

# NI 43-101 TECHNICAL REPORT ON THE SNOBALL PROPERTY

#### **Project Location:**

Liard Mining Division, British Columbia, Canada Latitude 57° 10' North, Longitude 130° 30' West NAD 83, Zone 9N, 409300E, 6336900N NTS Map Sheets 104G/ 1W and 2E

Prepared for:



**Evergold Corp.** 18 King St. East, Toronto, Ontario, Canada M5C 1C4

> **Prepared by:** David W. Tupper, P.Geo.

Effective Date: May 23, 2019 Amended and Restated Date: August 8, 2019



#### DATE AND SIGNATURE PAGE

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#### Prepared for:

**Evergold Corp.** 18 King St. East, Toronto, Ontario, Canada M5C 1C4

(signed) "David W. Tupper" David W. Tupper (APEGBC no. 121813) (signed and sealed original on file);

Signed this 8th day of August, 2019, in North Vancouver, British Columbia.

## **CERTIFICATE OF QUALIFIED PERSON**

I, David W. Tupper, am a professional geologist residing at 2-620 West 15<sup>th</sup> St., North Vancouver, British Columbia, Canada, V7M 1S9, and do hereby certify that:

- 1. I am the author of the report entitled "*NI 43-101 Technical Report on the Snoball Property*", dated May 23, 2019;
- 2. I am a Registered Professional Geoscientist (P.Geo.), Practising, with the Association of Professional Engineers and Geoscientists of British Columbia (licence # 121813).
- 3. I graduated from the University of British Columbia, Canada, with a B.Sc. in Geology in 1985;
- 4. I have practiced my profession continuously since graduation, concentrating in mineral property exploration and Quarternary geology throughout British Columbia, the Yukon and Ontario, Nevada, Alaska, Chile and Asia;
- 5. I visited the Snoball Property on May 11, 2019;
- 6. I have had no previous involvement with the Property until contracted to write this Technical Report;
- 7. I am responsible for all sections of this Report entitled "*NI 43-101 Technical Report on the Snoball Property*", dated May 23, 2019;
- I am independent of Evergold Corp. as independence is described in Section 1.5 of NI 43-101. I have not received, nor do I expect to receive, any interest (direct, indirect, or contingent), in the property described herein or Evergold Corp. for the services rendered in the preparation of this Report;
- I was retained by Evergold Corp. to prepare an exploration and technical summary and provide recommendations on the Snoball Property, in accordance with National Instrument 43-101. This Technical Report is based on my review of Project files and information provided by Evergold Corp. personnel;
- 10. I have read National Instrument 43-101 and Form 43-101F1 and, by reason of education and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. This Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;

- 11. As of the date of this certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed in order to make this Technical Report not misleading;
- 12. I, the undersigned, prepared this Report entitled "NI 43-101 Technical Report on the Snoba/1 Property", dated May 23, 2019, in support of the public disclosure of the exploration potential of the Snoball Property by Evergold Corp.

Effective Date: May 23, 2019

Signed this 8th day of August, 2019, in North Vancouver, British Columbia:

(signed) "David W. Tupper" David W. Tupper APEGBC no. 121813) (signed and sealed origination file);

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# LIST OF ABBREVIATIONS

	Description	Abbreviation	Description	
AA	atomic absorption	li	limonite	
Ag	silver	m	metre	
ASL	above sea level	m <sup>2</sup>	square metre	
As, aspy	Arsenic, arsenopyrite	m <sup>3</sup>	cubic metre	
Au	gold	Ма	million years ago	
AuEQ	gold equivalent grade	mg	magnetite	
AgEQ	silver equivalent grade	mm	millimetre	
Az	azimuth	mm <sup>2</sup>	square millimetre	
Bi	bismuth	Moz	million troy ounces	
b.y.	billion years	ser	sericite	
C\$ or \$	Canadian dollar	Mt	million tonnes	
са	calcite	mu	muscovite	
cl	chlorite	m.y.	million years	
cm	centimetre	NI 43-101	National Instrument 43-101	
cm <sup>2</sup>	square centimetre	opt	ounces per short ton	
ср	chalcopyrite	OZ	troy ounce (31.1035 grams)	
Cu	copper	Pb	lead	
су	clay	pf	plagioclase feldspar	
°Č	degree Celsius	ро	pyrrhotite	
°F	degree Fahrenheit	ppb	parts per billion	
DDH	diamond drill hole	ppm	parts per million	
ер	epidote	ру	pyrite	
ft	feet	QA	Quality Assurance	
ft <sup>2</sup>	square feet	QC	Quality Control	
ft <sup>3</sup>	cubic feet	qz	quartz	
g	gram	RQD	rock quality description	
gl	galena	Sb	antimony	
go	goethite	SEDAR	System for Electronic Document Analysis and Retrieval	
GPS	Global Positioning System	SG	specific gravity	
gpt, g/t	grams per tonne	sph	sphalerite	
ha	hectare	t	tonne (1,000 kg or 2,204.6 lbs)	
Hg	mercury	Te	Tellurium	
hm	hematite	to	tourmaline	
ICP	inductively coupled plasma	ton	short ton (2,000 pounds)	
kf	potassium feldspar	um	micron	
kg	kilogram	US\$	United States dollar	
km	kilometre	VMS	Volcanogenic massive sulphide	
km <sup>2</sup>	square kilometre	Zn	zinc	
I	litre	%	percent	

# 1.0 SUMMARY

#### 1.1 Introduction

The Snoball Property ("the Property" or "Project") is a gold-silver exploration project located in the Golden Triangle, one of the most important mineral regions in British Columbia (BC), Canada (Figure 1.1 right). No estimates of mineral resources or reserves have been undertaken for the Property. The geology and mineral occurrences on the Snoball Property have affinities to a number of advanced, intrusion-related mineral prospects found nearby.

At the request of Evergold Corp. ("Evergold" or "the Company"), the author, David W. Tupper, P.Geo., carried out an independent review of the Property, including a property examination on Mav 11. 2019. historical available reviewed documentation and recent exploration results from work carried out by the Company, and prepared this Report in accordance with the formatting requirements of National Instrument 43-101 and Form 43-101F1 Standards of Disclosure for Mineral Properties.



It is the author's understanding that Evergold intends to pursue an Initial Public Offering ("IPO") of its shares on the TSX Venture Exchange. It is the author's opinion that the Snoball Property is a property of merit and that the use of this Technical Report in support of the Company's planned IPO is appropriate.

### 1.2 Property Description and Ownership

The Snoball Property totals 3,545.12 hectares (see Table 4.1 and Figure 4.2) and Evergold holds a 100% interest. The Property is subject to a 0.5% Net Smelter Returns ("NSR") royalty payable to C.J. Greig Holdings Ltd., with no buyout option.

Further details with respect to property tenures and ownership can be found in Section 4.0.

#### **1.2.1** Description of the Transaction

On April 5, 2016, Evergold entered into an all-stock Mineral Property Acquisition Agreement with C.J. Greig Holdings Ltd., under the terms of which Evergold purchased a 100% interest in the Snoball Property. There were no cash payment or exploration commitment elements to the transaction. Charles J. Greig is the owner of C.J. Greig Holdings Ltd. and a principal shareholder of Evergold Corp. The agreement includes an area of interest extending 3 kilometres from the outermost boundaries of the claims in which any interest in mineral tenures acquired by either party within 3 years of the agreement may be added to the Property by mutual election. Additionally, a 0.5% Net Smelter Returns Royalty is held by C.J. Greig Holdings Ltd. on any minerals that may in future be extracted from the Property. There is no buyout option.

Further details with respect to the transaction can be found in Section 4.3.

#### 1.3 Accessibility and Physiography

The Snoball Property is located in the Liard Mining Division of northwestern BC, approximately 140 kilometres north-northwest of the village of Stewart and 25 kilometres northwest of the Bob Quinn Lake gravel airstrip, which lies beside highway 37 (Figure 4.1). Access to the Property is currently by helicopter only, either from Stewart or from a seasonal base at the Bob Quinn airstrip. However, the Galore Creek mine access road passes 8 kilometres to the south.

The Property is approximately 40 percent covered by permanent glacial ice and snow, predominantly on north-facing slopes. Topography over the immediate area of the Snoball prospect is dominated by a northeast-trending ridge (Snoball Ridge), which runs for approximately 1 kilometre through the middle of the prospect area and is anchored at its east end by a diorite intrusion underlying Pyramid Peak, from which spur ridges trend northwest and southeast. Elevations range from 1040 to 2160 metres ASL.

All of the Property area is essentially above treeline, with bedrock exposed on upper slopes and talus and glacial gravel deposits on lower slopes. Vegetation, where present, is alpine in character.

Further details of Property accessibility and physiography can be found in Section 5.0.

#### 1.4 History

Interest in the Golden Triangle region of northwestern BC dates back to 1861 when placer gold was discovered in the Stikine River, sparking the Stikine Gold Rush. Systematic exploration within the region surrounding the Property commenced in the mid-1980s, with early work focused on exploration for Eskay-type volcanic massive suphide ("VMS") deposits.

In 1989 Noranda Exploration identified drainages on the current area of the Property with anomalous metals, which led to the staking of 3 claims by Noranda in 1990. Later that year and in 1991, Noranda undertook geological mapping, prospecting, rock, grid-based soil and localized silt sampling, trenching and geophysical surveys. This work outlined an area of about 40 hectares with highly anomalous geochemical (Au, Ag, As, Pb) results, now constituting the core of the Snoball prospect and principal target area, which has since expanded to some 225 hectares with later work.

In 1992, under a joint venture between Noranda and Gold Giant Minerals, 12 diamond drill holes were completed to test some of the more accessible targets, all of which were located some 500

metres or more topographically below Snoball Ridge, on lower elevation south-facing slopes and adjacent areas. The best drill intercepts were from pyrrhotite zones that returned anomalous gold values. Also that year, Tenajon Resources Corp. explored the Smith property, located contiguous to the west with the Snoball prospect and now incorporated into the Snoball Property, with minor soil and rock chip sampling. Several styles of mineralization were observed one of which, the UT quartz-carbonate vein, returned significant gold values.

In 1995, Condor International Resources Ltd. conducted minor rock and silt sampling in the area of the Noranda grid. Several of the highest values came from vein and breccia samples. In 1996, Condor continued with prospecting, geological mapping, and the blasting of five short trenches, several of which returned significant gold and silver values from chip samples of narrow, anastomosing veins hosted in shears within argillites and siltstones on the western and southwestern areas of the grid. With the industry in recession at the time, Condor allowed the Snoball claims to lapse. They were subsequently re-staked, then allowed to expire with little or no work, re-staked once again with an upturn in markets, then acquired by Charles Greig in 2015.

Further details of Project history can be found in Section 6.0.

#### 1.5 Geological Setting

The Snoball Property lies within the Stikine terrane, along the western margin of the Intermontane Belt of the Canadian Cordillera. The Property is underlain mainly by Upper Triassic and Lowerto Middle Jurassic stratified volcanic and volcaniclastic rocks of the Stuhini and Hazelton Groups, as well as coeval intrusions. The top of the Stuhini group is a regional angular unconformity, overlain by Hazelton Group strata, the so-called BCGS "Red Line" (Figure 15.2) interpreted by the BC Geological Survey to be a key to the localization of many of the mineral deposits in the Golden Triangle.

At the Snoball prospect a complex of diorite dikes, sills and stocks is elongate along the northwesttrending, faulted contact (the "Northmore Fault") between Stuhini Group sedimentary rocks and Hazelton Group volcanic rocks.

Further details of local and Property geology can be found in Section 7.2.

#### 1.6 Mineralization

Work to date has identified two principal styles of precious metal-bearing mineralization at the Snoball prospect: a "Type 1" replacement style comprising skarn and hornfels alteration with disseminated to semi-massive pyrrhotite and lesser pyrite and chalcopyrite, occurring as disseminations, veinlets, patches and small irregular pods carrying low-grade gold values over significant widths; and a "Type 2" style of mineralization consisting of discontinuous quartz-sulphide-calcite veins, with local stockworks and breccia zones, which locally returns very high gold and silver values.

Mapping indicates that both these types of mineralization are associated with the same mineralizing system – i.e. the north-northwest-trending complex of diorite dikes, sills, and stocks, which has intruded Stuhini sedimentary rocks. The intrusion of these rocks formed a hornfelsic aureole containing the Type 1 replacement style disseminated mineralization. These rocks were then cut by a dense network of discontinuous, Type 2 style quartz+carbonate+sulphide epithermal-textured veins of erratic orientation and thickness, the greatest intensity of which is centered on the diorite intrusive complex.

Further details of known mineralization and showings can be found in Section 7.

#### 1.7 Recent Exploration

Since acquiring the Property in 2016, Evergold has conducted the following exploration activities:

- 2016: Compilation, digitization and evaluation of historical data, additional claim staking, geological reconnaissance, prospecting, soil and rock geochemical sampling, data modeling and interpretation.
- 2017: Prospecting, soil and rock geochemical sampling, heli-borne magnetometer geophysics, data modeling and interpretation.
- 2018: Detailed geological mapping of the area drilled by Noranda in 1992 and areas upslope to Snoball Ridge and Pyramid Peak, and west along Snoball Ridge to the UT showing, examination of historical core, rock and soil sampling, and data modeling and interpretation.

Additional information on these programs is described in Sections 9 and 10.

#### 1.8 Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing has been completed by previous operators of the Snoball Project or by Evergold.

#### 1.9 Mineral Resources

No estimates of mineral resources or reserves have been undertaken for the Snoball Property.

#### 1.10 Interpretations and Conclusions

Interpretation of historical and more recent work indicates that the various styles of mineralization present at the Snoball prospect are associated with an intrusive system comprised of NNW-trending diorite dikes, sills, and stocks which intruded fine grained sedimentary rocks.

The most intense Type 1 replacement-style alteration and mineralization occurs in proximity to the diorite intrusive complex. Extensions of such mineralization at the stratigraphic level historically drilled should occur in the subsurface NNW of Snoball Pond. In addition, dark grey calcareous beds mapped on the western edge of the Snoball prospect should project beneath the historically drilled area and represent a possible target for skarn mineralization at the contact of the diorite intrusive complex at depth.

Abundant Type 2 style mineralized veins cut nearly all rock types. Textural relationships and variations in vein density suggest a close affinity to the diorite intrusive complex. The possibility of a deeper Au-Cu core should be considered.

Importantly, bedrock, float and talus fines sampling by Evergold in 2016, 2017 and 2018 in areas well upslope from the historical work, returned strong precious metal values along and below the one-kilometre length of Snoball Ridge and over the Pyramid Peak diorite intrusive which anchors its east end. When modeled with historical data sets, these latest results suggest the source of much of the historical geochemical anomalism at the lower elevations encompassed by the Noranda geochemical grid was in fact derived from areas above. As such, the Pyramid Peak

diorite intrusive proper, its brecciated contact zones with surrounding sediments, its deeper contacts with calcareous sediments, and its outlying aureole of epithermal veins, all represent untested targets for drilling.

#### 1.11 Recommendations and Proposed Exploration Budget

The author believes the Snoball Property has merit, and that further work is justified. The immediate area of the Snoball prospect is considered drill-ready. A two-phase exploration program is therefore recommended with the immediate goal (Phase I) of locating with drilling the source(s) of the widespread metal anomalism which recent work by the Company indicates may lie at the up-slope head of the anomalies, tentatively identified as along or below Snoball Ridge and Pyramid Peak, and downslope areas immediately adjacent. Proposed collar locations and drill orientations for the Phase I work are shown on Figures 18.1 and 18.2.

Styles of mineralization targeted by this proposed drill program would include quartz-carbonate veins distal to the diorite intrusive complex, vein stockworks, and vein breccias along faults and contacts with the intrusives, hornfelsed sediments adjacent to or overlying the intrusions, skarnified carbonaceous sediments, and bulk tonnage porphyry-style mineralization within the intrusives.

#### **Proposed Exploration Budget: Phase I Drilling**

Scope and Cost Estimate for Recommended Exploration Snoball Phase 1 Drill Program					
Target	Activity	Scope	Cost (\$CDN)		
Snoball Ridge Pyramid Peak	drilling services pad building core cutting, logging assaying aircraft rental fuel shipping & transport claims & permitting First Nations camp geological services archaeo-enviro contingency	2400 metres of drilling and 13 holes from 8 pads	260,000 20,000 31,000 38,000 85,000 18,000 2,500 2,500 2,000 30,000 80,000 70,000 18,000 40,000		
	694,500				

**Table 1.1** below sets out the recommended scope and budget for the next stage of exploration.

The total budget excludes any provision for corporate support services and activities.

#### Phase II Drilling

Phase II would be contingent upon the success of Phase I, and expand upon results achieved. It would be predominantly oriented to drilling, and encompass an additional 2,400 metres of work at a similar cost to Phase I.

### 2.0 INTRODUCTION

#### 2.1 Introduction and Terms of Reference

At the request of Evergold Corp. ("Evergold" or the "Company"), David W. Tupper, P. Geo., carried out an independent review of the Snoball Property (the "Property" or "Project"), located in the Liard Mining Division of northwestern British Columbia, Canada. The author reviewed available historical and recent exploration results, studied reports of nearby mineral occurrences, carried out a site visit to the Property on May 11, 2019, and prepared this independent Technical Report (the "Report"). This Report was prepared in accordance with the formatting requirements of *National Instrument 43-101 and Form 43-101F1 Standards of Disclosure for Mineral Properties* to be a comprehensive review of the results from exploration activities on the Property to date and, if warranted, to provide recommendations for future work. This Report is intended to be read in its entirety. It is the author's understanding that Evergold intends to pursue an Initial Public Offering ("IPO") of its shares on the TSX Venture Exchange, in support of which this Technical Report is to be used. It is the author's opinion that the Snoball Property is a property of merit and that the use of this Technical Report in support of the Company's planned IPO is appropriate.

#### 2.2 Site Visit

The author is an independent Qualified Person as such term is defined by NI 43-101, and visited the Snoball Property for a day on May 11, 2019. The Property's key target area, the 2.5km<sup>2</sup> Snoball prospect, was examined and one sample was collected from surface outcrop within the hornfelsed edge of the diorite intrusive. A tour of the entire property and surrounding area was also undertaken from the air by helicopter. The author reviewed all aspects of the historical exploration work with Evergold personnel including results from historical sampling, trenching and drilling, local lithological and structural features, sampling and shipping procedures, geophysical surveys and results, and available project documentation. The Property is considered an early-stage exploration project based on the geological, geochemical and geophysical exploration work completed and the 1,504.6 metres of historical drilling. Results and photographs from the site visit are provided in Section 12 with data verification.

#### 2.3 Sources of Information

The author has reviewed previous exploration activities on the Property, including assessment reports on file through the BC Government's Ministry of Mines, Energy & Petroleum Resources ARIS database, undertaken in the period from the 1980s up until 2017. This Report refers to the past work undertaken by other qualified geologists and professional field personnel. Other non-project specific reports by qualified personnel have been referenced whenever possible. The information, conclusions, opinions and recommendations in this Report are based upon:

- information available to the author at the time of the preparation of this Report;
- assumptions, conditions and qualifications as set forth in this Report; and
- data, reports and other information provided by Evergold and other third-party sources;

• published reports from the operating mines in the region, plus other published government reports and scientific papers.

During the site work and while preparing this Report, the author reviewed all of the readily available historical exploration and technical reports pertaining to the Property. This historical exploration information is of good quality, and there is no reason to believe that any of the information is inaccurate.

Information concerning the purchase of mineral tenures that comprise the Property was provided by Evergold and has not been independently verified by the author. Statistics, weather and local information for the Project area were obtained from various government sources, historical assessment reports and personal knowledge of the Property area. A detailed list of references and sources of information is provided in the References section of this Report.

#### 2.4 Abbreviations and Units of Measure

Metric units are used throughout this Report and currencies are in Canadian Dollars (C\$) unless otherwise stated. Market gold or silver metal prices are reported in US\$ per troy ounce. A list of abbreviations that may be used in this Report is provided on page ix, above.

#### 2.5 Acknowledgements

The author wishes to thank the officers and personnel of Evergold for providing the technical materials and assistance required to prepare this Report.

## 3.0 RELIANCE ON OTHER EXPERTS

On May 6, 2019, the author confirmed the status and registration of the subject mineral tenures with information available through the web page of the Mineral Titles Branch, Ministry of Energy, Mines and Petroleum Resources of the Government of British Columbia at: https://www2.gov.bc.ca/gov/content/industry/mineral-exploration-mining/mineral-titles/mineral-placer-titles/mineraltitlesonline. This British Columbia government agency records tenure information for all mineral claims in the province.

The British Columbia Ministry of Energy, Mines and Petroleum Resources geological library was accessed for geological maps and reports found at: http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/Pages/default.aspx.

The author confirmed with Evergold's legal counsel on May 23, 2019 the legal validity of the acquisition agreement that grants Evergold 100% ownership of the mineral titles that comprise the Snoball Property. Evergold's legal counsel is:

Dennis Peterson, Senior Partner Peterson McVicar LLP 18 King St E Suite 902 Toronto, Ontario, Canada M5C 1C4 Tel: 647 259-1790

The title opinion applies to Section 4 and the Summary of this Report.

# 4.0 PROPERTY DESCRIPTION and LOCATION

#### 4.1 Property Location

The Snoball Property is located in northwestern British Columbia, approximately 140 kilometres north-northwest of the town of Stewart, British Columbia. Figure 4.1 shows the location of the Property. Highway 37 is located 10 kilometres to the east; however, there are no roads on the Property. Access to the Snoball prospect and wider Property is currently by helicopter. The area is characterized by steep mountainous terrain with weather conditions typical of the north coastal mountains. The claims lie on National Topographic System (NTS) Map Sheets 104G/1W & 2E and are approximately centered at latitude 57° 10' N, longitude 130° 30' W, or in the local North American Datum 83 (NAD 83) coordinate system, Zone 9N, at 409300E, 6336900N.





