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Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: 2017 Prospecting and Sampling on the RD Cobalt Prope **TOTAL COST:** $90,199.03

AUTHOR(S): P. Kluczny, B.Sc., P.Geol. **SIGNATURE(S):** Patrick Kluczny

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): Not required **YEAR OF WORK:** 2017

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event No. 5674278 (Nov. 16, 2017)

PROPERTY NAME: RD Cobalt Property

CLAIM NAME(S) (on which the work was done): CHICAGO, STATION, MUDFLAT, BUNKER

COMMODITIES SOUGHT: Cobalt, Gold, Copper

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:

MINING DIVISION: Omineca Mining Division **NTS/BCGS:** 93M03

LATITUDE: 55 ° 11 ' 8 " **LONGITUDE:** -127 ° 36 ' 17 " **(at centre of work)**

OWNER(S):
1) Jody Dahrouge 2)

MAILING ADDRESS:
Suite 18, 10509 81 Avenue
Edmonton, AB T6E 1X7

OPERATOR(S) [who paid for the work]:
1) Primary Cobalt Corp. 2)

MAILING ADDRESS:
Suite 430-580 Hornby Street
Vancouver, BC V6C 3B6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
New Hazelton, Rocher Deboule Range, Golden Wonder, Daley West, Paleozoic Stikine volcanic arc, Skeena Arch, Hazelton Group, Rocher Deboule stock, veining, infill

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: N/A

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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	114 rock and stream sediment samples	CHICAGO, STATION, MUDFLAT, BUN	$5000.05
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)	5852.5 ha	CHICAGO, STATION, MUDFLAT, BUN	$85,198.98
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$90,199.03

PRIMARY COBALT CORP.

2017 PROSPECTING AND SAMPLING OF THE RD COBALT PROPERTY, ROCHER DÉBOULÉ RANGE

NEAR NEW HAZELTON, BRITISH COLUMBIA

Omineca Mining Division

Tenures 1047950-53, 1052710

Geographic Coordinates
55° 11' N
127° 36' W

NTS Sheet 93M03

Owner:	Jody Dahrouge 18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7
Operator:	Primary Cobalt Corp. Suite 430-580 Hornby Street Vancouver, British Columbia V6C 3B6
Consultant:	Dahrouge Geological Consulting Ltd. 18, 10509 - 81 Avenue Edmonton, Alberta T6E 1X7
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Date Submitted:	February 14, 2018

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1. INTRODUCTION

In November 2016, ‘Chicago’, ‘Station’, ‘Mudflat’ and ‘Bunker’ mineral tenures were acquired to cover potential high-grade cobalt-gold-silver-copper veining/infill near the contact of the Roche Déboulé volcanic stock and Hazelton rocks at the north end of the Rocher Déboulé Range, near the junction of the Bulkley and Skeena Rivers. Following promising lab results, ‘Three Hills’ mineral tenure was staked in June 2017.

In May 2017, a field crew of five from Dahrouge Geological Consulting Ltd. (Dahrouge) carried out a mapping and sampling program on the RD Cobalt Property from May 20th to 31st. A total of 95 surface samples and 19 stream sediment samples were collected and analyzed to test the mineralization on/near the Property. This report describes the 2017 exploration and provides an interpretation of the results. The 2017 prospecting and sampling program was authorized by Jody Dahrouge (owner) and Patrick Morris (operator) of the RD Property claims.

Structural measurements were obtained at locations throughout the Property. A magnetic declination of 18° 35' E was used. Attitudes of bedding, jointing and other planar features are given as A°/B° NW, where A° is the azimuth of the dip (dip direction/dip) and B° is the amount of dip in the direction indicated. Where bedding has been obscured by structure, stratigraphic thicknesses were calculated using orientations from adjacent units. Where more than one bedding orientation was measured, the mean orientation was used.

Two statements of work have been filed with respect to the exploration described in this report (Event numbers 5678200 and 5678202).

1.1 GEOGRAPHIC SETTING

1.1.1 Location and Access

The RD Cobalt Property is located approximately 1 km south of the Yellowhead Highway (Highway 16) (Fig. 1.1). The west end of the Property (the Golden Wonder area) can be reached by Comeau Road, a gravel road that links to Highway 16 southwest of Sealey Lake Provincial Park. ATV trails run west from Comeau Road north (for ~1,400 m) and south (for ~1100 m) of Denys Lake (Fig. 1.2).

The northern section of the Property (West’s Knoll, Daley West areas) is accessible from Highway 16 by ATV along trails or by foot. Access to the south-central area of the Property above the treeline (Black Prince, Blue Lake, Silvertip Glacier, and Hecla areas) is limited by topography to helicopter.

1.1.2 Topography, Vegetation and Climate

The RD Cobalt Property is in rugged and glaciated mountainous terrain with deeply incised valleys. It includes Hagwilget Peak (1,879 m) and the north half of the Sawmill Glacier (1,927 m).

Elevations on the Property range from 300 m to 2200 m, with steep slopes, bare rock, and talus aprons separated by bog and streams that flow into the Skeena and Bulkley rivers.

Vegetation is sparse above the tree line (~1,100 m) consisting mainly of heather and fir in protected areas and depressions. Below the tree line, vegetation is predominantly pine, spruce, and fir, with Labrador tea, moss, and ferns. The Property lies within the BC Ministry of Environment's Nass Range: Cranberry Upland ecoregion classification. The ecoregion is described as having four main types of ecosystems:

- wet, Coastal Western Hemlock forest (valleys and lower slopes: west)
- wet transitional Mountain Hemlock subalpine and alpine forests (upper slopes: west)
- cold interior Cedar-Hemlock forest (valley bottoms lower slopes: east)
- cold Engelmann Spruce-Subalpine Fir forest (middle to upper slopes: east)

Deer, moose, and mountain goats inhabit the area, as well as carnivorous animals such as cougars, black bears, wolves, coyotes, and wolverines.

The Property experiences a mix of coastal and interior weather patterns owing to its location. The nearest active Environment Canada weather station is at the Smithers Regional Airport, approximately 45 m southeast of the Property at an elevation of 522 m (see Table 6 for climate data). However, elevations on the Property reach 2,200 m, and consequently, weather at the higher elevations will likely be more severe.

The lower elevations experience a humid continental climate: the driest month is March, and the wettest month is October. Higher elevations often have heavy winter snow accumulations. In spring, snow melting can be rapid and result in heavy spring runoff. Although much of the Property is free of snow by July, some higher elevations have permanent snowfield.

Summers are hot and dry with intermittent storms. In the Hazelton area, the daytime temperature in summer can exceed 30°C but be as low as -2°C; the average temperature range in July is 20.9°C to 8°C. Winters are cold but can be moderated by Pacific air masses. In the Hazelton area, the average temperature in January is -6.9°C, but Arctic air masses can push the temperature below -33°C.

The property's lower elevations can be explored from May through October, but exploration of the higher elevations should be restricted to summers between July and September.

1.2 PROPERTY

The RD Cobalt Property was staked through Mineral Titles Online on November 18, 2016, by Jody Dahrouge on behalf of DG Resource Management Ltd. The tenures are registered in the name of Jody Dahrouge, who holds them in trust for DG Resource Management. Tenure 1052710 ('Three Hills') was map-staked by Jody Dahrouge in 2017 and is held in trust directly for Primary Cobalt Corp.; it is not subject to any other agreement. Primary Cobalt Corp. retains a 100% interest in this tenure. Primary Cobalt Corp. entered an agreement with DG Resource Management effective March 31, 2017, whereby a 100% interest in the original four tenures constituting the RD Cobalt Property (excluding tenure 1052710) can be obtained. In total, the RD Property is currently 7,330.85 ha in size (Fig. 1.3).

TABLE 1.1: LIST OF RD COBALT PROPERTY TENURES

Claim Name	Tenure Number	Record Date	New Expiry Date
Chicago	1047950	2016/Nov/18	2020/May/31
Station	1047951	2016/Nov/18	2020/May/31
Mudflat	1047952	2016/Nov/18	2020/May/31
Bunker	1047953	2016/Nov/18	2020/May/31
Three Hills	1052710	2017/Jun/23	2018/Jun/23

1.3 HISTORY AND PREVIOUS INVESTIGATIONS

The Property is in an area with an extensive history of mineral exploration, including production from the nearby CAP, Victoria (Hazelton View), Roché Déboulé, Red Rose, and Highland Boy mines in the early to middle 1900s.

Historic showings on the Property, listed on British Columbia's MINFILE database, include Golden Wonder, Daley West, Hecla, Black Prince, Blue Lake, and Silvertip Glacier. Another area of interest mentioned in historical reports is West's Knoll.

Previous exploration on the Property has been ongoing since the early 1900s on two of the claims (Golden Wonder, Daley West). Most of the showings previously belonged to other claim blocks and information can be difficult to delineate as names varied with ownership.

Historical exploration and development for each showing is predominantly derived from the British Columbia Geological Survey MINFILE reports and from British Columbia's Assessment Report Indexing Service (ARIS) reports.

A 1,089 line-km DIGHEM geophysical survey (electromagnetic, magnetic, and radiometric) was conducted in 2007 by Fugro Airborne Survey Corporation for Rocher Déboulé Minerals Corp. over their Rocher Déboulé Property, which included most of the Property. The results indicated a strong positive anomaly over the central part of the Property.

Three Hills (Claim 1052710)

Alfred LeToile registered six claims in 1951, and in 1955, LeToile was joined in registering claims by D.R. Willemar and E.H. Harbottle. A shallow trench cut at right angles to a rock drumlin strikes 030°. The drumlin is approximately 37 m wide and up to 111 m long and rises almost 8 m above the flat surrounding drift. Two chip samples assayed (Sutherland Brown, 1960):

- trace gold, 0.3% silver, 0.058% copper
- trace gold, trace silver, 0.61% copper

In 1955 and 1956, Silver Standard Mines Limited drilled several shallow diamond drillholes, but results of the drilling program are not available (Sutherland Brown, 1960).

Golden Wonder (Claim 1047950)

The Golden Wonder and other areas of claim 1047950 (including historic claims Loudel, Mandon, Shamrock) have been investigated since 1912. The showing is at the far west end of the Property, on a large rock drumlin.

Two shear zones are reported from previous workers: a south shear zone at the site of the shafts, and a north shear zone 305 m northeast of the main shaft. This zone strikes 290° and dips 75°S, is up to 1.2 m wide, and is exposed for a few hundred metres in open cuts (Minister of Mines, B.C., MINFILE 093M 074).

The first recorded workings included a 6 m shaft and several surface cuts by Messrs. Harris and Comeau. In 1917–18, three more shafts were sunk on the Golden Wonder, Golden Chief, Golden Potlatch, Crescent, and Maple Leaf claims, as well as several pits and trenches. The deepest shaft reached a depth of 30 m into the south shear zone (Minister of Mines, B.C., MINFILE 093M 074).

Although National Exploration Company Ltd. acquired the claim in 1951, no work was reported by them.

In 1959–60, G.L. Oates held the claim for the Golden Wonder showing (Golden Wonder and Mandon claims) and reported an electromagnetic induction survey on the showing (Oates, 1960).

The claim (Loudel) was acquired by Chapparal Mines Ltd. as part of a larger claim block in 1970 and subsequently underwent an IP and magnetometer survey, a geochemical soil survey, mapping, and trenching. Percussion (6 holes, 314 m) and diamond (10 holes, ~1,000 m) drillholes were drilled on the Loudel Property near Denys Lake (Olson, 1980). One drillhole is reported to have intersected 0.3 m of 13% copper (Ethier and Pinsent, 2011).

Asarco Exploration Company reported in 1980 that a ground magnetic survey and detailed mapping and sampling on the Golden Wonder and Shamrock claims disclosed three areas of significant sulfide copper mineralization within narrow mineralized shear zones and post-mineralization faulting. Samples from the Golden Wonder claim had a weighted average assay of 0.476 oz/t silver, 0.09% cobalt, 1.01% copper, 0.016% lead, 0.017% zinc, and 0.08% tungsten (Olson, 1980).

Prospecting and mapping undertaken in 2006 on behalf of Ranex Exploration reported 20 g/t gold, 124 g/t silver, up to 8% copper, (McInnis, 2006).

In 2011, American Manganese reported results from a soil survey and rock sampling program they undertook. They obtained samples from the south and north shear zones, and also from another area of interest about 450 m from the main pit on the southwest side that showed similar characteristics to the other areas. Results for two of the geochemical soil survey samples indicated one sample with 1.585 g/t gold, 214 g/t silver, and another sample with 11.4 g/t gold. A rock grab sample from the higher grade main pit area assayed 21.9 g/t gold, 104 g/t silver, 3.1% copper, and 1.215% cobalt. A 0.2 m chip sample from the 450 m SW of the main pit assayed 1.29 g/t gold, 6.69 g/t silver, and 0.234% copper (Ethier and Pinsent, 2011).

West's Knoll (1047951)

American Manganese's soil survey and rock sampling program in 2011 extended to West's Knoll, an area of interest west of the Daley West showing, where loose, rusty rocks containing arsenopyrite were found at the base of a cliff near a swamp. A grab sample indicated 61 g/t Au (Ethier and Pinsent, 2011).

Daley West (Claim 1047950)

The Spokane Rocher Déboulé Mining and Copper Company, Ltd. developed two adits (subsequently caved) and open cuts that exposed a silicified shear zone in 1916. The shear zone strikes at 020° and dips 65°NW (Burgoyne and Kikauka, 2007), and contains small amounts of vein quartz and sulphides that reaches up to 1.5 m in width (Ethier and Pinsent, 2011). The vein

was reported as containing pyrite, arsenopyrite, pyrrhotite, and chalcopyrite, with minor scheelite, sphalerite, galena, and calcite. It is exposed in several trenches for over 100 m, and reaches up to 1 m in several places, with an average thickness of 15 cm. A 38 cm channel sample assayed 1.4 g/t gold, 47 g/t silver, and 1.92% copper (Kindle, 1954).

In 1981, L'Orsa carried out prospecting and geological mapping on his Judi claims which covered part of the Daley West area, reporting two grab samples from the shear zone. The samples contained arsenopyrite, with lesser amounts of chalcopyrite, pyrite, pyrrhotite, scheelite, sphalerite, galena, tetrahedrite (?), quartz, and calcite. One sample assayed: 2.14 g/t gold, 15.6 g/t silver, 1.06% copper, 0.66% tungsten, 0.10% cobalt ± 15% arsenopyrite; the other sample assayed 0.13 g/t gold, 0.5 g/t silver, 0.59% copper, 0.44% cobalt ± 80% arsenopyrite (L'Orsa, 1981).

American Manganese's soil survey and rock sampling program in 2011 included work at Daley West. They reported finding chalcopyrite and molybdenite in porphyritic quartz monzonite in narrow quartz veins on the north, east, and west sides of the previous workings. Analysis of a chip sample from above the main adit produced better results than a high-grade grab sample, with 6.32 g/t gold, 215 g/t silver, 7% copper, and anomalous cobalt, bismuth, and arsenic (Ethier and Pinsent, 2011).

Black Prince/Blue Lake/Silvertip Glacier (1047952)

The Black Prince, Blue Lake, and Silvertip Glacier showings are in a cluster near the southeast boundary of the Property.

The Black Prince showing is on the ridge between Mudflat and Porphyry creeks. The Blue Lake showing is immediately southwest of the Black Prince Property and they were previously considered one property. The Silvertip Glacier showing is west of the other two showings.

The showings, near the head of Mudflat Creek, are in an area that was first located in 1911 or 1912 and subsequently explored by Black Diamond Exploration from 1916. Work continued sporadically in 1944 to 1945 (underground work, Privateer Mining Company) and 1951 to 1953, possibly owing to wartime demand for tungsten (Meyers, 1980).

A sample from over 0.6 m of the Black Prince showing's Main Fracture Zone assayed 6.9 g/t silver, 0.36% copper, 0.82% WO3, 0.10% molybdenum, and (Sutherland Brown, 1960).

A quartz vein situated approximately 250 m east of the main zone contains areas of massive chalcopyrite and scheelite, and lesser pyrite, bornite, cassiterite, and uraninite. A sample taken

over 7.6 cm assayed 1.0 g/t gold, 2.37% WO3, 0.8% tin, and 0.033% equivalent uranium (Kindle, 1954).

Group VIII Ventures staked all three showings as part of a larger group of claims (CRO claims) in 1979 and completed work including trenching and drifting (~50 m), and limited sampling. A 59 cm sample from an intermediate vein indicated 3.4 g/t silver, 1.15% copper, 0.02% WO3, and 0.34% molybdenum (Meyers, 1980).

The Black Prince showing reportedly produced 120,338 g Ag and 619 kg Pb from 19 tonnes in 1915 (Minister of Mines, B.C., MINFILE 093M 057).

Previous work on the Blue Lake showing (Kindle, 1954) indicates four veins. Samples from three of the veins assayed:

- 0.85% molybdenum, 1.0% WO3, and 0.004% equivalent uranium
- 2.74 g/t gold, 11.31% WO3, 0.06% molybdenum, and 0.003% equivalent uranium
- 0.7 g/t gold and 1,900 g/t silver

No record of previous work on the Silvertip Glacier showing is available (BC MINFILE 093M 055).

Hecla/Bluebird (1047952)

The Hecla showing is a porphyritic granodiorite (Rocher Déboulé stock) approximately half way between the Daley West and Silvertip Glacier showings, on the north edge of the Mudflat claim. The granodiorite is cut by an aplite dike (2.7 m) and a pegmatite dike (1.8 m). A grab sample of a 1.2 m wide mineralized zone in the aplite dike contained quartz veins with small amounts of pyrite and chalcopyrite (assayed trace Au, 34.3 g/t Ag, 0.22% Cu). Another grab sample from the mineralized pegmatite dike assayed trace Au, 18.2 g/t Ag, and 0.39% Cu (Sutherland Brown, 1960).

1.4 PURPOSE OF WORK

The goal of the exploration program was to confirm historic showings, identify possible new targets, and become familiar with the working conditions.

1.5 SUMMARY OF WORK

In May, 2017, Dahrouge, on behalf of Primary Cobalt Corp., prospected the Property (by vehicle, helicopter, and on foot) and collected rock and stream pan sediment samples for analysis.

A total of 47 person days were spent in the field examining rocks, collecting samples, and examining the area. Ninety-five (95) rock samples and 19 stream pan concentrate samples were collected from the Property to confirm results in historic assay results, and to guide future exploration. Assay results and locations of rock and stream pan concentrate sample locations are shown in Fig.'s 1.4 to1.9.

Samples were shipped to Activation Laboratories in Kamloops, BC, for preparation and analyses by ICP and fire assay. Analytical procedures are described in Appendix 2 and assay sheets are provided in Appendix 3. Geological observations were recorded, including lithologic information, measurements of structural elements, and other pertinent details (Appendix 4).

Personnel were based in a lodge near New Hazelton. Access to and from the Property was by rented 4X4 truck and helicopter. Access throughout the Property was by extensive hiking.

2. REGIONAL GEOLOGY

The RD Cobalt Property is situated in the Intermontane tectonic province of the Canadian Cordillera and is underlain by rocks of the Late Paleozoic Stikine volcanic arc terrane, the largest terrane in BC. The Stikine terrane was accreted to the Quesnel and Cache Creek terranes, and then to the North American margin in the Middle Jurassic before being intruded by coeval and younger plutonic rocks and overlain by younger volcanic and sedimentary units (Kryba, 2017; Figure 1.10).

The Rocher Déboulé area lies within the Skeena Arch, an area that has been mapped in detail because of its 100+ year history of mineral exploration. The Skeena Arch is an east–northeast-trending belt of Jurassic and older mostly volcanic rocks. Uplift of the arch, thought to have occurred in the Middle Jurassic, resulted in the separation of the Bowser and Nechako Basins (MacIntyre, 2006). Exposed rocks along the Skeena arch represent a long-lived magmatic arc that has produced a range of geological settings and resulted in a diverse range of mineral deposits.

The Skeena arch straddles Skeena Terrane, a volcanic arc complex that formed off shore before accreting to the west coast of North America. The Skeena Terrane is made up of two cycles of volcanic and related intrusions, as well as overlying sedimentary rock on a metamorphosed volcanic rock and limestone basement (Kryba, 2017).

The Rocher Déboulé Range is underlain by the upper two divisions of the Hazelton group and intruded by the Rocher Déboulé stock.

The upper two divisions of the Hazelton group (Jurassic to Cretaceous) are:

1. Red Rose Formation (2,300 to 2,400 m marine and non-marine sedimentary greywackes)
2. Brian Boru Formation (1,500 to 1,800 m porphyritic andesite breccias and massive flows with minor hornblende porphyry andesite flows and some pyroclastic rocks).

The Rocher Déboulé stock, a member of the Late Cretaceous Bulkley Plutonic Suite, is predominantly a porphyritic granodiorite, but also includes what is thought to be a younger fine-grained quartz monzonite. It is thought to have been emplaced after folding of the Hazelton group, between mid-Lower and late Upper Cretaceous. Heat from the intrusion of the Rocher Déboulé stock created a hornfelsic aureole in the surrounding Hazelton rocks (Sutherland Brown, 1960).

The adjacent valley contains late Jurassic to early Tertiary successor basin assemblages of the Bowser Lake, Skeena, and Sustut Groups.

3. PROPERTY GEOLOGY

Local geology described herein is based on published historical geological mapping and exploration.

Showings on the RD Cobalt Property are associated with the contact between the Rocher Déboulé stock and the surrounding Hazelton rocks.

The Rocher Déboulé stock has three major joint sets (Sutherland Brown, 1960):

1. parallel to the contact: 015°/65°W
2. normal (subhorizontal cross-joints): 085°/5°W
3. radial, vertical, and less well-developed: 060°/65°NW

Another set of joints strikes 055 and dips 55°SE. Burgoyne and Kikauka (2007) surmised that the joint pattern may be indicative of orthogonal fracturing caused by contraction on cooling.

The third set of radial fractures appear to host most of the vein mineralization and are thought to be responsible for introducing fluids into the rock, causing alteration, quartz-hornblende pegmatite vein development, and mineralization.

The geology of the RD Cobalt Property and the historical showings and workings is described below. The location of each area of interest is shown in Figure 1.11.

Three Hills

Most of the Three Hills claim area is in the hornfelsic argillites (mudstones, siltstone, shale, fine clastic rocks) of the Kitsumkalum Shale and the andesitic volcanic rocks of the Kasalka

Group. The southwest corner lies within the coarse clastic sedimentary rocks of the Kitsuns Creek and Red Rose formations.

The area of interest is a rock drumlin along the same trend as that seen in the Golden Wonder and West's Knoll areas, is flat drift. The drumlin is approximately 37 m wide and up to 111 m long, rising almost 8 m above the flat surrounding drift. It strikes 035° and dips 40° northwest on the southeast, with an obscured dip elsewhere (Sutherland Brown, 1960).

Golden Wonder

The Golden Wonder area lies approximate 5 km northwest of the historic Rocher Déboulé mine site, in the mudstones/siltstone/shale/fine clastic rocks of the Kitsumkalum Shale. The main area of interest is rock drumlin of hornfelsed pyritic argillites of the Red Rose formation.

This drumlin is thought to be a parallel structure to the Skeena fault (Ethier and Pinsent, 2011) and is along trend with similar drumlins in the Three Hills area (to the southwest) and the West's Knoll area (to the northeast). The area hosts at least two shear zones occur, approximately 300 m apart (Ethier and Pinsent, 2011):

1. The south shear zone is up to ~1 m wide (085°/80°N) and is traced for 150 m. The shear is locally silicified with small quartz stringers, calcite, and sulphide lenses (pyrrhotite, chalcopyrite, arsenopyrite, pyrite).
2. The north shear zone is up to 1.2 m wide (290°/75°S) and is exposed for a few hundred metres in open cuts at the north end of the drumlin. The shear is occupied by a post-mineralization porphyry dyke with small quartz stringers and sulphide lenses (pyrite, chalcopyrite).

West's Knoll

The West's Knoll area is near the approximate contact between the quartz monzonite rocks of the Bulkley Plutonic Suite and the coarse clastic sedimentary rocks of the Red Rose Formation. The area of interest consists of a rock drumlin that lies along the same trend as the Golden Wonder showing and the historic Three Hills showing. At the base of the drumlin, near a contact between feldspar porphyry and quartz monzonite, arsenopyrite has been found in loose rocks (Ethier and Pinsent, 2011).

