



Ministry of Energy and Mines  
BC Geological Survey

Assessment Report  
Title Page and Summary

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

TOTAL COST: 9096

AUTHOR(S): Derrick Strickland

SIGNATURE(S):

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

YEAR OF WORK: 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event 5582949

PROPERTY NAME: Fay Property

CLAIM NAME(S) (on which the work was done): Fae, Fae-2

COMMODITIES SOUGHT: Gold Copper

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: Fae 104K 014 Giver 104K 105 Norm 104K 034 Taker 104K 104

MINING DIVISION: Atlin

NTS/BCGS: 104K08

LATITUDE: 58 ° 17 ' 00 " LONGITUDE: 132 ° 02 ' 00 " (at centre of work)

OWNER(S):

1) Andrew Molnar

2) \_\_\_\_\_

MAILING ADDRESS:

1158-409 Granville Street Vancouver BC.

OPERATOR(S) [who paid for the work]:

1) \_\_\_\_\_

2) \_\_\_\_\_

MAILING ADDRESS:

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

Stikine Terrane, plagioclase phyrlic and equigranular monzonite exhibit heterogeneous alteration ranging from weak quartz-pyrite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 23,621 29395 07242 17891 3842

12775

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping			
Photo interpretation			
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil			
Silt			
Rock 7 31 element ICP		1033680, 1033701	9096
Other			
<b>DRILLING (total metres; number of holes, size)</b>			
Core			
Non-core			
<b>RELATED TECHNICAL</b>			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		<b>TOTAL COST:</b>	9096

**BC Geological Survey  
Assessment Report  
35998**

**Assessment Report  
On the  
Fae Property  
British Columbia**

**104K/08  
58° 17' North Latitude  
132° 02' West Longitude**

**For  
Rio Minerals Ltd  
1158-409 Granville Street  
Vancouver**

**Prepared By  
Derrick Strickland, P.Geo.**

**March 16, 2016**

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## 1 Summary

The Fae property had an exploration program was undertaken on June 30, 2015 and consisted of the collection of 7 rock samples.

The Fae Property claim consists of two non-surveyed contiguous mineral claims totalling 374.255 hectares located on NTS maps 104K08 centered at Latitude 58° 17' Longitude 132° 02'. The claims are located in northwestern B.C. about 90 kilometres northwest of Telegraph Creek and 120 kilometres west of Dease Lake.

The Fae Property is located within northern Stikine Terrane, which comprises a series of mid-Paleozoic to Middle Jurassic volcano-plutonic arc sequences west of oceanic rocks of the Cache Creek Terrane. Paleozoic basement rocks are informally known as the Stikine Assemblage. A prominent undated limestone unit cores a series of structural culminations in the Samatua area and appears to be conformably overlain by a thick sequence of polydeformed metavolcanic rocks; on this basis the limestone was interpreted as Carboniferous by Bradford and Brown (1993). However, thrust faults are well documented in the Tatsamenie Lake area, where dated Upper Carboniferous felsic volcanics structurally overlie Permian volcanics (Bradford and Brown, 1993).

The Fae Property covers a complexly folded and faulted sequence of Paleozoic metasedimentary and metavolcanic rocks that are intruded by a small felsic stock of possible late Cretaceous or Tertiary age. The stock underlies a poorly exposed area on the north flank of a prominent northeast trending ridge that bisects the Property.

Numerous companies have explored the area sporadically since 1959, when Kennco Exploration prospectors located molybdenite showings at the Fae prospect in the northern part of the property (Ney, 1963). Subsequently in the early 1960's Kennco carried out a program of mapping and soil sampling on the porphyry target. In the early 1970's, Skyline Explorations conducted mapping and soil sampling in peripheral areas around the Fae prospect. With the discovery of the Golden Bear gold deposit in the mid-1980's, the Tatsamenie Lake area attracted renewed exploration interest for gold exploration. Chevron investigated the prominent iron carbonate alteration on Vermillion Ridge located south of the Fae porphyry in 1984. Tahlitan Holdings carried out more detailed work in this area in 1987, and in 2007 and 2011 Paget Resources Corporation/Paget Minerals Corp completed exploration and drilling programmes. Exploration in the area of the Fae Property is documented in assessment reports available on the B.C. Ministry of Mines website.

In order to continue to evaluate the economic potential of the Fae Property, a program of property mapping, trenching, and ground geophysics is warranted. The expected cost of the programme is \$88,550 CDN.

## 1.1 Units and Measurements

**Table 1: Definitions, Abbreviations, and Conversions**

Units of Measure	Abbreviation	Units of Measure	Abbreviation
Above mean sea level	amsl	Micrometre (micron)	µm
Annum (year)	a	Miles per hour	mph
Billion years ago	Ga	Milligram	mg
Centimetre	cm	Milligrams per litre	mg/L
Cubic centimetre	cm <sup>3</sup>	Millilitre	mL
Cubic metre	m <sup>3</sup>	Millimetre	mm
Day	d	Million	M
Days per week	d/wk	Million tonnes	Mt
Days per year (annum)	d/a	Minute (plane angle)	'
Dead weight tonnes	DWT	Minute (time)	min
Degree	°	Month	mo
Degrees Celsius	°C	Ounce	oz.
Degrees Fahrenheit	°F	Parts per billion	ppb
Diameter	∅	Parts per million	ppm
Gram	g	Percent	%
Grams per litre	g/L	Pound(s)	lb.
Grams per tonne	g/t	Power factor	pF
Greater than	>	Specific gravity	SG
Hectare (10,000 m <sup>2</sup> )	ha	Square centimetre	cm <sup>2</sup>
Gram	g	Square inch	in <sup>2</sup>
Grams per litre	g/L	Square kilometre	km <sup>2</sup>
Grams per tonne	g/t	Square metre	m <sup>2</sup>
Greater than	>	Thousand tonnes	kt
Kilo (thousand)	k	Tonne (1,000kg)	t
Kilogram	kg	Tonnes per day	t/d
Kilograms per cubic metre	kg/m <sup>3</sup>	Tonnes per hour	t/h
Kilograms per hour	kg/h	Tonnes per year	t/a
Kilometre	km	Total dissolved solids	TDS
Kilometres per hour	km/h	Total suspended solids	TSS
Less than	<	Week	wk
Litre	L	Weight/weight	w/w
Litres per minute	L/m	Wet metric tonne	wmt
Metre	m	Yard	yd.
Metres above sea level	masl	Year (annum)	a
Metres per minute	m/min	Year	yr.
Metres per second	m/s		
Metric ton (tonne)	t		

## 2 PROPERTY DESCRIPTION AND LOCATION

The Fae Property claim consists of two non-surveyed contiguous mineral claims (11033680, 10337017) totalling 374.255 hectares located on NTS map 104K08 centered at Latitude 58° 17' Longitude 132° 02'. The claims are located within the Atlin Mining Division. The Mineral claims are shown in Figures 1 and 2, and the claim details are illustrated in the following table:

**Table 2: Property Claim Information**

Title Number	Name	Area (ha)	Issue Date	Good to
1033680	Fae	340.24	Jan 26. 2015	Jan 01. 2019
1033701	Fae 2	34.01	Jan 26. 2015	Jan 01. 2019

Mineral Titles online indicates that Andrew Molnar is the current registered owner of Fae claims (no. 11033680, 1033701).

## 3 ACCESSIBILITY, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE

The Fae Property is located in northwestern B.C. about 90 kilometres northwest of Telegraph Creek and 120 kilometres west of Dease Lake (Figure 1). The property is located in NTS 104K08, latitude 58° 17'N, longitude 132° 02'W.

Air access by fixed wing aircraft is available to three gravel landing strips in the area. The Sheslay River strip allows up to DC-3 sized planes; The Muddy (Bearskin) Lake strip handles airplanes up to Caribou size; and a third strip located at the western end of Tatsamenie Lake allows airplanes the size of a Cessna 206 to land. Access to Tatsamenie or Little Tats Lake is available by floatplane from June until late October and by plane on skis during winter months except during freezing and break up periods. Helicopters must be used to travel from the lakes or strips to the Property. Exploration can be carried out from a camp on the north shore of Little Tats Lake.

The claims are situated on the lee side of the Coast Range Mountains, 80 kilometres east of the Pacific Coast. The region has a relatively dry climate; snow cover in winter is moderate; snow, rain and windstorms are common all year round.

The Property covers a semi-rugged to sub-alpine terrain. Elevations range from 760 metres to 1,650 metres. Some slopes are fairly steep, but most may be traversed with care. Vegetation is sparse; tree line is at an elevation of approximately 1,000 metres above which alpine tundra covers the property; shrubs and trees are restricted to valley bottoms. Engelmann spruce, alpine fir, lodge pole pine, white spruce and white bark pine trees characterize the vegetation. Water and timber resources for exploration and development purposes are available in valleys of creeks flowing north-westerly into the Samotua River. Several tributaries to these main creeks carry sufficient drilling water during most of the year.

The town of Dease Lake, located to the west of the property serves as the general service and supplier for the region. The nearest major centres are Whitehorse, Yukon,



which is located approximately 560 km to the north, and Smithers, B.C. which is located approximately 720 km south.

