

BC Geological Survey
Assessment Report
37655



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Irene Trend Project: Char Creek and Copper Queen Areas –
Geochemical Sampling Report

TOTAL COST: \$2,194.37

AUTHOR(S): Doug Warkentin

SIGNATURE(S): 

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A

STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5693202/12 Apr-18, 5707289/10 Aug-18, 5719811/16 Nov-18.

YEAR OF WORK: 2017

PROPERTY NAME: Irene Trend

CLAIM NAME(S) (on which work was done): Linc, Monk

COMMODITIES SOUGHT: Au, Ag, Cu, Co

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 082FSE053, 082FSE080,
082FSE134.

MINING DIVISION: Nelson

NTS / BCGS: 082F/02

LATITUDE: 49° 2' 27"

LONGITUDE: 116° 58' 21" (at centre of work)

UTM Zone: 11 EASTING: 502000 NORTHING: 5432000

OWNER(S): Doug Warkentin

MAILING ADDRESS: 7069 McBride St., Burnaby, BC, V5E 1R1

OPERATOR(S) [who paid for the work]: Crucible Resources Ltd.

MAILING ADDRESS: 7069 McBride St., Burnaby, BC, V5E 1R1

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**): Late Proterozoic, Cretaceous, Windermere Supergroup, Irene Formation, Toby Formation, Anstey Pluton, Summit Stock, Greenstones, Granodiorites, Volcanics, Quartz Veins, Chalcopyrite

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:
22054, 26797, 32961 and 34161.

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil	10 samples, ICP-MS	Linc, Monk	\$952.72
Silt	2 samples, ICP-MS	Linc	\$190.54
Rock	6 samples, ICP-MS	Linc	\$571.63
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying	18 samples, prep and ICP-MS analysis	Linc, Monk	\$479.47
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale/area)			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other			
		TOTAL COST	\$2194.37

Irene Trend Project

**Nelson Mining Division
NTS 082F/02**

**Project Area Location:
UTM NAD 83: Zone 11, 502000 East, 5432000 North**

**Registered Owner: Doug Warkentin
Operator: Crucible Resources Ltd.**

Char Creek and Copper Queen Areas - Geochemical Sampling Report

Project Tenure Numbers: 1051409, 1052616, 1052617 and 1055256

SOW Event Numbers: 5693202, 5707289 and 5719811

November 16, 2018

Prepared By: Doug Warkentin, P.Eng

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Introduction

Location and Access

The Irene Trend property lies at the south end of the Nelson Range of the Selkirk Mountains, approximately 28 km east southeast of the community of Salmo and 33 km west of Creston, in the Kootenay Pass area. The property lies only about 4 km from the pass, on the east side. The general project location is shown in Figure 1.

Access to the property is via forestry roads from the Salmo-Creston Highway, which runs to the north of the property. At its closest point the highway passes within 4 km of the property, with the pass being the closest point, but road access is via the Maryland Creek Forest Service Road (FSR) system, which leaves the highway approximately 15 km east of the pass. The Maryland Creek FSR climbs back up to the southwest over a lower pass and then turns south into the Priest River drainage. About 4 km south of this pass, and only 3 km north of the international boundary, the Monk Creek FSR follows Monk Creek in a westerly direction back toward Kootenay Pass and passes through the southernmost part of the property. At this point a rough logging spur road climbs the steep hillside, providing good access to the centre of the property.

The claim area extends from Monk Creek in the south beyond the ridge forming the height of land just below Mt. Irene in the north, and also extends over the ridge into the upper part of the Char Creek drainage, which drains to the north into Summit Creek adjacent to the highway. There is also a smaller system of old logging roads in the Char Creek area accessed from the main highway about 8 km east of Kootenay Pass. The main road into the Char Creek area is passable in the lower sections, and old roads reach the upper part of the drainage, near the northern boundary of the claims, but the roads are mainly de-activated in this area and the current condition of the upper sections is unknown.

The property is generally high elevation and includes steep and mountainous topography, ranging from an elevation of 1440 meters along Monk Creek to 2000 meters on the west flank of Mt. Irene. The property includes relatively recent clear cuts, but is otherwise heavily forest covered at lower elevations, with sub-alpine vegetation at higher elevations.

In addition to forestry uses, some of the road access is used to service power transmission lines which traverse the area. A major transmission line passes through the property in the south, along the north slope of the Monk Creek drainage.

Stagleap Provincial Park, which includes the Kootenay Pass, lies less than 2 km from the northwest boundary of the project claim area.

Tenure Information

The area of the Irene Trend Project is made up of four contiguous MTO claims on the western slopes of Mt. Irene between Char Creek and Monk Creek covering a total area of 318 hectares. The claims are owned by the author, and Crucible Resources Ltd. has an option to acquire 100% ownership. The claim details are shown in Table 1. The expiry date shown in this table reflects the application of the work described in this report.

The project area is underlain by a group of five historical crown granted mineral claims that were granted in 1959 to L.R. Clubine, who worked in this area from the 1920's to the 1950's. These claims (known as the Copper Queen and Copper Queen No. 1 to No. 4) reverted back to the crown in 1987, leaving no known legacy mineral tenures in the area.

Figure 2 outlines the tenure of the Zacta Project.

Table 1 – Irene Trend Project - Mineral Tenures

Title Number	Claim Name	Owner	Title Type	Map Number	Issue Date	Good To Date	Area (ha)
1051409	LINC	145582 (100%)	Mineral	082F	2017/APR/14	2019/SEP/19	169.38
1052616	LINC UP	145582 (100%)	Mineral	082F	2017/JUN/16	2019/SEP/19	84.67
1052617	MONK	145582 (100%)	Mineral	082F	2017/JUN/16	2019/SEP/19	42.35
1055256	ML	145582 (100%)	Mineral	082F	2017/OCT/01	2019/SEP/19	21.17
Total							317.57



