

**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)]:** Soil Geochemical Sampling

**TOTAL COST:** 10,680

**AUTHOR(S):** L.E. Wilson, C.J. Greig **SIGNATURE(S):** \_\_\_\_\_

**NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):** \_\_\_\_\_ **YEAR OF WORK:** 2016

**STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):** 5631987 (2017/JAN/04)

**PROPERTY NAME:** Ben

**CLAIM NAME(S) (on which the work was done):** R2R2 (1041369)

**COMMODITIES SOUGHT:** Cu, Au, Ag

**MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:** 093F 059

**MINING DIVISION:** Omineca Mining Division **NTS/BCGS:** 93F/07W

**LATITUDE:** 53 ° 19 ' 10 " **LONGITUDE:** 124 ° 34 ' 24 " (at centre of work)

**OWNER(S):**  
1) C.J.Greig 2) \_\_\_\_\_

**MAILING ADDRESS:**  
729 Okanagan Ave E., Penticton, BC V2A 3K7

**OPERATOR(S) [who paid for the work]:**  
1) Charles Greig 2) \_\_\_\_\_

**MAILING ADDRESS:**  
729 Okanagan Ave., Penticton, BC V2A 3K7

**PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):**  
The Ben property hosts mineral occurrences within a 225 x 200 m area near the southern end of the CH pluton within foliated, intensely silicified meta-volcanics 200 to 300 m south of the contact over a strike length of 80 m. East-west foliation-parallel disseminations and local semi-massive quartz-sulphide veins or seams of arsenopyrite, pyrite, pyrrhotite and traces of chalcopyrite, galena and sphalerite at the Ben East occurrence.

**REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:** 22059, 29592, 31936

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping	_____	_____	_____
Photo interpretation	_____	_____	_____
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
Magnetic	_____	_____	_____
Electromagnetic	_____	_____	_____
Induced Polarization	_____	_____	_____
Radiometric	_____	_____	_____
Seismic	_____	_____	_____
Other	_____	_____	_____
<b>Airborne</b>			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil 67	_____	1041369	10,680
Silt	_____	_____	_____
Rock	_____	_____	_____
Other	_____	_____	_____
<b>DRILLING (total metres; number of holes, size)</b>			
<b>Core</b>			
<b>Non-core</b>			
<b>RELATED TECHNICAL</b>			
Sampling/assaying	_____	_____	_____
Petrographic	_____	_____	_____
Mineralographic	_____	_____	_____
Metallurgic	_____	_____	_____
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres)	_____	_____	_____
Topographic/Photogrammetric (scale, area)	_____	_____	_____
Legal surveys (scale, area)	_____	_____	_____
Road, local access (kilometres)/trail	_____	_____	_____
Trench (metres)	_____	_____	_____
Underground dev. (metres)	_____	_____	_____
Other	_____	_____	_____
		<b>TOTAL COST:</b>	10,680

**2016 SOIL GEOCHEMICAL  
SAMPLING PROGRAM  
on the  
BEN PROPERTY**

Mineral Tenure Name	Mineral Tenure Number
R2R	1041364
R2R2	1041369

Nechako River Map Area

(NTS 93F07)

Omineca Mining Division, Central British Columbia,

Latitude 53°19' 10" N, Longitude 124°34' 24" W  
5908962N, 395196E (UTM NAD83, Zone 10)

for

**C.J.Greig & Associates Ltd.**

by

L.E. Wilson, B.Sc.

and

C.J. Greig, M.Sc., P.Geo.

May 30, 2017

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## **1.0 Summary**

The Ben property was staked in January, 2016, upon expiry of a previous mineral tenure, for its potential to host a copper-gold-silver deposit. It consists of two tenures totaling 116 hectares, located 85 kilometres southwest of Vanderhoof in central British Columbia. In the early 1990's a soil sampling program conducted by BHP Minerals Canada Ltd., covering both the property and areas farther west, defined a roughly 2 km x 0.7 km gold-in-soil geochemical anomaly, which remained open to the northeast (Wesa and St. Pierre, 1992). The present program provided further coverage to the northeast of this soil geochemical anomaly and was in part undertaken to evaluate the utility of employing a portable XRF unit for soil geochemical exploration in this area.

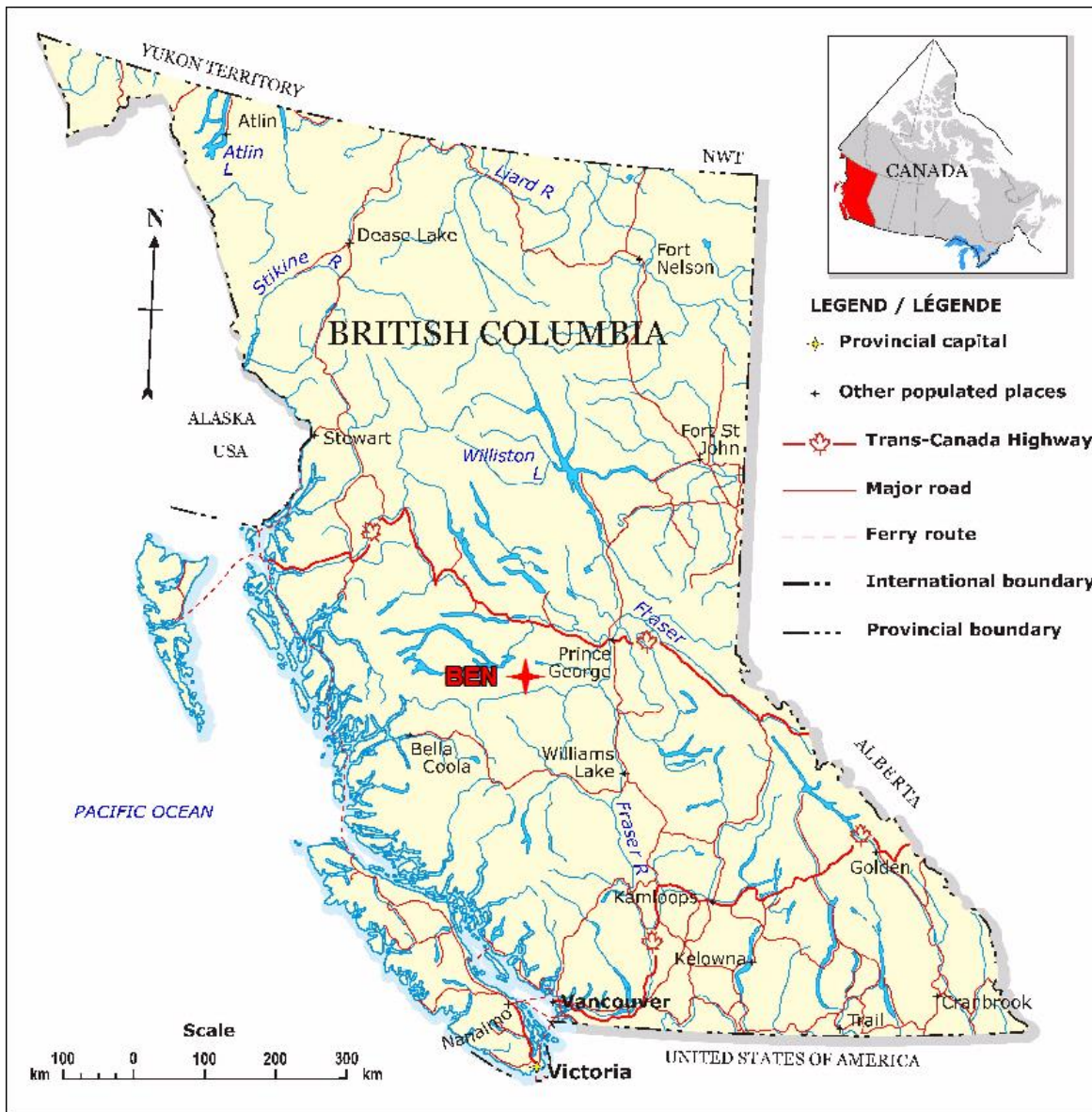
The 2016 soil sampling program was limited to a single day and carried out by a two-person crew from C.J. Greig & Associates Ltd., based out of Fraser Lake. The results provided further extension of the Cu-As soil geochemical anomaly observed by the 1992 BHP program. However, due to the high detection limits for Au and Ag with the XRF unit, gold and silver values were not effectively tested. It is recommended that a number of the soil samples that returned high Cu-As values be sent to an analytical lab for Au and multi-element ICP analyses. The soil geochemical anomaly falling within the property area measures approximately 1400 m long by 300 to 400 m wide, and is largely underlain by altered and veined intrusive rocks, as well as meta-volcanic and meta-sedimentary rocks within the intrusive contact aureole. The size and tenor of the Cu-As soil geochemical anomaly, and the common presence of outcrops of veined and altered intrusive rocks and adjacent hornfels, suggests that the property has potential to host a significant Cu-Au-Ag deposit, of possible porphyry-style mineralization. The results remain very encouraging, particularly in light of the fact that this property exhibits significant alteration and mineralization, has never been tested with an Induced Polarization geophysical survey and has never been drilled.

Further work on the property is highly recommended. It should be undertaken as a systematic exploration program consisting initially of additional infill soil geochemical sampling and prospecting, along with Induced Polarization (IP) test lines across the anomalous zone. If the results of this survey are considered favourable, a targeted trenching and diamond drilling program should be considered.

## **2.0 Location, Access, Physiography, Climate and Vegetation**

The Ben property, located in the Omineca Mining Division of central British Columbia, lies along the western flank of the Nechako Mountains, approximately 85 kilometres southwest of Vanderhoof, B.C. (fig. 1). The Nechako Ranges make up part of the Nechako Plateau, a broad physiographic region in central British Columbia generally typified by thick overburden and forest cover and little outcrop exposure. Near the heights of the Nechako Ranges, however, and on the Ben property, the outcrop is at least locally more plentiful and the overburden generally thinner.

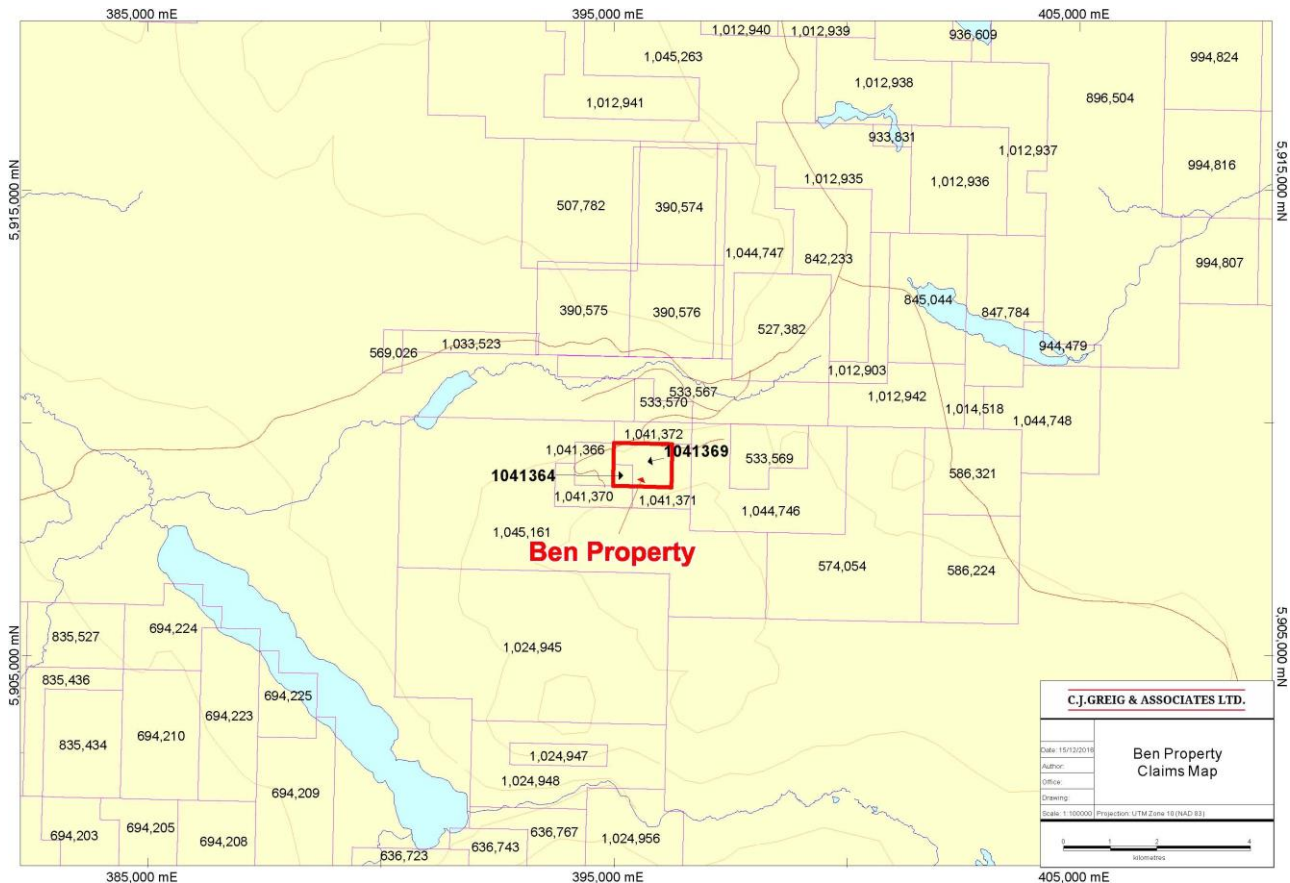
Elevations in the immediate area of the property exceed 1600 metres, while elevations on the property range from slightly less than 1160 metres on the northwest part to over 1370 metres on the southeast boundary.



**Figure 1. Location of the Ben property, central British Columbia.**

Access to the Ben property is excellent (figs. 2 & 3). It can be reached by a good system of logging roads, including the Kluskus-Ootsa Forest Service Rd., exiting Hwy. 16 at Vanderhoof, which is a full-service community of approximately four thousand people. The last 3.5 km onto the property are accessed by the Yellow Road, which is generally in poor condition and would require minor upgrading for direct day-to-day pickup truck access. Pre-existing logging roads in the area provide excellent sites for helicopter landing as well. The area of the Ben property experiences moderate to hot summers and cold winters. Temperatures typically range between 5°C and 35°C in summer and -30°C and -10°C in the winter. Precipitation is lowest in the spring months and snow

accumulations in winter can exceed 1.5m. Vegetation consists of stands of lodgepole pine at lower elevations and moderately dense pine, spruce and balsam fir at higher elevations, some of which is merchantable, although much has been damaged by the infestation of the Mountain Pine Beetle. The eastern half of the property on which the soil grid is located was clear-cut logged in 1994-95, and outcrops are exposed locally but in general are not plentiful.



**Figure 2. Ben property claims, located near Tatelkuz Lake**

### 3.0 Claims

The Ben property consists of two MTO tenures; number 1041364 (R2R) and number 1041369 (R2R2), (fig. 2) with dimensions measuring approximately 1.2 km (E-W) by 0.9 km (N-S), for a total area of about 116 hectares. It is located on NTS map sheet 93F07 and centered at approximately 53 degrees 19 minutes 10 seconds North Latitude and 124 degrees 34 minutes 24 seconds West Longitude, or 5908962N, 395196E (UTM zone 10, NAD83). The claims were staked in January, 2016 and are owned 100% by Charles Greig. They are entirely surrounded by claims held by others. Tenure details are listed in Table 1 and they are illustrated on Figure 2.

