DD16ELB006	PEMC/ML Gold	2016	23.5	75.3	51.8	174	0.24	1.31
DD16ELB007	PEMC/ML Gold	2016	18.7	60.0	41.3	85	0.42	1.57
	<i>including</i>		23.5	32.6	9.1	150	1.34	3.54
DD17PR001	PEMC/ML Gold	2017		Not assayed				
DD17PR002	PEMC/ML Gold	2017		Not assayed				
DD17PR003	PEMC/ML Gold	2017		Not assayed				
DD17PR004	PEMC/ML Gold	2017	105.8	114.9	9.1	367	0.14	0.46
DD17PR005	PEMC/ML Gold	2017		Not assayed				

**10.1.1.1 The Elbow Target Area** DD15ELB001, drilled to the north, targeted the center of a chargeability anomaly where chargeability values were greater than 20 mV/V. The hole was drilled to a depth of 501 meters and intersected variably altered andesitic volcanic rocks consisting of heterolithic breccias and massive flows cut by hypabyssal feldspar porphyry dikes and aplite dikes. Alteration was predominantly propylitic and consisted of moderate to strong chlorite-epidote-pyrite assemblages throughout the hole. From 208 - 302 meters phyllic alteration consisting of silica-sericite  $\pm$  biotite was encountered associated with a zone of quartz-carbonate-pyrite veining. This interval returned 94 meters grading 0.34 g/t gold with elevated copper values including 0.23% Cu from 208 - 210 meters. Sporadic chalcopyrite was locally associated with quartz-carbonate-pyrite veins as blebs and veins fillings. Pyrite as disseminations and quartz-carbonate vein fillings occurred throughout the hole. Towards the bottom of the hole, localized potassic alteration as K feldspar in veins and vein selvages increased and coarse blebs of pyrite were associated with quartz veins, which coincided spatially with aplite dikes. Casing length and overburden depth was 10.7 m for DD15ELB001.

DD15ELB002 was collared approximately 700 meters to the south-southwest of DD15ELB001 and was drilled to the southwest to a depth of 501 meters. The top of the hole was characterized by variably altered volcanic rocks consisting of andesitic to trachytic flows and tuffs cut by aplite dikes. From 257 meters to the bottom of the hole at 501 meters the predominant lithology was a variably altered monzonite with lesser syenite cut by basalt, feldspar porphyry, diorite and latite dikes. This hole was not sampled, despite the presence of several sporadic pyrite-chalcopyrite-galena  $\pm$  sphalerite veins. Moderate amounts of disseminated magnetite were prevalent throughout. At this location, the length of casing and overburden depth was 10.5 m.

DD15ELB003 was collared approximately 850 meters to the west of DD15ELB001 and was drilled to the northeast to a depth of 76.5 meters. The hole was terminated due to technical issues and subsequently re-drilled at a steeper dip as DD15ELB004.

DD15ELB004 was drilled to the northwest at a dip of -60° to a depth of 303 meters. Lithologies encountered were predominantly andesitic flows and tuffs with lesser trachytes and latites. Several aplitic dikes were typically spatially related to significant faults. Pyrite as disseminations and quartz-carbonate vein fillings were relatively abundant throughout. A 2 meter interval from 104 - 106 meters returned 2.28 g/t gold associated with moderately pervasive biotite  $\pm$  epidote alteration within fine grained, locally amygdaloidal andesite. This hole was abandoned prematurely as the core barrel got stuck in a rubbly fault. At this location the casing length was 16.5 meters.

**10.1.1.2 The Sooner Target Area** DD15SON001 was drilled to the north-northeast and targeted a discrete magnetic high coincident with a small chargeability anomaly. The hole was drilled to a depth of 305.2 meters and primarily intersected variably altered monzonitic intrusive rocks with lesser feldspar porphyry, diorite and heterolithic andesite breccia. Moderate to strong calc-silicate alteration with coarse grained magnetite alteration persists through roughly the first 200 m of the hole, locally associated with thin bands of semi-massive pyrite and trace chalcopyrite. Anomalous copper values were intersected over 175.6 metres (12.4m - 188m) where values averaged 302.8 ppm. At this location the overburden depth was 12.4 metres.

DD15SON002 was collared approximately 530 metres south-southwest of DD15SON001 and was drilled at an azimuth of approximately 30 degrees to a depth of 305.2 metres. Variably propylitic  $\pm$  K-feldspar altered monzonite and syenite were cut by a few late mafic and aplite dikes. This hole was not sampled. At this location the overburden depth was 18.3 metres.

