

Ministry of Energy & Mines Energy & Minerals Division Geological Survey Branch



ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TOTAL COST \$11,538.46
X
EAR OF WORK 2012
(at centre of work)
de):
al vein,

10925, 27136, 29870, 30486, 32742

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			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL			
number of samples analysed for)			
Soil			
Silt			
Rock			
Other			
DRILLING			
(total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL	ok complete JCD MS		
Sampling/assaying	k samples - ICP-MS	Big Sheep West & East	603.12
Petrographic			
Mineralographic			
Metallurgic			10.005.04
PROSPECTING (scale, area)	1:5000 700 ha	Big Sheep West & East	10,935.34
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
			\$11,538.46

Prospecting Report For Big Sheep Property BC Geological Survey Assessment Report 33619

Lillooet Mining District British Columbia, Canada

NTS 92O/2 Latitude: 51°02' N Longitude: 122°39' W

Owner / Operator Tom Gilchrist

Report Prepared By Tom Gilchrist

February 26, 2013

Table of Contents

1.0	Sum	mary	1
2.0	Introd	duction	2
	2.1	Terms of Reference	2
	2.2	General	2
	2.3	Location and Access	2
	2.4	Property Tenure	3
	2.5	Physiography	4
	2.6	Regional History	5
	2.7	Property History	5
3.0	Regio	onal Geology	8
4.0	Prop	erty Geology	11
	4.1	Mineralization	13
5.0	2012	Field Program	13
	5.1	General Description	13
	5.2	Traverse Descriptions	15
	5.3	Rock Sample Geochemistry	18
6.0	Conc	lusions and Recommendations	29
	6.1	Conclusions	29
	6.2	Recommendations	29
7.0	Refe	rences	30
8.0	Com	puter Software	30
Append	lix A:	Statement of Qualifications	31
Append	lix B:	Expense Statement	32
Append	lix C:	Rock Sample Descriptions	33
Append	lix D:	Analytical Methods and Assay Certificates	35

Table of Figures

Figure 1	Big Sheep Property Location	3
Figure 2	Big Sheep Claim Map	4
Figure 3	Big Sheep Regional Geology	10
Figure 4	Property Geology Map	12
Figure 5	Sample Location Map	14

Figure 6: T	raverse 1 - Big Sheep Mountain Summit (looking west)	15
Figure 7: T	raverse 2 - Divide East of Big Sheep Mountain (looking east)	16
Figure 8: T	raverse 3: Big Sheep Mountain North Bowl (looking south)	17
Figure 9: T	raverse 4: Toe of Northeast Ridge (looking east)	17
Figure 10:	Traverse 5 - Portion of North Slope (looking NW)	
Figure 11	Rock Geochemistry: Silver	20
Figure 12	Rock Geochemistry: Arsenic	21
Figure 13	Rock Geochemistry: Gold	22
Figure 14	Rock Geochemistry: Copper	23
Figure 15	Rock Geochemistry: Mercury	24
Figure 16	Rock Geochemistry: Lead	25
Figure 17	Rock Geochemistry: Antimony	26
Figure 18	Rock Geochemistry: Tellurium	27
Figure 19	Rock Geochemistry: Zinc	

1.0 Summary

The Big Sheep property is located in the Lillooet Mining District in southwestern British Columbia, 200 kilometers north of Vancouver, and approximately 20 kilometers north-northeast of the historic mining community of Gold Bridge. The property encompasses most of Big Sheep Mountain, as well as terrain to the north and east.

The Big Sheep property is currently held entirely by the author. It was initially acquired by ground staking in September 2004, then subsequently converted to a Mineral Titles Online (MTO) claim, and expanded to its present extent. The Big Sheep property was formerly comprised of the Big 1 to 4 claims.

Access to the claim is by truck along mainline forest service roads, and then by all-terrain vehicle (ATV) along a deactivated logging road and a narrow, deteriorated secondary road.

Previous operators have performed limited work on the property during the period of 1980 to 1982, then again in 2002. The previous operators have focused primarily near the summit of Big Sheep Mountain within a limited area that has produced gold in soil anomalies up to 5500 ppb gold. Rock samples collected during the previous work have returned values up to 19 g/t gold.

The most detailed previous program was completed in 1982. The conclusions of that work suggested that the density of fractures and veining was probably not sufficient to allow bulk mining. However, the conclusions reported, "that the presence of scattered mineralized float and the extensive geochemical anomaly may indicate a considerably larger mineralized zone and better mineralized sections may exist at depth because of surface leaching". More recent work, conducted in 2002, indicates that anomalous soils are concentrated near the trend of north by northwest trending structures with values up to 1,024 ppb gold (over limit assay at 1.51 g/t gold). It is apparent from a review of this previous work that a significant and extensive gold in soil anomaly has not been adequately explained or fully delineated.

A field program undertaken by the author in August and September 2008 resulted in the collection of forty-nine samples consisting of soil, rock, stream sediment, and moss mats. Rock sample analytical data from that collection returned up to 7,266 ppb gold; those samples however were primarily float from the extensive talus cover of Big Sheep Mountain.

The encouraging rock gold geochemistry observed in samples from earlier programs indicates potential of the property, however relatively few of those results came from rock in-place. The field program described in this report focused primarily on collecting rock samples from prominent outcrop areas on the property in an attempt to identify mineralization in defined areas.

The Big Sheep property is at an early stage, and further work is recommended to identify and sample additional outcrop, particularly on the Big Sheep West claim in the vicinity of the previously identified summit area soil anomaly. Additional reconnaissance work on the under-explored lower west and southwest flanks of Big Sheep Mountain should also be undertaken.

2.0 Introduction

2.1 Terms of Reference

This report was prepared to meet assessment requirements for the Big Sheep property. It briefly reviews previous exploration work conducted on the property and describes the work done by the author during 2012. The information contained in this report is comprised of work and observations of the author, previous assessment reports, and government maps and publications.

2.2 General

A 2012 field exploration program was conducted on the Big Sheep property for a period of 18 person-days. The field work was performed by two people during the period of September 13 to 21, 2012.

Twenty-one rock samples were collected. The samples were transported from the field by the author and hand delivered to AGAT Laboratories in Burnaby, BC for analysis.

A total value of work of \$11,538.46 was incurred as presented in Appendix B. A Statement of Work (Event Number 5419097) was filed by way of Mineral Titles Online on November 28, 2012.

2.3 Location and Access

The Big Sheep property is located in southwestern British Columbia, as shown in Figure 1, 200 kilometers north of Vancouver, and approximately 20 kilometers north-northeast of the historic Bridge River mining community of Gold Bridge. The nearest population center is Lillooet, approximately 110 kilometers by road to the east.

Access to the property is by road from Lillooet along Highway 40, then along the unpaved Marshall Lake and Noaxe Creek forest service roads (FSR). A deactivated branch road off the Noaxe FSR runs through old cut blocks and intersects a deteriorated road of unrecorded origin three kilometers from the main FSR. The old road, which has deteriorated to a trail, climbs a further five kilometers to near the summit of Big Sheep Mountain. The condition of the trail allows travel by ATV, however due to the unstable nature of two steep slopes of loose shale fragments that it crosses, periodic clearing of slumped material is necessary.

Access to the central part of the property is possible by ATV. The open nature of the terrain allows further travel by foot; however the north side of the summit of Big Sheep Mountain consists of 200 meter cliffs and is therefore inaccessible. Some portions of the property are more easily reached in a timely manner by helicopter.



Figure 1 Big Sheep Property Location

2.4 Property Tenure

The Big Sheep property consists of two separate claims, Big Sheep West and Big Sheep East, as shown in Figure 2, covering a total area of 711.33 hectares. Property tenure details are shown in Table 1.

Tenure Number	Claim Name Owner Map Number		Current Good- To Date	Area	
540959	Big Sheep West	143070 100%	0920	2015/Dec/01	406.49 ha
540960	Big Sheep East	143070 100%	0920	2015/Dec/01	304.84 ha

Table 1 Property Tenure

Property adjoining along the north claim boundary, and by a small separation to the east, is presently held by Sona Resources.



Figure 2 Big Sheep Claim Map

2.5 Physiography

The Big Sheep property is situated in the Shulaps Range between the Fraser Plateau to the east and the Chilcotin Mountains to the west. The property encompasses most of Big Sheep Mountain, a ridge trending to the east, and steeply forested slopes to the north and south. The terrain is generally steep, with precipitous cliffs on the ridge running north of the summit. The ridge to the east runs at a relatively gentle grade with steep slopes on the north and south sides. Several basins on the north and west sides of Big Sheep Mountain drain into the headwaters of Noaxe Creek. The basin on the south side drains into Liza Creek.