**Table 1 – Ben property Mineral Tenures**

Tenure Number	Name	Issue Date	Good To Date	Hectares
1041364	R2R	2016/JAN/18	2024/AUG/27	19.32
1041369	R2R2	2016/JAN/18	2024/AUG/27	96.59

#### 4.0 Regional Geology & Mineral Occurrences

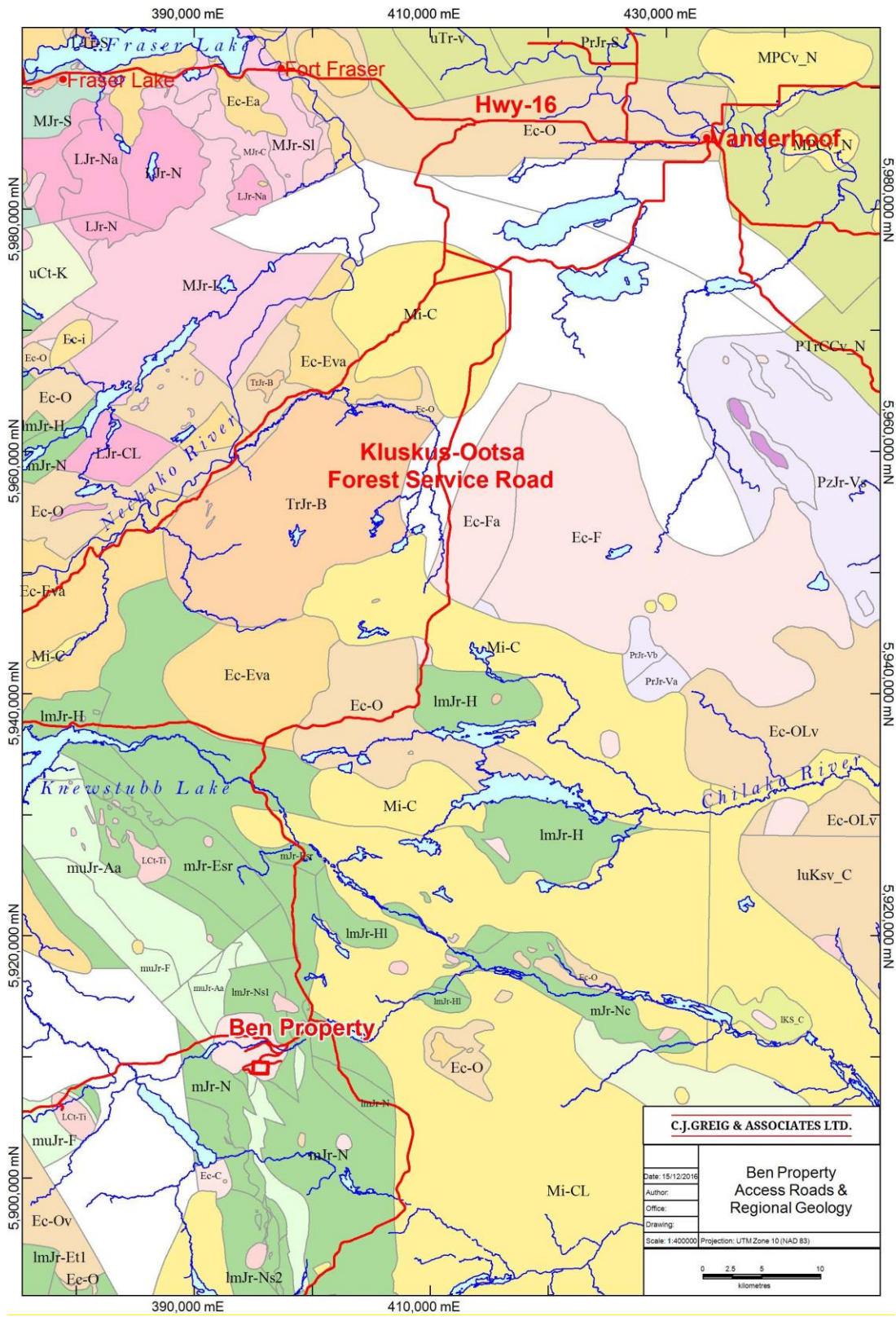
The regional geologic setting of the Ben property is shown in Figure 3, after Tipper (1963a, b) and Diakow et al. (1994, 1995). As was discussed by Fleming (1997), the property is underlain by rocks that are part of what has been referred to as the “Nechako Plateau,” or “Nechako Uplift,” a fifty kilometre wide, northeasterly-trending “horst” of Mesozoic rocks of the Stikine terrane which are bound on the north by the northeast trending Nataalkuz fault and to the south by a poorly defined and unnamed structure that parallels the Blackwater River. The Mesozoic rocks are shown in green and greenish grey in the southwest part of Figure 3.

According to Fleming (1997), felsic to mafic volcanic and sedimentary rocks of the Lower to Middle Jurassic Hazelton Group predominate in the Nechako block, and they were most likely deposited as part of an island arc. Regional metamorphism of the Mesozoic rocks is at lower greenschist facies and the Mesozoic rocks display a pervasive, northwest trending regional foliation which is distinct within the uplift. Cretaceous Skeena Group conglomerate and associated sedimentary rocks that overlie the Hazelton Group rocks and which are rare in the Nechako Uplift, may have been deposited as a result of accretion of the Hazelton arc to the North American continental margin. Continental, subduction-related volcanic rocks of the late Cretaceous Kasalka Group, as well as those of the more abundant Eocene Ootsa Lake and Endako groups are preserved marginal to the uplift in graben-like features which may reflect extensional tectonism. Plateau basalts of the Neogene Chilcotin Group are common to the south of the Blackwater River.

Again, as noted by Fleming (1997), intrusive rocks of probable lower to middle Jurassic, early Cretaceous, late Cretaceous, and Eocene ages occur within the Nechako Plateau and, like their coeval volcanic counterparts, they reflect arc-magmatic events. Most of the intrusions in this belt can be related to known mineralization within the uplift. The most significant of the mineralizing systems within the Nechako Plateau are:

- 1) porphyry molybdenum (copper, gold) systems, typically spatially related to undeformed, magnetically distinct plutons, such as the Eocene Chutanli pluton (Chu occurrences, 5 km north of Ben);
- 2) volcanic-hosted epithermal gold-silver systems, typically hosted by Eocene Ootsa Group volcanic rocks (e.g., Wolf occurrence, 60 km WSW); and
- 3) porphyry-related, disseminated gold-zinc-silver systems, also probably of Eocene age (Capoose, 45 km W and Blackwater-Davidson, 25 km SW).





**Figure 3. Regional geologic setting of the Ben property, central B.C.**

## 5.0 Property Geology

The following is summarized from Marsden (2008), who described property scale geologic mapping undertaken for Paget Resources Corporation on the Ben property. Wesa and St. Pierre (1992) completed a 1:10,000 geological mapping program for BHP Minerals Canada Ltd., which has also been referenced for this report. Paget's mapping focussed primarily on areas with known gold (arsenic, copper) mineralization, as well as areas farther west and south of the current Ben property. The dominant lithology of the northern half of the property is an equigranular felsic to intermediate pluton (the CH Pluton or Kluskus Pluton; part of the Quanchus Plutonic Suite), that intrudes and contact metamorphoses a sequence of deformed sedimentary, volcanic and intrusive rocks to the south (Marsden, 2008). In general, Wesa and St. Pierre (1992) described the outcrop exposure as poor, with an extensive forest cover, abundant swamps, and Pleistocene glacial and glacio-fluvial deposits.

The exposed lithologies in the south part of the Ben property are described by Marsden (2008) to “*consist of well-bedded argillite and siltstone with skarn-altered calcareous layers, minor fragmental volcanic, green sandstone to siltstone, gabbros and associated mafic rocks, and a distinctive sequence of well-bedded mudstone and sandstone with discrete layers of chert pebble conglomerate.*” Marsden (2008) interpreted that the chert pebble conglomerate was likely a part of the Bowser Lake Group, and is thus stratigraphically younger than the other units.

In the stratified units, Marsden (2008) noted strong NNW bedding strikes with steep dips, forming a synclinal structure wrapping the chert pebble conglomerate in the core. He also observed the stratified units to display remarkably strong deformation, with well-developed foliation and fragments exhibiting strong linear extension with a subvertical plunge. Marsden (2008) recorded both the foliation and the bedding to strike north-south to northwest-southeast, while observing a consistent clockwise sense of rotation seen in minor folds within small quartz veins and a few thin beds.

The emplacement of the main pluton produced thermal contact metamorphism in surrounding units and resulted in strong metasomatic effects, especially adjacent to the contact (Marsden, 2008). Though the thermal effects decrease further away from the pluton (south), Marsden observed that the effects are still very strong for an unusually long distance from the contact, and has interpreted “*that the intrusion may plunge at shallow depths below the surface exposures of the metasomatic rocks*”. Proximal to the pluton, the finer sedimentary beds (argillite and sandstone) are observed to be altered to quartz-biotite hornfels, whereas some other units “*contain thin layers of green to white fine-grained skarn, and less typically, strong garnet pyroxene skarn*” (Marsden, 2008). Disseminated sulphide minerals are seen throughout the skarn and hornfels units, including pyrite, pyrrhotite, arsenopyrite and chalcopyrite (Marsden, 2008). In addition to the skarn and hornfels units, Marsden (2008) observed two other metasomatic units on the Ben property. He described “*a hard, dark green magnetic rock with strong quartz, chlorite, biotite and visible disseminated*

*magnetite... (and) a grey feldspathic rock of possible intrusive origin with strongly disseminated magnetite and a granular recrystallized matrix*". Marsden (2008) interpreted the feldspathic rock to be a metasomatically-altered intrusive unit.

Several discrete intrusive phases were noted by Marsden (2008) across the Ben property, though he interpreted all of them to be related to the CH (or Kluskus) Pluton of Eocene age. Alternatively, Lane and Schroeter (1994) identified two distinct plutons of different ages, including an Eocene biotite-hornblende granodiorite (CH Pluton), and an older (possibly Jurassic-Cretaceous) monzonite. This inconsistency may be worthwhile investigating in the future, to observe why Marsden (2008) interpreted the plutons to be of the same age rather than distinct bodies. He described the main pluton as a fresh and relatively undeformed equigranular biotite granite or monzonite, except along its southern extent where a dominant east-west foliation is locally developed parallel to the contact with the meta-sedimentary and volcanic rocks (Marsden, 2008). It was noted by Wesa and St. Pierre (1992) that in general the CH Pluton and its associated aplitic and dioritic phases are barren of mineralization, although they observed one narrow dioritic dyke containing minor disseminated pyrite, molybdenite and possibly pyrrhotite.

## **6.0 Mineralization and Alteration**

Mineralization on the Ben property noted by Marsden (2008) from near the southern end of the CH pluton includes a mineralized zone over a 225 x 200 metre area, which includes the Ben East Minfile occurrence on the west side of the property ("Hooter", "Shaun" and "Creek" showings). These showings occur within foliated, intensely silicified meta-volcanics 200 to 300 metres south of the contact with the CH Pluton, over a strike length of 80 metres (Lane and Schroeter, 1994; Raven, 2010a). Foliation-parallel disseminations, to locally semi-massive quartz-sulphide veins or seams, comprised of arsenopyrite, pyrite and pyrrhotite, with traces of chalcopyrite, galena and sphalerite, were observed by Lane and Schroeter (1994) at the Ben East occurrences. Mineralization is found to be mostly concentrated near the moderately to strongly altered biotite monzonite intrusion (Raven, 2010a) and within the meta-volcanic rocks, and there is a noticeably higher sulphide content in skarn layers than in hornfels layers (Marsden, 2008).

Wesa and St. Pierre (1992) identified what they found to be four basic styles of mineralization on the property, including:

1. *"Quartz vein-hosted, polymetallic mineralization with As, Ag, Au, Pb, Zn, Cu, Sb and Bi. The highest Au, As and Ag grades occur in this style of mineralization.*
2. *Disseminated to semi-massive arsenopyrite with minor pyrite and chalcopyrite at sheared contacts between silicified and weakly chloritized volcanoclastics and altered monzonites. Sulphides occur primarily in the meta-volcanics.*

3. *Altered biotite monzonite hosting disseminated and fracture-coating pyrite, pyrrhotite and molybdenite plus minor arsenopyrite.*
4. *Silicified, silica-flooded and quartz veined dacitic tuffs hosting disseminated to coarse arsenopyrite and sphalerite with trace to minor pyrite, chalcopyrite and galena.”*

Further, based on the alteration and mineralization, Wesa and St. Pierre (1992) interpreted a possible two phase genesis of mineralization, “*a volcano-sedimentary submarine exhalative origin with a subsequent overprinting epithermal vein style of mineralization.*”

Initially, when Wesa and St. Pierre (1992) identified the Ben East occurrence, they collected a 3.0 m chip sample that returned 0.7 g/t Au, 95 g/t Ag and 0.2% Pb, as well as a 10 cm arsenopyrite-pyrite-quartz vein in biotite monzonite with 3.7 g/t Au and 5.2 g/t Ag. An even higher gold value was recorded from a polymetallic float boulder, assaying 12.4 g/t Au, >200 g/t Ag, >1% arsenic and lead, and anomalous values of zinc, antimony and copper (Wesa and St. Pierre, 1992). More recent work done by Marsden (2008), produced rock chip samples with up to 1.04 g/t Au and up to 80 g/t Ag, and identified strong correlation coefficients between gold and; silver (0.87), lead (0.73) and antimony (0.63). The correlation factors between Au and As (0.36) and Ag and As (0.29) seem to be lower than expected, especially since arsenopyrite is often associated with elevated Au values (Marsden, 2008).

## **7.0 Previous Exploration Work**

There has been sporadic previous work in the area of the Ben property over the last 35 years. Mineralized outcrops were first exposed by road construction for Westar Timber’s logging operations through 1990-1991, and shortly thereafter discovered by BHP-Utah Mines Ltd. personnel (Marsden, 2008). The first exploration work was reported in 1991, when BHP-Utah Mines Ltd. completed 13.2 kilometres of flagged line grid, 241 soil samples, 40 rock samples, 4 stream sediment samples and 14 man days of geological mapping at a scale of 1:10,000 (Pollock and Nikolajevich, 1991). This initial pass over the Ben property was simply reconnaissance level work, giving a basic geologic understanding and identifying some mineralization. The discovery of silver and gold values in pyrite-pyrrhotite-arsenopyrite mineralization, in addition to minor chalcopyrite, molybdenite and galena, is what led BHP-Utah Mines Ltd. to identify the Ben property as a significant new exploration target at that time (Pollock and Nikolajevich, 1991). Their mapping described mineralization occurring in hornfelsed Hazelton Group sediments and volcanics adjacent to monzonite intrusions, and recommended further mapping, soil sampling, geophysics (Mag-VLF) and targeted trenching in the anomalous area (Pollock and Nikolajevich, 1991).

In the following year, BHP Minerals Canada Ltd. returned for further work on the property. The program consisted of detailed geological mapping and prospecting, grid-controlled soil sampling

and geophysical surveys (Wesa and St. Pierre, 1992). A total of 47 rocks and 359 soil samples were collected, along with the completion of 52 km of Total Field Magnetics, 45 km of VLF-EM and 1 km of IP (Wesa and St. Pierre, 1992). During this exploration program, several mineral showings were identified and designated as the “Creek”, “Shaun”, and “Hooter” showings, which are traceable across 180 metres (Wesa and St. Pierre, 1992). As mentioned above in Section 6.0 several samples from the showings returned significant Au, Ag, As and Pb values over widths of up to 3.0 metres. The geophysical surveys were successful in determining contacts between the CH Pluton and the Hazelton volcanic rocks and, as well, there were several VLF-EM conductors identified that were believed to indicate structures that could potentially be mineralized (Wesa and St. Pierre, 1992).

