ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Franklin Project; Union Tails, Ida and Dane Areas - Exploration and Metallurgical Testing

TOTAL COST: $5,439.56

AUTHOR(S): Doug Warkentin
SIGNATURE(S):

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YEAR OF WORK: 2017/2018

PROPERTY NAME: Franklin

CLAIM NAME(S) (on which work was done): Ida-Dane; Union

COMMODITIES SOUGHT: Au, Ag, Cu

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN: Franklin Camp, including 082ENE003 and 082ENE004

MINING DIVISION: Greenwood
NTS / BCGS: NTS 082E09W
LATITUDE: ____49_____ ° ___33_____ ' ___25_____ "
LONGITUDE: ____118_____ ° ___20_____ ' ___8_____ " (at centre of work)
UTM Zone: 11 EASTING: 403400 NORTHING: 5490250

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**) Jurassic, Eocene, Carboniferous-Permian, Penticton Group, Harper Ranch Group, Volcaniclastic Rocks, Granites, Kettle River Formation, Marron Formation, Franklin Group, Limestone Skarns, Averill Complex

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00637, 17273, 21768, 26306, 26440, 27328, 27604, 27929, 28790, 29306, 33945, 34310, 34714, 34846, 35780, 36027, 36292, 36574

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock	7 samples ICP-MS	Ida-Dane	$2444.55
Other			
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying	7 samples, prep and ICP analysis	Ida- Dane	$226.42
Petrographic			
Mineralographic			
Metallurgic	5 tests, 5 solid and 11 solutions - ICPanalysis	Union	$2493.59
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	$5,439.56

Franklin Project

Greenwood Mining Division
NTS 082E/08 and /09

Project Area Location:
UTM NAD 83: Zone 11, 403400 East, 5490250 North

Registered Owner: Doug Warkentin
Operator: Crucible Resources Ltd.

Union Tails, Ida and Dane Areas - Exploration and Metallurgical Testing

Project Tenure Numbers: **1040223, 1045746, 1047875, 1047876, 1052520, 1052521, 1057014, 1057213, 1057687, 1057704, 1057845, 1058110, 1058765, 1059202, 1060339, 1060407, 1060637, 1061297 and 1061298.**

SOW Event Numbers: 5688417, 5693715, 5696560, 5699765, 5704825 and 5708065.

October 15, 2018

Prepared By: Doug Warkentin, P.Eng

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Introduction

Location and Access

The Franklin project lies along the Burrell Creek valley in the Christina Range of the Monashee Mountains of Southeast BC, approximately 65 km north of Grand Forks, BC. It covers part of the historic Franklin Camp, which includes the abandoned town sites of Franklin and Gloucester City. The general project location is shown in Figure 1.

The property consists of a contiguous grouping of MTO claims covering much of Mt. McKinley and Mt. Franklin, extending across Burrell Creek to the east, along Franklin Creek to the northwest and to the southern toe of Tenderloin Mountain in the northeast. The project area is crossed by the Burrell Creek Forest Service Road (FSR) which is a well-maintained all-season two wheel drive accessible road. It connects with Grand Forks via the Granby River road to the south and runs along the east side of the Burrell Creek Valley in the project area. About 1 kilometre southwest of where the Burrell Creek FSR leaves the property a forestry spur road crosses Burrell Creek and splits into multiple branches that provide access to many areas of the property on the west side of Burrell Creek. These are recently active logging roads that mostly remain in fair to good condition. The middle branch, accessing the upper part of Franklin Creek, has been decommissioned but remains passable by high clearance two-wheel drive vehicles. The other two branches, accessing the Mt. McKinley area south of Franklin Creek and the Gloucester Creek area to the north, remain as active forestry roads and are passable by two-wheel drive vehicles through much of the property, although they are prone to potential temporary blockages by fallen trees, small washouts or rock falls.

The entire area was part of a well-known exploration and mining camp in the early part of the last century, and there are therefore also many overgrown and unmaintained roads and trails accessing old workings, particularly in the areas surrounding Mt. Franklin and the north side of Mt. McKinley.

The area is mountainous, with deep valleys to the west of the broader Burrell Creek Valley. The east-facing slopes tend to be steep, while west-facing slopes are gentler. The climate is generally dry in the summer and the terrain is mainly tree-covered, but with relatively little undergrowth. The area has an interior climate, with warm dry summers and cold winters. Winter snow accumulations can be significant, and creeks are prone to flooding during spring freshet, but flows diminish greatly in the summer.

Tenure Information

The Franklin Project currently consists of 19 Mineral Titles Online claims with a total area of 2305 hectares. The project claims are adjoining and form a contiguous area covering ground along Franklin, Gloucester and Burrell Creeks, and the adjacent slopes of Mt. McKinley and Mt. Franklin. The project claims cover much of the historically active Franklin mining camp, which has a long history of past exploration and has been covered by many generations of previous mineral tenures. Many claims were crown granted in the first half of the twentieth century, and the project area includes most of the reverted crown grants associated with the main Franklin and Gloucester camps. There are also a small number of crown grants that remain in good standing partly underlying the current project boundaries, as shown in Figure 4. The active crown grants principally cover the past producing Union and McKinley Mines, along with the area around the Homestake mine. Together these claims affect the title to approximately 88 hectares of the total project area. The full details of the rights associated with these crown

grants have not been determined, but it is assumed that they pre-empt all rights of the overlying MTO claims within their boundaries.

Figure 1 – Franklin Project Location Map

The project MTO claims are all owned by the author, and Crucible Resources Ltd. has an option to acquire 100% ownership of these claims. Claim details are shown in Table 1. Expiry dates shown in this table reflect the application of work described in this report.

Figure 2 outlines the tenures of the Franklin Project and also shows the listed Minfile showings for the camp.

