BRITISH COLUMBIA The Best Place on Earth			Sum correst
Ministry of Energy and Mines BC Geological Survey			Assessment Report Title Page and Summary
TYPE OF REPORT [type of survey(s)]: Geological Study, Metallurgica	l Study	TOTAL COST:	83,487
AUTHOR(S): B. Mossman	SIGNATURE(S):	Ban Mrs	withen
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A			YEAR OF WORK: 2012
STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5411842 Oct 22 2012	5402433 Aug 30th 2	2012, 54054	43 Sept 17,2012
PROPERTY NAME: Red Mountain			
CLAIM NAME(S) (on which the work was done): 513001, 513005, 513	)14		
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: 103P 086, 103 MINING DIVISION: Skeena LATITUDE: 55 ° 56 '29 " LONGITUDE: 129 OWNER(S): 1) Seabridge Gold Inc.	NTS/BCGS: <u>103P13 /</u>	103P.092 (at centre of worl	\$)
MAILING ADDRESS: 106 Front St.			
Toronto, Ontario 5MA 1E1			
OPERATOR(S) [who paid for the work]: 1) Banks Island Gold Ltd.	2)		
MAILING ADDRESS: 300-1055 W. Hastings St			
Vancouver, BC V6E 2E9			
PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure	alteration, mineralization, siz	e and attitude):	
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT F	EPORT NUMBERS:		

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	(IN METRIC UNITS)		APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			· · ·
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres) Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiomatric			
Selamic			
Other			-
Airborne			
GEOCHEMICAL number of samples analysed for)			
Soll		_	
8lit		_	
Rock <u>91</u>		513001, 513005, 513014	65710
Other			
RILLING total metres; number of hotes, size)			
Core			
Non-core	·		
RELATED TECHNICAL			
Sampling/assaying			
Petrographic Petrographic Stu	dy - Lost Mountain	513005, 513014	1600
Mineralographic			
Metallurgic HLS study on Mar	c Zone	513001	
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/tr	ei)		
Trench (metres)		[ [	
Underground dev. (metres)			
Other			
		TOTAL COST:	83487

## EXPLORATION OF THE LOST VALLEY SHOWING ON THE RED MOUNTAIN GOLD PROPERTY

*Located near Stewart, BC* 55°56'29"N, 129°59'17"W

NTS 103P/13

BCGS 103P.092

Skeena Mining Division

Mineral Tenures: 513001, 513005, 513014

BC Geological Survey Assessment Report 33873

Assessment work includes: Exploration Work on the Lost Valley showing and Metallurgical Testing at the Marc Zone

Operator: Banks Island Gold Ltd.

Owner: Seabride Gold Inc.

Prepared by: Benjamin Mossman, P.Eng

**Report Submitted: November 21, 2012** 



## DATE AND SIGNATURE

The undersigned prepared the foregoing Technical Report entitled *Exploration of the Lost Valley Showing on the Red Mountain Gold Property*. The effective date of this Report is November 21, 2012.

Signed:

"Signed and Sealed"

Benjamin Mossman, P.Eng. Banks Island Gold Ltd. November 21<sup>th</sup>, 2012



## **CERTIFICATE OF AUTHOR**

I, Benjamin W. Mossman, P.Eng., do hereby certify that:

- I am currently employed as President of: Banks Island Gold Ltd.
   Suite 300 – 1055 W Hastings St.
   Vancouver, BC
- 2. This certificate applies to the Assessment Report entitled *"Exploration of the Lost Valley Showing on the Red Mountain Gold Property"* dated November 21<sup>th</sup> 2012.
- 3. I am a graduate of the University of British Columbia (2001) with a B.A.Sc. degree in Mining and Mineral Process Engineering. I have practiced in my profession continuously for 11 years since my graduation.
- 4. I am a Professional Engineer registered with the Association of Professional Engineers and Geoscientists of the Province of British Columbia (#31171).
- 5. I consent to the filing of this Assessment Report and publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of this Assessment Report.

Dated this 21<sup>st</sup> day of November 2012.

"Signed and sealed"

Benjamin Mossman, P.Eng. Banks Island Gold Ltd.



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## 1.0 INTRODUCTION

Banks Island Gold did a limited field program on the Red Mountain Gold Property during the fall of 2012. Three field visits were undertaken.

On August 24<sup>th</sup> 2012, Ben Mossman, P.Eng, Dirk Meckert P.Geo, and Robert Baldwin P.Eng undertook a field visit to Red Mountain using an ASTAR helicopter chartered out of Smithers, BC. During this trip a metallurgical sample was taken from the ore stockpile derived from the Marc Zone. A reconnaissance was done over areas where the glacial ice had been present during previous exploration from 1989-1996. An area at MacAdam Point was noted as a high potential area for follow-up work.

On September 8<sup>th</sup> and 9<sup>th</sup> a second field trip was undertaken by Rob Baldwin and Dirk Meckert. Initial prospecting was done at the MacAdam Point showing and the surrounding areas. Prospecting work identified the MacAdam Point as a high priority target for more detailed exploration.

From October 1<sup>st</sup> to Oct 4<sup>th</sup> a field crew consisting of Rob Baldwin, Dirk Meckert, and Caddaric Meckert performed a detailed survey of the MacAdam stock. The field crew was based in Stewart, BC and used an ASTAR helicopter chartered from Smithers, BC.

#### 1.1 LOST VALLEY SHOWING

Banks Island Gold Ltd. discovered a new area of gold, silver, molybdenum, and copper mineralization located approximately 3km south of the Red Mountain mineralized zones. Company geologists discovered this new mineralization in a recently uncovered glacial valley located between MacAdam Point and Lost Mountain. The Red Mountain Gold Property is located 15km east of Stewart, British Columbia.

In 1965, previous operators discovered gold/molybdenum mineralization in an area named MacAdam Point where a small area of a Quartz-Monzonite intrusive stock protruded at the northern edge of Bromley Glacier. A sample taken on the contact zone assayed 8.6gpt gold and 0.23% molybdenum over 8.5m.

During Banks Island's exploration activities in September 2012, Company geologists observed that the eastern arm of the Bromley Glacier at Lost Mountain had receded to the edge of the Cambria Icefield, exposing the entire valley. A follow-up exploration program was conducted in early October of 2012 to prospect the area.

Two recent field trips were focused on mapping and sampling the MacAdam Intrusive. Preliminary surveying indicate a surface exposure with dimensions of approximately 1000m x 600m. Chip samples were collected while mapping the



contact, as the outer 10m of the Quartz Monzonite and the surrounding Hornfels aureola show a marked increase in vein intensity. Veins consist of coarse quartz containing variable amounts of pyrite, sphalerite, chalcopyrite and molybdenite. Veins up to 0.5m in thickness were encountered and locally veins are spaced in 0.2m intervals.

Company geologists were able to access the contact zone between the MacAdam Intrusive and the Hornfels at the eastern side of the newly uncovered glacial valley. A mineralized shear zone along the contact was prospected over a strike length of 120m. One sample across the shear zone assayed 6.2gpt Au, 22gpt Ag and 0.40% Mo over 5.0m. A second sample assayed 0.1gpt Au, 12gpt Ag, 0.45% Mo and 0.1% Cu over 3.0m. This newly discovered mineral showing, named "Lost Valley", is located approximately 880m along the contact from the historic MacAdam Point showing.

The contact zone was not accessible between the Lost Valley and MacAdam Point showings due to steep and unstable terrain. However, numerous boulders with well mineralized quartz veins were observed in a recent rockfall of substantial size between the showings. Highlights from the sampling in this area include a sample which assayed 71gpt Au, 197gpt Ag, and 1.1%Cu and a sample which assayed 35gpt Au, 102gpt Ag, and 0.2%Cu.

This structure is a very promising exploration target and requires further exploration. During the next stage of exploration activity it is recommended that some of the glacial till be washed off the contact, a baseline established, and a detailed sampling program conducted.

The Lost Valley showing is located on mineral tenures 513005 and 513014 and at NAD83 455388E, 6199779N.

#### 1.2 METALLURGICAL TESTING AT MARC ZONE

Banks Island Gold collected an ore sample from the stockpile located near the Red Mountain portal. This ore stockpile was derived from underground drifting in the Marc Zone by Lac Minerals in 1994. The ore stockpile is located at NAD83 456808E, 6202424N.

The sample was submitted to SGS Mineral Services, located at 185 Concession Street, Lakefield Ontario for Heavy Liquid Separation Testing. The purpose of the testing was to determine if the mineralization from the Marc zone would be amenable to a Dense Media Separation process.

The Marc zone and stockpile are located mineral tenures 513001.

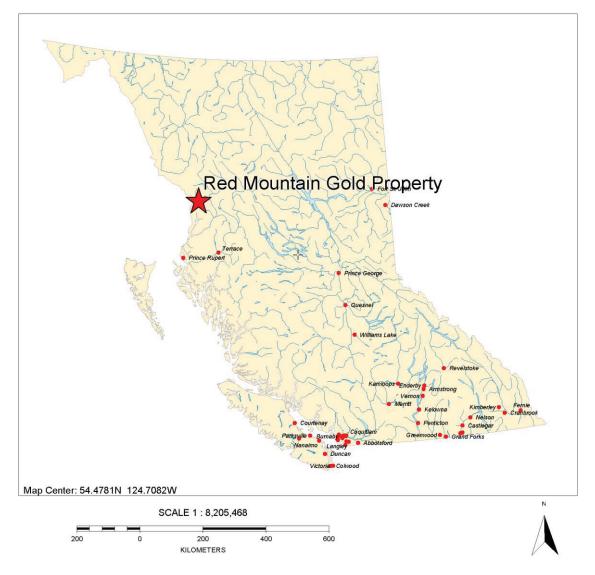


## 2.0 PROPERTY DESCRIPTION AND LOCATION

#### 2.1 PROJECT LOCATION

The 17,125 hectare Red Mountain Gold Property is located in the Skeena Mining Division near the town of Stewart in northwestern British Columbia, as shown on the overview map in Figure 2-1. The Property is located approximately 18km east-northeast of the town of Stewart (55°56′29″N, 129°59′17″W) between the Cambria Ice Field and the Bromley Glacier at elevations ranging between 500m and 2,000m. The Property, on NTS map sheets 103P/13 and 104A/4, is centred on 55°59′4″N, 129°45′37″W. Additionally, the UTM coordinates are 452,450 E, 6,250,325 N in Zone 9 (NAD 83).







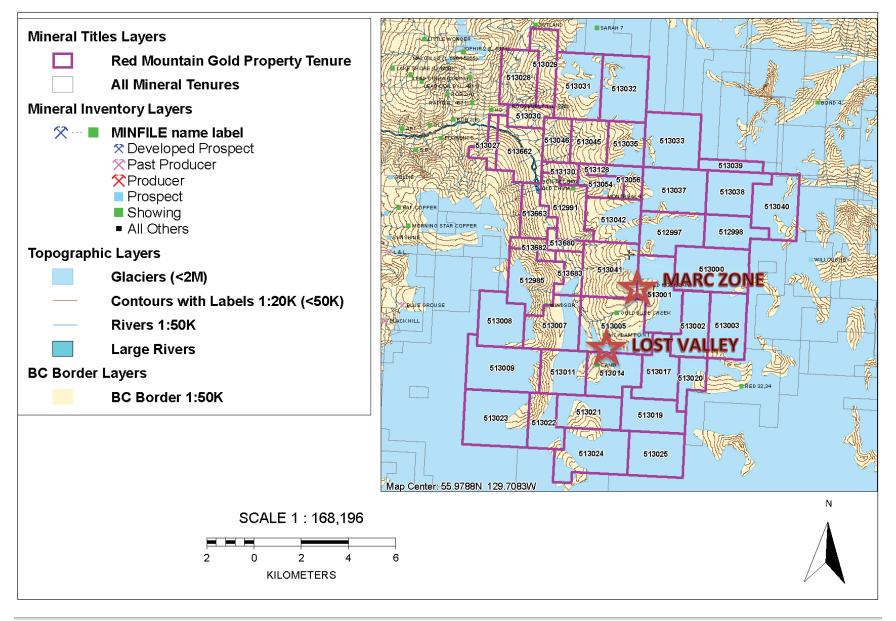
#### 2.2 PROPERTY DESCRIPTION

The Red Mountain Gold Property consists of 47 mineral claims (941 cells) totaling 17,125 hectares as shown in Figure 2-2 and detailed in Table 2-1. The recorded owner of the claims is Seabridge Gold Inc. The Property boundaries are located along claim limits as determined by the BC map staking system.

No significant factors or risk are known to exist which would affect access, title, or the right or ability to perform work on the Property.



Figure 2-2 Claim Boundary and Mineralized Zones, Red Mountain Mineral Property





RED MOUNTAIN GOI	LD PROPERTY:	MINERAL TEN	IURES			Date:	02-Mar-12			
						Tenures:	47			
OWNER:	Seabridge Go	old Inc.	100.00%			Cells:	941			
BC CLIENT NO.	145264					Area (ha):	17125.204			
VINING DIVISION:	Skeena									
OCATION:	Northwest Bri	tish Columbia	a, 18km East-I	Northeast of St	ewart, BC					
MAP NO.	NTS:	103P/13, 104	1A/4		GEOGRAPH	IIC COORDINA	ATES:	55°59'4	4"N, 129°4	5'37"W
	BCGS:	103P092, 10	4A002		UTM COOR	DINATES (NAC	83, ZONE 9):	452,45	0 E, 6,250,	325 N
Tenure Number	Tenure Type	Claim Nam e	% Held	BCGS Map Number	Issue Date	Good To Date	Cells	Status	Area (ha)	Yearly Work Requiremen
512985	Mineral		100%	103P092	2005/may/19	2012/jul/15	27	GOOD	488.80	\$3,910.38
512991	Mineral		100%	103P092	2005/may/19	2012/sep/26	23	GOOD	416.154	\$3,329.23
512997	Mineral		100%	103P092	2005/may/19	2012/aug/12	25	GOOD	452.432	\$3,619.46
512998	Mineral		100%	103P092	2005/may/19	2012/aug/12	17	GOOD	307.647	\$2,461.18
513000	Mineral		100%	103P092	2005/may/19	2012/jul/15	32	GOOD	579.305	\$4,634.44
513001	Mineral		100%	103P092	2005/may/19	2012/sep/16	29	GOOD	525.127	\$4,201.02
513002	Mineral		100%	103P092	2005/may/19	2012/jul/15	20	GOOD	362.257	\$2,898.06
513003	Mineral		100%	103P092	2005/may/19	2012/jul/15	24	GOOD	434.699	\$3,477.59
513005	Mineral		100%	103P092	2005/may/19	2012/jul/11	37	GOOD	670.206	\$5,361.65
513007	Mineral		100%	103P092	2005/may/19	2012/sep/23	25	GOOD	452.776	\$3,622.21
513008	Mineral		100%	103P092	2005/may/19	2012/sep/16	23	GOOD	416.515	\$3,332.12
513009	Mineral		100%	103P092	2005/may/19	2012/sep/08	33	GOOD	597.805	\$4,782.44
513011	Mineral		100%	103P092	2005/may/19	2012/sep/08	20	GOOD	362.383	\$2,899.06
513014	Mineral		100%	103P092	2005/may/19	2012/sep/02	22	GOOD	398.677	\$3,189.42
513017	Mineral		100%	103P092	2005/may/19	2012/sep/16	21	GOOD	380.539	\$3,044.31
513019	Mineral		100%	103P092	2005/may/19	2012/aug/12	20	GOOD	380.734	\$3,045.87
513020	Mineral		100%	103P092	2005/may/19	2012/jul/15	11	GOOD	199.338	\$1,594.70
513020	Mineral		100%	103P092	2005/may/19	2012/jui/13	21	GOOD	380.738	\$3,045.90
513022	Mineral		100%	103P092	2005/may/19	2012/sep/08	17	GOOD	308.159	\$2,465.27
513023	Mineral		100%	103P092	2005/may/19	2012/sep/08	35	GOOD	634.389	\$5,075.11
513024	Mineral		100%	103P092	2005/may/19	2012/sep/00 2012/aug/12	32	GOOD	580.53	\$4,644.24
513024	Mineral		100%	103P092	2005/may/19	2012/aug/12 2012/aug/12	24	GOOD	435.383	\$3,483.06
513025			100%	1031 092 104A 002		-	7	GOOD	126.577	
513027	Mineral Mineral		100%	104A002	2005/may/19 2005/may/19	2012/sep/26	16	GOOD	361.393	\$1,012.62
				104A002		2012/sep/15	10			\$2,891.14
513029	Mineral		100%	104A002	2005/may/19	2012/sep/15		GOOD	289.073	\$2,312.58
513030	Mineral		100%	-	2005/may/19	2012/sep/15	11	GOOD	162.691	\$1,301.53
513031	Mineral		100%	104A002	2005/may/19	2012/sep/15	30 30	GOOD	542.145	\$4,337.16
513032	Mineral		100%	104A 002	2005/may/19	2012/sep/15		GOOD	542.161	\$4,337.29
513033	Mineral		100%	104A 002	2005/may/19	2012/sep/24	30	GOOD	542.426	\$4,339.41
513035	Mineral		100%	104A002	2005/may/19	2012/jul/15	16	GOOD	289.308	\$2,314.46
513037	Mineral		100%	103P092	2005/may/19	2012/aug/12	28	GOOD	506.513	\$4,052.10
513038	Mineral		100%	103P092	2005/may/19	2012/aug/12	22	GOOD	397.977	\$3,183.82
513039	Mineral		100%	104A002	2005/may/19	2012/sep/14	7	GOOD	126.596	\$1,012.77
513040	Mineral		100%	103P092	2005/may/19	2012/sep/21	26	GOOD	470.395	\$3,763.16
513041	Mineral		100%	103P092	2005/may/19	2012/sep/23	30	GOOD	543.126	\$4,345.01
513042	Mineral		100%	103P092	2005/may/19	2012/sep/26	23	GOOD	416.2	\$3,329.60
513045	Mineral		100%	104A002	2005/may/19	2012/jul/15	16	GOOD	289.307	\$2,314.46
513046	Mineral		100%	104A002	2005/may/19	2012/jul/15	12	GOOD	216.972	\$1,735.78
513054	Mineral		100%	104A002	2005/may/19	2013/jan/19	10	GOOD	180.89	\$1,447.12
513056	Mineral		100%	104A002	2005/may/19	2012/jul/15	8	GOOD	144.704	\$1,157.63
513128	Mineral		100%	104A002	2005/may/20	2013/jan/19	2	GOOD	36.173	\$289.38
513130	Mineral		100%	104A002	2005/may/20	2013/jan/19	6	GOOD	108.522	\$868.18
513662	Mineral		100%	104A002	2005/may/31	2012/sep/26	24	GOOD	434.001	\$3,472.01
513663	Mineral		100%	103P092	2005/may/31	2012/sep/16	14	GOOD	253.327	\$2,026.62
513680	Mineral		100%	103P092	2005/may/31	2012/sep/06	5	GOOD	90.495	\$723.96
513682	Mineral		100%	103P092	2005/may/31	2012/sep/02	6	GOOD	108.596	\$868.77
513683	Mineral		100%	103P092	2005/may/31	2012/sep/23	10	GOOD	181.046	\$1,448.37



#### 2.3 AGREEMENTS

Banks Island Gold Ltd. has had an active interest in the Red Mountain Gold Property since January of 2012 and presently holds an option agreement with Seabridge Gold Inc. The Option Agreement dated the 12th of June 2012, outlines the obligations that Banks Island Gold Ltd. must fulfill to earn 100% interest in the Property.

Banks Island Gold has paid \$1,000,000 and issued 4,000,000 common shares to Seabridge Gold as of November 21st<sup>h</sup>, 2012, for the acquisition of the Red Mountain Gold Project. The terms of the option agreement contemplate that the Company may earn a 100% interest in the Project from Seabridge by making the payments to Seabridge as detailed below:

- \$1,500,000 cash payment on or before August 2<sup>nd</sup> 2013.
- \$9,500,000 cash payment on or before January 2<sup>nd</sup> 2015.

#### 2.4 PERMITS

Currently, Seabridge holds an exploration permit (MX-1-422), with associated \$1M environmental bond, on the Red Mountain Gold Property.



#### 2.5 ROYALTIES

The Red Mountain Gold Property is 100% owned by Seabridge Gold Inc. The Property is subject to the payment of production royalties and, on the key Wotan Resources Corp. ("Wotan") claim group, to the payment of an annual minimum royalty of \$50,000.

Two separate production royalties, totaling 3.5% net smelter return ("NSR"), are applicable to the Wotan claims, which contain the known Red Mountain mineralized zones. The royalties include a 1.0% NSR payable to Barrick Gold Corporation ("Barrick") and a 2.5% NSR payable to Wotan.

Upon sale of the Property to Royal Oak in 1995, Barrick was granted its 1.0% NSR royalty on all of the then existing claims. Bond Gold Canada Inc. ("Bond Gold") assembled most of the existing Red Mountain Property package in 1989 by way of three option agreements (Wotan, Krohman, and Harkley Agreements) which were subsequently exercised and the claims purchased by Bond Gold's successor, Lac Minerals ("Lac"). The agreements each provide for NSR royalties and one of them, the Wotan agreement, has an area of influence.

#### 2.5.1 UNDERLYING AGREEMENTS

The principal agreements governing the Red Mountain Gold Property are listed below in chronological order.

#### PWC Agreement

Agreement of Purchase and Sale dated the 17<sup>th</sup> of December 1999 between Price Waterhouse Coopers ("PWC"), in its capacity as interim receiver of Royal Oak Mines ("Royal Oak"), and North American Metals Corporation ("NAMC"); and Bill of Sale dated the 7<sup>th</sup> of February 2000 between PWC and NAMC.

Pursuant to these agreements, NAMC purchased all of Royal Oak's rights and interests, and assumed all of Royal Oak's obligations.

#### **Barrick Agreement**

Asset Purchase and Royalty Agreement dated the 17<sup>th</sup> of August 1995 between 1091064 Ontario Limited ("1091064"), Royal Oak, and Barrick. The agreement was further amended by a Consent Agreement dated the 3<sup>rd</sup> of February 2000 among NAMC, Barrick, and 1091064.

Under the 1995 agreement, Royal Oak purchased its interest in Red Mountain from 1091064 (a wholly-owned Barrick subsidiary) and granted 1091064 (Barrick) an uncapped 1.0% NSR royalty on production from the Property. Through the



agreement, 1091064 is also entitled to receive an additional \$10.00 per ounce cash production payment on all gold produced from the Property in excess of 1,850,000 ounces.

#### Wotan Agreement

Agreement dated the 26<sup>th</sup> of July 1989 between Bond Gold Canada Inc. ("Bond Gold") and Wotan (Dino Cremonese) granting Bond Gold an option to acquire seven mineral claims. The agreement was further amended by a Notice and Agreement dated 10 February 2000 between NAMC, Wotan, and Cremonese.

Banks Island Gold is obligated to pay Wotan an uncapped 2.5% NSR royalty on production from seven historic claims (Oro I–VI and Hrothgar, which contain the known Red Mountain Gold Property) and from any other properties within a 2 km area of influence extending from the boundaries of the claims. In 2005, Claim Oro III was abandoned, while the other six claims were renamed as claims 513005, 513001, 513017, 513041, 513007, and 513683. An annual advance royalty of \$50,000 is due by October 31<sup>st</sup> of each year. All minimum royalties paid from inception are deductible, once production is attained, against the NSR production royalty amount otherwise payable.

#### Krohman Agreement

Agreement dated the 9<sup>th</sup> of September 1989 between Bond Gold, Greg Sinitsin, and Darcy Krohman to option 11 claims, as amended by (1) an assignment and release dated the 21<sup>st</sup> of March 1990 between Bond and Greg Sinitsin; (2) a letter agreement between Lac and Darcy Krohman dated the 24<sup>th</sup> of September 1992; and (3) a Notice and Agreement dated the 10<sup>th</sup> of February 2000 between NAMC and Darcy Krohman.

