Stardust Project
Ni 43-101 Technical Report
Omineca Mining Division, British Columbia

NI 43-101 Technical Report

Prepared for:
Sun Metals Corp.
Lorraine Copper Corp.

Prepared by:
Ronald G. Simpson, P.Geo., GeoSim Services Inc.

Effective Date: January 8, 2018

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Certain information and statements contained in this report are “forward looking” in nature. All information and statements in this report, other than statements of historical fact, that address events, results, outcomes or developments that Sun Metals Corp., Lorraine Copper Corp. and/or the Qualified Person who authored this report expect to occur are “forward-looking statements”. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the use of forward-looking terminology such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, “projects”, “potential”, “believes” or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “should”, “might” or “will be taken”, “occur” or “be achieved” or the negative connotation of such terms. Forward-looking statements include, but are not limited to, statements with respect to estimates of mineral reserves and resources; potential environmental liabilities and related costs; and exploration potential.

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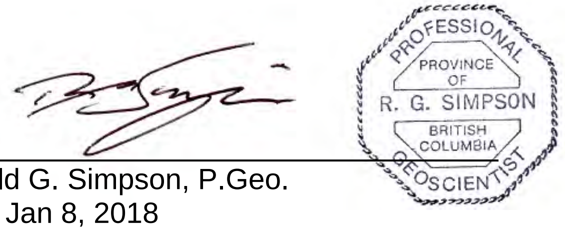
DATE AND SIGNATURE PAGE

The effective date of this NI 43-101 Technical report, entitled "Stardust Project, NI 43-101 Technical Report," is Jan 8, 2018.



Ronald G. Simpson, P.Geo.
Date: Jan 8, 2018

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1.0 SUMMARY

1.1 Introduction

Geosim Services Inc. ("Geosim") was requested by Sun Metals Corp. ("Sun Metals" or "the Company") and Lorraine Copper Corp. ("Lorraine Copper") to prepare a Technical Report for the Stardust Project located in central British Columbia.

The Stardust Property ("the Property"), was formerly known as 'Lustdust' and lies in the Omineca Mining Division of north-central British Columbia, approximately 150km north of Fort St. James. It consists of 20 contiguous claims owned 100% by Lorraine Copper Corp. ("Lorraine Copper"). There are no title encumbrances, surface rights issues or legal access obligations that must be met in order for Lorraine Copper to retain this property. The Stardust Property is not subject to any royalty terms, back-in rights, payments or any other agreements or encumbrances. The Company has an option to acquire a 100% interest in the property subject to certain royalties and terms.

1.2 Project History

The Property has been explored since 1944 when the Takla silver vein (No. 1 Zone) was discovered. Alpha Gold Corporation ("Alpha Gold") carried out exploration on the property between 1991 and 2012. In June of 2016, Lorraine Copper Corp. entered into an agreement to acquire a 100% interest in the Stardust property from Alpha Gold. The 2017 exploration program began in early August of 2017 and concluded in late October. Work conducted in 2017 included 39 line-km of soil sampling, 28 line-km of IP and magnetometer survey, 3 diamond drill holes totalling 344m and the collection of 45 rock and chip samples.

1.3 Geology and Mineralization

The property is underlain by the Sowchea succession, Pope succession, and Copley succession of the Cache Creek Terrane immediately west of the Pinchi Fault. Supracrustal rocks are intruded by Eocene age intrusive bodies, the most voluminous of which is the Glover Stock.

The Property is host to at least one mineralized carbonate replacement system identified as the Canyon Creek copper-gold deposit. Carbonate Replacement Deposits (CRDs), are epigenetic, intrusion-related, high-temperature sulfide-dominant Pb-Zn-Ag-Cu-Au-rich deposits that typically range from lenticular or podiform bodies developed along stock, dyke, or sill contacts to elongate-tubular to elongate-tabular bodies referred to as chimneys and/or mantos depending on their orientation (Megaw, 1998). Limestone, dolomite and dolomitized limestone are the major host rocks. Ores grade outward from sulfide-rich skarns associated with unmineralized or porphyry-type intrusive bodies to essentially 100% polymetallic massive sulfide bodies. Proximal to distal metal zoning generally follows: Cu (Au, W, MO), Cu-Zn (Ag), Zn-Pb-Ag, Pb-Ag, Mn-Ag, Mn, and Hg (Megaw, 1998).

1.4 Metallurgical Testing

No metallurgical work has been carried out to date on the project.

1.5 Mineral Resource Estimate

The Canyon Creek deposit is estimated to contain an indicated mineral resource of 985,000 tonnes grading 1.34% Cu, 0.62% Zn, 1.59 g/t Au and 36.8 g/t Ag. An additional inferred resource contains 1,985,000 tonnes averaging 1.24% CU, 0.14% Zn, 1.72 g/t Au and 30.5 g/t Ag.

The copper equivalent calculation used metal prices of US$3.00/lb for copper, US$1.25/lb for zinc, US$1300/oz for gold, and US$18/oz for silver. Adjustment factors to account for differences in relative metallurgical recoveries of the constituents will depend upon completion of definitive metallurgical testing. The following equation was used to calculate copper equivalence: Cu Eq = Cu + (Zn x 0.4167) + (Au x 0.6319) + (Ag x 0.0087). A cut-off grade of 1.5% Cu Equivalent represents an in-situ metal value of approximately $100/tonne which is believed to represent a reasonable break-even cost for underground mining and processing.

The effective date of the mineral resource estimate is January 8, 2018.

1.6 Interpretation and Conclusions

The Canyon Creek zone is a skarn-hosted mineral occurrence hosted by Permian Cache Creek group sediments in proximity to the Glover stock. The presently defined mineral zone extends some 600 m along strike and down dip.

The present resource estimate is based on analytical data from 106 core holes completed between 1997 and the end of 2017.

Recent QA/QC procedures are acceptable but historic data does not meet current industry standards. Partial reliance on historic data resulted in limitation of the level of resource classification.

1.7 Recommendations

Geosim makes the following recommendations:

- Certified reference standards representing all elements of potential economic interest should be used for all future sampling programs.
- Unsampled historic drill core from areas adjacent to and within mineralized skarn should be split and analyzed.
- Geochemical sampling and field mapping should be expanded to cover gaps in existing coverage
- Additional geophysical surveys should be undertaken to explore for additional mineral occurrences
- Infill and definition drilling should be continued to upgrade resource confidence and define the ultimate extents of the Canyon Creek Skarn Zone.
- Other targets on the Stardust property should be evaluated and prioritized.
- A more accurate topographic base map should be acquired.

- Preliminary metallurgical studies should be considered

1.8 Phase I Drilling Proposal

A number of targets have been identified from previous work which immediately warrant additional drill testing (Table 19-1.). Drilling should initially be concentrated on exploring for additional Cu-Au skarns proximal to the Glover stock. Drill testing the mantos has essentially been neglected since the Canyon Creek skarn discovery in 1999. However, in 2005 and 2006 drilling a large soil geochemistry anomaly to the east of the Canyon Creek Skarn resulted in the discovery of the East and the GD Zones respectively which both warrant further drill testing.

Exact depths, collar locations and dips should be determined in the field as access allows. Diamond drilling should be completed with NQ core to minimize hole deviation and all core should be orientated to allow for determination of accurate structural measurements.

A Phase I budget amounting to $M2.17 is shown in Table 1-1. A Phase II budget contingent on positive results from Phase I, totals an additional $M3.275 and is presented in Table 1-2

Table 1-1 Proposed Phase I Exploration Budget

Phase I	Cost
Geochemical - all in cost 3000 samples	$215,000
Photogrammetry – Elevation Mapping	$15,000
Geological – Structural Study	$40,000
Geological – Core Relogging / Sampling	$40,000
Geological – Field Mapping	$60,000
Geophysical – EM Surveying	$150,000
Geophysical – NSAMT Surveying	$50,000
Diamond Drilling (road supported) 4000m @$250/m all in cost	$1,000,000
Diamond Drilling (helicopter supported) 1500m @ 400/m all in cost	$600,000
Subtotal	**$2,170,000**

Table 1-2 Proposed Phase II Exploration Budget

Phase II	
Road Building:	$300,000
Diamond Drilling (road supported - winter) 8500m @350m/all in cost	$2,975,000
Subtotal	**$3,275,000**
Total Phases I + II	**$5,445,000**

2.0 INTRODUCTION AND TERMS OF REFERENCE

Sun Metals Corp. (“Sun Metals” or “the Company”) is engaged in the exploration of the Stardust Property, Omineca Mining Division, British Columbia, 100% owned by Lorraine Copper Corp. The Property was historically known as ‘Lustdust’. Geosim Services Inc. was retained by the Company to estimate an updated mineral resource for the Canyon Creek copper-gold skarn deposit and complete a Technical Report summarizing the findings of the study to meet the requirements of National Instrument 43-101 (“the instrument”) and Form 43-101F1.

2.1 Terms of Reference

Geosim is independent of Sun Metals and Lorraine Copper and has no beneficial interest in the Stardust Project. Fees for this Technical Report are not dependent in whole or in part on any prior or future engagement or understanding resulting from the conclusions of this report.

All measurement units used in this report are metric, and currency is expressed in United States dollars unless stated otherwise.

The geographic projection used for the project maps and surveys is UTM Zone 10, NAD 83.

2.2 Qualified Persons

Ronald G. Simpson, P Geo. (Geosim Services Inc.) served as the Qualified Person (QPs) as defined in NI 43-101.

2.3 Site Visits and Scope of Personal Inspection

The author visited the site on June 14, 2010 and on October 19, 2017. Details are described in Section 12.1.

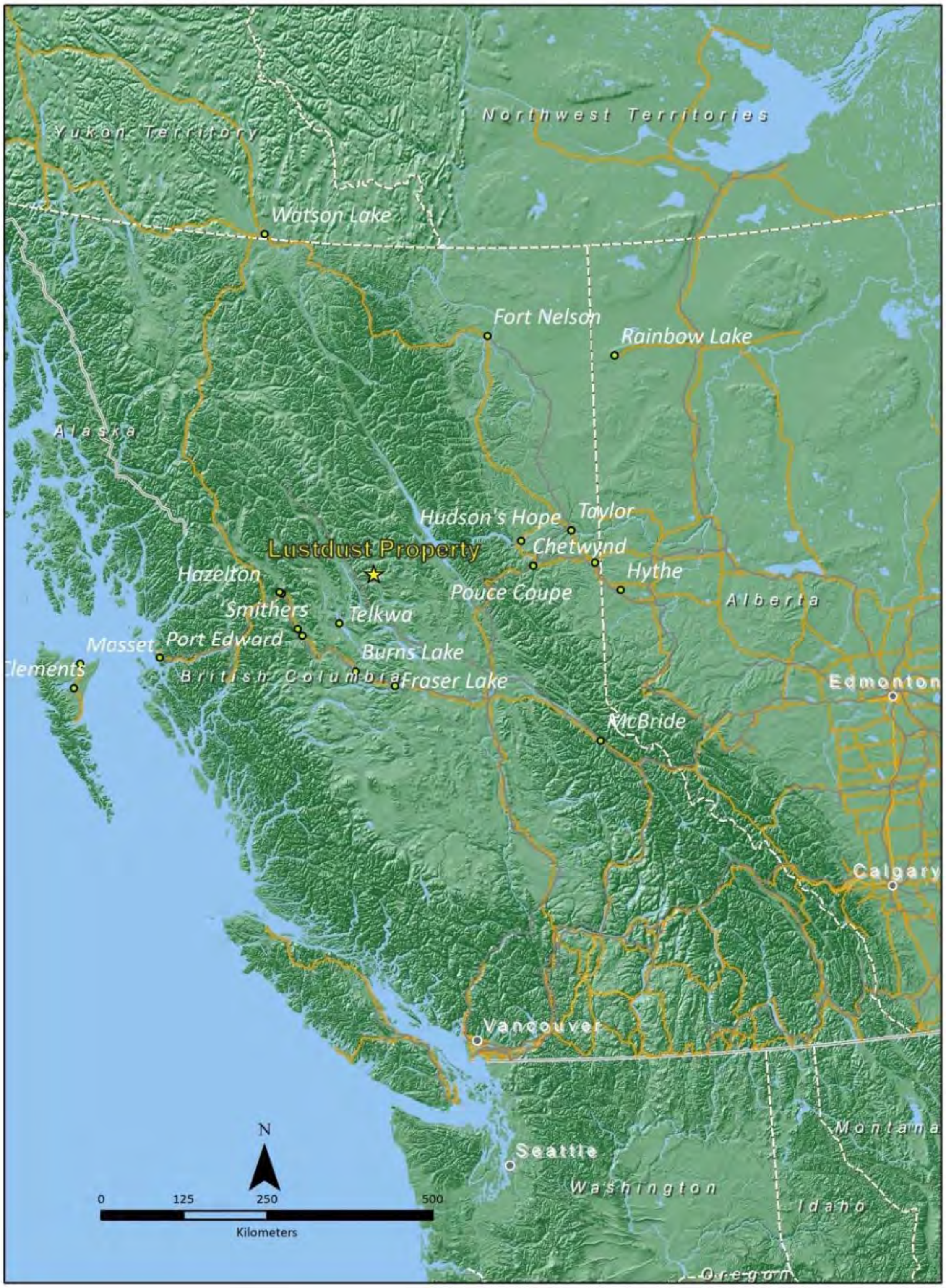
3.0 RELIANCE ON OTHER EXPERTS

The QP author of this Report states that he is a qualified person for those areas as identified in the "Certificate of Qualified Person", as included in this Report. The author has not conducted independent land status evaluations and has relied and believe there is a reasonable basis for this reliance, upon information from Sun Metals, Lorraine Copper, and the Mineral Titles Branch, Energy and Minerals Division of the Ministry of Energy and Mines for British Columbia regarding property status, and legal title for the Project (Sections 4.2 to 4.4), which the author believes to be accurate.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Property is located approximately 150 km north of Fort St. James in the Omineca Mining Division of north-central British Columbia on NTS 93N/11W at latitude 55° 34' North (Northing 6160175) and 125° 25' West (Easting 347850), UTM Zone 10, NAD 83 (Figure 4-1).

Figure 4-1 General Location Map



4.1 Tenure History

Pursuant to agreements dated July 15, 1989 and February 21, 1992, Alpha Gold acquired interest in 77 mineral claims known as the Lustdust Property, Omineca Mining Division. In 2003, Alpha acquired the retained 5% net profits interest and the 2% net smelter return royalties. In 2003, net smelter returns were purchased for these claims. Also, during 2003, an additional 8 two-post claims overlying the historic Takla Bralorne Mercury Mine were acquired by purchase. In June 2005 all these claim holdings were converted to eleven "cell" claims.

In 2006, six additional "cell" claims were acquired bringing the total to seventeen contiguous claims covering an area of 8,560.75 hectares (Figure 4-2). In 2011 and additional 3 claims were acquired brining the total area to 9,583 hectares. "Cell" claims are geographic blocks with boundaries defined by a computer mapping system. No fractions or ownership disputes are possible with this type of claim.

In August 2013, Alpha Gold was re-named ALQ Gold Corp.

In June of 2016, Lorraine Copper Corp. acquired the Property from Alpha Gold. The completion of the sale was announced in a news release dated September 26. 2016. It was stated that "Lorraine Copper purchased a 100% interest in the Lustdust Property by (i) issuing ALQ 5.5 million LLC common shares and (ii) paying ALQ $50,000 in cash. After acquisition, Lorraine Copper decided to change the property name to 'Stardust'.

4.2 Mineral Tenure

Lorraine Copper Corp. owns a 100% interest in the Stardust mineral property. This has been confirmed by an on-line search of records at the Mineral Titles Branch, Energy and Minerals Division of the Ministry of Energy and Mines for British Columbia (the "Mineral Titles Branch") effective February 28, 2018, which disclosed that Lorraine is the recorded holder of a 100% interest in the Property.

The Property encompasses 24 mineral claims covering 11,156 hectares. Claim details are presented in Table 4-1 and Figure 4-2.

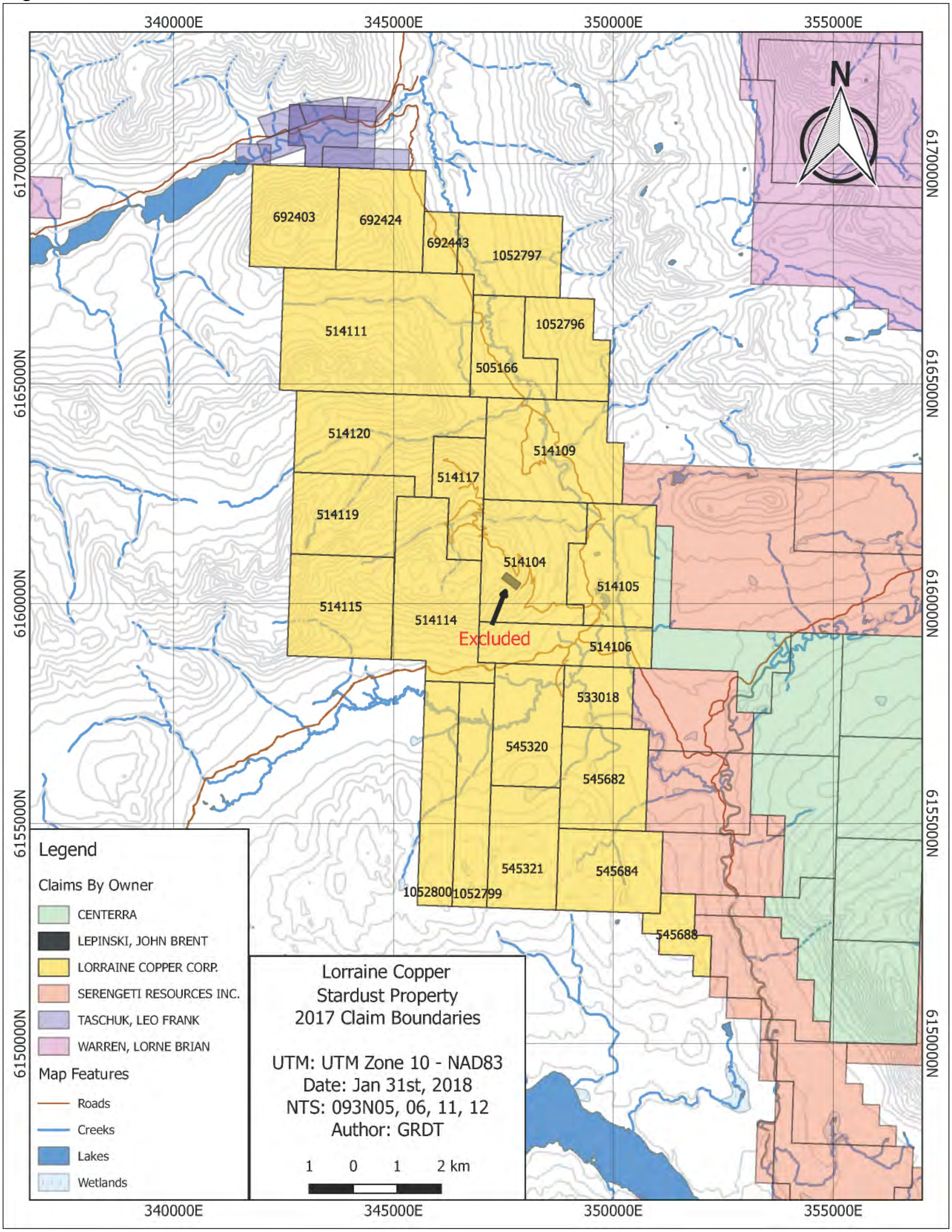
On September 21, 2017, 1124245 B.C. Ltd. (subsequently renamed "Sun Metals") was granted an option to acquire a 100% interest in the Property subject to certain royalties and terms. To earn its interest in the Property, 1124245 B.C. Ltd. made a $50,000 cash payment to Lorraine Copper and issued 500,000 shares of 1124245 B.C. Ltd. and was required to undertake a minimum $500,000 expenditure on the property by December 31, 2017. Thereafter Sun Metals will make annual cash payments, share issuances and minimum annual property expenditures until a total of $6,000,000 has been spent on the Property before December 31, 2021. At that point Sun Metals will issue sufficient shares (to a maximum of 51,873,599) to Lorraine Copper such that Lorraine will hold a 30% interest in Sun Metals. Lorraine Copper will also retain a 2% NSR on precious metals and a 1% NSR on base metals which may be bought down by one-half each by the payment of $1,500,000 per royalty to Lorraine Copper.

Sun Metals Fulfilled the 2017 expenditure requirement by completing an exploration program by year end at a total cost of $725,411 (S. Robertson, personal communication).

Table 4-1 Stardust Mineral Tenures

Title Number	Claim Name	Map Number	Issue Date	Good To Date	Status	Area (ha)
505166	Alpha 1	093N	2005/JAN/29	2026/DEC/15	GOOD	347.16
514104		093N	2005/JUN/07	2026/DEC/15	GOOD	603.62
514105		093N	2005/JUN/07	2026/DEC/15	GOOD	493.88
514106		093N	2005/JUN/07	2026/DEC/15	GOOD	365.99
514109		093N	2005/JUN/07	2026/DEC/15	GOOD	694.67
514111		093N	2005/JUN/07	2026/DEC/15	GOOD	1205.81
514114		093N	2005/JUN/08	2026/DEC/15	GOOD	695.24
514115		093N	2005/JUN/08	2026/DEC/15	GOOD	548.90
514117		093N	2005/JUN/08	2026/DEC/15	GOOD	274.28
514119		093N	2005/JUN/08	2026/DEC/15	GOOD	457.19
514120		093N	2005/JUN/08	2026/DEC/15	GOOD	712.91
533018	ALPHA 2	093N	2006/APR/25	2025/DEC/15	GOOD	219.65
545320	LUSTDUST	093N	2006/NOV/13	2025/DEC/15	GOOD	439.37
545321	LUSTDUST	093N	2006/NOV/13	2025/DEC/15	GOOD	439.65
545682	NAT 1	093N	2006/NOV/22	2025/DEC/15	GOOD	457.80
545684	NAT 2	093N	2006/NOV/22	2025/DEC/15	GOOD	439.70
545688	NAT 3	093N	2006/NOV/22	2025/DEC/15	GOOD	164.92
692403	UTM2	093N	2010/JAN/01	2025/DEC/15	GOOD	456.47
692424	UTM3	093N	2010/JAN/01	2025/DEC/15	GOOD	456.47
692443	UTM4	093N	2010/JAN/01	2025/DEC/15	GOOD	109.57
1052796	KW2	093N	2017/JUN/28	2025/DEC/15	GOOD	347.13
1052797	KWN	093N	2017/JUN/28	2025/DEC/15	GOOD	420.02
1052799	WESTSIDE 1	093N	2017/JUN/28	2025/DEC/15	GOOD	402.92
1052800	WESTSIDE 2	093N	2017/JUN/28	2025/DEC/15	GOOD	402.92
					Total:	**11156.26**

Figure 4-2 Mineral Claim Locations



4.3 Royalties and Encumbrances

The Stardust Property is not subject to any royalty terms, back-in rights, payments or any other agreements or encumbrances. In order to earn its interest in Stardust, Sun Metals was required to undertake a minimum of $500,000 expenditure on the property by December 31, 2017. Thereafter, the Company will make annual cash payments, share issuances and minimum annual property expenditures until a total of $6,000,000 has been spent on the property before December 31, 2021. At that point the Company will issue sufficient shares to Lorraine Copper such that Lorraine will hold a 30% interest in the Company. Lorraine Copper will also retain a 2% NSR on precious metals and a 1% NSR on base metals which may be bought down by one-half each by the payment of $1,500,000 per royalty to Lorraine Copper.

4.4 Permits & Environmental Liabilities

The historic Bralorne Takla Mercury Mine is located on the property. The area has been fenced off with signs clearly posted warning of contaminated soil. The abandoned mine is being investigated by the Crown Contaminated Sites Branch of the Ministry of Agriculture and Lands, but Lorraine Copper is not responsible for reclamation or remediation of this historic site. A Preliminary Site Investigation and Detailed Site Investigation have both been completed and report elevated levels of antimony, arsenic, cadmium, chromium, and mercury in the soil at the mine site. Ongoing government work including a Human Health and Ecological Risk Assessment is underway in consultation with local First Nations. (Source: B.C. Ministry of Agriculture and Lands, 2008)

Lorraine Copper announced on March 30, 2017 that multiyear exploration permits had been issued by the BC Ministry of Energy and Mines authorizing mineral exploration for the Stardust Project.

4.5 Comments on Section 4

to the extent known there are no other significant factors and risks besides noted in the report that may affect access, title, or the right or ability to perform work on the property.

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

5.1 Accessibility

The Stardust property is located in the Omineca Mountains approximately 210 kilometers northwest of Prince George, B.C. and 36 km east of Takla Landing (Figure 4-1). The claims lie immediately west of the old Bralone-Takla Mercury Mine (Minfile 093N 008) and encompass the historic Takla Silver Mine (Minfile 093N 009).

The property is accessible by road from Highway 16 at Fort St. James by traveling 30 km along a paved road towards Tachie Lake, then north for 68 km along the all-weather Leo Creek Forest Service Road (FSR), 54 km along the Driftwood FSR, 26 km along the Fall-Tsayta logging road, and 3 km along the Silver Creek road. Total distance by road is approximately 200 km from Fort St. James and driving time is about 3 hours under good road conditions. The property is also accessible by float plane, about a 1 hour trip to Tsayta Lake from either Prince George or Smithers, followed by a half an hour drive to the site and is about 140km from Smithers.

5.2 Climate

The climate is cool and moderate with warm, moist summers and cool winters. Snow accumulations, during average winters, persist from late September through May-June at the higher elevations. Winter temperatures are commonly below freezing and can fall as low as -30°C for short periods of time. The region receives an average of 295 mm of rainfall and 192 cm of snowfall annually with 138 days per year with precipitation exceeding 0.2 mm. Most of the exploration programs conducted on the property to date have been completed during the June to October field season.

5.3 Local Resources and Infrastructure

The nearby centres of Prince George, Burns Lake, Houston and Smithers (populations of 65500, 1930, 2100 and 5350 respectively) have provided all the necessary supplies and services to operate past exploration programs. All these communities have a strong mining history. Prince George is the regional centre with a mineral resource sector economic base.

Smaller population centres closer to the property are Takla Landing and Fort St. James.

