NI 43-101 UPDATED TECHNICAL REPORT
FOR THE SHORTY CREEK PROJECT,
LIVENGOOD - TOLOVANA MINING DISTRICT, ALASKA

Prepared for

Freegold Ventures Limited
Free Gold Recovery, USA
and Grizzly Bear Gold Inc.

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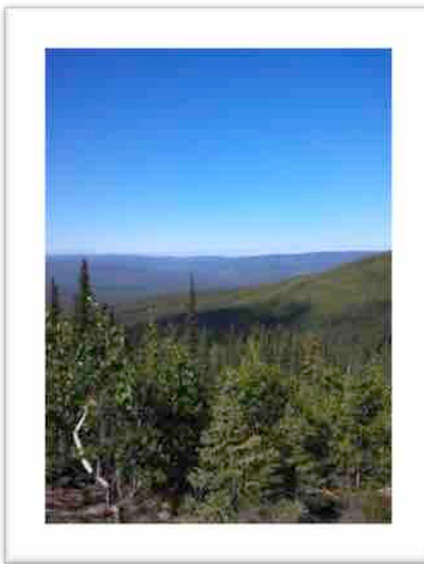

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1. SUMMARY

The Shorty Creek property (Property) is located in the Livengood - Tolovana Mining District about 125 road-kilometres northwest of Fairbanks Alaska. The Property lies about 4 kilometres south of the now-abandoned gold-mining town site of Livengood and the all-weather paved Elliott Highway. The claim group is situated primarily within Township 7 North, Ranges 4 and 5 West, Fairbanks Meridian; in the Livengood B-3 and B-4 quadrangles. The Property is centered on 430000 E, 7257500 N (UTM NAD 27 for Alaska, Zone 6 North datum (Figure 4.2).
The Property is comprised of 328 State of Alaska mining claims covering 31,478 acres (12,738.69 hectares).

The Trans-Alaska Pipeline and the associated surface access corridor cross the Property. This 48-inch diameter 800 mile long pipeline carried 517,568 barrels per day of crude oil (approx. 50% of design capacity), during 2016 from production facilities on Alaska's North Slope to the all-weather port of Valdez, Alaska. In addition, the right -of-way for the proposed trans-Alaska natural gas pipeline also passes through the Property and is largely coincident with the oil pipeline right-of-way.

The Property area is largely covered by sub-Arctic taiga forest consisting of black spruce, white spruce, birch and aspen. A thick blanket of tundra vegetation and small shrubs such as dwarf birch, willow, alder, Labrador tea and blueberries covers the forest floor. The physiography of Property is characterized as moderately hilly. Elevations range from 150 metres (500 feet) along the Tolovana River, to 660 metres (2,161 feet) on the hilltops generating variable relief to about 510 metres (1,670 feet). This part of Alaska was not glaciated during the Pleistocene however, the project area was near the southwestern terminus of continental ice and winds from this cold ice mass deposited a variably thick layer of aeolian silt over much of Interior Alaska, including the project area. Permafrost primarily occurs as discontinuous lenses on steep, poorly drained north-facing slopes. The climate in this portion of Alaska is dominated by 6 to 8 months of sub-freezing temperatures in winter followed by 4 to 6 months of warm summer weather. Average annual precipitation is 33 cm (13 in.), mostly as snowfall between October and March.

Placer gold was discovered on Livengood Creek in 1914 and placer mining has been conducted in the district on a nearly continuous basis since that time. Total recorded production from the district through 2007 was approximately 530,121 ounces of gold, all from placer operations. The project is located on the south side of the Tolovana River. With the exception of Wilber Creek, also located on the south side of the Tolovana River, the most productive creeks in the district are located on the north side of the Tolovana River valley. Total placer production from the Wilber Creek valley is unknown but likely less than 50,000 ounces.

The Shorty Creek prospect was originally located as an antimony prospect in 1972. It was re-evaluated as a copper-molybdenum prospect by Earth Resources in 1972 and was reportedly drilled in several locations prior to 1974. No technical data remains from this work. Public sector mineral evaluations between 1979 and 1984 indicated that copper; gold and arsenic mineralization was exposed in road cuts on the Alyeska Pipeline access road on what is now the southwestern extension of the Hill 1835 prospect. The Shorty Creek prospect was staked in 1984 and leased to Fairbanks-based Fairbanks Exploration Inc. who conducted exploration on the project in 1985 through 1990, the latter three years under a joint venture with Asarco Inc. These efforts included soil and rock sampling and a total of 2,085.9 metres of reverse circulation drilling in 20 holes. Total cost of these programs was approximately $400,000. Fairbanks Exploration terminated their interest in the project, which was subsequently acquired by Fairbanks-based Gold Range Ltd. Little substantive exploration was conducted until 2005 when California-based Select Resources acquired a lease on the project. During 2005 Select conducted a top of bedrock soil sampling program over the Hill 1835 prospect. A total of 566 soil samples were collected along with 21 grab rock samples collected while soil sampling was under way. Additional non-field related work included digital compilation and evaluation of geological, geophysical, geochemical, GIS and remote sensing data. This work was conducted before, during and after the field program. Freegold acquired the property in July 2014. They commenced geophysical and geochemical surveys shortly after; completing 28.6 line kilometres of induced polarization geophysics and collecting 354 soil samples. Their work defined significant chargeability anomalies and coincident strong copper, gold and bismuth geochemistry.

During 2015 Freegold undertook an exploration diamond drill program on Hill 1835. An attempt was made to complete initial drilling on Hill 1710 however an unseasonably heavy snowfall forced the early cancellation of the program.   A total of 1,253 metres were drilled in 4 holes. Challenging ground conditions prevented the completion of Hole SC 1504, although two attempts were made. Results of the drilling on Hill 1835 successfully demonstrated that the copper mineralization increases with depth. Recommendations for 2016 included additional drilling at Hill 1835 as well as testing the copper molybdenum anomaly outlined on Hill 1710 by the 2014 ground program.

During 2016 Freegold conducted exploration diamond drilling on both the Hill 1835 and Hill 1710 target areas. A total of 7 holes were drilled (3,038 metres). Two holes were drilled on the Hill 1835 Target and 5 holes were completed on Hill 1710. Drilling on Hill 1835 successfully demonstrated the association of the copper mineralization with the magnetic high over Hill 1835. Additional ground geophysics (magnetics) has further refined the magnetic model and will be used to guide future drilling activities on the Hill 1835 target. In addition drilling at Hill 1710 successfully intersected copper mineralization, and established the presence of porphyry style mineralization. Other work completed during 2016 included the location of additional claims; ground magnetics and additional geochemical sampling. As a result of this work several other drill targets have been defined, in particular the Steel Creek, Quarry and Hill 1890 target areas.

The Shorty Creek project is located within the Livengood Terrane, a complex and poorly understood belt of Paleozoic through Cretaceous sedimentary, metamorphic and intrusive rocks which is bounded on the north by the northeast trending right lateral Kaltag fault and the northwest trending right lateral Tintina fault. On the south, the regionally extensive Yukon Tanana Terrane bounds the Livengood Terrane. Rocks of the Shorty Creek project are hosted within the Wilber Creek unit, a folded sequence of Early Cretaceous flysch sediments, which form the youngest, bedded rocks in the project area. The principal Wilber Creek flysch lithologies exposed on the Shorty Creek project include black carbonaceous siltstone, gray feldspathic sandstone and silty sandstone, black shale and polymict conglomerate. The Wilber Creek flysch disconformably overlies a thrust package of south dipping Lower Paleozoic carbonates, volcanics and pelitic rocks which host the Livengood gold project located about 5 miles north of the Property. A variety of small intermediate igneous bodies occur within and peripheral to the Property. Biotite granodiorite is the most abundant intrusive rock type seen on the property. A potassium - argon age date of 63 Ma was reported for intrusive rocks in the Shorty Creek area while an Ar^{40}/Ar^{39} age date of 65-70 Ma was reported from white mica in intrusive rocks exposed at the collar of drill hole RH8901 on the north end of the Hill 1835 prospect. Limited fluid inclusion data from a granitic pluton on the south side of Wilber Creek indicated the presence of high $C0_2$, high salinity fluids.

The dominant structural elements of the Property are compression-related, generally northwest directed, northeast trending thrust faults and northeast striking folds. Folds with axes parallel to the northeast-trending Wilber Creek valley are examples of this style of deformation. Rocks of the Wilber Creek flysch are folded into open to recumbent isoclinal folds and subsequently cut by northeast and north-south structures, the largest of which are the Minto and Ranney Hollow faults, two north-south striking left lateral faults with significant vertical offset. The Minto fault bounds broad topographic lowland immediately west of the project area, and remains active to the present.

Previous work has indicated that biotite hornfels and lesser diopsidic hornfels are widespread in the area. Previous mapping indicate that hornfels occurs at the Shorty Creek Cu-Mo prospect, on 1835 prospect, on the flanks of Hill 1870 and in the Hill 2161 area on the southern end of the Shorty Creek project. Although very little intrusive rock is exposed on the Shorty Creek project the widespread and the often weak to intense hornfelsing of the sediments, particularly in the Hill 1835 area, are suggestive of a significant size intrusive nearby.

Outcrop exposures containing anomalous gold mineralization were discovered at the Hill 1835 prospect in 1985. Subsequent field activities revealed anomalous gold, silver, mercury, zinc, copper, molybdenum and arsenic in RC drill chips, grab rock and trench rock samples collected in 1985, 1986 and 1988 through 1990. Highly anomalous Au, As, Bi, Te, S, Sn and W were detected in top of bedrock soil samples collected on Hill 1835 in 2005. Other areas with anomalous Au, Cu, As, Sb or Mo include the old Shorty Creek Cu-Mo prospect, Hill 1890 east of Ranney Hollow, Hill 1870 on the south side of the pipeline corridor, Hill 2161 at the head of Eagle and Wilber Creeks and the lower eastern flank of Wilber Creek valley.

The most intense hydrothermal alteration and anomalous metal geochemistry at Shorty Creek are concentrated at the Hill 1835 prospect. The protolith host rocks at Hill 1835 were shale and siltstone of the Wilber Creek flysch, which subsequently were silicified. Rare anhydrite veins are present in parts of the altered sections. This rock has undergone variable crackle to matrix-supported brecciation. Rubble and outcrop of this hornfels unit contain large (1 cm) cubic molds after pyrite, often partially filled with limonite. In drill chips, disseminated and fracture-controlled pyrite, pyrrhotite, chalcopyrite, arsenopyrite and bornite have been identified (along with numerous secondary oxide minerals). In total, the area of silicification, brecciation and geochemical enrichment covers a northeast-trending area measuring 1700 metres by 600 metres. Mineralization remains open under Quaternary cover on both ends.

Mineralization at Shorty Creek is hosted by structurally and possibly stratigraphically controlled, polyphase, grain-supported and matrix-supported silicified breccias, quartz stockworks and fractures. Intense flood silicification occurs in matrix-supported breccias and is often accompanied by arsenopyrite-quartz veinlets and disseminated pyrite and arsenopyrite. Drill results indicate that deeper portions of the system contain arsenopyrite-pyrite-chalcopyrite stockwork veinlets along with local disseminated and bedding controlled pyrite, chalcopyrite; and rare bornite and enargite. Gold values tend to be higher near the top of the drill holes. Widespread pervasive sericite results in a pale yellow to tan "bleached" appearance. Sericite alteration is commonly overprinted by silicification, potassic alteration and less commonly sodic and propolitic alteration in and adjacent to mineralized veins and porphyry dikes. Some of the strongest mineralization is coincident with the presence of small granite or quartz porphyry intrusive dikes. Significant drill intercepts include 220 feet grading 1.216 gpt gold in hole RH8908, including 25 feet grading 4.577 gpt gold, 60 feet grading 0.800 gpt gold in hole RH9016, 25 feet grading

1.707 gpt gold in hole RH9017 and 55 feet grading 1.035 gpt gold in hole RH9019 , 91.4 metres grading 0.14 g/t gold, 7.02 g/t silver, 0.55% Cu (in hole SC 15-03), 434.5 metres grading 0.36% copper and 0.12 g/t gold and 7.46 g/t silver (hole SC 16-01) and 409.6 metres grading 0.29% copper and 0.06 g/t gold and 5.66 g/t silver (hole SC 16-02).

The evaluation presented here would not have been possible without the extensive compilation of all geological, geochemical, geophysical information to a common digital database on the Shorty Creek project completed by Avalon Development Corp. All of the information had been compiled and the first time these data were evaluated in the light of new ore deposit models for porphyry Cu-Au-Mo and IRG systems (Freeman, 2010). Previous investigators suggested that there are two primary types of mineralization present at Shorty Creek: a gold-dominant IRG system in the southern part of the Property and a copper-molybdenum-dominant system in the northern part of the Property (centered on the old Shorty Creek Cu-Mo prospect). Freeman (Freeman, 2010) believes that the available data are suggestive of a single, zoned porphyry Cu-Au-Mo system which includes three main zones, a proximal Cu-Mo±Au mineralization (Shorty Creek Cu-Mo, Hill 1890 prospect), a high-sulfidation epithermal Au-As-Bi-W±Cu±Ag mineralization (Hill 1835/Hill 1870) and an intermediate-sulfidation epithermal Au-Ag-Pb-Zn±As±Sb±Mn mineralization (Hill 2161 and ridge south of Wilber Creek). A comparison of salient features of IRG and porphyry Cu-Au-Mo deposits demonstrates that many of the important alteration and mineralization features of a typical IRG deposit are shared by porphyry Cu-Mo-Au deposits. However, in every characteristic that is not common to both deposit types, the data suggest that Shorty Creek mineralization is a porphyry Cu-Au-Mo system instead of an IRG.

Post-mineral faulting on the north-south trending Minto and Ranney Hollow faults and on the Steel Creek lineament and the other northeast trending structures has offset alteration and mineralization in a consistent sense across all three alteration/mineralization zones. Three-dimensional modelling of magnetic data indicates a strong central magnetic low with highly magnetic bodies surrounding it on the north.

The Shorty Creek project porphyry system extends approximately 10 km in diameter. Mineralized porphyry systems of this scale are not uncommon in large porphyry systems such as Bingham District, Utah (5-6 miles), Central Mining District, New Mexico (+10 miles), Los Bronces, Chile (5 miles), Chuquicamata (+10 miles). While the interpretations of this report represent a departure from previous thinking about the Shorty Creek project area. Previous investigators focused on individual parts of the larger system, but did not recognize these parts as being integral pieces of a larger porphyry copper-gold-molybdenum system.

Based on field, laboratory and literature studies completed to date, the following recommendations for future work are warranted:

1. Additional diamond drilling should be conducted at the Hill 1835 Cu-Au target area. Approximately 3,000 metres (10,000 ft.) of diamond drilling are recommended to further test the magnetic anomaly to the south and east of the previous holes (SC 15-03, SC 16-01 and SC 16-02). (Figure 26.2). Initial drill depths should be planned to test depths of at least 500 metres (1640 ft.). This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling should be conducted with a fly capable - diamond core drill using HQ core (2.5 inch diameter). All core should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis. The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$1,500,000 ($500/m or $152/ft).

2. Initial diamond drilling should be conducted at the Steel Creek magnetic anomaly. Approximately 1,200 metres (3,936 ft.) of drilling are recommended (Figure 26.3). Drilling will need to extend to a depth of 400 metres (1312 ft). This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling should be conducted with a fly capable diamond core drill using HQ core (2.5 inch diameter). All core should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis. The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$600,000 ($500/m or $152/ft).

3. Initial diamond drilling should be conducted at the Quarry magnetic anomaly. Approximately 1,200 metres (4,920 ft.) of drilling are recommended (Figure 26.4). Drilling will need to extend to a depth of 400 metres (1475 ft) This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling

should be conducted with a fly capable diamond core drill using HQ core (2.5 inch diameter). All core should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis. The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$600,000 ($500/m or $152/ft).

4. Additional reconnaissance exploration on both the original and the new claim blocks, to include prospecting and mapping of ridgelines, stream sediment, rock and soil sampling where warranted. Induced polarization geophysics and ground magnetics is recommended to extend the grid coverage along the northeastern and southwestern extensions of the, Hill 1870, and Hill 1890 anomaly areas. Daily fieldwork will be on foot or supported by 4WD ATV where possible. All samples should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. The estimated cost of this program, including labor, assays, camp, equipment, fuel and all consumables is US$100,000.

The total cost of the above-recommended work is approximately US$2,800,000.

2. INTRODUCTION

2.1 Introduction

At the request of Freegold Ventures Limited, Free Gold Recovery, USA, and Grizzly Bear Gold Inc. (Freegold), this technical report has been prepared for the Shorty Creek property located in the Livengood - Tolovana Mining District, Alaska. The purpose of this report is to provide Freegold with an independent opinion of the technical aspects of the Shorty Creek project and make recommendations for future work. This report conforms to the standards specified in National Instrument 43-101 (NI 43-101) and Form 43-101F (Standards of Disclosure for Mineral Properties).

Freegold has provided the author documents, maps, reports and analytical results. The author supervised the drilling and logged the drill core during the 2016 exploration program. (July –October 2016) During the course of the program the author reviewed the geology, areas of historical activities, claim corners/locations monument locations, drill holes and other pertinent features of the property.

The work completed by Freegold both in 2014, 2015 and 2016 along with historical data available to the author, forms the basis of this report. These data include reports from previous operators, including but not limited to, annual, monthly, operations, geological, engineering, metallurgy and production reports.

Unless otherwise noted, all costs contained in this report are denominated in United States dollars (US$1.00 = CDN$1.35). Where gold grades are quoted in this report, the abbreviation “opt” means troy ounces per short ton and the abbreviation “gpt” means grams per metric tonne. Historical resource estimates are presented in their original dimensions and measurement units to insure historical accuracy. Historical literature from before 1970 often quotes gold grades in United States dollars per short ton. Gold prices used for conversions to troy ounces per short ton are $20.67 per ounce for publications prior to 1934 and $35.00 per troy ounce for publications dating from 1934 to 1971 when the gold price was allowed to float on the open market.

When referring to locations along a creek, this report uses the historical method of description where right limit and left limit refer to the side of the creek as viewed by a person looking downstream. The terms alluvial and placer are considered synonymous for the purposes of this report. For purposes of this report, the abbreviated term "Ma" shall mean "millions of years ago" and the term "Moz" shall mean "millions of ounces". Older literature uses volcanic rock names for clearly plutonic rocks, particularly those of hypabyssal nature. The author has used the classification system of Streckeisen (1973) to convert the incorrect volcanic terms to their equivalent correct plutonic classification. In this report the name "Shorty Creek Cu-Mo- prospect” will be used only to refer to the copper-molybdenum prospect on Hill 1710 that was drilled by Earth Resources in the early 1970s while the term “Hill 1835 prospect” will be used to describe mineralization in the vicinity of Hill 1835 which was explored by Fairbanks Exploration Inc. (FEI) and Select in 1985-1990 and 2005, respectively.

2.2 Units of Measure

Unless otherwise noted, all costs contained in this report are denominated in United States dollars (US$1.00 = CDN$1.35).

All units of measurement used in this report are metric unless otherwise stated. Historical grade and tonnage are reported as originally published. Gold grades are reported as referenced and conversion factors are listed below. Freegold uses the UTM coordinate system, NAD 27 Alaska, Zone 6 North datum.

Some of the conversion factors applicable to this report are:

Analytical Values

	oz/ton (opt)	**gm/tonne (g/t)**
1 ppm	0.0291667	1
1 ppb	0.0000291667	0.001
1 oz/ton	1	34.2857

Linear Measure

1 inch (in)	=2.54 centimetres (cm)
1 foot (ft)	=0.3048 meter (m)
1 yard (yd)	=0.9144 meter (m)
1 mile (mi)	=1.6093 kilometres (km)

Area Measure

1 acre	=0.4047 hectare	
1 square mile	=640 acres	=259 hectares

2.3 Definitions

ADL	Alaska Division of Lands
ADGGS	Alaska Division of Geological and Geophysical Surveys
AOI	Area of Influence
BLM	United States Bureau of Land Management
CFR	Code of Federal Regulations (United States Federal Code)
DDH	Diamond Drill Hole
FA/AA	Fire Assay with Atomic Absorption finish, analytical technique for gold analysis
F, FBM	Fairbanks Base and Meridian
FLYSCH	A sequence of shales rhythmically interbedded with thin, hard, greywacke like sandstones
GPS	Global Positioning System
ICP	Inductively Coupled Plasma (geochemical analytical method)
LR2000	US Bureau of Land Management online Legacy Rehost System (BLM land status)
Moz	Million ounces
NAD	North American Datum
NSR	Net Smelter Royalties
RAB	Reverse Air Blast (Drill Hole)
RC	Reverse Circulation (Drill Hole)
USGS	United States Geological Survey
4WD	Four Wheel Drive vehicle
2WD	Two Wheel Drive vehicle

3. RELIANCE ON OTHER EXPERTS

This report has been prepared by John Woodman (Woodman) using public documents acquired by the author and private documents given to the author by Freegold for this purpose; as well the author's direct observations made during the course of the 2016 drill program. The author used his experience to determine if information from previous reports was suitable for inclusion in this Report and adjusted the information as required. The author has not independently verified the legal ownership of the Property, nor has he verified the status of the claims. The interpretive views expressed herein are those of the author and may or may not reflect the views of Freegold or the property owners.

4. PROPERTY DESCRIPTION AND LOCATION

4.1 Area and Location

The Property is located in the Livengood - Tolovana Mining District about 125 road-kilometres northwest of Fairbanks Alaska (Figure 4.1). The Property lies about 4 kilometres south of the now-abandoned gold-mining town site of Livengood and the all-weather paved Elliott Highway, which connects Fairbanks with Alaska's North Slope petroleum production areas via the Elliott and Dalton Highways. The Trans-Alaska Pipeline and the associated surface access corridor cross the Shorty Creek property. The south-draining Tolovana River wraps around the north and west sides of the property and is a tributary to the Yukon River via the Tanana River.

The claim group is situated primarily within Township 7 North, Ranges 4 and 5 West, Fairbanks Meridian; in the Livengood B-3 and B-4 quadrangles. Geographically the center of the Property lies at about 430000 E, 7257500 N (UTM NAD 27 for Alaska, Zone 6 North datum (Figure 4.2). The Property is comprised of 328 State of Alaska mining claims covering 31,478 acres (12,738.69 hectares).

The Trans-Alaska Pipeline (Figure 4.2) crosses the property from the southeast to the northwest. Mineral Closing Order 67 closed the original pipeline corridor, measuring one mile in total width, to mineral entry in 1980. Subsequently, in 2014 the pipeline corridor was reduced to 600 feet (300 feet on each side of the pipeline). In addition, a slightly different closing order, Mineral Closing Order 529 was imposed more recently and encompasses the right of way for possible natural gas line construction (Figure 4.2). Freegold staked additional claims in the formerly closed area, as well as additional claims to cover a north-east striking magnetic lineament bringing the total number to claims to 328.

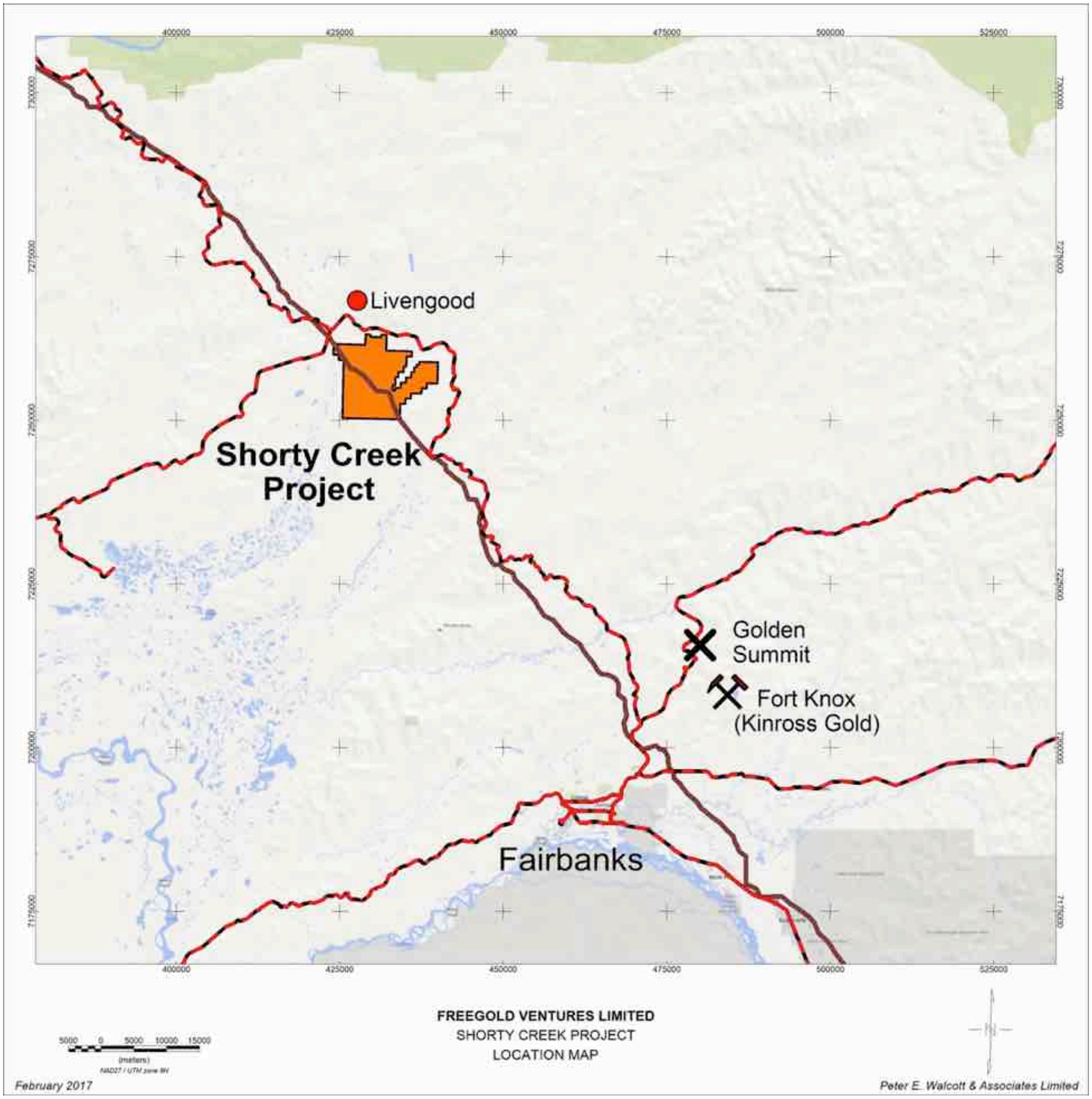

Figure 4.1 Shorty Creek Property Location Map

4.2 Claims and Agreements

In July 2014, Freegold through its wholly owned subsidiary, Grizzly Bear Gold Inc., acquired a lease on the Shorty Creek property from Gold Range, Ltd., a Fairbanks-based private corporation. The Shorty Creek claims under lease include the original 203 State of Alaska mining claims held by Gold Range, Ltd. and the additional State of Alaska claims staked by Freegold in the area of interest. Additional claims were located both in 2014 and in 2106 bringing the total number of claims to 328. All claims are treated as though they are subject to the Gold Range agreement. The total number of claims is currently 328 claims covering 31,478 acres (12,739.69 hectares); (Figure 4.2). Under terms of this lease, Freegold may explore, develop and mine the project under an initial 10-year lease agreement with additional 10-year automatic renewals subject to the completion of certain milestones. A share payment of 750,000 shares was made to Gold Range, Ltd. as consideration. Gold Range, Ltd. will be responsible for the annual State of Alaska rent for the first 5 years for the original 203 claims, after which point Freegold will be responsible for these payments. Gold Range, Ltd. will retain a 2% NSR.

Mineral rights in this part of Alaska are administered by the State of Alaska. The 2016-2017 annual rents at Shorty Creek were paid by Gold Range, Ltd. and Grizzly Bear in November of 2016 These claim rent payments and the annual labor documents recorded by Gold Range, Ltd. are sufficient to keep the claims valid through September 1, 2017. Total rents for the Shorty Creek Project including for 2016 – 2017 were US$69,733 of which US $58,515 was paid by Gold Range under the current lease agreement. Annual work commitment on the properties in the amount of $2.50 per acre per year is required with amounts in excess of these levels bankable up to four years into the future. To the best of the author's knowledge, all claims at the Shorty Creek project currently are in good standing. A registered land or mineral surveyor has not surveyed the claims of the Shorty Creek project and there is no State or federal law or regulation requiring such surveying.

A summary of the claims held by Freegold is shown in Table 4.1. Figure 4.2 shows the land status. Table 4.2 is a list of the claims.

Table 4.1 Summary of claims comprising the Shorty Creek property

Claim Type	Total Claims	Total Area (sq. mi)	Total Area (acres)	Total Area (hectares)
State of Alaska	328	49.18	31,478	12,738.69
Total	**328**	**49.18**	**31,478**	**12,738.69**

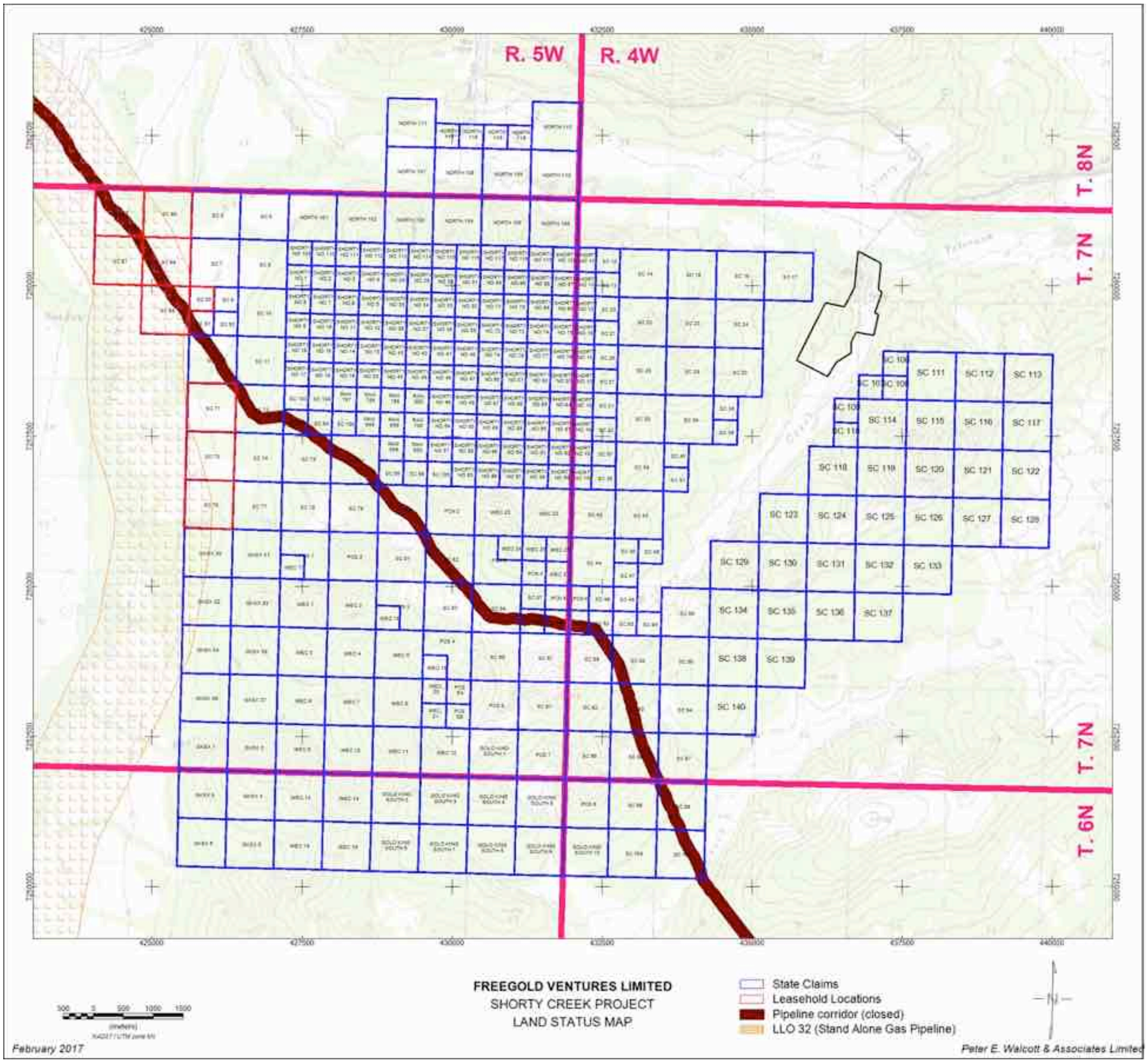

Figure 4.2 Shorty Creek Land Status Map

Table 4.2 Claims comprising the Shorty Creek property

State of Alaska Mining Claims
All claims located in the Fairbanks Recording Districts, Alaska

