

Ches Property Evaluation Report

**Omineca Mining Division
Tenure Numbers:
600320**

**BC Geological Survey
Assessment Report
33702**

NTS: 093F/05E

**UTM Zone 10
323000 E, 5921625 N
(NAD 83)**

Work performed Dec 6, 2011 - Dec 4, 2012 by
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Item 1: Summary

The Ches property is comprised of a single mineral claim covering 462.56ha, situated in the Omineca Mining Division, in the Tetachuck Lake map area (NTS 93F/05E), of central British Columbia. The property lies approximately 80km south of Burns Lake and is accessible via an all-weather paved highway south from Burns Lake to Ootsa Lake crossing Francois Lake using the Francois Lake ferry. A private barge operated by the Ron Vantine can be used to access the network of logging roads south of Ootsa Lake and the Ches/Tet property.

The Ches showing was discovered following the construction of the Tetachuck Main logging road in 1985. The showing consists of pyrrhotite-scheelite replacement style mineralization in calcareous sediments and a quartz chalcopyrite-molybdenite-scheelite stockwork zone in fine grained siltstones. Much of the stockwork zone was subsequently covered by road fill and only sporadic mineralization can now be seen along the ditches. A nearby intrusion is suspected to underlie the area and be the source of copper-silver-tungsten-molybdenite mineralization. Grades of the main showing average 0.26% WO_3 over 22m with high grade zones of 0.56% WO_3 and 0.45% Cu over 2m. The stockwork zone is reported to average 0.52% Cu, 0.07% WO_3 , 0.008% MoS_2 and 5.14g/t Ag/350m (Leask/Eldridge, 1987). Geophysical and soil geochemical surveys identified anomalies up to 350m wide and at least 800m and possibly 1500m long and open along strike.

Scarlet Resources Ltd. used the property as a listing property in 2008 but other than a brief property visit by Gerald Ray Ph.D., P.Geol. in May, 2008, as part of the requirements to complete an NI43-101 report on the property, no work programs were completed under the agreement.

Teck Resources Ltd. personnel completed a one day property visit during the summer of 2010 with the claim owners Ralph Keefe and Shawn Turford. Access was gained via a helicopter under charter from Interior Helicopters in Fort St. James. The party collected a total of 5 rock samples from both the Main and stockwork zones. Results confirmed the presence of significant copper mineralization in both zones.

A second property visit was completed by Riverside Resources and Antofagasta Minerals in early December, 2011. Several mineralized samples were collected for analysis despite deep snow and winter conditions that did not allow the proper sampling of the showings. It is the Riverside/Antofagasta site visit that is the primary subject of this report.

Item 2: Introduction

2.1 Qualified Person and Participating Personnel

Mr. Kenneth D. Galambos, P.Eng. was commissioned by Ralph Keefe and Shawn Turford of British Columbia to complete the assessment report for the Project and to make recommendations for the next phase of exploration work in order to test the economic potential of the area. The author of this report did not participate in the work program. Participating personnel included Ralph Keefe, Jaime Poblete (Riverside Resources) and Thomas Ullrich (Antofagasta Minerals).

2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are primarily reported in meters (m) and kilometers (km) and in feet (ft) when reporting historical data.
- GPS refers to global positioning system.
- Minfile showing refers to documented mineral occurrences on file with the British Columbia Geological Survey.
- The term ppm refers to parts per million, equivalent to grams per metric tonne (g/t).
- ppb refers to parts per billion.
- The abbreviation oz/t refers to troy ounces per imperial short ton.
- The symbol % refers to weight percent unless otherwise stated. 1% is equivalent to 10,000ppm.
- Elemental and mineral abbreviations used in this report include: arsenic (As), gold (Au), lead (Pb), molybdenum (Mo), silver (Ag), tungsten (W); chalcopyrite (Cpy), galena (PbS), molybdenite (MoS₂) and pyrrhotite (Po), pyrite (Py).

2.3 Source Documents

Sources of information are detailed below and include the available public domain information and private company data.

- Research of the Minfile data available for the area at <http://www.empr.gov.bc.ca/Mining/Geoscience/MINFILE/Pages/default.aspx>
- Research of mineral titles at <https://www.mtonline.gov.bc.ca/mtov/home.do>
- Review of company reports and annual assessment reports filed with the government at <http://www.empr.gov.bc.ca/Mining/Geoscience/ARIS/Pages/default.aspx>
- Review of geological maps and reports completed by the British Columbia Geological Survey at <http://www.empr.gov.bc.ca/Mining/Geoscience/MapPlace/MainMaps/Pages/default.aspx>.
- Published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.

2.4 Limitations, Restrictions and Assumptions

The author has assumed that the previous documented work in the area of the property is valid and has not encountered any information to discredit such work. The only discrepancy noted is in the historical results reported for the Exo showing. ARIS 15129

reports that the sampling of the stockwork zone average 0.62% Cu, 0.07% WO₃, 0.06% MoS₂ and 5.14g/t Ag/350m, while a subsequent report ARIS 17679 reports the same interval as grading 0.52% Cu, 0.07% WO₃, 0.008% MoS₂ and 5.14g/t Ag/350m. Assay certificates are not provided in either report so an independent grade calculation of the zone is not possible.

2.5 Scope

This report describes the December 6, 2011 site visit to the Exo showing, geology, previous exploration history and mineral potential of the Ches Project. Research included a review of the historical work that related to the immediate and surrounding area of the property. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area. The property was examined and evaluated by Ralph Keefe, Jaime Poblete (Riverside Resources) and Thomas Ullrich (Antofagasta Minerals). Work consisted of prospecting, limited mapping and sample collection.

Item 3: Reliance on Other Experts

Some data referenced in the preparation of this report was compiled by geologists employed by various companies in the mineral exploration field. These individuals would be classified as “qualified persons” today, although that designation did not exist when some of the historic work was done. The author believes the work completed and results reported historically to be accurate but assumes no responsibility for the interpretations and inferences made by these individuals prior to the inception of the “qualified person” designation.

Item 4: Property Description and Location

The Ches property is comprised of a single mineral claim with a total area of 462.56ha, situated in the Omineca Mining Division, in the Tetachuck Lake map area (NTS 93F/05E) of central British Columbia.

The property lies approximately 80km south of Burns Lake and is accessible via an all-weather paved highway south from Burns Lake to Ootsa Lake, crossing Francois Lake using the Francois Lake ferry. A private barge operated by the Ron Vantine can be used to access the network of logging roads south of Ootsa Lake and the Ches property. Upon acceptance of this report, the claim will have its anniversary date advanced to April 20, 2016, as indicated in the following table.

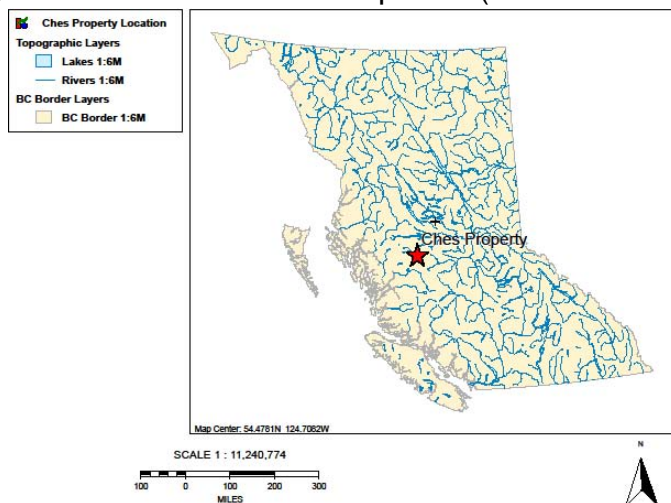


Figure 1: Property Location Map

Table 1: Claim Data

| Tenure # | Claim name | Issue date | Expiry date | Registered Owner |
|----------|------------|------------|-------------|------------------|
| 600320 | Exo1 | 4-mar-09 | 20-apr-2016 | Keefe, Ralph R |

The claims comprising the Ches property are being held as an exploration target for possible hardrock mining activities which may or may not be profitable. Any exploration completed will be subject to the application and receipt of necessary Mining Land Use Permits for the activities recommended in this report. There is no guarantee that this application process will be successful.

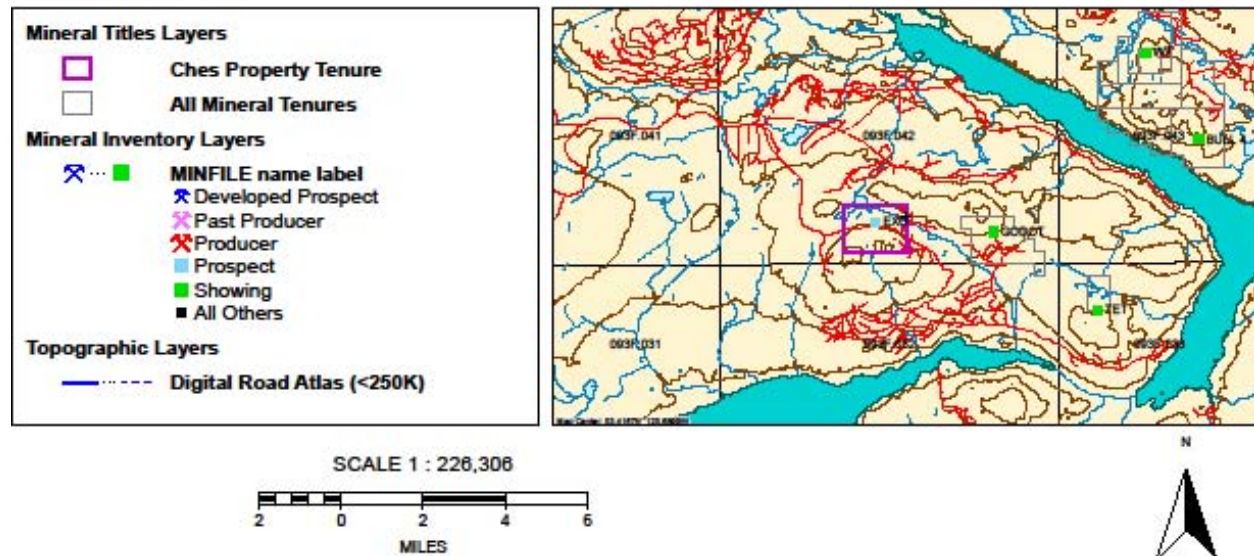


Figure 2: Claim Map

The Claims lie in the Traditional territories of a number of local First Nations and to date no dialog has been initiated with these First Nations regarding the property. There is no guarantee that approval for the proposed exploration will be received.

Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Ches property lies in central British Columbia, approximately 80 kilometres south of Burns Lake, B.C. The claims lie immediately north of Tetachuck Lake on NTS map sheet 93 F/05E. Access is from Burns Lake via the Marilla Forest Service Road, south for 75 kilometres to the ferry landing and then south across Intata Reach. An extensive network of logging roads allows good access to much of the area east of Tweedsmuir Park



Plate 1: Satellite Image of the Ches Project

and south of Ootsa Lake. The Tetachuck Main logging road bisects the property and it was in the construction of this road that the Exo showings were discovered.

The Ches property covers an area of moderate relief of between 900m and 1400m in elevation above sea level. Topographically comprises low, rolling hills interspersed with swampy areas. The vegetation includes mixed coniferous forest, which has seen extensive logging. The area has been heavily affected by the mountain Pine Beetle and is designated by the province as part of the beetle infestation zone.

The climate is typical of central British Columbia with below freezing temperatures (0° C to -40° C) from November to April and periods of hot weather in the summer ranging from 20° to 40° C. Precipitation averages 427.8 millimetres a year, with a substantial portion in the form of snow, averaging 90.5 centimetres per year.

Lodging, groceries, diamond drilling contractors, a helicopter charter company and building supply stores are available in the small community of Burns Lake. Nearby centers such as Smithers and Terrace host regional airports serviced from Vancouver, additional diamond drilling and exploration service companies.

Item 6: History

Excerpt from Ray (2009)

The limited exploration has focused on the Tet and Godot Cu-Mo porphyry showings in the eastern and central parts of the property, and the area around the Exo Cu-Mo-W skarn stockwork prospect situated further west. The earliest known exploration occurred in the early 1970's with trenching and the drilling of at least seven short (<200 feet or 61 meters) diamond drill holes at the Tet Cu-Mo showing. It is not certain what company did this work, although indirect evidence via Richards (1981) suggests that Noranda Exploration Company performed the drilling. In 1972 Noranda also completed a geophysical reconnaissance program of induced polarization and resistivity surveys over the Godot Cu-Mo showing (Fountain, 1972).

Further exploration in this area took place a decade later, with a soil-sampling program conducted by Colossal Energy Inc. (Keyser, 1984). In 1980, JMT Services and Prism Resources Ltd conducted a small program of soil and rock chip sampling at the Tet Cu-Mo showing, as well as some 1:6000 scale geological mapping (Richards, 1981). During this program the old drill-pads and trenches from the (presumed) Noranda work were discovered, as well as some of the old drill-core. Richards (1981) reports that sixty-three rock-chip samples, twelve soil samples and some silt samples were collected. In addition, pyritic Cu-Mo mineralization hosted by hornfels, quartz diorite and aplite was discovered in float and outcrop. One hornfels sample assayed 16 parts per million (ppm) molybdenum (Mo), and soils in the vicinity of an aplite body contained between 22 to 88 ppm Mo.

