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BC Geological Survey
Assessment Report
34542

Aztec File #1401-HB-AZT

PROSPECTING SURVEY REPORT
HOOK BAY CU PROPERTY
NANAIMO MINING DIVISION, BC
NTS 092F/2W
LATITUDE 49°06'22"N / LONGITUDE 124°52'40"W

Prepared by:

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January 2014

Executive Summary

The Hook Bay Cu Property is in the southwestern region of Vancouver Island, in the southwest corner of British Columbia, Canada. The 254 hectare area is centred over Cook Creek, on the west side of Alberni Inlet, approximately 19km southwest of Port Alberni, BC. The claims are accessed off Canal Main along the west side of Alberni Inlet and several forestry roads branching westward off the mainline.

The property covers an area of Triassic basaltic volcanics (Karmutsen) along the western edge of intrusive Jurassic granodiorites (Island Plutonic Suite), in an area recognized for its significant (>95 percentile) Cu regional geochemical values.

Initial work on the claims was conducted by Mattagami/ Noranda Exploration in the mid 1980's. This work produced two zones of interest for a volcanogenic massive sulphide (VMS) potential.

Mattagami's Zone 2 had several soil geochemical anomalies along the south side of Cook Creek in the vicinity of a 10cm po-py-cpy vein (lense) with assay values of 0.54 oz/ton Ag and 8.1% Cu. This potential sulphide target occurred on the contact between lapilli tuff and basalt. Mattagami's Zone 1 had hand specimens of up to 1.3 oz/ton Ag and 5.8% Cu in sulphide pods. Potential of the zone is thought to lie at depth with the potential union of individual mineral-rich shears.

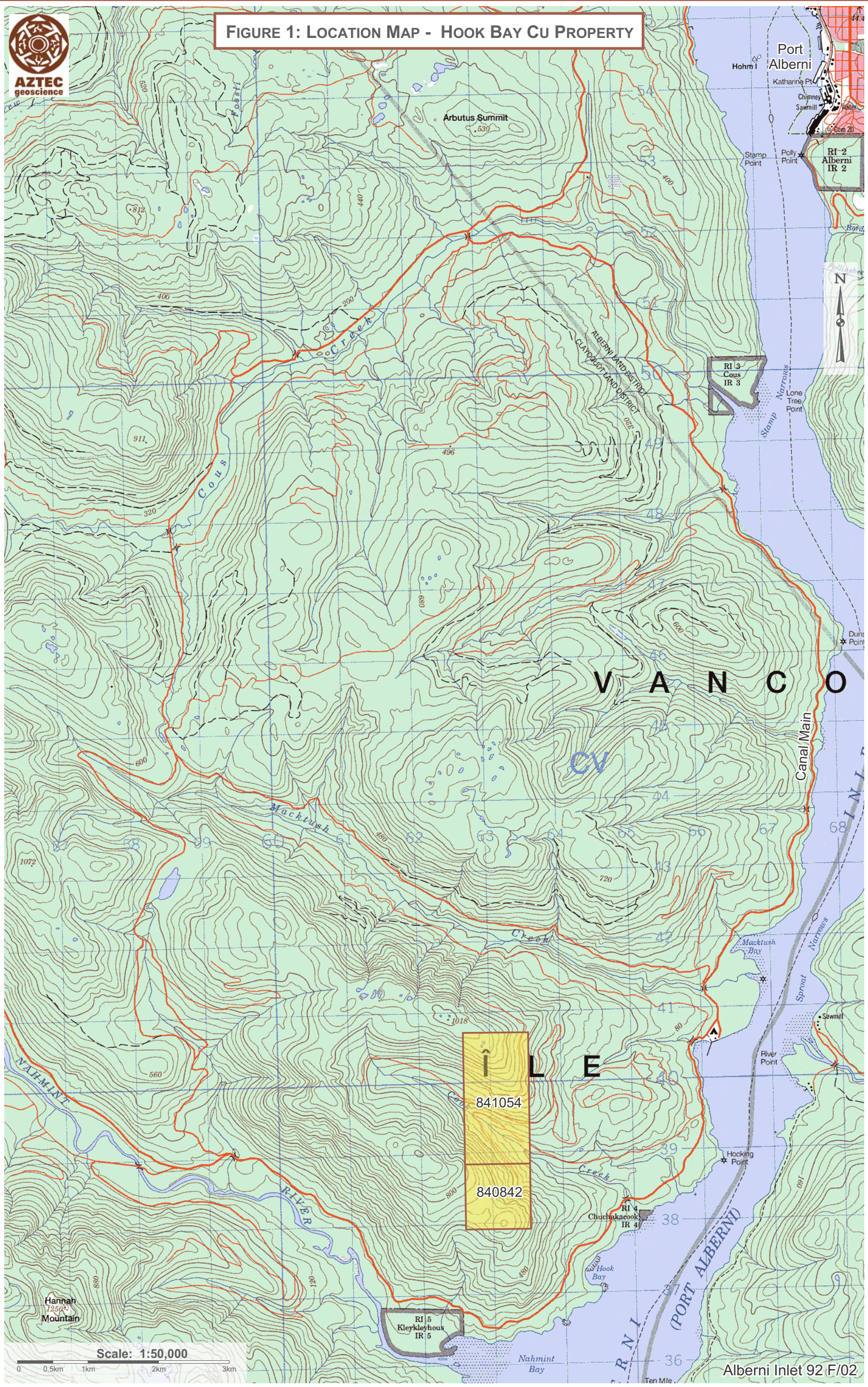
A 2011 prospecting survey along a newly constructed forestry road exposed an ~25m wide zone of highly sheared and Fe-stained basalts bounded by two faults (depression features) striking 050°. This zone contained several 0.5 to 1m spaced quartz-calcite-hematite-pyrite-chalcopyrite veinlets. On the west side of the zone a ~30cm wide vein (lense) of massive cpy-py-po appeared to follow a similar strike. A grab sample of this lense assayed 5.995% Cu and trace Au, Ag.