Figure 1 – Irene Trend Project Location Map

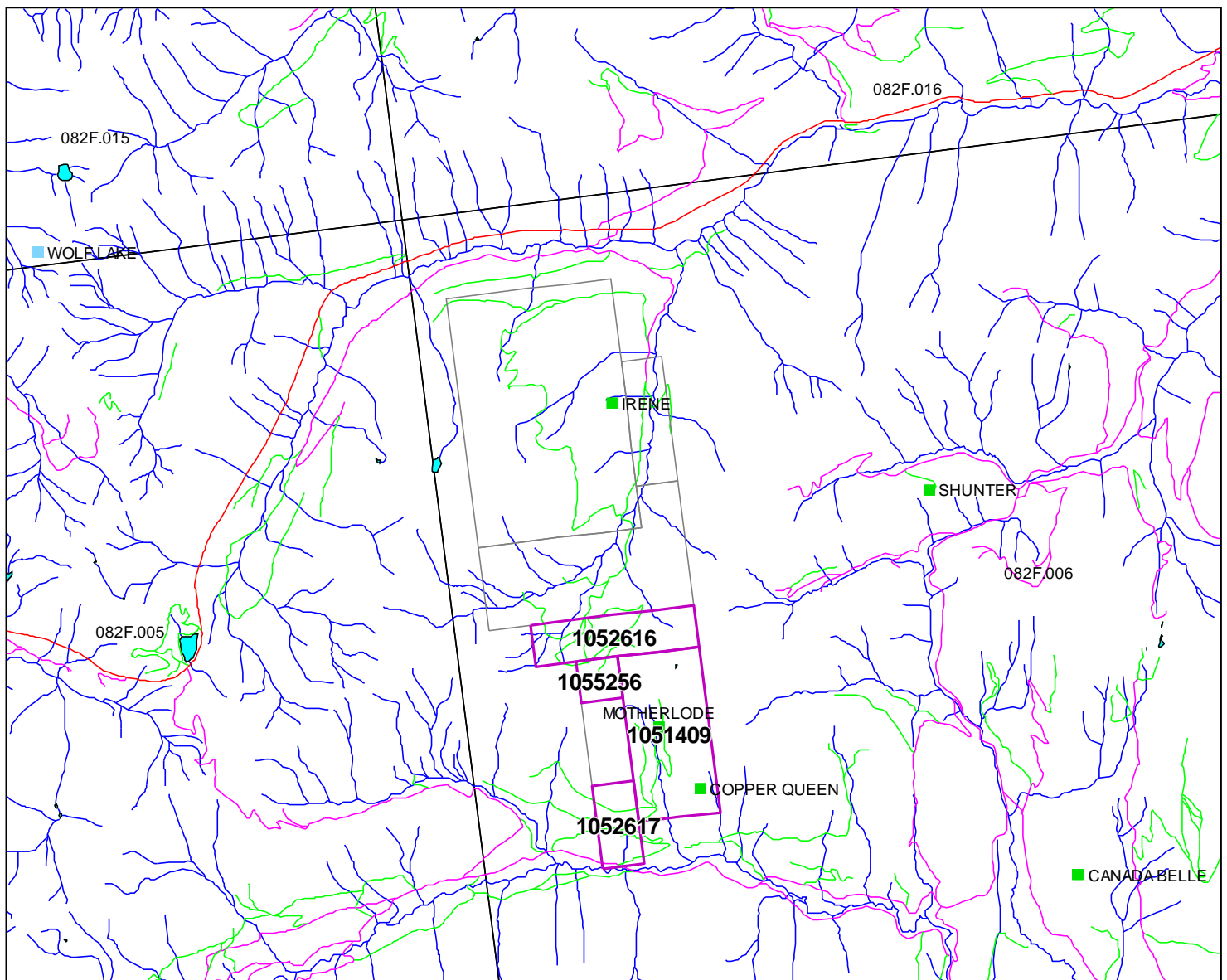


Figure 2 – Project Tenure Outline

Regional Geology

The Irene Trend project lies within the western section of the North American terrane, within a sequence of sediments and volcanics known as the Windermere Supergroup. This terrane occupies the western margins of the ancient North American Craton and are therefore older than most Cordilleran rocks. The Windermere rocks have been dated as late Proterozoic and overlie the somewhat older Purcell Supergroup sequences to the east. The group is bounded to the west by the younger sediments of the Kootenay Arc and throughout the area all these units have been intruded by younger stocks, plutons and batholiths.

The Purcell rocks are all dated as middle Proterozoic, with the largest and oldest unit in the area being the Aldrich formation, which includes argillite, greywacke, conglomerates and turbidites. The Aldrich rocks begin about 12 km to the east of the property, and to the west are conformably overlain by progressively younger units of the Purcell group. From east to west these consist of the clastic Creston formation, the dolomitic carbonates of the Kitchener formation, the Dutch Creek formation and the Mount Nelson formation. The later units consist of coarse and fine clastic sediments and

dolomitic sediments. The upper contact of the Mount Nelson unit lies approximately 3 km east of the property. All these units trend in a northerly to north-easterly direction in this region.

The oldest unit of the Windermere group, the Toby formation of coarse clastic sediments and conglomerate, overlies the Purcell rocks unconformably and extends west into the eastern part of the property. Conformably overlying this unit is the Irene Volcanic unit, which includes mafic volcanics and metamorphic greenstone and greenschist. To the west of the property the Monk formation consists of clastic sediments, turbidites and carbonates. Further west the quartzites of the Three Sisters formation is the top unit of the Windermere group. Overlying the Three Sisters formation is the younger Hamill Group sediments, which is part of the Kootenay Arc. In the project area the Windermere units trend in a generally north-northeast direction, with most units showing a pronounced deflection to the east in the Summit Creek area about 5 km north of the property.

To the north and west of the property area the sediments are extensively intruded by multiple phases of plutonic rocks of Jurassic and Cretaceous age. Of these, the most relevant are the Bayonne Batholith a large Middle Jurassic age granitic body that hosts the historical Bayonne gold mine, and the various units of the Anstey Pluton, a Cretaceous age series of granodioritic intrusions, which includes the Summit Stock, lying northwest of the property in the Kootenay Pass area.

Some regional faulting is mapped in the Aldrich formation well to the east, and closer to the property an east-west fault cuts both Kootenay Arc and Windermere units along Monk Creek to the southwest. To the northwest the Three Sisters and Monk formations both show apparent displacement to the east around the Summit Stock. The regional geology surrounding the Irene Trend project is shown in Figure 3.

Local Geology

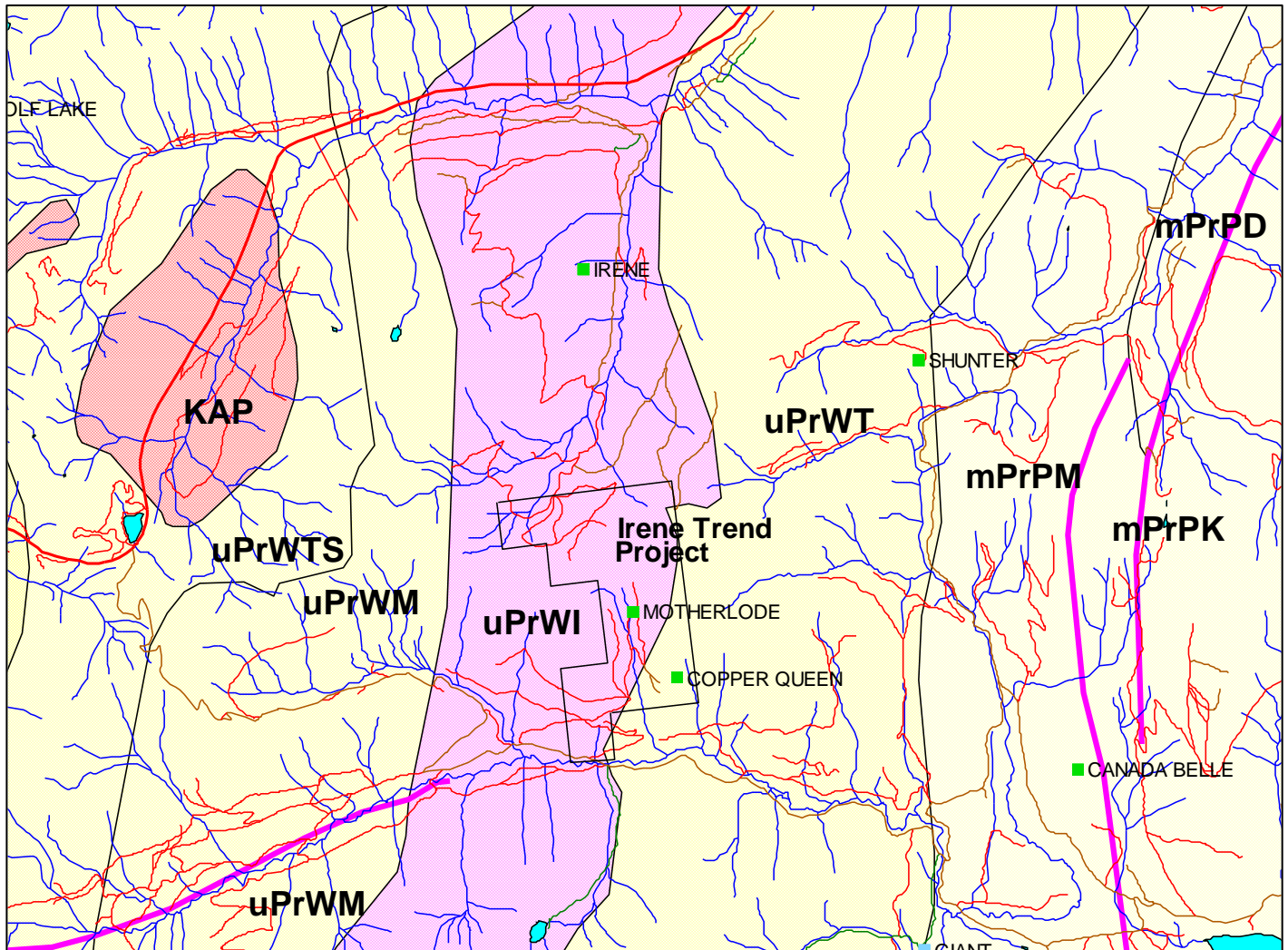
The Irene Trend project lies primarily within the Irene volcanic unit of the Windermere supergroup. The contact of the volcanics with the Toby conglomerate unit cuts across the southeast part of the claim block. This contact generally follows the eastern claim boundary. Within the Irene volcanics the rocks are generally fine-grained greenstone, with some areas of greater metamorphism forming greenschist. To the north narrow beds of limestone have been mapped within the Irene formation, following a north-south trend. A narrow bed of conglomerate was also mapped paralleling the limestone. If these beds continue to the south along strike they are likely to cross into the project claims.

The Summit Stock of the Anstey Pluton outcrops a few kilometres northwest of the property, and regional aeromagnetic data shows a strong magnetic high surrounding this intrusion, and extending into the claim area, suggesting that the intrusive is only partly exposed and may underlie the Windermere sediments and possibly even the Irene formation in this area. Minor granodiorite dikes occur in the southwest part of the property and some intrusive flow is evident suggesting that there may be additional outcrops that have not been mapped.

