ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: 2014 Technical Assessment Report on Sampling and Mapping of the Berg property

TOTAL COST: $136,311.31

AUTHOR(S): Jim Hutter, Richard Beck, Kay MacKenzie
SIGNATURE(S):

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): 5521471

YEAR OF WORK: 2014

PROPERTY NAME: Berg

CLAIM NAME(S) (on which work was done): 545074 – 545078; 545080 – 545083; 671444, 671450, 671467, 671472, 671503, 693844, 693884, 693904, 888229, 896477, 896480, 896481 – 896483, 896485 – 896489; 89649, 896496, 896497, 898001 – 898003; 905577, 905578, 926665, 930909, 1000685, 1011438, 1015521 and 1017031

COMMODITIES SOUGHT: Cu, Mo

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN:

MINING DIVISION: Omineca
NTS / BCGS: 93E/14
LATITUDE: ____53______° ____48______’ __________"
LONGITUDE: ____127______° ____26______’ __________" (at centre of work)
UTM Zone: 603056 EASTING: 5962776 NORTHING:

OWNER(S): Berg Metals Limited Partnership

MAILING ADDRESS: 26 West Dry Creek Circle, Suite 810
Littleton, Colorado 80120 U.S.A.

OPERATOR(S) [who paid for the work]: Berg metals Limited Partnership

MAILING ADDRESS: 26 West Dry Creek Circle, Suite 810
Littleton, Colorado 80120 U.S.A.

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude. **Do not use abbreviations or codes**)

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS:

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (in metric units)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			$118,118.31
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for …)			
Soil			
Silt			
Rock	34		$2193.00
DRILLING (total metres, number of holes, size, storage location)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling / Assaying			
Petrographic			
Mineralographic			
Metallurgic			
PREPATORY / PHYSICAL			
Line/grid (km)			
Topo/Photogrammetric (scale, area)			
Legal Surveys (scale, area)			
Road, local access (km)/trail			
Trench (number/metres)			
Underground development (metres)			
Other REPORT WRITING & PREPATORY WORK			$16,000.00
		TOTAL COST	$136,311.31

2014 Technical Assessment Report On Sampling and Mapping Of the Berg Property

Omineca Mining Division
British Columbia

NTS 93E/14
53°48 N/127°26 W

Event #5521471

Mineral Tenure #'s:
515447, 515449, 515450, 515451, 515453, 515454, 515455, 515456, 545074, 545075, 545076, 545077, 545078, 545079, 545080, 545081, 545082, 545083, 545084, 545085, 545086, 545087, 594483, 594485, 594490, 594495, 604976, 604978, 671443, 671444, 671450, 671451, 671463, 671467, 671472, 671473, 671484, 671503, 671523, 671526, 671527, 672023, 673446, 673465, 673485, 673503, 673523, 693843, 693844, 693883, 693884, 693903, 693904, 888229, 896477, 896480, 896481, 896482, 896483, 896485, 896486, 896487, 896488, 896489, 896490, 896491, 896492, 896493, 896494, 896495, 896496, 896497, 896498, 898001, 898002, 898003, 898009, 898010, 898011, 905571, 905573, 905575, 905576, 905577, 905578, 905581, 905582, 905583, 905586, 910289, 926662, 926663, 926664, 926665, 926666, 926667, 926668, 926669, 926670, 926671, 926672, 926673, 926674, 926675, 926676, 930909, 1000685, 1011438, 1014803, 1015521, 1015818 and 1017031.

Prepared for:
Thomson Creek Metals Company Inc.

Prepared by:
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Richard Beck, President
UTM Exploration Services Ltd. 3176 Tatlow Road
Smithers, BC

October 2014

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1. Summary

In July 2014 Thompson Creek Metals Company Inc. contracted UTM Exploration Services Ltd. of Smithers, BC to conduct an approximate 21 day prospecting and sampling program of the Berg Property claims, 115 km's south southwest of Smithers, BC (Figure 1). The program involved predominantly expansive, wide reaching reconnaissance work on all of the "soon to lapse" peripheral claims surrounding the main Berg deposit. The design and intention of this program was to put boots on the ground and physically examine other areas that showed potential for continued mineralization and possible extension to known mineralization.

The property is located approximately 115km south southwest of Smithers, B.C. The property consists of one hundred and twelve (116) mineral claims. Exploration included rock sampling and localized mapping where possible.

2. Introduction and Terms of Reference

The work was completed between July 9th-July 26th 2014, and 31 rock samples were collected. The rock samples were submitted to ACME Labs of Smithers, B.C. for ICP analysis. Standards and Blanks were inserted into the sampling stream in efforts of monitoring QA/QC through the analyses performed at the lab. Samples were collected by Jim Hutter and Rene Victorino (consulting geologists for UTM Exploration Services Ltd) and Michael LaCouffe and Chris King, employees of UTM Exploration Services.

This report summarizes the results of the 2014 sampling and recce mapping campaign. The results of the rock sampling are documented in this report.

This report borrows/quotes from historical assessment reports of the area as noted in the References section.

3. Property Description and Location

3.1 Accessibility and Infrastructure

The Berg Property is located within the Sibola Range of the Hazelton Mountains 22km northwest of the Imperial Metals owned, Huckleberry Mine and 84km south of the town of Houston, B.C. Infrastructure available to the claim area consists of the Morice, Tahtsa and Sibola Forest Service Rods (FSR's). Depending on year to year snow accumulations, access to the property is typically best between June and October. Numerous offshoot trails access the main Berg property and eastern Bergette Minfile area, however, most of the property is at higher elevation in a cluster of mountain peaks and valleys and only assessable by helicopter. The nearest electric power is located at the Huckleberry Mine, 22km to the southeast. Elevations throughout the claims range from 1200 to 2200 m.

Helicopters are available directly from the towns of Smithers and Houston, B.C. The current program was helicopter-supported out of the town of Smithers.

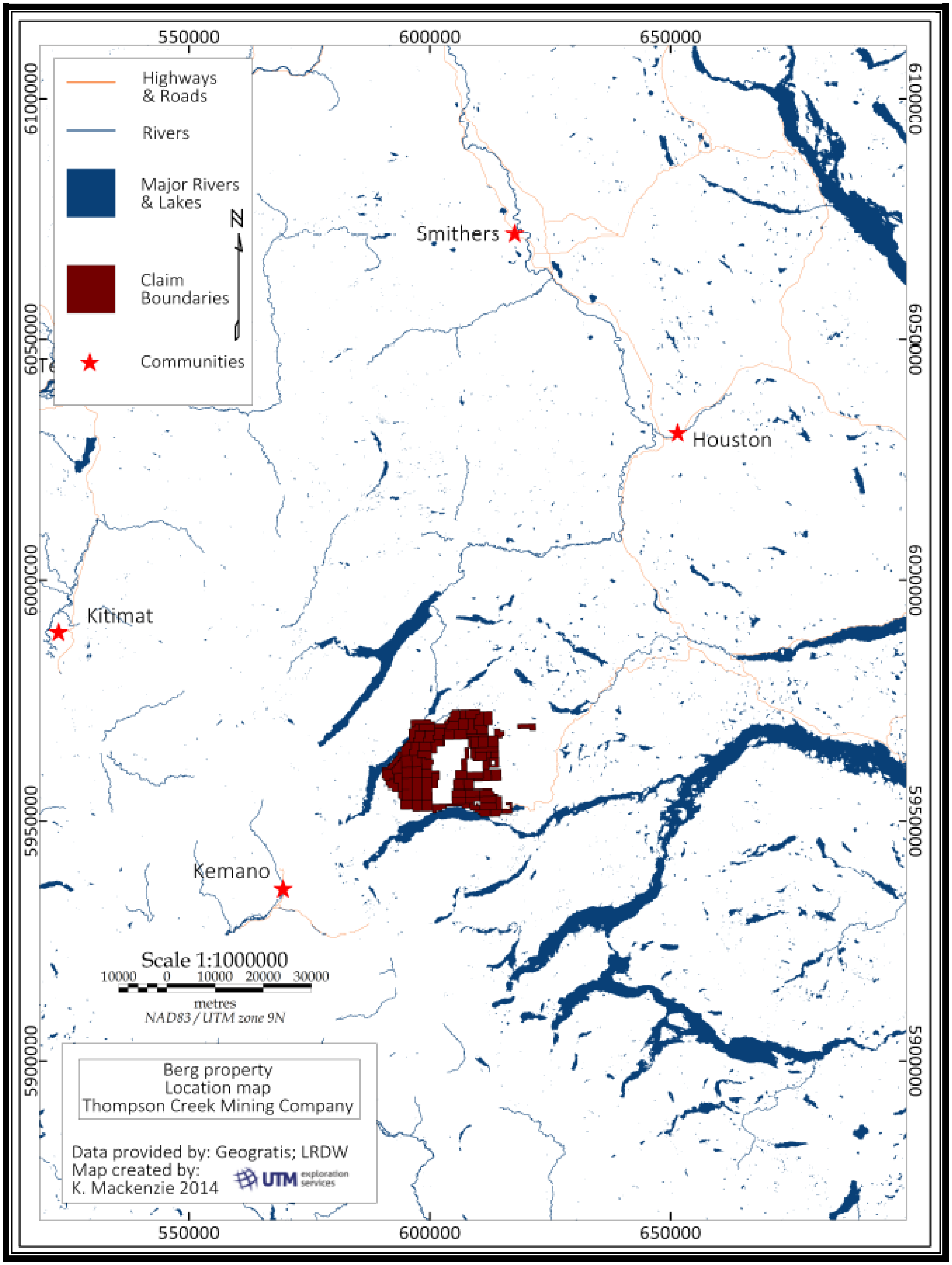

Figure 1. Berg Location Map.

3.2 Mineral Tenure Information

The Berg property consists of 116 mineral claims totaling 45948.79 ha (Table 1). For the purpose of this exploration season a total of 70 claims totaling 29551.04ha were targeted within the scope of work (Table 1 and Figure 2). The property is located on NTS map sheet 93E/14 in the Omineca Mining Division, approximately 115km south southwest of Smithers, B.C. The geographic coordinates of the approximate property center are latitude 53°48 N longitude127°26 W. The claims are 100% owned by Berg Metals Limited Partnership, a wholly owned subsidiary of Thompson Creek Metals Company Inc.

Table 1. Mineral Tenure Claims.

Tenure Number	Claim Name	Map Number	Issue Date	Good To Date	Status	Area (ha)
243481		093E083	1968/aug/27	2015/aug/27	GOOD	16.81
515447		093E	2005/jun/28	2021/oct/15	GOOD	191.004
515449		093E	2005/jun/28	2021/oct/15	GOOD	190.966
515450		093E	2005/jun/28	2021/oct/15	GOOD	572.74
515451		093E	2005/jun/28	2021/oct/15	GOOD	553.588
515453		093E	2005/jun/28	2021/oct/15	GOOD	477.444
515454		093E	2005/jun/28	2021/oct/15	GOOD	496.524
515455		093E	2005/jun/28	2021/oct/15	GOOD	229.252
515456		093E	2005/jun/28	2021/oct/15	GOOD	343.875
545074	SOUTH 1	093E	2006/nov/10	2015/nov/17	GOOD	287.0966
545075	SOUTH 2	093E	2006/nov/10	2015/nov/17	GOOD	363.5405
545076	SOUTH 3	093E	2006/nov/10	2015/nov/17	GOOD	401.6407
545077	SOUTH 4	093E	2006/nov/10	2015/nov/17	GOOD	401.6379
545078	SOUTH 5	093E	2006/nov/10	2015/nov/17	GOOD	401.6389
545079	SOUTH 6	093E	2006/nov/10	2015/nov/17	GOOD	401.7575
545080	SOUTH 7	093E	2006/nov/10	2015/nov/17	GOOD	344.3572
545081	SOUTH 8	093E	2006/nov/10	2015/nov/17	GOOD	459.149
545082	SOUTH 9	093E	2006/nov/10	2015/nov/17	GOOD	459.2846
545083	SOUTH 10	093E	2006/nov/10	2015/nov/17	GOOD	325.4207
545084	SOUTH 11	093E	2006/nov/10	2015/nov/17	GOOD	363.7019
545085	SOUTH 12	093E	2006/nov/10	2015/nov/17	GOOD	229.6488
545086	SOUTH 13	093E	2006/nov/10	2015/nov/17	GOOD	306.1689
545087	SOUTH 14	093E	2006/nov/10	2015/nov/17	GOOD	401.8809

594483	BERG C	093E	2008/nov/18	2021/nov/30	GOOD	477.7854
594485	BERG D	093E	2008/nov/18	2021/nov/30	GOOD	477.9961
594490	BERG A	093E	2008/nov/18	2021/nov/30	GOOD	477.839
594495	BERG I	093E	2008/nov/18	2021/nov/30	GOOD	458.028
604970		093E	2009/may/26	2021/nov/30	GOOD	478.1444
604976		093E	2009/may/26	2021/nov/30	GOOD	191.3234
604978		093E	2009/may/26	2021/nov/30	GOOD	478.2371
671443		093E	2009/nov/19	2016/nov/30	GOOD	477.3702
671444		093E	2009/nov/19	2016/nov/30	GOOD	458.1384
671450		093E	2009/nov/19	2016/nov/30	GOOD	477.0649
671451		093E	2009/nov/19	2016/nov/30	GOOD	477.0645
671463		093E	2009/nov/19	2016/nov/30	GOOD	381.64
671467		093E	2009/nov/19	2016/nov/30	GOOD	228.9265
671472		093E	2009/nov/19	2016/nov/30	GOOD	114.5628
671473		093E	2009/nov/19	2016/nov/30	GOOD	229.1254
671484		093E	2009/nov/19	2016/nov/30	GOOD	248.3239
671503		093E	2009/nov/19	2016/nov/30	GOOD	477.5783
671523		093E	2009/nov/19	2016/nov/30	GOOD	95.5252
671526		093E	2009/nov/19	2016/nov/30	GOOD	191.0128
671527		093E	2009/nov/19	2016/nov/30	GOOD	381.8585
672023		093E	2009/nov/20	2016/nov/30	GOOD	305.6054
673446		093E	2009/nov/24	2016/nov/30	GOOD	381.6526
673465		093E	2009/nov/24	2016/nov/30	GOOD	190.9192
673485		093E	2009/nov/24	2016/nov/30	GOOD	95.4597
673503		093E	2009/nov/24	2016/nov/30	GOOD	343.8404
673523		093E	2009/nov/24	2016/nov/30	GOOD	95.4132
693843		093E	2010/jan/04	2021/nov/30	GOOD	457.5074
693844		093E	2010/jan/04	2021/nov/30	GOOD	476.8043
693883		093E	2010/jan/04	2021/nov/30	GOOD	457.5136
693884		093E	2010/jan/04	2021/nov/30	GOOD	457.5066
693903		093E	2010/jan/04	2021/nov/30	GOOD	457.5093
693904		093E	2010/jan/04	2021/nov/30	GOOD	438.6436
888229	SOUTH 15	093E	2011/aug/11	2015/nov/17	GOOD	95.6693
896477	BERG W1	093E	2011/sep/11	2015/nov/17	GOOD	477.6788
896480	BERG W3	093E	2011/sep/11	2015/nov/17	GOOD	477.4448
896481	BERGW2	093E	2011/sep/11	2015/nov/17	GOOD	477.9124
896482	BERG W5	093E	2011/sep/11	2015/nov/17	GOOD	477.5757

896483	BERG W7	093E	2011/sep/11	2015/nov/17	GOOD	458.7438
896485	BERGW4	093E	2011/sep/11	2015/nov/17	GOOD	478.1463
896486	BERG W9	093E	2011/sep/11	2015/nov/17	GOOD	133.8848
896487	BERGW8	093E	2011/sep/11	2015/nov/17	GOOD	477.9119
896488	BERG W11	093E	2011/sep/11	2015/nov/17	GOOD	477.6779
896489	BERGW10	093E	2011/sep/11	2015/nov/17	GOOD	478.1458
896490	BERG W13	093E	2011/sep/11	2015/nov/17	GOOD	439.2562
896491	BERGW6	093E	2011/sep/11	2015/nov/17	GOOD	478.1447
896492	BERG W15	093E	2011/sep/11	2015/nov/17	GOOD	458.4011
896493		093E	2011/sep/11	2015/nov/17	GOOD	477.9116
896494	BERG W15	093E	2011/sep/11	2015/nov/17	GOOD	458.5897
896495	BERG W17	093E	2011/sep/11	2015/nov/17	GOOD	458.7388
896496	BERG W18	093E	2011/sep/11	2015/nov/17	GOOD	478.3799
896497	BERGW20	093E	2011/sep/11	2015/nov/17	GOOD	478.3789
896498	BERG W19	093E	2011/sep/11	2015/nov/17	GOOD	459.223
898001	BERG EXT 1	093E	2011/sep/19	2015/nov/17	GOOD	477.9537
898002	BERG EXT 2	093E	2011/sep/19	2015/nov/17	GOOD	458.6337
898003	BERG EXT 3	093E	2011/sep/19	2015/nov/17	GOOD	477.9534
898009	BERG EXT 4	093E	2011/sep/19	2015/nov/17	GOOD	458.6551
898010	BERG EXT 5	093E	2011/sep/19	2015/nov/17	GOOD	477.7842
898011	BERG EXT 6	093E	2011/sep/19	2015/nov/17	GOOD	477.766
905571	BERG N1	093E	2011/oct/06	2015/nov/17	GOOD	457.8275
905573	BERG N2	093E	2011/oct/06	2015/nov/17	GOOD	457.654
905575	BERG N3	093E	2011/oct/06	2015/nov/17	GOOD	476.5121
905576	BERG N4	093E	2011/oct/06	2015/nov/17	GOOD	476.6935
905577	BERG N5	093E	2011/oct/06	2015/nov/17	GOOD	476.7588
905578	BERG N6	093E	2011/oct/06	2015/nov/17	GOOD	476.8091
905581	BERG N7	093E	2011/oct/06	2015/nov/17	GOOD	476.5836
905582	BERG N8	093E	2011/oct/06	2015/nov/17	GOOD	476.5952
905583	BERG N9	093E	2011/oct/06	2015/nov/17	GOOD	457.4166
905586	BERG N10	093E	2011/oct/06	2015/nov/17	GOOD	228.7118
910289	BERG W21	093E	2011/oct/12	2015/nov/17	GOOD	95.405
926662	BERG NW1	093E	2011/oct/31	2015/nov/17	GOOD	458.2237
926663	BERG NW3	093E	2011/oct/31	2015/nov/17	GOOD	477.187
926664	BERG NW2	093E	2011/oct/31	2015/nov/17	GOOD	477.1258
926665	BERG NW5	093E	2011/oct/31	2015/nov/17	GOOD	458.1029
926666	BERG NW4	093E	2011/oct/31	2015/nov/17	GOOD	476.8825

926667	BERG NW7	093E	2011/oct/31	2015/nov/17	GOOD	458.0552
926668	BERG NW9	093E	2011/oct/31	2015/nov/17	GOOD	476.9249
926669	BERG NW6	093E	2011/oct/31	2015/nov/17	GOOD	286.02
926670	BERG NW11	093E	2011/oct/31	2015/nov/17	GOOD	476.8449
926671	BERG NW8	093E	2011/oct/31	2015/nov/17	GOOD	476.9321
926672	BERG NW12	093E	2011/oct/31	2015/nov/17	GOOD	458.3486
926673	BERG NW10	093E	2011/oct/31	2015/nov/17	GOOD	457.6694
926674	BERG NW12	093E	2011/oct/31	2015/nov/17	GOOD	457.5622
926675	BERG NW12	093E	2011/oct/31	2015/nov/17	GOOD	477.7198
926676	BERG NW13	093E	2011/oct/31	2015/nov/17	GOOD	477.9426
930909	BERG NE1	093E	2011/nov/24	2015/nov/17	GOOD	400.4764
1000685	BERGETTE 1	093E	2012/jun/24	2015/nov/17	GOOD	19.0883
1011438	BERG NE2	093E	2012/jul/24	2015/nov/17	GOOD	419.6951
1014803	BERGETTE 2	093E	2012/nov/26	2015/nov/17	GOOD	477.4389
1015521	BERG NE3	093E	2012/dec/27	2015/nov/17	GOOD	286.1382
1015818	BERG N11	093E	2013/jan/08	2015/nov/17	GOOD	381.5241
1017031	SOUTH 16	093E	2013/feb/19	2015/nov/17	GOOD	19.1351
1030076	BERG NE4	093E	2014/aug/06	2015/aug/06	GOOD	1278.66
1031370	SOUTH 17	093E	2014/oct/04	2015/oct/04	GOOD	76.5212

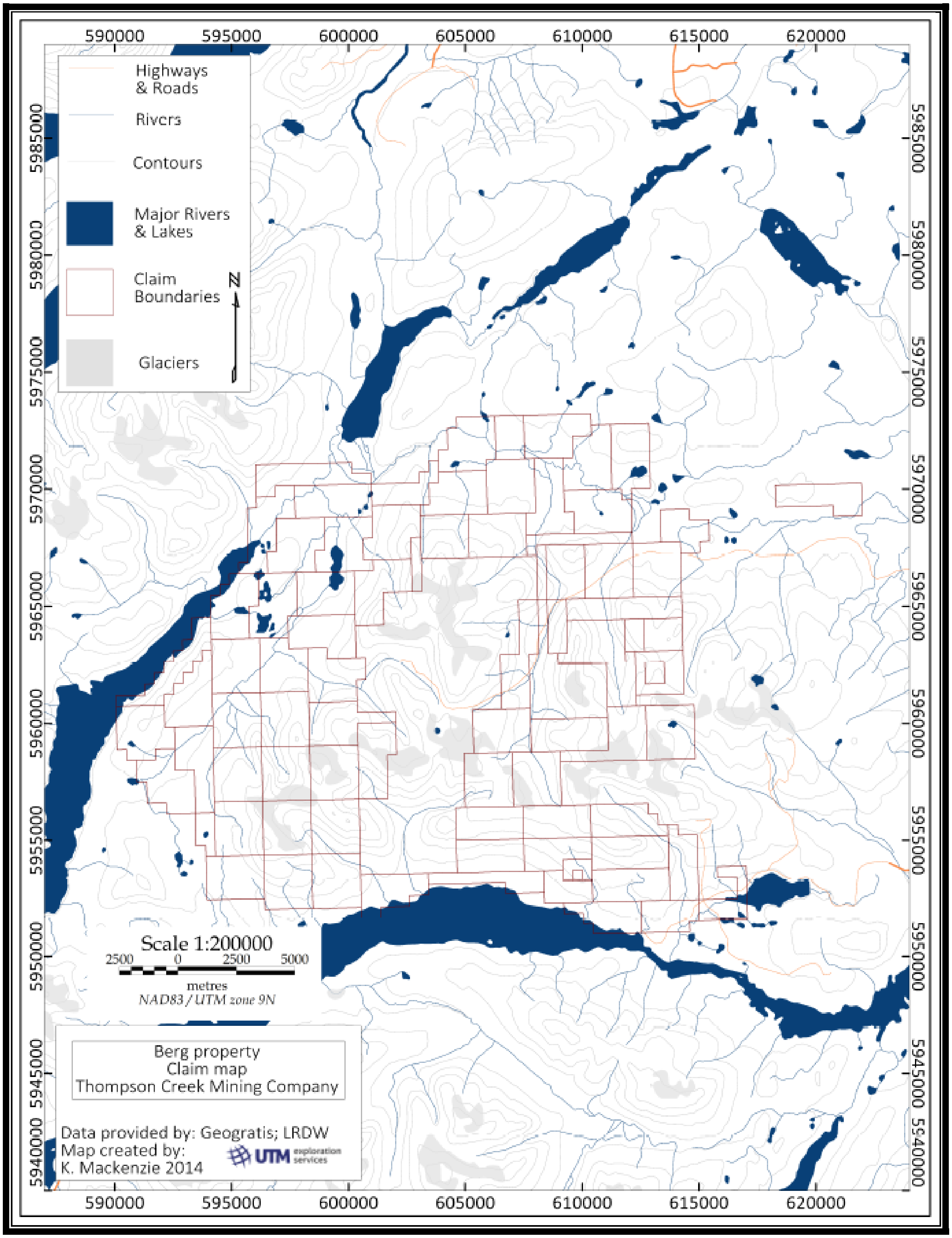

Figure 2. Berg Mineral Tenure Map (200K).

3.3 Physiography and Climate

The Berg deposit is located in the Tahtsa Ranges, a 15 to 20 kilometer wide belt of mountains within the Hazelton Mountains. The Hazelton Mountains lie along the eastern flank of the Kitimat Ranges of the Coast Mountains and form part of the Skeena Arch. The Tahtsa Ranges represent a transitional zone between the rugged, predominantly granitic Coast Mountains to the west and the rolling hill region of sedimentary and volcanic rocks that underlie the Nechako Plateau to the east.