The summit elevation of Big Sheep Mountain is 2420 meters. The claim elevation descends down to approximately 1700 meters on steep forested slopes at the northwest corner, and to approximately 1940 meters in the basin along the south boundary. Most of the property is above tree line, which generally occurs at

approximately 2000 meters. The summit area is mantled in extensive talus with outcrop occurring along ridge tops and the cliffs on the north side. The ridge to the east is alpine meadow with extensive outcrop exposure.

Most of the property is barren of vegetation except for the meadow flanks of the east ridge, and scattered islands of scrubby alpine fir. The lower elevation forested areas consist of spruce, balsam, and pine. There has been extensive logging in the Noaxe Creek and Liza Creek drainages. Mountain Pine Beetle infestation is evident in the forest surrounding Big Sheep Mountain.

The climate is alpine, and being situated leeward of the Coast Range Mountains, the property receives only moderate annual precipitation. Access is generally possible from late June to early October, although snow can be expected anytime after early September.

2.6 Regional History

Mining activity in the Bridge River district began in the mid 19th century, when prospectors entered the area from the Fraser River Canyon. Placer gold was found first in 1863, and then the first hard rock claims were staked in 1896.

In 1956 copper mineralization was discovered at Poison Mountain, located approximately 11 kilometers north of the Big Sheep property. According to the BC Mineral Inventory (Minfile) database, approximately 37,000 meters of drilling during the 1960s to 1980s defined a resource of 280 million tonnes at a grade of 0.26% copper and 0.14 grams per tonne gold.

The Elizabeth property, located approximately 6 kilometers east of Big Sheep, holds gold bearing quartz veins and has been explored intermittently since the early 1940s. From the late 1940s to 1990, several operators have explored the Elizabeth property, including drilling, trenching, and drifting. Exploration resumed in 2002 with geochemical sampling and 1,642 meters of drilling.

Most mining activity in the region has focused on the Bralorne, Pioneer, Minto, Coronation and Wayside gold deposits. The Pioneer Mine went into production in 1914 and the Bralorne Mine in 1932. By the time production ceased at Bralorne in 1971, the Bralorne and Pioneer Mines had a combined production of 4.1 million ounces of gold at an average grade of 0.53 ounces per ton, making this the largest gold producing camp in British Columbia's history

Limited exploration activity at the Bralorne Mine occurred in the 1990s, and significant work resumed in 2004 with multi-phase exploration and bulk sampling programs as a path to resuming production.

2.7 Property History

The Big Sheep property was originally staked in June 1980 by Du Pont of Canada Exploration Limited as the 20-unit Big claim as a result of regional prospecting in the 1970s. Du Pont held the property and did follow-up geological and geochemical surveys in 1980, 1981, and 1982. The Big Sheep property is presently 100% owned by the author. It was initially acquired by ground staking in September 2004, then subsequently converted to a Mineral Titles Online (MTO) claim, and expanded to its present extent.

Dawson (1982) concluded that precious metal mineralization is associated with very narrow, vuggy quartz stringers and limonite coated fractures primarily within argillic altered rhyolite porphyry. Dawson (1982) also reported, "the presence of scattered mineralized float and the extensive geochemical anomaly may indicate a considerably larger mineralized zone". Conversely to the above statements, Dawson (1982) also stated that, exploration to date has not shown areas of sufficient grade to warrant further detailed testing at this time.

Viceroy Resources acquired the property in April 2002 by staking 80 units as the Big 1 to 4 claims. The claims later formed part of an option agreement with Royal County Minerals. A short field program was undertaken in 2002.

Travis (2002) states "It is the opinion of the authors that the Big Sheep property is underlain by extensive and high order gold-in-soil anomalies that have not been tested. Elevated levels of Pb, Zn, and Ag are associated with these anomalies." Travis (2002) points out similarities with the past producing Blackdome Mine located 30 kilometers to the north, and further states that "The Big Sheep property may have more in common with the mesothermal, pluton-hosted gold veins of the Bralorne Camp, these typically average 1.5 meters in width and grade 10 to 30 g/t gold."

The work by previous operators has indicated that an area of at least 300 by 1000 meters contains a number of smaller, 50 to 100 meters wide by 500 meters long, greater than 250 ppb gold in soil anomalies. Individual results ranged up to 5500 ppb gold. Rock samples have returned values up to 19.2 g/t gold from rhyolite porphyry with limonite and manganese on fractures, minor quartz veinlets, although with no visible sulphides.

A brief summary of the previous work by the individual operators is given in Table 2. There is no published record of work being done during the period between 1982 and 2002 can be found; however the five kilometer road leading to near the summit of Big Sheep Mountain did not exist during he reported 1980s work, but was in place, in deteriorated condition, when the 2002 work occurred.

Year	Operator	Work Summary
1980	Du Pont of Canada Exploration	Collection and geochemical analysis of 38 soil, 18 stream sediment, and 15 rock samples. Geological mapping. Soil and steam sediment samples indicate presence of base and precious metal mineralization although no significant economic mineralization was observed.
1981	Du Pont of Canada Exploration	Collection and geochemical analysis of 249 soil and 21 rock samples. Geological mapping. Data outlines an area of anomalous gold and silver values which correspond approximately to the outcrop area of the rhyolite porphyry plug.
1982	Du Pont of Canada Exploration	Collection and geochemical analysis of 349 soil and 47 rock samples. Data outlines several, coincident north- northwesterly trending linear zones of anomalous gold- silver values centered near the peak of Big Sheep Mountain
2002	Viceroy Resources	Collection and analysis of 60 soil, and eight rock samples. Results indicate anomalous soils with values up to 1,024 ppb gold are concentrated in northwest trending structures near the summit of Big Sheep Mountain.
2007	T. Gilchrist	Trail access improvement and collection and geochemical analysis of 10 soil, six rock, and three steam sediment samples. Early onset of winter conditions restricted sampling mainly to access corridor on north aspect of property.
2008	T. Gilchrist	Forty-nine samples were collected consisting of soil, rock, stream sediment, and moss mats. Sample analytical data returned values up to 148 ppb gold in soil, 7,266 ppb gold in rock, 75 ppb gold in stream sediment, and 150 ppb gold in moss.
2010	T. Gilchrist	Property inspection conducted by third-party geological consultant. Rock and soil samples collected and geological observations compiled. Gold values in rocks varied from <1 to 350 ppb Au. Mineralization and alteration is consistent with epithermal style mineralization. Low-grade surface mineralization may indicate higher grade deposit at depth.

Table 2 Big Sheep Property Work History

3.0 Regional Geology

The Big Sheep property is situated within a geologically diverse area of the Intermontane Belt of southern British Columbia as shown in Figure 3.

The region has a varied and complex period of tectonic activity. Major breaks and faults have been active or reactivated over a broad geologic time frame. Some of these faults have controlled the emplacement of intrusive bodies and have played an important role in the formation of mineral deposits such as the Bralorne/Pioneer.

The area is transected by the northwest-trending Yalakom fault and underlain by Mesozoic and Tertiary rocks that host epithermal to mesothermal gold occurrences, fault-related mercury showings and porphyry copper prospects with low gold values such as the Poison Mountain deposit.

Southeast of the Yalakom fault, much of the area is underlain by partially coeval rocks of the Bridge River complex, the Cadwallader Group, and younger Tyaughton, Relay Mountain, Taylor Creek groups.

The Bridge River Terrane is situated to the south of the Shulaps Ultramafic Complex and is represented mainly by the Bridge River Complex, an assemblage of chert, argillite, greenstone, gabbro, serpentinite, limestone and clastic sedimentary rocks with no coherent stratigraphy. Ages range from Mississippian to late Middle Jurassic. The Bridge River Complex is overlain by a thick, coherent succession of clastic metasedimentary rocks referred to as the Cayoosh Assemblage.

The Cadwallader Group is located further to the west, and is comprised of greenstone of the Pioneer Formation and overlying conglomerate, sandstone and shale of the Hurley Formation. It is Late Triassic in age and therefore coeval with parts of the Bridge River complex. In the Eldorado Mountain area it is juxtaposed against the Bridge River complex across north-northeast-trending faults.

Tyaughton Group Middle to Upper Norian red conglomerates and sandstones, and thick-bedded limestone are overlain by Early Jurassic to Middle Jurassic shales, sandstone, siltstone and conglomerate. Relay Mountain Group rocks are variably shale, sandstone, conglomerate and calcareous rocks.

