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

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Geochemical, Metallurgical

TOTAL COST: $4,057.61

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

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A **YEAR OF WORK:** 2015

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5564528, 5570209, 5574897, 5579678

PROPERTY NAME: Franklin

CLAIM NAME(S) (on which the work was done): Alpha Twin, Union, Union Tails

COMMODITIES SOUGHT: Au, Ag, Cu

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: Franklin Camp - including 082ENE003, 082ENE020 and 082ENE052

MINING DIVISION: Greenwood **NTS/BCGS:** NTS: 082E09W

LATITUDE: 49 ° 33 '25 " **LONGITUDE:** 118 ° 22 '04 " **(at centre of work)**

OWNER(S):
1) Doug Warkentin 2)

MAILING ADDRESS:
7069 McBride Street
Burnaby, BC, V5E 1R1

OPERATOR(S) [who paid for the work]:
1) Crucible Resources Ltd. 2)

MAILING ADDRESS:
7069 McBride Street
Burnaby, BC, V5E 1R1

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Jurassic, Eocene, Carboniferous-Permian, Penticton Group, Harper Ranch Group, Volcaniclastic Rocks, Granites, Kettle River Formation, Marron Formation, Franklin Group, Limestone Skarns

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00637,17273, 21768, 26306, 26440, 27328, 27604, 27929, 28790, 29306, 33945, 34310, 34714, 34846, 35477

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TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock	6 samples, ICP analysis	Alpha Twin, Union Tails	1321.86
Other	tailings - 2 samples, ICP analysis	Union Tails	220.00
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying	21 samples, ICP and fire assay	Alpha Twin, Union, Union Tails	660.75
Petrographic			
Mineralographic			
Metallurgic	2 leach tests, 1 flotation test	Union Tails	1855.00
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST:	$44057.61

Franklin Project

Greenwood Mining Division
NTS 082E/08 and /09

Project Area Location:
UTM NAD 83: Zone 11, 402000 East, 5489500 North

Registered Owner: Doug Warkentin
Operator: Crucible Resources Ltd.

Union Tails Area – Metallurgical Testing Report

Project Tenure Numbers: **1015696, 1016556, 1019846, 1019983, 1024505, 1028442, 1032615, 1032735, 1032842, 1033089, 1036687, 1036688, 1036689, 1036690, 1036691, 1036692.**

SOW Event Numbers: 5564528, 5570209, 5574897, 5579678.

November 26, 2015

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, including 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 and along Franklin Creek to the northwest. 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 Valley road to the south, and runs along the east side of the Burrell Creek Valley in the project area. Near the northeast boundary of the property a forestry spur road crosses Burrell Creek and splits into three branches, providing access to much of the western and north-western parts of the project area. These are recently active logging roads that mostly remain in 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, appear to remain as active forestry roads and are in good condition where they pass through the project area.

The entire area was part of an active 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 generally tree-covered, but with relatively little underbrush.

Tenure Information

The Franklin Project currently consists of 16 Mineral Titles Online claims with a total area of 1886 hectares. The project claims form a single contiguous block in an area covering the confluence of Franklin, Gloucester and Burrell Creeks, and covering much of Mt. McKinley and Mt. Franklin. It also extends to the northwest along Franklin Creek, including the Twin Creek and McDonald Creek areas. The project claims also include relatively small areas on the east side of Burrell Creek north of Dinsmore Creek and along the lower portion of Nichol Creek. Most of the project claims cover parts of the historically active Franklin mining camp, with a long history of past exploration and previous tenures. The area includes many reverted crown granted mineral claims that no longer hold title, along with a small number of crown grants that remain in good standing. The active crown grants principally cover the past producing Union and McKinley Mines, along with parts of the Homestake mine area. Together these claims exclude title to approximately 80 hectares of the total project area.

The 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.

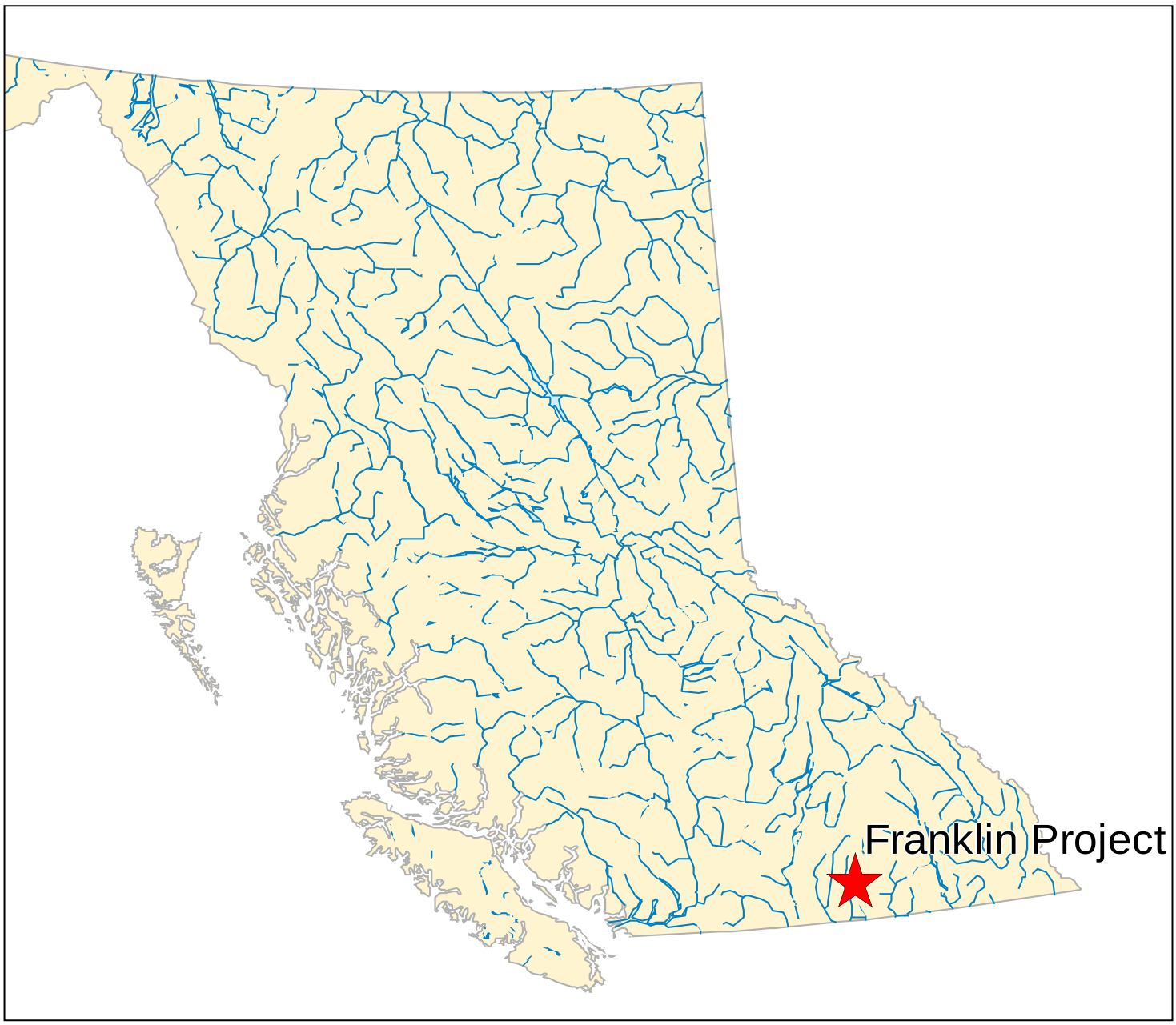


Figure 1 – Franklin Project Location Map

Figure 2 outlines the tenures of the Franklin Project.