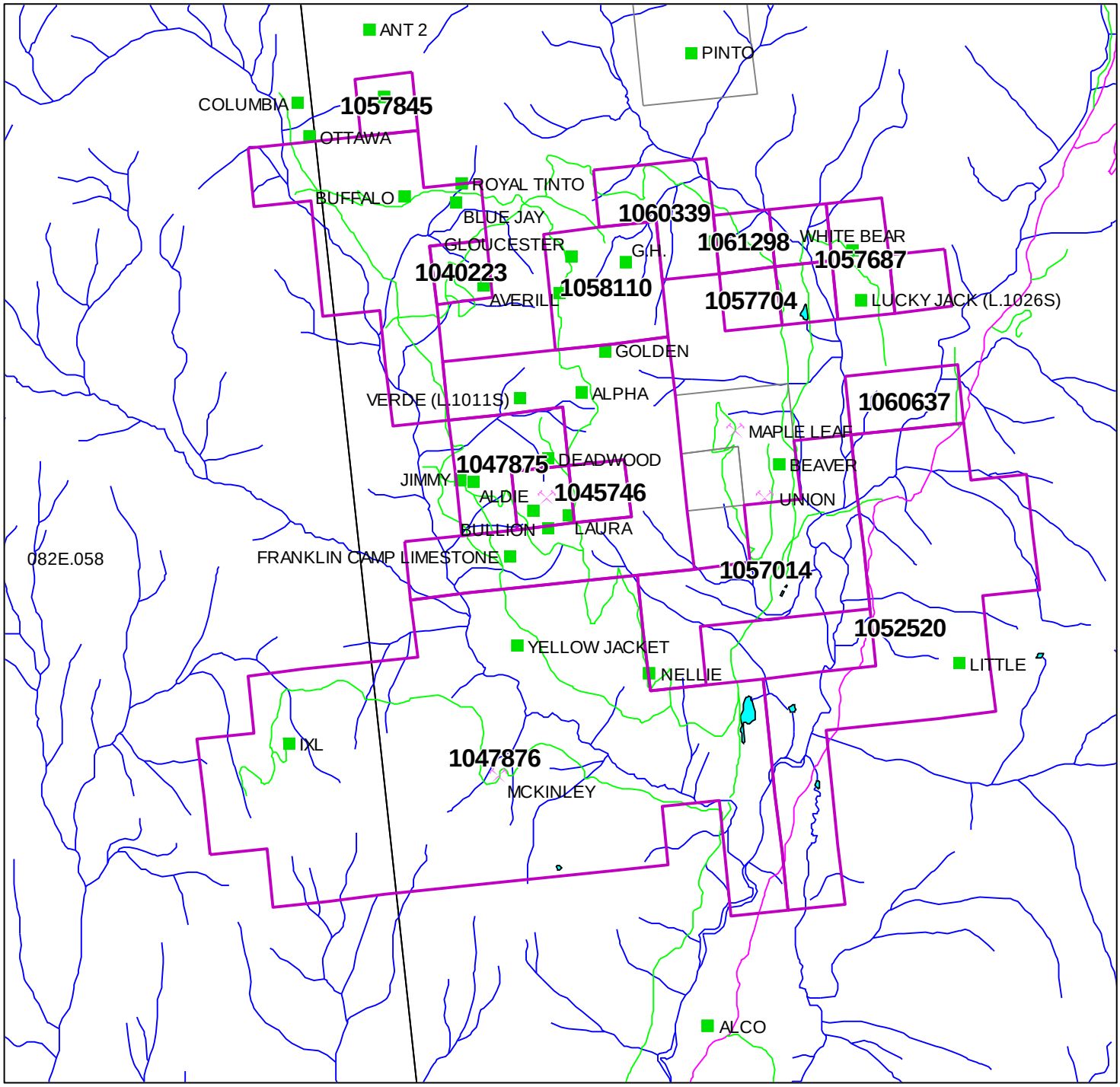


Figure 2 – Project Tenure Outline

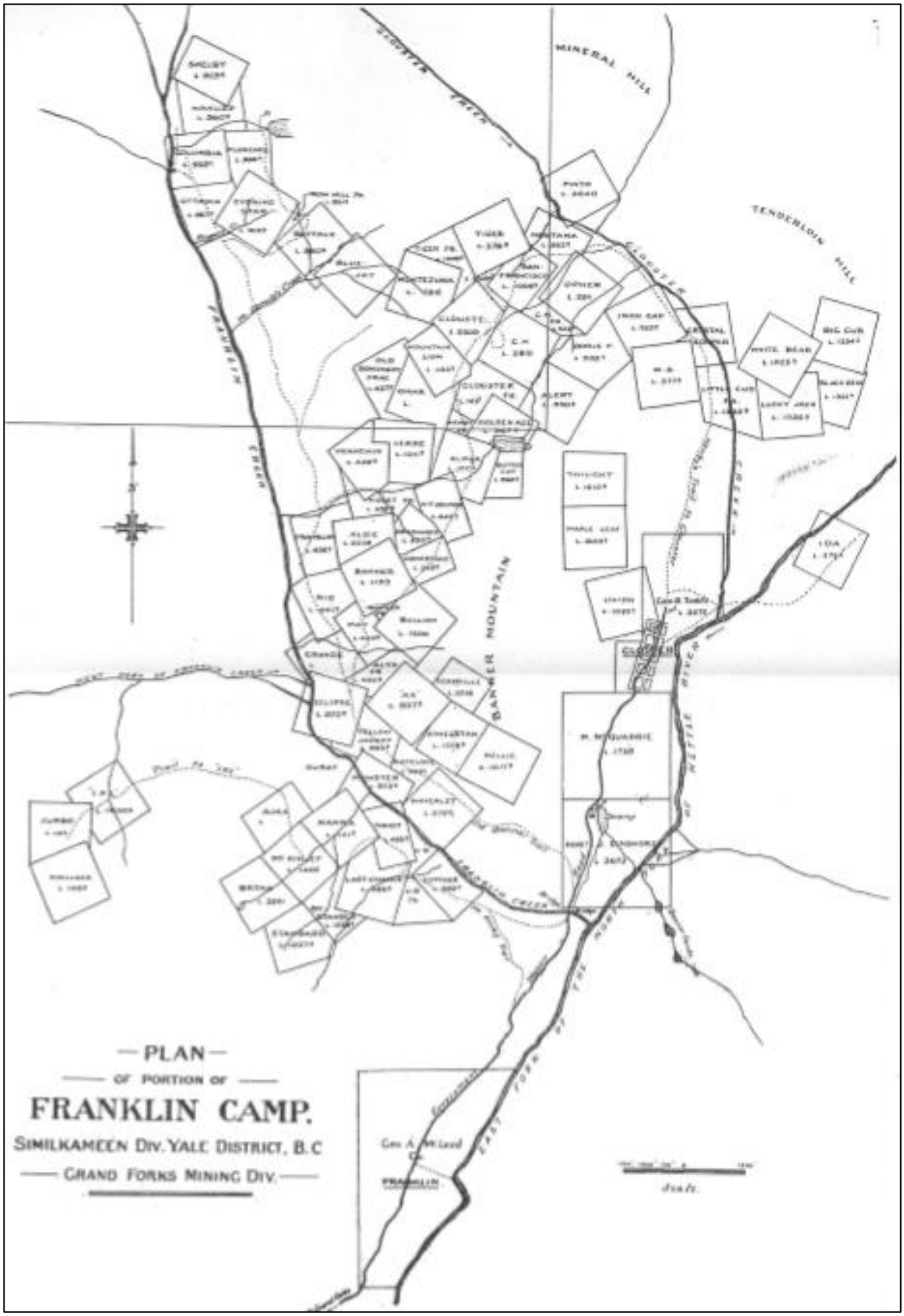


Figure 3 – Franklin Camp Historical Crown Granted Claims (Larson and Verrill, 1914)

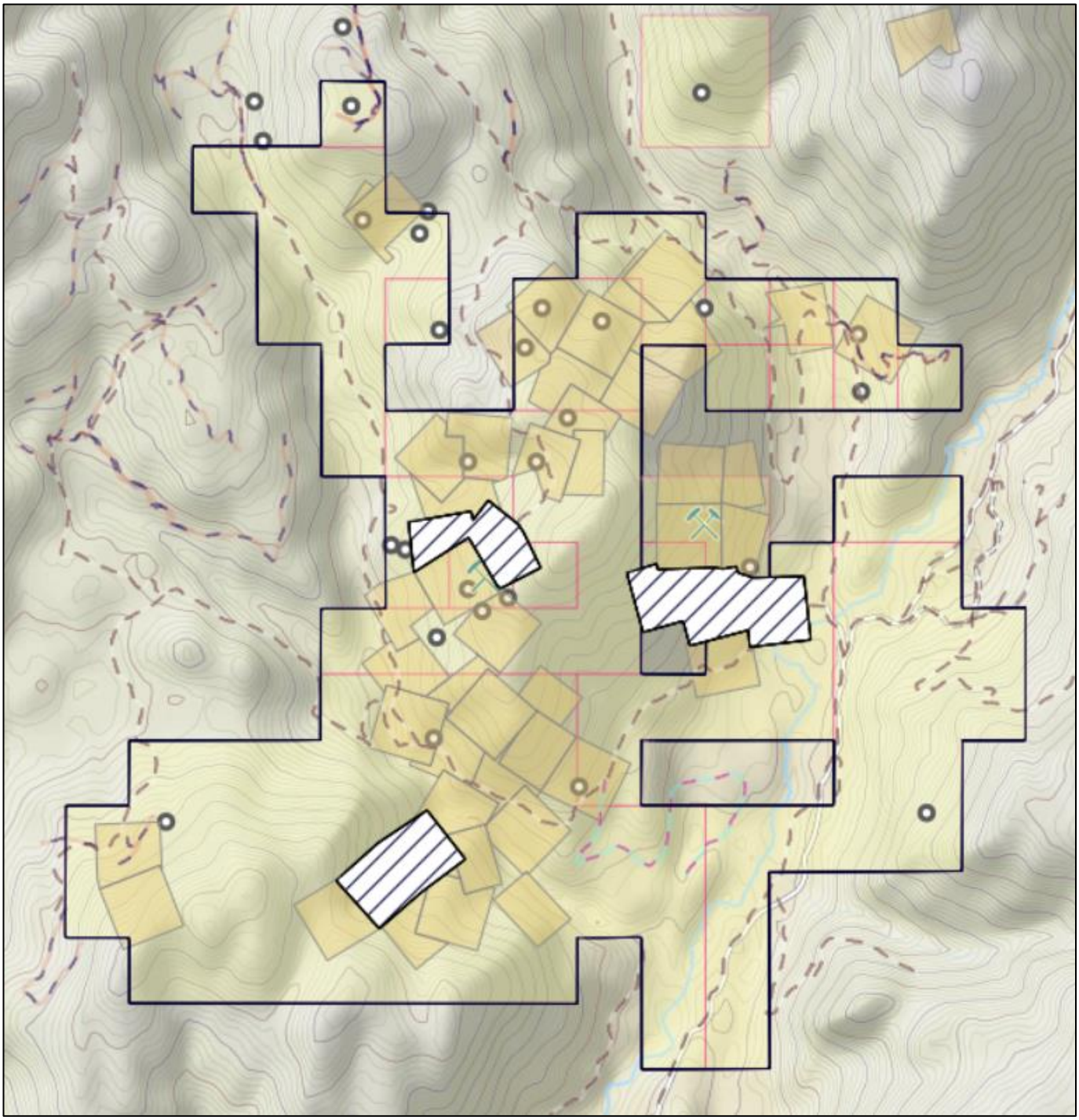


Figure 4 – Project Tenure Outline Showing Historical and Current Grown Grants

Table 1: Franklin Project Mineral Tenures

Title Number	Claim Name	Owner	Map Number	Issue Date	Good To Date	Area (ha)
1040223	AVERRILL	145582 (100%)	082E	2015/NOV/29	2018/NOV/15	20.95
1045746	UV	145582 (100%)	082E	2016/AUG/03	2018/NOV/15	20.95
1047875	TWIN CR S	145582 (100%)	082E	2016/NOV/15	2018/NOV/15	62.86
1047876	MT MCKINLEY	145582 (100%)	082E	2016/NOV/15	2018/NOV/15	838.47
1052520	IDA-DANE	145582 (100%)	082E	2017/JUN/14	2019/MAY/31	356.31
1052521	BULLION TWIN	145582 (100%)	082E	2017/JUN/14	2019/JAN/31	251.44
1057014	UNION	145582 (100%)	082E	2017/DEC/14	2018/NOV/15	167.66
1057213	BANNER	145582 (100%)	082E	2017/DEC/24	2019/JAN/02	20.95
1057687	LUCKY BEAR	145582 (100%)	082E	2018/JAN/16	2019/FEB/22	41.90
1057704	MS	145582 (100%)	082E	2018/JAN/16	2019/FEB/22	20.95
1057845	COUGAR	145582 (100%)	082E	2018/JAN/21	2019/FEB/22	20.94
1058110	GH	145582 (100%)	082E	2018/FEB/01	2019/FEB/22	83.79
1058765	MCS	145582 (100%)	082E	2018/FEB/21	2019/FEB/22	20.95
1059202	LUCKY E	145582 (100%)	082E	2018/MAR/09	2019/APR/30	20.95
1060339	AUFER	145582 (100%)	082E	2018/APR/29	2019/APR/30	62.84
1060407	AVERILL NW	145582 (100%)	082E	2018/MAY/03	2018/NOV/25	209.46
1060637	IDA NW	145582 (100%)	082E	2018/MAY/17	2019/MAY/31	41.90
1061297	MSSE	145582 (100%)	082E	2018/JUN/19	2019/JUN/21	20.95
1061298	CAP	145582 (100%)	082E	2018/JUN/19	2019/JUN/21	20.95
					Total:	**2305.2**

Regional Geology

The Franklin Project covers much of the historic Franklin mining camp. The area is defined by major north-south regional faults that form a graben structure. The Granby fault, which runs to the east of the property, can be traced for more than 100 km to the south, where it forms the eastern boundary of the Republic graben in Washington State. In the Franklin camp area, this fault separates older metamorphic rocks to the east from younger intrusive rocks that surround and partly underlie the Franklin property.

While plutonic rocks are dominant regionally, the geology of the Franklin camp is more complex (Figure 3). The oldest rocks are a sequence of sediments, volcanics and related intrusives known locally as the Franklin Group. These are mapped as part of the Carboniferous Harper Ranch Group, and show strong similarities to the Brooklyn formation in the Greenwood-Grand Forks area (Caron 2004). This group includes argillite, conglomerate, chert, tuffaceous siltstone, limestone and greenstone, often showing significant alteration. The Franklin rocks are intruded by several distinct bodies of plutonic rock, including diorite/granodiorite from the Jurassic aged Nelson batholith and related bodies, as well as Jurassic aged porphyry dikes, the Jurassic Averill complex and the Eocene Coryell suite, including syenite stocks and lamprophyre dikes. Overlying the Franklin rocks and much of the intrusive rock are Eocene clastic sediments and volcanics of the Kettle River formation. In addition to sandstones and conglomerates, these rocks include tuffs and some areas of rhyolite. These are in turn overlain by andesites and trachytes of the Eocene Marron formation, which mainly occur at higher elevations.

The Franklin rocks were the main focus of early exploration in the Mt McKinley and Mt Franklin areas, particularly for precious metal-bearing quartz veins and for silicified zones and skarn deposits with high base metal values along limestone contacts. Another type of mineralization identified in the early days of exploration was the so-called 'Black Lead' zones of shear hosted massive chalcopyrite with some PGM values. These tend to form small erratic pods along contact zones of the pyroxenite phase of the Averill plutonic complex. Rare Earth Element (REE) mineralization has also been reported in these rocks, but the style of the mineralization is unknown. The Averill complex was originally correlated to the Eocene Coryell intrusives, but recent dating suggests a Jurassic age. The complex covers much of the north end of the Franklin camp and is a concentrically zoned differentiated intrusion with pyroxenite at its centre, grading outward through monzogabbro to monzonite, with trachytic syenite intruding the pyroxenite and monzogabbro along the axis of the pluton. The black lead mineralization generally occurs along the syenite-pyroxenite contacts.

Other possible styles of mineralization have been identified in more recent exploration programs, including epithermal gold and volcanogenic massive sulphide (VMS). Several areas of epithermal-style alteration and veining have been identified associated with intrusive contact zones but no significant economic mineralization has yet been identified in these areas. There are also intrusive contact zones resulting in extensive alteration that can carry base metal mineralization, but thes have seen very limited exploration. The potential for VMS mineralization has also been suggested, basd on the correlation of the Franklin rocks with similar formations along the Granby fault to the south, where economic VMS deposits have been discovered in the Belcher district in Washington State.