#### **4 HISTORY**

Numerous companies have explored the Tatsamenie Lake area since 1959, when Kennco Explorations prospectors located molybdenite showings at the Samatua (Fae) prospect in the northern part of the property (Ney, 1963). Exploration in the area of the Fae Property is documented in assessment reports available on the B.C. Ministry of Mines ARIS website (<http://www.em.gov.bc.ca/cf/aris>). Subsequently in the early 1960's Kennco carried out a program of mapping and soil sampling on the Fae porphyry target. In the early 1970's Skyline Explorations conducted mapping and soil sampling in peripheral areas around the Fae prospect. With the discovery of the Golden Bear gold deposit in the mid-1980's the Tatsamenie Lake area attracted renewed exploration interest for gold exploration. Chevron investigated the prominent iron carbonate alteration on Vermillion Ridge, located south of the Fae porphyry in 1984. Tahltan Holdings carried out more detailed work in this area in 1987. In 2007 and 2011 by Paget Resources Corporation/Paget Minerals Corp undertook an exploration and drilling program. see Figure 3 for historical claim outlines the section below.

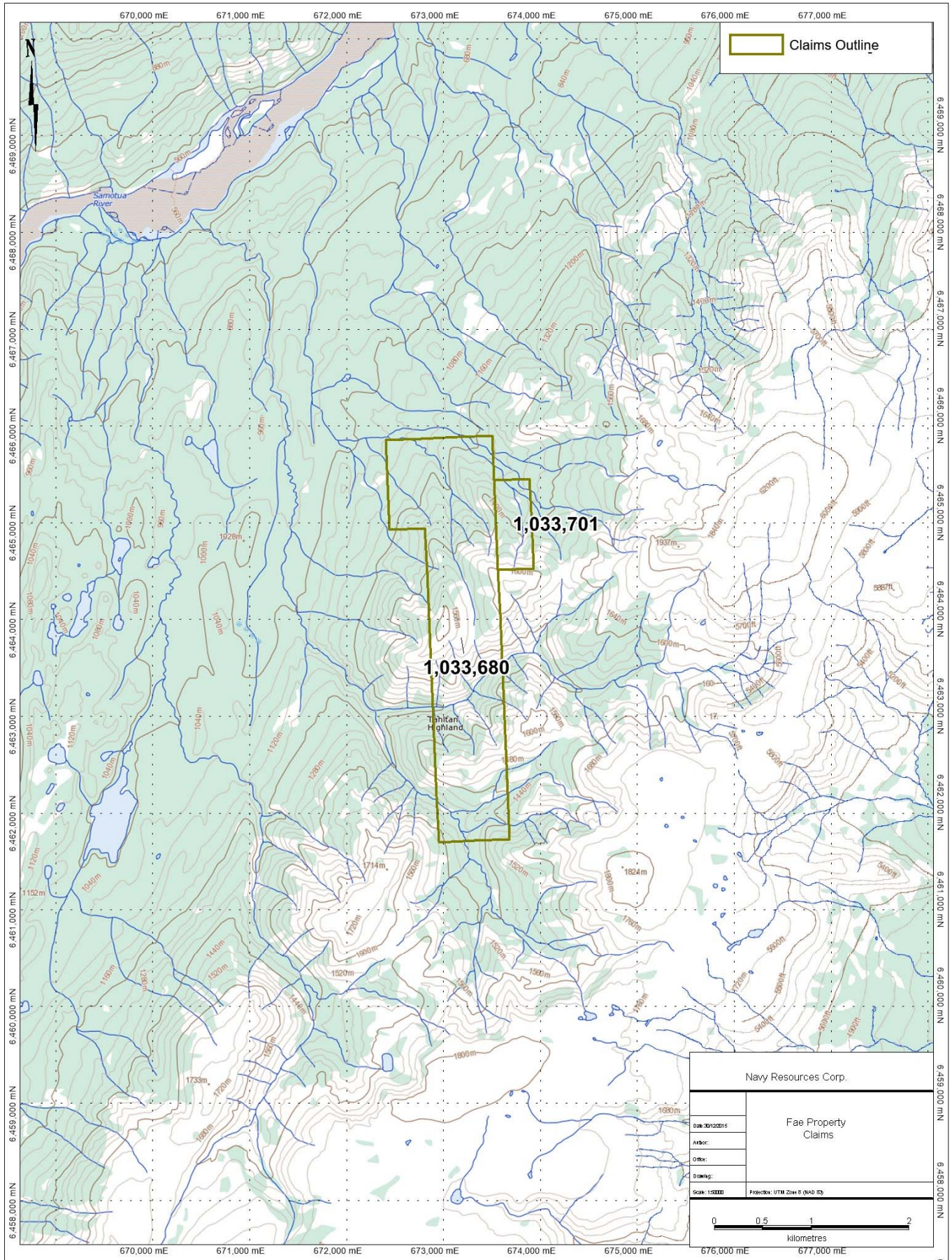


Figure 1: Regional Location Map





Figure 2: Property Claim Map



## **5 Kennco Explorations Western Ltd.**

The Property was geologically mapped and geochemically sampled from July-August 1962. The mapping was done at a scale of 1:1,000 and covered an area larger than the current property configuration. Contour soil sampling was undertaken at 30 metre intervals. Approximately 230 soils samples were collected and analyzed for Copper and molybdenum. Molybdenum ranges from 0 to 477 ppm and copper values range from 10 to 1,404 ppm (Charles 1963).

### **5.1 Skyline Exploration Ltd.**

**1970**

The Property was geologically mapped and geochemically sampled in August 1970. Twenty stream silt and 82 soil samples were collected and analyzed for copper, molybdenum, lead, and zinc. Molybdenum ranged from 0 to 200 ppm, copper ranged from below background to the highest value of 575 ppm, zinc ranged from 54 to 295 ppm, and lead ranging from 14 to 133 ppm (Gutrath 1971).

**1972**

The Property was geologically mapped, geochemically sampled, and line cutting was performed from July - August 1972. A total of 9.6 line kilometres (6 miles) of line were cut and a total of 224 soil samples were collected. Seven samples returned anomalous values above 80 ppm copper (Sevensma 1972).

### **5.2 Kennco Explorations Western Ltd.**

In 1976, Kennco Explorations Western Ltd. collected 15 rock chip channel samples, 7 silts, and 24 soil samples. The contour soil samples returned elevated molybdenum, copper, and silver from the southwestern end of the Property.

### **5.3 Chevron Canada Limited**

**1983**

In the summer of 1983, Chevron Canada Limited collected 16 rock and 192 soil and silt samples. Five of the soil samples gave anomalous gold values of 2,200 ppb, 230 ppb, 275 ppb, 275 ppb, and 135 ppb respectively (Thicke 1983).

**1984**

In the summer of 1984, Chevron Canada Limited undertook a geological mapping and soil sampling programme. A total of 215 soil samples and 21 rock samples were collected. Two of grab rock samples returned elevated gold values of 2,700 and 730 ppb (Walton 1984).

### **5.4 Tahltan Holdings Ltd.**

*After Freeze et al. 1988*

In 1987, Tahltan Holdings Ltd. undertook geological mapping, prospecting, rock chip and soil sampling. A total of 121 talus samples, 198 rock chip samples, and 5 stream sediment samples were collected.

In Porphyry Creek on the Fae claims, quartz stockwork within a clay alteration zone in the quartz feldspar porphyry returned up to 140 ppb gold and 7.25 oz. per ton silver over 2.9 metres.



In the siliceous zone on Fae Creek a silicified and dolomitized limestone with pyrite, chalcopyrite and haematite staining returned up to 300 ppb gold with 485 ppm copper across 0.2 metres. A carbonate altered chert breccia with fuchsite returned 340 ppb gold and 18.2 ppm silver (Freeze et al. 1988).

Above this zone a 0.15 m wide galena and tetrahedrite bearing quartz vein in an iron carbonate alteration zone returned 6,900 ppb gold, 10.35 oz. per ton silver, 2,095 ppm copper, 2,912 ppm zone, 257 ppm antimony, 1,399 ppb mercury and 865 ppm arsenic.

On the north slope of Tag Creek, a quartz vein and a black carbonate vein within a quartz-carbonate stockwork zone returned 0.55 oz. gold per ton and 2,650 ppb (0.77 oz. per ton) gold over 0.15 metres and 0.10 metres, respectively. In Tag Creek below the latter zone, a gouge zone within sheared tuffs, returned 2300 ppb (0.67 oz. per ton) gold over 1.5 m (Freeze et al. 1988).

Talus samples across the iron carbonate alteration average 40 ppb gold and often exceed 100 ppb gold. At the north end of Vermillion Ridge a fuchsitic quartz-carbonate stockwork zone with disseminated pyrite and arsenopyrite returned 1,440 ppb gold, 7.8 ppm silver, 305 ppm lead, and 488 ppm arsenic. Below this to the east a pyritic silicified limestone pod returned up to 0.019 oz gold per ton, 0.13 oz. silver per ton and 3,634 ppm arsenic. A total of 121 talus samples were collected (Freeze et al. 1988)

## 5.5 Paget Resources Corporation/Paget Minerals Corp.

### 2007

In 2007, Paget Resources Corporation collected 32 rock grab samples, 45 soil samples, and 5 silt samples. Strong Cu (17,403 ppm) and As (1,232 ppm) values were returned in sample 147256, in conjunction with the presence of veinlets of black sulphides, and suggests that enargite may be present. Enargite is a characteristic mineral of high sulphidation systems which have undergone advanced argillic alteration as well as with porphyry systems with late stage advanced argillic alteration (Bradford 2007).

