

# Ministry of Energy, Mines & Petroleum Resources Mining & Minerals Division



Assessment Report Title Page and Summary

Mining & Minerals Division
BC Geological Survey

TYPE OF REPORT [type of survey(s)]: Geochemical, Geological, Pro	especting TOTAL COST: \$21,347.00
AUTHOR(S): John A. Chapman, B.Sc., P.Eng., FCIM	SIGNATURE(S):
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): NA	YEAR OF WORK: 2012
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):	Event Number 5426887 (January 17, 2013) and
Event Number 5426888 (January 17, 2013)	
PROPERTY NAME: Boer Mineral Property	
CLAIM NAME(S) (on which the work was done): Boer 1 to Boer 13	
COMMODITIES SOUGHT: Silver, Copper, Molybdenum and Gold	
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: None Applical	ble
MINING DIVISION: Omineca Mining Division	NTS/BCGS: 093K/04 and 093K/05
LATITUDE: 54 ° 16 '02 " LONGITUDE: 125	o 36 '34 " (at centre of work)
OWNER(S):  1) John A. Chapman (50%)	2) Gerald G. Carlson (50%)
MAILING ADDRESS: 43 - 1725 Southmere Cres.	1740 Orchard Way
Surrey, B.C., V4A 7A7	West Vancouver, B.C., V7V 4E8
OPERATOR(S) [who paid for the work]:  1) Same	2) Same
MAILING ADDRESS: Same	Same
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure Topley Intrusives, 184 m.y. to 137 m.y., Intrusive and Extrusive	
Chalcopyrite and Molybdenite in Hydrothermal Breccia, Surface	Exposure: 90m x 20m
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT R	EPORT NUMBERS: None

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 14km x 5km	1	Boer 1,2,3,4,5,6,10,12,13	\$6,000
Photo interpretation 30km x 30	)km	Boer 1 to 13	\$3,500
GEOPHYSICAL (line-kilometres)			
Ground			
			- Mr
		1	
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil Four		Boer 1,2,3,4,5,6,10,12,13	\$100
Silt Six		Boer 1,2,3,4,5,6,10,12,13	\$150
Rock Fourteen		Boer 1,2,3,4,5,6,10,12,13	\$350
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying 62 Sites Ex	kamined		\$9,247
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area) 14km x		Boer 1,2,3,4,5,6,10,12,13	
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/tr	ail		
Trench (metres)			
Underground dev. (metres)			
Other Data Processing and R		1	\$2,000
		TOTAL COST:	\$21,347

# Geochemical, Geological and Surface Prospecting of the Boer Property, Central British Columbia, Canada

BC Geological Survey Assessment Report 33782

# Mineral Tenures (Boer 1 – 13)

942348, 942349, 942350, 942369, 942370, 942371, 942372, 942373, 942374, 942389, 942390, 942391, 1011913

Burns Lake, Omineca Mining Division

NTS Maps: 093K/04 and 093K/05

UTM 10N (NAD 83) Northing 6017000m Easting 330000m

#### **Owners and Operators:**

John A. Chapman (FMC no. 104633) and Gerald G. Carlson (FMC no. 104271)

c/o John A. Chapman

43 -1725 Southmere Cres.

Surrey, B.C. V4A 7A7

#### Report By:

John A. Chapman, B.Sc., P.Eng., FCIM

April 5, 2013

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#### **SUMMARY**

The Boer property (6,346 hectares) is a grass-roots mineral exploration play in terrane with extensive glacial cover ( $\sim$ 99%), and in a region with several large porphyry copper and molybdenum mineral deposits. In January 2012, John Chapman's attention was drawn to the Boer area as a result of published RGS work done by B.C. GSB and most recently Geoscience B.C., whereby lakes sediments were determined to be highly anomalous in several metals, especially silver (see Figure 1 and Appendix C). John Chapman and Gerald Carlson acquired, via BCMTO, the Boer 1 – 12 mineral claims in January 2012 and an additional claim (Boer 13) in August 2012, upon discovery of a sulfide mineralized breccia at km 13.2 of the Co-op Main logging road.

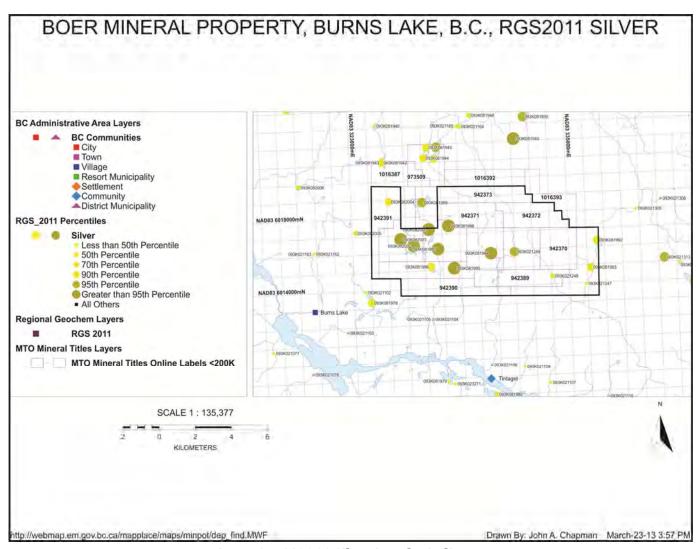


Figure 1. RGS2011 Silver in Lake Sediments

Property main access is via Hwy 16, 20 kilometers east of Burns Lake then north by a mainline logging road network (Augier and Co-op) to and around the eastern 2/3 of the Property (see Figure 3). The western 1/3 of the Property is accessed via the Mercury road at 5.3 kilometers north of Burns Lake on the Babine Lake main road (junction: 319561mE/6018720mN). The Property topography is gentle relief typical of the B.C.

Interior Plateau, and has been extensively clear-cut logged. The Property is located near excellent infrastructure including the Village of Burns Lake (resource service center), and related highways, grid power, natural gas pipeline and airport.

This report describes the results of prospecting and surface sampling (rocks, silts and soils) on the Boer property in 2012 which was conducted in an effort to explain the RGS anomalous silver, copper, molybdenum, manganese and mercury in lakes and swamps in and near the Boer claim area (see Appendix C).

The total value of the work done on the Boer property in 2012 was \$21,347 (SOW filing \$27,786.38, including PAC). John Arthur Chapman filed two Statements of Work (SOW) using Mineral-Titles-Online (MTO) on January 27, 2013 (event 5426887 and 5426888) which changed the Good to Date for the Boer claims to December 30, 2013. This assessment report has been prepared in support of these filings.

Based on literature review and the geological, geochemical and prospecting results obtained from the 2012 work, the Boer property is a complex mix of mainly intrusive and extrusive rocks in an area with high Total Magnetic Field response that has been glaciated in a west to east direction. The first mineral discovery made on the Property was August 9, 2012, by John Chapman and Brian Remanda at kilometer 13.2 on the Co-op Main logging road, ~12km northeast of Burns Lake (see Figure 4). It is a large hydrothermal breccia mineralized with sulfides (abundant pyrite, 182.4ppm molybdenum, 279.5ppm copper and 3.4ppm silver) and iron carbonate; consisting of coarse fragments of aplite and andesite in a matrix of granite. Prospecting in 2012, and the resulting rock and silt geochemistry, indicates a potential base and precious metal target between and north of BJS-01, BJ-01 and BJ-05 toward the highest elevations on the Property (may be metal rich copula (dome) of the main intrusive, being the highest point).

The field program recommended in this report includes: 1) a helicopter-borne ZTEM survey by Geotech Ltd. (~\$110,000), and 2) detailed prospecting and where warranted development of grids for soil geochemical surveys and 3D-IP surveys (~\$100,000).

# INTRODUCTION

The Boer property is a "virgin" mineral prospect in that it has had no prior known mineral exploration conducted upon it by companies or individuals. General area geosciences surveys have been conducted by governments over the Property and the surrounding region mainly since the early 1960s in step with the development of the large Endako open-pit molybdenum mine (1965) that lies 40km to the southeast of the Boer.

This assessment report has been prepared by John A. Chapman, P.Eng., a 50% registered owner of the Boer property. The writer has reviewed all general geological, geophysical and other mineral exploration data pertaining to the Property and the surrounding area. He was involved in the Boer 2012 surface exploration surveys, and makes recommendations for further work in this report.

The writer visited the Boer property in August 2012 (4 days) and September 2012 (5 days).

Units of measure in this report are metric; coordinates are UTM Zone 10N NAD83, unless stated otherwise.

Monetary amounts referred to in this report are in Canadian dollars.

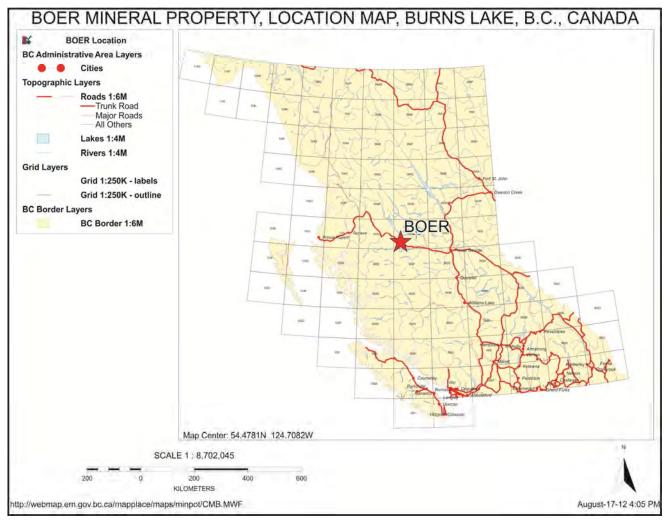


Figure 2. B.C. Location Map – Boer Property

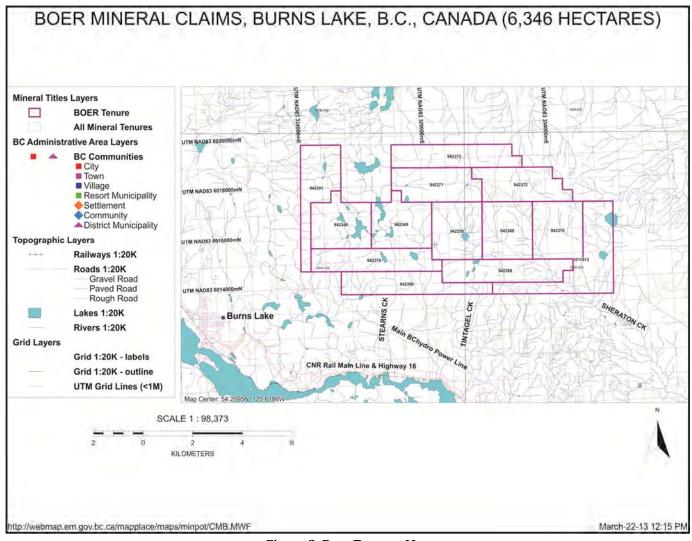


Figure 3. Boer Tenures Map

# PROPERTY DESCRIPTION AND LOCATION

The Boer property is located adjacent to Highway 16, and centered nine kilometers northeast of the resource Village of Burns Lake, B.C. UTM Zone 10N: 6017000N/330000E, NTS maps: 093K/04 and 093K/05, Omineca Mining Division (see Figure 2).

The Property consists of 13 mineral tenures (6,346 hectares), owned by John A. Chapman (50%) and Gerald G. Carlson on behalf of KGE Management Ltd. (50%). The claims are in good standing until December 30, 2013 (after the SOW application of the recent 2012 exploration program). The claims have not been surveyed, but cell corners are referenced to geographical coordinates (BCMTO) that may be precisely located in the field by GPS or theodolite surveys. A list of the Boer claims is provided in Table 1, below.

# **Mineral Tenures and Ownership**

The mineral tenures comprising the Property are shown in Figure 3 and listed in Table 1. The claim map shown in Figure 3 was generated from GIS spatial data downloaded from the Government of B.C., Integrated Land Management Branch (ILMB), Land and Resource Data Warehouse (LRDW, http://archive.ilmb.gov.B.C. ca/lrdw/). These spatial layers are generated by the Mineral-Titles-Online

http://archive.ilmb.gov.B.C..ca/lrdw/). These spatial layers are generated by the Mineral-Titles-Online (MTO) electronic staking system that is used to locate and record mineral tenures in British Columbia.

Claim details given in Table 1 were obtained using an online mineral tenure search engine available on the BC MapPlace web site (Aris MapBuilder). All claims listed in the table are in the Omineca Mining Division within NTS map sheets 093K/04 and 093K/05.

		Tubic Il Tubic of Bool I	111101 011 1 011011 00	
Tenure Number	Type	Claim Name	Good Until	Area (ha)
942348	Mineral	BOER 1	20131230	472.1982
942349	Mineral	BOER 2	20131230	472.2019
942350	Mineral	BOER 3	20131230	472.2271
942369	Mineral	BOER 4	20131230	472.2199
942370	Mineral	BOER 5	20131230	472.2201
942371	Mineral	BOER 6	20131230	472.0397
942372	Mineral	BOER 7	20131230	472.0342
942373	Mineral	BOER 8	20131230	471.9212
942374	Mineral	BOER 9	20131230	472.3462
942389	Mineral	BOER 10	20131230	472.3885
942390	Mineral	BOER 11	20131230	472.4516
942391	Mineral	BOER 12	20131230	472.0497
1011913	Mineral	BOER 13	20131230	680.1721

Table 1. Table of Boer Mineral Tenures

Total Area: 6346,4704 ha

All the claims are owned as to 50% by each Owner: FMC no. 104271 Gerald George Carlson on behalf of KGE Management Ltd 50% and FMC no. 104633 John Arthur Chapman 50%. Under new regulations, assessment work to the value of \$5 per hectare (first and second anniversary years) and \$10 per hectare (third and fourth anniversary years) is required by the expiry date or cash in lieu of work paid (at double the work rate, minimum six months). The 2012 exploration work was filed (SOW with BCMTO) in January 2013, advancing all claim expiry dates to December 30, 2013.

The claims have not been surveyed, but claim boundaries are referenced to exact positions of UTM coordinates or Lat/Long points which may be located in the field. The claims have adequate area for exploration and, if warranted, development and operations.

Management Ltd.

#### Location

The Boer property is located adjacent to Highway 16, and centered nine kilometers northeast of the resource Village of Burns Lake, B.C., at UTM Zone 10N: 6017000mN/330000mE, NTS on maps: 093K/04 and 093K/05, in the Omineca Mining Division.

Figure 4 shows the Boer tenures on a Google Earth image relative to local infrastructure and physiography.

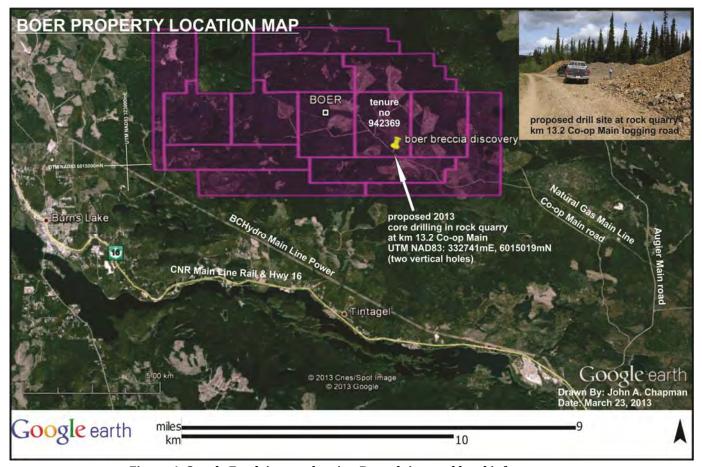


Figure 4. Google Earth image showing Boer claims and local infrastructure

# ACCESSIBILITY, CLIMATE, VEGETATION, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### Access

Property main access is via Hwy 16 (The Yellowhead Highway), 20 kilometers east of Burns Lake then north by a mainline logging road network (Augier and Co-op) to and around the Property. The junction of Augier Main and Co-op Main is at 341217mE/6007706mN. The western 1/3 of the Property is accessed via the Mercury road at 5.3 kilometers north of Burns Lake on the Babine Lake main road (junction: 319561mE/6018720mN). The Property topography is gentle relief typical of the B.C. Interior Plateau, and has been extensively clear-cut logged. The Property is located near excellent infrastructure including the resource Village of Burns Lake, and related highways, grid power, natural gas pipeline and airport (see Figure 3). There has been extensive clear-cut logging conducted within the Boer claims.

Four wheel drive vehicles are advised. Property access is available year round – it is common practice in the region for mineral resource operators to conduct winter drill programs.

# Climate and Vegetation (MacIntyre, 2012)

Climate is typical of the Interior Plateau with a cool continental climate. Short, warm and moist summers are combined with temperatures often reaching 30 degrees Celsius. Winters can reach temperatures of -10 degrees, with extremes sometimes at -40 degrees. Precipitation is relatively low being in the east-side rain shadow of the Coast Range Mountains. Precipitation is mainly in the form of snow with average annual accumulation of between 1.0 and 2.0 metres.

The Boer property is located within the Sub-Boreal Spruce bioclimatic zone of British Columbia. It extends along the highlands of the Nechako and Quesnel plateaus and the Fraser Basin, with long forested sections into the valley bottoms of mountainous areas to the north, east, and west. The vast rolling landscape of the Sub-Boreal Spruce zone is lushly covered in coniferous forest. The dominant coniferous species are hybrid white spruce, subalpine fir, and occasionally, black spruce, along with lodgepole pine and occasionally douglas-fir. Underbrush include: lilies, ferns, blueberries, devil's club, black huckleberry, thimbleberry, highbush-cranberry, Sitka alder, velvet-leaved blueberry, black gooseberry, black twinberry, bunchberry, thimbleberry and queen's cup.