Local Geology

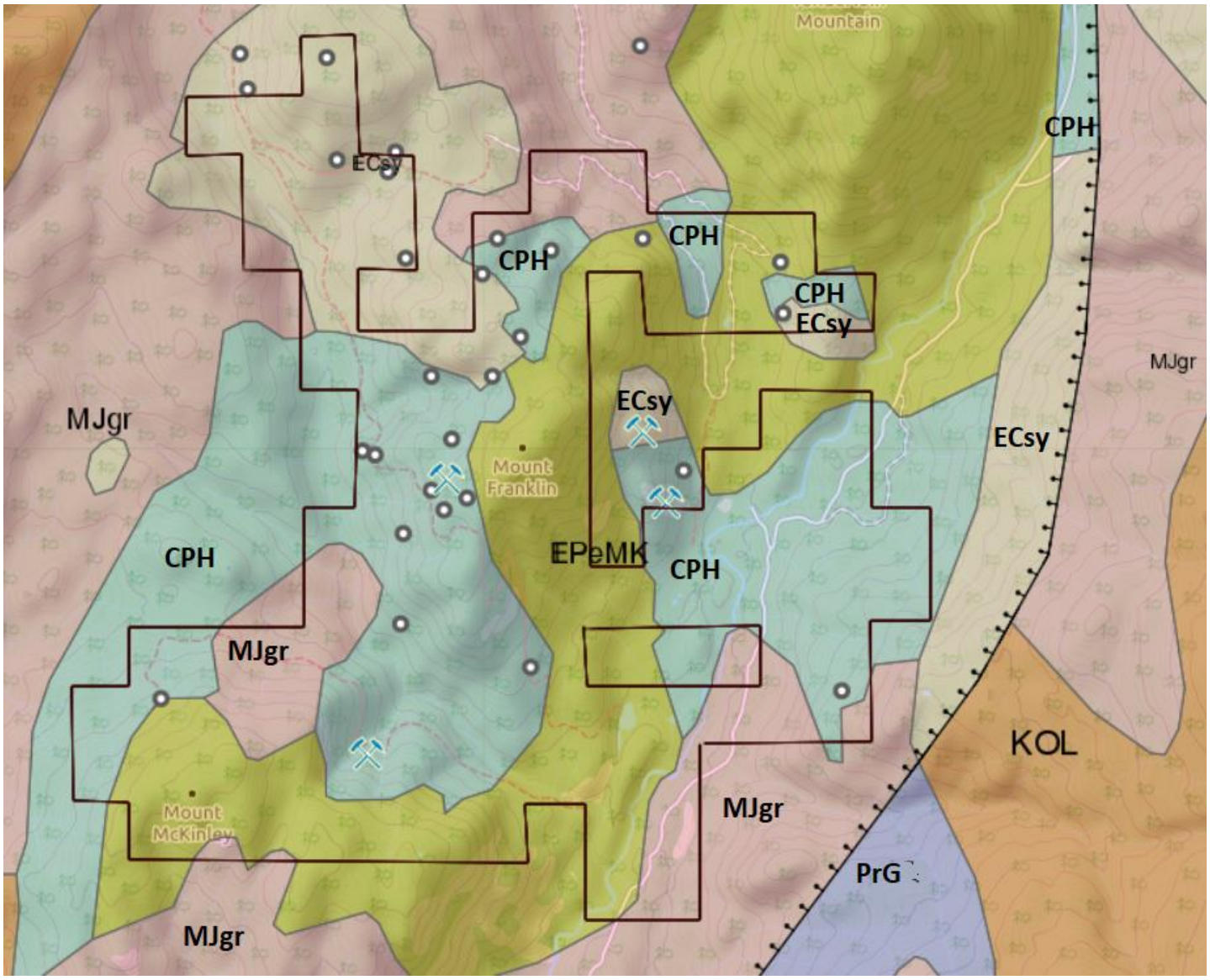
The Franklin Property is primarily underlain by Franklin group rocks and the overlying Eocene sediments and volcanic rocks of the Kettle River and Marron formations. The property also includes significant intrusive contact zones in and around the Franklin rocks. To the northwest the project area also covers part of the Averill complex, including several known occurrences of the 'Black Lead' mineralization and significant exposures of pyroxenite.

The project area partly overlaps the main historic producer in the camp, the Union mine, along with historical producers the McKinley and the Homestake. The other historic producer in the camp, the Maple Leaf, lies just outside the property boundary. While the actual mine workings are covered by active crown granted mineral claims, these are small and do not necessarily cover potential extensions or parallel zones.

By far the most important ore zones discovered to date were at the Union Mine (see Table 3, below). The ore was a relatively low sulphide replacement-style vein with some adjacent zones of higher base metal sulphide content. The mineralization consisted of a zone of almost complete replacement of a limestone horizon in Franklin sediments which was later fractured into small irregular sections by multiple faults. Precious metal grades were highest at the intersections of these faults, indicating that the faulting also played a role in later mineralization. The vein did not have clear margins, with ore zones being defined almost entirely by assay. Silver grades were highest in the upper levels, with gold grades increasing in the lower mine levels. Associated minerals consisted mainly of fine-grained pyrite and other iron minerals, but in places the vein also carried galena and spahlerite.

In its best sections, the Union mine produced some of the highest grade ore mined in BC. Ore grades were generally found to diminish with depth and to the east, and the vein was truncated by a larger fault to the west. More recent exploration has identified small ore remnants and unmined zones within the old workings, but no significant new extensions of the mineralization

have been identified since active mining ceased in the 1940's. Recent drilling to the west of the western fault boundary identified a silicified zone carrying anomalous precious metal values, but it is not clear whether this is an extension of the Union structure. Mill tailings are deposited within the Franklin property boundaries in two separate locations, to the south and east of the mine, and parts of these have been reprocessed on two separate occasions.



CPH – Carboniferous to Permian Harper Ranch Group – volcaniclastic rocks

ECsy – Eocene Coryell Plutonic Suite – syenitic to monzonitic intrusive rocks

EPeMK – Eocene Penticton Group: Marron, Kettle River, Springbrook, Marama and Skaha Formations – undivided volcanic rocks

KOL – Cretaceous Okanogan Batholith: Ladybird and Valhalla Intrusions – undivided intrusive rocks

MJqr – Middle Jurassic – granite, alkali feldspar granite intrusive rocks

MJNqd – Middle Jurassic Nelson Batholith – granodioritic intrusive rocks

PrG – Proterozoic Grand Forks Gneiss/Monashee Complex – paragneiss metamorphic rocks

Figure 5 – Regional Geology, Franklin Camp Area

There are numerous other mineral occurrences on the property. A significant band of limestone runs through the Franklin Creek valley with a north-south orientation and is associated with the high grade skarn mineralization found at the McKinley mine. Other more poorly defined occurrences have also been identified along this trend and may indicate additional skarn mineralization. At the IXL showing to the west of the McKinley Mine, shallow zones of skarn-type mineralization have also been identified. This area has seen considerable modern exploration; including trenching and drilling, which has identified significant zones of copper-gold surface mineralization in Franklin group rocks and altered porphyry intrusives in contact with small bodies of Franklin limestone. Drilling has shown that some of the best exposures of surface mineralization are cut off at shallow depths by intrusive rocks, however the mineralized rocks are covered by Eocene sediments to the east and potential thickening in this direction has not yet been tested. In addition, at least one hole has shown more significant depths of lower grade copper-gold mineralization in both Franklin volcanics and porphyry intrusives.

In the Mt Franklin area numerous smaller quartz veins have been identified in Franklin rocks, some carrying significant gold and/or base metals. The most developed occurrence in this area, the Homestake, lies within a crown grant, but several other important occurrences are also known within the project area. These include the Banner, North Banner, Bullion, Laura and Verde showings as well as some unnamed occurrences in the Twin Creek area, near the Alpha and Deadwood showings. On the southeast flank of Mt Franklin pyrite, chalcopyrite and copper carbonate mineralization occurs in Franklin rocks near the contact with Eocene volcanics at the Nellie showing. This area reportedly shows evidence of hydrothermal alteration associated with nearby intrusives. There is also reportedly copper mineralization at the Alpha showing, near the contact between the Franklin rocks and the Averill intrusives.

In the northwest part of the property the Franklin rocks are intruded by the Averill complex, and several occurrences of copper mineralization with platinum values were historically reported within the project boundaries. These include at least two styles of mineralization. The first type of occurrence is as shear zones along the pyroxenite contact at the Averill, Golden and Buffalo showings, which are typical of the Black Lead type of mineralization, while the second type consists of larger zones of pyroxenite carrying disseminated copper mineralization. This is the style at the Ottawa showing and may also be closely related to the Evening Star and Blue Jay showings, which are reported as disseminated copper in pyroxenite. The Buffalo showing may also include areas of this type of mineralization. The mineralization historically reported from the Averill complex has been primarily the Black Lead type, found in narrow and discontinuous shear zones along contact zones between pyroxenite and syenite, where copper, platinum and sometimes other precious metals appear to be concentrated by secondary hydrothermal enrichment. It has been suggested that the source of these values is enriched heavy mineral differentiated zones within the intrusive, likely within the pyroxenite phase. More recent work also points toward extensive low-grade copper mineralization within the pyroxenite, particularly where wider sections of pyroxenite are exposed in the northwest part of the complex.

The northern part of the camp, on the northeast side of the Averill intrusions, includes smaller bodies of older Franklin rocks in contact with Jurassic age granodiorite of the Nelson Batholith, and partly overlain by Kettle River sediments and Marron Formation volcanics. Some parts of this area show considerable alteration and sulphide mineralization occurs along the contacts of the granodiorite with the volcanic greenstones of the Franklin Formation. These deposits can host semi-massive sulphide bodies including pyrite and chalcopyrite. The Gloucester showing is the most developed of this type. Wider bodies of magnetite and pyrite-rich material are also reported in parts of this area at the GH and Iron Cap showings.

To the east of Burrell Creek few mineral showings were reported historically, but recent work has identified a number of mineralized exposures, including at least one previously explored mineralized shear zone in Franklin volcanics not far from a contact with granodiorite intrusive

rocks. The Dane showing includes significant gold values in addition to copper and silver values. The occurrence of zones carrying high copper and silver values with minor to significant gold values is a more common pattern of mineralization in the southern part of the camp, normally occurring in east-west striking veins or shear zones. The highest value veins in the Mt. Franklin area are more typically associated with lead and zinc mineralization, also often with high silver values. The Union veins themselves generally carried very low base metal values, with the main minerals of economic importance being gold and silver.

A short distance to the south of the property, in addition to the small east-west striking copper-bearing vein structures, there are showings of high-grade contact mineralization, intrusive related copper-zinc and copper-molybdenum mineralization, as well as epithermal-style vein systems in granodiorite which are locally reported to carry some gold values.

A summary of the documented showings occurring within the Franklin project claim area is included in Table 2.