B.C. Railway Company maintains an active rail line to Fort St. James (approximately 215 km via road) that could potentially be used for concentrate transport

There are no permanent structures or facilities presently located on the Stardust property, save a small gazebo with information about the Bralorne-Takla Mine reclamation site. Several collapsed cabin structures dot the small lake just south of the reclamation site in the area formerly occupied by historic exploration camps. To the immediate southeast along the Silver Creek road lies Serengeti Resources' (SIR) Kwanika camp, which, at the time of the 2017 exploration program, contained several permanent structures that were in various states of disrepair. There are also several fishing lodges and guiding camps within the area, including the Tsayta Lake Lodge at 7km on the Fall-Tsayta road, which was the operations-base for the 2017 program.

5.4 Physiography

The terrain is moderate, ranging in elevation from 1000-1525 m on the property with little outcrop exposure. Lower elevations are covered by widely-spaced lodgepole pine. At elevations above 1200 m, forest cover consists of overmature spruce and balsam with an undergrowth of white rhododendron. Despite fairly moist summers, many drainages are seasonal in nature with progressively diminished flows during the late summer and fall.

5.5 Regional Seismicity

South of 60° N, seismicity in the interior and Rocky Mountain areas drops off rapidly. The largest earthquake recorded in the southern Cordillera was a magnitude 6.0 in 1918 that struck the Valemount area of the Rocky Mountain trench. In 1986 a magnitude 5.5 earthquake occurred near Prince George, causing some minor damage.

6.0 HISTORY

The Stardust area was first staked in 1944 when the No. 1 Zone (Takla Siver Veins) was discovered near the southern end of the property. Since that time numerous operators have investigated the property and immediately surrounding area and a number of mineralized zones have been identified.

The Bralorne Takla Mercury mine was in operation from November 1943 to September 1944 when mining ceased. During nine months of operation, 59,914 kg of mercury were recovered from 10,206 tonnes of milled ore from the two largest orebodies (Geological Survey of Canada Memoir 252, page 157).

Bralorne Mines Ltd. explored the property from 1952-54. In 1960 Bralorne again acquired the property and from 1960 to 1962 carried out further work (drilling and trenching) in a joint venture with Noranda Exploration Company, Ltd. and Canex Aerial Exploration Ltd. A limited sampling program was also carried out by Bralorne alone in 1963.

The option held by Bralorne was transferred to Talka Silver Mines Ltd. which was organized in September 1964 to explore and develop the property. A new adit, bypassing the old one, was begun in 1964 and advanced to a total length of 229 m in 1965. Diamond drilling during 1965-1966 totaled 259 metres underground and more than 762 metres on surface. In July 1968 an agreement was reached with Anchor Mines Ltd. by which a new company, Anchor-Takla Mines Ltd., was incorporated for the purpose of performing joint venture work on the property. Additional ground was acquired in the A.G. 1-6, Ag 1-4, and Keno l-8 claims. Diamond drilling during the fall of 1968 totaled 573 metres in 17 holes underground, and 1337 metres in 13 holes on surface. The underground work was confined to the No. 1 zone. The company (Anchor-Takla) was dissolved in 1977.

In 1977, Granby located the K, L and M claims comprising 38 units to cover a large area with apparent mineral potential. The M claims adjoined Crown Granted Mineral Claims L.6181, 6184, 6186 and 6188 which formed part of the former Bralorne Takla Mercury Mine Property. Pioneer Metals Corporation acquired 100% interest in the property early in 1985 and followed with some geological work in 1986.

The Air claim was added to the property in late 1978, and in 1979 three fractions and 52 metric claim units were located.

In 1978 Granby cut 67 km of grid line, carried out a soil geochemical survey and mapped the property at a scale of 1:5,000. In 1979 a Pulse E.M, survey was conducted by Glen White Geophysics Ltd. followed by a diamond drill program later in the year.

In 1989 Alpha acquired the property and in 1991 completed 906.6 m of drilling in 10 holes on Zone 3. They followed in 1992 with 30 diamond drill holes totaling 1520 metres on Zone 4B. In 1993, Alpha Gold completed a further 24 diamond drillholes on Zone 4B and purchased 8 two post claims which overlie the historic Bralorne Takla mine. A total of four drillholes were collared in the mine area but only three were successfully completed. An extensive soil geochemical survey was also conducted in the mine area.

Teck Exploration Ltd., under option from Alpha, drilled 16 holes totaling 3063 metres in 1997. Drilling targeted the manto and skarn styles of mineralization that were traced by trenching in 1996. Alpha completed 1103 metres in a 14-hole diamond drilling program in 1998 that targeted Zones 1, 2 and 3. In 1999, Alpha completed an 18-hole, 3045-metre drilling program that accomplished two objectives. It extended the strike length of the skarn zone 1000 metres further to the north (hole LD99-06 intersected 5.2 metres grading 8.3 per cent copper) and provided very encouraging information on a previously untested 400-metre gap between the most southerly skarn holes and most northerly exposures of manto mineralization. In 2000, Alpha drilled 4680 metres of diamond drilling in 29 holes. Most of the drill holes targeted prospective skarn zones, although the company did test areas further west for potential porphyry mineralization. In 2001, Alpha drilled 2664 holes on the Canyon Creek Skarn Zone (CCS) and Mo zones.

Alpha drilled 19 NQ bore holes totaling 7790 metres between July 8 and September 6, 2002 on the CCS deposit. An additional 42 NQ holes totaling 7908 metres, were completed in 2003 and 32 holes totaling 6,010 m in 2004. Most of the drilling was on the CCS deposit.

In 2005, Alpha Gold drilled 5,153 metres in 16 diamond drillholes. Drilling a coincident gold-arsenic soil geochemistry anomaly 300 metres east of the CCS deposit resulted in the discovery of the East zone. In 2005 Alpha also conducted a broad, grid-based soil sampling and bedrock mapping program that covered not only the Dream Creek area north of the Canyon skarn zone but also part of the Pinchi fault system at the former Bralorne Takla mercury mine

In 2005, a resource estimate was prepared in conformance with the requirements set out in the standards defined by National Instrument 43-101 (Palmer & Hanson, 2005). The resource estimate was based upon drill core results from 40,690 metres of drilling from 225 drill holes obtained by Alpha Gold during the period 1991 to 1993 and 1998 to 2004, and results obtained from 3,063 metres of drilling by Teck Exploration in 1997. Based on this estimate, the mineralized zones contained an inferred resource of 2.45 million tonnes at a grade of 1.82 grams per tonne gold, 59 grams per tonne silver, 0.56 per cent copper, 0.10 per cent lead and 1.01 per cent zinc at a cut-off of three grams per tonne gold equivalent (Press Release, Alpha Gold Corp., April 11, 2005). The mineral resource estimate was a summation of five geologically distinct mineralized zones on the property. These include Zone 1, Zone 3, Zone 4b, Canyon Creek skarn and Canyon Creek extension.

In 2006, diamond drilling extended the sinuous geometry of the Canyon Creek copper skarn system both down-dip and to the south. Alpha drilled 6855 metres in 31 NQ diamond-drill holes and 3054 metres in 24 rotary holes. Trenching of a gold soil anomaly southeast of the Canyon Creek zone discovered the GD zone. The company completed a reverse circulation drilling program in an area surrounding the historic Bralorne-Takla mercury mine to evaluate gold soil anomalies outlined in 2005.

In 2007, Alpha Gold completed 50 line km of soil geochemistry and IP, mapping, and 11 boreholes totaling about 2757 m. In 2008, Alpha completed about 2400 metres of drilling on untested targets on the southern portion of the property.

In 2009, Alpha completed 6367m of core drilling in 17 holes, mainly targeting the Canyon Creek skarn zone. In 2010 Alpha drilled 14 holes (3987 m) in the Canyon Creek and Canyon Creek Extension zones. Details are described in Section 10.

In 2012, Aurora Geoscience was engaged by Alpha Gold to carry out a data evaluation and report on project potential.

No work was carried out between 2012 and the time the project was acquired by Lorraine Copper.

The 2017 exploration project carried out by Sun Metals included a geochemical survey, IP and magnetometer surveys and a 3-hole diamond drill program. Details are discussed in Section 10.

A summary of work performed by the various parties is shown in Table 6-1.

Table 6-1 Summary of Previous Work

Year	Operator	Claims	Zone	Work Performed
1944		Wow #1	1	Zone 1 discovered and staked
1945	McKee Gp.	Wow #1	1	trenching, 106.7 m of drilling
	Leta Expl. Ltd.			
1952-	Bralorne	Wow 1, MV1	1,2,3	5306 m of trenching,
1954	Mines Ltd.	MV2, M	4b	1429 m of drilling
1960	Noranda Canex		"	7 rock cuts, 34 test pits, 200m hand; and 1508m cat trenching
1963	Bralorne	Wow #1	1	sampling
1964	Takla Silver Mines Ltd.	Wow #1	1	229 m of drifting
1966	Takla Silver Mines Ltd.	Wow #1	1	229 m of underground ddh
1968	Takla Silver Mines Ltd.	Wow #1	1	1337 m of surface and 573 m of
	Anchor Mines Ltd.			underground ddh, 90 kg bulk sample
1978	Granby Mining Corp	MV1, MV2, K,L,M	1, 2, 3, 4b,	Pulse EM, surface ddh
1980	Granby Mining Corp	L,M	1, 2, 3, 4b	airborne mag, VLF, ground mag, VLF; soil survey, 2 ddhs
1981	Noranda Expln. Co	L,M	4b	8 ddhs (7 wildcat); soil sampling; mapping
1986	Welcome North Mines Ltd.	Wow 1, MV, L, M	1, 3, 4B	sampling
1986	Pioneer Metals	Wow 1, MV1, M	1,2, 3, 4b	geological survey
1991	Alpha Gold Corp.	MV1	3	906.6m of drilling in 10 holes
1992	Alpha Gold Corp.	L, M	4b	trenching, 1520m of drilling in 30 holes
1993	Alpha Gold Corp.	L, M	4b	24 ddhs
1996	Alpha Gold Corp.		2,3,4b,4	geology, soils, trenching
1997	Alpha Gold Corp.		2,3,4b,4	soil sampling, 3062.8 m drilling in 16 holes
1998	Alpha Gold Corp.		1, 2, 3	1,103m of drilling in 14 ddhs
1999	Alpha Gold Corp.		3, 4b	3050m drilling in 18 holes, trenching CCS
2000	Alpha Gold Corp.		CCS	4680m drilling in 29 holes.
2001	Alpha Gold Corp.		CCS, Mo	Porphyry Mo-Cu 2945 m in 10 holes; CCS 2664 m in 8 holes
2002	Alpha Gold Corp.	L,M	CCS	7790.4 m in 19 NQ boreholes.
2003	Alpha Gold Corp.	C.G’s, L, M	CCS,1,3	7,908 m in 42 NQ boreholes; 37 km soil geochemistry
2004	Alpha Gold Corp.	L,M	CCS,3	6010 m in 21 NQ holes; 724 B horizon soils
2005	Alpha Gold Corp.		East Zone, CCS	5153 m in 16 NQ holes; 587 B horizon soils

Year	Operator	Claims	Zone	Work Performed
2006	Alpha Gold Corp.	514104, 514105, 514117	CCS, GD, Valley	3054m RC drilling in 24 holes; 6855.1m NQ diamond drilling in 32 holes; trenching GD zone
2007	Alpha Gold Corp.	514104, 514105,	CCS, GD, Valley	34 NQ drill holes targeting 2007 geophysical survey targets
2008	Alpha Gold Corp.	514117	Valley	5 NQ drill holes along Pinchi fault, Aeromagnetic Survey
2009	Alpha Gold Corp.	514104, 514105,	CCS	6366.92m NQ drilling in 17 holes
2010	Alpha Gold Corp.	514117	CCS, CCS extension	3986.7m NQ drilling in 14 holes;
2011	Alpha Gold Corp.	514117		Airborne ZTEM survey, mapping, prospecting and soil sampling
2017	Sun Metals Corp.			Geochemical survey, IP & magnetometer survey, 3 HQ drill holes

7.0 GEOLOGICAL SETTING AND MINERALISATION

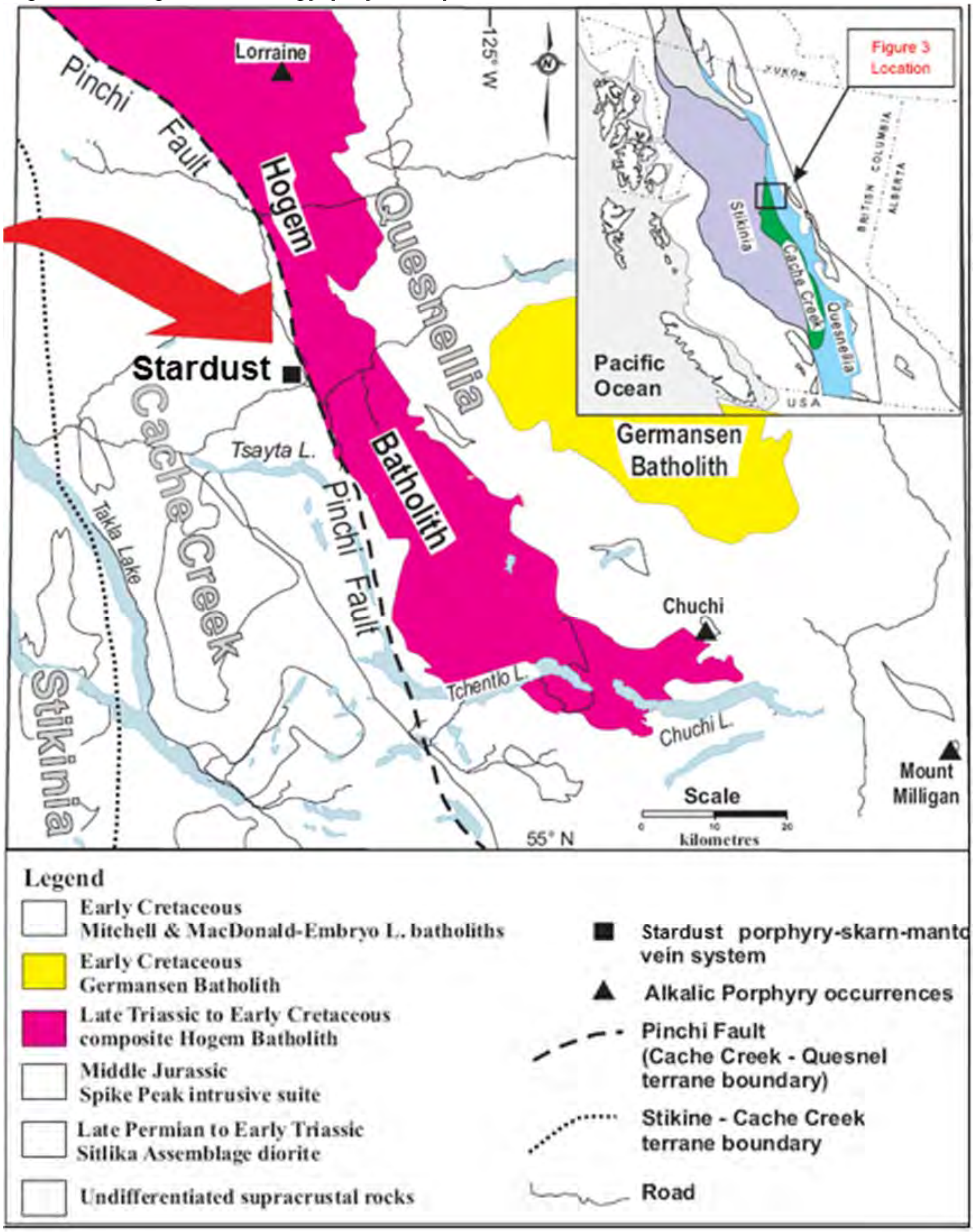
7.1 Regional Geology

The Stardust property is located within the Cache Creek Terrane directly west of the Pinchi Fault (Figure 7-1). The Pinchi Fault can be traced for 600 km through north-central B.C. and is believed to have been a major thrust fault which was later reactivated as a large right-lateral strike-slip fault (Paterson, 1977). In the project area, the Pinchi Fault separates Cache Creek rocks from the Jurassic Hogem Batholith and Triassic-Jurassic Takla rocks to the west. The Cache Creek Group is of Pennsylvanian-Permian age and consists of a >500-kilometer-long, >3000-meter-thick, complexly deformed sequence of interbedded argillites, cherts, carbonates, and mafic to ultramafic volcanic and plutonic igneous rocks. Alpine peridotites and ophiolite fragments are locally present, especially to the north of the Stardust property (Soregaroli, 1999, Schiarizza, 2000, and MacIntyre & Struik, 1999).

Although some rock units are locally metamorphosed to blueschist facies, the overall metamorphic grade throughout the area is low. The argillites and cherts are typical, fine-grained, thinly bedded deep-marine sediments (Monger, 1977). The volcanic rocks are tholeiitic and include andesitic to basaltic tuffs, flowbreccias, and pillow basalts - all of oceanic affinity. The carbonates are dominated by bioclastic to micritic and algal-bound shallow-water facies limestones, interpreted to have been deposited in a carbonate bank or reef environment (Monger, et al, 1991). Regional studies have emphasized the observation that contacts between most of the different lithologies are abrupt and probably are faults. However, detailed studies, executed close to Stardust (Sano and Struick, 1997), have found limestone conglomerate and sandstones with volcanic fragments, and limestone fragments within the argillite-chert section. Similar relationships are seen in core at Stardust and locally show uninterrupted gradation from massive limestones to mafic volcanic dominated successions.

The entire package is folded with a well-developed axial planar foliation with a north-northwest strike trend typical of the entire Intermontane Belt in which the Cache Creek Terrane lies (Gabrielse and Yorath, 1992). A wide range of Jurassic to Tertiary intrusions cuts the Cache Creek Assemblage and many of these are emplaced along the prominent NW-trending structures and stratigraphic breaks. Numerous mercury occurrences are present along the length of the Pinchi Fault (Albino, 1987) and a few gold and base metal occurrences are present within Cache Creek rocks near the Pinchi fault including the Stardust, Indata and Axelgold properties. There are at least two alkalic gold-copper Porphyry systems in the immediate Stardust area: J49 and Axel Properties (Schiarrizza, 2000).

Figure 7-1 Regional Geology (Ray, 2002)



7.2 Property Geology

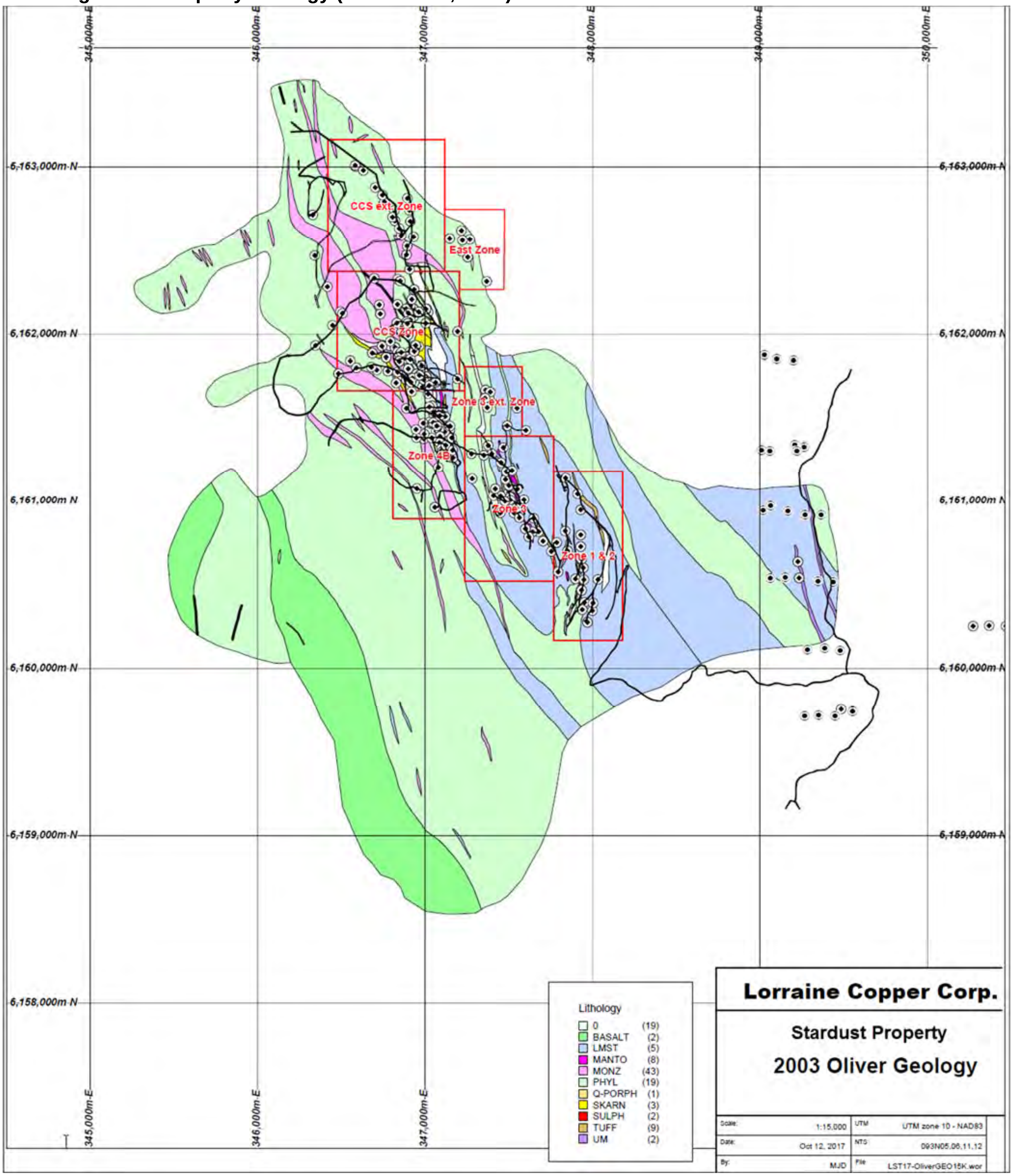
The Stardust property is mainly underlain by Permian Cache Creek units that form upright to overturned asymmetrical, west-dipping, north-plunging folds. These folds parallel the north-northwest trending Pinchi fault that lies along the eastern property boundary. The stratigraphy strikes N-NW with generally vertical to moderate westerly dips. Very little bedding is preserved, and structural information is rare except in road cuts. The explored part of the property is dominated by a variety of intrusions which cut carbonate rocks interbedded with graphitic and calcareous phyllites, cherts, cherty argillites, and mafic tuffs (Figure 7-2).

A composite intrusive center and linear dyke array, the “Glover Stock”, occurs in the center portion of the property. The stock is well-zoned and includes rocks ranging from mafic to felsic in composition. Pervasiveness of biotite hornfels and skarn increases towards the stock (Evans, 1998). Some of the intrusive phases contain significant amounts of magnetite and appear to be responsible for the large magnetic anomaly shown on published regional maps and in Alpha's 2000 ground-magnetics survey (Butler and Jarvis, 2000). Geochemical analyses, of several different intrusive phases, indicate that some have borderline alkalic composition similar to intrusions related to Au-Cu porphyry deposits elsewhere in the region, including the “Babine Intrusions”. Others have calc-alkaline compositions typical of B.C. copper skarns (Ray and Webster, 1997).

Several styles of mineralization that are zonally related to each other are present on the property. From most proximal to most distal from the Glover Stock, they are:

- Molybdenum-Copper-Gold Porphyry consisting of quartz-K-spar, pyrite, molybdenite and/or chalcopyrite veinlets associated with potassic, sericitic, and propylitic alteration in intrusive rocks (Glover Stock).
- Multi-stage Garnet-Diopside skarn cut by Cu-Au-Ag-Zn bearing structures with surrounding dispersed Cu-Au mineralization (Canyon Creek Skarn).
- Structurally and stratigraphically controlled massive sulfide Zn, Au, Pb,
- Ag, Cu replacement bodies [CRD] (4b, 3, and 2 Zones) and their oxidized equivalents.
- Sulfosalt-rich veins (Zone 1) which follow faults and are strongly associated with fine-grained, linear, felsic dykes containing high values of Au, Ag, Pb, Zn, Sb and Mn.
- Mercury mineralization in limestone proximal to the Pinchi Fault.
- Sediment-hosted gold mineralization in limestone.

Figure 7-2 Property Geology (from Oliver, 2003)



7.2.1 Supracrustal Rocks

Interpretations of primary stratigraphy are challenged by the strong regional deformation. In the area of extensive drilling of the 4b and Canyon Creek Skarn (CCS) zones, several coherent rock panels may be described as follows:

Hanging-wall assemblages to the Canyon Creek Skarn are dominated by a sequence of thinly compositionally laminated, siliceous and/or argillaceous phyllites often with strong biotite compositional layers. These rocks are interpreted as ribbon cherts by British Columbia Geological Survey geologists with extensive regional experience. The argillaceous, clastic component, of these rocks may increase towards the skarn – calc silicate horizon, particularly to the south towards the 4b zone.

Skarn assemblages are developed in weakly compositionally-layered limestones, in calcareous mafic tuffs, or rarely in siliceous phyllites.

Footwall assemblages to the Canyon Creek Skarn are dominated by rocks which are typically described as cherty argillites and/or cherts. Rocks in the footwall are similar to hangingwall rocks but qualitatively appear to have a higher proportion of quartz compositional layers and decreased biotite lamella.

Stratigraphic units are more fully described below:

Limestone (LS)

Light to medium grey, sucrosic, recrystallized limestone, locally with weak stylolitic cleavages. These rocks bleach to off-white adjacent to skarn fronts. They may contain numerous internal horizons of both dark grey clastic beds and mafic tuffaceous horizons.

Calcareous Phyllite (CP)

Dark grey-brown, argillaceous interbeds are intercalated with thin, centimetre scale, calcareous lamella

Calcite Knot Limestone (Lcs)

Calcite knot limestones may contain either white cm scale calcite aggregates within a darker grey matrix, or they may be a gradational unit to mafic tuffs where10-30% oval to cuspate calcite clasts are supported by a strongly calcareous, light to medium green matrix.

Siliceous Phyllite (SP)

These rocks are defined by compositional layers formed by alternating foliation parallel biotite +/- lesser white micas, with quartz compositional layers. The protoliths of these rocks is interpreted, by many workers, as ribbon cherts.

Chert (C)

With an increase in quartz content, to greater than 75% rock volume, the rocks are logged as cherts. Minor increases in biotite compositional layers may shift these rocks into a phyllitic chert (PC) field.