Several major lakes and rivers are located in this zone, including the Skeena, Bulkley, Fraser, Babine, and Nechako, as well as lakes such as Stuart, Francois, Burns, Trembleur, and the Nation Lakes. In addition, the flat plateaus in this zone are dotted with a variety of glacial meltwater channels, kettle depressions, river oxbows, and lakes that harbour wetland ecosystems which include marshes, fens, and swamps. The Boer project area is generally heavily forested. Several tree species occur on the claims and their occurrence may reflect the nature of the underlying materials. Aspen and cottonwood occur near the lakes; elsewhere spruce and jackpine tend to dominate with varying amounts of balsam fir.

# Local Resources and Infrastructure

Supplies and services are available in the nearby Village of Burns Lake, B.C. The area is well served by regional infrastructure including a paved airstrip, heliport, mainline highways, rail (CNR), grid power (BC Hydro), natural gas (Pacific Northern Gas Ltd.) and an extensive logging road network. Active logging in and near the Boer property by Burns Lake Community Forest Ltd., based in Burns Lake B.C., is proceeding and radios are advised when traveling in these active logging areas (see Figure 3). Other active logging operations in the region are conducted by Hampton Affiliates: Babine Forest Products and Decker Lake Forest Products.

# **Physiography**

The claims are within the heavily glaciated Interior Plateau (ice direction from west to east) with gentle rolling relief and abundant creeks and small lakes. The Boer claim block exhibits low to modest relief with elevations ranging from 1,000 to 1,370 metres above mean sea level over an area of 6,346 hectares. Most of the drainage on the Property is from north to south into the Endako River system; minor drainage is to the north into the Babine River system. Bedrock exposure is sparse, forming less than 1% of the area.

#### **HISTORY**

# General Mining History in the Region

Many large copper and molybdenum porphyry deposits were discovered in Central British Columbia from the 1950's to the 1970's by major mining companies, particularly U.S.A. firms, searching for large copper deposits to replace production in the Southwest U.S.A. In many cases these majors were following up on small showings discovered by prospectors in prior years when there was no interest in low-grade bulk tonnage deposits.

The large low-grade mineral deposits of Central British Columbia near Burns Lake in the Omineca Mining Division, such as Blackwater, Bell, Berg, Chu, Endako, Equity, Granisle, Huckleberry, Kemess, Morrison, and Mount Milligan make this area one of the most intensively mineralized (base and precious metals) in the world.

# **Boer Property History**

The mineral potential at Boer was first identified by the Geoscience B.C., Quest West Project conducted from 2008 to present. The lake and stream sediment geochemistry component of that study discovered highly anomalous silver in lake sediments (up to 2,160ppb) that are now covered by the Boer property claims. This large and intense Boer silver-in-sediments anomaly is ranked in the 98th percentile from RGS samples over a vast area of the B.C. Interior Plateau. This silver anomaly includes seven RGS2011 lake sediment samples, averaging 1,255ppb over a 6km E/W by 4km N/S area centered on the Boer property. In addition, the same sediment samples are anomalous in copper, molybdenum, manganese and mercury.

The B.C. and Federal governments' Airborne Magnetic Survey, 1967 and 1968, over the Burns Lake region shows several magnetic anomalies in the areas now covered by the Boer property (see Figure 7). Refer to GSC Magnetic Maps for Sheets 93K/04 (5303G) and 93K/05 (5306G).

Prospecting was conducted in the summer of 2012 following roads, natural gas pipeline, logging roads and clear-cuts. The Property is extensively covered with thin (<2 meters) glacial till (ice direction from west to east), with only minor bedrock outcrop (<1 percent). The most interesting mineral discovery made in 2012 was a hydrothermal breccia at kilometer 13.2 of the Co-op Main road, mineralized with sulfides (abundant pyrite, 182.4ppm molybdenum, 279.5ppm copper and 3.4ppm silver) and iron carbonate; consisting of coarse fragments of aplite and andesite in a matrix of granite. This is a recent rock exposure as the quarry was established for road fill and rip-rap used at bridge and culvert crossing on the Co-op road system. The surface exposure of the breccia measures  $\sim 90$ m x 20m.

#### **GEOLOGICAL SETTING**

# Regional and Local Geology

The regional geological setting of the Boer property, within the important central area of the composite Topley Intrusions, is shown in Figure 5. The Jurassic Age Topley pluton rocks vary in composition and texture from acid, intermediate to basic and span a period of intrusion from 184 m.y. to 137 m.y. (Kimura, 1977).

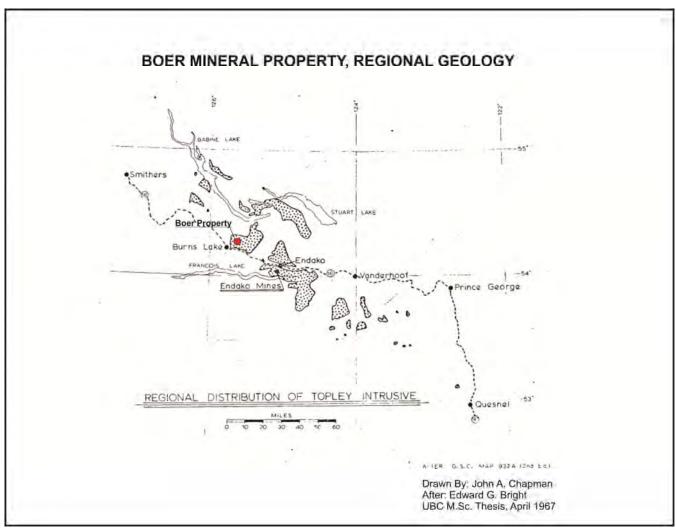


Figure 5. Regional Geology, Topley Intrusives

Regional distribution of the Topley rocks stretches from Babine Lake to Quesnel, a distance of about 288 kilometers along a regional northwesterly trend. These are differentiated (composite) intrusives in which granite, quartz monzonite, granodiorite, quartz diorite and diorite have been identified. The geology at the Boer property consists of mainly Topley intrusives (from granite to diorite to gabbro) that are covered in several areas by younger (Jurassic, Cretaceous, Eocene and Oligocene) volcanics. These volcanics vary in composition from Andesite to Basalt. Reference Figure 6, Geology and Appendix D, Structural Study.

There is no detailed geology available for the Boer property as there has never been any work reported by industry (no assessment reports filed).

The sampling done in the 2012 program indicates that there is an extensive area of granites and diorites (in some cases they appear coeval, no chilled contacts) with fairly abundant quartz and K-spar pegmatites within the Property's mineral claims. This bodes well for discovery as these rocks are within the anomalous lakes sediments area and they represent end phases of a differentiated intrusive that could be associated with sulfur and metal-rich fluids (Sillitoe, 2010).

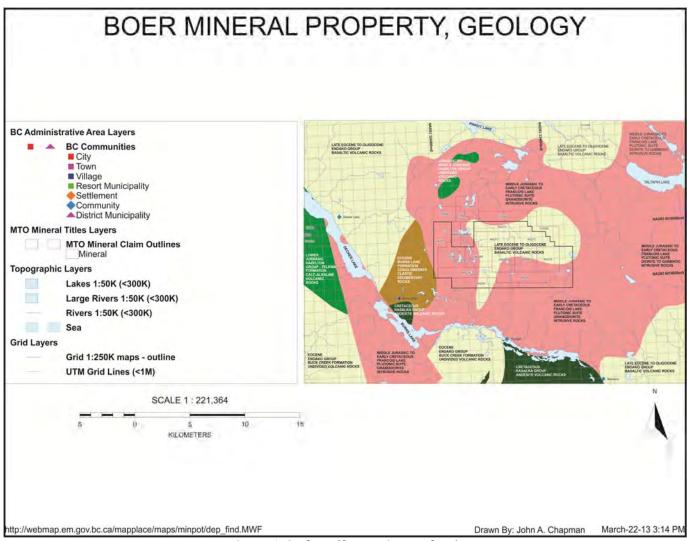


Figure 6. Geology (from B.C. MapPlace)

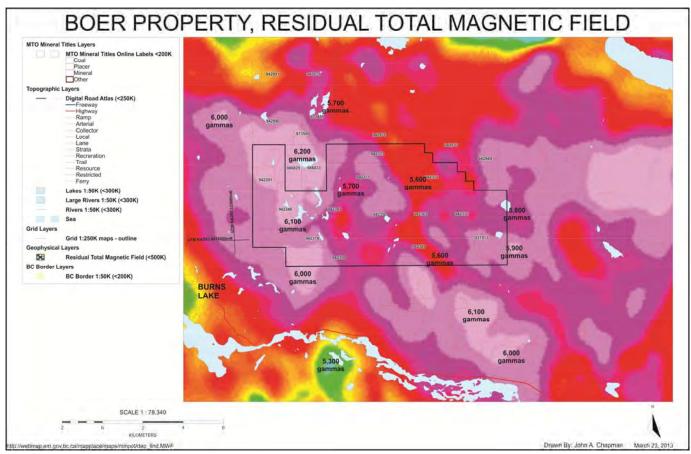


Figure 7. Residual Total Magnetic Field (from B.C. MapPlace)

# **2012 EXPLORATION PROGRAM**

The 2012 exploration program consisted of prospecting and sampling of rocks, silts and soils in an effort to determine the source of the metals-in-lake-sediment anomalies identified by recent government surveys.



Figure 8. Typical method of lake sediment sampling by B.C. and Canadian governments

Refer to Figures 9, 10 and 11 to view the 2012 traverses and sample sites. There were 62 sites examined, resulting in 14 rocks, 6 silt and 4 soil samples being sent to ACME Analytical Laboratories (Vancouver) Ltd for analysis (see Appendix A). For details of the prospecting, including descriptions of each site refer to Appendix B.

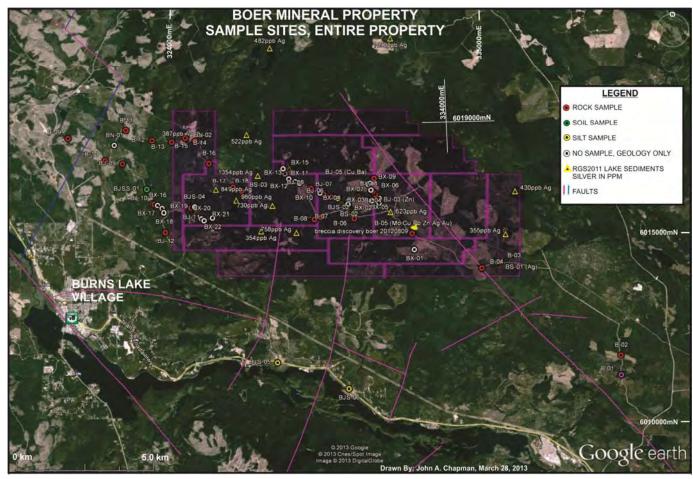
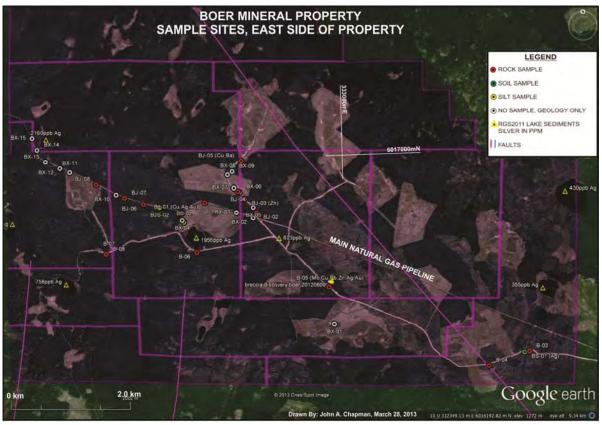


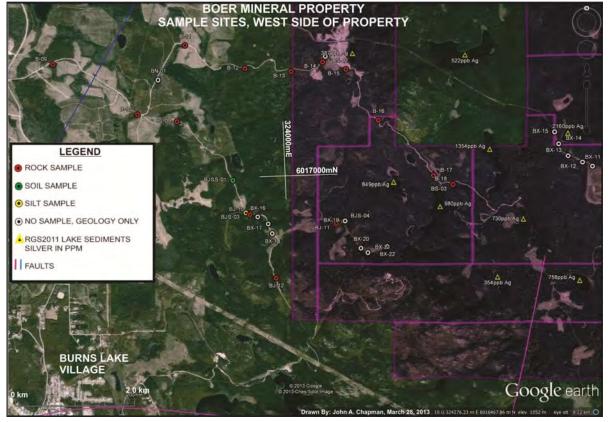
Figure 9. Entire Property, Prospecting (rock, silt and soil geochemistry)

The first mineral discovery made on the Property was August 9, 2012, by John Chapman and Brian Remanda at kilometer 13.2 on the Co-op Main logging road, ~12km northeast of Burns Lake (see Figure 4). It is a 90m x 20m hydrothermal breccia (exposed in road right-of-way) mineralized with sulfides (abundant pyrite, 182.4ppm molybdenum, 279.5ppm copper and 3.4ppm silver) and iron carbonate; consisting of coarse fragments of aplite and andesite in a matrix of granite. The breccia is located upon a small topographic high that probably is caused by silicification of the local rocks, making them resistant to erosion (glacial and weather).



Geochem Mo, Cu, Zn ppm B-05A 9.7,45.6,414 B-05B 182.4,38.8,597 B-05C 26.6,279.5,113 1 BS-01 4.2,12.8,73

Figure 10. East Side of Property, Prospecting (rock, silt and soil geochemistry)



BJ-01 0.3,280.5,96 BJ-02 0.4,66.3,42 **BJ-03** 0.7,90.3,115 **BJ-04** 0.3,1.9,5 BJ-05 4.0,192.1,66 BJ-06 0.4,76.8,63 BJS-01 4.0,23.5,140 BJS-02 2.5,35.6,78 BJS-03 0.9,36.2,85

Figure 11. West Side of Property, Prospecting (rock, silt and soil geochemistry)

#### INTERPRETATION AND CONCLUSIONS

It has been well established during the 2012 program that the glacial ice direction over the Boer property has been from west to east. However, the drainage through the main lakes with elevated metals-in-sediments has been from the height of land (divide between Babine and Endako drainages). The headwaters of the two main south draining creeks (Stearns and Tintagel) are from the height of land in the north central to north east portion of the Property (see Appendix D for topography). This complicates the tracing of anomalous metals from the lakes to the source - from west if glacial transport, and from north and northeast if drainage transported (or perhaps a combination of the two). In addition, drainage transport of metals may be physical and/or chemical.

Prospecting in 2012, and the resulting rock and silt geochemistry, indicates a potential base and precious metal target between and north of BJS-01, BJ-01 and BJ-05 toward the highest elevations on the Property (may be metal rich copula (dome) of the main intrusive, being the highest point). Note that the samples with anomalous metals are shown on the Prospecting maps (Figures 9, 10 and 11) with the anomalous metal in brackets after the sample number.

The breccia discovery on the Co-op logging road (Sample B-05) is anomalous in molybdenum, copper, lead, zinc, silver and gold. This warrants a follow-up as it is near a NW/SE regional fault, which has been mapped half way to the Endako mine, and is mapped as being close to the lakes containing anomalous metals-in-sediments.

A note of caution on the source of the anomalous metals-in-sediments from the central lakes on the Boer property is the potential for the elevated manganese to have scavenged (from a low-grade multi-metal source) and enhanced metal concentration in the lakes by having metal adsorb on manganese oxides as they form and precipitate in the lake waters, depending upon Eh (electron activity), pH (hydrogen ion activity), temperature, flow rates, etc. (Wingert-Runge).

#### RECOMMENDATIONS

In order to locate a buried metal (sulfide) deposit (under glacial till or thin young volcanics) at Boer it will be necessary to: 1) continue surficial prospecting, 2) gridding select areas for soil geochemical surveys, and 3) conduct a Geotech Ltd. ZTEM airborne geophysical survey. Anomalies generated from this work should be trenched and/or drilled.

The relatively new ZTEM method is effective in identifying bulk conductivity contrasts in rocks to ~2km depths. This can outline the resistive potassic zone from the surrounding less resistive phyllic and propylitic zones related to porphyry copper and molybdenum deposits.

Consideration should also be given to drilling a "Hail Mary" deep vertical core hole at the breccia discovery at kilometer 13.2 on the Co-op Main road.

The field program recommended includes: 1) a helicopter-borne ZTEM survey by Geotech Ltd. ( $\sim$ \$110,000), and 2) detailed prospecting and where warranted development of grids for soil geochemical surveys and 3D-IP surveys ( $\sim$ \$100,000).

#### REFERENCES

Armstrong, J.E. (1965), Fort St. James Map-Area, Cassiar and Coast Districts, British Columbia, Memoir 252, Geological Survey of Canada.

Bright, E.G. (1967), Geology of the Topley Intrusives in the Endako Area British Columbia, a thesis submitted in partial fulfillment of the requirements for the degree of Master of Science, Department of Geology, UBC.

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Kimura, E.T. and Drummond, A.D. (1966), Geology of the Endako Molybdenum Deposit, Presented at CIM, B.C. Section Meeting Victoria, B.C.