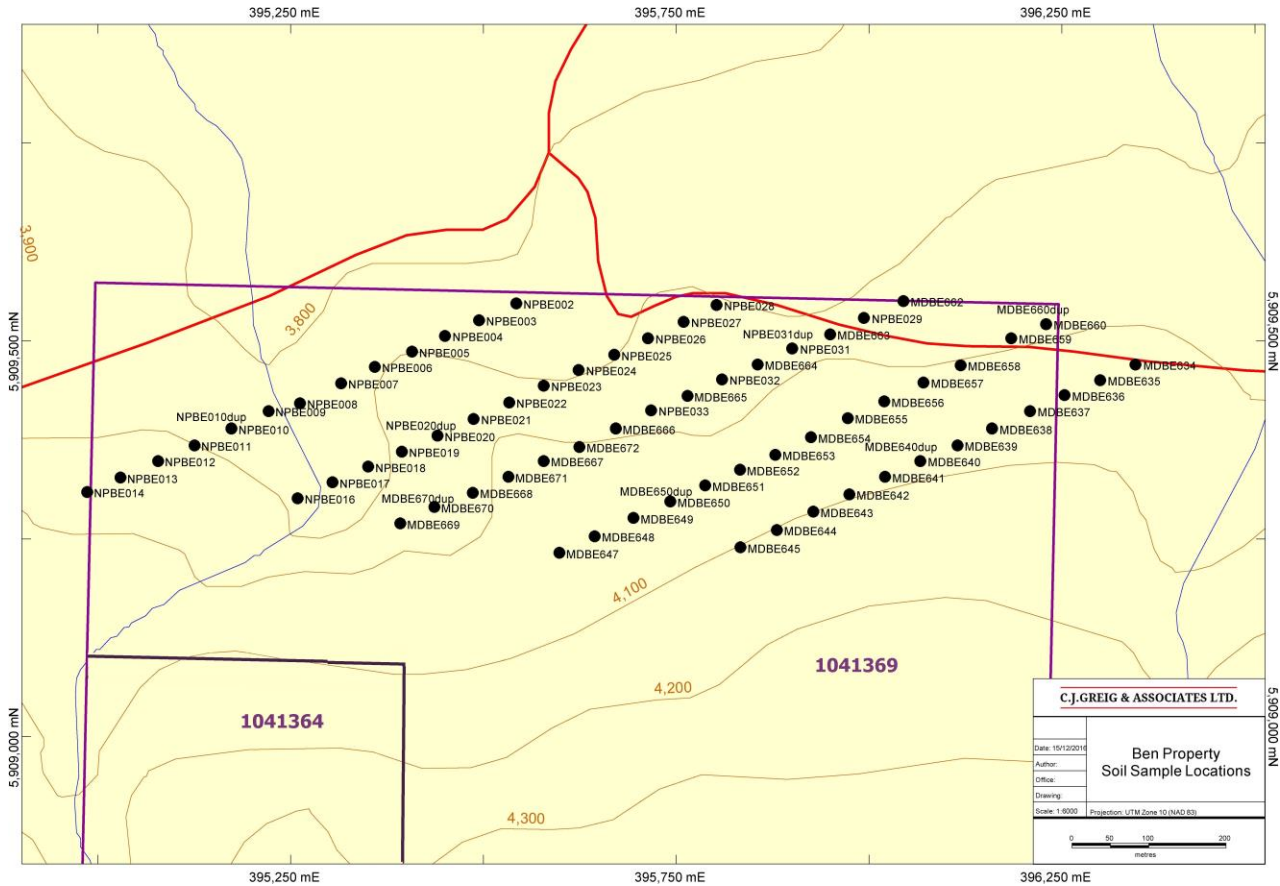
After a 15 year hiatus, the Ben property was acquired by Paget Resources Corporation, which conducted a work program of mapping, prospecting and rock chip sampling. A total of 78 rock chip samples were collected from the project area (Marsden, 2008) which encompassed a somewhat larger area than the current Ben property. Specifically, 23 rock chip samples were taken from their “East Zone” (which loosely corresponds to the current Ben property area), and returned values up to 1.04 g/t Au and 80 g/t Ag (Marsden, 2008). Marsden (2008) noted that the higher gold values were from quartz biotite hornfels with disseminated arsenopyrite and pyrrhotite, and that the values were mostly confined to a small (225 x 200 m) area in their “East Zone”. Shortly thereafter, in 2010, TTM Resources began work on the Ben property under option from Paget Resources Corporation to delineate possible surface molybdenite mineralization (Raven, 2010a). A total of 2254 soil samples were collected from 115 line km, at 50 metre-intervals on a 100 metre-spaced grid, which was later followed up by a small drill program (Raven, 2010a). The soil samples were taken from the “B” horizon at depths from 10-50 cm, with the belief that they were representative of the underlying bedrock geology as there was minimal till cover; and detailed soil descriptive notes were recorded by the TTM crew (Raven, 2010a). The four follow-up drill holes were all outside of, and to the east of, the current Ben property, and overall had disappointing assay results (Raven, 2010a). The holes failed to intersect significant molybdenite mineralization, and although elevated Ag and As values were common, they were restricted to low density, narrow, quartz-arsenopyrite veins (Raven, 2010a). Based on the drill results, Raven (2010b) recommended that there be no further exploration on the Ben property, and later the claims were dropped.

## **8.0 2016 Exploration Program**

### **8.1 Soil Geochemical Sampling Procedure & Analytical Techniques**

Current work on the Ben property was conducted by two employees of C. J. Greig & Associates Ltd. on October 19, 2016. The soil sampling lines were positioned to provide a continuation of the 1992 BHP Minerals Canada Ltd. soil grid, to give more complete coverage of the present Ben property, and to test for extension of anomalous values towards the northeast. A total of 67 samples

were collected on five, 100 metre-spaced, northeast-southwest lines with 50 metre stations. Figure 4, below, shows the soil sample locations and the claim tenures.



**Figure 4. 2016 Soil geochemical sample locations**

Soil samples were collected from the B horizon, at a depth of approximately 15 to 20 centimetres. The soil was placed in standard Kraft paper soil sample bags that were labelled with sample numbers. Control on locations was provided by hand-held Garmin GPS units; datum used was UTM NAD83, Zone 10. The soil samples were transported to C. J. Greig & Associates Ltd. office in Penticton, B.C., where they were laid out on racks to dry for several days. The dried samples were analyzed with a Thermo Scientific Niton Gold XL3t 500 GOLDD™ handheld X-Ray Fluorescence (XRF) Analyzer unit, operated in the ‘benchtop’ mode. The sample, in its original paper bag, was placed on the test stand and centered on the probe window; the test stand lid was then closed and locked. The analyzer was then run in “Soils” mode for 30 seconds, reading three separate “filters” of elements, at 10 seconds per filter. The three “filters” provided analytical values for a total of 33 elements. Data was automatically recorded, saved directly to the analyzer and simultaneously downloaded to a laptop computer. Approximately every 10<sup>th</sup> reading was duplicated, on the flip side of the sample bag, to check reproducibility. All XRF analytical values and soil sample UTM coordinates are attached in Appendix 1.

## 8.2 Soil Geochemical Results

Copper values from the 2016 program, as shown on Figure 5, are generally low to moderate across the grid, with only three samples exceeding 80 ppm, and a high of 117.88 ppm Cu. These are surrounded by weakly to moderately anomalous Cu values from 30 to 80 ppm, indicating a relatively large area of above background values. Arsenic values, shown on Figure 6, are moderately to strongly anomalous at most of the same stations as the anomalous copper, with six samples returning >110 ppm As. Both copper and arsenic are most elevated on the eastern third of the grid, covering an area of about 200 m by 400 m, however, weakly anomalous Cu (30-45 ppm) and weakly anomalous As (37-70 ppm) both cover a large percentage of the sampled grid.

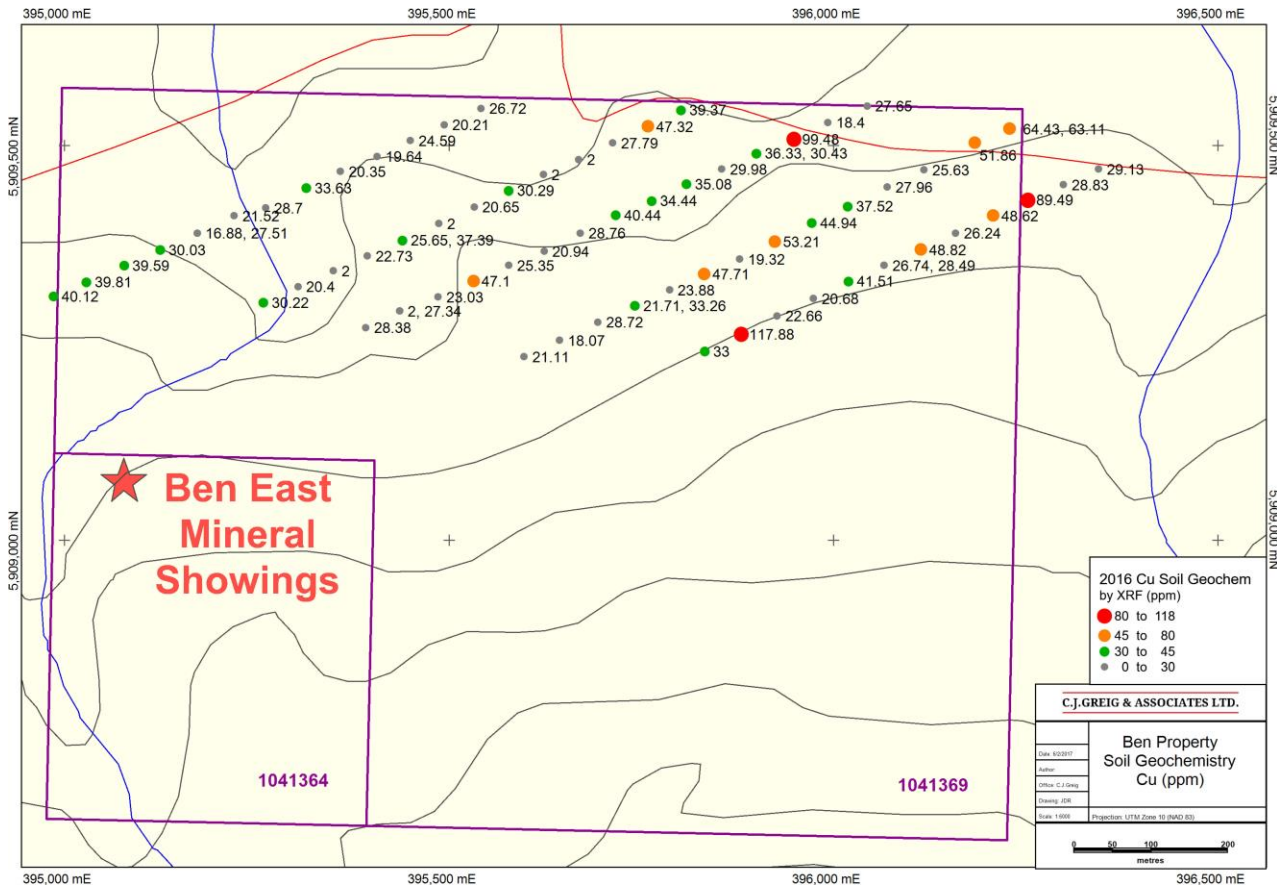
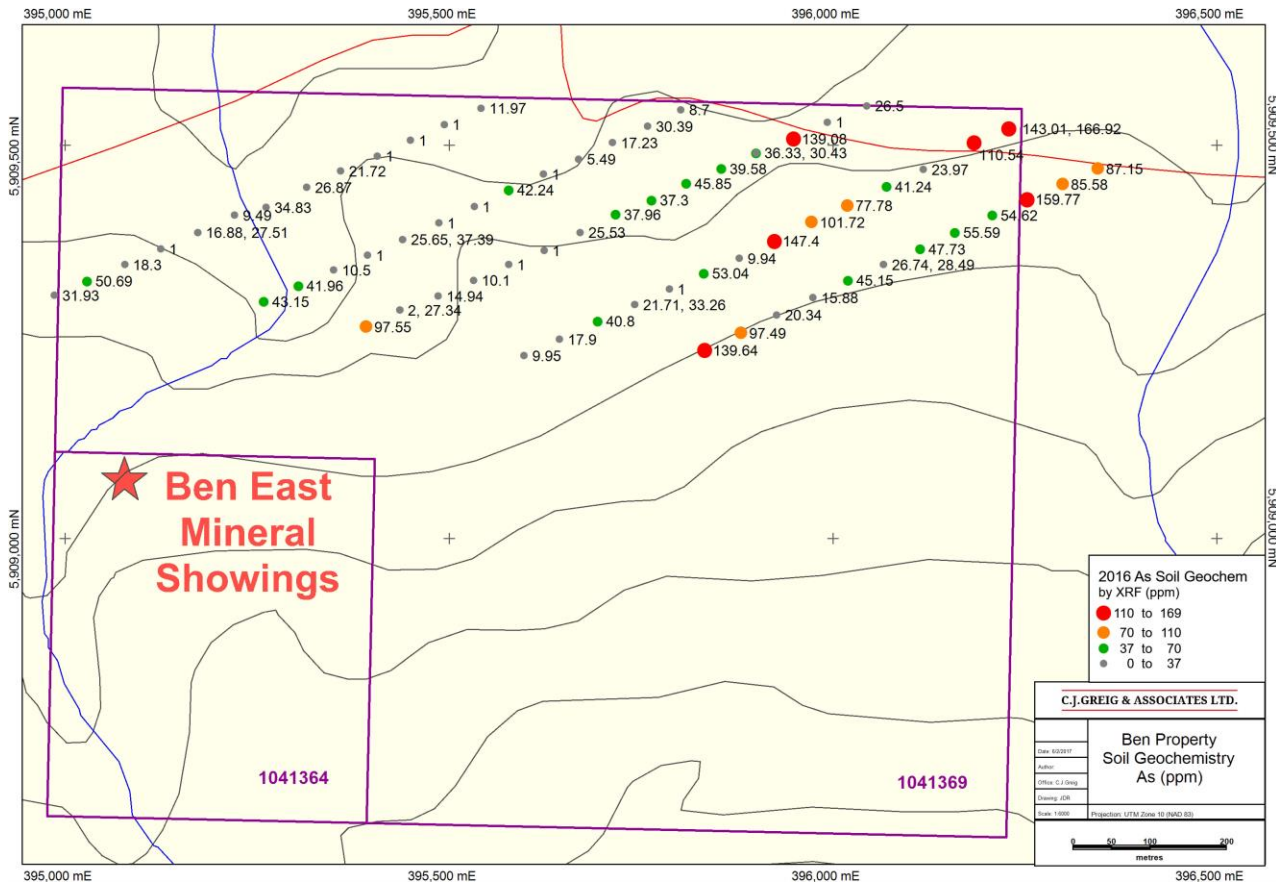