Banks Island Gold is obligated to pay Krohman a 1.0% NSR royalty on production from 11 historic Bon Accord claims, of which some have been abandoned in 2005 and the remaining comprise portions of claims 513130 and 513128. The royalty may be purchased at any time for \$500,000.

#### Harkley Agreement

Option Agreement dated the 26<sup>th</sup> of September 1989 between Bond, Harkley Silver Mines Ltd. ("Harkley Silver"), Stephen Fegen, and Wesley Scott. The agreement was further amended by a letter agreement dated the 30<sup>th</sup> of September 1992 between Lac Minerals ("Lac") and Harkley Silver and a Notice and Agreement dated the 10<sup>th</sup> of February 2000 between NAMC and Harkley Silver.

Harkley Silver holds an uncapped 3.0% NSR royalty on production from 24 historic claims (Kim 1-14, Pam 1-2, Montreal No. 1-8) of which some have been abandoned in 2005 and the remaining comprise portions of claims 513054, 512991, and 513042.



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

#### 3.1 ACCESSIBILITY

The Red Mountain Gold Property is situated in steep, rugged terrain near the Alaska - BC border, approximately 18km east-northeast of Stewart, BC. Glacial ice is present year round at elevations greater than 600m. The Property lies between the Cambria Ice Field to the east and the Bromley Glacier to the south.

The Property is accessible by helicopter from Stewart with a flight time of 10 to 15 min. A 13km road access was developed along the Bitter Creek valley from Highway 37A (at a junction 14km northeast of Stewart) to the Hartley Gulch-Otter Creek area by Lac Minerals in 1994. Currently, this road is passable for only a few kilometres from the highway. The remainder is inaccessible as sections have been subject to washout or landslide activity.

#### 3.2 PHYSIOGRAPHY

The topography in the Red Mountain area is extremely steep and rugged, with elevations ranging from 500 m to over 2,100 m above sea level. The mineralized zones are located under the summit of Red Mountain at elevations between 1,600m and 2,000m. Alpine glaciers are abundant and surround the property on three sides. Lower elevations are forested, with the tree line occurring at approximately 1,300 m.

#### 3.3 CLIMATE

The Red Mountain Gold Property is located in the Coastal Mountain-heather Alpine (CMA) Zone of the British Columbia's Ministry of Forests and Range Biogeoclimatic Ecosystem Classification (BC Ministry of Forests and Range, 2006). Climatic conditions at Red Mountain are dictated primarily by its altitude (1,742m above sea level) and proximity to the Pacific Ocean.

#### 3.3.1 PRECIPITATION

Precipitation is significant in all months, with the wettest month usually being October. Over one-third of the annual precipitation falls as snow, even at sea level. At higher elevations, snow fall may occur year round. Precipitation measurements taken at the Stewart Airport are considered to be representative of precipitation at



the Red Mountain site. The data collected between 1974 and 1992 indicate yearly precipitation averages of approximately 188 cm with the bulk of precipitation during fall and winter months.

#### 3.3.2 TEMPERATURE

Temperatures at Red Mountain are moderated year-round by the coastal influence. Data was collected on site between June 1993 and June 1994. The data collected indicated an average temperature of 0.1°C, with temperatures ranging from -25°C in the winter and 20°C in summer.

#### 3.3.3 RELATIVE HUMIDITY

Due to the proximity of the Pacific Coast, the relative humidity is generally high yearround. The relative humidity through 1993 and 1994 ranged from 67.5% to 89.4% with an average of 78.4% based upon the one-hour average relative humidity values.

#### 3.3.4 WIND

Windy conditions are frequent at Red Mountain where hourly average wind speeds regularly exceed 10 m/s and instantaneous wind speeds in excess of 30 m/s have been observed. Measurements taken to date are from more sheltered locations than the top of the ridge where significantly higher wind speeds are expected. Windy conditions add a significant wind chill factor at most times of year.

#### 3.4 OPERATING SEASON

The heavy snowfall and steep terrain present a challenging combination for infrastructure development and mine management. Blizzard conditions are frequent in the immediate area around the Red Mountain Gold Property during the winter and avalanches pose a threat in the Bitter Creek Valley and in the upper Bear River Valley, through which the Highway 37A corridor passes.

Surface exploration and infrastructure construction is limited to the summer season.



#### 3.5 INFRASTRUCTURE

The District of Stewart, located 18km west-southwest of the Red Mountain Gold Property, has a population of approximately 700. The nearby center of Terrace (approximately 310km by road from Stewart) has an area population of about 15,500, while Smithers (approximately 330km from Stewart) has a population of 6,000 and a trading area population of 20,000.

The town of Stewart has a paved airstrip, a small hospital, an RCMP detachment and a variety of retail businesses including restaurants and hotels. There is a charter helicopter hanger in town. There is no regularly scheduled air service to Stewart.

Stewart is situated at the head of the Portland Canal, a 120 km long fjord that remains ice-free year-round. This has allowed operation of Stewart Bulk Terminals, which has been serving the Pacific Northwest since 1993. Their dock has a capacity of 800 tph. Contracts previously undertaken by the Stewart Bulk Terminals include handling ore or concentrate from Homestake Mine, Snip Mine, Eskay Creek, and Huckleberry Mine.

Power is available by an electrical transmission line that runs along Highway 37A at the junction with the Bitter Creek Access Road.

Water is available underground and from groundwater sources and creeks adjacent to the Red Mountain Gold Property.

There are suitable locations identified for the site infrastructure, rock storage locations, and tailings facilities in the Bitter Creek Valley.

Some exploration and supporting personnel may be recruited from the adjacent communities. Skilled professionals not available in local communities could be transported from more distant centers to the Property.

#### **3.6 SURFACE RIGHTS**

The Red Mountain project resides on Crown land and no private property lies within the operating plan area. Exploration permit (MX-1-422), issued to Seabridge, currently exists on the Property.



#### 4.0 HISTORY

#### 4.1 EARLY HISTORY

Prospecting and small-scale mining took place near Red Mountain, in the Bitter Creek Valley, as early as 1900 and persisted intermittently through the first half of the 20<sup>th</sup> century. At this time, the Red Mountain Gold Property was covered with glacial ice. The glacier has since retreated, exposing large portions of the summit and surrounding bedrock.

Porphyry molybdenum and copper occurrences in the immediate Red Mountain area were explored in the 1960's and 1970's. In 1965, a molybdenum and native gold showing was discovered at MacAdam Point (Erin Showing) on the south side of Red Mountain. Additional small molybdenum showings were subsequently located and explored in the central cirque of Red Mountain. Significant gold values (up to 37 gpt) were obtained in 1973 from Lost Mountain (R.H.S. claims). Gold exploration at Red Mountain then ceased as it was generally regarded as a setting favorable for porphyry style molybdenum mineralization.

#### 4.2 BOND GOLD

In 1987 evaluation of the Red Mountain area for gold potential commenced. The Wotan claims were staked in 1988 by local prospectors and optioned to Bond Gold in 1989. That year, Bond Gold began gold exploration of the Red Mountain Property by initiating a drill program on the Marc Zone.

From 1989 to 1991 Bond carried out exploration programs including 17,638 metres of diamond drilling, surface mapping and sampling, and airborne EM and magnetic surveys.

#### 4.3 LAC MINERALS

In 1991, Lac Minerals acquired 100% interest of the Red Mountain Property through the acquisition of Bond Gold. Lac Minerals completed further surface drilling on the Marc, AV, JW, AV Tails, and 141 Zones from 1991 to 1994, totaling 48,000 metres. Underground exploration of the Marc Zone was conducted in 1993 and 1994 by utilizing a 1,700 m production-sized decline, which included a total of 38,600 metres of diamond drilling. An intensive environmental baseline data collection and assessment was undertaken 1993 and 1994 to support a feasibility study produced in 1994.



#### 4.4 BARRICK GOLD / ROYAL OAK

In September 1994, Barrick acquired Lac Minerals and the Red Mountain Property assets. Barrick later sold the project to Royal Oak in August 1995. Royal Oak extended the underground development by 305m, undertook a drill program seeking extensions to the known deposits which included 22 surface holes and 15 underground holes, completed a drill program on nearby targets, and worked on plans for the development of the Red Mountain project. In 1996, lacking funds for exploration, Royal Oak ceased all activity at Red Mountain. In 1999, Royal Oak went into receivership and Price Waterhouse Coopers (PWC) was appointed to dispose of the Red Mountain Gold Property.

#### 4.5 NORTH AMERICAN METALS CORP.

In 2000, NAMC purchased the Red Mountain Property from PWC. NAMC completed a comprehensive review of the Red Mountain project and validation of the geological and environmental database. NAMC also carried out geological work including the re-logging of a substantial quantity of drill core in order to produce an improved resource estimation model. Additional metallurgical testing investigated the possibility of producing a saleable gold-bearing pyrite concentrate. An access road route was designed from the end of the existing road to the site. NAMC also met with local and provincial officials to discuss the project, its history and some possible new development scenarios.

#### 4.6 SEABRIDGE

In February of 2002, Seabridge acquired 100% interest in the Red Mountain Property through an agreement with NAMC. Seabridge also acquired the mineral exploration permit on the Property (MX-1-422) and a related \$1.5 million cash reclamation fund lodged with the British Columbia Ministry of Mines. Seabridge commissioned the first Independent NI43-101 compliant Technical Report on the Red Mountain Gold Project (Craig, 2002) along with various site investigations, database reviews, and engineering studies.

#### 4.7 HISTORICAL PRODUCTION

There have been no commercial mining operations on the Red Mountain Gold Property.



## 5.0 GEOLOGICAL SETTING AND MINERALIZATION

#### 5.1 GEOLOGICAL SETTING

#### 5.1.1 REGIONAL GEOLOGY

The regional geology of the Red Mountain area has been described by Greig et al. (1994), Alldrick (1993), Rhys et al (1995), Craig (2001), and Craig (2002). The following geological description is drawn from the above listed sources.

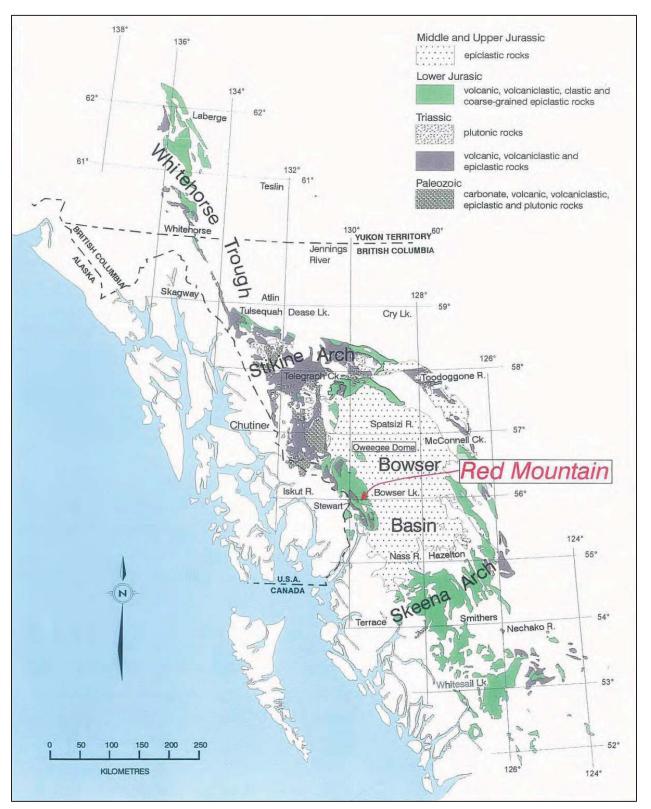
Red Mountain is located near the western margin of the Stikine terrain in the Intermontane Belt. The Stikinia Belt comprises three primary stratigraphic elements: Middle and Upper Triassic clastic rocks of the Stuhini Group, Lower and Middle Jurassic volcanic and clastic rocks of the Hazelton Group, and Upper Jurassic sedimentary rocks of the Bowser Lake Group. Mineralogy suggests that the regional metamorphic grade is probably lower greenschist facies.

The age of intrusive rocks in the Red Mountain region range from Late Triassic to Eocene. Early to Middle Jurassic plutons, named the Goldslide Intrusions, appear to be closely related to the gold mineralization at Red Mountain. Eocene intrusions of the Coast Plutonic Complex occur to the west and south of Red Mountain and are associated with high-grade silver-lead-zinc occurrences.

Red Mountain lies along the western edge of a complex northwest trending structural culmination formed during the Cretaceous era. The Red Mountain mineral zones lie at the core of the Bitter Creek antiform, a northwest-southeast trending structure created during this deformation event (Greig, 2000). During the Tertiary era the area at Red Mountain was subject to extensional block faulting.

A regional geological map prepared of Red Mountain is displayed in Figure 5-1.





# Figure 5-1 Structural and Statigraphic Setting of Gold Mineralization at Red Mountain (Greig et al., 1994)



#### 5.1.2 PROPERTY GEOLOGY

The Stuhini Group sedimentary rocks outcrop across approximately two-thirds of the mapped area. This group of rocks is the oldest of those found on the Red Mountain Gold Property and are comprised of Middle to Upper Triassic mudstones, siltstones, and cherts. The Stuhini Group rocks grade upward into Lower Jurassic Hazelton Group clastic and volcaniclastic rocks, which outcrop in the northeastern portion of the map area. Rocks of both groups are folded about axes that plunge towards 345° and dip steeply to the southwest.

The Goldslide intrusions underlying Red Mountain have been segregated into two phases, Goldslide (FHx) and Hillside (FHBp). Both phases have dioritic compositions. The Goldslide rocks have been noted to crosscut the Hillslide Porphyry suggesting the Hillslide Porphyry is the older phase (Sieb 1995).

The Hillside Porphyry occurs near the summit of Red Mountain and is a medium grained hornblende and plagioclase-phyric porphyry. The Hillside Porphyry contains rafts of the sedimentary rocks.

The Goldslide Porphyry is a hornblend-biotite quartz porphyry intrusion underlying most of the Red Mountain cirque.

Alteration is strong and widespread throughout the Property. All pre-Tertiary rocks have been hydrothermally altered. The sediments and intrusives display similar alteration assemblages. Alteration minerals observed include quartz, K-feldspar, tourmaline, sericite, chlorite, and pyrite. Red Mountain was named for an extensive rusty gossan covering 12 to 15 square kilometers of area.

Brittle faulting has affected all rock units at Red Mountain. Rhys et al. (1995) recognized two phases of faulting, northeast striking, steeply northwesterly dipping faults and north to northwest trending faults. Faults of the former group are those that offset the mineralized zones, such as the Rick Fault.



## 6.0 LOST VALLEY SHOWING

#### 6.1 **PREVIOUS EXPLORATION WORK**

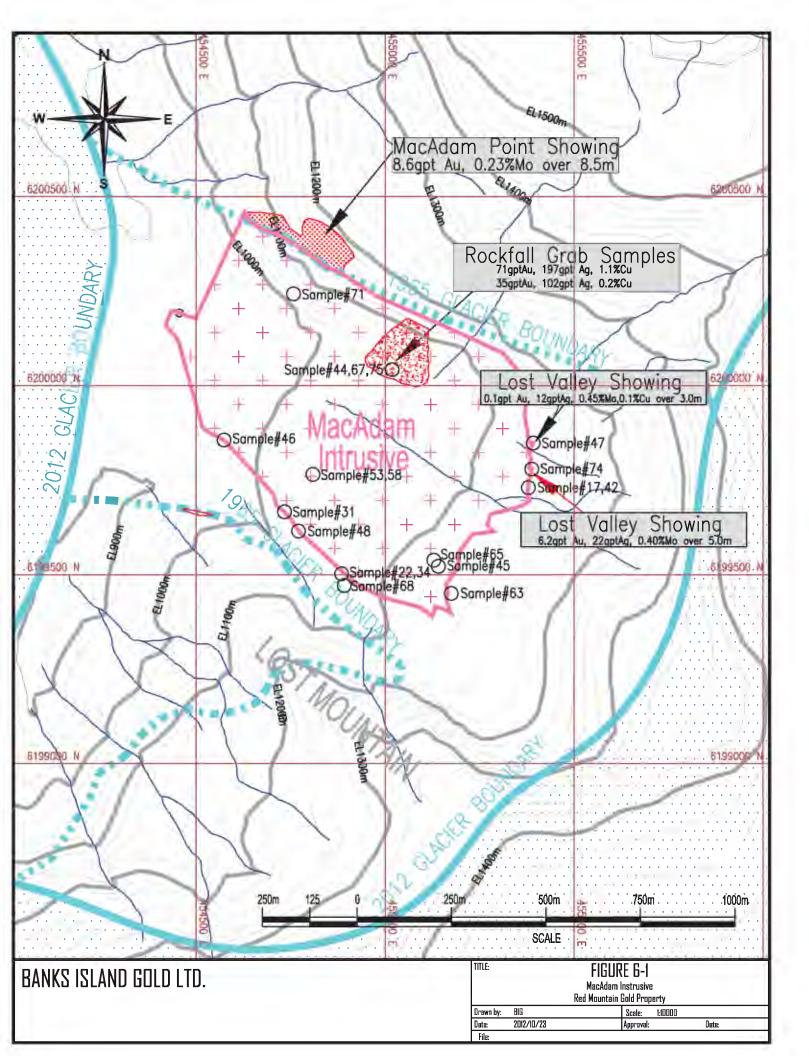
In 1965 while prospecting the headwaters of Bitter Creek near Stewart (Reeve 1967), a molybdenite showing was discovered adjacent to the eastern arm of Bromley glacier at MacAdam Point. The area was staked and field work took place in 1965 and 1967.

The molybdenite showing discovered is associated with the contact zone of an intrusive stock, of which in 1965 only a small sliver was visible above the ice of Bromley Glacier. The ice thickness at the time was estimated to be 120m (Reeve 1967). The contact zone is fine grained and tends to be richer in biotite and mafic accessories in that area. The intrusive was identified as being a Granodiorite and closely related to intrusions that were recognized in the Red Mountain cirque. Subsequent work in the 1990's (Rhys et al 1995) established that the stock is a Quartz Monzonite of Eocene age and not related to the Mesozoic intrusions on Red Mountain. Judging by geological maps produced in the 1990's (Bray 1992,) the ice had been depleted by about 50% since the late 60's, considerably enlarging the stocks visible outcrop below MacAdam Point and across the ice to the Southwest on Lost Mountain.

#### 6.2 2012 EXPLORATION WORK

During a field trip on August 24<sup>th</sup>, 2012 Ben Mossman, P.Eng, Dirk Meckert P.Geo, and Robert Baldwin, P.Eng undertook a field visit to Red Mountain using an ASTAR helicopter chartered out of Smithers, BC. It was noted that the entire bowl once taken up by the eastern arm of the Bromley Glacier was ice free and likely has been in this stage for several years. The entire stock is visible from the air, easily distinguished from the reddish brown country rock by its off white color. The contacts give the impression that they are steeply dipping on all sides. This recently uncovered glacial valley located between MacAdam Point and Lost Mountain has been named "Lost Valley".

During subsequent field trips to the property, on September 8<sup>th</sup>-9<sup>th</sup> and October 1<sup>st</sup> to Oct 4<sup>th</sup> a field crew consisting of Rob Baldwin, Dirk Meckert, and Caddaric Meckert performed a detailed survey of the MacAdam stock. The field crew was based in Stewart, BC and used an ASTAR helicopter chartered from Smithers, BC. Preliminary surveying of the contact zone of the MacAdam stock using a hand held GPS unit indicates a surface exposure with dimensions of approximately 1000m x 600m. Figure 6-1 displays a map of the Lost Valley area, the surveyed contact of the MacAdam Intrusive, and the locations of important samples.





A total of 91 samples, of which 65 were from the Lost Valley area, were collected and submitted for assay. Assaying was performed by AGAT Laboratories at 5623 MacAdam Road, Mississauga, Ontario. AGAT Laboratories is independent of Banks Island Gold Ltd. and is ISO 17025 accredited by the Standards Council of Canada.

All geological samples were dried and crushed to 75% passing 2mm then riffle split into 250g samples and pulverized to 85% passing 75um.

Gold was fire assayed with an ICP-OES finish. Over limit gold samples (>10g/t Au) were fire assayed with a gravimetric finish. Silver was assayed by Aqua Regia Digest with an AAS Finish. Over limit silver samples (>100g/t) were fire assayed with a gravimetric finish. Further, Sodium Peroxide Fusion with an ICP-EOS finish was used to assay for 19 elements, including base metals.

The sampling highlights broken into sub areas are displayed in Table 6.1. A detailed summary of all sample assays are displayed in Appendix A and assay certificates are displayed in Appendix B.

The Lost Valley sampling was broken into four sub areas; Centre, East Contact Zone, North Area, and South Contact Zone.

Company geologists were able to access the contact zone between the MacAdam Intrusive and the Hornfels at the eastern side and southern side of the newly uncovered glacial valley.

A mineralized shear zone along the eastern contact was prospected over a strike length of 120m. One sample across the shear zone assayed 6.2gpt Au, 22gpt Ag and 0.40%Mo over 5.0m. A second sample assayed 0.1gpt Au, 12gpt Ag, 0.45%Mo and 0.1%Cu over 3.0m. This newly discovered mineral showing is located approximately 880m along the contact from the historic MacAdam Point showing.

On the southern contact nine samples assayed with anomalous gold, silver, molybdenum, and copper. Gold values ranged up to 0.6gpt, silver values up to 105gpt, molybdenum values up to 1.42% and copper values up to 0.57%.

The contact zone on the north side of Lost Valley was not accessible between the Lost Valley and MacAdam Point showings due to steep and unstable terrain. However, numerous boulders with well mineralized quartz veins were observed in a recent rockfall of substantial size between the showings. Highlights from the sampling in this area include a sample which assayed 71gpt Au, 197gpt Ag, and 1.1%Cu and a sample which assayed 35gpt Au, 102gpt Ag, and 0.2%Cu.

A sample taken in the centre of the MacAdam stock assayed at 0.1gpt Au, 30gpt Ag, 4.6% Zn, and 0.06% Cu. A second sample assayed 7gpt Ag, 0.20% Mo, and 0.31%Cu.