Argillite (A)

Argillite is a composite unit that includes a wide range of fine-grained, essentially non-calcareous, carbonaceous, thinly bedded sedimentary rocks. It includes argillites (A), cherty argillites (CA), thinly bedded cherts, carbonaceous argillites (CA). Graphitic layers are common throughout. Locally, the thinly bedded units contain fine-grained, continuous pyrite or pyrrhotite layers that appear to be part of the original sediments. As with all supracrustal rocks, these units are strongly deformed.

Mafic Tuffs (MT)

Mafic tuffs are well-foliated and often well compositionally layered dark green, to green and white mottled rocks with highly chloritic and locally calcitic matrices. The chlorite is interpreted to result from alteration of mafic-intermediate tuffaceous materials. 1-30 cm limestone fragments are the dominant clasts, but fragments of intermediate and mafic volcanic rocks are also present. These rocks contain up to 2% finely disseminated pyrite and/or pyrrhotite and are geochemically anomalous for Pb, Zn, and Cu. Grading in limestone fragment size is common. Evans (1997, 1998) believed that there was only one mafic tuff unit and that it was a good marker bed. Previous fieldwork and core logging show that there are multiple mafic tuff units in the section and they show enough lateral variation that their utility as marker beds may be limited.

7.2.2 Intrusive Rocks

Mineralization throughout the Stardust property shows a close association with the Glover Porphyry - a composite intrusive complex consisting of stocks and dikes ranging from diorite to monzonite to rhyodacite. Cu-Au skarn forms abundantly along stock and dike contacts (and replaces these rocks) and Zn-Au-Pb-Ag-Cu replacement mineralization is locally well developed along dike margins at more distal locales. Overall, mineralization shows zonation relative to the inferred center of the Glover Porphyry complex. Some of the compositional variations can be attributed to potassic alteration and silicification, which change the original intrusive composition and appearance in hand specimen, but the majority of the phase differences are real. Intrusive rock units include:

Monzonite (M)

A medium-grained equigranular to weakly porphyritic rock composed of plagioclase>K-feldspar, abundant elongate hornblende and euhedral biotite. Quartz is present, but in minor amounts. This unit crops out extensively as dikes throughout the southern and southwestern area, and the dikes seem to widen towards the 4b Zone. These dikes locally host replacement mineralization along their flanks.

Megacrystic Monzonite (Mp)

This intrusive phase is defined by the presence of very strongly plagioclase +/- quartz porphyritic monzonites. Contacts of these rocks with finer grained phases may be gradational.

Quartz Monzonite (QM)

These rocks contain 10 -15% free quartz as discrete, millimetre scale phenocrysts. The rock is also hornblende and biotite porphyritic and may be beginning to shift into a granodiorite field.

Diorite (D)

Diorites are fine to medium-grained, medium to dark graygreen and composed of plagioclase, biotite and hornblende phenocrysts. Accessory magnetite is locally abundant. The phases are distinguished largely on the presence and the abundance of biotite and hornblende. This distinction can be difficult to make in the finer-grained units where potassic alteration has replaced the hornblendes with secondary biotite. Color is determined by mafic phenocryst content and the degree of chloritic alteration.

Monzodiorite (MD)

A shift to increased percentages of fine-grained matrix plagioclase and a decrease in mafic phases, hornblende and biotite are the characteristics of this unit. Free quartz is not identified.

Felsic Dykes (Fd)

Felsic dykes occur across the property. These are weakly porphyritic felsic rocks with sparse to prominent 1-3 mm quartz and feldspar phenocrysts set in a sugary finegrained matrix of quartz and feldspar. They are locally well flow-banded with banding generally parallel to their overall orientation. Felsic dykes are often pervasively argillically altered or silicified making them difficult to distinguish from altered fine-grained monzonite. Felsic dykes in the Number 1 Zone commonly have vein mineralization along one or both contacts.

Felsic Dykes (Fpd) Plagioclase Porphyritic

Distinctive elongate, sericitized feldspar phenocrysts are abundant within this rock matrix and may exceed 35% rock volume. The rock also contains 5-8% coarse quartz phenocrysts.

Mafic Dykes (Bd)

Medium to fine-grained, undifferentiated mafic dykes. Ultramafics (UM) Green to dark black, uralitically altered, ultramafic intrusions. In their unaltered state, the intrusions are likely pyroxenites. Elevated interstitial magnetite is common. Pyrrhotite is locally noted. The intrusions likely trace major strands of the Pinchi Fault. True brittle-ductile fabrics are common within these intrusions.

7.2.3 Structure

Rocks underlying the Stardust property have experienced multiple deformational events. In the absence of geochronological data, definitive age relations between these events are difficult to establish. However, overall map patterns, rock fabrics and discordant rock fabrics in drill core suggest that at least two penetrative deformational processes, D1 and D2, have influenced the current map pattern.

The development of a pronounced planar S1 fabric, often co-planar to bedding and primary compositional layers, defines an early D1, deformational process. These fabrics are most likely axial planar to the tight to isoclinal, upright to west overturned, east-verging folds. The data of Ray et al., (2002) suggest these folds plunge approximately 40-50° to the north-northwest. The distribution of bedrock lithology has been profoundly influenced by this event.

The rotation of S1 fabrics is evidence for post D1 processes. Although S1 fabrics are clearly rotated, S2 penetrative foliations are weakly developed and may be measured in only very selective core and rock samples. Ray et al. (2002) suggest that D2 folds have similar orientations to D1 folds, but tend to be slightly more open, and have shallower, 20° northwest plunges.

Regionally, folds in the Cache Creek assemblage are typically open (Schiarizza and McIntyre, 1999), but on the Stardust property folds are generally asymmetrical and overturned with short, shallow, west-dipping western limbs and long, steep, west-dipping eastern limbs. Locally they are isoclinal. Tight folding is likely due to buttressing against the Pinchi Fault, which is believed to have originally been a major thrust fault (Paterson, 1977). Where observed, these folds have a 10-60 degree N-NW plunge and minor axial plane shears are common. The noses of antiforms are structurally thickened and fractured zones favorable for manto mineralization (Evans, 1998; Megaw, 1999).

The entire property has a strong NW-trending, grain reflecting bedding, tight asymmetric folding, and bedding plane faults. This structural fabric closely controls intrusive emplacement and most of the dykes of the Glover stock are strongly elongated along this N-NW structural grain. The most important, and consistent, fault structures demonstrated in drill core are roughly coplanar to bedding. Some of these faults have the appearance of early east verging reverse faults, which are largely lithologically controlled and mostly identified in the immediate hangingwall to the Canyon Creek Skarn. These faults may be rotated into slightly steeper positions by latter extension faults.

The strongest and most strike discordant structural zone on the property is the structural zone and dyke system which hosts the Number 1 veins. This mineralized fault structure has a nearly north-south strike and moderate to steep west dip. In marked contrast, all structures, including lithology and major skarn bodies on the Stardust property have strike relationships which average 150° to 160° and steep westerly dips.

Compilation of the sub-surface data with the surface geological plans suggests that right stepping lithologic offsets, which occur both to the north and south of Canyon Creek, are related to fold vergance effects - an east verging, right stepping antiform - rather than a fault related offset.

Mapping of carbonates on a property-wide scale (Evans 1997; 1998) shows a wide outcrop band in the southern portion of the property that appears to decrease in width to the north, largely disappearing at Canyon Creek. This may be an artifact of limited outcrop exposures as integration of the subsurface information from drilling suggests the northern continuity of the most easterly limestone package may be significantly better than initially interpreted (Figure 4). The limestone is asymmetrically folded and plunges north at 15-20°.

7.3 Mineralization

The following has been modified after Ledwon and Rensby (2011).

The Stardust Property has been interpreted to host Porphyry- and Carbonate Replacement-style mineralization. The Carbonate Replacement corridor is a large, well zoned and poly-phased system interpreted to be at least 2.5 kilometers in strike (Megaw, 1999). Porphyry-related Cu±Mo±Au mineralization and alteration assemblages occur in the Glover Stock and adjacent carbonate rocks as far north as the CCS extension zone; intrusion-proximal skarn and manto mineralization assemblages occur at the CCS and contiguous 4b, 3, 3 ext., and 2 Zones; and distal quartz vein systems are found in the No. 1 Zone and historic Takla Silver Mine (Figure 9 1). This mineralized trend is estimated to be up to 2.5 kilometers in length (Ledwon and Rensby, 2011).

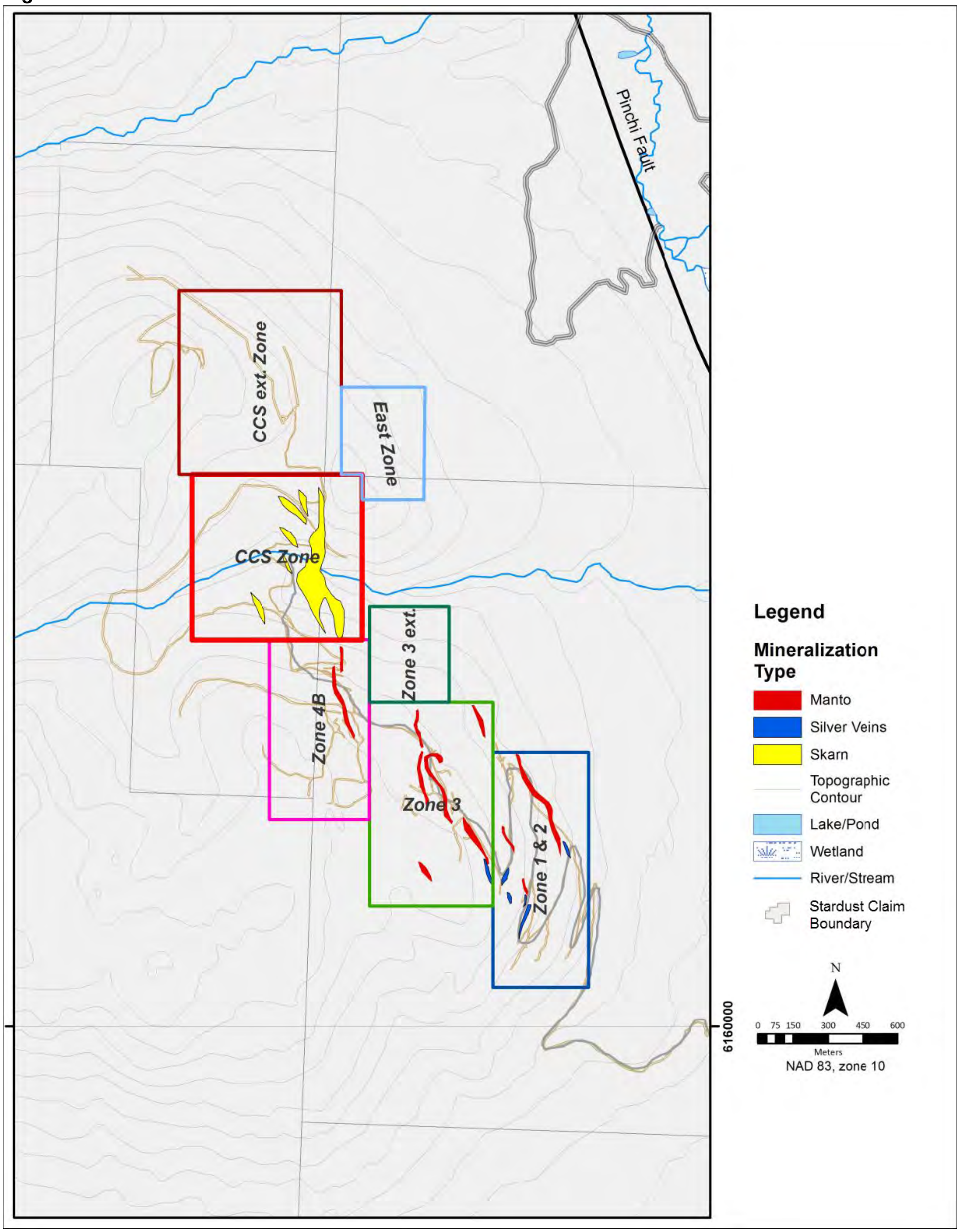
Resource modeling shows that the CCS is mineralized over at least 600 m vertically and increasingly shows polyphase intrusive and mineralization characteristics typical of Cu-Zn skarn-replacement systems throughout the American Cordillera, such as the San Martin Mine in, Zacatecas, Mexico and Antamina in Peru (Megaw, 1999; Simpson, 2010).

Despite widespread anomalous metal values, no significant volumes of porphyry-style mineralization with economic grades have yet been discovered.

The overall carbonate replacement system is interpreted to be a complex structural corridor with discontinuity between possibly concurrent mineralizing zones or micro-systems (Megaw, 1999, 2000, 2001; Oliver, 2003; Hanson 2005, 2006, 2007; Ledwon and Beck, 2011, 2011b). Within the lengthy mineralized corridor several genetically related styles of mineralization are observed. From most proximal to distal these are:

- Molybdenum-Copper-Gold porphyry-style mineralization consisting of quartz-K-feldspar, pyrite, molybdenite and/or chalcopyrite veinlets associated with potassic, sericitic, and propylitic alteration in intrusive rocks (Glover Stock).
- Multi-stage Garnet-Diopside skarn cut by Cu-Au-Ag-Zn-bearing structures with surrounding dispersed Cu-Au mineralization (Canyon Creek Skarn and Canyon Creek Skarn Extension).
- Structurally and stratigraphically controlled massive sulfide Zn, Au, Pb, Ag, Cu replacement bodies [CRD] (4b, 3, and 2 Zones) and their oxidized equivalents.
- Sulfosalt-rich veins (Zone 1), which follow faults and are strongly associated with fine-grained, linear, felsic dykes containing high values of Au, Ag, Pb, Zn, Sb and Mn.

Figure 7-3 Mineralized Zones



Principle characteristics of the main mineralized zones may be summarized as follows:

7.3.1 Zn-Pb-As-Sb Vein Zone: Number 1 Zone

The Number 1 Zone, located at the southern end of the property, was the site of the 1944 discovery of mineralization on the property. Here, the limestone and graphitic phyllites are cut by numerous monzonite and felsic dikes. Sulfosalt veins composed of nearly massive pyrite, sphalerite, galena, jamesonite, stibnite, arsenopyrite and freibergite with lesser open-space filling quartz and calcite occur both within the sedimentary rocks and along dike contacts. Dunne & Ray (2002) also report traces of very fine-grained calc-silicates in these bodies. Three separate veins have been recognized, all of which appear to dip steeply west. Felsic dikes are closely related to all three veins, but the veins do extend beyond the dikes in many places. The Number 1 Zone has the strongest structural control of any occurrence on this property. The presence of a regional antiformal crest is likely to be important to the development of significant mineralized zones as is the main fault structure. Argentiferous Manganese Oxide Mineralization (AMOM) occurs throughout the Number 1-Zone. AMOM is a typical distal alteration product in certain major CRD systems (Megaw, 1998) and the Number 1 Zone is strongly anomalous in Mn (Evans, 1997). Based on inclusion chemistry and mineralogic relationships, Dunne & Ray (2002) suggested that the mineralization in this zone might be related to high sulphidation-type veins. However, the alteration mineralogy and textures of quartz and other gangue minerals do not support the high sulphidation model for these veins.

The principal vein was explored by underground drifting and drilling in the 1945 and 1964-65 seasons. The three ore-shoots (minimum 2 m true widths) above the adit level were reported to grade 3.6 g/t Au, 780 g/t Ag, and 5% combined Pb and Zn with 5% Sb. Historic drilling had notoriously bad recovery problems, so in many cases grade was not reported for potentially significant intersections. Compilation of all available data during the 2003 exploration season clearly indicated that the currently known strike length of the Number 1 Fault exceeds 750 m with a significant mineralized zone developed over approximately 450 m.

7.3.2 Zn-Au-Ag-Pb CRD Mineralization: Number 2, 3, 3 Extension, 4b and East Zones

Mineralization in these zones consists of roughly stratigraphically concordant massive sulfide bodies ("mantos") and their oxidized equivalents. The mantos are best developed along permeable and karsted (?) carbonate beds in close proximity to chlorite-altered mafic tuff beds. The mantos occur through the Number 2 to Number 4b Zones and appear to merge into the Canyon Creek Skarn Zone. Drilling results have failed to find substantial discordant chimney feeders to these mantos, although narrow feeders may have been hit locally (Megaw, 1999). The mantos occur dominantly in structurally thickened and deformed zones along the crests of antiforms. There is some evidence for nesting, or repetition, of mantos in successive limestone beds, giving an overall morphology reminiscent of the stacked "saddle-reef" mantos.

Number 2 Zone

The Number 2 Zone is a minor oxidized replacement zone similar to the Number 3 Zone. The Number 2 Zone is located very close to the crest of a regional antiform which lies just north of the Number 2 Zone trenches. Surface sampling indicates an average of 2.3 g/t Au, 109 g/t Ag, 2.16 % Zn and 2.09 % Pb across an average of 5.3 meters true width. This zone has a strike length, based on surface oxidation, of approximately 200 meters. Its continuity at depth is much more problematic as significant intersections have not been obtained from drill holes to date.

Number 3 Zone

The Number 3 Zone contains the largest identified CRD resource identified to date at Stardust. It is thoroughly oxidized to depths of greater than 100 meters from the surface. The style of mineralization may be highly amenable to low cost heap-leach extraction processes.

The thickest portions of this manto zone occur in carbonates surrounding a mafic tuff bed along the crest of a regional-scale antiform. The manto may have the form of an oxidized saddle reef replacement body. Drilling has failed to find a feeder vertically beneath it, suggesting that it was probably fed from one end with fluid migration concentrated along the non-reactive tuff bed. Evans (1997) felt that the conduit for this system was down dip along the west limb of the antiform (possibly with a NW rake). This zone, based on the trace of oxidation exposed in surface trenches, has a strike length exceeding 600 meters. The Number 3 zone appears to weaken to the south, south of the Number 2 Zone trenches. The northern extension of the Number 3 Zone has received very limited exploration, as has the down dip extensions to this mineralization.

Number 4b Zone

The Number 4b Zone CRD manto is developed along the 4b Antiform, a tight fold, with 60-degree west dips and a 10-15° plunge to the NW. The trace of this fold lies some 300 meters to the west of the Number 3 Zone antiform. The two zones are linked by a north-northwest plunging synform. Mineralization occurs as a series of aligned, discontinuous (?) massive sulfide pods (with sparse calc-silicate minerals) following the crest of the fold and also along the contact between limestone on the east and hornfelsed graphitic phyllites to the west. A mafic tuff horizon within the limestone appears to be a major conduit for fluid movement, as is seen in the Number 3 Zone. The 4b Zone is, however, essentially unoxidized: sphalerite, arsenopyrite, coarse-grained well-zoned pyrrhotite, and pyrite are prominently displayed in surface trenches along the zone.

East Zone

The East Zone was discovered in 2005 by drilling a coincident gold-arsenic soil geochemistry anomaly approximately 300 metres east of the Canyon Creek Skarn. This gold-silver-copper-zinc massive sulfide zone is completely “blind” and has been intersected by five drill-holes over a strike length of 150 metres. It is open along strike to the north and in both dip directions. The massive sulfide mineralization consists of pyrite, sphalerite, arsenopyrite, and chalcopyrite. The preliminary interpretation is that the zone is a carbonate replacement similar to the Number 3 and Number 4B zones.

7.3.3 Canyon Creek Skarn (Number 4 Zone)

The Canyon Creek Skarn [CCS] or the Number 4 Zone, is the skarn-replacement zone lying north of the 4b Zone. The discovery of this skarn is recent enough that it was not included in Ray and Dawson's (1998) compilation on B.C. skarns. Prior to the 2001 season, this zone had been cut by 41 drill holes (97-9, 10, and 11; LD99-03 through 12; and LD00-02 through 29) and a few trenches (Evans, 1997, 1998; Megaw 1999, 2000). A high percentage of the pre-2001 holes in skarn intercept high-grade Cu-Au mineralization along structures cutting garnet-pyroxene skarn. Some of these mineralized structures were surrounded by zones of dispersed mineralization a few meters wide (Megaw, 1999; 2000).

At shallow levels, the skarn is composed of early coarse-grained green-tan grossular-andradite garnet with minor fine-grained greenish-yellow diopside and rare vesuvianite or pyroxene (Ray et al., 2002). Specularite is locally very common as euhedral plates. At depth, a brown garnet stage crosscuts and overprints the green stage, and at even greater depths, a red-brown garnet stage appears (Megaw, 1999). These minerals replace massive limestone and locally replace intrusives (endoskarn). Drilling in 2001 showed that endoskarn increases with depth (cf. LD01-44, 45). Biotite hornfelsed siliceous phyllite is also overprinted by skarn, especially on the north side of Canyon Creek. Mafic tuff units are altered to distinctive green, banded chlorite-garnet units with 5-15% disseminated pyrite and trace chalcopyrite and sphalerite.

Retrograde hydration of the garnet-diopside skarn also increases with depth. In the retrograde zones, the brown-red, brown and green garnet stages are hydrated to a cream-colored mass of very fine-grained amphibole, chlorite, quartz, and clays or dark grayish-green masses of felted chlorite, locally preserving the shapes of dodecahedral garnet crystals. Retrograde alteration is often accompanied by a dramatic increase in magnetite, both as fine-grained masses and as pseudomorphs after bladed specularite, and increased amounts of chalcopyrite (Megaw, 2000, Ray et al., 2002)

Mineralization in the skarn occurs as Ag and Au-bearing chalcopyrite and bornite with abundant pyrite, variable sphalerite, and rare arsenopyrite and stibnite emplaced along and surrounding structures that cut the skarn (Megaw, 1999). Much of the sulfide replaces skarn silicates. Numerous stages of sulfide mineralization are identified as:

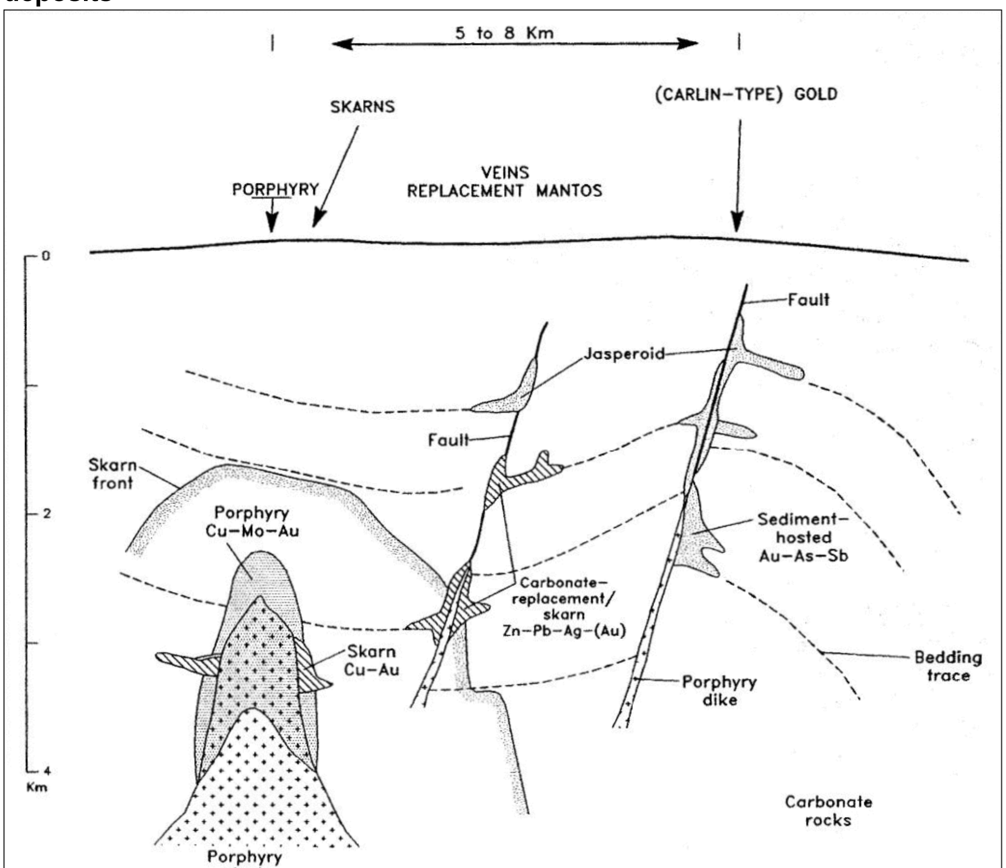
1. Chalcopyrite deposited in interstices and along garnet grain boundaries.
2. Early pyrrhotite (often later pseudomorphed to pyrite) with minor chalcopyrite and locally intergrown with sphalerite.
3. Pyrite or pyrrhotite (pseudomorphed to pyrite) that is brecciated and healed with later sphalerite or replaced by chalcopyrite.
4. Massive to dispersed, banded and chaotic chalcopyrite along structures and replacing adjoining skarn.
5. Magnetite with interstitial chalcopyrite and/or sphalerite, pyrite or pyrrhotite.
6. Sphalerite with chalcopyrite cut by later pyrite veinlets.
7. Massive sphalerite, brecciated and healed by chalcopyrite and sphalerite.
8. Mineralized skarn, brecciated and healed with epithermal style chalcedonic quartz.
9. Calcite veins filled with Au sulfides/sulfosalts cutting skarn.

The skarn silicates tend to end abruptly and massive sphalerite-chalcopyrite-pyrite-pyrrhotite mineralization is locally well-developed along the contact of skarn with recrystallized limestone (marble front). It is near this front that the very high-grade gold grades associated with the 2002 drilling have been recognized (Oliver, 2002). High-grade gold and sulphide-rich replacement bodies may be considered transitional mineralization between the skarn and 4b style of replacement mineralization..

8.0 DEPOSIT TYPES

The current exploration concept for the Stardust Property is based on a model proposed by Sillitoe and Bonham in 1990 (Figure 8-1). The model links porphyry, skarn, carbonate replacement, vein, and sediment hosted types of mineralization. Any one or several of these deposit types can be present in a mineralized system (Hanson, 2007). According to the model, Cu-Au-bearing garnet skarns occur as replacements of the limestone host-rocks adjacent to a mineralized porphyry stock. Outboard of the skarn zones, structurally and stratigraphically controlled carbonate replacement massive sulphides deposits (CRD) occur as mantos and chimneys. Sulphosalt veins can occur outboard of the CRD or overlie them in leakage zones. The distal end member mineralization style in this system is the sediment hosted Au-As-Sb (Carlin-type) deposit (Hanson, 2007).