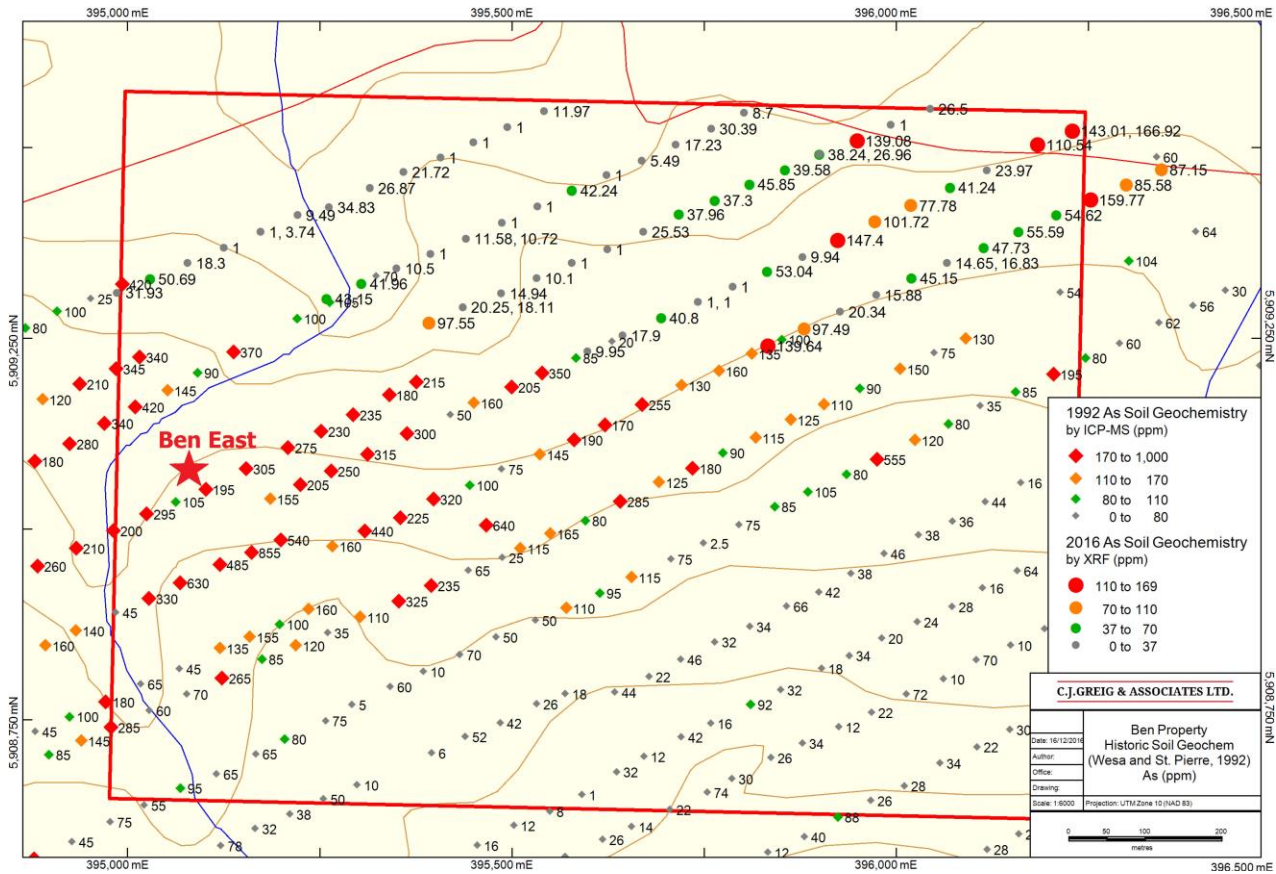
Figure 5. 2016 Copper-in-soil geochemistry



**Figure 6. 2016 Arsenic-in-soil geochemistry**

When viewed with the soil geochemical sampling completed over the remainder of the property by BHP Minerals Canada Ltd. (Wesa and St. Pierre, 1992), the geochemical results from this program, albeit lower in strength, show a close correlation with the previously defined broad geochemical anomaly. Figure 7 shows arsenic values for both the 2016 sampling and the 1992 sampling (Wesa and St. Pierre, 1992), and it highlights a distinct arsenic anomaly up to 450 m wide, extending northeasterly 1.4 km right across the property, and passing through the area of the Ben East mineral showings. The apparently lower overall values for Cu and As for the 2016 samples, which used XRF analyses on un-prepared samples, as compared to laboratory ICP analyses used by BHP, may be due to the calibration used for the XRF unit. It is recommended that a number of selected 2016 samples be sent for laboratory analysis, to allow a direct comparison of ICP results to the XRF values. The selected samples should also be analyzed for gold, since anomalous gold values reported by BHP Minerals (Wesa and St. Pierre, 1992) suggest the potential for precious metals in the system.

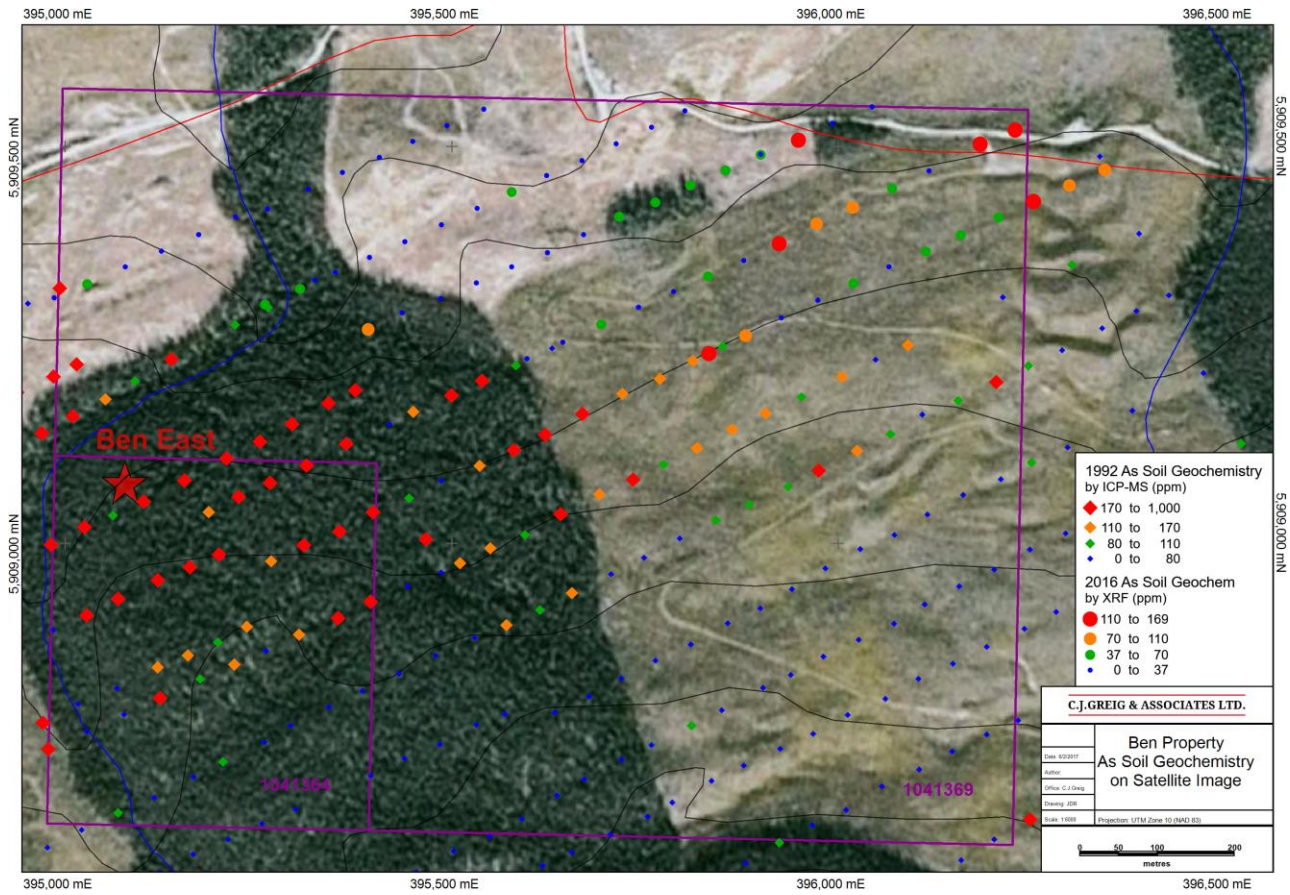




**Figure 7. 2016 and 1992 Arsenic-in-soil geochemistry (1992 data from Wesa and St. Pierre, 1992)**

Weakly to moderately anomalous values for other elements from the 2016 XRF analyses have shown relatively strong correlations with the anomalous copper and arsenic values. The anomalous values are highlighted on a “Selected Elements Comparison” table in Appendix I, visually illustrating the element correlations. These coinciding elements include Zn up to 113 ppm, Pb up to 39 ppm, Mo up to 3.4 ppm, Fe up to 2.9%, Mn up to 486 ppm and Co up to 310 ppm. Ag and Au detection limits with the XRF unit are very high, therefore all values for those elements registered as less than level of detection (<LOD).

Figure 8 illustrates the As-in-soil anomalies overlain on satellite imagery of the property area. The east half of the property has been logged, revealing the topography more clearly. There are some physiographic features on the east side that appear to be mounds of glacial till that may be several metres, or more, in depth. Geochemical results should be weighed based on the potential masking effect of thick glacial cover, and lower values should not be overlooked, especially if they are on trend with a known mineralized area. On the other hand, glacial direction in this region is generally northeasterly and anomalous values in the soil may have been dispersed several hundred metres “down-ice” from the source. Therefore, it is possible that the more scattered arsenic anomalies in the northeast part of the property may be dispersed from a source closer to the Ben East mineral showings.



**Figure 8. 2016 and 1992 Arsenic-in-soil geochemistry on satellite imagery**

## 9.0 Conclusions and Recommendations

The 2016 soil geochemical program on the Ben property has been successful in extending the Cu and As anomalous zones farther to the northeast, onto the previously unsampled part of the Ben property. Although the soil values are relatively weak they define a promising broad continuous trend that remains partially open to the northeast. The extent of the weakly to moderately anomalous zone suggests that a sizeable mineralized system may be present, and it could strengthen at depth. It has been shown, by previous rock sampling in the area that significant Au and Ag values accompany arsenopyrite mineralization, so selected check samples, and all future samples, should be analyzed for gold.

With these observations in mind, a systematic exploration program involving further soil sampling and prospecting is strongly recommended for the property, as are grid-controlled geophysical surveys. In particular, in the far northeast section of the property, in-fill soil geochemical sampling and prospecting are recommended to follow up the strongly anomalous values. Ground geophysical surveys, specifically Induced Polarization (IP), would be particularly useful, since there is a known association of arsenopyrite and pyrite with copper and gold values in altered intrusive rocks and hornfelsed sedimentary strata. IP would be effective in helping to define drill targets, whether they be stockworks, closely-spaced sheeted veins, or mineralization associated

with disseminated and/or fracture-controlled sulphides. Ideally, IP lines should be oriented across the trend of the zone, with five to six northwest-southeast lines 800-1000 m long, at 200 m spacing to provide preliminary coverage of the Ben property. In addition, following further encouraging results, a focused trenching program in areas of shallow overburden would be valuable in identifying the nature of mineralization and structures involved in this anomalous zone and to better develop the necessary targets for a future diamond drill program. Given the excellent access to the property by logging roads and clear-cut areas, this proposed work could be done efficiently and relatively economically.

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**APPENDIX I**

**SOIL GEOCHEMICAL SAMPLE LOCATIONS**

**AND XRF ANALYTICAL RESULTS**

## Ben 2016 Soil Samples - XRF Analyses

SAMPLE	Easting	Northing	Elev	Durtn	Units	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	U	U Error	Rb	Rb Error	Th	Th Error	Pb
MDBE634	396345	5909470	1203	30	ppm	2.4	1.49	94.38	2.83	218.78	3.78 < LOD	5.94	24.67	1.35	5.51	2.42	39.07	
MDBE635	396299	5909450	1202	30	ppm	< LOD	1.5	62.38	2.37	148.1	3.07 < LOD	5.45	19.84	1.23 < LOD	3.11	11.7		
MDBE636	396253	5909431	1205	30	ppm	2.81	1.37	42.47	2	129.86	2.75 < LOD	5.02	17.5	1.12 < LOD	2.93	10.9		
MDBE637	396208	5909411	1217	30	ppm	< LOD	1.5	25.6	1.48	66.13	1.79 < LOD	3.99	7.75	1 < LOD	2.38 < LOD			
MDBE638	396159	5909389	1219	30	ppm	< LOD	2.25	110.4	3.21	375.28	5.17 < LOD	6.27	20.06	1.26	4.23	2.25 < LOD		
MDBE639	396114	5909368	1219	30	ppm	< LOD	1.57	36.3	2.01	172.05	3.2 < LOD	5.35	16.74	1.11 < LOD	2.94 < LOD			
MDBE640	396066	5909348	1222	30	ppm	< LOD	1.78	62.11	2.56	332.1	4.59 < LOD	5.6	12.8	1.02 < LOD	2.98 < LOD			
MDBE640dup	396066	5909348	1222	30	ppm	< LOD	2.01	51.44	2.29	249.34	3.86 < LOD	5.41	13.92	1.03 < LOD	2.83 < LOD			
MDBE641	396020	5909328	1216	30	ppm	< LOD	1.5	61.14	2.54	241.1	4.04	6.91	4.21	24.36	1.36 < LOD	3.26 < LOD		
MDBE642	395974	5909306	1221	30	ppm	< LOD	1.73	79.78	2.84	309.4	4.64 < LOD	6.45	27.12	1.41	3.78	2.23	6.64	
MDBE643	395927	5909284	1221	30	ppm	< LOD	1.5	75.29	2.61	223.2	3.79 < LOD	5.69	21.69	1.27 < LOD	3.07 < LOD			
MDBE644	395880	5909261	1217	30	ppm	< LOD	1.5	45.29	1.9	82.16	2.14	10.15	3.35	12.7	1	3.41	1.97	9.43
MDBE645	395833	5909239	1212	30	ppm	< LOD	2.23	69.68	2.65	223.29	3.93 < LOD	6.07	21.07	1.3	4.59	2.33	16.64	
MDBE647	395598	5909232	1191	30	ppm	< LOD	1.5	67.93	2.75	292.85	4.59 < LOD	6.59	28.52	1.47	4.19	2.27 < LOD		
MDBE647dup	395598	5909232	1191	30	ppm	< LOD	2.2	85.27	2.98	364.55	5.11 < LOD	6.77	28.98	1.46	3.36	2.21 < LOD		
MDBE648	395644	5909253	1193	30	ppm	< LOD	2.08	72.15	2.42	180.26	3.26	8.27	3.75	19.65	1.18	4.13	2.04 < LOD	
MDBE649	395694	5909276	1195	30	ppm	< LOD	2.05	54.14	2.1	120.11	2.62 < LOD	4.8	12.11	1 < LOD	2.81 < LOD			
MDBE650	395742	5909297	1200	30	ppm	< LOD	2.15	50.46	2.79	445.4	5.84 < LOD	6.55	22.24	1.34	5.58	2.33 < LOD		
MDBE650dup	395742	5909297	1200	30	ppm	< LOD	2.14	53.23	2.75	429.6	5.62 < LOD	6.4	17.28	1.2 < LOD	3.22 < LOD			
MDBE651	395787	5909317	1201	30	ppm	< LOD	2.08	28.48	2.63	517.14	6.27 < LOD	6.61	16.76	1.18 < LOD	2.91 < LOD			
MDBE652	395832	5909337	1197	30	ppm	< LOD	1.77	12.51	1.22	51.44	1.55	4.48	2.5	5.27	1 < LOD	2.12 < LOD		
MDBE653	395878	5909356	1200	30	ppm	< LOD	1.5	57.47	2.47	277.01	4.22 < LOD	5.64	15.41	1.1 < LOD	2.99 < LOD			
MDBE654	395924	5909378	1188	30	ppm	2.53	1.47	71.57	2.48	148.11	3.08 < LOD	6.19	31.67	1.5 < LOD	3.24	12.75		
MDBE655	395972	5909402	1192	30	ppm	< LOD	2.25	72.63	2.71	231.51	4.03 < LOD	6.21	22.15	1.33	4.7	2.38	24.82	
MDBE656	396019	5909423	1194	30	ppm	< LOD	1.5	62.83	2.49	219.35	3.78 < LOD	5.64	15.86	1.13	3.35	2.15	13.14	
MDBE657	396070	5909447	1185	30	ppm	< LOD	1.7	69.24	2.38	186.28	3.29	7.63	3.67	17.48	1.11 < LOD	2.89 < LOD		
MDBE658	396118	5909469	1189	30	ppm	< LOD	1.71	52.71	2.03	148.44	2.77	5.05	3.08	8.99	1 < LOD	2.43 < LOD		
MDBE659	396184	5909503	1188	30	ppm	< LOD	2.3	84.77	2.91	254.53	4.3 < LOD	6.58	29.46	1.52	5.77	2.51	26.15	
MDBE660	396229	5909521	1177	30	ppm	2.94	1.51	58.79	2.47	179.47	3.52 < LOD	5.92	19.1	1.26	5.22	2.34	10.64	
MDBE660dup	396229	5909521	1177	30	ppm	3.38	1.39	37.93	1.9	103.62	2.47 < LOD	4.95	14.74	1.06 < LOD	3.04	14.57		
MDBE662	396044	5909550	1182	30	ppm	< LOD	1.5	57.26	2.17	160.94	2.99 < LOD	4.95	12.71	1 < LOD	2.72 < LOD			
MDBE663	395949	5909508	1175	30	ppm	< LOD	2.17	60.89	2.34	139.74	2.99	7.88	4.09	27.14	1.4	5.64	2.32	15.25
MDBE664	395855	5909470	1177	30	ppm	< LOD	2.03	75.28	2.53	176.27	3.33 < LOD	5.89	25.81	1.35	4.25	2.17 < LOD		
MDBE665	395764	5909430	1179	30	ppm	< LOD	1.98	76.21	2.71	221.72	3.91 < LOD	5.93	21.65	1.31 < LOD	3.28 < LOD			
MDBE666	395671	5909389	1184	30	ppm	< LOD	1.5	66.95	2.49	238	3.84	6.54	3.81	16.54	1.11	4.93	2.13 < LOD	
MDBE667	395578	5909348	1208	30	ppm	< LOD	1.5	106.49	3.23	319.25	4.9	8.63	4.74	30.01	1.53 < LOD	3.4 < LOD		
MDBE668	395486	5909308	1187	30	ppm	< LOD	1.5	74.35	2.58	202.98	3.61 < LOD	5.78	21.16	1.26	3.47	2.16	12.93	