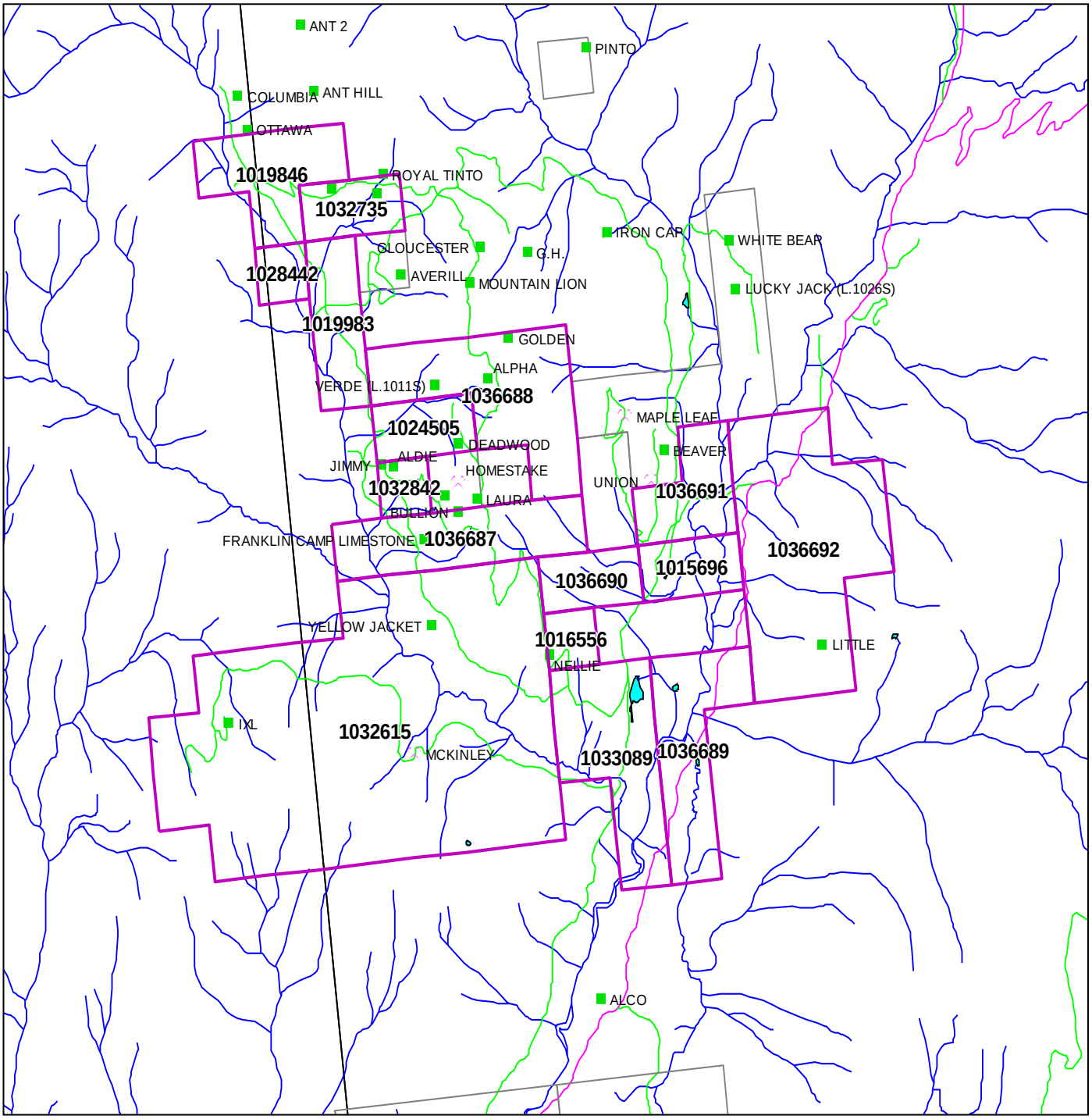


Figure 2 – Project Tenure Outline

Table 1: Franklin Project Mineral Tenures

Title Number	Claim Name	Owner	Map Number	Issue Date	Good To Date	Area (ha)
1015696	UNION TAILS	145582 (100%)	082E	2013/jan/04	2016/jan/06	41.92
1016556	NELLIE	145582 (100%)	082E	2013/feb/02	2016/jan/06	20.96
1019846	AVERRILL NW	145582 (100%)	082E	2013/may/28	2016/jan/06	83.77
1019983	AVERILL SW	145582 (100%)	082E	2013/jun/01	2016/jan/06	62.85
1024505	TWIN CREEK	145582 (100%)	082E	2013/dec/19	2016/jan/06	41.90
1028442	AV W PT	145582 (100%)	082E	2014/may/22	2016/jan/25	20.95
1032615	MCKINLEY-IXL	145582 (100%)	082E	2014/dec/08	2016/jan/06	712.69
1032735	BUFFALO	145582 (100%)	082E	2014/dec/14	2016/apr/03	41.89
1032842	W BANNER	145582 (100%)	082E	2014/dec/20	2016/apr/03	20.95
1033089	FRANKLIN CR SE	145582 (100%)	082E	2015/jan/03	2016/jan/06	125.78
1036687	BULLION	145582 (100%)	082E	2015/jun/12	2016/jan/06	104.78
1036688	ALPHA TWIN	145582 (100%)	082E	2015/jun/12	2016/jan/06	146.66
1036689	DANE-NICHOL	145582 (100%)	082E	2015/jun/12	2016/jan/06	104.82
1036690	MT FRANKLIN	145582 (100%)	082E	2015/jun/12	2016/jan/06	41.92
1036691	UNION	145582 (100%)	082E	2015/jun/12	2016/jan/06	62.87
1036692	DANISH	145582 (100%)	082E	2015/jun/12	2016/jan/06	251.49
					Total	**1886.2**

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. 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.

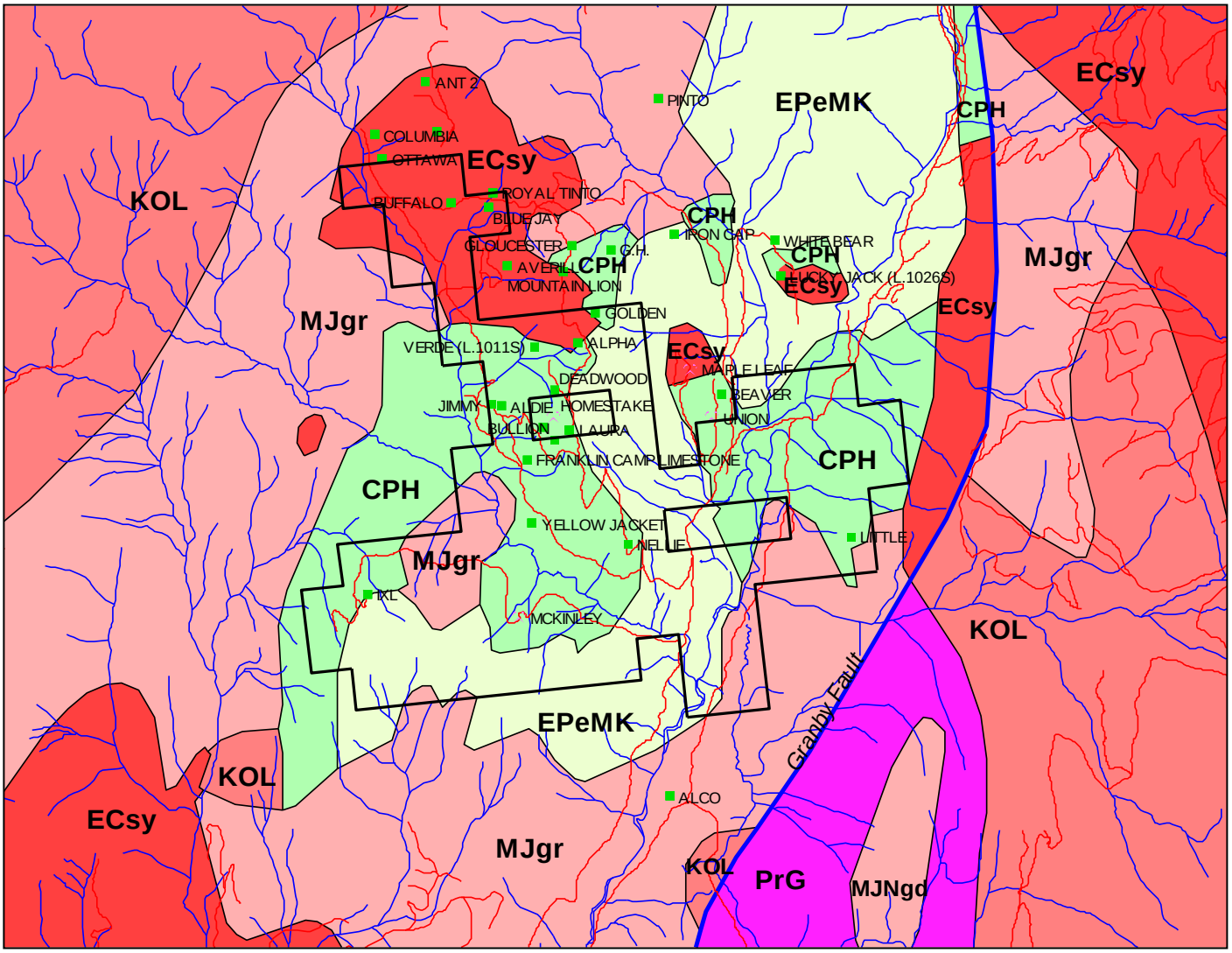
Other possible styles of mineralization have been identified in more recent exploration programs, including epithermal gold and volcanogenic massive sulphide (VMS). Several areas of epithermal-style alteration and veining have been identified associated with intrusive contact zones but no significant economic mineralization has yet been identified in these areas. There are also apparent intrusive contact zones associated with low-grade base metal mineralization that have seen very limited exploration. The potential for VMS mineralization is suggested by 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 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 producers in the camp, the Union and McKinley, and the other two historic producers, the Maple Leaf and the Homestake, both lie just outside the property boundary. While the actual mine workings are held by active crown granted claims, these are small and do not 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.

In its best sections, the Union mine produced some of the highest grade ore mined in BC. Ore grades were 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 extensions of the mineralization have been found 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 zone. 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 3 – 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 that 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 small quartz veins have been identified in Franklin rocks, some carrying significant gold and/or base metals. The best known occurrences in this area, the Homestake and the Banner, lie just outside the claim area, but several are also known within the project area. These include the Bullion and Verde showings as well as unnamed occurrences in the Twin Creek area. 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 apparently 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 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.

To the east of Burrell Creek few mineral showings are reported, but recent work has identified 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. High copper and silver values with minor to significant gold values is a more common pattern of mineralization to the south, 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. To the south, 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 minor gold values.

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

Table 2: Franklin Projects - Documented Mineral Occurences

Name	Minfile #	Location	Minerals	Reported Grades	Width (m)	Year
Minfile showings						
Ottawa	082ENE061	Franklin Crk	Pt, Cu	2.06 g/t Pt	grab	1918
Buffalo	082ENE008	McDonald Crk	Cu, Pt, Pd	6.51 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			
Verde	082ENE020	Twin Creek	Au, As, Co	2.98 g/t Au	grab	2003
Alpha	082ENE052	Mt. Franklin	Au, Ag, Cu	0.68 g/t Au, 3.42 g/t Ag, 0.8% Cu	1.5 m	1965
Golden	082ENE053	Mt. Franklin	Pt, Cu	2.06 g/t Pt	grab	1918
Bullion	082ENE013	Mt. Franklin	Ag, Au, Cu, Pb, Zn	1.1 g/t Au, 100 g/t Ag, 2.5% Pb	grab	2003
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			
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		Dane Crk	Au, Ag, Cu	2.16 g/t Au, 162 g/t Ag, 5.7% Cu	grab	2006
Golden Zone		Gloucester Crk	Au			
Mary Ann		Gloucester Crk	Au			
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, and some minor development. None of the recorded past producing mines of the Franklin camp are directly covered by the property, although the principal ones are located on small active crown-granted mineral claims that are partly or fully overlain by MTO claims that are part of the property. The property covers much of the historical Franklin camp, which was actively explored beginning in the 1890's, and was the source of minor base metal and significant 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 vein. During this same period considerable development occurred on the McKinley property and ore shipments may have been made during that period, although again there is no record of the production.

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 and Maple Leaf properties, starting in 1913. In 1914 a provincial government survey of the area included ore sampling from the Union and Banner claims, and also included an assay from a shaft under development on the 'United Verde' claim which returned a value of 0.15 opt Au. The location of this claim has not been verified, but it was likely in the vicinity of the Dane of Little showings, across Burrell Creek from the Union Mine.