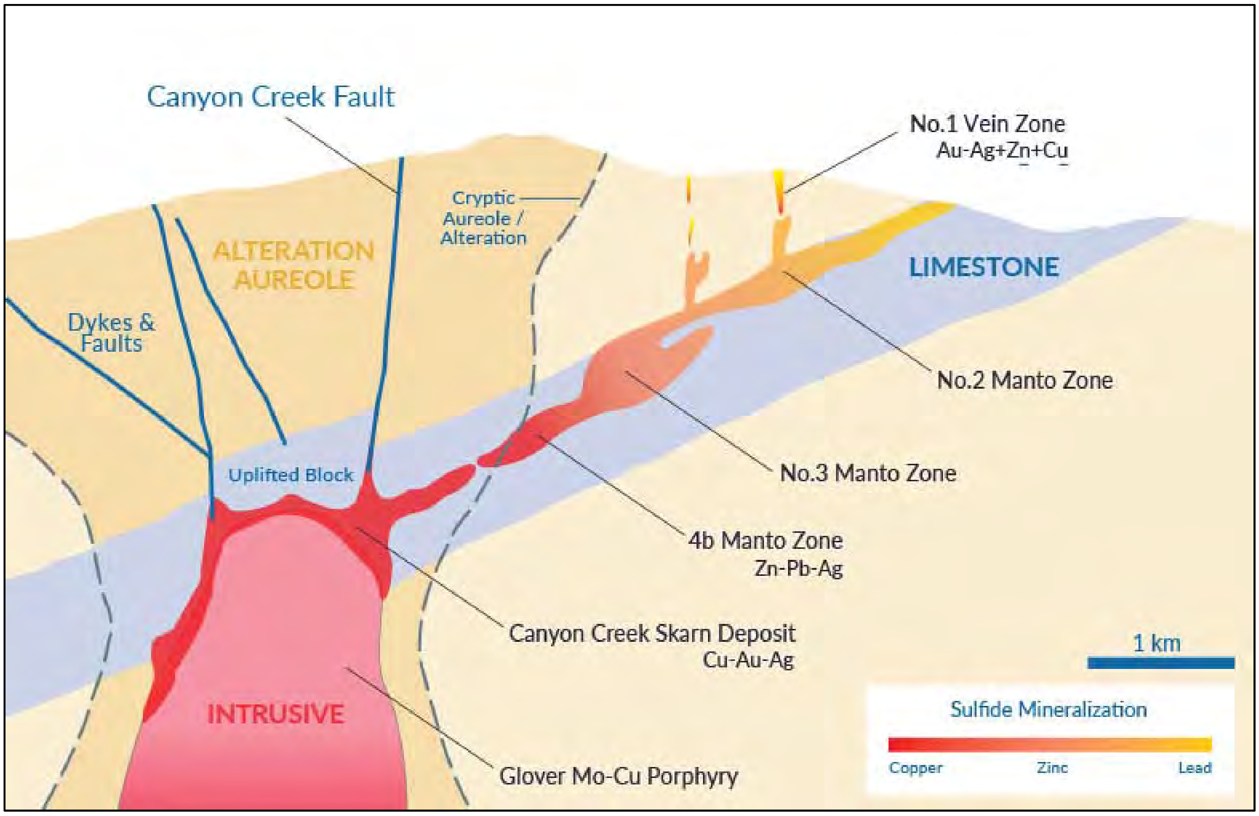
Figure 8-1 Schematic model of possible links between porphyry districts and sedimentary deposits



after Sillitoe and Bonhamn, 1990

A conceptual model for the Stardust Property showing the relative positions of the various mineralized zones is illustrated in Figure 8-2.

Figure 8-2 Conceptual model



8.1 Carbonate Replacement Deposits

Carbonate Replacement Deposits (CRDs), are epigenetic, intrusion-related and high-temperature sulfide-dominant Pb-Zn-Ag-Cu-Au-rich deposits. These CRD'stypically grade from lenticular or podiform bodies developed along stock, dyke, or sill contacts to elongate-tubular to elongate-tabular bodies referred to as chimneys and/or mantos depending on their orientation. Limestone, dolomite and dolomitized limestones are the major host rocks. Ores grade outward from sulfide-rich skarns associated with unmineralized or porphyry-type intrusive bodies to essentially 100% polymetallic massive sulfide bodies. Both sulfide and skarn contacts with carbonate host rocks are razor sharp and evidence for replacement greatly outweighs evidence for open-space filling or syngenetic deposition (Titley & Megaw 1985). In reduced, high to low-temperature systems, proximal to distal metal zoning generally follows: Cu (Au, W, MO), Cu-Zn (Ag), Zn-Pb-Ag, Pb-Ag, Mn-Ag, Mn, and Hg. This zoning may be very subtle and large scale (Prescott 1916; Morris 1968; Megaw 1990) or tightly telescoped and smaller scale (Graf 1997).

CRD mineralization is associated with polyphase intrusions that evolve from early intermediate phases towards late, highly evolved felsic intrusions and related extrusive phases. The intrusions most closely related to mineralization are usually the most evolved phases and these are not exposed in many districts. However, they are often encountered when the system is explored to depth.

CRD exploration is difficult enough that considerable care should be taken in selecting a target district/deposit prior to high-cost detailed exploration. However, several features make CRDs highly desirable mining targets including:

1) Size-CRDs average 10-13 million tons of ore and the largest range up to ~50 million tons
2) Grade-ores are typically polymetallic with metal contents ranging from 2-12% Pb; 2-18% Zn, 60-600 g/T Ag, Tr-2% Cu, and Tr-6 g/T Au. Many have by-product credits for Cd, W, In, Ga, Ge, Bi, and S)
3) Deposit morphology-orebodies are continuous and average 0.5 to 2 million tons in size, with some up to 20 million tons
4) Extraction and Beneficiation- CRDs are typically metallurgically docile, amenable to low-cost mining methods and the environmental footprint is minimal

Many different features of CRDs tend to be well zoned at district, deposit and hand-sample scales. The most important zonations are:

1. Ore and gangue mineralogy and metal contents
2. Orebody geometry
3. Intrusive geometry and composition
4. Structural controls on mineralization
5. Alteration
6. Isotopic characteristics of wallrocks.

In general, the largest systems show the best-developed zoning and repetition of zoning and paragenesis. Zoning tends to be most extensive in the elongate manto and chimney systems where individual zones may extend over kilometers vertically and laterally (Megaw 1990, 1998). Zoning in large stock contact skarn systems is typically more compressed because of telescoping and repeated overprinting (Graf 1997). In all cases, multi-phase mineralization is a reliable indicator of large systems.

The evolution of CRD-skarn systems in time and space, and the gradations seen in single orebodies or districts suggests that the various manifestations of the deposit type can be considered part of a spectrum (Einaudi et al. 1982; Megaw et al. 1988; Titley 1993; Megaw et al. 1998) ranging from:

a. Stock contact skarns: formed against either barren or productive (i.e. Porphyry Copper or Molybdenum) stocks
b. Dike and sill contact skarns
c. Dike and sill contact massive sulfide deposits
d. Massive sulfide chimneys
e. Massive sulfide mantos
f. Epithermal veins (in some cases)

This conceptual framework allows examination of the mineralization, alteration, intrusion types, host rock and other characteristics of a given deposit and determining where it lies within the spectrum. Examination of the composition, geometry and controls on intrusion emplacement, if possible, is essential to determining district zoning and level of exposure. Perhaps most importantly, understanding of the host rock tectono-stratigraphy can allow rapid determination of the potential for more mineralization in the host section at depth or laterally in the known favorable beds, or in previously unconsidered host units.

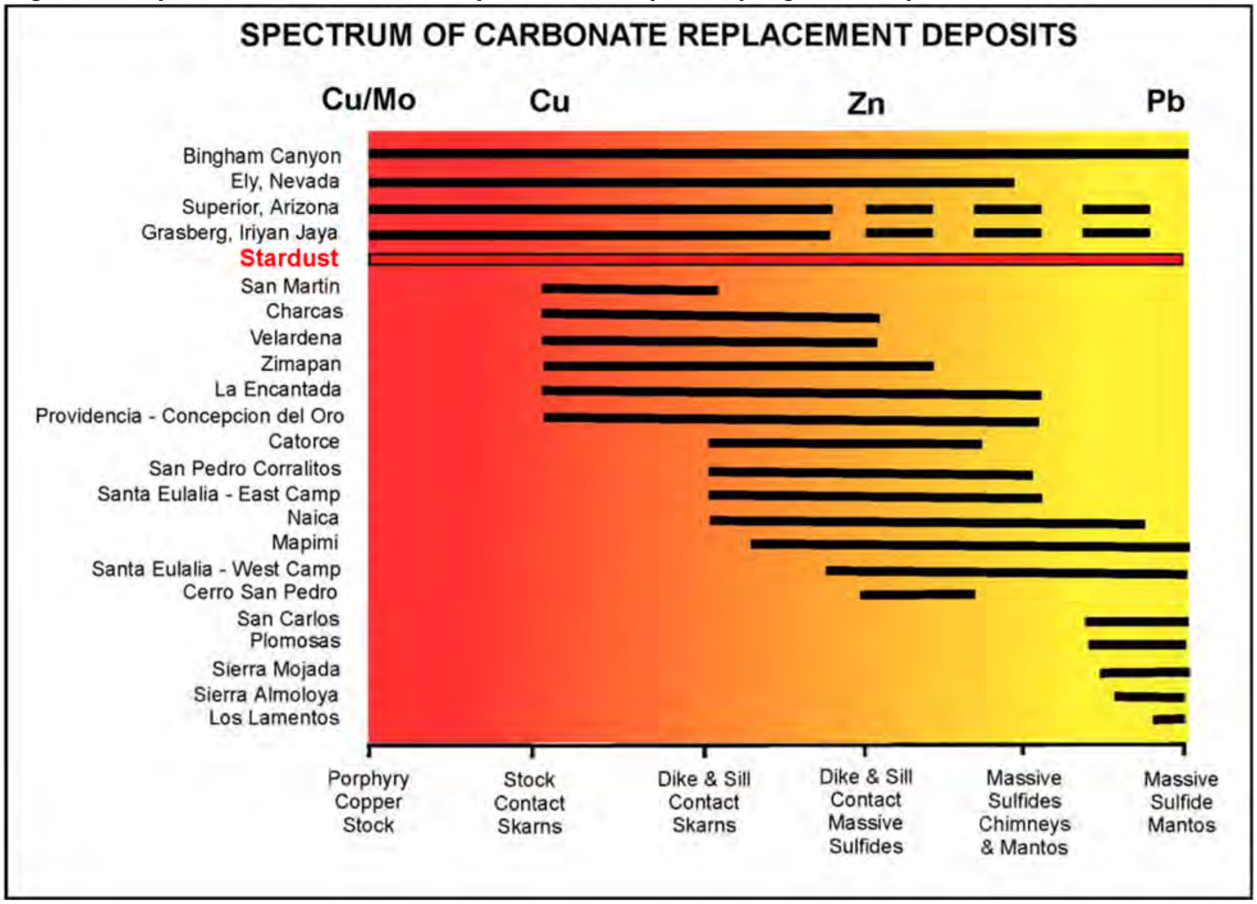
Structural fabrics are the dominant control variable on mineralization in CRDs, as they control intrusion emplacement and channel ore fluids into favorable host strata. Most CRDs lie in fold-thrust belts on major structural domes, arches, anticlines, synclines or homoclines, and most districts have structural grains controlled by faulting and fracturing related to regional deformation (Megaw et al. 1988). Orebodies are often elongate and parallel district-wide structural trends but may not be restricted to a given structure over great lengths.

Intrusive stocks commonly occur beneath or adjacent to the most proximal portions of CRD systems, although in many cases they do not crop out. Where intrusions are exposed, they are generally less than 5 km2 in areal extent. These stocks are generally polyphase with compositions grading from early diorite to late granite. Texturally, these intrusions range from equigranular to porphyritic and massive to highly fractured depending on age and proximity to paleosurface. The central stocks may be barren, contain porphyry copper or molybdenum systems, or have marginal zones with porphyry copper or molybdenum affinities (Megaw, 1998). In many systems, the early phases of the intrusion have associated skarnoid or barren skarn, whereas skarn and ore mineralization are related to later, more highly differentiated phases (Meinert, 1995 and 1999; Graf, 1997; Megaw and others, 1998).

Dikes and sills characterize the intermediate reaches of CRDs and there is often evidence for multiple dyke/sill emplacement events (Megaw 1990). These intrusions may be compositionally homogeneous (Megaw 1990) or there may be compositional evolution between dyke/sill phases (Graf 1997). Textures range from porphyritic to aphanitic, locally with narrow gradations between textural domains (Megaw 1990). Chimney and replacement veins are the most common orebody types associated with these intrusions, although mantos locally occur along sill contact.

The distal zones of CRDs are characterized by massive sulfide bodies lacking an associated intrusion. These commonly have the form of high angle to vertical slab-like replacement veins or elongate pipe-like chimneys or low angle to horizontal tabular or elongate tongue-shaped mantos, generally crudely stratabound. Mantos may be developed entirely within selected beds or groups of carbonate beds, or may occur with one or more non-reactive, relatively impermeable sedimentary or intrusive rock contacts.

Figure 8-3 Spectrum of Carbonate Replacement Deposits (Megaw, 2001)



Development of carbonate rock alteration in CRDs, like mineralization, is highly variable in type and in scale. The major alteration types are:

1. Skarnoid or hornfels: These are typically very fine-grained, mineralogically simple, calc-silicate and silicate assemblages formed through thermal metamorphism without significant addition of outside components. Skarnoid typically forms from a limestone or shaly limestone precursor, whereas hornfels forms from shale or limy shale precursors. Hornfels and skarnoid commonly develop in the thermal aureole around the largest volume (often early) intrusive phase and may aid in ground preparation for later metasomatic events. Hornfels mineralogy may be zoned with respect to the thermal center, commonly with pyroxenes proximal and biotite more distal. Skarnoid and hornfels often contain abundant fine-grained pyrite or pyrrhotite, but seldom significant amounts of ore-metal sulfides unless it has been overprinted by subsequent hydrothermal events.

2. Skarn: Skarns are fine to very coarse-grained, often mineralogically complex, calc-silicate or calcic-iron silicate assemblages formed through metasomatism with significant addition of outside components. Endoskarn is skarn formed at the expense of intrusive rock, exoskarn is skarn formed at the expense of wallrocks to the intrusion - most commonly carbonates. Skarn commonly develops around lesser volume, more fluid-rich intrusive phases and may overprint hornfels or skarnoid to varying degrees. Anhydrous talc-silicate minerals (dominantly pyroxenes and garnets) characterize

the early “prograde” skarn phase generated during rising temperatures related to magma emplacement. Hydrous talc-silicate minerals (dominantly amphiboles, chlorites, and clays) formed at the expense of predecessor prograde minerals characterize the later “retrograde” skarn assemblage. Retrograding occurs as temperatures drop and variable amounts of magmatic fluids and groundwater invade the skarn zone. Skarns are said to be mineralized when they contain sulfide minerals of economic interest. Said sulfides may be co-deposited with the talc-silicates, but more commonly are introduced along structures that cut the skarn, replacing skarn minerals and unaltered wallrocks. Complex mineralized skarn systems typically show multiple intrusive phases and a repetition of sulfides replacing talc-silicates presumably reflecting successive intrusive and hydrothermal events. In some systems, different compositions of skarn and sulfides characterize each phase (Megaw and others, 1998).

3. Marbleization and Recrystallization: These are present in virtually all CRD systems and range from narrow zones around mineralization to zones hundreds of meters wide (Titley & Megaw 1985; Megaw et al. 1988).

4. Silicification or Jasperoid development: These consist of fine-grained silica replacements of carbonate rocks, with or without appreciable amounts of metals, and are very common in the peripheries of some CRD systems (Titley & Megaw 1985; Megaw et al. 1988; Megaw 1990).

8.2 Porphyry Cu±Mo±Au Deposits

Porphyry copper deposits are large, low grade, intrusion related deposits which provide the major portion of the world’s copper and molybdenum and to a lesser degree gold (Rennie, 2011). The deposits are formed by a shallow magma chamber of hydrous, intermediate composition at depths of less than five kilometers. When the magma crystallizes, fluids are released; the fluids’ movement upwards through overlying rocks results in hydrothermal alteration and deposition of sulphide minerals both as disseminations and as stockwork mineralization. There is a clear spatial and genetic association between the intrusion and the alteration zones at a regional and local scale (Rennie, 2011).

The defining characteristics that distinguish porphyry deposits are:

- Large size
- Widespread alteration
- Structurally controlled ore minerals superimposed on pre-existing host rocks
- Distinctive metal associations
- Spatial, temporal, and genetic relationships to porphyritic intrusions

These deposits in British Columbia typically occur in the Intermontane Belt, which is host to the Quesnellia, Cache Creek, and Stikinia Terranes, and based on the composition of the host rocks comprising three specific types: Alkalic, Transitional, and Calc-Alkalic. Examples are presented in Table 8-1.

Table 8-1 Porphyry Cu-Au Deposits of British Columbia (after Rennie, 2011)

Type	Deposit	Tonnage and Grade
Alkalic	Galore Creek	1,309 Mt of 0.46% Cu and 0.30 g/t Au
Transitional	Mitchell Creek	563 Mt of 0.18% Cu and 0.72 g/t Au
Calc-Alkalic	Prosperity	1,148 Mt of 0.22% Cu and 0.41 g/t Au

The Glover Stock is an intrusion of Eocene age emplacement (circa 51-52 Ma by U-Pb zircon dating; Ray et al., 2002). It is inferred to be emplaced between at a relatively shallow 1.1 to 1.9 kilometer depth as supported by field structural relationships and fluid inclusion work (Ray et al., 2002; Dunne and Ray, 2002) and less than five kilometers (Megaw, 2001). The stock is a multiphase composite intrusive complex and most of its rocks are weakly to strongly feldspar hornblende biotite porphyritic. Compositionally it ranges from mafic diorite-monzodiorite to leucocratic monzonite-quartz monzonite (Ray et al., 2002).

The Glover Stock shows many features prospective to host porphyry-style mineralization. Molybdenite±chalcopyrite-bearing veinlets are associated with several generations of veins containing quartz, K-feldspar, sericite, pyrite, and tourmaline (Ray et al., 2002). Alteration assemblages include pervasive albitic or potassic (K-feldspar, sericite, and biotite), silicic, pyritic, and argillic. A fluid inclusion study supports a combination of highly saline and dilute fluids that show a transition from high-pressure lithostatic conditions during porphyry emplacement to lower pressure hydrostatic conditions during vein formation (Megaw, 2001). Such a transition may be indicative of a long lived shallow emplacement. ‘Pebble’ dykes logged in drill core are similar to breccia dykes seen in major porphyry systems. These breccias are interpreted to record violent volatile release events coincident with the transition from lithostatic to hydrostatic conditions (Megaw, 1990; Frontier, 1999; Jones and Gonzalez-Partida, 2001).

Porphyry-related alteration styles include:

- Tourmaline-rich greisen along numerous structures cutting the biotite diorite in LD20O1-30.
- Potassic alteration consisting of secondary biotite selvages on mineralized veinlets secondary euhedral and/or “shreddy” biotite affecting primary biotite and hornblende and secondary K-feldspar flooding.
- Weak to pervasive sericitic alteration of intrusion
- Widespread chloritized and epidotized hornblende and feldspar

Mineralization of the intrusions consists of crosscutting veinlets including:

- Quartz-K-feldspar-pyrite veinlets
- Quartz-K-spar-pyrite-chalcopyrite veinlets
- Quartz-K-spar-pyrite-molybdenite veinlets

- Hornblende replaced by specularite replaced by magnetite with interstitial chalcopyrite.
- Open sigmoidal cavities lined

9.0 EXPLORATION

Exploration programs completed prior to 2010 have been described in Section 6 and in the previous Technical Report (Simpson, 2010).

Work conducted between 2010 and 2012 was done on behalf of Alpha Gold. No exploration work was carried out between 2012 and June of 2017. Exploration work in 2017 was carried out on behalf of Sun Metals.

9.1 2011 Geological Mapping

Geologists Justin Rensby and Stan Hammon mapped and prospected the Stardust claims over a 24-day period with the periodic help of geotech/ prospector/ soil samplers Lisa Perry and Ingrid Granlin. Due to the large land package involved traverses were at 300m intervals. Occasionally traverses were even farther apart when limited encounter of outcrop was anticipated. All data was collected using NAD 83 UTM coordinates. Mapping was conducted at a 1:5000 scale.

Overall outcrop exposure is limited and patchy—hills often have higher percentage exposure and flatter areas often have no outcrop. Float boulders were thus used in many areas to infer contacts. Boulder usage is complicated by the abundant glacial moraines but in many areas, gives an excellent guide to underlying rock.

9.2 2011 Re-logging and Re-sampling

During the 2011 exploration program, a team of four individuals lead by the Takla First Nation personnel on site located, catalogued, and subsequently retrieved all usable 1992 and 1993 drill core from its original storage place at and around the 5km marker along the main access road onto the Stardust property.

All core boxes were found stacked and organized according to drill number. The condition of the original core boxes varied depending on their position within the stacked piles. A printout of an Excel spreadsheet documenting all known information about the 1992/1993 drilling was provided to the staff prior to retrieval of the core. All boxes with original workable and readable tags and/or markings were the only boxes used in this re-logging exercise. Once the entire core from any 1992/1993 drill hole was located, it was carefully removed from the original core box and placed in order into a new core box with all markings and tags and core blocks placed in the original positions from the original boxes. If the original core box was not compromised by years of sitting out in the elements, then the original box was taken as is.

Once all usable core boxes were found, the core was then taken to the camp and stored outside the main core shack prior to re-logging and re-sampling.

Re-logging of the core was performed on 52 drill holes that were ultimately found and identified. Logging of this core was done as a 'quick log' with focus solely on lithology for the purpose of adding missing data into the database. Prior to re-logging, core was measured, cleaned, and new legible 'from' and 'to' intervals were noted on the core boxes. The core was then photographed.

Re-sampling of the historical core was performed at the original sample locations with additional samples taken as shoulder samples where none were taken historically. During the re-sampling of the original sample locations, the remaining core was taken from the core boxes and put into sample bags. All additional shoulder samples were taken and split in half as per customary sampling techniques. Samples were collected from 24 drill holes completed in 1992 and 1993. A total of 181 samples were collected representing 291.26m of core. Approximately 25% of the total core re-sampled had been previously split and analyzed.

9.3 2011 Geochemical Sampling

UTM Exploration Services Ltd. ("UTM") conducted property-scale soil sampling between mid-August and mid-September 2011 (Ledwon and Rensby, 2011). Samples were collected from two separate grid areas that were designed to give maximum ground coverage in promising or prospective areas with little or no outcrop. The location of all samples was recorded as well as horizon taken from, soil composition, and soil colour. Location was determined using a Garmin CSx handheld GPS unit. Samples were collected in kraft paper bags and uniquely labeled by the last four numbers of their UTM coordinates in NAD 83. All 285 of the soil samples collected were sent to AGAT Labs as part of this program.

The southernmost soil grid was designed to assess mineralization potential along strike of the Takla vein system and to the east to the Bralorne Mercury mine. Samples were collected at 200m intervals on lines spaced 200m apart and were taken with a manual soil auger from depths of 15cm to 50cm. Lines sampled were from 347800 to 349600 Eastings with sample stations from Northings 6158200 to 6160600. The southern, and particularly southeastern reaches of this grid were deep in organic matter (swamps and wetlands) and samples were not taken from these sites. A total of 110 soil samples were collected from this grid area.

A second soil---sampling grid was designed for the northern sections of the claims. A grid that stretched from 6165000N to 6169500N with east---west running lines at 500m intervals and stations at 200m intervals along those lines running east---west right across the claims. The grid was to encompass the whole northern section of the claims. Unfortunately, the very eastern reaches of this grid were inaccessible due to a creek that could not be crossed. Areas likely to have abundant outcrop were eliminated from the grid as soil sampling was being used as a proxy for outcrop sampling in the valley bottom outcrop---poor zones of the northern claims. Due to a lack of sufficient helicopter time there are some minor gaps in the sampling in the southwest corner of the grid. There are other minor gaps to the north. A total of 185 soil samples was collected from this grid.

As part of the mapping program 344 rock samples were taken and sent to the lab (AGAT Labs of Terrace, BC) for assay. Fifteen blanks and thirteen standards are included in this count and only 316 were actual rocks from the claims. Each unit encountered in outcrop was sampled in several locations and several float samples were also taken. GPS coordinates and rock descriptions were recorded for each sample.

9.4 2017 Geochemical Sampling

The 2017 soil grid was designed to expand upon and extend previous soil grids completed in 2003, 2005, and 2011 in order to better encompass the extent of the magnetic and ZTEM anomalies that surround the central zones of the Stardust site where most of the historic work took place. Soil lines were oriented East-West and were emplaced using a handheld GPS. The names of the sample sites for this grid were based on the E-W, 100m spaced 2005 soil grid and therefore carried forward a few quirks of the past sampling nomenclature including the lack of a L3N (which seems just to be an error on the part of the previous grid). The lines were spaced 200m apart and samples were collected every 50m along the lines using a tree planting shovel or a soil auger to reach the “B” horizon. Sample depth, soil horizon and soil colour were recorded for each sample. In total, 786 soil samples were taken. Of these, 744 were sent for assay, while the remaining 42 were marked as “No Samples”, mostly due to swampy ground in the E part of the grid next to the Silver Creek road. Though the initial soil sampling program was for 1200 samples, much of the sampling areas to the N and SW of the central zones had to be abandoned near the end of October due to inclement weather and snow on steep terrain.

Each of the 4 grids sampled in 2017 delineated notable soil geochemistry anomalies. The Eastern section of the grid, which is located to the North of the Valley Zone, which had been covered by 2003 grids, extended a multi-element soil anomaly in the NE part of the 2003 grids. Within the two most southern lines of the East grid sampled in 2017, 9 contiguous samples taken in the Eastern part of these lines returned values over 50 ppm Cu, 300 ppm Zn and 20 ppm Pb. These samples fall within the 75th percentile of all samples taken on the Stardust property for Cu and Pb and the 90th percentile for Zn. Individual samples from this area returned multiple 95th percentile element values, such as L18N 1000E, which ran 48ppm Mo, 677ppm Zn, 20% Fe, 1359ppm As and 78ppm Cu (75th percentile).