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Wingert-Runge, B., and Andren, A.W., Adsorptive Behavior of Silver to Synthetic and Natural Systems in Aqueous Systems, University of Wisconsin-Madison.

# STATEMENTS OF QUALIFICATIONS

I, John Arthur Chapman of the City of Surrey, Province of British Columbia, Canada, do hereby certify as follows:

- (1) I am a consulting mining engineer residing at #43 1725 Southmere Cr., Surrey, British Columbia, V4A 7A7:
- (2) I graduated with honours in Mining Technology from the British Columbia Institute of Technology, June 1967 and I graduated with honours in Mining Engineering (B.Sc.) from the Colorado School of Mines, January 1971;
- (3) I am a Professional Engineer registered (No. 8840) in the Province of British Columbia, Canada, since 1973;
- (4) I am a Fellow of the Canadian Institute of Mining and Metallurgy;
- (5) I have practised my profession continuously since 1973 in Canada, United States and Philippines;
- (6) Since 1983 I have provided services to the mining industry as the Principal of J.A. Chapman Mining Services:
- (7) Prior to 1983 I served five years with Manalta Coal Ltd., Canada's largest coal company, as Operations Manager then as Vice-President and General Manager. Prior to that I served eleven years with Placer Dome Inc. in engineering, supervision and management at large open-pit copper and molybdenum mines:
- (8) I am the author of this report on the Boer property, dated April 5, 2013. The report is based upon a literature review, discussions with neighboring claim owners and on Property visits during 2012;
- (9) I am the owner of 50% interest in the Boer property.
- (10) I personally assisted in the planning for and reviewing of the 2012 exploration program at the Boer property.

Dated at Surrey, British Columbia this 5th day of April 2013.

John Arthur Chapman, B.Sc., P.Eng., FCIM

# **STATEMENT OF EXPENDITURES**

Personnel:	
John Chapman, P.Eng., Project Manager	
4 days in August @ \$800/day	3,200.00
5 days in September @ \$800/day	4,000.00
Brian Remanda, Prospector/Contractor with 4x4	
2 days in August @ \$350/day	700.00
Grant Carlson, P.Eng., Project Assistant	
3 days in September @ \$600/day	1,800.00
Subtotal	\$9,700.00
Expenses:	
Return Flight Vancouver to Prince George	500.00
Truck No. 1: Fully equipped 4x4, 9 days @ \$130/day	1,170.00
Truck No. 2: 4x4, 2 days @ \$110/day	220.00
Fuel for trucks	725.00
Motel: 12 man days @ \$95 per day	1,140.00
Meals: 14 man days @ \$60 per day	840.00
Supplies & Rental: GPS, ribbon, ohm meter, sample bags, etc.	350.00
Analytical: 16 rock & 10 soil @ \$27/s	702.00
Gerald Carlson, PhD, P.Eng., 5 days structural int. @ \$800/day	4,000.00
Data Processing and Reporting	2,000.00
Subtotal	\$11,647.00
Total	\$21,347.00

Event Numbers: 5426887 and 5426888

Work Filed: \$3,000.00 + \$18,347.00 = \$21,347.00 PAC Filed: \$894.15 + \$5,482.23 = \$6,376.00

Work Recorded: January 17, 2013

# APPENDIX A ANALYTICAL PROCEDURES & ASSAY CERTIFICATES

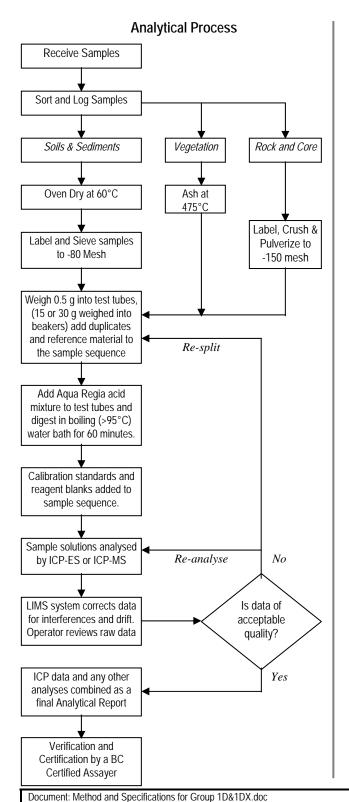
#### Notes:

There are assays in these ACME certificates from properties other than the Boer. Only the sample numbers starting with B are from the Boer property.

On Certificate of Analysis VAN13000203.1, samples BJS-01 to BJS-06 are actually silt samples (not soil).



# METHODS AND SPECIFICATIONS FOR ANALYTICAL PACKAGE GROUP 1D & 1DX – ICP & ICP-MS ANALYSIS – AQUA REGIA



#### Comments

#### Sample Preparation

All samples are dried at 60°C. Soil and sediment are sieved to -80 mesh (-177  $\mu m)$ . Moss-mats are disaggregated then sieved to yield -80 mesh sediment. Vegetation is pulverized or ashed (475°C). Rock and drill core is jaw crushed to 70% passing 10 mesh (2 mm), a 250 g riffle split is then pulverized to 95% passing 150 mesh (100  $\mu m$ ) in a mild-steel ring-and-puck mill. Pulp splits of 0.5 g are weighed into test tubes, 15 and 30 g splits are weighed into beakers.

#### Sample Digestion

A modified Aqua Regia solution of equal parts concentrated ACS grade HCl and HNO $_3$  and de-mineralised H $_2$ O is added to each sample to leach for one hour in a hot water bath (>95°C). After cooling the solution is made up to final volume with 5% HCl. Sample weight to solution volume is 1 g per 20 mL.

#### Sample Analysis

*Group 1D*: solutions aspirated into a Jarrel Ash AtomComp 800 or 975 ICP emission spectrometer are analysed for 30 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, Ti, U, V, W, Zn.

Group 1DX: solutions aspirated into a Perkin Elmer Elan6000 ICP mass spectrometer are analysed for 36 elements: Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Tl, Sr, Th, Ti, U, V, W, Zn.

#### **Quality Control and Data Verification**

An Analytical Batch (1 page) comprises 34 samples. QA/QC protocol incorporates a sample-prep blank (SI or G-1) carried through all stages of preparation and analysis as the first sample, a pulp duplicate to monitor analytical precision, a -10 mesh rejects duplicate to monitor sub-sampling variation (drill core only), two reagent blanks to measure background and aliquots of in-house Standard Reference Materials like STD DS5 to monitor accuracy.

Raw and final data undergo a final verification by a British Columbia Certified Assayer who signs the Analytical Report before it is released to the client. Chief Assayer is Clarence Leong, other certified assayers are Leo Arciaga, Marcus Lau, Ken Kwok, Dean Toye and Jacky Wang.

Date: Jan 15, 2004 Prepared By: J. Gravel



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

www.acmelab.com

Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Submitted By: John A. Chapman
Receiving Lab: Canada-Vancouve

Receiving Lab: Canada-Vancouver Received: August 16, 2012

Report Date: August 29, 2012

Page: 1 of 2

# **CERTIFICATE OF ANALYSIS**

# VAN12003833.1

#### **CLIENT JOB INFORMATION**

Project: LAKES DISTRICT

Shipment ID: P.O. Number

Number of Samples: 6

#### SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps
PICKUP-RJT Client to Pickup Rejects

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

Invoice To: J.A.Chapman Mining Services

18-1480 Foster Street White Rock BC V4B 3X7

Canada

CC: Gerald G. Carlson

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	6	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX1	6	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

#### **ADDITIONAL COMMENTS**





1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716

Project:

Client:

White Rock BC V4B 3X7 Canada

18-1480 Foster Street

J.A.Chapman Mining Services

LAKES DISTRICT

Report Date:

August 29, 2012

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Page:

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Part: 1 of 2

Analyte   Wgt   Mgt													5									
Analyte   Wgt   Mo   Cu   Pb   Zn   Ag   Ni   Co   Mn   Fe   As   Au   Th   Sr   Cd   Sb   Bi   V   Ca	CERTIFICATE OF ANALYSIS VAN12003833.1																					
Unit   Ng   ppm   ppm		Method	WGHT	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
MDL         0.01         0.1         0.1         0.1         1         0.0         0.0         0.0         0.1         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0		Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р
G1         Prep Blank         <0.01		Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
B-05A         Rock         1.07         9.7         49.6         162.7         414         1.0         9.8         10.0         1685         2.68         1.9         4.7         8.9         170         18.5         <0.1		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
B-05B         Rock         1.14         182.4         38.8         506.7         597         1.7         12.3         15.9         1424         3.50         3.8         6.9         9.9         129         29.0         0.1         0.9         8         2.60         0           B-05C         Rock         1.43         26.6         279.5         539.5         1131         3.4         9.4         19.3         1344         5.07         4.2         10.9         10.7         112         76.5         0.1         1.5         5         1.78         0           B-18         Rock         0.93         0.9         68.0         7.2         15         0.1         2.4         3.5         103         1.71         8.1         1.4         12.5         9         0.2         0.2         0.1         6         0.11         0           H-01         Rock         0.63         1.4         735.2         2.4         25         1.3         9.5         33.6         250         1.99         1.8         4.6         1.0         47         0.2         <0.1	G1	Prep Blank	<0.01	<0.1	2.0	2.5	48	<0.1	4.3	4.3	588	1.94	<0.5	2.6	5.0	58	<0.1	<0.1	<0.1	35	0.46	0.080
B-05C         Rock         1.43         26.6         279.5         539.5         1131         3.4         9.4         19.3         1344         5.07         4.2         10.9         10.7         112         76.5         0.1         1.5         5         1.78         0           B-18         Rock         0.93         0.9         68.0         7.2         15         0.1         2.4         3.5         103         1.71         8.1         1.4         12.5         9         0.2         0.2         0.1         6         0.11         0           H-01         Rock         0.63         1.4         735.2         2.4         25         1.3         9.5         33.6         250         1.99         1.8         4.6         1.0         47         0.2         <0.1	B-05A	Rock	1.07	9.7	49.6	162.7	414	1.0	9.8	10.0	1685	2.68	1.9	4.7	8.9	170	18.5	<0.1	0.6	7	3.17	0.034
B-18         Rock         0.93         0.9         68.0         7.2         15         0.1         2.4         3.5         103         1.71         8.1         1.4         12.5         9         0.2         0.2         0.1         6         0.11         0           H-01         Rock         0.63         1.4         735.2         2.4         25         1.3         9.5         33.6         250         1.99         1.8         4.6         1.0         47         0.2         <0.1	B-05B	Rock	1.14	182.4	38.8	506.7	597	1.7	12.3	15.9	1424	3.50	3.8	6.9	9.9	129	29.0	0.1	0.9	8	2.60	0.059
H-01 Rock 0.63 1.4 735.2 2.4 25 1.3 9.5 33.6 250 1.99 1.8 4.6 1.0 47 0.2 <0.1 0.3 52 0.98 0	B-05C	Rock	1.43	26.6	279.5	539.5	1131	3.4	9.4	19.3	1344	5.07	4.2	10.9	10.7	112	76.5	0.1	1.5	5	1.78	0.042
	B-18	Rock	0.93	0.9	68.0	7.2	15	0.1	2.4	3.5	103	1.71	8.1	1.4	12.5	9	0.2	0.2	0.1	6	0.11	0.024
Y-02 Rock 0.85 4.7 36.8 3.9 157 0.2 24.2 3.6 366 1.29 15.9 1.8 0.7 9 1.3 4.0 0.2 26 0.06 0	H-01	Rock	0.63	1.4	735.2	2.4	25	1.3	9.5	33.6	250	1.99	1.8	4.6	1.0	47	0.2	<0.1	0.3	52	0.98	0.133
1 02 100K   0.00 4.7 00.0 0.0 107 0.2 24.2 0.0 000 1.20 10.0 1.0 0.7 0 1.0 4.0 0.2 20 0.00 0	Y-02	Rock	0.85	4.7	36.8	3.9	157	0.2	24.2	3.6	366	1.29	15.9	1.8	0.7	9	1.3	4.0	0.2	26	0.06	0.017



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J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project:

Client:

LAKES DISTRICT

Report Date:

August 29, 2012

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Page: 2 of 2

Part: 2 of 2

# CERTIFICATE OF ANALYSIS

# VAN12003833.1

	Method Analyte	1DX La	1DX Cr	1DX Mg	1DX Ba	1DX Ti	1DX B	1DX Al	1DX Na	1DX K	1DX W	1DX Hg	1DX Sc	1DX TI	1DX S	1DX Ga	1DX Se	1DX Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
G1	Prep Blank	8	8	0.61	239	0.127	<20	1.03	0.076	0.50	0.1	<0.01	2.2	0.3	<0.05	5	<0.5	<0.2
B-05A	Rock	5	6	0.72	70	<0.001	<20	0.29	0.032	0.19	<0.1	0.02	2.6	<0.1	1.58	<1	<0.5	0.5
B-05B	Rock	5	9	0.53	74	<0.001	<20	0.31	0.031	0.21	<0.1	0.02	3.2	<0.1	2.43	<1	<0.5	0.6
B-05C	Rock	4	3	0.45	70	<0.001	<20	0.30	0.045	0.21	<0.1	0.02	1.8	<0.1	4.19	<1	1.2	1.4
B-18	Rock	15	3	0.16	56	<0.001	<20	0.37	0.050	0.14	<0.1	<0.01	0.9	<0.1	0.71	2	0.5	<0.2
H-01	Rock	2	14	0.54	53	0.132	<20	0.92	0.133	0.07	0.1	<0.01	4.3	<0.1	0.57	3	<0.5	<0.2
Y-02	Rock	2	15	0.38	42	0.010	<20	0.44	0.009	0.20	0.3	0.02	2.2	0.3	<0.05	2	<0.5	<0.2



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Project:

LAKES DISTRICT

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Part: 1 of 2

QUALITY CONTROL REPORT VAN12003833.1 Method WGHT 1DX Analyte Cd Wgt Mo Cu Pb Zn Ag Ni Co Mn Fe As Αu Th Sr Sb Bi ν Ca 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 0.01 0.5 0.5 0.1 1 0.1 0.1 0.1 2 0.01 0.001 **Pulp Duplicates** B-05C Rock 1.43 26.6 279.5 539.5 1131 3.4 9.4 19.3 1344 5.07 4.2 10.9 10.7 112 76.5 0.1 5 1.78 0.042 1.5 REP B-05C QC 25.4 283.4 545.5 1138 3.2 8.7 19.2 1337 5.02 4.2 11.0 11.5 111 73.9 0.2 1.5 5 1.77 0.042 Reference Materials STD DS9 Standard 13.9 110.4 124.8 315 2.1 41.5 8.1 614 2.44 26.5 105.8 7.1 76 2.4 5.4 6.4 40 0.74 0.089 STD OREAS45CA Standard 1.1 534.6 20.7 60 0.3 256.5 95.7 1008 16.06 3.8 39.0 7.3 16 0.1 0.2 0.1 228 0.49 0.040 STD DS9 Expected 12.84 108 126 317 1.83 40.3 7.6 575 2.33 25.5 118 6.38 69.6 2.4 4.94 6.32 40 0.7201 0.0819 STD OREAS45CA Expected 494 0.275 240 92 943 15.69 3.8 43 15 0.13 0.19 215 0.4265 0.0385 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 Prep Blank < 0.01 < 0.1 2.0 2.5 48 <0.1 4.3 4.3 588 1.94 < 0.5 2.6 5.0 58 < 0.1 < 0.1 < 0.1 35 0.46 0.080



OLIVITY CONTROL DEPORT

Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716

Project:

Client:

White Rock BC V4B 3X7 Canada

J.A.Chapman Mining Services

LAKES DISTRICT

18-1480 Foster Street

Report Date:

August 29, 2012

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Page: 1 of 1 Part: 2 of 2

QUALITY CONTROL REPORT VAN120038																		
	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	La	Cr	Mg	Ва	Ti	В	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
B-05C	Rock	4	3	0.45	70	<0.001	<20	0.30	0.045	0.21	<0.1	0.02	1.8	<0.1	4.19	<1	1.2	1.4
REP B-05C	QC	4	3	0.46	66	<0.001	<20	0.30	0.044	0.21	0.1	0.02	1.7	<0.1	4.18	<1	1.8	1.9
Reference Materials																		
STD DS9	Standard	13	126	0.65	338	0.111	<20	0.98	0.080	0.40	3.1	0.22	2.3	5.6	0.17	4	5.2	5.5
STD OREAS45CA	Standard	16	711	0.16	172	0.135	<20	3.69	0.008	0.07	<0.1	0.04	46.3	<0.1	<0.05	19	1.1	<0.2
STD DS9 Expected		13.3	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
STD OREAS45CA Expected		15.9	709	0.1358	164	0.128		3.592	0.0075	0.0717		0.03	39.7	0.07	0.021	18.4	0.5	
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	8	8	0.61	239	0.127	<20	1.03	0.076	0.50	0.1	<0.01	2.2	0.3	<0.05	5	<0.5	<0.2



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

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Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Submitted By: John A. Chapman

Receiving Lab: Canada-Vancouver Received: August 16, 2012

Report Date: August 25, 2012

Page: 1 of 2

# **CERTIFICATE OF ANALYSIS**

# VAN12003834.1

#### **CLIENT JOB INFORMATION**

LAKES DISTRICT Project:

Shipment ID: P.O. Number

Number of Samples: 3

#### SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps PICKUP-RJT Client to Pickup Rejects

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

J.A.Chapman Mining Services Invoice To:

> 18-1480 Foster Street White Rock BC V4B 3X7

Canada

CC: Gerald G. Carlson

#### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	3	Dry at 60C			VAN
SS80	3	Dry at 60C sieve 100g to -80 mesh			VAN
RJSV	3	Saving all or part of Soil Reject			VAN
1DX1	3	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

#### **ADDITIONAL COMMENTS**



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.