The first known exploration at the Exo Cu-Mo-W skarn-stockwork prospect took place after Esso Minerals Ltd staked the ground in response to high copper-zinc values in lake sediment samples (Leask, 1987a and 1987b). Follow-up work by Esso included 15

kilometers of cut line with soil sampling and magnetometer and VLF-EM geophysical surveys. In 1985, road construction uncovered several new mineralized skarn and stockwork zones at the Exo prospect that were then staked (Leask, 1987b). Prospecting and 1:10 000 scale geological mapping in 1986 discovered more skarn outcrops. In 1987, 26 kilometers of grid-line were cut. Magnetometer and VLF-EM readings and soil samples were taken at 25 meters along the cut-lines. A total of 848 soil samples were collected. The range of soil assays were as follows: 7 ppm to 512 ppm for copper (Cu), 1 ppm to 39 ppm for molybdenum (Mo), 1 ppm to 124 ppm for tungsten (W), 33 ppm to 4306 ppm for zinc (Zn), 0.1ppm to 2.4 ppm for silver (Ag), 1 ppb to 310 ppb for gold (Au). The geological mapping outlined a hornfels-skarn envelope, at least 1 kilometer wide, adjacent to the western margin of the Tetachuck North Stock. Within this envelope, a wide Mo-Cu skarn and stockwork zone was discovered that averaged 0.52% Cu, 0.07% tungsten oxide (WO₃), 0.008% molybdenite (MoS₂), and 0.15 oz/ton Ag over a distance of 350 meters (Leask, 1987b).

Keefe (2000) conducted the last known exploration on the property in the vicinity of the Exo Cu- o-W skarn-stockwork zone. This work involved the collection of 18 bedrock samples, 1 silt sample and 39 infill soil samples. The program confirmed the presence of a significant B-horizon soil anomaly at the Exo.

During the Scarlet Exploration program, 20 grab or rock-chip samples were collected. Eighteen of these were taken from the Exo skarn-stockwork zone, and the remaining two from a gossanous road quarry lying approximately 3 kilometers further west. The assay results of the 20 samples, showed that fourteen of the samples contained > 2000 ppm Cu (maximum 10500 ppm), and ten samples assayed > 598 ppm W (maximum 3031 ppm). In addition, there were sporadic anomalous values in Mo (maximum 219 ppm), Zn (maximum 1862 ppm), and Ag (maximum 16 ppm). There were also sporadic enhanced values in Co (up to 155 ppm), Mn (up to 7343 ppm), Bi (up to 16 ppm) and Se (up to 43 ppm). Assays in Au and As were very low (maximum 0.02 g/t Au and 9 ppm As).

Teck Resources collected five rock samples for whole rock and trace multi-element geochemistry by ICP and ICP-MS methods. Samples collected confirmed the presence of mineralization in both the Main showing and stockwork zones. Analyses returned values of up to 5239ppm Cu, 953.1ppm W, 916.8ppm Zn, 7840ppb Ag.

Item 7: Geological Setting and Mineralization

7.1 Regional Geology

Excerpt from Ray (2009)

Geologically, the region lies in the Stikine Terrane (Stikinia) that began amalgamation and convergence with the other terranes of the Intermontane Belt during the Triassic period. Rocks in the Tetachuck Lake map area are separable into four stratified units that range in age from Early Jurassic to the Miocene, as well as four intrusive suites of Jurassic to Eocene age. The four stratified units are the Early to Middle Jurassic Hazelton Group, the Eocene Ootsa Lake and Endako groups and Miocene basaltic flow cover rocks.

The Hazelton Group rocks are economically important in British Columbia because they host many mineral occurrences and deposits, including the deposit worked at the Eskay Creek Mine. Other important deposits hosted by the group include Core Mountain and Chikamin Mountain in the Chikamin Mountain (93E/06) map area, and the Premier, Kerr and Inel deposits in the Iskut River map area.

The Hazelton Group comprises arc-volcanics and related sediments formed in response to subduction of the Wrangellia and/or Cache Creek terranes under Stikinia during Early and Middle Jurassic times (Gabrielse, 1991; Marsden and Thorkelson, 1992). It ranges in age from Toarcian (late Early Jurassic) to Bajocian (early Middle Jurassic) and the succession consists of sub-aerial and submarine volcanic rocks interbedded with marine sediments. The group is divided into two formations, the older Entiako and the younger Naglico (Diakow et al., 1997; Quat and Struik (1999), and the contact between these units is mostly para-conformable. The two formations represent a silica-bimodal volcanic and sedimentary succession deposited in an arc-back-arc complex of the Stikine Terrane (Quat and Struik, 1999). Volcanic-sedimentary rocks of the Naglico Formation mostly occupy the CHES property. Regionally, the Hazelton Group is overlain by Eocene Ootsa Lake Group rhyolites, Endako Group basalts and Miocene age basalts.

In the Tetachuck Lake map area Struik et al. (1999) sub-divides the Naglico Formation into the following three lithologic units:

1. Unit 1: a feldspar-phyric andesite flow and lapilli tuff.
2. Unit 2: andesite agglomerate and breccia.
3. Unit 3: a sedimentary sequence containing sandstone interbedded with limey ash tuff and limestone with zones of densely packed gastropod and clam shell debris.

The Naglico Formation in the Tetachuck Lake map area correlates with the Smithers Formation in the Whitesail Reach map area and the Salmon River Formation in the Iskut River-Telegraph Creek map areas (Struik et al., 1999).

Small intrusive stocks and plugs are scattered throughout the district where they intrude the Hazelton Group rocks; Billesberger et al. (1999) describe some of these bodies. They represent at least three plutonic suites of Jurassic, Late Cretaceous and Eocene age (Friedman et al., 2000). They have a wide range of compositions and include diorite, granodiorite, alaskite, aplite, monzonite and granite. Many are fine to medium-grained, equigranular to moderately porphyritic, and contain biotite and hornblende. Some are slightly foliated and they may be cut by andesite and rhyolite dykes. Several of these small intrusive bodies occur on, and nearby, the CHES property, and some are spatially associated with Cu mineralization as present at the Exo prospect and Tet showing.

The Eocene Ootsa Lake Group includes rhyolites that are characterized by light coloured flows; in the Tetachuck Lake area these are sometimes banded but are more usually massive. The rhyolites contain phenocrysts of quartz, plagioclase and minor

biotite. The Eocene-age Endako Group basalt is found in small patches throughout the district. It forms massive, dark aphanitic flows with a few phenocrysts of pyroxene and trace olivine.

The Miocene basalt forms the youngest rocks in the district. The flows are dark grey to black, flat-lying and locally contain mantle xenoliths up to 10 cm in diameter. The xenoliths comprise crystals of olivine, pyroxene, diopside and augite within a massive aphanitic groundmass. This basalt correlates with the Chilcotin Group of south-central British Columbia (Struik et al., 1999).

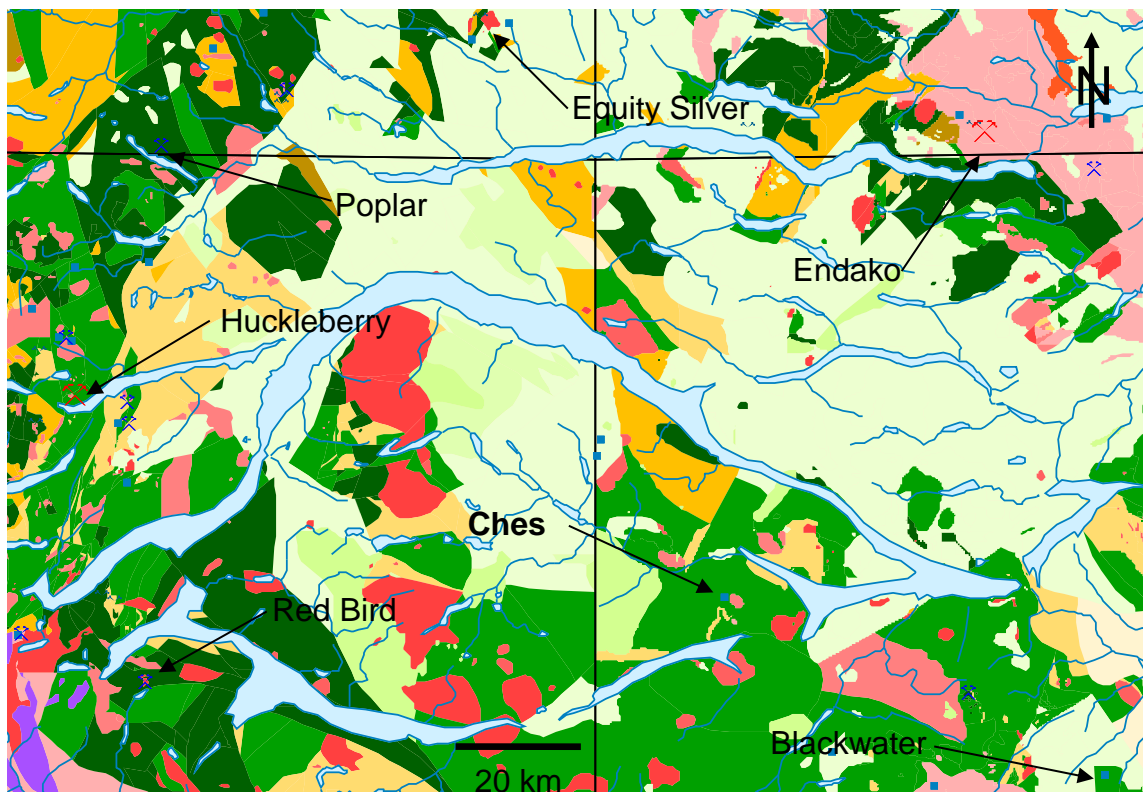


Figure 3: Regional Geology Map

Table 2: Geology Legend

Bounding Box: North: 54.169 South: 53.095 West: -127.450 East: -124.305

NTS Mapsheets: 093L, 093E, 093F, 093K

Miocene to Pleistocene

Chilcotin Group

 MiPICvb basaltic volcanic rocks

Miocene

 MiCCI Cheslatta Lake Complex: alkaline volcanic rocks

 MiCvb basaltic volcanic rocks

Eocene to Lower Miocene***Endako Group***

 **EMiE** basaltic volcanic rocks


Paleogene***Tsaytis Plutonic Suite***

 **ETTs** granodioritic intrusive rocks

Eocene to Oligocene***Nechako Plateau Group***

 **EEva** Endako Formation: andesitic volcanic rocks

 **EOva** Ootsa Lake Formation: andesitic volcanic rocks

 **EOH** Ootsa Lake Formation - Hicks Hill Dacite: dacitic volcanic rocks


 **EO** Ootsa Lake Formation: rhyolite, felsic volcanic rocks

 **EOvf** Ootsa Lake Formation: rhyolite, felsic volcanic rocks

 **EOIEs** undivided sedimentary rocks

 **EEv** Endako Formation: undivided volcanic rocks

Eocene

 **Efp** feldspar porphyritic intrusive rocks


 **Egb** gabbroic to dioritic intrusive rocks

 **Egr** granite, alkali feldspar granite intrusive rocks

 **ESR** Sam Ross Creek Pluton: granite, alkali feldspar granite intrusive rocks

 **Egd** granodioritic intrusive rocks

 **EBo** Boundary Stock: granodioritic intrusive rocks


 **ECH** Ch Pluton: granodioritic intrusive rocks

 **Eqp** high level quartz phyric, felsitic intrusive rocks

 **Evf** intrusive rocks, undivided

 **EFLmi** Frank Lake Pluton - Nulki Shear Zone: migmatitic metamorphic rocks

Coast Plutonic Complex(?)

 **Eg** intrusive rocks, undivided

Endako Group

 **EEG** Goosly Lake Formation: alkaline volcanic rocks
























 **EEBvb** Buck Creek Formation: basaltic volcanic rocks





















Goosly Plutonic Suite

















 **EGo** monzodioritic to gabbroic intrusive rocks

Nanika Plutonic Suite





 **ENg** intrusive rocks, undivided

| | | |
|---|--------|---|
|  | ENqm | quartz monzonitic intrusive rocks |
| <i>Nechako Plateau Group</i> | | |
|  | EEva | Endako Formation: andesitic volcanic rocks |
|  | EEG | Goosly Lake Formation: andesitic volcanic rocks |
|  | EOvc | Ootsa Lake Formation: volcanoclastic rocks |
| <i>Ootsa Lake Group</i> | | |
|  | EO | rhyolite, felsic volcanic rocks |
| <i>Quanchus Plutonic Suite</i> | | |
|  | EQ | feldspar porphyritic intrusive rocks |
| Paleocene to Eocene | | |
|  | PeEs | undivided sedimentary rocks |
| Late Cretaceous to Pliocene | | |
|  | LKTDfp | Danskin Pluton: feldspar porphyritic intrusive rocks |
|  | LKTSfp | Skins Lake Pluton: feldspar porphyritic intrusive rocks |
|  | LKi | intrusive rocks, undivided |
| Upper Cretaceous to Eocene | | |
| <i>Sustut Group</i> | | |
|  | uKESu | argillite, greywacke, wacke, conglomerate turbidites |
| Late Cretaceous to Paleocene | | |
|  | LKPedr | dioritic intrusive rocks |
|  | LKPegd | granodioritic intrusive rocks |
| Cretaceous | | |
| <i>Kasalka Group</i> | | |
|  | uKK | andesitic volcanic rocks |
| Late Cretaceous | | |
|  | uKva | andesitic volcanic rocks |
|  | uKvf | dacitic volcanic rocks |
|  | LKH | Holy Cross Pluton: feldspar porphyritic intrusive rocks |
|  | LKgd | granodioritic intrusive rocks |
|  | LKCa | Capoose Pluton: granodioritic intrusive rocks |
|  | LKCL | Cabin Lake Pluton: quartz monzonitic to monzogranitic intrusive rocks |
|  | uKs | undivided sedimentary rocks |
| <i>Bulkley Plutonic Suite</i> | | |
|  | LKBdr | dioritic intrusive rocks |
|  | LKBfp | feldspar porphyritic intrusive rocks |