				ASSAYS				
Sample Number	Area	Sample Type	Sample Description	Au (ppm)	Ag (ppm)	Zn (%)	Mo(%)	Cu (%)
58	Lost Valley - Centre	Chip Sample	Quartz Monzonite with quartz veining containing pyrite and sphalerite.	0.1	30	4.6	0.00	0.06
53	Lost Valley - Centre	Chip Sample	Quartz Monzonite with quartz veining containing 10% coarse euhedral pyrite.	0.0	7	0.0	0.20	0.31
47	Lost Valley - East	Chip Sample	Shear zone as before. More irregular to the North du to uneven contact between stock and Hornfels. Hosted in Quartz Monzonite.	0.1	12	0.1	0.45	0.08
74	Lost Valley - East	Chip Sample	5 meter wide shear zone with disseminated pyrite and molybdenite. Sulphides also occur in veins and fractures. Hosted in Quartz Monzonite.	6.2	22	0.0	0.40	0.01
17	Lost Valley - East	Chip Sample	Contact shear with disseminated molybdenite, minor pyrite. Hosted in Quartz Monzonite.	0.0	2	0.0	0.23	0.01
42	Lost Valley - East	Chip Sample	Bundled quartz veins with pyrite and sericite disseminated in veins and wallrock. Hosted in Quartz Monzonite.	0.2	48	0.1	0.00	0.09
75	Lost Valley - North	Grab Sample	Quartz vein with 40% pyrite and grey sulphides.	70.6	197	0.1	0.00	1.13
44	Lost Valley - North	Grab Sample	Criss crossing quartz veins with more than 30% pyrite in Quartz Monzonite.	0.0	15	0.6	0.05	0.04
67	Lost Valley - North	Grab Sample	Float from Rob. Vuggy quartz vein with coarse pyrite and sphalerite.	34.6	102	6.3	0.00	0.19
71	Lost Valley - North	Grab Sample	90% pyrite float.	7.7	0	0.0	0.00	0.09
22	Lost Valley - South	Grab Sample	Quartz Monzonite with veining at Hornfels contact with molybdenite and pyrite.	0.1	16	0.1	0.47	0.02
46	Lost Valley - South	Chip Sample	30cm, West dipping quartz vein with large clusters of pyrite and mineralised fractures extending 0.5m into footwall.	0.1	37	0.0	0.00	0.02
48	Lost Valley - South	Chip Sample	Coarse pyrite in 35cm quartz vein parallel to contact of stock.	0.5	23	0.0	0.00	0.41
63	Lost Valley - South	Chip Sample	Quartz vein with molybdenite in wall rock.	0.0	7	0.0	1.42	0.04
65	Lost Valley - South	Chip Sample	Quartz vein with 5% sulphides.	0.5	66	0.0	0.00	0.01
68	Lost Valley - South	Chip Sample	Pervasive pyrite mineralisation in silicified Biotite Hornfels adjacent to quartz vein.	0.2	96	0.5	0.00	0.57
31	Lost Valley - South	Chip Sample	12cm quartz vein with coarse clusters of pyrite.	0.4	105	0.0	0.00	0.01
34	Lost Valley - South	Chip Sample	5cm quartz vein with coarse euhedral pyrite in Biotite Hornfels at Quartz Monzonite contact.	0.0	7	0.0	0.09	0.06
45	Lost Valley - South	Chip Sample	Quartz vein adjacent to dark grey dyke.	0.6	65	0.0	0.00	0.01

#### Table 6-1 Lost Valley Sampling Highlights by Sub-Area

#### 6.3 GEOLOGY OF THE MACADAM INTRUSIVE STOCK

The MacAdam stock is composed of fresh Quartz Monzonite which is medium to coarse grained and off-white in color. It contains about 5% of large (5cm to 10cm) euhedral shaped potassium-feldspar on average. Pink potassium-feldspar alteration is present in the form of symmetrical alteration halos around quartz veins. Alteration becomes more pervasive towards the center of the stock. Previous work which concentrated on MacAdam Point (Rhys et al 1996) states that the majority of quartz veins carries these pink alteration halos. Banks Island geologists were not able to verify this during mapping. Field observation showed pink potassium-feldspar



alteration almost entirely absent in the south and east perimeter of the stock. Approaching MacAdam Point the number of quartz veins accompanied by such halos increases. The pervasive alteration encountered towards the center of the stock, where the cupola has been eroded the deepest, does not seem to be related to quartz veining, as the vein thickness and frequency is low.

The outcrop area of the stock is littered with Quartz Monzonite fragments of all sizes. Some of these fragments show quartz veins with green sericite alteration envelopes. Many veins do not show any alteration associated with them.

Figure 6.2 shows a photo looking west across the MacAdam Intrusive to the Bromley Glacier in the Bitter Creek Valley.



Figure 6-2 Photo Looking West from Lost Valley

The contact between the Quartz Monzonite and the surrounding Biotite Hornfels is generally easy to recognize. In some areas, most notably in the southwest towards Lost Mountain, numerous dykes and assimilated screens of the country rock obscure the picture. Dykes contain 90% feldspar with very little visible quartz but appear to be silicified, giving them an aplitic appearance. Assimilated boulders of Hornfels tend to show 5cm to 10cm thick crusts of similar composition. These crusts are followed



outwards by a diffuse region characterized by medium grained biotite. The biotite reaches 15% to 20% locally and the orientation of the 2mm to 5mm sized platelets tends to parallel to contacts. The orientation of the biotite crystals may be an expression of flow texture within the stock.

Quartz veining can be observed throughout the stock, occurs at random strike and dip, and can reach widths of more than 0.5m. Most of the quartz is coarse and of milky white color. Some veins show distinct swelling and pinching that is sometimes accompanied by wall rock brecciation, however the majority are consistent in width and show only minor deformation.

#### 6.4 MINERALIZATION

Mineralization within the MacAdam Point stock is associated with quartz veining and contact shearing.

All guartz veins observed in the bedrock and Quartz Monzonite debris contain varying amounts of pyrite, sphalerite, chalcopyrite, molybdenite and galena. The distribution of the sulphides is erratic within the veins and occurs in pods and odd shaped masses. Mineralization often represents a late stage filling of quartz crystal lined vugs within the veins. Pyrite is clearly dominant with the other sulphides mixed in very finely. This often makes it difficult to identify them macroscopically. Molybdenite stands out as it crystalizes quite separately from the pyrite in small clusters. Crystals can reach up to 3mm in size but mostly fall below 1mm. In a few instance both pyrite and molybdenite were observed as fine grained disseminations within the alteration envelopes and it should be noted that assayed grades where highest in these. Veins with pyrite – molybdenite mineralization do extend into the contact aureola, but the grade of visible mineralization very quickly tapers off within 5m of the contact. Here fractures are often painted with molybdenite but assays often do not match visual estimates. Gold grades from vein samples appear to confirm historical data that gold is tied to pyrite and not arsenopyrite, as the latter is at trace level in most samples taken.

Figure 6.3 shows atypical quartz pyrite vein with shallow western dip. Note irregular distribution of coarse pyrite masses and swelling and pinching of vein.





#### Figure 6-3 Typical Quartz Pyrite Vein in Lost Valley

The second mode of occurrence of pyrite - molybdenite mineralization is in shear structures, namely contact shears. The first well mineralized zone in the area was discovered in what was described as a shear (Reeve 1967). An 8.5m wide zone at MacAdam Point was chip sampled and yielded 8.6 gpt Au and 0.23% Mo. Another shear zone was discovered during the most recent trip to Red Mountain immediately below the icefall along the eastern boundary of the Quartz Monzonite stock. The shear zone structure could be followed for about 120m. The structure is north-south striking and sub-vertical where exposed. The structure may extend north across a creek into the slope below the Red Mountain cirque that is now covered by talus. The shear contains quartz veining but it is uncertain whether these veins are spatially related to the shear. Shear planes are 1cm to 3cm apart and straight to slightly undulating, giving the intrusive a banded appearance. Bedding in the neighboring sediments follows the same orientation, likely due to being bent upwards by the intruding Quartz Monzonite. Mineralization in the shear consists of pervasive disseminations of fine grained pyrite and molybdenite coating fractures



and in spidery granular masses contained in quartz veins. The width of the shear ranges from 1m to over 5m.

Chip samples were taken across the structure in several places. One sample across the shear zone assayed 6.2gpt Au, 22gpt Ag and 0.40%Mo over 5.0m. A second sample assayed 0.1gpt Au, 12gpt Ag, 0.45%Mo and 0.1%Cu over 3.0m.

Figure 6.4 shows a photo of the looking East across McAdam Quartz Monzonite. The mineralized contact shear discovered is situated at foot of rockface in between the two small ice tongues showing. There is a lamprophyre dyke showing in the foreground.

#### Figure 6-4 Photo looking East in Lost Valley



This structure is a very promising exploration target and requires further exploration. Chip sampling was made difficult due to the fact that a good part of the outcrop is rounded and glacier scoured un-weathered bedrock. During the next stage of activity some of the glacial till needs to be washed off, a baseline established, and a detailed sampling program conducted.



The contact zone on the north side of Lost Valley was not accessible between the Lost Valley and MacAdam Point showings due to steep and unstable terrain. However, numerous boulders with well mineralized quartz veins were observed in a recent rockfall of substantial size between the showings. Highlights from the sampling in this area include a sample which assayed 71gpt Au, 197gpt Ag, and 1.1%Cu and a sample which assayed 35gpt Au, 102gpt Ag, and 0.2%Cu.

Figure 6.5 shows a photo of the rockslide area of the north side of Lost Valley. Future exploration work should be done to determine the source, location and extent of mineralization found in the rockfall area.



#### Figure 6-5 Photo of Rockfall at North Side of Lost Valley

#### 6.5 **PETROGRAPHIC STUDIES**

In order to provide detailed petrographic information on the various rock types encountered in the Lost Mountain area, seven samples were sent to Vancouver Petrographic Ltd for thin section analysis. The full report is displayed in Appendix C.



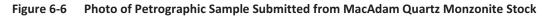
Table 6.2 displays the location and description of samples submitted for petrographic study.

		LOCATION				
Sample Number	Fast	North	Elevation	Notes	Description	Petrogprapic Desctiption
E539664	454,572	6,199,029	1,155	Lost Mountain	Mafic Dyke	chloritized hornblende trachyte
E539665	454,916	6,198,848	1,252	Lost Mountain	Main Rock Unit at Lost Mountain	biotite schist
E539666	454,916	6,198,848	1,252	Lost Mountain	Minor Unit At Lost Mountain	laminated carbonaceous sandy siltstone
E539667	454,916	6,198,848	1,252	Lost Mountain	Minor Unit At Lost Mountain	layered volcaniclastic siltstone
E539668	455,000	6,200,000	1,000	Lost Valley	Main Unit of MacAdam Stock	altered biotite monzogranite
E539669	455,000	6,200,000	1,000	Lost Valley	"Rusty non-sulphide" float common in Lost Valley	fine-medium grained tuff
E539670	455,000	6,200,000	1,000	Lost Valley	Jasper colored float common in Lost Valley	clay-altered lithic tuff

 Table 6-2
 Samples Submitted for Petrographic Study

Samples E5396664 though E5396667 were taken from an area south of the ridge of Lost Mountain.

Figure 6.6 shows a photo of Sample E5396668, which is representative of the main unit of the MacAdam Quartz Monzointe Stock. Detailed petrology work has identified this unit as an altered biotite monzogranite.







Samples E5396669 and E5396670 are samples of widespread "rusty" looking nonsulphide rock present as float in the Lost Valley. These rocks were determined to be fine-medium grained tuff and clay-altered lithic tuff. The alteration and veining with trace chalcopyrite, sphalerite and pyrite may point to this rock unit being in present within close proximity to the MacAdam stock.



### 7.0 METALLURGICAL TESTING AT MARC ZONE

Banks Island Gold Ltd. collected an ore sample from the stockpile located near the Red Mountain portal. This ore stockpile was derived from underground drifting in the Marc Zone by Lac Minerals in 1994. The ore stockpile is located at NAD83 456808E, 6202424N.

The sample was submitted to SGS Mineral Services, located at 185 Concession Street, Lakefield Ontario for Heavy Liquid Separation Testing (HLS). The purpose of the testing was to determine if the mineralization from the Marc zone wold be amenable to a Dense Media Separation process.

The Marc zone and stockpile are located mineral tenures 513001.

A single sample from the Red Mountain Project was provided by Banks Island Gold Ltd. to conduct heavy liquid separation testwork. The sample was stage-crushed to -1/2'' (-12.5 mm) and to -1/4'' (-6.3 mm). The -20 mesh was retained and assayed for Au and Ag and the +20 mesh was subjected to HLS testing. The head assay of the sample was determined to contain 26.8 g/t of Au and 85.0 g/t of Ag.

The  $-1/2''/+850 \mu m$  and  $-1/4''/+850 \mu m$  size fractions were subjected to HLS testing at specific gravity (SG) intervals of 3.20, 3.10, 3.00, 2.90, 2.80, 2.75, 2.70 and 2.65. The test produced sinks at each SG interval and a float at the final 2.65 SG interval. Each sample generated from the HLS test was assayed for Au and Ag.

The sample provided for this testwork appeared to be quite amenable to HLS for the recovery of Au and Ag. From a combination of the 3.20 SG sink and -20 mesh fines, for the -1/2'' sample, Au and Ag recoveries of 86.9% and 89.5% at grades of 74.6 g/t and 236 g/t respectively at a mass rejection of 73.8% was experienced. Similarly, for the -1/4'' sample Au and Ag recoveries of 90.3% and 92.4% were achieved at grades of 61.0 g/t and 192 g/t respectively at a mass rejection of 77.6%.

The full report for the testwork is presented in Appendix D.



### 8.0 ITEMIZED COST STATEMENT

Field Trip#1 – August 24 <sup>th</sup> 2012	UNITS		RATE	TOTAL
Helicopter Charter	3	hrs	\$2,069	\$6,208
Dirk Meckert	1	day	500	\$500
Rob Baldwin	1	day	800	\$800
Ben Mossman	1	day	600	\$600
Commercial Flights	3		458	\$1,375
Metallurgical Testing (HLS)				\$16,177
Report Writing (B. Mossman)	3	days	800	\$2,400
Total Trip #1				\$28,060
Field Trip #2 – September 8 <sup>th</sup> -9 <sup>th</sup> 2012				
Helicopter Charter	3.6	hrs	\$2,076	\$7,475
Dirk Meckert	2	days	500	\$1,000
Rob Baldwin	2	days	800	\$1,600
Commercial Flights	2	uuys	458	\$1,341
Hotels	2		150	\$194
Sample Freight				\$230
Assay				\$1,619
Report Writing (B. Mossman)	3	days	800	\$2,400
Total Trip #2				\$15,858
				+/
Field Trip #3 – October 1 <sup>st</sup> – 4th				
Helicopter Charter	8.4	hrs	\$2,104	\$17,674
Dirk Meckert	4	days	500	\$2,000
Caddaric Meckert	4	days	250	\$1,000
Rob Baldwin	3	days	800	\$2,400
Commercial Flights	2		458	\$3,447
Truck Rental				\$760
Hotels				\$2,104
Sample Freight				\$230
Assay				\$4,725
Petrographic Analysis				\$1,600
Food & Misc.				\$791
Field Supplies				\$438
Report Writing (B. Mossman)	3	days	800	\$2,400
Total Trip #3				\$39,569
Total Assessment work				\$83,487



### 9.0 **REFERENCES**

- Alldrick, D.J. 1993. *Geology and Metallogeny of the Stewart Mining Camp, Northwestern British Columbia.* British Columbia Ministry of Energy, Mines, and Petroleum Resources, Bulletin 85, p. 105.
- A. R. MacPherson Consultants Ltd. (MacPherson). May 1994. *Proposed Grinding System for Red Mountain Project*. Prepared for LAC Minerals. Lakefield, ON.
- Barnett, R.L. 1991. Petrographic-Metallurgical Electron Microprobe Investigation of Selected Samples from the Red Mountain Prospect, British Columbia. Private report to Lac Minerals Ltd., 65p.
- BC Ministry of Energy and Mines (BC MEM). 2002. *Mineral and Coal Exploration Activities and Reclamation Permit Number MX-1-422, Mine No:0100406*. Issued June 24, 1993; amended May 17, 2002.
- BC Ministry of Forest and Range (BC MoFR). February 2008. Biogeoclimatic Ecosystem Classification Subzone / Variant Map for the Kalum Forest District. Victoria, BC.
- BC Ministry of Forest and Range (BC MoF). March 2006. *Brochure 83: The Ecology of the Alpine Zones*. Victoria, BC.
- BC Ministry of Forests (BC MoF). March 1999. Brochure 31: The Ecology of the Coastal Western Hemlock Zone. Victoria, BC.
- BC Ministry of Forests (BC MoF). October 1997. Brochure 51: The Ecology of the Mountain Hemlock Zone. Victoria, BC.
- Beattie Consulting Ltd. January 2001. *Red Mountain Project Flotation Study*. Prepared for North American Metals Corp. Vancouver, BC.
- Bray, Adrian D. Nov 1992. Assessment Report 1992 Survey Program on the Red Mountain and Sarah Properties. Vancouver, BC.
- Brenda Process Technology (Brenda). 1994. Final Report on Metallurgical Testing of Red Mountain Gold – Silver Ores. Prepared for LAC Minerals Limited. Kelowna, BC.
- Craig, D.L. 2001. *Red Mountain Project 2001 Resource Estimate*. North American Metals Corporation Internal Company Report.
- Craig, D. L. March 2002. *Red Mountain Project Technical Report*. Prepared for Seabridge Resources Inc.



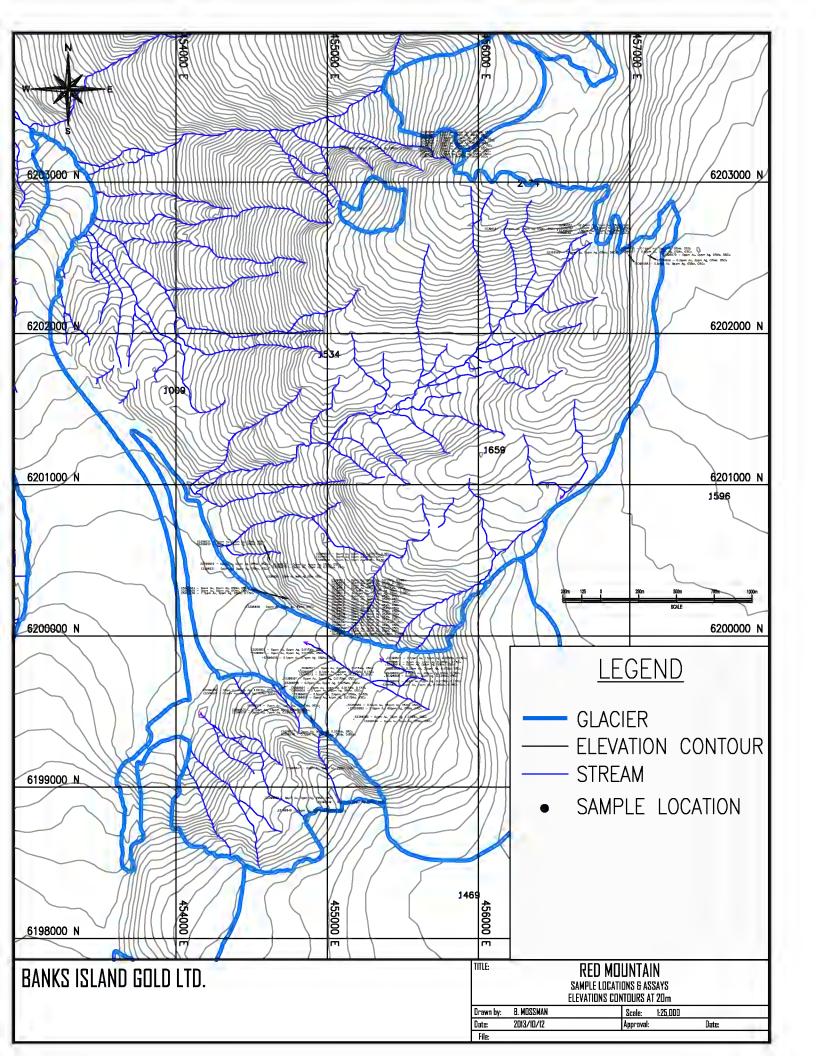
- Legault, Erin Nov 2012. An Investigation into Heavy Liquid Separation of Samples from the Red Mountain Project. Lakefield, Ont.
- Golder Associates Ltd. (Golder). August 2000. Draft Report Engineering Feasibility Assessment Routing and Costing for the Red Mountain Mine Access Road, Stewart, BC. Prepared for North American Metals Corp. Abbotsford, BC.
- Greig, C.J., Anderson R.G., Daubeny, P.H., Hull, K.F., & Hinderman, T.K. 1994. Geology of the Cambria Icefield Area: Regional Settling for Red Mountain Gold Deposit, Northwestern British Columbia. In Current Research 1994-A. Geological Survey of Canada, p. 45-56.
- Greig, C. J. November 2000. *Review of the Structural and Stratigraphic Setting for Gold Mineralization at Red Mountain, Stewart District, Northwestern British Columbia*. Prepared for Wheaton River Minerals Ltd.
- Ian Hayward International Ltd. (Hayward). June 1994. *Red Mountain Project Power Supply Feasibility Study and Preliminary Cost Estimate*. Prepared for Rescan Engineering Ltd. Surrey, BC.
- Klohn-Crippen Consultants Ltd. (Klohn). July 1994. *Red Mountain Project Underground Geomechanics Assessment*. Prepared for LAC North America Ltd. Richmond, BC.
- North American Metals Corp. (NAMC). 2002. *Red Mountain Project Reclamation Plan* 2002. Submitted to Ministry of Energy and Mines, Smithers, BC, March 7, 2002.
- Panteleyev, A. 1995. Subvolcanic Cu-Au-Ag (As-Sb), in Selected British Columbia Mineral Deposit Profiles, Volume 1 – Metallics and Coal. Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pages 79-82.
- Reeve, Albert F. July 1967. *Geological and Geochemical Investigation of the MoS2 Claim Group*. Vancouver, BC.
- Rescan Engineering Limited (Rescan). October 1994. *Red Mountain Project Feasibility Study*. Prepared for LAC North America Ltd. Vancouver, BC.
- Rhys, D.A., Seib, M., Frostad, S.R., Swanson, C.L., Prefontaine, M.A., Mortenson, J.K., & Smit, H.Q. 1995. *Geology and Setting of the Red Mountain Gold-Silver Deposits, Northwestern British Columbia*. In Schroeter, T.G. (ed) Porphyry deposits of the northwestern Cordillera of North America, Canadian Institute of Mining, Metallurgy and Petroleum Special Volume 46: p. 811-828.

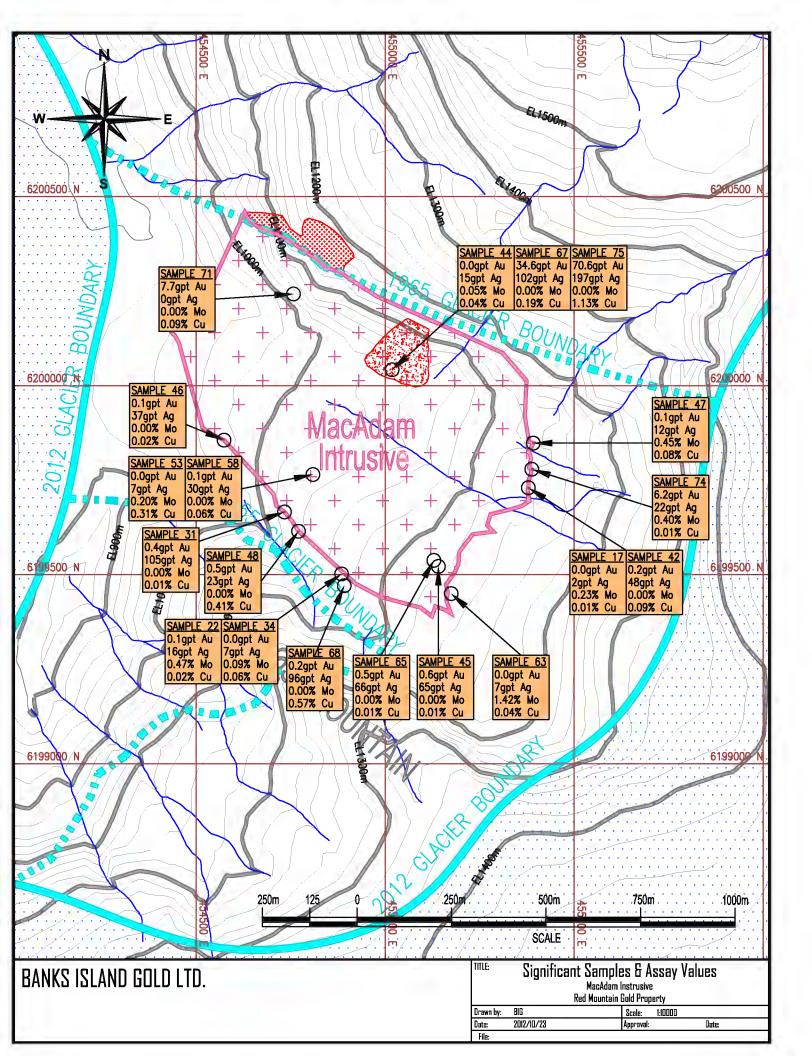


- Royal Oak Mines Inc. (Royal Oak). July 1996. *Red Mountain Project 1996 Project Development Review*. Submitted to Environmental Assessment Office, Victoria, BC. Smithers, BC.
- Sieb, Mike. May 1995. *Diamond Drilling on the Oro IV Claim Assessment Report*. Prepared for LAC Minerals Ltd.
- Steffen Robertson and Kirsten (Canada) Inc. (SRK *a*). October 2000. *Review of Baseline Studies at Red Mountain*. Prepared for North American Metals Corp.
- Steffen Robertson and Kirsten (Canada) Inc. (SRK). August 2003. *Red Mountain Project Engineering Study*. Prepared for Seabridge Gold Inc. Toronto, ON.
- SRK Consulting Engineers and Scientists (SRK b). November 2000. Evaluation of ARD/ML Data Collected from the Red Mountain Waste Pile, August and September 2000 – Draft. Issued to North American Metals Corporation. Vancouver, BC.
- SRK Consulting Engineers and Scientists (SRK). January 2008. Preliminary Economic Assessment Red Mountain Gold Project, British Columbia. Prepared for Seabridge Gold Inc. Toronto, ON.
- SRK Consulting Engineers and Scientists (SRK). June 2010. *Red Mountain Property 2009 Field Investigations Assessment Report*. Prepared for Seabridge Gold Inc. Toronto, ON.