DD15SON003 was collared approximately 675 meters to the northeast of DD15SON001 and was drilled at an azimuth of 209 degrees to a depth of 501 meters. At this location the chargeability anomaly is associated with a magnetic low response. From the top of the hole to a depth of approximately 350 meters volcanic

lithologies were dominant and consisted of fine grained andesitic volcanics. Intrusive lithologies characterized by variably altered syenite and monzonite were encountered from 350 meters to the bottom of the hole at 501 meters. Localized phyllic ± argillic alteration was present in the first 150 m of the hole. Only selected intervals from this hole were submitted for analysis. Anomalous copper values were intersected over 74 meters (312m - 398m) where values averaged 358.5 ppm. At this location the overburden depth was 30.5 meters.

### 10.1.2 PEMC / ML Gold Corp. - 2016

In 2016, a diamond drill program was completed on the Elbow target area to follow-up on anomalous gold mineralization encountered during the 2015 drill campaign. A total of 1,107.19 metres was completed in 3 holes and was highlighted by the intersection of 41.3 metres grading 0.42 g/t gold in hole DD16ELB007.

The diamond drilling program at the Elbow Zone during 2016 focused on an area to the southeast of the 2015 drilling. Similar styles of mineralization and alteration were encountered including quartz-sericite-pyrite alteration associated with elevated gold values. The dominant alteration assemblage was propylitic that was characterized by the presence of secondary chlorite, calcite, epidote and localized magnetite. Local and patchy zones of phyllic alteration were associated with secondary quartz, sericite and pyrite and were also associated with elevated gold values. Secondary biotite, similar to that encountered in DD15ELB001, was not observed in the 2016 drilling.

DD116ELB005, was collared 818 m to the east-southeast of DD15ELB001 and drilled to the northeast targeting a lobe of anomalous elevated resistivity and coincident magnetic high on the eastern margin of the chargeability anomaly. At this location the depth to overburden was 14 m and the hole was drilled to a depth of 447.14 m. The top of the hole consisted of green, fine grained, massive andesite flows with small feldspar and hornblende phenocrysts cut by medium green, chlorite-calcite altered fine grained andesite dikes. At a depth of 300 m localized zones of increasingly porphyritic texture appear and are characterized by feldspar and hornblende phenocrysts. Latite interbeds appear at a depth of 400 m and were characterized by the presence of abundant plagioclase lathes indicating a flow direction texture. Phenocrysts of augite and hornblende also characterize the latite flows. Distal propylitic alteration best describes the alteration mineralogy encountered with weak chlorite-calcite alteration dominating. Pyrite content in this hole ranged from 0 - 80% and averaged just over 4%.

DD116ELB006, was collared 419 m to the southeast of DD15ELB001 and 400 m to the west of DD16ELB005. This hole was drilled to the north to a depth of 316.5 m and targeted a moderate chargeability and resistivity high signature coincident with a magnetic low. Overburden consisting of glaciofluvial boulders and cobbles of an intrusive nature was drilled to a depth of 20 m. The upper portion of the hole (20.4 - 63.7 m) encountered plagioclase lath phyrlic and crystal rich augite phyrlic latite flows with andesitic interflows. Beyond 63.7 m to the end of the hole a dark grey-green, locally augite-phyric, fine grained basalt was intersected. Alteration consisted of an assemblage of weakly chlorite-calcite-epidote altered volcanics with minor localized zones of quartz-sericite-pyrite alteration. Pyrite content in this hole ranged from 0 - 10% and averaged just under 3%.

DD16ELB007, was collared at the same location as DD16ELB006 but drilled to the south, targeting the same geophysical signature as DD16ELB006. Lithologies and alteration encountered were similar to that of DD16ELB006 with the depth of overburden at 18.7 m. Pyrite content in this hole ranged from 0 - 9% and averaged approximately 3.6%.

### 10.1.3 PEMC / ML Gold Corp. - 2017

In 2017, ML Gold Corp. completed five diamond drill holes totaling 1,079.6 m, immediately to the west of the historical Aplite Creek zone. The focus of the 2017 program was an annular IP chargeability “donut” measuring approximately 1.5 km in diameter. Propylitic alteration consisting of a chlorite-epidote-carbonate-pyrite assemblage was encountered in all 5 holes, with localized potassic alteration consisting of a biotite-pyrite-chalcopyrite assemblage occurring in drill hole DD17PR004. However, no appreciable copper-gold intercepts were achieved over the course of this program.