NI 43-101 Technical Report on the Snoball Property, by David W. Tupper, P.Geo.

### 4.2 Property Description

The Snoball Property consists of 6 contiguous Mineral Titles Online (MTO) digitally registered mineral tenures totaling 3,545.12 ha. The mineral tenures are listed in Table 4.1 and are shown on Figure 4.3.

Tenure No.	Claim Name	Owner	Issue Date	Expiry Date	Area (Hec)
1039125	WASTELINE EXPANDING	Charles Greig	06/10/2015	23/03/2020	17.55
1039141	ROLLIN' WITH THE SNOBALL2	Charles Greig	06/10/2015	23/03/2020	17.55
1042870	BLOHINSNO	Charles Greig	16/03/2016	23/03/2020	175.50
1043000		Charles Greig	23/03/2016	23/03/2020	1,421.14
1043001	SNOSE	Charles Greig	23/03/2016	23/03/2020	421.27
1043002		Charles Greig	23/03/2016	23/03/2020	1,492.11
				Total:	3,545.12

The tenures that comprise the Snoball Property were staked by Charles Greig in 2015 and 2016. Evergold acquired a 100% interest in the claims comprising the Snoball Property by issuing shares to CJ Greig Holdings Ltd., a company controlled by Charles Greig, on April 5, 2016, and by granting to CJ Greig Holdings Ltd. a 0.5% Net Smelter Returns royalty on the Property, with no buyout option. All claims are in good standing until March 23, 2020 according to information from the British Columbia Mineral Title Online web site on May 20, 2019.

### 4.3 Snoball Property Agreement

On April 5, 2016, Evergold entered into an all-stock Mineral Property Acquisition Agreement with C.J. Greig Holdings Ltd., a company incorporated under the laws of British Columbia, under the terms of which Evergold purchased a 100% interest in the Snoball Property. There were no cash payment or exploration commitment elements to the Mineral Property Acquisition Agreement. The Company issued the following number of Common Shares and Common Share purchase warrants to C.J. Greig Holdings Ltd., net of adjustments to adequately reflect the value of the Purchased Properties:

- 2,806,958 Common Shares at a deemed price per share of \$0.10 for a total deemed consideration of \$280,695.80;
- 701,740, 7-year, 12 cent Common Share purchase warrants;
- a 0.5% Net Smelter Returns Royalty, with no buyout option



Charles J. Greig is the owner of C.J. Greig Holdings Ltd.. The agreement includes an area of interest extending 3 kilometres from the outermost boundaries of the claims in which any interest in mineral tenures acquired by either party may be added to the Property by mutual election.

#### 4.4 Mineral Tenure Ownership in British Columbia

In British Columbia, the owner of a mineral claim is granted 100% ownership of all sub-surface minerals. A valid Free Miner Certificate ("FMC") is required to record a claim or acquire a recorded claim or interest in a recorded claim by transfer, and to conduct exploration for minerals on mineral claims within British Columbia. A company FMC is available to any registered corporation in good standing for a fee of \$500, and to individuals for \$25, renewable annually.

Mineral titles in British Columbia are acquired and maintained through Mineral Titles Online, a computerized system that provides map-based staking. Acquisition costs for claims are \$1.75 per hectare. This confers ownership of the claim for one year beyond the date of staking. To continue to hold the claims beyond the first year, the owner must complete assessment work, either physical or technical, on the property. A report must be filed detailing the work performed and the results. These assessment reports remain confidential for one year and then become available for public access. If assessment work or cash in lieu is not filed by the required date the claims will automatically forfeit. For years 1 and 2 of claim existence the work requirement is \$5 per hectare per year, for years 3 and 4 it is \$10 per year, years 5 and 6 it is \$15 per year, and thereafter \$20 per year. Rather than work on the property, cash in lieu may be paid to hold the claims, at a rate twice that of exploration work. The Snoball Property tenures currently expire on March 1, 2020, at which time a minimum of \$53,352.37 assessment work is required to be filed to hold the claims for an additional year. The currently budged Phase I work program would secure the claims to 2030.

The claims that comprise the Property are wholly located within the traditional territory of the Tahltan First Nation, on Crown Land, and the province of British Columbia owns all surface rights. There is no privately held ground within the area of the Property.

#### 4.5 Environmental Regulations & Exploration Permits

Permits and reclamation security are required for any type of exploration work that may cause disturbance or possible environmental damage to the land. These include, but are not limited to, the following:

- construction of drill sites and heli-pads
- camp construction and operation
- construction of roads or trails
- cutting of geophysical cut-lines
- trenching
- use of wheeled or other mobile equipment
- fuel storage

The exploration permit application process is initiated when a proponent files a Notice of Work ("NOW"). A reclamation bond or security is required to be posted with the government of BC as part of the exploration permitting process to pay for the cost of reclamation of surface disturbance in the case that a company defaults on its obligation to perform any required remediation. The

bond, or security, can be recovered by the company upon remediation of any environmental disturbance on the property caused by exploration activities.

One to five-year exploration permits are issued and overseen by the Smithers, BC office of the BC Ministry of Energy, Mines and Petroleum Resources subsequent to the proponent's submission of a NOW through the government's Natural Resources Online Services portal. A Multi-Year (up to 5 years) Area-Based ("MYAB") permit provides flexibility for a range of property exploration activities, including the capacity to vary the location of the work within the permit area and specified levels of diamond drilling, geophysical surveys, camp site disturbance, and fuel storage. The permitting process also requires consultation with affected First Nations. Baseline archaeological and environmental studies (water quality, flora, fauna), including possible implementation of a wildlife mitigation plan, are also typically required in the areas proposed for exploration. Evergold submitted a Notice of Work on March 1, 2019 for a work program largely similar to that which is proposed in this Report. At the time of writing, the NOW had entered the referral stage and been circulated to the Tahltan First Nation within whose traditional territory the Property is located. The permit process generally takes from 3 to 5 months to complete. Such permits have recently been issued to other companies working near the Snoball Property and the author anticipates that Evergold will not have difficulty obtaining a work permit.

#### 4.6 Environmental Liabilities and Other Risk Factors

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

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

#### 5.1 Accessibility

The Snoball Property is located in northwestern British Columbia, approximately 140 kilometres north-northwest of the town of Stewart, British Columbia. Figure 4.1 shows the location of the Property, which is centered at latitude 57° 10' N, longitude 130° 30' W or alternatively, NAD 83, Zone 9N, 409300E, 6336900N.

The Property is currently only accessible by helicopter, either from the town of Stewart or from a seasonal base at Bob Quinn Lake, approximately 25 kilometres to the southeast of the Property, situated beside the Stewart-Cassiar highway (highway 37). Supplies for the Project can be trucked roughly 400 kilometres north via highways 16 and 37 from either Terrace or Smithers to Bob Quinn Lake, and then ferried from there by helicopter to a camp on the Property. All work on the Property, including diamond drilling, presently requires helicopter support for transport of equipment and crews. Seasonal limitations are imposed on work programs due to the high elevation and associated severe winter conditions on the site. Although access between late

autumn and early spring is possible, the associated costs of helicopter supported winter exploration drilling would be prohibitive.

There is currently no road access to the Property; however, the Galore Creek mining access road extends westward from highway 37 and passes 8 kilometres to the south of the Property. A broad, southerly-trending valley extends from the Property to the Galore Creek road, which would provide a relatively easy route for construction of future road access to the main mineralized area on the Property.

#### 5.2 Climate and Vegetation

The climate on the Snoball Property is generally that of a northern temperate zone, with subarctic conditions at high elevations. At the Eskay Creek mine site, located 53 kilometres to the south and at approximately the same elevation, the average winter temperature is -7° C and summer temperature averages 10°C, with short-lived extremes of -30° and +30°C (https://www.theweathernetwork.com/ca). Precipitation is also estimated to be similar to that of Eskay Creek, which receives about 800 mm of rain per year on average from May through September, and 1300 cm of snow falling from late September to mid-May. The driest months are June and July, averaging 71 and 81 mm of precipitation respectively.

Exploration is generally restricted to the period from June through October due to heavy snowfall in winter months, some of which typically remains on north-facing slopes until late summer, or year-round in areas of glacial ice. Potential future mining activities would incorporate avalanche control measures and utilize appropriate equipment to remove snow to allow work to proceed throughout the winter.

The tree line in the area lies at about 1,000 metres ASL, below which relatively sparse forests of mostly hemlock and balsam fir are developed. The Property area is all above tree line with limited vegetation consisting of grasses and low brush growing in poorly developed glacial soil on the lower slopes and valley bottoms. Upper slopes and ridge tops consist of craggy outcrops, talus and small grassy patches.

Fish are not known to inhabit the Snoball drainage basin. Large wildlife such as deer, moose and caribou are rare at higher elevations due to the rugged topography and restricted access; however, bears, cougar, mountain goats and mountain sheep may be present on occasion.

#### 5.3 Physiography

The Property lies in the rugged Coastal Mountains of northwestern BC, and the topography of the immediate vicinity of the Snoball prospect area (Photo 1 below) is dominated by the roughly one kilometre long, northeast-trending Snoball Ridge, anchored at its east end by the higher elevations of Pyramid Peak, from which spur ridges trend northwest and southeast. Elevations range from 1040 metres ASL on the eastern and western edges of the Property to over 2160 metres on the highest peaks. Year-round glaciers fill the upper portions of the north-facing basins and slopes, covering approximately 40 percent of the Property, mainly on the south, northwest and north-central claims. Glacial meltwater feeds small streams which in the vicinity of the Snoball prospect flow north and south off the sides of Snoball Ridge. These local streams join east and

west-flowing creeks in the valley bottoms that eventually empty into the Iskut River, located about 10 kilometres to the east. The Iskut River then flows south and then west for approximately 160 kilometres, joining the Stikine River, which empties into the Pacific Ocean near Wrangell Alaska.



**Photo 1.** Snoball physiography, viewed to the northeast. The elevation difference between Snoball Pond (right, centre) and Snoball Ridge (left, top) ranges from 400-500 metres (C. Greig, 2016)

#### 5.4 Local Resources and Infrastructure

Stewart, a town of approximately 500 inhabitants, is located 140 kilometres south-southwest of the Property. It is connected to the provincial highway system via paved, all weather highway 37A. Dease Lake, with a population of about 300, is located 140 kilometres to the north along highway 37. The larger population centers of Prince Rupert, Terrace, Kitimat, and Smithers, with a total combined population of about 37,000, are located within approximately 320 kilometres by air to the south.

Deep-water loading facilities for shipping bulk mineral concentrates exist at Stewart, and are currently utilized by the Red Chris copper-gold mine, which is located about 75 kilometres northeast of the Property. Historically these transportation facilities have been used by several other mines in northern BC. The nearest railway is the CNR Yellowhead route, which passes east-west through Kitwanga, approximately 330 kilometres southeast of the Property. This rail line connects to deep-water ports near Prince Rupert and Vancouver.

The closest major towns to the Property would be Smithers or Terrace, a 4.5 to 5-hour drive to the south from Bob Quinn Lake airstrip. Food, exploration supplies, skilled exploration personnel, drill contractors and construction contractors are available in Smithers and Terrace, where there are daily scheduled airline services to Vancouver and other major centers.

Water for exploration and drilling at the Snoball prospect can be drawn from local meltwater-fed creeks, and Snoball Pond, lying at the foot of Snoball Ridge. Later advanced exploration and mining would require a water use permit from the BC Government. The recently completed 287-kilovolt Northwest Transmission power line runs along highway 37, 10 kilometres to the east of the Property. The line extends north as far as the village of Iskut and provides power to the Red Chris mine. Topography within the Snoball prospect area is generally steep, posing obvious associated challenges to the siting of potential future mining and processing facilities.



**Photo 2.** View south and downslope from Snoball Ridge, with Snoball Pond in the lower right foreground (C. Greig, 2016)

# 6.0 HISTORY

The Snoball Property is located in a region with numerous large and rich mineral deposits, some of which have been or are presently being mined, and some of which are very likely to be mined in the future.

Current mine operations in the area include Pretium Resources' recently commissioned underground Brucejack gold-silver mine, located 77 kilometres to the south-southeast of the Property, and Imperial Metal's large-scale Red Chris open-pit porphyry copper-gold mine, located 70 kilometres to the northeast, near Iskut. Past producers currently undergoing detailed re-evaluations include: Barrick's Eskay Creek mine, which was developed on a very high-grade precious metal-rich (Au-Ag-Cu-Zn) VMS deposit, located 54 kilometres to the south, and the Snip Au-Ag-Cu mine, 64 kilometres to the southwest. Advanced stage deposits of merit include the Seabridge's KSM very large-scale copper-gold porphyry deposits, located 69 kilometres to the south-southeast, Teck/Newmont's Galore Creek Cu-Au-Ag-Mo porphyry deposit, located 55 kilometres to the west, which is seeing renewed exploration activity in 2019, and Teck/Copper Fox Metal's Schaft Creek Cu-Au-Ag-Mo porphyry deposit, located 33 kilometres to the northwest.

### 6.1 Regional Exploration and Mining History

Note: The author has been unable to verify the information concerning the regional mineral deposits and mines discussed in the following section. Readers should be aware that the information presented is not necessarily indicative of the mineralization on the Snoball Property that is the subject of this Technical Report. It is, however, believed by the author to provide relevant geological context.

The Snoball Property lies within one of the most important mineral trends of northwestern British Columbia, at the heart of the region colloquially referred to as the "Golden Triangle" (Figure 6.1, below). This region extends over 200 kilometres north from near the town of Stewart, along the western part of the Stikine Arch terrane and includes numerous precious metal-rich deposits. Deposits potentially analogous to the Snoball prospect exploration model include the high-grade Au-Ag vein deposits found on Pretium's Brucejack property, and the Au-Ag rich polymetallic veins and siliceous breccias of the Silbak Premier deposit, near Stewart. Both of these deposits exhibit certain characteristics of epithermal mineral systems, have variable structural and stratigraphic controls on mineralization, and are associated with porphyritic igneous rocks.





Figure 6.1 Snoball Property Location, Golden Triangle, Northwestern B.C.

BC Locator

The recently commissioned **Brucejack** mine has been developed within the Valley of the Kings (VOK) Zone where high-grade gold-silver mineralization occurs as electrum, generally hosted within quartz-carbonate and quartz-adularia veins and vein stockworks. While quartz veining and stockworks are common throughout the VOK Zone, the majority of gold intersections are confined to a 75 to 100 metre-wide zone that closely parallels the axis of a synclinal structure. Alteration at the VOK Zone consists dominantly of quartz-sericite-pyrite, with lesser sericite-chlorite. The most pervasive of the intense alteration is observed within sedimentary and fragmental volcanic rocks. A number of significant showings of gold-silver, plus copper, zinc and lead occur along a north-northwest trend, the "Brucejack Trend", that approximately follows the trend of the regional Brucejack fault for about 4.5 kilometres north from VOK. Most of the showings consist of quartz-carbonate plus local barite veins and stockworks associated with northwest to west-trending faults that may be splays from the Brucejack fault. Mineralization has been described as transitional epithermal, located up-stratigraphy from porphyritic intrusions believed to be the source of the mineralizing fluids.

An updated April 4, 2019, NI 43-101 compliant mineral resource estimate for the VOK deposit, combining Measured plus Indicated categories, quantified 18.7 million tonnes grading 14.18 g/t gold and 81.6 g/t silver for contained totals of 8.5 million ounces of gold and 48.7 million ounces of silver (Pretium Resources Inc. news release, April 4, 2019). The Brucejack mine was commissioned in mid-2017 and is currently ramping up to mining at a targeted rate of 2,700 tonnes per day, utilizing long-hole stoping methods.

At the **Silbak-Premier** mine, production began in about 1918 and continued with few interruptions until 1968. Open pit mining was initiated in 1989, continuing to 1996. The operations have milled nearly 5.9 million tonnes of ore, recovering approximately 62 tonnes of gold and 1,333 tonnes of silver, with associated Pb, Zn, Cu and Cd (BC Minfile No. 104B 054). As of January 1997, diluted Proven plus Probable Reserves were 350,140 tonnes grading 7.2 g/t gold, 37.7 g/t silver and 1.6% zinc (George Cross news letter No. 26, February 6, 1997).

The Silbak-Premier orebody is hosted in andesite flows, andesite breccia and lapilli tuff of the Unuk River Formation that has been intruded by Early Jurassic Texas Creek Plutonic Suite dacitic porphyry dikes. Potassium feldspar porphyry dikes, historically known as "Premier Porphyry", are spatially associated with ore, which is believed to indicate a Lower Jurassic mineralization age.

Hydrothermal alteration zones related to the mineralizing system are represented by a proximal silicification/quartz stockwork with potassium feldspar and/or sericite-dominated alteration. Peripheral to mineralization is a propylitic alteration assemblage of carbonate, chlorite and pyrite. The variable intensity and type of alteration is partially controlled by fracture intensity and host lithology, and possibly, elevation in the hydrothermal system. The most characteristic feature of the andesite package is the pervasive carbonate, chlorite and clay alteration around the deposit.

The mineralized bodies are predominantly discordant, but locally concordant with the moderately northwest-dipping andesite flows, breccias and dacite flows. Mineralization occurs along two

trends; a steeply northwest dipping Main Zone and a steep to vertical West Zone. These trends are believed to represent structural controls to the mineralization and the emplacement of the dacite porphyry intrusions. Most production came from an area within 500 metres of the intersection of these two zones.

There are at least four styles of mineralization, with textures ranging from stockwork and siliceous breccia, to locally layered and massive sulphide-rich mineralization. Sulphide content varies, generally less than 5% but can be as high as 75%. Sulphide minerals include pyrite, sphalerite and galena, with minor tetrahedrite, chalcopyrite, arsenopyrite and local pyrrhotite. Historical bonanza ore was noted to contain native gold, electrum, pyrargyrite, polybasite, argentite and native silver. Gangue minerals include quartz, potassium feldspar, chlorite and carbonates. A hybrid genesis model combining epigenetic vein and porphyry copper characteristics compares well with the features observed.

At the Snoball prospect, potentially comparable mineralization includes the quartz-carbonate UT vein, samples of which have returned high gold values in association with arsenopyrite, sphalerite, galena and pyrite. As well, some of the broader historical intercepts on the Property are associated with pyrrhotite+pyrite pods containing minor chalcopyrite in hornfelsed sedimentary rocks spatially associated with diorite intrusions of possible Early Jurassic age.

The **Snip** mine was developed on another prolific gold-bearing vein deposit in the region. The mineralization is found in a southwest-dipping shear vein system, hosted within Upper Triassic Stuhini Group sedimentary rocks intruded by Early Jurassic age stocks and plutons. The Snip deposit occurs within the southeast trending Bronson structural corridor, which also appears to be associated with other significant deposits within the Iskut River area. The mine produced approximately 1 million ounces of gold from 1991 until 1999 at an average grade of 25 g/t. Approximately 60% of production was obtained from the Twin Zone, a 0.5 to 15 metre-wide sheared quartz-carbonate-sulphide vein system that cuts massive bedded greywacke and siltstone. Other sub parallel structures located in the footwall to the Twin Zone accounted for the rest of the production. Total sulphide content in the veins seldom exceeded two percent, and was characterized mainly by minor pyrrhotite, arsenopyrite, sphalerite, chalcopyrite and rare galena (BC Minfile No. 104B 004).

The **Red Mountain** deposit also exhibits features that have been observed at the Snoball prospect. Gold-silver mineralization at Red Mountain occurs in several discrete zones within Middle to Late Triassic sedimentary rocks and Early Jurassic volcaniclastic rocks that are cut by Early Jurassic (Goldslide) intrusions, which Grove (1986) correlates with the Texas Creek Plutonic Suite (BC Assessment Report 20971). Features associated with the irregular bodies of monzodiorite such as contact breccias, igneous breccia dikes and the presence of intrusive clasts in volcanic rocks, suggest that the intrusions were feeders to overlying volcanic units.

A wide contact zone occurs between the volcano-sedimentary package and porphyritic monzodiorite stock. This contact zone is strongly brecciated and contains argillite and/or pyroclastic rock fragments within an intrusive matrix. Quartz stockwork is locally developed in the

zone, accompanied by weak to intense silicification, sericitization and propylitization. An extensive halo of pyrite-sericite alteration surrounds the intrusion.

Anomalous gold mineralization, grading >0.3 g/t Au, is developed at the transition from pyrite to overlying pyrrhotite dominant alteration over an area of more than one square kilometre. Within this anomalous zone, high-grade gold-silver mineralization, grading 3 to 20 g/t Au, occurs in 5 metre to 29 metre-thick, semi-tabular, pyrite+pyrrhotite stockwork zones, accompanied by intense sericitic alteration and surrounded by an area of disseminated sphalerite and pyrrhotite.

Stratigraphic and spatial relations, and alteration zoning, indicate that mineralization formed in a subvolcanic environment at the top of the Goldslide intrusions and at the base of the Early Jurassic volcanic pile. The Goldslide porphyry is interpreted to be the mineralizing intrusion and the relationships with the mineral zones show similarities common to many porphyry systems (Rhys,1995).

A NI 43-101 compliant resource estimate for Red Mountain calculated in June, 2017 (Doerksen *et al.*, 2017) reported Measured plus Indicated category resources of 2.07 million tonnes grading 8.75 g/t Au and 24.8 g/t Ag. The report projects a six-year, 1000 tonne per day underground mining operation.