1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716

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18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project:

Client:

LAKES DISTRICT

Report Date:

August 25, 2012

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Page:

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Part:

1 of 2

												i ago.		2 01 2					1 0		01 2
CERTIFI	CERTIFICATE OF ANALYSIS VAN12003834.1																				
	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	Unit MDL	ppm 0.1	ppm 0.1	ppm 0.1	ppm 1	ppm 0.1	ppm 0.1	ppm 0.1	ppm 1	% 0.01	ppm 0.5	ppb 0.5	ppm 0.1	ppm 1	ppm 0.1	ppm 0.1	ppm 0.1	ppm 2	% 0.01	% 0.001	ppm 1
BS-01					<b>ppm 1</b> 73				ppm 1 323					<b>ppm 1</b> 13				<b>ppm 2</b> 91			<b>ppm 1</b> 8
BS-01 BS-02	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	<b>ppm 1</b> 8 7



1020 Cordova St. East Vancouver BC V6A 4A3 Canada Phone (604) 253-3158 Fax (604) 253-1716 Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project: LAKES DISTRICT

Report Date: August 25, 2012

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Page: 2 of 2 Part: 2 of 2

CERTIFICATE OF AN	IALY	SIS													VA	N12	2003834.1
Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
Analyte	Cr	Mg	Ва	Ti	В	ΑI	Na	K	w	Hg	Sc	TI	s	Ga	Se	Te	
Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	

	-		-								•						
	Uni	t ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MD	_ 1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
BS-01	Soil	23	0.48	90	0.056	<20	3.06	0.009	0.05	0.2	0.06	3.4	<0.1	<0.05	7	<0.5	<0.2
BS-02	Soil	25	0.54	110	0.026	<20	3.22	0.005	0.04	<0.1	0.06	3.9	<0.1	<0.05	6	<0.5	<0.2
BS-03	Soil	30	0.66	156	0.062	<20	1.76	0.011	0.10	<0.1	0.02	5.5	0.1	<0.05	5	<0.5	<0.2



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18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project:

LAKES DISTRICT

Report Date:

August 25, 2012

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QUALITY CO	UALITY CONTROL REPORT															VAI	V120	003	8834.1					
	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX			
	Analyte	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р	La			
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm			
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1			
Pulp Duplicates																								
BS-03	Soil	1.7	39.2	7.7	68	<0.1	20.7	13.7	597	3.37	7.9	0.8	2.6	39	0.2	0.3	0.2	76	0.34	0.076	9			
REP BS-03	QC	1.3	40.0	7.6	67	<0.1	20.9	13.5	578	3.37	8.0	1.3	2.4	37	0.1	0.3	0.1	75	0.33	0.080	8			
Reference Materials																								
STD DS9	Standard	12.1	105.8	120.8	311	1.9	39.4	7.2	556	2.30	24.7	115.5	6.0	71	2.3	4.9	6.2	40	0.67	0.082	12			
STD OREAS45CA	Standard	1.1	480.5	18.8	61	0.3	229.5	87.2	917	16.34	3.6	49.7	6.8	14	<0.1	0.1	0.1	198	0.40	0.036	15			
STD OREAS45CA Expected		1	494	20	60	0.275	240	92	943	15.69	3.8	43	7	15	0.1	0.13	0.19	215	0.4265	0.0385	15.9			
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819	13.3			
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	<1			



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Project: LAKES DISTRICT

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# ALITY CONTROL REPORT

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Cr	Mg	Ва	Ti	В	Al	Na	K	w	Hg	Sc	TI	s	Ga	Se	Te
	Unit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																	
BS-03	Soil	30	0.66	156	0.062	<20	1.76	0.011	0.10	<0.1	0.02	5.5	0.1	<0.05	5	<0.5	<0.2
REP BS-03	QC	30	0.65	153	0.059	<20	1.73	0.010	0.10	<0.1	0.01	5.4	<0.1	<0.05	5	<0.5	<0.2
Reference Materials																	
STD DS9	Standard	115	0.63	328	0.105	<20	0.88	0.077	0.36	2.7	0.23	2.5	5.6	0.16	4	6.4	5.6
STD OREAS45CA	Standard	695	0.14	163	0.126	<20	3.25	0.012	0.06	<0.1	0.05	43.4	0.1	<0.05	18	8.0	<0.2
STD OREAS45CA Expected		709	0.1358	164	0.128		3.592	0.0075	0.0717		0.03	39.7	0.07	0.021	18.4	0.5	
STD DS9 Expected	· ·	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



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Submitted By: John A. Chapman Receiving Lab: Canada-Vancouver Received: January 15, 2013 Report Date: January 30, 2013

Page: 1 of 3

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

# CERTIFICATE OF ANALYSIS

# VAN13000202.1

#### **CLIENT JOB INFORMATION**

**BOER-HANSON-YORK** Project:

Shipment ID: P.O. Number

Number of Samples:

41

#### SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days

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.

J.A.Chapman Mining Services Invoice To:

> 18-1480 Foster Street White Rock BC V4B 3X7

Canada

CC: Gerald G. Carlson

#### Number of Method **Code Description** Test Report Lab Code Samples Wgt (g) Status R200-250 41 Crush, split and pulverize 250 g rock to 200 mesh VAN 1DX1 41 1:1:1 Aqua Regia digestion ICP-MS analysis 0.5 Completed VAN

#### **ADDITIONAL COMMENTS**



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.



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Part: 1 of 1

CERTIFICATE OF ANALYSIS VAN1300020															202	.1					
M	Method	WGHT	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
Į.	Analyte	Wgt	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р
	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
YM-01 Rock		0.40	0.2	40.5	0.3	53	<0.1	40.7	23.2	956	4.56	5.8	<0.5	0.2	64	0.1	<0.1	<0.1	63	5.77	0.053
YM-02 Rock		0.56	0.3	46.3	0.6	74	<0.1	51.6	35.6	1086	6.27	7.4	<0.5	0.2	58	0.1	0.5	<0.1	101	3.51	0.074
YM-03 Rock		0.54	1.0	74.1	1.0	104	<0.1	34.1	44.7	1704	8.34	23.3	3.7	0.3	170	0.2	0.4	<0.1	212	4.02	0.132
YM-04 Rock		0.51	8.3	38.4	3.4	67	8.0	22.7	16.5	2921	7.72	1316	44.6	0.1	208	0.6	4.7	<0.1	62	12.67	0.050
YM-05 Rock		0.32	0.5	1.7	1.0	15	<0.1	4.3	3.4	808	2.01	3162	845.1	0.2	238	0.1	0.7	<0.1	5	2.08	0.028
YM-06 Rock		0.58	4.0	2.3	7.6	51	0.2	5.3	16.6	2795	6.04	7485	1417	8.0	1301	0.4	1.8	<0.1	13	8.91	0.497
YM-07 Rock		0.68	5.2	62.5	3.4	120	0.2	59.4	13.7	535	3.51	25.8	1.7	1.5	81	8.0	1.5	<0.1	57	0.99	0.093
YM-08 Rock		0.47	0.4	94.6	30.4	61	0.1	21.7	15.3	543	2.84	7.9	4.3	0.9	49	0.4	2.4	<0.1	46	0.78	0.072
YM-09 Rock		0.40	18.5	104.2	6.3	170	0.1	60.8	31.0	365	3.48	5.1	1.9	2.7	8	1.3	3.3	8.0	109	0.14	0.082
YM-10 Rock		0.38	1.6	203.6	3.3	68	0.1	27.0	30.6	925	4.92	5.4	1.8	1.2	164	0.9	0.2	<0.1	152	3.25	0.209
YM-11 Rock		0.20	42.0	106.8	2.4	718	0.3	95.7	20.5	397	5.58	<0.5	5.3	3.4	36	11.2	<0.1	2.0	748	0.39	0.145
YM-12 Rock		0.36	12.3	69.9	3.6	120	0.2	90.0	23.4	400	3.56	1.7	1.0	0.7	42	0.2	<0.1	0.5	131	0.63	0.140
YM-13 Rock		0.42	0.6	60.1	1.4	41	<0.1	58.9	19.8	395	2.53	8.0	<0.5	0.9	40	0.2	0.6	<0.1	42	0.60	0.062
YM-14 Rock		0.43	0.2	2.5	3.1	4	<0.1	1.7	0.4	54	0.39	1.3	0.5	0.7	8	<0.1	<0.1	<0.1	<2	0.03	0.006
YM-15 Rock		0.43	17.8	7.0	5.3	65	0.1	13.0	2.4	320	0.99	1.8	3.4	3.8	41	1.8	0.5	0.5	4	0.52	0.046
YM-16 Rock		0.44	249.3	108.2	2.2	51	0.4	47.4	6.7	148	3.57	<0.5	0.6	1.9	37	0.3	0.2	8.0	76	0.58	0.123
YM-17 Rock		0.52	5.1	77.2	2.6	88	0.1	56.3	10.8	439	2.28	2.1	1.2	1.6	60	0.3	0.6	0.3	73	0.90	0.172
YM-18 Rock		0.46	29.2	128.5	4.5	154	0.3	129.1	30.1	255	3.24	4.5	<0.5	2.4	91	1.2	0.1	0.3	180	1.01	0.087
YM-19 Rock		0.66	1.1	6.3	7.3	8	<0.1	1.0	0.5	139	0.55	6.1	<0.5	7.8	2	<0.1	0.4	0.1	<2	0.04	0.003
YM-20 Rock		0.35	42.6	325.5	3.4	216	0.4	147.5	19.5	220	3.90	<0.5	1.9	2.6	32	3.4	0.1	0.9	182	0.70	0.118
YM-21 Rock		0.32	10.7	168.0	9.0	80	0.3	128.5	16.2	1462	4.93	2.6	4.1	2.2	18	0.2	0.3	0.4	156	0.43	0.069
YM-22 Rock		0.44	0.6	12.9	2.0	11	<0.1	10.3	2.4	337	0.64	3.7	<0.5	1.1	3	<0.1	1.0	<0.1	13	0.06	0.019
YM-23 Rock		0.48	0.3	127.3	1.5	35	0.2	115.8	22.5	399	2.66	<0.5	1.7	0.1	124	0.2	0.2	0.1	72	4.46	0.089
YM-24 Rock		0.72	0.2	64.8	3.8	51	<0.1	45.6	14.9	876	2.22	<0.5	<0.5	1.3	35	<0.1	<0.1	<0.1	57	2.08	0.028
BJ-01 Rock		0.40	0.3	280.5	0.9	96	0.2	8.8	26.5	1338	6.84	0.9	1.8	1.2	243	<0.1	<0.1	<0.1	266	3.57	0.148
BJ-02 Rock		0.25	0.4	66.3	0.5	42	<0.1	109.4	24.2	669	3.42	<0.5	<0.5	0.6	202	<0.1	<0.1	<0.1	82	2.66	0.115
BJ-03 Rock		0.36	0.7	90.3	4.0	115	<0.1	15.9	30.4	1316	6.33	0.8	0.9	1.4	164	<0.1	<0.1	0.1	245	3.33	0.112
BJ-04 Rock		0.39	0.3	1.9	8.0	5	<0.1	0.8	0.7	151	0.57	<0.5	<0.5	28.7	5	<0.1	<0.1	<0.1	<2	0.07	0.004
BJ-05 Rock		0.31	4.0	192.1	1.6	66	<0.1	3.4	23.9	1101	6.57	0.8	<0.5	1.8	107	<0.1	<0.1	0.1	112	1.20	0.225
BJ-06 Rock		0.35	0.4	76.8	1.2	63	<0.1	73.8	27.7	769	4.53	<0.5	2.7	0.4	199	<0.1	<0.1	<0.1	146	3.81	0.061



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# FICATE OF ANALYSIS

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	La	Cr	Mg	Ва	Ti	В	Al	Na	K	w	Hg	Sc	TI	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
YM-01 Rock		3	132	2.42	24	0.007	<20	3.05	0.026	0.18	<0.1	0.01	9.0	0.1	<0.05	7	<0.5	<0.2
YM-02 Rock	:	3	168	3.80	20	0.224	<20	3.72	0.015	0.11	<0.1	<0.01	16.1	<0.1	<0.05	7	<0.5	<0.2
YM-03 Rock	:	5	33	2.97	34	0.263	<20	3.59	0.013	0.10	<0.1	0.01	21.3	<0.1	0.20	12	<0.5	<0.2
YM-04 Rock		3	30	0.89	148	0.005	<20	1.04	0.008	0.08	0.1	<0.01	13.1	<0.1	<0.05	3	0.5	<0.2
YM-05 Rock		2	9	0.44	38	<0.001	<20	0.15	0.014	0.10	0.2	<0.01	1.8	<0.1	0.13	<1	<0.5	<0.2
YM-06 Rock		10	3	1.90	97	0.005	<20	0.60	0.009	0.37	2.0	<0.01	21.1	<0.1	0.30	2	<0.5	<0.2
YM-07 Rock		4	50	1.26	142	0.108	<20	1.60	0.013	0.21	0.4	0.02	2.9	<0.1	0.37	3	3.2	<0.2
YM-08 Rock		5	37	1.36	238	0.163	<20	1.90	0.030	0.39	0.5	<0.01	1.8	0.1	<0.05	4	<0.5	<0.2
YM-09 Rock		6	86	0.13	29	0.003	<20	1.13	<0.001	0.05	<0.1	0.30	22.4	0.2	<0.05	3	1.5	<0.2
YM-10 Rock		7	23	1.80	45	0.169	<20	5.54	2.319	0.49	0.4	0.04	5.3	<0.1	0.11	9	1.1	<0.2
YM-11 Rock		12	145	2.68	512	0.346	<20	3.23	0.065	2.96	0.3	<0.01	13.5	2.9	0.59	12	7.4	0.2
YM-12 Rock		3	178	1.76	560	0.221	<20	2.23	0.102	1.76	0.2	<0.01	3.9	2.3	0.43	8	<0.5	<0.2
YM-13 Rock		4	83	1.75	205	0.174	<20	1.95	0.035	0.33	0.2	<0.01	1.9	0.1	<0.05	4	<0.5	<0.2
YM-14 Rock		1	7	0.02	52	0.001	<20	0.28	0.049	0.18	<0.1	<0.01	0.3	<0.1	<0.05	1	<0.5	<0.2
YM-15 Rock		11	6	0.11	200	0.020	<20	0.43	0.068	0.29	0.2	<0.01	0.5	0.1	0.18	2	3.0	<0.2
YM-16 Rock		7	46	0.19	34	0.149	<20	0.30	0.070	0.12	0.8	<0.01	2.3	0.2	0.51	2	4.4	<0.2
YM-17 Rock		7	62	0.97	848	0.127	<20	1.16	0.071	0.87	0.1	<0.01	4.6	0.9	0.20	4	1.4	<0.2
YM-18 Rock		6	107	1.20	230	0.230	<20	3.04	0.372	1.19	0.2	<0.01	2.4	1.2	1.14	10	3.6	<0.2
YM-19 Rock		4	6	0.03	12	0.010	<20	0.25	0.074	0.13	<0.1	<0.01	1.0	<0.1	<0.05	1	<0.5	<0.2
YM-20 Rock		8	153	0.77	109	0.173	<20	0.73	0.083	0.47	0.9	<0.01	5.4	0.6	1.57	4	5.9	0.2
YM-21 Rock		22	20	0.53	64	0.066	<20	1.18	0.031	0.19	0.5	<0.01	2.1	0.2	2.77	5	2.0	<0.2
YM-22 Rock		3	17	0.16	25	0.002	<20	0.27	0.002	0.04	<0.1	0.03	2.1	<0.1	<0.05	1	<0.5	<0.2
YM-23 Rock	:	2	197	1.79	396	0.229	<20	2.29	0.143	0.98	0.2	<0.01	2.5	0.4	<0.05	6	<0.5	<0.2
YM-24 Rock		3	70	1.05	517	0.174	<20	2.22	0.166	0.98	<0.1	<0.01	5.2	0.2	<0.05	8	<0.5	<0.2
BJ-01 Rock		7	10	2.04	137	0.184	<20	3.98	0.364	0.41	<0.1	<0.01	13.6	<0.1	0.12	11	0.6	<0.2
BJ-02 Rock		5	286	2.29	88	0.138	<20	4.07	0.398	0.12	<0.1	<0.01	3.1	<0.1	<0.05	8	<0.5	<0.2
BJ-03 Rock		4	8	2.30	95	0.241	<20	3.46	0.233	0.39	<0.1	<0.01	9.7	<0.1	0.12	11	<0.5	<0.2
BJ-04 Rock		16	4	0.05	30	<0.001	<20	0.33	0.038	0.16	<0.1	<0.01	0.4	<0.1	<0.05	<1	<0.5	<0.2
BJ-05 Rock		12	4	2.12	626	0.400	<20	3.15	0.223	1.66	0.2	<0.01	12.8	0.6	0.52	14	0.6	<0.2
BJ-06 Rock	:	3	101	2.29	104	0.185	<20	5.89	0.495	0.05	<0.1	<0.01	6.6	<0.1	0.07	11	<0.5	<0.2