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 514366	Gold Range Ltd	Mining Claim (MC)	RAN 600	27-Nov-86	F007N005W14	40
ADL 514368	Gold Range Ltd	Mining Claim (MC)	RAN 700	27-Nov-86	F007N005W14	40
ADL 514370	Gold Range Ltd	Mining Claim (MC)	RAN 800	27-Nov-86	F007N005W14	40
ADL 526720	Gold Range Ltd	Mining Claim (MC)	RAN 599	14-Sep-88	F007N005W14	40
ADL 526727	Gold Range Ltd	Mining Claim (MC)	RAN 698	12-Sep-88	F007N005W15	38
ADL 526728	Gold Range Ltd	Mining Claim (MC)	RAN 699	13-Sep-88	F007N005W14	40
ADL 526735	Gold Range Ltd	Mining Claim (MC)	RAN 797	12-Sep-88	F007N005W15	40
ADL 526736	Gold Range Ltd	Mining Claim (MC)	RAN 798	12-Sep-88	F007N005W15	40
ADL 526737	Gold Range Ltd	Mining Claim (MC)	RAN 799	13-Sep-88	F007N005W14	40
ADL 571634	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 1	17-Feb-96	F007N005W03	40
ADL 571635	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 2	17-Feb-96	F007N005W03	40
ADL 571636	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 3	17-Feb-96	F007N005W03	40
ADL 571637	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 4	17-Feb-96	F007N005W03	40
ADL 571638	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 5	17-Feb-96	F007N005W10	40
ADL 571639	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 6	18-Feb-96	F007N005W10	40
ADL 571640	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 7	18-Feb-96	F007N005W10	40
ADL 571641	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 8	18-Feb-96	F007N005W10	40
ADL 571642	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 9	24-Feb-96	F007N005W10	40
ADL 571643	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 10	24-Feb-96	F007N005W10	40
ADL 571644	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 11	24-Feb-96	F007N005W10	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 571645	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 12	24-Feb-96	F007N005W10	40
ADL 571646	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 13	25-Feb-96	F007N005W10	40
ADL 571647	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 14	25-Feb-96	F007N005W10	40
ADL 571648	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 15	25-Feb-96	F007N005W10	40
ADL 571649	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 16	25-Feb-96	F007N005W10	40
ADL 571650	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 17	2-Mar-96	F007N005W10	40
ADL 571651	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 18	2-Mar-96	F007N005W10	40
ADL 571652	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 19	2-Mar-96	F007N005W10	40
ADL 571653	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 20	2-Mar-96	F007N005W10	40
ADL 571654	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 28	3-Mar-96	F007N005W02	40
ADL 571655	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 29	3-Mar-96	F007N005W02	40
ADL 571656	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 30	3-Mar-96	F007N005W02	40
ADL 571657	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 31	3-Mar-96	F007N005W02	40
ADL 571658	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 32	9-Mar-96	F007N005W11	40
ADL 571659	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 33	9-Mar-96	F007N005W11	40
ADL 571660	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 34	9-Mar-96	F007N005W11	40
ADL 571661	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 35	9-Mar-96	F007N005W11	40
ADL 571662	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 36	10-Mar-96	F007N005W11	40
ADL 571663	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 37	10-Mar-96	F007N005W11	40
ADL 571664	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 38	10-Mar-96	F007N005W11	40
ADL 571665	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 39	10-Mar-96	F007N005W11	40
ADL 571666	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 40	24-Feb-96	F007N005W11	40
ADL 571667	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 41	24-Feb-96	F007N005W11	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 571668	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 42	25-Feb-96	F007N005W11	40
ADL 571669	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 43	25-Feb-96	F007N005W11	40
ADL 571670	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 44	25-Feb-96	F007N005W11	40
ADL 571671	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 45	25-Feb-96	F007N005W11	40
ADL 571672	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 46	24-Feb-96	F007N005W11	40
ADL 571673	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 47	24-Feb-96	F007N005W11	40
ADL 571674	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 48	18-Feb-96	F007N005W14	40
ADL 571675	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 49	18-Feb-96	F007N005W14	40
ADL 571676	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 54	18-Feb-96	F007N005W14	40
ADL 571677	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 55	18-Feb-96	F007N005W14	40
ADL 571678	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 56	17-Feb-96	F007N005W14	40
ADL 571679	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 57	17-Feb-96	F007N005W14	40
ADL 571681	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 63	17-Feb-96	F007N005W14	40
ADL 571682	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 64	11-Mar-96	F007N005W01	40
ADL 571683	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 65	11-Mar-96	F007N005W01	40
ADL 571684	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 66	11-Mar-96	F007N005W01	40
ADL 571685	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 67	11-Mar-96	F007N005W01	40
ADL 571686	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 68	12-Mar-96	F007N005W12	40
ADL 571687	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 69	12-Mar-96	F007N005W12	40
ADL 571688	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 70	12-Mar-96	F007N005W12	40
ADL 571689	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 71	12-Mar-96	F007N005W12	40
ADL 571690	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 72	13-Mar-96	F007N005W12	40
ADL 571691	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 73	13-Mar-96	F007N005W12	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 571692	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 74	13-Mar-96	F007N005W12	40
ADL 571693	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 75	13-Mar-96	F007N005W12	40
ADL 571694	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 76	12-Mar-96	F007N005W12	40
ADL 571695	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 77	12-Mar-96	F007N005W12	40
ADL 571696	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 78	12-Mar-96	F007N005W12	40
ADL 571697	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 79	12-Mar-96	F007N005W12	40
ADL 571698	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 80	11-Mar-96	F007N005W12	40
ADL 571699	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 81	11-Mar-96	F007N005W12	40
ADL 571700	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 82	11-Mar-96	F007N005W12	40
ADL 571701	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 83	11-Mar-96	F007N005W12	40
ADL 571702	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 84	10-Mar-96	F007N005W13	40
ADL 571703	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 85	10-Mar-96	F007N005W13	40
ADL 571704	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 86	10-Mar-96	F007N005W13	40
ADL 571705	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 87	10-Mar-96	F007N005W13	40
ADL 571706	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 88	9-Mar-96	F007N005W13	40
ADL 571707	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 89	9-Mar-96	F007N005W13	40
ADL 571708	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 90	9-Mar-96	F007N005W13	40
ADL 571709	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 91	9-Mar-96	F007N005W13	40
ADL 571710	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 92	3-Mar-96	F007N005W13	40
ADL 571711	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 93	3-Mar-96	F007N005W13	40
ADL 571712	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 94	3-Mar-96	F007N005W13	40
ADL 571713	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 95	3-Mar-96	F007N005W13	40
ADL 571714	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 96	2-Mar-96	F007N005W13	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 571715	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 97	2-Mar-96	F007N005W13	40
ADL 571716	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 98	2-Mar-96	F007N005W13	40
ADL 571717	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 99	2-Mar-96	F007N005W13	40
ADL 571718	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 100	14-Mar-96	F007N004W06	40
ADL 571719	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 101	14-Mar-96	F007N004W07	40
ADL 571720	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 102	14-Mar-96	F007N004W07	40
ADL 571721	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 103	13-Mar-96	F007N004W07	40
ADL 571722	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 104	13-Mar-96	F007N004W07	40
ADL 571723	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 105	13-Mar-96	F007N004W18	40
ADL 571724	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 106	13-Mar-96	F007N004W18	40
ADL 571725	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 107	14-Mar-96	F007N004W18	40
ADL 571726	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 108	14-Mar-96	F007N004W18	40
ADL 576809	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 109	1-Nov-97	F007N005W03	40
ADL 576810	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 110	1-Nov-97	F007N005W03	40
ADL 576811	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 111	1-Nov-97	F007N005W03	40
ADL 576812	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 112	1-Nov-97	F007N005W03	40
ADL 576813	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 113	2-Nov-97	F007N005W02	40
ADL 576814	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 114	2-Nov-97	F007N005W02	40
ADL 576815	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 115	2-Nov-97	F007N005W02	40
ADL 576816	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 116	2-Nov-97	F007N005W02	40
ADL 576817	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 117	8-Nov-97	F007N005W01	40
ADL 576818	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 118	8-Nov-97	F007N005W01	40
ADL 576819	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 119	8-Nov-97	F007N005W01	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 576820	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 120	8-Nov-97	F007N005W01	40
ADL 576821	Gold Range Ltd	Mining Claim (MC)	SHORTY NO 121	9-Nov-97	F007N004W06	40
ADL 606525	Gold Range Ltd	Mining Claim (MC)	WEC 1	18-Feb-05	F007N005W27	160
ADL 606526	Gold Range Ltd	Mining Claim (MC)	WEC 2	18-Feb-05	F007N005W27	160
ADL 606527	Gold Range Ltd	Mining Claim (MC)	WEC 3	18-Feb-05	F007N005W27	160
ADL 606528	Gold Range Ltd	Mining Claim (MC)	WEC 4	18-Feb-05	F007N005W27	160
ADL 606529	Gold Range Ltd	Mining Claim (MC)	WEC 5	18-Feb-05	F007N005W26	160
ADL 606530	Gold Range Ltd	Mining Claim (MC)	WEC 6	18-Feb-05	F007N005W34	160
ADL 606531	Gold Range Ltd	Mining Claim (MC)	WEC 7	18-Feb-05	F007N005W34	160
ADL 606532	Gold Range Ltd	Mining Claim (MC)	WEC 8	18-Feb-05	F007N005W35	160
ADL 606533	Gold Range Ltd	Mining Claim (MC)	WEC 9	18-Feb-05	F007N005W34	160
ADL 606534	Gold Range Ltd	Mining Claim (MC)	WEC 10	18-Feb-05	F007N005W34	160
ADL 606535	Gold Range Ltd	Mining Claim (MC)	WEC 11	18-Feb-05	F007N005W35	160
ADL 606536	Gold Range Ltd	Mining Claim (MC)	WEC 12	18-Feb-05	F007N005W35	160
ADL 606537	Gold Range Ltd	Mining Claim (MC)	WEC 13	18-Feb-05	F006N005W03	160
ADL 606538	Gold Range Ltd	Mining Claim (MC)	WEC 14	18-Feb-05	F006N005W03	160
ADL 606539	Gold Range Ltd	Mining Claim (MC)	WEC 15	18-Feb-05	F006N005W03	160
ADL 606540	Gold Range Ltd	Mining Claim (MC)	WEC 16	18-Feb-05	F006N005W03	160
ADL 606541	Gold Range Ltd	Mining Claim (MC)	WEC 17	18-Feb-05	F007N005W22	40
ADL 606542	Gold Range Ltd	Mining Claim (MC)	WEC 18	18-Feb-05	F007N005W26	40
ADL 606543	Gold Range Ltd	Mining Claim (MC)	WEC 19	18-Feb-05	F007N005W26	40
ADL 606544	Gold Range Ltd	Mining Claim (MC)	WEC 20	18-Feb-05	F007N005W35	40
ADL 606545	Gold Range Ltd	Mining Claim (MC)	WEC 21	18-Feb-05	F007N005W35	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 606546	Gold Range Ltd	Mining Claim (MC)	WEC 22	18-Feb-05	F007N005W24	160
ADL 606547	Gold Range Ltd	Mining Claim (MC)	WEC 23	18-Feb-05	F007N005W24	160
ADL 606548	Gold Range Ltd	Mining Claim (MC)	WEC 24	18-Feb-05	F007N005W24	40
ADL 606549	Gold Range Ltd	Mining Claim (MC)	WEC 25	18-Feb-05	F007N005W24	40
ADL 606550	Gold Range Ltd	Mining Claim (MC)	WEC 26	18-Feb-05	F007N005W24	40
ADL 606551	Gold Range Ltd	Mining Claim (MC)	WEC 27	18-Feb-05	F007N005W24	40
ADL 606552	Gold Range Ltd	Mining Claim (MC)	NORTH 101	18-Feb-05	F007N005W03	160
ADL 606553	Gold Range Ltd	Mining Claim (MC)	NORTH 102	18-Feb-05	F007N005W03	160
ADL 606554	Gold Range Ltd	Mining Claim (MC)	NORTH 103	18-Feb-05	F007N005W02	160
ADL 606555	Gold Range Ltd	Mining Claim (MC)	NORTH 104	18-Feb-05	F007N005W02	160
ADL 606556	Gold Range Ltd	Mining Claim (MC)	NORTH 105	18-Feb-05	F007N005W01	160
ADL 606557	Gold Range Ltd	Mining Claim (MC)	NORTH 106	18-Feb-05	F007N005W01	160
ADL 606558	Gold Range Ltd	Mining Claim (MC)	NORTH 107	18-Feb-05	F008N005W35	160
ADL 606559	Gold Range Ltd	Mining Claim (MC)	NORTH 108	18-Feb-05	F008N005W35	160
ADL 606560	Gold Range Ltd	Mining Claim (MC)	NORTH 109	18-Feb-05	F008N005W36	160
ADL 606561	Gold Range Ltd	Mining Claim (MC)	NORTH 110	18-Feb-05	F008N005W36	160
ADL 606562	Gold Range Ltd	Mining Claim (MC)	NORTH 111	18-Feb-05	F008N005W35	160
ADL 606563	Gold Range Ltd	Mining Claim (MC)	NORTH 112	18-Feb-05	F008N005W36	160
ADL 606564	Gold Range Ltd	Mining Claim (MC)	NORTH 113	18-Feb-05	F008N005W35	40
ADL 606565	Gold Range Ltd	Mining Claim (MC)	NORTH 114	18-Feb-05	F008N005W35	40
ADL 606566	Gold Range Ltd	Mining Claim (MC)	NORTH 115	18-Feb-05	F008N005W36	40
ADL 606567	Gold Range Ltd	Mining Claim (MC)	NORTH 116	18-Feb-05	F008N005W36	40
ADL 619807	Gold Range Ltd	Leasehold Location (LL)	SC 50	11-Oct-14	F007N005W09	40

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 619808	Gold Range Ltd	Mining Claim (MC)	SC 51	11-Oct-14	F007N005W09	40
ADL 619809	Gold Range Ltd	Mining Claim (MC)	SC 52	11-Oct-14	F007N005W09	40
ADL 619810	Gold Range Ltd	Mining Claim (MC)	SC 53	11-Oct-14	F007N005W15	40
ADL 619811	Gold Range Ltd	Mining Claim (MC)	SC 54	11-Oct-14	F007N005W15	40
ADL 619812	Gold Range Ltd	Mining Claim (MC)	SC 55	11-Oct-14	F007N005W14	40
ADL 619813	Gold Range Ltd	Mining Claim (MC)	SC 56	11-Oct-14	F007N005W14	40
ADL 619814	Gold Range Ltd	Mining Claim (MC)	SC 57	11-Oct-14	F007N005W25	40
ADL 619815	Gold Range Ltd	Mining Claim (MC)	SC 59	11-Oct-14	F007N005W25	40
ADL 619816	Gold Range Ltd	Mining Claim (MC)	SC 60	11-Oct-14	F007N005W25	40
ADL 619817	Gold Range Ltd	Mining Claim (MC)	SC 61	11-Oct-14	F007N004W30	40
ADL 619818	Gold Range Ltd	Mining Claim (MC)	SC 62	11-Oct-14	F007N004W30	40
ADL 619819	Gold Range Ltd	Mining Claim (MC)	SC 63	11-Oct-14	F007N004W30	40
ADL 619820	Gold Range Ltd	Mining Claim (MC)	SC 64	11-Oct-14	F007N004W30	40
ADL 619821	Gold Range Ltd	Leasehold Location (LL)	SC 65	11-Oct-14	F007N005W05	160
ADL 619822	Gold Range Ltd	Leasehold Location (LL)	SC 66	11-Oct-14	F007N005W05	160
ADL 619823	Gold Range Ltd	Leasehold Location (LL)	SC 67	11-Oct-14	F007N005W05	160
ADL 619824	Gold Range Ltd	Leasehold Location (LL)	SC 68	11-Oct-14	F007N005W05	160
ADL 619825	Gold Range Ltd	Leasehold Location (LL)	SC 69	11-Oct-14	F007N005W08	160
ADL 619826	Gold Range Ltd	Mining Claim (MC)	SC 70	11-Oct-14	F007N005W09	160
ADL 619827	Gold Range Ltd	Leasehold Location (LL)	SC 71	11-Oct-14	F007N005W16	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 619828	Gold Range Ltd	Mining Claim (MC)	SC 72	11-Oct-14	F007N005W16	160
ADL 619829	Gold Range Ltd	Leasehold Location (LL)	SC 73	11-Oct-14	F007N005W16	160
ADL 619830	Gold Range Ltd	Mining Claim (MC)	SC 74	11-Oct-14	F007N005W16	160
ADL 619831	Gold Range Ltd	Mining Claim (MC)	SC 75	11-Oct-14	F007N005W15	160
ADL 619832	Gold Range Ltd	Leasehold Location (LL)	SC 76	11-Oct-14	F007N005W21	160
ADL 619833	Gold Range Ltd	Mining Claim (MC)	SC 77	11-Oct-14	F007N005W21	160
ADL 619834	Gold Range Ltd	Mining Claim (MC)	SC 78	11-Oct-14	F007N005W22	160
ADL 619835	Gold Range Ltd	Mining Claim (MC)	SC 79	11-Oct-14	F007N005W22	160
ADL 619836	Gold Range Ltd	Mining Claim (MC)	SC 80	11-Oct-14	F007N005W23	160
ADL 619837	Gold Range Ltd	Mining Claim (MC)	SC 81	11-Oct-14	F007N005W23	160
ADL 619838	Gold Range Ltd	Mining Claim (MC)	SC 82	11-Oct-14	F007N005W23	160
ADL 619839	Gold Range Ltd	Mining Claim (MC)	SC 83	11-Oct-14	F007N005W26	160
ADL 619840	Gold Range Ltd	Mining Claim (MC)	SC 84	11-Oct-14	F007N005W25	160
ADL 619841	Gold Range Ltd	Mining Claim (MC)	SC 85	11-Oct-14	F007N004W29	160
ADL 619842	Gold Range Ltd	Mining Claim (MC)	SC 86	11-Oct-14	F007N005W25	160
ADL 619843	Gold Range Ltd	Mining Claim (MC)	SC 87	11-Oct-14	F007N005W25	160
ADL 619844	Gold Range Ltd	Mining Claim (MC)	SC 88	11-Oct-14	F007N004W30	160
ADL 619845	Gold Range Ltd	Mining Claim (MC)	SC 89	11-Oct-14	F007N004W30	160
ADL 619846	Gold Range Ltd	Mining Claim (MC)	SC 90	11-Oct-14	F007N004W29	160
ADL 619847	Gold Range Ltd	Mining Claim (MC)	SC 91	11-Oct-14	F007N005W36	160
ADL 619848	Gold Range Ltd	Mining Claim (MC)	SC 92	11-Oct-14	F007N004W31	160
ADL 619849	Gold Range Ltd	Mining Claim (MC)	SC 93	11-Oct-14	F007N004W31	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 619850	Gold Range Ltd	Mining Claim (MC)	SC 94	11-Oct-14	F007N004W32	160
ADL 619851	Gold Range Ltd	Mining Claim (MC)	SC 95	11-Oct-14	F007N004W31	160
ADL 619852	Gold Range Ltd	Mining Claim (MC)	SC 96	11-Oct-14	F007N004W31	160
ADL 619853	Gold Range Ltd	Mining Claim (MC)	SC 97	11-Oct-14	F007N004W32	160
ADL 619854	Gold Range Ltd	Mining Claim (MC)	SC 98	11-Oct-14	F006N004W06	160
ADL 619855	Gold Range Ltd	Mining Claim (MC)	SC 99	11-Oct-14	F006N004W05	160
ADL 619856	Gold Range Ltd	Mining Claim (MC)	SC 100	11-Oct-14	F006N004W06	160
ADL 619857	Gold Range Ltd	Mining Claim (MC)	SC 101	11-Oct-14	F006N004W05	160
ADL 619858	Gold Range Ltd	Mining Claim (MC)	SC 102	18-Oct-14	F007N005W15	40
ADL 619859	Gold Range Ltd	Mining Claim (MC)	SC 103	18-Oct-14	F007N005W15	40
ADL 619860	Gold Range Ltd	Mining Claim (MC)	SC 104	18-Oct-14	F007N005W15	40
ADL 619861	Gold Range Ltd	Mining Claim (MC)	SC 105	18-Oct-14	F007N005W14	40
ADL 666591	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 1	28-May-09	F007N005W36	160
ADL 666592	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 2	28-May-09	F006N005W02	160
ADL 666593	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 3	28-May-09	F006N005W02	160
ADL 666594	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 4	28-May-09	F006N005W01	160
ADL 666595	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 5	28-May-09	F006N005W01	160
ADL 666596	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 6	28-May-09	F006N005W02	160
ADL 666597	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 7	28-May-09	F006N005W02	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 666598	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 8	28-May-09	F006N005W01	160
ADL 666599	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 9	28-May-09	F006N005W01	160
ADL 666600	Gold Range Ltd	Mining Claim (MC)	GOLD KING SOUTH 10	28-May-09	F006N004W06	160
ADL 700545	Gold Range Ltd	Mining Claim (MC)	PCN 1	9-Apr-10	F007N005W15	160
ADL 700546	Gold Range Ltd	Mining Claim (MC)	PCN 2	9-Apr-10	F007N005W23	160
ADL 700547	Gold Range Ltd	Mining Claim (MC)	PCN 3	9-Apr-10	F007N005W24	160
ADL 700548	Gold Range Ltd	Mining Claim (MC)	PCN 4	9-Apr-10	F007N005W24	40
ADL 700549	Gold Range Ltd	Mining Claim (MC)	PCN 5	9-Apr-10	F007N005W25	40
ADL 700550	Gold Range Ltd	Mining Claim (MC)	PCN 6	9-Apr-10	F007N004W30	40
ADL 700552	Gold Range Ltd	Mining Claim (MC)	PCS 1	9-Apr-10	F007N005W22	160
ADL 700553	Gold Range Ltd	Mining Claim (MC)	PCS 2	9-Apr-10	F007N005W22	160
ADL 700554	Gold Range Ltd	Mining Claim (MC)	PCS 3	9-Apr-10	F007N005W26	160
ADL 700555	Gold Range Ltd	Mining Claim (MC)	PCS 4	9-Apr-10	F007N005W26	160
ADL 700556	Gold Range Ltd	Mining Claim (MC)	PCS 5A	9-Apr-10	F007N005W35	40
ADL 700557	Gold Range Ltd	Mining Claim (MC)	PCS 5B	9-Apr-10	F007N005W35	40
ADL 700558	Gold Range Ltd	Mining Claim (MC)	PCS 6	9-Apr-10	F007N005W36	160
ADL 700559	Gold Range Ltd	Mining Claim (MC)	PCS 7	9-Apr-10	F007N005W36	160
ADL 700560	Gold Range Ltd	Mining Claim (MC)	PCS 8	9-Apr-10	F006N004W06	160
ADL 700562	Gold Range Ltd	Mining Claim (MC)	GKSX 1	9-Apr-10	F007N005W33	160
ADL 700563	Gold Range Ltd	Mining Claim (MC)	GKSX 2	9-Apr-10	F007N005W33	160
ADL 700564	Gold Range Ltd	Mining Claim (MC)	GKSX 3	9-Apr-10	F006N005W04	160
ADL 700565	Gold Range Ltd	Mining Claim (MC)	GKSX 4	9-Apr-10	F006N005W04	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 700566	Gold Range Ltd	Mining Claim (MC)	GKSX 5	9-Apr-10	F006N005W04	160
ADL 700567	Gold Range Ltd	Mining Claim (MC)	GKSX 6	9-Apr-10	F006N005W04	160
ADL 701156	Gold Range Ltd	Mining Claim (MC)	GKSX 30	11-May-10	F007N005W21	160
ADL 701157	Gold Range Ltd	Mining Claim (MC)	GKSX 31	11-May-10	F007N005W21	160
ADL 701158	Gold Range Ltd	Mining Claim (MC)	GKSX 32	11-May-10	F007N005W28	160
ADL 701159	Gold Range Ltd	Mining Claim (MC)	GKSX 33	11-May-10	F007N005W28	160
ADL 701160	Gold Range Ltd	Mining Claim (MC)	GKSX 34	11-May-10	F007N005W28	160
ADL 701161	Gold Range Ltd	Mining Claim (MC)	GKSX 35	11-May-10	F007N005W28	160
ADL 701162	Gold Range Ltd	Mining Claim (MC)	GKSX 36	11-May-10	F007N005W33	160
ADL 701163	Gold Range Ltd	Mining Claim (MC)	GKSX 37	11-May-10	F007N005W33	160
ADL 719403	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 5	16-Sep-14	F007N005W04	160
ADL 719404	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 6	16-Sep-14	F007N005W04	160
ADL 719405	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 7	16-Sep-14	F007N005W04	160
ADL 719406	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 8	16-Sep-14	F007N005W04	160
ADL 719407	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 9	16-Sep-14	F007N005W09	40
ADL 719408	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 10	16-Sep-14	F007N005W09	160
ADL 719409	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 11	16-Sep-14	F007N005W09	160
ADL 719410	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 12	16-Sep-14	F007N004W06	40
ADL 719411	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 13	16-Sep-14	F007N004W06	40
ADL 719412	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 14	16-Sep-14	F007N004W06	160
ADL 719413	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 15	16-Sep-14	F007N004W05	160
ADL 719414	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 16	16-Sep-14	F007N004W05	160
ADL 719415	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 17	16-Sep-14	F007N004W04	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 719418	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 20	16-Sep-14	F007N004W07	40
ADL 719419	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 21	16-Sep-14	F007N004W07	40
ADL 719420	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 22	16-Sep-14	F007N004W07	160
ADL 719421	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 23	16-Sep-14	F007N004W08	160
ADL 719422	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 24	16-Sep-14	F007N004W08	160
ADL 719424	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 26	16-Sep-14	F007N004W07	40
ADL 719425	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 27	16-Sep-14	F007N004W07	40
ADL 719426	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 28	16-Sep-14	F007N004W07	160
ADL 719427	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 29	16-Sep-14	F007N004W08	160
ADL 719428	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 30	16-Sep-14	F007N004W08	160
ADL 719429	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 31	16-Sep-14	F007N004W18	40
ADL 719430	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 32	16-Sep-14	F007N004W18	40
ADL 719431	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 33	16-Sep-14	F007N004W18	160
ADL 719432	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 34	16-Sep-14	F007N004W17	160
ADL 719433	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 35	16-Sep-14	F007N004W17	40
ADL 719434	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 36	16-Sep-14	F007N004W17	40
ADL 719435	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 37	16-Sep-14	F007N004W18	40
ADL 719436	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 38	16-Sep-14	F007N004W18	40
ADL 719437	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 39	16-Sep-14	F007N004W18	160
ADL 719438	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 40	16-Sep-14	F007N004W17	40
ADL 719439	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 41	16-Sep-14	F007N004W17	40
ADL 719440	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 42	16-Sep-14	F007N004W19	160
ADL 719441	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 43	16-Sep-14	F007N004W19	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 719442	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 44	16-Sep-14	F007N004W19	160
ADL 719443	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 45	16-Sep-14	F007N004W19	40
ADL 719444	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 46	16-Sep-14	F007N004W19	40
ADL 719445	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 47	16-Sep-14	F007N004W19	40
ADL 719446	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 48	16-Sep-14	F007N004W30	40
ADL 719447	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 49	16-Sep-14	F007N004W30	40
ADL 722032	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 106	12-Jul-16	F007N004W10	40
ADL 722033	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 107	12-Jul-16	F007N004W10	40
ADL 722034	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 108	12-Jul-16	F007N004W10	40
ADL 722035	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 109	12-Jul-16	F007N004W16	40
ADL 722036	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 110	12-Jul-16	F007N004W16	40
ADL 722037	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 111	12-Jul-16	F007N004W10	160
ADL 722038	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 112	12-Jul-16	F007N004W11	160
ADL 722039	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 113	12-Jul-16	F007N004W11	160
ADL 722040	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 114	12-Jul-16	F007N004W15	160
ADL 722041	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 115	12-Jul-16	F007N004W15	160
ADL 722042	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 116	12-Jul-16	F007N004W14	160
ADL 722043	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 117	12-Jul-16	F007N004W14	160
ADL 722044	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 118	12-Jul-16	F007N004W16	160
ADL 722045	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 119	12-Jul-16	F007N004W15	160
ADL 722046	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 120	12-Jul-16	F007N004W15	160
ADL 722047	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 121	12-Jul-16	F007N004W14	160
ADL 722048	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 122	12-Jul-16	F007N004W14	160

ADL Number	Ownership	Claim Type	Claim Name	Date Located	Township/Range/Section	Acres
ADL 722049	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 123	12-Jul-16	F007N004W21	160
ADL 722050	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 124	12-Jul-16	F007N004W21	160
ADL 722051	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 125	12-Jul-16	F007N004W22	160
ADL 722052	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 126	12-Jul-16	F007N004W22	160
ADL 722053	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 127	12-Jul-16	F007N004W23	160
ADL 722054	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 128	12-Jul-16	F007N004W23	160
ADL 722055	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 129	12-Jul-16	F007N004W20	160
ADL 722056	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 130	12-Jul-16	F007N004W21	160
ADL 722057	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 131	12-Jul-16	F007N004W21	160
ADL 722058	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 132	12-Jul-16	F007N004W22	160
ADL 722059	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 133	12-Jul-16	F007N004W22	160
ADL 722060	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 134	12-Jul-16	F007N004W29	160
ADL 722061	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 135	12-Jul-16	F007N004W28	160
ADL 722062	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 136	12-Jul-16	F007N004W28	160
ADL 722063	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 137	12-Jul-16	F007N004W27	160
ADL 722064	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 138	12-Jul-16	F007N004W29	160
ADL 722065	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 139	12-Jul-16	F007N004W28	160
ADL 722066	Grizzly Bear Gold, Inc.	Mining Claim (MC)	SC 140	12-Jul-16	F007N004W32	160

4.3 Permits

Gold Range, Ltd. and Freegold, through its wholly owned subsidiary Grizzly Bear Gold Inc.; have obtained a multi-year Miscellaneous Land Use Permit For Hardrock Exploration and Reclamation, Winter Cross Country Travel permit. Permit #9170 authorizes exploration, road and drill pad construction and winter cross-country travel off of the claim block. The permit also prescribes mitigation and reporting requirements. The permit was issued effective February 26, 2015 and is valid through December 31, 2017. The permit allows for the construction of access road from the Elliot Highway to Hill 1835 and the Cu-Mo target on Hill 1710

Surface disturbance associated with past mineral exploration prior to 2016 is restricted to a few cut survey lines, drill pad clearings, and partially reclaimed exploration roadways in the northern portion of the Shorty Creek property. To the best of the author's knowledge, there are no unusual environmental liabilities attached to the property.

Depending on the level of exploration work proposed, permits may be required from the Alaska Department of Natural Resources and other State and Federal regulatory agencies and will be applied for on an as-needed basis.

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5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Shorty Creek property is located in the Livengood - Tolovana Mining District about 125 road-kilometres northwest of Fairbanks Alaska. The property lies about 4 kilometres south of the now-abandoned gold-mining town site of Livengood and the all-weather paved Elliott Highway. The Elliott Highway connects Fairbanks with Alaska's North Slope petroleum production areas via the Dalton Highway. The southern terminus of the Dalton Highway, the only all-weather road link to Alaska's North Slope, is located approximately 10 kilometres north of the project.

5.2 Climate

The climate in this portion of Alaska is dominated by 6 to 8 months of sub-freezing temperatures in winter followed by 4 to 6 months of warm summer weather. Average annual precipitation is 33 cm (13 in.), mostly as snowfall between October and March. The summer exploration season extends from mid-May through October, although winter drilling programs are common in Interior Alaska. Development of mines in this climate requires additional engineering and cost, but is not prohibitive, as demonstrated by large-scale mining operations conducted at the Fort Knox, True North, Greens Creek, Red Dog Usibelli and Pogo mines in Alaska, and numerous mines in Canada's far north.

The Shorty Creek area is largely covered by sub-Arctic taiga forest consisting of black spruce, white spruce, birch and aspen. A thick blanket of tundra vegetation and small shrubs such as dwarf birch, willow, alder, Labrador tea and blueberries covers the forest floor.

5.3 Local Resources

Only a few buildings occupied by less than 10 seasonal residents remain in the historic placer mining settlement of Livengood. The Alaska Department of Transportation and Public Facilities maintains a road maintenance facility at Livengood. There are no public services in the Livengood area.

The greater Fairbanks area supports a population of approximately 87,000 and has excellent labor and services infrastructure, including rail and international airport access. The Fairbanks International airport is served by several major airlines with numerous scheduled daily flights. The main campus of the University of Alaska is located in Fairbanks in addition to numerous State and Federal Offices. Major employers within the Fairbanks Area include Fort Knox, Fort Wainwright (US Army), the University of Alaska as well as numerous State and Federal Agencies. Exploration and development costs in the Fairbanks area are comparable to those in the western United States.

5.4 Infrastructure

There currently is no public electrical or communications services in the Shorty Creek project area however, advanced pre feasibility work is being conducted by International Tower Hill Mines on their Livengood gold deposit. Should development of this project occur, industrial-scale power and communications systems linked to Fairbanks will be constructed only a few kilometres from the Property (see "Adjacent Properties").

The Shorty Creek project is bisected by the Trans-Alaska Pipeline, a 48-inch diameter 800-mile long pipeline currently carrying approximately 500,000 barrels per day of crude oil from production facilities on Alaska's North Slope to the all-weather port of Valdez, Alaska. In the Shorty Creek area, Alyeska Pipeline Service Co., the operator of the Trans-Alaska Pipeline, services the pipeline via a controlled-access gravel road whose right-of-way is leased from the State of Alaska.

The State of Alaska maintains royalty rights to a certain amount of crude oil on the Trans-Alaska Pipeline system. Eight large pumping stations along the pipeline route are powered by crude oil produced from on-site topping plants and diesel demand for any project in the Shorty Creek area may be able to utilize State royalty oil to create a local diesel fuel product for mine use.

Several competing options currently are being promoted for construction of an Alaska Natural Gas Pipeline. Regardless of the option eventually chosen, this pipeline will parallel the Trans-Alaska oil line from Prudhoe Bay on the North Slope to Fairbanks, and will thus be constructed across the Shorty Creek property, most likely within the same right-of-way that hosts the oil pipeline. There currently is no guarantee that the natural gas line will be built however, if it is constructed, it would offer similar energy alternatives to the Shorty Creek project.

5.5 Physiography

The physiography of Shorty Creek is characterized as moderately hilly. Elevations range from 150 metres (500 feet) along the Tolovana River, to 660 metres (2,161 feet) on the hilltops. The project is drained by Shorty Creek, Steel Creek, Wilber Creek, Eagle Creek, Slate Creek and several other seasonal drainages, which feed the Tolovana River. These drainages drain across the northern and western edges of the project.

This part of Alaska was not glaciated during the Pleistocene however, the project area was near the southwestern terminus of continental ice and winds from this cold ice mass deposited a variably thick layer of aeolian silt over much of Interior Alaska, including the Shorty Creek project area. Permafrost is limited to small discontinuous lenses on steep, poorly drained north-facing slopes and has posed no hindrance to past exploration. Permafrost was encountered both during the 2015 and 2016 programs and presented additional exploration challenges.

6. HISTORY

The Tolovana-Livengood district is best known as a placer gold district. Placer gold was discovered on Livengood Creek in 1914 and placer mining has been conducted in the district on a nearly continuous basis since that time. Total recorded production from the district through 2007 is approximately 530,121 ounces of gold, all from placer operations (AMA, 2009). Freeman and Schaefer (1999) reported that drilling on Livengood Creek proper prior to 1940 had blocked over 1 Moz of placer gold resources out. The most productive creeks in the area are located on the north side of the Tolovana River valley and include Livengood Creek, Myrtle Creek, Olive Creek, Ruth Creek, Gertrude Creek and Lucille Creek.

