

NTS 92P/08
**TECHNICAL REPORT ON THE CHU CHUA PROPERTY,
BRITISH COLUMBIA, CANADA**

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Approximate Property Location:
Centre: 703859E and 5695730N
(UTM, NAD 83, Zone 10N)
24 km northeast of Barriere, BC (NTS 92P/8)

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August 9, 2012
Edmonton, Alberta

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1 Summary

This Technical Report (the “Report”) is written for the Chu Chua Property (“the Property”) in which Reva Resources Corp. (“Reva”) has 100 percent (%) interest subject to two separate 1% net smelter return (NSR) royalties. The Chu Chua property consists of two active mineral claims totaling 282.5 hectares (ha); located 24 km northeast of Barriere, B.C. Newport Exploration Ltd. (“Newport”) currently has an option to earn a 50% interest in the Chu Chua Property. Pursuant to an agreement dated November 22, 2010 Reva granted Newport an option to acquire a 50% interest in the Chu Chua claims. In order to earn the 50% interest, Newport on or before December 31, 2012, will need to carry out and fund the costs of the recommended as detailed in the technical report dated October 15, 2009 prepared for Reva by APEX Geoscience Ltd. (“APEX”), estimated to be \$1,070,000.

During 2011, APEX was retained by Newport to construct a National Instrument (NI) 43-101 compliant resource calculation. Mr. Michael Dufresne, M.Sc., P.Geol, Mr. Kristopher Raffle, B.Sc., P. Geol., and Mr. Steve Nicholls, BASc, M-AIG of APEX are the independent qualified persons as defined by the Canadian Securities Administration (CSA) National Instrument (NI) 43-101, and are the authors of this report. Mr. Raffle supervised the 2011 exploration program at the Property, which included the re-sampling of historic core. Mr. Raffle conducted a property visit on June 26th, 2012. The mineral resource estimation of the Chu Chua mineralised zone was completed by Mr. Nicholls under the direct supervision of Mr. Dufresne and Mr. Raffle. This report is written to comply with standards set out in NI 43-101 for the Canadian Securities Administration, and is a technical summary of available historic geological, geophysical and geochemical information in addition to recent work completed.

The property is host to the Chu Chua deposit, a Cyprus-type volcanogenic massive sulphide body first discovered in 1978. The property is largely underlain by the Mississippian to Permian aged Fennell Formation which comprises basaltic and rhyolitic volcanic rocks, clastic and chemical sedimentary rocks and diabase sills. This volcanic stratigraphy is prospective for other Cyprus-type and Kuroko-type massive sulphide deposits and also has potential to host precious- and/or base-metal-bearing epithermal deposits.

A total of 99 diamond drill holes, totaling 19,707 m were completed to delineate the Chu Chua deposit between 1978 and 1991. Craigmont Mines Ltd. (Craigmont) drilled a total of 10,820 m in 55 core holes between 1978 and 1982. The drilling defined two areas of relatively thick, high grade sulphide mineralization occurring within 100 m of the surface. Highlights from this early drilling included drill hole CC-6 which yielded 3.4% copper (Cu), 0.6% zinc (Zn), 0.86 grams per tonne (g/t) gold (Au) and 12.14 g/t silver (Ag) over 23 m core length and drill hole CC-16 which yielded 3.82% Cu, 0.47% Zn, 0.53 g/t Au and 11.88 g/t Ag over 22.7 m core length. Additional drilling to test the grade, thickness, lateral and depth extent and continuity of the deposit was completed by Minnova Inc. (Minnova) between 1988 and 1991. Minnova drilled a total of 46 holes (8,887 m) during the period. Highlights from the Minnova drilling include drill hole CCF-19 which yielded 4.53% Cu, 0.21% Zn, 0.36 g/t Au and 13.86 g/t Ag over 21.5 m core

length and drill hole CCF-22 which yielded 4.61% Cu, 0.67% Zn, 1.7 g/t Au and 19.59 g/t Ag over 25.5 m core length.

The 2011 Chu Chua Property exploration program included differential global positioning system (DGPS) surveying of historic diamond drill hole collars, select re-sampling of historic diamond drill core stored at the Property, and the creation of a DGPS digital elevation model (DEM) over the Chu Chua deposit. A total of 60 drill holes were re-located and surveyed, a total of 110 core samples were collected from the historic core, and an area of 55 ha was surveyed to produce a DEM over the Chu Chua deposit. Exploration was completed between the dates of July 6 and July 16, 2011, inclusive.

The mineral resource estimate comprises an inferred mineral resource of 2.5 million tonnes averaging 2.0 % copper, 0.3% zinc, 9.4 g/t silver, 0.5 g/t gold at a copper block cut-off grade of 1.0% (see table below). The mineral resource modelling and estimation was carried out using a 3-dimensional block model, using commercial mine planning software Micromine. Out of the 99 diamond drill holes, a total of 50 were used in the resource estimation. Spacing between drill lines is quite varied with drilling conducted not on set line spacing. The drill line spacing varies from 10 m to 45 m, with an average of about 20 m between drill lines. A total of 251 composites of 5 m length, capped at 5.90% copper, 0.86% zinc, 32 g/t silver and 1.4 g/t gold, were used for the estimation. The mineral resource was estimated by ordinary kriging within a three-dimensional mineralization envelope, defined by similar geological characteristics in terms of alteration and mineralogy, using a 0.5% copper cut-off grade.

Mineral Resource Estimate (Inferred) for the Chu Chua Deposit

Cu % Block Cut Off	Tonnes	Cu %	Zn %	Ag g/t	Au g/t
0	2,827,047	1.90	0.32	8.96	0.47
0.2	2,827,047	1.90	0.32	8.96	0.47
0.4	2,818,389	1.90	0.32	8.97	0.47
0.5	2,805,117	1.91	0.32	8.99	0.47
0.6	2,770,947	1.93	0.32	9.05	0.47
0.8	2,672,315	1.97	0.33	9.18	0.47
1	2,505,581	2.04	0.33	9.41	0.48

To date, mineralization has been modeled over a 480 m strike length and to a depth of 180 m from surface. Additional drilling is warranted to define the extent of near surface mineralization at the north end of the deposit; at depth within and beneath the currently modeled Main Lens; and to the south where limited deep drilling has encountered narrow sulphide intercepts. Given that approximately 75% of the deposit as currently modeled lies within a 100 m depth from surface, further drilling and economic studies to determine if all or portion of the Chu Chua deposit may be amenable to open pit extraction are also warranted.

A two phase drilling program recommended. The first stage should consist of a confirmatory drill program to test the main zone and north zone in order to aid in the validation of the historic drilling and to convert some of the resource into an indicated category as well as provide samples for metallurgical work. Six holes, totalling 810 m, are recommended for the first stage of drilling. The first stage is estimated at \$ 202,500. Further drilling of south end of the main zone and below the main zone is recommended in order to test the lateral and depth extent of known sulphide mineralization. Seven holes, totalling 2,160 m, are recommended for the second stage of drilling. The exact number of holes and the total depth would depend on the results of the first stage of drilling. Any new deeper drilling should include downhole electromagnetic surveys measuring conductivity, which can directly assist in extending the current known extent of the Chu Chua massive sulphide lenses and in targeting new separate zones. In addition, systematic downhole multi trace element and whole rock geochemical work should be conducted on any new core in order to identify and better map out the existing volcanic stratigraphy associated with the Chu Chua massive sulphide lenses. The second stage is estimated at CDN\$ 648,000. The total cost of the both drilling programs combined is CDN\$ 850,500.

2 Introduction

This Technical Report (the “Report”) is written for the Chu Chua Property (“the Property”) in which Reva Resources Corp. (“Reva”) has 100 percent (%) interest subject to two separate 1% net smelter return (NSR) royalties. Newport Exploration Ltd. (“Newport”) currently has an option to earn a 50% interest in the Chu Chua Property. In order to earn the 50% interest, Newport on or before December 31, 2012, will need to carry out and fund the costs of the recommended work program on the Chu Chua property as detailed in the technical report dated October 15, 2009 prepared for Reva by APEX Geoscience Ltd. (“APEX”) and filed on SEDAR, estimated to be \$1,070,000 (Dufresne and Raffle, 2009).

During 2011, APEX was retained by Newport to construct a National Instrument (NI) 43-101 compliant resource calculation and subsequent Technical Report for the Property. Mr. Michael Dufresne, M.Sc., P.Geol, Mr. Kris Raffle, B.Sc., P. Geol., and Mr. Steve Nicholls, BASc, M-AIG of APEX are the independent qualified persons as defined by the Canadian Securities Administration (CSA) NI 43-101, and are the authors of this report. The resource estimate is classified as an Inferred Mineral Resource, consistent with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) definitions on Mineral Resources and Reserves referred to in NI 43-101. Mr. Raffle supervised the 2011 exploration program at the Property, which included the re-sampling of old core. On June 26th, 2012, Mr. Raffle visited the Property and inspected the historic core-samples.

This report is written to comply with standards set out in National Instrument 43-101 for the Canadian Securities Administration, and is a technical summary of available historic geological, geophysical and geochemical information in addition to recent work completed. All dollar amounts referred to in this report are in Canadian currency. Coordinates herein use the Universal Transverse Mercator (UTM) with the 1983 North American Datum (NAD 83); the Chu Chua property lies within Zone 10, unless otherwise stated.

3 Reliance of Other Experts

The Report written by Mr. Raffle is a compilation of proprietary and publicly available information, as well as information obtained during the property visit. In writing this report, the author has used as sources of information those publications listed in the reference section. Due to the author’s limited exposure to the geology and mineralization of the Chu Chua deposit and surrounding geology certain parts of the Geological Setting and Mineralization, and Deposit Types sections have been directly quoted from previous workers reports listed in the reference section.

Government reports referenced by this report were prepared by a person(s) holding post-secondary geology or related university degrees and, therefore, the information in those reports is assumed to be accurate. Those reports written by other geologists, prior to the implementation of the standards relating to National Instrument 43-101, are also

assumed to be accurate based on a review conducted by the author although they are not the sole basis for this report.

4 Property Description and Location

The Chu Chua property consists of two active mineral claims (529300, 529301) totaling 282.5 hectares (ha) held by Reva (Table 1). These claims are located about 24 kilometers (km) northeast of Barriere, B.C., centred at 703,859 m E / 5,695,730 m N (UTM NAD83 Zone 10), and are located within NTS map sheet 92P/8 (Figures 1 and 2). The claims were staked by Strongbow Exploration Inc. ("Strongbow") through online staking on March 2nd, 2006 and subsequently transferred online to Reva on December 16, 2009. The area currently held occupies territory on what was historically known as the CC1 claim. The Chu Chua massive sulphide deposit is located on claim 529300 (Chu Chua 1).

Table 1. Claim information for the Chu Chua Property, BC

Tenure Number	Claim Name	Owner	Issue Date	Good To Date	Status	Area (ha)
529300	CHU CHUA 1	Reva Resources Corp. (100%)	2006/03/03	2018/09/30	GOOD	161.41
529301	CHU CHUA 27	Reva Resources Corp. (100%)	2006/03/03	2017/09/30	GOOD	121.08

Pursuant to an agreement dated November 22, 2010 Reva granted Newport an option to acquire a 50% interest in the Chu Chua claims. In order to earn the 50% interest, Newport on or before December 31, 2012, will need to carry out and fund the costs of the recommended work program as detailed in the technical report dated October 15, 2009 prepared for Reva by APEX, estimated to be \$1,070,000 (initially \$1,670,000, and later revised; Newport Exploration Ltd. Feb 10, 2011 Press Release).

In British Columbia, the owner of a mineral claim acquires the right to the minerals which were available at the time of claim location and as defined in the Mineral Tenure Act of British Columbia. Surface rights are not included. Claims are valid for one year and the anniversary date is the annual occurrence of the date of record (the staking completion date of the claim). To maintain a claim in good standing the claim holder must, on or before the anniversary date of the claim, either: (a) record the exploration and development work carried out on that claim during the current anniversary year; or (b) pay cash in lieu of work. Payment of cash in lieu of work requirements are assessed at double the corresponding assessment work value; and a minimum of 6 months and a maximum The amount of work required in the first 2 years is \$5 per hectare per year; and \$10 per hectare per year in years 3 and 4; \$15 per hectare per year in years 5 and 6; and \$20 per hectare per year in subsequent years. Only work and associated costs for the current anniversary year of the mineral claim may be applied toward that claim unit. If the value of work performed in a year exceeds the required minimum, the value of the excess work, can be applied to cover work requirements for that claim for additional years (subject to the regulations). A report detailing work done and

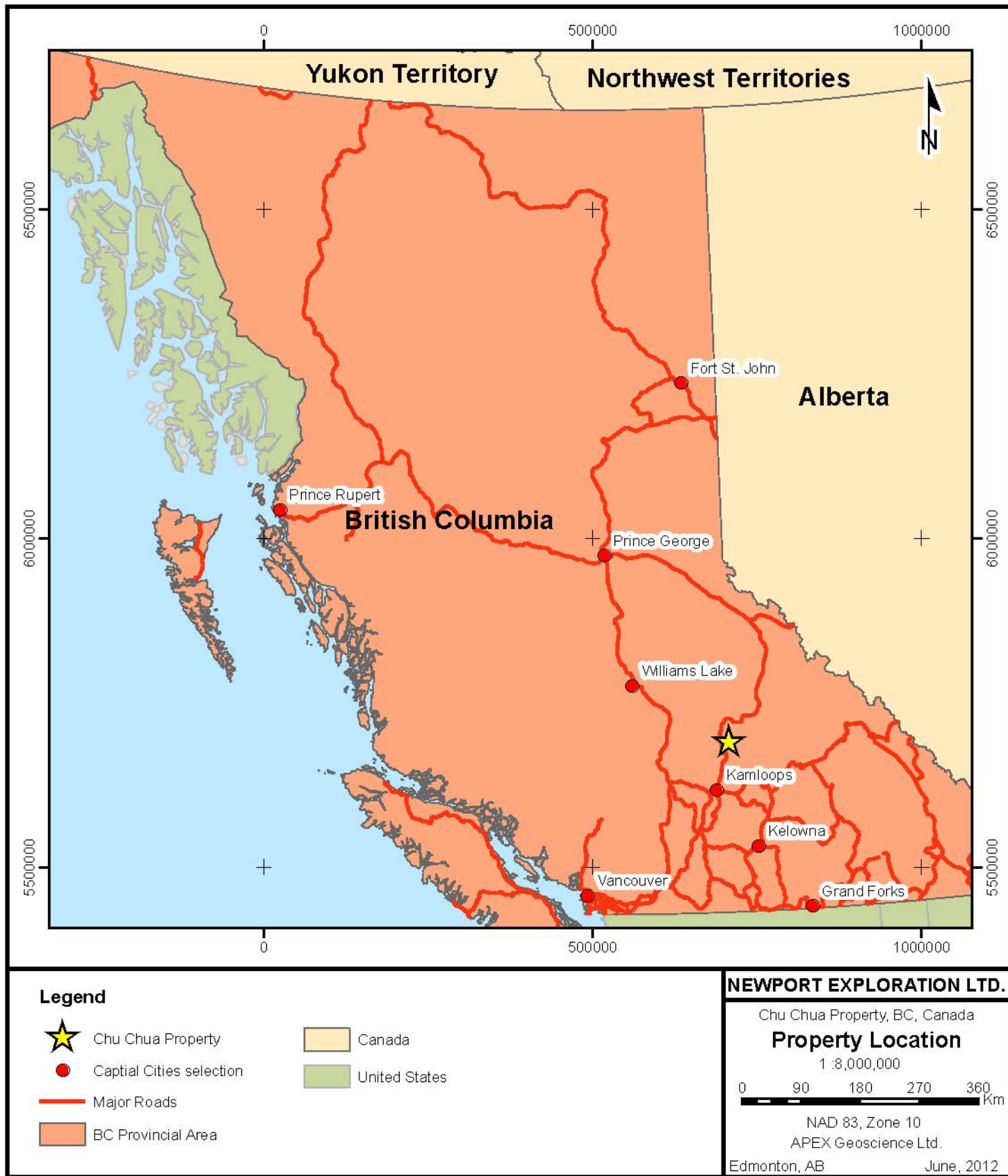


Figure 1. Chu Chua Property Location

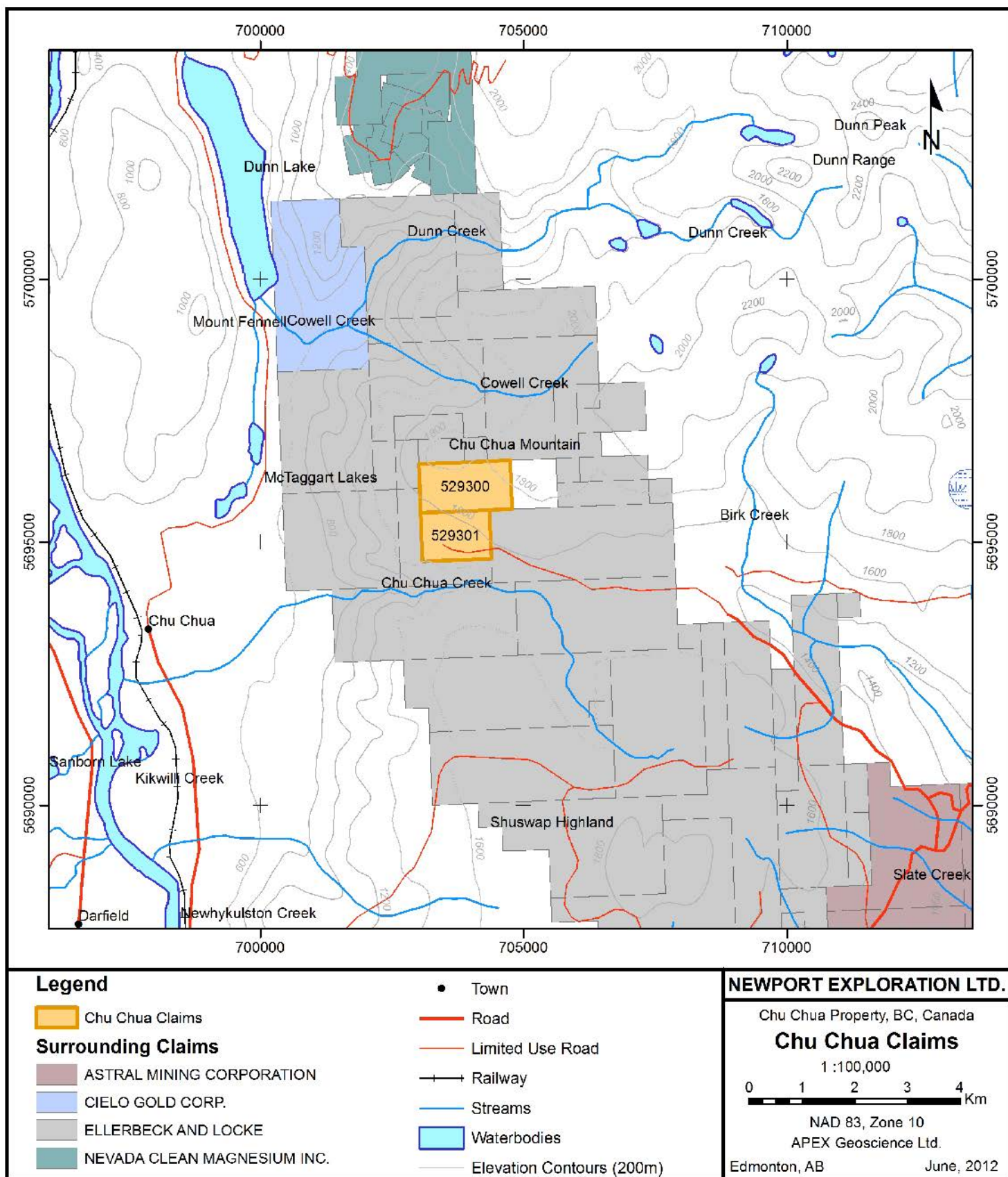


Figure 2. Chu Chua Mineral Tenures

expenditures must be filed with, and approved by, the B.C. Ministry of Energy and Mines MTO website.

Changes to the Mineral Tenure Act effective July 1, 2012 will affect the Chu Chua Property claims. Because of changes to the yearly assessment work requirements, as of July 1, 2012, all mineral claims within B.C. will be treated as if they are in their first anniversary year, regardless of the issue date of the claim. This has the effect of reducing the overall yearly assessment work requirements for the Property for the next two anniversary years.

All work carried out on a claim that disturbs the surface by mechanical means (including drilling, trenching, excavating, blasting, construction or demolition of a camp or access, induced polarization surveys using exposed electrodes, and site reclamation) requires a Notice of Work permit under the Mines Act and the owner must receive written approval from the District Inspector of Mines prior to undertaking the work. The Notice of Work must include: the pertinent information as outlined in the Mines Act; additional information as required by the Inspector; maps and schedules for the proposed work; applicable land use designation; up to date tenure information; and, details of actions that will minimize any adverse impacts of the proposed activity. The claim owner must outline the scope and type of work to be conducted, and approval generally takes one month.

Exploration activities that do not require a Notice of Work permit include: prospecting with hand tools, geological/geochemical surveys, airborne geophysical surveys, ground geophysics without exposed electrodes, hand trenching (no explosives) and the establishment of grids (no tree cutting). These activities and those that require Permits are outlined and governed by the Mines Act of British Columbia.

The Chief Inspector of Mines makes the decision whether or not land access will be permitted. Other agencies, principally the Ministry of Forests, determine where and how the access may be constructed and used. With the Chief Inspector's authorization, a mineral tenure holder must be issued the appropriate "Special Use Permit" by the Ministry of Forests, subject to specified terms and conditions. The Ministry of Energy and Mines makes the decision whether land access is appropriate and the Ministry of Forests must issue a Special Use Permit. However, three ministries, namely the Ministry of Energy and Mines; Forests; and Environment, Lands and Parks, jointly determine the location, design and maintenance provisions of the approved road.

Notification must be provided before entering private land for any mining activity, including non-intrusive forms of mineral exploration such as mapping surface features and collecting rock, water or soil samples. Notification may be hand delivered to the owner shown on the British Columbia Assessment Authority records or the Land Title Office records. Alternatively, notice may be mailed to the address shown on these records or sent by email or facsimile to an address provided by the owner. Mining activities cannot start sooner than eight days after notice has been served. Notice must include a description or map of where the work will be conducted and a description of what type of work will be done, when it will take place and approximately how many

people will be on the site. It must include the name and address of the person serving the notice and the name and address of the onsite person responsible for operations.

Newport does not currently hold a Notice of Work permit for the Property. Approval of a completed Notice of Work permit application takes approximately 1 to 2 months from the date of submission. At present, the author does not know of any environmental liabilities to which the property may be subject.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Chu Chua claims are located 24 km northeast of Barriere, B.C., centered on the Chu Chua deposit (120°4'15" W longitude and 51°22'34"N latitude or 703,859 m E / 5,695,730 m N UTM NAD83 Zone 10). The property is vehicle-accessible along the paved Barriere Lakes Road and either the North Barriere Lake or Birk Creek logging roads. The Chu Chua deposit can be accessed via 4x4 vehicle from the end of the Birk Creek logging road. The climate varies seasonally with temperature ranging from -30 to +40°C. Experiencing heavy snowfall in the winter, the work season lasts from late June to mid-October. Elevation varies from 900 to over 2200 metres (m). Snow may still be present into July at higher elevations. Vegetation varies with elevation from alpine to sub alpine below 1800 m. Logging status has had great effect on the area with clear cut, second growth, spruce pine and cedar forests all being present on the property.

Barriere (population 3,450) is the closest town to the property; accommodations, RCMP and a health center can be found there. Lodging may be found at other communities between Barriere and Kamloops. Kamloops is the nearest major center, providing all services; located 64.1 km south of Barriere along Highway 5 (The Yellowhead). Kamloops has an airport that provides charters along with scheduled air service.

If an exploration camp were to be established on the property electric power would be provided by a diesel generator and water may be sourced from numerous streams in the Chu Chua area.

6 History

6.1 Historical Exploration Programs

In 1977, Vestor Explorations Ltd. (Vestor) conducted a stream sediment survey and located a 10 square-metre (m²) limonite gossan on the south slope of Chu Chua Mountain near a northerly striking massive magnetite body (Vollo, 1979a). The property was optioned by Craigmont Mines Ltd. and subsequently drilled with a total of 2,843 m in 23 holes in 1978 (Figure 3). Twenty-two of these holes are located within claim 529300 and one hole (CC-8) falls approximately 45 m north of the claim boundary. This initial drilling outlined the Chu Chua massive sulphide body with thicknesses up to 15 m, a strike length of 300 m and a vertical depth of 200 m. Highlights from this early drilling include sample 2436 from drill hole CC-6 which assayed 4.41% copper (Cu), 0.69% zinc (Zn), 1.23 grams-per-tonne (g/t) gold (Au) and 15.09 g/t silver (Ag) over 5 m, sample 2305 from drill hole CC-16 which assayed 7.47% Cu, 0.75% Zn, 0.69 g/t Au and

22.6 g/t Ag over 5 m, and sample 2313 from drill hole CC-17 which assayed 14.54% Cu, 0.93% Zn, 1.03 g/t Au and 9.3 g/t Ag over 4.2 m (Vollo, 1979a).

Between April 5 and May 20, 1979, a Digital Helicopter Electromagnetic (DIGHEM) survey of 2,274 line-km was flown in the North Thompson River Area, including over the Chu Chua deposit, by DIGHEM Ltd. for Craigmont (Fraser and Dvorak, 1979). Following the survey 21 holes totaling 3,330 m were drilled. A total of 15 holes (2,655 m) targeted the main area of interest identified by the 1978 drilling, these holes fall within claim 529300. Eleven of these holes intersected massive sulfides. An additional 4 holes (CC-34, CC-35, CC-37, and CC-39) were drilled to test the extent of the deposit along strike to the north of the Property. At a depth of 15.0 m, drill hole CC-34 intersected chert matrix agglomerate containing up to 5% pyrite-chalcopyrite-pyrrhotite mineralization at a depth of 15.0 m that returned assays of 0.17% Cu, 0.06% Zn, 0.25 g/t Au and 4 g/t Ag over 1.3 m. Drill holes CC-35 and CC-37, collared at distances of 200 and 400 m to the north of CC-34, respectively, did not intersect significant mineralisation. At a depth of 85.0 m drill hole, CC-39 collared 600 m to the north of CC-34, intersected rhyolite containing 5-10% pyrite mineralization that returned assays of 0.3 g/t Au and 0.6 g/t Ag over 5 m (Cu, Pb and Zn were not analyzed). Two holes (CC-43, and CC-44) were drilled approximately 1.3 km east of the deposit to test nearby conductors that proved to be graphitic cherts (Vollo, 1979b, c).

By the early 1980s it was evident that the Chu Chua deposit consisted of at least two sulfide lenses within the Fennell Formation (Vollo, 1981, 1982a). In October 1980 a Horizontal Loop Electromagnetic (HLEM) survey was carried by Craigmont. The survey covered area extending from southern tip of Chu Chua to 1 km to the south of the deposit. A total of 6.7 line-km was surveyed over 100 m spaced east-west lines with 200 m coil separation. A north-south conductor was detected along the southern tip of the deposit, extending approximately 180 m (Hallof et al. 1981). In 1981, three additional holes were drilled to test the extent of the known ore zone. Two holes (CC-45, 46) fall on claim 529300 and one hole (CC-47) lies just south of the claim. Hole CC-45 (319 m total depth) was drilled to test the down-dip extension of Chu Chua sulphide zone and encountered tuffite with minor chalcopyrite (Vollo, 1981). Hole CC-46 (420 m total depth) intersected beds of massive, cupriferous pyrite, magnetite and talc in a siliceous tuffite unit. Hole CC-47 (110.5 m total depth) was drilled on a parallel conductor but intersected only basalt (Vollo, 1982a).

In 1982, Craigmont drilled eight holes totalling 3,992 m targeting the Chu Chua mineralized zone (all on claim 529300). Hole CC-48 intersected massive to weakly banded chalcopyrite, magnetite and talc in a siliceous tuff unit that assayed 2.4% Cu, 0.34% Zn, 2.61 g/t Au and 13.8 g/t Ag over 6.7 m (Vollo, 1982a). Three additional holes (CC-49, CC-54 CC-55) tested the depth extent of the Chu Chua sulphide lens and intersected narrow zones of massive sulphides, tuff and altered basalt at downhole depths up to 600 m (Vollo, 1982b). Additionally in 1982, Craigmont conducted VLF-EM and magnetic surveys over a 35 km grid, 516 soil samples were collected and four holes (CC-50 to CC-53) totalling 229.5 m were drilled, 3 km to the northeast of the Chu Chua deposit. The drilling intersected graphitic argillite and tuff containing disseminated pyrite and pyrrhotite; no samples were submitted for analysis (Vollo, 1982c).

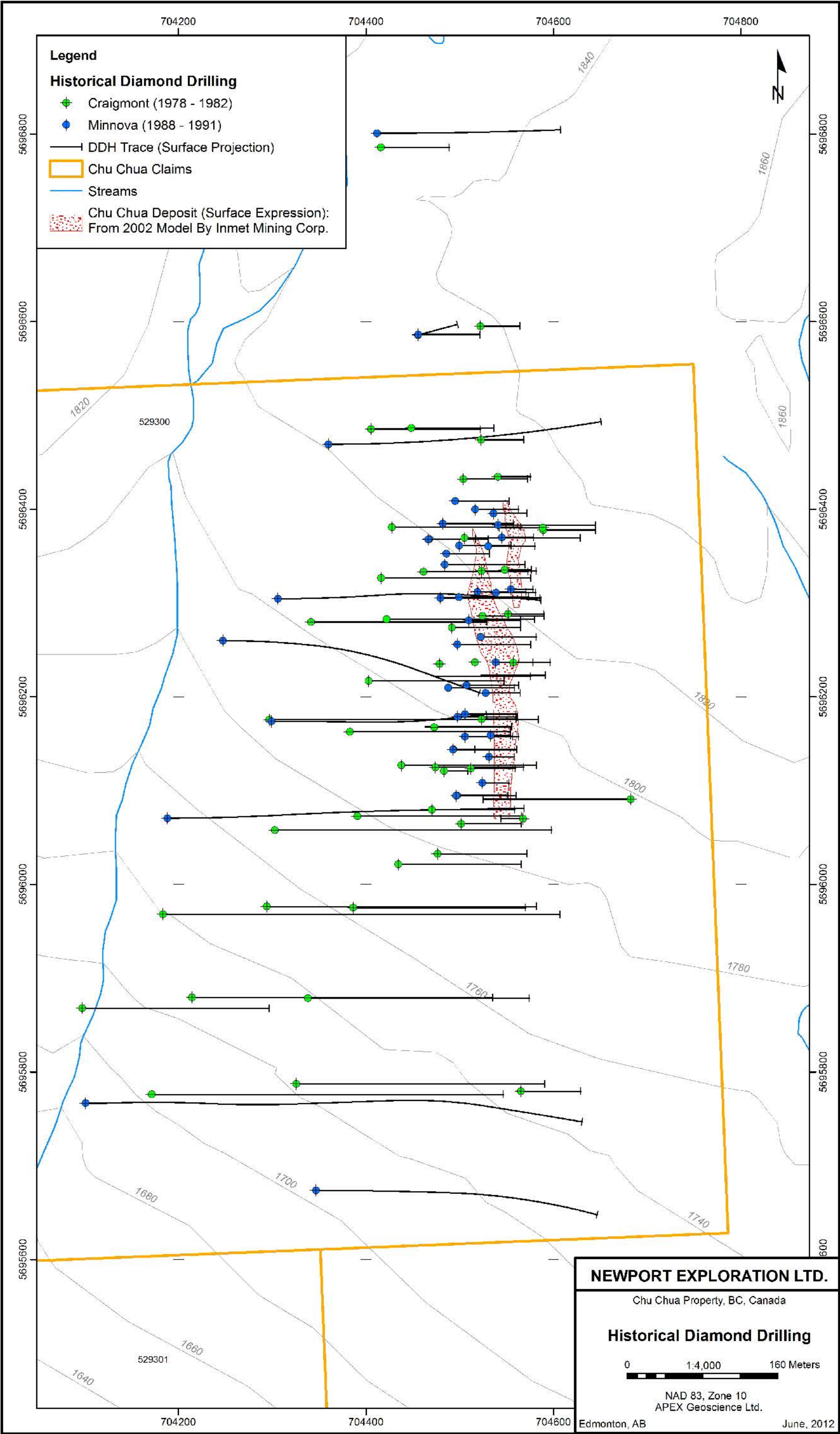


Figure 3. Historical Diamond Drilling of Chu Chua Deposit

The Craigmont exploration program at Chu Chua was cancelled in 1983 due to the closure of the Craigmont Mine near Merritt, B.C. and difficult deep hole drilling conditions (Morganti, 1983). The property was returned to Vestor.

During October of 1984, Vestor conducted an electromagnetic survey to the south of the 1980 HLEM grid (to the northeast of the Property), extending the surveyed as south as Cowell Creek. A total of 19 line-km were surveyed over 200 m spaced lines. Several strong northwest trending conductors were detected, with the most prominent one stretching along the survey grid, measuring close to 2 km in strike length (Candy and White, 1984).

In August 1985, Falconbridge Copper (Falconbridge) acquired the Chu Chua deposit. Subsequently, 82.5 line-km of horizontal-loop EM (HLEM) surveys were carried out on 3 grids. The Chu Chua grid covered the Chu Chua deposit and adjacent claims to the east of the Property. The other two grids (SC/CH and Anna grids) were located to the approximately 7 km to south of the Chu Chua deposit (Pirie, 1985a). Three drill holes located east of the Chu Chua deposit, totalling 618 m were drilled to test HLEM anomalies and adjacent stratigraphy but no significant sulfides were intersected (Pirie, 1985b).

In 1986, Falconbridge extended the Chu Chua grid 1.5 km south, and collected 30 line-km of HLEM data and 1,074 soil geochemical samples to test for strike parallel mineralization to the east of the Chu Chua deposit. The geophysical survey defined an approximately 100 x 1400 m, north-south trending conductive anomaly crossing the entire survey grid. An approximately 25 x 300 m, Pb, Zn, Cu, Ag soil geochemical anomaly is broadly coincident with the northern third of the conductive anomaly (Pirie, 1986).

In 1987, Falconbridge changed its name to Minnova Inc. (Minnova) and completed diamond drilling of 6 holes totalling 852 m. Minnova's drilling continued to test the HLEM conductive anomaly east of the Chu Chua deposit; and a quartz-feldspar porphyry rhyolite dome within the SC/CH grid at head of Slate Creek. Four holes (CCF-12 to CCF-15) drilled within the Chu Chua grid did not intersect massive sulphides. Drill holes CCF-16 and CCF-17 targeted the flanks of a rhyolite dome. Silica-sericite altered rhyolite and tuffaceous argillite intersected within drill hole CCF-16 returned assays of 1.1 g/t Au over 3 m between 94.5 and 97.5 m depth. CCF-17 did not return significant assays (Gray, 1987).

The 1988 field season consisted of a focused drilling program on the Chu Chua deposit and an extension of the Chu Chua Main HLEM Grid to the north of the Property. As noted above, drilling by Craigmont in the late 1970's and early 1980's had defined two zones of relatively thick, high grade mineralization occurring within 100 m of the surface which became known as the Main and North Lenses. Minnova's 1988 drilling was designed to test the continuity of grade and thickness of both lenses of the Chu Chua sulfide deposit by establishing drill intercepts at 25 m spacing. The program consisted of 13 holes totalling 1,152 m (all holes were within claim 529300). As a result of this drilling significant tonnage was added to the deposit and the western margin of

the Main sulphide lens was defined. The Main Lens was determined to be a funnel shaped body with two zones of mineralization termed the Footwall and Hanging Wall Zones. The Footwall Zone was found to be a well-developed, continuous zone of highly variable thickness located along the footwall contact of the lens. It had an average thickness of about 7.2 m and contained the highest grade mineralization in the deposit. The Hanging Wall Zone was found to be thinner, less continuous and of lower grade, with an average thickness of about 4.5 m. The North Lens was found to be thinner than the upper part of the Main Lens, contained uniform mineralization but with lower grades than the Footwall Zone (Blackadar, 1989 and Lear, 1989).

During the 1989 field season, 21 holes totalling 1,663 m were drilled in the deposit area (all holes were within claim 529300). The drilling further delineated of the near surface mineralization and showed that the highest copper grades occurred in the Footwall and Hangingwall massive sulphide zones. Grades within the massive sulphide zones tended to be highly variable; though increased copper grades correlated positively with zinc, silver, and gold values. Additionally, Quantech Consulting Inc. completed a 24.3 line-km of transient electromagnetic (TEM) survey over the deposit and area to the north and south. The survey defined a subtle conductive anomaly extending north from the Chu Chua deposit a distance of 200 m. Beyond this, the anomaly is more evident and extends a further 650 m to the northwest, suggesting the potential for the discovery of additional deep massive sulphide mineralization (Wild, 1989).

During 1990, Minnova drilled eleven holes, totaling 1,731 m. Three holes were drilled into the Chu Chua deposit to test specific targets in the footwall and on the plane of mineralization. Two holes (CCF-61 and CCF62), totalling 1,014.1 m, on claim 529300, and one hole (CCF-60) totalling 100.9 m falls to the north of the Property. At a depth of 83 m, drill hole CCF-60 intersected a sequence of fine grained siliceous sediments containing 2-10% pyrite bands and stringers and trace chalcopyrite that returned assays of 0.18% Cu, 0.03% Zn and 4.4 g/t Ag over 4.3 m. Hole CCF-61 did not identify any new mineralization, but did provide an additional, shallow intersection of the North Lens. Hole CCF-62 demonstrated that the massive sulfide extends to 550 m depth and identified a zone of zinc rich massive sulphide; something that had not been previously observed at Chu Chua (Heberlein, 1990). In addition, eight diamond drill holes (MCC-52 through MCC-59) were completed to test coincident EM and magnetic anomalies at pass separating the headwaters of Birk and Chu Chua creeks (3 km south of the Chu Chua deposit). The drill holes intersected a sequence of sericite altered sediments, argillite and magnetic diorite sills that explained the geophysical anomalies. Drill hole MCC-56 intersected a 3.7 m cherty interval containing 1-3% bedded pyrite, trace chalcopyrite, and a 15 cm interval of massive sulphide with approximately 3% chalcopyrite. The massive sulphide interval returned assays of 1% Cu and 9 g/t Ag. Drill hole MCC-37 through MCC-39 tested the potential for additional mineralization to the north and south but did not intersect massive sulphides (Heberlein, 1990).

Minnova completed their last work in the Chu Chua area in the fall of 1991. Nine deep drill holes totalling 4,957 m tested the Chu Chua sulphide horizon along strike and down-dip. Four of the drill holes (CCF-63, 64, 67 and 69) were surveyed with downhole pulse EM. Six holes, totalling 3,793 m, are located within claim 529300. Two holes

(CCF-64 and CCF-65) to the north of Chu Chua deposit and one hole (CCF-68) to the south were also drilled. Holes CCF-63 to CCF-66 tested the Chu Chua horizon at depth to the north of the Main Lens. Drill hole CCF-63 intersected silicified basalt and sulphide stringers interpreted as a footwall alteration zone that returned assays of 0.12% Cu over 11.7 m; and drill hole CCF-66 intersected two separate intervals of pyrite exhalite that returned assays of 0.21% Cu, 360 ppm Zn over 4.3 m, and 0.33% Cu, 330 ppm Zn over 1.5 m. Holes CCF-67 and CCF-68 tested the Chu Chua horizon to the south of the Main Lens and did not intersect significant mineralization or alteration. Hole CCF-69 was drilled to test the down-dip extent of the Main Lens. The hole intersected a new hanging wall massive sulphide zone at a depth of 381 m that returned assays of 0.97% Cu, 0.84 g/t Au over 14.85 m occurring 1.9 m above a second zone assaying 0.75% Cu, 1.37 g/t Au over 4.65 m. Drill hole CCF-70 was collared 150 m southwest of CCF-69 and intersected an 11.5 m zone of chert and magnetite-hematite-pyrite exhalite; a distance of 230 m further down dip than the massive sulphide intersected in CCF-69 (Wells, 1991). Hole CCF-71 tested the down-dip and northern strike extent of mineralization within CCF-69, and intersected massive sulfide zone at a depth of 658 m that returned assays of 0.69% Cu, 0.13% Zn, 0.14 g/t Au and 5.69 g/t Ag over 9.95 m.

Strongbow acquired the claims overlying the Chu Chua deposit by online staking on March 2nd, 2006. During fall 2006, Strongbow completed a soil geochemical survey and a compilation of historic Craigmont and Minnova soil sampling. A total of 302 soil samples were collected at a spacing of 50 m over a series of select east-west oriented gridlines designed to test the geochemical response over the Chu Chua deposit, and select conductive anomalies from Craigmont's 1979 DIGEM airborne geophysical survey (Fraser and Dvorak, 1979). Of the 302 samples collected by Strongbow, 38 were collected within the Property. A series of six consecutive samples collected over the Main Lens of the Chu Chua deposit returned anomalous values ranging from between 27 and 335 ppm Cu. A line crossing just north of the Main Lens, and a second line 400 m further to the north, did not return anomalous values. A series of 100 and 400 m spaced soil lines completed DIGEM and HLEM conductive anomalies within the southern part of the Falconbridge's Chu Chu grid (Pirie, 1985b; and Pirie 1986) correlated with a number of single and two sample greater than 100 ppm Cu anomalies. Two soil lines spaced at 100 m tested the area above Minnova's MCC-52 through MCC-55 drill sites (Heberlein, 1990), but did not return significant anomalies. Compilation of 2,703 historic Craigmont and Minnova soil samples revealed numerous single and multi-sample greater than 100 ppm Cu, and 125 ppm Zn, soil anomalies to the north and south of the Chu Chua deposit (Gale, 2007).

In 2008 the field program for the Chu Chua property included a helicopter-borne time domain geophysical survey and a property visit by Mr. Raffle (Figures 4 and 5). During summer 2008, Aeroquest Limited completed an 840 line-km helicopter-borne AeroTEM III survey (covering the Chu Chua property and surrounding area). The AeroTEM III, time-domain EM system in conjunction with a cesium vapour magnetometer was flown east-west with a 100 m cross line spacing from June 29 to July 5, which identified the Chu Chua deposit as a magnetic anomaly accompanied by a slightly offset strong EM anomaly likely representing the juxtaposition of the massive sulphide body and magnetite alteration of the host rocks. The anomalies revealed that

the Chu Chua deposit has an approximate strike length of between 400 and 450 m and is fairly steep in nature. The elongated magnetic contours to the south may indicate that the deposit plunges to depth to the south. During fall 2008, Mr. Raffle visited the Chu Chua Property and collected a total of 5 rock and/or historic core samples from the Property. Three rock samples of variably altered volcanic rocks were collected from around the Chu Chua deposit and two samples from historic core were collected from drill hole CC-21 at approximate depths of 193 and 208 m, respectively (Raffle, 2008). Pyrite and magnetite were associated with the rock samples, the best of which (08KRP800) assayed 0.086% Cu, 0.027% Zn, 0.129 g/t Au and 2.93 g/t Ag. The core samples comprised chalcopyrite-bearing volcanic rocks and massive sulphide, the latter of which (08KRM002) assayed 3.78% Cu, 0.6% Zn, 0.318 g/t Au and 7.35 g/t Ag (Raffle, 2008).

6.2 Historical Mineral Estimates

During August and September, 2009, Strongbow acquired and made available the proprietary Minnova resource and metallurgical reports, which have been reviewed by the authors. A preliminary resource summary was completed for Minnova in 1989 by Mintec Inc. (Davies, 1989; Purkis, 1991). Mintec Inc. (Mintec) outlined an unconstrained (no cutoffs) total resource of 2.91 million tonnes at a grade of 1.60% Cu, 0.26% Zn, 6.9 g/t Ag, 0.4 g/t Au (Purkis, 1991). In the same memo, Mintec provided a near surface potentially open pittable “dipper pit” resource of 798,611 tonnes using a 2.0% Cu cutoff yielding 3.87% Cu, 0.45% Zn, 0.69 g/t Au and 12.8 g/t Ag (Davies, 1989 and Purkis, 1991).

The resource work was done in August-September of 1989 and was done as a polygonal block model using Medsystem. The memo style report constructed by Mintec is summary in nature and contains few details of any data review and Quality Assurance/Quality Control (QA/QC) work that might have been performed (Davies, 1989; Purkis, 1991). Even though the drill hole spacing is good and the continuity of the zones reasonable, there is data that was never captured or has been lost including little if any QA/QC work was ever completed for the assaying and SG work, there is no evidence of systematic and accurate collar surveys, there is no good quality topographic surface that was produced and there is a complete lack of downhole azimuth surveys for most if not all the drill holes in the resource area. The Mintec report and all of the resource calculations contained within it are not acceptable for the purposes of a National Instrument 43-101 resource of any category as defined in “CIM Estimation of Mineral Resources and Mineral Reserves Best Practices Guidelines” dated May 30, 2003 and “CIM Definition Standards for Mineral Resources and Mineral Reserves” dated November 27th, 2010. A qualified person has not done sufficient work to classify any of the historical resource estimates for Chu Chua as current mineral resources or mineral reserves and as such none of the historical estimates should be relied upon.