| | | |
|---|---------|---|
|  | LKBgd | granodioritic intrusive rocks |
|  | LKBqp | high level quartz phyric, felsitic intrusive rocks |
|  | LKBg | intrusive rocks, undivided |
|  | LKBqd | quartz dioritic intrusive rocks |
|  | LKBqm | quartz monzonitic intrusive rocks |
| <i>Chelaslie River-Tetachuck Lake Plutonic Suite</i> | | |
|  | LKCT | dioritic intrusive rocks |
| <i>Endako Batholith</i> | | |
|  | LKEngr | Leg Lake Phase: granite, alkali feldspar granite intrusive rocks |
| <i>Endako Batholith - Fraser Lake Suite</i> | | |
|  | LKEFLgd | Mouse Phase: granodioritic intrusive rocks |
| <i>Kasalka Group</i> | | |
|  | uKK | andesitic volcanic rocks |
|  | uKKsc | coarse clastic sedimentary rocks |
| <i>Kasalka Plutonic Suite</i> | | |
|  | LKKP | granodioritic intrusive rocks |
| Early Cretaceous | | |
| <i>Endako Batholith - Fraser Lake Suite</i> | | |
|  | LKEFLqm | Fraser Phase: quartz monzonitic to monzogranitic intrusive rocks |
| <i>Skeena Group</i> | | |
|  | IKSsc | coarse clastic sedimentary rocks |
|  | IKSsf | mudstone, siltstone, shale fine clastic sedimentary rocks |
|  | IKSRvf | Rocky Ridge Formation - Subvolcanic Rhyolite Domes: rhyolite, felsic volcanic rocks |
| Lower Cretaceous | | |
| <i>Gambier Group</i> | | |
|  | IKGca | calc-alkaline volcanic rocks |
| <i>Skeena Group</i> | | |
|  | IKSRs | Red Rose Formation: coarse clastic sedimentary rocks |
|  | IKS | undivided sedimentary rocks |
|  | IKSN | Mt. Ney Volcanics: undivided volcanic rocks |
| Early Jurassic to Late Cretaceous | | |
|  | JKCL | Clatlatently Lake Pluton: quartz monzonitic to monzogranitic intrusive rocks |
| Middle Jurassic to Late Cretaceous | | |
| <i>Bowser Lake (or Skeena Group?)</i> | | |

| | | |
|---|---|---|
|  | mJKB | coarse clastic sedimentary rocks |
| | Middle Jurassic to Early Cretaceous | |
| | <i>Endako Batholith - Francois Lake Suite</i> | |
|  | MJKFqp | high level quartz phyric, felsitic intrusive rocks |
| | Jurassic | |
|  | Jqm | quartz monzonitic intrusive rocks |
| | Late Jurassic | |
| | <i>Endako Batholith - Francois Lake Suite</i> | |
|  | LJFN | Glenannan Subsuite - Nithi Phase: quartz monzonitic to monzogranitic intrusive rocks |
| | <i>Endako Batholith - Francois Lake Plutonic Suite</i> | |
|  | LJFCL | Glenannan Subsuite - Copley Lake Phase: quartz monzonitic to monzogranitic intrusive rocks |
| | <i>Endako Batholith - Francois Lake Suite</i> | |
|  | LJFC | Endako Subsuite - Casey Phase: granite, alkali feldspar granite intrusive rocks |
|  | LJFE | Endako Subsuite - Endako Phase: granodioritic intrusive rocks |
|  | LJFF | Endako Subsuite - Francois Subphase: granodioritic intrusive rocks |
|  | LJFN | Glenannan Subsuite - Nithi Phase: quartz monzonitic to monzogranitic intrusive rocks |
| | <i>Laidman Batholith</i> | |
|  | LJLagr | granite, alkali feldspar granite intrusive rocks |
|  | LJLaqd | quartz dioritic intrusive rocks |
|  | LJLaqm | quartz monzonitic to monzogranitic intrusive rocks |
| | Upper Jurassic | |
| | <i>Bowser Lake Group</i> | |
|  | uJBAm | Ashman Formation: mudstone, siltstone, shale fine clastic sedimentary rocks |
| | Middle Jurassic to Late Jurassic | |
| | <i>Gamsby Complex</i> | |
|  | MLJG | quartz dioritic intrusive rocks |
| | Middle Jurassic to Upper Jurassic | |
| | <i>Hazelton Group</i> | |
|  | muJHNa | Nanika Volcanics: rhyolite, felsic volcanic rocks |
| | Middle to Late Jurassic | |
| | <i>Bowser Lake (or Skeena Group?)</i> | |
|  | uJBvd | dacitic volcanic rocks |





Bowser Lake Group

| | | |
|---|---------|--|
|  | muJBsc | coarse clastic sedimentary rocks |
|  | uJBAmsc | Ashman Formation: coarse clastic sedimentary rocks |
|  | uJBAmcg | Ashman Formation: conglomerate, coarse clastic sedimentary rocks |
|  | muJBF | Fawnie Volcanics: undivided volcanic rocks |









Endako Batholith - Francois Lake Suite

| | | |
|---|------|--|
|  | LJFG | Glenannan Subsuite - Glenannan Phase: granite, alkali feldspar granite intrusive rocks |
|  | LJFT | Glenannan Subsuite - Tatin Lake Subphase: granite, alkali feldspar granite intrusive rocks |
|  | LJFE | Endako Subsuite: granodioritic intrusive rocks |







Endako Batholith - Stag Lake Plutonic Suite

| | | |
|---|--------|---|
|  | MJSLTw | Twenty-Six Mile Phase: dioritic intrusive rocks |
|  | MJSLSt | Stag Lake Phase: gabbroic to dioritic intrusive rocks |
|  | MJLSu | Sugarloaf Phase: granodioritic intrusive rocks |
|  | MJSLl | Limit Lake Phase: quartz dioritic intrusive rocks |

Middle Jurassic

| | | |
|---|---------|---|
|  | MJfp | feldspar porphyritic intrusive rocks |
|  | JSLO | Overlander Phase: dioritic intrusive rocks |
|  | MJSLTi | Tintagel Phase: granite, alkali feldspar granite intrusive rocks |
|  | MJSLqd | quartz dioritic intrusive rocks |
|  | MJSLM | McKnab Phase - Sutherland Subphase: quartz dioritic intrusive rocks |
|  | MJSLsqd | Stellako Phase: quartz dioritic intrusive rocks |
|  | MJSLC | Caledonia Phase: quartz monzonitic to monzogranitic intrusive rocks |
|  | MJSLSh | Sheraton Phase: quartz monzonitic to monzogranitic intrusive rocks |

Hazelton Group

| | | |
|---|---------|--|
|  | mJHNvd | Naglico Formation: dacitic volcanic rocks |
|  | mJHNlm | Naglico Formation: limestone, marble, calcareous sedimentary rocks |
|  | mJHEvf | Entiako Formation: rhyolite, felsic volcanic rocks |
|  | mJHNs | Naglico Formation: undivided sedimentary rocks |
|  | mJHSms | Smithers Formation: undivided sedimentary rocks |
|  | mJHN | Naglico Formation: undivided volcanic rocks |
|  | mJHNvc | Naglico Formation: volcanoclastic rocks |
|  | mJHSmvc | Smithers Formation: volcanoclastic rocks |

Trapper Plutonic Suite

| | | |
|---|-------|---------------------------------|
|  | MJTqd | quartz dioritic intrusive rocks |
|---|-------|---------------------------------|

Early to Middle Jurassic

 **EMJdr** dioritic intrusive rocks

Hazelton Group

 **IJHvl** coarse volcanoclastic and pyroclastic volcanic rocks

 **IJHsv** marine sedimentary and volcanic rocks

 **ImJHEvf** Entiako Formation: rhyolite, felsic volcanic rocks

 **ImJHEs** Entiako Formation: undivided sedimentary rocks

 **ImJH** undivided volcanic rocks

Early Jurassic***Endako Batholith - Stag Lake Plutonic Suite***

 **MJSLB** Boer Phase: quartz dioritic intrusive rocks

Hazelton Group

 **IJHNk** Nechako Formation: marine sedimentary and volcanic rocks

 **IJHNsv** Nechako Formation: marine sedimentary and volcanic rocks

 **IJHNsf** Nechako Formation: mudstone, siltstone, shale fine clastic sedimentary rocks

 **IJHNvc** Nechako Formation: volcanoclastic rocks

Lower Jurassic

 **IJHT** Telkwa Formation: calc-alkaline volcanic rocks

 **IJHNsc** Nechako Formation: coarse clastic sedimentary rocks

 **IJHNvf** Nechako Formation: rhyolitic, felsic volcanic rocks

Late Triassic to Early Cretaceous***Black Dome Complex***

 **LTrKB** gabbroic to dioritic intrusive rocks


Early Triassic to Late Jurassic

 **TrJB** Brooks Diorite Complex: dioritic intrusive rocks

Late Triassic to Early Jurassic

 **uTrv** undivided volcanic rocks

Sitlika Assemblage

 **uTrJSs** Clastic Unit: undivided sedimentary rocks

Late Triassic***Stern Creek Plutonic Suite***

 **LTrSC** Stern Creek Phase: dioritic intrusive rocks

Upper Triassic***Stuhini Group***

 **uTrSsv** marine sedimentary and volcanic rocks

Early Permian to Late Jurassic**Cache Creek Complex**

| | | |
|--|-------------|---|
| | PJCS | Sowchea Succession: mudstone, siltstone, shale fine clastic sedimentary rocks |
|--|-------------|---|

Upper Paleozoic to Middle Jurassic**Gamsby Complex**

| | | |
|--|----------------|---|
| | uPzJGgs | greenstone, greenschist metamorphic rocks |
|--|----------------|---|

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7.2 Property Geology

Excerpt from Ray (2009)

The CHES property is mostly underlain by a folded sedimentary and volcanic sequence belonging to the Middle Jurassic, arc-related Naglico Formation; this formation forms part of the Hazelton Group. These rocks are intruded by several small stocks and plugs that were emplaced during Jurassic, Late Cretaceous and Eocene magmatic events. The Cretaceous event resulted in the Tetachuck North Stock, which lies in the eastern part of the property. This body is probably genetically related to the Exo polymetallic Cu-Mo-W skarn (BC Minfile 093F 017). It yielded a U-Pb zircon age of 76 to 79 Ma, suggesting it is part of the metallogenically important Bulkley plutonic suite (Friedman et al., 2000). Another somewhat larger granodiorite-alaskite body, named for this report the “Tet Stock”, lies in the eastern part of the property. It is believed to be either Eocene or Cretaceous in age and appears to host the Tet Cu-Mo showing (BC Minfile 093F 002).

7.2.1 Naglico Formation (Hazelton Group)

Struik et al. (1999) note that the Naglico Formation in the CHES property area records a subaerial volcanic explosive and eruptive event that was associated with marine sedimentation. These workers identified three units in the formation, all of which are believed to be present in the CHES property area. They are as follows:

Unit 1: feldspar-phyric andesite flows and tuffs, which are found in the Chelaslie River and Tetachuck Lake areas. The flow rocks are generally maroon to dark grey and contain plagioclase phenocrysts, acicular hornblende, and minor pyroxene phenocrysts. The lapilli tuff contains fragments of the flow unit in a groundmass of the same composition.

Unit 2: andesite agglomerate and breccia that is found at the Chelaslie-Main and Chelaslie River areas. It occurs stratigraphically under Unit 1 rocks in this area.