Wilber Creek is the only past-producing drainage entering the Tolovana River from the south, the same side of the river on which the Shorty Creek project is located. Placer gold discovered on Wilber Creek in 1906 (Freeman, 2010; R. Rybachek, oral comm., 1988) and additional prospects were discovered in 1915 and 1921 (Freeman and Schaefer, 1999). The first recorded placer production from Wilber Creek took place in 1926 and production took place intermittently between then and the late 1980’s when a limited amount of drift mining was conducted. Freeman (Freeman, 1989) based the 1988 Shorty Creek exploration program from the active placer mine at Wilber Creek and was informed by the placer mine operators that high-grade gold in quartz veins was discovered and mined by hand methods from pits and shallow shafts along the left limit (northwest side) of Wilber Creek some-time prior to World War II (Freeman, 2010; R. Rybachek, oral comm., 1988). Limited efforts during the 1988 program to locate these old workings were not successful. Total placer production from the Wilber Creek valley is unknown but likely less than 50,000 ounces.

Joesting (1943) reported considerable tungsten (as wolframite) in a placer concentrate collected from Steel Creek, which drains the eastern side of the Shorty Creek project. No other reference to Steel Creek is known to the author.

The Shorty Creek Cu-Mo prospect was originally located as an antimony prospect in 1972 (Hart and others, 1985) but was re-evaluated as a copper-molybdenum prospect by Earth Resources in 1972 and was reportedly drilled in several locations prior to 1974 (Eakins, 1974). The property was located based on a large aeromagnetic anomaly that extends over an area about 10 miles square. Quartz-feldspar porphyry with disseminated sulfides, as well as anomalous concentrations of copper, was found along Shorty Creek near the center of the magnetic anomaly. Eakin (1974) reported anomalous metal concentrations from 4 stream sediment samples collected in Shorty Creek and one stream sediment sample collected in Ranney Hollow. Values from the Shorty Creek samples ranged from 30 to 175 ppm copper, 10 to 50 ppb lead, 70 to 105 ppm zinc, <0.2 to 0.5 ppm silver and <100 ppb gold. The sample from lower Ranney Hollow returned 90 ppm copper, 200 ppb lead, 440 ppm zinc, 0.5 ppm silver and 300 ppb gold.

Field evidence suggests that Earth Resources, possibly in joint venture with BP Minerals America (Robinson and Metz, 1979), drilled ten rotary holes on the south flank of Hill 1710 (Figure 2) but abandoned the property in 1979 due to low copper and molybdenum grades. The joint venture concluded that the copper-molybdenum-silver mineralization is associated with the felsic dikes and sills that intrude the Jurassic-Cretaceous Wilber Creek flysch sequence. Data from this exploration program is not available to the author however; Eakin (1974) collected four grab samples from drill cuttings left at the Earth Resources drill pads. These samples returned 170 to 1,050 ppm copper, 20 to 60 ppb lead, 105 to 640 ppm zinc, <0.2 to 01.1 ppm silver and <100 to 100 ppb gold. One bedrock sample was collected approximately 0.5 miles south of the drill area and returned 150 ppm copper, 20 ppb lead, 60 ppm zinc and no detectible silver or gold.

Regional geochemical results presented by Robinson and Metz (1979), Albanese (1983b) and Metz (1984) indicated that widespread anomalous precious and base metal mineralization is present in the Shorty Creek project area. Sulfide mineralization was described by Robinson and Metz (1979) during their mineral evaluations on the Alyeska Pipeline Corridor on what is now the southwestern extension of the Hill 1835 prospect. In the excavation adjacent to the buried pipe, sulfides as much as 5 inches thick were described. The sulfide mineralization included arsenopyrite, stibnite, galena, and chalcopyrite. Strongly anomalous concentrations of cobalt and bismuth also were noted, although the exact mineral species hosting these metals was not determined.

The Alaska Division of Geological and Geophysical Surveys (DGGS) conducted a regional geological mapping and rock and stream sediment geochemical sampling program in the Tolovana-Livengood mining district in 1982 and 1983. Mapping was completed at 1:40,000 scale and stream sediment, pan concentrate and rock samples were collected in the Livengood - Tolovana Mining District, including the Shorty Creek project area (Albanese, 1983a, 1983b; Bundtzen, 1983). These samples were subsequently re-analyzed using more sensitive analytical equipment and re-released (Szumigala and others, 2005). Geochemical results from this re-analysis are presented under "Mineralization".

In 1984, local Fairbanks geologist Roger Burleigh utilized the results of these studies to target what was then called the Ranney Hollow - Eagle Creek prospect area (now Shorty Creek project), and stake prospecting sites and mining claims. The claims were subsequently leased to Fairbanks-based Fairbanks Exploration Inc. who in 1985 discovered significant gold, copper and pathfinder element anomalies in the vicinity of Hill 1835, in exposures along the Alaska Pipeline access road and in the vicinity of Hill 1870 to the south of the pipeline road (Hart and others, 1985). During 1985 Fairbanks Exploration geologists spent 53 person-days on the property and collected 130 rock samples, which were analyzed for Au, As, Sb, Ag, Pb, and Zn. Total 1985 expenditures at Shorty Creek were not specified by Hart and others (1985) but were less than $25,000.

The 1986 exploration program was designed to outline and sample the mineralized zone on Hill 1835 and advance it as a drill target. Field exercises in 1986 consisted of 23 man-days of work on the prospect (Freeman and others, 1986). A total of 77 rock samples were collected and analyzed for Au, Ag, As, Sb, Cu, Pb, Zn, Mo, Ba, and Tl by Bondar-Clegg and Company. Four trenches were emplaced using hand and explosive techniques. All of the trenches were emplaced within mineralized portions of the property. Prospecting was conducted along the northeast and southwest projections of the mineralized zone resulting in identification of the mineralized zone over a plus-one mile strike length. Total 1986 expenditures at Shorty Creek were approximately $13,693.

In June 1988 Fairbanks Exploration entered into a joint venture agreement with Asarco Inc. to explore and develop the Shorty Creek project (Freeman and others, 1988). Terms of this agreement are not available to the author. Field activities in 1988 consisted of 67 person-days of fieldwork, in which 602 rock samples were collected at 100-foot intervals along lines spaced at 400 feet, covering a 5,200 by 4,200-foot area over and to the north of the anomalous area defined in 1985-1986. For economy, every other sample collected on a given sample line was sent for analysis. Bondar-Clegg and Company of Vancouver, B.C, analyzed a total of 340 samples for gold, silver and arsenic. The remaining 262 rock samples were stored in Fairbanks but were never analyzed and are no longer available. Total 1988 expenditures at Shorty Creek were approximately $39,630.

Field activities in 1989 consisted of access road and drill pad construction and reverse circulation drilling (Freeman, 1989). A total of 83 man-days were expended on fieldwork between August 31st and September 22nd, 1989. A 1. 5-mile access road was constructed between the Hill 313.5 metres, were completed at the Hill 1835 target (Figure 6.1). A total of 201 drill samples were collected on 5-foot intervals on all holes. All samples were sent to Bondar-Clegg and Company in Vancouver, BC, and analyzed for gold by fire assay with gravimetric finish. Total 1989 expenditures at Shorty Creek were approximately $58,000.

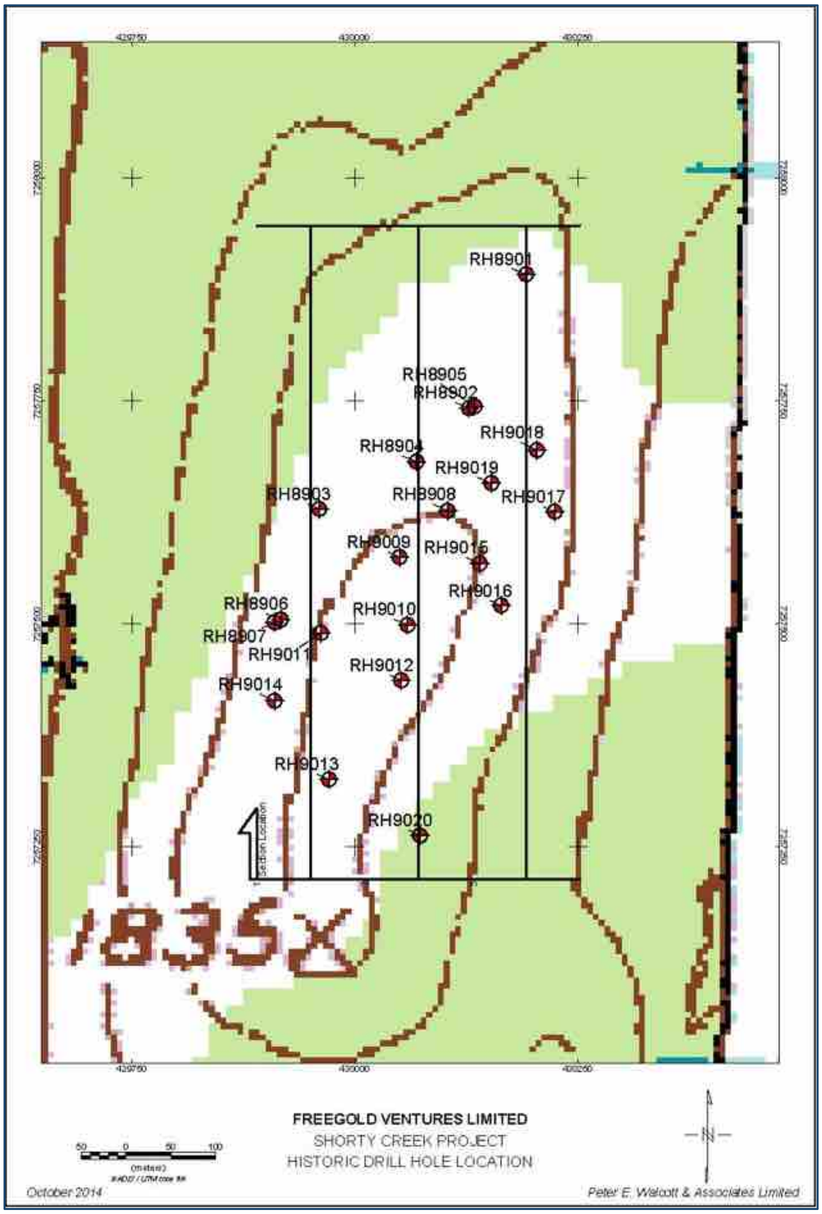

Figure 6.1 Map Showing Historical Drill Hole Locations Hill 1835

A total of 223 man-days of fieldwork were completed on the Rainey Hollow claim block by the Fairbanks Exploration - Asarco joint venture during 1990 (Freeman and Huber, 1990). Twelve reverse-circulation drill holes, totaling 1,772.4 metres were completed (Figure 6.1). All holes were vertical with eleven holes terminating at 152 metres depth and one terminating at 96 metres. As in the 1989 program, drilling was completed in the vicinity of Hill 1835 prospect area. A total of 1,174 drill samples were collected at 5-foot intervals in all drill holes. In addition to drilling, recon-scale mapping and sampling was conducted over those portions of the claim block not previously examined. The old Shorty Creek Cu-Mo prospect was re-examined in light of the highly anomalous copper values returned from the 1990-drilling program. A total of 184 rock samples was collected and analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption and for arsenic by neutron activation. A total of 80 pulps from rock samples originally collected on the project in 1985 were re-analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption and for arsenic by neutron activation. Total 1990 expenditures at Shorty Creek were approximately $259,000. Asarco elected to abandon mineral exploration in Alaska, and as a result, the Asarco-Fairbanks Exploration joint venture was terminated in late 1990.

Little substantive exploration work was conducted on the Shorty Creek project between 1990 and 2005. Weber and others (1992) published a geologic map of the Livengood quadrangle, which was updated and colorized by Weber and others (1997). McCammon and others (1997) published a probabilistic estimate outlining the mineral potential of the Livengood quadrangle but it contained no specific references to the Shorty Creek project. Light and Lee (1997) published a summary of gold bearing samples from the Livengood quadrangle but presented no new information from the Shorty Creek area.

The Alaska Division of Geological and Geophysical Surveys (DGGS) conducted airborne surveys over the Livengood Mining District and released maps and digital data containing magnetic and two frequencies of resistivity derived from electromagnetic survey data (DGGS Staff, 1999a, 1999b and 1999c). DGGS conducted follow-up mapping and geochemical sampling in 2001 and 2003 in the area north of the Elliott Highway but not in the Shorty Creek project area (Athey and others, 2004a, Athey and others, 2004b).

During June 2000, Kennecott Exploration staked a small block of claims on the north side of the Shorty Creek project and conducted additional rock, soil and stream sediment sampling over the Shorty Creek project (Metz, 2000). The work defined three target areas with anomalous concentrations of Au, Cu and As: the Hill 1835 prospect explored by Fairbanks Exploration; the Shorty Creek Cu-Mo prospect area and a third area centered on hill 1890 to the east of Ranney Hollow. Kennecott provided thematic geochemical maps for these three elements showing sample locations and values sized by percentile rank. Raw data from this work were not made available to Fairbanks Exploration.
In 2004, AngloGold Ashanti obtained the assay pulps from the DGGS stream sediment geochemical programs of the early 1980's and had these pulps reanalyzed for gold and a low-level multi-element geochemical suite using modern analytical techniques. The results of this work were provided to ADGGS published by Szumigala and others (2005). A significant number of samples from this work form part of the geochemical database for the Shorty Creek project. Results are discussed under "Mineralization".

In early 2005, California-based Select Resources (Select) announced acquisition of the Shorty Creek project from Fairbanks-based Gold Range Ltd. In March 2005 Select staked approximately 5,300 acres of additional State of Alaska mining claims adjacent to the existing 4800 acre Shorty Creek claim block. Later that year Select contracted with Avalon Development to conduct a top of bedrock soil sampling program on an approximately 4 square kilometer area of the project (Noyes and others, 2006). Soil samples were spaced 50 metres apart on east-west lines spaced 100 metres apart. A total of 566 soil samples were collected along with 21 grab rock samples collected while soil sampling was under way. Total 2005 field expenditures at Shorty Creek were approximately $165,000 however; additional but unknown costs were incurred for geological, geophysical, geochemical, GIS and remote sensing work conducted before, during and after the field program. These additional costs are not available to the author.

No further field work was conducted at Shorty Creek until early June, 2009 when Select staked additional State of Alaska mining claims to increase its land position from approximately 17 square miles to a total of about 39 square miles (Tri-Valley Corp., News Release, 5 June 2009). In September the company announced that it had begun seeking a joint venture partner for the project (Tri-Valley Corp., News Release, 2 Sep 2009).

In order to facilitate seeking a joint venture partner, Select engaged Avalon Development to review all of the previously generated data, summarize it and synthesize targets from this data.
This work was summarized in a report by Curt Freeman of Avalon Development (Freeman, 2010). The cost for this work was not available to the author.

Table 6.1 Summary of exploration (1914-2015) conducted on the Shorty Creek property and adjacent prospects

Company	Years	Exploration/Mining Activity	Principle Targets
Independent prospectors	1914	Placer mining (gold)	Livengood Creek
Independent prospectors	1926 – late 1980s	Placer mining (gold)	Wilbur Creek
Independent prospectors	1943	Placer mining (gold, tungsten)	Steel Creek
Earth Resources	1972 -1979	Geochemical sampling, geophysics and drilling (approximately 10 holes) for Cu-Mo	South Flank of Hill 1710 for porphyry Cu-Mo.
Mineral Industry Research Lab – University of Alaska	1979	Mineral evaluation of the pipeline corridor	Pipeline corridor near Hill 1835
Alaska Division of Geological and Geophysical Surveys	1982 – 1983	Regional geological mapping and rock and stream sediment geochemical sampling.	Tolovana – Livengood mining district
Roger Burleigh	1984	Prospecting	Ranney Hollow, Eagle

Company	Years	Exploration/Mining Activity	Principle Targets
			Creek, Shorty Creek
Fairbanks Exploration	1985 – 1988	Rock and soil geochemical sampling, trenching	Hill 1870, Hill 1835
Fairbanks Exploration/Asarco	1988 – 1990	Rock sampling, property wide mapping, road and drill pad construction, RC drilling	Hill 1835 – 20 holes
Kennecott	2000	Shorty Creek area. Rock, soil and stream sediment sampling.	Property-wide, Hill 1835, Shorty Creek Cu-Mo area and Hill 1890
AngloGold Ashanti	2004	Reanalyzed pulps from the Alaska Division of Geological and Geophysical Surveys stream sediment programs from the early 1980's using modern techniques. The results were published by DGGS.	General Shorty Creek area
Select Resources	2005 -2010	Top of bedrock soil sampling (auger drilling); geological, geophysical and geochemical surveys; remote sensing and GIS.	Property-wide, with focus on Hill 1835.
Freegold	2014	Claim staking, soil sampling (354 samples), geophysics (28.6 line km of induced polarization)	North central part of the current claim block
Freegold	2015	Diamond Drilling, Pad Construction and Magnetic Modelling	Hill 1835 (4 holes) and Hill 1710
Freegold	2016	Diamond Drilling, Pad Construction, Magnetic Modelling, ground magnetics, and soil geochemical surveys	Hill 1835 (2 holes) and Hill 1710 (5 holes), Steel Creek, and Quarry target areas

7. GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional and Property Geology

7.1.1 Regional Geology

The following summary of the regional geology of Interior Alaska is generally excerpted from Freeman (2010):

The Shorty Creek project is located within the Livengood Terrane, a complex and poorly understood belt of Paleozoic through Cretaceous sedimentary, metamorphic and intrusive rocks which are bounded on the north by the northeast trending right lateral Kaltag fault and the northwest trending right lateral Tintina fault. On the south, the Livengood Terrane is bounded by the regionally extensive Yukon Tanana Terrane (Weber and others, 1992; Weber and others, 1997). Late Cretaceous and Tertiary dextral motion along the Tintina fault displaced rocks south of the fault at least 430 kilometres westward relative to time-equivalent rocks to the north of the Tintina fault in the Yukon Territory. During Mid-Cretaceous time, the Livengood area was situated approximately in the position of Dawson City relative to the northern cordillera (Hart and others, 2004). The Livengood Terrane sits immediately south of this hinge zone where predominantly northwest trending high angle structures become predominantly northeast trending thrust and reverse faults. To the southeast, the Livengood Terrane is separated from regionally extensive rocks of the Yukon Tanana Terrane by the Beaver Creek thrust fault, a northeast striking, southeast dipping regional-scale structure (Figure 7.1.2).

Rocks of the Shorty Creek project are hosted within the Wilber Creek unit, a folded sequence of Early Cretaceous flysch sediments which form the youngest bedded rocks in the project area. The Wilber Creek flysch disconformably overlies a thrust package of south dipping Lower Paleozoic carbonates, volcanics and pelitic rocks which host the +20.1 Moz Livengood gold project located about 5 miles north of the Shorty Creek project (Bundtzen, 1983, Weber and others, 1992; Weber and others, 1997). Rocks of the Wilber Creek flysch are folded into open to recumbent isoclinal folds and subsequently cut by northeast and north-south structures, the largest of which are the Minto and Ranney Hollow faults, two north-south striking left lateral fault with significant but uncertain vertical offset. The Minto fault bounds a broad topographic lowland immediately west of the project area, and remains active to the present.

Rocks of the Livengood Terrane have been intruded by both mid-Cretaceous (90 to 110 Ma) and Early Tertiary (60-75 Ma) felsic to intermediate plutonic rocks, the latter of which crop out on the Shorty Creek project (Athey and Craw, 2004; Albanese, 1983; Metz, oral comm., 2010). These intrusive rocks are regionally extensive in both the Tintina Gold belt to the west and the Kuskokwim Gold belt to the southwest. In both mineral belts, these intrusives are spatially and probably genetically associated with widespread gold and base metal mineralization (Ebert, 2003, Lang and others, 1999, Hart and others, 2002, Hart and others, 2004; Flanigan and others, 2000, Mortensen and others, 2000, McCoy, 1999, McCoy and others, 1997, McCoy and others, 2002, Bundtzen and Miller, 1997, Eremin, 1995, Baker, 2002, Baker and others, 2006, Klipfel and Giroux, 2009).

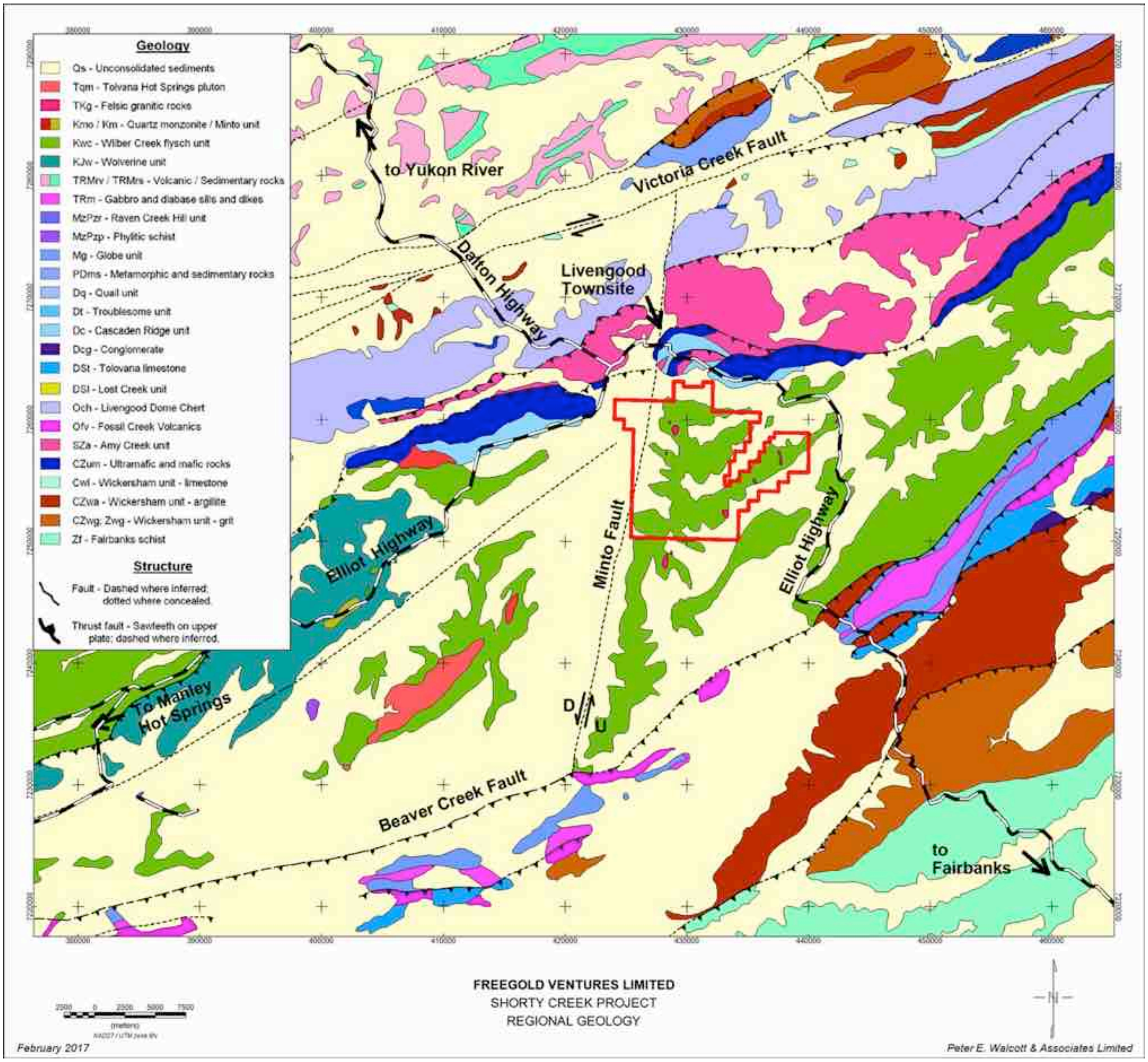

Figure 7.1.1 Regional Geology of the Shorty Creek project, Alaska. Data from Weber and others, 1992 and 1997, modified by Avalon Development, 2010 and modified by Freegold, 2016

7.1.2 Project Geology

The following summary of the Shorty Creek project general geology is derived in large part from Freeman (2010):

Extensive Pleistocene aeolian silt and sub-Arctic vegetation obscure most of the bedrock on the Shorty Creek project (Figure 7.1.3). Its presence is only noted on the project geology map as a dashed line showing where the cover deepens. Limited exposures of the Wilber Creek sequence occur along the Alyeska Pipeline access road corridor and along some ridge tops in the area. Lithologies exposed at Shorty Creek include interbedded shale, siltstone, greywacke sandstone and conglomerate. Graded bedding is common. Poorly preserved pelecypods within the conglomerate unit suggest a Late Jurassic to Early Cretaceous age although Weber and others (1997) assign the Wilber Creek rocks an Early Cretaceous age in the Shorty Creek project area.

The principal lithologies exposed on the Shorty Creek project include black carbonaceous siltstone, gray feldspathic sandstone and silty sandstone, black shale and polymict conglomerate (Figure 7.1.3, Bundtzen, 1983; Albanese, 1983; Hart and others, 1985; Freeman and others, 1986; Freeman and others, 1988; Freeman, 1989; Freeman and Huber, 1990). Most lithologic units strike N20-60E and dip shallowly to the northwest or southeast. Siltstone, shale and conglomerate beds range from a few inches to several feet in thickness. Slaty cleavage occurs locally where it transects bedding at low angles, suggesting possible large scale isoclinal folding may occur in the Wilber Creek flysch (Albanese, 1983). Graded bedding, evaporite horizons, a load and flute casts all indicate that the stratigraphic sequence on the Shorty Creek project is right-side up. Anhydrite veins or beds (?) are present in areas of alteration. Siltstone and sandstone units are by far the most voluminous with some siltstone units slightly calcareous. Conglomerate lenses within the siltstone and sandstone units commonly form resistant ridge-top outcrops. Conglomerate clasts are subrounded and poorly sorted and range up to 2 centimetres in length. Clast lithologies include quartzite, hematitic chert, grey-black chert, tan sandstone and minor granodiorite. A distinctive, hydrothermally altered(?) pyritic conglomerate has been identified on the south flank of Hill 2161 on the southern edge of the Shorty Creek project.

A variety of small igneous bodies occur within and peripheral to the Shorty Creek project (Figure 7.1.3). Biotite granodiorite is the most abundant intrusive rock type seen on the property. Textures of the biotite granodiorite are typically medium to coarse grained and equigranular to seriate. The granodiorite contains up to 15% black biotite and trace muscovite. Alteration minerals consist of minor anhydrite, calcite and iron oxides. Small medium grained intermediate intrusive bodies encountered during the 1989 and 1990 drilling program are heavily altered to clay(?), quartz and sericite. Quartz porphyry and aplite form smaller apophyses to the granodiorite bodies. The quartz porphyry bodies are light gray in color and fine to medium-grained with relict plagioclase altered to calcite and quartz, euhedral limonitic opaques, and minor muscovite. The ground mass is altered to calcite in some instances. The igneous bodies encountered by Earth Resources Company during drilling on the Shorty Creek Cu-Mo prospect were thought to be sill-form (C. Herbert, oral comm., 1986). Limited fluid inclusion data from a small granitic pluton on the pipeline access road on the south side of Wilber Creek indicated the presence of high CO_2, high salinity fluids (P. Metz, oral comm., 2010). A potassium- argon age date of 63 Ma was reported for intrusive rocks in the Shorty Creek area (Albanese, 1983). An Ar^{40}/Ar^{39} age date of 65-70 Ma was reported from white mica in intrusive rocks exposed at the collar of drill hole RH8901 on the north end of the Hill 1835 prospect (P. Metz. oral comm., 2010). In contrast, Athey and Craw (2004) reported an Ar^{40}/Ar^{39} age of 91-93 Ma for the Money Knob intrusions in the center of International Tower Hill's 19 Moz Livengood Gold deposit to the north of Shorty Creek.

Previous work has indicated that biotite hornfels and lesser diopsidic hornfels are widespread in the area. Field evidence suggests that hornfelsing precedes hydrothermal alteration, brecciation and mineralization. Previous mapping indicate that hornfels occurs at the Shorty Creek Cu-Mo prospect, on 1835 prospect, on the flanks of Hill 1870 and in the Hill 2161 area on the southern end of the Shorty Creek project. Although very little intrusive rock is exposed on the Shorty Creek project the widespread and often intense hornfelsing of the sediments, particularly in the Hill 1835 area, suggest a significant size intrusive nearby.

The dominant structural elements of the Shorty Creek property are compression-related, generally northwest directed, northeast-trending thrust faults and northeast striking folds (Bundtzen, 1983; Albanese, 1983; Weber and others, 1997; Athey and Craw, 2004; Noyes and others, 2006). Rocks of the Wilber Creek flysch are folded into open to recumbent isoclinal folds and subsequently cut by northeast and north-south structures, the largest of which are the Minto and Ranney Hollow faults, two north-south striking left lateral faults with significant vertical offset (Figure 7.1.3). The Minto fault bounds a broad topographic lowland immediately west of the project area, and remains active to the present. The Ranney Hollow fault was unrecognized prior to this report but is easily traceable in topography, in the DGGS airborne magnetics and in trace metal geochemistry patterns. Magnetic highs in the Hill 1710 area are offset by the Ranney Hollow fault in an apparent left lateral sense from similar magnitude magnetic highs to the east in the Hill 1890 area. The Ranney Hollow fault can be traced for at least ten miles from Olive Creek, a placer gold producing stream on the north side of the Tolovana River valley, through the Shorty Creek project to the valley of Slate Creek on the south (Figure 7.1.3).

Field evidence from the Hill 1835 area suggests the presence of northeast trending post-mineral structures (Freeman and others, 1986; Freeman and others, 1988). The northeast-trending Steel Creek lineament and possibly a parallel but unexposed structure along the trace of Wilber Creek are examples of this type of structure. Field evidence presented by Freeman and Huber (1990) and geochemical results from the 2005 soil sampling program (Noyes and others, 2006) indicate the presence of northeast-striking faults which bound the northern and southern limits of the anomalous metals at Hill 1835 prospect. The Hill 1835 mineralization appears to be part of the same structural zone exposed over one mile to the southwest on the Alyeska Pipeline access road. At this location exposures of the shear zone are several hundred feet wide and are marked by intense brecciation, silicification and gold-sulfide mineralization. Field observations indicate this is a normal fault zone, which has had multiple periods of movement. The probable extension of this mineralized zone can be traced an additional one-half mile to the southwest where it is exposed on the northeast flank of Hill 1870. The zone appears to be truncated by the Ranney Hollow fault on the west flank of Hill 1870.

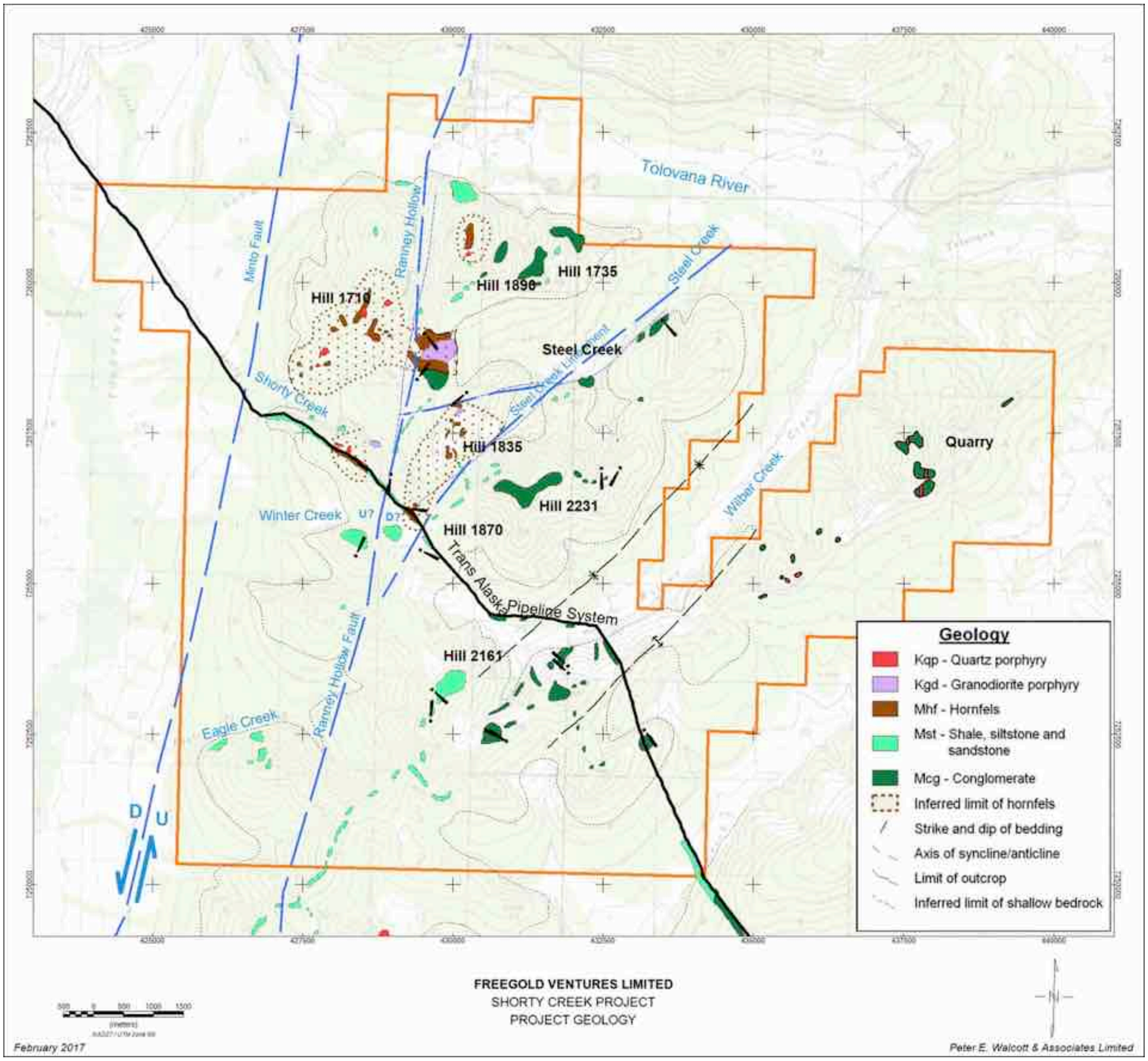

Figure 7.1.2 General Geology of the Shorty Creek Project, Livengood – Tolovana Mining District, Alaska. Data from Fairbanks Exploration (1986-1990), Bundtzen (1983) and Noyes and others (2006); modified by Avalon Development, 2010, modified by Freegold (2016).

7.2 Mineralization

Unless otherwise noted, the following summary of mineralization on the Shorty Creek project was modified after Hart and others, 1985, Freeman and others, 1986, Freeman and others, 1988, Freeman, 1989, Freeman and Huber, 1990, Noyes and others, 2006 and Freeman, 2010. Unless otherwise noted, the following summary of mineralization refers to Hill 1835.