Lower Cretaceous Taylor Creek rocks range from the Paradise Formation, a siltstone, sandstone, conglomerate unit, through the Dash chert pebble conglomerate, to the Lizard Formation shale and muscovite-rich arkosic sandstones. Upper Cretaceous rocks of the Battlement Ridge Group consist of the Silverquick Formation of dominantly pebble to cobble conglomerate, and the Powell Creek Formation of andesitic volcanic breccia, and related tuffs, flows and epiclastic rocks. Eocene rhyolitic to dacitic flows occur locally, and Miocene and/or Pliocene basalt flows cap high areas.

The region is cut by a northwest-trending system of strike-slip faults that was active in Late Cretaceous time. Northerly trending splays of the Relay Creek-Marshall Creek fault system connect with the Yalakom fault system to define a large-scale extensional duplex structure. This fault system steps across and bounds the northwestern margin of the Shulaps ultramafic complex at its southeastern end. Metallic mineral concentrations are within or adjacent to strike-slip faults or associated structures, and have a close spatial relationship with plutons or dykes. The age of mineralization seems closely tied to igneous activity between Late Cretaceous and Early Tertiary time. Epithermal gold, precious metal-bearing polymetallic veins, porphyry copper-molybdenum, tungsten skarn and shearrelated mercury occurrences are documented in the region.

Big Sheep Regional Geology





Note: Only key formations are shown on map and legend

- Efp Eocene Unnamed feldspar prophyritic intrusive rocks
- KSq Cretaceous Silverquick Formation
- IKT Lower Cretaceous Taylor Creek Group
- uJKR Upper Jurassic to Lower Cretaceous Relay Mountain Group
- MmJBgs Mississippian to Mid Jurassic Bridge River Complex
- uTrC Upper Triassic Cadwallader Group
- uTrTy Upper Triassic Tyaughton Group
- PShum Permian Shulaps Ultramafic Complex

Figure 3 Big Sheep Regional Geology



4.0 Property Geology

The geology of the Big Sheep claim is shown in Figure 4, and described by Dawson in his 1982 assessment report of the same property. According to Dawson, the geology of the Big Sheep property can be divided into six distinct units:

- 1. The oldest rocks on the property are represented by the Lower Mesozoic Bridge River Group comprised of argillites, cherts, conglomerates, recrystallized limestone, and metavolcanics.
- 2. Immediately west of the Bridge River rocks is a narrow northerly trending slice of ultramafic rocks related to the Shulaps Ultramafic Complex which occur as orange brown to dark green weathering harzburgites, peridotites and serpentine.
- 3. In fault contact and immediately west of the ultrabasic rocks are undivided sedimentary rocks of the Lower Cretaceous Lizard Formations sediments in the Taylor Creek Group.
- 4. Intruding the Lower Cretaceous Lizard Formation sediments in the Taylor Creek Group, area several bodies of middle to early Tertiary feldspar porphyry (Bendor-Type) and are according to Dawson (1982), rhyolite porphyry. The feldspar porphyry is typically a brown to gray-green fine to medium grained massive feldspar or feldspar-hornblende porphyry. This rock is generally unaltered; however near its contact it sometimes exhibits weak to moderate chloritic and/or limonitic alteration. This unit forms its main mass near the peak and to the southwest. Numerous dykes, sills, and lithologic similarities of the feldspar porphyry are also found south, southeast, and north of the peak.
- 5. Dawson (1982) reported a plug-like body of rhyolite porphyry unit closely associated with the feldspar porphyry. This unit is typically white to yellowish-brown, argillic altered, fractured and invariably limonite stained. This unit was identified as forming a 150 meter thick cap to a stock of feldspar porphyry and feldspar-hornblende porphyry.

Note however, that Travis, in his 2002 fieldwork program, interpreted this unit as an alteration product of the feldspar porphyry along north-northwest trending structures. This is evidenced by increasing alteration of the generally unaltered feldspar porphyry unit increasing towards these structures, which occur in talus filled slight depressions. These altered rocks have been overstated in the talus giving the impression that they mantle or cap the feldspar porphyry. Further credence to this new postulation is gathered from a review of the soil geochemistry and examination of regional structures. Regardless of genesis, this unit is host to fine quartz veinlets, veins, and local stockworks of potentially economic importance.

6. Dykes of fine-grained, brown, feldspar porphyritic basic rock were also recorded by Dawson (1982). These rocks crosscut the feldspar porphyry.





(See Table of Property Rock Units on the following page)

Table 3 Property Rock Units

Unit	Description
Evc	Eocene Unnamed volcaniclastic rocks
Efp	Eocene Unnamed feldspar porphyritic intrusive rocks
uTrCHs	Upper Triassic Cadwallader Group Hurley Formation undivided sedimentary rocks
IKTL	Lower Cretaceous Taylor Creek Lizard Formation undivided sedimentary rocks
IKTD	Lower Cretaceous Taylor Creek Dash Formation undivided sedimentary rocks
MmJBgs	Mississippian to Middle Jurassic Bridge River Complex greenstone greenschist metamorphic rocks
PShus	Permian Shulaps Ultramafic Complex Serpentinite Melange Unit serpentinite ultramafic rocks
PShum	Permian Shulaps Ultramafic Complex Harzburgite Unit serpentinite ultramafic rocks

4.1 Mineralization

Gold and silver values in the vicinity of Big Sheep Mountain appear to be associated with vuggy quartz seams with tetrahedrite. Pyrite is uncommon. Host rocks consist of argillic-altered feldspar and quartz porhpyritic rhyolite containing limonite coated fractures. Locally, rocks are tuffaceous to breccia textured, vuggy, and contain fine grained quartz veinlets and rare amethyst.

The Big Sheep Property contains the Minfile prospect 0920 047, Big Sheep Mountain.

5.0 2012 Field Program

5.1 General Description

An 18 person-day prospecting field program was conducted in September, 2012. One day was required to clear fallen trees and brush from the deteriorated road and manually dig out several slumped sections in order to allow ATV access. The technical work accomplished over the program period includes the collection and documentation of 21 rock samples.

The goal of this field program was to reconnoiter the core area of the property for outcrop and collect in-place rock samples. Prior work had collected mainly float samples that had returned encouraging gold values, however it is desirable to determine if there is any in-place rock containing significant mineralization.

Five areas were traversed as shown on the map in Figure 5, which also shows the sample locations.



Big Sheep Property Traverse Routes and Sample Locations

Projection: UTM Zone 10 Datum: NAD83 Original Scale: 1:10,000

Contour Interval: 20 m Date: February 2013

5.2 Traverse Descriptions

Twenty-one rock samples were collected during the 2012 program. The rock samples were collected from four areas of the property.

Selected element values from the rock samples are shown in Table 4. Rock sample field descriptions and UTM coordinates are given in Appendix C.

Traverse 1

Seven samples were collected from near the summit of Big Sheep Mountain, shown in Figure 6, and south flank of the summit; this is part of the area covered by a soil sampling program in 1982 that returned significantly anomalous gold values. The summit area is underlain by Eocene volcaniclastic, and feldspar and rhyolite porphyritic rocks.



Figure 6: Traverse 1 - Big Sheep Mountain Summit (looking west)

The summit area is heavily covered in talus with outcrop occurring mainly along the ridgelines. The traverse starts at the pass on the claim boundary between the west and east claims, following the old road as it switchbacks up to near the summit. Samples were taken of a broad band of yellow-brown talus fines straddling the ridge near the summit as well as rock samples from outcrop in the same area. The route descended the south flank talus slope and contoured back to the starting point.

The highest gold value returned from rocks on this traverse is 160 ppb Au in sample E5632864 taken from outcrop near the summit. This sample also returned relatively high arsenic (1450 ppm As) and the highest tellurium value (27.1 ppm Te) of all the rocks collected during the program. This sample also contains relatively high silver and lead values as compared with the other samples. Refer to Table 4 for further element values.

Traverse 2

Six rock samples were collected on the ridge running east from Big Sheep Mountain, shown in Figure 7, that forms the divide between the Noaxe Creek and Lisa Creek watersheds, and is included in the Big Sheep East claim.



Figure 7: Traverse 2 - Divide East of Big Sheep Mountain (looking east)

The geology of this eastern side of the property is distinctly different from the west. The eastern side is underlain by Mississippian Bridge River metamorphic, Permian ultramafic and sedimentary rocks. The terrain is a broad gently sloping ridge that divides two large drainages. The ridge is a gravelly meadow with a large prominent outcrop, sedimentary in origin, and random smaller outcrops of sedimentary, metamorphic, and ultramafic rock. Contact between the various rock units is distinguished by different coloured gravel bands that straddle the ridge.