Daley West

The Daley West area is in the fine-grained quartz monzonite phase of the Rocher Déboulé stock. The showing is characterized by a silicified shear zone containing small amounts of vein

quartz that strikes 020°/65°NW. Masses of arsenopyrite and pyrrhotite, pyrite, and some chalcopyrite occur in the shear zone, as well as minor scheelite, sphalerite, galena, and calcite (Sutherland Brown, 1960). Molybdenite was reported in scattered narrow quartz veins near old workings (Ethier and Pinsent, 2011).

Black Prince/Blue Lake/Silvertip Glacier

The Black Prince, Blue Lake, and Silvertip Glacier showings are in a cluster near the southeast boundary of the Property, in the feldspar porphyritic intrusive rocks of the Bulkley Plutonic Suite. The Black Prince showing is on the ridge between Mudflat and Porphyry creeks. The Blue Lake showing is immediately southwest of the Black Prince Property and they were previously considered one property. The Silvertip Glacier showing is west of the other two showings.

The Black Prince and Blue Lake showings both consist of parallel quartz veins in the intensely jointed Rocher Déboulé Stock, a porphyritic granodiorite that intruded the siltstones and argillites of the Hazelton rocks (Ethier and Pinsent, 2011).

Historically, the showing comprises several parallel quartz veins in the stock:

- The main fracture zone (150°/65°SW) comprises quartz veins with scheelite, pyrite, chalcopyrite, molybdenite, wolframite, ferberite, and erythrite; the fracture zone is up to 2.4 m wide and over 300 long.
- A parallel quartz vein (~250 m east of the main vein; 150°/65°SW) has areas of massive chalcopyrite and scheelite with lesser pyrite, bornite, cassiterite, and uraninite.
- An intermediate vein (150 m east of the main vein; 160°/70°SW) was also reported.

The Blue Lake showing is approximately 1,600 m southwest of the Black Prince showing, near the head of a cirque. Reports indicate that it consists of (Sutherland Brown, 1960):

- No. 1 vein (east end; 105°/65°NE): a quartz vein with up to 10% tetrahedrite and minor chalcopyrite, up to 25 cm wide.
- No. 2 vein (30 m west of No. 1 vein; 155°/70°SW): quartz vein with chalcopyrite, pyrite, molybdenite, tetrahedrite, scheelite, and likely uraninite.
- No. 3 vein (600 m northwest of other veins; 165°/75°W): quartz vein with scheelite, molybdenite, chalcopyrite, and ferberite.
- 23 m quartz vein (90 m below No. 3 vein; 270°/60°NE): milky white quartz vein and tetrahedrite; up to 3 m wide.

Hecla/Bluebird

The Hecla/Bluebird area is on the east side of the Rocher Déboulé Stock, where the Bulkley's feldspar porphyry rocks contact the sedimentary rocks of the Red Rose Formation. The showing is at the head of the Station Creek, and consists of an aplite and a pegmatite dike in porphyritic granodiorite, both silicified and cut by quartz veinlets that contain pyrite and chalcopyrite (Sutherland Brown, 1960):

- The aplite dike is 2.7 m wide with a 1.2 m wide mineralized zone; a grab sample assayed 0.22% copper, trace gold, and 34.3 g/t silver.
- The pegmatite dike is 1.8 m wide; a grab sample assayed 0.39% copper, trace gold, and 18.2 g/t silver.

4. RESULTS OF 2017 EXPLORATION

In May, 2017, Dahrouge, on behalf of Primary Cobalt, prospected the Property and collected rock and stream pan sediment samples for analysis. The goal of the exploration program was to confirm historic showings, identify possible new targets, and become familiar with the working conditions. A total of 47 person days were spent in the field examining rocks, collecting samples, and examining the area. Ninety-five (95) rock samples and 19 stream pan concentrate samples were collected from the Property (Fig.'s 1.4 to 1.9).

Most of the samples that produced significant analytical results are from the Golden Wonder area. Four samples were characterized by elevated cobalt values: 122427, a float sample taken from a siltstone brecciated by arsenopyrite and cut by pyrite and chalcopyrite veins in the area between the road and Deny's Lake, assayed 8.75 g/t gold, 18.5 g/t silver, and 0.534% cobalt. A grab sample, 122364, collected from a massive (80%) sulphide vein in an outcrop of quartz and mudstone near the road assayed 6.39 g/t gold and 0.384% cobalt. The highest gold assay was found in 122368, a chip sample at 17.80 g/t gold and 18.2 g/t silver, collected from a small mudstone outcrop north of Deny's Lake that measured approximately 1 m^2 and contained sulphur-rich coating and rusty jointing. Grab sample 122365 was collected from a 10 cm wide massive sulphide vein near the road, and assayed 15.2 g/t gold, 77.2 g/t silver, and 0.094% cobalt.

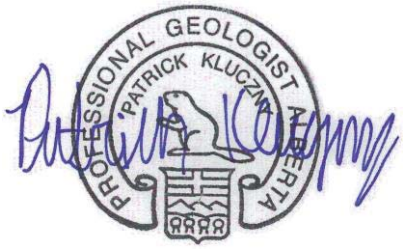
5. DISCUSSION AND CONCLUSIONS

The 2017 exploration program at the RD Cobalt Property focused on investigating the cobalt and other mineral potential of the claims by confirming historic assay results and determining field conditions. The results of the exploration program indicate that significant mineralization occurs in the Golden Wonder area, in massive to narrow sulphide veins and in the surrounding argillite/mudstone. In addition to elevated cobalt values, the assays also indicate significant gold, silver, and copper values:

- Cobalt: up to 0.534% (sample 122427)
- Gold: up to 17.80 g/t (sample 122368)
- Silver: up to 45.60 g/t (sample 122428)
- Copper: up to 4.95% (sample 122365)

Based on these positive exploration results, further exploration for cobalt, gold, and copper is recommended.

A detailed ground magnetic survey is recommended to determine the geophysical characteristics of the mineralization in the Golden Wonder showing area, at the west end of the RD Cobalt Property. Concurrently, an extensive soil sampling program should be carried out in the same prospective area. Several days should also be spent completing small soil sample grids over other showings on the Property.



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Edmonton, AB
2018 02 14

6. REFERENCES

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LEGEND

- **Provincial capital**
- **Other populated places**
- **Trans-Canada Highway**
- **Major road**
- **Ferry route**
- **International boundary**
- **Provincial boundary**

Scale

100 km 0 100 200 300 km

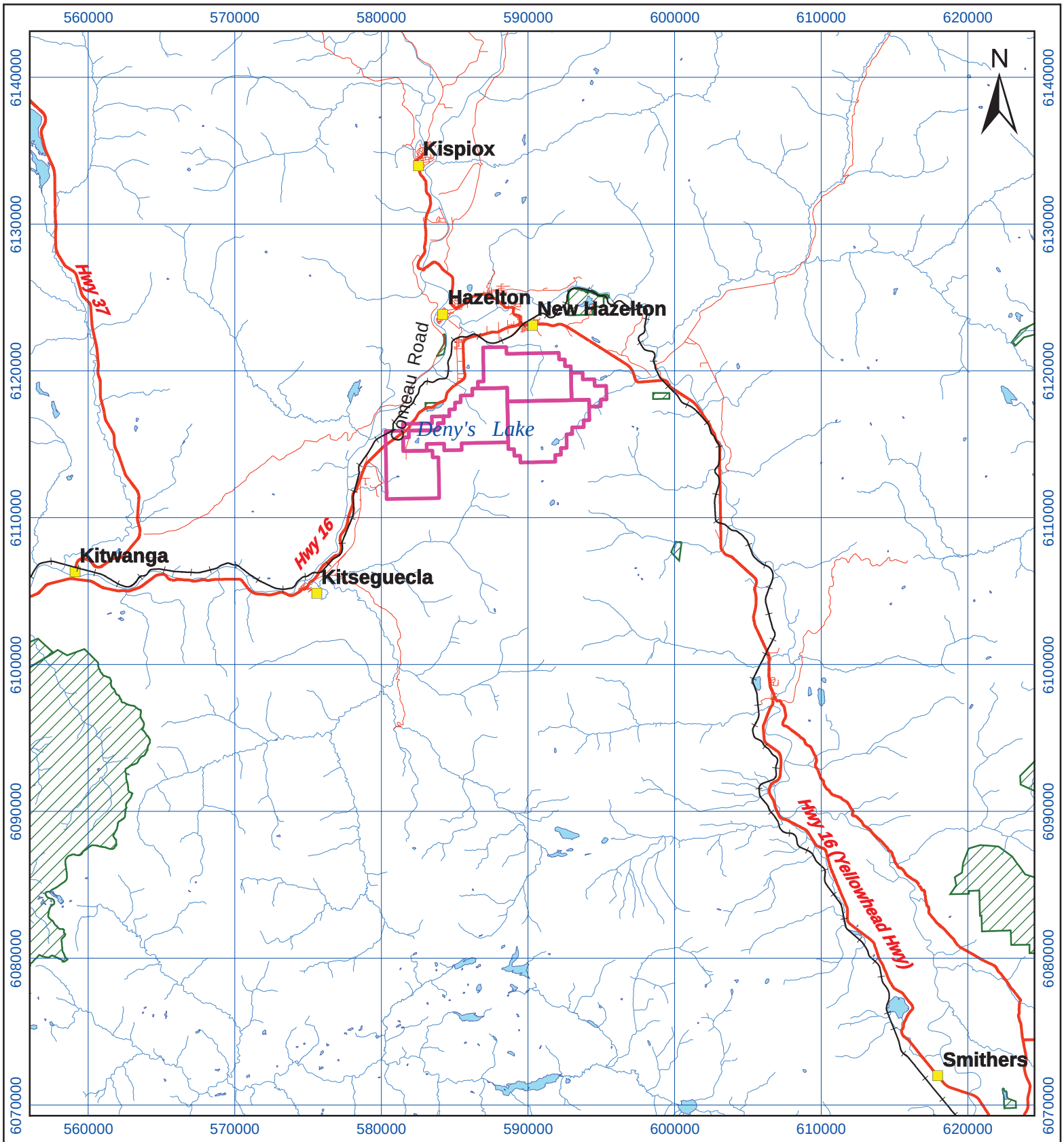
PRIMARY COBALT CORP.

RD COBALT PROPERTY

Hazelton Area, British Columbia

Fig. 1.1 Location Map

2017/07



Legend

- Highway
- Secondary Road
- Railway
- River
- Lake
- RD Property
- BC Parks

Metres
0 5,000 10,000

1:350,000

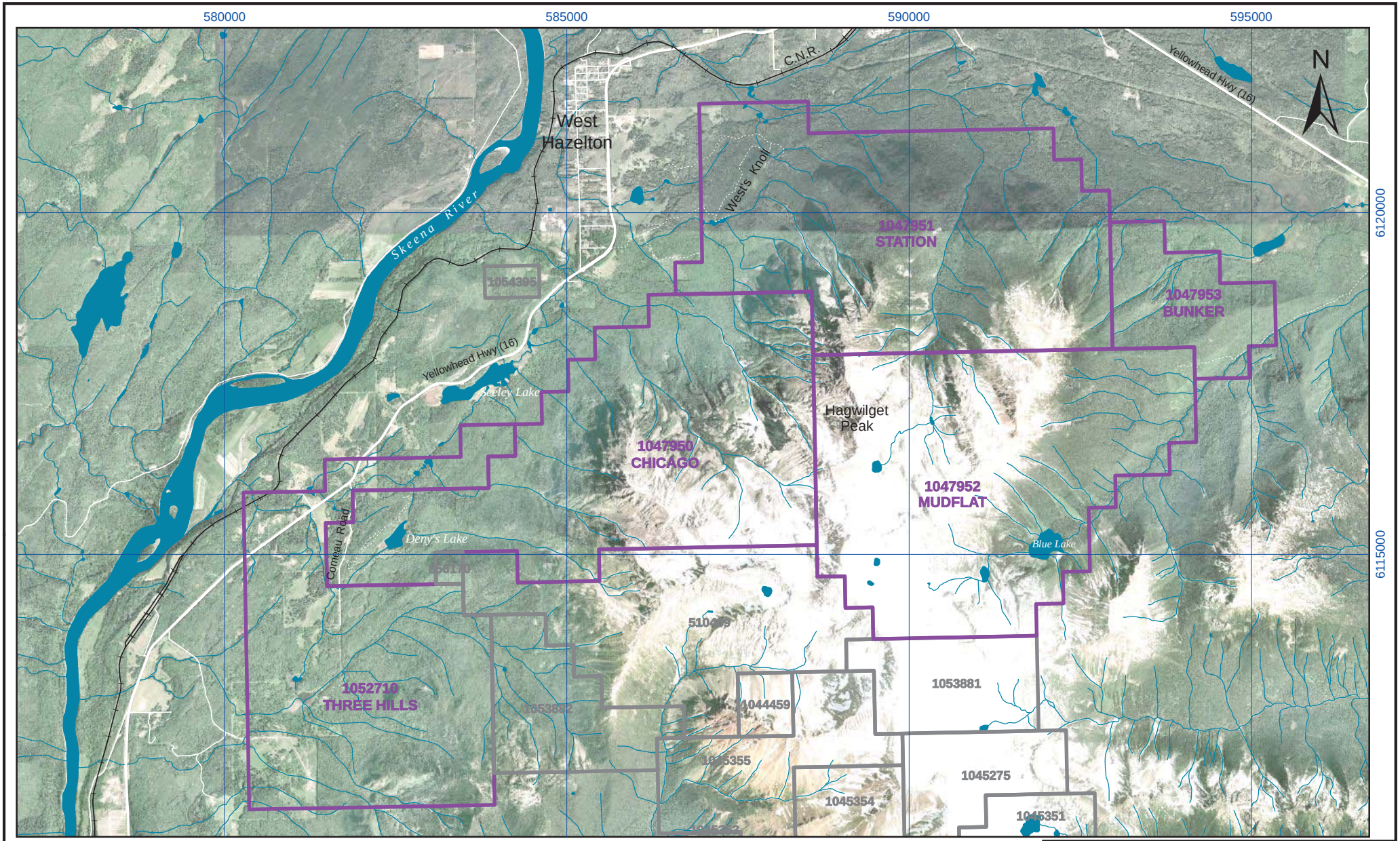
Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.2
Regional Access Map

WM 2017/07



Mineral Tenures

- Jody Dahrouge
- Other
- Waterbody
- Creek, stream

Grid is UTM
NAD83 Zone 9

Kilometres
0 1 2 3

1:75,000

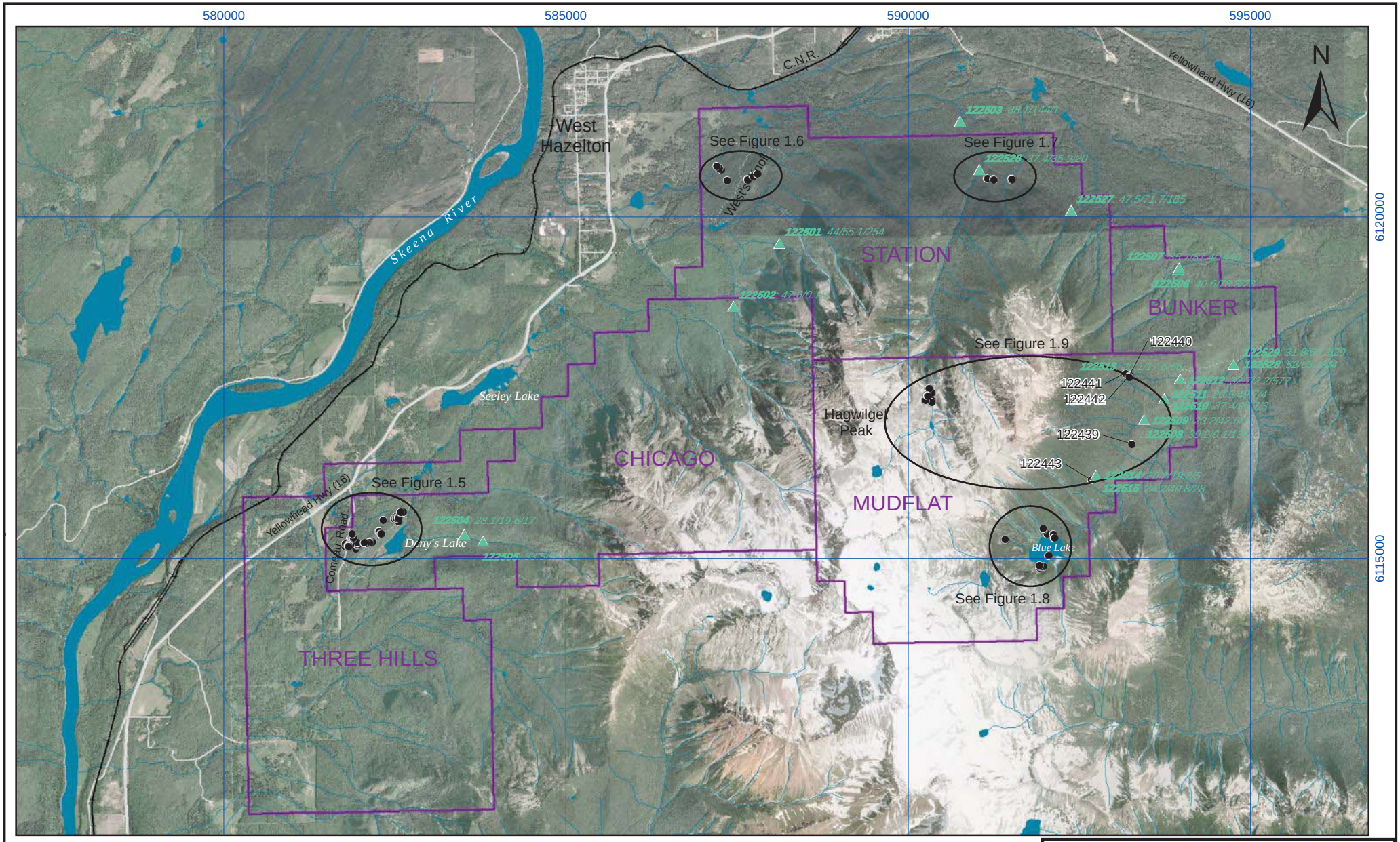
Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.3
Property Map

WM 2017/07

F3



Legend

- 2017 Stream Sample Locations *(ppm Co/ppm Cu/ppm Au)*
- 2017 Rock Samples
- Mineral Claim (Primary Cobalt)
- Waterbody
- Creek, stream

Kilometres
0 1 2 3

1:75,000

Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.4
Sample Locations

WM 2017/07

F4

581600 581800 582000 582200 582400 582600

6115600 6115400 6115200

N

122438: 2.5/314/29
122437: 3.8/13.9/8
122346: 4.4/42.8/5
122345: 9.9/0.1/4
122347: 3.5/14.1/1
122435: 14/2390/8
122436: 5.5/75.1/1
122344: 9.6/863/21
122319: 17.8/0.1/1
122318: 11/371/5
122369: 3.7/682/24
122320: 4.3/51.1/2
122312: 7.3/14.7/3
122333: 10.4/26/12
122368: 25.3/459/17800
122363: 9.5/146/21
122359: 55.2/501/13
122360: 34.8/127/8
122361: 84.5/388/52
122330: 19.9/29.6/2
122362: 25.3/97.4/1
122329: 25.9/131/3
122309: 22.4/45.4/1
122328: 32.8/97.1/2
122326: 26.4/149/1
122310: 27.4/143/3
122327: 14.6/108/2
122308: 15.2/225/11
122311: 22.9/59/1
122337: 7.7/77.6/16
122335: 13.2/302/7
122367: 55.6/483/19
122336: 18.2/93.8/8
122404: 3010/27100/10300
122366: 7.4/170/36
122365: 940/49500/15200
122364: 3840/1500/6390
122332: 25.3/926/727
122407: 119/7510/112
122331: 53.1/1470/35
122334: 182/314/464
122405: 55/957/1110
122406: 1290/32700/25300
122341: 44.2/5720/181
122426: 127/8120/299
122427: 5340/5290/8750
122340: 127/2600/95
122339: 43.7/1520/327
122428: 488/9930/1690
122429: 40.7/7.9/41
122430: 490/246/2140
122431: 83.8/1050/444

Deny's Lake

Legend

Geology (rock type)
- arg
- granodiorite
- qtz monz
- sulphide vn
- volc
- RD Property

- 2017 Rock Samples *(ppm Co/ppm Cu/ppb Au)*
- Highway
- Road, other
- Trail, digitized
- Waterbody
- Creek, stream
- Contour (5 m)

Metres
0 100 200

1:3,000

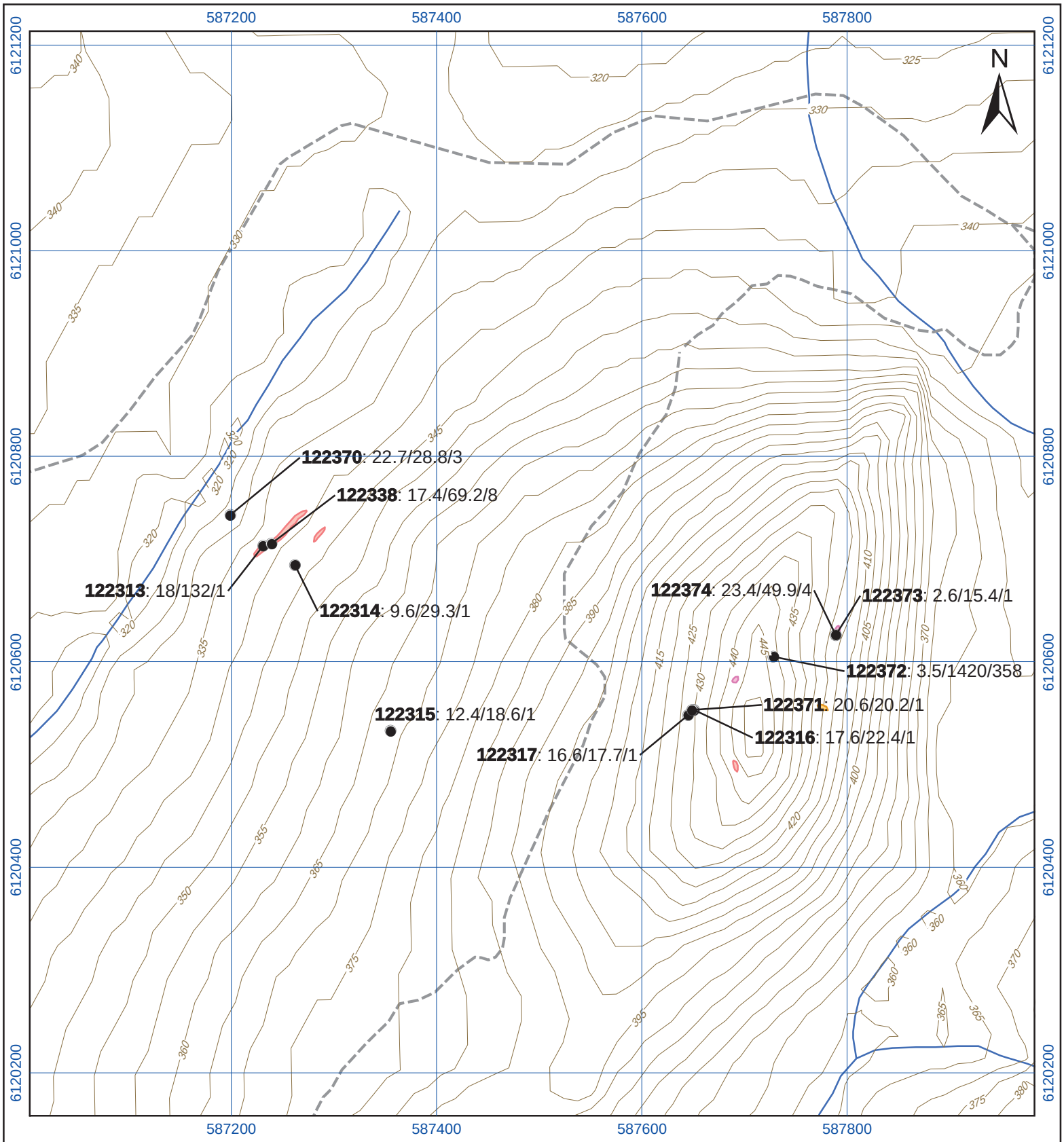
Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.5
Sample Locations
Golden Wonder