The 2013 prospecting survey revealed a zone of strong copper mineralization found over a 185m length of Road 2510K, with indications of an east-west striking zone perpendicular to the road heading. This area correlates with Mattagami's Zone 1 discovery in 1983. Of the four samples taken in 2014, values ranged from 2572 to 8195 ppm Cu. Shear-zones within an altered volcanic package on the Hook Bay Property host high Cu ± Ag, Au values with showings dispersed along a 2.5km strike length.

Further prospecting, geological mapping and geophysical surveys are required on this property to better define targets. Magnetometer and/or Induced Polarization surveys over target areas would further define the potential for economically viable Cu ± Ag, Au deposits.



FIGURE 1: LOCATION MAP - HOOK BAY CU PROPERTY



Scale: 1:50,000

Alberni Inlet 92 F/02

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1.0 Introduction

1.1 Terms of Reference / Objectives

This is a prospecting report on the 2013 activities carried out on the Hook Bay Property approximately 19km southwest of Port Alberni, BC, on July 4 and 5, 2013. The objective was to identify and document copper mineralization found along old deactivated roads on the property, north of Cook Creek, to enhance the economic resource potential of the property.

1.2 Location, Access and Facilities

The property is centred over Cook Creek, on the west side of Alberni Inlet, approximately 19km southwest of Port Alberni, BC. (Latitude 49°06'06"N, Longitude 124°52'41"W). This area is in the southwestern region of Vancouver Island, in the southwest corner of British Columbia, Canada. The claims are accessed off Canal Main along the west side of Alberni Inlet and several forestry roads branching westward off the mainline.

Port Alberni has a good infrastructure of housing, industrial and servicing facilities required by a mining operation.

1.3 Legal Property Description & Ownership

The surface rights are on crown lands and existing roads are maintained by local forest tenure holders. New roads are currently being constructed in the south end of the claims (south of Cook Creek), where as much of the older road infrastructure north of Cook Creek is overgrown or has been deactivated by forest tenure holders. Mineral Tenures 840842 and 841054 (Table 1) held by Delbert Ferguson, cover an area 253.86 ha (627 acres) centred over Cook Creek, a major tributary flowing eastward into Alberni Inlet.

Table 1 – Hook Bay Claim Tenure as of January 1, 2014

Tenure #	Ownership	Hectares	Expiry Date
840842	Delbert Ferguson	84.63	May 17, 2016
841054	Delbert Ferguson	169.23	May 17, 2016

Delbert Ferguson has a 50/50 involvement in these claims with David Preedy, prospector of Port Alberni, BC.

1.4 Physiography

The study area is in the Vancouver Island Range Mountains, rising steeply off the Alberni Inlet. The south end of the claims rests on hummocky bedrock-controlled ridge tops which descend steeply northward into the Cook Creek Valley. From Cook Creek, the topography again rises steeply northward onto a southeast-trending ridge nose. Numerous impassable bluffs are situated on both sides of Cook Creek, within the claims. Elevations within the claims range from 200m in the Cook Creek Valley transecting the claims to 760m on the ridge top in the south end of the claims to 960m on ridge nose benches in the northwest corner of the claims.

Recent road construction and new road construction and logging has taken place or is to take place in the area south of Cook Creek. Google Earth™ imagery shows an extensive road network, partially overgrown (mostly deactivated) over the claim area north of Cook Creek. Lower portions of these roads were driven during the 2013 exploration works, but upper portions are only accessible by foot due to non-passable cross-ditches. Bedrock outcrops are abundant and the surficial mantle of colluvial origin is commonly thin occurring as pockets. Thick colluvial and till deposits blanket the Cook Creek Valley transecting the claims.