### **10.0** APPENDIX A – DETAILED SUMMARY OF SAMPLE ASSAYS





						LOCATION (NAD83)					ASS	AYS				
Sample Number	Area	Sample Type	SampleID	Easting	Northing	Notes	Sample Description		Ag (ppm)						Fe(%)	
	Lost Mountain	Chip Sample	E5396647	454,729	6,199,120	Former Nunatuk in Bromley Glacier	Quartz vein.	0.0	0	0.0	0.0	0.00	0.00	0.0		0.2
8	Lost Mountain Lost Mountain	Chip Sample Chip Sample	E5396648 E5396649	454,671 454,930	6,198,841 6,198,909	Former Nunatuk in Bromley Glacier Former Nunatuk in Bromley Glacier	Quartz vein. Quartz vein.	0.0	0	0.0	0.0	0.00		0.0	1.2	0.7
10	Lost Mountain	Chip Sample	E5396650	454,587	6,198,923	Former Nunatuk in Bromley Glacier	Pyrite in volcanic sediment.	0.0	4	0.0	0.1	0.00	0.03	0.0	5.6	
12	Lost Valley	Chip Sample	E5396619	454,635	6,900,464	Hornfels at northernmost outcrop of MacAdam Point Stock.	Stongly bleached metasediments.	0.0	1	0.0	0.0	0.01	0.01	0.0		0.1
		Chip Sample	E5396623	454,616	6,900,471	Hornfels at northernmost outcrop of MacAdam Point Stock.	Pod of quartz hosted in Biotite Hornfels adjacent to bleached	0.0	0	0.0	0.0	0.00	0.00	0.0	0.7	0.1
13	Lost Valley						Metasediments.		-							
20	Lost Valley	Chip Sample	E5396597	454,705	6,199,713	South Western contact of McAdam Point Stock.	Quartz veining in Hornfels with pyrite and molybdenite.	0.0	3	0.0	0.0	0.01	0.03	0.0	1.6	0.5
21	Lost Valley	Chip Sample	E5396571	454,823	6,199,778	Boulder in center of McAdam Point Stock.	Quartz Monzonite with quartz veining containing pyrite,	0.0	2	0.0	0.0	0.01	0.04	0.0	1.6	1.3
21	Lost valley						molybdenite and sphalerite. 30cm extension fracture healed with quartz containing 8% fine									
23	Lost Valley	Chip Sample	E5396574	454,950	6,199,525	75m from Southwestern contact; within McAdam Point Stock.	grained pyrite.	0.0	1	0.0	0.0	0.01	0.03	0.0	1.8	1.2
49	Lost Valley	Chip Sample	E5396621	454,628	6,900,481	Hornfels at northernmost outcrop of MacAdam Point Stock.	Silicified shear, vertical with pyrite and chalcopyrite.	0.0	1	0.0	0.0	0.00	0.04	0.0	6.6	3.3
50	Lost Valley	Chip Sample	E5396605	455,362	6,199,682	South Western contact of McAdam Point Stock.	1 meter wide quartz healed breccia with fine grained pyrite.	0.0	1	0.0	0.0	0.04	0.14	0.0		4.0
51	Lost Valley	Chip Sample	E5396584	455,240	6,199,450	South East contact zone.	Quartz vein with pyrite clusters.	0.0	0	0.0	0.0	0.00	0.04	0.0		4.3
54	Lost Valley	Chip Sample	E5396602	454,754	6,199,642	South Western contact of McAdam Point Stock.	Quartz Monzonite with coarse K-spar.	0.1	0	0.0	0.0	0.00	0.01	0.0	1.2	0.3
		Chip Sample	E5396625	454,758	6,200,243	Float below 1967 exposure of McAdam Point Stock in North East.	Coarse Quartz Monzonite with 7% biotite and traces of pyrite.	0.0	0	0.0	0.0	0.00	0.00	0.0	1.3	0.3
55	Lost Valley								-							
56	Lost Valley	Chip Sample	E5396631	454,618	6,200,451	North Western contact of Mcadam Point Stocktock.	Fault rubble from steeply NE dipping fault.	0.0	0	0.0	0.0	0.00	0.01	0.0	1.4	0.2
57	Lost Valley	Chip Sample	E5396642	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Unaltered typical Quartz Monzonite with no veining.	0.0	0	0.0	0.0	0.00	0.01	0.0	1.5	0.2
60	Lost Valley	Chip Sample	E5396622	454,628	6,900,481	Hornfels at northernmost outcrop of MacAdam Point Stock.	Wall rock metasediments from same shear.	0.0	0	0.0	0.0	0.00	0.01	0.0	2.3	0.3
61	Lost Valley	Chip Sample	E5396598	454,712	6,199,683	South Western contact of McAdam Point Stock.	Quartz vein up to 20cm wide with coarse clusters of pyrite	0.2	5	0.0	0.0	0.02	0.01	0.0		1.5
			E5396634	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.		0.0	0	0.0	0.0	0.00	0.01	0.0	2.5	0.4
64	Lost Valley	Chip Sample	E3390034	455,019	6,200,043	ROCK TAIL AT DOLLOTH OF NORTH EASTERN CHILL OF MICADAM POINT SLOCK.	Wall rock of previous sample.	0.0	U	0.0	0.0	0.00	0.01	0.0	2.5	0.4
		Chip Sample	E5396614	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Quartz vein with large cluster of coarse pyrite and adjacent Biotite	0.0	0	0.0	0.0	0.00	0.05	0.0	14.4	7.5
69	Lost Valley	chip sumple	13330014	455,015	0,200,045	nock fan at bottom of North Eastern ein of Meadain Font Stock.	Hornfels.	0.0	Ů	0.0	0.0	0.00	0.05	0.0	14.4	/.5
		Grab Sample	E5396632	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Barren quartz vein in Quartz Monzonite with brown coated	0.0	0	0.0	0.0	0.00	0.00	0.0	0.3	0.0
11	Lost Valley				.,,		fractures.									
14	Lost Valley	Grab Sample	E5396615	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Quartz Monzonite with pink k-spar with disseminated pyrite adjacent to barren guartz vein.	0.0	0	0.0	0.0	0.01	0.00	0.0	0.8	0.6
	Lost Valley	Grab Sample	E5396620	454.635	6.900.464	Hornfels at northernmost outcrop of MacAdam Point Stock.	Gossaneous quartz veining in same bleached metasediments.	0.0	4	0.0	0.0	0.00	0.02	0.0	0.8	0.5
15	cost valley						Along straight line to North of previous sample. Minor trace									
16	Lost Valley	Grab Sample	E5396610	455,386	6,199,808	Eastern contact of McAdam Point Stock.	sulphides hosted in Biotite Hornfels.	0.0	0	0.0	0.0	0.00	0.01	0.0	1.0	0.4
	Lost Valley	Grab Sample	E5396630	454,595	6,200,393	North Western contact of Mcadam Point Stocktock.	Quartz Monzonite from downslope contact.	0.0	0	0.0	0.0	0.00	0.01	0.0		0.4
19	Lost Valley	Grab Sample	E5396604	454,771	6,199,615	South Western contact of McAdam Point Stock.	Brecciated footwall of same vein with chloritic alteration.	0.0	4	0.0	0.0	0.01	0.02	0.0	1.2	0.4
		Grab Sample	E5396641	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	1cm thick quartz pyrite vein with 1cm symmetrical k-spar halo.	0.0	0	0.0	0.0	0.04	0.01	0.0	1.9	0.5
24	Lost Valley				.,,											
25	Lost Valley	Grab Sample	E5396639	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Partially bleached metasedimants with amorphous worm shaped pyrite masses.	0.0	0	0.0	0.0	0.00	0.02	0.0	2.0	1.1
25	LOSE Valley						Quartz vein with pyrite and molybdenite in vugs, hosted in Quartz	-								
26	Lost Valley	Grab Sample	E5396633	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Monzonite.	0.0	4	0.0	0.0	0.00	0.04	0.0	2.8	2.6
	,	Crok Comula	E5396640	455.010	c 200 042	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.		0.0	0	0.0	0.0	0.00	0.01	0.0	2.8	0.5
27	Lost Valley	Grab Sample	E5396640	455,019	6,200,043	ROCK TAIL AT DOLLOTH OF NORTH EASTERN CHILL OF MICADAM POINT SLOCK.	Maroon coloured Biotite Hornfels with no visible sulphides.	0.0	U	0.0	0.0	0.00	0.01	0.0	2.8	0.5
		Grab Sample	E5396611	455,386	6,199,808	Eastern contact of McAdam Point Stock.	Quartz flooded and bleached Hornfels from same location with	0.0	1	0.0	0.0	0.02	0.05	0.0	3.1	1.4
28	Lost Valley			,000	.,,,,,		trace sulphides.		<u> </u>							
29	Lost Vallov	Grab Sample	E5396644	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Biotite Hornfels and epidote rich Quartz Monzonite stringer	0.0	0	0.0	0.0	0.00	0.02	0.0	3.3	1.5
29	Lost Valley						containing disseminated pyrite.								$\rightarrow$	
30	Lost Valley	Grab Sample	E5396636	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Microfolded metasediments.	0.0	0	0.0	0.0	0.00	0.01	0.0	3.6	0.6
		Creh Course	FF200000	455 202	C 100 COT	Couth Mastern content - Charlen Delta Charl	Assimilated Biotite Hornfels raft with veining and associated	0.0		0.0	0.0	0.01	0.07	0.0	4.4	
32	Lost Valley	Grab Sample	E5396606	455,382	6,199,695	South Western contact of McAdam Point Stock.	pyrite.	0.0	1	0.0	0.0	0.01	0.07	0.0	4.1	2.8
	Lost Valley	Grab Sample		454,734	6,199,666	South Western contact of McAdam Point Stock.	Gossaneous quartz vein with molybdenite and vugs.	0.0	5	0.0	0.0	0.03	0.03	0.0		3.1
35	Lost Valley	Grab Sample		454,754	6,199,642	South Western contact of McAdam Point Stock.	Biotite Hornfels between quartz veins.	0.0	2	0.0	0.0	0.01	0.06	0.0		2.3
36	Lost Valley	Grab Sample		454,495	6,199,904	South Western contact of Mcadam Point Stock.	Dark grey coloured massive metasediments.	0.0	0	0.0	0.0	0.01	0.02	0.0	4.4	
37	Lost Valley	Grab Sample	E5396629	454,456	6,200,192	North Western contact of Mcadam Point Stocktock.	Biotite Hornfels from downslope contact of McAdam stock. Yellow weathering, light grey coloured Hornfels with disseminated	0.0	0	0.0	0.0	0.00	0.01	0.0	4.4	0.8
38	Lost Valley	Grab Sample	E5396581	454,917	6,200,515	Rockfall above McAdam Point Stock.	pyrite.	0.0	0	0.0	0.0	0.00	0.01	0.0	4.5	2.8
- 50	Lost valley						quartz Healed Quartz Monzonite Metasediment Breccia with				-					_
39	Lost Valley	Grab Sample	E5396637	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	disseminated pyrite.	0.0	0	0.0	0.0	0.00	0.01	0.0	4.5	1.4
	· · · ·	Creh Crows	FF200007	454 405	C 100 000	Cauth Manham and a Childred an Delation of	Dark grey discoloured fractures in rusty, disturbed	0.0	<u> </u>	0.0	0.0	0.01	0.00	0.0	4.0	2.2
40	Lost Valley	Grab Sample	E5396627	454,495	6,199,889	South Western contact of Mcadam Point Stock.	metasediments.	0.0	0	0.0	0.0	0.01	0.02	0.0		2.2
41	Lost Valley	Grab Sample	E5396577	454,892	6,199,471	South Western contact Zone of McAdam Point Stock.	Light grey Hornfels with disseminated pyrite at contact.	0.0	0	0.0	0.0	0.02	0.05	0.0	4.9	2.6
		Grab Sample	E5396638	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Hematite healed brecciation in Quartz Monzonite.	0.0	0	0.0	0.0	0.00	0.01	0.0	5.0	1.0
43	Lost Valley				,,				-							
52	Lost Vallov	Grab Sample	E5396643	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Biotite Hornfels with masses of fine grained pyrite and amorphous	0.0	0	0.0	0.0	0.00	0.03	0.0	8.0	6.2
52	Lost Valley						blobs of same on fractures. Contact of Quartz Monzonite to assimilated sediment fragment,								$\rightarrow$	—
		Grab Sample	E5396624	454,758	6.200 243	Float below 1967 exposure of McAdam Point Stock in North East.		0.0	0	0.0	0.0	0.00	0.02	0.0	2.0	0.5
59	Lost Valley	2. ab sample		.5 .,, 50	-,200,240		Monzonite.	0.0	Ĭ	0.0	0.0	0.00	0.02	0.0	1.0	5.5
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62	Lost Valley	Grab Sample	E5396635	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Quartz Monzonite with weak pervasive green sericite alteration.	0.0	0	0.0	0.0	0.00	0.00	0.0	2.3	0.4
66	Lost Valley	Grab Sample	E5396579	454,917	6,200,515	Rockfall above McAdam Point Stock.	25% pyrite in rusty angular fragment. Silicified Biotite Hornfels with disseminated and fine grained	0.0	6	0.0	0.0	0.00	0.13	0.0	12.9	8.4
70	Lost Valley	Grab Sample	E5396613	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	pyrite.	0.0	3	0.0	0.0	0.01	0.07	0.0	15.2	15.2
72	Lost Valley	Grab Sample	E5396580	454,917	6,200,515	Rockfall above McAdam Point Stock.	Rusty angular sediment fragment from recent rock fall with trace sulphides.	0.0	0	0.0	0.0	0.01	0.13	0.0	17.7	11.0
73	Lost Valley	Grab Sample	E5396646	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Hornfels pyrite mix.	0.1	0	0.0	0.0	0.00	0.18	0.0	17.9	10.6
58	Lost Valley - Centre	Chip Sample	E5396572	454,809	6,199,765	Bedrock in center of McAdam Point Stock.	Quartz Monzonite with quartz veining containing pyrite and sphalerite.	0.1	30	0.0	4.6	0.00	0.06	0.0	1.5	3.7
53	Lost Valley - Centre	Chip Sample	E5396573	454,809	6,199,765	Bedrock in center of McAdam Point Stock.	Quartz Monzonite with quartz veining containing 10% coarse euhedral pyrite.	0.0	7	0.0	0.0	0.20	0.31	0.0	9.9	10.7
47	Lost Valley - East	Chip Sample	E5396612	455,392	6,199,848	Eastern contact of McAdam Point Stock.	Shear zone as before. More irregular to the North du to uneven contact between stock and Hornfels. Hosted in Quartz Monzonite.	0.1	12	0.0	0.1	0.45	0.08	0.0	6.0	5.6
74	Lost Valley - East	Chip Sample	E5396609	455,388	6,199,779	Eastern contact of McAdam Point Stock.	5 meter wide shear zone with disseminated pyrite and molybdenite. Sulphides also occur in veins and fractures. Hosted in Quartz Monzonite.	6.2	22	0.0	0.0	0.40	0.01	0.0	19.1	21.8
17	Lost Valley - East	Chip Sample	E5396608	455,379	6,199,730	Eastern contact of McAdam Point Stock.	Contact shear with disseminated molybdenite, minor pyrite. Hosted in Quartz Monzonite.	0.0	2	0.0	0.0	0.23	0.01	0.0	1.1	1.2
42	Lost Valley - East	Chip Sample	E5396607	455,379	6,199,730	Eastern contact of McAdam Point Stock.	Bundled quartz veins with pyrite and sericite disseminated in veins and wallrock. Hosted in Quartz Monzonite.	0.2	48	0.0	0.1	0.00	0.09	0.0	4.9	5.3
75	Lost Valley - North	Grab Sample	E5396617	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Quartz vein with 40% pyrite and grey sulphides.	70.6	197	0.0	0.1	0.00	1.13	0.0	28.9	32.5
44	Lost Valley - North	Grab Sample	E5396616	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Criss crossing quartz veins with more than 30% pyrite in Quartz Monzonite.	0.0	15	0.0	0.6	0.05	0.04	0.0	5.3	4.0
67	Lost Valley - North	Grab Sample	E5396618	455,019	6,200,043	Rock fall at bottom of North Eastern Cliff of Mcadam Point Stock.	Float from Rob. Vuggy quartz vein with coarse pyrite and sphalerite.	34.6	102	0.0	6.3	0.00	0.19	0.0	13.0	17.5
71	Lost Valley - North	Grab Sample	E5396645	454,758	6,200,243	Float below 1967 exposure of McAdam Point Stock in North East.	90% pyrite float.	7.7	0	0.0	0.0	0.00	0.09	0.0	15.6	13.3
22	Lost Valley - South	Grab Sample	E5396575	454,885	6,199,502	South Western contact Zone of McAdam Point Stock.	Quartz Monzonite with veining at Hornfels contact with molybdenite and pyrite.	0.1	16	0.0	0.1	0.47	0.02	0.0	1.8	2.2
46	Lost Valley - South	Chip Sample	E5396626	454,574	6,199,856	South Western contact of Mcadam Point Stock.	30cm, West dipping quartz vein with large clusters of pyrite and mineralised fractures extending 0.5m into footwall.	0.1	37	0.0	0.0	0.00	0.02	0.0	5.9	6.2
48	Lost Valley - South	Chip Sample	E5396603	454,771	6,199,615	South Western contact of McAdam Point Stock.	Coarse pyrite in 35cm quartz vein parallel to contact of stock.	0.5	23	0.0	0.0	0.00	0.41	0.0	6.4	7.4
63 65	Lost Valley - South Lost Valley - South	Chip Sample Chip Sample	E5396585 E5396582	455,175 455,129	6,199,450 6,199,538	South East contact zone. Within Southeastern exposure of McAdam Point Stock.	Quartz vein with molybdenite in wall rock. Quartz vein with 5% sulphides.	0.0	7 66	0.0	0.0	1.42	0.04	0.0	2.4 2.5	2.4
68	Lost Valley - South	Chip Sample	E5396578	454,892	6,199,471	South Western contact Zone of McAdam Point Stock.	Pervasive pyrite mineralisation in silicified Biotite Hornfels	0.2	96	0.0	0.5	0.00	0.57	0.0	14.1	15.1
31	Lost Valley - South	Chip Sample	E5396600	454,734	6,199,666	South Western contact of McAdam Point Stock.	adjacent to quartz vein. 12cm quartz vein with coarse clusters of pyrite.	0.4	105	0.2	0.0	0.00	0.01	0.0	3.6	3.9
34	Lost Valley - South	Chip Sample	E5396576	454,885	6,199,502	South Western contact Zone of McAdam Point Stock.	5cm quartz vein with coarse euhedral pyrite in Biotite Hornfels at	0.0	7	0.0	0.0	0.09	0.06	0.0	4.2	4.3
45	Lost Valley - South	Chip Sample	E5396583	455,141	6,199,522	Within Southeastern exposure of McAdam Point Stock.	Quartz Monzonite contact. Quartz vein adjacent to dark grey dyke.	0.6	65	0.0	0.0	0.00	0.01	0.0	5.4	6.1
76	Marc Zone	Chip Sample	E5396564	456,524	6,202,688	Center of slope at Mark Zone outcrop.	Spongy, oxidised material. Hardened talus (?).	22.3	7	0.0	0.0	0.00	0.01	0.1	12.8	0.6
77	Marc Zone	Chip Sample	E5396561	456,524	6,202,688	Center of slope at Mark Zone outcrop.	Light grey sericitic intrusive with hairline fractures containing pyrite.	0.1	0	0.0	0.0	0.00	0.01	0.0	6.3	4.4
78	Marc Zone	Chip Sample	E5396563	456,524	6,202,688	Mark Zone outcrop.	Light grey sericitic intrusive with finely sisseminated pyrite.	1.8	14	0.0	0.0	0.00	0.02	0.0	6.7	7.3
79	Marc Zone	Chip Sample	E5396562	456,524	6,202,688	Area of Mark Zone outcrop.	Fine grained biotite rich intrusive, possibly a dike. No visible sulphides.	3.2	19	0.0	0.0	0.00	0.01	0.0	6.7	7.1
80	Marc Zone	Grab Sample	E5396560	456,524	6,202,688	Talus below Mark Zone outcrop.	Chloritic intrusive with very fine grained disseminated pyrite.	7.7	3	0.0	0.0	0.00	0.00	0.0	10.9	12.6
1	Marc-Cornica Zone	Grab Sample	E5396565	457,040	6,202,450	30m Northeast of drillhole at Corinca Showing.	Breccia healed by quartz carbonate with minor pyrite.	0.1	1	0.0	0.0	0.00	0.01	0.1	2.3	1.6
2	Marc-Cornica Zone	Grab Sample	E5396568	457,040	6,202,450	70m downhill (East) from drillhole location.	Folded veining is internally brecciated, with fine to coarse grained pyritic masses. In chlorite rich matrix.	0.9	8	0.0	0.0	0.00	0.02	0.5	23.1	26.8
3	Marc-Cornica Zone	Grab Sample	E5396567	457,040	6,202,450	30m downhill (East) from drillhole location.	Float of fine grained white quartz vein containing about 35% of fine grained pyrite.	9.6	0	0.0	0.0	0.00	0.00	0.0	25.8	31.0
4	Marc-Cornica Zone	Grab Sample	E5396566	457,040	6,202,450	10m East of drillhole at Corinca Showing.	Coarse pyrite clusters in stockwork like mineralisation.	2.2	0	0.0	0.0	0.00	0.04	0.3	27.4	27.6
5	Marc-Cornica Zone	Grab Sample	E5396569	457,040 457,040	6,202,450 6,202,450	200m downhill (East) from drillhole location.	Crumbly, partially oxidised massive pyrite from outcrop. Quartz veining in dark grey very fine grained volcaniclastic rock.	0.3	3	0.0	0.0	0.00	0.04	0.0	2.0	46.0
6	Marc-Cornica Zone						Contains no visible sulphides.									
82	Rio Blanco	Chip Sample Chip Sample	E5396586 E5396593	455,600	6,203,250 6,203,250	Rio Blanco Creek, close to tongue of glacier. Rio Blanco Creek, close to tongue of glacier. Outcrop on knoll just	Footwall Breccia below gossaneous quartz-gypsum vein. Fine grained pyrite in light grey Hornfels.	0.0	0	0.0	0.0	0.01	0.00	0.0	3.3 4.9	1.5 3.1
83	Rio Blanco	Chip Sample	E5396592	455,600	6,203,250	below cliff on RM side. Rio Blanco Creek, close to tongue of glacier. Knoll just below cliff	Green couloured highly silicified volcanic (?) with myriad of pyrite-	0.0	0	0.0	0.0	0.00	0.01	0.0	5.4	1.2
84 85	Rio Blanco Rio Blanco	Chip Sample	E5396592	455,600	6,203,250	on RM side. Rio Blanco Creek, close to tongue of glacier.	quartz healed fractures Quartz-gypsum vein with pyrite in small clusters.	0.0	1	0.0	0.0	0.00	0.01	0.0	5.4	4.4
	Dianeo	Chip Sample	E5396594	455,600	6,203,250	Rio Blanco Creek, close to tongue of glacier. Outcrop on knoll just	Medium grey coloured and silicified Hornfels with disseminated	0.0	0	0.0	0.0	0.00	0.02	0.0	6.0	2.4
86	Rio Blanco					below cliff on RM side. Rio Blanco Creek. close to tongue of glacier. Knoll iust below cliff	pyrite. Surface showing thick red oxidation crust. Grey green coloured volcanic (?) float with quartz vein fragments		-							
87	Rio Blanco	Chip Sample	E5396590	455,600	6,203,250	on RM side.	containing disseminated pyrite.	0.0	0	0.0	0.0	0.00	0.02	0.0	6.1	0.9

		Chip Sample	F5396595	455 600	6 203 250	Rio Blanco Creek, close to tongue of glacier. Outcrop on knoll just		0.1	0	0.0	0.0	0.00	0.04	0.0	10.5	6.2
88	Rio Blanco	chip sumple	23330333	433,000	0,203,230	below cliff on RM side.	blobs of fine grained pyrite locally.	0.1	Ŭ	0.0	0.0	0.00	0.04	0.0	10.5	0.2
81	Rio Blanco	Chip Sample	E5396587	455,600	6,203,250	Rio Blanco Creek, close to tongue of glacier.	Gossaneous quartz-gypsum vein.	0.0	0	0.0	0.0	0.00	0.00	0.0	1.2	0.1
89	Rio Blanco	Grab Sample	E5396589	455,600	6,203,250	Rio Blanco Creek, close to tongue of glacier. Knoll just below cliff on RM side.	Hornfels float with disseminated pyrite	0.1	0	0.0	0.0	0.01	0.01	0.0	4.5	1.8
90	Rio Blanco	Grab Sample	E5396591	455,600	6,203,250	Rio Blanco Creek, close to tongue of glacier. Knoll just below cliff on RM side.	Quartz healed microbreccia with pyrite on fractures, float.	0.0	13	0.1	0.3	0.00	0.08	0.0	4.7	1.2
91	Rio Blanco	Grab Sample	E5396596	455,600	6,203,250	Rio Blanco Creek, near old drill site with damaged spigot.	Float with 15% coarse pyrite.	0.0	0	0.0	0.0	0.00	0.06	0.0	12.6	6.2



### **11.0** APPENDIX B – ASSAY CERTIFICATES



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

#### CLIENT NAME: BANKS ISLAND GOLD LTD. 880-580 HORNBY STREET VANCOUVER, BC V6C3B6 (604) 245-0066

#### ATTENTION TO: BEN MOSSMAN

PROJECT NO:

AGAT WORK ORDER: 12D649402

SOLID ANALYSIS REVIEWED BY: Kevin Motomura, ICP Supervisor

DATE REPORTED: Oct 19, 2012

PAGES (INCLUDING COVER): 12

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.