In the southern part of the grids, Samples to the NW of the grid expanded a large, multi-element Cu-Mo-Ag-Pb-Zn-Au anomaly that extends south-southwest from the #1 Vein. Here, most samples within a ~500m^2 area returned values over 50ppm Cu, 5ppm Mo, 0.5ppm Ag, 20ppm Pb, 100ppm Zn and 3 returned over 10ppb Au. These values are all within the 75th percentile for these elements for all samples taken on the property. Individual samples returned 95th percentile values in multiple elements, such as L15S/900W, which ran 702ppm Cu, 131ppm Ni, 6.3ppm Ag; or L15S/1050W, which ran 368ppm Cu, 114ppm Ni and 2.3ppm Ag.

Of lines completed in the Western section of the 2017 grids, much of lines 22N and 20N were anomalous in Mo and Cu, with a ~800m^2 area between lines 24N and 18N containing 9 samples over 15ppm Mo, which is in the 80th percentile for all samples taken on the property. In their recommendations for further work following the completion of the 2011 program, Alpha Gold listed this area as one of significant potential for further exploration, citing both anomalous soil values and a significant western anomaly in the 2011 ZTEM mapping. The 2017 findings further the theory that the western part of the Glover stock, that is thought to underlie this area, may have potential as a porphyry target.

Though only one of several proposed soil lines to the North of the central Stardust zones was completed in 2017, the western part of this line contained several samples moderately (75th percentile) anomalous in Cu, Mo and Ag; which, when combined with nearby results from 2011 sampling, suggests the need for further prospecting and tighter soil grids to the north, where little historic exploration activity has taken place.

Rock sampling was conducted mainly along existing roads in the central Stardust area. Sampling locales were chosen largely to follow up on established zones of mineralization and to fill in some gaps in historic rock sampling. Scattered samples were also taken throughout the soil grid where outcrops were encountered. Limited geologic mapping was also undertaken in an attempt to become better oriented with the various historic maps. In total 41 rock samples and 4 chip samples were taken. The chip samples were taken along the road-cuts of the #1 vein and the Canyon Creek Skarn showings.

Soil geochemistry compilation plans for Cu and Au are shown in Figure 9-1 and Figure 9-2.

Figure 9-1 Soil Geochemistry Compilation - Cu

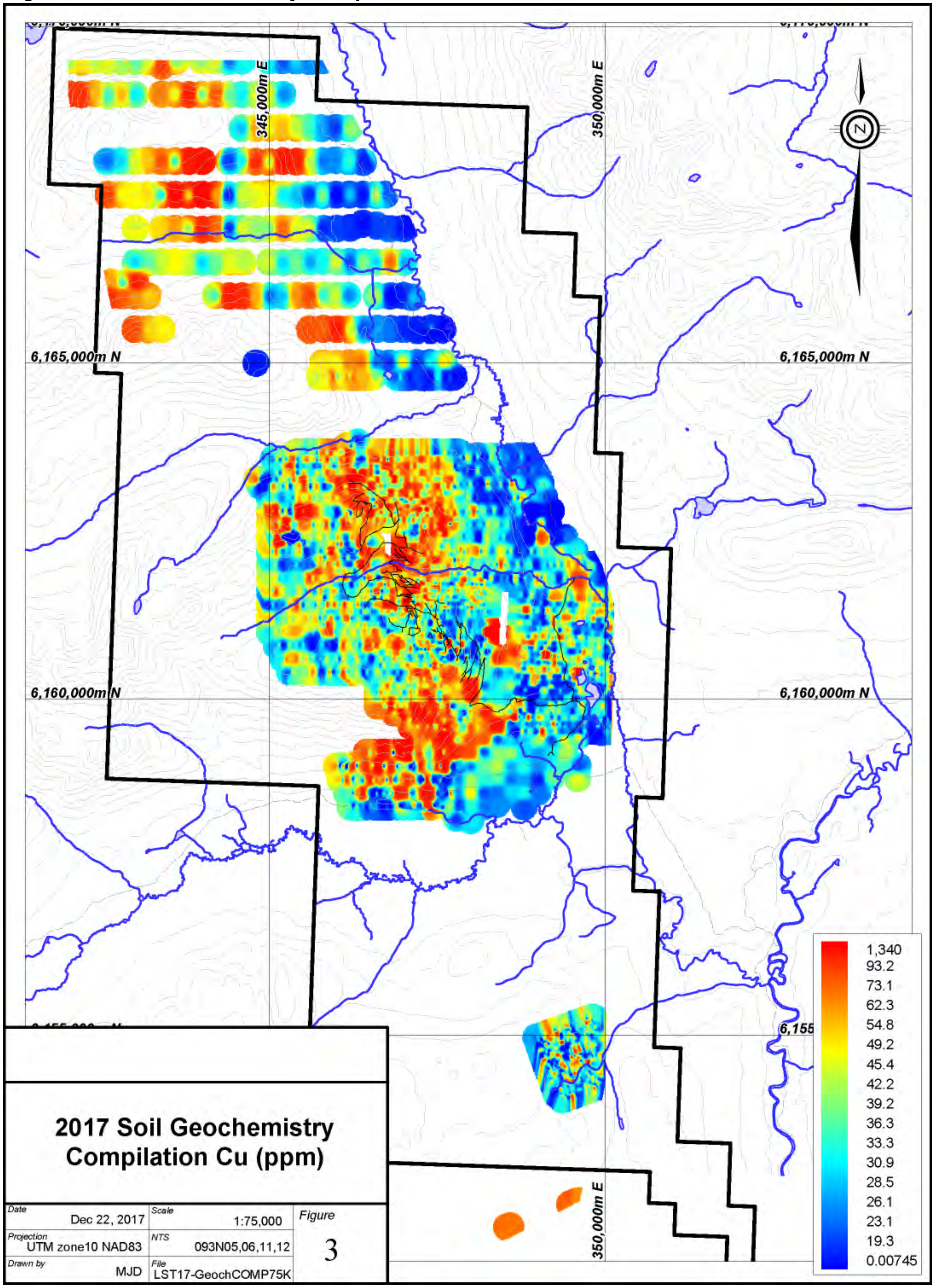
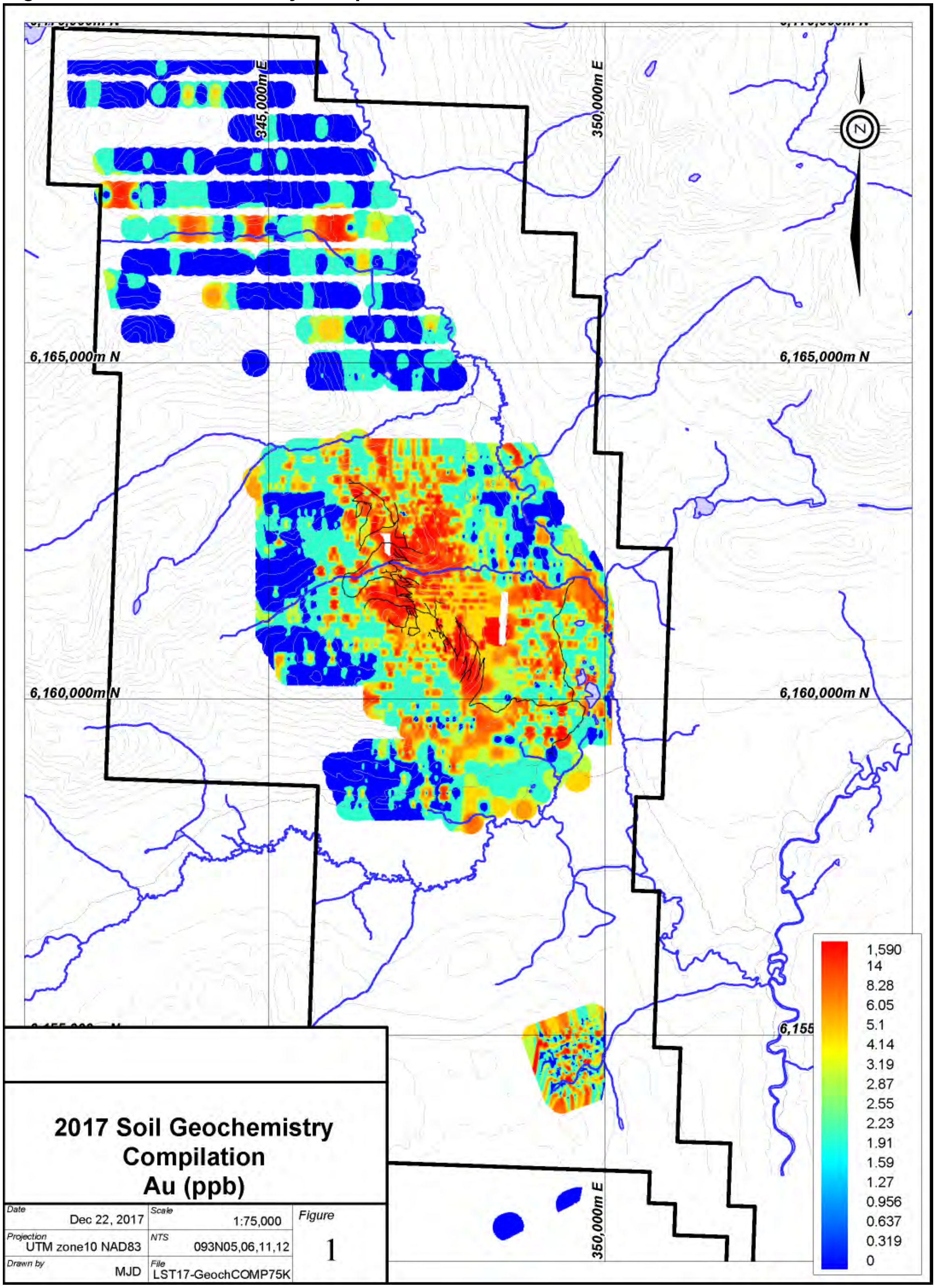


Figure 9-2 Soil Geochemistry Compilation - Au



9.5 Geophysical Surveys

9.5.1 2011 ZTEM Survey

In 2011, Alpha contracted Geotech Ltd. (Geotech) to conduct an airborne Z-Axis Tipper electromagnetic (ZTEM) and aeromagnetic geophysical survey and UTM Exploration Services Ltd. (UTM) to conduct a grassroots exploration program on the Stardust Property.

Between July 29th and August 03, 2011 Geotech completed a 330.6 line-kilometer heli-borne ZTEM survey over the property (Schein et al., 2011). Survey data of 30, 45, 90, 180, 360, 720Hz frequencies (rotated x and y, in-phase and quadrature, and total divergence), Total Magnetic Intensity (TMI) and Reduced-to-Pole (RTP) magnetic maps are presented at 1:20,000 scale. 2-D inversions of flight lines 1290, 1270, and 1150 were also completed and the results presented.

Figure 9-3 ZTEM airborne survey interpretation shows an interpretation of the ZTEM survey in the context of the geology as presently mapped. Any conclusions reached from the ZTEM should be treated as preliminary. With the exception of the Pinchi Fault and interpreted late offsets (faults) of the major conductors, there is poor apparent lithological correlation between the ZTEM data and the geologic mapping. As a result, the majority of the ZTEM conductors are interpreted to be a function of structural processes. The resolution of the ZTEM survey and the limited attention to structure when mapping outside the CCSD area limit the ability to interpret faults and folds from the ZTEM data.

The ZTEM survey does show a series of conductors that are parallel or sub-parallel to the Pinchi Fault and strike oblique to the mapped geology. Two isolated conductors termed the Eastern and Western Anomalies are located adjacent to the Glover Stock on both the east and west sides (Figure 9-3). The eastern conductor is spatially associated with the CCSD. The western conductor is not exposed, nor can it be directly explained by surface exploration. East-west and north-northwest offsets in the major ZTEM conductors show structural complication as supported by property-scale mapping.

A series of major conductors strike approximately north-south across the property. Major conductors are defined as conductive responses that show contiguity from the 720Hz to 30Hz frequencies. The two eastern-most of these conductors are coincident with the mapped location of the Pinchi Fault, and are interpreted to be caused by the fault. Four other major linear conductors are interpreted to traverse the property to the west of the Pinchi Fault. These conductors strike sub-parallel to the Pinchi Fault and may be splays of the Pinchi Fault, or deformation zones created during the accretion of the Cache Creek Terrane. The relative age of these interpreted conductors is undetermined. These conductors parallel prominent physiographic linear features (joints?) that are apparent in every ridge line on the property. The author would suggest that this is a prominent structural grain of the property, but this fabric is rarely recognized in property-scale mapping completed to date.

There are two prominent orientations of conductor offsets interpreted to be late faults. East-northeast faults are oriented nearly tangential to the Pinchi Fault and fault splays. Three of these faults are spatially coincident with Canyon Creek, and the two un-named E/W-trending creeks north of Canyon Creek. South of the Canyon Creek, the physiographic expression of these faults is not as apparent. These faults truncate against the Pinchi Fault and are therefore interpreted to be pre-Pinchi Fault dextral-slip reactivation features. A second group of offsets strike parallel to stratigraphy and the dominant foliation and are likely faults or ‘slips’ at lithological contacts or bedding planes.

Small offsets or disruptions in the ZTEM data are more likely to be a function of folding than faulting. Variability in foliations shown in property-scale mapping (Ledwon and Rensby, 2011) and detailed work in the CCS area (Ray et al., 2002) support at least two generations of folding. Without detailed field follow up to constrain the limbs and hinge zones of these folds, interpretation of the ZTEM survey in this context is dubious.

2-D inversions of lines 1150, 1270, and 1290 were generated from the ZTEM survey. Lines 1270 and 1290 intersect the CSS and CSS ext. zones and suggest the presence of two isolated conductors located on the west and east sides of the Glover Stock. The eastern conductor is best illustrated on the line 1270 inversion and shows that the conductor is coincident with the northern extent of the modeled CCSD (as modeled by Simpson, 2010). The western conductor is modeled on line 1270 and 1290. In both inversions the conductor is isolated at depth. Line 1270 shows a second conductor intersecting the surface and extending to the west; this is interpreted to be hornfels metamorphism related to intrusion emplacement.

The Pinchi Fault is modeled as the strong conductor to the east of the CCSD drilling. East of the fault are the relatively more resistive rocks of the Hogem Batholith.

It is unclear on examination of the ZTEM data if the survey is an effective tool for directly mapping carbonate replacement mineralization adjacent to the Glover Stock. The No. 3, No. 3 ext., No. 2, and 1 zones are not conductive. Figure 9-4 shows the 30Hz and 90Hz frequency profiles over the Eastern and Western anomalies together with the 90Hz conductor axes. The Eastern Anomaly shows two distinct conductors that are offset at Canyon Creek, the center of the 2010 CCSD modeled resource. The CCSD and faulted offset are not directly associated with a conductor; however, it is evident from diamond drilling and ZTEM inversions that the ZTEM does define the mineralized zone at depth. The ZTEM anomaly is interpreted to outline a zone of alteration that in conjunction with carbonate lithologies is prospective for carbonate replacement mineralization. The same justification applies to the Western Anomaly. There are carbonate rocks mapped at surface on the western side of the Glover Stock.

Figure 9-3 ZTEM airborne survey interpretation

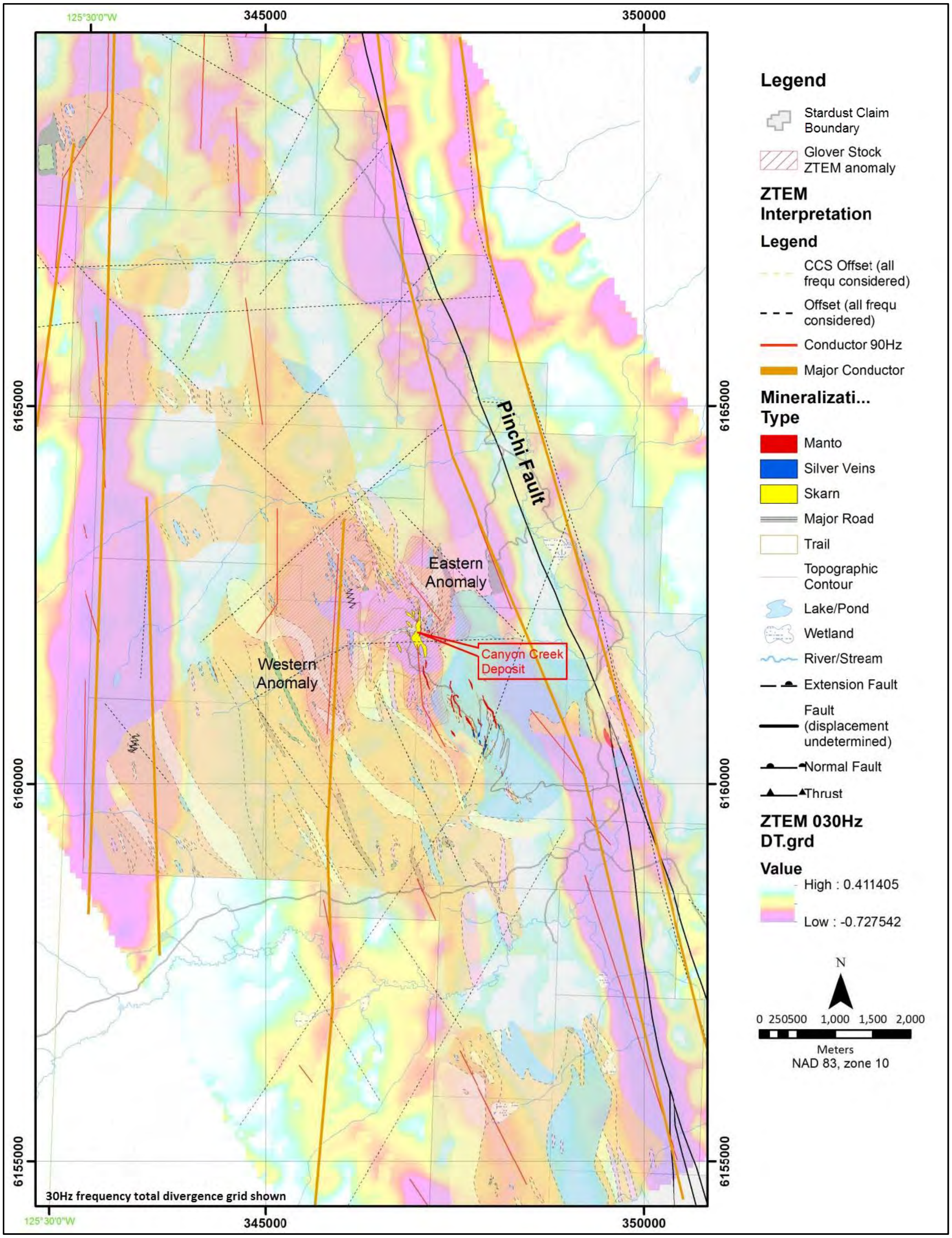
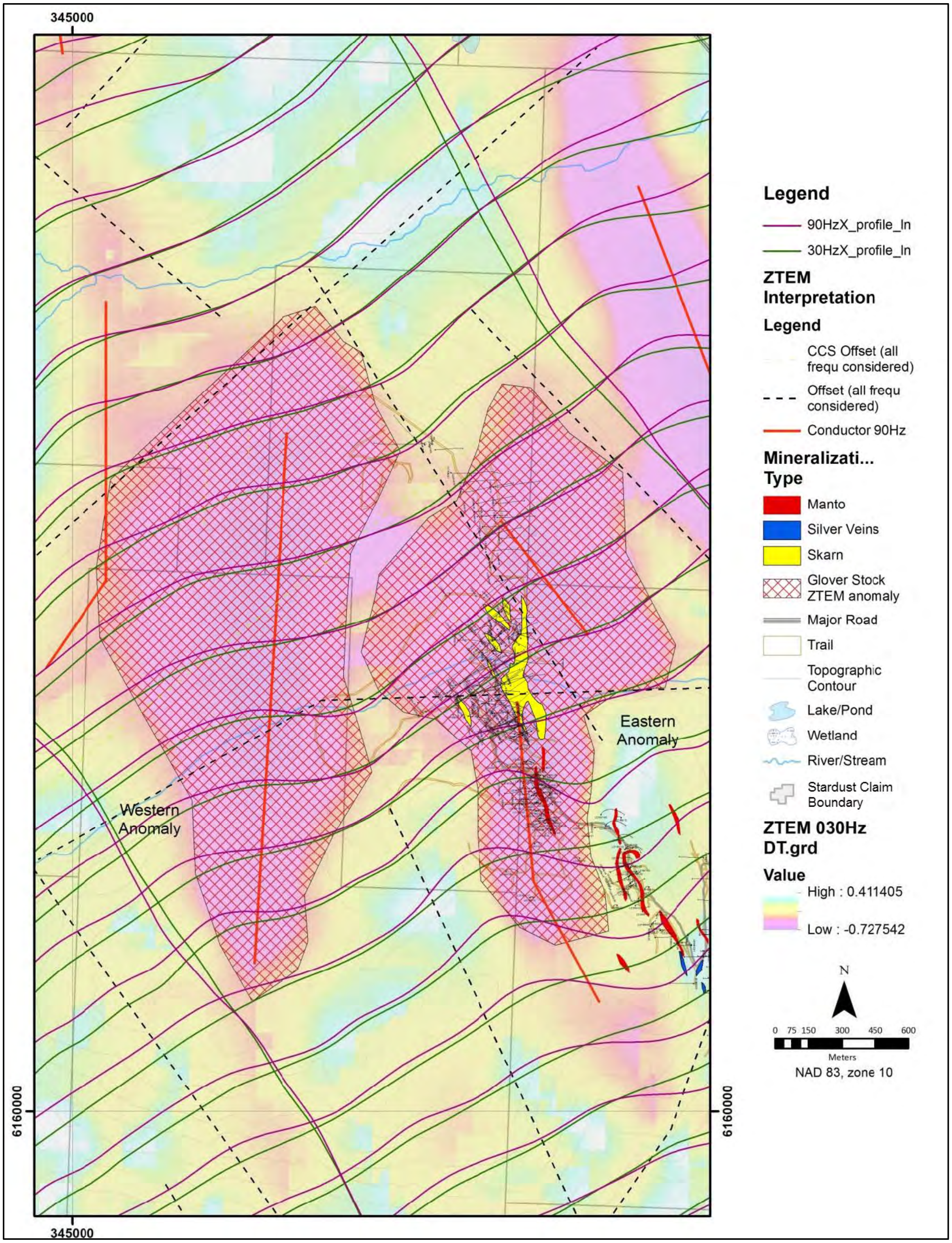


Figure 9-4 Eastern and Western ZTEM anomalies



The ZTEM inversions on line 1270 and 1290 show that the anomaly does not intersect the surface, as a result, the Eastern anomaly and associated sulphide mineralization is a good analogue for the untested Western anomaly.

9.5.2 2017 IP and Magnetometer Surveys

Induced Polarization (IP) and total field magnetometer surveys were performed over the Project area between September 22 and October 17, 2017 on behalf of Sun Metals Approximately 28 line kilometres of induced polarization and magnetometer surveys were conducted on nine 3km long, cut, E-W grid lines. The survey was performed by Scott Geophysics Ltd. on behalf of Lorraine Copper Corp.

The pole-dipole array was used for the IP survey. Readings were taken at an “a” spacing of 50m and at “n” separations of 1, 2, 3, 4, and 5, and at an “a” spacing of 100m and at “n” separations of 2.5, 3, 4, 5, 6, 7, and 8 (50/1-5 + 100/3-8). The on line current electrode was located to the east of the potential electrodes.

Total field magnetometer readings were routinely taken at 10 metre intervals (reduced to 5 metre intervals in areas with a steep magnetic gradient) and corrected for diurnal variation against a fixed base station cycling at 2 second intervals.

GPS readings were taken at each magnetometer station and at the remote (“infinite”) electrode locations, subject to satellite reception. Elevation measurements are barometric altimeter readings, calibrated to GPS altitude at the beginning of each line.

A GDD GRx8-32 receiver and GDD TxII transmitter (5,000 watts) were used for the IP survey. Readings were taken in the time domain using a 2 second on/2 second off alternating square wave. The chargeability values plotted on the accompanying pseudosections and plans are for the interval 690-1050 msec after shutoff.

Total field and GPS readings were taken with a GEM GSM-19 Overhauser magnetometer. The fixed base station was a Scintrex ENVI Proton Precession magnetometer.

Induced polarization (IP) and magnetometer (mag) results from the 2017 surveys provided enhanced resolution over the central Stardust zones when compared to existing geophysical anomalies delineated in the 2011 and 2008 airborne surveys. Chargeability and resistivity characteristics seem to fit well with mapped geology and should provide a useful tool to instruct further drilling.

10.0 DRILLING

10.1.1 2009 Drill Program

Between August 15th and October 16th, 2009, Alpha Gold Corporation drilled 6,366.92 metres in seventeen holes to infill, expand and test at depth the known Canyon Creek Skarn Zone.

Holes LD-2009-01, LD-2009-02 and LD-2009-03 were re-drill targets designed to evaluate downhole survey trends for drillholes, pre-2002, which had no downhole surveys performed. Three separate drill years were chosen (1999, 2000 and 2001) to provide information within the heart of the CCS Zone establishing improved downhole survey data consistency with surrounding drillhole data.

All holes were surveyed using real time GPS system CMT March2. Collar locations are shown in Table 10-1.

The core was logged on site by Hungry Hill Geological Ltd, OF Telkwa, B.C. and the samples were analyzed by ALS Laboratories Ltd, of Vancouver, B.C. The core is stored on site at the old Takla Silver Camp site.

Table 10-1 2009 Drill Hole Collar Locations

Hole ID	Total depth(m)	azimuth	dip	Purpose for drilling	Elev(m)
LD-2009-01	371.00	135	-60	re-drill of hole LD1999-12	1317.20
LD-2009-02	570.00	50	-60	re-drill of hole LD2001-44	1366.30
LD-2009-03	131.00	90	-55	re-drill of hole LD2000-27	1329.60
LD-2009-04	429.00	50	-55	infill	1330.40
LD-2009-05	312.00	70	-55	infill	1330.40
LD-2009-06	447.00	70	-75	infill	1351.10
LD-2009-07	249.00	90	-50	infill	1351.10
LD-2009-08	246.00	90	-80	infill	1363.80
LD-2009-09	294.00	70	-65	depth extension	1363.80
LD-2009-10	393.00	90	-85	infill	1373.10
LD-2009-11	317.72	90	-55	infill	1318.60
LD-2009-12	525.00	90	-80	depth extension	1380.60
LD-2009-13	354.20	98	-75	infill	1380.00
LD-2009-14	255.00	72	-55	infill	1380.00
LD-2009-15	471.00	90	-75	infill	1317.20
LD-2009-16	525.00	70	-75	depth extension	1359.00
LD-2009-17	477.00	90	-75	depth extension	1368.50
Total	**6366.92**				

10.1.2 2010 Drill Program

Between June and September 2010, a fourteen hole drill program (3986.7 m), was carried out on the Property for Alpha Gold under the direction of Anastasia Ledwon, P.Geo of UTM Exploration Services

Ltd. The program was designed around infill drilling the Canyon Creek Skarn Extension zone in effort to add to the 2010 resource estimate (Simpson, 2010).