Table 2: Franklin Project – Documented Mineral Occurrences

Name	Minfile #	Location	Minerals	Reported Grades	Width (m)	Year
Minfile showings						
Ottawa	082ENE061	Franklin Crk	Pt, Cu	2.1 g/t Pt	grab	1918
Ant Hill	082ENE085	Franklin Crk	Cu, Pd	2.4% Cu, 0.65 g/t Pd	grab	1987
Buffalo	082ENE008	McDonald Crk	Cu, Pt, Pd	6.5 g/t Pt	grab	1918
Blue Jay	082ENE054	McDonald Crk	Ag, Cu	2.7 g/t Ag, 0.24% Cu	grab	1988
Royal Tinto	082ENE010	McDonald Crk	Fe			
Averill	082ENE007	McDonald Crk	Cu, Pt, Pd	0.9 g/t Pt, 3.5 g/t Pd, 53 g/t Ag, 6.7% Cu	grab	1988
Gloucester	082ENE005	Gloucester Crk	Cu, Au, Ag	0.34 g/t Au, 12.65 g/t Ag, 1.33% Cu	4.0	1965
GH	082ENE006	Gloucester Crk	Cu, Au, Ag			
Iron Cap	082ENE058	Gloucester Crk	Fe, Cu			
Mountain Lion	082ENE055	Gloucester Crk	Pt, Cu	3.1 g/t Pt	grab	1918
Verde	082ENE020	Twin Creek	Au, As, Co	2.98 g/t Au	grab	2003
Alpha	082ENE052	Twin Creek	Au, Ag, Cu	0.68 g/t Au, 3.42 g/t Ag, 0.8% Cu	1.5	1965
Golden	082ENE053	Twin Creek	Pt, Cu	2.1 g/t Pt	grab	1918
Banner	082ENE002	Mt. Franklin	Au, Ag, Cu, Pb, Zn	9.27 g/t Au, 45 g/t Ag, 6.0% Zn, 2.1% Pb	grab	1987
Bullion	082ENE013	Mt. Franklin	Ag, Au, Cu, Pb, Zn	1.1 g/t Au, 100 g/t Ag, 2.5% Pb	grab	2003
Laura	082ENE066	Mt. Franklin	Ag, Au	56 g/t Ag, 0.14 g/t Au	grab	1987
Jimmy	082ENE042	Mt. Franklin	Ag, Pb, Zn	20.0 g/t Ag,1.94% Pb, 3.40% Zn	grab	1988
Yellow Jacket	082ENE021	Mt. Franklin	Cu, Pb, Zn			
Franklin Limestone	082ENE062	Mt. Franklin	Limestone			
Nellie	082ENE059	Mt. Franklin	Cu			
White Bear	082ENE057	Gloucester Crk	Au, Cu, Ag	0.9 g/t Au, 0.7 g/t Ag	grab	1984
Lucky Jack	082ENE056	Gloucester Crk	Pt, Cu	2.7 g/t Pt	grab	1918
Little	082ENE004	Dinsmore Crk	Pb, Zn	1.82 g/t Au, 1.9 g/t Ag	0.07	2006
IXL	082ENE033	Mt. McKinley	Cu, Au, Pb, Zn	3.85 g/t Au, 0.8% Cu	5.5	2003
Non-minfile occurences						
Dane		Burrell Crk East	Au, Ag, Cu	2.16 g/t Au, 162 g/t Ag, 5.7% Cu	grab	2006
Ida		Burrell Crk East	Au, Ag, Cu			
MS/Crystal Copper		Gloucester Crk	Au, Ag, Cu			
United Verde		Mt. Franklin?	Au, Ag	5.5 g/t Au	shaft	1914
Golden Zone		Gloucester Crk	Au			1914
Mary Ann		Gloucester Crk	Au			1914
Evening Star		Franklin Crk	Pt, Cu, Au, Ag	$0.49 to $14.35 in Au, Cu and Ag	2-400 m	1906
Last Chance		Mt. McKinley	Au, Ag	1.9 g/t Au, 13.5 g/t Ag, 0.1% Zn	grab	2005
Jack		Mt. McKinley	Zn, Ag, Cu	17.5 g/t Ag, 2.9% Pb, 6.5% Zn	grab	2005

Property History

The property has a long history of exploration, along with a more limited history of mine development and production. None of the recorded past producing mines of the Franklin camp are directly covered by the property, as the principal past producers are located on small active crown-granted mineral claims that are partly or fully overlain by the property's MTO claims. The property covers most of the historical Franklin and Gloucester camps, which were actively explored beginning in the 1890's, and which were the source of both base metal and precious metal production (Table 3) in the first half of the last century.

Exploration in the Franklin camp area began around 1896, when the first claims were staked. The camp was very active in the early 1900's when most of the principal showings were discovered and developed with small shafts and adits. As early as 1901 the Banner vein had seen considerable development and test shipments had been made, although there is no record of the production from that property. During that same period considerable development occurred on the McKinley property and ore shipments may have been made during that period, although again there is no available record of the production.

A Mines Ministry report from 1900 includes high values in gold and silver from the Homestake and Silver Bell claims, along with high copper and gold values from the Gloucester and the Pollard claims. While the Homestake and Gloucester claims were later crown granted, the precise locations of the Silver Bell and Pollard claims are unknown. The Silver Bell was described as lying to the west of the Homestake and hosting an extension of one of the Homestake veins, carrying 40 oz/ton silver and 0.2-1.5 oz/ton gold.

Between 1900 and 1905 on the Gloucester claim a 16 meter shaft and at least one crosscut tunnel 70 meters long had been developed. The shaft was on a steeply dipping vein rich in chalcopyrite, reportedly carrying 10-13% copper and increasing in width from 0.5 meters at surface to 1.5 meters at depth. The crosscut apparently failed to intersect the vein.

Table 3. Historical Production from the Franklin Camp

Mine	Years of Operation	Production (tonnes)	Gold Production (ounces)	Historical Grades
Union	1913-89	122,555	55,525	14.1 g/t Au, 353 g/t Ag, 0.2% Zn, 0.1% Pb, 0.01% Cu
Maple Leaf	1915-16	36	2	1.7 g/t Au, 172 g/t Ag, 7.6% Cu
Homestake	1940-41	453	223	15.3 g/t Au, 30.0 g/t Ag, 0.12% Zn, 0.06% Pb
McKinley	1949	132	2	0.47 g/t Au, 215 g/t Ag, 17.1% Zn, 11.2% Pb

The first actual recorded production from the camp came from the Union property. The Union vein was discovered in 1913 when a silicified zone near earlier workings on an adjacent quartz vein carrying lead and zinc was found to be rich in gold and silver. Shipments of high grade ore began almost immediately from a large open cut, with adits later developed to access more of the ore. Development and small shipments continued from the Union vein until 1920, when operations were shut down due to the high cost of transporting ore to the smelter.

In 1914 a provincial government survey of the area included ore sampling and production data from the Union mine. The same report included sample assays from the Union and Banner claims, and also included assays from a shaft under development on the 'United Verde' claim which returned a value of 0.16 opt Au. The location of this claim has not been verified, but a search of available records from the time indicates that it was active from July 1913 to July 1922 but was never crown granted. The government report places it west of the Union mine on 'Banner Mountain' (Mt. Franklin), while contemporary news reports place it 'across the river' from the Union mine, which would presumably place it to the east.

In 1915 and 1916 two small shipments of copper ore were made from the Maple Leaf mine, lying just north of the Union mine. At the smelter this ore was found to carry an average of 8 g/t platinum, which resulted in new interest in the Franklin Camp for its PGM potential. Following this discovery, in 1918 the federal government's munitions department carried out an evaluation of the platinum potential of the entire camp. Numerous showings of copper from 'Black Lead' and pyroxenite zones were sampled, with grades ranging from less than 1 g/t to 13 g/t Pt, with the highest grades coming from the Maple Leaf workings. Sampling from within the claim boundaries of the Franklin Project included multiple workings on the Lucky Jack claim (ranging from 1.4 g/t to 2.7 g/t Pt), a small shaft and open cut on the Mountain Lion claim (3.1 g/t Pt), a small shaft on the Golden claim (2.1 g/t Pt), a shaft dump and an adit dump at the Averill showing (both 3.1 g/t Pt), a shaft dump and open cuts at the Buffalo showing, (6.5 g/t and 2.7 g/t Pt respectively), and large open cuts on the Ottawa claim (2.1 g/t Pt). While there is very limited information about any of the samples collected, the Ottawa showing has been described as consisting of open cuts exposing pyroxenite mineralized with disseminated copper. It is not known if the 1918 platinum sample came from a selected high grade zone or from the broader disseminated mineralization.

In 1927 Hecla Mining Company bonded the Union and Maple Leaf properties and began to develop milling ore on the Union vein. By 1929 a 145 ton per day concentrator had been constructed and milling operations began in 1930. Full mine production lasted until 1932, when most of the known ore had been mined out, and the mine closed in 1933. In that same year a cyanidation plant was constructed to retreat the tailings, which operated from 1934-36. Lease operators produced a small amount of additional ore between 1937 and 1942. During the same period that the Union mine and mill were in operation, a small amount of ore was also produced from the nearby Homestake mine. Some ore from the Homestake was likely processed at the Union mill, but the recorded production relates only to direct ore shipments from 1941 and 1942.

In 1964 Franklin Mines Ltd acquired most of the Franklin camp and carried out geological and geophysical surveys along with limited sampling of old workings. This included sampling of the Alpha tunnel, within the current project area, which averaged 0.12% Cu and 1 g/t Ag over its entire 18 meter length, with the 3 meters before the face assaying 0.41% Cu, 5.1 g/t Ag and 0.69 g/t Au. They also mapped the Buffalo area and carried out detailed sampling of a 33 meter adit on the Buffalo claim. Samples showed minimal precious metals values, but there were copper values, including an average of 0.34% Cu over 12 meters of the tunnel toward the face. Sampling around the Averill showing returned minimal Pt assays (max. 0.14 g/t), but showed extensive low grade copper mineralization, including an average of 0.16% Cu along 16.8 meters of the Averill Tunnel. Surface sampling near the Gloucester workings showed 1.33% Cu with 12.6 g/t Ag and 0.34 g/t Au over a 4 meter sample width.

In 1968 Newmont Exploration acquired part of the camp and carried out a work program which included airborne and ground geophysics, trenching and drilling of three holes at the IXL showing in 1969. Limited information is available regarding this work program, but in general, good mineralization was encountered in trenches but this same mineralization was not found in the drill core. One of the holes reportedly encountered ultramafic rocks with disseminated chalcopyrite, but this zone was not assayed.

In 1979 Pearl Resource acquired part of the camp, including the Union mine and surrounding area. Their work focused on the Union mine and included re-opening the lowest adit and a program of underground drilling in 1984.

In 1986 Longreach Resources Ltd acquired a large part of the Franklin camp and carried out an exploration program that included geochemical sampling, geophysical surveys and drilling of several targets, primarily aimed at platinum. The following year the property was renamed the Platinum Blonde property and optioned to Placer Development Limited who carried out additional drilling, prospecting and geochemical sampling over the entire property. This project was also focused mainly on PGM mineralization and the property primarily covered the northern part of the camp, overlapping much of the northern and north-western portions of the current Franklin project claims. This work identified several precious and base metal soil anomalies, some of which do not appear to have been fully investigated, including a strong and fairly extensive copper anomaly in the northwest, in an area likely underlain by a pyroxenite zone in the Averill complex rocks, and including areas covered by the historical Ottawa and Evening Star claims. Prospecting also resulted in numerous gold-bearing samples being collected in the Homestake, Deadwood, North Banner and Twin Creek areas. The latter included an assay of 16.8 g/t Au in an area below the Alpha claim, but no details of this sample were recorded.

