MINERAL RESOURCE UPDATE for the RED MOUNTAIN GOLD PROJECT, NORTHWESTERN BC, CANADA

Prepared for:

IDM Mining Ltd.

IDM MINING

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ACS ARSENEAU Consulting Services Inc.

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Date & Signature Page

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NOTICE

This report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for IDM Mining Ltd. The quality of information, conclusions and estimates contained herein is based on: (i) information available at the time of preparation; (ii) data supplied by outside sources, and (iii) the assumptions, conditions and qualifications set forth in this report.

IDM Mining Ltd. is authorized to file this report as a Technical Report with the Canadian Securities Regulatory Authorities pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities law, any other use of this report by any third party is at that party's sole risk.

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Arseneau Consulting Services Inc. (ACS) was retained be IDM Mining Ltd. (IDM or IDM Mining) to prepare an update of the Mineral Resource Estimate for the Red Mountain gold project located in northwestern B.C., 18 km east of the town of Stewart. The purpose of this study is to incorporate new drilling information gathered by IDM and to update the mineral resources for the Red Mountain gold project to include the results of the 2016 drilling program.

On April 12, 2014, IDM optioned the property from Seabridge Gold Inc. (Seabridge) with the intent of initiating a Preliminary economic assessment (PEA) study and conducting further exploration work. Since acquiring the project, IDM has completed a comprehensive review and validation of the Red Mountain geological and environmental data, initiated project permitting under the British Columbia and Canadian Environmental Assessment review process, completed a seventy-four drill hole drilling program, engaged JDS Energy & Mining (JDS) to prepare a PEA for the Red Mountain gold project that was published on September 3, 2014 and an updated PEA also by JDS published on July 12, 2016.