WM 2017/07



Legend

Geology (rock type)

- arg
- granodiorite
- qtz monz
- sulphide vn
- volc
- RD Property

- 2017 Rock Samples *(ppm Co/ppm Cu/ppb Au)*
- Highway
- Road, other
- Trail, digitized
- Waterbody
- Creek, stream
- Contour (5 m)

Metres
0 100 200

1:5,000

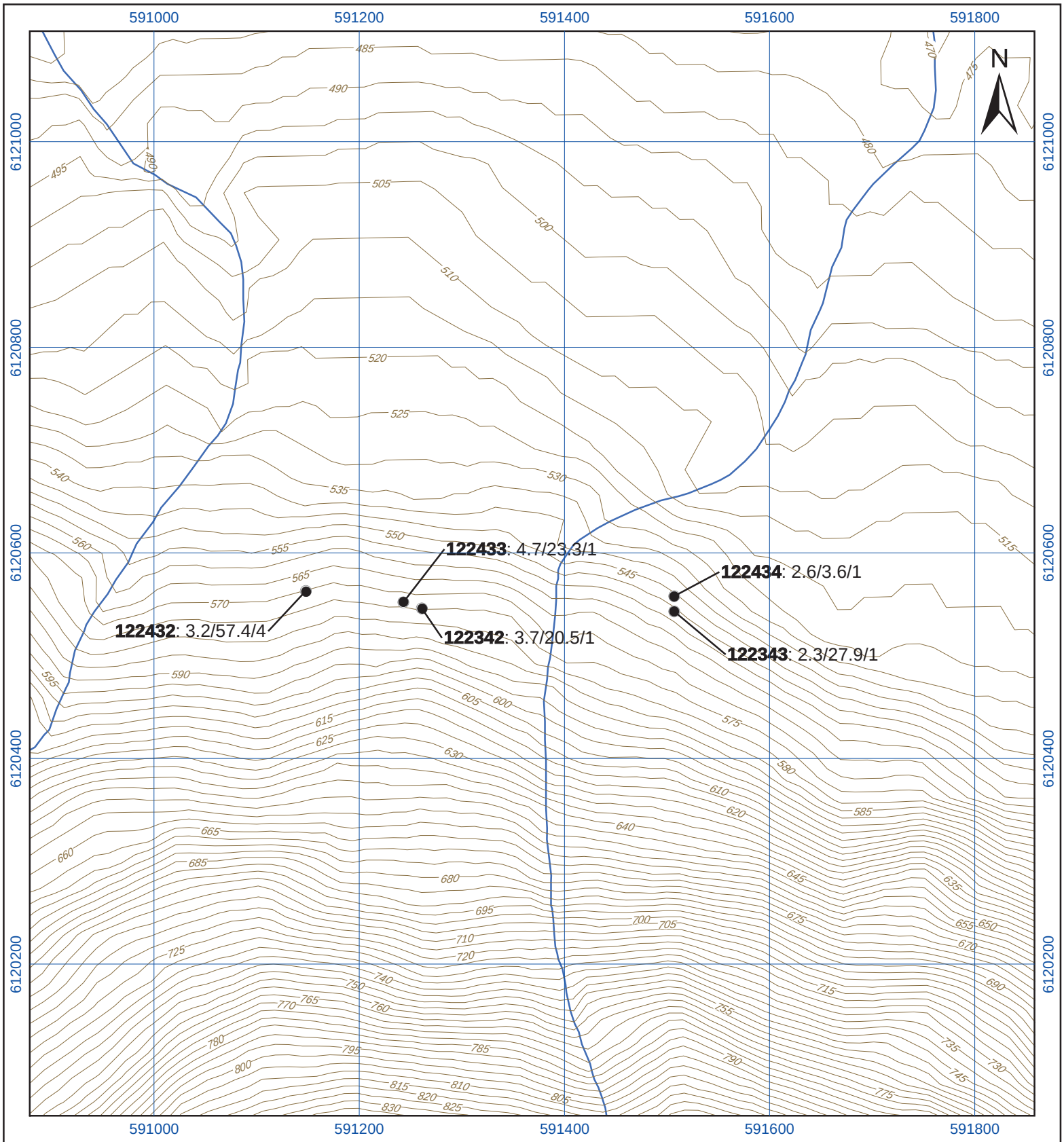
Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.6
Sample Locations
West's Knoll

WM 2017/07



Legend

Geology (rock type)

- arg
- granodiorite
- qtz monz
- sulphide vn
- volc
- RD Property

- 2017 Rock Samples *(ppm Co/ppm Cu/ppb Au)*
- Highway
- Road, other
- Trail, digitized
- Waterbody
- Creek, stream
- Contour (5 m)

Metres
0 100 200

1:5,000

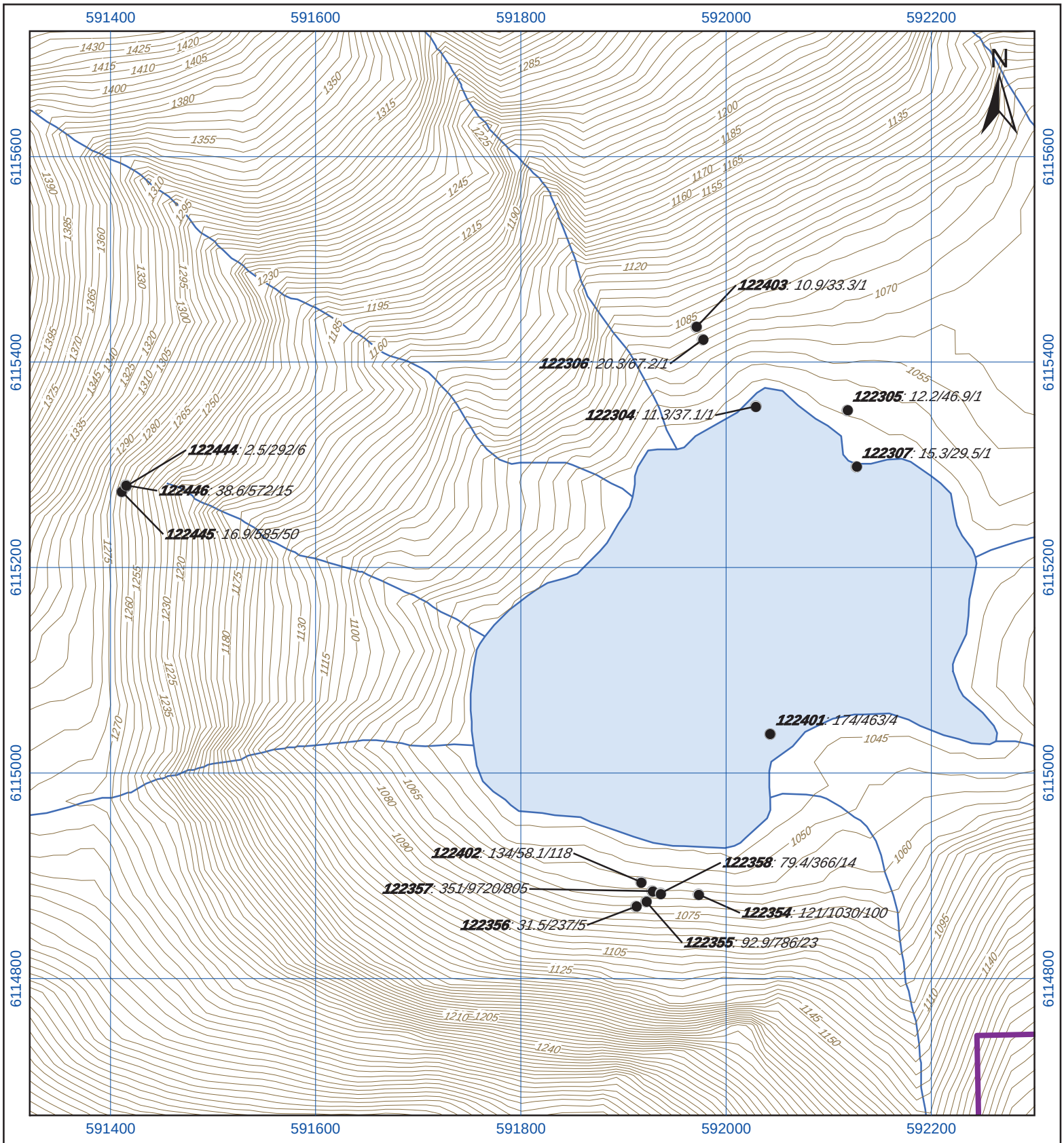
Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.7
Sample Locations
Daley West

WM 2017/07



Legend

Geology (rock type)

- arg
- granodiorite
- qtz monz
- sulphide vn
- volc
- RD Property

- 2017 Rock Samples *(ppm Co/ppm Cu/ppb Au)*
- Highway
- Road, other
- Trail, digitized
- Waterbody
- Creek, stream
- Contour (5 m)

Metres
0 100 200

1:5,000

Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.8
Sample Locations
Black Prince

WM 2017/07

590000 590500 591000 591500 592000 592500 593000 593500 594000

6118000 6117500 6117000 6116500

122352: 15/175/1
122351: 14.4/117/1
122353: 13.1/78.8/3
122303: 8.5/9/1
122301: 13.1/5.1/1
122302: 5.3/76.5/1
122441: 16/20.3/1
122440: 24.9/30.2/1
122442: 1.7/134/1
122439: 5.8/367/6
122443: 76.9/16.8/1

N

Legend

Geology (rock type)
- arg
- granodiorite
- qtz monz
- sulphide vn
- volc
- RD Property

- 2017 Rock Samples *(ppm Co/ppm Cu/ppb Au)*
- Highway
- Road, other
- Trail, digitized
- Waterbody
- Creek, stream
- Contour (5 m)

Metres
0 400 800

1:10,000

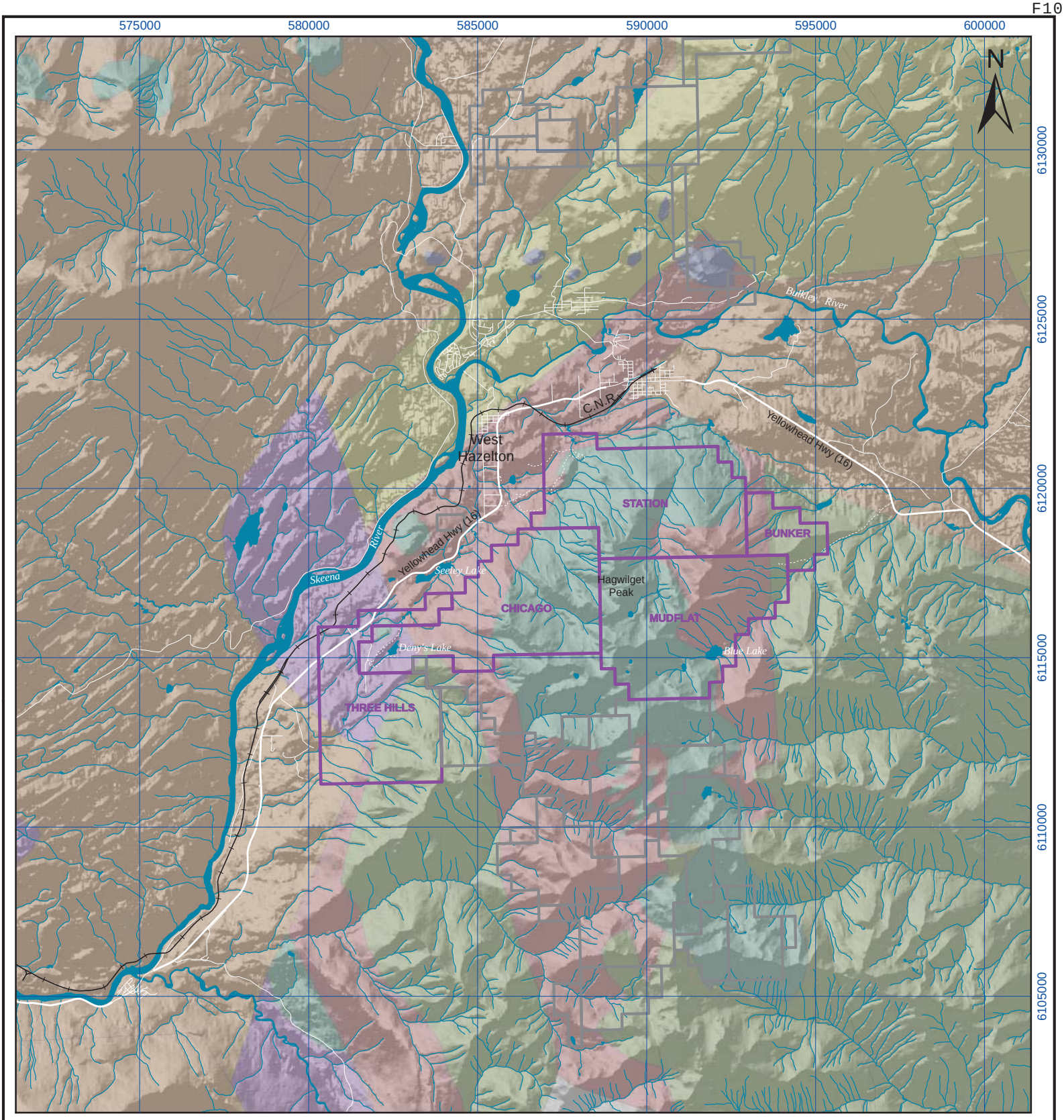
Grid is UTM NAD83 Zone 9

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.9
Sample Locations
Hecla Bluebird

WM 2017/07



Legend

Bedrock Geology

- Babine Plutonic Suite
- Bowser Lake Group
- Bulkley Plutonic Suite
- Kasalka Group
- Skeena Group - Kitsumkalum Shale
- Skeena Group - Kitsuns Creek Formation
- Skeena Group - Red Rose Formation

Mineral Tenures

- Jody Dahrouge
- Other
- Waterbody
- Creek, stream

Grid is UTM
NAD83 Zone 9

Kilometres
0 1 2 4 6

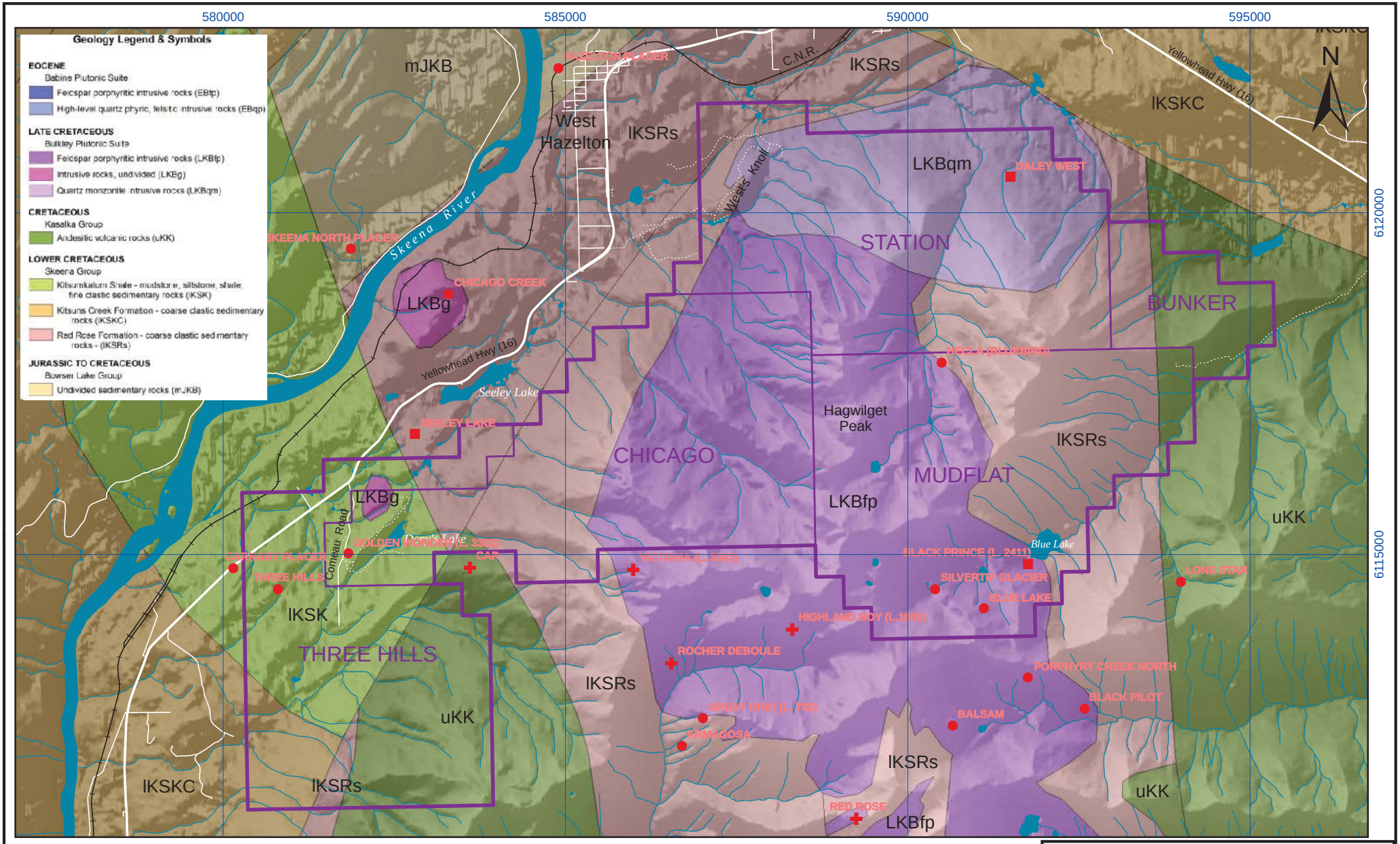
1:150,000

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.10
Regional Geology

WM 2017/07



Legend

- RD Property
- Mineral Claim (Primary Cobalt)
- Waterbody
- Creek, stream

BC Minfile

- Anomaly/Showing
- Developed Prospect
- Past Producer
- Producer
- Prospect

Strat Unit Code

- LKBfp
- LKBg
- LKBqm
- lKSK
- lKSKCs
- lKSRs
- mJKB
- uKK

Grid is UTM
NAD83 Zone 9

Kilometres
0 1 2 3

1:75,000

Primary Cobalt Corporation

RD COBALT PROPERTY
Hazelton Area, British Columbia

Figure 1.11
Property Geology

WM 2017/07

F11

APPENDIX 1: ITEMIZED COST STATEMENT FOR THE 2017 EXPLORATION - RD COBALT PROPERTY

a) Personnel

D. Smith, geologist					
0.1	days		project supervision, data compilation		
0.10	days	@	$ 1,075.00	$	107.50
P. Kluczny, geologist					
5.4	days		project planning/supervision, data compilation		
5.38	days	@	$ 885.00	$	4,761.30
W. McGuire, technologist					
12.0	days		field work and travel May 20-31		
11.4	days		project planning & preparations, reporting, data entry		
23.40	days	@	$ 705.00	$	16,497.00
L. Ewert, geologist					
12.0	days		field work and travel May 20-31		
10.6	days		project planning & preparations, reporting, data entry		
22.56	days	@	$ 640.00	$	14,438.40
K. Krueger, geologist					
0.9	days		project planning/research		
0.93	days	@	$ 640.00	$	595.20
D. Dicks, technologist					
12.0	days		field work and travel May 20-31		
2.4	days		project preparation, data entry, map creation		
14.40	days	@	$ 555.00	$	7,992.00
P. Schmidt, geologist					
12.0	days		field work and travel May 20-31		
3.1	days		project preparation, data entry, map creation		
15.07	days	@	$ 550.00	$	8,288.50
D. Gorham, technologist					
8.0	days		field work and travel May 20-31		
8.00	days	@	$ 550.00	$	4,400.00
J. Holman, receptionist					
7.8	hrs		logistics		
7.75	hrs	@	$ 42.00	$	325.50
					$ 57,405.40

FIELD WORK SUMMARY:

RD Cobalt Property Prospecting & Rock/Sediment Sampling, May 20-31, 2017

Claims CHICAGO, STATION, MUDFLAT, BUNKER, ; 5,852 hectares

114 rock and sediment samples collected

Field Personnel: L. Ewert, W. McGuire, D. Dicks, P. Schmidt, D. Gorham

b) Food and Accommodation

60	man-days	@	$	205.88	accommodations & meals	$ 12,352.74	
15	man-days	@	$	77.00	meals (travel days)	$ 1,155.00	
							$ 13,507.74

c) Transportation

Vehicles:	SUV Rental	$ 809.00	
	Truck Rental	$ 2,145.00	
	Helicopter Rental (Highland Helicopters)	$ 9,333.84	
	Flights	$ 1,153.46	
	Fuel	$ 997.95	
			$ 14,439.25

d) Instrument Rental

Software (ArcGIS)	$ 690.00		
GPS (3)	$ 180.00		
Laptops (2)	$ 345.00		
Radios (2)	$ 240.00		
Chain Saw	$ 270.00		
		$	1,725.00

e) Drilling n/a

f) Analyses Actlabs

(95 rock samples, 19 streams)

19	samples	@	$	3.50	rock preparation fee	$ 73.70	
95	samples	@	$	8.00	sediment preparation fee	$ 836.00	
114	samples	@	$	32.00	sample analysis	$ 4,012.80	
4	samples	@	$	14.00	sample analysis	$ 61.60	
1	samples	@	$	14.50	sample analysis	$ 15.95	
							$ 5,000.05

g) Other

Courier and Shipping	$ 596.04		
Field Supplies	$ 2,695.06		
Admin Costs and Supplies	$ 1,796.80		
		$	5,087.89

Total $ 97,165.33

P. Kluczny, B.Sc., P. Geol.

Edmonton, Alberta
February 14, 2018

APPENDIX 2: ANALYTICAL LABORATORY AND TECHNIQUES OF ACTIVATION LABORATORIES LTD.

1A2 - (1A2-30 or 50) Au Fire Assay - AA

Fire Assay Fusion
A sample size of 5 to 50 grams can be used but the routine size is 30 g for rock pulps, soils or sediments (exploration samples). The sample is mixed with fire assay fluxes (borax, soda ash, silica, litharge) and with Ag added as a collector and the mixture is placed in a fire clay crucible. The mixture is then preheated at 850°C, intermediate 950°C and finish 1060°C with the entire fusion process lasting 60 minutes. The crucibles are then removed from the assay furnace and the molten slag (lighter material) is carefully poured from the crucible into a mould, leaving a lead button at the base of the mould. The lead button is then placed in a preheated cupel which absorbs the lead when cupelled at 950°C to recover the Ag (doré bead) + Au.

AA Finish
The entire Ag dore bead is dissolved in aqua regia and the gold content is determined by AA (Atomic Absorption). AA is an instrumental method of determining element concentration by introducing an element in its atomic form, to a light beam of appropriate wavelength causing the atom to absorb light. The reduction in the intensity of the light beam directly correlates with the concentration of the elemental atomic species.On each tray of 42 samples there is two blanks, three sample duplicates and 2 certified reference materials, one high and one low (QC 7 out of 42 samples). We generally rerun all gold by fire assay gravimetric over 5,000 ppb to ensure accurate values

Code 1A2 (Fire Assay-AA) Detection Limits (ppb)

Element	Detection Limit	Upper Limit
Au	5	5,000

Note: If value exceeds upper limit, reanalysis by Fire Assay-Gravimetric (Code 1A3) is recommended.

Reference:
Hoffman, E.L., Clark, J.R. and Yeager, J.R. 1998. Gold analysis - Fire Assaying and alternative methods. Exploration and Mining Geology, Volume 7, pp. 155-160.

Ultratrace 4 - "Near Total" Digestion - ICP/MS

A 0.25 g sample is digested with four acids beginning with hydrofluoric, followed by a mixture of nitric and perchloric acids, heated using precise programmer controlled heating in several ramping and holding cycles which takes the samples to dryness. After dryness is attained, samples are brought back into solution using hydrochloric and nitric acids. This digestion may not be completely total if resistate minerals are present. As, Sb and Cr may be partially volatilized.