1.5 Climate and Vegetation

The area south of Cook Creek is covered dominantly by old growth stands of Douglas Fir and Western Hemlock of the Coastal Western Hemlock Biogeoclimatic Zone. The Cook Creek Valley and much of the ridge to the north is covered by regenerating stands of Douglas Fir and Western Hemlock. The climate is maritime, with an annual precipitation of 2023mm rainfall, 1112cm snowfall (Environment Canada Climate Normals, 1971-2000 – Port Alberni-Robertson Creek weather station ~19km NE). Seasonal precipitation patterns are typical of coastal British Columbia. Precipitation occurs mainly as rain, but transient snow accumulations may also occur down to sea-level, mainly between November and March.

1.6 Acknowledgements

The author would like to acknowledge the work of David Preedy, Parker Schachtel and Tim Wickman in conducting effective prospecting and observing copper mineralization along the partially brushed-in, deactivated roads in the north end of the property.

1.6 Property History

The first recorded work within the claim area was the Contented Claim Group (ARIS Report #12,044) consisting of two claims totaling 875ha. The claims were held by Mattagami Lake Exploration Ltd. and explored by Noranda Exploration Company Ltd. in 1983. The claims covered showings of Cu-Ag mineralization within sheared Karmutsen Basalts overlying granodiorites of the Island intrusives. During this era the claims were easily accessed off Canal Main via Cous Creek Main and auxiliary logging roads, north of Cook Creek. These roads are deactivated with deep cross-ditches, making access difficult. Some roads have been permanently deactivated (re-contoured) and are inaccessible by vehicle or ATV.

Geological mapping on these claims was restricted to a 220m interval along road cut 2510, where mineralization was initially encountered. This zone is dominated by altered basalt with a small outcrop of rhyolite porphyry intruding it. The predominant lithology is dark, grey-green basalt which has been variably altered. Lesser outcrops of rhyolite porphyry, granodiorite and basalt lapilli-tuff were also encountered. The basalt varies in competency and texture as a result of shearing and the introduction of carbonate ±silicate ± epidote ±sulphides.

Structure control was defined in shears of 0.1 to 3m wide, striking 110° to 120° with steep dips of 70° to 90° S. Twelve major shears occurred over a 40m interval (favourable exploration target). Pyrite, pyrrhotite and chalcopyrite (malachite) were observed in two localities; Zone 1 along road 2510K (sulphides in sheared basalts); Zone 2 (10cm wide vein of massive sulphides) adjacent to road 2500.

Zone 1: disseminated, fracture-fillings, veinlets, massive pods of py-po-cpy in sheared basalts (values of up to 1.3 oz/t Ag and 5.8% Cu). A geochemical soil sampling program over Zone 1 was somewhat disappointing with poor sporadic Cu anomalies peaking at 220ppm, one isolate Au value of 80ppb and no anomalous Ag values.

Zone 2: flat-lying 10cm wide massive sulphide vein (exhalative lens?) of mostly py-po (values of 0.54oz.tAg and 8.4%Cu). The geochemical sampling program in the vicinity of Zone 2 resulted in four anomalous areas off road 2500:

Area 1: 50m – 220 to 420ppm Cu

Area 2: 250m – 390 to 580ppm Cu

Area 3: spot anomaly – 960ppm Cu

Area 4: spot anomaly – 260 to 760 ppm Cu

Zone 2 is considered to lie along a contact between basalt lapilli tuff (footwall) and basalt (hanging wall) and shows good potential for a massive sulphide target.

Follow-up exploration was recommended in the form of geological mapping, soil sampling and induced polarization surveys. No further work was done.

In 2010, new forestry roads leading up the steep ridge side west of Hook Bay reached the vicinity of the south end of the Hook Bay Cu Property. In the fall of 2010, Dave Preedy made a discovery along roadside outcrops along the newly constructed HB1000 in the south end of the claims. Quartz veinlets and associated quartz-carbonate “blow-outs” of chalcopyrite, pyrite and bornite were exposed in veinlets through altered basalt pyroclastics. These were very narrow to hairline and pinching and swelling into pods. The initial claim (Hookie) was staked on December 14, 2010, and the northern extension (Cookie) was added shortly thereafter on December 17, 2010. With active road construction in the area throughout much of 2011, little exploration work was completed until year end. Del Ferguson, P.Geol. and an associate visited the area on January 18, 2011 while conducting a terrain stability survey and noted local malachite stains in the newly constructed roadway and interesting glacially carved structures in a volcanic agglomerate.

2.0 Regional Geology & Mineralization

The regional 2005 BCGS mapping of this area (Figure 3) indicates that the Hook Bay Property lies along the western rim of an Early to Middle Jurassic (200 to 170 mya) Island Intrusive Complex (EMJlgd) granodiorite body which extends eastward across Alberni Inlet. Most of the property is underlain by Mid to Upper Triassic (230 to 210 mya) Vancouver Group Karmutsen Formation (uTrVK) basaltic volcanics. Lower Jurassic (210 to 190 mya) Bonanza Group (IJBca) of calc-alkaline volcanics and associated metasedimentary rocks (limestone, argillite, siltstone etc.) exist south of Nahmint River, several kilometres south of the claims.

