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2018 Diamond Drilling Report

Black Raven Property

Hemlo Area, Ontario

NTS Map sheet 42D/16

September to October 2018

for

Canadian Orebodies Inc.

141 Adelaide Street West, Suite 301,

Toronto, Ontario

M5H 3L5

Henry P. Hutteri P.Geo. January 2019

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1.0 Summary

From September 22 to October 9, 2018, Canadian Orebodies carried out an eight hole and 1137.3 metre diamond drill program on their Black Raven Property, within the Hemlo greenstone belt of Northern Ontario. During this time period, Henry Hutteri P.Geo., the author of this report spotted drill holes, directed drill crews and logged drill core. Core sawing and sampling was ongoing during this period and was completed on Oct 9. Steve MacConnell P.Geo. assisted with the logging of the last drill hole. All work was carried out through an exploration camp set up at Wire Lake and crews and drill were transported to and from the drill sites by an Astar helicopter, provided by Expedition Helicopters. Work was carried out under exploration permit PR-16-11008A.

The drill program was primarily designed to further assess the gold-bearing potential of a narrow north-northeast striking, high grade quartz vein system (Super G) known to occur on the north shore of Smoke Lake within mafic volcanic rocks, and its northern extensions. In the Smoke Lake area, historical drilling had yielded gold values up to 44.57g/t over 2.38 metres. Recent mapping and prospecting had traced this mineralized corridor northwards through the Beggs Lake Monzonite stock where additional anomalous gold values up to 5.3 g/t in grab samples have been obtained from a broad zone of quartz stringers containing pyrite and chalcopyrite. In addition, one last hole was drilled to test a series of easterly striking quartz veins near Contact Lake where recent prospecting had yielded gold values up to 6.08 g/t.

Drilling has confirmed the high-grade nature of the narrow Super G vein system at Smoke Lake with three of the 5 drill holes (BR-2018-001 to 003) having fine visible gold noted and assays including 37.2 g/t over 1.0m, 8.08 g/t over 1.1m, 2.51 g/t over 0.4m, 443.0 g/t over 0.6m, 6.99 g/t over 0.5m, 9.11 g/t over 0.6m, 34.6 g/t over 0.5m. Drill holes BR-2018-004 and BR-2018-005 encountered weaker zones with gold values of 5.03 g/t over 0.4m, 7.69 g/t over 0.4m and 0.65 g/t over 0.6m. The two drill holes drilled further north along strike within the Beggs Lake monzonite stock yielded numerous sample intervals with anomalous gold values. However, the best results obtained were 284 ppb over 1.0m in hole BR-2018-006 and 1.11 g/t over 2.0m in hole BR-2018-007. Further drill testing between these two areas located 1.5km apart is warranted if the results of a recommended selective program of soil and Induced Polarization surveying are encouraging. Drilling at Contact Lake yielded only anomalous results with the highest assay obtained being 237 ppb gold over 1.0m. No additional surface work or diamond drilling is warranted unless a site visit explains the discrepancy between the lack of quartz veining on surface and in drill hole CL-2018-001.

Figure 1

CANADIANOREBODIES

Black Raven Property
General Location Map

Date: December, 2018 Name: HH

File: ontloc_dec2018_blkraven

2.0 Introduction

Canadian Orebodies Inc. has completed an eight hole diamond drill program totalling 1137.3 metres on the Black Raven Property within the Hemlo belt of northern Ontario. The drilling was carried out by Chibougamau Diamond Drilling, based in White River and all assaying was performed by Actlabs of Thunder Bay. Drill supervision and core logging was carried out by Henry Hutteri P.Geo. and assisted by Steve MacConnell. Core sawing was performed by Doug Kakeeway of Thunder Bay, Ontario. The work was carried out from September 22 to October 9, 2018.

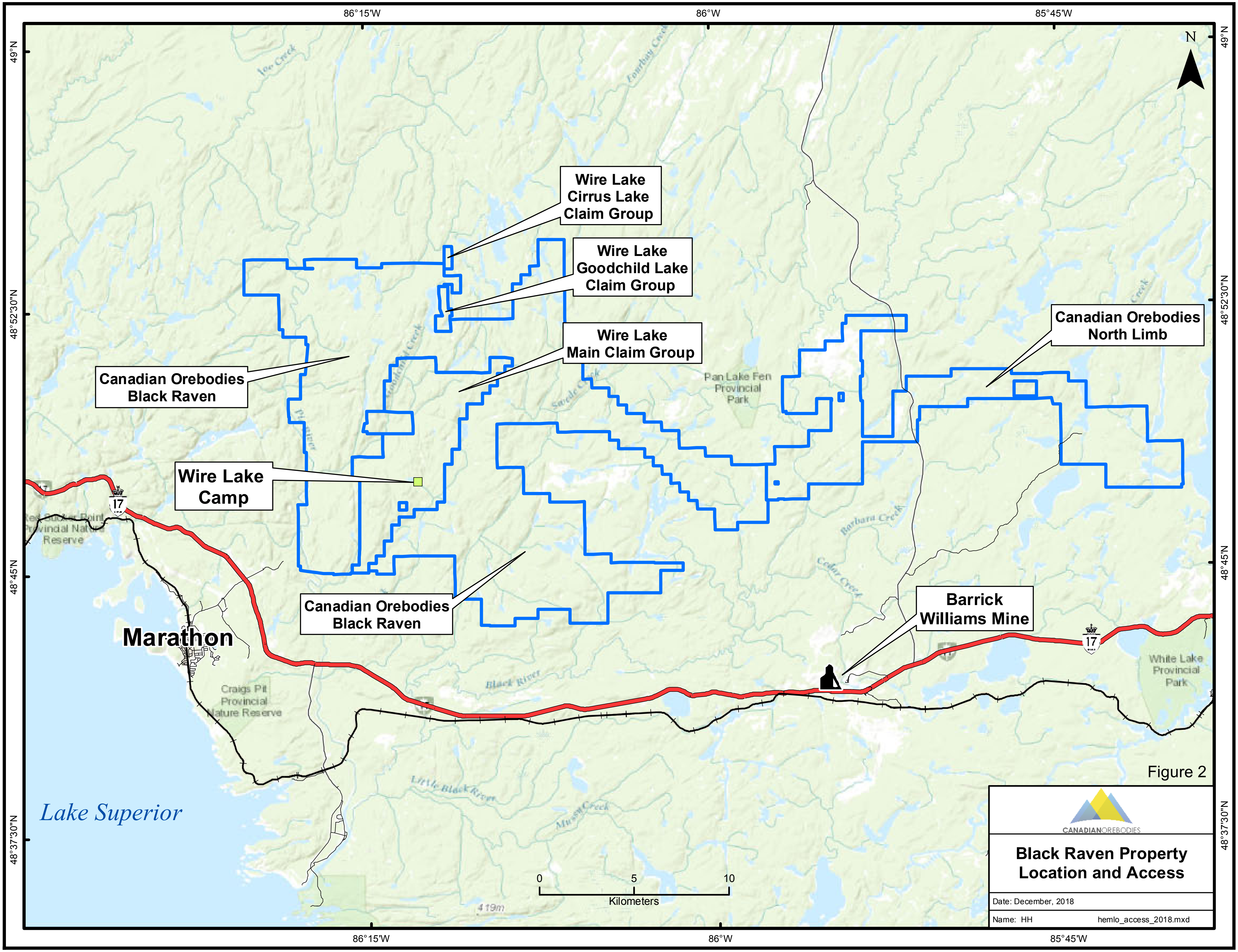
3.0 Property Location and Description

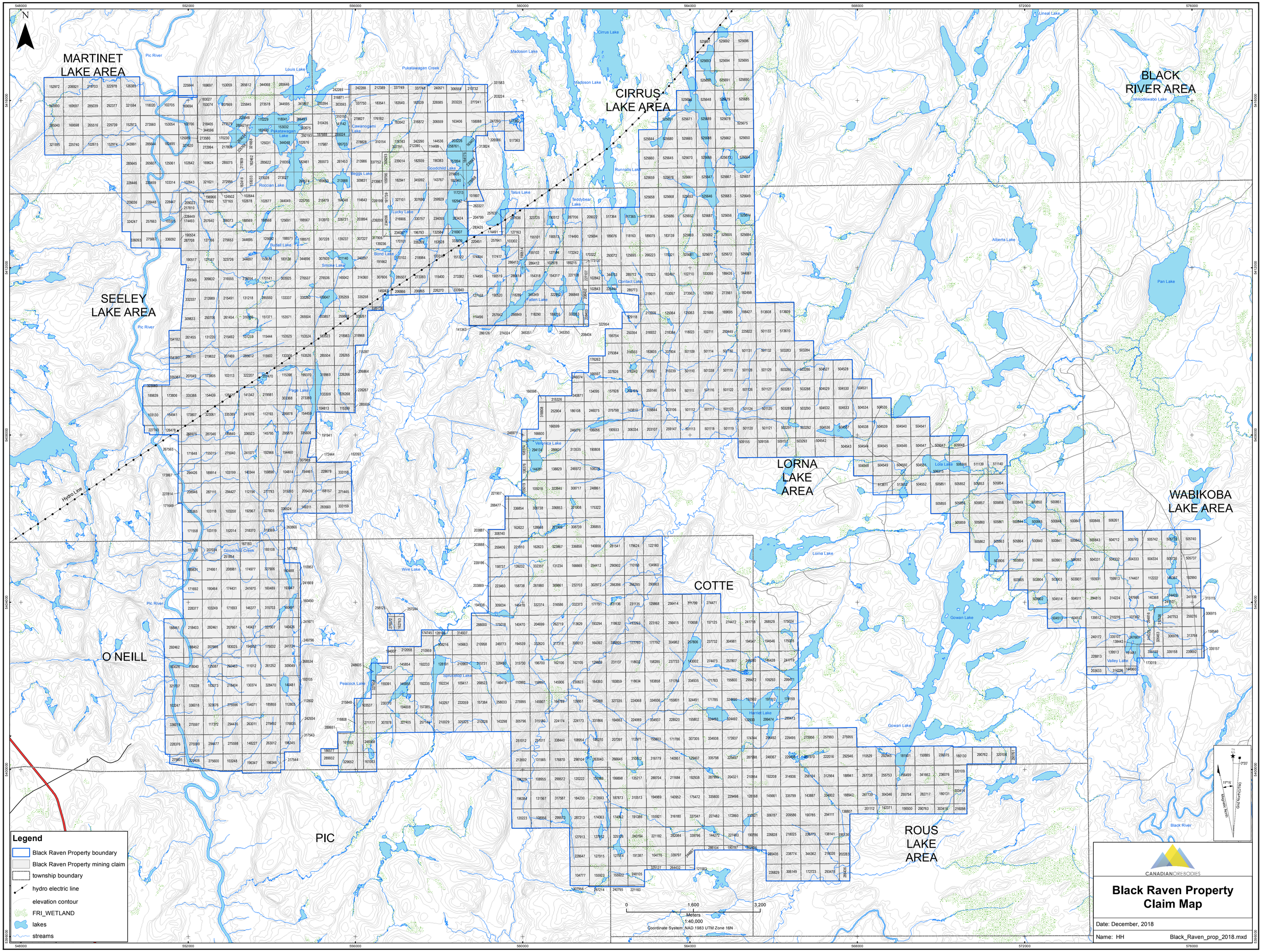
3.1 Location and Access

The Black Raven Property is situated approximately 15 km northeast of the town of Marathon, which lies 220 kilometers east of Thunder Bay and 30 km west of the Hemlo gold camp. The large property lies immediately east of the Pic River, a major north trending waterway covering parts of Lorna Lake, Seeley Lake, Martinet lake and Cirrus Lake Areas, ONeil and Cotte Townships. The Trans-Canada Highway No. 17 lies south of the claim group with a gravel road extending further north to the west side of the Pic River. From here, overgrown logging and drill roads extend eastward along Goodchild Creek across the property. Access during the summer is mainly by helicopter or by boat up the Pic River. The Terrace Bay-Manitouwadge power transmission line crosses the northern portion of the claim group.

3.2 Description of Mining Claims

The Black Raven Property is comprised of 1234 cells currently owned 100% by Canadian Orebodies Inc. Portions of the large property are subject to a 2.5% NSR held by prospectors James Bond, Russell Renner, Duncan Michano, Jamie Moses, Brian Gionet, Mike Dorval and Ken Fenwick. Benton Resources also holds a 1.5% NSR on a small group of cells within the large property. The drilling was carried out on only 5 of these cells numbered 211140, 139237, 309831, 329118, 307227 and 250354.


86°15'W
86°W
85°45'W
49°N
48°52'30"N
48°45'N
48°37'30"N
N
Wire Lake
Cirrus Lake
Claim Group
Wire Lake
Goodchild Lake
Claim Group
Wire Lake
Main Claim Group
Canadian Orebodies
North Limb
Canadian Orebodies
Black Raven
Wire Lake
Camp
Canadian Orebodies
Black Raven
Barrick
Williams Mine
Marathon
Lake Superior
Pan Lake Fen
Provincial
Park
Craigs Pit
Provincial
Nature Reserve
White Lake
Provincial
Park
Black River
Little Black River
Barbara Creek
Cedar Creek
17
0
5
10
Kilometers
Figure 2
CANADIANOREBODIES
Black Raven Property
Location and Access
Date: December, 2018
Name: HH
hemlo_access_2018.mxd


MARTINET LAKE AREA
SEELEY LAKE AREA
CIRRUS LAKE AREA
BLACK RIVER AREA
LORNA LAKE AREA
WABIKOBA LAKE AREA
COTTE
O NEILL
PIC
ROUS LAKE AREA
Pic River
Louis Lake
Pukatawagan Creek
Madoson Lake
Cirrus Lake
Lineal Lake
Ishkodewabo Lake
Cawanogami Lake
Pukatawagan Lake
Roccian Lake
Beggs Lake
Goodchild Lake
Runnalls Lake
Talus Lake
Teddybear Lake
Lucky Lake
Bond Lake
Smoke Lake
Buttall Lake
Contact Lake
Fallen Lake
Alberta Lake
Pan Lake
Page Lake
Veronica Lake
Lola Lake
Loma Lake
Gowan Lake
Harriet Lake
Spruceloop Lake
Peacock Lake
Wire Lake
Goodchild Creek
Valley Lake
Black River
Hydro Line
N
Legend
Black Raven Property boundary
Black Raven Property mining claim
township boundary
hydro electric line
elevation contour
FRI_WETLAND
lakes
streams
0
1,600
3,200
Meters
1:40,000
Coordinate System: NAD 1983 UTM Zone 16N
Declination
0°30'
11°15
Magnetic North
Grid North (UTM)
CANADIANOREBODIES
Black Raven Property
Claim Map
Date: December, 2018
Name: HH
Black_Raven_prop_2018.mxd

3.3 Physiography and Vegetation.

The climate within the region on the north shore of Lake Superior is characterized by relatively short hot summers to +30 C and long cold winters down to -30 C with abundant snowfall.

The topography within the property area is fairly rugged consisting of high ridges cut by rivers with a relief of approximately 200 metres. Outcrop exposure is generally good with steep hills and numerous cliff faces throughout the area. Overburden is generally thin in the order of a few metres but thicker in fault controlled valleys. Vegetation consists of a mix of spruce, balsam, birch, pine, cedar and tag alders.

4.0 PREVIOUS WORK

The following work history in the area has been adapted from MacTavish (2003) and MacLachlan and MacConnell (2017).

1930 and 1931: J.E. Thomson of the Ontario Department of Mines completed reconnaissance mapping over a large area including the Cirrus Lobe. He noted the presence of a pit located a short distance south of Cawanogami Lake within the northeastern corner of the present property. No record of who excavated the pit is within the public record.

1951 to 1953: A group of 9 claims staked east of Cawanogami and Beggs Lake by Moses Fisher in 1951 included the northeastern corner of the present property. Fisher excavated several trenches and pits somewhere on this property later that year and discovered the Cawanogami Lake Asbestos Occurrence. He added another 9 claims to the property in 1953 and then optioned it to MacLeod Cockshutt Gold Mines Limited, who dropped it soon after without completing any work. Canadian Johns-Manville Co. Ltd. then optioned the claims and completed line cutting, reconnaissance mapping, and a magnetometer survey.

1953 and 1954: MacLeod Cockshutt Gold Mines Limited completed airborne magnetometer and scintillometer surveys over the Goodchild Lake Serpentinite during July 1953.

1953 and 1954: A group of 30 claims was staked in 1953 for Kenogamisis Gold Mines Limited near Louis, Pukatawagan, Fisher, and Beggs Lakes. The claims were optioned by MacLeod Cockshutt Gold Mines Limited sometime in 1953. Ground magnetometer and

HEM surveys and 6 diamond drill holes, totalling 939 ft. (286.2m), were completed in 1954. The drilling was completed near the northeast corner of the property.

1953 and 1954: A group of 18 claims was staked in 1953 by Violamac Mines Limited to cover the Goodchild Lake Prospect (Violamac Prospect). Work completed included geological mapping, trenching, prospecting and 5 diamond drill holes, and totalling 2002 ft. (610.2 m). Four sulphide showings were defined within silicified diorite (?) over a strike length of approximately 2300 feet (700 m). Surface mineralization occurs as thin stringers and seams of pyrite, pyrrhotite, and chalcopyrite over widths of <8 to 100 ft. (2.4 to 30.5 m). Values of up to 2% Cu, 0.5% Ni, and 2.0 ounces per ton Ag were reported.

1959: The Mining Corporation of Canada contracted an airborne magnetometer and EM survey over the Goodchild Lake-Pic River area.

1963: The area of the Cirrus Lobe was mapped by V.G. Milne of the Ontario Department of Mines.

1967 to 1969: The Violamac Prospect was covered by a block of 54 claims staked by Mexico Exploration (Canada) Limited during 1967. Work completed during 1968 included geological mapping, soil geochemistry, and ground magnetometer, HLEM, and self-potential (SP) surveys. In 1969, 11 diamond drill holes were completed, totally 4251 ft. (1295.7 m). Disseminated to semi-massive pods of pyrrhotite and pyrite, with minor chalcopyrite were intersected; however, no significant metal values were encountered.

1971 and 1972: Knut Kuhner discovered Zn-Au mineralization about 0.75 km southwest of Page Lake (4 km south of the Smoke Lake Property) in 1971. He staked a group of claims around the occurrence and optioned them to Kerr Addison Mines Ltd. The company promptly staked a large block of claims around the original property and proceeded to complete line cutting, geological mapping, IP and resistivity surveys, and 9 diamond drill holes, totalling 254 m. Four of the holes tested the occurrence, with one intersecting 1.10% Zn/7.60 m, which included a 1.50 m interval grading 4.50 gpt Au.

1978 and 1979, 1990, 1996: The Geological Survey of Canada (GSC) completed extensive lake sediment geochemical surveys covering much of the Schreiber-Hemlo Greenstone Belt during the late 1970s. The original samples were re-analysed for Au and a multi-element package (Friske et al. 1991) in 1990. The re-analyses defined anomalous Au-in lake sediment values in 4 lakes occurring in an east-west trend located to the south, southeast and southwest of Goodchild Lake. Three of the anomalous sites are within the confines of the present Smoke Lake Property with gold values of 21, 18 and 13 ppb Au. These comprise the highest Au values obtained from the entire survey and are associated with elevated levels of Ag, Zn, Cd Cr, and Ni. A detailed follow-up of these anomalies was

completed by the GSC (Friske 1997) in 1996. Lake sediment core samples were collected from the 4 anomalous lakes as well as several smaller lakes that were not initially sampled. This follow-up survey defined an additional 5 lakes exhibiting anomalous gold values, clearly demonstrating the potential for widespread gold mineralization within the catchment basin that comprises a major portion of the Smoke Lake property.

1982 to 1991: A 20 claim property centred on Page Lake was staked in 1982 by Gowganda Resources Ltd. The property included the Kuhner Zn-Au Occurrence and was optioned in 1984 by Homestake Mineral Development Company. During 1984 and 1985 Homestake completed line cutting, geological mapping, and IP and resistivity surveys. The property was optioned to Noranda Exploration Co. Ltd. In 1986 after Homestake dropped its option. Geological mapping, soil and humus geochemistry surveys, and VLF-EM and magnetometer surveys were completed in 1987 and 1988. This work included the discovery of the Page Lake Au occurrence containing up to 6 gpt Au. An additional 65 claims were added to the property during 1988 and 1989 to bring the total to 85 contiguous claims. A lithogeochemical survey centred to the west and north of Page Lake outlined a Na depletion, Mg-enrichment trend along the sedimentary-metavolcanic contact west of Page Lake. HLEM and magnetometer surveys were completed on the southern claims in 1991. There is no record of diamond drilling or a description of the Page Lake Au Occurrence in the Noranda assessment data.

1983: Canadian-United Metals Inc. conducted a short prospecting and reconnaissance program on the Goodchild Creek Property, re-excavating a historical trench dug in 1938. No significant gold values were discovered, so it was concluded that the excavated trench was likely not one that had previously yielded gold values up to 0.4 oz/t. (Caulfield and Ikona, 1983)

1984: MPH Consulting Limited completed an Airborne Magnetic and VLF-EM Survey by Aerodat Limited.

1983 to 1994: Carlson Mines Ltd. Staked the 214 claim Wire Lake Property, located about 4 km south of the Smoke Lake Property, in 1983 during the Hemlo gold rush. When the first report of work was filed in 1986 the property consisted of 407 claims; however, by 2000 it had decreased to 253 contiguous claims. An Aerodat helicopter-borne EM, magnetic and VLF-EM survey was flown over the property in 1984. Surface exploration began in 1985 and included geological mapping, prospecting, stream sediment and humus geochemistry, and VLF-EM surveys on flagged grids. Gold was discovered by surface sampling of pyritic quartz veins south of Wire Lake during the initial program. One of the samples contained 15.91 gpt Au and 23.30 gpt Ag. Subsequent exploration programs completed between 1986 and 1994 included geological mapping, humus geochemistry, IP,

resistivity, and VLF-EM surveys, another airborne geophysics survey, stripping and trenching, line cutting, and 73 diamond drill holes, totalling 9794 m. This work shows that the Wire Lake Property hosts numerous northwest-trending shear zones containing significant but erratic gold mineralization. Several mineralized zones (South Lake, Lucky Seven, Candlestick, and North Hill) are apparently related to a 2.5 km-long lineament known as the Wire Lake Shear zone. Gold is associated with quartz, carbonate and stockwork vein systems within intensely altered metavolcanic and metasedimentary rocks. Alteration consists of silicification, chloritization, pyritization, carbonatization, and sericitization as well as potassic alteration assemblages. Some of the better drill intercepts include 7.07 gpt Au/2.10 m (0.21 opt Au/6.90 ft.) and 1.50 gpt Au/28.50 m (0.04 opt Au/93.50 ft.). The original company was succeeded by Black Gregor Exploration Ltd, Gregor Goldfields Corp., and Aavdex Corporation. All Terrane Track Sales and Service acquired the property in 2000. The mineral rights are now owned by Canadian Orebodies.

1984: Teeshin Resources conducted work on the Hemlo West (Pic River) Property (formerly the Goodchild Creek Property), east of the Pic River and north of Goodchild Creek, including grid magnetometer and V.L.F. ground geophysical surveys, as well as diamond drilling. Drilling intersected sulphide-chert formations with relatively high background levels of silver, copper and zinc, as well as gold values up to 0.008opt/5 feet and 0.011opt/6 feet in black mudstone (Kaye, 1984).

1986 to 1988: A 54 claim group, including the Violamac Prospect, was staked by Paul Skalesky in 1986. A Terraquest airborne magnetometer and VLF-EM survey was completed over the property in 1988 and detected numerous VLF-EM conductors. One 1.8 km long anomaly parallels the Violamac Prospect between 50 and 75 m to the northeast and may represent a down-dip expression of the mineralized zone.

1989: Noranda Exploration Co. Ltd. completed a detailed, helicopter-borne Dighem EM and magnetometer survey over a large area encompassing the eastern Schreiber-Hemlo greenstone belt, including the Cirrus Lobe.

1989 and 1990: Russel Renner staked a small group of 11 claims that included the north half of Roccian Lake and the southwestern portion of Pukatawagan Lake. Noranda Exploration Co. Ltd. optioned the property and staked 15 additional claims to the southwest. Over the next 2 years Noranda completed geological mapping, soil and rock geochemistry, magnetometer and HLEM surveys, and 3 diamond drill holes, totally 258.5m One of the holes targeted the Renner/Roccian Lake Cu Occurrence located 500 m west of Roccian Lake, which on surface graded up to 1.10% Cu and 0.12% Zn. The other 2 holes tested HLEM anomalies, but no assay results are available.

1991 to 1993: D.B. McKay of the Ontario Geological Survey examined, sampled, described, and sometimes mapped 71 mineral occurrences, and researched and compiled a further 18 occurrences within a 50-km radius of the town of Manitouwadge (McKay 1994).

1993 and 1994: Reconnaissance field investigations of the GSC lake bottom sediment anomalies by Hemlo Gold Mines Inc. during 1993 led to the discovery of the high-grade Smoke Lake Float boulders on the northeastern shoreline of Smoke Lake. These boulders occur 120 metres southeast of the Smoke Lake Occurrence discovered the by OGS during 1996 and consist of numerous angular blocks of white, coarse to fine-grained quartz containing fine-grained pyrite and fine visible gold. Grab samples graded 139.9 gpt Au (4.10 opt), 30.3 gpt Au (0.88 opt), 10.0 gpt Au (0.29 opt) and 6.6 gpt Au (0.19 opt). After this was discovered Hemlo immediately staked a single 16-unit claim and completed limited prospecting and a soil geochemical survey on a flagged grid.

Positive results from the soil survey led to the staking of 2 additional claims and the completion of line cutting, prospecting, geological mapping, and soil sampling during 1994. An attempt to hand strip the Smoke Lake Float occurrence to bedrock was unsuccessful. A total of 69 rock samples were collected as part of the property-wide prospecting and reconnaissance mapping program (Thomson 1995). A second soil survey comprising 256 soil samples collected at 25 m intervals along grid lines cut at 100 and 200 m intervals was completed in the immediate vicinity of Smoke Lake. Numerous spot-high, Au-in-soil values of up to 210, 350 and 600 ppb Au were obtained.

1996 and 1997: The staff of the Schreiber-Hemlo Resident Geologist's office of the Ontario Geological Survey (OGS) conducted a one-day examination on the Smoke Lake property in 1996 to investigate possible source areas for the gold-in lake sediment anomalies. They discovered a narrow, steeply dipping, northwest-trending quartz vein crosscutting carbonatized mafic volcanic rocks near the north shore of Smoke Lake. Disseminated pyrite occurs in the vein selvages and in the altered wall rocks. A single grab sample of the quartz vein, dubbed the Smoke Lake Occurrence assayed 26.7 gpt Au (0.78 opt) (Schnieders et al. 1996).

An additional short visit by the OGS in 1997 uncovered another occurrence approximately 1 km east-northeast of Smoke Lake, proximal to the contact between the Beggs Lake syenite stock and outlying mafic metavolcanic rocks. Two grab samples of carbonatized, pyritized syenodiorite (?) with a quartz veinlet stockwork collected from the Contact Occurrence assayed 1.03 gpt Au (0.03 opt) and 0.68 gpt Au (0.02 opt), respectively.

1997 to 2000: During 1997 Peter Moses staked the 2 claims comprising the Goodchild Property as defined by Freewest and included the Violamac Cu-Ni-Ag Occurrence located near Goodchild Lake within the northeastern portion of the property. Prospecting and soil sampling during 1997 led to the discovery of the Main Moses and South Moses gold occurrences. The Main Moses Occurrence consists of a coarse Fe-carbonate vein system within strongly sheared and carbonatized mafic metavolcanic rocks. The zone was exposed by 6 surface trenches over 207 m in 1999 and samples taken from the zone graded from 0.30 to 8.60 gpt Au. The South Moses Occurrence was exposed by a trench in 1998 and consists of folded, sulphide-bearing quartz veins within mafic metavolcanic rocks that graded up to 1.60 gpt Au. Further prospecting and soil sampling were completed during 1998 and 1999 and led to the discovery of 3 more occurrences: the BG Pt Occurrence, located approximately 115 m northwest of the South Moses Occurrence, occurs within a gabbro dike and grades up to 517 ppb Pt and 101 ppb Au; the MZ Occurrence, located 780 m south-southeast of the South Moses Occurrence on the eastern shore of a small lake, consists of an altered, well-mineralized monzonite outcrop and numerous boulders containing between 0.47 and 2.50 gpt Au; and the Crusher Occurrence, located 600 m east-southeast of the MZ Occurrence and 110 m northeast of a small lake, consists of well-mineralized talus boulders of pink, fine- grained felsite/aplite that assayed up to 430 ppb Au.

Teck-Cominco Limited optioned the property late in 1999 and during 2000 completed line cutting, geological mapping and sampling, channel sampling of the Main Moses Occurrence, and an Induced Polarization (IP) survey. A total of 97 rock samples were collected during reconnaissance mapping, prospecting, and channel sampling. Samples collected from the trenches at the Main Moses Occurrence graded up to 5.50 gpt Au (0.16 opt); whereas sampling of the South Moses and MZ occurrences returned up to 0.25 and 0.145 gpt Au, respectively. Teck-Cominco also discovered 2 previously unknown, contact proximal, disseminated pyrite zones within the Beggs Lake Stock that contained strongly anomalous to low-grade Au values. The first is located 100m W of the South Moses Occurrence, has been traced for 125 m and grades up to 0.33 gpt Au. The second is located 300 m north-northeast of the MZ Occurrence, grades up to 120 ppb Au, and may correspond to the present UGM Occurrence. Paakki (2001) recognized that at least three styles of mineralization were present within the property, including 1) sheared, pyritic, Fe-carbonate altered mafic metavolcanic rocks (Main Moses and South Moses); 2) disseminated pyrite and quartz veining within granodiorite, monzonite and syenite along the contact of the Beggs Lake stock (UGM, J & J); and 3) disseminated and fracture-controlled chalcopyrite and pyrrhotite in cherty footwall rocks at the base of the Goodchild Lake Serpentinite (Violamac Cu-Ni). Teck-Cominco optioned the property to Saxony Explorations Ltd. who subsequently optioned it to Jonpol Explorations Inc. in 2001.

1998 to 2001: Four claims, totalling 51 units, were staked near Smoke Lake during 1998 for prospectors J.E. Bond, D.M. Michano, P.A. Moses, R.P. Renner, and K.G. Fenwick. Prospecting during 1998 by Peter Moses and Russell Renner discovered several high-grade float boulders within a stream valley east of Smoke Lake. These boulders consist of disseminated pyrite within angular to sub-round, metre-sized blocks of pink to dark grey, altered, equigranular, fine-grained monzonite crosscut by quartz and quartz-carbonate veinlets. Grab samples returned high-grade assays of up to 20.60 gpt Au (0.60 opt). The owners completed a program of prospecting, stripping, blasting, trenching, soil sampling, and rock sampling in 1999 and discovered 1 high grade Au float boulder, 2 bedrock Au occurrences, and 7 Zn+/-Cu+/-Ag+/-Co occurrences throughout the property. Two samples taken from the float boulder (which may be the Syenite 1 boulder discovered by Peter Moses in 1997) graded 3.90 and 21.05 gpt Au. The most significant of the various bedrock Au and base metals occurrences discovered during 1999 include: The East Budall Occurrence located 150 m northeast of Budall Lake (3.02 gpt Au from a 15-cm thick quartz vein); the Budall Lake Occurrence on the eastern shoreline of Budall Lake (1.97% Zn and 2810 ppm Cu); and the Moosehorn Lake Occurrence occurring within iron formation on the western shoreline of Moosehorn Lake (5.78% Zn, 12.4 ppm Ag, and 528 ppm Cu). The 5 remaining occurrences were within various iron formation units and contained up to 7170 ppm Zn, 5260 ppm Cu, and 3.80 ppm Ag. Additional prospecting was completed and 2 claims, totalling 32 units, were added to the property in 2001. The prospecting discovered several boulders containing anomalous amounts of Au and one high grade float boulder all in the immediate vicinity of Bond Lake. The high-grade boulder (Syenite #2) is located 60 m west of Bond Lake and assayed 14.52 gpt Au. The property was optioned to Freewest Resources Canada Inc. in late April 2002. Freewest added 7 more claims to the property (an additional 73 units), completed 2 phases of prospecting, a till sampling program, line cutting, ground magnetometer and IP surveys, geological mapping, backhoe trenching, channel sampling, and detailed trench mapping. The highlight of the Phase 1 exploration was the discovery of a high-grade, granodiorite float boulder (Crocker Float) crosscut by a stockwork of quartz veins and veinlets approximately 270 m north of Smoke Lake. This boulder graded 321.90 gpt Au, 70.70 ppm Ag, 2050 ppm Bi, 989 ppm Te, and 1940 ppm Cu. Phase 1 prospecting also discovered the Beggs Lake Occurrence (1.09 gpt Au), the RC South Occurrence (2.76% Zn, 6.92 ppm Ag), and several auriferous float boulders, in the vicinity of the Syenite #1 and #2 boulders, that graded between 1.01 and 7.57 gpt.

2002: Freewest Resources Canada Inc. acquired the Smoke Lake Property, in the northern portion of what is now the Black Raven Property, in April 2002. They completed a Phase I prospecting, mapping and till sampling program in June and July of that year. They were also operators for Jonpol Explorations Limited on the Goodchild Property, situated

adjacent to the Smoke Lake Property to the northeast and adjoining the west shore of Goodchild Lake. Jonpol had optioned the property from Saxony Explorations Ltd. in 2001. Saxony had optioned the property from Teck Cominco Limited, who had originally optioned the ground from Peter Moses of Marathon, Ontario in 1999. The Phase I program, focusing on the Smoke Lake Property, resulted in the discovery of 4 bedrock gold occurrences (1 being > 1gpt), 5 Zn occurrences (1 being > 1%) and 14 auriferous floats. As mentioned above, this included the high-grade granodiorite Crocker Float, and a number of boulders forming a train NE from Smoke Lake towards a possible source on the Goodchild Property. As a follow-up to the Phase I program, in August Freewest began a Phase II program which would involve line cutting, grid prospecting and mapping, ground magnetometer and IP surveys, trench excavating, and channel sampling. 288 grab samples were taken during the prospecting program – 153 from the Smoke Lake Property and 135 from the Goodchild Property. (MacTavish, 2003). 8 new Au occurrences were discovered on the Smoke Lake Property and 5 new Au occurrences were discovered on the Goodchild Property. Some more auriferous boulders were also found in the boulder train, and some source areas for the train were discovered on the Goodchild Property. Also, a total of 300 channel samples from the Smoke Lake Property and 351 from the Goodchild Property were taken, for a total of 651. The trenching program uncovered the gold-rich Super G vein hosted in mafic metavolcanics on the east shore of Smoke Lake. A grab sample there assayed 846.6 gpt Au and channel samples assayed up to 33.06 gpt/1.85m. (MacTavish, 2003) Freewest drilled 3 holes on the Smoke Lake Property in October. Two of them tested the Super G occurrence and one tested the Double Deuce occurrence within the Beggs Lake Stock, where sampling had yielded gold values up to 9.08 gpt. The first two holes intersected VMS style mineralization (samples graded up to 7321 ppm Zn and 627 ppm Cu, as well as 127 ppb Au) as well as the probable continuation of the Super G vein below surface (10.57 gpt/0.29 m). The third hole intersected altered monzonite with quartz stringers and veins from 23 to 135 m, with the best sample assaying 471 ppb Au/0.2 m. (Hawke, 2003 (3))

2002 and 2003: Jonpol began drilling in November 2002 and ended in January 2003. They drilled 3 holes beneath the high-grade (100.9 gpt) Lucky occurrence within the Beggs Lake Stock, and intersected altered monzonite and syenite dikes which returned assays of up to 2.88 gpt Au/1.14m. Another hole tested the UGM occurrence (up to 2.71 gpt Au), and returned assays of up to 3.94 gpt Au/0.42 m and 1.29 gpt Au/2.2 m, in a 90-metre section of altered and mineralized monzonite. The fifth hole tested an IP anomaly and intersected VMS style mineralization which returned assays of up to 888 ppm Cu/1.0 m and 8180 ppm Zn/0.42 m. (Hawke, 2003(1))

2003: Jonpol drilled 5 diamond drill holes on the Goodchild Property during September and October. Four holes tested IP targets and one tested the MZ gold occurrence. One hole testing an IP target and a historical occurrence returned 1.13 gpt Au/1 m, the best result of the program. The hole testing the MZ occurrence was drilled to hopefully intersect the contact between the monzonite and surrounding metavolcanics, but failed to reach the contact and yielded low gold values. (Hawke, 2003(2))

2004: CanAlaska Ventures Ltd., having previously optioned the ground from Freewest, conducted a program of detailed soil sampling, geological mapping and prospecting on the Smoke Lake Property from late August to mid-September, with the main purpose of locating source areas for the Crocker Float and the Smoke Lake Float boulders. Up to 632 ppb Au was obtained from soil sampling and re-sampling of the Super G vein returned a value of 100 gpt Au (MacLachlan and Londry, 2004).

From late October to mid-November, CanAlaska followed up these results with a DDH program consisting of six holes. The highest assay from drilling was 8092 ppb Au/0.8m, in a hole testing the possible strike extension of the Super G vein to the north, as well as soil anomalies, an IP trend and possible NE structure. Another hole testing the possible strike extension of the Smoke Lake Occurrence (on the north shore of Smoke Lake), as well as soil anomalies, IP and mag features, and a NE trending structure, returned a highest assay of 1587 ppb Au/1.0 m. (MacLachlan et al., 2004)

2004 to 2006: Prospectors Duncan Michano, Brian Gionet and Jamie Moses conducted a prospecting and trenching program on the Page Lake Property to follow up on the historical Kurt Kuhner showing, and to locate hematized quartz veins similar to that of the Super G showing at Smoke Lake. The main trench southwest of Page Lake contained green mica sericite schist and samples that assayed up to 23 gpt Au from a quartz-flooded sample, 6.20% Zn, and 34.8 gpt Ag. There were Mo anomalies throughout the trench. A pit 100m NW of the main trench yielded a sample which assayed 160 ppb, 42.6 gpt Ag, 30.7 ppm As, 179 ppm Bi, 3650 ppm Mo, 2770 ppm Pb, 15.35 ppm Te, and 464 ppm Zn, from an 8cm wide quartz vein. (Michano, 2004) In 2005, more work was done to the southwest and northeast along strike of the main trench, as well as in the northwest of the property to follow up on work done by Hemlo Gold. The best mineralization was discovered southwest of the main trench, assaying up to 298 ppb Au. (Michano, 2005)

In 2006, two claims were added to the Page Lake Property to result in the creation of the King Lake Property, owned by the previously mentioned prospectors as well as Russell Renner and James Bond. The intent of the 2006 program was to follow up on work done in the 2005 field season; however, a new showing was discovered southwest of King Lake, south of Page Lake, and it was decided to set up a camp there to carry out further work in

the area. Samples taken from subsequent trenching at the main showing assayed up to 281ppb Au, 2255ppm Cu and 23696ppm Zn. (Michano and Renner, 2006)

2011: Entourage Metals Ltd. acquired the Black Raven Property on February 28th, 2011. It consists of the Smoke Lake Property, a couple of claims adjoining it to the north, covering part of the Goodchild Lake Serpentinite, and a block of claims adjoining it to the south. All claims were under option from J. Bond, D. Michano, R. Renner, J. Moses B. Gionet, M. Dorval and K. Fenwick. Entourage conducted a Phase I exploration program between May 1st and July 29th, involving line cutting, reconnaissance sampling of historical trenches, prospecting, and a grid based soil survey. 19 reconnaissance channel samples, 38 grab samples and at least 1000 soil samples were taken. Several grab samples returned anomalous levels of Au and a trench sample from the Super G vein confirmed high grade. There were also several gold anomalies in the soil samples taken. (Labrecque, 2011)

2011 and 2012: Entourage Metals Ltd. conducted a diamond drill program between October 1st, 2011 and March 19th, 2012 on the Black Raven Property, based on the results of their earlier soil survey and geophysical data. The purpose was generally to test for the strike extension of the Super G vein and mineralization at the contact between the Beggs Lake stock and the surrounding metavolcanics. It is unknown as to whether this program intersected important Au mineralization. (Labrecque and Florek, 2012).

From June to October of 2017 a prospecting, mapping, line cutting and soil survey program was carried out on the Canadian Orebodies Inc. ("Orebodies") Black Raven property. Nine hundred and forty-nine grab samples were collected on the Black Raven claims. Lithologies sampled were predominantly felsic to intermediate intrusives, mafic volcanics and quartz veins. Of those 949 samples, 142 returned gold assays of 0.1 gpt Au or greater, 21 returned gold assays of 1.0 gpt Au or greater, and 5 samples returned gold assays of 10.0 gpt Au or greater, with one sample returning a bonanza grade of 109.0 gpt Au. Most auriferous samples were discovered within the Beggs Lake Stock, an oval-shaped monzonite-tonalite-granodiorite body approximately 3 km long and 1 km wide. Other auriferous samples were returned from the Page Lake area where gold grades up to 3160 ppb were returned from banded magnetic iron formation and where gold grades up to 867 ppb were returned from vuggy quartz in mafic volcanics. Gold-bearing veins are usually oriented N-S or NE-SW. In response to highly anomalous prospecting results, a grid was cut East of Roccian Lake in the fall. A small B-horizon soil geochemistry survey was carried out along the grid. Soil geochemistry results returned assays of up to 180 ppb Au.

(MacLachlan and MacConnell, 2017).

From May 11 to 16, 2018, Canadian Orebodies Inc. contracted Scott Hogg and Associated Ltd. to carry out an 800 km helicopter-towed aeromagnetic three axis gradient survey using a Heli-GT system. The 50m spaced lines were flown both in east-west and north-south directions centered over the Beggs Lake Stock portion of the property.

During the following June to September, 2018 field season, Canadian Orebodies Inc. carried out additional prospecting, geological mapping and limited soil sampling prior to the subject drilling program commencing.