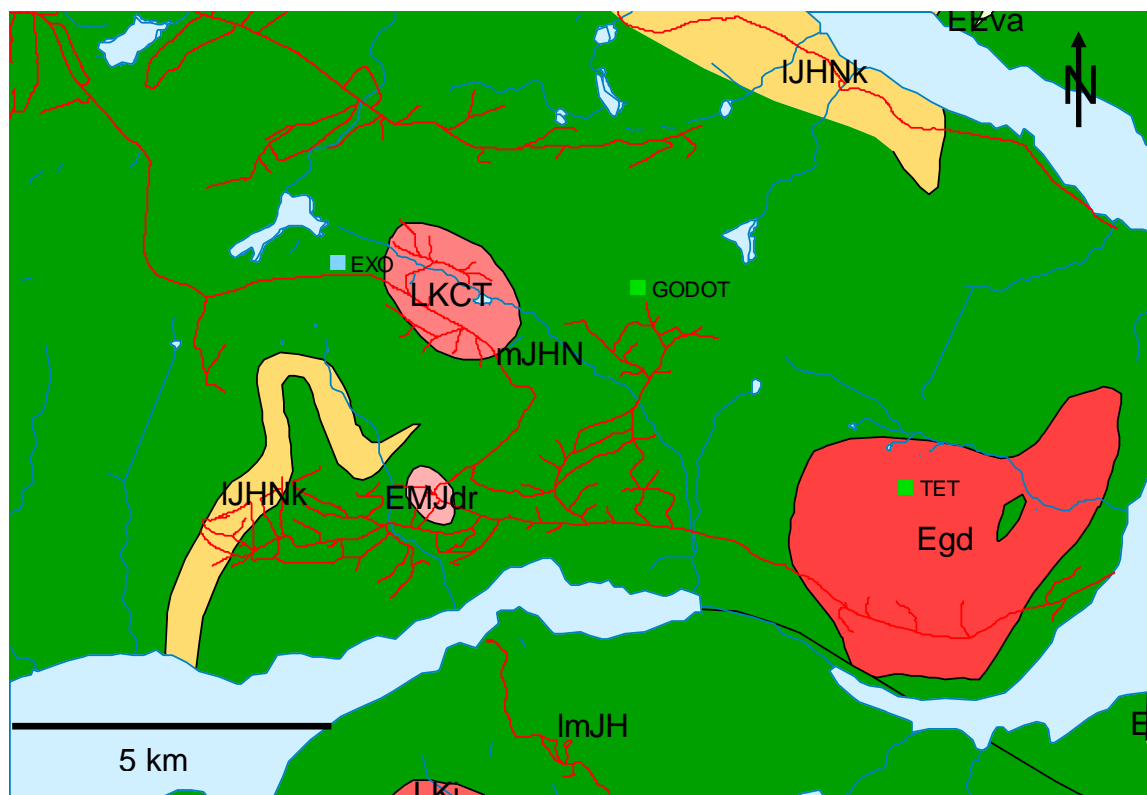


Figure 4: Property Geology Map

Unit 3: this is found on the CHES property, although differences between the sedimentary rocks in Chelaslie-Main and Chelaslie River areas suggest a facies change across the district (Struik et al., 1999). Unit 3 includes fossiliferous limestone and mudstone with interbedded sandstone and limey ash tuff. The mudstone is dark grey, weathers brown and its bedding is interrupted by local bioturbation. The limey sandstone package is cream to yellow and has interbeds, up to 45 cm thick, of limey ash. It is overlain with angular unconformity by Ootsa Lake Group rhyolite. Unit 3 calcareous siltstones and mudstones are believed to host the Exo skarn stockwork mineralization.

7.2.2 Intrusive Rocks

At least two intrusive stocks are known to be present on the CHES property, and both are associated with copper mineralization. The oldest and smallest of these, the Tetachuck North Stock, lies in the western part of the property and has been described by Billesberger et al., (1999) and Friedman et al. (2000). This economically important intrusion is sub-circular and covers a 3.5 km² area. It consists of a pale, medium-grained quartz monzodiorite that contains hornblende, biotite, plagioclase, K-feldspar, and lesser titanite, apatite and zircon. U-Pb dating by Friedman et al. (2000) on zircons and titanite fractions gave ages ranging between 76.6 and 79.3 Ma (Late Cretaceous) for the Tetachuk North Pluton. The wide hornfels envelope on the western margin of the pluton hosts the Exo polymetallic Cu-Mo-W skarn (BC Minfile 093F 017). The other larger pluton, the Tet Stock, underlies part of the eastern portion of the CHES property. It consists of a medium to coarse-grained biotite-hornblende granodiorite and alaskite

and is possibly Cretaceous or Eocene in age. The alaskite phase appears to host Cu-Mo mineralization (Richards, 1981), encountered by past drilling at the Tet showing (BC Minfile 093F 002).

The author believes that an older intrusive located SSE of the Exo showing and mapped as an Early-Middle Jurassic diorite may be responsible for the skarn and stockwork mineralization present at the Exo showing. This interpretation is based on airborne 1st derivative magnetics from MapPlace and is discussed below.

7.2.3 Structures on the Property

The structural history of the CHES property area and its relationship to the hydrothermal alteration and copper mineralization present in the Exo, Godot and Tet areas are poorly understood. Mapping by Leask (1987a) in the area around the Exo skarn prospect shows that the bedded fine-grained sedimentary rocks were folded and now strike north-northeast to northeast with a steep northwesterly dip. This trend is seen in the Exo road quarry where the layered-bedded hornfels rocks show evidence of open folding. The emplacement of the Late Cretaceous Tetachuck North Stock possibly post-dates the folding event.

Leask (1987a) believed that the western margin of the stock dipped westerly, sub-parallel to, or at a shallower angle to the bedded hornfels. His work also indicates the presence of late brittle faulting with at least three different trends. The most common strikes northeast and dips westerly, sub-parallel to the bedding. Another set trends north-south while a third set strikes east-southeast. At least two faults belonging to the east-southeast set are present in the Exo skarn area. The most southerly of these, as postulated by Leask (1987a), may cut and displace the southern margin of the Tetachuck North Stock. The other presumed parallel structure further north passes under the north end of Gunn Lake, and continues east-southeast under a linear zone of muskeg and creek. This latter structure may cut the northern margin of the Tetachuck North Stock.

7.3 Mineralization

The best known is represented by the copper-dominant polymetallic skarn and stockwork system present at the Exo prospect (BC Minfile 093F 017). The stockwork target would be analogous to mineralization mined at the Huckleberry porphyry deposit with the host rock being a limy sediment rather than volcanics.

7.3.1 Mineralization at the Exo Cu-Mo-W skarn (BC Minfile 093F 017)

Excerpt from Ray (2009)

The intrusion of the Tetachuck North Stock resulted in an extensive zone of thermal and hydrothermal alteration in the surrounding sedimentary country rocks. On the western margin of the stock this altered zone is at least 1 km wide; it is marked by green calc-silicate hornfels containing abundant silica-quartz, epidote and chlorite, with lesser amounts of purple-brown coloured biotite hornfels. These rocks are siliceous, fine-grained and vary from massive to layered; the layering represents remnant sedimentary

bedding. Locally, the hornfels is overprinted by garnet-pyroxene-epidote skarn-alteration that is commonly quartz-rich and siliceous.

At least two types of skarn-hornfels-hosted mineralization are seen at the Exo Cu-Mo-W prospect, namely:

1. Thin (< 1.5 m) units of massive and semi-massive sulphide that are mostly concordant with bedding. These contain abundant pyrite and magnetic pyrrhotite with lesser amounts of chalcopyrite. Trace bornite, molybdenite and magnetite may also be present.
2. Quartz-pyrite stockwork veins are present, up to 0.6 cm thick, which contain variable amounts of pyrite, molybdenite, chalcopyrite and brown sphalerite. Blebs and masses of (apparently barren) coarsely crystalline pyrite are also spatially associated with the stockworks. Scheelite is reported at the Exo skarn (Leask, 1987b).

The **Type 1** massive to semi-massive sulphide mineralization is best seen in a 35-40 meter-long road-side open-cut that was excavated for road-building material (Photo 1). This cut, situated at UTM 319946 m E and 5921625 m N, lies more than 1 km west of the western margin of the Tetachuck North Stock. The steeply northwest-dipping, north-northeast to northeast-striking host rocks show evidence of open folding. Most of the hornfelsic rocks in the open-cut contain between 1 to 5% fine-grained, disseminated pyrite, but at certain localities there are thin (<1.5m) steeply-dipping zones of siliceous brown-garnet exoskarn containing > 25% pyrite-pyrrhotite and lesser chalcopyrite. These mineralized zones are orientated sub-parallel to the remnant bedding, and some are spatially associated with late faulting, oxidation and abundant black Mn-oxide alteration.

The **Type 2** vein-stockwork mineralization occurs immediately east of the road-side open-cut where it is seen in float and sub-crop for > 300 m along the logging road. This mineralization is hosted by hornfels and garnet-exoskarn; the latter is characterized by pink garnet with epidote and abundant quartz. Molybdenite tends to (but not always) occur along the margins of the quartz-pyrite ± chalcopyrite veinlets.

7.4 Property Geophysics

The 1st derivative magnetic layer, from MapPlace, shows a magnetically complex area that for the most part does not correlate with the mapped geology. The exception appears to be the oldest intrusive on the property, south of the Exo showing, that exhibits a magnetic high halo surrounding a magnetic low core. This type of feature is often found with a porphyry center intruding into fine grained sediments and developing a pyrrhotite halo. This would also suggest that mineralization at the Exo showing may be related to this older intrusive body and not the Tetachuck North Stock as suggested by Leask (1987a). There has been little exploration south of the Exo near Tetachuck Lake over this area (pers comm. Ralph Keefe). The later Cretaceous and Eocene intrusive rocks do not appear to influence the magnetic characteristics of the surrounding rocks. Of interest is that all of the known mineralization found to date,

namely the Exo, Godot and Tet showings are all located on the northern (and western) margin of the large 1st Vertical Derivative magnetic anomaly that trends northwesterly through the property.

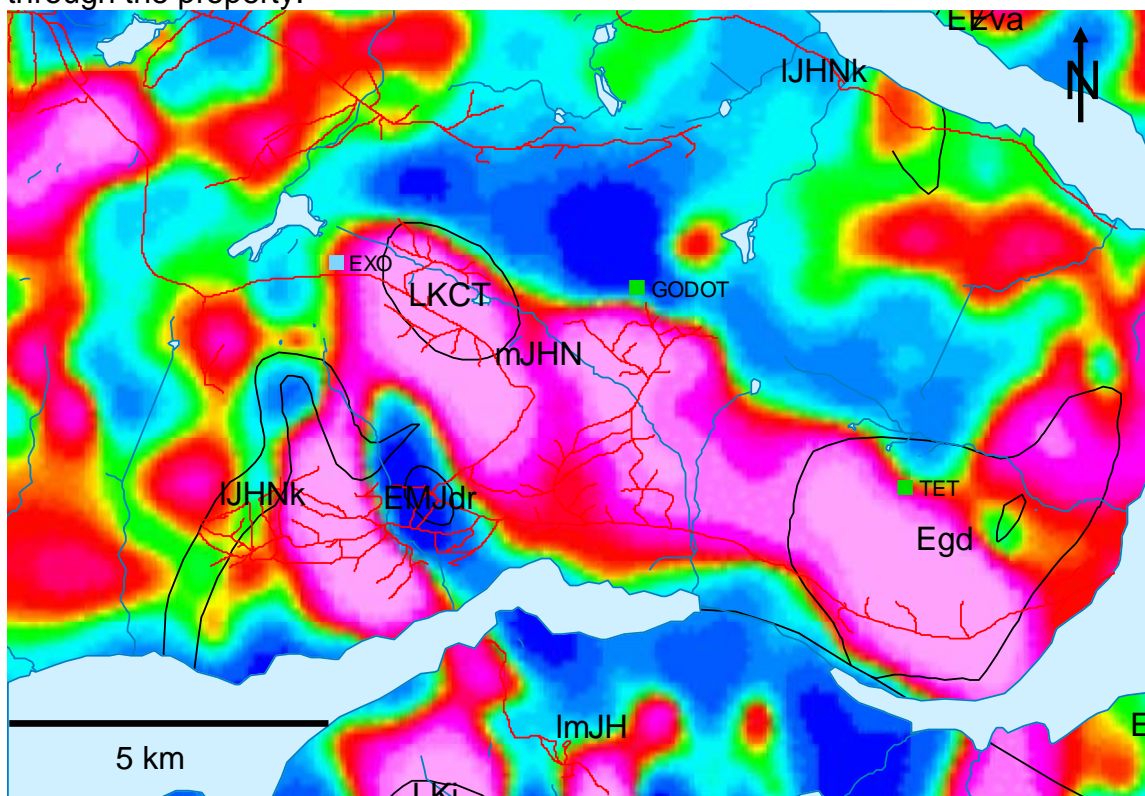


Figure 5: 1st Derivative Magnetics from MapPlace.

8.0 Deposit Types

The Ches property area contains at least two types of copper-bearing mineralization, namely (1) Cu-dominant polymetallic Cu-Mo-W skarn, as seen at the Exo prospect (093F 017), and (2) Cu-Mo porphyry mineralization, as present at the Tet (093F 002) and Godot (093F 035) occurrences. The main exploration model at each of the showings would be the Cu-Mo porphyry target.

8.1 Porphyry copper/molybdenum

The porphyry Copper/Molybdenum target is the main deposit type thought to be responsible for mineralization at each of the known showings on the Ches/Tet property. Panteleyev, (1995) describes the Porphyry Cu+/-Mo+/-Au model in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Open File 1995-20, pages 87-92 as a Calcalkaline porphyry Cu, Cu-Mo, Cu-Au deposit type. Classic British Columbia examples include: Brenda (092HNE047), Berg (093E 046), Huckleberry (093E 037) and Schaft Creek (104G 015); while others include Casino (Yukon, Canada), Inspiration, Morenci, Ray, Sierrita-Experanza, Twin Buttes, Kalamazoo and Santa Rita (Arizona, USA), Bingham (Utah, USA), El Salvador, (Chile), Bajo de la Alumbrera (Argentina).

Host intrusions vary from coarse-grained phaneritic to porphyritic stocks, batholiths and dike swarms, with compositions that range from quartz diorite to granodiorite and quartz monzonite. There are commonly multiple emplacements of intrusive phases and a wide variety of breccias that modify the stock geometry. The deposits usually exhibit a lateral outward zoning of alteration and sulphide minerals from a potassic (K-feldspar and biotite) altered core through phyllic (quartz-sericite-pyrite) alteration to propylitic (chlorite-epidote-calcite). Less commonly argillic and in the uppermost parts of some ore deposits, advanced argillic (kaolinite-pyrophyllite) alteration occur.

Characteristics of this deposit type have large zones, up to 10 km² in size, of hydrothermally altered rock containing stockworks of quartz veins and veinlets, closely spaced fractures and breccia zones containing pyrite and chalcopyrite +/- molybdenite, bornite and magnetite. Disseminated sulphide minerals are present but in minor amounts. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization.