Limited sampling of iron carbonate and silica altered rock exposed at lower elevations in the creek east of Vermillion Ridge failed to return anomalous values in base and precious metals and indicator elements (samples 147263-147265). A variety of quartz veins were also sampled in this area; two returned anomalous gold, with a single banded quartz sulphide vein returning significant gold and silver assays (Table 3) (Bradford 2007).

**Table 3: Quartz Veins Vermillion Ridge Area**

Sample	Au g/t	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Mo ppm
147267	17.78	120.9	12261	564	1189	93	2716	9
147268	0.11	1.2	279	-2	25	-5	6	4

## 2011

In 2011 Paget Minerals Corp. collared a single, 477.62 metre diamond drill hole. Below is a description of the lithology, mineralization, and alteration of the drill hole as described by Volkert (2011).

The first 19 meters of the hole was not recovered from the drilling. From 19 meters to 80 meters, lithology is feldspar porphyry with all of the feldspar being altered to sericite and then an argillic overprinting. The rock contains a stockwork of quartz veins, sometimes over 100 meters. At 80 meters, a breccia pipe is encountered. The clasts within the breccia are mainly feldspar porphyry and a sedimentary unit that has been labeled as a siltstone. From 82-100 meters, the breccia was matrix supported with angular clasts. The matrix was dark in colour and contained quartz and pyrite. After the breccia pipe, the main rock unit that is encountered for the rest of the hole was a feldspar porphyry and siltstone breccia that alternated from being feldspar porphyry dominated to siltstone dominated. Sections of feldspar porphyry were mainly not brecciated from 230-335 meters, although small 5-10 meter sections were slightly brecciated with some siltstone clasts mixed in.

The main mineralization that occurred within the hole was pyrite and molybdenite. Pyrite was typically seen associated with quartz veins that were cross-cutting non mineralized veins. In the brecciated sections, abundant cubic pyrite was contained in the matrix. Pyrite was seen relatively consistently throughout the hole. Molybdenite was also observed throughout the hole and was typically occurring on the edges of pyrite mineralized quartz veins and coating fractures. These molybdenite coated fractures were not very observable in the fresh core, but became more apparent as the core was split and these molybdenite covered fractures were exposed. The only time that mineralization dropped off was in the matrix supported breccia pipe, where there was very little moly and only a trace of fine, disseminated pyrite within the matrix.

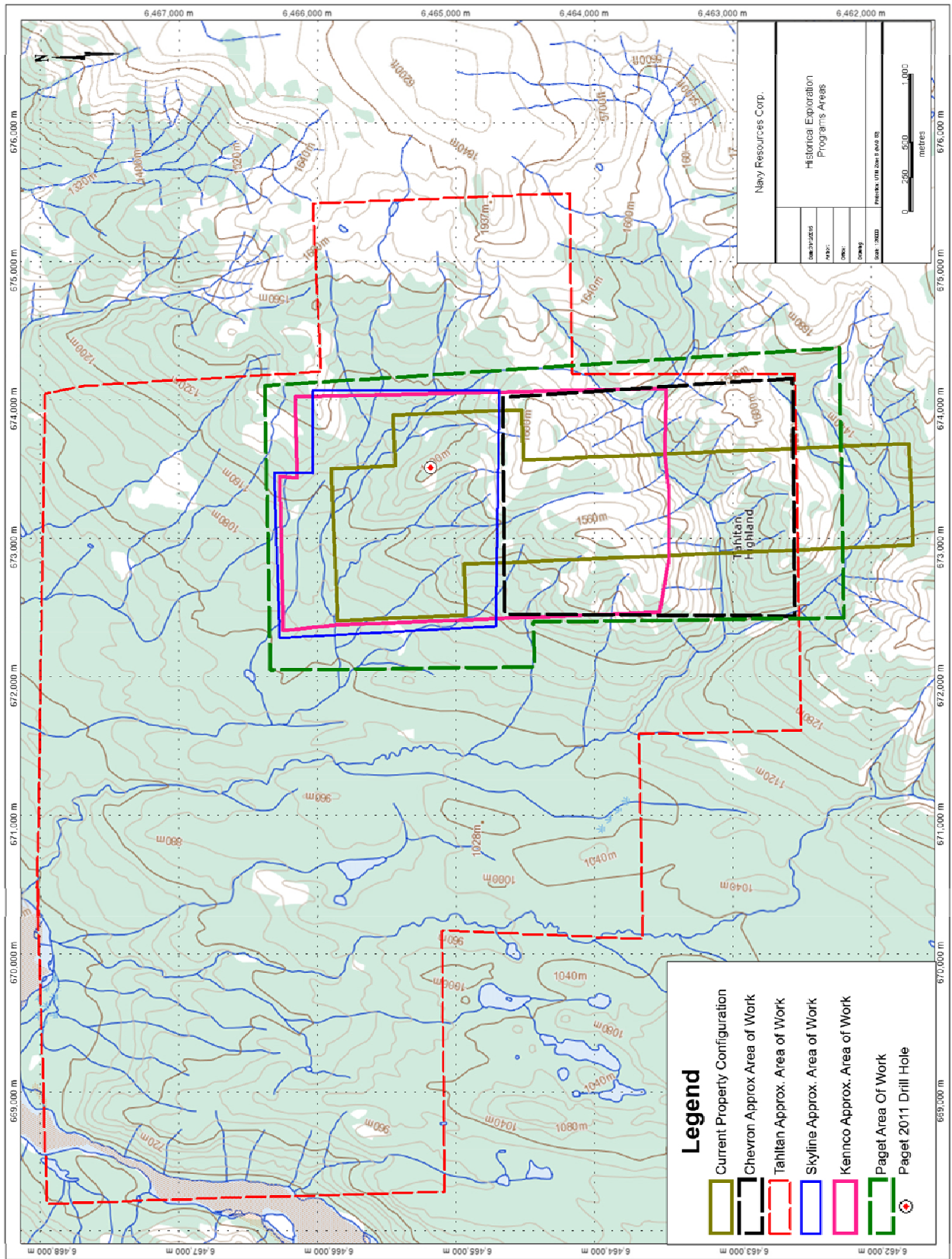
There were two main types of alteration observed. The initial alteration took place as sericite replaced the feldspars throughout the hole. Virtually all of the initial feldspar was replaced with sericite and some of the feldspathic groundmass material had also been altered to sericite. This alteration was then overprinted by a silicic system that resulted in the quartz stockworks and the fracture breccias. There has been minor argillic overprinting of the entire hole as well. Two small sections of minor k-spar alteration was observed from 226-238 meters and 276-285 meters that appeared to be associated with quartz veins hosted in the feldspar porphyry/siltstone breccia.

Table 4 illustrates notable drill intercepts from the 2011 drill program.

**Table 4: 2011 Drill Hole Intercepts**

Drill Hole	From (m)	To (m)	Interval (m)	Cu (%)	Mo (%)	Au (ppm)
PF-11-01	11.8	477.6	465.8	0.0307	0.0132	0.0475
<i>including</i>	186	190	4.0	0.1972	0.0123	0.0450
	307	311	4.0	0.1672	0.0288	0.0500
	429	452.2	23.2	0.0325	0.0130	0.2809

Figure 3: Historical Work Map



## 6 GEOLOGICAL SETTING AND MINERALIZATION

### 6.1 Regional Geology

*After Volkert 2011*

The Fae Property is located within northern Stikine Terrane, which comprises a series of mid-Paleozoic to Middle Jurassic volcano-plutonic arc sequences west of oceanic rocks of the Cache Creek Terrane. Paleozoic basement rocks are informally known as Stikine Assemblage. A prominent undated limestone unit cores a series of structural culminations in the Samatua area and appears to be conformably overlain by a thick sequence of polydeformed metavolcanic rocks; on this basis the limestone was interpreted as Carboniferous by Bradford and Brown (1993). However, thrust faults are well documented in the Tatsamenie Lake area, where dated Upper Carboniferous felsic volcanics structurally overlie Permian volcanics (Bradford and Brown, 1993).

The Paleozoic supracrustal rocks are intruded by voluminous diorite to quartz diorite plutons of Middle to Late Triassic age. These plutons have a widely developed structural fabric not found in more felsic Jurassic to Eocene intrusive rocks. On the Fae Property, a small post-tectonic quartz monzonite (quartz-feldspar porphyry) stock of presumed Late Cretaceous or Tertiary age intrudes Stikine Assemblage siliciclastic rocks, limestone and intermediate to mafic volcanics later potassium-rich volcanic suite.

### 6.2 Property Geology

*After Volkert 2011*

The Fae Property covers a complexly folded and faulted sequence of Paleozoic metasedimentary and metavolcanic rocks that are intruded by a small felsic stock of possible late Cretaceous or Tertiary age. The stock underlies a poorly exposed area on the north flank of a prominent northeast trending ridge that bisects the Property.

Paleozoic layered rocks comprise a mixed assemblage of submarine volcanic and sedimentary rocks. Sedimentary rocks include massive to thick bedded recrystallized buff coloured limestone and well bedded black chert and argillite. These rocks strike roughly east-west and dip moderately to the north. The limestone was interpreted as Carboniferous in age by Bradford and Brown (1993) because of the presence of a thick section of overlying deformed volcanic rocks. Volcanics overlying the sedimentary section at the Fae property include mottled green chlorite-altered basalt and aphanitic massive green andesites. Carbonate alteration is widespread in country rocks south of the intrusion, and recent calcrete cemented breccias are common in creeks draining north into the Samotua River.