### 10.1.4 PEMC - 2019

In the fall and winter months of 2019, PEMC completed a small, snowmobile assisted reverse circulation drilling program on the Pinnacle Project comprised of 4 short drill holes totaling 336.8 m (Figure 10.2). Two holes were drilled in the northern portion of the Elbow target area and two holes were drilled at the Later target area. Although no significant copper intervals were intersected over the course of the 2019 RC drill program, one significant interval of anomalous gold mineralization was drilled at the Elbow target area (Figure 10.4).

**Table 10.4:** Significant Intercepts of 2019 Reverse Circulation Drilling (true thicknesses not known)

Hole ID	Operator	Year	From (m)	To (m)	Interval (m)	Copper (ppm)	Gold (g/t)	Silver (g/t)
RC19ELB008	PEMC	2019		Not assayed				
RC19ELB009	PEMC	2019	29.0	106.7	77.7	140	0.18	0.93
RC19LAT001	PEMC	2019		Not assayed				
RC19LAT002	PEMC	2019	25.9	32.0	6.1	377	0.01	0.63

**10.1.4.1 Elbow target area** The intent of the two holes drilled at the Elbow target area in 2019 was to step 1 km to the north and northwest of the 2015 diamond drill hole DD15ELB001, which intersected 94 m grading 0.34 g/t copper. Despite the relatively large step out, anomalous gold mineralization and propylitic alteration was encountered in the one hole that was assayed, RC19ELB009 (Figure 10.4). Gold mineralization was associated with pyrite±+/- quartz-sericite alteration.

**10.1.4.2 Later target area** Limited RC drilling at the Later target area was focused on testing a “bull’s eye” magnetic anomaly high anomaly coincident with moderate copper-in-soil geochemistry. Anomalous copper was intersected (Figure 10.4), but no appreciable copper-gold mineralization was encountered at this target area.

## 10.2 Historical Drilling

In 1974, Pechiney Development Ltd. drilled 4 diamond drill holes totaling 230.8 metres on what was then known as the Hilltop prospect, which coincides with the northwest portion of the current Later Property. Drilling encountered propylitically altered andesite volcanics with 0.5% to 1% pyrite and localized chalcopyrite mineralization ((Hainsworth, 1974, AR#05148)). Analytical results from the 1974 drilling were blanked out of publicly available assessment reports, and are not known as a result. Drill hole coordinates are summarized in Table 10.5.

BP Resources Canada Ltd. completed 1067.8 metres of drilling in 6 diamond drill holes in 1990. Drilling targeted surface copper mineralization and geophysical anomalies (magnetic and IP chargeability) and was focused in and around the area of the “Aplite Creek Zone”. Drilling encountered propylitic, phyllic and localized potassic alteration assemblages in andesitic volcanics which are locally intruded by syenitic to monzonitic porphyritic dikes. Anomalous copper-gold mineralization was spatially associated with syenitic to monzonitic dikes in drill holes AH90-1 through AH90-4 ((Paterson and Barrie, 1991, AR#20943)). Drill collar information is summarized in Table 10.5 while significant intercepts from the 1990 drilling are summarized in Table 10.6.

**Table 10.5:** Summary of Historical Diamond Drilling

Prospect	Hole ID	UTM East	UTM North	Elevation (m)	Azimuth (°)	Dip (°)	Depth (m)
HILLTOP	PEC74DDH01	379,538	6,134,706	1,335	0	-90	16.5
HILLTOP	PEC74DDH02	379,538	6,134,706	1,335	240	-45	30.5
HILLTOP	PEC74DDH03	379,477	6,134,713	1,332	200	-70	31.4
HILLTOP	PEC74DDH04	379,488	6,135,173	1,265	0	-90	152.4
APLITE CREEK	AH90-1	381,071	6,132,425	1,195	270	-45	198.1
APLITE CREEK	AH90-2	381,073	6,132,423	1,195	150	-46	164
APLITE CREEK	AH90-3	380,901	6,132,755	1,250	256	-45	202.7
APLITE CREEK	AH90-4	380,905	6,132,755	1,250	90	-59	168.9
APLITE CREEK	AH90-5	381,486	6,132,755	1,183	150	-45	170
APLITE CREEK	AH90-6	381,296	6,132,585	1,189	160	-45	164.1