In 1915 and 1916 two small shipments of copper ore were made. 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. Samples from within the claim boundaries of the Franklin Project include a sample from a small shaft on the Golden claim, which assayed 2.06 g/t Pt, a sample from a shaft dump and from open cuts at the Buffalo showing, which assayed 6.51 g/t and 2.74 g/t respectively, and a sample from large open cuts on the Ottawa claim that assayed 2.06 g/t. 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.

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 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 this same period that the Union mine and mill was 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.

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 roughly corresponding to the areas of the historical Ottawa and Evening Star claims. Prospecting also resulted in several gold-bearing samples being collected in the Twin Creek area, including one assaying 16.8 g/t Au. No follow-up in this area is recorded.

From 1987 to 89 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 were at least one strong gold and base metal soil anomaly identified int eh 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 2014 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. A small occurrence of copper-gold mineralization was identified near the Nellie showing, and in the northwest multiple occurrences of copper mineralization were found, 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

This report includes progress on two separate avenues of on-going property exploration. Firstly, a site visit was conducted in July 2015, which included additional surveying and sampling of historical tailings and wastes from past operation of the Union mine, as well as a prospecting and sampling traverse in an area of poorly documented historical workings on the north side of Twin Creek, on the old Hennekin and Verde claims. From the tailings and waste survey, three composite samples were collected from three distinct waste areas, while from the traverse a total of five rock samples were collected, mainly from old workings.

In support of the site work, a laboratory program is on-going to evaluate suitable options for potential recovery of values from tailings or other site sources. This program of metallurgical testing also serves to provide larger-scale evaluation of composite sample grades. During the period covered by this report, two leaching tests were conducted on a tailings composite prepared earlier. The leaching method uses a novel chemical combination for gold leaching that avoids the use of cyanide. Previous testing of a number of different methods identified this as a possible option, and the current tests were part of a planned program to refine the method and improve recovery rates. Quantitative recovery of leached gold and silver was also investigated to help in verifying the composite head grade, which shows considerable variability. In addition a single flotation test was carried out on the same composite material to investigate the potential for

precious metal upgrading and to provide another avenue for investigating the gold grade of the composite.

These tests were encouraging both in gold recovery and in the elevated calculated gold grades. Silver grades were also consistently high, but recoveries were not significant in either type of testing. The limited tailings survey also provided an initial indication of the possible quantities of material present on the site.

Work Program

Sampling, Testing and Data Collection

A site visit was conducted on July 9th, 2015, which included work in two separate areas. A traverse was completed along the slope on the north side of Twin Creek. Several small workings, including pits, an adit and open cuts were identified and some were sampled. Map 1, in Appendix 1, shows the specific locations of the samples collected. In addition, the area to the southeast of the Union mine workings was visited, including the main tailings area and surrounding areas containing secondary tailings and waste rock accumulations. Three samples were collected, all of which were composites from multiple sample points. The sample locations are shown on Map 2 in Appendix 1. In addition, a rough survey of the main tailings area was completed using a hand held GPS unit. The data was used to estimate the area of these tailings. The data was also plotted on Map 3 to show the principal tailings area. All rock and tailings samples were digested in aqua regia using a 0.5 gram sample and analyzed with a 36 element scan by ICP-MS. All of these samples were analysed by Bureau Veritas Commodities Canada Ltd (formerly Acme Analytical Laboratories Ltd.) in Vancouver.

Metallurgical Testwork was carried out using representative sub-samples of a previously prepared composite sample of Union mine tailings. The composite was prepared from a series of grab samples collected in 2013 from various locations on the Union tailings site. The location of these tailings is identified on Map 3 in Appendix 1. Assay results for the tailings composite sample head and the back-calculated head grades from metallurgical testing are summarized in Table 5. Complete test reports for each metallurgical test are included in Appendix 2. Each report details test conditions, and includes a mass balance for targeted metals. Assay reports are included in Appendix 2. All leach test residues were washed, filtered, dried and weighed before being submitted for analysis. Leach solutions were filtered, weighed and a 10 ml sub-sample was withdrawn and submitted for a 34 element ICP-ES analysis. Solid samples were digested in aqua regia using a 0.5 gram sample and analyzed with a 36 element scan by ICP-MS. All solid sample analyses were carried out by Bureau Veritas Commodities Canada Ltd (formerly Acme Analytical Laboratories Ltd.) in Vancouver. Solution analyses were carried out by Kemetco Research Inc. in Richmond, BC, which is also where the leach testing was conducted.

The site sampling and metallurgical work carried out are described below.

Twin Creek Rock Samples

A total of 5 samples were collected from the Twin Creek area. The traverse completed was mainly within the historical Hennekin and Verde claims. Targets were based on mapping and sampling carried out by previous operators of properties in this area. The work was also intended to test the presumption that the Verde claim is the same as the United Verde claim reported on in 1914.

Table 4 - Rock Sample Description and Analytical Results

Sample #	Date	Description	UTM East	UTM North	Width (m)	Au g/t	Ag g/t	Cu %	Pb %	Zn %
	Twin Creek - Rock									
CR150709-1	09/07/2015	Limonitic shear at entrance to old adit	399970	5E+06	1.2	0.019	1.6	0.034	0.00	0.00
CR150709-2	09/07/2015	Chips from side of old pits	399910	5E+06		0.031	0.5	0.017	0.00	0.00
CR150709-3	09/07/2015	Alt. material w py from pit on steep slope	400210	5E+06		0.027	0.5	0.013	0.00	0.01
CR150709-4	09/07/2015	Silicified sedimentss in outcrop	400240	5E+06		0.010	0.3	0.003	0.00	0.01
CR150709-5	09/07/2015	Highly oxidized qtz float near old cut	399962	5E+06		0.004	0.8	0.029	0.00	0.00
	Union Area - Rock and Tailings									
CR150709-T1	09/07/2015	Tailings Comp - middle shallow zone	401997	5489733		0.592	36.1	0.009	0.02	0.06
CR150709-T2	09/07/2015	Waste rock pile - composite	402075	5489775		0.004	0.4	0.010	0.00	0.01
CR150709-T3	09/07/2015	Roadside tailings piles - composite	402300	5490400		0.424	41.0	0.005	0.01	0.05

On the Hennekin a collapsed adit was found close to Creek level, showing highly oxidized and sheared volcanics. The adit could not be accessed, but a sample was collected across a 1.2 meter exposure above the adit entrance (CR150709-1). Further up the hillside, and also on the Hennekin claim, two shallow pits were found showing highly silicified volcanics with minor sulphides. A grab sample was collected from the dump material of the larger pit (CR150709-2). On the Verde claim a fairly large open cut was identified on the steep hillside well above the Creek. It exposed steeply dipping shear with some quartz and sulphides. A grab sample of wall rock from multiple locations was collected (CR150709-3). A short distance to the southeast an area of silicified Franklin rocks was exposed on the hillside. A chip sample of more altered material showing minor sulphides was collected. (CR150709-4). Finally, on the return a third sample was collected from the Hennekin claim area. An area with highly limonitic quartz float was found on the hillside a short distance above the adit. Chips were collected from several pieces of float (CR150709-5)..

Union Tailings Area Survey and Sampling

As a first step in developing estimates of potential tailings and waste rock inventories on the property, the main tailings area was visited and multiple location readings were collected using a hand-held GPS unit. Crest locations were recorded along all the major piles at the main storage site, and height estimates were also made at each location. Heights were from apparent ground level at the toe of each pile, and no excavations were carried out to determine actual depths of tailings. In some locations toe elevations appeared to also be underlain by an additional shallow depth of tailings, but this depth was not determined. A detailed plan of the piles was not prepared due to the limited data, but a general outline of the tailings area was mapped (Map 3, Appendix 1), and an approximate surface area of 13,000 m^2 was determined. The average pile height estimate was 3.5 to 4 meters, however the piles do not cover the entire area outlined, as there are also lower 'basins' between the piles where the tailings appear to have minimal depth. Average dept over the entire area would therefore be significantly lower.

These tailings piles were sampled in 2013, but a single additional sample was collected, made up of material from the inner slopes of the principal central basin (CR150709-T1). A rock sample (CR150709-T2) was also collected from a large rock berm made up of relatively fine crushed rock which may have been mine waste or other excavated material from the site.

A second tailings sample was later collected as a separate location (CR150709—T3). This was a composite from a series of smaller piles identified along the main Union-Franklin forestry road.

Concrete foundations in the area indicate that this may have been a former processing plant location. An additional tailings site was also noted close to Gloucester Creek. There are several piles in a bermed area that suggests this as one of the original tailings locations where material was extracted for later reprocessing at the current main tailings site.

Union Tails Composite Metallurgical Testing

During previous work a composite was prepared from the tailings samples collected in 2013. Several alternative gold and silver leaching methodologies were evaluated based on the assumption that conventional cyanide leaching would not be an option for this site. These tailings have already been partially treated at least twice using cyanide extraction, the most recent time being a heap-leach style operation run by Sumac Ventures in the late 1980's. This last operation was reportedly ended at least in part due to environmental concerns with the cyanide leach operation, and site remediation work was required afterward. Any potential retreatment method proposed would need to feature a much lower risk of contamination. Due to the relatively low tonnage and limited values any process considered would also need to have low capital and operating costs.

Leach Testing:

Of the previous tests carried out, only one using ammonia and sodium salts showed encouraging results. Analyses for this test showed considerable variation, but showed a gold recovery close to 60% and indicated a somewhat higher grade than composite head analysis. Silver recovery was poor in all tests. As a result, two additional leach tests were carried out using the same composite sample to further test this approach and to get additional grade confirmation. Both tests confirmed the potential for gold recovery, including one that showed potential for using calcium rather than sodium salt, which would improve teh ability to recycle process reagents. The first (Test FRT-L5) gave 30% recovery using the calcium salt, and showed a calculated head grade almost identical to the assayed head (see Table 5). Test FRT-L6 used the sodium salt and achieved a recovery of over 60%. This test also indicated a calculated head slightly higher than the assayed value, as indicated in Table 5. Test reports for the two leach tests completed are included in Appendix 2.