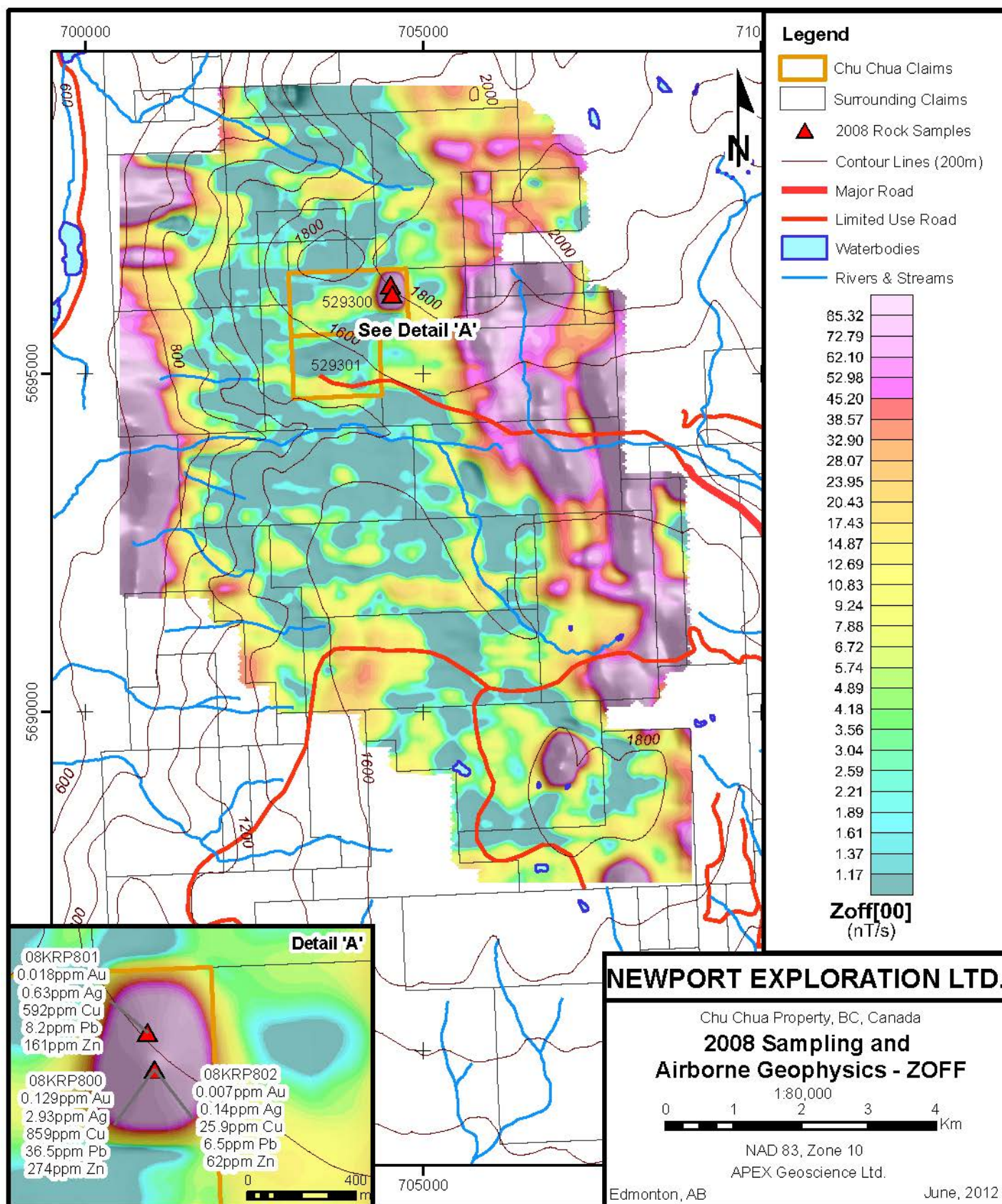


Figure 4. 2008 AeroTEM III Airborne Geophysical Survey (Zoff)

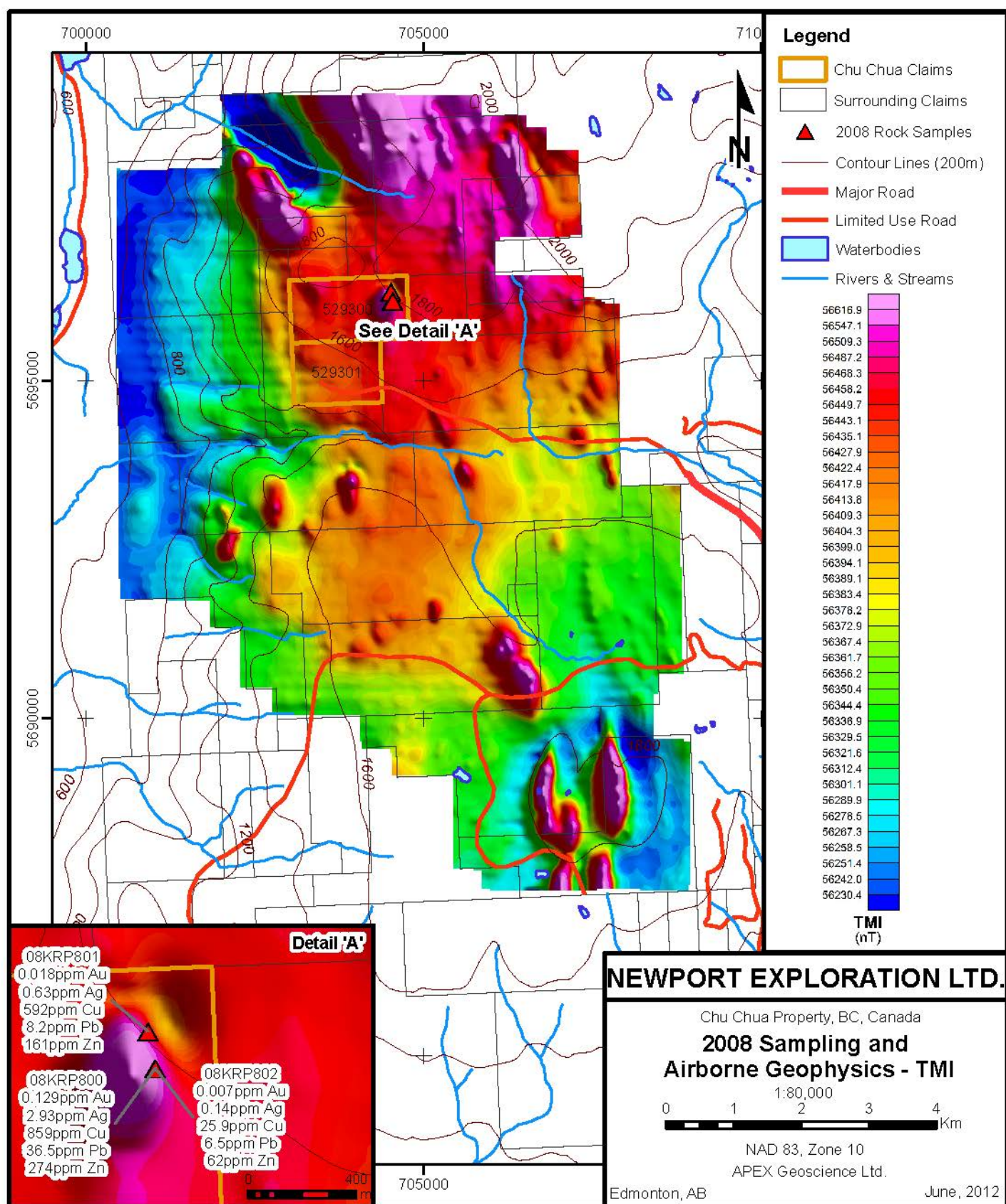


Figure 5. 2008 AeroTEM III Airborne Geophysical Survey (TMI)

7 Geological Setting

7.1 Regional Geology

Schiarizza and Preto (1987) mapped the Adams Plateau Clearwater-Vavenby area at 1:100,000 providing a concise regional geological picture for the Chu Chua property. The following regional geology section is taken from their work.

The Chu Chua area is on the western edge of the Omineca Belt and is underlain by the Fennell Formation of the Slide Mountain Assemblage to the west and by the Eagle Bay Assemblage to the east (Figure 6). The Early Cambrian to Mississippian Eagle Bay Assemblage is in the pericratonic Kootenay Terrane and consists of metasedimentary and metavolcanic rocks which are repeated in four Northwest-dipping thrust sheets. The assemblage is comprised of a Lower Palaeozoic succession of clastic metasediments, *carbonate* and mafic metavolcanic rocks, and an overlying Devonian-Mississippian succession of felsic to intermediate metavolcanic rocks and metasediments. The Homestake and Rea VMS deposits are hosted by intermediate to felsic metavolcanic rocks of the Lower Devonian-Mississippian succession.

The Slide Mountain Assemblage is part of Slide Mountain Terrane and consists of the Devonian to Middle Permian Fennell Formation. The formation is an oceanic sequence consisting of two major divisions. The structurally lower (eastern) division comprises a heterogeneous assemblage of bedded chert, gabbro, diabase, pillowed basalt, clastic metasediments, quartz-feldspar-porphyry rhyolite and intraformational conglomerate. The upper (western) division consists almost entirely of pillowed and massive basalt with gabbro and minor bedded chert and argillite. Both intrusive and extrusive mafic igneous rocks are tholeiitic. Tops throughout the succession consistently face west.

The Fennell Formation and Eagle Bay Assemblage are intruded by mid-Cretaceous granodiorite and quartz-monzonite of the Raft and Baldy batholiths. The package is locally overlain by Eocene Kamloops Group volcanic and sedimentary rocks and Miocene lavas. The map area is dominated by easterly directed thrust faults, which imbricate the Fennell Formation and *separate* it from the underlying Eagle Bay Assemblage. Tectonic emplacement of the Fennell Formation over the Eagle Bay Assemblage was followed by southwesterly-directed folding and associated thrust faulting. Folding and fabrics associated with this event are evident in the Eagle Bay Assemblage, but are rarely seen in the Fennell Formation.

7.1 Local Geology

The following summary of the local geology is reprinted from Heberlein (1990). Detailed discussion of individual lithological units can be found in Wild (1989).

The Chu Chua property is underlain by rocks of the Mississippian to Permian Fennell Formation (Schiarizza and Preto, 1987). Two litho-structural packages make up the Fennell Fm. These are called the upper and lower divisions. The lower division forms a north-south belt that extends from the Barriere River fault in the south to Clearwater in the north. It is composed of a complexly interbedded and thrust imbricated sequence of massive basalt, clastic metasediments (greywackes and argillites),

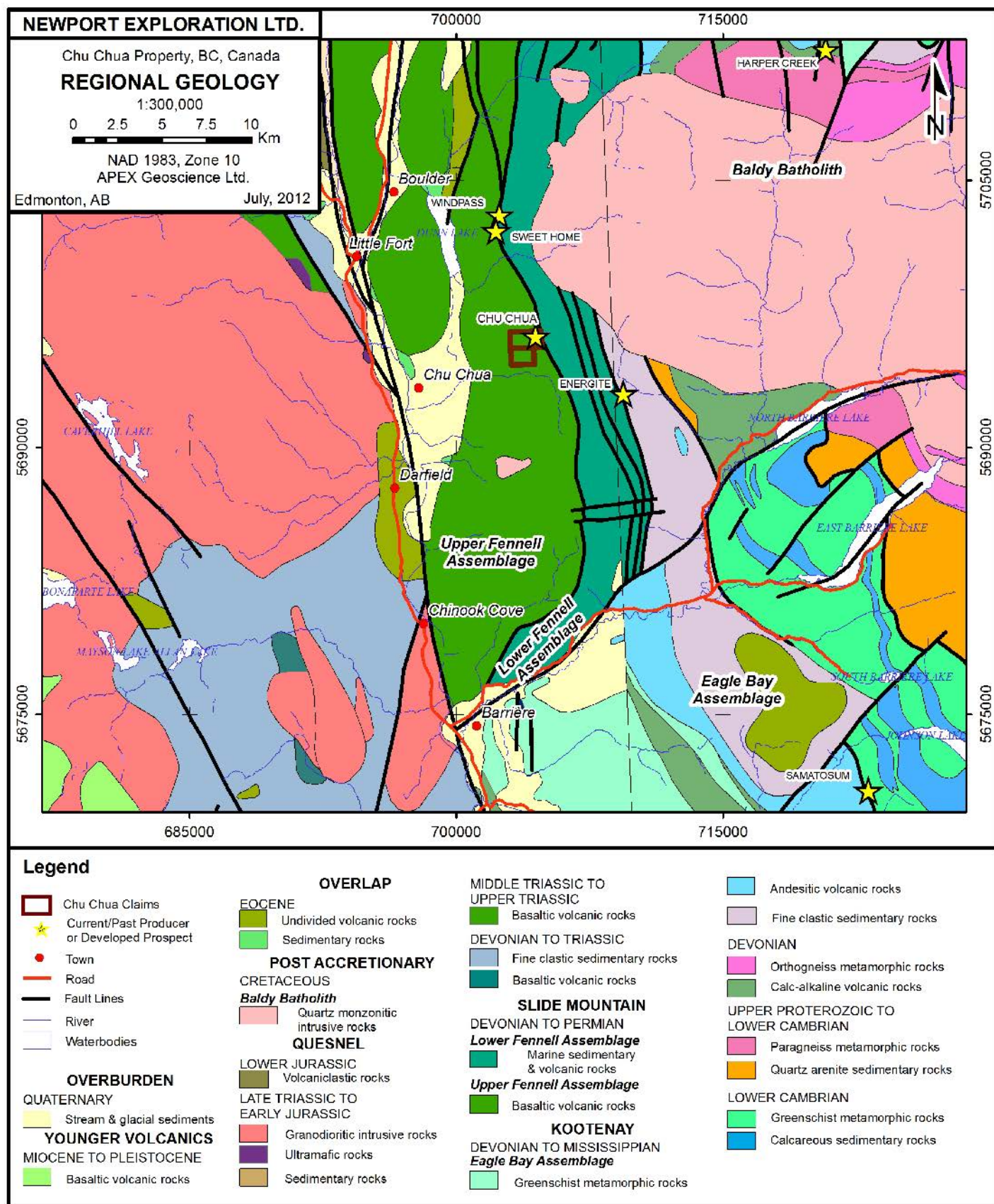


Figure 6. Regional Geology

ribbon cherts, quartz-feldspar phyric rhyolite and intraformational conglomerate. The upper division underlies most of the property area and hosts the Chu Chua deposit. It consists of pillowed to massive basalt flows, diabase sills, argillite and rare chert. These rocks can be traced from Barriere as far north as Wells Grey Park. They are responsible for the rugged cliff exposures on either side of the North Thompson River Valley between Little Fort and Clearwater. Both divisions of the Fennell Formation are intruded by the Cretaceous Baldy Batholith, which forms a prominent easterly trending mountain range to the northeast of Barriere.

Deformation in the Fennell formation is not intense. Units have been rotated into a vertically dipping west facing homocline that is interpreted to be the western limb of a thrust-dismembered anticline (Schiarizza and Preto, 1987). There is little evidence for mesoscopic folding and penetrative fabrics are mostly absent. Late, north and east trending (Tertiary?) normal faults cause local offsets of the Upper Fennell stratigraphy. A west-dipping thrust fault is inferred to separate the upper and lower divisions of the Fennell Fm. This is based on conodont ages determined from chert beds in both divisions. The Lower Fennell sequence is also inferred to be thrust imbricated based on fossil data (Schiarizza and Preto, 1987).

Both Fennell Formation divisions are regionally metamorphosed to lower greenschist facies. Close to the contact of the Baldy Batholith (within approximately 500 m) the regional metamorphism is overprinted by a contact thermal aureole. Locally this reaches hornblende hornfels grade. Despite the metamorphism, primary textures are well preserved in both volcanic and sedimentary units.

8 Deposit Types

The principal deposit of interest on the Chu Chua property is a Cyprus-type volcanogenic massive sulphide (VMS). The stratigraphy underlying the property is also prospective for Kuroko-type massive sulphide deposits evidenced by the presence of several of these proximal to the property. In general terms, volcanic-associated massive sulphide deposits (VMS) are an important source of copper, lead and zinc with lesser precious metals and comprise a massive sulphide ore lens underlain by a stringer zone of intensely altered rocks hosting vein and disseminated ore (Franklin, 1993). These deposits are generally hosted in volcanic rocks of varying compositions with associated but less abundant sedimentary rocks. Quartz veins hosting base- and/or precious-metals may also be significant when considering the numerous occurrences of this mineralization type surrounding the Chu Chua property.

8.1 Cyprus Type Massive Sulphide

Cyprus-type massive sulphide deposits are part of the volcanic-associated massive sulphide deposits spectrum, present in ophiolite sequences, dominated by mafic and ultramafic volcanic rocks (Galley and Koski, 1999). These ophiolite sequences form in fore-arc and back-arc environments and comprise sheeted dyke complexes overlain by volcanic successions of lava flows, pillow lavas, breccias, hyaloclastites, feeder dykes and sills and interstitial sediments. Driven by the heat of underlying magma chambers, hydrothermal fluids circulate through the volcanic pile scavenging metals, redepositing

them as massive, stratiform sulphide lenses typically composed of pyrite, chalcopyrite, sphalerite and magnetite; the underlying stringer/feeder zone typically consists of quartz and pyrite with minimal base metal content. The sulphide lenses are commonly clustered in groups and can often be found along strike of other lenses. In British Columbia, workers have noted a common alignment of these lenses near steep, normal faults (Hoy, 1995).

Cyprus-type deposits in British Columbia are primarily Mississippian-Permian or late-Triassic in age; the most significant of which are the Anyox deposits which range from 0.2 to 23.7 million tonnes in size and average grades of 1.5% Cu, 9.9 g/t Ag and 0.17 g/t Au (Hoy, 1995). The authors have not verified the size and/or grade of these deposits as described by Hoy (1995) and the mineralization contained within these deposits may or may not be indicative of the mineralization on the Chu Chua Property.

Exploration for these deposits is aided by the highly conductive nature of the massive sulphide bodies which can be readily identified using various electromagnetic or induced-polarization geophysical techniques or the associated magnetite mineralogy resolved by magnetic geophysical techniques. Soil sampling will typically display anomalous levels of the relevant metals including copper and zinc or other associated elements. When rock exposure allows, prospecting and mapping should focus on altered packages of submarine volcanic rocks of mafic-ultramafic compositions. Alteration of these rock types results in common chlorite-talc-carbonate-magnetite assemblages; the underlying stringer zone can be typified by this assemblage with accompanying quartz-pyrite veins (Hoy, 1995).

8.2 Kuroko Massive Sulphide

Kuroko (or Noranda) type massive sulphide deposits are typically present within felsic volcanic rocks in calc-alkaline, bimodal arc successions. They form during the development of island arc complexes during rifting within or behind an oceanic or continental margin (Hoy, 1995). Host rocks to these deposits are typically rhyolite-dacite submarine volcanic rocks with associated andesites or, less commonly, mafic volcanic rocks or sedimentary rocks. Mineralization, including pyrite, sphalerite, galena and chalcopyrite, is found within one or more lenses of massive sulphides, commonly zoned with a Cu-rich base and a Pb+Zn-rich top. These deposits can also have a significant concentrations of precious-metals including silver and gold. Underneath these lenses, low-grade stringer zones are common, while barite or chert layers commonly overlie these lenses. As with the Cyprus-type deposits, the massive sulphide lens forms above a hydrothermal-fluid cell with the stringer zone representing the remains of the channel way of these fluids. Individual sulphide lenses vary in thickness from 1 to 10's of metres with strike lengths of 10's to 100's of metres.

In British Columbia, Kuroko-type deposits are the most common form of VMS deposits, principally hosted by the late-Devonian Eagle Bay Assemblage located northeast of Kamloops and the late-Devonian Sicker group on Vancouver Island (Hoy, 1995). Less commonly they are Permian-Mississippian, late-Triassic, early-middle Jurassic, and Cretaceous in age. A typical deposit in British Columbia can range from less than 1 million tonnes to more than 10 million tonnes. The most notable Kuroko

deposits in British Columbia, the H-W and Kutcho, are reported to contain 10.1 million tonnes grading 2.0% Cu, 3.5% Zn, 0.3% Pb, 30.4 g/t Ag and 2.1 g/t Au and 17 million tonnes grading 1.6% Cu, 2.3% Zn, 0.06% Pb, 29 g/t Ag and 0.3 g/t Au, respectively (Hoy, 1995). The authors have not verified the grade and tonnage information provided by Hoy (1995).

Exploration for Kuroko deposits parallels that for the Cyprus deposits save the host rocks and associated alteration. Felsic volcanic domes and centres should be investigated along with pyrite and chert horizons, all of which display quartz-sericite-chlorite alteration with distal clay mineral-, albite-, or carbonate-alteration.

8.3 Epithermal Veins

Epithermal veins represent a broad spectrum mineral exploration target in that they are present in rocks of all types and ages in a range of tectonic settings and can host a wide variety of metals, including but not limited to Au, Ag, Cu, Pb, Zn, solely or as part of a polymetallic assemblage. Because of this variability it is difficult to describe them in general terms. The common association of these veins to massive sulphide deposits increases their importance in the Chu Chua area. Deposits of this kind are typically manifested as a collection of quartz veins which formed penecontemporaneously thus they may cross-cut one another but were generated from the same event. The location and morphology of these veins are largely controlled by rheological contrasts in the host rocks and by ore-controlling structures. These deposits can also contain multiple stages of mineralization, presumably related to periodic tectonism associated with increased intrusive activity and magmatic hydrothermal fluid generation (Panteleyev, 1996). The country rock surrounding epithermal veins is commonly extensively altered even though the vein walls may be sharply defined. Alteration can be areally restricted but large overprints of clay minerals, sericite and chlorite are possible; more proximal alteration will comprise pyrite and quartz with lesser carbonate minerals. It is also not uncommon to find large, highly coloured supergene gossans covering epithermal ores.

Lefebure and Church (1996) suggest that for polymetallic veins in British Columbia which are larger than 20,000 tonnes, the average size is 161,000 tonnes with grades of 304 g/t Ag, 3.47 % Pb and 2.66 % Zn. Within these, gold and copper are of significant abundance in only half of the instances with average grades of 4 g/t Au and 0.09% Cu. The authors have not verified the information provided by Lefebure and Church (1996).

Exploration for these deposits focuses on second-order structural features adjacent to crustal-scale faults or structures surrounding volcanic centres. Geophysically, these deposits will commonly display as linear, magnetic lows and may have electromagnetic or induced-polarization potential due to the sulphide content. Soil geochemistry can show elevations of the aforementioned principal elements as well as arsenic, mercury, antimony, bismuth, molybdenum, tin, tungsten and manganese.

9 Mineralization

The work of Wild (1989) offered an excellent description of Chu Chua mineralization; the subsequent three paragraphs are from this work.

The Chu Chua deposit consists of two major and several minor sulphide lenses hosted by massive and pillowed green basalt of the Upper Fennell Formation. The lenses are oriented along a north-south trend dipping from vertical to very steeply west. The principal axes of the lenses appear to plunge gently to the south. The strike extension of near surface mineralization is approximately 300 m and total thicknesses for the mineralized zones range up to 80 m.

Massive sulphides lie immediately below a very sharp contact with the hangingwall basalts. Pyrite makes up approximately 90% of the massive sulphide, often occurring as coarse anhedral grains displaying annealed textures. Chalcopyrite is the main ore mineral occurring as massive streaks up to 25 cm thick, as small inclusions in both pyrite and magnetite, and as fracture fillings and interstices in coarse granular pyrite. These textures suggest a large degree of remobilization. Thin section work (Manley, 1988 -unpublished paper), has shown good triple junctions in granular pyrite with chalcopyrite often occurring in the interstices, as tiny anhedral blebs (50-200 micrometres), and as inclusion trails inside pyrite grains. Megascopically, sections of massive sulphide show good rolled textures and brecciation, indicating either primary collapse structures or, more likely, tectonic activity.

Other economic minerals identified in drillcore include covellite, chalcocite, sphalerite and magnetite. Cubanite (CuFe_2S_3) and stannite are also present (Aggarwal, 1982). Covellite occurs in chalcopyrite-rich sections as fracture fillings. Chalcocite occurs as discrete grains within either pyrite or chalcopyrite (Manley, 1988). Sphalerite and possibly trace amounts of galena occur as fine grained and massive blebs usually but not exclusively with copper mineralization. Magnetite content increases toward the footwall occurring as subhedral grains possibly mixed with or replacing pyrite. The matrix is likely quartz and barite. Other metals present in the ore zone include gold (commonly 1 g/t), silver (commonly 15-30 g/t), cobalt (310-475 ppm), and trace amounts of tin (stannite), platinum, and palladium (Aggarwal, 1982).

10 Exploration

The 2011 Chu Chua Property exploration program included differential global positioning system (DGPS) surveying of historic diamond drill hole collars, select re-sampling of historic diamond drill core stored at the Property, and the creation of a DGPS digital elevation model (DEM) over the Chu Chua deposit. A total of 60 drillholes were re-located and surveyed, a total of 110 core samples were taken from the historic core, and an area of 55 ha was surveyed to produce a DEM over the Chu Chua deposit. Exploration was completed between the dates of July 6 and July 16, 2011.

Summary results of drill hole collar surveys, drill core re-sampling and creation of the DEM are presented below. Copies of the drill core re-sampling results, and the original lab analytical certificates are presented in appendices 1 and 2 respectively.

10.1 Drill Hole Collar Surveys

DGPS surveys of historic drill collar locations at the Chu Chua deposit were completed in an effort to confirm historically reported drill hole locations, and to provide precise data horizontal location (X-Y) and elevation (Z) of the drill holes. Drill hole collar

surveys were completed using a pair of Trimble R8 Global Navigation Satellite System (GNSS) receivers as base and mobile (rover) units. Drill collar surveys were completed in Real Time Kinematic (RTK) survey mode, whereby the stationary base receiver broadcasts a correction signal to the mobile receiver via UHF radio connection providing horizontal accuracies of up to 10 cm and vertical accuracy of up to 20 cm.

Location of drill sites was aided by reviewing historic exploration reports and site plan maps showing drill sites in relation to access trails, clearings and creek drainages. Individual drill sites were located based on comparing historic plan maps with the current site layout. Of the 99 historic drill hole locations (ranging from CC-1 to CC-59 and CCF-18 to CCF-71), 60 were re-located and surveyed (Figure 7). Typically drill hole sites were represented by exposed casing, obvious cleared areas, and rarely by collar identification posts or marked tags.

10.1 Re-Sampling of Historic Drill Core

During 2011 a total of 110 samples were taken from the historic drill core stored in racks located on the Chu Chua property. The objective of the 2011 drill core re-sampling program was to verify the presence of historically reported mineralization at the Chu Chua massive sulphide deposit. Drill core intervals to be re-sampled were chosen based on a previously completed compilation of historic diamond drill hole results (Raffle and Dufresne, 2010). Specific re-sampled intervals were selected based on the drill core currently available on site; and in an effort to replicate select historic high grade intercepts from both the north and south sulphide lenses at both near surface and relatively deep drill intersections.

Historically, a total of 99 diamond drill holes, totalling 19,707 m were completed to delineate the Chu Chua deposit between 1978 and 1991. The 110 core samples collected during 2011 were selected from high grade intercepts within historic drill holes CC-16, CC-17, CC-21, CC-26, CC-54, CC-55 and CC-57, comprising a total sampled core length of 103.7 m. Samples of quartered drill core were collected using a mechanical core splitter. The 110 core samples along with 12 Quality Assurance/Quality Control (QA/QC) samples were shipped for gold fire assay and Inductively Coupled Mass Spectrometry (ICP-MS) analysis by ALS Minerals (ALS).

A comparison of historic and current composite grades has been completed for a total of 82.3 m of the 103.7 m of drill core re-sampled during 2011. The reduction in comparable assays was due to the fact that in some cases the complete historic sample interval was not available for assay. Only results for which the entire historic sample interval was available (ranging from 2.5 to 6 m) have been included in the comparison. Of the 103.7 m of drill core re-sampled during 2011, it is possible to complete a direct comparison of 82.3 m. Comparison of historic and current composite grades indicate that no significant variability exists between historically reported versus current re-sampling for zinc gold and silver assays at the Chu Chua deposit (-0.07% Zn, -0.07 g/t Au and, -0.41 g/t Ag of the length weighted average difference based on 82.3 m of drill core re-sampled, Table 2). Copper values indicate a -0.39% Cu length weighted average difference between the re-sampled and historically reported drill core assays available for comparison. The difference in re-sampled versus historically reported

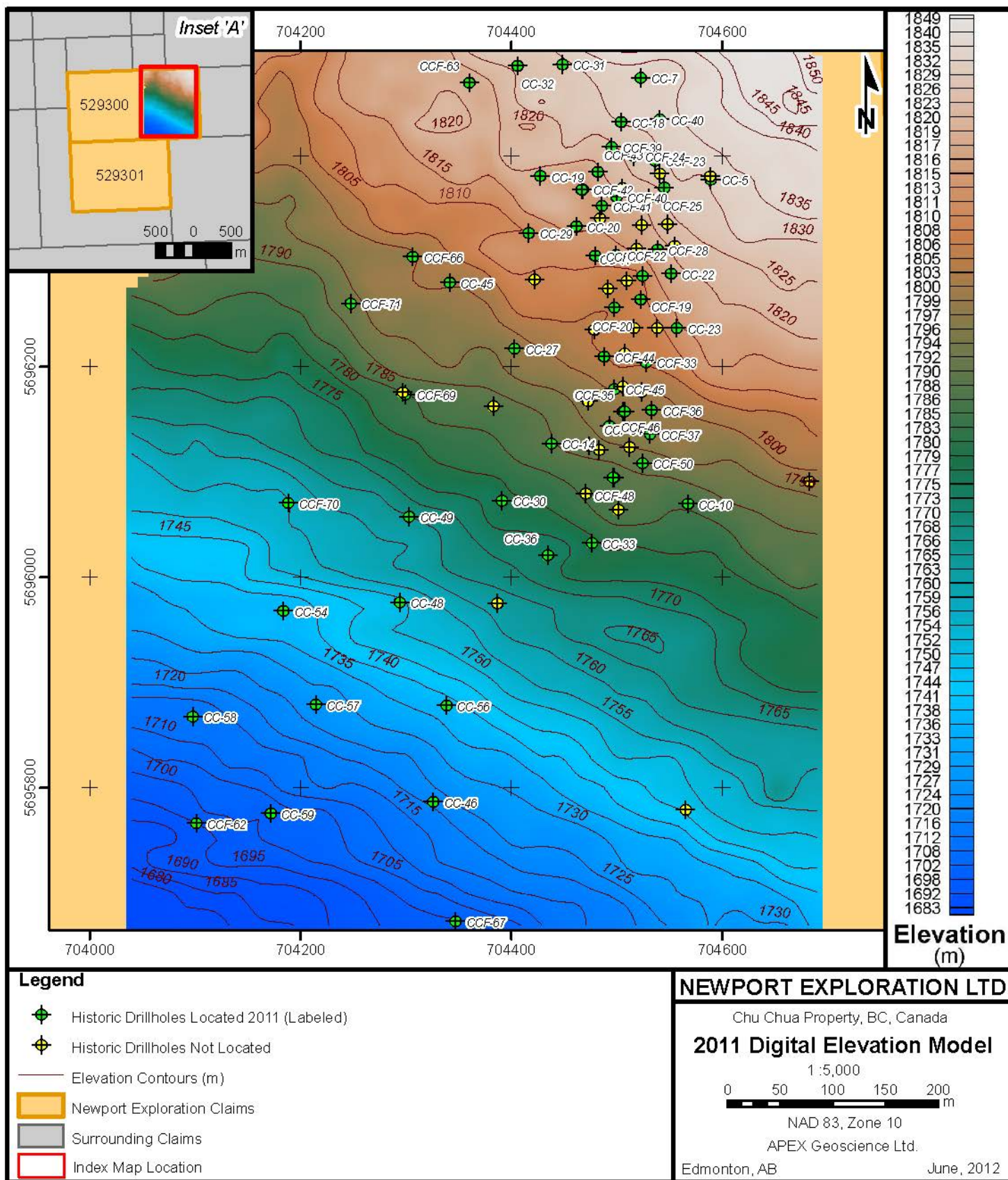


Figure 7. Digital Elevation Model

copper values is largely due to grade apparent grade variability within the drill hole CC-16 where particularly high historic copper grades (up to 7.57% Cu over 5 m) were reported. Re-sampling of the same high-grade interval returned assays of 4.6% Cu over 5 m (Table 2). It is considered reasonable for grade variation to occur, in particular with respect to relatively high grade intervals such as those found within CC-16, given the inherent variability of disseminated to semi-massive and massive sulphide mineralization within the Chu Chua deposit. An exclusion of the results for CC-16 returns a -0.14% Cu length weighted average difference between the re-sampled and historically reported drill core assays (64.7 m of drill core directly compared).

Table 2. 2011 Diamond Drill Core Re-Sampling Results

Drill hole	From (m)	To (m)	Int. (m)	Historic Assay				2011 APEX Re-sampling				Difference (2011-Historic)			
				Cu%	Zn%	Ag g/t	Au g/t	Cu%	Zn%	Ag g/t	Au g/t	Cu %	Zn %	Ag g/t	Au g/t
CC-16	45	50	5	1.74	0.26	6.80	0.55	1.88	0.50	8.28	0.66	0.14	0.24	1.48	0.11
CC-16	50	55	5	4.83	0.44	9.60	0.69	1.52	0.21	7.39	0.76	-3.31	-0.23	-2.21	0.07
CC-16	55	60	5	7.47	0.75	22.60	0.69	4.60	0.31	12.94	0.66	-2.87	-0.44	-9.66	-0.03
CC-16	60	62.6	2.6	2.25	0.69	20.50	0.41	4.99	0.63	15.59	0.67	2.74	-0.06	-4.91	0.26
CC-17	14.6	20	5.4	1.59	0.19	12.30	0.55	1.10	0.08	8.27	0.55	-0.49	-0.11	-4.03	0.00
CC-17	20	25	5	2.55	0.57	12.30	0.55	1.61	0.26	10.50	0.67	-0.94	-0.31	-1.80	0.12
CC-17	25	28.8	3.8	1.02	0.71	2.70	0.00	0.82	0.52	7.13	1.00	-0.20	-0.19	4.43	1.00
CC-17	30	35	5	0.91	0.24	1.37	0.00	0.89	0.24	7.50	0.83	-0.02	0.00	6.13	0.83
CC-17	42.5	45	2.5	0.82	0.2	0.00	0.00	2.60	0.24	9.32	0.25	1.78	0.04	9.32	0.25
CC-21	205.5	210	4.5	1.99	1.09	0.00	0.00	2.22	1.02	7.27	0.30	0.23	-0.07	7.27	0.30
CC-21	210	214.4	4.4	1.91	0.66	0.00	0.00	2.14	0.89	8.54	0.46	0.23	0.23	8.54	0.46
CC-26	31.5	35	3.5	2.06	0.08	4.80	0.62	1.28	0.05	3.21	0.22	-0.78	-0.03	-1.59	-0.40
CC-26	35	40	5	0.94	0.07	5.80	0.34	0.50	0.06	2.15	0.21	-0.44	-0.01	-3.65	-0.13
CC-26	40	46	6	0.55	0.19	3.00	0.55	0.21	0.11	0.64	0.03	-0.34	-0.08	-2.36	-0.52
CC-26	46	50	4	0.07	0.08	2.00	0.21	0.10	0.04	0.28	0.01	0.03	-0.04	-1.72	-0.20
CC-54	599.5	602.2	2.7	3.82	0.76	15.17	0.52	3.49	0.51	11.24	0.46	-0.33	-0.25	-3.93	-0.06
CC-54	610.2	614	3.8	0.07	0.03	3.51	0.50	0.07	0.06	0.89	0.23	0.00	0.03	-2.62	-0.27
CC-54	652.4	656.1	3.7	0.01	0.04	1.94	3.61	0.01	0.03	0.28	0.08	0.00	-0.01	-1.66	-3.53
CC-55	394.6	400	5.4	1.06	0.14	5.99	0.40	1.17	0.12	4.49	0.40	0.11	-0.02	-1.50	0.00
Total (m)			82.3	Length Weighted Average Difference								-0.39	-0.07	-0.41	-0.07

The 2011 re-sampling included the collection of four (4) samples as quarter-split drill core duplicates. A comparison of duplicate analysis permits an assessment of Chu Chua drill core mineralization heterogeneity (within sample variation). A comparison of 4 duplicate samples collected during 2011 indicates that no significant within sample variability exists for silver and gold (Table 3). The length weighted average difference of duplicate sample analysis for copper and zinc are 0.20% Cu and 0.14% Zn, respectively. The results indicate that at a significant part of the copper variability between historically reported and the 2011 re-sampled drill core is a result of the inherent variability of disseminated to semi-massive and massive sulphide mineralization within the Chu Chua deposit.

Table 3. 2011 Diamond Drill Core Duplicate Sample Results

Drill hole	From (m)	To (m)	Int. (m)	2011 Primary Assay				2011 Duplicate Assay				Difference (Primary-Duplicate)			
				Cu%	Zn%	Ag g/t	Au g/t	Cu%	Zn%	Ag g/t	Au g/t	Cu %	Zn %	Ag g/t	Au g/t
CC-16	45	46	1	2.60	0.59	10.05	0.64	1.98	1.015	9.05	0.63	0.62	-0.41	1.00	0.01
CC-17	24	25	1	1.24	0.15	8.89	0.84	1.12	0.28	9.43	0.81	0.13	-0.13	-0.54	0.03
CC-26	36	37	1	0.86	0.02	2.73	0.22	0.80	0.02	3.20	0.21	0.06	-0.00	-0.47	0.01
CC-54	659	659.8	1	0.01	0.01	0.14	0.01	0.03	0.01	0.19	0.02	-0.01	-0.00	-0.05	-0.01
Total (m)			4	Length Weighted Average Difference								0.20	-0.14	-0.01	0.01

Plots of historic and 2011 re-sampling analytical results for gold, silver, copper versus depth (m) for all re-sampled drill holes (CC-16, 17, 21, 26, 54, 55, 57) are presented in Appendix 4. The figures permit a direct comparison of historic versus 2011 re-sampled assay results for each drill hole, and further highlight within-interval variability (i.e. variability in the distribution of sulphide mineralization).

Individual data points were plotted at the midpoint of the respective interval. Missing data or gaps in the sampling, both from the original sampling or the 2011 re-sampling, are represented as data gaps in the charts. Drill hole CC-17 (Figure 7) in particular indicates that a relatively wide zone of moderate grade mineralization between the depths of 45-57 m is directly underlain by a narrower higher grade interval between 57-62.6m. Re-sampling indicates that discrete intervals of high grade mineralization are present within the majority of drill holes. Increased base metal and silver values do not appear to be accompanied by a corresponding increase in gold assays within drill hole CC-17. However, higher grade base metal and silver mineralization within drill holes CC-26, 54 and 55 is associated with slight increases in gold assay values (Appendix 3).

10.2 Digital Elevation Model

In an effort to aid future exploration and potential mineral resource estimates at the Chu Chua deposit a Digital Elevation Model (DEM) was completed in conjunction with historic drill collar surveys. The DEM was produced over a 650 m (east-west) x 850 m (north-south), approximately 55 ha rectangular survey grid encompassing the known surface and subsurface expression of the Chu Chua deposit. The survey was completed using a single Trimble R8 GNSS receiver operating without a base station correction signal, and providing accuracies of approximately 2 m vertically and 4 m horizontally. Survey accuracy was reduced in comparison to historic drill collar surveys when it was determined that the UHF radio connection between base and mobile receivers was unreliable due to heavy tree cover and topographic variation.

The DEM survey progressed via a series of 35 east-west oriented survey lines spaced at intervals of 25 m over the Chu Chua deposit. Individual DGPS observations (data points) were collected along each line at an observation frequency of 3 Hz. The receiver was programmed to collect an observation only if position accuracies of better than 2 m horizontally and 4 m vertically were available. Under certain circumstances,

for example due to heavy tree cover, accuracies of better than 2 m horizontally and 4 m vertically were not achievable. In such cases the survey crew was instructed to stop and wait for higher position accuracies enabling an observation to be collected, or in areas of very thick tree cover to continue the survey and accept the resultant lower observation density.

The completed survey covering an area of approximately 55 ha resulted in the collection of 9,807 individual location observations, having an approximately data density of one observation every 2-3 m (east-west) and one observation every 25 m (north-south). Each observation consisted of the following data channels: UTM NAD83 Zone 10 (XY) location, elevation in metres, number of satellites tracked, horizontal precision estimate, vertical precision estimate, and Position Dilution of Precision (PDOP) value (Table 4). PDOP position accuracy values of 1 through 5 are considered ideal to good; values of 5 through 20 are considered moderate or fair; while values of >20 are considered poor.

Table 4: Summary of DEM Observation Accuracy

Number of Observations = 9,807	Minimum (m)	Maximum (m)	Mean (m)	Standard Deviation
Horizontal Precision	0.054	2.814	1.315	0.362
Vertical Precision	0.076	4.568	2.094	0.662
PDOP	1.7	61.5	3.39	1.54
Satellites Tracking	5	10	5.57	0.77

The resultant survey data was analyzed and processed using Geosoft Oasis Montaj software. Data processing was limited to the application of a B-Spline smoothing filter to the elevation channel (0.6/1 smoothness, and 0.2/1 tension parameters). This was done due to the lower absolute accuracy of elevation data in comparison to the horizontal position accuracy. It was found that the use of a B-Spline filter reduced the “spikiness” apparent in the elevation data. This resulted in a smoother and more realistic DEM product in comparison to unfiltered data. No filtering or processing of horizontal position data was conducted. The resultant unfiltered horizontal position and smoothed elevation data was gridded via minimum curvature using a 6.25 m cell size. The resultant minimum curvature grid was re-sampled at a 1 cell size to produce the final DEM and contours polylines were extracted at 5 m intervals. The final colour-shade DEM data including 5 m contours is presented in Figure 7.

11 Drilling

No drilling has been conducted on the property since the last drilling program conducted by Minnova in 1991.

12 Sample Preparation, Analyses and Security

12.1 Historic Samples

There is little information available for the sampling method and approach for the historic soil, rock and core sampling. Where information is available, the historic core sampling methodology is discussed below the Data Verification section as part of the ongoing drill hole database validation.

12.2 Core Re-Sampling 2011

In July of 2011, a total of 110 core samples were re-sampled in the field by APEX geologists from existing historic core present on the Chu Chua property. A rock splitter was on site and the core was split and bagged into plastic sample bags. On every 10th sample, a QA/QC sample (Standard, Blank, or Duplicate) was inserted into the stream of samples, a total of 12 QA/QC samples were added. Sample identifiers were written on the outside of each bag and part of the sample card with the sample number was placed in the bag with the rock sample number written on it. All sample bags were closed using zip ties. Upon completion of sampling the total of 122 (QA/QC) samples were placed in poly-woven bags and sent to ALS in North Vancouver, BC for processing. The authors have no reason to believe that the security of the samples was compromised. Although an exhaustive sampling was not conducted, the samples collected represent select mineralized intervals based on previous historic data. All core samples collected on the property had their sample numbers recorded along with the drill hole identification depth interval (from-to) in metres. Any missing sections within the sampled intervals were recorded and are noted within Appendix 1.

Samples at ALS are received, sorted and verified according to a Sample Submittal Form. The shipment is assigned an ALS reference number, after which a worksheet with analyses requested is generated. Excessively wet samples are first dried in drying ovens and then crushed. Large rock or core samples are typically coarse crushed using an oscillating jaw crusher to 70% passing a Tyler 9 mesh (2.0mm) screen. The sample is then split using a riffle splitter. A sample split of up to 250g is then ring-mill pulverized to better than 85% of the sample passing a Tyler 200 mesh (75 microns) screen. At the beginning of each shift and/or the start of a new group, samples are screened to ensure correct particle sizes. Crushers, rifflers and pans are cleaned with compressed air between samples. Pulverizing pots and rings are brushed, hand cleaned and air blown.

A 30 gram nominal sample weight charge is then taken and the entire plus fraction is retained. Sample decomposition is performed by fire assay fusion (FA-FUS) and the digested solution is analyzed by inductively coupled plasma atomic emission spectrometry (ICP-AES) against matrix-matched standards. Gold detection limits for FA by ICP-AES is 0.001 to 10 ppm. The default overlimit method (Assay procedure Au-AA25) for an ore grade anyalyte is by atomic absorption spectrometry (AAS) which has a detection limit of 0.05 to 100 ppm.

A prepared 0.25 gram minus fraction was sent for multi-acid ICP-AES and inductively coupled plasma mass spectrometry (ICP-MS) analysis. The ICP analysis detects 48 elements and the use of the multi-acid (HNO₃-HClO₄-HF-HCl) digestion liberates

more elements than the Aqua Regia partial leaching process. The four acid digestions are able to dissolve most minerals; however, although the term “*near-total*” is used, depending on the sample matrix, not all elements are quantitatively extracted. The elements are then detected by their characteristic wavelength specific light, which can then be measured by the ICP Spectrometer and the results are corrected for spectral interelement interferences.

The assay procedure ME-OG62 is the default overlimit method for ore grade analytes. The evaluation of ores and high-grade materials are optimized for accuracy and precision at high concentrations using conventional ICP-AES analysis which provides greater upper limits. The samples are similarly decomposed by the same four acid digestion and the results from the Spectrometer are equally corrected for spectral interelement interferences.

ALS Vancouver is an ISO 9001:2008 certified laboratory and is also accredited by the Standards Council of Canada (SCC) and has been found to conform to the requirements of ISO/IEC 17025:2005.

13 Data Verification

13.1 Historic Core Sampling

The diamond drill re-sampling was done at 1 m intervals unless the length of the core was insufficient and the intervals had to be reduced. The resampling was completed on cut core so most samples were quartered. The 1 m interval data was then combined into 5 m data groups in order to be compared with historic data. Duplicates were taken every 30 samples; standards and blanks were included every 30 samples as well so that every 10th sample (10%) was a part of QA/QC.

Laboratory pulp standards inserted into the sample stream by the field crew were compared to the expected certified values and if the lab results fell significantly outside the established third standard deviation confidence levels, the internal batch or the entire sample shipment was requested to be re-run. In addition, an analytical batch was considered a failure if two or more values from that same analytical batch fell outside the +/- 2 standard deviation (SD) lines.

The assay for Zn, Au and Ag were all within the two SD limits while one Cu and one Pb value fell outside the two standard deviation limits, triggering a provisional warning but not a failure (Appendix 1). The assay for the blanks showed consistent results with <0.01% Cu, <0.01% Zn, <0.001% Pb, <1ppm Ag, and <0.01ppm (Appendix 1). Additionally the assay for the duplicate samples was comparable to the assay of the primary samples considering the heterogeneity of core samples.

All samples taken were processed at ALS in which additional QA/QC measures are undertaken. As part of their in house quality QA/QC program, ALS inserts blank and standard samples in addition to repeat sample analysis. Quality control samples are inserted on each analytical run, based on the rack sizes associated with the method. Regular AAS, ICP-AES and ICP-MS methods use a rack size of 40 and are allocated 2

standards, 1 duplicate and 1 blank. Regular fire assay methods use a rack size of 84 and are allocated 2 standards, 3 duplicates, and 1 blank. The blank is inserted at the beginning, standards are inserted at random intervals, and duplicates are analyzed at the end of the batch. ALS in-house standards are tested by internal round robin exchanges and by external proficiency tests.

13.2 Drill Hole Collar Surveying

13.2.1 Surveyed DDH in the field

A total of 60 drill hole collars were surveyed during the 2011 field program, of which 45 were exposed rods that were in place. For the remainder of the holes surveyed, a point was taken from middle of the clearing or where the collars seem most likely to be based on orientation of the holes. The data was post-processed and corrected after the field visit to obtain sub-meter accuracy of absolute locations of surveyed data.

Drill collar surveys were completed in RTK survey mode, whereby the stationary base receiver broadcasts a correction signal to the mobile receiver via UHF radio connection providing horizontal accuracies of up to 10 cm and vertical accuracy of up to 20 cm. The locations of drill hole collars surveyed from a clearing site were verified using historic plan maps and their relative position to the surveyed holes with exposed rod in-situ. The orientation and set-up of the drill were also considered in order to minimize errors.

13.2.2 Digitized Drill Hole Collars

All the historic diamond drilling plans from the original assessment reports available were rectified using Google Earth imagery, NTS 1:50k base map data, and the 2011 drill hole collar survey. In the case of digitization with the 2011 drill hole collar survey only drill hole with sub-meter accuracy values were used to rectify the old drilling plans.

The locations of 32 drill hole collars, which could not be verified via surveying, were digitized using the rectified plan maps, and the previously verified drill hole collar locations. The newly digitized locations honored the relativity of holes within historic plans in relation to the 2011 surveyed drill hole collars, while falling within areas of roads-trails, and clearings.

13.3 Digital Data

Basic digital data from the Chu Chua property was provided to APEX by Strongbow which served as the base for a geographic information systems (GIS) project, specifically for an ArcGIS project built by APEX. An access digital drill hole database was also provided. Apex proceeded to compile and digitize all available data pertaining to the Chu Chua deposit and relevant to the property.

Drill logs and assay data for 99 diamond drill holes, totaling 19,707 m, that targeted the Chu Chua deposit were compiled and validated against available paper copies. Drilling completed from 1978 to 1982 by Craigmont included 55 holes. The holes were documented only with hand written logs; holes CC-1 to -49 have been validated against paper copies. It is unclear, but unlikely, that any collar surveys were done hence an uncertainty exists about the exact location of the collars. Only downhole acid dip tests

were carried out, with the data recorded on the logs. No downhole azimuth or specific gravity (SG) measurements were taken. The logs show that most of the sample intervals within the massive sulphide zones are on the order of 4 to 5 m in length for single samples. The assays are hand written on the logs, with no assay certificates available. No QA/QC samples were analysed (i.e. no standards, duplicates or blanks were processed and analysed). The 1978 to 1982 drill core was stored in racks on site; it has been verified to be present and is in reasonable shape.