5.0 GEOLOGICAL SETTING

5.1 Regional Geology

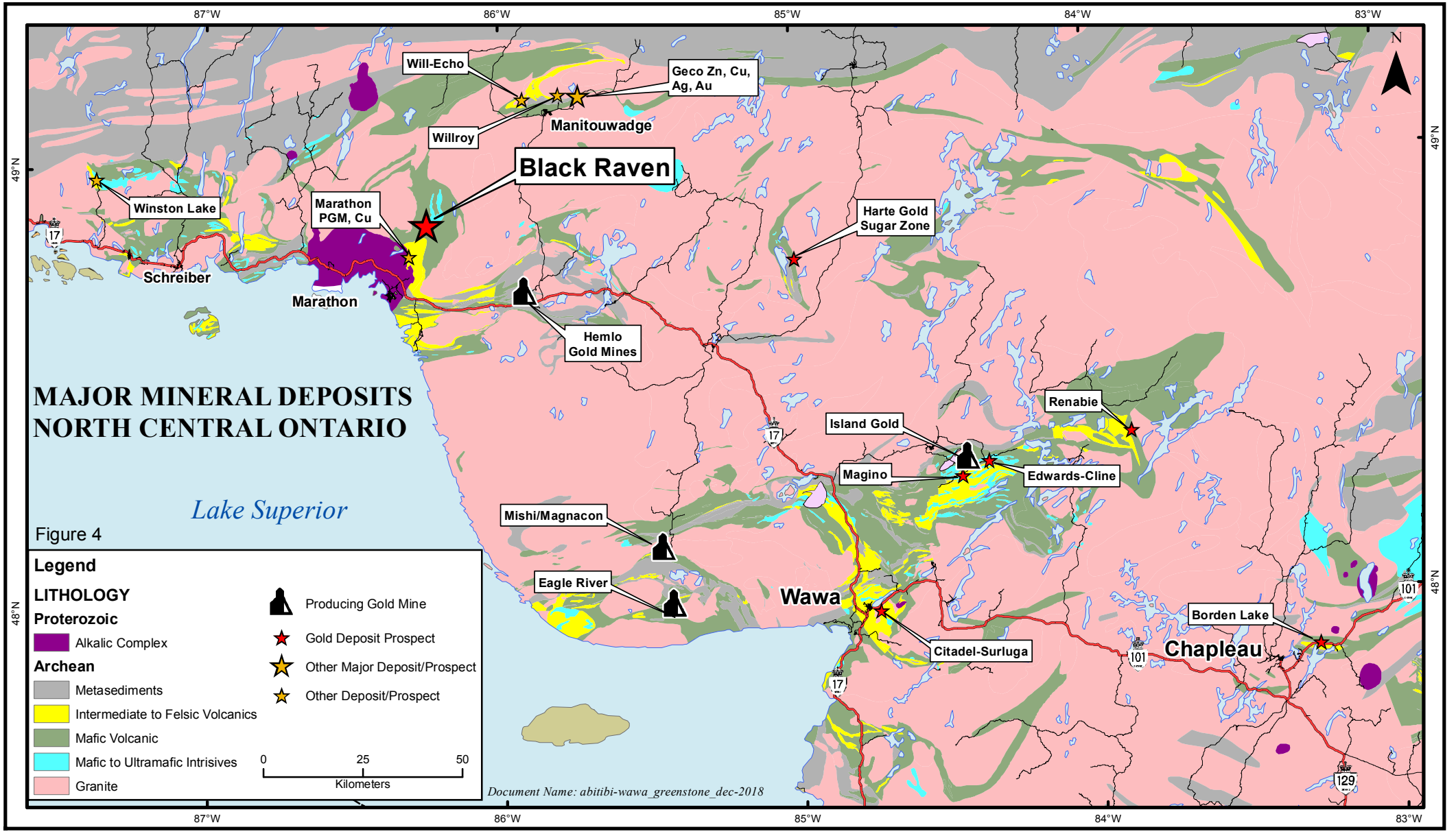
The Black Raven property is situated within the Schreiber-Hemlo greenstone belt of the Wawa Subprovince of the Canadian Shield. The property is located immediately east of the Port Caldwell alkalic complex which has intruded and separated the belt into two segments. The eastern segment of the Schreiber-Hemlo belt is comprised of an older Hemlo-Black River assemblage to the north and a younger Heron Bay assemblage to the south and both are separated by the Lake Superior-Hemlo Fault. The Black Raven claims lie within the northwestern folded section of the Hemlo-Black River assemblage which consists of pillowed to massive mafic volcanics, gabbroic, peridotitic and serpentinous intrusions, calc-alkalic mafic to felsic pyroclastic and volcanic flows, greywacke, iron formations and conglomerates (Williams, H.R. et at. 1991). The assemblage has been intruded by granodioritic-tonalitic intrusions and dykes, diabase and lamprophere dykes. All rocks have undergone amphibolite facies metamorphism.

5.2 Property Geology

The Black Raven property is underlain a folded sequence of pillowed, variolitic and massive amphibolitized mafic volcanic rocks, felsic to intermediate pyroclastic rocks and flows, minor ultramafic volcanic rocks and sediments consisting of greywackes, chert and iron formations. These units have been locally intruded by dykes and stocks of granodiorite-monzonite-tonalite in composition, the largest of which is the Beggs Lake stock located in the north-central part of the claim group. All Lithologies have been cut by younger diabase and lamprophere dykes.

5.3 Mineralization

Anomalous gold mineralization is widespread throughout the property area and occurs within ductile shear and brittle fracture zones, quartz veins, stringers and silica-biotite-carbonate alteration zones generally containing sulfides. The main quartz vein


87°W
86°W
85°W
84°W
83°W
49°N
48°N
N
Will-Echo
Geco Zn, Cu, Ag, Au
Manitouwadge
Willroy
Black Raven
Winston Lake
Marathon PGM, Cu
Harte Gold Sugar Zone
Schreiber
Marathon
Hemlo Gold Mines
MAJOR MINERAL DEPOSITS
NORTH CENTRAL ONTARIO
Lake Superior
Figure 4
Renabie
Island Gold
Magino
Edwards-Cline
Mishi/Magnacon
Eagle River
Wawa
Borden Lake
Citadel-Surluga
Chapleau
17
101
129
Legend
LITHOLOGY
Proterozoic
Alkalic Complex
Archean
Metasediments
Intermediate to Felsic Volcanics
Mafic Volcanic
Mafic to Ultramafic Intrisives
Granite
Producing Gold Mine
Gold Deposit Prospect
Other Major Deposit/Prospect
Other Deposit/Prospect
0
25
50
Kilometers
Document Name: abitibi-wawa_greenstone_dec-2018

orientations on the property include 005-015, 020-040, 060-070 and 340 degrees. Gold mineralization to the south and east of the Black Raven property at the Wire Lake prospect appears to be related to a north striking shear along competency contrasting lithological units of pillowed and coarser grained massive amphibolitized mafic volcanics. Whereas further north on the Black Raven property, large scale disruptive folding appears to have resulted in most quartz veins and stringers occurring predominantly along north striking fracture systems cross-cutting lithological contacts. These fracture controlled quartz vein and stringer zones on the Black Raven property occur within mafic volcanic rocks locally with disseminated pyrite and very fine visible gold (Super G and Marke Veins). The main Super G vein has a strike of north to north-northeast and a dip of 50 degrees to the west. This north striking fracture-controlled vein and stringer system traverses the Beggs Lake stock further north containing anomalous gold values up to 1.1 g/t in sub-outcrop and 5.3 g/t in float associated with chalcopyrite and pyrite mineralization with associated silicification, hematization, tourmaline and minor carbonate alteration.

6.0 DIAMOND DRILLING

6.1 Sample Collection, Preparation, Analyses and Security

BTW drill core was placed in core boxes and flown by helicopter to the core shack at Canadian Orebodies' Wire Lake camp where geotechnical and geological logging was performed by the author of this report. In sections of core to be sampled, the core was orientated before marking up samples with a maximum width of 1.0 metre and minimum of 0.4 metres in areas with potential gold mineralization. Geological boundaries were followed with the sampling where possible. Sample tags were inserted at the beginning of each sample and standards and blanks were randomly inserted within the sample sequence for QAQC. The drill core samples were then cut in half with a Vancon diamond core saw by a core technician with the bottom half of the core remaining in the box and top half being placed in a sample bag with a sample tag. The sample bags were then stapled shut and placed in rice bags and then sealed with zip ties. The rice bags were then flown out to a waiting vehicle at the Marathon airport and driven to Actlabs in Thunder Bay. The remainder of the drill core was then placed in racks for storage at the Wire Lake camp site.

6.2 Laboratory Methods

At Actlabs, the routine practice with rock and core is the entire sample is crushed to a nominal -2 mm, mechanically split to obtain a representative sample and then pulverized to at least 95% -105 microns (µm). All core samples were assayed for gold using a 50 gram

sample (1A2-50). Samples observed having visible gold within were assayed a second time using the Fire Assay-Metallic Screen method. The following are procedures used by Actlabs, Thunder Bay (Personal communication with Chris Turczak, Actlabs).

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.

1A4-1000 - Au Fire Assay-Metallic Screen

Metallic Screen

A representative 500 g split (1,000 g for Code 1A4-1000) is sieved at 100 mesh (149 micron) with fire assays performed on the entire +100 mesh and 2 splits on the -100 mesh fraction. The total amount of sample and the +100 mesh and -100 mesh fraction is weighed for assay reconciliation. Measured amounts of cleaner sand are used between samples and saved to test for possible plating out of gold on the mill. Alternative sieving mesh sizes are available but the user is warned that the finer the grind the more likelihood of gold loss by plating out on the mill.

Fire Assay

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.

Au is separated from the Ag in the doré bead by parting with nitric acid. The gold (roasting) flake remaining is weighed gravimetrically on a microbalance. Two splits on the -150 micron fraction are weighted and analyzed by fire assay with a gravimetric finish. A final assay is calculated based on the weight of each separated fraction and obtained Au values.

Code 1A4 (Fire Assay-Metallic Screen) Detection Limits (g/T)

Element	Detection Limit
Au	0.03

6.3 Diamond Drilling Program

From September 22 to October 9, 2018, an eight hole diamond drill program totalling 1137.3 metres was carried out on Canadian Orebodies Inc.'s Black Raven Property. An Astar helicopter supplied by Expedition Helicopters was used to move around one drill

and two alternating drill pads. Drilling operations were performed by Chibougamau Diamond Drilling Ltd. The core size drilled was BTW.

Five of the drill holes (BR-2018-001 to BR-2018-005) were completed on the north side of Smoke Lake within mafic volcanic host rocks in order to further test the historical Super G vein's high grade shoot which appeared to plunge steeply north. Several historical holes on the Super G vein have yielded intercepts of 44.57 g/t gold over 2.38 metres in hole BR-11-04 and 128.0 g/t gold over 0.3 metres in hole BR-11-01. Two drill holes (BR-2018-006 to BR-2018-007) were drilled approximately 1.5 km further north along strike in order to test the vein system within the Beggs Lake monzonite-granodiorite stock where anomalous gold values have been recently obtained from prospecting. No drill testing had been carried out previously in this area where a broad north-striking zone of quartz stringers had been outlined containing minor pyrite, chalcopyrite and molybdenum associated with fracture systems with hematite, carbonate alteration and silicification. One final hole (CL-2018-001) was drilled southeast of Contact Lake testing a series of easterly striking quartz veins where recent prospecting had yielded grab samples up to 6.08 g/t gold. All collars were spotted using a GPS (NAD 83) and in some cases in close proximity to casings of historical holes. The historical holes in the area only used dip data from acid tests. The drill hole statistics can be seen in Table 1. Drill holes BR-2018-001 to 007 were logged by Henry Hutteri P.Geo. and the last hole, CL-2018-001 was logged by Stephen MacConnell P.Geo. All drill logs and sections are in Appendix B. A summary of daily work activities can be seen in Appendix G.

BR-2018-001 was collared at UTM 555765E, 5412367N and was drilled at an azimuth of 135 degrees and a dip of -45 down to a depth of 270.3 metres. The hole intersected primarily massive and pillowed variolitic mafic volcanic rocks with several narrow interflow sediments consisting of cherty sediments and iron formation containing varying amounts of pyrite and pyrrhotite. A few fault zones and a few felsic, intermediate biotitic and lamprophere dykes were also observed. One 3-5mm quartz stringer containing one very fine speck of visible gold was noted near the top of the hole within interval 33.8 to 34.2 metres, probably representing the historical parallel Marke Vein. This interval yielded 2.32 g/t gold over 0.4 metres. One narrow interval of chlorite-biotite altered, sheared and brecciated interflow cherty sediments with 5% pyrite and pyrrhotite from 46.8 to 47.8 metres yielded an assay result of 37.2 g/t gold over 1.0 metres. A second quartz veined zone, probably representing another parallel Super G type Vein and containing 15% quartz stringers with 2-3% disseminated pyrite as disseminated haloes was encountered at 146.9 to 148.0 metres. This interval yielded 8.08 g/t gold over 1.1 metres. A third weaker narrow zone containing a few <1-2cm quartz stringers with <1-1% disseminated pyrite and minor shearing was observed at 196.4 to 196.8 metres. Due to its location, this narrow

zone more than likely represents a weaker extension of the historical Super G Vein. It yielded an assay result of 2.51 g/t gold over 0.4 metres.

BR-2018-002 was collared at UTM 555820E, 5412368N and was drilled with an azimuth of 143 degrees and a dip of -48 degrees down to a depth of 180.0 metres. The hole intersected relatively unaltered pillowed variolitic and massive mafic volcanic flows with minor faulting, two biotitic intermediate dykes, one lamprophere dyke and narrow interflow cherty sediments with minor pyrite and pyrrhotite. A few quartz stringers with associated disseminated pyrite within interval 137.1 to 138.3 metres yielded and assay result of 2.39 g/t gold over 1.2 metres. The Super G Vein was intersected from 142.1 to 142.7 metres and consisted of 40% grey silica-pyrite seams/veins meandering through the section at 25 degrees TCA containing 10% fine disseminated pyrite and numerous very fine specks of visible gold. This interval yielded an assay of 443.0 g/t gold over 0.6 metres.

BR-2018-003 was collared at UTM 555820E, 5412368N on the same setup as the previous hole and was drilled with an azimuth of 143 degrees and a dip of -62 degrees down to a depth of 189.0 metres. The hole intersected relatively unaltered pillowed variolitic and massive mafic volcanic flows, one fault zone, one brecciated interflow chert unit with minor pyrite and pyrrhotite and two biotitic intermediate dykes. A weak quartz stringer zone with disseminated pyrite from 108.0 to 108.5 metres was encountered yielding 6.99 g/t gold over 0.5 metres. The Super G Vein was intersected from 120.1 to 120.6 metres and consisted of two 5 and 15cm, locally brecciated quartz veins with 5-10% fine disseminated pyrite mainly within silicified wall rock. A few very fine specks of visible gold were noted with assay results yielding 34.6 g/t gold over 0.5 metres. A second lower quartz veined zone was intersected from 130.9 to 131.5 metres containing 35% quartz veins and stringers to 8 cm. The 8cm vein was observed to have 1-2% disseminated pyrite, trace chalcopyrite and trace galena associated with it but overall sulfides were <1-1%. This interval returned 9.11 g/t gold over 0.6 metres.

BR-2018-004 was collared at UTM 555921E, 5412460N and was drilled with an azimuth of 080 degrees and a dip of -60 degrees down to 75.0 metres. The hole intersected primarily massive mafic volcanic flows, one shear fault zone, one narrow diabase dyke and two narrow quartz veined zones. The first veined zone from 38.3 to 38.7 metres contained 30% quartz stringers and one 10cm sheared quartz vein within shear mafic volcanics immediately below a sheared fault zone. The wall rock and veins contained <1% disseminated pyrite. In addition, the sheared 10cm vein contained trace chalcopyrite and a few very fine specks of visible gold. This interval yielded an assay of 5.03 g/t over 0.4 metres. The Super G zone from 55.6 to 56.0 metres consisted of a 30cm lightly sheared and brecciated quartz vein containing <1% disseminated pyrite within weakly biotite

altered wall rock inclusions within the vein. Trace pyrite and galena was also observed within the quartz vein material which returned an assay result of 7.69 g/t gold over 0.4 metres.

BR-2018-005 was collared at UTM 555921E, 5412460N on the same setup as the previous hole and was drilled with an azimuth of 080 degrees and a dip of -80 degrees down to a depth of 90.0 metres. The hole intersected primarily massive mafic volcanic flows, two shear/fault zones, and one interflow sediment unit consisting of chloritic schist with chert fragments and minor pyrite. A weak Super G vein was intersected from 62.80 to 63.4 metres and consisted of a weakly biotite-chlorite-carbonate altered shear zone with one 3.5cm quartz stringer containing trace pyrite. The weak intersection yielded an assay of 0.65 g/t gold over 0.6 metres.

BR-2018-006 was collared at UTM 556078E, 5414042N within the Beggs Lake stock and was drilled with an azimuth of 090 degrees and a dip of -45 degrees down to 105.0 metres. The hole intersected primarily massive monzonite/granodiorite which was variably hematized red and silicified with scattered 1-3% <1-3cm quartz stringers with minor associated disseminated pyrite and trace chalcopyrite and molybdenum. The hole intersected a moderately bleached and silicified zone adjacent to fault and mafic dyke structure with local 2-3% fine disseminated pyrite from 48.2 to 52.3m with no significant gold values. The largest quartz vein was a 12cm vein within hematite-silicified monzonite containing 1% pyrite from within interval 98.0 to 98.6m which yielded only 98 ppb gold. The highest gold value obtained from within quartz stringers in the hole was 284 ppb gold over 1.0 metre.

BR-2018-007 was collared at UTM 556040E, 5413870N approximately 175 metres further south and was drilled with an azimuth of 090 degrees and a dip of -45 degrees down to 111.0 metres. The hole intersected primarily massive variably hematized red and silicified monzonite/granodiorite, two mafic dykes, two lamprophere dykes and one fault zone. Scattered 1-5% <1-4cm quartz stringers with minor associated disseminated pyrite and trace chalcopyrite and molybdenum occurred throughout much of the hole. Two larger quartz veined zones were intersected from 53.7 to 55.7 metres and 66.5 to 67.1 metres. The first consisted of several 1-3cm quartz stringers and one 18cm quartz vein (30% quartz) containing some red feldspar, minor pyrite and chalcopyrite. The one 18cm vein however, was observed to contain a few very coarse clusters of chalcopyrite, minor pyrite, and molybdenum. This interval yielded an assay of 1.11 g/t gold over 2.0 metres. The second lower zone contained a 46cm quartz vein with tourmaline and silicified wall rock inclusions with <1% disseminated pyrite. This yielded a nominal 245 ppb gold over 0.6 metres.

N

555400 555600 555800 556000 556200

5431200 5431400 5431600 5431800 5432000

LORNA
LAKE
AREA

BR-2018-004
Az: 80°
Dip: -60°

BR-2018-004
EOH: 75m

BR-2018-005
Az: 80°
Dip: -80°

BR-2018-005
EOH: 90m

BR-2018-001
Az: 135°
Dip: -45°

BR-2018-002
Az: 143°
Dip: -48°

BR-2018-003
Az: 143°
Dip: -62°

BR-2018-003
EOH: 189m

BR-2018-002
EOH: 180m

EOH: 270.3m

Smoke Lake

Legend

- Diamond drill hole collar location
- Diamond drill hole horizontal trace projection
- mining claim boundary
- township boundary
- hydro electric line
- wetlands
- lakes
- streams
- elevation contours

TN
GN
0°50'
11°16'
Magnetic North
Grid North (UTM)

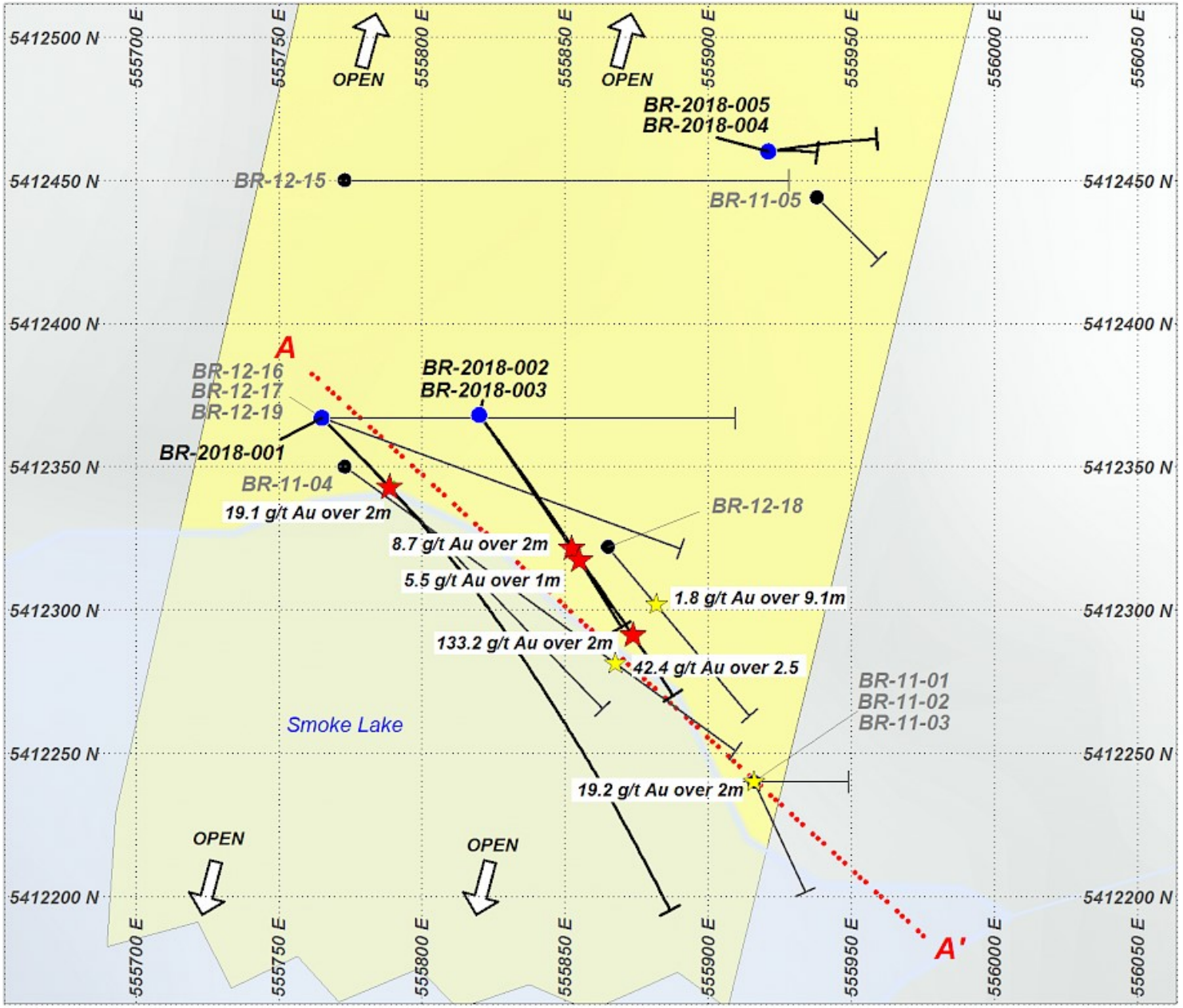
0 100 200
Meters
Scale 1:1,000

CANADIANCREEKCOLIES

Black Raven Property
Smoke Lake Area
2018 Diamond Drill Hole Plan

Date: December, 2018 File: br2018_smoke_lk_ddh_pln

Projection: NAD83 Zone 16N



HOLES PLOTTED

TOTAL 5

BR-2018-001 BR-2018-002 BR-2018-003 BR-2018-004 BR-2018-005

Legend

Canadian Orebodies 2018 drilling results

Entourage Gold 2011-2012 drilling results

Smoke Lake Gold System

PLAN SPECS:

REF. PT. E, N	555900 m	5412000 m
EXTENTS	409.8 m	349.3 m

SCALE 1 : 1500

(m)

-20 0 20 40 60

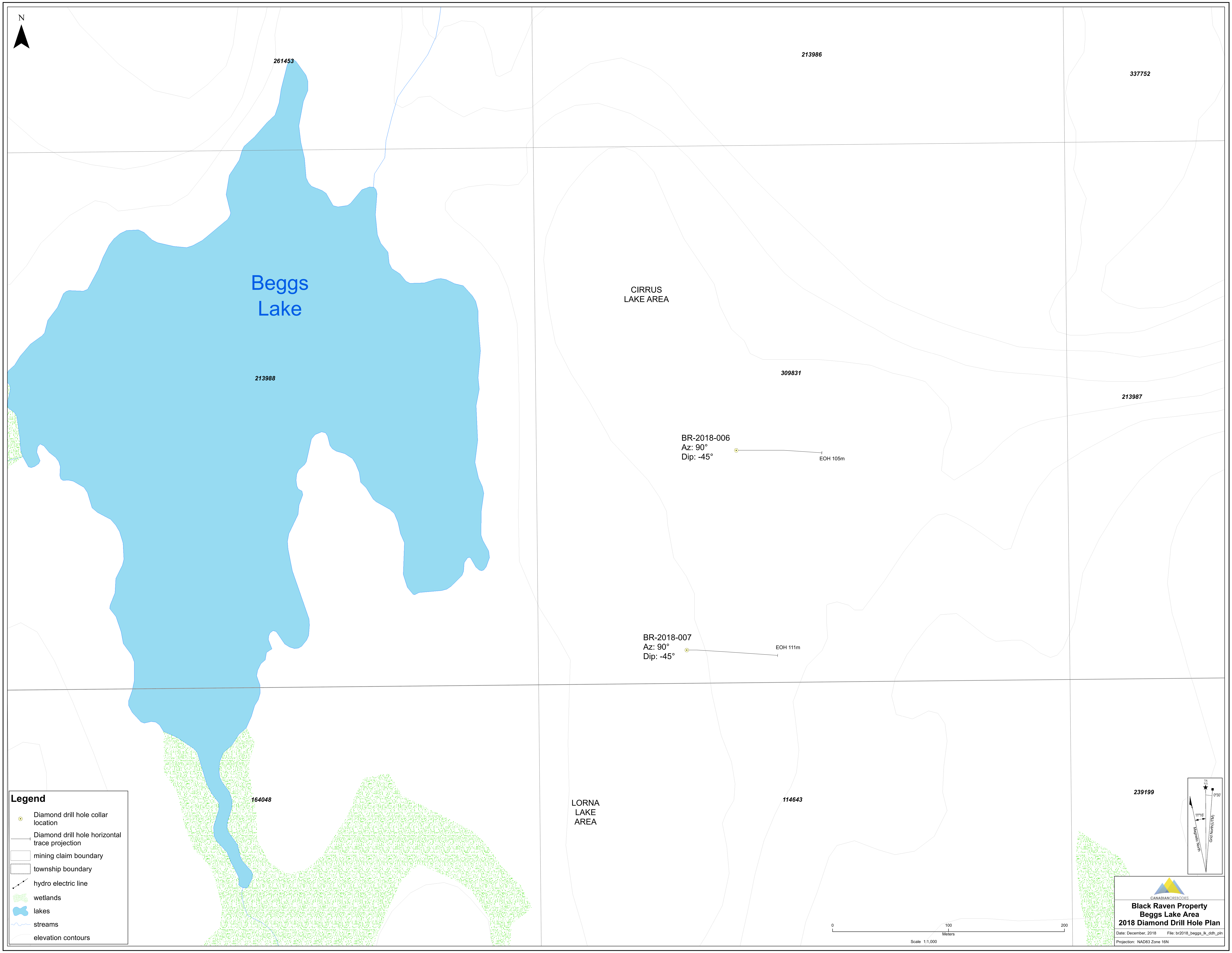
WGS 84 / UTM zone 16N

N W E S

Canadian Orebodies

Black Raven

2018 Diamond Drilling


N
261453
213986
337752
Beggs
Lake
CIRRUS
LAKE AREA
213988
309831
213987
BR-2018-006
Az: 90°
Dip: -45°
EOH 105m
BR-2018-007
Az: 90°
Dip: -45°
EOH 111m
164048
LORNA
LAKE
AREA
114643
239199
Legend
Diamond drill hole collar location
Diamond drill hole horizontal trace projection
mining claim boundary
township boundary
hydro electric line
wetlands
lakes
streams
elevation contours
Magnetic North
Grid North(UTM)
0
100
200
Meters
Scale 1:1,000
CANADIANOREBODIES
Black Raven Property
Beggs Lake Area
2018 Diamond Drill Hole Plan
Date: December, 2018
File: br2018_beggs_lk_ddh_pln
Projection: NAD83 Zone 16N

CL-2018-001 was collared at UTM 562800mE, 5410740mN and was drilled with an azimuth of 180 degrees and a dip of -45 degrees down to 117.0 metres. This hole was collared in altered mafic volcanics and apart from a minor interval of intermediate biotitic intrusive rock from 20.3 to 26.9m, it continued throughout the remainder of the drill hole. These altered mafic volcanics were observed to be moderate to locally strongly sheared at 20-25 degrees to core axis, with local minor insitu brecciation with 1-5mm quartz fracture fillings. Moderate pervasive chlorite and locally moderate biotite alteration was observed with minor associated hematite within the breccia. Occasional course grained granodiorite dykes with sharp contacts at 25 degrees to core axis were also present. Trace to locally 1% very fine-grained pyrite was associated with the brecciated areas. The intermediate biotitic intrusive from 20.3 to 26.9m was light grey-white (locally pink), course grained, massive to weakly foliated at 51 degree to core axis with local hematite staining and no sulfides. No significant assay results were returned from this hole with the greatest result being 237 ppb gold over 1.0 metres.

Table 1. Diamond Drilling Statistics (NAD 83)

Hole No.	Easting	Northing	Elevation	Azimuth	Dip	Length (m)
BR-2018-001	555765	5412367	316	135	-45	270.3
BR-2018-002	555820	5412368	310	143	-48	180
BR-2018-003	555820	5412368	310	143	-62	189
BR-2018-004	555921	5412460	316	80	-60	75
BR-2018-005	555921	5412460	316	80	-80	90
BR-2018-006	556078	5414042	318	90	-45	105
BR-2018-007	556040	5413870	318	90	-45	111
CL-2018-001	562800	5410740	320	180	-45	117

562400 562600 562800 563000 563200 563400

5411200 5411000 5410800 5410600 5410400

N

285773

219011

153057

213209

LORNA
LAKE
AREA

125064

329118

CL-2018-001
Az: 180°
Dip: -45°

EOH: 117m

250354

316932

218384

Legend

- Diamond drill hole collar location
- Diamond drill hole horizontal trace projection
- mining claim boundary
- township boundary
- hydro electric line
- wetlands
- lakes
- streams
- elevation contours

0 100 200
Meters
Scale 1:1,000

TN
G.N.
0°30'
11°16'
Magnetic North
Grid North (UTM)

CANADIANOREBODIES

Black Raven Property
Contact Lake Area
2018 Diamond Drill Hole Plan

Date: December, 2018 File: br2018_contact_lk_ddh_pln

Projection: NAD83 Zone 16N

7.0 Conclusions and Recommendations

A total of five holes were drilled to further test the Super G Vein system for continuity and the possibility of high grade shoots. Significant gold values were obtained in four of the first 5 holes drilled in the area of the historical Super G Vein area where quartz veining had associated fine sulfides. These intercepts include 37.2 g/t over 1.0m, 8.08 g/t over 1.1m, 2.51 g/t over 0.4m, 443.0 g/t over 0.6m, 6.99 g/t over 0.5m, 9.11 g/t over 0.6m, 34.6 g/t over 0.5m, 5.03 g/t over 0.4 metres and 7.69 g/t over 0.4 metres. It appears possible that there are two separate auriferous shoots along the Super G trend just north of Smoke Lake, however more drilling is required and warranted to determine their size and depth potential.

Two additional holes were drilled approximately 1.5 km further north along strike of the mineralized corridor within the Beggs Lake stock. A broad mineralized quartz stringer zone was intersected within the two holes yielding numerous anomalous gold values, however the best assay value obtained was 1.11 g/t over 2.0 metres. It is recommended that a program of limited soil sampling and Induced Polarization surveying be carried out on 100 metre spaced east-west lines selectively along this mineralized corridor in search of additional high grade shoots. The values obtained from drill testing the Beggs Lake Stock mineralized stringer zones, although not exceptional, warrant further work since they may possibly be the source of the high grade Crocker Float.

One final hole was drilled approximately 7 km further east testing the vein zone southeast of Contact Lake. A broad zone of altered mafic volcanics was encountered with no significant quartz veining or gold values. No additional surface work or diamond drilling is warranted unless a site visit explains the discrepancy between the lack of quartz veining on surface and in drill hole CL-2018-001.

8.0 References

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Statement of Qualifications

I, Henry P. Hutteri, of 36 Warwick Ct, Kitchener, Ontario, N2E 2P1 hereby certify that:

I am a geologist currently employed by Canadian Orebodies as a senior geologist on a contract basis.

I am a graduate of Laurentian University, Sudbury B.Sc.H Geology in 1985.

I have practiced my profession as a geologist for over 30 years.

I am a member in good standing in the Association of Professional Geoscientists of Ontario.

I have personal knowledge of the work carried out on the property as described in this report.

I have no personal interest in the property or securities of Canadian Orebodies Inc.

Dated this 28th day of December, 2018 at Kitchener, Ontario.

Henry P. Hutteri P.Geo.

Appendix A

List of Cells where Drilling was Performed.

Black Raven Property Cells Drilled On

250354

309831

329118

211140

139237

307227

Appendix B

Drill Logs, Sections and Abbreviations used.

BR-2018-001
555761.595mE, 5412368.078mN
Azimuth: 135°, Dip -45°
Elevation: 309.06m ASL

SURFACE

CAS

Smoke Lake

Claim #211140

1

4

1

6

1

QTZ

1

4

1

8 8 12

1

SG

1

BR-2018-001
EOH: 270.30m

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Hole BR-2018-001
is covered by permit #PR-16-11008A

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Smoke Lake Area
Diamond Drill Hole Section 1
Looking 53°, 20m Section Width

Date: December, 2019 File: SEC1_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

DRILL HOLE REPORT

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth: 135
Dip: -45
Length: 270.3
Started: 23-Sep-18
Completed: 26-Sep-18
Logged: 23-Sep-18

Casing

Length: 0
Pulled: no
Capped: yes
Cemented: no

Core

Dimension: BTW
Storage: Wire Lake
Section:
Hole Type DD

Location

Township: LORNA LAK
Claim No.: 211140
NTS: 63N/02
Hole: SURFACE

Other

Logged by: Henry Hutteri
Relog by:
Contractor: Chibougamau
Spotted by: Henry Hutteri
Surveyed: yes
Surveyed by: GPS
Geophysics:
Geophysic Contractor:
Left in hole: Casing
Making water: no
Multi shot survey: no

Comment: Marke Vein within 33.8 to 34.2m as 3-5mm qs with py,vg.
Weak Vein qs zones with py at 146.9-148.0m and
Weak Super G at 196.4-196.8

Coordinate - Gemcom

East: 555765
North: 5412367
Elev.: 316

Coordinate - UTM

East: 555765
North: 5412367
Elev.: 316
Zone: 16 **NAD:** NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	135.00	-45.00	C	☑	
18.00	135.10	-45.40	S	☑	55868
69.00	138.90	-42.90	S	☑	55679
120.00	148.20	-40.00	S	☐	57744
140.00	146.10	-37.80	S	☑	55708
171.00	146.60	-36.70	S	☐	58363
180.00	147.50	-35.70	S	☑	56260
222.00	150.50	-32.60	S	☑	55693
270.30	153.20	-29.30	S	☑	55711

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	2.50	**CAS** ***Casing*** Casing					
2.50	45.15	**1** ***Mafic Volcanics*** Dark green, fg, massive mafic volcanic with minor hairline calcitic fracture-fillings and a few 1cm epidote+/- qtz+/- carb stringers at 20-30 deg TCA. Minor diss py and rare qs with minor associated py appearing below 27.9m. Blocky core.	A757001	17.50	18.50	1.00	3
			A757002	18.50	19.50	1.00	3
			A757003	19.50	20.50	1.00	3
			A757004	26.90	27.90	1.00	3
			A757005	27.90	28.30	0.40	39
			A757007	28.30	29.30	1.00	3
			A757008	29.30	30.30	1.00	186
			A757009	30.30	31.30	1.00	98
		Minor Interval: 18.50 19.50 1 *Mafic Volcanics* A few qtz-epidote stringers at 35 deg TCA	A757010	31.30	32.30	1.00	3
			A757011	32.30	33.30	1.00	3
		Minor Interval: 27.90 28.30 1 *Mafic Volcanics* 1cm qs with weak diss py halo at 70 deg TCA.	A757013	33.30	33.80	0.50	43
			A757014	33.80	34.20	0.40	2320
		Minor Interval: 33.80 34.20 Mvn *Marke Vein* 3-5mm qs with a few mg py cubes and minor fg diss py at 60 deg TCA no wallrock altn but one vvfg barely visible speck vg. Possible Marke Vein.	A757015	34.20	35.20	1.00	3
			A757016	35.20	36.20	1.00	3
			A757017	36.20	37.20	1.00	3
			A757018	37.20	38.20	1.00	3
			A757019	44.20	45.20	1.00	3

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
45.15	48.80	**4** ***Interflow sediments***	A757021	45.20	46.00	0.80	53
		Interbedded sheared cherty sediments with fg diss to fine py and po seams up to 5% locally within dominant massive mafics. Sediments are locally sheared, dark green with chl+/- bio altn with round <1-2cm knots of white-grey chert. Foliation 25 to 35 deg TCA.	A757022	46.00	46.80	0.80	3
			A757024	46.80	47.80	1.00	37200
			A757025	47.80	48.80	1.00	987
48.80	87.70	**1** ***Mafic Volcanics***	A757026	48.80	49.80	1.00	40
		Fine to very fine grained, dark green, massive and pillowed variolitic flows with fine calcitic fracture-fillings and a few 1-2cm qtz-epidote stringers at 0-30 deg TCA. A few fine 1mm qtz and qtz-cal stringers with minor associated py within section 52.8 to 53.2m. Very little observed py overall. 1-2cm qtz-fsp stringer at 40 deg TCA at 79.1m with 1 cg py cube in WR in sample. Fine clayey flt gouge seams at 60 deg TCA from 78.9 to 79.4m. Blocky core.	A757027	49.80	50.80	1.00	7
			A757028	50.80	51.80	1.00	8
			A757030	51.80	52.80	1.00	96
			A757031	52.80	53.20	0.40	217
			A757032	53.20	54.20	1.00	3
			A757033	59.50	60.50	1.00	3
			A757034	78.90	79.40	0.50	5
		Structure Maj.: ***Type/Core Angle*** ***Comment***					
		61.70 - 61.75 G 30 30-50 deg TCA					
87.70	92.60	**6** ***Fault, Shear Zone***					
		Very broken up core with top 10cm a strong cemented bx seam with fine clayey fracs throughout. Core loss.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
92.60	146.90	**1** ***Mafic Volcanics*** Fine to med grained, massive, dark green mafic volcanic with minor patchy epidote and epidote +/- stringers. Three 1-5mm qs with minor py, cpy at 20, 40 and 60 deg TCA within interval from 94.5 to 95.5m. Trace py overall, occasional calcite frac fillings at 0-30 deg TCA and very rare qs. Two 1-3cm 40 and 50 deg qtz-cb stringers with tr py at 109.6 to 110.4m. 5cm qs at 80 deg TCA with clay slips at ctcs at 120.7m. 10cm marbled patchy qtz-calcite irregular vein at 137.7m with 1% fg py in inclusions and wallrock. 1-2% py-po within interval from 140.0 to 140.5m as fine cal-py stringers/frac-fillings and patches 20 deg TCA.	A757035	93.50	94.50	1.00	3
			A757036	94.50	95.50	1.00	3
			A757037	95.50	96.50	1.00	3
			A757038	108.60	109.60	1.00	3
			A757039	109.60	110.40	0.80	3
			A757041	110.40	111.40	1.00	3
			A757042	120.50	121.00	0.50	977
			A757043	136.50	137.50	1.00	219
			A757044	137.50	138.00	0.50	944
			A757045	138.00	139.00	1.00	472
			A757047	139.00	140.00	1.00	114
			A757048	140.00	140.50	0.50	14
			A757049	140.50	141.50	1.00	3
			A757050	145.00	146.00	1.00	3
			A757051	146.00	146.90	0.90	18
146.90	148.00	**QTZ** ***Quartz Vein*** Weak to mod fracture/shearzone with 15% <1-2cm concordant qtz stringers containing minor fg py but with variable 1-2% to 3-5% vfg diss py haloes in locally buff wk sil-bio altered mafic wallrock. Similarities to other historical Super G multiple qtz stringer-py intersections but intersected earlier than expected in model. Shear/frac/qs at 45 to 60 deg TCA. 2-3 py overall.	A757052	146.90	147.50	0.60	2740
			A757053	147.50	148.00	0.50	14500

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
148.00	165.10	**1** ***Mafic Volcanics*** Fine to medium grained, dark green, massive mafic volcanic. Minor fine calcitic fracture-fillings.	A757055	148.00	149.00	1.00	23
			A757056	149.00	150.00	1.00	13
			A757057	163.50	164.50	1.00	3
			A757058	164.50	165.10	0.60	3
165.10	166.65	**4** ***Interflow sediments*** Chert-py-po iron formation. Somewhat sheared, and locally marbled and deformed, brecciated. Massive py-po over 30cm approx. Magnetic.	A757059	165.10	166.10	1.00	188
			A757060	166.10	166.70	0.60	98
166.65	175.20	**1** ***Mafic Volcanics*** Massive amygdaloidal mafic volcanics with a few shallow angled calcite stringers and fine fracture-fillings.Blocky bottom approaching flt.	A757061	166.70	167.70	1.00	3
			A757062	170.40	170.90	0.50	3
175.20	176.60	**6** ***Fault, Shear Zone*** Very broken up fault/fracture zone. 10-30 deg breaks.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
176.60	177.50	**8** ***Felsic dyke***					
		Medium grey-red, weak to mod siliceous, hard. Fg, weakly hematitic felsic dyke at 40 deg TCA.					
177.50	179.85	**1** ***Mafic Volcanics***	A757063	178.10	178.70	0.60	8
		Massive fg dark green mafic volcanic.					
179.85	180.60	**12** ***Lamprophere***					
		Dark grey-brown, fg and slightly porphyritic, massive with strong bio within. Mod to strongly magnetic.					
180.60	196.40	**1** ***Mafic Volcanics***	A757065	194.40	195.40	1.00	3
		Massive fg, dark green mafic volcanic with local calcite stringers, patches and fracture-fillings. Rare py specks.	A757066	195.40	196.40	1.00	5

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
196.40	196.80	**SG** ***Super G Zone*** A few <1 to 2cm qs with <1-1% fg diss py within qs and as haloes to qs in dark grey mafic wallrock. Weak shearing around the one 1-2cm qs. Qtz stringers at 60 deg TCA. Possible weak Super G vein extension-approximately where expected.	A757067	196.40	196.80	0.40	2510
196.80	270.30	**1** ***Mafic Volcanics*** Dark green very fine grained, massive mafic volcanic with minor very fine calcite frac-fillings. Gradual coarsening below 216m to fg to mg and massive. Rock appears more competent with only minor blocky intervals due to sub-parallel fracs. Several narrow interbedded chert-py iron formations interbedded within mafics below 236.7m. 5cm slightly irregular qtz-cb-chl veinlet at 265.2m with trace py.Sheared/brecciated qtz-calcite stringers within interval from 266.7 to 267.2m with trace py, 10cm core loss, minor rubble and fine clay slips at 50deg TCA. Bit blew at 270.3m EOH.	A757068	196.80	197.80	1.00	67
			A757069	197.80	198.80	1.00	3
			A757070	236.70	237.30	0.60	10
			A757072	241.60	242.00	0.40	5
			A757073	243.50	244.00	0.50	18
			A757074	244.00	245.00	1.00	10
			A757075	247.70	248.80	1.10	16
			A757076	264.00	265.00	1.00	3
			A757077	265.00	265.50	0.50	6
			A757079	265.50	266.70	1.20	10
			A757080	266.70	267.20	0.50	198
			A757081	267.20	268.20	1.00	3
		Minor Interval: 201.60 203.35 5B *Intermediate Biotitic Intrusive* Medium grey, speckled, relatively massive, hard, medium grained and slightly porphyritic with biotite. Contacts at 60 and 45 deg TCA with a few cm of shearing at ctc's.					
		Minor Interval: 236.70 237.30 4 *Interflow sediments* Banded chert-py-po iron formation at 40-80 deg TCA. Minor shearing within. Minor irregular patch also within interval from 241.55 to 242.0m.					
		Minor Interval: 243.50 244.95 4 *Interflow sediments* Banded, fairly pristine looking lean chert-py-po-mag iron formation. Patchy mag. Bedding at 50-70 deg TCA.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
		Minor Interval:					
		247.65 248.80 4 *Interflow sediments*					
		Banded chert-py-mag iron formation with 50 deg banding at top and more contorted sulfide rich bottom end.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	2.50	**CAS** ***Casing*** Casing					
2.50	45.15	**1** ***Mafic Volcanics*** Dark green, fg, massive mafic volcanic with minor hairline calcitic fracture-fillings and a few 1cm epidote+/- qtz+/- carb stringers at 20-30 deg TCA. Minor diss py and rare qs with minor associated py appearing below 27.9m. Blocky core. **Minor Interval:** 18.50 19.50 1 *Mafic Volcanics* A few qtz-epidote stringers at 35 deg TCA **Minor Interval:** 27.90 28.30 1 *Mafic Volcanics* 1cm qs with weak diss py halo at 70 deg TCA. **Minor Interval:** 33.80 34.20 Mvn *Marke Vein* 3-5mm qs with a few mg py cubes and minor fg diss py at 60 deg TCA no wallrock altn but one vvfg barely visible speck vg. Possible Marke Vein.	A757001	17.50	18.50	1.00	3
			A757002	18.50	19.50	1.00	3
			A757003	19.50	20.50	1.00	3
			A757004	26.90	27.90	1.00	3
			A757005	27.90	28.30	0.40	39
			A757007	28.30	29.30	1.00	3
			A757008	29.30	30.30	1.00	186
			A757009	30.30	31.30	1.00	98
			A757010	31.30	32.30	1.00	3
			A757011	32.30	33.30	1.00	3
			A757013	33.30	33.80	0.50	43
			A757014	33.80	34.20	0.40	2320
			A757015	34.20	35.20	1.00	3
			A757016	35.20	36.20	1.00	3
			A757017	36.20	37.20	1.00	3
			A757018	37.20	38.20	1.00	3
			A757019	44.20	45.20	1.00	3