**Scottie Gold** is another precious metals vein type deposit that has defining features possibly useful for exploration planning at the Snoball prospect. The Scottie veins are hosted by andesitic volcaniclastic rocks of the Lower-Middle Jurassic Unuk River Formation of the Hazelton Group, near the contact with a large stock. These strata are cut by mineralized veins and faults, as well as lamprophyre, microdiorite and porphyry dikes.

An Early Jurassic stock, comprised of hornblende quartz monzonite to hornblende granodiorite, lies to the northwest of the deposit. A wide, irregular aureole around the intrusive is comprised of an inner envelope with a pervasively silicified contact zone containing fine disseminated pyrrhotite and pyrite, decreasing outwardly to less altered volcanic breccias. The intrusive rocks are locally sheared and chloritized, particularly where transected by the Morris Summit fault.

Structurally, the Scottie property is dominated by a set of north striking faults, the most dominant of which is the west dipping Morris Summit fault. West of the Morris Summit fault, east-west striking faults and lineations are common. The area east of the fault is cut by a suite of north striking microdiorite dikes.

The Scottie deposit consists of several flat-lying mineralized quartz-carbonate veins, each forming an *en echelon* or "ladder" vein pattern across widths of tens of metres, between pairs of northwest-trending steeply dipping veins, and extending to depths of up to 300 metres. The veins are components of secondary shears of the Morris Summit fault and are up to 7 metres wide, averaging 2 metres in width. The Main zone is northwest striking and three mineralized splays from this structure strike east-west and dip steeply north. The overall mineralized area measures about 400 by 250 by 300 metres. Elsewhere in the area, the veins are erratic in strike length and width.

The main veins of the "ladders" occur within near-vertical fracture zones bordered by siliceous alteration envelopes with poorly defined borders. The veins contain variable sulphide content, with common lenses of massive sulphide consisting largely of pyrrhotite and pyrite, as well as lesser sphalerite, chalcopyrite, galena, arsenopyrite, tetrahedrite and gold.

Intermittent exploration work was undertaken on the Scottie property commencing in the 1930s. Scottie Gold Mines placed the property into production in 1981 and, through 1984, the mine produced 2.98 tonnes of gold and 1.6 tonnes of silver from 160,000 tonnes of ore, with an average grade of 18.6 g/t Au. Non-compliant historical resource estimates suggest underground mineable Measured Reserves of approximately 29,000 tonnes grading 18.5 g/t Au, as well as Indicated plus Inferred Resources of 223,000 tonnes grading 8.5 g/t Au and 4.3 g/t Ag (BC Minfile No. 104B 034).

The region surrounding Snoball also contains several large porphyry-style systems which provide evidence that Late Triassic to Early Jurassic intrusions in this region are closely associated with numerous Au-Cu mineralized bodies and are undoubtedly the sources for much of the mineralization. Below are brief summaries of some of the porphyry deposits in the area.

Comprehensive drilling programs by Seabridge Gold Inc. on the **KSM** property have outlined four potentially mineable deposits along a 12 kilometre-long northeasterly trend. On March 12, 2019, Seabridge announced independent updated resource estimates for the KSM deposits (Kerr, Sulphurets, Mitchell & Iron Cap) as follows: Proven and Probable Mineral Reserves of 2,198 million tonnes averaging 0.55 g/t gold, 0.21% copper, 2.6 g/t silver, and 42.6 ppm molybdenum; and Measured plus Indicated Mineral Resources totaling 2.98 billion tonnes averaging 0.52 g/t gold, 0.21% copper and 2.8 g/t silver. An additional 4.56 billion tonnes are estimated in the Inferred Resource category grading 0.38 g/t gold, 0.32% copper and 2.4 g/t silver.

The mineral bodies at KSM are associated with the Early Jurassic "Mitchell Intrusions", high level diorite to monzonite plugs and dikes that intrude volcanic and sedimentary rocks of the Stuhini and Hazelton Groups. The Iron Cap deposit is the northernmost of the four deposits. Each of the deposits exhibits varying intensities of alteration but, as an exploration model, Iron Cap displays similar alteration to the others in the group, with pervasive silicification, lesser sericitization and chloritization, and containing typically 3-5% disseminated pyrite. The intense silicification overprints earlier potassic and chloritic alteration. Phyllic alteration, although present, is less pervasive than at the nearby Mitchell deposit. Copper bearing zones at Iron Cap demonstrate higher grades and more extensive potassic alteration than some of the other deposits, and this is believed to be consistent with its deposition primarily within intrusive host rocks that presented a deeper and hotter environment. Associated with the silicification at Iron Cap are wide zones of hydrothermal brecciation, scattered metre-scale quartz-pyrite-chalcopyrite veins and centimetre-scale quartz-carbonate-pyrite-chalcopyrite-sphalerite-galena-tetrahedrite veins interpreted to have been superimposed on earlier stockwork and disseminated mineralization, providing evidence of multi-stage mineralizing events.

At KSM, Ghaffari *et al.* (2016), envisage a combined open-pit and underground block caving mining operation projected to operate for 53 years. During the initial 33 years, open pit production

would average 130,000 tonnes per day, thereafter reducing to 95,000 tonnes per day from underground operations. Flotation concentrate would be produced on site and trucked to Stewart, BC for shipment to smelters.

The **Red Chris** porphyry copper-gold deposit, owned by Imperial Metals Corporation, commenced commercial production in 2015. The deposit is hosted by a Late Triassic diorite to monzonite body that has intruded Late Triassic Stuhini Group volcanic and sedimentary rocks. As of September 2015, combined open pit and underground block cave Measured plus Indicated resources at Red Chris totaled 1.035 billion tonnes averaging 0.35% copper, 0.35 g/t gold and 1.14 g/t silver (Imperial Metals Corporation website). The open pit resources are somewhat lower grade, but still total 847.9 million tonnes averaging 0.31% copper, 0.27 g/t gold and 1.01 g/t silver. Production is currently from two pits (Main and East) at an average of about 30,000 tonnes per day, with plans for a future increase in mining capacity. Concentrate is produced on site and trucked to Stewart for shipping overseas.

At **Schaft Creek**, pyrite, chalcopyrite, bornite and molybdenite occur predominantly in fractured to brecciated andesitic volcanic rocks of the Stuhini Group, intruded by augite porphyry basalt and quartz diorite dikes emanating from the nearby Late Triassic Hickman batholith. Less than ten percent of the mineralization occurs in intrusive rocks. Pyrite and bornite are mutually exclusive and most of the main deposit occurs within the bornite zone, with pyrite on the periphery.

Two phases of mineralization are observed. The first phase occurs as hydrothermal veins and breccias, and minor disseminations. It consists of bornite, chalcopyrite, molybdenite, and pyrite with potassic and sericite-chlorite alteration. The second phase is minor and consists of veins of molybdenite plus local specularite, as well as Cu-Pb-Zn sulphide veins without any significant corresponding alteration.

The distribution of most sulphide minerals is fracture-controlled. They occur in dry fractures or combined with quartz or quartz-calcite veinlets within the andesitic volcanics. The sulphide minerals within the intrusive rocks are usually disseminated, seemingly replacing mafic minerals. Trace amounts of covellite, chalcocite, tetrahedrite and native copper have been identified. Minor amounts of galena and sphalerite occur in breccia zones and in small calcite veins. Gold and silver are associated with the sulphide minerals.

A January 2013, NI 43-101 compliant feasibility study for the Schaft Creek project proposed a 130,000 tonne per day open pit mine, with Proven plus Probable Reserves of 940.8 million tonnes grading 0.27% copper, 0.19 g/t gold, 0.018% molybdenum and 1.72 g/t silver (Copper Fox website). The feasibility study contemplated a 21-year mine life. The owners are continuing exploration and collection of geotechnical data prior to making a production decision.

At the **Galore Creek** deposit, at least twelve alkalic porphyry copper-gold deposits are known to occur within the Galore Creek syenite complex, which is roughly 5 by 2.5 kilometres in area. This complex comprises a series of Late Triassic to Early Jurassic orthoclase-porphyry syenitic bodies, which have intruded coeval Upper Triassic Stuhini Group volcanic rocks and related sedimentary rocks.

The deposits are hosted primarily by highly altered volcanic rocks and pipe-like breccias adjacent to syenite dikes and stocks. Typically, the deposits are manto-shaped and have a north to northeast trend related to the syenite contacts and zones of structural weakness. Host rocks have commonly been converted to skarns, so that original rock types are unclear. The term "hornfels" was frequently applied to these meta-volcanic rocks in the early stages of exploration.

An extensive hydrothermal alteration system led to the formation of large gossans. Potassic alteration has converted the syenites and volcanic rocks to pink, white and orange coloured rocks, composed mostly of orthoclase. Propylitic alteration, best developed in the syenitic rocks, consists of assemblages of chlorite and calcite +/- albite and epidote. Overprinted calc-silicate alteration, consisting of abundant garnet, diopside, epidote, albite and anhydrite, is an unusual feature of the complex in some areas.

As of September 2011, the Galore Creek deposit had reported Proven plus Probable Reserves of 528 million tonnes grading 0.59% copper, 0.32 g/t gold and 6.02 g/t silver (Galore Creek Mining Corporation website). A prefeasibility study published in 2011 envisaged a large-scale open-pit mine providing ore to a process plant at a nominal rate of 95,000 tonnes per day over an approximate 18-year mine life. Concentrate would be produced and transported to the port of Stewart for shipment to various international destinations. The owners are undertaking environmental studies and seeking ways to optimize the economics of the project.

The area near the Snoball Property has also been explored for volcanogenic massive sulphide (VMS) deposits since the discovery of the nearby **Eskay Creek** deposit, and comparable rocks favourable for hosting VMS mineralization have been mapped on the Property.

Eskay Creek was, during its operation, among the world's richest gold-silver mines. Host rocks are volcaniclastic rocks of the Middle Jurassic Salmon River Formation of the upper Hazelton Group. The mineral zones were comprised of polymetallic sulphide and sulfosalt mineralization deposited in a transitional environment between a hot spring and deeper water VMS exhalative system. Like most VMS deposits, the mineralization consists of semi-massive to massive concordant sulphide lenses underlain by discordant stockwork feeder zones. Mineral bodies have diverse geochemical signatures dominated by Au, Ag, Cu and Zn and often accompanied by elevated As, Sb, Pb, Te and Hg. Mineralization displays both lateral and vertical zoning. Antimony, arsenic and mercury-rich mineral assemblages in the south part of the deposit grade into zinc, lead and copper-rich assemblages in the north. Vertical zoning is expressed as a systematic increase in gold, silver and base metal content up-section.

Mineralization is associated with areas of intense alteration. Mudstone host rocks are overprinted with varying amounts of chlorite, muscovite, chalcedonic silica, calcite and dolomite, with ubiquitous pyrobitumen. Beneath the stratabound mineralization found in the mudstone unit, the footwall rhyolite unit is highly fractured and intensely altered. Fracturing, alteration intensity and metal tenor appear to increase toward the upper contact. Within 3 to 4 metres of the upper contact, rhyolite-hosted mineralization is characterized either by massive chlorite-gypsum-barite rock or by quartz-muscovite-sulphide breccia. Mineralization in footwall rocks commonly occurs as semi-massive to disseminated, crystalline pyrite, sphalerite, tetrahedrite, galena and chalcopyrite.

Many mineral zones occur at Eskay Creek, but the majority of the mined reserves came from the 21 Zone. The bulk of mineralization in the 21 Zone occurs as a stratabound sheet within carbonaceous mudstones and underlying rhyolite-mudstone breccia. In the north, sulphide layers also occur in the hangingwall andesite unit. As traced by diamond drilling the entire zone extends 1400 metres along strike, 250 metres downdip and is from 5 to 45 metres thick.

Mining from 1995 to 2008 at Eskay Creek produced 2.1 million tonnes of ore yielding 101.65 tonnes of gold, at an average grade of 48.4 g/t Au, as well as 4,942 tonnes of silver, at an average grade of 2,221 g/t Ag (BC Minfile No. 104B 008).

Many mineral occurrences found near the Snoball Property are related to large regional structures. The dominant structural features in the region are north to northeast trending normal faults such as the Forrest Kerr Fault Zone which passes 9 kilometres to the west of Snoball, and which is associated with secondary northwest trending structures. The area extending 10 to 25 kilometres southwest from the Property contains several high-grade base and precious metal mineral showings, focused along the Forrest Kerr Fault Zone, in highly sheared and altered Triassic and Jurassic intermediate volcanic rocks. For example, 20 kilometres southwest of Snoball at the Goz-RDN project, drilling in 1991 by Noranda at the Wedge Zone in follow up to polymetallic float boulders returned 24.0 g/t Au over 11.6 metres with minor Ag, Cu, Pb and Zn. Other drill results in that area included 7.9 g/t Au over 7.8 metres and 11.7 g/t Au over 4.4 metres (Northernminer.com news, September 16, 1991). Continued exploration in this area has focused on potential volcanogenic massive sulphide mineralization in strata overlying these possible footwall veins.

### 6.2 Property Exploration History

A substantial amount of exploration work has been documented for the Snoball Property area, all of it occurring after the late 1980's. Exploration appears to have been initiated following a 1987 regional geochemical sampling program carried out by the BC Ministry of Energy, Mines and Petroleum Resources in which a number of drainages in the vicinity of the Property returned anomalous precious metals and pathfinder element values. Follow-up of these results with heavy mineral sampling, by Noranda Mines in 1989, identified drainages with anomalous gold, silver and arsenic values, which led them to stake claims that covered much of the area of the current Snoball Property.

In 1990 Noranda undertook exploration on the new claims that consisted of mapping, prospecting and collection of 43 rock and 17 silt samples. Their preliminary surveys outlined an area encompassing the current Snoball prospect measuring about 2 square kilometres with highly anomalous stream sediment geochemistry, in which rock samples returned values of up to 10.25 g/t Au and 116.7 g/t Ag, as well as moderate values in Cu, Pb, As and Sb (Savell, 1991).

Noranda continued exploration in 1991, focusing on the immediate area of the current Snoball prospect, including establishing approximately 12 kilometres of grid lines that facilitated geologic mapping, soil geochemical sampling, trenching, and magnetometer, horizontal loop electromagnetics (HLEM) and induced polarization (IP) geophysical surveys. A total of 175 rock samples and 359 soil samples were collected from the grid area, and analyzed. A multi-element soil anomaly was defined within which the >100 ppb Au anomaly measured 300 to 700 metres wide by 800 metres long, and widened to the north, where it remained open (Savell and Harrison, 1991). Arsenic and lead in the soils on the grid coincided closely with gold, whereas higher zinc and copper values were centered farther to the west of the gold anomaly, in an area underlain by a graphitic argillite unit that is possibly enriched in those elements. In the geophysical surveys, the gridded area was surveyed with magnetics and HLEM at 100 metre line-spacing and with IP at 200 metres line-spacing. The EM survey detected one isolated bedrock conductor that was coincident with a probable source comprised of a graphitic shear zone in carbonaceous black sediments. The magnetic survey showed a strong positive anomaly corresponding to an area of hornfels alteration and pyrrhotite mineralization adjacent to diorite dikes. Strong IP chargeability responses were associated with the strong magnetic high in the area of pyrrhotite mineralization and several zones of moderate chargeability correlated with north-trending soil geochemical anomalies and magnetic features.



Figure 6.2. Example of mapping by Noranda Exploration over core areas of the Snoball prospect, 1991

A key shortcoming of Noranda's work at the time and later, was its overriding focus, particularly for sampling and drilling (Figure 6.3 below), on the lower-elevation, more readily accessible parts of Snoball Ridge, and areas immediately adjacent to the south. Noranda's soil geochemical grid, for example, did not extend above the mid-level slopes of Snoball Ridge, leaving the multi-element soil anomalies later identified open up-slope to the north, and apparently strengthening in that direction.

Noranda's prospecting and mapping delineated two styles of sulphide mineralization within the bounds of the gold-in-soil geochemical anomaly. A first "Type 1" style was associated with diorite and hornblende porphyry intrusions that had hornfelsed the surrounding country rock. Pyrrhotite pods and disseminations in the hornfels have formed distinctive gossans and returned variable but locally high gold and copper values. A second "Type 2" variety consisted of quartz-sulphide veins and stringer networks crosscutting dark grey siltstone and light grey volcaniclastic rocks. A number of hand trenches were excavated to better expose and sample some of the mineral occurrences, and Noranda reported zones of polymetallic mineralization from which their fifteen highest grade samples averaged 60.1 g/t gold, 214.5 g/t silver, 0.12% copper, 1.7% lead, 1.5% zinc, and 7.2% arsenic. The peak value in this group came from a float sample grading 174.0 g/t gold and 427.7 g/t silver (BC Minfile No. 104G0143, Gold Giant Minerals news release c.1992).

In 1992, Noranda and Gold Giant Minerals formed a joint venture, operated by Noranda, to explore various targets with a diamond drill program. Twelve holes (Figure 6.3), totaling 1,504.6 metres, were drilled on the lower slopes of Snoball Ridge and areas immediately adjacent to the south, from which 1,246 core samples were collected and analyzed (Savell, 1992). The initial targets were blind Eskay Creek-type precious metals-rich stratiform massive sulphide targets, selected in part because of the similar elemental signature and Snoball's proximity to Eskay Creek, located 54 kilometres south. Three holes tested coincident geochemical and geophysical anomalies, three were drilled to test depth extensions of quartz-sulphide surface showings and six holes tested areas of pyrrhotite-bearing hornfels. The best drill holes were from pyrrhotite zones in the east-central grid area proximal to Snoball Pond. These holes returned moderate widths of anomalous gold values that were typically in the 0.5 to 1.0 g/t Au range, with the exception of hole SN-92-7 (Figure 6.4, below), which returned 2.16 g/t Au over 7 metres from a shallow intersection between 23 metres and 30 metres downhole. Drill holes summaries are presented in Table 6.1, below.

The drill holes were all located on the lower elevation, less precipitous and more accessible lower slopes of Snoball Ridge and areas nearby to the south, more than 500 metres downslope from the ridge top where the strongest part of the soil geochemical anomaly has, through work carried out by Evergold in the period between 2016 and 2018, now been identified. Interpretation and modeling of the full datasets now suggests that the downslope part of the geochemical anomalies in the vicinity of Noranda's historical drill holes may be largely derived from weathered mineralization transported downslope from the upper elevations of Snoball Ridge and the Pyramid Peak intrusive. Consequently, an area upslope measuring about 500 metres by 600 metres that contains strongly anomalous gold-silver-lead-arsenic rock and soil geochemistry, gossans, dikes and mineralized vein showings, remains completely untested by drilling and is a prime target area for further exploration. Furthermore, no down-hole geophysical testing was undertaken in the 1992 program, in spite of the fact that a downhole electromagnetic ("EM") survey was recommended by earlier workers to search for off-hole conductive sulphide bodies. What the drilling did indicate was that the immediate vicinity of the Snoball prospect is not underlain by the stratigraphy of the upper Hazelton Group associated with the Eskay Creek deposit. Prospective VMS-host Hazelton Group stratigraphy is present on the northeastern part of the Snoball Property, where its potential has not been adequately tested.


Figure 6.3. 2016 soil sample locations on geology, showing 1991 Noranda grid and 1992 drill hole locations (J. Rowe, 2016)



Photo 3. Gold-bearing "Type 1" style gossanous pyrrhotite zones around Snoball Pond (R. Greig, 2018)



Figure 6.4. Noranda drill section from 1992 showing assays on trace of holes SN92-6, SN92-7 and SN92-12, drilled north-northeast of Snoball Pond

Also in 1992, Tenajon Resources Corp. explored the Smith property, which at that time adjoined Noranda's Sno property to the west, but which is now encompassed by the Snoball Property. Geological reconnaissance and collection of 4 soil and 67 rock chip samples was undertaken on the Smith property, resulting in the identification of three styles of mineralization: (1) disseminated pyrite in both sedimentary and volcanic rocks, (2) quartz vein related disseminated pyrite, and (3) brittle shear-hosted gold and silver bearing quartz veins containing arsenopyrite, galena, sphalerite and pyrite. A new showing of this third style of mineralization, the "UT" vein, located toward what is now the western extremity of Snoball Ridge and constituting part of the current Snoball target area, averaged 51.6 g/t Au, 302 g/t Ag, 3.59% Pb, 2.05% Zn and 15.3% As over 1.5 metres (Visagie, 1992).