A total of 46 holes were drilled by Minnova between 1988 and 1991. The Minnova data is comprised of computer generated drill logs that contain information on the collar locations and downhole surveys. Most of the available drill logs indicate that the collars have not been properly surveyed after completion of the drill hole. For two of the collars that have been surveyed a discrepancy exists between the plotting coordinate and an alternate coordinate and it is unclear which the final surveyed collar location is. There is no downhole azimuth data for the 1988 and 1989 drill holes, which represent the bulk of the Minnova drilling into the massive sulphide zones. For the 1990 and 1991 deep drilling single shot azimuth and dip data is recorded on the logs, however, it is unlikely the original shots are available. It should be noted that for the deep holes drilled by Minnova, the end of hole northing coordinate versus the collar northing coordinate due to azimuth deviation of the easterly drilled holes ranges from a few meters up to more than 60 m (hole CC-71 drilled to a depth of 667.7 m core length). It is highly likely that some of the deeper Craigmont BQ core holes drilled to depths of between 300 and 668 m core length in the period between 1978 and 1982 would have encountered significant downhole deviation for some of the holes, throwing into question the exact location of the deeper massive sulphide intercepts due to a lack of downhole survey information.

The 1988 to 1991 drill hole data includes a significant amount of SG data, however, there is no indication on how the measurements were taken. Sampling of the core during 1988 to 1991 through the massive sulphide zones was done with more reasonable intervals with samples taken at 1 to 1.5 m sample lengths. The samples were analysed by Min En Laboratories and assay data have been validated against the assay certificates for samples from drill holes CCF-31-34, 43-47 and partially for CCF-49. In a number of cases, high grade base and precious metal zones identified in the Minnova drilling lack adjacent wall rock sampling in order to characterize the grade of potential wall rock dilution. Whole rock geochemical samples were also collected and processed at Min En Laboratories. A thorough review of the paper and digital data indicates that there is no obvious QA/QC data for the assay, geochemical or SG analyses (i.e. no evidence of any blanks, standards and duplicates). The 1988 to 1991 drill core is reported to have been retained and stored by Minnova in a warehouse in Barriere, however, Strongbow indicates that the core has been disposed of (Gale, pers comm., 2009).

Overall, it can be said that the hardcopy data, the drill hole database and the contained data for the Chu Chua property are of a reasonable standard and relatively complete.

14 Mineral Processing and Metallurgical Testing

Minnova completed a fairly extensive program of metallurgical test work during 1989 to 1991 (Purkis, 1991). The reported metal recoveries from the Chu Chua ore, in particular for Cu, were less than desirable, however, the test work was conducted solely based on the Afton Mill flow sheet and then was looked at as feedstock for the Samatosum Mill. The ore processing flow sheet at both mills, both of which are currently not in operation, was less than optimum for processing Chu Chua ore. Further metallurgical work was strongly recommended for the Chu Chua ore (Purkis, 1991).

15 Mineral Resource Estimates

15.1 Introduction

The mineral resource estimation of the Chu Chua mineralised zone was completed by Mr. Nicholls under the direct supervision of Mr. Dufresne and Mr. Raffle whom are all deemed as a “Qualified Person” with respect to the style of mineralisation and mineral resource estimation as defined by NI 43-101. The mineral resource modelling and estimation was carried out using a 3-dimensional block model, using commercial mine planning software Micromine (version 12.05.03).

The Chu Chua mineralised zone block model utilised a parent block size of 25 m x 2 m x 10 m with sub blocking down to 2.5 m x 0.5 m x 1 m. The resource modelling utilised 55 historic core holes completed between 1978 and 1990. APEX personnel have not overseen any of this historic drilling but site visit has been performed by Mr K. Raffle on June 26th, 2012. Mr Raffle has overseen the compilation of the historical drill hole data for the use in this resource estimation.

The mineral resource for the Chu Chua mineralised zone is reported in accordance with the Canadian Securities Administrators National Instrument (NI) 43-101 and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 23rd, 2003 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated November 27th, 2010. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve.

15.2 Data

15.2.1 Micromine Database

The drilling database used is current up to April 1, 2012. This incorporates all available diamond drilling and analytical data. All data provided for the mineral resource estimation was copied from excel spread sheets into Micromine format. The five main .xlsx files that were utilised were:

- CC_DH_Collars_2011.xlsx – Collar file
- DH_downhole surveys verified2010.xlsx – Survey file
- DH_Chua-Chua logs verified2010.xlsx – Geology file
- DH_Assays_verified 2010.xlsx – Sample file

- Chuchua_DEM_final.XYZ – DEM surface file

There were a total of 99 diamond drill holes within the provided export of which 50 were used in the resource estimation. Spacing between drill lines is quite varied with drilling conducted not on set line spacing. The drill line spacing varies from 10 m to 45 m, with an average of about 20 m between drill lines. The sample file comprises 873 samples of variable length but when composited in Micromine yielded a database of 251 sample composites for the Chu Chua mineralisation that were used for the mineral resource estimation.

Data supplied and utilised in Micromine included collar easting, northing and elevation co-ordinates, lithology information, and Cu, Pb, Zn, Ag, and Au assay data, as well as bulk density data (specific gravity) data. The collar co-ordinates were obtained by a combination of Differential GPS drill hole collar pickups and the use of historic collars provided from the drill logs. The elevation of the drill holes that did not have their collar picked up had an Reduced Level (RL) assigned using the provided DEM topographic surface in Micromine. The method of the down hole surveys for the Chu Chua mineralised zone varies from dip only acid etch surveys to single shot down hole surveys which provided a dip and an azimuth for the drill hole orientation. The initial collar setup was performed using a compass and a clinometer. Where no azimuth's were not able to be obtained from the down hole surveys then the collar azimuth setup was applied to the dip only down hole surveys.

15.2.2 Collar Coordinates

A total of 99 diamond drill holes are known to have been drilled on the Chu Chua properties of which fifty of these holes were used in the resource. Due to the lack of historic documentation of the drill hole collar set out, it was decided to ground truth the collar positions and resurvey where possible. This was conducted using a Trimble R8 GNSS GPS system that has a horizontal accuracy of 0.25m and vertical accuracy of 0.5m. Out of a total of 50 diamond drill holes that have been used in the resource estimation a total of 26 holes have had the drill hole collars picked up by locating the actual drill hole collar casing sticking out of the ground. Of the remaining 24 holes there were an additional 4 holes where a 10m x 10m clearing was visible and picked up. For the remaining drill holes that could not be verified on the ground, a variety of registration techniques were utilised to better constrain the reported historic drill hole co-ordinates. The original historic drill plans that were completed soon after the completion of drilling were registered using the 26 re-surveyed drill holes and used in conjunction with notable cleared drill pads observed on Bing Maps aerial photography. From a combination of these techniques new easting and northing co-ordinates were generated for the remaining 20 drill holes. The elevation for these drill hole collars were generated by assigning a new RL using the surveyed topographic DTM surface in Micromine.

This surface DTM was created by walking 25m spaced line traverses with points collected every 3m along the lines. This was conducted using the Trimble R8 GNSS GPS system. Due to some spikes in the data this data set was then smoothed out to provide a more realistic set of points that could be used for the surface DTM surface. The size of the surface DTM covered the entire resource area of which is 650m wide x 850m long in size.

15.2.3 Sampling/Assaying

Due to the historic nature of the diamond drilling and the lack of historic documentation there is limited information about the sampling and assaying methodology conducted for the Chu Chua diamond drilling.

15.2.4 Downhole Surveys

Craigmont drilled 55 BQ and AQ diamond drill holes between 1978 and 1982. The down hole surveys (acid etch) that were completed on this drilling only recorded the down hole dip of the drill hole. There were no azimuth surveys able to be collected using the acid etch technique. An assigned azimuth was assigned to the drill hole based on the collar setup (usually 90°). The maximum hole depth of these drill holes range from 37 to 688 m. Due to the depth of the drill holes drill hole deviation in the azimuth is expected and as such raises concerns over the exact location of the massive sulphide/stringer mineralisation intersected in the drilling.

During 1988 and 1991 Minnova completed 46 NQ size diamond drill holes. The holes that were drilled between 1998 and 1989 had down hole dip measurements collected every 30 to 40 m using an acid dip test but failed to collect any azimuth readings. These holes were generally shallow with the maximum depth of 120 m. Although these holes are relatively shallow drill hole deviation in the azimuth is still expected. As such it raises into question the exact locations of the deeper massive sulphide/stringer intersections.

The 1990 to 1991 drilling that Minnova conducted were all deeper drill holes ranging from 100 to 813m in depth. These drill holes had sporadic dip and azimuth surveys collected on average every 250m intervals down the hole. There was dip only surveys collected at around 60 metre intervals. All of these 1990 to 1991 drill hole surveys were collected using a single shot camera.

Based on the above mentioned concerns over the accuracy of the down hole positions of the drill holes drilled at the Chu Chua mineralised zone, this has a direct implication on the classification of the resource.

15.3 Geological Modelling

15.3.1 Wireframing

Mineralized lode wireframes were constructed and used to constrain the resource block model (Figure 8). The Chu Chua mineralisation consists of copper, lead, zinc, silver, and gold. A correlation table of the five elements indicated that there was a strong correlation between copper and silver. As copper and silver are the dominate metals of interest it was decided to use these as the control on the interpretation of mineralisation. A primary lower cut off of 0.5% copper and secondary 1 to 5 g/t silver cut off was used to constrain the outer edges of the lode interpretation.

The wireframes included some zones where there was no mineralisation, but as long as the down hole length was less than two metres this was included. There are gaps in the samples that have been collected over the mineralised ore zones, so for

completeness dummy intervals were inserted in these gaps and assigned a 0.0% or 0.0 g/t grade. This is discussed further under Drill hole Flagging and Compositing.

The interpretation was conducted on 25 m spaced east-west cross sections looking north with a window of 12.5 m towards and away. The lodes were extrapolated 12.5 metres along strike or halfway to the next drill hole (whichever one was less), and up to around 30 m up/down dip depended on the mineralisation on neighbouring sections.

The current lode interpretation was conducted with the aim to wireframe mineralisation that had reasonable prospects of economic extraction. The width of the ore zones tends to drop off around the 180m below surface. Widths range from up to over 40 m to less than one metre. Although mineralisation extends down to 560m below surface it was decided to only wireframe mineralisation with reasonable prospects of economic extraction.

All drilling data was used to conduct and guide the lode wireframe interpretation.

15.3.2 Assay Summary Statistics

There are five elements of interest that were defined by the Chu Chua Mineralised Zone resource. These include Copper Cu, Pb, Zn, Au, and Ag. A typical down hole copper profile is shown in Figure 9. Summary statistics and histograms were calculated for the Chu Chua mineralised zone (Table 4 and Figures 10 through 15).

The precious metal Lead (Pb) was reviewed and excluded from the resource work below, because only it is in such low concentrations (with the exception of CC-28) at and near it's detection limit, therefore it is not included in the final resource estimate. For this reason the grades displayed in CC-28 raise concerns over the Pb analysis of this particular drill hole. It is recommended that this drill hole be re-analysed for Pb. Of the total 597 samples within the Chu Chua mineralised domain only 80% of these samples assayed for Pb. The statistics for Lead are presented in Table 4 for comparative purposes; however, they are not included in the resource estimate or any other tabulation below.

Table 3. Summary Statistics for Assay Data within the Chu Chua Mineralised Zone

	Copper (%)	Lead (%)	Zinc (%)	Silver (g/t)	Gold (g/t)
Number	597	487	590	591	595
Minimum	0.001	0	0	0	0
Maximum	15.3	27.9	8.2	76.2	5.12
Mean	2.168	0.305	0.346	9.85	0.554
Median	1.505	0.02	0.18	8.1	0.41
Std Dev	2.271	2.674	0.557	8.142	0.578
Variance	5.156	7.15	0.311	66.286	0.334
Std Error	0.004	0.005	0.001	0.014	0.001
Coeff Var	1.047	8.778	1.61	0.827	1.043

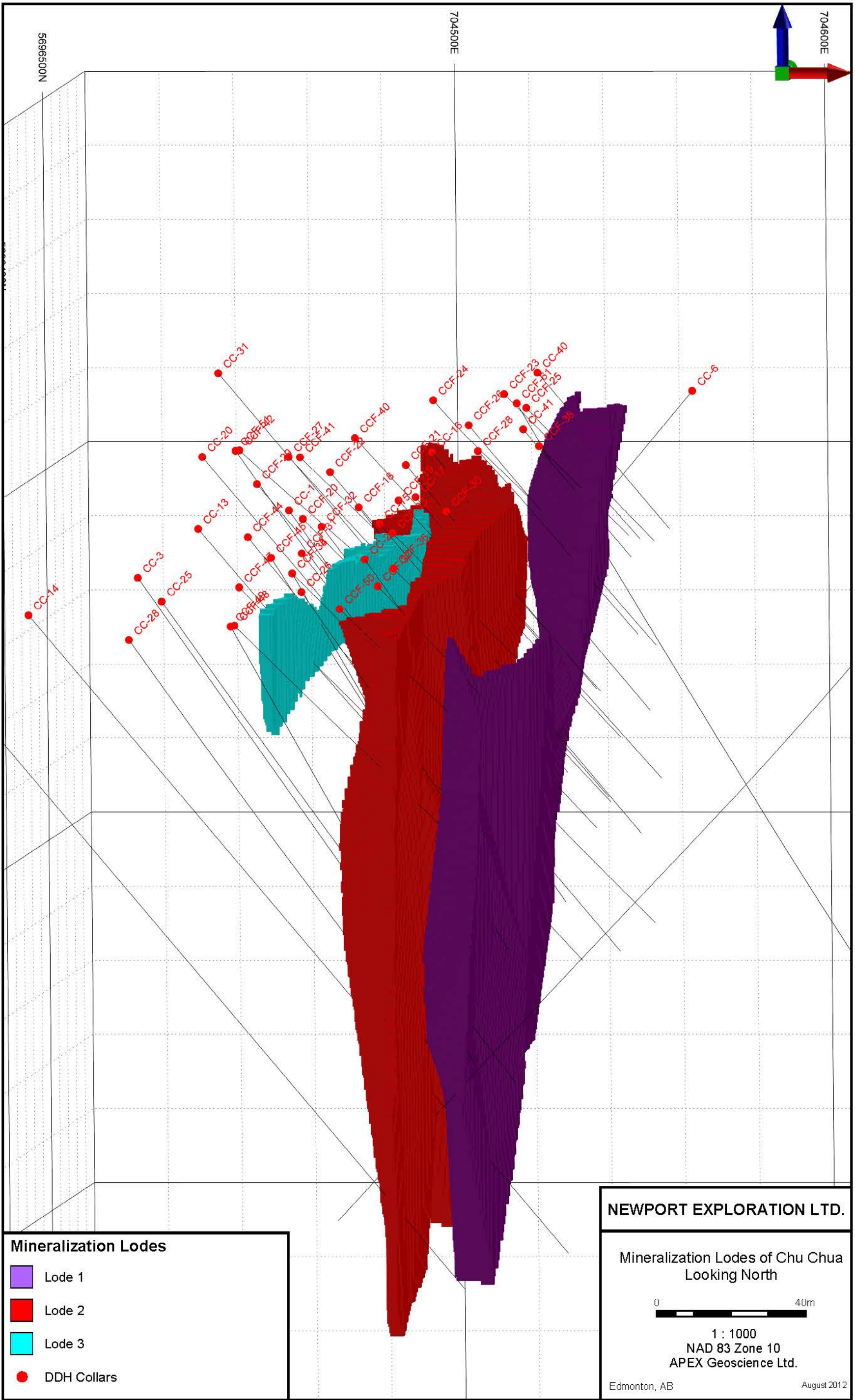


Figure 8. Mineralized Lodes of Chu Chua Deposit

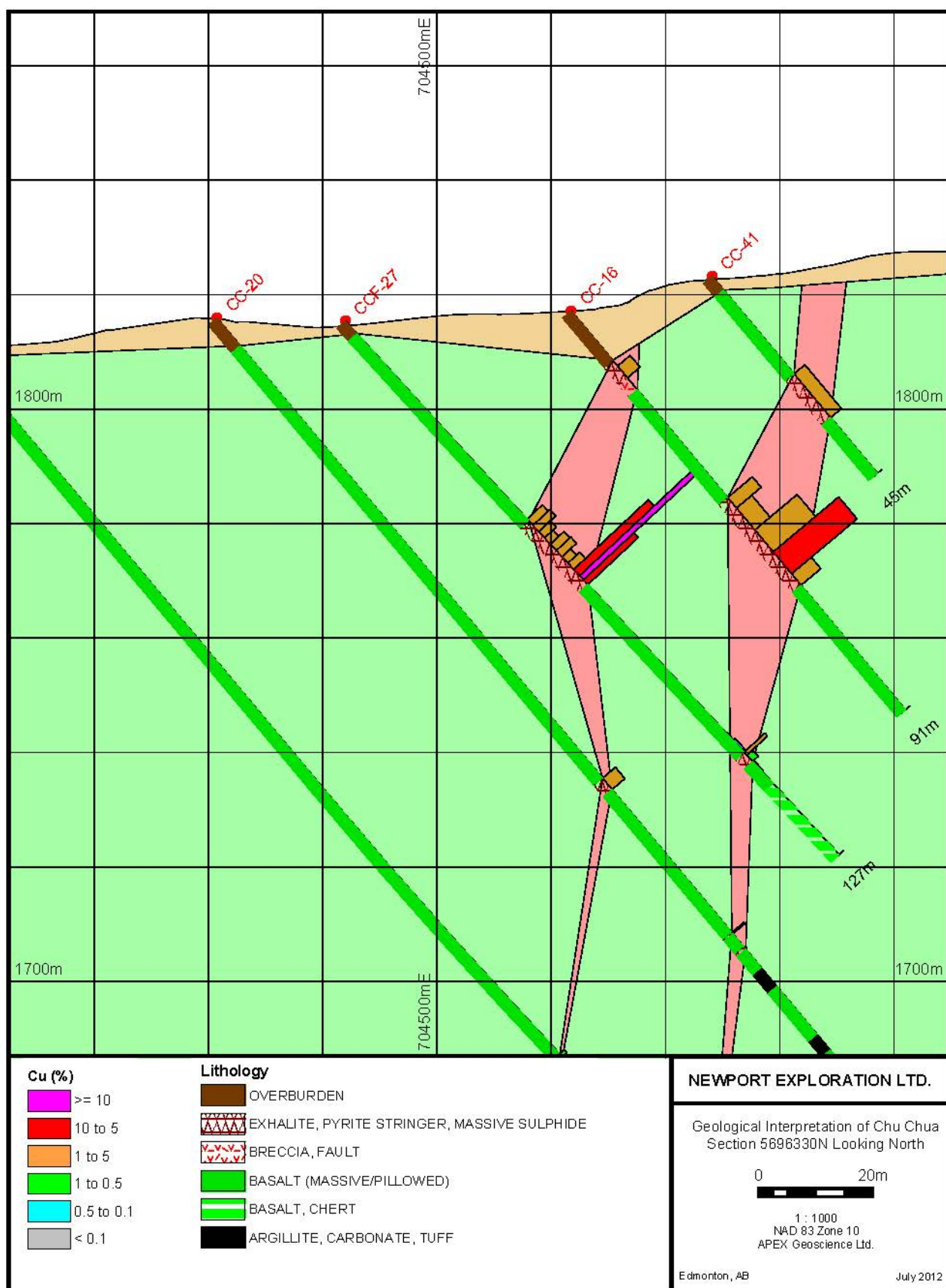


Figure 9. Drill Section Showing Geological Interpretation

Correlations between the various metal grades were calculated for the Chu Chua mineralised zone. There is a strong correlation between copper and silver and also between gold and silver (Table 5 and Appendix 4). A moderate correlation between gold and copper exists and to a lesser degree between silver and zinc. There is a poor correlation with lead in respect to the other metals.

Table 4. Correlation Between Assay Values Within the Chu Chua Mineralised Zone

	Cu	Pb	Zn	Ag	Au
Cu	1	-0.02	0.25	0.74	0.48
Pb	-0.02	1	0.02	-0.04	-0.02
Zn	0.25	0.02	1	0.35	0.32
Ag	0.74	-0.04	0.35	1	0.69
Au	0.48	-0.02	0.32	0.69	1

15.3.3 Drill hole Flagging & Compositing

Drill hole samples that were situated within the Chu Chua mineralised wireframes were selected and flagged with the wireframe name/code.

The flagged samples were checked visually next to the drill hole to check the automatic flagging process worked correctly. All samples were correctly flagged and there was no need to manually flag or remove any samples.

A review of the sample lengths was conducted for all Chu Chua samples that were constrained within the mineralised zone. The review showed that the Chu Chua sample lengths vary from 0.2 m to 11.4 m in length (Table 6 and Figure 15). Looking at the samples, there were four main populations, one being 0.5 m to 1.0 m in length, 1.0 m to 1.5 m in length, 1.5 m to 2.0 m in length and finally 4.5 m to 5 m in length. Essentially 99% of the sample data is less than 5 m in length. It was decided that 5 m should be used for a composited sample length.

Table 5. Sample Length Statistics for the Chu Chua Domain

	Un Composited Width
Number	597
Minimum	0.2
Maximum	11.4
Mean	1.754
Median	1.5
Std Dev	1.22
Variance	1.49
Std Error	0.002
Coeff Var	0.696

It should be noted that there exists gaps in the samples that have been collected to date. It is unknown if these gaps were in fact core loss or visually not mineralised and

Figure 10. Histogram of Cu Assay Data Within Chu Chua Mineralised Zone

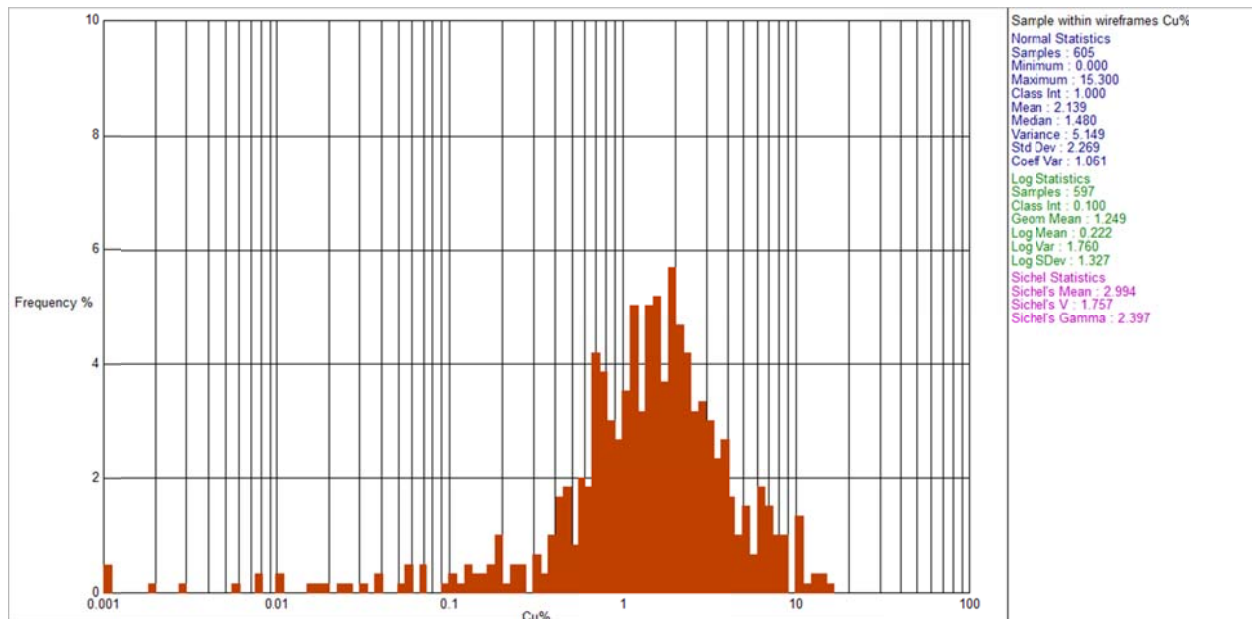


Figure 11. Histogram of Pb Assay Data Within Chu Chua Mineralised Zone

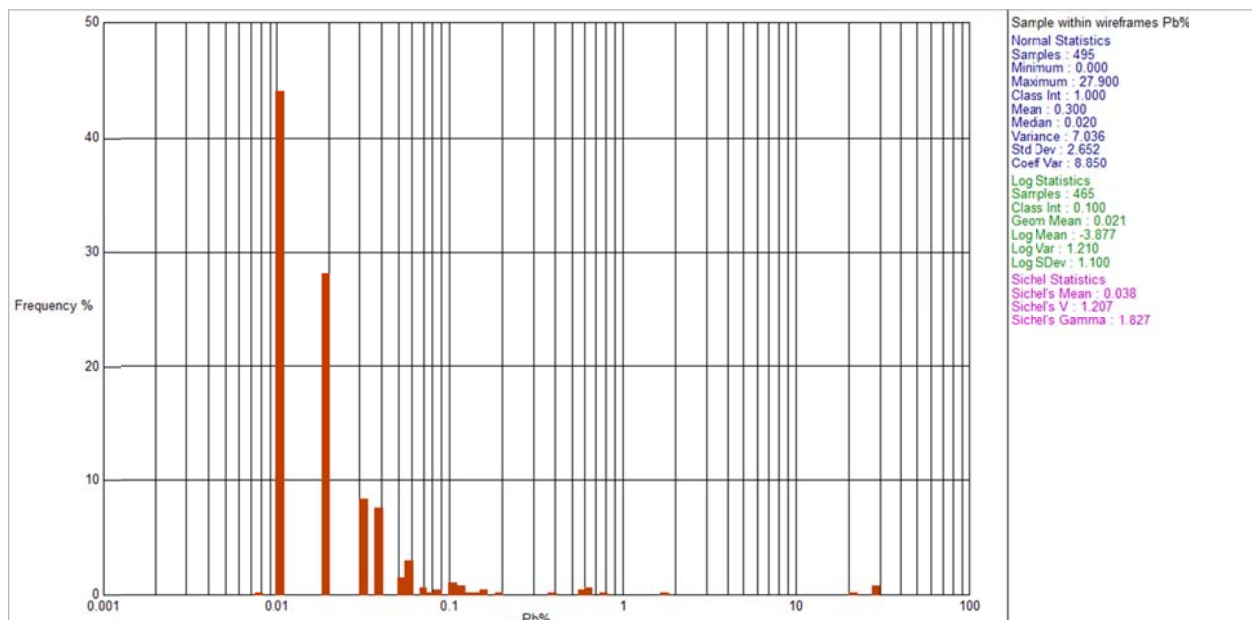


Figure 12. Histogram of Zn Assay Data Within Chu Chua Mineralised Zone

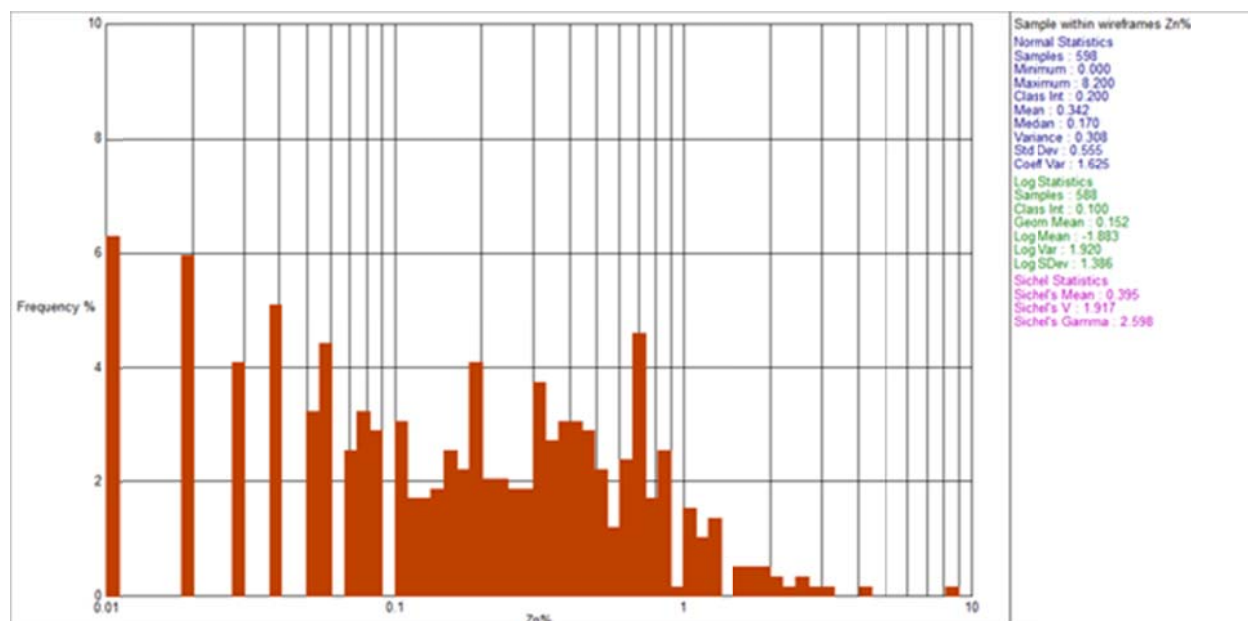


Figure 13. Histogram of Ag Assay Data Within Chu Chua Mineralised Zone

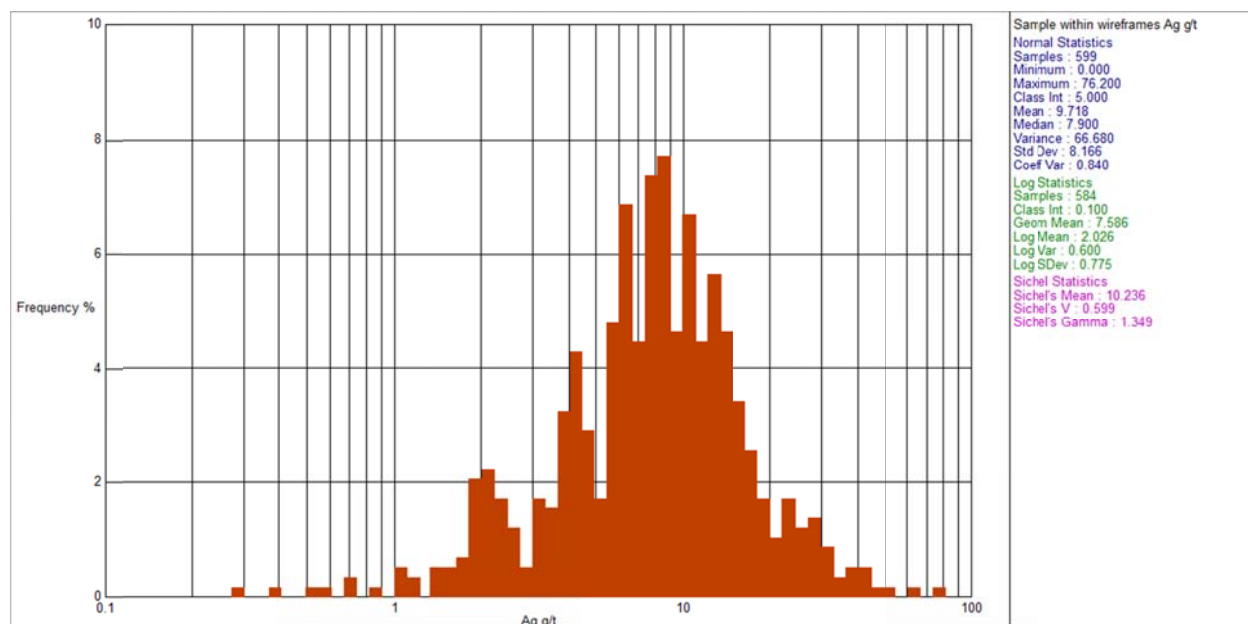


Figure 14. Histogram of Au Assay Data Within Chu Chua Mineralised Zone

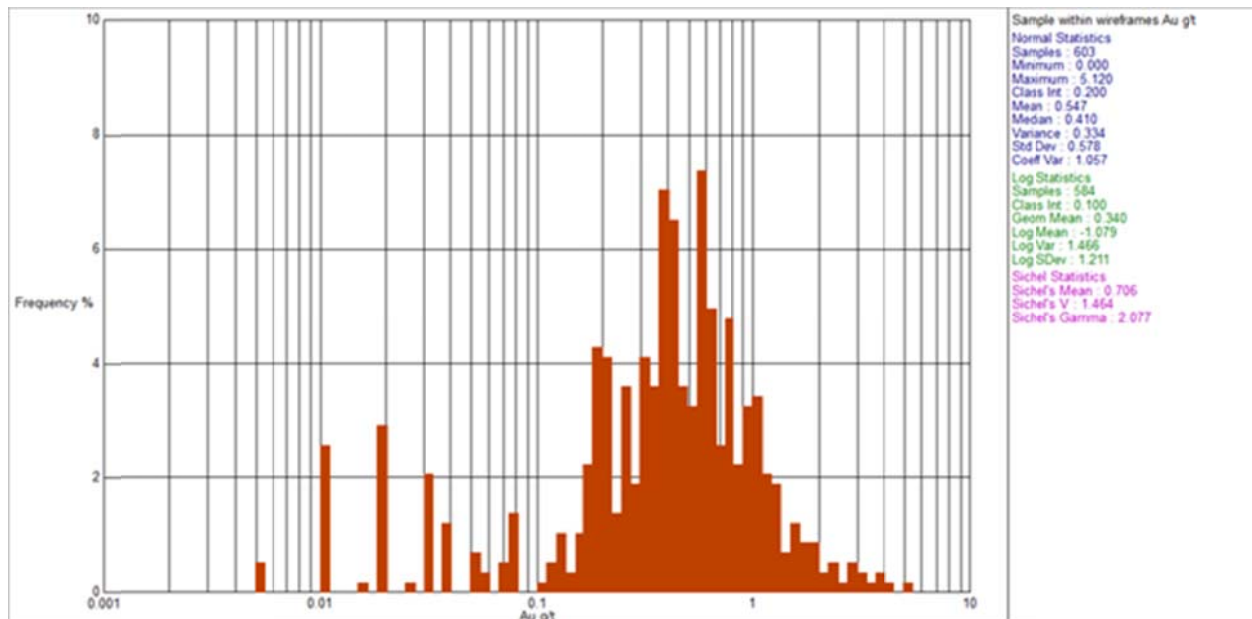
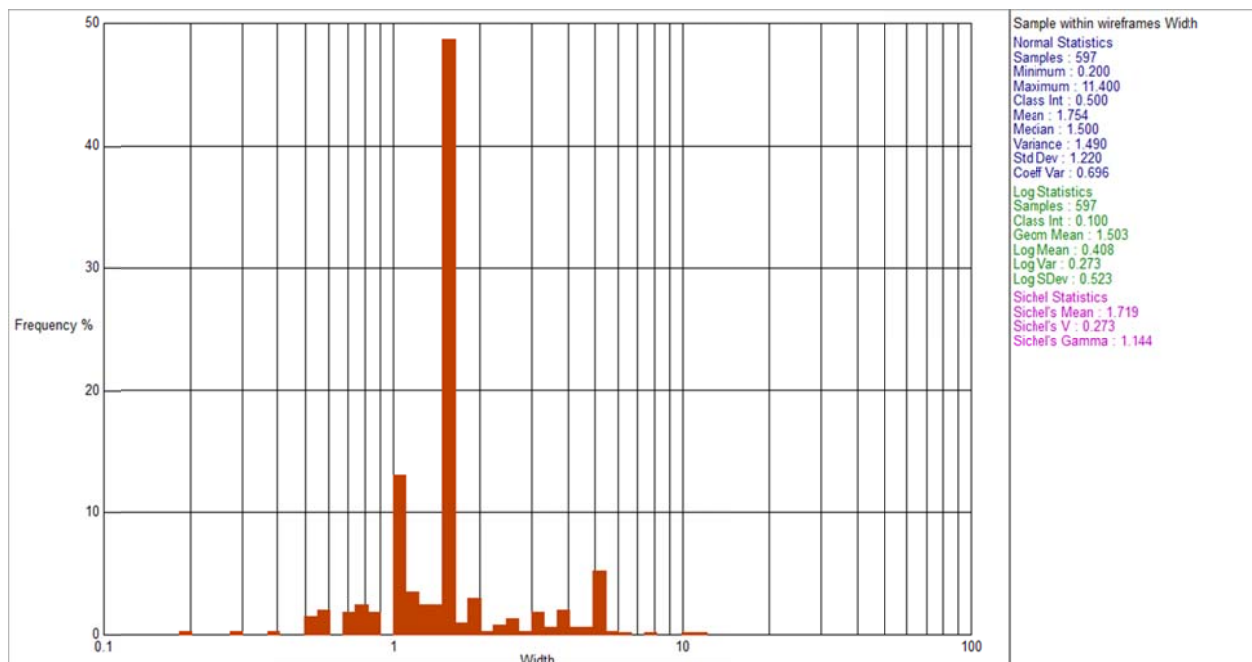


Figure 15. Histogram of Sample Length for the Chu Chua Domain Prior to Compositing



deemed not required for sampling. Either case missing sampled should be inserted. A part of the compositing process was to insert these missing intervals in the existing sampling. These samples were given a 0.0 % or 0.0 g/t grade for copper, lead, zinc, silver and gold. There were a total of 8 samples/gaps inserted into the sample file prior to compositing.

Length Weighted composites were calculated for Cu, Pb, Zn, Ag and Au. The compositing process starts from the first point of intersection between the drill hole and the Chu Chua mineralised wireframe, and is halted upon the end of the mineralised wireframe.

Upon completion of the 5 m compositing it was decided to examine the sample population which is less than 5m in width. The average of the remaining samples less than 5 m in length was 1.973% Cu compared to the 5 m composite length samples of 1.981% Cu. The inclusion of the sub 5 m composite lengths dropped the global average copper grade by 0.002%. It was decided to include all samples in the estimation as this was deemed to be within tolerances. This produced 251 composited with an average grade of 1.979% Cu.

The compositing process did not add any undue bias to the data (Table 7). The composited samples were used for all sample statistics, capping, estimation input file and validation comparisons.

Table 6. Composited Sample Summary Statistics for the Chu Chua Domain

	Un Composted Samples				Composited Samples			
	Cu%	Zn%	Ag g/t	Au g/t	Cu%	Zn%	Ag g/t	Au g/t
Number	597	590	591	595	251	250	249	250
Minimum	0.001	0	0	0	0.006	0	0	0
Maximum	15.3	8.2	76.2	5.12	8.778	2.64	62	4.301
Mean	2.168	0.346	9.85	0.554	1.979	0.331	9.263	0.5
Median	1.505	0.18	8.1	0.41	1.541	0.221	7.663	0.414
Std Dev	2.271	0.557	8.142	0.578	1.634	0.354	7.049	0.479
Variance	5.156	0.311	66.286	0.334	2.669	0.125	49.693	0.23
Std Error	0.004	0.001	0.014	0.001	0.007	0.001	0.028	0.002
Coeff Var	1.047	1.61	0.827	1.043	0.826	1.068	0.761	0.959

15.3.4 Top Cut / Capping

The composited sample data within the Chu Chua lode wireframes were used for top cut/capping analysis. All elements within the Chu Chua mineralised domain were examined individually to determine suitable capping to apply to the respective grade populations. A combination of histograms and probability plots were used to determine the extreme values to be cut (Appendix 6). During the estimation the extreme values were capped to the values provided in (Table 8).

Table 7. Capping Levels Applied to the Chu Chua Mineralised Domain

Grade Element	Capping Level	No Of Samples Capped
Cu	5.90%	12
Zn	0.86%	16
Ag	32g/t	3
Au	1.4g/t	6

15.3.5 Grade Continuity

The variography utilized the composite data within the mineralised Chu Chua lode wireframes to produce spherical semi variograms. Each element was modelled individually to determine the continuity and orientation of mineralisation. Some difficulties were encountered with the semi variograms for some of the elements due to limited number of samples. Table 9 provides the search criteria and the limits used in the estimation process. The individual variograms are provided in Appendix 7.

Table 8. Semi-variogram Parameters for the Composited Chu Chua Domain

Grade Element	Nugget (%)	C1 (gamma)	Range 1 (m)	Range 2 (m)	Range 3 (m)
Cu	13.6	1.9	49	32	3
Zn	14.3	0.059	52	57	3
Ag	19.6	35	32	36	2
Au	12.5	0.105	45.1	26	4

15.4 Block Modelling**15.4.1 Block Model Extent & Size**

As a result of the varied historic drill spacing a parent block model size of 25 m x 2 m x 10 m was chosen for the Chu Chua resource estimation. This block selection honours the approximate drill hole spacing. The block model extents were extended far enough past the mineralised wireframe to encompass the entire mineralised domain. Table 10 presents the coordinates ranges and block size dimensions used to build 3D block model from the mineralisation wireframes. Sub blocking was used to more effectively honour the volumes and shapes created during the geological interpretation of the mineralised lodes. The blocks were oriented in a north-south orientation parallel to the strike of the mineralisation. There were a total number of 19,426 blocks.

Table 9. Block Model Extents and Cell Dimensions for the Chu Chua Domain

Deposit	Block Model Dimensions	Easting	Northing	RL (m)
Chu Chua	Maximum	704600	5696505	1860
	Minimum	704400	5695855	1180
	Parent Cell Size	2	25	10
	Sub Blocking Cell Size	0.5	2.5	1

Upon setup of the block model, the volume of the block model lode was cross checked with the volume of the wireframes to check there were no significant

discrepancies between the two. The block volume was only 0.01% different from the wireframe volume. Refer to Table 11 for a comparison.

Table 10. Volume Comparison between Block model and Wireframe for the Chu Chua Deposit

Lode	Wireframe Volume (m³)	Block Model Volume (m³)	% Difference
Lode01	184,862	184,974	0.06%
Lode02	445,453	445,351	-0.02%
Lode03	19,214	19,108	-0.56%
Total	649,529	649,433	-0.01%

15.4.2 Bulk Density

A total of 522 bulk density measurements were collected from drill core within the Chu Chua area. The samples were tagged with the lode name and separated for use in the estimation process. A total of 465 samples were collected from within the mineralised horizon at Chu Chua. The bulk densities for each lode were examined using normal histograms to determine if there were any outliers present. Only one outlier was identified (CCF-31 – 6.49t/m³) and subsequently was removed from the bulk density dataset. This produced an average bulk density (specific gravity) of 4.366 t/m³. A breakdown of the bulk density by lode is presented in Table 12.

The bulk density samples were collected by Minnova Inc. between 1998 and 1991. Due to the lack of historic documentation the methodology adopted to calculate the bulk densities is unknown, but is of the authors opinion that these measurements seem realistic based on the geology encountered in the drill logs.

Table 11. Bulk Density Values by Lode

Lode	No. Samples	Average Density
All	464	4.362
Lode01	107	4.372
Lode02	331	4.329
Lode03	26	4.732

15.4.3 Mining and Geological Surfaces

The Chu Chua mineralisation is overlain with between 1 and 17 m of transported overburden. A DTM surface of the base of the overburden was created using the down hole geology logs from the diamond drilling. This was then used to cut the top of the mineralised lode wireframes as the overburden. The block model was then constrained to the modified Chu Chua lode wireframes.

There is no open pit or underground workings to Boolean out of the block model.

15.5 Grade Estimation

15.5.1 Ordinary Kriging

The Chu Chua mineral resource estimation was calculated using Ordinary Kriging (OK) grade estimation technique for each metal element. No trends were applied to the OK grade estimation. The kriging parameters were based on the variography conducted on the individual grade elements within the Chu Chua mineralised domain. Estimation was only calculated on parent blocks. All sub blocks within the parent block were assigned the parent block grade. A block discretisation of 2 (X) x 5 (Y) x 3 (Z) was applied to all blocks during kriging. The Chu Chua lode wireframes were treated as hard boundaries, which meant that only samples within the lode were used to estimate the grade of the blocks within that particular lode.

There were four passes of estimation conducted. The size of the elliptical search ellipsoid was based on the suggested ranges obtained from the variography. The estimation criteria for each pass are provided in Table 12.

Table 12. Search Ellipsoid Criteria for the Chu Chua Grade Estimation

Run Number	Minimum No. of Samples	Minimum No. of Holes	Factor x Radius	% Blocks Estimated
1	12	3	1	0%
2	8	2	2	46%
3	4	1	3	52%
4	1	1	30	2%

15.5.2 Search Parameters

The estimation of the Chu Chua mineralised zone was constrained within an-isotropic ellipsoids. The ellipsoid orientation was aligned to the strike and the dip of the lode being estimated. Each grade element was looked at individually and the search ellipsoid plunge was tailored to the observations from the variographic analysis. The search ellipsoid orientation is shown in Table 13. These search orientations honour the geological interpretation of the Chu Chua mineralisation.

Table 13. Search Ellipsoids Used in the Chu Chua Estimation Process

Lode	Strike	Dip	Plunge			
			Cu	Zn	Ag	Au
Lode01	178°	88°	27°	44°	18°	41°
Lode02	176°	90°	27°	44°	18°	41°
Lode03	174°	88°	27°	44°	18°	41°

15.5.3 Bulk Density

A total of 522 bulk density measurements were collected from drill core within the Chu Chua area. The samples were tagged with the lode name and separated for use in the estimation process. A total of 465 samples were collected from within the mineralised horizon at Chu Chua. The bulk densities for each lode were examined using normal histograms to determine if there were any outliers present. Only one

outlier was identified (CCF-31 – 6.49t/m³) and subsequently was removed from the bulk density dataset. This produced an average bulk density (specific gravity) of 4.366 t/m³. A breakdown of the bulk density by lode is presented in Table 14.

The bulk density samples were collected by Minnova Inc. between 1998 and 1991. Due to the lack of historic documentation the methodology adopted to calculate the bulk densities is unknown, but is of the authors opinion that these measurements seem realistic based on the geology encountered in the drill logs.

Table 14. Bulk Density Values by Lode

Lode	No. Samples	Average Density
All	464	4.362
Lode01	107	4.372
Lode02	331	4.329
Lode03	26	4.732

15.6 Model Validation

15.6.1 Visual Validation

The blocks were visually validated on cross section comparing block grades versus the sample grades for all sections and drill holes. In addition, the block and sample data were compared for each grade element, by lode, northing and RL. These comparisons are present in Table 15, Figures 16, 17 and 18, and in Appendix 8.

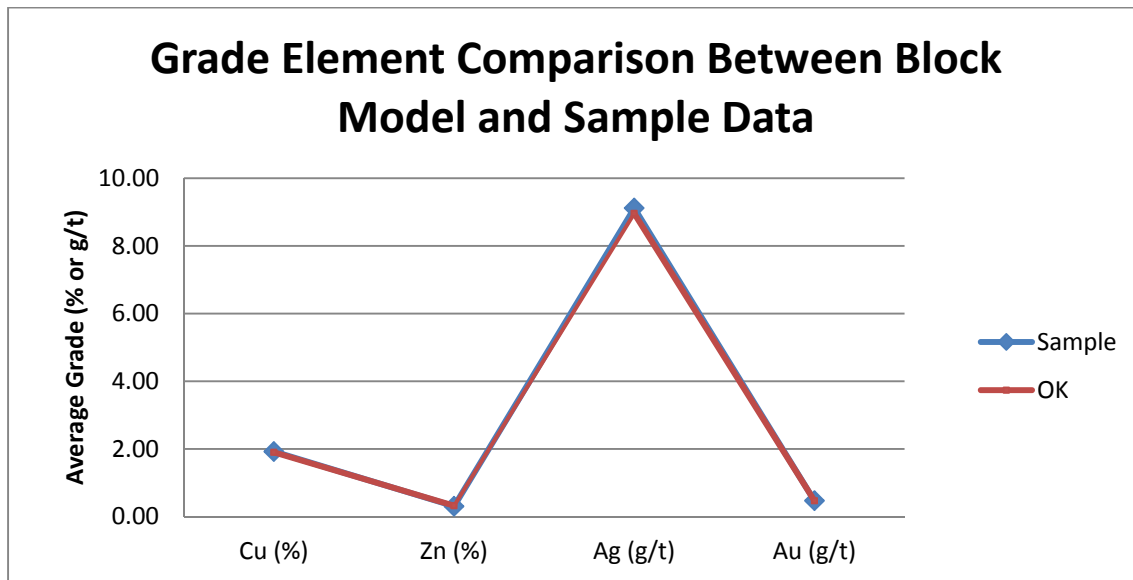
Table 15. Global Average of Capped and Composited Sample Grades vs. Calculated Model Grades

Grade Element	Sample (average)	OK Block Model (calculated grade)
Cu %	1.92	1.90
Zn %	0.30	0.32
Ag g/t	9.12	8.96
Au g/t	0.47	0.47

15.6.1 Statistical Validation

Figure 14 and Table 15 show the average grade of the composited capped sample data versus the block model data. It can be concluded that the average grade of the OK block model data is very close to or generally slightly lower than the composited and capped sample data. This is the expected result for well-behaved data and if the block model estimation process is being done correctly. The model data tends to have a reduced dispersion of the block grades resulting from the grade estimation process. The OK block modelling and estimation process tends to lower the high end grades compared to the sample data and increase the low end grades compared to the sample data. This is expected with the overall smoothing of the estimation process.