Regional geochemical results presented by Albanese (1983b), Metz (1984) and Robinson and Metz (1979) indicated that widespread anomalous precious and base metal mineralization was present in the Shorty Creek project area. Sulfide mineralization was described by Robinson and Metz (1979) during their mineral evaluations on the Alyeska Pipeline Corridor on what is now the southwestern extension of the Hill 1835 prospect. In bedrock exposures to the east and west of the buried pipe, low-quartz sulfide veinlets as much as 5 inches thick were described in oxidized, fractured sediments of the Wilber Creek flysch. The sulfide mineralization included arsenopyrite, stibnite, galena, and chalcopyrite. Secondary scorodite and malachite were also identified. Sulfide veins also returned boron concentrations as high as 300 ppm, bismuth concentrations as high as 610 ppm and cobalt concentrations as high as 0.43% (4,300 ppm). Copper values as high as 0.21%, nickel values as high as 0.17% and antimony values as high as 500 ppm were detected in high-grade samples of sulfide-bearing vein material (Robinson and Metz, 1979). Due to the fact that these exposures were at the center of a one-mile wide mineral closure (since greatly reduced) associated with the pipeline corridor, no further work was conducted in this area until the ground was prospected and staked by Roger Burleigh in 1984 and leased to Fairbanks Exploration in 1985.

Outcrop exposures containing anomalous gold mineralization were discovered at the Hill 1835 prospect in 1985. Subsequent field activities revealed anomalous gold, silver, mercury, zinc, copper, molybdenum and arsenic in RC drill cutting, grab rock and trench rock samples collected in 1985, 1986 and 1988 through 1990. Anomalous Au, As, Bi, Te, S, Sn and W were detected in top of bedrock soil samples collected on Hill 1835 in 2005. Other areas where anomalous Au, Cu, As, Sb and Mo were detected includes the old Shorty Creek Cu-Mo prospect, Hill 1890 east of Ranney Hollow and Hill 1870 on the south side of the pipeline corridor.

The most intense hydrothermal alteration and anomalous metal geochemistry is concentrated at the Hill 1835 prospect where the normally dense sub-Arctic vegetation is absent or greatly reduced. The absence of vegetation is attributed to acidic soils and metal toxicity. This vegetation anomaly on Hill 1835 is visible in false color infrared images as well as full color digital images. The northern and southern limits of the vegetation anomaly correspond to the northern and southern limits of anomalous metal geochemistry, suggesting the boundaries are post-mineral structures. The mineralized host rocks at Hill 1835 were shale and siltstone of the Wilber Creek flysch, which subsequently were locally metamorphosed to a dense dark brown hornfels beneath the surface as, noted in the 2015 programs.

Rare anhydrite veins are present in parts of the altered sections. The hornfels exhibits variable crackle to matrix-supported brecciation and silicification. Rubble and outcrop of this hornfels unit contain large (1 cm) cubic molds after pyrite, often partially filled with limonite. In drill chips, disseminated and fracture-controlled pyrite, pyrrhotite, chalcopyrite, arsenopyrite and bornite have been identified (along with numerous secondary oxide minerals). In total, the area of silicification and geochemical enrichment covers a northeast-trending area about 1700 metres by 600 metres and remains open under Quaternary cover on both ends. The north and south margins of the mineralization at Hill 1835 appears to be structurally bounded by the northeast trending Steel Creek lineament to the south and an unnamed east-northeast trending structure on the north (Figure 7.1.3).

Mineralization at Shorty Creek is hosted by structurally and possibly stratigraphically controlled, polyphase, grain-supported and matrix-supported, silicified breccias. Intense flood silicification occurs in matrix-supported breccias and is often accompanied by arsenopyrite-quartz veinlets and disseminated pyrite and arsenopyrite. Drill results indicate that deeper portions of the system contain arsenopyrite-pyrite-chalcopyrite stockwork veinlets along with local disseminated and bedding controlled pyrite, chalcopyrite; and rare bornite and enargite. Gold values tend to be higher in more intensely altered sediments. Areas of widespread pervasive sericite alteration appears be associated with the porphyry mineralization style and, results in a pale yellow to tan “bleached” appearance. Sericite alteration is commonly overerprinted by silicification, and less commonly potassic sodic and propolitic alteration in and adjacent to mineralized veins and porphyry dikes. Silicified and brecciated areas stand out in positive relief compared to the surrounding unaltered or strongly sericite/-altered rock. Vuggy, barren, stockwork quartz veins cut grain-supported and matrix-supported breccias and appear to be the last phase of silicification at the Hill 1835 prospect. Supergene and possibly hypogene oxidation products include limonite, jarosite, scorodite, stibiconite, manganese oxide and rare malachite. Based on drilling results, there is no obvious supergene enrichment on the Hill 1835 prospect: copper grades in surface exposures and near-surface drilling are consistently lower than those encountered at depth. Although gold grades generally are higher near or at the surface, the presence of higher gold grades has been noted deeper in several drill holes. Significant silver values have also been encountered in the 2015, and 2016 drill programs

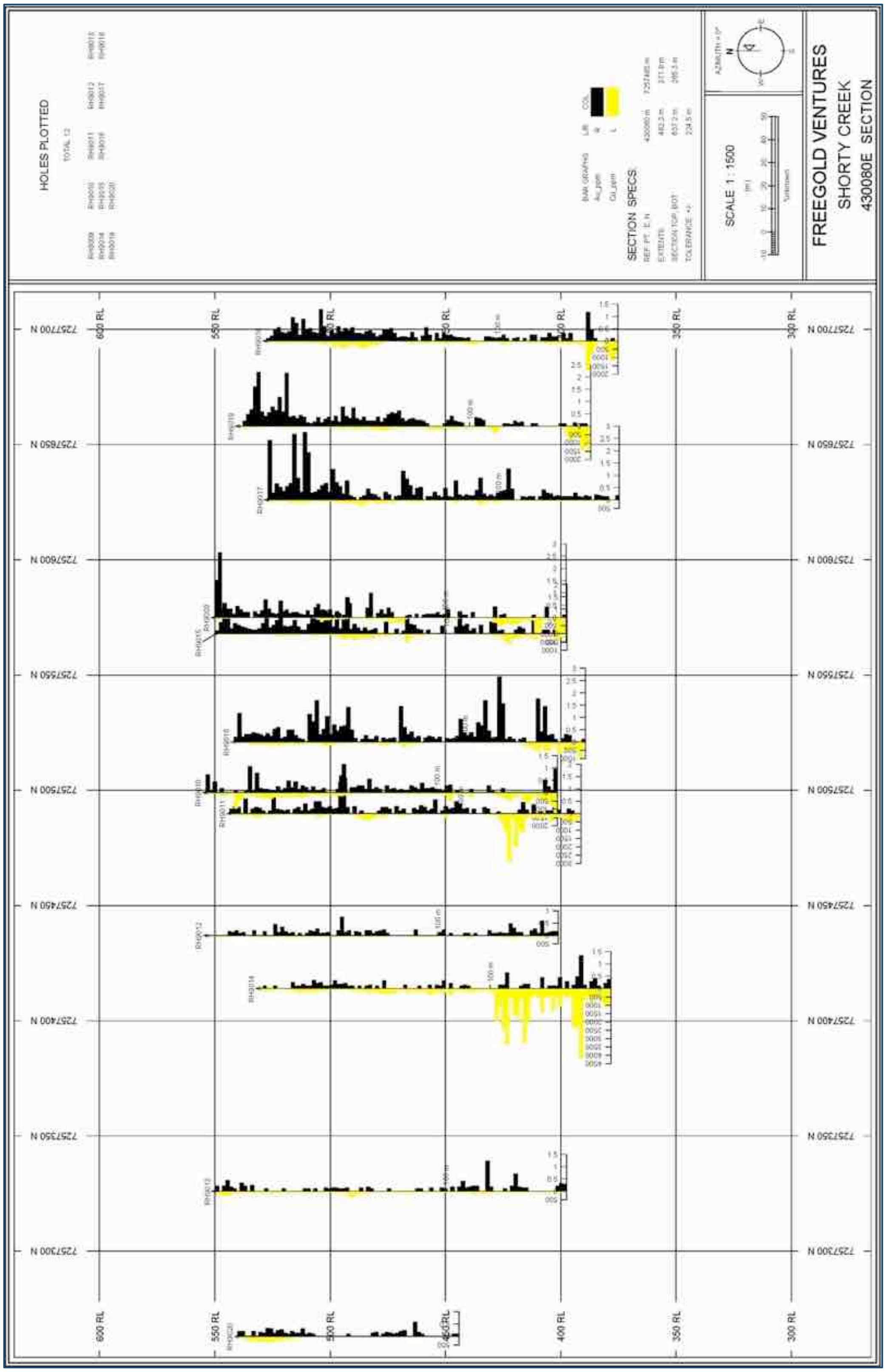

Figure 7.2.1 Hill 1835 - Composite Section E 430080 Looking North West Showing Previous Asarco Drilling

The gold grade appears to be strongly influenced by the intensity of alteration and brecciation within the "hornfels" horizons, regardless of depth. The depth of at least partial oxidation extends beyond the 152 metre limit of drill holes completed in 1989 and 1990. The deepest partial oxidation noted in the 2015 drilling extended to 191.4 metres and in 2016 to the 94 metre depth.

Cataclastic deformation and polyphase silicification of brecciated siltstone suggest several episodes of fracturing and silica plus sulfide introduction. Sample results indicate that precious metal grades are correlative with the intensity of brecciation and alteration while Cu values appear to be inversely correlative with the intensity of brecciation and alteration (Freeman and others, 1986). Chemically favorable stratigraphic units are well documented in skarn and replacement deposits around the world however, Cook and Carboy (2004) addressed the importance of host rock porosity and permeability in relation to gold mineralization in the Great Basin of the western United States. The apparent restriction of some breccias to specific stratigraphic units at Hill 1835 prospect suggests that host rock porosity and permeability may exert some control on the precious and base metal mineralization at Hill 1835 prospect.

The Asarco-Fairbanks Exploration joint venture completed drilling programs in the Hill 1835 prospect area in 1989 and 1990 (Figure 6.1). In 1989, eight vertical reverse circulation drill holes were completed with a total footage of 1,028.5 feet (Freeman, 1989). The 1990 program tested the same general target area with reverse circulation drilling to depths of 500 feet (Freeman and Huber, 1990). Twelve reverse-circulation drill holes, totaling 5,815 feet, were completed. All holes were vertical with eleven holes reaching 500 feet depth and one terminated at 315 feet. Drill samples were analyzed for gold only in 1989 and for gold, silver and copper in 1990. Gold grades ranged from 0.069 to 9.154 ppm and averaged 0.261 ppm. Silver values ranged from 0.34 to 23.31 ppm and averaged 2.553 ppm. Copper values ranged from 3 to 4,142 ppm and averaged 155 ppm. Significant intercepts from these drilling programs are presented in Table 7.2.1.

Table 7.2.1: Significant Au, Ag and Cu intercepts in 1989 and 1990 drilling at the Shorty Creek project. Data from Freeman, 1989 and Freeman and Huber, 1990.

Hole #	From (m)	To (m)	Interval (m)	Au (ppm)	Ag (ppm)	Cu (ppm)
RH8901	1.5	54.9	53.3	0.137	NA	NA
RH8902	0.0	27.4	27.4	0.385	NA	NA
RH8903	0.0	54.9	54.9	0.201	NA	NA
RH8904	1.5	54.9	53.3	0.264	NA	NA
RH8905	3.0	10.1	7.0	0.508	NA	NA

Hole #	From (m)	To (m)	Interval (m)	Au (ppm)	Ag (ppm)	Cu (ppm)
RH8906	0.9	11.4	10.5	0.196	NA	NA
RH8907	1.5	32.9	31.4	0.22	NA	NA
RH8908	0.0	67.1	67.1	1.216	NA	NA
Including	0.0	38.1	38.1	1.776	NA	NA
Including	18.3	25.9	7.6	4.577	NA	NA
RH9009	0.0	152.4	152.4	0.193	1.98	1.98
And	0.0	51.8	51.8	0.351	3.17	3.17
Including	0.0	3.0	3.0	2.075	12.69	12.69
RH9010	0.0	152.4	152.4	0.18	2.74	2.74
Including	0.0	109.7	109.7	0.206	3.43	3.43
RH9011	0.0	152.4	152.4	0.191	1.525	1.525
RH9012	0.0	152.4	152.4	0.125	3.456	3.456
RH9013	0.0	152.4	152.4	0.113	2.633	2.633
RH9014	0.0	152.4	152.4	0.134	0.888	0.888
RH9015	0.0	152.4	152.4	0.312	2.66	2.66
Including	0.0	57.9	57.9	0.511	4.068	4.068
RH9016	0.0	152.4	152.4	0.398	3.576	3.576
Including	0.0	73.2	73.2	0.42	3.434	3.434
Including	32.0	50.3	18.3	0.8	3.058	3.058
And	108.2	117.3	9.1	1.114	8.972	8.972
RH9017	0.0	152.4	152.4	0.386	2.448	2.448
Including	0.0	1.5	1.5	2.434	10.29	10.29
And	10.7	18.3	7.6	1.707	5.418	5.418
RH9018	0.0	152.4	152.4	0.261	2.115	2.115
Including	4.6	25.9	21.3	0.561	3.991	3.991
RH9019	1.5	152.4	150.9	0.298	3.276	3.276
Including	4.6	21.3	16.8	1.035	5.61	5.61
RH9020	0.0	96.0	96.0	0.144	3.798	3.798
Including	9.1	29.0	19.8	0.203	3.27	3.27

. These results are historical in nature and are reported for information purposes only and have not been verified by the Company and are not to be relied upon. NA – Not Assayed

Except for the collar of hole RH8901, which was collared in an altered biotite granodiorite but passed into shale at a depth of 20 feet, and a small interval near the bottom of hole RH9018, all holes in the 1989 and 1990 programs were collared in and remained in hornfels, shale, siltstone, sandstone, greywacke and minor amounts of fault gauge and quartz veining. Gold values were consistently above 100 ppb from collar to termination depth in all holes however, the Hill 1835 prospect drilling generally returned higher gold values in the hornfels units in the upper 100-150 feet of drilling. Copper values tend to be higher outside of the hornfels units, particularly near the bottom of some holes. Pervasive oxidation reached an average depth of 250 feet in drill holes, but oxidation along fractures extended to at least the lowest elevation reached in drilling. Hornfels was best developed and most intense in the upper 100 to 250 feet of drill holes with the bottom of most holes entering unaltered or weakly silicified rock. Assay results from the first seven holes, located on the northwest side of Hill 1835, yielded only spotty gold values from 137 to 508 ppb gold over widths of 7 to 53 metres (Table 7.2.1). Drill hole RH8908, drilled farther southeast than other 1989 holes, returned 67 metres grading 1.216 ppm gold, including 7.62 metres grading 4.577 ppm gold starting at 18.28 metres (Table 7.2.1). The highest-grade interval was hosted at the transition zone between intensely silicified rock above and unaltered or weakly altered siltstone below. Other significant drill results include 18.28 metres grading 0.800 gpt gold in hole RH9016, 7.62 feet grading 1.707 gpt gold in hole RH9017 and 16.76 metres grading 1.035 gpt gold in hole RH9019.

Examination of the drill logs from 1989 suggests that rocks mapped, as hornfels breccias are most common near the crest of Hill 1835. Although the distribution of drill holes currently is limited, and structural data between drill holes is lacking, the hornfels appears to be dipping shallowly to the southeast and is located above unaltered or less altered Wilber Creek flysch.

The Hill 1710 and Hill 1890 target areas are located in the northern part of the Shorty Creek claim block (Figure 7.1.3). Steams draining these areas are anomalous in Ag, As, Bi, Mo, Sb, W, Cu, Pb, Zn, and Sn. Rock chip samples are anomalous in Ag, As, Mo, Cu, and Zn. Former Earth Resources-consultant Chuck Herbert reported that silver values from the 1970's drilling on the Shorty Creek Cu-Mo prospect were surprisingly high; however the exact values encountered are not known (B. Donnellan, oral comm., 2010). Copper and molybdenum are closely tied to the south flank of hill 1710 within the old Shorty Creek Cu-Mo prospect and with Hill 1890 on the east side of Ranney Hollow. The Wilber Creek flysch is the dominant rock type in this area and is intruded by small felsic intrusive bodies, which were the focus of the exploration drilling on Hill 1710 in the 1970's. Unlike the Hill 1835 area to the south, anomalous Au is not present in the Hill 1710 and Hill 1890 target areas. Both the Hill 1710 and the Hill 1890 areas are associated with curvilinear magnetic highs that are offset by the Ranney Hollow fault in an apparent left lateral sense (Figure 7.2.2).

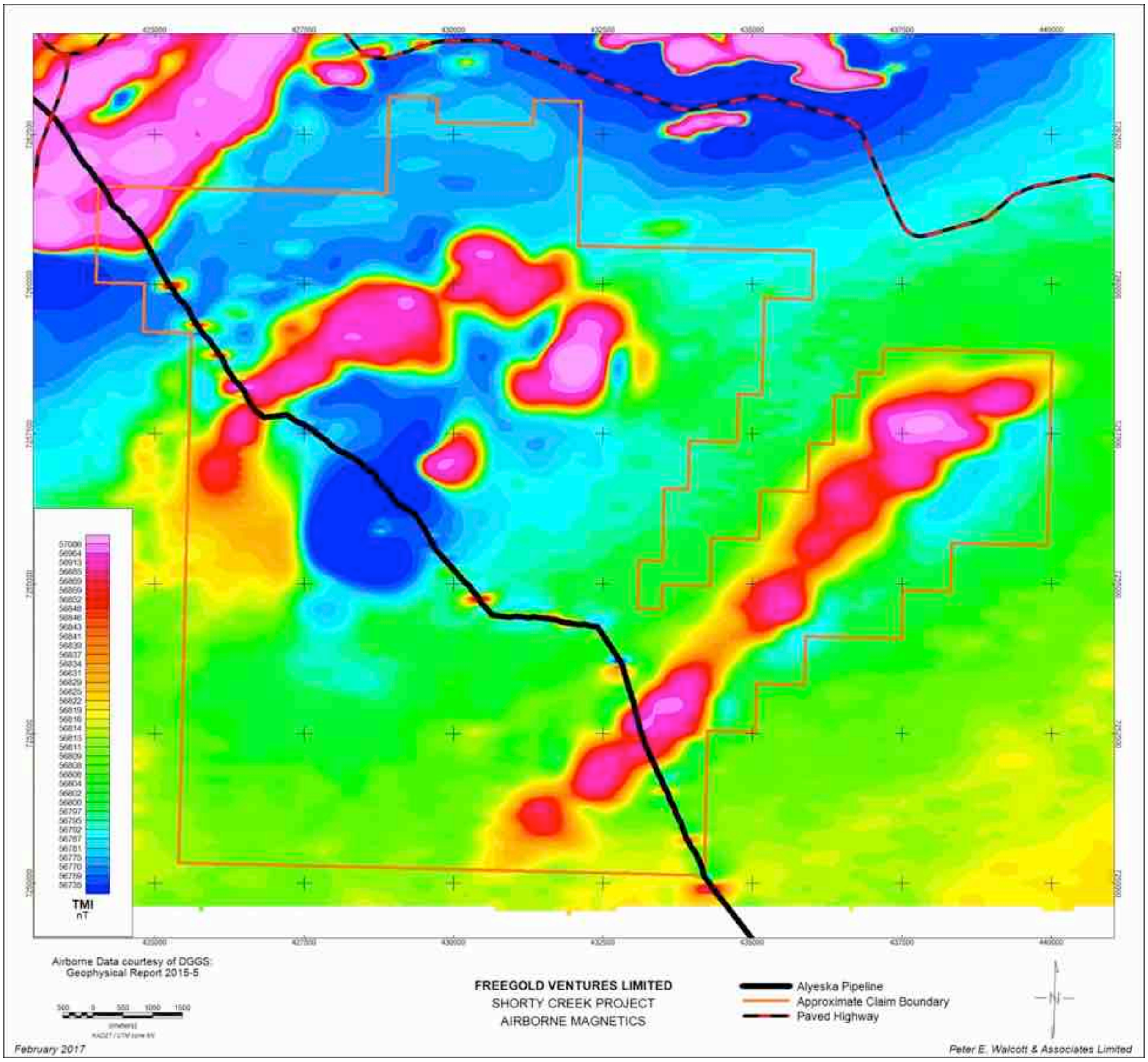

Figure 7.2.2 Shorty Creek Project Airborne Magnetics Response Map

The nearby Minto fault, parallel to and west of the Ranney Hollow fault (Figure 7.1.3), also has an apparent left lateral offset but has west side down motion. The lack of intrusives east of the Ranney Hollow fault and the presence of small, possibly sillform intrusives mapped and drilled to the west at the Shorty Creek Cu-Mo prospect (Figure 7.1.3) argue for a west side up geometry on the Ranney Hollow fault. Three-dimensional modelling conducted on the magnetic data in this area suggests the magnetic anomalies are discrete magnetic bodies that appear to be annual to the magnetic low core to the south (Beasley, 2005).

The Hill 1870 target lies 0.5 miles to the west of the Alyeska pipeline in the headwaters of the Winter Creek and Wilber Creek drainages (Figure 7.1.3). Both drainage basins are anomalous in Au, As, Bi, Sb, W, Cu, Pb, Zn and S. Rock chip sample coverage is limited but samples collected from poorly developed matrix supported breccias and strongly altered crackle breccias along a 290 foot section of the Alyeska pipeline road cut are anomalous in Au (<69 to 1,063 ppb), Ag (0.7 to 5.8 ppm) and As (160 to >1,000 ppm). Unfortunately, these were the only metals analyzed in the 1988 rock samples so the level of other Au or Cu pathfinder elements in these samples is unknown. Sampling along the Alyeska pipeline road cut also revealed two other potentially significant details about the mineralization in this area (Freeman and others, 1986; Freeman and others, 1988). Not surprisingly, gold grades from the chip samples on the access road drop gradually as the degree of brecciation and alteration decrease. Perhaps more important, sub-vertical gold-bearing quartz-arsenopyrite veinlets exposed in the pipeline exposures are poorly preserved at the surface, even though soil thickness is <1 foot. The structures and the veins in these structures are not recognizable until a depth below surface of 10 to 12 feet. Freeman and others (1986) reported that a rubble-soil sample from approximately 4 feet above and slightly down slope from visible quartz-arsenopyrite veinlets returned 65 ppb Au, 0.5 ppm Ag, 1451 ppm As and 186 ppm Cu. A grab rock sample from the quartz-arsenopyrite veinlet itself returned 1,050 ppb Au, 2 ppm Ag, >2000 ppm As and 3,828 ppm Cu. This suggests that potentially significant mineralization may exist below soil or rubble-crop, which lacks any evidence of mineralization. The pipeline access road exposures fall along the northeast trend of alteration and mineralization discovered on Hill 1835. Along trend to the southwest, mapping has identified quartz porphyry intruding the Wilber Creek flysch on Hill 1870 and hornfels flysch and iron-oxide-cemented breccias were identified in float on the flanks of Hill 1870 (Hart and others, 1985; Freeman and others, 1986). The Hill 1870 anomaly lies in the center of the strong, circular airborne magnetic low (Figure 7.2.2) and within the largest airborne EM conductor in this part of the Shorty Creek project (Noyes and others, 2006). Based on the limited available geological, geochemical and geophysical data, Hill 1870 appears to be related to the same system responsible for alteration and mineralization on Hill 1835 prospect. However, the prospect is cut by the Ranney Hollow fault on the west flank of Hill 1870, further complicating the structural setting of this area.

The Hill 2161 anomaly lies in the southern claim block of the Shorty Creek property (Figure 7.1.3). This area is centered on Hill 2161 about two miles to the southeast of the Hill 1710 target and two miles to the west of a small quartz porphyry intrusion mapped along the Alyeska pipeline access road (Bundtzen, 1983). The anomalous area sits at the head of Eagle Creek, Wilber Creek and an unnamed southeast-flowing tributary of Slate Creek. All of the streams flowing from Hill 2161 are anomalous in Au, Ag, Sb, Zn, Mn and S with more sporadic anomalous As, Cu, Fe, Hg and Pb. Elements that are conspicuous by their lack of anomalous values in Hill 2161 include Bi, W, Mo and Sn. Geologic maps of this area indicate this area is underlain by Wilber Creek flysch units however barren hornfels were reported from the southeast flank of Hill 2161 (Myers, written comm., 2004). In addition, a "baked" (hornfelsed?) pyritic conglomerate was reported along the ridgeline extending northeast from Hill 2161 (Myers, written comm., 2004). The southern edge of the DGGS airborne geophysical survey covers the Hill 2161 area and suggests the Hill 2161 target area is related to a prominent northeast trending magnetic high which extends for over 7 miles along the right limit of lower Wilber Creek and the right limit of upper Slate Creek (Figure 7.2.2). There is a strong spatial correlation between anomalous Au + pathfinders in stream sediments and the location of this linear magnetic high. Noyes and others (2006) ascribed the geochemical signature associated with Hill 2161 with distal IRG mineralization. However, the anomalous element suite present, particularly the elevated S and Mn values, is suggestive of intermediate-sulfidation epithermal Cu-Au-As mineralization that is distal to a porphyry Cu-Au-Mo system.

8. DEPOSIT TYPES

Shorty Creek also bears similarities to gold-enriched porphyry copper deposits of Tertiary age that are widespread in Interior Alaska and the western Yukon Territory (Young and others, 1997). Panteleyev (1995) describes a subset of this type of mineralization, referred to as the sub volcanic Cu-Ag-Au system that has numerous similarities to the precious metal mineralization seen to date on the Shorty Creek project. Sillitoe (2010) presents a similar classification but refers to the Au-Cu±Ag mineralization as part of the high-sulfidation epithermal mineralization widely identified near and sometime overlapping the upper portions of the main porphyry Cu-Au-Mo mineralization. Unless otherwise noted, the following model type descriptions are derived from Sillitoe (2010) and Panteleyev (1995) and will be referred to as high-sulfidation epithermal mineralization. The various styles of significant base and precious metal mineralization in porphyry Cu-Au-Mo systems are portrayed in a schematic cross-section in Figure 8.1 (Sillitoe, 2010).

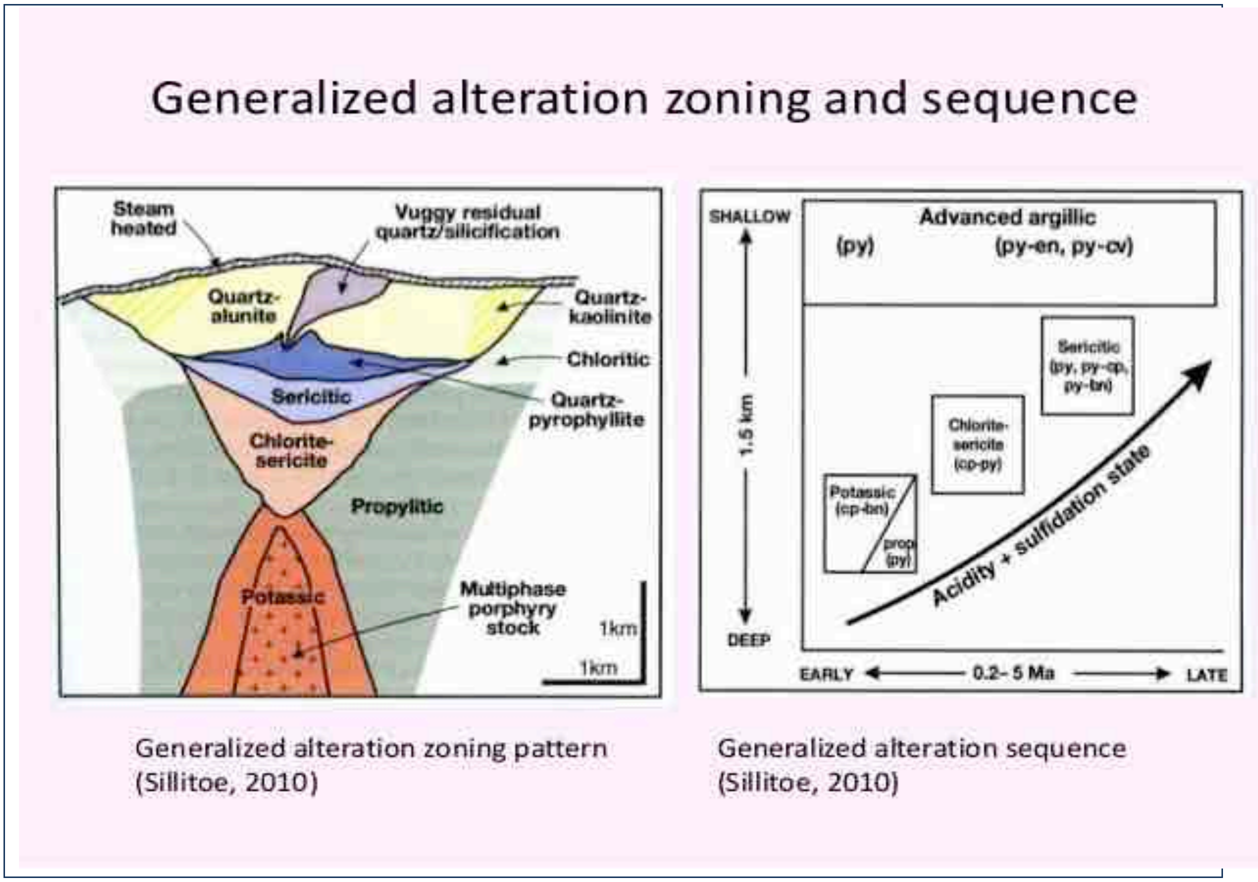

Figure 8.1 Generalized alteration zoning sequence porphyry Cu-Mo-Au system. Data from Sillitoe, 2010

High-sulfidation epithermal mineralization is characterized by elevated values of Au, Cu, Ag, As, Sb, Zn, Cd, Pb, Fe and F. At deeper levels Mo, Bi, W and locally Sn are elevated. In some deposits there is local strong enrichment in B, Co, Ba, K and a marked depletion of Na. Both depth zoning and lateral zoning are evident. While virtually undocumented in Alaska, these deposits are thought to be related to high-level mineralization and alteration peripheral to buried porphyry Cu ± Au ± Mo deposits. Some large porphyry centers, such as Escondida, Chuquicamata and Butte show evidence of high-sulfidation epithermal mineralization overprinting the upper portions of the classic disseminated porphyry Cu ± Au ± Mo deposit. Geological characteristics of this deposit type include pyritic veins, stockworks and breccias in sub volcanic intrusive bodies and/or stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal breccias in country rocks extending up to several kilometres from the porphyry center. These deposits commonly contain pyritic auriferous polymetallic mineralization with Ag sulfosalts and other As and Sb-bearing minerals. In form, this style of mineralization occurs as stockwork veins and closely-spaced to sheeted sets of sulfide-bearing veins in zones within intrusions and as structurally controlled and stratabound or bedding plane replacements along permeable units and horizons in host rocks. Veins and stockworks form in transgressive hydrothermal fluid conduits that can pass into pipe-like and/or planar breccias. Breccia bodies are commonly tens of metres and, rarely, a few hundred metres in size. Massive sulfide zones can pass outward into auriferous pyrite-quartz-sericite veins and replacements. Multiple generations of veins and hydrothermal breccias are common. Pyrite is dominant and quartz is minor to absent in veins. Ore minerals include pyrite, commonly as auriferous pyrite, chalcopyrite, tetrahedrite/tennantite; enargite/luzonite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulfosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar, hematite, tin and bismuth minerals. Depth zoning is commonly evident with pyrite-rich deposits containing enargite near surface, passing downwards into tetrahedrite/tennantite + chalcopyrite and then chalcopyrite in deeper porphyry intrusions.

Ore fluids associated with Au-Cu±Ag high-sulfidation epithermal mineralization contain varying amounts of magmatic-source fluids with temperatures commonly on the order of 300^{o} C and higher. Fluid salinities are also relatively high, commonly more than 10 weight percent NaCl-equivalent and rarely in the order of 50% or greater. Favorable tectonic settings include strongly fractured to crackled zones in plutonic cupolas, internal parts of intrusions and associated flow-dome complexes as well as along faulted margins of high-level intrusive bodies. Other favorable hosts include carbonate and/or permeable clastic country rock lithologies, both of primary and secondary origin. Regional scale structures often control clusters of porphyry systems, which manifest themselves as magnetic lows due to magnetite-destructive alteration, associated with mineralization (Behn and others, 2001). Primary controls are structural features such as faults, shears, fractures, crackle zones and breccias. Secondary controls are porous volcanic and/or sedimentary units, bedding plane contacts and unconformities. Discordant and concordant breccias provide channel ways for hydrothermal fluids originating from deeper porphyry copper systems and commonly carry elevated values of Au and Ag. The deeper high-sulfidation epithermal Au-Cu±Ag deposits can overlap the stockwork porphyry Cu ± Au ± Mo mineralization and can extend up to several kilometres away from the causative porphyry Cu ± Au ± Mo deposit. Examples of similar systems include gold zones at Lepanto, Philippines, Nena in the Frieda River District, Papua New Guinea, Chelopech, Bulgaria, Kori Kollo, Bolivia, the Rochester District, Nevada, and parts of the Recsk deposit, Hungary and Bor deposit, Serbia.

Recent exploration discoveries in Alaska and the adjacent Yukon Territory have outlined a series of distinctive intrusive-related gold (IRG) occurrences, which appear to be genetically related to mid-Cretaceous (90-110 Ma) and early Tertiary (60-75 Ma) plutonic activity. These two subduction related plutonic events affected a large area of northwestern British Columbia, Yukon, Alaska and the Russian Far East (Ebert, 2003, Lang and others, 1999, Hart and others, 2002, Hart and others, 2004; Flanigan and others, 2000, Mortensen and others, 2000, McCoy, 1999, McCoy and others, 1997, McCoy and others, 2002, Bundtzen and Miller, 1997, Eremin, 1995, Baker, 2002, Baker and others, 2006, Klipfel and Giroux, 2009). One of the largest of these IRGs, International Tower Hill's Livengood gold deposit, is only a few miles north of the Shorty Creek project and many believe the Livengood and Shorty Creek projects are part of a district-scale IRG system. While a district-scale IRG system may in fact exist in the Livengood deposit area, the Shorty Creek project does not appear to be an IRG target.

Freeman (2010) compiled a useful table (Table 8.1) that compares the attributes of typical interior Alaska IRG and porphyry Cu-Mo-Au systems and the similarity to Shorty Creek. The data was gathered from sources listed in this section.