An in-lab standard (traceable to certified reference materials) or certified reference materials are used for quality control.

Digested samples are diluted and analyzed by Perkin Elmer Sciex ELAN 6000, 6100 or 9000 ICP/MS. One blank is run for every 40 samples. In-house control is run every 20 samples. Digested standards are run every 80 samples. After every 15 samples, a digestion duplicate is analyzed. Instrument is recalibrated every 80 samples.

Code Ultratrace-4 Elements and Detection Limits (ppm except where noted)

Element	Detection Limit	Upper Limit
Ag	0.05	100
Al	0.01%	10%
As	0.1	10,000
B	20	6000
Ba	1	5,000
Be	0.1	1,000
Bi	0.02	2,000
Ca	0.01%	50%
Cd	0.1	1,000
Ce	0.1	10,000
Co	0.1	500
Cr	1	5,000
Cs	0.05	100
Cu	0.2	10,000
Dy	0.1	5,000
Er	0.1	1,000
Eu	0.05	100
Fe	0.01%	50%
Ga	0.1	500
Gd	0.1	5,000

Element	Detection Limit	Upper Limit
Ge	0.1	500
Hf	0.1	500
Hg	10 ppb	10,000 ppb
Ho	0.1	1,000
In	0.1	100
K	0.01%	5%
La	0.1	10,000
Li	0.5	400
Lu	0.1	100
Mg	0.01%	50%
Mn	1	10,000
Mo	0.05	10,000
Na	0.01%	3%
Nb	0.1	500
Nd	0.1	10,000
Ni	0.5	5,000
Pb	0.5	5,000
Pr	0.1	1,000
Rb	0.2	5000
Re	0.001	100

Element	Detection Limit	Upper Limit
Sb	0.1	500
Se	0.1	1,000
Sm	0.1	100
Sn	1	200
Sr	0.2	1,000
Ta	0.1	1000
Tb	0.1	100
Te	0.1	500
Th	0.1	500
Tl	0.05	500
Tm	0.1	1000
U	0.1	10,000
V	1	1,000
W	0.1	200
Y	0.1	10,000
Yb	0.1	5,000
Zn	0.2	10,000
Zr	1	5,000

Notes:
Extraction of each element by 4-Acid Digestion is dependent on mineralogy.
Unaltered silicates and resistate minerals may not be dissolved.

APPENDIX 3: ASSAY RESULTS – CENTRAL ANALYTICAL LABORATORY OF ACTIVATION LABORATORIES LTD.

Quality Analysis ... *Innovative Technologies*

Date Submitted: 05-Jun-17
Invoice No.: A17-05566
Invoice Date: 21-Jun-17
Your Reference: Roche-DeBoule

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Jody Dahrouge

CERTIFICATE OF ANALYSIS

7 Rock samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A2-ICP Kamloops Au-Fire Assay ICPOES 30g

Code UT-4-Kamloops Total Digestion ICP/MS

REPORT **A17-05566**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Kamloops@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122401			4	21	19.2	2.60	0.53	7.63	1.36	1.15	< 0.1	61	26.3	115	6.07	2.0	45.8	3.9	0.5	1.4	< 10	0.08	2.91
122402			118	200	6.5	0.30	0.80	6.16	4.96	2.39	< 0.1	76	30.4	1290	5.28	0.5	12.7	1.7	1.2	0.6	< 10	0.72	3.77
122403			< 2	13	46.2	1.99	1.35	8.37	1.09	1.92	0.1	139	52.2	305	3.84	2.1	29.6	1.3	1.0	0.4	< 10	0.10	4.15
122404	0.301	2.71	10300	2360	9.9	0.39	0.92	5.47	1.66	0.40	2.1	78	28.2	202	24.8	1.4	135	1.7	0.6	0.5	< 10	53.9	0.60
122405			1110	35	22.5	1.43	0.70	9.25	> 5.00	0.73	0.1	53	4.6	541	7.18	0.7	3.2	2.3	1.1	0.8	< 10	2.90	7.12
122406	0.129	3.27	25300	14	1.7	0.01	0.21	0.18	0.12	0.30	6.0	< 1	4.6	237	46.2	< 0.1	54.0	0.4	< 0.1	0.2	< 10	65.7	0.17
122407			112	123	7.1	0.14	0.37	2.56	1.70	1.08	0.7	14	2.8	527	38.2	0.8	36.5	1.2	0.3	0.4	< 10	12.9	2.53

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122401	174	0.85	0.57	3.2	15.9	13.6	10.2	77.8	32.1	72	2.9	8.71	< 0.1	< 1	1.2	< 0.1	31	9.4	20.8	2.5	10.8	3.0	4.8
122402	134	1.39	1.17	1.6	3.8	15.3	12.9	230	14.1	12	10.5	1.65	0.1	11	1.8	0.3	75	83.4	98.6	8.0	23.9	3.7	3.4
122403	10.9	1.09	0.15	1.6	44.8	16.7	5.4	57.1	9.0	80	1.8	2.62	< 0.1	< 1	0.4	< 0.1	256	13.0	29.5	3.7	14.9	3.3	2.7
122404	> 500	0.21	117	11.1	405	17.6	> 10000	38.4	12.3	149	5.1	4.34	8.8	4	190	8.8	9	0.7	2.1	0.4	2.0	0.7	1.2
122405	55.0	1.52	66.1	0.7	57.1	17.4	719	173	19.1	51	8.6	2.18	0.2	1	4.8	< 0.1	376	34.9	64.5	7.6	30.0	5.9	5.4
122406	> 500	0.09	> 2000	15.8	1000	0.4	9950	3.3	3.2	20	0.7	1.20	9.7	2	52.3	6.8	15	0.4	0.9	0.1	0.7	0.4	0.7
122407	119	0.56	2.79	7.6	149	4.6	1580	58.9	10.5	38	5.3	1.08	0.9	< 1	3.1	0.3	12	7.6	18.3	2.4	9.6	2.0	2.1

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122401	0.8	6.5	463	0.1	0.6	2.6	0.4	0.2	267	4.9	0.015	0.82	3.8	2.8	2.1
122402	0.4	2.9	58.1	0.2	0.2	1.3	0.2	0.6	59.0	66.4	0.005	1.28	4.3	4.0	4.1
122403	0.3	2.0	33.3	0.6	0.2	1.3	0.2	< 0.1	367	0.5	0.012	0.58	2.8	3.1	2.0
122404	0.2	2.0	> 10000	0.3	0.3	1.7	0.3	0.2	59.6	> 200	0.015	0.59	6.6	0.5	9.8
122405	0.7	4.2	957	0.4	0.3	1.9	0.3	0.3	182	22.2	0.013	1.74	3.6	5.0	2.2
122406	0.1	0.7	> 10000	0.3	< 0.1	0.2	< 0.1	< 0.1	11.2	> 200	0.017	0.28	39.6	0.1	0.2
122407	0.3	2.1	7510	0.2	0.2	0.9	0.1	0.3	29.0	30.7	0.012	0.58	7.6	1.1	1.0

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas				< 1	6.8	0.04	0.20	2.01	0.04	0.84	2.4	80	7.0	863	24.8	0.5	36.6		0.9		2310	30.7	2.67
GXR-1 Cert				15.0	8.20	0.0520	0.217	3.52	0.050	0.960	3.30	80.0	12.0	852	23.6	0.960	41.0		1.22		3900	31.0	3.00
GXR-4 Meas				< 1	10.1	0.49	1.57	6.38	4.03	0.98	0.1	81	38.8	134	3.06	1.3	36.3		1.8		120	2.50	2.55
GXR-4 Cert				4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0		1.90		110	4.00	2.80
SDC-1 Meas				< 1	35.7	1.56	1.04	8.65	2.98	1.07		28	40.8	808	5.03	0.3	33.9	4.1	3.1	1.4	10		3.91
SDC-1 Cert				13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00
GXR-6 Meas				< 1	42.5	0.12	0.70	> 10.0	1.88	0.23	0.1	63	40.9	903	5.30	1.4	20.8		1.3		< 10	0.16	3.90
GXR-6 Cert				9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20
MP-1b Meas		3.13																					
MP-1b Cert		3.07																					
DNC-1a Meas					5.1							143	211				268						
DNC-1a Cert					5.2							148	270				247						
PK2 Meas			4540																				
PK2 Cert			4790																				
PK2 Meas			4700																				
PK2 Cert			4790																				
PK2 Meas			4700																				
PK2 Cert			4790																				
PK2 Meas			4860																				
PK2 Cert			4790																				
CZN-4 Meas	0.010	0.415																					
CZN-4 Cert	0.009	0.403																					
SBC-1 Meas					174						0.4	211	57.7			2.5	79.2	4.0	3.5	1.5			7.80
SBC-1 Cert					163						0.40	220.0	109			3.7	82.8	3.80	3.20	1.40			8.2
CDN-PGMS-24 Meas			754																				
CDN-PGMS-24 Cert			806.000																				
CDN-PGMS-24 Meas			796																				
CDN-PGMS-24 Cert			806.000																				
CDN-PGMS-24 Meas			793																				
CDN-PGMS-24 Cert			806.000																				
CDN-PGMS-24 Meas			819																				
CDN-PGMS-24 Cert			806.000																				
CDN-PGMS-24 Meas			731																				
CDN-PGMS-24																							

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
Cert			806.000																				
PTC-1b Meas	0.327	7.88																					
PTC-1b Cert	0.325	7.97																					
SdAR-M2 (U.S.G.S.) Meas					17.9						4.7	18	23.5			0.6	47.4	3.4	6.9	1.1	940		1.74
SdAR-M2 (U.S.G.S.) Cert					17.9						5.1	25.2	49.6			7.29	48.8	3.58	6.6	1.21	1440.00		1.82
CCU-1e Meas	0.031																						
CCU-1e Cert	0.0301																						
122407 Orig				133	7.0	0.14	0.36	2.53	1.68	1.07	0.6	13	3.4	513	37.9	0.8	36.8	1.2	0.3	0.4	< 10	13.1	2.47
122407 Dup				114	7.3	0.14	0.37	2.59	1.72	1.09	0.7	15	2.2	541	38.4	0.8	36.2	1.3	0.2	0.5	< 10	12.7	2.58
Method Blank				< 1	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	17	< 0.01	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 10	< 0.05	< 0.05
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank	< 0.003	< 0.001																					

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	7.6	0.63	1610	15.8	818	9.2	425	2.4	27.1	18	0.5	17.5	0.8	30	20.9	9.4	620	7.0	13.8		8.1	2.8	4.4
GXR-1 Cert	8.20	0.690	1380	16.6	760	13.8	427	14.0	32.0	38.0	0.800	18.0	0.770	54.0	122	13.0	750	7.50	17.0		18.0	2.70	4.20
GXR-4 Meas	13.6	1.54	19.6	4.5	63.6	16.1	97.5	132	12.4	39	8.9	325	0.2	8	4.3	1.0	91	53.7	103		39.9	6.2	5.0
GXR-4 Cert	14.6	1.63	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25
SDC-1 Meas	18.2	1.71			105	18.6	< 0.1	113		10	< 0.1			< 1	< 0.1		630	40.8	86.7		40.6	8.2	7.5
SDC-1 Cert	18.0	1.70			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00
GXR-6 Meas	12.1	0.63	0.20	< 0.1	118	25.9	204	66.6	10.9	47	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	1720	11.9	32.4		11.9	2.5	2.6
GXR-6 Cert	13.8	0.760	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97
MP-1b Meas																							
MP-1b Cert																							
DNC-1a Meas	59.4	0.63			62.6	13.3		3.3	15.8	34	0.1				< 0.1		104	3.8			5.1		
DNC-1a Cert	57	0.59			70	15		5	18.0	38.0	3				0.96		118	3.6			5.20		
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
PK2 Meas																							
PK2 Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
SBC-1 Meas	21.7	2.06	0.75		194	22.7	25.5	132	29.6	90	9.1	2.04		4	0.9		661	48.4	103	12.3	47.1	9.6	9.0
SBC-1 Cert	22.7	1.98	0.70		186	27.0	25.7	147	36.5	134.0	15.3	2.40		3.3	1.01		788.0	52.5	108.0	12.6	49.2	9.6	8.5
CDN-PGMS-24 Meas																							
CDN-PGMS-24 Cert																							
CDN-PGMS-24 Meas																							
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CDN-PGMS-24 Meas																							
CDN-PGMS-24 Cert																							

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
PTC-1b Meas																							
PTC-1b Cert																							
SdAR-M2 (U.S.G.S.) Meas	13.0	1.42	1.12		819	14.1		137	25.5	35	1.1	5.63					958	44.8	95.5	10.4	37.5	6.9	6.0
SdAR-M2 (U.S.G.S.) Cert	12.4	1.44	1.05		760	17.6		149	32.7	259	26.2	13.3					990	46.6	98.8	11.0	39.4	7.18	6.28
CCU-1e Meas																							
CCU-1e Cert																							
122407 Orig	120	0.55	2.94	8.3	146	4.5	1570	59.2	10.5	38	5.2	1.02	0.9	< 1	3.2	0.3	11	7.6	18.0	2.3	9.5	2.0	2.1
122407 Dup	118	0.56	2.64	7.0	151	4.6	1590	58.7	10.4	38	5.3	1.13	1.0	< 1	3.0	0.3	14	7.7	18.6	2.4	9.7	2.0	2.1
Method Blank	< 0.1	< 0.05	< 0.02	< 0.1	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							
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Method Blank																							
Method Blank																							

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	0.7	5.2	1140		0.4	2.1	0.3	< 0.1	273	129		0.35	753	2.6	32.5
GXR-1 Cert	0.830	4.30	1110		0.430	1.90	0.280	0.175	275	164		0.390	730	2.44	34.9
GXR-4 Meas	0.5	3.2	6110		0.2	1.0	0.2	0.5	193	33.2		3.25	46.2	17.7	5.6
GXR-4 Cert	0.360	2.60	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	1.0	7.1	27.8		0.6	3.3		< 0.1	167	0.4		0.63	24.2	11.9	2.8
SDC-1 Cert	1.20	6.70	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	0.4	2.7	55.9			1.6	0.3	< 0.1	43.9	0.2		2.02	93.7	5.3	1.4
GXR-6 Cert	0.415	2.80	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
MP-1b Meas															
MP-1b Cert															
DNC-1a Meas			93.6			2.0			139				6.7		
DNC-1a Cert			100			2.0			144				6.3		
PK2 Meas															
PK2 Cert															
PK2 Meas															
PK2 Cert															
PK2 Meas															
PK2 Cert															
PK2 Meas															
PK2 Cert															
CZN-4 Meas															
CZN-4 Cert															
SBC-1 Meas	1.1	7.3	29.1		0.6	3.4	0.5	0.4	166	1.4		0.85	34.9	16.2	5.8
SBC-1 Cert	1.20	7.10	31.0000		0.56	3.64	0.54	1.10	178.0	1.60		0.89	35.0	15.8	5.76
CDN-PGMS-24 Meas															
CDN-PGMS-24 Cert															
CDN-PGMS-24 Meas															
CDN-PGMS-24 Cert															
CDN-PGMS-24 Meas															
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CDN-PGMS-24 Meas															
CDN-PGMS-24 Cert															
CDN-PGMS-24 Meas															
CDN-PGMS-24 Cert															

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
PTC-1b Meas															
PTC-1b Cert															
SdAR-M2 (U.S.G.S.) Meas	0.8	5.8	243		0.5	2.9	0.4	< 0.1	136	0.1			800	13.9	2.4
SdAR-M2 (U.S.G.S.) Cert	0.97	5.88	236.0000		0.54	3.63	0.54	1.8	144	2.8			808	14.2	2.53
CCU-1e Meas															
CCU-1e Cert															
122407 Orig	0.3	2.1	7520	0.2	0.2	0.9	0.1	0.3	29.4	30.5	0.018	0.55	7.0	1.1	1.0
122407 Dup	0.3	2.1	7490	0.2	0.2	0.9	0.1	0.3	28.6	30.9	0.007	0.62	8.3	1.1	1.0
Method Blank	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.007	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank															
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Method Blank															
Method Blank															
Method Blank															

Quality Analysis ... *Innovative Technologies*

Date Submitted: 07-Jun-17
Invoice No.: A17-05700
Invoice Date: 05-Jul-17
Your Reference: Roche-DeBoule

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Jody Dahrouge

CERTIFICATE OF ANALYSIS

107 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-ICP Kamloops Au-Fire Assay ICPOES 30g

Code Sieve Report-Kamloops Internal Sieve Report Internal

Code UT-4-Kamloops Total Digestion ICP/MS

REPORT **A17-05700**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
9989 Dallas Drive, Kamloops, British Columbia, Canada, V2C 6T4
TELEPHONE +250 573-4484 or +1.888.228.5227 FAX +1.905.648.9613
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Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122301			< 2	6	15.5	2.73	1.20	7.36	2.63	2.66	< 0.1	54	35.8	507	3.62	0.4	15.1	1.7	1.4	0.6	30	0.08	2.63
122302			< 2	1	12.9	2.86	0.78	6.47	1.29	1.96	0.2	48	26.0	237	1.79	0.4	10.2	1.5	1.3	0.5	10	0.25	1.64
122303			< 2	4	11.9	> 3.00	0.78	7.96	1.91	2.42	< 0.1	76	31.0	303	4.01	0.4	12.3	1.6	1.5	0.5	50	0.20	2.04
122304			< 2	< 1	17.1	> 3.00	1.10	7.51	2.40	2.62	< 0.1	50	41.6	325	3.40	0.4	17.6	1.3	1.5	0.4	10	< 0.05	2.37
122305			< 2	< 1	57.6	1.54	1.02	7.70	1.40	0.70	< 0.1	142	66.9	237	3.92	2.0	41.1	1.3	1.1	0.4	30	< 0.05	3.52
122306			< 2	19	38.0	2.16	1.85	9.61	1.66	1.95	< 0.1	155	58.0	376	4.45	2.4	54.5	1.6	1.2	0.5	40	0.25	3.27
122307			< 2	39	27.6	1.32	1.37	9.37	1.95	4.17	< 0.1	97	46.1	189	5.43	1.6	28.9	1.0	1.1	0.3	30	0.80	5.76
122308			11	1440	76.2	1.18	2.38	8.47	1.63	1.38	0.1	244	117	1990	9.46	2.3	65.3	2.2	1.3	0.7	< 10	0.17	6.66
122309			< 2	38	48.5	1.57	2.09	8.19	1.95	1.21	0.1	231	151	491	6.08	2.1	96.5	1.9	1.2	0.7	20	0.46	8.68
122310			3	10	64.0	1.48	2.22	6.96	1.34	3.25	0.2	149	69.7	841	7.60	1.6	81.8	2.0	1.1	0.7	50	0.22	3.98
122311			< 2	< 1	48.2	1.35	1.60	7.10	1.64	7.13	0.1	164	104	1690	4.95	1.8	101	2.6	1.2	0.9	< 10	0.16	5.68
122312			3	< 1	23.8	2.12	1.82	5.44	2.46	0.67	0.2	66	182	319	4.26	0.8	111	1.2	1.2	0.4	30	< 0.05	4.28
122313			< 2	< 1	9.1	> 3.00	0.93	8.43	0.90	2.94	0.1	60	26.6	493	3.36	0.2	23.0	0.8	0.8	0.3	20	< 0.05	1.31
122314			< 2	< 1	11.7	2.87	0.69	7.83	1.72	2.38	< 0.1	49	23.9	323	2.92	0.4	13.4	1.2	0.9	0.4	20	< 0.05	1.78
122315			< 2	< 1	15.0	2.89	1.10	9.39	1.82	1.22	< 0.1	68	17.5	505	4.86	1.3	14.9	1.0	1.0	0.4	20	< 0.05	2.07
122316			< 2	2	18.0	1.86	1.51	8.13	0.23	4.07	0.2	69	33.1	646	4.58	0.4	24.6	1.2	0.9	0.4	50	< 0.05	0.89
122317			< 2	5	15.8	2.76	1.81	8.30	0.28	3.64	0.1	69	30.5	717	4.48	0.4	21.9	1.2	0.9	0.4	20	1.02	1.13
122318			5	4610	20.1	0.76	1.98	7.01	1.29	0.76	0.1	175	164	1460	6.68	1.9	92.0	1.7	1.6	0.5	30	6.90	5.64
122319			< 2	18	33.1	0.86	2.94	6.03	4.01	1.14	0.1	164	145	517	9.93	1.8	43.1	1.4	0.8	0.6	20	0.23	19.5
122320			2	7	7.4	0.65	2.21	7.60	0.09	0.43	< 0.1	87	132	101	3.61	1.2	40.3	1.5	1.0	0.4	10	0.53	0.25
122326			< 2	5	60.7	1.49	2.21	8.60	2.58	0.89	< 0.1	211	102	2350	5.56	2.0	137	2.1	1.8	0.7	40	0.08	7.49
122327			2	4	96.4	0.97	3.11	7.37	1.38	1.75	< 0.1	213	101	2620	9.23	1.9	85.7	3.0	1.3	1.1	20	0.13	6.60
122328			2	4	61.5	1.44	2.45	8.31	2.39	1.28	< 0.1	232	118	2260	6.62	2.1	157	2.8	1.8	1.0	< 10	0.38	7.45
122329			3	4	66.3	1.44	2.62	8.37	1.98	2.22	1.1	241	118	2160	7.26	2.3	117	2.3	1.7	0.8	20	0.67	8.13
122330			2	4	52.6	2.31	2.49	7.37	2.07	2.47	0.1	145	102	1160	6.14	1.6	57.5	1.7	1.3	0.6	< 10	0.06	2.65
122331			35	7	2.6	0.12	0.20	2.63	2.15	0.23	0.9	20	23.1	127	37.4	0.6	43.2	0.7	0.2	0.2	< 10	3.17	1.40
122332			727	26	32.1	1.74	1.94	8.42	3.46	0.59	< 0.1	220	105	169	6.59	2.0	75.6	1.6	1.5	0.5	< 10	2.51	8.63
122333			12	206	32.7	2.18	1.85	6.62	2.38	0.68	0.1	68	201	354	5.60	0.7	118	1.3	1.4	0.4	20	0.12	3.01
122334			464	5	41.4	0.34	2.12	7.76	2.27	0.26	0.2	191	116	827	14.3	1.9	45.7	1.3	0.8	0.4	< 10	0.88	1.81
122335			7	6	27.1	2.00	2.13	8.95	4.01	0.64	< 0.1	204	117	350	5.69	2.1	94.8	1.4	1.5	0.4	< 10	0.22	8.52
122336			8	5	26.1	2.10	2.53	9.73	3.67	0.71	< 0.1	224	127	252	4.92	2.1	78.1	1.5	1.4	0.5	< 10	0.73	9.38
122337			16	13	40.7	2.21	2.38	8.41	2.35	0.44	0.1	190	136	332	6.50	1.9	40.2	1.5	1.2	0.4	< 10	0.33	2.54
122338			8	7	29.9	> 3.00	1.75	9.37	2.47	2.18	0.2	82	32.5	754	5.55	0.2	20.8	1.1	1.3	0.4	10	0.39	2.86
122339			327	9	17.4	0.47	1.35	6.25	1.62	0.16	0.1	124	198	817	10.4	1.2	54.7	0.9	0.6	0.4	10	1.67	4.00
122340			95	18	7.6	0.48	1.07	6.02	0.69	0.22	0.2	124	204	174	8.43	1.2	68.2	1.0	0.8	0.4	10	14.3	1.86
122341			181	2190	14.5	0.47	1.71	6.45	0.79	0.26	0.6	144	297	1240	12.8	1.3	86.4	1.1	0.9	0.4	< 10	19.1	2.19
122342			< 2	30	19.7	> 3.00	0.33	9.51	4.05	0.89	< 0.1	21	27.2	774	2.13	0.6	6.0	1.4	2.5	0.5	< 10	1.95	4.32
122343			< 2	40	24.9	> 3.00	0.28	9.38	4.16	0.84	< 0.1	15	25.5	626	2.01	0.4	2.5	1.2	2.0	0.4	< 10	0.27	4.88
122344			21	4180	8.1	0.41	1.06	8.12	2.07	0.25	< 0.1	116	81.6	340	8.53	1.8	25.2	1.0	1.2	0.3	< 10	15.9	1.76
122345			4	10	27.0	1.87	1.34	9.00	> 5.00	0.43	< 0.1	87	43.9	1150	5.19	2.0	19.2	1.0	1.1	0.3	50	0.22	2.56
122346			5	11	7.7	0.79	2.48	8.63	0.10	0.46	< 0.1	96	172	125	4.21	1.5	65.1	1.2	1.4	0.3	20	0.61	0.19