1.2 PROPERTY DESCRIPTION & OWNERSHIP

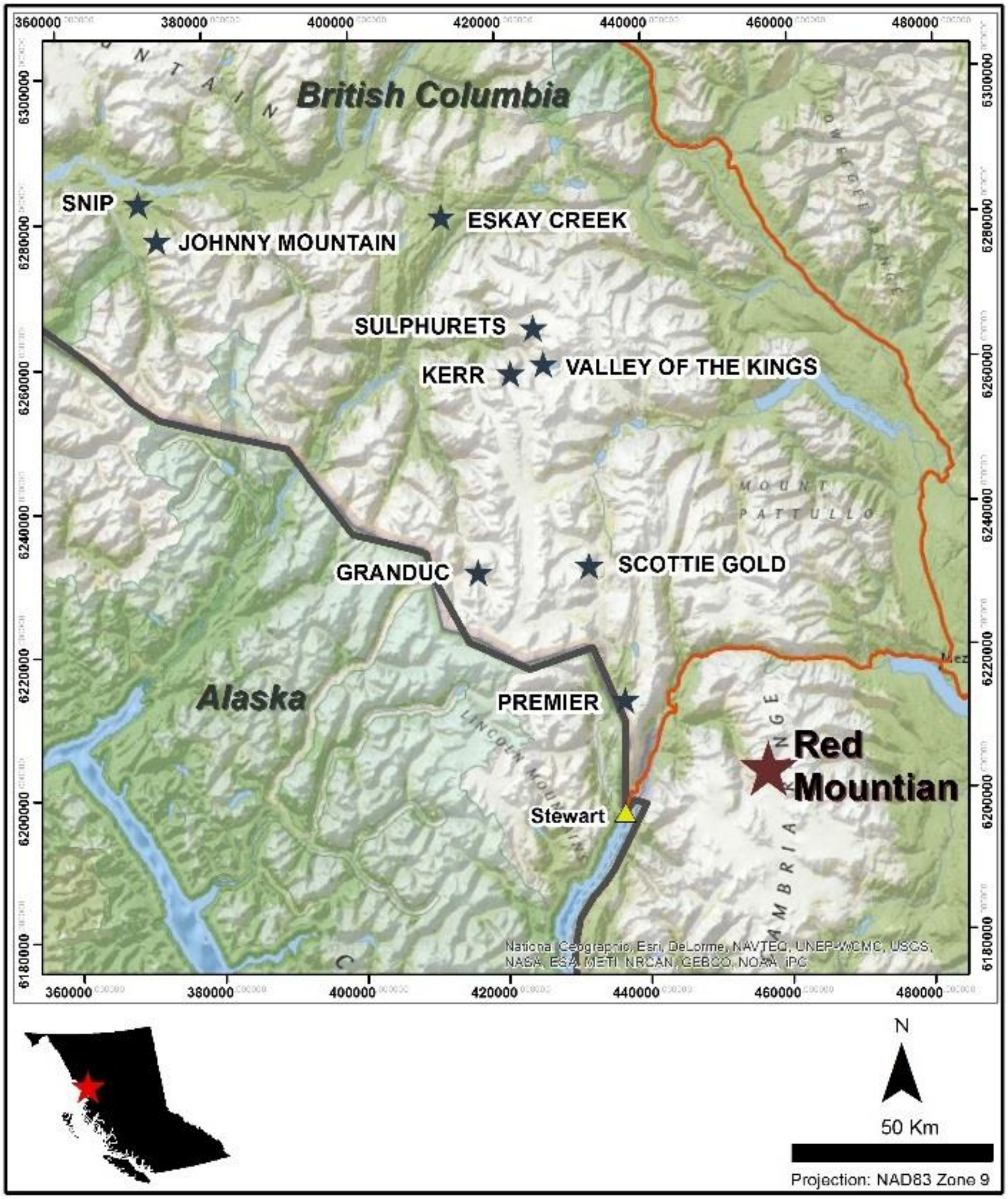
1.2.1 Property Description

The 17,125 hectare (ha) Red Mountain gold property is situated in northwestern British Columbia approximately 18 km east-northeast of Stewart (Figure 1.1). The project is located at 55° 57’ N latitude and 129° 42’ W longitude between the Cambria Ice Field and the Bromley Glacier at elevations ranging between 1,500 and 2,000 m. On NTS map sheets 103P/13 and 104A/4, the property is centred on 55º59’4”N, 129º45’37”W. The UTM coordinates are 452,450 E, 6,250,325 N in Zone 9 (NAD 83).

The area is characterised by rugged, steep terrain with weather conditions typical of the north coastal mountains including significant (+2 m) snow accumulation in the winter. Access to the site is presently by helicopter from Stewart with a flight time of 10 to 15 minutes. An existing road extends for approximately 13 km along Bitter Creek Valley but stops approximately 7 km from the proposed mine site.

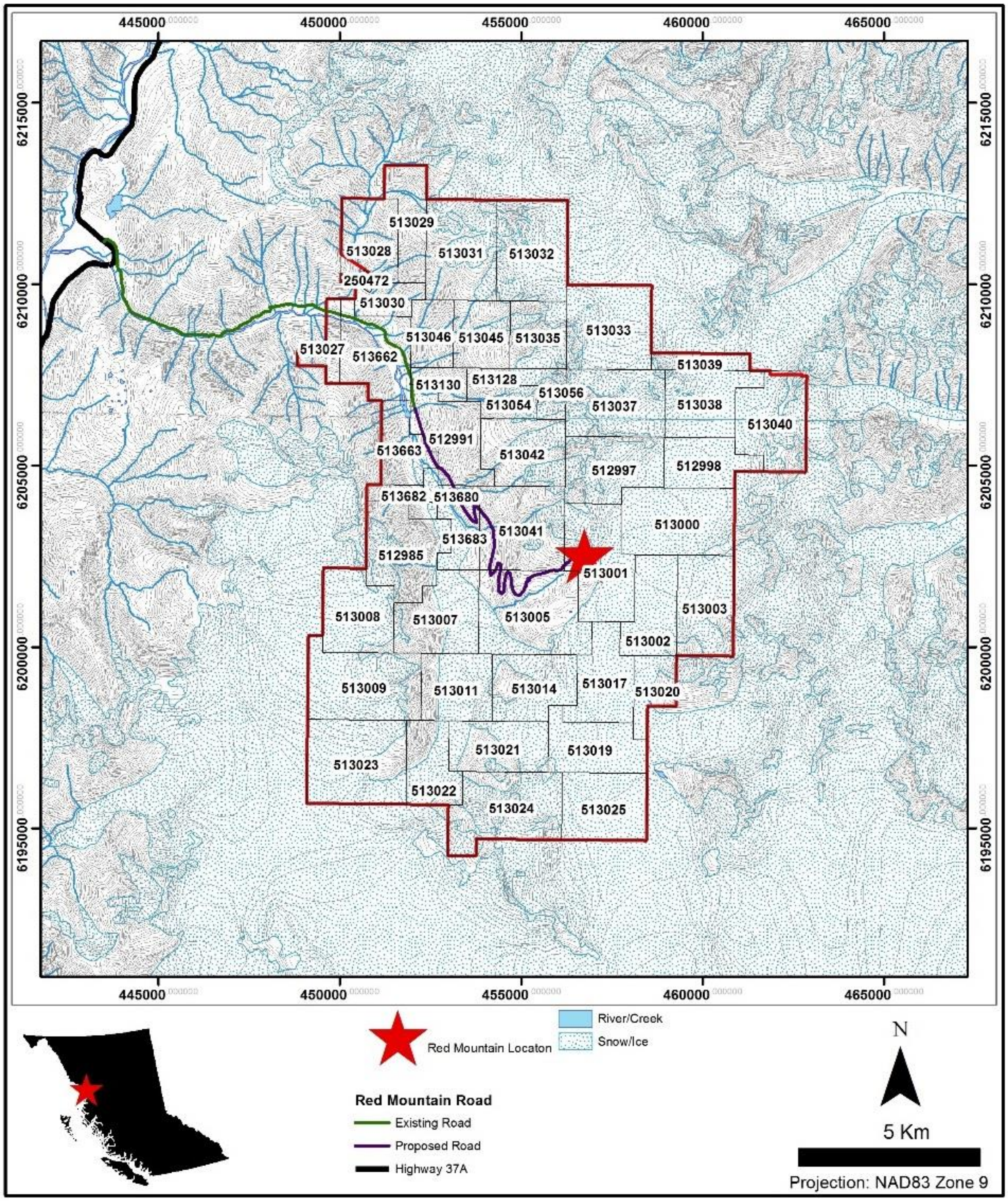
The Red Mountain gold property consists of 47 contiguous mineral claims totalling 17,125 ha (Figure 1.2). No significant risks are identified which would affect access, title, or the right or ability to perform work on the property.