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CERTIFICAT	E OF AN	IALY	SIS													VA	N13	3000	202	.1	
	Method Analyte	WGHT Wgt	1DX Mo	1DX Cu	1DX Pb	1DX Zn	1DX Ag	1DX Ni	1DX Co	1DX Mn	1DX Fe	1DX As	1DX Au	1DX Th	1DX Sr	1DX Cd	1DX Sb	1DX Bi	1DX V	1DX Ca	1DX P
	Unit	kg	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%							
D.1.07	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
BJ-07	Rock	0.20	0.2	2.9	2.4	29	<0.1	1.5	2.2	524	1.39	<0.5	<0.5	14.6	12	<0.1	<0.1	<0.1	14	0.28	0.022
BJ-08	Rock	0.20	0.5	52.8	0.9	71	<0.1	34.1	26.6	1119	3.78	<0.5	<0.5	0.5	159	<0.1	<0.1	<0.1	105	2.44	0.098
BJ-09	Rock	0.22	1.3	12.3	1.5	93	<0.1	11.5	13.7	831	2.73	1.6	<0.5	5.0	46	0.1	<0.1	<0.1	71	0.63	0.095
BJ-10	Rock	0.22	1.0	70.8	1.6	72	<0.1	37.7	27.8	950	4.80	3.0	1.5	0.3	47	<0.1	<0.1	<0.1	96	1.30	0.242
BJ-11	Rock	0.33	0.8	67.3	4.7	24	<0.1	1.7	4.2	273	1.76	6.6	2.1	8.5	13	0.1	0.4	<0.1	25	0.14	0.050
BJ-12	Rock	0.20	0.4	70.1	2.2	58	<0.1	64.0	21.4	968	3.14	1.6	1.4	3.1	71	<0.1	0.1	<0.1	86	1.79	0.095
HJ-01	Rock	0.24	<0.1	2416	1.0	78	3.1	47.4	23.7	788	3.19	4.4	12.6	0.5	68	1.2	0.1	0.3	120	2.76	0.603
HJ-02	Rock	0.48	0.2	135.9	8.0	14	0.2	6.9	45.2	221	2.99	0.7	3.3	0.6	27	<0.1	<0.1	<0.1	48	0.87	0.188
HJ-03	Rock	0.46	<0.1	64.2	1.4	24	0.2	7.4	71.4	316	3.58	<0.5	7.0	<0.1	140	<0.1	0.2	0.2	56	1.52	0.182
HJ-04	Rock	0.22	<0.1	142.6	1.0	16	0.1	3.3	20.3	243	2.68	0.6	4.8	0.5	31	<0.1	<0.1	<0.1	51	0.85	0.175
HJ-05	Rock	0.62	18.0	1513	12.1	110	1.5	26.3	49.2	659	7.17	91.0	5.0	1.2	125	0.3	0.2	0.2	119	1.28	0.267



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Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project: **BOER-HANSON-YORK** 

Report Date: January 30, 2013

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# CERTIFICATE OF ANALYSIS

# VAN13000202.1

Part: 2 of 1

	ı	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	La	Cr	Mg	Ва	Ti	В	AI	Na	K	w	Hg	Sc	TI	s	Ga	Se	Te
		Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
		MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
BJ-07	Rock		17	5	0.22	45	0.035	<20	0.49	0.088	0.16	<0.1	<0.01	1.5	<0.1	<0.05	2	<0.5	<0.2
BJ-08	Rock		4	42	2.06	194	0.136	<20	3.96	0.243	0.13	<0.1	<0.01	6.3	<0.1	0.13	8	<0.5	<0.2
BJ-09	Rock		10	7	1.17	53	0.098	<20	1.29	0.068	0.09	<0.1	<0.01	6.3	<0.1	<0.05	6	<0.5	<0.2
BJ-10	Rock		7	43	1.88	45	0.114	<20	1.92	0.053	0.05	<0.1	<0.01	6.0	<0.1	0.18	7	<0.5	<0.2
BJ-11	Rock		12	3	0.11	91	0.004	<20	0.45	0.028	0.17	<0.1	0.24	3.2	0.2	<0.05	1	<0.5	<0.2
BJ-12	Rock		7	110	1.73	85	0.104	<20	2.96	0.252	0.15	<0.1	<0.01	6.5	<0.1	<0.05	7	<0.5	<0.2
HJ-01	Rock		3	31	1.94	58	0.131	<20	1.48	0.114	0.17	0.7	<0.01	16.3	<0.1	0.12	5	0.8	<0.2
HJ-02	Rock		2	4	0.41	16	0.134	<20	0.56	0.080	0.04	0.1	<0.01	3.2	<0.1	1.46	2	0.7	<0.2
HJ-03	Rock		<1	4	0.71	45	0.123	<20	1.24	0.074	0.03	0.2	<0.01	3.9	<0.1	1.83	3	1.6	<0.2
HJ-04	Rock		3	6	0.31	12	0.138	<20	0.43	0.105	0.04	<0.1	<0.01	3.2	<0.1	0.37	2	<0.5	<0.2
HJ-05	Rock		18	15	1.73	104	0.234	<20	1.96	0.097	0.12	0.4	<0.01	8.2	<0.1	3.27	7	2.2	<0.2



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18-1480 Foster Street

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Report Date:

January 30, 2013

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Page: 1 of 1 Part: 1 of 1

QUALITY CO	NTROL	REP	OR <sup>-</sup>	Γ												VAI	V130	0002	202.	1	
	Method Analyte	WGHT Wgt	1DX Mo	1DX Cu	1DX Pb	1DX Zn	1DX Ag	1DX Ni	1DX Co	1DX Mn	1DX Fe	1DX As	1DX Au	1DX Th	1DX Sr	1DX Cd	1DX Sb	1DX Bi	1DX V	1DX Ca	1DX P
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
Pulp Duplicates	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
YM-10	Rock	0.38	1.6	203.6	3.3	68	0.1	27.0	30.6	925	4.92	5.4	1.8	1.2	164	0.9	0.2	<0.1	152	3.25	0.209
REP YM-10	QC	0.30	1.7	213.0	3.3	71	0.1	28.5	32.0	939	5.03	5.5	0.8	1.2	168	0.8	0.2	<0.1	155	3.30	0.219
Core Reject Duplicates			***		0.0		· · · ·		02.0		0.00		0.0			0.0				0.00	
YM-13	Rock	0.42	0.6	60.1	1.4	41	<0.1	58.9	19.8	395	2.53	8.0	<0.5	0.9	40	0.2	0.6	<0.1	42	0.60	0.062
DUP YM-13	QC		0.5	56.4	1.2	37	<0.1	57.2	19.1	370	2.40	7.7	0.9	0.8	34	0.1	0.6	<0.1	37	0.52	0.057
Reference Materials																					
STD DS9	Standard		13.2	116.8	129.7	312	1.9	41.0	7.8	586	2.42	26.6	118.5	7.2	81	2.3	5.1	7.7	40	0.72	0.081
STD DS9	Standard		14.3	121.7	133.5	324	1.8	45.8	8.6	617	2.53	26.6	107.7	7.0	74	2.5	4.0	6.1	41	0.77	0.086
STD OREAS45EA	Standard		1.5	687.5	16.3	29	0.3	383.5	52.9	419	24.23	9.6	52.0	11.4	3	<0.1	0.2	0.3	300	0.04	0.026
STD OREAS45EA	Standard		1.4	730.0	15.6	32	0.3	406.3	56.8	439	24.98	9.0	54.5	11.0	3	<0.1	0.1	0.2	345	0.04	0.030
STD OREAS45EA Expected			1.78	709	14.3	30.6	0.311	357	52	400	22.65	11.4	53	10.7	4.05	0.03	0.64	0.26	295	0.032	0.029
STD DS9 Expected			12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819
BLK	Blank		<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	0.02	<0.5	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank		<0.1	0.2	<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	Prep Blank		<0.1	2.7	3.1	47	<0.1	1.9	4.0	602	2.05	<0.5	<0.5	5.9	64	<0.1	<0.1	<0.1	38	0.54	0.081
G1	Prep Blank		<0.1	2.6	3.1	48	<0.1	2.0	4.0	597	2.05	<0.5	<0.5	5.7	60	<0.1	<0.1	<0.1	39	0.49	0.081



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J.A.Chapman Mining Services

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White Rock BC V4B 3X7 Canada

Project:

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Report Date:

January 30, 2013

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Part: 2 of 1

# QUALITY CONTROL REPORT

## VAN13000202.1

	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	La	Cr	Mg	Ва	Ti	В	Al	Na	K	W	Hg	Sc	TI	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
_	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
YM-10	Rock	7	23	1.80	45	0.169	<20	5.54	2.319	0.49	0.4	0.04	5.3	<0.1	0.11	9	1.1	<0.2
REP YM-10	QC	8	25	1.84	47	0.168	<20	5.62	2.405	0.50	0.3	0.03	5.4	<0.1	0.12	9	1.6	<0.2
Core Reject Duplicates																		
YM-13	Rock	4	83	1.75	205	0.174	<20	1.95	0.035	0.33	0.2	<0.01	1.9	0.1	<0.05	4	<0.5	<0.2
DUP YM-13	QC	4	81	1.66	167	0.160	<20	1.81	0.024	0.29	0.2	<0.01	1.5	<0.1	<0.05	3	<0.5	<0.2
Reference Materials																		
STD DS9	Standard	12	117	0.62	312	0.123	<20	0.96	0.088	0.42	3.1	0.21	2.6	5.5	0.17	4	5.3	4.9
STD DS9	Standard	13	135	0.66	328	0.127	<20	1.04	0.092	0.42	2.8	0.24	2.4	5.7	0.17	5	5.9	5.4
STD OREAS45EA	Standard	7	790	0.11	148	0.106	<20	3.22	0.021	0.06	<0.1	<0.01	78.4	<0.1	<0.05	12	<0.5	<0.2
STD OREAS45EA	Standard	7	957	0.10	161	0.105	<20	3.45	0.019	0.06	<0.1	<0.01	81.0	<0.1	<0.05	13	<0.5	<0.2
STD OREAS45EA Expected		8.19	849	0.095	148	0.106		3.32	0.027	0.053		0.34	78	0.072	0.044	11.7	2.09	0.11
STD DS9 Expected		13.3	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	0.2	2.5	5.3	0.1615	4.59	5.2	5.02
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	0.1	<0.1	<0.05	<1	<0.5	<0.2
Prep Wash																		
G1	Prep Blank	16	8	0.52	151	0.140	<20	0.92	0.100	0.49	0.2	<0.01	2.2	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	13	8	0.52	148	0.141	<20	0.89	0.090	0.48	<0.1	<0.01	2.1	0.3	<0.05	5	<0.5	<0.2



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Acme Analytical Laboratories (Vancouver) Ltd.

PHONE (604) 253-3158

Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

VAN13000203.1

Submitted By: John A. Chapman
Receiving Lab: Canada-Vancouver
Received: January 15, 2013
Report Date: January 25, 2013

Page: 1 of 2

### **CERTIFICATE OF ANALYSIS**

Project: BOER-HANSON-YORK

Shipment ID:

P.O. Number NA Number of Samples: 7

**CLIENT JOB INFORMATION** 

### **SAMPLE DISPOSAL**

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

Invoice To: J.A.Chapman Mining Services

18-1480 Foster Street White Rock BC V4B 3X7

Canada

CC: Gerald G. Carlson

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
Dry at 60C	7	Dry at 60C			VAN
SS80	7	Dry at 60C sieve 100g to -80 mesh			VAN
1DX1	7	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

### **ADDITIONAL COMMENTS**



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.



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J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

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Report Date:

January 25, 2013

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Part: 1 of 1

CERTIFIC	CATE O	F AN	ALY	SIS													VA	N13	000	203	.1	
		Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
		Analyte	Мо	Cu	Pb	Zn	Ag	Ni	Со	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р	La
		Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
-		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
BJS-01	Soil		4.0	23.5	6.5	140	0.3	14.4	15.1	6124	3.30	4.4	2.5	1.2	58	1.0	0.2	0.2	67	0.67	0.096	12
BJS-02	Soil		2.5	35.6	8.6	78	0.2	18.9	13.4	1099	2.82	4.4	1.0	3.7	37	0.6	0.3	0.3	77	0.46	0.079	17
BJS-03	Soil		0.9	36.2	8.6	85	0.1	27.2	14.7	729	3.71	8.3	1.8	3.2	54	0.1	0.7	0.1	86	0.61	0.106	15
BJS-04	Soil		1.0	42.0	5.7	89	0.9	20.5	7.7	2599	2.40	3.6	1.2	8.0	212	1.2	0.3	<0.1	36	3.00	0.108	22
BJS-05	Soil		0.8	15.4	5.3	57	<0.1	14.6	9.2	749	2.51	4.3	0.9	1.6	33	<0.1	0.3	<0.1	68	0.47	0.091	10
BJS-06	Soil		1.0	19.7	5.7	64	<0.1	16.4	10.5	794	3.10	4.6	<0.5	2.4	44	0.2	0.3	0.1	92	0.47	0.079	14
BJSS-01	Soil		0.7	44.3	6.7	67	<0.1	26.0	12.4	572	3.68	8.6	4.9	3.5	50	<0.1	0.6	0.1	89	0.50	0.068	17



CERTIFICATE OF ANALYSIS

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Project: **BOER-HANSON-YORK** 

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Report Date: January 25, 2013

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	3,		, <u>.                                    </u>	0.0														
	Meth	nod	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Anal	yte	Cr	Mg	Ва	Ti	В	AI	Na	K	w	Hg	Sc	TI	s	Ga	Se	Те
	ι	Jnit	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	N	IDL	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
BJS-01	Soil		19	0.50	231	0.024	<20	1.75	0.010	0.06	0.1	0.06	3.2	<0.1	<0.05	5	<0.5	<0.2
BJS-02	Soil		27	0.73	176	0.042	<20	1.82	0.011	0.09	0.1	0.02	5.4	<0.1	<0.05	5	<0.5	<0.2
BJS-03	Soil		36	0.63	207	0.039	<20	1.48	0.014	0.08	0.1	0.05	10.3	<0.1	<0.05	5	0.7	<0.2
BJS-04	Soil		24	0.60	333	0.010	<20	2.05	0.012	0.07	<0.1	0.26	7.7	0.1	0.35	4	1.2	<0.2
BJS-05	Soil		25	0.46	131	0.044	<20	0.88	0.013	0.06	0.1	0.03	3.6	<0.1	<0.05	3	<0.5	<0.2
BJS-06	Soil		33	0.49	214	0.036	<20	0.94	0.011	0.06	0.2	0.04	4.9	<0.1	<0.05	3	<0.5	<0.2
BJSS-01	Soil		37	0.59	259	0.028	<20	1.58	0.013	0.08	<0.1	0.06	13.0	<0.1	<0.05	5	<0.5	<0.2



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Part:

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Project:

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QUALITY CO	NTROL	REP	OR	Γ												VAI	V130	0002	203.	1	
	Method	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX
	Analyte	Мо	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	Р	La
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	1
Pulp Duplicates																					
BJSS-01	Soil	0.7	44.3	6.7	67	<0.1	26.0	12.4	572	3.68	8.6	4.9	3.5	50	<0.1	0.6	0.1	89	0.50	0.068	17
REP BJSS-01	QC	0.8	45.5	6.7	71	<0.1	25.4	12.6	581	3.80	8.7	2.1	3.5	50	<0.1	0.6	0.1	87	0.48	0.070	17
Reference Materials																					
STD DS9	Standard	12.8	105.7	124.1	304	1.7	39.2	7.5	543	2.11	23.7	103.2	5.8	64	2.6	5.0	6.4	45	0.65	0.083	11
STD OREAS45EA	Standard	1.6	635.2	13.1	27	0.3	328.9	49.9	364	21.42	11.0	58.6	9.5	3	<0.1	0.3	0.2	318	0.04	0.027	6
STD DS9 Expected		12.84	108	126	317	1.83	40.3	7.6	575	2.33	25.5	118	6.38	69.6	2.4	4.94	6.32	40	0.7201	0.0819	13.3
STD OREAS45EA Expected		1.78	709	14.3	30.6	0.311	357	52	400	22.65	11.4	53	10.7	4.05	0.03	0.64	0.26	295	0.032	0.029	8.19
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	3	<0.01	<0.001	<1



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Client: J.A.Chapman Mining Services

18-1480 Foster Street

White Rock BC V4B 3X7 Canada

Project: **BOER-HANSON-YORK** 

Report Date: January 25, 2013

PHONE (604) 253-3158 Page:

1 of 1 Part: 2 of 1

### **QUALITY CONTROL REPORT** VAN13000203.1 Method 1DX Analyte Cr Ва Τi В ΑI Na Κ W Sc ΤI s Ga Se Te Mg Hg Unit % % % ppm ppm % ppm % ppm ppm ppm ppm % ppm ppm ppm MDL 1 0.01 1 0.001 20 0.01 0.001 0.01 0.1 0.01 0.1 0.1 0.05 1 0.5 0.2 **Pulp Duplicates** 0.013 BJSS-01 Soil 37 0.59 259 0.028 <20 1.58 0.08 < 0.1 0.06 13.0 < 0.1 < 0.05 5 <0.5 < 0.2 QC **REP BJSS-01** 35 0.60 257 0.029 <20 1.65 0.013 0.08 <0.1 0.08 12.2 0.1 < 0.05 5 <0.5 <0.2 Reference Materials STD DS9 Standard 118 0.65 309 0.102 <20 0.90 0.082 0.38 2.8 0.21 2.3 5.5 0.11 4 5.4 4.8 STD OREAS45EA 902 <0.1 Standard 0.09 141 0.090 <20 2.71 0.017 0.05 <0.1 0.01 74.8 < 0.05 10 1.1 < 0.2 0.0853 5.02 STD DS9 Expected 121 0.6165 330 0.1108 0.9577 0.395 2.89 0.2 2.5 5.3 0.1615 4.59 5.2 STD OREAS45EA Expected 849 0.095 148 0.106 3.32 0.027 0.053 0.34 0.072 0.044 11.7 2.09 0.11 BLK Blank <1 < 0.01 <1 < 0.001 <20 < 0.01 < 0.001 < 0.01 < 0.1 < 0.01 < 0.1 < 0.1 < 0.05 <1 < 0.5 <0.2