# Certificate of Analysis

AGAT WORK ORDER: 12D649402 PROJECT NO:

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

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

			Aqua Regia Digest - Ag,	AAS finish (201025)	
DATE SAMPLED: Oct	t 04, 2012		DATE RECEIVED: Oct 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Ag			
	Unit:	ppm			
Sample Description	RDL:	0.2			
E5396597		2.6			
E5396598		5.1			
E5396599		5.4			
E5396600		105			
E5396601		2.1			
E5396602		0.4			
E5396603		23.4			
E5396604		4.0			
E5396605		1.2			
E5396606		0.9			
E5396607		48.2			
E5396608		1.9			
E5396609		22.3			
E5396610		<0.2			
E5396611		0.6			
E5396612		11.8			
E5396613		3.3			
E5396614		<0.2			
E5396615		<0.2			
E5396616		14.6			
E5396617		197			
E5396618		102			
E5396619		0.7			
E5396620		4.3			
E5396621		0.9			
E5396622		0.2			
E5396623		<0.2			
E5396624		0.3			
E5396625		<0.2			
E5396626		37.0			
E5396627		<0.2			
E5396628		<0.2			

Certified By:

Omuna



AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

ATTENTION TO: BEN MOSSMAN

			Aqua Regia Digest - Ag,	AAS finish (201025)	
DATE SAMPLED: Oc	t 04, 2012		DATE RECEIVED: Oct 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Ag			
	Unit:	ppm			
Sample Description	RDL:	0.2			
E5396629		<0.2			
E5396630		<0.2			
E5396631		<0.2			
E5396632		<0.2			
E5396633		4.3			
E5396634		<0.2			
E5396635		<0.2			
E5396636		<0.2			
E5396637		<0.2			
E5396638		<0.2			
E5396639		0.4			
E5396640		<0.2			
E5396641		0.2			
E5396642		<0.2			
E5396643		<0.2			
E5396644		0.3			
E5396645		<0.2			
E5396646		<0.2			
E5396647		0.4			
E5396648		<0.2			
E5396649		2.0			
E5396650		4.0			



AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

#### ATTENTION TO: BEN MOSSMAN

				Fire Assay - Trace Au, IC	P-OES finish (202052)	
DATE SAMPLED: O	t 04, 2012			DATE RECEIVED: Oct 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Sample Login Weight	Au	Au-Grav		
	Unit:	kg	ppm	g/t		
Sample Description	RDL:	0.01	0.001	0.05		
E5396597		1.76	0.011			
E5396598		1.06	0.233			
E5396599		2.24	0.024			
E5396600		1.82	0.371			
E5396601		2.40	0.013			
E5396602		1.32	0.064			
E5396603		3.82	0.503			
E5396604		2.76	0.035			
E5396605		2.50	0.019			
E5396606		1.62	0.005			
E5396607		1.30	0.172			
E5396608		1.24	0.008			
E5396609		2.86	6.20			
E5396610		1.60	0.014			
E5396611		1.10	0.009			
E5396612		2.22	0.062			
E5396613		0.92	0.036			
E5396614		1.96	0.010			
E5396615		1.64	0.003			
E5396616		6.88	0.048			
E5396617		1.76	>10	70.6		
E5396618		0.84	>10	34.6		
E5396619		2.56	0.034			
E5396620		3.24	0.020			
E5396621		4.30	0.039			
E5396622		2.62	0.006			
E5396623		1.90	0.011			
E5396624		1.82	0.006			
E5396625		3.78	< 0.001			
E5396626		2.58	0.138			
E5396627		2.30	0.002			

Certified By:

bonura

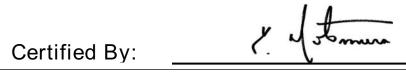


AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

#### ATTENTION TO: BEN MOSSMAN

				Fire Assay - Trace Au, ICI	P-OES finish (202052)	
DATE SAMPLED: Oc	t 04, 2012			DATE RECEIVED: Oct 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Sample Login Weight	Au	Au-Grav		
	Unit:	kg	ppm	g/t		
Sample Description	RDL:	0.01	0.001	0.05		
E5396628		2.26	0.008			
E5396629		2.40	0.020			
E5396630		2.26	0.010			
E5396631		2.00	0.005			
E5396632		1.78	<0.001			
E5396633		2.54	0.044			
E5396634		2.02	<0.001			
E5396635		1.96	0.002			
E5396636		1.96	0.006			
E5396637		2.16	0.004			
E5396638		1.94	0.010			
E5396639		2.76	0.002			
E5396640		1.34	0.001			
E5396641		2.72	0.023			
E5396642		3.04	0.001			
E5396643		4.44	0.012			
E5396644		4.08	0.003			
E5396645		6.48	7.67			
E5396646		2.66	0.081			
E5396647		1.74	0.002			
E5396648		1.60	0.003			
E5396649		2.32	0.004			
E5396650		0.38	0.039			





AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

### ATTENTION TO: BEN MOSSMAN Sodium Peroxide Eusion - ICP-OES finish (201079)

				Coura	II Peroxi				011 (2010	10)					
DATE SAMPLED: Oc	t 04, 2012			DATE REC	EIVED: Oct	04, 2012		DATE	REPORTE	D: Oct 19, 2	012	SAN	MPLE TYPE	Rock	
	Analyte:	AI	As	Са	Со	Cr	Cu	Fe	Pb	Mg	Mn	Мо	Ni	К	Si
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	RDL:	0.01	0.005	0.05	0.001	0.005	0.001	0.01	0.005	0.005	0.005	0.005	0.001	0.05	0.005
E5396597		6.16	<0.005	0.81	<0.001	0.009	0.025	1.60	0.006	0.381	0.052	0.009	<0.001	1.82	26.6
E5396598		5.64	<0.005	1.35	<0.001	0.013	0.033	2.28	<0.005	0.430	0.033	0.018	<0.001	1.58	33.0
E5396599		2.77	<0.005	1.45	0.001	0.012	0.026	4.10	<0.005	0.785	0.030	0.029	<0.001	0.75	27.8
E5396600		0.33	<0.005	< 0.05	<0.001	0.019	0.009	3.64	0.211	0.018	0.007	<0.005	<0.001	0.14	39.6
E5396601		3.66	<0.005	0.61	0.002	0.014	0.059	4.29	<0.005	0.975	0.028	0.005	0.002	1.01	30.3
E5396602		7.21	<0.005	1.24	<0.001	0.012	0.012	1.24	<0.005	0.352	0.033	<0.005	<0.001	2.56	30.4
E5396603		0.21	0.008	< 0.05	<0.001	0.017	0.409	6.38	0.007	0.012	0.006	<0.005	<0.001	0.08	38.2
E5396604		6.00	<0.005	1.16	<0.001	0.014	0.015	1.16	<0.005	0.229	0.047	0.005	<0.001	2.89	30.3
E5396605		1.63	<0.005	0.97	0.002	0.009	0.144	6.96	0.022	0.849	0.032	0.037	<0.001	0.31	32.6
E5396606		3.03	<0.005	0.99	0.002	0.009	0.073	4.06	<0.005	0.859	0.025	0.008	0.003	1.13	32.8
E5396607		3.69	0.007	0.48	<0.001	0.014	0.092	4.89	0.024	0.072	0.030	<0.005	<0.001	1.43	35.2
E5396608		6.60	<0.005	0.46	<0.001	0.012	0.013	1.11	<0.005	0.136	0.021	0.230	<0.001	5.70	32.0
E5396609		3.38	0.050	0.35	0.002	0.011	0.011	19.1	0.035	0.326	0.096	0.404	<0.001	1.76	21.0
E5396610		2.96	<0.005	0.44	<0.001	0.014	0.008	0.99	<0.005	0.317	0.013	<0.005	<0.001	1.20	36.7
E5396611		2.63	<0.005	1.29	<0.001	0.013	0.050	3.05	<0.005	0.778	0.036	0.023	0.001	0.45	35.2
E5396612		2.85	<0.005	2.16	0.002	0.022	0.075	5.97	<0.005	1.29	0.130	0.452	0.001	1.90	32.7
E5396613		5.48	0.011	1.26	0.010	0.009	0.073	15.2	0.033	0.981	0.065	0.005	<0.001	2.06	20.4
E5396614		2.76	<0.005	4.06	0.002	0.010	0.051	14.4	0.011	5.01	0.118	<0.005	<0.001	1.12	23.9
E5396615		6.59	<0.005	1.19	<0.001	0.014	0.003	0.77	<0.005	0.135	0.045	0.007	<0.001	6.33	31.4
E5396616		5.40	<0.005	0.47	0.002	0.016	0.044	5.34	0.013	1.42	0.047	0.045	<0.001	1.56	31.4
E5396617		0.16	0.019	< 0.05	0.005	0.005	1.13	28.9	0.047	<0.005	0.005	<0.005	<0.001	<0.05	10.9
E5396618		0.16	0.022	<0.05	<0.001	0.015	0.186	13.0	0.038	<0.005	0.009	<0.005	<0.001	0.05	24.4
E5396619		6.88	<0.005	0.72	<0.001	0.027	0.005	0.35	<0.005	0.157	0.016	0.011	<0.001	2.90	34.3
E5396620		0.68	<0.005	0.53	<0.001	0.025	0.022	0.80	<0.005	0.193	0.026	<0.005	<0.001	0.25	41.2
E5396621		4.46	<0.005	3.48	0.002	0.008	0.043	6.61	<0.005	4.57	0.067	<0.005	<0.001	1.55	26.6
E5396622		5.18	<0.005	0.32	<0.001	0.012	0.007	2.27	<0.005	2.13	0.027	<0.005	<0.001	2.12	34.5
E5396623		2.28	<0.005	0.24	<0.001	0.025	0.002	0.73	<0.005	0.715	0.016	<0.005	0.005	1.89	25.3
E5396624		7.46	<0.005	1.34	<0.001	0.023	0.015	2.04	<0.005	0.495	0.037	<0.005	0.001	3.13	33.1
E5396625		6.13	<0.005	1.17	<0.001	0.012	0.003	1.30	0.044	0.323	0.030	<0.005	<0.001	2.40	25.8
E5396626		0.36	<0.005	2.31	<0.001	0.014	0.022	5.91	0.015	0.066	0.155	<0.005	<0.001	0.17	35.9
E5396627		6.34	<0.005	6.38	0.002	0.013	0.019	4.55	<0.005	1.46	0.119	0.006	0.006	1.71	26.9
E5396628		7.77	<0.005	3.29	0.002	0.016	0.015	4.38	<0.005	1.11	0.060	0.014	0.013	1.17	28.3

Certified By:

mura



AGAT WORK ORDER: 12D649402

PROJECT NO:

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

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

				Sodiu	m Peroxi	de Fusic	on - ICP-0	DES fini	sh (2010	79)					
DATE SAMPLED: Oc	t 04, 2012			DATE REC	EIVED: Oct	04, 2012		DATE	REPORTED	D: Oct 19, 2	012	SAN	MPLE TYPE:	Rock	
	Analyte:	Al	As	Са	Со	Cr	Cu	Fe	Pb	Mg	Mn	Мо	Ni	К	Si
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	RDL:	0.01	0.005	0.05	0.001	0.005	0.001	0.01	0.005	0.005	0.005	0.005	0.001	0.05	0.005
E5396629		7.90	<0.005	0.84	0.002	0.019	0.008	4.42	<0.005	2.33	0.084	<0.005	0.003	2.54	28.5
E5396630		6.75	<0.005	0.95	<0.001	0.020	0.007	1.13	<0.005	0.283	0.031	<0.005	<0.001	3.52	31.5
E5396631		6.76	<0.005	1.13	<0.001	0.020	0.005	1.39	<0.005	0.219	0.044	<0.005	0.001	2.43	31.4
E5396632		0.60	<0.005	< 0.05	<0.001	0.027	0.001	0.32	<0.005	0.036	0.008	<0.005	0.023	0.24	42.0
E5396633		0.81	<0.005	<0.05	<0.001	0.026	0.041	2.76	<0.005	0.025	0.007	<0.005	<0.001	0.33	37.8
E5396634		7.36	<0.005	1.35	<0.001	0.022	0.011	2.45	<0.005	0.517	0.028	<0.005	0.002	2.30	27.8
E5396635		7.73	<0.005	1.25	<0.001	0.022	0.004	2.34	<0.005	0.435	0.035	<0.005	0.004	3.26	31.6
E5396636		4.38	<0.005	0.66	<0.001	0.019	0.013	3.57	<0.005	1.87	0.062	<0.005	0.003	1.24	34.4
E5396637		6.20	<0.005	0.96	0.001	0.023	0.009	4.53	<0.005	2.24	0.053	<0.005	0.003	0.95	32.7
E5396638		7.93	<0.005	3.74	0.001	0.033	0.007	5.03	<0.005	2.04	0.261	<0.005	0.008	4.20	22.4
E5396639		2.82	<0.005	0.74	<0.001	0.014	0.018	2.02	<0.005	0.991	0.021	<0.005	0.001	1.15	31.9
E5396640		6.80	<0.005	0.25	<0.001	0.015	0.010	2.84	<0.005	1.72	0.022	<0.005	0.002	2.90	29.6
E5396641		5.89	<0.005	1.55	<0.001	0.019	0.005	1.87	<0.005	0.465	0.043	0.041	0.001	2.04	22.5
E5396642		6.83	<0.005	1.10	<0.001	0.022	0.009	1.50	<0.005	0.336	0.036	<0.005	0.003	2.54	28.7
E5396643		7.22	0.010	1.07	0.003	0.044	0.034	8.00	<0.005	1.98	0.051	<0.005	0.015	0.56	23.0
E5396644		5.31	<0.005	1.14	<0.001	0.021	0.022	3.26	<0.005	0.834	0.028	<0.005	0.004	1.67	29.2
E5396645		2.42	<0.005	0.19	0.008	0.013	0.090	15.6	0.037	0.540	0.014	<0.005	0.006	0.42	13.1
E5396646		7.15	<0.005	2.61	0.005	0.013	0.183	17.9	<0.005	0.908	0.023	<0.005	0.003	1.05	18.2
E5396647		1.56	<0.005	0.34	<0.001	0.019	0.002	0.96	<0.005	0.378	0.012	<0.005	<0.001	0.38	38.2
E5396648		1.08	<0.005	34.5	<0.001	0.022	0.004	1.22	<0.005	1.19	0.345	<0.005	0.004	0.34	7.43
E5396649		1.16	<0.005	7.85	<0.001	0.018	0.028	1.36	<0.005	0.468	0.092	<0.005	<0.001	0.41	34.5
E5396650		4.44	0.013	0.87	<0.001	0.026	0.017	5.62	<0.005	0.598	0.027	<0.005	0.008	2.06	32.4

mura Certified By:



AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

				Sodiu	m Peroxi	ide Fusio	n - ICP-OES finish (201079)	
DATE SAMPLED: Oc	t 04, 2012			DATE REC	EIVED: Oct	1 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	S	Sn	Ti	V	Zn		
	Unit:	%	%	%	%	%		
Sample Description	RDL:	0.01	0.005	0.005	0.005	0.005		
E5396597		0.52	0.009	0.181	<0.005	0.032		
E5396598		1.54	0.015	0.089	<0.005	0.017		
E5396599		3.07	0.013	0.127	0.007	0.007		
E5396600		3.93	0.025	<0.005	<0.005	0.007		
E5396601		2.31	0.017	0.203	0.015	0.014		
E5396602		0.25	0.015	0.145	<0.005	0.009		
E5396603		7.37	0.009	<0.005	<0.005	0.013		
E5396604		0.42	0.011	0.118	<0.005	0.010		
E5396605		3.99	0.013	0.028	<0.005	0.006		
E5396606		2.79	0.015	0.167	0.008	0.005		
E5396607		5.33	0.025	0.015	<0.005	0.059		
E5396608		1.15	0.014	0.033	<0.005	0.011		
E5396609		21.8	0.017	0.247	<0.005	0.011		
E5396610		0.35	0.021	0.065	0.013	< 0.005		
E5396611		1.36	0.012	0.163	0.021	0.006		
E5396612		5.59	0.014	0.207	< 0.005	0.137		
E5396613		15.2	0.008	0.094	0.014	0.014		
E5396614		7.54	0.010	0.245	0.016	0.020		
E5396615		0.59	0.018	0.096	<0.005	<0.005		
E5396616		4.04	0.029	0.161	0.010	0.648		
E5396617		32.5	0.016	<0.005	<0.005	0.093		
E5396618		17.5	0.012	<0.005	<0.005	6.25		
E5396619		0.09	0.013	0.024	<0.005	0.017		
E5396620		0.52	0.022	0.018	<0.005	0.010		
E5396621		3.31	0.012	0.306	0.014	0.013		
E5396622		0.32	0.019	0.367	<0.005	<0.005		
E5396623		0.10	0.019	0.075	<0.005	<0.005		
E5396624		0.47	0.029	0.235	<0.005	0.011		
E5396625		0.30	0.020	0.126	<0.005	<0.005		
E5396626		6.15	0.017	<0.005	<0.005	0.024		
E5396627		2.16	0.013	0.295	0.032	0.012		
E5396628		2.47	0.012	0.402	0.071	0.008		

Certified By:

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AGAT WORK ORDER: 12D649402 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

ATTENTION TO: BEN MOSSMAN

				Sodiu	m Peroxi	de Fusion	- ICP-OES finish (201079)	
DATE SAMPLED: Oc	t 04, 2012			DATE REC	EIVED: Oct	: 04, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	S	Sn	Ti	V	Zn		
	Unit:	%	%	%	%	%		
Sample Description	RDL:	0.01	0.005	0.005	0.005	0.005		
E5396629		0.78	0.020	0.472	0.013	0.010		
E5396630		0.39	0.028	0.112	<0.005	<0.005		
E5396631		0.24	0.028	0.124	<0.005	0.008		
E5396632		0.04	0.027	0.012	<0.005	<0.005		
E5396633		2.60	0.038	0.016	<0.005	<0.005		
E5396634		0.43	0.031	0.234	<0.005	0.006		
E5396635		0.38	0.019	0.206	<0.005	0.007		
E5396636		0.63	0.018	0.182	0.027	0.010		
E5396637		1.35	0.025	0.324	0.014	0.016		
E5396638		1.01	0.021	0.209	0.017	0.009		
E5396639		1.10	0.013	0.202	<0.005	<0.005		
E5396640		0.48	0.021	0.338	0.012	0.010		
E5396641		0.49	0.013	0.184	<0.005	0.008		
E5396642		0.24	0.029	0.135	<0.005	0.011		
E5396643		6.16	0.016	0.349	0.017	0.006		
E5396644		1.54	0.018	0.266	0.009	0.006		
E5396645		13.3	0.020	0.086	<0.005	<0.005		
E5396646		10.6	0.020	0.154	0.011	0.015		
E5396647		0.24	0.021	0.052	<0.005	<0.005		
E5396648		0.74	0.020	0.033	<0.005	<0.005		
E5396649		0.47	0.020	0.036	<0.005	0.034		
25396650		4.22	0.018	0.241	0.033	0.112		

mura Certified By:



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

# **Quality Assurance**

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

PROJECT NO:

### AGAT WORK ORDER: 12D649402

			Solic	d Anal	ysis						
RPT Date: Oct 19, 2012			REPLIC	CATE				REFEF	RENCE MATE	RIAL	
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result	Expect	Recovery	Accepta	ble Limits
							Value	Value		Lower	Upper
Fire Assay - Trace Au, ICP-OES finish	. ,	0700747	0.0111	0.0407	40.40/	. 0.001	4 57	4.50	100%	00%	4400/
Au	1	3783747	0.0111	0.0127	13.4%	< 0.001	1.57	1.52	103%	90%	110%
Aqua Regia Digest - Ag, AAS finish (2	201025)										
Ag	1	3783747	2.6	2.6	0.0%	< 0.2	13.3	13.0	102%	80%	120%
Sodium Peroxide Fusion - ICP-OES fi	inish (201079	9)									
AI	1	3783747	6.16	6.56	6.3%	< 0.01	4.12	4.30	95%	80%	120%
As	1	3783747	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Са	1	3783747	0.816	0.911	11.0%	< 0.05	2.02	2.21	91%	80%	120%
Со	1	3783747	< 0.001	< 0.001	0.0%	< 0.001	0.0635	0.0672	95%	80%	120%
Cr	1	3783747	0.0090	0.0118	26.9%	< 0.005	0.0397	0.0320	124%	80%	120%
Cu	1	3783747	0.0254	0.0263	3.5%	< 0.001	1.144	1.185	97%	80%	120%
-e	1	3783747	1.60	1.77	10.1%	< 0.01	23.62	25.54	92%	80%	120%
Pb	1	3783747	0.0059	0.0066	11.2%	< 0.005	20102	20101	0270	80%	120%
Mg	1	3783747	0.381	0.371	2.7%	< 0.005	1.72	1.790	96%	80%	120%
Mg Mn	1	3783747	0.052	0.056	7.4%	< 0.005	0.069	0.0703	98%	80%	120%
****		0100141	0.002	0.000	7.470	4 0.000	0.000	0.0700	0070	0070	12070
Мо	1	3783772	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Ni	1	3783747	< 0.001	< 0.001	0.0%	< 0.001	1.87	1.953	96%	80%	120%
K	1	3783747	1.82	2.05	11.9%	< 0.05	0.6	0.6	93%	80%	120%
Si	1	3783747	26.6	29.7	11.0%	< 0.005	13.91	15.23	91%	80%	120%
S	1	3783747	0.52	0.55	5.6%	< 0.01	13.72	14.14	97%	80%	120%
Sn	1	3783772	0.019	0.024	23.3%	< 0.005				80%	120%
Ti	1	3783747	0.181	0.196	8.0%	< 0.005				80%	120%
V	1	3783747	< 0.005	< 0.005	0.0%	< 0.005	0.00961	0.00825	116%	80%	120%
Zn	1	3783747	0.032	0.035	9.0%	< 0.005	0.0262	0.0235	112%	80%	120%
Fire Assay - Trace Au, ICP-OES finish	n (202052)										
Au	1	3783759	6.20	6.12	1.3%	< 0.001				90%	110%
Fire Assay - Trace Au, ICP-OES finish	. ,				~~~~						
Au	1	3783772	0.0055	0.0042	26.8%	< 0.001				90%	110%
Fire Assay - Trace Au, ICP-OES finish	า (202052)										
Au	1	3783784	< 0.001	< 0.001	0.0%	< 0.001				90%	110%
	(0000000)										
Fire Assay - Trace Au, ICP-OES finish	. ,										
Au	1	3783797	0.002	0.012		< 0.001				90%	110%
Aqua Regia Digest - Ag, AAS finish (ź	201025)										
Ag	1	3783772	0.2	0.2	0.0%	< 0.2	13.4	13.0	103%	80%	120%
-		=									
Aqua Regia Digest - Ag, AAS finish (2	201025)										
Ag	1	3783787	< 0.2	< 0.2	0.0%	< 0.2	13.8	13.0	106%	80%	120%
Aqua Regia Digest - Ag, AAS finish (2	201025)										
Ag	1	3783797	0.4	0.4	0.0%	< 0.2				80%	120%
Rodium Porovido Eucion - ICD OF0 #	inich (20107	ום									
Sodium Peroxide Fusion - ICP-OES fi	msn (2010/S	3)									



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

# **Quality Assurance**

CLIENT NAME: BANKS ISLAND GOLD LTD.