The Tahtsa Ranges are further subdivided into the Tahtsa, Sibola, Whitesail, and Chikamin Ranges, of which the Berg deposit is hosted in the Sibola Range. These are separated by major valleys whose bottoms range in elevation from 800 to 950 metres. Mt. Ney is the highest peak in the Tahtsa Ranges at 2470 metres and is 4 kilometers northeast of the Berg property. A number of other mountain ridges are 2000 metres or more in elevation and occur as serrate peaks modified by cirque glaciation.

4. History

(Harris, 2012)

The Tahtsa Ranges were first prospected in the early 1900's after gold was discovered near Sibola Mountain. Prior to the late 1920's, several lead-zinc-silver, gold-tungsten and copper showings had been staked. In 1948, the Lead Empire Syndicate re-staked claims originally located by Cominco Ltd. in 1929 over several lead-zinc occurrences. These are now recognized as part of the Berg porphyry system.

The potential for porphyry copper style mineralization at Berg was first understood by Kennco (Kennecott), based on their experience in the south-western United States. Increased exploration expenditures in 1964 enabled bulldozer trenching and diamond drilling that demonstrated the deep effects of surface leaching and revealed the widespread presence of supergene mineralization, a feature not common in the Canadian Cordillera. Subsequent work shows that rocks are leached in places to depths in excess of 30 metres, and these rocks are underlain by an extensive "blanket" of supergene copper enrichment.

Drilling by Kennecott during 1965 and 1966 delineated two main mineralized zones; a northeast zone that contains primary (hypogene) and some supergene mineralization, and a south zone with widespread supergene mineralization. At the end of the 1966 field season, the property consisted of 108 mineral claims on which there had been a total of 3886 m of diamond drilling in 23 holes. During 1967, a

3325-metre drill program tested the south zone on a widely-spaced grid and three holes explored areas peripheral to the main area of interest. From 1968 to 1970 the property was dormant but metallurgical testing was done on composite samples of drill core. In 1971, three additional holes were drilled in the northeast zone. At the end of the 1971 exploration program a total of 49 diamond-drill holes of mainly NQ and BQ core had been completed with a total length of 7875.8 m.

In 1972, exploration and development of the property were taken over by Canex Placer Limited (Placer Dome Inc.) under agreement with Kennecott. From 1972 to 1975, Placer Dome drilled an additional 52 drill holes of NQ and PQ core totaling 9689.4 m. The PQ holes were utilized to collect metallurgical samples and to address low core recovery issues from previous years. Another 8 HQ core holes totaling 1099.0 m were drilled in 1980.

A total of 119 diamond drill holes for 20,127.9 m had been completed on the Berg Property to 1980. A limited amount of pre-2007 drill core is still cross-stacked on the property at the old camp site, but most of the mineralized sections have been consumed for metallurgy test-work and core box identification is sometimes difficult due to deterioration over the years.

Between 1982 and 2007, there was no active exploration on the project, although Placer had arranged for or conducted in-house revised resource estimates, additional economic analyses, conceptual mine layouts, and environmental reports. No mining activity has occurred on the property. Detailed descriptions of these activities can be found in the June 2008 NI 43-101 Technical Report by Harris and Stubens titled "Technical Report – Mineral Resource Estimate, Berg Property, Tahtsa Range, British Columbia", and in the June 2009 NI 43-101 Technical Report by Harris and Labrenz titled "2009 Mineral Resource Estimate on the Berg Copper-Molybdenum-Silver Property, Tahtsa Range, British Columbia".

In 2006, Placer Dome was purchased by Barrick Gold, who sold the Canadian assets to Goldcorp Inc. Terrane Metals Corp purchased certain Canadian assets from Goldcorp, including their share of the Berg Project. In September 2006, Terrane purchased Kennecott's share of the Berg Joint Venture to become 100% owners.

An exploration program consisting of 11,288.8 metres of diamond drilling in 29 holes and a pole dipole IP survey was performed in 2007 by Terrane Metals Corp. A subsequent follow-up exploration program was carried out on the property in 2008 by Terrane, consisting of 11,659.6 metres of diamond drilling in 31 holes and a total field ground magnetic survey performed in the deposit area to determine the geophysical characteristics of the deposit. Both the 2007 and 2008 programs were carried out by Equity Exploration Consultants Ltd. (formerly Equity Engineering Ltd.) under contract to Terrane Metals Corp. from a camp constructed in the drill area. Environmental baseline studies commenced in 2007 and continuing into 2008 were implemented by AMEC Earth and Environmental.

5. Geological Setting

5.1 Regional Geology

(Harris, 2012)

Berg is centered on one of several Early to Middle Eocene (52 Ma to 47 Ma) composite quartz monzonite stocks that intrude Middle Jurassic Hazelton Group and Lower Cretaceous Skeena Group rocks in the area. Hazelton Group rocks are well exposed west of the Berg Stock (Figure 3). They consist of a sequence of green, grey, red and maroon lithic tuffs, tuff breccias and flows of andesitic composition. Skeena Group rocks overlie the Hazelton Group and are exposed mainly east of the property, but also cap the highest peaks north of the property. Amygdaloidal and vesicular andesites and basalts make up the lower part of the Skeena Group succession. Many of the flows exhibit trachytic texture that distinguishes them from the underlying Hazelton Group. Sandstones, siltstones and conglomerates comprise the upper part of the succession.

The contact between the Skeena Group and the Hazelton Group is not exposed in the property area as it is everywhere intruded by quartz diorite. An exposure of the contact on a cliff face north of the property is strongly epidotized and rocks on both sides are hydrothermally altered. Upper Cretaceous Kasalka Group rocks uncomfortably overlie the Skeena Group north of the property. The best exposures occur at Mount Ney, 6 km north of the Berg Stock. Here the succession consists of a basal conglomerate member that has a distinctive red to maroon colour. Overlying the conglomerate is a predominantly volcanic sequence of white, grey and pale green rhyolite and dacite flows and flow breccias with interbedded crystal and crystal vitric tuff.

Structure in the area consists of poorly developed open folds with north to northeast axial trends resulting in local dips of 10° to 30°. Fractures and Miocene basalt dikes parallel this structural trend that may have also acted as the principal structural control for the emplacement of intrusions in the area. This relationship is supported by the pronounced elongation of the quartz diorite intrusion.

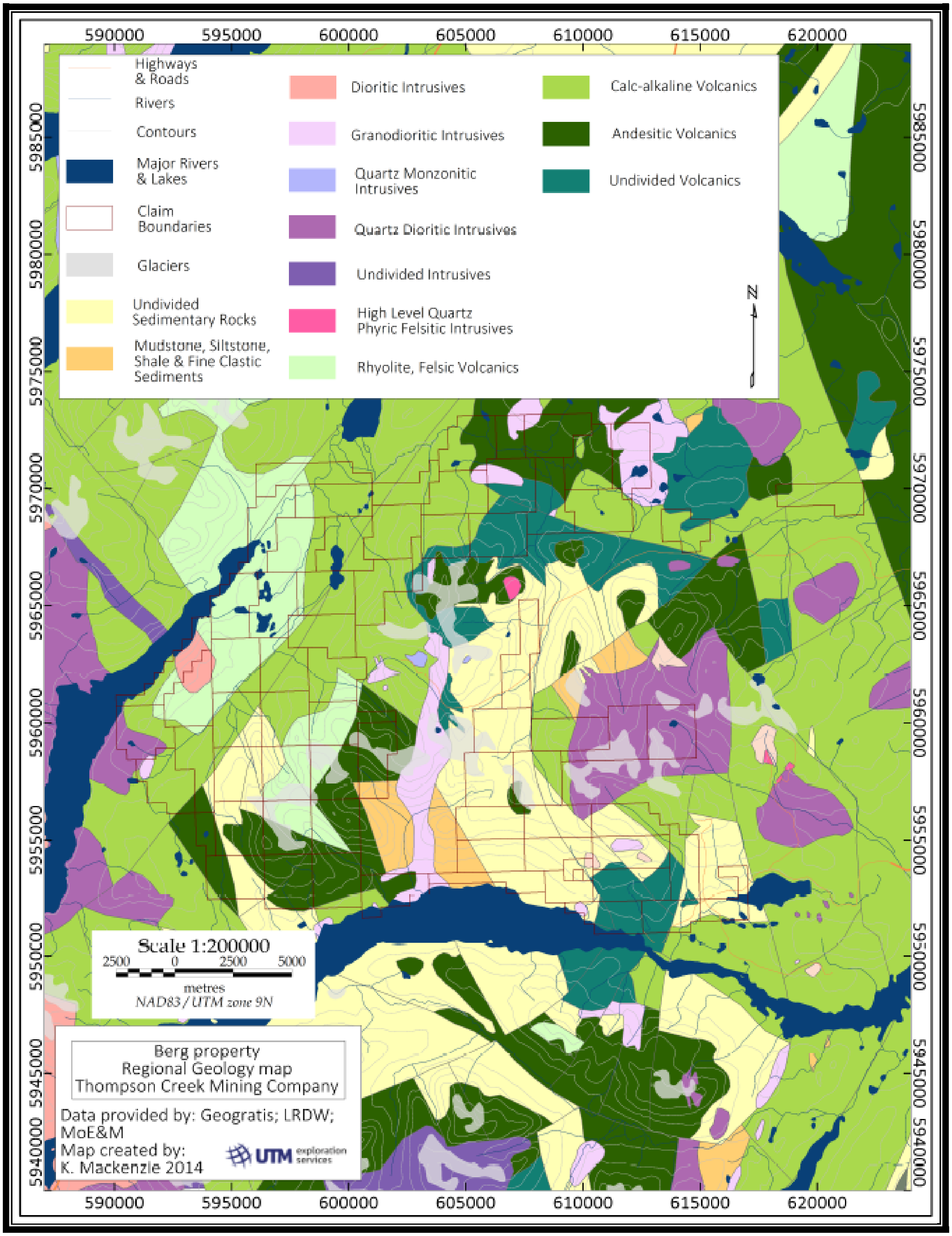

Figure 3. Regional Geology Map.

5.2 Local Geology

(Harris, 2012)
The Berg Deposit has been well studied with excellent treatises on the geology, alteration and mineralization by Panteleyev (1976, 1981), Heberlein and Godwin (1984), and Heberlein (1995); the following description is largely based upon their work. Two main intrusive bodies are exposed in the property area. The largest consists of a north-trending, elongate body of quartz diorite (Unit QDR) that intrudes the contact between Hazelton Group and Skeena Group east of the mineralized area. The intrusion extends from about 750 metres north of the Berg Stock to over 6.5 km to the south (see Figures 3 and 4). It ranges in width from 600 metres on the property area to over 2 km at its southern extremity. Compositional and textural zonation of the quartz diorite is evident with a central core of pink quartz monzonite exposed 1.6 km south of the camp that grades outwards into quartz diorite and hornblende quartz diorite. Porphyritic phases are also present. At hand-specimen scale the quartz diorite is fine-grained and pale grey or dark grey brown where hornfelsed or biotite-altered. In drilling this unit was typically a fine-grained rock consisting of plagioclase, hornblende, biotite and quartz overprinted by biotite, chlorite and minor epidote alteration or quartz-sericite-pyrite±chlorite alteration. Where the quartz diorite is mineralized, quartz veining, chalcopyrite, pyrite and molybdenite are present in association with biotite alteration. This grades outwards into biotite-chlorite±epidote alteration with pyrite overprinting primary magnetite and a phyllic assemblage of quartz-sericite-pyrite±chlorite. The phyllic assemblage is most evident in quartz diorite at the eastern margins of the system and suggests that the exposure level of the Berg Deposit is relatively deep as the alteration is preserved at higher altitudes in the vertically-oriented system. A well-developed thermal aureole up to 120m wide occurs on both sides of the intrusion and into Hazelton Group andesitic rocks in the deposit area. The western contact of the quartz diorite and Hazelton Group andesitic rocks is subvertical and diffuse in nature in the deposit area due to the prevalence of dykelets of quartz diorite in andesite and assimilated xenoliths of andesite in quartz diorite and to the nature of the hornfelsing and overprinting alteration. Hornfelsed rocks are typically brownish purple due to the abundance of secondary biotite.

The other prominent intrusion in the deposit area is the Berg Stock, a multi-phase composite quartz monzonite stock that intrudes the Hazelton Group andesitic rocks. It is broadly cylindrical and approximately 600 to 750 metres in diameter with typically sharp, sub vertical contacts. Locally these contacts are complex with brecciated xenoliths of andesitic rocks with diffuse clast boundaries. This stock is the prime control on mineralization at the Berg as the deposit forms an annulus around the stock.

(Macintyre, 1985)

This report describes the geology and mineral deposits of mineral claims surrounding the Berg porphyry copper-molybdenum property, owned by Thompson Creek Metals Company, Inc. and here referred to as the Berg Claim Group. These claims occupy the western half of the Sibola Range to the north of Tahtsa Lake in the Tahtsa Lake mineral district, as well as lower ground immediately to the north and west of this area. The claims cover an area of 44,593.6 hectares.

Summary

The Berg Claim Group is underlain by a succession of deformed volcanic and sedimentary rocks of the Early to Middle Jurassic Hazelton Group and successor basin deposits of the Late Jurassic and Early Cretaceous Bowser and Skeena Groups. These are unconformably overlain by Late Cretaceous continental volcanic rocks of the Kasalka Group. Kasalka Group rocks crop out mainly at higher elevations in the northern part of the claim group and occasionally are preserved elsewhere in down-dropped fault blocks. In general, older rocks are successively more deformed than younger ones.

Large intrusive bodies within the claim area include the Upper Cretaceous biotite-hornblende granodiorite Sibola Stock and an elongate Eocene biotite-hornblende quartz diorite body that extends from just northeast of the Berg deposit southerly to Tahtsa Lake. The Bergette property is hosted by quartz diorite and quartz monzonite phases of the northern part of the Sibola Stock. The Whiting Stock, similar in age and mineralogy to the Sibola Stock, occurs to the west and outside of the claim group.

Several small granitic intrusions are known both within and outside of the claim group and some are known to host porphyry copper-molybdenum deposits including Berg, the Huckleberry Mine, Whiting Creek, Ox Lake and Seel properties.

A small but prominent body of augite-hornblende micro diorite, known as Rhine Crag, occurs within the southwest part of the claim area. Dykes of similar composition occur within the immediate area.

Numerous types of dykes and sills are found within the claim area, the most significant being a steeply-dipping feldspar porphyry which most commonly strikes north to northwest.

HAZELTON GROUP:

Early Jurassic Hazelton Group rocks are the oldest found within the claim area and also within the Tahtsa lake area. These are divided into two formations: the andesitic fragmental unit of the Telkwa Formation and the felsic volcanic – chert unit of the Smithers and/or Whitesail Formation (?).

Telkwa Formation:

The Telkwa Formation mainly consists of red to green andesitic fragmental rocks including lapilli tuff, lithic tuff, crystal tuff and tuff breccia. Less common rock types include porphyritic augite andesite, dacite, tuffaceous siliceous argillite, and pebble conglomerate.

Smithers and/or Whitesail Formation:

These siliceous grey to greenish-grey felsic volcanic rocks conformably overlie and may be partly interbedded with rocks of the Telkwa Formation. The predominant rock types are welded lapilli tuff, mottled cherty tuff, and banded or massive dacite and rhyodacite, which may grade upward into alternating beds of mottled and banded grey chert, siliceous argillite, and siltstone.

BOWSER LAKE GROUP:

Ashman Formation:

Marine sedimentary rocks of the Ashman Formation include interbedded dark grey pebble conglomerate, sandstone, siltstone, shale and minor tuff. This unit in some locations is known to contain large coiled ammonite fossils.

SKEENA GROUP:

Basal Conglomerate Unit:

This unit is a boulder conglomerate that is generally not well exposed and is usually in fault contact with older rocks.

Amygdaloidal Basalt Unit:

This unit is composed of dark green to light grey amygdaloidal basalt flows, commonly with discontinuous lenses of flow breccia at the top of individual flows.

Marine Sedimentary Unit:

The marine sedimentary unit consists of at least 1000 metres of interbedded wacke and shale. These rocks range from grey to black and from thin to thick bedded. The predominant rock type is a fine-grained lithic wacke locally containing iron-rich concretions. This unit underlies a wide north-south trend in the central part of the claim group.

KASALKA GROUP:

Kasalka Group rocks are not widespread within the area of the claims. They crop out mainly at higher elevations in the northern part of the claim group and occasionally are preserved elsewhere in down-dropped fault blocks. Kasalka rocks are mainly continental volcanics with the lower contact being either an angular unconformity with the older rocks or a fault contact.

Basal Conglomerate Unit:

This red to reddish-brown poorly-sorted pebble conglomerate is generally 5 to 10 metres thick but occasionally reaches thicknesses of up to 50 metres where it fills erosion channels in underlying surfaces.

Felsic Fragmental Unit:

This unit consists mainly of grey to cream-coloured, variably welded, siliceous pyroclastic rocks, predominantly lithic lapilli tuffs. Massive flows of fragmental and porphyritic rhyodacite to andesite, ash flow tuff breccia and minor volcanic sandstone are interbedded with the pyroclastic rocks.

Porphyritic Andesite Unit:

Massive, greenish-grey to dark green, fine-grained flows or sills of porphyritic andesite to dacite overly the felsic fragmental unit. Columnar jointing may be well developed.

Lahar Unit:

Overlying the porphyritic andesite unit, a crudely stratified lahar unit may be up to 600 metres thick. This unit, which may consist in part of mass flow or scarp slump deposits, is made up mostly of clasts up to several metres in diameter that are identical to the underlying porphyritic andesite unit.

Rhyolite Unit:

Light grey to cream-coloured rhyolite flows and fine-grained siliceous tuffs are found capping peaks in the vicinity of the Bergette prospect, where they unconformably overlie either porphyritic andesite or the basal conglomerate of the Kasalka Group.

Basalt Unit:
Basalt flows with columnar jointing are found conformably overlying the lahar unit on Swing peak Ridge on the south side of Tahtsa Lake, but have not been encountered within the area of the Berg claims.

PLUTONIC ROCKS:

A wide variety of plutonic rock types are subdivided on the basis of modal composition, age, and mode of occurrence.

Kasalka Intrusions:

These rocks are petrographically and compositionally similar to volcanic rocks of the Kasalka Group. They consist of subvolcanic dykes, sills, and small irregular stocks of porphyritic augite-hornblende microdiorite and andesite. The best example of this rock type within the area of the claims is the Rhine Crag microdiorite and related dykes.

Rhyolitic Intrusions:

Sills and laccoliths and dykes of porphyritic dacite are found within and below the felsic fragmental unit of the Kasalka Group and some may be feeders to overlying intrusive and extrusive bodies.

Small irregular dykes of rhyolitic quartz-eye porphyry intrude the Sibola Stock.

The quartz porphyry at the Bergette prospect grades into breccia pipes.

Bulkley Intrusions:

The Bulkley Intrusions comprise granodioritic stocks and dykes of earliest Late Cretaceous age (70 to 84 Ma). They are subdivided into three groups: (1) small isolated stocks of porphyritic hornblende-biotite granodiorite, (2) large compositionally zoned intrusions of equigranular biotite-hornblende granodiorite and biotite-hornblende quartz diorite, and (3) late porphyritic hornblende-biotite quartz monzonite dyke swarms and stocks that cut both (1) and (2).

(1) Porphyritic Hornblende-Biotite Granodiorite:

These small sub-circular stocks are simple, variably porphyritic intrusions of light to dark grey, porphyritic hornblende-biotite granodiorite. These often are associated with porphyry copper-molybdenum deposits, of which the best known is the Huckleberry Mine.

(2) Biotite-Hornblende Granodiorite and Quartz Diorite:

Large compositionally zoned stocks within the Sibola Range include the Sibola and Whiting Stocks. Much of the Sibola Stock lies with the Berg Claim Group, while the Whiting Stock is located to the east. The Sibola Stock is in the main a coarse-grained sub porphyritic biotite-hornblende granodiorite, but includes a narrow zone of mafic-rich, medium to fine-grained biotite-hornblende quartz diorite along the northern boundary.

(3) Porphyritic Hornblende-Biotite Quartz Monzonite:

Northwest-trending dykes and small stocks are found within or near both the Sibola and Whiting Stocks. At the Bergette and Whiting prospects these are coarse-grained pinkish-grey to buff-coloured rocks that straddle the quartz-monzonite-granodiorite boundary.

<u>Coast Intrusions:</u>

An elongate north-trending body of quartz diorite intrudes rocks of the Hazelton and Skeena groups in the western part of the claim group. This intrusion is believed to be satellitic to the Coast Plutonic Complex and has been determined to be of the same age, about 50 Ma. The quartz diorite is zoned, with a mafic-rich, fine-grained border phase that grades into a coarser grained, more quartz-rich core. A well-developed biotite hornfels zone extends around the intrusion for up to 100 metres from the contact.

<u>Nanika Intrusions:</u>

The Berg porphyritic quartz monzonite stock is the only known example of the Nanika Intrusions in the Tahtsa Lake area, which are Eocene (50 Ma) in age. The Berg Stock is pinkish grey and coarsely porphyritic and has a greater k-feldspar content than the Late Cretaceous quartz monzonite and granodiorite.

<u>Late Dykes, Sills and Plugs:</u>

Five major groups of dykes are recognized in the area, intruding all rocks of earliest late cretaceous age and older, and most commonly with a northwest trend and a subordinate orientation of north to northeast. These dykes, according to MacIntyre (1985) are: (1) lamprophyre, (2) basalt or andesite, (3) porphyritic andesite and feldspar porphyry, (4) pink aplite porphyry, and (5) rhyolite porphyry.

The largest, most common and widespread dykes within the claim group are of the feldspar porphyry variety. These dykes exhibit very little alteration or mineralization, indicating that they are mainly post-mineral.

STRUCTURE:

The area has been subjected to a complex history of faulting and regional uplift related to the origin of the Pacific Orogen and the formation of the Coast Crystalline Belt. High-angle normal and reverse faults with predominant northwest trends and subordinate north to northeast trends have resulted in the entire area being broken into blocks which are uplifted, down-dropped, and often tilted. The youngest rock units have commonly been eroded away, sometimes with remnants remaining on mountain peaks or within down-dropped blocks. Major thrust faults are not recognized in the area but may be present.

Hazelton and Skeena Group rocks are commonly broadly to tightly folded with a northerly trend. Folding in the younger Kasalka Groups is restricted to gentle warping of strata.

6. Exploration

6.1 Methodology and Procedure

Figures 6 to12 show the sample locations with select geochemistry.

6.1.1 Rock Sampling

Between July 9th and July 26th, 2014, Jim Hutter, P.Geo and Rene Victorino, P.Geo, contract geologists for UTM and assistants Michael LaCouffe and Chris King, employees of UTM Exploration Services Ltd. conducted reconnaissance prospecting, rock sampling and localized mapping on behalf of Thompson Creek Metals Company Inc.

Thirty one (31) rock samples were taken over the vast Berg property claims. Complete list of assay results are found in Appendix I. Rock sample locations and field note descriptions are shown in Table 2, with UTM coordinates.

All samples were taken from either outcrop or float material. The sampling areas were selected at the discretion of the sampling geologists and based upon areas deemed similar to that of the Berg main deposit. All samples were placed in their 12x20 6mm poly bag. The poly bags had the sample number written on the outside to match the sample tag that was placed inside the bag, which was then sealed with a zap strap. All samples were located and marked using a handheld Garmin GPS.

After the samples were taken a small aluminum butter tag with sample number and date was left behind at each sample site, secured with bright orange flagging tape. All samples were submitted to ACME Labs for ICP analysis. A complete description of the ACME analytical techniques is presented in Appendix II and the certificate of analysis are attached as Appendix I. ACME Labs are an ISO---9000 certified laboratory.

Table 2. 2014 Rock Sample Locations & Field Notes.

Sample#	Sample Type	Easting	Northing	Sample Description
5592660	rock outcrop	610239	5956016	Fine-grained siltstone, dark grey, strongly clay-silica-py altered.
5592661	rock outcrop	610183	5955924	Fine-grained siltstone, dark grey, strongly clay-silica-py altered. Sample taken from 0.5m shear zone near contact with granodiorite.
5592662	rock outcrop	610316	5955691	Silica-py vein, ~30cm wide, in siltstone, vuggy, ~000/90.
5592663	rock outcrop	610247	5955750	5-8cm sil-py vein/shear 335/80W within Skeena(?) siltstone.
5592664	rock outcrop	610217	5955674	Siltstone, with small very gossanous area assoc'd with shearing. Sulphide decomposition is strong enough to smell.
5592665	rock outcrop	610190	5955580	0.3m very gossanous silica-py shear 190/60W in siltstone.
5592666	rock float	610143	5955591	15(?)cm sil-py vein 145/90, poorly exposed, but trail of float to 610157, 5955570. Sample is collected from float trail over vein.
5592667	rock float	610860	5958548	Quartz-py vein float within granodiorite talus field.
5592668	rock outcrop	609303	5959115	Gossanous strongly silicified volcs or seds(?) with 3-5% py in veins and disseminations.
5592669	rock outcrop	596374	5956784	Gossanous flow-banded rhyolite with local irregularly disseminated py.
5592670	lab standard	-	-	Lab standard.
5592671	rock float	596593	5956491	Gossanous rhyolite breccia.
5592672	rock outcrop	596516	5956281	Rhyolite agglomerate, angular to rounded rhyolite pebbles to 4cm in a slightly darker fine-grained matrix, gossanous, minor py.
5592673	rock float	613341	5962284	Intrusive (float), 1-2%disseminated py, from Bergette property.
5592674	rock float	613258	5962147	Skarn(?) (float) from Bergette property.
5592675	rock outcrop	613341	5962120	Intrusive(?), sil-py alt'd. Py veins to 5mm + disseminated py.
5592676	rock outcrop	610427	5955568	Small pyritic breccia zone in seds. Leached, limonitic.
5592677	blank	-	-	Blank
5592678	rock float	602345	5967830	Brecciated siltstone or fine tuff with minor galena
5592560	Rock Outcrop Chip	610449	5955313	Andesite (?), lt grey to grey, fi grained, pervasively sil'd., with 3-5% fresh pyrite diss, pervasive oxidation as surface coatings; up to 8% pyrite in some fresh sections.