From 1987 to 1989 Sumac Ventures ran a heap leach operation on the Union mine tailings, reportedly recovering 13,300 grams of gold and about 400,000 grams of silver from 42,500 tonnes of tailings and waste rock. The operation appears to have been terminated due to operational difficulties rather than depletion of the available values.

In 1991 Canamax conducted an airborne geophysical survey over the IXL area along with rock and soil sampling. A new zone of low-grade copper mineralization in diorite was identified about 1.5 km south of the main IXL showing.

In 1993 and 94 Sway Resources drilled up to 29 short diamond drill holes and 14 percussion holes in the Banner-Homestake area and carried out rock and silt sampling, and diamond drilled 900 meters in 8 holes at the IXL showing, but available results of this work are very limited and poorly documented. Some high-grade drill intercepts were reported to the west of the Homestake workings at the North Banner showing, as well as high grade surface samples from at least two separate locations on the Deadwood Crown Grant.

In 2001 Tuxedo Resources Ltd. acquired much of the south and west portions of the Franklin camp and an airborne geophysical survey was flown that year. In 2003 rock sampling, soil geochemistry, trenching and a small drill program were carried out in the IXL and Banner-Homestake areas. Good mineralization was encountered, but the extent was limited. In addition, there was at least one strong gold and base metal soil anomaly identified in the North Deadwood area that has not been fully explored. A single drill hole showed significant widths of low grade gold mineralization below the IXL trenches.

In 2004 Solitaire Minerals carried out trenching and a limited drill program in the Union and Maple Leaf areas. Drilling failed to clearly identify a western extension of the Union vein, but a promising silicified zone carrying anomalous precious metal values was intersected under a cap of overlying volcanic rocks. Work on the Maple Leaf crush zone, to the north of the old Maple Leaf workings, identified low grade gold mineralization with intermittent bands of high grade base metal mineralization that also carried higher gold grades.

Also in 2004, New Cantech Ventures conducted an 11 hole, 1741 meter drill program at the IXL showing, indicating that encouraging surface mineralization encountered in trenches was generally cut off at shallow depths by feldspar porphyry and syenite intrusions. Follow-up work in 2005 by Nanika Resources Inc. found evidence of new mineralized zones to the east, near the McKinley

mine, mainly based on samples showing good zinc grades, but also occasional samples with good copper, silver and gold grades at the Jack and Last Chance showings. No follow-up work was reported.

In 2006 and 2007 Yankee Hat Minerals conducted limited rock sampling and prospecting in the Dane and Little area and conducted an airborne geophysical survey covering much of the Franklin camp, including some less-explored areas to the east of Burrell Creek. Few strong targets were identified with the exception of a relatively strong conductivity target to the south of the Dane showing. A small subcrop sample of gold in quartz was also found somewhat further to the south, a few hundred meters northwest of the probable location of the Little showing.

Sampling by Crucible Resources between 2012 and 2016 confirmed the presence of high grade copper-gold-silver mineralization at the Dane showing, while limited soil sampling showed only slightly anomalous base metal values in the area below the showings. Samples carrying gold and silver without base metals were found in the Ida area, a short distance north of the Dane showing. A small occurrence of copper-gold mineralization was identified near the Nellie showing, and in the northwest multiple occurrences of copper mineralization were located and sampled, with some showing minor gold and PGM values as well. The old Union tailings were sampled and some significant gold and silver values were found to remain despite previous reprocessing operations.

Summary of Work

A site visit was conducted in October 2017 to the Ida and Dane areas, both on the east side of Burrell Creek, directly across from the old Union mine workings. One day was spent in these areas sampling and prospecting. At the Ida the work was focused on a recently discovered gold-silver showing, while at the Dane a prospecting traverse was run along a deactivated forestry branch road on the ridge above the historical Dane workings. A total of seven rock samples, including four chip samples from outcrop, two from sub-crop and one vein float sample were collected.

Following up on previous successful metallurgical testwork on low-grade composite samples of tailings from the Union mine, a new series of tests were completed using a higher-grade composite, based primarily on the main body of historical tailings. This work continued to add to the understanding of the potential for non-cyanide precious metal recovery from this property and incorporated flotation techniques which can more accurately define the average grade for samples containing free milling and potentially erratic gold values.

Work Program

Sampling, Testing and Data Collection

A site visit was conducted on October 4th, 2017, which included work on the Ida showing, on the west bank of Burrell Creek and in the area above the historical Dane showing, located on a hillside to the south of the Ida, and also on the west side of Burrell Creek. The main focus of the work was on the area surrounding a recent discovery of gold and silver in an outcrop in the Ida area. The Ida South showing is exposed on a short outcropping ridge in a recent clear cut about 100 meters west of the road. The exposure is small and poorly defined, but previous sampling returned values up to 6.2 g/t gold and 304 g/t silver over 1 meter of what appears to be a fractured quartz vein in a silicified zone of Franklin volcanics. Previous work has failed to find any other exposures of the vein in the area, and while the strike appears to be approximately east-west, the precise direction cannot be determined from the limited outcrop. For this work, therefore, additional prospecting and hand-trenching was performed in areas along the expected strike direction in an effort to find additional exposures. Four rock chip samples, one sub-crop sample and one float sample were

collected in this area. In addition, a traverse was run along a deactivated forestry road above the Dane workings. One sub-crop sample was collected from a road cut exposure. Sample locations are shown on the map in Appendix 1.

Metallurgical testing was carried out using a new composite sample prepared from previously assayed low-grade samples of historical Union Mine tailings, combined with a sample from a previously prepared composite of higher grade tailings. The composite was mainly (75%) made up of the higher-grade composite from the main tailings site, together with lower grade samples collected from several locations where tailings have been stored. This new composite was used to conduct a grinding and pre-flotation test, followed by a leach test on the flotation concentrate and three comparative leach tests on splits of the flotation tails. Analytical results for the original samples and the new composite (FRT Comp #2B) are shown in Table 5. Due to past issues with cyanide use in re-processing at the site, all extraction test work has focused on non-cyanide gold and silver recovery methods.

All rock samples from site, as well as the flotation concentrate and tailings leach residues from metallurgical testing were digested in aqua regia using a 0.5 gram sample. Samples were then analyzed with a 36 element scan by ICP-MS. Solution sample from Metallurgical testing were analyzed by ICP-ES. All solid samples were analysed by Bureau Veritas Commodities Canada Ltd (formerly Acme Analytical Laboratories Ltd.) in Vancouver, while solution samples were analyzed by Kemetco Research Inc. in Richmond.

Details of the site sampling and metallurgical testwork carried out are described below. Sample details and assays are summarized in Table 4 and full analytical results are included in the Appendix.

Ida Area Rock Sampling

A total of 6 samples were collected from the area surrounding the Ida South showing. Prospecting on a small ridge about 30 meters east of the showing, areas of strong silicification in the Franklin volcanic rocks were noted. These included zones of quartz breccia and fractured quartz with iron staining and some pyrite. In this area two chip samples were collected. The first (CR171004-1) was a 1 meter wide sample across a highly silicified zone, while the second (CR171004-2) was from a more strongly developed quartz vein immediately to the north. Both samples were slightly anomalous in copper, and while the first had no other values of significance, the second also showed slightly anomalous gold and silver and an elevated lead content (0.16% Pb).

Closer to the showing two additional chip samples were taken along the top of the ridge above the showing. The first (CR171004-3) was over a width of 0.75 meters and was an extension of an earlier sample over a silicified zone immediately to the north that had shown low but anomalous precious metal values. This sample was only slightly anomalous for gold. The second sample was approximately 2 meters south of the first and covered a poorly exposed quartz breccia zone in altered volcanic rocks. The sample covered 0.5 meters, but the vein was not fully exposed. This sample carried more significant precious metal values (1.43 g/t Au and 22.4 g/t Ag) but low base metal values, suggesting a continuity with the vein outcropping below.

Further to the west a small hand trench was excavated and samples of silicified volcanic rocks carrying pyrite were collected (CR171004-5). While the sampling appeared close to bedrock the sample was fractured and loose in situ, and was therefore designates as sub crop. This sample returned minimal values.

One final sample was collected in this area (CR171004-7). This sample was collected from coarse vein float carrying quartz and highly weathered sulphides. The source was not evident but it was

likely from historical workings in the Ida claim area. Despite the weathering this sample contained low grade copper value (0.088% Cu) along with anomalous precious metal values.

Dane Area Rock Sampling

The area above the Dane workings can be accessed through a network of recently deactivated logging spur roads. One of these spurs was examined along its lower level and was found to offer limited outcrop. Considerable alteration was seem in some of the exposures that were present, and one in particular showed strong silicification and pyrite over several metes of exposure. The degree of fracturing and the limited size of the outcrop made it unclear if the exposure was bedrock, so it was classified as sub crop. A sampling of the more mineralized sections (CR171004-6) returned minimal values.

A small pit was located just below the road, but it was partially sloughed and highly overgrown. No mineralization was seen in any of the portions exposed, and no sample was collected.

Table 4 – Rock Sample Descriptions and Analytical Results

Sample #	Date	Description	UTM East	UTM North	Width (m)	Au g/t	Ag g/t	Cu %	Pb %	Zn %
	Ida Area - Rock									
CR171004-1	2017-10-04	Quartz breccia in silicified volcanics	403369	5490668	1.0	<0.005	<0.2	0.016	0.001	0.007
CR171004-2	2017-10-04	Fractured quartz with pyrite and iron stain	403368	5490669	1.2	0.020	1.6	0.020	0.159	0.052
CR171004-3	2017-10-04	Fractured quartz with iron staining	403329	5490688	0.8	0.021	0.3	0.010	0.001	0.004
CR171004-4	2017-10-04	Silicified volcanics and quartz breccia near -3	403329	5490683	0.5	**1.430**	**22.4**	0.018	0.005	0.003
CR171004-5	2017-10-04	Subcrop - silic. volc. and quartz with pyrite	403310	5490690	-	0.003	0.2	0.009	0.000	0.004
CR171004-7	2017-10-04	Weathered sulphidic vein float	403337	5490716	-	0.103	3.7	0.088	0.001	0.004
	Dane Area - Rock									
CR171004-6	2017-10-04	Subcrop - silic. volc. with disseminated pyrite	403372	5489880	1.5	0.001	0.2	0.012	0.000	0.002

Union Tails – Metallurgical Testing

Sampling of the tailings from the Union mine has shown that significant gold and silver values remain despite past reprocessing operations. Previous metallurgical work has shown promise using non-cyanide methods to extract gold, but silver extraction has been low. In the most recent work, tests using a combination of flotation and leaching have showed positive extraction results and also showed a significant elevation in the back-calculated head grade. Because the tests are based on much larger samples than typical assays, this testing provides valuable new information on the true grade of precious metal bearing samples where segregation of values within the sample can result in underestimated grades with normal assay methods.