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
45.15	48.80	**4** ***Interflow sediments***	A757021	45.20	46.00	0.80	53
		Interbedded sheared cherty sediments with fg diss to fine py and po seams up to 5% locally within dominant massive mafics. Sediments are locally sheared, dark green with chl+/- bio altn with round <1-2cm knots of white-grey chert. Foliation 25 to 35 deg TCA.	A757022	46.00	46.80	0.80	3
			A757024	46.80	47.80	1.00	37200
			A757025	47.80	48.80	1.00	987
48.80	87.70	**1** ***Mafic Volcanics***	A757026	48.80	49.80	1.00	40
		Fine to very fine grained, dark green, massive and pillowed variolitic flows with fine calcitic fracture-fillings and a few 1-2cm qtz-epidote stringers at 0-30 deg TCA. A few fine 1mm qtz and qtz-cal stringers with minor associated py within section 52.8 to 53.2m. Very little observed py overall. 1-2cm qtz-fsp stringer at 40 deg TCA at 79.1m with 1 cg py cube in WR in sample. Fine clayey flt gouge seams at 60 deg TCA from 78.9 to 79.4m. Blocky core.	A757027	49.80	50.80	1.00	7
			A757028	50.80	51.80	1.00	8
			A757030	51.80	52.80	1.00	96
			A757031	52.80	53.20	0.40	217
			A757032	53.20	54.20	1.00	3
			A757033	59.50	60.50	1.00	3
			A757034	78.90	79.40	0.50	5
		Structure Maj.: ***Type/Core Angle*** ***Comment***					
		61.70 - 61.75 G 30 30-50 deg TCA					
87.70	92.60	**6** ***Fault, Shear Zone***					
		Very broken up core with top 10cm a strong cemented bx seam with fine clayey fracs throughout. Core loss.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
92.60	146.90	**1** ***Mafic Volcanics*** Fine to med grained, massive, dark green mafic volcanic with minor patchy epidote and epidote +/- stringers. Three 1-5mm qs with minor py, cpy at 20, 40 and 60 deg TCA within interval from 94.5 to 95.5m. Trace py overall, occasional calcite frac fillings at 0-30 deg TCA and very rare qs. Two 1-3cm 40 and 50 deg qtz-cb stringers with tr py at 109.6 to 110.4m. 5cm qs at 80 deg TCA with clay slips at ctcs at 120.7m. 10cm marbled patchy qtz-calcite irregular vein at 137.7m with 1% fg py in inclusions and wallrock. 1-2% py-po within interval from 140.0 to 140.5m as fine cal-py stringers/frac-fillings and patches 20 deg TCA.	A757035	93.50	94.50	1.00	3
			A757036	94.50	95.50	1.00	3
			A757037	95.50	96.50	1.00	3
			A757038	108.60	109.60	1.00	3
			A757039	109.60	110.40	0.80	3
			A757041	110.40	111.40	1.00	3
			A757042	120.50	121.00	0.50	977
			A757043	136.50	137.50	1.00	219
			A757044	137.50	138.00	0.50	944
			A757045	138.00	139.00	1.00	472
			A757047	139.00	140.00	1.00	114
			A757048	140.00	140.50	0.50	14
			A757049	140.50	141.50	1.00	3
			A757050	145.00	146.00	1.00	3
			A757051	146.00	146.90	0.90	18
146.90	148.00	**QTZ** ***Quartz Vein*** Weak to mod fracture/shearzone with 15% <1-2cm concordant qtz stringers containing minor fg py but with variable 1-2% to 3-5% vfg diss py haloes in locally buff wk sil-bio altered mafic wallrock. Similarities to other historical Super G multiple qtz stringer-py intersections but intersected earlier than expected in model. Shear/frac/qs at 45 to 60 deg TCA. 2-3 py overall.	A757052	146.90	147.50	0.60	2740
			A757053	147.50	148.00	0.50	14500

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
148.00	165.10	**1** ***Mafic Volcanics***	A757055	148.00	149.00	1.00	23
		Fine to medium grained, dark green, massive mafic volcanic. Minor fine calcitic fracture-fillings.	A757056	149.00	150.00	1.00	13
			A757057	163.50	164.50	1.00	3
			A757058	164.50	165.10	0.60	3
165.10	166.65	**4** ***Interflow sediments***	A757059	165.10	166.10	1.00	188
		Chert-py-po iron formation. Somewhat sheared, and locally marbled and deformed, brecciated. Massive py-po over 30cm approx. Magnetic.	A757060	166.10	166.70	0.60	98
166.65	175.20	**1** ***Mafic Volcanics***	A757061	166.70	167.70	1.00	3
		Massive amygdaloidal mafic volcanics with a few shallow angled calcite stringers and fine fracture-fillings.Blocky bottom approaching flt.	A757062	170.40	170.90	0.50	3
175.20	176.60	**6** ***Fault, Shear Zone***					
		Very broken up fault/fracture zone. 10-30 deg breaks.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
176.60	177.50	**8** ***Felsic dyke***					
		Medium grey-red, weak to mod siliceous, hard. Fg, weakly hematitic felsic dyke at 40 deg TCA.					
177.50	179.85	**1** ***Mafic Volcanics***	A757063	178.10	178.70	0.60	8
		Massive fg dark green mafic volcanic.					
179.85	180.60	**12** ***Lamprophere***					
		Dark grey-brown, fg and slightly porphyritic, massive with strong bio within. Mod to strongly magnetic.					
180.60	196.40	**1** ***Mafic Volcanics***	A757065	194.40	195.40	1.00	3
		Massive fg, dark green mafic volcanic with local calcite stringers, patches and fracture-fillings. Rare py specks.	A757066	195.40	196.40	1.00	5

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
196.40	196.80	**SG** ***Suoer G Zone*** A few <1 to 2cm qs with <1-1% fg diss py within qs and as haloes to qs in dark grey mafic wallrock. Weak shearing around the one 1-2cm qs. Qtz stringers at 60 deg TCA. Possible weak Super G vein extension-approximately where expected.	A757067	196.40	196.80	0.40	2510
196.80	270.30	**1** ***Mafic Volcanics*** Dark green very fine grained, massive mafic volcanic with minor very fine calcite frac-fillings. Gradual coarsening below 216m to fg to mg and massive. Rock appears more competent with only minor blocky intervals due to sub-parallel fracs. Several narrow interbedded chert-py iron formations interbedded within mafics below 236.7m. 5cm slightly irregular qtz-cb-chl veinlet at 265.2m with trace py.Sheared/brecciated qtz-calcite stringers within interval from 266.7 to 267.2m with trace py, 10cm core loss, minor rubble and fine clay slips at 50deg TCA. Bit blew at 270.3m EOH.	A757068	196.80	197.80	1.00	67
			A757069	197.80	198.80	1.00	3
			A757070	236.70	237.30	0.60	10
			A757072	241.60	242.00	0.40	5
			A757073	243.50	244.00	0.50	18
			A757074	244.00	245.00	1.00	10
			A757075	247.70	248.80	1.10	16
			A757076	264.00	265.00	1.00	3
			A757077	265.00	265.50	0.50	6
			A757079	265.50	266.70	1.20	10
			A757080	266.70	267.20	0.50	198
			A757081	267.20	268.20	1.00	3
		Minor Interval: 201.60 203.35 5B *Intermediate Biotitic Intrusive* Medium grey, speckled, relatively massive, hard, medium grained and slightly porphyritic with biotite. Contacts at 60 and 45 deg TCA with a few cm of shearing at ctc's.					
		Minor Interval: 236.70 237.30 4 *Interflow sediments* Banded chert-py-po iron formation at 40-80 deg TCA. Minor shearing within. Minor irregular patch also within interval from 241.55 to 242.0m.					
		Minor Interval: 243.50 244.95 4 *Interflow sediments* Banded, fairly pristine looking lean chert-py-po-mag iron formation. Patchy mag. Bedding at 50-70 deg TCA.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-001** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
		Minor Interval:					
247.65	248.80	4 *Interflow sediments* Banded chert-py-mag iron formation with 50 deg banding at top and more contorted sulfide rich bottom end.					

BR-2018-003
555819.604mE, 5412369.45mN
Azimuth: 143°, Dip: -62°
Elevation: 305.19m ASL

BR-2018-002
555819.604mE, 5412369.45mN
Azimuth: 143°, Dip: -48°
Elevation: 305.19m ASL

SURFACE

SURFACE

Smoke Lake

Claim #211140

Claim #240297

BR-2018-002
EOH: 180.0m

BR-2018-003
EOH: 189.0m

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Holes BR-2018-002,BR-2018-003
are covered permit #PR-16-11008A

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Smoke Lake Area
Diamond Drill Hole Section 2-3
Looking 53°, 20m Section Width

Date: December, 2019 File: SEC2_3_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

DRILL HOLE REPORT

Hole Number: **BR-2018-002** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth: 143
Dip: -48
Length: 180
Started: 26-Sep-18
Completed: 28-Sep-18
Logged: 27-Sep-18

Casing

Length: 0
Pulled: no
Capped: yes
Cemented: no

Core

Dimension: BTW
Storage: Wire Lake
Section:
Hole Type DD

Location

Township: LORNA LAK
Claim No.: 211140
NTS: 63N/02
Hole: SURFACE

Other

Logged by: Henry Hutteri
Relog by:
Contractor: Chibougamau
Spotted by: Henry Hutteri
Surveyed: yes
Surveyed by: GPS
Geophysics:
Geophysic Contractor:
Left in hole: Nothing
Making water: no
Multi shot survey: no

Comment: Silica-py altn with 10% vfg diss py and numerous vfg vg specks from 142.1 to 142.7m.

Coordinate - Gemcom

East: 555820
North: 5412368
Elev.: 310

Coordinate - UTM

East: 555820
North: 5412368
Elev.: 310
Zone: 16 **NAD:** NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	143.00	-48.00	C	☑	
30.00	144.40	-49.20	S	☑	55804
84.00	146.40	-49.00	S	☑	56163
135.00	144.80	-48.10	S	☑	55742
180.00	147.10	-48.10	S	☑	56165

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-002** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	15.00	**CAS** ***Casing*** Casing.					
15.00	86.60	**1** ***Mafic Volcanics*** Fine to very fine grained, massive, dark green mafic volcanics. Scattered trace py-po specks and minor fine calcite frac-fillings. Moderately blocky core intervals with common 0-30 deg joints causing wedging. Rare irregular qtz-epidote stringers and a few mm sized qtz-cal frac-fillings at 55 deg TCA with tr py within interval 40.2-41.0m. Gradually coarsening to fine to medium grained and massive below 54m and moderately blocky. Medium grained with a massive mottled gabbroic texture gradually below 78m to 86.6m. <10cm rubble with mixed clay-minor flt seam at 67.7m.	A757082	39.20	40.20	1.00	3
			A757083	40.20	41.00	0.80	3
			A757084	41.00	42.00	1.00	3
			A757085	48.80	49.80	1.00	3
			A757086	49.80	50.20	0.40	13
			A757087	50.20	51.20	1.00	3
			A757089	85.60	86.60	1.00	3

Minor Interval:

49.80 50.10 4 *Interflow sediments*

Narrow 30cm slightly marbled to weakly banded interflow chert bed with 2-3% clustered to stringery py. Lower 20 deg and irregular upper ctc's.

Minor Interval:

74.60 75.45 5B *Intermediate Biotitic Intrusive*

Medium greyish, massive with mg black slightly porphyritic texture which maybe biotite. 1cm clay flt seam 50cm at upper ctc and fine clay slip at lower ctc at 50 deg tca.

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-002** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
86.60	142.10	**1** ***Mafic Volcanics*** Pillowed variolitic mafic volcanics with local 0-30 deg shears with patchy minor qtz-calcite stringers and chl altn down to 90.4m. Very dark green fine grained chloritic mafic with local hyaloclastite, varioles and amygdules. 5mm qs with fg minor associated py 60 deg TCA at 86.6m. Rare specks py. Mod shear zone-possible mafic-int dyke from 115.0 to 117.2m with abrupt to sharp ctcs -shearing related to faulting with local minor brecciation and thin clay seams within varying from 20 to 50 deg TCA. Variolitic mafic flows continuing below with irregular calcite and qtz-calcite stringers with one larger stringer-patch containing dark grey massive magnetite and <1% py within irregular qtz-cal stringer/veinlet at 126.5m.Only trace py overall. Weak very local shear foliation at 30-35 deg TCA. Becoming darker grey, fg and weakly silicified below 131m with occasional <1cm qtz stringers/sweats with fg disseminated py within and around over a few cm as at 132.65m (65 deg TCA), 136.5m (23 deg TCA), and a few in 137.1 to 138.3m (15-20 deg TCA). 20cm shear at 136.8 to 137.0m with a few <1cm qs and fg diss py within and as haloes-1% over 20cm.	A757091	86.60	87.00	0.40	47
			A757092	87.00	88.00	1.00	7
			A757093	88.00	89.00	1.00	7
			A757094	89.00	90.00	1.00	452
			A757095	90.00	90.40	0.40	3
			A757096	90.40	91.40	1.00	68
			A757097	100.40	101.40	1.00	12
			A757098	101.40	102.20	0.80	12
			A757099	102.20	103.30	1.10	9
			A757101	125.00	126.00	1.00	3
			A757102	126.00	127.00	1.00	3
			A757103	127.00	128.00	1.00	3
			A757105	128.00	129.00	1.00	3
			A757106	129.00	130.00	1.00	3
			A757107	130.00	131.00	1.00	3
			A757108	131.00	132.00	1.00	3
			A757109	132.00	133.00	1.00	171
			A757110	133.00	134.00	1.00	199
			A757111	134.00	135.00	1.00	3
			A757112	135.00	136.00	1.00	32
			A757113	136.00	136.70	0.70	88
			A757115	136.70	137.10	0.40	331
			A757116	137.10	137.70	0.60	2550
			A757117	137.70	138.30	0.60	2230
			A757118	138.30	139.30	1.00	8
			A757120	139.30	140.30	1.00	10
			A757121	140.30	141.30	1.00	228
			A757122	141.30	142.10	0.80	591

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-002** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
142.10	142.70	**SG** ***Super G Vein*** 40% silica-py seams/veins meandering through section at approximately 25 deg TCA with 10% total vfg diss py mainly concentrated in heavy silica-py veins with fine criss-crossing silica frac-fillings with py in dark grey variolitic mafic wallrock. One 1mm speck vg with numerous other vvfg specks vg also observed.	A757123	142.10	142.70	0.60	443000
142.70	152.70	**1** ***Mafic Volcanics*** Dark greyish vfg variolitic mafic volcanics with minor hyaloclastite, common qtz-cal fine frac-fillings and irreg stringers and rare irreg veinlets. Minor very local 40-50 deg shearing over 20cm. Trace py.	A757124	142.70	143.70	1.00	361
			A757125	143.70	144.70	1.00	238
			A757127	144.70	145.70	1.00	169
			A757129	145.70	146.70	1.00	25
			A757130	146.70	147.70	1.00	10
			A757131	147.70	148.70	1.00	12
152.70	154.10	**5B** ***Intermediate Biotitic Intrusive*** Massive to weakly foliated, medium greyish, weakly porphyritic Intermediate biotitic dyke. Sharp ctc's at 60-65 deg TCA.					
154.10	173.85	**1** ***Mafic Volcanics*** Dark grey and green, vfg variolitic mafic volcanics with hyaloclastite and minor qtz-cal frac-fillings and rare qs. Trace py.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-002** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
173.85	176.40	**12** ***Lamprophere*** Typical brown, weakly porphyritic, mod to strongly magnetic lamprophere dyke. Upper ctc 30 deg TCA. Thin clay gouge seam along lower ctc sub-parallel TCA for last 50cm.					
176.40	180.00	**1** ***Mafic Volcanics*** Dark green-grey, vfg massive mafic volcanics. Trace hairline calcite frac-fillings. Trace py. 180.0m EOH					

DRILL HOLE REPORT

Hole Number: **BR-2018-003** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth:	143
Dip:	-62
Length:	189
Started:	28-Sep-18
Completed:	30-Sep-18
Logged:	30-Sep-18

Casing

Length:	0
Pulled:	yes
Capped:	yes
Cemented:	no

Core

Dimension:	BTW
Storage:	Wire Lake
Section:	
Hole Type	DD

Location

Township:	LORNA LAK
Claim No.:	211140
NTS:	63N/02
Hole:	SURFACE

Other

Logged by:	Henry Hutteri
Relog by:	
Contractor:	Chibougamau
Spotted by:	Henry Hutteri
Surveyed:	yes
Surveyed by:	GPS
Geophysics:	
Geophysic Contractor:	
Left in hole:	Nothing
Making water:	no
Multi shot survey:	no

Comment: Super G veined zone with 5-10% py and a few vvfg specks vg from 120.1 to 120.6m. A second narrow qtz veined zone with minor py,

Coordinate - Gemcom

East:	555820
North:	5412368
Elev.:	310

Coordinate - UTM

East:	555820
North:	5412368
Elev.:	310
Zone:	16
NAD:	NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	143.00	-62.00	C	☑	
30.00	145.60	-62.10	S	☑	55699
81.00	145.50	-62.10	S	☑	55703
132.00	146.50	-61.80	S	☑	55693
189.00	148.70	-61.30	S	☑	55793

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-003** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	11.80	**CAS** ***Casing*** Casing.					
11.80	57.00	**1** ***Mafic Volcanics*** Dark green, very fine and fine grained, massive mafic volcanics with occasional epidote and qtz-cal-epidote patches and stringers at 40 deg TCA. No shearing. Trace py specks. Blocky core down to 23m with local flt gouge mixed.	A757132	56.00	57.00	1.00	3
		Minor Interval: 19.90 21.00 6 *Fault, Shear Zone* Broken up core with sub-parallel fractures, fine clay slips at 50 deg TCA and a 5cm clay flt gouge/breccia seam within at approximately 20.1m.					
57.00	58.60	**4** ***Interflow sediments*** Well banded thick chert beds at upper ctc grading down into few sheared and brecciated chert fragments towards base. 2-3% py-po +/- magnetite. Weak to locally mod magnetic. Bedding and shearing at 20-25 deg TCA.	A757133 A757135	57.00 58.00	58.00 58.60	1.00 0.60	22 10
58.60	87.00	**1** ***Mafic Volcanics*** Dark grey-green, very fine grained pillowed flows with minor recognizable amygdules. Massive with occasional minor patches and stringers of epidote. Trace scattered py and po specks throughout. Moderately blocky from 57.6 to 70.6m with shallow angled fractures. Quickly grades into more massive	A757136 A757138	58.60 79.50	59.60 80.00	1.00 0.50	3 3

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-003** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
		mg flow below with no sharp ctc.					
		Minor Interval:					
		78.70 79.50 5B *Intermediate Biotitic Intrusive* Intermediate biotitic dyke, medium greyish and weakly porphyritic, massive with <1cm clay flt gouge seam at upper ctc at 40 deg TCA. Fine clay seam and minor shearing of wallrock at lower ctc 45 deg TCA with a 1-3cm qs with tr py.					
87.00	108.00	**1** ***Mafic Volcanics*** Massive dark green, medium grained massive mafic flow. A few rare fine qtz and qtz-cal stringers. Narrow shear from 93.0 to 93.1m with a 1.5cm slightly sheared qs and <1% fg diss py in qs and wallrock around. Trace py specks throughout. Two 5mm qs with trace py 65-70 deg TCA at 101.0m and 105.5m. Gradational lower ctc	A757139	91.80	92.80	1.00	55
			A757140	92.80	93.30	0.50	228
			A757141	93.30	94.30	1.00	14
			A757142	97.40	98.40	1.00	25
			A757143	100.80	101.30	0.50	52
			A757144	104.70	105.30	0.60	3
			A757145	105.30	105.80	0.50	118
			A757146	105.80	107.00	1.20	3
			A757148	107.00	108.00	1.00	153
108.00	120.10	**1** ***Mafic Volcanics*** Very fine grained, dark green variolitic mafic volcanics. Weak shearing from 108.0 to 108.4m with a few fine to 1.5cm greyish silica bands at 45 deg TCA with decent diss py mainly within and less in sheared wallrock- qs-py mainly within a 10cm interval with 1-2% diss py. Weak shear/fracturing from 111.8 to 114.0m with fine carb infilling at 40-45 deg TCA and local <1% diss py over one narrow 20cm interval from 112.7 to 112.9m and containing a 5mm slightly irreg grey qs.	A757149	108.00	108.50	0.50	6990
			A757150	108.50	109.50	1.00	616
			A757152	112.50	113.00	0.50	666
			A757153	118.10	119.10	1.00	7
			A757154	119.10	120.10	1.00	10

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-003** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
120.10	120.60	**SG** ***Super G Vein*** 5cm lightly sheared qtz-veinlet with 2-3% py at 55 deg TCA followed by silicified pyritic wallrock with 10-15% fg to mg disseminated cubic py and some silica flooding followed by another 15cm brecciated qtz vein at 35-50 deg TCA with heavy diss py in wallrock inclusions. Narrow shears at upper ctc of 5cm vein and bottom ctc of 15cm vein. 5-10% disseminated py overall. Two or three microscopic specks vg observed in upper 5cm vein.	A757155	120.10	120.60	0.50	34600
120.60	130.90	**1** ***Mafic Volcanics*** Dark green variolitic mafic volcanics. Minor specks py. Weak to mod shear from 125.3 to 126.4m at 55-60 deg TCA with possible weak hem and silicification or a sheared hematitic dyke of some sort within with difuse contacts in shear and a few <1cm qtz-cal stringers along foln.	A757156	120.60	121.60	1.00	44
			A757157	121.60	122.60	1.00	31
			A757158	122.60	123.60	1.00	24
			A757160	123.60	124.60	1.00	6
			A757161	124.60	125.30	0.70	3
			A757163	125.30	126.40	1.10	8
			A757164	126.40	127.40	1.00	168
			A757165	127.40	128.40	1.00	3
			A757166	128.40	129.40	1.00	18
			A757167	129.40	130.40	1.00	3
			A757168	130.40	130.90	0.50	15
130.90	131.50	**QTZ** ***Quartz Vein*** 35% white qtz veins and stringers to 8cm with variable contacts. Core 8cm vein has 45 to 60 deg ctcs with1-2% fg to mg py, trace cpy and gal within vein and immediate wallrock as well as two microscopic specks vg. Another 1cm qs is at 70 deg TCA with a light diss py halo. One 5cm irregular veinlet appears to cross-cut the walllrock and trend of the other veins and has no associated py to speak of. Weak shearing in top 15cm of zone only. Weak sil of wallrock between veins. <1-1% sulfides overall.	A757169	130.90	131.50	0.60	9110

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-003** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
131.50	189.00	**1** ***Mafic Volcanics***	A757171	131.50	132.50	1.00	3
		Very fine grained, dark green, variolitic, amygdaloidal pillowed mafic volcanics with local hyaloclastite. Trace sulfides and qs. Minor irreg qtz-cal stringers. Calcite-qtz vein with sheared 25 deg wallrock from 154.8 to 155.5m with <1% fg py in sheared wallrock and a few inclusions. Two 5mm or less qtz stringers at 50-60 deg TCA within interval 161.2 to 162.0m, one of which has weak diss py halo- <1% py overall. A few <1cm qs with minor associated diss py from 163.0 to 167.0m with one 6cm sheared qtz-cal veinlet 30 deg TCA with trace py at 165.1m. Mafic volcanics becoming fg and more massive below 177m. Two 15 and 20cm intermediate biotitic dyklets at 182.1m and 183.7m. Weak shearing and weak local oxidization around trace clay slip within 185 to 185.5m. 189.0m End of Hole.	A757172	132.50	133.50	1.00	3
			A757174	133.50	134.50	1.00	212
			A757175	153.80	154.80	1.00	3
			A757176	154.80	155.50	0.70	3
			A757177	155.50	156.50	1.00	10
			A757178	160.20	161.20	1.00	3
			A757180	161.20	162.00	0.80	172
			A757181	162.00	163.00	1.00	3
			A757182	163.00	164.00	1.00	17
			A757183	164.00	165.00	1.00	238
		Minor Interval:	A757184	165.00	166.00	1.00	7
		143.70 144.90 5B *Intermediate Biotitic Intrusive*	A757185	166.00	167.00	1.00	15
		Massive intermediate biotitic dyke with 65 deg ctc's and shearing 10cm into wallrock parallel to ctc's.	A757186	167.00	168.00	1.00	3

555900 555950 556000

WEST EAST

BR-2018-005
555922.142mE, 5412454.479mN
Azimuth: 80°, Dip -80°
Elevation: 311.95m ASL

BR-2018-004
555922.142mE, 5412454.479mN
Azimuth: 80°, Dip -60°
Elevation: 311.95m ASL

SURFACE

300

250

CAS

1

1

6
QVZ

1

SG

1

6

1

SG

1

6
4

1

BR-2018-004
EOH: 75.0m

BR-2018-005
EOH: 90.0m

Claim #139237 Claim #307227

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Holes BR-2018-004,BR-2018-005
are covered by permit #PR-16-11008A

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Smoke Lake Area
Diamond Drill Hole Section 5412454.5 North
Looking North, 10m Section Width

Date: December, 2019 File: SEC4-5_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

555900 555950 556000

DRILL HOLE REPORT

Hole Number: **BR-2018-004** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth:	80
Dip:	-60
Length:	75
Started:	30-Sep-18
Completed:	01-Oct-18
Logged:	01-Oct-18

Casing

Length:	0
Pulled:	no
Capped:	yes
Cemented:	no

Core

Dimension:	BTW
Storage:	Wire Lake
Section:	
Hole Type	DD

Location

Township:	LORNA LAK
Claim No.:	139237
NTS:	63N/02
Hole:	SURFACE

Other

Logged by:	Henry Hutteri
Relog by:	
Contractor:	Chibougamau
Spotted by:	Henry Hutteri
Surveyed:	yes
Surveyed by:	GPS
Geophysics:	
Geophysic Contractor:	
Left in hole:	Casing
Making water:	no
Multi shot survey:	no

Comment: Two quartz vein zones from 38.3 to 38.7m containing 30% qtz, <1% py and a few microscopic specks vg and a second 30cm QV with <1

Coordinate - Gemcom

East:	555921
North:	5412460
Elev.:	316

Coordinate - UTM

East:	555921
North:	5412460
Elev.:	316
Zone:	16
NAD:	NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	80.00	-60.00	C	☑	
21.00	82.20	-59.30	S	☑	55370
75.00	85.70	-59.20	S	☑	55659

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-004** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	2.80	**CAS** ***Casing*** Casing.					
2.80	37.40	**1** ***Mafic Volcanics*** Blocky broken core down to 6m. Medium to locally finer grained, dark grey-green, massive mafic volcanics. Common criss-crossing calcite and epidote fracture-fillings. Abrupt transition to shear related flt below.	A757187	36.40	37.40	1.00	3
37.40	38.30	**6** ***Fault, Shear Zone*** Moderate to strongly sheared, fg, medium green-grey-buff fault zone with a few fine clay gouge seams parallel to shear foln at 60 deg TCA and one 2-3cm fault gouge seam in bottom 10cm. Weak to moderate chl-cb altn with a very few qs up to 2cm with trace py within concordant with the shearing. Minor fg diss py specks throughout but trace to <1%.	A757189	37.40	38.30	0.90	187
38.30	38.70	**QVZ** ***Quartz Veined Zone*** Shear continuing related to the fault above but with a couple 1cm qs and one 10cm partially sheared quartz vein. Weak ser-chl altn with trace to <1% fg py in wallrock. Minor <1% fg py and a few specks cpy within the sheared lower half of the 10cm qv with two microscopic clusters of vg along the 45 deg shears in the vein. Overall 30% qtz and <1% vfg sulfides.	A757191	38.30	38.70	0.40	5030

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-004** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
38.70	55.60	**1** ***Mafic Volcanics*** Dark green-grey, medium grained, massive mafic volcanics. Scattered qtz-cal-epidote fracture-fillings and rare veinlet. Trace py.	A757192	38.70	39.70	1.00	74
			A757193	39.70	40.70	1.00	3
			A757194	53.60	54.60	1.00	3
			A757195	54.60	55.60	1.00	478
55.60	56.00	**SG** ***Super G Vein*** Lightly sheared and brecciated 30cm QV with weak brown biotite altn within wallrock inclusions and surrounding wallrock up to 20cm above vein and 1.0m below vein. Veining appears sub-parallel to shearing with ctc's at 40-55 deg TCA. <1% vfg diss py mainly within bio altered wallrock inclusions within the vein.Trace py and one fine speck ga within the vein material.	A757196	55.60	56.00	0.40	7690
56.00	75.00	**1** ***Mafic Volcanics*** Dark grey-green, medium grained, massive mafic volcanics. Weak brown biotite altn at upper ctc below vein above from 56 to 56.9m with 1-2% fine qs and qtz-cb fracture-fillings with weak pyritic-biotite haloes but <1% py overall. No altn and rare py specks to end of hole. 10cm qtz-cal vein at 40 deg TCA below narrow mafic dyke at 72.65 to 72.75m with no py. 75.0m End of Hole.	A757198	56.00	56.90	0.90	670
			A757199	56.90	57.90	1.00	45
			A757201	72.70	73.10	0.40	8

Minor Interval:

72.20	72.65	5	*Diabase*

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-004** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
		Very fine grained mafic dyke with sharp ctc's at 40 deg TCA. Weakly magnetic.					

DRILL HOLE REPORT

Hole Number: **BR-2018-005** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth:	80
Dip:	-80
Length:	90
Started:	01-Oct-18
Completed:	02-Oct-18
Logged:	02-Oct-18

Casing

Length:	0
Pulled:	yes
Capped:	no
Cemented:	no

Core

Dimension:	BTW
Storage:	Wire Lake
Section:	
Hole Type	DD

Location

Township:	LORNA LAK
Claim No.:	139237
NTS:	63N/02
Hole:	SURFACE

Other

Logged by:	Henry Hutteri
Relog by:	
Contractor:	Chibougamau
Spotted by:	Henry Hutteri
Surveyed:	yes
Surveyed by:	GPS
Geophysics:	
Geophysic Contractor:	
Left in hole:	Nothing
Making water:	no
Multi shot survey:	no

Comment: Biotite altered shear zone with one 3.5cm qs with minor py from 62.85 to 63.4m representing a weak Super G Vein structure.

Coordinate - Gemcom

East:	555921
North:	5412460
Elev.:	316

Coordinate - UTM

East:	555921
North:	5412460
Elev.:	316
Zone:	16
NAD:	NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	80.00	-80.00	C	☑	
21.00	88.70	-79.10	S	☑	55499
90.00	97.00	-78.70	S	☑	55660

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-005** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	2.80	**CAS** ***Casing*** Casing.					
2.80	45.50	**1** ***Mafic Volcanics*** Dark green-grey, fine to medium grained, massive, common fine calcitic fracture-fillings with minor patchy wk epidote, calcitic fracture-filling increasing below 42.5m approaching shear/fault zone below with trace to loc <1% fg diss py and trace fine qs at 45 deg TCA with minor py. Rare small irregular qtz patch at 32.0m with associated chl altn surrounding. Rare py.	A757202	31.70	32.20	0.50	3
			A757203	41.50	42.50	1.00	3
			A757205	42.50	43.50	1.00	601
			A757206	43.50	44.50	1.00	82
			A757207	44.50	45.50	1.00	17
45.50	46.20	**6** ***Fault, Shear Zone*** Moderate to strong shear zone at 35-45 deg TCA with a few 2-3mm fault gouge seams towards the bottom. A 1cm qs along shear, minor local biotite in chlorite-calcite altered shear with trace py. Section equivalent to first vein along fault in BR-2018-004.	A757208	45.50	46.20	0.70	425
46.20	62.85	**1** ***Mafic Volcanics*** Dark green-grey, medium grained, massive mafic volcanic with moderate criss-crossing fine calcite fracture-fillings in top 1m and decreasing below that. Rare py speck.	A757209	46.20	47.20	1.00	6
			A757211	60.80	61.80	1.00	3
			A757213	61.80	62.80	1.00	3

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-005** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
62.85	63.40	**SG** ***Super G Vein*** Slightly bleached weakly biotite-chlorite-cb altered shear zone with one central 3.5cm qtz stringer at 65 to 70 deg TCA. Qtz stringer has minor trace py within one small wallrock inclusion and fine specks along the ctc's but no disseminated py halo. Trace specks py in altered wallrock with one other 1mm qtz stringer. Shearing at 40-60 deg with one fine clay slip at 30 deg TCA.	A757214	62.80	63.40	0.60	654
63.40	78.70	**1** ***Mafic Volcanics*** Dark grey-green, medium grained and massive mafic volcanic. A few qtz-calcite stringers 50-60 deg TCA with trace py within 73.4 to 73.5m.	A757216	63.40	64.40	1.00	34
			A757217	64.40	65.40	1.00	12
			A757218	73.20	73.70	0.50	102
78.70	78.90	**6** ***Fault, Shear Zone*** Broken, rubbly section with minor mixed clay. Minor fault. Blocky ground below with 15-20 deg chlorite slips.					
78.90	80.60	**4** ***Interflow sediments*** Sheared, soft chloritic, green interflow sediments with a few irregular chert bands and more common sheared/brecciated chert fragments within chloritic schist. Shearing and several chloritic slips related to	A757219	78.90	79.90	1.00	16
			A757221	79.90	80.60	0.70	9

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-005** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
		fault above at 15-20 deg TCA. Broken core at top of interval for 30cm. 5% wisps and patches of po and lesser py along foliation.					
80.60	90.00	**1** ***Mafic Volcanics*** Dark green-grey, fine to medium grained, massive mafic volcanics. Blocky core with shallow angled fractures. Shallow angled<1cm qtz-calcite fracture-fillings at 0-10 deg TCA within interval from 83.4 to 84.4m containing and locally rimmed with po and trace py- 3-4% po, tr py. 90.0m End of Hole.	A757222	83.40	84.40	1.00	3

556050 556100 556150

WEST EAST

BR-2018-006
556080.809mE, 5414042.747mN
Azimuth: 90°, Dip -45°
Elevation: 318.68m ASL

SURFACE

CAS

MON

Claim #309831

5A

MZ

MON

MZ

MON

BR-2018-006
EOH: 105.0m

300 300

250 250

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Hole BR-2018-006
is covered by permit #PR-16-11008A

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Beggs Lake Area
Diamond Drill Hole Section 5414043 North
Looking North, 10m Section Width

Date: December, 2019 File: SEC6_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

556050 556100 556150

DRILL HOLE REPORT

Hole Number: **BR-2018-006** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth: 90
Dip: -45
Length: 105
Started: 02-Oct-18
Completed: 03-Oct-18
Logged: 03-Oct-18

Casing

Length: 0
Pulled: yes
Capped:
Cemented: no

Core

Dimension: BTW
Storage: Wire Lake
Section:
Hole Type DD

Location

Township: LORNA LAK
Claim No.: 309831
NTS: 63N/02
Hole: SURFACE

Other

Logged by: Henry Hutteri
Relog by:
Contractor: Chibougamau
Spotted by: Henry Hutteri
Surveyed: yes
Surveyed by: GPS
Geophysics:
Geophysic Contractor:
Left in hole: Nothing
Making water: no
Multi shot survey: no

Comment: Weak 1-3% quartz stringer zone throughout with minor associated py, trace cpy, moly. Moderate bleached and silicified zone adjacent to faulting

Coordinate - Gemcom

East: 556078
North: 5414042
Elev.: 318

Coordinate - UTM

East: 556078
North: 5414042
Elev.: 318
Zone: 16 **NAD:** NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	90.00	-45.00	C	☑	
33.00	90.00	-45.60	S	☑	56583
84.00	93.80	-44.80		☑	56426

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-006** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
0.00	14.30	**CAS** ***Casing*** Casing.					
14.30	45.10	**MON** ***Monzonite*** Pink to reddish hematite altered, medium grained, equigranular, massive monzonite with few minor remnant whitish intervals with less hematite. Speckled with fg to mg black biotite throughout. 1-2% sporadic qtz stringers up to 2cm and 2-3% silica-feldspar bands/stringers from 15.0 to 37.0m with occasional tr py in qtz stringers and wallrock. Local <1-1% diss py and weak silicification within interval from 30.0-33.0m. Increasing to 2-3% <1cm qtz stringers and qtz-feldspar stringers from 37.0 to 45.1m with trace associated py and trace to <1% py in the wallrock. First 1cm qtz-tour stringer appearing at 40.1m. All stringers at 65 to 70 deg TCA. Sharp lower ctc with dyke below.	A757223	15.00	16.00	1.00	3
			A757224	16.00	17.00	1.00	11
			A757225	17.00	18.00	1.00	7
			A757227	18.00	19.00	1.00	3
			A757228	19.00	20.00	1.00	3
			A757229	20.00	21.00	1.00	3
			A757230	21.00	22.00	1.00	3
			A757231	22.00	23.00	1.00	5
			A757232	23.00	24.00	1.00	5
			A757233	24.00	25.00	1.00	8
			A757235	25.00	26.00	1.00	14
			A757236	26.00	27.00	1.00	25
			A757237	27.00	28.00	1.00	10
			A757238	28.00	29.00	1.00	3
			A757239	29.00	30.00	1.00	3
			A757240	30.00	31.00	1.00	13
			A757242	31.00	32.00	1.00	35
			A757243	32.00	33.00	1.00	89
			A757244	33.00	34.00	1.00	10
			A757245	34.00	35.00	1.00	163
			A757247	35.00	36.00	1.00	11

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-006** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
			A757249	36.00	37.00	1.00	20
			A757250	37.00	38.00	1.00	78
			A757251	38.00	39.00	1.00	24
			A757252	39.00	40.00	1.00	80
			A757253	40.00	41.00	1.00	284
			A757254	41.00	42.00	1.00	15
			A757256	42.00	43.10	1.10	22
			A757257	43.10	44.10	1.00	3
			A757258	44.10	45.10	1.00	64
45.10	48.20	**5A** ***Mafic Dyke*** Fine to medium grained, medium to dark pinkish grey, weakly hematitic and silicified, and weak to moderately magnetic. Mostly massive becoming weakly sheared at 35 deg TCA in bottom 70cm ending with fine 35 deg clay slips in broken up bottom 20cm. Sharp upper ctc at 75 deg TCA with irregular lower ctc with slight offset. Trace py within and no qs.	A757260	45.10	46.10	1.00	22
			A757261	46.10	47.10	1.00	16
			A757262	47.10	48.20	1.10	32
48.20	52.30	**MZ** ***Mineralized Zone >1% Py, Po*** Moderately bleached and silicified, buff coloured, massive monzonite with variable <1 to 2-3% vfg diss py and trace broken qs. Very blocky with a couple 1-2cm irregular breccia seams, numerous irregular fracturing with black chl infilling and one broken up 30cm section of dark green sheared mafic dyke at 50.5 to 50.8m - lower ctc at 45 deg TCA and slightly irregular. Alteration zone has gradational lower ctc and appears possibly related to the faulting.	A757263	48.20	49.20	1.00	29
			A757264	49.20	50.20	1.00	65
			A757265	50.20	51.20	1.00	77
			A757266	51.20	52.30	1.10	27

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-006** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
52.30	97.00	**MON** ***Monzonite*** Pinkish-white to reddish with variable hematite, medium grained, equigranular, massive monzonite with 2-3% occasional clean <1 to 3cm qtz stringers and few qtz-feldspar stringers. Fine black speckled biotite throughout. A few qtz-tour stringers within as well. Qtz stringers mainly at 70 deg TCA with one 1cm qtz-tour stringer at 27 deg TCA. One 3cm qs with several specks cpy, and trace py, moly at 55.45m. A 1.5cm qs at 62.55m contains one 2-3mm py cluster and trace moly. Qtz stringers commony have trace associated py within and in the adjacent wallrock.Trace moly in 1cm qs at 66.3m. Two 25 and 15cm mafic dykes 80 deg TCA within interval 67.0 to 68.0m, one of which is moderately magnetic and the other 25cm dyke is weakly sheared and weakly sericite altered with 2-3% vfg py. <1cm qs at 68.2m 65 deg TCA with tr py and several specks moly. Three 5 to 25 cm mafic dykes at 70-8- deg TCA and slightly irregular crosscutting within interval from 72.5 to 73.2m with one 2-3cm irregular cross-cutting qs and <1% py overall. From 69.0 to 97.0m, monzonite appears less altered with patchy weak hematite and quartz content appears to decrease to approximately 1% 1cm qs and few qtz-feldspar stringers at 60-80 deg TCA with trace specks and clusters py. Rare <1cm qtz-tour stringer with silicified wallrock at 25 deg TCA at 82.05m with 2-3% diss py over 10cm.	A757267	52.30	53.00	0.70	20
			A757268	53.00	54.00	1.00	40
			A757270	54.00	55.00	1.00	25
			A757271	55.00	56.00	1.00	111
			A757272	56.00	57.00	1.00	148
			A757273	57.00	58.00	1.00	43
			A757274	58.00	59.00	1.00	15
			A757275	59.00	60.00	1.00	3
			A757276	60.00	61.00	1.00	3
			A757278	61.00	62.00	1.00	3
			A757279	62.00	63.00	1.00	45
			A757280	63.00	64.00	1.00	3
			A757281	64.00	65.00	1.00	22
			A757282	65.00	66.00	1.00	3
			A757283	66.00	67.00	1.00	6
			A757284	67.00	68.00	1.00	41
			A757285	68.00	69.00	1.00	12
			A757287	69.00	70.50	1.50	3
			A757288	70.50	72.00	1.50	22
			A757289	72.00	73.50	1.50	25
			A757290	73.50	75.00	1.50	14
			A757291	75.00	76.50	1.50	13
			A757293	76.50	78.00	1.50	3
			A757294	78.00	79.50	1.50	3
			A757295	79.50	81.00	1.50	3
			A757296	81.00	82.00	1.00	12
			A757297	82.00	83.00	1.00	3
			A757299	83.00	84.00	1.00	20

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-006** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
			A757300	84.00	85.50	1.50	27
			A757301	85.50	87.00	1.50	3
			A757303	87.00	88.50	1.50	15
			A757304	88.50	90.00	1.50	8
			A757305	90.00	91.50	1.50	3
			A757306	91.50	93.00	1.50	3
			A757307	93.00	94.00	1.00	3
			A757308	94.00	95.00	1.00	42
			A757309	95.00	96.00	1.00	5
			A757310	96.00	97.00	1.00	15
97.00	98.60	**MZ** ***Mineralized Zone >1% Py, Po*** Silicified and red hematite altered, massive monzonite with 1% diss py and a couple 1cm qs, a few fine to patchy black cross-cutting tour filled fractures, one 4cm 70 deg qs with diss py in wallrock and one 12cm 70 deg qtz vein containing a few fine specks py within and 2-3% diss py in adjacent bleached silicified wallrock. Most veining in bottom 30cm of zone with fine clay 65 deg slip at base of zone.	A757312	97.00	98.00	1.00	77
			A757313	98.00	98.60	0.60	98
98.60	105.00	**MON** ***Monzonite*** White and pink, medium grained, speckled, locally weakly hematitic monzonite with 1-2% <1-1cm qtz stringers at 70 deg TCA with trace py. Trace py in wallrock. 105.0m End of Hole.	A757314	98.60	99.60	1.00	28
			A757316	99.60	100.60	1.00	7
			A757317	100.60	102.00	1.40	5
			A757318	102.00	103.50	1.50	7
			A757319	103.50	105.00	1.50	84

556050 556100 556150

WEST EAST

BR-2018-007
556038.171mE, 5413870.557mN
Azimuth: 90°, Dip -45°
Elevation: 303.21m ASL