5592561	Rock Outcrop Chip	610206	5955467	Andesite - lt grey to grey on fresh sections but with very strong limonite coatings along cracks and fractures; strong sil and wk ser(?) on unoxidized surfaces; 7-10% pyrite as fi grained diss.
5592562	Rock Outcrop Chip	605911	5959933	Andesite or Sandstone (?) - fine- grained, highly indurated, weak to mod sil'd with 3% pyrite as fi grained diss; 1% epidote as fi grained dis; sli chl.
5592563	Rock Outcrop Chip	605810	5959920	Siltstone, greenish grey on fresh sections but coated with strong but thin limonite on cracks and fracture planes; mod-str sil'd, sli chl, with 5-7% fi-grained pyrite diss.
5592564	Rock Outcrop Chip	605606	5959861	Siltstone, lt to dark grey, wk-mod sil'd on fresh surface but with strong limonite as surface coatings/stains; with 1% pyrite as fi grained diss.
5592565	Rock Outcrop Chip	611076	5966341	Andesite - greenish grey, porphyritic with distinct hblende pheno, weak limonite stains but with 1-2% coarse-grained pyrite specks/grain clusters (vertical wall outcrop); non-magnetic; weak sil'd, sli-weakly chl.
5592566	Rock Float Chip	611512	5963474	Siltstone (?), pervasively silicified, lt grey with 7-8% pyrite as fi grained dis; with moderate-strong limonite as surface coatings.
5592567	Rock Float Chip	611982	5962931	Highly gossanous and silicified rock, dark brown to orange; x-cut with strongly limonitic and vuggy to dog-toothed qtz vnlts; no fresh sulphides
5592568	Rock Outcrop Chip	612850	5962479	Granodiorite (?), pevasively silicified, weakly chl rock (indistinct rock type due to alteration); green to grey, ; with 7% pyrite diss.
5592569	Standard			
5592570	Rock Outcrop Chip	612883	5962445	Granodiorite (?), indistinct rock type due to mod-str chl, weak to mod sil alteration; with 1-2% pyrite diss and occasional vnlts; with distinct <1mm chl vnlts (1%); strong limonite and hem as surface coatings associated with distinct metallic grey specularite hem.
5592571	Rock Outcrop Chip	594766	5955072	Massive Silica (Chert?), lt grey to cream with weak to moderate limonite as surface coatings; no fresh sulphides; hard/competent rock and fine grained with occasional <1 mm x'talline quartz vnlts; pervasively sil'd rock appears to be intercalated with or intruding? conglomerate
5592572	Rock Outcrop Chip	594730	5954175	Silica/pervasively sil'd rock (Chert?); 8m-wide wall outcrop; hard and intact with strong limonite as brownish orange to black stains on surface, light grey to cream on fresh sections with very rare pyrite specks; no clear contact with immediate outcrops of siltstone/sandstone
5592573	Rock Outcrop Chip	615282	5967814	Granodiorite(?), cream with pinkish tinge matrix with 10-20% mafic grains (biotite/hblende?); with 3-5% quartz eyes as granule size and rounded grains; non-magnetic; mafic grains are light greenish grey.
5592574	Rock Outcrop Chip	596533	5957388	Tuff/Andesite (?); immediate wall of Diorite dyke; lt grey, pervasively sil'd with very strong limonite coatings; no fresh sulphides but with limonite specks and rare thin vnlts .

6.1.2 Reconnaissance Mapping and Field data collection

In addition to the rock sampling undertaken over the 3 week period the two geological field crews walked a lot of ground with daily traverses in efforts to investigate as many areas as possible within the limits of the budget and time constraints. All, but two, field days were clear and the crews were able to access the property locations designed for each daily traverse.

Daily traverses were selected largely from pre-field data analysis and examination of historical data; both geological and geophysical, google earth imagery and regional geological government maps. Targeted areas were then assigned levels of rank and then the crews embarked on their daily traverse.

Days one and two were spent getting familiar with the local rocks and maintaining a consistent nomenclature analogous to previous years' work and mapping. The Berg Deposit was visited and the rocks around this area were examined as well as core that remained on site was examined so to better provide a primary starting point on what these rocks look like, in particular what the rocks that are strongly mineralized look like.

Throughout the course of the exploration program, numerous areas were visited (Figure 4 Mapping Observation Station map) and waypoint data and geological comments were collected (Table 3. 2014 Mapping Waypoint Field Notes and Observations).

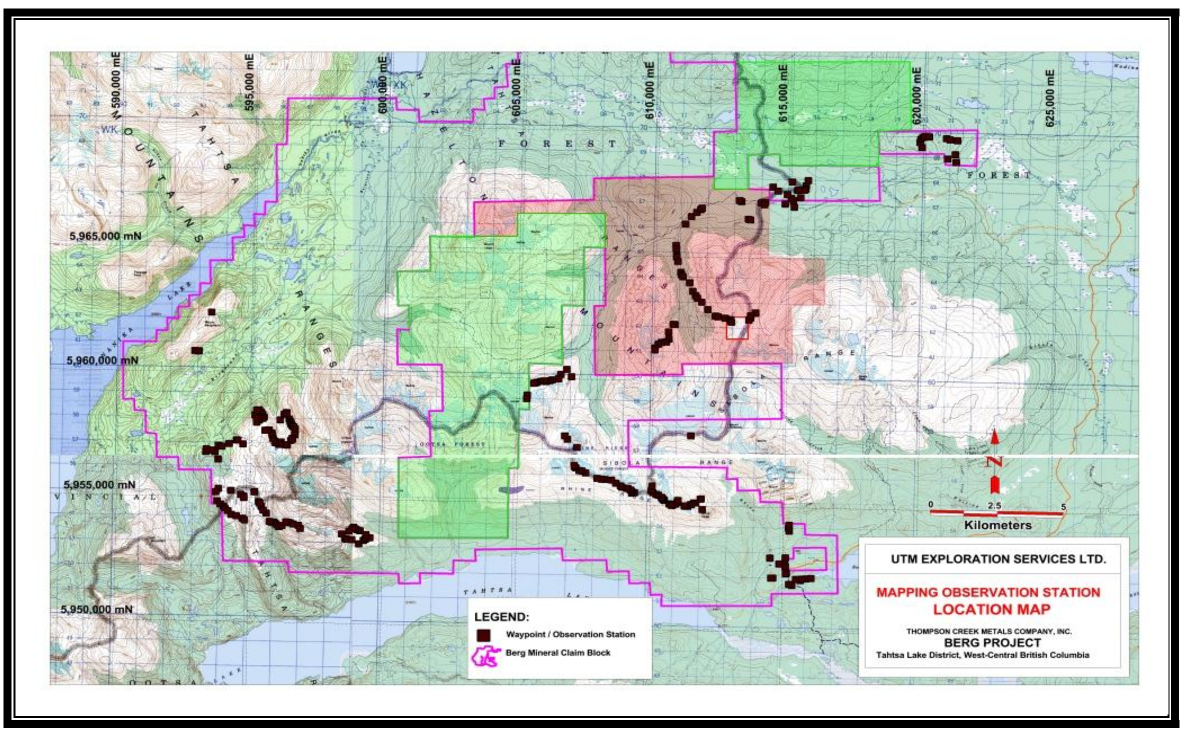

Figure 4. Mapping Observation Station map.

The Rhine Ridge/Rhine Crag area was the one area that showed particular greater interest due to its lithological and mineralization similarities to that of the Berg Deposit. As a result a brief map has been generated to showcase the local geology and its corresponding structure (Figure 5. Rhine Cirque Geology)

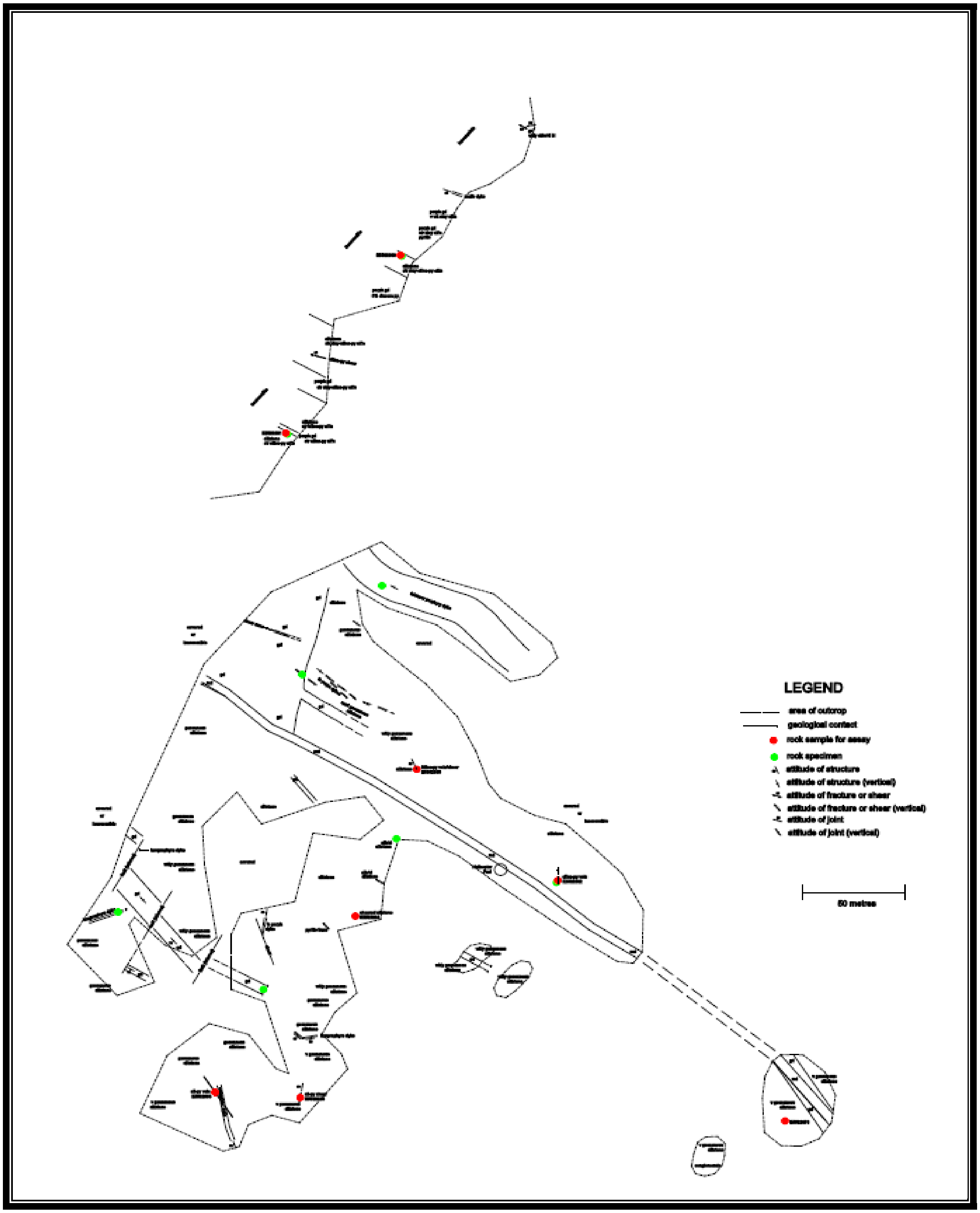

Figure 5. Rhine Cirque Geology.

Table 3. 2014 Mapping Waypoint Field Notes and Observations.

Date	Station	Easting	Northing	Elev	Observations
9-Jul-14	WPT1	611453	5957842	1923	Rock Outcrop: Granodiorite- coarse-grained, pinkish brown, slightly weathered, unaltered and no sulphides
9-Jul-14	WPT2	610759	5962305	1559	Helicopter landing site
9-Jul-14	WPT3	610700	5962310	1547	Rock Outcrop: Andesite - lt. to dark grey, fine-grained, mod-hi fractured, sli to wk sil, sli chl, with rare crse-grained pyrite specks
9-Jul-14	WPT4	610532	5962006	1642	Boulder Field: along gently sloping area; granodiorite floats with same description as at WPT1
9-Jul-14	WPT5	610550	5961713	1701	Topographic Saddle: rock floats still granodiorite same as at WPT1
9-Jul-14	WPT6	610458	5961595	1778	Rock Floats of granodiorite, med grained; with distinct distorted mafic grains variably altered to magnetite
9-Jul-14	WPT7	610425	5961595	1792	Rock Outcrop: Granodiorite - Med to crse-grained and equigranular, lt. grey with pinkish tinge, generally fresh with sli. Chl mafics, Joint: 330/70SW
9-Jul-14	WPT8	610270	5961574	1882	Rock Outcrop: Granodiorite - same as at WPT7 but generally med-grained
9-Jul-14	WPT9	610167	5961503	1931	Start of Traverse03; +100-200m from station - Andesite dyke (?); extent is not distinct due to highly broken rock atop ridge; relatively more oxidized than granodiorite outcrops but with no fresh sulphides noted; +50m from station: Granodiorite - med grained, sli sil'd; most fi-med grained mafics appear partly replaced by magnetite (2% of grains)
9-Jul-14	WPT10	610036	5961347	1958	WPT9 to WPT 10 - 40-50% of pbl to bldr size floats have strong but thin limonite surface coatings/stains; floats are granodiorite porphyry and andesite with 2-5% fresh pyrite disseminations; wk-mod sil'd; From WPT10 onwards - oxidized rock floats start to disappear
9-Jul-14	WPT11	610038	5961266	1940	Rock Outcrop: Conglomerate - distinct traces of pbl to bldr size, rounded to sub-rounded multi-lithic clasts set in a fi-grained matrix; hi indurated and fresh to sli sil'd. in some sections
9-Jul-14	WPT12	611891	5955315	1740	Helicopter landing site; start of Traverse04
9-Jul-14	WPT13	611943	5954896	1703	Base of steep vertical wall with numerous talus boulder-size and angular rock floats; grey to greenish grey andesite; fi-med grained to porphyritic with distinct hblende laths in some sections; fresh to sli chl; no sulphides. Close to WPT13 - rock floats are 75% andesite and 25% clastics
10-Jul-14	WPT14	611872	5955307	1755	Helicopter landing site; start of Traverse05

10-Jul-14	WPT15	611693	5955150	1768	Rock Outcrop: Andesitic basalt - lt to dk grey, wk to mod fractured, with occasional distinct hblende laths; some sections appear like siltstone but with no distinct bedding or lamination; this rock unit is 80-85% of the floats from WPT14 to WPT16.
10-Jul-14	WPT16	611629	5955147	1792	Rock Outcrop: same as at WPT15 but some sections appear to be fi grained andesite, lt grey with occasional <1mm qtz vnlts; Joint: 290/80NE
10-Jul-14	WPT17	611527	5955084	1848	Rock Outcrop: Basalt - grey to dk grey, fi grained to porphyritic with occasional hblende phenos; with distinct columnar jointing; generally fresh with occasional epidote as planar vnlts; J1-280/80NE; J2-345/80NE; J3- 20/75SE
10-Jul-14	WPT18	611505	5955087	1860	Rock Outcrop: same as at WPT 17; with fi grained magnetite diss in matrix (2-3%)
10-Jul-14	WPT19	611403	5955012	1898	Rock Outcrop: Mud/Siltstone, dark grey, thinly laminated, with strong brownish-orange limonite stains or coatings on bedding/fracture planes; from WPT19 to WPT20 - with increase in volume of oxidized rock floats
10-Jul-14	WPT20	611298	5955012	1913	From WPT 20 to 21 - rock floats become almost purely andesite/basalt; fesh, lt. to dark grey and unmineralized
10-Jul-14	WPT21	611269	5955025	1921	Rock Outcrop: Basalt, fi-grained to porphyritic, fresh to sli chl, with no sulphides but up to 3% magnetite as fi-grained diss; with very distinct hblende laths in porphyritic sections associated with plag phenos; J1-285/70NE; J2- 40/50NW
10-Jul-14	WPT22	611029	5955236	1962	Rock Outcrop: Andesitic Basalt (?), grey, fi grained with occasional porphyritic sections; Sli sil'd with occasional </=1mm epidote vnlts; distinctly non-magnetic but more oxidized on fracture planes compared to previous outcrops; hi fractured/broken
10-Jul-14	WPT23	611007	5955160	1980	Start of Traverse06
10-Jul-14	WPT24	610942	5955085	1978	Rock Outcrop: Basalt - grey to dk grey, fi grained, partly andesitic, hi fractured/broken, with 1-2% magnetite as very fi grained diss in matrix
10-Jul-14	WPT25	610823	5955029	1937	From WPT24 to 25 - rock outcrops and boulder floats are basalt, same as at WPT24; start observing floats with 2-3% pyrite as thin and planar vnlts or hair-line fracture fills
10-Jul-14	WPT26	610776	5955050	1921	Start of topo saddle; end of generally barren/unoxidized basalt boulder floats; start of significantly oxidized soil to pebble sized ridge top deposits; fragments include soft and friable dark red gossan materials; start occurrence of granodiorite boulders (20%), fresh and crse-grained , and some look like quartz monzonite

10-Jul-14	WPT27	610703	5955099	1915	Rock Outcrop: Basalt, amygdaloidal texture, hi broken ridge outcrop, weak to mod disintegrated, lt greenish grey and fi grained matrix with distinct plag and epidote amygdule's (B-2 Rock Specimen)
10-Jul-14	WPT28	610517	5955226	1912	Rock Outcrop: Andesite - grey, fi grained, weak to mod fractured, fresh/unaltered, no sulphides but with 2-3% magnetite as fi grained diss in matrix. From WPT27 to 28 - granodiorite floats decrease and become mainly andesite/basalt with up to 3% fresk py diss/fracture fill; likely reason why limonite staining is distinct along this section of the ridge; also with some rock floats which are pervasively sil'd, strong limonite surface coatings and with up to 3% fresh pyrite disseminations
10-Jul-14	WPT29	610478	5955269	1911	End of topo saddle and start of steep slope with more pronounced oxidation; rock floats are also relatively smaller in sizes
10-Jul-14	WPT30	610449	5955313	1927	Rock Outcrop: Andesite (?) - lt grey to grey, pervasively sil'd, fi grained with 3-5% fresh pyrite diss, pervasive oxidation as surface coatings; up to 8% pyrite in some sections. (B-3 Rock Specimen). Sample 5592560.
10-Jul-14	WPT31	610415	5955353	1940	End point of highly oxidized rock outcrops and floats (andesite) with floats starting to be grey to dark grey in color. Rock Outcrop: Quartz Monzonite (?) - li greenish grey with pinkish tinge; very distinct but variably weathered biotite abd hblende grains; k-felds not readily recognizable due to color alteration caused by weathering. (B-4 Rock Specimen). Area near qtz monzonite is significantly lee oxidized than the andesite on both walls.
10-Jul-14	WPT32	610287	5955435	1940	End of qtz. Monzonite zone. Rock Outcrop: Andesite - li grey to grey, fi grained, hi fractured/broken with strong but thin limonite coatings/stains on fracture planes; generally weakly sil'd with 1-2% pyrite diss and thin planar vnlts; non-magnetic. This zone is distinctly more oxidized (brownish red color) than the intrusive rock sections.
10-Jul-14	WPT33	610206	5955467	1939	Rock Outcrop: Andesite - lt grey to grey on fresh sections but with very strong limonite coatings along cracks and fractures; strong sil and wk ser(?) on unoxidized surfaces; 7-10% pyrite as fi grained diss. From WPT33 to 34 - essentially the same rock unit with varying pyrite content (2-10%) and oxidation intensity; strong silica alteration and lighter grey color is distinct; rock is also highly broken. Sample: 5592561.
10-Jul-14	WPT34	610089	5955535	1966	End of highly oxidized zone. WPT34 + 50m. - Andesite outcrop, sli to weak sil'd, </=1% pyrite; significantly reduced oxidation and only as thin coatings on fracture planes
10-Jul-14	WPY35	610028	5955619	1951	Rock Outcrop: Andesite - lt grey to grey, fi grained, weak to mod sil'd with 1% pyrite generally as coarse grained specks; non-magnetic (B-5 Rock Specimen).

10-Jul-14	WPT36	610036	5955655	1940	Rock Outcrop: Silt or Fine-grained Sandstone - lt grey to grey; no distinct bedding; no sulph; weakly oxidized on fractures; intercalated with fi grained, grey andesite flows containing 2-3% pyrite disseminations.
10-Jul-14	WPT37	610046	5955800	1892	Rock Outcrop: Basalt- amygdaloidal, weak wthd with distinct plag amygdule's in greenish grey and fi grained matrix; highly broken outcrop with about 50% of plag/calcite (?) amygdule's already leached out. End of Traverse06.
11-Jul-14	WPT38	609387	5955520	1841	Helicopter landing spot. Start of Traverse07. +50m - Rock Outcrop: Mudstone - dk grey to black; shaly, fresh and highly indurated. (B-6 Rock Specimen)
11-Jul-14	WPT39	609301	5955502	1836	Rock Outcrop: Andesite - greenish grey, fi grained to porphyritic, sli sil'd and chl to fresh, weakly fractured and intact with occasional hblende and plag pheno; non-magnetic
11-Jul-14	WPY40	609285	5955563	1823	Rock Outcrop: Mudstone, same as at WPT38; it appears that andsite flows and clastics are intercalated. Some sections are brownish to lt grey. Some sections with thin limonite coatings/stains along fracture or bedding planes; with occasional fresh pyrite as fi grained diss in tight hair-line fractures or bedding planes. (B-8 rock Specimen)
11-Jul-14	WPT41	609244	5955623	1798	Rock Outcrop: Mudstone/shale - same as at WPT38
11-Jul-14	WPT42	609139	5955681	1754	Start of topo saddle; rock floats are 70% sand/silt/mudstone; 20% andesite; 10% granodiorite
11-Jul-14	WPT43	609083	5955692	1743	Rock Outcrop: Siltstone - dark grey with weak limonite as thin stains on fracture planes; no fresh pyrite; weak-mod fractured; J1 - 340/80SW.
11-Jul-14	WPT44	608924	5955723	1729	End of topo saddle zone; Rock Outcrop: Conglomerate - matrix-supported; silt to sand-size, greenish grey groundmass with pbl-cbl sized, sub-rdd to rdd, polymictic volcanic and sedimentary rock clasts; clasts not readily recognizable on freshly cut rock but can be readily traced out on actual surface exposures.
11-Jul-14	WPT45	608872	5955778	1737	Rock Outcrop: Siltstone - grey to brown, hi broken and significantly more oxidized as fracture stains than previous outcrops.
11-Jul-14	WPT46	608686	5955879	1768	Rock Outcrop: same as at WPT45 but less oxidized

11-Jul-14	WPT47	608516	5956003	1788	Rock Outcrop: bedding contact between siltstone and amygdaloidal basalt. Siltstone is dark grey, partly shaly, hi indurated and with no sulph; slightly oxidized on fracture and bedding planes. Basalt has greenish grey matrix, fresh and massive with distinct yellow-green and classy epidote amygdule's; occasional hblende phenocrysts (B-9 Rock Specimen). Bedding contact: 330/80SW. From WPT 47 to 48 - 90% of outcrops is siltstone and with subordinate intercalations of amygdaloidal basalt (</= 10m thick); also with very minor lenticular pebble conglomerate intercalations.
11-Jul-14	WPT48	608274	5956022	1767	Rock Outcrop: Siltstone and Conglomerate intercalations; Bedding 330/70SW. WPT48+50m - Rock Outcrop: Conglomerate - poorly sorted, li grey to lt brown, silt to sand size matrix with sub-rdd to rdd, pbl to cbl size volcanic and sedimentary clasts (B-10 Rock Specimen).
11-Jul-14	WPT49	608140	5956027	1752	Rock Outcrop: Conglomerate - same as at WPT45 but dark grey and hi broken
11-Jul-14	WPT50	607983	5956061	1739	Rock Outcrop: Conglomerate - same as at WPT49. Bedding: 310/60SW. WPT50+50m. - start of steep slope of interbedded red siltstone, greenish grey to red conglomerate and grey siltstone; beds are about 3-5 m thick; fresh and unmineralized with distinct bedding attitude 310/75SW; (B-11 Rock Specimen - reddish brown siltstone). Moving upslope - outcrops become predominantly siltstone.
11-Jul-14	WPT51	607544	5956269	1848	Rock Outcrop: Reddish brown/maroon Conglomerate and Siltstone interbeds. Conglomerate contains mostly cbl-bldr multi-lithic clasts. Bedding: 340/50SW
11-Jul-14	WPT52	607405	5956346	1893	Along break of slope where 2 siltstone floats (3cm diameter) observed with strong malachite coatings.
11-Jul-14	WPT53	607308	5956363	1923	Top of ridge. Rock Outcrop: Conglomerate- lt greenish grey to maroon matrix with pbl to cbl size clasts
11-Jul-14	WPT54	607179	5956470	1936	Rock Outcrop: Conglomerate - brownish orange and hi oxidized, snady matrix with pbl to bldr size, poorly sorted clasts; clast supported; some distinct fine-grnd to porphyritic clasts, lt. colored granodiorite or diorite clasta; matrix and surface of clasts are strongly limonitic; no fresh pyrite (B-12 Rock Specimen).
11-Jul-14	WPT55	607126	5956505	1942	Spot where photo was taken to show difference of oxidized/limonitic conglomerate and maroon/red clastic interbeds of conglomerate and siltstone. Some clasts are strongly sil'd rock without any sulphide; white to lt grey and probably ande and dio(?)