Table 5 - Metallurgical Testing - Assayed and Calculated Head Grades

Sample #	Date	Description	Au g/t	Ag g/t	Cu %	Pb %	Zn %
	Union Area - Tailings Composite Assay						
FRT Comp	02/05/2014	Union Tailings Composite 1	1.20	57.8	0.008	0.02	0.06
	Metallurgical Test Calculated Heads						
FRT-L5	16/06/2015	Chloride Leach	1.19	51.6	-	0.02	0.06
FRT-L6	22/09/2015	Chloride Leach	1.25	53.3	-	0.02	0.06
FRT 01	17/07/2015	Flotation Test on Composite 1	3.40	54.5	0.012	0.02	0.06

Due to the low gold grades in these samples, solution assays for gold can be challenging, with values at or below detection levels being common, but also being an important part of the overall gold balance. A fast quantitative method of precipitating gold and silver from solution was therefore developed to assist in evaluating the results. This method also represents potential practical recovery step in an overall extraction process. Some preliminary comparisons with assay values are shown in Table 6. The first attempt was with test FRT-L6 and appeared to be only semi-

quantitative, but was improved for test FRT-L5, which resulted in identifying significant gold recovery that had been missed by solution assay methods.

Table 6: Au/Ag Recovery from Leachate

Test No.	Extr.Vol (ml)	Extract Grade		Extract Content		Leach Content		Extract Recovery	
		Au (mg/l)	Ag (mg/l)	Au (mg)	Ag (mg)	Au (mg)	Ag (mg)	Au (%)	Ag (%)
FRT-L5	11.49	3.42	15.12	0.039	0.17	0	0.25	-	69.5
FRT-L6	7.23	6.29	30.2	0.045	0.22	0.102	0.58	44.6	37.7

Flotation Testing

In addition to the leach testing, an initial flotation test was conducted to determine the potential for producing a high-grade precious metal concentrate for sale or for further processing. For this test (FRT 01) a split of the tailings composite was subjected to a light regrind and then floated under typical conditions for precious metals recovery. The test report is included in Appendix 2, and shows that a high grade concentrate can be produced (for this test 81 g/t Au and 230 g/t Ag). Overall gold recovery was over 80%, but silver recovery was low (34%). Of particular note was the high calculated gold head grade (Table 5), at almost 3 times the assayed head.

Interpretation of Results

Site Work

Twin Creek

Assay results from the samples collected in the Twin Creek area were generally disappointing. Locations were mainly based on the presence of historical workings, but only slightly anomalous values in copper and precious metals were seen. Sampling reported by past operators had shown some significant values from a pit on the Verde claim, which appeared to be the same one sampled in this work, but that sample contained only 26 ppb Au.

One result of this work was a re-evaluation of the assumption that the Verde claim was the same as the United Verde, which was reported to have a shaft in ore carrying significant gold values in 1914. Additional research on the claim ownership indicates that the two claims were likely separate, and that the United Verde was never crown granted, and its location is no longer known. Reports from the time give limited and contradictory information as to its location, but it was most likely located between the Union mine and the Homestake claim on Mt. Franklin, likely within the project boundaries.

Union Tailings

Additional sampling in the Union Tailings area showed tailings grades within the range of previous sampling, although both samples were closer to the lower end of the range, at 0.4 and 0.6 g/t Au and 41 and 36 g/t Ag. The newly identified tailings location near the road gave the lower gold value, although it was higher in silver. The waste rock pile sample returned only background values, indicating that this may not be mine waste, but rather more localized excavated site material.

He rough tailings area survey did not determine a specific tonnage estimate, but an area of approximately 13,000 m^2 was outlined, which is an area consistent with the range of tonnage estimates mentioned in historical reports of the tailings reprocessing. Newly identified areas of tailings also add to the potential inventory available.

Metallurgical Testing

The metallurgical work showed promise in defining an alternative process for gold extraction and recovery that does not require the use of cyanide. Silver recovery was not as effective due to the relatively high silver levels, improving that aspect would be a useful component of any further process development work. An initial flotation test also showed good promise for gold recovery and to a lesser extent silver recovery using standard precious metal flotation techniques.

Leach tests, carried out on relatively small splits of a tailings composite sample, showed calculated head grades very close to the assayed value for the composite (1.2 g/t Au). The flotation test, however, had a calculated head grade nearly three times the assayed value (3.4 g/t Au), and was carried out using a larger split (approximately 0.5 kg). Assuming this is not the result of laboratory contamination, it may indicate the presence of an erratic 'nugget-effect' from coarser free gold particles present in the tailings. If present, this could be expected to become more evident in larger concentrating tests such as flotation. Additional gravity and/or flotation testing would be required to determine whether there is likely to be any impact on the overall value of the tailings.

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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 27 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 30th day of November 2015.

Doug Warkentin, PEng.
Metallurgical Engineer

Statement of Costs

Site Exploration, Surveys and Sampling

Logistics and Site Labour		
Doug Warkentin:	July 8-10, 2015 (16 hours @ $55/hr)	$880.00
Transportation (2 days vehicle rental, plus fuel)		$174.25
Accommodation (1 night)		$62.15
Food and Supplies (2 days)		$25.46

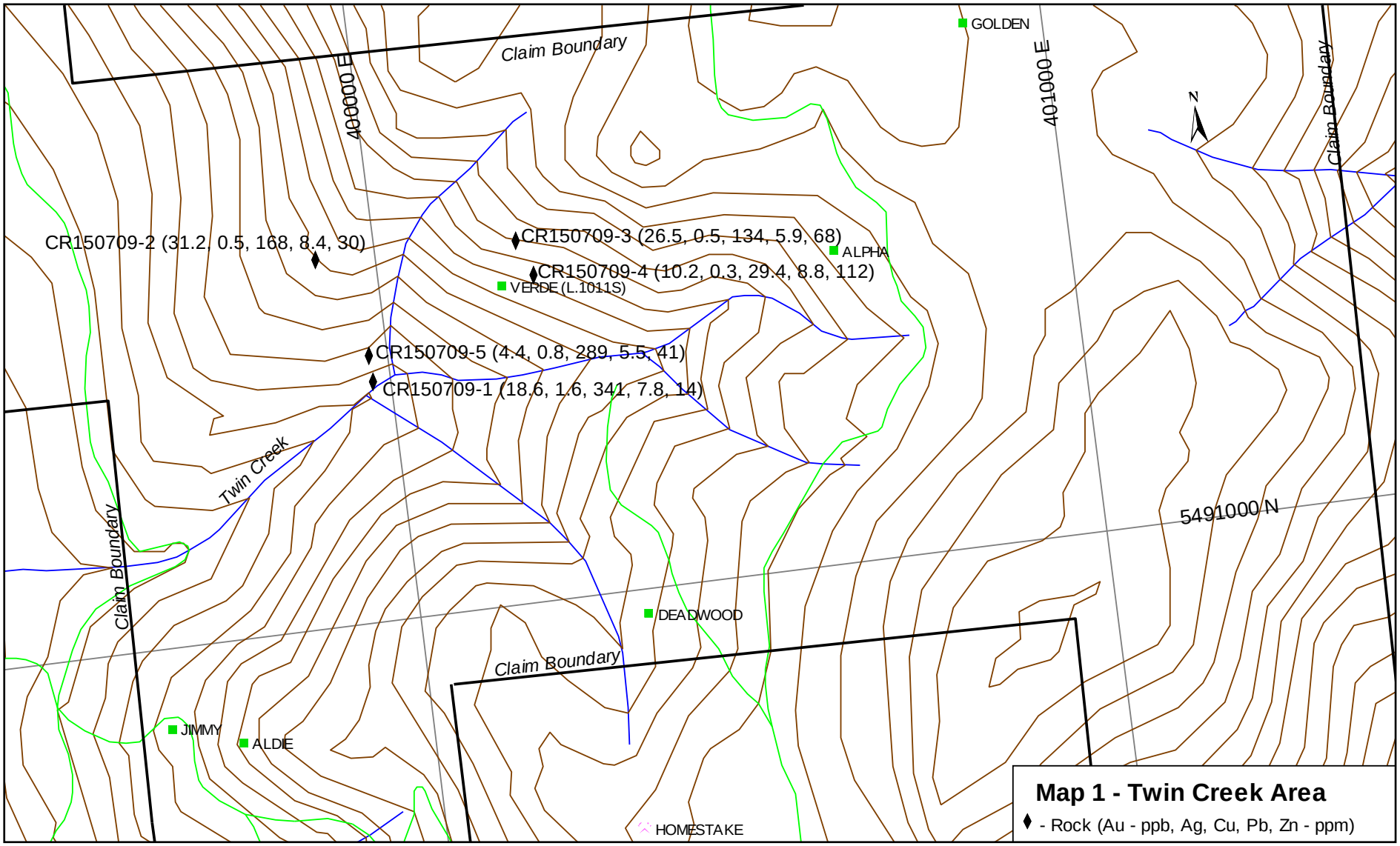
Metallurgical testing

Sample Preparation, Test Design and Analysis	
(Doug Warkentin, P.Eng: 6 hours @ $55/hr)	$330.00
Metallurgical Testwork	
(Doug Warkentin, P.Eng.: 20 hours @$55/hr)	$1100.00