Figure 16. Average Grade Element Comparison Between Input Sample and OK Block Model Data



15.6.1 Lode Comparison

The input composited sample average that was broken down by lode was compared to the reported OK block model grade for each metal of interest for the Chu Chua Mineralised Zone (Appendix 8). Overall the copper, zinc, silver and gold comparisons compare very well. There is some slight local over and under estimation but on a whole the differences in grade displayed in the comparisons are deemed to be within acceptable tolerances. These in combination with the global comparisons indicate that there are no concerns over the calculation of the Chu Chua estimation process. Refer to Appendix 8.

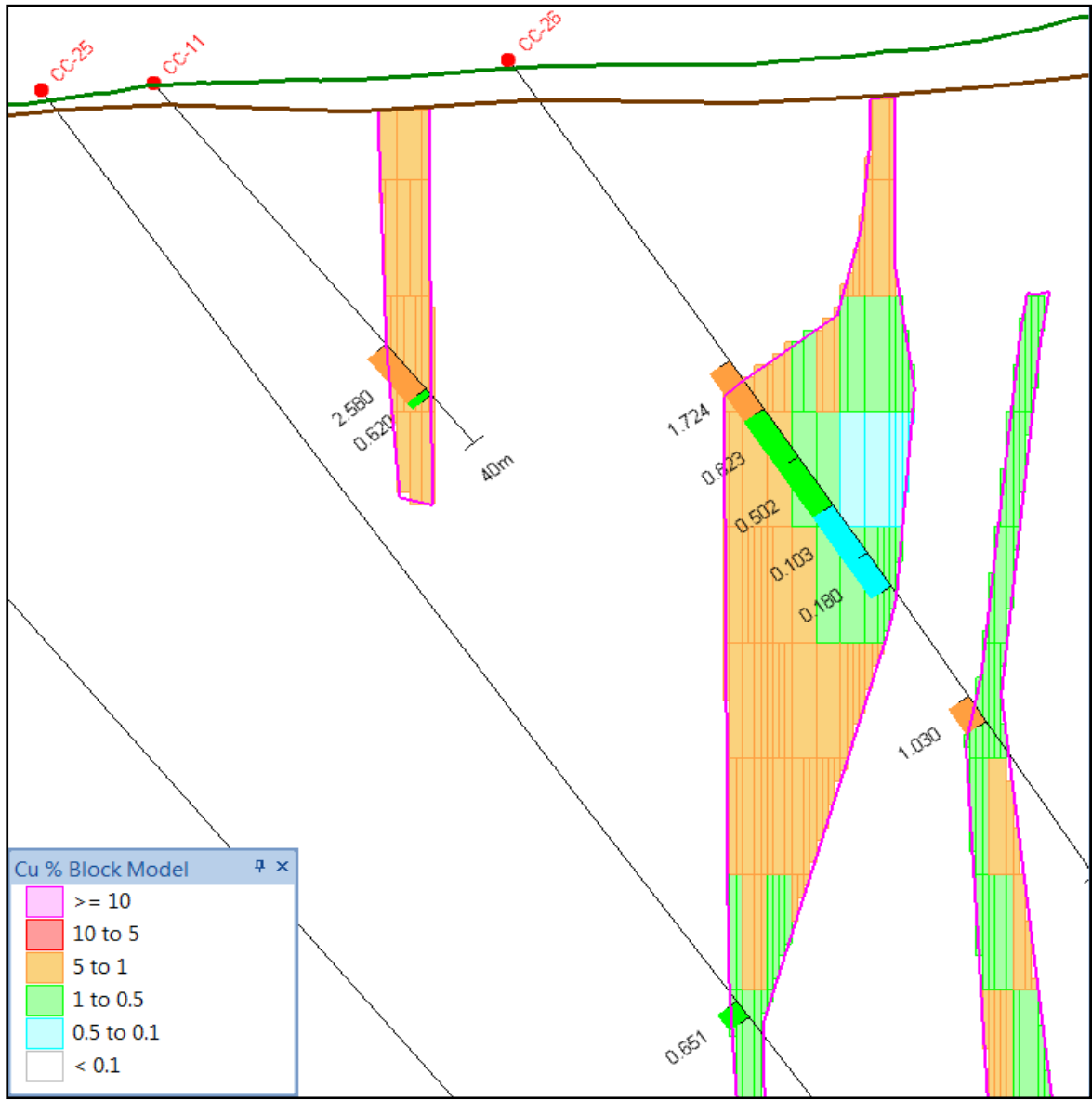
15.6.2 Northing Comparison

The input sample and block model averages were calculated on 25 m composite sections down the northing for the Chu Chua Mineralized Zone (Appendix 8). Due to the near vertical nature of the deposit this is parallel to the strike of the mineralization. The purpose is to compare the input sample file with the resulting block model data to make sure there is no gross over or under estimation occurring. The northing composites generally compare quite well. There is some local over and under estimation observed but this is to be expected with the estimation process. Overall the block averages follow the general trend of the input sample data. Graphs of the individual grade element comparisons are provided in Appendix 8.

15.6.3 RL Comparison

The sample and block model averages were calculated on 10 m composite slices through the RL for the Chu Chua Mineralized Zone (Appendix 8). Due to the vertical nature of the deposit this is parallel to the dip of the mineralization. The purpose is to compare the input sample file with the resulting block model data to make sure there is

Figure 17. Cross-section showing Cu Block Model Grades (%) versus Cu Sample Grades



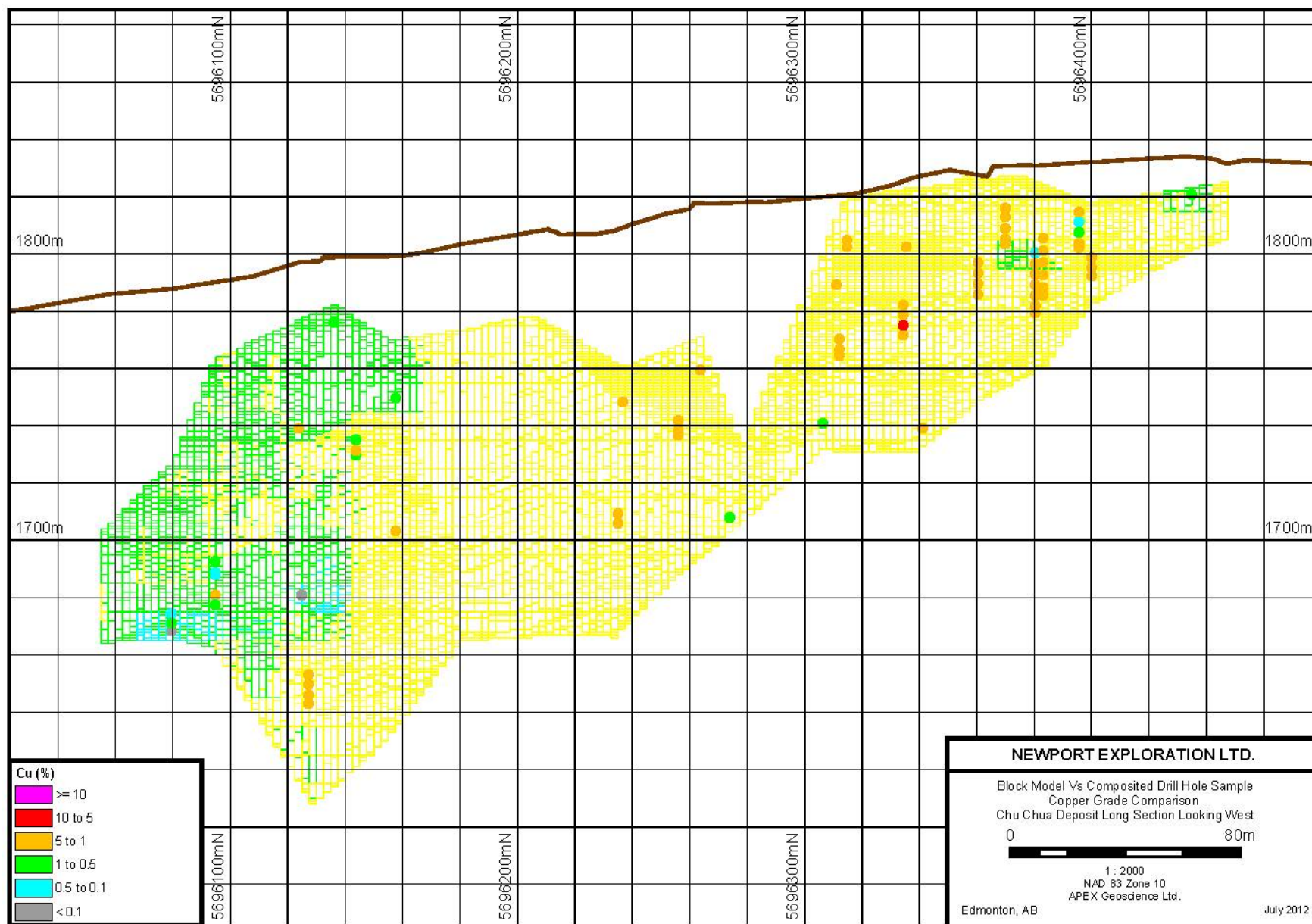


Figure 18. Long section showing Cu Block Model Grades (%) versus drill hole Cu Sample Grades

no gross over or under estimation occurring. The RL composites generally compare quite well. There is some local over and under estimation observed but this is to be expected with the estimation process. Overall the block average grades follow the general trend of the input sample data. Graphs of the individual grade element comparisons are provided in Appendix 8.

15.7 Classification

The mineral resources were classified in accordance with guidelines established by the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 23rd, 2003 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated November 27th, 2010. The Chu Chua mineral resource is classified as inferred:

An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the inferred mineral resource will be converted into a mineral reserve.

This is the mineral resource estimate completed for the Chu Chua mineralised zone. This mineral resource estimate has been classified as inferred according to the CIM definition standards. This classification is based on a number of factors which are noted below:

- Historical nature of the drilling and no recent confirmation drilling has been carried out.
- Limited down hole surveys that have been performed and the uncertainty associated with down hole intersection locations.
- Lack of documentation on QAQC and assaying/sampling procedures.
- In ability to re-survey the collar locations of lack of collar location survey control.
- Good continuity of mineralisation from section to section along 630m of strike.
- Good geological control of mineralisation along strike and up and down dip.

15.8 Final Reported Resource (April 2012)

Table 16. Mineral Resource Estimate for the Chu Chua Deposit (0.0 % or g/t cut off) – Capping applied

Classification	Tonnes	Cu %	Zn %	Ag g/t	Au g/t
Measured	-	-	-	-	-
Indicated	-	-	-	-	-
Total Measured + Indicated	-	-	-	-	-
Inferred	2,827,047	1.90	0.32	8.96	0.47

Table 17. Mineral Resource Estimate for the Chu Chua Deposit by RL (0.0 % or g/t cut off) – Capping applied

RL From Depth (m)	RL To Depth (m)	Tonnes	Cu %	Zn %	Ag g/t	Au g/t
1820	1830	2,273	1.91	0.21	10.76	0.42
1810	1820	42,005	2.12	0.18	9.65	0.49
1800	1810	85,468	1.99	0.20	9.37	0.48
1790	1800	172,719	2.27	0.25	9.73	0.51
1780	1790	270,519	2.37	0.29	9.82	0.53
1770	1780	299,537	2.34	0.31	9.77	0.50
1760	1770	266,907	2.36	0.32	10.29	0.51
1750	1760	210,159	1.99	0.28	9.23	0.46
1740	1750	180,460	1.93	0.31	9.33	0.45
1730	1740	164,401	1.82	0.34	9.67	0.46
1720	1730	157,017	1.71	0.34	9.29	0.48
1710	1720	154,825	1.66	0.33	9.16	0.48
1700	1710	149,205	1.58	0.34	8.94	0.48
1690	1700	123,580	1.44	0.32	8.16	0.44
1680	1690	105,416	1.42	0.34	7.51	0.42
1670	1680	104,315	1.37	0.35	7.53	0.42
1660	1670	82,099	1.27	0.37	7.02	0.40
1650	1660	77,521	1.38	0.40	7.04	0.39
1640	1650	60,533	1.37	0.44	5.84	0.35
1630	1640	48,043	1.35	0.45	5.27	0.32
1620	1630	37,606	1.25	0.42	5.22	0.28
1610	1620	25,680	1.21	0.38	4.89	0.27
1600	1610	6,759	1.22	0.37	3.45	0.26
TOTAL		2,827,047	1.90	0.32	8.96	0.47

Table 18. Mineral Resource Estimate for the Chu Chua Deposit by Lode (0.0 % or g/t cut off) – Capping applied

Lode	Tonnes	Cu %	Zn %	Ag g/t	Au g/t
Lode01	808,705	1.77	0.28	9.27	0.47
Lode02	1,927,926	1.97	0.34	8.98	0.47
Lode03	90,417	1.55	0.11	5.67	0.29
TOTAL	2,827,047	1.90	0.32	8.96	0.47

Table 19. Mineral Resource Estimate for the Chu Chua Deposit (Various reporting cut offs) – Capping applied

Cu % Block Cut Off	Tonnes	Cu %	Zn %	Ag g/t	Au g/t
0	2,827,047	1.90	0.32	8.96	0.47
0.2	2,827,047	1.90	0.32	8.96	0.47
0.4	2,818,389	1.90	0.32	8.97	0.47
0.5	2,805,117	1.91	0.32	8.99	0.47
0.6	2,770,947	1.93	0.32	9.05	0.47
0.8	2,672,315	1.97	0.33	9.18	0.47
1	2,505,581	2.04	0.33	9.41	0.48
1.2	2,244,093	2.15	0.33	9.78	0.50
1.4	1,911,306	2.30	0.33	10.32	0.52
1.6	1,585,242	2.47	0.33	10.75	0.54
1.8	1,246,113	2.69	0.34	11.14	0.55
2	912,484	2.97	0.36	11.63	0.57
2.2	767,149	3.15	0.37	11.95	0.58
2.4	626,452	3.34	0.38	12.33	0.59
2.5	564,880	3.45	0.38	12.52	0.60
2.6	521,741	3.52	0.39	12.68	0.61
2.8	438,654	3.68	0.40	13.01	0.62
3	367,304	3.85	0.39	13.37	0.62

16 Adjacent Properties

The section titled “Adjacent Properties” is based on a review of available public company documents including press releases, annual reports, and NI 43-101 technical reports as listed in the “References” section. However, all sources of information referred to in this section were prepared by Qualified Person’s as defined by NI 43-101 and are assumed accurate based on based on the data review conducted by the author. All diamond drill intercepts reported are core length and may not be indicative of true width of mineralization.

16.1 Windpass and Sweethome

Windpass and Sweethome Properties are gold properties consisting of seven contiguous mineral leases totaling 389 hectares. The properties, owned 100% by Nevada Clean Magnesium Inc., and lie 7 km north-northwest of Chu Chua Property.

The Windpass mine is located between Dunn Lake and Baldy Mountain. Sweethome Showing located 1 km to the north of Windpass Mine. Mineralization in both Windpass and Sweethome is in gold-bearing quartz veins, which cut the Devonian to Permian Fennell Formation of the Slide Mountain Group. Both the Windpass and Sweethome veins dip at variable angles to the north and cut the western margin of a steeply west-dipping diorite sill and an adjacent bedded chert horizon within the lower Fennell Formation, directly east of the upper Fennell contact.

The Windpass workings to 1939 include 457 m of drift and cross-cut in the main (200 level) adit. Two inclined shafts, the Pioneer and Telluride, were sunk from surface to the adit level. An internal shaft (Davis Winze, on an incline averaging 25 degrees) was sunk to the 900 level and drifting carried out east and west on each level. The Sweethome vein was developed by a 36 m inclined shaft (30 degrees) that connects with a 106 m crosscut adit, and 137 m of drift in the footwall of the vein. The production of Windpass and Sweethome ore totalled 93,435 tonnes, yielding 1,072 kilograms of gold, 53 kilograms of silver and 78,906 kilograms of copper.

In 1972, Dalion Res Ltd performed trenching and 152 m of drilling. Surveying and sampling of the Windpass and Sweethome dumps indicated 32,655 tonnes at 6.99 g/t Au and 16,146 tonnes at 0.68 g/t Au. In 1987, Kerr Addison Mines Ltd carried out geological mapping, magnetometer surveys, trenching and 2,010 m of NQ diamond drilling in 11 holes. Highlights from 1987 diamond drilling include 1 m interval of 16.3 g/t Au (Kikauka, 2004).

The most recent exploration was done by Moly Gold Corp. in 2003 and 2004. Rock chip sampling of trenches on the Windpass shear vein system in 2003 revealed values of 21.78 g/t Au over 0.25 (Pioneer South Trench) and 1.45 g/t over 2.0 m (Telluride Shaft Area). Rock chips samples from a quartz vein in the Weather Station Zone, about 300 m north of the main Windpass zone, returned values of 36.94 g/t Au across 4.0 m in the area of a silicified and carbonitized breccia zone (Kikauka, 2004). In 2004, Moly Gold Corp. drilled 2 diamond drill holes totaling 152 m on the Weather Station Zone. The two drill holes cut Cu-Au bearing mineralization hosted in quartz-sulphide veins and/or magnetite veins on the Weather Station Zone. Several anomalous gold value intervals were intersected, but the drilling failed to produce economical values. The highest grade intersected was 2.25 g/t Au over 0.3 m (Kikauka, 2005).

16.2 Rea and Somatosum Deposits

The Rea volcanogenic sulphide deposit is located 35 km to the southeast of the Chu Chua Property and was first discovered in 1983. Subsequent exploration by Corporation Falconbridge Copper (later Minova Inc., now Inmet Mining Inc. "Inmet") resulted in the discovery of the Samatosum massive sulphide deposit in 1986; a distance of 500 m to the northeast.

The Rea deposit comprises two northwest trending massive sulphide lenses, named the RG8 and L100 lenses, which contain fine to medium grained, banded to breccia texture pyrite, sphalerite, galena, arsenopyrite, chalcopyrite and tetrahedrite massive sulphide mineralization. The RG8 lens occurs over a surface strike length of 75 m and a down-dip extent of 80 m; the L100 lens has a surface strike length of 50 m and down-dip extent of 120 m (Bailey, et al., 2000). The Samatosum deposit comprises a tabular 5 m thick, shallowly northeast dipping orebody having a northwesterly strike length of 500 m and down-dip extend of 100 to 150 m (B.C. Minfile 082M 244).

The Rea and Somatosum deposits occur within Devonian to Mississippian rocks of the Eagle Bay Assemblage near the stratigraphic top of a unit of mafic metavolcanics, flows and volcanoclastics; overlain by phyllite and quartz-sericite schist metasediments (unit EBF of Schiarizza and Preto, 1987). The deposits are hosted within two zones of

sericite-quartz-carbonate-pyrite altered metasediments termed the Rea and Samatosum Horizons. Structurally, the deposits appear to lie on the west limb of an overturned, southwest-verging anticline. Recent mapping by Bailey et al. (2000) suggests both deposits occur within the same stratigraphic sequence that has been repeated by faulting.

The Samatosum deposit was mined by Inmet between 1989 and 1992 and produced 14 million ounces silver, 21 thousand ounces gold, 8 million pounds copper, 11 million pounds lead and 21 million pounds zinc from 612,000 tons (555,000 tonnes) of ore milled (B.C. Minfile 082M 244). Before commencement of production, Pirie (1989) reported a Samatosum mineral resource of 634,984 tonnes grading 1,035 g/t Ag, 1.9 g/t Au, 1.2% Cu, 1.7% Pb and 3.6% Zn. The Rea deposit was never put into production, however historic mineral reserves of 376,000 tonnes grading 69 g/t Ag, 6.1 g/t Au, 0.3% Cu, 2.2% Pb and 2.3% Zn have been reported (Northern Miner, 1987; Table 21).

Table 20. Historic Production and Mineral Reserves For the Rea and Samatosum Deposits

	Tonnes	Ag (g/t)	Au (g/t)	Cu (%)	Pb (%)	Zn (%)
Samatosum* (Pre-Mining Resource, Pirie, 1989)	634,984	1035	1.9	1.2	1.7	3.6
Samatosum (Production 1989-1992)	554,873	774	1.2	0.7	0.9	1.7
Rea (Reserves)*	376,000	69	6.1	0.3	2.2	2.3

*The resources are considered historic in nature and do not meet the criteria for a NI 43-101 compliant resource of any category as defined in "CIM Definition Standards on Mineral Resources and Ore Reserves" dated November 27th, 2010, and as such should not be relied upon.

16.3 Harper Creek Deposit

Yellowhead Mining Inc's (Yellowhead) Harper Creek polymetallic volcanogenic sulphide deposit is located 23 km to the northeast of the Chu Chua Property. Noranda Exploration Company originally discovered the deposit in 1966, and subsequent exploration through 1974 defined a historic, non 43-101 compliant resource of 77.6 million tonnes (Mt) grading 0.39% Cu (Rennie and Scott, 2010, Table 22). Between 1967 and 1996, Noranda and its joint venture partners completed diamond drilling of 176 holes totalling 21,292 m.

The Harper Creek Deposit occurs within rocks of the Devonian to Mississippian Eagle Bay Assemblage (unit EBA of Schiarizza and Preto, 1987). The deposit is hosted within a moderately north dipping, thrust-imbricated, sequence of volcanic derived felsic to intermediate sericite-chlorite-quartz-feldspar phyllite, and silicified sandstone-siltstone rocks. Mineralization comprises foliation and stratigraphy conformable lenses of disseminated, fracture-filling and banded pyrite-pyrrhotite and chalcopyrite mineralization and accessory magnetite.

Yellowhead acquired the Harper Creek Property in 2005 and completed re-logging and sampling of historic drill core, and a 7 hole program of confirmatory diamond drilling totalling 2,324 m. In November 2007 Yellowhead released the first NI 43-101 compliant

resource estimate for the Harper Creek deposit. The estimate comprised an indicated resource of 451 million tonnes grading 0.32% Cu, and an inferred resource of 142 Mt grading 0.33% Cu at a copper block cut off grade of 0.2% (Rennie and Scott, 2007).

Through the end of 2008 Yellowhead completed diamond drilling of 75 holes totalling 27,584 m. During 2009, re-sampling of historic drilling core was completed to permit incorporation of precious metal values into the resource model database. On March 8, 2011, Yellowhead released the results of preliminary economic assessment (PEA) and an updated resource estimate. The resource estimate, at a 0.2% Cu cut-off comprised measured resources of 90.0 Mt grading 0.30% Cu, 0.033 g/t Au and 1.18 g/t Ag; indicated resources of 442.1 Mt grading 0.31% Cu, 0.032 g/t Au and 1.06 g/t Ag for a total measured and indicated resource of 532.1 Mt grading 0.31% Cu, 0.032 g/t Au and 1.08 g/t Ag (Narcisco et al, 2011).

Table 21. Historic and Current Mineral Resource Estimates for the Harper Creek Deposit

	Category	Cu% Cut-Off	Million Tonnes	Cu (%)	Au (g/t)	Ag (g/t)
Noranda (1974)	Unclassified*	-	77.6	0.39	-	-
Yellowhead Mining Inc. (Rennie and Scott, 2007)	Indicated	0.2%	451	0.32	-	-
	Inferred		142	0.33	-	-
Yellowhead Mining Inc. (Narcisco et al, 2011)	Measured	0.2%	90.0	0.30	0.033	1.18
	Indicated		442.1	0.31	0.032	1.06
	Measured & Indicated		532.1	0.31	0.032	1.08
	Inferred		117.2	0.29	0.032	1.32
Yellowhead Mining Inc. (Collins et al, 2012)	Measured	0.2%	348.5	0.31	0.034	1.30
	Indicated		466.5	0.28	0.030	1.30
	Measured & Indicated		815.0	0.29	0.032	1.30
	Inferred		80.2	0.30	0.033	1.40
	Reserves Proven		401.2	0.27	0.031	1.15
	Reserves Probable		303.2	0.25	0.027	1.13

*The resources are considered historic in nature and do not meet the criteria for a NI 43-101 compliant resource of any category as defined in "CIM Definition Standards on Mineral Resources and Ore Reserves" dated November 27th, 2010, and as such should not be relied upon.

During 2010 and 2011 Yellowhead completed an additional 44 diamond drill holes totalling 14,330 m (119 diamond drill holes totalling 41,914 m were completed by Yellowhead between 2006 and 2011). On February 16, 2012 Yellowhead released and updated resources estimate; and announced completion of a feasibility study (FS) on March 2, 2012. The current resource estimate (effective December 20, 2011) for the Harper Creek deposit, at a 0.2% Cu cut-off, comprises measured resources of 348.5 Mt grading 0.31% Cu, 0.034 g/t Au, 1.3g/t Ag; indicated resources of 466.5 Mt at 0.28% Cu, 0.03g/t Au, 1.3g/t Ag for a total measured and indicated resource of 815 Mt grading 0.29% Cu, 0.032 g/t Au and 1.3 g/t Ag. A further 80.2 Mt grading 0.30% Cu, 0.033g/t

Au, and 1.4g/t Ag were classified in the inferred resource category. The FS included a mineable reserve estimate for the Harper Creek Deposit. The mineable reserve estimate; based upon certain economic parameters, geotechnical design criteria and metallurgical recovery assumptions; comprises proven reserves of 401.2 Mt grading 0.27% Cu, 0.031 g/t Au and 1.15 g/t Ag; probable reserves of 303.3 Mt grading 0.25% Cu, 0.027 g/t Au and 1.13 g/t Ag for total proven and probable reserves of 704.4 Mt grading 0.26% Cu, 0.029 g/t Au and 1.14 g/t Ag (Collins et al, 2012).

16.4 CM

Six and a half km southwest of the Property is the CM Cyprus-type massive sulphide prospect, located on the north slopes of Chinook Mountain and currently held by JC Resources. Similar to Chu Chua, the CM is hosted in the mafic volcanic-dominated Upper Fennell Assemblage with mineralization comprising variably massive pyrite, chalcopyrite and sphalerite with an associated quartz-pyrite stringer zone and hydrothermal alteration of the volcanic pile (B.C. Minfile 092P 101). From 1987 to 1994, a total of 34 holes were drilled throughout the area. The most significant intersection occurred in drill hole 87-2 from the Gold zone, which is characterized by vuggy quartz-carbonate fracture-filling which is anomalous in gold and may represent a late stage epithermal event. Mineralization consists of semi-massive pyrite and chalcopyrite in silica-rich sediment. The intersection grades 4.8 % Cu, 0.2 % Zn, 14.1 g/t Ag and 0.12 g/t Au over 2.9 m. Subsequent drilling in the area was unsuccessful at expanding this intersection. Sulphides at the Lower showing consist of semi-massive to disseminated pyrite with lesser chalcopyrite and sphalerite in a chert/argillite unit. In 1994, a grab sample across 2 m of massive sulphides at the Lower showing analysed 8.6% Cu, 0.39% Zn, 4.23 g/t Au, and 30 g/t Ag (Casselman, 1993).

17 Other Relevant Data and Information

The authors are not aware of any other relevant information with respect to the Chu Chua property.

18 Interpretation and Conclusions

The Chu Chua property, located 24 km northeast of Barriere, B.C., is host to the Chu Chua deposit, a Cyprus-type volcanogenic massive sulphide body first discovered in 1978. The property is largely underlain by the Mississippian to Permian aged Fennell Formation which comprises basaltic and rhyolitic volcanic rocks, clastic and chemical sedimentary rocks and diabase sills. The Chu Chua deposit consists of two major and several minor sulphide lenses hosted by massive and pillowed green basalt of the Upper Fennell Formation. The lenses are oriented along a north-south trend dipping from vertical to very steeply west. The principal axes of the lenses appear to plunge gently to the south.

A total of 99 diamond drill holes, totaling 19,707 m were completed to delineate the Chu Chua deposit between 1978 and 1991. Craigmont drilled a total of 10,820 m in 55 core holes between 1978 and 1982. The drilling defined two areas of relatively thick, high grade sulphide mineralization occurring within 100 m of the surface. Deep drilling during 1989 to 1991 by Minnova seems to indicate that the main deposit may plunge to

the south as suggested by the 2008 airborne magnetic data. For the most part little in the way of massive sulphide has been intersected deeper than 200 m below the surface. However, other than a series of about 10 deep drill holes with targeted depths of about 500 to 600 m below surface, there is little drilling that has targeted the area between the deep drilling and the known bottom of the sulphide zones. At the south end of the main Chu Chua deposit, deep drilling by Craigmont and by Minnova did encounter a couple of narrow intersections of massive sulphide and/or wider stockwork breccia zones with disseminated sulphide in drill holes CC-54, CC-57 and CCF-62.

The 2011 Chu Chua Property exploration program included DGPS surveying of historic DDH collars, select re-sampling of historic diamond drill core stored at the Property, and the creation of a DGPS DEM over the Chu Chua deposit. A total of 60 DDH were re-located and surveyed, a total of 110 core samples were taken from the historic core, and an area of 55 ha was surveyed to produce a DEM over the Chu Chua deposit. A comparison of historic and current composite grades indicate that there is a significant difference between historically reported values and the 2011 re-sampling values with respect to copper and zinc. Length weighted average difference composite grades returned from current re-sampling indicate a decrease of 0.90% copper and a decrease of 0.13% zinc in total composition comparison to historically reported results. No significant difference was noted for gold and silver values between historically reported results and the 2011 samples. Historic drill core was sampled at approximately 5 m intervals and locally smaller intervals where discrete zones of mineralization were encountered. During 2011, drill core was sampled at 1 m intervals in an effort to better assess the within-intercept variability of Chu Chua deposit sulphide mineralization. The use of smaller sample intervals reveals that most of the mineralization within the historic intervals is relatively homogeneous.

A modern NI 43-101 compliant resource estimation of the Chu Chua mineralised zone was completed by Mr. Nicholls under the direct supervision of Mr. Dufresne and Mr. Raffle whom are all deemed as a "Qualified Person" with respect to the style of mineralisation and mineral resource estimation as defined by NI 43-101. The estimate comprises an inferred mineral resource of 2.5 million tonnes averaging 2.0 % copper, 0.3% zinc, 9.4 g/t silver, 0.5 g/t gold at a copper block cut-off grade of 1.0% (Table 20).

The mineral resource modelling and estimation was carried out using a 3-dimensional block model, using commercial mine planning software Micromine (version 12.05.03). Out of the 99 diamond drill holes, a total of 50 were used in the resource estimation. Spacing between drill lines is quite varied with drilling conducted not on set line spacing. The drill line spacing varies from 10 m to 45 m, with an average of about 20 m between drill lines. A total of 251 composites of 5 m length, capped at 5.90% copper, 0.86% zinc, 32 g/t silver and 1.4 g/t gold, were used for the estimation. The mineral resource was estimated by ordinary kriging within a three-dimensional mineralization envelope, defined by similar geological characteristics in terms of alteration and mineralogy, using a 0.5% copper cut-off grade. The search ellipsoid orientations were based on variography and ranged in size from 30 to 50 m along the primary axis, depending on the metal of interest. The search ellipsoids were used for grade interpolation into 2 m (X) x 25 m (Y) x 10 m (Z) parent blocks. All blocks were

classified as being in the inferred category. A total of 464 bulk density measurements were used to calculate the average for each of three modeled massive sulphide lenses. The average density of each of the three lenses varied from 4.33 to 4.73 g/cm³. Due to the lack of historic documentation, the methodology used to calculate the bulk densities is unknown, however the densities used in the resource estimate are considered consistent with the geology and style of mineralization of the Chu Chua deposit.

The Chu Chua project is considered to be an early stage project, therefore little is known about the potential mining or metallurgical characteristics of the massive sulphide deposit. The base case cut-off threshold of 1.0% Cu, which yields 2,506,000 tonnes at an average grade of 2.0% Cu, 0.3% Zn, 9.4 g/t Ag and 0.5 g/t Au, is considered to be prospective for development based on the projects favourable location for access, power, water, labour force and other assumptions derived from deposits of similar type and scale.

To date, mineralization has been modeled over a 480 m strike length and to a depth of 180 m from surface. Additional drilling is warranted to define the extent of near surface mineralization at the north end of the deposit; at depth within and beneath the currently modeled Main Lens; and to the south where limited deep drilling has encountered narrow sulphide intercepts. Given that approximately 75% of the deposit as currently modeled lies within a 100 m depth from surface, further drilling and economic studies to determine if all or portion of the Chu Chua deposit may be amenable to open pit extraction are also warranted.

19 Recommendations

Based on the data compilation, re-interpretation of geology, and the 2012 resource calculations two stages of drilling is warranted.

The first stage should consist of a confirmatory drill program to test the main zone and north zone in order to aid in the validation of the historic drilling and to convert some of the resource into an indicated category as well as provide samples for metallurgical work. Six holes, totalling 810 m, are recommended for the first stage of drilling. The first stage is estimated at \$ 202,500 not including GST (Table 23).

Further drilling of south end of the main zone and below the main zone is recommended in order to test the lateral and depth extent of known sulphide mineralization. Seven holes, totalling 2,160 m, are recommended for the second stage of drilling. The exact number of holes and the total depth would depend on the results of the first stage of drilling. Any new deeper drilling should include downhole electromagnetic surveys measuring conductivity, which can directly assist in extending the current known extent of the Chu Chua massive sulphide lenses and in targeting new separate zones. In addition, systematic downhole multi trace element and whole rock geochemical work should be conducted on any new core in order to identify and better map out the existing volcanic stratigraphy associated with the Chu Chua massive sulphide lenses. The second stage is estimated at \$ 648,000 not including GST (Table 23).

Table 22: Budget for Recommended Exploration

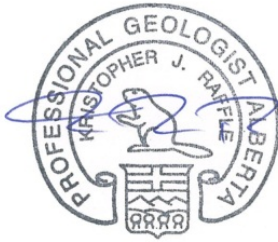
First Stage of Drilling	
Estimated cost 6 holes for 810 m @ \$250 per meter	\$202,500
Second Stage of Drilling	
Estimated cost 6 holes for 2,160m @ \$300 per meter to include downhole EM	\$648,000
Total Cost of the Two Stages of Drilling	\$850,500

* Cost Estimates Exclude GST

20 Date and Signature Page

This Technical Report was prepared to NI 43-101 standards by the following Qualified Persons. The effective date of this report is August 9, 2012.

APEX Geoscience Ltd.



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A handwritten signature in black ink, appearing to read "Steven J Nicholls".

Steven J Nicholls, BA.Sc. (Geology) MAIG

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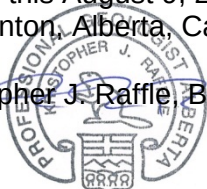
Chu Chua Group C, Chu Chua Group D , Kamloops Mining Division, 92P/8E, Lat. 51°22' N, Long. 120°04' W, British Colombia Ministry of Energy and Mines, Assessment Report no. 19540.

22 Certificate of Author

1. I, Kristopher J. Raffle, residing at 1155 Seymour Street, Vancouver British Columbia, Canada do hereby certify that: I am a senior geologist at APEX Geoscience Ltd. ("APEX"), 200, 9797 – 45 Avenue, Edmonton, Alberta, Canada.
2. I am the author of this Technical Report entitled: "Technical Report on the Base and Precious Metal Potential of the Chu Chua Property, British Columbia, Canada", and dated November 23rd, 2010 (the "Technical Report").
3. I am a graduate of The University of British Columbia, Vancouver, British Columbia with a B.Sc. in Geology (2000) and have practiced my profession continuously since 2000. I have supervised exploration programs specific to gold and base metals. I have completed National Instrument 43-101 reports for projects in British Columbia and Ontario. I am a Professional Geologist registered with APEGGA (Association of Professional Engineers, Geologists and Geophysicists), and APEGBC (Association of Professional Engineers and Geoscientists of British Columbia) and I am a 'Qualified Person' in relation to the subject matter of this Technical Report.
4. I visited the Property that is the subject of this Report on June 26th, 2012. Previously I had visited the Property over a 3 day period during November, 2008.
5. I am responsible for all sections of the Technical Report titled "TECHNICAL REPORT ON THE CHU CHUA PROPERTY, BRITISH COLUMBIA, CANADA", and dated August 9, 2012 (the "Technical Report").
6. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Reva Resources Corp. or Newport Exploration Ltd. I am not aware of any other information or circumstance that could interfere with my judgment regarding the preparation of the Technical Report.
7. I have read and understand National Instrument 43-101 and Form 43-101 FI and the Report has been prepared in compliance with the instrument.
8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
9. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this August 9, 2012
Edmonton, Alberta, Canada

Kristopher J. Raffle, B.Sc., P.Geol

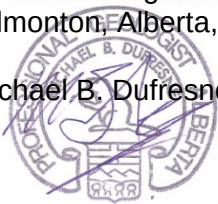


I, Michael B. Dufresne, M.Sc., P.Geol., do hereby certify that:

1. I am President of APEX Geoscience Ltd. with address of Suite 200, 9797 – 45th Avenue, Edmonton, Alberta T6E 5V8.
2. I graduated with a B.Sc. Degree in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. Degree in Economic Geology from the University of Alberta in 1987.
3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta since 1989.
4. I have worked as a geologist since my graduation from university.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of NI 43-101.
6. Although I have not visited the Chu Chua property, I was directly involved in the review of all of the historic information and the design and interpretation of the 2008 Airborne Geophysical Survey. I am responsible for all sections of the Technical Report titled “TECHNICAL REPORT ON THE CHU CHUA PROPERTY, BRITISH COLUMBIA, CANADA”, and dated August 9, 2012 (the “Technical Report”).
7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101. I have not received, nor do I expect to receive, any interest, directly or indirectly, in Reva Resources Corp. or Newport Exploration Ltd. I am not aware of any other information or circumstance that could interfere with my judgment regarding the preparation of the Technical Report.
9. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this August 9, 2012
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P.Geol.



I, Steven J Nicholls, MAIG., do here by certify that:

1. I am currently employed as a Resource Geologist with APEX Geoscience Australia Pty Ltd. 39B Kensington St East Perth WA Australia 6004
2. My academic qualification is: Bachelor of Applied Science, in Geology, received from the University of Ballarat in 1997.
3. My professional affiliation is: Member of the Australian Institute of Geoscientists, Australia (AIG).
4. I have worked as a geologist for a total of 13 years since my graduation from university and have extensive experience in gold/base metal exploration/resource estimation. Most recently I was employed by Tanami Gold NL as a Senior Exploration geologist where I was responsible for the company resource estimations.
5. I have read the definition of "qualified person" set out in the National Instrument 43-101 ("NI 43-101") and certify that be reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "Qualified Person" for the purposes of NI 43-101.
6. I, along with my co-authors Michael Dufresne, M.Sc., P.Geol and Kristopher J. Raffle, B.Sc., P.Geol, am responsible for the preparation of the "Mineral Resource and Mineral Reserve Estimates" section in this Technical Report titled "Technical Report on the Base and Precious Metal Potential of the Chu Chua Property, British Columbia, Canada" dated May 31, 2011.
7. I have not had prior involvement with the property that is the subject of the Mineral Resource Estimation.
8. As of the date on this certificate, to the best of my knowledge, information and belief, the Resource Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
9. I am an independent to the company in accordance to section 1.4 of NI 43-101
10. I consent to the public filing of the Technical Report and to extracts from, or a summary of the Technical Report, with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their website accessible by the public.



Dated this August 9, 2012

Steven J Nicholls, BA.Sc(Geology) MAIG

Appendix 1 – Core Resamples, Duplicates, and Standard Blanks

2011 Chu Chua Core Resamples

Drill Hole	From (m)	To (m)	Interval (m)	Sample	Certificate	Cu (%)	Zn (%)	Ag (ppm)	Au (ppm)
CC-16	45	46	1	J296350	VA11136283	2.60	0.591	10.05	0.641
CC-16	46	47	1	J296351	VA11136283	1.51	0.467	7.43	0.524
CC-16	47	48	1	J296352	VA11136283	1.55	0.421	8.46	0.842
CC-16	48	49	1	J296353	VA11136283	2.13	0.627	8.64	0.716
CC-16	49	50	1	J296354	VA11136283	1.60	0.416	6.83	0.599
CC-16	50	51	1	J296355	VA11136283	0.74	0.175	6.16	0.647
CC-16	51	52	1	J296356	VA11136283	1.73	0.378	8.44	0.947
CC-16	52	53	1	J296357	VA11136283	1.48	0.136	5.71	0.7
CC-16	53	54	1	J296358	VA11136283	2.78	0.201	11	0.859
CC-16	54	55	1	J296359	VA11136283	0.86	0.136	5.65	0.646
CC-16	55	56	1	J296361	VA11136283	0.95	0.203	5.3	0.621
CC-16	56	57	1	J296362	VA11136283	2.82	0.498	7.37	0.606
CC-16	57	58	1	J296363	VA11136283	6.13	0.326	17.5	0.854
CC-16	58	59	1	J296364	VA11136283	6.21	0.437	16.5	0.712
CC-16	59	60	1	J296365	VA11136283	6.87	0.102	18.05	0.495
CC-16	60	61	1	J296366	VA11136283	7.75	0.584	22.7	0.806
CC-16	61	62	1	J296367	VA11136283	2.74	0.176	9.86	0.51
CC-16	62	62.6	0.6	J296368	VA11136283	4.13	1.445	13.3	0.731
CC-17	14.6	15	1	J296369	VA11136283	1.09	0.0935	11.6	0.873
CC-17	15	16	1	J296371	VA11136283	0.70	0.0632	8.17	0.664
CC-17	16	17	1	J296372	VA11136283	0.73	0.102	6.09	0.582
CC-17	17	18	1	J296373	VA11136283	1.32	0.0779	10.65	0.578
CC-17	18	19	1	J296374	VA11136283	0.99	0.0578	6.75	0.423
CC-17	19	20	1	J296375	VA11136283	1.78	0.0877	8.34	0.398
CC-17	20	21	1	J296376	VA11136283	2.83	0.142	16.95	0.023
CC-17	21	22	1	J296377	VA11136283	1.74	0.249	11.4	0.63
CC-17	22	23	1	J296378	VA11136283	0.98	0.469	6.46	0.909
CC-17	23	24	1	J296379	VA11136283	1.28	0.271	8.82	0.942
CC-17	24	25	1	J296380	VA11136283	1.24	0.152	8.89	0.837
CC-17	25	26	1	J296381	VA11136283	0.29	0.138	6.93	1.13
CC-17	26	27	1	J296382	VA11136283	0.90	0.45	6.4	0.904
CC-17	27	28	1	J296383	VA11136283	1.22	0.882	7.26	0.733
CC-17	28	29	1	J296384	VA11136283	0.87	0.593	7.91	1.23
CC-17	30	31	1	J296386	VA11136283	0.52	0.0566	6.24	1.11
CC-17	31	32	1	J296387	VA11136283	0.80	0.102	6.48	0.634
CC-17	32	33	1	J296388	VA11136283	0.96	0.212	9.94	1.15
CC-17	33	34	1	J296389	VA11136283	1.07	0.442	7.11	0.599
CC-17	34	35	1	J296391	VA11136283	1.11	0.372	7.74	0.681
CC-17	40	41	1	J296392	VA11136283	6.44	1.025	25.7	0.677
CC-17	41	42	1	J296393	VA11136283	6.85	0.956	25.1	0.543
CC-17	42	43	1	J296394	VA11136283	6.49	0.453	22.3	0.498
CC-17	43	44	1	J296395	VA11136283	1.09	0.231	3.92	0.092
CC-17	44	45	1	J296396	VA11136283	0.21	0.0224	1.75	0.149
CC-55	395	396	1	J296397	VA11136283	1.56	0.174	9.2	0.407
CC-55	396	397	1	J296398	VA11136283	0.65	0.0377	2.07	0.216
CC-55	397	398	1	J296399	VA11136283	3.45	0.303	10.05	1.28

2011 Chu Chua Core Resamples

Drill Hole	From (m)	To (m)	Interval (m)	Sample	Certificate	Cu (%)	Zn (%)	Ag (ppm)	Au (ppm)
CC-55	398	399	1	J296401	VA11136283	0.14	0.0305	0.37	0.024
CC-55	399	400	1	J296402	VA11136283	0.07	0.059	0.78	0.074
CC-55	400	401	1	J296403	VA11136283	0.11	0.192	0.47	0.032
CC-55	401	402	1	J296404	VA11136283	0.10	0.0327	0.61	0.033
CC-55	402	403	1	J296405	VA11136283	1.21	0.0533	3.8	0.417
CC-26	31.5	33	1	J296406	VA11136283	0.02	0.015	0.09	0.003
CC-26	33	34	1	J296407	VA11136283	3.40	0.0777	5.38	0.346
CC-26	34	35	1	J296408	VA11136283	1.06	0.0807	5.73	0.422
CC-26	35	36	1	J296409	VA11136283	1.06	0.042	3.89	0.243
CC-26	36	37	1	J296410	VA11136283	0.86	0.0223	2.73	0.223
CC-26	37	38	1	J296411	VA11136283	0.27	0.065	2.06	0.244
CC-26	38	39	1	J296412	VA11136283	0.17	0.0569	1.05	0.183
CC-26	39	40	1	J296413	VA11136283	0.13	0.106	1.04	0.143
CC-26	40	41	1	J296414	VA11136283	0.96	0.337	2.66	0.167
CC-26	41	42	1	J296415	VA11136283	0.04	0.0211	0.17	0.004
CC-26	42	43	1	J296416	VA11136283	0.02	0.0879	0.2	0.007
CC-26	43	44	1	J296417	VA11136283	0.16	0.104	0.34	0.01
CC-26	44	45	1	J296418	VA11136283	0.07	0.0876	0.25	0.012
CC-26	45	46	1	J296419	VA11136283	0.05	0.0236	0.2	0.006
CC-26	46	47	1	J296421	VA11136283	0.13	0.0469	0.34	0.02
CC-26	47.5	48	1	J296422	VA11136283	0.12	0.0461	0.29	0.016
CC-26	48	49	1	J296423	VA11136283	0.19	0.0483	0.41	0.031
CC-26	49	50	1	J296424	VA11136283	0.00	0.0182	0.18	0.001
CC-54	595.5	600.5	1	J296425	VA11136283	3.98	0.385	11.6	0.441
CC-54	600.5	601.5	1	J296426	VA11136283	3.26	0.634	11.3	0.536
CC-54	601.5	602.2	1	J296427	VA11136283	3.12	0.499	10.65	0.389
CC-54	610.2	611	1	J296428	VA11136283	0.04	0.0172	1.01	0.197
CC-54	611	612	1	J296429	VA11136283	0.08	0.0478	0.83	0.371
CC-54	612	613	1	J296431	VA11136283	0.12	0.114	1.44	0.274
CC-54	613	614	1	J296432	VA11136283	0.03	0.0561	0.32	0.057
CC-54	652.4	653	1	J296433	VA11136283	0.01	0.0132	0.12	0.007
CC-54	653	654	1	J296434	VA11136283	0.02	0.0509	0.51	0.226
CC-54	654	655	1	J296435	VA11136283	0.01	0.0183	0.25	0.046
CC-54	655	656	1	J296436	VA11136283	0.00	0.013	0.16	0.017
CC-54	656	657	1	J296437	VA11136283	0.02	0.0125	0.29	0.018
CC-54	657	658	1	J296438	VA11136283	0.02	0.023	0.28	0.027
CC-54	658	659	1	J296439	VA11136283	0.01	0.0101	0.08	0.009
CC-54	659	659.8	1	J296440	VA11136283	0.01	0.0083	0.14	0.01
CC-16	62.6	64	1	J296441	VA11136283	0.21	0.0485	1.7	0.118
CC-16	64	65	1	J296442	VA11136283	0.03	0.0069	0.33	0.021
CC-16	65	66	1	J296443	VA11136283	0.01	0.0082	0.13	0.014
CC-16	66	67	1	J296444	VA11136283	0.01	0.0058	0.13	0.017
CC-16	67	68	1	J296445	VA11136283	0.00	0.0057	0.07	0.01
CC-16	68	69	1	J296446	VA11136283	0.01	0.0079	0.13	0.014
CC-16	69	70	1	J296447	VA11136283	0.01	0.0243	0.14	0.013
CC-16	70	71	1	J296448	VA11136283	0.58	0.0656	2.2	0.088

2011 Chu Chua Core Resamples

Drill Hole	From (m)	To (m)	Interval (m)	Sample	Certificate	Cu (%)	Zn (%)	Ag (ppm)	Au (ppm)
CC-16	71	72	1	J296449	VA11136283	0.02	0.01	0.15	0.005
CC-21	193.5	194	1	J296451	VA11136283	0.97	0.0724	12.2	0.584
CC-21	194	195	1	J296452	VA11136283	0.77	0.0613	28	0.546
CC-21	200	201	1	J296453	VA11136283	0.48	0.409	2.7	0.252
CC-21	201 ¹	202 ¹	1	J296454	VA11136283	0.70	0.468	2.76	0.127
CC-21	205.5	206	1	J296455	VA11136283	1.45	0.171	6.03	0.172
CC-21	206	207	1	J296456	VA11136283	2.33	0.811	6.43	0.263
CC-21	207 ²	208 ²	1	J296457	VA11136283	3.84	1.13	9.19	0.305
CC-21	208	209	1	J296458	VA11136283	1.41	1.765	7.35	0.41
CC-21	209	210	1	J296459	VA11136283	1.71	0.804	6.74	0.303
CC-21	210 ³	211 ³	1	J296461	VA11136283	2.37	1.695	9.06	0.406
CC-21	211	212	1	J296462	VA11136283	1.85	0.977	6.44	0.299
CC-21	212	213	1	J296463	VA11136283	1.66	0.396	8.62	0.467
CC-21	213	214.4	1	J296464	VA11136283	2.54	0.598	9.61	0.595
CC-57	460	461	1	J296465	VA11136283	0.86	0.0435	5.25	1.035
CC-57	461	462	1	J296466	VA11136283	0.72	0.0394	4.58	0.931
CC-57	462	463	1	J296467	VA11136283	0.87	0.182	5.05	0.617
CC-57	463	464	1	J296468	VA11136283	0.58	0.0304	2.43	0.281

Note: ¹ Missing 45cm within this interval, ² Missing 30cm within this interval, ³ Missing 20cm within this interval

2011 Chu Chua Standard and Blank Samples

Drill Hole	Sample	Type	Certificate	Cu (%)	Zn (%)	Pb (%)	Ag (ppm)	Au (ppm)
CC-17	J296370	Blank	VA11136283	0.00378	0.005	0.00044	0.77	0.008
CC-55	J296400	Blank	VA11136283	0.00673	0.0051	0.00051	0.46	0.001
CC-54	J296430	Blank	VA11136283	0.00269	0.0043	0.00039	0.4	0.002
CC-21	J296460	Blank	VA11136283	0.00281	0.0044	0.00038	0.37	0.002

Drill Hole	Sample	Type	Certificate	Cu (%)	Zn (%)	Pb (%)	Ag (ppm)	Au (ppm)
CC-16	J296360	Standard	VA11136283	0.411	0.27	0.211	50.5	0.325
CC-17	J296390	Standard	VA11136283	0.443	0.28	0.225	53	0.335
CC-26	J296420	Standard	VA11136283	0.413	0.28	0.216	53.3	0.355
CC-21	J296450	Standard	VA11136283	0.392*	0.26	0.202*	50.2	0.375

*Values fall below the LAB recommended two standard deviation lines

Standard Used: CDN-ME-12 – Recommended Values:

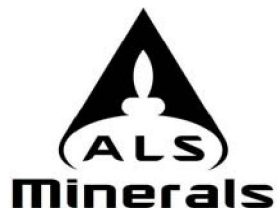
Gold	0.348 g/t	±	0.040 g/t
Silver	52.5 g/t	±	4.3 g/t
Copper	0.428 %	±	0.020 %
Lead	0.222 %	±	0.014 %
Zinc	0.275 %	±	0.018 %

2011 Chu Chua Duplicate Samples

Assay Values of Sample Duplicates for Select Elements											
Drill Hole	From (m)	To (m)	Interval (m)	Sample Duplicate #	Primary Sample #	Certificate	Cu (%)	Zn (%)	Pb (ppm)	Ag (ppm)	Au (ppm)
CC-16	45	46	1	J296500	J296350	VA11136283	1.98	1.005	222	9.05	0.628
CC-17	24	25	1	J296501	J296380	VA11136283	1.115	0.278	161.5	9.43	0.81
CC-26	36	37	1	J296502	J296410	VA11136283	0.804	0.024	62.8	3.2	0.213
CC-54	659	659.8	1	J296503	J296440	VA11136283	0.0261	0.0112	10	0.19	0.016

Assay Values of Original Numbers Duplicated for Select Elements										
Drill Hole	From (m)	To (m)	Interval (m)	Primary Sample #	Certificate	Cu (%)	Zn (%)	Pb (ppm)	Ag (ppm)	Au (ppm)
CC-16	45	46	1	J296350	VA11136283	2.6	0.591	191	10.05	0.641
CC-17	24	25	1	J296380	VA11136283	1.24	0.152	167.5	8.89	0.837
CC-26	36	37	1	J296410	VA11136283	0.859	0.0223	60.3	2.73	0.223
CC-54	659	659.8	1	J296440	VA11136283	0.0143	0.0083	7.5	0.14	0.01

Appendix 2 – Certificate of Analysis



ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: APEX GEOSCIENCE LTD.
200- 9797 45 AVE
EDMONTON AB T6E 5V8

Page: 1
Finalized Date: 24- AUG- 2011
Account: TTB

CERTIFICATE VA11136283

Project: 99119

P.O. No.:

This report is for 122 Drill Core samples submitted to our lab in Vancouver, BC, Canada on 18-JUL- 2011.