Hole No.	Depth (m)	Target	Mineralization	Interval (m)	Width (m)	Assays
SN-92-1	395.4	Au-As-Pb soil anomaly, deep chargeability	sheared pyritic zone	59.0-62.0	3.0	130 ppb Au
		anomaly, on trend from high-grade veins	10cm py-po vein	138.0-139.0	1.0	130 ppb Au, 37.2 ppm Ag, 0.25 % Zn
SN-92-2	106.7	Depth extension of trench mineralization,	two 3 cm qz-py-aspy veins	17.3-18.3	1.0	920 ppb Au, 0.49 % As, 0.12 % Zn
		coincident geochemical/ geophysical anomaly	one 2 cm qz-aspy vein	46.3-47.3	1.0	120 ppb Au, 0.07 % As
SN-92-3	68.0	Depth extension of trench mineralization,	narrow qz-ca-py veins	44.7-46.7	2.0	95 ppb Au
		coincident geochemical/ geophysical anomaly	over 0.5 m interval			
SN-92-4	106.7	Depth extension of trench mineralization,	graphitic, pyritic shear	12.0-13.0	1.0	150 ppb Au
		coincident Au-As-Pb geochem/ chargeability anomaly	graph. shear, qz-ca-py-sph vlts	64.0-66.0	2.0	610 ppb Au, 19.6 ppm Ag, 0.12 % As, 0.20 % Zn
SN-92-5	69.8	High Chargeability upslope from Au anomaly	dissem & veinlets of po			no significant results
SN-92-6	82.0	Silicification, diss po, mag & chargeability	10-15% po in silicified	4.0-16.0	12.0	458 ppb Au, 0.04 % Cu
		highs, resistivity low, Au soil anomaly	sedimentary rocks w. dikes			
SN-92-7	66.6	Silicification, diss po, mag & chargeability	10-30% po in silicified	3.0-17.0	14.0	513 ppb Au
		highs, resistivity low, Au soil anomaly	sedimentary rocks w. dikes	23.0-30.0	7.0	2162 ppb Au
			5% to semi-massive po-py	42.6-51.0	8.4	948 ppb Au
SN-92-8	75.9	Same zone as holes 6 & 7, 175 m to the NW	1-4% po-py in silicified, brecciated	4.0-40.0	36.0	various lengths returned 20 to 230 ppb Au
		approx. 50 m higher in elevation	sediments w. narrow hornblende	54.0-59.0	5.0	various lengths returned 20 to 50 ppb Au
			porphyry dikes	65.0-69.0	4.0	various lengths returned 20 to 50 ppb Au
			diorite cut by narrow qz veins	75.0-75.9	0.9	1500 ppb Au
SN-92-9	27.1	Same zone as holes 6 & 7, 175 m to the NW	2-4% po-py in silicified, brecciated	1.5-12.0	10.5	various lengths returned 20 to 120 ppb Au
		approx. 50 m higher in elevation	sediments w. narrow hornblende	17.0-19.0	2.0	425 ppb Au
			porphyry dikes	25.0-27.1	2.1	225 ppb Au
SN-92-10	97.0	Chargeability high and Au anomaly on trend	narrow qz-ca-py veins over 35 m			no significant results
		from high-grade veins in outcrop	in siltstone & greywacke			
SN-92-11	127.7	Magnetic high and 2.6 g/t Au in rock sample	2-4% po in mod. silicified sed	6.0-24.0	18.0	125 ppb Au
			rocks w. narrow porphyry dikes			
SN-92-12	281.6	Chargeability high and Au soil anomaly, rock	2-5% po in silic. seds, a few dikes	3.0-15.0	12.0	1095 ppb Au
		sample 5.3 g/t Au in gossan zone, and test	2-10% po in bleached, silicified			
		down dip from zone in holes 6 & 7	porphyry dikes w. intervals of			
			siliceous sedimentary rocks	34.5-82.0	47.5	344 ppb Au
			3-5% po in porphyry dikes (60%)			
			and silic. sedimentary rocks (40%)	98.0-111.0	13.0	538 ppb Au

### Table 6.1. Summary of Historical 1992 Noranda Diamond Drilling Results



Photo 4. Old Noranda core from 1992 drilling program stacked on site approx. 400 metres southwest of Snoball Pond at 409630 E, 6335830 N (R. Greig, 2018)

In 1995 Condor International Resources Ltd. undertook a review of historic data and visited the Property to evaluate its potential for hosting a precious metal deposit (Game, 1995). The evaluation included the collection of 29 rock samples from areas of known mineralization and the collection of 10 silt samples. Some of the rock samples were from stockwork zones and quartz breccia zones showing pronounced epithermal textures, including silicification of the sedimentary host rocks and the presence of open-space textures in both quartz veins and breccias. Other sampling concentrated on a gossanous area near Snoball Pond where disseminated to massive pods of pyrrhotite occur in hornfelsed, fine-grained sedimentary rocks, adjacent to a diorite intrusion and related hornblende porphyry dikes and sills. This was the area of best drilling results by Noranda and Gold Giant in 1992. Many of the grab samples returned strongly anomalous gold values, with some of the highest values coming from vein and breccia samples, including SNGR016 that assayed 141.0 g/t Au and 446.0 g/t Ag (Game, 1995).

In 1996, Condor continued evaluating the Snoball Property by prospecting, geological mapping, and hand trenching (Weber, 1996). They re-established the 1991 Noranda grid for mapping control, prospected the area of the large soil geochemical anomaly, excavated four new hand-trenches and re-mapped and re-sampled one old Noranda trench. The new trenches were located in the western and southwestern part of the Noranda grid, outside of the area of the strong gold-in-soil anomaly and some 800 metres downslope from the top of Snoball Ridge. Re-sampling of the old Noranda trench returned 9.9 g/t Au, 33.6 g/t Ag, 0.3% Pb, 0.1% Zn and >1% As across a 0.4 metre-wide quartz vein that showed evidence of strong shearing. One of the new trenches returned 14.38 g/t Au, 185.6 g/t Ag, 2.9% Pb, 0.2% Zn and >1% As across a 0.55 metre-wide quartz vein that was also faulted or sheared and noted to pinch and swell in width. Ten metres east



of this trench, strongly oxidized veins returned several multi-gram Au values that ranged up to 25.28 g/t Au over 0.5 metres, accompanied by 233 g/t Ag, 4.2% Pb, 1.9% Zn and >1% As.

Figure 6.5. Example of trenching and sampling by Condor International, 1996

Weber (1996) concluded that there were many showings of high-grade precious-metal quartzsulphide veins on the Property, although the ones that he viewed were generally narrow, limited in strike length, and typically pinched and swelled over short intervals. He also noted that the veins tended to occur in or along small faults, increasing in thickness in dilational lenses created by small crosscutting faults. As well, he observed that no major causative structure had been identified on which to focus further exploration. Weber (1996) also concluded that the 1991 soil geochemical anomaly was comprised primarily of samples of very immature "C horizon" soil and talus fines and that on the steep topography many of the high soil geochemical values obtained were the consequence of downslope dispersion of talus fines and rock fragments from the many vein showings present on the upper slopes. Weber (1996) optimistically concluded that the 1992 drill holes in the eastern grid area that had returned intermittent low-grade gold in pyrrhotite-bearing, hornfelsed sedimentary rocks indicated good potential for discovery of bulk-tonnage volumes of low-grade gold mineralization. Finally, Weber (1996) suggested that to properly evaluate the extent and grade of this type of mineralization, further mapping, rock chip sampling and drilling would be required.

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central part of the Snoball Property. Since platinum group elements had not been included in previous analytical work, a program to determine the potential for platinum group metals was carried out. Ainsworth (2002) undertook a geochemical orientation survey, comprised of three stream sediment and eight rock samples. The results of the survey did not indicate the potential for platinum; however, the widespread gold-silver mineralization seen in irregular pods and lenses in the course of the sample collection encouraged a recommendation for further work on the claims. Ainsworth (2002) suggested that this work include probing some of the 1992 Noranda-Gold Giant drill holes to determine if they were still open, with the aim of using Electromagnetic surveying to test for off-hole concentrations of gold-bearing sulphide mineralization.

There are no other publicly available records of any additional work having been undertaken in the area of the Snoball Property since 2002, although at times the showing area has been staked, dropped, and then re-staked by various parties.

Documentation of current exploration programs by the Company may be found in Section 9, Exploration by the Company.

#### 7.0 GEOLOGICAL SETTING AND MINERALIZATION

Sections 7.1 Regional Geology and 7.2 Local and Property Geology following are transcribed in part from Assessment Report #36534, 2016 Geological & Geochemical Program on the Snoball Property (Rowe, 2017).

#### 7.1 **Regional Geology**

The Property lies within a mineral-rich belt that extends over 200 kilometres northerly from near the town of Stewart, along the western part of the Stikine Arch terrane and includes numerous advanced stage precious metal deposits (Figures 6.1, 7.1, 7.2). Logan et al (2000) describe the geological history of the area as consisting of five consecutive volcanic arcs, from mid-Paleozoic to mid-Mesozoic, developed in sediment-poor and sediment-rich marine settings. Regional-scale unconformities within the study area include a Late Permian-Early Triassic unconformity, a Late Triassic-Early Jurassic angular unconformity and nonconformity, and a late Early Jurassic angular unconformity (Aldrick et al, 2005). Lulls in volcanism at the Triassic-Jurassic boundary and in the uppermost Lower Jurassic were marked by tectonic uplift, deformation and erosion (Souther, 1972). Cretaceous fold-and-thrust belt deformation in the western part of Stikinia resulted in the older, mineralized volcano-sedimentary rocks being brought close to surface in this region.

Several plutonic episodes in the area range from Devonian to Eocene and were, in many cases, coeval with volcanic strata. The four youngest plutonic suites generated important mineral deposits. These include the Late Triassic to Early Jurassic (Copper Mountain), Early Jurassic (Texas Creek), Middle Jurassic (Three Sisters) and Eocene (Hyder) intrusions.

The major stratigraphic units exposed near the Snoball Project area are the Paleozoic Stikine Assemblage, Triassic Stuhini Group, Lower to Middle Jurassic Hazelton Group, Jurassic-Cretaceous Bowser Lake Group and Pleistocene Mount Edziza Complex.



**Figure 7.1.** Location of the Snoball Property and significant mineral deposits in the "Golden Triangle" of northwestern BC (J. Rowe, 2019)

The oldest stratified rocks in the area near the Property are Paleozoic Stikine Assemblage, which underlie a north-trending belt about 20 kilometres west of the claims (Figure 7.2). The Paleozoic rocks, shown in grey-blue on Figure 7.2, consist of volcanic flows and tuffs, thin-bedded clastic sedimentary rocks and some thick limestone members of Carboniferous to Lower Permian age. The predominant rock types include argillite, siltstone and conglomerate with calcareous interbeds and limestone or marble units, as well as basaltic to andesitic flows with crystal and lithic lapilli tuffs. This unconformity-bounded belt is in contact to the east with a belt of Upper Triassic and Jurassic sedimentary and volcanic rocks, some of which underlie the Snoball Property.



Figure 7.2. Regional geologic map for the Snoball Property (legend, below) (J. Rowe, 2019)



Figure 7.3. Geology legend to accompany Figure 7.2 above

The Triassic-Jurassic belt is comprised mainly of the Stuhini and Hazelton Groups, shown in shades of green on Figure 7.2. The Upper Triassic Stuhini Group consists of a lower volcanic package with lesser amounts of intercalated sedimentary rocks, overlain by a thick upper package of primarily sedimentary rocks with some interlayered volcanics. Alldrick *et al* (2004b) have interpreted the Stuhini Group in the map area as a subaqueous accumulation of dacite, andesite and bimodal basalt-rhyolite volcanic rocks in a setting characterized by a progressively increasing accumulation of volcaniclastic sedimentary rocks with carbonate cement. The top of the Stuhini Group is a regional angular unconformity that is overlain by Hazelton Group strata. Total thickness of the Stuhini Group cannot be determined due to this truncation, but minimum thickness is 3,000 metres (Alldrick *et al*, 2004b).

The overlying Early to Middle Jurassic Hazelton Group is also an island arc succession, consisting of a lower package of volcanic rocks of intermediate composition along with derived clastic sedimentary units, a middle interval that includes thin, but widely distributed felsic volcanic rocks, and an upper unit of fine clastic sedimentary rocks, with local bimodal volcanic rocks dominated by basalt. Carbonate units are rare or absent in Hazelton Group strata distinguishing it from Stuhini Group (Alldrick *et al*, 2004b).

Gagnon *et al* (2012) recognized that the Hazelton Group consists of lower and upper parts, separated by a diachronous contact. Lower Hazelton Group strata have not been identified in the Property area but to the north, near Kinaskan Lake, exposed rocks of the lower sequence comprise polymictic volcanic conglomerate, sandstone and grit; part of the basal Jack Formation. Overlying the Jack Formation along a paraconformable to unconformable contact is a thick sequence of

andesitic pyroclastic and epiclastic volcanic rocks that make up the remainder of the Lower Hazelton Group. Previously the andesitic succession was divided into Ukuk River Formation and overlying Betty Creek Formation, based primarily on colour differences, which were due to submarine versus subaerial deposition. Nelson *et al.* (2018) have proposed that previously defined Unuk River Formation rocks be included in Betty Creek Formation.

The upper part of the Hazelton Group in this region consists of a volcanic-dominated succession of interlayered basalt, rhyolite, and sedimentary rocks thousands of metres in thickness that occupies a narrow, elongate north-trending belt, that has been referred to as the Eskay Rift (Alldrick *et al*, 2005). This sequence of rocks contains several different facies along the rift due to deposition within a number of fault-bounded sub-basins. Gagnon *et al* (2012) have proposed the name Iskut River Formation for this succession in the Iskut River region and elsewhere in western Stikinia. The Iskut River Formation is a highly variable succession in which mafic and felsic volcanic and sedimentary units occur in differing stratigraphic sequences, with multiple stratigraphic repetitions in some areas.

A type-section of Iskut River Formation, located 40 kilometres north of the Property at Table Mountain, was documented by Gagnon *et al* (2012). At this location, the informally named "Willow Ridge Complex" has a basal rhyolite unit 70 metres thick, overlain by 1770 metres of pillowed basalt flows and breccias. The uppermost 5 metres is strongly altered and partly replaced by pyrite below the contact with overlying mudstone. Thin laminated beds of pyrite in the mudstone are apparently of exhalative origin (Gagnon *et al*, 2012). The overlying sedimentary interval consists of mudstone, siltstone, sandstone and conglomerate, coarsening upward over a 60 metre thickness. The sedimentary rocks are overlain by at least another 1480 metres of basalt, lithologically similar to the lower basalt unit. Its upper contact is not exposed and has been interpreted as a fault, however in other areas, such as at Eskay Creek, the basalt is overlain by a thick succession of tuffaceous mudstone, which is included in the Quock Formation.

Other facies of the Iskut River Formation have been identified within different areas of the Eskay Rift and some have been distinguished by Nelson *et al* (2018). Near Downpour Creek, approximately 10 kilometres south of the Property, sections of mainly medium-grained siliciclastic beds, many hundreds of metres thick, are assigned to the Downpour Creek siliciclastic unit. Conglomerates south of Downpour Creek and on western Table Mountain are assigned to the Kinaskan conglomerate.

The Middle to Late Jurassic Bowser Lake Group is suggested by Evenchick and Thorkelson (2005) to have a conformable, gradational contact with the underlying Hazelton Group rocks. The Bowser Lake Group, shown in grey on Figure 7.2, is a thick, clastic marine sedimentary succession, including greywacke, chert pebble conglomerate, sandstone and mudstone that is very similar, and difficult to distinguish from, rocks of the uppermost Hazelton Group. The lower Bowser Lake Group is a marine sequence of complexly inter-fingering deltaic, shelf, slope and submarine fan assemblages in excess of 3000 metres thick, sourced mostly from uplifted Cache Creek Group rocks in the northeast. These are overlain by several thousand metres of low energy fluvial deposits and alluvial fan and braided stream systems.

Miocene to Recent volcanic strata from the Mount Edziza Volcanic Complex form a north-trending belt that blankets the older rocks to the north of the Project area. Rocks of this Complex, shown in orange and yellow on Figure 7.2, are mostly subaqueous and subaerial lava flows of alkali olivine basalt and lesser plagioclase-phyric hawaiite, as well as tuff breccias, ash flows, localized trachyte domes and minor subvolcanic intrusions of soda granite. Farther north are local pyroclastic cones and areas of vitrophyric ignimbrite containing crystal fragments, aphanitic lithic lapilli, coarse lithic ash and flattened pumice (Alldrick *et al*, 2006).

Plutonic rocks with a wide variety of compositions and ages are abundant in the vicinity of the Snoball Property. The oldest intrusions in the area form a north trending belt nine kilometres west of the Property. They are Late Devonian in age and together form one of the larger intrusive bodies in the region, varying in composition from granite to hornblende diorite to local hornblendite. Other large intrusions comprised of Middle to Late Triassic hornblende quartz diorite to granodiorite are found 25 to 40 kilometres west of the Property within a belt of roughly coeval Stuhini Group rocks. Localized ultramafic(?) bodies, also of Middle to Late Triassic age, are found in the same area. Sizeable stocks of Early to Middle Jurassic quartz monzonite to diorite are located 40 to 65 kilometres northwest of the Property, where they cut Stuhini Group and Paleozoic rocks, as well as some of the older intrusive bodies.

Small stocks of Triassic to Jurassic quartz monzonite and potassium feldspar-phyric monzonite and syenite of the Copper Mountain Suite intrude Stuhini rocks a few kilometres to the north and west of the Property. In addition, small bodies of possibly Early Jurassic quartz diorite to leucocratic, and commonly porphyritic, intrusions are found both on the Property and in the surrounding area. These have been correlated with the Texas Creek Suite (Logan *et al*, 2000); a suite that is commonly associated regionally with porphyry copper-gold, transitional gold and epithermal gold-silver deposits. For example, they are associated with the Red Chris porphyry copper-gold deposit, the Hank property epithermal gold deposit, and the ME, Mary, Spectrum, GJ and Groat prospects, all located within the local area (Alldrick *et al*, 2004b). A small fault-bounded slice of Early Jurassic, possible Alaskan-type, ultramafic(?) intrusive rock has been mapped at the Snoball prospect at the east end of Snoball Ridge (Photo 5, below), immediately adjacent to Pyramid Peak and along the faulted (Northmore Fault) contact between Stuhini Group and Hazelton Group rocks.



**Photo 5.** View easterly from Pyramid Peak toward a thin wedge of ultramafic(?) along Northmore Fault between diorite intrusive complex, foreground, and Hazelton volcanics, background (C. Greig, 2016)

Near the west edge of the map area shown in Figure 7.2 small Paleocene to Eocene granitoid stocks are present that are probable outliers of the more massive Coast Belt plutons located farther to the west. Eocene quartz-feldspar porphyry, felsite and rhyolite cut both Stuhini Group rocks and Hazelton Group rocks within the nearby area. Alldrick *et al* (2004b) have stated that these intrusions are likely part of a large-scale magmatic event, with common and typically north-trending dikes acting as feeders to overlying felsic flows that have been subsequently eroded.

Several of the plutonic episodes have mineral occurrences associated with them, especially near their contact zones (Figure 7.2, BC MinFile Occurrences). Additionally, a majority of the occurrences are spatially associated with faults that trend north, northeast and northwest. These faults commonly occur along the boundaries between lithostratigraphic units and at intrusive contacts. Two large, northwest-trending, steeply dipping faults have been mapped crossing the Snoball Property, with the westernmost (Figures 7.2 and 7.4) marking the contact between Stuhini Group and Hazelton Group rocks.

Basin-bounding, north-south trending, growth faults of the Eskay Rift are located several kilometres to the west and to the east of the Property. Northwest trending faults, one cutting through the Property and one near More Creek 8 kilometres south of the Property, may have developed a subbasin within the rift. These structures may have provided channel ways for hydrothermal fluids, which created localized mineral zones and associated alteration halos. As well, the structures appear to be deep-seated zones of weakness; suitable pathways for intrusion of small stocks and dikes.

## 7.2 Local and Property Geology

The Snoball Property is predominantly underlain by Stuhini Group volcanic and sedimentary rocks in faulted contact along the northwest trending Northmore Fault with Hazelton Group volcanic and sedimentary rocks that underlie the northeast corner of the Property (Figures 7.4 and 7.5). At the centre of the Property, in the immediate vicinity of the Snoball target area, along and immediately west of the Northmore Fault, a small, probably Late Triassic to Early Jurassic diorite stock has been emplaced, outcropping at Pyramid Peak, as well as an adjacent small wedge of ultramafic(?) of unknown age. A number of dikes and sills emanate outward from the intrusions and siliceous alteration zones are common adjacent to the stock.



**Figure 7.4.** Simplified geology of the Snoball Property and immediate region, including Golden Ridge Resources' intrusion-related, active Hank project 4 kilometres to the north, showing relationship to the Stuhini-Hazelton unconformity (BCGS Red Line) (Golden Ridge Resources, 2018)

Detailed geological mapping has been documented by Savell and Harrison (1991) in the mineralized Snoball prospect area at the centre of the Property, and descriptions of the geologic units reported below borrow heavily from their work in that part of the Property. In addition, R. Greig, B.Sc., P.Geo, spent 5 days in July, 2018 mapping the geology of the roughly 225 ha. area of the Snoball prospect, which includes the historical Noranda grid and mineral showings.

# 7.2.1 Lithologic Units

Exposures of Stuhini Group rocks in the central part of the Snoball Property at the Snoball Prospect are mainly sedimentary, and likely belong to the upper Stuhini sequence of Alldrick *et al* (2004b). The sequence is described as a mixed fine to medium grained, clastic succession of siltstones, sandstones, rare pebble conglomerates and minor but distinctive limestone and volcanic members. The sandstones and conglomerates are characterized by buff-orange weathering carbonate cement.

The primary unit in the Snoball target area mapped by Savell and Harrison (1991) is thinly laminated to thickly bedded dark grey siltstone, argillite and fine to medium grained volcanic wacke. Subdivisions of this unit, identified locally in discrete outcrops, consist of minor very fine-grained grey tuff (Savell and Harrison Unit 2a), carbonate-rich siltstone, sandstone and limestone (Unit 2b) and poorly sorted conglomerate containing limestone, sandstone and siltstone fragments (Unit 2c). Fining-upward sequences suggest that the stratigraphy is upright. Silty limestone beds (Unit 2b) occur infrequently and locally host Upper Carnian (Upper Triassic) belemnites, bivalves and ammonites (Palfy, in Weber, 1996).