This area has seen relatively little historical exploration and there are limited known mineralized showings. The most well-known mineralization in the area is at the Bayonne mine, which lies about 15 km north of the property. Mineralization at the Bayonne consists of quartz-filled fissure veins within a granodiorite stock (the Mine Stock, a distinct intrusion within the Bayonne Batholith). The veins carry gold associated with pyrite, galena, sphalerite, chalcopyrite and tetrahedrite.

Immediately north of the property the Irene showing in the Char Creek area consists of quartz veining and volcanic breccia zones containing some chalcopyrite, pyrite and iron oxides in varying amounts, with some gold values. Mineralization within the Irene Trend property appears to be similar to this. Historical reports describe a north trending zone of shearing and alteration along an unnamed creek

southwest of Mt. Irene. Although poorly exposed, this zone reportedly contained significant widths of quartz carrying sections rich in pyrite and chalcopyrite. Other exposures showed iron oxides in quartz. Regional stream sediment geochemistry shows strong copper values in the vicinity of the Irene Volcanics together with some anomalous gold values and elevated cobalt levels.



- KAP** – Cretaceous Anstey Pluton - granodioritic intrusive rocks
- mPrPD** – Meso Proterozoic Dutch Creek Formation – undivided sediment
- mPrPK** – Meso Proterozoic Kitchener Formation – dolomitic carbonate rocks
- mPrPM** – Meso Proterozoic Mt. Nelson Formation – quartzites and quartz arenite sedimentary rocks
- uPrWI** – Neo Proterozoic Irene Formation – greenstone, greenschist metamorphic rocks
- uPrWM** – Neo Proterozoic Monk Formation – argillite, greywacke, wacke, conglomerate turbidites
- uPrWT** – Neo Proterozoic Toby Formation – conglomerate, coarse clastic sedimentary rocks
- uPrWTS** – Neo Proterozoic Three Sisters Formation - quartzites and quartz arenite sedimentary rocks

Figure 3 – Regional Geology, Irene Trend Area

Property History

The Irene Trend property has a very limited history of exploration, most of which was carried out many years ago. Historical results from Minfile showings wholly or partly within the property boundaries are summarized in Table 2. The Motherload property was described in a 1937 Annual Report of the BC Ministry of Mines, with a description of at least seven trenches or open cuts

excavated along a north-south shear zone carrying quartz and chalcopyrite in a small valley on the southwest slope of Mt. Irene. The report describes the trenches as dating from several years earlier and being partially caved and filled in. This suggests the earliest work on the property would have occurred in the late 1920's. The report provides analysis of samples collected by the government inspector. Two samples from different parts of one of the main open cuts assayed 0.2 oz/ton Au, 2.5 oz/ton Ag and 0.4% Cu and 'trace' Au, 4.5 oz/ton Ag and 2.4% Cu.

In the 1956 Annual report there was a similar description of the Copper Queen property from the same general area. The Copper Queen claims were crown granted around this time, providing a record of the location. The Motherload and Copper Queen were both staked and worked by the same owner, L.R. Clubine over approximately 30 years. The later report describes the Copper Queen as being at a lower elevation than the earlier workings and the descriptions are quite different, making it unlikely that both reports are describing the same showings.

The Copper Queen is described as primarily consisting of a prominent east-west trending quartz vein exposed near the creek along with an additional open cut about 200 meters downstream. The quartz exposure was 15 meters wide and carried chalcopyrite, hematite, sericite and secondary copper minerals, with mineralization strongest in the southernmost 6 meters. Sampling across this width averaged 0.16% Cu with 0.3 g/t Au. A sample from the open cut to the south showed no values. No further work is reported in this area until a small prospecting program was carried out as part of wider regional prospecting in 1999.

The Irene or Char occurrence lies just north of the property and previous claims in that area extended into the northern part of the property in the upper Char Creek drainage. The Irene claims were first staked by Cominco Ltd. In October 1990 after regional stream sediment geochemical sampling showed anomalous gold values in Char Creek. A program carried out in 1991 included prospecting, geological mapping and some soil geochemistry. Some limited gold anomalies were identified along with some stronger copper anomalies. Rock samples returned values up to 0.28% Cu, and a sample from near the current northern boundary of the Irene Trend property assayed 0.18% Cu

Table 2: Irene Trend Project – Minfile Showings

Name	Minfile #	Minerals	Reported Grades	Sample (m)	Year
Motherload	082FSE080	Cu, Au, Ag	6.9 g/t Au, 86 g/t Ag, 0.4% Cu	0.6	1937
			2.4% Cu, 154 g/t Ag	grab	1937
Copper Queen	082FSE053	Cu, Au, Ag	0.34 g/t Au, 0.16% Cu	6.1	1956
Irene/Char	082FSE134	Cu, Au, Ag	0.18% Cu	grab	1991

In 2001 the area was restaked as the Char claims and prospected for gold by Glen Rodgers. The work included rock and stream sediment sampling, and some significant gold anomalies were identified, including a rock sample assaying 8.7 g/t Au and 461 g/t Ag. Fine placer gold was also found in several panned concentrates from stream sediments from Char Creek and its tributaries.

No follow-up was reported on this work and the claims do not appear to have had further work done until it was restaked in 2011 and acquired by Integra Gold Corp. Prospecting, geological mapping and ground geophysics were conducted in 2011 and 2012. This work was conducted to the north of the Irene Trend project, but it identified two parallel north-south trending mineralized shears that remain open to the south. The western shear contained quartz breccia and carried copper mineralization, while the east zone was iron rich with some lead and zinc values in relatively narrow quartz veins. Both zones showed anomalous gold values, generally less than 1 g/t Au. Geophysics

also showed magnetic north-south features associated with the mineralization and open to the south. While there are bands of limestone and conglomerate trending in the same direction in the area explored, the zones identified were both within the volcanics.

Summary of Work

An area reconnaissance visit was made in June 2017 and a follow-up site visit was conducted in early October 2017. In June site access was limited to geochemical sampling in lower drainages draining the north end of the property. This work was aimed at confirming and expanding on regional geochemical data supporting anomalous metal values in the drainages covered by the property. A site visit was then carried out in October, evaluating road access into the property and allowing an initial program of prospecting and geochemical sampling to be completed in the Copper Queen area. In total from these two visits six rock samples, two stream sediments and ten soil samples were collected for analysis.

Work Program

Sampling and Data Collection

Samples were collected during two separate visits to the Irene Trend project area. On June 18th, 2017 an attempt was made to access the southern part of the property via the Maryland Creek and Monk Creek forestry road system. Heavy residual snow pack, however, made this route impassable, so work was limited to geochemical work in the Char creek drainage on the north side of the property, which was accessed from highway 3, east of Kootenay Pass. Stream float and sediments were collected to evaluate upstream potential. On October 2nd, 2017 a site visit was made to the southern part of the property from the Monk Creek road. A short prospecting traverse was run along a small south-flowing unnamed creek and a line of soil samples was collected along a logging spur road. Rock chip and grab samples were collected in addition to the soil samples and a single stream sediment.

Sample descriptions and locations, along with principal assay results for the rock and silt samples collected are summarized in Table 3. Soil sampling conditions and locations are provided in Table 4. Locations and key results are plotted for all samples collected on the maps in Appendix 1. Complete assay reports are included in Appendix 2. Rock samples were dried, crushed, split and pulverized before being analyzed. The stream sediment and soil samples were dried and screened at 80 mesh, with the minus 80 mesh fractions being submitted for assay. For all samples, 0.5 grams of pulverized or screened material was digested with aqua regia and analysed with a standard 36 element scan by ICP-MS. All analyses were carried out by Bureau Veritas Mineral Laboratories (formerly Acme Analytical Laboratories Ltd.) in Vancouver.

The locations visited and samples collected are described below.

Rock Samples

During the June visit two float rock samples were collected from the Char Creek drainage below the property to the north. The first (CR170618-1) was a composite of grab sampling from coarse mineralized float in a northeast flowing tributary of Char Creek. The float included iron stained quartz and weathered limonitic volcanics. This sample did not show any significant values. The other sample was a chip sample from a single small float boulder (CR170618-2) collected from the lower part of Char Creek. This float was rounded and about 20 cm in diameter. The float showed surface oxidation and showed small amounts of pyrite and chalcopyrite on freshly broken surfaces of what

appeared to be altered granodiorite. This sample was anomalous in copper and cobalt but low in precious metals.