11-Jul-14	WPT56	607113	5956559	1934	Rock Outcrop: Sandstone - fine to med grained, maroon, partly clay or silty, hi fragmented with intercalations of maroon conglomerate with generally pbl-size clasts. WPT 56 to 57 - all outcrops are interbedded red/maroon sandstone and pbl-gvl conglomerate. Sandstone is fi-grained and with minor silty to muddy intercalations; conglomerate has rounded to sub-rounded multi-lithic clasts; poorly sorted.
11-Jul-14	WPT57	607200	5957286	1928	Rock Outcrop: Conglomerate - reddish brown with generally pbl-sized, multi-lithic clasts; with some distinct brown, hard and massive chert clasts; bedding: 40/30SE
11-Jul-14	WPT58	606842	5957609	1713	Rock Outcrop: Sandstone - lt grey to grey, weakly weathered and hi indurated, and forming steep wall outcrop into the saddle zone below; bedding: 40/60SE; interbedded with dark grey silt to shaly units; generally </= 20 cm beds/lamina. WPT58 - 50m: possible contact between reddish clastics and grey/green units
11-Jul-14	WPT59	606735	5957740	1627	End of Traverse 7
12-Jul-14	WPT60	606934	5960120	1530	Helicopter landing spot. Start of Traverse 8.
12-Jul-14	WPT61	606751	5960413	1564	Rock Outcrop: Sandstone - lt grey, fi grained, 90-95% grey, 5-10% red grains; mod-hi fractured/broken with no distinct lamination; weak limonite stains on surface/fracture planes; interbedded with dark grey silty to shaly layers.
12-Jul-14	WPT62	606539	5960209	1618	Rock Outcrop: Sandstone - lt grey, fi grained, highly indurated and weakly oxidized as thin stains along fracture/bedding planes; bedding: 70/50SE.
12-Jul-14	WPT63	606454	5960026	1686	Rock Outcrop: Sandstone - same as at WPT62
12-Jul-14	WPT64	606211	5959978	1806	Rock Outcrop: Sandstone - same as at WPT62; highly broken/fractured
12-Jul-14	WPT65	606121	5959946	1844	Start to see floats (10% of floats) of weak-mod oxidized andesite, fine grained to porphyritic, sli-weak sil'd/chl on fresh-cut sections,; with 1-2% pyrite dis/specks; disappears after 100m. along traverse line
12-Jul-14	WPT66	605997	5959908	1887	Top of ridge; no outcrop but mainly siltstone/sandstone pbl-bldr floats; strong limonite as surface coatings but no fresh sulphides
12-Jul-14	WPT67	605911	5959933	1895	Rock Outcrop: Sandstone - fi grained, highly indurated, weak to mod sil'd with 3% pyrite as fi grained diss; 1% epidote as fi grained dis; sli chl. From WPT 67 to 68 - pyrite diss is 0.5 to 3%, with some sections almost barren but highly broken but strongly indurated; rock has strong limonite coatings. Samples: 5592562 and 5592563

12-Jul-14	WPT68	605781	5959915	1883	End of highly oxidized siltstone/sandstone. Start of Quartz Diorite outcrop, lt grey, med grained to porphyritic, fresh with very minor fi grained epidote specks; with 2-3% fi grained mag diss; very distinct hblende laths and biotite grains; some grade into hblende andesite porphyry; dark grey, fi-med grained matrix with distinct hblende phenos. (B-13 Rock Specimen)
12-Jul-14	WPT69	605643	5959870	1873	End of Quartz Diorite outcrop; sharp contact with highly oxidized siltstone; contact: 30/75SE
12-Jul-14	WPT70	605606	5959861	1876	Contact between hi oxidized siltstone and grey quartz diorite/andesite porphyry (40m wide highly oxidized siltstone); siltstone is lt to dk grey, weak to mod sil'd, with strong limonite as surface coatings/stains; with 1% fresh pyrite as fine-grained diss. Andesite Porphyry - dark grey, fine-med grained matrix with distinct hblende pheno; rare pyrite specks but with 2-3 % magnetite as fine-grained diss. Sample: 5592564
12-Jul-14	WPT71	605566	5959839	1879	Rock Outcrop: Siltstone/Sandstone - strongly oxidized, same as WPT69; highly broken but strongly indurated
12-Jul-14	WPT72	605541	5959830	1877	Rock Outcrop: contact with slightly or unoxidized silt/sand stone; li to dk grey on fresh sections, no sulphides; most are fi-grained sandstone, generally grey with associated 3-5% fi grained oxidized grains; limonite stains only on surface and does not penetrate interior sections of rock. (B-14 Rock Specimen)
12-Jul-14	WPT73	605290	5959355	1897	Rock Outcrop: Sandstone - lt grey with pale green tinge; very fine to fine grained; highly broken with weak and thin limonite stains on fractures/cracks; with minor dark grey siltstone intercalations.
12-Jul-14	WPT74	605278	5959207	1941	Last station of Traverse08.
13-Jul-14	WPT75	615680	5952114	991	Helicopter landing spot along logging road. Start of Traverse 9A.
13-Jul-14	WPT76	615880	5952192	966	Rock Outcrop: Sandstone - greenish grey, med to coarse mostly felds and qtz grained, massive.
13-Jul-14	WPT77	616080	5952210	978	Rock Outcrop: Andesite, dark greenish grey, fi grained to porphyritic, weakly frac to massive, sli-weak chl, with 2% fi grained magnetite diss; occasional distinct hblende pheno.
13-Jul-14	WPT78	615727	5952180	956	Start of logging road traverse
13-Jul-14	WPT79	615508	5952167	954	Rock Outcrop: Siltstone - grey, highly indurated, sli-weak weathered/oxidized but strongly indurated; bedding: 80/35SE; with distinct lamination
13-Jul-14	WPT80	615364	5951920	948	Road junction with main gravel road which trends E-W

13-Jul-14	WPT81	615255	5951954	940	Wooden bridge
13-Jul-14	WPT82	615145	5952399	960	Triple road junction. Continued towards Emerald Glacier Mine road
13-Jul-14	WPT83	615110	5952671	973	Road junction.
13-Jul-14	WPT84	615083	5952800	987	Rock Outcrop: Andesite - fi grained to porphyritic, weak to mod weathered/oxidized; with strong but thin limonite stains on fractures.
13-Jul-14	WPT85	615104	5953018	1011	Rock Outcrop: Sandstone: grey, fi grained feldspathic, no distinct bedding. (B-15 Rock Specimen)
13-Jul-14	WPT86	615225	5954091	1192	Rock Outcrop: Siltstone and Shale, dark grey; interbedded with fine grained sandstone and tuffaceous volcanics; weak to mod weathered; bedding: 300/30NE.
13-Jul-14	WPT87	615196	5954217	1205	Rock Outcrop: Andesite, fine grained to porphyritic; greenish grey, non-magnetic; highly broken
13-Jul-14	WPT88	615217	5954335	1239	Last station along the road. End of Traverse 9B.
13-Jul-14	WPT89	615106	5952670	974	Start of Traverse 9C
13-Jul-14	WPT90	614867	5952770	987	Wooden bridge
13-Jul-14	WPT91	614529	5953001	1025	End station of Traverse 9C.
13-Jul-14	WPY92	615123	5952380	957	Start of road Traverse 9D
13-Jul-14	WPT93	614642	5952199	948	Rock Outcrop: Sandstone - greenish grey, med to coarse grained, slight to weak weathered/oxidized; limonite stains mainly along fracture planes
13-Jul-14	WPT94	614581	5952194	951	Last station of Traverse 9D. With big boulder of porphyritic Andesite (same as WPT77). Weak chl with 2% magnetite as fine-grained diss; most probably vertical wall outcrop 100 m. to the north is of this same rock type. Could not reach outcrop due to thick vegetation.
14-Jul-14	WPY95	610750	5965344	1261	Start point along river of Traverse10A and going downstream.
14-Jul-14	WPT96	610742	5965478	1248	Rock Outcrop: Andesite - lt greenish grey, fi grained with sub-vertical fractures, non-magnetic; J1 - 330/80SW
14-Jul-14	WPT97	611076	5966341	1201	Rock Outcrop: Andesite - greenish grey, porphyritic with distinct hblende pheno, weak limonite stains but with 1-2% coarse-grained pyrite specks/grain clusters (vertical wall outcrop); non-magnetic; weak sil'd, sli-weakly chl. Sample 5592565

14-Jul-14	WPT98	611291	5966649	1182	Rock Outcrop: Andesite - (lithic volcanics), grey, fi-grained, non-magnetic, fresh
14-Jul-14	WPT99	611486	5966822	1173	Rock Outcrop: Basaltic Andesite- brownish grey, massive, fi- grained to porphyritic with distinct hblende laths, non-magnetic.
14-Jul-14	WPT100	611629	5966938	1170	Rock Outcrop: Andesite - greenish grey, fi grained, sli chl vertical wall outcrop; with 1% fine grained pyrite diss (B-16 Rock Specimen)
14-Jul-14	WPT101	611679	5966993	1169	End of Traverse 10A where road crosses the river.
14-Jul-14	WPT101A	611681	5966995	1168	Start tof Traverse 10B
14-Jul-14	WPT102	613078	5967337	1125	Wooden bridge - impassable to vehicles
14-Jul-14	WPT103	613152	5967289	1123	Wooden bridge - impassable to vehicles
14-Jul-14	WPT104	613902	5967258	1132	Wooden bridge - impassable to vehicles
14-Jul-14	WPT105	614045	5967279	1140	Last station for Traverse10B. Helicopter pick-up point.
15-Jul-14	WPT106	610749	5965337	1247	Start point of Traverse 11A at creek bank.
15-Jul-14	WPT107	610770	5965048	1258	Rock Outcrop: Sandstone: grey, very fi grained, massive/thickly bedded; no distinct lamination; non-magnetic, weak Fe oxide stains on surfaces.
15-Jul-14	WPT108	610773	5965017	1261	Last station for Traverse 11A
15-Jul-14	WPT108A	610772	5965023	1261	Start point for Traverse 11B
15-Jul-14	WPT109	610818	5964840	1274	Boulder float (1m X 2m), pervasively sil'd rock, grey to lt brown on fresh sections, no sulphides noted but with strong Fe oxide on cracks and fractures (B-17 Rock Specimen)
15-Jul-14	WPT110	610940	5964402	1298	Area with 80% sandstone/siltstone and pervasively sil'd rock; with strong limonite as surface coatings; with <1% to 5% pyrite as fine grained diss and grain clusters on fresh sections.
15-Jul-14	WPT111	610968	5964311	1301	Along gully; photo taken of sil'd and oxidized rock floats
15-Jul-14	WPT112	611020	5964231	1305	Oxidized rock floats become rare and start to observe granodiorite (40%) boulders
15-Jul-14	WPT113	611281	5963991	1347	Boulder field close to a vertical wall outcrop upslope; sandstone/siltstone; lt greenish grey with weak limonite as stains on fractures/bedding planes

15-Jul-14	WPT114	611401	5963656	1386	Almost all rock floats are oxidized clastics and/or variably sil'd ans oxidized rocks
15-Jul-14	WPT115	611512	5963474	1415	Boulder float sample collected.; pervasively silicified rock (siltstone?), lt grey with 7-8% pyrite as fi grained dis; with moderate-strong limonite as surface coatings. Some floats are white-grey massive silica with rare or no pyrite (B-18 Rock Specimen) Sample: 5592566.
15-Jul-14	WPT116	611583	5963375	1450	Still with up to 90% variably sil'd and oxidized rock floats; altered volcanic and clastic rocks
15-Jul-14	WPT117	611745	5963222	1515	Along slope with numerous talus rock floats mainly gossanous and/or silicified rocks
15-Jul-14	WPT118	611982	5962931	1576	Along slope with numerous talus rock floats mainly gossanous and/or silicified rocks. Highly gossanous and silicified rocks, orange to dark brown with black patches x-cut by vuggy quartz with strong limonite coatings; no fresh sulphides. Sample: 5592567
15-Jul-14	WPT119	612272	5962676	1619	Rock Outcrop: Sandstone to Siltstone, very fi grained; with strong limonite stains on fracture planes; no fresh pyrite
15-Jul-14	WPT120	612363	5962651	1611	Rock Outcrop: Silty Sandstone - same as at WPT119 with rare hairline and tight chl vnlts associated with specks of pyrite
15-Jul-14	WPT121	612641	5962601	1620	With significant volume of conglomerate floats; highly gossanous, brownish orange to dark brown; some lighter colored clasts are dacite porphyry with distinct qtz eyes; other clasts (pbl-cbl) are not readily recognizable rock types; sub rounded to sub-angular and mainly pbl to cbl size clasts.
15-Jul-14	WPT122	612843	5962545	1613	Along creek; most rock float boulders are granodiorite
15-Jul-14	WPT123	612850	5962479	1610	Rock Outcrop: Granodiorite (?), Pervasively silicified, weakly chl rock (indistinct rock type due to alteration); green to grey, with 7% pyrite disseminations. Sample 5592568
15-Jul-14	WPT124	612883	5962445	1614	Rock Outcrop: Indistinct rock type due to mod-str chl, weak to mod sil alteration; with 1-2% pyrite diss and occasional vnlts; with distinct <1mm chl vnlts (1%); strong limonite and hem as surface coatings associated with distinct metallic grey specularite hematite. Sample: 5592570
16-Jul-14	WPT125	595163	5955250	1566	Start point for Traverse 12. Helicopter landing site.
16-Jul-14	WPT126	594775	5955006	1496	Rock Outcrop: Conglomerate - Greenish grey, poorly sorted, silt to coarse sand matrix with sub-rounded to rounded to sub-angular, multi-lithic clasts (cream, gree to grey color); clasts are mainly pbl-cbl size; no distinct bedding; weak to mod but thin limonite stains on cracks and fracture planes; matrix is weak to mod sil'd in some sections

16-Jul-14	WPT127	594766	5955072	1495	Rock Outcrop: Massive Silica? or Chert (?) Lt grey to cream with weak to moderate limonite as surface coatings; no fresh sulphides; hard/competent rock and fine grained with occasional <1 mm x'talline quartz vnlts; pervasively sil'd rock appears to be intercalated with or intruding (?) conglomerate. Sample: 55922571
16-Jul-14	WPT128	594655	5955129	1494	Rock Outcrop: Conglomerate - same as at WPT120
16-Jul-14	WPT129	594274	5955283	1480	Rock Outcrop: Basaltic to andesitic flows; some sections with pbl-cbl size lithic fragments; grey andesite to dark grey basaltic units; fine grained; very rare pyrite specks; with localized magnetite as fine grained diss (up to 3%)
16-Jul-14	WPT130	593812	5955362	1486	Rock Outcrop: Basaltic Andesite - dark grey with pale green tinge; generally fine grained but also porphyritic in some sections; weakly fractured but strong cracks from freeze and thaw breakdown; with occasional epidote vnlts and strongly magnetic; slight to weak sil'd in some sections
16-Jul-14	WPT131	593712	5955218	1506	Rock Outcrop: Basalt - fine grained to amygdaloidal, grey to dark grey, with rounded edges resembling pillow structures; weak chl in matrix, weak epidote as vnlts (</= 5mm); with occasional hematite as smears/streaks on fracture planes; weak to mod magnetic (3% as diss)
16-Jul-14	WPT132	593767	5954857	1512	Rock Outcrop: Andesite - greenish grey, fine grained, sli to weakly chl, non-magnetic; occasional epidote vnlts and grain clusters; some sections are darker grey and basaltic; some sections are lithic with pbl size volcanic clasts
16-Jul-14	WPT133	593892	5954733	1536	Rock Outcrop: Andesitic Basalt -dark greenish grey, generally fine grained, sli-weakly chl, with weak limonite stains on fracture planes; weakly magnetic; some sections still with pillow structures.
16-Jul-14	WPT134	594017	5954649	1551	Rock Outcrop: Conglomerate - reddish brown and silt sand size matrix with mainly pbl-cbl size multi-lithic, and rounded to sub-rounded clasts; highly indurated and massive; matrix-supported; clasts are not distinct on greenish grey and weakly chl fresh cuts; no fresh sulphides noted.
16-Jul-14	WPT135	594075	5954572	1518	Rock Outcrop: Andesite - fine grained, greenish grey. Weakly fractured, weak chl in matrix; weak epidote as grain clusters or specks and rare vnlts; weakly magnetic
16-Jul-14	WPT136	594180	5954469	1497	Rock Outcrop: Conglomerate - same as at WPT135 but with intercalated conglomerate consisting of pbl-cbl size multi-lithic clasts
16-Jul-14	WPT137	594304	5954324	1470	Rock Outcrop: fine grained sandstone/siltstone, light greenish grey, sli to weak weathered, unoxidized with 2-3% fine grained magnetite diss in matrix.

16-Jul-14	WPT138	594499	5954276	1424	Rock Outcrop: Siltstone: greenish grey, no distinct bedding but with some recognizable grain lamination; non-magnetic and with occasional calcite as thin fracture fills.
16-Jul-14	WPT139	594730	5954175	1482	Rock Outcrop: Silica/pervasively sil'd rock / Chert (?); 8m-wide wall outcrop; hard and intact with strong limonite as brownish orange to black stains on surface, light grey to cream on fresh sections with very rare pyrite specks; no clear contact with immediate outcrops of siltstone/sandstone. Sample: 5592572.
16-Jul-14	WPT140	594812	5954115	1500	Rock Outcrop: Sandstone - light grey to lt brown; fine grained; highly fractured/broken with no distinct bedding attitude; weak to mod weathered with mod limonite as thin coatings on fracture planes; no fresh sulphides; non-magnetic.
17-Jul-14	WPT141	595159	5955246	1547	Start point of Traverse 13. Helicopter landing site.
17-Jul-14	WPT142	595330	5954860	1547	Rock Outcrop: Sandstone - fine grained, greenish grey, hi broken, non-magnetic; bedding: 320/75SW
17-Jul-14	WPT143	595366	5954796	1559	Rock Outcrop: Lithic Tuff - cream to lt grey, hard and highly indurated but mod to hi broken; fresh with weak limonite stains; with distinct granule to pbl size lithic fragments (B-20 Rock Specimen)
17-Jul-14	WPT144	595436	5954671	1558	Rock Outcrop: Sandstone - same as at WPT142; bedding: 350/80NE. +50m to the east: wall outcrop of Conglomerate - poorly sorted; lt grey to brown, fine to coarse grained sand matrix with pbl-bldr, sub rounded to rounded, multi-lithic clasts; with minor silt and sandstone interbeds; bedding: 345/70NE
17-Jul-14	WPT145	595505	5954516	1549	Rock Outcrop: Sandstone and Conglomerate - same as at WPT144; Sandstone is more lt brown in color and more quartzose
17-Jul-14	WPT146	595622	5954401	1566	Rock Outcrop: Conglomerate - grey to brown due to weak-mod oxidation; generally with pbl - cbl size multi-lithic clasts; clast supported; matrix is generally very coarse grained to gravelly; bedding: 320/65SW; with minor interbeds (<30cm thick) of very coarse grained sandstone. Conglomerate rock floats which are highly oxidized contain highly pyritic clasts.
17-Jul-14	WPT147	595752	5954075	1566	Rock Outcrop: 5m-wide Quartz Monzonite dyke intruding shale; grey with pinkish tinge, coarse grained, fresh, weakly magnetic and no sulphides; sharply cutting shale/mudstone which is grey to dk grey, variably sil'd going into contact with intrusive, and highly indurated.
17-Jul-14	WPT148	595820	5954037	1579	Rock Outcrop: Conglomerate - reddish brown to maroon, fine to coarse grained sand matrix with pbl-bldr, multi-lithic clasts; no distinct bedding.

17-Jul-14	WPT149	595911	5954053	1616	Rock Outcrop: Andesite (?) -or Granodiorite near contact with wallt rock(?); greenish grey, sli-weak chl, porphyritic with distinct plag and occasional hblende phenocrysts; moderately magnetic (2-3% magnetite diss); no sulphides, tuffaceous in parts (B-22 Rock Specimen)
17-Jul-14	WPT150	595961	5954013	1631	Rock Outcrop: Andesite - greenish grey, fi grained, hi fractured/broken, slightly chl and weakly sil'd in parts, s;light to weak oxidized; no sulphides and non-magnetic.
17-Jul-14	WPT151	596035	5953938	1640	Rock Outcrop: Andesite - same as at WPT150; J1: 20/60SE
17-Jul-14	WPT152	596112	5953873	1648	Rock Outcrop: Andesite (?) - fi grained, lt grey to cream; hi cracked/fractured; fragmental; pervasive silicification with weak limonite stains; no fresh sulphides.
17-Jul-14	WPT153	596219	5953914	1707	Rock Outcrop: Andesite - greenish grey, fi grained, sli-weak chl, sli sil'd on sections; non-magnetic; weak limonite as surf coatings; no fresh sulphides.
17-Jul-14	WPT154	596364	5954067	1786	Rock Outcrop: Andesite (?) - lt grey to cream, weak to mod limonite surface stains, looks bleached rock; pervasively sil'd, hard but hi broken; some sections with distinct x'talline quartz eyes (dacite porphyry? rhyolite?)
17-Jul-14	WPT155	596448	5954054	1801	Rock Outcrop: series of sil'd rock/dacitic and highly indurated shale/siltstone; occurring as dykes sharply cutting andesite/clastics; fine-grained, weak chl wall rocks
17-Jul-14	WPT156	596533	5954033	1811	Rock Outcrop: (from WPT 154 to 156 are the same); some sections look cherty, fine-grained, massive and hard (B-23 Rock Specimen)
17-Jul-14	WPT157	596637	5953979	1809	Rock Outcrop: Andesite - dark grey with green tinge, fine grained, highly broken, sli chl, no sulphides, non-magnetic, sli-weak sil'd in parts; with weak limonite stains mainly along fracture planes.
17-Jul-14	WPT158	596840	5953935	1827	Rock Outcrop: Andesite - same as at WPT157.
17-Jul-14	WPT159	596907	5953810	1829	Rock Outcrop: Andesite - same as at WPT 157 but with occasional porphyritic sections; very rare fresh pyrite specks; with intercalations of lighter greenish grey dacite porphyry (?); with distinct hblende, plagio abd qtz eyes set in fi grained matrix; no sulphides; non-magnetic.
18-Jul-14	WPT160	593776	5956530	1367	Start point; Helicopter landing site. +50m NW - Rock Outcrop: Andesite, fine grained, greenish grey, weakly fractured, partly porphyritic, sli-weak chl/sil'd, rare py specks, non-magnetic
18-Jul-14	WPT161	593652	5956826	1340	Rock Outcrop: Andesite, brown to grey/black, weakly oxidized/weathered
18-Jul-14	WPT162	593504	5956893	1330	Rock Outcrop: Andesite, same as at WPT161, massive.