In the southwest part of the Snoball prospect area a unit of black, finely bedded argillite with minor siltstone (Savell and Harrison Unit 1) appears to underlie the rocks of Savell and Harrison's Unit 2 and is assumed to be part of the Stuhini Group. These fine-grained rocks of Unit 1 are described as intensely folded and deformed, in contrast with the more competent, coarser grained rocks of Unit 2. The argillite is highly sheared and it hosts rare centimetre-scale stratiform pyrite lenses (Savell and Harrison, 1991).

In the central part of the Snoball prospect area an elongate northwest-trending zone of hornfels altered rocks (Savell and Harrison Unit 3) has been identified over a length of more than 1,000 metres. These siliceous rocks have been interpreted as altered rocks of Unit 2 that contain local identifiable tuff layers and possible chert horizons. The hornfels contains ubiquitous finely disseminated pyrrhotite, from trace to 1%, with local small pods of massive pyrrhotite. Intrusive rocks of equigranular to porphyritic hornblende diorite are exposed at the east end of Snoball Ridge at Pyramid Peak and intermittently along the east side of the hornfels zone, spatially related to the Northmore Fault zone that lies directly to the northeast. The intrusions are probably linked to the hydrothermal event that caused the hornfels alteration and it is possible that these diorite exposures are part of a larger intrusive body that may underlie much of the hornfels zone (up to 500 metres wide – Figure 7.7), as well as the common dikes that cut the hornfels and the siltstone units, and the results of a helicopter-borne magnetic survey carried out by Evergold in 2017.



Photo 6. View south along trend of diorite intrusive complex from vicinity of Snoball Pond, resistant due to rusty-coloured hornfelsing of sediments around diorite intrusive complex (R. Greig, 2018)



**Photo 7.** Darker diorite dike cuts light diorite dike or sill cutting sedimentary rocks. Veins cut all phases. A bleached selvage surrounds many veins and also follows the contact of the darker diorite dike (R. Greig, 2018)

Dikes (Photo 7) have been mapped cutting the rocks of both Unit 2 and Unit 3, but are more abundant in the Unit 3 hornfels. The majority of the dikes are porphyritic, with laths of hornblende in a fine-grained grey-green matrix. They are generally tabular, less than 2 metres in thickness, and apparently do not show any preferred orientation.

Massive pods of pyrrhotite are also found locally and are commonly located along the contacts between dikes and altered sedimentary rocks. The pyrrhotite-rich zones are indicated at surface by the presence of numerous patchy gossans (Photo 18, below), from which significant gold values have been returned from a number of samples. A small body of feldspar porphyry has also been mapped near Snoball Pond in the central part of the grid, containing fine subhedral feldspar in a grey-brown aphanitic matrix.



Photo 8. View of contact zone (dense intrusion of diorite dikes into sedimentary rocks) at Snoball Pond. Hornfelsing of sediments (gossanous, pyrrhotite-rich) has locally occurred along the contacts (R. Greig, 2018)

Alldrick *et al* (2004b) have described thin members in the upper Stuhini Group regionally that include massive light grey limestone and limestone conglomerates, as well as basalt flows and breccias, and black to white rhyolite flows with associated bright apple green, massive to bedded rhyolite ash tuffs. Local thin flows of andesite and dacite were also noted by Alldrick *et al*(2004b). A few outcrops of limestone, calcareous siltstone and conglomerate were distinguished by Savell and Harrison (1991) however; the other rock types that may be part of the upper Stuhini were not noted in their mapping.

Alldrick *et al* (2004b) also described lower Stuhini Group units that are not exposed on the Property, but are found in areas to the north and south (Figure 7.2). They comprise mainly dacitic volcanic rocks, including massive, fine-grained, light grey, aphanitic dacite, which is overlain by a succession of light greenish grey, medium and rhythmically-bedded ash tuff. Tuff grades laterally into coarse, massive dacite breccia and crudely bedded dacite conglomerate hosting clasts ranging from pebble to cobble size and commonly displaying distinct flow banding. The dacitic units are overlain by fine to coarse-grained volcanic sandstone, which is overlain in turn by an andesite sequence. The andesite sequence consists of several facies and varies from a series of proximal lava flows with varying porphyritic textures, typically separated by minor units of tuff, to more distal, coarse-grained plagioclase-phyric andesite fragmental rocks with rare sandstone interbeds. The andesitic fragmental facies is host to both the Hank epithermal gold deposit and the Mary porphyry copper-molybdenum deposit, located 6.5 kilometres and 14 kilometres to the north respectively (Alldrick *et al*, 2004b). Andesitic rocks of the lower volcanic package are overlain by the upper sedimentary package of the Stuhini Group, as described above, and as exposed in the Snoball target area at the core of the Snoball Property.

Adjacent to the east of the Snoball target area, Savell and Harrison (1991) mapped the northwesttrending Northmore Fault, interpreted to extend under the glacier occupying the bowl and valley on the north side of Snoball Ridge. East of the Northmore Fault, Savell and Harrison mapped Hazelton Group rocks. Their Unit 6, directly east of the fault, comprises green to grey to maroon andesitic volcanic rocks, which include tuff to tuff breccia, that may be part of the re-defined Betty Creek Formation of the lower Hazelton Group (Nelson *et al*, 2018). Interbeds of volcaniclastic rocks of andesitic composition as well as a local feldspar phyric volcanic unit that may represent a flow also occur in the volcanic sequence. Within the upper 100 metres of the volcanic and volcaniclastic sequence, but underlying a finer clastic section, tabular rhyolite flows occur locally. They are commonly pyritic and vary from massive, to flow-banded, to brecciated, to tuffaceous.

East of, and apparently overlying the Unit 6 volcanic rocks, is a thick sequence of clastic sedimentary rocks, which may belong to Iskut Formation of the upper Hazelton Group. These clastic rocks are comprised of grey to dark grey interbedded siltstones and greywacke with minor shale and black argillite (Savell and Harrison's Unit 7). Parts of this sequence also include exposures of felsic tuff and chert. The descriptions by Nelson *et al* (2018), of their Downpour Creek siliciclastic unit of the Iskut Formation, which contains small bodies of rhyolite and basalt, bears a close resemblance to the rocks on the east side of the Property. These rocks, if they belong to the Downpour Creek unit, may be equivalent in age with the host rocks for the Eskay Creek deposit, located 54 kilometres to the south (Nelson *et al*, 2018).



Figure 7.5. Lithology and structure of the immediate area of the Snoball prospect (R. Greig, 2019)

Mapping by R. Greig (2018) of the 2.25 km<sup>2</sup> Snoball target area, including the relatively small portion of the prospect tested by Noranda drilling in 1992, and roughly corresponding to the area mapped by Savell and Harrison in 1991, has confirmed many of their geological observations and interpretations, and added new insights. Greig maps a predominantly north-northwest-trending complex of porphyritic to phaneritic diorite dikes, sills, and irregularly-shaped stocks, which intruded incompletely lithified, thin-to-medium bedded, fine grained sedimentary rocks of presumed upper Triassic age. Contact relationships and textures suggest that the system was probably submarine and emplaced at shallow crustal depth. Based on orientations of bedding (striking predominantly northeast with dips predominantly 25° southeast in the central part of the map area) and veins (predominantly dipping 65° northwest with a subordinate set dipping 50° southwest), the system has been tilted moderately to shallowly southeast.



**Figure 7.6.** Poles to all veins in map area (colour contoured, solid circles, 181 measurements), showing predominant northwest dip, subordinate southwest dip, and considerable scatter, and poles to bedding measurements (not contoured, open squares, 54 measurements), showing predominant shallow-moderate southeast dip and scatter to steeper southeast and northwest dips resulting from folding around northeast to north-northeast-trending axes (R. Greig, 2018)

Due to complexities in detail and for clarity of presentation (Figure 7.5), R. Greig consolidated the observed lithologies into map units comprised of 1) hornblende diorite, 2) hornblende diorite contact zone, 3) pyroxene diorite contact zone, 4) upper layered (sedimentary) rocks, and 5) lower layered (sedimentary) rocks.

The hornblende diorite unit includes i) fine-medium grained, locally hornblende porphyritic, phaneritic diorite lithologies and/or ii) chaotic-textured diorite consisting of fine-medium feldsparhornblende-phyric, medium-coloured diorite, commonly with abundant inclusions of amphibolite, "light diorite" and wallrock (ash tuff), in total proportion >75%.

The hornblende diorite contact zone includes chaotic-textured diorite (ii) as above, in addition to iii) dark diorite dikes consisting of fine to medium grained, feldspar-hornblende phyric dikes and sills, and iv) light diorite dikes consisting of medium-coarse grained, lathy hornblende phyric dikes and sills, in combined proportion >25% in chaotic contact with hornfelsed sedimentary wallrock.

The pyroxene diorite contact zone was observed as a cluster of fine to coarse grained pyroxenefeldspar phyric diorite dikes and sills with lobate contacts, occurring on the southern edge of the mapped area, which contain distinct equant medium to coarse-grained pyroxene phenocrysts, and fine to medium-grained feldspar phenocrysts.

The upper layered sedimentary unit consists of thin to thick bedded, well bedded mudstone to medium grained sandstone, with the latter predominating, and minor calcareous sedimentary

rocks. One marker bed with multi-centimetre spheroidal nodules was traced into the hornfels, near the stratigraphic level of presumably calcareous beds which host skarn alteration. Greig considers that rocks east of the Northmore Fault may also be part of this sequence, but this is not certain. Fossils collected in this sequence by Weber (1996), indicate Upper Carnian (Upper Triassic) age. Commonly hornfelsed (often with disseminated pyrrhotite), locally calcareous beds were seen to be converted to silica-marble or, rarely, epidote or green garnet(?) skarn.

The lower layered sedimentary rocks were described by Greig as laminated to thin bedded, well bedded black mudstone to medium grained sandstone (with the former predominating over the few thicker (up to 80 cm) beds of the latter), plus (most abundant) dark grey calcareous fine-grained sedimentary rocks. This unit was observed to underlie the upper layered sequence and to be distinctly darker in colour, and to be convolutely folded in the core of an antiform on the west side of the mapped area.

# 7.2.2 Structural Geology

The dominant northwest structural grain in the vicinity of the Property is largely defined by deepseated northwest-trending faults that outline a series of elongate, fault-parallel blocks of relatively intact stratigraphy (Alldrick *et al*, 2004b). Between the blocks there has been differential uplift, resulting in adjacent blocks displaying a number of different facies packages with pronounced variations in stratigraphy and thicknesses. The various facies were deposited in Lower to Middle Jurassic, suggesting that during that time growth faults were active, forming sub-basins within what has been termed the "Eskay Rift", first suggested by Anderson (1993) (quoted from Alldrick *et al*, 2004b).

Minor warps and gentle folds within the Upper Triassic stratigraphy were also developed along northwest-trending fold axes, suggesting that minor buckling may have accompanied the faulting and differential uplift of fault-bound stratigraphic blocks.

The prominent northwest-trending fault that cuts through the Snoball Property immediately adjacent to the east of the heavily mineralized Snoball prospect area has been named the Northmore Fault on regional maps (Alldrick *et al*, 2004b) (Photo 9, below). It is a large-scale feature with significant sinistral offset, and strata near the fault appear to be more intensely folded than equivalent strata elsewhere in the region. The fault also appears to be the locus for a string of small plutons and Alldrick *et al*, (2004b) suggested that it might have been a syn-intrusive structure active during the Early Jurassic. Property mapping by Savell and Harrison (1991) outlined areas of strongly deformed and folded argillite units, but bedding attitudes in the more competent siltstone and tuff units on their map typically show northwest and northeast strikes with relatively shallow dips, suggesting that broader, more open folds mainly characterize the host rocks. The variation may also be taken to suggest that some subsidiary faults, perhaps including low angle ones, may have gone unrecognized on the Property.



Photo 9. Northmore Fault, viewed northwest, Hazelton volcanics to the right, gossanous diorite intrusive complex and Stuhini rocks to the left (C. Greig, 2016)

This latter observation has been borne out by Greig (2018) who mapped not one but two large west-southwest-dipping faults cutting all geological features on the Snoball target area (Figure 7.5), which he has named the "Eastern Fault" (corresponding to the Northmore Fault) and the "Western Fault". Measurements on the Western Fault, which bisects the rocks toward the eastern end of Snoball Ridge where it meets the west slopes of Pyramid Peak, indicate sinistral-normal slip, and displacement of an intrusive contact and the boundary of the hornfels with sinistral strike separation of probably less than 250 metres. No observations constraining the nature of offset were made on the surface of the Eastern (Northmore) Fault, which appears to largely truncate the mineralizing system at surface. However, the rocks on the poorly-mineralized east side of the fault bear some similarity to those of the upper layered rocks on the west side of the fault.

Greig additionally observes that bedding in most of the central part of the mapped area dips moderately-shallowly southeast, forming a limb separating an anticline-syncline pair (an antiformal hinge along the northwest margin of the map area and a corresponding synformal hinge along its southeast margin marking the boundaries to the dip domain which contains most of the exposed system) with northeast to north-northeast-trending axes (Figure 7.5). The orthogonality of the veins to bedding (Figure 7.6) suggests that the veins initially had predominantly steep or subvertical dips. Measured dikes in the intrusive complex predominantly trend north-northwest and dip steeply to the southwest, likely mirroring the mapped general trend of the complex.

To the east of the Northmore Fault, tight, northwest-trending folds and small thrust faults, suggestive of possible northeastward compression, have been mapped within the Hazelton sedimentary sequence by Alldrick *et al* (2004b). This style of deformation is similar to that seen throughout the Skeena Fold Belt that affected much of the surrounding region during the Cretaceous period.

### 7.2.3 Mineralization and Alteration

Previous workers on the Snoball Property identified the potential for different styles of precious metal-bearing mineralization. Recent fieldwork by R. Greig (2018) has confirmed observations by earlier workers that gold-bearing showings and mineralization encountered in historical trenches and drilling can be categorized into two primary styles: a "Type 1" replacement style mineralization comprising hornfels with disseminated to semi-massive pyrrhotite and lesser pyrite and chalcopyrite occurring as disseminations, veinlets, patches and small irregular pods; and a "Type 2" style comprising discontinuous sulphide-bearing veins, vein breccias and vein stockworks with epithermal textures (Photos 11 and 12, below). Mapping by Greig indicates that both these types of mineralization are associated with the same mineralizing system: i.e. a predominantly northnorthwest-trending complex of porphyritic to phaneritic diorite dikes, sills, and irregularly-shaped stocks, which have intruded incompletely lithified, thin-to-medium bedded, fine grained sedimentary rocks of interpreted upper Triassic age (upper Carnian, from fossils collected on the Property; Weber, 1996). The intrusion of these rocks formed a hornfelsic aureole containing the observed Type 1 style disseminated and poddy sulphide mineralization and minor skarn. These rocks were then cut by a dense network of very discontinuous, quartz+carbonate+sulphide epithermal-textured veins of somewhat erratic orientation and thickness, the greatest intensity of which is centered on the diorite intrusive complex. Both replacement-type mineralization and sulphide-bearing veins are of potential economic interest.



Photo 10. Type 1 style skarn and hornfels alteration and mineralization in rocks adjacent to Snoball Pond (R. Greig, 2018)



Figure 7.7. Alteration on topography and structure, Snoball prospect (R. Greig, 2019)

The most intense replacement alteration and mineralization at surface is located around Snoball Pond (Photo 10, above). Some of these Type 1 zones were explored by Noranda and Gold Giant (Savell, 1992), with six holes drilled in the eastern part of the historical grid where pyrrhotitic hornfels is widely developed near porphyry dikes. Hole SN-92-7 returned one of the best gold intercepts in the program, averaging 0.63 g/t Au over 48 metres, which included 2.16 g/t Au over 7 metres. The hole intersected silicified sedimentary rocks and narrow dikes with numerous sections containing 10-40% pyrrhotite and pyrite. Hole SN-92-12, collared 170 metres to the north, but drilled toward the intercept in hole SN-92-7, returned three separate mineralized intervals in similar host rocks, including 1.09 g/t Au over 12 metres, 0.34 g/t Au over 47.5 metres and 0.54 g/t Au over 13 metres.



**Photo 11.** Type 2 style epithermally-textured quartz-carbonate vein mineralization in float, showing calcite casts remaining after weathering (R. Greig, 2018)

Proximity to the diorite intrusive complex and a favourable stratigraphic horizon are likely controlling factors on potentially economic mineralization of Type 1 style. R. Greig (2018) concludes that given the orientation of stratigraphy and the intrusive complex, extensions of such mineralization at the stratigraphic level previously drilled should occur in the subsurface north-northwest of Snoball Pond. In addition, dark grey calcareous beds mapped in the lower sedimentary sequence, on the western edge of the map area, should project beneath the historically drilled area and represent a possible high-grade target where they meet the contact of the diorite intrusive complex at depth.

Type 2 style mineralized showings at the Snoball prospect have locally returned very high gold and silver values primarily from surface rock chip samples and float. This style of mineralization, characterized by the presence of quartz veining, typically contains associated pyrite, arsenopyrite, galena, lesser sphalerite and trace chalcopyrite. Larger veins, typically less than 1 metre, but ranging up to 3 metres in thickness, are commonly brecciated, containing fragments of siltstone as well as less common sulphide and quartz fragments (Savell and Harrison, 1991).

R. Greig observes that abundant veins of the Type 2 (Photos 11 and 12) style cut nearly all rock types, and are composed mostly of quartz, with variable calcite content and typically minor sulphide. They currently have a predominating moderate-to-steep northwest dip and subordinate moderate-to-steep southwest dip, with significant scatter between and about these orientations. The thicker of these veins commonly possess classic epithermal textures (bladed calcite, vuggy

quartz, brecciation, cockade texture), and contain usually minor but occasionally abundant sulphide minerals (pyrrhotite, pyrite, arsenopyrite, minor base metal sulphides). Thinner veins observed in historic core (which is stacked on the Property and in moderate, at least partly salvageable condition) have a subtle banded or ribbony texture which may be similar to that described in porphyry Au deposits, which are emplaced at shallow depths (<1000 metres) (Muntean & Einaudi, 2000). These thinner veins commonly have a wispy, pinch-and-swell geometry, but veins of all thicknesses are relatively discontinuous; the thickest veins are traceable on surface for typically no more than a few tens of meters. Most veins are anastomosing, and where veins of two orientations are present (as is commonly the case), they form a network which suggests that they formed nearly simultaneously, though commonly one vein orientation is offset *al*ong the other. In distal portions of the vein network, calcite predominates over quartz as the primary gangue mineral.



Photo 12. Casts of bladed calcite in quartz-dominant, sulphide mineral-bearing Type 1 vein cutting diorite (R. Greig, 2018)



Photos 13 and 14. Two examples of the common "wispy" semi-sheeted texture and discontinuous/erratic nature of quartz veining (R. Greig, 2018)

Sampling by R. Greig in the eastern, recently ice-free portion of the map area during the 2018 program reinforces previous indications that veins containing more carbonate and brecciated textures are the most auriferous. As described above, these veins tend to predominate on the outer edge of the vein system (e.g., near the UT vein toward the western limits of Snoball Ridge) and at higher elevations (e.g., UT vein and samples collected near Pyramid Peak), though exceptions occur. Most of the veins and veinlets sampled in the 2018 program contain low Au contents (approximately 10 ppb), though some contain hundreds of ppb and may exceed 1,000 ppb (1 g/t) Au.



Photo 15. Vuggy and cockade-textured "Type 2" style vein-breccia - quartz-rich, calcite and sulphide-bearing (R. Greig, 2018)

Veins commonly have sheared or gouge-filled contacts and are often truncated or cross-cut by small-displacement faults. The veins tend to pinch and swell over short distances and were viewed by Weber (1996) as likely dilational features associated with cross-cutting faults (Figure 6.4). Although the mapped quartz-sulphide veins and stockworks have various attitudes, some of the wider and better-mineralized veins typically have northwest or east-west trends. Weber (1996) noted that the veins commonly lie subparallel to bedding, although those in the northern part of the grid tend to be discordant. Weathering in the vicinity of both styles of mineralization (Types 1 and 2) commonly creates coatings of rusty-weathering iron and local arsenic oxide minerals; sulphide veinlets are commonly found surrounding larger veins, but wallrock alteration, aside from local development of disseminated sulphides, is not overly apparent in sedimentary host rocks.

Recent soil and talus fines sampling carried out in 2017 has revealed a strong Au-Cu-Ag soil anomaly covering an area of more than 250 X 250 metres overlying the Pyramid Peak diorite stock, located at the east end of Snoball Ridge well upslope from the historical geochemical grid. The close-spaced highly anomalous soil samples suggest the diorite stock is mineralized, possibly with closely-spaced veins that could define a porphyry style target. As well, there is a strong possibility, suggested by the results of an airborne magnetic survey, that the diorite intrusion may extend to depth and laterally beneath the hornfels zone that is exposed on surface over a length of more than 1,000 metres.

R. Greig (2018) mapped vein density (defined as the average thickness of veins at a given location divided by their spacing) over the area of the Snoball prospect (Figure 7.8, below). He notes that highs in vein density, which is overall somewhat erratic, generally occur near the contacts of the diorite intrusive complex and generally correspond with areas of high Au in soil (the UT vein showing on the west side of the mapped area is an exception). A possibility implied by these observations is that the system could have features of a porphyry Au deposit, with some unusual characteristics resulting from its inferred submarine setting. Au in these types of deposits can occur in a variety of different vein types occupying different positions and timing within the system.