For the current work program a series of tests were conducted to continue to refine the float-leach flowsheet and to test a higher grade feed material focused more heavily on the main tailings site. For this work a new composite was prepared that was made up primarily of a main tailings composite prepared in 2014 (75% by weight) with the addition of smaller amounts of lower grade samples collected in 2015, as indicated in Table 5. This provided a feed material with a head grade (calculated from assays) of approximately 1 g/t Au and 50 g/t Ag. The original sample grades and the calculated composite grade are both included in Table 5.

Table 5 – Metallurgical Composite

Sample #	Date	Description	UTM East	UTM North	Au g/t	Ag g/t	Cu %	Pb %	Zn %
	Union Area - Tailings Composite								
CR150709-T1	2015-07-09	Tailings Comp - middle shallow zone	401997	5489733	0.59	36.1	0.009	0.02	0.06
CR150709-T3	2015-07-09	Roadside tailings piles - composite	402300	5490400	0.42	41.0	0.005	0.01	0.05
CR151027-T1	2015-10-27	Composite - Gloucester Creek Pond Area	402450	5490450	0.72	31.5	0.007	0.02	0.06
FRT Comp #1	*2014*	*Previous Main Tailings Composite*			*1.20*	*57.8*	*0.008*	*0.02*	*0.06*
FRT Comp #1B	*2018*	*Weighted Composite of Above 3 Samples*			*1.02*	*51.6*	*0.008*	*0.02*	*0.06*

The approach for investigating the remaining recovery potential from site tailings has focused on alternatives to cyanide leaching due to environmental issues with previous operations that used cyanide at the site. Testing to date has shown that flotation and salt-based leaching both had potential as processing methods, and the most recent work has focused on a possible combination of the two methods. The current testing began with a bulk pre-float test on a ground sample of the new composite using a small addition of fuel oil and low doses of precious metal collectors together with frother as needed. The concentrate was cleaned to remove slimes and the float tails were composited and split into smaller test lots for leach testing. The flotation concentrate and three tails test lots were subjected to salt leaching to test gold and silver recovery under a range of conditions. Back-calculated head grades from each leach test were then used to calculate the flotation recoveries and the overall head grade of the composite sample. Detailed reports for each test conducted are provided in Appendix 2.

As noted, in addition to evaluating the extraction potential, these tests provide grade confirmation for gold values present in the tailings samples, which can be subject to nugget effect. Calculated gold grades have been consistently higher than the assayed grade, but the magnitude has varied from test to test. For the current work the back-calculated head grade was 1.10 g/t Au, which was 8% higher than the calculated head. The flotation gave relatively low precious metal recoveries but the concentrate showed good grades for both gold and silver. The concentrate contained 17.4 g/t Au and 327 g/t Ag, representing 27% recovery for gold, but only 12% for silver.

The leach tests carried out on the flotation products evaluated gold and silver recoveries under a range of leach conditions, resulting in a range of recoveries. The best results (Tests FL3 T2 and T1) gave recoveries of 43% for Au and 22% for Ag respectively. When combined with the flotation concentrate recovery this would result in overall recoveries of 58% for gold and 31% for silver. Applying the leach to the flotation concentrate resulted in limited gold and silver recovery.

Interpretation of Results

Site Work

Work in the vicinity of the Ida South showing was encouraging in identifying a presumed extension of the occurrence to the west. While most of the samples had low values, this appears to be the nature of the Union-style veins, which need to be identified and defined by assay due to the lack of strong distinctive mineralization. With the identification of a secondary exposure of the vein, is will be possible to make a better projection of the direction of the strike. From the location of the sample that carried values it appears that the orientation is slightly to the west-southwest rather than east-west or west-northwest as previously assumed. This will be useful in guiding further detailed prospecting along strike. In this area soil cover is generally thin, but there is limited outcrop, meaning that hand-trenching is needed to find strike extensions.

The vein float analyzed was also encouraging in carrying significant copper values despite heavy weathering. There were also anomalous precious metal values, suggesting similar mineralization to the Dane showing, which locally carries high values.

The sample collected along the road above the Dane did not show any values but its location in significantly north of the known mineralization and this exposure highlights the extent of hydrothermal-style alteration in the area. The immediate area of the Dane workings was not visited, but this forestry spur road has created greatly improved access to the upper workings and more detailed work in this area is justified by previous high grade sampling.

Metallurgical Testing

The metallurgical testing showed some positive results from the flotation, with good concentrate grades and continued confirmation of tailings grades that exceed those obtained through assays of smaller samples. Leach recoveries were not as strong as in some of the previous testing, indicating that the adjustment made to the leaching conditions did not have the desired effect. The results do, however add further important test data that can be used for further optimization. Flotation concentrate grades are very encouraging, but additional work needs to be undertaken to enhance the overall recoveries if an economic process is to be developed.

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Author's Qualifications

I, Douglas Warkentin, P.Eng., a professional engineer with a business address at 7069 McBride St., 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 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 Franklin 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 October 2018.

Doug Warkentin, PEng.
Metallurgical Engineer

Statement of Costs

Site Exploration, Research and Sampling

Logistics and Site Labour		
Doug Warkentin:	October 4-5, 2017 (20 hours @ $55/hr)	$1100.00
Transportation (2 days vehicle rental, plus fuel)		$244.86
Accommodation (1 night)		$91.53
Food and Supplies (2 days)		$18.17

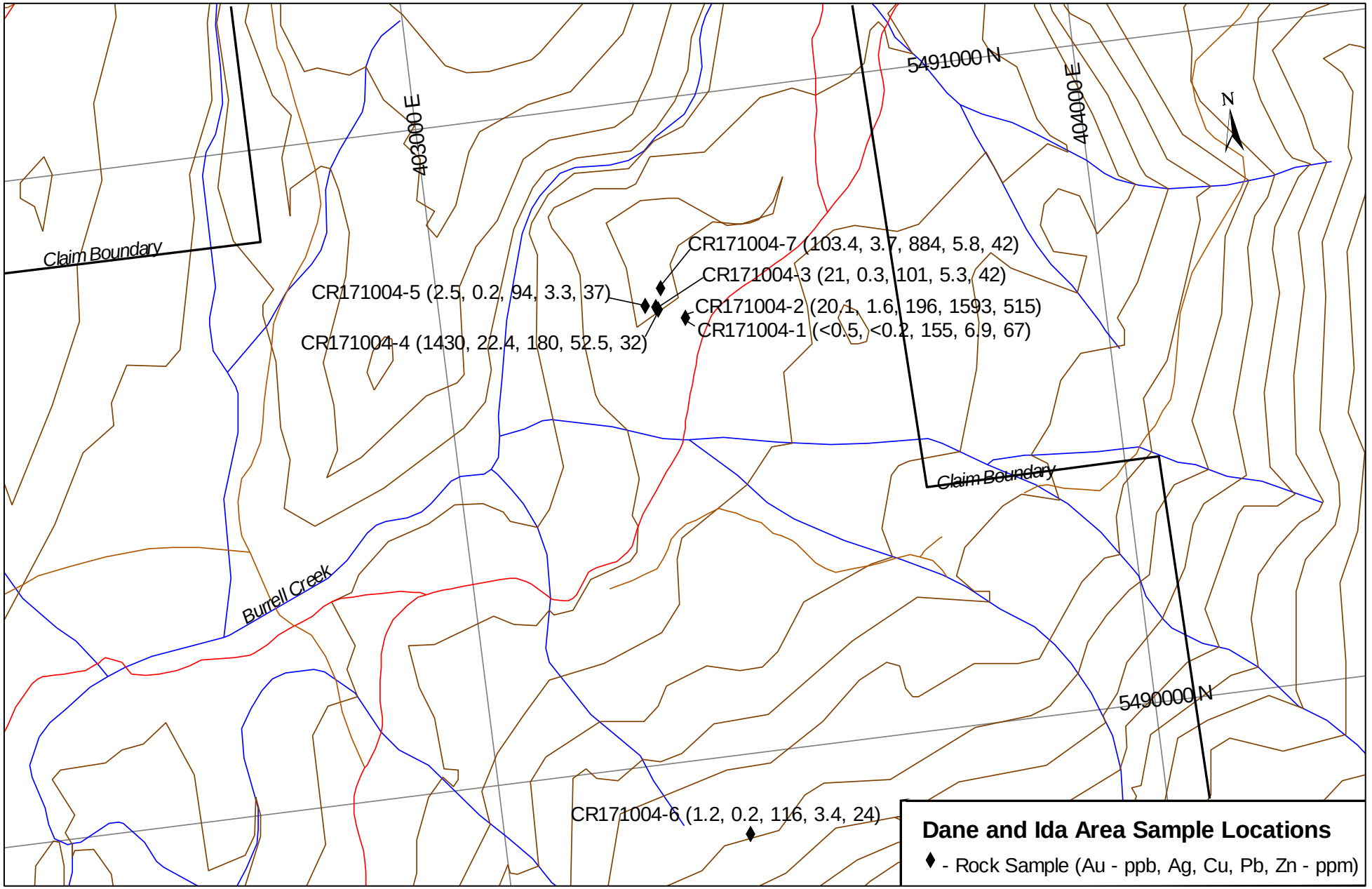
Metallurgical Testwork

Laboratory Testing (5 tests @ $396.00/test)		$1980.00

Sample Analysis

Sample Preparation	(7 samples @ $13.19/sample)	$92.33
	(5 samples @ $8.55/sample)	$42.75
Sample Assaying	(7 samples @ $16.64/sample)	$116.48
	(5 samples @ $17.17/sample)	$85.85
	(1 sample @ $17.59/sample)	$17.59
	(11 samples @ $35.00/sample)	$385.00
Report Preparation		$1265.00
Total Cost		**$5,439.56**

Appendix 1 – Sample Location Map


5491000 N
403000 E
404000 E
N
Claim Boundary
CR171004-7 (103.4, 3.7, 884, 5.8, 42)
CR171004-3 (21, 0.3, 101, 5.3, 42)
CR171004-5 (2.5, 0.2, 94, 3.3, 37)
CR171004-2 (20.1, 1.6, 196, 1593, 515)
CR171004-1 (<0.5, <0.2, 155, 6.9, 67)
CR171004-4 (1430, 22.4, 180, 52.5, 32)
Claim Boundary
Burrell Creek
5490000 N
CR171004-6 (1.2, 0.2, 116, 3.4, 24)
Dane and Ida Area Sample Locations
- Rock Sample (Au - ppb, Ag, Cu, Pb, Zn - ppm)

Scale 1:8,000

Appendix 2 – Metallurgical Test Reports

Flotation Test Report

Test: FL3 **Date:** 3 May-18
Feed: FRT Comp 1B (Old Comp 1 with 25% lower grade tails)
Grind: 1.5 min in rod mill (50% charge, 65% solids)

Conditions:

Stage	Reagents added, grams per tonne							Time, minutes			pH
	Kerosene	A3418A	A208			DF250	MIBC	Grind	Cond.	Froth	
Grind	200							1.5			
Condition		10	8				28		3		8.87
Rougher						56	28			8	8.9
											8.65
Cleaner 1						14				5	8.82
											8.71
Cleaner 2										5	8.71
											8.69
Cleaner 3						14				5	8.76
											8.69
Total	*200*	*10*	*8*	*0*	*0*	*84*	*56*	*1.5*	*3*	*23*	

Metallurgical Balance

Product	Weight		Assays						% Distribution					
	g	%	Au (g/t)	Ag (g/t)	Cu (%)	Fe (%)	Pb (%)	Zn (%)	Au	Ag	Cu	Fe	Pb	Zn
Cleaned Concentrate	8.38	1.69	17.42	327	0.05	5.11	0.06	0.16	26.8	12.5	0.3	3.4	4.5	4.9
Combined Float Tails	487.2	98.31	0.82	39.5	0.24	2.50	0.02	0.05	73.2	87.5	99.7	96.6	95.5	95.1
Head (calc.)	495.5	100.0	1.10	44.4	0.24	2.54	0.02	0.06	100.0	100.0	100.0	100.0	100.0	100.0
Head (assay)			1.02	51.6	0.01	2.53	0.02	0.06						

Leach Extraction Test Report

Test: FL3 C
Sample: FRT Comp #1B Float Concentrate

Date: 10-May-18
Project: I0603

Test Conditions

Solids:	8.38	g	**Notes:** Concentrate leach testing using $NH_4Cl/NH_4OH/NaCl$ w $CuSO_4$
Solution:	50	g	
Solids Content:	14.35	%	
Grind:	1.5	min	
Temp:	amb. (15 °C)		
pH:	alk		
Duration:	90	hrs	Tare: 104.31 g

Head Grade

	Au	Ag	Pb	Zn	
Calculated:	17.42	326.8	573	1618	g/t
Assayed:	n/a	n/a	n/a	n/a	g/t

Leach Solution Data

Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$ (g)	NH_4OH (g)	NH_4Cl (g)	$CaCl_2.2H_20$ (g)	Sol'n Vol. (mL)	Sample (mL)	Au (mg/L)	Ag (mg/L)	Pb*	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	180.3	75.9	9.79	0.33	5.94	5.36	14.71										
1.0	180.5	76.2	9.80		1.01			60	5.0	0.13	3.10	2.3	25.1	0.01	0.19	0.14	1.50
16	188.0	83.7	9.90		1.22			67	5.0	0.16	2.50	0.5	29.2	0.01	0.18	0.05	2.09
94	204.4	100.1	9.98					85		0.19	1.70	0.0	26.2	0.02	0.17	0.01	2.51
Total				0.33	8.16	5.36	14.71										

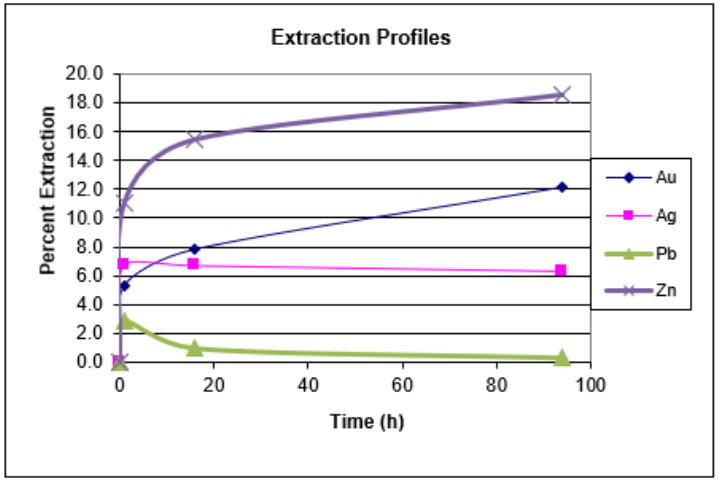
Solids

Time (hrs)	Wt (g)	Au (g/t)	Ag (g/t)	Pb (g/t)	Zn (g/t)	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
94	8.44	15.20	304.0	567	1309	0.1	2.6	4.8	11.0

Leach Results

Time (hrs)	Au Dist. (%)	Ag Dist. (%)	Pb Dist. (%)	Zn Dist. (%)	$CuSO_4$ Cons. (kg/t)	NH_4OH Cons. (kg/t)	NH_4Cl Cons. (kg/t)	NaCl Cons. (kg/t)
0	0.0	0.0	0.0	0.0	39.4	708	640	1755
1	5.3	6.8	2.9	11.1	39.4	829	640	1755
16	7.8	6.7	0.9	15.4	39.4	974	640	1755
94	12.1	6.3	0.3	18.5	39.4	974	640	1755
Residue	87.9	93.7	99.7	81.5				
Total	100.0	100.0	100.0	100.0				

* Values below detection limit shown as zero



Leach Extraction Test Report

Test: FL3 T1 **Date:** 24-May-18
Sample: FRT Comp #1B Float Tails **Project:** I0603

Test Conditions

Solids:	50 g	**Notes:**	Tails leach optimization testing using $NH_4OH/CaCl_2$ w $CuSO_4$
Solution:	100 g		
Solids Content:	33.33 %		
Grind:	1.5 min		
Temp:	amb. (15 °C)		
pH:	alk		
Duration:	20 hrs	Tare:	104.32 g

Head Grade

	Au	Ag	Pb	Zn	
Calculated:	0.73	36.1	202	507	g/t
Assayed:	0.60	35.5	190	559	g/t

Leach Solution Data

Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$ (g)	NH_4OH (g)	NH_4Cl (g)	$CaCl_2.2H_20$ (g)	Sol'n Vol. (mL)	Sample (mL)	Au (mg/L)	Ag (mg/L)	Pb*	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	254.0	149.7	10.72	0.51	7.00		29.41										
1.5	253.4	149.0	10.80					85	5.0	0.00	9.78	9.0	29.3	0.000	0.84	0.77	2.50
14	279.1	174.8	10.80					111	5.0	0.00	3.55	1.2	23.8	0.000	0.44	0.18	2.79
20	287.5	183.2	10.76					120		0.00	2.69	0.5	21.2	0.014	0.39	0.11	2.82
Total				0.51	7.00	0.00	29.41										

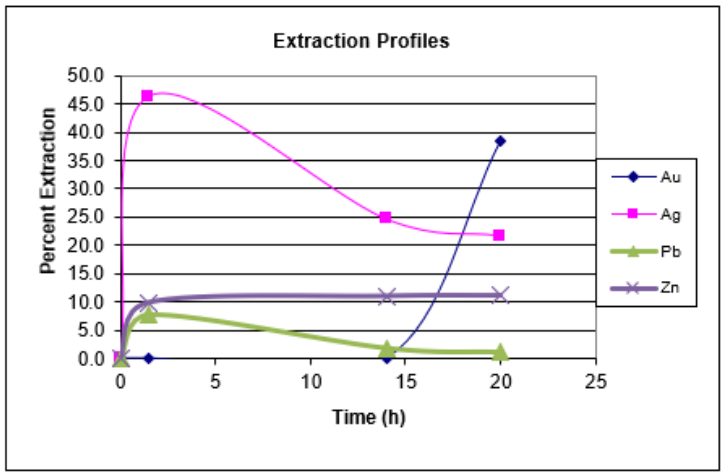
Solids

Time (hrs)	Wt (g)	Au (g/t)	Ag (g/t)	Pb (g/t)	Zn (g/t)	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
20	49.8	0.45	28.4	200	452	0.0	1.4	10.0	22.5

Leach Results

Time (hrs)	Au Dist. (%)	Ag Dist. (%)	Pb Dist. (%)	Zn Dist. (%)	$CuSO_4$ Cons. (kg/t)	NH_4OH Cons. (kg/t)	NH_4Cl Cons. (kg/t)	NaCl Cons. (kg/t)
0	0.0	0.0	0.0	0.0	10.2	140.0	0.00	588.2
1.5	0.0	46.3	7.7	9.9	10.2	140.0	0.00	588.2
14	0.0	24.6	1.8	11.0	10.2	140.0	0.00	588.2
20	38.4	21.6	1.1	11.1	10.2	140.0	0.00	588.2
Residue	61.6	78.4	98.9	88.9				
Total	100.0	100.0	100.0	100.0				

* Values below detection limit shown as zero



Leach Extraction Test Report

Test: FL3 T2 **Date:** 31-May-18
Sample: FRT Comp #1B Float Tails **Project:** I0603

Test Conditions

Solids: 100 g **Notes:** Tails leach optimization testing using $NH_4OH/CaCl_2$ w $CuSO_4$
Solution: 120 g (use treated FL3-T1 leachate+wash)
Solids Content: 45.45 %
Grind: 1.5 min
Temp: amb. (15 °C)
pH: alk
Duration: 95 hrs Tare: 104.23 g

Head Grade

	Au	Ag	Pb	Zn	
Calculated:	0.85	40.6	214	539	g/t
Assayed:	0.60	35.5	190	559	g/t

Leach Solution Data

Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$ (g)	NH_4OH (g)	NH_4Cl (g)	$CaCl_2.2H_20$ (g)	Sol'n Vol. (mL)	Sample (mL)	Au (mg/L)	Ag (mg/L)	Pb*	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	340.0	235.8	10.56	0.98	1.82		15.00										
4	349.9	245.6	10.44		1.23			132	94.2	0.24	1.17	0.1	1.5	0.023	0.11	0.01	0.14
20	402.5	298.2	10.58		1.96		14.70	185	5.0	0.05	0.51	0.0	17.9	0.032	0.20	0.01	3.46
95	433.6	329.4	10.54					208		0.00	0.93	0.0	17.8	0.036	0.32	0.03	3.93
Total				0.98	5.01	0.00	29.70										

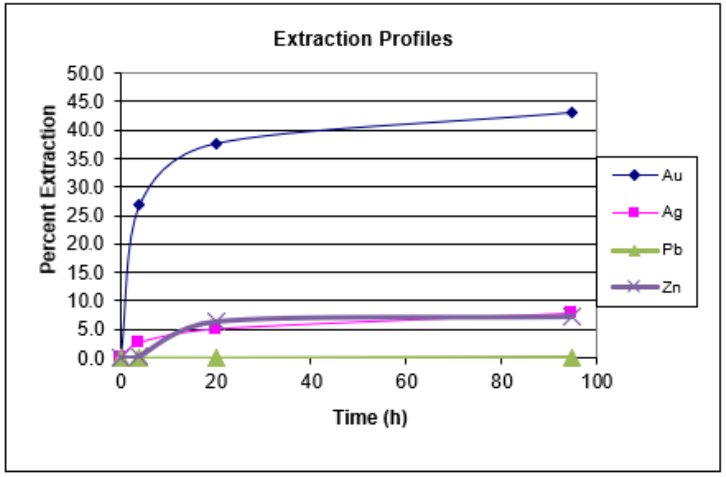
Solids

Time (hrs)	Wt (g)	Au (g/t)	Ag (g/t)	Pb (g/t)	Zn (g/t)	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
95	100.53	0.48	37.2	212	497	0.0	3.7	21.3	50.0