The rock samples collected from the east ridge area did not return significant precious metal values. Sample E5632872 returned a relatively high antimony value (92.6 ppm Sb), however is should be noted that this sample location is at the western part of the traverse at the foot of Big Sheep Mountain's eastern slope, so is more closely associated with that rock unit than the metamorphic and ultramafic rocks further east. Sample E5632869, the easternmost outcrop sampled, contained the second highest amount of copper (263 ppm Cu) of all the samples collected during the program.

Traverse 3

Three samples were collected from the basin immediately north of the summit of Big Sheep Mountain as shown in Figure 8. The basin is underlain on the south side by Eocene volcaniclastic, and feldspar and rhyolite porphyritic rocks. The south rim of the basin consists of Lower Cretaceous undivided sedimentary rocks. Contact between the volcanic and sedimentary units is visible high on the cirque walls but is obscured lower in the basin by the extensive and deep talus cover from the constantly eroding walls.



Figure 8: Traverse 3 - Big Sheep Mountain North Bowl (looking south)

In-place rock exists high up on the basin walls, but outcrop could not be found in the reasonably accessible lower basin due to the talus cover, so float grab samples were taken instead. Samples E5632881 and E5632882 collected in the north basin returned the highest gold values (650 ppb and 210 ppb Au respectively) of all the samples collected during the program. These samples also contained significant arsenic and lead values as shown in Table 4; E5632882 returned the highest antimony of all the samples (110 ppm Sb).

Traverse 4

Four rock samples were collected from outcrop at the toe of the ridge forming the east side of Big Sheep Mountain and the eastern perimeter of the north basin as shown in Figure 9. The rocks underlying this area are a mélange of sedimentary, metamorphic, and volcanic.



Figure 9: Traverse 4 - Toe of Northeast Ridge (looking east)

The highest gold value returned from the outcrop samples in this area is 10 ppb Au in E5632878, which also contained elevated antimony (79.6 ppm Sb)

and arsenic (94.8 ppm As). Sample E5632879 contains a lesser gold value, but shows elevated arsenic and antimony (75.8 ppm As and 103 ppm Sb respectively).

Traverse 5

A traverse was made in the northwest part of Big Sheep West along the northwest ridge of the mountain and adjacent north-sloping meadow as shown in Figure 10. The meadow consists of a thick moss and lichen layer over gravelly soil. The meadow is underlain by sedimentary rock with a few gravel patches exposed; no outcrop was found in the meadow area.



Figure 10: Traverse 5 - Portion of North Slope (looking NW)

The northwest ridge of Big Sheep Mountain is the approximate contact between the Eocene volcanic rocks associated with the summit area and the Lower Cretaceous sedimentary rocks underlying the meadow to the east. The ridge consists of broken and fractured in-place rock however no samples were collected on this traverse. The rocks were observed and noted along the ridge/contact area to be mainly barren unaltered greywacke. There are occasional outcrops along the flank of the ridge that consist mainly of unaltered feldspar porphyry with no visible mineralization. A small band of weakly argillic-altered feldspar porphyry intrudes through the sedimentary rock and gravel along the north rim of the basin (Traverse 3), but without visible mineralization.

5.3 Rock Sample Geochemistry

The rock samples were sealed in plastic bags, and transported in rice sacks. The samples remained in the author's possession at all times until transferred to AGAT Laboratories in Burnaby, BC for geochemical analysis. A 51 element ICP-MS analysis was performed on the rock samples.

Selected element values from the rock samples are shown in Table 4. Rock sample field descriptions and UTM coordinates are given in Appendix C.

The strongest gold values were returned from outcrop near the summit of Big Sheep Mountain (samples E5632863 and E5632864) and from float samples collected in the north basin (samples E5632881 and E5632882). From the location of the float samples, it is reasonable to assume that their origin is probably above on the steep north slope of the mountain that is eroding into the basin. The same four samples also returned the highest levels of arsenic, commonly considered to be a pathfinder element for gold. Tellurium is also present in the greatest amount in these four samples.

Note that the laboratory analysis has a Reported Detection Limit (RDL) of 0.1 ppm (10 ppb) for gold; therefore Au values shown as less than 10 ppm may in fact be as high as 9.9 ppb.

		-							
Sample Number	Ag (ppm)	As (ppm)	Au (ppb)	Cu (ppm)	Hg (ppm)	Pb (ppm)	Sb (ppm)	Te (ppm)	Zn (ppm)
E5632860	0.33	135	<10	91.8	<0.01	10.4	2.29	0.09	244
E5632861	0.3	28.7	10	15.7	0.02	7.7	1.85	0.13	19.5
E5632862	0.36	64.8	<10	9.4	<0.01	13.1	4.24	0.22	11.7
E5632863	2.76	2210	80	11.9	0.02	53	5.25	1.78	10.5
E5632864	7.48	1450	160	43.7	0.07	179	59.5	27.1	23
E5632865	0.07	7.4	<10	33.5	0.01	6.6	0.38	0.05	51.8
E5632866	0.86	17.7	<10	2.4	0.02	87.8	64	0.09	717
E5632867	0.07	39.3	<10	35.6	0.03	1.7	43.1	0.08	31.6
E5632868	<0.01	<0.1	<10	1.3	<0.01	0.4	0.1	0.06	25
E5632869	0.07	1.1	<10	263	0.05	0.7	0.17	0.05	68.5
E5632870	0.02	7.3	<10	24.8	0.16	4.2	1.01	0.09	13.6
E5632871	0.01	1.2	<10	42.7	0.18	1.1	0.12	0.02	9.5
E5632872	0.07	38.5	<10	16.8	0.27	3.4	92.6	<0.01	23.3
E5632873	0.05	0.2	<10	72.7	0.11	0.9	0.32	<0.01	45.8
E5632874	0.02	31.4	<10	7.5	0.18	0.6	16.4	0.04	18.9
E5632878	0.02	94.8	10	5.4	0.95	0.6	79.6	<0.01	17.5
E5632879	0.02	75.8	<10	6.5	0.82	0.4	103	0.01	18.2
E5632880	0.04	7.9	<10	40.5	0.68	2.1	0.87	0.02	36.7
E5632881	29.6	2060	650	186	0.08	1880	31.1	23.6	338
E5632882	30.2	1190	210	620	0.05	4620	110	9.96	447
E5632883	0.12	7.1	<10	13.8	<0.01	11.9	0.56	0.11	67.5

 Table 4
 Rock Sample Selected Element Values

Bold figures are the four highest values of the corresponding element.

The selected element values shown in Table 4 are plotted on the maps in Figure 11 through Figure 19 on the following pages.







Rock Geochemistry: Gold

Projection: UTM Zone 10 Datum: NAD83 Original Scale: 1:5,000

Contour Interval: 20 m Date: February 2013 *Note: Due to Au analysis reported detection limit of 0.01 ppm (10 ppb), zero values shown may actually be up to 9.9 ppb.



Original Scale: 1:5,000





Original Scale: 1:5,000







6.0 Conclusions and Recommendations

6.1 Conclusions

- 1. Rock samples collected from the summit of Big Sheep Mountain and the basin immediately to the north, returned the highest gold values. The same samples contained anomalous arsenic and tellurium, and elevated antimony, commonly considered to be pathfinders for gold.
- 2. Rock samples collected on a reconnaissance traverse of the ridge on the eastern part of the property (Big Sheep East) did not indicate evidence of precious metal mineralization. One sample however had the second highest copper value of all the samples collected during the program.
- 3. The results of this outcrop sampling program, combined with the results of previous programs appears to isolate the evidence of significant mineralization to the summit area of Big Sheep Mountain and immediately perimeter, particularly the north slopes.
- 4. Previous operators have identified extensive gold-in-soil anomalies on the summit area of Big Sheep Mountain that have not been explained.

6.2 Recommendations

Extensive gold-in-soil anomalies identified during previous programs exist in the vicinity of the summit of Big Sheep Mountain that has not yet been explained. Rock samples with anomalous gold values collected over the course of several programs by various operators occur in the same area and in the north basin.

Based on the 2012 field program and on work by previous operators, the following work is recommended:

- 1. Conduct detailed prospecting with a focus on the summit, adjoining ridges, north slopes, and north basin, in an effort to locate and sample all outcrop.
- 2. Prospecting and reconnaissance soil sampling on the unexplored lower elevations of Big Sheep Mountain, particularly the west and southwest areas.
- 3. Digitize and assemble the work of all previous programs with a geographic information system (GIS). Include ASTER remote sensing imagery to the compilation as most of the property is above tree line with minimal vegetation cover.
- 4. Carry out detailed geological mapping to confirm and update the work done prior to 1982. The road ascending to near the summit was constructed after the last mapping effort, which has exposed geological information that may provide a better understanding of the mineralizing event on the property.
- 5. Carry out a deep-penetration geophysics survey such as airborne ZTEM or ground-based Titan.