The creek traverse carried out during the October site visit located a prominent quartz outcrop just to the north of a creek crossing of an inactive logging spur road. This is likely the Copper Queen showing described in the BC Annual Report from 1956. Due to the width of the outcrop (about 15 meters) and the variability of the mineralization across the exposure, three separate chip and float samples were collected. From the north end, chips across 6 meters included iron stained quartz and narrow limonitic shears containing pods of massive pyrite and chalcopyrite (CR171002-1). These high grade seams resulted in an overall grade of 0.22% Cu, with slightly anomalous Pb and Ag. The south end was more fractured and showed greater iron staining and limonitic fracture fillings. Chips across a 6 meter width (CR171002-2) did not show significant values. The middle section of the exposure showed stronger mineralization, including narrow seams of chalcopyrite and malachite staining on fractures. This sample (CR171002-3) included chips across 1.5 meters of the exposed face and chips from mineralized float accumulated immediately below the face. This sample showed more significant values (0.65% Cu, 0.20% Pb and 61 g/t Ag). Gold was also slightly elevated relative to other samples, but not economically significant (0.03 g/t).

The only other rock sample collected was from a large limonitic float boulder or subcrop found on the west side of the creek (CR171002-4). This appeared to be silicified greenstone with fine disseminated pyrite visible in fresh surfaces. Aside from iron, this sample did not show significant values.

Table 3: Rock and Silt Sample Descriptions with Analytical Results

Sample #	Date	Description	UTM East	UTM North	Width (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Co ppm
Char Creek Area - Rock											
CR170618-1	2017-06-18	Quartz and oxide float - Char tributary	502519	5436859	-	0.001	<0.1	26.7	15.1	31	10.6
CR170618-2	2017-06-18	Sulphide in float rock - Char Creek	503004	5437663	-	0.002	0.2	241	15.5	100	127.2
CR170618-S1	2017-06-18	Sediment - high energy tributary	502519	5436859	-	0.006	<0.1	46.1	5.9	89	31.6
Copper Queen Area - Rock											
CR171002-1	2017-10-02	North end, wide qtz exposure, some lim, py, cpy	502075	5432295	5.0	0.002	4.2	2196	393	51	29.8
CR171002-2	2017-10-02	South end of exposure: limonitic qtz breccia	502078	5432290	6.0	0.001	0.3	147	13.3	53	22.2
CR171002-3	2017-10-02	Middle: weathered sulph in qtz+ float w cpy, py	502078	5432292	1.5	0.031	61.4	6540	2018	186	22.8
CR171002-4	2017-10-02	Highly Fe stained greenstone: subcrop	501998	5432396	-	0.001	0.1	88.4	17.9	82	25.4
CR171002-S1	2017-10-02	Sediment - low energy channel	502052	5432704	-	0.008	0.2	111	13.1	77	21.4

Stream Sediment Samples

A single stream sediment sample was collected from the same tributary as the first float rock sample during the initial work in June. This sample (CR170618-S1) did not return high values but was anomalous for cobalt (32 ppm). During the October work a sediment sample was taken from the upper part of the stream in a relatively flat valley with multiple stream channels (CR171002-S1). This was in the vicinity of the presumed location of the Motherlode Minfile showing. The sample was not highly anomalous but did show elevated copper (111 ppm).

Soil Samples

During the October site work a total of 10 soil samples were collected. The first sample (CR171002-G1) was collected in the upper part of the stream drainage during the traverse, near the presumed location of the Motherload showing. This sample contained 90 ppm Cu but was not otherwise anomalous. The other nine samples were taken along an east-west logging spur south of the Copper

Queen showing, running westward from the spur that passes near the showing. Samples were taken with an approximate 25-30 meter spacing from the upslope side of the road. These samples (CR171002-G2 to -G10) showed generally elevated copper and anomalous cobalt, with two samples also showing elevated gold. Copper values ranged from 56 to 255 ppm and cobalt from 12.5 to 42.3 ppm. Seven of the nine samples had >140 ppm Cu and >30 ppm Co, with the two lower samples at the eastern end of the sampling line. Values for both Cu and Co appeared to trend upward toward the west. Two adjacent samples near the east end of the sampling line showed values over 10 ppb Au (17 and 74 ppb). Iron was generally elevated, but other base metals were not significant.

Table 4: Geochemical Soil Sample Descriptions and Locations

Sample #	Date	Description	Soil Horizon	Depth (cm)	UTM East	UTM North
Char Creek Area - Stream Sediment						
CR171002-G1	2017-10-02	stream bank	B	15	502087	5432636
CR171002-G2	2017-10-02	along road, fine reddish	B	15	501953	5431782
CR171002-G3	2017-10-02	sandy gray gravel	B	15	501960	5431745
CR171002-G4	2017-10-02	fine reddish	B	15	501938	5431774
CR171002-G5	2017-10-02	greenish gray, rocky	C	15	501909	5431781
CR171002-G6	2017-10-02	gray-green, gravelly, reddish surface	B	15	501881	5431781
CR171002-G7	2017-10-02	mixed gray-blue and reddish brown	B	15	501856	5431781
CR171002-G8	2017-10-02	darker gray	B	15	501826	5431787
CR171002-G9	2017-10-02	gray with reddish surface layer	B	15	501793	5431783
CR171002-G10	2017-10-02	mixed reddish-gray	B	15	501763	5431776

Interpretation of Results

This work constituted a very preliminary initial evaluation of this property, which has seen very little past exploration. Geochemical work in the Char Creek area was mainly of interest due to the copper and cobalt values found in transported float within Char Creek. Since this sample did not appear to be vein material, but rather altered intrusive, it may be productive to attempt to trace this type of material further upstream toward the north end of the property.

Site work was apparently successful in locating the Copper Queen showing, as described in the 1956 Annual Report. Results showed that the vein can carry significant values in Cu, Pb and Ag, but that values appear to be limited to high-sulphide seams in the quartz, which are narrow in the exposed section. It may be productive to prospect the surrounding area for additional exposures, and to locate the additional showing described in the 1956 report, lying about 200 meters to the south. Prospecting to the north failed to locate the more promising Motherload showing described in a 1937 Annual Report entry. Based on that description there were extensive surface workings developed. Based on the age of the report and limited location detail available it is likely that a wider search will be needed to determine the true location. The strong values in Cu, Ag and Au reported make this showing worth tracking down and examining in detail.

Stream sediment and soil geochemistry confirmed that this area has generally elevated copper levels, and the line of sampling running westward was highly encouraging, showing consistently high Cu and Co values. Further sampling to the west is warranted, in addition to expanded soil sampling at higher elevations to the north. Additional sampling around the gold anomaly identified may also be productive.

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Author's Qualifications

I, Douglas Warkentin, P.Eng., a professional engineer with a business address at 7069 McBride Street, Burnaby, B.C., certify that:

I have been a Registered Member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia since 1992.

I am a graduate of the University of British Columbia, Vancouver, B.C. and hold a degree of Bachelor of Applied Science in Mining and Mineral Process Engineering.

I have practiced my profession as a Metallurgist and Mineral Process Engineer for 30 years.

I am currently employed as a Metallurgical Engineer by Kemetco Research Inc., Vancouver B.C., and have previously been employed as a Mineral Process Engineer by Vista Mines Inc., Coastech Research Inc., NTBC Research Corp., Biomet Mining Ltd., Blue Sky Mines Ltd., and Vizon Scitec Inc. I have also previously served as a Director of Duncastle Gold Corp., a TSX-Venture listed company.

Since 2001 I have acted as an independent engineering consultant for a number of mining clients.

I am a qualified person for the purposes of National Instrument 43-101 in relation to metallurgical testing and evaluation programs.

I directly conducted or supervised all sampling, sample handling and preparation related to the Irene Trend Project that is described in this report.

I am the sole author of this report.

I am not aware of any material fact or material change with respect to the subject matter of this technical report that is not reflected in this report, the omission to disclose which would make this report misleading.

Dated at Vancouver, B.C., this 15th day of November 2018.