18-Jul-14	WPT163	593313	5956831	1350	Rock Outcrop: Andesite, fine grained to porphyritic, greenish grey, massive to weakly fractured, weak chl with occasional vnlts/blebs of epidote; very rare pyrite specks.
18-Jul-14	WPT164	593324	5956941	1332	Rock Outcrop: Andesite, outcrop along floor of creek, same as at WPT 163.
18-Jul-14	WPT165	593767	5957089	1343	Rock Outcrop: Andesite, greenish grey, fine-grained to porphyritic, weakly chl, slight sil'd on sections, with very rare pyrite asw coarse grained specks, non-magnetic.
18-Jul-14	WPT166	593899	5957054	1310	Rock Outcrop: Siltstone/Sandstone interbeds along river wall; lt greenish grey to dark grey, mod to thinly bedded, weakly magnetic, no fresh sulphides, with localized strong limonite stains on bedding/frature planes; bedding: 20/65SE.
18-Jul-14	WPT167	594172	5957166	1385	Rock Outcrop: Sandstone, li greenish grey to cream; fine grained, thickly bedded/massive and weakly fractured, non-magnetic, no distinct bedding attitude.
18-Jul-14	WPT168	594447	5957319	1435	Rock Outcrop: Sandstone, fine-grained, grey-lt grey, weakly fractured, no distinct bedding
18-Jul-14	WPT169	594490	5957308	1442	Rock Outcrop: same as at WPT168 but with distinct bedding planes; bedding: 30/40SE
18-Jul-14	WPT170	594689	5957165	1475	Rock Outcrop: Shale/Mudstone, dark grey to black, thinly bedded with minor siltstone interbeds; bedding: 10/30SE.
20-Jul-14	WPT171	613765	5962836	1807	Rock Outcrop: Quartz Monzonite Porphyry, with up to 1.5cm diameter plag phenos, weakly weathered/oxidized, with <1% coarse pyrite specks, moderately magnetic intergrown (?) or replacing (?) biotite.
20-Jul-14	WPT172	613775	5962818	1797	Rock Outcrop: Quartz Diorite - coarse grained, lt grey, <1% pyrite specks, weakly oxidized, hi fractured/broken, moderately magnetic (B-7 Rock Specimen).
20-Jul-14	WPT173	613584	5962630	1811	Rock Float: Diorite Porphyry (?), grey, fi-med grained matrix with distinct white plag (</= 5mm) and smaller size hblende and biotite (</=2mm) phenos; weak to mod magnetic (B-24 Rock Specimen)
20-Jul-14	WPT174	613533	5962540	1811	Helicopter landing spot. Start point of Traverse 15A.
20-Jul-14	WPT175	598602	5953440	1512	Helicopter landing site and start point for Traverse 15B. Rock Outcrop: Basaltic Andesite, greenish grey, fine grained, massive-weakly fractured, sli-weakly chl, with occasional epidote vnlts; weak to mod magnetic.
20-Jul-14	WPT176	598665	5953413	1507	Rock Outcrop: Basalt, grey to dark grey, amygdaloidal, weak chl/epi with some pillow structures; distinct black to greenish black amygdule's; occasional deep red hematite as fracture fills; moderately magnetic; epidote as vnlts or blebs.

20-Jul-14	WPT177	598848	5953403	1467	Rock Outcrop: Andesite - grey to greenish grey, fi grained, hard but hi fractured, slightly magnetic, sli chl; sli epi/zeol as thin vnlts/fracture fills.
20-Jul-14	WPT178	599111	5953242	1440	Rock Outcrop: Andesite - grey to dark grey, fine grained, massive to weakly fract, mod-hi magnetic, weak hematite/limonite as thin fracture fills.
20-Jul-14	WPT179	599291	5953381	1487	Rock Outcrop: Andesite - greenish grey, fine grained, massive-weakly fract, slightly magnetic, weak hem/lim stains on fractures.
20-Jul-14	WPT180	599342	5953430	1493	Rock Outcrop: Mud/Siltstone/Sandstone interbeds, </= 10cm beds/laminations, greenish grey to cream, hard and highly indurated; bedding: 320/40NE
20-Jul-14	WPT181	599379	5953455	1499	Rock Outcrop: Andesite - same as at WPT179.
20-Jul-14	WPT182	599523	5953499	1460	Rock Outcrop: Andesite - same as at WPT179.
20-Jul-14	WPT183	599376	5953621	1448	Rock Outcrop: Andesite - greenish grey, fine grained, sli chl, weak sil'd, sli magnetic, no sulphides.
20-Jul-14	WPT184	599153	5953763	1484	Rock Outcrop: Sandstone, lt greenish grey to cream, fi grained, sli limonite stains on fracture planes; no distinct bedding attitude but with occasional distinct grain laminations.
20-Jul-14	WPT185	599056	5953797	1519	Rock Outcrop: Siltstone - greenish grey wit weak limonite stains on fractures, highly broken/fragmented, with occasional hair-line infills of calcite on fractures, highly indurated and appears like andesite in some sections.
20-Jul-14	WPT186	598971	5953842	1543	Rock Outcrop: Andesite (?) Rhyolite (?), lt grey to cream, fi grained, hi sil'd, with rare coarse grained pyrite specks; non-magnetic, hi broken; weak limonite as stains on fractures and cracks (B-25 Rock Specimen).
20-Jul-14	WPT187	598900	5953902	1564	Rock Outcrop: Andesite - greenish grey, fine grained, generally massive, slightly sil'd/chl; mod to hi magnetic; no fresh sulphides, weak limonite stains.
20-Jul-14	WPT188	598852	5953832	1574	Rock Outcrop: Basalt - fi grained to amygdaloidal, dark greenish grey, sli-weak sil/chl, weak epidote as vnlts/blebs; slightly magnetic. +50m upslope: Rock Outcrop: Andesite - tuffaceous, lt grey to cream, some weathered sections are porphyritic with distinct clayey plag phenos; non-magnetic, no sulphides.
20-Jul-14	WPT189	598740	5953752	1547	Rock Outcrop: Andesite - greenish grey, fine grained, non-magnetic sli-weak chl, no sulphides.
20-Jul-14	WPT190	598464	5953623	1518	Last station of Traverse15B. In the whole traverse, granodiorite boulder floats consist about 5-10% of the total floats; coarse grained, unaltered and unmineralized.

20-Jul-14	Bergette	613594	5962718	1816	
21-Jul-14	WPT191	596064	5958154	1456	Start of Traverse 16A along cirque.
21-Jul-14	WPT192	596210	5958389	1573	Rock Outcrop: Andesitic Tuff, lt grey to lt brown, fi grained to porpyritic/lithic, hi broken, sli-weak oxidized on surface, non-magnetic.
21-Jul-14	WPT193	596297	5958457	1644	Rock Outcrop: Andesitic Tuff - lt grey to brown, well bedded, with sli-weak limonite stains on fracture or bedding planes, highly indurated, non-magnetic; bedding: 30/40NW
21-Jul-14	WPT194	596302	5958437	1649	Helicopter pick-up point. Discontinued mapping work due to thick fog.
21-Jul-14	WPT195	592964	5960868	1167	Helicopter landing site. Start point for Traverse 16B.
21-Jul-14	WPT196	592818	5960877	1211	Rock Outcrop: Andesite - tuffaceous, greenish grey, fi grained, weakly sil/chl, with occasional epi vnlts, weak-mod fractured, non-magnetic, no sulphides; J1: 20/65NW, J2: 310/40NE.
21-Jul-14	WPT197	592948	5960856	1173	End of Traverse16B. Discontinued mapping due to thick vegetation cover and steep slopes.
21-Jul-14	WPT198	595187	5958047	1486	Start Point of Traverse 16C. Rock Outcrop: Sandstone - lt grey to cream, fine grained, no distinct bedding.
21-Jul-14	WPT199	595178	5958190	1471	Rock Outcrop: Sandstone - same as at WPT198; bedding: 50/30SE
21-Jul-14	WPT200	595119	5958339	1448	Rock Outcrop: Sandstone - greenish grey, fi grained, well-bedded and hi broken, readily splits along bedding and fracture planes; bedding: 45/25SE.
21-Jul-14	WPT201	595183	5958531	1429	Rock Outcrop: Sandstone - same as at WPT200
21-Jul-14	WPT202	595269	5958545	1413	Rock Outcrop: Sandstone - green to greyish green, fine grained; no distinct bedding and appears massive, well-sorted.
21-Jul-14	WPT203	595346	5958450	1412	Rock Outcrop: Sandstone, same as at WPT202.
21-Jul-14	WPT204	595405	5958365	1428	Rock Outcrop: Sandstone, creek floor outcrop, same as at WPT202.
21-Jul-14	WPT205	595460	5958258	1445	Rock Outcrop: Sandstone - greenish grey, very fine grained with some sections being silty; no distinct bedding.
21-Jul-14	WPT206	595415	5958199	1460	Rock Outcrop: Sandstone - same as at WPT201; some sections look banded with cream to dark grey laminations.
21-Jul-14	WPT207	595276	5958129	1465	Rock Outcrop: Sandstone - same as at WPT198, no distinct bedding, appears massive and hi indurated. Last station of Traverse16C.

22-Jul-14	WPT208A	593410	5962431	1410	
23-Jul-14	WPT209A	615547	5967845	1180	
23-Jul-14	WPT210A	615498	5967799	1188	
23-Jul-14	WPT211A	613517	5973951	1712	
23-Jul-14	WPTA09	615563	5967979	1119	
23-Jul-14	WPTAbc	615629	5968195	1094	
24-Jul-14	WPT208	614786	5967227	1119	Start point of traverse along logging road.
24-Jul-14	WPT209	615016	5967469	1159	Waypoint along logging road. Rock floats from WPT 208 to 209 about 80% Granodiorite, coarse-grained, unaltered.
24-Jul-14	WPT210	615363	5967494	1190	No outcrop but increase in fine-grained to porphyritic andesite floats (50%) and the rest still granodiorite and minor clastics.
24-Jul-14	WPT211	615245	5967785	1194	1m X 2m. Rock float, Granodiorite?, white to cream matrix with distinct x'talline quartz eyes and brown to black mafic grains; non-magnetic. (B-27 Rock Specimen). All other floats are granodiorite, grey to cream, med to coarse grained, weakly weathered/oxidized; moderately magnetic but no sulphides. (B-26 Rock Specimen).
24-Jul-14	WPT212	615282	5967814	1204	Rock Outcrop: Granodiorite?, cream with pinkish tinge matrix with 10-20% mafic grains (biotite/hblende?); with 3-5% quartz eyes as granule size and rounded grains; non-magnetic; mafic grains are light greenish grey. Sample: 5592573.
24-Jul-14	WPT213	615040	5968119	1114	No outcrop; edge of reforestation area.
24-Jul-14	WPT214	614319	5967903	1112	No outcrop; within forest area.
24-Jul-14	WPT215	614516	5967749	1125	No outcrop: rock floats 75% clastics (conglo, sand and silt stone); 15% andesitic volcanics; 10% coarse-grained, unaltered, slightly magnetic granodiorite.
24-Jul-14	WPT216	614863	5967607	1156	Start of logging road; overgrown and cut along reforestation area.
24-Jul-14	WPT217	615090	5967376	1168	Rock Outcrop: Granodiorite; along logging road cut; light grey to cream to pink; coarse grained, weakly weathered, unaltered, slightly magnetic and with no sulphides. (B-28 Rock Specimen).

24-Jul-14	WPT218	615133	5967105	1137	Rock Outcrop: Granodiorite?, logging road cut outcrop, pinkish cream color, porphyritic with distinct granule-size rounded-sub-rounded quartz eye phenocrysts; 5-10% oxidized and greenish grey, finer grained mafics; same as at WPT 212. (B-29 rock Specimen). Photo of outcrop taken.
24-Jul-14	WPT219	614044	5967278	1144	New traverse. Start point along logging road.
24-Jul-14	WPT220	613423	5966591	1157	No outcrop. Within forest, very rare rock floats of volcanics, clastics and granodiorite.
24-Jul-14	WPT221	613497	5966561	1157	Small creek; all boulder floats are greenish grey and fi-grained sandstone.
24-Jul-14	WPT222	614011	5967188	1131	Last station of traverse within bushes/forest area.
25-Jul-14	WPT223	596309	5958425	1641	Start point of traverse along ridge top. Rock outcrop: Tuffaceous Andesite; light greenish grey, hi broken with occasional glassy to black lithic fragments; weak and thin limonite/hematite as surface stains; non-magnetic. Some sections with purplish matrix and grey to green lithic fragments.
25-Jul-14	WPT224	596402	5958198	1657	Rock Outcrop: Andesite, same as at WPT223 but with variable silicification close to narrow </= 3m-wide dacitic dykes that sharply cut andesitic hosts; dykes are cream to lt grey with distinct feldspars and quartz eyes; occasional mafic phenocrysts.
25-Jul-14	WPT225	596442	5958100	1675	Rock Outcrop: Tuff?, maroon to purple and highly indurated matrix with grey to green and glassy lithic fragments; weak limonite/hematite as surface coatings.
25-Jul-14	WPT226	596464	5958051	1689	Rock Outcrop: Diorite; big boulders atop ridge and most probably outcrops; medium to coarse grained, greenish grey; fresh with slightly chl matrix; no sulphides; non-magnetic. (B-30 Rock Specimen).
25-Jul-14	WPT227	596468	5958015	1694	Rock Outcrop: Tuff? - same as at WPT225
25-Jul-14	WPT228	596493	5957981	1694	Rock Outcrop: sharp contact between purple-red tuff and light grey to cream strongly silicified rock (B-31 Rock Specimen); massive to rubbly with no other component except for fine-grained silica; some sections with distinct pebble-cobble, poorly sorted clasts (wacke?). (B-31 Rock Specimen). Weathering leaves isolated pillars of rock which are broken and crumbly. These units are relatively more oxidized than tuff and andesitic units.
25-Jul-14	WPT229	596521	5957928	1708	Rock Outcrop: Tuff?, andesitic, brown to grey, bedded but hi indurated; mod toi highly silicified, hard and with weak limonite surface coatings; bedding: 70/60SE.

25-Jul-14	WPT230	596574	5957885	1731	Rock Outcrop: Andesite - greenish grey, porphyritic, hi fractured and broken with columnar jointing patterns; with distinct plag phenocrysts; no sulphides; non-magnetic; appears basaltic and vesicular on some sections.
25-Jul-14	WPT231	596630	5957807	1761	Rock Outcrop: same as at WPT 229. (B-32 Rock Specimen). With very distinct lamination intercalated with lithic and andesitic li grey/green tuff. Some sections as brown to orange sandy and silica-rich tuff. Some appears cherty and banded.
25-Jul-14	WPT232	596632	5957712	1758	Rock Outcrop: same as at WPT 231. With some rare specks of coarse grained pyrite.
25-Jul-14	WPT233	596622	5957571	1758	Rock Outcrop: vertical wall outcrop; same as at WPT 232.
25-Jul-14	WPT234	596544	5957427	1692	Rock outcrop: same as at WPT 232. From WPT 231 to 234 - same rock type along continuous steep wall outcrops and into ridge tops.
25-Jul-14	WPT235	596538	5957402	1688	Rock Outcrop: Diorite: grey, med to coarse grained; no sulphides; weak to moderately magnetic; as fi grained disseminations (2%). Weakly fractured to massive with distinct hblende and biotite grains. No clear contact with tuffaceous walls. (B-33 Rock Specimen)
25-Jul-14	WPT236	596533	5957388	1684	Rock Outcrop: Immediate wall of Diorite dyke; Tuff/Andesite?; lt grey, pervasively sil'd with very strong limonite coatings; no fresh sulphides but with limonite specks and rare thin vnlts . Sample 5592574.
25-Jul-14	WPT237	596483	5957335	1670	Rock Outcrop: same as at WPT236 but finer grained due to cooled margins; with some distinct grey and fi-grained andesitic tuff inclusions (</= 2m diameter).
25-Jul-14	WPT238	596355	5957144	1692	Rock Outcrop: Andesitic Lithic Volcanics - dark grey matrix, weakly sil'd, with distinct poorly sorted granule to pebble size grey silica and dark grey to black rock fragments; massive, slightly oxidized on surface and non-magnetic; some sections appear as pbl agglomerate.
25-Jul-14	WPT239	596269	5957161	1656	Rock Outcrop: Siltstone - lt grey with green tinge, highly indurated; well-laminated; bedding: 70/50SE; interbedded with maroon silty shale.
25-Jul-14	WPT240	596110	5957271	1614	Rock Outcrop: Shale - dark grey, hi fissile and hi indurated; bedding: 20/40SE; with thin but very strong brownish orange limonite stains along bedding and fracture planes; with occasional white quartz as thin fracture/bedding fill.
25-Jul-14	WPT241	596084	5957202	1648	Rock Outcrop: Sandstone - (10-15m bed) in between dark grey shale; light brown, med grained; non-magnetic.
25-Jul-14	WPT242	596046	5957164	1670	Rock Outcrop: Shale - same as at WPT 240 but very thinly bedded and breaks in platy aggregates; hi shattered with minor interbedded lt grey and fi grained sandstone and/or siltstone.

25-Jul-14	WPT243	595915	5957228	1678	Rock Outcrop: Diorite - 10m-wide sill intruding sand/siltstone as greenish grey and non-magnetic interbeds; diorite is cream to lt brown, with 1% pyrite disseminations; weakly oxidized on surface; bedding of sand/siltstone: 320/60SW.
25-Jul-14	WPT244	595880	5957296	1704	Rock Outcrop: Siltstone - lt to dark grey, hi fragmented; thinly bedded, str Fe oxide stains on bedding and fracture planes; non-magnetic; grades into fi grained sandstone; platy and hi fragmented.
25-Jul-14	WPT245	595812	5957405	1723	Rock Outcrop: Sandstone - lt brown to lt grey, fi grained, hi broken/fractured; weak limonite as surface coatings.
25-Jul-14	WPT246	595786	5957537	1699	Rock Outcrop: Sandstone - same as at WPT 245 with minor dark grey, more thinly bedded shaly siltstone.
25-Jul-14	WPT247	595765	5957623	1687	Rock Outcrop: Sandstone/Shale interbeds - </=50 cm sand and </= 30cm thinly laminated dark grey silty shale. Sandstone is lt brown to grey and fi grained. Bedding: 20/70NW. Photo taken of outcrop (looking NE).
25-Jul-14	WPT248	595661	5957740	1617	Rock Outcrop: Sandstone - lt greenish grey, fi grained, massive and thickly bedded; hi indurated; breaks in fragments with sharp edges.
25-Jul-14	WPT249	595605	5957741	1589	Rock Outcrop: Sandstone- same as at WPT 248.
25-Jul-14	WPT250	595508	5957726	1550	Rock Outcrop: Sandstone - same as at WPT 248. Last station of traverse.
26-Jul-14	WPT251	619857	5969611	1243	Start point of traverse. Helicopter landing site in swampy area.
26-Jul-14	WPT252	619790	5969808	1269	Rock Outcrop: Andesite - generally maroon to purple to lt grey; fi grained porphyry, massive wo weakly fractured, slightly chl mafic phenocrysts; non-magnetic in reddish more weathered sections but mod to hi magnetic in grey, fi-grained and fresher sections.
26-Jul-14	WPT253	619806	5969936	1283	Rock Outcrop: Andesite - same as at WPT 252 but with some tuffaceous sections.
26-Jul-14	WPT254	619880	5970020	1285	Rock Outcrop: Andesite - same as at WPT 252 but mainly reddish/maroon and looks like red mud/siltstone. Start occurrence of granodiorite floats (5% of floats and </= 30 cm diameter size); coarse grained, fresh and non-magnetic.
26-Jul-14	WPT255	619906	5970018	1284	Rock Outcrop: Andesite - maroon to green/grey; weakly chl, weakly magnetic; some sections are agglomerate with pebble size dark grey to brown clasts (B-34 Rock specimen). With occasional blebs of epidote and weak hematite stains on fractures.
26-Jul-14	WPT256	619961	5970055	1270	Rock Outcrop: same as at WPT 255; some sections appear like lithic tuff.
26-Jul-	WPT257	620129	5970039	1231	Rock Outcrop: same as at WPT 255; with prominent fracture set:

14					345/70NE.
26-Jul-14	WPT258	620775	5969985	1146	No Outcrop: within forest area.
26-Jul-14	WPT259	620908	5969941	1120	No Outcrop: clearing/logged-over area.
26-Jul-14	WPT260	621189	5969911	1078	No Outcrop: logging road.
26-Jul-14	WPT261	621115	5969349	1054	No Outcrop: End of logging road.
26-Jul-14	WPT262	621154	5969038	1037	No Outcrop: another logging road. Last station of Traverse 19A.
26-Jul-14	WPT263	621155	5969036	1037	No Outcrop: start point of Traverse19B.
26-Jul-14	WPT264	620831	5969164	1085	Rock Outcrop: Andesite - greenish grey, massive, fi grained, weakly fractured, weakly chl, slightly sil'd; weak magnetic, no sulphides, slightly oxidized on fracture planes. Last station of Traverse19B.

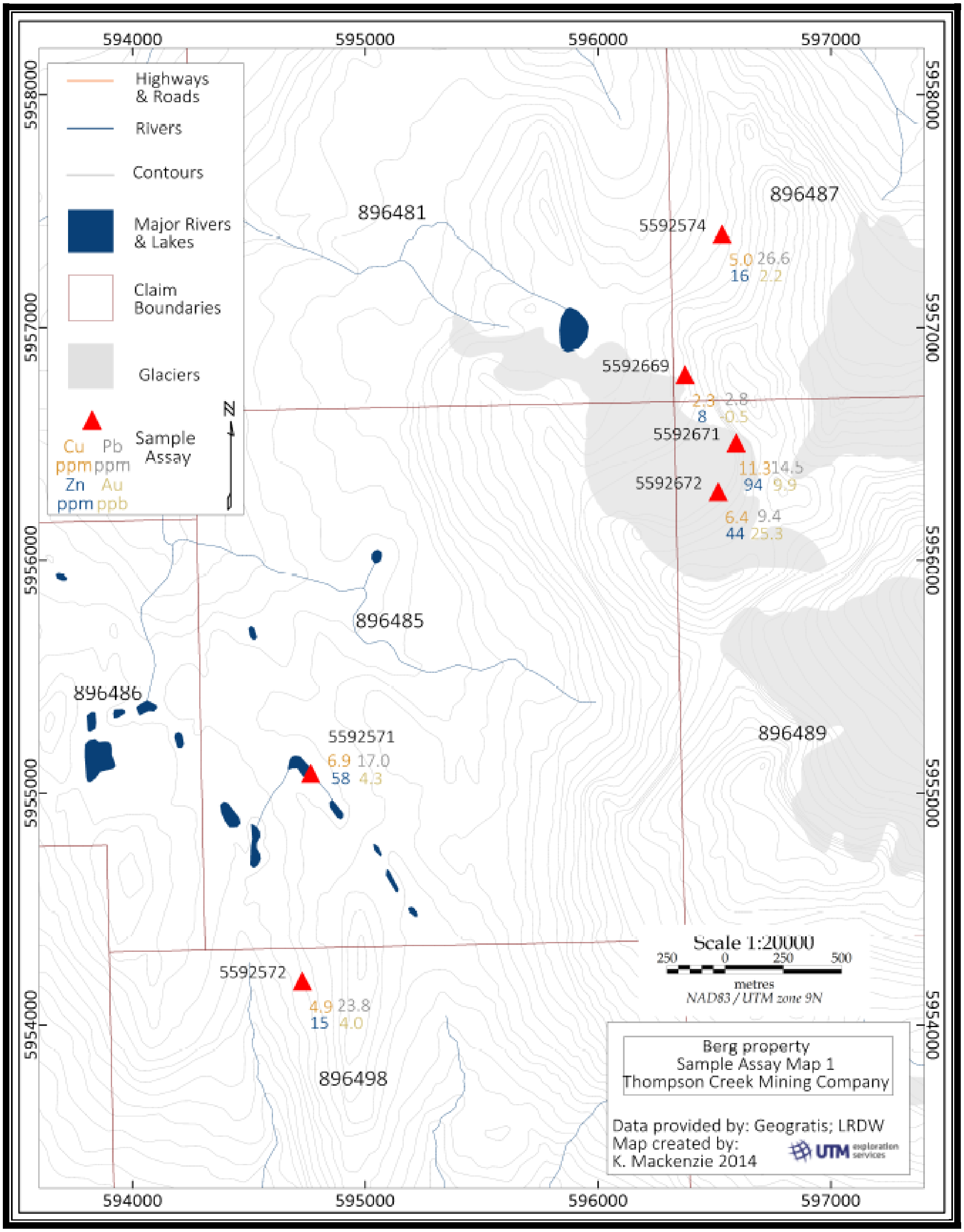

Figure 6. Rock Sample Location Map.