The drilling program utilized an A-5 Hydraulic, skid-mounted drill under contract from Driftwood Diamond Drilling Ltd. (Driftwood) based in Smithers, B.C. Drilling was undertaken using regular wireline equipment.

Access to the drill sites utilized the narrow trails existing on the property. All drilling was performed from pre-existing narrow trails and no new access construction was required. Upon completion of each hole the collar was identified with a labeled pole and full reclamation was completed during 2010.

Core was logged on site by Richard Beck, Project Manager and Sara Henderson, B.Sc. RQD was the only quantitative geotechnical data collected. All core was digitally photographed.

Collar locations are shown in Table 10-2 and significant intercepts in Table 10-3.

Table 10-2 2010 Drill Hole Collar Locations

Hole_ID	Easting	Northing	Elevation	Depth	Azimuth	Dip
LD2010-01	346895.00	6162061.00	1331.00	701.70	0	-90
LD2010-02	346895.00	6162061.00	1331.00	684.00	332	-83
LD2010-03	346908.00	6162387.00	1426.00	222.00	78	-53
LD2010-04	346585.00	6163003.00	1473.00	339.00	300	-60
LD2010-05	346583.00	6163010.00	1498.00	315.00	263	-47
LD2010-06	346632.00	6162980.00	1497.00	201.00	82	-55
LD2010-07	346746.00	6162832.00	1498.00	276.00	82	-55
LD2010-08	346806.00	6162700.00	1495.00	258.00	84	-58
LD2010-09	346846.00	6162632.00	1487.00	243.00	85	-65
LD2010-10	346932.00	6162581.00	1463.00	162.00	85	-65
LD2010-11	347009.91	6162149.33	1364.70	87.00	82	-50
LD2010-12	347009.91	6162149.33	1364.70	138.00	82	-70
LD2010-13	347009.91	6162149.33	1364.70	201.00	110	-65
LD2010-14	347009.91	6162149.33	1364.70	159.00	88	-70
			Total	**3986.70**		

Table 10-3 2010 Significant Intercepts

Hole ID	From (m)	To (m)	Interval (m)	Est True Width (m)	Cu %	Au g/t	Ag g/t
LD2010-03	72.00	74.00	2.00	1.80	0.690	2.020	18.7
	105.00	107.00	2.00	1.80	0.077	0.525	2.2
	117.00	119.00	2.00	1.80	0.003	1.190	0.3
LD2010-05	104.00	108.00	4.00	2.30	0.386	0.689	23.3
LD2010-08	179.17	186.95	7.78	5.90	0.076	2.328	0.8
	222.00	224.00	2.00	1.52	0.253	0.155	46.1
	238.00	242.00	4.00	3.04	0.246	5.359	2.2
LD2010-10	68.00	76.00	8.00	4.32	0.100	3.294	4.2

Hole ID	From (m)	To (m)	Interval (m)	Est True Width (m)	Cu %	Au g/t	Ag g/t
	108.00	110.00	2.00	1.08	0.026	2.990	20.5
LD2010-12	31.00	34.10	3.10	1.60	0.917	0.393	26.8
	129.27	138.00	8.73	5.49	1.558	1.229	36.6
including	137.00	138.00	1.00	0.63	6.670	3.600	180.0
LD2010-13	26.57	33.40	6.83	3.35	2.004	1.021	52.4
LD2010-14	28.96	33.38	4.42	1.84	1.391	0.394	36.8
	144.00	146.00	2.00	0.83	0.089	5.160	33.6

Figure 10-1 Shows the locations of 2010 drill holes in the CCS and CCS Extension zones.

10.1.3 2017 Drill Program

In October of 2017, a three-hole drill program was completed on the Property in order to verify previous drill results as part of a due diligence exercise. The work was supervised by Mincord Consultants on behalf of Sun Metals. Holes were drilled into three locations of previously intersected mineralization; copper-gold-silver-zinc in skarn and manto/transitional zones in the Canyon Creek deposit, and silver-gold in the No.1 Vein.

The drill program was carried out by Paycore Enterprises Ltd. of McBride, BC, from October 11-18, coring a total of 343.51 metres. The drilling generally went well though ground conditions were often poor, resulting in low recoveries and lower production.

LD2017-01 was drilled at the site of LD2000-13 and LD2000-17 to test the copper rich, Canyon Creek Skarn (Figure 10-1). At an azimuth of 055° and an inclination of -75°, it was drilled directly between the two previous holes. It was drilled to a depth of 105.46m.

The hole was collared into a porphyritic monzonite dyke that ran from 7.92 to 20.75 m, containing feldspar phenocrysts up to 1 cm in size, then intersected a grey silicified argillite to 49.3 m. The argillite was silicified and/or cherty with 2-5mm wide bands of light to dark brown and green garnet and diopside calc-silicates throughout. Most of this interval was badly broken with local slickensides noted. Sulfide content was low. Below the silicified argillite the hole encountered another porphyritic monzonite dyke to 76.13 m, this time with pyrite to 1% as disseminations and veinlets.

From 76.13 to 83.6 m the hole encountered another grey silicified/cherty argillite interval, which contained several skarn intervals up to 45 cm in length. The skarn consisted of banded fine-grained brown-pink garnet and green diopside containing up to 5% pyrite.

The main skarn body was intersected between 83.6 m and the end of the hole at 105.48 m. Most of the skarn was composed of the fine-grained variety noted above though coarser green garnets occurred locally. Magnetite was locally common in parts of the zone with local dark grey-purple quartz veins also noted. Local unmineralized, grey silicified argillite intervals up to 2.3 m occurred within the skarn unit. The skarn mineralisation consisted of pyrite that ranged up to 5%, and chalcopyrite that reached 3% in the upper part of the zone.

LD2017-02 was drilled at the site of LD2002-02 and LD1999-17 to test a zinc-rich manto in the #4B zone (Figure 10-1). At an azimuth of 070° and an inclination of -60°, it was again drilled between the two previous holes. It was drilled to a depth of 99.06 m.

The mineralised manto/transitional unit was intercepted within the limestone from 78.68 to 89.92 m. Mineralisation was hosted in medium-grained light-green garnet and consisted of fine to medium grained pyrite, which locally made up 100% of the core. The pyrite in such intervals was coarse grained and rubbly, which made for local poor core recovery. Black sphalerite occurred in the bottom half of the interval, ranging up to 5%, while chalcopyrite occurred throughout in amounts up to 3%, with pyrrhotite common in the upper part of the sulfide interval.

LD2017-03 was drilled at the site of LD2003-08 and 2003-09 to test the gold and silver-rich #1 vein. At an azimuth of 270° and an inclination of -57°, it split the inclination of the previous holes. It was drilled to a depth of 138.99m.

For the most part, LD2017-03 encountered strongly sheared and graphitic phyllite, siltstone and limestone units which appear to have been tectonically juxtaposed within a wide fault zone. The core was generally badly broken along low core-angle fractures which were commonly graphitic. Several monzonite dykes were also encountered; most notably from 92.87 to 100.92 m, where the dyke serves as a “marker unit”, around which the No.1 Vein mineralisation occurs. From 89 m to the dyke the core is largely composed of black graphitic mud which contains zones with up to 20% fine pyrite as well as other sulfides. Below the dyke to 105.2 m, zones of black graphitic argillite and clay with up to 1% pyrite and broken white quartz veins to 1 cm occur. These are the only quartz veins noted within the Number 1 Vein Zone.

Below this mineralised zone, broken graphitic argillite and siltstone were encountered to the bottom of the hole at 138.99 m.

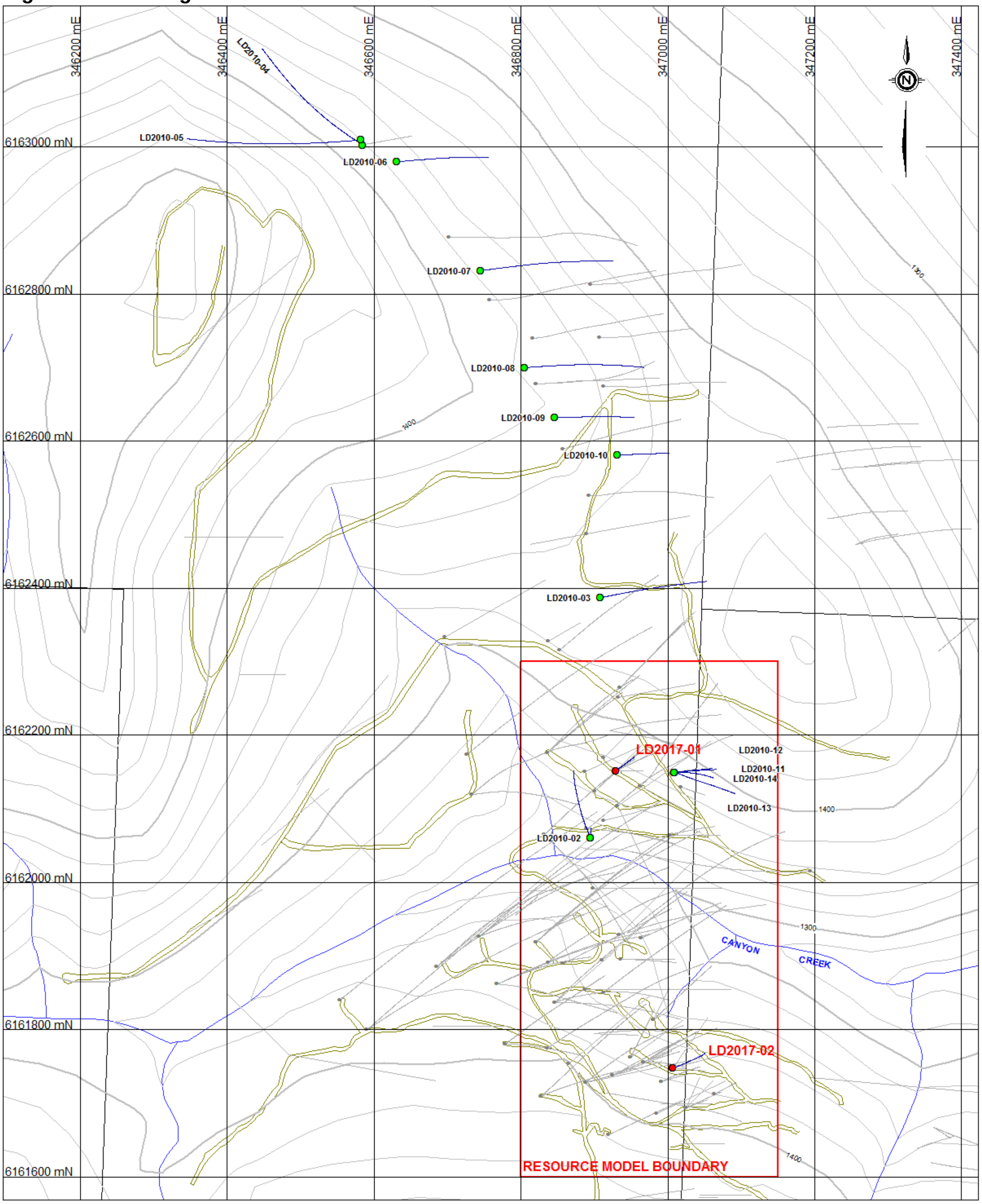
All the core was split and sampled and a total of 144 samples were sent to Bureau Veritas Minerals Laboratory in Vancouver for analysis.

Significant intercepts from the 2017 drill program are presented in Table 10-4.

Table 10-4 Selected 2017 Drill Intercepts

Hole ID	From (m)	To (m)	Length (m)	True Width (m)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)
LD2017-01	94.60	97.00	2.40	1.56	0.61	0.10	0.07	13.6	0.57
including	95.30	97.00	1.69	1.10	0.83	0.00	0.00	16.6	0.74
LD2017-02	82.70	89.90	7.22	5.88	0.46	2.10	0.29	117.7	1.15
including	82.70	87.90	5.15	4.22	0.44	3.00	0.40	156.6	1.36
LD2017-03	89.50	93.90	4.37	2.12	0.02	1.10	0.25	332.6	3.36
including	89.50	90.80	1.32	0.71	0.05	2.10	0.60	856.0	8.00

Figure 10-1 Drilling in CCS and CCS Extension Zones since 2009



10.2 Recovery

Core recovery data was not systematically recorded prior to 2004 but reports state that it was close to 100% in the CCS zone (Megaw, 2000 & 2001). Core recovery since 2004 averaged over 97%. Recoveries within the mineralized portions of the CCS zone were generally excellent.

10.3 Collar Surveys

Since 2005, drill hole collars have been located by Nex Tech of Fort St. James using a GPS system operating in differential mode. In this mode, precision of the UTM location was determined to be less than 3.0 meters. However, examination of drill hole collars in cross section suggests that the elevation precision was much less than this. It was observed that several holes from the same pads showed significant variation in elevation by as much as 19.4 m. Most of the historic holes were re-surveyed in 2009 and 2010 using differential GPS. Eleven of the historic collars could not be located due to more recent access road and drill pad construction and rehabilitation work. Some of the elevations from these holes were adjusted based on adjacent drill collars and TRIM topography.

10.4 Down Hole Surveys

Historically, the attitude of the drill collar was measured using a Brunton compass with a declination of 23° while down-hole surveys were conducted using a Sperry Sun Reflex EZShot digital instrument. Down-hole readings for azimuth, inclination, and magnetic field were taken at approximately 60 metre (200 ft.) intervals in all holes except for rare instances when the instrument was unavailable due to mechanical or electrical problems. It should be noted that the EZ-Shot azimuth readings can be influenced by magnetic minerals.

The 52 holes drilled on the CCS deposit prior to 2002 had no down-hole survey data.

10.5 True Thickness

Due to the steeply dipping orientation of the mineralized zones and the limitations of surface drilling, none of the drill intercepts approximate the true thickness. True thickness must be calculated for each intercept based on the angle of the drill hole to the specified zone.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling Methods

11.1.1 Historic Sample Preparation

During the 2000 and 2001 programs core was split and bagged for assay on site using doubled plastic bags. The bags were marked with sample numbers on the outside and on tags included with the core samples. These were then placed in rice bags for direct shipment by Alpha Gold personnel to the assay laboratory. In 2000, Eco-Tech labs of Kamloops, B.C. was used as the primary laboratory and Chemex Laboratories in Vancouver, B.C. for check assays. In 2001, Chemex was used for all analyses.

During the 2003 - 2006 programs four-part tags were used to label the samples - two parts were sent to the laboratory; one part was stapled into the core box at the end of the sample interval and one part was retained in the sample book. Samples were stored in a secure location on-site and then transported directly to the laboratory by Mr. R. Whatley, a director of Alpha Gold.

11.1.2 2009 Drill Program

Drill core was split using a hydraulic splitter and bagged for assay on site using doubled 6mm poly bags. The bags were marked with individual sample numbers on the outside of the bags as well as on a bar coded sample tag within the core sample itself. Four poly bags, for an averaged total weight of 40lbs, were then placed into large rice bags for direct shipment BY Alpha Gold personnel to the ALS CHEMEX prep lab in Terrace, BC.

11.1.3 2010 Drill Program

Assay intervals were determined by the Project Manager at the time of logging. The intervals, ranging from 0.3 to 2.5 meters in length, were based on a combination of alteration, mineralogy, lithology and veining.

The core from each assay interval was split in half with a hydraulic core splitter. The splitting was done in a representative manner under the supervision of the project manager and there are no known biases in the samples. Half the core from each interval was double-bagged and the other half was returned to the core box for storage.

11.1.4 2017 Drill Program

All of the 2017 core was sampled and a total of 144 samples were collected. After logging, the core was cut with a rock saw with one half sent for analysis and the other half retained in the core box. Sample intervals were chosen during the logging process based on lithologies and mineralisation noted.

Prepared samples and sample blanks were inserted into the sample stream at a ratio of approximately one per twenty. One duplicate sample was also collected, where both halves of the cut core were sent for analysis. As with the other samples, the core was sent to Bureau Veritas for analysis. The core is currently stored at Tsayta Lake Lodge.

11.2 Density Determinations

Selected lithological samples within the 2009 core were submitted to the ALS laboratory for Specific Gravity testing (OA-GRA08). The rock or core section (up to 6 kg) is weighed dry for method OA-GRA08. The sample is then weighed while it is suspended in water. The specific gravity is calculated from the following equations.

$$\text{Specific Gravity} = \frac{\text{Weight of sample (g)}}{\text{Weight in air (g) - Weight in water (g)}}$$

11.3 Analytical and Test Laboratories

All analytical work carried out on the project was done at independent laboratories.

In 2000, Eco-Tech labs of Kamloops, B.C. (ISO:9001-2000 Certification) was used as the primary laboratory and Chemex Laboratories in Vancouver, B.C. for check assays. In 2001, Chemex (ISO:9001 Certification) was used for all analyses.

Between 2004 and 2006, Alpha used ALS in Vancouver for assaying samples. ALS has ISO:9001:2000 registration at all of its North American sites.

In 2009 pulps were assayed at ALS Chemex using a standard 35 element ICP package (ME-ICP41) BY Aqua Regia acid digestion and ICP-AES- RSD 10% plus Au and Ag (fire assay: AA finish, Au-AA23) by 30g fire assay and AAS – RSD 10%. Atomic Absorption analyses were performed on all overlimits of Au Ag Cu Pb and Zn samples.

Samples from the 2010 drill program and re-sampling of legacy core were analyzed at ALS Chemex Laboratories Ltd. in Vancouver, using a standard 34 element ICP package plus a 30-gram Au fire assay with an AA finish. Atomic Absorption analyses were performed on all overlimit Ag, Cu, Zn, and Pb samples. Overlimit Au samples were analyzed by a 30-gram fire assay with a gravimetric finish.

Geochemical samples from 2010 were analyzed at AGAT Labs in Terrace, BC (ISO:9001 Certification), using a standard 46 element ICP package plus a 30-gram Au fire assay with an AA finish. Atomic Absorption analyses were performed on all over-limits Ag, Cu, Zn, and Pb samples. Over-limit Au samples were analyzed by a 30-gram fire assay with a gravimetric finish.

All core and geochemical samples from 2017 were analyzed at Bureau Veritas Minerals Laboratory in Vancouver, an ISO:9001 Certified lab.

11.4 Sample Preparation and Analysis

11.4.1 Pre-2009 Drill Programs

Available reports indicate that most of the sample preparation and analysis prior to 2004 was carried out by registered Canadian laboratories. Between 2004 and 2006, Alpha used ALS in Vancouver for assaying samples. ALS has ISO:9001:2000 registration at all of its North American sites.

ALS prepared samples for analysis in the following way: All half core splits were dried and the entire sample was then crushed to better than 70% passing a 2 mm (Tyler 10 mesh) screen. A split of up to 250 grams was taken and pulverized to better than 85% passing a 75 micron (Tyler 200 mesh) screen to form a pulp.

In 2003 pulps were assayed using a standard 33 element ICP package (code 9402) plus Au and Ag (fire assay: AA finish, code 9413). Atomic Absorption analyses were performed on all overlimits Au Ag Cu Pb and Zn samples prior to 2004. In 2004 the over-limit Au samples were analysed by a 30 gram fire assay with a gravimetric finish. Atomic Absorption analyses were performed on all over-limits Ag Cu Pb and Zn samples.

Between 2004 and 2006, samples were assayed using a standard 34 element ICP package plus a 30 gram Au fire assay with an AA finish. Atomic Absorption analyses were performed on all over-limits Ag, Cu, Zn, and Pb samples. Over-limit Au samples were analyzed by a 30 gram fire assay with a gravimetric finish.

An independent QA/QC program was carried out during the 2002 to 2004 exploration seasons. This program comprised the insertion of known standards into the core sample stream (Oliver, 2003).

The same standard (PM-169) was used in the 2002 and 2003 exploration program. In 2002 the mean assay of the 16 standards submitted was 0.642 g/t Au, compared with the standard reference value of 0.63 g/t Au. The mean of 14 assays of the standard submitted for gold analysis during the 2003 drilling program was 0.554 g/t Au with a standard deviation of 0.160 g/t Au. This mean value is 13.7% lower than the reference standard.

The mean of 11 assays of the standard (CDN-CGS-2) submitted for gold analysis during the 2004 drilling program was 0.918 g/t Au with a standard deviation of 0.135 g/t Au. This mean value is 5.4% lower than the reference standard which contained 0.97 g/t Au. The mean of the 10 blank samples (CDN-CGS-5) submitted in 2004 was 0.008 g/t Au. Prior to 2004 the supplied database contained no blank samples.

11.4.2 2009 Drill Program

ALS Chemex prepared the samples in the following way: All half core splits sample tags with a scannable bar code attached to the sample tag were logged into the tracking system, had an applicable internal ALS bar code, the weight was recorded, and the sample was dried at <120 C. The sample was then crushed to better than > 70% passing a 2mm (Tyler 10 mesh) screen. The crushed sample was then riffle split up to 250 grams and pulverized to better than 85% passing a 75-micron (Tyler 200 mesh) screen to form a pulp.

In 2009 pulps were assayed using a standard 35 element ICP package (ME-ICP41) BY Aqua Regia acid digestion and ICP-AES- RSD 10% plus Au and Ag (fire assay: AA finish, Au-AA23) by 30g fire assay and AAS – RSD 10%. Atomic Absorption analyses were performed on all overlimits of Au Ag Cu Pb and Zn samples.

During the 2009 drill program, all samples submitted to the ALS lab included the insertion of known standards and blanks into the sample stream. Every 20th sample was a known standard, blank or duplicate sample inserted for the purpose of the QA/QC program. Standards used during the 2009 program were CDN-CGS-2B and CDN-CGS-11. Blanks were CDN-BL2. All standards and blanks were purchased and supplied by CDN Resources Labs Ltd of Richmond, B.C. Core samples were analyzed by ALS Chemex Laboratory in Vancouver employing the Group Au-AA23 methodology. Analytical procedures consisted of a 31-element ICP analysis followed by assay for any copper ICP analyses greater than 10,000 ppm.

11.4.3 2010 Drill Program

Samples from the 2010 drill program and re-sampling of legacy core were analyzed at ALS Chemex Laboratories Ltd. in Vancouver, using a standard 34 element ICP package plus a 30-gram Au fire assay with an AA finish. Atomic Absorption analyses were performed on all overlimit Ag, Cu, Zn, and Pb samples. Overlimit Au samples were analyzed by a 30-gram fire assay with a gravimetric finish.

11.4.4 2017 Drill Program

Samples were analyzed at Bureau Veritas Mineral Laboratories in Vancouver using a standard 42-element ICP package (Aqua Regia Digestion ICP-MS). Twenty-nine samples were analyzed using a 30-gram Au fire assay with an AA finish. Seven overlimit analyses for Cu, Pb and Zn were assayed by ICP-MS.

11.5 Quality Assurance and Quality Control

QA/QC for drill programs prior to 2010 are documented in the previous Technical Report (Simpson, 2010).

11.5.1 Standards

Historic Drill Programs

There were no records of standards being used in drill programs prior to 2002.

An independent QA/QC program was reportedly carried out during the 2002 to 2004 exploration seasons. This program comprised the insertion of known standards into the core sample stream (Oliver, 2003). Statistics for standards used in the 2003 drill program (mainly PM-169) were not recorded and only 5 standard analyses were performed in drill holes from the Canyon Creek Skarn deposit.

The same standard (PM-169) was used in the 2002 and 2003 exploration program. In 2002 the mean assay of the 16 standards submitted was 0.642 g/t Au, compared with the standard reference value of 0.63 g/t Au. The mean of 14 assays of the standard submitted for gold analysis during the 2003 drilling program was 0.554 g/t Au with a standard deviation of 0.160 g/t Au. This mean value is 13.7% lower than the reference standard.

The mean of 33 assays of the standard (CDN-CGS-2) submitted for gold analysis during the 2004-2005 drilling program was 0.943 g/t Au with a standard deviation of 0.087 g/t Au. This mean value is slightly lower than the reference standard which contained 0.97 g/t Au. Three samples were at or beyond the 3 standard deviation limit (Figure 14 1 Historic standard CGS-2 control chart for Au). There is no indication that any action was taken over the failed standards. The mean of 33 assays of the same standard submitted for Cu showed a slight high bias with an average grade of 1.19% Cu compared to 1.177% Cu.

Two standards were used in 2006, CGS-7 and CGS-10. No significant biases were evident and 1 failure for Au was noted.

In 2006 a certified blank standard was purchased from CDN Resource Laboratories. This blank was certified for Au, Pt and Pd but not Cu or Ag. Results for Cu showed one outlier at 114 ppm which also contained anomalously high As and Ag. Results for Au showed 2 samples above the accepted threshold of 0.01 ppm Au. This could be a result of sample mis-labeling or could indicate minor contamination during sample preparation. Follow up procedures, if any, were not documented.

2009 Drill Program

For the 2009 drill program, two reference standards were purchased from CDN Resource Laboratories Ltd. of Delta, BC and used over the duration of the program. One standard was certified for gold and copper and the second for higher grade gold. The calculated mean grades of the standards are shown in Table 11-1.

Table 11-1 Certified grades of 2009 standards

Standard	Au	Cu
CGS-11	0.730	0.683
GS-2B	2.030	-

Results for CGS-11 showed two failed Au analyses (Figure 11-1). The Cu results show a minor high bias and one failure using the adjusted upper 3 standard deviation limit (Figure 11-1). Results for GS-2B showed a minor high bias for Au in the ALS results and a single low failure (Figure 11-2). Only one of the failures (Au in CGS-11) was within a batch of samples located within the resource model and it is recommended that this batch be re-run.