Doug Warkentin, PEng.
Metallurgical Engineer

Statement of Costs**Site Reconnaissance and Sampling****Labour**

Doug Warkentin, P.Eng.: June 18, 2017 (4 hours @ \$55/hr)
October 2, 2017 (12 hours @ \$55/hr) \$880.00

Transportation (vehicle rental and fuel) \$166.51

Food and Accommodation (2 days) \$118.39

Sample Analysis

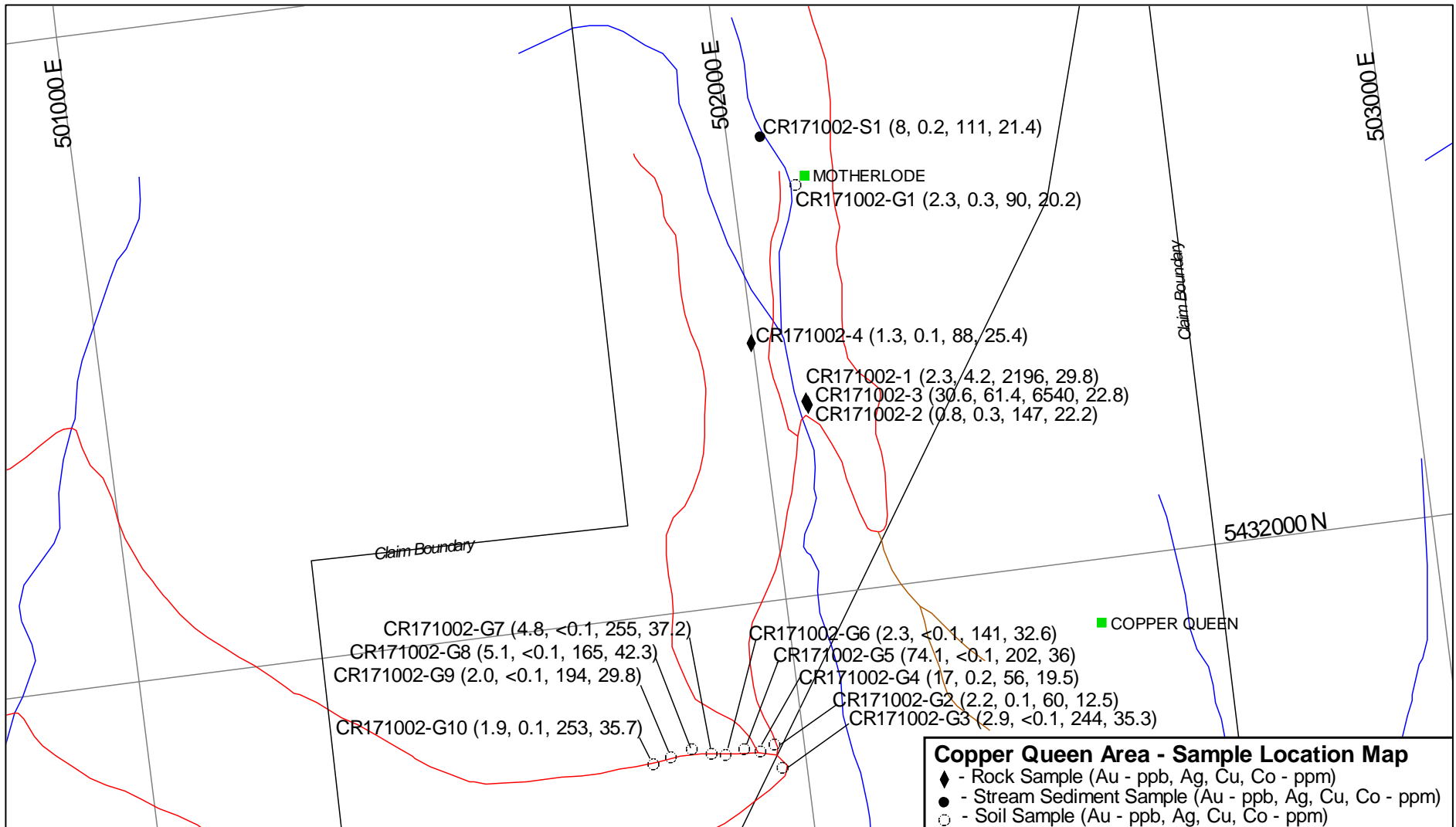
Sample Preparation (12 samples @ \$8.13/sample)
(6 samples @ \$13.73/sample) \$179.90

Sample Assaying (12 samples @ \$16.64/sample) \$299.57

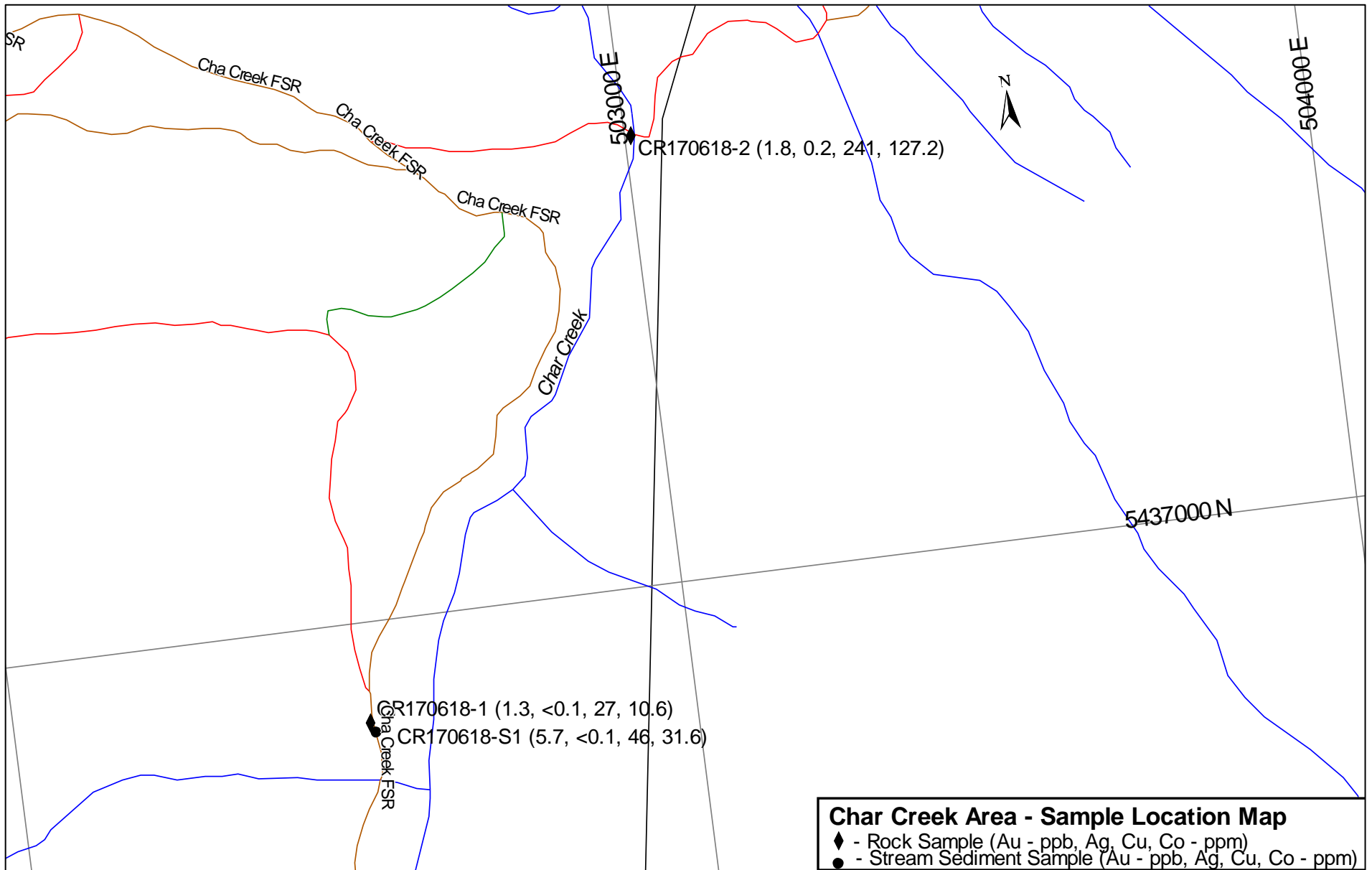
Report Preparation \$550.00

Total Cost **\$2,194.37**

Appendix 1 – Sample Location Maps



Map Scale 1:9,000



Map Scale 1:9,000

Appendix 2 – Assay Reports



BUREAU VERITAS MINERAL LABORATORIES
Canada

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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: August 08, 2017
Report Date: September 22, 2017
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17001670.1

CLIENT JOB INFORMATION

Project: Fr-Nv-CT
Shipment ID:
P.O. Number
Number of Samples: 18

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps
PICKUP-RJT Client to Pickup Rejects

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	16	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ200	16	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
DRPLP	16	Warehouse handling / disposition of pulps			VAN
DRRJT	16	Warehouse handling / Disposition of reject			VAN
AQ370	3	1:1:1 Aqua Regia digestion ICP-ES analysis	0.4	Completed	VAN
EN002	1	Environmental disposal charge-Fire assay lead waste			VAN
FA330-Au	1	Fire assay fusion Au by ICP-ES	30	Completed	VAN