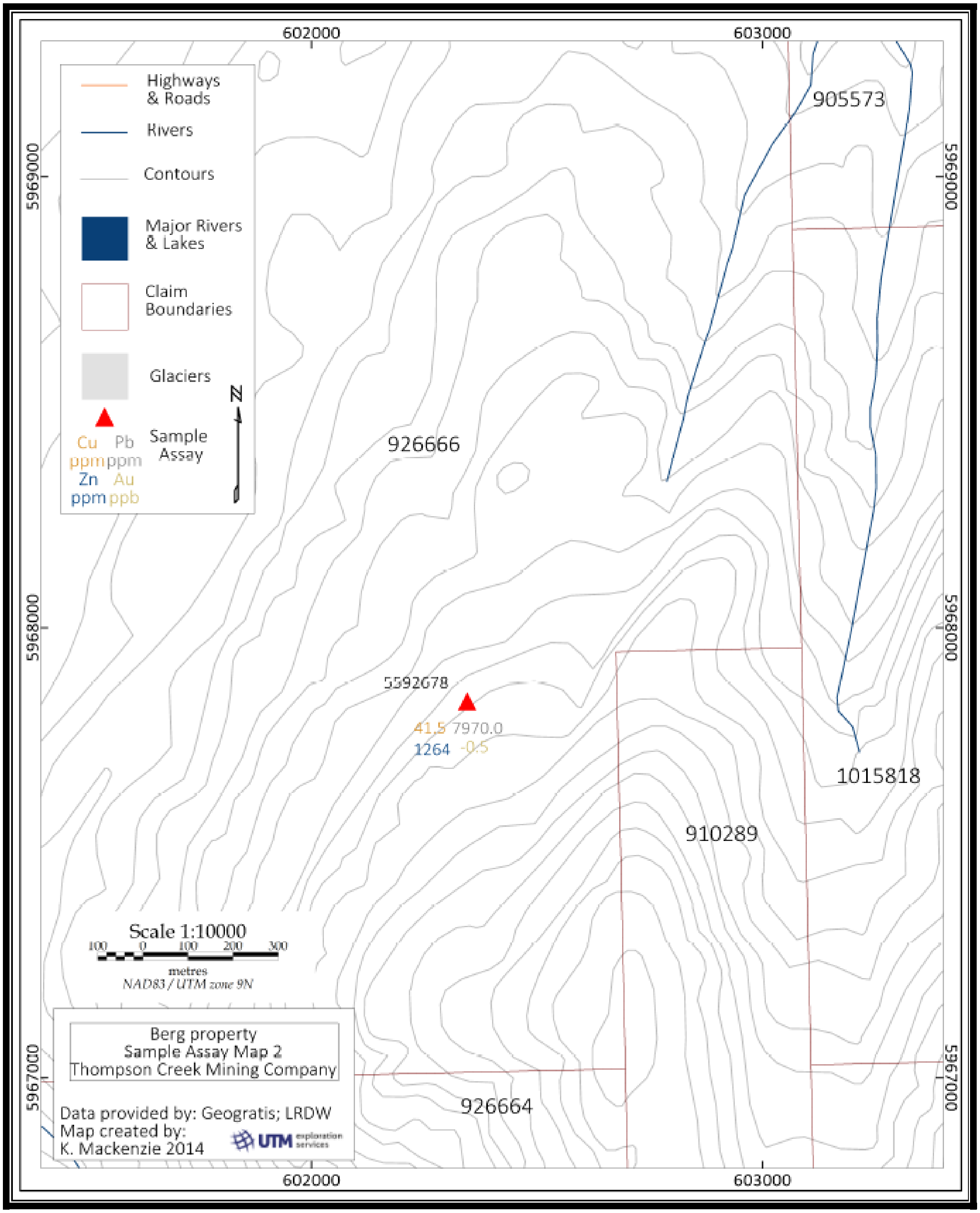

Figure 7. Rock Sample Location Map.

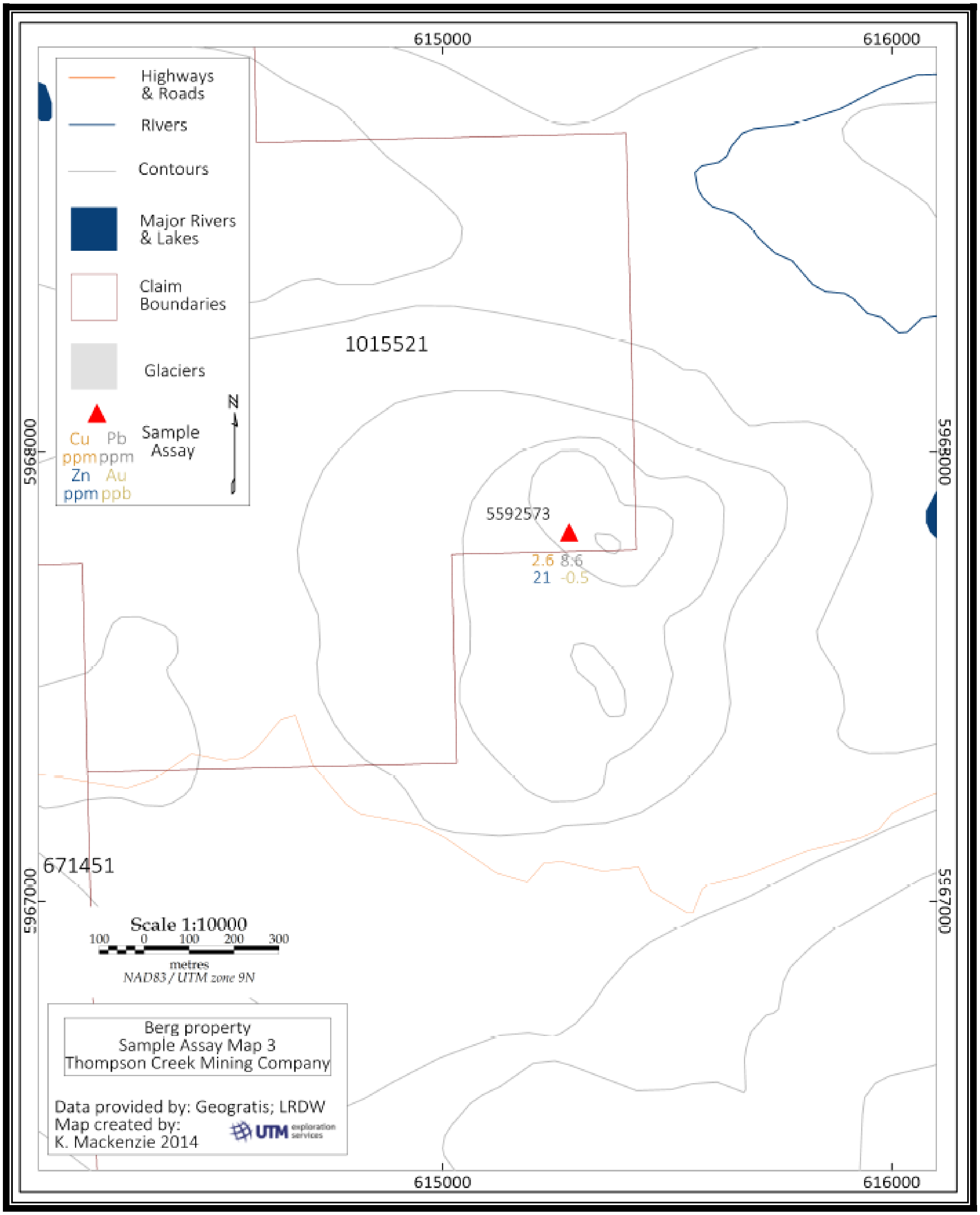

Figure 8. Rock Sample Location Map.

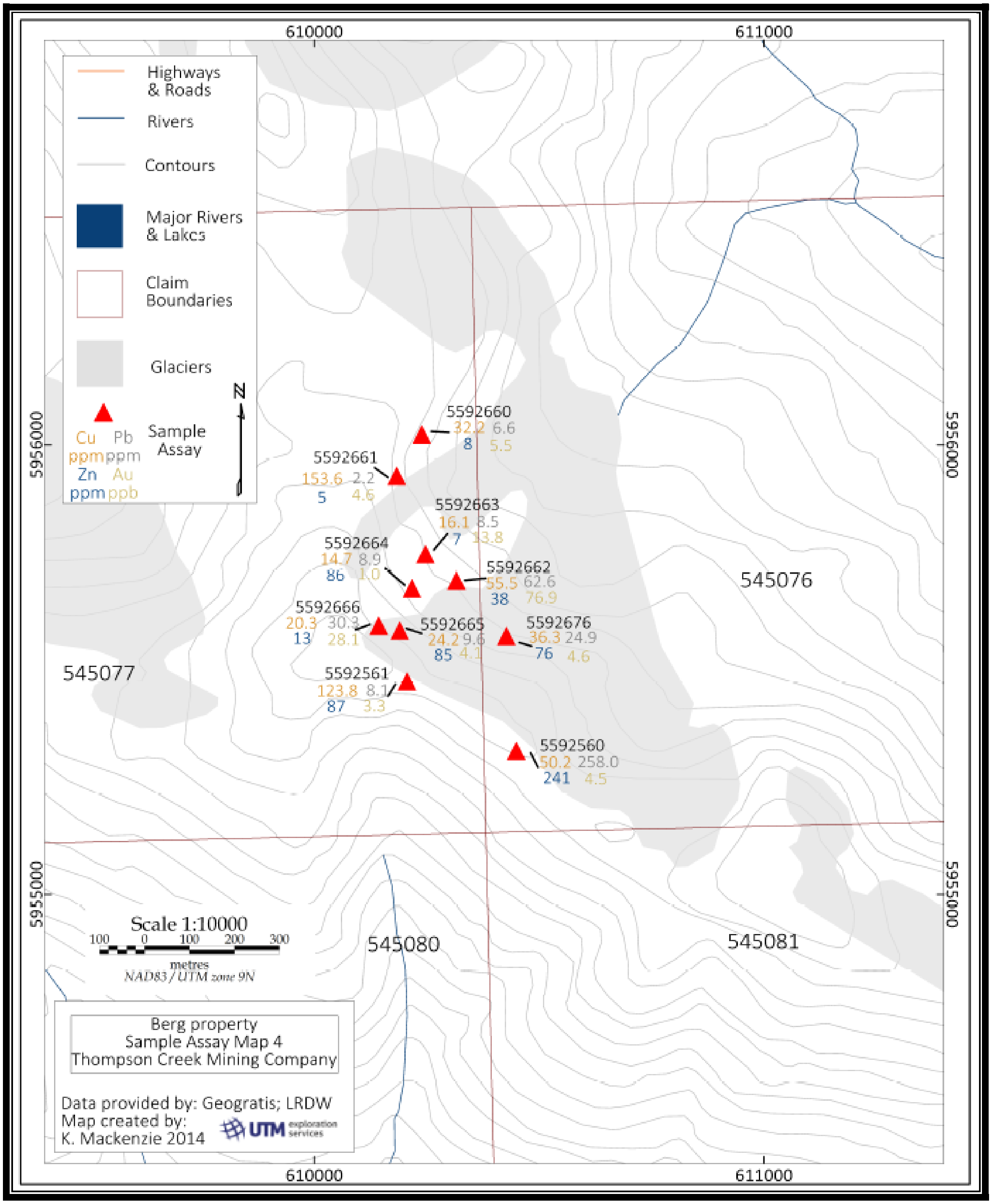

Figure 9. Rock Sample Location Map.

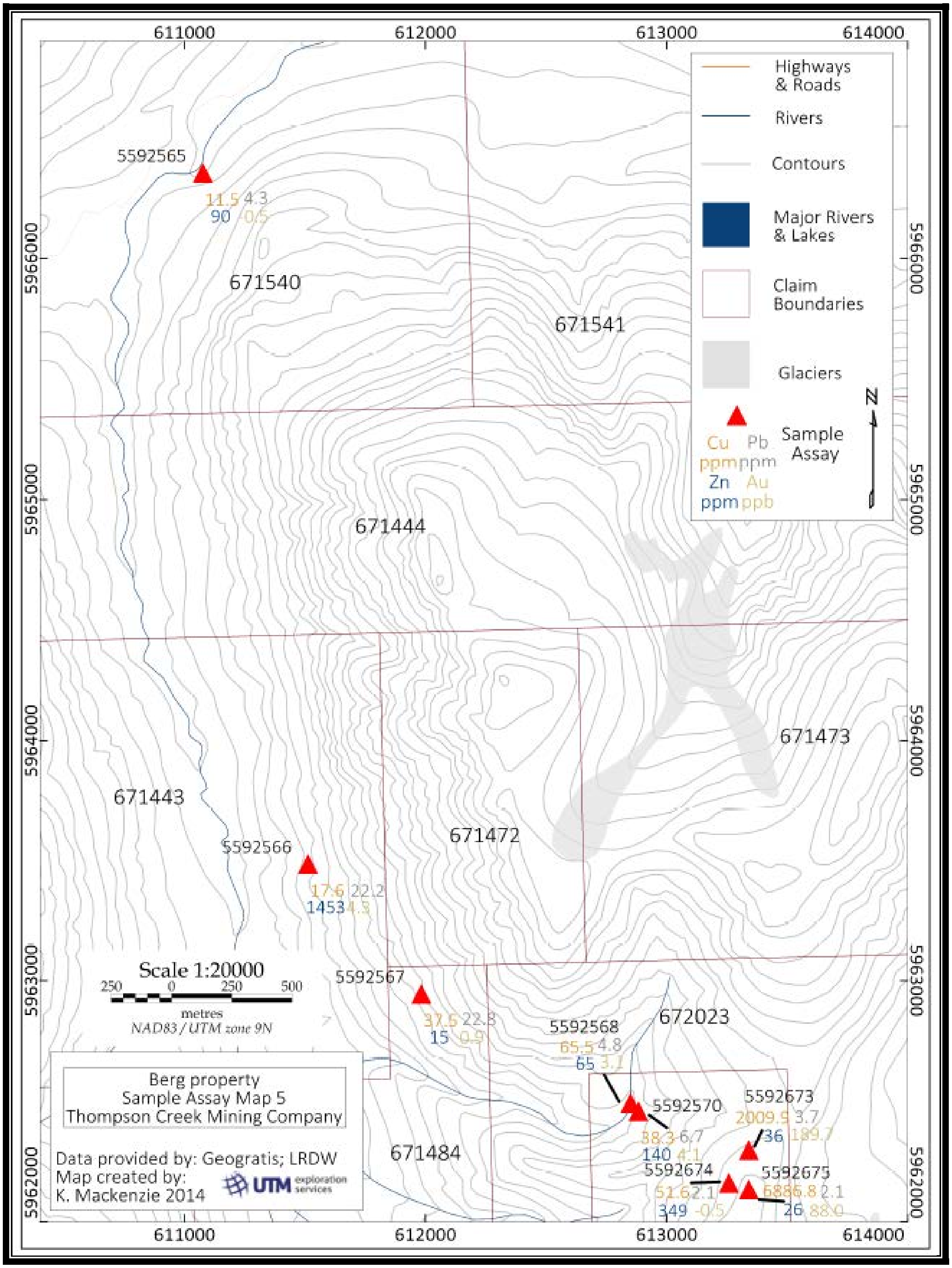

Figure 10. Rock Sample Location Map.

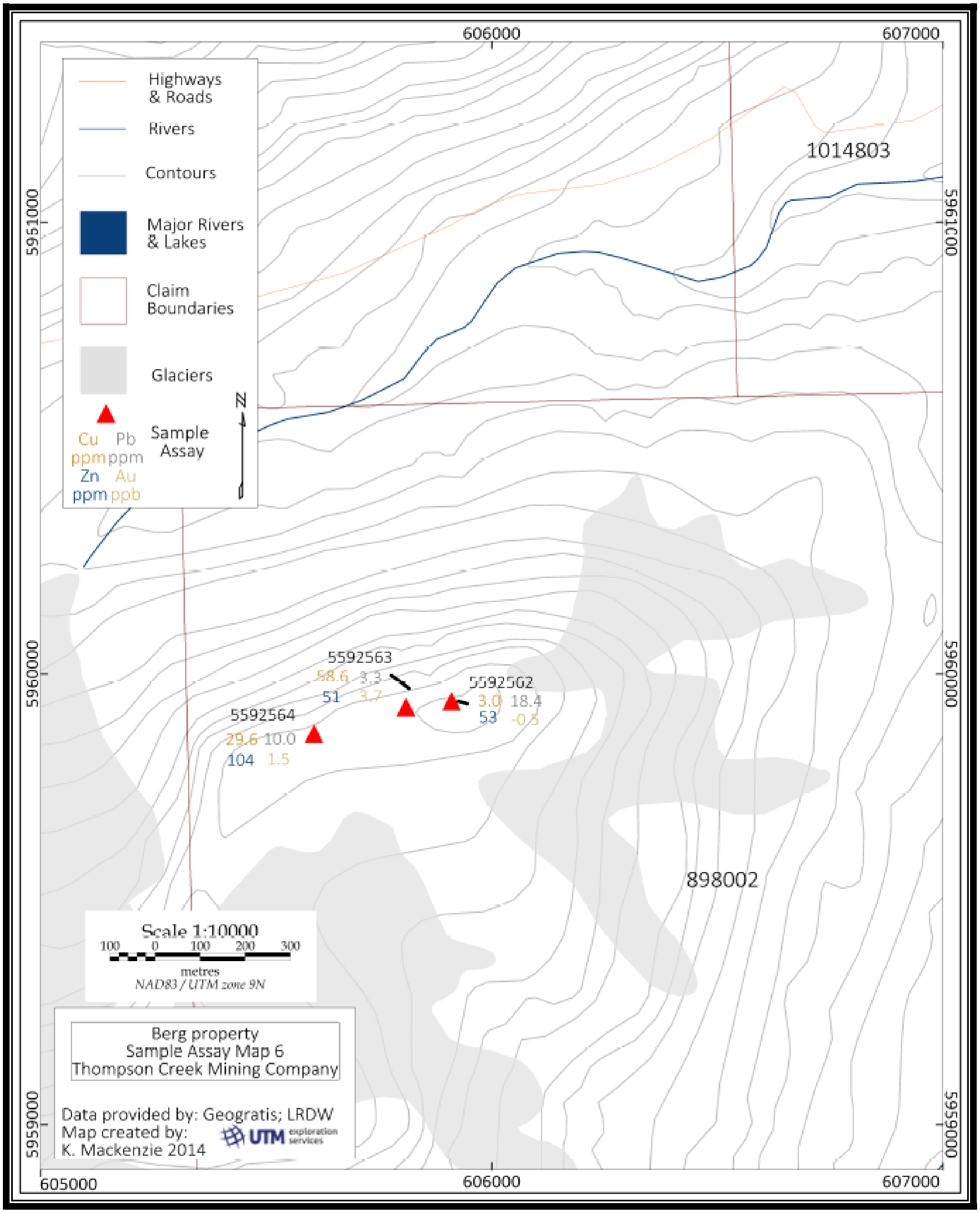

Figure 11. Rock Sample Location Map.

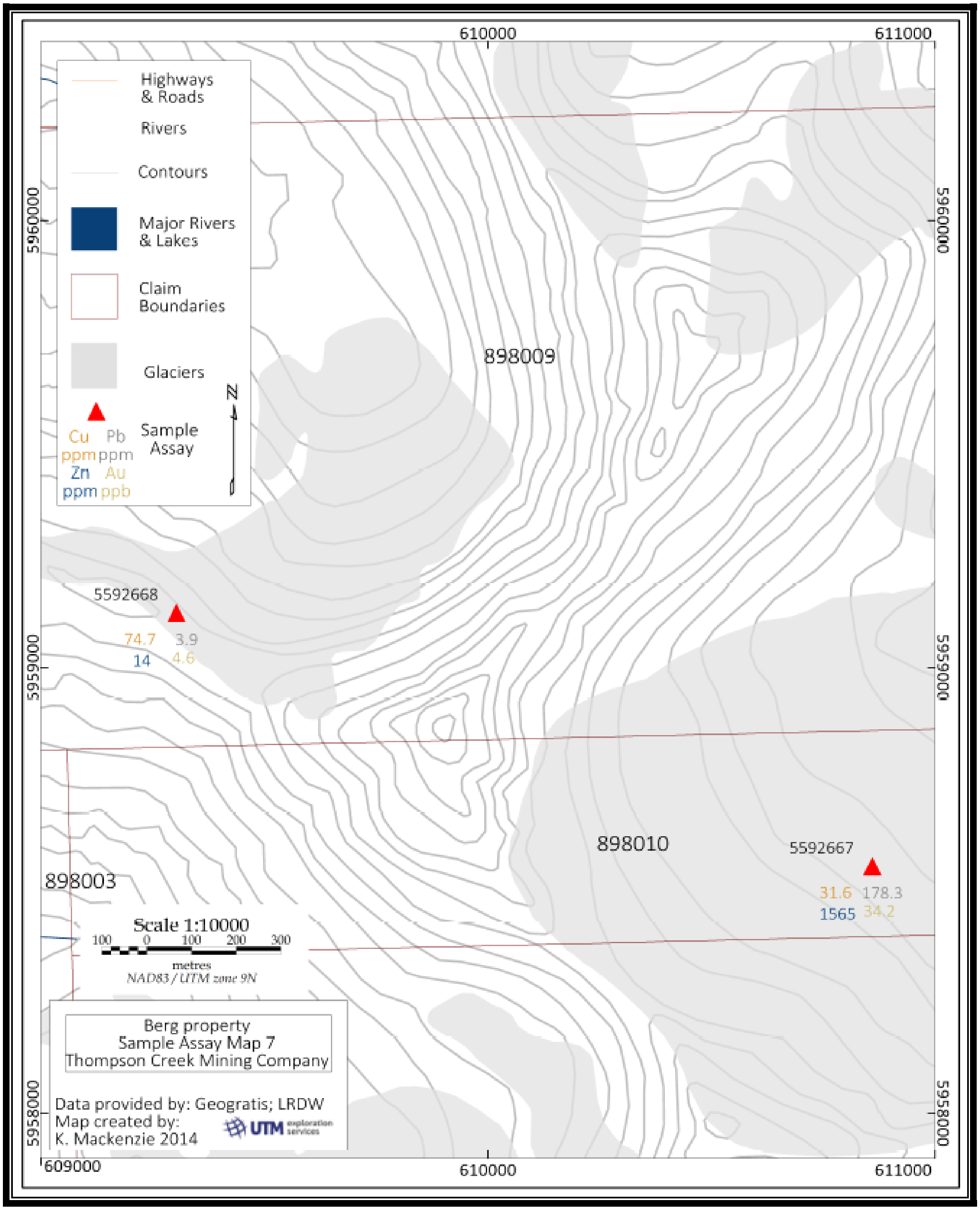

Figure 12. Rock Sample Location Map.

7. Sampling

7.1 Sampling Method and Approach

See section 6.1.1 for details of on-site sampling methods. After sample collection, samples were bagged, sealed with a sample list, and stored by UTM personnel until they were delivered to ACME Labs in Smithers, BC.

7.2 Sample Preparation, Analyses, and Security

Lab methodology is described in Appendix II.

7.3 Data Verification

Two standards and one blank were submitted, although ACME runs their own tests regularly.

7.4 Results

All assay results may be found in Appendix I. Sample Location maps may be perused in Figure 6 to 12.

8. Interpretation and Conclusion

The area underlain by the Berg Claim Group is prospective for copper-molybdenum porphyry deposits associated with small granodiorite to quartz monzonite and quartz diorite plugs, the Berg deposit and the nearby Huckleberry Mine being the best examples of this type of deposit. The Whiting Creek deposit, outside of the claim area to the east, is also included in this classification. The Bergette prospect, in the eastern part of the claim group, has some similarities to this type of deposit but appears to be at least partially hosted by a border phase of a larger pluton, the Sibola Stock.

The above deposits are all marked by large gossanous areas due to the pyrite halos typical of copper-molybdenum porphyry deposits. Typical alteration patterns within and beyond the areas of pyrite development include sericitic (quartz-sericite-pyrite) alteration mainly coincident with the pyrite and propylitic alteration (chlorite-epidote) mainly beyond it. This is of obvious significance in terms of locating areas likely to be prospective for this type of deposit, and areas not marked by gossans are unlikely to host mineralization of any great importance. The exception to the above might be in the case of deposits buried deeply enough that the pyrite halo is not exposed on surface, and in that case the presence of alteration more distal to this type of deposit, mainly being propylitic, would be helpful as an indicator. Within the geological setting in which we are presently working, base metal veins with minor to moderate amounts of accompanying silver and gold are commonly located distal to porphyry deposits, but these can be located at such a large distance from the related porphyry deposit as to be of very little assistance in locating it.

In summary then, the most prospective areas for porphyry type deposits will be marked by the presence of gossans with sericitic alteration and with the possibility of nearby propylitic alteration and base metal veins in more distal areas.

A prominent gossan is located in the area of Rhine Crag on both sides of Rhine Ridge. This gossan is somewhat larger in extent than is shown on Macintyre's (1985) map, covering a significant area to the north of Rhine Ridge and extending for a short distance around Rhine Crag. The Rhine Crag plug is composed of micro diorite and is not considered to be a likely source of mineralizing fluids that would be responsible for the pyrite and subsequent gossan development. It is felt that a nearby small quartz diorite plug to the southwest and possibly a small plug of quartz monzonite to the southeast are likely sources, and the existence of small plugs that have not been unroofed is also possible.

Several days were spent in the Rhine Cirque area on the north side of Rhine Ridge mapping rocks in that area, but unfavorable weather combined with time constraints meant that the south side of Rhine Ridge was not investigated.

Aside from the intrusives, rocks in the area underlain by the gossan belong to the Skeena Group and are mainly siltstone with lesser conglomerate. Macintyre also maps Skeena basalts south of Rhine Crag but, as indicated above, these were not investigated by the writer.