SAMPLE	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Au	Au Error	Zn	Zn Error	W	W Error	Cu	Cu Error	Ni	Ni Error
MDBE634	5.14 < LOD		1.5	87.15	5.37 < LOD		7.2 < LOD	7.82		113.08	8.93 < LOD		29.8	29.13	10.16 < LOD		31.85
MDBE635	4.09 < LOD		1.5	85.58	4.95 < LOD		7.02 < LOD	8.05		68.81	7.55 < LOD		51.6	28.83	9.95 < LOD		31.36
MDBE636	3.89 < LOD		1.5	159.77	5.99 < LOD		6.37 < LOD	7.43		74.4	7.37 < LOD		47.07	89.49	10.99 < LOD		29.17
MDBE637	4.14 < LOD		1.5	54.62	3.46 < LOD		5.02 < LOD	5.86		31.79	5.15 < LOD		38.12	48.62	8.45 < LOD		23
MDBE638	5.87 < LOD		1.73	55.59	4.18 < LOD		7.08 < LOD	8.16		48.59	6.83 < LOD		50.55	26.24	9.89 < LOD		31.71
MDBE639	5.23 < LOD		1.5	47.73	3.75 < LOD		6.45 < LOD	7.07		44.12	6.36 < LOD		27.06	48.82	9.86 < LOD		29.17
MDBE640	5.09 < LOD		1.5	14.65	2.81 < LOD		6.4 < LOD	6.7		27.73	5.68 < LOD		26.95	26.74	9.07 < LOD		28.36
MDBE640dup	4.79 < LOD		1.5	16.83	2.78 < LOD		6.33 < LOD	6.61		32.09	5.76 < LOD		25.9	28.49	9.04 < LOD		28.2
MDBE641	5.85 < LOD		1.5	45.15	3.97 < LOD		7.18 < LOD	8.04		68.43	7.66 < LOD		51.75	41.51	10.56 < LOD		32.32
MDBE642	3.99 < LOD		2.27	15.88	3.25 < LOD		7.33 < LOD	8.09		38.32	6.56 < LOD		52.32	20.68	9.74 < LOD		31.85
MDBE643	5.63 < LOD		1.5	20.34	3.25 < LOD		6.67 < LOD	8.03		36.89	6.25 < LOD		49.66	22.66	9.35 < LOD		30.27
MDBE644	3.77 < LOD		1.5	97.49	4.84 < LOD		6.37 < LOD	7.2		107.75	8.27 < LOD		46.45	117.88	11.66 < LOD		28.73
MDBE645	4.48 < LOD		1.5	139.64	6.13 < LOD		7.75 < LOD	8.41		89.21	8.51 < LOD		31.47	33	10.7 < LOD		33.78
MDBE647	5.69 < LOD		1.5	12.65	2.98 < LOD		7.46 < LOD	7.86		70.79	7.83 < LOD		30.4	17.81	9.84 < LOD		32.73
MDBE647dup	5.58 < LOD		1.5	9.95	2.84 < LOD		7.34 < LOD	8.03		62.39	7.4 < LOD		51.62	21.11	9.76 < LOD		31.99
MDBE648	5.12 < LOD		1.5	17.9	2.93 < LOD		6.4 < LOD	7.17		31.61	5.82 < LOD		47.26	18.07	8.88 < LOD		28.6
MDBE649	5.19 < LOD		1.5	40.8	3.59 < LOD		6.47 < LOD	7.39		41.39	6.17 < LOD		48.36	28.72	9.43 < LOD		29.55
MDBE650	5.56 < LOD		1.5 < LOD		3.88 < LOD		7.34 < LOD	8.34		38.05	6.54 < LOD		52.62	21.71	9.88 < LOD		32
MDBE650dup	5.61 < LOD		1.5 < LOD		2.77 < LOD		7.17 < LOD	8.19		34.03	6.3 < LOD		29.55	33.26	10.06 < LOD		31.92
MDBE651	5.19 < LOD		1.5 < LOD		3.67 < LOD		6.9 < LOD	8.05		30.88	6.11 < LOD		49.73	23.88	9.61 < LOD		30.82
MDBE652	3.59 < LOD		1.5	53.04	3.26 < LOD		4.69 < LOD	5.36		15.95	4.36 < LOD		34.99	47.71	8.11 < LOD		21.51
MDBE653	6.01 < LOD		1.5	9.94	2.78 < LOD		6.41 < LOD	7.83		31.38	5.86 < LOD		49.33	19.32	9.06 < LOD		29.36
MDBE654	4.2 < LOD		1.5	147.4	6.1 < LOD		7.3 < LOD	8.66		100.46	8.62 < LOD		29.58	53.21	10.89 < LOD		32.26
MDBE655	4.8 < LOD		1.5	101.72	5.59 < LOD		7.52 < LOD	8.74		90.45	8.52 < LOD		30.29	44.94	10.99 < LOD		33.37
MDBE656	4.17 < LOD		1.5	77.78	4.8 < LOD		6.92 < LOD	7.8		47.5	6.76 < LOD		50.2	37.52	10.11 < LOD		30.44
MDBE657	5.37 < LOD		1.5	41.24	3.64 < LOD		6.39 < LOD	7.2		36.41	5.97 < LOD		47	27.96	9.08 < LOD		28.23
MDBE658	4.57 < LOD		1.5	23.97	2.88 < LOD		5.52 < LOD	6.28		16.5	4.75 < LOD		41.13	25.63	8.37 < LOD		25.41
MDBE659	4.94 < LOD		2.04	110.54	5.85 < LOD		7.77 < LOD	9.06		81.3	8.39 < LOD		55.34	51.86	11.44 < LOD		34.52
MDBE660	4.26 < LOD		1.56	143.01	6.19 < LOD		7.65 < LOD	8.8		102.29	9.01 < LOD		31.78	64.43	11.67 < LOD		34.04
MDBE660dup	4.04 < LOD		1.5	166.92	6.22 < LOD		6.52 < LOD	8		95.58	8.07 < LOD		50.13	63.11	10.36 < LOD		29.68
MDBE662	5 < LOD		1.5	26.5	3.1 < LOD		6 < LOD	6.96		33.19	5.7 < LOD		44.59	27.65	8.8 < LOD		27.31
MDBE663	4.29 < LOD		1.5	139.08	5.98 < LOD		7.03 < LOD	8.2		107.83	8.84 < LOD		52.21	99.48	12.18 < LOD		31.15
MDBE664	5.66 < LOD		1.5	39.58	3.76 < LOD		7.18 < LOD	7.99		75.33	7.74 < LOD		51.58	29.98	10.06 < LOD		31.85
MDBE665	5.98 < LOD		1.5	37.3	3.84 < LOD		7.54 < LOD	8.59		64.57	7.68 < LOD		53.66	34.44	10.51 < LOD		33.59
MDBE666	5.28 < LOD		1.5	25.53	3.22 < LOD		6.74 < LOD	6.61		52.71	6.75 < LOD		27.81	28.76	9.51 < LOD		29.31
MDBE667	5.53 < LOD		1.5 < LOD		3.83 < LOD		7.4 < LOD	7.99		72.17	8.02 < LOD		30.93	25.35	10.37 < LOD		33.43
MDBE668	4.14 < LOD		1.5	14.94	3.29 < LOD		6.96 < LOD	7.59		66.73	7.41 < LOD		49.28	23.03	9.52 < LOD		30.12

SAMPLE	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	V	V Error	Ti	Ti Error	Sb	Sb Error	Sn	Sn Error	Cd
MDBE634	< LOD	105.44	20952.06	184.71	338.3	47.38	< LOD	142	< LOD	297.92	< LOD	478.41	< LOD	12.95	< LOD	14.24	< LOD
MDBE635	131.53	64.33	17431.62	169.1	355.5	47.36	< LOD	144.03	< LOD	305.36	< LOD	479.87	< LOD	12.91	< LOD	14.18	< LOD
MDBE636	245.07	66.46	19898.6	172.63	374.34	45.88	< LOD	133.41	< LOD	271.3	< LOD	420.12	< LOD	12.08	< LOD	13.33	< LOD
MDBE637	144.04	40.2	8073.24	100.8	< LOD	73.93	< LOD	112.14	< LOD	232.43	< LOD	360.07	< LOD	10.4	< LOD	11.43	< LOD
MDBE638	< LOD	99.33	19043.24	175.84	286.95	45.84	< LOD	146.66	< LOD	310.74	< LOD	494.54	< LOD	12.85	< LOD	14.2	< LOD
MDBE639	170.99	55.4	13504.91	142.81	266.74	42.26	< LOD	140.97	< LOD	282.61	< LOD	432.34	< LOD	12.08	< LOD	13.31	< LOD
MDBE640	< LOD	69.55	7730.2	107.6	< LOD	82.26	< LOD	138.48	< LOD	295.96	< LOD	453.92	< LOD	11.91	< LOD	13.08	< LOD
MDBE640dup	89.17	40.8	7228.92	103.36	< LOD	82.33	< LOD	140.78	< LOD	291.75	< LOD	454.6	< LOD	11.72	< LOD	12.84	< LOD
MDBE641	148.12	67.9	19218.23	178.72	483.7	51.39	< LOD	144.85	< LOD	299.95	< LOD	489.48	< LOD	13.02	< LOD	14.43	< LOD
MDBE642	< LOD	87.44	12700.81	144.66	257.03	44.29	< LOD	157.49	< LOD	336.27	671.36	356.54	< LOD	13.04	< LOD	14.4	< LOD
MDBE643	126.82	52.88	11618.74	136.47	186.28	41.07	< LOD	151.22	< LOD	318.44	< LOD	501.2	< LOD	12.69	< LOD	13.97	< LOD
MDBE644	163.64	68.8	22043.55	178.75	272.27	42.49	< LOD	121.89	< LOD	253.71	< LOD	385.99	< LOD	11.75	< LOD	12.94	< LOD
MDBE645	< LOD	116.5	26013.66	211.13	331.82	49.35	< LOD	145.25	< LOD	313.47	1040.52	334.5	< LOD	13.44	< LOD	14.82	< LOD
MDBE647	< LOD	102.43	19008.82	180.39	287.19	47.12	< LOD	155.29	< LOD	329.51	877.32	348.57	< LOD	13.43	< LOD	14.81	< LOD
MDBE647dup	< LOD	95.06	16394.43	164.19	237.52	44.11	< LOD	149.4	< LOD	319.04	< LOD	507.24	< LOD	12.85	< LOD	14.24	< LOD
MDBE648	98.03	44.58	8614.31	113.96	< LOD	88.86	< LOD	139.71	< LOD	299.51	< LOD	476.25	< LOD	11.93	< LOD	13.21	< LOD
MDBE649	110.24	54.89	13904.81	143.45	< LOD	86.5	< LOD	130.66	< LOD	267.32	< LOD	431.34	< LOD	11.76	< LOD	12.91	< LOD
MDBE650	< LOD	81.47	10459.1	132.68	271.35	44.77	< LOD	160.53	< LOD	341.93	727.66	368.58	< LOD	13.09	< LOD	14.45	< LOD
MDBE650dup	123.78	42.91	6913.48	106.87	< LOD	91.26	< LOD	157.4	< LOD	332.02	< LOD	528.48	< LOD	12.63	< LOD	14	< LOD
MDBE651	< LOD	75.6	9430.26	123.1	197.83	40.78	< LOD	148.99	< LOD	314.59	< LOD	499.28	< LOD	12.54	< LOD	13.92	< LOD
MDBE652	< LOD	59.14	6919.47	91.36	351.03	37.39	< LOD	105.88	< LOD	214.53	< LOD	328.29	< LOD	9.85	< LOD	10.84	< LOD
MDBE653	< LOD	74.62	8956.62	118.13	204.75	40.15	< LOD	144.51	< LOD	305.47	< LOD	483.18	< LOD	12.22	< LOD	13.42	< LOD
MDBE654	195.54	72.63	21409.53	187.89	485.64	51.92	< LOD	150.68	< LOD	313.76	< LOD	493.63	< LOD	13.12	< LOD	14.44	< LOD
MDBE655	< LOD	108.46	22325.18	196.48	326.21	48.92	< LOD	149.32	< LOD	315.23	< LOD	489.27	< LOD	13.42	< LOD	14.72	< LOD
MDBE656	< LOD	95.5	16481.61	163.31	263.64	44.37	< LOD	145.46	< LOD	311.08	< LOD	491.66	< LOD	12.83	< LOD	14.07	< LOD
MDBE657	110.45	52.28	12570.19	136.03	237.55	40.48	< LOD	135.86	< LOD	285.87	< LOD	455.92	< LOD	11.82	< LOD	13.02	< LOD
MDBE658	< LOD	66.38	8071.74	104.09	< LOD	73.82	< LOD	119.75	< LOD	247.86	< LOD	385.67	< LOD	10.73	< LOD	11.81	< LOD
MDBE659	< LOD	112.47	22167.53	198.51	451.8	53.01	< LOD	151.31	< LOD	314.74	< LOD	503.5	< LOD	13.62	< LOD	15.12	< LOD
MDBE660	117.35	75.85	22945.62	200.62	456.77	53.13	< LOD	155.38	< LOD	315.09	< LOD	489.46	< LOD	13.29	< LOD	14.76	< LOD
MDBE660dup	309.86	59.12	14522.08	148.92	226.44	41.04	< LOD	130.66	< LOD	273.46	< LOD	421.97	< LOD	12.08	< LOD	13.31	< LOD
MDBE662	157.39	49.06	11011.42	125.27	< LOD	85.66	< LOD	133.07	< LOD	268.59	< LOD	418.69	< LOD	11.57	< LOD	12.73	< LOD
MDBE663	< LOD	117.84	29051.65	218.81	481.42	52.22	< LOD	130.64	< LOD	276.71	< LOD	443.46	< LOD	12.86	< LOD	14.23	< LOD
MDBE664	131.99	68.15	20328.14	180.11	327.52	46.54	< LOD	141.74	< LOD	306.13	< LOD	490.79	< LOD	12.79	< LOD	14.08	< LOD
MDBE665	119.15	68.32	19051.46	180.49	314.95	47.75	< LOD	150.28	< LOD	324.4	< LOD	507.47	< LOD	13.36	< LOD	14.72	< LOD
MDBE666	< LOD	98.45	19692.86	173.09	228.95	42.3	< LOD	131.94	< LOD	271.96	< LOD	439.92	< LOD	12.24	< LOD	13.42	< LOD
MDBE667	< LOD	107.29	20710.6	191.48	227.29	46.23	< LOD	147.83	< LOD	323.46	784.91	348.67	< LOD	13.62	< LOD	14.97	< LOD
MDBE668	< LOD	91.92	14883.92	154.66	< LOD	90.85	< LOD	143.65	< LOD	301.83	< LOD	488.77	< LOD	12.66	< LOD	13.96	< LOD