# APPENDIX B PROSPECTING

&

**ROCK, SILT, SOIL GEOCHEMISTRY** 

### BOER PROPERTY, BURNS LAKE, B.C., SAMPLING AUGUST 2012 (John Chapman and Brian Remanda)

AUGUST 9, 2012 (B = Rock, BS = Soil)

Compiled by Gerald G. Carlson, PEng, and John A. Chapman, PEng, August 18, 2012

Sample	Road	East	North	<u>Assay</u>	Magnetism	HCL (final)	<u>Description</u>
<u>No.</u>		(NAD83)	(NAD83)			(fizz)	
B-01	Co-op, km 2.3	340227	6009577	N	weak	weak	Rounded volcanic erratic float boulder (1m diameter), purple andesite, lots of pyritic orange rust, feldspar lathes to 5mm, flow banded alignment (photo IMG 760)
B-02	Co-op, km 3.0	340234	6010312	N	K-spar none, diorite strong	K-spar none, diorite strong	Host is rusty weathered (no visible pyrite) highly fractured dark medium grained diorite or quartz diorite cut by fresh medium to course grained granite dike rock, also later medium to course grained pegmatite with pink K-feldspar, quartz and mica to 4 to 5cm wide, the quartz diorite has late phase calcite in very fine fracture fillings (HCL fizz) – the K-spar/quartz pegmatite dikes are the youngest event (photo IMG 781)
B-03	Co-op, km 9.5	335882	6013874	N	K-spar none, diorite strong	K-spar none, diorite strong	Medium to coarse grained quartz diorite and granodiorite with rare disseminated pyrite, cut by medium grained pegmatitic K-feldspar, quartz and pale epidote, same comment on HCL fizz as in B-02 (photo IMG 761)
BS-01	Co-op, km 9.6	335804	6013863	Y			Rusty B-Horizon soil in south side road cut
B-04	Co-op, km 10.2	335237	6013668	N	K-spar none, diorite strong	K-spar none, diorite strong	Same as B-03, (photo IMG 763)
B-05	Co-op, km 13.2	332741	6015019	NA	a few of the rock samples are weakly magnetic	none	Blasted rock in quarry, rip rap rock stockpile measures ~95m x 22m, rock is mainly minor quartz diorite host with large hydrothermal breccia mineralized with sulfides, three samples taken here (B-05A, B-05B, B-05C), (photos IMG 766, 767, 768, 769, 770, 771, 773, 808, 809, 810, 811, 812, 813), note that this quarried sulfide mineralized rock has been used as fill at bridge abutments and culvert entries and discharges over many kilometers on the Co-op road – beware element contamination down-stream
B-05A	Co-op, km 13.2	332741	6015019	Y			Medium to coarse grained pale orange quartz rock, locally breccia angular fragments mainly less than 1 to 4cm, fragments and matrix mainly quartz cut by quartz veins 0.5

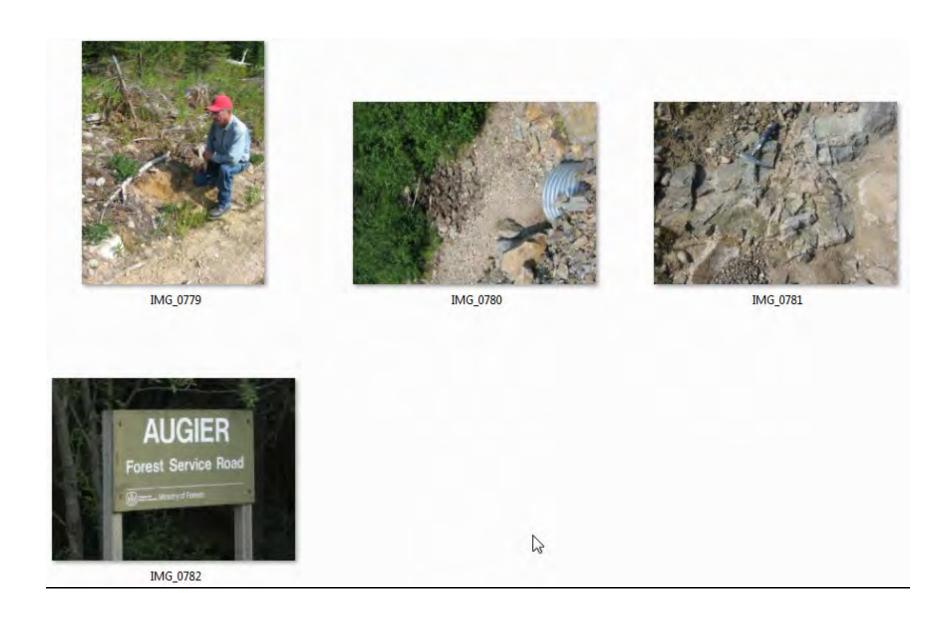
B-05B	Co-op, km 13.2	332741	6015019	Y			to 1cm wide, rock may be silicified andesite, contains pyrite that is medium to coarse grained in blebby disseminations at 3 to 5% locally, fine pyrite in matrix, weathered surfaces tarnished, maybe some chalcopyrite  Similar to B-05A with strong molybdenite mineralization within 0.5cm wide late white quartz vein, may also be molybdenite in fine dark fractures cutting rock, in places fine grained granular felsic appearance ~0.5 to 2cm, overall a very unusual rock that may originally have been an andesite that is now mainly silica with some feldspar remnants of mafic minerals, there are some fragments to
B-05C	Co-op,	332741	6015019	Υ			several centimeters in size that look like fine grained andesite  Similar to B-05A and B-05B with more select high grade
	km 13.2						sulfides that are mainly pyrite, there is one rock in sample that has a malachite coating on the surface
B-06	Co-op, km 15.6	330679	6015640	N	none	none	Coarse grained pink pegmatitic granite, some white feldspar possibly plagioclase, about 50/50 K-feldspar and quartz, less than 5% biotite, this may be source of pegmatite dikes in earlier samples, this location is very near RGS 2011 No. 093K081994 (lake sediment) with highly anomalous silver, molybdenum and mercury (photos IMG 774, 775)
B-07	Co-op, km 17.0	329473	6015736	N	K-spar weak, f.g. dark rock strong	none	Same sample description as B-06 plus a f.g. dark rock also present (photo 776)
B-08	Co-op, km 17.3	329234	6015663	N	none	none	15m wide very fine grained quartz eye porphyry dike, creamy brown matrix with rusty flecks, quartz eyes 2 to 3%, rounded, 1-3mm in diameter (photos IMG 777, 778)
BS-02	Co-op R10447 528	330493	6016120	Y			Rusty B-Horizon soil in north side road cut, this location is adjacent to RGS 2011 No. 093K081994 (lake sediment) with highly anomalous silver, molybdenum and mercury (photo IMG 779)

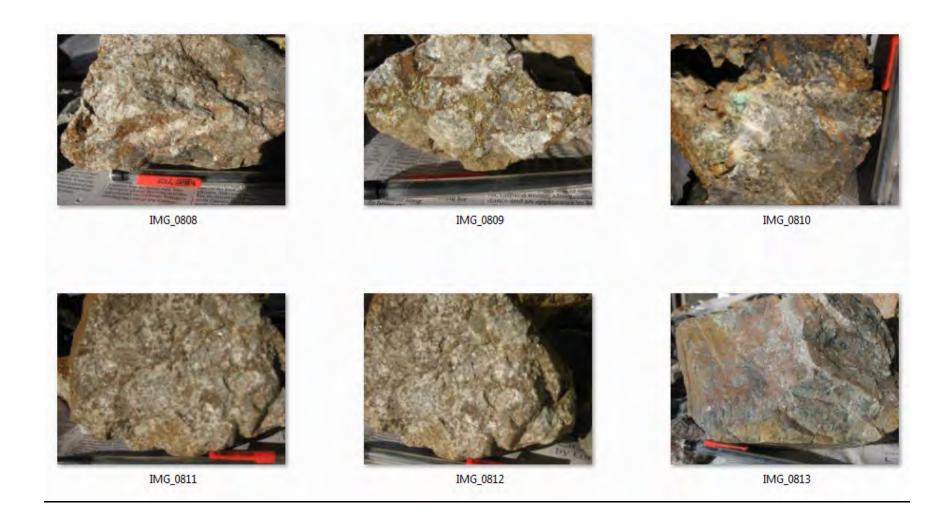


Boer Mineral Property, Sampling August 2012



Boer Mineral Property, Sampling August 2012





### AUGUST 10, 2012 (B = Rock, BS = Soil, BN=no sample)

### Note: \* the two sites reported as BN-01 & BN-02 were not sampled

Sample No.	Road	East (NAD83)	North (NAD83)	Assay	Magnetism	HCL (fizz)	<u>Description</u>
NO.		(NAD63)	(NAD63)			(1122)	
B-09	Mercury, km 0.7	320996	6018968	N	weak	none	Black very fine grained vesicular basalt, less than 2mm vesicules, light rusty weathering
B-10	Mercury, km 2.4	321621	6018114	N	none	none	Mafic very fine grained quartz feldspar porphyry, locally appears to be clastic texture, feldspars are subhedral and chalky and about 0.5 to 3mm diameter
BN-01*	Mercury, km 3.3	321986	6018652				No sample taken – granite with K-spar envelopes enclosing narrow (~3mm wide) green mineral filled fractures (epidote?) (photo IMG 784)
B-11	Mercury, km 4.1	322445	6019184	N	none	none	Similar rock to B-10 with increasing feldspar and fewer quartz eyes, fault zone that is a rusty yellow to brown, some rocks contain red hematite matrix (photos IMG 785, 786, 787, 788, 789)
B-12	Mercury, km 5.3	323397	6018762	N	none	none	Similar rock to B-06, quartz and K-spar granite, coarse grained locally abundant epidote (greisen?), contains 5 to 10% mafics (some biotite?) (photo IMG 790)
B-13	Mercury, km 6.2	324136	6018672	N	granite strong, f.g. dark rock weak	none	Coarse grained biotite (hornblende?) granite rock, locally pinkish K-spar as envelopes, intrudes dark fine grained volcanic rock (photos IMG 791, 792)
B-14	Mercury, km 6.9	324638	6018791	N	strong	weak	Medium to coarse hornblende biotite granite that is fractured and cut by veins of pink K-spar (photo IMG 793)
BN-02*	Mercury, km 7.1	324683	6018875				Fine grained dark rock on northeast side of road (beware: may be float) that shows glacial striations, based upon "plucking" ice direction was toward 140 degrees azimuth (photos IMG 795, 796)
B-16	Mercury, km 8.8	325477	6017835	N	granite strong, f.g. dark rock weak	none	Quarry rock, course grained biotite granite possibly cutting fine grained dark massive mafic rock, locally pyritic (photos IMG 798, 799, 800)
B-17	Mercury, km 10.4	326317	6016929	N	strong	none	Medium grained intermediate biotite quartz feldspar rock, unusual appearance (may be altered), may contain

							secondary biotite, this location is amongst the RGS 2011 anomalous highs in the adjacent lakes sediments (silver, molybdenum, copper)
B-18	Mercury, km 10.8	326618	6016779	Υ	none	none	Coarse grained granular quartz (plus feldspar) rock with disseminated fine grained pyrite that makes up 2 to 3% of rock in this up to 12m wide dike, course grained greenish cream mineral possibly plagioclase, this location is amongst the RGS 2011 anomalous highs in the adjacent lakes sediments (silver, molybdenum, copper) (photos IMG 801, 802, 803, 814, 815, 816)
BS-03	Mercury, km 10.8	326618	6016779	Y			Soil sample taken from B-Horizon above the ~12 meter wide pyritic dike



Boer Mineral Property, Sampling August 2012



Boer Mineral Property, Sampling August 2012





### BOER PROPERTY, BURNS LAKE, B.C., SAMPLING SEPTEMBER 2012 (John Chapman and Grant Carlson)

September 14, 15, 16, 2012 (BJ=Rock, BJS=Silt, BJSS=Soil)

Compiled by Grant Carlson, PEng, and John A. Chapman, PEng, September 16, 2012

Sample No.	Road	East	North (NA DO2)	Assay	Magnetism	HCL (fine)	<u>Description</u>
NO.		(NAD83)	(NAD83)			(fizz)	
BJ-01	Gas pipeline	330840	6009577	Y	strong	weak	Gabbro to hornblende diorite (~2% disseminated sulfides and minor chlorite alteration) intruded by a quartz, K-spar granite dike. Note in photo IMG 880 the mafic rock was blasted from the pipeline trench and shows ½ drill hole (photos IMG 879, IMG 880 and IMG 951)
BJS-01	Gas pipeline	330478	6016265	Y			Small stream crossing pipeline ROW from north to south, took stream silt sample on north side of ROW (photo IMG 881)
BJ-02	Co-op 7697 10	331649	6016228	Υ	moderate	none	Basalt. Glacial striations azimuth 80 degrees (photos IMG 884 and IMG 952)
BJ-03	Co-op, 7697 10	331474	6016455	Y	strong	minor	Gabbro (minor disseminated sulfides) intruded by basalt dikes. Glacial striations azimuth 90 degrees (photos IMG 887 and IMG 953)
BJ-04	Co-op, 7697 10	331373	6016628	Y	none	none	K-spar granite (photos IMG 889 and IMG 954)
BJ-05	Co-op, 7679 10	331443	6017046	Y	strong	none	Biotite gabbro with ~2% disseminated sulfides and chlorite alteration (photos IMG 898 and IMG 955)
BJS-02	Gas pipeline	330120	6016372	Y			Small stream crossing pipeline ROW from north to south, took stream silt sample on north side of ROW (photo IMG 899)
BJ-06	Gas pipeline	329873	6016429	Y	strong	none	Hornblende diorite with minor sulfides (photos IMG 900 and IMG 956)
BJ-07	Gas pipeline	329598	6016537	Y	moderate	none	K-spar porphyry granite (photos IMG 901 and IMG 957)
BJ-08	Gas pipeline	329162	6016762	Y	none (granite) strong (diorite)	none	K-spar, quartz granite in contact with hornblende diorite to gabbro. Gabbro contains minor disseminated sulfides and epidote filled fractures (photos IMG 903 and IMG 958)
BJ-09	Jupiter R10447	322270	6017966	Y	none	none	Diorite (photos IMG 904 and IMG 959)
BJSS- 01	Jupiter R10447	323131	6016981	Υ			Red to brown soil in road cut , soil sample taken

BJ-10	Jupiter R10447	323388	6016423	Y	minor	none	Basalt (photos IMG 906 and IMG 960)
BJ-11	Venus R10447 71	324756	6016232	Y	none	none	Fine grained limonitic felsic dike ~3m wide (photos IMG 910 and IMG 961)
BJS-04	Venus R10447 71	324875	6016264	Y			Silt sample taken from small stream
BJ-12	Jupiter R10447 94	323766	6015393	Y	strong (basalt) Minor (diorite)	none	Large outcrop with a mixture of basalt and diorite. There are a lot of K-spar and epidote envelopes in fractures in the diorite (photos IMG 912 and IMG 962)
BJS-05	Highway 16	327651	6010428	Υ			Checking main drainage from Boer by sampling stream silt in Stearns Creek at Highway 16
BJS-06	Highway 16	330258	6009375	Υ			Checking main drainage from Boer by sampling stream silt in Tintagel Creek at Highway 16

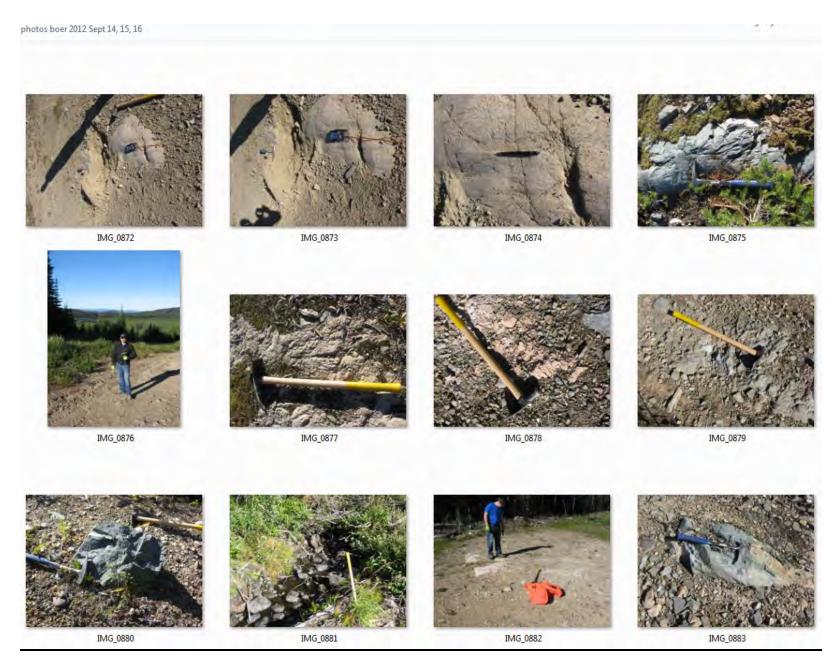
### BOER PROPERTY, BURNS LAKE, B.C., OUTCROP ROCK SAMPLING SEPTEMBER 2012 (John Chapman and Grant Carlson)