SURFACE

CAS
MON
12
6
MON
QVZ
MON
QTZ
MON
5A
MON

Claim #309831

300 300

250 250

BR-2018-007
EOH: 111.0m

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Hole BR-2018-007
is covered by permit #PR-16-11008A

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Beggs Lake Area
Diamond Drill Hole Section 5413870 North
Looking North, 10m Section Width

Date: December, 2019 File: SEC7_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

556050 556100 556150

DRILL HOLE REPORT

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

Drilling

Azimuth: 90
Dip: -45
Length: 111
Started: 03-Oct-18
Completed: 04-Oct-18
Logged: 04-Oct-18

Casing

Length: 0
Pulled: yes
Capped: no
Cemented: no

Core

Dimension: BTW
Storage: Wire Lake
Section:
Hole Type DD

Location

Township: LORNA LAK
Claim No.: 309831
NTS: 63N/02
Hole: SURFACE

Other

Logged by: Henry Hutteri
Relog by:
Contractor: Chibougamau
Spotted by: Henry Hutteri
Surveyed: yes
Surveyed by: GPS
Geophysics:
Geophysic Contractor:
Left in hole: Nothing
Making water: no
Multi shot survey: no

Comment: Variable 1-5% quartz stringers from top and dying out towards bottom of hole with sporadic py, cpy and moly within. Best veined Zone

Coordinate - Gemcom

East: 556040
North: 5413870
Elev.: 318

Coordinate - UTM

East: 556040
North: 5413870
Elev.: 318
Zone: 16 **NAD:** NAD83

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	90.00	-45.00	C	☑	
24.00	93.50	-45.70	S	☑	56423
75.00	93.90	-44.50	S	☑	56097
111.00	94.40	-44.30	S	☑	55893

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	2.60	**CAS** ***Casing*** Casing.					
2.60	15.75	**MON** ***Monzonite*** Red hematitic, weak to moderately silicified, massive medium grained monzonite with lesser white sections with weak to no hematite. Trace to locally <1% fg diss py. Several rusty oxidized fractures indicating iron carbonate within. <1% thin 1cm qtz stringers appearing below 5.0m at 75 deg TCA increasing to 2-3% down to dyke at 15.75m with one 7cm qtz veinlet 65 deg TCA at 9.9m. Minor py in wallrock but veining appears not to have sulfides within. Two <1-2cm black tourmaline bands/stringers at 30 deg TCA with minor silicification and py between 11.0 and 13.0m. Most qtz stringers at 65-75 deg TCA.	A757320	3.70	4.70	1.00	3
			A757321	4.70	5.70	1.00	3
			A757323	5.70	6.70	1.00	3
			A757324	6.70	7.70	1.00	3
			A757325	7.70	8.70	1.00	53
			A757327	8.70	9.70	1.00	94
			A757328	9.70	10.70	1.00	36
			A757329	10.70	11.70	1.00	29
			A757330	11.70	12.70	1.00	33
			A757331	12.70	13.80	1.10	19
			A757332	13.80	14.80	1.00	3
			A757333	14.80	15.80	1.00	38
15.75	16.50	**12** ***Lamprophere*** Dark grey-black, fine grained, moderately magnetic massive dyke with fine lampropheric textures. Sharp upper ctc at 75 deg TCA. Broken oxidized lower ctc approaching blocky fracture/fault zone below.	A757334	15.80	16.50	0.70	20

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
16.50	19.70	**6** ***Fault, Shear Zone*** Blocky monzonite with frequent rusty oxidized fractures with at least 3 1-5mm clay fault gouge seams at 70-80 deg TCA. One partial 2cm qs and one 30 deg <1cm qtz-tour stringer at 30 deg TCA. Trace py.	A757335	16.50	18.00	1.50	60
			A757336	18.00	19.00	1.00	15
			A757338	19.00	19.70	0.70	153
19.70	53.70	**MON** ***Monzonite*** Mainly reddish hematitic and moderately silicified massive monzonite with 1% <1-1cm qtz stringers at 65-70 deg TCA increasing to 2-3% stringers below with one stringer up to 3cm in width. Trace specks py, cpy and moly within qtz stringers and minor <1% diss py in surrounding wallrock. Two <1cm black tourmaline stringers at 25 deg TCA with a few cm of wallrock silicification and 1% py. Rare 70 deg fracture coated with thin film of py and moly as at 35.15. 2cm qtz-tour stringer 15 deg TCA with <1-1% diss py in immediate silicified wallrock from 46.7 to 47.0m. Variable trace to locally <1% py in monzonite wallrock. Hematite weakening below 36.0 TO 53.7m and looking more white and granodioritic for most part with a few percent mostly cm sized qs with one 10cm qv at 43.8m with trace speck py.	A757339	19.70	20.70	1.00	12
			A757340	20.70	21.70	1.00	82
			A757341	21.70	22.70	1.00	11
			A757342	22.70	23.70	1.00	3
			A757343	23.70	24.70	1.00	3
			A757344	24.70	25.70	1.00	3
			A757345	25.70	26.70	1.00	11
			A757347	26.70	27.70	1.00	202
			A757348	27.70	28.70	1.00	12
			A757349	28.70	29.70	1.00	10
			A757351	29.70	30.70	1.00	11
			A757352	30.70	31.70	1.00	16
			A757353	31.70	32.70	1.00	5
			A757354	32.70	33.70	1.00	36
			A757355	33.70	34.70	1.00	9
			A757356	34.70	35.70	1.00	109
			A757357	35.70	36.70	1.00	17
			A757358	36.70	37.70	1.00	36
			A757359	37.70	38.70	1.00	57
			A757360	38.70	39.70	1.00	31

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
			A757361	39.70	40.70	1.00	103
			A757362	40.70	41.70	1.00	59
			A757364	41.70	42.70	1.00	13
			A757365	42.70	43.70	1.00	72
			A757366	43.70	44.70	1.00	91
			A757368	44.70	45.70	1.00	33
			A757369	45.70	46.70	1.00	156
			A757370	46.70	47.70	1.00	8
			A757371	47.70	48.70	1.00	25
			A757372	48.70	49.70	1.00	12
			A757373	49.70	50.70	1.00	15
			A757374	50.70	51.70	1.00	26
			A757375	51.70	52.70	1.00	3
			A757376	52.70	53.70	1.00	5
53.70	54.70	**QVZ** ***Quartz Veined Zone*** Several 1-3cm qtz stringers and one 18cm qtz vein containing some red feldspar, minor py and cpy except for 18cm qv which contains a few coarser clusters of cpy and minor py,moly. Veining at 50-65 deg TCA. 30% total qtz veining. Trace py in wallrock.	A757377	53.70	54.70	1.00	1320

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
54.70	66.50	**MON** ***Monzonite*** White and granodioritic looking grading into dark red silicified hematitic monzonite with scattered 3-5% <1 to 4cm qtz stringers and trace to <1% py in the wallrock. Minor py in qtz stringers with a few parallel fractures coated with py. Stringers at 60-70 deg TCA.	A757378	54.70	55.70	1.00	902
			A757379	55.70	56.70	1.00	38
			A757380	56.70	57.70	1.00	79
			A757381	57.70	58.70	1.00	48
			A757382	58.70	59.70	1.00	26
			A757383	59.70	60.70	1.00	140
			A757384	60.70	61.70	1.00	716
			A757386	61.70	62.70	1.00	33
			A757387	62.70	63.70	1.00	115
			A757388	63.70	64.70	1.00	258
			A757389	64.70	65.70	1.00	306
			A757390	65.70	66.50	0.80	64
66.50	67.10	**QTZ** ***Quartz Vein*** Approximately 46cm qtz vein with one 10cm band of black tourmaline and several silicified wallrock inclusions containing minor <1% diss py. Contacts at 65-70 deg TCA.	A757391	66.50	67.10	0.60	245
67.10	68.40	**MON** ***Monzonite*** Pinkish-red hematitic monzonite with 5% <1-1cm qtz stringers at 70 deg TCA. Occasional fg specks py, cpy in qs. Trace py in wallrock.	A757392	67.10	68.40	1.30	216

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
68.40	69.00	**5A** ***Mafic Dyke*** Weakly sheared, pinkish-grey, weakly magnetic mafic dyke with sharp contacts at 25 and 45 deg TCA. <1% vfg py.	A757393	68.40	69.00	0.60	43
69.00	111.00	**MON** ***Monzonite*** Variably white to pink and reddish variably hematitic monzonite with sparse 1% <1-1cm qtz stringers with little sulfide in stringers and wallrock with stringers increasing to 3-5% within intervals from 84.0m to 88.0m and 100 to 105.5m with trace py and cpy within. Stringers 60-70 deg TCA. No qtz stringers below 105.2m. 111.0m End of hole.	A757394	69.00	70.00	1.00	3
			A757395	70.00	71.00	1.00	6
			A757397	71.00	72.00	1.00	19
			A757398	72.00	73.00	1.00	3
			A757399	73.00	74.00	1.00	31
			A757400	74.00	75.00	1.00	17
			A757401	78.50	79.50	1.00	19
			A757402	79.50	80.50	1.00	3
		Minor Interval:	A757403	83.00	84.00	1.00	16
		95.60 96.30 5A *Mafic Dyke* Dark green-black, fine grained massive and strongly magnetic. Contacts at 30 deg TCA. Minor parallel calcite stringers. Probable lamprophere.	A757404	84.00	85.00	1.00	366
			A757406	85.00	86.00	1.00	7
			A757407	86.00	87.00	1.00	68
		Minor Interval:	A757408	87.00	88.00	1.00	62
		98.15 99.00 12 *Lamprophere* A few 5cm dyklets and one 30cm dyke at 30 deg TCA. Dark green, weakly magnetic and weakly porphyritic with biotite.	A757409	88.00	89.00	1.00	3
			A757410	99.00	100.00	1.00	20
			A757411	100.00	101.00	1.00	20
			A757412	101.00	102.00	1.00	12
			A757413	102.00	103.00	1.00	183
			A757414	103.00	104.00	1.00	30
			A757415	104.00	105.00	1.00	42

LITHOLOGY REPORT
- Detailed -

Hole Number: **BR-2018-007** Project: **BLACK RAVEN** Project Number: **002**

From (m)	*To* (m)	*Lithology*	*Sample #*	*From*	*To*	*Length*	*-FINAL Au* (ppb)
			A757416	105.00	106.00	1.00	88
			A757417	106.00	107.00	1.00	15

5410650 5410700 5410750

SOUTH NORTH

350 350

SURFACE

CL-2018-001
562800mE, 5410740mN
Azimuth: 180°, Dip -45°
Elevation: 340.80m ASL

Claim #250354 Claim #329118

CAS 1A 1A 5B 1A 6 1A 1A 6 1A 1A

CL-2018-001
EOH: 117.0m

300 300

ROCKTYPE	LONGDESC
1	Mafic Volcanics
1A	Altered Mafic Volcanic
4	Interflow sediments
5A	Mafic Dyke
5B	Intermediate Biotitic Intrusive
6	Fault, Shear Zone
8	Felsic dyke
12	Lamprophere
CAS	Casing
MON	Monzonite
MZ	Mineralized Zone >1% Py, Po
QTZ	Quartz Vein
QVZ	Quartz Veined Zone
SG	Super G Vein

Hole CL-2018-001
is covered by permit #PR-16-11008A

250 250

0 10 20
Meters
1:500

CANADIANOREBODIES

Black Raven Property
Contact Lake Area
Diamond Drill Hole Section 562800 East
Looking West, 14m Section Width

Date: December, 2019 File: SEC_CL1_br2018

By: TS Projection: NAD 1983 UTM Zone 16N

5410650 5410700 5410750

DRILL HOLE REPORT

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

Drilling

Azimuth: 180
Dip: -45
Length: 117
Started: 05-Oct-18
Completed: 07-Oct-18
Logged: 07-Oct-18
Comment:

Casing

Length: 0
Pulled: yes
Capped: no
Cemented: no

Core

Dimension: BTW
Storage: Wire Lake
Section:
Hole Type DD

Location

Township: COTTE TOW
Claim No.: 153031
NTS: 63N/02
Hole: SURFACE

Coordinate - Gemcom

East: 0
North: 0
Elev.: 0

Coordinate - UTM

East: 562800
North: 5410740
Elev.: 320
Zone: 16 **NAD:** NAD83

Other

Logged by: Stephen MacConnell
Relog by:
Contractor: Chibougamau
Spotted by: Stephen MacConnell
Surveyed: yes
Surveyed by: GPS
Geophysics:
Geophysic Contractor:
Left in hole:
Making water: no
Multi shot survey: no

Deviation Tests

Distance	*Azimuth*	*Dip*	*Type*	*Good*	*Comments*
0.00	180.00	-45.00	C	☑	
27.00	173.20	-44.20	S	☑	
78.00	175.70	-42.70	S	☑	
117.00	178.40	-41.40	S	☑	

LITHOLOGY REPORT
- Detailed -

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
0.00	4.80	**CAS** ***Casing***					
4.80	6.00	**1A** ***Altered Mafic Volcanic***	A757418	4.70	6.00	1.30	86
		Strongly sheared (at 15 DTCA) and altered (chlorite and minor biotite) mafic volcanic with low angle (20-25 DTCA) 5-7cm grey white quartz vein. Trace to locally 1% fine grained pyrite associated with vein margins. Lower contact is sharp at 20 DTCA.					
		Alteration Maj: ***Type/Style/Intensity*** ***Comment***					
		4.80 - 6.00 BIO PCH WM					
		4.80 - 6.00 CHL P S					
		Structure Maj.: ***Type/Core Angle*** ***Comment***					
		4.80 - 6.00 SHR 20					
6.00	20.30	**1A** ***Altered Mafic Volcanic***	A757419	6.00	7.00	1.00	90
		Moderate to locally strongly sheared at 20-25 DTCA, locally minor insitu brecciation with 1-5mm quartz fracture fill. Moderate pervasive chlorite and locally moderate biotite alteration with minor hematite associated with breccia. Occasional course grained granodiorite dykes with sharp contacts at 25 DTCA. Trace to locallt 1% very fine grained py associated with breccias. Lower contact is sharp at 53 DTCA.	A757420	7.00	8.00	1.00	38
			A757421	8.00	9.00	1.00	38
			A757422	9.00	10.00	1.00	6
			A757424	10.00	11.00	1.00	15
			A757425	11.00	12.00	1.00	53
			A757426	12.00	13.00	1.00	236
			A757427	13.00	14.00	1.00	237
			A757428	14.00	15.00	1.00	7
		Minor Interval:					
		8.40 9.54 5B *Intermediate Biotitic Intrusive*					

LITHOLOGY REPORT
- Detailed -

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
		Minor Interval:	A757430	15.00	16.00	1.00	3
		13.30 13.96 5B *Intermediate Biotitic Intrusive*	A757431	16.00	17.00	1.00	7
		Minor Interval:	A757432	17.00	18.00	1.00	7
		15.77 16.14 5B *Intermediate Biotitic Intrusive*	A757433	18.00	19.00	1.00	8
		Strongly silicified with sharp contacts at 50 DTCA	A757434	19.00	20.30	1.30	9
20.30	26.90	**5B** ***Intermediate Biotitic Intrusive***	A757435	20.30	21.00	0.70	3
		Light grey white (locally pink), course grained, massive to weakly foliated at 51 DTCA, feldspar biotite intermediate intrusive. Weak to locallystrong (over 5-20cm) hematite staining. No mineralisation observed. Lower contact is sharp at 53 DTCA.	A757436	21.00	22.00	1.00	3
			A757438	22.00	23.00	1.00	3
			A757439	23.00	24.00	1.00	3
			A757441	24.00	25.00	1.00	3
			A757442	25.00	26.00	1.00	3
			A757443	26.00	26.90	0.90	3
26.90	32.60	**1A** ***Altered Mafic Volcanic***	A757444	26.90	28.00	1.10	3
		Light to dark grey black, fine grained, moderately to strongly sheared at 15-20 DTCA. Weakly brecciated upper contact with minor 1-2mm quartz fracture fill. Moderate chlorite / biotite alteration with a strong to locally intense silica overprint. Trace very fine grained py associated with breccias. Lower contact not observed due to broken core.	A757445	28.00	29.00	1.00	5
			A757447	29.00	30.00	1.00	3
			A757448	30.00	31.00	1.00	3
			A757449	31.00	32.60	1.60	3
32.60	33.60	**6** ***Fault, Shear Zone***	A757450	32.60	33.60	1.00	158
		Broken and fracture cored, brittle fault in altered mafic volcanic.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
33.60	42.10	**1A** ***Altered Mafic Volcanic***	A757451	33.60	34.00	0.40	6
		Medium grey green, fine grained moderate to locally strongly sheared at 20-25 DTCA locally brecciated toward bottom of interval with minor 1-2mm white quartz fracture fill. Moderate to locally strong (decreasing towards bottom of interval), chlorite +/- biotite alteration with minor epidote associated with quartz veins. Occasional 3-8cm light white grey quartz veins at 30-40 DTCA. Trace to 1% very fine grained pyrite associated with vein margins. Lower contact is sharp at 53 DTCA.	A757452	34.00	35.00	1.00	7
			A757453	35.00	36.00	1.00	13
			A757454	36.00	37.30	1.30	10
			A757455	37.30	38.40	1.10	3
			A757456	38.40	39.00	0.60	5
			A757458	39.00	40.00	1.00	7
			A757459	40.00	41.00	1.00	8
			A757460	41.00	42.10	1.10	9
		Minor Interval:					
		37.36 37.44 QTZ *Quartz Vein*					
		Minor Interval:					
		37.79 37.85 QTZ *Quartz Vein*					
		Light white grey, crystalline, weakly brecciated with trace py. Sharp contacts at 40 DTCA					
		Minor Interval:					
		38.25 38.31 QTZ *Quartz Vein*					
		Light white grey, crystalline quartz vein with 0.5-1% very fine grained py along vein margins. Contacts are sharp at 38 DTCA.					
42.10	51.64	**1A** ***Altered Mafic Volcanic***					
		Medium to dark grey black fine to medium grained (biotite), moderate to locally strongly sheared at 35-40 DTCA. Weak to locally moderate chlorite - biotite altered with locally strong chlorite associated with 1-5mm foliation parallel quartz veinlets. Locally insitu brecciated with 1-2mm quartz fracture fill. Trace pyrite associated with foliation parallel veinlets. Lower contact is faulted contact not observed.					
		Minor Interval:					
		42.10 42.62 5B *Intermediate Biotitic Intrusive*					
		Strongly silicified with sharp contacts at 45 DTCA					

LITHOLOGY REPORT
- Detailed -

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
51.64	53.55	**6** ***Fault, Shear Zone*** Brittle fault in highly altered and brecciated mafic volcanic. Moderate to strong brecciation and brittle fracturing with light white grey quartz fill. Minor 1-5mm clay fault gouge. Trace to 0.5% pyrite associated with brecciation along margins. Lower contact is sharp but irregular at approximately 35 DTCA.					
53.55	85.51	**1A** ***Altered Mafic Volcanic*** Medium grey green, fine grained mafic volcanic with 5-10% 1-3mm variolites. Weak to locally moderately foliated at 53 DTCA. Locally weakly brecciated associated swith more silica rich zones but only minor 1-2mm quartz fracture fill.Occasional course grained granodiorite dykes up to 40cm with sharp foliation parallel contacts. Weak to locally moderate chlorite / biotite alteration with zones (72-79m) of strong pervasive silica alteration. Trace fine grained py +/- po associated with weak breccia. Occasional irregular <1mm black magnetite stringers. Lower contact is 30cm granodiorite dyke with sharp contact at 46 DTCA.	A757461	54.00	54.90	0.90	17
			A757462	54.90	55.60	0.70	15
			A757464	55.60	56.50	0.90	16
			A757465	62.00	62.61	0.61	25
			A757466	62.61	62.81	0.20	47
			A757467	62.82	63.50	0.68	29
		Minor Interval: 54.90 54.95 QTZ *Quartz Vein* Low angle 15 DTCA smoky grey quartz vein with strong epidote along margins. Locally brecciated with 0.5-1% fracture fill py. **Minor Interval:** 55.54 55.60 QTZ *Quartz Vein* Low angle vein at 20 DTCA smoky grey white strong epidote along margins locally brecciated with trace fracture fill pyrite.					

LITHOLOGY REPORT
- Detailed -

Hole Number: **CL-2018-001** Project: **WIRE LAKE** Project Number: **001**

From (m)	To (m)	Lithology	Sample #	From	To	Length	-FINAL Au (ppb)
		Minor Interval:					
		62.69 62.82 QTZ *Quartz Vein* Cross cutting quartz vein at 56 DTCA. Smoky grey white with minor host rock inclusions. Weakly insitu brecciated with Tr fracture fill pyrite.					
85.51	117.00	**1A** ***Altered Mafic Volcanic*** Dark grey black to medium green fine grained with 7-10% 1-5mm mauve garnets. Moderate to locally strong foliation at 30-45 DTCA with crude alignment of garnets. Locally weakly brecciated with 1-5mm light white quartz fracture fill. Weak to locally moderate chlorite / biotite alteration. Weak to locally moderate retrograde alteration of garnets. Occasional granodiorite dykes parallel to foliation up to 40cm with sharp contacts. Occasional cross cutting quartz veinlets 1-5mm at 15 and 30 DTCA. Minor <1mm irregular magnetite veinlets. Trace pyrite associated with veinlets and breccia fracture fill.					
117.00	0.00	End of Hole					

Abbreviations used in Drill Logs

moly	molybdenum	ctc	contact
py	pyrite	irreg	irregular
cpy	chalcopyrite	loc	local
po	pyrrhotite	tr	trace
ga	galena	WR	wall rock
vg	visible gold	flt	fault
hem	hematite	bx	breccia
qs	quartz stringer	fracs	fractures
qv	quartz vein	int	intermediate
vfg	very fine grained	PCH	pervasive chlorite
fg	fine grained	P	pervasive
mg	moderate grained	S	strong
cg	coarse grained	SHR	sheared
mod	moderate	DTCA	degrees to core axis
wk	weak	carb	carbonate
chl	chlorite		
bio	biotite		
qtz-cal	quartz-calcite		
fsp	feldspar		
tour	tourmaline		
sil	silicified		
mag	magnetic		
diss	disseminated		
deg	degrees		
TCA	to core axis		

Appendix C

Actlabs Assay Certificates

Quality Analysis ... *Innovative Technologies*

Date Submitted: 03-Oct-18
Invoice No.: A18-14336
Invoice Date: 14-Nov-18
Your Reference: Wire Lake

Canadian Orebodies Inc.
141 Adelaide Street West, Suite 301
Toronto ON M5H 3L5
Canada

ATTN: President Gordon McKinnon

CERTIFICATE OF ANALYSIS

131 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A2-50-Tbay Au - Fire Assay AA(QOP Fire Assay Tbay)

Code 1A4-1000 (100mesh)-Tbay Au-Fire Assay-Metallic Screen-1000g

REPORT **A18-14336**

Notes:

A representative 1000 gram split is seived at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757001	< 5								
A757002	< 5								
A757003	< 5								
A757004	< 5								
A757005	39								
A757006	1770								
A757007	< 5								
A757008	186								
A757009	98								
A757010	< 5								
A757011	< 5								
A757012	< 5								
A757013	43								
A757014	2530	7.05	1.90	2.20	2.32	20.41	355.08	375.49	
A757015	< 5								
A757016	< 5								
A757017	< 5								
A757018	< 5								
A757019	< 5								
A757020	> 5000								25.7
A757021	53								
A757022	< 5								
A757023	< 5								
A757024	> 5000								37.2
A757025	987								
A757026	40								
A757027	7								
A757028	8								
A757029	5								
A757030	96								
A757031	217								
A757032	< 5								
A757033	< 5								
A757034	5								
A757035	< 5								
A757036	< 5								
A757037	< 5								
A757038	< 5								
A757039	< 5								

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757040	4220								4.14
A757041	< 5								
A757042	977								
A757043	219								
A757044	944								
A757045	472								
A757046	339								
A757047	114								
A757048	14								
A757049	< 5								
A757050	< 5								
A757051	18								
A757052	2430	1.46	2.87	2.72	2.74	23.26	587.57	610.83	
A757053	> 5000	6.09	15.2	14.6	14.5	23.80	435.89	459.70	16.3
A757054	> 5000								13.4
A757055	23								
A757056	13								
A757057	< 5								
A757058	< 5								
A757059	188								
A757060	98								
A757061	< 5								
A757062	< 5								
A757063	8								
A757064	< 5								
A757065	< 5								
A757066	5								
A757067	2940	1.37	2.69	2.53	2.51	21.85	248.13	269.98	
A757068	67								
A757069	< 5								
A757070	10								
A757071	1800								
A757072	5								
A757073	18								
A757074	10								
A757075	16								
A757076	< 5								
A757077	6								
A757078	< 5								

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757079	10								
A757080	198								
A757081	< 5								
A757082	< 5								
A757083	< 5								
A757084	< 5								
A757085	< 5								
A757086	13								
A757087	< 5								
A757088	< 5								
A757089	< 5								
A757090	> 5000								13.4
A757091	47								
A757092	7								
A757093	7								
A757094	452								
A757095	< 5								
A757096	68								
A757097	12								
A757098	12								
A757099	9								
A757100	< 5								
A757101	< 5								
A757102	< 5								
A757103	< 5								
A757104	1680								
A757105	< 5								
A757106	< 5								
A757107	< 5								
A757108	< 5								
A757109	171								
A757110	199								
A757111	< 5								
A757112	32								
A757113	88								
A757114	4250								4.31
A757115	331								
A757116	2550								
A757117	2230								

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757118	8								
A757119	< 5								
A757120	10								
A757121	228								
A757122	591								
A757123	> 5000	354	466	426	443	25.37	718.48	743.85	461
A757124	361								
A757125	238								
A757126	> 5000								26.1
A757127	169								
A757128	6								
A757129	25								
A757130	10								
A757131	12								

Analyte Symbol	Au	Total Au	Total Weight	Au
Unit Symbol	ppb	g/mt	g	g/tonne
Lower Limit	5	0.03		0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-GRA
OREAS 216 (Fire Assay) Meas				6.63
OREAS 216 (Fire Assay) Cert				6.66
OREAS 216 (Fire Assay) Meas				6.52
OREAS 216 (Fire Assay) Cert				6.66
OREAS 254 Meas	2560			
OREAS 254 Cert	2550			
OREAS 254 Meas	2650			
OREAS 254 Cert	2550			
OREAS 254 Meas	2640			
OREAS 254 Cert	2550			
OREAS 254 Meas	2550			
OREAS 254 Cert	2550			
OREAS 229 (Fire Assay) Meas		12.0		11.9
OREAS 229 (Fire Assay) Cert		12.1		12.1
OREAS 229 (Fire Assay) Meas		12.1		12.1
OREAS 229 (Fire Assay) Cert		12.1		12.1
OREAS 217 (Fire Assay) Meas	339			
OREAS 217 (Fire Assay) Cert	338			
OREAS 217 (Fire Assay) Meas	331			
OREAS 217 (Fire Assay) Cert	338			
OREAS 217 (Fire Assay) Meas	337			
OREAS 217 (Fire Assay) Cert	338			
OREAS 217 (Fire Assay) Meas	334			
OREAS 217 (Fire Assay) Cert	338			
A757010 Orig	< 5			
A757010 Dup	< 5			
A757021 Orig	51			
A757021 Dup	55			

Analyte Symbol	Au	Total Au	Total Weight	Au
Unit Symbol	ppb	g/mt	g	g/tonne
Lower Limit	5	0.03		0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-GRA
A757024 Orig				37.7
A757024 Dup				36.8
A757030 Orig	92			
A757030 Dup	99			
A757048 Orig	14			
A757048 Dup	13			
A757050 Orig	< 5			
A757050 Split PREP DUP	< 5			
A757058 Orig	< 5			
A757058 Dup	< 5			
A757068 Orig	62			
A757068 Dup	72			
A757082 Orig	< 5			
A757082 Dup	< 5			
A757091 Orig	45			
A757091 Dup	49			
A757099 Orig	8			
A757099 Dup	9			
A757101 Orig	< 5			
A757101 Split PREP DUP	< 5			
A757113 Orig	94			
A757113 Dup	82			
A757123 Orig	> 5000	443	743.85	482
A757123 Dup				441
Method Blank		< 0.03	0.00000	
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank				< 0.02
Method Blank				< 0.02
Method Blank				< 0.02

Quality Analysis ... *Innovative Technologies*

Date Submitted: 09-Oct-18
Invoice No.: A18-14674
Invoice Date: 09-Nov-18
Your Reference: Wire Lake

Canadian Orebodies Inc.
141 Adelaide Street West, Suite 301
Toronto ON M5H 3L5
Canada

ATTN: President Gordon McKinnon

CERTIFICATE OF ANALYSIS

91 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A2-50-Tbay Au - Fire Assay AA(QOP Fire Assay Tbay)

Code 1A4-1000 (100mesh)-Tbay Au-Fire Assay-Metallic Screen-1000g

REPORT **A18-14674**

Notes:

A representative 1000 gram split is seived at 100 mesh (149 micron) with assays performed on the entire +100 mesh and 2 splits of the -100 mesh fraction. A final assay is calculated based on the weight of each fraction.

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
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E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757132	< 5								
A757133	22								
A757134	4210								4.28
A757135	10								
A757136	< 5								
A757137	< 5								
A757138	< 5								
A757139	55								
A757140	228								
A757141	14								
A757142	25								
A757143	52								
A757144	< 5								
A757145	118								
A757146	< 5								
A757147	> 5000								13.3
A757148	153								
A757149	> 5000								6.99
A757150	616								
A757151	15								
A757152	666								
A757153	7								
A757154	10								
A757155	> 5000	19.4	35.1	34.8	34.6	14.60	585.77	600.37	30.2
A757156	44								
A757157	31								
A757158	24								
A757159	2030								
A757160	6								
A757161	< 5								
A757162	< 5								
A757163	8								
A757164	168								
A757165	< 5								
A757166	18								
A757167	< 5								
A757168	15								
A757169	4580	2.46	9.43	9.04	9.11	13.01	691.20	704.21	3.73
A757170	> 5000								25.3

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757171	< 5								
A757172	< 5								
A757173	< 5								
A757174	212								
A757175	< 5								
A757176	< 5								
A757177	10								
A757178	< 5								
A757179	< 5								
A757180	172								
A757181	< 5								
A757182	17								
A757183	238								
A757184	7								
A757185	15								
A757186	< 5								
A757187	< 5								
A757188	< 5								
A757189	187								
A757190	4050								4.29
A757191	> 5000	5.24	4.89	5.14	5.03	21.45	304.61	326.10	5.57
A757192	74								
A757193	< 5								
A757194	< 5								
A757195	478								
A757196	> 5000	7.53	9.26	9.36	9.22	14.86	284.24	299.10	7.69
A757197	> 5000								13.1
A757198	670								
A757199	45								
A757200	34								
A757201	8								
A757202	< 5								
A757203	< 5								
A757204	< 5								
A757205	601								
A757206	82								
A757207	17								
A757208	425								
A757209	6								

Analyte Symbol	Au	Au + 100 mesh	Au - 100 mesh (A)	Au - 100 mesh (B)	Total Au	+ 100 mesh	- 100 mesh	Total Weight	Au
Unit Symbol	ppb	g/mt	g/mt	g/mt	g/mt	g	g	g	g/tonne
Lower Limit	5	0.03	0.03	0.03	0.03				0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-MeT	FA-GRA
A757210	> 5000								25.0
A757211	< 5								
A757212	< 5								
A757213	< 5								
A757214	654								
A757215	4040								4.15
A757216	34								
A757217	12								
A757218	102								
A757219	16								
A757220	< 5								
A757221	9								
A757222	< 5								

Analyte Symbol	Au	Total Au	Total Weight	Au
Unit Symbol	ppb	g/mt	g	g/tonne
Lower Limit	5	0.03		0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-GRA
OREAS 216 (Fire Assay) Meas				6.52
OREAS 216 (Fire Assay) Cert				6.66
OREAS 254 Meas	2660			
OREAS 254 Cert	2550			
OREAS 254 Meas	2420			
OREAS 254 Cert	2550			
OREAS 254 Meas	2550			
OREAS 254 Cert	2550			
OREAS 229 (Fire Assay) Meas		12.0		12.1
OREAS 229 (Fire Assay) Cert		12.1		12.1
OREAS 217 (Fire Assay) Meas	333			
OREAS 217 (Fire Assay) Cert	338			
OREAS 217 (Fire Assay) Meas	328			
OREAS 217 (Fire Assay) Cert	338			
OREAS 217 (Fire Assay) Meas	328			
OREAS 217 (Fire Assay) Cert	338			
A757141 Orig	14			
A757141 Dup	14			
A757152 Orig	666			
A757152 Dup	666			
A757161 Orig	< 5			
A757161 Dup	< 5			
A757176 Orig	< 5			
A757176 Dup	< 5			
A757181 Orig	< 5			
A757181 Split PREP DUP	< 5			
A757185 Orig	20			
A757185 Dup	9			
A757191 Orig		5.03	326.10	5.60
A757191 Dup				5.54
A757195 Orig	353			
A757195 Dup	603			

Analyte Symbol	Au	Total Au	Total Weight	Au
Unit Symbol	ppb	g/mt	g	g/tonne
Lower Limit	5	0.03		0.02
Method Code	FA-AA	FA-MeT	FA-MeT	FA-GRA
A757211 Orig	< 5			
A757211 Dup	< 5			
A757221 Orig	9			
A757221 Dup	9			
Method Blank		< 0.03	0.00000	
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank	< 5			
Method Blank				< 0.02
Method Blank				< 0.02

Quality Analysis ... *Innovative Technologies*

Date Submitted: 15-Oct-18
Invoice No.: A18-15006
Invoice Date: 23-Nov-18
Your Reference: Wire Lake

Canadian Orebodies Inc.
141 Adelaide Street West, Suite 301
Toronto ON M5H 3L5
Canada

ATTN: President Gordon McKinnon

CERTIFICATE OF ANALYSIS

430 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A2-50-Tbay Au - Fire Assay AA(QOP Fire Assay Tbay)

REPORT **A18-15006**

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757223	< 5	
A757224	11	
A757225	7	
A757226	4740	4.11
A757227	< 5	
A757228	< 5	
A757229	< 5	
A757230	< 5	
A757231	5	
A757232	5	
A757233	8	
A757234	< 5	
A757235	14	
A757236	25	
A757237	10	
A757238	< 5	
A757239	< 5	
A757240	13	
A757241	1940	
A757242	35	
A757243	89	
A757244	10	
A757245	163	
A757246	< 5	
A757247	11	
A757248	4220	4.69
A757249	20	
A757250	78	
A757251	24	
A757252	80	
A757253	284	
A757254	15	
A757255	6	
A757256	22	
A757257	< 5	
A757258	64	
A757259	> 5000	14.1
A757260	22	
A757261	16	
A757262	32	
A757263	29	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757264	65	
A757265	77	
A757266	27	
A757267	20	
A757268	40	
A757269	< 5	
A757270	25	
A757271	111	
A757272	148	
A757273	43	
A757274	15	
A757275	< 5	
A757276	< 5	
A757277	1990	
A757278	< 5	
A757279	45	
A757280	< 5	
A757281	22	
A757282	< 5	
A757283	6	
A757284	41	
A757285	12	
A757286	< 5	
A757287	< 5	
A757288	22	
A757289	25	
A757290	14	
A757291	13	
A757292	> 5000	13.8
A757293	< 5	
A757294	< 5	
A757295	< 5	
A757296	12	
A757297	< 5	
A757298	< 5	
A757299	20	
A757300	27	
A757301	< 5	
A757302	4280	4.23
A757303	15	
A757304	8	
A757305	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757306	< 5	
A757307	< 5	
A757308	42	
A757309	5	
A757310	15	
A757311	< 5	
A757312	77	
A757313	98	
A757314	28	
A757315	1640	
A757316	7	
A757317	5	
A757318	7	
A757319	84	
A757320	< 5	
A757321	< 5	
A757322	< 5	
A757323	< 5	
A757324	< 5	
A757325	53	
A757326	4110	4.39
A757327	94	
A757328	36	
A757329	29	
A757330	33	
A757331	19	
A757332	< 5	
A757333	38	
A757334	20	
A757335	60	
A757336	15	
A757337	< 5	
A757338	153	
A757339	12	
A757340	82	
A757341	11	
A757342	< 5	
A757343	< 5	
A757344	< 5	
A757345	11	
A757346	1810	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757347	202	
A757348	12	
A757349	10	
A757350	6	
A757351	11	
A757352	16	
A757353	5	
A757354	36	
A757355	9	
A757356	109	
A757357	17	
A757358	36	
A757359	57	
A757360	31	
A757361	103	
A757362	59	
A757363	> 5000	12.9
A757364	13	
A757365	72	
A757366	91	
A757367	< 5	
A757368	33	
A757369	156	
A757370	8	
A757371	25	
A757372	12	
A757373	15	
A757374	26	
A757375	< 5	
A757376	5	
A757377	1320	
A757378	902	
A757379	38	
A757380	79	
A757381	48	
A757382	26	
A757383	140	
A757384	716	
A757385	1800	
A757386	33	
A757387	115	
A757388	258	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757389	306	
A757390	64	
A757391	245	
A757392	216	
A757393	43	
A757394	< 5	
A757395	6	
A757396	< 5	
A757397	19	
A757398	< 5	
A757399	31	
A757400	17	
A757401	19	
A757402	< 5	
A757403	16	
A757404	366	
A757405	4080	4.15
A757406	7	
A757407	68	
A757408	62	
A757409	< 5	
A757410	20	
A757411	20	
A757412	12	
A757413	183	
A757414	30	
A757415	42	
A757416	88	
A757417	15	
A757418	86	
A757419	90	
A757420	38	
A757421	38	
A757422	6	
A757423	4070	4.22
A757424	15	
A757425	53	
A757426	236	
A757427	237	
A757428	7	
A757429	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757430	< 5	
A757431	7	
A757432	7	
A757433	8	
A757434	9	
A757435	< 5	
A757436	< 5	
A757437	> 5000	14.1
A757438	< 5	
A757439	< 5	
A757440	14	
A757441	< 5	
A757442	< 5	
A757443	< 5	
A757444	< 5	
A757445	5	
A757446	< 5	
A757447	< 5	
A757448	< 5	
A757449	< 5	
A757450	158	
A757451	6	
A757452	7	
A757453	13	
A757454	10	
A757455	< 5	
A757456	5	
A757457	1690	
A757458	7	
A757459	8	
A757460	9	
A757461	17	
A757462	15	
A757463	< 5	
A757464	16	
A757465	25	
A757466	47	
A757467	29	
A757468	< 5	
A757469	< 5	
A757470	< 5	
A757471	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757472	< 5	
A757473	< 5	
A757474	5	
A757475	6	
A757476	4070	4.20
A757477	< 5	
A757478	5	
A757479	7	
A757480	< 5	
A757481	< 5	
A757482	< 5	
A757483	< 5	
A757484	< 5	
A757485	< 5	
A757486	< 5	
A757487	< 5	
A757488	< 5	
A757489	< 5	
A757490	375	
A757491	< 5	
A757492	< 5	
A757493	< 5	
A757494	6	
A757495	6	
A757496	5	
A757497	7	
A757498	10	
A757499	65	
A757500	1140	
A757501	40	
A757502	122	
A757503	72	
A757504	150	
A757505	5	
A757506	55	
A757507	85	
A757508	141	
A757509	126	
A757510	19	
A757511	297	
A757512	4080	4.15

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757513	273	
A757514	< 5	
A757515	138	
A757516	48	
A757517	62	
A757518	219	
A757519	16	
A757520	11	
A757521	12	
A757522	399	
A757523	12	
A757524	< 5	
A757525	6	
A757526	7	
A757527	17	
A757528	46	
A757529	71	
A757530	35	
A757531	17	
A757532	1100	
A757533	29	
A757534	23	
A757535	77	
A757536	20	
A757537	< 5	
A757538	17	
A757539	22	
A757540	21	
A757541	28	
A757542	17	
A757543	< 5	
A757544	< 5	
A757545	4290	4.18
A757546	< 5	
A757547	< 5	
A757548	< 5	
A757549	5	
A757550	< 5	
A757551	5	
A757552	< 5	
A757553	5	
A757554	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757555	428	
A757556	< 5	
A757557	< 5	
A757558	9	
A757559	7	
A757560	< 5	
A757561	5	
A757562	3980	4.25
A757563	< 5	
A757564	< 5	
A757565	< 5	
A757566	< 5	
A757567	< 5	
A757568	< 5	
A757569	< 5	
A757570	< 5	
A757571	< 5	
A757572	< 5	
A757573	< 5	
A757574	< 5	
A757575	< 5	
A757576	< 5	
A757577	368	
A757578	< 5	
A757579	< 5	
A757580	< 5	
A757581	< 5	
A757582	< 5	
A757583	< 5	
A757584	1160	
A757585	< 5	
A757586	< 5	
A757587	< 5	
A757588	< 5	
A757589	5	
A757590	< 5	
A757591	< 5	
A757592	< 5	
A757593	5	
A757594	7	
A757595	314	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757596	< 5	
A757597	< 5	
A757598	< 5	
A757599	< 5	
A757600	< 5	
A757601	< 5	
A757602	7	
A757603	9	
A757604	< 5	
A757605	< 5	
A757606	19	
A757607	25	
A757608	55	
A757609	14	
A757610	9	
A757611	6	
A757612	6	
A757613	4230	4.78
A757614	6	
A757615	7	
A757616	5	
A757617	201	
A757618	38	
A757619	10	
A757620	5	
A757621	< 5	
A757622	< 5	
A757623	< 5	
A757624	< 5	
A757625	< 5	
A757626	< 5	
A757627	< 5	
A757628	1110	
A757629	11	
A757630	172	
A757631	212	
A757632	27	
A757633	129	
A757634	< 5	
A757635	126	
A757636	125	
A757637	149	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757638	4250	4.25
A757639	74	
A757640	416	
A757641	140	
A757642	26	
A757643	58	
A757644	49	
A757645	90	
A757646	129	
A757647	< 5	
A757648	129	
A757649	86	
A757650	74	
A757651	343	
A757652	67	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
OREAS 216 (Fire Assay) Meas		6.70
OREAS 216 (Fire Assay) Cert		6.66
OREAS 216 (Fire Assay) Meas		6.66
OREAS 216 (Fire Assay) Cert		6.66
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 254 Meas	2460	
OREAS 254 Cert	2550	
OREAS 254 Meas	2440	
OREAS 254 Cert	2550	
OREAS 254 Meas	2450	
OREAS 254 Cert	2550	
OREAS 254 Meas	2420	
OREAS 254 Cert	2550	
OREAS 254 Meas	2490	
OREAS 254 Cert	2550	
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 254 Meas	2540	
OREAS 254 Cert	2550	
OREAS 254 Meas	2550	
OREAS 254 Cert	2550	
OREAS 254 Meas	2510	
OREAS 254 Cert	2550	
OREAS 254 Meas	2550	
OREAS 254 Cert	2550	
OREAS 254 Meas	2510	
OREAS 254 Cert	2550	
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 257 Meas		14.0
OREAS 257 Cert		14.18
OREAS 257 Meas		14.3
OREAS 257 Cert		14.18
Oreas 221 (Fire Assay) Meas	1030	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire	1020	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
Assay) Meas		
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1030	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	999	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1060	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1050	
Oreas 221 (Fire Assay) Cert	1060	
A757232 Orig	5	
A757232 Dup	5	
A757242 Orig	36	
A757242 Dup	33	
A757252 Orig	85	
A757252 Dup	74	
A757267 Orig	23	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757267 Dup	17	
A757272 Orig	148	
A757272 Split PREP DUP	161	
A757276 Orig	< 5	
A757276 Dup	< 5	
A757287 Orig	< 5	
A757287 Dup	< 5	
A757301 Orig	< 5	
A757301 Dup	< 5	
A757312 Orig	78	
A757312 Dup	76	
A757321 Orig	< 5	
A757321 Dup	< 5	
A757323 Orig	< 5	
A757323 Split PREP DUP	< 5	
A757338 Orig	139	
A757338 Dup	166	
A757349 Orig	12	
A757349 Dup	8	
A757359 Orig	54	
A757359 Dup	59	
A757370 Orig	7	
A757370 Dup	8	
A757372 Orig	12	
A757372 Split PREP DUP	10	
A757379 Orig	43	
A757379 Dup	33	
A757389 Orig	306	
A757407 Orig	80	
A757407 Dup	56	
A757418 Orig	75	
A757418 Dup	97	
A757422 Orig	6	
A757422 Split PREP DUP	5	
A757427 Orig	200	
A757427 Dup	274	
A757438 Orig	< 5	
A757438 Dup	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757448 Orig	< 5	
A757448 Dup	< 5	
A757458 Orig	7	
A757458 Dup	7	
A757472 Orig	< 5	
A757472 Split PREP DUP	< 5	
A757473 Orig	< 5	
A757473 Dup	< 5	
A757482 Orig	< 5	
A757482 Dup	< 5	
A757492 Orig	< 5	
A757492 Dup	< 5	
A757507 Orig	85	
A757507 Dup	85	
A757517 Orig	62	
A757517 Dup	62	
A757523 Orig	12	
A757523 Split PREP DUP	11	
A757526 Orig	7	
A757526 Dup	6	
A757544 Orig	< 5	
A757544 Dup	< 5	
A757556 Orig	< 5	
A757556 Dup	13	
A757565 Orig	< 5	
A757565 Dup	< 5	
A757572 Orig	< 5	
A757572 Split PREP DUP	< 5	
A757575 Orig	< 5	
A757575 Dup	< 5	
A757585 Orig	< 5	
A757585 Dup	< 5	
A757596 Orig	< 5	
A757596 Dup	< 5	
A757610 Orig	8	
A757610 Dup	9	
A757620 Orig	5	
A757620 Dup	5	
A757623 Orig	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757623 Split PREP DUP	< 5	
A757629 Orig	11	
A757629 Dup	10	
A757644 Orig	49	
A757644 Dup	48	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank		< 0.02
Method Blank		< 0.02