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver British Columbia V5V 2V8
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. ** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT
Report Date: September 22, 2017

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17001670.1

Method	Analyte	Unit	MDL	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200		
				Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
				kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	
				0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	
CR170618-1	Rock			2.21	1.5	26.7	15.1	31	<0.1	10.7	10.6	539	2.38	1.9	1.3	3.4	59	<0.1	<0.1	0.5	28	1.45	0.078
CR170618-2	Rock			0.49	0.8	241.4	15.5	100	0.2	84.4	127.2	399	6.14	4.9	1.8	3.3	7	<0.1	<0.1	1.6	69	0.03	0.021
CR170619-1	Rock			0.80	0.4	16.8	20.3	29	1.1	5.4	1.9	349	0.72	11.8	0.5	20.6	26	0.3	0.1	3.4	6	0.79	0.055
CR170619-2	Rock			0.60	1.9	14.2	983.3	148	2.8	5.0	2.6	228	1.77	1.4	98.6	18.4	21	1.9	1.3	1.9	20	0.18	0.059
CR170619-3	Rock			3.16	0.2	7.4	713.7	1121	7.9	0.7	1.4	46	1.26	210.3	170.4	16.6	3	26.5	0.5	13.5	<2	0.03	<0.001
CR170619-4	Rock			0.36	0.4	13.0	37.3	106	1.5	0.7	0.4	57	1.29	8.5	6.5	8.2	2	1.0	<0.1	4.3	<2	0.01	0.007
CR170619-5	Rock			0.80	1.5	64.7	95.5	267	1.2	3.2	3.4	605	2.21	5.2	11.4	7.7	51	3.8	0.4	4.3	24	1.02	0.108
CR170619-6	Rock			1.77	0.3	29.4	5353.2	>10000	>100	6.3	3.8	111	4.64	106.5	192.8	0.3	1	897.3	2.3	746.4	<2	<0.01	0.002
CR170620-1	Rock			3.10	14.2	141.7	12.9	69	0.4	20.2	13.1	524	3.32	39.6	20.4	0.7	8	0.7	0.6	0.7	104	0.31	0.118
CR170620-2	Rock			2.28	13.2	82.8	21.8	88	0.9	17.1	12.9	704	4.72	38.0	31.7	0.6	5	1.2	0.7	2.3	135	0.16	0.068
CR170620-2A	Rock			L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
CR170619-2A	Rock			0.72	1.5	31.9	752.4	153	8.4	6.8	3.6	244	2.33	6.9	9.7	15.2	14	2.2	0.7	14.8	14	0.11	0.033
CR170620-3	Rock			0.67	3.8	145.8	12.6	74	0.5	16.2	18.2	884	4.77	16.2	3.5	1.2	28	0.2	0.7	0.8	167	0.44	0.119
CR170620-4	Rock			2.24	8.6	208.3	185.4	98	>100	3.7	8.3	320	4.00	30.5	5582.4	0.5	8	0.1	5.7	0.9	86	0.11	0.105
CR170620-5	Rock			0.60	8.2	248.7	6.7	41	1.4	22.5	23.9	560	4.95	40.8	64.3	1.0	50	<0.1	1.3	0.3	246	0.46	0.135
CR170620-6	Rock			1.16	0.8	25.3	7.1	29	0.8	23.5	11.3	2178	2.73	35.4	21.5	0.2	480	0.3	0.5	0.3	56	17.18	0.017
CR170620-7	Rock			L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
CR170619-7	Rock			1.45	0.4	155.7	8137.7	>10000	>100	3.6	5.5	72	4.86	153.1	107.2	0.1	4	580.0	2.4	421.3	<2	0.04	0.001



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT
Report Date: September 22, 2017

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

VAN17001670.1

Method	Analyte	Unit	MDL	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ374	AQ374	FA330	
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Zn	Ag
				ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	gm/t	ppb
				1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	0.01	2	2
CR170618-1	Rock			7	8	0.63	37	0.017	<20	1.02	0.049	0.13	0.5	<0.01	2.8	<0.1	0.13	3	<0.5	<0.2		
CR170618-2	Rock			12	88	1.45	167	0.350	<20	3.57	0.055	1.99	<0.1	<0.01	11.2	0.6	1.45	11	1.1	0.3		
CR170619-1	Rock			8	7	0.19	37	0.023	<20	0.34	0.043	0.14	0.5	<0.01	1.0	0.1	<0.05	2	<0.5	<0.2		
CR170619-2	Rock			10	21	0.36	47	0.072	<20	0.86	0.030	0.41	2.9	0.01	2.1	0.2	0.13	4	2.1	0.4		
CR170619-3	Rock			<1	2	<0.01	11	<0.001	<20	0.18	0.005	0.17	7.1	<0.01	0.2	<0.1	1.06	<1	1.8	<0.2		
CR170619-4	Rock			<1	2	<0.01	22	<0.001	<20	0.28	0.004	0.19	9.5	<0.01	0.2	<0.1	<0.05	2	0.5	<0.2		
CR170619-5	Rock			9	5	0.55	25	0.056	<20	1.13	0.082	0.39	3.1	<0.01	2.5	0.3	0.22	5	0.9	<0.2		
CR170619-6	Rock			<1	3	0.01	2	<0.001	<20	0.03	<0.001	0.01	1.0	0.08	<0.1	0.2	5.86	2	23.5	12.0	4.00 238	
CR170620-1	Rock			11	29	0.99	48	0.021	<20	1.27	0.022	0.09	0.2	<0.01	9.8	<0.1	0.55	5	2.4	<0.2		
CR170620-2	Rock			5	30	1.60	60	0.026	<20	2.04	0.006	0.16	0.4	<0.01	12.2	0.1	0.52	6	1.7	<0.2		
CR170620-2A	Rock			L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	
CR170619-2A	Rock			5	11	0.31	28	0.055	<20	0.75	0.006	0.27	0.4	<0.01	1.4	0.2	0.20	3	2.0	<0.2		
CR170620-3	Rock			9	26	1.60	51	0.011	<20	1.90	0.030	0.11	0.1	<0.01	11.4	<0.1	0.18	8	<0.5	<0.2		
CR170620-4	Rock			5	8	0.51	62	0.007	<20	0.81	0.020	0.10	0.2	0.15	4.3	<0.1	0.29	4	36.9	1.1	0.01 304 6200	
CR170620-5	Rock			7	60	0.86	86	0.073	<20	1.40	0.073	0.10	0.4	<0.01	15.6	<0.1	0.38	7	3.9	0.2		
CR170620-6	Rock			5	7	0.70	141	0.029	<20	0.61	0.002	0.01	1.1	0.02	6.3	<0.1	0.88	3	1.1	<0.2		
CR170620-7	Rock			L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	
CR170619-7	Rock			<1	3	0.01	2	<0.001	<20	0.02	0.002	<0.01	11.2	0.13	<0.1	0.2	6.26	<1	42.8	11.0	2.28 173	



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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: August 08, 2017
Report Date: August 25, 2017
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17001671.1

CLIENT JOB INFORMATION

Project: Fr-Nv-CT
Shipment ID:
P.O. Number
Number of Samples: 6

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	6	Sorting, labeling and boxing samples received as pulps			VAN
AQ200	4	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
AQ250_EXT	2	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN
DRPLP	6	Warehouse handling / disposition of pulps			VAN
AQ370	3	1:1:1 Aqua Regia digestion ICP-ES analysis	0.4	Completed	VAN

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver British Columbia V5V 2V8
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT
Report Date: August 25, 2017

Page: 2 of 2

Part: 1 of 5

CERTIFICATE OF ANALYSIS

VAN17001671.1

Method	Analyte	AQ200																			
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
CR170618-S1	Rock Pulp	0.2	46.1	5.9	89	<0.1	29.0	31.6	515	6.26	2.7	5.7	1.1	16	<0.1	0.1	0.1	167	0.47	0.081	6
FRT-FL1 A	Rock Pulp	1.6	155.0	204.1	463	32.0	6.2	4.9	1168	2.16	18.2	236.1	0.3	81	3.0	5.5	0.1	49	3.89	0.039	3
FRT-FL1 B	Rock Pulp	2.0	127.5	218.8	452	30.0	6.1	4.4	1168	2.15	18.1	267.3	0.3	85	3.4	5.6	0.1	48	4.10	0.038	3
FRT-C1 Res	Rock Pulp	7.4	1187.9	918.0	1418	>100	31.6	97.5	3625	2.89	66.0	41779.9	0.8	316	25.6	28.7	1.0	55	15.09	0.191	11
MFA-F03 Clnr Tls	Rock Pulp																				
MFA-F03 Conc	Rock Pulp																				