Table 8.1 Comparison of Typical Interior Alaska IRG and Porphyry Cu-Mo-Au Systems and Their Similarity to the Shorty Creek Project

Characteristic	IRG	Porphyry Cu-Au-Mo	Shorty Cr. Data Agrees with:
Host Rocks	Metamorphics and	Metamorphics and flysch	Both
Intrusive Types	Intermediate, I-type	Intermediate, I-type	Both
Intrusive Ages	90-105 Ma	60-65 Ma	Porphyry Cu-Au-
Metamorphic Grades	Low Greenschist to	Low greenschist or absent	Both
Alteration	Qtz + Ser dominant	Potassic-sericitic-argillic-	Both
Carbonate Alteration	Ankerite in/near	Not seen	Uncertain
Silicification	Massive to sheeted	Flood silic, stockwork and	Porphyry Cu-Au-
Brecciation	Not common	Common, pipes and tabular	Porphyry Cu-Au-
Magnetite	Low to absent	Abundant	Porphyry Cu-Au-
Total Sulfide Content	1 to 3% average	>3% average	Porphyry Cu-Au-
Primary Sulfides	BiS-	Cpy+moly+Au+tetra+aspy+s	Both
Pyrite	Minimal to absent	Abundant	Porphyry Cu-Au-
Late Stage	Massive stibnite	Au-Ag-base metals-Mn distal	Porphyry Cu-Au-
Tungsten	Scheelite in skarns	Skarns, proximal to intrusives	Both
Bismuth	Proximal, in pluton	Skarns, proximal to intrusives	Both
Manganese	Not diagnostic	Distal to causative intrusive	Porphyry Cu-Au-
CO2 content of fluids	C02 rich	C02 rich	Both
Salinity of fluids	Low salinity	High salinity	Porphyry Cu-Au-
Age of Mineralization	88-112 Ma	63-65 Ma	Porphyry Cu-Au-
Sulfur Isotopes	-5 to +5 per mil	-5 to +15, avg 0 per mil	Uncertain
Tectonic Regime	Compressional to	Compressional to Volc Arc	Both
Gneiss Dome	Sometimes	Sometimes	Both
Regional Gravity Low	Yes	Yes	Both
District Magnetic	Yes	Yes	Both
High Angle Faults	Present, important	Present, important controls	Both
Low Angle Normal	Present, important	Not common	Uncertain

Characteristic	IRG	Porphyry Cu-Au-Mo	Shorty Cr. Data Agrees with:
Contact metamorphic	Uncommon	Common	Porphyry Cu-Au-
Skarn/Carbonate	W skarns common	Cu-Au, Cu-Ag-Zn, Pb-Zn	Uncertain

9. EXPLORATION

As per section 12 of NI43-101-F1, all exploration work conducted by parties other than Freegold is discussed under “History”, “Geologic Setting” or “Mineralization”.

EXPLORATION 2014

Exploration work at Shorty Creek during the summer of 2014 comprised of 28.6 kilometres of Induced Polarization (IP) surveying and the collection of 354 soil samples. The work was carried out on the western area of the property east of the Trans-Alaska pipeline, and was designed to augment previous studies over Hills 1710 and 1835 respectively.

The IP survey was conducted over seven 400 metre spaced lines established at an azimuth of 325 using the “chain and compass” technique abetted with a Garmin C60 handheld receiver to record horizontal positioning of the respective stations. Measurements – first to sixth separation – of apparent chargeability – the IP response parameter – and resistivity were made along the traverse lines using the pole-dipole technique with a 100 metre dipole as illustrated on the respective stacked pseudo-section plots of apparent chargeability (Figure 9.1) and resistivity (Figure 9.2).

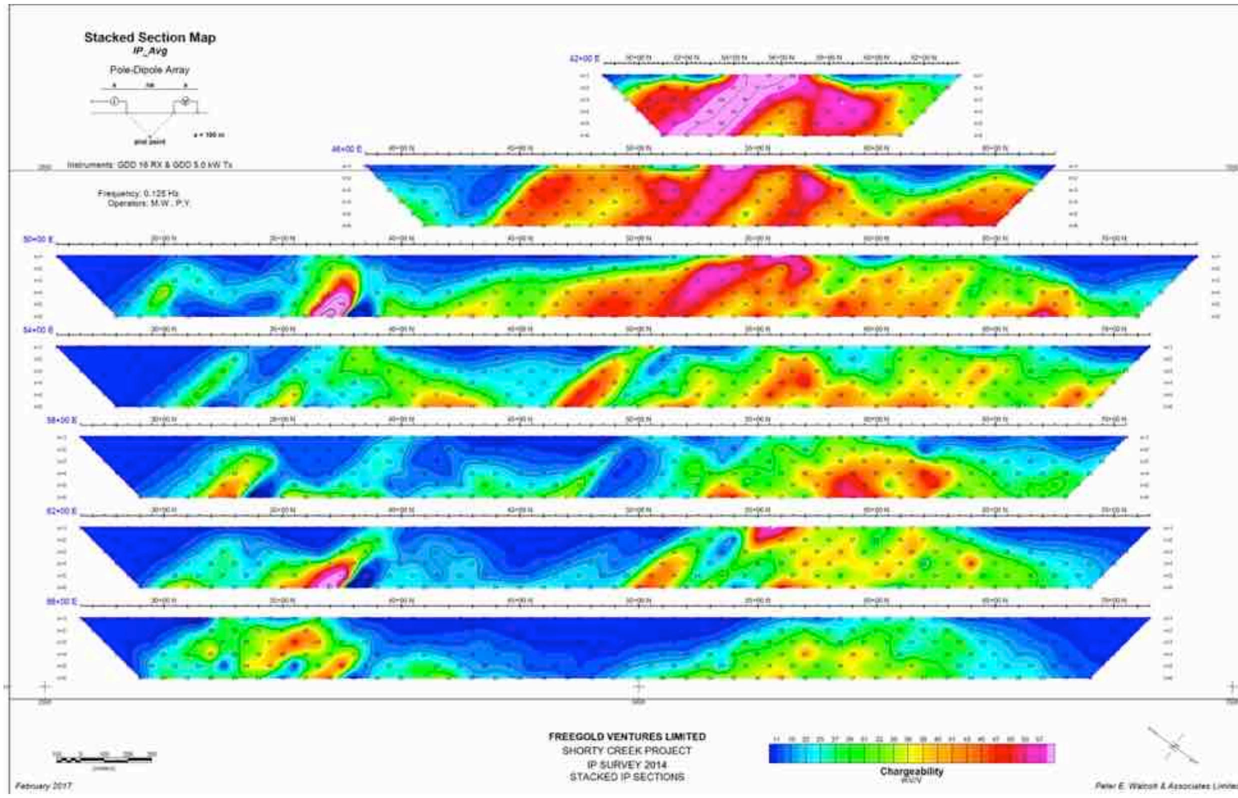

Figure 9.1 Stacked Pseudo-Section Plots of Apparent Chargeability

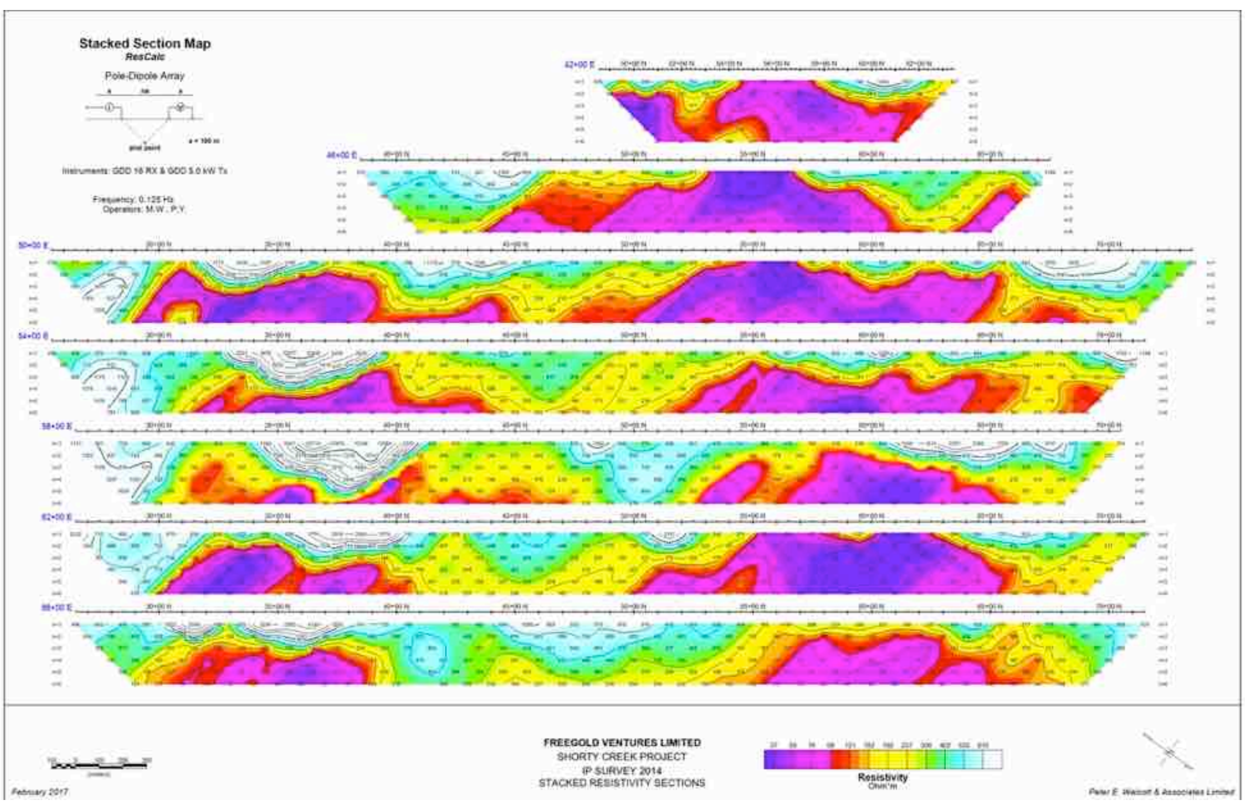

Figure 9.2 Stacked Pseudo-Section Plots of Apparent Resistivity

The soil samples were collected on eleven north south traverses – the line direction chosen for simplistic grid establishment – from the "B" horizon using shovels. The results are shown as symbol plots on a topographic grid along with those of the previously done survey by Avalon Development collected by augering to bedrock (Figures 9.3, 9.4, 9.5, 9.6 and 9.7).

The 1998 DGGS airborne survey showed a discontinuous elliptical ring of magnetic highs – major axis northeast and some 4 kilometres in length – situated in the centre of the claim block (Figure 9.8).

The northwestern limb is offset left laterally by the Ranney Hollow fault as seen on the plot of the total field magnetics and copper geochemistry.Geosoft Voxi modelling suggests little vertical displacement with the western side somewhat down dropped.

Two zones of anomalous soil geochemistry are clearly discernible, one of Cu-Mo coincident with the magnetic response on Hill 1710 (Figure 9.3, Figure 9.4), and the other of Au-As-Bi and Cu on Hill 1835 (Figure 9.3, Figure 9.5, Figure 9.6, Figure 9.7 and Figure 9.8) around and to the east of the smaller shallower magnetic feature.

Little or no soil geochemical coverage was undertaken on the magnetic feature of Hill 1890 and the larger feature to the north of Steel creek.

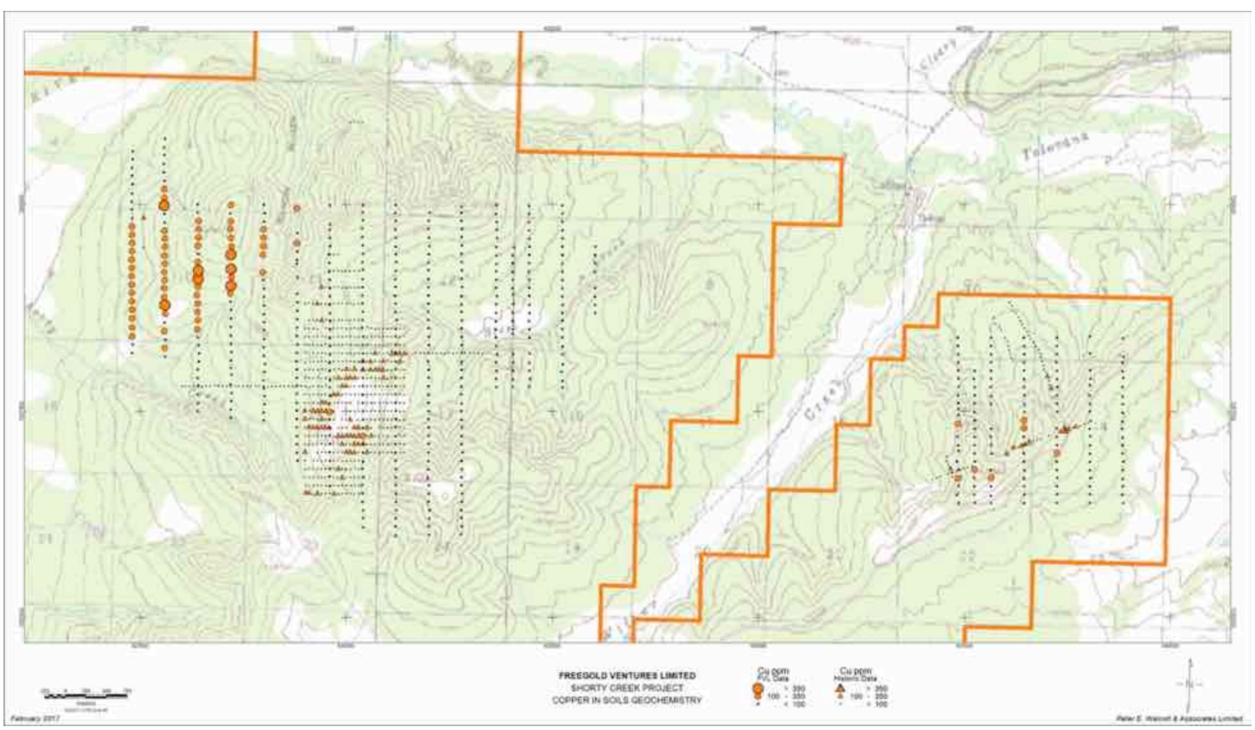

Figure 9.3 Shorty Creek Soil Cu Geochemistry All Samples

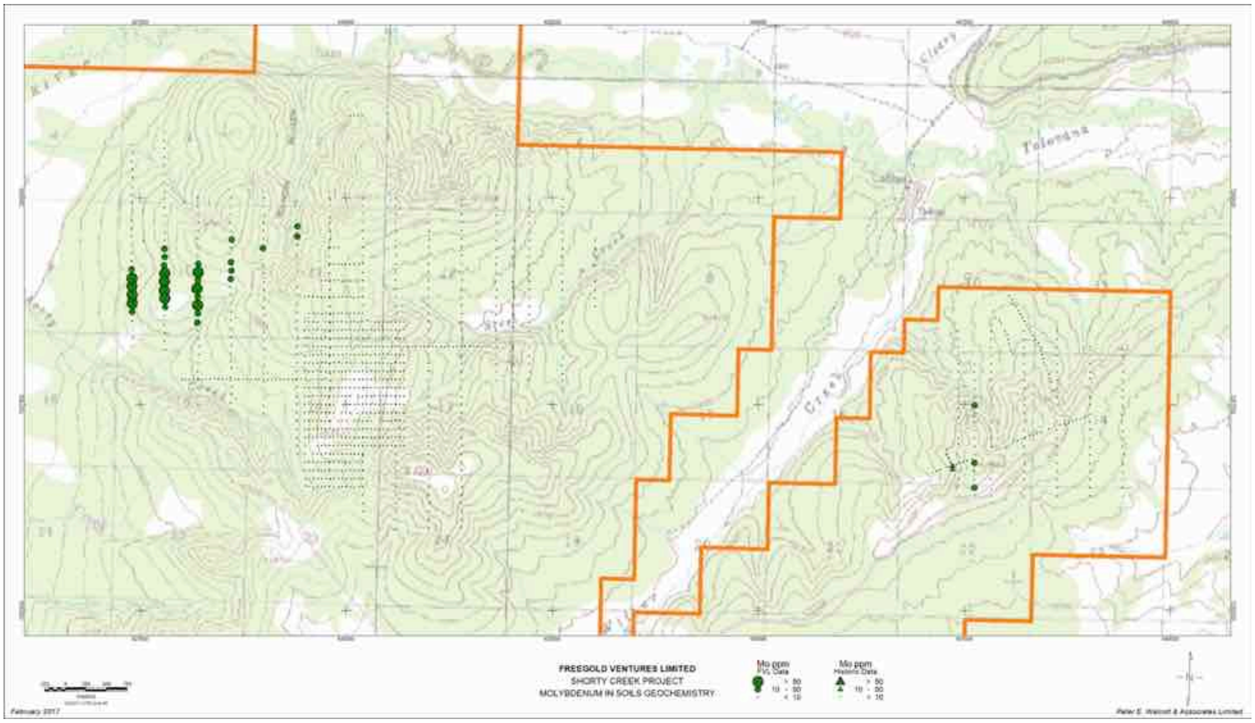

Figure 9.4 Shorty Creek Soil Mo Geochemistry All Samples

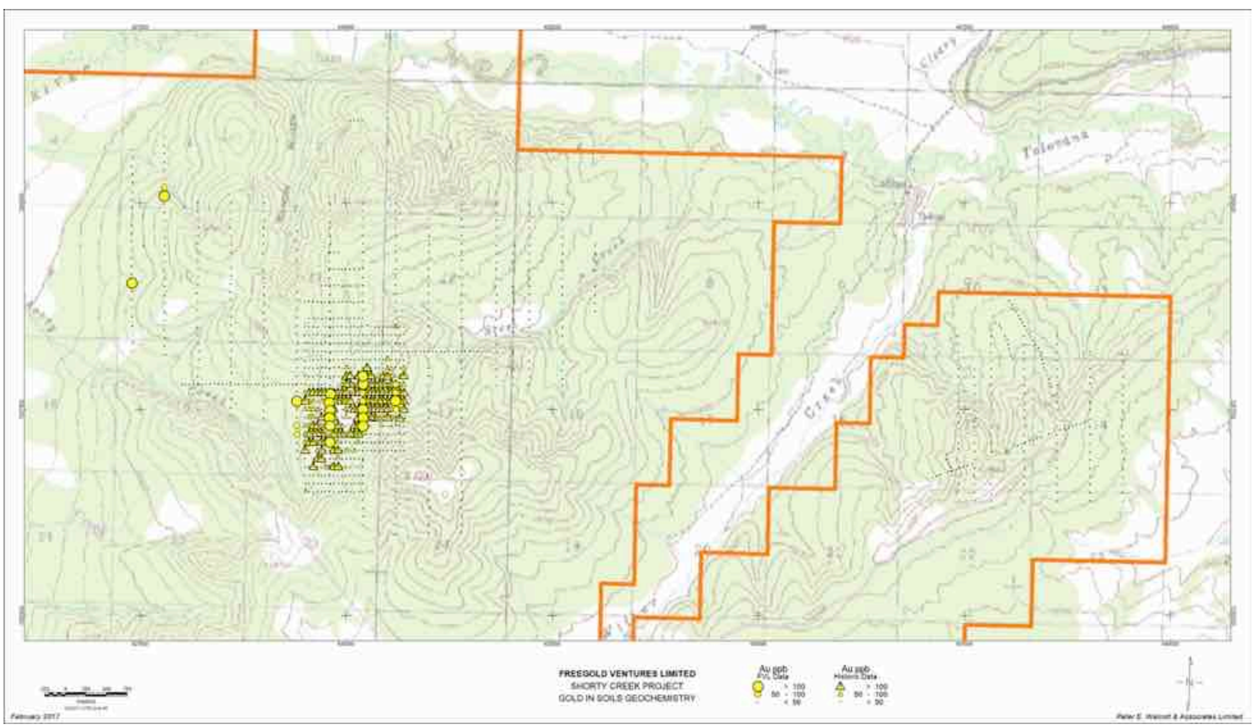

Figure 9.5 Shorty Creek Soil Gold Geochemistry All Samples

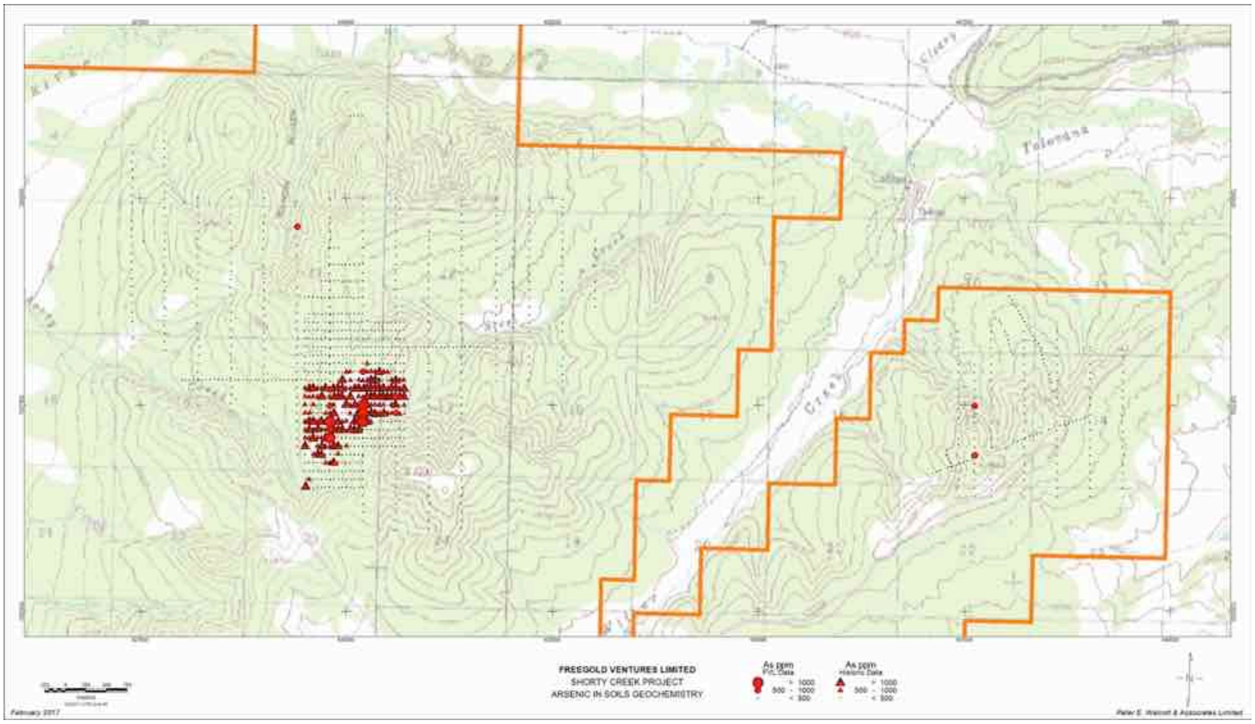

Figure 9.6 Shorty Creek Soil Arsenic Geochemistry All Samples

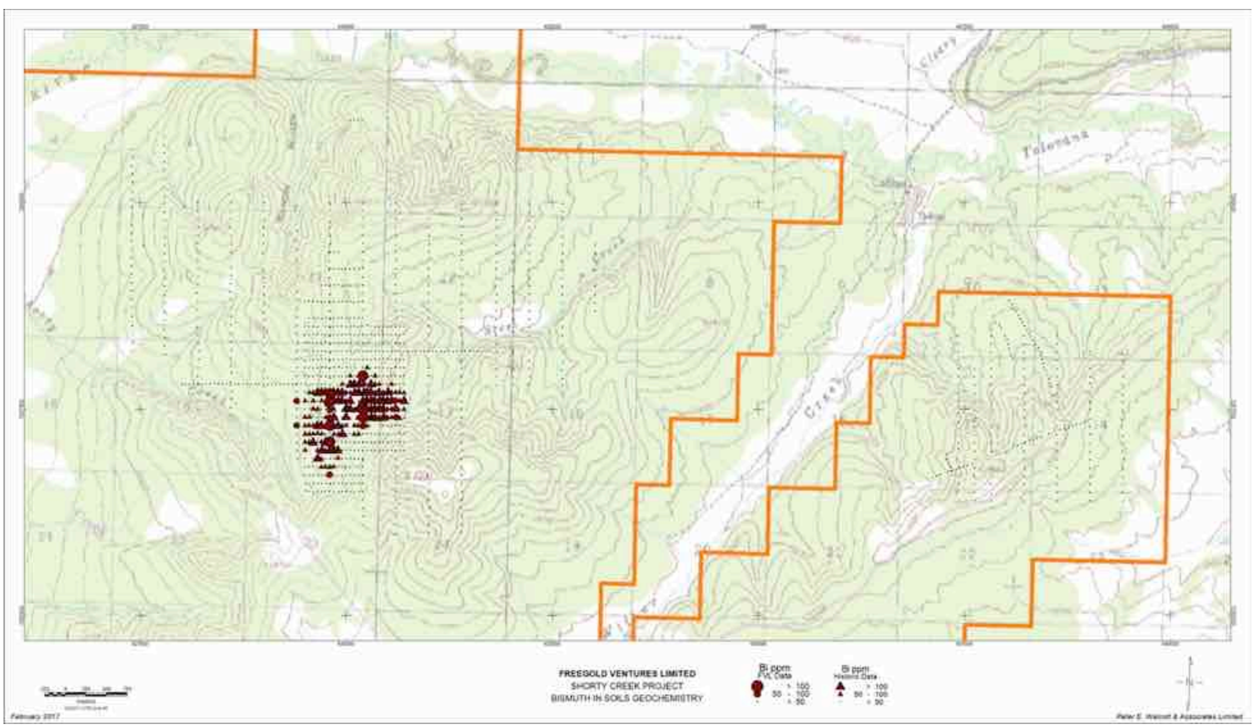

Figure 9.7 Shorty Creek Soil Bismuth Geochemistry All Samples

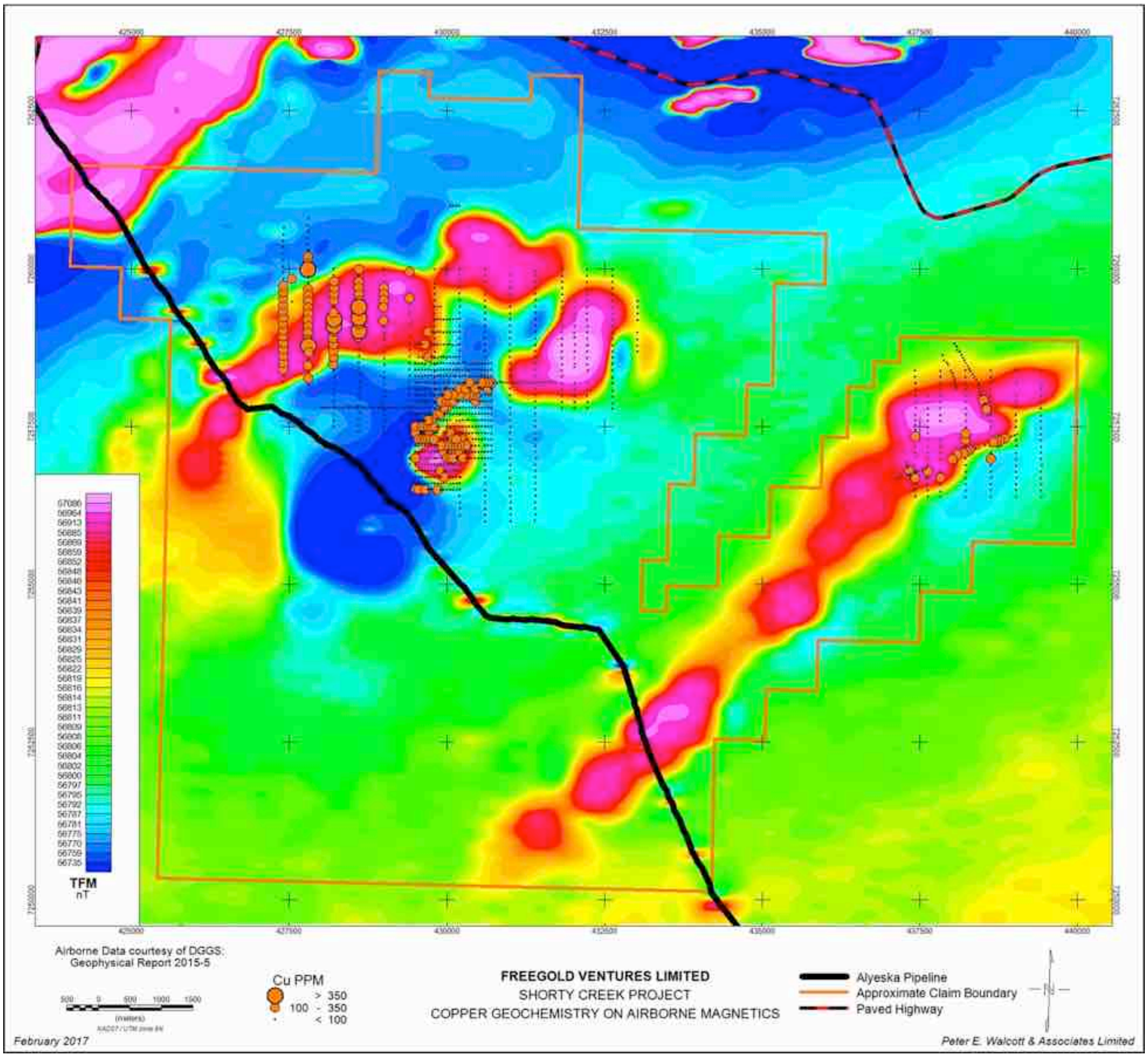

Figure 9.8 Shorty Creek Soil Cu Geochemistry and Magnetic Response

The IP survey showed two complex zones of elevated chargeability to exist over the area surveyed (Figure 9.9).

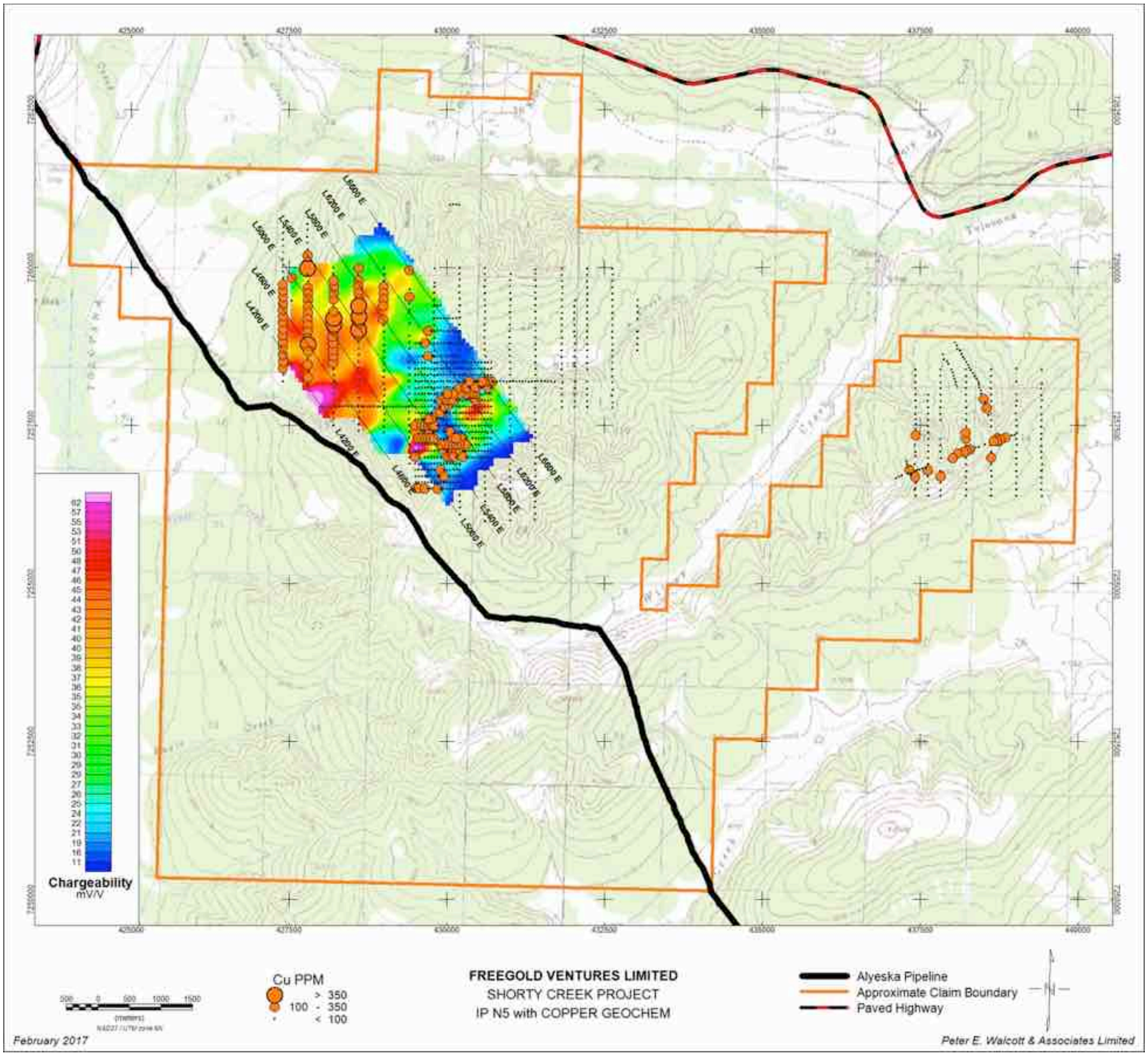

Figure 9.9 IP Survey Chargeability Map Superposed on Cu Soil Geochemistry

The more northerly is a broad zone that strikes across the grid between 5000 and 6200N on L4200E to between 5500 and 600N on L6600E that appears to be associated with the northerly magnetic feature. It is undefined to the east and west, and exhibits higher chargeability values in the western portion.

The second feature is a complex zone of smaller features that runs between 3000 and 4000N on L5000E to a similar location on L6600E. It is also undefined at both ends.

These smaller anomalous zones are clustered around an intense resistivity high, seen mostly on the shallower spacing (Figure 9.10).