Quality Analysis ... *Innovative Technologies*

Date Submitted: 15-Oct-18
Invoice No.: A18-15006
Invoice Date: 23-Nov-18
Your Reference: Wire Lake

Canadian Orebodies Inc.
141 Adelaide Street West, Suite 301
Toronto ON M5H 3L5
Canada

ATTN: President Gordon McKinnon

CERTIFICATE OF ANALYSIS

430 Core samples were submitted for analysis.

The following analytical package(s) were requested: Code 1A2-50-Tbay Au - Fire Assay AA(QOP Fire Assay Tbay)

REPORT **A18-15006**

Notes:

If value exceeds upper limit we recommend reassay by fire assay gravimetric-Code 1A3

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

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Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757223	< 5	
A757224	11	
A757225	7	
A757226	4740	4.11
A757227	< 5	
A757228	< 5	
A757229	< 5	
A757230	< 5	
A757231	5	
A757232	5	
A757233	8	
A757234	< 5	
A757235	14	
A757236	25	
A757237	10	
A757238	< 5	
A757239	< 5	
A757240	13	
A757241	1940	
A757242	35	
A757243	89	
A757244	10	
A757245	163	
A757246	< 5	
A757247	11	
A757248	4220	4.69
A757249	20	
A757250	78	
A757251	24	
A757252	80	
A757253	284	
A757254	15	
A757255	6	
A757256	22	
A757257	< 5	
A757258	64	
A757259	> 5000	14.1
A757260	22	
A757261	16	
A757262	32	
A757263	29	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757264	65	
A757265	77	
A757266	27	
A757267	20	
A757268	40	
A757269	< 5	
A757270	25	
A757271	111	
A757272	148	
A757273	43	
A757274	15	
A757275	< 5	
A757276	< 5	
A757277	1990	
A757278	< 5	
A757279	45	
A757280	< 5	
A757281	22	
A757282	< 5	
A757283	6	
A757284	41	
A757285	12	
A757286	< 5	
A757287	< 5	
A757288	22	
A757289	25	
A757290	14	
A757291	13	
A757292	> 5000	13.8
A757293	< 5	
A757294	< 5	
A757295	< 5	
A757296	12	
A757297	< 5	
A757298	< 5	
A757299	20	
A757300	27	
A757301	< 5	
A757302	4280	4.23
A757303	15	
A757304	8	
A757305	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757306	< 5	
A757307	< 5	
A757308	42	
A757309	5	
A757310	15	
A757311	< 5	
A757312	77	
A757313	98	
A757314	28	
A757315	1640	
A757316	7	
A757317	5	
A757318	7	
A757319	84	
A757320	< 5	
A757321	< 5	
A757322	< 5	
A757323	< 5	
A757324	< 5	
A757325	53	
A757326	4110	4.39
A757327	94	
A757328	36	
A757329	29	
A757330	33	
A757331	19	
A757332	< 5	
A757333	38	
A757334	20	
A757335	60	
A757336	15	
A757337	< 5	
A757338	153	
A757339	12	
A757340	82	
A757341	11	
A757342	< 5	
A757343	< 5	
A757344	< 5	
A757345	11	
A757346	1810	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757347	202	
A757348	12	
A757349	10	
A757350	6	
A757351	11	
A757352	16	
A757353	5	
A757354	36	
A757355	9	
A757356	109	
A757357	17	
A757358	36	
A757359	57	
A757360	31	
A757361	103	
A757362	59	
A757363	> 5000	12.9
A757364	13	
A757365	72	
A757366	91	
A757367	< 5	
A757368	33	
A757369	156	
A757370	8	
A757371	25	
A757372	12	
A757373	15	
A757374	26	
A757375	< 5	
A757376	5	
A757377	1320	
A757378	902	
A757379	38	
A757380	79	
A757381	48	
A757382	26	
A757383	140	
A757384	716	
A757385	1800	
A757386	33	
A757387	115	
A757388	258	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757389	306	
A757390	64	
A757391	245	
A757392	216	
A757393	43	
A757394	< 5	
A757395	6	
A757396	< 5	
A757397	19	
A757398	< 5	
A757399	31	
A757400	17	
A757401	19	
A757402	< 5	
A757403	16	
A757404	366	
A757405	4080	4.15
A757406	7	
A757407	68	
A757408	62	
A757409	< 5	
A757410	20	
A757411	20	
A757412	12	
A757413	183	
A757414	30	
A757415	42	
A757416	88	
A757417	15	
A757418	86	
A757419	90	
A757420	38	
A757421	38	
A757422	6	
A757423	4070	4.22
A757424	15	
A757425	53	
A757426	236	
A757427	237	
A757428	7	
A757429	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757430	< 5	
A757431	7	
A757432	7	
A757433	8	
A757434	9	
A757435	< 5	
A757436	< 5	
A757437	> 5000	14.1
A757438	< 5	
A757439	< 5	
A757440	14	
A757441	< 5	
A757442	< 5	
A757443	< 5	
A757444	< 5	
A757445	5	
A757446	< 5	
A757447	< 5	
A757448	< 5	
A757449	< 5	
A757450	158	
A757451	6	
A757452	7	
A757453	13	
A757454	10	
A757455	< 5	
A757456	5	
A757457	1690	
A757458	7	
A757459	8	
A757460	9	
A757461	17	
A757462	15	
A757463	< 5	
A757464	16	
A757465	25	
A757466	47	
A757467	29	
A757468	< 5	
A757469	< 5	
A757470	< 5	
A757471	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757472	< 5	
A757473	< 5	
A757474	5	
A757475	6	
A757476	4070	4.20
A757477	< 5	
A757478	5	
A757479	7	
A757480	< 5	
A757481	< 5	
A757482	< 5	
A757483	< 5	
A757484	< 5	
A757485	< 5	
A757486	< 5	
A757487	< 5	
A757488	< 5	
A757489	< 5	
A757490	375	
A757491	< 5	
A757492	< 5	
A757493	< 5	
A757494	6	
A757495	6	
A757496	5	
A757497	7	
A757498	10	
A757499	65	
A757500	1140	
A757501	40	
A757502	122	
A757503	72	
A757504	150	
A757505	5	
A757506	55	
A757507	85	
A757508	141	
A757509	126	
A757510	19	
A757511	297	
A757512	4080	4.15

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757513	273	
A757514	< 5	
A757515	138	
A757516	48	
A757517	62	
A757518	219	
A757519	16	
A757520	11	
A757521	12	
A757522	399	
A757523	12	
A757524	< 5	
A757525	6	
A757526	7	
A757527	17	
A757528	46	
A757529	71	
A757530	35	
A757531	17	
A757532	1100	
A757533	29	
A757534	23	
A757535	77	
A757536	20	
A757537	< 5	
A757538	17	
A757539	22	
A757540	21	
A757541	28	
A757542	17	
A757543	< 5	
A757544	< 5	
A757545	4290	4.18
A757546	< 5	
A757547	< 5	
A757548	< 5	
A757549	5	
A757550	< 5	
A757551	5	
A757552	< 5	
A757553	5	
A757554	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757555	428	
A757556	< 5	
A757557	< 5	
A757558	9	
A757559	7	
A757560	< 5	
A757561	5	
A757562	3980	4.25
A757563	< 5	
A757564	< 5	
A757565	< 5	
A757566	< 5	
A757567	< 5	
A757568	< 5	
A757569	< 5	
A757570	< 5	
A757571	< 5	
A757572	< 5	
A757573	< 5	
A757574	< 5	
A757575	< 5	
A757576	< 5	
A757577	368	
A757578	< 5	
A757579	< 5	
A757580	< 5	
A757581	< 5	
A757582	< 5	
A757583	< 5	
A757584	1160	
A757585	< 5	
A757586	< 5	
A757587	< 5	
A757588	< 5	
A757589	5	
A757590	< 5	
A757591	< 5	
A757592	< 5	
A757593	5	
A757594	7	
A757595	314	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757596	< 5	
A757597	< 5	
A757598	< 5	
A757599	< 5	
A757600	< 5	
A757601	< 5	
A757602	7	
A757603	9	
A757604	< 5	
A757605	< 5	
A757606	19	
A757607	25	
A757608	55	
A757609	14	
A757610	9	
A757611	6	
A757612	6	
A757613	4230	4.78
A757614	6	
A757615	7	
A757616	5	
A757617	201	
A757618	38	
A757619	10	
A757620	5	
A757621	< 5	
A757622	< 5	
A757623	< 5	
A757624	< 5	
A757625	< 5	
A757626	< 5	
A757627	< 5	
A757628	1110	
A757629	11	
A757630	172	
A757631	212	
A757632	27	
A757633	129	
A757634	< 5	
A757635	126	
A757636	125	
A757637	149	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757638	4250	4.25
A757639	74	
A757640	416	
A757641	140	
A757642	26	
A757643	58	
A757644	49	
A757645	90	
A757646	129	
A757647	< 5	
A757648	129	
A757649	86	
A757650	74	
A757651	343	
A757652	67	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
OREAS 216 (Fire Assay) Meas		6.70
OREAS 216 (Fire Assay) Cert		6.66
OREAS 216 (Fire Assay) Meas		6.66
OREAS 216 (Fire Assay) Cert		6.66
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 254 Meas	2460	
OREAS 254 Cert	2550	
OREAS 254 Meas	2440	
OREAS 254 Cert	2550	
OREAS 254 Meas	2450	
OREAS 254 Cert	2550	
OREAS 254 Meas	2420	
OREAS 254 Cert	2550	
OREAS 254 Meas	2490	
OREAS 254 Cert	2550	
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 254 Meas	2540	
OREAS 254 Cert	2550	
OREAS 254 Meas	2550	
OREAS 254 Cert	2550	
OREAS 254 Meas	2510	
OREAS 254 Cert	2550	
OREAS 254 Meas	2550	
OREAS 254 Cert	2550	
OREAS 254 Meas	2510	
OREAS 254 Cert	2550	
OREAS 254 Meas	2500	
OREAS 254 Cert	2550	
OREAS 257 Meas		14.0
OREAS 257 Cert		14.18
OREAS 257 Meas		14.3
OREAS 257 Cert		14.18
Oreas 221 (Fire Assay) Meas	1030	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire	1020	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
Assay) Meas		
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1030	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	999	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1010	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1060	
Oreas 221 (Fire Assay) Cert	1060	
Oreas 221 (Fire Assay) Meas	1050	
Oreas 221 (Fire Assay) Cert	1060	
A757232 Orig	5	
A757232 Dup	5	
A757242 Orig	36	
A757242 Dup	33	
A757252 Orig	85	
A757252 Dup	74	
A757267 Orig	23	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757267 Dup	17	
A757272 Orig	148	
A757272 Split PREP DUP	161	
A757276 Orig	< 5	
A757276 Dup	< 5	
A757287 Orig	< 5	
A757287 Dup	< 5	
A757301 Orig	< 5	
A757301 Dup	< 5	
A757312 Orig	78	
A757312 Dup	76	
A757321 Orig	< 5	
A757321 Dup	< 5	
A757323 Orig	< 5	
A757323 Split PREP DUP	< 5	
A757338 Orig	139	
A757338 Dup	166	
A757349 Orig	12	
A757349 Dup	8	
A757359 Orig	54	
A757359 Dup	59	
A757370 Orig	7	
A757370 Dup	8	
A757372 Orig	12	
A757372 Split PREP DUP	10	
A757379 Orig	43	
A757379 Dup	33	
A757389 Orig	306	
A757407 Orig	80	
A757407 Dup	56	
A757418 Orig	75	
A757418 Dup	97	
A757422 Orig	6	
A757422 Split PREP DUP	5	
A757427 Orig	200	
A757427 Dup	274	
A757438 Orig	< 5	
A757438 Dup	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757448 Orig	< 5	
A757448 Dup	< 5	
A757458 Orig	7	
A757458 Dup	7	
A757472 Orig	< 5	
A757472 Split PREP DUP	< 5	
A757473 Orig	< 5	
A757473 Dup	< 5	
A757482 Orig	< 5	
A757482 Dup	< 5	
A757492 Orig	< 5	
A757492 Dup	< 5	
A757507 Orig	85	
A757507 Dup	85	
A757517 Orig	62	
A757517 Dup	62	
A757523 Orig	12	
A757523 Split PREP DUP	11	
A757526 Orig	7	
A757526 Dup	6	
A757544 Orig	< 5	
A757544 Dup	< 5	
A757556 Orig	< 5	
A757556 Dup	13	
A757565 Orig	< 5	
A757565 Dup	< 5	
A757572 Orig	< 5	
A757572 Split PREP DUP	< 5	
A757575 Orig	< 5	
A757575 Dup	< 5	
A757585 Orig	< 5	
A757585 Dup	< 5	
A757596 Orig	< 5	
A757596 Dup	< 5	
A757610 Orig	8	
A757610 Dup	9	
A757620 Orig	5	
A757620 Dup	5	
A757623 Orig	< 5	

Analyte Symbol	Au	Au
Unit Symbol	ppb	g/tonne
Lower Limit	5	0.02
Method Code	FA-AA	FA-GRA
A757623 Split PREP DUP	< 5	
A757629 Orig	11	
A757629 Dup	10	
A757644 Orig	49	
A757644 Dup	48	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
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Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank	< 5	
Method Blank		< 0.02
Method Blank		< 0.02

Quality Analysis ... *Innovative Technologies*

Date Submitted: 04-Jan-19
Invoice No.: A19-00221
Invoice Date: 20-Feb-19
Your Reference: RAV

Canadian Orebodies Inc.
141 Adelaide Street West, Suite 301
Toronto ON M5H 3L5
Canada

ATTN: President Gordon McKinnon

CERTIFICATE OF ANALYSIS

210 Pulp samples were submitted for analysis.

The following analytical package(s) were requested: Code UT-6M-RedPine Total Digestion ICP & ICP/MS

REPORT **A19-00221**

Notes:

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

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

ACTIVATION LABORATORIES LTD.
41 Bittern Street, Ancaster, Ontario, Canada, L9G 4V5
TELEPHONE +905 648-9611 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Ancaster@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
A757001	0.04	6.32	< 0.2	40	0.64	0.01	5.48	0.10	19.4	43.4	68	0.22	118	9.81	17.6	0.17	0.9	0.090	0.14	7.9	8.6	3.58	1400
A757002	0.03	6.18	< 0.2	30	0.55	0.02	7.64	0.15	20.2	42.3	89	0.17	72.5	9.58	18.5	0.08	1.1	0.076	0.12	8.2	8.3	3.28	1320
A757003	0.02	6.63	< 0.2	50	0.51	0.01	5.40	0.11	19.1	42.0	85	0.19	59.3	10.5	17.7	< 0.05	1.6	0.069	0.18	7.5	11.7	3.56	1400
A757004	0.03	6.19	< 0.2	70	0.68	0.01	6.31	0.20	21.3	42.4	81	0.80	78.3	10.2	16.8	0.06	1.2	0.083	0.27	8.4	13.8	3.29	1600
A757005	0.03	5.73	< 0.2	60	0.65	0.02	6.32	0.12	20.2	41.4	75	0.46	66.8	9.27	17.3	0.06	1.6	0.084	0.23	8.2	12.7	3.05	1580
A757007	0.03	5.87	< 0.2	60	0.60	0.01	6.90	0.17	19.9	42.0	83	0.29	66.4	9.60	17.6	0.06	1.3	0.082	0.20	8.0	7.8	3.15	1560
A757008	0.05	5.91	< 0.2	80	0.68	0.02	5.85	0.22	20.7	47.9	90	0.42	77.7	10.0	17.7	0.09	1.6	0.076	0.29	8.2	11.5	3.51	1610
A757009	0.04	5.81	< 0.2	90	0.56	0.02	5.90	0.18	19.8	48.0	69	0.60	81.2	10.1	17.3	0.12	0.8	0.085	0.30	8.3	13.1	3.55	1570
A757010	0.03	6.12	< 0.2	60	0.67	0.01	6.51	0.26	19.9	48.9	55	0.24	73.6	10.7	17.3	0.20	1.9	0.100	0.23	8.3	10.5	3.78	1710
A757011	0.05	6.03	< 0.2	50	0.54	0.02	6.05	0.15	19.7	50.1	55	0.27	75.2	10.6	17.2	0.32	2.4	0.087	0.25	7.9	12.0	3.74	1620
A757013	0.04	5.85	< 0.2	130	0.67	0.02	5.74	0.14	18.0	47.1	57	0.69	95.7	10.2	16.3	0.32	2.0	0.068	0.46	7.6	16.2	3.68	1590
A757014	0.06	5.85	< 0.2	70	0.72	0.02	5.72	0.08	17.3	46.5	61	0.48	68.5	10.2	16.1	0.21	1.3	0.079	0.42	7.2	13.8	3.74	1640
A757015	0.03	5.97	< 0.2	70	0.61	0.01	6.07	0.15	19.6	47.3	62	0.28	74.7	10.3	16.7	0.17	1.7	0.094	0.28	8.0	11.6	3.68	1600
A757016	0.03	6.13	< 0.2	110	0.60	0.01	6.27	0.18	18.6	46.8	69	0.49	71.4	10.7	16.2	0.24	1.4	0.080	0.41	7.8	14.7	3.77	1650
A757017	0.04	6.09	< 0.2	70	0.50	0.01	6.28	0.17	18.8	45.8	65	0.36	71.3	10.3	16.4	0.11	1.2	0.064	0.27	7.8	10.8	3.66	1650
A757018	0.06	5.97	< 0.2	90	0.50	0.06	6.14	0.16	18.0	42.8	83	0.29	69.7	10.0	16.4	0.06	1.2	0.077	0.28	7.5	10.7	3.65	1570
A757019	0.18	5.77	< 0.2	50	0.63	0.02	6.09	0.53	17.1	57.4	81	0.24	125	10.7	15.9	0.79	2.3	0.078	0.27	6.7	11.6	4.26	1780
A757021	0.63	3.40	< 0.2	40	1.20	0.19	3.61	7.30	21.0	34.2	45	0.81	451	14.3	14.2	2.62	1.7	1.30	0.15	8.9	4.6	1.71	1680
A757022	0.06	5.29	< 0.2	30	1.34	0.15	5.98	0.53	37.5	31.0	20	0.38	31.0	10.1	23.7	0.29	1.9	0.199	0.16	15.2	6.4	2.17	1480
A757024	1.55	5.16	< 0.2	60	1.25	0.59	4.88	0.34	34.1	33.4	24	2.90	76.3	10.0	20.0	0.26	2.0	0.159	0.47	13.5	10.9	2.08	1490
A757025	0.26	4.21	< 0.2	60	1.19	0.19	4.86	1.88	29.3	35.1	21	1.93	130	11.3	19.3	0.20	2.8	0.193	0.30	12.2	10.3	2.20	1640
A757026	0.03	5.57	< 0.2	40	0.99	0.02	5.06	0.13	35.9	31.5	31	0.22	38.7	10.7	20.5	0.08	1.2	0.122	0.13	13.8	4.4	2.09	1600
A757027	0.04	5.54	< 0.2	60	1.29	0.02	5.72	0.20	39.4	34.6	29	0.14	53.8	10.8	21.9	< 0.05	0.6	0.129	0.15	15.5	5.2	2.27	1690
A757028	0.04	5.38	< 0.2	80	1.15	0.02	5.52	0.16	40.4	34.8	19	0.32	45.6	10.5	24.8	< 0.05	1.0	0.135	0.22	15.8	6.2	2.16	1630
A757030	0.07	5.37	< 0.2	60	1.22	0.04	5.29	0.20	38.6	35.1	25	0.39	55.6	10.2	19.6	0.13	2.0	0.130	0.17	15.4	5.9	2.07	1570
A757031	0.07	5.27	< 0.2	70	1.09	0.03	5.56	0.16	35.6	31.9	19	0.28	46.8	10.2	21.2	0.14	1.8	0.118	0.18	13.9	5.3	2.00	1560
A757032	0.03	5.50	< 0.2	70	1.17	0.02	5.20	0.33	37.1	33.9	23	0.37	56.3	10.8	20.1	0.14	2.7	0.130	0.20	14.8	6.0	2.26	1620
A757033	0.02	5.45	< 0.2	60	1.04	0.01	6.32	0.08	37.2	32.2	17	0.32	54.1	10.3	23.5	0.20	1.7	0.122	0.25	14.8	12.0	2.33	1440
A757034	0.04	5.71	< 0.2	110	1.00	0.05	4.88	0.06	31.2	33.4	28	0.25	40.8	9.79	19.9	0.15	2.1	0.109	0.31	12.5	15.3	3.07	1170
A757035	0.03	5.71	< 0.2	90	0.94	< 0.01	4.09	0.16	30.7	33.9	29	0.67	39.0	10.4	20.4	0.07	2.0	0.131	0.35	12.3	7.2	2.53	1570
A757036	0.02	5.67	< 0.2	60	1.00	0.01	4.46	0.09	33.6	30.0	29	0.53	54.4	9.92	19.6	0.08	1.1	0.109	0.26	13.2	5.8	2.40	1470
A757037	0.02	5.53	< 0.2	40	1.14	0.02	4.63	0.15	33.4	32.6	28	0.12	44.0	10.1	21.6	0.09	2.0	0.129	0.16	12.9	4.4	2.41	1450
A757038	0.01	5.45	< 0.2	60	1.03	0.01	4.40	0.10	32.1	31.9	32	1.30	17.9	9.82	20.1	0.09	2.2	0.125	0.25	12.8	5.7	2.42	1370
A757039	0.02	5.47	< 0.2	60	1.02	0.03	4.63	0.10	31.3	33.6	28	0.79	46.4	9.93	21.0	0.15	2.5	0.126	0.24	12.4	4.8	2.52	1400
A757041	0.01	5.73	< 0.2	50	1.13	0.01	4.31	0.09	32.8	32.7	29	1.51	19.9	10.1	20.5	0.07	1.6	0.106	0.28	13.1	5.1	2.51	1410
A757042	0.03	5.68	< 0.2	280	1.41	0.04	5.42	0.05	44.7	25.9	66	3.67	23.8	7.29	16.8	0.16	2.0	0.060	0.81	19.9	25.9	2.66	1020
A757043	0.02	5.89	< 0.2	80	1.16	0.02	5.37	0.15	33.7	35.8	41	0.52	45.4	10.5	21.5	0.09	0.7	0.108	0.35	13.8	9.5	2.77	1520
A757044	0.05	4.59	< 0.2	130	0.87	0.04	8.79	0.04	26.6	25.1	35	0.66	39.0	7.99	16.5	0.12	1.6	0.110	0.44	10.3	12.8	1.64	1000
A757045	0.04	5.42	< 0.2	40	1.15	0.02	6.29	0.15	29.9	35.6	31	1.11	29.8	10.6	19.5	0.12	0.7	0.119	0.28	11.6	13.3	2.52	1650
A757047	0.03	5.26	< 0.2	30	0.81	0.03	8.46	0.20	29.4	29.1	38	0.24	27.7	10.3	18.3	0.16	1.0	0.130	0.15	12.0	11.0	2.53	1810
A757048	0.23	4.83	< 0.2	90	0.63	0.05	8.93	0.24	28.5	36.0	31	0.78	58.7	13.6	17.2	0.14	1.9	0.097	0.28	11.7	10.1	2.91	2100
A757049	0.04	6.09	< 0.2	80	1.22	0.01	5.40	0.20	33.7	34.3	65	0.71	31.1	11.7	21.1	0.15	1.6	0.129	0.36	13.1	16.4	3.21	1820

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
A757050	0.04	5.91	< 0.2	60	1.12	0.02	5.82	0.26	32.3	32.6	42	0.51	42.2	11.6	20.2	0.15	1.4	0.121	0.30	12.6	13.4	3.00	1740
A757051	0.03	5.23	< 0.2	40	0.80	0.02	7.58	0.15	30.8	32.0	36	0.26	46.6	9.35	18.9	0.09	0.7	0.124	0.23	12.3	8.7	1.92	1460
A757052	0.25	4.71	< 0.2	50	1.28	0.16	6.77	0.16	31.5	32.0	42	2.08	45.3	8.95	19.3	0.16	2.7	0.096	0.32	12.8	17.7	1.81	1030
A757053	0.92	4.47	< 0.2	70	1.26	0.48	4.97	0.20	25.5	27.0	35	2.81	40.4	8.44	17.2	0.18	1.9	0.083	0.69	9.6	18.4	1.84	1100
A757055	0.02	5.60	< 0.2	70	0.94	0.02	6.23	0.20	32.7	32.5	30	0.34	36.0	9.98	19.9	0.14	0.9	0.110	0.33	13.1	11.2	2.69	1500
A757056	0.02	5.76	< 0.2	80	1.08	0.01	5.64	0.18	33.4	33.9	40	0.35	42.5	10.4	20.6	0.16	2.7	0.141	0.34	13.2	10.5	2.89	1430
A757057	0.06	5.86	< 0.2	80	0.99	0.03	6.38	1.24	31.6	32.4	35	0.28	52.6	9.76	20.1	0.34	1.8	0.134	0.38	12.9	11.1	1.95	1570
A757058	0.10	4.94	< 0.2	120	1.00	0.04	7.16	0.62	27.8	29.5	29	0.55	66.1	8.72	18.0	0.37	1.3	0.404	0.48	11.3	13.7	1.35	1400
A757059	3.06	3.62	28.7	50	0.72	4.55	3.16	31.6	20.4	157	47	0.40	650	14.1	20.8	0.15	1.9	4.27	1.13	9.4	18.6	1.60	602
A757060	2.60	4.53	19.2	50	1.21	4.04	1.25	49.2	26.2	104	36	0.75	436	11.0	28.9	0.13	3.0	8.65	1.73	11.2	28.0	1.77	491
A757061	0.05	5.35	< 0.2	110	1.44	0.05	5.30	0.31	50.6	20.7	7	0.77	26.9	9.31	22.1	0.10	0.4	0.188	0.50	20.8	10.0	1.25	1610
A757062	0.02	4.06	< 0.2	40	0.97	0.03	4.88	0.08	40.8	17.6	7	0.25	10.8	8.92	17.1	0.15	0.4	0.138	0.16	16.9	7.6	1.37	1310
A757063	0.05	5.02	< 0.2	90	1.71	0.05	5.08	0.29	53.3	22.7	16	0.83	26.2	9.32	21.7	0.13	1.3	0.163	0.29	22.5	7.2	1.77	1500
A757065	0.03	5.39	< 0.2	100	1.76	0.03	4.14	0.23	55.6	21.7	16	0.34	15.6	9.93	22.4	0.09	2.0	0.166	0.24	22.6	5.4	1.56	1610
A757066	0.01	5.32	< 0.2	110	1.53	0.02	3.96	0.24	52.3	19.9	12	0.50	12.8	9.59	21.5	0.11	1.7	0.138	0.26	20.4	5.7	1.54	1560
A757067	0.30	4.63	< 0.2	180	1.56	0.21	3.99	0.14	49.0	19.2	9	2.96	22.3	8.69	20.1	0.21	3.8	0.159	0.68	19.5	7.4	1.36	1280
A757068	0.02	5.25	< 0.2	130	1.59	0.03	3.92	0.25	54.8	20.9	10	0.79	11.0	9.47	22.1	0.08	2.1	0.140	0.34	21.5	7.0	1.54	1420
A757069	0.03	5.20	< 0.2	120	1.66	0.03	4.13	0.16	52.8	20.3	19	0.44	15.6	9.45	21.9	0.08	2.1	0.151	0.29	20.9	7.1	1.66	1540
A757070	1.76	3.85	5.1	70	0.63	1.12	0.54	16.0	22.7	130	48	1.06	775	10.2	16.1	0.09	2.0	1.70	0.43	10.4	7.2	1.59	420
A757072	0.50	4.40	< 0.2	110	0.90	0.29	1.72	3.25	32.6	44.6	46	0.74	231	9.04	18.6	0.86	3.2	0.417	0.41	12.8	8.7	2.26	738
A757073	2.07	4.11	8.0	70	0.86	1.03	0.69	16.4	19.3	56.6	52	0.56	384	9.52	18.3	0.19	3.0	1.45	1.18	7.4	18.7	1.53	499
A757074	1.85	4.30	< 0.2	70	0.92	0.80	2.34	14.0	30.0	30.9	31	0.43	309	10.3	18.8	2.36	3.6	0.796	0.82	12.2	21.7	1.83	692
A757075	4.74	3.94	10.0	30	0.83	2.17	0.97	27.3	25.0	127	39	0.76	1160	11.4	37.6	0.33	2.7	3.46	0.46	10.2	18.0	2.19	459
A757076	0.05	5.58	< 0.2	140	1.15	0.03	4.54	0.17	38.8	28.0	21	1.95	24.0	9.41	23.3	0.08	1.6	0.145	0.37	14.8	17.5	2.24	1430
A757077	0.04	6.24	< 0.2	310	1.45	0.03	4.92	0.07	64.9	21.0	23	1.49	18.3	6.66	19.9	< 0.05	2.5	0.066	0.75	28.3	26.4	1.87	896
A757079	0.12	7.13	< 0.2	520	1.86	0.03	4.39	0.18	68.7	20.6	32	2.57	16.0	5.71	19.3	< 0.05	3.9	0.058	1.29	29.9	44.0	2.13	778
A757080	0.18	3.74	< 0.2	240	1.54	0.13	10.0	0.05	31.1	22.4	33	2.27	29.8	4.79	15.5	0.39	1.2	0.103	1.46	13.4	15.6	0.56	1130
A757081	0.04	5.62	< 0.2	70	1.57	0.03	4.38	0.23	39.5	28.5	26	2.28	22.3	9.49	23.8	0.14	0.4	0.123	0.49	15.6	21.6	2.02	1040
A757082	0.05	6.14	< 0.2	70	0.74	0.03	5.89	0.20	21.7	43.3	61	0.36	81.6	9.60	20.0	0.15	1.0	0.085	0.24	8.6	7.3	2.79	1600
A757083	0.08	6.19	< 0.2	70	0.59	0.03	6.04	0.18	19.9	45.7	73	0.40	81.9	9.45	20.6	0.51	2.0	0.101	0.22	7.6	6.2	2.88	1560
A757084	0.07	5.43	< 0.2	70	0.60	0.09	7.64	0.22	19.1	48.1	64	0.18	68.3	9.55	19.2	0.24	1.6	0.087	0.17	7.5	4.6	3.21	1630
A757085	0.14	6.16	< 0.2	70	0.86	0.05	4.30	0.65	28.0	28.7	54	0.36	49.3	10.2	20.2	0.85	3.0	0.177	0.19	11.8	6.3	2.26	1600
A757086	0.54	3.99	< 0.2	40	1.04	0.32	3.06	6.13	27.3	36.0	35	0.73	232	9.63	19.0	0.69	3.1	0.919	0.13	10.8	12.9	2.14	1160
A757087	0.22	5.19	< 0.2	40	1.38	0.11	4.78	0.67	35.4	27.8	28	0.54	62.2	9.96	24.5	0.54	1.3	0.174	0.18	14.5	14.8	2.70	1470
A757089	0.02	5.49	< 0.2	80	1.25	0.15	6.14	0.29	42.6	37.3	25	0.29	41.3	10.2	25.9	< 0.05	0.6	0.153	0.35	16.4	8.2	2.31	1620
A757091	0.04	5.51	< 0.2	80	1.19	0.07	5.74	0.24	41.3	36.3	17	0.39	52.3	10.00	25.2	< 0.05	0.8	0.144	0.28	15.4	8.7	1.79	1510
A757092	0.03	5.52	< 0.2	60	1.07	0.02	5.91	0.17	41.4	34.0	18	0.31	62.0	9.91	25.5	0.09	1.5	0.163	0.27	15.7	6.3	1.76	1410
A757093	0.02	5.38	< 0.2	110	0.79	0.03	5.08	0.11	34.0	33.3	34	0.47	46.7	9.38	22.8	0.20	1.8	0.131	0.50	12.8	12.2	2.41	1540
A757094	0.06	5.30	< 0.2	90	0.99	0.03	6.21	0.16	32.8	30.5	31	0.61	34.2	9.22	22.7	0.18	1.6	0.125	0.46	12.5	13.1	2.28	1510
A757095	0.02	5.01	< 0.2	90	0.82	< 0.01	5.99	0.13	31.3	31.7	56	0.68	28.4	8.11	19.8	< 0.05	0.4	0.101	0.41	12.1	6.5	1.90	1390
A757096	0.04	5.60	< 0.2	140	1.06	0.03	5.22	0.17	35.6	35.1	47	1.52	43.7	10.1	23.5	< 0.05	0.6	0.133	0.59	13.4	16.1	2.71	1570
A757097	0.03	5.73	< 0.2	150	1.09	0.02	5.17	0.09	33.6	37.4	42	2.46	31.5	9.99	23.3	0.11	1.1	0.143	0.57	13.0	12.2	2.70	1480

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
A757098	0.05	4.27	< 0.2	150	0.56	0.03	4.61	0.08	24.8	28.4	36	2.97	43.3	7.88	18.3	0.16	0.9	0.105	0.50	9.2	8.5	1.41	1100
A757099	0.04	5.87	< 0.2	150	1.06	0.01	4.74	0.16	38.2	36.3	33	4.21	27.2	11.9	25.1	0.16	2.9	0.146	0.77	14.6	17.4	3.23	1840
A757101	0.02	5.44	< 0.2	60	0.93	0.02	6.98	0.20	33.6	33.6	32	0.39	37.4	10.2	24.9	0.13	1.4	0.122	0.28	12.9	13.8	2.81	1580
A757102	0.03	4.79	< 0.2	90	0.73	0.02	8.70	0.20	30.2	30.4	28	0.40	39.6	10.2	20.2	0.13	1.0	0.110	0.25	11.6	10.4	2.45	1640
A757103	0.02	5.72	< 0.2	50	0.86	< 0.01	7.07	0.11	33.2	33.7	36	0.14	43.8	10.4	23.1	0.07	1.3	0.129	0.20	12.7	5.0	2.43	1540
A757105	0.02	5.79	< 0.2	70	1.09	0.01	5.71	0.17	36.1	35.9	38	0.29	39.3	10.3	24.0	< 0.05	1.0	0.138	0.31	13.6	9.4	2.56	1610
A757106	0.02	4.80	< 0.2	40	0.79	0.02	9.46	0.14	27.4	29.7	31	0.21	43.3	9.87	17.7	0.12	1.7	0.100	0.17	10.8	7.9	2.27	1560
A757107	0.02	5.64	< 0.2	50	0.90	0.02	5.65	0.07	30.8	31.8	37	0.21	41.5	10.0	19.7	0.10	1.2	0.132	0.19	12.3	4.8	1.99	1510
A757108	0.02	5.60	< 0.2	70	0.92	0.02	6.82	0.07	31.0	32.4	34	0.27	42.0	9.98	19.9	0.10	1.5	0.118	0.28	12.4	4.8	1.97	1490
A757109	0.03	5.59	< 0.2	80	1.02	0.04	6.71	0.09	31.4	33.0	33	0.69	39.9	9.76	20.0	0.12	1.5	0.124	0.37	12.6	6.4	2.03	1610
A757110	0.05	5.31	< 0.2	70	1.02	0.02	7.04	0.16	30.8	31.6	28	0.59	44.0	9.71	19.6	0.11	1.6	0.107	0.32	12.4	8.5	1.89	1520
A757111	0.02	5.55	< 0.2	50	1.17	0.01	5.77	0.19	30.9	36.4	33	0.26	46.5	10.9	20.1	0.11	1.3	0.109	0.23	12.6	14.1	3.04	1750
A757112	0.03	5.05	< 0.2	70	1.04	0.02	5.69	0.14	30.6	31.2	40	0.72	32.6	8.89	18.9	< 0.05	0.4	0.107	0.31	12.6	12.7	2.30	1520
A757113	0.04	5.77	< 0.2	90	0.93	0.02	4.78	0.31	31.4	33.8	36	1.14	42.8	9.90	20.3	< 0.05	1.1	0.112	0.43	12.5	13.2	2.63	1610
A757115	0.06	5.04	< 0.2	70	1.13	0.06	5.88	0.25	28.9	29.8	28	2.69	39.1	9.19	18.4	0.11	1.7	0.098	0.55	11.7	17.1	2.41	1480
A757116	0.37	5.40	< 0.2	70	1.00	0.12	5.25	0.22	30.5	31.6	36	0.98	45.7	9.83	19.1	0.23	2.5	0.105	0.40	12.7	10.7	2.55	1480
A757117	0.29	5.38	< 0.2	110	0.95	0.15	5.40	0.16	30.1	31.0	32	0.58	33.3	9.80	19.7	0.24	2.5	0.104	0.41	12.0	13.8	2.48	1480
A757118	0.03	5.66	< 0.2	70	1.03	0.03	5.23	0.19	33.1	34.5	32	0.62	42.5	10.2	21.7	0.24	2.4	0.125	0.38	13.2	12.6	2.70	1570
A757120	0.02	5.61	< 0.2	130	1.02	0.03	5.15	0.15	32.0	33.6	30	2.20	28.3	10.0	21.0	0.10	1.5	0.114	0.69	12.9	21.5	2.55	1350
A757121	0.03	5.36	< 0.2	60	1.12	0.02	4.77	0.14	30.3	32.4	35	0.86	39.8	9.46	19.5	0.07	0.8	0.100	0.26	12.3	17.8	2.40	1370
A757122	0.05	5.15	< 0.2	100	1.16	0.04	4.82	0.09	29.7	32.4	35	1.71	35.9	9.22	19.6	< 0.05	1.0	0.104	0.54	12.0	18.6	2.46	1420
A757123	18.2	4.53	< 0.2	170	1.33	4.42	4.72	0.15	24.0	30.0	41	2.83	99.5	8.53	16.7	0.14	1.9	0.089	1.31	9.9	17.3	1.94	1240
A757124	0.04	5.62	< 0.2	100	0.85	0.03	5.84	0.14	30.8	33.0	33	1.22	52.7	9.96	20.2	0.11	2.3	0.107	0.45	12.5	10.2	2.28	1600
A757125	0.05	5.68	< 0.2	80	0.86	0.03	6.01	0.10	29.8	26.3	30	0.73	33.7	8.90	20.2	0.15	3.1	0.104	0.30	11.6	12.2	1.95	1390
A757127	0.10	5.67	< 0.2	70	1.12	0.03	4.45	0.18	30.2	36.5	36	0.78	39.0	8.93	19.5	0.28	3.1	0.112	0.28	11.9	16.9	2.78	1470
A757129	0.02	4.79	< 0.2	50	0.82	0.03	7.16	0.45	28.7	29.8	31	0.21	35.9	9.66	17.5	0.13	0.9	0.087	0.18	11.7	17.5	2.86	1980
A757130	0.02	5.56	< 0.2	40	1.13	0.03	6.40	0.17	32.3	33.5	49	0.17	45.4	10.5	21.9	0.10	0.5	0.124	0.19	12.7	11.2	2.53	1560
A757131	0.01	5.49	< 0.2	40	0.62	0.01	6.71	0.15	31.2	31.5	42	0.18	46.3	9.73	20.5	< 0.05	0.4	0.120	0.18	12.4	6.4	1.98	1500
A757132	0.07	5.25	< 0.2	60	0.60	0.10	6.28	0.33	27.0	25.4	59	0.26	26.7	8.03	13.6	0.32	3.2	0.088	0.15	11.3	4.1	1.49	1550
A757133	0.80	2.63	< 0.2	20	0.59	0.94	4.16	19.7	18.1	26.5	59	0.25	418	8.08	12.6	0.14	1.4	2.38	0.07	8.5	4.7	0.81	1270
A757135	0.40	5.09	< 0.2	70	1.10	0.45	2.23	3.97	29.5	31.3	44	0.49	159	11.3	16.4	0.58	3.7	0.416	0.17	12.2	17.6	2.56	1550
A757136	0.15	5.75	< 0.2	90	1.28	0.14	3.70	0.24	42.1	34.6	30	0.44	40.7	12.3	22.2	0.49	5.2	0.148	0.19	17.5	18.7	3.13	1900
A757138	0.05	5.12	< 0.2	230	1.26	0.04	5.52	0.11	35.5	29.6	46	1.20	48.9	9.73	19.2	0.15	2.9	0.086	0.56	14.7	10.0	2.43	1490
A757139	0.04	5.57	< 0.2	70	1.16	0.03	5.32	0.20	38.2	34.2	21	0.63	41.5	10.9	23.1	0.19	3.0	0.147	0.21	15.6	5.9	2.21	1680
A757140	0.10	5.32	< 0.2	130	1.07	0.09	5.19	0.13	35.9	32.1	24	0.80	33.9	9.98	21.2	0.16	2.6	0.124	0.32	14.7	8.8	2.05	1510
A757141	0.03	5.61	< 0.2	80	1.13	0.03	5.10	0.17	36.2	33.3	33	0.69	46.0	10.6	22.0	0.11	1.6	0.136	0.25	14.5	5.9	2.31	1570
A757142	0.10	5.63	< 0.2	100	1.12	0.01	5.17	0.20	35.5	33.6	26	0.78	48.9	10.6	21.6	0.16	2.2	0.118	0.30	14.0	7.2	2.35	1550
A757143	0.03	5.43	< 0.2	90	1.10	0.04	5.38	0.16	34.8	32.8	26	0.40	42.5	10.7	21.3	0.16	2.7	0.122	0.28	13.5	8.4	2.38	1580
A757144	0.05	5.53	< 0.2	70	1.16	0.03	5.17	0.20	36.2	33.1	29	0.59	73.0	10.3	22.2	0.20	3.4	0.123	0.27	14.9	6.4	2.40	1410
A757145	0.08	5.46	< 0.2	90	1.03	0.04	5.63	0.19	34.6	33.0	25	0.61	47.0	10.3	23.6	0.16	2.4	0.143	0.29	14.1	7.5	2.44	1420
A757146	0.03	5.47	< 0.2	70	0.83	0.04	6.23	0.27	33.6	32.8	22	0.22	51.6	10.2	20.8	0.18	2.5	0.130	0.26	13.7	6.0	2.35	1510
A757148	0.03	5.35	< 0.2	80	1.09	0.12	6.88	0.25	34.3	34.0	28	0.39	61.9	10.0	21.8	< 0.05	0.4	0.135	0.24	14.0	6.7	2.07	1510