SAMPLE	Cd Error	Ag	Ag Error	Pd	Pd Error	Bal	Bal Error	Nb	Nb Error	Bi	Bi Error	Re	Re Error	Ta	Ta Error	Hf	Hf Error
MDBE634	10.66 < LOD		7.46 < LOD		5.82	971231.63	476.88	6.9	1.27 < LOD		4.33 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE635	10.67 < LOD		7.37 < LOD		5.79	975375.88	469.13	3.53	1.22 < LOD		3.15 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE636	10.12 < LOD		6.9 < LOD		5.55	972201.25	434.51	3.34	1.15 < LOD		2.85 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE637	8.93 < LOD		5.86 < LOD		4.78	987680.5	338.82	2.58	1.05 < LOD		2.11 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE638	10.69 < LOD		7.38 < LOD		5.89	973186.13	481.78	5.28	1.23 < LOD		3.64 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE639	10.1 < LOD		6.85 < LOD		5.48	980293.13	421.6	7.11	1.23 < LOD		2.84 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE640	9.97 < LOD		6.74 < LOD		5.43	988053.56	412.45	3.84	1.16 < LOD		2.82 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE640dup	9.82 < LOD		6.69 < LOD		5.37	988792.25	409.47	5.4	1.18 < LOD		2.71 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE641	10.8 < LOD		7.49 < LOD		5.89	973066.63	479.47	3.42	1.22 < LOD		3.34 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE642	10.74 < LOD		7.45 < LOD		5.91	980675.69	488.41	3.19	1.2 < LOD		3.4 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE643	10.54 < LOD		7.22 < LOD		5.81	982864.75	461.51	5.59	1.23 < LOD		3.12 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE644	9.88 < LOD		6.71 < LOD		5.33	969909.56	417.55	6.14	1.19 < LOD		2.99 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE645	11 < LOD		7.69 < LOD		6	964548.75	513.43	5.66	1.28 < LOD		3.44 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE647	11.02 < LOD		7.64 < LOD		6.06	972731.38	505.22	4.77	1.26 < LOD		3.43 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE647dup	10.7 < LOD		7.41 < LOD		5.88	976589.38	481.71	4.98	1.24 < LOD		3.89 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE648	10.05 < LOD		6.83 < LOD		5.45	986951.13	428.45	4.16	1.17 < LOD		3.75 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE649	9.9 < LOD		6.74 < LOD		5.36	980037	414.58	4.98	1.18 < LOD		2.67 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE650	10.82 < LOD		7.52 < LOD		5.91	983451.69	493.3	7.99	1.31 < LOD		3.93 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE650dup	10.53 < LOD		7.3 < LOD		5.77	989084.06	464.26	4.72	1.23 < LOD		3.13 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE651	10.47 < LOD		7.19 < LOD		5.7	985611.88	451.64	< LOD	1.74 < LOD		2.87 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE652	8.5 < LOD		5.59 < LOD		4.56	989175.13	312.95	1.9	1.01 < LOD		1.75 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE653	10.22 < LOD		6.96 < LOD		5.56	986427.81	437.26	3.65	1.18 < LOD		2.93 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE654	10.76 < LOD		7.49 < LOD		5.88	969911.25	493.01	4.68	1.24 < LOD		3.35 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE655	10.98 < LOD		7.71 < LOD		5.95	969740.63	496.81	5.01	1.28 < LOD		3.53 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE656	10.57 < LOD		7.29 < LOD		5.71	976672.69	471.43	4.57	1.23 < LOD		3.15 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE657	9.96 < LOD		6.75 < LOD		5.38	981634.31	427.22	4.63	1.17 < LOD		2.77 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE658	9.17 < LOD		6.19 < LOD		4.91	987783.88	358.72	2.98	1.09 < LOD		2.26 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE659	11.23 < LOD		7.9 < LOD		6.2	969392	504.64	6.02	1.31 < LOD		4.25 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE660	11.03 < LOD		7.75 < LOD		6.06	968684.63	502.46	5.41	1.29 < LOD		4.56 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE660dup	10.17 < LOD		6.87 < LOD		5.52	978810.75	417.63	3.78	1.18 < LOD		2.91 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE662	9.75 < LOD		6.57 < LOD		5.27	983692.25	397.16	4.55	1.15 < LOD		2.58 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE663	10.72 < LOD		7.41 < LOD		5.83	962151.44	483.29	3.8	1.22 < LOD		4.51 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE664	10.52 < LOD		7.35 < LOD		5.75	971683.13	480.61	5.23	1.23 < LOD		3.19 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE665	11.01 < LOD		7.62 < LOD		6.01	973360.88	495.43	6.45	1.29 < LOD		3.27 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE666	10.19 < LOD		7 < LOD		5.51	972944.31	441.42	5.81	1.21 < LOD		3.17 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE667	11.17 < LOD		7.81 < LOD		6.13	970990.06	510.11	5	1.29 < LOD		3.45 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE668	10.56 < LOD		7.28 < LOD		5.75	978759.56	460.76	5.38	1.23 < LOD		3.73 < LOD		1.5 < LOD		1.5 < LOD		1.5

SAMPLE	Easting	Northing	Elev	Durtn	Units	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	U	U Error	Rb	Rb Error	Th	Th Error	Pb
MDBE669	395392	5909269	1160	30	ppm	< LOD	2.2	79.72	2.6	171.25	3.32 < LOD	5.8	21.21	1.27	4.25	2.17 < LOD		
MDBE670	395436	5909290	1173	30	ppm	< LOD	1.5	48.59	1.91	105.41	2.33 < LOD	4.42	10.22	1 < LOD		2.42 < LOD		
MDBE670dup	395436	5909290	1173	30	ppm	< LOD	1.5	100.65	3.21	208.75	3.91 < LOD	4.85	14.51	1.36	3.3	1.92 < LOD		
MDBE671	395532	5909328	1198	30	ppm	< LOD	1.5	87.84	2.75	179.59	3.47 < LOD	6.47	33.48	1.56 < LOD		3.17 < LOD		
MDBE672	395624	5909366	1201	30	ppm	< LOD	1.5	74.65	2.6	276.91	4.15 < LOD	5.71	16.69	1.11 < LOD		2.82 < LOD		
NPBE002	395542	5909547	1149	30	ppm	< LOD	1.5	66.71	2.37	147.07	3.01 < LOD	5.66	22.6	1.27 < LOD		2.95 < LOD		
NPBE003	395494	5909526	1159	30	ppm	< LOD	1.5	75.42	2.62	231.03	3.86 < LOD	6.16	31.31	1.47 < LOD		3.12 < LOD		
NPBE004	395450	5909506	1173	30	ppm	< LOD	1.5	99.93	2.95	285.89	4.35 < LOD	6.09	22.81	1.29 < LOD		3.07 < LOD		
NPBE005	395407	5909486	1172	30	ppm	< LOD	1.5	53.57	2.5	315.55	4.55 < LOD	7.01	3.99	16.35	1.13 < LOD		2.9 < LOD	
NPBE006	395359	5909467	1161	30	ppm	< LOD	1.5	79.54	2.76	220.36	3.92 < LOD	6.15	23.23	1.35 < LOD		3.26 < LOD		
NPBE007	395315	5909446	1150	30	ppm	< LOD	2.39	122.64	3.55	87.35	2.73 < LOD	5.64	17.42	1.21	3.77	2.19 < LOD		
NPBE008	395262	5909421	1148	30	ppm	< LOD	1.63	97.16	2.66	123.7	2.73 < LOD	5.24	15.94	1.11 < LOD		3 < LOD		
NPBE009	395221	5909411	1150	30	ppm	< LOD	1.5	80.51	2.46	134.32	2.82 < LOD	5.36	22.35	1.25 < LOD		2.95 < LOD		
NPBE010	395173	5909389	1159	30	ppm	2.36	1.46	98.62	2.66	112.73	2.62 < LOD	5.26	17.32	1.14	4.73	2.1 < LOD		
NPBE010dup	395173	5909389	1159	30	ppm	2.13	1.39	86	2.44	123.4	2.63 < LOD	4.75	14.36	1.03	3.01	1.92 < LOD		
NPBE011	395125	5909368	1169	30	ppm	< LOD	2.09	108.54	3.33	169.57	3.66 < LOD	6.12	3.53	19.3	1.38	4.36	2.05 < LOD	
NPBE012	395078	5909348	1174	30	ppm	< LOD	1.97	83.22	2.74	169	3.42 < LOD	5.64	17.76	1.23	5.92	2.32 < LOD		
NPBE013	395029	5909327	1177	30	ppm	2.82	1.47	68.72	2.53	192.22	3.54 < LOD	5.73	18.26	1.2	4.02	2.16 < LOD		
NPBE014	394986	5909309	1177	30	ppm	5.29	1.45	74.29	2.49	200.71	3.47 < LOD	5.39	20.14	1.19 < LOD		2.96 < LOD		
NPBE016	395259	5909301	1165	30	ppm	< LOD	2.14	80.04	2.57	151.04	3.1 < LOD	5.51	18.02	1.19	4.16	2.14 < LOD		
NPBE017	395304	5909321	1148	30	ppm	2.99	1.44	86.45	2.51	119.27	2.66 < LOD	5.3	20.08	1.2 < LOD		2.95 < LOD		
NPBE018	395350	5909341	1148	30	ppm	< LOD	1.5	20.14	1.35	60.7	1.67 < LOD	3.73	5.88	1 < LOD		2.29 < LOD		
NPBE019	395394	5909360	1159	30	ppm	< LOD	1.5	66.42	2.45	219.73	3.67 < LOD	5.6	19.34	1.18	3.76	2.06 < LOD		
NPBE020	395440	5909380	1170	30	ppm	< LOD	1.5	64.83	2.47	204.49	3.61 < LOD	6.27	3.96	21.75	1.27	4.6	2.17 < LOD	
NPBE020dup	395440	5909380	1170	30	ppm	< LOD	2.09	75.63	2.46	171.04	3.19 < LOD	5.53	20.12	1.2	7.05	2.19 < LOD		
NPBE021	395487	5909401	1172	30	ppm	< LOD	1.5 < LOD		1.5	35.48	1.36 < LOD	7.02	2.26	1.42	0.86 < LOD		1.8 < LOD	
NPBE022	395533	5909422	1171	30	ppm	< LOD	2.06	65.53	2.48	255.57	3.96 < LOD	5.62	16.1	1.1 < LOD		2.83 < LOD		
NPBE023	395578	5909443	1173	30	ppm	< LOD	2.2	64.97	2.6	234.85	4.01 < LOD	6.1	23.12	1.34	5.24	2.26 < LOD		
NPBE024	395623	5909463	1174	30	ppm	< LOD	1.5	132.15	3.2	300.55	4.38 < LOD	5.72	16.47	1.12 < LOD		2.86 < LOD		
NPBE025	395669	5909482	1169	30	ppm	< LOD	1.5	46.78	2.22	230.37	3.7 < LOD	5.19	16.82	1.1 < LOD		2.77 < LOD		
NPBE026	395713	5909503	1173	30	ppm	< LOD	2.27	74.51	2.87	290.8	4.65 < LOD	6.36	23.56	1.39	4.42	2.32 < LOD		
NPBE027	395759	5909524	1174	30	ppm	< LOD	1.5	41.42	2.02	158.39	3.01 < LOD	4.85	7.71	1 < LOD		2.82 < LOD		
NPBE028	395802	5909545	1172	30	ppm	< LOD	1.5	96.83	2.75	141.14	3 < LOD	5.74	25.09	1.36	4.69	2.18 < LOD		
NPBE029	395993	5909529	1181	30	ppm	< LOD	1.5	36.91	2.1	240.16	3.74 < LOD	6.12	3.67	16.67	1.09 < LOD		2.78 < LOD	
NPBE031	395900	5909490	1179	30	ppm	< LOD	2.18	68.35	2.55	208.08	3.7 < LOD	5.87	21.49	1.28 < LOD		3.15 < LOD		
NPBE031dup	395900	5909490	1179	30	ppm	2.24	1.4	63.87	2.3	144.14	2.93 < LOD	5.33	19.35	1.18 < LOD		3.02 < LOD		
NPBE032	395809	5909451	1183	30	ppm	< LOD	1.5	76.3	2.41	141.95	2.88 < LOD	4.96	13.23	1.01 < LOD		2.9	8.83	
NPBE033	395717	5909412	1190	30	ppm	2.74	1.56	89.82	3.06	296.65	4.74 < LOD	6.91	31.78	1.58	4.51	2.41	7.98	