The southern contact of the main intrusive body is obscured by overburden; however, the location of the contact coincides with an east-west oriented break in slope. Outcrops that occur close to the break in slope show evidence of east-west oriented faulting. While the faulting could be related to the emplacement of the intrusive body, similar east-west topographic linears crosscut the monzonite suggesting that faulting is post emplacement.



The monzonite body consists of at least two varieties, an equigranular variety and a quartz and plagioclase phyrlic (QFP) variety. Both varieties originally contained biotite although this mafic phase is destroyed in the majority of altered rocks. The distribution of the equigranular and plagioclase phyrlic bodies is not easily mapped due to limited outcrop; however, it appears that a QFP generally occupies a central position with equigranular quartz monzonite flanking it to the north and south. The strongest mineralization is associated with the lowest elevation exposures of the central QFP.

**Mineralization and Alteration Fae Porphyry:** Both the plagioclase phyrlic and equigranular monzonite exhibit heterogeneous alteration ranging from weak quartz-pyrite with relict unaltered biotite and feldspar crystals, to intense texturally destructive phyllic (sericite) to argillic (clay) and silicic alteration. The majority of outcrops show some degree of phyllic/argillic alteration with varying degrees of textural destruction. Silica alteration is also widespread and includes both sheeted and stockwork quartz veining and more massive replacement. In some outcrops over 50% of the rock volume is comprised of quartz veins.

Mineralization is most intense in rocks that have been affected by the strongest phyllic to argillic alteration. These rocks are typically strongly weathered except where affected by intense silica alteration. Phyllic alteration is locally accompanied by up to 5% disseminated and stockwork pyrite. Some of the alteration interpreted as clay dominated may reflect a supergene overprint from weathering of pyrite. Copper mineralization is ubiquitous in these rocks in the form of chalcopyrite and minor bornite. Veins of an unidentified black mineral locally accompany copper mineralization (neotocite? Or possibly enargite?); these were originally thought to be hematite veins. Large outcrops of phyllic-altered rocks are stained with malachite and azurite on approximately 20% of surfaces indicating a high overall Cu content. Patchy but locally intense quartz veining and replacement accompanies phyllic alteration; these rocks contain less visible copper mineralization, although rare malachite and azurite staining is present.

Molybdenite is widespread in trace amounts as fine disseminations and locally present as <1 mm wide veinlets and fracture-controlled mineralization. Even rocks with weak quartz-pyrite alteration have rare occurrences of molybdenite. In addition, country-rock along the margins of the intrusive body is also mineralized. On the northeastern margin of the monzonite, one of two outcrops that had been mapped by Kennco (Ney 1963) as containing molybdenite was re-located. This exposure consists of aphanitic green andesite with 1% quartz veins and associated pyrite veinlets. The quartz stringers have a fine coating of molybdenite along their margins. The rock also contained patchy trace disseminated molybdenite. On the northwestern margin of the porphyry, copper is associated with magnetite skarn within screens of andesitic metavolcanic rocks cut by hematized porphyry dykes. The massive magnetite skarn contains lenses of massive pyrrhotite-pyrite with minor chalcopyrite.

On the southern margin of the monzonite body chert beds are strongly deformed, locally brecciated and silicified with up to 5% disseminated and stringer pyrite.

Metavolcanic and sedimentary rocks underlie Vermillion Ridge in the southern portion of the Fae property, including limestone, of probable Paleozoic age. The ridge centered near UTM 674000 E, 6463000 N was designated Vermillion Ridge in previous

assessment reports (Freeze et al. 1988) for its brilliant orange-red gossan. These rocks exhibit widespread, variable to locally intense iron carbonate and silica alteration.

Prospecting along the main drainage on the east side of Vermillion Ridge revealed patchy silicification concentrated in particular carbonate beds, as well as along the margins of minor normal faults. Sulphides are generally in very low concentrations in these zones. North of this area, an array of discordant north-south striking banded quartz-sulphide veins up to 30 cm thick were identified in a tributary creek. The veins are variably mineralized with pyrite  $\pm$  stibnite  $\pm$  arsenopyrite  $\pm$  galena  $\pm$  sphalerite  $\pm$  chalcopyrite. More massive white quartz and quartz-carbonate veins with only trace amounts of sulphides are also widespread in this area

### **6.3 Mineralization**

*After Freeze et al. 1988*

The most distinct alteration feature on the Fae Property is a pervasive iron carbonate alteration zone that weathers to a bright orange colour and appears to be controlled by a northerly striking and westerly dipping structure. The alteration extends from the southwest end of Vermillion Ridge along the ridge to the north across Tag Creek and up Vermillion Tributary. A small iron carbonate alteration zone also occurs in Fae Creek. The Pre-Upper Triassic sediment-volcanic package is the most susceptible unit to this alteration. Quartz-carbonate stockwork often occurs within the pervasive alteration zone. Silicified limestones exposed within this zone may be fault controlled Permian limestone or the Pre-Upper Triassic limestone unit.

Above the headwaters to Vermillion Tributary, a bright red gossan occurs at the contact between felsic tuffs and overlying basalt flows. The gossanous material is weathered beyond recognition and no mineralization is visible. However anomalous silver, lead, and zinc values were obtained from this area.

Silicification is most prominent as a hornfels zone proximal to the intrusive bodies. In addition to the hornfels zones, a distinct east-west zone of cryptocrystalline quartz crosses Fae Creek just north of Chert Peak. The silicified zone comprises brecciated cherts and/or rhyolites healed by chalcedony and quartz, disseminated and massively banded or bedded pyrite, shear zones and complex folding which includes an overturned anti-form cored by limestone.

Porphyry style copper and molybdenum mineralization has been known to occur with the Sloko Group quartz-feldspar porphyry stock since the 1960's. Quartz stockwork in clay alteration zones within the quartz-feldspar porphyry also host silver and weak gold mineralization.

The siliceous zone crossing Fae Creek hosts gold and silver bearing pyrite in a carbonate altered cherty breccia with fuchsite as well as with chalcopyrite in a silicified limestone in an overturned anti-form.

Anomalous gold, silver, antimony, and arsenic values occur with blebs of galena, sphalerite, and chalcopyrite in iron carbonate altered tuffs in felsenmeer on Fae Ridge south of the east-west siliceous zone.

In the Tag Creek Area gold +/- silver bearing pyrite is found in: quartz veins with limonite staining; in iron carbonate altered tuffs with quartz lenses; and in graphitic shear zones.

Weak gold mineralization occurs in talus samples throughout much of the pervasive iron carbonate alteration zone.

On the northern end of Vermillion Ridge, within the iron carbonate alteration zone, gold bearing pyrite-arsenopyrite-galena occurs with weak silver mineralization in: a fuchsitic quartz-carbonate stockwork zone in schists and phyllites; in silicified limestone with sphalerite; and in malachite stained rubble.

#### **6.4 MINFILE Showings on the Property**

There are four reported MINFILE showings on the property, Fae, Giver, Norm, and the Taker. The location of these showings can be seen in Figure 4. Below are the MINFILE descriptions of each showing.

##### **Fae 104K 014**

The Fae showing (104K 014) is in quartz monzonite occurs as a stock measuring about 1.2 by 0.7 kilometres. It is equigranular, containing plagioclase, potassium feldspar, quartz and minor biotite. Hornfels and skarn are developed along the intrusive contact.

The stock contains areas of alteration (feldspars to clay), silicification and quartz veins. Pyrite, molybdenite, and chalcopyrite are associated with these areas. The minerals occur in fractures, veinlets and as disseminations in the intrusive rock and, to a lesser extent, in the hornfels.

Chip sampling of an area with the best molybdenum mineralization assayed 0.024 per cent molybdenite and 0.026 per cent copper over 24 metres. A 6 metre chip sample from this area assayed 0.033 per cent molybdenum, 0.030 per cent copper, 0.12 per cent lead, and 4.46 grams per tonne silver. A 6 metre chip sample, 200 metres to the northwest, assayed 0.005 per cent molybdenum, 0.022 per cent copper, 0.23 per cent lead and 39.4 grams per tonne silver (Stevenson 1976).

Anomalous gold, silver, antimony, and arsenic values occur with blebs of galena, sphalerite, and chalcopyrite in iron carbonate altered tuffs in felsensmeer on Fae Ridge south of the east-west siliceous zone.

##### **Giver 104K 105**

The Giver showing (104K 105) is made up of Tuffs, greenstones and phyllites, quartz-iron carbonate altered, and contain quartz veins and disseminated pyrite. A sample of tuff assayed 7.3 grams per tonne gold (Walton 1984).

In this area gold +/- silver bearing pyrite is found in: quartz veins with limonite staining; in iron carbonate altered tuffs with quartz lenses; and in graphitic shear zones.

On the northern end of Vermillion Ridge, within the iron carbonate alteration zone, gold bearing pyrite-arsenopyrite +/- galena occurs with weak silver mineralization in: a fuchsitic quartz-carbonate stockwork zone in schists and phyllites; in silicified limestone with sphalerite; and in malachite stained rubble.