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
A757149	1.01	4.84	< 0.2	140	0.88	0.74	5.68	0.13	26.7	33.2	21	1.31	40.5	9.43	19.5	0.05	1.8	0.107	0.51	10.2	14.0	1.81	939
A757150	0.09	5.29	< 0.2	130	1.35	0.12	6.41	0.18	32.0	33.5	17	1.04	42.6	10.0	20.6	0.09	0.5	0.117	0.43	12.6	12.5	2.04	1630
A757152	0.17	5.43	< 0.2	70	1.15	0.15	5.98	0.16	32.0	33.5	34	1.93	32.7	9.39	21.8	0.17	1.9	0.119	0.42	12.9	10.5	1.99	1430
A757153	0.01	5.70	< 0.2	90	1.01	0.02	5.98	0.20	31.0	31.6	34	0.45	25.2	9.81	21.8	0.20	2.0	0.120	0.47	12.5	9.8	2.48	1590
A757154	0.03	5.75	< 0.2	100	1.05	0.02	5.93	0.15	34.0	33.9	42	0.46	64.3	8.86	21.6	0.18	1.5	0.129	0.43	13.3	9.0	2.07	1450
A757155	2.09	3.64	< 0.2	150	1.03	2.06	4.12	0.30	19.5	22.1	46	1.58	25.7	6.81	13.5	0.28	2.1	0.066	0.80	8.2	9.3	1.20	714
A757156	0.03	5.63	< 0.2	150	1.00	0.02	5.27	0.11	31.1	32.8	38	0.91	46.0	9.49	19.7	0.29	2.1	0.128	0.57	12.0	9.6	2.23	1470
A757157	0.02	5.54	< 0.2	70	1.32	0.02	6.71	0.19	29.1	31.2	37	0.22	31.1	9.92	21.4	0.08	0.4	0.115	0.31	11.8	8.9	2.34	1530
A757158	0.05	5.34	< 0.2	50	0.96	0.02	7.08	0.32	31.9	35.9	51	0.26	62.8	11.5	20.3	0.08	0.7	0.118	0.20	13.1	10.7	2.61	1840
A757160	0.01	5.73	< 0.2	110	1.02	0.01	5.18	0.17	29.9	31.8	37	0.35	33.3	10.5	19.7	0.08	0.8	0.100	0.27	12.5	12.1	2.88	1730
A757161	0.01	5.52	< 0.2	140	1.11	0.02	5.12	0.10	31.5	32.1	40	0.68	43.3	9.85	19.5	0.11	1.3	0.103	0.42	12.7	12.5	2.82	1610
A757163	0.08	5.88	< 0.2	400	1.47	0.02	5.29	0.13	55.4	30.1	171	2.44	41.5	6.67	15.4	0.17	3.4	0.055	1.26	25.7	25.8	3.56	907
A757164	0.06	5.68	< 0.2	150	0.93	0.08	5.84	0.14	32.6	33.6	35	1.17	34.5	10.7	21.8	0.19	1.4	0.121	0.32	13.3	14.5	2.61	1720
A757165	0.02	5.71	< 0.2	60	1.03	0.02	6.38	0.18	30.5	33.0	37	0.25	34.1	10.3	22.0	0.15	0.9	0.112	0.18	12.1	10.8	2.43	1620
A757166	0.06	5.90	< 0.2	60	1.10	0.02	5.83	0.18	32.1	33.5	41	0.35	42.1	10.7	22.0	0.21	1.8	0.147	0.25	12.9	9.8	2.51	1580
A757167	0.02	6.03	< 0.2	120	1.03	0.01	4.91	0.16	29.5	33.3	38	0.51	42.7	11.3	21.7	0.15	0.8	0.108	0.30	12.1	13.7	2.85	1760
A757168	0.01	5.53	< 0.2	200	0.88	0.02	4.57	0.10	29.0	34.8	41	1.77	69.5	9.29	17.9	0.14	1.1	0.106	0.47	11.9	10.4	2.13	1580
A757169	0.21	3.99	0.3	50	0.71	0.41	5.10	0.15	16.1	23.5	38	0.68	48.4	7.14	15.5	0.24	1.9	0.080	0.38	6.4	13.8	1.45	741
A757171	0.02	5.64	< 0.2	100	0.99	0.01	4.83	0.13	30.1	34.5	32	2.58	31.1	10.6	20.3	0.12	1.1	0.097	0.46	11.6	15.6	2.93	1650
A757172	0.02	5.94	< 0.2	150	1.12	0.02	5.08	0.31	34.5	36.9	37	0.65	51.6	11.0	21.9	0.22	2.2	0.133	0.43	13.7	14.7	2.84	1770
A757174	0.06	5.72	< 0.2	60	1.23	0.04	5.20	0.19	31.5	33.6	44	0.73	31.8	10.0	20.3	0.25	2.7	0.128	0.33	12.0	9.1	2.50	1660
A757175	0.03	5.90	< 0.2	190	0.99	0.02	4.76	0.17	30.5	33.7	49	1.21	43.0	11.1	20.4	0.15	2.3	0.125	0.83	12.3	14.4	2.81	1640
A757176	0.02	3.40	< 0.2	210	0.44	0.02	12.6	0.08	23.0	20.9	31	0.67	30.9	5.66	11.0	0.10	0.8	0.056	0.43	9.8	7.6	1.16	2490
A757177	0.02	5.58	< 0.2	130	1.05	0.01	5.14	0.21	31.8	34.3	48	0.96	39.0	10.1	20.8	< 0.05	0.3	0.113	0.56	12.8	15.5	2.65	1540
A757178	0.03	5.46	1.5	60	0.99	0.02	5.16	0.10	30.7	32.6	40	0.81	49.9	10.6	21.7	0.14	1.7	0.127	0.27	12.5	9.7	2.35	1520
A757180	0.04	5.37	< 0.2	70	0.85	0.04	5.94	0.14	30.3	30.7	40	2.82	33.9	10.1	20.9	0.20	2.1	0.111	0.79	12.1	14.1	2.50	1490
A757181	0.04	7.41	< 0.2	40	0.83	0.03	5.83	0.19	31.0	33.8	45	0.37	38.6	11.2	20.9	0.15	1.8	0.129	0.26	11.9	11.9	2.73	1650
A757182	0.03	5.69	< 0.2	60	1.01	0.03	5.19	0.38	31.3	33.6	36	0.89	39.3	10.9	21.3	0.14	2.2	0.130	0.42	12.4	16.0	2.95	1710
A757183	0.03	5.71	< 0.2	90	1.13	0.03	5.79	0.13	32.2	30.6	41	1.93	32.4	9.84	21.0	0.30	2.1	0.115	0.74	13.1	12.9	2.29	1590
A757184	0.07	4.68	< 0.2	40	0.96	0.08	7.87	0.23	28.9	31.2	40	0.33	94.4	15.6	18.8	0.08	3.0	0.084	0.22	11.9	6.0	3.03	2080
A757185	0.03	5.03	< 0.2	30	1.17	0.08	7.66	0.23	29.5	28.3	44	0.31	39.3	12.3	20.2	0.14	0.7	0.099	0.16	11.9	8.1	2.56	1930
A757186	0.03	5.52	< 0.2	60	0.97	0.04	6.85	0.16	31.2	31.1	31	0.36	49.6	10.7	20.9	0.12	1.4	0.105	0.21	12.5	10.2	2.54	1560
A757187	0.07	7.81	< 0.2	260	0.35	0.03	6.59	0.07	10.3	50.5	121	0.85	92.0	8.96	14.6	0.47	1.7	0.050	0.92	4.2	18.8	4.62	1470
A757189	0.08	5.92	< 0.2	220	1.49	0.08	6.36	0.13	39.0	32.9	123	1.23	61.8	6.26	13.4	0.06	2.4	0.049	0.43	19.1	29.6	3.89	971
A757191	0.70	4.81	1.5	220	0.76	0.50	5.66	0.06	6.49	32.1	100	1.30	62.2	5.72	11.1	0.06	1.1	0.025	0.59	2.8	24.6	3.18	858
A757192	0.09	7.95	< 0.2	160	0.43	0.03	7.13	0.06	10.5	46.5	116	1.07	82.2	8.57	14.9	0.37	1.6	0.048	0.65	4.1	12.7	4.60	1370
A757193	0.05	9.73	1.4	110	0.28	0.01	6.72	0.10	8.81	48.9	131	1.31	89.3	8.66	15.2	0.40	1.4	0.048	0.76	3.5	17.6	4.98	1380
A757194	0.04	8.48	< 0.2	60	0.28	0.02	6.77	0.09	8.14	47.9	200	1.28	82.8	8.15	14.5	0.33	1.3	0.059	0.65	3.3	15.3	4.97	1220
A757195	0.08	6.78	< 0.2	100	0.62	0.21	6.54	0.10	9.08	47.5	226	3.93	58.0	7.57	14.5	0.19	1.2	0.058	0.80	3.7	29.3	4.68	1150
A757196	0.38	3.69	1.2	50	0.69	2.89	5.50	0.10	4.44	23.6	120	2.73	58.8	4.03	9.26	0.35	0.7	0.038	0.39	1.7	22.0	2.44	737
A757198	0.18	6.46	1.0	90	1.37	0.32	7.07	0.20	8.13	45.4	127	5.10	73.7	7.38	15.1	0.17	1.3	0.048	1.01	3.2	43.9	4.41	1140
A757199	0.10	6.84	< 0.2	90	0.43	0.41	6.90	0.06	8.34	46.7	130	1.49	73.0	7.92	14.3	0.17	1.3	0.052	0.71	3.3	24.6	4.83	1220

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
A757201	0.06	5.95	1.1	40	0.35	0.05	7.34	0.07	12.8	37.8	106	0.97	70.3	6.66	12.9	0.27	1.4	0.043	0.23	5.2	17.3	3.95	1020
A757202	0.04	4.71	0.3	< 10	0.21	0.02	5.77	0.06	7.53	36.9	144	0.39	57.3	7.24	10.5	0.41	1.0	0.031	0.06	3.0	18.2	5.30	984
A757203	0.04	6.38	< 0.2	70	0.43	0.15	8.15	0.16	11.6	45.8	182	0.55	86.5	8.81	15.5	0.16	1.2	0.061	0.37	4.6	12.9	4.16	1370
A757205	0.14	5.78	0.6	80	0.63	0.25	8.73	0.11	10.5	43.7	197	0.79	82.5	7.75	13.9	0.11	0.9	0.040	0.24	4.2	18.0	3.39	1250
A757206	0.06	6.42	< 0.2	110	0.43	0.19	7.91	0.14	11.6	45.9	161	0.75	76.2	8.60	15.5	0.20	1.0	0.071	0.47	4.6	10.4	3.67	1400
A757207	0.06	6.24	< 0.2	80	0.38	0.08	7.63	0.08	12.1	45.2	121	0.57	73.7	8.65	14.1	0.30	0.8	0.049	0.27	4.9	7.9	3.78	1370
A757208	0.15	5.88	< 0.2	170	1.29	0.12	5.83	0.17	37.2	38.7	208	1.63	43.6	6.60	13.1	0.07	2.5	0.038	0.40	16.1	36.7	4.54	1120
A757209	0.05	6.19	1.2	200	0.28	0.04	6.17	0.04	7.82	58.8	261	0.59	65.9	8.26	11.3	0.38	1.1	0.036	0.54	3.3	23.6	6.56	1230
A757211	0.05	5.86	0.5	30	0.23	0.08	6.36	0.06	7.73	63.7	341	0.94	81.1	8.72	12.6	0.39	1.2	0.034	0.29	3.1	15.7	6.91	1360
A757213	0.04	5.60	0.2	40	0.26	0.08	6.28	0.08	7.63	60.9	346	1.00	67.8	8.54	12.0	0.50	1.2	0.040	0.30	3.1	22.3	6.88	1330
A757214	0.20	5.03	1.5	20	0.58	0.43	7.42	0.06	6.27	50.9	340	2.02	61.8	7.34	12.4	0.38	1.0	0.040	0.20	2.5	45.9	5.60	1030
A757216	0.06	6.07	1.0	60	0.29	0.08	6.67	0.12	8.22	62.3	329	1.41	76.2	8.87	13.7	0.40	1.2	0.043	0.55	3.3	18.5	6.56	1390
A757217	0.06	6.10	0.8	40	0.32	0.12	6.69	0.09	8.68	63.4	303	1.37	76.1	8.66	14.5	0.51	1.3	0.050	0.40	3.5	14.3	6.22	1380
A757218	0.07	6.10	0.8	50	0.34	0.04	7.23	0.15	8.58	57.8	204	1.43	80.7	8.44	14.9	0.45	1.4	0.053	0.39	3.4	21.5	5.64	1320
A757219	0.88	3.16	0.7	10	0.55	1.07	2.83	12.6	19.0	29.3	35	0.33	332	11.5	17.9	0.53	1.7	1.22	0.03	8.1	11.1	2.71	667
A757221	0.79	4.30	1.2	20	0.49	0.73	1.76	4.20	20.2	49.9	44	1.00	228	13.3	19.4	0.54	2.3	0.808	0.05	8.5	18.1	3.13	745
A757222	0.21	5.77	< 0.2	20	0.49	0.04	5.30	0.64	14.5	49.7	82	0.38	151	11.6	18.7	0.31	1.8	0.099	0.12	5.8	9.7	3.55	1130
A757377	4.87	5.31	0.4	560	1.09	25.5	1.78	0.53	41.4	5.9	20	4.65	1140	2.04	17.6	< 0.05	2.3	0.088	2.23	20.3	14.5	0.42	264
A757378	1.35	6.62	0.6	760	1.48	3.74	2.14	0.50	48.9	9.1	21	5.62	90.9	2.97	22.9	< 0.05	3.0	0.073	2.27	24.3	19.0	0.57	377
A757379	0.13	6.93	< 0.2	800	1.33	0.17	2.30	0.10	47.7	7.4	19	4.11	35.7	2.57	22.0	0.19	2.7	0.030	2.21	23.4	17.2	0.60	354
A757380	0.31	6.89	0.5	680	1.19	2.17	2.41	0.05	46.1	7.4	16	2.54	13.6	2.83	21.5	< 0.05	2.8	0.029	1.93	22.8	14.5	0.61	381
A757381	0.17	6.97	< 0.2	780	1.41	0.24	2.25	0.10	50.9	7.3	15	3.29	61.0	2.50	22.9	0.10	2.8	0.031	2.24	24.4	15.2	0.61	345
A757382	0.15	6.92	0.6	750	1.43	1.30	2.25	0.08	47.7	7.2	20	2.56	62.7	2.85	22.4	0.08	2.8	0.044	2.38	22.9	13.0	0.60	345
A757383	0.29	6.61	0.2	670	1.24	3.95	2.20	0.02	48.5	7.0	17	1.74	122	2.51	21.2	< 0.05	3.0	0.028	2.33	24.2	12.5	0.58	280
A757384	0.46	6.44	1.8	680	1.36	2.93	1.85	< 0.02	49.3	6.8	18	2.07	212	2.80	19.9	0.06	2.7	0.035	2.20	23.8	13.6	0.54	294
A757386	0.11	7.00	< 0.2	730	1.49	0.19	2.01	0.03	60.1	6.8	12	1.83	198	2.50	22.2	< 0.05	3.1	0.041	2.23	30.4	16.2	0.64	320
A757387	0.21	6.75	3.6	700	1.28	0.47	2.10	0.08	49.1	6.9	19	3.78	60.5	2.64	20.8	< 0.05	2.7	0.023	1.83	23.6	14.1	0.57	360
A757388	0.28	6.69	0.5	690	1.31	0.56	2.32	0.05	44.9	6.4	16	3.09	35.1	2.39	20.9	0.09	2.7	0.033	2.26	21.9	14.3	0.54	303
A757389	0.23	6.51	0.7	730	1.35	1.09	2.47	0.03	46.1	7.2	14	3.43	42.8	2.64	20.4	0.09	2.7	0.031	2.05	22.4	14.0	0.56	345
A757390	0.17	6.72	0.7	700	1.39	0.43	2.50	0.03	48.2	7.2	21	2.95	20.4	2.39	22.0	< 0.05	2.7	0.033	2.14	23.1	15.6	0.56	299
A757391	0.45	3.58	1.1	240	0.65	3.34	1.81	< 0.02	23.6	5.3	32	1.12	20.2	2.04	12.2	< 0.05	1.3	0.012	0.67	11.3	6.0	0.30	176
A757392	1.17	6.30	< 0.2	620	1.23	7.13	2.22	0.09	42.3	6.8	14	2.55	126	2.35	20.8	< 0.05	2.6	0.031	1.92	21.0	14.7	0.56	301
A757393	0.24	6.33	< 0.2	580	1.78	0.60	5.19	< 0.02	62.8	23.9	71	3.11	76.7	5.39	19.0	< 0.05	3.4	0.043	2.18	28.8	35.7	1.73	585
A757418	0.32	3.45	1.7	510	0.75	0.03	2.45	< 0.02	27.0	19.3	147	1.51	96.0	3.25	7.68	< 0.05	1.0	0.014	1.01	14.9	21.4	1.75	534
A757419	0.13	5.95	< 0.2	930	1.64	0.06	4.80	0.12	77.8	65.9	239	3.28	152	9.00	11.4	< 0.05	0.9	0.060	2.28	42.0	41.8	4.50	1440
A757420	0.10	5.65	0.2	680	1.13	0.08	5.52	0.05	59.9	46.9	222	1.20	119	7.93	12.3	0.16	1.8	0.043	1.15	30.4	28.0	4.06	1370
A757421	0.09	6.17	< 0.2	700	1.00	0.09	5.99	0.16	58.8	43.1	215	3.07	36.0	6.60	15.9	0.22	2.7	0.046	1.71	25.6	24.3	4.89	1240
A757422	0.19	6.13	< 0.2	1440	1.30	0.08	6.05	0.11	62.9	40.0	123	1.10	108	7.22	10.5	< 0.05	2.4	0.051	2.46	29.7	14.8	3.63	1390
A757424	0.22	5.45	2.4	770	1.05	0.09	9.29	0.12	70.9	55.0	132	0.82	170	9.15	8.89	0.18	1.5	0.047	1.30	39.2	16.9	3.98	2170
A757425	0.25	5.70	< 0.2	1740	1.53	0.05	7.64	0.10	70.3	52.1	153	1.45	182	8.91	3.41	0.24	1.6	0.051	2.25	39.0	23.1	3.64	1790
A757426	0.22	5.15	< 0.2	1010	1.20	0.05	6.14	0.10	61.7	43.7	151	1.09	188	8.13	9.36	0.08	0.9	0.031	1.47	34.3	27.1	3.38	1560
A757427	0.30	4.42	0.3	740	0.95	0.06	7.51	0.08	51.0	36.7	96	0.53	351	5.73	7.10	< 0.05	1.3	0.031	1.22	28.0	11.1	2.62	1470

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
A757001	0.15	2.57	< 0.1	43.8	620	< 0.5	2.3	0.002	0.09	< 0.05	41.2	< 1	< 0.2	68.4	< 0.05	< 0.05	0.7	0.190	0.04	0.2	123	< 0.1	33.1
A757002	0.14	1.29	< 0.1	45.7	660	0.5	2.0	0.002	0.03	< 0.05	40.2	< 1	< 0.2	195	< 0.05	< 0.05	0.7	0.146	< 0.02	0.2	104	< 0.1	33.2
A757003	0.08	2.46	< 0.1	44.2	640	< 0.5	2.8	< 0.002	0.06	< 0.05	43.6	< 1	< 0.2	94.7	< 0.05	< 0.05	0.7	0.199	0.04	0.2	158	< 0.1	34.2
A757004	0.08	1.77	< 0.1	47.8	710	0.8	6.4	< 0.002	0.10	< 0.05	40.2	< 1	< 0.2	122	< 0.05	< 0.05	0.8	0.165	0.08	0.2	119	< 0.1	35.7
A757005	0.11	1.69	< 0.1	50.9	660	0.8	4.9	0.003	0.12	< 0.05	38.4	< 1	< 0.2	131	< 0.05	< 0.05	0.7	0.204	0.06	0.2	127	< 0.1	33.9
A757007	0.12	1.39	< 0.1	55.6	680	0.7	3.7	< 0.002	0.07	< 0.05	38.6	< 1	< 0.2	109	< 0.05	< 0.05	0.7	0.189	0.05	0.2	115	< 0.1	33.5
A757008	0.13	1.66	< 0.1	66.8	670	1.0	6.3	< 0.002	0.14	< 0.05	39.8	< 1	< 0.2	134	< 0.05	< 0.05	0.7	0.234	0.07	0.2	153	< 0.1	34.6
A757009	0.09	1.51	< 0.1	72.7	640	1.0	7.5	< 0.002	0.17	< 0.05	37.7	< 1	< 0.2	135	< 0.05	< 0.05	0.7	0.161	0.09	0.2	108	< 0.1	33.0
A757010	0.22	1.52	0.2	78.6	620	0.8	4.3	< 0.002	0.10	< 0.05	37.6	< 1	0.3	147	< 0.05	< 0.05	0.7	0.369	0.05	0.2	170	< 0.1	33.5
A757011	0.42	1.44	2.2	83.2	660	0.7	5.1	< 0.002	0.12	< 0.05	37.8	< 1	0.3	131	0.08	< 0.05	0.7	0.601	0.06	0.2	231	< 0.1	32.9
A757013	0.34	1.50	0.8	75.0	620	0.9	10.0	< 0.002	0.15	< 0.05	36.7	< 1	0.9	138	< 0.05	< 0.05	0.7	0.558	0.07	0.2	209	< 0.1	30.8
A757014	0.09	1.66	< 0.1	74.4	620	0.8	6.8	< 0.002	0.13	< 0.05	36.2	< 1	< 0.2	125	< 0.05	< 0.05	0.7	0.285	0.05	0.2	138	< 0.1	31.2
A757015	0.17	1.70	0.1	77.7	610	0.7	7.5	< 0.002	0.08	< 0.05	37.3	< 1	< 0.2	129	< 0.05	< 0.05	0.7	0.292	0.07	0.2	154	< 0.1	33.0
A757016	0.19	1.72	0.1	78.2	640	0.7	11.4	< 0.002	0.08	< 0.05	36.4	< 1	0.3	137	< 0.05	< 0.05	0.7	0.326	0.09	0.2	128	< 0.1	31.9
A757017	0.06	1.87	< 0.1	66.6	590	0.7	7.2	< 0.002	0.11	< 0.05	37.8	< 1	< 0.2	134	< 0.05	< 0.05	0.7	0.188	0.05	0.2	135	< 0.1	32.5
A757018	< 0.05	1.59	< 0.1	62.2	590	0.7	7.2	< 0.002	0.08	< 0.05	36.8	< 1	< 0.2	126	< 0.05	< 0.05	0.7	0.161	0.06	0.2	139	< 0.1	30.9
A757019	0.44	1.56	3.8	125	620	8.4	7.4	0.002	0.20	< 0.05	37.6	< 1	1.3	106	0.18	< 0.05	0.6	0.673	0.05	0.1	244	0.1	29.2
A757021	2.91	0.92	1.4	40.2	630	9.2	4.0	0.006	1.87	< 0.05	12.5	4	13.8	39.0	< 0.05	0.41	1.1	0.311	0.12	0.3	97	< 0.1	19.1
A757022	0.14	2.10	0.3	27.8	1100	9.7	2.2	< 0.002	0.15	< 0.05	35.1	< 1	1.9	58.0	< 0.05	< 0.05	1.3	0.300	0.03	0.4	112	< 0.1	61.1
A757024	0.20	2.48	0.9	24.4	1070	25.4	16.6	< 0.002	1.35	< 0.05	31.9	< 1	2.1	72.4	< 0.05	2.13	1.3	0.410	0.17	0.5	96	0.3	54.3
A757025	0.21	1.12	0.2	24.5	870	4.6	13.4	0.004	1.54	< 0.05	26.9	< 1	3.8	44.2	< 0.05	< 0.05	1.0	0.351	0.17	0.3	146	< 0.1	46.2
A757026	0.07	2.61	< 0.1	23.1	1110	1.7	1.4	0.002	0.10	< 0.05	34.8	< 1	0.3	51.3	< 0.05	< 0.05	1.3	0.169	0.03	0.4	87	< 0.1	59.9
A757027	< 0.05	2.35	< 0.1	24.8	1120	2.1	1.5	0.003	0.15	< 0.05	38.2	< 1	< 0.2	61.0	< 0.05	< 0.05	1.4	0.153	0.06	0.4	111	< 0.1	66.5
A757028	0.11	2.09	< 0.1	23.0	1100	2.2	3.9	0.004	0.19	< 0.05	36.9	< 1	0.4	81.0	< 0.05	< 0.05	1.5	0.162	0.07	0.4	93	< 0.1	66.4
A757030	0.16	2.35	< 0.1	25.6	1090	1.8	2.7	0.002	0.23	< 0.05	36.8	< 1	0.6	85.8	< 0.05	< 0.05	1.4	0.270	0.06	0.4	124	< 0.1	65.0
A757031	0.19	2.27	0.6	22.7	1130	1.5	2.5	< 0.002	0.26	< 0.05	35.2	< 1	0.6	81.1	< 0.05	< 0.05	1.4	0.344	0.05	0.4	127	< 0.1	59.8
A757032	0.26	2.18	0.8	23.5	1140	1.6	3.7	0.003	0.20	< 0.05	36.1	< 1	0.5	105	< 0.05	< 0.05	1.4	0.446	0.09	0.4	139	< 0.1	63.8
A757033	0.14	0.98	0.7	22.6	1090	0.5	5.4	< 0.002	0.14	< 0.05	35.1	< 1	0.4	287	< 0.05	< 0.05	1.3	0.327	0.03	0.3	115	< 0.1	59.5
A757034	0.16	2.17	2.1	26.0	1100	< 0.5	7.6	< 0.002	0.64	< 0.05	34.4	< 1	1.3	93.8	< 0.05	< 0.05	1.1	0.488	0.05	0.3	112	< 0.1	52.2
A757035	0.07	3.34	0.2	26.2	980	< 0.5	5.9	< 0.002	0.03	< 0.05	37.3	< 1	< 0.2	66.9	< 0.05	< 0.05	1.1	0.246	0.02	0.3	74	< 0.1	55.4
A757036	0.08	3.44	< 0.1	22.8	990	0.6	4.2	< 0.002	0.06	< 0.05	34.7	< 1	< 0.2	64.1	< 0.05	< 0.05	1.3	0.130	0.02	0.4	66	< 0.1	59.1
A757037	0.13	3.16	0.1	24.9	960	< 0.5	1.5	0.003	< 0.01	0.07	37.0	< 1	< 0.2	101	< 0.05	< 0.05	1.2	0.241	< 0.02	0.3	77	< 0.1	58.1
A757038	0.09	3.01	< 0.1	25.9	950	< 0.5	6.1	< 0.002	0.04	0.06	35.1	< 1	< 0.2	81.5	< 0.05	< 0.05	1.1	0.262	0.04	0.3	87	< 0.1	54.4
A757039	0.11	3.02	0.3	27.1	970	< 0.5	5.2	0.002	0.20	0.06	35.7	< 1	0.4	75.7	< 0.05	0.05	1.1	0.341	0.03	0.3	122	< 0.1	55.1
A757041	0.05	3.29	< 0.1	26.9	990	< 0.5	7.6	< 0.002	0.03	< 0.05	37.3	< 1	< 0.2	77.1	< 0.05	< 0.05	1.2	0.210	0.05	0.3	70	< 0.1	56.2
A757042	0.07	2.52	< 0.1	22.4	1090	3.1	28.1	< 0.002	0.06	< 0.05	28.6	< 1	0.4	299	< 0.05	< 0.05	2.2	0.268	0.19	0.7	100	< 0.1	26.0
A757043	< 0.05	1.73	< 0.1	29.2	970	1.1	8.6	< 0.002	0.11	0.05	36.9	< 1	< 0.2	127	< 0.05	< 0.05	1.2	0.115	0.08	0.3	86	< 0.1	58.5
A757044	0.12	1.64	0.1	22.4	860	1.3	8.7	< 0.002	0.34	< 0.05	30.4	< 1	1.2	86.5	< 0.05	< 0.05	0.9	0.248	0.08	0.3	93	< 0.1	46.5
A757045	0.07	1.31	< 0.1	30.9	970	1.7	8.9	< 0.002	0.22	0.06	34.0	< 1	0.5	94.9	< 0.05	< 0.05	1.1	0.150	0.16	0.3	90	< 0.1	53.8
A757047	0.18	0.88	0.5	24.9	950	2.3	2.7	0.002	0.18	0.07	32.6	< 1	0.4	184	< 0.05	< 0.05	1.0	0.328	0.04	0.3	108	< 0.1	50.7
A757048	0.32	0.54	1.7	27.4	900	2.8	7.3	0.003	1.33	0.07	29.3	< 1	1.4	89.6	< 0.05	< 0.05	1.0	0.548	0.32	0.3	156	< 0.1	51.7
A757049	0.18	1.00	0.8	28.5	1090	2.0	11.6	0.002	0.10	0.05	36.8	< 1	0.3	187	< 0.05	< 0.05	1.2	0.416	0.29	0.3	108	< 0.1	59.4

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
A757050	0.20	1.29	0.5	28.0	1080	2.2	8.3	0.002	0.24	0.05	35.6	< 1	0.7	101	< 0.05	< 0.05	1.1	0.341	0.20	0.3	112	< 0.1	56.0
A757051	0.12	1.59	< 0.1	25.8	910	1.7	3.7	< 0.002	0.19	< 0.05	32.4	< 1	< 0.2	90.8	< 0.05	< 0.05	1.1	0.152	0.05	0.3	96	< 0.1	52.8
A757052	0.23	2.04	0.5	26.0	980	2.9	8.5	< 0.002	0.83	0.08	31.1	< 1	1.3	108	< 0.05	< 0.05	1.0	0.473	0.15	0.4	125	0.8	47.5
A757053	0.16	1.90	0.3	22.9	910	7.2	20.0	< 0.002	1.57	0.06	28.8	< 1	1.1	111	< 0.05	0.24	0.9	0.402	0.18	0.4	100	0.9	39.4
A757055	0.06	1.42	< 0.1	26.7	950	1.2	8.6	0.002	0.11	0.07	34.1	< 1	0.4	144	< 0.05	< 0.05	1.1	0.164	0.08	0.3	79	< 0.1	56.7
A757056	0.57	1.53	0.5	28.0	1030	1.2	9.7	0.002	0.12	0.07	36.7	< 1	0.4	152	< 0.05	< 0.05	1.2	0.471	0.09	0.3	132	0.1	57.9
A757057	0.44	1.79	0.8	27.1	1080	6.7	7.5	< 0.002	0.22	0.22	34.5	< 1	1.3	88.2	< 0.05	< 0.05	1.1	0.388	0.11	0.3	129	< 0.1	53.6
A757058	0.22	1.36	0.1	26.2	870	11.8	11.0	< 0.002	0.35	0.12	28.3	< 1	2.4	61.1	< 0.05	< 0.05	1.0	0.247	0.18	0.3	107	< 0.1	43.9
A757059	6.30	0.10	2.3	101	330	132	18.8	0.011	> 10.0	1.45	8.3	17	36.6	12.9	0.15	6.16	1.4	0.163	1.08	0.5	58	0.8	9.9
A757060	9.01	0.17	3.9	87.7	470	80.2	30.7	0.010	7.91	0.84	12.2	17	38.6	15.4	0.28	4.97	1.9	0.272	1.32	0.7	71	1.3	18.0
A757061	0.09	1.78	< 0.1	1.9	1490	3.9	10.9	< 0.002	0.17	0.09	32.1	< 1	0.3	58.2	< 0.05	< 0.05	1.9	0.214	0.25	0.5	46	< 0.1	82.1
A757062	0.06	1.26	< 0.1	0.9	1180	1.4	3.2	< 0.002	0.11	0.07	24.9	< 1	0.3	54.0	< 0.05	< 0.05	1.5	0.135	0.04	0.4	27	< 0.1	69.4
A757063	0.07	2.52	< 0.1	3.4	1490	4.3	6.3	< 0.002	0.33	0.08	30.6	< 1	1.3	168	< 0.05	< 0.05	1.9	0.185	0.08	0.6	38	< 0.1	78.2
A757065	0.11	2.60	< 0.1	1.4	1600	1.2	3.8	< 0.002	0.12	0.07	33.4	< 1	0.5	130	< 0.05	< 0.05	2.0	0.174	0.08	0.5	31	< 0.1	92.6
A757066	0.09	2.54	< 0.1	1.3	1560	1.1	4.2	< 0.002	0.12	0.07	30.3	< 1	0.8	123	< 0.05	< 0.05	1.9	0.159	0.07	0.5	31	< 0.1	82.9
A757067	0.25	2.36	0.4	0.9	1290	2.0	18.9	< 0.002	0.73	0.07	28.5	< 1	1.7	129	< 0.05	< 0.05	1.8	0.416	0.23	0.6	42	0.3	73.0
A757068	0.09	2.42	< 0.1	1.0	1640	1.1	7.3	< 0.002	0.13	0.07	33.0	< 1	0.5	150	< 0.05	< 0.05	2.0	0.175	0.12	0.5	29	< 0.1	87.9
A757069	0.10	2.18	< 0.1	1.2	1570	1.0	4.7	< 0.002	0.16	< 0.05	30.6	< 1	0.5	125	< 0.05	< 0.05	1.9	0.171	0.07	0.5	34	< 0.1	86.1
A757070	3.34	1.77	2.8	73.8	320	91.2	8.8	0.007	6.50	0.18	9.8	10	17.7	16.3	0.19	0.95	1.6	0.194	0.76	0.5	65	0.3	12.6
A757072	0.87	1.85	1.0	72.3	760	15.1	10.3	0.004	2.79	0.06	14.2	< 1	13.0	30.0	< 0.05	< 0.05	2.2	0.408	0.59	0.6	57	< 0.1	37.9
A757073	3.40	0.85	4.4	107	340	276	19.3	0.007	5.70	0.48	11.3	9	19.7	11.4	0.31	1.62	1.6	0.223	0.92	0.6	72	0.4	18.0
A757074	1.77	0.91	2.2	66.2	500	524	13.9	0.003	3.59	0.21	13.9	6	14.5	26.1	< 0.05	0.14	2.2	0.315	0.38	0.7	66	0.1	32.2
A757075	4.89	1.45	4.3	69.4	440	336	10.8	0.005	8.48	0.52	11.1	15	20.6	45.3	0.21	2.55	1.9	0.198	0.87	0.7	68	0.4	17.9
A757076	0.09	1.97	< 0.1	19.5	1060	3.6	13.0	< 0.002	0.16	< 0.05	30.4	< 1	0.6	201	< 0.05	< 0.05	1.4	0.241	0.16	0.4	54	< 0.1	56.1
A757077	< 0.05	2.92	< 0.1	16.2	1180	3.6	21.1	< 0.002	0.15	< 0.05	20.5	< 1	0.4	313	< 0.05	< 0.05	3.4	0.207	0.15	0.9	66	< 0.1	33.0
A757079	0.33	3.42	0.8	18.2	1510	3.5	39.3	< 0.002	0.12	< 0.05	16.8	< 1	1.0	381	< 0.05	< 0.05	4.7	0.452	0.28	1.2	134	0.2	22.9
A757080	0.31	0.26	0.7	15.7	690	5.2	45.4	< 0.002	0.30	< 0.05	18.6	< 1	1.9	182	< 0.05	< 0.05	1.4	0.463	0.25	0.9	88	0.4	34.0
A757081	< 0.05	1.52	< 0.1	22.0	990	2.9	20.0	< 0.002	0.18	< 0.05	31.0	< 1	0.7	162	< 0.05	< 0.05	1.4	0.126	0.12	0.4	64	< 0.1	53.7
A757082	0.06	2.62	< 0.1	47.1	690	2.4	5.2	< 0.002	0.13	< 0.05	41.4	< 1	0.3	117	< 0.05	< 0.05	0.9	0.241	0.09	0.3	100	< 0.1	34.8
A757083	0.56	2.09	2.6	57.5	700	2.4	3.5	< 0.002	0.13	< 0.05	39.0	< 1	0.5	143	0.07	< 0.05	0.8	0.654	0.08	0.2	221	< 0.1	31.2
A757084	0.34	1.54	1.3	79.6	600	3.2	1.3	< 0.002	0.05	< 0.05	34.5	< 1	< 0.2	145	< 0.05	< 0.05	0.6	0.529	0.04	0.2	210	< 0.1	29.4
A757085	0.54	2.81	3.8	35.2	740	7.0	4.4	< 0.002	0.13	< 0.05	31.7	< 1	3.4	56.5	0.15	< 0.05	1.6	0.626	0.06	0.4	203	0.1	28.4
A757086	0.37	1.09	0.2	36.8	770	12.5	3.9	0.005	1.22	< 0.05	22.4	< 1	7.6	34.2	< 0.05	< 0.05	1.3	0.401	0.09	0.4	132	< 0.1	36.6
A757087	0.07	1.84	< 0.1	23.5	890	9.9	3.7	0.002	0.33	< 0.05	31.7	< 1	3.6	48.0	< 0.05	< 0.05	1.4	0.247	0.12	0.5	113	< 0.1	52.8
A757089	< 0.05	1.58	< 0.1	26.2	1010	2.2	8.7	0.003	0.11	< 0.05	41.0	< 1	< 0.2	102	< 0.05	< 0.05	1.5	0.122	0.07	0.4	109	< 0.1	70.8
A757091	< 0.05	2.11	< 0.1	24.1	1120	2.0	6.5	< 0.002	0.27	< 0.05	38.1	< 1	0.4	89.7	< 0.05	< 0.05	1.5	0.150	0.07	0.4	101	< 0.1	66.7
A757092	0.09	2.00	0.1	25.8	1080	1.6	5.4	0.003	0.10	< 0.05	39.0	< 1	0.6	72.4	< 0.05	< 0.05	1.5	0.245	0.05	0.4	92	< 0.1	65.9
A757093	0.17	1.65	0.4	26.4	970	1.6	12.5	< 0.002	0.20	< 0.05	34.6	< 1	0.8	101	< 0.05	< 0.05	1.2	0.435	0.08	0.3	141	< 0.1	55.0
A757094	0.19	1.44	< 0.1	24.7	930	1.5	11.7	0.003	0.19	< 0.05	33.3	< 1	0.6	97.2	< 0.05	< 0.05	1.2	0.356	0.09	0.3	121	< 0.1	52.7
A757095	< 0.05	1.71	< 0.1	24.3	880	1.2	12.2	< 0.002	0.10	< 0.05	29.7	< 1	< 0.2	60.4	< 0.05	< 0.05	1.1	0.105	0.10	0.3	79	< 0.1	50.7
A757096	< 0.05	1.39	< 0.1	27.7	980	1.9	20.4	0.002	0.26	< 0.05	36.3	< 1	0.3	138	< 0.05	< 0.05	1.3	0.152	0.18	0.4	111	< 0.1	57.0
A757097	0.06	1.71	< 0.1	27.3	950	1.8	19.3	< 0.002	0.10	< 0.05	34.6	< 1	0.3	92.5	< 0.05	< 0.05	1.2	0.195	0.15	0.3	78	< 0.1	54.6