SAMPLE	Pb Error	Se	Se Error	As	As Error	Hg	Hg Error	Au	Au Error	Zn	Zn Error	W	W Error	Cu	Cu Error	Ni	Ni Error
MDBE669	5.51 < LOD	1.5	97.55	5 < LOD	7.17 < LOD	8.37	74.42	7.78 < LOD	52.77	28.38	10.07 < LOD	30.77					
MDBE670	4.64 < LOD	1.5	20.25	2.8 < LOD	5.63 < LOD	6.07	32.95	5.47 < LOD	41.47 < LOD	12.41 < LOD	25.22						
MDBE670dup	5.06 < LOD	1.5	18.11	2.95 < LOD	6.25 < LOD	7	35.03	5.8 < LOD	25.45	27.34	8.9 < LOD	27.4					
MDBE671	5.77 < LOD	1.5	10.1	3 < LOD	7.49 < LOD	8.5	51.83	7.19 < LOD	53.94	47.1	10.9 < LOD	33.46					
MDBE672	5.01 < LOD	1.5 < LOD	2.81 < LOD	6.46 < LOD	6.76	23.74	5.49 < LOD	26.1	20.94	8.96 < LOD	28.46						
NPBE002	5.2 < LOD	1.5	11.97	2.78 < LOD	6.8 < LOD	7.52	42.69	6.48 < LOD	28.04	26.72	9.56 < LOD	29.92					
NPBE003	5.25 < LOD	1.5 < LOD	3.7 < LOD	6.86 < LOD	7.7	41.7	6.43 < LOD	27.57	20.21	9.36 < LOD	30.98						
NPBE004	5.38 < LOD	1.5 < LOD	3.76 < LOD	7.02 < LOD	8.2	52.04	6.88 < LOD	51.4	24.59	9.71 < LOD	31.2						
NPBE005	5.16 < LOD	1.5 < LOD	2.36 < LOD	6.61 < LOD	7.22	27.76	5.79 < LOD	27.25	19.64	9.04 < LOD	28.66						
NPBE006	5.99 < LOD	1.5	21.72	3.3 < LOD	7.42 < LOD	8.05	51.69	7.2 < LOD	52.32	20.35	10.12 < LOD	33.74					
NPBE007	5.54 < LOD	1.5	26.87	3.39 < LOD	7.45 < LOD	8.11	44.05	7.06 < LOD	54.34	33.63	11.16 < LOD	34.29					
NPBE008	5.24 < LOD	1.5	34.83	3.47 < LOD	7.1 < LOD	7.45	68.9	7.46 < LOD	29.52	28.7	9.92 < LOD	31.3					
NPBE009	5.31 < LOD	1.5	9.49	2.76 < LOD	6.83 < LOD	7.6	58.49	6.95 < LOD	48.83	21.52	9.38 < LOD	30.42					
NPBE010	5.1 < LOD	1.5 < LOD	3.7 < LOD	6.81 < LOD	7.54	44.11	6.56 < LOD	28.61	16.88	9.32 < LOD	30.19						
NPBE010dup	4.9 < LOD	1.5	3.74	2.4 < LOD	6.4 < LOD	7.17	31.94	5.81 < LOD	26.84	27.51	9.11 < LOD	28.57					
NPBE011	5.23 < LOD	1.5 < LOD	2.57 < LOD	6.57 < LOD	7.34	32.04	5.95 < LOD	47.36	30.03	9.42 < LOD	29.6						
NPBE012	5.52 < LOD	1.5	18.3	3.15 < LOD	7.91 < LOD	8.24	79.17	8.31 < LOD	31.88	39.59	11.14 < LOD	33.96					
NPBE013	5.51 < LOD	1.5	50.69	4.02 < LOD	7.28 < LOD	8	68.85	7.64 < LOD	52.33	39.81	10.57 < LOD	32.08					
NPBE014	5.14 < LOD	1.5	31.93	3.33 < LOD	6.69 < LOD	7.17	45.6	6.46 < LOD	27.8	40.12	9.78 < LOD	28.99					
NPBE016	5.82 < LOD	1.5	43.15	3.81 < LOD	7.37 < LOD	8.16	42.5	6.71 < LOD	30.42	30.22	10.2 < LOD	32.09					
NPBE017	4.99 < LOD	1.5	41.96	3.57 < LOD	6.68 < LOD	8.12	51.74	6.74 < LOD	49.28	20.4	9.31 < LOD	29.73					
NPBE018	3.35 < LOD	1.5	10.5	2.07 < LOD	4.69 < LOD	5.61 < LOD	5.76 < LOD	36.41 < LOD	10.93 < LOD	22.55							
NPBE019	5.26 < LOD	1.5 < LOD	3.41 < LOD	6.57 < LOD	7.04	28.97	5.81 < LOD	27.19	22.73	9.21 < LOD	29.38						
NPBE020	5.45 < LOD	1.5	11.58	2.9 < LOD	6.98 < LOD	7.83	32.79	6.18 < LOD	50.62	25.65	9.89 < LOD	32.16					
NPBE020dup	5.01 < LOD	1.5	10.72	2.67 < LOD	6.58 < LOD	7.3	28.42	5.76 < LOD	47.48	37.39	9.52 < LOD	28.61					
NPBE021	2.67 < LOD	1.5 < LOD	1.5 < LOD	4.01 < LOD	4.58 < LOD	4.74 < LOD	31.16 < LOD	9.15 < LOD	18.91								
NPBE022	5.16 < LOD	1.5 < LOD	3.68 < LOD	6.42 < LOD	7.35	33.17	5.89 < LOD	47.62	20.65	8.95 < LOD	29.11						
NPBE023	5.45 < LOD	1.5	42.24	3.78 < LOD	7.34 < LOD	8.63	54.01	7.2 < LOD	54.01	30.29	10.43 < LOD	32.57					
NPBE024	4.92 < LOD	1.5 < LOD	2.77 < LOD	6.34 < LOD	6.51	21.26	5.41 < LOD	46.04 < LOD	13.74 < LOD	28.67							
NPBE025	4.73 < LOD	1.5	5.49	2.39 < LOD	6.23 < LOD	6.92	32.21	5.74 < LOD	45.18 < LOD	14.01 < LOD	27.6						
NPBE026	5.83 < LOD	1.5	17.23	3.26 < LOD	7.55 < LOD	6.13	42.99	7 < LOD	54.51	27.79	10.44 < LOD	32.9					
NPBE027	5 < LOD	1.5	30.39	3.23 < LOD	6.32 < LOD	7.23	37	5.99 < LOD	46.35	47.32	9.76 < LOD	29.12					
NPBE028	5.21 < LOD	1.5	8.7	2.69 < LOD	6.96 < LOD	7.95	42.78	6.62 < LOD	50.98	39.37	10.29 < LOD	31.83					
NPBE029	4.49 < LOD	1.5 < LOD	3.26 < LOD	6.16 < LOD	6.85	36.36	5.82 < LOD	45.58	18.4	8.68 < LOD	28.12						
NPBE031	6.3 < LOD	1.5	38.24	3.7 < LOD	7.32 < LOD	8.13	66.05	7.55 < LOD	52.84	36.33	10.53 < LOD	32.9					
NPBE031dup	5.52 < LOD	1.5	26.96	3.38 < LOD	6.84 < LOD	7.47	56.49	6.89	29.72	18.92	30.43	9.51 < LOD	30.26				
NPBE032	3.79 < LOD	1.5	45.85	3.88 < LOD	6.2 < LOD	7.16	54.65	6.68 < LOD	45.13	35.08	9.43 < LOD	28.51					
NPBE033	4.23 < LOD	1.5	37.96	4.03 < LOD	7.8 < LOD	8.73	87.35	8.65 < LOD	31.74	40.44	11.12 < LOD	34.56					

SAMPLE	Co	Co Error	Fe	Fe Error	Mn	Mn Error	Cr	Cr Error	V	V Error	Ti	Ti Error	Sb	Sb Error	Sn	Sn Error	Cd
MDBE669	120.76	73.98	23679.99	196.88	297.42	46.87 < LOD	141.1 < LOD	295.52 < LOD	481.38 < LOD	12.93 < LOD	14.22 < LOD						
MDBE670	< LOD	70.77	9257.78	111.5 < LOD		77.92 < LOD	124.29 < LOD	255.62 < LOD	411.31 < LOD	11.04 < LOD	12.09 < LOD						
MDBE670dup	129.51	40.86	7196.8	101.96 < LOD		82.54 < LOD	132.83 < LOD	284.17 < LOD	449.14 < LOD	11.44 < LOD	12.59 < LOD						
MDBE671	120.51	63.47	16362.2	166.75	420.84	50.45 < LOD	162.38 < LOD	340.04	2047.54	371.3 < LOD	13.4 < LOD	14.7 < LOD					
MDBE672	< LOD	73.3	9454.57	119.28 < LOD		84.08 < LOD	135.81 < LOD	295.31 < LOD	470.8 < LOD	11.94 < LOD	13.2 < LOD						
NPBE002	133.19	59.94	15537.64	156.81	404.91	47.51 < LOD	145.84 < LOD	307.17 < LOD	478.26 < LOD	12.65 < LOD	13.97 < LOD						
NPBE003	151.84	53.85	11938.39	138.36	239.18	42.64 < LOD	149.08 < LOD	315.89 < LOD	501.18 < LOD	12.72 < LOD	14 < LOD						
NPBE004	133.33	58.44	14618.37	152.37	301.39	44.66 < LOD	143.95 < LOD	312.87 < LOD	491.6 < LOD	12.63 < LOD	13.98 < LOD						
NPBE005	< LOD	75.62	9126.34	119.11 < LOD		89.4 < LOD	141.47 < LOD	294.78 < LOD	472.39 < LOD	12.14 < LOD	13.48 < LOD						
NPBE006	146.77	70.86	20158.9	186.78	325.6	48.58 < LOD	152 < LOD	320.65	706.71	345.51 < LOD	13.44 < LOD	14.86 < LOD					
NPBE007	125.49	66.96	17168.78	175.96 < LOD		96.71 < LOD	152.64 < LOD	323.14 < LOD	521.77 < LOD	13.48 < LOD	14.79 < LOD						
NPBE008	284.76	65.52	18018.08	168.16	218.99	42.56 < LOD	137.49 < LOD	291.7 < LOD	458.39 < LOD	12.54 < LOD	13.84 < LOD						
NPBE009	221.58	60.06	15597.25	154.48	228.3	41.83 < LOD	137.86 < LOD	290.27 < LOD	460.54 < LOD	12.32 < LOD	13.62 < LOD						
NPBE010	146.87	56.36	13451.4	145.94	221.14	42.24 < LOD	149.3 < LOD	316.36 < LOD	489.07 < LOD	12.65 < LOD	13.91 < LOD						
NPBE010dup	185.3	44.67	8338.38	110.73 < LOD		81.92 < LOD	143.23 < LOD	304.59 < LOD	487.91 < LOD	11.76 < LOD	12.95 < LOD						
NPBE011	76.42	37.67	5723.22	94.32 < LOD		87.59 < LOD	151.24 < LOD	316.64 < LOD	513.59 < LOD	12.11 < LOD	13.23 < LOD						
NPBE012	194.2	75.61	21789.65	196.08	294.97	48.51 < LOD	151.84 < LOD	318.98 < LOD	502.05 < LOD	13.56 < LOD	14.96 < LOD						
NPBE013	121.24	72.16	21604.7	188.46	325.2	47.45 < LOD	143.46 < LOD	299.91 < LOD	480.71 < LOD	13.03 < LOD	14.36 < LOD						
NPBE014	148.2	47.67	9642.04	120.89 < LOD		89.41 < LOD	146.49 < LOD	313.07 < LOD	516.89 < LOD	12.06 < LOD	13.38 < LOD						
NPBE016	194.89	63.04	16260.65	163.33	299.97	45.86 < LOD	151.04 < LOD	315.94 < LOD	497.49 < LOD	13 < LOD	14.36 < LOD						
NPBE017	188.5	57.84	14409.46	149.01 < LOD		89.9 < LOD	140.18 < LOD	301.38 < LOD	460.49 < LOD	12.32 < LOD	13.54 < LOD						
NPBE018	< LOD	59.88	6697.31	89.53 < LOD		62.64 < LOD	107.34 < LOD	223 < LOD	347.77 < LOD	9.96 < LOD	11.02 < LOD						
NPBE019	105.26	49.05	10431.75	126.52 < LOD		89.76 < LOD	142.22 < LOD	302.61 < LOD	468.47 < LOD	12.14 < LOD	13.34 < LOD						
NPBE020	< LOD	88.46	13943.04	149.36	211.51	42.37 < LOD	150.79 < LOD	321.65 < LOD	510.03 < LOD	12.82 < LOD	14.11 < LOD						
NPBE020dup	116.88	45.31	8658.12	115.13 < LOD		86.71 < LOD	145.34 < LOD	302.8 < LOD	490.24 < LOD	12.15 < LOD	13.4 < LOD						
NPBE021	< LOD	25.7	871.6	33.89 < LOD		55.36 < LOD	96.08 < LOD	203.1 < LOD	301.82 < LOD	9 < LOD	9.9 < LOD						
NPBE022	< LOD	72.64	8727.88	114.77 < LOD		89.65 < LOD	148.08 < LOD	309.99 < LOD	487.49 < LOD	12.14 < LOD	13.4 < LOD						
NPBE023	129.48	68.18	19155.8	179.83	270.59	46.19 < LOD	149.46 < LOD	319.8 < LOD	499.86 < LOD	13.26 < LOD	14.61 < LOD						
NPBE024	118.62	46.25	9039.07	117.75 < LOD		87.23 < LOD	137.81 < LOD	293.27 < LOD	453.76 < LOD	12.01 < LOD	13.27 < LOD						
NPBE025	< LOD	75.13	9676.61	119.55 < LOD		84.53 < LOD	138.25 < LOD	285.7 < LOD	451.23 < LOD	11.86 < LOD	13.09 < LOD						
NPBE026	111.42	65.23	16573.84	171.66	280.53	47.4 < LOD	158.61 < LOD	334.84	762.86	360.81 < LOD	13.67 < LOD	15.07 < LOD					
NPBE027	186.81	63.8	19055.96	166.79	229.93	41.46 < LOD	131.82 < LOD	267.83 < LOD	427.44 < LOD	11.91 < LOD	13.12 < LOD						
NPBE028	138.55	58.82	14121.41	153.03	382.15	47.76 < LOD	149.04 < LOD	315.94 < LOD	506.32 < LOD	12.93 < LOD	14.33 < LOD						
NPBE029	< LOD	76.55	10727.98	124.18 < LOD		83.5 < LOD	130.49 < LOD	282.27 < LOD	448.89 < LOD	11.5 < LOD	12.73 < LOD						
NPBE031	144.33	60.47	15029.71	157.51	279.65	45.25 < LOD	152.28 < LOD	315.66 < LOD	486.84 < LOD	12.99 < LOD	14.29 < LOD						
NPBE031dup	231.6	47.97	9055.63	118.19 < LOD		88.33 < LOD	149.85 < LOD	314.6 < LOD	516.11 < LOD	12.34 < LOD	13.57 < LOD						
NPBE032	< LOD	90.37	15651.38	153.59 < LOD		87.37 < LOD	130.95 < LOD	273.53 < LOD	448.51 < LOD	12.08 < LOD	13.32 < LOD						
NPBE033	< LOD	115.36	24062.08	208.51	434.7	53.22 < LOD	150.92 < LOD	329.22	1523.48	353.79 < LOD	13.9 < LOD	15.38 < LOD					

SAMPLE	Cd Error	Ag	Ag Error	Pd	Pd Error	Bal	Bal Error	Nb	Nb Error	Bi	Bi Error	Re	Re Error	Ta	Ta Error	Hf	Hf Error
MDBE669	10.66 < LOD		7.44 < LOD		5.78	968052.81	485.82	5.53	1.25 < LOD		3.2 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE670	9.34 < LOD		6.28 < LOD		5.02	986169.88	378.63	2.45	1.08 < LOD		2.18 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE670dup	9.66 < LOD		6.58 < LOD		5.25	988654.69	733.14	5.82	1.17 < LOD		2.7 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE671	10.99 < LOD		7.66 < LOD		6.03	974583.44	516.59	8.31	1.32 < LOD		3.32 < LOD		1.5 < LOD		1.5 < LOD		1.5
MDBE672	10 < LOD		6.83 < LOD		5.42	985794.06	426.34 < LOD		1.69 < LOD		2.78 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE002	10.45 < LOD		7.24 < LOD		5.75	977649.13	460.46	5.02	1.22 < LOD		2.95 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE003	10.51 < LOD		7.26 < LOD		5.75	982375.88	461.78	5.39	1.23 < LOD		3.22 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE004	10.45 < LOD		7.24 < LOD		5.74	978875.38	464.52	6.22	1.24 < LOD		3.05 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE005	10.19 < LOD		6.96 < LOD		5.55	986185.38	428.72 < LOD		1.72 < LOD		2.81 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE006	11.08 < LOD		7.71 < LOD		6.07	971549.75	503.59	5.05	1.27 < LOD		3.34 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE007	11.09 < LOD		7.74 < LOD		5.94	976044.56	497.08	7	1.33 < LOD		3.28 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE008	10.41 < LOD		7.19 < LOD		5.63	974824.63	452.63	4.81	1.21 < LOD		2.93 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE009	10.26 < LOD		7.08 < LOD		5.58	977788.31	443.37	3.97	1.18 < LOD		2.91 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE010	10.42 < LOD		7.2 < LOD		5.71	980543.31	460.29	5.7	1.23 < LOD		2.98 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE010dup	9.86 < LOD		6.72 < LOD		5.4	987276	433.93	7.2	1.21 < LOD		2.64 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE011	10.06 < LOD		6.86 < LOD		5.41	990969.38	471.88	4.87	1.17 < LOD		3.04 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE012	11.09 < LOD		7.78 < LOD		6.02	970352	503.24	6.7	1.32 < LOD		4.1 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE013	10.71 < LOD		7.48 < LOD		5.8	970527.25	481.21	4.99	1.25 < LOD		3.12 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE014	10.07 < LOD		6.91 < LOD		5.48	985382.81	456.84	5.04	1.19 < LOD		2.82 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE016	10.67 < LOD		7.46 < LOD		5.82	976883.63	476.52	7.73	1.29 < LOD		3.15 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE017	10.24 < LOD		7.03 < LOD		5.6	979349.88	442.95	5.79	1.21 < LOD		2.87 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE018	8.6 < LOD		5.62 < LOD		4.63	989794.31	321.1 < LOD		1.5 < LOD		1.96 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE019	10.17 < LOD		6.93 < LOD		5.55	984490.25	433.45	2.26	1.15 < LOD		2.94 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE020	10.54 < LOD		7.29 < LOD		5.69	979971.06	473.92	3.18	1.19 < LOD		3.69 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE020dup	10.08 < LOD		6.93 < LOD		5.52	986859.88	437.69	6.08	1.21 < LOD		4.17 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE021	7.87 < LOD		5.07 < LOD		4.2	998638.31	250.63 < LOD		1.5 < LOD		1.5 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE022	10.11 < LOD		6.9 < LOD		5.53	986751.19	439.03	5.08	1.18 < LOD		2.8 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE023	10.82 < LOD		7.56 < LOD		5.85	973505.94	489.85	4.42	1.25 < LOD		3.88 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE024	10.03 < LOD		6.88 < LOD		5.38	986305.63	417.37	3.3	1.17 < LOD		2.78 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE025	9.94 < LOD		6.79 < LOD		5.38	985516.44	414.79	3.96	1.16 < LOD		2.67 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE026	11.24 < LOD		7.85 < LOD		6.18	975736.25	509.8	5.56	1.3 < LOD		4.66 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE027	9.99 < LOD		6.71 < LOD		5.42	973585.94	430.18	3.14	1.14 < LOD		2.63 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE028	10.7 < LOD		7.41 < LOD		5.83	979490.25	473.94	5.26	1.25 < LOD		3.6 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE029	9.68 < LOD		6.58 < LOD		5.27	984117.81	414	2	1.11 < LOD		2.65 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE031	10.65 < LOD		7.44 < LOD		5.79	978423.69	468.01	5.38	1.25 < LOD		3.17 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE031dup	10.23 < LOD		7.01 < LOD		5.58	986183.06	456.69	5.57	1.21 < LOD		2.9 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE032	10.15 < LOD		6.84 < LOD		5.5	977838.13	431.11	3.41	1.16 < LOD		2.75 < LOD		1.5 < LOD		1.5 < LOD		1.5
NPBE033	11.44 < LOD		8 < LOD		6.28	966144.44	531.01	6.87	1.33 < LOD		4.68 < LOD		1.5 < LOD		1.5 < LOD		1.5