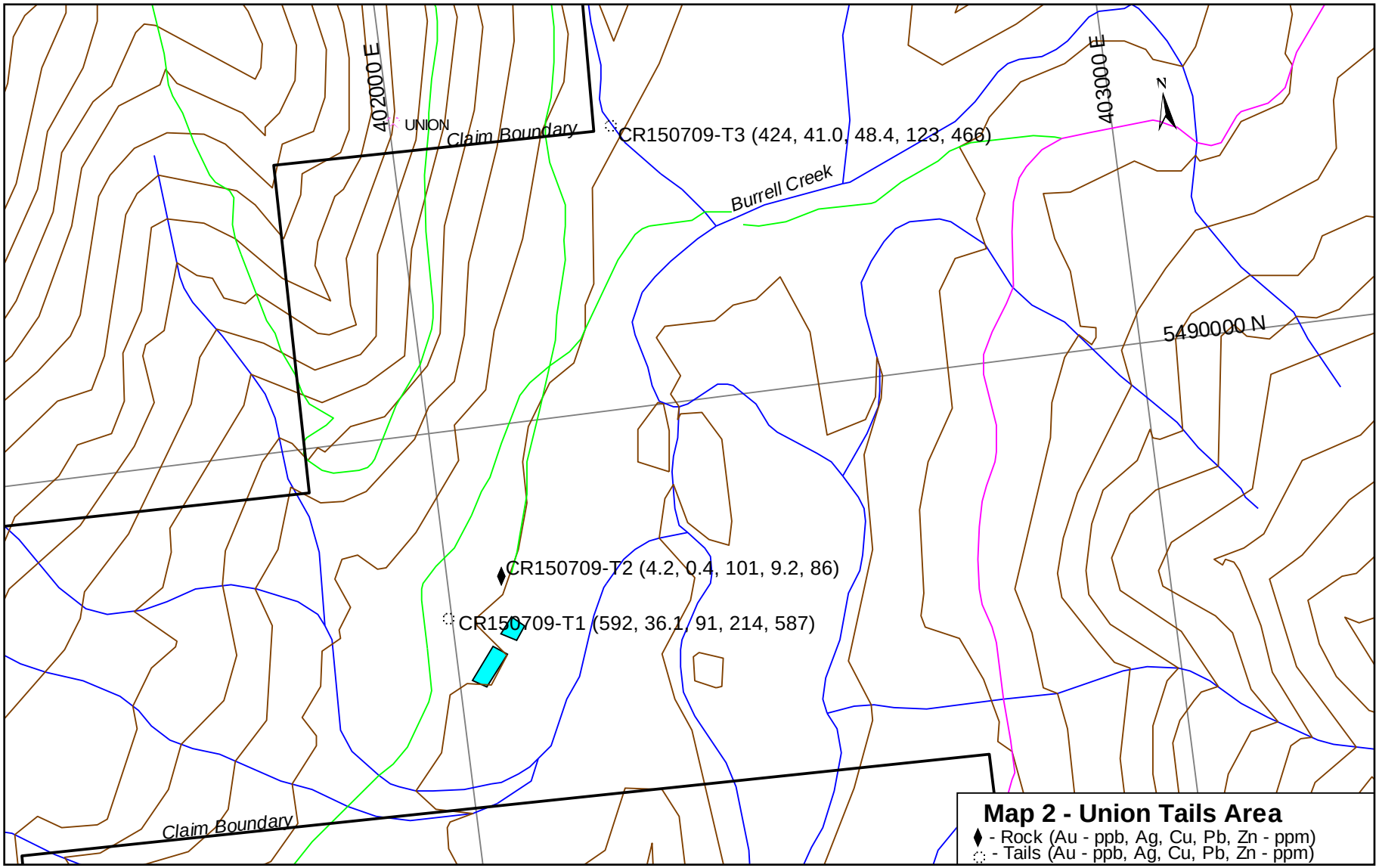
Sample Analysis

Sample Preparation (15 samples @ $10.47/sample)	$157.12
Sample Assaying (15 samples @ $16.64/sample)	$249.64
(2 samples @ $11.71/sample)	$23.42
(1 sample @ $20.58/sample)	$20.58
(6 samples @ $35/sample)	$210.00
Assay Total:	$503.63
Data Compilation and Report Preparation	$825.00
Total Cost	**$4,057.61**

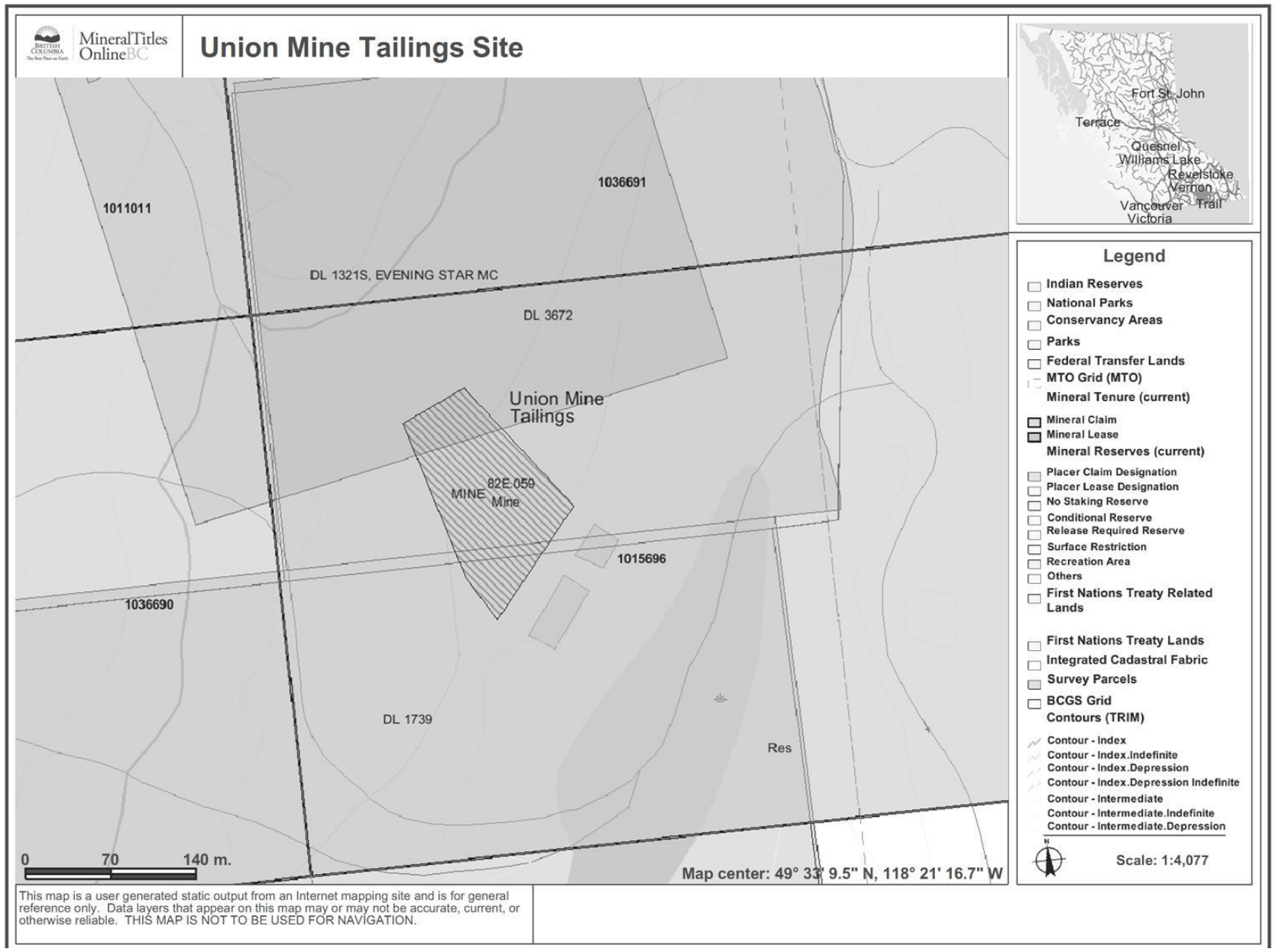
Appendix 1 – Sample Location Maps


GOLDEN
Claim Boundary
400000 E
401000 E
Claim Boundary
N
CR150709-2 (31.2, 0.5, 168, 8.4, 30)
CR150709-3 (26.5, 0.5, 134, 5.9, 68)
ALPHA
CR150709-4 (10.2, 0.3, 29.4, 8.8, 112)
VERDE (L.1011S)
CR150709-5 (4.4, 0.8, 289, 5.5, 41)
CR150709-1 (18.6, 1.6, 341, 7.8, 14)
Twin Creek
Claim Boundary
5491000 N
DEADWOOD
Claim Boundary
JIMMY
ALDIE
HOMESTAKE
Map 1 - Twin Creek Area
- Rock (Au - ppb, Ag, Cu, Pb, Zn - ppm)

Scale 1:8,000


402000 E
403000 E
UNION
Claim Boundary
CR150709-T3 (424, 41.0, 48.4, 123, 466)
Burrell Creek
5490000 N
N
CR150709-T2 (4.2, 0.4, 101, 9.2, 86)
CR150709-T1 (592, 36.1, 91, 214, 587)
Claim Boundary
Map 2 - Union Tails Area
- Rock (Au - ppb, Ag, Cu, Pb, Zn - ppm)
- Tails (Au - ppb, Ag, Cu, Pb, Zn - ppm)

Scale 1:8,000



Map 3 – Union Tails Surveyed Area

Appendix 2 – Metallurgical Test Reports

CRUCIBLE

Crucible Resources Ltd. 7069 McBride St., Burnaby, BC Canada V5E 1R1 Tel: 604 788-4478

Extraction Test Report

Test: L5 **Date:** 16-Jun-15
Sample: FRT Comp #1 **Project:** I0603

Test Conditions

Solids: 106.63 g
Solution: 160 g
Solids Content: 39.99 %
Grind Size: as rec
Temp: amb. (15 °C)
pH: alk
Duration: 24 hrs

Notes: First test of $NH_4Cl/NH_4OH/CaCl_2$ w $CuSO_4$

Tare: 95.61 g

Head Grade	**Au**	**Ag**	Pb	Zn	
Calculated:	1.19	51.6	178	560	g/t
Assayed:	1.20	57.8	226.5	555	g/t

Leach Solution Data

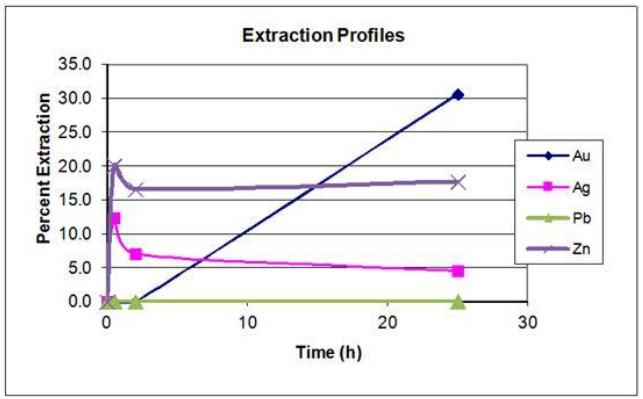
Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$** (g)	NH_4OH (g)	NH_4Cl (g)	$CaCl_2$ (g)	Sol'n Vol. (mL)	Sample (mL)	Au* (mg/L)	Ag (mg/L)	Pb	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	423.5	327.9		0.6	11.2	3.0	17.7										
0.5	423.36	327.8	10.33					206	18.7	0.0	3.3	0.0	58.2	0.0	0.7	0.0	12.0
2	445.12	349.5	10.32					239	25.2	0.0	1.4	0.0	36.9	0.0	0.4	0.0	9.9
25	442.43	346.8	10.32					234		0.0	0.7	0.0	36.5	0.04	0.25	0.0	10.6
Total				0.60	11.20	3.00	17.70										