**Table 10.6:** Significant Intercepts of Historical Diamond Drilling (true thicknesses not known)

Hole ID	Operator	Year	From (m)	To (m)	Interval (m)	Copper (ppm)	Gold (g/t)
PEC74DDH01	Pechiney	1974		No assays available			
PEC74DDH02	Pechiney	1974		No assays available			
PEC74DDH03	Pechiney	1974		No assays available			
PEC74DDH04	Pechiney	1974		No assays available			
AH90-1	BP	1990	10.4	198.1	187.7	529	0.04
<i>including</i>			88.0	114.0	26.0	915	0.07
AH90-2	BP	1990	3.6	164.0	160.4	396	0.03
<i>including</i>			126.0	128.0	2.0	1,114	0.18
AH90-3	BP	1990	3.1	202.7	199.6	180	0.04
<i>including</i>			42.0	44.0	2.0	2,551	1.33
AH90-4	BP	1990	3.8	168.9	165.1	235	0.32
<i>including</i>			60.0	62.0	2.0	43	2.97
<i>&amp; including</i>			106.0	112.0	6.0	981	6.42
AH90-5	BP	1990		No significant assays			
AH90-6	BP	1990	2.4	164.1	161.7	189	0.01
<i>&amp; including</i>			82.0	90.0	8.0	713	0.03

## 11 Sample Preparation, Analysis & Security

As data verification completed by the QP was performed on representative core samples from the 2016 ML Gold diamond drilling, a review of the sample preparation, analysis and security measures employed during that drill program were reviewed based on information provided by PEMC management and are detailed below.

## 11.1 2016 Diamond Drilling

During 2016, Sunrise Drilling Inc. was contracted by ML Gold to complete the drilling and a B-20 Diamond Drill was used. All holes were drilled with NQ size, no orientation of core was completed. Magnetic susceptibility information was recorded by running a magnetic susceptibility meter along the core over one metre intervals.

Drill core was driven back to the camp at Tchentlo Lake Lodge where it was logged and all intervals were split into halves using a conventional rock saw with one half placed into plastic sample bags and closed using plastic strap closures. Samples were shipped to Met-Solve Analytical in Langley, BC for analysis. The split drill core was left in labelled core boxes and is stored at Tchentlo Lake Lodge.

Sample preparation and analyses for this program were completed at Met-Solve Analytical in Langley BC. Gold was determined by 30g Fire Assay with an Atomic Absorption Spectrophotometry (AAS) finish. Copper and other elements were determined by 4-Acid digestion with Inductively Coupled Plasma - Atomic Emission Spectrometry (ICP-AES/MS) finish. Met-Solve is an ISO 9001-2008 certified analytical laboratory (certificate #0010433-00) that is independent to PEMC or ML Gold.

A comprehensive quality assurance/quality control program including insertion of blanks and certified reference materials form part of ML Gold's sampling protocol, whereby these materials are inserted into the sample sequence at a rate of 1 in 20. Met-Solve analytical provides further quality control with insertion of sample duplicates, blank and certified reference materials. All quality control sample results are inspected by PEMC subsequent to receiving analytical results. Over the course of the 2016 diamond drilling program the results of all certified reference material analyses were within two standard deviations of the certified laboratory reported geochemical concentrations and all blank materials analysed returned values less than the upper threshold as designated by the manufacturer of the blank materials, providing adequate confidence in the data collection and processing. It is of the QP's opinion that the sample preparation, security and analytical procedures utilized in the 2016 drill program were adequate.

## 12 Data Verification

A total of 3 data verification samples were selected and submitted to ALS Canada Ltd. ("ALS") for analysis. The selection of the data verification samples was based on anomalous gold values encountered in the 2016 drill program. In particular, an anomalous sample that graded over 2 g/t of gold warranted verification, in the opinion of the QP. In addition, sampling procedures and quality assurance/quality control procedures from the 2016 diamond drilling program were reviewed (outlined above).

3 drill core samples were obtained by cutting previously half-split drill core with a rock saw brought to site by the QP, thereby sampling one quarter of the original drill core. The 3 core samples were shipped to ALS Minerals in North Vancouver, BC, and were analyzed with analogous analytical packages as those originally used at Met-Solve. ALS Minerals is an ISO 17025:2005 accredited laboratory (Accredited laboratory No. 579, Standards Council of Canada) that is independent of 1111 Acquisition. Samples were prepared by crushing to >70% passing through <2 mm sieve followed by pulverizing with >85% passing through a 75 um sieve. Samples were then split using a riffle splitter followed by a four-acid digestion and 48 element analysis using ICP-MS. 30 g samples were analyzed for gold by Fire Assay with an Atomic Absorption finish.