Regional Geochemical Sampling (RGS) shows the region to be highly anomalous in Copper.

A Minfile search reveals that there are several other Cu-rich mineral prospects in the area, the closest and most notable being:

The **Macktush Property** (Minfile 092F 012) lies several km north of the Hook Bay Property ~2km west of Alberni Inlet. Similarly this developed prospect is underlain by Karmutsen Formation volcanics, intruded by granodioritic rocks of the Island Plutonic Suite. The volcanic rocks consist of dark green massive basalt and andesite interbedded with or intruded by porphyritic felsic flows or dykes striking 030. The mafic volcanics contain disseminated pyrite and epidote veinlets with local disseminated chalcopryrite. Sulphide lenses are <0.6m wide and of limited lateral extent. At least 4 quartz veins up to 0.8m wide striking 030° to 080° occur over an area of ~150 to 200m. The Macktush vein sampled is hosted strongly silicified diorite has measured reserves of 137,891 tonnes grading 18.52 gm/t Au, 78.52 gm/t Ag and 0.75% Cu. The Fred vein has inferred reserves of 166,000 tonnes grading 12.38 gm/t Au, 48.8 gm/t Ag and 0.695% Cu. The David vein has inferred reserves of 54,000 tonnes grading 16.24 gm/t Au, 61.24 gm/t Ag and 1.02% Cu.

The **Three Jays Property** (Minfile 092F 140) is a past producer (1898 to 1902), several kilometres south of Hook Bay on the west side of Alberni Inlet ~2.5km south of Nahmint Bay. In this area, Vancouver Group Quatsino limestones are underlain by Karmutsen basalts and interbedded tuffs. Lower Jurassic Bonanza Group andesite tuffs, agglomerates and flows are also present. These rocks are folded, faulted and intruded by a 60m wide granodiorite dyke and by several diorite and quartz-feldspar porphyry bodies (Island Plutonic Suite). Skarn mineralization is hosted in limestone and overlying Bonanza volcanics and in Karmutsen tuff horizons. Mineralization is high grade chalcopryrite, magnetite, pyrite, bornite, epidote, garnet and actinolite. Seven major ore shoots in 3 parallel zones are separated by ~30m and ore deposits are 1500m in length. The easterly trend of the ore has steep dips (80°S) and plunges to the west. Production was reported as 328,244lbs Copper, 1,929gms Au (62 oz.) and 75,207gms Ag (2,418 oz.).

3.0 Property Geology & Mineralization

Most work done on the property to date indicates that the Hook Bay Property is underlain for the most part by Mid to Upper Triassic (230 to 210 mya) Vancouver Group Karmutsen Formation basaltic volcanics in contact with Early to Middle Jurassic (200 to 170 mya) Island Plutonic Suite granodiorite exists along the eastern edge of the claims. (BCGS 2005).

The recently (2011) prospected south end of the claims indicates that most of the southern area consists of variable volcanic lithologies, none of which have been mapped. These vary from volcanic agglomerates, lapilli tuffs, porphyritic dykes, massive basalts and highly sheared and oxidized basalts. Pyrite (py), pyrrhotite (po) and chalcopyrite are found as disseminations and stringers in thin calcite-quartz-epidote veinlets and fracture fillings and in thin shears. The discovery outcrop along HB1000 showed a 20m wide zone of shearing rusty, hematite-stained basalts with a ~30cm wide massive sulphide lense on the western contact.

Mattagami's 1983 exploration in the northern portion of the claims revealed a variety of lithologies: massive dark grey-green basalt with epidote fractures (predominant); recrystallized calcareous basalt; sheared-altered basalt (shear mineralization of py-cpy-po as fine grained disseminations, fracture fillings, veinlets and pods of massive sulphide); rusty brown calcareous basalt (calcite veinlets and fracture fillings ±py-cpy); greenish-grey rhyolite porphyry; intensely sheared granodiorite; medium to dark grey-green basaltic lapilli tuff with calcite and epidote fracture fillings and chalcopyrite to 1% as disseminations and fine crystal aggregates.

4.0 2013 Prospecting Survey

On July 4th and 5th, 2013 Dave Preedy, Parker Schachtel, Tim Wickman and Del Ferguson engaged in a prospecting survey along old deactivated forestry roads through the north end of the claims. Roads were difficult to access due to deep cross-ditches encountered and 4x4 access was only obtainable from Canal Main to the junction of Roads 2510 and 2510J. Thus all roads in this north area of the property remain only accessible by hiking. Very little mineralization was observed in granodiorite outcrops along lower road networks explored, but the mapping did serve to better define the contact between the main granodiorite body along the east side of the property and the basaltic rocks to the west (Figure 3). Nine samples were collected for analysis within areas of veinlet and disseminated pyrite-chalcopyrite in the basalt. Sample location, description and results are outlined in Table 1.