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)
25	106.46	0.83	49.3	178.2	462	0.1	5.2	19.0	49.2

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)	$CaCl_2$ Cons. (kg/t)
0	0.0	0.0	0.0	0.0	5.63	105.04	28.13	166.0
0.5	0.0	12.4	0.0	20.1	5.63	105.04	28.13	166.0
2	0.0	7.1	0.0	16.6	5.63	105.04	28.13	166.0
25	30.6	4.6	0.0	17.7	5.63	105.04	28.13	166.0
Residue	69.4	95.4	100.0	82.3				
Total	100.0	100.0	100.0	100.0				



* Values below detection limit shown as zero
** $CuSO_4.5H_2O$

CRUCIBLE

Crucible Resources Ltd. 7069 McBride St., Burnaby, BC Canada V5E 1R1 Tel: 604 788-4478

Extraction Test Report

Test: L6 **Date:** 22-Sep-15
Sample: FRT Comp #1 **Project:** I0603

Test Conditions

Solids: 128.08 g **Notes:** Optimization testing $NH_4Cl/NH_4OH/NaCl$ w $CuSO_4$
Solution: 100 g
Solids Content: 56.16 %
Grind Size: 100% -80#
Temp: amb. (15 °C)
pH: alk
Duration: 24 hrs Tare: 95.63 g 96.22 g

Head Grade	Au	Ag	Pb	Zn	
Calculated:	1.25	53.3	185	533	g/t
Assayed:	1.20	57.8	226.5	555	g/t

Leach Solution Data

Time (hrs)	Gr. Wt. (g)	Slurry (g)	pH	$CuSO_4$ (g)	NH_4OH (g)	NH_4Cl (g)	NaCl (g)	Sol'n Vol. (mL)	Sample (mL)	Au (mg/L)	Ag (mg/L)	Pb*	Zn	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
0	363.9	268.2		0.5	7.0	2.7	11.7										
0.5	366.6	271.0	10.56					139	18.1	0.29	2.0	0.0	66.1	0.040	0.28	0.0	9.2
2	389.72	294.1	10.41		0.28			163	17.2	0.23	0.9	0.0	49.0	0.043	0.19	0.0	9.2
24	422.37	326.7	10.44					199	199.2	0.29	0.7	0.0	36.9	0.067	0.19	0.0	9.4
72	370.02	273.8	10.55	0.7	8.40	3.00	12.50	144		0.24	2.7	0.0	25.5	0.102	0.58	0.0	13.1
Total				1.20	15.68	5.68	24.20										

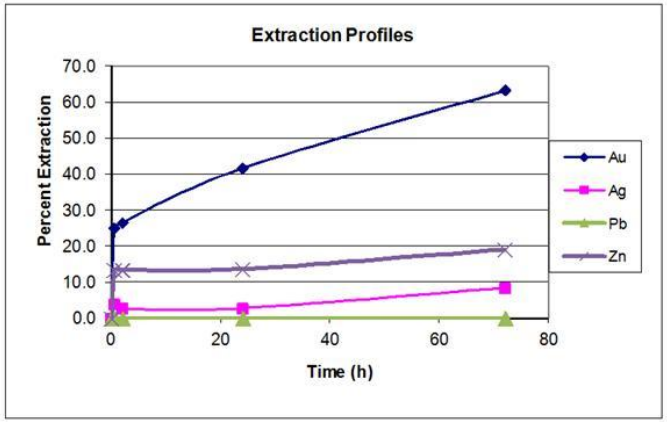
Solids

Time (hrs)	Wt (g)	Au (g/t)	Ag (g/t)	Pb (g/t)	Zn (g/t)	Au (mg)	Ag (mg)	Pb (mg)	Zn (mg)
72	126.43	0.46	49.4	187.3	437	0.1	6.2	23.7	55.2

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	3.90	54.65	20.92	91.3
0.5	25.2	4.1	0.0	13.4	3.90	54.65	20.92	91.3
2	26.7	2.7	0.0	13.4	3.90	56.84	20.92	91.3
24	41.8	2.8	0.0	13.7	3.90	56.84	20.92	91.3
72	63.4	8.6	0.0	19.1	9.37	122.42	44.35	188.9
Residue	36.6	91.4	100.0	80.9				
Total	78.4	94.2	100.0	94.6				

* Values below detection limit shown as zero



CRUCIBLE

Crucible Resources Ltd. 7069 McBride St., Burnaby, BC, V5E 1R1 Tel: 604 788-4478

Flotation Test Report

Test: FRT F01 **Date:** 17 Jul-15
Feed: Union Tails Comp 1
Grind: 1 min @ 65% solids (50% rod charge)

Conditions:

Stage	Reagents added, grams per tonne						Time, minutes			pH
	Na_2CO_3	A208	PAX	Mx900	CuSO4	DF250	Grind	Cond.	Froth	
Grind							1			
Condition	1600	20	20	42				4		7.50
Rougher						42			5	8.72
Ro Clnr		6						1	4	8.43
Cond			20		50			5		8.52
Scavenger						14			4	8.46
Total	*1600*	*26*	*40*	*42*	*50*	*56*	*1*	*10*	*13*	

Metallurgical Balance

Product	Weight		Assays						% Distribution					
	g	%	Au (g/t)	Ag (g/t)	Cu (%)	Fe (%)	Pb (%)	Zn (%)	Au	Ag	Cu	Fe	Pb	Zn
Rougher Clnr Conc.	16.6	3.21	81.0	230	0.04	7.59	0.05	0.15	76.5	13.6	9.8	7.0	8.6	8.2
Rougher Clnr Tails	42.6	8.26	1.6	83	0.02	4.83	0.03	0.09	3.9	12.5	11.0	11.5	12.6	12.2
Scavenger Conc.	16.4	3.18	2.5	129	0.03	6.10	0.05	0.13	2.4	7.5	7.6	5.6	7.4	6.9
Flotation Tails	439.9	85.34	0.69	42.4	0.01	3.08	0.02	0.05	17.2	66.4	71.6	75.8	71.5	72.8
Head (calc.)	515.5	100.0	3.40	54.5	0.01	3.47	0.02	0.06	100.0	100.0	100.0	100.0	100.0	100.0
Head (assay)			1.20	57.8	0.01	2.64	0.02	0.06						

Appendix 3 – Assay Reports

BUREAU VERITAS MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: September 08, 2015
Report Date: October 06, 2015
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN15002319.1

CLIENT JOB INFORMATION

Project: Franklin/Nevada
Shipment ID:
P.O. Number
Number of Samples: 20

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	11	Crush, split and pulverize 250 g rock to 200 mesh			VAN
PUL85	1	Pulverize to 85% passing 200 mesh			VAN
SLBHP	8	Sort, label and box pulps			VAN
FA530-Au	1	Lead collection fire assay fusion - Grav finish	30	Completed	VAN
AQ200	20	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
DRPLP	20	Warehouse handling / disposition of pulps			VAN
DRRJT	11	Warehouse handling / Disposition of reject			VAN
AQ370	3	1:1:1 Aqua Regia digestion ICP-ES analysis	0.4	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver BC V5V 2V8
CANADA

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
MARCUS LAU
Geochemical Laboratory 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 BC V6P 6E5 CANADA
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Project: Franklin/Nevada
Report Date: October 06, 2015

CERTIFICATE OF ANALYSIS VAN15002319.1

	Method	WGHT	FA530	FA530	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Wgt	Ag	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V
	Unit	kg	gm/t	gm/t	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.01	50	0.9	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
CR150708-1	Rock	2.05			8.3	74.4	>10000	298	>100	20.3	7.3	1774	3.06	3754.7	2912.1	4.3	87	31.6	38.2	733.5	35
CR150708-2	Rock	1.86			1.3	25.4	1546.4	2256	25.5	2.0	1.3	339	1.73	873.7	265.7	0.7	7	45.0	0.5	42.1	<2
CR150708-3	Rock	1.08			3.1	49.5	146.3	293	4.8	26.3	7.0	619	3.39	88.8	39.1	8.6	18	3.1	0.5	3.6	38
CR150708-4	Rock	0.74			1.1	20.1	45.3	122	1.9	6.8	3.5	194	2.57	228.2	79.8	12.7	14	1.1	0.2	3.3	5
CR150709-1	Rock	1.48			5.4	341.0	7.8	14	1.6	2.1	4.9	296	19.08	193.4	18.6	0.2	26	<0.1	2.6	1.6	25
CR150709-2	Rock	1.82			64.1	167.9	8.4	30	0.5	25.3	11.7	214	6.13	450.7	31.2	3.7	14	<0.1	1.5	1.9	410
CR150709-3	Rock	1.51			15.1	134.3	5.9	68	0.5	35.7	90.6	717	5.15	231.1	26.5	1.5	17	0.2	1.7	0.6	94
CR150709-4	Rock	1.14			1.3	29.4	8.8	112	0.3	4.9	4.9	671	4.15	32.2	10.2	7.3	15	0.3	0.8	0.4	57
CR150709-5	Rock	1.25			5.7	289.1	5.5	41	0.8	13.0	16.5	661	14.35	79.0	4.4	0.9	19	0.1	1.7	0.6	78
CR150710-1	Rock	0.67			0.3	21.8	0.6	9	<0.1	980.8	64.0	741	3.23	36.8	<0.5	<0.1	7	<0.1	0.2	<0.1	9
CR150709-T2	Rock	1.81			1.7	100.8	9.2	86	0.4	10.2	17.7	970	4.67	6.9	4.2	2.9	53	0.2	0.2	0.2	130
CR150709-T1	Rock Chip	0.08			3.3	90.7	214.5	587	36.1	14.2	4.8	1392	2.79	22.4	592.2	0.5	105	4.1	4.8	0.1	62
CR150709-T3	Rock Pulp	0.06			2.0	48.4	122.9	466	41.0	4.3	2.7	1058	1.85	17.1	424.4	0.3	83	3.2	6.2	<0.1	41
CR150710-S1	Rock Pulp	0.08			0.2	29.4	1.6	22	<0.1	375.1	24.4	307	2.02	55.4	0.7	0.2	5	<0.1	0.3	<0.1	34
CR-FRT-L4-R1	Rock Pulp	0.11			1.6	294.7	172.1	523	45.5	6.9	3.6	1295	2.49	21.1	971.2	0.4	94	3.9	2.5	0.1	55
CR-FRT-L5-R1	Rock Pulp	0.11			2.7	185.8	178.2	462	49.3	6.2	3.8	1389	2.66	22.4	830.2	0.4	96	3.0	6.2	0.2	58
FRT-F1-R1 Tails	Rock Pulp	0.06			8.2	99.4	164.3	503	42.4	35.2	4.6	1324	3.08	22.0	685.8	0.5	90	3.6	5.1	0.2	55
FRT-F1-C2 clnr tls	Rock Pulp	0.04			19.9	157.2	297.9	868	82.8	96.2	7.5	1849	4.83	43.9	1615.7	0.6	124	6.6	7.9	0.5	82
FRT-F1-C3 SCAV	Rock Pulp	0.02			28.0	284.6	453.6	1277	>100	134.8	10.7	2204	6.10	66.8	2540.0	0.7	150	10.8	11.6	0.6	95
FRT-F1-C1 Ro Con	Rock Pulp	0.02	234	75.9	112.2	363.4	523.3	1502	>100	605.2	31.7	2251	7.59	150.4	82248.9	0.7	155	14.7	20.0	1.0	95