**Figure 7.8.** Vein density (defined as the average thickness of veins at a given location divided by their spacing) over the area of the Snoball prospect. Hotter / darker colours denote greater density (R. Greig, 2019)

Previous workers have theorized that the sedimentary rocks on the Property may host Eskay Creek-style syngenetic polymetallic mineralization. Although some drilling was done in 1992 to test geophysical targets for this type of deposit, the results did not show any evidence in the area drilled. The drilling, however, was all undertaken within Stuhini Group rocks, whereas the Eskay-equivalent Hazelton Group rocks are located on the part of the Property northeast of the Northmore Fault, and have received little exploration. An area of strongly anomalous Ag, Zn and Cu in soils, underlain by carbonaceous argillite in the southwestern part of the Snoball target area may have potential for syngenetic mineralization. However, evidence is limited since there is no record of detailed exploration in that area.

British Columbia Minfile listings provide brief descriptions of most of the documented mineral occurrences in British Columbia. Two Minfile showings are located within the current area of the Snoball Property, as summarized below from Minfile.

The Snoball showing (BC Minfile No. 104G 143), encompassed by the three original claims (Sno 1, Sno 2, and Sno 3) staked by Noranda in 1990 and roughly corresponding to the limits of their exploration grid, is described as a 0.8 by 1.5 kilometre area containing two contrasting styles of gold mineralization. In the eastern part of the showing area siltstones are converted to a siliceous hornfels containing disseminated pyrite and pyrrhotite. Replacement pods of massive pyrrhotite with minor chalcopyrite (up to 0.5% copper) contain from 0.5 to 5 g/t gold. In the western part, quartz-sulphide veins, generally less than 1.5 metres wide, crosscut bedding at various angles in the host siltstone. In the west hornfels is notably absent. Vein sulphide minerals include arsenopyrite, pyrite, sphalerite and galena. The widest vein assayed 13.7 grams per tonne gold, 70.1 grams per tonne silver, 4.9 percent arsenic, 1.14 percent lead, and 0.66 percent zinc over 3 metres where it is exposed in a trench. Brecciation textures are prominent in the vein.



**Figure 7.9.** Correlation of Au with other elements, Snoball rock samples (R. Greig, 2019)

The UT vein showing (BC Minfile No. 104G 198) is mis-plotted on the Minfile map, and is actually located about 5 kilometres west of the indicated site, more or less central to the current area of the Snoball Property. Although originally covered by Tenajon Resources' Smith property, then (1992) contiguous to the west with Noranda's Snoball prospect, the UT vein now constitutes part of the immediate Snoball target area, located at the west end of Snoball Ridge, about a kilometre west of Pyramid Peak. The area of the showing is underlain by Upper Triassic Stuhini Formation, tuffaceous to calcareous, thin-bedded siltstone, volcaniclastic wacke and limy black argillite. The siltstone sequence is apparently intruded by a diorite stock, mapped immediately to the north of the mineralized area, as well as a plug about 600 metres to the northeast. It is possible that these bodies may represent parts of the same intrusion, partially obscured by glacial ice and partially capped by Stuhini Group rocks. Emanating outward from the stock are abundant hornblende phyric dikes and less common feldspar-phyric dikes that are primarily seen cutting the extensively hornfelsed siltstone east of the UT showing.



Photo 16. View westerly of diorite stock proximal to the UT Vein showing (foreground, left), western extremity of Snoball Ridge (C. Greig, 2016)

At the UT showing, one of the larger veins in the area, the UT vein, cuts sedimentary rocks and ranges up to 1.3 metres wide across its exposed strike length of 5 metres. It strikes to the east-southeast at 100 degrees and dips steeply to the south. Vein mineralogy consists of quartz gangue with disseminated to massive arsenopyrite along with lesser galena, sphalerite and pyrite.

A 1.5 metre rock chip sample taken across the vein by Tenajon Resources in 1992 averaged 51.5 g/t gold, 301.3 g/t silver, 3.6% lead and 2.1% zinc (Visagie, 1992).

Descriptions and grades of mineralization encountered in the 1992 diamond drill core is included above in section 6.2 and Table 6.2.1.

# 8.0 DEPOSIT TYPES

As described by Rowe (2017), two different styles of Au-bearing mineralization have been identified on the Property: a "Type 1" replacement style mineralization comprising hornfels with disseminated to semi-massive pyrrhotite and lesser pyrite and chalcopyrite occurring as disseminations, veinlets, patches and small irregular pods that have returned moderate to low-grade gold values over significant widths; and a "Type 2" style comprising discontinuous sulphide-bearing veins, vein breccias and vein stockworks with epithermal textures which locally carry very high gold and silver values.

Calc-silicate (skarn) alteration assemblages have recently been mapped by R. Greig (2018) for the first time at the Snoball prospect (Figure 7.7), proximal to diorite intrusive, comprising local replacement and recrystallization of presumably calcareous sedimentary rocks in his mapped "upper layered" sedimentary package, accompanied by minor crystalline epidote and/or garnet, and more common bedding-parallel silica replacement and associated marbling, with pyrrhotite the predominant associated sulphide, typically poddy in occurrence. These alteration assemblages are probably associated with "Type 1" mineralization.

A possibility implied by the observations catalogued above, in particular the association with intrusive rocks of dioritic composition, and the presence of abundant and widespread veinlet-controlled and disseminated mineralization concentrated near the contacts of the intrusions, is that the system could have porphyry Au or Cu-Au affinities, with some unusual characteristics resulting from its emplacement into partially lithified sedimentary rocks. Mineralization in porphyry-type deposits can occur in a variety of different vein types and alteration styles (including skarns or replacements) with varying timing and position in the system (e.g., Seedorff *et al*, 2005). Thus, Greig suggests that the possibility of a deeper Au-Cu core should be considered.

The veins described above also have certain characteristics (i.e., bladed calcite, local colloform and possibly banded textures) typical of the epithermal (near-surface) environment, so elements common to epithermal precious metals deposits (which have very diverse characteristics, e.g., Sillitoe & Hedenquist, 2003, John, 2001) should be considered. However, as can be extrapolated from descriptions of the diverse geology of deposits mined in the region (Section 6.1 above), none of which are typical deposits conforming to end-member deposit models of any kind, no single model fully captures the geology of the target, though many contain elements that are helpful to consider.



**Figure 8.1** below, captures certain aspects of the geology and possible deposit models in an interpreted cross-section through Snoball Ridge and Pyramid Peak.

Figure 8.1. Snoball intrusion-related deposit model and potential target types (K. Keough, A. Albano, 2019)

# 9.0 EXPLORATION BY THE COMPANY

Evergold's exploration programs on the Snoball Project began in the summer of 2016, shortly after its purchase in April that year from C.J. Greig Holdings Ltd.. The exploration programs carried out by historical operators prior to Evergold's ownership of the Project area are documented in the History (Section 6.0) of this Report.

Evergold has carried out exploration work on the Snoball Property in each of the three years since its acquisition, broadly categorized as follows:

- Historical data compilation, interpretation, digitization
- Geochemical (rock and soil / talus fines) sampling
- Geological mapping
- Airborne magnetometer surveying

# 9.1 Surface Geochemical Sampling - 2016 and 2017

Grid soil sampling overlying the immediate area of the Snoball prospect, on the south-facing slopes of Snoball Ridge and areas immediately adjacent to the south, was previously undertaken by Noranda in 1991. Their samples were collected at 25 metre intervals along grid lines spaced at 100 metres, covering in all approximately 0.8 square kilometres (Figure 9.1, below). Lines were oriented across the relatively steep southeast-facing slope but did not extend to the top of Snoball Ridge, which is located about 250 metres further upslope to the northwest. The samples were analyzed for Au, Ag, As, Pb, Zn and Cu and returned polymetallic anomalies over much of the area of the grid, measuring between 300 to 700 metres in width by 800 metres in an up-slope (i.e. northnorthwest) direction. Digitization, modeling and interpretation of the historical Noranda sampling results by Evergold pointed to the anomalies remaining open off-grid up-slope to the north, with an apparent widening in that direction (Figures 9.2, 9.3, 9.4).

In follow-up, Evergold carried out rock and soil sampling in 2016 and 2017 generally focused on areas up-slope from the historical Noranda grid, along and below Snoball Ridge, and over Pyramid Peak, which anchors the east end of Snoball Ridge.

# 9.1.1 2016 Soil Sampling

On August 27, 2016 four man-days of work were undertaken on the Snoball prospect by Evergold personnel. The crew included two geologists, a prospector and a soil sampler who mobilized to the Property by helicopter from the nearby Forrest Kerr "run-of-river" hydro camp. Work by the 2016 crew was focused on the area at the upslope, northern, and open end of the extensive Au-Ag-As soil geochemical anomalies identified by Noranda. The aim of the work was to gain an understanding of the possible styles of mineralization, their possible trends, to locate mineralized features such as the "UT" vein, and to test for the postulated upslope northerly extension of Noranda's previously defined anomalous zone. A soil geochemical line was run along Snoball Ridge, and 33 soil samples were collected at 25 metre intervals along the ridge top for a total line-length of 800 metres, with the line approximately parallel to, and 250 metres up-slope from, the northern margin of the Noranda anomaly.

Concurrent with the soil sampling, reconnaissance geology and prospecting lines were run downslope to lower elevations from Snoball Ridge in the direction of Snoball Pond, near where historical drilling by Noranda had taken place. Twenty rock samples were collected during the reconnaissance in this central part of the Property. Rock samples typically consisted of selected chip samples from vein material or rocks hosting disseminated sulphide minerals, and included samples of both float and bedrock.

The 2016 soil analytical results returned a very high percentage of strongly anomalous values. For comparison purposes the soil geochemical results for gold for the samples collected by Noranda in 1991 are illustrated on Figure 9.2 below, along with the results of the 2016 sample line. Of the 2016 samples, 21 of the 33 samples analyzed returned greater than 0.1 ppm Au, with several returning results greater than 1.0 ppm Au.



**Figure 9.1.** 2016 soil sample locations on geology, showing 1991 Noranda grid and 1992 drill hole locations (J. Rowe, 2016)



**Figure 9.2.** Gold-in-soil on geology (values from 1991 and 2016 programs), with gold contours >150 ppb (see geology legend on Figure 9.1) (J. Rowe, 2016)

The 2016 gold-in-soil geochemistry (Figure.9.2), when coupled with the results of historical Noranda work, showed two large, relatively cohesive, northwest-trending anomalies with values greater than 0.15 ppm Au. Photo 17 is a photograph of the southeast-facing slopes below Snoball Ridge and Pyramid Peak, showing the approximate outlines of the two main Au-in-soil anomalies. The western anomaly measures 300 to 700 metres wide and extends for over 800 metres up-slope to Snoball Ridge, where, at its northern edge, it remains open, and covered by ice on north-facing slopes. This anomaly is underlain by volcaniclastic rocks that are cut by local and narrow hornblende porphyry dikes and scattered quartz-sulphide vein occurrences. The anomaly was further observed to be widest on the upper slopes, and to narrow downslope, giving rise to the possibility that it represents a tail of transported mineralized talus and scree likely originating at or near the ridgeline above.



Photo 17. Photograph looking north showing the approximate outlines of the two main Snoball gold-in-soil anomalies (C. Greig, J. Rowe, 2016)

The eastern gold anomaly is very strong and 250 metres wide at Pyramid Peak, the diorite stock containing abundant gossan zones and severalknown quartz-sulphide veins, which anchors the east end of Snoball Ridge. The anomaly narrows downslope to about 50 metres in width and then splits into two "pant legs" that are each about 400 metres long and 50 to 100 metres wide. The width and strength of the upslope parts of the anomalies are postulated to reflect proximity to and/or direct contact with, the dioritic intrusive bodies postulated as the possible core of the mineralized complex.

Figure 9.3 shows silver-in-soil geochemistry overlain on the Property geology and on the >150 ppb gold contour. Anomalous silver values coincide very closely with the two main gold anomalies, indicating that the mineralization responsible for the high values contains both gold and silver minerals and that they appear to have the same source areas. A third area of strongly anomalous silver, without gold, is located in the western part of the grid, measuring about 200 metres by 150 metres and open to the northwest and southeast.



**Figure 9.3.** Silver-in-soil on geology (values from 1991 and 2016 programs), with gold contours >150 ppb (see geology legend on Figure 9.1) (J. Rowe, 2016)

Arsenic-in-soil geochemistry is illustrated on Figure 9.4. As with silver, anomalous arsenic values are strongly coincident with anomalous gold, with the majority of the very high arsenic values falling within the >150 ppb Au contours. This would appear to indicate that gold in bedrock is occurring along with arsenic minerals, most probably arsenopyrite, and it also indicates that arsenic is a very good pathfinder element for gold exploration on the Snoball Property. It is noteworthy that the eastern leg of the eastern gold contour has a lack of highly anomalous arsenic, suggesting that arsenopyrite is less common in this area, which is where "Type 1" gold mineralization is known to occur with pyrrhotite and pyrite disseminations and pods in silicified siltstone. This may further suggest that the areas of coincident high arsenic and gold in soils are most probably caused by the second "Type 2" style of mineralization, namely quartz-carbonate veins, breccias and stockworks with accompanying arsenopyrite, as well as galena, and lesser sphalerite. The greatest concentration of this style of quartz vein hosted mineralization, based on soil geochemistry, appears to be in the upslope part of the western contoured gold anomaly, as well as in the diorite body to the northeast, where, not coincidentally, high gold and silver values have been returned from sampling of outcrop and float.


**Figure 9.4.** Arsenic-in-soil on geology (values from 1991 and 2016 programs) with gold contours >150 ppb (see geology legend on Figure 9.1) (J. Rowe, 2016)

#### 9.1.2 2016 Rock Sampling

Figures 9.5, 9.6, 9.7 and 9.8 show the location of the 20 rock sample locations from the 2016 program and the analytical results for Au, Ag and As, which returned encouraging results. Since many of the samples are "grabs" from sulphide-rich rocks the values may be higher than what would be expected from continuous chip samples collected across more representative widths.

The 2016 analytical results for rock samples returned a very high percentage of strongly anomalous values. Results correlate closely with the values reported for the samples collected nearby by others, so the older sample results are believed to be representative.

Gold values for rock samples are shown on Figure 9.6 in grams per tonne, with any conversions of values calculated at 1 g/t equal to 1 part per million (ppm). For comparison purposes the rock geochemical gold results for samples collected by Savell and Harrison (1991), Visagie (1992) and Weber (1996) are also illustrated on the figure, together with the gold results for the 2016 rock samples. The reader is referred to those quoted references for details about the samples.



Figure 9.5. Rock sample locations, 2016 (J. Rowe, 2016)



**Figure 9.6.** Rock samples from 2016, 1992 and 1996, showing Au values overlain on geology, with gold-in-soil contours >150 ppb (see geology legend on Figure 9.1) (J. Rowe, 2016)

Several of the 2016 rock samples returned high gold values (grading from 4 to 80 g/t Au), all of which had coincident anomalous silver (20 to 1080 g/t Ag), arsenic (>10,000 ppm) and lead (1,815 ppm to 11.5%). Most also had moderately high zinc (up to 3.1%) and copper (up to 0.3%). These samples were all collected from relatively narrow quartz-sulphide veins found in bedrock or float. The largest pieces of float were 0.45 cm and 0.60 cm in diameter. The rock samples with the highest metal values were collected from near the contact of the Pyramid Peak diorite stock anchoring the east end of Snoball Ridge, and continuing over a distance of about 500 metres to the southwest. Where measured, the veins from which the samples were collected commonly trended northwesterly or northeasterly.

The mineralized quartz or quartz-calcite veins typically contain a few percent sulphides, although sulphide mineralization in some of the veins ranged up to 50 percent. Arsenopyrite was generally the predominant mineral in the veins and occurred as disseminations, blebs, and locally as coarse masses. Pyrite and galena also sometimes occurred as small intergrown masses, or as disseminations in the veins. Sphalerite and chalcopyrite were less common, and usually occurred as disseminations in the veins. Veins may include breccias hosting fragments of wallrock. At one sample location gouge material was noted along the vein and another sample comprised sericite-quartz altered breccia containing fragments of chert that were rimmed by arsenopyrite. Sulphide minerals are commonly strongly weathered, creating rusty zones of iron and arsenic oxides. The elements having the strongest correlations with anomalous gold values were observed to be silver, arsenic and lead, with lesser zinc and copper.

Two of the more significant samples, in that they show potential for wider zones of low to moderate gold grade, are SR-SNO-2016-019 and 026, located 230 metres apart on the southeast-facing slope of Snoball Ridge. These grab samples were collected from locally silicified siltstone and mudstone cut by northwest-trending, sheeted narrow veins and stockworks of calcite containing abundant limonite and minor remnant pyrite. SR-SNO-2016-019 returned 5.22 g/t Au, 12.3 g/t Ag, 0.37% As and 0.35% Pb from strongly oxidized mineralization (Photo 18, below) and SR-SNO-2016-026 returned 1.02 g/t Au, 4.5 g/t Ag, 0.54% As, 0.09% Pb and 0.18% Zn.



SR-SNO-2016-019 Sediments x-cut by carb+qz vein zone @ 347/15 to NE. strong feox staining locally within veinzone, sulfides are weathered and indistinguishable

Photo 18. Sheeted veins or stockworks at Snoball have potential for wide zones of low to moderate grade gold and silver (C. Greig, 2016)

Sample CGSNO16R377, collected on the ridge top 300 metres north of SR-SNO-2016-019, was also viewed as significant because it yielded 1.42 g/t Au and 2.9 g/t Ag from quartz-pyrite stringers and disseminated pyrite in weakly silicified siltstone, but with low values (<0.02%) for As, Pb, Zn and Cu. This may represent a different style of mineralization from the quartz-calcite veins. Previous workers have described pyrrhotite-pyrite veinlets and pods in hornfelsed siltstone that have returned gold values in the 1 to 2 g/t range over several metres in drill holes (Savell, 1992), and so potentially, there could be wide zones of similar gold-bearing pyrrhotite-pyrite stockwork veining within some of the large gossan zones seen on the Property, such as that shown in Photo 19.



Photo 19. Areas of "Type 1" style mineralization comprising pyrrhotite and pyrite disseminations, veinlets and pods, have returned 1 to 2 g/t Au over several metres in historical drill holes (C. Greig, 2016)



Figure 9.7. Rock samples, showing 2016 Ag values overlain on geology, with gold-insoil contours >150 ppb (see geology legend on Figure 9.1) (J. Rowe, 2016)







Photo 20. Vein breccia float sample GBR1604004 taken from Snoball Ridge returned 80.2 g/t Au and 452 g/t Ag (C. Greig, 2016)

### 9.1.3 2017 Soil Sampling

The highly encouraging results of soil and rock sampling in 2016 led to an expanded geochemical sampling program over the Snoball prospect in 2017. From September 14 to 16, 2017, a sampler collected 67 soil samples, focused on Pyramid Peak (58 of 67 samples), as well as the west end of Snoball Ridge (9 of 67 samples - vicinity of the UT vein). Soil lines were established along elevation contours and spaced roughly 50 metres apart, with samples collected at 25 metre intervals. Six of the 67 soil samples were marked "not sufficient sample" due to a lack of sufficient fines, and were processed as "talus rock" samples, also described in this section (Figure 9.11).

For comparison purposes the soil geochemical results for the 2017 samples are shown alongside samples collected in 2016 and also some of those collected by Noranda in 1991. Results are illustrated on Figures 9.10 to 9.18 below. As was the case with the 2016 soil results, the 2017 analytical results returned a very high percentage of strongly anomalous values for several elements of interest. For example, 44 of 61 samples analyzed returned greater than 0.1 ppm Au, with eight returning results greater than 1.0 ppm Au.



Figure 9.9. Soil geochemistry – 2017 sample locations (J. Rowe, 2018)

Figures 9.9 to 9.17 show the 2017 soil sample locations and the analytical results for Au, Ag, Cu, As, Pb and Zn. The 2017 samples are shown with diamond symbols, the 2016 and 1991 samples are shown with circle symbols. Due to the limited sample population the author has chosen categories based on personal technical experience with anomalous soil geochemical values in the region. Five categories were used, ranging from very weakly anomalous to very strongly anomalous.

Gold-in-soil geochemistry (Figure 9.10) shows that the samples collected in 2017 confirmed and extended anomalies defined by previous sampling. The strongly anomalous gold values on Pyramid Peak cover an area more than 250 metres in diameter, with several values greater than 0.5 ppm Au, to a high of 25.1 ppm Au. Many of these anomalous stations are located near craggy exposures of diorite that undoubtedly host the mineralization that is the source of the high gold values.



Figure 9.10. Gold-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Gold values for the six talus rock samples from the soil grid are shown on Figure 9.11, below. These were samples containing insufficient silt-size material, so they represent fine rock fragments derived from nearby bedrock sources on the upper part of Pyramid Peak. Three of the samples have elevated gold values, but not to the same degree as the nearby soil samples. Two returned weakly anomalous values and one returned a moderately anomalous value of 0.134 ppmAu.



Figure 9.11. Gold-in-talus-rock geochemistry, 2017 program (representing 6 of 67 soil samples collected) (J. Rowe, 2018)



Figure 9.12. Gold-in-soil geochemistry on geology (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Figure 9.13 shows silver-in-soil geochemistry, with diamond-shaped symbols depicting the 2017 samples. Moderately to strongly anomalous silver values coincide closely with most of the strongly anomalous gold values, especially near the top of Pyramid Peak, indicating that the mineralization responsible for the high values contains both gold and silver minerals and that they appear to have the same source areas. The diorite host rocks in this area are known to contain pyritic veins within extensive gossan zones. As well, there are three strongly anomalous samples (up to 27.6 ppm Ag) at the southwest end of the 2017 sampling that are within the siltstone unit near the contact with another diorite body that extends to the northwest of the sample line. Previously discovered quartz-sulphide veins within this western anomalous area have returned high gold and silver values.