Ore controls include igneous contacts with the surrounding wallrocks and internal contacts between intrusive phases; cupolas and the uppermost, bifurcating parts of stocks, dike swarms, early formed intrusive breccias and hydrothermal breccias. Ore minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold, electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite and barite.

Two main periods of deposit formation occurred in the Canadian Cordillera during the Triassic/Jurassic (210-180 Ma) and Cretaceous/Tertiary (85-45 Ma). Elsewhere deposits are mainly Tertiary, but range from Archean to Quaternary.

British Columbia porphyry Cu/Mo ± Au deposits range from <50 to >900 Mt with 0.2 to 0.5% Cu, 0.0 to 0.04% Mo, <0.1 to 0.6 g/t Au, and 1 to 3 g/t Ag. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37 % Cu, 0.01 % Mo, 0.3g /t Au and 1.3 g/t Ag.

Porphyry deposits contain the largest reserves of Cu, significant Mo resources and close to 50% of Au reserves in British Columbia.

8.2 Cu-dominant skarn deposits

Excerpt from Ray (2009)

Worldwide, Copper skarns are important primary producers of Cu with some byproduct production of Au, Ag, Mo, W, and (rarely) magnetite. Examples in British Columbia are the Craigmont (BC Minfile 092ISE 035), Phoenix (082ESE 020), Old Sport (092L 035) and Queen Victoria (082FSW 082) deposits. Examples elsewhere include the Mines Gaspé deposits (Québec), Ruth, Mason Valley and Copper Canyon (Nevada, USA), Carr Fork (Utah, USA), Ok Tedi (Papua New Guinea) and Rosita in Nicaragua. Worldwide they average 1 to 2 % copper and range in tonnage from 1 to 100 Mt,

although some exceptional deposits exceed 300 Mt. The Craigmont deposit is British Columbia's largest Cu skarn; it contained approximately 34 Mt grading 1.3 % Cu.

These deposits are characterized by Cu-dominant mineralization (generally chalcopyrite) genetically associated with a garnet-pyroxene-dominant skarn gangue. They are most commonly developed where Andean-type plutons intrude older continental-margin carbonate sequences. To a lesser extent (but important in British Columbia), they can be associated with oceanic island arc plutonism. Worldwide they are mainly Mesozoic, although they may be any age. In British Columbia they are mostly Early to Mid-Jurassic in age.

The associated host rocks include porphyritic stocks, dikes and breccia pipes of quartz diorite, granodiorite, monzo-granite and tonalite composition, that intrude carbonate rocks, calcareous siltstones or calcareous volcanics and tuffs. Copper skarns in oceanic island arcs tend to be associated with more mafic intrusions (quartz diorite to granodiorite), while those formed in continental margin environments are associated with more felsic material. The morphology of the deposits can be highly varied, including stratiform and tabular orebodies, vertical pipes, narrow lenses, and irregular ore zones that were controlled by intrusive contacts.

The skarn alteration often overprints the related intrusion (called endoskarn) as well as the adjacent country rocks (called exoskarn). Worldwide, virtually all economic skarn deposits are hosted by exoskarn.

The exoskarn mineralogies include abundant garnet and lesser clinopyroxene. The garnet tends to be andradite, being high in Fe, and low in Al and Mn. The pyroxene is diopsidic. A mineral zoning from the stock out to the marble is commonly as follows: (1) andradite + diopside (proximal); (2) wollastonite ± tremolite ± garnet ± diopside ± vesuvianite (distal). Retrograde alteration to actinolite, chlorite and montmorillonite is common. Endoskarn alteration of the intrusion is marked by potassic alteration with K-feldspar, epidote and sericite ± pyroxene ± garnet. Retrograde alteration generates actinolite, chlorite and clay minerals.

The principal ore mineralogies include chalcopyrite ± pyrite ± magnetite, commonly developed in an exoskarn garnet-pyroxene zone that generally lies proximal, or relatively close, to the related intrusive margin. A more distal zone close to the outlying carbonate country rocks is often dominated by bornite ± chalcopyrite ± sphalerite ± tennantite, together with wollastonite. Hematite, pyrrhotite or magnetite may predominate (depending on the oxidation state). Scheelite, molybdenite, bismuthinite, galena, cosalite, arsenopyrite, enargite, tennantite, loellingite, cobaltite and tetrahedrite may be present.

The ore bodies tend to occur as irregular or tabular orebodies that form in carbonate rocks and/or calcareous volcanics or tuffs near igneous contacts. Pendants within igneous stocks can be important host rocks. Copper mineralization is present as stockwork veining and disseminations in both endo and exoskarn, although exoskarn

generally hosts the more economic deposits. Magnetic, electromagnetic and IP surveys are useful tools to locate these deposits.

Copper skarns are often related to, and may occur in the same geological regime as copper porphyries. Copper skarn deposits related to mineralized Cu porphyry intrusions tend to be larger, lower grade, and emplaced at higher structural levels associated with barren stocks. Most copper skarns contain oxidized mineral assemblages, and mineral zoning is common in the skarn envelope. Those with reduced assemblages can be enriched in W, Mo, Bi, Zn, As and Au. One third of the 340 copper skarn occurrences in British Columbia lie in the Quesnellia and Stikinia terranes.

Item 9: Exploration

A one day visit was made to the Ches property on December 6, 2011 by personnel from Riverside Resources and Antofagasta Minerals. Winter conditions played a major factor in the visit. Snow drifts in the Exo main showing area reached depths of approximately 1m severely hampering sampling efforts. The stockwork zone was completely snow covered. Despite conditions, sixteen samples were collected during the visit. Rock sample descriptions were not provided with the GPS locations. A listing of the coordinates is provided below.

Table 3: Sample Locations

| Sample ID | East (NAD 83) | North (NAD 83) |
|-----------|---------------|----------------|
| RRI-BC-20 | 319934 | 5921621 |
| RRI-BC-21 | 319933 | 5921620 |
| RRI-BC-22 | 319930 | 5921623 |
| RRI-BC-23 | 319924 | 5921622 |
| RRI-BC-24 | 319923 | 5921618 |
| RRI-BC-25 | 319920 | 5921621 |
| RRI-BC-26 | 319915 | 5921620 |
| RRI-BC-27 | 319912 | 5921624 |
| RRI-BC-28 | 319910 | 5921621 |
| RRI-BC-29 | 319908 | 5921621 |
| RRI-BC-30 | 319906 | 5921622 |
| RRI-BC-31 | 319904 | 5921621 |
| RRI-BC-32 | 319900 | 5921623 |
| RRI-BC-33 | 319896 | 5921623 |
| RRI-BC-34 | 319893 | 5921626 |
| RRI-BC-35 | 319887 | 5921619 |

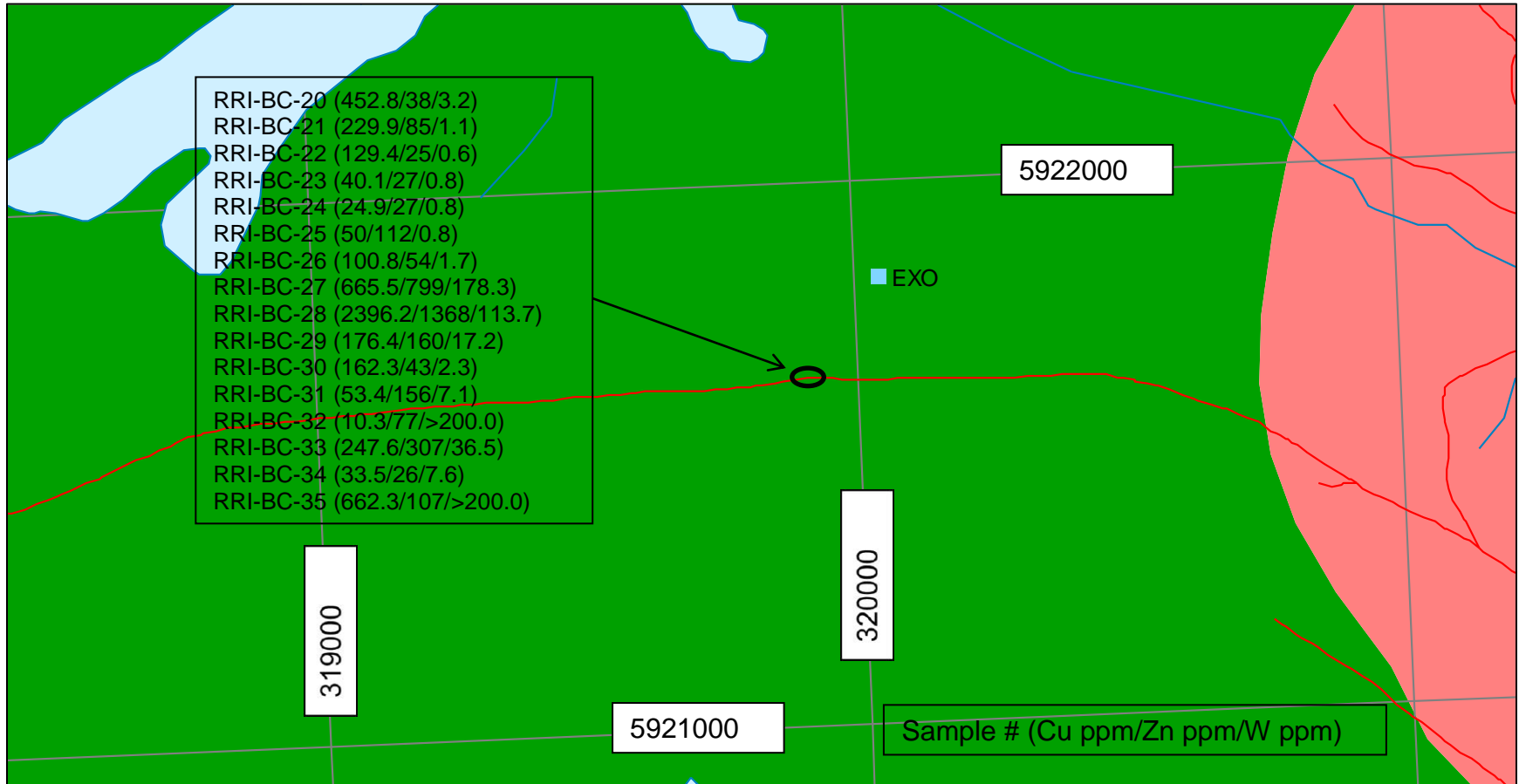


Figure 6: Sample Location map

Item 10: Drilling

No drilling was completed as part of the exploration program.

Item 11: Sample Preparation, Analyses and Security

All rocks collected during the program were placed in clean poly bags with a sample tag and tied closed with flagging tape. Samples were transported to Smithers and submitted to the Acme Prep Lab facilities for sample prep prior to analysis. Rocks were prepared using R200-250 methods where the sample was crushed to 80% passing 10 mesh. A 250g sub-sample was split and pulverized to 85% passing 200 mesh. Samples were analyzed using Acme's 1EX package which uses a strong multi-acid digestion that dissolves most minerals followed by ICP-MS analysis using a 0.25g split.. Gold values were determined using Fire Assay Fusion - AAS Finish of a 30g sample.

Item 12: Data Verification

No data verification was completed during the program.

Item 13: Mineral Processing and Metallurgical Testing

No mineral processing or metallurgical testing was completed as part of the exploration program.

Item 14: Mineral Resource Estimates

No mineral resource estimates were completed as part of the exploration program

Item 15: Adjacent Properties**15.1 Huckleberry (Minfile 093E 037, rev. Meredith-Jones, 2012)**

At the Huckleberry deposit, 190km to the southwest, porphyry copper and molybdenum mineralization is associated with a near elliptical stock of Upper Cretaceous age granodiorite porphyry (Bulkley Intrusions) measuring approximately 670 by 425 metres. The stock intrudes fine-grained crystal tuff of the Lower-Middle Jurassic Hazelton Group. Tuffs adjacent to the intrusion have been hornfelsed.

Mineralization consists of chalcopyrite and minor molybdenite in fractures, principally in the hornfelsed volcanics but also in the stock. Minerals accompanying chalcopyrite are quartz, orthoclase and pyrite with probably later calcite, gypsum and zeolite. Magnetite occasionally accompanies chalcopyrite. Disseminated chalcopyrite also occurs. Molybdenite usually occurs with quartz in hairline fractures. The mineralization generally occurs around the stock contact but the extent outward from the contact and the grade vary greatly. The best mineralization occurs on the east side of the stock. Potassic, pyrite and chlorite alteration haloes surround the stock.

The ore zones at Huckleberry are enclosed by an easterly-oriented zone of alteration approximately 4 kilometres long and 1 kilometre to 2 kilometres wide. The Main zone occurs along the eastern periphery of a sub-circular stock located in the western part of the alteration zone and is further centred on an apophysis of the stock. Most of the mineralization occurs in an arc measuring 500 metres by 100 metres. The East zone

occurs within and surrounding a similar porphyritic stock in the eastern part of the system and is approximately 900 metres by 300 metres and remains open at depth. The East zone appears to be centred on an apophysis of the East zone.

The Huckleberry mine has been in production since October, 1997. Published reserves for the deposit in 2010 were Proven and Probable reserves totaling 14.01 million tonnes grading 0.362% Cu, 0.005% Mo, Measured and Indicated reserves of 182.9M tonnes grading 0.321% Cu and Inferred reserves of 45.4M tonnes grading 0.288% Cu. Reserves were calculated with 0.20% Cu cut-off grade.