Figure 11-1 Standard CGS-11 control charts for Au and Cu

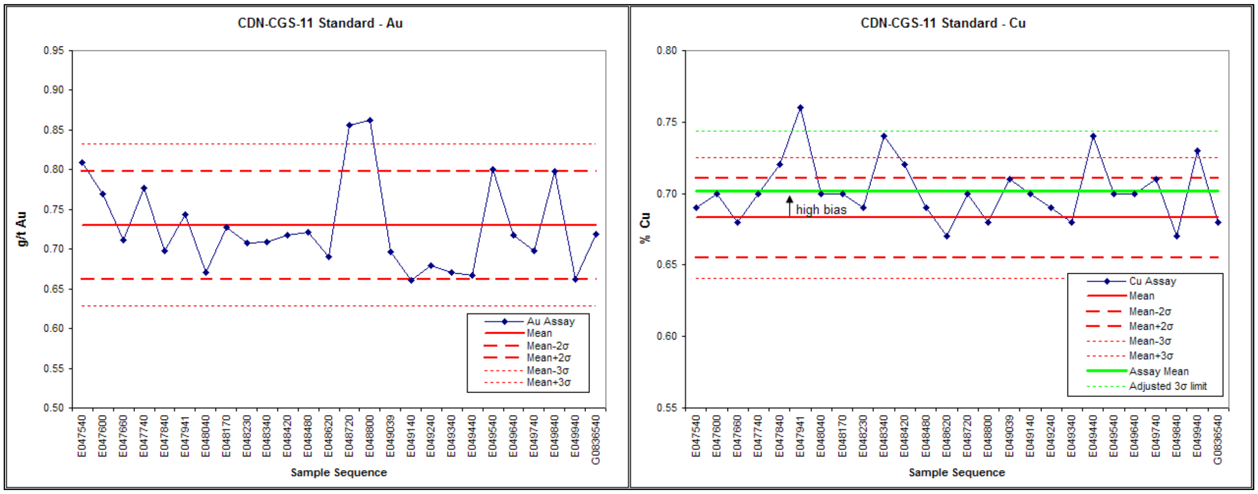
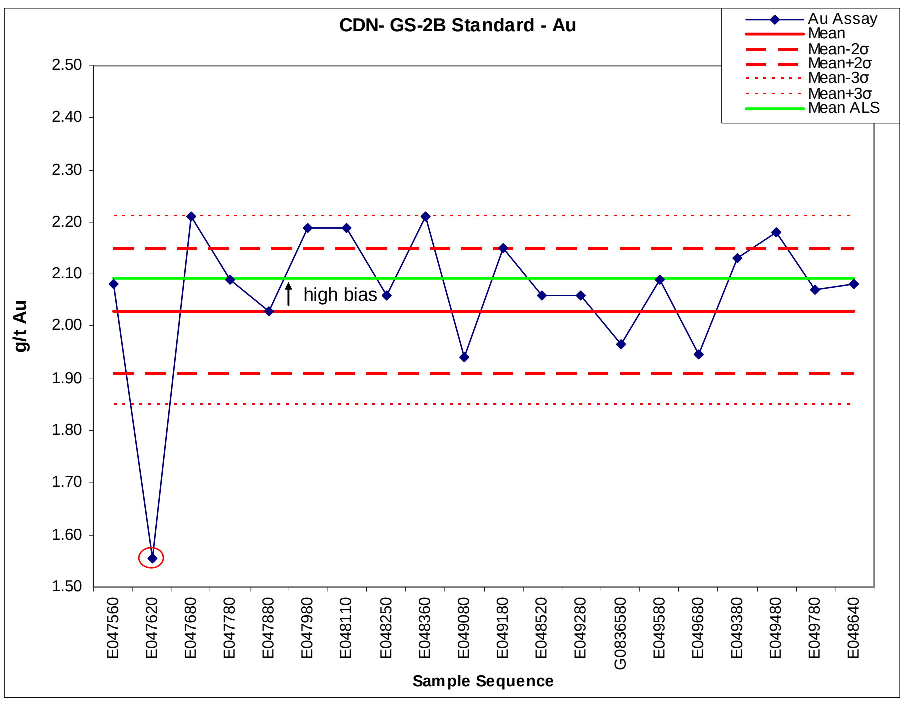


Figure 11-2 Standard GS-2B control chart for Au



2010 Drill Program

Standards and/or blanks were included in the sample stream every 20 samples as a measure of quality control. The ore reference multi-element standards used were CDN-ME-7 and CDN-ME-11 prepared by CDN Resource Laboratories Ltd. of Delta, B.C. CDN-ME- 7 has certified reference values of 0.219 g/t ± 0.24 g/t Au, 150.7g/t ± 8.7g/t Ag, 0.227% ± 0.016% Cu, 4.95% ± 0.30% Pb and 4.84% ± 0.17% Zn. CDN-ME-11 has certified values of 1.38 g/t ± 0.1 g/t Au, 79.3 g/t ± 6.0 g/t Ag, 2.44% ± 0.11% Cu, 0.86% ± 0.10% Pb and 0.96% ± 0.06% Zn.

A total of 21 CDN-ME-7 standards and 33 CDN-ME-11 standards were inserted during the sampling process. Results were deemed acceptable.

2017 Drill Program

Three standards were inserted into the sample stream using certified Au standard CDN-GS-1C (0.99 ± 0.08 g/t). Results were within acceptable limits.

11.5.2 Blank Samples

Historic Drilling

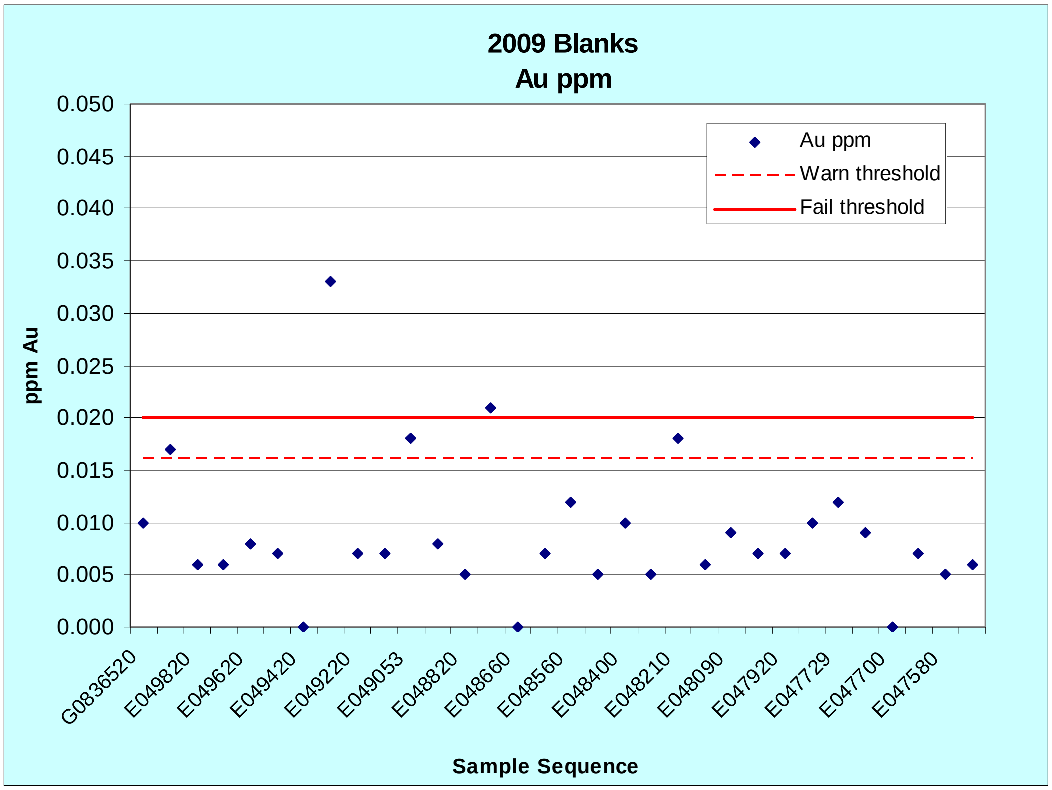
Between 2004 and 2006 a blank standard labeled CGS-5 was used. This standard was certified for Au, Cu, Pt and Pd by Assayers Canada in a report dated Apr-07-04. Cu analyses from ALS-Chemex averaged slightly above the accepted mean of 120 ppm Cu and averaged 130 ppm. Gold analyses were all below 2 standard deviations from the accepted mean of 0.01 ppm.

In 2006 a certified blank standard was purchased from CDN Resource Laboratories. This blank was certified for Au, Pt and Pd but not Cu or Ag. Results for Cu showed one outlier at 114 ppm which also contained anomalously high As and Ag. Results for Au showed 2 samples above the accepted threshold of 0.01 ppm Au. This could be a result of sample mis-labeling or could indicate minor contamination during sample preparation. Follow up procedures, if any, were not documented.

2009 Drill Program

The blank results from 2009 are illustrated in Figure 11-3. Two samples were above the 0.02 g/t Au threshold but neither was adjacent to samples in the resource model. No copper values were above the detection limit.

Figure 11-3 2009 blank results



2010 Drill Program

The blank material used was a typical landscaping rock purchased from a local gardening centre. Nineteen blank samples were inserted. One sample from hole LD2010-03 was above the acceptable limit for Au grading 0.106 g/t. This hole lies outside of the resource model.

2017 Drill Program

A total of 3 blank samples were inserted. Results were within acceptable limits.

11.5.3 Duplicates

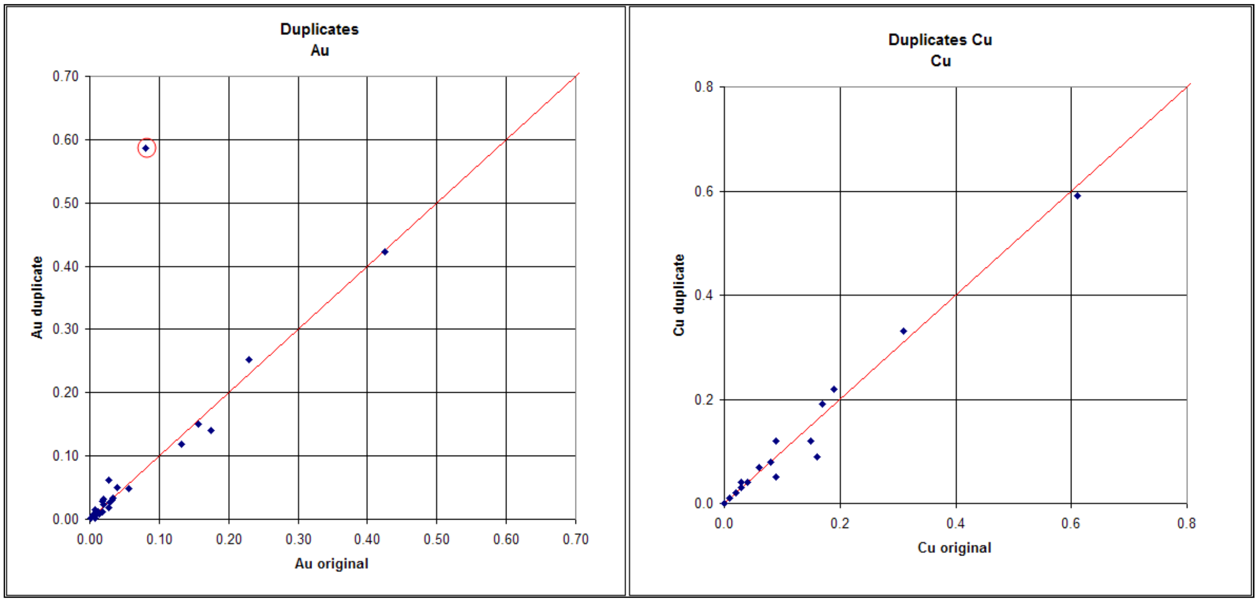
Historic Drill Programs

Four duplicate half cores from the 2006 drill program were submitted to ALS-Chemex for analysis. Results for Au showed significant local sampling variability but no apparent bias.

2009 Drill Program

Forty-two duplicate samples were submitted during the 2009 drill program. Results show no apparent bias and one outlier for Au was re-analyzed (Figure 11-4).

Figure 11-4 2009 duplicate sample results



2010 Drill Program

Duplicate samples were submitted to ALS Chemex; these duplicate samples were introduced into the sampling stream every 20 samples, alternating with the blanks and standards. There were no duplicate analyses performed by other laboratories. A total of 20 duplicate samples were taken. Results showed significant local sampling variability but no apparent bias.

2017 Drill Program

One duplicate sample was collected from hole LM2007-01. The sample was in very low-grade material and showed little difference from the original sample.

11.6 Sample Security

Pre-2009 Sampling Programs

During the 2000 and 2001 programs core was split and bagged for assay on site using doubled plastic bags. The bags were marked with sample numbers on the outside and on tags included with the core samples. These were then placed in rice bags for direct shipment by Alpha Gold personnel to the assay laboratory.

During the 2003 - 2006 programs four-part tags were used to label the samples - two parts were sent to the laboratory; one part was stapled into the core box at the end of the sample interval and one part was retained in the sample book. Samples were stored in a secure location on-site and then transported directly to the laboratory by Mr. R. Whatley, a director of Alpha Gold.

2009 Sampling

Drill core was split using a hydraulic splitter and bagged for assay on site using doubled 6mm poly bags. The bags were marked with individual sample numbers on the outside of the bags as well as on a bar coded sample tag within the core sample itself. Four poly bags, for an averaged total weight of 40lbs, were then placed into large rice bags for direct shipment BY Alpha Gold personnel to the ALS CHEMEX prep lab in Terrace, BC.

2010 Sampling

Three-part tags were used to label the samples. One tag was sent to the laboratory, one was stapled into the core box at the end of the sample interval, and the last was retained in the sample book. Samples were stored in a secure location on-site and then securely transported directly to the laboratory by Bandstra shipping.

2017 Sampling

For soil samples, sample depth, soil horizon and soil colour and relevant notes were recorded for each sample. Samples were placed in Kraft bags labelled with the grid location, were dried in the Tsayta Lake Lodge core shack and were put in ~12x11" size cardboard boxes and shipped to Bureau Veritas via courier.

Rock Samples were placed in poly-bags and taken back to camp, where hand specimens were separated from the original sample. Sampler, location, field description, source and source size, sample type, rock type, mineralisation and alteration were recorded for each sample. Samples were batched in rice bags and sent via courier to Bureau Veritas for assay.

Drill core was brought from the drill to the core logging facility by either the drillers or the project geologist. On site the core was kept in and around the core logging tent, where it was logged by the geologist and sample intervals laid out.

After cutting, samples were placed into sequentially number plastic sample bags with a designated sample tag inside the bag and the number written on the outside of the bag. All samples were sealed with a cable tie, then placed into rice sacks in preparation for shipping. The rice sacks were likewise sealed and stored in the core shack until the end of the project when they were delivered by the project geologist to a trucking company which then arranged for the shipment of the samples to the laboratory in Vancouver.

11.7 Opinion on Adequacy

GeoSim is of the opinion that the adequacy of sample preparation, security and analytical procedures are sufficiently reliable to support the mineral resource estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices at the time of collection.

12.0 DATA VERIFICATION

12.1 Site Visit Verification

The author conducted a site visit on June 14, 2010 accompanied by project geologist Richard Beck. The drill core from recent and historic programs was found to be well preserved and several holes from the CCS deposit were examined. The author visually identified copper-bearing sulphide mineralization in drill core and outcrop and collected several samples for analysis. A number of drill sites were checked by GPS and found to be accurate.

Results of the sample from hole LD200913 were consistent with the initial values obtained from the assay interval of 2.82 g/t Au 62.1 g/t Ag and 3.13% Cu (Table 12-1). The limonitic material from near the top of hole LD200513 was not previously sampled.

A second site visit was made by the author on September 17, 2017. During this visit, core intervals from the three 2017 drill holes was examined and QA/QC procedures reviewed.

Table 12-1 Independent sample results

Hole	Depth (m)	Au g/t	Ag g/t	Cu %	Description
LD200913	159	4.488	95	4.733	
LD200513	31-32	0.054	3	0.05	Leached limonitic zone
Outcrop		1.302	44	2.311	Roadcut in N CCS Area

12.2 Database Verification

In 2005, all pre-2004 drill hole data was compiled into a GEMS (MS Access) database by Greystone Engineering Ltd (GEL) in 2005 (Palmer & Hanson, 2005). IGS maintained and updated the database in Excel format up to the end of 2008.

Palmer & Hanson (2005) stated that a validation subset of 473 assay records from the database was compared to the Au, Ag, Cu, Pb and Zn values reported on original assay certificates. Where no certificates were available, the assays were validated against logs or written reports. Where an error was detected in one of these samples, the samples adjacent to the error in the same drill hole were also checked. A total of 76 errors were identified in the assay records. There were 3 errors in Au, 23 in Ag, 7 in Cu, 15 in Pb and 28 in Zn.

In 1999, 121 drill hole collars were re-surveyed by UTM using differential GPS.

In 2010, Geosim examined the sample database for location accuracy, down hole survey errors, typographical errors, interval errors and missing sample intervals. Several issues were identified and corrected prior to the mineral resource estimation (Simpson, 2010).

In 2012, Aurora Geoscience expanded the database to include additional data from outside of the Canyon Creek Skarn Zone.

12.3 Conclusions

Sampling since 2002 is believed to be of sufficient quality and reliability to support resource estimation. Some of the 1992-1993 drill core was re-sampled in 2010 with the inclusion of standards and blanks.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No metallurgical work has been carried out to date on material from the project.

In 2005, Alpha reportedly submitted samples for acid-base accounting test-work in preparation for applying for a permit to construct a decline to the 1000 metre elevation of the CCS. (NR 08 Oct 2005). It is not known if these tests were ever completed as no results could be located and plans to construct the decline were abandoned.

14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

This mineral resource estimate is an update to that previously prepared for the Property for Alpha Gold in 2010. The mineral resource estimate was prepared by Ronald G. Simpson P. Geo, a Qualified Person of GeoSim.

The indicated portion of the resource is estimated to contain 985,000 tonnes grading 1.34% Cu, 0.62% Zn, 1.59 g/t Au and 36.8 g/t Ag. An additional inferred resource contains 1,985,000 tonnes averaging 1.24% CU, 0.14% Zn, 1.72 g/t Au and 30.5 g/t Ag. The cut-off grade for the base case was 1.5% copper equivalent. Metal price assumptions for the equivalent calculation were $3.00/lb Cu, $1.25/lb Zn, $1300/oz Au and $18/oz Ag. The cut-off grade represents an in-situ metal value of approximately $100/tonne which is believed to represent a reasonable break-even cost for underground mining and processing.

14.2 Key Assumptions/Basis of Estimate

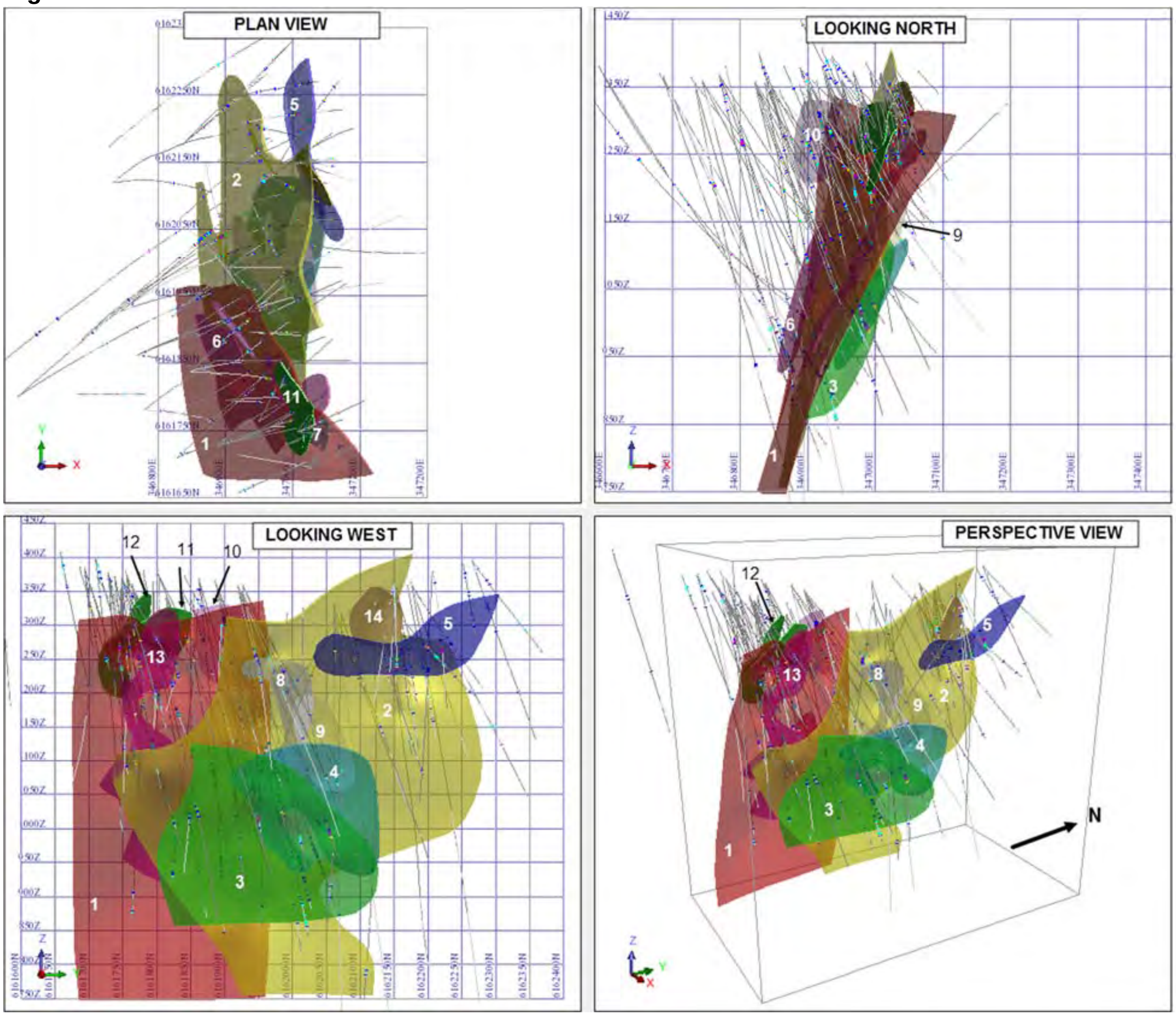
The database for the Canyon Creek Zone area presently contains analytical and lithology data from 148 core holes totaling 42,749 metres drilled between 1997 and 2017. The resource estimate is based on analytical data from 106 of these drill holes which intercepted skarn mineralization.

14.3 Geological Modeling

Footwall and hangingwall intercepts of mineralized skarn zones were modeled interactively in Surpac and exported to Leapfrog software for wireframe generation as simulated veins with a minimum width of 1.5m. The initial wireframes were imported back into Surpac and checked for consistency and overlaps. This process was repeated several times for some of the zones until satisfactory models were produced. Final clipping of the zones was carried out in Surpac to exclude areas that appeared to be interrupted by post-mineral dykes and to define the extents of the individual zones.

A total of 14 zones were interpreted extending some 600 m along strike and down dip as illustrated in (Figure 14-1).

Figure 14-1 Zone Models



14.4 Exploratory Data Analysis

For this modeling exercise it was decided to use the ‘best fit’ method of compositing. This procedure produces samples of variable length, but of equal length within a contiguous drill hole zone, ensuring the composite length is as close as possible to the nominated composite length. In this case, the nominated length was set at 2 m with a tolerance of 50% meaning that composite widths for a given zone intercept could range from 1 to 3 metres. This also has the advantage of avoiding partial composites at the beginning and end of the zone intercepts.

The composite intervals were determined by determining the drill hole intercepts within the wireframe models of each zone. If part of the interval was not sampled, then the values were assumed to be ‘0’ and the composite grade was diluted. Statistics of the composites within the zone models are presented in Table 14-1.

Table 14-1 Composite Statistics

	Au g/t	Ag g/t	Cu %	Zn %
n	560	560	560	560
min	0.000	0.0	0.000	0.000
max	68.800	562.6	6.258	34.565
mean	1.348	25.8	0.921	0.594
median	0.625	12.8	0.591	0.012
Std Dev	4.083	45.3	0.997	3.108
COV	3.030	1.758	1.082	5.234

14.5 Grade Capping / Outlier Restrictions

Grade distribution in the composited sample data was examined to determine if grade capping or special treatment of high outliers was warranted. A decile analyses was performed on the composites within the zone constraints and log probability plots examined. As a general rule, the cutting of high grades is warranted if:

- the last decile (upper 10% of samples) contains more than 40% of the metal; or
- the last decile contains more than 2.3 times the metal of the previous decile; or
- the last centile (upper 1%) contains more than 10% of the metal; or
- the last centile contains more than 1.75 times the next highest centile.

The data for gold meets all of the requirements stated above with 54% of the contained metal in the upper decile and 20% in the top percentile. A selected top cut of 15 g/t affected 5 samples and reduced the coefficient of variation in the data set from 3.03 to 1.62.

For Ag, the upper decile contains 46% of the contained metal and the upper percentile exceeds 11%. The 99th percentile value, rounded off to 200 g/t, was adopted as the capping level and affected 6 samples.

The decile distribution for Cu indicates that capping is not warranted with the upper decile containing about 37% of the contained metal.

Zn content was highly variable with isolated higher-grade intercepts. It was decided to limit the influence of composites exceeding 6% Zn to a search distance of 25m.

Statistics of the capped composites for Au and Ag are shown in Table 14-2.

Table 14-2 Capped Composite Statistics

	Au	Ag
n	560	560
min	0.000	0.000
max	15.000	200.000
mean	1.145	24.533
median	0.625	12.835
Std Dev	1.859	36.009
COV	1.623	1.468

14.6 Density

The drilling database includes specific gravity measurements from drill core collected between 1997 and 2003 and from core collected in the 2009 exploration program. Statistics by lithology are shown in Table 14-3.

Table 14-3 Specific Gravity by Lithology

Lithology	Count	Mean	Median
Diorite	3	2.38	2.59
Monzodiorite	10	2.64	2.52
Phyllite	21	2.93	2.65
Limestone	4	2.83	2.78
Mafic Tuff	1	3.21	3.21
Skarn	71	3.40	3.48
Mineralized Skarn (>0.25% Cu)	20	3.49	3.50

The median value of 3.5 for mineralized skarn was used for determining the tonnes of material within the modeled zones.

1.1 Estimation/Interpolation Methods

A block model was created in Gemcom-Surpac© software 8.1. The block size selected was 1.5 x 1.5 x 1.5 m. Block model extents are shown in Table 14-4.