Depending on the results of the above recommendations, further work in a successive program could include systematic trenching and possibly several drill holes.

7.0 References

- Dawson, James M.: Geological and Geochemical Report on the Big Claims, DuPont Canada, 1982 (Assessment Report 10925)
- Gilchrist, T.: Geochemical Report for Big Sheep Property, 2008, Assessment Report 30486
- Gilchrist, T.: Examination of the Big Sheep Mountain Property, 2010, Assessment Report 32742
- Glover, J.K., Schiarizza, P. and Garver, J.I.: Geology of the Noaxe Creek Map Area (920/2), BCMEMPR Open File 1988-09
- Travis, Adam: Geological, Geochemical, and Prospecting Report Undertaken on the Big Sheep Property, Viceroy Resources, 2002, Assessment Report 27136

8.0 Computer Software

The following computer software was used to prepare this report:

- Microsoft Word
- Microsoft Excel
- CorelDraw
- Manifold System Professional GIS
- Adobe Acrobat Professional

Appendix A: Statement of Qualifications

I, Tom Gilchrist, of Squamish, British Columbia hereby certify that:

- 1. I have been prospecting for approximately 14 years.
- 2. I have completed the BCIT Exploration and Prospecting Methods course and the BCIT Prospecting and Exploration Field School, as well as various short courses, including Gold Vein Deposits, Interpretation of Airborne Geophysics, ASTER on the MapPlace, and others.
- 3. I prospect independently, and also work as a professional contract prospector for various exploration companies in the province of British Columbia and Yukon Territory.
- 4. This report is based on my own observations as well as previous assessment reports and government publications.
- 5. I hold 100% interest in the Big Sheep Property.

Signed in Squamish, British Columbia on February 26, 2013.

T. Dihahit

Tom Gilchrist

Signed
Appendix B: Expense Statement

Project period: September 13 through 21, 2012

	Unit	Unit Qty	Rate (\$)	Total
Services				
Prospecting and travel				
Tom Gilchrist	day	9	425.00	3,825.00
Deborah Rafuse	day	9	425.00	3,825.00
Equipment Costs				
Dodge 3500 4X4 truck	day	9	100.00	900.00
Camper	day	8	30.00	240.00
All terrain vehicle	day	7	90.00	630.00
Chainsaw	week	1	35.00	35.00
Communications	day	7	10.00	70.00
(Sat phone & 2 VHF radios)				
Expenses				
Truck fuel	total	1	137.00	137.00
ATV fuel	total	1	23.34	23.34
Camp costs, field conditions	person/day	14	25.00	350.00
Rock sample analysis	each	21	28.72	603.12
GIS and report preparation	day	3	300.00 _	900.00

TOTAL EXPENDITURES

\$ 11,538.46

Appendix C: Rock Sample Descriptions

Location coordinates: UTM Zone 10 NAD 83

Sample	Northing	Easting	Sample Type	Rock Type	Alteration	Mineralization	Remarks
E5632860	5653200	523845	Talus fines	Volcanic	Argillic	N/A	Talus fines from gravelly band straddling E ridge crest. Brown-yellow sandy gravel. Depth 20 cm.
E5632861	5653200	523845	Outcrop grab	Feldspar porphyry	Silica, limonite	Limonite	Gray-white, fine grained, felsic extrusive. Porphyritic texture. Spotty silica and limonite alteration.
E5632862	5653171	523936	Outcrop grab	Feldspar porphyry	Silica, limonite	Limonite	Gray-white, fine grained, felsic extrusive. Porphyritic texture. Pervasive silica and limonite alteration.
E5632863	5653148	523865	Outcrop grab	Rhyolite	Argillic	Mesolite, limonite	White fine grained felsic, pervasive vesicles filled with clear acicular crystals. Few vugs with mesolite and limonite.
E5632864	5653140	523903	Outcrop grab	Rhyolite	Argillic	Limonite	White-yellow, fine grained felsic rhyolite. Few qtz and limonite veinlets. Rusty fracture surfaces.
E5632865	5653336	524126	Outcrop grab	Limestone		Calcite	Dark gray limestone. Veins of crystalline calcite and other dark mineral.
E5632866	5653019	524400	Outcrop grab	Rhyolite	Argillic	Pyrolusite, limonite	White-yellow fine grained felsic flow-banded rhyolite. Disseminated pyrolusite, vugs with pyrolusite and limonite. Wad coating exterior surfaces.
E5632867	5652794	523981	Outcrop grab	Meta sedimentary			Dark gray sedimentary rock. Breccia texture, carbonate veinlets
E5632868	5653569	525076	Outcrop grab	Sedimentary		Calcite	White calcite
E5632869	5653581	525144	Outcrop grab	Ultramafic	Silica	None	Dark green, fine grained ultramafic rock. Silica alteration, quartz bleb and veinlets.
E5632870	5653706	524780	Outcrop grab	Chert			Gray siliceous strongly jointed chert, few small vugs with quartz crystals and black mineral coating.
E5632871	5653501	524524	Outcrop grab	Qtz vein			Gray-white quartz, breccia texture.
E5632872	5653395	524466	Outcrop grab	Volcanic	Silica	Fuchsite	Brown, strongly siliceous vuggy rock with pervasive green infilling.
E5632873	5653559	524959	Outcrop grab	Igneous mafic			Peridotite
E5632874	5653871	524195	Outcrop grab	Mafic	Silica	Limonite	Dark gray mafic rock, strong silica alteration, quartz veinlets, few drusy vugs with limonite.

Sample	Northing	Easting	Sample Type	Rock Type	Alteration	Mineralization	Remarks
E5632878	5653868	524337	Outcrop grab	Volcanic	Silica	Tetrahedrite	Gray, brown weathered surfaces, fine grained volcanic rock. Silica alteration, quartz veinlets. Veinlets and vugs with masses of tetrahedrite and quartz crystals, possibly also barite. Heavy.
E5632879	5653868	524337	Outcrop grab	Volcanic	Silica	Pyrolusite	Brown weathered fine grained volcanic rock. Silica alteration. Quartz veinlets with black massive mineral.
E5632880	5653853	524191	Outcrop grab	Volcanic	Argillic	Pyrolusite	Brown fine grained volcanic. Quartz veins with pyrolusite.
E5632881	5653679	523520	Float grab	Volcanic	Limonite, goethite	Sphalerite	Brown, cooked, volcanic rock. Vuggy with quartz infilling and massive black sphalerite.
E5632882	5653667	523511	Float grab	Rhyolite	Argillic, limonite	Limonite, goethite	White-yellow rusty rhyolite. Limonite/goethite alteration. Vugs with quartz crystal filling.
E5632883	5653641	523645	Float grab	Rhyolite	Argillic	Pyrite	White rhyolite. Rusty exterior. Finely disseminated pyrite.

Appendix D: Analytical Methods and Assay Certificates

Analytical Methods

Samples are dried as required, then prepared by particle size reduction to produce a homogeneous sub-sample which is representative of the original sample. The sample undergoes digestion (dissolution and decomposition), then a multi-element analysis technique.

Process Description

The rock samples were prepared and analyzed as described in the following steps:

- 1. Dry and crush sample to 75% passing 2 mm.
- 2. Split 250 gram portion and pulverize to 85% passing 75 μ m.
- 3. Digest a 15 gram sample split in 95 °C Aqua Regia solution
- 4. Conduct a 51 element ICP/ICPMS analysis

Assay Certificates

Rock sample assay certificates are presented on the following pages.



CLIENT NAME: MISC AGAT CLIENT BC, BC (403) ATTENTION TO: Tom Gilchrist PROJECT NO: AGAT WORK ORDER: 12V646443 SOLID ANALYSIS REVIEWED BY: Yufei Chen, Analyst DATE REPORTED: Oct 22, 2012 PAGES (INCLUDING COVER): 10

Should you require any information regarding this analysis please contact your client services representative at (905) 501-9998

*NOTES

All samples are stored at no charge for 90 days. Please contact the lab if you require additional sample storage time.