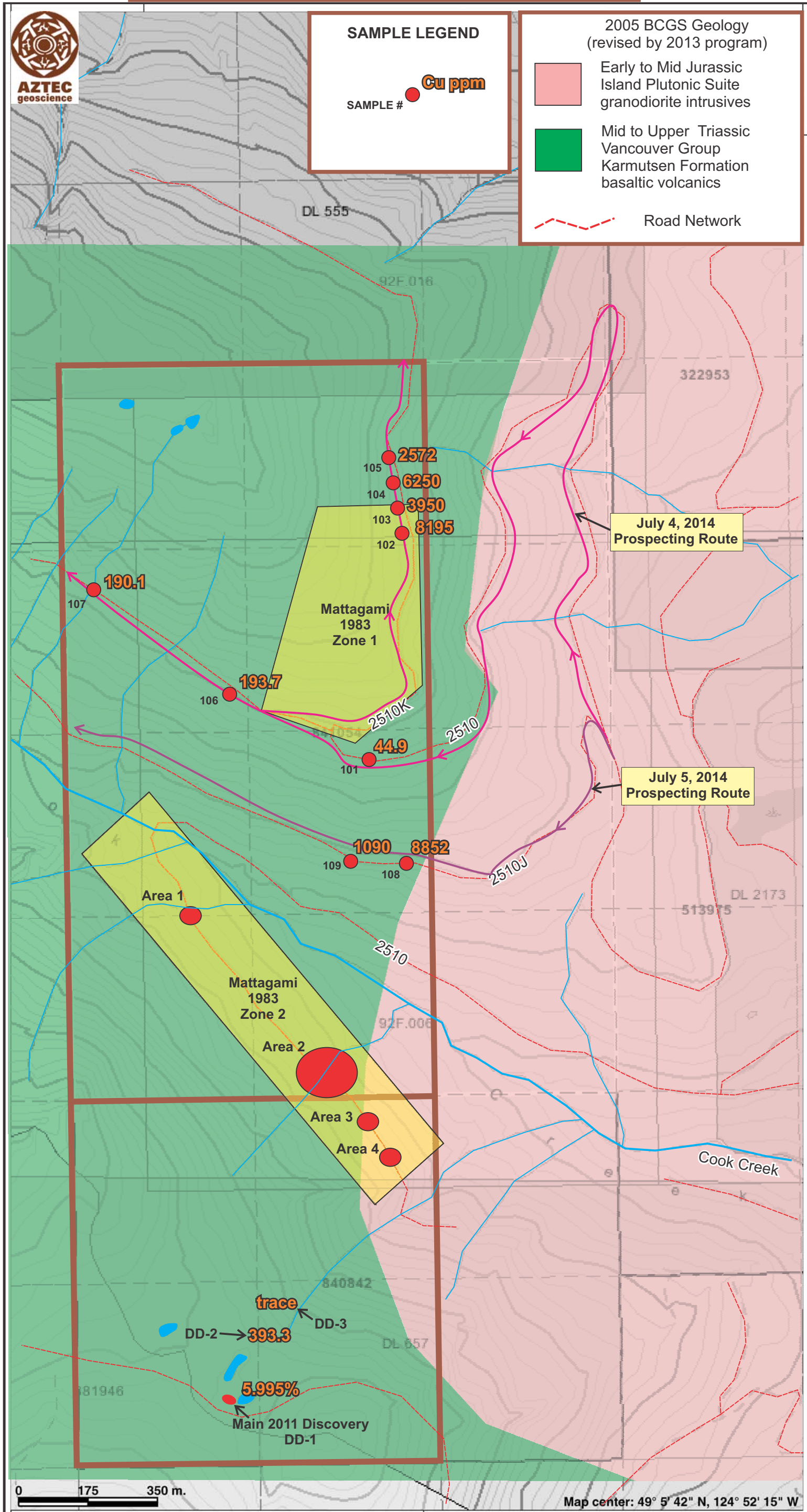
Table 1: 2014 Rock Grab Sampling

Sample #	Location	Description	Analytical Results
1615101	Road 2510 363395mE/5439696mN	~20cm wide vuggy quartz vein with limonite and manganese coatings -strike 090/80N	Cu – 44.9 ppm
1615102	Road 2510K 363468mE/5440268mN	1-3cm wide chlorite-rich stringers with strong disseminated pyrite-chalcopyrite±bornite in ~30m wide zone strikes 090/80N	Cu – 8195 ppm Zn – 124 ppm Au – 13.9 ppb
1615103	Road 2510K 363449mE/5440351mN	quartz-calcite-epidote veinlets in silicified basalt; py-cpy-asp veinlets ~10m wide zone	Cu – 3950 ppm
1615104	Road 2510K 363435mE/5440401mN	cpy-py-chalcopyrite veinlets and disseminations in chlorite altered basalt	Cu - 6250 ppm Zn – 162 ppm
1615105	Road 2510K 363429mE/5440450mN	-large angular boulder with py-cpy stringers	Cu – 2572 ppm Zn – 125 ppm
1615106	Road 2510 362961mE/5439915mN	2cm vuggy quartz vein in basalt	Cu – 193.7 ppm
1615107	Road 2510 362643mE/5440169mN	quartz-pyrite veinlets in basalt	Cu – 190.1 ppm Au – 22 ppb
1615108	Road 2510J 363308mE/5439440mN	three 5-10cm wide quartz-py-cpy veinlets over 2m width strike 220/90 through basalt	Cu – 8852 ppm Au – 39.1 ppb
1615109	Road 2510J 363102mE/5439553mN	1m thick horizontal layer of intense chlorite-epidote alteration with pyrite blebs and cpy with quartz flooding	Cu – 1090 ppm

The highlight of this sampling program was the zone of strong copper mineralization found over a 185m length of Road 2510K, with indications of an east-west striking zone perpendicular to the road heading. This area likely correlates with Mattagami's Zone 1 discovery in 1983. Of the four samples taken in 2014, values ranged from 2572 to 8195 ppm Cu. There was evidence of trace zinc and gold values, but no indications of elevated silver as found in Mattagami's Zone 1.

In addition two other areas ~200m apart on Road 2510J and approximately 800m south of the Road 2510K showing produced Cu values of 8852 and 1090 ppm.

FIGURE 3: COMPILATION MAP - HOOK BAY CU PROPERTY



5.0 Results & Recommendations

The results from the 2013 prospecting/geological mapping program, in correlation with previously obtained results from 2011 and from Mattagami's 1983 program show that mineralization occurs within shear zones of the Karmutsen basalts in this area along a north-south trend approximately 2.5km in length.