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
A757098	< 0.05	1.58	< 0.1	21.4	800	1.3	18.0	< 0.002	0.39	< 0.05	26.8	< 1	1.0	66.8	< 0.05	< 0.05	1.0	0.241	0.14	0.3	78	< 0.1	40.4
A757099	0.29	1.18	0.9	29.9	1000	1.6	28.4	0.002	0.11	< 0.05	38.7	< 1	0.5	122	< 0.05	< 0.05	1.4	0.637	0.21	0.4	169	< 0.1	61.9
A757101	0.08	0.83	< 0.1	25.5	910	1.3	7.2	0.002	0.10	< 0.05	33.5	< 1	0.3	277	< 0.05	< 0.05	1.2	0.290	0.05	0.3	87	< 0.1	54.0
A757102	0.14	0.91	0.1	23.1	880	1.3	6.4	0.002	0.25	< 0.05	30.8	< 1	0.4	213	< 0.05	< 0.05	1.1	0.273	0.06	0.3	92	< 0.1	50.8
A757103	0.09	1.83	0.2	26.3	1020	1.0	3.9	< 0.002	0.16	< 0.05	34.9	< 1	0.4	72.1	< 0.05	< 0.05	1.2	0.271	0.05	0.3	92	< 0.1	53.8
A757105	0.05	1.65	< 0.1	29.1	1040	1.3	7.4	0.002	0.14	< 0.05	37.8	< 1	0.3	144	< 0.05	< 0.05	1.3	0.224	0.07	0.4	81	< 0.1	57.6
A757106	0.17	1.34	< 0.1	23.8	750	0.5	3.4	< 0.002	0.18	0.05	29.4	< 1	0.2	164	< 0.05	< 0.05	1.0	0.286	0.05	0.3	123	< 0.1	47.9
A757107	0.10	2.19	< 0.1	26.2	1000	0.5	4.1	< 0.002	0.14	0.05	34.5	< 1	0.2	55.6	< 0.05	< 0.05	1.1	0.196	0.06	0.3	84	< 0.1	52.5
A757108	0.18	2.04	0.1	27.4	990	0.7	6.9	< 0.002	0.16	0.06	34.8	< 1	0.3	73.2	< 0.05	< 0.05	1.1	0.250	0.08	0.3	99	< 0.1	53.0
A757109	0.17	1.84	0.3	27.3	1000	1.1	8.7	< 0.002	0.20	0.07	34.7	< 1	0.5	96.0	< 0.05	< 0.05	1.1	0.279	0.07	0.3	99	< 0.1	53.9
A757110	0.12	1.77	0.1	26.0	940	1.0	7.4	< 0.002	0.17	0.06	34.0	< 1	0.4	96.2	< 0.05	< 0.05	1.1	0.244	0.06	0.3	93	< 0.1	53.3
A757111	0.10	1.59	< 0.1	27.1	950	0.9	4.6	0.002	0.13	< 0.05	34.7	< 1	0.3	78.7	< 0.05	< 0.05	1.1	0.211	0.04	0.3	84	< 0.1	54.9
A757112	< 0.05	1.58	< 0.1	25.8	900	1.1	8.8	< 0.002	0.13	< 0.05	32.3	< 1	< 0.2	78.8	< 0.05	< 0.05	1.1	0.091	0.08	0.3	75	< 0.1	52.8
A757113	< 0.05	2.07	< 0.1	27.2	990	1.4	11.8	< 0.002	0.14	< 0.05	35.0	< 1	< 0.2	95.3	< 0.05	< 0.05	1.2	0.181	0.10	0.3	96	< 0.1	53.4
A757115	0.10	1.72	< 0.1	24.6	870	1.7	19.8	< 0.002	0.25	< 0.05	31.5	< 1	0.3	118	< 0.05	< 0.05	1.0	0.262	0.15	0.3	106	< 0.1	47.4
A757116	0.24	1.96	0.8	24.5	1000	2.4	10.0	< 0.002	0.47	0.07	31.2	< 1	1.2	116	< 0.05	< 0.05	1.1	0.490	0.08	0.3	147	0.2	50.7
A757117	0.24	1.84	1.7	25.4	990	2.5	8.5	< 0.002	0.57	0.08	30.7	< 1	1.2	157	< 0.05	0.08	1.1	0.558	0.08	0.3	143	0.1	51.6
A757118	0.36	1.59	0.5	27.4	990	1.7	9.7	< 0.002	0.14	0.07	36.0	< 1	0.7	160	< 0.05	< 0.05	1.2	0.477	0.08	0.3	138	0.1	56.4
A757120	0.15	1.72	< 0.1	27.3	950	2.0	19.4	< 0.002	0.12	< 0.05	35.9	< 1	0.3	146	< 0.05	< 0.05	1.1	0.264	0.15	0.3	81	< 0.1	51.2
A757121	0.07	2.25	< 0.1	26.5	910	1.5	6.3	< 0.002	0.16	< 0.05	33.9	< 1	< 0.2	108	< 0.05	< 0.05	1.1	0.148	0.05	0.3	92	< 0.1	47.0
A757122	< 0.05	2.13	< 0.1	25.2	910	2.1	14.9	< 0.002	0.26	< 0.05	32.4	< 1	0.3	115	< 0.05	< 0.05	1.1	0.185	0.12	0.3	116	< 0.1	45.1
A757123	0.52	2.11	0.3	25.0	760	34.8	36.9	< 0.002	2.08	0.06	26.1	< 1	0.9	125	< 0.05	4.77	1.0	0.405	0.32	0.6	98	3.0	31.9
A757124	0.09	1.97	0.4	26.5	1000	1.9	10.2	< 0.002	0.11	0.06	34.5	< 1	0.4	92.5	< 0.05	< 0.05	1.1	0.340	0.09	0.3	99	< 0.1	52.3
A757125	0.16	2.21	0.5	22.8	1010	1.6	4.0	< 0.002	0.12	< 0.05	27.5	< 1	0.4	70.5	< 0.05	< 0.05	1.1	0.545	0.06	0.3	144	< 0.1	46.9
A757127	0.48	1.98	1.5	27.1	1020	1.3	7.4	0.004	0.14	0.07	34.1	< 1	1.0	92.3	< 0.05	< 0.05	1.1	0.695	0.09	0.3	168	0.1	49.9
A757129	0.14	0.65	< 0.1	23.9	910	1.2	3.0	0.002	0.17	< 0.05	30.0	< 1	0.3	134	< 0.05	< 0.05	1.0	0.246	0.02	0.3	89	< 0.1	51.0
A757130	< 0.05	0.96	< 0.1	27.6	970	1.8	2.8	0.002	0.15	< 0.05	36.2	< 1	< 0.2	344	< 0.05	< 0.05	1.2	0.113	0.03	0.3	76	< 0.1	53.9
A757131	< 0.05	1.82	< 0.1	26.7	960	1.0	2.9	< 0.002	0.13	< 0.05	33.9	< 1	< 0.2	104	< 0.05	< 0.05	1.2	0.085	0.03	0.3	71	< 0.1	53.7
A757132	0.31	2.36	0.1	30.9	550	8.9	3.1	< 0.002	0.05	< 0.05	22.1	< 1	0.6	110	< 0.05	< 0.05	2.0	0.287	0.04	0.6	112	< 0.1	25.7
A757133	7.20	0.77	2.0	31.2	340	20.4	1.3	0.010	2.16	0.12	6.0	9	31.2	19.5	0.14	2.23	1.1	0.142	0.05	0.3	48	0.2	10.0
A757135	2.99	1.27	5.3	33.4	880	10.3	4.8	0.004	0.66	0.07	20.2	1	9.7	32.5	0.25	0.26	1.7	0.727	0.08	0.5	181	0.2	34.5
A757136	0.82	1.45	4.4	29.9	1180	7.7	4.3	0.002	0.13	0.06	37.9	< 1	2.5	48.6	0.12	< 0.05	1.6	0.994	0.06	0.4	245	0.2	65.5
A757138	0.47	1.88	0.8	21.6	1140	2.9	10.9	< 0.002	0.26	< 0.05	27.0	< 1	0.4	245	< 0.05	< 0.05	1.6	0.597	0.19	0.5	170	< 0.1	49.9
A757139	0.36	2.44	1.0	24.7	1170	1.2	3.6	0.002	0.16	< 0.05	34.7	< 1	0.6	129	< 0.05	< 0.05	1.4	0.471	0.07	0.4	140	< 0.1	65.4
A757140	0.44	2.07	0.4	24.8	1060	1.4	8.0	< 0.002	0.41	0.06	33.4	< 1	1.4	129	< 0.05	< 0.05	1.3	0.398	0.06	0.4	142	< 0.1	61.2
A757141	0.18	2.33	< 0.1	29.5	1060	1.3	6.7	0.002	0.12	< 0.05	34.3	< 1	0.5	113	< 0.05	< 0.05	1.3	0.210	0.08	0.4	88	< 0.1	61.9
A757142	0.26	2.02	0.4	25.9	1070	1.1	7.8	0.002	0.20	< 0.05	34.6	< 1	0.6	114	< 0.05	< 0.05	1.3	0.362	0.10	0.3	122	< 0.1	60.4
A757143	0.30	1.73	0.5	25.9	1060	1.5	4.4	0.002	0.15	< 0.05	31.7	< 1	0.2	154	< 0.05	< 0.05	1.2	0.470	0.06	0.3	146	< 0.1	59.4
A757144	0.51	2.00	0.8	23.9	1060	1.6	5.1	< 0.002	0.18	< 0.05	33.1	< 1	1.5	108	< 0.05	< 0.05	1.3	0.574	0.09	0.3	164	< 0.1	59.8
A757145	0.21	1.85	0.2	27.2	980	2.2	7.2	< 0.002	0.23	0.06	36.4	< 1	0.5	113	< 0.05	< 0.05	1.3	0.376	0.09	0.3	142	< 0.1	58.4
A757146	0.23	1.69	0.7	24.5	1030	1.3	4.7	< 0.002	0.16	< 0.05	34.1	< 1	0.5	114	< 0.05	< 0.05	1.3	0.436	0.04	0.3	139	< 0.1	58.3
A757148	0.07	1.40	< 0.1	24.9	1030	1.9	5.1	< 0.002	0.20	< 0.05	36.7	< 1	0.2	123	< 0.05	< 0.05	1.3	0.099	0.05	0.3	87	< 0.1	61.0

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
A757149	0.69	1.95	0.4	22.8	1030	5.4	13.2	0.002	2.23	< 0.05	32.6	< 1	0.6	71.9	< 0.05	< 0.05	1.1	0.421	0.11	0.6	118	1.1	47.9
A757150	< 0.05	1.83	< 0.1	24.3	980	1.7	13.2	< 0.002	0.37	< 0.05	35.2	< 1	0.5	139	< 0.05	< 0.05	1.2	0.147	0.11	0.4	116	< 0.1	58.9
A757152	0.13	2.24	< 0.1	28.1	1020	3.5	14.2	< 0.002	0.50	0.05	37.2	< 1	1.4	101	< 0.05	< 0.05	1.2	0.341	0.12	0.4	120	< 0.1	55.3
A757153	0.21	1.46	0.5	26.9	990	1.0	10.0	0.002	0.09	< 0.05	33.5	< 1	0.3	206	< 0.05	< 0.05	1.1	0.513	0.08	0.3	138	< 0.1	53.6
A757154	0.28	1.65	0.7	28.0	1050	2.0	8.3	< 0.002	0.17	0.06	34.7	< 1	0.6	177	< 0.05	0.10	1.2	0.390	0.08	0.3	113	< 0.1	56.3
A757155	15.6	1.38	1.3	18.6	590	29.7	20.1	< 0.002	3.28	0.07	19.1	< 1	1.0	144	< 0.05	3.50	0.8	0.659	0.17	0.8	149	6.1	28.6
A757156	0.48	1.69	0.7	25.4	990	1.6	16.2	< 0.002	0.22	< 0.05	34.6	< 1	0.7	113	< 0.05	< 0.05	1.2	0.557	0.12	0.3	159	0.1	52.4
A757157	< 0.05	0.79	< 0.1	24.9	930	1.4	7.3	< 0.002	0.10	< 0.05	32.2	< 1	< 0.2	327	< 0.05	< 0.05	1.1	0.123	0.04	0.3	67	< 0.1	51.8
A757158	0.09	0.83	< 0.1	28.1	1010	1.6	3.8	0.002	0.38	< 0.05	35.2	< 1	1.0	171	< 0.05	< 0.05	1.1	0.211	0.05	0.3	84	< 0.1	57.7
A757160	0.07	1.41	< 0.1	25.9	970	1.0	5.6	0.002	0.08	< 0.05	34.3	< 1	0.2	164	< 0.05	< 0.05	1.1	0.153	0.05	0.3	67	< 0.1	52.9
A757161	0.07	1.63	< 0.1	27.4	970	2.6	10.3	< 0.002	0.14	< 0.05	34.4	< 1	0.3	224	< 0.05	< 0.05	1.2	0.219	0.07	0.3	88	< 0.1	49.6
A757163	0.58	2.23	6.0	49.1	1330	4.0	34.2	< 0.002	0.21	0.11	21.8	< 1	1.0	321	0.27	< 0.05	2.8	0.493	0.21	0.9	159	2.4	21.9
A757164	0.26	0.96	0.4	27.3	1010	2.9	9.8	0.002	0.23	0.07	36.0	< 1	0.4	442	< 0.05	0.06	1.2	0.469	0.06	0.3	138	< 0.1	54.4
A757165	0.18	0.92	0.5	29.0	1010	1.4	3.0	0.003	0.11	< 0.05	35.1	< 1	0.3	346	< 0.05	< 0.05	1.2	0.335	0.02	0.3	109	< 0.1	52.1
A757166	0.37	1.42	0.6	28.2	1010	1.1	4.3	< 0.002	0.14	< 0.05	35.0	< 1	0.5	241	< 0.05	< 0.05	1.1	0.494	0.04	0.3	143	< 0.1	54.0
A757167	0.07	1.59	< 0.1	28.3	910	1.0	6.1	< 0.002	0.14	< 0.05	37.2	< 1	0.4	158	< 0.05	< 0.05	1.2	0.178	0.05	0.3	89	< 0.1	51.6
A757168	< 0.05	2.02	< 0.1	26.8	980	0.8	13.2	< 0.002	0.36	< 0.05	34.5	< 1	1.0	109	< 0.05	< 0.05	1.1	0.256	0.11	0.3	109	< 0.1	46.1
A757169	0.25	1.32	0.3	19.0	540	4.6	10.5	< 0.002	0.79	< 0.05	23.4	< 1	0.8	63.2	< 0.05	0.06	0.7	0.434	0.07	0.2	141	0.2	26.5
A757171	0.07	1.72	< 0.1	27.8	910	0.9	17.3	0.002	0.08	< 0.05	35.2	< 1	0.2	98.4	< 0.05	< 0.05	1.1	0.188	0.14	0.3	78	< 0.1	38.4
A757172	0.26	1.69	0.5	30.1	990	1.2	9.4	0.002	0.14	< 0.05	37.9	< 1	0.6	143	< 0.05	< 0.05	1.3	0.477	0.07	0.3	133	< 0.1	57.5
A757174	0.34	2.32	0.5	27.0	1010	1.0	7.3	< 0.002	0.23	< 0.05	35.9	< 1	0.6	81.6	< 0.05	< 0.05	1.3	0.468	0.06	0.4	151	< 0.1	54.2
A757175	0.64	1.50	0.9	27.6	1020	1.4	22.9	0.002	0.15	< 0.05	33.7	< 1	0.4	108	< 0.05	< 0.05	1.3	0.623	0.22	0.4	159	< 0.1	53.4
A757176	0.14	0.58	< 0.1	16.2	640	0.7	11.4	< 0.002	0.20	< 0.05	20.2	< 1	0.4	69.7	< 0.05	< 0.05	0.6	0.171	0.10	0.2	69	< 0.1	39.9
A757177	0.11	1.59	< 0.1	27.8	950	1.3	16.4	< 0.002	0.11	0.05	35.0	< 1	< 0.2	151	< 0.05	< 0.05	1.2	0.648	0.15	0.3	163	< 0.1	53.0
A757178	0.26	1.90	0.6	27.4	1000	0.9	9.0	< 0.002	0.19	0.07	36.1	< 1	0.4	49.6	< 0.05	< 0.05	1.2	0.345	0.11	0.3	105	< 0.1	54.8
A757180	0.23	1.92	< 0.1	26.6	910	1.8	29.5	< 0.002	0.33	0.06	33.6	< 1	0.6	76.0	< 0.05	0.08	1.1	0.362	0.28	0.3	143	< 0.1	47.1
A757181	0.25	1.48	0.8	28.0	1140	2.0	2.8	< 0.002	0.18	0.06	32.1	< 1	0.4	113	< 0.05	< 0.05	1.1	0.540	0.06	0.3	140	< 0.1	53.2
A757182	0.34	1.19	0.6	27.4	960	2.6	11.2	< 0.002	0.11	< 0.05	33.9	< 1	0.2	231	< 0.05	< 0.05	1.2	0.590	0.12	0.3	158	< 0.1	53.5
A757183	0.41	1.59	0.4	26.4	970	2.7	24.2	< 0.002	0.19	< 0.05	34.4	< 1	0.7	183	< 0.05	< 0.05	1.2	0.481	0.28	0.3	148	< 0.1	53.1
A757184	0.11	0.60	0.1	26.4	760	2.0	3.3	< 0.002	1.06	< 0.05	29.9	< 1	0.7	34.1	< 0.05	< 0.05	1.0	0.295	0.10	0.3	162	< 0.1	54.0
A757185	0.22	0.44	< 0.1	24.8	860	2.5	2.4	< 0.002	0.49	0.06	32.1	< 1	1.1	259	< 0.05	< 0.05	1.0	0.287	0.05	0.3	103	< 0.1	50.8
A757186	0.15	1.41	< 0.1	25.7	970	1.8	4.7	< 0.002	0.25	< 0.05	34.5	< 1	0.4	106	< 0.05	0.13	1.2	0.225	0.07	0.3	95	< 0.1	52.6
A757187	0.46	1.19	2.7	154	400	1.2	27.7	< 0.002	0.07	0.10	33.1	< 1	0.5	248	0.17	< 0.05	0.4	0.506	0.21	0.1	216	0.4	19.1
A757189	2.39	2.33	3.5	88.5	940	4.7	10.3	< 0.002	0.19	0.09	22.7	< 1	0.7	359	0.20	0.33	1.8	0.403	0.08	0.5	157	1.6	16.2
A757191	8.52	1.48	1.7	102	180	7.2	13.3	< 0.002	0.60	0.08	21.7	< 1	0.4	137	0.11	3.83	0.3	0.328	0.09	0.2	170	3.5	10.7
A757192	0.90	1.42	2.7	140	420	2.5	15.8	< 0.002	0.09	0.09	31.1	< 1	0.5	174	0.16	0.06	0.4	0.517	0.14	0.1	214	0.2	18.3
A757193	0.32	1.42	2.4	161	380	< 0.5	19.0	< 0.002	0.08	< 0.05	28.6	< 1	0.6	150	0.15	< 0.05	0.3	0.534	0.15	< 0.1	220	0.2	16.7
A757194	0.85	1.30	0.6	180	310	< 0.5	17.6	< 0.002	0.08	< 0.05	27.7	< 1	< 0.2	138	< 0.05	< 0.05	0.3	0.385	0.15	< 0.1	183	< 0.1	15.5
A757195	1.29	1.39	0.1	180	280	3.2	25.0	< 0.002	0.07	< 0.05	29.2	< 1	< 0.2	141	< 0.05	0.05	0.3	0.250	0.19	0.1	153	< 0.1	16.0
A757196	26.5	1.14	1.0	92.5	100	13.0	11.3	0.002	0.42	0.11	15.1	< 1	0.3	89.2	0.05	7.05	< 0.2	0.211	0.10	0.1	117	5.8	8.1
A757198	2.02	1.41	2.0	176	250	4.6	30.5	< 0.002	0.63	0.08	27.1	< 1	0.5	160	0.12	1.43	0.3	0.387	0.22	0.1	211	6.9	14.4
A757199	1.03	1.11	2.3	188	310	1.2	18.9	< 0.002	0.12	0.12	28.1	< 1	0.4	157	0.14	0.38	0.3	0.415	0.15	< 0.1	191	0.6	15.4

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
A757201	1.01	1.29	2.8	144	360	0.6	7.4	< 0.002	0.07	0.08	23.2	< 1	0.4	110	0.14	< 0.05	0.5	0.430	0.05	0.1	156	0.8	13.9
A757202	0.66	0.69	1.1	163	250	< 0.5	1.8	< 0.002	0.06	< 0.05	20.1	< 1	< 0.2	47.9	< 0.05	< 0.05	0.3	0.300	< 0.02	< 0.1	143	< 0.1	12.7
A757203	0.09	1.18	< 0.1	109	360	1.4	14.3	< 0.002	0.07	< 0.05	35.1	< 1	< 0.2	174	< 0.05	< 0.05	0.4	0.218	0.11	0.1	163	< 0.1	21.4
A757205	0.11	1.53	< 0.1	112	370	2.0	7.4	< 0.002	0.29	< 0.05	29.8	< 1	0.2	131	< 0.05	< 0.05	0.4	0.283	0.06	0.1	165	< 0.1	17.7
A757206	0.10	1.59	< 0.1	103	380	2.4	16.6	< 0.002	0.08	< 0.05	35.7	< 1	< 0.2	198	< 0.05	< 0.05	0.4	0.261	0.11	0.1	149	< 0.1	19.7
A757207	0.09	2.11	< 0.1	103	420	3.0	7.3	< 0.002	0.10	0.05	35.6	< 1	< 0.2	222	< 0.05	< 0.05	0.4	0.256	0.06	0.1	126	< 0.1	20.6
A757208	3.74	2.10	3.6	142	980	5.1	10.4	< 0.002	0.25	0.09	23.6	< 1	0.8	240	0.20	1.39	1.9	0.404	0.08	0.5	175	1.4	15.4
A757209	0.20	1.01	1.2	335	300	2.4	19.0	< 0.002	0.06	< 0.05	24.7	< 1	< 0.2	116	0.06	< 0.05	0.3	0.360	0.11	< 0.1	172	0.2	13.3
A757211	0.26	0.78	1.8	385	300	< 0.5	10.5	< 0.002	0.07	< 0.05	27.9	< 1	0.2	99.3	0.11	< 0.05	0.3	0.374	0.08	< 0.1	183	0.1	14.0
A757213	0.27	0.76	1.6	368	310	0.8	10.8	< 0.002	0.06	< 0.05	25.8	< 1	< 0.2	78.8	0.09	< 0.05	0.3	0.362	0.07	< 0.1	171	0.2	13.6
A757214	3.53	0.53	1.1	305	200	7.9	8.5	< 0.002	0.43	< 0.05	23.2	< 1	0.3	52.2	< 0.05	5.76	0.2	0.332	0.11	0.1	190	1.1	10.6
A757216	0.45	0.93	1.2	312	290	2.1	17.7	< 0.002	0.06	< 0.05	31.2	< 1	0.3	101	< 0.05	0.06	0.3	0.369	0.14	< 0.1	181	0.2	14.6
A757217	0.43	1.02	1.4	296	300	1.5	14.0	< 0.002	0.05	< 0.05	31.4	< 1	0.3	111	0.07	< 0.05	0.3	0.376	0.12	< 0.1	184	0.1	15.7
A757218	0.60	1.09	1.9	242	300	6.2	13.4	< 0.002	0.11	0.05	33.4	< 1	0.3	114	0.11	< 0.05	0.3	0.414	0.11	< 0.1	198	0.6	15.7
A757219	2.63	0.10	2.1	31.0	440	32.2	0.9	0.003	1.84	0.11	6.6	6	14.1	22.7	0.15	1.90	1.2	0.139	0.03	0.3	47	0.6	10.5
A757221	2.97	0.34	3.1	53.4	400	49.9	1.4	0.003	3.09	0.15	13.9	7	11.0	51.1	0.21	1.45	1.3	0.299	0.12	0.4	107	0.6	12.9
A757222	1.05	1.17	1.3	67.9	440	14.6	2.8	0.002	0.74	0.07	36.4	< 1	1.2	90.5	< 0.05	< 0.05	0.5	0.577	0.05	0.1	253	< 0.1	24.5
A757377	11.9	2.54	3.3	3.4	470	34.2	67.8	0.004	0.30	0.08	2.4	< 1	0.7	486	0.22	9.05	4.0	0.190	0.48	2.1	38	2.2	4.1
A757378	3.94	3.14	4.5	4.5	620	20.3	77.8	0.002	0.33	0.15	3.1	< 1	1.1	726	0.27	1.91	4.7	0.250	0.55	2.0	50	1.5	5.2
A757379	0.84	3.25	0.4	3.6	630	14.6	68.8	< 0.002	0.03	< 0.05	3.1	< 1	0.6	762	< 0.05	< 0.05	3.8	0.211	0.49	1.7	45	< 0.1	5.0
A757380	29.3	3.69	4.6	4.7	690	17.5	52.2	0.011	0.35	0.14	2.6	< 1	1.1	638	0.30	0.46	3.8	0.266	0.34	1.8	51	2.7	4.8
A757381	12.1	3.27	4.1	4.6	660	14.9	66.0	0.005	0.07	0.06	3.3	< 1	0.9	689	0.22	0.06	4.3	0.258	0.41	1.5	50	1.0	5.4
A757382	14.0	3.59	5.3	4.6	680	11.6	65.0	0.005	0.10	0.12	3.0	< 1	1.0	535	0.30	0.50	4.1	0.266	0.41	1.5	54	2.2	5.1
A757383	11.8	3.71	5.6	4.2	670	9.4	62.3	0.005	0.29	0.08	3.0	< 1	0.9	364	0.31	1.73	3.8	0.255	0.38	1.7	52	3.4	5.2
A757384	6.91	3.17	3.8	5.7	610	7.9	60.7	0.003	0.14	0.10	2.8	< 1	0.9	410	0.12	1.13	4.6	0.237	0.38	1.4	47	1.6	4.9
A757386	3.24	3.60	2.5	3.8	670	26.0	64.0	< 0.002	0.09	< 0.05	3.2	< 1	0.7	484	< 0.05	0.06	4.5	0.257	0.41	1.8	48	0.4	5.8
A757387	4.20	3.17	3.2	4.0	620	12.7	62.0	0.002	0.10	0.09	3.3	< 1	0.9	615	0.07	0.23	4.2	0.244	0.40	1.5	50	1.1	5.1
A757388	4.91	3.22	0.9	4.0	610	11.6	65.6	0.003	0.13	0.06	2.8	< 1	0.7	524	< 0.05	0.15	3.1	0.219	0.42	1.3	46	0.3	4.8
A757389	2.63	3.21	3.9	3.9	630	11.4	62.2	< 0.002	0.23	0.12	2.9	< 1	0.9	578	0.12	0.16	3.8	0.240	0.40	1.2	53	2.0	4.9
A757390	3.30	3.11	4.3	4.1	640	11.9	68.3	< 0.002	0.38	0.15	2.9	< 1	0.9	550	0.29	0.14	3.7	0.245	0.38	1.2	50	4.8	5.1
A757391	9.53	1.87	1.8	5.9	660	8.0	25.7	0.002	0.70	0.17	2.8	< 1	0.6	274	0.11	0.98	1.5	0.119	0.15	0.7	37	7.0	3.8
A757392	17.5	3.18	4.0	3.9	600	15.2	57.1	0.008	0.32	0.10	3.0	< 1	0.8	529	0.26	0.94	3.8	0.227	0.33	1.4	49	3.5	4.7
A757393	0.29	2.26	4.7	20.4	1610	7.0	73.9	< 0.002	0.60	0.13	18.7	< 1	1.2	485	0.25	0.31	3.6	0.405	0.37	1.1	162	3.0	19.1
A757418	2.27	0.83	3.1	89.5	480	5.0	37.0	< 0.002	0.17	0.13	11.0	< 1	0.6	273	0.08	0.06	2.1	0.216	0.15	0.6	88	6.5	5.2
A757419	0.17	1.06	0.2	367	690	5.5	76.2	< 0.002	0.23	< 0.05	30.4	< 1	0.2	271	< 0.05	< 0.05	3.0	0.164	0.26	0.5	114	0.1	14.6
A757420	1.21	1.42	2.0	233	770	3.5	42.0	< 0.002	0.21	< 0.05	24.9	< 1	0.8	277	< 0.05	< 0.05	2.8	0.382	0.18	0.7	158	0.2	12.6
A757421	0.41	1.73	5.1	175	1300	6.6	60.7	< 0.002	0.05	0.05	26.8	< 1	0.8	680	0.29	< 0.05	1.8	0.387	0.25	0.6	171	0.3	15.9
A757422	1.84	1.55	10.2	139	1230	6.6	63.6	< 0.002	0.14	0.08	22.6	< 1	0.9	635	0.52	< 0.05	2.5	0.459	0.24	0.8	158	10.4	15.6
A757424	1.10	0.96	8.3	345	640	3.4	41.4	< 0.002	0.25	< 0.05	26.2	< 1	0.6	378	0.31	< 0.05	2.8	0.461	0.15	0.5	145	0.5	13.0
A757425	1.25	1.13	12.2	240	810	3.6	74.5	< 0.002	0.17	< 0.05	29.5	< 1	0.6	339	0.44	< 0.05	2.8	0.576	0.27	0.4	175	0.8	13.7
A757426	0.60	1.19	1.1	208	670	3.7	46.8	< 0.002	0.38	< 0.05	24.3	< 1	0.8	297	< 0.05	< 0.05	2.5	0.321	0.19	0.5	110	0.5	11.0
A757427	1.06	1.95	6.9	147	710	3.5	37.2	< 0.002	0.52	0.06	15.2	< 1	0.6	287	0.12	< 0.05	3.4	0.352	0.18	0.8	112	1.8	9.3

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
A757001	3.9	65	28.6
A757002	3.9	57	35.5
A757003	4.0	73	56.9
A757004	3.9	124	42.0
A757005	3.9	104	59.4
A757007	3.7	111	44.2
A757008	3.9	126	56.2
A757009	3.7	115	27.3
A757010	3.8	131	62.9
A757011	3.8	115	81.2
A757013	3.5	117	65.0
A757014	3.6	104	42.8
A757015	3.8	119	58.0
A757016	3.6	122	46.6
A757017	3.7	127	40.5
A757018	3.5	114	41.0
A757019	3.3	243	74.5
A757021	2.1	3810	63.6
A757022	6.9	196	59.2
A757024	6.2	194	59.9
A757025	5.2	340	93.2
A757026	6.8	194	39.0
A757027	7.1	142	21.3
A757028	6.7	131	34.3
A757030	7.1	138	66.0
A757031	6.4	130	55.4
A757032	6.9	152	88.1
A757033	6.8	110	53.3
A757034	6.2	94	66.6
A757035	6.3	122	65.9
A757036	6.8	98	37.9
A757037	6.5	85	65.6
A757038	6.1	104	71.1
A757039	6.1	102	83.1
A757041	6.3	97	53.0
A757042	2.9	77	66.4
A757043	6.4	117	19.9
A757044	5.2	86	49.1
A757045	5.7	158	22.4
A757047	5.3	125	30.2
A757048	5.2	143	63.0
A757049	6.1	147	52.2

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
A757050	5.8	171	43.3
A757051	5.7	126	23.8
A757052	5.2	98	86.3
A757053	4.5	100	53.2
A757055	5.9	131	29.8
A757056	6.3	124	87.9
A757057	5.8	439	58.6
A757058	4.9	390	41.6
A757059	1.1	> 10000	70.4
A757060	1.9	> 10000	108
A757061	9.5	386	22.7
A757062	7.7	106	10.7
A757063	9.0	155	38.9
A757065	10.7	154	64.5
A757066	9.6	159	51.7
A757067	8.5	119	121
A757068	9.9	145	68.5
A757069	9.7	137	64.9
A757070	1.2	7450	82.6
A757072	4.1	901	116
A757073	1.9	7430	123
A757074	3.2	6500	145
A757075	1.7	> 10000	105
A757076	6.1	147	62.6
A757077	3.8	106	95.9
A757079	2.6	93	159
A757080	3.5	62	60.8
A757081	6.1	157	11.3
A757082	3.9	134	36.0
A757083	3.6	115	68.2
A757084	3.3	115	51.5
A757085	3.2	452	114
A757086	4.3	2410	115
A757087	6.0	232	40.6
A757089	7.7	138	23.6
A757091	7.1	135	30.3
A757092	7.0	167	52.9
A757093	5.7	126	63.3
A757094	5.5	115	56.0
A757095	5.3	100	13.4
A757096	6.0	126	21.6
A757097	5.7	117	36.1

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
A757098	4.3	85	23.8
A757099	6.4	156	105
A757101	5.5	122	47.8
A757102	5.2	114	35.9
A757103	5.8	128	46.1
A757105	6.1	130	37.0
A757106	5.3	114	56.9
A757107	5.8	116	39.2
A757108	5.9	123	49.9
A757109	5.9	124	48.1
A757110	5.9	120	51.9
A757111	6.0	134	45.0
A757112	5.7	115	11.8
A757113	6.1	134	37.3
A757115	5.2	119	57.7
A757116	5.6	121	83.0
A757117	5.6	115	79.3
A757118	6.1	129	82.6
A757120	5.7	126	52.6
A757121	5.3	118	28.1
A757122	5.4	118	31.7
A757123	3.8	99	62.8
A757124	6.0	124	75.2
A757125	5.3	118	103
A757127	5.6	119	105
A757129	5.5	147	28.4
A757130	5.9	127	16.9
A757131	6.0	121	14.8
A757132	2.9	252	114
A757133	1.0	9500	50.5
A757135	3.8	1270	126
A757136	7.3	177	172
A757138	5.7	106	95.4
A757139	7.2	139	97.9
A757140	6.6	115	81.0
A757141	6.8	139	52.8
A757142	6.7	125	72.2
A757143	6.5	116	87.2
A757144	6.7	132	111
A757145	6.5	133	74.2
A757146	6.3	138	78.8
A757148	6.6	132	14.0

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
A757149	5.7	107	54.8
A757150	6.4	131	14.5
A757152	6.0	128	54.5
A757153	5.6	118	63.0
A757154	6.0	104	46.1
A757155	3.1	78	65.6
A757156	5.6	122	68.8
A757157	5.3	118	12.0
A757158	6.1	135	18.5
A757160	5.7	134	25.7
A757161	5.4	124	41.5
A757163	2.3	87	118
A757164	5.7	127	41.6
A757165	5.6	121	28.0
A757166	5.7	125	55.2
A757167	5.6	138	24.3
A757168	5.1	113	31.1
A757169	3.2	87	60.1
A757171	4.5	137	34.2
A757172	6.2	144	69.2
A757174	6.0	125	86.0
A757175	5.8	136	74.6
A757176	4.4	56	23.1
A757177	5.8	129	21.8
A757178	6.0	134	55.3
A757180	5.2	124	65.8
A757181	5.9	144	59.9
A757182	5.8	168	68.6
A757183	5.8	131	66.8
A757184	5.9	137	95.7
A757185	5.6	127	19.5
A757186	6.1	153	44.4
A757187	2.3	74	54.9
A757189	1.7	80	88.4
A757191	1.3	59	36.3
A757192	2.2	74	50.9
A757193	1.9	80	43.3
A757194	1.8	69	41.9
A757195	1.8	75	38.1
A757196	1.0	50	23.4
A757198	1.6	97	40.6
A757199	1.8	71	40.8

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
A757201	1.5	64	46.4
A757202	1.4	66	31.3
A757203	2.3	86	38.1
A757205	2.0	76	25.9
A757206	2.3	83	30.6
A757207	2.4	75	22.5
A757208	1.7	100	82.4
A757209	1.6	74	34.6
A757211	1.6	77	36.3
A757213	1.7	73	37.8
A757214	1.3	77	31.2
A757216	1.8	77	43.2
A757217	1.8	76	47.6
A757218	1.9	80	49.8
A757219	1.2	5450	72.3
A757221	1.6	3910	93.6
A757222	3.1	329	62.0
A757377	0.3	74	80.9
A757378	0.3	86	111
A757379	0.3	79	98.0
A757380	0.3	73	104
A757381	0.3	65	106
A757382	0.4	61	113
A757383	0.4	56	112
A757384	0.4	57	100
A757386	0.4	64	114
A757387	0.3	67	101
A757388	0.3	64	102
A757389	0.4	67	104
A757390	0.4	62	102
A757391	0.4	45	50.2
A757392	0.3	59	96.4
A757393	2.1	74	139
A757418	0.6	39	40.9
A757419	1.7	100	35.3
A757420	1.4	76	74.6
A757421	1.6	89	113
A757422	1.7	84	95.3
A757424	1.5	91	54.9
A757425	1.5	97	61.8
A757426	1.2	88	33.6
A757427	1.0	55	44.7

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
GXR-4 Meas	3.38	5.80	102	120	1.99	19.1	1.06	0.34	101	13.3	41	2.48	6410	3.07	16.1		1.3	0.199	4.16	56.6	10.4	1.73	152
GXR-4 Cert	4.00	7.20	98.0	1640	1.90	19.0	1.01	0.860	102	14.6	64.0	2.80	6520	3.09	20.0		6.30	0.270	4.01	64.5	11.1	1.66	155
GXR-4 Meas	3.57	5.55	104	140	2.02	19.1	1.03	0.27	107	13.4	39	2.61	6410	2.91	15.5		1.2	0.230	3.95	58.5	10.4	1.66	147
GXR-4 Cert	4.00	7.20	98.0	1640	1.90	19.0	1.01	0.860	102	14.6	64.0	2.80	6520	3.09	20.0		6.30	0.270	4.01	64.5	11.1	1.66	155
SDC-1 Meas		6.98	< 0.2	640	2.66		1.06		81.6	16.9	40	3.79	28.8	4.68	18.6		0.9		2.65	39.0	32.2	1.00	895
SDC-1 Cert		8.34	0.220	630	3.00		1.00		93.00	18.0	64.00	4.00	30.000	4.82	21.00		8.30		2.72	42.00	34.0	1.02	880.00
GXR-6 Meas	0.29	12.0	263	1470	1.10	0.18	0.17	0.12	31.1	12.2	54	4.00	61.5	5.50	26.5		2.2	0.060	1.99	12.1	34.1	0.62	1070
GXR-6 Cert	1.30	17.7	330	1300	1.40	0.290	0.180	1.00	36.0	13.8	96.0	4.20	66.0	5.58	35.0		4.30	0.260	1.87	13.9	32.0	0.609	1010
OREAS 97 (4 Acid) Meas	19.3					43.4				63.6			> 10000										
OREAS 97 (4 Acid) Cert	19.6					40.1				62.9			63100.00										
OREAS 97 (4 Acid) Meas	17.9					40.0				59.7			> 10000										
OREAS 97 (4 Acid) Cert	19.6					40.1				62.9			63100.00										
OREAS 98 (4 Acid) Meas	43.3					93.1				114			> 10000										
OREAS 98 (4 Acid) Cert	45.1					97.2				121			148000.0										
OREAS 98 (4 Acid) Meas	42.3					100				121			> 10000										
OREAS 98 (4 Acid) Cert	45.1					97.2				121			148000.0										
DNC-1a Meas				100			7.65			54.3	116		92.2	6.96	12.5					3.5	4.6		
DNC-1a Cert				118			8.21			57	270		100	6.97	15					3.6	5.2		
SBC-1 Meas			22.8	730	3.12	0.65		0.46	101	22.0	90	8.19	28.8		28.3		3.3			44.1	157		
SBC-1 Cert			25.7	788.0	3.20	0.70		0.40	108.0	22.7	109	8.2	31.0		27.0		3.7			52.5	163		
OREAS 45d (4-Acid) Meas		6.64	6.1	190	0.78	0.33	0.18		33.6	28.3	454	3.56	353	13.6	19.5		1.5	0.073	0.40	15.9	21.7	0.24	493
OREAS 45d (4-Acid) Cert		8.150	13.8	183.0	0.79	0.31	0.185		37.20	29.50	549	3.910	371	14.5	21.20		3.830	0.096	0.412	16.9	21.5	0.245	490.000
OREAS 45d (4-Acid) Meas		6.89		180			0.18				494			13.9					0.40			0.24	516
OREAS 45d (4-Acid) Cert		8.150		183.0			0.185				549			14.5					0.412			0.245	490.000
OREAS 96 (4 Acid) Meas	10.8					28.1				48.4			> 10000										
OREAS 96 (4 Acid) Cert	11.5					26.3				49.9			39300										
OREAS 96 (4 Acid) Meas	10.3					27.5				47.1			> 10000										
OREAS 96 (4 Acid) Cert	11.5					26.3				49.9			39300										
OREAS 923 (4 Acid) Meas	1.59	6.59	4.0	440	2.45	18.5	0.48	0.46	91.0	23.3	67	6.87	4640	6.68	21.4		3.7	0.546	2.55	45.3	31.1	1.75	1020

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
OREAS 923 (4 Acid) Cert	1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	83.0	23.1	71.0	6.70	4230	6.43	20.3		3.42	0.520	2.51	42.2	31.4	1.69	950
OREAS 923 (4 Acid) Meas	1.57	6.26	8.0	420	2.23	19.0	0.47	0.39	75.5	21.5	66	6.29	4200	6.34	16.4		3.7	0.472	2.41	40.4	28.9	1.68	994
OREAS 923 (4 Acid) Cert	1.60	7.29	7.61	434	2.42	21.4	0.473	0.420	83.0	23.1	71.0	6.70	4230	6.43	20.3		3.42	0.520	2.51	42.2	31.4	1.69	950
OREAS 621 (4 Acid) Meas	66.9	5.78	75.3		1.74	4.03	2.07	285	48.4	29.9	33	3.38	3940	3.69	26.9		4.4	1.93	2.18	21.3	13.5	0.52	497
OREAS 621 (4 Acid) Cert	69.0	6.40	77.0		1.69	3.93	1.97	284	46.6	29.3	37.1	3.28	3630	3.70	24.6		4.41	1.83	2.20	21.6	14.2	0.507	532
OREAS 520 (4 Acid) Meas	0.46	4.89	130		0.88	2.95	4.05		77.7	199	34	0.75	2640	16.2	17.5		3.5	0.127	3.46	78.4	14.1	1.21	2350
OREAS 520 (4 Acid) Cert	0.450	5.63	153		1.06	2.94	4.10		86.0	203	36.4	0.800	2930	16.4	18.7		3.53	0.110	3.46	85.0	16.9	1.19	2420
OREAS 520 (4 Acid) Meas	0.46	4.74	143		1.07	3.07	4.01		72.7	197	31	0.76	2840	15.6	16.8		3.6	0.093	3.36	70.2	16.2	1.17	2320
OREAS 520 (4 Acid) Cert	0.450	5.63	153		1.06	2.94	4.10		86.0	203	36.4	0.800	2930	16.4	18.7		3.53	0.110	3.46	85.0	16.9	1.19	2420
A757001 Orig	0.04	6.36	< 0.2	40	0.62	0.01	5.48	0.11	19.2	42.8	65	0.22	117	9.82	17.4	0.21	1.0	0.086	0.14	7.7	8.6	3.59	1410
A757001 Dup	0.04	6.28	< 0.2	40	0.66	0.01	5.48	0.09	19.6	44.0	71	0.23	119	9.81	17.8	0.12	0.8	0.095	0.14	8.1	8.7	3.58	1390
A757021 Orig	0.64	3.38	< 0.2	40	1.19	0.19	3.60	7.41	21.0	34.1	45	0.82	450	14.2	14.3	2.39	1.7	1.28	0.15	8.9	4.6	1.70	1660
A757021 Dup	0.63	3.42	< 0.2	40	1.20	0.18	3.62	7.18	21.0	34.4	45	0.81	452	14.4	14.2	2.84	1.8	1.31	0.15	8.8	4.6	1.71	1700
A757038 Orig	0.01	5.50	< 0.2	60	1.12	0.01	4.41	0.10	31.8	31.2	31	1.29	18.5	9.86	19.8	0.10	1.9	0.125	0.26	12.5	5.6	2.44	1370
A757038 Dup	0.02	5.41	< 0.2	50	0.94	0.01	4.39	0.09	32.3	32.5	32	1.31	17.4	9.79	20.5	0.08	2.5	0.125	0.25	13.1	5.8	2.41	1370
A757045 Orig	0.04	5.39	< 0.2	40	1.21	0.02	6.27	0.17	29.7	35.5	32	1.08	29.4	10.5	19.6	0.11	0.5	0.108	0.27	11.5	13.1	2.50	1640
A757045 Dup	0.03	5.44	< 0.2	40	1.10	0.02	6.32	0.12	30.1	35.8	30	1.14	30.2	10.7	19.5	0.13	0.9	0.130	0.28	11.8	13.4	2.54	1660
A757091 Orig	0.04	5.52	< 0.2	80	1.21	0.06	5.75	0.24	41.4	36.3	17	0.39	51.9	10.0	25.2	< 0.05	0.7	0.148	0.28	15.5	8.8	1.79	1520
A757091 Dup	0.04	5.49	< 0.2	80	1.16	0.07	5.73	0.24	41.2	36.2	18	0.39	52.7	9.98	25.2	< 0.05	1.0	0.141	0.29	15.3	8.7	1.79	1510
A757094 Orig	0.05	5.36	< 0.2	90	0.97	0.03	6.25	0.18	32.4	30.2	32	0.61	34.0	9.33	22.4	0.28	1.8	0.123	0.46	12.3	12.9	2.31	1520
A757094 Dup	0.06	5.23	< 0.2	90	1.01	0.03	6.17	0.13	33.3	30.9	31	0.62	34.3	9.11	23.1	0.08	1.3	0.128	0.45	12.6	13.3	2.26	1500
A757113 Orig	0.03	5.78	< 0.2	90	1.00	0.02	4.78	0.28	31.4	33.8	37	1.17	43.2	9.98	20.4	< 0.05	0.5	0.120	0.43	12.6	13.4	2.64	1610
A757113 Dup	0.04	5.77	< 0.2	90	0.86	0.02	4.78	0.33	31.5	33.9	35	1.12	42.4	9.83	20.2	0.10	1.7	0.104	0.43	12.4	13.1	2.61	1620
A757125 Orig	0.04	5.47	< 0.2	80	0.89	0.02	6.00	0.09	30.0	26.0	31	0.73	29.7	8.93	20.0	0.13	2.9	0.110	0.30	11.6	12.2	1.92	1380
A757125 Dup	0.05	5.89	< 0.2	80	0.82	0.03	6.03	0.11	29.5	26.6	29	0.73	37.7	8.87	20.3	0.16	3.3	0.098	0.31	11.5	12.2	1.97	1400
A757142 Orig	0.18	5.39	< 0.2	100	1.15	0.01	5.16	0.20	36.0	33.4	25	0.78	50.3	10.6	21.3	0.16	2.0	0.115	0.29	14.2	7.2	2.33	1530
A757142 Dup	0.03	5.86	< 0.2	100	1.08	0.01	5.17	0.19	35.0	33.7	27	0.78	47.4	10.7	21.8	0.17	2.4	0.121	0.30	13.8	7.3	2.36	1560
A757175 Orig	0.03	5.85	< 0.2	190	1.05	0.02	4.72	0.18	29.5	32.9	50	1.19	39.9	10.9	19.8	0.19	2.5	0.117	0.83	11.9	14.2	2.77	1650
A757175 Dup	0.03	5.95	< 0.2	190	0.93	0.01	4.80	0.17	31.5	34.6	48	1.24	46.0	11.2	20.9	0.10	2.1	0.133	0.83	12.7	14.6	2.84	1630
A757181 Orig	0.03	7.32	< 0.2	40	0.82	0.03	5.86	0.17	31.2	34.6	45	0.38	41.1	11.4	21.2	0.16	2.0	0.130	0.26	12.0	12.2	2.76	1660
A757181 Dup	0.04	7.50	< 0.2	40	0.85	0.02	5.79	0.21	30.8	33.0	45	0.35	36.1	11.1	20.7	0.13	1.7	0.128	0.27	11.8	11.5	2.71	1630
A757198 Orig	0.19	6.48	1.2	90	1.27	0.31	7.10	0.21	8.09	44.9	127	5.04	69.4	7.38	14.8	0.18	1.2	0.047	1.02	3.2	43.1	4.41	1150
A757198 Dup	0.17	6.44	0.8	90	1.47	0.32	7.04	0.19	8.17	46.0	126	5.17	78.1	7.38	15.3	0.16	1.3	0.050	1.01	3.3	44.6	4.41	1140
A757219 Orig	0.90	3.16	0.7	10	0.54	1.08	2.83	12.8	19.1	29.5	34	0.33	337	11.5	18.2	0.61	1.8	1.25	0.03	8.1	11.3	2.72	666
A757219 Dup	0.87	3.16	0.7	10	0.56	1.06	2.83	12.4	19.0	29.2	36	0.34	326	11.4	17.6	0.45	1.7	1.19	0.03	8.0	10.8	2.71	668