PROJECT NO:

AGAT WORK ORDER: 12D649402

ATTENTION TO: BEN MOSSMAN

		Solic	Anal	ysis (C	Conti	nued)					
RPT Date: Oct 19, 2012			REPLIC	CATE				REFE	RENCE MATE	RIAL	
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result	Expect	Recovery	Accepta	ble Limits
FARAMETER	Balch	Sample lu	Original	Rep #1	RFD		Value	Value	Recovery	Lower	Upper
AI	1	3783797	1.49	1.55	3.9%	< 0.01				80%	120%
As	1	3783797	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Са	1	3783797	0.66	0.70	5.9%	< 0.05				80%	120%
Co	1	3783797	< 0.001	< 0.001	0.0%	< 0.001				80%	120%
Cr	1	3783797	0.0186	0.0174	6.7%	< 0.005				80%	120%
Cu	1	3783797	0.002	0.005		< 0.001	3.089	3.069	101%	80%	120%
Fe	1	3783797	0.92	0.94	2.2%	< 0.01				80%	120%
Pb	1	3783797	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Mg	1	3783797	0.338	0.342	1.2%	< 0.005				80%	120%
Mn	1	3783797	0.012	0.012	0.0%	< 0.005				80%	120%
Мо	1	3783797	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Ni	1	3783797	< 0.001	< 0.001	0.0%	< 0.001				80%	120%
К	1	3783797	0.378	0.405	6.9%	< 0.05				80%	120%
Si	1	3783797	40.1	44.8	11.1%	< 0.005	16.16	15.23	106%	80%	120%
S	1	3783797	0.24	0.25	4.1%	< 0.01				80%	120%
Sn	1	3783797	0.021	0.021	0.0%	< 0.005				80%	120%
Ti	1	3783797	0.052	0.054	3.8%	< 0.005	0.07	0.07	101%	80%	120%
V	1	3783797	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Zn	1	3783797	< 0.005	< 0.005	0.0%	< 0.005				80%	120%

Certified By:



### Method Summary

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

AGAT WORK ORDER: 12D649402 ATTENTION TO: BEN MOSSMAN

PROJECT NO:		ATTENTION TO:	BEN MOSSMAN
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12032		AAS
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Au-Grav			GRAVIMETRIC
AI	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/OES
Са	MIN-200-12001		ICP/OES
Со	MIN-200-12001		ICP/OES
Cr	MIN-200-12001		ICP/OES
Cu	MIN-200-12001		ICP/OES
Fe	MIN-200-12001		ICP/OES
Pb	MIN-200-12001		ICP/OES
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Мо	MIN-200-12001		ICP/OES
Ni	MIN-200-12001		ICP/OES
к	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
S	MIN-200-12001		ICP/OES
Sn	MIN-200-12001		ICP/OES
Ті	MIN-200-12001		ICP/OES
V	MIN-200-12001		ICP/OES
Zn	MIN-200-12001		ICP/OES



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

CLIENT NAME: BANKS ISLAND GOLD LTD. 880-580 HORNBY STREET VANCOUVER, BC V6C3B6 (604) 245-0066

ATTENTION TO: BEN MOSSMAN

PROJECT NO:

AGAT WORK ORDER: 12D640431

SOLID ANALYSIS REVIEWED BY: Yufei Chen, Analyst

DATE REPORTED: Oct 19, 2012

PAGES (INCLUDING COVER): 12

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.



## Certificate of Analysis

AGAT WORK ORDER: 12D640431 PROJECT NO:

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

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

			Aqua Regia Digest - Ag,	AAS finish (201025)	
DATE SAMPLED: Se	p 11, 2012		DATE RECEIVED: Sep 11, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Ag			
	Unit:	ppm			
Sample Description	RDL:	0.2			
E5396560		3.4			
E5396561		<0.2			
E5396562		19.4			
E5396563		14.1			
E5396564		6.5			
E5396565		0.7			
E5396566		<0.2			
E5396567		<0.2			
E5396568		7.7			
E5396569		3.1			
E5396570		<0.2			
E5396571		1.5			
E5396572		30.4			
E5396573		6.8			
E5396574		1.1			
E5396575		15.8			
E5396576		6.5			
E5396577		<0.2			
E5396578		96.2			
E5396579		5.9			
E5396580		<0.2			
E5396581		<0.2			
E5396582		65.7			
E5396583		65.0			
E5396584		<0.2			
E5396585		6.6			
E5396586		<0.2			
E5396587		0.3			
E5396588		1.3			
E5396589		<0.2			
E5396590		<0.2			
E5396591		12.9			

Certified By:

y. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

ATTENTION TO: BEN MOSSMAN

	Aqua Regia Digest - Ag, AAS finish (201025)													
DATE SAMPLED: Se	p 11, 2012		DATE RECEIVED: Sep 11, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock									
	Analyte:	Ag												
	Unit:	ppm												
Sample Description	RDL:	0.2												
E5396592		<0.2												
E5396593		<0.2												
E5396594		<0.2												
E5396595		<0.2												
E5396596		<0.2												

Certified By:

J. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

				Fire	Assay - Trace Au, ICI	P-OES finish (202052)	
DATE SAMPLED: Sep	o 11, 2012			DATE REC	EIVED: Sep 11, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	Sample Login Weight	Au	Au-Grav			
	Unit:	kg	ppm	g/t			
Sample Description	RDL:	0.01	0.001	0.05			
E5396560		1.68	7.68				
E5396561		2.06	0.062				
E5396562		1.76	3.24				
E5396563		2.32	1.77				
E5396564		1.28	>10	22.3			
E5396565		1.30	0.086				
E5396566		1.28	2.15				
E5396567		2.92	9.64				
E5396568		1.28	0.886				
E5396569		2.24	0.316				
E5396570		1.08	0.006				
E5396571		3.32	0.020				
E5396572		0.72	0.137				
E5396573		1.56	0.042				
E5396574		3.54	0.020				
E5396575		2.16	0.065				
E5396576		1.34	0.019				
E5396577		2.32	0.003				
E5396578		1.58	0.194				
E5396579		3.30	0.030				
E5396580		4.84	0.009				
E5396581		2.58	0.003				
E5396582		0.76	0.456				
E5396583		1.64	0.568				
E5396584		2.50	0.004				
E5396585		2.90	0.024				
E5396586		2.10	0.049				
E5396587		1.34	0.004				
E5396588		3.36	0.103				
E5396589		2.98	0.061				
E5396590		1.62	0.004				

Certified By:

y. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

ATTENTION TO: BEN MOSSMAN

	Fire Assay - Trace Au, ICP-OES finish (202052)													
DATE SAMPLED: Se	ep 11, 2012			DATE RECE	IVED: Sep 11, 2012	DATE REPORTED: Oct 19, 201	2 SAMPLE TYPE: Rock							
	Analyte:	Sample Login Weight	Au	Au-Grav										
	Unit:	kg	ppm	g/t										
Sample Description	RDL:	0.01	0.001	0.05										
E5396591		2.48	0.004											
E5396592		1.46	0.020											
E5396593		1.34	0.132											
E5396594		2.06	0.022											
E5396595		2.44	0.138											
E5396596		3.60	0.027											

Certified By:

y. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

### ATTENTION TO: BEN MOSSMAN Sodium Peroxide Eusion - ICP-OES finish (201079)

DATE SAMPLED: Se	n 11 2012				EIVED: Sep	11 2012			REPORTED	). Oct 10, 2	012	SVI	MPLE TYPE:	Pock	
DATE SAMPLED. SE	p 11, 2012					0 11, 2012									
	Analyte:	Al	As	Ca	Co	Cr	Cu	Fe	Pb	Mg	Mn	Мо	Ni	К	Si
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	RDL:	0.01	0.005	0.05	0.001	0.005	0.001	0.01	0.005	0.005	0.005	0.005	0.001	0.05	0.005
E5396560		6.45	0.036	<0.05	0.001	0.042	0.004	10.9	0.006	0.128	0.016	<0.005	0.014	2.97	26.7
E5396561		8.64	0.015	0.58	0.002	0.028	0.010	6.30	<0.005	2.39	0.066	<0.005	0.008	4.18	21.9
E5396562		6.60	0.047	<0.05	0.001	0.059	0.006	6.65	<0.005	0.413	0.018	<0.005	0.019	3.43	26.9
E5396563		9.50	0.031	0.16	0.002	0.023	0.016	6.65	0.011	0.791	0.026	<0.005	0.003	5.25	26.2
E5396564		6.04	0.064	<0.05	<0.001	0.028	0.012	12.8	0.017	0.210	0.018	<0.005	<0.001	2.84	24.6
E5396565		5.13	0.064	11.6	<0.001	0.042	0.006	2.28	<0.005	0.377	0.077	<0.005	0.014	1.59	23.3
E5396566		1.82	0.280	0.14	0.010	0.063	0.044	27.4	0.005	0.355	0.041	<0.005	0.030	0.65	17.0
E5396567		0.62	<0.005	< 0.05	0.001	0.034	0.003	25.8	<0.005	0.037	0.010	< 0.005	0.009	0.30	19.2
E5396568		1.27	0.526	0.05	0.006	0.055	0.015	23.1	<0.005	0.096	0.018	<0.005	0.020	0.65	20.8
E5396569		0.98	0.028	< 0.05	0.010	0.059	0.040	37.3	0.011	0.149	0.022	< 0.005	0.023	0.36	4.46
E5396570		2.07	<0.005	29.5	0.001	0.067	0.013	2.02	<0.005	0.603	0.542	<0.005	0.027	0.70	5.91
E5396571		7.20	<0.005	1.04	<0.001	0.019	0.039	1.61	<0.005	0.070	0.034	0.010	0.002	2.75	34.9
E5396572		1.68	<0.005	1.21	<0.001	0.017	0.055	1.52	0.015	0.111	0.109	<0.005	<0.001	1.29	36.2
E5396573		5.77	<0.005	0.51	0.002	0.022	0.307	9.92	<0.005	0.235	0.053	0.199	0.003	4.27	25.6
E5396574		7.36	<0.005	1.00	<0.001	0.040	0.027	1.78	<0.005	0.285	0.048	0.006	0.008	5.26	33.0
E5396575		5.13	<0.005	2.67	<0.001	0.054	0.020	1.76	0.009	0.129	0.122	0.473	0.016	5.92	33.9
E5396576		2.01	<0.005	3.35	<0.001	0.018	0.056	4.21	<0.005	0.772	0.226	0.093	0.001	1.91	34.3
E5396577		10.2	<0.005	2.67	<0.001	0.013	0.046	4.85	<0.005	1.19	0.032	0.015	0.002	2.04	27.7
E5396578		3.70	<0.005	1.01	0.004	0.021	0.572	14.1	0.036	2.69	0.159	<0.005	0.005	2.70	22.4
E5396579		1.62	<0.005	< 0.05	0.001	0.024	0.126	12.9	<0.005	1.59	0.021	<0.005	0.007	0.60	23.2
E5396580		4.36	<0.005	0.71	<0.001	0.029	0.133	17.7	<0.005	1.17	0.068	0.006	0.019	1.21	24.4
E5396581		3.84	<0.005	1.49	0.001	0.020	0.014	4.48	<0.005	0.781	0.028	<0.005	0.003	0.99	37.9
E5396582		0.95	<0.005	0.36	<0.001	0.031	0.009	2.46	0.023	0.067	0.031	< 0.005	0.006	0.53	44.2
E5396583		0.63	<0.005	3.05	<0.001	0.019	0.013	5.37	0.031	0.067	0.232	<0.005	<0.001	0.29	34.9
E5396584		1.13	<0.005	0.15	0.001	0.031	0.039	7.07	<0.005	0.528	0.025	< 0.005	0.009	0.60	39.2
E5396585		8.52	<0.005	1.51	<0.001	0.011	0.038	2.42	<0.005	0.632	0.061	1.42	<0.001	4.34	28.2
E5396586		7.39	<0.005	2.47	<0.001	0.008	0.003	3.32	<0.005	0.858	0.043	0.006	<0.001	1.19	22.0
E5396587		1.42	<0.005	2.15	<0.001	0.021	0.001	1.20	<0.005	0.263	0.033	<0.005	<0.001	0.33	40.6
E5396588		7.41	0.009	7.31	< 0.001	0.009	0.004	5.75	<0.005	0.948	0.065	<0.005	<0.001	2.87	21.3
E5396589		9.27	<0.005	1.88	0.001	0.005	0.011	4.46	<0.005	1.37	0.087	0.008	<0.001	3.62	25.7
E5396590		8.05	0.006	2.65	0.003	0.021	0.018	6.12	<0.005	2.15	0.119	<0.005	0.009	3.68	25.6
E5396591		0.98	0.007	9.86	0.001	0.014	0.078	4.67	0.137	1.82	0.226	<0.005	0.001	0.44	23.2

Certified By:

y. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

				Sodiu	m Peroxi	de Fusic	on - ICP-0	DES fini	sh (2010	79)					
DATE SAMPLED: Sep 11, 2012 DATE RECEIVED: Sep 11, 2012								DATE REPORTED: Oct 19, 2012 SAMPLE TYPE: Rock							
	Analyte:	Al	As	Са	Co	Cr	Cu	Fe	Pb	Mg	Mn	Мо	Ni	К	Si
	Unit:	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Sample Description	RDL:	0.01	0.005	0.05	0.001	0.005	0.001	0.01	0.005	0.005	0.005	0.005	0.001	0.05	0.005
E5396592		5.30	<0.005	7.32	<0.001	0.018	0.009	5.35	<0.005	1.42	0.227	<0.005	0.002	0.33	26.3
E5396593		6.06	0.031	0.78	0.001	0.022	0.012	4.90	<0.005	1.07	0.036	<0.005	0.002	2.81	33.2
E5396594		9.91	<0.005	0.44	0.002	0.016	0.020	5.96	<0.005	1.99	0.073	< 0.005	0.005	2.72	25.2
E5396595		3.91	<0.005	0.27	0.002	0.013	0.042	10.5	<0.005	0.902	0.037	<0.005	0.002	1.43	26.7
E5396596		6.78	0.015	3.45	0.004	0.008	0.059	12.6	<0.005	3.34	0.236	< 0.005	<0.001	1.84	21.5

Certified By:

y. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

				Sodiu	m Peroxi	ide Fusic	n - ICP-OES finish (201079)	
DATE SAMPLED: Sep	o 11, 2012			DATE REC	EIVED: Sep	0 11, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	S	Sn	Ti	V	Zn		
	Unit:	%	%	%	%	%		
Sample Description	RDL:	0.01	0.005	0.005	0.005	0.005		
E5396560		12.6	0.014	0.252	0.010	<0.005		
E5396561		4.44	0.016	0.284	0.027	0.006		
E5396562		7.11	0.023	0.269	0.014	0.015		
E5396563		7.32	0.024	0.311	0.027	0.009		
E5396564		0.57	0.027	0.263	0.014	0.006		
E5396565		1.59	0.017	0.168	0.014	<0.005		
E5396566		27.6	0.020	0.063	0.010	0.040		
E5396567		31.0	0.023	0.007	<0.005	<0.005		
E5396568		26.8	0.030	0.036	<0.005	<0.005		
E5396569		46.0	0.032	0.032	<0.005	<0.005		
E5396570		1.12	0.021	0.055	0.005	0.006		
E5396571		1.31	0.012	0.022	<0.005	<0.005		
E5396572		3.69	0.014	0.017	<0.005	4.58		
E5396573		10.7	0.021	0.048	<0.005	0.010		
E5396574		1.18	0.030	0.111	<0.005	0.006		
E5396575		2.16	0.021	0.038	<0.005	0.051		
E5396576		4.29	0.014	0.046	<0.005	0.026		
E5396577		2.59	0.007	0.220	0.016	0.013		
E5396578		15.1	0.013	0.077	0.014	0.542		
E5396579		8.44	0.017	0.036	0.007	0.014		
E5396580		11.0	0.027	0.249	0.022	0.017		
E5396581		2.77	0.021	0.261	0.012	<0.005		
E5396582		2.36	0.014	0.017	<0.005	<0.005		
E5396583		6.08	0.018	<0.005	<0.005	0.012		
E5396584		4.26	0.010	0.045	0.007	0.005		
E5396585		2.43	0.011	0.255	<0.005	0.012		
E5396586		1.45	0.012	0.139	0.011	<0.005		
E5396587		0.11	0.021	0.044	<0.005	<0.005		
E5396588		4.38	0.015	0.179	0.015	<0.005		
E5396589		1.77	0.007	0.205	0.018	0.006		
E5396590		0.94	0.010	0.334	0.019	0.006		
E5396591		1.16	0.016	0.057	<0.005	0.285		

Certified By:

M. che



AGAT WORK ORDER: 12D640431 PROJECT NO: 5623 McADAM ROAD MISSISSAUGA, ONTARIO CANADA L4Z 1N9 TEL (905)501-9998 FAX (905)501-0589 http://www.agatlabs.com

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

ATTENTION TO: BEN MOSSMAN

				Sodiur	n Peroxi	ide Fusion -	ICP-OES finish (201079)	
DATE SAMPLED: Se	p 11, 2012			DATE REC	EIVED: Sep	o 11, 2012	DATE REPORTED: Oct 19, 2012	SAMPLE TYPE: Rock
	Analyte:	S	Sn	Ti	V	Zn		
	Unit:	%	%	%	%	%		
Sample Description	RDL:	0.01	0.005	0.005	0.005	0.005		
E5396592		1.15	0.023	0.247	0.015	<0.005		
E5396593		3.07	0.021	0.225	0.014	<0.005		
E5396594		2.42	0.019	0.306	0.012	0.005		
E5396595		6.16	0.014	0.163	0.010	0.005		
E5396596		6.19	0.014	0.150	0.021	0.010		

Certified By:

J. che



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

# Quality Assurance

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

PROJECT NO:

### AGAT WORK ORDER: 12D640431

			Solic	d Anal	ysis							
RPT Date: Oct 19, 2012			REPLIC	CATE				REFE	RENCE MATE	RIAL	RIAL	
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result	Expect	Recovery	Accepta	able Limits	
			-				Value	Value		Lower	Upper	
Fire Assay - Trace Au, ICP-OES Au	finish (202052) 1	3694735	7.68	8.26	7.3%	< 0.001	0.263	0.263	100%	90%	110%	
Au	I	3094735	7.00	0.20	1.3%	< 0.001	0.203	0.203	100 %	90%	11076	
Sodium Peroxide Fusion - ICP-0	DES finish (201079	9)										
AI	1	3694735	6.45	6.66	3.2%	< 0.01	4.41	4.30	102%	80%	120%	
As	1	3694735	0.0363	0.0420	14.6%	< 0.005				80%	120%	
Са	1	3694735	< 0.05	0.07		< 0.05	2.07	2.21	94%	80%	120%	
Со	1	3694735	0.001	0.001	0.0%	< 0.001	0.0669	0.0672	99%	80%	120%	
Cr	1	3694735	0.042	0.044	4.7%	< 0.005				80%	120%	
Cu	1	3694735	0.004	0.004	0.0%	< 0.001	1.192	1.185	101%	80%	120%	
Fe	1	3694735	10.9	11.3	3.6%	< 0.01	24.42	25.54	96%	80%	120%	
Pb	1	3694735	0.0062	0.0068	9.2%	< 0.005		20.01	0070	80%	120%	
Mg	1	3694735	0.128	0.131	2.3%	< 0.005	1.68	1.790	94%	80%	120%	
Mn	1	3694735	0.016	0.017	6.1%	< 0.005	1.00	1.7 00	0470	80%	120%	
IVIT	I	3094735	0.010	0.017	0.176	< 0.005				80%	120 %	
Мо	1	3694735	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Ni	1	3694735	0.014	0.013	7.4%	< 0.001	1.941	1.953	99%	80%	120%	
к	1	3694735	2.97	3.06	3.0%	< 0.01				80%	120%	
Si	1	3694735	26.7	27.2	1.9%	< 0.005	15.68	15.23	102%	80%	120%	
S	1	3694735	12.6	13.3	5.4%	< 0.01	14.5	14.14	103%	80%	120%	
C.a.	4	2004725	0.014	0.000		< 0.00F				0.00/	1000/	
Sn T:	1	3694735	0.014	0.020	0.49/	< 0.005				80%	120%	
Ti	1	3694735	0.252	0.258	2.4%	< 0.005				80%	120%	
V	1	3694735	0.010	0.010	0.0%	< 0.005				80%	120%	
Zn	1	3694735	< 0.005	< 0.005	0.0%	< 0.005	0.025	0.0235	106%	80%	120%	
Aqua Regia Digest - Ag, AAS fir	nish (201025)											
Ag	1	3694735	3.44	3.75	8.6%	< 0.2	13.2	13.0	101%	80%	120%	
	(											
Fire Assay - Trace Au, ICP-OES Au	tinish (202052) 1	3694747	0.137	0.208		< 0.001				90%	110%	
-nu	I	5054747	0.157	0.200		< 0.001				50 /8	11076	
Fire Assay - Trace Au, ICP-OES	finish (202052)											
Au	1	3694760	0.0235	0.0216	8.4%	< 0.001				90%	110%	
	(; ; , , (000050)											
Fire Assay - Trace Au, ICP-OES		0004774	0.007	0.007	0.00/					000/	44000	
Au	1	3694771	0.027	0.027	0.0%	< 0.001				90%	110%	
Sodium Peroxide Fusion - ICP-0	DES finish (201079	9)										
AI	<b>`</b> 1	3694760	8.52	8.35	2.0%	< 0.01				80%	120%	
As	1	3694760	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Са	1	3694760	1.51	1.51	0.0%	< 0.05				80%	120%	
Со	1	3694760	< 0.001	< 0.001	0.0%	< 0.001				80%	120%	
Cr	1	3694760	0.0113	0.0140	21.3%	< 0.005				80%	120%	
Cu	٨	2604700	0.0375	0.0254	6 60/	< 0.004	2 4 2 0	2 000	1000/	000/	1000/	
Cu Fa	1	3694760	0.0375	0.0351	6.6%	< 0.001	3.136	3.069	102%	80%	120%	
Fe	1	3694760	2.42	2.43	0.4%	< 0.01				80%	120%	
Pb	1	3694760	< 0.005	< 0.005	0.0%	< 0.005				80%	120%	
Mg	1	3694760	0.632	0.615	2.7%	< 0.01				80%	120%	
Mn	1	3694760	0.061	0.059	3.3%	< 0.005				80%	120%	