From north to south on the Hook property highlights of mineralized occurrences are as follows:

Zone 1:

Mattagami's Zone 1 had hand specimens of up to 1.3 oz/ton Ag and 5.8% Cu in sulphide pods. This area corresponds with 2013 sampling which produced grab sample values between 2572 to 8195 ppm Cu and trace Au over a 185m length of road 2510K.

Zone 2:

Approximately 800m south of Zone 1, on road 2510J (north of Cook Creek), two samples taken in 2013 across zones of shearing and intense mineralized veinlets returned values of 8852 and 1090 ppm Cu.

Zone 3:

Mattagami's Zone 2 had several soil geochemical anomalies along the south side of Cook Creek in the vicinity of a 10cm po-py-cpy vein (lense) with assay values of 0.54 oz/ton Ag and 8.1% Cu. This potential sulphide target occurred on the contact between lapilli tuff and basalt. Follow-up work included detailed mapping, geochemical sampling and IP surveys if feasible.

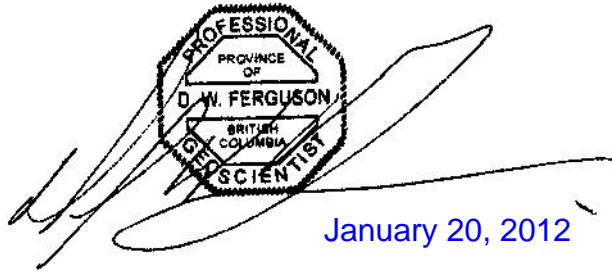
Zone 4:

The 2011 sampling of an ~25m wide NE striking shear zone on the ridge top road HB1000 in the south end of the claims returned 5.995% Cu and trace Ag, Au.

In conclusion, it is obvious that shear-zones within the volcanic package host high Cu and \pm Ag, Au values. Individual shear zones do not add up to an economic deposit, but could point to larger massive sulphide deposits on the property or at depth.

Further prospecting, geological mapping and geophysical surveys are required on this property to better define targets. Magnetometer and/or Induced Polarization surveys over target areas would further define the potential for economically viable Cu \pm Ag, Au deposits.

Respectfully submitted,
AZTEC GEOSCIENCE INC.



January 20, 2012

Del W. Ferguson, P.Ge.

APPENDIX I STATEMENT OF QUALIFICATIONS

I, Delbert Wells Ferguson, of Comox, Province of British Columbia, do hereby state that:

I am a practicing Geoscientist.

I have practiced my profession for over 34years throughout Canada and mostly in British Columbia.

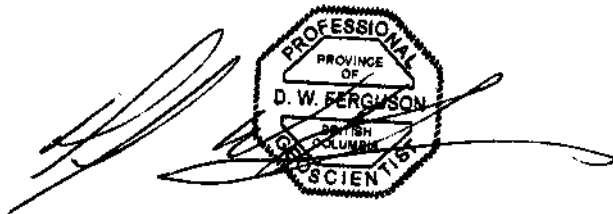
I am a Fellow Member of the Geological Association of Canada (GAC).