Leach Results

Time (hrs)	Au Dist. (%)	Ag Dist. (%)	Pb Dist. (%)	Zn Dist. (%)	$CuSO_4$ Cons. (kg/t)	NH_4OH Cons. (kg/t)	NH_4Cl Cons. (kg/t)	$CaCl_2.2H_20$ Cons. (kg/t)
0	0.0	0.0	0.0	0.0	9.8	18.2	0.00	150.0
4	26.8	2.7	0.0	0.3	9.8	30.5	0.00	150.0
20	37.6	5.0	0.0	6.4	9.8	50.1	0.00	297.0
95	43.0	7.8	0.1	7.3	9.8	50.1	0.00	297.0
Residue	57.0	92.2	99.9	92.7				
Total	100.0	100.0	100.0	100.0				

* Values below detection limit shown as zero



Leach Extraction Test Report

Test: FL3 T3 **Date:** 14-Jun-18
Sample: FRT Comp #1B Float Tails **Project:** I0603

Test Conditions

Solids: 100.01 g **Notes:** Tails leach optimization testing using $NH_4OH/CaCl_2$ w $CuSO_4$ and accelerator
Solution: 190 g (use treated FL3-T2 leachate+wash)
Solids Content: 34.49 %
Grind: 1.5 min
Temp: amb. (15 °C)
pH: alk
Duration: 15 hrs Tare: 104.33 g

Head Grade

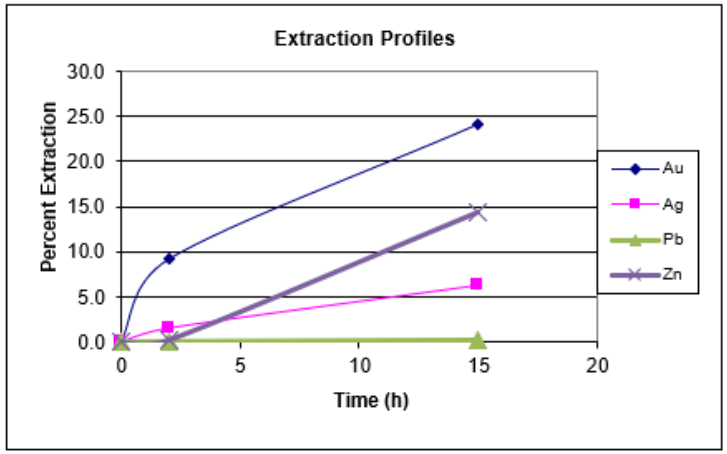
	Au	Ag	Pb	Zn	
Calculated:	0.83	40.2	204	556	g/t
Assayed:	0.60	35.5	190	559	g/t

Leach Solution Data

Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$ (g)	NH_4OH (g)	NH_4Cl (g)	$CaCl_2.2H_20$ (g)	Sol'n Vol. (mL)	Sample (mL)	Au (mg/L)	Ag (mg/L)	Pb*	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	425.9	321.5	10.60	0.84	6.42	1.07	5.05										
2	426.8	322.5	10.58		1.99	0.62		202	86.8	0.09	0.71	0.1	1.6	0.008	0.06	0.01	0.14
15	450.4	346.0	10.40					229		0.00	0.64	0.2	34.4	0.020	0.25	0.04	8.02
Total				0.84	8.41	1.69	5.05										

Solids

Time (hrs)	Wt (g)	Au (g/t)	Ag (g/t)	Pb (g/t)	Zn (g/t)	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
15	99.87	0.63	37.7	204	477	0.1	3.8	20.4	47.6



Leach Results

Time (hrs)	Au Dist. (%)	Ag Dist. (%)	Pb Dist. (%)	Zn Dist. (%)	$CuSO_4$ Cons. (kg/t)	NH_4OH Cons. (kg/t)	NH_4Cl Cons. (kg/t)	$CaCl_2.2H_20$ Cons. (kg/t)
0	0.0	0.0	0.0	0.0	8.4	64.2	10.7	50.5
2	9.1	1.5	0.0	0.2	8.4	84.1	16.9	50.5
15	24.1	6.3	0.2	14.4	8.4	84.1	16.9	50.5
Residue	75.9	93.7	99.8	85.6				
Total	100.0	100.0	100.0	100.0				

* Values below detection limit shown as zero

Appendix 3 – Assay Reports

BUREAU VERITAS MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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 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

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

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

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

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
MARCUS LAU
Production Manager

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 MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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

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
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

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

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

CERTIFICATE OF ANALYSIS VAN17003052.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	FA330
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppb
	MDL	1	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	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	1430
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	

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: July 10, 2018
Report Date: July 30, 2018
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN18001667.1

CLIENT JOB INFORMATION

Project: Fr-Nv
Shipment ID:
P.O. Number
Number of Samples: 8

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	7	Sorting, labeling and boxing samples received as pulps			VAN
AQ200	7	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
AR402	1	Aqua Regia Digestion 0.5g / 100 mL (SCH)	0.5	Completed	VAN

ADDITIONAL COMMENTS

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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Project: Fr-Nv
Report Date: July 30, 2018

CERTIFICATE OF ANALYSIS VAN18001667.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	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	1	0.01	0.001	1
FL2 T4 Res	Rock Pulp	19.5	270.4	181.1	453	22.6	141.4	6.7	1142	2.37	20.9	306.8	0.4	83	2.1	3.9	0.2	53	3.93	0.046	3
FRT FL3-T1 Res	Rock Pulp	10.9	242.5	200.1	452	28.4	75.5	5.4	1273	2.48	22.9	454.0	0.4	87	3.1	4.3	0.1	55	4.15	0.048	3
FRT FL3-T2 Res	Rock Pulp	11.1	259.6	212.1	497	37.2	81.7	6.0	1286	2.53	23.1	479.8	0.4	91	4.0	4.2	0.1	56	4.30	0.050	3
FRT FL3-T3 Res	Rock Pulp	11.0	234.6	204.1	477	37.7	78.6	5.6	1273	2.48	22.2	631.7	0.4	85	3.3	4.3	0.1	55	4.23	0.049	3
FRT FL3-C1 Res	Rock Pulp	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.
FRT FL3-C Res	Rock Pulp	17.2	472.0	566.9	1309	>100	129.1	18.9	2151	5.11	197.3	15200.0	0.7	132	11.2	15.5	0.5	99	6.14	0.070	5
LT-01 Res	Rock Pulp	1.0	191.3	21.5	75	0.5	13.2	21.1	1149	5.89	2598.0	825.0	<0.1	108	<0.1	1.9	<0.1	192	3.46	0.055	<1
LT-04 Res	Rock Pulp	8.7	228.7	30.8	72	0.4	81.2	20.5	1188	5.78	2310.9	663.6	<0.1	106	0.1	1.6	<0.1	200	3.49	0.055	<1

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Project: Fr-Nv
Report Date: July 30, 2018

CERTIFICATE OF ANALYSIS VAN18001667.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AR402
	Analyte	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Ag
	Unit	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	2
FL2 T4 Res	Rock Pulp	245	0.98	21	0.021	<20	1.10	0.007	0.06	0.7	0.09	3.6	<0.1	0.08	4	1.2	<0.2	
FRT FL3-T1 Res	Rock Pulp	147	1.05	28	0.020	<20	1.18	0.006	0.07	0.8	0.13	3.5	<0.1	0.07	5	1.7	<0.2	
FRT FL3-T2 Res	Rock Pulp	145	1.06	30	0.020	<20	1.20	0.007	0.07	0.7	0.11	3.7	<0.1	0.11	5	1.7	<0.2	
FRT FL3-T3 Res	Rock Pulp	151	1.05	28	0.020	<20	1.19	0.006	0.07	0.7	0.10	3.7	<0.1	<0.05	5	0.9	<0.2	
FRT FL3-C1 Res	Rock Pulp	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.	
FRT FL3-C Res	Rock Pulp	211	1.98	50	0.025	<20	2.27	0.011	0.11	1.0	0.48	6.6	0.1	0.54	9	8.5	0.4	304
LT-01 Res	Rock Pulp	19	1.56	14	0.017	<20	1.69	0.005	0.06	0.1	0.01	23.9	<0.1	0.77	8	0.9	<0.2	
LT-04 Res	Rock Pulp	149	1.51	15	0.017	<20	1.69	0.006	0.07	0.2	0.01	23.5	<0.1	0.49	8	0.6	<0.2	

KEMETCO RESEARCH INC
| Kemetco Research Inc | #150–13260 Delf Place, Richmond, BC, V6V 2M2 CANADA
| Tel: 604-273-3600 | Fax: 604-273-3609 | E-Mail: info@kemetco.com | Website: www.kemetco.com

Sample ID	I0603 FL3-C1	I0603 FL3-C2	I0603 FL3-C3	I0603-FL3-T1-1	I0603-FL3-T1-2	I0603-FL3-T1-3	I0603-FL3-T2-2	I0603-FL3-T2-3	I0603 FL3-T3-2
ELEMENTS	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Ag Silver	3.1	2.5	1.7	9.78	3.55	2.69	0.51	0.79	0.64
Al Aluminium	<0.2	<0.2	0.2	2.80	1.09	1.06	0.95	0.96	1.08
As Arsenic	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
Au Gold	0.13	0.16	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
B Boron	1.6	1.0	<0.5	1.38	2.23	1.42	0.97	0.53	1.27
Ba Barium	5.3	4.7	3.6	3.47	2.66	2.61	2.54	2.72	4.27
Be Beryllium	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
Bi Bismuth	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
Ca Calcium	56185	50238	37648	73897	54052	49279	30774	30491	37541
Cd Cadmium	0.3	0.3	0.2	0.39	0.30	0.28	0.19	0.22	0.25
Co Cobalt	0.3	0.4	0.4	0.11	0.08	0.07	<0.05	0.05	<0.1
Cr Chromium	0.1	0.1	<0.05	0.79	<0.05	<0.05	<0.05	<0.05	<0.1
Cu Copper	1026	1044	784	1206	848	761	632	631	572
Fe Iron	0.9	1.1	1.0	6.57	0.85	0.77	1.02	1.03	1.54
K Potassium	12.9	11.7	10.0	19.04	14.83	13.89	18.83	19.69	25.9
Li Lithium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
Mg Magnesium	12.6	11.3	7.9	1.53	0.74	0.65	0.78	0.49	2.39
Mn Manganese	0.8	0.4	0.5	<0.01	<0.01	<0.01	<0.01	<0.01	0.17
Mo Molybdenum	0.2	0.2	0.2	0.18	0.18	0.19	0.22	0.27	0.26
Na Sodium	11.3	10.6	8.1	11.82	12.23	11.75	283.23	263.59	529.0
Ni Nickel	0.6	0.8	0.8	1.22	0.96	0.89	0.17	0.22	0.29
Pb Lead	2.3	0.5	<0.2	9.03	1.22	0.49	<0.2	<0.2	<0.4
Sb Antimony	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
Se Selenium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
Si Silicon	4.8	3.9	2.7	0.90	0.73	0.89	4.52	4.20	4.39
Sn Tin	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
Sr Strontium	35.9	32.0	23.3	47.34	34.07	30.29	20.06	26.98	22.9
Ti Titanium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
Tl Thallium	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.4
U Uranium	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.
V Vanadium	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2
Zn Zinc	25.1	29.2	26.2	29.30	23.77	21.19	17.89	17.81	34.4