The results of the drill core "check samples" are presented in Tables 12.1 and 12.2, with data analysis presented in Figures 12.1 through 12.3. The two sets of analytical data correlate well together, with R-squared values of 0.95 or greater, and there are no significant outliers between the two data sets. In particular, check sample analysis of the higher grade gold sample that was the focus of the data verification correlated very

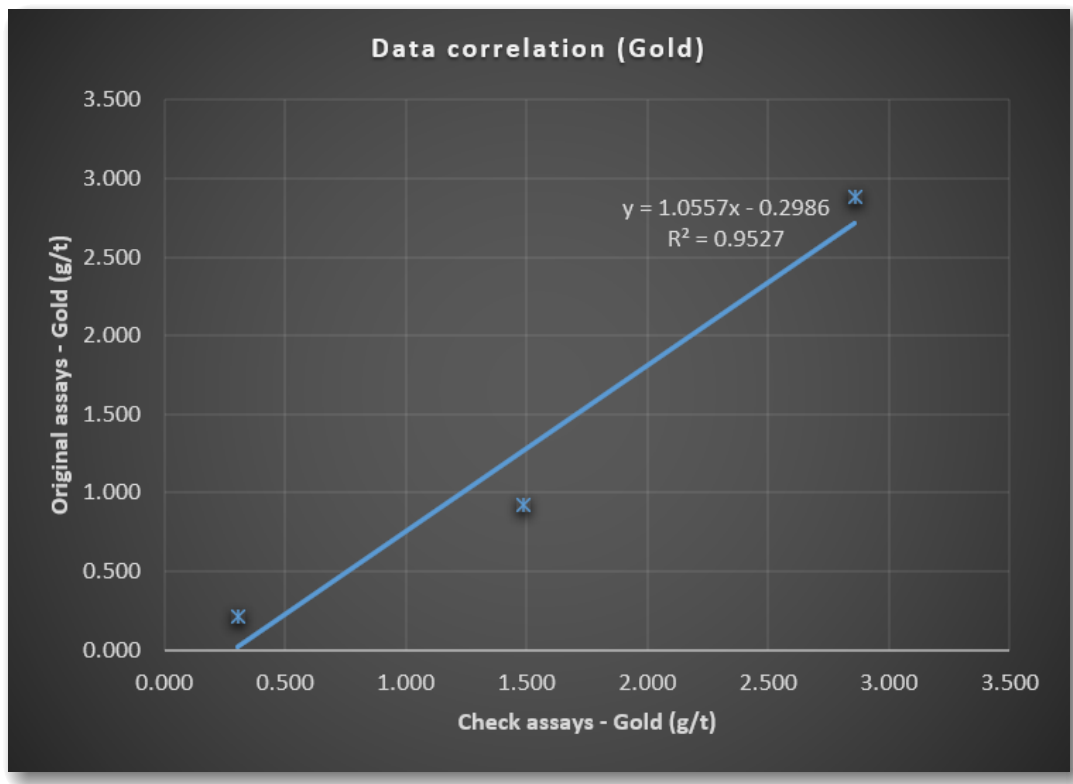
well with the original analytical results. In the opinion of the QP, the data verification was adequate for the purpose of this report.

**Table 12.1:** Data verification - Original analytical results.

Hole ID	From (m)	To (m)	Interval (m)	Au_original (g/t)	Ag_original (g/t)	Cu_original (ppm)
DD16ELB007	23.47	26.52	3.05	0.922	5.93	189.5
DD16ELB007	26.52	29.57	3.05	0.209	1.38	201.7
DD16ELB007	29.57	32.61	3.04	2.881	3.31	59.3

**Table 12.2:** Data verification - Check sample analytical results.

Hole ID	From (m)	To (m)	Interval (m)	Au_check (g/t)	Ag_check (g/t)	Cu_check (ppm)
DD16ELB007	23.47	26.52	3.05	1.485	10.05	192.0
DD16ELB007	26.52	29.57	3.05	0.304	1.77	190.0
DD16ELB007	29.57	32.61	3.04	2.860	3.91	70.2