Figure 9.13. Silver-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Copper-in-soil geochemistry is illustrated on Figure 9.14. Copper anomalies show a very close association with gold anomalies in the 2017 samples. This was not the case with the 1991 samples, where anomalous copper values although coincident with high gold values in hornfelsed rocks, showed a weaker correlation in the siltstone unit to the west. This implies that the copper mineralization is associated with veining in the diorite intrusions and hydrothermally altered rocks adjacent to intrusions, in what may be a porphyry-style Au-Cu system, but Cu values decrease outward from the intrusions. The high copper-in-soil values in the hornfelsed area suggest that minor amounts of chalcopyrite are associated with the gold-bearing disseminated to semi-massive pyrrhotite and pyrite mineralization in that area.



Figure 9.14. Copper-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Copper values for the six talus rock samples from the soil grid returned moderately to strongly anomalous copper values of up to 212 ppm Cu which, along with high copper-in-soil values nearby, indicate a mineralized source on the upper mountain slope, most likely hosted by diorite.

Arsenic-in-soil geochemistry is illustrated on Figure 9.15. Arsenic correlates very well with silver, as well as with gold and copper anomalies, with a large number of high arsenic values located within the diorite of Pyramid Peak. This would appear to indicate that gold in bedrock is occurring along with arsenic minerals, most probably arsenopyrite, and it also indicates that arsenic is a very good pathfinder element for gold exploration on the Snoball Property. These areas of coincident high arsenic and gold in soils are most probably caused by "Type 2" style vein-type mineralization, comprised of quartz-calcite with accompanying arsenopyrite, as well as local galena, and lesser sphalerite. The greatest concentration of this style of vein hosted mineralization, based on soil geochemistry, appears to be in the upslope part of the western grid area, as well as in the Pyramid Peak and postulated westward extensions beneath Snoball Ridge.



Figure 9.15. Arsenic-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Lead-in-soil geochemistry is illustrated on Figure 9.16. There were very few strongly anomalous lead values returned by the 2017 samples, with the only significant cluster at the southwest end of the sampling area. These samples are also strongly anomalous in Au, Ag, Cu and As. They are located downslope of quartz-sulphide vein showings (the high-grade UT vein) that lies close to the contact with a diorite body at the western extremity of Snoball Ridge.

The lack of anomalous lead in the diorite body at Pyramid Peak suggests the occurrence of metal zonation, possibly transitioning outward from copper-bearing veins to lead- and zinc- bearing veins, deposited by hydrothermal solutions that cooled away from the original heat source. Similarly, lead values are also low in the area of the hornfelsed rocks on the east side of the grid but become more anomalous to the west into the less altered siltstone unit.



Figure 9.16. Lead-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

Zinc-in-soil geochemistry is illustrated in Figure 9.17. Anomalous zinc correlates very closely with lead, likely due to the presence of sphalerite with galena in vein material. On the western part of the soil grid an area of strongly anomalous zinc and lead geochemistry also has high values of Au, Ag and As, indicating that precious metals may be quite widespread within the hydrothermal system, overlapping metal zones and extending hundreds of metres outward from their potential source intrusions.



Figure 9.17. Zinc-in-soil geochemistry (values from 2017, 2016 and 1991 programs) (J. Rowe, 2018)

#### 9.1.4 2017 Rock Sampling

Two prospectors and a soil sampler worked three days on the Snoball Property from September 14 to 16, 2017, mobilizing daily by helicopter from a camp at Bell II, located along highway 37. Work was focused on the Snoball target area north and upslope of the historical Noranda grid in approximately the same areas covered by the 2016 and 2017 Evergold soil sampling programs (J. Rowe, 2018).

Figures 9.18 to 9.24 below show the 2017 rock sample locations and the analytical results for Au, Ag, Cu, As, Pb and Zn. Since many of the samples are "grabs" from sulphide-rich rocks the values may be higher than what would be expected from continuous chip samples collected across more representative widths.



Figure 9.18. 2017 rock sample locations overlain on satellite image (J. Rowe, 2018)

Gold values for rock samples are shown on Figure 9.19 in parts per million (ppm), for which conversions of values are calculated at 1 part per million equates to 1 gram per tonne. A compilation of previous rock sampling conducted by others in the Property area since 1991 has been reported by Rowe and Greig (2017). Of these former samples, more than twelve returned high gold values of greater than 15 g/t Au, primarily from within the siltstone unit and, to a lesser degree, within the diorite stock. The 2017 analytical results likewise returned a number of strongly anomalous Au values, which correlate closely with the values reported for the samples collected nearby by others, and these were also collected primarily from veins within siltstone hostrocks.



Figure 9.19. 2017 gold-in-rock samples, overlain on satellite image (J. Rowe, 2018)

The 2017 rock samples that returned high gold values (11 samples grading from 5 to 36.1 g/t Au) almost all had coincident anomalous silver (10.9 to 231.0 g/t Ag), arsenic (>10,000 ppm), copper (457 to 4,870 ppm), lead (0.36 to 33.3%), antimony (193 to 4,930 ppm) and less commonly, zinc (814 ppm to 5.6%). These samples, all collected from within bedrock or subcrop, consisted of relatively narrow quartz-sulphide veins ranging from 1 cm to 0.5 metre, with one vein up to 2.0 metres in width (sample D006419). The largest pieces of float were up to 0.5 metre in diameter. The rock samples with the highest metal values were collected from near the southwest end of Snoball Ridge over a length of about 200 metres east-west, where they are hosted by locally silicified siltstone and mudstone, often with nearby narrow porphyry dikes. Where measured, the veins from which the samples were collected commonly are oriented northwesterly or northeasterly, and to a lesser extent east-west.

Two of the strong gold values were from samples collected within diorite on Pyramid Peak (D006402 & D006454). Both consisted of quartz veins with pyrite, however, neither of these samples contained much Cu, Pb or Zn, again suggesting that there may be a zonation of metals, becoming more Pb and Zn rich away from the diorite heat source.

Sample D006402, collected on the southeast side of Pyramid Peak (Figure 9.19), is significant because it yielded 11.75 g/t Au from narrow quartz-pyrite stringers in probable diorite host rock, but with low values (<0.01%) for As, Pb, Zn and Cu. This may represent a different style of mineralization from the siltstone-hosted quartz-calcite veins. Previous workers have described pyrrhotite-pyrite veinlets and pods in hornfelsed rocks that have returned gold values in the 1 to 2 g/t range over several metres in drill holes (Savell, 1992), and so potentially, there could be wide zones of similar gold-bearing pyrrhotite-pyrite stockwork veining within some of the large gossan zones seen in the Pyramid Peak area.

The mineralized quartz or quartz-calcite veins typically contain a few percent sulphides, although sulphide mineralization in some of the veins ranges up to 50 percent. Pyrite is generally the predominant mineral in the veins and occurs as disseminations, blebs, and locally as coarse masses. Arsenopyrite and galena may also occur as small intergrown masses, or as disseminations in the veins. Sphalerite and chalcopyrite are less common, and usually occur as disseminations in the veins. Pyrrhotite was noted in a couple of the veins, with pyrite.

Veins may include breccias that host fragments of wallrocks. Sulphide minerals are commonly strongly weathered, creating rusty zones of iron and arsenic oxides. The vein mineral associations are evident from Figures 9.20 to 9.24, which show that the elements having the strongest correlations with anomalous gold values are silver, arsenic, lead and copper, with lesser zinc. As well, Fe, Sb and S are strongly correlated with Au (Figure 7.9).

Although most of the samples were collected from single veins, in some areas there are multiple narrow veins or silicified zones that could be classified as stockworks, with potential to be part of wider zones of low to moderate grade gold and silver.



Figure 9.20. 2017 silver-in-rock samples, overlain on satellite image (J. Rowe, 2018)



Figure 9.21. 2017 copper-in-rock samples, overlain on satellite image (J. Rowe, 2018)



Figure 9.22. 2017 arsenic-in-rock samples, overlain on satellite image (J. Rowe, 2018)



Figure 9.23. 2017 lead-in-rock samples, overlain on satellite image (J. Rowe, 2018)



Figure 9.24. 2017 zinc-in-rock samples, overlain on satellite image (J. Rowe, 2018)



Figure 9.25. 2017, 2016 and historical gold-in-rock overlain on geology (see geology legend on Figure 9.1) (J. Rowe, 2018)



Figure 9.26. 2017, 2016 and historical silver-in-rock overlain on geology (see geology legend on Figure 9.1) (J. Rowe, 2018)

## 9.2 2017 Geophysical Surveying Program

A 43 line-kilometre heli-borne magnetometer survey (Figure 9.27, below), flown north-south with lines spaced at 70 metres, was carried out in 2017. Highs in total magnetic intensity closely match the mapped contacts of the diorite intrusive complex, while lows correspond to the Stuhini Group sedimentary sequence and to covered and/or unmapped rocks along the eastern (Northmore) fault. A subdued high located immediately west of Pyramid Peak and north of Snowball Ridge, in an area covered by ice, indicates shallowly-covered bedrock and an extension of the diorite intrusive complex into that area. A magnetic high at the western end of Snoball Ridge, in proximity to the location of the UT vein, reflects a mapped diorite intrusive that extends to the northwest.



**Figure 9.27.** Snowball prospect. Trace of geology (see also Figure 7.5) on total field magnetics (A. Walcott (2017), R. Greig (2019))

## 9.3 2018 Mapping, Rock & Soil Sampling

Roy E. Greig, B.Sc., P.Geo., spent five days mapping and sampling the Snoball Property in July, 2018. The mapped area, approximately 1.5 x 1.5 km, encompasses the area drilled by Noranda in 1992 and the high-grade UT showing. In addition, forty-two rock samples and ten soils were collected for analyses, principally focused in historically drilled areas of hornfels alteration east, northeast and south of Snoball Pond. Maps of lithology & structure, alteration and vein densities, along with analysis of measurements of structures including veins and bedding, were generated from these activities, and have been presented and discussed in the chapters of this Report pertaining to Property geology and mineralization styles. Figure 9.28 below shows the location of rock samples taken by R. Greig in 2018. Table 9.1 shows the corresponding assay results. Figure 9.29 below aggregates all historical soil and rock samples taken over the Snoball prospect in the years 1991, 2016, 2017 and 2018, superimposed on the trace of principal lithologies, structures and topography as mapped by R. Greig, 2018.



Figure 9.28. Location of rock samples taken by R. Greig, 2018

Та	able 9.1. Rock sample results, R. Greig, 2018. See Figure 9.28 above for
	corresponding locations. Assays were carried out by ALS Global
	Laboratories of North Vancouver, BC

Sample	UTM E	UTM N	Elevation	Au	Ag	Cu	Pb	Zn
	(m)	(m)	(m)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
W095101	409938	6336288	1669	0.06	2.43	3120	9	127
W095102	410054	6336261	1648	0.01	0.24	21.4	4.3	63
W095103	410139	6336132	1672	0.01	0.78	190.5	11	58
W095104	410136	6336117	1677	0.01	1.09	281	1.6	352
W095105	409943	6336106	1639	0.01	0.96	170.5	71.3	702
W095106	409947	6336427	1686	0.55	16.15	102.5	380	2300
W095107	409972	6336469	1687	0.47	1.07	5.2	20.8	108
W095108	409984	6336500	1681	0.06	0.76	16	22.2	205
W095109	409992	6336531	1688	0.98	139	1575	104	496
W095110	410024	6336579	1686	0.97	5.31	23.7	24.3	2140
W095111	410024	6336579	1686	0.01	0.65	22.7	14.3	148
W095112	409973	6336605	1706	0.01	0.12	99.8	1.7	51
W095113	410046	6336803	1720	0.01	0.12	56.8	3	76
W095114	410049	6336434	1642	0.02	0.07	7	2	47
W095115	410049	6336434	1642	0.03	0.12	36.5	5.1	74
W095116	410062	6336465	1625	0.13	2.95	13.7	1.8	3
W095117	410085	6336547	1630	1.13	249	397	112	53
W095118	410082	6336575	1632	0.07	0.65	11.7	2.4	14
W095119	410088	6336656	1667	0.38	0.56	24	13.9	246
W095120	blank	blank	blank	0.01	0.08	16	14.6	88
W095121	410228	6336657	1660	0.05	0.31	193	4.2	26
W095122	410171	6336463	1589	0.01	0.07	14.1	2.2	29
W095123	410192	6336432	1583	0.01	0.36	152.5	46.7	117
W095124	410213	6336434	1581	0.01	0.18	6.8	2.1	10
W095125	410256	6336377	1566	0.02	0.38	211	3.5	39
W095126	410299	6336299	1535	0.01	0.3	87.6	2.3	73
W095127	410369	6336181	1491	0.17	0.32	81.7	2.5	81
W095128	410375	6336092	1486	0.06	0.07	26.4	0.8	48
W095129	410435	6335962	1511	0.04	0.06	51.3	1.9	71
W095130	410326	6335914	1562	0.01	0.13	115	3.2	56
W095131	410400	6335800	1601	0.01	0.27	87.1	3.4	37
W095132	410277	6335773	1642	0.05	0.14	36.7	2.8	131
W095133	410253	6335835	1608	0.01	0.21	59.8	2.1	58
W095134	410271	6335596	1699	1.04	0.28	75.4	21.6	103
W095135	409041	6336399	1973	8.47	15.5	39	1535	525
W095136	409389	6336381	1848	0.01	0.11	22.2	2.7	28
W095137	409694	6335648	1494	0.01	0.06	2.2	1.3	5
W095138	409614	6335733	1527	0.38	0.7	36.9	14.8	45
W095139	409533	6335881	1557	0.01	0.24	37.8	3.2	85
W095140	blank	blank	blank	0.01	0.03	3.4	15.1	63
W095141	410657	6335922	1404	0.01	0.08	19.4	4.5	34
W095142	409943	6336311	1676	0.01	0.17	157	3.3	38



**Figure 9.29.** Map aggregating all historical soil (circles) and rock (squares) samples taken over the Snoball prospect in the years 1991, 2016, 2017, and 2018, superimposed on the trace of principal lithologies, structures and topography. For breakout by years, see Section 9.1 above (R. Greig, 2019)

## 10.0 DRILLING

The Company has not conducted any drilling on the Property. Previous diamond drilling of 12 holes (1,504.6 metres) by Noranda and Gold Giant Minerals in 1992 is described in Section 6.2 - Property Exploration History. The 1992 drilling constituted the only drilling that has been documented for the Property.

# 11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Sample preparation, analyses and security procedures were implemented for soil and rock samples collected by the Company in 2016, 2017 and 2018, as detailed below.

### 11.1 Protocols for Sampling, Sample Analysis and Security

### 11.1.1 Sampling Protocol

Soil samples were collected along reconnaissance lines in areas upslope from soil geochemical anomalies identified by Noranda's 1991 sampling, including along Snoball Ridge, and over the Pyramid Peak diorite intrusive anchoring its east end. The reconnaissance lines were established using a hip chain to measure the distance between stations. UTM co-ordinates were recorded for each station using a hand-held Garmin GPS unit. A mattock was used to dig out the soil at depths ranging from 10 cm to 30 cm. Most of the soil samples comprised C-horizon material, with moderately common talus fines, and some poorly developed B-horizon material. Soil collected along the ridge top had clearly not moved more than a couple of metres, however, soil on steep slopes had probably been subject to downslope movement of up to 100 metres, or more.

Soil samples were placed in Kraft paper bags marked with identifying numbers, which were then enclosed in thick plastic bags, packed into rice sacks and transported by freight truck to the offices of ALS Global Laboratories in North Vancouver, B.C. for analysis.

Rock samples consisted primarily of selected chips from mineralized or altered bedrock or float. UTM co-ordinates were recorded for each rock sample site using a hand-held Garmin GPS unit. Data was recorded regarding type, strength and extent of mineralization, as well as host rock characteristics, including alteration and possible controlling structures. Rock samples were secured in thick plastic bags marked with identifying numbers, packed in sacks and transported by freight truck to the offices of ALS Global Laboratories in North Vancouver, BC for preparation and analysis. Samples were stored in a secure location in the camp facility until shipment to the laboratory.

#### 11.1.2 Sample Analysis and Security

Sample analyses were carried out by ALS Global Laboratories in North Vancouver, BC. Evergold has no relationship with ALS other than the procurement of analytical services.

At the laboratory, soil samples were dried and sieved to recover the -180 micron size material. Fifty grams of the sieved material was dissolved in aqua regia and analyzed by ICP/MS for Au content, with detection limits of 0.001 to 1 ppm, and a suite of 50 additional elements that include all of the common base metals and alteration elements (Lab code AuME-TL44). No blank samples

were submitted with the field samples; however, the laboratory conducts its own internal QA/QC testing to ensure that their equipment is properly calibrated and providing accurate results. Results of the analyses compared closely with those of the soil analyses conducted by Noranda in 1991 from the areas downslope, indicating that the 2016 and 2017 analyses are of acceptable quality. The analytical results for the soil samples collected in 2016 and 2017 may be viewed in Appendices B and C to this Report.

Rock samples were weighed and crushed to 70% less than 2 mm diameter, from which 250 grams were split and pulverized to 85% passing 75 microns. Fifty grams of -75 micron size pulp was fire assayed and finished by ICP/AES to measure Au contents between 0.001 and 10.0 ppm. Those samples that returned greater than 10.0 ppm Au were re-analyzed by means of fire assay with gravimetric finish, using 50 grams from the original sample pulp, for accuracy of up to 1000 ppm Au. As well, a minimum 1 gram cut from the pulp of each rock sample was dissolved by 4-acid digestion and analyzed by ICP for a suite of 33 additional elements that include all of the common base metals and alteration elements (Lab code ME-ICP61). Four-acid digestion is, in most sample types, capable of near-total extraction for the elements analyzed. A few samples returned values greater than detection limits for some elements, so those with over-limit Ag, Pb or Zn were reanalyzed using 4-acid digestion followed by a higher limit ICP-AES finish to provide accuracy of up to 1500 ppm Ag, 20% Pb and 30% Zn (Lab code OG62). No blank samples were submitted with the field samples; however, the laboratory conducts its own internal QA/QC testing to ensure that their equipment is properly calibrated and providing accurate results. The analytical results for the rock samples collected in 2016 and 2017 may be viewed in Appendices B and C to this Report.

### 11.2 QA/QC Results

The ALS laboratory in North Vancouver, Canada, which analyzed the company's samples in 2016, 2017 and 2018, operates to ISO 17025 standards and is accredited by the local regulatory authority.

Quality Managers at the lab maintain the quality system, conduct internal audits, and assist in training and compliance. Staff are supported by a Quality Management System (QMS) framework which is designed to highlight data inconsistencies sufficiently early in the process to enable corrective action to be taken in time to meet reporting deadlines. The QMS framework follows the most appropriate ISO Standard for the service at hand i.e. ISO 17025:2005 UKAS ref 4028 for laboratory analysis.

### 11.2.1 Duplicate Analyses

Field duplicates were not inserted into the rock sample lots because the rock chip samples were not homogeneous enough to split into equal duplicates. However, duplicate cuts from original sample pulps prepared at the lab were selected for some of the rock samples that had returned greater than detection limits for certain metals. These pulps were re-analyzed using a process capable of measuring higher concentrations of metal. The initial analytical method typically provided detection limits for the primary metals of interest of 1.00 ppm Au, 100 ppm Ag, 10,000 ppm Cu, 10,000 ppm Pb, 10,000 ppm Zn and 10,000 ppm As.

#### 11.2.2 Discussion

No outside laboratory checks were performed on the rock samples. However, earlier companies sampled some of the same mineral showings and reported results similar to those determined by Evergold. The author recommends selecting some of the coarse rejects and pulps from the 2016 and 2017 samples and submitting them to another laboratory for verification of the high metal values.

The sampling, security and analyses protocols employed by Evergold appear to be consistent with industry standard best practices.

# 12.0 DATA VERIFICATION

The author (David Tupper, P.Geo.) visited the Snoball Property for a day on May 11, 2019. Before, during and after the site visit the author preformed the following activities to verify the data presented by Evergold:

- Reviewed and assessed the historical literature for quality;
- Reviewed and incorporated data and work summaries provided by Evergold geologists (R. Greig, 2018, 2019; J. Rowe, 2017, 2018; C. Greig, 2019);
- Examined the geology of the area of the Snoball prospect above Snoball Pond on the south slope of Pyramid Peak (see Figure 12.1 and Photo 21);
- Examined geological units, alteration styles and mineralization on the Snoball prospect area;
- Gathered and submitted for assay one float sample (# T19SF-01) taken from sub-cropping rocks at the Snoball prospect area, comprised of altered and weakly silicified hornblende gabbro with up to 3% disseminated pyrrhotite. The location of, and analytical results for, sample T19SF-01 are shown, respectively, on Figure 12.1 and Table 12.1, below;
- Was not able to inspect specific historic sample sites or the Noranda core described as stacked on the Property due to the lingering heavy snow load and persisting avalanche risk.



Photo 21: Evergold geological staff Callum Quinn and Arron Albano examine outcrops at the site of sample T19SF-01 on the Snoball Property (D. Tupper, May 10, 2019)

During the preparation of this Report, the following data verifications were performed:

- Verification of the mineral titles that comprise the Property, as listed on the British Columbia Government MTO website;
- Review of technical reports documenting previous work on the Property and other properties in the vicinity;
- Discussion with Evergold geological staff regarding work updates provided.

In the author's opinion the data verifications performed both through on-site observation and sampling of the Property, and review of the legacy historical documentary record, are adequate to support the recommendations for further work made in this Technical Report. The tenor of soil and rock samples both individually and collectively agree closely with the results of historical work on the Project area.