Figure 1.1: Red Mountain Location Map



Source: IDM (2014)

Figure 1.2: Red Mountain gold project Claim Map



Source: IDM (2014)

The property falls within the Nass Wildlife Area as set out in the Nisga'a Final Agreement (NFA). Pursuant to the NFA, the Nisga'a Nation has rights to the management and harvesting of fish and wildlife within the Nass Wildlife Area.

1.2.2 Ownership

On April 15, 2014, IDM (formerly known as Revolution Resources Corporation) entered into an option agreement for the Red Mountain gold project with Seabridge.

Claim title is currently under Seabridge. Upon satisfaction of the option terms, title will be transferred to IDM. Seabridge owns 100% of the property claims subject to two royalties. Franco Nevada Corporation (Franco) holds a 1% Net Smelter Return (NSR) royalty and a 2.5% NSR royalty is payable to Wotan Resources Corp. A $50,000 advance royalty is payable to Wotan annually.

Under the terms of the Option Agreement, IDM issued 4,955,500 common shares and paid $2 million in cash and was required to incur $7.5 million in exploration and development expenditures by June 4, 2017 ($2.5 million per year) to earn a 100% interest in the Red Mountain gold project.

Upon the commencement of commercial production, IDM will make an additional one-time $1.5 million cash payment to Seabridge and Seabridge will also retain a gold metal stream on the Red Mountain gold project to acquire 10% of the annual gold production from the Property at a cost of US$1,000 per ounce up to a maximum of 500,000 ounces produced (50,000 ounces to Seabridge). Alternatively, Seabridge may elect to receive a one-time cash payment of $4 million at the commencement of production in exchange for the buy-back of the gold metal stream.

1.3 GEOLOGY & MINERALIZATION

Red Mountain is located near the western margin of the Stikine terrain in the Intermontane Belt. There are three primary stratigraphic elements in Stikinia and all are present in the Stewart area: 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. Many primary textures are preserved in rocks from all of these groups, and mineralogy suggests that the regional metamorphic grade is probably lower greenschist facies.

Mineralized zones consist of crudely tabular, northwesterly trending and moderately to steeply southwesterly dipping gold and silver bearing iron sulphide stockworks. Pyrite is the predominant sulphide; however, locally pyrrhotite is important. The stockworks zones are developed primarily within the Hillside porphyry and to a lesser extent in rafts of sedimentary and volcaniclastic rocks.

The stockwork zones consist of pyrite microveins, coarse-grained pyrite veins, irregular coarse-grained pyrite masses and breccia matrix pyrite hosted in a pale, strongly sericite altered porphyry. Vein widths vary from 0.1 cm to approximately 80 cm but widths of 1 to 3 cm are most common. The veins are variably spaced and average 2 to 10 per metre. The veins are very often heavily fractured or brecciated with infillings of fibrous quartz and calcite. Orientations of veins in the stockworks are variable; however, sets with northwesterly trends and moderate to steep northeasterly and southwesterly dips have been identified in underground workings.

The pyrite veins typically carry gold grades ranging from ~3 g/t to greater than 100 g/t. Gold occurs in grains of native gold, electrum, petzite and a variety of gold tellurides and sulphosalts. The stockwork zones are surrounded by more widespread zone of disseminated pyrite and pyrrhotite alteration.

1.4 HISTORY, EXPLORATION & DRILLING

Placer mining commenced in Bitter Creek at the base of Red Mountain at the turn of the century but significant work on the current deposit began in 1988 when Wotan Resources Inc. staked claims in 1988 and optioned the property to Bond Gold Canada Inc. (“Bond’) in 1989.

In that year, gold mineralization in the Marc and Brad zones were discovered by drilling. LAC Minerals Ltd. (LAC) acquired Bond in 1991. Surface drilling on the Marc, AV and JW zones continued in 1991, 1992, 1993 and 1994. Underground exploration of the Marc zone was conducted in 1993 and 1994. In 1995, LAC was acquired by Barrick who subsequently optioned the property to Royal Oak Mines Ltd. (Royal Oak) in 1996. North American Minerals Inc. (NAMC) purchased the property from the receivership sale of Royal Oak in 2000. NAMC subsequently sold the property to Seabridge in 2002 who optioned the property to Banks Island Gold Ltd. (Banks). Banks terminated the option in 2013 and the property reverted to Seabridge. Seabridge subsequently optioned the property to IDM in 2014.