Within the Rhine Cirque area, Skeena siltstones were intruded by a variety of dykes including granodiorite, micro diorite, feldspar porphyry and rare small lamprophyres. The granodiorite dykes are pre-mineral and carry significant amounts of pyrite. Emplacement of the granodiorite dykes has fractured the surrounding siltstone, resulting in enhanced pyrite development in those areas along with enhanced quartz sericite alteration which presents as silicification. Both the feldspar porphyry and the micro diorite dykes carry only small amounts of pyrite and so are considered to be mostly post-mineral. The lamprophyre dykes are entirely post-mineral and are volumetrically insignificant. As is common elsewhere on the claim group, all dykes except the lamprophyres generally trend northwesterly and have a steep or vertical dip.

Several granodiorite dykes occur within the mapped area, as well as a granodiorite body of indeterminate size and shape that remains largely unmapped due to overburden, snow cover and difficult terrain.

The Rhine Ridge area is considered by the writer to be prospective for porphyry copper-molybdenum deposits due to the presence of a large and strong gossan comparable in size to those of nearby known deposits, accompanying intense silica-pyrite alteration, and the presence of at least two small intrusive bodies of similar age and mineralogy to intrusives known to be associated with nearby porphyry deposits.

9. Recommendations

Due to the large size of the claim group it was not possible to investigate all areas during the 2014 program. Another program of geological mapping, sampling and prospecting similar to the one completed this year is recommended. This would be in addition to any work to be done on the Rhine Ridge gossan area.

A program of geological mapping and sampling is recommended for the Rhine Ridge area. This will focus mainly on the south side of Rhine Ridge but some time should also be made available to extend the work on the north side in the Rhine Cirque area. In support of the mapping and sampling program a topographic base map should be made from existing air photos to provide a 2 metre contour interval over a area of about 4 km x 5 km.

A ZTEM helicopter-borne electromagnetic and magnetic survey should be carried out in order to delineate areas favorable for the exploration of porphyry style deposits. This survey should cover, at a minimum, the area of the topographic base map.

The geological mapping program will require two geologists, each with a field assistant. One will work on the larger claim area and the other will be mapping on the Rhine Ridge area, although on days when weather will not allow access to Rhine Ridge this geologist would work elsewhere on the claims. This part of the program, which is scheduled to last 25 days, will be helicopter supported from Smithers and will be budgeted at $150,000 including labour, assays, and helicopter time and report preparation.

The preparation of the topographic base map should take place during the winter so that it can be delivered before the start of the field season. $10,000 is budgeted for this work.

The ZTEM survey will be flown on 200 metre spacing. The budget for this survey, including mobilization, is $40,000.

Allowing 15% for contingencies, total expenditures for the program will be in the order of $230,000.

10. Statement of Costs

Thompson Creek Metals Co Inc.					
Sampling/Mapping Program					
Berg Property					
Pre-field work					
Jessica Hardy	expediting	9.0	$55.00	$495.00	
Jim Hutter	pre-field assessment planning and prep	10.0	$95.00	$950.00	
Rene Victorino	pre-field assessment planning and prep	2.0	$78.75	$157.50	
				$1,602.50	**$1,602.50**
Personnel (Name)* / Position	**Field Days**	**Days**	**Rate**	**Subtotal**	
Jim Hutter	field work	18.0	950	$17,100.00	
Rene Victorino	field work	18.0	787.5	$14,175.00	
Michael LaCouffe	field work	17	$462.00	$7,854.00	
Chris King	field work	17	$462.00	$7,854.00	
				$46,983.00	**$46,983.00**
Office Studies	**List Personnel**				
		Hours	**Rate**	**Subtotal**	
Report preparation	J. Hutter	10.0	$95.00	$950.00	
Report preparation	R.Beck	96.0	$55.00	$5,280.00	
Report preparation	K. MacKenzie	16.0	$65.00	$1,040.00	
				$7,270.00	**$7,270.00**
Geochemical Surveying	**Number of Samples**	**No.**	**Rate**	**Subtotal**	
Drill (cuttings, core, etc.)			$0.00	$0.00	
Stream sediment			$0.00	$0.00	
Soil			$0.00	$0.00	
Rock		34.0	$64.52	$2,193.68	
Water			$0.00	$0.00	
Biogeochemistry			$0.00	$0.00	
Whole rock			$0.00	$0.00	
Petrology			$0.00	$0.00	
				$2,193.68	**$2,193.68**
Transportation		**No.**	**Rate**	**Subtotal**	
Airfare			$0.00	$0.00	

Taxi			$0.00	$0.00	
truck rental		19.00	$105.00	$1,995.00	
kilometers		186.00	$0.79	$146.94	
ATV			$0.00	$0.00	
fuel			$0.00	$0.00	
Helicopter (hours)		51.40	$1,140.00	$58,596.00	
Fuel (litres/hour)		5565.50	$1.44	$8,014.32	
				$68,752.26	**$68,752.26**
Accommodation & Food	**Rates per day**	**No.**	**Rate**	**Subtotal**	
Camp				$0.00	
Meals		38.00	$65.00	$2,470.00	
				$2,470.00	**$2,470.00**
Miscellaneous				$0.00	
Propane				$0.00	
gasoline				$0.00	
Field supplies				$154.97	
pre-field organizing		8.00	$55.00	$440.00	
post-field clean-up		8.00	$55.00	$440.00	
UTM Management - 10%				$6,995.40	
				$8,030.37	**$8,030.37**
Equipment Rentals					
computer rentals		18.00	$5.00	$90.00	
Sattelite phone x2		18.00	$24.00	$432.00	
handheld radios x4		18.00	$10.00	$180.00	
				$612.00	**$612.00**
TOTAL Expenditures	**w/o taxes**				**$136,311.31**

Thompson Creek Metals Co Inc								
Geological Sampling/Mapping Program								
Berg Property - 2014								
Work Title	**Dates**	**Activity**	**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Pre-Field Work								
Jessica Hardy	June 16/20/23; July 8/16/17	expediting		8.0		$55.00	$440.00	
Jim Hutter	8-Jul	Field assessment planning and prep		10.0		$95.00	$950.00	
Chris King	8-Jul	pre-field organizing		4.0		$55.00	$220.00	
Richard Beck	8-Jul	pre-field organizing		4.0		$55.00	$220.00	
Rene Victorino	8-Jul	Field assessment planning and prep		2.0		$78.75	$157.50	
							$1,987.50	**$1,987.50**
Personnel - Field								
Jim Hutter	July 9 - July 26 inclusive	sampling and mapping	18		$950.00		$17,100.00	
Rene Victorino	July 9 - July 26 inclusive	sampling and mapping	18		$787.50		$14,175.00	
Michael LaCouffe	July 9 - July 25 inclusive	field labour	17		$462.00		$7,854.00	
Chris King	July 9 - July 23; July 25/26	field labour	17		$462.00		$7,854.00	
							$46,983.00	**$46,983.00**
Office Studies								
Report preparation - Jim Hutter P.Geo	July - December 2014	Report writing		10.0		$95.00	$950.00	
Report preparation - Richard Beck	July - December 2014	Report writing		96.0		$55.00	$5,280.00	
Report preparation - Kay MacKenzie	July - December 2014	GIS Maps		16.0		$65.00	$1,040.00	
							$7,270.00	**$7,270.00**
Geochemical Surveying		**Number of Samples**	**No.**		**Rate**		**Subtotal**	
Drill (cuttings, core, etc.)					$0.00		$0.00	
Stream sediment					$0.00		$0.00	
Soil					$0.00		$0.00	
Rock			34.0		$64.52		$2,193.68	
Water					$0.00		$0.00	
Biogeochemistry					$0.00		$0.00	
Whole rock					$0.00		$0.00	
Petrology					$0.00		$0.00	
Other (specify)					$0.00		$0.00	
							$2,193.68	**$2,193.68**
Transportation			**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Airfare					$0.00		$0.00	
Taxi					$0.00		$0.00	
truck rental	July 8 - July 26 inclusive		19.00		$105.00		$1,995.00	
kilometers		3 of truck km's	186.00		$0.79		$146.94	
ATV					$0.00		$0.00	
fuel		litres of fuel - gasoline	5565.50		$1.44		$8,014.32	
Helicopter (hours)	July 9 - July 26 inclusive			51	$0.00	$1,140.00	$58,596.00	
							$68,752.26	**$68,752.26**
Food			**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Meals	July 9 - July 26 inclusive		38.00		$65.00		$2,470.00	
							$2,470.00	**$2,470.00**

Supplies			# of items		item cost		Subtotals	
Zap straps			35.00		$0.10		$3.50	
Sample booklets			2.00		$10.00		$20.00	
Markers			4.00		$2.15		$8.60	
Ball point pens			2.00		$0.58		$1.16	
Mechanical pencils			2.00		$2.38		$4.76	
Flagging tape			4.00		$1.75		$7.00	
Notebooks			2.00		$6.85		$13.70	
Muriatic acid			2.00		$1.85		$3.70	
Aluminum tags			35.00		$0.17		$5.95	
Bug Spray			4.00		$5.60		$22.40	
Sample bags (plastic)			35.00		$0.44		$15.40	
Rice bags			10.00		$1.38		$13.80	
							$119.97	**$119.97**
Equipment Rentals								
Sattelite phone/radios x 2	July 9 - July 26 inclusive		36.00		$12.00		$432.00	
Handheld radios rentals x 4	July 9 - July 26 inclusive		72.00		$2.50		$180.00	
Computer rentals x 1	July 9 - July 26 inclusive		18.00		$5.00		$90.00	
							$702.00	**$702.00**
Post Field Clean-up								
Jessica Hardy	July 27 - July 28 2014		8.00		55		$440.00	
							$440.00	**$440.00**
						Subtotal		**$130,918.41**
Project Management								
UTM Project Management 10%							$6,995.40	
							$6,995.40	**$6,995.40**
						Total		**$137,913.81**

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12. Statement of Qualifications

I, James M. Hutter, P. Geo., do hereby certify that:

1) I am a consulting geologist with an office at 4407 Alfred Avenue, Smithers, BC, Canada;

2) This certificate applies to the technical report entitled "2014 Technical Report for Sampling and Mapping on the Berg Property", dated October 29, 2014, and prepared for UTM Exploration Ltd, Smithers, B.C.;

3) I am a graduate of the University of British Columbia, in 1976, with a BSc in Geology.

4) I am a member in good standing of the APEGBC

5) I have practiced my profession continuously since 1976 in various capacities;

6) I have read National Instrument 43-101 and Form 43-101F1 and I am a Qualified Person for the purpose of NI 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1;

7) I am, as the qualified person, independent of the issuer as defined in Section 1.4 of National Instrument 43-101;

8) I have attended the property daily from July 9 to July 26, 2014;

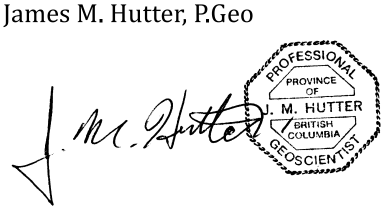
9) I have no previous involvement with the mineral property in question;

10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11) 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, and that this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading;

12) I consent to the filing of the technical report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the technical report;

James M. Hutter, P.Geo



Dated this 27th day of October, 2014

I, Richard Beck, residing at 4901 Slack Road, Smithers, B.C., do hereby certify that:

- I am part owner of and currently employed as the President by UTM Exploration Services of Smithers, British Columbia;
- I attended Dalhousie University from 1985-1989, specializing in geology;
- Between 1987 and 1990, and 1996 to present I have been continuously employed as a junior geologist/project manager/senior geologist in the mineral exploration sector;
- I did visit the property and jointly supervised the program.

Dated at Smithers, British Columbia, this 27th day of October 2014.

Richard Beck, President
UTM Exploration Services Ltd.

Appendix I: Assay Certificates

AcmeLabs™
A Bureau Veritas Group Company

www.acmelab.com

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

Client:	UTM Exploration Services Ltd. 104-1165 Main Street Box 5037 Smithers BC V0J 2N0 CANADA
Submitted By:	Richard Beck
Receiving Lab:	Canada-Smithers
Received:	September 25, 2014
Report Date:	October 03, 2014
Page:	1 of 3

CERTIFICATE OF ANALYSIS SMI14000714.1

CLIENT JOB INFORMATION

Project:	T.C.M.
Shipment ID:	
P.O. Number	
Number of Samples:	34

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	32	Crush, split and pulverize 250 g rock to 200 mesh			SMI
AQ202	34	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN

SAMPLE DISPOSAL

DISP-PLP	Dispose of Pulp After 90 days
DISP-RJT	Dispose of Reject After 90 days

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

ADDITIONAL COMMENTS

Invoice To: UTM Exploration Services Ltd.
104-1165 Main Street
Box 5037
Smithers BC V0J 2N0
CANADA

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
Marcus Lau
MARCUS LAU

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

AcmeLabs™
A Bureau Veritas Group Company

www.acmelab.com

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

Client: UTM Exploration Services Ltd.
104-1165 Main Street
Box 5037
Smithers BC V0J 2N0 CANADA

Project: T.C.M.
Report Date: October 03, 2014

Page: 2 of 3 Part: 1 of 2

CERTIFICATE OF ANALYSIS SMI14000714.1

Method		WGHT	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
5592660	Rock	1.79	5.0	32.2	6.6	8	0.1	3.4	2.1	106	3.53	1.2	5.5	3.8	16	<0.1	0.1	4.2	18	0.01	0.033
5592661	Rock	2.31	11.6	153.6	2.2	5	0.5	7.5	6.1	56	3.73	<0.5	4.6	3.4	5	<0.1	<0.1	3.9	7	0.05	0.027
5592662	Rock	2.45	1.5	55.5	62.6	38	4.7	5.2	15.6	23	13.87	136.2	76.9	0.2	1	0.2	0.2	11.8	4	0.01	0.001
5592663	Rock	1.76	1.1	16.1	8.5	7	0.3	10.8	15.7	46	9.27	5.9	13.8	0.3	2	<0.1	0.1	6.0	8	0.02	0.004
5592664	Rock	2.28	2.9	14.7	8.9	86	0.2	13.3	27.5	839	2.81	0.6	1.0	8.5	39	<0.1	0.1	2.4	40	2.47	0.090
5592665	Rock	1.54	1.0	24.2	9.6	85	0.3	8.2	24.2	606	4.60	6.5	4.1	0.9	19	<0.1	0.7	5.9	73	0.26	0.044
5592666	Rock	1.89	1.2	20.3	30.3	13	0.5	6.5	8.9	34	6.80	36.1	28.1	0.3	5	<0.1	0.4	2.6	4	0.01	0.006
5592667	Rock	1.68	7.4	31.6	178.3	1565	2.7	7.7	126.7	5958	16.33	29.4	34.2	4.8	4	6.6	0.1	9.0	24	0.52	0.039
5592668	Rock	1.15	0.4	74.7	3.9	14	<0.1	6.4	24.3	78	2.95	2.4	4.6	3.4	16	<0.1	0.1	0.2	25	0.28	0.069
5592669	Rock	1.18	0.8	2.3	2.8	8	<0.1	0.6	0.6	214	0.48	1.3	<0.5	3.3	5	<0.1	0.4	<0.1	<2	0.16	0.012
5592670	Rock Pulp	0.08	37.1	>10000	>10000	>10000	>100	58.3	29.9	398	17.33	1102.9	360.6	0.3	28	521.5	183.7	57.3	18	1.69	0.031
5592671	Rock	1.01	76.1	11.3	14.5	94	0.3	0.6	0.4	144	0.48	21.6	9.9	3.8	7	0.4	0.5	0.1	<2	0.18	0.008
5592672	Rock	1.34	5.6	6.4	9.4	44	0.4	1.2	1.2	493	0.79	28.2	25.3	1.7	11	<0.1	0.5	<0.1	<2	0.59	0.011
5592673	Rock	1.11	130.2	2009.9	3.7	36	1.7	16.3	14.1	173	4.07	<0.5	189.7	6.0	10	<0.1	<0.1	0.9	60	0.12	0.073
5592674	Rock	1.15	0.3	51.6	2.1	349	<0.1	80.5	32.9	1352	3.10	1.8	<0.5	0.6	261	0.7	<0.1	<0.1	66	3.90	0.046
5592675	Rock	1.99	4.8	6886.8	2.1	26	3.1	14.9	49.7	70	14.26	11.5	88.0	1.0	1	<0.1	0.1	0.3	41	0.03	0.018
5592676	Rock	2.16	1.1	36.3	24.9	76	0.2	8.7	14.2	646	5.81	6.1	4.6	0.9	20	<0.1	0.7	1.4	77	0.46	0.060
5592677	Rock	1.84	0.7	16.5	1.3	33	<0.1	1.2	3.9	454	1.81	0.9	<0.5	2.2	28	<0.1	<0.1	<0.1	24	0.66	0.039
5592678	Rock	1.16	3.9	41.5	7970.0	1264	8.0	1.3	6.2	6574	5.53	86.2	<0.5	0.2	193	24.7	20.6	<0.1	228	14.22	0.023
5592560	Rock	0.88	0.8	50.2	258.0	241	0.7	9.2	24.5	408	4.69	16.3	4.5	0.8	22	2.6	0.6	0.4	76	0.26	0.053
5592561	Rock	0.90	0.8	123.8	8.1	87	0.2	19.3	27.6	410	6.92	8.3	3.3	1.3	22	0.1	0.4	0.5	105	0.32	0.035
5592562	Rock	0.95	0.2	3.0	18.4	53	<0.1	41.5	11.3	357	2.56	3.1	<0.5	2.7	23	<0.1	0.2	<0.1	46	0.32	0.042
5592563	Rock	0.94	0.1	58.6	3.3	51	0.1	34.9	6.0	317	2.57	5.4	3.7	1.9	7	0.1	0.2	0.1	50	0.08	0.040
5592564	Rock	1.03	1.6	29.6	10.0	104	<0.1	61.5	16.2	424	2.77	1.8	1.5	3.2	7	0.3	0.1	<0.1	44	0.08	0.038
5592565	Rock	0.98	0.4	11.5	4.3	90	0.5	76.3	16.6	1358	4.89	21.8	<0.5	0.5	16	<0.1	1.5	<0.1	111	0.91	0.070
5592566	Rock	0.78	1.8	17.6	22.2	1453	0.4	18.1	12.0	465	3.27	21.9	4.3	2.6	75	5.2	0.4	0.6	48	0.85	0.102
5592567	Rock	0.71	0.2	37.5	22.8	15	<0.1	4.4	0.2	98	3.07	7.3	0.9	4.2	5	<0.1	0.3	0.6	29	0.01	0.062
5592568	Rock	1.07	4.6	65.5	4.8	65	0.5	8.2	5.8	614	4.58	1.2	3.1	3.7	8	<0.1	0.1	1.2	49	0.12	0.057
5592569	Rock Pulp	0.10	36.1	>10000	>10000	>10000	>100	61.1	30.5	403	17.71	1122.7	336.2	0.3	27	506.2	169.7	56.9	19	1.68	0.033
5592570	Rock	1.05	21.8	38.3	6.7	140	<0.1	6.8	5.6	2269	7.54	0.8	4.1	6.7	3	<0.1	0.2	0.4	39	0.13	0.087

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Project: T.C.M.
Report Date: October 03, 2014

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CERTIFICATE OF ANALYSIS SMI14000714.1

	Method	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
5592660	Rock	7	9	0.25	75	0.003	<1	0.56	0.011	0.29	0.2	<0.01	0.6	0.1	1.18	3	1.3	0.5
5592661	Rock	3	4	0.38	46	0.002	<1	0.58	0.008	0.24	<0.1	<0.01	0.5	0.1	3.84	2	1.4	0.6
5592662	Rock	<1	6	<0.01	11	<0.001	<1	0.15	0.004	0.11	0.3	<0.01	0.6	<0.1	>10	<1	3.0	0.7
5592663	Rock	<1	6	0.08	13	0.001	<1	0.24	0.006	0.16	1.2	<0.01	0.9	0.1	>10	<1	3.4	1.2
5592664	Rock	15	12	0.25	91	<0.001	1	0.94	0.019	0.11	<0.1	<0.01	3.2	<0.1	1.13	2	<0.5	0.5
5592665	Rock	2	19	0.85	13	0.049	4	1.00	0.020	0.05	0.4	<0.01	5.2	<0.1	2.62	5	4.7	1.1
5592666	Rock	<1	6	<0.01	12	<0.001	<1	0.12	0.003	0.10	0.2	<0.01	0.7	<0.1	7.21	<1	2.7	0.9
5592667	Rock	3	11	0.60	31	0.004	<1	1.67	0.001	0.28	0.8	0.02	2.9	0.4	>10	6	0.9	1.3
5592668	Rock	2	4	0.22	4	0.021	1	0.39	0.080	0.01	0.1	<0.01	1.5	<0.1	2.41	2	6.1	<0.2
5592669	Rock	26	5	0.02	82	<0.001	<1	0.27	0.024	0.18	<0.1	<0.01	0.3	<0.1	<0.05	<1	<0.5	<0.2
5592670	Rock Pulp	2	16	0.78	<1	<0.001	2	0.27	0.002	0.07	0.7	19.60	1.1	29.9	>10	8	>100	0.6
5592671	Rock	16	4	0.01	35	<0.001	<1	0.26	0.008	0.16	<0.1	0.04	0.4	0.3	0.12	<1	<0.5	<0.2
5592672	Rock	10	8	0.03	28	<0.001	<1	0.20	0.010	0.15	<0.1	0.02	0.4	0.1	0.46	<1	<0.5	<0.2
5592673	Rock	7	23	0.63	53	0.036	<1	0.90	0.031	0.27	0.5	<0.01	3.2	0.1	1.62	5	3.2	0.2
5592674	Rock	6	30	1.21	109	0.078	<1	4.30	0.599	0.04	<0.1	<0.01	5.5	<0.1	<0.05	6	<0.5	<0.2
5592675	Rock	1	9	0.03	11	0.010	<1	0.42	0.006	0.10	1.9	<0.01	0.6	<0.1	4.78	7	5.6	<0.2
5592676	Rock	3	15	0.84	10	0.067	<1	1.29	0.023	0.04	0.2	<0.01	5.0	<0.1	2.36	4	6.2	0.9
5592677	Rock	6	6	0.43	68	0.069	1	0.95	0.084	0.08	<0.1	<0.01	3.0	<0.1	<0.05	4	<0.5	<0.2
5592678	Rock	7	4	3.48	269	<0.001	4	0.16	0.009	0.04	<0.1	0.05	8.5	<0.1	0.07	<1	<0.5	<0.2
5592560	Rock	3	6	0.38	8	0.108	<1	1.28	0.069	0.02	<0.1	<0.01	3.2	<0.1	3.22	3	2.4	2.4
5592561	Rock	2	34	1.27	15	0.099	2	2.25	0.160	0.04	<0.1	<0.01	11.4	<0.1	5.27	7	10.2	2.6
5592562	Rock	18	52	1.08	90	0.003	2	1.35	0.032	0.15	<0.1	<0.01	3.7	<0.1	0.73	5	<0.5	0.2
5592563	Rock	5	48	1.01	24	0.003	<1	1.28	0.044	0.10	<0.1	<0.01	3.9	<0.1	0.98	6	<0.5	0.3
5592564	Rock	8	33	0.79	55	0.034	1	1.19	0.027	0.22	<0.1	<0.01	2.9	<0.1	0.81	3	0.9	<0.2
5592565	Rock	7	54	2.49	35	0.003	2	2.72	0.046	0.06	<0.1	<0.01	8.0	<0.1	1.64	11	<0.5	0.3
5592566	Rock	8	25	0.62	24	0.103	1	1.85	0.268	0.06	0.1	<0.01	2.5	<0.1	2.48	7	1.7	1.6
5592567	Rock	13	40	0.50	78	0.001	<1	0.66	0.003	0.15	<0.1	<0.01	1.3	0.1	<0.05	4	0.9	0.8
5592568	Rock	5	10	0.74	35	0.038	<1	1.12	0.027	0.22	6.2	<0.01	3.2	0.2	2.22	6	0.7	<0.2
5592569	Rock Pulp	1	15	0.80	<1	<0.001	2	0.29	0.002	0.07	0.8	18.59	1.0	30.0	>10	8	>100	0.6
5592570	Rock	8	15	0.95	33	0.020	<1	2.39	0.002	0.29	7.2	<0.01	2.6	0.2	0.27	7	<0.5	<0.2

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Project: T.C.M.
Report Date: October 03, 2014

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CERTIFICATE OF ANALYSIS SMI14000714.1

	Method	WGHT	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
5592571	Rock	1.00	0.2	6.9	17.0	58	<0.1	0.9	0.7	229	0.46	1.2	4.3	0.3	7	0.3	0.1	<0.1	<2	0.77	0.023
5592572	Rock	1.00	9.2	4.9	23.8	15	0.6	1.3	2.3	100	1.02	83.6	4.0	0.2	3	<0.1	3.1	0.6	<2	0.03	0.008
5592573	Rock	1.06	0.3	2.6	8.6	21	<0.1	1.4	1.1	645	0.58	1.5	<0.5	3.6	48	0.2	0.2	<0.1	2	0.50	0.017
5592574	Rock	1.04	21.8	5.0	26.6	16	0.1	0.5	0.6	57	0.54	7.5	2.2	2.7	3	<0.1	0.3	0.2	<2	0.04	0.009