#### **Norm 104K 034**

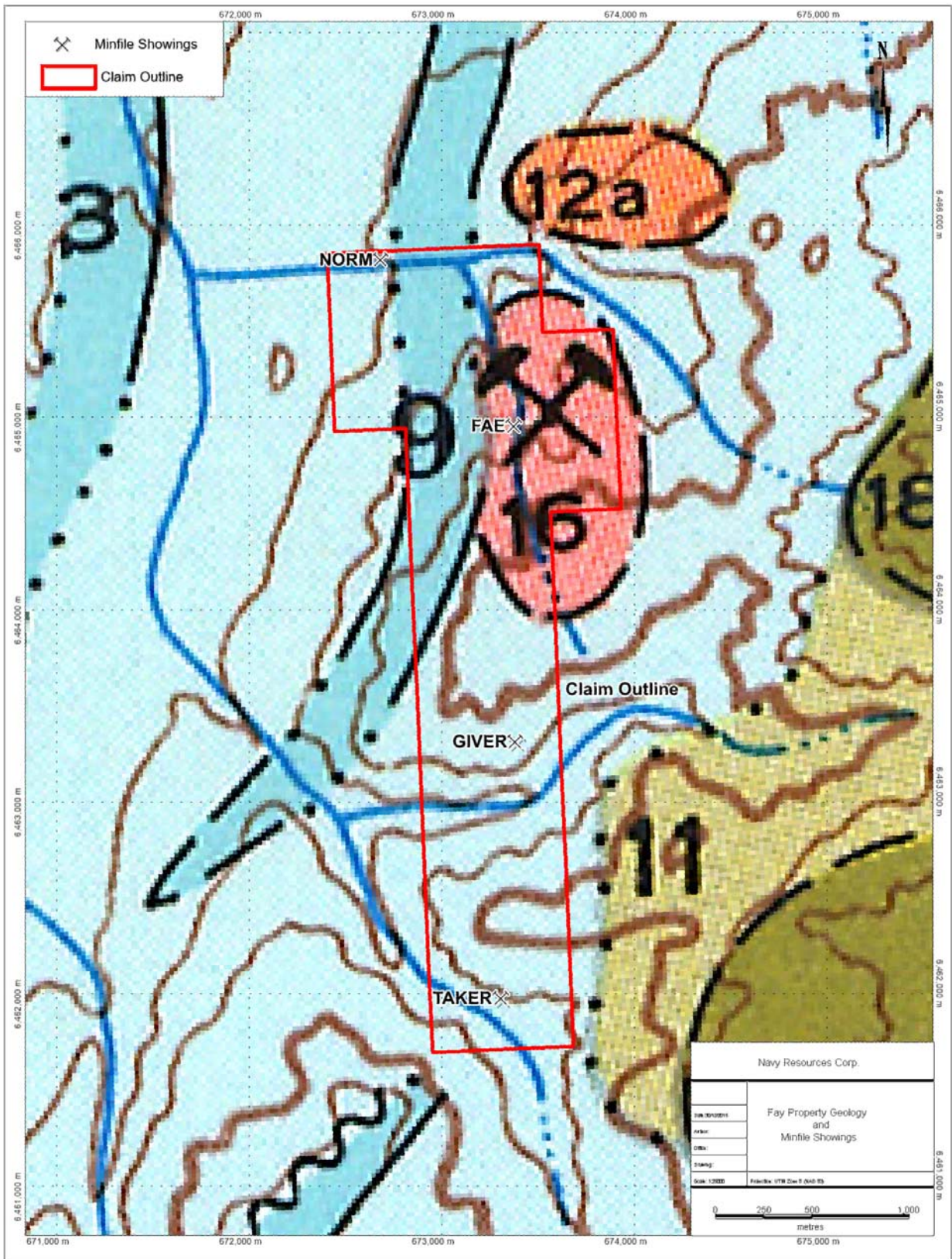
The Norm showing (104K 034) is made up of magnetite that occurs as three tabular masses, up to 3 metres wide and several metres long, associated with the quartz monzonite and limestone contact. The masses contain up to 50 percent pyrite and some chalcopyrite. Minor chalcopyrite and molybdenite occur in the hornfels.

#### **Taker 104K 104**

The Taker showing (104K 104) is made up of tuffs, greenstones and phyllites are quartz-iron carbonate altered, and contain quartz veins and disseminated pyrite. A sample of altered tuff, adjacent to limestone assayed 2.7 grams per tonne gold, over 1.0 per cent arsenic and 0.02 per cent antimony (Walton 1984).

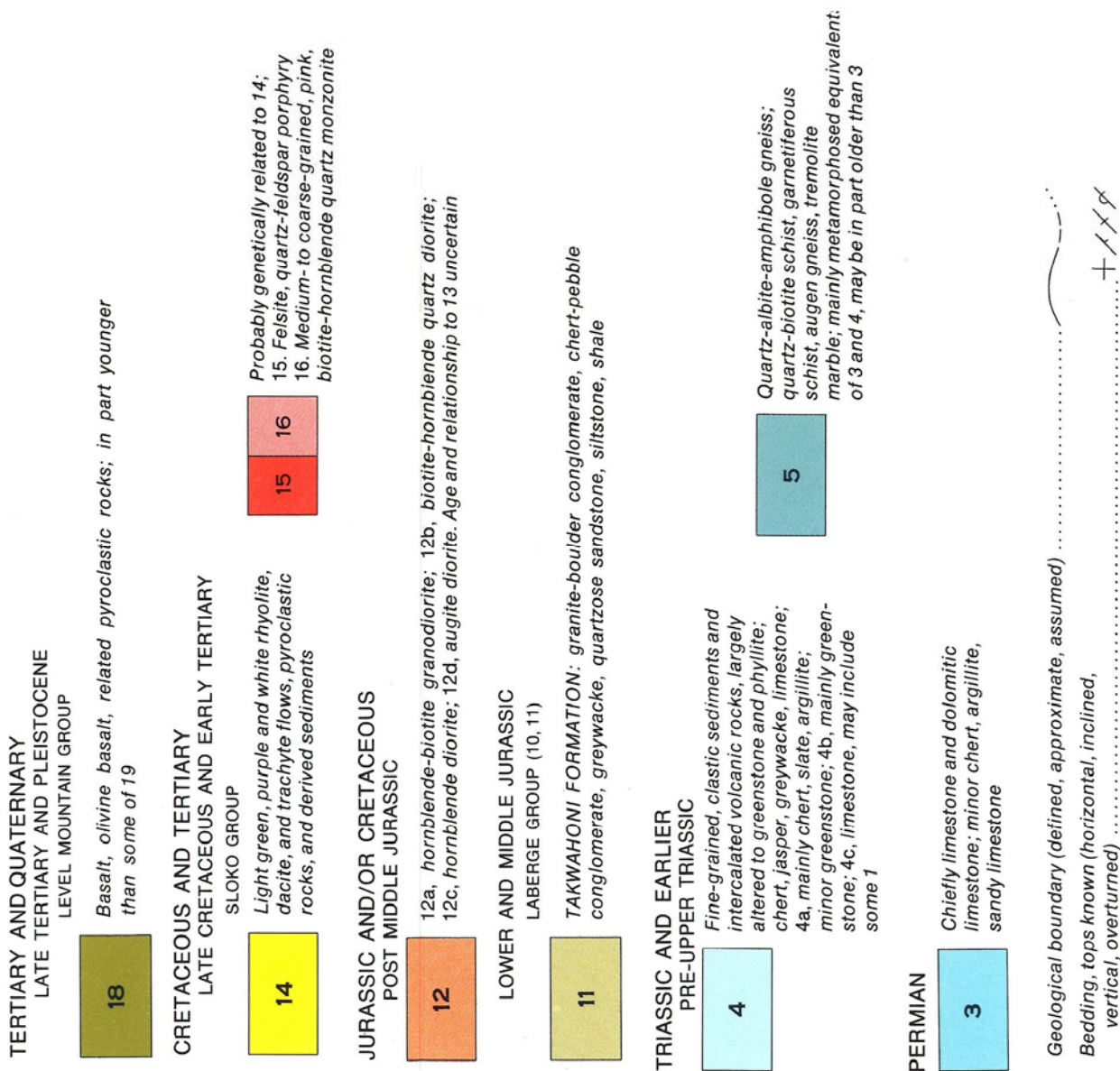


Figure 4: Fae Property Geology



Geology Map after Souther 1971

Figure 5: Fae Property Geology Legend



Modified after Souther 1971



## 7 DEPOSIT TYPES

Based in the historical exploration work and the identification of four mineral showings on the Fae Property there appears to be three potential deposit models to be explored for on the Property: epithermal gold, skarn, and porphyry.

### 7.1 Epithermal gold

An epithermal gold deposit is one in which the gold mineralization occurs within 1 to 2 km of surface and is deposited from hot fluids. The fluids are estimated to range in temperature from less than 100°C to about 300°C and, during the formation of a deposit, can appear at the surface as hot springs. The deposits are most often formed in areas of active volcanism around the margins of continents (Norcross 1997).

Epithermal gold mineralization can be formed from two types of chemically distinct fluids -- "low sulphidation" (LS) fluids, which are reduced and have a near-neutral pH (the measure of the concentration of hydrogen ions) and "high sulphidation" (HS) fluids, which are more oxidized and acidic. LS fluids are a mixture of rainwater that has percolated into the subsurface and magmatic water (derived from a molten rock source deeper in the earth) that has risen toward the surface. In both LS and HS models, fluids travel toward the surface via fractures in the rock, and mineralization often occurs within these conduits. LS fluids usually form large cavity-filling veins, or a series of finer veins, called stockworks, that host the gold. The hotter, more acidic HS fluids penetrate farther into the host rock, creating mineralization that may include veins but which is mostly scattered throughout the rock. LS deposits can also contain economic quantities of silver and minor amounts of lead, zinc, and copper, whereas HS systems often produce economic quantities of copper. Geochemical exploration for these deposits can result in different chemical anomalies, depending on the type of mineralization involved. LS systems tend to be higher in zinc and lead, and lower in copper, with a high silver-to-gold ratio. HS systems can be higher in arsenic and copper with a lower silver-to-gold ratio (Norcross 1997).