I am a Professional Geoscientist, registered with the Association of Engineers and Geoscientists of British Columbia.

I received an Honours B.Sc. Degree in Geology from the University of Western Ontario, London, Ontario, Canada in 1979.

This report was prepared by me, based on researched historical data and prospecting visitations to the Hook Bay Property.

I am currently the Mineral Title holder of the Hook Bay Property and share a 50% interest in the property.

A handwritten signature in black ink is written over a circular professional seal. The seal is for a Professional Geoscientist in the Province of British Columbia, with the name D. W. Ferguson. The seal is partially obscured by the signature.

Delbert Wells Ferguson, P.Geo., FGAC

Dated January 20, 2014

APPENDIX II - STATEMENT OF COSTS

Hook-Cook GEOLOGY- PROSPECTING SURVEY - 2013

<u>Mapping/Prospecting</u>	Personnel	Rate	Man Days	Total
1 Geologist		500	1.5	750
1 Prospector		400	1.5	600
2 field assistants		250	3	750
 <u>Expenses</u>				
	Km	Rate		
Travel	400	0.5		200.00
Food				127.35
Sample Shipment				27.71
 <u>Analysis</u>				
Acme Labs		Samples	per Sample	
	Rock Samples	9	22.95	206.55
 <u>Reporting, Research & Mapping</u>				
	Geologist	Days		
	500	2		1,000.00
Total				3,661.61

APPENDIX III PHOTO DOCUMENTATION

Photos 1 through 3: ~185m road cut through mineralized shear zone on Road 2510K



Photo 1: zone of strong chlorite alteration carrying veinlets and fracture fillings of pyrite-chalcopyrite-bornite; WP190; sample 1615102



Photo 2: silicified basalt rubble with epidote-calcite-pyrite-chalcopyrite veinlets; WP191; sample 161103



Photo 3: large block riddled with pyrite-chalcopyrite stringers; WP194; sample 161105



Photo 4: three 5-10cm wide quartz-pyrite-chalcopyrite veinlets over 2m width on Road 2510J; WP196; sample 161108



Photo 5: 1m thick horizontal layer of intense chlorite-epidote alteration with pyrite blebs and chalcopyrite in quartz veinlets on Road 2510J Wp197; sample 1615109



APPENDIX IV

www.acmelab.com

Acme Analytical Laboratories (Vancouver) Ltd.
9050 Shaughnessy St Vancouver BC V6P 6E5 CANADA
PHONE (604) 253-3158

Client: **Aztec Geoscience Inc.**
918 Highwood Drive
Comox BC V9M 3R5 CANADA

Submitted By: Del Ferguson
Receiving Lab: Canada-Vancouver
Received: July 09, 2013
Report Date: July 20, 2013
Page: 1 of 2

CERTIFICATE OF ANALYSIS

VAN13002497.1

CLIENT JOB INFORMATION

Project: HOOK
Shipment ID:
P.O. Number
Number of Samples: 10

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	10	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX1	10	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

SAMPLE DISPOSAL

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

ADDITIONAL COMMENTS

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: Aztec Geoscience Inc.
918 Highwood Drive
Comox BC V9M 3R5
CANADA

CC: Dave Preedy



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.

CERTIFICATE OF ANALYSIS

VAN13002497.1

Method	WGHT	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
1615101	Rock	0.82	<0.1	44.9	0.5	12	<0.1	13.1	10.2	636	2.96	0.8	<0.5	<0.1	2	<0.1	<0.1	<0.1	84	0.08	0.027
1615102	Rock	1.42	1.0	8195	3.3	124	2.4	174.4	156.4	561	8.83	50.0	13.9	0.1	22	0.6	0.3	0.2	142	1.09	0.050
1615103	Rock	1.86	0.2	3950	2.4	85	1.4	82.0	39.8	558	4.55	9.1	3.6	0.1	27	0.4	0.1	<0.1	128	2.47	0.056
1615104	Rock	1.63	0.2	6250	1.3	162	2.5	82.2	71.4	692	6.60	26.0	7.2	0.1	33	0.8	0.2	0.1	162	1.35	0.050
1615105	Rock	1.67	0.4	2572	0.3	125	0.9	105.6	103.8	1573	10.50	5.9	3.2	0.2	45	0.2	<0.1	<0.1	224	3.21	0.056
1615106	Rock	0.95	0.1	193.7	1.5	37	0.1	37.3	17.6	450	3.49	1.9	9.5	0.3	30	0.3	<0.1	<0.1	157	5.56	0.045
1615107	Rock	1.06	0.4	190.1	3.5	19	0.1	31.6	21.5	308	3.97	1.4	22.0	0.2	28	0.1	0.1	<0.1	119	7.62	0.041
1615108	Rock	2.28	0.6	8852	1.0	43	0.8	122.6	103.9	469	16.38	10.3	39.1	0.2	39	<0.1	0.1	0.3	212	1.44	0.063
1615109	Rock	1.58	0.4	1090	2.0	29	0.3	42.8	141.6	398	6.95	5.5	6.2	<0.1	85	<0.1	0.2	0.3	69	3.86	0.020
1615110	Rock	0.90	0.3	65.2	3.0	32	<0.1	21.5	13.4	587	2.96	4.2	26.4	0.2	11	<0.1	0.3	<0.1	122	1.64	0.018