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Project: T.C.M.
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CERTIFICATE OF ANALYSIS SMI14000714.1

	Method	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
5592571	Rock	11	5	<0.01	39	<0.001	1	0.23	0.031	0.15	<0.1	0.01	1.3	<0.1	<0.05	<1	<0.5	<0.2
5592572	Rock	4	4	0.03	40	<0.001	<1	0.41	0.036	0.10	<0.1	0.18	0.6	0.5	<0.05	<1	<0.5	<0.2
5592573	Rock	3	4	0.09	108	<0.001	1	0.45	0.025	0.18	0.2	<0.01	1.3	<0.1	<0.05	<1	<0.5	<0.2
5592574	Rock	4	7	0.01	51	<0.001	<1	0.24	0.011	0.16	<0.1	0.01	0.3	<0.1	0.05	<1	<0.5	<0.2

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Project: T.C.M.
Report Date: October 03, 2014

Page: 1 of 1 Part: 1 of 2

QUALITY CONTROL REPORT SMI14000714.1

	Method	WGHT	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
5592568	Rock	1.07	4.6	65.5	4.8	65	0.5	8.2	5.8	614	4.58	1.2	3.1	3.7	8	<0.1	0.1	1.2	49	0.12	0.057
REP 5592568	QC		4.9	64.7	4.9	63	0.5	8.3	5.6	605	4.57	1.1	1.0	3.7	8	<0.1	0.1	1.2	48	0.12	0.056
5592574	Rock	1.04	21.8	5.0	26.6	16	0.1	0.5	0.6	57	0.54	7.5	2.2	2.7	3	<0.1	0.3	0.2	<2	0.04	0.009
REP 5592574	QC		20.5	5.0	25.9	16	<0.1	0.7	0.6	58	0.54	7.2	<0.5	2.4	3	<0.1	0.3	0.2	<2	0.03	0.008
Core Reject Duplicates																					
5592564	Rock	1.03	1.6	29.6	10.0	104	<0.1	61.5	16.2	424	2.77	1.8	1.5	3.2	7	0.3	0.1	<0.1	44	0.08	0.038
DUP 5592564	QC		1.5	30.7	10.2	103	<0.1	62.6	16.2	415	2.75	1.5	1.2	3.2	7	0.3	0.1	<0.1	42	0.09	0.038
Reference Materials																					
STD DS10	Standard		14.6	150.3	150.5	357	1.8	74.0	12.9	874	2.72	43.8	65.7	7.1	64	2.4	8.0	11.3	44	1.10	0.070
STD DS10	Standard		15.3	158.2	155.3	378	2.0	78.9	13.3	905	2.89	45.2	78.2	7.8	67	2.3	8.3	11.9	46	1.12	0.078
STD OXC109	Standard		1.4	34.4	11.3	39	<0.1	72.9	19.0	411	2.89	0.7	195.5	1.4	139	<0.1	<0.1	<0.1	51	0.80	0.102
STD OXC109	Standard		1.6	35.6	11.0	41	<0.1	74.1	19.2	405	2.88	0.8	199.5	1.5	141	<0.1	<0.1	<0.1	50	0.79	0.105
STD DS10 Expected			14.69	154.61	150.55	370	2.02	74.6	12.9	875	2.7188	43.7	91.9	7.5	67.1	2.49	8.23	11.65	43	1.0625	0.073
STD OXC109 Expected													201								
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
Prep Wash																					
G1-SMI	Prep Blank		0.6	5.7	1.2	30	<0.1	2.1	4.1	423	1.68	1.2	4.2	1.9	25	<0.1	<0.1	<0.1	24	0.74	0.039
G1-SMI	Prep Blank		0.6	5.7	1.2	29	<0.1	1.8	3.9	428	1.69	1.0	1.3	2.1	26	<0.1	<0.1	<0.1	25	0.78	0.035

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QUALITY CONTROL REPORT SMI14000714.1

	Method	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202	AQ202
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
5592568	Rock	5	10	0.74	35	0.038	<1	1.12	0.027	0.22	6.2	<0.01	3.2	0.2	2.22	6	0.7	<0.2
REP 5592568	QC	5	11	0.74	35	0.036	<1	1.10	0.027	0.22	5.6	<0.01	3.1	0.2	2.09	6	0.7	<0.2
5592574	Rock	4	7	0.01	51	<0.001	<1	0.24	0.011	0.16	<0.1	0.01	0.3	<0.1	0.05	<1	<0.5	<0.2
REP 5592574	QC	3	7	0.01	50	<0.001	<1	0.24	0.011	0.16	<0.1	<0.01	0.3	<0.1	0.05	<1	<0.5	<0.2
Core Reject Duplicates																		
5592564	Rock	8	33	0.79	55	0.034	1	1.19	0.027	0.22	<0.1	<0.01	2.9	<0.1	0.81	3	0.9	<0.2
DUP 5592564	QC	8	33	0.78	53	0.032	<1	1.17	0.027	0.21	<0.1	<0.01	2.9	<0.1	0.81	4	0.9	<0.2
Reference Materials																		
STD DS10	Standard	17	56	0.75	339	0.076	7	1.06	0.067	0.34	3.2	0.27	3.0	5.0	0.29	4	2.3	4.9
STD DS10	Standard	19	59	0.81	362	0.088	8	1.16	0.073	0.35	3.1	0.31	3.2	5.1	0.29	5	2.3	4.9
STD OXC109	Standard	12	59	1.41	53	0.349	<1	1.61	0.700	0.41	0.2	<0.01	1.4	<0.1	<0.05	5	<0.5	<0.2
STD OXC109	Standard	12	60	1.48	56	0.381	<1	1.62	0.715	0.43	0.2	<0.01	1.2	<0.1	<0.05	5	<0.5	<0.2
STD DS10 Expected		17.5	54.6	0.775	359	0.0817		1.0259	0.067	0.338	3.32	0.3	2.8	5.1	0.29	4.3	2.3	5.01
STD OXC109 Expected																		
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1-SMI	Prep Blank	5	6	0.43	60	0.059	2	0.97	0.085	0.08	<0.1	<0.01	2.8	<0.1	<0.05	4	<0.5	<0.2
G1-SMI	Prep Blank	5	6	0.43	62	0.064	2	1.02	0.093	0.09	<0.1	<0.01	2.8	<0.1	<0.05	4	<0.5	<0.2

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

Appendix II: Lab Methodologies

AcmeLabs
CARECOMMITMENTPERFORMANCE

METHOD SPECIFICATIONS

GROUP 1D AND 1F – GEOCHEMICAL AQUA REGIA DIGESTION

Package Codes: 1D01 to 1D03, 1DX1 to 1DX3, 1F01 to 1F07
Sample Digestion: HNO3-HCl acid digestion
Instrumentation Method: ICP-ES (1D), ICP-MS (1DX, 1F)
Applicability: Sediment, Soil, Non-mineralized Rock and Drill Core

Method Description:

Prepared sample is digested with a modified Aqua Regia solution of equal parts concentrated HCl, HNO3 and DI H2O for one hour in a heating block of hot water bath. Sample is made up to volume with dilute HCl. Sample splits of 0.5g, 15g or 30g can be analyzed.

Element	Group 1D Detection	Group 1DX Detection	Group 1F Detection	Upper Limit
Ag	0.3 ppm	0.1 ppm	2 ppb	100 ppm
Al*	0.01%	0.01%	0.01%	10%
As	2 ppm	0.5 ppm	0.1 ppm	10000 ppm
Au	2 ppm	0.5 ppb	0.2 ppb	100 ppm
B*^	20 ppm	20 ppm	20 ppm	2000 ppm
Ba*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Bi	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Ca*	0.01%	0.01%	0.01%	40%
Cd	0.5 ppm	0.1 ppm	0.01 ppm	2000 ppm
Co	1 ppm	0.1 ppm	0.1 ppm	2000 ppm
Cr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Cu	1 ppm	0.1 ppm	0.01 ppm	10000 ppm
Fe*	0.01%	0.01%	0.01%	40%
Ga*	-	1 ppm	0.1 ppm	1000 ppm
Hg	1 ppm	0.01 ppm	5 ppb	50 ppm
K*	0.01%	0.01%	0.01%	10%
La*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Mg*	0.01%	0.01%	0.01%	30%
Mn*	2 ppm	1 ppm	1 ppm	10000 ppm
Mo	1 ppm	0.1 ppm	0.01 ppm	2000 ppm
Na*	0.01%	0.001%	0.001%	5%
Ni	1 ppm	0.1 ppm	0.1 ppm	10000 ppm
P*	0.001%	0.001%	0.001%	5%
Pb	3 ppm	0.1 ppm	0.01 ppm	10000 ppm
S	0.05%	0.05%	0.02%	10%

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AcmeLabs
CARECOMMITMENTPERFORMANCE

Element	Group 1D Detection	Group 1DX Detection	Group 1F Detection	Upper Limit
Sb	3 ppm	0.1 ppm	0.02 ppm	2000 ppm
Sc	-	0.1 ppm	0.1 ppm	100 ppm
Se	-	0.5 ppm	0.1 ppm	100 ppm
Sr*	1 ppm	1 ppm	0.5 ppm	10000 ppm
Te	-	0.2 ppm	0.02 ppm	1000 ppm
Th*	2 ppm	0.1 ppm	0.1 ppm	2000 ppm
Ti*	0.01%	0.001%	0.001%	5%
Tl	5 ppm	0.1 ppm	0.02 ppm	1000 ppm
U*	8 ppm	0.1 ppm	0.05 ppm	2000 ppm
V*	1 ppm	2 ppm	2 ppm	10000 ppm
W*	2 ppm	0.1 ppm	0.05 ppm	100 ppm
Zn	1 ppm	1 ppm	0.1 ppm	10000 ppm
Be*	-	-	0.1 ppm	1000 ppm
Ce*	-	-	0.1 ppm	2000 ppm
Cs*	-	-	0.02 ppm	2000 ppm
Ge*	-	-	0.1 ppm	100 ppm
Hf*	-	-	0.02 ppm	1000 ppm
In	-	-	0.02 ppm	1000 ppm
Li*	-	-	0.1 ppm	2000 ppm
Nb*	-	-	0.02 ppm	2000 ppm
Rb*	-	-	0.1 ppm	2000 ppm
Re	-	-	1 ppb	1000 ppb
Sn*	-	-	0.1 ppm	100 ppm
Ta*	-	-	0.05 ppm	2000 ppm
Y*	-	-	0.01 ppm	2000 ppm
Zr*	-	-	0.1 ppm	2000 ppm
Pt*	-	-	2 ppb	100 ppm
Pd*	-	-	10 ppb	100 ppm
Pb_{204}	-	-	0.01 ppm	10000 ppm
Pb_{206}	-	-	0.01 ppm	10000 ppm
Pb_{207}	-	-	0.01 ppm	10000 ppm
Pb_{208}	-	-	0.01 ppm	10000 ppm

* Solubility of some elements will be limited by mineral species present.
^Detection limit = 1 ppm for 15g / 30g analysis.

Limitations:
Au solubility can be limited by refractory and graphitic samples.

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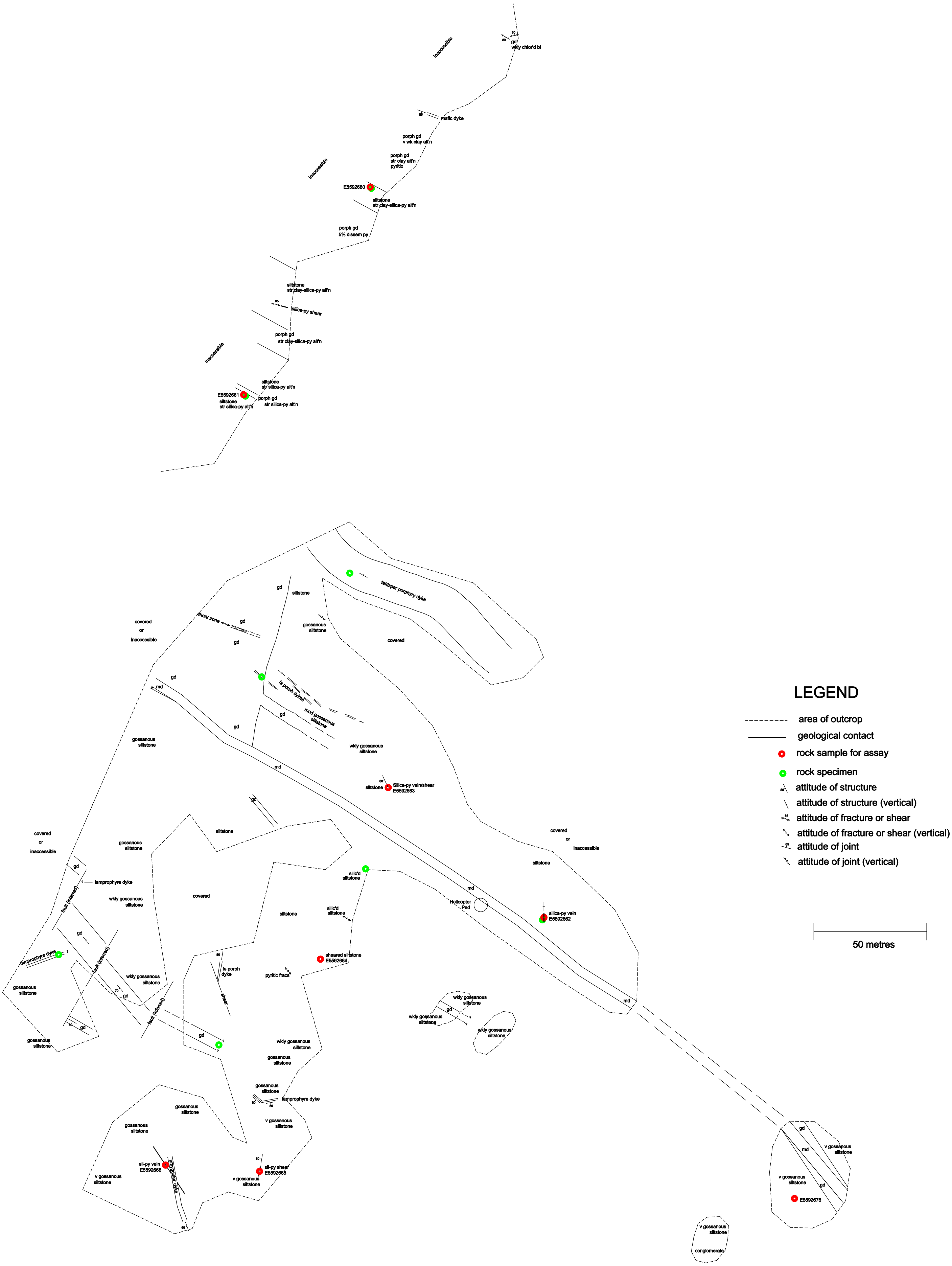

inaccessible
gd
wkly chlor'd bi
mafic dyke
porph gd
v wk clay alt'n
porph gd
str clay alt'n
pyritic
inaccessible
E5592660
siltstone
str clay-silica-py alt'n
porph gd
5% dissem py
siltstone
str clay-silica-py alt'n
silica-py shear
porph gd
str clay-silica-py alt'n
inaccessible
siltstone
str silica-py alt'n
E5592661
siltstone
str silica-py alt'n
porph gd
str silica-py alt'n
feldspar porphyry dyke
siltstone
gd
covered
or
inaccessible
shear zone
gossanous
siltstone
covered
fs porph dykes
mod gossanous
siltstone
md
gossanous
siltstone
wkly gossanous
siltstone
siltstone
Silica-py vein/shear
E5592663
siltstone
covered
or
inaccessible
gossanous
siltstone
covered
or
inaccessible
lamprophyre dyke
fault (inferred)
wkly gossanous
siltstone
covered
silic'd
siltstone
Helicopter
Pad
siltstone
silica-py vein
E5592662
silic'd
siltstone
siltstone
lamprophyre dyke
gossanous
siltstone
fs porph
dyke
sheared siltstone
E5592664
pyritic fracs
shear
wkly gossanous
siltstone
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lamprophyre dyke
gossanous
siltstone
gossanous
siltstone
v gossanous
siltstone
sil-py vein
E5592666
lamprophyre dyke
sil-py shear
E5592665
v gossanous
siltstone
v gossanous
siltstone
v gossanous
siltstone
v gossanous
siltstone
E5592676
v gossanous
siltstone
conglomerate
LEGEND
area of outcrop
geological contact
rock sample for assay
rock specimen
attitude of structure
attitude of structure (vertical)
attitude of fracture or shear
attitude of fracture or shear (vertical)
attitude of joint
attitude of joint (vertical)
50 metres

Thompson Creek Metals Co Inc								
Geological Sampling/Mapping Program								
Berg Property - 2014								
Work Title	**Dates**	**Activity**	**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Pre-Field Work								
Jessica Hardy	June 16/20/23; July 8/16/17	expediting		8.0		$55.00	$440.00	
Jim Hutter	8-Jul	Field assessment planning and prep		10.0		$95.00	$950.00	
Chris King	8-Jul	pre-field organizing		4.0		$55.00	$220.00	
Richard Beck	8-Jul	pre-field organizing		4.0		$55.00	$220.00	
Rene Victorino	8-Jul	Field assessment planning and prep		2.0		$78.75	$157.50	
							$1,987.50	**$1,987.50**
Personnel - Field								
Jim Hutter	July 9 - July 26 inclusive	sampling and mapping	18		$950.00		$17,100.00	
Rene Victorino	July 9 - July 26 inclusive	sampling and mapping	18		$787.50		$14,175.00	
Michael LaCouffe	July 9 - July 25 inclusive	field labour	17		$462.00		$7,854.00	
Chris King	July 9 - July 23; July 25/26	field labour	17		$462.00		$7,854.00	
							$46,983.00	**$46,983.00**
Office Studies								
Report preparation - Jim Hutter P.Geo	July - December 2014	Report writing		10.0		$95.00	$950.00	
Report preparation - Richard Beck	July - December 2014	Report writing		96.0		$55.00	$5,280.00	
Report preparation - Kay MacKenzie	July - December 2014	GIS Maps		16.0		$65.00	$1,040.00	
							$7,270.00	**$7,270.00**
Geochemical Surveying		**Number of Samples**	**No.**		**Rate**		**Subtotal**	
Drill (cuttings, core, etc.)					$0.00		$0.00	
Stream sediment					$0.00		$0.00	
Soil					$0.00		$0.00	
Rock			34.0		$64.52		$2,193.68	
Water					$0.00		$0.00	
Biogeochemistry					$0.00		$0.00	
Whole rock					$0.00		$0.00	
Petrology					$0.00		$0.00	
Other (specify)					$0.00		$0.00	
							$2,193.68	**$2,193.68**
Transportation			**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Airfare					$0.00		$0.00	
Taxi					$0.00		$0.00	
truck rental	July 8 - July 26 inclusive		19.00		$105.00		$1,995.00	
kilometers		3 of truck km's	186.00		$0.79		$146.94	
ATV					$0.00		$0.00	
fuel		litres of fuel - gasoline	5565.50		$1.44		$8,014.32	
Helicopter (hours)	July 9 - July 26 inclusive			51	$0.00	$1,140.00	$58,596.00	
							$68,752.26	**$68,752.26**
Food			**#Days**	**#Hours**	**Day rate**	**Hr rate**	**Subtotals**	
Meals	July 9 - July 26 inclusive		38.00		$65.00		$2,470.00	
							$2,470.00	**$2,470.00**

Supplies			# of items		item cost		Subtotals	
Zap straps			35.00		$0.10		$3.50	
Sample booklets			2.00		$10.00		$20.00	
Markers			4.00		$2.15		$8.60	
Ball point pens			2.00		$0.58		$1.16	
Mechanical pencils			2.00		$2.38		$4.76	
Flagging tape			4.00		$1.75		$7.00	
Notebooks			2.00		$6.85		$13.70	
Muriatic acid			2.00		$1.85		$3.70	
Aluminum tags			35.00		$0.17		$5.95	
Bug Spray			4.00		$5.60		$22.40	
Sample bags (plastic)			35.00		$0.44		$15.40	
Rice bags			10.00		$1.38		$13.80	
							$119.97	**$119.97**
Equipment Rentals								
Sattelite phone/radios x 2	July 9 - July 26 inclusive		36.00		$12.00		$432.00	
Handheld radios rentals x 4	July 9 - July 26 inclusive		72.00		$2.50		$180.00	
Computer rentals x 1	July 9 - July 26 inclusive		18.00		$5.00		$90.00	
							$702.00	**$702.00**
Post Field Clean-up								
Jessica Hardy	July 27 - July 28 2014		8.00		55		$440.00	
							$440.00	**$440.00**
						Subtotal		**$130,918.41**
Project Management								
UTM Project Management 10%							$6,995.40	
							$6,995.40	**$6,995.40**
						Total		**$137,913.81**

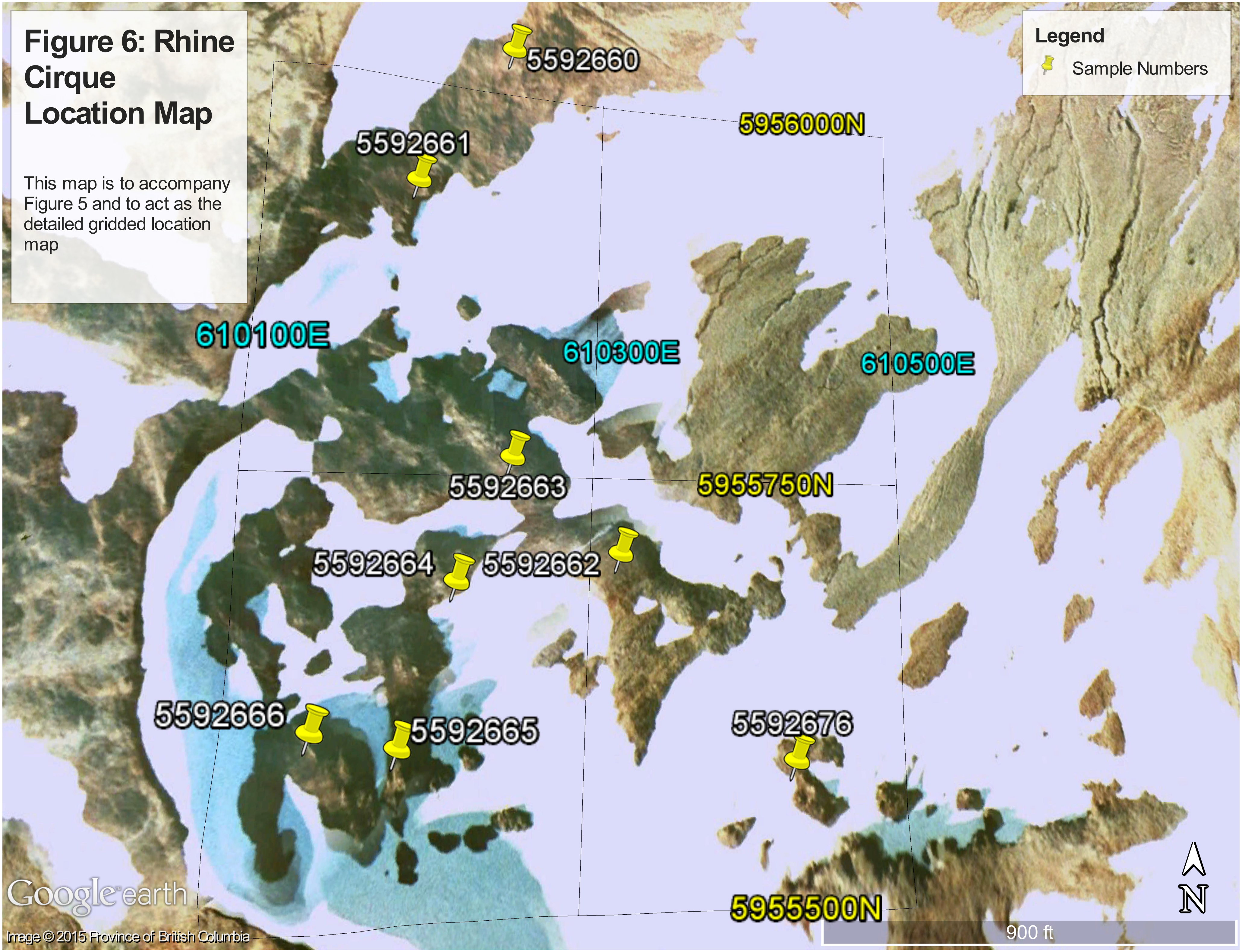

Figure 6: Rhine Cirque Location Map

This map is to accompany Figure 5 and to act as the detailed gridded location map