The following have access to data associated with this certificate:

APEX GEOSCIENCE LTD.
KRIS RAFFLE

ANDER ALOISIO

MIKE DUFRESNE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
CRU- QC	Crushing QC Test
PUL- QC	Pulverizing QC Test
LOG- 22	Sample login - Rcd w/o BarCode
CRU- 31	Fine crushing - 70% < 2mm
SPL- 21	Split sample - riffle splitter
PUL- 31	Pulverize split to 85% < 75 um
LOG- 24	Pulp Login - Rcd w/o Barcode
WEI- 21	Received Sample Weight

ANALYTICAL PROCEDURES

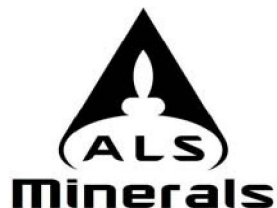
ALS CODE	DESCRIPTION	INSTRUMENT
Au- ICP21	Au 30g FA ICP- AES Finish	ICP- AES
ME- MS61	48 element four acid ICP- MS	
ME- OG62	Ore Grade Elements - Four Acid	ICP- AES
Cu- OG62	Ore Grade Cu - Four Acid	VARIABLE
Zn- OG62	Ore Grade Zn - Four Acid	VARIABLE

To: APEX GEOSCIENCE LTD.
ATTN: ANDER ALOISIO
200- 9797 45 AVE
EDMONTON AB T6E 5V8

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager



ALS Canada Ltd.
2103 Dollarton Hwy
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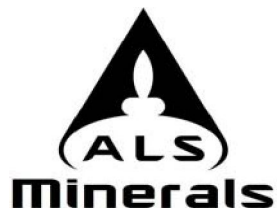
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CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	Au- ICP21 Au ppm 0.001	WEI- 21 Recvd Wt. kg 0.02	ME- MS61 Ag ppm 0.01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0.2	ME- MS61 Ba ppm 10	ME- MS61 Be ppm 0.05	ME- MS61 Bi ppm 0.01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0.02	ME- MS61 Ce ppm 0.01	ME- MS61 Co ppm 0.1	ME- MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0.2
J296350		0.641	0.76	10.05	0.17	178.5	10	<0.05	10.70	2.23	14.35	0.41	235	4	2.04	>10000
J296351		0.524	1.00	7.43	0.21	276	10	<0.05	13.90	0.42	10.65	0.41	339	22	1.42	>10000
J296352		0.842	0.82	8.46	0.07	411	10	<0.05	23.2	0.03	12.35	0.42	397	10	0.07	>10000
J296353		0.716	1.10	8.64	0.11	344	60	<0.05	17.90	0.08	17.15	0.51	384	25	0.06	>10000
J296354		0.599	1.02	6.83	0.16	321	240	<0.05	15.65	0.03	11.30	0.23	322	10	0.09	>10000
J296355		0.647	1.04	6.16	0.02	297	50	<0.05	16.85	0.03	5.32	0.16	315	1	<0.05	7360
J296356		0.947	1.14	8.44	0.03	534	80	<0.05	26.1	0.03	12.30	0.12	188.0	4	0.06	>10000
J296357		0.700	0.96	5.71	0.02	443	50	<0.05	18.25	0.03	3.73	0.08	123.0	2	<0.05	>10000
J296358		0.859	0.92	11.00	1.01	316	310	0.08	16.85	0.98	9.15	0.67	178.5	29	0.07	>10000
J296359		0.646	0.98	5.65	0.06	519	50	<0.05	27.5	0.07	3.39	0.14	326	<1	0.05	8620
J296360		0.325	0.10	50.5	7.18	95.7	580	0.93	1.30	0.78	19.15	30.7	16.0	37	4.78	4110
J296361		0.621	0.74	5.30	0.06	408	30	<0.05	36.2	0.24	4.28	0.90	149.0	<1	0.14	9500
J296362		0.606	0.98	7.37	0.08	332	90	<0.05	23.2	0.92	7.91	1.90	332	3	0.08	>10000
J296363		0.854	1.04	17.50	0.05	530	100	<0.05	46.6	0.53	7.39	2.13	529	1	0.29	>10000
J296364		0.712	1.28	16.50	0.06	423	150	0.07	58.8	0.29	9.67	1.71	479	<1	0.27	>10000
J296365		0.495	1.08	18.05	0.07	438	260	<0.05	37.5	0.10	2.56	2.98	831	<1	0.68	>10000
J296366		0.806	0.46	22.7	0.09	481	300	<0.05	43.7	0.11	8.95	1.05	1075	5	0.08	>10000
J296367		0.510	1.12	9.86	0.94	322	480	0.19	22.7	0.12	3.42	5.78	576	15	0.24	>10000
J296368		0.731	0.30	13.30	0.10	525	70	<0.05	69.7	0.04	26.4	1.95	358	9	0.05	>10000
J296369		0.873	0.26	11.60	0.01	399	70	<0.05	19.00	0.01	5.60	0.07	88.2	13	<0.05	>10000
J296370		0.008	0.10	0.77	5.12	3.4	490	0.65	0.08	1.80	0.31	20.4	8.5	36	0.65	37.8
J296371		0.664	0.64	8.17	0.02	508	150	<0.05	21.4	0.01	2.20	0.10	271	<1	<0.05	7020
J296372		0.582	1.02	6.09	0.01	548	230	<0.05	24.9	0.01	3.40	0.02	382	<1	<0.05	7290
J296373		0.578	0.96	10.65	0.01	484	280	<0.05	30.8	0.01	1.79	0.12	495	<1	<0.05	>10000
J296374		0.423	0.86	6.75	0.01	335	260	<0.05	25.2	0.01	0.95	0.80	535	1	<0.05	9890
J296375		0.398	0.58	8.34	0.19	341	600	<0.05	23.4	0.07	1.35	6.77	543	1	0.08	>10000
J296376		0.023	0.90	16.95	0.01	409	220	<0.05	35.9	0.07	1.68	3.61	446	<1	<0.05	>10000
J296377		0.630	0.90	11.40	0.01	387	230	<0.05	44.4	0.05	4.27	3.76	512	2	<0.05	>10000
J296378		0.909	1.24	6.46	0.01	747	280	<0.05	44.7	0.06	16.30	1.67	425	1	<0.05	9790
J296379		0.942	0.80	8.82	0.01	498	190	<0.05	49.9	0.08	10.50	1.52	376	3	<0.05	>10000
J296380		0.837	0.62	8.89	0.01	361	290	<0.05	44.5	0.05	6.40	0.98	382	3	<0.05	>10000
J296381		1.130	0.52	6.93	0.10	309	160	<0.05	33.6	0.13	3.98	0.62	67.0	3	<0.05	2910
J296382		0.904	0.52	6.40	0.12	363	130	<0.05	31.3	0.09	6.92	0.62	66.7	4	0.06	8950
J296383		0.733	0.88	7.26	0.03	301	80	<0.05	28.8	0.10	15.50	0.14	37.8	7	0.05	>10000
J296384		1.230	0.54	7.91	0.02	600	80	<0.05	48.3	0.48	11.70	0.78	22.2	<1	0.05	8660
J296386		1.110	0.86	6.24	0.01	605	90	<0.05	21.7	0.04	0.72	0.33	133.0	2	<0.05	5240
J296387		0.634	0.98	6.48	0.04	682	170	<0.05	32.8	0.05	1.81	0.75	287	3	0.08	8020
J296388		1.150	0.88	9.94	0.05	499	230	<0.05	40.0	0.02	4.14	1.00	77.0	4	0.08	>10000
J296389		0.599	1.14	7.11	0.09	523	220	<0.05	37.0	0.07	9.57	0.82	211	5	0.08	>10000
J296390		0.335	0.10	53.0	7.46	99.2	600	1.05	1.37	0.82	21.4	31.2	17.2	37	5.82	4430



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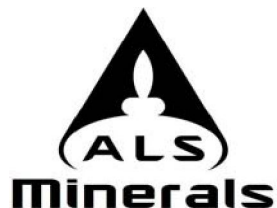
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Plus Appendix Pages
Finalized Date: 24- AUG- 2011
Account: TTB

Project: 99119

CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
J296350		22.8	38.4	0.81	<0.1	3.09	0.04	<0.5	0.4	1.58	138	65.6	0.01	0.3	10.1	160
J296351		31.3	45.7	0.86	<0.1	3.84	0.03	<0.5	0.4	0.50	40	48.7	<0.01	0.4	23.9	140
J296352		35.8	35.0	1.06	<0.1	3.44	0.01	<0.5	0.3	0.08	5	42.1	<0.01	0.5	26.9	20
J296353		33.6	62.1	0.99	<0.1	5.25	<0.01	<0.5	0.5	0.10	<5	59.7	<0.01	0.5	20.0	270
J296354		33.8	27.5	0.94	<0.1	2.70	0.02	<0.5	0.3	0.05	5	52.1	<0.01	0.6	11.8	30
J296355		38.0	14.40	1.16	<0.1	1.820	<0.01	<0.5	0.2	0.02	<5	81.0	<0.01	0.5	8.0	10
J296356		36.1	20.0	1.01	<0.1	4.08	<0.01	<0.5	0.2	0.03	<5	34.2	<0.01	0.5	9.5	<10
J296357		36.6	9.54	1.00	<0.1	1.775	<0.01	<0.5	<0.2	0.02	<5	31.7	<0.01	0.6	6.9	<10
J296358		32.9	16.55	0.61	0.3	2.24	0.02	<0.5	1.5	0.46	166	38.7	0.22	0.8	21.5	90
J296359		40.6	16.45	0.84	<0.1	1.445	<0.01	<0.5	0.3	0.03	<5	74.0	<0.01	0.5	16.6	<10
J296360		4.94	16.85	0.14	0.8	6.32	4.42	17.4	11.0	0.82	512	166.5	1.27	4.7	23.6	970
J296361		38.8	28.5	1.01	<0.1	1.005	0.02	<0.5	0.2	0.12	36	51.3	<0.01	0.6	18.3	<10
J296362		36.3	59.3	1.43	<0.1	3.87	0.01	0.7	0.3	0.37	61	49.8	<0.01	0.6	37.4	10
J296363		39.4	51.7	2.14	<0.1	4.67	0.01	0.9	0.3	0.27	77	45.4	<0.01	0.6	36.2	20
J296364		35.7	66.8	2.22	<0.1	4.84	0.01	0.7	0.3	0.55	102	32.3	<0.01	0.5	32.4	20
J296365		36.4	54.2	3.41	<0.1	3.82	0.02	1.3	0.3	0.99	53	303	<0.01	0.6	50.6	10
J296366		36.9	46.4	4.64	<0.1	2.85	<0.01	0.5	0.4	0.38	50	63.7	<0.01	0.7	36.5	<10
J296367		30.1	16.75	3.03	0.4	1.465	0.35	1.9	2.0	0.51	164	34.0	0.01	1.2	30.5	120
J296368		35.5	33.0	2.19	<0.1	6.89	0.01	1.3	0.8	0.79	128	23.6	<0.01	0.5	64.0	<10
J296369		35.5	6.31	1.65	<0.1	1.720	<0.01	<0.5	<0.2	0.01	<5	83.5	<0.01	0.6	10.6	<10
J296370		2.44	9.65	0.06	1.5	0.037	0.79	10.1	11.2	0.71	442	2.74	1.97	3.5	18.4	500
J296371		41.6	3.29	1.68	<0.1	0.504	0.01	<0.5	<0.2	0.01	<5	20.7	<0.01	0.6	16.9	<10
J296372		41.5	2.72	1.98	<0.1	0.647	<0.01	<0.5	<0.2	0.01	<5	26.0	<0.01	0.6	32.7	<10
J296373		41.6	3.15	2.19	<0.1	0.525	<0.01	<0.5	0.2	<0.01	<5	66.4	<0.01	0.7	40.0	<10
J296374		41.2	2.36	1.86	<0.1	0.298	<0.01	<0.5	<0.2	<0.01	<5	48.3	<0.01	0.6	38.9	<10
J296375		37.5	4.08	1.60	0.1	0.508	0.06	2.7	0.6	0.05	9	38.0	<0.01	0.7	59.0	10
J296376		39.6	5.12	1.44	<0.1	0.554	<0.01	1.7	0.2	0.01	<5	22.0	<0.01	0.7	50.7	<10
J296377		41.5	5.70	1.80	<0.1	0.729	0.01	1.8	0.2	0.01	<5	21.5	<0.01	0.7	41.0	<10
J296378		40.1	3.49	1.71	<0.1	2.87	<0.01	0.8	<0.2	<0.01	<5	14.00	<0.01	0.6	24.3	<10
J296379		41.4	4.23	1.67	<0.1	3.51	<0.01	0.7	<0.2	<0.01	<5	15.65	<0.01	0.7	21.5	<10
J296380		41.6	3.85	1.66	<0.1	1.180	0.01	0.5	<0.2	<0.01	<5	36.0	<0.01	0.7	13.9	<10
J296381		39.7	2.22	0.79	<0.1	0.555	<0.01	<0.5	0.2	0.04	12	9.99	0.01	0.6	7.6	<10
J296382		39.7	10.15	1.03	<0.1	1.390	0.01	<0.5	0.3	0.07	37	15.20	0.04	0.6	8.8	<10
J296383		39.8	10.00	1.39	<0.1	1.940	<0.01	<0.5	0.2	0.05	25	12.45	<0.01	0.6	5.6	<10
J296384		40.3	6.89	0.97	<0.1	1.540	0.01	<0.5	<0.2	0.13	107	9.44	<0.01	0.6	4.5	<10
J296386		42.5	2.62	1.01	<0.1	0.394	<0.01	<0.5	<0.2	0.01	<5	12.75	<0.01	0.5	7.4	<10
J296387		>50	3.71	1.29	<0.1	0.773	0.02	<0.5	0.4	0.01	<5	13.70	0.01	0.7	6.4	<10
J296388		45.0	18.20	1.07	<0.1	1.615	0.01	0.5	0.3	0.04	31	16.00	<0.01	0.7	9.3	<10
J296389		47.6	17.40	2.18	<0.1	3.03	0.02	<0.5	0.5	0.05	23	24.6	0.01	0.8	9.1	<10
J296390		5.32	17.10	0.15	0.9	7.35	4.66	16.4	14.4	0.89	538	190.5	1.37	4.8	28.9	1020



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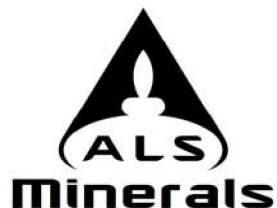
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CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm 0.5	ppm 0.1	ppm 0.002	% 0.01	ppm 0.05	ppm 0.1	ppm 1	ppm 0.2	ppm 0.2	ppm 0.05	ppm 0.05	ppm 0.2	% 0.005	ppm 0.02
J296350		191.0	2.7	0.179	>10.0	14.70	0.2	129	5.5	18.0	<0.05	4.88	<0.2	<0.005	1.10
J296351		251	1.8	0.145	>10.0	14.60	0.3	140	6.8	15.1	<0.05	6.10	<0.2	<0.005	1.38
J296352		217	0.3	0.085	>10.0	25.0	0.1	162	13.3	17.2	<0.05	8.88	<0.2	<0.005	1.69
J296353		214	0.2	0.124	>10.0	21.1	0.2	159	10.0	18.0	<0.05	8.03	<0.2	<0.005	1.45
J296354		195.0	1.2	0.157	>10.0	16.85	0.3	143	7.2	15.8	<0.05	6.81	<0.2	0.006	1.03
J296355		183.5	0.1	0.319	>10.0	20.1	0.1	170	9.0	16.6	<0.05	8.19	<0.2	<0.005	1.52
J296356		178.0	0.2	0.057	>10.0	25.1	0.1	133	24.8	13.5	<0.05	9.73	<0.2	<0.005	1.57
J296357		178.5	0.2	0.040	>10.0	18.30	0.1	140	11.3	13.6	<0.05	10.75	<0.2	<0.005	1.52
J296358		234	0.8	0.047	>10.0	28.6	4.8	74	18.3	11.0	<0.05	7.00	<0.2	0.141	1.63
J296359		199.0	0.2	0.209	>10.0	22.5	0.1	101	12.7	11.0	<0.05	6.71	<0.2	<0.005	1.80
J296360		2110	117.0	0.380	2.48	65.6	12.4	7	166.0	268	0.30	0.61	2.9	0.259	2.18
J296361		130.0	0.4	0.382	>10.0	18.10	0.1	132	11.9	12.1	<0.05	10.40	<0.2	<0.005	1.72
J296362		539	0.3	0.056	>10.0	23.9	0.2	250	8.6	14.8	<0.05	10.95	<0.2	<0.005	2.15
J296363		481	0.6	0.033	>10.0	36.0	0.1	414	16.2	14.9	<0.05	20.6	<0.2	<0.005	1.09
J296364		189.0	0.7	0.046	>10.0	31.4	0.1	454	11.5	11.6	<0.05	23.0	<0.2	<0.005	0.97
J296365		107.5	1.2	1.700	>10.0	28.0	0.2	767	13.5	8.4	<0.05	21.6	<0.2	<0.005	0.61
J296366		206	0.2	0.039	>10.0	57.9	0.2	>1000	20.6	5.0	<0.05	17.40	<0.2	<0.005	1.07
J296367		145.0	13.2	0.020	>10.0	50.4	2.7	663	9.7	4.9	0.06	9.62	0.6	0.057	0.77
J296368		212	0.3	0.018	>10.0	71.4	0.1	442	23.7	2.4	<0.05	22.9	<0.2	<0.005	0.78
J296369		153.0	0.2	0.035	>10.0	55.8	<0.1	313	204	7.9	<0.05	10.50	<0.2	<0.005	1.70
J296370		4.4	25.3	<0.002	0.14	0.80	10.2	1	0.8	246	0.26	0.05	2.1	0.256	0.19
J296371		135.0	0.2	0.020	>10.0	39.2	0.1	285	80.8	4.9	<0.05	12.20	<0.2	<0.005	1.48
J296372		96.0	0.1	0.028	>10.0	19.05	<0.1	357	32.0	4.6	<0.05	18.30	<0.2	<0.005	0.83
J296373		112.0	0.1	0.061	>10.0	23.0	<0.1	405	28.3	5.0	<0.05	21.7	<0.2	<0.005	0.79
J296374		84.9	0.1	0.034	>10.0	15.40	<0.1	359	16.3	3.7	<0.05	13.85	<0.2	<0.005	0.82
J296375		71.6	2.1	0.024	>10.0	17.45	0.5	289	10.9	4.4	<0.05	12.45	0.2	0.009	0.93
J296376		111.0	0.2	0.014	>10.0	35.4	<0.1	224	10.8	6.3	<0.05	13.80	<0.2	<0.005	1.11
J296377		110.0	0.2	0.016	>10.0	26.2	<0.1	313	6.5	7.5	<0.05	19.50	<0.2	<0.005	1.08
J296378		132.5	0.1	0.015	>10.0	22.2	<0.1	291	7.6	5.0	<0.05	19.30	<0.2	<0.005	1.27
J296379		154.0	0.1	0.011	>10.0	23.0	<0.1	285	10.4	5.7	<0.05	19.70	<0.2	<0.005	1.00
J296380		167.5	0.2	0.025	>10.0	24.4	<0.1	295	23.9	5.2	<0.05	19.95	<0.2	<0.005	1.57
J296381		174.0	0.2	0.013	>10.0	35.0	0.5	75	27.5	4.7	<0.05	8.59	<0.2	0.015	3.78
J296382		235	0.3	0.010	>10.0	32.3	0.5	133	12.7	2.8	<0.05	9.50	<0.2	0.014	3.32
J296383		416	0.2	0.008	>10.0	29.6	0.1	214	8.6	2.6	<0.05	12.45	<0.2	<0.005	2.61
J296384		182.5	0.2	0.007	>10.0	25.3	0.1	118	8.8	37.8	<0.05	19.40	<0.2	<0.005	1.91
J296386		187.0	0.1	0.011	>10.0	31.9	<0.1	149	10.1	2.0	<0.05	10.55	<0.2	<0.005	2.62
J296387		193.5	0.5	0.014	>10.0	24.0	0.1	180	9.2	3.2	<0.05	24.7	<0.2	<0.005	1.99
J296388		356	0.7	0.015	>10.0	56.0	0.1	108	11.9	1.6	<0.05	18.90	<0.2	<0.005	5.49
J296389		248	0.7	0.026	>10.0	34.8	0.2	363	11.5	3.8	<0.05	22.7	<0.2	<0.005	3.72
J296390		2250	123.5	0.455	2.69	72.0	12.9	10	174.0	283	0.35	0.81	3.0	0.288	2.61



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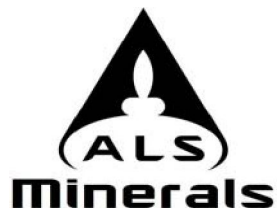
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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001	Zn- OG62 Zn % 0.001
J296350		34	1.9	1.0	5910	0.8	2.60	
J296351		58	1.4	0.7	4670	1.5	1.505	
J296352		39	2.8	0.6	4210	1.0	1.545	
J296353		68	1.8	1.1	6270	1.6	2.13	
J296354		29	1.7	0.7	4160	1.8	1.595	
J296355		9	1.5	0.2	1750	<0.5		
J296356		15	2.4	0.2	3780	0.7	1.730	
J296357		8	2.3	0.1	1360	<0.5	1.480	
J296358		52	3.7	4.9	2010	9.4	2.78	
J296359		11	2.9	0.2	1360	<0.5		
J296360		148	9.9	14.1	2670	29.0		
J296361		12	3.0	0.8	2030	<0.5		
J296362		18	2.4	0.7	4980	<0.5	2.82	
J296363		13	1.7	0.7	3260	<0.5	6.13	
J296364		9	1.1	0.9	4370	<0.5	6.21	
J296365		19	1.2	0.8	1020	<0.5	6.87	
J296366		17	5.7	0.4	5840	1.1	7.75	
J296367		32	3.8	4.1	1760	14.6	2.74	
J296368		18	6.5	0.5	>10000	0.9	4.13	1.445
J296369		9	5.5	0.1	935	<0.5	1.085	
J296370		79	19.3	14.1	50	46.5		
J296371		2	3.5	0.1	632	<0.5		
J296372		2	1.5	0.1	1020	<0.5		
J296373		2	2.3	0.1	779	<0.5	1.320	
J296374		2	1.4	0.2	578	<0.5		
J296375		7	1.4	0.8	877	2.1	1.780	
J296376		4	2.2	0.4	1420	<0.5	2.83	
J296377		5	2.7	0.2	2490	<0.5	1.735	
J296378		2	3.2	0.2	4690	<0.5		
J296379		3	2.4	0.2	2710	<0.5	1.280	
J296380		2	4.8	0.1	1520	<0.5	1.240	
J296381		7	5.2	0.6	1380	1.0		
J296382		10	4.5	0.6	4500	1.1		
J296383		3	3.9	0.1	8820	<0.5	1.215	
J296384		4	3.5	0.4	5930	<0.5		
J296386		3	2.9	0.2	566	<0.5		
J296387		5	4.0	0.3	1020	0.6		
J296388		15	7.0	0.2	2120	<0.5	0.960	
J296389		14	6.8	0.3	4420	<0.5	1.065	
J296390		155	12.9	14.2	2830	30.1		



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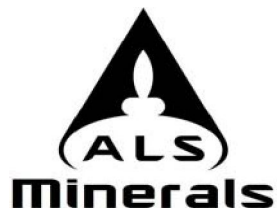
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Sample Description	Method Analyte Units LOR	Au- ICP21 Au ppm 0.001	WEI- 21 Recvd Wt. kg 0.02	ME- MS61 Ag ppm 0.01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0.2	ME- MS61 Ba ppm 10	ME- MS61 Be ppm 0.05	ME- MS61 Bi ppm 0.01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0.02	ME- MS61 Ce ppm 0.01	ME- MS61 Co ppm 0.1	ME- MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0.2
J296391		0.681	0.70	7.74	0.10	493	220	<0.05	26.7	0.02	5.92	0.48	96.6	4	0.13	>10000
J296392		0.677	0.72	25.7	0.29	762	130	<0.05	12.40	0.07	3.03	8.96	1315	7	0.29	>10000
J296393		0.543	0.64	25.1	0.51	432	330	0.05	12.00	0.12	3.49	5.58	945	19	0.26	>10000
J296394		0.498	0.72	22.3	1.24	366	340	0.07	15.15	0.12	2.10	12.70	781	25	0.12	>10000
J296395		0.092	0.56	3.92	3.02	88.1	190	0.49	2.78	0.57	6.58	7.97	139.5	66	0.17	>10000
J296396		0.149	0.76	1.75	3.15	91.8	370	0.55	5.92	0.47	0.43	3.27	35.9	55	0.44	2120
J296397		0.407	0.28	9.20	2.95	82.8	300	0.53	10.80	2.48	7.05	16.05	159.5	55	0.60	>10000
J296398		0.216	0.90	2.07	4.65	52.3	470	0.80	2.65	3.47	1.42	13.90	170.5	79	0.87	6500
J296399		1.280	0.84	10.05	2.74	244	280	0.22	11.75	2.89	13.45	23.9	160.0	60	0.31	>10000
J296400		0.001	0.10	0.46	5.92	3.7	530	0.78	0.07	2.14	0.26	20.9	10.0	42	0.83	67.3
J296401		0.024	0.70	0.37	7.91	20.9	1130	0.57	0.81	3.25	0.19	17.05	47.5	138	0.59	1410
J296402		0.074	0.64	0.78	6.49	21.5	1920	0.45	1.91	2.81	0.81	12.10	60.7	150	0.95	663
J296403		0.032	0.68	0.47	7.40	16.9	1820	0.51	1.09	4.53	3.86	13.85	43.4	163	0.40	1100
J296404		0.033	0.84	0.61	6.99	28.3	1830	0.48	1.62	3.31	0.19	13.25	51.2	153	0.46	1000
J296405		0.417	1.34	3.80	1.70	169.0	600	0.24	7.37	5.75	1.31	4.34	104.0	35	0.56	>10000
J296406		0.003	1.04	0.09	6.94	38.4	>10000	0.76	0.09	5.41	0.15	17.35	36.3	174	0.34	169.0
J296407		0.346	0.76	5.38	0.19	142.0	240	<0.05	6.36	1.40	1.11	1.10	62.5	18	0.53	>10000
J296408		0.422	1.02	5.73	0.05	281	210	<0.05	10.70	0.65	1.38	0.38	12.5	12	<0.05	>10000
J296409		0.243	0.92	3.89	0.18	165.0	500	<0.05	11.25	0.61	0.65	1.32	321	15	0.05	>10000
J296410		0.223	0.90	2.73	0.06	183.5	200	<0.05	11.35	0.38	0.57	0.70	156.0	3	<0.05	8590
J296411		0.244	0.90	2.06	0.03	193.5	170	<0.05	10.20	0.50	1.70	0.70	239	2	<0.05	2670
J296412		0.183	1.04	1.05	0.03	191.5	140	<0.05	7.58	0.53	1.90	0.36	175.5	1	<0.05	1680
J296413		0.143	0.78	1.04	0.02	191.0	140	<0.05	7.62	0.54	2.11	0.30	255	<1	<0.05	1305
J296414		0.167	0.76	2.66	0.03	215	160	<0.05	6.12	0.07	3.01	0.43	954	<1	<0.05	9550
J296415		0.004	0.62	0.17	0.09	53.5	220	0.72	0.19	0.12	0.29	6.11	166.0	<1	0.84	412
J296416		0.007	0.92	0.20	0.13	97.2	70	0.38	0.23	0.04	0.97	5.72	201	<1	0.49	162.0
J296417		0.010	0.86	0.34	0.17	15.2	50	0.40	0.21	0.03	0.78	10.05	97.2	<1	0.42	1590
J296418		0.012	0.64	0.25	0.14	19.7	40	0.42	0.24	0.05	0.53	9.60	160.5	<1	0.34	733
J296419		0.006	0.86	0.20	0.21	102.0	50	0.49	0.16	0.05	<0.02	14.30	429	<1	0.38	452
J296420		0.355	0.08	53.3	7.20	96.4	580	1.04	1.07	0.78	21.9	31.1	16.9	39	5.39	4130
J296421		0.020	0.58	0.34	0.15	34.8	40	0.47	0.18	0.03	<0.02	9.77	607	<1	0.39	1345
J296422		0.016	0.50	0.29	0.20	106.5	220	0.22	0.09	0.04	0.17	2.12	447	<1	0.97	1210
J296423		0.031	0.66	0.41	0.06	97.2	50	0.60	0.20	0.02	0.37	7.14	555	<1	0.36	1855
J296424		0.001	0.72	0.18	0.12	36.0	130	0.33	0.04	0.04	0.16	4.64	190.0	<1	0.39	48.0
J296425		0.441	0.68	11.60	0.79	49.9	180	0.15	6.20	6.80	10.00	7.83	389	27	0.45	>10000
J296426		0.536	0.74	11.30	0.21	53.2	230	<0.05	8.37	4.13	16.45	0.98	431	5	0.30	>10000
J296427		0.389	0.40	10.65	0.43	47.4	250	<0.05	4.59	5.12	19.90	4.07	418	10	0.47	>10000
J296428		0.197	0.68	1.01	3.34	75.6	200	0.18	4.83	0.34	0.24	8.46	126.5	89	0.62	354
J296429		0.371	0.72	0.83	4.69	139.5	1450	0.21	6.94	0.72	0.69	10.60	126.5	144	0.73	797
J296430		0.002	0.10	0.40	5.13	3.5	470	0.59	0.05	1.82	0.22	17.60	9.3	41	0.68	26.9



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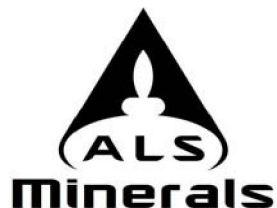
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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
J296391		46.7	18.20	1.65	<0.1	1.175	0.04	<0.5	0.4	0.04	30	27.0	0.01	0.7	7.1	<10
J296392		40.5	28.5	3.05	0.1	2.43	0.02	4.0	1.7	0.30	421	38.0	0.02	1.1	82.8	20
J296393		25.5	29.9	2.27	0.3	2.67	0.02	2.0	3.6	0.41	365	27.6	0.04	1.1	54.5	20
J296394		27.1	20.1	2.70	0.5	5.03	0.01	5.0	10.4	1.08	280	29.6	0.01	1.5	45.4	10
J296395		12.90	19.95	0.56	0.9	2.32	0.08	1.4	14.8	1.19	263	14.45	0.06	3.4	23.2	200
J296396		14.50	11.05	0.32	0.9	0.516	0.35	<0.5	5.5	0.35	192	9.74	0.01	3.0	21.0	360
J296397		13.25	24.3	0.50	0.8	1.720	0.58	5.5	15.2	1.77	1160	66.7	0.15	3.1	49.4	480
J296398		13.55	34.4	0.34	0.6	0.652	0.82	3.9	15.4	2.30	1840	33.8	0.75	3.1	48.4	530
J296399		13.20	37.5	0.54	0.9	2.85	0.24	12.0	8.9	2.09	1850	173.5	0.03	3.9	65.9	790
J296400		2.87	11.30	0.07	1.5	0.045	0.90	10.0	16.3	0.85	515	3.84	2.31	3.9	26.1	570
J296401		11.25	18.10	0.25	1.0	0.154	0.48	6.2	36.8	5.06	2290	5.60	1.71	3.6	80.6	810
J296402		16.55	14.30	0.30	1.7	0.148	0.64	3.7	30.6	4.00	1240	37.3	1.25	2.9	77.4	600
J296403		12.50	18.45	0.28	1.2	0.619	0.58	4.4	34.9	4.70	1420	13.50	1.26	3.4	88.4	780
J296404		15.10	18.90	0.31	1.2	0.335	0.47	4.3	36.6	4.43	1420	13.10	0.97	3.0	80.7	710
J296405		35.3	28.8	0.60	0.5	3.32	0.19	1.2	5.3	0.99	469	40.0	0.03	1.7	14.6	320
J296406		8.30	20.1	1.31	1.6	0.126	0.91	6.2	20.0	4.11	1560	1.23	0.08	3.2	79.9	830
J296407		30.4	33.4	0.61	<0.1	5.28	0.02	<0.5	1.0	0.22	100	59.3	0.02	0.6	5.5	270
J296408		34.5	5.09	0.64	<0.1	3.08	0.01	<0.5	0.4	0.12	12	40.5	<0.01	0.5	3.5	70
J296409		41.3	11.85	1.16	<0.1	2.42	0.02	0.5	0.8	0.43	14	107.0	0.01	0.7	17.6	130
J296410		43.0	5.46	1.27	<0.1	1.005	0.01	<0.5	0.3	0.21	<5	210	0.01	0.7	8.2	50
J296411		40.6	3.91	1.07	<0.1	0.373	0.01	<0.5	0.3	0.26	<5	127.5	<0.01	0.6	14.1	10
J296412		41.6	4.63	1.15	<0.1	0.248	<0.01	<0.5	0.4	0.31	<5	190.0	<0.01	0.7	14.1	<10
J296413		40.1	3.83	1.19	<0.1	0.206	<0.01	<0.5	0.4	0.30	<5	134.5	<0.01	0.6	21.8	<10
J296414		39.8	5.49	1.50	<0.1	0.382	<0.01	<0.5	0.6	0.15	<5	293	<0.01	0.7	25.0	<10
J296415		>50	35.2	5.88	<0.1	0.075	0.02	2.9	0.9	3.93	18	470	0.02	1.3	36.4	20
J296416		46.3	21.5	5.46	<0.1	0.072	0.01	2.6	0.8	5.06	45	562	0.02	1.2	21.5	30
J296417		40.6	19.60	3.50	<0.1	0.155	0.01	4.7	1.0	6.39	57	441	0.02	1.4	39.0	20
J296418		43.9	20.3	4.94	<0.1	0.050	0.01	4.4	1.6	5.60	106	242	0.01	1.6	48.5	160
J296419		43.5	21.8	4.04	<0.1	0.028	0.01	6.4	1.4	5.48	75	366	0.02	1.5	73.2	90
J296420		5.05	17.45	0.15	1.0	6.86	4.51	15.3	13.2	0.86	514	173.5	1.30	5.1	23.5	960
J296421		43.1	15.50	2.86	<0.1	0.050	0.01	4.5	1.2	5.48	40	518	0.02	1.1	90.1	110
J296422		38.8	14.15	0.68	<0.1	0.042	0.02	0.9	1.0	6.45	168	256	0.02	0.9	49.7	60
J296423		41.6	12.05	1.32	<0.1	0.080	0.01	3.5	1.1	5.29	98	212	<0.01	1.2	24.5	20
J296424		35.7	13.40	0.46	<0.1	0.012	0.01	2.1	0.9	8.11	173	167.0	<0.01	0.8	41.6	100
J296425		20.4	12.10	0.64	0.2	4.27	0.01	2.4	3.9	1.74	332	174.5	<0.01	0.6	19.5	190
J296426		21.0	7.18	0.61	<0.1	3.32	0.01	<0.5	1.1	0.43	119	181.0	<0.01	0.3	6.5	20
J296427		23.8	17.45	0.69	0.1	2.19	0.01	1.5	2.3	0.84	195	252	<0.01	0.4	13.6	40
J296428		24.9	9.83	0.44	0.7	0.104	0.10	3.4	38.8	3.59	998	74.2	<0.01	2.0	41.7	120
J296429		24.5	14.15	0.41	0.6	0.191	0.05	3.7	51.2	5.43	1500	52.4	<0.01	2.8	54.5	320
J296430		2.42	10.25	0.11	1.3	0.032	0.78	8.7	11.7	0.73	442	3.14	1.97	3.6	21.6	480



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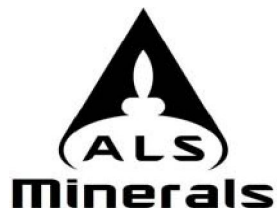
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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
		0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.1
J296391		306	1.3	0.026	>10.0	35.4	0.2	259	10.2	3.0	<0.05	15.10	<0.2	<0.005	0.2
J296392		151.0	1.2	0.014	>10.0	76.3	0.5	683	8.3	2.0	<0.05	15.35	0.5	0.014	1.8
J296393		111.0	0.8	0.012	>10.0	57.4	1.0	535	10.4	4.5	0.06	17.60	0.6	0.034	1.7
J296394		108.5	0.4	0.014	>10.0	41.1	1.8	647	20.3	3.6	0.09	25.0	1.4	0.050	1.7
J296395		51.9	3.8	0.007	>10.0	9.45	7.7	109	24.0	4.2	0.25	2.76	2.2	0.161	1.6
J296396		38.2	15.3	0.004	>10.0	8.70	7.7	53	13.4	2.7	0.23	2.43	1.1	0.133	1.3
J296397		358	21.6	0.113	>10.0	9.20	10.3	110	39.9	35.1	0.23	6.64	2.1	0.248	0.9
J296398		59.9	26.6	0.112	>10.0	8.24	19.0	45	11.7	45.5	0.24	2.07	1.3	0.493	0.6
J296399		390	10.3	0.279	9.42	18.40	7.9	105	53.8	43.5	0.26	11.10	3.0	0.190	1.9
J296400		5.1	29.1	0.002	0.04	0.92	12.5	2	0.8	287	0.29	0.07	2.3	0.304	1.0
J296401		14.8	6.7	0.014	3.76	3.82	39.1	9	8.0	77.0	0.27	0.26	0.4	1.070	0.4
J296402		104.0	25.0	0.130	>10.0	5.69	34.3	22	5.5	42.6	0.22	0.84	0.4	0.879	0.4
J296403		20.5	9.9	0.042	7.35	4.77	39.8	10	3.9	78.4	0.26	0.40	0.3	1.045	0.3
J296404		17.2	9.1	0.043	>10.0	4.08	35.7	9	5.2	73.5	0.23	0.55	0.3	0.954	0.5
J296405		165.5	5.2	0.108	>10.0	12.45	5.5	53	38.5	32.8	0.11	4.29	0.4	0.142	1.5
J296406		3.4	13.1	0.004	0.40	1.19	61.8	4	1.5	92.2	0.25	0.05	0.3	1.095	0.6
J296407		186.5	0.9	0.145	>10.0	18.35	0.6	32	44.7	10.1	<0.05	2.29	<0.2	0.016	1.4
J296408		217	0.2	0.024	>10.0	68.2	0.2	21	195.0	10.2	<0.05	4.67	<0.2	<0.005	0.4
J296409		71.8	0.5	0.095	>10.0	16.80	0.5	162	30.8	18.9	<0.05	8.20	<0.2	0.014	1.6
J296410		60.3	0.2	0.247	>10.0	11.95	0.1	177	33.5	13.2	<0.05	9.31	<0.2	<0.005	0.9
J296411		79.6	0.3	0.262	>10.0	14.00	0.1	130	16.5	35.2	<0.05	7.80	<0.2	<0.005	0.6
J296412		49.1	0.1	0.600	>10.0	8.32	0.1	166	16.3	48.7	<0.05	6.88	<0.2	<0.005	1.3
J296413		33.8	0.1	0.372	>10.0	8.31	0.1	177	16.6	52.1	<0.05	7.24	<0.2	<0.005	1.4
J296414		31.6	0.1	0.569	>10.0	10.70	<0.1	272	11.4	4.0	<0.05	7.78	<0.2	<0.005	0.5
J296415		2.3	0.7	3.07	1.58	5.89	0.1	5	13.2	3.2	<0.05	0.16	<0.2	<0.005	2.9
J296416		5.1	0.4	3.29	1.24	4.16	0.1	4	8.1	2.0	<0.05	0.28	<0.2	<0.005	2.4
J296417		2.6	0.3	3.23	2.19	3.61	0.3	7	6.1	1.3	<0.05	0.31	<0.2	<0.005	2.3
J296418		1.7	0.3	1.750	2.60	3.70	0.2	8	7.7	2.0	<0.05	0.45	<0.2	<0.005	5.9
J296419		1.5	0.2	2.00	2.85	3.70	0.4	10	8.2	2.6	<0.05	0.39	<0.2	0.006	3.3
J296420		2160	129.5	0.367	2.48	70.4	12.3	9	170.0	272	0.33	0.68	2.8	0.268	1.2
J296421		8.7	0.4	2.71	7.47	3.30	0.3	54	7.8	1.8	<0.05	0.55	<0.2	<0.005	2.2
J296422		1.7	0.9	1.100	5.23	2.10	0.3	52	5.1	3.2	<0.05	0.26	<0.2	<0.005	1.6
J296423		2.4	0.3	0.669	6.53	3.28	0.3	39	4.2	1.2	<0.05	0.20	<0.2	<0.005	2.1
J296424		0.5	0.2	0.548	0.21	1.56	0.5	2	3.3	2.1	<0.05	0.08	<0.2	<0.005	1.3
J296425		188.0	1.0	0.722	>10.0	6.85	2.5	119	7.2	71.1	<0.05	4.87	0.2	0.024	0.9
J296426		153.5	0.6	0.509	>10.0	8.17	0.5	134	7.0	32.1	<0.05	5.84	<0.2	0.006	0.4
J296427		140.5	1.1	0.875	>10.0	7.07	1.2	139	7.2	46.2	<0.05	3.49	<0.2	0.018	0.6
J296428		44.0	6.0	0.492	>10.0	2.49	18.3	46	10.7	9.7	0.12	5.03	0.3	0.446	0.3
J296429		43.1	2.6	0.359	>10.0	4.59	28.2	41	16.7	23.6	0.17	4.91	0.2	0.723	0.4
J296430		3.9	30.4	<0.002	0.06	0.74	11.3	1	0.7	248	0.24	<0.05	2.1	0.254	0.8