15.2 Berg (Minfile 093E 046, rev. Flower, 2009)

The area of the Berg porphyry copper-molybdenum deposit, situated 175km to the south, is underlain by massive and clastic volcanic and sedimentary rocks of the Lower-Middle Jurassic Hazelton Group. These rocks have been intruded by an elongate body of quartz diorite and a circular quartz monzonite porphyry stock (Berg Stock) approximately 800 metres in diameter. A breccia pipe and quartz latite porphyry dikes postdate the stock. Volcanic and sedimentary rocks adjacent to the stock have been metamorphosed to biotite hornfels. Mineralization is associated with the Eocene age porphyry stock.

The most common forms of primary mineralization are fracture-controlled and disseminated pyrite and chalcopyrite with quartz stockworks of pyrite, molybdenite and chalcopyrite. Less commonly, quartz and quartz-carbonate veins contain pyrite, sphalerite, galena, chalcopyrite and sulphosalt minerals. Secondary copper sulphides, with chalcocite being the most important, are found in an enrichment blanket over most of the deposit. Primary ore minerals are most abundant in an asymmetrical annular zone around the quartz monzonite stock.

In general, the best molybdenum mineralization is within and adjacent to the stock while the highest copper values are normally 70 metres or more beyond the contact. The best developed mineralization occurs along the eastern side of the stock.

A pyrite halo extends 300 to 600 metres beyond the stock contact. Potassic, phyllic, propylitic and argillic alteration types are all present at Berg.

The deposit has a recently published 43-101 compliant measured & indicated resource of 557.8.5 million tonnes, grading 0.30% Cu and 0.037% Mo and 3.77g/t Ag and an inferred resource of 159.4 million tonnes grading 0.23% Cu, 0.033% Mo and 2.5 g/t Ag using a 0.30% copper equivalent cut-off grade.

15.3 Poplar (Minfile 093L 239, rev. Duffett, 1988)

The Poplar deposit is located 155km south of the Property, where Lower-Middle Jurassic Hazelton Group volcanics are intruded by a Middle-Late Cretaceous Bulkley Intrusions. The Hazelton rocks are comprised of massive andesite, tuff, lapilli tuff, agglomerate, flow breccia with narrow bands and interbedded argillite. This group is overlain by Juro-Cretaceous sediments which are estimated to be 400 metres thick. The

basal unit is comprised of gritty argillite overlain by sorted to unsorted medium to coarse-grained sandstone and conglomerate. The average bedding strikes 035 degrees and dips 60 degrees to the southeast.

The Bulkley Intrusions are comprised of a granodiorite to biotite monzonite porphyry which is aplitic near the contact margins. The stock is weakly mineralized with chalcopyrite, molybdenite and pyrite in fracture-fillings. As well, the biotite porphyry hosts an estimated 1.5 per cent of disseminated sulphides, mainly pyrite with minor chalcopyrite.

A 200-metre wide dike swarm associated with the biotite porphyry stock crosscuts the volcanics which have undergone considerable fracturing/faulting and hornfelsing throughout. Mineralization in the quartz veins and dike swarms is comprised of pyrite with minor chalcopyrite.

There is a well-developed hydrothermal alteration facies concentric to the biotite porphyry which includes potassic, phyllic, argillic and propylitic zones. There is weak hornfelsing throughout the volcanics and it is strongest near the contact with the granodiorite stock. Mineralization in the hornfelsed aureole consists mainly of disseminated pyrite with very minor chalcopyrite.

Lions Gate Metals of Vancouver has filed the new 43-101 report on April 5, 2012 with an updated resource for the Poplar deposit. The property has a new indicated resource of 171.3 million tonnes grading 0.28% Cu, 0.008% Mo, 0.08 g/t Au and 2.30 g/t Ag (0.40% CuEq), plus an inferred resource of 209.0 million tonnes grading 0.23% Cu, 0.004% Mo, 0.06 g/t Au and 3.62 g/t Ag (0.33% CuEq) using a 0.15% Cu cut-off.

15.4 Ox Lake (Minfile 093E 004, rev. Barlow, 1998)

The Ox Lake porphyry copper-molybdenum deposit occurs in an area underlain by felsic tuff, andesitic tuff, sandstone and siltstone of the Lower-Middle Jurassic Hazelton Group. Intruding the sequence is a 400 by 600 metre granodiorite porphyry plug of Upper Cretaceous age. Volcanic tuffs marginal to the porphyry plug are hornfelsed and pyritized in a halo up to about 300 metres wide. Intrusive breccias occur along the southwestern side of the plug.

Copper and molybdenum mineralization occur in a peripheral zone around the plug and is concentrated in hornfels immediately west of the plug. The highest grades occur at the porphyry-hornfels contact and gradually decline in the hornfels away from the contact. On the porphyry side of the contact the grade of mineralization falls sharply.

The main host to mineralization is an intense stockwork of veins and fractures in the hornfels zone. In general, copper mineralization is most prominent in the hornfels while molybdenum is concentrated in porphyry dikes with small amounts in the hornfels. Nine vein types are developed in four stages that form part of the stockwork. The most common metallic minerals are pyrite, chalcopyrite, bornite, hematite, magnetite, pyrrhotite and molybdenite. Very minor late veins contain some sphalerite and galena.

Potassic, albitic, propylitic, sericitic and argillic alteration are evident at the deposit and are defined by biotite, chlorite, sericite, epidote, albite, magnetite and hematite alteration mineralogy.

Drilling by Goldreach Resources in 2011, at the newly discovered West Seel deposit, intersected 566m of 0.51% copper equivalent. The company recently released an independent resource calculation at Seel of 28.13 million tonnes (indicated) at 0.40% copper equivalent and 214.78 million tonnes (inferred) at 0.33% copper equivalent using a 0.2% copper equivalent cut off.

15.5 Equity Silver (Minfile 093L 001, rev. Robinson, 2009)

Silver, copper and gold were produced from the Equity Silver deposit, located 150km to the southeast of the Property.

The mineral deposits are located within an erosional window of uplifted Cretaceous age sedimentary, pyroclastic and volcanic rocks near the midpoint of the Buck Creek Basin. Strata within the inlier strike 015 degrees with 45 degree west dips and are in part correlative with the Lower-Upper Skeena(?) Group. Three major stratigraphic units have been recognized. A lower clastic division is composed of basal conglomerate, chert pebble conglomerate and argillite. A middle pyroclastic division consists of a heterogeneous sequence of tuff, breccia and reworked pyroclastic debris. This division hosts the main mineral deposits. An upper sedimentary-volcanic division consists of tuff, sandstone and conglomerate. The inlier is flanked by flat-lying to shallow dipping Eocene andesitic to basaltic flows and flow breccias of the Francois Lake Group (Goosly Lake and Buck Creek formations).

Intruding the inlier is a small granitic intrusive (57.2 Ma) on the west side, and Eocene Goosly Intrusions gabbro-monzonite (48 Ma) on the east side.

The chief sulphides at the Equity Silver mine are pyrite, chalcopyrite, pyrrhotite and tetrahedrite with minor amounts of galena, sphalerite, argentite, minor pyrargyrite and other silver sulphosalts. These are accompanied by advanced argillic alteration clay minerals, chlorite, specularite and locally sericite, pyrophyllite, andalusite, tourmaline and minor amounts of scorzalite, corundum and dumortierite. The three known zones of significant mineralization are referred to as the Main zone, the Southern Tail zone and the more recently discovered Waterline zone. The ore mineralization is generally restricted to tabular fracture zones roughly paralleling stratigraphy and occurs predominantly as veins and disseminations with massive, coarse-grained sulphide replacement bodies present as local patches in the Main zone. Main zone ores are fine-grained and generally occur as disseminations with a lesser abundance of veins. Southern Tail ores are coarse-grained and occur predominantly as veins with only local disseminated sulphides. The Main zone has a thickness of 60 to 120 metres while the Southern Tail zone is approximately 30 metres thick. An advanced argillic alteration suite includes andalusite, corundum, pyrite, quartz, tourmaline and scorzalite. Other zones of mineralization include a zone of copper-molybdenum mineralization in a quartz

stockwork in and adjacent to the quartz monzonite stock and a large zone of tourmaline-pyrite breccia located to the west and northwest of the Main zone.

Alteration assemblages in the Goosly sequence are characterized by minerals rich in alumina, boron and phosphorous, and show a systematic spatial relationship to areas of mineral deposits. Aluminous alteration is characterized by a suite of aluminous minerals including andalusite, corundum, pyrophyllite and scorzalite. Boron-bearing minerals consisting of tourmaline and dumortierite occur within the ore zones in the hanging wall section of the Goosly sequence. Phosphorous-bearing minerals including scorzalite, apatite, augelite and svanbergite occur in the hanging wall zone, immediately above and intimately associated with sulphide minerals in the Main and Waterline zones. Argillic alteration is characterized by weak to pervasive sericite-quartz replacement. It appears to envelope zones of intense fracturing, with or without chalcopyrite/tetrahedrite mineralization.

The copper-silver-gold mineralization is epigenetic in origin. Intrusive activity resulted in the introduction of hydrothermal metal-rich solutions into the pyroclastic division of the Goosly sequence. Sulphides introduced into the permeable tuffs of the Main and Waterline zones formed stringers and disseminations which grade randomly into zones of massive sulphide. In the Southern Tail zone, sulphides formed as veins, fracture-fillings and breccia zones in brittle, less permeable tuff. Emplacement of post-mineral dikes into the sulphide-rich pyroclastic rocks has resulted in remobilization and concentration of sulphides adjacent to the intrusive contacts. Remobilization, concentration and contact metamorphism of sulphides occurs in the Main and Waterline zones at the contact with the postmineral gabbro-monzonite complex.

The Southern Tail deposit has been mined out to the economic limit of an open pit. With its operation winding down, Equity Silver Mines does not expect to continue as an operating mine after current reserves are depleted. Formerly an open pit, Equity is mined from underground at a scaled-down rate of 1180 tonnes-per-day. Proven and probable ore reserves at the end of 1992 were about 286,643 tonnes grading 147.7 grams per tonne silver, 4.2 grams per tonne gold and 0.46 per cent copper, based on a 300 grams per tonne silver-equivalent grade. Equity has also identified a small open-pit resource at the bottom of the Waterline pit which, when combined with underground reserves, should provide mill feed through the first two months of 1994 (Northern Miner - May 10, 1993).

Equity Silver Mines Ltd. was British Columbia's largest producing silver mine and ceased milling in January 1994, after thirteen years of open pit and underground production. Production totaled 2,219,480 kilograms of silver, 15,802 kilograms of gold and 84,086 kilograms of copper, from over 33.8 Million tonnes mined at an average grade of 0.4 per cent copper, 64.9 grams per tonne silver and 0.46 gram per tonne gold.

15.6 Emerald Glacier (Minfile 093E 001, rev. Sweeney, 2009)

The Emerald Glacier mine area is underlain by the Lower-Middle Jurassic Hazelton Group which consists of a sedimentary member of feldspathic sandstone with minor

siltstone and silty tuffaceous shale, and an overlying volcanic member of andesitic and dacitic breccias, tuffs and some massive volcanic rocks. Mineralization is hosted primarily by sedimentary rocks in a zone of transition between the two members. These rocks include intercalated sandstone, tuff, tuffaceous sandstone, siltstone and shale. Dacite, basalt and rhyolite dikes cut the stratified rocks.

En echelon quartz veining extends for at least 1200 metres and is associated with shears striking about 170 degrees and dipping 60 degrees to 75 degrees east. The main mineralization occurs in one of these shears and is associated with quartz veining up to 3 metres wide that is variously stockwork, massive, banded, brecciated and drusy in form. Sulphide mineralization includes galena, sphalerite, chalcopyrite and pyrite in order of decreasing abundance. Smaller veins in the vicinity are dominated by sphalerite.

Unclassified reserves are 40,800 tonnes grading 355 grams per tonne silver, 8.23 per cent lead, 9.49 per cent zinc and 1.13 grams per tonne gold (CIM Special Volume 37, page 186).

Item 16: Other Relevant Data and Information

There is no other relevant data or information other than that included in this report.

Item 17: Interpretation and Conclusions

All of the showings on the property, the Exo, Godot and Tet, occur on the northern and western margin of a magnetic high feature that trends northwesterly through the property. The Exo Main showing is associated with pyrrhotite in replacement style mineralization in limy sediments and silty-limestones. Sampling by Teck Resources personnel during their one day visit confirmed the presence of significant copper, tungsten, zinc and silver mineralization in both the skarn and stockwork showings. The late season property visit by Riverside Resources and Antofagasta returned similar findings. A reinterpretation of the historical surveys, combined with government airborne data has identified a large area south of the Exo showing that could host similar styles of mineralization as that found at the Exo. This area measures approximately 2000m wide and in excess of 6000m in length and occurs on the western margin of a small Early to Middle Jurassic diorite plug. The intrusion exhibits a magnetic low core surrounded by a magnetic high aureole. This pattern is typical of an intrusion into fine grained sediments where the hornfels zone is anomalous in pyrrhotite.

The known mineralization at Exo and the new interpretation of airborne geophysics for the area present excellent exploration targets. The property is considered by the author a property of merit that is worthy of additional exploration expenditures.

Item 18: Recommendations

Resampling and mapping of the known showings to confirm the reported historical grades is an obvious first step in the recommended program. This will involve the re-trenching of road ditches to uncover fresh bedrock material for sampling. This should be followed by a program to re-establish the original grid, if possible, and to conduct an up-

to-date magnetic survey to map the pyrrhotite hornfels zone and an Ah geochemical survey in an attempt to “see through” the glacial till present on the property and identified areas of anomalous mineralization. This initial program should be followed by an IP survey to locate the relative abundance of sulphide material and map silica alteration over magnetic and geochemically anomalous areas. Once geophysical and geochemical anomalies have been identified, a minimum of 2000m of HQ or NTW core drilling should be completed in approximately 10 holes over the apparent 1500m of strike length of the replacement and stockwork zones that has been identified to date and over any extensions to these zones identified in the present programs.