Table 1.1 provides a chronological summary of recent exploration efforts on Red Mountain.

Table 1.1: Red Mountain 1988-2016 Chronological Exploration Summary

1988-89	Staking of Red Mountain by Wotan Resources Inc.
1989	Red Mountain and Wotan properties optioned to Bond. Discovery of gold-silver mineralization by drilling in the Marc zone (3,623 m); airborne EM and magnetic survey.
1990	Exploration of Marc zone and adjacent area (11,615 m of drilling) by Bond.
1991	LAC acquired 100% of Bond. A 2,400 m drill program was completed on the Marc and AV Zones.
1992	Results of a 4,000 m drill program by LAC increased Red Mountain resources and indicated excellent potential for expansion.
1993	28,800 m of surface drilling defined the Marc, AV, and JW Zones and identification of the 141 Zone. An underground exploration adit allowed bulk sampling of the Marc zone. 8,600 m of underground drilling completed in the Marc zone.
1994	LAC completed a 350 m extension of the main decline, 30,000 m of underground drilling and 16,000 m of surface drilling.
1995	Red Mountain gold project acquired by Barrick following Barrick's take-over of LAC. No exploration work completed by Barrick.
1996	Royal Oak undertakes exploration to explore for additional reserves. Extended underground drift by 304 m and completed 26,966 m of surface and underground drilling.
2000	NAMC purchased the property and project assets from Price Waterhouse Coopers, conducts detailed relogging of existing drill core and constructs a geological model for resource estimation purposes and exploration modelling.
2002-2012	Seabridge purchases property, completes two Preliminary Assessment Studies ("PEA")
2012-2013	Banks options property, two surface drill holes completed, completes PEA study.
2014	IDM options property and drilled 12 diamond drill holes
2016	IDM drilled 11 surface diamond drill holes and 51 underground infill and resource expansion drill holes

1.5 MINERAL PROCESSING & METALLURGICAL TESTING

There has been a significant amount of metallurgical testing conducted on samples from Red Mountain gold project. Three basic process options were explored to extract gold and silver: production of gold- and silver-bearing flotation concentrates for sale to a smelter; direct whole mineralized material cyanidation for doré production; and a hybrid flotation process with cyanide leaching of the flotation concentrate to produce doré.

Under the direction of LAC, metallurgical testing began in 1991 at Lakefield Research. A significant body of testing at Brenda Process Technology in 1994 followed this preliminary campaign. Whole cyanidation was the primary process tested during these programs.

Metallurgical testing resumed in 2001 under the direction of Dr. M. Beattie of Beattie Consulting. Production of precious metal bearing concentrates was nearly exclusively investigated in this program, conducted at PRA laboratories.

As Red Mountain is located within 35 km of the deep-sea port of Stewart that is currently shipping concentrate from two mines, extensive flotation test work was completed in 2000.

In 2017 IDM submitted 35 composites from 17 drill holes in the Marc, AV and JW zones for additional testing. Work includes floatation with cyanide leach of concentrate, whole ore leach and CIL tests along with grind sensitivity testing. Results of this work are pending.

1.6 MINERAL RESOURCE ESTIMATE

Numerous resource estimates were completed from 1989 to present. During 2000, NAMC conducted a detailed review of all data, re-logged all core within a 20 m envelope of the Marc, AV and JW mineralized zones and reviewed all exploration holes for potential inclusion into the resource. An extensive quality control and quality assurance (QA/QC) review was completed on all exploration work, and a comparative analysis was performed on drill hole data, underground bulk sampling, and geology. The 2000 NAMC resource was reviewed, cross checked and verified for accuracy in May 2014. IDM drilled 12 core holes on the property in 2014 and 62 holes in 2016. The seventy-four IDM drill holes combined with the past historical drilling on the property form the basis for the resource estimate in Table 1.2.

Table 1.2: Mineral Resource Statement at a 3 g/t Cut-off Grade, effective January 23, 2017*