Analyte Symbol	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm
Lower Limit	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5
Method Code	TD-MS	TD-ICP	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-ICP
Method Blank	< 0.01	< 0.01	< 0.2	< 10	< 0.05	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1		< 0.05	< 0.2	< 0.01	0.10	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	
Method Blank	< 0.01	< 0.01	< 0.2	< 10	< 0.05	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	1	< 0.05	0.4	< 0.01	0.08	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	< 5
Method Blank	< 0.01	< 0.01	< 0.2	< 10	< 0.05	< 0.01	< 0.01	< 0.02	0.04	< 0.1		< 0.05	< 0.2	< 0.01	0.09	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	< 5
Method Blank	< 0.01	< 0.01	< 0.2	< 10	< 0.05	< 0.01	< 0.01	< 0.02	0.01	< 0.1	< 1	< 0.05	< 0.2	< 0.01	0.08	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	
Method Blank	< 0.01	< 0.01	0.5	< 10	< 0.05	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1	1	< 0.05	< 0.2	< 0.01	0.09	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	< 5
Method Blank	< 0.01	< 0.01	< 0.2	< 10	< 0.05	< 0.01	< 0.01	< 0.02	< 0.01	< 0.1		< 0.05	0.2	< 0.01	0.08	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	
Method Blank	< 0.01	< 0.01	0.7	< 10	< 0.05	< 0.01	< 0.01	< 0.02	0.06	< 0.1	< 1	< 0.05	0.4	< 0.01	< 0.05	< 0.05	< 0.1	< 0.005	< 0.01	< 0.5	< 0.2	< 0.01	

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
GXR-4 Meas	310	0.50	8.8	41.8	1310	48.3	145		1.83	4.27	6.9	5	6.8	212	0.58	0.89	19.8	0.270	3.09	5.6	91	33.8	12.8
GXR-4 Cert	310	0.564	10.0	42.0	1200	52.0	160		1.77	4.80	7.70	5.60	5.60	221	0.790	0.970	22.5	0.29	3.20	6.20	87.0	30.8	14.0
GXR-4 Meas	318	0.48	8.5	46.7	1270	47.9	146		1.78	4.42	7.0	6	6.9	209	0.57	0.95	19.8	0.257	3.03	5.6	88	32.7	12.6
GXR-4 Cert	310	0.564	10.0	42.0	1200	52.0	160		1.77	4.80	7.70	5.60	5.60	221	0.790	0.970	22.5	0.29	3.20	6.20	87.0	30.8	14.0
SDC-1 Meas		1.44	0.2	33.1	530	23.1	117			0.09	13.7		0.3	169	< 0.05		11.3	0.118	0.59	2.5	37	< 0.1	
SDC-1 Cert		1.52	21.00	38.0	690	25.00	127.00			0.54	17.00		3.00	180.00	1.20		12.00	0.606	0.70	3.10	102.00	0.80	
GXR-6 Meas	0.88	0.09	0.8	22.4	340	95.7	74.2		0.02	0.54	25.0	< 1	0.8	38.2	< 0.05	< 0.05	4.9		1.97	1.3	138	0.1	11.4
GXR-6 Cert	2.40	0.104	7.50	27.0	350	101	90.0		0.0160	3.60	27.6	0.940	1.70	35.0	0.485	0.0180	5.30		2.20	1.54	186	1.90	14.0
OREAS 97 (4 Acid) Meas						145			6.55	6.06		72	92.9										
OREAS 97 (4 Acid) Cert						147			6.07	9.23		71.4	95.7										
OREAS 97 (4 Acid) Meas						134			6.62	5.76		66	87.0										
OREAS 97 (4 Acid) Cert						147			6.07	9.23		71.4	95.7										
OREAS 98 (4 Acid) Meas						340			> 10.0	4.34		139	191										
OREAS 98 (4 Acid) Cert						345			15.5	20.1		158	206										
OREAS 98 (4 Acid) Meas						336			> 10.0	7.19		163	197										
OREAS 98 (4 Acid) Cert						345			15.5	20.1		158	206										
DNC-1a Meas		1.36	1.3	252		5.6	3.3			0.65	29.9			136				0.258			143		14.9
DNC-1a Cert		1.40	3	247		6.3	5			0.96	31			144				0.29			148		18.0
SBC-1 Meas	2.23		14.4	82.4		35.6	135			1.06	18.5		3.3	183	1.04		13.6	0.474	0.90	5.4	215	1.5	28.7
SBC-1 Cert	2.40		15.3	82.8		35.0	147			1.01	20.0		3.3	178.0	1.10		15.8	0.51	0.89	5.76	220.0	1.60	36.5
OREAS 45d (4-Acid) Meas	0.20	0.09	< 0.1	222	320	20.9	38.6		0.17	0.06	45.1		0.5	29.9	< 0.05		13.4	0.151	0.25	2.7	129	< 0.1	10.3
OREAS 45d (4-Acid) Cert	2.500	0.101	14.50	231.0	420.000	21.8	42.1		0.049	0.82	49.30		2.78	31.30	1.02		14.5	0.773	0.27	2.63	235.0	1.62	9.53
OREAS 45d (4-Acid) Meas		0.09			350				0.05									0.339			154		
OREAS 45d (4-Acid) Cert		0.101			420.000				0.049									0.773			235.0		
OREAS 96 (4 Acid) Meas						95.4			4.12	3.97		41	61.9										
OREAS 96 (4 Acid) Cert						101			4.19	5.09		40.7	65.6										
OREAS 96 (4 Acid) Meas						93.2			4.24	2.79		39	60.5										
OREAS 96 (4 Acid) Cert						101			4.19	5.09		40.7	65.6										
OREAS 923 (4 Acid) Meas	0.93	0.31	14.4	37.1	600	86.8	176		0.71	1.34	13.6	6	13.3	44.2	1.16		18.0	0.401	0.88	3.4	97	5.2	26.2

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
OREAS 923 (4 Acid) Cert	0.930	0.324	14.1	35.8	630	83.0	166		0.691	1.29	13.1	6.54	13.3	43.0	1.11		16.5	0.405	0.860	3.06	91.0	4.85	26.4
OREAS 923 (4 Acid) Meas	0.99	0.29	13.4	33.9	590	85.4	150		0.68	1.23	11.5	5	12.6	40.8	1.05		15.8	0.383	0.81	3.1	93	5.9	23.4
OREAS 923 (4 Acid) Cert	0.930	0.324	14.1	35.8	630	83.0	166		0.691	1.29	13.1	6.54	13.3	43.0	1.11		16.5	0.405	0.860	3.06	91.0	4.85	26.4
OREAS 621 (4 Acid) Meas	12.7	1.26	8.4	26.3	350	> 10000	87.0		4.57	16.9	6.7	5	5.1	69.7			5.8	0.168	2.09	3.0	34	1.8	12.6
OREAS 621 (4 Acid) Cert	13.6	1.31	8.61	26.2	359	13600	84.0		4.48	139	6.24	5.64	5.25	91.0			7.48	0.149	1.96	2.83	31.8	2.35	11.1
OREAS 520 (4 Acid) Meas	63.3	1.31	5.5	72.4	680	5.4	95.7	0.024	0.94	0.93	16.1	< 1	4.4	87.7	0.43	0.11	9.5	0.467	0.26	18.0	261	39.4	18.4
OREAS 520 (4 Acid) Cert	65.0	1.35	5.68	76.0	740	5.85	111	0.0310	1.01	3.21	17.0	1.76	4.76	104	0.470	0.360	9.62	0.445	0.260	17.9	257	43.8	20.8
OREAS 520 (4 Acid) Meas	63.9	1.26	5.8	74.0	670	5.2	112	0.030	0.92	1.41	16.0	< 1	4.6	91.9	0.42	0.25	8.4	0.459	0.24	17.2	255	40.0	20.0
OREAS 520 (4 Acid) Cert	65.0	1.35	5.68	76.0	740	5.85	111	0.0310	1.01	3.21	17.0	1.76	4.76	104	0.470	0.360	9.62	0.445	0.260	17.9	257	43.8	20.8
A757001 Orig	0.20	2.57	< 0.1	42.8	630	< 0.5	2.2	0.002	0.09	< 0.05	39.8	< 1	0.3	67.6	< 0.05	< 0.05	0.7	0.214	0.04	0.2	121	< 0.1	32.9
A757001 Dup	0.10	2.56	< 0.1	44.8	610	< 0.5	2.3	0.002	0.09	< 0.05	42.6	< 1	< 0.2	69.2	< 0.05	< 0.05	0.7	0.166	0.04	0.2	125	< 0.1	33.4
A757021 Orig	2.58	0.91	0.5	40.4	610	9.3	4.0	0.006	1.85	< 0.05	12.5	3	13.6	39.6	< 0.05	0.15	1.1	0.281	0.12	0.3	93	< 0.1	19.3
A757021 Dup	3.24	0.92	2.3	40.0	650	9.1	3.9	0.006	1.89	< 0.05	12.4	6	13.9	38.4	0.11	0.67	1.1	0.341	0.12	0.3	101	0.2	18.9
A757038 Orig	0.08	3.03	< 0.1	24.8	960	< 0.5	6.0	< 0.002	0.04	0.06	35.4	< 1	< 0.2	79.5	< 0.05	< 0.05	1.1	0.242	0.04	0.3	80	0.6	53.5
A757038 Dup	0.10	2.99	0.2	26.9	950	< 0.5	6.2	< 0.002	0.04	0.06	34.8	< 1	< 0.2	83.5	< 0.05	< 0.05	1.2	0.283	0.03	0.3	93	< 0.1	55.2
A757045 Orig	0.07	1.30	< 0.1	30.8	970	1.7	8.9	0.002	0.22	0.06	34.2	< 1	0.4	95.5	< 0.05	< 0.05	1.1	0.126	0.16	0.3	82	< 0.1	53.7
A757045 Dup	0.07	1.32	< 0.1	31.0	970	1.8	8.9	< 0.002	0.22	0.06	33.9	< 1	0.6	94.3	< 0.05	< 0.05	1.1	0.175	0.15	0.3	99	< 0.1	53.8
A757091 Orig	< 0.05	2.11	< 0.1	23.7	1120	2.0	6.5	< 0.002	0.27	< 0.05	38.0	< 1	0.3	89.6	< 0.05	< 0.05	1.5	0.128	0.06	0.4	98	< 0.1	66.8
A757091 Dup	0.06	2.10	< 0.1	24.4	1120	2.0	6.5	0.002	0.27	< 0.05	38.1	< 1	0.4	89.8	< 0.05	< 0.05	1.5	0.171	0.07	0.4	103	< 0.1	66.5
A757094 Orig	0.30	1.46	0.5	24.1	940	1.5	11.4	0.003	0.20	< 0.05	32.7	< 1	0.7	94.8	< 0.05	< 0.05	1.1	0.462	0.09	0.3	143	< 0.1	51.9
A757094 Dup	0.08	1.42	< 0.1	25.2	920	1.5	12.0	0.003	0.18	< 0.05	33.9	< 1	0.4	99.6	< 0.05	< 0.05	1.2	0.251	0.09	0.3	99	< 0.1	53.5
A757113 Orig	< 0.05	2.09	< 0.1	27.6	1020	1.4	11.8	< 0.002	0.14	< 0.05	34.7	< 1	< 0.2	95.5	< 0.05	< 0.05	1.1	0.114	0.10	0.3	95	< 0.1	53.4
A757113 Dup	0.06	2.05	< 0.1	26.9	970	1.4	11.8	< 0.002	0.14	< 0.05	35.2	< 1	0.3	95.1	< 0.05	< 0.05	1.2	0.249	0.10	0.3	98	< 0.1	53.4
A757125 Orig	0.09	2.20	0.3	22.7	980	1.6	4.5	< 0.002	0.12	< 0.05	28.2	< 1	0.3	69.9	< 0.05	< 0.05	1.1	0.444	0.06	0.3	128	< 0.1	47.7
A757125 Dup	0.22	2.23	0.8	23.0	1040	1.6	3.5	< 0.002	0.13	< 0.05	26.8	< 1	0.4	71.1	< 0.05	< 0.05	1.0	0.645	0.06	0.3	159	< 0.1	46.2
A757142 Orig	0.22	2.01	0.1	26.2	1040	1.0	9.1	0.003	0.19	0.06	35.7	< 1	0.6	114	< 0.05	< 0.05	1.3	0.285	0.10	0.3	112	< 0.1	60.9
A757142 Dup	0.31	2.02	0.8	25.6	1090	1.1	6.5	0.002	0.20	< 0.05	33.4	< 1	0.5	115	< 0.05	< 0.05	1.2	0.438	0.09	0.4	132	< 0.1	59.8
A757175 Orig	0.91	1.47	1.2	27.1	1020	1.5	20.0	0.002	0.15	< 0.05	31.2	< 1	0.6	107	< 0.05	< 0.05	1.4	0.749	0.22	0.5	182	< 0.1	51.4
A757175 Dup	0.37	1.52	0.5	28.1	1010	1.3	25.8	0.002	0.15	< 0.05	36.1	< 1	0.2	110	< 0.05	< 0.05	1.2	0.497	0.22	0.3	135	< 0.1	55.5
A757181 Orig	0.25	1.49	0.8	29.2	1140	2.0	3.0	< 0.002	0.18	0.06	33.6	< 1	0.4	115	< 0.05	< 0.05	1.1	0.546	0.06	0.3	142	< 0.1	54.4
A757181 Dup	0.25	1.46	0.8	26.7	1140	1.9	2.6	< 0.002	0.18	0.06	30.7	< 1	0.4	111	< 0.05	< 0.05	1.1	0.534	0.06	0.3	139	< 0.1	52.1
A757198 Orig	2.06	1.41	1.9	174	250	4.5	30.0	< 0.002	0.63	0.08	26.4	< 1	0.5	155	0.11	1.37	0.3	0.389	0.22	0.1	213	6.4	14.1
A757198 Dup	1.97	1.41	2.1	178	250	4.7	31.1	< 0.002	0.63	0.08	27.7	< 1	0.5	165	0.13	1.49	0.3	0.386	0.23	0.2	210	7.4	14.6
A757219 Orig	2.63	0.10	2.1	31.3	440	32.5	0.9	0.003	1.83	0.12	6.7	6	14.3	23.3	0.14	1.93	1.2	0.139	0.03	0.3	47	0.6	10.6
A757219 Dup	2.64	0.10	2.1	30.6	440	31.9	0.9	0.003	1.84	0.10	6.5	6	13.8	22.2	0.15	1.87	1.2	0.140	0.03	0.3	48	0.6	10.3

Analyte Symbol	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y
Unit Symbol	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.05	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.2	0.005	0.02	0.1	1	0.1	0.1
Method Code	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS	TD-ICP	TD-MS	TD-MS
Method Blank	0.07	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	< 0.05	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	0.05	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	0.08	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	< 0.05	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	< 0.05	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	< 0.05	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	< 0.05	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	0.23	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	0.07	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	< 0.05	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	< 0.05	< 0.1	< 1	< 0.2	< 0.2	< 0.05	< 0.05	< 0.2	< 0.005	< 0.02	< 0.1	< 1	< 0.1	< 0.1
Method Blank	0.14	< 0.01	< 0.1	< 0.2	< 10	< 0.5	< 0.1	< 0.002	< 0.01	0.05	0.1	< 1	< 0.2	< 0.2	< 0.05	0.10	< 0.2	< 0.005	< 0.02	< 0.1	< 1	0.1	< 0.1

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
GXR-4 Meas	1.0	74	36.6
GXR-4 Cert	1.60	73.0	186
GXR-4 Meas	1.0	73	34.9
GXR-4 Cert	1.60	73.0	186
SDC-1 Meas	3.2	102	30.6
SDC-1 Cert	4.00	103.00	290.00
GXR-6 Meas	1.6	129	69.6
GXR-6 Cert	2.40	118	110
OREAS 97 (4 Acid) Meas		598	
OREAS 97 (4 Acid) Cert		646	
OREAS 97 (4 Acid) Meas		602	
OREAS 97 (4 Acid) Cert		646	
OREAS 98 (4 Acid) Meas		1240	
OREAS 98 (4 Acid) Cert		1360	
OREAS 98 (4 Acid) Meas		1270	
OREAS 98 (4 Acid) Cert		1360	
DNC-1a Meas	1.9	60	33.6
DNC-1a Cert	2.0	70	38.0
SBC-1 Meas	3.2	196	120
SBC-1 Cert	3.64	186	134.0
OREAS 45d (4-Acid) Meas	1.4	46	52.2
OREAS 45d (4-Acid) Cert	1.33	45.7	141
OREAS 45d (4-Acid) Meas		46	
OREAS 45d (4-Acid) Cert		45.7	
OREAS 96 (4 Acid) Meas		431	
OREAS 96 (4 Acid) Cert		457	
OREAS 96 (4 Acid) Meas		438	
OREAS 96 (4 Acid) Cert		457	
OREAS 923 (4 Acid) Meas	2.6	346	132

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
OREAS 923 (4 Acid) Cert	2.57	345	116
OREAS 923 (4 Acid) Meas	2.5	341	117
OREAS 923 (4 Acid) Cert	2.57	345	116
OREAS 621 (4 Acid) Meas	1.0	> 10000	182
OREAS 621 (4 Acid) Cert	0.990	52200	168
OREAS 520 (4 Acid) Meas	2.2	22	141
OREAS 520 (4 Acid) Cert	2.20	22.7	134
OREAS 520 (4 Acid) Meas	2.1	22	135
OREAS 520 (4 Acid) Cert	2.20	22.7	134
A757001 Orig	3.9	65	31.2
A757001 Dup	4.0	65	26.1
A757021 Orig	2.1	3800	62.3
A757021 Dup	2.1	3820	64.8
A757038 Orig	6.0	104	61.5
A757038 Dup	6.2	104	80.7
A757045 Orig	5.7	157	17.8
A757045 Dup	5.7	160	27.1
A757091 Orig	7.2	135	23.6
A757091 Dup	7.1	134	36.9
A757094 Orig	5.4	115	65.3
A757094 Dup	5.6	114	46.8
A757113 Orig	6.2	135	16.8
A757113 Dup	6.1	134	57.8
A757125 Orig	5.3	118	95.7
A757125 Dup	5.3	118	111
A757142 Orig	6.7	126	67.2
A757142 Dup	6.8	125	77.2
A757175 Orig	5.6	134	82.6
A757175 Dup	5.9	138	66.7
A757181 Orig	6.0	146	62.7
A757181 Dup	5.8	142	57.1
A757198 Orig	1.6	97	39.2
A757198 Dup	1.6	98	42.0
A757219 Orig	1.2	5450	74.2
A757219 Dup	1.2	5440	70.4

Analyte Symbol	Yb	Zn	Zr
Unit Symbol	ppm	ppm	ppm
Lower Limit	0.1	2	0.5
Method Code	TD-MS	TD-ICP	TD-MS
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5
Method Blank	< 0.1	< 2	< 0.5

Appendix D

CDN Resources Labs Ltd Standards and Blanks

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: CDN-GS-1P5R

Recommended value and the "Between Laboratory" two standard deviations

Gold	1.81 g/t ± 0.14 g/t	Certified value	30g FA / Instrumental

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: July 26th, 2018

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-1P5R was prepared from material received from WCM Minerals. Material was collected from Scottie Gold mine near the northwestern tip of Summit Lake, British Columbia, Canada, blended with low grade granitic rock.

The Scottie Gold deposit is hosted by steeply east dipping volcaniclastic rocks that consist of green andesitic breccia and conglomerate with thin intercalated volcanic sandstones and tuffaceous bands. Several alteration assemblages are developed in the area. The Scottie deposit consists of several mineralized quartz-carbonate veins. The veins contain lenses of massive sulphide, consisting largely of pyrrhotite and pyrite, with lesser sphalerite, chalcopyrite, galena, arsenopyrite, tetrahedrite and gold.

Alteration to the north of the property is characterized by the development of fine-grained pyrrhotite or pyrite in the volcanic host. To the south, the alteration zone has a gradational contact with less altered Hazelton rocks. Overprinting of the regional assemblage by the Summit Lake stock occurs. To the west of the Morris Summit fault, the Hazelton Group is metamorphosed to greenschist facies and locally altered to a grey to green fine- grained quartz-chlorite-pyrrhotite-pyrite assemblage.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270-mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

ASSAY PROCEDURES:

Au: 30 gr Fire assay pre-concentration, AA or ICP finish.
Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 5 samples.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent		Percent
SiO2	62.4	**Na2O**	3.4
Al2O3	15.7	**MgO**	2.4
Fe2O3	6.6	**K2O**	1.6
CaO	5.5	**TiO2**	0.5
MnO	0.1	**LOI**	1.2
Total S	0.3	**Total C**	0.1

STATISTICAL PROCEDURES:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations

when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Our certified gold values are based on 30 g Fire Assay determinations. For optimal results, we strongly recommend you assay our standards with similar methods using "at least" 30 g of material. Using a smaller sample weight may result in erratic values.

RESULTS FROM ROUND ROBIN ASSAYING:

Instrumental	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-1P5R-1	1.94	1.64	1.71	1.90	1.81	1.88	1.70	1.63	1.92	1.92	1.72	1.80	1.69	1.88	1.85
GS-1P5R-2	1.75	1.79	1.81	1.79	1.73	1.84	1.73	1.84	1.80	1.95	1.79	1.80	1.66	1.90	1.84
GS-1P5R-3	1.82	1.74	1.83	1.90	1.74	1.83	1.76	1.85	1.71	1.94	1.76	1.87	1.74	1.91	1.82
GS-1P5R-4	1.77	1.71	1.76	1.88	1.63	1.79	1.67	1.85	1.91	1.94	1.71	1.86	1.76	1.73	1.85
GS-1P5R-5	1.84	1.87	1.82	1.76	1.85	1.83	1.77	1.85	1.87	1.92	1.80	1.87	1.66	1.72	1.83
GS-1P5R-6	1.74	1.66	1.83	1.76	2.01	1.79	1.80	1.94	1.81	1.93	1.78	1.86	1.76	1.72	1.85
GS-1P5R-7	1.62	1.66	1.79	1.76	1.86	1.88	1.80	1.81	1.87	1.94	1.75	1.88	1.65	1.79	1.77
GS-1P5R-8	1.83	1.69	1.85	1.77	1.96	1.71	1.79	1.85	1.78	1.93	1.81	1.82	1.75	1.79	1.91
GS-1P5R-9	1.80	1.85	1.85	1.87	1.83	1.83	1.78	1.86	1.80	1.92	1.78	1.79	1.66	1.82	1.78
GS-1P5R-10	1.79	1.80	1.87	1.72	1.83	1.80	1.76	1.94	1.82	1.92	1.80	1.89	1.76	1.87	1.81
Mean	**1.79**	**1.74**	**1.81**	**1.81**	**1.83**	**1.82**	**1.76**	**1.84**	**1.83**	**1.93**	**1.77**	**1.84**	**1.71**	**1.81**	**1.83**
Std. Dev.	**0.082**	**0.083**	**0.047**	**0.069**	**0.109**	**0.050**	**0.044**	**0.085**	**0.062**	**0.011**	**0.036**	**0.037**	**0.049**	**0.074**	**0.040**
% RSD	**4.60**	**4.74**	**2.60**	**3.81**	**5.98**	**2.73**	**2.48**	**4.61**	**3.37**	**0.59**	**2.01**	**1.99**	**2.87**	**4.06**	**2.18**

PARTICIPATING LABORATORIES: (not in same order as table of assays)

Activation Laboratories, Ancaster, Ontario, Canada	Bureau Veritas, Vancouver, BC, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada	Certimin S.A., Lima, Peru
ALS Canada, North Vancouver, BC, Canada	MS Analytical, Langley, BC, Canada
ALS, Loughrea, Ireland	SGS, Vancouver, BC, Canada
ALS, Lima, Peru	SGS, Lima, Peru
ALS, Perth Australia	SGS, Lakefield, Ontario, Canada
Bureau Veritas, Perth, Australia	TSL Laboratories Ltd., Saskatoon, SK, Canada
Skyline, USA	

LEGAL NOTICE:

This certificate and the reference material described in it have been prepared with due care and attention. However, CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by

Duncan Sanderson, Certified Assayer of B.C.

Geochemist

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: CDN-GS-4E

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 4.19 ± 0.19 g/t (30g Fire Assay / Instrumental finish)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: December 12, 2013
ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-4E was prepared using ore supplied by Barrick Gold Inc. from their Cortez Hills Mine in Nevada, USA.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
CDN-GS-4E-1	4.15	4.32	4.15	4.52	4.23	4.26	4.15	4.16	3.96	4.34	4.19	4.45	3.80	3.70	4.12
CDN-GS-4E-2	4.16	4.22	4.12	4.54	4.31	4.22	4.19	4.22	4.15	4.26	4.10	4.08	4.10	3.71	4.22
CDN-GS-4E-3	4.20	4.15	4.18	4.32	4.26	4.28	4.20	4.29	4.06	4.26	4.13	4.28	3.98	3.63	4.14
CDN-GS-4E-4	4.19	4.19	4.07	4.28	4.25	4.27	4.17	4.28	3.99	4.38	4.15	4.15	4.23	3.68	4.19
CDN-GS-4E-5	4.20	4.28	4.07	4.21	4.27	4.16	4.21	4.30	3.95	4.33	4.11	4.31	4.19	3.65	4.34
CDN-GS-4E-6	4.13	4.36	4.13	4.20	4.26	4.07	4.16	4.28	4.00	4.33	4.12	4.06	4.03	3.67	4.26
CDN-GS-4E-7	4.15	4.45	4.06	4.14	4.21	4.07	4.12	4.27	3.99	4.36	4.10	4.16	4.12	3.65	4.13
CDN-GS-4E-8	4.15	4.30	4.11	4.20	4.16	4.13	4.15	4.28	3.97	4.32	4.14	4.14	4.18	3.36	4.01
CDN-GS-4E-9	4.15	4.49	4.06	4.31	4.33	4.24	4.18	4.24	4.08	4.27	4.21	4.11	4.43	3.64	4.14
CDN-GS-4E-10	4.17	4.38	4.08	4.30	4.23	4.14	4.18	4.29	4.06	4.37	4.21	4.16	4.14	3.83	4.09
Mean	4.17	4.31	4.10	4.30	4.25	4.18	4.17	4.26	4.02	4.32	4.15	4.19	4.12	3.65	4.16
Std. Dev'n	0.0242	0.1098	0.0416	0.1344	0.0474	0.0804	0.0267	0.0431	0.0640	0.0466	0.0430	0.1208	0.1659	0.1175	0.0923
%RSD	0.58	2.54	1.02	3.12	1.12	1.92	0.64	1.01	1.59	1.08	1.04	2.88	4.03	3.22	2.22

Note: Data from laboratory 14 was excluded for failing the t test.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent			Percent			ppm
SiO2	74.4		Na2O	<0.1		As	730
Al2O3	6.2		MgO	1.7		Sb	10
Fe2O3	4.0		K2O	1.8			
CaO	2.8		TiO2	0.3			
MnO	<0.1		LOI	8.1			
Total S	1.9		Total C	2.4			
Sulphide S	0.9		Inorganic C	0.6			

REFERENCE MATERIAL: CDN-GS-4E

Statistical Procedures:

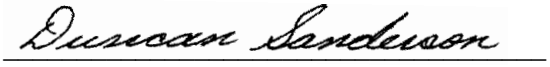
The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories: (not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, BC, Canada
Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Kamloops, BC, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
ALS Canada, North Vancouver, BC, Canada
ALS, Loughrea, Ireland
ALS, Reno, Nevada, USA
American Assay Laboratories, Nevada, USA
Certimin, Lima, Peru
Labtium, Finland
Met-Solve Analytical Services Inc., Langley, BC, Canada
SGS, Lima, Peru
SGS Vancouver, B.C., Canada
Skyline Laboratory, Arizona, USA
TSL Laboratories Ltd., Saskatoon, SK, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

GOLD ORE REFERENCE MATERIAL CDN-GS-13B

Recommended value and the "Between Laboratory" two standard deviations

Gold	***13.28 g/t ± 0.61 g/t***	***30g FA / Gravimetric***	**Certified Value**
Gold	***13.18 g/t ± 0.81 g/t***	***50g FA / Gravimetric***	**Certified Value**

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: November 24, 2015

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-13B was prepared from ore sourced from Nunavut, Canada, consisting of a mix of lower greenschist metamorphosed Banded Iron Formation (BIF) and greywacke units with variable amounts of pyrrhotite, arsenopyrite and lesser pyrite. Gold mineralization is hosted mostly in the BIF with localized silicification, amphibole alteration and pyrrhotite/arsenopyrite replacement of magnetite."

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying. Round robin results are displayed below:

30 g FA	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
Grav	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-13B-1	13.05	13.55	13.26	13.32	13.10	13.69	13.80	13.50	13.20	12.70	13.16	13.90	13.10	13.20	13.30
GS-13B-2	13.95	13.15	13.76	13.22	12.97	13.66	13.50	13.93	12.96	13.20	13.04	13.30	13.70	12.80	12.98
GS-13B-3	13.35	13.25	13.02	13.65	12.87	13.89	13.10	13.22	13.99	12.90	13.54	13.30	12.90	12.70	14.79
GS-13B-4	13.00	14.20	13.22	13.39	13.18	13.22	13.00	13.60	13.66	13.00	13.48	13.10	13.00	13.30	14.52
GS-13B-5	13.45	13.15	13.44	13.58	13.08	13.17	13.65	13.91	13.04	13.10	13.04	12.90	13.10	13.40	12.85
GS-13B-6	13.30	13.05	13.22	13.65	13.10	12.95	13.15	13.61	13.04	12.60	13.08	13.50	12.90	12.90	14.63
GS-13B-7	13.20	13.40	13.23	13.26	13.25	13.10	13.05	13.59	14.30	13.40	12.98	13.80	13.50	13.00	14.14
GS-13B-8	13.85	13.45	12.95	13.34	12.93	12.91	12.70	13.59	12.68	13.20	13.16	13.80	13.00	13.40	14.06
GS-13B-9	13.00	13.95	13.00	13.44	12.96	13.50	13.40	13.32	13.17	13.30	12.89	13.80	13.40	13.00	12.25
GS-13B-10	13.60	13.45	12.98	13.56	12.96	13.86	13.25	13.78	13.43	12.60	13.16	13.50	13.20	13.30	13.67
Mean	13.38	13.46	13.21	13.44	13.04	13.40	13.26	13.61	13.35	13.00	13.15	13.49	13.18	13.10	13.72
Std. Devn.	0.3393	0.3658	0.2493	0.1598	0.1207	0.3698	0.3307	0.2297	0.5014	0.2906	0.2073	0.3381	0.2700	0.2539	0.8521
% RSD	2.54	2.72	1.89	1.19	0.93	2.76	2.49	1.69	3.76	2.24	1.58	2.51	2.05	1.94	6.21

50 g FA	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
Grav	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-13B-1	13.40	13.80	12.91	13.39	12.21	13.44	13.05	13.65	13.62	14.40	13.56	12.70	12.40	12.90	14.44
GS-13B-2	12.55	13.75	13.02	13.33	12.50	13.31	13.20	13.73	13.70	14.80	13.58	13.20	13.00	13.20	13.15
GS-13B-3	13.90	13.80	13.42	13.64	12.58	13.45	12.80	13.66	12.99	13.50	12.98	13.00	12.30	13.20	13.49
GS-13B-4	13.55	13.00	12.90	13.65	12.52	13.24	13.30	13.43	12.32	13.70	12.85	13.50	12.60	13.30	14.69
GS-13B-5	13.10	13.90	12.93	13.57	12.40	13.35	13.10	13.64	13.43	14.10	13.24	13.30	12.60	13.40	13.03
GS-13B-6	12.75	14.20	13.12	13.67	12.54	13.33	13.20	13.85	13.18	13.70	13.16	12.70	12.90	12.80	13.39
GS-13B-7	13.05	14.15	12.91	13.24	12.34	13.23	12.75	13.41	13.38	13.90	13.29	13.30	12.00	13.50	13.24
GS-13B-8	12.95	13.35	13.24	13.28	12.52	13.29	12.85	13.20	13.20	14.80	13.16	13.50	12.30	13.40	13.48
GS-13B-9	13.80	13.50	12.87	13.39	12.34	13.50	13.45	13.53	12.58	13.70	12.86	13.50	12.30	13.60	13.32
GS-13B-10	12.95	13.50	13.13	13.48	12.26	13.56	12.95	13.66	12.78	13.50	12.99	13.40	12.00	14.00	13.37
Mean	13.20	13.70	13.05	13.46	12.42	13.37	13.07	13.58	13.12	14.01	13.17	13.21	12.44	13.33	13.56
Std. Devn.	0.4466	0.3662	0.1806	0.1607	0.1288	0.1120	0.2286	0.1881	0.4502	0.4977	0.2596	0.3107	0.3373	0.3433	0.5528
% RSD	3.38	2.67	1.38	1.19	1.04	0.84	1.75	1.39	3.43	3.55	1.97	2.35	2.71	2.58	4.08

Note: 30 g FA - Au data from Lab 15 was excluded for failing the t-test.
50 g FA - Au data from Lab 10 was excluded for failing the t-test.

GOLD ORE REFERENCE MATERIAL: CDN-GS-13B

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent			Percent
SiO2	52.8		Na2O	0.2
Al2O3	3.8		MgO	3.1
Fe2O3	30.9		K2O	0.4
CaO	2.9		TiO2	0.1
MnO	0.1		LOI	3.5

Statistical Procedures:

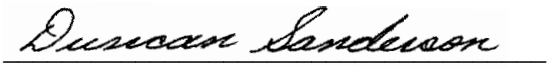
The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories:
(not in same order as table of assays)

* Acme, South America, Santiago, Chile
* Activation Laboratories, Ancaster, Ontario, Canada
* Activation Laboratories, Thunder Bay, Ontario, Canada
* AGAT Labs, Mississauga, Ontario, Canada
* ALS Canada, North Vancouver, British Columbia, Canada
* ALS Ireland, Loughrea, Ireland
* ALS Reno, Nevada, United States
* ALS South America, Lima, Peru
* American Assay Laboratories, Nevada, United States
* Bureau Veritas, Vancouver, British Columbia, Canada
* Certimin, Lima, Peru
* Met-Solve Analytical, Langley, British Columbia, Canada
* SGS, Lima, Peru
* SGS, Vancouver, British Columbia, Canada
* TSL Laboratories Ltd., Saskatoon, Saskatchewan, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Ave, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: CDN-GS-25

Recommended value and the "Between Laboratory" two standard deviations

Gold	**25.60 g/t ± 0.94 g/t**	**Certified value**	**30g FA / Gravimetric**
Silver	**99.5 g/t ± 7.4 g/t**	**Certified value**	**30g FA / Gravimetric**

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: June 29th, 2018

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-25 was prepared by combining several different siliceous ores with low sulphide content, blended with 160 kg of high grade ore supplied by Teuton Resources from their Clone gold property in B.C., Canada.
Mineralization of Clone gold property is localized within highly silicified semi-massive to massive specular hematite. Gold occurs as fine disseminations and is associated with the oxide mineralization. The major lithology is light grey to green andesitic pyroclastic intercalated with fine grained to aphanitic andesite. Clasts are sub angular to angular, matrix supported, and range in size from 1-3cm. Quartz-calcite stockwork pervades the unit in moderate abundance

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270-mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying.

ASSAY PROCEDURES:

Au, Ag: 30 gr Fire assay pre-concentration, Gravimetric finish.
Whole rock analysis and 30 element ICP analysis (4-acid digestion) were also conducted on 5 samples.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent		Percent
SiO2	58.6	**Na2O**	2.1
Al2O3	11.7	**MgO**	2.3
Fe2O3	13.7	**K2O**	1.9
CaO	3.6	**TiO2**	0.4
MnO	0.2	**LOI**	4.0
Total S	1.9	**Total C**	0.5

STATISTICAL PROCEDURES:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses

rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Our certified gold values are based on 30 g Fire Assay determinations. For optimal results, we strongly recommend you assay our standards with similar methods using "at least" 30 g of material. Using a smaller sample weight may result in erratic values.

RESULTS FROM ROUND ROBIN ASSAYING:

Gravimetric Finish	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-25-1	24.6	26.4	25.2	25.9	24.7	26.2	25.34	25.78	25.5	24.63	26.50	25.73	26.12	24.94	25.83
GS-25-2	24.9	26.1	26.2	24.7	25.6	26.6	25.26	25.69	26.9	24.67	25.32	25.86	25.36	25.65	25.67
GS-25-3	25.1	25.5	25.8	25.6	26.3	26.7	26.30	24.98	25.8	24.65	25.83	25.27	26.08	25.51	25.57
GS-25-4	25.0	26.1	25.7	26.4	25.9	26.1	26.21	25.39	25.3	25.01	26.07	25.63	25.58	25.22	26.01
GS-25-5	25.9	25.5	25.9	26.4	25.5	24.9	26.02	25.47	25.5	24.84	25.97	25.56	25.48	25.75	25.86
GS-25-6	25.0	25.6	25.7	25.0	25.5	24.7	26.16	25.88	25.7	24.62	25.32	25.76	25.51	25.55	25.60
GS-25-7	24.4	25.3	25.1	25.9	25.5	22.5	25.71	24.97	26.0	24.99	25.75	25.53	26.04	26.02	25.45
GS-25-8	24.4	26.4	25.7	25.1	26.7	25.8	25.44	24.37	25.7	24.63	25.55	25.83	25.63	25.28	25.53
GS-25-9	24.4	26.3	25.3	25.7	25.3	26.1	25.53	25.10	26.1	25.00	25.32	26.06	26.10	25.71	25.83
GS-25-10	24.5	26.2	25.4	25.9	25.8	25.7	26.04	24.99	25.5	24.63	25.52	25.95	25.85	25.76	25.34
Mean	24.8	25.9	25.6	25.7	25.7	25.53	25.80	25.26	25.8	24.77	25.72	25.72	25.78	25.54	25.67
Std. Dev.	0.471	0.420	0.343	0.572	0.547	1.246	0.390	0.466	0.457	0.173	0.388	0.231	0.295	0.315	0.209
% RSD	1.90	1.62	1.34	2.23	2.13	4.88	1.51	1.84	1.77	0.70	1.51	0.90	1.14	1.23	0.82

Gravimetric Finish	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t	Ag g/t
GS-25-1	100	103	97	103	95	69	100	98	104.0	104	102	96.7	103.5	98.9	96
GS-25-2	99	100	95	94	92	60	99	95	108.9	103	95	94.7	100.5	98.5	97
GS-25-3	99	101	95	104	99	80	99	97	105.9	103	105	95.6	101.2	99.0	96
GS-25-4	101	102	94	100	105	46	100	99	103.6	101	96	93.5	98.9	105.0	95
GS-25-5	100	101	95	101	87	66	96	97	104.5	101	107	92.9	100.7	106.0	99
GS-25-6	101	102	105	92	95	64	100	94	110.5	103	106	94.4	99.5	99.5	94
GS-25-7	102	102	104	101	95	61	96	96	107.9	101	99	93.2	99.9	100.0	101
GS-25-8	99	106	95	96	97	149	102	92	110.9	102	100	99.4	100.1	105.0	95
GS-25-9	99	109	106	100	92	99	99	99	102.2	104	99	95.8	100.5	107.0	98
GS-25-10	100	102	100	97	105	95	96	99	112.5	102	97	98.6	99.3	100.0	104
Mean	100	103	99	99	96	79	98	97	107.1	102	101	95.5	100.4	101.9	98
Std. Dev.	1.054	2.700	4.742	3.910	5.653	29.486	2.061	2.366	3.545	1.174	4.248	2.218	1.293	3.399	3.100
% RSD	1.05	2.63	4.81	3.96	5.88	37.37	2.09	2.45	3.31	1.15	4.22	2.32	1.29	3.34	3.18

Note:
Ag results from lab 6 were removed for failing the t test

PARTICIPATING LABORATORIES: (not in same order as table of assays)

Activation Laboratories, Ancaster, Ontario, Canada	Bureau Veritas, Vancouver, BC, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada	Certimin S.A., Lima, Peru
ALS Canada, North Vancouver, BC, Canada	MS Analytical, Langley, BC, Canada
ALS, Loughrea, Ireland	SGS, Vancouver, BC, Canada
ALS, Lima, Peru	SGS, Lima, Peru
ALS, Perth Australia	SGS, Lakefield, Ontario, Canada
Bureau Veritas, Perth, Australia	TSL Laboratories Ltd., Saskatoon, SK, Canada
Bureau Veritas, Reno, USA	

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Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

Appendix E

Actlabs Invoices

Withheld for client confidentiality.

Appendix F

Chibougamau Diamond Drilling Invoices

Withheld for client confidentiality.

Appendix G

Summary of Daily Work Activities

Man Days worked from Sept 22 to Oct 9, 2018 on Black Raven Drilling Program

Date	Work Performed by Geologist	Geologist Days	Work Performed by Core Tech	Core Sawing Days
22-Sep-18	Organize drillers, line up first hole	1		
23-Sep-18	Inspect drill sites, prep core shack	1		
24-Sep-18	Logged core, direct drillers to sites	1	Start sawing and sampling core	1
25-Sep-18	Logged core, stopped first hole	1	Sawing and sampling core	1
26-Sep-18	Logged core, line up next hole	1	Sawing and sampling core	1
27-Sep-18	Logged core, line up next drill hole	1	Sawing and sampling core	1
28-Sep-18	Logged ciore, shut down drill hole	1	Sawing and sampling core	1
29-Sep-18	Logged core, spot hole, prep samples	1	Sawing and sampling core	1
30-Sep-18	Logged core, shut down drill hole	1	Sawing and sampling core	1
01-Oct-18	Logged core, lined up next drill hole	1	Sawing and sampling core	1
02-Oct-18	Logged core, lined up next drill hole	1	Sawing and sampling core	1
03-Oct-18	Logged core, shut down drill hole	1	Sawing and sampling core	1
04-Oct-18	Logged core, check site cleanup	1	Sawing and sampling core	1
05-Oct-18	Logging core, line up last hole	1	Sawing and sampling core	1
06-Oct-18	Logging core	1	Sawing and sampling core	1
07-Oct-18	Logging last hole	1	Sawing and sampling core	1
08-Oct-18			Sawing and sampling core	1
09-Oct-18			Finish sawing and sampling core	1
		16		16

Geologists Henry Hutteri P.Geo. and
Steve MacConnell P.Geo.

Core Technician Doug Kakeeway

Appendix H

Black Raven Drill Report Expenditures

STATEMENT of EXPENDITURES

The following is a breakdown of expenditures related to the 2018 diamond drilling program on the Black Raven Property.

Labour:

Preparation, field work, travel	
Labour	$ 33,367.65
Prepare maps etc.	
Drafting	$ 3,011.38
Report Writing	
Report Writing	$ 3,342.58

Associated Costs:

Camp Costs (Meals, Accommodation, Camp rental etc.)	$ 32,587.56
Field Supplies	$ 2,140.34
Ground Travel and Transportation	$ 1,400.65
Astar helicopter including fuel	$ 81,351.78
Motel	$ 637.86
Plane	$ 1,750.65
Fladgate Consulting	$ 2,871.62
Chibougamau Diamond Drilling	$133,084.50

Analytical Costs:

Actlabs (398 core samples)	$ 9,495.28

TOTAL EXPENDITURES	**$ 305,041.85**

TOTAL EXPENDITURES BY CLAIM

Cell #	Core Samples per Cell	Analysis Cost by Cell ($)	DDH Meters per Cell	Project Costs by Cell ($)	Totals
139237		$0.00	15.6	$4,053.92	$4,053.92
250354		$0.00	22.3	$5,795.03	$5,795.03
329118	43	$1,025.87	94.7	$24,609.39	$25,635.26
309832			111	$28,845.22	$28,845.22
309831	170	$4,055.77	105	$27,286.02	$31,341.79
307227	27	$644.15	149.4	$38,824.11	$39,468.26
211141		$0.00	180	$46,776.03	$46,776.03
211142		$0.00	189	$49,114.83	$49,114.83
211140	158	$3,769.48	270.3	$70,242.01	$74,011.49
Totals	**398**	**$9,495.28**	**1137.3**	**$295,546.57**	**$305,041.85**