### 7.2 Skarn

Skarn deposits typically form at or near the contact between predominantly carbonate-rich rocks (limestone or dolomite) and an igneous intrusive body, or in carbonate veins along faults or fractures (Wilton 1999).

They form when hot magmatic fluids from the intrusion react with the host carbonate-rich rock, producing calcium, iron, manganese and magnesium silicates (also known as calc-silicates (Wilton 1999).

Skarns are classified as either calcic, if they formed in a limestone, or magnesian, if they formed in a dolomitic host rock. Silicate skarns form when intrusives come into contact with calcium-rich silicate rocks, such as amphibolite. Endoskarn is skarn that develops in the intrusive, whereas exoskarn develops in the surrounding carbonate-rich rocks. Endoskarn is igneous rock-hosted; exoskarn, sedimentary rock-hosted (Wilton 1999).



### 7.3 Porphyry Deposits

Porphyry deposits are low-grade, large-tonnage mineral deposits. These formations are called porphyries because they are associated with intrusive igneous rocks with large, well-formed mineral crystals (typically feldspars) set in a groundmass of finer-grained crystals (Wilton 1999).

Porphyry deposits can be subdivided into different types based on their metal content. These types include copper, copper-gold, copper-molybdenum, and molybdenum. In general, copper- and gold-rich porphyries are associated with intrusions derived from mafic magmas in settings such as island arcs. Molybdenum-rich deposits are associated with felsic intrusions derived from magmas with a substantial component of remelted continental crust (Wilton 1999).

Porphyry deposits are related both genetically and spatially to igneous intrusions. There are usually several bodies of intrusive rock, emplaced in multiple events, and porphyry copper deposits are often associated with dyke swarms and breccias. The country rock intruded by the porphyry can be of any lithological type.

Mineralization and alteration can develop in both the intrusive and country rock. The core of the mineralizing system demonstrates the most intense alteration - called potassic alteration because potassium is added to the affected rocks. In the potassic zone the minerals biotite, potassium feldspar, and quartz develop. The potassic zone grades outwards into the phyllic zone, which contains quartz and muscovite, usually in its fine-grained variety, called sericite. The phyllic zone then passes into the argillic zone, where quartz and clay minerals develop. The propylitic zone, containing chlorite, epidote, and carbonate, develops next, grading outwards into unaltered country rock. These zones do not all show up in every deposit: any one can be absent. The argillic zone, typically the smallest, is often entirely absent (Wilton 1999).

Usually, mineralization has a low-grade core containing disseminated pyrite that grades out into the ore zone. In the ore zone, pyrite with lesser chalcopyrite (copper ore) and molybdenite (molybdenum ore) are present in veins and disseminations. Sometimes an outermost zone containing only pyrite develops, and then passes into unmineralized country rock (Wilton 1999).

Porphyry deposits occur in a similar geological setting to epithermal-style gold deposits, and share many of the same characteristics and processes of formation. Some epithermal deposits are part of a larger porphyry-deposit system (Wilton 1999).

## 8 Exploration

Rio Minerals Ltd on June 30, 2015 and exploration crew of four used a helicopter from Dease lake to access the site. As a result, 7 rock samples were taken from the property. Expenditures can be seen in Appendix A. Assays sheets and maps are in Appendix B.

**Table 5: Collected Samples**

Sample No	NAD83E	Nad83N	Date	Field Descriptions
440501	673507	6465173	30 June 2015	Light brown on fresh surface, tr pyrite, highly silicified, minor vuggs, rock looks like possible multiple silica remobilization events, breccia in appearance, grab outcrop
440502	673512	6465171	30 June 2015	highly silicified with breccia fragments, cross-cutting qtz veins and 1% py. Sub-crop.
440503	673303	6464032	30 June 2015	Light brown on fresh surface, light green on fresh, possible rutile, silicified. Outcrop.
440504	673423	6464121	30 June 2015	banded qtz w/1% py. Minor vuggs w/minor qtz coatings. Py in blebs and bands. Outcrop grab.
440505	673461	6464154	30 June 2015	grab of qtz breccia with clay?
440506	673155	6463807	30 June 2015	Brown on fresh, gossan are, vuggs, mostly quartz, silica flooding, grab, outcrop
440507	673464	6464152	30 June 2015	dug, angular boulder of qtz breccia. Float. Grab

**Table 6: Select Collected Assays**

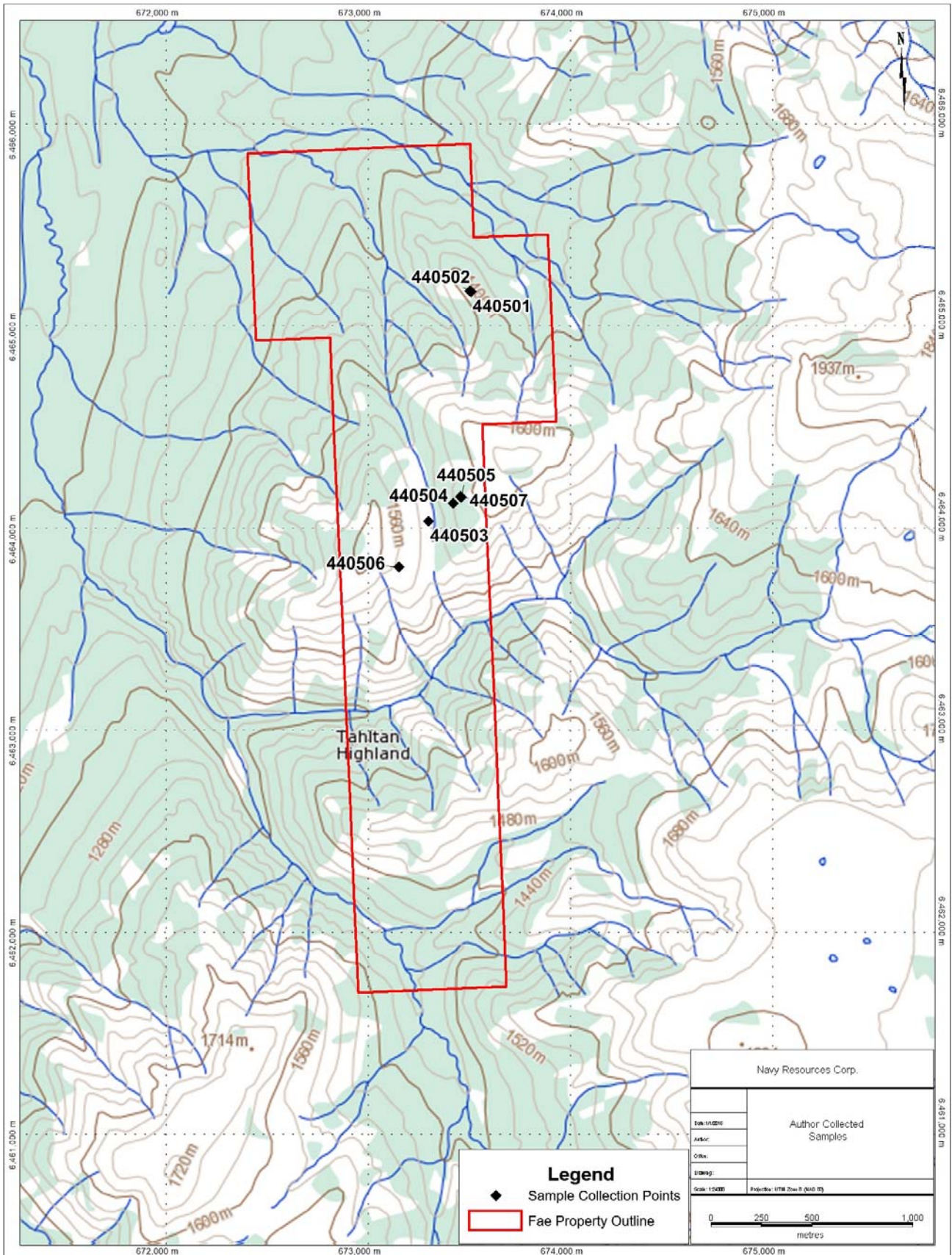
Sample	Mo ppm	Cu ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	Au PPB	Sr ppm	Cr ppm
440501	251.7	23.5	0.3	2.7	0.8	30	1.4	21	7.4	18	3
440502	14	20.9	0.5	0.3	0.2	21	0.77	11.4	6.5	12	2
440503	0.9	30.5	<0.1	141.2	40.1	1347	5.82	2.6	0.5	172	255
440504	0.4	3.5	<0.1	2	0.9	39	0.41	1.2	<0.5	6	4
440505	0.5	2.4	<0.1	3.3	2.2	170	0.61	2.3	2.1	7	3
440506	0.8	3.6	0.1	13.1	5.5	1351	1.85	16.7	5.9	24	4
440507	0.5	5.4	<0.1	7.3	4.7	326	1.1	2.7	<0.5	15	4

The rock samples collected during 2015 were placed in marked poly bags, sealed with zap straps, placed into marked rice bags, double sealed with zap straps, and shipped.

All the samples collected during 2015 exploration were sent to Bureau Veritas Commodities Canada Ltd. is an independent accredited laboratory located in Vancouver, BC. Canada.