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122347			< 2	12	6.8	0.80	2.41	8.49	0.09	0.47	< 0.1	98	199	116	4.53	1.0	64.1	0.7	1.1	0.2	20	< 0.05	0.14
122351			< 2	11	25.3	> 3.00	1.46	8.54	3.55	3.22	< 0.1	33	40.6	630	4.20	0.3	16.9	1.7	1.9	0.6	40	0.37	3.19
122352			< 2	10	18.4	> 3.00	1.09	8.83	3.03	3.30	< 0.1	52	39.7	493	3.90	0.3	16.6	1.7	1.7	0.6	30	0.23	4.33
122353			3	10	22.6	2.98	1.42	8.30	3.30	2.90	< 0.1	47	49.6	559	3.64	0.2	18.8	1.7	1.4	0.6	10	0.34	2.72
122354			100	62	11.7	2.49	1.00	7.65	3.25	1.99	< 0.1	82	45.2	267	5.66	0.4	20.0	1.0	1.3	0.4	< 10	0.97	2.53
122355			23	70	9.3	1.50	0.40	7.84	> 5.00	1.07	0.2	80	48.1	209	4.09	0.6	14.9	0.7	1.0	0.2	10	1.83	5.89
122356			5	27	14.5	2.91	1.06	8.71	3.67	2.11	< 0.1	90	59.3	308	4.14	0.6	19.1	1.0	1.4	0.3	< 10	0.46	3.54
122357			805	9	3.7	0.31	0.07	4.53	> 5.00	0.05	< 0.1	22	29.5	82	11.1	< 0.1	55.2	< 0.1	< 0.1	< 0.1	< 10	16.9	2.72
122358			14	10	18.5	2.82	1.06	8.52	4.21	1.93	< 0.1	95	51.8	256	4.72	0.5	17.3	0.9	1.6	0.3	< 10	0.88	4.90
122359			13	17	75.2	0.36	3.40	6.60	0.17	3.66	1.1	201	86.1	3240	12.4	1.3	183	3.1	0.6	1.3	< 10	0.64	0.56
122360			8	11	42.4	0.30	1.07	2.71	0.55	2.90	0.7	69	70.8	836	7.16	0.5	175	1.8	0.5	0.7	20	0.17	1.70
122361			52	10	60.6	0.20	1.59	2.45	0.19	1.91	2.2	71	47.6	793	14.3	0.4	229	1.7	0.2	0.7	50	< 0.05	0.56
122362			< 2	18	71.6	1.33	2.35	> 10.0	2.94	0.29	0.1	258	100	348	6.60	2.2	155	2.1	1.7	0.7	20	0.38	7.91
122363			21	> 6000	58.2	0.75	3.23	9.73	1.54	0.71	< 0.1	254	149	443	9.08	1.9	50.5	1.2	1.4	0.4	< 10	0.35	4.00
122364	0.384		6390	5870	11.4	0.42	1.05	4.89	0.21	0.67	0.2	86	25.7	236	43.0	0.7	212	2.2	0.5	0.8	20	2.79	0.21
122365	0.094	4.95	15200	49	1.7	< 0.01	0.29	0.13	0.04	0.13	10.5	5	15.8	226	> 50.0	< 0.1	49.4	0.2	< 0.1	< 0.1	< 10	77.2	0.09
122366			36	24	39.0	1.77	1.20	> 10.0	> 5.00	0.93	< 0.1	66	16.1	694	8.17	3.1	1.7	2.2	1.2	0.8	< 10	1.02	3.84
122367			19	36	105	0.76	4.32	> 10.0	0.49	0.70	0.9	230	89.1	571	16.6	1.5	324	2.5	1.1	0.9	30	0.71	0.47
122368			17800	23	17.4	0.64	2.16	7.73	0.32	0.34	0.3	164	193	290	9.35	1.3	169	1.1	1.4	0.3	< 10	18.2	0.50
122369			24	22	4.7	0.53	1.47	6.42	0.72	0.23	0.1	132	205	148	10.1	1.1	43.7	0.6	1.0	0.2	20	3.40	1.36
122370			3	20	55.6	1.25	1.37	> 10.0	2.01	0.65	0.3	116	44.4	913	8.32	1.7	15.9	2.4	1.2	0.8	< 10	1.08	1.36
122371			< 2	19	18.7	2.46	1.99	> 10.0	0.22	5.96	0.1	92	46.2	1040	5.72	0.5	24.6	1.3	1.2	0.5	40	0.34	0.65
122372			358	19	12.6	1.62	0.64	9.49	2.29	3.81	< 0.1	85	41.4	429	6.11	0.7	5.4	1.7	1.0	0.6	20	17.5	1.28
122373			< 2	23	23.9	> 3.00	0.36	> 10.0	4.36	0.97	< 0.1	15	21.5	640	2.13	0.3	2.6	1.6	2.8	0.5	30	0.06	4.22
122374			4	32	45.4	2.21	1.65	> 10.0	1.42	3.75	0.1	113	62.2	907	7.00	0.2	29.4	1.3	1.2	0.5	10	0.19	3.64
122375			< 2	19	7.9	0.02	0.01	0.06	0.03	0.02	< 0.1	4	54.6	35	0.26	< 0.1	1.8	< 0.1	< 0.1	< 0.1	30	< 0.05	< 0.05
122426			299	25	33.4	0.30	2.41	5.88	0.12	0.28	1.2	123	162	850	14.8	1.0	139	1.0	0.7	0.4	< 10	32.5	0.39
122427	0.534		8750	30	4.7	0.66	2.08	7.61	0.49	0.41	0.5	134	105	1800	26.0	1.0	1060	5.1	1.2	1.8	< 10	18.5	1.09
122428		0.993	1690	26	35.8	0.42	1.86	8.05	2.27	0.27	1.0	169	172	757	20.9	1.6	162	1.3	1.2	0.5	50	45.6	4.16
122429			41	18	27.9	2.77	2.82	> 10.0	> 5.00	1.15	< 0.1	191	201	804	8.89	1.7	110	1.5	1.7	0.5	< 10	0.59	14.7
122430	0.049		2140	36	33.1	0.12	1.82	5.43	1.24	0.28	2.6	119	136	1240	25.3	1.4	97.2	1.5	0.6	0.6	< 10	3.42	4.08
122431			444	796	7.3	1.01	2.29	9.51	0.16	0.33	0.2	188	137	197	14.4	2.3	69.1	1.3	1.3	0.3	40	5.70	0.17
122432			4	19	27.4	> 3.00	0.40	> 10.0	4.77	1.02	< 0.1	20	23.9	780	2.29	0.4	4.2	1.6	2.9	0.6	20	0.54	3.27
122433			< 2	25	22.7	> 3.00	0.41	> 10.0	4.72	1.01	< 0.1	22	56.4	652	2.29	0.5	12.0	1.8	3.1	0.6	< 10	0.57	4.26
122434			< 2	46	24.3	> 3.00	0.37	> 10.0	4.42	1.05	< 0.1	18	27.7	782	2.19	0.3	3.2	1.5	2.7	0.5	< 10	0.15	4.09
122435			8	515	21.5	0.07	0.40	> 10.0	4.75	0.18	0.1	111	67.0	4210	11.7	2.4	42.4	1.5	1.5	0.5	< 10	0.77	6.63
122436			< 2	22	15.3	0.07	0.45	> 10.0	4.90	0.06	< 0.1	135	47.9	8230	13.3	2.3	40.1	1.0	1.4	0.3	30	0.14	4.78
122437			8	19	10.6	1.03	3.70	> 10.0	0.09	0.64	< 0.1	106	168	116	4.29	1.5	81.8	1.4	2.1	0.3	30	0.47	0.12
122438			29	17	12.5	0.58	2.06	6.77	0.08	0.28	< 0.1	114	157	154	3.51	0.9	37.9	1.4	1.4	0.4	< 10	8.15	0.16
122439			6	17	18.7	> 3.00	0.68	8.98	2.41	1.40	< 0.1	25	56.6	211	1.88	0.5	9.2	1.8	1.7	0.6	40	0.48	3.06
122440			< 2	16	3.3	0.03	1.59	6.65	0.03	26.3	0.3	108	46.8	6640	10.5	1.5	45.6	1.4	1.4	0.5	30	< 0.05	0.06

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122441			< 2	17	30.4	> 3.00	2.79	> 10.0	0.71	7.61	0.2	86	16.8	1880	7.85	0.7	3.0	2.7	1.1	0.9	20	< 0.05	1.65
122442			< 2	26	16.7	> 3.00	0.52	9.90	4.87	0.58	< 0.1	27	28.8	350	2.71	0.4	3.3	1.5	2.4	0.5	30	0.17	2.72
122443			< 2	1230	17.7	2.51	1.40	9.09	4.01	1.99	< 0.1	90	55.9	392	5.11	0.8	20.5	1.1	1.5	0.4	20	0.26	3.87
122444			6	29	8.4	2.55	0.17	7.93	> 5.00	0.69	< 0.1	19	37.9	121	0.95	1.1	6.1	0.3	1.0	< 0.1	50	0.28	1.86
122445			50	16	28.3	> 3.00	2.17	9.95	3.46	3.31	0.1	93	59.3	662	6.17	0.3	31.2	1.7	1.8	0.6	20	1.73	4.97
122446			15	15	23.8	> 3.00	1.98	9.16	2.54	2.31	< 0.1	100	55.0	507	5.04	1.0	25.1	2.4	2.1	0.9	20	0.58	1.94
122501				13	6.7	0.30	0.91	1.12	0.29	2.45	0.1	> 1000	523	3280	48.6	1.7	50.5	4.7	0.7	1.6	< 10	2.63	0.70
122502				14	5.2	0.23	0.71	0.77	0.21	1.74	< 0.1	> 1000	712	2680	> 50.0	1.2	61.6	3.3	0.4	1.1	10	1.28	0.42
122503				12	5.9	0.57	0.91	1.99	0.39	2.00	< 0.1	> 1000	481	4020	42.0	1.8	48.7	4.4	0.6	1.6	30	0.58	0.77
122504				14	11.6	0.50	1.03	5.58	0.41	2.24	0.3	364	336	4820	30.2	0.8	33.4	6.3	0.4	2.1	50	3.41	1.06
122505				13	7.6	0.34	0.84	4.76	0.28	1.80	0.3	476	430	5050	35.5	0.9	35.8	6.2	0.4	2.1	30	0.24	0.84
122506				25	2.8	0.20	0.52	1.04	0.19	1.46	0.1	799	499	5650	46.8	1.4	47.3	5.0	0.2	1.8	30	0.07	0.58
122507				54	5.0	0.21	0.62	1.33	0.20	1.47	0.2	538	284	6830	35.8	2.1	31.1	5.5	0.1	2.0	30	0.29	0.81
122508				205	9.9	0.32	0.51	1.37	0.29	1.14	0.1	> 1000	560	3160	40.1	2.2	59.3	3.1	0.5	1.3	10	2.41	1.05
122509				108	27.4	1.34	0.98	5.96	1.03	1.46	0.1	137	176	1830	17.0	0.1	33.4	3.1	0.9	1.2	20	< 0.05	3.39
122510				14	15.9	0.44	0.73	3.46	0.51	1.32	0.2	300	666	2550	34.9	1.7	152	4.6	0.6	2.0	40	0.19	2.15
122511				13	33.7	1.24	0.97	7.51	1.33	1.24	0.2	113	100	1170	10.5	0.7	29.3	2.9	1.1	1.1	60	< 0.05	4.39
122512				13	4.2	0.28	0.48	1.30	0.26	1.17	< 0.1	922	613	3540	45.6	2.2	64.2	3.4	0.2	1.2	30	0.17	0.66
122513				13	11.0	0.91	0.69	3.54	0.76	1.35	< 0.1	348	296	2260	28.5	1.2	43.1	2.9	0.6	1.1	40	< 0.05	1.60
122514				21	1.6	0.10	0.27	0.66	0.10	0.49	0.4	373	235	1940	20.6	1.1	28.3	1.7	0.1	0.7	30	0.33	0.44
122515				68	22.8	1.40	1.20	5.94	1.21	1.68	0.2	133	151	1800	15.0	0.3	34.7	2.9	1.0	1.1	60	0.19	3.22
122526				102	7.5	0.59	1.25	2.15	0.43	2.23	< 0.1	665	401	3220	37.3	0.6	46.1	4.8	0.8	1.6	30	0.20	0.76
122527				51	10.0	0.88	0.74	2.44	0.83	1.99	0.2	652	239	3550	25.7	1.1	29.5	8.0	1.3	2.9	20	0.46	2.65
122528				86	9.0	0.20	0.52	1.56	0.32	0.81	0.4	792	559	1980	41.9	1.5	78.0	2.7	0.7	1.0	80	0.74	1.90
122529				88	30.7	1.12	1.02	5.63	1.19	0.99	0.5	275	253	1110	17.9	0.5	59.7	2.6	1.2	0.9	130	0.51	5.23

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122301	13.1	0.79	0.04	0.4	46.5	19.4	3.2	89.5	16.5	10	6.6	1.00	< 0.1	< 1	0.3	< 0.1	773	21.5	41.3	5.1	18.2	3.3	3.0
122302	5.3	0.71	0.08	0.4	33.6	15.2	13.9	55.4	15.9	10	7.9	15.0	< 0.1	< 1	0.5	< 0.1	318	15.8	34.6	4.5	16.2	3.0	2.7
122303	8.5	0.72	0.13	0.3	36.1	20.8	4.1	65.5	16.2	11	6.5	0.84	< 0.1	< 1	0.6	< 0.1	422	18.4	39.3	5.0	17.5	3.1	2.9
122304	11.3	0.73	0.04	0.4	23.5	21.2	1.8	92.7	13.8	13	6.7	3.07	< 0.1	< 1	0.1	< 0.1	897	19.6	36.6	4.5	16.3	2.9	2.7
122305	12.2	0.58	0.18	2.0	9.3	22.2	2.0	41.6	11.8	97	4.1	3.79	< 0.1	< 1	0.6	< 0.1	698	12.5	26.8	3.7	14.7	2.9	2.5
122306	20.3	0.73	0.50	1.1	26.3	26.0	26.0	65.8	15.0	120	6.9	2.68	< 0.1	< 1	0.6	< 0.1	634	15.7	32.9	4.3	16.2	3.0	2.7
122307	15.3	0.48	< 0.02	0.4	29.9	24.5	1.8	99.1	9.0	68	1.5	0.43	< 0.1	< 1	0.1	< 0.1	362	2.2	5.1	0.8	3.3	0.8	1.0
122308	15.2	1.30	0.29	3.6	125	24.7	11.4	70.1	22.3	108	6.9	1.93	0.1	2	2.5	0.1	582	20.9	42.6	5.5	20.9	4.1	4.3
122309	22.4	1.02	0.28	2.6	110	23.7	18.4	81.5	19.9	119	6.7	2.40	< 0.1	< 1	1.6	< 0.1	668	21.8	43.0	5.8	22.0	4.2	3.9
122310	27.4	1.18	0.53	2.3	95.7	18.7	21.2	67.8	20.9	73	6.3	2.62	< 0.1	< 1	1.3	< 0.1	342	22.4	42.7	5.5	20.9	3.9	3.9
122311	22.9	1.28	0.23	2.7	54.6	19.1	18.6	74.6	28.0	85	5.9	1.40	< 0.1	< 1	1.5	< 0.1	486	20.6	40.3	5.4	20.6	4.1	4.3
122312	7.3	0.27	0.16	< 0.1	56.7	15.2	38.7	111	11.9	35	1.4	0.54	< 0.1	< 1	0.2	< 0.1	575	8.0	15.9	2.1	8.2	1.6	2.0
122313	18.0	0.90	0.03	0.4	100	21.6	6.1	16.6	9.1	8	1.1	0.29	< 0.1	< 1	0.3	< 0.1	604	13.2	29.3	4.2	17.0	3.0	2.6
122314	9.6	0.82	0.04	0.2	66.2	21.4	4.0	50.5	11.9	15	3.4	0.81	< 0.1	< 1	0.3	< 0.1	1080	21.9	44.9	5.7	20.6	3.5	3.0
122315	12.4	0.86	0.06	0.3	73.7	24.3	3.6	42.5	11.3	58	0.9	0.05	< 0.1	< 1	< 0.1	< 0.1	1020	10.9	27.3	3.8	15.3	3.0	2.8
122316	17.6	0.85	0.12	0.2	105	21.7	7.8	6.6	12.4	14	0.9	0.30	< 0.1	< 1	0.2	< 0.1	177	13.8	29.4	4.1	16.5	3.1	2.8
122317	16.6	0.68	< 0.02	0.3	105	22.0	3.2	6.2	11.2	18	1.1	0.24	< 0.1	< 1	0.3	< 0.1	184	12.4	26.2	3.8	15.0	2.8	2.5
122318	11.0	0.52	11.3	0.5	35.0	24.0	338	68.3	14.8	83	4.7	5.66	0.4	5	2.2	< 0.1	284	12.8	26.5	3.4	12.7	2.3	2.3
122319	17.8	1.10	0.18	0.8	52.1	18.7	5.1	201	14.4	77	5.5	1.75	< 0.1	2	2.3	< 0.1	721	19.3	38.4	5.2	21.1	4.2	3.9
122320	4.3	0.23	6.84	0.2	24.3	26.0	55.0	2.7	12.8	60	3.4	2.95	0.2	4	0.7	< 0.1	21	1.8	3.0	0.3	1.3	0.3	0.6
122326	26.4	0.81	0.26	0.8	124	26.2	26.5	88.7	18.8	97	4.7	1.25	< 0.1	< 1	0.8	< 0.1	867	22.1	45.9	5.8	21.4	4.0	3.8
122327	14.6	1.41	0.25	3.7	116	22.1	11.3	65.1	33.7	89	6.4	1.81	< 0.1	< 1	2.6	< 0.1	355	22.8	47.9	6.2	24.5	5.4	6.5
122328	32.8	1.19	0.46	3.7	101	25.5	28.6	90.6	32.1	99	6.9	2.13	< 0.1	< 1	1.5	< 0.1	736	23.6	49.6	6.4	24.5	5.3	6.0
122329	25.9	1.24	0.31	1.8	364	24.6	14.6	81.4	23.5	105	7.3	2.10	0.1	1	1.6	< 0.1	544	25.6	51.5	6.5	24.3	4.5	4.5
122330	19.9	0.92	0.13	0.8	114	20.9	7.9	74.2	16.5	75	5.3	1.51	< 0.1	< 1	2.6	< 0.1	791	16.5	31.6	4.2	15.9	3.1	3.2
122331	53.1	0.31	0.91	7.6	108	5.2	154	52.5	6.3	35	4.1	1.31	0.2	1	0.6	< 0.1	36	4.1	12.4	2.0	8.2	1.6	1.4
122332	25.3	0.55	4.09	1.6	9.8	24.8	590	137	14.6	95	5.8	1.69	0.6	< 1	5.4	< 0.1	1040	19.1	39.2	4.9	18.1	3.2	2.9
122333	10.4	0.52	1.48	0.5	45.8	17.2	27.2	99.1	12.7	32	1.0	0.33	< 0.1	< 1	0.2	< 0.1	455	14.3	27.1	3.6	13.1	2.3	2.3
122334	182	0.23	64.3	1.1	63.6	30.3	9170	72.5	11.6	107	6.8	3.81	0.3	1	11.4	1.0	891	5.4	9.7	1.2	4.7	1.1	1.6
122335	13.2	0.49	2.06	1.6	34.0	25.8	168	155	13.0	97	6.3	2.71	< 0.1	< 1	6.2	< 0.1	944	17.6	34.4	4.4	16.4	2.9	2.8
122336	18.2	0.64	0.62	1.5	12.2	28.3	268	143	14.4	104	5.1	2.17	< 0.1	< 1	7.4	< 0.1	692	21.5	41.6	5.5	20.8	3.8	3.5
122337	7.7	0.32	0.67	1.2	55.2	25.7	67.2	85.3	13.1	89	4.5	2.55	< 0.1	< 1	1.2	< 0.1	764	10.1	19.9	2.5	9.5	1.7	2.0
122338	17.4	0.94	0.42	0.6	92.2	29.2	15.2	58.4	11.3	8	2.3	0.55	< 0.1	< 1	0.2	< 0.1	1040	16.3	35.4	5.0	19.3	3.6	3.1
122339	43.7	0.80	1.14	0.6	74.1	25.5	1040	58.8	9.9	57	4.7	2.11	0.4	2	2.1	0.2	369	68.3	119	14.0	47.5	7.5	5.8
122340	127	0.94	1.36	1.8	46.6	26.0	6050	29.8	10.4	67	5.5	3.41	2.3	6	7.5	0.6	67	91.9	156	17.6	59.4	9.2	6.9
122341	44.2	0.76	3.26	1.7	188	28.5	1570	26.6	11.6	78	6.0	4.58	2.0	5	5.8	0.3	131	67.7	115	13.3	44.6	7.2	5.6
122342	3.7	0.65	0.11	0.3	84.6	26.0	24.8	128	14.2	19	13.0	2.83	< 0.1	3	0.3	< 0.1	1200	25.6	51.2	5.8	19.4	3.1	2.8
122343	2.3	0.68	0.09	0.3	68.4	25.6	16.0	128	12.9	14	13.8	3.64	< 0.1	< 1	0.3	< 0.1	1230	25.0	49.3	5.6	19.0	3.1	2.7
122344	9.6	0.19	210	2.6	18.4	21.3	83.0	78.0	8.3	76	8.6	6.72	0.6	13	4.4	0.5	298	3.9	6.5	0.8	2.7	0.5	0.7
122345	9.9	0.65	0.88	0.2	126	31.3	8.4	167	9.9	99	7.9	3.51	< 0.1	1	3.3	< 0.1	1990	18.2	31.2	3.5	12.4	2.1	2.0
122346	4.4	0.19	3.92	0.8	15.5	28.5	26.5	2.6	9.6	67	1.6	1.81	0.2	7	0.8	< 0.1	29	1.8	3.3	0.4	1.5	0.3	0.5
122347	3.5	0.16	0.28	0.5	11.3	23.8	8.6	1.7	6.0	52	1.7	1.46	0.1	6	0.7	< 0.1	26	3.0	5.1	0.6	2.0	0.3	0.4