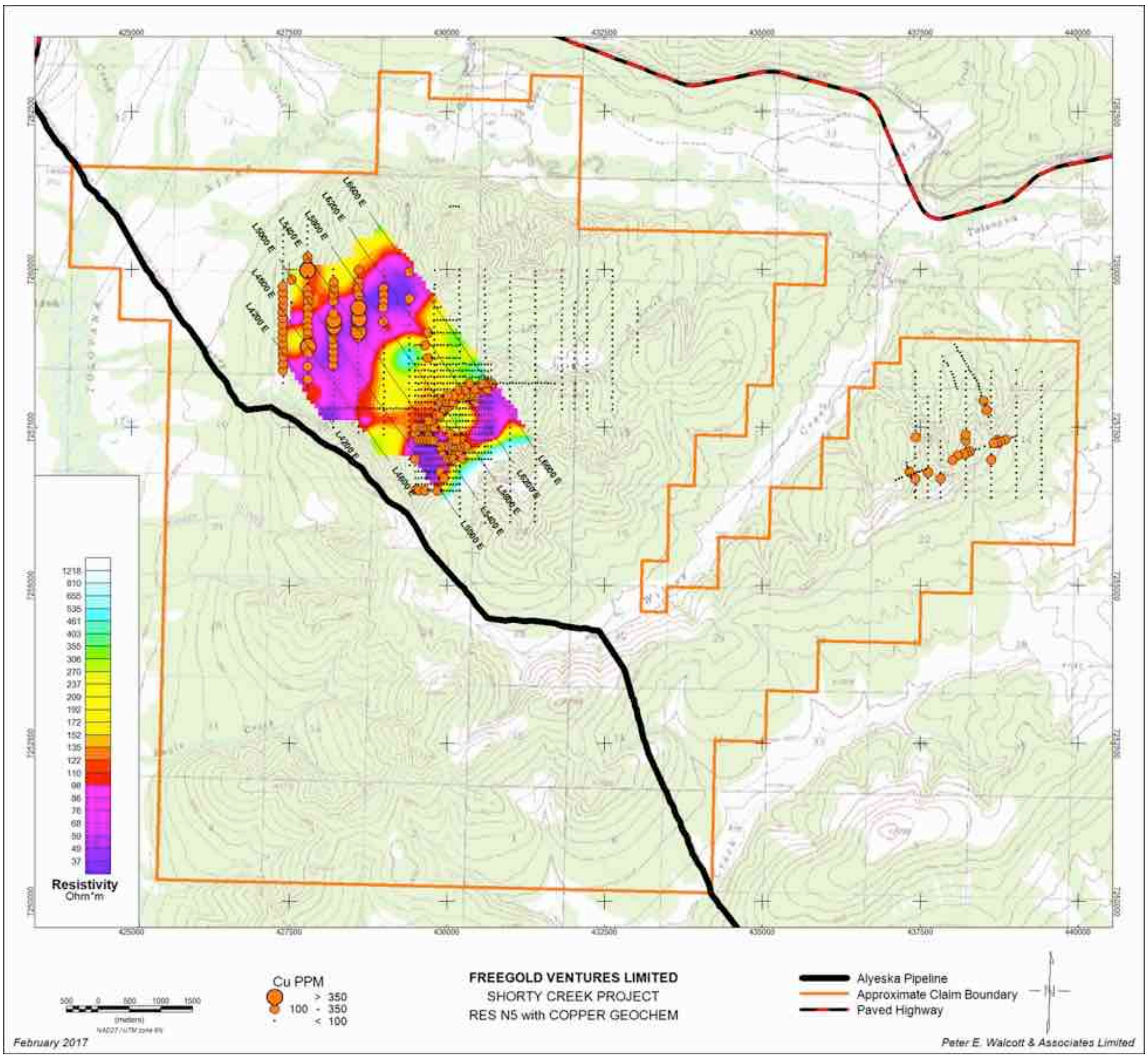

Figure 9.10 IP Survey Resistivity Map Superposed on Cu Soil Geochemistry

This resistivity high represents the silicified hornfels cap of Hill 1835 into which most of the Asarco rotary holes of 500-foot depth penetrated.

Lower resistivities and higher chargeabilities are seen below this feature. Lower resistivities are also observed coincident with most of the northern chargeability zone in particular the more northerly part. The Cu and Mo anomalous soils are associated with the lower chargeabilities on the northern part of the zone. Au-As-Bi and Cu are associated with the resistive cap of the second zone on Hill1835. A similar geochemical combination is noted on Hill 1870 to the west of the IP grid.

The Steel Creek lineament is well defined by the southern contact of the second zone as evidenced on the respective stack pseudo-section plots. Whether or not the bodies of higher susceptibility are indicative of separate intrusions, or are more magnetic phases of a large intrusion at depth, as evidenced by the widespread hornfelsing, will only be ascertained by considerably more work.

Additional sampling by augering to bedrock to the north beneath the thick cover of aeolian silt along with extension of the IP coverage might determine if the Mo there was related to the core of an individual porphyry with the higher chargeability to the south representative of the pyrite halo, or if to some phase/skarn associated with a large porphyry system. Deeper holes drilled beneath the resistive cap of Hill 1835 have determined the presence of a Cu porphyry system.

2016 Exploration

During 2016 a total of 34 additional new claims were staked covering a 5,000 acres. Additional geochemical sampling in the vicinity of the Steel Creek and newly acquired Quarry Target area was undertaken. A total of 229 samples were taken. A clearly discernible copper in soil anomaly with coincident molybdenum is visible in the Quarry Target area. Sampling in the Steel Creek area was hampered by both frozen ground and ground cover. Plots of 2014 and 2016 soil samples showing Au-As-Bi and Cu are shown on Figures 9.3, Figure 9.4, Figure 9.5, Figure 9.6, Figure 9.7, Figure 9.8 and Figure 9.9. Rock samples in the vicinity of the Quarry Target also returned values of 469 ppm Cu in porphyritic rock with stockwork veining.

In addition some 104 km of ground magnetic surveying was undertaken to further refine the airborne magnetic targets as it appears the highest copper mineralization at Hill 1835 is directly related to the magnetic high. The survey covered the northern portion of the 10 km long north- east striking magnetic anomaly (Quarry Target), Steel Creek, Hill 1835 and a limited area on the western portion of Hill 1710. Two very discrete, large magnetic anomalies are discernible over the Steel Creek targets and Quarry target areas. The Steel Creek anomaly is directly on strike with Hill 1835.

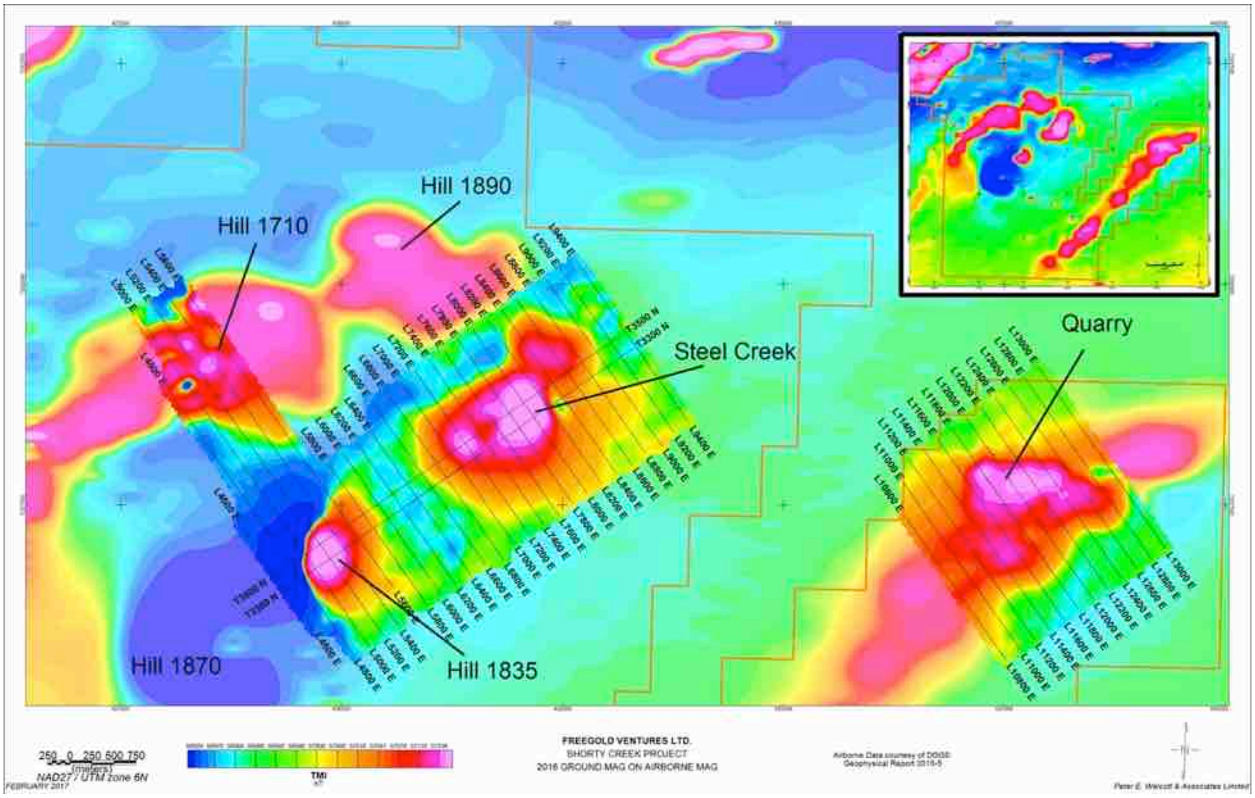

Figure 9.11 Shorty Creek 2016 Ground Magnetic Survey

10. DRILLING

10.1 2015 DRILLING

During August of 2015 Freegold commenced a diamond drill program on the Shorty Creek Project. A total of 10 holes were planned however inclement weather forced the program to be curtailed. A total of 4 holes were drilled as the program was severely hampered by challenging weather conditions, which included an unseasonably large snowfall (the second largest for September in a 100 years). As a result only the smaller magnetic high at Hill 1835 was tested. The airborne magnetic high at Hill 1835 covers roughly a 750 metre by 1 km area. Total expenditures were approximately US $800,000 in 2015.

Table 10.1 Collar Locations 2015 Drilling

Hole #	Prospect	Northing	Easting	Azimuth	TD _(m)
SC15-01	Hill 1835	429948	7257487	-90	410.9
SC15-02	Hill 1835	429767	7257421	-90	280.4
SC15-03	Hill 1835	429982	7257081	-90	380.3
SC 15-04	Hill 1835	430320	7257562	-90	103.2
SC15-04A	Hill 1835	430320	7257562	-75	78.02

The 2015 drill program was designed to test a combination of geochemistry, geophysics (airborne and induced polarization surveys) and as well as favourable geology based on the results of the 2014 program. Results of the program demonstrated the potential for a significant copper gold porphyry deposit at Shorty Creek with discovery of **0.55 % Cu** in the first core drilling at Shorty Creek

The 2015 drilling was completed in the area of Hill 1835 where results of previous drilling by Asarco had suggested the potential for a porphyry system at depth. The Asarco drill program (1989/1990) was comprised of an RC drill program with a maximum hole depth of 152 metres. The presence of copper mineralization in conjunction with gold mineralization was noted at depth in most of the historic drill holes.

The presence of quartz feldspar porphyry was noted in Holes SC-15-01, 02 and 03 confirmed the proposed model.

Hole SC 15-01 was collared in the vicinity of the previous Fairbanks Exploration Asarco drilling. The hole was intended to determine if the increasing grade noted in the previous drilling would extend to depth. Results from SC 15-01 demonstrated that the mineralization originally identified does in fact extend to depth (Figure 10.2).

Hole SC 15-02 was sited to test a portion of the surrounding pyritic halo and corresponding chargeability high. Anomalous copper and gold values were intercepted.

Hole SC 15-03 was sited to test the central portion of the airborne magnetic anomaly This hole successfully intercepted considerable copper mineralization throughout the hole with the strongest section averaging 0.55 % Cu over 91 metres. This intercept was in the lower part of the hole. Figures 10.3 and 10.4 show the mineralization in the lower part of SC 15-03.

Hole SC 15-04 was designed to test the higher gold values from the Asarco drilling, unfortunately due to difficult ground conditions both attempts were aborted at shallow depths. Assays have not been reported as significant intervals of zero core recovery make the data unreliable.

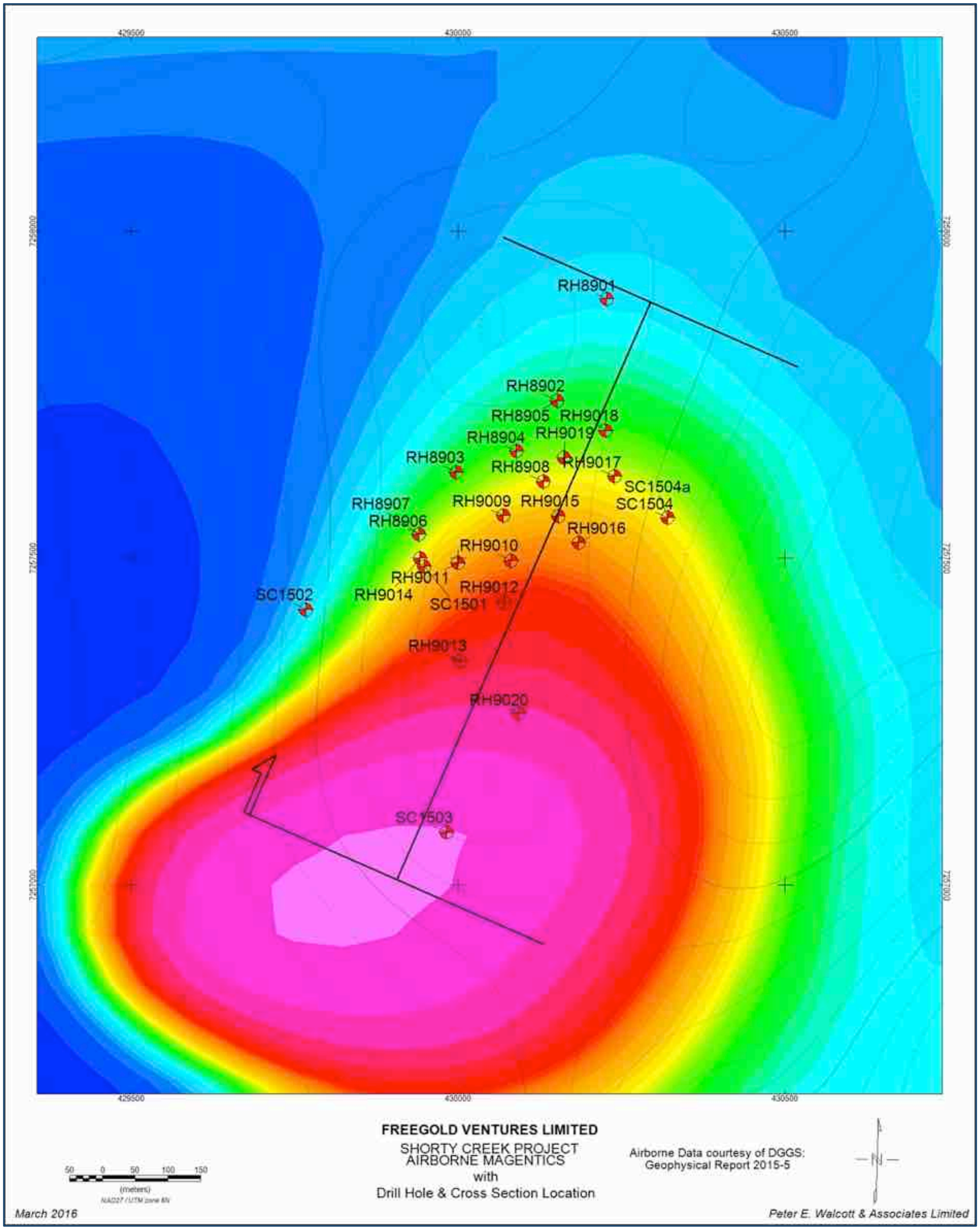

Figure 10.1.1 Map Showing 2015 Drill Hole Locations on Hill 1835 and trace of composite section

Table 10.1.2 Significant Intervals from the 2015 Drill Program

Hole Number	From (m)	To (ft)	Interva l (m)	Au g/t	Ag g/t	Cu %
SC 15-01	4.0	39.0	35.1	0.25	AN	AN
SC 15-01	91.7	244.1	152.4	0.18	1.97	0.13
SC15-02				AN	AN	AN
SC 15-03	78.6	371.3	292.6	0.12	3.23	0.26
	221.9	371.3	**149.4**	**0.24**	**6.33**	**0.4**
	279.8	371.3	**91.4**	**0.14**	**7.02**	**0.55**
SC 15-04						

Freegold has not as yet collected sufficient data to determine how the downhole drill intervals might relate to the actual true thickness of mineralization.

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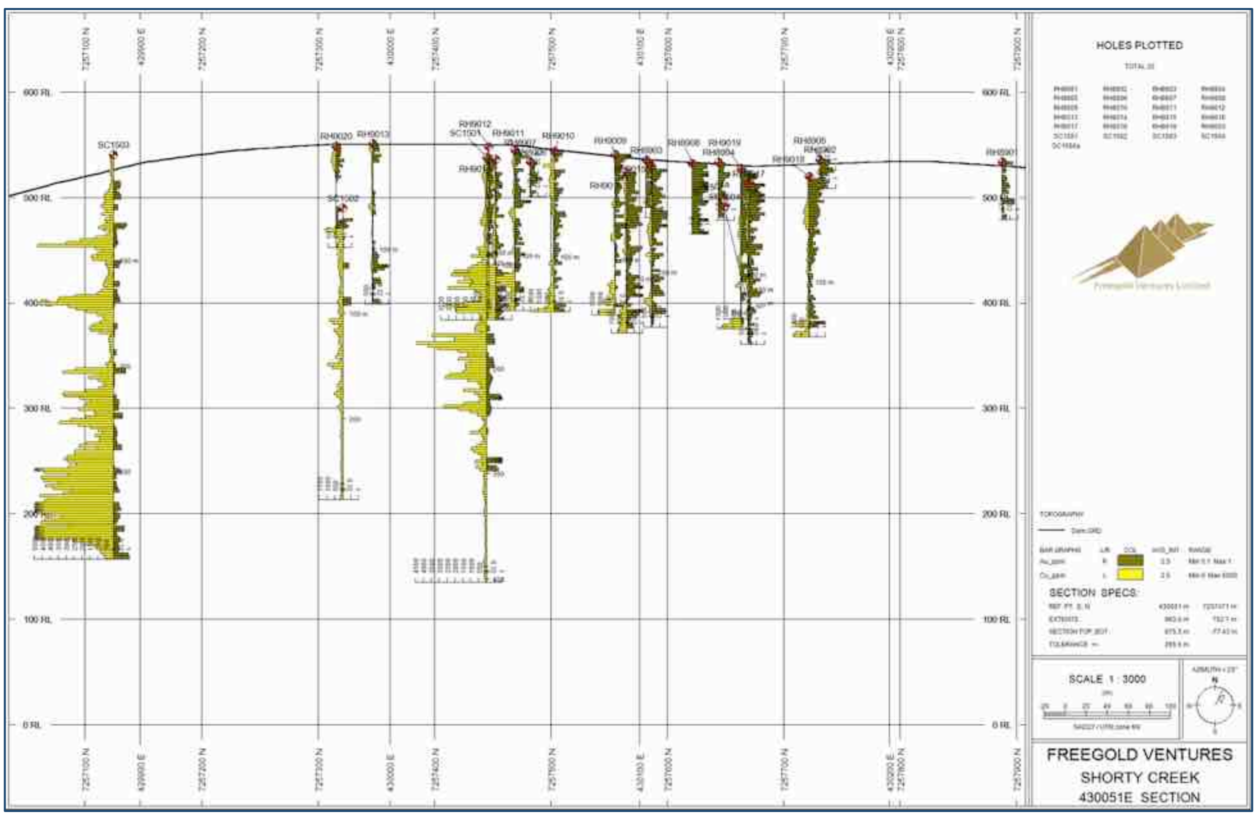


Figure 10.1.2 Hill 1835 - Composite Section with 2015 Drilling and Asarco Drilling – looking Northwest

Core Photos From Hole SC 15-03

Figure 10.1.3 Core Photo From Hole SC 15-03
Assayed 0.29% Cu and 0.12 g/t Au

Figure 10.1.4 Core Photo From Hole SC15-03
Assayed 2.4% Cu and 0.46 g/t Au.

Figure 10.1.5 Core Photo From Hole SC15-03
Assayed 2.4% Cu and 0.46 g/t Au.

10.2 2016 DRILLING

In July 2016 Freegold Ventures commenced a diamond drill program on the Shorty Creek Project. Seven holes were completed for a total of 3,037 metres. Two holes totaling 1,018 metres were collared on Hill 1835 and 5 holes totaling 2,919 metres were collared on Hill 1710.

Table 10.2.1 2016 Drill Hole Locations and Orientations

Hole ID	UTM 27 Zone 6 Easting	UTM 27 Zone 6 Northing	Elevation (metres)	Hole Inclination (degrees)	Hole Azimuth (degrees)	Total Depth (metres)	Total Depth (feet)	Area Name
SC 16-01	429886	7257005	504.83	-90	N/A	520.6	1708.0	Hill 1835
SC 16-02	429775	7256965	475.11	-90	N/A	497.6	1632.5	Hill 1835
SC 16-03	427366	7258746	278.36	-90	N/A	257.6	845.1	Hill 1710
SC 16-04	427822	7258751	371.74	-90	N/A	426.5	1399.3	Hill 1710
SC 16-05	427517	7258509	306.83	-60	135	422.9	1387.5	Hill 1710
SC 16-06	428066	7259122	415.45	-90	N/A	516.0	1692.9	Hill 1710
SC 16-07	428494	7259201	446.46	-90	N/A	396.0	1299.2	Hill 1710

Hill 1835 – 2016 Drilling

The first 2 drill holes of the 2016 drilling program (SC 16-01 and SC 16-02) were collared on southwestern flank of Hill 1835 and drilled vertical to depths of 520.6 metres (1708 feet) and 497.6 metres (1632.5 feet) respectively. Both holes were drilled to test the southwestward extent of high-grade porphyry style mineralization noted in core SC 15-03 in the apex of a ground magnetic anomaly. Core hole SC 16-01 was collared 125 metres southwest of the SC 15-03 collar location and hole SC 16-02 a further 120 metres southwest of the SC 16-01 location.

Both 2016, Hill 1835 core holes exhibited shallow surface oxidation and no evidence of secondary oxide mineralization enrichment. The predominant rock type encountered was graded bedded fine-grained siltstone to sandy siltstone with rare interbeds of limestone and anhydrite. Approximately half of the core contains scattered spots of biotite hornfels (spots average 2-3 mm in diameter), suggestive of an intrusive heat source in the area. Both holes encountered 2 dikes. The upper dike composed of latite porphyry, is approximately 2 metres wide, located between depths of 121 and 125 metres in both SC 16-01 and SC 16-02. The lower dike is composed of fine to medium grain granodiorite, which was encountered at a depth of 190 metres and is approximately a 7 metres intercept in hole SC 16-01 and was encountered at a depth of 242 metres with an intercept length of 8.5 metres in holes SC 16-02.

Intercepts (up to 85 metres) of high fractured and faulted siltstone were encountered in the upper portions of both SC 16-01 and SC 16-02. Rare markers of faulting offset, show thrusting and high-angle reverse faulting, which is indicative of compressional terrain. Fractured rock commonly formed conduits for copper, gold and silver mineralized fluids as evidenced in tectonic breccias with mineralized vein material breccias matrix.

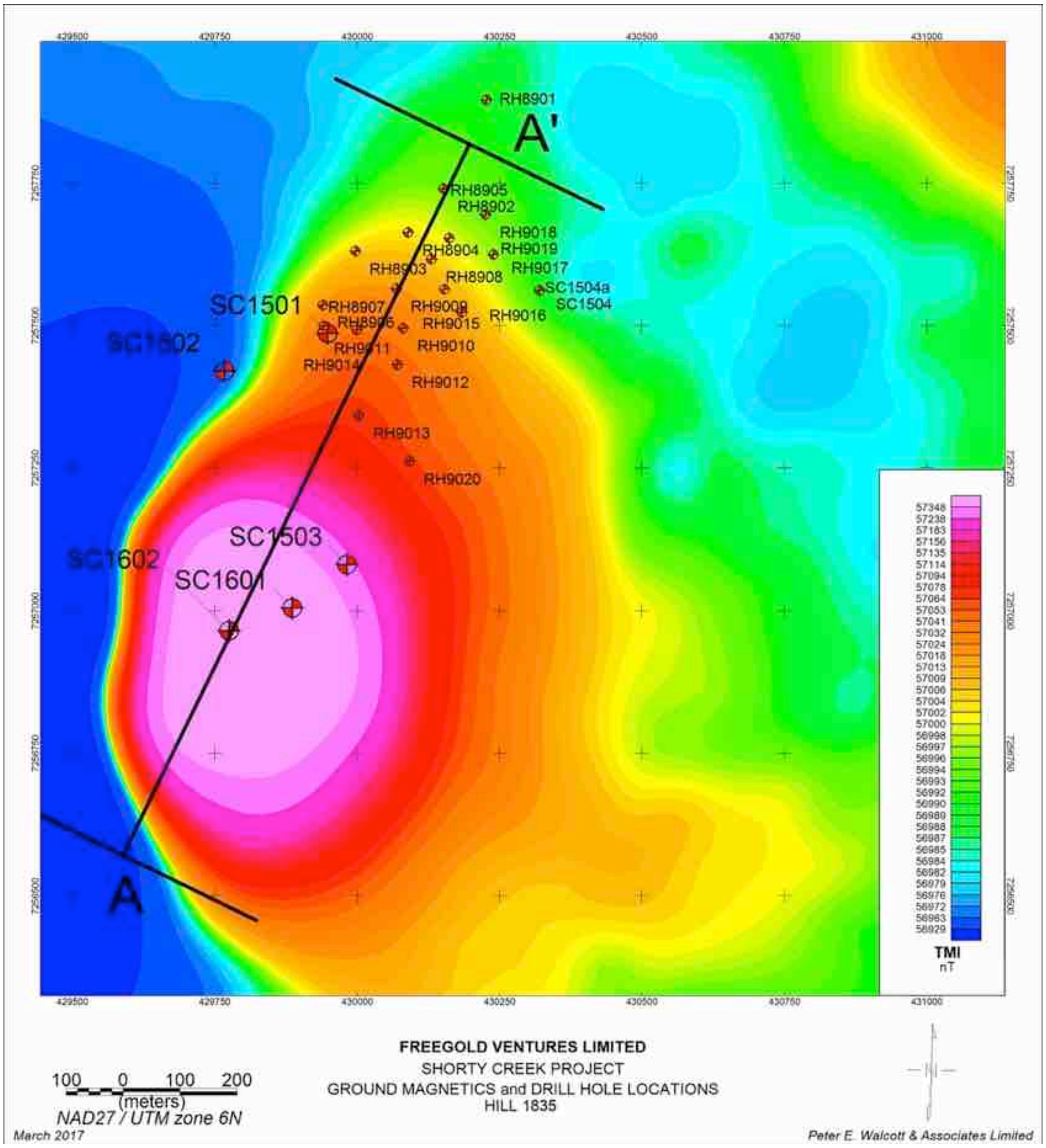


Figure 10.2.1 Location of SC 16-01 and SC 16-02 Hill 1835 Area showing trace of composite section

Drill holes SC 16-01 and SC 16-02 encountered long intercepts of significant copper, gold and silver mineralization throughout most of both drill holes (Table 10.2.2). In addition to the significant copper, gold and silver mineralization reported from the 2016 drilling, tungsten was also intersected in hole SC 16-01 which included 359 ppm W (0.045% WO3) over 207 metres and in SC 16-02 tungsten values averaging 252 ppm W (0.03 % WO3) over 409.6 metres including a higher grade interval of 519 ppm W (0.065% WO3) over 93.5 metres.

Table 10.2.2 SC 16-01 and SC 16-02 Assay Highlights

Hole Number	Hole Incl.	Depth of Hole (m)	From (m)	To (m)	Interval (m)	Interval (ft)	Au g/t	Ag g/t	Cu %
SC 16-01	-90	520.6	86.1	520.6	434.5	1425.6	0.12	7.46	0.36
	incl		138.6	345.6	207	679.2	0.16	9.6	0.45
	incl		300.6	345.6	45	147.6	0.38	9.9	0.57
SC 16-02	-90	497.6	88	497.6	409.6	1344	0.06	5.66	0.29
	incl		88	209	141	462.6	0.07	8.31	0.33
	incl		135.5	229	93.5	307	0.07	8.96	0.38

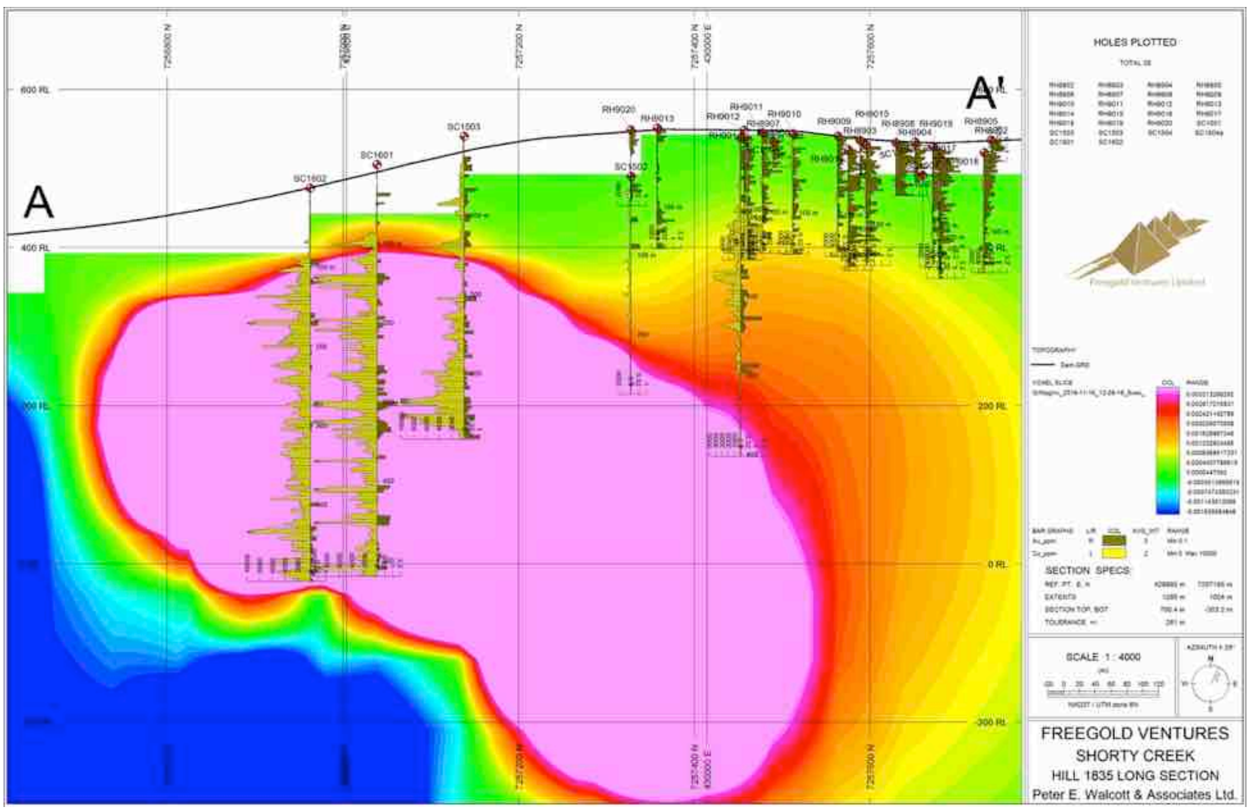


Figure 10.2.2 Composite Section Showing Location and Copper and Gold Assay Values of 1835 Drill Holes on Magnetic Model

Mineralization noted in drill holes SC1601 and SC1602 primarily includes; pyrite, pyrrhotite, chalcopyrite, arsenopyrite, enargite and bornite intercepts that occur as 4 types of high-grade mineralization:

- The greatest contributor of higher-grade mineralization in intercepts both SC 16-01 and SC 16-02 is associated with individual and swarms of veins containing quartz/pyrite/chalcopyrite +/_ arsenopyrite+/- enargite and minor traces of bornite. Assay results indicate all of the highest gold values (Au greater than 0.50 g/t to a high of 2.14 g/t) and majority of silver intercepts (Ag greater than 20.0 Ag to the highest value of 55.9 Ag) are also associated with large veins and vein swarms. Veins range in width of ½ to 7 cm wide and are most commonly oriented sub-perpendicular to the core axis (nearly horizontal).

- Tectonic breccia matrix is commonly composed of quartz, pyrite, chalcopyrite, arsenopyrite, and enargite vein material. Similar to the high-grade veins mention above assay data indicates the tectonic breccias quartz vein matrix hosts moderately high gold mineralization and high silver assay values

- Copper silver and gold mineralization is also hosted in silicified and potassic altered dikes and adjacent upper siltstone along the dike contact. The potentially economic mineralization occurs as fine discontinuous veinlets and fine grained disseminations and blebs of pyrite, chalcopyrite, arsenopyrite, enargite and bornite

- Intercepts of disseminated fine grained chalcopyrite, arsenopyrite, enargite and bornite in siltstone host rocks are commonly accompanied with silicified and potassic altered siltstones and usually adjacent to vein swarms.

Figure 10.2.3 – Mineralization Hole SC 16-01

Figure 10.2.4 Core Photo From Hole SC16-01
0.605 ppm Au, 47.3 ppm Ag, Cu 1.99%,
(141.6m – 144.6 m)

Figure 10.2.5 Core Photo From Hole SC16-01
0.112 ppm Au, 20 ppm Ag, Cu 1.07%,
(196.5m – 198.6 m)

HILL 1710 – 2016 Drilling

Four of the five (5) drill holes (SC 16-03 – SC 16-07) totaling 2,019.8 metres were collared approximately 400 metres apart on the southwestern flank of Hill 1710, located approximately 2.5 km northwest of Hill 1835. The Hill 1710 holes tested a portion of a broad (6,000 metres x 1,500 metres) magnetic anomaly and coincident copper and molybdenum soil geochemical anomalies.

Hill 1710 sedimentary host rocks are graded fine-grained siltstone to sandy siltstone with the exception of fault bound 43-metre intercept of heterolithic conglomerate in drill hole SC 16-05. Sills and dikes of predominately granodiorite, quartz latite porphyry, and latite and quartz feldspar porphyry intruded the Sedimentary rocks. Additionally, hole SC 16-07 contained 3 pebble dikes and several pegmatite veins. Generally, the percentage and variety of felsic intrusives increased toward the northeast in the Hill 1710 drill holes (1% felsic intrusive rocks were logged in the southwest most hole of SC 16-05 whereas 80% of intercepts were logged as intrusives in the northeast most hole of SC 16-07).