Zone	Tonnage (tonnes)	In-situ Gold Grade (g/t)	In-situ Silver Grade (g/t)	Contained Gold (troy ounces)	Contained Silver (troy ounces)
Marc Zone					
Measured	682,000	10.62	38.3	232,800	840,500
Indicated	32,300	9.69	32.6	10,100	33,800
Inferred	4,500	10.43	43,4	1,500	6,200
AV Zone					
Measured	519,400	7.73	20.0	129,100	334,500
Indicated	236,300	9.07	19.2	60,700	146,300
Inferred	43,300	8.13	15.4	20,400	21,400
JW Zone					
Measured	44,600	10.11	13.2	14,500	18,900
Indicated	314,200	8.54	18.0	86,300	181,600
Inferred	111,700	6.78	7.4	24,400	26,500
141 Zone					
Indicated	188,600	4.91	11.1	29,700	67,300
Inferred	15,100	4.67	4.7	2,300	2,300
Marc Footwall					
Indicated	18,100	6.15	12.1	3,600	7,000
Inferred	12,600	5.12	6.4	2,100	2,600
Marc Outlier Zone					
Indicated	4,200	3.43	16.8	500	2,300
Inferred	7,300	6.54	27.4	1,500	6,400
Marc NK Zone					
Indicated	10,700	5.58	7.6	1,900	2,600
Inferred	7,300	5.98	9.0	1,400	2,100
JW Lower Zone					
Indicated	24,300	8.15	26.6	6,400	20,800
Inferred	2,000	13.94	9.3	900	600
AV Lower Zone					
Inferred	42,500	5.55	6.6	7,600	8,300
132 Zone					
Inferred	78,700	4.73	11.5	12,000	29,100
Total Measured & Indicated	**2,074,700**	**8.75**	**24.8**	**583,700**	**1,655,700**
Total Inferred	**324,700**	**6.21**	**10.1**	**64,800**	**105,500**

*3 g/t Au is calculated as the cut-off grade for underground longhole stoping.

1.7 CONCLUSIONS & RECOMMENDATIONS

1.7.1 Resource

A high degree of drilling and quality control work has been performed on the project by previous operators. Re-logging the core to create a geological model has created confidence in the understanding of mineralized zone controls.

The Marc Zone which forms the main portion of the mineralized deposit requires no further test work.

The AV and JW Zones are drilled at nearly a 25 x 25 m grid spacing and shows good geological and grade continuity yielding a large portion of the deposit in the measured category. It does require infill drilling in the AV and JW Lower Zones and in the 132 Zone. The infill drilling carried out in 2016 confirmed the geological and grade continuity of the AV and JW and was successful in upgrading the inferred resources in these zones to indicated classification.

The AV and JW Lower zones are currently classified as inferred due to wider spaced drill density. The existing drill holes display good geological continuity. The stockwork seems consistent in virtually every hole and matches well with the reconstruction of the other zones.

1.7.2 Opportunities

Exploration potential on the property has been greatly enhanced since 1994 by glacial recession surrounding the deposit. A considerable area that was previously under ice is now exposed for the first time and available for exploration proximal to the Red Mountain gold/silver-bearing sulphidation system.

1.7.3 Recommendations

Further work is recommended for the Red Mountain gold project. ACS recommends that a feasibility study (FS) be prepared to include the new indicated mineral resources defined as part of this report. ACS recommends that contingent on positive results of the feasibility study that an additional 7,500 m of underground definition drilling be carried out prior to initiating mining. The total estimated cost of the combined phases is $6.8 million as outlined in in Table 1.3.

Table 1.3: Recommended Work Program

Item	**Cost**
Phase 1 Program	
Feasibility Study	**$1,800,000**
Phase 2 Program	
7,500 m drill program	
Assay	$80,000
Labour	$560,000
Underground	$1,100,000
Drilling	$1,700,000
Camp	$900,000
Helicopter	$660,000
Total Phase 2	**$5,000,000**
Total Phase 1 and 2	**$6,800,000**

2.0 INTRODUCTION

2.1 BASIS OF TECHNICAL REPORT

Arseneau Consulting Services Inc. (ACS) was retained by IDM Mining Ltd. (IDM or IDM Mining) to prepare an update of the Mineral Resource Estimate for the Red Mountain gold project located in northwestern B.C., 18 km east of the town of Stewart. The purpose of this study is to incorporate new drilling information gathered by IDM and to update the mineral resources for the Red Mountain gold project to include the results of the 2016 drilling campaign.

On April 12, 2014, IDM optioned the property from Seabridge Gold Inc. (Seabridge) with the intent of initiating a PEA study and conducting further exploration work.

Since acquiring the project, IDM has completed a comprehensive review and validation of the Red Mountain geological and environmental data, drilled an additional seventy-four core holes and engaged JDS Energy & Mining (JDS) to prepare a PEA for the Red Mountain gold project that was published on July 12, 2016.

2.2 SCOPE OF WORK

ACS was requested to update the mineral resources for the Red Mountain gold project to include information from the recently completed IDM drilling program.

The ACS scope of work included:

- Compile the technical report including historical data and information provided by other consulting companies
- Carry out a site visit
- Validate and modify the existing wireframes
- Statistical review of the assay data
- Prepare block model for resource estimation
- Estimate mineral resource by Ordinary Kriging
- Validate block model resource and classify the mineral resource

2.3 QUALIFIED PERSON RESPONSIBILITIES & SITE INSPECTIONS

The Qualified Persons (QPs) preparing this technical report are specialists in the fields of geology, exploration and mineral resource estimation and classification.