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122351	14.4	0.78	0.14	0.3	61.5	23.1	4.2	115	17.3	9	2.7	0.78	< 0.1	< 1	< 0.1	< 0.1	725	20.0	37.9	4.6	16.4	3.0	3.1
122352	15.0	0.82	0.07	0.6	47.5	22.5	6.0	97.1	17.8	9	5.1	0.90	< 0.1	< 1	0.5	< 0.1	636	22.3	41.7	5.1	18.0	3.3	3.2
122353	13.1	0.77	0.11	0.3	59.2	21.8	4.0	98.8	17.6	7	3.6	0.62	< 0.1	< 1	0.1	< 0.1	714	18.7	36.9	4.6	16.9	3.1	3.1
122354	121	0.63	1.13	2.2	13.8	21.3	22.3	127	10.0	14	8.5	74.0	< 0.1	1	0.4	0.4	792	18.8	31.7	3.6	12.8	2.2	2.2
122355	92.9	0.50	1.11	1.4	32.2	23.5	13.6	234	7.1	21	11.6	6.09	< 0.1	2	5.3	0.5	1160	58.0	66.2	5.7	16.3	2.0	1.8
122356	31.5	0.60	0.49	0.7	16.3	24.3	7.8	142	10.1	21	12.3	12.6	< 0.1	1	0.8	< 0.1	947	17.6	31.3	3.6	13.0	2.2	2.2
122357	351	0.10	4.12	9.5	13.3	14.1	27.1	176	0.8	6	2.3	560	0.4	1	12.8	1.4	1020	7.2	7.9	0.6	1.7	0.2	0.2
122358	79.4	0.60	0.51	0.8	18.7	25.5	6.0	158	9.7	17	11.6	39.8	< 0.1	1	1.1	< 0.1	1010	21.3	33.6	3.6	12.5	2.1	2.1
122359	55.2	1.39	0.63	12.1	638	21.3	9.3	5.7	39.0	70	4.5	1.76	0.3	< 1	0.7	< 0.1	43	22.8	47.5	6.5	27.7	6.8	9.1
122360	34.8	1.04	0.25	4.0	224	7.8	6.9	18.8	22.6	25	1.6	3.75	< 0.1	< 1	0.9	< 0.1	155	13.4	26.9	4.0	16.4	3.7	4.7
122361	84.5	1.08	0.50	7.6	913	8.1	28.5	6.8	22.2	22	1.6	1.69	0.1	< 1	1.1	0.3	66	28.8	55.6	7.2	28.5	5.9	6.5
122362	25.3	0.86	0.40	3.4	94.6	27.0	8.0	99.2	19.1	111	6.7	1.82	< 0.1	1	0.8	< 0.1	657	20.1	38.5	5.3	20.3	3.8	3.4
122363	9.5	0.90	3.01	7.9	42.9	27.5	80.0	68.7	13.0	84	6.0	3.49	0.2	2	2.7	< 0.1	230	35.5	73.5	9.4	34.2	5.3	4.3
122364	> 500	0.53	79.0	18.0	51.2	18.3	> 10000	4.2	19.4	97	2.0	43.4	0.4	1	122	9.3	73	31.9	52.8	5.9	19.9	3.5	3.8
122365	> 500	< 0.05	1890	15.3	1880	0.4	> 10000	0.8	1.7	29	0.7	1.20	10.3	2	62.3	4.1	5	0.2	0.6	< 0.1	0.5	0.2	0.3
122366	7.4	1.43	4.35	0.6	37.8	33.1	73.4	201	21.8	174	14.7	2.82	< 0.1	< 1	1.6	< 0.1	2370	34.7	64.1	7.9	29.3	5.2	5.3
122367	55.6	1.39	3.62	14.4	406	32.3	22.6	14.0	23.7	59	4.2	1.85	0.3	3	3.8	0.8	219	21.8	44.7	5.8	22.9	4.7	5.2
122368	25.3	0.17	31.8	5.4	215	27.5	1290	8.2	8.3	58	7.0	48.3	0.6	4	17.9	0.9	44	3.7	6.6	0.8	2.9	0.6	0.9
122369	3.7	0.15	2.54	2.4	9.4	21.2	352	22.6	4.3	49	5.0	3.03	2.4	3	4.1	0.1	34	2.5	4.2	0.5	1.9	0.4	0.4
122370	22.7	0.86	0.15	0.5	131	27.2	4.7	44.4	20.6	72	1.5	0.17	< 0.1	< 1	0.1	< 0.1	489	10.0	24.8	3.2	13.4	3.1	3.6
122371	20.6	0.85	0.20	0.4	133	23.7	10.2	3.7	12.1	19	1.1	0.38	< 0.1	< 1	0.3	< 0.1	161	12.2	26.3	3.8	15.0	2.8	2.8
122372	3.5	0.68	10.6	4.5	27.8	26.7	49.5	78.1	18.3	30	2.2	2.54	0.6	< 1	0.9	1.5	417	19.7	38.4	5.1	19.4	3.6	3.5
122373	2.6	0.74	0.51	0.4	33.8	25.8	15.6	130	15.8	10	0.8	1.23	< 0.1	< 1	0.1	< 0.1	1190	27.3	51.7	6.2	20.5	3.4	3.1
122374	23.4	0.98	0.07	0.3	135	27.3	6.0	31.9	12.0	9	1.1	0.37	< 0.1	< 1	< 0.1	< 0.1	549	11.6	25.6	3.7	15.0	3.0	2.9
122375	0.5	< 0.05	< 0.02	0.1	4.8	0.2	2.4	0.3	< 0.1	< 1	< 0.1	3.32	< 0.1	< 1	0.1	< 0.1	5	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
122426	127	0.45	3.97	4.7	193	26.4	4400	3.0	9.1	51	4.4	5.80	5.5	2	8.0	0.6	31	30.8	54.3	6.4	22.4	3.7	3.4
122427	> 500	1.16	47.0	18.0	92.7	27.3	> 10000	16.9	44.7	202	5.5	40.7	2.5	3	128	19.3	30	80.4	136	15.6	55.1	9.7	10.4
122428	488	0.99	64.3	5.6	196	27.1	> 10000	84.6	13.9	94	7.8	5.35	4.7	2	22.8	2.6	409	70.5	122	14.5	50.6	8.2	6.8
122429	40.7	0.44	0.67	0.3	61.7	24.3	1180	248	14.0	74	4.6	1.75	< 0.1	< 1	1.1	< 0.1	1310	19.6	34.0	4.1	14.9	2.7	2.9
122430	> 500	0.72	85.5	5.6	390	19.7	> 10000	42.1	12.7	180	6.4	2.04	0.3	< 1	145	0.6	71	55.2	97.0	11.4	39.5	6.7	5.9
122431	83.8	0.10	13.8	5.3	96.0	33.6	> 10000	2.9	8.0	111	7.9	7.53	0.8	3	22.9	1.1	43	0.9	1.5	0.2	0.7	0.2	0.5
122432	3.2	0.76	0.17	< 0.1	71.8	23.9	57.6	122	14.2	15	12.9	3.44	< 0.1	< 1	0.3	< 0.1	1300	25.4	49.9	5.8	19.7	3.2	3.1
122433	4.7	0.81	0.12	< 0.1	58.8	23.9	29.6	127	15.7	17	8.9	3.04	< 0.1	1	0.2	< 0.1	1200	26.2	52.9	6.1	21.1	3.5	3.5
122434	2.6	0.79	0.11	< 0.1	67.1	24.1	18.7	115	13.5	12	11.4	2.39	< 0.1	< 1	0.3	< 0.1	1270	25.3	48.8	5.7	19.8	3.2	3.2
122435	14.0	1.86	1.76	0.6	46.3	20.5	28.9	183	12.2	89	11.2	7.30	0.4	5	6.4	< 0.1	503	67.9	135	15.9	53.1	7.2	5.7
122436	5.5	1.29	0.23	0.1	35.9	19.2	19.3	202	8.1	88	10.5	11.7	0.5	3	8.8	< 0.1	342	42.7	80.7	9.5	32.4	4.8	3.7
122437	3.8	0.15	1.26	0.5	15.5	28.0	22.8	1.7	9.8	61	0.7	1.07	0.3	9	0.4	< 0.1	23	1.5	2.6	0.3	1.0	0.2	0.4
122438	2.5	0.44	21.0	1.0	37.9	15.7	52.5	1.7	10.5	35	0.6	3.55	1.0	9	0.6	< 0.1	27	6.9	12.6	1.6	6.2	1.3	1.3
122439	5.8	1.03	0.23	< 0.1	24.2	18.8	6.4	121	14.7	12	1.7	0.66	< 0.1	2	0.1	< 0.1	448	30.8	61.0	7.5	25.3	4.2	4.0
122440	24.9	0.97	0.15	< 0.1	169	12.6	10.8	0.4	12.3	67	1.6	0.72	0.2	2	0.5	< 0.1	39	8.0	15.8	2.3	10.1	2.2	2.5
122441	16.0	1.09	0.09	0.6	129	23.4	8.7	20.9	22.9	33	0.5	0.28	0.1	< 1	0.3	< 0.1	336	14.6	32.0	4.7	19.5	4.1	4.5
122442	1.7	0.69	0.91	0.2	41.3	25.6	8.9	154	14.1	13	10.6	9.28	< 0.1	< 1	0.5	< 0.1	1320	25.4	48.5	5.8	20.1	3.3	3.2

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122443	76.9	0.64	0.43	0.3	20.4	24.5	6.1	152	9.9	24	11.2	7.38	< 0.1	4	2.0	< 0.1	919	19.0	33.4	3.9	13.4	2.3	2.2
122444	2.5	0.45	0.09	< 0.1	27.5	24.8	3.7	123	2.7	40	6.0	3.30	< 0.1	< 1	0.3	< 0.1	2110	10.5	14.7	1.4	4.2	0.6	0.6
122445	16.9	0.90	0.29	0.8	62.3	26.4	8.5	139	16.0	16	6.7	22.4	0.1	< 1	0.5	< 0.1	1090	18.9	36.4	4.5	16.8	3.1	3.3
122446	38.6	1.45	0.37	0.6	72.4	23.8	9.7	126	23.0	47	7.5	8.85	< 0.1	2	1.0	< 0.1	876	213	328	29.9	84.8	9.4	8.0
122501	44.0	0.97	0.24	0.8	50.0	25.8	8.4	10.0	42.0	47	82.3	13.6	< 0.1	1	0.5	< 0.1	498	126	214	22.8	74.2	10.9	10.7
122502	47.6	0.87	0.10	0.7	69.8	29.3	4.2	5.9	29.1	34	58.3	3.73	< 0.1	< 1	0.2	< 0.1	47	80.6	141	15.4	50.8	7.6	7.5
122503	38.1	1.21	22.7	0.7	113	24.8	15.0	10.4	38.9	51	29.2	3.23	< 0.1	< 1	0.3	< 0.1	141	127	236	27.2	89.0	13.1	12.0
122504	28.1	1.29	0.51	1.2	198	21.6	3.4	10.6	55.0	31	2.6	0.57	< 0.1	1	0.1	< 0.1	175	82.4	133	14.2	46.0	7.5	9.7
122505	33.5	1.21	0.21	1.1	137	22.5	2.6	6.9	52.8	30	2.2	0.98	< 0.1	< 1	0.1	< 0.1	106	85.3	139	14.6	48.2	7.5	9.5
122506	40.6	1.40	1.05	1.4	245	26.9	6.9	6.4	46.6	48	0.5	1.86	0.1	< 1	0.2	< 0.1	71	171	333	37.9	126	18.5	16.4
122507	35.1	1.66	7.78	1.5	296	25.5	4.1	7.4	51.3	74	1.6	2.07	0.2	2	1.2	< 0.1	90	206	409	46.5	154	22.1	18.6
122508	39.2	2.08	0.42	1.3	9.1	21.9	81.6	6.7	27.4	77	102	5.26	< 0.1	2	0.8	< 0.1	110	156	306	35.3	125	19.3	16.7
122509	23.2	1.96	0.39	1.3	81.4	20.3	42.3	41.2	30.7	7	0.8	0.17	< 0.1	< 1	< 0.1	< 0.1	374	120	219	26.4	92.8	14.5	12.7
122510	37.4	4.33	0.73	1.6	105	22.3	1.5	19.7	48.0	68	1.2	4.62	0.1	< 1	0.1	< 0.1	185	327	610	71.1	253	39.1	31.3
122511	20.9	1.87	0.31	0.4	78.8	20.2	66.9	50.1	26.6	28	3.1	0.37	< 0.1	< 1	0.3	< 0.1	471	96.9	188	22.4	79.8	12.8	10.6
122512	32.7	1.28	0.11	0.8	75.2	25.2	0.4	7.6	28.6	72	9.8	1.48	< 0.1	2	0.1	< 0.1	92	127	214	23.6	77.3	11.0	10.4
122513	20.1	1.08	0.24	0.5	67.2	21.5	0.1	25.6	25.7	41	1.0	0.33	< 0.1	< 1	< 0.1	< 0.1	287	67.3	128	15.7	55.9	9.3	8.8
122514	20.2	0.84	0.95	0.4	61.8	11.8	0.8	2.9	15.8	36	6.5	1.37	< 0.1	< 1	0.1	< 0.1	40	76.1	143	16.9	58.2	8.8	7.6
122515	24.2	1.47	0.57	0.7	86.2	20.2	26.1	40.8	27.8	13	0.2	0.18	< 0.1	< 1	< 0.1	< 0.1	481	103	187	22.1	75.6	11.6	10.5
122526	37.4	1.12	0.51	1.0	113	22.2	9.1	13.5	41.8	21	0.6	0.60	< 0.1	< 1	< 0.1	< 0.1	165	97.0	179	21.0	70.0	10.7	10.9
122527	47.5	1.80	63.8	2.5	156	19.3	2180	28.3	68.9	41	9.0	1.67	0.1	< 1	0.9	< 0.1	1060	165	338	39.3	135	20.9	19.8
122528	52.0	1.43	0.48	0.5	288	23.5	2.5	13.2	23.7	75	0.3	1.86	0.1	1	0.2	< 0.1	341	94.6	174	20.6	72.3	11.2	10.3
122529	31.8	1.49	0.26	0.9	198	20.0	51.4	47.7	22.5	26	1.5	1.15	< 0.1	< 1	0.3	< 0.1	543	57.2	109	13.4	48.9	8.5	8.0

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122301	0.4	2.8	5.1	0.7	0.3	1.9	0.3	0.5	349	0.3	< 0.001	0.48	6.9	10.5	3.6
122302	0.4	2.5	76.5	0.6	0.2	1.8	0.3	0.7	308	0.7	0.004	0.31	20.8	10.2	2.5
122303	0.4	2.6	9.0	0.7	0.3	1.9	0.3	0.6	356	0.3	< 0.001	0.33	6.8	14.7	4.7
122304	0.3	2.2	37.1	0.6	0.2	1.4	0.2	0.4	430	0.5	< 0.001	0.41	4.9	7.8	2.8
122305	0.3	2.0	46.9	0.2	0.2	1.7	0.3	0.2	215	0.5	0.002	0.29	2.0	3.2	2.2
122306	0.4	2.4	67.2	0.9	0.3	1.9	0.3	0.3	358	0.8	< 0.001	0.46	3.1	4.0	2.3
122307	0.2	1.3	29.5	0.9	0.2	1.4	0.2	< 0.1	319	0.1	0.002	0.95	1.3	2.4	1.3
122308	0.6	3.6	225	0.8	0.3	2.6	0.4	0.4	216	2.0	0.001	0.77	14.4	6.3	2.1
122309	0.5	3.2	45.4	0.8	0.3	2.2	0.3	0.4	175	0.9	0.002	0.83	3.9	5.6	2.7
122310	0.5	3.4	143	0.5	0.3	2.1	0.3	0.2	294	2.3	< 0.001	0.62	11.2	5.5	2.8
122311	0.6	4.2	59.0	0.6	0.4	2.7	0.4	0.3	695	1.0	< 0.001	0.62	6.4	4.5	2.3
122312	0.3	1.8	14.7	0.3	0.2	1.4	0.2	< 0.1	202	0.5	< 0.001	0.98	3.5	4.7	1.9
122313	0.3	1.7	132	0.5	0.1	0.8	< 0.1	< 0.1	741	< 0.1	< 0.001	0.13	10.8	2.0	0.7
122314	0.4	2.3	29.3	0.7	0.2	1.1	0.2	0.2	511	< 0.1	< 0.001	0.28	8.4	5.6	1.0
122315	0.3	2.0	18.6	0.5	0.1	0.9	0.1	< 0.1	512	< 0.1	< 0.001	0.29	7.1	2.7	1.3
122316	0.4	2.2	22.4	0.6	0.2	1.2	0.2	< 0.1	656	0.3	< 0.001	0.06	8.6	2.6	0.9
122317	0.3	2.1	17.7	0.6	0.2	1.2	0.2	< 0.1	508	0.1	< 0.001	0.06	7.9	2.2	0.8
122318	0.3	2.2	371	0.7	0.3	2.1	0.3	0.2	129	4.6	< 0.001	0.78	13.3	5.9	2.9
122319	0.5	3.0	< 0.2	1.3	0.2	1.5	0.2	0.3	206	0.2	< 0.001	2.66	3.5	4.9	2.1
122320	0.1	1.3	51.1	0.7	0.3	2.4	0.4	0.2	139	6.3	0.004	0.08	6.6	4.3	2.6
122326	0.5	3.4	149	0.9	0.3	2.3	0.3	0.3	181	0.6	< 0.001	0.75	3.2	7.3	2.3
122327	0.9	5.8	108	0.3	0.5	2.8	0.4	0.4	208	0.9	< 0.001	0.81	9.9	6.2	2.1
122328	0.8	5.3	97.1	0.3	0.4	2.6	0.4	0.4	199	1.0	< 0.001	0.85	8.5	6.6	2.4
122329	0.6	3.9	131	0.4	0.3	2.5	0.4	0.4	262	1.0	0.004	0.90	7.3	7.3	2.5
122330	0.4	2.8	29.6	0.7	0.2	1.7	0.2	0.3	410	0.6	< 0.001	0.68	5.1	5.6	2.1
122331	0.2	1.1	1470	0.3	< 0.1	0.6	0.1	0.2	27.6	> 200	< 0.001	0.43	4.8	0.4	0.6
122332	0.4	2.5	926	0.6	0.2	1.9	0.3	< 0.1	150	> 200	< 0.001	1.22	2.6	6.3	2.4
122333	0.3	2.0	26.0	0.3	0.2	1.3	0.2	< 0.1	207	0.6	< 0.001	0.87	3.3	4.0	1.7
122334	0.2	2.0	314	0.2	0.2	1.7	0.3	0.4	72.0	> 200	0.009	0.54	4.3	5.6	5.4
122335	0.3	2.1	302	0.6	0.3	1.6	0.3	0.3	166	17.1	< 0.001	1.40	6.6	6.7	3.4
122336	0.4	2.5	93.8	0.5	0.2	1.7	0.3	0.2	172	6.6	0.001	1.30	3.3	7.0	2.9
122337	0.3	1.9	77.6	0.9	0.2	1.8	0.3	0.3	176	6.5	< 0.001	0.75	8.2	6.4	3.1
122338	0.4	2.2	69.2	0.5	0.2	1.0	0.1	0.1	675	1.8	< 0.001	0.42	11.2	4.6	1.3
122339	0.6	2.5	1520	0.7	0.1	1.1	0.2	0.2	77.7	12.4	< 0.001	0.55	3.4	3.8	3.0
122340	0.6	2.6	2600	0.3	0.2	1.3	0.2	0.3	102	19.2	< 0.001	0.31	6.3	3.4	3.2
122341	0.6	2.6	5720	0.5	0.2	1.3	0.2	0.3	94.3	36.9	< 0.001	0.39	46.4	3.7	5.5
122342	0.4	2.4	20.5	0.6	0.2	1.4	0.2	0.8	171	1.9	< 0.001	0.65	14.3	10.3	2.3
122343	0.4	2.2	27.9	0.6	0.2	1.2	0.2	0.8	171	1.2	< 0.001	0.69	14.3	9.4	2.1
122344	0.1	1.0	863	0.6	0.2	1.5	0.3	0.6	75.5	9.8	< 0.001	0.84	43.5	6.9	3.6
122345	0.3	1.7	< 0.2	0.6	0.2	1.1	0.1	0.5	121	2.1	< 0.001	1.55	7.8	9.8	4.0
122346	< 0.1	0.9	42.8	0.6	0.2	2.1	0.4	< 0.1	144	2.3	< 0.001	0.06	17.9	3.9	2.4
122347	< 0.1	0.6	14.1	0.6	0.2	1.4	0.3	0.1	156	2.0	< 0.001	< 0.05	2.9	3.0	1.9

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122351	0.4	2.8	117	0.4	0.3	1.9	0.3	0.3	354	0.9	< 0.001	0.55	8.3	11.1	5.1
122352	0.4	2.8	175	0.6	0.3	1.9	0.3	0.4	325	0.3	< 0.001	0.49	9.3	12.9	5.5
122353	0.4	2.7	78.8	0.5	0.2	1.6	0.2	0.2	501	0.3	< 0.001	0.46	7.5	9.5	2.2
122354	0.3	1.8	1030	0.2	0.1	0.9	0.1	0.5	323	> 200	0.010	0.50	5.2	7.3	3.3
122355	0.2	1.1	786	0.2	< 0.1	0.6	< 0.1	0.7	120	67.7	< 0.001	1.00	6.0	6.9	16.0
122356	0.3	1.7	237	0.4	0.1	1.0	0.1	0.8	316	51.5	< 0.001	0.62	5.5	8.2	4.5
122357	< 0.1	0.1	9720	0.3	< 0.1	< 0.1	< 0.1	< 0.1	67.5	144	0.003	0.73	5.0	1.1	2.4
122358	0.3	1.6	366	0.2	0.1	0.9	0.1	0.7	293	> 200	0.002	0.74	9.7	7.2	3.7
122359	1.2	7.3	501	0.3	0.4	2.2	0.3	0.3	105	6.4	< 0.001	0.13	13.2	4.0	1.6
122360	0.7	4.1	127	0.3	0.2	1.2	0.2	< 0.1	107	1.8	< 0.001	0.21	17.4	1.6	1.5
122361	0.8	4.7	388	0.3	0.2	1.2	0.2	< 0.1	116	1.7	< 0.001	0.11	30.2	1.7	0.7
122362	0.5	3.1	97.4	0.3	0.3	2.3	0.3	0.4	93.6	2.1	0.002	0.83	13.8	5.8	4.1
122363	0.5	2.4	146	0.6	0.2	1.4	0.2	0.4	126	12.8	< 0.001	0.69	25.1	5.0	2.2
122364	0.6	3.6	1500	0.4	0.3	2.2	0.3	0.2	76.9	8.6	< 0.001	0.35	24.0	2.0	101
122365	< 0.1	0.4	> 10000	2.1	< 0.1	< 0.1	< 0.1	< 0.1	4.1	> 200	0.008	0.23	30.6	< 0.1	0.3
122366	0.7	4.0	170	0.5	0.3	2.1	0.3	0.8	241	13.9	< 0.001	1.55	3.6	5.5	2.6
122367	0.7	4.3	483	0.4	0.4	2.6	0.4	0.3	150	7.1	< 0.001	0.27	113	4.2	1.6
122368	0.1	1.2	459	0.3	0.2	1.7	0.3	0.3	111	12.1	< 0.001	0.19	30.7	3.2	9.1
122369	< 0.1	0.6	682	0.6	0.1	1.1	0.2	0.2	99.3	9.8	< 0.001	0.31	7.2	3.8	1.7
122370	0.6	3.8	28.8	0.9	0.4	2.7	0.4	< 0.1	340	0.8	< 0.001	0.35	9.9	2.5	1.0
122371	0.4	2.4	20.2	0.9	0.2	1.3	0.2	< 0.1	679	0.6	< 0.001	0.06	9.7	2.7	1.0
122372	0.4	2.8	1420	1.0	0.3	1.6	0.3	0.2	650	1.7	< 0.001	0.63	8.4	4.8	1.9
122373	0.4	2.8	15.4	0.6	0.2	1.4	0.2	0.6	172	0.5	< 0.001	0.72	10.6	9.5	3.0
122374	0.4	2.3	49.9	0.6	0.2	1.2	0.2	< 0.1	551	0.5	< 0.001	0.30	9.9	2.8	1.0
122375	< 0.1	< 0.1	3.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	2.3	0.3	< 0.001	< 0.05	< 0.5	< 0.1	< 0.1
122426	0.4	2.0	8120	0.2	0.1	1.1	0.2	0.3	51.8	> 200	0.014	0.11	12.6	3.1	2.7
122427	1.4	9.0	5290	0.5	0.7	5.2	0.6	0.3	108	> 200	0.028	0.31	30.9	3.4	106
122428	0.7	3.2	> 10000	0.4	0.2	1.4	0.2	0.5	53.6	177	< 0.001	0.84	28.6	5.2	7.6
122429	0.4	2.3	7.9	0.9	0.2	1.7	0.3	0.3	242	11.5	< 0.001	2.62	3.6	6.4	3.1
122430	0.6	3.3	246	0.4	0.2	1.5	0.2	0.3	23.7	77.5	< 0.001	0.60	43.6	4.6	5.0
122431	0.1	1.0	1050	0.2	0.2	2.1	0.4	0.6	169	47.4	< 0.001	0.19	37.7	4.6	8.2
122432	0.4	2.8	57.4	0.4	0.2	1.5	0.2	0.8	163	4.2	< 0.001	0.67	13.8	10.2	2.7
122433	0.5	3.1	23.3	0.6	0.3	1.8	0.2	0.6	177	3.4	< 0.001	0.85	12.7	11.7	3.7
122434	0.4	2.7	3.6	0.7	0.2	1.3	0.2	0.7	175	2.7	< 0.001	0.69	13.1	10.2	2.0
122435	0.6	2.9	2390	0.6	0.2	1.6	0.3	0.8	10.1	11.5	< 0.001	2.14	7.2	12.0	5.7
122436	0.4	1.9	75.1	0.6	0.2	1.1	0.2	0.8	11.3	14.0	< 0.001	2.06	2.1	11.3	6.5
122437	< 0.1	1.0	13.9	0.5	0.3	2.5	0.4	< 0.1	151	2.1	< 0.001	0.09	6.2	5.1	2.4
122438	0.2	1.5	314	0.4	0.3	2.1	0.4	< 0.1	70.5	> 200	< 0.001	< 0.05	13.2	5.2	4.9
122439	0.5	3.1	367	0.4	0.3	1.9	0.3	< 0.1	215	2.2	< 0.001	0.56	5.4	5.4	5.6
122440	0.3	2.3	30.2	0.8	0.2	1.2	0.2	< 0.1	78.8	2.6	< 0.001	< 0.05	2.8	1.7	0.8
122441	0.6	4.3	20.3	0.5	0.4	2.7	0.4	< 0.1	734	1.0	< 0.001	0.22	6.7	2.4	0.9
122442	0.4	2.7	134	0.7	0.2	1.3	0.2	0.6	146	1.4	< 0.001	1.08	5.8	9.3	2.7