**Figure 12.1.** Location of verification rock sample T19SF-01 taken by D. Tupper during site visit May 11, 2019 (map by R. Greig, 2019). Historical rock samples (squares) and soil samples (circles) also shown

Table 12.1. Rock sample results (D. Tupper - May 10, 2019)									
Sample	Location N	IAD83 (9N)	General Description	Au	Ag	Cu	Pb	Zn	As
No.	UTM mE	UTM mN	General Description	ppm	ppm	ppm	ppm	ppm	ppm
T19SF-01	409747	6336630	Hematitic diorite?; up to 1% Po dissemminated to course blebs.	<0.01	0.12	157	1.3	29	12.5

Float sample T19SF-01 was collected from very fresh and angular, but loose material considered to be derived from the immediate site where it was collected. It was the best opportunity for a sample on the south slope of Pyramid Peak due to the heavy snow generally, and avalanche risk in nearby areas. The sample is considered to be from the contact zone of the Pyramid Peak hornblende diorite, as it exhibited only minor, very narrow quartz stockwork veining and no massive sulphides. Results are inconclusive with regard to the presence of gold and silver on the Property. Sample T19SF-01 returned a copper value of 157 ppm Cu, which is within background levels measured against 2017 rock samples collected at the Snoball Ridge area (see Figure 9.21).

Sample T19SF-01 was collected, bagged and delivered by hand by the author to ALS Global Laboratories in North Vancouver for analysis. The sample was analyzed in accordance with the methods used for the 2018 samples, including: crush to 70% less than 2mm (CRU31); split off 250g (SPL21) and pulverize to 85% passing 75 microns (PUL31); then analysis by ore grade fire

assay with atomic adsorption finish analysis of 50g (Au-AA26) and 48 element induced coupled plasma mass spectrometer (ICP-MS) analysis of four acid digestion aliquot (ME-MS61). Over limit results for silver, copper, lead and zinc from the ICP-MS required reanalysis using four acid digestion and either atomic adsorption spectrometry or ICP analysis where suitable (ME-OG61).

No duplicates, blanks or standards were submitted with sample T19SF-01.

## 13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing or metallurgical testing has been carried out on mineralization from the Snoball Property.

## 14.0 MINERAL RESOURCE ESTIMATES

No mineral resource estimate has been undertaken for the Snoball Property mineralization as there is insufficient data to perform such an estimate.

# 15.0 ADJACENT PROPERTIES

A number of mineral occurrences are known on properties located within a few kilometres of Snoball. They encompass several styles of mineralization, but are typically comprised of veins or replacement sulphide pods in sedimentary or volcanic rocks, associated with intrusive plugs or dikes and often accompanied by strong alteration haloes. The occurrences are recorded and



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summarized in the British Columbia Government's "Minfile" database, to which readers are referred, and from which their locations are plotted on Figure 15.1.

Note: The author has been unable to verify the information concerning the mineral occurrences shown on Figure 15.1. Readers should be aware that these occurrences are not necessarily indicative of the mineralization on the Snoball Property that is the subject of this Technical Report.

The most prominent of these occurrences is the **Hank** porphyry prospect, shown on Figure 15.2 below, located 4 kilometres north of the Snoball Property, presently being explored by Golden Ridge Resources Ltd.



Figure 15.2. Location of the Hank project, 4 kilometres due north of the Snoball prospect (Golden Ridge Resources, 2017) (J. Rowe, 2019)

Drilling in 2017 and 2018 by Golden Ridge has had considerable success with new discoveries, particularly at the Williams and Boiling Zones where, among other intercepts, 319 metres of 0.42g/t Au 0.34% Cu and 2.20 g/t Ag, including 131 metres of 0.68 g/t Au, 0.55% Cu and 3.34 g/t Ag, were returned in HNK-18-013.

# 16.0 OTHER RELEVANT DATA AND INFORMATION

To the author's best knowledge, all the relevant data and information on the Property has been provided in the preceding text.

# 17.0 INTERPRETATION AND CONCLUSIONS

The Snoball Property hosts both high-grade, sulphide-bearing quartz-calcite veins and moderately large-scale "intrusion-related, thermal aureole" associated gold-bearing pyrrhotitequartz-pyrite-(chalcopyrite) veins, replacements and stockworks that in part occur in brittle shears within and marginal to a diorite intrusive complex. The mineralized zones vary from irregular lenses and veins to tabular and stratabound bodies and also include pyritic breccias along intrusive contacts. Many of these features suggest that the mineralization may have formed during the waning stages of emplacement of the intrusive bodies.

Previous exploration at Snoball focused primarily on the more accessible, lower elevation slopes of Snoball Ridge and areas immediately adjacent to the south. The historical work in this lower area of the Snoball prospect included most of the hand trenching and all of the diamond drilling undertaken on the Property, concentrated on poorly exposed vein showings and geological or geophysical targets.

Compilation by Evergold personnel of Noranda's historical soil geochemical results suggested a broadening of the multi-element soil geochemical anomalies up-slope to the north, where they remained open off-grid. It was postulated that given the steep grade of the south-facing slopes below Snoball Ridge, much of the material sampled by Noranda would have been comprised of material transported down-slope from above.

In follow-up to these early observations, Evergold completed two programs of soil and rock sampling in 2016 and 2017 along the top of Snoball Ridge and the Pyramid Peak diorite intrusive anchoring its eastern end. This work has demonstrated a strong multi-element soil anomaly in place on Snoball Ridge and overlying Pyramid Peak, and returned high grades from selected samples of vein and vein breccias gathered directly from outcrop and locally derived float. The combined results of this work strongly suggest the anomalies reflect an underlying source(s) in the bedrock below Snoball Ridge and Pyramid Peak.

# 18.0 **RECOMMENDATIONS**

The author believes the Snoball Property has merit, that further work is justified, and that the immediate area of the Snoball prospect is drill-ready. A two-phase exploration program is therefore recommended with the immediate goal (Phase I) of locating with drilling the source(s) of the widespread metal anomalism which recent work by the Company indicates may lie at the up-slope head of the anomalies, tentatively identified as along or below Snoball Ridge and Pyramid Peak, and downslope areas immediately adjacent.

Where possible, drilling should focus on simultaneously testing vein and stratigraphicallycontrolled targets. With the predominating southwest to northeast strike of veins, the predominating 25° southeast dip of bedding in the central part of the map area, and the northnorthwest trend of the diorite intrusive complex, holes should ideally be drilled to the northwest. Styles of gold-silver bearing mineralization targeted by this proposed program, as shown in Figure 18.3 and Photos 19, 20 and 22, would include quartz-carbonate veins distal to the diorite intrusive complex, vein stockworks, and vein breccias along faults and contacts with the intrusives, hornfelsed sediments adjacent to or overlying the intrusions, skarned carbonaceous sediments, and bulk tonnage porphyry-style mineralization within the intrusives.

Proposed collar locations for the Phase I work are shown on Figures 18.1 and 18.2. An interpreted section along Snowball Ridge, with potential target styles, is shown in Figure 18.3. Phase I would also include reconnaissance geological and geochemical exploration in other prospective areas of the Property.

It is recommended that budgeting allow for a Phase II drilling program, contingent upon the receipt of favourable results from Phase I, and of similar scale.



Figure 18.1. Proposed Phase I drill collar locations on alteration (R. Greig recommendations, 2019)



Figure 18.2. Proposed Phase I drill collar locations on rock and soil geochemistry (R. Greig, 2019)

Other parts of the Snoball Property should also receive some exploration attention. For example, in the northwestern part of the Property, where Stuhini Group rocks are known to host gossans and showings of gold-bearing veins, reconnaissance geology, prospecting and soil and stream sediment sampling should be undertaken. In the northeastern part of the Property, where Hazelton Group rocks outcrop, the potential for other styles of mineralization, such as the stratiform mineralization found at Eskay Creek, should be addressed.



Figure 18.3. Snoball intrusion-related deposit model and potential target types (K. Keough, A. Albano, 2019)



Photo 22. Gossanous, gold-bearing hornfelsed northwest slope of Pyramid Peak (C. Greig, 2016)

### 18.1 Proposed Exploration Budget

#### Phase I Drilling Program

**Table 18.1** below sets out the recommended scope and budget for the next stage of exploration. The location of the proposed holes are shown in Figures 17.1 and 17.2 above.

Scope and Cost Estimate for Recommended Exploration Snoball Phase 1 Drill Program						
Target	Activity	Scope	Cost (\$CDN)			
Snoball Ridge Pyramid Peak	drilling services pad building core cutting, logging assaying aircraft rental fuel shipping & transport claims & permitting First Nations camp geological services archaeo-enviro contingency	2400 metres of drilling and 13 holes from 8 pads	260,000 20,000 31,000 38,000 85,000 18,000 2,500 2,000 30,000 80,000 70,000 18,000 40,000			
		Total:	694,500			

The total budget excludes any provision for corporate support services and activities.

#### Phase II Drilling Program

Phase II would be contingent upon the success of Phase I, and expand upon results achieved. It would be predominantly oriented to drilling, and encompass an additional 2,400 metres of work at a similar cost to Phase I.

## 19.0 REFERENCES

Ainsworth, B., 2002. Assessment Report, Geochemical Orientation Study, Sno 2 and Sno 3 Mineral Claims; unpublished Assessment Report for Mr. M.J. Mason; British Columbia Ministry of Energy and Mines, Assessment Report No. 26947.

Alldrick, D.J., Stewart, M.L., Nelson, J.L., and Simpson, K.A., 2004a. Geology of the More Creek - Kinaskan Lake area, northwestern British Columbia. British Columbia Ministry of Energy, Mines and Petroleum Resources, Open File Map 2004-2.

Alldrick, D.J., Stewart, M.L., Nelson, J.L. and Simpson, K.A., 2004b. Tracking the Eskay Rift through northern British Columbia - geology and mineral occurrences of the Upper Iskut River area. British Columbia Ministry of Energy and Mines, Geological Fieldwork 2003, Paper 2004-1, pages 1-18.

Alldrick, D.J., Nelson, J.L., and Barresi, T., 2005. Geology and mineral occurrences of the Upper Iskut River Area: tracking the Eskay rift through northern British Columbia (Telegraph Creek NTS 104G/1, 2; Iskut River NTS 104B/9, 10, 15, 16). In Geological Fieldwork 2004. British Columbia Ministry of Energy, Mines and Petroleum Resources, Paper 2005-1, pp. 1–30.

Alldrick, D.J., Nelson, J.L., Barresi, T., Stewart, M.L. and Simpson, K.A., 2006. Geology of upper Iskut River area, northwestern British Columbia. BC Ministry of Energy and Mines, Open File Map 2006-2, Scale 1:100 000.

Anderson, R.G., 1989. A Stratigraphic, Plutonic and Structural Framework for the Iskut Map Area, Northwestern BC, in Current Research, Part E, Geological Survey of Canada, Paper 89-1 E, p.145-154.

Anderson, R.G. and Thorkelson, D.J., 1990. Mesozoic stratigraphy and setting for some mineral deposits in Iskut River map area, northwestern British Columbia; in Current Research, Part E, Geological Survey of Canada, Paper 90-1E, pages 131–139.

Anderson, R.G., 1993. A Mesozoic stratigraphic and plutonic framework for northwestern Stikinia (Iskut River area), northwestern British Columbia, Canada; in Mesozoic Paleogeography of the Western United States--II, (ed.), G. Dunne and K. McDougall; Society of Economic Palaeontologists and Mineralogists, Pacific Section, vol. 71, p. 477-494.

Baker, N.W., 1992. Prospecting Report on the Voigtberg Project; unpublished Assessment Report for 344967 B.C. Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 22507.

Bobyn, M.G., 1991. Summary Report on Geological Mapping, Prospecting and Geochemistry of the Arctic/ Upper More Claim Group; unpublished Assessment Report for Skeena Resources Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 21529.

Cathro, M.S., 2015. Geological, Geochemical and Geophysical Report on the Hank Property; unpublished Assessment Report for Lac Properties Inc. & Golden Ridge Resources Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 35341.

Copper Fox Metals website, Schaft Creek Project, https://www.copperfoxmetals.com/projects/schaft-creek-project/overview/

Doerksen, G. *et al.* 2017. Feasibility Study Executive Summary for the Red Mountain Project, British Columbia, Canada. Private Report for IDM Mining Ltd.; <u>http://www.idmmining.com/\_resources/IDM-JDS-Red-Mountain-FS-Executive-Summary-Final-</u>2017-06-25.pdf

Evenchick, C.A., 1991. Structural relationships of the Skeena Fold Belt west of the Bowser Basin, northwest British Columbia; in Canadian Journal of Earth Sciences vol. 28, no. 6, 1991 p. 973-983, https://doi.org/10.1139/e91-088.

Evenchick, C.A. and Thorkelson, D.J., 2005. Geology of the Spatsizi River map area, north-central British Columbia. Geological Survey of Canada, Bulletin 577, 276 pp.

Folk, P., 1981. Geological and Geochemical Report on the More and Two More Claims; unpublished Assessment Report for Teck Corporation.; British Columbia Ministry of Energy and Mines, Assessment Report No. 9041.

Gagnon, J.F., Barresi, T., Waldron, J.W.F., Nelson, J.L., Poulton, T.P. and Cordey, F., 2012. Stratigraphy of the upper Hazelton Group and the Jurassic evolution of the Stikine terrane, British Columbia, Canadian Journal of Earth Sciences, vol.49, p. 1027-1052.

Galore Creek Mining Corporation website, Galore Creek Project Description, https://www.gcmc.ca/the-project/

Game, B.D., 1995. Geological Report on the Sno 2 and Sno 3 Mineral Claims; unpublished Assessment Report for Condor International Resources Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 24111.

Ghaffari, H. *et al.* 2016. 2016 KSM (Kerr-Sulphurets-Mitchell) prefeasibility study update and preliminary economic assessment; private report for Seabridge Gold Inc., on Sedar website, <u>https://www.sedar.com/GetFile.do?lang=EN&docClass=24&issuerNo=00007531&issuerType=0</u> <u>3&projectNo=02548688&docId=4006854</u>

Greig, R.E., 2018. Preliminary Observations and Interpretations, Snoball Property; unpublished report for Evergold Corp.

Grove, E.W., 1986. Geology and Mineral Deposits of the Unuk River - Salmon River - Anyox, Bulletin 63, British Columbia Ministry of Energy, Mines and Petroleum Resources.

Gunning, D.R., 1996. Report on the 1996 Diamond Drilling Program on the Voigtberg Property; unpublished Assessment Report for Hayden Resources Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 24937.

Imperial Metals Corporation website, Red Chris Mine Mineral Resources, http://www.imperialmetals.com/s/RedChris.asp?ReportID=562656 John, D.A., 2001. Miocene and early Pliocene epithermal gold-silver deposits in the northern Great Basin, western United States: Characteristics, distribution, and relationship to magmatism. Economic Geology, 96, p.1827-1853.

Jones, M.I., 2006. 2006 Geological, Geochemical, Geophysical and Diamond Drilling Report on the RDN Claims; unpublished Assessment Report for Rimfire Minerals Corp. & Northgate Minerals Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 28789.

Kaip, A.W., 1997. Geology, Alteration and Mineralization on the Hank Property, Northwestern British Columbia: A Near Surface, Low-Sulfidation Epithermal System; University of British Columbia, MSc Thesis, 199 pages.

Kutluoglu, R., 2008. 2007 Geochemical and Geological Report on the Voigtberg Property; unpublished Assessment Report for BCGold Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 29682.

Kutluoglu, R., 2009. 2008 Geological, Geochemical and Geophysical Report on the Grizzly Project; unpublished Assessment Report for Inmet Mining Corp. & Rimfire Minerals Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 30723.

Logan, J.M., Drobe, J.R. and McClelland, W.C., 2000. Geology of the Forest Kerr - Mess Creek area, Northwestern British Columbia (104B/10,15 & 104G/2 & 7W); British Columbia Ministry of Energy and Mines, Bulletin 104, 164 pages.

McPherson, M.D., 1993. 1992 Exploration Report on the Panky Property; unpublished Assessment Report for Cominco Ltd. & Homestake Canada Ltd.; British Columbia Ministry of Energy and Mines, Assessment Report No. 22747.

Marsden, H., 2005. 2005 Geological and Geochemical Report on the Ball Creek Property; unpublished Assessment Report for Paget Resources Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 28076.

Massey, N.W.D., D.G. MacIntyre, P.J. Desjardins and R.T. Cooney, 2005. Geology of British Columbia, BC Ministry of Energy, Mines and Petroleum Resources, Geoscience Map 2005-3, North Sheet, scale 1:1,000,000.

Monger, J.W.H., 1970. Upper Palaeozoic Rocks of the Stikine Arch, British Columbia; in Report of Activities, Part A, Geological Survey of Canada, Paper 70-1, Part A, p. 41-43.

Muntean, J.L. & Einaudi, M.T., 2000. Porphyry gold deposits of the Refugio district, Maricunga belt, northern Chile. Economic Geology, 95, 1445-1472.

Nelson, J., Waldron, J., van Straaten, B., Zagorevski, A., and Rees, C., 2018. Revised stratigraphy of the Hazelton Group in the Iskut River region, northwestern British Columbia; in Geological Fieldwork 2017, British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey Paper 2018-1, pp. 15-38.

Pretium Resources Inc. website, Valley of the Kings Mineral Reserve Update, http://www.pretivm.com/news/news-details/2016/Pretium-Resources-Inc-Positive-Valley-of-the-Kings-Mineral-Reserve-Update-Senior-Management-Changes/default.aspx

Read, P.B., Brown, R.L., Psutka, J.F., Moore, J.M., Journay M., Lane, L.S. and Orchard, M.J., 1989. Geology of Parts of Snippaker Creek (104B/10), Forrest Kerr Creek (104B/15), Bob Quinn

Lake (104B/16), Iskut River (104G/1), and More Creek (104G/2); Geological Survey of Canada, Open File 2094.

Rhys, D.A., 1995. The Red Bluff Gold-Copper Porphyry and Associated Precious and Base Metal Veins, Northwestern British Columbia; in Porphyry Deposits of the Northwestern Cordillera of North America (Schroeter, T. G., ed.), Canadian Institute of Mining, Metallurgy and Petroleum, Special Volume 46, Pages 838-850.

Rowe, J.D. & Greig, C.J., 2017. 2016 Geological & Geochemical Program on the Snoball Property: Assessment Report for Evergold Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 36534.

Rowe, J.D., 2018. 2017 Rock & Soil Geochemical Program on the Snoball Property: unpublished Assessment Report for Evergold Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 37818.

Savell, M., 1991. Geological and Geochemical Report on the Sno 1 to 3 Mineral Claims; unpublished Assessment Report for Noranda Exploration Company, Limited; British Columbia Ministry of Energy and Mines, Assessment Report No. 21019.

Savell, M. and Harrison, D., 1991. Geological, Geophysical and Geochemical Report on the Sno 1 to Sno 3 Mineral Claims; unpublished Assessment Report for Noranda Exploration Company, Limited; British Columbia Ministry of Energy and Mines, Assessment Report No. 21932.

Savell, M., 1992. Diamond Drilling Report on the Sno 1 to Sno 3 Mineral Claims; unpublished Private Report for Noranda Exploration Company, Limited.

Seabridge Gold Inc. website, Preliminary Feasibility Study, Reserves Estimate, <u>http://seabridgegold.net/News/Article/626/updated-preliminary-feasibility-study-completed-for-seabridge-gold-s-ksm-project</u>

Seedorff, E., Dilles, J.H., Proffett, J.M., Jr., Einaudi, M.T., Zurcher, L., William J. A. Stavast, W. J.A., Johnson, D.A., Barton, M.D., 2005. Porphyry-Related Deposits: Characteristics and Origin of Hypogene Features; in Hedenquist, J., Thompson, J.F., Richards, J. (Eds.), 100th Anniversary Volume, Society of Economic Geologists, p. 251–298.

Sillitoe, R.H. & Hedenquist, J.W., 2003. Linkages between volcano-tectonic settings, ore-fluid compositions, and epithermal precious metal deposits. In: Simmons, S.F., Graham, I. (Eds.), Volcanic, Geothermal, and Ore-Forming Fluids: Rulers and Witnesses of Processes within the Earth. Society of Economic Geologists Special Publication 10, p. 315-343.

Simmons, A., 2006. 2006 Geochemical and Geological Report on the Voigtberg Property; unpublished Assessment Report for Kaminak Gold Corp. & BCGold Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 28837.

Souther, J.G., 1972. Telegraph Creek Map Area, British Columbia; Geological Survey of Canada Paper 71-4

Visagie D., 1992. Geochemical Report, Smith Property; unpublished Assessment Report for Tenajon Resources Corp.; British Columbia Ministry of Energy and Mines, Assessment Report No. 22577.

Weber, J.S., 1996. 1996 Exploration Program on the Sno 2 & 3 Claims; unpublished Assessment Report for Condor International Resources Inc.; British Columbia Ministry of Energy and Mines, Assessment Report No. 24795.

#### **ASSESSMENT REPORTS**

- \* All Assessment Reports are available on-line at: http://aris.empr.gov.bc.ca/
- \* Minfile descriptions are available on-line at: <u>http://minfile.gov.bc.ca/searchbasic.aspx</u>
- \* BC Ministry of Energy and Mines, Exploration Assistant is available online at: http://webmap.em.gov.bc.ca/mapplace/minpot/ex\_assist.cfm
- \* All BC GSB publications are available on-line at: http://www.empr.gov.bc.ca/MINING/GEOSCIENCE/PUBLICATIONSCATALOGUE/Pages/default.aspx
- \* BC Mineral Titles data is available online at: <u>https://www2.gov.bc.ca/gov/content/industry/mineral-</u> exploration-mining/mineral-titles/mineral-placer-titles/mineraltitlesonline