The QPs are not insiders, associates, or affiliates of IDM. The results of this technical report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between IDM and the QPs. The QPs are being paid a fee for their work in accordance with normal professional consulting practice.

The following individuals, by virtue of their education, experience and professional association, are considered QPs as defined in the NI 43-101, and are members in good standing of appropriate professional institutions. The QPs are responsible for specific sections as outlined in Table 2.1.

Table 2.1: Qualified Person Responsibilities

QP	Company	Report Section(s) of Responsibility
Andrew Hamilton, P. Geo		4, 5, 6, 7, 8, 9, 10, 11, 12 and 16
Gilles Arseneau, P.Geo.	ACS	1, 2, 3, 13, 14, 15, 17, 18, 19, 20 and 21

Source: JDS (2014)

2.4 SITE VISITS & INSPECTIONS

QP site visits were conducted as follows:

- Dr. Gilles Arseneau of ACS responsible for the preparation of the mineral resources visited the site on March 25, 2016 for one day.
- Andrew Hamilton last visited the site from July 20th to 24th, 2016.

2.5 UNITS, CURRENCY & ROUNDING

Unless otherwise specified or noted, the units used in this technical report are metric. Every effort has been made to clearly display the appropriate units being used throughout this technical report. Currency is in Canadian dollars (CAD, C$ or $) unless otherwise noted.

This report includes technical information that required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QPs do not consider them to be material.

2.6 TERMS OF REFERENCE

This function of this report is to provide an updated mineral resource estimate of the Red Mountain deposit. It is a compilation derived from the historical work performed by previous operators from 1986 to present and first principles design and estimate work by ACS.

Data used in the compilation was derived from unpublished historical reports by Bond Gold Inc., (Bond), Lac Minerals Ltd. (LAC), Royal Oak Mines Inc. (ROM), North American Metals Corp. (NAMC), Seabridge and Banks Island Gold Inc. (Banks).

Bond collected primarily exploration data. LAC continued with exploration and conducted numerous engineering studies, which culminated in a draft feasibility study. ROM conducted exploration and during the NAMC program. Detailed studies of mineralization were conducted by NAMC staff in conjunction with consultants during which all drill holes were re-logged within a 20 m shell of the current resource boundary identified in this report. Seabridge engaged in several PEA studies as well as conducting further tailings management facility studies. Banks completed a PEA in 2013 (Baldwin and Jones, 2013).

Engineering and geological information from historical documents was used in this report after determination by ACS that the work was performed by competent persons or engineering firms. Data derived from engineering companies, consultants and authors are listed in the reference section of this report.

3.0 RELIANCE ON OTHER EXPERTS

The resource estimate in this report is a compilation of historical work (1986-1996) and new work by IDM in 2014 and 2016.

Metallurgical test work was conducted by LAC and NAMC staff from 1991 to 2001.

The QPs take responsibility for the work provided by other experts.

4.0 PROPERTY DESCRIPTION & LOCATION

4.1 PROPERTY DESCRIPTION & LOCATION

Red Mountain is situated in northwestern British Columbia, approximately 18 km east-northeast of Stewart (Figure 4-1). The project is located at 55° 57' N latitude and 129° 42' W longitude between the Cambria Ice Field and the Bromley Glacier at elevations ranging between 1,500 and 2,000 m. The area is characterised by rugged steep terrain with difficult weather conditions typical of the north coastal mountains. Access to the site is presently by helicopter from Stewart with a flight time of 10 to 15 minutes. A road has been pioneered from Highway 37A up the Bitter Creek valley to the base of Red Mountain. A plan was developed by NAMC to extend this road to the Red Mountain portal site.

The deposit is located under the summit of Red Mountain at elevations of between 1,600 and 2,000 m. The site is drained by Goldslide Creek, which flows southwest to the flank of the Bromley Glacier and by the Rio Blanco Creek. Both of these creeks are tributaries of Bitter Creek, which in turn is a tributary of the Bear River. The Bear River drains into tidewater just east of Stewart, on the Canadian side of the Portland Canal. The mouth of the Bear River is 1.5 km east of the Canada – USA boundary.

Stewart is situated at the head of the Portland Canal, a 120-km long fjord. Stewart is commonly referred to as Canada's most northerly ice free port. It is 880 km north west of Vancouver and 180 km north of Prince Rupert. Stewart is at the end of Highway 37A, a paved all weather highway, 347 km from Smithers and 327 km from Terrace. The District of Stewart borders on the State of Alaska and extends some services to the community of Hyder, Alaska.