Rock samples were crushed to -10 mesh followed by pulverizing a 250-gram split to -150 mesh (95%). A 30-gram cut of the -150-mesh material from each sample was taken. The rock samples were analyzed using AQ200 36 element 0.5 ICP ES/MS.

Figure 6: Collected Samples





## 9 INTERPRETATION AND CONCLUSIONS

The Fae Property claims consist of two non-surveyed contiguous mineral claims totalling 374.255 hectares located on NTS mapsheet 104K08 centered at Latitude 58° 17', Longitude 132° 02'. The claims located in north western B.C. about 90 kilometres northwest of Telegraph Creek and 120 kilometres west of Dease Lake.

In the Fae Property area, centrally located within the Stikine terrane, both porphyry style copper - molybdenum and structurally controlled precious metal mineralization has been found. Known mineralization in the area is hosted by an extensive northerly trending structure called the West Wall fault. North trending vertical fault structures between Permian limestone and Pre-Upper Triassic tuff control gold mineralization and associated quartz-carbonate alteration. Both the limestone and the tuff act as hosts to the ore. The gold is commonly associated with disseminations and fracture fillings of fine-grained pyrite, predominantly along fault contacts. Accessory minerals include pyrrhotite, arsenopyrite, tetrahedrite and minor galena, sphalerite, chalcopyrite, and tellurides.

Results of the first hole drilled on the Fae property (in 2011) confirms the presence of a porphyry system. Using an idealized porphyry model, the first drill hole likely drilled through the phyllic zone in a porphyry system with the propylitic cap having been eroded away. Further mapping to determine the location of the potassic core would be helpful in determining future drilling targets. The mineralization observed in this hole is associated with later stage quartz veining and infilling in fractures. If the source of these mineralized quartz veins can be determined, then the potential for an economic ore body increases.

The Fae Property also hosts several zones that host gold with or without silver, copper, lead zinc, antimony, arsenic, and mercury mineralization in structurally controlled quartz + carbonate veins and associated alteration zones fitting mesothermal and epithermal descriptions.

Gold ± silver with occasional chalcopyrite, galena, sphalerite, molybdenum, arsenopyrite, and mercury mineralization occurs in several zones on the Property. The sulphides occur in quartz ± carbonate vein structures and the surrounding stockwork and alteration halos in silicified limestone in shear zones in the siliceous breccias. These mineralized structures occur predominantly in the Permian limestone and Pre-Upper Triassic sediment-volcanic package.

The Vermillion Ridge iron carbonate alteration zone appears to be controlled by a major northerly striking and westerly dipping structure as evidenced by the outcrop pattern. Anomalous gold values occur in several veins and stockwork zones as well as in the talus covering much of this zone. The Fae Creek gold bearing siliceous zone appears to be controlled by an east-west structure. One of the 2007 samples (sample 147267) returned 17.78 ppm Au, 120.9 ppm Ag, and 1.23% Cu. No work was done on this part of the Property in 2011, therefore, further rock, soil and silt sampling would be recommended to confirm this.

In order to continue to evaluate the economic potential of the Fae Property, a program of property mapping, trenching, and ground geophysics is warranted. The expected cost of the programme is \$88,550 CDN.

## 10 RECOMMENDATIONS

The suggested work program includes compilation of all the historical geological, geophysical, and geochemical data available for the Fay Property, and rendering this data into a digital database in GIS formats for further interpretation. This work will include georeferencing historical survey grids, samples, trenches, geophysical survey locations, and detailed property geological maps.

The fieldwork component will include geophysical surveying, geological mapping, and trenching and sampling as warranted. The intent of this work would be to re-define the relationship of known skarn, epithermal, and Porphyry mineralization.

**Table 7: Proposed Budget**

Item	Unit	Rate	Number of Units	Total (\$)
Creation of GIS Database	Lump Sum	\$10,000	1	\$10,000
Geological mapping and Prospecting 2 person crew	days	\$750	15	\$11,250
Geophysical Survey	line-km	\$500	15	\$ 7,500
Geologist	days	\$500	15	\$ 7,500
Assaying rock samples	sample	\$25	150	\$ 3,750
Accommodation and Meals	days	\$170	60	\$10,200
Vehicle 1 truck	days	\$100	15	\$ 1,500
Helicopter use with fuel	Hour	\$1,150	20	\$23,000
Supplies and Rentals	Lump Sum	\$1,500	1	\$ 1,500
Reports	Lump Sum	\$5,000	1	\$ 5,000
		Subtotal		\$81,200
Contingency (10%)				\$ 7,350
<b>TOTAL (CANADIAN DOLLARS)</b>				<b>\$88,550</b>

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## 12 CERTIFICATE OF AUTHOR

I, Derrick Strickland, of 409 Granville Street, in the City of Vancouver in the Province of British Columbia do hereby certify that:

1. I am a Consulting Geologist working in Vancouver, British Columbia.
2. I hold a Bachelor of Science in Geology (1993).
3. I have been employed in the mineral exploration industry since 1987 and have practiced my profession since graduation.
4. The information for this report has been taken from government and old geological reports and work undertaken by author.
5. I am a member in good standing with Association of Professional Engineers, Geoscientist of British Columbia.
6. The assessment costs presented in this report are true and accurate to the best of my knowledge.

DATED at Vancouver, British Columbia, this 16<sup>th</sup> day of March 2016



Derrick Strickland, P.Geo.

# Appendix A

<b>Exploration Work type</b>	<b>Comment</b>	<b>Days</b>			<b>Totals</b>
<b>Personnel (Name)* / Position</b>	<b>Field Days</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	
Derrick Strickland Geologist	June 30, 2016	1	\$ 700	\$ 700	
Andrew Monlar Crew	June 30, 2016	1	\$ 500	\$ 500	
Aaron Wardwell Field Crew	June 30, 2016	1	\$ 450	\$ 450	
Lyle Gregory Field Crew	June 30, 2016	1	\$ 450	\$ 450	
				\$ 2,100	<b>\$2,100.00</b>
<b>Office Studies</b>	<b>List Personnel</b>				
Literature search	Derrick Strickland Geologist	0.5	\$ 700	\$ 350	
Reprocessing of data			\$ -	\$ -	
Report preparation	Derrick Strickland Geologist	2.5	\$ 700	\$ 1,750	
					<b>\$2,100.00</b>
<b>Geochemical Surveying</b>	<b>Number of Samples</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Rock Samples	7 Samples	7.0	\$ 28	\$ 196	
Other (specify)			\$ -	\$ -	<b>\$196.00</b>
<b>Transportation</b>		<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
truck rental		1.00	\$ 150	\$ 150	
Helicopter (hours)		3.20	\$ 1,155	\$ 3,695	
Fuel (litres/hour)			\$ -	\$ -	
Other					
				\$ 3,845	<b>\$3,845.04</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>				
Hotel		4.00	\$ 150	\$ 600	
Meals	Daily Rate of 50\$ per day	4.00	\$ 50	\$ 200	
				\$ 800	<b>\$800.00</b>
<b>Miscellaneous</b>					
Telephone	2 Satphones and Radios Rentals	1.00	\$ 55	\$ 55	
				\$ 55	<b>\$55.00</b>
<b>TOTAL Expenditures</b>					<b>\$9,096.04</b>

# Appendix B



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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

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

**Client:** **Strickland, Derrick**  
1107-1251 Cardero St.  
Vancouver BC V6G 2H9 CANADA

Submitted By: Derrick Strickland  
Receiving Lab: Canada-Vancouver  
Received: December 04, 2015  
Report Date: December 11, 2015  
Page: 1 of 2

# CERTIFICATE OF ANALYSIS

VAN15003248.1

## CLIENT JOB INFORMATION

Project: Fae 2015  
Shipment ID:  
P.O. Number  
Number of Samples: 7

## SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage  
DISP-RJT Dispose of Reject After 90 days

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

Invoice To: Strickland, Derrick  
1107-1251 Cardero St.  
Vancouver BC V6G 2H9  
CANADA

CC:

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
BAT01	1	Batch charge of <20 samples			VAN
PRP70-250	7	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ200	7	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

## ADDITIONAL COMMENTS



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



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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**Client:** **Strickland, Derrick**  
1107-1251 Cardero St.  
Vancouver BC V6G 2H9 CANADA

**Project:** Fae 2015  
**Report Date:** December 11, 2015

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# CERTIFICATE OF ANALYSIS

**VAN15003248.1**

Method	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
440501	Rock	1.21	251.7	23.5	15.3	28	0.3	2.7	0.8	30	1.40	21.0	7.4	4.4	18	0.1	1.0	2.3	8	0.01	0.022
440502	Rock	2.52	14.0	20.9	13.0	8	0.5	0.3	0.2	21	0.77	11.4	6.5	3.1	12	<0.1	1.3	1.7	3	<0.01	0.014
440503	Rock	3.99	0.9	30.5	1.8	64	<0.1	141.2	40.1	1347	5.82	2.6	0.5	0.7	172	<0.1	0.1	<0.1	120	7.85	0.119
440504	Rock	1.63	0.4	3.5	0.4	2	<0.1	2.0	0.9	39	0.41	1.2	<0.5	<0.1	6	<0.1	0.3	<0.1	<2	0.05	0.010
440505	Rock	1.59	0.5	2.4	0.8	10	<0.1	3.3	2.2	170	0.61	2.3	2.1	<0.1	7	<0.1	0.1	<0.1	9	0.09	0.021
440506	Rock	2.73	0.8	3.6	2.6	26	0.1	13.1	5.5	1351	1.85	16.7	5.9	0.1	24	0.2	0.2	<0.1	25	4.28	0.023
440507	Rock	1.50	0.5	5.4	1.3	14	<0.1	7.3	4.7	326	1.10	2.7	<0.5	0.1	15	<0.1	0.3	<0.1	15	0.14	0.029



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

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Bureau Veritas Commodities Canada Ltd.