AGAT WORK ORDER: 12V646443 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-9589 http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC

NO.	
	ATTENTION TO: Tom Gilchrist

DATE SAMPLED: Se	p 27, 2012		DATE RECEIVED: Sep 26, 2012					DATE REPORTED: Oct 22, 2012				SAMPLE TYPE: Rock			
	Analyte:	Sample Login Weight	Ag	AI	As	Au	В	Ва	Be	Bi	Са	Cd	Ce	Co	С
	Unit:	kg	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppn
Sample Description	RDL:	0.01	0.01	0.01	0.1	0.01	5	1	0.05	0.01	0.01	0.01	0.01	0.1	0.
E5632860		1.45	0.33	2.90	135	< 0.01	<5	79	0.26	1.20	0.04	0.79	20.9	1.6	12.
E5632861		0.92	0.30	0.58	28.7	0.01	<5	113	0.23	1.69	0.01	0.12	27.6	0.2	19.
E5632862		1.17	0.36	0.40	64.8	<0.01	<5	71	0.09	1.04	<0.01	0.06	32.0	0.1	10.
E5632863		1.35	2,76	0.36	2210	0.08	8	103	0.05	3.10	<0.01	0.33	17.6	0.2	25,
E5632864		1,19	7.48	0.30	1450	0.16	5	81	0.08	15.6	<0.01	1,58	11,3	0.3	20.
E5632865		1.03	0.07	2.98	7.4	< 0.01	<5	33	0.20	0.05	8.93	0.09	25.2	32.2	27
E5632866		1.11	0.86	0.39	17.7	< 0.01	<5	330	0.33	0.07	0.10	6.72	38.5	1.6	6.
E5632867		1.44	0.07	0.99	39.3	< 0.01	<5	232	0.17	0.13	7.57	0.09	11,8	10.1	92.
E5632868		0.76	<0.01	0.03	<0.1	< 0.01	<5	19	< 0.05	<0.01	>25	1.46	1.10	0.6	1.
E5632869		1.19	0.07	4.60	1.1	<0.01	11	794	0.76	0.01	6.59	0.09	6.71	23.1	4.
E5632870		1.40	0.02	0.18	7.3	< 0.01	<5	29	0.12	0.09	0.09	0.05	5.26	6.3	12
E5632871		1.04	0.01	0.16	1.2	< 0.01	<5	54	0.06	0.01	0.20	0.02	1.54	1.8	51.
E5632872		1.85	0.07	0.05	38.5	< 0.01	11	10	<0.05	< 0.01	2.05	0.07	0.05	77.1	34
E5632873		1.96	0.05	2.43	0.2	< 0.01	<5	7	0.73	< 0.01	1.63	0.10	4.15	20.7	27.
E5632874		1.30	0.02	0.04	31,4	< 0.01	<5	15	0.06	< 0.01	11.3	0.04	1.23	42.5	22
E5632878		1.91	0.02	0.04	94.8	0.01	18	28	0.15	< 0.01	3.35	0.01	0.09	56.4	23
E5632879		1.22	0.02	0.03	75.8	<0.01	10	22	< 0.05	<0.01	6.55	0.03	0.19	44.1	20
E5632880		1.99	0.04	0.17	7.9	<0.01	6	46	0.12	0.07	6.26	0.06	3.74	35.9	12
E5632881		0.56	29.6	0.38	2060	0.65	<5	75	0.11	24.8	0.11	12.0	13.6	7.4	47.
E5632882		1.51	30.2	0.88	1190	0.21	<5	108	0.09	12.5	0.06	1.69	50.2	2.5	19.
E5632883		1.21	0.12	0.97	7.1	< 0.01	<5	112	0.21	0.23	0.84	0.29	32.0	3.0	17.

Certified By:

y. che.



AGAT WORK ORDER: 12V646443 PROJECT NO: 5623 MCADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC

ATTENTION TO: Tom Gilchrist

DATE SAMPLED: Se	p 27, 2012		1	DATE RECE	EIVED: Sep	26, 2012		DATE	REPORTED	D: Oct 22, 20)12	SAMPLE TYPE: Rock			
	Analyte:	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	К	La	Li	Mg	Mn	M
	Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppn
Sample Description	RDL:	0.05	0.1	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.1	0.1	0.01	1	0.0
E5632860		2.36	91.8	4.33	10.9	1.96	<0.02	<0.01	0.222	0.08	9.2	11.3	0.77	409	2.0
E5632861		1.42	15.7	2,32	2.03	2.49	<0.02	0.02	0.212	0.32	14.0	2.1	0.04	64	5.6
E5632862		0.93	9.4	0.61	1.04	3.12	<0.02	<0.01	0.110	0.23	15.4	0.4	0.02	14	2.0
E5632863		0.22	11.9	0.73	1.24	1.79	<0.02	0.02	0.850	0.32	8.3	0.7	0.03	18	2.7
E5632864		0.73	43.7	2.57	1.44	1.24	<0.02	0.07	0.878	0.20	5.4	0.4	0.01	20	8,1
E5632865		0.23	33.5	4,15	12.9	1.47	0.03	0.01	0.053	<0.01	11.5	62.5	3.89	3590	1.2
E5632866		0.76	2.4	0.95	1,10	3.37	0.04	0.02	0.015	0.19	19.4	0.5	0.03	3880	4.4
E5632867		1.03	35.6	3.28	3.32	0.89	0.02	0.03	0.125	0.11	5.7	18.7	2.79	1080	1.5
E5632868		< 0.05	1.3	0.03	0.18	0.69	<0.02	< 0.01	< 0.005	< 0.01	6.5	0.2	0.08	25	0.24
E5632869		1.01	263	5.16	13.4	1.14	0.29	0.05	0.016	0.01	2.5	37.2	1.03	485	0.5
E5632870		0.08	24.8	0.73	1.57	0.70	0.11	0.16	0.016	0.03	2.5	0.8	0.10	184	15.
E5632871		0.52	42.7	0.76	1.03	0.35	<0.02	0.18	<0.005	0.02	1.5	1.1	0.08	276	3.7
E5632872		0.53	16.8	3.84	0.44	0.61	<0.02	0.27	0.006	0.02	<0.1	1.6	15.0	691	0.5
E5632873		<0.05	72.7	3.61	11.1	0.89	0.26	0.11	0.015	0.02	1.4	3.8	1.46	493	0.30
E5632874		0.13	7.5	1.72	0.39	0.33	<0.02	0.18	<0.005	< 0.01	0.7	0.3	7.05	728	0.69
E5632878		0.38	5.4	2.67	0.40	0.49	<0.02	0.95	<0.005	< 0.01	<0.1	4.6	11.4	609	0.74
E5632879		0.21	6.5	2.33	0.40	0.47	< 0.02	0.82	< 0.005	< 0.01	0.1	1.5	11.4	1200	0.68
E5632880		0.37	40.5	3.16	0.69	0.56	<0.02	0.68	0.029	0.03	1.9	2.0	11.5	1360	2.5
E5632881		0.16	186	1.48	1.39	1.46	<0.02	0.08	0.137	0.21	6.0	1.1	0.14	3090	5.6
E5632882		0.45	620	5.51	5.58	<0.05	<0.02	0.05	0.813	0.32	24.2	4.3	0.20	430	1.97
E5632883		0.35	13.8	1.89	5.42	< 0.05	0.02	< 0.01	0.024	0.20	15.9	9.3	0.41	331	1.09

Aqua Regia Digest - Metals Package, ICP/ICP-MS finish (201074)

Certified By:

J. che.



AGAT WORK ORDER: 12V646443 PROJECT NO: 5623 MCADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC

ATTENTION TO: Tom Gilchrist

			Aqua	Regia D	igest - N	letals Pa	ckage,	ICP/ICP-	MS finish	n (201074	4)					
DATE SAMPLED: Se	ep 27, 2012			DATE RECI	EIVED: Sep	26, 2012		DATE REPORTED: Oct 22, 2012					SAMPLE TYPE: Rock			
	Analyte:	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	
	Unit:	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	
Sample Description	RDL:	0.01	0.05	0.2	10	0.1	0.1	0.001	0.005	0.05	0.1	0.2	0.2	0.2	0.01	
E5632860		0.05	<0.05	<0.2	585	10.4	4.0	<0.001	0.120	2.29	6.7	1.8	0.5	69.5	<0.01	
E5632861		0.01	0.05	<0.2	359	7.7	7.9	<0.001	0.076	1.85	0.5	3.2	0.7	25.1	<0.01	
E5632862		0.01	0.06	<0.2	65	13.1	4.7	<0.001	0.012	4.24	0.3	0.2	1.5	2.7	< 0.01	
E5632863		0.01	0.09	0.3	91	53.0	6.2	<0.001	0.188	5.25	0.3	0.8	2.6	3.3	<0.01	
E5632864		< 0.01	0.08	<0.2	290	179	4.4	0.004	0.065	59.5	0.3	3.3	1.9	4.7	< 0.01	
E5632865		0.01	< 0.05	164	571	6.6	0.3	< 0.001	0.105	0.38	17.1	1.1	0.3	229	<0.01	
E5632866		0.02	0.07	1.8	306	87.8	4.8	<0.001	< 0.005	64.0	0.5	0.3	<0.2	16.3	<0.01	
E5632867		0.01	<0.05	78.9	309	1.7	4.6	< 0.001	0.084	43.1	7.3	0.8	1.1	360	< 0.01	
E5632868		0.06	< 0.05	1.9	806	0.4	<0.1	< 0.001	0.380	0.10	0.6	2.7	<0.2	1290	< 0.01	
E5632869		0.12	0.12	10.7	568	0.7	1.6	0.002	0.067	0.17	4.1	1.1	0.2	926	< 0.01	
E5632870		< 0.01	0.35	20.5	101	4.2	1.7	0.001	0.023	1.01	1.8	<0.2	0.3	6.2	<0.01	
E5632871		< 0.01	0.09	8.7	78	1.1	1.1	< 0.001	0.006	0.12	0.7	<0.2	<0.2	10.4	<0.01	
E5632872		< 0.01	< 0.05	1310	71	3.4	1.2	< 0.001	0.036	92.6	9.6	0.3	<0.2	49.4	<0.01	
E5632873		0.08	0.05	32.0	475	0.9	0.6	< 0.001	0.017	0.32	4.7	0.6	0.2	12.3	< 0.01	
E5632874		< 0.01	<0.05	706	183	0.6	0.5	< 0.001	0.127	16.4	7.1	0.9	<0.2	796	< 0.01	
E5632878		0.01	< 0.05	923	120	0.6	0.5	< 0.001	0.052	79.6	4.6	0.3	<0.2	118	< 0.01	
E5632879		< 0.01	< 0.05	771	99	0.4	0.5	< 0.001	0.075	103	4.7	0.6	<0.2	181	< 0.01	
E5632880		< 0.01	<0.05	591	164	2.1	1.7	< 0.001	0.127	0.87	5.9	0.6	<0.2	279	< 0.01	
E5632881		0.01	<0.05	17.3	187	1880	3.5	0.002	0.044	31.1	0.8	0.6	2.4	10.1	<0.01	
E5632882		0.02	0.06	5.9	241	4620	6.3	<0.001	0.131	110	1.2	2.1	8.3	24.4	<0.01	
E5632883		0.05	<0.05	2.2	662	11.9	5.2	<0.001	0.172	0.56	2.1	0.3	<0.2	37.8	<0.01	

Certified By:

J. che.



AGAT WORK ORDER: 12V646443 PROJECT NO: 5623 MCADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

CLIENT NAME: MISC AGAT CLIENT BC

ATTENTION TO: Tom Gilchrist

ATE SAMPLED: Se	p 27, 2012		DATE RECEIVED: Sep 26, 2012					DATE F	REPORTED	: Oct 22, 20	12	SAMPLE TYPE: Rock
	Analyte:	Te	Th	Ti	Tİ	U	V	W	Y	Zn	Zr	
	Unit:	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
ample Description	RDL:	0.01	0.1	0.005	0.01	0.05	0.5	0.05	0.05	0.5	0.5	
5632860		0.09	0.3	<0.005	0.06	0.07	80.4	<0.05	7.48	244	<0.5	
5632861		0.13	1.1	<0.005	0.15	0.12	4.6	<0.05	2.69	19.5	<0.5	
5632862		0.22	0.9	< 0.005	0.08	0.06	1.6	<0.05	1.81	11.7	<0.5	
5632863		1.78	0.6	<0.005	0.10	0.06	1,1	0.06	1.33	10.5	0.7	
5632864		27.1	1.5	<0.005	0.07	0.12	4.1	<0.05	1.19	23.0	<0.5	
5632865		0.05	0.3	0.010	<0.01	<0.05	143	<0.05	16.6	51.8	0.7	
5632866		0,09	0.9	<0.005	0.09	0.15	0.8	< 0.05	9.12	717	1.4	
5632867		0.08	0.5	<0.005	0.04	0.11	37.5	< 0.05	10.2	31.6	<0.5	
5632868		0.06	0.1	<0.005	< 0.01	0.21	2.4	0.11	19.1	25.0	0.5	
5632869		0.05	0.2	0.511	< 0.01	0.14	249	<0.05	16.3	68.5	11.5	
5632870		0.09	0,4	0.027	0.19	14.5	11.7	0.12	1.86	13.6	4.2	
5632871		0.02	<0.1	0.006	0.01	<0.05	13.8	<0.05	1.13	9.5	0.6	
5632872		< 0.01	<0.1	<0.005	0.07	< 0.05	31.3	0.63	0.29	23.3	<0.5	
5632873		<0.01	<0.1	0.279	< 0.01	<0.05	133	<0.05	9.34	45.8	9.6	
5632874		0.04	<0.1	<0.005	0.01	<0.05	25.6	0.27	1.14	18.9	<0.5	
5632878		< 0.01	<0.1	<0.005	0.07	<0.05	21.8	0.31	0.32	17.5	<0.5	
5632879		0.01	<0.1	<0.005	0.06	<0.05	21.3	0.57	0.34	18.2	<0.5	
5632880		0.02	0,1	<0.005	0.05	<0.05	29.4	0.08	3.65	36.7	<0.5	
5632881		23.6	0.9	<0.005	0.04	0.18	4.8	0.15	7.24	338	<0.5	
5632882		9.96	1.0	<0.005	0.07	0.24	11.5	0.13	5.54	447	<0.5	
5632883		0.11	1.5	< 0.005	0.06	0.22	18,5	<0.05	11.5	67.5	0,6	

Comments: RDL - Reported Detection Limit

Certified By:

M. che.



Quality Assurance

CLIENT NAME: MISC AGAT CLIENT BC

PROJECT NO:

AGAT WORK ORDER: 12V646443

ATTENTION TO: Tom Gilchrist

So	lid	Ana	lysis
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RPT Date: Oct 22, 2012			REPLIC	CATE				REFER	RENCE MATE	RIAL	
						Method Blank	Result	Expect		Accepta	ble Limits
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD		Value	Value	Recovery	Lower	Upper
Aqua Regia Digest - Metals Package	ICP/ICP-MS	finish (2010)	74)								
Ag	1	3752134	0.12	0.26		< 0.01	11.7	13.0	90%	80%	120%
AI	1	3752114	2.90	2.94	1.4%	< 0.01				80%	120%
As	1	3752134	7.13	7.31	2.5%	< 0.1				80%	120%
Au	1	3752134	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
3	1	3752134	< 5	< 5	0.0%	< 5	5.66	7.00	81%	80%	120%
3a	1	3752114	79	83	4.9%	< 1				80%	120%
3e	1	3752134	0.21	0.22	4.7%	< 0.05				80%	120%
3i	1	3752134	0.229	0.296	25.5%	< 0.01				80%	120%
Ca	1	3752114	0.04	0.04	0.0%	< 0.01				80%	120%
Cd	1	3752134	0.287	0.282	1.8%	< 0.01				80%	120%
Ce	1	3752134	32.0	30.7	4.1%	< 0.01				80%	120%
Co	1	3752134	3.0	3.0	0.0%	< 0.1				80%	120%
Dr	1	3752114	12.6	13.2	4.7%	< 0.5				80%	120%
Cs	1	3752134	0.35	0.35	0.0%	< 0.05				80%	120%
Cu	1	3752114	91.8	96.1	4.6%	< 0.1	6585	6000	109%	80%	120%
e	1	3752114	4.33	4.45	2.7%	< 0.01				80%	120%
Ga	1	3752134	5.42	5.21	4.0%	< 0.05				80%	120%
Ge	1	3752134	< 0.05	< 0.05	0.0%	< 0.05				80%	120%
lf	1	3752134	0.02	0.02	0.0%	< 0.02				80%	120%
Hg	1	3752134	< 0.01	0.01		< 0.01				80%	120%
'n	1	3752134	0.024	0.025	4.1%	< 0.005				80%	120%
<	1	3752114	0.085	0.089	4.6%	< 0.01				80%	120%
_a	1	3752134	15.9	15.5	2.5%	< 0.1				80%	120%
_i	1	3752134	9.34	9.41	0.7%	< 0.1				80%	120%
Mg	1	3752114	0.77	0.78	1.3%	< 0.01				80%	120%
Mn	1	3752114	409	424	3.6%	< 1				80%	120%
	1										
Mo		3752134	1.09	1.14	4.5%	< 0.05				80%	120%
Na	1	3752114	0.05	0.05	0.0%	< 0.01				80%	120%
Nb Ni	1 1	3752134 3752114	0.05 < 0.2	0.05 < 0.2	0.0% 0.0%	< 0.05 < 0.2				80% 80%	120% 120%
	1	3752114	585	584	0.2%	10				80%	120%
Pb	1	3752134	11.9	12.5	4.9%	0.1		10		80%	120%
Rb	1	3752134	5.2	5.2	0.0%	< 0.1	15	13	117%	80%	120%
Re	1	3752134	< 0.001	< 0.001	0.0%	< 0.001				80%	120%
S	1	3752114	0.120	0.122	1.7%	< 0.005				80%	120%
Sb	1	3752134	0.561	0.699	21.9%	< 0.05				80%	120%
Sc	1	3752134	2.06	2.00	3.0%	< 0.1				80%	120%
Se	1	3752134	0.34	0.37	8.5%	< 0.2				80%	120%
Sn	1	3752134	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Sr	1	3752134	37.8	37.6	0.5%	< 0.2				80%	120%
Та	1	3752134	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
Те	1	3752134	0.109	0.147	29.7%	< 0.01				80%	120%
Th	1	3752134	1.47	1.41	4.2%	< 0.1	1.1	1.4	80%	80%	120%
Ti	1	3752114	< 0.005	< 0.005	0.0%	< 0.005				80%	120%