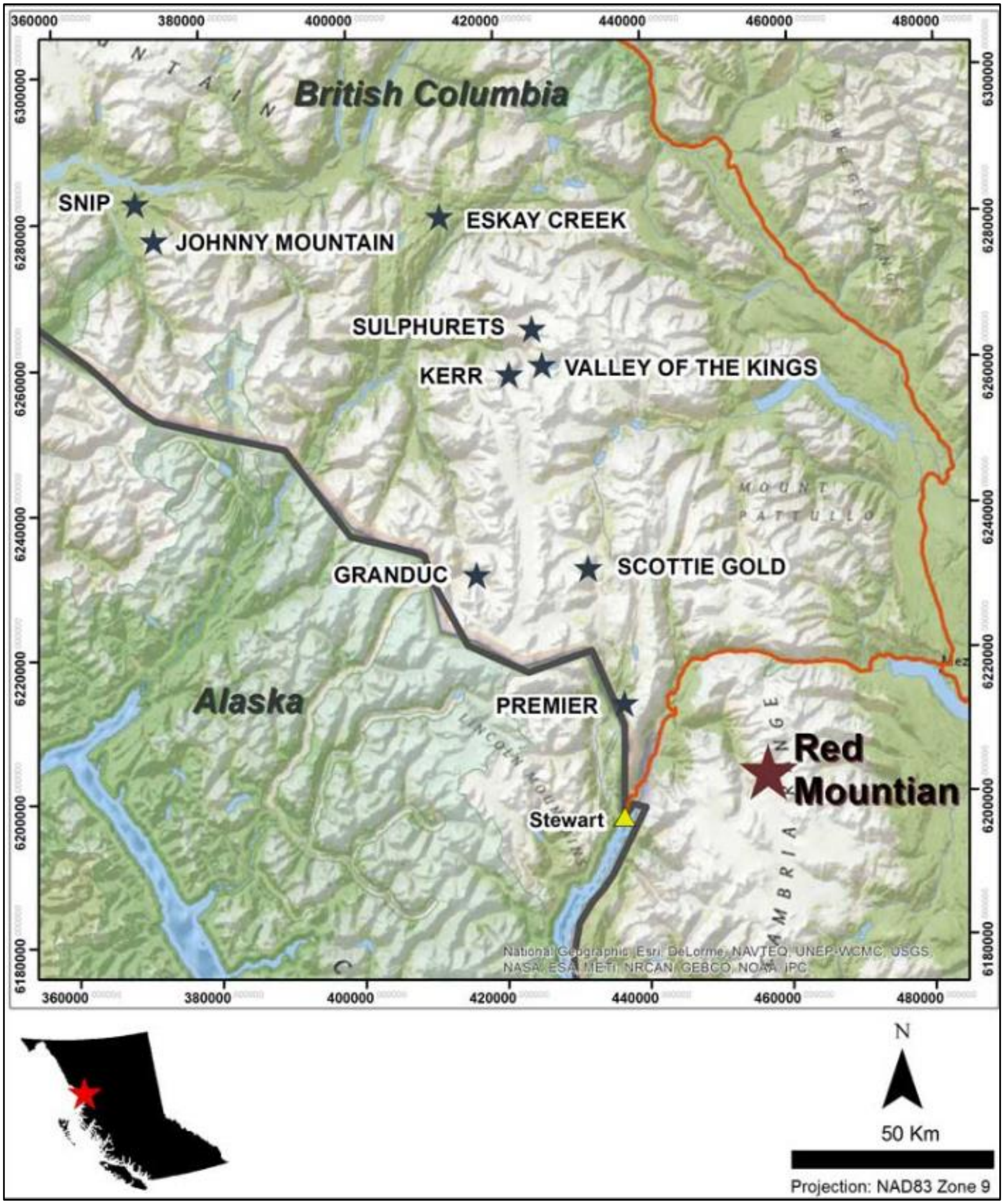
4.2 MINERAL TITLE

IDM has, under an option agreement, the right to acquire a 100% interest in 47 contiguous claims that comprise an area of 17,125.2 ha currently owned 100% by Seabridge (Table 4.1 and Figure 4.2).

All claims are in good standing until May 9, 2023 according to documents provided by IDM and information from the British Columbia Mineral Title Online web site.