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

# **Quality Assurance**

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

PROJECT NO:

### AGAT WORK ORDER: 12D640431

#### ATTENTION TO: BEN MOSSMAN

Solid Analysis (Continued)											
RPT Date: Oct 19, 2012	REPLICATE					REFERENCE MATERIAL					
PARAMETER	Batch	Sample Id	Original	Rep #1	RPD	Method Blank	Result Value	Expect Value	Recovery -	Acceptable Limits	
										Lower	Upper
Мо	1	3694760	1.42	1.34	5.8%	< 0.005				80%	120%
Ni	1	3694760	< 0.001	< 0.001	0.0%	< 0.001				80%	120%
К	1	3694760	4.34	4.29	1.2%	< 0.01				80%	120%
Si	1	3694760	28.2	27.6	2.2%	< 0.005	17.3	15.23	113%	80%	120%
S	1	3694760	2.43	2.28	6.4%	< 0.01				80%	120%
Sn	1	3694760	0.011	0.027		< 0.005				80%	120%
Ті	1	3694760	0.255	0.248	2.8%	< 0.005	0.07	0.07	106%	80%	120%
V	1	3694760	< 0.005	< 0.005	0.0%	< 0.005				80%	120%
Zn	1	3694760	0.0116	0.0112	3.5%	< 0.005				80%	120%
Sodium Peroxide Fusion - ICP-OES fini	sh (201079	9)									
Al	1					< 0.01	4.42	4.30	103%	80%	120%
Са	1					< 0.05	2.05	2.21	93%	80%	120%
Со	1					< 0.001	0.0688	0.0672	102%	80%	120%
Cu	1					< 0.001	1.201	1.185	101%	80%	120%
Fe	1					< 0.01	24.43	25.54	96%	80%	120%
Mg	1					< 0.005	1.71	1.790	96%	80%	120%
Mn	1					< 0.005				80%	120%
Ni	1					< 0.001	1.924	1.953	99%	80%	120%
Si	1					< 0.005	15.84	15.23	104%	80%	120%
S	1					< 0.01	14.97	14.14	106%	80%	120%
Zn	1					< 0.005	0.0265	0.0235	113%	80%	120%
Aqua Regia Digest - Ag, AAS finish (20	1025)										
Ag	1	3694756	< 0.2	0.3		< 0.2	13.2	13.0	102%	80%	120%
Aqua Regia Digest - Ag, AAS finish (20	1025)										
Ag	1	3694760	6.56	6.47	1.4%	< 0.2	13.5	13.0	104%	80%	120%

Certified By:

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J. che



# Method Summary

#### CLIENT NAME: BANKS ISLAND GOLD LTD.

AGAT WORK ORDER: 12D640431 ATTENTION TO: BEN MOSSMAN

PROJECT NO:		ATTENTION TO: BEN MOSSMAN	
PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Solid Analysis			
Ag	MIN-200-12032		AAS
Sample Login Weight	MIN-12009		BALANCE
Au	MIN-200-12006	BUGBEE, E: A Textbook of Fire Assaying	ICP-OES
Au-Grav			GRAVIMETRIC
AI	MIN-200-12001		ICP/OES
As	MIN-200-12001		ICP/OES
Са	MIN-200-12001		ICP/OES
Со	MIN-200-12001		ICP/OES
Cr	MIN-200-12001		ICP/OES
Cu	MIN-200-12001		ICP/OES
Fe	MIN-200-12001		ICP/OES
Pb	MIN-200-12001		ICP/OES
Mg	MIN-200-12001		ICP/OES
Mn	MIN-200-12001		ICP/OES
Мо	MIN-200-12001		ICP/OES
Ni	MIN-200-12001		ICP/OES
κ	MIN-200-12001		ICP/OES
Si	MIN-200-12001		ICP/OES
S	MIN-200-12001		ICP/OES
Sn	MIN-200-12001		ICP/OES
Ті	MIN-200-12001		ICP/OES
V	MIN-200-12001		ICP/OES
Zn	MIN-200-12001		ICP/OES



### 12.0 APPENDIX C – PETROGRAPHIC STUDY



Summary: Banks Island Gold: SUITE E5396, seven polished thin sections:

This mini-suite of samples is rather diverse. The suite ranges from volcanogenic sediments to dykes to deeper plutonic rocks. The degree of alteration within the suite is also highly variable. In general the package consists of what can be interpreted as a classic continental arc sub-aerial suite. The maximum grade of metamorphism in rocks is lower greenschist with an almost typical greenstone assemblage of quartz, chlorite, albite, epidote, muscovite, clays, and carbonate in varying proportions. The level of tectonism within the suite is fairly low with some rocks showing no signs of foliation and others, such as E5396665, displaying a well developed foliation.

Sulphides concentrations within these specimens were relatively low. Typically pyrite was the more abundant sulphide, but pyrrhotite and chalcopyrite were relatively common accessory sulphides within most of the samples in this suite.

mable

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Sturta MUSTARD

Page 1

Peter Steele Mustard, Ph.D., M.Sc., B.Sc., P.Geo. Mustard Geologic Consulting

#### Petrographic Report: Sample E5396664 Polished Thin Section

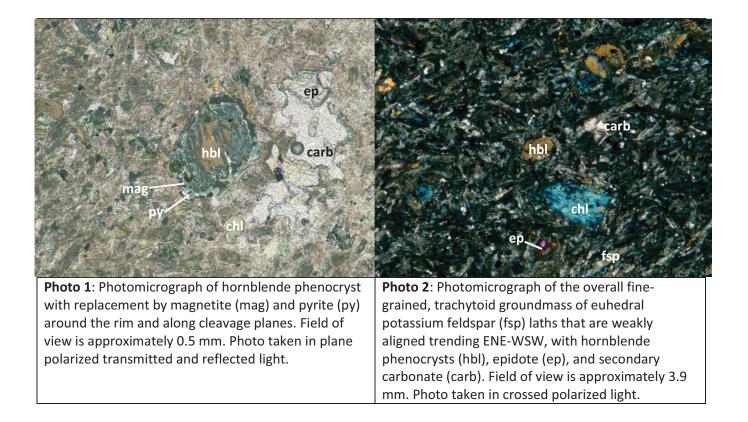
### General Rock type: chloritized hornblende trachyte

This rock is a moderately chloritized hornblende-phyric trachyte primarily consisting of euhedral feldspar laths, hornblende phenocrysts, chlorite, subhedral magnetite, secondary carbonate, minor primary quartz, biotite, and epidote. Trace minerals include anhedral pyrite and hexagonal prismatic apatite. Feldspar laths and hornblende phenocrysts are weakly aligned. Feldspar laths are heavily altered to illite and carbonate (± epidote), and it is therefore difficult to identify which feldspar is present. However, the offcut has been stained and took on a medium yellow stain, indicating the presence of potassium feldspar (likely sanidine) rather than albite. The hornblende is idiomorphic, displaying typical cleavages, pleochroism and interference colours. The hornblende phenocrysts are moderately replaced around the rims or completely replaced by chlorite, and rarely are replaced by magnetite and pyrite (photo 1) or carbonate. Biotite is very fine grained and mostly chloritized. The biotite is rare and generally replaces the hornblende. Chlorite is usually after hornblende, but also occurs as finer grained plates and may have replaced biotite. The chlorite is typical green in plane polarized light and exhibits classic berlin-blue pleochroism. Magnetite occurs as subhedral to euhedral grains disseminated throughout the section. Quartz is primary and ranges in size up to 150 microns. It is generally anhedral. Pyrite is anhedral, commonly has rims altered to hematite, and generally occurs with magnetite. Magnetite and pyrite are commonly coarser grained where they occur with hornblende. This indicates that there are probably two generations of magnetite. One is primary and the other associated with the destruction of the hornblende and the introduction of pyrite. The carbonate is an alteration of the primary rock and overprints primary feldspar and hornblende in some places. Prismatic epidote overprints feldspar. Apatite is hexagonal, prismatic and occurs with feldspar.

There is one large clast of relict albite attached to a similar sized grain of epidote. The epidote is likely after hornblende. The clast is approximately 0.5 mm in diameter and the feldspar laths comprising the bulk of the sample wrap around it. The clast is likely of igneous origin and supports a dyke genesis for this rock.

The offcut is light grey with small patches of dark chlorite and hornblende, and is magnetic. The thin section has an overall phenocrystic texture, with a fine-grained, trachytoid groundmass of euhedral potassium feldspar laths that are weakly aligned (photo 2) trending ENE-WSW relative to a hypothetical north at the top of the thin section. There are no veins or other tectonic structures exhibited by the sample.

Mineral	Modal Percent Abundance	Size Range (mm)
- potassium feldspar	38	Up to 0.6
- chlorite	24	Up to 2
- hornblende	15	0.1 to 1.5
- magnetite	10	Up to 0.1
- carbonate	8	Up to 1
- quartz	3	Up to 0.15
- epidote	2	Up to 0.2
- biotite	trace	Up to 0.02
- pyrite	trace	Up to 0.07
- apatite	trace	Up to 0.1



#### Petrographic Report: Sample E5396665 Polished Thin Section

### General Rock type: biotite schist

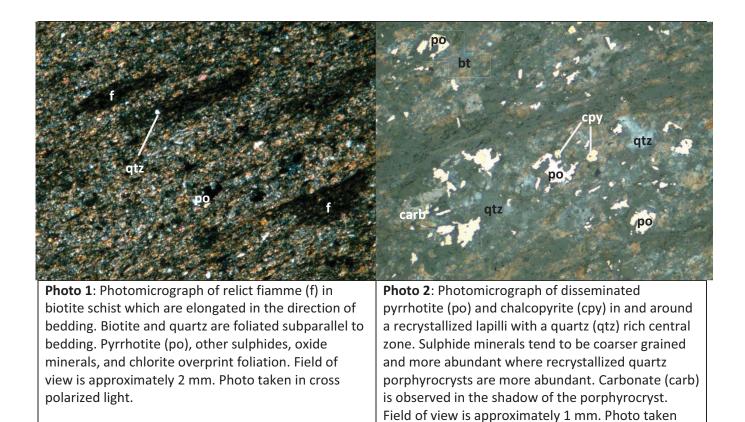
This rock is a strongly foliated biotite schist primarily consisting of biotite, quartz, and chlorite, with minor feldspar, pyrrhotite, muscovite, rutile, and magnetite. Trace mineral phases include anhedral chalcopyrite, anhedral to subhedral pyrite, anhedral pyrrhotite, anhedral sphalerite, and subhedral carbonate. The protolith to this schist was probably a mafic volcanogenic rock. Relict layering, defined by thin laminations and grain size differences, trends ENE-WSW across the section (assuming a hypothetical north as the top of the section). Relict fiamme (photo 1) occur in the bottom third of the section and are elongated in the direction of primary bedding. Biotite, feldspar, and recrystallized quartz lapilli surrounded by biotite shadows are foliated sub-parallel to relict bedding. There is only one foliation in the sample indicating a rather simple deformational history. Chlorite, sulphide minerals, oxide minerals, and carbonate overprint foliation. Muscovite appears to be after biotite and is not well foliated. Sulphide and oxide minerals are disseminated throughout the section. Sulphide minerals tend to be coarser grained and more abundant in layers with more recrystallized lapilli (see below) and less biotite (photo 2). Chalcopyrite is commonly associated with or intergrown with pyrrhotite. Magnetite is generally associated with pyrrhotite-chalcopyrite aggregates. Trace amounts of anhedral sphalerite are associated with anhedral pyrite. Carbonate is mostly restricted to the fiamme beds, and commonly associated with anhedral pyrite.

The layering within the sample is complex and ranges from sand-sized to silt-sized particles. There are approximately 20 different layers in the thin section although some layers are similar. The fiamme (Photo 1) are characteristic of volcanic tuff layers. The other interesting feature in this sample is the presence of elliptical structures. These structures are restricted to the coarser grained layers and range in length up to approximately 0.7 mm. The length to width ratio is approximately 2. Zonation within the structures ranges, but in general there is a polycrystalline quartz central area and an outer zone that is biotite rich. These cannot be vesicles as they occur with fine fiamme, and the most likely interpretation is that these are recrystallized air-fall lapilli.

The dominant sulphide in the rock is pyrrhotite. The pyrrhotite grain sizes range up to 0.2 mm and represent approximately 3 percent of the rock volume. The only two economic sulphides present are chalcopyrite and sphalerite. Their grain sizes range up to 50 microns and both are present in trace amounts. Chalcopyrite is the more abundant of the two minerals. There were only 2 grains of sphalerite, both very dark in colour indicating it is iron-rich. All of the sulphides appear to be the product of hydrothermal alteration in the rock. This minor sulphide mineralizing event took place after primary deposition of the volcanogenic sediments as a number of the sulphides are replacing the primary magnetite. Likewise, the sulphides and oxides are oriented parallel to the foliation and primary bedding suggesting that the hydrothermal event responsible for the deposition of the sulphides occurred either pre- or syn-deformation.

The offcut has been stained and the uppermost beds of the offcut took on a very pale yellow stain, indicating a very minor amount of potassium feldspar. In thin section, the potassium feldspar is difficult to identify due to its generally fine grain size. The offcut is light to medium grey. The thin section has an overall fine-grained, schistose texture.

Mineral	Modal Percent Abundance	Size Range (mm)
- biotite	60	0.05 to 0.2
- quartz	16	0.005 to 0.15
- chlorite	11	0.05 to 0.3
- potassium feldspar	4	Up to 0.2
- epidote	3	Up to 0.1
- pyrrhotite	3	0.001 to 0.2
- muscovite	1	Up to 0.2
- rutile	1	0.01 to 0.1
- magnetite	1	0.001 to 0.05
- chalcopyrite	trace	0.005 to 0.05
- pyrite	trace	0.001 to 0.06
- sphalerite	trace	0.01 to 0.05
- carbonate	trace	Up to 0.2



under partly crossed polarized transmitted and reflected light.

#### Petrographic Report: Sample E5396666 Polished Thin Section

#### General Rock type: laminated carbonaceous sandy siltstone

This rock is a sandy siltstone primarily consisting of laminations of silt to fine sand and minor coarse angular to rounded sand. A crystal tuff layer is present at the top centimeter of the thin section, comprising euhedral albite crystals (0.5 to 2 mm in diameter) and anhedral rounded quartz crystals (0.5 to 2 mm in diameter) in fine ash. Albite crystals occasionally have weak sericite alteration within the cores. The silt and sand (less than 0.25 mm) is dominated by quartz and albite while the finer grains are dominantly clays and very fine quartz and secondary feldspar. The clays are very fine, making exact identification tenuous, but the chemistry and primary mineralogy of the rock suggest these are likely illite and kaolinite. The offcut has been stained for potassium feldspar identification, but the groundmass material did not take on a yellow stain, indicating that potassium feldspar is not present in any appreciable amount. Clay content is greater where carbonate is less abundant. Weak iron oxidation overprints clay alteration. The bottom half of the section is dominantly carbonaceous siltstone with abundant recrystallized subhedral carbonate, weakly sericitized and carbonatized euhedral albite (0.5 to 2 mm diameter), secondary bladed muscovite, and trace chlorite. Sulphides occur throughout the thin section, but are about two to three times more abundant and coarser grained where carbonate is more abundant. Sulphide minerals include pyrite, pyrrhotite, and chalcopyrite. Pyrite is commonly euhedral and cubic, occasionally anhedral and rounded, and some contain inclusions of pyrrhotite and chalcopyrite (photo 1). Pyrrhotite is always anhedral and generally associated with chalcopyrite. It rarely contains inclusions of pyrite. Chalcopyrite in some occurrences contains inclusions of pyrrhotite and is much more abundant where carbonate is present.

Two types of vein are present, but their genetic relationship is difficult to determine as they do not intersect in the thin section and have relatively similar gangue mineralogy. Vein type 1 consists of one vein trending NNE that is 0.5 mm wide (assuming the top of the section as a hypothetical north). This vein is dominantly composed of quartz with minor carbonate and muscovite. This vein is overprinted by trace pyrite. The pyrite ranges up to approximately 30 microns in size. The mineralization within the vein is rare indicating that these veins were probably not highly mineralized.

Vein type 2 consists of several veins that are 0.5 to 2 mm wide and trend NNE to NE. These veins are composed dominantly of carbonate with minor quartz, pyrite, pyrrhotite, muscovite, and trace chalcopyrite (photo 2). Pyrite and pyrrhotite comprise 5 and 4 % of the vein respectively. The pyrite is in some occurrences rimmed by limonite of other hydrated iron oxides. The pyrite and sulphides in the second vein set are more prevalent than in vein set 1. Texturally the sulphides appear to have co-precipitated with the vein gangue minerals. The carbonate in the vein and rock reacts strongly to acid indicating it is likely calcite.

Fluid inclusions within quartz in the two vein sets are two-phase liquid and vapour fluid inclusions with highly variable liquid to vapour ratios, meaning there is no evidence that supports markedly different fluids being responsible for the two different vein sets. However the presence of contemporaneous gangue and sulphide minerals in vein set 2 versus what appears to be a sulphide overprint of vein set 1 would favour the interpretation that vein set 1 predates vein set 2.

Alteration around both vein sets is minimal in thin section, with virtually no alteration halo for vein set 1 and a cryptic alteration of very fine grained carbonate for vein set 2. No alteration around the vein sets is visible in the offcut material.

Mineral	Modal Percent Abundance	Size Range (mm)
Wall rock	97	
<ul> <li>carbonate (calcite)</li> </ul>	34	Up to 0.7
- albite	20	Up to 0.25; 0.5 to 2
- quartz	13	Up to 0.25; 0.5 to 2
- muscovite	2	0.05 to 0.5
- illite	8	Up to 0.01
- kaolinite	3	Up to 0.005
- chlorite	4	Up to 0.1
- pyrite	8	Up to 0.8
- pyrrhotite	8	0.005 to 0.4
- chalcopyrite	trace	0.001 to 0.02
- rutile	trace	0.001 to 0.15
Vein type 1	1	0.5 mm wide
- quartz	90	0.01 to 0.1
- carbonate	9	0.01 to 0.05
- muscovite	1	0.08 to 0.1
- pyrite	trace	Up to 30 microns
Vein type 2	2	0.5 to 2 mm wide
- carbonate	70	Up to 1.5
- quartz	20	0.001 to 0.5
- pyrite	5	0.01 to 0.3
- pyrrhotite	4	0.05 to 0.1
- muscovite	1	0.01 to 0.1
- chalcopyrite	trace	0.01 to 0.04

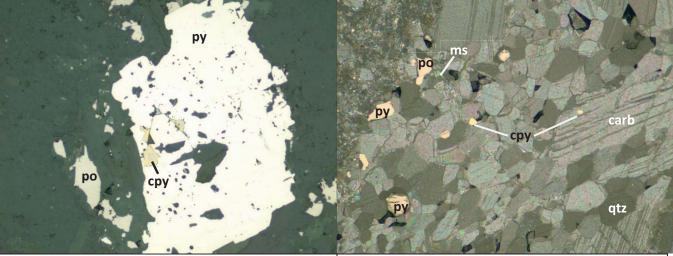


Photo 1: Photomicrograph of subhedral poikiliticPhotopyrite (py) containing inclusions of chalcopyrite (cpy)of cand pyrrhotite (po). Anhedral pyrrhotite is also(pypresent within the groundmass. Field of view ischaapproximately 0.5 mm. Photo taken in reflected crossFieldpolarized light.cros

**Photo 2**: Photomicrograph of type 2 vein consisting of carbonate (carb) with minor quartz (qtz), pyrite (py), pyrrhotite (po), muscovite (ms), and chalcopyrite (cpy). Pyrite is rimmed by limonite. Field of view is approximately 1 mm. Photo taken in crossed polarized and reflected light.

#### Petrographic Report: Sample E5396667 Polished Thin Section

General Rock type: layered volcaniclastic calcareous siltstone

This rock is a heavily altered volcaniclastic siltstone comprising three layers. From bottom to top of the thin section, these layers consist of altered and compressed, rounded volcanic and rock fragments in heavily altered matrix; a finely laminated layer that is foliated parallel to layering; and another layer of altered and compressed, rounded fragments and clasts in heavily altered matrix. Fragments in the first and third layers make up about 30-40% of the layers and are 1 to 6 mm wide, subrounded and compressed parallel to layering, and mostly composed of relict quartz and albite, and/or secondary carbonate, pyrite, biotite, illite, and sericite (photo 1). The groundmass is comprised of relict quartz and completely replaced feldspar, and secondary illite, sericite, carbonate, biotite, pyrite, pyrrhotite, and potassium feldspar. Trace minerals in the groundmass include chalcopyrite and marcasite. The groundmass has a generally microlitic to felty texture. Primary quartz is rounded and corroded around the edges. Relict euhedral feldspar (possibly albite) is nearly completely replaced by carbonate and sericite. Secondary illite and sericite are microlitic and intergrown with carbonate. Carbonate is ubiquitous throughout the thin section and is fine- to coarse-grained. Carbonate also forms patches and subhedral rhombs. The rock reacts with acid, thus the dominant carbonate is interpreted to be calcite.

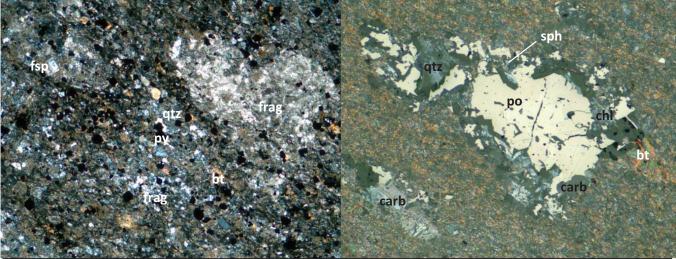
Mineral	Modal Percent Abundance	Size Range (mm)
Layers 1 and 3	85	
- carbonate	30	Up to 1
- illite	15	Up to 0.05
- biotite	15	0.01 to 0.4
- pyrite	12	0.01 to 0.5
- chlorite	8	0.01 to 0.1
- sericite	5	Up to 0.05
- potassium feldspar	5	Up to 0.02
- quartz	5	0.005 to 0.1
- pyrrhotite	2	0.01 to 0.2
- pyrite	2	0.05 to 0.2
- chalcopyrite	1	0.02 to 0.08
- marcasite	trace	0.1 to 0.3
Layer 2	15	
- biotite	35	Up to 0.2
- illite	20	Up to 0.03
- chlorite	13	Up to 0.02
- carbonate	12	Up to 0.4
- pyrrhotite	8	Up to 0.5
- quartz	7	0.03 to 0.3
- pyrite	5	Up to 0.5
- sphalerite	trace	up to 0.02
- epidote	trace	0.02
- chalcopyrite	trace	0.01 to 0.05
- rutile	trace	Up to 0.01
- sphene	trace	Up to 0.01

groundmass. Biotite, chlorite, pyrite, quartz, chalcopyrite, and pyrrhotite form knots or aggregates up to 3 mm in diameter. Minor anhedral chalcopyrite and subhedral marcasite are always observed in association with pyrite. Minor fine-grained potassium feldspar is disseminated throughout the groundmass.