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Project: Fr-Nv-CT
Report Date: August 25, 2017

Page: 2 of 2

Part: 2 of 5

CERTIFICATE OF ANALYSIS **VAN17001671.1**

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ250	AQ250	AQ250	AQ250	
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb	Zn
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.01	0.01	0.01	
CR170618-S1	Rock Pulp	32	1.54	56	0.252	<20	2.22	0.002	0.15	0.1	<0.01	7.3	<0.1	<0.05	10	<0.5	<0.2				
FRT-FL1 A	Rock Pulp	13	0.92	24	0.020	<20	1.02	0.155	0.06	0.9	0.08	3.2	<0.1	0.06	4	0.7	<0.2				
FRT-FL1 B	Rock Pulp	13	0.90	20	0.020	<20	1.02	0.006	0.06	0.9	0.09	3.2	<0.1	0.05	5	1.1	<0.2				
FRT-C1 Res	Rock Pulp	38	0.96	1074	0.027	<20	1.18	0.074	0.08	10.5	0.60	5.7	0.2	0.31	5	7.2	0.8				
MFA-F03 Clnr Tls	Rock Pulp																	25.27	1062.44	1885.17	>10000
MFA-F03 Conc	Rock Pulp																	21.66	2310.51	7436.68	>10000



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PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: December 19, 2017
Report Date: January 17, 2018
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17003052.1

CLIENT JOB INFORMATION

Project: Fr-Nv-CT-He
Shipment ID:
P.O. Number
Number of Samples: 24

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps
PICKUP-RJT Client to Pickup Rejects

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	24	Crush, split and pulverize 250 g rock to 200 mesh			VAN
AQ200	24	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
EN002	1	Environmental disposal charge-Fire assay lead waste			VAN
FA330-Au	1	Fire assay fusion Au by ICP-ES	30	Completed	VAN

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver British Columbia V5V 2V8
Canada

CC:



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*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT-He
Report Date: January 17, 2018

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17003052.1

Method	WGHT	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
CR171001-1	Rock	0.48	41.4	97.8	8.0	21	0.2	9.4	9.1	332	2.44	2.6	1.4	13.7	25	0.2	0.3	1.9	58	0.90	0.090
CR171001-2	Rock	1.76	8.4	64.2	15.2	80	0.4	36.0	14.6	415	4.71	75.2	1.4	1.8	161	0.7	2.3	0.4	54	1.12	0.428
CR171001-3	Rock	0.55	6.8	66.5	12.1	116	0.8	25.9	8.0	219	2.29	30.9	0.5	2.4	130	1.5	1.8	0.3	62	1.14	0.159
CR171001-4	Rock	2.32	2.3	74.1	16.5	82	0.5	43.4	15.4	867	6.44	25.9	<0.5	0.9	182	0.6	3.4	0.4	35	2.26	0.192
CR171001-5	Rock	0.48	9.7	79.1	16.0	603	0.4	45.8	17.5	700	7.68	14.2	<0.5	2.8	173	4.2	3.3	0.4	121	1.29	0.120
CR171002-1	Rock	3.58	1.1	2196.1	392.8	51	4.2	29.7	29.8	1479	6.17	18.7	2.3	0.4	40	0.5	0.1	16.0	13	1.93	0.067
CR171002-2	Rock	1.85	0.5	147.4	13.3	53	0.3	24.7	22.2	1576	5.45	12.7	0.8	0.5	20	0.2	0.2	2.0	12	0.94	0.046
CR171002-3	Rock	2.62	0.7	6539.7	2017.9	186	61.4	18.2	22.8	2386	5.70	14.7	30.6	0.4	8	1.9	1.2	139.7	13	0.20	0.099
CR171002-4	Rock	0.90	0.4	88.4	17.9	82	0.1	39.6	25.4	862	4.97	21.3	1.3	3.9	3	0.2	0.2	0.5	53	0.42	0.079
CR171003-1	Rock	1.14	102.3	45.6	22.7	240	2.5	47.2	9.0	219	1.41	16.7	5.1	5.8	124	5.8	1.3	0.4	81	3.66	0.200
CR171003-2	Rock	0.72	0.6	20.5	8.4	45	0.5	29.4	9.1	361	2.54	23.9	78.9	9.6	119	0.3	0.2	0.3	63	0.99	0.062
CR171003-3	Rock	0.99	2.7	33.5	13.6	53	0.7	23.4	7.6	165	1.41	8.4	3.6	10.7	138	0.9	0.3	0.2	47	1.95	0.075
CR171003-4	Rock	0.86	2.7	43.5	15.7	44	1.3	46.2	14.3	524	4.87	149.8	22.8	2.3	40	0.5	1.3	0.9	11	0.60	0.035
CR171003-5	Rock	2.47	1.0	19.0	7.8	30	<0.1	21.0	8.0	345	2.41	6.0	<0.5	18.2	52	<0.1	0.2	0.1	35	0.59	0.020
CR171003-6	Rock	2.78	0.5	32.7	17.6	49	0.1	24.1	10.9	505	2.70	4.9	0.9	11.8	13	<0.1	0.2	0.2	22	0.14	0.040
CR171003-7	Rock	2.51	2.1	51.1	40.9	77	0.2	22.6	11.2	712	3.60	1.0	1.1	7.8	16	0.2	<0.1	0.5	29	0.08	0.030
CR171003-8	Rock	2.30	1.5	53.1	38.5	91	0.2	22.6	11.6	698	3.88	4.1	<0.5	9.3	17	0.3	<0.1	0.4	42	0.11	0.029
CR171004-1	Rock	0.80	3.7	154.8	6.9	67	<0.1	12.1	27.7	870	4.95	23.8	<0.5	0.9	16	<0.1	0.7	<0.1	155	0.30	0.145
CR171004-2	Rock	1.76	5.3	196.0	1592.7	515	1.6	6.7	10.9	565	4.63	42.2	20.1	0.7	13	0.9	1.5	0.3	173	0.15	0.147
CR171004-3	Rock	1.36	2.4	100.9	5.3	42	0.3	23.6	14.1	734	3.23	14.3	21.0	2.2	106	<0.1	0.6	<0.1	136	1.13	0.130
CR171004-4	Rock	1.22	3.1	180.4	52.5	32	22.4	3.7	6.8	209	4.55	27.3	1293.0	0.4	8	<0.1	1.3	0.2	82	0.07	0.064
CR171004-5	Rock	0.57	1.6	93.6	3.3	37	0.2	22.8	15.1	798	2.90	4.9	2.5	1.0	90	0.1	0.3	<0.1	116	1.80	0.097
CR171004-6	Rock	1.98	3.8	116.1	3.4	24	0.2	6.2	9.3	415	3.18	2.9	1.2	3.7	27	<0.1	<0.1	0.7	49	0.29	0.079
CR171004-7	Rock	0.62	36.0	884.4	5.8	42	3.7	21.5	25.6	253	24.36	61.9	103.4	0.4	23	0.1	1.5	0.5	276	0.10	0.103



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT-He
Report Date: January 17, 2018