BUREAU VERITAS MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Project: Franklin/Nevada
Report Date: October 06, 2015

CERTIFICATE OF ANALYSIS VAN15002319.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ374
	Analyte	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Pb
	Unit	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%
	MDL	0.01	0.001	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	0.01
CR150708-1	Rock	1.45	0.125	15	14	0.58	73	0.033	<20	1.07	0.032	0.27	7.0	0.06	4.5	0.3	0.84	5	25.3	9.0	1.51
CR150708-2	Rock	0.05	0.005	2	3	<0.01	20	<0.001	<20	0.14	0.005	0.14	0.3	0.02	0.2	<0.1	1.31	<1	7.7	0.5	
CR150708-3	Rock	0.17	0.050	16	34	0.83	137	0.084	<20	1.53	0.039	0.58	0.3	0.01	4.5	0.3	0.16	6	2.9	<0.2	
CR150708-4	Rock	0.02	0.037	24	4	0.04	45	0.002	<20	0.33	0.014	0.23	0.2	<0.01	2.6	0.1	<0.05	1	3.3	<0.2	
CR150709-1	Rock	0.41	0.065	1	6	0.13	3	0.087	<20	0.35	0.003	0.03	0.3	<0.01	1.3	0.5	0.86	3	36.9	0.5	
CR150709-2	Rock	0.24	0.070	10	52	0.81	92	0.105	<20	1.54	0.071	0.47	0.6	<0.01	8.4	0.4	0.65	7	7.0	1.2	
CR150709-3	Rock	0.98	0.061	5	40	1.47	34	0.036	<20	1.56	0.021	0.09	0.2	<0.01	6.4	0.2	1.81	5	4.5	0.5	
CR150709-4	Rock	0.21	0.094	16	11	1.03	105	0.081	<20	1.39	0.039	0.09	0.2	<0.01	5.1	<0.1	0.14	8	1.0	<0.2	
CR150709-5	Rock	0.63	0.074	3	23	0.51	16	0.192	<20	1.12	0.022	0.09	0.3	<0.01	4.9	0.2	0.23	6	14.9	0.2	
CR150710-1	Rock	1.09	0.002	<1	522	3.84	8	0.001	<20	0.09	<0.001	<0.01	<0.1	<0.01	3.7	<0.1	<0.05	<1	<0.5	<0.2	
CR150709-T2	Rock	0.85	0.109	15	9	1.66	113	0.165	<20	2.65	0.073	0.22	0.3	<0.01	8.7	0.1	0.24	9	<0.5	<0.2	
CR150709-T1	Rock Chip	4.62	0.047	5	20	1.15	37	0.031	<20	1.36	0.016	0.11	0.7	0.12	4.2	<0.1	<0.05	5	1.9	<0.2	
CR150709-T3	Rock Pulp	3.33	0.043	3	10	0.77	13	0.016	<20	0.86	0.004	0.05	0.5	0.04	2.9	<0.1	<0.05	4	1.8	<0.2	
CR150710-S1	Rock Pulp	0.23	0.027	<1	316	1.18	43	0.054	<20	0.67	0.008	0.04	<0.1	0.01	2.4	<0.1	<0.05	2	<0.5	<0.2	
CR-FRT-L4-R1	Rock Pulp	4.49	0.044	4	14	1.11	22	0.021	<20	1.22	0.026	0.07	0.5	0.09	3.7	<0.1	0.42	5	0.7	<0.2	
CR-FRT-L5-R1	Rock Pulp	4.08	0.044	4	13	1.15	20	0.023	<20	1.30	0.007	0.07	0.6	0.14	3.9	<0.1	<0.05	6	1.2	<0.2	
FRT-F1-R1 Tails	Rock Pulp	3.70	0.039	4	51	1.04	23	0.022	<20	1.18	0.013	0.07	0.7	0.10	3.4	<0.1	<0.05	5	1.1	<0.2	
FRT-F1-C2 clnr tls	Rock Pulp	4.91	0.054	5	145	1.63	38	0.028	<20	1.85	0.014	0.10	0.8	0.24	5.3	0.1	<0.05	8	2.7	0.2	
FRT-F1-C3 SCAV	Rock Pulp	6.17	0.062	6	205	1.90	48	0.031	<20	2.17	0.018	0.11	1.1	0.48	6.1	0.1	0.16	9	4.2	0.3	0.02
FRT-F1-C1 Ro Con	Rock Pulp	6.33	0.121	6	869	1.77	48	0.028	<20	2.06	0.151	0.11	2.9	0.49	5.8	0.2	1.23	9	8.3	0.6	0.02

BUREAU VERITAS MINERAL LABORATORIES Canada

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

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Project: Franklin/Nevada
Report Date: October 06, 2015

CERTIFICATE OF ANALYSIS VAN15002319.1

		Method	AQ374
		Analyte	Ag
		Unit	gm/t
		MDL	2
CR150708-1	Rock		>300
CR150708-2	Rock		
CR150708-3	Rock		
CR150708-4	Rock		
CR150709-1	Rock		
CR150709-2	Rock		
CR150709-3	Rock		
CR150709-4	Rock		
CR150709-5	Rock		
CR150710-1	Rock		
CR150709-T2	Rock		
CR150709-T1	Rock Chip		
CR150709-T3	Rock Pulp		
CR150710-S1	Rock Pulp		
CR-FRT-L4-R1	Rock Pulp		
CR-FRT-L5-R1	Rock Pulp		
FRT-F1-R1 Tails	Rock Pulp		
FRT-F1-C2 clnr tls	Rock Pulp		
FRT-F1-C3 SCAV	Rock Pulp		129
FRT-F1-C1 Ro Con	Rock Pulp		230

BUREAU VERITAS MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Submitted By: Doug Warkentin
Receiving Lab: Canada-Vancouver
Received: October 30, 2015
Report Date: November 23, 2015
Page: 1 of 2

CERTIFICATE OF ANALYSIS VAN15002935.1

CLIENT JOB INFORMATION

Project: Porphyry Creek
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	8	Crush, split and pulverize 250 g rock to 200 mesh			VAN
PUL85	3	Pulverize to 85% passing 200 mesh			VAN
SLBHP	13	Sort, label and box pulps			VAN
AQ200	24	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
DRPLP	24	Warehouse handling / disposition of pulps			VAN
DRRJT	6	Warehouse handling / Disposition of reject			VAN

ADDITIONAL COMMENTS

Invoice To: Crucible Resources Ltd.
745 East 30th Ave
Vancouver BC V5V 2V8
CANADA

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
MARCUS LAU
Geochemical Laboratory 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 BC V6P 6E5 CANADA
PHONE (604) 253-3158

Client: **Crucible Resources Ltd.**
745 East 30th Ave
Vancouver BC V5V 2V8 CANADA