Proposed budget

| | |
|---|---------------|
| Project Geologist (60 days @ 600/day) | 36,000 |
| Geologist (60 days @ \$500/day) | 30,000 |
| Prospector/sampler x 2 (30 days @ \$400/day) | 24,000 |
| Line-cutting (30km @\$1500/km) | 45,000 |
| Geophysical surveys mag/IP (30km @ \$2500/km) | 75,000 |
| Mob/demob | 5,000 |
| Drilling NTW (2000m @ \$120/m) | 240,000 |
| Assaying (2300 samples @ \$55/ea) | 126,500 |
| Camp costs (500 person days @ \$100/day) | 50,000 |
| Reporting | 20,000 |
| Contingency (15%) | <u>97,725</u> |
| Total | \$749,225 |

Contingent on the results of the program, additional diamond drilling should target favorable anomalies and/or extensions to mineralization.

Respectfully submitted this 4th day of March, 2013.

Ken Galambos P.Eng.
 APEY #0916
 APEGBC #35364

Item 19: References

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Item 20: Date and Signature Page

1) I, Kenneth Daryl Galambos of 1535 Westall Avenue, Victoria, British Columbia am self-employed as a consultant geological engineer, authored and am responsible for this report entitled “Ches Property Evaluation Report”, dated March 4, 2013.

2) I am a graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelor’s Degree in Geological Engineering (1982). I began working in the mining field in 1974 and have more than 30 years mineral exploration and production experience, primarily in the North American Cordillera. Highlights of this experience include the discovery and delineation of the Brewery Creek gold deposit, near Dawson City, Yukon for Noranda Exploration Ltd.

3) I am a registered member of the Association of Professional Engineers of Yukon, registration number 0916 and have been a member in good standing since 1988. I am a registered Professional Engineer with APEGBC, license 35364, since 2010.

4) This report is based upon the author’s personal knowledge of the region, a review of additional pertinent data and a 2011 work program on the property.

5) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.

6) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.

7) I am partners with Ralph Keefe and Shawn Turford on the Ches property and a number of other properties in British Columbia. My professional relationship is as a non-arm’s length consultant, and I have no expectation that this relationship will change.

8) I consent to the use of this report by Ralph Keefe and Shawn Turford for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Victoria, British Columbia this 4th day of March, 2013.

“Signed and Sealed”

Ken Galambos, P.Eng. (APEY Reg. No. 0916, APEGBC license 35364)
KDG Exploration Services
1535 Westall Ave.
Victoria, British Columbia V8T 2G6

Item 21 Statement of Expenditures**December 6, 2011****Personnel**

| | |
|---|--------|
| Ralph Keefe (1 days @ \$350/day) | 350.00 |
| Jaime Poblete (0.5 day @ \$610.90/day) | 305.45 |
| Thomas Ullrich (0.5 day @ \$610.90/day) | 305.45 |

Transportation and Exploration costs (Riverside/Antofagasta)

| | |
|---|---------|
| Meals | 132.05 |
| Hotel | 203.49 |
| Vehicle rental | 221.99 |
| Flights and travel from Toronto and Vancouver | 675.07 |
| XRF Machine rental | 37.33 |
| Helicopter | 1876.49 |

Analysis costs

| | |
|------------------------------|--------|
| rock samples 16 @ \$50.40/ea | 806.40 |
|------------------------------|--------|

Transportation and Exploration costs (Keefe)

| | |
|-------------------------------|--------|
| F-150 4x4 (1 day @ \$100/day) | 100.00 |
| food (1 day @ \$35/day) | 35.00 |

Report

| | |
|--------------------|------------------|
| 2 days @ \$600/day | <u>\$1200.00</u> |
|--------------------|------------------|

Total = \$6,248.72

Item 22: Software Used in the Program

Microsoft Windows 7
Microsoft Office 2010
Adobe Reader 8.1.3
Adobe Acrobat 9
Internet Explorer
Google Earth

Item 23
Appendices

Appendix A

Assay Certificates Rock Samples

ACME ANALYTICAL LABORATORIES LTD.

Final Report

Client: Riverside Resources Inc.
 File Created: 09-Jan-12
 Job Number: VAN11006936
 Number of Samples: 18
 Project: None Given
 Shipment ID:
 P.O. Number:
 Received: 13-Dec-11

| | Method | WGHT | 1EX | 1EX | 1EX | 1EX | 1EX |
|---------------------|------------|-------|------|--------|------|------|------|
| | Analyte | Wgt | Mo | Cu | Pb | Zn | Ag |
| | Unit | KG | PPM | PPM | PPM | PPM | PPM |
| | MDL | 0.01 | 0.1 | 0.1 | 0.1 | 0.1 | 1 |
| Sample | Type | | | | | | |
| RRI-BC-20 | Rock | 2.02 | 15.2 | 452.8 | 5.8 | 38 | 1 |
| RRI-BC-21 | Rock | 1.18 | 8.7 | 229.9 | 31 | 85 | 0.2 |
| RRI-BC-22 | Rock | 0.42 | 3.8 | 129.4 | 3.1 | 25 | 0.2 |
| RRI-BC-23 | Rock | 0.7 | 2.1 | 40.1 | 4.4 | 27 | <0.1 |
| RRI-BC-24 | Rock | 1.31 | 4 | 24.9 | 4.8 | 27 | <0.1 |
| RRI-BC-25 | Rock | 0.38 | 5.3 | 50 | 6.2 | 112 | <0.1 |
| RRI-BC-26 | Rock | 1.03 | 5.7 | 100.8 | 5.2 | 54 | 0.1 |
| RRI-BC-27 | Rock | 0.84 | 3.5 | 665.5 | 6.6 | 799 | 0.9 |
| RRI-BC-28 | Rock | 1.06 | 17.2 | 2396.2 | 3 | 1368 | 4.6 |
| RRI-BC-29 | Rock | 1.52 | 0.8 | 176.4 | 24.3 | 160 | 0.4 |
| RRI-BC-30 | Rock | 0.61 | 6.8 | 162.3 | 6.8 | 43 | 0.1 |
| RRI-BC-31 | Rock | 1.21 | 1.3 | 53.4 | 12.8 | 156 | 0.2 |
| RRI-BC-32 | Rock | 0.98 | 2.6 | 10.3 | 5.8 | 77 | <0.1 |
| RRI-BC-33 | Rock | 0.41 | 1 | 247.6 | 14.4 | 307 | 0.5 |
| RRI-BC-34 | Rock | 0.63 | 0.3 | 33.5 | 6.2 | 26 | <0.1 |
| RRI-BC-35 | Rock | 1.17 | 20.3 | 662.3 | 11.8 | 107 | 1 |
| Pulp Duplicates | | | | | | | |
| RRI-BC-34 | Rock | 0.63 | 0.3 | 33.5 | 6.2 | 26 | <0.1 |
| RRI-BC-34 | REP | | 0.4 | 31.6 | 5.9 | 26 | <0.1 |
| Reference Materials | | | | | | | |
| STD OREAS24P | STD | | 1.5 | 46.3 | 2.7 | 103 | <0.1 |
| STD OREAS45C | STD | | 2 | 616.3 | 26.2 | 81 | 0.4 |
| STD OREAS24P | STD | | 1.5 | 52.2 | 3.2 | 124 | 0.1 |
| STD OREAS45C | STD | | 2.2 | 663.3 | 26.5 | 90 | 0.3 |
| BLK | BLK | | <0.1 | <0.1 | <0.1 | <1 | <0.1 |
| BLK | BLK | | <0.1 | 0.3 | <0.1 | <1 | <0.1 |
| Prep Wash | | | | | | | |
| G1 | Prep Blank | <0.01 | 0.3 | 2.8 | 17.4 | 45 | <0.1 |
| G1 | Prep Blank | <0.01 | 0.2 | 2.5 | 18.5 | 44 | <0.1 |

| | 1EX Ni PPM | 1EX Co PPM | 1EX Mn PPM | 1EX Fe % | 1EX As PPM | 1EX U PPM | 1EX Au PPM | 1EX Th PPM | |
|---------------------|------------------|------------------|------------------|----------------|------------------|-----------------|------------------|------------------|------|
| | 0.1 | 0.2 | | 1 | 0.01 | 1 | 0.1 | 0.1 | 0.1 |
| Sample | | | | | | | | | |
| RRI-BC-20 | 1.7 | 6.1 | 343 | 3.02 | 2 | 0.4 | <0.1 | | 1.3 |
| RRI-BC-21 | 1.9 | 2.9 | 575 | 2.3 | 2 | 0.4 | <0.1 | | 1.6 |
| RRI-BC-22 | 2 | 3.9 | 277 | 2.23 | <1 | | 0.2 | <0.1 | 1.2 |
| RRI-BC-23 | 2.2 | 1.1 | 164 | 0.9 | <1 | | 0.2 | <0.1 | 0.7 |
| RRI-BC-24 | 1.4 | 2.2 | 175 | 1.92 | <1 | | 0.3 | <0.1 | 1.7 |
| RRI-BC-25 | 2.9 | 3.2 | 201 | 1.55 | 3 | 0.3 | <0.1 | | 1.4 |
| RRI-BC-26 | 3.1 | 5.4 | 428 | 2.37 | <1 | | 0.3 | <0.1 | 0.7 |
| RRI-BC-27 | 5.1 | 6.6 | 3086 | 4.75 | 2 | 1.4 | <0.1 | | 1 |
| RRI-BC-28 | 4.6 | 3.4 | >10000 | 4.75 | <1 | | 2.2 | <0.1 | 1.5 |
| RRI-BC-29 | 6.5 | 2.2 | >10000 | 9.53 | 1 | 3.3 | <0.1 | | 1.5 |
| RRI-BC-30 | 2.6 | 7.9 | 247 | 2.94 | <1 | | 0.3 | <0.1 | 0.5 |
| RRI-BC-31 | 9.1 | 3.6 | >10000 | 4.61 | 1 | 2.5 | <0.1 | | 1.9 |
| RRI-BC-32 | 7.2 | 4.4 | >10000 | 6.45 | 3 | 2.8 | <0.1 | | 1.6 |
| RRI-BC-33 | 2.9 | 4.2 | 755 | 2.34 | 4 | 0.4 | <0.1 | | 1.1 |
| RRI-BC-34 | 2.2 | 2.2 | 311 | 1.93 | <1 | | 0.3 | <0.1 | 1.6 |
| RRI-BC-35 | 4.7 | 8.2 | 1326 | 5.47 | 1 | 1.6 | <0.1 | | 1.5 |
| Pulp Duplicates | | | | | | | | | |
| RRI-BC-34 | 2.2 | 2.2 | 311 | 1.93 | <1 | | 0.3 | <0.1 | 1.6 |
| RRI-BC-34 | 2.2 | 2.6 | 302 | 1.94 | <1 | | 0.3 | <0.1 | 1.5 |
| Reference Materials | | | | | | | | | |
| STD OREAS24P | 137.8 | 43.5 | 1052 | 6.99 | 1 | 0.7 | <0.1 | | 2.9 |
| STD OREAS45C | 348.6 | 96.3 | 1115 | 17.97 | 11 | 2.4 | <0.1 | | 11.1 |
| STD OREAS24P | 144.3 | 49.5 | 1192 | 8.1 | 2 | 0.6 | <0.1 | | 3 |
| STD OREAS45C | 370.1 | 110.3 | 1216 | 20.37 | 12 | 2.3 | <0.1 | | 11.7 |
| BLK | <0.1 | <0.2 | <1 | <0.01 | <1 | <0.1 | <0.1 | <0.1 | |
| BLK | <0.1 | <0.2 | <1 | <0.01 | <1 | <0.1 | <0.1 | <0.1 | |
| Prep Wash | | | | | | | | | |
| G1 | 2.2 | 3.9 | 674 | 2.26 | 1 | 2.9 | <0.1 | | 10.2 |
| G1 | 2.2 | 4.2 | 676 | 2.27 | <1 | | 3.2 | <0.1 | 11.3 |