The second layer is 1 cm wide and very fine grained with a microlitic to felty texture. Euhedral biotite, felty illite, anhedral pyrrhotite, cubic pyrite, secondary quartz, and secondary carbonate are the most dominant minerals. Biotite is weakly to moderately chloritized. Trace minerals include subhedral sphene, prismatic epidote, anhedral chalcopyrite, and rutile. Iron oxides (rust) overprint the groundmass minerals. Aggregates of pyrrhotite, sphalerite, biotite, epidote, and chlorite are almost always associated with secondary quartz or carbonate grains (photo 2) and are 0.2 to 1 mm in diameter.

The offcut has been stained and the first and third layers took on a very pale yellow stain, indicating a very minor amount of potassium feldspar.

The sulphides in both layers are generally coarser grained than the matrix of the clastic material and more idiomorphic. The sulphides are also present in both fragments (Photo 1) and matrix. The three most abundant sulphides (pyrrhotite, pyrite, and chalcopyrite) are intergrown and the textures indicate they we precipitated contemporaneously. These observations are consistent with the sulphides being a later hydrothermal overprint, perhaps accompanying some contemporaneous recrystallization in the carbonates. However, the sulphides do not form vein networks, but are disseminated throughout the rock and elongated or concentrated parallel to the foliation and primary bedding.



**Photo 1**: Photomicrograph of volcanic fragments (frag) in the bottom layer of the thin section, which are 0.5 and 2 mm wide, subrounded and compressed parallel to layering. The groundmass is comprised of relict quartz and completely replaced feldspar (fsp), and secondary illite, sericite, carbonate, biotite (bt), pyrite (py), and potassium feldspar. Field of view is approximately 4 mm. Photo taken in cross polarized light. **Photo 2**: Photomicrograph of an aggregate knot of pyrrhotite (po), biotite (bt), quartz (qtz), chlorite (chl), and carbonate (carb). A smaller aggregate of carbonate and pyrrhotite is observed in the bottom left corner. Field of view is approximately 1.9 mm. Photo taken in crossed polarized and reflected light.

#### Petrographic Report: Sample E5396668 Polished Thin Section

#### General Rock type: altered biotite monzogranite

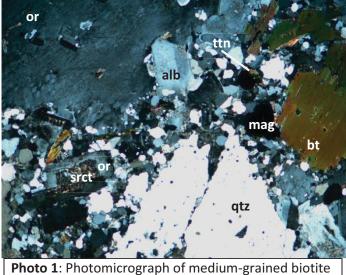
This rock is a weakly altered biotite monzogranite primarily consisting of primary quartz, albite, orthoclase, and biotite (photo 1). Minor phases include primary rounded magnetite, euhedral titanite, and secondary epidote and sericite. Quartz is rounded to interlocking, and grain size distribution is bimodal. One mode of the grains ranges from 0.05 to 3 mm, with the second mode phenocrystic and generally larger than 5 mm. Primary plagioclase is euhedral, in some examples zoned, and equigranular. The plagioclase displays typical albite twins with a number of grains also displaying pericline twins. Extinction angles of the albite twins are consistent with plagioclase compositions ranging from andesine to labradorite. Primary orthoclase is subhedral, commonly zoned, and generally displays sericite alteration especially in the cores. Sericite alteration makes up 10 to 20% of the grains. The orthoclase is commonly host to inclusions of quartz and albite. Biotite is euhedral, platy, and generally contains feldspar inclusions. Biotite is commonly chloritized around grain rims. Muscovite is euhedral, bladed, and mostly associated with the alteration of orthoclase. Magnetite is rounded and anhedral, frequently associated with muscovite or biotite. Euhedral sphene with a diamond cross section is commonly associated with biotite or magnetite, in some examples as mineral inclusions. Epidote and sericite are both alteration minerals. Epidote is observed as euhedral prisms. Sericite occurs within the cores or around the edges of orthoclase. The thin section has an overall medium-grained texture. One quadrant of the section is dominated by a large orthoclase crystal with moderate sericite alteration. There are two very small grains of pyrite present. One is an inclusion totally contained within a grain of magnetite, but near a fracture. The second is hosted along the grain boundary between two feldspar grains. The most likely scenario is that the pyrite is secondary and associated with the alteration.

Despite the alteration the monzogranite does not display any foliation in the plane of the thin section and veining is absent in thin section and the offcut material.

Mineral	Modal Percent Abundance	Size Range (mm)
- quartz	28	Up to 10
- plagioclase	33	Up to 7
- orthoclase	20	0.2 to 7*
- biotite	10	0.2 to 2
- muscovite	3	0.01 to 0.2
- magnetite	3	0.01 to 0.5
- titanite	1	0.01 to 0.8
- sericite	1	0.005 to 0.02
- epidote	1	0.01 to 0.2
- pyrite	trace	Up to 20 microns

The offcut has been stained and the groundmass material took on a deep yellow stain, indicating the presence of potassium feldspar in the interstices between albite and quartz grains. The offcut is white to light grey with small patches of dark biotite and magnetite.

\*Note: a 3 cm phenocryst of pink potassium feldspar was observed in one of the off cut pieces



**Photo 1**: Photomicrograph of medium-grained biotite monzogranite primarily consisting of primary quartz (qtz), albite (alb), orthoclase (or), and biotite (bt). Minor magnetite (mag) and titanite (ttn) are also present. Sercite (srct) alteration of the core of an orthoclase grain is observed in the bottom left quadrant. Field of view is approximately 4 mm. Photo taken in cross polarized light.

#### Petrographic Report: Sample E5396669 Polished Thin Section

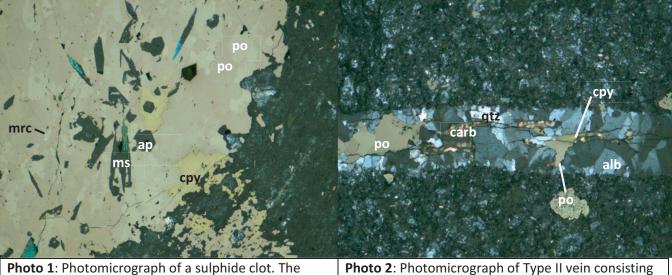
#### General rock type: fine- to medium-grained tuff

This rock is a moderately to strongly clay-altered, fine- to medium-grained tuff. The tuff has an overall microlitic to felty texture, with a fine-grained, interlocking groundmass of potassium feldspar, clay (illitesmectite, kaolinite), chlorite, plus trace amounts of euhedral apatite, bladed muscovite, and cubic pyrite. The original mineralogy is difficult to discern due to pervasive potassium feldspar, clay, and chlorite alteration, but deformed layers are somewhat identifiable. Alteration is pervasive and overprinted by later rusty iron oxide weathering (limonite and goethite). The offcut has been stained and the groundmass material took on a medium to deep yellow stain, indicating the presence of abundant potassium feldspar. In places where the yellow stain did not get absorbed, the offcut is white to light grey in colour. In thin section, the potassium feldspar is in some occurrences difficult to identify due to its generally fine grain size, but is ubiquitous. Illitesmectite and kaolinite are after and replace potassium feldspar. Clasts or clots of sulphide minerals comprise approximately 20% of the total thin section volume and are 1 to 8 mm wide. These clots are not primary, but a secondary enrichment of sulphide probably related to hydrothermal activity subsequent to the deposition of the primary tuff. The sulphides in decreasing order of abundance are pyrrhotite, pyrite, chalcopyrite, and marcasite. Pyrrhotite and pyrite are commonly intergrown in these angular to rounded clots, some of which are elongated in the direction of layering, and probably deformed by the same event. Chalcopyrite is generally associated with pyrrhotite and is anhedral (photo 1). Minor amounts of bladed, well-formed muscovite and hexagonal apatite are also associated with these clots. Trace anhedral marcasite also occurs in these clots, and appears to be an alteration of the pyrrhotite (photo 1).

Three types of veins are present in the thin section, and total vein density is about 2%. Type I consists of very thin, discontinuous, stringy veinlets of quartz-feldspar. These veins are less than 0.05 mm wide and trend N-S to NE-SW (assuming a hypothetical north towards the top of the thin section). Type II is the dominant vein set. These either cut or are conjugate to the type I veins , and consists of quartz-albite-iron carbonate veins that are 1 mm wide and trend roughly E-W across the section. Quartz and albite are interlocking and anhedral, while fibrous rusty iron carbonate cuts across the vein. Minor pyrrhotite, trace chalcopyrite, and trace sphalerite (associated with chalcopyrite) are generally found in the core of the veins (photo 2). Type III are minor and consist of thin, discontinuous and stringy veinlets of muscovite-quartz-chlorite ±pyrite. These veinlets generally trend NE-SW or E-W and are less than 2 mm long. They mostly occur in an area on the south side of the section along with a higher concentration of sulphide minerals.

Mineral	Modal Percent Abundance	Size Range (mm)
Wall rock	98	
<ul> <li>potassium feldspar (secondary)</li> </ul>	30	Up to 0.05
- illite-smectite	20	up to 0.01
- chlorite	19	Up to 0.005
- kaolinite	12	Up to 0.005
- pyrrhotite	13	0.03 to 4
- pyrite	3	0.02 to 0.2
- iron oxides	3	cryptocrystalline
- chalcopyrite	trace	0.02 to 0.25
- marcasite	trace	Up to 0.1

Veins	2	
-Type I		Up to 0.5 mm wide
- quartz	75	0.005 to 0.04
- albite	25	0.005 to 0.02
-Type II		1 mm wide
- albite	35	0.08 to 0.5
- quartz	27	0.08 to 1
- iron carbonate	25	0.01 to 1
- pyrrhotite	12	0.001 to 0.6
- chalcopyrite	1	0.01 to 0.2
- sphalerite	trace	0.03
-Type III		Up to 0.2 mm wide
- muscovite	60	0.01 to 0.05
- chlorite	25	0.01 to 0.05
- quartz	15	0.005 to 0.01
- pyrite	5	0.005 to 0.03



**Photo 1**: Photomicrograph of a sulphide clot. The bireflectant pyrrhotite (po) hosts inclusions of anhedral chalcopyrite (cpy), marcasite (mrc), apatite (ap), and muscovite (ms). Field of view is approximately 1 mm. Photo taken in cross polarized and reflected light.

**Photo 2**: Photomicrograph of Type II vein consisting of quartz (qtz), albite (alb), iron carbonate (carb), pyrrhotite (po), and trace chalcopyrite (cpy). The vein is 1 mm wide and trends roughly E-W across the section. Field of view is approximately 1.9 mm. Photo taken in crossed polarized and reflected light.

#### Petrographic Report: Sample E539670 Polished Thin Section

### General Rock type: clay-altered lithic tuff

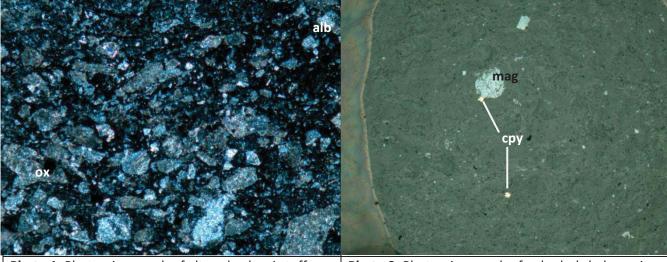
This rock is a strongly altered lithic tuff consisting mostly of altered rock fragments, minor feldspar (albite) phenocrysts, minor oxide minerals, and trace quartz phenocrysts. The fragments range in size up to 7 mm, are very angular and completely altered to clays (illite-smectite, kaolinite), chlorite, and minor calcite (photo 1). Albite phenocrysts within the clasts are subhedral and pervasively altered to illite and carbonate. The degree of alteration ranges up to 100%. Quartz phenocrysts in the clasts are rounded with corroded edges. The matrix has a generally microlitic to felty texture and is cryptocrystalline devitrified glass pervasively altered to clays (illite-smectite and kaolinite, possibly minor chamosite), hematite, chlorite, and minor calcite. Very minor oxide phases (magnetite and ilmenite) overprint both fragments and matrix. Magnetite is generally rounded to subrounded and being replaced by ilmenite around rims and fractures. Trace anhedral chalcopyrite is commonly associated with the edges of magnetite grains (photo 2) and also with primary quartz. The chalcopyrite ranges up to 60 microns along its maximum dimension. There are also trace amounts of sphalerite present. The sphalerite ranges in size up to 0.2 mm and is generally associated with the chalcopyrite. It is relatively clear when viewed in transmitted light, which is consistent with it being Fepoor or Zn-rich sphalerite. Strangely, there is no pyrite in this sample. This is probably attributable to oxidation of all the pyrite to iron-oxides during the pervasive alteration and is consistent with the cubic shapes or pseudmorphic outlines in some of the larger iron-oxide grains. However, the chalcopyrite seems unaffected by the alteration.

Layering within the sample is diffuse and non-planar. The layering is not distinct in hand specimen and is more visible in the thin section. The layering is generally visible as contrasting areas of medium and dark red in thin section.

There is no foliation or any tectonic structure visible in the sample. However there is one thin, discontinuous smectite-calcite veinlet oriented N-S across the top right corner of the thin section (assuming a hypothetical north as the top of the thin section). The vein is 0.15 mm wide, with smectite along the selvage and a central region dominated by calcite. There are no sulphides or oxides associated with this vein.

The offcut is maroon-red and very soft. Small white, angular to rounded fragments are visible. It showed no reaction to either a potassic (kspar) stain or to dilute HCl acid.

Phase	Modal Percent Abundance	Size Range (mm)
Fragments	70	0.01 to 7
- illite-smectite	-45	Up to 0.1
- chlorite	-20	0.005 to 0.1
- calcite	-20	0.01 to 0.2
- kaolinite	-15	Up to 0.03
Matrix	30	
× devitrified glass	-30	cryptocrystalline
- illite-smectite	-20	Up to 0.05
- chlorite	-15	Up to 0.1
- kaolinite	-10	Up to 0.02
- hematite	-10	Cryptocrystalline
- calcite	-10	Up to 0.4
- albite	- 2	Up to 0.4
- magnetite	- 2	Up to 0.4
- ilmenite	- 1	Up to 0.2
- quartz	-trace	Up to 0.2
- chalcopyrite	-trace	0.02 to 0.06
- sphalerite	-trace	Up to 0.02



**Photo 1**: Photomicrograph of altered volcanic tuff consisting mostly of altered rock fragments, minor altered albite (alb) phenocrysts, very minor oxide minerals (ox), and trace quartz phenocrysts. The fragments are very angular and completely altered to clays, chlorite, and minor calcite. Field of view is approximately 3.9 mm. Photo taken in cross polarized light. **Photo 2**: Photomicrograph of anhedral chalcopyrite (cpy) along the edge of a magnetite (mag) grain. Field of view is approximately 1.9 mm. Photo taken in reflected light.



### 13.0 APPENDIX D – METALLURGICAL TESTING REPORT

An Investigation into

#### HEAVY LIQUID SEPARATION OF SAMPLES FROM THE RED MOUNTAIN PROJECT

prepared for

### **BANKS ISLAND GOLD LTD.**

Project 13845-001 Final Report November 14, 2012

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### Introduction

The following report outlines the results of heavy liquid separation (HLS) testing of a single sample from the Red Mountain deposit. The sample was tested at crush sizes of -1/2" and -1/4" and the results were sent to Lyn Jones of ConsuMet Ltd. as they became available.

Erin Legault Senior Metallurgist, Metallurgical Operations

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Experimental work by: AMF Report preparation by: Erin Legault, Su McKenzie Reviewed by: S. McKenzie, Curtis Mohns, Dan Imeson

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# **Testwork Summary**

A single sample from the Red Mountain Project was provided by Banks Island Gold Ltd. to conduct heavy liquid separation testwork. Once the sample was received it was given the SGS receipt number 0017-SEP12.

The sample was stage-crushed to -1/2" (-12.5 mm) and 5 kg removed for HLS testing. An additional 6 kg was removed and stage-crushed to -1/4" (-6.3 mm). 5 kg was removed for HLS testing and the remaining -1/4" was stage-crushed to -10M (-2.0 mm) and a sub-sample extracted for head analysis of Au and Ag.

The -1/2" x 5 kg and -1/4" x 5 kg samples were screened at 20 mesh (850  $\mu$ m). The -20 mesh was retained and assayed for Au and Ag and the +20 mesh was subjected to HLS testing.

The head assay of the sample was determined to contain 26.8 g/t of Au and 85.0 g/t of Ag.

### **Heavy Liquid Separation Testwork**

The -1/2"/+850 µm and -1/4"/+850 µm size fractions were subjected to HLS testing at specific gravity (SG) intervals of 3.20, 3.10, 3.00, 2.90, 2.80, 2.75, 2.70 and 2.65. The test produced sinks at each SG interval and a float at the final 2.65 SG interval. The amount of sample representing the 2.65 SG float was quite low, 1.50 g and 3.08 g for the -1/2" and -1/4" tests respectively, and was combined with the 2.65 SG sink to represent a 2.70 SG float.

Each sample generated from the HLS test was assayed for Au and Ag.

The mass balances of the -1/2" and -1/4" tests are detailed in Table 1 and Table 2 and summarized in Figure 1 and Figure 2, respectively.

As can be seen, the sample provided for this testwork appeared to be quite amenable to HLS for the recovery of Au and Ag. From a combination of the 3.20 SG sink and -20 mesh fines, for the -1/2" sample, Au and Ag recoveries of 86.9% and 89.5% at grades of 74.6 g/t and 236 g/t respectively at a mass rejection of 73.8% was experienced. Similarly, for the -1/4" sample Au and Ag recoveries of 90.3% and 92.4% were achieved at grades of 61.0 g/t and 192 g/t respectively at a mass rejection of 77.6%.

Sample	Wt, g	Wt %	Assay, g/t		Distribution, %	
			Au	Ag	Au	Ag
3.20 SG Sink	1117.6	22.4	84.7	269	65.9	68.0
3.10 SG Sink	245.7	4.9	21.4	69.5	3.7	3.9
3.00 SG Sink	194.1	3.9	8.05	24.2	1.1	1.1
2.90 SG Sink	13.5	0.3	10.5	32.7	0.1	0.1
2.80 SG Sink	701.0	14.1	6.28	13.7	3.1	2.2
2.75 SG Sink	864.6	17.3	2.18	1.6	1.3	0.3
2.70 SG Sink	707.3	14.2	0.92	<0.5	0.5	0.1
2.70 SG Float	133.7	2.7	0.55	1.6	0.1	0.0
Fines	1007.4	20.2	34.8	107	24.4	24.4
Head (Calc)	4984.9	100	28.8	88.7	100	100
Head (Dir)			26.8	85.0		

Table 1: Mass Balance of HLS Test of -1/2" Sample

Combined Products

Sample	Wt, g	Wt %	Assay, g/t		Distribution, %	
			Au	Ag	Au	Ag
3.20 SG + Fines	2125	42.6	61.0	192	90.3	92.4
3.10 SG + Fines	2371	47.6	56.9	179	93.9	96.2
3.00 SG + Fines	2565	51.5	53.2	168	95.0	97.3
2.90 SG + Fines	2578	51.7	53.0	167	95.1	97.4
2.80 SG + Fines	3279	65.8	43.0	134	98.2	99.6
2.75 SG + Fines	4144	83.1	34.5	107	99.5	99.9
2.70 SG + Fines	4851	97.3	29.6	91.1	99.9	100

Table 2:	Mass Ba	lance of H	LS Test of	f -1/4"	Sample
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Sample	Wt, g	Wt %	Assay, g/t		Distribution, %	
			Au	Ag	Au	Ag
3.20 SG Sink	1310.7	26.2	89.8	286	77.0	79.8
3.10 SG Sink	94.8	1.9	28.8	104	1.8	2.1
3.00 SG Sink	193.5	3.9	13.9	43.6	1.8	1.8
2.90 SG Sink	290.9	5.8	7.07	26.3	1.3	1.6
2.80 SG Sink	829.3	16.6	13.8	25.5	7.5	4.5
2.75 SG Sink	934.9	18.7	0.76	1.6	0.5	0.3
2.70 SG Sink	793.0	15.9	0.49	1.0	0.3	0.2
2.70 SG Float	77.9	1.6	0.77	0.9	0.0	0.0
Fines	469.5	9.4	32.3	96.4	9.9	9.6
Head (Calc)	4994.6	100	30.6	94.0	100	100
Head (Dir)			26.8	85.0		

#### **Combined Products**

Sample	Wt, g	Wt %	Assay, g/t		Distribution, %	
Gample	vvi, g	VVI 70	Au	Ag	Au	Ag
3.20 SG + Fines	1780	35.6	74.6	236	86.9	89.5
3.10 SG + Fines	1875	37.5	72.3	229	88.7	91.6
3.00 SG + Fines	2069	41.4	66.9	212	90.4	93.4
2.90 SG + Fines	2359	47.2	59.5	189	91.8	95.0
2.80 SG + Fines	3189	63.8	47.6	147	99.2	99.5
2.75 SG + Fines	4124	82.6	37.0	114	99.7	99.8
2.70 SG + Fines	4917	98.4	31.1	95.5	100	100

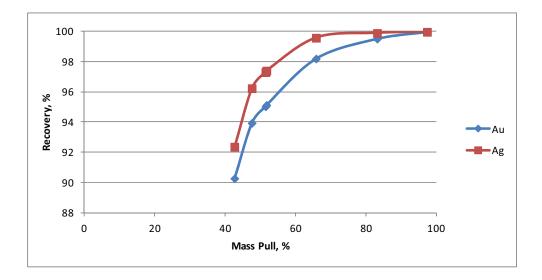


Figure 1: Au and Ag Recovery vs. Mass of HLS Test of -1/2" Sample

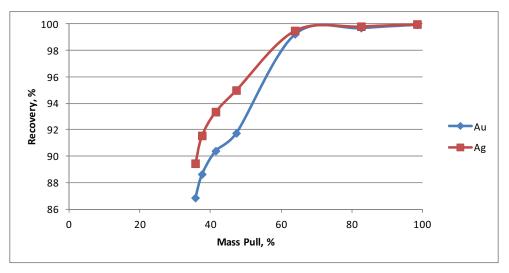


Figure 2: Au and Ag Recovery vs. Mass of HLS Test of -1/4" Sample

Incorporating material from lower SG intervals will increase recovery and the optimum, i.e. where recovery versus mass curves plateau appears to be at the 2.80 SG level at both crush sizes. For the -1/2" sample the plateau is quite apparent and at this SG interval in combination of the -20 mesh fines, Au and Ag recoveries of 99.2% and 99.5% at grades of 47.6 g/t and 147 g/t, respectively and a mass rejection of 36.2% are expected. For the -1/4" sample the plateau is less apparent, Au and Ag recoveries of 98.2% and 99.6% at grades of 43.0 g/t and 134 g/t, respectively, and a mass rejection of 34.2% are expected.

For this data a crush size of -1/2" is recommended for processing material from the Red Mountain Project.

From the heavy liquid separation testwork conducted on the sample provided from the Red Mountain Project a crush size of -1/2" appears to be beneficial over -1/4".

From combination of the 2.80 SG sink and -20 mesh fines, Au and Ag recoveries of 99.2% and 99.5% at grades of 47.6 g/t and 147 g/t respectively and a mass rejection of 36.2% were experienced with the -1/2" sample. This is an improvement over the results from the -1/4" sample of Au and Ag recoveries of 98.2% and 99.6% at grades of 43.0 g/t and 134 g/t respectively and a mass rejection of 34.2%.

It is recommended that a larger sample be provided for pilot scale dense media separation test work to confirm these results under dynamic conditions. However, the analysis discussed in this report should be repeated with such a sample to confirm the benefit of crushing to -1/2" over -1/4" and possible other crush sizes.