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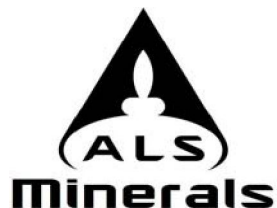
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CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001	Zn- OG62 Zn % 0.001
J296391		11	4.6	0.3	3720	<0.5	1.110	
J296392		12	2.1	1.3	>10000	5.2	6.44	1.025
J296393		21	2.1	1.8	9560	8.7	6.85	
J296394		27	2.8	3.7	4530	17.2	6.49	
J296395		63	3.4	9.5	2310	31.8	1.090	
J296396		54	3.5	8.9	224	31.8		
J296397		106	2.6	10.6	1740	31.2	1.560	
J296398		176	2.9	10.7	377	17.9		
J296399		138	1.5	10.2	3030	36.8	3.45	
J296400		87	24.1	15.9	51	48.8		
J296401		325	3.6	28.6	305	24.4		
J296402		257	2.0	29.3	590	68.4		
J296403		316	2.1	32.8	1920	28.5		
J296404		309	1.6	32.0	327	31.2		
J296405		87	4.5	8.1	533	14.7	1.205	
J296406		346	4.2	42.3	150	43.6		
J296407		45	7.3	1.0	777	1.7	3.40	
J296408		19	5.8	0.4	807	0.5	1.060	
J296409		26	1.4	1.0	420	0.8	1.060	
J296410		13	1.1	0.4	223	<0.5		
J296411		8	1.2	0.4	650	<0.5		
J296412		10	0.8	0.2	569	<0.5		
J296413		10	0.7	0.2	1060	<0.5		
J296414		9	0.5	0.1	3370	<0.5		
J296415		23	3.9	1.5	211	<0.5		
J296416		15	1.9	1.1	879	<0.5		
J296417		24	1.3	1.0	1040	<0.5		
J296418		25	4.4	2.1	876	<0.5		
J296419		33	1.5	1.8	236	<0.5		
J296420		153	15.5	14.8	2770	33.1		
J296421		19	1.8	1.6	469	<0.5		
J296422		17	1.3	1.1	461	<0.5		
J296423		16	1.2	1.0	483	<0.5		
J296424		17	0.7	1.2	182	<0.5		
J296425		59	1.0	3.2	3850	6.5	3.98	
J296426		16	1.0	0.8	6340	<0.5	3.26	
J296427		35	0.8	2.5	4990	1.6	3.12	
J296428		141	0.8	10.3	172	21.6		
J296429		200	1.4	14.7	478	16.3		
J296430		79	20.5	14.6	43	43.6		



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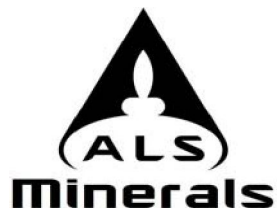
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Project: 99119

CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	Au- ICP21 Au ppm 0.001	WEI- 21 Recvd Wt. kg 0.02	ME- MS61 Ag ppm 0.01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0.2	ME- MS61 Ba ppm 10	ME- MS61 Be ppm 0.05	ME- MS61 Bi ppm 0.01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0.02	ME- MS61 Ce ppm 0.01	ME- MS61 Co ppm 0.1	ME- MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0.2
J296431		0.274	0.80	1.44	3.98	112.5	580	0.20	5.93	1.94	5.13	8.65	139.0	98	0.34	1155
J296432		0.057	0.62	0.32	7.31	35.4	580	0.51	2.04	1.02	0.57	16.20	36.7	215	0.66	340
J296433		0.007	0.62	0.12	5.60	2.7	2710	0.67	0.13	2.27	0.13	21.4	22.3	117	1.14	93.0
J296434		0.226	0.52	0.51	6.08	14.7	600	1.34	0.97	6.75	2.74	19.80	33.1	133	1.80	150.5
J296435		0.046	0.62	0.25	5.20	24	260	0.61	0.47	10.05	0.55	25.1	29.0	77	0.41	53.8
J296436		0.017	0.40	0.16	5.98	4.9	310	0.62	0.22	8.82	0.47	15.30	22.8	74	0.29	48.9
J296437		0.018	1.10	0.29	6.15	3.6	1940	1.20	0.12	4.66	0.20	23.1	23.0	65	1.96	230
J296438		0.027	1.20	0.28	5.75	6.2	1020	0.85	0.35	4.55	0.23	30.3	31.4	78	1.07	238
J296439		0.009	1.22	0.08	7.51	1.6	610	0.61	0.07	4.15	0.11	20.3	34.4	50	0.57	68.1
J296440		0.010	0.72	0.14	4.44	5.2	910	0.67	0.24	4.30	0.15	31.1	23.1	86	0.79	143.0
J296441		0.118	1.20	1.70	1.67	98.2	70	0.12	9.18	0.82	1.32	16.15	83.8	25	0.17	2060
J296442		0.021	0.82	0.33	2.02	18.5	320	0.57	0.66	0.41	0.26	20.9	24.5	34	0.30	281
J296443		0.014	0.66	0.13	3.32	56.1	680	0.45	0.35	0.29	0.05	23.3	96.3	56	0.84	60.8
J296444		0.017	0.98	0.13	3.04	28.2	380	0.73	0.41	0.39	0.07	26.9	52.1	45	0.81	109.5
J296445		0.010	1.18	0.07	3.15	14.1	5080	0.88	0.17	0.89	0.04	38.0	7.3	45	0.79	43.1
J296446		0.014	1.06	0.13	3.10	15.1	4470	0.84	0.20	0.58	0.12	32.9	8.9	41	0.69	105.5
J296447		0.013	0.98	0.14	7.84	27.5	6290	0.83	0.14	2.27	0.33	19.65	32.2	37	1.38	89.7
J296448		0.088	1.04	2.20	7.53	66.9	2040	0.54	2.88	4.21	1.27	12.90	55.2	68	0.94	5820
J296449		0.005	1.30	0.15	5.78	9.6	1660	0.45	0.09	3.27	0.05	18.90	22.4	83	0.55	231
J296450		0.375	0.10	50.2	7.01	93.3	550	1.01	1.23	0.77	21.6	30.2	16.0	40	5.35	3920
J296451		0.584	0.32	12.20	0.35	317	750	<0.05	31.0	3.60	2.74	5.81	762	7	0.08	10000
J296452		0.546	0.50	28.0	0.68	316	1000	0.08	15.75	1.39	4.56	3.29	740	21	0.14	7720
J296453		0.252	0.30	2.70	0.21	274	170	<0.05	11.85	0.26	3.99	3.07	491	9	0.06	4790
J296454		0.127	0.66	2.76	0.10	149.5	230	0.09	7.06	0.27	5.86	5.05	568	4	1.24	7030
J296455		0.172	0.62	6.03	0.11	163.5	450	<0.05	13.70	3.11	2.78	11.55	475	10	0.90	>10000
J296456		0.263	0.76	6.43	0.04	187.0	160	<0.05	14.35	1.18	13.25	4.56	435	5	0.11	>10000
J296457		0.305	0.38	9.19	0.04	271	230	<0.05	14.45	0.47	12.75	10.50	498	3	0.15	>10000
J296458		0.410	1.00	7.35	0.04	251	170	<0.05	11.60	0.80	40.0	1.82	515	4	0.07	>10000
J296459		0.303	1.00	6.74	0.03	214	40	<0.05	7.83	0.39	18.05	0.49	484	4	0.05	>10000
J296460		0.002	0.08	0.37	4.91	3.5	460	0.59	0.05	1.72	0.21	19.25	9.4	37	0.74	28.1
J296461		0.406	0.92	9.06	0.03	199.5	20	<0.05	8.22	1.02	36.4	1.39	401	3	0.21	>10000
J296462		0.299	1.26	6.44	0.03	180.5	30	<0.05	5.24	0.46	24.2	0.61	345	3	0.16	>10000
J296463		0.467	1.06	8.62	0.02	233	30	<0.05	8.36	0.31	12.10	0.80	329	6	<0.05	>10000
J296464		0.595	1.38	9.61	0.61	259	160	<0.05	9.19	1.54	22.6	1.73	342	23	0.08	>10000
J296465		1.035	0.86	5.25	0.09	228	40	<0.05	7.54	0.45	1.01	2.73	1260	11	<0.05	8550
J296466		0.931	0.80	4.58	0.06	191.5	50	<0.05	7.34	0.65	1.04	0.21	583	4	<0.05	7230
J296467		0.617	0.66	5.05	1.84	156.0	230	0.15	7.91	1.88	4.94	1.33	432	54	0.24	8670
J296468		0.281	0.30	2.43	3.57	86.3	270	0.19	6.60	1.45	0.70	6.47	251	82	0.29	5760
J296500		0.628	0.78	9.05	0.16	198.0	80	<0.05	10.20	2.06	29.5	0.25	213	8	2.56	>10000
J296501		0.810	0.50	9.43	0.50	322	250	<0.05	36.4	0.46	14.80	1.20	257	15	0.13	>10000



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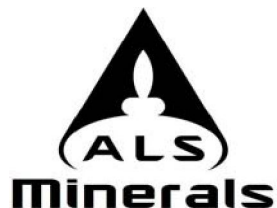
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CERTIFICATE OF ANALYSIS VA11136283

Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
		0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
J296431		22.2	12.45	0.39	0.4	0.207	0.07	3.0	36.0	4.23	1620	72.4	0.10	1.8	45.3	430
J296432		11.35	20.9	0.21	2.5	0.260	0.33	5.5	61.3	6.85	2110	7.27	0.81	3.8	81.4	890
J296433		4.77	10.90	0.16	1.6	0.066	0.66	9.9	21.4	3.74	942	2.34	1.18	3.9	46.2	470
J296434		6.20	12.30	0.15	1.1	0.364	1.14	9.9	16.2	2.75	1540	8.19	1.66	3.8	51.9	670
J296435		7.91	9.52	0.17	1.0	0.339	0.37	10.9	5.9	3.64	1790	17.95	3.05	2.7	50.5	2890
J296436		5.74	10.05	0.12	0.6	0.160	0.28	6.8	2.8	3.25	1600	14.20	4.34	2.5	36.8	950
J296437		5.68	14.20	0.13	0.9	0.111	1.68	11.0	9.7	2.30	1490	0.82	1.07	3.3	36.3	850
J296438		6.59	14.30	0.19	1.1	0.156	0.69	18.8	16.5	2.32	1640	1.72	1.35	4.5	70.4	1010
J296439		6.91	16.65	0.18	1.0	0.084	0.26	8.4	21.5	3.07	1730	0.62	2.78	3.8	44.2	740
J296440		5.38	13.10	0.19	1.2	0.113	0.63	20.0	13.6	1.96	1260	0.53	0.56	5.0	66.9	980
J296441		10.80	12.75	0.47	0.7	0.361	0.02	7.3	13.3	2.54	186	9.03	<0.01	1.7	35.5	50
J296442		4.93	9.12	0.13	1.0	0.064	0.22	9.3	15.2	1.83	178	676	0.03	2.0	18.5	620
J296443		7.85	14.25	0.18	1.4	0.081	0.59	10.6	23.8	2.22	295	3.25	0.01	3.3	49.7	90
J296444		4.42	11.30	0.13	1.1	0.072	0.93	9.6	7.8	0.87	316	2.63	0.01	3.4	27.2	320
J296445		1.92	9.04	0.13	1.2	0.040	0.98	14.7	6.1	0.65	676	3.62	0.06	4.3	22.0	370
J296446		2.28	8.73	0.13	1.2	0.044	0.90	12.7	7.3	0.71	536	9.17	0.04	3.8	21.0	320
J296447		7.66	18.90	0.19	1.0	0.091	1.60	7.4	34.3	3.44	1600	1.11	0.08	2.7	29.4	790
J296448		9.42	21.1	0.24	0.6	0.361	0.95	4.4	36.7	3.85	1480	1.11	0.53	2.7	43.6	710
J296449		6.33	13.65	0.15	0.8	0.044	0.44	7.2	23.8	2.91	852	0.86	1.20	2.7	31.3	590
J296450		4.79	16.90	0.19	0.9	6.80	4.21	15.8	11.2	0.80	493	173.5	1.21	4.5	24.1	940
J296451		36.3	8.86	1.23	0.1	1.720	0.04	4.3	2.5	0.46	174	94.3	<0.01	0.9	67.3	60
J296452		39.0	7.11	1.19	0.1	1.080	0.11	1.4	3.0	0.45	136	117.5	0.01	0.8	85.0	170
J296453		42.0	6.53	1.03	<0.1	0.676	0.02	1.6	1.2	0.24	62	93.8	0.02	0.8	20.4	20
J296454		39.8	18.55	0.86	<0.1	1.700	0.02	2.4	0.8	1.80	43	137.0	<0.01	1.0	39.6	10
J296455		33.5	9.10	0.96	<0.1	1.535	0.02	5.9	0.9	2.65	123	204	<0.01	0.7	22.9	20
J296456		37.4	14.20	0.80	<0.1	2.07	0.01	1.2	1.2	0.65	53	61.0	<0.01	0.6	21.1	<10
J296457		39.2	27.8	0.88	<0.1	1.440	0.01	4.4	0.9	0.49	29	83.8	<0.01	0.6	22.1	<10
J296458		37.5	21.6	0.71	<0.1	5.24	0.01	0.5	0.7	0.32	23	138.0	<0.01	0.5	27.9	<10
J296459		37.5	18.35	1.18	<0.1	2.64	0.01	<0.5	0.4	0.19	17	125.0	<0.01	0.9	21.4	<10
J296460		2.45	11.00	0.09	1.2	0.035	0.76	9.4	13.2	0.69	432	3.08	1.92	3.7	20.8	480
J296461		27.2	35.5	0.79	<0.1	6.30	0.01	<0.5	1.2	0.54	20	412	<0.01	0.7	18.1	10
J296462		30.7	30.2	0.80	<0.1	3.66	0.01	<0.5	1.0	0.49	15	469	<0.01	0.7	14.4	<10
J296463		34.2	11.55	0.88	<0.1	4.54	<0.01	<0.5	0.3	0.08	29	234	<0.01	0.8	13.0	10
J296464		31.9	15.55	0.97	0.2	7.71	0.05	<0.5	1.4	0.48	131	163.5	0.06	1.0	19.3	70
J296465		35.9	13.55	1.01	<0.1	3.02	0.01	0.8	0.4	0.08	24	170.0	<0.01	0.6	22.3	290
J296466		36.4	8.19	0.91	<0.1	2.55	0.02	<0.5	0.2	0.03	20	191.5	<0.01	0.7	11.8	20
J296467		28.9	25.9	0.81	0.3	4.04	0.52	<0.5	3.7	0.82	261	149.5	0.07	1.2	23.3	300
J296468		21.1	18.65	0.53	0.4	3.62	0.33	2.2	11.5	2.43	635	190.5	0.46	1.6	49.0	870
J296500		23.2	43.1	0.78	<0.1	4.35	0.03	<0.5	0.4	1.20	124	55.3	<0.01	0.4	9.5	160
J296501		36.1	6.11	1.59	0.1	2.29	0.12	<0.5	1.9	0.22	61	28.7	0.01	0.9	9.7	50



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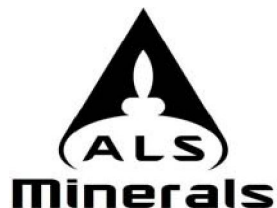
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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61
		Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	U
		ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
J296431		39.7	2.9	0.601	>10.0	5.63	20.1	38	7.4	37.3	0.11	4.31	0.2	0.470	0.2
J296432		12.7	15.3	0.031	3.26	2.24	39.9	4	10.6	36.6	0.27	0.61	0.4	1.125	0.2
J296433		4.9	32.4	0.012	0.39	1.38	24.1	2	1.5	72.1	0.24	0.09	1.8	0.572	1.3
J296434		29.1	52.4	0.030	3.07	2.57	26.4	4	3.1	250	0.18	0.23	0.9	0.592	1.6
J296435		17.0	18.7	0.014	3.91	1.96	19.9	4	3.3	717	0.19	0.21	1.8	0.337	0.6
J296436		8.5	13.8	0.011	1.68	1.76	18.6	3	1.7	687	0.15	0.11	0.9	0.476	0.5
J296437		5.8	70.4	0.003	0.36	1.05	21.3	1	2.4	200	0.23	0.09	2.1	0.500	0.5
J296438		18.3	39.2	0.004	0.54	1.45	24.4	2	2.7	150.0	0.30	0.24	2.7	0.532	0.7
J296439		6.5	11.6	<0.002	0.11	1.89	31.9	2	1.4	175.5	0.26	<0.05	1.0	0.834	0.3
J296440		7.5	28.8	0.002	0.43	1.22	16.9	2	3.1	127.0	0.32	0.15	3.7	0.362	0.8
J296441		51.8	1.0	0.018	>10.0	15.60	4.6	96	3.7	62.4	0.12	3.71	2.5	0.061	0.7
J296442		11.8	10.4	2.76	3.80	4.12	5.7	9	4.3	16.5	0.13	0.54	3.0	0.088	1.3
J296443		8.2	23.0	0.010	6.67	3.37	10.5	18	5.5	9.1	0.25	0.60	3.4	0.165	2.0
J296444		7.5	37.2	0.005	3.33	3.48	8.4	8	3.3	9.3	0.23	0.36	3.4	0.125	1.1
J296445		6.2	38.1	0.014	0.14	1.15	8.2	1	1.0	11.7	0.30	0.08	5.0	0.157	0.8
J296446		6.7	36.0	0.003	0.38	1.08	8.1	2	1.4	7.8	0.27	0.09	4.6	0.148	0.7
J296447		9.3	59.4	0.003	0.80	1.60	29.8	2	1.5	22.4	0.20	0.05	0.7	0.897	0.3
J296448		24.9	23.2	0.004	2.11	10.90	32.3	21	2.9	43.3	0.20	1.00	0.3	0.840	0.1
J296449		4.3	18.4	0.002	1.23	1.96	22.4	3	2.7	49.0	0.19	0.05	1.5	0.650	0.2
J296450		2020	96.5	0.428	2.36	68.0	12.9	7	178.5	262	0.29	0.66	3.0	0.249	1.1
J296451		158.0	1.6	0.346	>10.0	99.3	1.3	237	18.8	66.2	<0.05	13.50	0.2	0.027	0.6
J296452		182.5	4.7	0.534	>10.0	516	3.3	232	27.2	23.3	<0.05	11.70	<0.2	0.079	0.3
J296453		85.0	0.5	0.253	>10.0	20.1	1.2	162	11.7	6.9	<0.05	7.40	<0.2	0.024	3.2
J296454		91.6	1.6	0.594	>10.0	19.45	0.5	105	7.3	9.9	<0.05	4.21	<0.2	0.005	3.8
J296455		72.6	1.5	0.630	>10.0	39.1	0.4	155	6.8	150.0	<0.05	6.32	<0.2	0.005	1.3
J296456		101.0	0.9	0.080	>10.0	17.05	0.2	120	10.5	17.3	<0.05	5.76	<0.2	<0.005	2.3
J296457		110.5	0.7	0.149	>10.0	21.1	0.2	138	16.4	16.0	<0.05	6.71	<0.2	<0.005	1.5
J296458		401	0.5	0.258	>10.0	29.6	0.1	117	37.5	10.0	<0.05	5.10	<0.2	<0.005	1.0
J296459		170.5	0.4	0.255	>10.0	22.2	0.2	127	31.2	11.5	<0.05	5.11	<0.2	<0.005	0.8
J296460		3.8	25.5	<0.002	0.08	0.84	10.4	1	0.8	240	0.24	<0.05	1.8	0.253	0.8
J296461		243	1.0	1.510	>10.0	19.25	0.1	103	9.5	19.9	<0.05	4.36	<0.2	<0.005	1.9
J296462		183.5	0.9	1.760	>10.0	15.30	0.1	84	14.9	12.8	<0.05	3.80	<0.2	<0.005	1.2
J296463		384	0.2	0.786	>10.0	24.4	0.1	93	39.5	11.9	<0.05	4.67	<0.2	<0.005	1.3
J296464		291	1.4	0.447	>10.0	33.5	2.6	123	38.7	16.2	<0.05	5.07	<0.2	0.083	1.8
J296465		119.0	0.6	0.578	>10.0	16.90	0.1	134	9.1	13.2	<0.05	7.91	<0.2	<0.005	0.7
J296466		126.5	0.8	0.617	>10.0	15.70	0.1	102	14.5	12.2	<0.05	6.89	<0.2	<0.005	0.4
J296467		130.5	14.1	0.593	>10.0	12.40	7.4	84	15.0	21.6	0.05	5.90	<0.2	0.201	0.5
J296468		44.7	9.6	0.838	>10.0	3.99	15.0	65	4.0	32.9	0.09	5.11	0.3	0.317	0.5
J296500		222	2.4	0.141	>10.0	21.2	0.2	133	7.8	18.4	<0.05	6.31	<0.2	<0.005	0.4
J296501		161.5	4.6	0.037	>10.0	30.4	2.4	275	19.7	11.5	<0.05	22.3	<0.2	0.051	0.2



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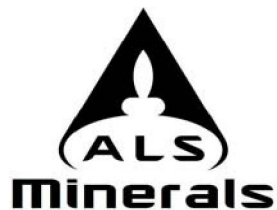
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Sample Description	Method Analyte Units LOR	ME- MS61 V ppm 1	ME- MS61 W ppm 0.1	ME- MS61 Y ppm 0.1	ME- MS61 Zn ppm 2	ME- MS61 Zr ppm 0.5	Cu- OG62 Cu % 0.001	Zn- OG62 Zn % 0.001
J296431		164	1.6	12.4	1140	8.7		
J296432		341	2.4	27.9	561	84.5		
J296433		193	2.4	15.5	132	54.9		
J296434		196	26.1	16.8	509	36.3		
J296435		123	37.1	21.0	183	32.1		
J296436		75	38.0	14.0	130	20.0		
J296437		237	10.1	10.5	125	25.7		
J296438		230	6.6	17.2	230	36.5		
J296439		266	1.2	15.6	101	24.2		
J296440		188	0.7	15.4	83	45.8		
J296441		45	2.1	5.1	485	24.8		
J296442		48	1.8	6.6	69	35.3		
J296443		71	1.9	10.0	82	54.6		
J296444		54	1.3	8.0	58	40.8		
J296445		40	1.0	8.8	57	43.8		
J296446		44	1.3	7.4	79	42.5		
J296447		306	3.3	19.5	243	33.8		
J296448		300	1.6	17.4	656	15.1		
J296449		213	1.6	21.1	100	23.2		
J296450		141	11.7	14.1	2580	28.0		
J296451		21	2.6	2.2	724	3.4	0.965	
J296452		41	4.4	3.0	613	2.0		
J296453		19	1.5	1.6	4090	1.2		
J296454		44	1.6	2.5	4680	<0.5		
J296455		22	0.9	3.4	1710	<0.5	1.445	
J296456		15	1.6	1.6	8110	<0.5	2.33	
J296457		23	1.8	1.0	>10000	<0.5	3.84	1.130
J296458		14	5.0	0.8	>10000	<0.5	1.405	1.765
J296459		13	3.6	0.8	8040	<0.5	1.710	
J296460		75	20.0	13.1	44	37.7		
J296461		10	5.1	1.2	>10000	<0.5	2.37	1.695
J296462		9	3.5	0.9	9770	<0.5	1.850	
J296463		8	5.4	0.5	3960	<0.5	1.660	
J296464		40	4.8	3.8	5980	5.1	2.54	
J296465		41	1.3	0.7	435	<0.5		
J296466		19	0.8	0.3	394	<0.5		
J296467		98	1.7	7.4	1820	7.4		
J296468		155	1.9	12.9	304	9.5		
J296500		35	2.4	1.0	>10000	0.8	1.980	1.005
J296501		23	5.8	1.8	2780	0.9	1.115	



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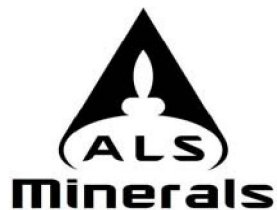
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Sample Description	Method Analyte Units LOR	Au- ICP21 Au ppm 0.001	WEI- 21 Recvd Wt. kg 0.02	ME- MS61 Ag ppm 0.01	ME- MS61 Al % 0.01	ME- MS61 As ppm 0.2	ME- MS61 Ba ppm 10	ME- MS61 Be ppm 0.05	ME- MS61 Bi ppm 0.01	ME- MS61 Ca % 0.01	ME- MS61 Cd ppm 0.02	ME- MS61 Ce ppm 0.01	ME- MS61 Co ppm 0.1	ME- MS61 Cr ppm 1	ME- MS61 Cs ppm 0.05	ME- MS61 Cu ppm 0.2
J296502		0.213	0.86	3.20	0.11	163.5	130	<0.05	11.10	0.37	0.76	1.02	168.5	5	<0.05	8040
J296503		0.016	0.76	0.19	4.65	6.1	1380	0.68	0.42	3.52	0.26	31.4	28.3	87	0.82	261



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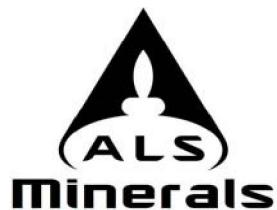
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Sample Description	Method Analyte Units LOR	ME- MS61 Fe %	ME- MS61 Ga ppm	ME- MS61 Ge ppm	ME- MS61 Hf ppm	ME- MS61 In ppm	ME- MS61 K %	ME- MS61 La ppm	ME- MS61 Li ppm	ME- MS61 Mg %	ME- MS61 Mn ppm	ME- MS61 Mo ppm	ME- MS61 Na %	ME- MS61 Nb ppm	ME- MS61 Ni ppm	ME- MS61 P ppm
J296502		40.5	5.93	1.15	<0.1	1.025	0.01	0.5	0.5	0.24	47	242	0.01	0.9	8.2	50
J296503		5.71	15.65	0.16	1.1	0.133	0.60	19.9	20.8	2.07	1280	1.57	0.62	5.1	71.5	900



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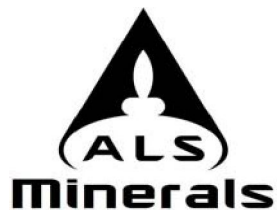
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Sample Description	Method Analyte Units LOR	ME- MS61 Pb ppm 0.5	ME- MS61 Rb ppm 0.1	ME- MS61 Re ppm 0.002	ME- MS61 S % 0.01	ME- MS61 Sb ppm 0.05	ME- MS61 Sc ppm 0.1	ME- MS61 Se ppm 1	ME- MS61 Sn ppm 0.2	ME- MS61 Sr ppm 0.2	ME- MS61 Ta ppm 0.05	ME- MS61 Te ppm 0.05	ME- MS61 Th ppm 0.2	ME- MS61 Ti % 0.005	ME- MS61 Tl ppm 0.02	ME- MS61 U ppm 0.1
J296502		62.8	0.4	0.244	>10.0	15.20	0.3	147	43.6	17.2	<0.05	9.26	<0.2	0.007	1.03	1.0
J296503		10.0	25.2	0.004	0.81	1.53	18.3	2	3.5	119.0	0.32	0.24	3.0	0.381	0.23	0.8



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Sample Description	Method Analyte Units LOR	ME- MS61	ME- MS61	ME- MS61	ME- MS61	ME- MS61	Cu- OG62	Zn- OG62
		V	W	Y	Zn	Zr	Cu	Zn
		ppm 1	ppm 0.1	ppm 0.1	ppm 2	ppm 0.5	% 0.001	% 0.001
J296502		12	1.2	0.6	240	0.5		
J296503		183	0.6	15.8	112	40.4		



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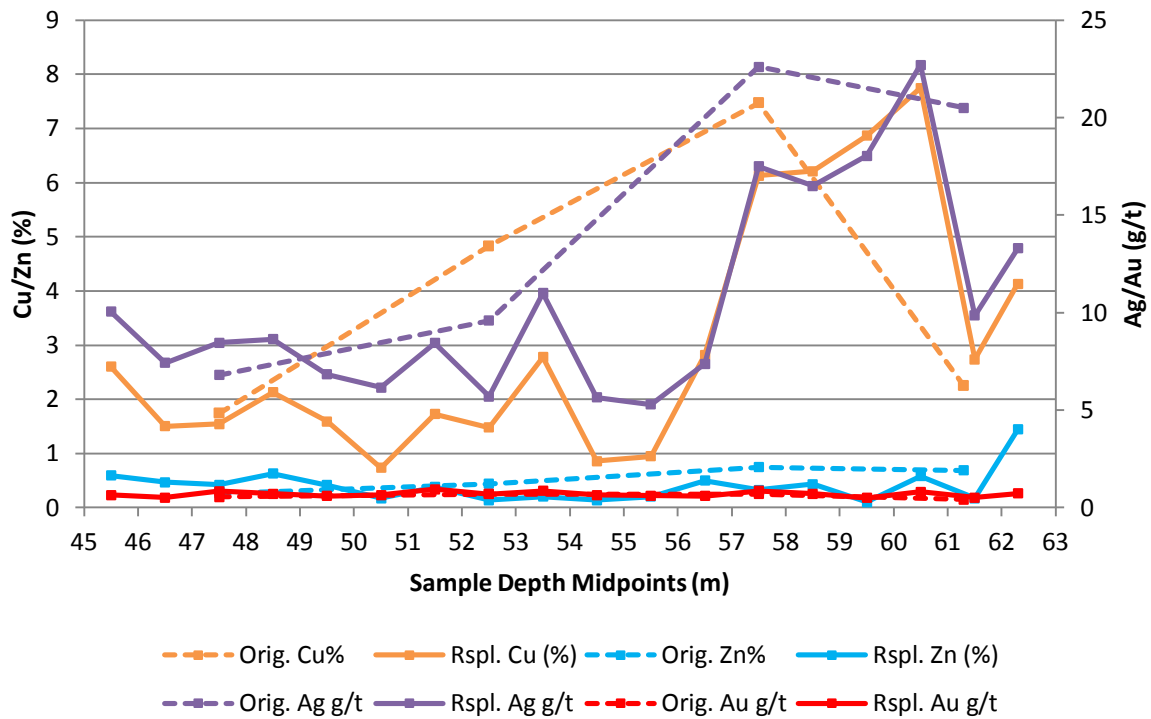
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Method	CERTIFICATE COMMENTS
ME- MS61 ME- MS61 ME- MS61	Interference: Ca> 10% on ICP- MS As,ICP- AES results shown. Interference: Mo> 400ppm on ICP- MS Cd,ICP- AES results shown. REE's may not be totally soluble in this method.

Appendix 3 – Assay Comparison

Hole CC-16 Original vs Resampled Assay



Hole CC-17 Original vs Resampled Assay

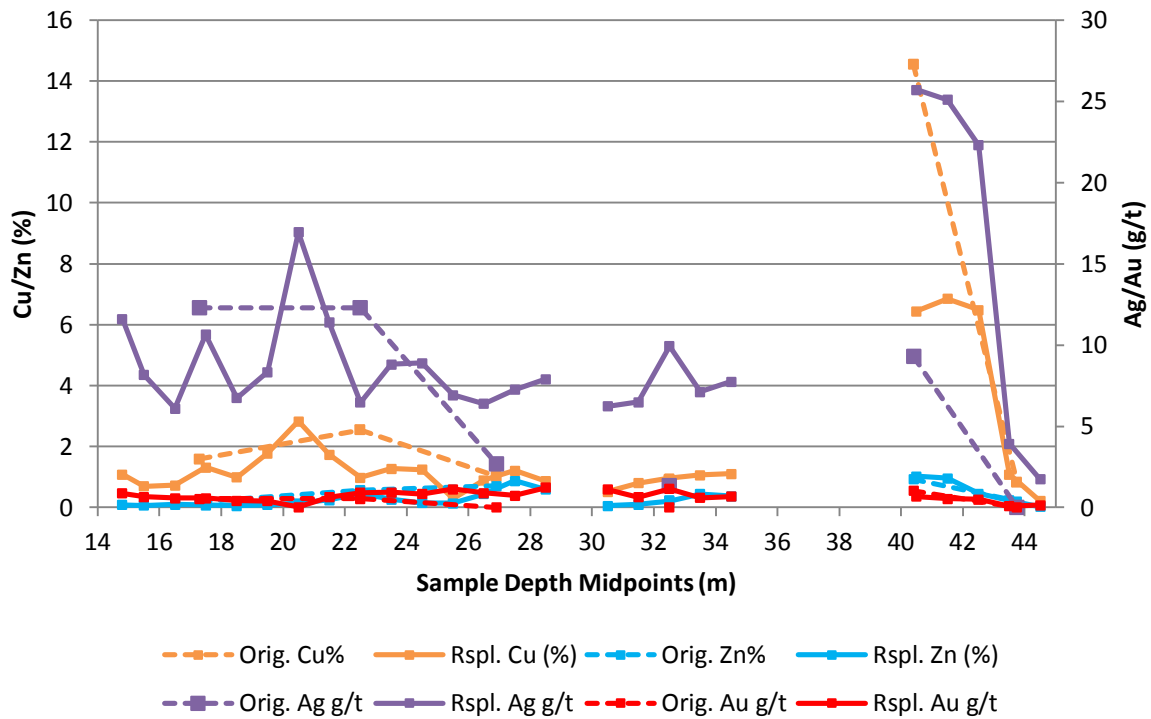
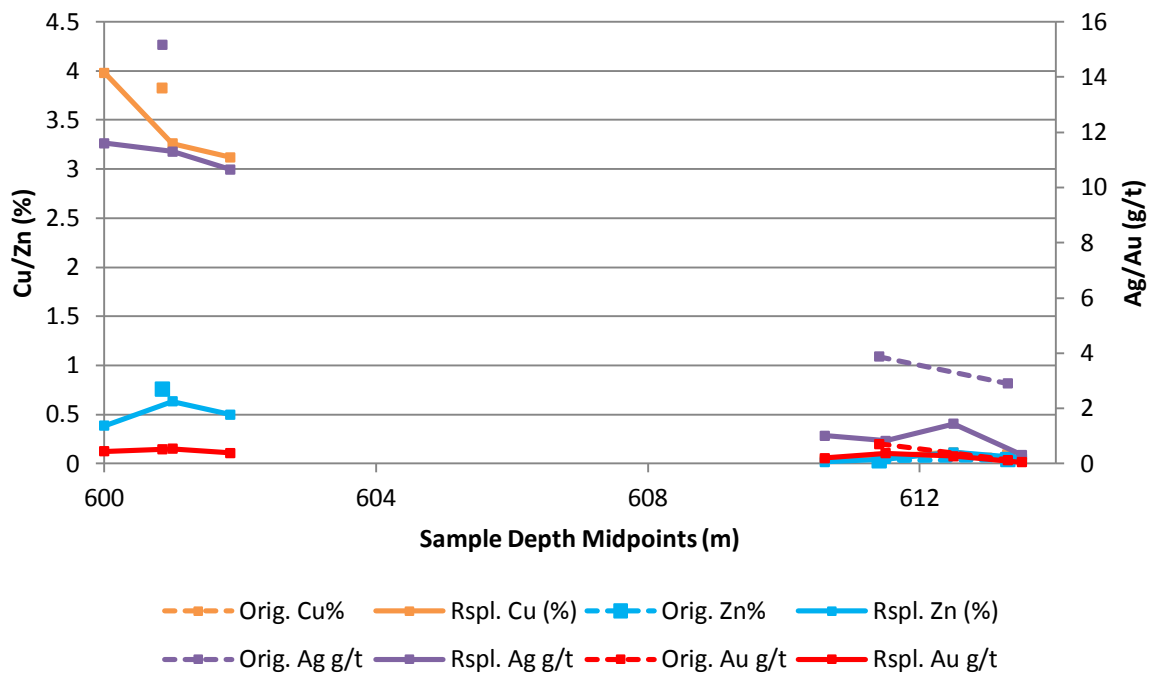


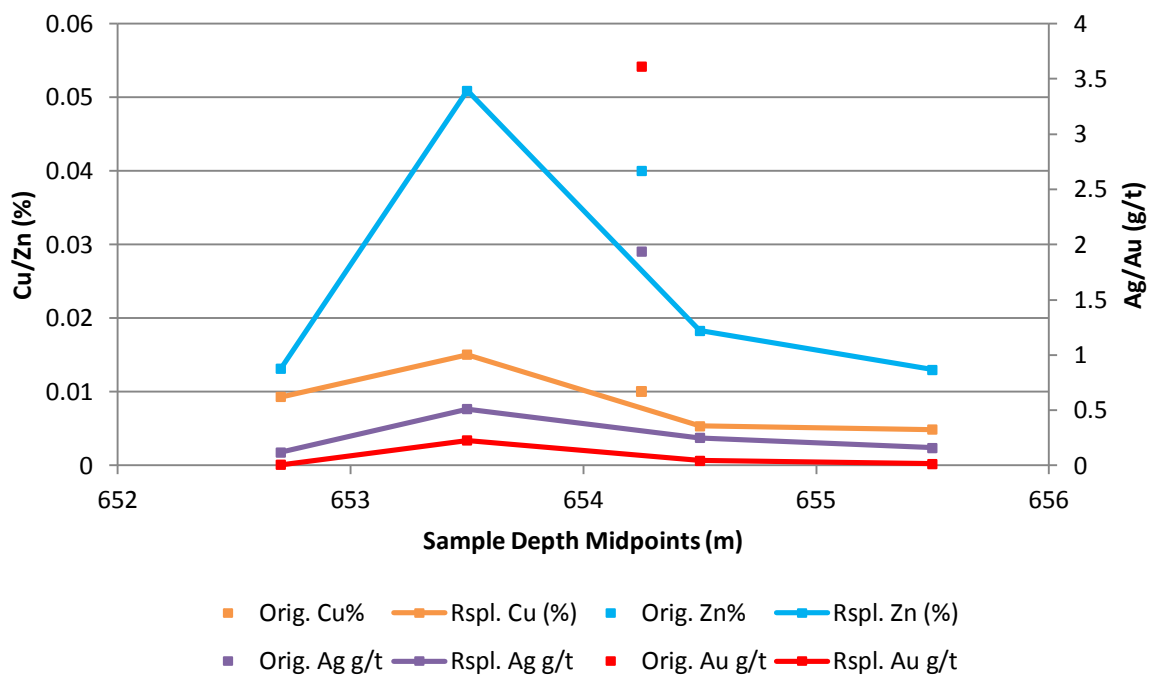
Figure 10 is a dual-axis line graph showing the vertical distribution of Cu, Zn, and Ag in the upper 20 m of the study area. The x-axis represents Sample Depth Midpoints (m) from 192 to 124. The left y-axis represents Cu/Zn (%) from 0 to 4.5. The right y-axis represents Ag/Au (g/t) from 0 to 30. The graph displays eight data series: Orig. Cu% (dashed orange line with squares), Rspl. Cu (%) (solid orange line with squares), Orig. Zn% (dashed blue line with squares), Rspl. Zn (%) (solid blue line with squares), Orig. Ag g/t (dashed purple line with squares), Rspl. Ag g/t (solid purple line with squares), Orig. Au g/t (dashed red line with squares), and Rspl. Au g/t (solid red line with squares). The graph shows significant variability in the ratios, particularly for Ag/Au, which peaks sharply around 194 m depth.

Sample Depth Midpoints (m)	Orig. Cu%	Rspl. Cu (%)	Orig. Zn%	Rspl. Zn (%)	Orig. Ag g/t	Rspl. Ag g/t	Orig. Au g/t	Rspl. Au g/t
32.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33.5	0.0	3.4	0.0	0.0	4.8	5.2	0.8	0.2
34.5	0.0	1.1	0.0	0.0	5.5	5.8	0.6	0.2
35.5	0.0	1.1	0.0	0.0	6.0	4.0	0.4	0.1
36.5	0.0	0.9	0.0	0.0	6.5	2.2	0.3	0.1
37.5	0.0	0.2	0.0	0.0	6.8	1.2	0.2	0.1
38.5	0.0	0.0	0.0	0.0	6.2	0.6	0.2	0.1
39.5	0.0	0.0	0.0	0.0	5.5	0.6	0.2	0.1
40.5	0.0	1.0	0.0	0.3	4.5	1.5	0.2	0.1
41.5	0.0	0.0	0.0	0.0	3.5	0.1	0.2	0.0
42.5	0.0	0.0	0.0	0.0	3.0	0.1	0.2	0.0
43.5	0.0	0.0	0.0	0.0	2.8	0.1	0.2	0.0
44.5	0.0	0.0	0.0	0.0	2.6	0.1	0.2	0.0
45.5	0.0	0.0	0.0	0.0	2.4	0.1	0.2	0.0
46.5	0.0	0.0	0.0	0.0	2.2	0.1	0.2	0.0
47.5	0.0	0.0	0.0	0.0	2.0	0.1	0.2	0.0
48.5	0.0	0.0	0.0	0.0	1.8	0.1	0.2	0.0
49.5	0.0	0.0	0.0	0.0	1.6	0.1	0.2	0.0

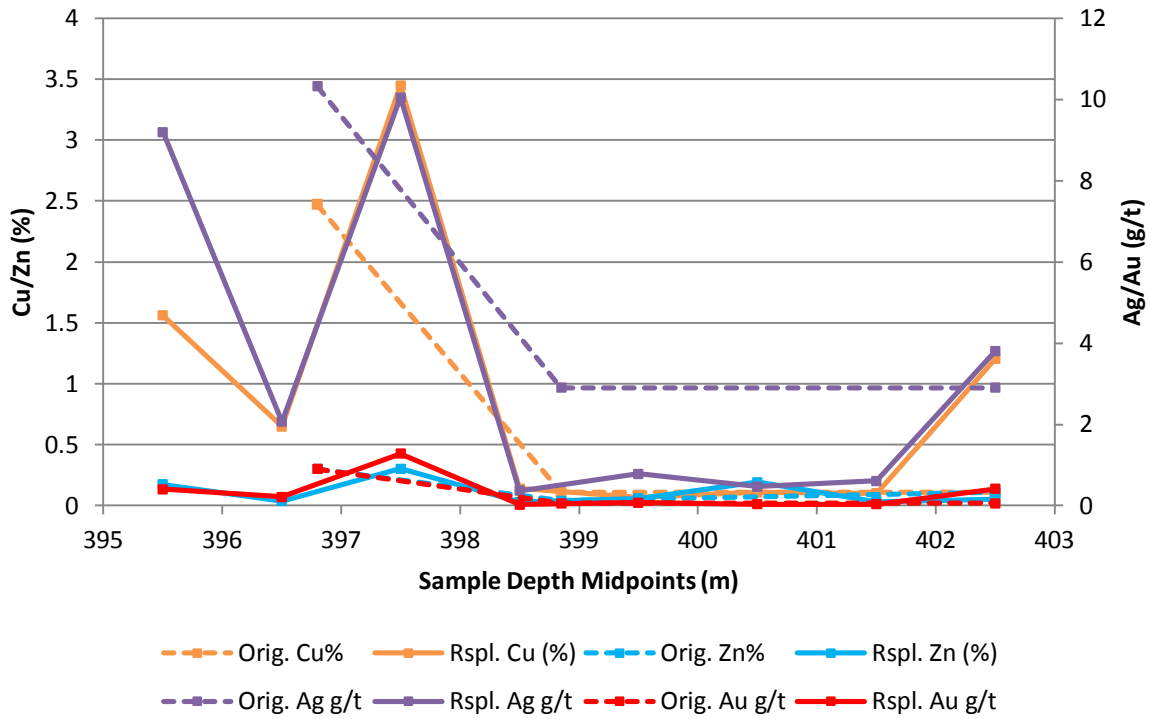
Hole CC-54 Original vs Resampled Assay 599.5-614 m



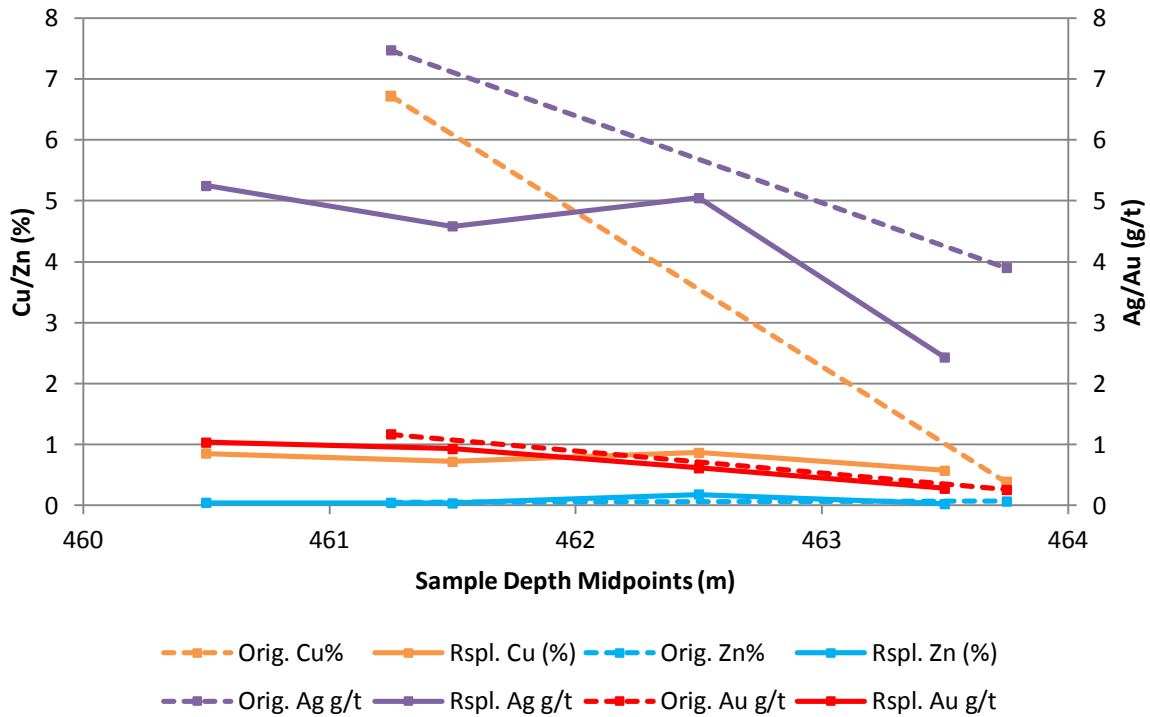
Hole CC-54 Original vs Resampled Assay 652.4-656 m