Table 14-4 Block model extents

Direction	Min	Max	Dist (m)	sub-block	# blocks
x	346800	347154	354	1.5	236
y	6161600	6162350	750	1.5	500
z	800	1501	600	1.5	534

Copper, zinc, gold and silver grades were estimated using the Inverse Distance method set to the third power (ID3). Grade estimation was constrained by wireframe shapes representing the mineralized skarn zones with a minimum width of 1.5 m. A minimum of 4 and maximum of 24 composites from at least two drill holes were required to estimate a block grade.

The maximum search distance was set at 150 m and a dynamic anisotropy was imposed with the direction of maximum continuity along strike and down-dip. Dip and dip directions of trend surfaces for each zone were assigned to blocks using the inverse distance squared method such that each block was assigned a unique search ellipsoid. Because the dip and azimuths are in circular coordinates, they could not be interpolated directly because samples either side of 0 azimuth would average close to 180. To resolve this, the sines and cosines of each angle were interpolated, and the true values determined by calculating the inverse tangent. The ratio of the major to semi-major axis was set at 1 and the major:minor axis ratio at 5.

Figure 14-2 Block model Cu grades

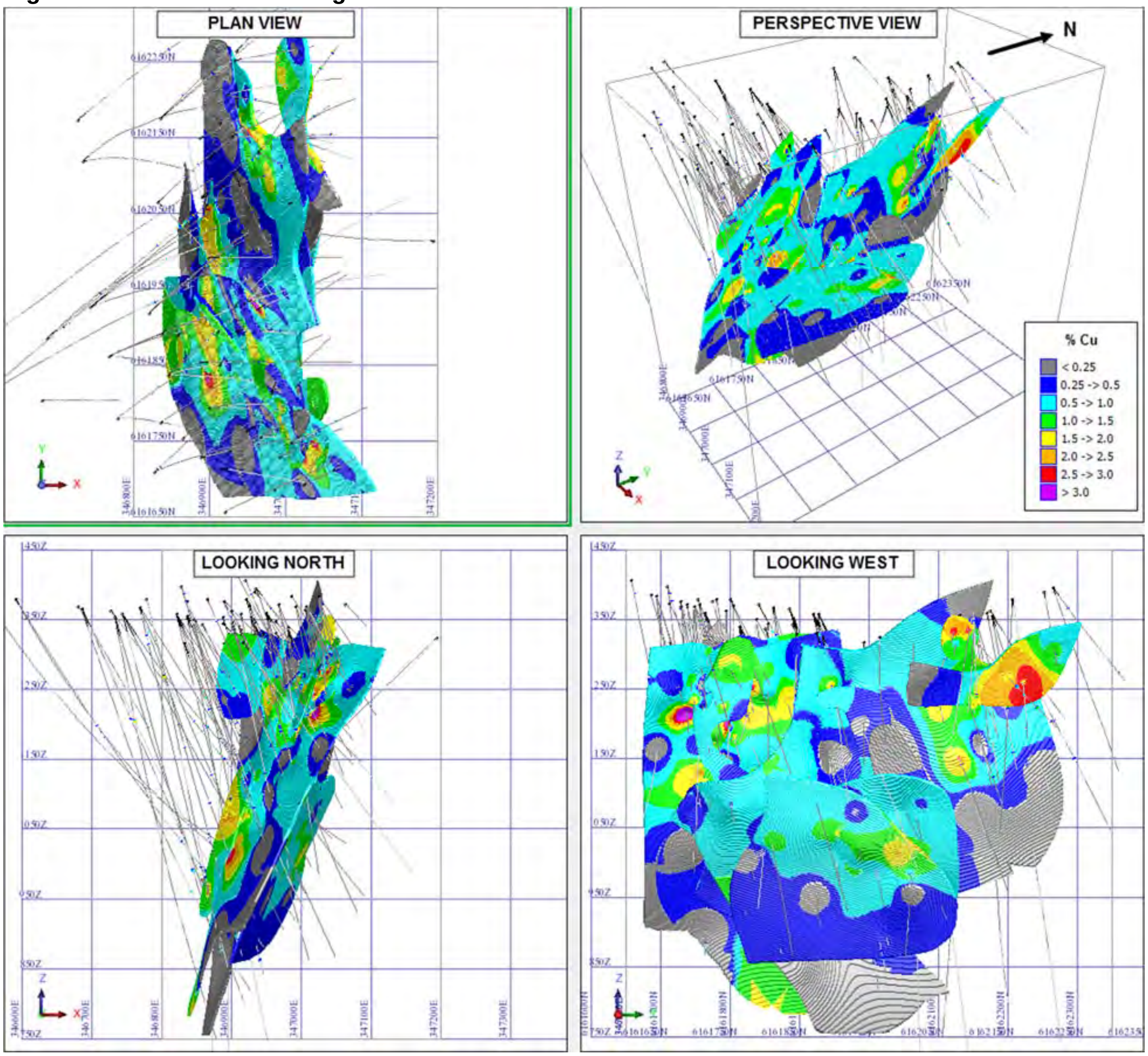


Figure 14-3 Block model Au grades

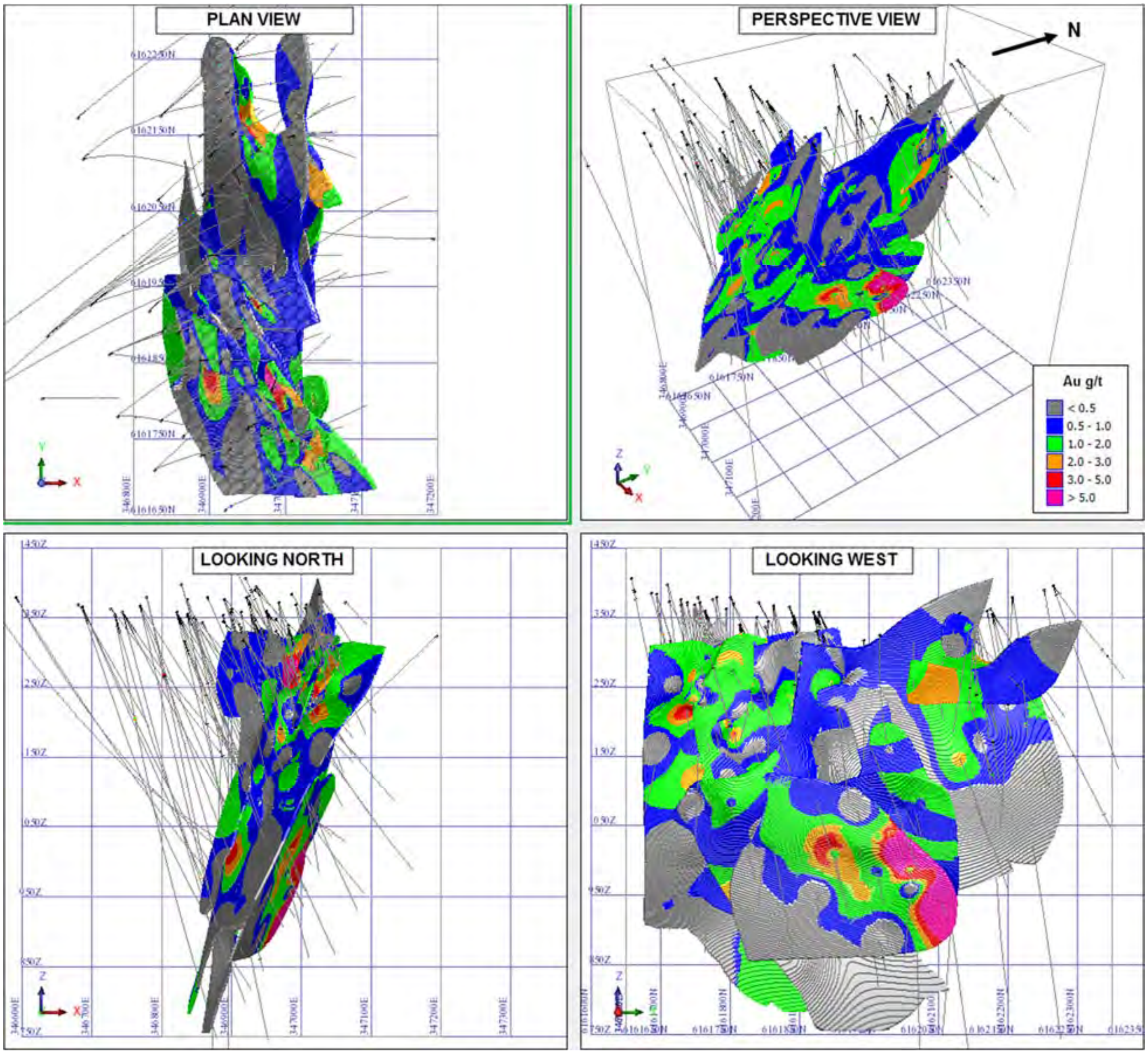


Figure 14-4 Block model Ag grades

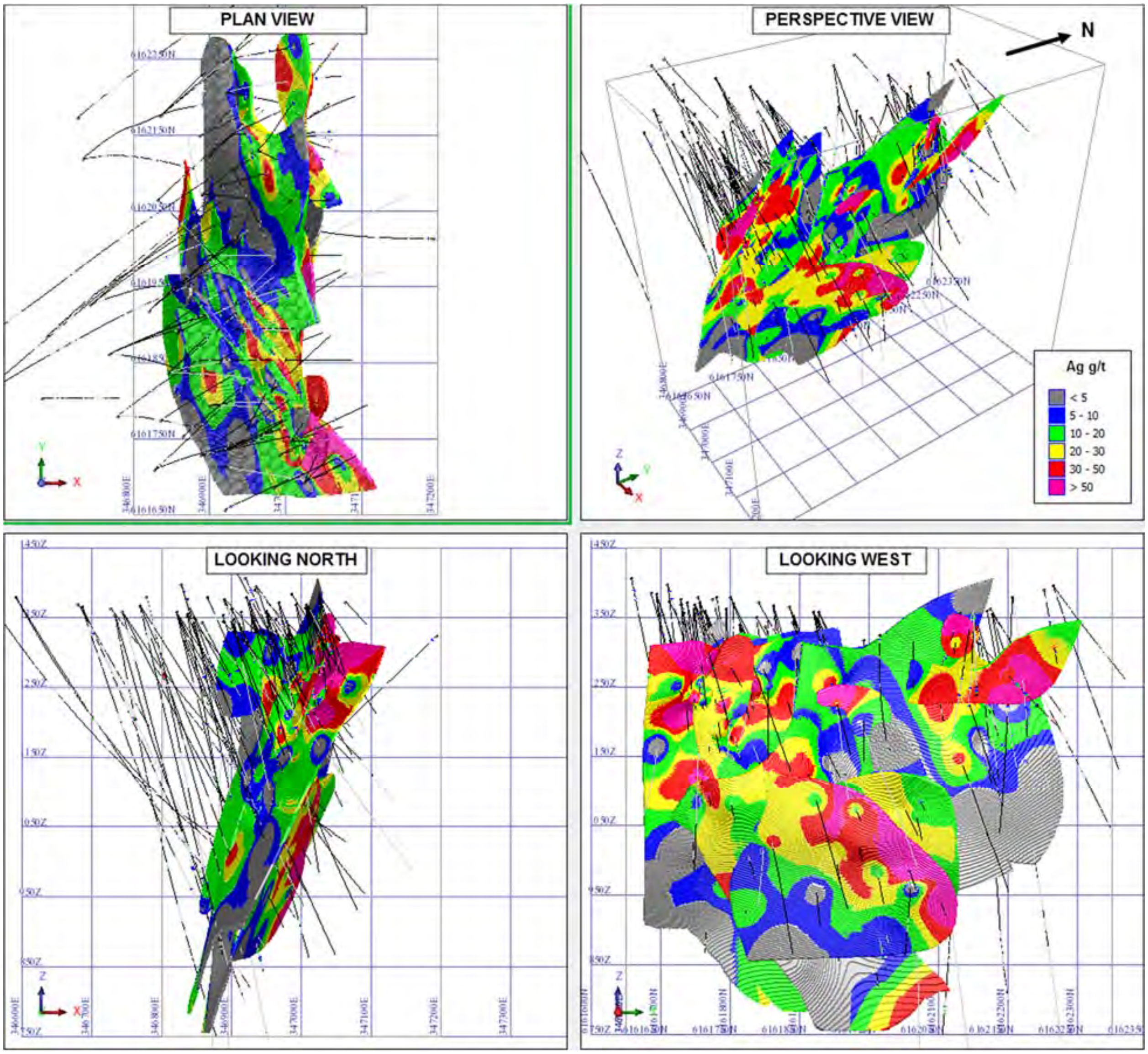
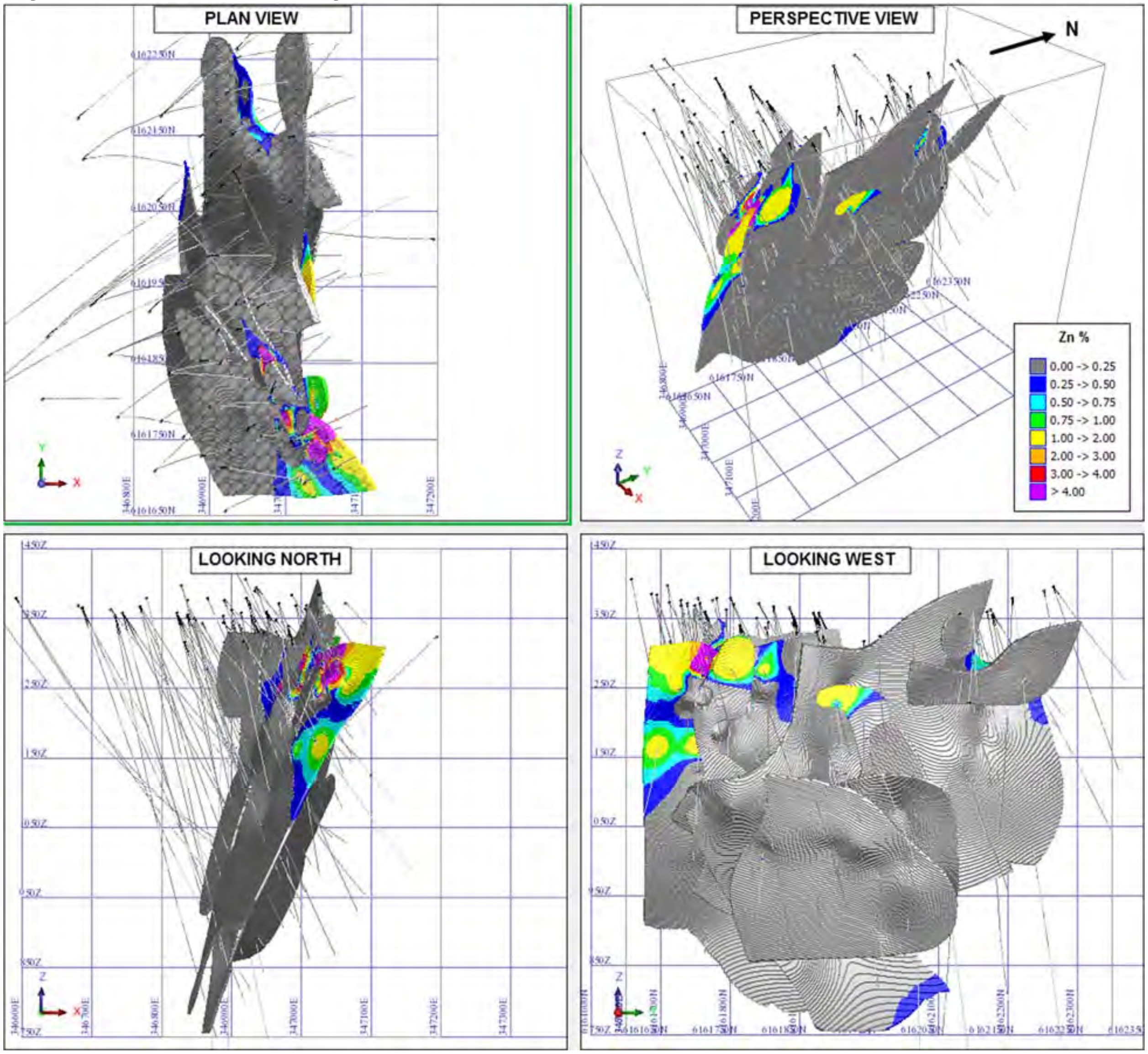


Figure 14-5 Block model Zn grades



1.2 Mineral Resource Classification

Resource classifications used in this study conform to the CIM Definition Standards for Mineral Resources and Mineral Reserves.

Mineral Resource

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Measured Mineral Resource

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.

Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.

Indicated Mineral Resource

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.

Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

Inferred Mineral Resource

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Blocks were classified as ‘indicated’ if at least 5 composites from post-2004 drill holes were within 150 m of a block centroid and the closest composite was within 33 m, a distance equivalent to 2/3 of the maximum variogram range. All other estimated blocks were classified as inferred.

1.3 Model Validation

Model verification was initially carried out by visual comparison of blocks and sample grades in plan and section views. The estimated block grades showed good correlation with adjacent composite grades.

A comparison of global mean values shows a reasonably close relationship with composites and block model values estimated using the nearest neighbour and ID^3 interpolation methods (Table 14-5). The Zn average for composites is significantly higher due to the outlier restrictions imposed in the block interpolations.

Table 14-5 Global mean grade comparison

Population	Cu %	Zn %	Au g/t	Ag g/t
Composites	0.92	0.31	1.35	25.8
NN	0.83	0.19	1.02	19.5
ID3	0.83	0.16	1.03	20.1

1.4 Mineral Resource Summary

The Canyon Creek deposit is estimated to contain an indicated mineral resource of 985,000 tonnes grading 1.34% Cu, 0.62% Zn, 1.59 g/t Au and 36.8 g/t Ag. An additional inferred resource contains 1,985,000 tonnes averaging 1.24% CU, 0.14% Zn, 1.72 g/t Au and 30.5 g/t Ag.

The copper equivalent calculation used metal prices of US$3.00/lb for copper, US$1.25/lb for zinc, US$1300/oz for gold, and US$18/oz for silver. Adjustment factors to account for differences in relative metallurgical recoveries of the constituents will depend upon completion of definitive metallurgical testing. The following equation was used to calculate copper equivalence: Cu Eq = Cu + (Zn x 0.4167) + (Au x 0.6319) + (Ag x 0.0087). A cut-off grade of 1.5% Cu Equivalent represents an in-situ metal value of approximately $100/tonne which is believed to represent a reasonable break-even cost for underground mining and processing.

The mineral resource estimate is presented in the following table at a range of cut-off grades with the base case of 1.5% copper equivalent in boldface.

Table 14-6 Canyon Creek mineral resource estimate – January 8, 2018

INDICATED						
Cutoff Cu Equiv (%)	Tonnes	% Cu	% Zn	g/t Au	g/t Ag	%Cu Eq
1.00	1,336,000	1.16	0.48	1.350	30.6	2.48
1.25	1,146,000	1.25	0.55	1.470	33.8	2.70
1.50	**985,000**	**1.34**	**0.62**	**1.590**	**36.8**	**2.92**
1.75	827,000	1.43	0.72	1.720	39.8	3.16
2.00	681,000	1.53	0.84	1.880	43.3	3.44

INFERRED						
Cutoff Cu Equiv (%)	Tonnes	% Cu	% Zn	g/t Au	g/t Ag	%Cu Eq
1.00	2,968,000	1.05	0.11	1.380	25.0	2.19
1.25	2,477,000	1.14	0.13	1.530	27.6	2.40
1.50	**1,985,000**	**1.24**	**0.14**	**1.720**	**30.5**	**2.65**
1.75	1,540,000	1.35	0.16	1.960	33.7	2.95
2.00	1,229,000	1.45	0.18	2.180	36.3	3.22

Notes:

1. Mineral resource estimate prepared by GeoSim Services Inc. with an effective date of January 8, 2018.
2. Copper equivalent (Cu Eq. %) calculations reflect total gross metal content using US$ of $3.00/lb Cu, $1.25/LB Zn, $1,300/oz Au, and $18/oz Ag and have not been adjusted to reflect metallurgical recoveries.
3. Totals may not sum due to rounding.
4. Mineral resources are not mineral reserves and do not have demonstrated economic viability.

14.7 Factors That May Affect the Mineral Resource Estimate

Areas of uncertainty that may materially impact the Mineral Resource Estimate include:

- Commodity price assumptions;
- Assumptions that all required permits will be forthcoming;
- Metallurgical recoveries
- Mining and process cost assumptions

There are no other known factors or issues that materially affect the estimate other than normal risks faced by mining projects in the province of British Columbia in terms of environmental, permitting, taxation, socio economic, marketing, and political factors. Geosim is not aware of any known legal or title issues that would materially affect the Mineral Resource estimate.

15.0 MINERAL RESERVES

No mineral reserves have been estimated for the Canyon Creek deposit.

16.0 ADJACENT PROPERTIES

This section is not relevant to this Report.

17.0 OTHER RELEVANT DATA AND INFORMATION

The author is of the opinion that all known relevant technical data and information with regard to the Canyon Creek copper-gold deposit has been reviewed and addressed in this Technical Report.

18.0 INTERPRETATION AND CONCLUSIONS

The Canyon Creek zone is a skarn-hosted mineral occurrence hosted by Permian Cache Creek group sediments in proximity to the Glover stock. The presently defined mineral zone extends some 600 m along strike and down dip.

The present resource estimate is based on analytical data from 106 core holes completed between 1997 and the end of 2017.

Recent QA/QC procedures are acceptable but historic data does not meet industry standards. Partial reliance on historic data resulted in limitation of the level of resource classification.

19.0 RECOMMENDATIONS

Geosim makes the following recommendations:

- Certified reference standards representing all elements of potential economic interest should be used for all future sampling programs.
- Unsampled historic drill core from areas adjacent to and within mineralized skarn should be split and analyzed.
- Geochemical sampling and field mapping should be expanded to cover gaps in existing coverage
- Additional geophysical surveys should be undertaken to explore for additional mineral occurrences
- Infill and definition drilling should be continued to upgrade resource confidence and define the ultimate extents of the CCS deposit.
- Other targets on the Stardust property should be evaluated and prioritized.
- A more accurate topographic base map should be acquired.
- Preliminary metallurgical studies should be considered

19.1 Phase I Drilling Proposal

A number of targets have been identified from previous work which immediately warrant additional drill testing (Table 19-1.). Drilling should initially be concentrated on exploring for additional Cu-Au skarns proximal to the Glover stock. Drill testing the mantos has essentially been neglected since the Canyon Creek skarn discovery in 1999. However, in 2005 and 2006 drilling a large soil geochemistry anomaly to the east of the Canyon Creek Skarn resulted in the discovery of the East and the GD Zones respectively which both warrant further drill testing.

Exact depths, collar locations and dips should be determined in the field as access allows. Diamond drilling should be completed with NQ core to minimize hole deviation and all core should be orientated to allow for determination of accurate structural measurements.

Table 19-1 Phase I Drill Targets

Target	Description	Holes	Avg Depth	Meters
#5 Lens N / #5 Footwall	The northern on-strike extension of the CCS #5 Lens to the northeast, holes will also intersect #5 Footwall skarn	3	300m	900
HW Skarn	The Hanging Wall skarn, which occurs about 200 metres to the west of the CCS	3	400m	1200
CC-ext. / NW extension	The Canyon Creek Extension and the Northwest Extension, which occur to the north and northwest of the CCS respectively	4	200m	800
Glover West	The untested west side of the Glover Stock, soil geochemical anomaly subject to refinement by EM geophysical surveying (helicopter supported)	5	300m	1500

Target	Description	Holes	Avg Depth	Meters
E Zone	The East Zone, which occurs about 500 m northeast of the CCS in a large soil anomaly	4	200m	800
GD Zone	The GD Zone, which occurs at the north end of the #3 Manto, one km south of the East Zone	3	100m	300

A Phase I budget amounting to $M2.17 is shown in Table 19-2. A Phase II budget, contingent on positive results from Phase I, totals an additional $M3.275 and is presented in Table 19-3.

Table 19-2 Proposed Phase I Exploration Budget

Phase I	Cost
Geochemical - all in cost 3000 samples	$215,000
Photogrammetry – Elevation Mapping	$15,000
Geological – Structural Study	$40,000
Geological – Core Relogging / Sampling	$40,000
Geological – Field Mapping	$60,000
Geophysical – EM Surveying	$150,000
Geophysical – NSAMT Surveying	$50,000
Diamond Drilling (road supported) 4000m @$250/m all in cost	$1,000,000
Diamond Drilling (helicopter supported) 1500m @ 400/m all in cost	$600,000
Subtotal	**$2,170,000**

Table 19-3 Proposed Phase II Exploration Budget

Phase II	
Road Building:	$300,000
Diamond Drilling (road supported - winter) 8500m @350m/all in cost	$2,975,000
Subtotal	**$3,275,000**
Total Phases I + II	**$5,445,000**

20.0 REFERENCES

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CERTIFICATE OF QUALIFIED PERSON

Ronald G. Simpson, P.Geo.
GeoSim Services Inc.
807 Geddes Rd.
Roberts Creek, BC, Canada V0N 2W6
Tel: (604) 803-7470
E-mail: rsimpson@geosimservices.com

I, Ronald G. Simpson, P.Geo., am employed as a Professional Geoscientist with GeoSim Services Inc.

This certificate applies to the technical report titled "**Stardust Project NI43-101 Technical Report**" with an effective date of Jan 8, 2018, the "**Technical Report**").

I am a Professional Geoscientist (19513) with the Association of Professional Engineers and Geoscientists of British Columbia. I graduated with a Bachelor of Science in Geology from the University of British Columbia, May 1975.

I have practiced my profession continuously for 43 years. I have been directly involved in mineral exploration, mine geology and resource estimation with practical experience from feasibility studies.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* ("**NI 43–101"**).

I visited the property on June 14, 2010 and on October 19, 2017.

I am responsible for all sections of the technical report.

I am independent of both Sun Metals Corp. and Lorraine Copper Corp. as independence is described by Section 1.5 of NI 43–101.

I have authored a previous Technical Report on the Project titled "Technical Report, Canyon Creek Copper-Gold Deposit, Lustdust Property, Omineca Mining Division, British Columbia, Canada" with effective data of June 23, 2010.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the Technical Report contain all scientific and technical information that is required to be disclosed to make those sections of the Technical Report not misleading

Dated: Jan 8, 2018

Ronald G. Simpson, P.Geo.

PROFESSIONAL
PROVINCE OF
R. G. SIMPSON
BRITISH COLUMBIA
GEOSCIENTIST