Faulting and fracturing was found widespread throughout the Hill 1710, particularly in the southwestern portion of the Hill 1710 drill holes where drill holes 16-03 and 16-05 were highly fractured throughout the entire holes. Fracture patterns and fault offsets indicate fault planes and predominately high angle several of which exhibited reverse fault movement.

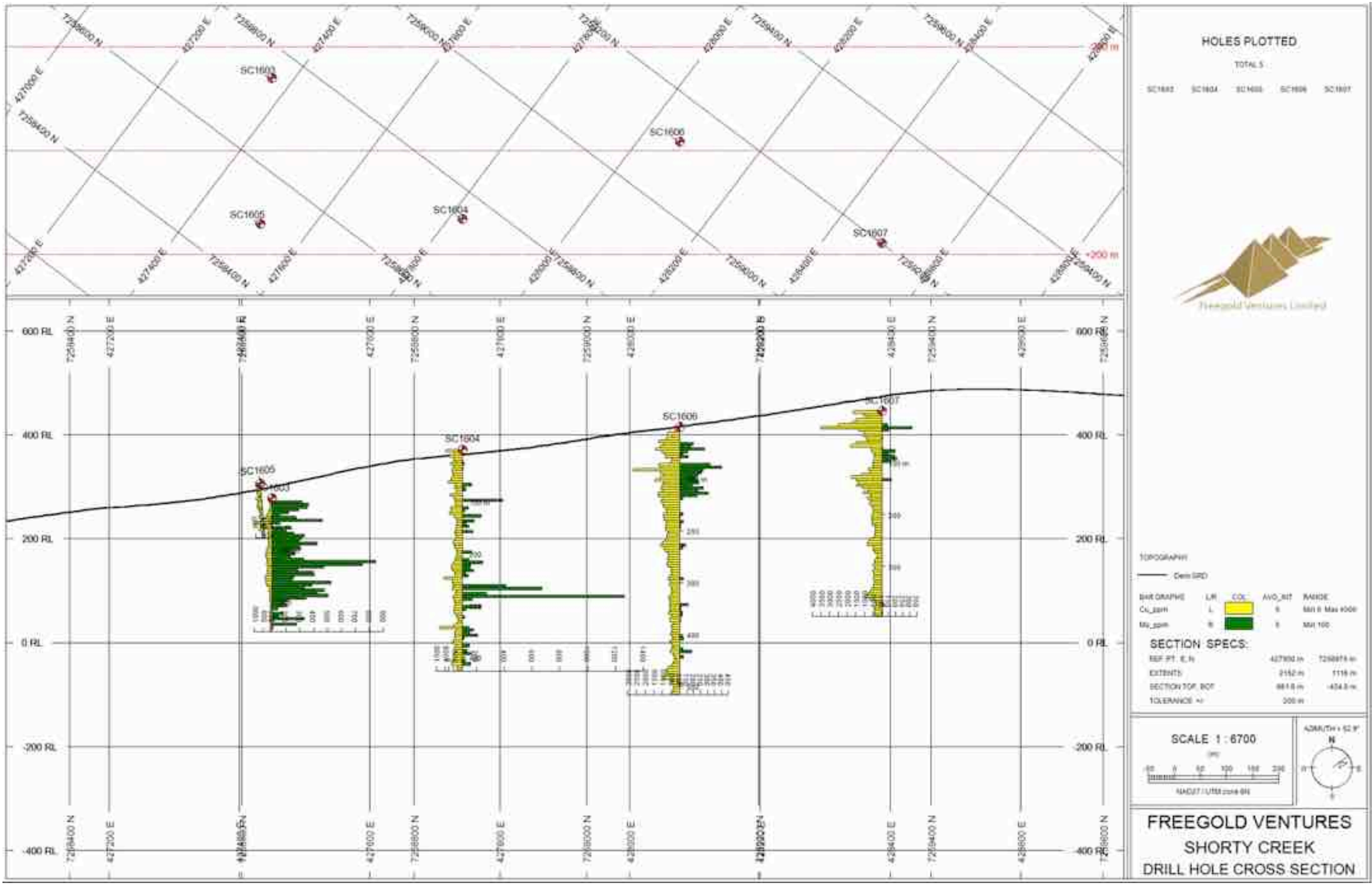


Figure 10.2.6 Longitudinal Section Showing Location and Copper and Molybdenum Assay Values of Hill 1710 Drill Holes

All Hill 1710 core holes intersected both copper and molybdenum mineralization and scattered intervals of anomalous gold and silver. The highest molybdenum grades were encountered in the southwestern portion of the drilling area (all intercepts greater than 1000 ppm Mo were collected from holes SC 16-03 and SC 16-04). In the western portion the of Hill 1710 drill program, hole 16-03, drilled to a depth of 257.6 metres, was the most westerly hole drilled and returned 172.6 metres grading 0.03% copper and 0.034% molybdenum. Hole 16-04 was collared approximately 400 metres to the east and intersected 0.05% copper and 0.014% molybdenum over the entire 426.5 metres length. Hole 16-05 was an angle hole drilled to southeast, aimed at testing the IP chargeability anomaly and encountered abundant fault gauge and broken rock with anomalous values throughout the hole.

Conversely, copper values and scattered intercepts of gold, silver, lead and zinc increased as the drilling moved to the northeast into drill holes containing higher percentages of felsic intrusive host rocks. In the northeastern portion of the Hill 1710 drilling grid, hole SC 16-06 intersected quartz-feldspar porphyry with a coincident higher-grade interval including 0.11% copper and 0.02% molybdenum from 25.7 to 147 metres and returned 0.07% copper and 0.01% molybdenum over the entire 516 metres. Hole SC 16-07 intersected 0.11% copper and 0.011% molybdenum from 0-159 metres including 0.15% copper and 0.009% molybdenum from 0-70.8 metres within quartz-feldspar porphyry. The hole averaged 0.08% copper and 0.006% molybdenum over the entire 396-metre length.

Table 10.2.3 SC 16-03, 16-04, 16-05, 16-06 and SC 16-07 Assay Highlights

Hole Number	Hole Incl.	Depth of Hole (m)	From (m)	To (m)	Interval (m)	Interval (ft)	Mo %	Cu %
SC 16-03	-90	257.6	5.4	178	172.6	566.3	0.034	0.023
SC 16-04	-90	426.5	0	426.5	426.5	1399.3	0.014	0.05
SC 16-05	-60	422.9	No Significant Mineralization					
SC 16-06	-90	516	0	516	516	1693.0	0.01	0.07
	incl		25.7	147	121.3	398.0	0.02	0.11
SC 16-07	-90	396	0	396	396	1299.3	0.006	0.08
	incl		0	159	159	521.7	0.011	0.11
	incl		0	70.8	70.8	232.3	0.009	0.15

Figure 10.2.7 Core Photo From Hole SC16-03
747 ppm Mo, 380 ppm Cu, 1.1 g/t Ag (162.4 m – 164.7 m)

Figure 10.2.8
Visible Mobybdenum Mineralization – Hill 1710

Figure 10.2.9 Copper Mineralization – Hill 1710

Figure 10.2.10 Core Photo From Hole SC16-06
0.013 ppm Au, 15.9 g/t Ag, 3730 ppm Cu, 282 ppm Mo
(80.88 m – 83.9m)

Figure 10.2.11 Core Photo From Hole SC16-07
0.011 Au, 1 g/t Ag, 2510 ppm Cu, 126 ppm Mo
(27 m – 30m)

Figure 10.2.12 Core Photo From Hole SC16-07
2.8 g/t Ag, 0.016 Au, 1225 ppm Cu, 10 ppm Mo
(357 m – 359 m)

Mineralization noted in drill holes SC1603 through SC1607 included pyrite, chalcopyrite, molybdenite, pyrrhotite and arsenopyrite. Distinctly separate scattered veins throughout core holes SC 16-04 through SC 16-07 contained coarse grain quartz sphalerite and galena. All potentially economic minerals occur as 3 types of anomalous mineralization:

- The primary host of molybdenum mineralization in core holes SC 16-03 through SC 16-05 and copper mineralization in holes SC 16-06 and SC 16-07 is the quartz vein material matrix portion of tectonic breccias. Quartz breccia matrix ranges from fine grained rarely banded to coarse grained

- Molybdenite and minor chalcopyrite was also noted in classic 'Climax style' porphyry fine stockwork veinlets. This stockwork mineralization is hosted in strong potassic altered intrusive rocks, primarily quartz latite porphyry. The strong potassic alteration is characterized by secondary potassic or rarely potassic / sodic feldspar often accompanied with brown biotite and magnetite that occur as replacement and pervasive flooding of the host intrusive rocks.

- Individual and swarms of veins containing quartz/pyrite/chalcopyrite +/_ arsenopyrite+/- enargite were noted in all drill holes. Individual coarse grained quartz, sphalerite and galena veins noted in holes SC 16-04 through SC16-07 and yielded assays of greater than 1000 ppm PB and 1000 ppm Zn over 5 metre intervals.

11. SAMPLE PREPARATION, ANALYSES, AND SECURITY

The following summarizes the procedure used for sample preparation, analyses and security for samples collected on the Shorty Creek Project.

The database was originally compiled by Freegold's prime geological contractor Avalon Development Corporation of Fairbanks, Alaska. Personnel from Avalon have been involved in several of the programs previously undertaken on the Shorty Creek Project. The author has held numerous discussions with both Fregold and Avalon in regard to sampling protocol. A digital database has been compiled of all assay and geochemical work completed on the project, including results from all the drilling programs, both Reverse Circulation (RC) and diamond (Core);) as well as rock and soil sampling. Analytical results from the Earth Resource work were not available as no records exist of this work..

Since 1997 all rock and soil geochemical samples collected were located using hand- held global positioning system (GPS) methods. Data from each sample was then entered into a digital GIS- database for later interpretation.

1985 – 2005

In 1985 all samples were collected in the field and locations plotted directly on topographic field maps (1:63360 base). GPS technology was not available so sample location accuracy is expected to be ± 20 meters. All samples were described on standard sample cards which remain a part of the records available to the author on this project. Sample locations from the 1985 program were digitized from original maps by Avalon Development.
All geochemical analyses conducted in 1985 were completed by Bondar-Clegg and Company, Ltd, in North Vancouver, B.C. (Hart and others, 1985). All samples were shipped from Fairbanks to Bondar-Clegg's Vancouver via Alaska Airlines Airfreight Service. Sample preparation consisted of drying, crushing and pulverizing each sample to minus 150 mesh prior to digestion. Each sample was analyzed for gold by 30 gram fire assay with AA finish, silver by hot hydrochloric-nitric acid digestion with AA finish, arsenic by nitric-perchloric digestion with colorimetric finish and antimony by XRF techniques. Samples were analyzed for copper, lead, zinc, molybdenum, silver, thallium,

arsenic and antimony by hot hydrochloric-nitric acid digestion with a DCP finish, barium was analyzed by XRF techniques.

In 1986 all samples were collected in the field and locations plotted directly on topographic field maps (1:63360 base). GPS technology was not available so sample location accuracy is expected to be ± 20 meters. All samples were described on standard sample cards which remain a part of the records available to the author on this project. Sample locations from the 1986 program were digitized from original maps by Avalon Development.

All geochemical analyses conducted in 1986 were completed by Bondar-Clegg and Company, Ltd, in North Vancouver, B.C. (Freeman and others, 1986). All samples were shipped to the lab via Alaska Airlines Airfreight Service from Fairbanks to Vancouver. Sample preparation consisted of drying, crushing and pulverizing each sample to minus 150 mesh prior to digestion. Each sample was analyzed for gold by 30 gram fire assay with AA finish, silver by hot hydrochloric-nitric acid digestion with AA finish, arsenic by nitric-perchloric digestion with colorimetric finish and antimony by XRF techniques. Samples were analyzed for copper, lead, zinc, molybdenum, silver, thallium, arsenic and antimony by hot hydrochloric-nitric acid digestion with a DCP finish, barium was analyzed by XRF techniques.

During 1988 a total of 340 rock grab samples were collected in the field and locations plotted directly on topographic field maps (1:63360 base). GPS technology was not available so sample location accuracy is expected to be ± 20 meters. All samples were described on standard sample cards which remain a part of the records available to the author on this project. Sample locations from the 1988 program were digitized from original maps by Avalon Development.

During 1988 a total of 340 samples were prepared by Bondar-Clegg and Company of Vancouver, B.C. (Freeman and others, 1988). All samples were crushed and pulverized to minus 150 mesh and analyzed for gold and silver by fire assay with gravimetric finish and for arsenic aqua regia digestion with atomic absorption finish.

During 1989 a total of 201 drill samples was collected in the field and drill hole locations were plotted directly on topographic field maps (1:63360 base). GPS technology was not available so sample location accuracy is expected to be ± 20 meters. All samples were described on standard sample cards which remain a part of the records available to the author on this project. Sample locations from the 1989 program were digitized from original maps by Avalon Development.

During 1989 total of 201 drill samples was collected on 5 foot intervals on all holes (Freeman, 1989). All samples were sent to Bondar-Clegg and Company in Vancouver, BC, and analyzed for gold by fire assay with gravimetric finish. Drill samples were collected on 5 foot intervals on all holes. Each sample weighed approximately 20 pounds and constituted a one-third split. The other two-thirds split was discarded at the drill site.

During 1990 a total of 1,174 drill samples was collected at 5 foot intervals in all reverse circulation drill holes (Freeman and Huber, 1990). Each sample weighed approximately 20 pounds and constituted a one-quarter split obtained directly from a Jones-type open splitter. The remaining portion was discarded. All samples were sent to Bondar-Clegg and Company and analyzed by fire assay for gold and by atomic absorption for silver and copper. In addition, a total of 184 rock samples was collected and analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption and for arsenic by neutron activation. A total of 80 pulps from rock samples originally collected on the project in 1985 was re-analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption, and for arsenic by neutron activation. In 1990 all samples were collected in the field and locations plotted directly on topographic field maps (1:63360 base). GPS technology was not available so sample location accuracy is expected to be ± 20 meters. All samples were described on standard sample cards which remain a part of the records available to the author on this project. Sample locations from the 1990 program were digitized from original maps by Avalon Development.

During 1990 a total of 1,174 drill samples was collected at 5 foot intervals in all reverse circulation drill holes (Freeman and Huber, 1990). All drill hole samples were sent to Bondar- Clegg and Company and analyzed by fire assay for gold and by atomic absorption for silver and copper. In addition, a total of 184 rock samples was collected and analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption and for arsenic by neutron activation. A total of 80 pulps from rock samples originally collected on the project in 1985 was re-analyzed for gold by fire assay, for silver, copper and molybdenum by atomic absorption and for arsenic by neutron activation.

During 2005, Select Resources contracted with Avalon Development Corporation of Fairbanks, Alaska to complete a top-of-bedrock soil auger sampling program over the Hill 1835 and Hill 1890 areas of the Shorty Creek claim block. This sampling method had proven effective in other parts of Interior Alaska. Avalon conducted the initial top of bedrock soil sampling that outlined the 18.5 Moz Livengood gold deposit several miles north of the Shorty Creek project. Avalon's crew consisted of two junior geologists and two geotechs working in two-person teams. Soil samples were spaced 50 meters apart on east-west lines spaced 100 meters apart. A total of 566 soil samples were collected along with 21 grab rock samples collected while soil sampling was under way. While the thickness of overburden above bedrock was seldom more than 5 feet (average soil thickness was 56 inches), the central portion of the south grid was underlain by extremely blocky "hornfels" with little or no soil development making auger sampling impossible in some areas. In cases where several attempts at a given site were unsuccessful in producing enough soil to constitute a standard 1-kilogram sample, the soil sampling method was switched to shovel sampling from hand-dug pits. This method proved effective in areas where soil auger sampling was not applicable. Following collection in Ziploc and canvas bags of a standard 1-kilogram soil sample, a separate lithology sample was collected and placed in a separate Ziploc bag for later logging similar to logging of RC drill chips. Field data gathered at each sample site included GPS coordinates in UTM, soil color, predominant and secondary rock lithologies, and other descriptive information as required (frozen, rocky, quartz veining observed, etc.). These data were then transferred to the project geochemical database. Geochemical samples were transported from the field by helicopter and Avalon truck to Avalon's offices where blank, standards and duplicates were inserted All 2005 samples from the soil geochemical program were shipped to the ALS Chemex sample preparation facility in Fairbanks where they were weighed, dried, and dry-sieved to minus 80 mesh (Method Prep-41). Rock samples were weighed, dried, the entire sample coarse- crushed and the entire sample then pulverized to better than 85% passing -200 mesh. Sample pulps were air-shipped for analysis by ALS-Chemex to their lab in North Vancouver, B.C. All samples were analyzed for gold by using a 30 gram Fire Assay extraction with an ICP-AES finish (Method Au-ICP21). A 47 multi-element suite was analyzed with 4-acid digestion (HF- HNO3-HClO4-HCL) and a combination of ICP-MS and ICP-AES finish. Chemex returned all pulps and rejects to Avalon Development for long-term storage.

The majority of the drilling undertaken has now been completed by Freegold (4,291 metres). Prior to the commencement of the 2015 drilling original drill sites from the 1989 and 1990 program were field located and RTK GPS co-ordinates were taken. Previous drilling was both RC and limited in scope and accordingly, the discussion is heavily weighted to the 2015 and 2016 drill programs.

In both 2014 and 2016 additional soil sampling was undertaken by Freegold. A total of 351 samples were collected during 2014 and 289 samples during 2016. The 2014 sample grid was orientated north south and covered the same area as the 2014 ground geophysical program. Samples were taken on average every 50 metres with sample lines spaced 400 metres apart. The program was designed to obtain broader geochemical coverage than what had been previously completed. In 2016 soil sampling was extended to cover both the

Steel Creek and Quarry target areas. Again this soil sampling was designed as a first pass program intended to identify targets for future detailed follow-up.

Soil samples were collected by digging a hole through the tundra mat cover down to the mineral soil layer and placing a sample of the soil into a marked bag. The clumps of moss and remaining soil were then returned and the hole was covered up. Sample weights were generally 250 –500 grams. Samples were taken to ALS Chemex in Fairbanks for preparation and subsequent analysis at either their Vancouver, BC or Reno, Nevada analytical facilities. Multi-element analysis for gold and pathfinder elements was performed. Fire Assay for gold with an AA finish for the gold and four acid digestion was used for the 33 pathfinder elements. (ICP- AES). QA/QC was restricted to the laboratories internal QA/QC program for the soil sampling program.

All 2014 and 2016 samples from the soil geochemical program were shipped to the ALS Chemex sample preparation facility in Fairbanks where they were weighed, dried, and dry-sieved to minus 80 mesh (Method Prep-41). Rock samples were weighed, dried, the entire sample coarse- crushed and the entire sample then pulverized to better than 85% passing -200 mesh. Sample pulps were air-shipped for analysis by ALS-Chemex to their lab in North Vancouver, B.C. All samples were analyzed for gold by using a 30 gram Fire Assay extraction with an ICP-AES finish (Method Au-ICP21). A 47 multi-element suite was analyzed with 4-acid digestion (HF- HNO3-HClO4-HCL) and a combination of ICP-MS and ICP-AES finish

The following summarizes the procedure used for sample preparation, analyses and security for core drill samples collected during both the 2015 and 2016 Shorty Creek drilling programs :

1. Core was moved by helicopter exclusively during the 2015 drill program to the camp facilities. During the 2016 program both helicopter and 4WD transport were utilized. Helicopter transport was employed for the drilling on Hill 1710 and 4WD truck was utilized for transport from the Hill 1835 from the drill rig to the camp facilities on a daily basis.
2. Upon arrival at the core logging facility, core boxes were inspected for proper labeling and placement of core in each box. Core boxes were inspected for proper labeling and core in the boxes was inspected to insure that the core was placed in the boxes at the drill rig in the proper order with the proper footage markings on the core run blocks.

3. Core was moved to logging tables and placed in order by box number such that the lowest numbered box (with the shallowest drill core) was on the far left side of the logging bench and while the highest numbered box (with the deepest drill core) is on the far right side of the logging bench.

4. Core was washed with a spray bottle and brush to remove polymer or other drill mud. A quick log of the general geology was performed for the purpose of a daily drill summary and sample blocks were inserted at each run block. Exceptions to this practice were rare, but would have to be made if run blocks were less than .5 ft. in length or if core recovery was too low to obtain a large enough sample for geochemical analysis.

5. The drill core was logged by a senior geologist with experience in the rock type, alteration and mineralization. Details relating to lithology, structure, alteration and mineralization were recorded systematically. Lithologic details were compiled on paper logs, and later converted to digital format. Structural details were measured and their angle to core axis recorded in the log. Details relating to the thickness, angle and other aspects were recorded in the log. Hydrothermal alteration features, such as quartz or sericite alteration, were noted in the logs and details relating to its extent and intensity were recorded. Hydrothermal mineralization was recorded in the log. Details recorded include morphology, mineralogy and color of quartz veins, sulfide mineralogy, form and abundance (in volume %), metallic oxide mineralogy, form and relative abundance, and any other feature related to gold, gold-pathfinder or other metallic mineralization. The geologist took close-up digital photographs of unique or otherwise significant features described above.

6. Core recovery (ratio of core recovered in a given core run to the actual length of the core run) was calculated and recorded as a percent recovered. The RQD, or Rock Quality Designation, was calculated for each drill run by recording the combined length of whole (unbroken) core in each run measuring a minimum of twice the diameter of the core. This number is recorded as a percent of each total drill run. The RQD, or Rock Quality Designation was calculated for each core run. The RQD is the combined length of all whole core segment in each core run that were greater than 10 cm (4 inches) or longer than twice the core diameter, divided by the total length of the recorded core run multiplied by 100 (expressed in % form). The total length of core includes all lost core sections. Breaks in the core that result from the drilling process or extraction of the core from the core barrel are usually fresh looking and have rough edges. These mechanical breaks were ignored while calculating RQD. Samples qualifying for addition in the RQD

calculation would be 4 inches or more in length. RQD information was record percentage form on the logging sheet for each core run interval pulled by the drilling company.

7. Following logging, the geologist selected sample intervals for geochemical analyses. Selection of sample intervals utilized all the visual rock information gathered by the logger as well as any information gathered through the use of additional tools, hand held geophysical tools, ultraviolet lamp or any other analytical tool that provided additional information about the geologic environment and mineralization. Sample intervals did not cross core recovery block boundaries and were no longer than 3 metres in length. Wooden blocks, designating the sample number and starting footage mark, were placed in the core boxes to guide the sampler. These sample blocks were marked in red while core footage run blocks were marked in black. Care was taken in assigning sample numbers to allow for insertion of blanks and standards into the sample stream. Blanks and standards comprised approximately 10% of the samples submitted to the lab from any given drill hole.

8. The core was digitally photographed. During this process the core was wetted to enhance picture quality and photographed. Each core box was photographed with a placard denoting hole number and footage contained in the box. Core run block and sample interval blocks were plainly visible in the pictures. Digital resolution was +5 mega-pixels to insure extremely high quality results. In addition to photographing each core box, close-up or macro photos were taken by the core logger of any obviously mineralized intervals, significant alteration or textures, noteworthy lithologic contacts, distinctive structural zones, etc. The core logger kept an accurate written log of the footage and hole number of these macro photos were crossed referenced to the digital file name. Once a given hole was photographed completely, the file name of the macro photos was changed to reflect the hole number and footage of each macro photo. During the 2016 program core was both split and photographed at the logging facilities of the camp and in 2015 was hauled to a secure logging facility in Fairbanks for splitting and photographing.

9. Core was then split in half length-wise using a tile saw during 2015 and a core saw during 2016 fitted with diamond blades.

10. Every section of core drilled was then sampled by taking one half of the core drilled between each set of run blocks. Extra care was taken to ensure that only rock and rock fragments from the proper interval were collected in the sample bag.

The bagged and labeled individual sample bags were sealed and delivered to the ALS Chemex preparatory facility in Fairbanks

11. During the 2016 program the onsite project geologist completed the geochemical laboratory submittal paperwork. Bagged and labeled samples were then loaded into wooden transport crates supplied by ALS Chemex Samples were delivered to the ALS's preparatory facility in Fairbanks and then were either prepped in Fairbanks or shipped to ALS's Kamloops facility. The minimum instructions required for each sample shipment included:
    1. Project Name and client billing instructions.
    2. Name or description for the sample preparation methods requested.
    3. Name or description for the sample pulp size (500 grams).
    4. Name or description of Au analysis procedure (Fire Assay, gravimetric finish) and description of over-limit condition and action required by laboratory.
    5. Name or description of multi-element package analysis procedure (if any) and description of over-limit condition and action required by laboratory.
    6. Method for distribution of analytical results.

Similar methods were employed during 2015 the notable exceptions are: the remaining half core is stored in the original boxes at camp facility for the 2016 program and the 2015 core is stored at a facility in Fairbanks.

The original hand-written drill core logs were scanned to a digital format (Adobe pdf) and the resulting scans were checked for clarity and completeness. Hard copy hand drill logs were converted to a digital drill log format (Excel format) to allow for their use in GIS and/or resource estimation software. The Excel file was checked for accuracy and completeness against the original hand written drill log by a third party and any discrepancies were rectified and errors or omissions corrected. Where necessary, the core logger referred to the core to make corrections, additions or other changes

Both ALS Chemex and SGS Laboratories have rigorous internal quality control standards, which utilize the use of their own standard, blanks and duplicates within the sample stream in addition to the standard, blanks and duplicates employed in the sample submittal process by Avalon and/Freegold.

It is the opinion of this author that the data collection, sampling, core recovery, chain of custody, preparation and analysis of the samples, and QA/QC protocol was conducted with a high level of due care, employing methods that meet or exceed industry standards.

Samples Assayed by **ALS Chemex** generally underwent the following preparatory and assay procedures:

a. The sample was first logged in the tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g was taken and pulverized to better than 85 % passing a 75-micron (Tyler 200 mesh, US Std. No. 200) screen. This method was utilized for rock chip or drill samples.

b. Excessively wet samples were dried in drying ovens. This is the default drying procedure for most rock chip and drill samples.

c. Fine crushing of rock chip and drill samples to better than 70% of the sample passing 2 mm. The sample was then split using a riffle splitter. The 250 g sample split was then pulverized to better than 85% of the sample passing 75 microns. In instance where gold only was required.: AA23 AU Atomic Absorption Spectroscopy (AAS) was performed.. A prepared sample was fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead was digested in 0.5 mL dilute nitric acid in the microwave oven, 0.5 mL concentrated hydrochloric acid was then added and the bead was further digested in the microwave at a lower power setting. The digested solution was cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards. A 30 g sample weight was utilized. Detection Limits under this method are: 0.005 ppm to 10 ppm. Samples that returned greater that >10 ppm were automatically re-done using Au Grav 2 or Au-GRA22. Under this method the prepared sample was fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metals was cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold. Silver, if requested, is then determined by the difference in weights. Detection limits under this method ranged from 0.5 ppm to 1,000 ppm.

d. In the event multi-element analyses was requested generally the ME ICP61 was selected– Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP – AES). Under this method a prepared sample (0.25 g) was digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue was topped up with dilute hydrochloric acid and the resulting solution analyzed by inductively coupled plasma-atomic emission spectrometry. Results are corrected for spectral interelement interferences. NOTE: Four acid digestions are able to dissolve most minerals; however, although the term "near- total " is used, depending on the sample matrix, not all elements are quantitatively extracted.

Duplicate Samples Assayed by **SGS** underwent the following preparatory and assay procedures:

Duplicate samples were logged into the tracking system known as G_LOG02. This method was utilized for rock chip or drill samples.
Excessively wet samples were dried in drying ovens. SGS laboratory staff uses drying procedures that avoid contamination and ensure that the drying temperature is suitable for core sample analysis. Drying protocols temperature range from 105°C to 60°C.

Fine crushing of rock chip and drill samples to better than SGS laboratory staff pulverize 250g in a chrome steel ring and puck mill so that 85% passes through a 75µ screen.

Duplicate samples were analyzed by the SGS method GE_ICP40B technique, a 34 element inductively coupled plasma, analyses.
A 30g-5ml split was analyzed using the GE_FA313 fire assay method. Gold assay within the detecting range of 5 - 10,000 ppb were analyzed with an AAS finish.

No information is available to the author regarding the quality assurance/quality control procedures utilized by Fairbanks Exploration during the 1985 and 1986 field programs.

During 1989, Asarco Inc. supplied two internal standards for quality control/quality assurance purposes (Freeman and others, 1988). Samples 1569 and 1901 are standard samples using Asarco test standard B. The analytical results of these standard samples were not available to the author when this report was written.

Freeman and Huber (1990) reported that during 1990 Asarco Standard Sample B was periodically sent to Bondar Clegg and Company along with rock samples and drill cuttings. Statistical comparison between laboratory results and the Asarco standard sample, which had a grade of 0.006 opt gold, 0.014 opt silver and 60 ppm copper, indicate extremely good accuracy and precision was achieved by Bondar Clegg during

1990. There was minimal variance between the standard and lab results for gold and only a maximum of 3 ppm variance for copper. Bondar Clegg's lower detection limit for silver was above the 0.014 opt grade of the standard sample however, laboratory silver results were consistently below the 0.02 opt lower cut-off.

During 2005, approximately 11% of all samples were quality assurance/quality control (QA/QC) samples consisting of 2% blanks, 5% standards and 4% duplicates. Over the course of the program a total of 15 blank, 26 standard and 25 duplicate samples were inserted into a total of 566 soil and 21 grab rock samples. Five different commercially prepared gold standards were used during the program. These standards had expected values of 49 ppb, 91 ppb, 0.430 ppm, 1.21 ppm and 2.57 ppm gold. Blank samples were composed of Quaternary basalt from Browns Hill Quarry, a commercial rock quarry in North Pole, Alaska. Avalon Development has utilized this material as a blank for over 10 years due to its hardness (assists in scouring crushers) and its distinctive geochemical fingerprint that is void of gold, base metals and gold-pathfinder elements. Chemex results for the 1.21 ppm and 2.57 ppm gold standards were higher than the expected standard value. Chemex results for the 91 ppb and 49 ppb gold standards were generally slightly lower than the expected standard value. Chemex results for the 0.430 ppm standard produced the largest variance with reported values ranging from 387 ppb to 439 ppb and averaging 415 ppb (4% less than expected). Analysis of the duplicate samples indicates that, with some exceptions, there is good correlation between samples whose original gold values are less than 100 ppb. Increasing variability is evident as original soil values increase, with duplicate values generally less than original assay values. Analysis of the 2005 blank samples indicates that 7 of the 15 blanks returned gold value less than the 1 ppb lower detection limit while the values ranged from <1 to 6 ppb. Average value for samples with reported values greater than or equal to 1 ppb was 3.2 ppb. Little in the way of arsenic contamination was observed, with arsenic values ranging from 2.1 to 8.9 ppm and averaging 5.9 ppm. Average soil arsenic value for the 566 grid samples was 407 ppm with a low of 7.8 ppm.

At least one possible problem involving lab calibration was documented in the 2005 soil sampling program. The distribution patterns made by the anomalous values for Re and Se suggest that ICP calibration problems may have occurred in the ICP-MS unit at ALS Chemex. The author has seen this “between-batch” variability before and was informed by Chemex that several reasons could exist for this sort of problem, most of which are related to poorly maintained or dirty ICP equipment and poor internal QA/QC oversight. Comparison with the ICP-AES screen done prior to submission of a sample to the ICP-MS unit is recommended to see if this issue is related to the ICP-MS unit. Until such lab check is completed, reliance on Re and Se results is not recommended.

2015

QAQC samples were inserted into the drill sample strings on the basis of approximately 1 QAQC sample per 10 assay samples (approximately 10%). A total of 513 samples were analyzed, including assay and QAQC samples. The types of QAQC samples used included standards, blanks and duplicates. Standards were inserted at a rate of approximately 1 standard sample per 14 assay samples (6%), blanks were inserted at a rate of approximately 1 blank sample per 36 assay samples (2.7%), and a duplicate sample was taken every 100 samples (1%). Standard and blank samples were analyzed in order of sample number by ALS Chemex along with the core samples. The coarse reject material to be used for the duplicate samples was returned to Avalon by ALS Chemex.

35 standards were used in the 2015 drill program. Three standards were obtained from Rocklabs and ranged in value from .414 ppm gold to 1.8 ppm gold. Seven standards were obtained from Analytical Solutions and ranged in value from .514 ppm gold to 5.49 ppm gold. An attempt was made to use gold standards with higher base metal values in zones known to have a higher sulfide concentration, and higher gold value standards were used where high gold values in the core were suspected. Of the standards used in the 2015 drill program, none returned values differing more than 15% from the expected value.

Blank samples consisted of Browns Hill Quarry basalt, an unmineralized Quaternary basalt flow from the Fairbanks Mining District, Alaska. Avalon Development has an extensive data base of assay values for this material which provides a reliable base-line for determining expected geochemical values. No spurious results were noted in the blank assays.

2016

QAQC samples were inserted into the drill sample strings on the basis of approximately 1 QAQC sample per 10 assay samples (approximately 10%). A total of 1,830 samples were analyzed, including assay and QAQC samples. The types of QAQC samples used included standards, blanks and duplicates. Standards were inserted at a rate of approximately 1 standard sample per 13 assay samples (7%), blanks were inserted at a rate of approximately 1 blank sample per 42 assay samples (2.3%), and a duplicate sample was taken every 100 samples (1%). ALS Chemex analyzed standard and blank samples in order of sample number along with the core samples. The coarse reject material is retained at ALS Chemex. 104 of the above samples were sent for duplicate analysis at SGS Laboratories in Burnaby, British Columbia. No significant variances were observed.

137 standards were used in the 2016 drill program. Three standards were obtained from Rocklabs and ranged in value from .414 ppm gold to 1.8 ppm gold. Seven standards were obtained from Analytical Solutions and ranged in value from 0.284 ppm gold to 1.81 ppm gold and ranging from 44.7 ppm copper to 7420 ppm copper. An attempt was made to use standards that corresponded with higher base metal values in zones known to have a higher sulfide concentration, and higher gold value standards were used where high gold values in the core were suspected. Of the standards used in the 2016 drill program, no values differed significantly from the expected values with the average variance well under the 15% tolerance.

Blank samples consisted of Browns Hill Quarry basalt, an un-mineralized Quaternary basalt flow from the Fairbanks Mining District, Alaska. Freegold holds an extensive database of assay values for this material, which provides a reliable base line for determining expected geochemical values. The use of standards and blanks was at a similar ratio to that employed in the 2015 drilling program. No spurious results were noted in the blank assays.