Rock outcrop descriptions with no sample taken

Compiled by Grant Carlson, PEng, and John A. Chapman, PEng, September 16, 2012

Site No.	Road	East (NAD83)	North (NAD83)	Assay	Magnetism	HCL (fizz)	<u>Description</u>
1101		(10.1200)	(10,1200)			<u> </u>	
BX-01	Clear Cut south of breccia	332804	6014429				K-spar granite in roadbed. Glacial striations indicate ice direction is azimuth 92 degrees (photos IMG 872, IMG 873 and IMG 874)
BX-02	Gas pipeline	331593	6016149				Andesite with glacial striations at 90 degrees azimuth (photo IMG 875)
BX-03	Gas pipeline	331330	6016244				K-spar granite intruding mafic hornblende diorite to gabbro (photos IMG 877 and IMG 878)
BX-04	Co-op R10447 528	330469	6016150				K-spar granite. Glacial striations at azimuth 93 degrees (photo IMG 882)
BX-05	Co-op, 7697 10	331602	6016315				K-spar porphyry granite with epidote filling narrow fractures (photo IMG 885)
BX-06	Co-op, 7679 10	331396	6016560				Hornblende diorite to gabbro (photo IMG 888)
BX-07	Co-op, 7679 10	331314	6016628				K-spar porphyry granite with epidote filling fractures (photo IMG 890)
BX-08	Co-op, 7679 10	331224	6016838				Quarry area (20m x 50m) beside logging road, mainly hornblende diorite intruded by k-spar dikes and with epidote fracture filling. There are also dark coloured mafic xenoliths in lighter coloured diorites (photos IMG 891, IMG 892, IMG893, IMG 894 and IMG 895)
BX-09	Co-op, 7679 10	331298	6016886				K-spar granite intruding hornblende diorite. Quartz, feldspar pegmatite rosette in diorite (photos IMG 896 and IMG 897)
BX-10	Gas pipeline	329475	6016590				K-spar granite and hornblende diorite (photo IMG 902)
BX-11	Gas pipeline	328743	6016972				Hornblende diorite to gabbro
BX-12	Gas pipeline	328591	6017041				K-spar granite
BX-13	J Gas pipeline	328370	6017149				K-spar granite

BX-14	Gas pipeline	328238	6017344	K-spar granite and hornblende diorite
BX-15	Gas pipeline	328175	6017529	Biotite granite
BX-16	Jupiter R10447 20	323510	6016383	Contact between K-spar granite and feldspar porphyry gabbro. Abundant K-spar and epidote flooding in fractures (photos IMG 907 and IMG 908)
BX-17	Jupiter R10447 20	323674	6016266	Mix of mafic and felsic rocks with K-spar dikes, epidote fracture filling and minor disseminated sulfides in mafic rock (photo IMG 909)
BX-18	Jupiter R10447 20	323733	6016109	As in BX-17 a mix of mafic and felsic rocks with sheeted K- spar and epidote filled fractures and minor sulfides in mafic rock
BX-19	Venus R10447 71	324898	6016269	Hornblende diorite with sheeted K-spar and epidote fracture filling. Small dikes of basalt intrude the diorite
BX-20	Venus R10447 71	325129	6015836	Hornblende biotite diorite with fractures filled with K-spar and epidote (photo IMG 911)
BX-21	Venus R10447 71	325232	6015764	Diorite
BX-22	Venus R10447 71	325537	6015449	Hornblende diorite with K-spar and epidote fracture filling

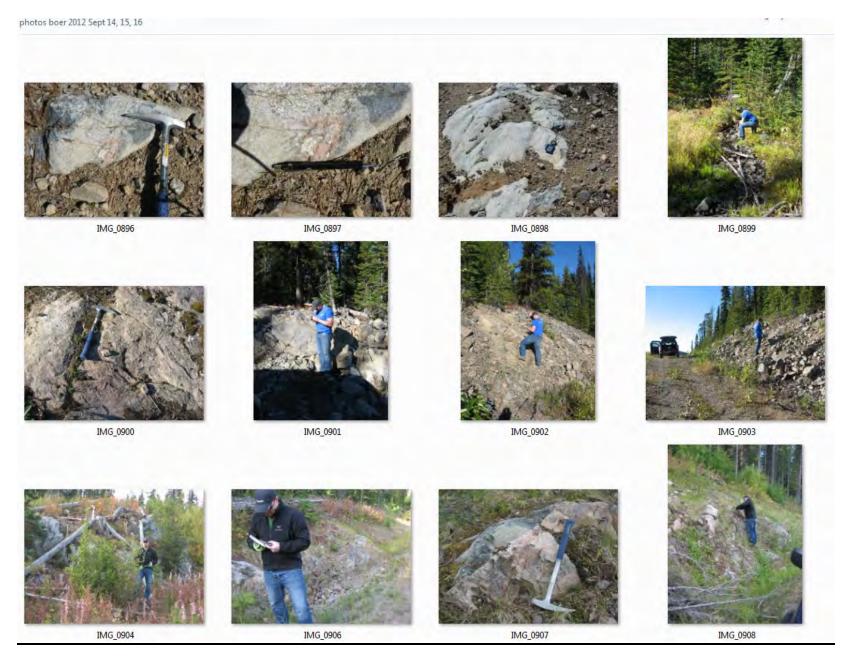


Boer Mineral Property, Sampling September 2012



Boer Mineral Property, Sampling September 2012

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Boer Mineral Property, Sampling September 2012

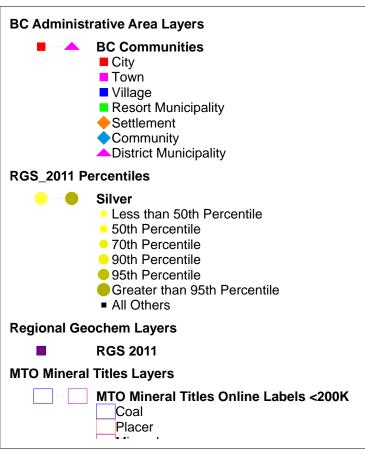
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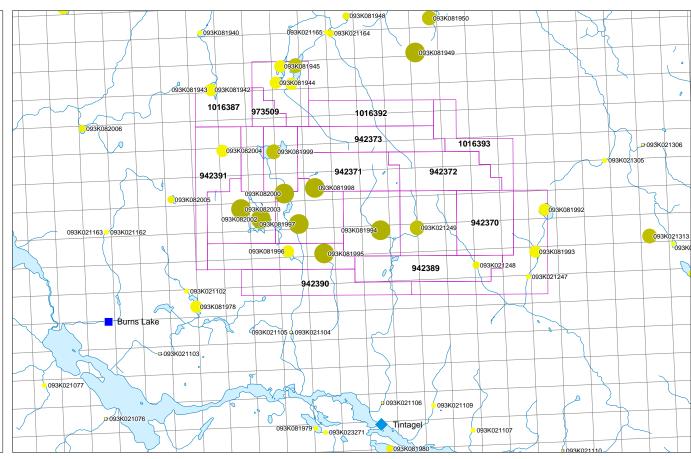


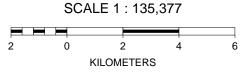


# APPENDIX C GEOSCIENCE BC, RGS 2011 LAKE SEDIMENT SAMPLING RESULTS

# BOER MINERAL PROPERTY, BURNS LAKE, B.C., RGS2011 SILVER

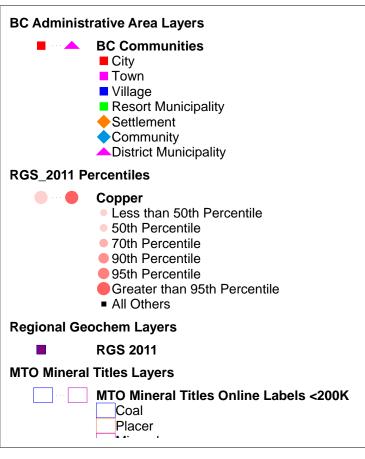


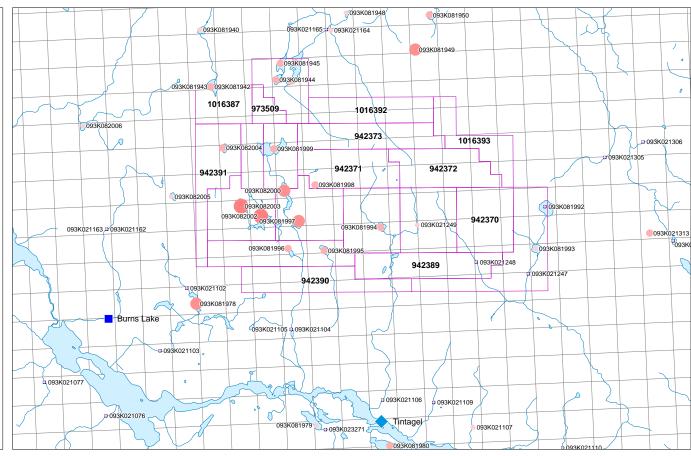


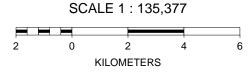




# BOER MINERAL PROPERTY, BURNS LAKE, B.C., RGS2011 COPPER

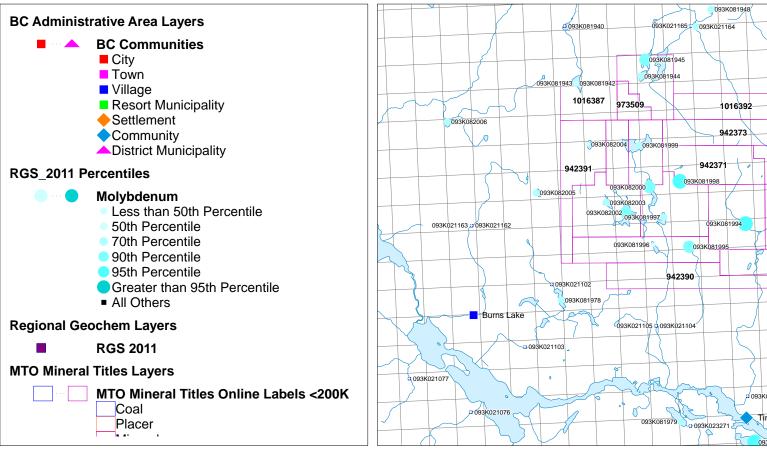


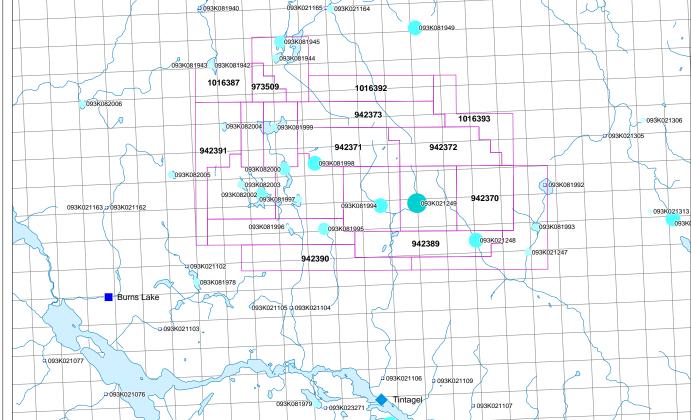




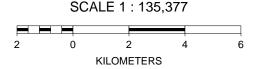


# BOER MINERAL PROPERTY, BURNS LAKE, B.C., RGS2011 MOLYBDENUM



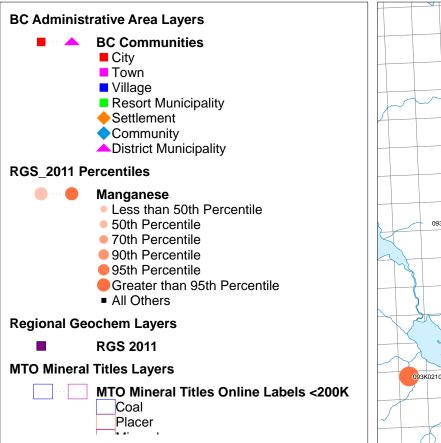


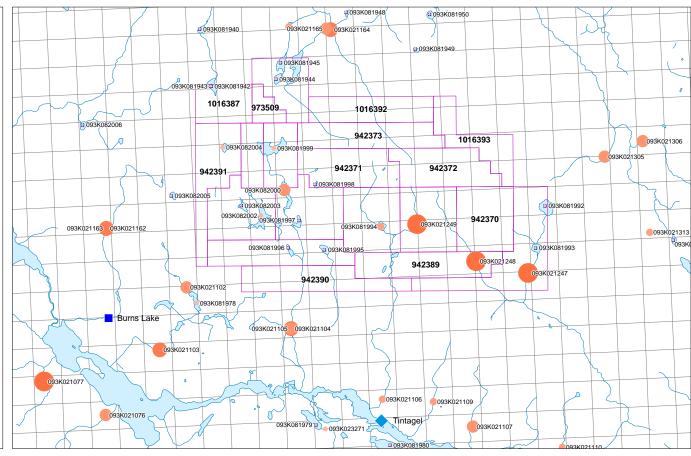
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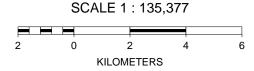




# BOER MINERAL PROPERTY, BURNS LAKE, B.C., RGS2011 MANGANESE

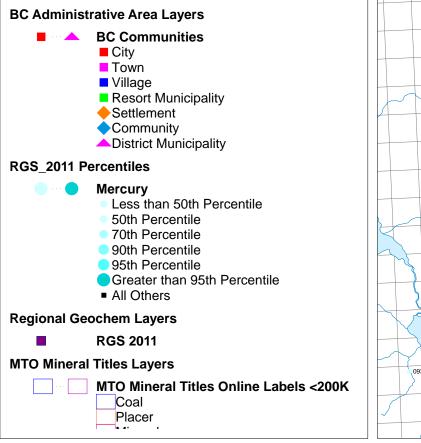


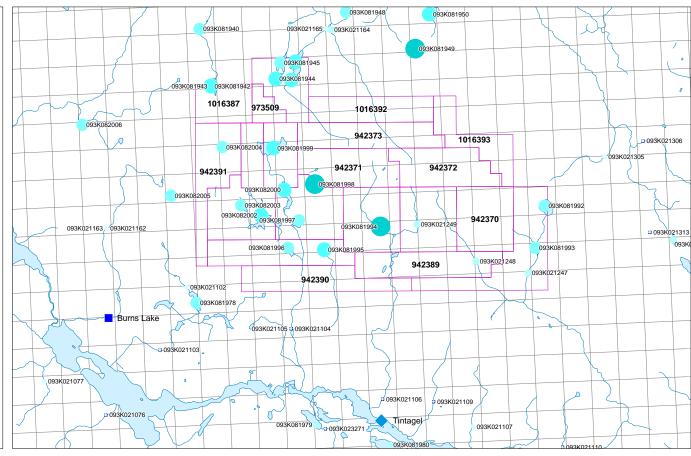


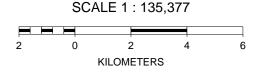




# BOER MINERAL PROPERTY, BURNS LAKE, B.C., RGS2011 MERCURY









# APPENDIX D STRUCTURAL STUDY BY GERALD G. CARLSON, Ph.D., P.Eng.

# **Boer Structural Study**

By
Gerald G. Carlson, Ph.D., P.Eng.
April 2, 2013

# 1:1,500,000 Scale Analysis

The regional setting of a property is important, as it has been shown that many types of mineral deposits occur along major structures, including porphyry systems, VMS and Sedex deposits. Indeed, many intrusive and volcanic associated deposits, such as porphyrys, have been shown to be associated not only with structures parallel to the regional tectonic fabric but also, more importantly, with deep, crustal penetrating cross structures. It is therefore important to examine any prospect in terms of its regional structural setting.

The Boer property lies within the Skeena Arch, an east-west trending zone of regional uplift that transects the western Cordillera in central British Columbia. Whether due to increased igneous activity related to the arch or to enhanced exposure due to the uplift, this is an area of a significantly higher density of mineral occurrences relative to most other parts of the province. Many of these occurrences are porphyry deposits such as Bell, Granisle, Morrison and Huckleberry to the west and Endako to the east.

The following section examines linears as interpreted from regional topographic, magnetic and gravity data and compares these data to regional faults as mapped by the BC Geological survey and to Minfile occurrences. The analysis was completed at 1:500,000 scale on the BC Geological Survey MapPlace web site on an image with the Boer property in the centre of the map. However, the actual location of the property was not positioned on the map until after the analysis was completed.

## Lakes, Rivers and Topography

Linears defined by lakes, rivers and topography (Figure 1) at large scale will tend to show those structures that reach surface and, by channeling erosive forces, produce channel ways and depressions. As such, they may represent shallow fault structures, stratigraphy or glacial direction. However, at this scale they are typically fairly significant linears that are probably related to through going fault structures. The longer and more pronounced linears, greater than 100 km in length (thicker dashed lines), likely represent deeper, possible crustal penetrating fault zones.