AGAT QUALITY ASSURANCE REPORT (V1)

Results relate only to the items tested and to all the items tested

Page 6 of 10



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5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

Quality Assurance

CLIENT NAME: MISC AGAT CLIENT BC

PROJECT NO:

AGAT WORK ORDER: 12V646443

ATTENTION TO: Tom Gilchrist

1

		20110	Anal	ysis (C	onti	nuea)					
RPT Date: Oct 22, 2012			REPLIC	CATE				REFER	RENCE MATE	RIAL	
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result	Expect	Recovery	Acceptal	ble Limits
PANAMETEN	Daten	Sample id	Originar	Nep#1	ICF D		Value	Value	Recovery	Lower	Upper
TI	1	3752134	0.06	0.06	0.0%	< 0.01				80%	120%
U	1	3752134	0.219	0.214	2.3%	< 0.05				80%	120%
V	1	3752114	80.4	84.0	4.4%	< 0.5				80%	120%
W	1	3752134	< 0.05	< 0.05	0.0%	< 0.05				80%	120%
Y	1	3752134	11.5	11.3	1.8%	< 0.05				80%	120%
Zn	1	3752114	244	252	3.2%	0.5				80%	120%
Zr	1	3752134	0.6	0.6	0.0%	< 0.5				80%	120%
Aqua Regia Digest - Metals Packaç	ge, ICP/ICP-MS	finish (2010)	74)								
Ag	1	3752134	0.125	0.106	16.5%	< 0.01	10.9	13.0	83%	80%	120%
AI	1	3752134	0.97	0.96	1.0%	< 0.01				80%	120%
As	1	3752134	2.37	2.55	7.3%	< 0.1				80%	120%
B	1	3752134	< 5	< 5	0.0%	< 5				80%	120%
Ba	1	3752134	112	113	0.9%	< 1				80%	120%
Be	1	3752134	0.25	0.25	0.0%	< 0.05				80%	120%
Bi	1	3752134	3.29	< 0.01		< 0.01				80%	120%
Ca	1	3752134	0.84	0.83	1.2%	< 0.01				80%	120%
Cd	1	3752134	0.70	1.02		< 0.01				80%	120%
Ce	1	3752134	21.2	20.9	1.4%	< 0.01				80%	120%
Со	1	3752134	3.0	3.0	0.0%	< 0.1				80%	120%
Cr	1	3752134	17.8	19.1	7.0%	< 0.5				80%	120%
Cu	1	3752134	13.8	18.2	27.5%	< 0.1	5948	6000	99%	80%	120%
Fe	1	3752134	1.89	1.88	0.5%	< 0.01				80%	120%
Ga	1	3752134	4.91	5.00	1.8%	< 0.05				80%	120%
Hg	1	3752134	< 0.01	< 0.01	0.0%	< 0.01				80%	120%
In	1	3752134	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
ĸ	1	3752134	0.20	0.20	0.0%	< 0.01				80%	120%
La	1	3752134	10.0	10.0	0.0%	< 0.1				80%	120%
Li	1	3752134	9.6	9.5	1.0%	< 0.1				80%	120%
Mg	1	3752134	0.41	0.41	0.0%	< 0.01				80%	120%
Mn	1	3752134	331	330	0.3%	< 1				80%	120%
Мо	1	3752134	5.68	5.77	1.6%	< 0.05	336	360	93%	80%	120%
Na	1	3752134	0.05	0.05	0.0%	< 0.01				80%	120%
Ni	1	3752134	2.2	3.0		< 0.2				80%	120%
P	1	3752134	662	678	2.4%	< 10				80%	120%
Pb	1	3752134	21.6	36.0		< 0.1				80%	120%
Rb	1	3752134	10.9	10.7	1.9%	< 0.1	14	13	107%	80%	120%
S	1	3752134	0.172	0.182	5.6%	< 0.005				80%	120%
Sb	1	3752134	46.8	39.3	17.4%	< 0.05				80%	120%
Sc	1	3752134	1.5	1.5	0.0%	< 0.1				80%	120%
Se	1	3752134	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Sn	1	3752134	< 0.2	< 0.2	0.0%	< 0.2				80%	120%
Sr	1	3752134	30.0	30.2	0.7%	< 0.2				80%	120%
Та	1	3752134	< 0.01	< 0.01	0.0%	< 0.01				80%	120%

Results relate only to the items tested and to all the items tested



Quality Assurance

CLIENT NAME: MISC AGAT CLIENT BC PROJECT NO: AGAT WORK ORDER: 12V646443

ATTENTION TO: Tom Gilchrist

Solid Analysis (Continued)

RPT Date: Oct	22, 2012			REPLIC	CATE			REFERENCE MATERIAL						
D	ARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result	Expect	Recovery	Accepta	ble Limits		
E.	ARAMETER	Datch	Sample Iu	Original	Kep#1	RFU		Value	Value	Recovery	Lower	Upper		
Те		1	3752134	8.56	8.72	1.9%	< 0.01				80%	120%		
Th		1	3752134	< 0.1	< 0.1	0.0%	< 0.1				80%	120%		
Ti		1	3752134	< 0.005	< 0.005	0.0%	< 0.005				80%	120%		
ТІ		1	3752134	89.4	99.8	11.0%	< 0.01				80%	120%		
U		1	3752134	1.03	0.75		< 0.05				80%	120%		
v		1	3752134	18.5	18.4	0.5%	< 0.5				80%	120%		
W		1	3752134	1.44	1.63	12.4%	< 0.05				80%	120%		
Y		1	3752134	8.96	8.79	1.9%	< 0.05				80%	120%		
Zn		1	3752134	67.5	80	16.9%	< 0.5				80%	120%		
Zr		1	3752134	0.6	0.5	18.2%	< 0.5				80%	120%		

AGAT QUALITY ASSURANCE REPORT (V1)

Certified By:

Page 8 of 10

J. chen.



Method Summary

CLIENT NAME: MISC AGAT CLIENT BC		AGAT WORK ORDER: 12V646443	
PROJECT NO:		ATTENTION TO: Tom Gilchrist	
AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE	
MIN-12009		BALANCE	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP/OES	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP/OES	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
		ICP/OES	
		ICP-MS	
		ICP-MS	
		ICP-MS	
		ICP/OES	
		ICP-MS	
		ICP-MS	
		ICP/OES	
		ICP-MS	
		ICP-MS	
		ICP-MS	
		ICP-MS	
		ICP-MS	
		ICP/OES	
		ICP-MS	
		ICP-MS	
		ICP/OES	
		ICP/OES	
		ICP-MS	
		ICP/OES	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP/OES	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP-MS	
MIN-200-12017		ICP/OES	
MIN-200-12017		ICP-MS	
		ICP-MS	
		ICP-MS	
		ICP/OES	
		ICP-MS	
		ICP-MS	
	-	ICP/OES	
		ICP-MS	
	AGAT S.O.P MIN-12009 MIN-200-12017 MIN-200-12017	AGAT S.O.P LITERATURE REFERENCE MIN-12009 MIN-200-12017 MIN-200-12017 MIN-200-12017 <t< td=""></t<>	



Method Summary

CLIENT NAME: MISC AGAT CLIENT BC PROJECT NO:		AGAT WORK ORDER: 12V646443 ATTENTION TO: Tom Gilchrist	
Y	MIN-200-12017	ICP-MS	
Zn	MIN-200-12017	ICP-MS	
Zr	MIN-200-12017	ICP-MS	