| | 1EX Sr PPM | 1EX Cd PPM | 1EX Sb PPM | 1EX Bi PPM | 1EX V PPM | 1EX Ca % | 1EX P % | 1EX La PPM | |
|---------------------|------------------|------------------|------------------|------------------|-----------------|----------------|---------------|------------------|------|
| | | 1 | 0.1 | 0.1 | 0.1 | 1 | 0.01 | 0.001 | 0.1 |
| Sample | | | | | | | | | |
| RRI-BC-20 | 183 | 0.2 | 0.6 | 0.9 | 45 | 1.61 | 0.043 | 13.8 | |
| RRI-BC-21 | 107 | 0.5 | 0.2 | 0.3 | 16 | 1.22 | 0.021 | 25.1 | |
| RRI-BC-22 | 180 | <0.1 | <0.1 | | 0.7 | 27 | 1.69 | 0.022 | 19.9 |
| RRI-BC-23 | 86 | 0.1 | 0.2 | <0.1 | | 18 | 0.59 | 0.012 | 4.8 |
| RRI-BC-24 | 92 | <0.1 | <0.1 | <0.1 | | 21 | 0.69 | 0.022 | 13.3 |
| RRI-BC-25 | 110 | 0.8 | 0.2 | 0.2 | 15 | 0.7 | 0.016 | 14 | |
| RRI-BC-26 | 165 | 0.3 | 0.4 | 0.9 | 32 | 1.68 | 0.056 | 6.8 | |
| RRI-BC-27 | 131 | 8.3 | 0.6 | 1.9 | 75 | 3.96 | 0.048 | 13.5 | |
| RRI-BC-28 | 107 | 12.4 | 1 | 1 | 57 | 8.55 | 0.032 | 12.2 | |
| RRI-BC-29 | 34 | 2.2 | 0.3 | 0.7 | 223 | 16.74 | 0.08 | 8.5 | |
| RRI-BC-30 | 288 | 0.3 | 0.1 | 1.3 | 79 | 2.37 | 0.063 | 7 | |
| RRI-BC-31 | 38 | 1.7 | 0.3 | 0.2 | 61 | 10.19 | 0.072 | 9.6 | |
| RRI-BC-32 | 8 | 1 | 0.2 | 0.2 | 145 | 14.16 | 0.114 | 5.7 | |
| RRI-BC-33 | 143 | 4.3 | 1 | 1.2 | 16 | 2.89 | 0.027 | 8.2 | |
| RRI-BC-34 | 189 | <0.1 | 0.4 | <0.1 | | 20 | 1.04 | 0.023 | 9.8 |
| RRI-BC-35 | 336 | 0.5 | 0.4 | 1.6 | 80 | 3.18 | 0.077 | 11 | |
| Pulp Duplicates | | | | | | | | | |
| RRI-BC-34 | 189 | <0.1 | 0.4 | <0.1 | | 20 | 1.04 | 0.023 | 9.8 |
| RRI-BC-34 | 187 | <0.1 | 0.4 | <0.1 | | 21 | 1.02 | 0.022 | 10 |
| Reference Materials | | | | | | | | | |
| STD OREAS24P | 366 | <0.1 | 0.1 | <0.1 | | 164 | 5.18 | 0.121 | 18.8 |
| STD OREAS45C | 47 | 0.2 | 1 | 0.2 | 282 | 0.45 | 0.056 | 25.3 | |
| STD OREAS24P | 428 | <0.1 | <0.1 | <0.1 | | 178 | 5.73 | 0.142 | 18.6 |
| STD OREAS45C | 42 | 0.2 | 0.9 | 0.2 | 293 | 0.51 | 0.054 | 27.2 | |
| BLK | <1 | <0.1 | <0.1 | <0.1 | <1 | <0.01 | <0.001 | <0.1 | |
| BLK | <1 | <0.1 | <0.1 | <0.1 | <1 | <0.01 | <0.001 | <0.1 | |
| Prep Wash | | | | | | | | | |
| G1 | 717 | <0.1 | <0.1 | <0.1 | | 49 | 2.09 | 0.066 | 33.1 |
| G1 | 709 | <0.1 | <0.1 | <0.1 | | 50 | 2.14 | 0.064 | 34.6 |

| | 1EX Cr PPM | 1EX Mg % | 1EX Ba PPM | 1EX Ti % | 1EX Al % | 1EX Na % | 1EX K % | 1EX W PPM | |
|---------------------|------------------|----------------|------------------|----------------|----------------|----------------|---------------|-----------------|-----|
| | 1 | 0.01 | | 1 | 0.001 | 0.01 | 0.001 | 0.01 | 0.1 |
| Sample | | | | | | | | | |
| RRI-BC-20 | 8 | 0.6 | 691 | 0.165 | 6.08 | 2.67 | 1.52 | 3.2 | |
| RRI-BC-21 | 7 | 0.65 | 291 | 0.091 | 4.85 | 2.442 | 0.84 | 1.1 | |
| RRI-BC-22 | 8 | 0.77 | 297 | 0.122 | 5.6 | 3.756 | 0.6 | 0.6 | |
| RRI-BC-23 | 9 | 0.25 | 559 | 0.101 | 5.16 | 3.627 | 1.18 | 0.8 | |
| RRI-BC-24 | 8 | 0.55 | 352 | 0.119 | 5.75 | 2.79 | 1.49 | 0.8 | |
| RRI-BC-25 | 12 | 0.32 | 232 | 0.118 | 5.22 | 3.625 | 1.18 | 0.8 | |
| RRI-BC-26 | 9 | 0.59 | 222 | 0.216 | 6.04 | 4.014 | 1.54 | 1.7 | |
| RRI-BC-27 | 12 | 0.49 | 163 | 0.147 | 5.13 | 1.979 | 0.74 | 178.3 | |
| RRI-BC-28 | 8 | 0.37 | 128 | 0.148 | 6.09 | 1.224 | 0.55 | 113.7 | |
| RRI-BC-29 | 11 | 0.49 | 5 | 0.179 | 5.21 | 0.037 | 0.04 | 17.2 | |
| RRI-BC-30 | 9 | 0.58 | 553 | 0.26 | 7.28 | 1.93 | 1.73 | 2.3 | |
| RRI-BC-31 | 13 | 0.55 | 127 | 0.26 | 5.58 | 0.692 | 0.87 | 7.1 | |
| RRI-BC-32 | 13 | 0.26 | 2 | 0.183 | 4.95 | 0.013 | <0.01 | >200.0 | |
| RRI-BC-33 | 9 | 0.08 | 430 | 0.109 | 6.47 | 3.849 | 0.68 | 36.5 | |
| RRI-BC-34 | 5 | 0.64 | 554 | 0.174 | 8.02 | 3.38 | 2.54 | 7.6 | |
| RRI-BC-35 | 7 | 1.21 | 187 | 0.313 | 10.72 | 3.5 | 1.75 | >200.0 | |
| Pulp Duplicates | | | | | | | | | |
| RRI-BC-34 | 5 | 0.64 | 554 | 0.174 | 8.02 | 3.38 | 2.54 | 7.6 | |
| RRI-BC-34 | 5 | 0.65 | 545 | 0.171 | 7.9 | 3.385 | 2.56 | 6.9 | |
| Reference Materials | | | | | | | | | |
| STD OREAS24P | 233 | 3.88 | 256 | 1.008 | 7.42 | 2.402 | 0.62 | 0.5 | |
| STD OREAS45C | 978 | 0.28 | 309 | 1.127 | 6.84 | 0.119 | 0.39 | 1.2 | |
| STD OREAS24P | 200 | 4.26 | 293 | 1.084 | 8.16 | 2.487 | 0.71 | 0.6 | |
| STD OREAS45C | 996 | 0.27 | 296 | 1.187 | 7.56 | 0.109 | 0.37 | 1.4 | |
| BLK | 4 | <0.01 | <1 | <0.001 | <0.01 | 0.002 | <0.01 | <0.1 | |
| BLK | 1 | <0.01 | <1 | <0.001 | <0.01 | 0.001 | <0.01 | <0.1 | |
| Prep Wash | | | | | | | | | |
| G1 | 9 | 0.52 | 986 | 0.2 | 7.11 | 2.642 | 1.69 | 0.1 | |
| G1 | 9 | 0.53 | 961 | 0.204 | 7.02 | 2.712 | 1.73 | 0.1 | |

| | 1EX Zr PPM | 1EX Ce PPM | 1EX Sn PPM | 1EX Y PPM | 1EX Nb PPM | 1EX Ta PPM | 1EX Be PPM | 1EX Sc PPM | |
|---------------------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|----|
| | | 0.1 | 1 | 0.1 | 0.1 | 0.1 | 0.1 | 1 | 1 |
| Sample | | | | | | | | | |
| RRI-BC-20 | 12.2 | 31 | 1.1 | 20.5 | 3.5 | 0.1 | <1 | | 11 |
| RRI-BC-21 | 14.4 | 54 | 30.4 | 29.5 | 3.6 | 0.2 | | 1 | 11 |
| RRI-BC-22 | 12 | 51 | 0.5 | 25.6 | 3.1 | 0.1 | | 1 | 11 |
| RRI-BC-23 | 8.9 | 10 | 1.1 | 15.2 | 2.3 | 0.1 | <1 | | 6 |
| RRI-BC-24 | 10.7 | 29 | 0.8 | 13.4 | 3.3 | 0.2 | | 1 | 10 |
| RRI-BC-25 | 12.2 | 30 | 0.6 | 17.3 | 3.3 | 0.2 | <1 | | 7 |
| RRI-BC-26 | 12.3 | 19 | 1.2 | 22.7 | 1.6 | 0.1 | | 1 | 9 |
| RRI-BC-27 | 31.8 | 25 | 6.9 | 23.7 | 2.6 | 0.2 | <1 | | 10 |
| RRI-BC-28 | 77.9 | 25 | 7 | 26.6 | 3.4 | 0.2 | | 1 | 13 |
| RRI-BC-29 | 49.9 | 17 | 32.2 | 18.3 | 1.9 | 0.1 | <1 | | 11 |
| RRI-BC-30 | 7.7 | 19 | 0.9 | 16.1 | 1.7 | <0.1 | <1 | | 13 |
| RRI-BC-31 | 71.4 | 17 | 10 | 20.2 | 2.8 | 0.1 | <1 | | 16 |
| RRI-BC-32 | 64.6 | 13 | 26.8 | 23.3 | 2.1 | 0.2 | <1 | | 12 |
| RRI-BC-33 | 20.5 | 20 | 1.2 | 22.9 | 2.2 | 0.2 | <1 | | 11 |
| RRI-BC-34 | 13.7 | 24 | 1.4 | 16.1 | 3.9 | 0.3 | | 1 | 14 |
| RRI-BC-35 | 25.2 | 23 | 2.4 | 17.6 | 1.4 | <0.1 | | 2 | 20 |
| Pulp Duplicates | | | | | | | | | |
| RRI-BC-34 | 13.7 | 24 | 1.4 | 16.1 | 3.9 | 0.3 | | 1 | 14 |
| RRI-BC-34 | 14.4 | 24 | 1.4 | 16.6 | 3.8 | 0.2 | <1 | | 14 |
| Reference Materials | | | | | | | | | |
| STD OREAS24P | 133.3 | 35 | 1.3 | 19.8 | 19 | 1.1 | <1 | | 18 |
| STD OREAS45C | 181.2 | 56 | 3.1 | 15.3 | 31 | 1.7 | <1 | | 55 |
| STD OREAS24P | 141.9 | 39 | 1.5 | 21.9 | 19.6 | 1.2 | | 1 | 21 |
| STD OREAS45C | 180.4 | 56 | 2.9 | 13.6 | 23.7 | 1.5 | | 1 | 64 |
| BLK | <0.1 | <1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <1 | |
| BLK | <0.1 | <1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <1 | |
| Prep Wash | | | | | | | | | |
| G1 | 10.7 | 62 | 1.3 | 15 | 22.4 | 1.3 | | 3 | 5 |
| G1 | 10.7 | 66 | 1.5 | 16.2 | 26.2 | 1.4 | | 2 | 5 |

| | 1EX Li PPM | 1EX S % | 1EX Rb PPM | 1EX Hf PPM | |
|---------------------|------------------|---------------|------------------|------------------|------|
| | | 0.1 | 0.1 | 0.1 | 0.1 |
| Sample | | | | | |
| RRI-BC-20 | | 10.1 | 1.2 | 58.8 | 0.5 |
| RRI-BC-21 | | 12.2 | 0.3 | 43.7 | 0.4 |
| RRI-BC-22 | | 12.9 | 1.2 | 28.3 | 0.4 |
| RRI-BC-23 | | 8.2 | <0.1 | 39.2 | 0.3 |
| RRI-BC-24 | | 12.6 | 0.2 | 65 | 0.3 |
| RRI-BC-25 | | 7.9 | 0.3 | 38.6 | 0.4 |
| RRI-BC-26 | | 6.3 | 0.8 | 52.7 | 0.3 |
| RRI-BC-27 | | 10.2 | 1.8 | 22.1 | 0.8 |
| RRI-BC-28 | | 10 | 0.8 | 18.7 | 2.3 |
| RRI-BC-29 | | 5.7 | <0.1 | 2.6 | 1.5 |
| RRI-BC-30 | | 12.4 | 1.2 | 76 | 0.2 |
| RRI-BC-31 | | 7.1 | <0.1 | 31.7 | 2.5 |
| RRI-BC-32 | | 5.4 | <0.1 | 0.5 | 1.9 |
| RRI-BC-33 | | 2.4 | 0.9 | 16.2 | 0.7 |
| RRI-BC-34 | | 15.4 | 0.2 | 76 | 0.4 |
| RRI-BC-35 | | 33 | 2.6 | 84.5 | 0.8 |
| Pulp Duplicates | | | | | |
| RRI-BC-34 | | 15.4 | 0.2 | 76 | 0.4 |
| RRI-BC-34 | | 14.5 | 0.2 | 76.6 | 0.4 |
| Reference Materials | | | | | |
| STD OREAS24P | | 7.3 | <0.1 | 20.4 | 3.4 |
| STD OREAS45C | | 16.7 | <0.1 | 25.8 | 4.6 |
| STD OREAS24P | | 8.1 | <0.1 | 22 | 3.7 |
| STD OREAS45C | | 17.1 | <0.1 | 26.3 | 4.6 |
| BLK | <0.1 | <0.1 | | 0.2 | <0.1 |
| BLK | <0.1 | <0.1 | <0.1 | <0.1 | |
| Prep Wash | | | | | |
| G1 | | 29.8 | <0.1 | 74.7 | 0.6 |
| G1 | | 27.1 | <0.1 | 80.1 | 0.5 |