It can be seen that, except for a northeast trending linear that passes through the central part of the map and through the property, most of the stronger linears trend northwesterly. The one major north-south linear also passes through the property, while the single major east-west linear passes to the south. Of potential interest is the fact that the Property lies at a triple junction of the larger linears from this interpretation.

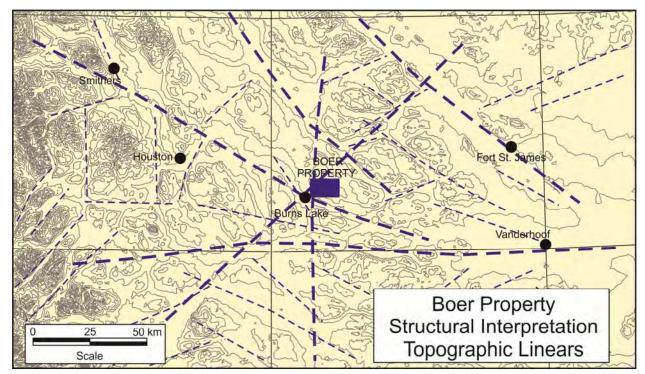


Figure 1 – Linears based on lakes, rivers and topography.

# Magnetics

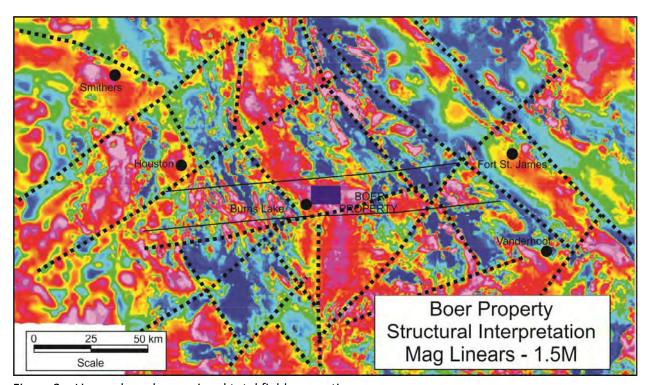


Figure 2 – Linears based on regional total field magnetics.

The regional magnetic data are extremely useful for outlining linears (Figure 2). In this case, the mag is most effective in mapping fault offsets of regional stratigraphic units that have varying magnetic intensity. These features are typically northeast trending cross structures. The northwest trending structures parallel major lithologies and the Cordilleran tectonic trend, and may or may not be fault

contacts. In addition to the northeast cross structures, there are a couple of north-south linears, one of which trends through the area of the Property, coincident with the strong north-south linear defined by topography.

Of particular interest on this map is a strong magnetic feature that trends northward into the property and then bends towards the northwest. This probably reflects a combination of magnetite-bearing intrusive rocks (Jurassic Endako Batholith quartz diorite) and volcanic rocks (Jurassic Hazelton Group volcanics). Two solid black lines have been drawn that define an east-west trending structurally disrupted zone, possibly a major shear zone, as defined by the magnetics and corresponding to the bend in the magnetic trend. This east-west feature appears to have been a focus of intrusive activity (see Figure 3) and could also be a focus for hydrothermal activity.

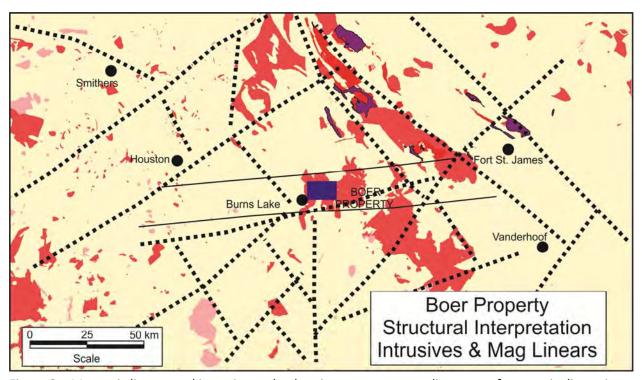


Figure 3 – Magnetic linears and intrusive rocks showing east-west trending zone of magnetic disruption.

## Gravity

The gravity data is quite course and, as a result, the bouger gravity map tends to reflect only deep structures or features. In the case of Figure 4, the most important feature is the north-easterly trending linear that appears to separate significantly different domains and likely reflects a deep penetrating structure. The north-south feature passing through the property is also evident on this figure.

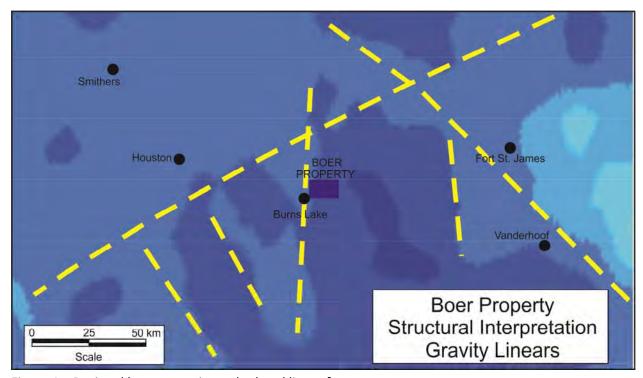


Figure 4 – Regional bouger gravity and related linear features.

#### **Terranes**

Figure 5 shows the terrane boundaries which represent major suture zones. These are noted as they help to explain some of the main magnetic linears. For example, the Cache Creek rocks, with a more subdued magnetic signature, contrast significantly to the magnetic signature of the Stikine Terrane rocks.

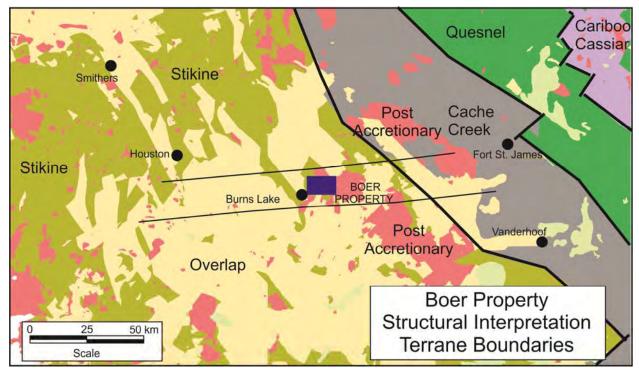


Figure 4 – Terranes and terrane boundaries, showing the east-west magnetic disruption zone.

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#### **Linears and BCGS Faults**

Figure 5 shows a summary of the interpreted linears in black solid lines, superimposed on faults mapped by the BC Geological Survey as shown on MapPlace. The faults are based on field mapping criteria such as offset lithological units and structural measurements from field observation. In some cases, structural interpretation from photos or magnetic data is used where direct evidence is not available due to bedrock cover. There does not appear to be a strong correlation between actual mapped faults and the interpreted linears, due in large part to the mostly smaller scale of the fault mapping. In fact, the major interpreted linears appear to separate different fault domains, as defined either by predominant fault orientation or by fault density. This would again suggest that the major linears are a reflection of deep penetrating or more significant structures.

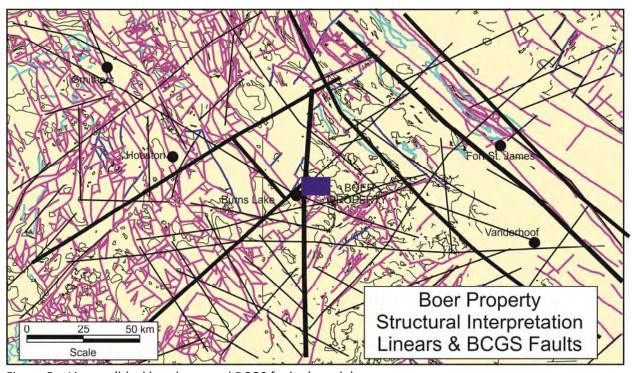


Figure 5 – Linears (black) and mapped BCGS faults (purple).

#### Summary of 1:500,000 Scale Linears

Figure 6 shows all the linears mapped on a background of topographic contours, while Figure 6 shows this data summarized, where the thick black lines represent linears that were defined from two or more sources. The zone of structural disruption is shown by the two parallel red lines. Of importance to the Boer property, from a regional economic geology and mineral deposit perspective, is that it not only occurs within this structurally disrupted corridor, which appears to have provided the focus for intrusive activity, it also occurs at a structural triple junction, as indicated from the linear interpretation. Such an intersection could provide an important structural plumbing system for intrusive and hydrothermal activity and an ideal site for porphyry style ore deposition.

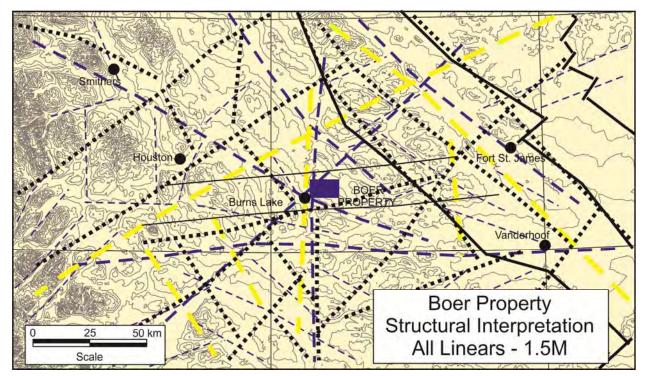


Figure 6 – All interpreted linears on topography.

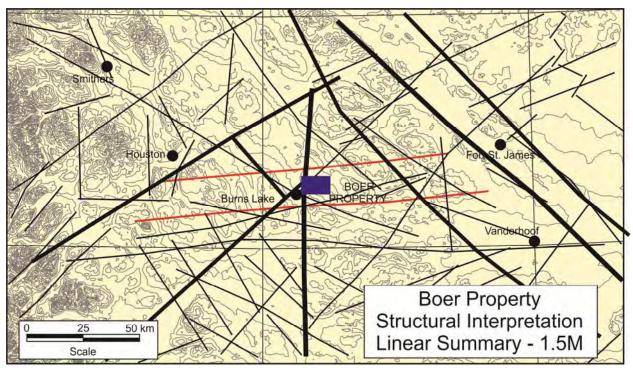


Figure 7 – Linear summary, with solid black lines showing all linears interpreted and solid red lines defining the magnetic disruption corridor.

# **1:100,000 Scale Analysis**

A second lineament analysis was conducted at the detailed or property scale using the BCGS MapPlace web site at a scale of 1:100,000. There is less information at this scale as the bouger gravity data is too coarse to show any patterns and the aeromagnetic information is also quite coarse. Figure 8 shows the silver lake sediment geochemistry values that led to the staking of the Property. These are among the highest values recorded throughout the province. There are no previously recorded mineral showings in or adjacent to the property, due largely to overburden cover, but also apparently due to a lack of historical prospector interest.

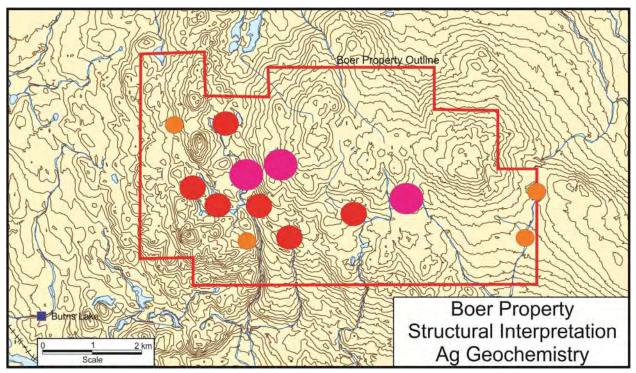


Figure 8 – Silver geochemistry from lake sediments (orange circles – 300-500 ppb; red circles – 500-1,000 ppb; purple circles – 1,000-2,160 ppb)

# **Property Scale Linears Based on Topography**

Topographic features within the property define a number of relatively weak linears that are oriented mostly to the northwest. Some of the smaller north and north-northwesterly features may reflect glacial direction. The north-south linears just outside the western boundary of the property may relate to the strong north-south linear identified in the regional portion of this study. Only short linear segments parallel the northeast structural trend.

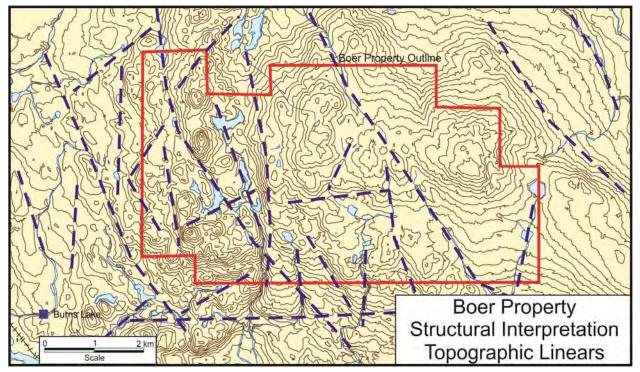


Figure 9 – Linears based on lakes, rivers and topography.

### **Property Scale Linears Based on Magnetics**

Figure 10 shows linears interpreted from the aeromagnetic data on MapPlace. Due to the coarseness of this data, the first vertical derivative map was also used to help define trends. The main feature is the well-defined northeast trending linear through the centre of the property, probably the same as the main northeast trend defined in the regional study. Also of interest in this figure is the relative mag low embayment in the centre of the property, adjacent to this linear. This could be a result of magnetite-destructive hydrothermal alteration related to a mineralizing centre.

Figure 11 shows the linears as defined from magnetics overlain on the distribution of granitic intrusions. It can be seen here that the northeast structure offsets the Jurassic intrusive rocks of the Endako Batholith.

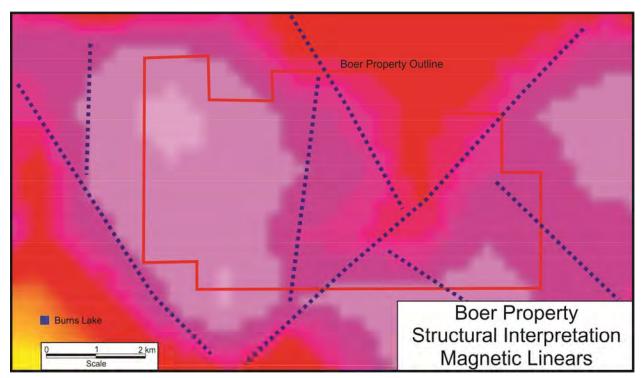


Figure 10 – Linears interpreted from airborne magnetics.

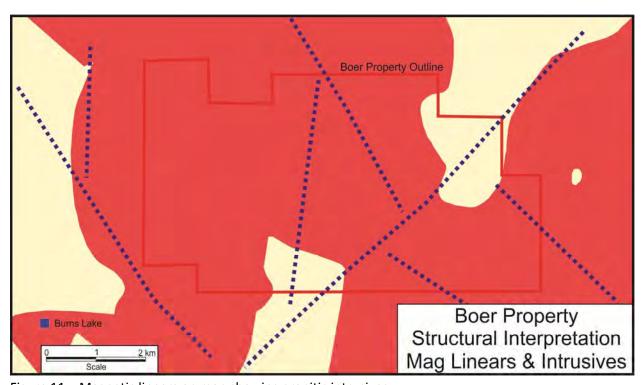


Figure 11 – Magnetic linears on map showing granitic intrusives.

#### **Property Scale Linears Summary**

Figure 12 shows a summary of the linear interpretation at the property scale. The heavy lines are those linears supported by both topographic features and magnetics. It is interesting that the high silver in stream sediment values occur to the northwest of the northeast trending linear and between the two strong northwest trending linears defined by the property scale interpretation. It is also an area of clustering of northerly trending linears, while the silver anomaly appears to have an east-west trend. This also correlates with the east-west trending deformation or shear zone defined in the regional interpretation.

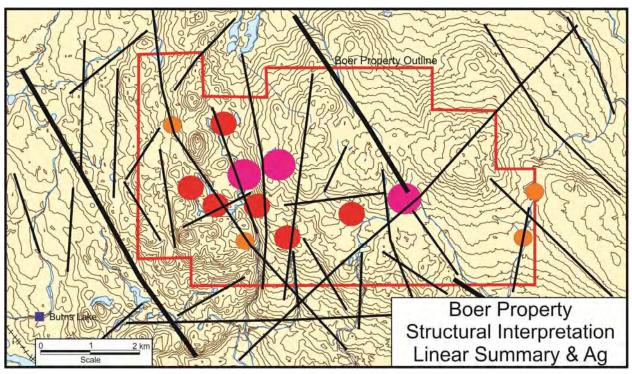


Figure 12 – Summary of property scale linears with silver in lake sediment results. Heavy lines are linears supported by both topography and magnetics.

# **Summary and Recommendations**

These features, combined with the intrusive setting and the suggestion of presence of hydrothermal alteration as interpreted from the magnetic data, all point to the Boer property having the potential for the discovery of a mineralized hydrothermal system, such as a porphyry deposit. This interpretation is further supported by the recent discovery of disseminated sulphide mineralization in brecciated and altered intrusive rocks within the property (Chapman, in the main body of this assessment report).

Further work should include a low level airborne geophysical survey, such as ZTEM, to more clearly define property scale structures as well as resistivity contrasts within the various rock units and possible alteration and mineralized zones. At the same time, prospecting and reconnaissance scale geochemical sampling is required to more closely define the silver anomaly and related geochemical trends within

the property. Depending on results, this work could lead directly to a drill recommendation or to further

definition with an IP survey prior to drilling.