CERTIFICATE OF ANALYSIS

VAN13002497.1

Method	Analyte	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
1615101	Rock	1	20	0.70	4	0.018	<20	1.40	0.001	0.01	<0.1	<0.01	15.4	<0.1	<0.05	4	<0.5	<0.2
1615102	Rock	<1	73	1.84	8	0.224	<20	2.96	0.060	0.02	<0.1	0.80	9.1	<0.1	2.30	10	3.4	<0.2
1615103	Rock	<1	40	1.74	6	0.282	<20	3.42	0.034	0.01	<0.1	0.20	8.9	<0.1	0.21	11	1.1	<0.2
1615104	Rock	2	47	2.02	3	0.336	<20	3.19	0.044	<0.01	<0.1	0.45	8.9	<0.1	0.65	11	1.4	<0.2
1615105	Rock	2	94	4.04	13	0.117	<20	5.51	0.010	0.07	<0.1	0.05	28.2	<0.1	0.06	16	<0.5	<0.2
1615106	Rock	4	15	0.67	10	0.443	<20	3.82	0.023	<0.01	<0.1	0.01	6.0	<0.1	<0.05	16	<0.5	<0.2
1615107	Rock	3	34	0.64	91	0.246	<20	3.20	0.008	<0.01	<0.1	0.26	6.1	<0.1	1.91	12	<0.5	<0.2
1615108	Rock	2	62	0.93	2	0.282	<20	2.05	0.028	<0.01	<0.1	0.34	5.2	<0.1	1.52	12	3.3	<0.2
1615109	Rock	<1	62	0.98	4	0.472	<20	1.28	0.001	<0.01	<0.1	0.27	4.7	<0.1	5.48	4	5.8	<0.2
1615110	Rock	<1	44	1.04	8	0.284	<20	1.95	0.010	<0.01	0.2	<0.01	6.0	<0.1	<0.05	9	<0.5	<0.2

QUALITY CONTROL REPORT

VAN13002497.1

Method	WGHT	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																					
1615110	Rock	0.90	0.3	65.2	3.0	32	<0.1	21.5	13.4	587	2.96	4.2	26.4	0.2	11	<0.1	0.3	<0.1	122	1.64	0.018
REP 1615110	QC		0.2	69.0	3.0	32	<0.1	23.8	13.6	601	3.03	4.5	25.1	0.2	11	0.2	0.3	<0.1	126	1.68	0.018
Reference Materials																					
STD DS9	Standard		12.8	104.9	124.8	303	1.5	38.8	7.5	578	2.36	24.7	186.7	5.9	72	2.4	4.3	5.6	40	0.72	0.078
STD OREAS45EA	Standard		1.6	714.7	14.6	31	0.3	393.5	54.5	428	23.48	9.2	60.6	11.0	4	<0.1	0.2	0.4	307	0.03	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
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
BLK	Blank		<0.1	0.3	<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		0.2	3.5	6.7	45	<0.1	2.7	3.7	580	1.95	<0.5	1.0	5.9	71	<0.1	<0.1	<0.1	37	0.71	0.070
G1	Prep Blank		0.1	4.6	13.9	42	<0.1	2.9	3.8	565	1.97	<0.5	<0.5	5.9	69	<0.1	<0.1	<0.1	37	0.60	0.068

QUALITY CONTROL REPORT

VAN13002497.1

Method		1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.01	0.05	1	0.5	0.2
Pulp Duplicates																		
1615110	Rock	<1	44	1.04	8	0.284	<20	1.95	0.010	<0.01	0.2	<0.01	6.0	<0.1	<0.05	9	<0.5	<0.2
REP 1615110	QC	<1	44	1.05	9	0.292	<20	2.02	0.011	<0.01	0.1	<0.01	6.4	<0.1	<0.05	9	<0.5	<0.2
Reference Materials																		
STD DS9	Standard	12	122	0.63	310	0.103	<20	0.95	0.082	0.40	2.2	0.19	2.2	5.1	0.16	4	5.4	4.5
STD OREAS45EA	Standard	7	891	0.11	141	0.090	<20	3.17	0.019	0.05	<0.1	<0.01	85.9	<0.1	<0.05	12	<0.5	<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 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
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	14	5	0.62	161	0.125	<20	1.04	0.120	0.52	<0.1	<0.01	2.5	0.3	<0.05	5	<0.5	<0.2
G1	Prep Blank	13	5	0.56	161	0.122	<20	0.99	0.108	0.49	<0.1	<0.01	2.5	0.3	<0.05	4	<0.5	<0.2