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CERTIFICATE OF ANALYSIS

VAN17003052.1

Method	Analyte	Unit	MDL	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	FA330	
				La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
				ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	
				1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	2
CR171001-1	Rock			16	19	0.20	42	0.118	<20	0.77	0.077	0.16	19.8	0.01	3.0	0.1	0.88	3	2.0	<0.2
CR171001-2	Rock			8	25	0.31	64	0.077	<20	1.14	0.091	0.09	0.5	<0.01	3.7	0.5	2.22	4	4.1	0.2
CR171001-3	Rock			7	42	0.33	169	0.090	<20	2.30	0.220	0.11	0.3	<0.01	4.3	0.3	0.15	6	4.0	<0.2
CR171001-4	Rock			5	34	0.63	130	0.034	<20	0.88	0.008	0.06	0.2	<0.01	2.5	0.6	3.63	3	5.3	0.3
CR171001-5	Rock			9	40	0.31	240	0.110	<20	2.97	0.416	0.16	0.3	0.01	4.5	1.7	1.33	9	15.3	0.3
CR171002-1	Rock			3	4	0.66	36	0.002	<20	0.27	0.006	0.16	0.1	<0.01	6.3	<0.1	0.93	<1	<0.5	<0.2
CR171002-2	Rock			3	3	0.27	34	0.001	<20	0.20	0.016	0.11	<0.1	<0.01	6.7	<0.1	0.29	<1	<0.5	<0.2
CR171002-3	Rock			3	5	0.06	47	0.010	<20	0.27	0.010	0.12	0.2	0.02	9.1	<0.1	1.09	<1	0.6	0.4
CR171002-4	Rock			16	34	1.36	73	0.006	<20	1.87	0.009	0.14	<0.1	<0.01	5.9	<0.1	<0.05	6	<0.5	<0.2
CR171003-1	Rock			21	20	0.23	11	0.117	<20	2.37	0.018	0.03	2.3	<0.01	2.1	<0.1	0.46	5	3.0	<0.2
CR171003-2	Rock			16	56	1.13	159	0.239	<20	2.98	0.123	0.81	0.6	<0.01	8.9	0.5	0.19	9	0.7	<0.2
CR171003-3	Rock			17	36	0.61	84	0.181	<20	2.18	0.133	0.32	0.7	<0.01	3.6	0.4	0.22	6	1.7	<0.2
CR171003-4	Rock			4	7	0.21	141	0.001	<20	0.30	0.003	0.21	0.2	<0.01	4.3	0.1	2.02	<1	4.8	<0.2
CR171003-5	Rock			31	31	0.61	136	0.066	<20	1.62	0.067	0.46	0.5	<0.01	5.2	0.2	0.08	6	<0.5	<0.2
CR171003-6	Rock			25	26	0.45	121	0.035	<20	1.45	0.026	0.52	<0.1	<0.01	4.1	0.3	0.07	4	<0.5	<0.2
CR171003-7	Rock			21	26	1.02	104	0.005	<20	1.97	0.022	0.54	<0.1	<0.01	3.9	0.3	1.14	6	0.8	<0.2
CR171003-8	Rock			18	34	1.23	70	0.021	<20	2.22	0.025	0.52	<0.1	<0.01	4.6	0.3	0.84	7	0.6	<0.2
CR171004-1	Rock			7	17	1.23	68	0.011	<20	1.96	0.052	0.10	0.2	<0.01	7.4	<0.1	0.07	10	0.6	<0.2
CR171004-2	Rock			7	20	1.12	46	0.016	<20	1.73	0.053	0.06	0.4	0.02	9.9	<0.1	0.14	9	1.9	<0.2
CR171004-3	Rock			12	43	1.14	139	0.156	<20	1.29	0.116	0.08	0.4	<0.01	12.1	<0.1	0.26	5	0.9	<0.2
CR171004-4	Rock			3	9	0.29	61	0.010	<20	0.62	0.021	0.10	0.2	0.05	4.1	<0.1	0.07	4	4.8	<0.2
CR171004-5	Rock			7	61	0.94	220	0.111	<20	1.13	0.065	0.08	0.2	<0.01	12.1	<0.1	0.26	4	1.3	<0.2
CR171004-6	Rock			15	9	0.57	79	0.004	<20	1.07	0.047	0.30	<0.1	<0.01	3.3	<0.1	0.68	4	0.8	<0.2
CR171004-7	Rock			2	23	0.39	364	0.040	<20	1.21	0.015	0.17	1.5	<0.01	8.5	<0.1	0.61	14	5.2	0.4



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Canada

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Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: December 19, 2017
Report Date: January 17, 2018
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN17003053.1

CLIENT JOB INFORMATION

Project: Fr-Nv-CT-He
Shipment ID:
P.O. Number
Number of Samples: 12

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	12	Sorting, labeling and boxing samples received as pulps			VAN
AQ200	12	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps

ADDITIONAL COMMENTS

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver British Columbia V5V 2V8
Canada

CC:


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted. *** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Project: Fr-Nv-CT-He
Report Date: January 17, 2018

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CERTIFICATE OF ANALYSIS

VAN17003053.1

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	2	0.01	0.001	1	
CR171002-S1	Pulp	0.4	110.8	13.1	77	0.2	31.1	21.4	987	3.91	5.9	8.0	0.5	18	0.4	0.3	0.2	96	0.60	0.060	5
CR171002-G1	Pulp	0.6	90.4	8.4	70	0.3	25.7	20.2	797	3.98	6.1	2.3	0.6	9	0.2	0.3	0.2	89	0.28	0.079	4
CR171002-G2	Pulp	0.6	60.4	6.7	47	0.1	15.4	12.5	397	2.30	4.4	2.2	2.1	8	<0.1	0.2	0.1	50	0.11	0.110	8
CR171002-G3	Pulp	0.3	243.5	6.9	82	<0.1	44.4	35.3	756	6.14	7.7	2.9	1.3	11	<0.1	0.2	<0.1	152	0.30	0.109	5
CR171002-G4	Pulp	0.6	56.2	8.4	83	0.2	19.4	19.5	1400	3.50	4.3	17.0	1.9	6	0.2	0.2	0.2	72	0.10	0.215	6
CR171002-G5	Pulp	0.2	202.1	5.9	87	<0.1	48.4	36.0	980	6.75	5.2	74.1	1.0	14	<0.1	0.2	<0.1	169	0.49	0.114	5
CR171002-G6	Pulp	0.2	140.7	4.6	75	<0.1	42.5	32.6	897	5.97	5.0	2.3	1.2	14	<0.1	0.2	<0.1	137	0.42	0.122	5
CR171002-G7	Pulp	0.3	255.3	4.9	86	<0.1	57.1	37.2	837	6.69	6.1	4.8	1.0	11	<0.1	0.1	1.1	172	0.47	0.096	3
CR171002-G8	Pulp	0.3	165.2	7.2	91	<0.1	51.4	42.3	1042	7.63	6.5	5.1	1.0	16	0.1	0.1	<0.1	181	0.55	0.114	4
CR171002-G9	Pulp	0.4	193.5	6.3	84	<0.1	43.2	29.8	652	5.74	6.6	2.0	1.7	9	0.1	0.1	0.1	139	0.20	0.140	7
CR171002-G10	Pulp	0.7	253.0	10.0	96	0.1	43.3	35.7	1112	6.31	10.6	1.9	1.8	9	0.1	0.2	0.2	163	0.22	0.176	5
FL2 T-3 RES	Pulp	17.8	551.9	198.7	519	29.8	140.2	7.4	1227	2.57	21.8	353.6	0.4	79	2.7	4.3	0.2	58	4.32	0.044	3



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Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver British Columbia V5V 2V8 Canada

Project: Fr-Nv-CT-He
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CERTIFICATE OF ANALYSIS

VAN17003053.1

Method	Analyte	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
CR171002-S1	Pulp	50	1.08	80	0.190	<20	2.27	0.004	0.08	<0.1	0.06	4.0	0.1	<0.05	8	<0.5	<0.2
CR171002-G1	Pulp	40	0.91	70	0.211	<20	2.27	0.003	0.09	0.1	0.05	3.1	<0.1	<0.05	9	<0.5	<0.2
CR171002-G2	Pulp	19	0.38	62	0.181	<20	3.42	0.014	0.05	0.2	0.08	4.5	<0.1	<0.05	9	<0.5	<0.2
CR171002-G3	Pulp	63	1.65	97	0.362	<20	3.21	0.001	0.24	0.1	0.02	6.8	0.1	<0.05	10	<0.5	<0.2
CR171002-G4	Pulp	30	0.53	73	0.207	<20	3.14	0.009	0.06	0.2	0.05	4.1	0.2	<0.05	11	<0.5	<0.2
CR171002-G5	Pulp	64	1.95	121	0.372	<20	3.27	0.002	0.34	0.1	0.02	7.5	0.1	<0.05	11	<0.5	<0.2
CR171002-G6	Pulp	54	1.61	99	0.322	<20	2.92	0.002	0.26	<0.1	0.01	6.2	0.1	<0.05	9	<0.5	<0.2
CR171002-G7	Pulp	102	1.93	145	0.400	<20	3.63	0.002	0.51	0.1	0.01	4.4	0.2	<0.05	10	<0.5	<0.2
CR171002-G8	Pulp	68	2.17	136	0.378	<20	3.71	0.003	0.48	0.1	<0.01	6.6	0.1	<0.05	12	<0.5	<0.2
CR171002-G9	Pulp	60	1.52	101	0.351	<20	3.38	0.003	0.22	0.1	0.03	6.2	0.1	<0.05	10	<0.5	<0.2
CR171002-G10	Pulp	62	1.50	117	0.373	<20	3.88	0.002	0.34	0.2	0.04	6.3	0.2	<0.05	11	<0.5	<0.2
FL2 T-3 RES	Pulp	281	1.04	24	0.022	<20	1.19	0.007	0.07	0.8	0.09	3.4	<0.1	0.13	5	1.8	<0.2