**Figure 12.1:** Data correlation chart - Gold



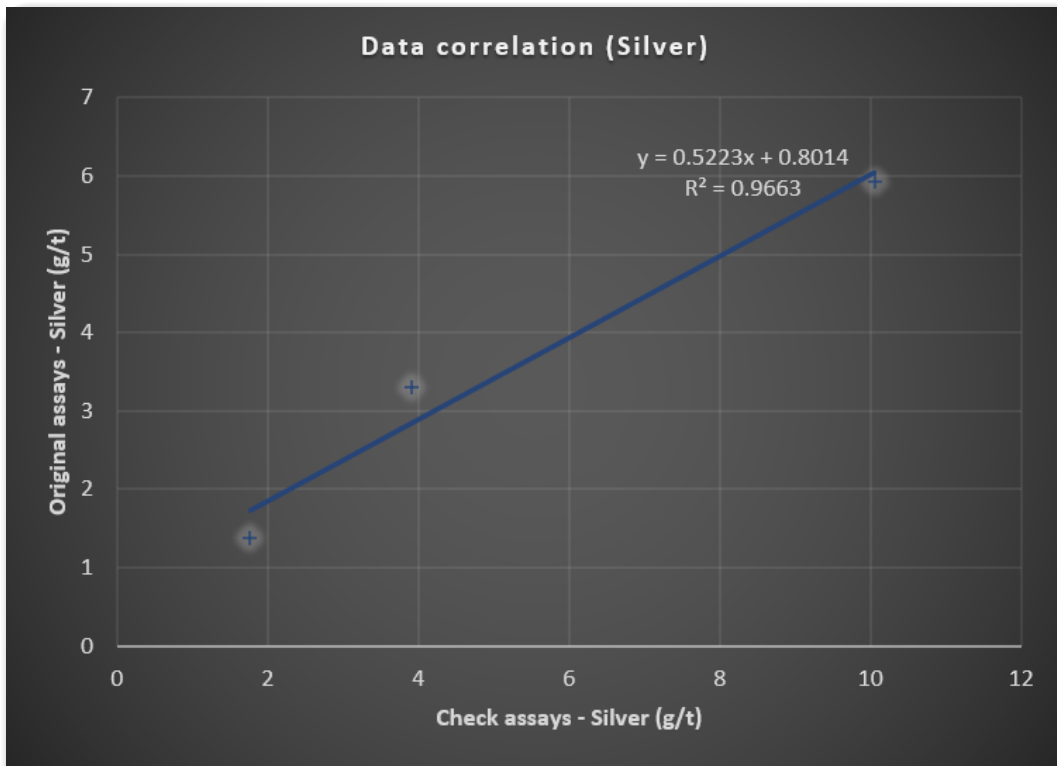


Figure 12.2: Data correlation chart - Silver

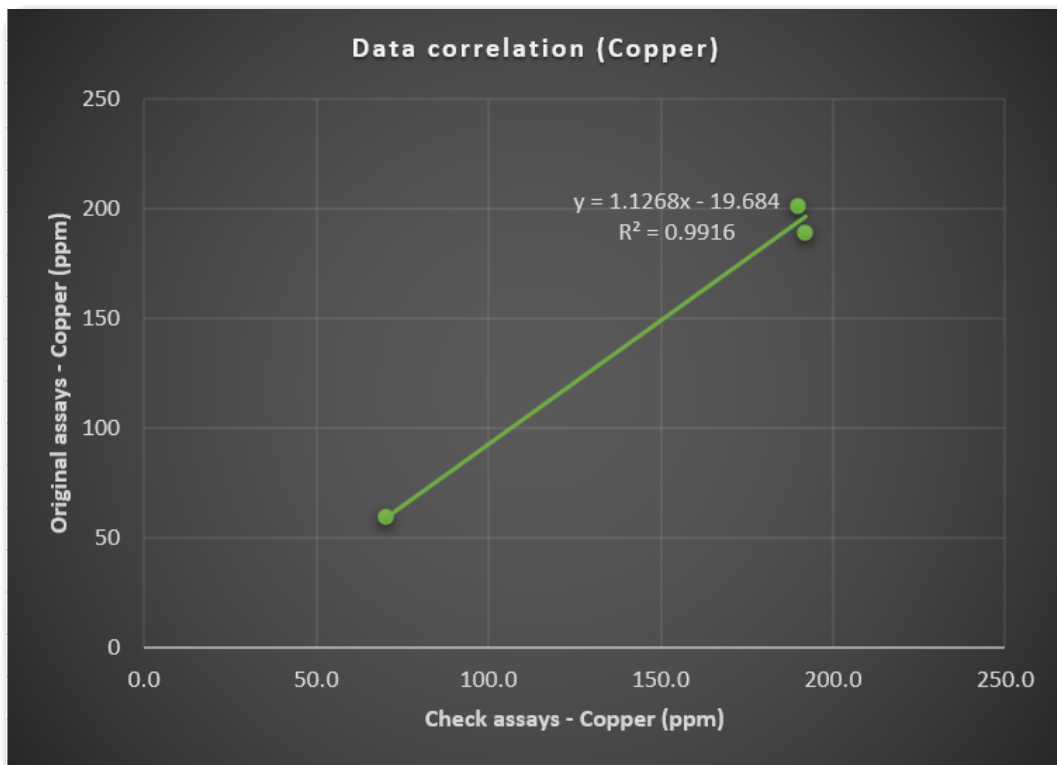


Figure 12.3: Data correlation chart - Copper

## 13 Mineral Processing & Metallurgical Testing

No mineral processing or metallurgical testing analyses have been carried out on the Pinnacle Project to date.