## Ben 2016 Soil Samples - Selected Elements Comparison

SAMPLE	Easting	Northing	Elevation	Mo	Pb	As	Zn	Cu	Co	Fe	Mn
MDBE634	396345	5909470	1203	2.4	39.07	87.15	113.08	29.13	< LOD	20952.06	338.3
MDBE635	396299	5909450	1202	< LOD	11.7	85.58	68.81	28.83	131.53	17431.62	355.5
MDBE636	396253	5909431	1205	2.81	10.9	159.77	74.4	89.49	245.07	19898.6	374.34
MDBE637	396208	5909411	1217	< LOD	< LOD	54.62	31.79	48.62	144.04	8073.24	< LOD
MDBE638	396159	5909389	1219	< LOD	< LOD	55.59	48.59	26.24	< LOD	19043.24	286.95
MDBE639	396114	5909368	1219	< LOD	< LOD	47.73	44.12	48.82	170.99	13504.91	266.74
MDBE640	396066	5909348	1222	< LOD	< LOD	14.65	27.73	26.74	< LOD	7730.2	< LOD
MDBE640dup	396066	5909348	1222	< LOD	< LOD	16.83	32.09	28.49	89.17	7228.92	< LOD
MDBE641	396020	5909328	1216	< LOD	< LOD	45.15	68.43	41.51	148.12	19218.23	483.7
MDBE642	395974	5909306	1221	< LOD	6.64	15.88	38.32	20.68	< LOD	12700.81	257.03
MDBE643	395927	5909284	1221	< LOD	< LOD	20.34	36.89	22.66	126.82	11618.74	186.28
MDBE644	395880	5909261	1217	< LOD	9.43	97.49	107.75	117.88	163.64	22043.55	272.27
MDBE645	395833	5909239	1212	< LOD	16.64	139.64	89.21	33	< LOD	26013.66	331.82
MDBE647	395598	5909232	1191	< LOD	< LOD	9.95	62.39	21.11	< LOD	16394.43	237.52
MDBE648	395644	5909253	1193	< LOD	< LOD	17.9	31.61	18.07	98.03	8614.31	< LOD
MDBE649	395694	5909276	1195	< LOD	< LOD	40.8	41.39	28.72	110.24	13904.81	< LOD
MDBE650	395742	5909297	1200	< LOD	< LOD	< LOD	38.05	21.71	< LOD	10459.1	271.35
MDBE650dup	395742	5909297	1200	< LOD	< LOD	< LOD	34.03	33.26	123.78	6913.48	< LOD
MDBE651	395787	5909317	1201	< LOD	< LOD	< LOD	30.88	23.88	< LOD	9430.26	197.83
MDBE652	395832	5909337	1197	< LOD	< LOD	53.04	15.95	47.71	< LOD	6919.47	351.03
MDBE653	395878	5909356	1200	< LOD	< LOD	9.94	31.38	19.32	< LOD	8956.62	204.75
MDBE654	395924	5909378	1188	2.53	12.75	147.4	100.46	53.21	195.54	21409.53	485.64
MDBE655	395972	5909402	1192	< LOD	24.82	101.72	90.45	44.94	< LOD	22325.18	326.21
MDBE656	396019	5909423	1194	< LOD	13.14	77.78	47.5	37.52	< LOD	16481.61	263.64
MDBE657	396070	5909447	1185	< LOD	< LOD	41.24	36.41	27.96	110.45	12570.19	237.55
MDBE658	396118	5909469	1189	< LOD	< LOD	23.97	16.5	25.63	< LOD	8071.74	< LOD
MDBE659	396184	5909503	1188	< LOD	26.15	110.54	81.3	51.86	< LOD	22167.53	451.8
MDBE660	396229	5909521	1177	2.94	10.64	143.01	102.29	64.43	117.35	22945.62	456.77
MDBE660dup	396229	5909521	1177	3.38	14.57	166.92	95.58	63.11	309.86	14522.08	226.44
MDBE662	396044	5909550	1182	< LOD	< LOD	26.5	33.19	27.65	157.39	11011.42	< LOD
MDBE663	395949	5909508	1175	< LOD	15.25	139.08	107.83	99.48	< LOD	29051.65	481.42
MDBE664	395855	5909470	1177	< LOD	< LOD	39.58	75.33	29.98	131.99	20328.14	327.52
MDBE665	395764	5909430	1179	< LOD	< LOD	37.3	64.57	34.44	119.15	19051.46	314.95
MDBE666	395671	5909389	1184	< LOD	< LOD	25.53	52.71	28.76	< LOD	19692.86	228.95
MDBE667	395578	5909348	1208	< LOD	< LOD	< LOD	72.17	25.35	< LOD	20710.6	227.29
MDBE668	395486	5909308	1187	< LOD	12.93	14.94	66.73	23.03	< LOD	14883.92	< LOD
MDBE669	395392	5909269	1160	< LOD	< LOD	97.55	74.42	28.38	120.76	23679.99	297.42
MDBE670	395436	5909290	1173	< LOD	< LOD	20.25	32.95	< LOD	< LOD	9257.78	< LOD
MDBE670dup	395436	5909290	1173	< LOD	< LOD	18.11	35.03	27.34	129.51	7196.8	< LOD

SAMPLE	Easting	Northing	Elevation	Mo	Pb	As	Zn	Cu	Co	Fe	Mn
MDBE671	395532	5909328	1198	< LOD	< LOD	10.1	51.83	47.1	120.51	16362.2	420.84
MDBE672	395624	5909366	1201	< LOD	< LOD	< LOD	23.74	20.94	< LOD	9454.57	< LOD
NPBE002	395542	5909547	1149	< LOD	< LOD	11.97	42.69	26.72	133.19	15537.64	404.91
NPBE003	395494	5909526	1159	< LOD	< LOD	< LOD	41.7	20.21	151.84	11938.39	239.18
NPBE004	395450	5909506	1173	< LOD	< LOD	< LOD	52.04	24.59	133.33	14618.37	301.39
NPBE005	395407	5909486	1172	< LOD	< LOD	< LOD	27.76	19.64	< LOD	9126.34	< LOD
NPBE006	395359	5909467	1161	< LOD	< LOD	21.72	51.69	20.35	146.77	20158.9	325.6
NPBE007	395315	5909446	1150	< LOD	< LOD	26.87	44.05	33.63	125.49	17168.78	< LOD
NPBE008	395262	5909421	1148	< LOD	< LOD	34.83	68.9	28.7	284.76	18018.08	218.99
NPBE009	395221	5909411	1150	< LOD	< LOD	9.49	58.49	21.52	221.58	15597.25	228.3
NPBE010	395173	5909389	1159	2.36	< LOD	< LOD	44.11	16.88	146.87	13451.4	221.14
NPBE010dup	395173	5909389	1159	2.13	< LOD	3.74	31.94	27.51	185.3	8338.38	< LOD
NPBE011	395125	5909368	1169	< LOD	< LOD	< LOD	32.04	30.03	76.42	5723.22	< LOD
NPBE012	395078	5909348	1174	< LOD	< LOD	18.3	79.17	39.59	194.2	21789.65	294.97
NPBE013	395029	5909327	1177	2.82	< LOD	50.69	68.85	39.81	121.24	21604.7	325.2
NPBE014	394986	5909309	1177	5.29	< LOD	31.93	45.6	40.12	148.2	9642.04	< LOD
NPBE016	395259	5909301	1165	< LOD	< LOD	43.15	42.5	30.22	194.89	16260.65	299.97
NPBE017	395304	5909321	1148	2.99	< LOD	41.96	51.74	20.4	188.5	14409.46	< LOD
NPBE018	395350	5909341	1148	< LOD	< LOD	10.5	< LOD	< LOD	< LOD	6697.31	< LOD
NPBE019	395394	5909360	1159	< LOD	< LOD	< LOD	28.97	22.73	105.26	10431.75	< LOD
NPBE020	395440	5909380	1170	< LOD	< LOD	11.58	32.79	25.65	< LOD	13943.04	211.51
NPBE020dup	395440	5909380	1170	< LOD	< LOD	10.72	28.42	37.39	116.88	8658.12	< LOD
NPBE021	395487	5909401	1172	< LOD	< LOD	< LOD	< LOD	< LOD	< LOD	871.6	< LOD
NPBE022	395533	5909422	1171	< LOD	< LOD	< LOD	33.17	20.65	< LOD	8727.88	< LOD
NPBE023	395578	5909443	1173	< LOD	< LOD	42.24	54.01	30.29	129.48	19155.8	270.59
NPBE024	395623	5909463	1174	< LOD	< LOD	< LOD	21.26	< LOD	118.62	9039.07	< LOD
NPBE025	395669	5909482	1169	< LOD	< LOD	5.49	32.21	< LOD	< LOD	9676.61	< LOD
NPBE026	395713	5909503	1173	< LOD	< LOD	17.23	42.99	27.79	111.42	16573.84	280.53
NPBE027	395759	5909524	1174	< LOD	< LOD	30.39	37	47.32	186.81	19055.96	229.93
NPBE028	395802	5909545	1172	< LOD	< LOD	8.7	42.78	39.37	138.55	14121.41	382.15
NPBE029	395993	5909529	1181	< LOD	< LOD	< LOD	36.36	18.4	< LOD	10727.98	< LOD
NPBE031	395900	5909490	1179	< LOD	< LOD	38.24	66.05	36.33	144.33	15029.71	279.65
NPBE031dup	395900	5909490	1179	2.24	< LOD	26.96	56.49	30.43	231.6	9055.63	< LOD
NPBE032	395809	5909451	1183	< LOD	8.83	45.85	54.65	35.08	< LOD	15651.38	< LOD
NPBE033	395717	5909412	1190	2.74	7.98	37.96	87.35	40.44	< LOD	24062.08	434.7

**APPENDIX II**  
**COST STATEMENT**

<b>Ben Exploration Cost Statement, July 1 - November 30, 2016</b>						
<b>Exploration Work Type</b>	<b>Details</b>				<b>Totals</b>	
<b>Geological Consulting</b>		<u>Days</u>	<u>Rate</u>	<u>Subtotal</u>		
C. Greig - Geologist	Planning, Supervision	1	800	800		
Neil Prowse - Geologist	Soil Sampling (*note 1)	2	500	1,000		
M. Donohoe- Geologist	Soil Sampling (*note 1)	2	500	1,000		
Lauren Wilson - Geologist	Report writing	8	650	5,200		
C.J.Greig & Assoc.	GIS prep of maps for report	1.5	500	750		
					8,750	
<b>Analytical</b>		<u>No.</u>	<u>Rate</u>	<u>Subtotal</u>		
XRF Analyses	Soils 67 x \$10	67	10	670		
					670	
<b>Equipment &amp; Supplies</b>	Field Equipment Rentals			300		
	Office Equipment, Software			250		
					550	
<b>Travel &amp; Accommodation</b>	Truck Rental			415		
	Fuel, Food & Lodging			295		
					710	
					<b>10,680</b>	
		<b>Total Expenditures</b>				

\*note 1: Travel – Oct 17, 22 (1 day prorated), Field Work – Oct 19, 2016



**APPENDIX III**  
**STATEMENTS OF QUALIFICATIONS**

I, Charles James Greig, of 250 Farrell St., Penticton, British Columbia, Canada, hereby certify that:

1. I am a graduate of the University of British Columbia with a B.Comm. (1981), a B.Sc. (Geological Sciences, 1985), and an M.Sc. (Geological Sciences, 1989), and have practiced my profession continuously since graduation.
2. I have been employed in the geoscience industry for 30 years, and have explored for gold and base metals in North, Central, and South America, and Africa for both senior and junior mining companies. I also have a number of years of experience in regional-scale government geological mapping.
3. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (license #27529).
4. I am a “Qualified Person” as defined by National Instrument 43-101.
5. I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the technical report, the omission to disclose which makes the technical report misleading.
6. I am the President and sole shareholder of C.J. Greig & Associates Ltd., a privately owned British Columbia corporation.
7. I am an author of the report entitled: “2016 Soil Geochemical Sampling Program on the Ben Property,” dated May 30, 2017. I supervised the work program reported on herein. I am the sole owner of the mineral title constituting the Ben property.

Dated at Penticton, British Columbia, this 30th day of May, 2017.

Respectfully submitted,

*“Charles J Greig”*

Charles J. Greig, M.Sc., P.Geo.

I, Lauren Eva Wilson, of 5419 Fir Avenue, Summerland, British Columbia, Canada, hereby certify that:

1. I am a graduate of the University of Victoria with a B.Sc. (Earth Science, 2015) and have practiced my profession continuously from 2015 to present.
2. I have been employed in the geoscience industry for 6 years, and have explored for gold and base metals in Canada for junior mining companies.
3. I am not aware of any material fact or material change with respect to the subject matter of the technical report that is not reflected in the technical report, the omission to disclose which makes the technical report misleading.
4. I have no direct or indirect interest in the property described herein, nor do I expect to receive any.
5. I am an author of the report entitled: “2016 Soil Geochemical Sampling Program on the Ben Property,” dated May 30, 2017.

Dated at Penticton, British Columbia, this 30<sup>th</sup> day of May, 2017.

Respectfully submitted,

*“Lauren Eva Wilson”*

Lauren E. Wilson, B.Sc.