Hole CC-55 Original vs Resampled Assay

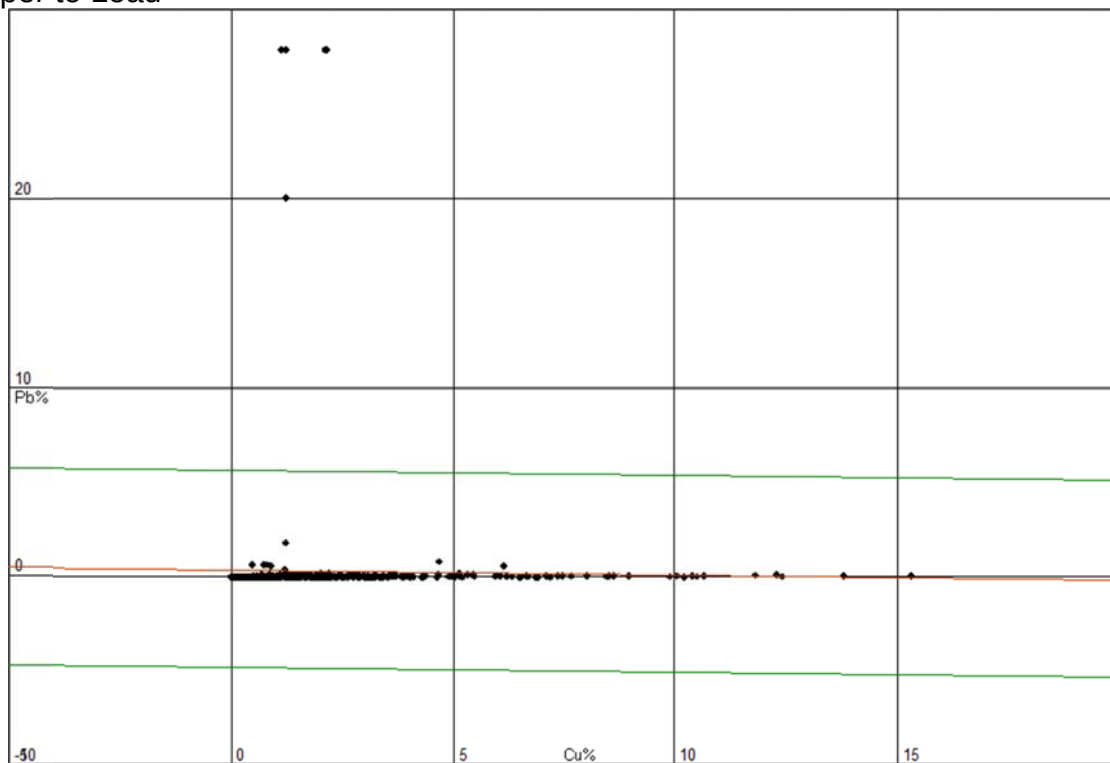


Hole CC-57 Original vs Resampled Assay

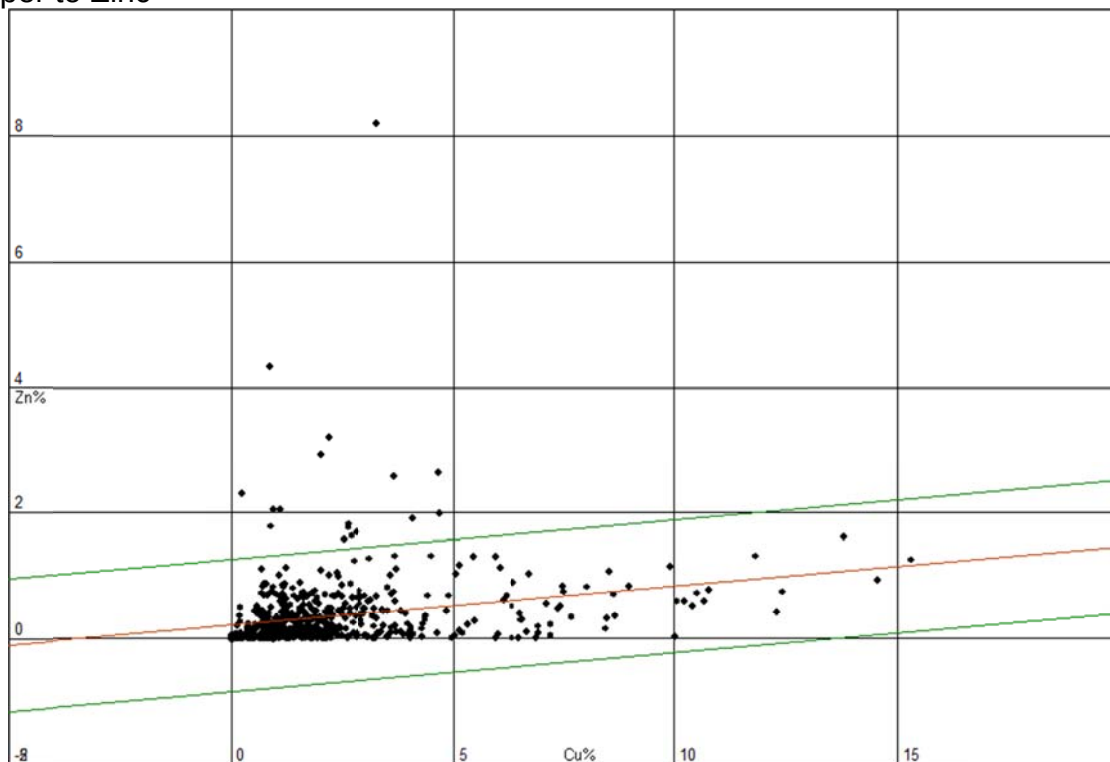


Appendix 4 – Matrix Scatterplots

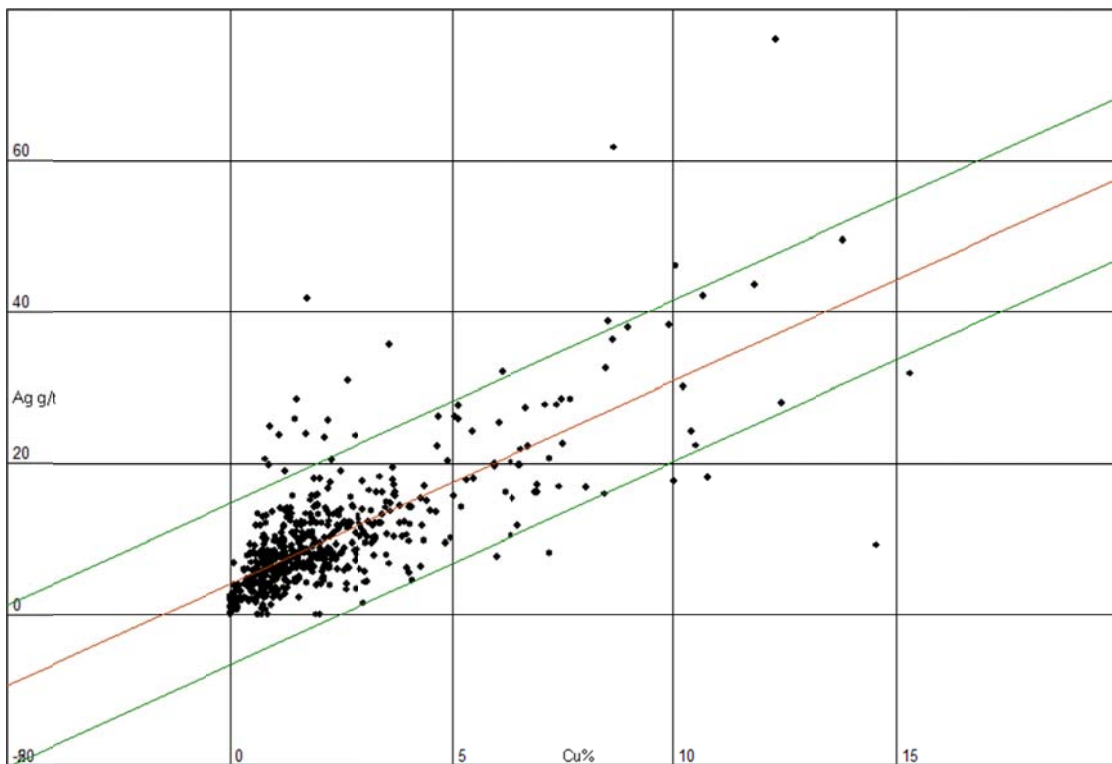
Copper to Lead



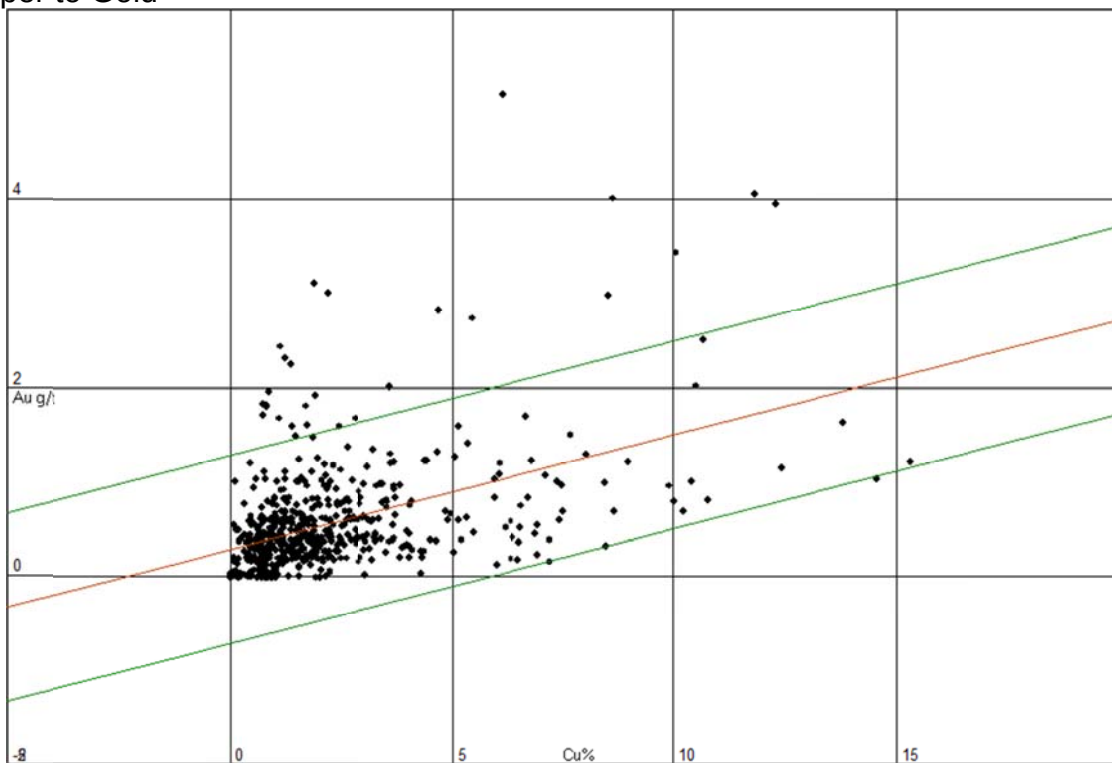
Copper to Zinc



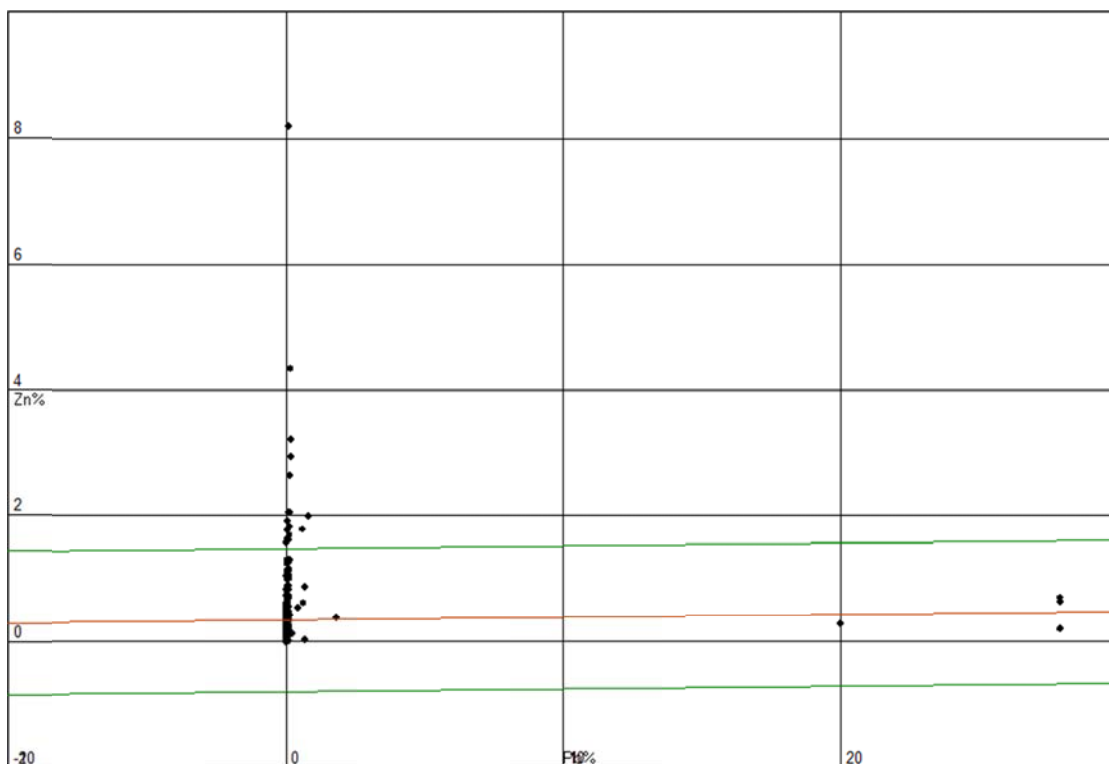
Copper to Silver



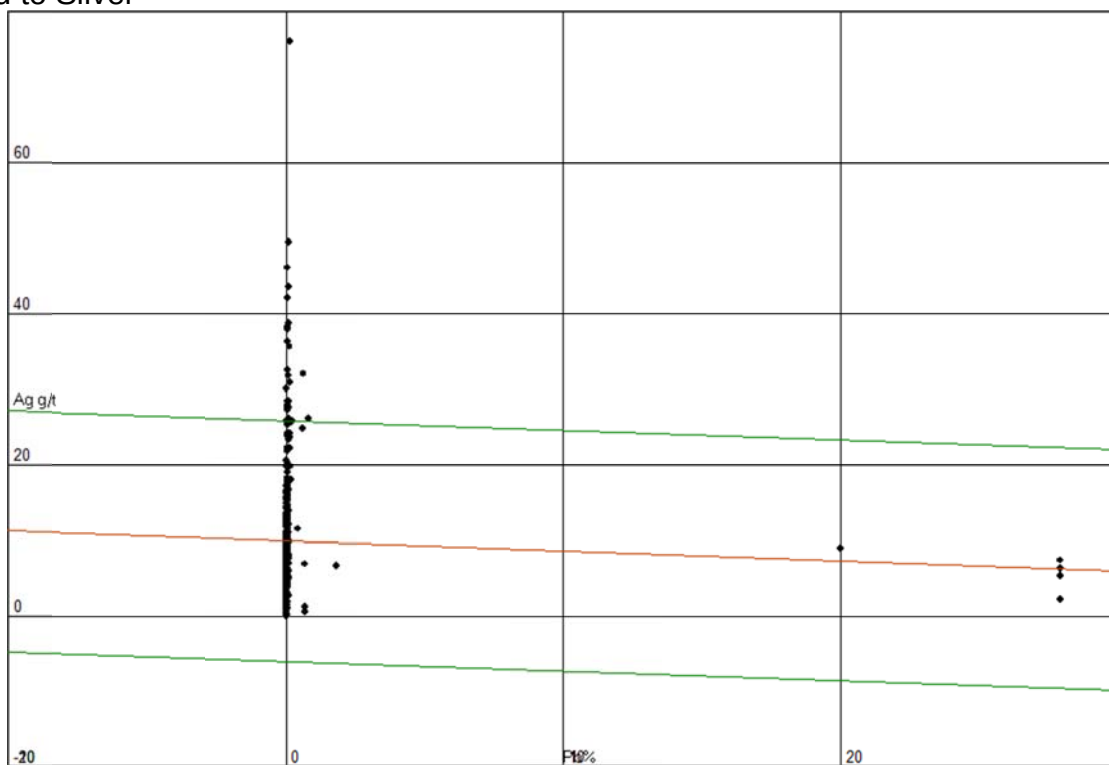
Copper to Gold



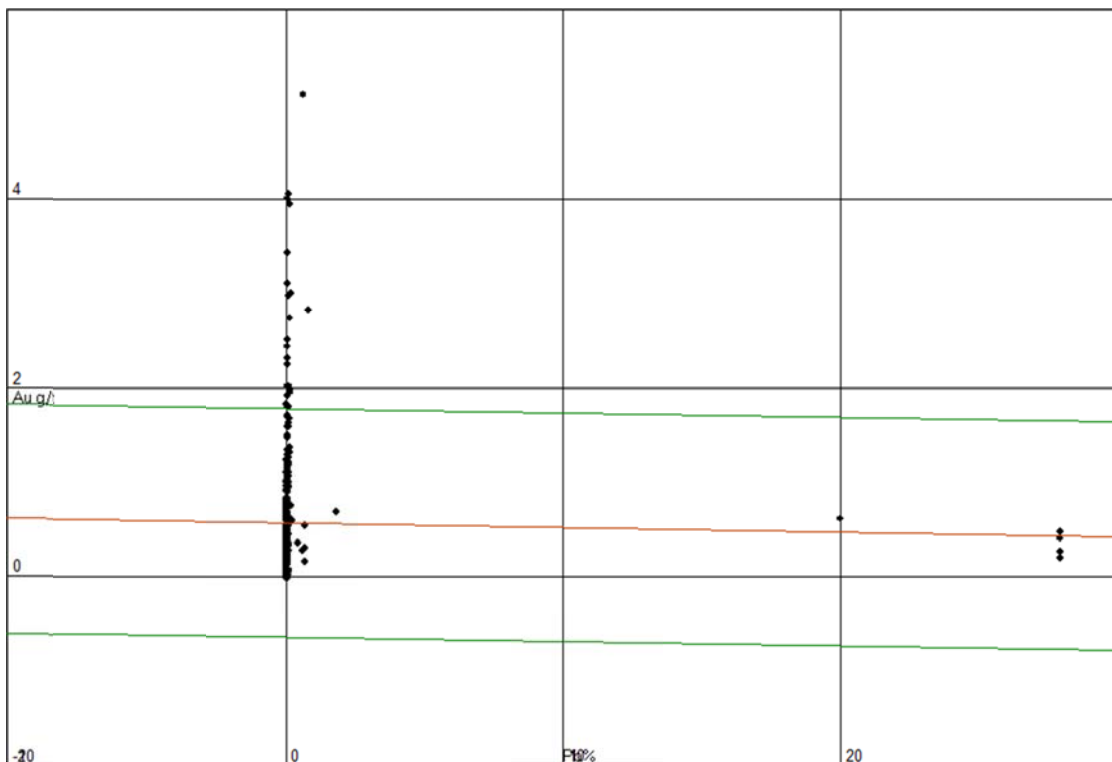
Lead to Zinc



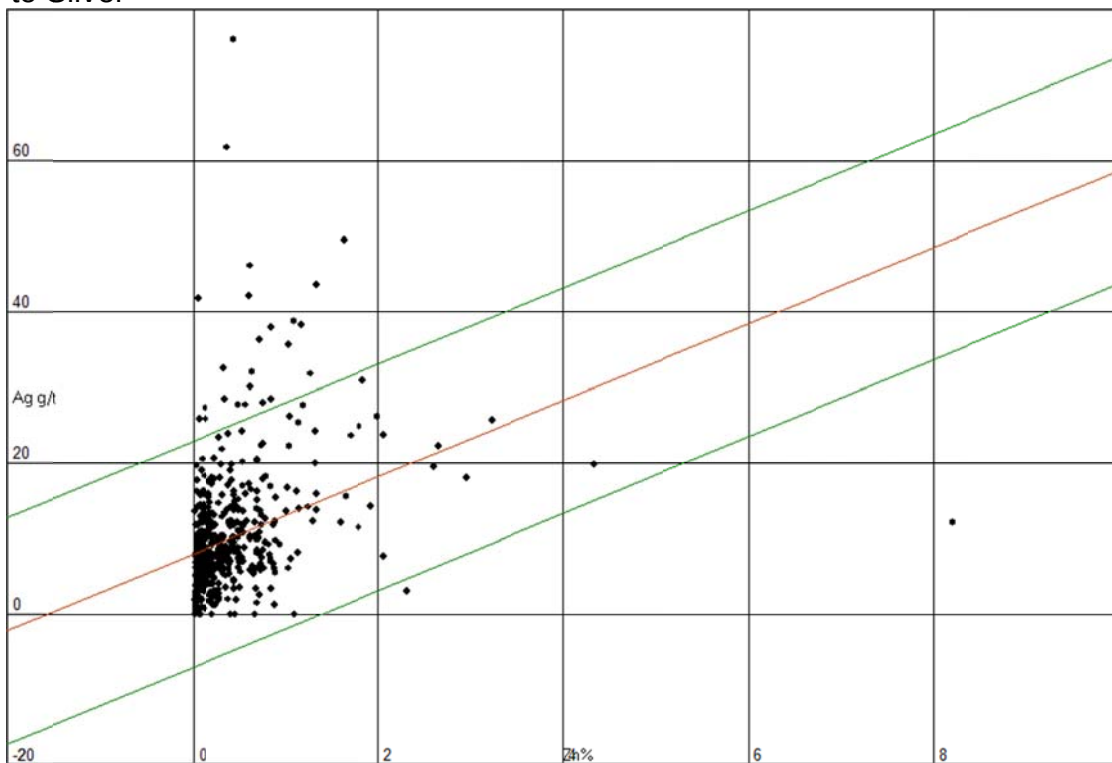
Lead to Silver



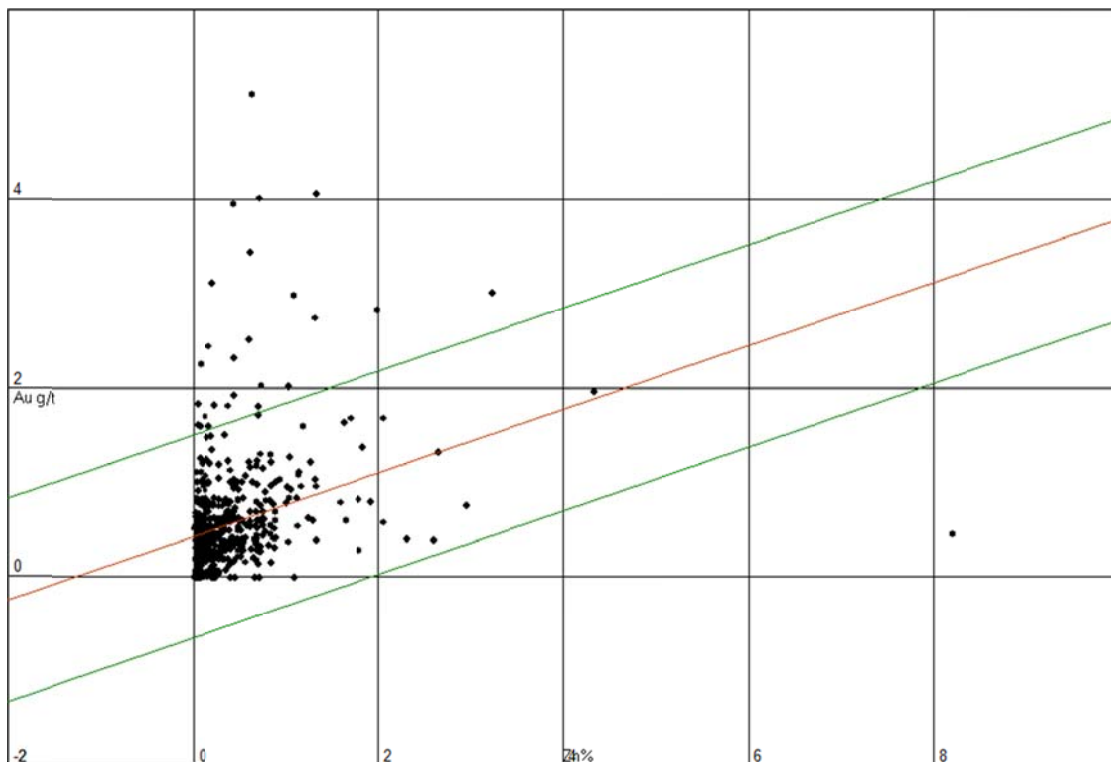
Lead to Gold



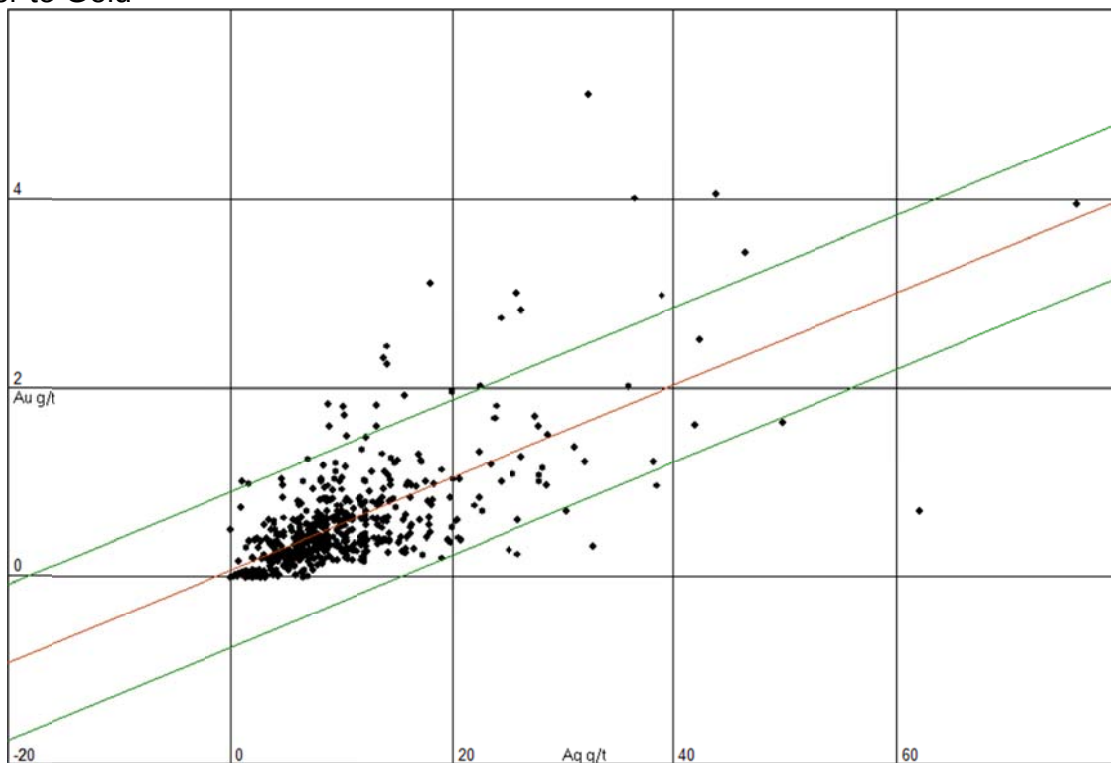
Zinc to Silver



Zinc to Gold



Silver to Gold



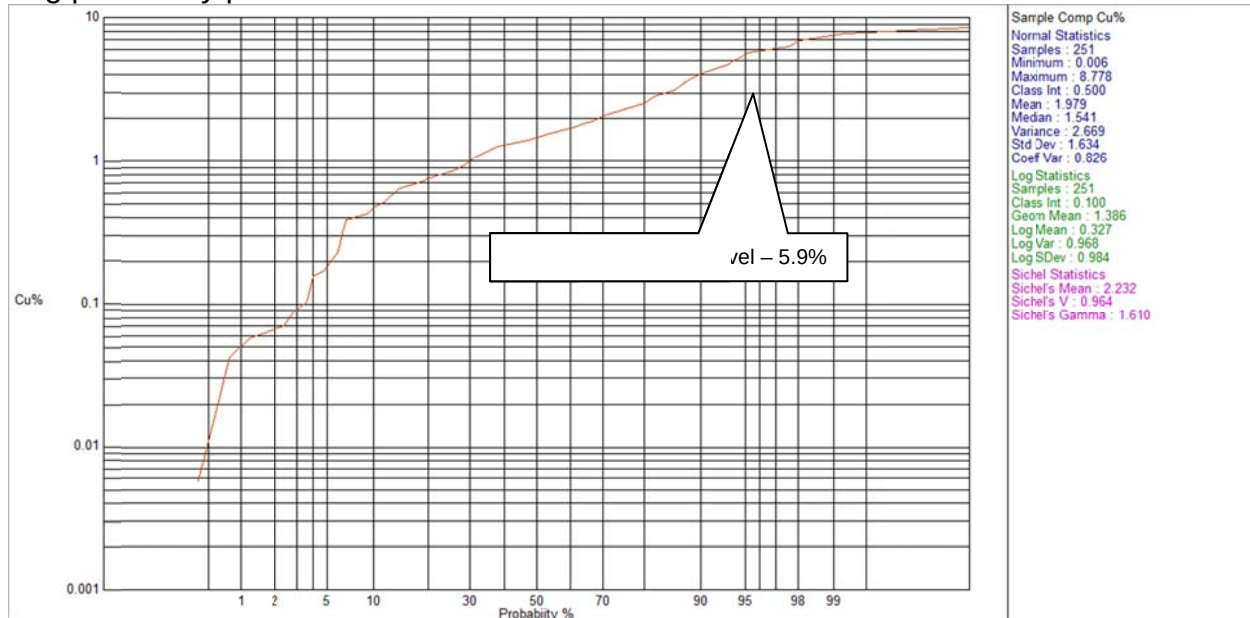
Appendix 5 – Chu Chua Sample Statistics displaying the effect of Capping

	Samples with no Capping Applied				Samples with Capping Applied			
	Cu%	Zn%	Ag g/t	Au g/t	Cu% Capped	Zn% Capped	Ag g/t Capped	Au g/t Capped
Number	251	250	249	250	251	250	249	250
Minimum	0.006	0	0	0	0.006	0	0	0
Maximum	8.778	2.64	62	4.301	5.9	0.86	32	1.4
Mean	1.979	0.331	9.263	0.5	1.923	0.304	9.119	0.469
Median	1.541	0.221	7.663	0.414	1.541	0.221	7.663	0.414
Std Dev	1.634	0.354	7.049	0.479	1.457	0.263	6.277	0.339
Variance	2.669	0.125	49.693	0.23	2.122	0.069	39.402	0.115
Std Error	0.007	0.001	0.028	0.002	0.006	0.001	0.025	0.001
Coeff Var	0.826	1.068	0.761	0.959	0.757	0.867	0.688	0.724
Log Num	251	249	243	243	251	249	243	243
Geom Mean	1.386	0.183	7.505	0.357	1.375	0.179	7.479	0.352
Log Min	-5.116	-4.962	-0.357	-4.605	-5.116	-4.962	-0.357	-4.605
Log Max	2.172	0.971	4.127	1.459	1.775	-0.151	3.466	0.336
Log Mean	0.327	-1.698	2.016	-1.029	0.319	-1.721	2.012	-1.044
Log S Dev	0.984	1.247	0.716	0.963	0.97	1.212	0.708	0.936
Log Var	0.968	1.555	0.513	0.928	0.942	1.47	0.501	0.875
Sichel Stats								
Mean	2.232	0.396	9.665	0.565	2.189	0.371	9.569	0.542
V	0.964	1.549	0.511	0.924	0.938	1.464	0.499	0.872
Gamma	1.61	2.162	1.288	1.581	1.592	2.075	1.28	1.539
Percentiles								
10	0.465	0.03	2.365	0.079	0.465	0.03	2.365	0.079
20	0.772	0.06	3.914	0.171	0.772	0.06	3.914	0.171
30	1.019	0.101	5.558	0.253	1.019	0.101	5.558	0.253
40	1.368	0.16	6.718	0.33	1.368	0.16	6.718	0.33
50	1.541	0.221	7.663	0.414	1.541	0.221	7.663	0.414
60	1.778	0.296	9.151	0.482	1.778	0.296	9.151	0.482
70	2.136	0.389	10.832	0.569	2.136	0.389	10.832	0.569
80	2.678	0.54	12.796	0.69	2.678	0.54	12.796	0.69
90	4.389	0.742	17.886	0.986	4.389	0.742	17.886	0.986
95	5.707	0.886	20.841	1.219	5.707	0.86	20.841	1.219
97.5	6.486	1.188	25.788	1.352	5.9	0.86	25.788	1.352
99	7.57	1.719	33.303	2.508	5.9	0.86	31.885	1.4

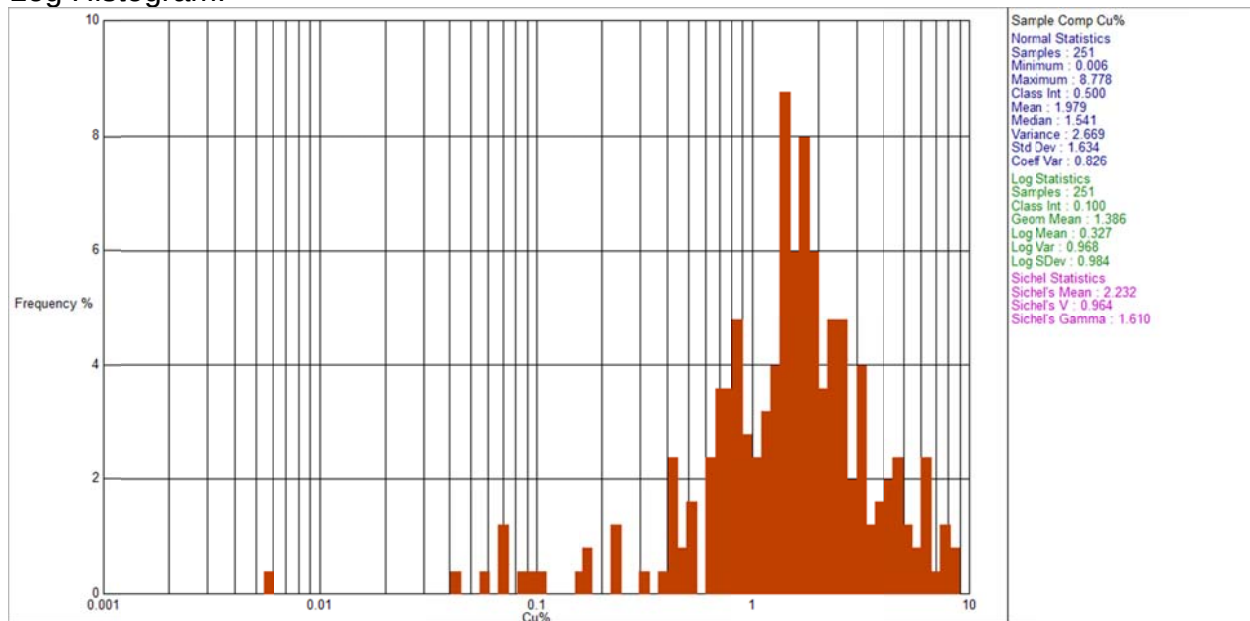
Appendix 6 – Top Cut/Capping Plots

Copper:

Log probability plot:

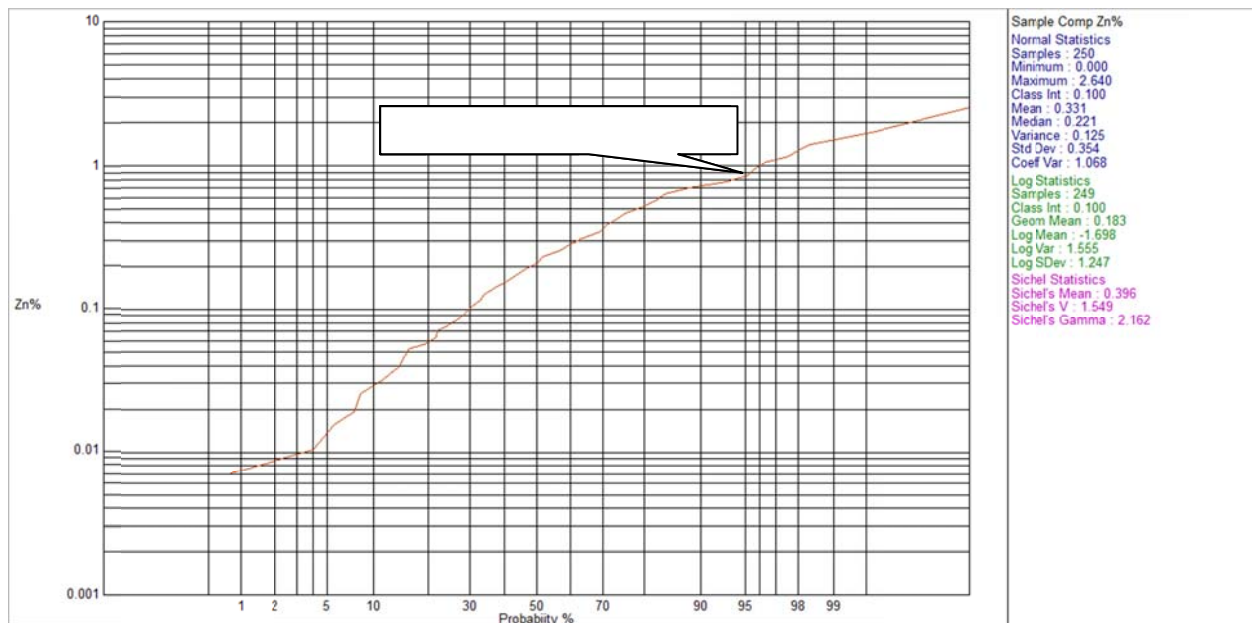


Log Histogram:

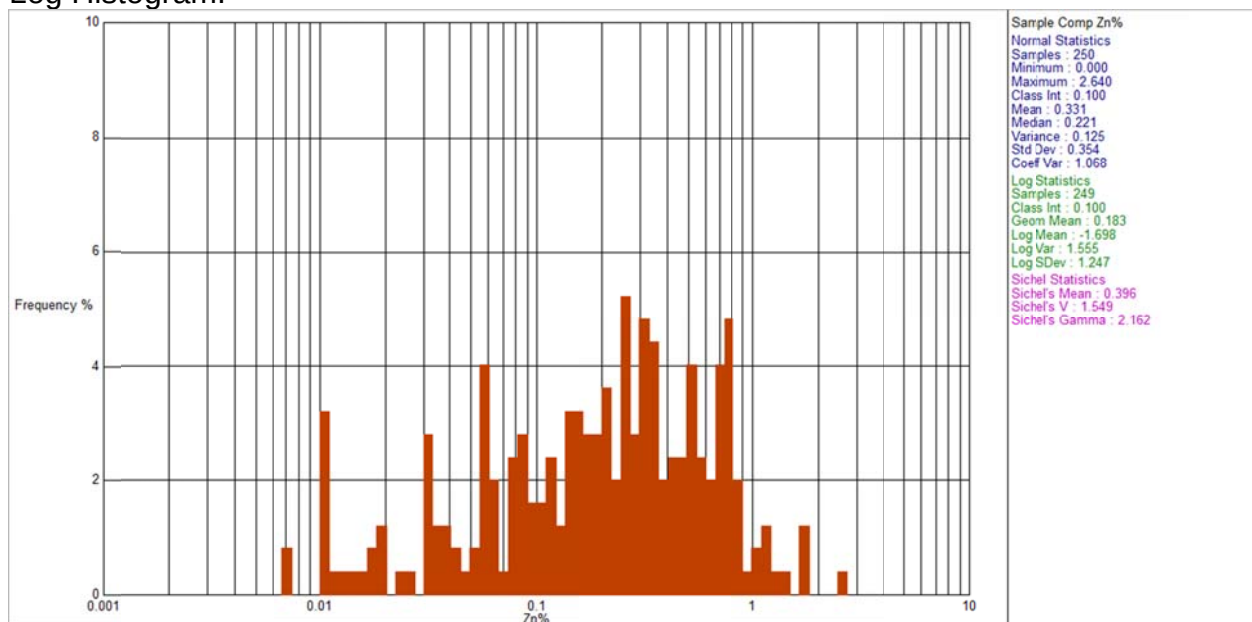


Zinc:

Log probability plot:

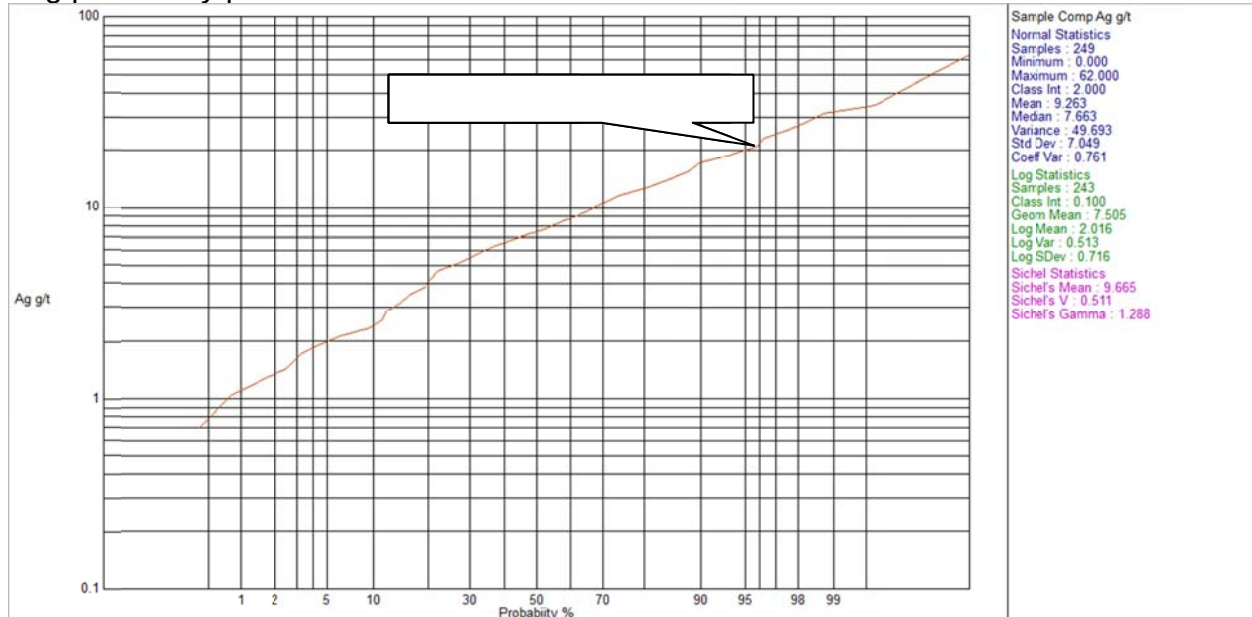


Log Histogram:

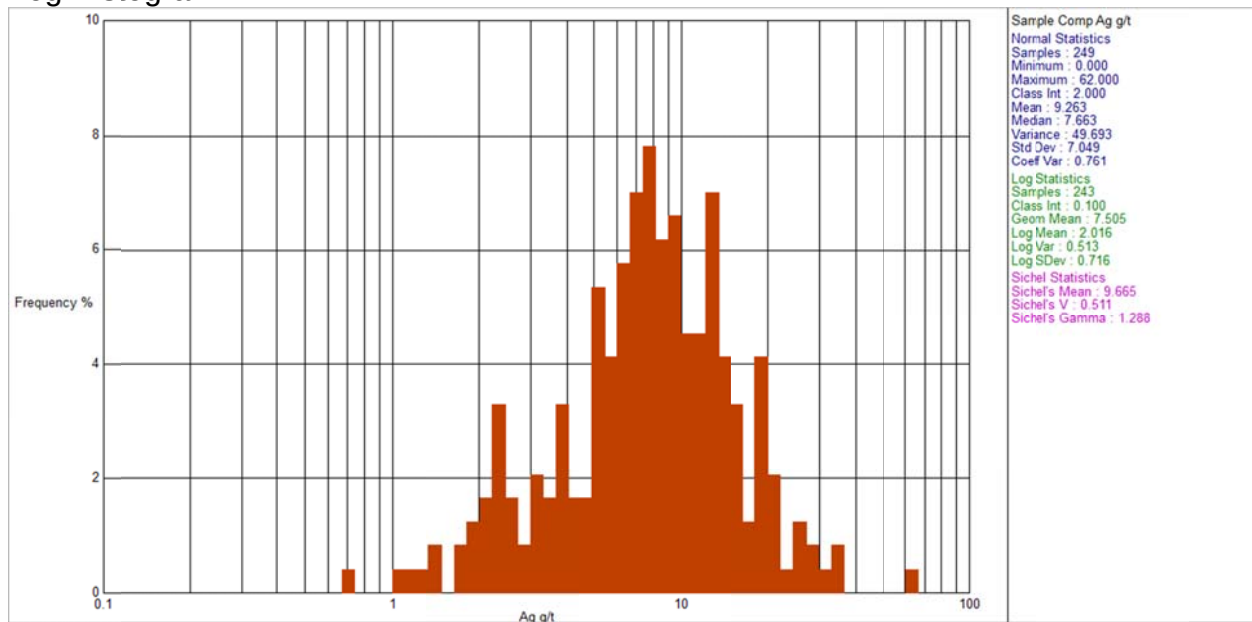


Silver:

Log probability plot:

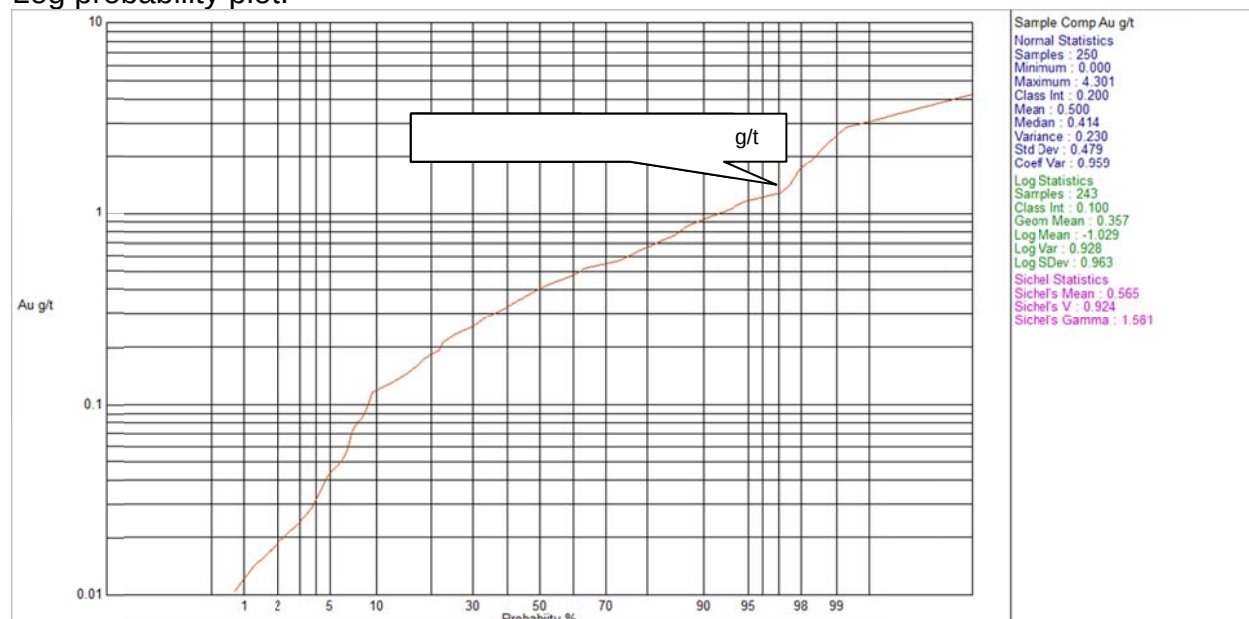


Log Histogram:

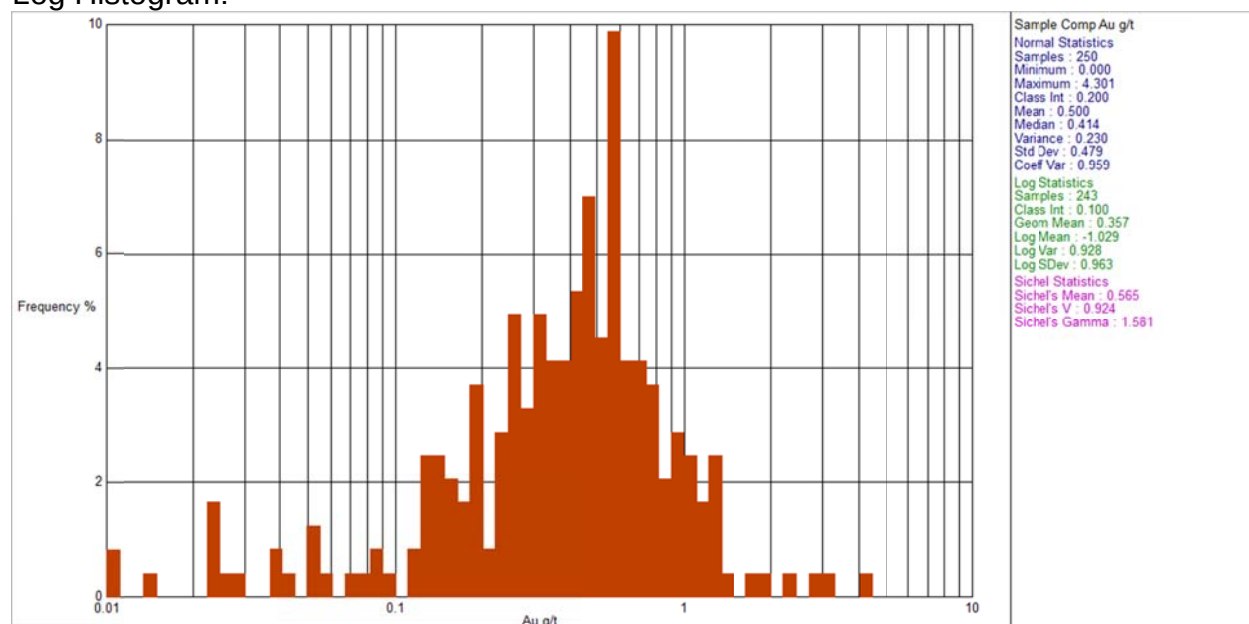


Gold:

Log probability plot:

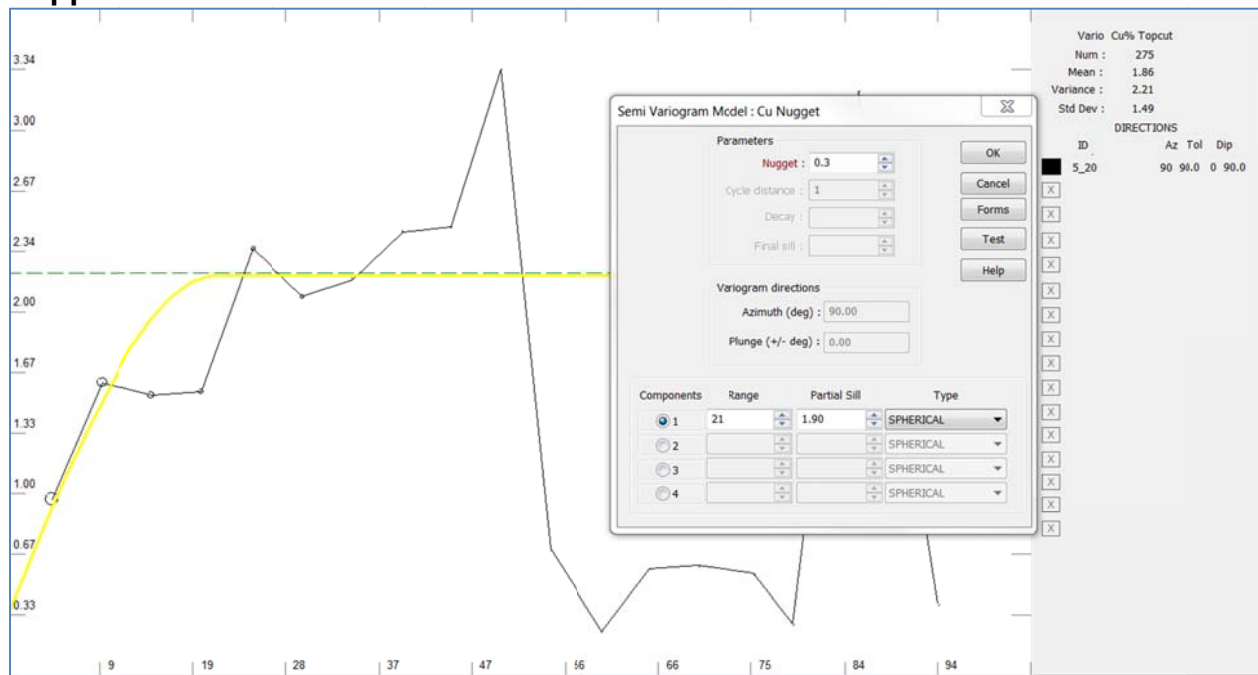


Log Histogram:

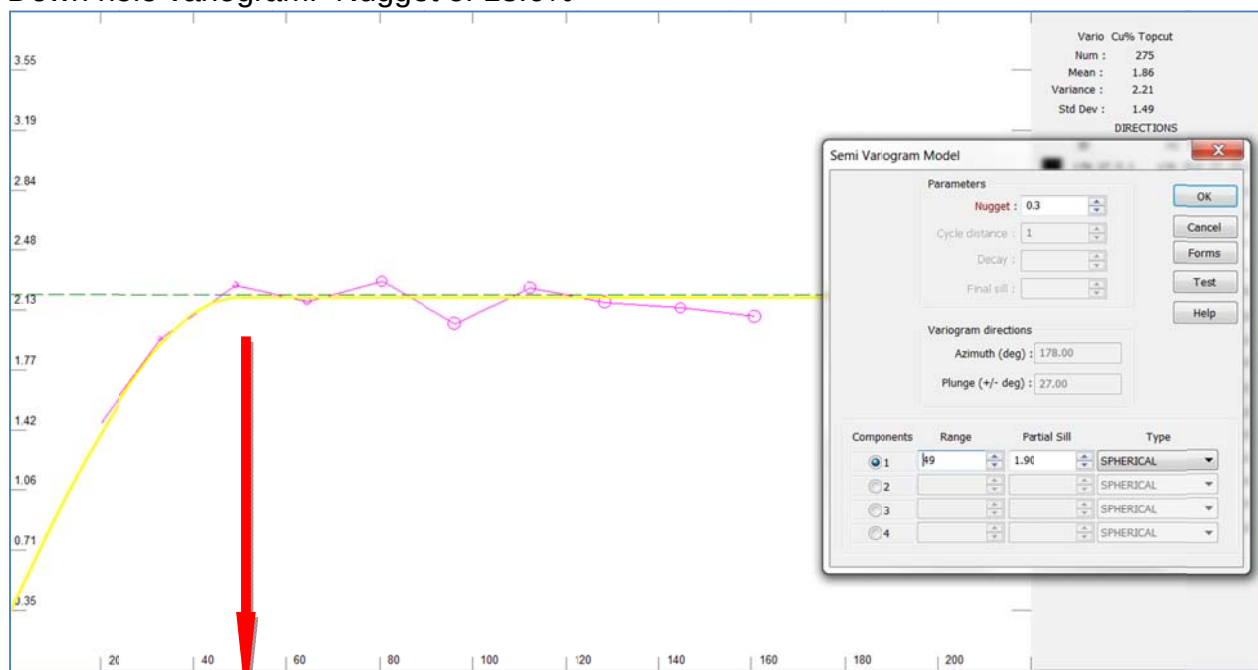


Appendix 7 – Variography

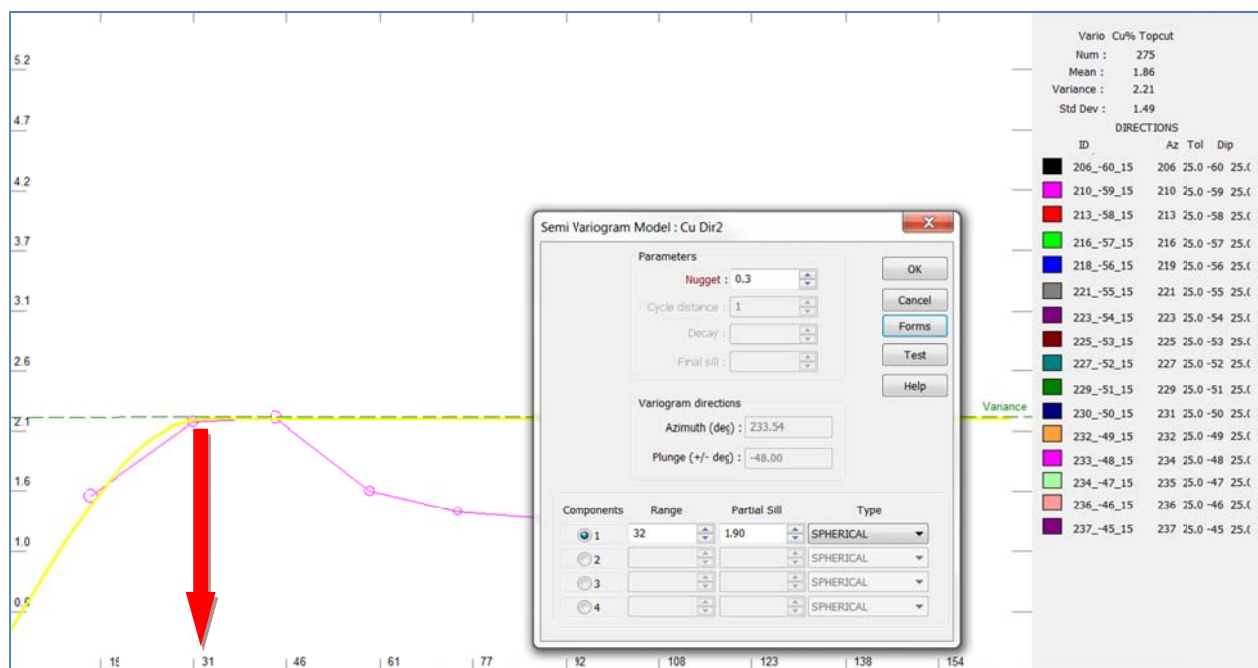
Copper:



Down hole variogram. Nugget of 13.6%

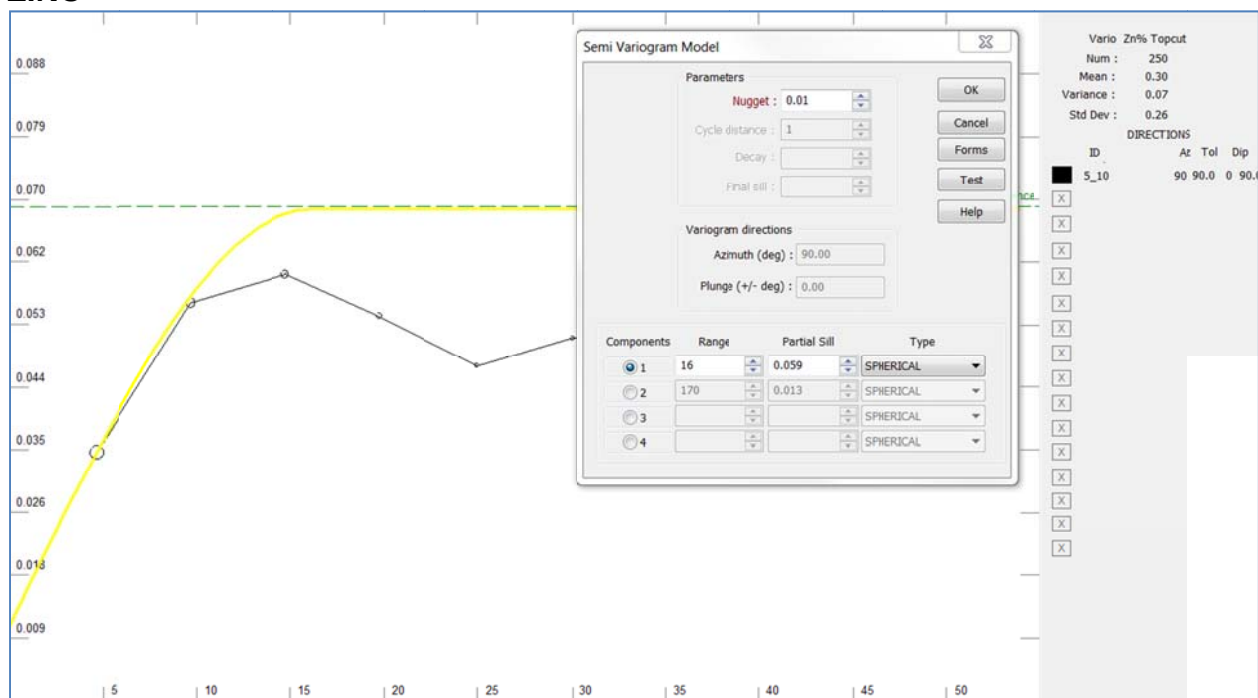


Directional variogram-Direction 1-Strike of 178° and 27° plunge. Suggested range of 49m.

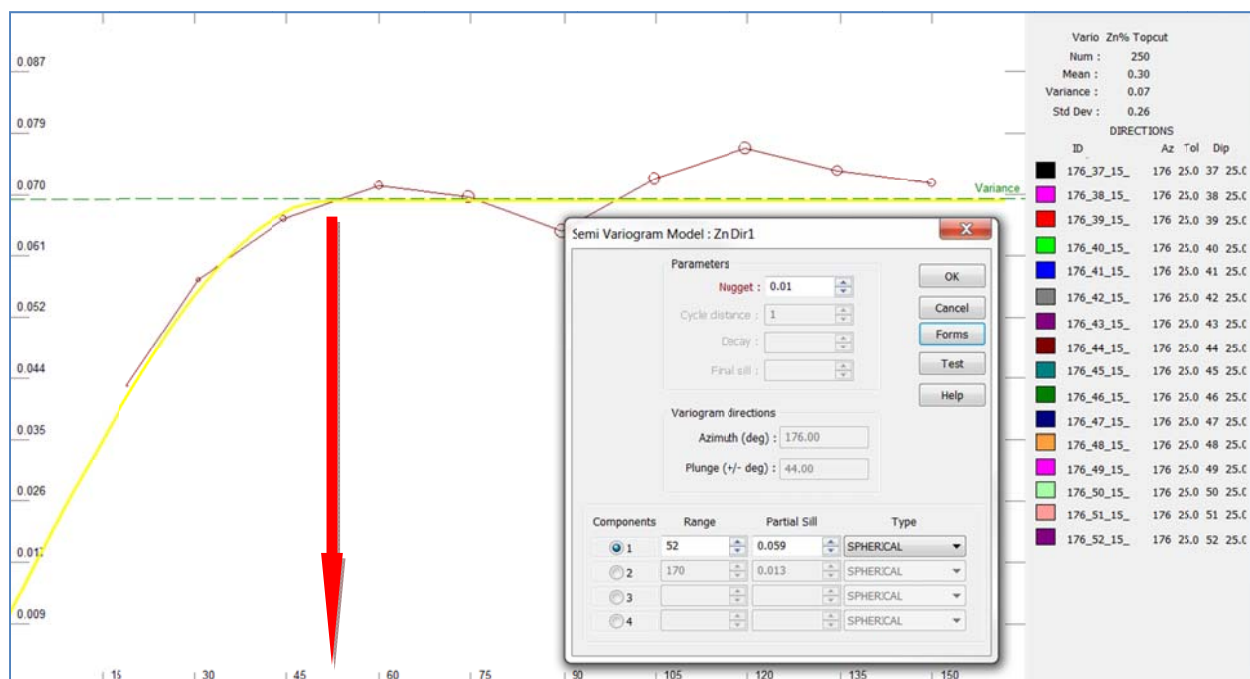


Directional Variogram – Dip of -48° Suggested range of 32m.

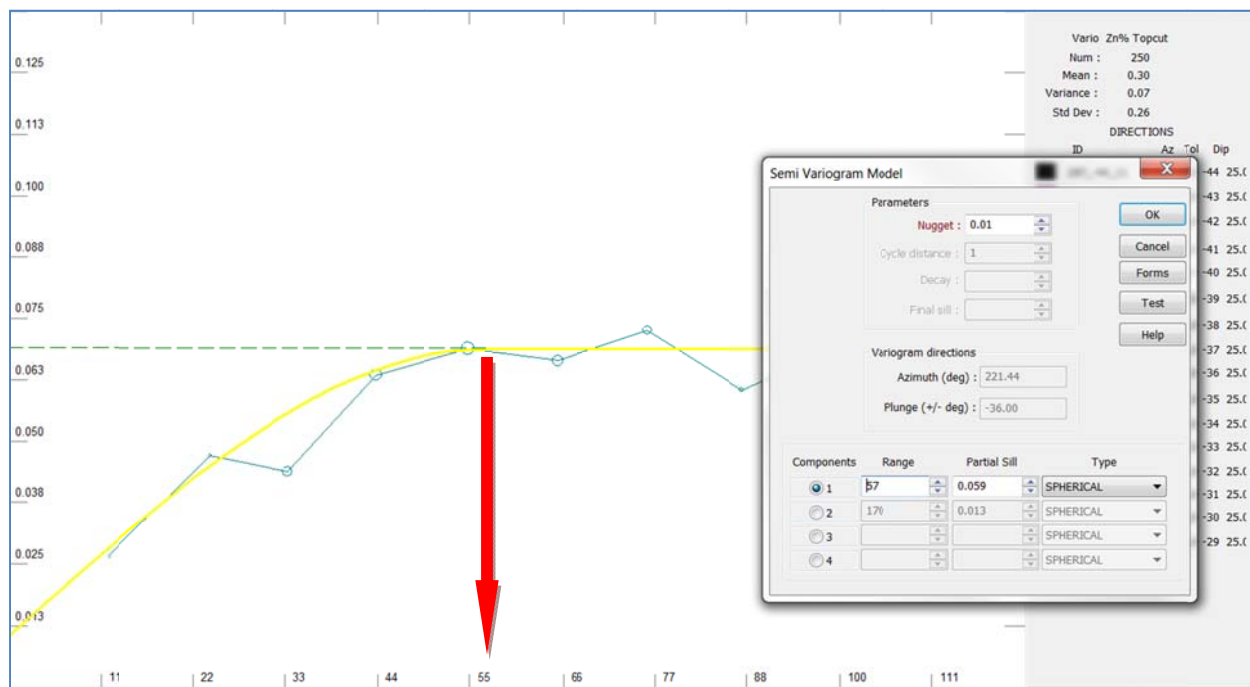
ZINC



Down Hole variogram. Nugget of 14%

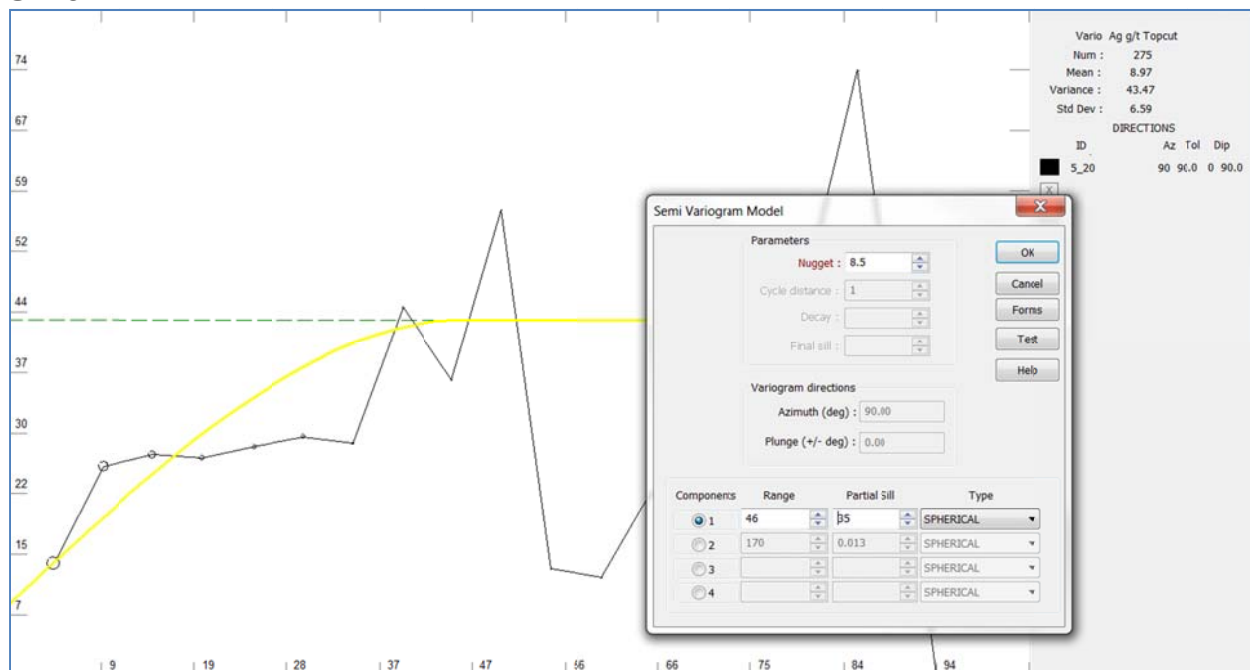


Directional Variogram. Strike of 176° and a 44° plunge. Suggested range of 52m.

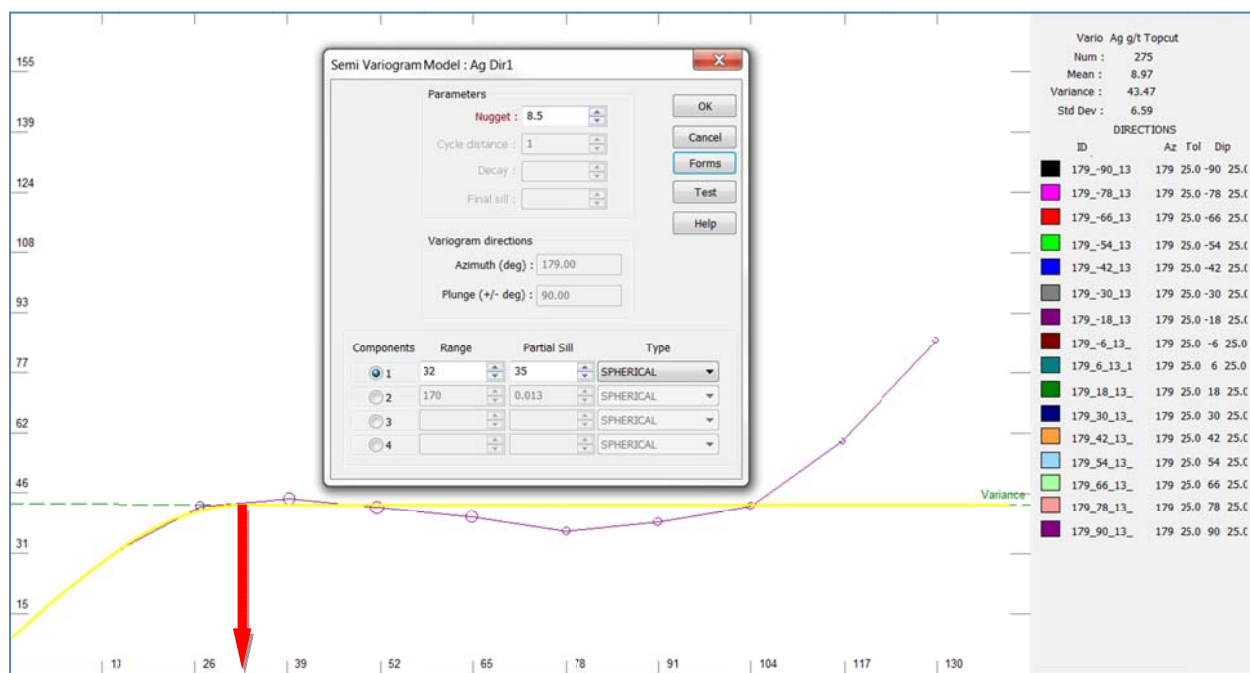


Directional Variogram. Suggested range of 57m.

Silver:



Down hole variogram. 19.6% Nugget



Directional variogram. Strike of 179° and 18° plunge. Suggested range of 32m.



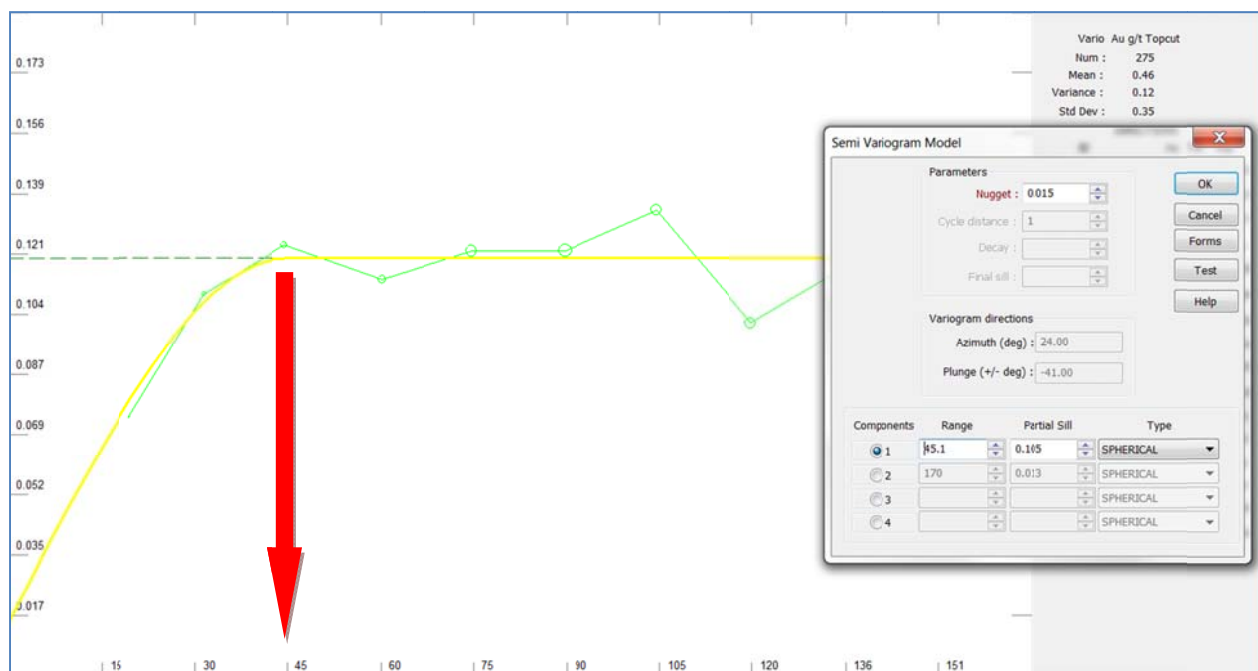
The screenshot displays a variogram analysis for 'Au Nugget'. The main plot shows a semi-variogram with a yellow fitted curve and a green dashed line labeled 'Variance'. The y-axis ranges from 0.011 to 0.114, and the x-axis ranges from 1.4 to 8.4. A dialog box titled 'Semi Variogram Model : Au Nugget' is open, showing the following parameters:

- Parameters:**
 - Nugget: 0.013
 - Cycle distance: 1
 - Decay: (empty)
 - Final sill: (empty)
- Variogram directions:**
 - Azimuth (deg): 90.00
 - Plunge (+/- deg): 0
- Components Table:**

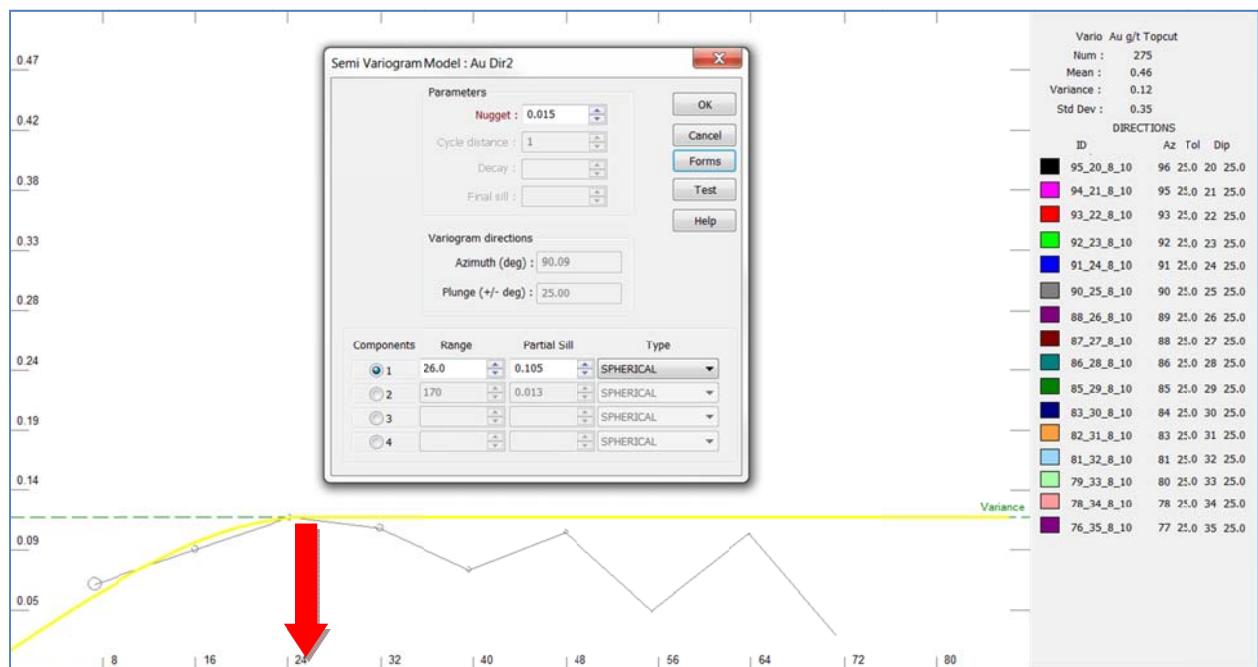
Components	Range	Partial Sill	Type
1	19	0.101	SPHERICAL
2	95	25	SPHERICAL
3			SPHERICAL
4			SPHERICAL

On the right side of the interface, a table titled 'DIRECTIONS' is visible, showing data for three points (1_16, 2_16, 3_16) with columns for ID, Az, Tol, and Dip. The values for Az, Tol, and Dip are all 90.00 for all three points.

Down hole variogram. Nugget of 12.5%



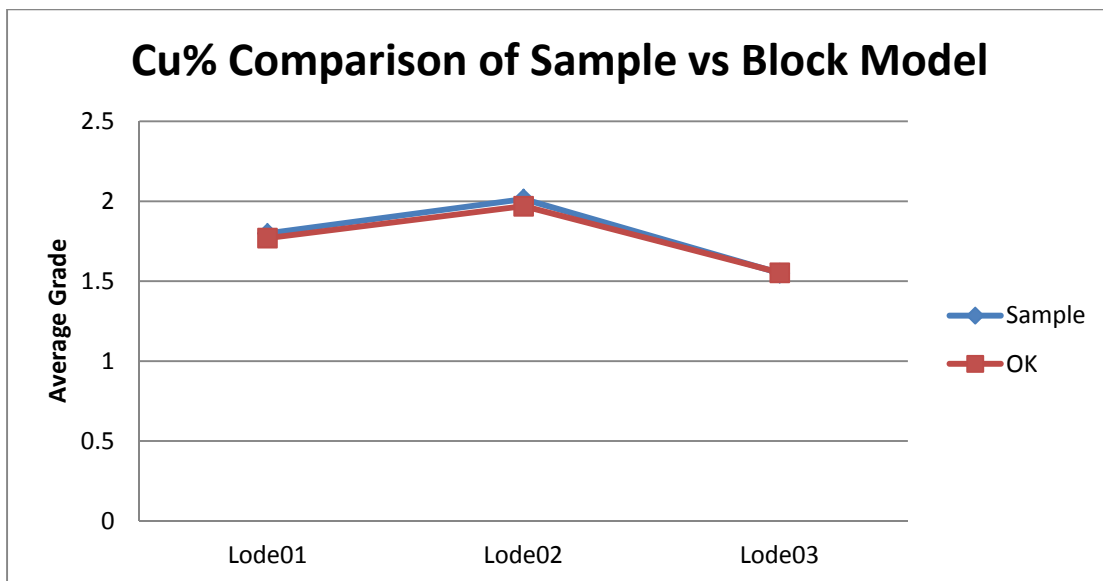
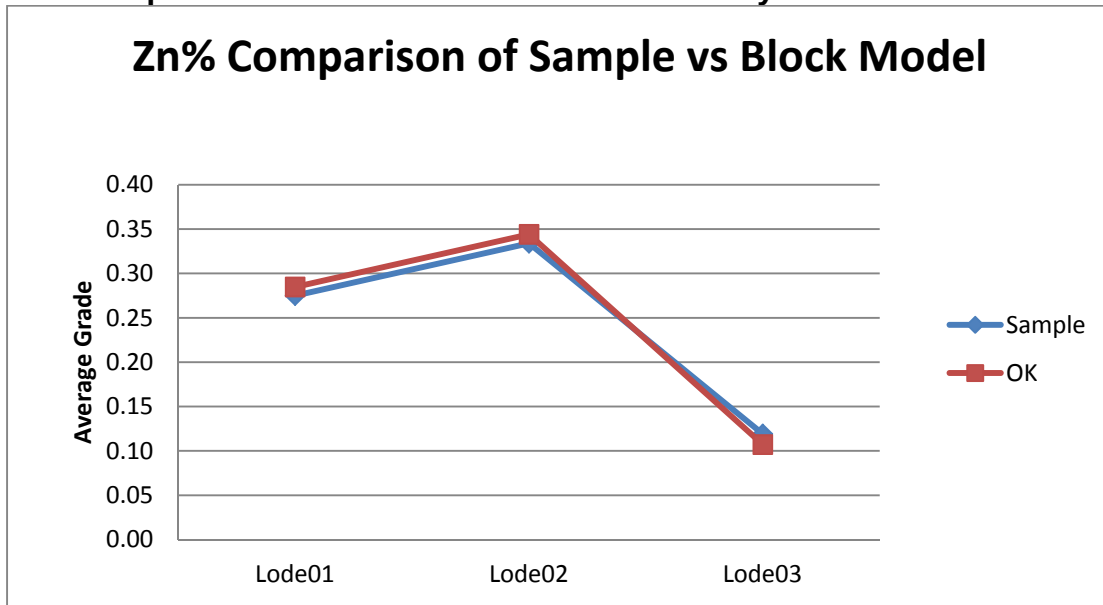
Directional Variogram. Strike of 24° and 41°plunge. Suggested range 45.1m.



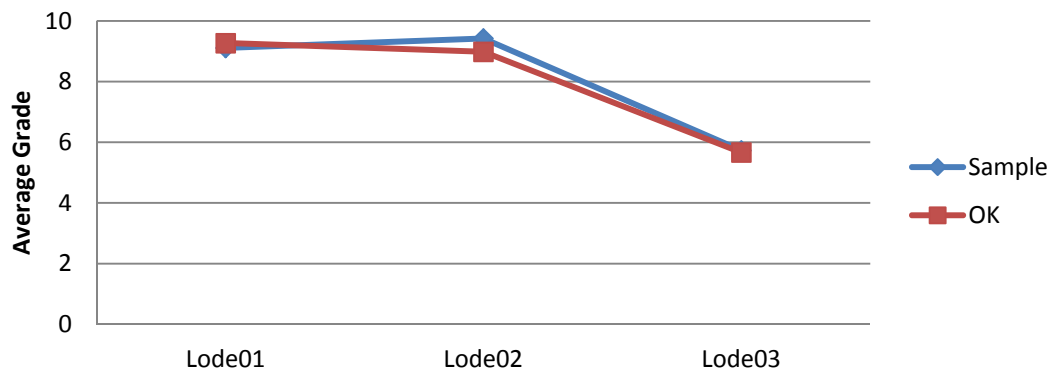
Directional Variogram. Suggested range of 26m.

Appendix 8 – Block Model Validation Graphs

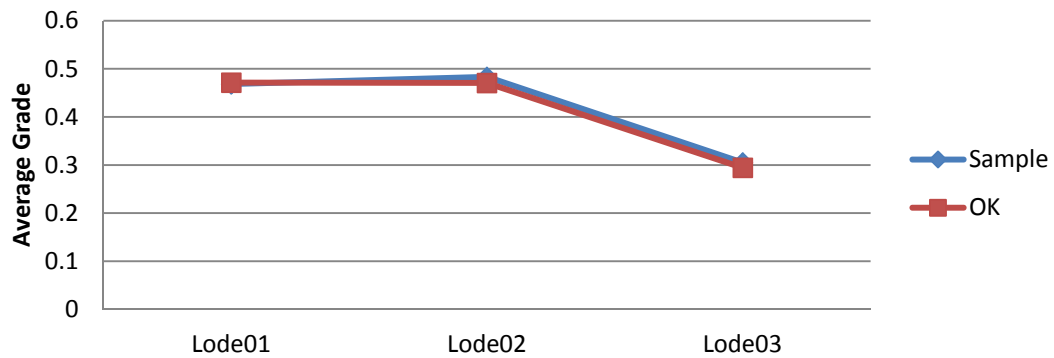
Drill hole samples versus Block Model broken down by Lode:



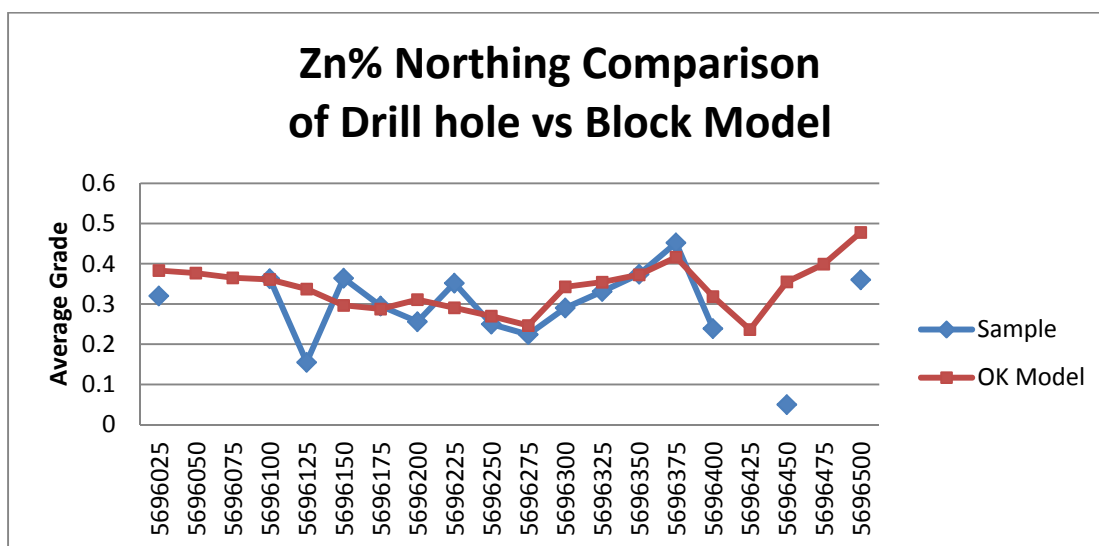
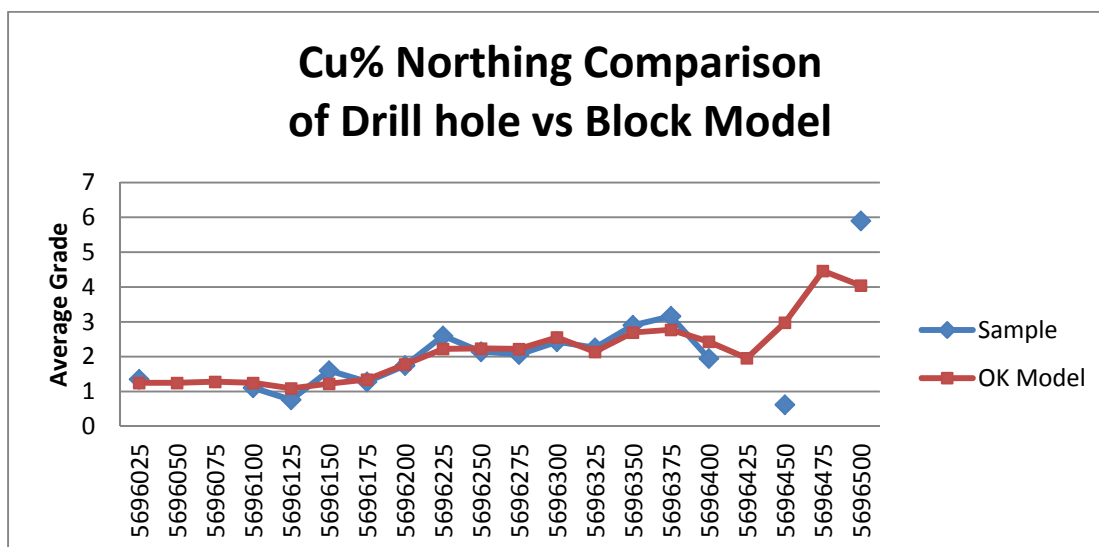
Ag (g/t) Comparison of Sample vs Block Model



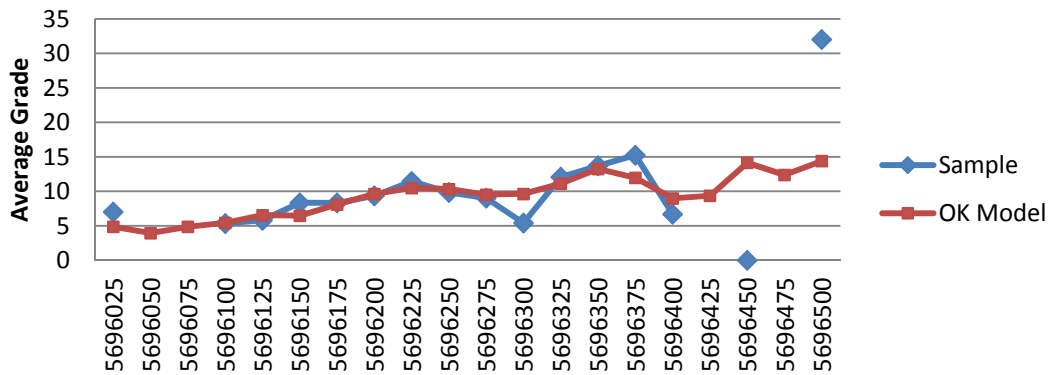
Au (g/t) Comparison of Sample vs Block Model



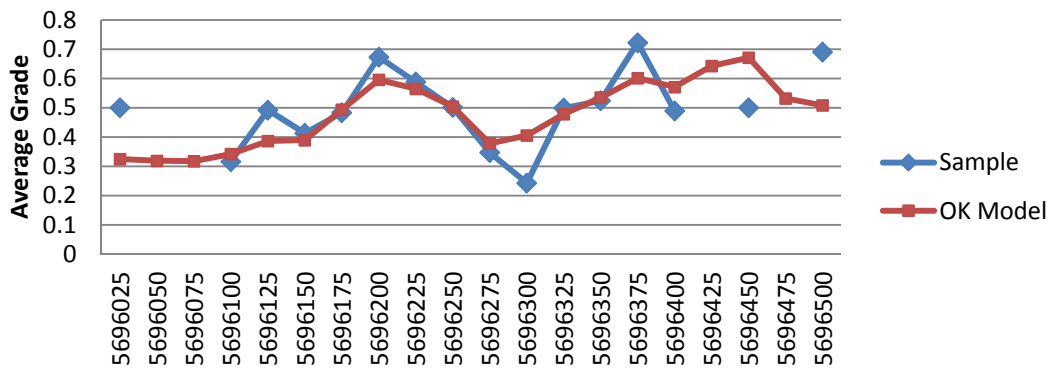
Drill hole samples versus Block Model broken down by Northing:



Ag g/t Northing Comparison of Drill hole vs Block Model

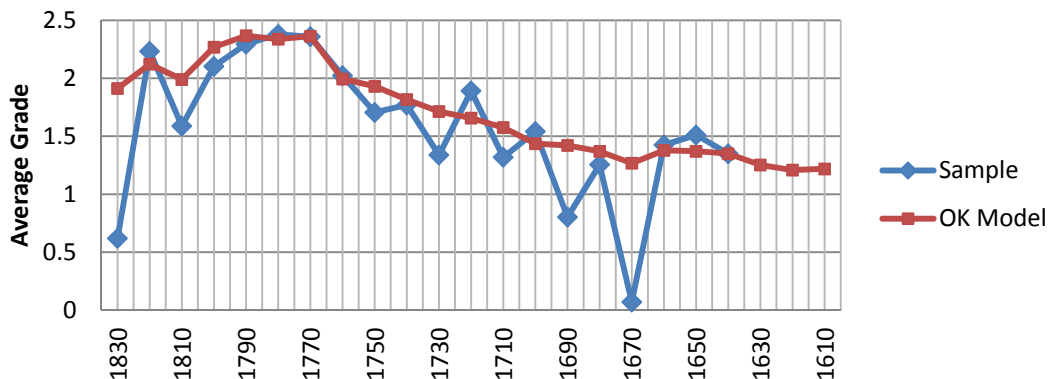


Au g/t Northing Comparison of Drill hole vs Block Model

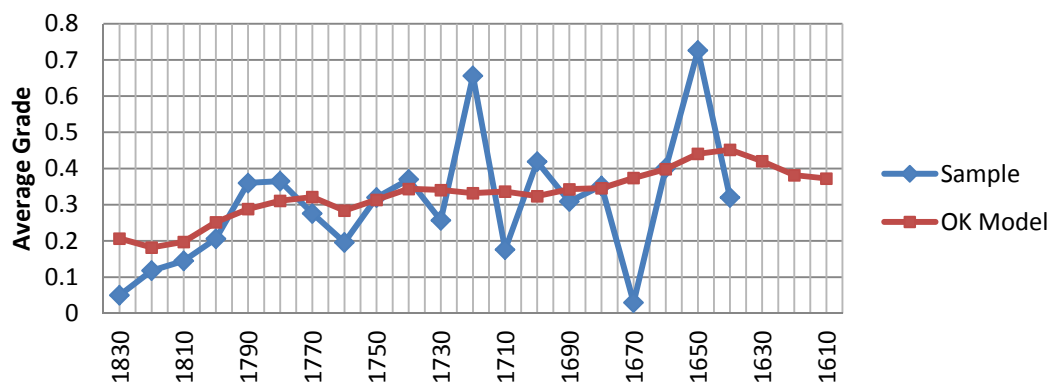


Drill hole samples versus Block Model broken down by RL:

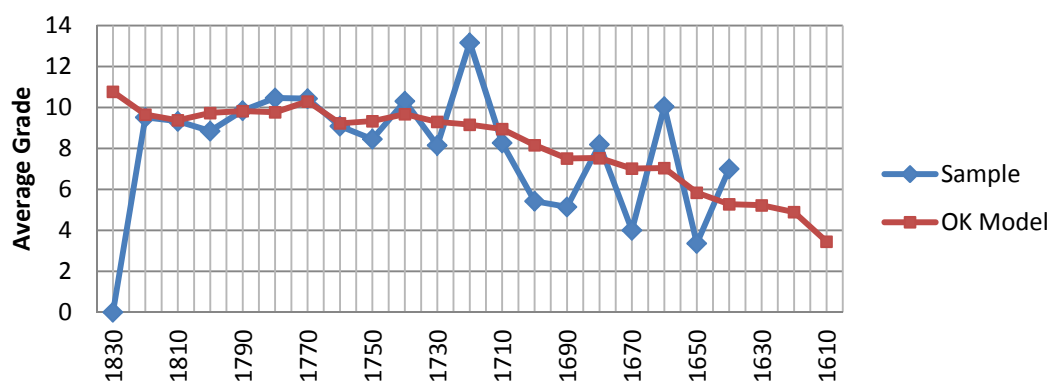
Cu% RL Comparison of Drill hole vs Block Model



Zn% RL Comparison of Drill hole vs Block Model



Ag g/t RL Comparison of Drill hole vs Block Model



Au g/t RL Comparison of Drill hole vs Block Model