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122443	0.3	1.8	16.8	0.6	0.2	1.0	0.2	0.6	241	19.7	< 0.001	0.73	4.7	7.8	3.0
122444	< 0.1	0.4	292	0.2	< 0.1	0.4	< 0.1	0.7	222	2.1	< 0.001	0.63	8.6	13.0	3.1
122445	0.4	2.8	585	0.7	0.2	1.6	0.2	0.5	420	1.4	< 0.001	0.70	16.0	8.3	3.3
122446	0.8	4.7	572	0.9	0.4	2.2	0.3	0.5	353	16.2	< 0.001	0.60	2.8	11.0	4.8
122501	1.3	7.8	55.1	0.8	0.7	4.4	0.7	4.6	59.9	125	< 0.001	0.07	31.6	117	27.5
122502	0.9	5.5	< 0.2	0.7	0.5	3.3	0.5	3.7	33.1	118	< 0.001	< 0.05	4.2	56.5	14.8
122503	1.3	7.8	144	0.7	0.6	4.2	0.6	1.2	84.3	12.3	< 0.001	0.07	6.6	96.2	30.9
122504	1.5	9.9	19.6	0.5	0.9	6.2	0.9	< 0.1	108	1.7	< 0.001	0.08	9.4	12.0	3.1
122505	1.4	9.6	95.8	0.5	0.9	6.3	0.9	< 0.1	76.3	0.7	< 0.001	< 0.05	9.9	5.4	2.8
122506	1.8	9.9	78.8	0.7	0.7	4.6	0.7	< 0.1	39.5	0.8	< 0.001	0.05	10.3	17.1	18.8
122507	2.0	11.0	87.4	0.8	0.8	4.8	0.7	< 0.1	40.5	0.9	< 0.001	< 0.05	7.2	16.1	5.2
122508	1.7	7.9	< 0.2	1.3	0.4	2.7	0.4	6.9	51.4	> 200	< 0.001	0.09	6.2	15.9	12.2
122509	1.3	7.0	42.6	0.5	0.4	2.8	0.4	< 0.1	188	1.2	< 0.001	0.33	6.9	7.1	13.3
122510	3.0	13.2	96.7	1.0	0.6	3.7	0.6	< 0.1	98.7	1.3	< 0.001	0.17	8.9	13.5	11.2
122511	1.1	6.0	49.7	0.6	0.4	2.5	0.4	0.2	197	4.1	< 0.001	0.42	7.9	8.8	4.5
122512	1.2	6.4	2.2	0.6	0.5	3.1	0.5	0.5	47.3	1.1	< 0.001	0.07	102	13.3	8.2
122513	1.0	5.7	17.6	0.4	0.4	2.6	0.4	< 0.1	129	0.5	< 0.001	0.17	10.9	16.9	4.5
122514	0.8	3.9	19.8	0.4	0.2	1.5	0.2	0.4	20.0	1.4	< 0.001	< 0.05	3.2	4.0	2.4
122515	1.1	6.1	40.8	0.5	0.4	2.6	0.4	< 0.1	227	0.4	< 0.001	0.29	7.6	25.4	4.4
122526	1.3	8.0	35.9	0.5	0.7	4.5	0.7	< 0.1	91.2	0.7	< 0.001	0.09	5.8	18.7	5.2
122527	2.5	14.6	71.7	0.8	1.1	6.9	1.0	0.3	101	15.0	< 0.001	0.20	17.7	24.4	5.6
122528	1.1	5.9	63.1	0.6	0.4	2.2	0.3	< 0.1	46.7	0.6	< 0.001	0.12	23.9	17.8	4.6
122529	0.9	5.1	69.3	0.5	0.3	2.2	0.3	< 0.1	157	1.3	< 0.001	0.40	18.6	7.2	9.0

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas				12	7.7	0.04	0.23	2.31	0.05	0.81	2.6	77	17.5	807	22.6	0.4	36.3		0.8		230	28.6	2.91
GXR-1 Cert				15.0	8.20	0.0520	0.217	3.52	0.050	0.960	3.30	80.0	12.0	852	23.6	0.960	41.0		1.22		3900	31.0	3.00
GXR-4 Meas				13	11.6	0.50	1.89	6.56	3.95	0.95	< 0.1	84	44.1	133	3.02	1.2	38.6		2.0		50	3.01	2.62
GXR-4 Cert				4.50	11.1	0.564	1.66	7.20	4.01	1.01	0.860	87.0	64.0	155	3.09	6.30	42.0		1.90		110	4.00	2.80
SDC-1 Meas				12	33.1	1.35	0.95	6.92	2.57	0.96		27	47.9	700	4.51	0.6	36.6	3.3	2.8	1.2	60		3.95
SDC-1 Cert				13.00	34.0	1.52	1.02	8.34	2.72	1.00		102.00	64.00	880.00	4.82	8.30	38.0	4.10	3.00	1.50	200.00		4.00
GXR-6 Meas				13	42.4	0.10	0.67	> 10.0	1.97	0.19	< 0.1	107	65.3	1080	5.96	1.5	32.2		1.2		30	0.29	4.11
GXR-6 Cert				9.80	32.0	0.104	0.609	17.7	1.87	0.180	1.00	186	96.0	1010	5.58	4.30	27.0		1.40		68.0	1.30	4.20
MP-1b Meas		3.12																					
MP-1b Cert		3.07																					
HiSilP1 Meas			12400																				
HiSilP1 Cert			12050.00																				
HiSilP1 Meas			12000																				
HiSilP1 Cert			12050.00																				
CZN-4 Meas	0.010	0.412																					
CZN-4 Cert	0.009	0.403																					
PTC-1b Meas	0.320	7.71																					
PTC-1b Cert	0.325	7.97																					
SdAR-M2 (U.S.G.S.) Meas					18.8						5.0	26	40.3			3.0	47.7	2.9	7.0	1.0	50		1.77
SdAR-M2 (U.S.G.S.) Cert					17.9						5.1	25.2	49.6			7.29	48.8	3.58	6.6	1.21	1440.00		1.82
OxL118 Meas			5970																				
OxL118 Cert			5828.000																				
OxL118 Meas			5880																				
OxL118 Cert			5828.000																				
CCU-1e Meas	0.031																						
CCU-1e Cert	0.0301																						
122306 Orig			< 2																				
122306 Dup			< 2																				
122317 Orig			< 2																				
122317 Dup			< 2																				
122332 Orig				9	31.1	1.71	1.93	8.61	3.37	0.57	< 0.1	223	103	168	6.43	2.0	74.0	1.6	1.4	0.5	< 10	2.45	8.66
122332 Dup				43	33.2	1.76	1.95	8.22	3.55	0.60	< 0.1	217	107	170	6.76	1.9	77.1	1.6	1.5	0.5	< 10	2.56	8.60
122334 Orig			459																				
122334 Dup			468																				
122346 Orig			6																				
122346 Dup			5																				

Analyte Symbol	Co	Cu	Au	B	Li	Na	Mg	Al	K	Ca	Cd	V	Cr	Mn	Fe	Hf	Ni	Er	Be	Ho	Hg	Ag	Cs
Unit Symbol	%	%	ppb	ppm	ppm	%	%	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm
Lower Limit	0.003	0.001	2	1	0.5	0.01	0.01	0.01	0.01	0.01	0.1	1	0.5	1	0.01	0.1	0.5	0.1	0.1	0.1	10	0.05	0.05
Method Code	4Acid ICPOES	4Acid ICPOES	FA-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122358 Orig			14	10	18.5	2.82	1.06	8.52	4.21	1.93	< 0.1	95	51.8	256	4.72	0.5	17.3	0.9	1.6	0.3	< 10	0.88	4.90
122358 Split PREP DUP			12	9	16.5	2.81	1.08	8.64	4.39	1.99	< 0.1	93	51.9	269	4.83	0.5	18.4	1.0	1.6	0.3	< 10	0.80	4.94
122359 Orig			12	16	75.4	0.36	3.37	6.56	0.17	3.56	1.1	201	89.8	3240	12.2	1.3	182	3.1	0.8	1.3	20	0.81	0.56
122359 Dup			13	17	75.0	0.37	3.44	6.65	0.17	3.76	1.1	201	82.4	3250	12.6	1.2	184	3.2	0.4	1.3	< 10	0.46	0.56
122371 Orig			2																				
122371 Dup			< 2																				
122373 Dup				23	23.9	> 3.00	0.36	> 10.0	4.36	0.97	< 0.1	15	21.5	640	2.13	0.3	2.6	1.6	2.8	0.5	30	0.06	4.22
122430 Orig	0.049																						
122430 Dup	0.049																						
122433 Orig			2																				
122433 Dup			< 2																				
122444 Orig			6																				
122444 Dup			6																				
122502 Orig				15	5.4	0.20	0.67	0.75	0.19	1.67	< 0.1	> 1000	734	2650	> 50.0	1.1	61.3	3.2	0.5	1.1	20	1.37	0.41
122502 Dup				14	5.0	0.25	0.74	0.80	0.22	1.82	< 0.1	> 1000	690	2710	> 50.0	1.2	61.9	3.3	0.3	1.2	10	1.19	0.43
122511 Orig				13	33.7	1.24	0.97	7.51	1.33	1.24	0.2	113	100	1170	10.5	0.7	29.3	2.9	1.1	1.1	60	< 0.05	4.39
122511 Split PREP DUP				13	34.2	1.24	1.00	7.33	1.36	1.32	0.2	121	105	1390	12.1	0.6	31.7	2.9	1.2	1.1	20	0.52	4.28
122515 Orig				15	20.5	1.36	1.18	5.67	1.13	1.69	0.2	186	166	1810	16.0	0.5	35.4	3.1	0.8	1.2	60	0.19	2.98
122515 Dup				121	25.1	1.43	1.23	6.21	1.29	1.68	0.1	81	137	1780	13.9	0.1	33.9	2.8	1.2	1.0	60	0.19	3.45
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank			< 2																				
Method Blank				< 1	< 0.5	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 1	< 0.5	< 1	< 0.01	< 0.1	< 0.5	< 0.1	0.2	< 0.1	< 10	< 0.05	< 0.05
Method Blank	< 0.003	< 0.001																					

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	7.1	0.54	1420	14.5	776	11.9	409	2.4	25.7	24	1.0	17.1	0.8	36	45.8	9.1	638	7.0	13.8		7.9	2.4	3.8
GXR-1 Cert	8.20	0.690	1380	16.6	760	13.8	427	14.0	32.0	38.0	0.800	18.0	0.770	54.0	122	13.0	750	7.50	17.0		18.0	2.70	4.20
GXR-4 Meas	14.0	1.25	17.1	5.9	64.7	20.5	95.4	137	12.2	56	8.6	309	0.2	6	3.3	0.7	1280	57.3	104		38.2	5.2	4.6
GXR-4 Cert	14.6	1.63	19.0	5.60	73.0	20.0	98.0	160	14.0	186	10.0	310	0.270	5.60	4.80	0.970	1640	64.5	102		45.0	6.60	5.25
SDC-1 Meas	17.2	1.33			109	21.5	0.5	114		31	0.3			< 1	< 0.1		559	38.1	80.5		36.8	6.3	6.5
SDC-1 Cert	18.0	1.70			103.00	21.00	0.220	127.00		290.00	21.00			3.00	0.54		630	42.00	93.00		40.00	8.20	7.00
GXR-6 Meas	13.8	0.55	0.19	1.4	136	35.0	257	73.1	11.5	70	0.8	0.44	< 0.1	< 1	0.4	< 0.1	1220	11.8	31.6		11.6	2.1	2.4
GXR-6 Cert	13.8	0.760	0.290	0.940	118	35.0	330	90.0	14.0	110	7.50	2.40	0.260	1.70	3.60	0.0180	1300	13.9	36.0		13.0	2.67	2.97
MP-1b Meas																							
MP-1b Cert																							
HiSilP1 Meas																							
HiSilP1 Cert																							
HiSilP1 Meas																							
HiSilP1 Cert																							
CZN-4 Meas																							
CZN-4 Cert																							
PTC-1b Meas																							
PTC-1b Cert																							
SdAR-M2 (U.S.G.S.) Meas	13.0	1.20	0.98		803	19.0		139	23.5	127	14.6	11.5					881	43.5	92.0	10.4	35.5	5.6	5.4
SdAR-M2 (U.S.G.S.) Cert	12.4	1.44	1.05		760	17.6		149	32.7	259	26.2	13.3					990	46.6	98.8	11.0	39.4	7.18	6.28
OxL118 Meas																							
OxL118 Cert																							
OxL118 Meas																							
OxL118 Cert																							
CCU-1e Meas																							
CCU-1e Cert																							
122306 Orig																							
122306 Dup																							
122317 Orig																							
122317 Dup																							
122332 Orig	25.6	0.55	4.07	1.8	8.5	25.3	610	136	14.7	101	6.8	1.79	0.6	< 1	6.6	0.3	1050	19.0	39.2	4.9	18.0	3.2	3.0
122332 Dup	25.0	0.56	4.11	1.4	11.2	24.4	570	138	14.6	90	4.8	1.58	0.6	< 1	4.2	< 0.1	1030	19.1	39.2	4.9	18.2	3.2	2.9
122334 Orig																							
122334 Dup																							
122346 Orig																							
122346 Dup																							
122358 Orig	79.4	0.60	0.51	0.8	18.7	25.5	6.0	158	9.7	17	11.6	39.8	< 0.1	1	1.1	< 0.1	1010	21.3	33.6	3.6	12.5	2.1	2.1
122358 Split PREP DUP	90.5	0.60	0.52	0.8	20.8	25.4	5.8	162	10.1	17	10.2	19.7	< 0.1	1	1.1	< 0.1	957	21.8	34.2	3.7	12.6	2.2	2.1
122359 Orig	54.5	1.38	0.65	12.5	639	21.0	9.9	5.9	37.8	71	4.6	1.77	0.3	1	0.7	< 0.1	44	23.1	48.0	6.5	27.8	6.8	9.1
122359 Dup	56.0	1.39	0.60	11.7	637	21.5	8.6	5.6	40.2	69	4.4	1.75	0.3	< 1	0.7	< 0.1	41	22.5	47.0	6.4	27.5	6.8	9.1

Analyte Symbol	Co	Eu	Bi	Se	Zn	Ga	As	Rb	Y	Zr	Nb	Mo	In	Sn	Sb	Te	Ba	La	Ce	Pr	Nd	Sm	Gd
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.05	0.02	0.1	0.2	0.1	0.1	0.2	0.1	1	0.1	0.05	0.1	1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122371 Orig																							
122371 Dup																							
122373 Dup	2.6	0.74	0.51	0.4	33.8	25.8	15.6	130	15.8	10	0.8	1.23	< 0.1	< 1	0.1	< 0.1	1190	27.3	51.7	6.2	20.5	3.4	3.1
122430 Orig																							
122430 Dup																							
122433 Orig																							
122433 Dup																							
122444 Orig																							
122444 Dup																							
122502 Orig	47.0	0.89	0.11	0.8	68.8	29.5	4.2	5.6	29.1	32	59.2	3.82	< 0.1	1	0.2	< 0.1	44	76.9	137	15.1	50.3	7.6	7.4
122502 Dup	48.2	0.84	0.10	0.7	70.8	29.2	4.1	6.2	29.2	36	57.4	3.65	< 0.1	< 1	0.2	< 0.1	50	84.4	146	15.6	51.3	7.5	7.6
122511 Orig	20.9	1.87	0.31	0.4	78.8	20.2	66.9	50.1	26.6	28	3.1	0.37	< 0.1	< 1	0.3	< 0.1	471	96.9	188	22.4	79.8	12.8	10.6
122511 Split PREP DUP	22.9	1.81	0.40	0.8	107	20.7	86.3	48.6	27.7	25	3.8	0.54	0.1	< 1	0.4	< 0.1	459	95.5	186	23.5	85.6	14.2	12.2
122515 Orig	22.4	1.41	0.54	0.8	84.0	20.6	3.2	37.8	28.7	19	0.3	0.24	< 0.1	< 1	< 0.1	< 0.1	455	111	197	23.0	77.5	11.7	10.7
122515 Dup	26.1	1.53	0.59	0.7	88.4	19.7	49.0	43.9	26.9	6	0.1	0.12	< 0.1	< 1	< 0.1	< 0.1	508	95.3	177	21.2	73.7	11.5	10.2
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank																							
Method Blank	< 0.1	< 0.05	< 0.02	< 0.1	< 0.2	< 0.1	< 0.1	< 0.2	< 0.1	< 1	< 0.1	< 0.05	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Method Blank																							

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
GXR-1 Meas	0.6	4.3	1090		0.3	2.0	0.3	< 0.1	279	139		0.30	755	2.6	31.6
GXR-1 Cert	0.830	4.30	1110		0.430	1.90	0.280	0.175	275	164		0.390	730	2.44	34.9
GXR-4 Meas	0.5	2.6	6370		0.2	0.9	0.1	0.5	220	29.8		2.86	48.0	21.9	5.4
GXR-4 Cert	0.360	2.60	6520		0.210	1.60	0.170	0.790	221	30.8		3.20	52.0	22.5	6.20
SDC-1 Meas	0.9	5.6	28.3		0.5	2.9		< 0.1	171	0.3		0.50	23.0	10.6	2.5
SDC-1 Cert	1.20	6.70	30.000		0.65	4.00		1.20	180.00	0.80		0.70	25.00	12.00	3.10
GXR-6 Meas	0.3	2.3	77.5			1.6	0.3	< 0.1	39.9	0.5		1.83	98.7	5.2	1.4
GXR-6 Cert	0.415	2.80	66.0			2.40	0.330	0.485	35.0	1.90		2.20	101	5.30	1.54
MP-1b Meas															
MP-1b Cert															
HiSilP1 Meas															
HiSilP1 Cert															
HiSilP1 Meas															
HiSilP1 Cert															
CZN-4 Meas															
CZN-4 Cert															
PTC-1b Meas															
PTC-1b Cert															
SdAR-M2 (U.S.G.S.) Meas	0.7	4.8	233		0.4	2.7	0.4	0.7	142	1.9			813	13.8	2.4
SdAR-M2 (U.S.G.S.) Cert	0.97	5.88	236.00 00		0.54	3.63	0.54	1.8	144	2.8			808	14.2	2.53
OxL118 Meas															
OxL118 Cert															
OxL118 Meas															
OxL118 Cert															
CCU-1e Meas															
CCU-1e Cert															
122306 Orig															
122306 Dup															
122317 Orig															
122317 Dup															
122332 Orig	0.4	2.6	870	0.7	0.2	1.8	0.3	0.3	150	> 200	< 0.001	1.20	2.4	6.2	2.4
122332 Dup	0.4	2.4	983	0.5	0.3	1.9	0.3	< 0.1	150	> 200	0.001	1.24	2.7	6.3	2.4
122334 Orig															
122334 Dup															
122346 Orig															
122346 Dup															
122358 Orig	0.3	1.6	366	0.2	0.1	0.9	0.1	0.7	293	> 200	0.002	0.74	9.7	7.2	3.7
122358 Split PREP DUP	0.3	1.7	396	0.2	0.1	1.0	0.1	0.5	291	> 200	0.002	0.73	9.1	7.6	4.1
122359 Orig	1.2	7.3	497	0.3	0.4	2.2	0.3	0.3	104	6.9	< 0.001	0.14	13.0	4.0	1.6
122359 Dup	1.2	7.3	504	0.3	0.4	2.3	0.3	0.2	106	5.9	< 0.001	0.12	13.5	4.0	1.7

Analyte Symbol	Tb	Dy	Cu	Ge	Tm	Yb	Lu	Ta	Sr	W	Re	Tl	Pb	Th	U
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.001	0.05	0.5	0.1	0.1
Method Code	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS
122371 Orig															
122371 Dup															
122373 Dup	0.4	2.8	15.4	0.6	0.2	1.4	0.2	0.6	172	0.5	< 0.001	0.72	10.6	9.5	3.0
122430 Orig															
122430 Dup															
122433 Orig															
122433 Dup															
122444 Orig															
122444 Dup															
122502 Orig	0.9	5.4	0.8	0.8	0.5	3.3	0.5	3.9	29.6	144	< 0.001	< 0.05	4.1	43.9	12.1
122502 Dup	0.9	5.7	< 0.2	0.7	0.5	3.3	0.5	3.5	36.6	92.4	< 0.001	< 0.05	4.2	69.2	17.5
122511 Orig	1.1	6.0	49.7	0.6	0.4	2.5	0.4	0.2	197	4.1	< 0.001	0.42	7.9	8.8	4.5
122511 Split PREP DUP	1.3	6.7	52.4	0.6	0.4	2.6	0.4	0.3	192	14.4	< 0.001	0.43	9.2	11.2	40.9
122515 Orig	1.1	6.1	34.2	0.5	0.4	2.7	0.4	< 0.1	217	0.5	< 0.001	0.27	6.8	11.9	3.3
122515 Dup	1.1	6.0	47.4	0.4	0.4	2.5	0.4	< 0.1	237	0.3	< 0.001	0.31	8.3	38.8	5.5
Method Blank															
Method Blank															
Method Blank															
Method Blank															
Method Blank															
Method Blank	< 0.1	< 0.1	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	0.003	< 0.05	< 0.5	< 0.1	< 0.1
Method Blank															

Quality Analysis ... *Innovative Technologies*

Date Submitted: 07-Jun-17
Invoice No.: A17-05700 (i)
Invoice Date: 12-Jul-17
Your Reference:

Dahrouge Geological Consulting Ltd.
10509-81 Ave.
Suite 18
Edmonton AB T6E 1X7
Canada

ATTN: Jody Dahrouge

CERTIFICATE OF ANALYSIS

107 Rock samples were submitted for analysis.

The following analytical package(s) were requested:

Code 1A2-ICP Kamloops Au-Fire Assay ICPOES 30g

Code Sieve Report-Kamloops Internal Sieve Report Internal

Code UT-4-Kamloops Total Digestion ICP/MS

REPORT **A17-05700 (i)**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

Note: Au values might be off because of the low sample weight for 122504, 122509, 122513, 122527, 122528, 122529.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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Analyte Symbol	Au
Unit Symbol	ppb
Lower Limit	2
Method Code	FA-ICP
122501	254
122502	< 2
122503	< 2
122504	17
122505	8
122506	23
122507	1440
122508	136
122509	< 2
122510	3
122511	4
122512	577
122513	65
122514	5
122515	28
122526	20
122527	185
122528	44
122529	29

Analyte Symbol	Au
Unit Symbol	ppb
Lower Limit	2
Method Code	FA-ICP
OxK110 Meas	3600
OxK110 Cert	3602.000
122502 Orig	3
122502 Dup	< 2
Method Blank	< 2