## 14 Mineral Resource Estimates

No known mineral resources or mineral reserves of any category exist on the Pinnacle Project.

## 15 Adjacent Properties

Immediately to the east of the Pinnacle Project is the Col Property where disseminated and stockwork vein hosted copper and gold have been reported. The Col Developed Prospect is located on the Col Property and has been the focus intermittent exploration programs since it was discovered by its current owner Colin Campbell in 1969.

Falconbridge signed an option agreement with Mr. Campbell in 1971 and proceeded to complete soil sampling, mapping, Induced Polarization and diamond drilling programs in the 1970's. This work identified a zone of copper-gold mineralization at the area referred to as the A-Zone (Harper, 1972).

In the late 1980's Kookaburra Gold optioned the Col Property from Mr. Campbell and proceeded to complete additional mapping, soil geochemical sampling and diamond drilling. This work was conducted to the immediate east of the A-Zone and was unsuccessful in extending the known mineralization at the A-Zone to the east (Nebocat, 1991).

In 2007, Solomon Resources entered into an option agreement with Mr. Campbell and over a period of two years completed an airborne geophysical survey, soil sampling and diamond drilling. The diamond drilling was primarily focused on expanding known mineralization at the A-Zone to the west (Lane, 2007a). The results of this program suggested that mineralization at the A-Zone was restricted in size and the Property was subsequently returned to the owner.

In 2013, after staking the ground to the west of the Col Property, PEMC entered into an option agreement with Mr. Campbell. During 2014 a program of Induced Polarization and diamond drilling was conducted. Although the Induced Polarization survey did not locate any significant areas of anomalous chargeability in the area of the A-Zone, two diamond drill holes were completed to the west of the A-Zone to test subtle chargeability anomalies at depth (Peters and Ritchie, 2015). The Property was returned to Mr. Campbell with no further work in 2015.

The author has been unable to verify the information pertaining to the Col Property, other than data collected during PEMC's 2013 and 2014 exploration programs. The information above and historical results to date on the Col Property are not necessarily indicative of the mineralization on the Pinnacle Project.

## 16 Other Relevant Data & Information

Drilling information presented in this Report has been thoroughly scrutinized, and should form the basis for future targeting at this time on the Pinnacle Project. As such, no other relevant data and information is presented.

## 17 Interpretation & Conclusions

Prior to 2012, exploration activities in the area of the Pinnacle Project were focused on areas of topographic relief where outcrop exposures were more common than in areas of subdued relief that are dominated by swamps and where outcrop exposure is absent. Early exploration in the area took place around the Aplite Creek Showing where copper mineralization was discovered in outcrop. Beginning in the 1970's and continuing through to the early 1990's, exploration efforts in the area of Aplite Creek consisted of soil geochemical surveys, geophysical surveys, rock sampling and diamond drilling. The results of this work outlined an area of anomalous copper and gold soil geochemistry in addition to an Induced Polarization chargeability anomaly in the area of Aplite Creek. Encouraging gold values were returned from the 1990 drilling program by BP Resources Canada following up on an induced polarization survey. Following this drilling program, an induced polarization survey was completed in 1991 that expanded upon the area surveyed one year prior. However, this data was never published and no further work was completed in the area of Aplite Creek or the Pinnacle Project until 2007 when Solomon Resources completed an airborne DIGHEM survey over the Col-Magnet claims which covered the area of the Later claims.

The Induced Polarization surveys completed by PEMC and partner OZE during 2014 were successful in identifying intriguing chargeability anomalies at the Elbow target area. Follow-up diamond drilling in 2015 and 2016 was successful in demonstrating that alteration and mineralization encountered in diamond drilling was consistent with alteration and mineralization that may be encountered on the margins or above a porphyry copper-gold system. Diamond drilling in 2016 encountered similar alteration and pyrite-dominated mineralization associated with anomalous gold, as did limited reverse circulation drilling in 2019.

Drilling in 1990 confirmed the presence of anomalous gold and copper as pyrite and localized sporadic chalcopyrite spatially associated with porphyritic syenitic to monzonitic dikes. The alteration and mineralization described in historical drill reports suggests that drilling in this area may have intersected the upper reaches of a copper-gold porphyry system. The coincidence of anomalous copper and gold in soils, widespread and relatively strong IP chargeability and anomalous copper and gold in drilling in the area of the historical Aplite Creek drilling suggests that a porphyry system exists in the area. Furthermore, discontinuous and localized potassic alteration associated with localized porphyritic intrusions suggests that a potentially copper-gold mineralized potassic center may exist at depth.