Project: Porphyry Creek
Report Date: November 23, 2015

CERTIFICATE OF ANALYSIS VAN15002935.1

	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
PCTJ 15-1	Rock	0.44	1.7	394.7	8.2	55	0.3	20.6	26.1	457	5.45	5.8	3.0	1.1	26	0.1	0.7	1.2	127	0.73	0.122
PCTJ 15-2	Rock	1.04	0.7	6.6	3.1	60	<0.1	7.6	16.3	1556	4.89	1.2	0.6	1.4	95	0.4	<0.1	<0.1	68	10.66	0.046
PCTJ 15-3	Rock	0.79	0.4	49.3	8.5	55	<0.1	15.7	31.9	449	4.81	7.2	1.2	4.0	17	0.1	0.5	0.1	117	0.46	0.089
PCTJ 15-4	Rock	0.58	>2000	988.7	3.6	38	0.4	10.3	30.1	286	3.17	0.6	2.9	8.3	21	5.4	0.5	0.2	60	0.94	0.092
CR150827-1	Rock	0.70	6.0	57.4	5.5	58	0.2	52.0	16.7	227	2.75	2.8	1.2	1.6	16	<0.1	0.6	0.2	29	0.15	0.038
CR150827-2	Rock	1.28	5.7	64.4	2.7	16	<0.1	12.8	5.3	147	2.99	20.3	1.3	1.7	19	<0.1	0.2	0.3	74	0.21	0.052
CR150829-1	Rock	0.26	2.0	108.9	8.1	136	0.2	13.9	37.3	4026	15.33	5.3	0.9	0.3	10	<0.1	2.3	0.7	185	0.77	0.466
CR150829-2	Rock	0.14	2.1	52.0	5.6	30	<0.1	25.5	12.1	117	2.18	113.9	1.9	1.6	22	0.2	0.6	0.3	55	0.15	0.022
CR150827-T1	Sand	0.05	219.7	3208.0	4.6	56	2.2	135.7	58.6	411	6.06	197.0	543.3	4.7	29	0.7	1.3	6.6	143	1.07	0.437
CR150827-T2	Sand	0.05	300.8	3723.7	4.9	51	2.8	82.1	41.3	286	5.01	197.5	648.4	4.0	36	0.6	1.6	6.9	108	1.01	0.365
CR150827-T3	Sand	0.03	530.3	4721.7	8.1	65	5.5	117.2	51.1	303	6.12	290.0	892.9	4.5	33	1.5	2.1	10.1	123	0.85	0.323
CR150827-F1	Rock Pulp	0.02	9.6	121.8	22.3	194	0.4	55.1	30.8	807	9.79	149.3	12.1	1.1	50	0.7	4.1	0.8	70	0.16	0.156
CR150827-G1	Rock Pulp	0.03	8.5	84.1	12.7	64	0.5	15.6	5.5	297	6.44	92.5	6.4	<0.1	80	0.8	3.0	0.6	50	0.41	0.145
CR150827-G2	Rock Pulp	0.03	10.2	82.2	12.4	97	0.4	27.3	10.4	390	4.94	94.8	26.5	0.2	47	0.6	2.4	0.7	62	0.24	0.126
CR150827-G3	Rock Pulp	0.04	8.6	109.1	19.0	179	0.6	48.4	20.2	549	9.86	154.7	4.3	0.9	51	0.6	4.9	0.7	60	0.11	0.167
CR150829-S1	Rock Pulp	0.02	2.5	73.5	15.2	180	0.1	44.7	20.8	904	5.64	73.3	8.2	1.3	52	0.7	3.6	0.2	65	0.30	0.097
CR150829-S2	Rock Pulp	0.01	2.5	71.4	11.3	178	0.1	44.0	20.2	908	5.73	77.7	8.2	1.3	52	0.7	3.5	0.2	66	0.29	0.087
CR150829-S3	Rock Pulp	0.01	1.6	36.0	5.0	100	<0.1	14.5	19.5	2264	3.90	15.9	2.7	0.6	24	1.1	0.4	<0.1	58	0.17	0.036
CR150829-S4	Rock Pulp	<0.01	2.3	58.8	15.5	354	0.4	133.2	22.3	2764	5.12	80.2	9.0	0.7	91	4.3	1.1	0.3	61	0.61	0.131
CR150829-S5	Rock Pulp	<0.01	2.5	44.8	9.4	196	0.2	60.9	15.5	1258	4.41	61.2	9.0	1.2	53	1.3	1.1	0.2	61	0.38	0.082
CR150829-S6	Rock Pulp	0.07	1.8	33.8	6.7	162	0.1	35.4	12.8	984	4.56	24.7	1.6	1.1	39	0.5	1.1	0.1	51	0.25	0.052
CR150829-G1	Rock Pulp	0.06	1.9	36.6	11.4	138	0.7	20.4	9.6	366	6.19	18.4	2.4	2.0	10	0.3	0.6	0.3	62	0.04	0.136
CR150829-G2	Rock Pulp	0.05	2.3	45.6	10.1	112	0.1	31.8	12.3	543	4.85	30.5	6.6	1.5	35	0.2	0.7	0.3	77	0.33	0.142
FRT-L6-R1	Rock Pulp	0.13	2.1	400.8	187.3	437	49.4	6.1	3.5	1305	2.57	21.7	463.4	0.4	99	2.9	6.2	0.1	58	3.82	0.047

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

Analyst: JXU

Sample ID / ELEMENTS	I0603 FRT-L5-3 mg/L	I0603 FRT-L5-2 mg/L	I0603 FRT-L5-1 mg/L
Ag Silver	0.66	1.37	3.30
Al Aluminium	<1.	<1.	<1.
As Arsenic	<1.	<1.	1.24
Au Gold	< 0.25	< 0.25	< 0.25
B Boron	<2.5	4.04	3.33
Ba Barium	1.57	1.75	2.14
Be Beryllium	<0.05	<0.05	<0.05
Bi Bismuth	<2.5	<2.5	<2.5
Ca Calcium	18433	19097	22341
Cd Cadmium	0.12	0.14	0.18
Co Cobalt	<0.25	<0.25	<0.25
Cr Chromium	<0.25	<0.25	<0.25
Cu Copper	519	564	614
Fe Iron	0.77	0.83	1.11
K Potassium	18.4	18.1	20.8
Li Lithium	<0.5	<0.5	<0.5
Mg Magnesium	2.03	4.07	5.48
Mn Manganese	<0.05	<0.05	<0.05
Mo Molybdenum	0.54	<0.5	<0.5
Na Sodium	109	115	141
Ni Nickel	<0.25	<0.25	<0.25
P Phosphorus	2.39	3.53	2.49
Pb Lead	<1.	<1.	<1.
S Sulfur	246	212	197
Sb Antimony	<1.	<1.	<1.
Se Selenium	<1.	<1.	<1.
Si Silicon	6.36	7.98	7.12
Sn Tin	<1.	<1.	<1.
Sr Strontium	7.73	8.13	9.76
Ti Titanium	<0.5	<0.5	<0.5
Tl Thallium	<1.	<1.	<1.
U Uranium	<2.5	<2.5	<2.5
V Vanadium	<0.5	<0.5	<0.5
Zn Zinc	36.5	36.9	58.2

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| 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

Analyst: JXU

Sample ID ELEMENTS	I0603-FRT-L6-1 H2O mg/L	I0603-FRT-L6-2 H2O mg/L	I0603-FRT-L6-3 H2O mg/L	I0603-FRT-L6-4 H2O mg/L
Ag Silver	2.00	0.92	0.69	0.41
Al Aluminium	<1.	<1.	<1.	2.30
As Arsenic	<1.	<1.	<1.	<1.
Au Gold	0.29	0.23	0.29	0.20
B Boron	2.53	2.88	2.56	<2.5
Ba Barium	0.69	0.41	0.24	0.20
Be Beryllium	<0.05	<0.05	<0.05	<0.05
Bi Bismuth	<2.5	<2.5	<2.5	<2.5
Ca Calcium	356	243	168	173
Cd Cadmium	0.46	0.29	0.19	0.49
Co Cobalt	<0.25	<0.25	<0.25	<0.25
Cr Chromium	<0.25	<0.25	<0.25	<0.25
Cu Copper	1200	889	615	804
Fe Iron	3.07	2.04	2.12	0.80
K Potassium	45.1	37.0	28.5	29.9
Li Lithium	<0.5	<0.5	<0.5	<0.5
Mg Magnesium	2.13	1.04	<0.5	0.56
Mn Manganese	<0.05	<0.05	<0.05	<0.05
Mo Molybdenum	<0.5	<0.5	<0.5	0.50
Na Sodium	29779	22972	16716	16821
Ni Nickel	<0.25	<0.25	<0.25	0.28
P Phosphorus	<1.5	<1.5	<1.5	<1.5
Pb Lead	<1.	<1.	<1.	<1.
S Sulfur	735	545	424	419
Sb Antimony	<1.	<1.	<1.	<1.
Se Selenium	<1.	<1.	<1.	<1.
Si Silicon	7.53	8.41	8.39	<2.5
Sn Tin	<1.	<1.	<1.	<1.
Sr Strontium	2.04	1.43	1.01	0.87
Ti Titanium	<0.5	<0.5	<0.5	<0.5
Tl Thallium	<1.	<1.	<1.	<1.
U Uranium	<2.5	<2.5	<2.5	<2.5
V Vanadium	<0.5	<0.5	<0.5	<0.5
Zn Zinc	66.1	49.0	36.9	146

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

Analyst: JXU

Sample ID	I0603-FRT L6-5	I0603-FRT L6-6
ELEMENTS	mg/L	mg/L
Ag Silver	2.74	30.2
Al Aluminium	<0.4	155
As Arsenic	<0.4	54.4
Au Gold	0.24	6.29
B Boron	2.19	8.09
Ba Barium	0.19	1.79
Be Beryllium	<0.02	<0.02
Bi Bismuth	<1.	<1.
Ca Calcium	110	274
Cd Cadmium	0.51	0.12
Co Cobalt	<0.1	0.12
Cr Chromium	<0.1	0.66
Cu Copper	1086	3669
Fe Iron	2.52	165
K Potassium	30.2	11.7
Li Lithium	<0.2	<0.2
Mg Magnesium	0.34	42.9
Mn Manganese	0.02	5.51
Mo Molybdenum	0.21	<0.2
Na Sodium	30875	1131
Ni Nickel	0.21	0.72
P Phosphorus	<0.6	3.79
Pb Lead	<0.4	107
S Sulfur	947	2464
Sb Antimony	<0.4	1.59
Se Selenium	<0.4	<0.4
Si Silicon	8.24	32.0
Sn Tin	<0.4	3.78
Sr Strontium	0.65	0.46
Ti Titanium	<0.2	2.76
Tl Thallium	<0.4	<0.4
U Uranium	<1.	<1.
V Vanadium	<0.2	<0.2
Zn Zinc	25.5	43.2

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Analyst: JXU	
Sample ID	I0603 L5-R
ELEMENTS	mg/L
Ag Silver	15.12
Al Aluminium	5.11
As Arsenic	1.65
Au Gold	3.42
B Boron	3.63
Ba Barium	0.64
Be Beryllium	<0.05
Bi Bismuth	<2.5
Ca Calcium	288
Cd Cadmium	0.06
Co Cobalt	<0.25
Cr Chromium	0.32
Cu Copper	9907
Fe Iron	20.1
K Potassium	4.81
Li Lithium	<0.5
Mg Magnesium	4.05
Mn Manganese	1.03
Mo Molybdenum	<0.5
Na Sodium	83.3
Ni Nickel	0.53
P Phosphorus	30.1
Pb Lead	6.66
S Sulfur	5059
Sb Antimony	<1.
Se Selenium	<1.
Si Silicon	6.57
Sn Tin	7.531
Sr Strontium	0.18
Ti Titanium	<0.5
Tl Thallium	<1.
U Uranium	<2.5
V Vanadium	<0.5
Zn Zinc	18.1