APPENDIX 4: 2017 SAMPLE DESCRIPTIONS AND ASSAY RESULTS FROM THE RD COBALT PROPERTY

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122301	590340	6117319	9N	Outcrop	4.0	**Granodiorite,** granodiorite/monzonite	small knoll (~4 m high) in middle of valley, upridge from Bluebird showing	-1	-1	1		
122302	590331	6117289	9N	Scree	N/A	**Granodiorite,** granodiorite/monzonite, altered with qtz vn, magnetic, rusty (minor)	west of 122302	-1	-1	1		
122303	590254	6117314	9N	Outcrop	3.0	massive, gy wthd, grains up to 3 mm across, qtz (70%, w, translucent), fsp (12-15%, pk), bt (5%, opague, v. blk), mag (10%, gy-blk, v.f.g.)	chips over 3 m horiz, west side of valley at base of cliffs above scree, ~40-50 m above 122301	-1	-1	1	Joint	275/87, 107/87
122304	592029	6115357	9N	Boulder	N/A	**Granodiorite,** granodiorite/monzonite, c.g., v. magnetic	sample from scree in exposed lake bed at north end of lake	-1	-1	1		
122305	592118	6115353	9N	Outcrop	2.0	**Argillite,** dk gy fx, rusty wthd, rust on joints, fol, magnetic in spots, sul (v. fine)	north of lake, outcrop under tree, moss-covered, 2 m vert sample	-1	-1	1		
122306	591977	6115422	9N	Outcrop	N/A	**Argillite,** f.g. mdst, sul blebs	exposed in root of fallen tree ~80 NW up 30° slope from lake	-1	-1	1		
122307	592127	6115298	9N	Boulder	N/A	**Argillite,** f.g. mdst, blk nodules	sample from scree in exposed lake bed at north end of lake	-1	-1	1		
122308	581836	6115247	9N	Outcrop	3.0	**Argillite,** rusty mdst	chips over 3 m horiz, east edge of road	-1	-1	11		
122309	581889	6115279	9N	Outcrop	2.0	**Argillite**, dk gy mdst, blocky, not magnetic	20 m E of road, ~10 m upridge, along strike with 122362	-1	**-1**	1		
122310	581881	6115275	9N	Outcrop	2.0	**Ctc (Granodiorite/Argillite),** ctc between granodiorite and argillite, sul, some rust		-1	-1	3		
122311	581865	6115278	9N	Outcrop	3.0	**Argillite,** dk gy mdst, sul vnlets (~ 1 mm), vns (w, 1 cm), sul (diss)	5 m cliff perpendicular to road, blocky, well-frac'd, some rust along exposed ridge	-1	-1	1	Joint	010/75
122312	582260	6115395	9N	Outcrop	2.0	**Argillite,** massive, no rust, no mag, no vis sul		-1	-1	3		
122313	587231	6120713	9N	Outcrop	3.0	**Granodiorite,** m.g., med gy, dk xtls, not magnetic	Outcrop (trending 005°, 5 m high), fracture set (360°), OC dipping 80° W, south of 122338	-1	-1	1	Joint	270/80
122314	587262	6120694	9N	Outcrop	1.5	**Granodiorite,** granodiorite/monzonite, med gy, m.g., with younger light-coloured granodiorite vn (1 - 2 cm, dk inclusions), lt blob (15 cm dia, with dkr streaks)		-1	-1	1		
122315	587355	6120533	9N	Boulder	N/A	**Argillite,** med gy, v.f.g., sul (minor, diss, > 1%), not magnetic, some rusty spots	boulder (flat top, ½ m across, middle of trail)	-1	-1	1		
122316	587651	6120553	9N	Outcrop	N/A	**Granodiorite,** granodiorite/monzonite, qtz	outcrop uphill from 122317	-1	-1	1	Joint	083/82
122317	587645	6120548	9N	Outcrop	1.0	**Diorite,** diorite vn (dk gy, m.g., with small white vn (1 cm, with 2 mm thick dk gy centre)), surrounded by granodiorite/monzonite	outcrop strikes 325°	-1	-1	1	Vein	130/75
122318	582494	6115583	9N	Outcrop	3.0	**Argillite,** f.g., py (minor), not magnetic, tiny xtls on frac'd vn surf	outcrop ~ 3 m long trending 76° and dipping ~75° N, sample ~ 2 m W of 122319	-1	-1	5		
122319	582490	6115582	9N	Outcrop	N/A	**Porphyry,** vis w xtls, py (tr), no mag	same outcrop as 122318	-1	-1	1		
122320	582548	6115536	9N	Outcrop	1.0	**Argillite,** med gy, f.g., rusty (spots), sul, magnetic blobs, flow banding? (w)	SE of access trail at top of steep slope overlooking Deny's Lake	-1	-1	2		
122326	581846	6115277	9N	Outcrop	2.0	**Argillite,** mdst, blk, micritic, highly frac'd	sample ~8 m E of road, 3½ m below road surface, and parallel to road	-1	-1	1	Joint	358/73
122327	581850	6115273	9N	Outcrop	0.8	**Argillite**, y wx, dk gy fx, micritic, very friable, dyke? or altered zone parallel to frac's dipping 75° N	continuous N of 122326	-1	-1	2		
122328	581846	6115281	9N	Outcrop	4.0	**Argillite**, dk gy, rusty y wx, micritic, very friable, few ½-m zones (similar to those at 122327) of more friable y wx with very dk red patches	continuous N of 122327, next 2¼ m northerly are mostly covered	-1	-1	2		

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122329	581850	6115284	9N	Outcrop	1.8	**Argillite,** mdst, dk gy, rusty yellow wthd, very friable	covered interval N of 122328 is 2¼ m brg 47°, chips @ 20 cm, in contact with porphyritic dyke to N	-1	-1	3		
122330	581845	6115288	9N	Outcrop	2.5	**Granodiorite,** porphyritic dyke, lt gy, slightly more competent, square prisms of clear white xtls, blk lenticular xtls up to 4 mm long	continuous N of 122329, mdst similar to 122326-29 continues NNE along E shoulder of road for ~90 m	-1	-1	2		
122331	581812	6115182	9N	Outcrop	1.0	**Sandstone,** sulphide vn cluster, mass, red, rusty red wthd, f.g., blocky, cpy, aspy, py, suls (secondary, mostly silver-coloured), bt, carbonates (tr), white stringers of arseno mins	in ctc with mdst similar to 122326-29 (see sketch)	-1	-1	35	Vein	340/75
122332	581773	6115172	9N	Outcrop	0.3	**Argillite,** gossan? - mdst, dk gy, rusty red-og-br wthd, very frac'd, flt gouge?	W of road in old pit, other rocks in this area of pit are rusty wthd dk gy mdst (argillite)	-1	-1	727	Joint	013/80
122333	582264	6115396	9N	Outcrop	1.0	**Argillite**, mdst, dk gy wthd & fresh, micritic, no visible mins	E side of ridge trending 10°, moss-covered outcrop, 3 m upslope @ 120° brg from 122312	-1	-1	12		
122334	581929	6115154	9N	Outcrop	4.0	**Argillite**, dk gy, micritic, no vis mins		-1	-1	464	Fractures	038/86
122335	581949	6115195	9N	Outcrop	1.0	**Argillite,** mdst, dk gy, highly frac'd	chips @ 20 cm	-1	-1	7	Joint	014/80
122336	581950	6115201	9N	Outcrop	2.0	**Argillite,** mdst, dk gy, micritic, blocky frac'd	cliff (trending 20°, 2 - 3 m high, ~18 m long), uniformly frac'd (2 - 5 cm apart), chips @ 20 cm	-1	-1	8	Fractures	020/83
122337	581958	6115227	9N	Outcrop	8.0	**Argillite**, mdst, dk gy, v. rusty, pervasive wthring, frac'd, fetid odor when struck	Outcrops S of here are all dk gy micritic mdst, gy wthd, no vis mins	-1	-1	16		
122338	587239	6120715	9N	Outcrop	3.0	**Qtz Monzonite,** granular texture, variable chips: 1) uniform lt gy, grains to 2 mm, 2) salt & pepper granitoid, dk rounded nodules up to 4 - 5 cm across with 1½ - 2 cm outer rind	cliff, 60 m long, sample is from a section ~20 m from S end, rough planar surf's 30/35, spaced 50 - 80 cm apart	-1	-1	8	Joint	345/77
122339	582159	6115248	9N	Outcrop	1.5	**Argillite,** dk gy, red rusty wthd, f.g.	~20 m S of access road, at small ~4.5 m long trench 50 cm wide x 50 cm deep brg 075° on flat ground, sample taken from approx equal widths on either side outside of 50 cm wide trench	-1	-1	327	Joint	009/70
122340	582159	6115248	9N	Outcrop	0.5	**Argillite,** vein?, dk gy, rusty red-br wthd, f.g., abund sulphides, py	sample from material at bottom of 50 cm deep trench, trench extends ~ 4½ m westerly from wpt.	-1	-1	95		
122341	582164	6115249	9N	Outcrop	0.6	**Argillite**, vein?, dk gy, rusty red-br wthd, f.g., abund sulphides in vns up to 2 mm wide, py	~15 m downslope brg 90° from samples 122339-40, chips @ 10 cm	-1	-1	181	Joint	355/75
122342	591261	6120546	9N	Outcrop	N/A	**Granitoid,** c.g. (1 - 3 mm), salt & pepper, 85 -90 % med gy xtls, 10 - 15 % lt mins	lrg mossy outcrops trending E-W for ~35 m	-1	-1	1		
122343	591507	6120543	9N	Outcrop	N/A	**Granitoid,** f.g. (~1 mm), salt & pepper, 70% plag, 5% bt, minor fsp, minor qtz	block appears slightly slumped (~½ m) from large outcrop above	-1	-1	1		
122344	582523	6115592	9N	Outcrop	0.6	**Volcanic,** gy, rusty wthd, vuggy, py blebs	also contains chips from sample 122435 interval	-1	-1	21	Joint	360/80
122345	582522	6115620	9N	Outcrop	3.0	**Qtz Monzonite,** gy, c.g., massive	sample near middle of 20 m long, 2 m high cliff trending 275°	-1	-1	4		
122346	582619	6115673	9N	Outcrop	0.5	**Argillite,** blk, no vis sulphides	15 m W and 7 m above access road, sample 122437 is 2 m N and 3 m E of this location	-1	-1	5	Joint	017/78
122347	582594	6115648	9N	Outcrop	1.0	**Greywacke,** uniform, med gy, f.g., minor rusty patches, few vugs	10 m W of access road	-1	-1	1		

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122351	590328	6117422	9N	Outcrop	N/A	**Granodiorite,** granodiorite/monzonite, K-spar, plag, bt, amph, no vis suls	big ridge, outcrop 10 m x 15 m	-1	-1	1		
122352	590297	6117487	9N	Boulder	N/A	**Granodiorite,** granodiorite/monzonite, grains ½ - 1 cm, minor euh sul (py?), oxidized rusty coating	boulder 30 cm x 10 cm x 40 cm	-1	-1	1		
122353	590276	6117386	9N	Outcrop	N/A	**Granodiorite,** granodiorite/monzonite, grains ½ cm, K-spar, plag, bt, amph, 2 cm mafic inclusion	outcrop 20 m x 5 m	-1	-1	3		
122354	591973	6114882	9N	Boulder	N/A	**Qtz-Sulphide Vein,** oxidized 10-cm wide rusty qtz+sulphide vein (abnt py, qtz - 2 cm zone, bt-qtz - 8 cm wide) within granodiorite / monzonite	boulder 30 cm x 20 cm x 10 cm within large boulder field	-1	-1	100		
122355	591922	6114875	9N	Boulder	N/A	**Qtz-Sulphide Vein,** oxidized 2- to 5-cm wide oxidized qtz+sulphide vein within granodiorite / monzonite	boulder 40 cm x 30 cm x 40 cm	-1	-1	23		
122356	591912	6114870	9N	Boulder	N/A	**Sulphide Vein,** oxidized 2-cm wide oxidized sulphide vein within granodiorite / monzonite		-1	-1	5		
122357	591928	6114885	9N	Boulder	N/A	**Sulphide Vein,** oxidized rusty wthd 2-cm wide oxidized sulphide (aspy?) vein with minor alteration (bt-qtz) zone within granodiorite / monzonite	boulder 30 cm x 40 cm x 50 cm	-1	-1	805		
122358	591936	6114883	9N	Boulder	N/A	**Sulphide Vein,** several up to 2-cm wide oxidized sulphide (aspy?) vns/vnlets within granodiorite / monzonite	boulder 30 cm x 40 cm x 30 cm	-1	-1	14		
122359	581861	6115305	9N	Outcrop	N/A	**Argillite**, sediment (mdst/sltst/greywacke/shale?), f.g., strongly jointed, abnt rusty yellow wthd crust, no visible ore mins	outcrop 10 m long, 2 m high in small quarry east of Comeau Rd.	-1	-1	13		
122360	581879	6115306	9N	Outcrop	N/A	Sulphide Nodule, rounded sul-rich nodule	outcrop 10 m long, 2 m high in small quarry east of Comeau Rd., samples 122360-62 collected here	-1	-1	8		
122361	581889	6115297	9N	Outcrop	N/A	Sulphide Nodule, few smaller rounded sul-rich nodules	outcrop 10 m long, 2 m high in small quarry east of Comeau Rd., samples 122360-62 collected here	-1	-1	52		
122362	581891	6115298	9N	Outcrop	N/A	**Argillite,** sample of mdst which hosts the sul-rich nodules, strongly jointed, f.g., rusty yellow wthd, abnt sul (cpy, po, py) along frac's	outcrop 10 m long, 2 m high in small quarry east of Comeau Rd., samples 122360-62 collected here	-1	-1	1		
122363	581878	6115355	9N	Outcrop	N/A	**Vein**, ~2 cm vn (blk, f.g., unknown mins, perpendicular to jts in mdst) with 2-5 cm rusty alteration halo	outcrop 5 m long, 1 m high	-1	-1	21	Vein	285/48
122364	581843	6115199	9N	Outcrop	N/A	**Sulphide Vein,** massive sul vn (10 cm wide, 80% sul (cpy, po, py), minor qtz & mdst)	outcrop 15 m long, 3 m wide, trends westerly to road, massive sul vn cuts mdst country rock	0.384	-1	6390		
122365	581811	6115183	9N	Outcrop	N/A	**Sulphide Vein,** massive sul vn (10 cm wide), abnt cpy, py, aspy? on wthd surf	outcrop 15 m long, 3 m wide, trends westerly to road, massive sul vn cuts mdst country rock	0.094	4.95	15200		
122366	581812	6115187	9N	Outcrop	N/A	**Vein,** barren part (~80%) of same vn as 122365, fine sand-sized grain size, bg to reddish coloured rock which could be either gneiss, sandstone, or rhyolite, rusty wthd, minor suls	outcrop 15 m long, 3 m wide, trends westerly to road, massive sul vn cuts mdst country rock	-1	-1	36		
122367	581777	6115217	9N	Outcrop	N/A	**Argillite,** mdst (blocky jointed, rusty wthd) hosting sul+qtz vn (~3 cm wide, 90% f.g. qtz and f.g. py, 10% cpy)	5 m x 0.2 m, in pit west of Comeau Road	-1	-1	19	Surface	280/36

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122368	582295	6115355	9N	Outcrop	N/A	**Argillite,** mdst, sulphur and rusty coating	small outcrop(?) in middle of access trail on Golden Wonder Ridge	-1	-1	17800		
122369	582327	6115561	9N	Outcrop	N/A	**Argillite,** mdst? greywacke?, gy, sulphur coated, very rusty crust	outcrop 5 m long, 1 m high	-1	-1	24		
122370	587199	6120743	9N	Boulder	N/A	**Argillite,** mdst	boulder 20 cm x 20 cm x 10 cm, in valley NW of West's Knoll	-1	-1	3		
122371	587649	6120553	9N	Outcrop	N/A	**Qtz Monzonite,** f.g., gy, no vis sul mins	outcrop 1½ m x 1 m	-1	-1	1		
122372	587728	6120605	9N	Boulder	N/A	**Qtz Monzonite**, m.g., red rusty wthd crust	boulder 2 m x 1 m	-1	-1	358		
122373	587789	6120626	9N	Outcrop	N/A	**Granodiorite,** m.g. - c.g., titanite? (reddish-honey brown min, tr)		-1	-1	1		
122374	587789	6120626	9N	Outcrop	N/A	**Greywacke**, dk gy, thin br wthd crust, m.g., clsts?,	outcrop 5 m x 1 m	-1	-1	4		
122401	592043	6115038	9N	Float (Talus)	N/A	**Argillite,** siltstone/argillite, siliceous, small clsts (suls, mostly py), gr alteration halo	QP sample	-1	-1	4		
122402	591917	6114894	9N	Float (Talus)	N/A	**Granodiorite,** qtz vn (2 cm), py vnlets, blk min (blady, tourmaline? or ferberite?)	QP sample	-1	-1	118		
122403	591971	6115434	9N	Boulder	N/A	**Argillite,** siltstone, br, siliceous, suls (diss, mostly py)	QP sample	-1	-1	1		
122404	581826	6115203	9N	Boulder	N/A	**Argillite,** siltstone-hosted semi-massive sulphide vein (~25 cm wide, po, cpy, py, containing clsts of siltstone)	QP sample	0.301	2.71	10300		
122405	581815	6115182	9N	Outcrop	N/A	**Argillite,** siliceous, sul (1%), lithic/qtz, sample of almost barren arkose/siltstone rock hosting two ~10 cm sulphide vns	QP sample, highwall	-1	-1	1110		
122406	581815	6115182	9N	Outcrop	N/A	**Sulphide Vein,** semi-massive, ~25 cm thick lower vn, abnt py+cpy+py	QP sample	0.129	3.27	25300		
122407	581815	6115182	9N	Outcrop	N/A	**Sulphide Vein,** semi-massive, upper vnlet, cpy+po	QP sample	-1	-1	112		
122426	582134	6115247	9N	Boulder	N/A	**Argillite,** blk, rusrty wthd, several ~2 mm wide sulphide vns ±qtz, py, minor cpy, not magnetic	float, siltstone or greywacke?	-1	-1	299		
122427	582131	6115246	9N	Boulder	N/A	**Argillite,** dk gy, brc by aspy, xcut by vns (py, cpy), not magnetic	adjacent to SW of 122426, float, siltstone or greywacke?	0.534	-1	8750		
122428	582135	6115236	9N	Outcrop	N/A	**Argillite,** brc (clsts of slts or greywacke up to 4 cm, matrix is rusty sul (py?))	adjacent to SW of 122426, in area cleared and worked adjacent NW of access trail, easy to break, possibly on strike with samples 122339-41 further east	-1	0.993	1690		
122429	582125	6115239	9N	Outcrop	N/A	**Argillite,** slst or greywacke, purplish dk gy, no vis sul mins	barren rock which hosts the sul vn	-1	-1	41		
122430	582075	6115220	9N	Outcrop	N/A	**Argillite,** rusty wthd crust, slst or greywacke, brc by aspy vnlets up to 60% of rock	previous 2012 sampling (1051358-62), 1051358 corresponds to this sample	0.049	-1	2140		
122431	582048	6115224	9N	Outcrop	N/A	**Argillite,** slst or greywacke, minor py vnlets, py on joints		-1	-1	444		
122432	591148	6120563	9N	Outcrop	N/A	**Granodiorite,** groundmass is slightly magnetic, mag (euh xtls up to 1 cm)	outcrop, 3 m x 1 m, at top of steep slope	-1	-1	4		
122433	591243	6120552	9N	Outcrop	N/A	**Granodiorite,** granodiorite/monzonite, thin br wthd crust, slightly magnetic	cliff outcrop, 15 m x 1 m	-1	-1	1		

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122434	591507	6120558	9N	Outcrop	N/A	**Granodiorite,** granodiorite/monzonite, c.g., slightly magnetic	outcrop near the reported location of the Daley West showing, no indication of the previously described qtz-sulphide filling within a brc shear zone	-1	-1	1		
122435	582518	6115589	9N	Outcrop	N/A	**Volcanic,** blk wthd, very wthd, crumbly, very rusty interval within the larger sample 122344, contains nodules similar to the mdst at the roadside showing (samples 122360 - 62), rest of the rock is goethite?	outcrop ~1 m high x 3-4 m long	-1	-1	8		
122436	582546	6115600	9N	Outcrop	N/A	**Volcanic,** porphyritic, red-br, f.g., abnt fsp? filling vugs or xenocrysts (clsts), easily alters into soft br-bg rock, tr py		-1	-1	1		
122437	582621	6115673	9N	Outcrop	N/A	**Argillite,** mdst, f.g., dk gy, no vis suls, ~2 mm qtz vn with wthd suls	location is 5-10 m SE of sample 122346	-1	-1	8		
122438	582579	6115678	9N	Outcrop	N/A	**Volcanic,** dk gy, f.g., abnt vugs, ~2 cm qtz vn, few og rusty wthd suls (-ve xtl shape)		-1	-1	29		
122439	593267	6116678	9N	Boulder	N/A	**Granodiorite,** 3 qtz vns (2 cm, 2 cm, & ½ cm wide) with 2-cm gr bt xtls parallel to ctc, py at ctc	boulder, sub-round, 30 cm across	-1	-1	6		
122440	593228	6117693	9N	Boulder	N/A	**Monzonite,** dense m.g. gr-gy igneous rock, ¼-cm rusty wthd crust	boulder, 20 cm across	-1	-1	1		
122441	593175	6117706	9N	Boulder	N/A	**Argillite**, rusty wthring crust	boulder, sub-round, 20 cm across, within area of granodiorite boulders up to 0.8 m x 0.6 m	-1	-1	1		
122442	593223	6117664	9N	Boulder	N/A	**Argillite,** white wthd, mag? on fresh surf	angular boulder frags exposed under tree root, other boulders exposed are sub-round granodiorite which are magnetic, stream flowing beneath	-1	-1	1		
122443	592671	6116151	9N	Boulder	N/A	**Granodiorite,** rusty wthd, two vns (~3 mm wide, tourmaline), suls	sub-round boulder	-1	-1	1		
122444	591415	6115279	9N	Boulder	N/A	**Granodiorite,** ~4 cm thick qtz+fsp pegmatitic vn, minor suls (py)	122444-46 collected in avalanche chute above Blue Lake and ~½ km NW of the Black Prince showing	-1	-1	6		
122445	591411	6115274	9N	Boulder	N/A	**Granodiorite,** rusted out sulphide-rich bleb ~5 cm across	122444-46 collected in avalanche chute above Blue Lake and ~½ km NW of the Black Prince showing	-1	-1	50		
122446	591415	6115280	9N	Boulder	N/A	**Volcanic,** plag porph text, few blebs of oxidized sul min, 2ndary gr Cu mins	122444-46 collected in avalanche chute above Blue Lake and ~½ km NW of the Black Prince showing	-1	-1	15		
122501	588115	6119613	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	254		
122502	587446	6118693	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	1		
122503	590756	6121400	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	1		
122504	583512	6115355	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	17		
122505	583790	6115254	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	8		
122506	593945	6119228	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	23		
122507	593956	6119254	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	1440		
122508	593444	6117034	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	136		
122509	593444	6117034	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	1		
122510	593738	6117342	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	3		
122511	593738	6117342	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	4		
122512	593970	6117633	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	577		

Sample	Easting	Northing	Zone	Source	Length (m)	Rock Description	Comments (all structure measurements are dip dir/dip)	Co_pct	Cu_pct	Au_ppb	Structure	Dip Dir/Dip
122513	593970	6117633	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	65		
122514	592741	6116213	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	5		
122515	592740	6116215	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	28		
122526	591036	6120693	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	20		
122527	592379	6120097	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	185		
122528	594753	6117836	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	44		
122529	594753	6117836	9N	Stream	N/A	**Sediment**	stream pan sediment sample	-1	-1	29		

APPENDIX 5: STATEMENT OF QUALIFICATIONS

P. Kluczny is a geological consultant with Dahrouge Geological Consulting Ltd. based in Edmonton, Alberta. He obtained a B.Sc. with Specialization in Geology from the University of Alberta, Edmonton in 2006 and has since been employed in the mineral exploration industry continuously. He is currently registered as a P.Geol. with the Association of Professional Engineers and Geoscientists of Alberta.