Exploration to date on the Pinnacle Project has shown that there is potential for a copper-gold porphyry deposit to exist, at both the Elbow and Aplite Creek target areas, as evidenced by distal porphyry-type alteration assemblages, an abundant of pyrite, localized chalcopyrite mineralization and widespread anomalous gold. Although no economic mineralization has been outlined to date, drilling has encountered lithologies, alteration assemblages and sulphide mineralization that could be associated with a copper-gold porphyry system in the immediate area, either laterally or at depth in both the Aplite Creek and Elbow target areas.

## 18 Recommendations

Given the widespread nature of anomalous gold at the Elbow Target Area, and the presence of locally high grade gold with anomalous copper at the Aplite Creek zone, it is of the author's opinion that at least two substantial areas prospective for copper-gold porphyry mineralization exist on the Pinnacle Project. Both areas should be drill tested with relatively deep diamond drilling to test for a copper-gold mineralized potassic centre at depth beneath zones of localized phyllic and potassic alteration at the Elbow and Aplite Creek target areas. Phase 1 should include drone-supported airborne magnetics and soil sampling, along with relogging and sampling of certain historical core that has not been assayed, and should be conducted prior to diamond drilling to further constrain drill targeting at both the Aplite Creek and Elbow target areas.

A conditional Phase 2 helicopter-supported diamond drilling program designed to test for copper-gold mineralization at depth beneath the large IP chargeability anomalies at the Elbow and Aplite Creek target areas should be undertaken at the Pinnacle Project following the successful completion of the initial Phase 1 program. Two 800 m holes at the Aplite Creek zone, beneath historical drill hole AH90-4 and AH90-1 are recommended, as well as two 800 m deep drill holes at the Elbow target area, roughly 500 m north and 1,000 m east of the 2015 drill hole DD15ELB001. The total cost of the two-phase proposed exploration program is estimated at CDN\$934,000 (see Table 18.1).

**Table 18.1:** Proposed exploration budget.

<b>Item</b>	<b>Description</b>	<b>Cost (CAD)</b>
<b>Phase 1</b>		
Drone supported magnetic survey	10 x 10 km, 150 line km incl. mob/demob	\$ 30,000.00
Soil geochemical - sampling	800 sample, two-person crew, 40 samples/day	\$ 20,000.00
Soil geochemical - assaying	800 samples at \$50/sample	\$ 40,000.00
Assaying of historical unsampled core	\$6,000 labour, \$6,000 for assays	\$ 12,000.00
Relocating and securing of historical core	3 days, 2 people, \$500/day each	\$ 3,000.00
	<b>TOTAL PHASE 1</b>	<b>\$ 105,000.00</b>
<b>Phase 2</b>		
Diamond drilling	3,200 metres at \$150/metre	\$ 480,000.00
Analytical	1,260 samples at \$50/sample	\$ 63,000.00
Helicopter support	88 hours at \$2,000/hour	\$ 176,000.00
Support	Geological crew, food and accommodation	\$ 110,000.00
	<b>TOTAL PHASE 1</b>	<b>\$ 829,000.00</b>
	<b>TOTAL PHASE 1 + PHASE 2</b>	<b>\$ 934,000.00</b>

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## 19 Certificate of Qualified Person

I, Richard J. Haslinger, do hereby certify that:

1. I am a professional engineer residing at 1245 Woodland Drive, Vancouver, B.C., Canada;
2. This certificate applies to “43-101 Technical Report on the Pinnacle Project” on the effective date of July 5<sup>th</sup>, 2021. The report is based on a review of recent exploration carried out on the Property as well as a review of the compilation of historical data;
3. I have Bachelor’s of Applied Science degree in Geological Engineering, 1986. I am a Licensed Professional Engineer with the Association of Professional Engineers and Geoscientists of British Columbia, Licence #16798. I have experience in exploration and development of porphyry copper-gold deposits in Canada and the United States and am a “qualified person” for the purposes of NI 43-101;
4. I completed a full-day personal inspection of the Pinnacle Project on July 21<sup>st</sup>, 2020;
5. I am responsible for all items of this technical report;
6. I am independent of the issuer using the definition in Section 1.5 of National Instrument 43-101;
7. I have had no prior involvement with the Property that is the subject of this report;
8. I have read NI 43-101 and this technical report has been prepared in compliance with the NI 43-101 and Form 43-101F1 guidelines;
9. As of the effective date of this Report, to the best of my knowledge, information and belief, the Report contains all scientific and technical information that is required to be disclosed to make the Report not misleading.

Signed and dated at Vancouver, British Columbia, on the 5<sup>th</sup> day of July 2021.

“Richard J. Haslinger”

Richard J. Haslinger, BA.Sc., P.Eng