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**Client:** **Strickland, Derrick**  
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**Project:** Fae 2015  
**Report Date:** December 11, 2015

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**Part:** 2 of 2

# CERTIFICATE OF ANALYSIS

**VAN15003248.1**

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
440501	Rock	7	3	<0.01	402	<0.001	<20	0.15	0.011	0.28	0.1	0.02	0.8	0.2	0.35	<1	<0.5	1.0
440502	Rock	7	2	<0.01	324	<0.001	<20	0.16	0.006	0.19	0.2	0.02	0.6	<0.1	0.15	<1	<0.5	0.5
440503	Rock	8	255	4.02	40	0.004	<20	1.49	0.018	0.14	<0.1	<0.01	27.4	<0.1	<0.05	4	<0.5	<0.2
440504	Rock	2	4	0.02	28	<0.001	<20	0.04	0.002	0.02	<0.1	<0.01	0.3	<0.1	0.06	<1	<0.5	<0.2
440505	Rock	1	3	0.02	17	<0.001	<20	0.10	0.002	0.07	<0.1	<0.01	1.4	<0.1	<0.05	<1	<0.5	<0.2
440506	Rock	<1	4	1.23	11	<0.001	<20	0.13	0.013	0.07	<0.1	0.02	3.4	<0.1	0.12	<1	<0.5	<0.2
440507	Rock	3	4	0.03	28	0.001	<20	0.15	<0.001	0.10	<0.1	<0.01	2.3	<0.1	<0.05	<1	<0.5	<0.2





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Project: Fae 2015  
Report Date: December 11, 2015

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# QUALITY CONTROL REPORT

**VAN15003248.1**

Method	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Reference Materials																					
STD DS10	Standard	13.3	155.4	150.8	358	1.9	73.8	12.7	868	2.67	42.5	57.7	7.0	60	2.5	8.6	10.9	40	1.05	0.074	
STD OREAS45EA	Standard	1.7	739.6	15.4	31	0.3	414.9	55.0	462	22.83	11.0	54.8	10.9	4	<0.1	0.3	0.2	333	0.04	0.030	
STD DS10 Expected		13.6	154.61	150.55	370	2.02	74.6	12.9	875	2.7188	46.2	91.9	7.5	67.1	2.62	9	11.65	43	1.0625	0.0765	
STD OREAS45EA Expected		1.6	709	14.3	31.4	0.26	381	52	400	23.51	10.3	53	10.7	3.5	0.03	0.32	0.26	303	0.036	0.029	
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001	
Prep Wash																					
ROCK-VAN	Prep Blank	0.7	4.5	1.5	33	<0.1	1.0	3.9	438	1.90	0.9	<0.5	2.5	28	<0.1	<0.1	<0.1	23	0.76	0.041	



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**Project:** Fae 2015  
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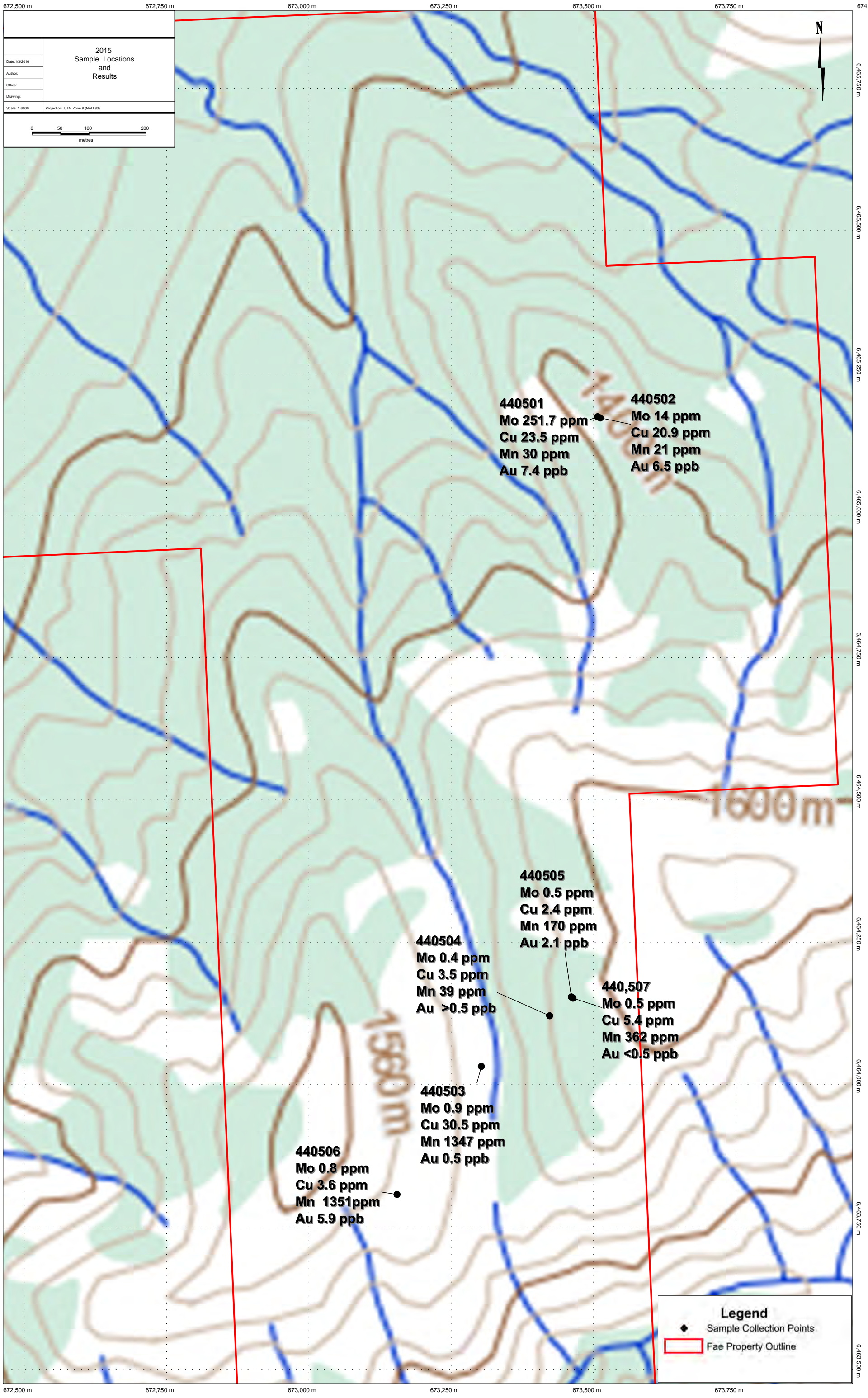
**Page:** 1 of 1

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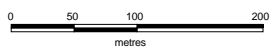
# QUALITY CONTROL REPORT

**VAN15003248.1**

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Reference Materials																		
STD DS10	Standard	17	53	0.77	392	0.071	<20	0.98	0.065	0.32	3.1	0.33	2.8	5.3	0.28	4	1.8	5.0
STD OREAS45EA	Standard	8	919	0.11	150	0.101	<20	3.29	0.023	0.06	<0.1	0.02	84.1	<0.1	<0.05	13	0.7	<0.2
STD DS10 Expected		17.5	54.6	0.775	412	0.0817		1.0259	0.067	0.338	3.32	0.3	2.8	5.1	0.29	4.3	2.3	5.01
STD OREAS45EA Expected		7.06	849	0.095	148	0.0984		3.13	0.02	0.053			78	0.072	0.036	12.4	0.78	0.07
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	0.2	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
ROCK-VAN	Prep Blank	6	3	0.42	69	0.087	<20	1.10	0.103	0.10	0.2	<0.01	2.7	<0.1	<0.05	4	<0.5	<0.2



<b>2015 Sample Locations and Results</b>	
Date: 1/9/2016	
Author:	
Office:	
Drawing:	
Scale: 1:6000	Projection: UTM Zone 9 (NAD 83)



**440501**  
 Mo 251.7 ppm  
 Cu 23.5 ppm  
 Mn 30 ppm  
 Au 7.4 ppb

**440502**  
 Mo 14 ppm  
 Cu 20.9 ppm  
 Mn 21 ppm  
 Au 6.5 ppb

**440505**  
 Mo 0.5 ppm  
 Cu 2.4 ppm  
 Mn 170 ppm  
 Au 2.1 ppb

**440504**  
 Mo 0.4 ppm  
 Cu 3.5 ppm  
 Mn 39 ppm  
 Au >0.5 ppb

**440,507**  
 Mo 0.5 ppm  
 Cu 5.4 ppm  
 Mn 362 ppm  
 Au <0.5 ppb

**440503**  
 Mo 0.9 ppm  
 Cu 30.5 ppm  
 Mn 1347 ppm  
 Au 0.5 ppb

**440506**  
 Mo 0.8 ppm  
 Cu 3.6 ppm  
 Mn 1351ppm  
 Au 5.9 ppb

**Legend**

- Sample Collection Points
- Fae Property Outline