Both ALS Chemex and Acme Laboratories have rigorous internal quality control standards, which utilize the use of their own standard, blanks and duplicates within the sample stream in addition to the standard, blanks and duplicates employed in the sample submittal process by Avalon.

12. DATA VERIFICATION

As part of a compilation report completed in 2010 Avalon reviewed the copies of the original analytical certificates (1985 – 2005) to check the integrity of the database. Woodman did not attempt to determine the veracity of the geochemical data reported by Freegold or third parties, nor did Woodman attempt to conduct duplicate sampling for comparision with the geochemical results provide by other parties. Woodman reviewed the copies of the original assay certificates from the 1989 – 1990 drill programs, and spot checks of better than 15% of the database were performed. The author also reviewed the original assay certificates for the 2015 and 2016 programs and spot checks of the database were also performed. No errors were noted. Woodman also held discussions with Avalon with regard to the 1989, 1990 and 2015 drill program and and is satisfied that QA/QC procedures were performed in accordance with industry standards. Woodman oversaw the 2016 QA/QC program.

It is the opinion of this author that the data collection, sampling, core recovery, chain of custody, preparation and analysis of the samples, and QA/QC protocol was conducted with a high level of due care, employing methods that meet or exceed industry standards and that they are adequate for the purposes used in this technical report.

13. MINERAL PROCESSING AND METALLURGICAL TESTING

To the author's knowledge, there has never been mineral processing or metallurgical testing of materials from the Shorty Creek property. Petrographic and mineralogical work has been undertaken on a representative number of samples from both the 2015 and 2016 drill programs by Terra Mineralogical Services. 10 samples were analyzed from Hole SC 15-03 in 2015 and an additional 15 samples were taken from various depths from Holes SC 16-01, 16-02 and 16-03. The results have been extracted from a reports prepared for Freegold by Terra Mineralogical Services.

> *The primary purpose was to assess as much as possible the hydrothermal assemblage overprinting the host rocks (felsic intrusive and hornfels) and to determine the predominant Copper minerals, as well as opaque gangue minerals associated with the mineralization. The main goal of the present study was to provide an overall estimate of the hydrothermal alteration overprinting the porphyry Copper rock samples, and also to provide detailed information regarding Copper minerals as well as other gangue sulphides minerals occurring alongside Copper phases.*

Hole SC 15-03

One polished thin section was prepared for each sample and was examined primarily using transmitted and reflected light microscopy, supported by abundant SEM-EDS check point analyses. A summary description of the protolith (if visible), alteration features, economic minerals and opaque minerals were collected.

A total of 10 samples were submitted from drill hole SC 15-03. Results indicate that the most recurrent alteration minerals are comprised of Magnesium (+/- Fe) Alumino Silicate that has been interpreted to be a chlorite (clinochlore), carbonate (Fe, Mg-rich: ankerite) and quartz. These are commonly accompanied by abundant Iron sulphides (pyrite partly replaced to marcassite), subordinate arsenopyrite, and Copper sulphides. Muscovite/ sericite is also abundant in the felsic intrusive samples, and clay is also fairly common, occurring along thin fractures in the hornfels. Chalcopyrite is by far the main Copper carriers in all the samples examined. It is commonly accompanied by minor to trace amounts of enargite and stannite. Copper is also present locally in minor to trace amounts of chalcocite/ digenite (partly replacing chalcopyrite) and, finally, bornite.

Holes SC 16-01, SC 16-02 and SC 16-03

One polished thin section was prepared for each sample and was examined primarily using transmitted and reflected light microscopy, supported by abundant SEM-EDS check point analyses. A summary description of the protolith (if visible), alteration features, economic minerals and opaque minerals were collected. In addition all the samples were subject to automated SEM-EDS scans to identified Gold/ Silver and Tungsten bearing minerals.

A total of 15 samples were submitted from the 2016 program. Results indicate that the most recurrent alteration minerals are comprised of acicular Magnesium (+/- Fe and trace Na) Alumino Silicate crystals that have been interpreted to be a chlorite (clinochlore), carbonate (Fe, Mg-rich: ankerite) and quartz. These are commonly accompanied by abundant Iron sulphides (pyrite partly replaced to marcassite and pyrrhotite), subordinate arsenopyrite, and chalcopyrite. Muscovite/ sericite is also common in the felsic intrusive samples, and clay is also present, occurring along thin fractures in lithologies that are interpreted as hornfels.

Chalcopyrite is by far the main Copper carriers in all the samples examined. It is locally accompanied by trace amounts of stannite. Finally, Heavy Mineral Scans were completed and few grains of native gold and minor **Ferberite**,$Fe^{2+}(WO_4)$ (Iron end member of wolframite group), were also identified locally.

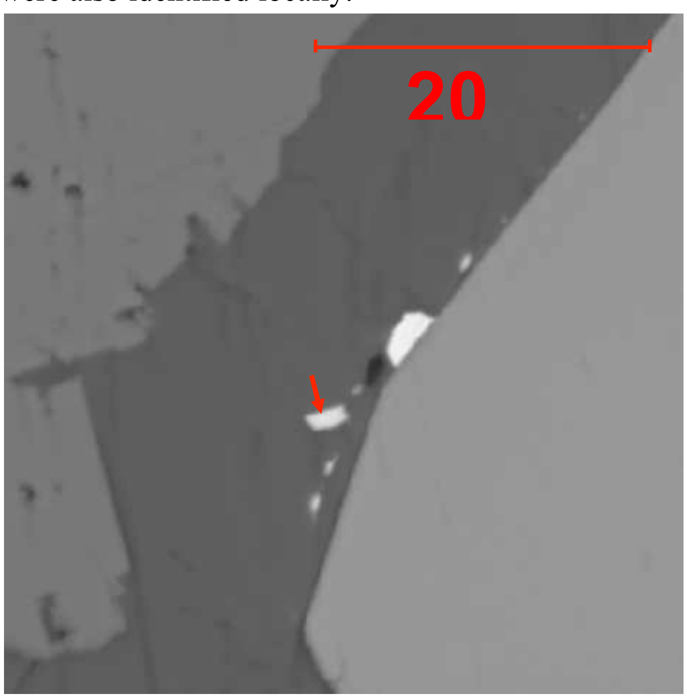


Figure 13.1 BSE- SC01-478.6 '

Native gold, at arsenopyrite-silicate grain boundaries, acanthite (red arrow) in silicate and pyrite nearby(on the left)

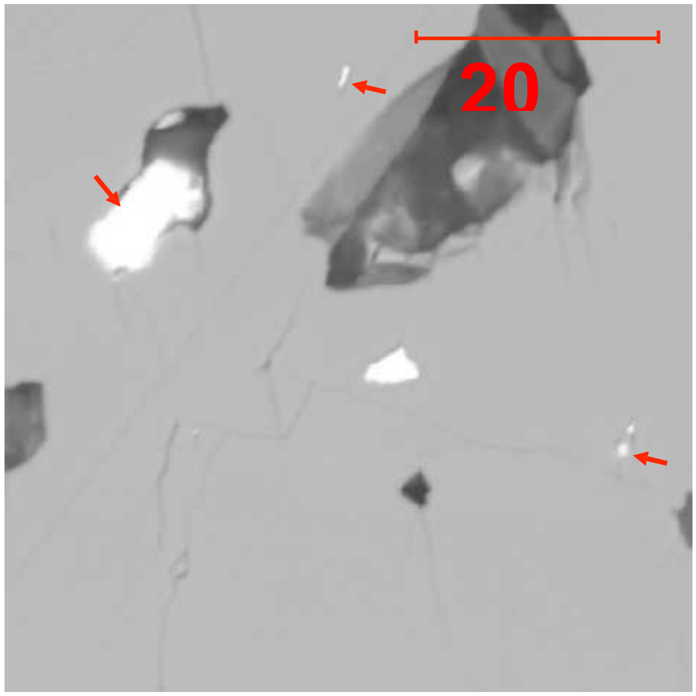
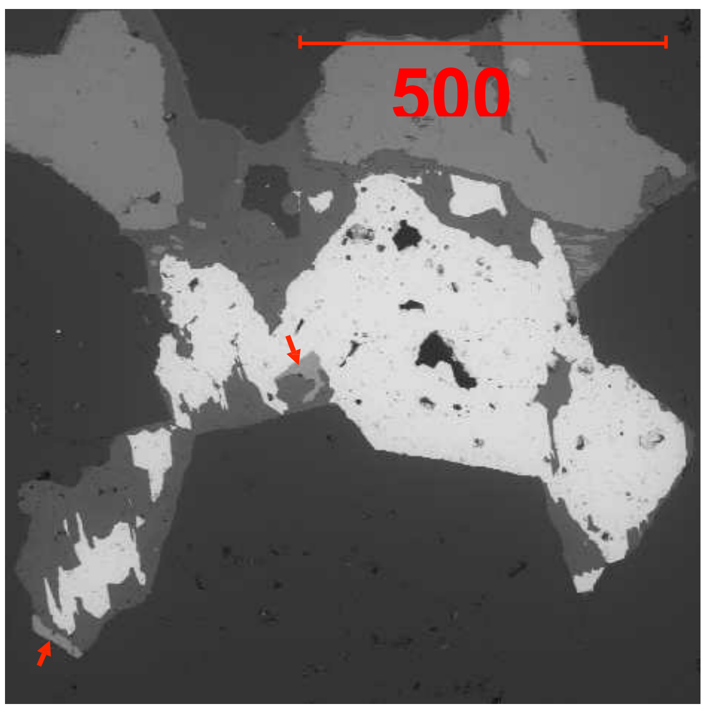


Figure 13.2 BSE 02- SC01-478,6

'Native gold, center, at arsenopyrite grain boundaries surrounded by Bi-telluride (red arrows)



Figures 13.3 - SC02-168.6

Ferberite,$Fe^{2+}(WO_4)$ (Iron end member of wolframite group), bright phase in center of image, mainly occurring at iron-rich carbonate (second darkest grey), quartz (darkest grey) grain boundaries, also attached to minor chalcopyrite (red arrows), near pyrite (upper right and left)

14. MINERAL RESOURCE ESTIMATE

To the author's knowledge, there has never been a resource estimate completed on the Shorty Creek property.

15-22. ITEMS OMITTED

Items 15-22 omitted since the Shorty Creek property does not qualify as an "advanced property".

23. ADJACENT PROPERTIES

The largest and most significant land position adjacent to the Shorty Creek project is International Tower Hill Mines Ltd's Livengood gold project, which sits primarily on the north side of the Tolovana River valley. Woodman has not independently verified the resource or reserves of the Livengood deposit. Results from the Livengood deposit are not necessarily indicative of the mineralization of the property that is the subject of the technical report. The following summary is largely derived from Livengood NI 43-101 report by Kunter, Rehn, Prenn, Carew, and Levy (2013) and the press release dated September 8th, 2016 issued by International Tower Hill Mines and the Pre-Feasibility Report entitled "*Pre-Feasibility Study of the Livengood Gold Project, BBA Inc". (October 24th, 2016)*.

The Livengood deposit is hosted in a thrust-interleaved sequence of Proterozoic to Paleozoic sedimentary and volcanic rocks. Mineralization is related to a 93 Ma (Fort Knox age) dike swarm that cuts through the thrust stack. Primary ore controls are a combination of favorable lithologies and crosscutting structural zones. In areas distal to the main structural zones the selective development of disseminated mineralization in favorable host rocks is the main ore control. Within the primary structural corridors all lithologies can be pervasively altered and mineralized. Devonian volcanic rocks and Cretaceous dikes represent the most favorable host lithologies and are pervasively altered and mineralized throughout the deposit. Two dominant structural controls are present: 1) the major shallow south-dipping faults host dikes and mineralization that are related to dilatant movement on structures of the original fold-thrust architecture during post-thrusting relaxation, and 2) steep NNW trending linear zones that focus the higher-grade mineralization which cuts across all lithologic boundaries.

In September 2016 International Tower Hill Mines announced the results of a Pre-Feasibility Study (the "PFS") on an optimized configuration for its Livengood Gold Project. The engineering optimization studies incorporated in the PFS evaluated several scenarios, ultimately selecting a project that will process 52,600 tons per day and produce 6.8 million ounces of gold over 23 years. Livengood Gold Project mineral resource is estimated at 497.3 M measured tonnes at an average grade of 0.68 g/mt (10.84 Moz) and 28.0 M indicated tonnes at an average grade of 0.69 g/mt (0.62 Moz), for a total of 525.4 mt at an average grade of 0.68 g/mt (11.5 Moz). *(Pre-Feasibility Study of the Livengood Gold Project, BBA Inc. (October 24th, 2016)*

Ongoing work includes the continuation of optimization studies to further improve and de-risk the Livengood project, and required environmental baseline studies.

24. OTHER RELEVANT DATA AND INFORMATION

To the author's knowledge, there are no other data available to the author that bear directly on the information presented in this report.

25. INTERPRETATIONS AND CONCLUSIONS

Compilation and interpretation of all geological and geophysical data collected on the large, 12,586-hectare Shorty Property indicates a minimum of 5 anomalies areas have been identified as potentially mineralized exploration targets.

Two exploration targets located on the northeast portion of the Shorty Creek property, known as Hill 1890 and Steel Creek, solely consist of magnetic anomalies. The Hill 1890 target aeromagnetic anomaly requires further geologic fieldwork to better understand the mineralization potential. The Steel Creek geophysical anomaly represents the largest and highest intensity ground and aeromagnetic anomaly on the Shorty property. The Steel Creek magnetic anomaly is located on a discontinuous magnetic anomalous trend shared by the prospect that currently features the highest exploration potential on the Shorty Creek property. Deep soil profiles on the Steel Creek magnetic anomaly has precluded hand soil sampling as an effective technique to verify presence of a geochemical signature. Proposed 2017 initial drill tests of the Steel Creek anomaly consists of 3 core holes oriented to test the highest portion of the aeromagnetic anomaly.

The Quarry prospect is the most recently acquired and soil sampled of the 2017 planned drill targets. The Quarry prospect features several soil samples containing greater than 350 ppm copper and scattered greater than 10 ppm molybdenum which form a crescent pattern along the southern and eastern flank of a prominent geophysical anomaly. Quarry is a drill ready mineral exploration target worthy of a first stage drill test of 3 planned core holes.

Compilation of geophysical data, geochemical sampling and drill data indicates Hill 1835 exhibits multiple characteristics of copper/gold porphyry litho cap mineralization recognized in many high potential mineral exploration prospects. Hill 1835 porphyry style, potassic and pervasive sericite alteration, coincides with high-grade copper and gold mineralization hosted sedimentary rocks that are cut by porphyritic dikes and sills. Six Hill 1835 proposed follow-up core holes, which are designed to show continuity, consistency and extend the high-grade copper, found in holes SC 15-03, SC 16-01 and SC 16-12 within the high portions of the ground and aeromagnetic anomaly.

Five core drilled at Hill 1710 during the 2016 program indicate the high-grade copper intercepts and percentage of porphyry dikes and sills increase in 2016 core holes collared in the northeast portion of the drilling grid. Also the broadest and highest portion of the Hill 1710 aeromagnetic anomaly lies to the northeast of the 1710 drill coverage. An additional drill hole northeast of the 1710 coverage is also recommended.

26. RECOMMENDATIONS

Based on field, laboratory and literature studies completed to date, the following recommendations for future work are warranted:

1. Additional diamond drilling should be conducted at the Hill 1835 Cu-Au target area. Approximately 3,000 metres (10,000 ft.) of diamond drilling are recommended to further test the magnetic anomaly to the south and east of the previous holes (SC 15-03, SC 16-01 and SC 16-02). (Figure 26.2). Initial drill depths should be planned to test depths of at least 500 metres (1640 ft.). This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling should be conducted with a fly capable - diamond core drill using HQ core (2.5 inch diameter). All cores should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis. The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$1,500,000 ($500/m or $152/ft).

2. Initial diamond drilling should be conducted at the Steel Creek magnetic anomaly. Approximately 1,200 metres (3,936 ft.) of drilling are recommended (Figure 26.3). Drilling will need to extend to a depth of 400 metres (1312 ft.) this phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling should be conducted with a fly capable diamond core drill using HQ core (2.5 inch diameter). All core should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis.

The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$600,000 ($500/m or $152/ft).

3. Initial diamond drilling should be conducted at the Quarry magnetic anomaly. Approximately 1,200 metres (4,920 ft.) of drilling are recommended (Figure 26.4). Drilling will need to extend to a depth of 400 metres (1475 ft) this phase of work is not success-dependent on any other work recommended for the Shorty Creek project. All drilling should be conducted with a fly capable diamond core drill using HQ core (2.5 inch diameter). All core should be logged, digitally photographed, split with a core saw and one-half of each interval should be submitted for analysis. The remaining half should be retained for future use. All core should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. The estimated cost of this drilling program, including labor, assays, camp, heavy equipment rental, drilling, fuel and all consumables is US$600,000 ($500/m or $152/ft).

4. Additional reconnaissance exploration on both the original and the new claim blocks, to include prospecting and mapping of ridgelines, stream sediment, rock and soil sampling where warranted. Induced polarization geophysics and ground magnetics is recommended to extend the grid coverage along the northeastern and southwestern extensions of the, Hill 1870, and Hill 1890 anomaly areas. Daily fieldwork will be on foot or supported by 4WD ATV where possible. All samples should be assayed for gold by fire assay techniques with each sample also analyzed for a multi-element suite by ICP methods using 4-acid digestion procedures. This phase of work is not success-dependent on any other work recommended for the Shorty Creek project. The estimated cost of this program, including labor, assays, camp, equipment, fuel and all consumables is US$100,000.

The total cost of the above-recommended work is approximately US$2,800,000.

Table 26.1 Breakdown of recommended exploration costs for the Shorty Creek project

Work Program	Cost	Comment
Additional Drilling on Hill 1835	$1,500,000	6 additional holes to test the magnetic anomaly to the south and east of holes SC 15-03, 16-01, and 16-02. Holes to be drilled to a minimum depth of 500 metres.
Steel Creek Drilling	$600,000	Initial testing of the magnetic anomaly on Steel Creek. 3 holes drilled to a depth of 400 metres.
Quarry Target Drilling	$600,000	Initial drill testing of the Quarry magnetic/geochemical anomaly. 3 holes drilled to a depth of 400 metres.
Geochemistry, Geophysics, Reconnaissance Program	$100,000	Mapping, Sampling, Induced Polarization and ground magnetics
TOTAL	$2,800,000	

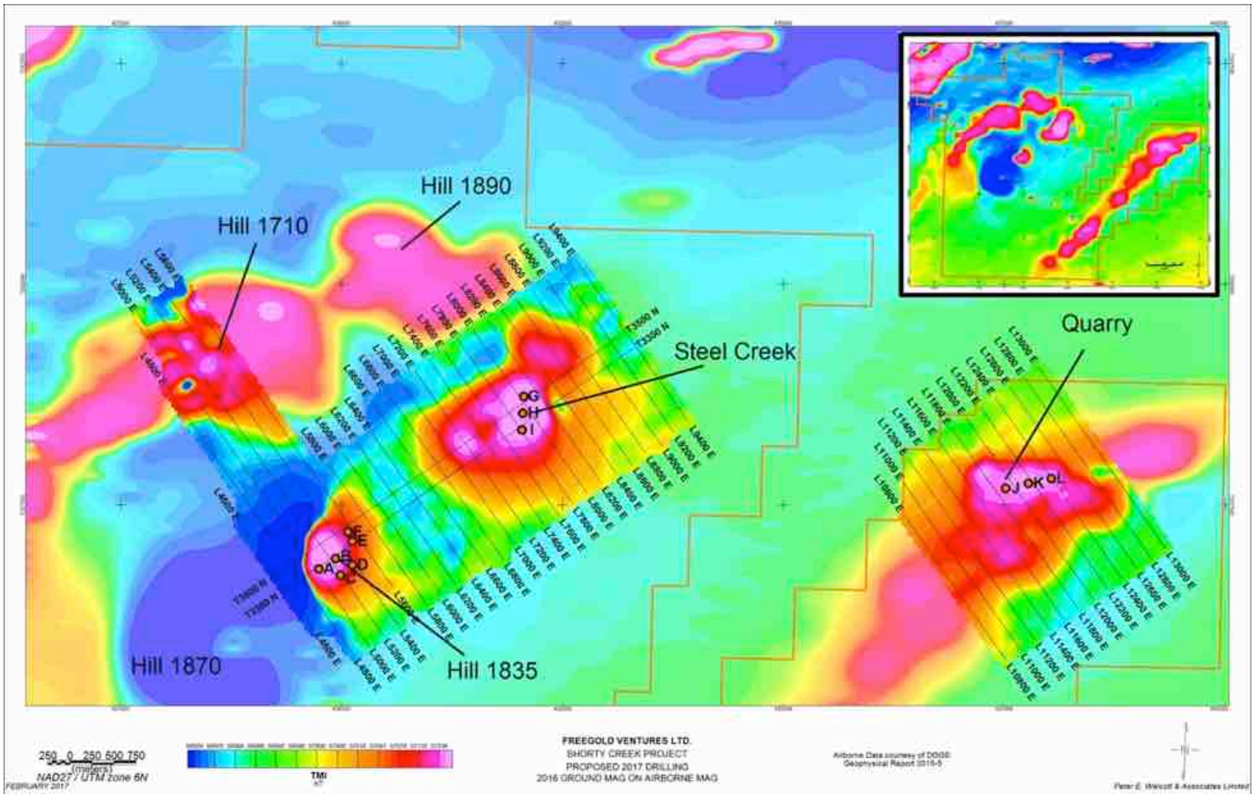


Figure 26.1 Map Showing Areas of Proposed Drilling Shorty Creek Project Area

Details maps showing each of the proposed target areas follow:

- Proposed Hole Location on 1835 Target
- Proposed Hole Locations on Steel Creek Target
- Proposed Hole Locations on Quarry Target

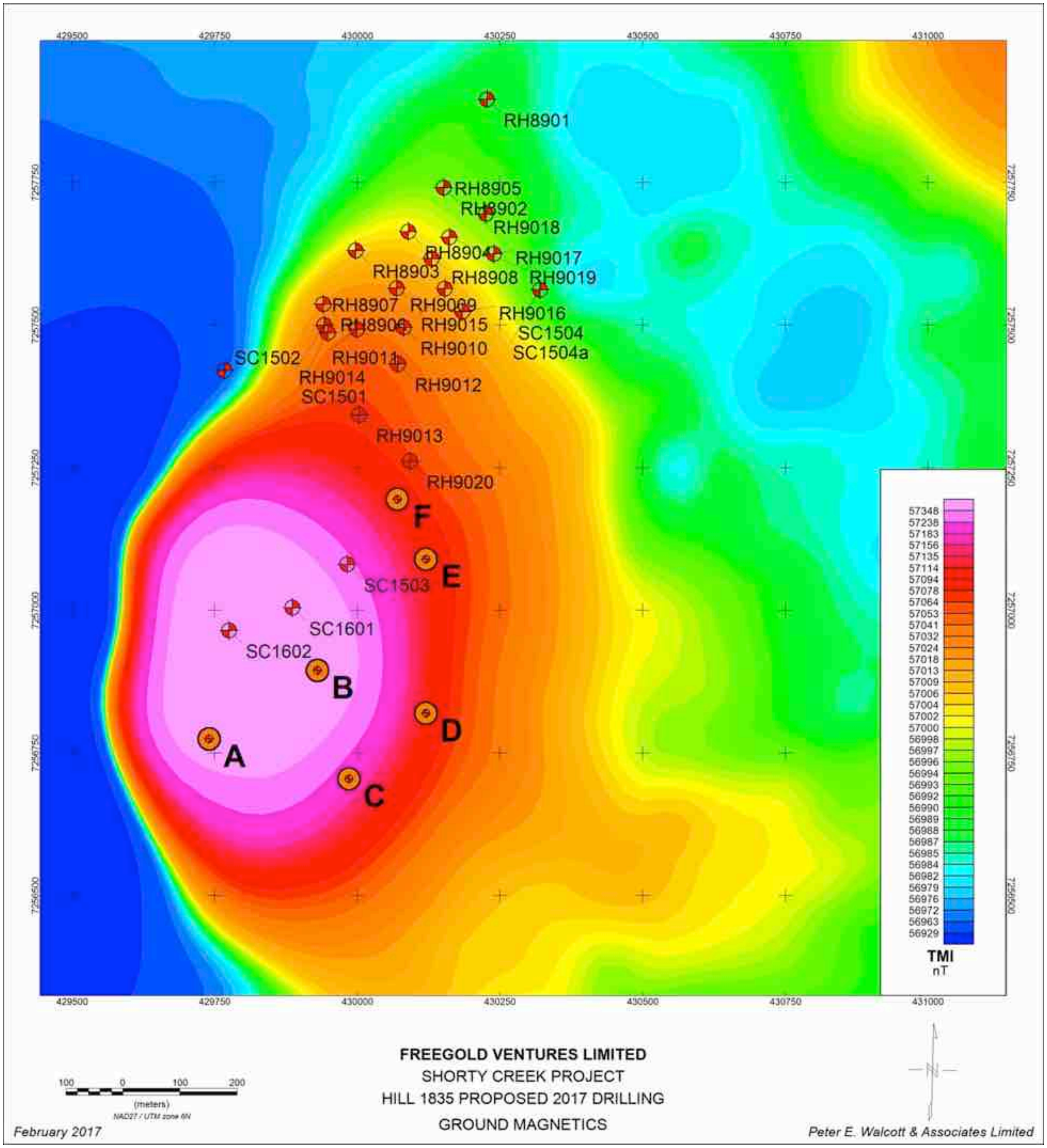


Figure 26.2 Map Showing Areas of Proposed Drilling on Hill 1835

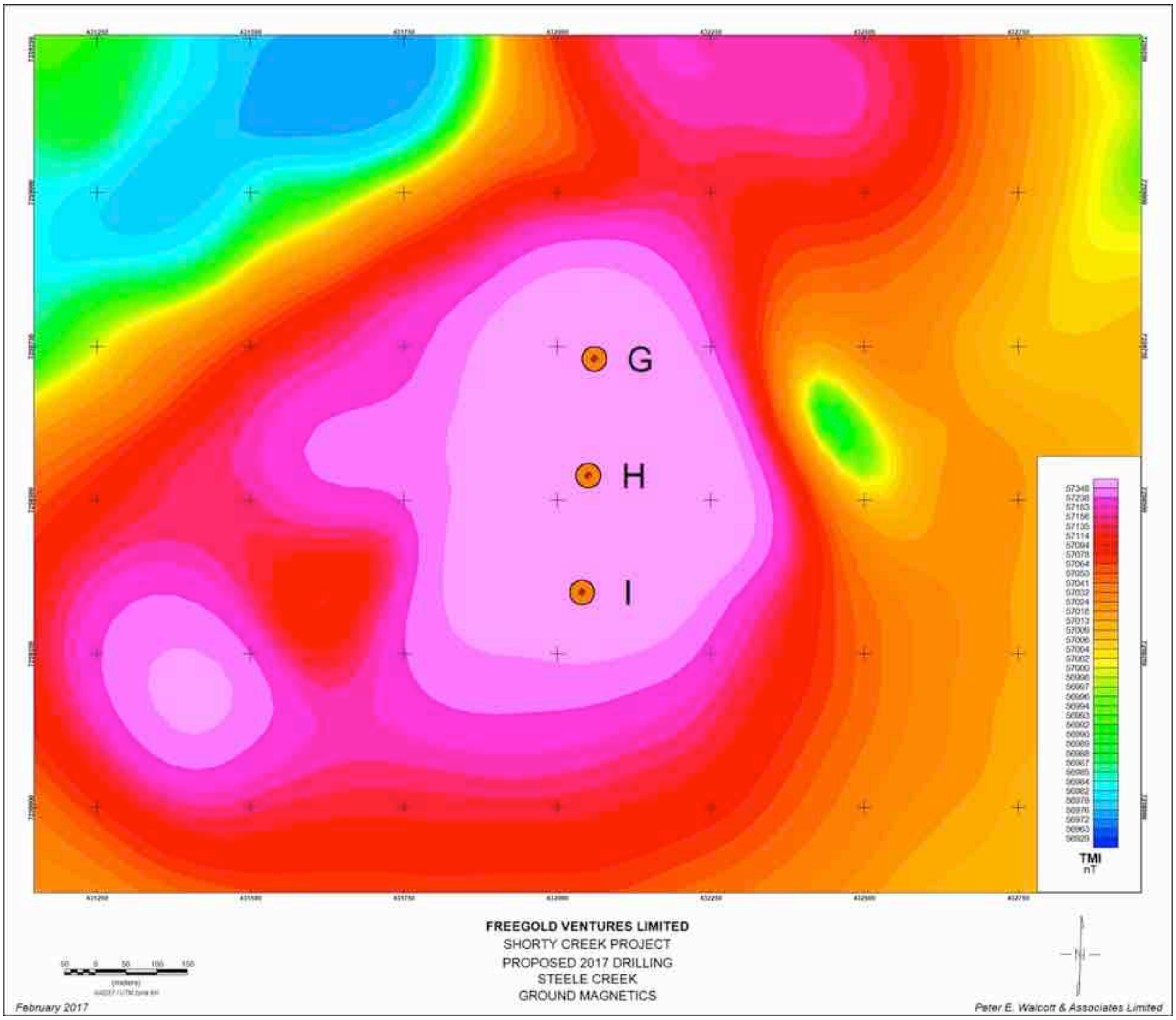


Figure 26.3 Map Showing Are as of Proposed Drilling on Steel Creek

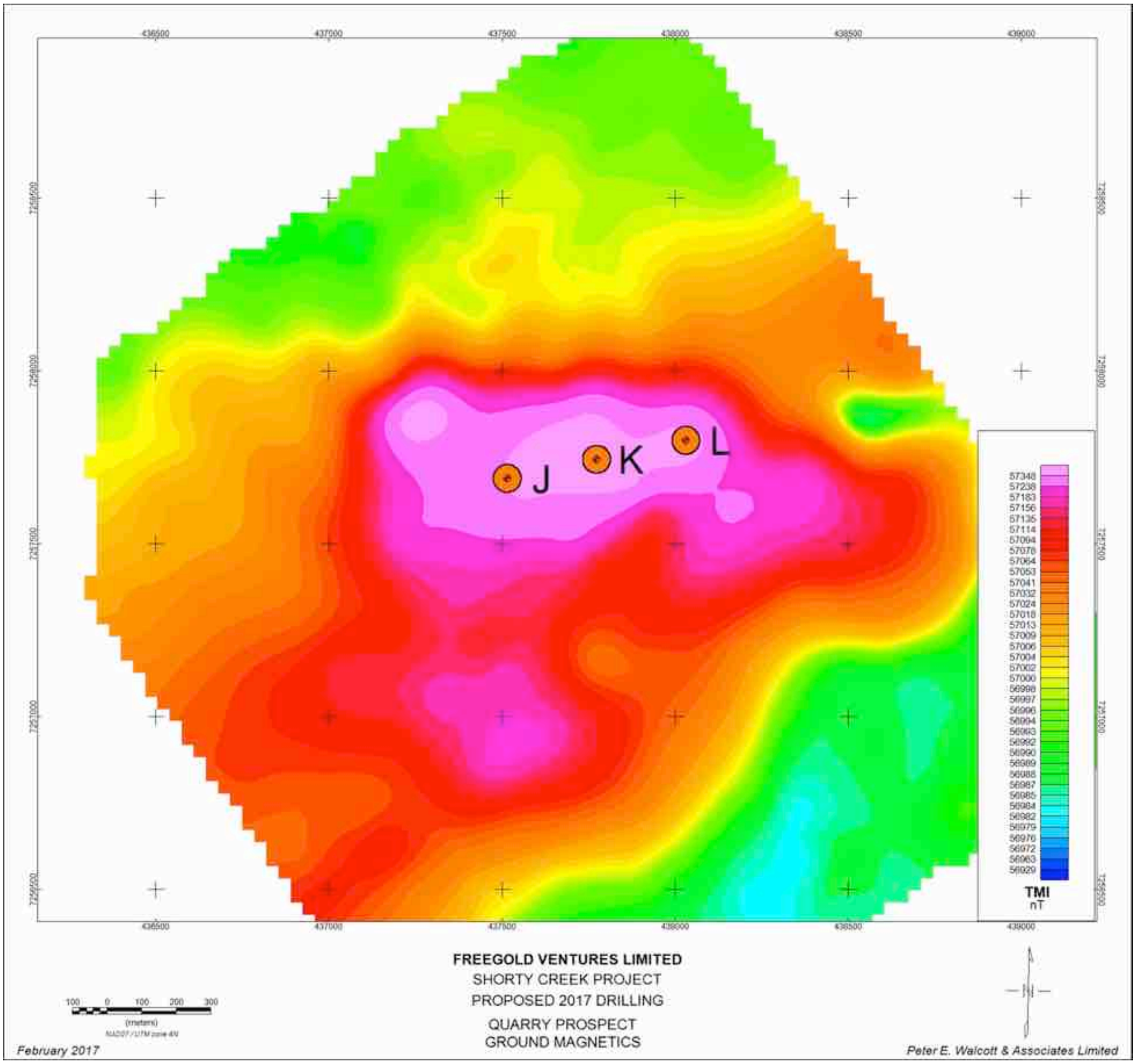


Figure 26.4 Map Showing Are as of Proposed Drilling on Quarry Target

27. DATE AND SIGNATURE PAGE

The effective date of the technical report “Updated Technical Report for the Shorty Creek Project, Livengood – Tolovana Mining District, Alaska ” issue date March 31, 2017 and Amended and Restated June 1, 2017

“John Woodman”

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John R. Woodman, C.P.G.

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CERTIFICATE OF QUALIFIED PERSON

John R. Woodman

I, John R. Woodman, , do hereby certify that:

1) I am a consulting geologist with an office 231 Bellevue Drive Port Townsend, Washington , USA.

2) I am a graduate of Western Washington University in 1980 with a B.S. degree; in Geology.

3) I am a member in good standing of the American Institute of Professional Geologists #11230.

4) I have practiced my profession continuously since 1980   I have 35 years of experience in all phases of mineral exploration and economic geology.

5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.

6) This report titled "Updated Technical Report for the Shorty Creek Project, Livengood – Tolovana Mining District, Alaska" dated March 31, 2017 and Amended and Restated June 1, 2017 is based on a study of the data and literature available on the Shorty Creek Property. In addition, I managed the recent drilling project on the property; working on the property from July 1st to October 14th, 2016

7) As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

8) I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

9) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 1 day of June, 2017

"John Woodman"

John R. Woodman, C.P.G