https://www.mtonline.gov.bc.ca/mtov/home.do

Figure 4.1: Red Mountain gold project Location Map



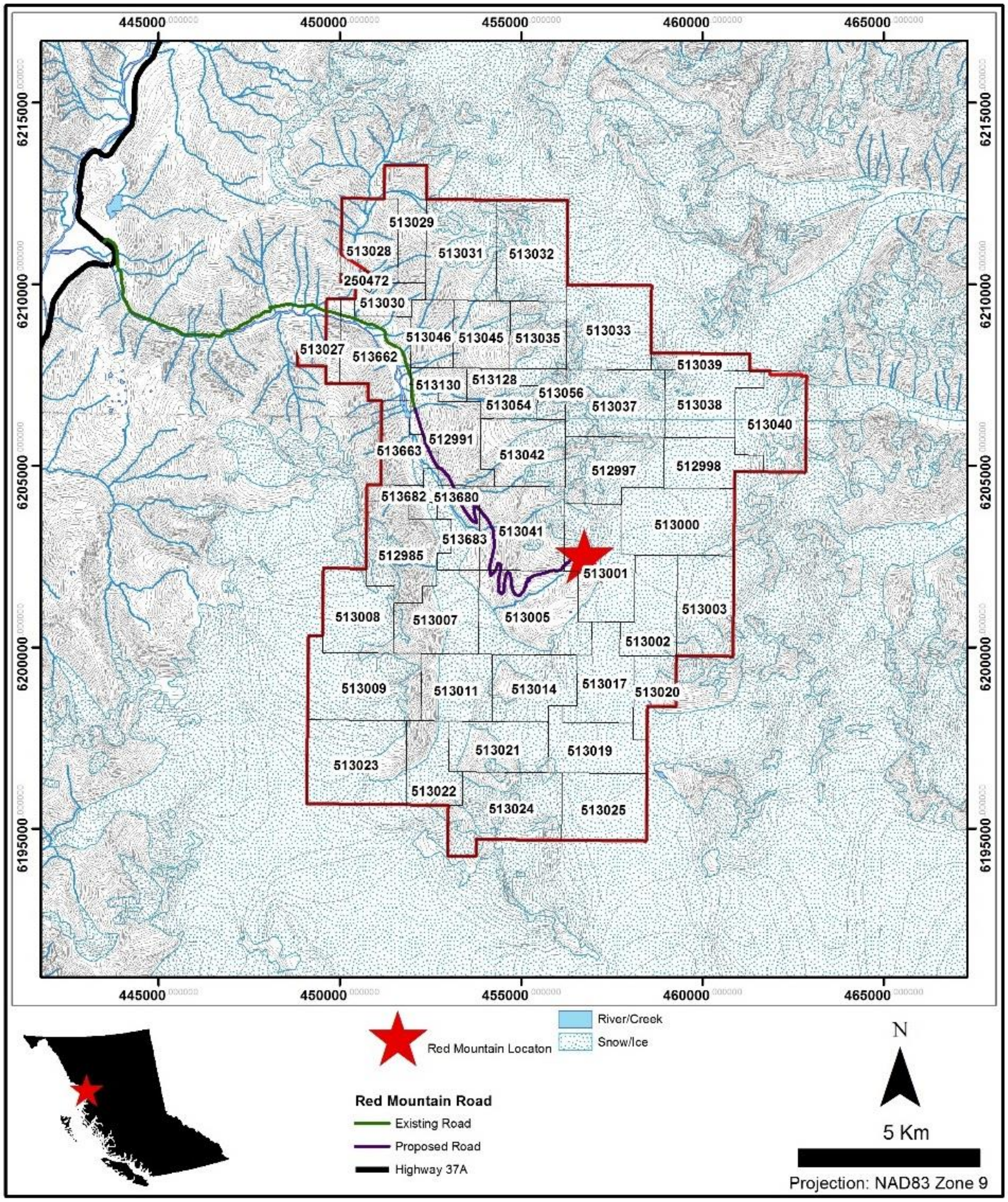
Source: IDM (2014)

Table 4.1: Red Mountain Claim Map

Tenure Number	Tenure Type		Hectares	Ownership (%)
512997	Mineral	CLAIM	452.4	100
513001	Mineral	CLAIM	525.1	100
513028	Mineral	CLAIM	361.4	100
513040	Mineral	CLAIM	470.4	100
513046	Mineral	CLAIM	217.0	100
513054	Mineral	CLAIM	180.9	100
513662	Mineral	CLAIM	434.0	100
513002	Mineral	CLAIM	362.3	100
513024	Mineral	CLAIM	580.5	100
513045	Mineral	CLAIM	289.3	100
513130	Mineral	CLAIM	108.5	100
513007	Mineral	CLAIM	452.8	100
513017	Mineral	CLAIM	380.5	100
512985	Mineral	CLAIM	488.8	100
513005	Mineral	CLAIM	670.2	100
513014	Mineral	CLAIM	398.7	100
513019	Mineral	CLAIM	380.7	100
513031	Mineral	CLAIM	542.1	100
513032	Mineral	CLAIM	542.2	100
513033	Mineral	CLAIM	542.4	100
513038	Mineral	CLAIM	398.0	100
513009	Mineral	CLAIM	597.8	100
513021	Mineral	CLAIM	380.7	100
513056	Mineral	CLAIM	144.7	100
513022	Mineral	CLAIM	308.2	100
513023	Mineral	CLAIM	634.4	100
513680	Mineral	CLAIM	90.5	100
512998	Mineral	CLAIM	307.6	100
513027	Mineral	CLAIM	126.6	100
513029	Mineral	CLAIM	289.1	100
513030	Mineral	CLAIM	162.7	100
513682	Mineral	CLAIM	108.6	100
513000	Mineral	CLAIM	579.3	100
513025	Mineral	CLAIM	435.4	100
513035	Mineral	CLAIM	289.3	100
513037	Mineral	CLAIM	506.5	100
513663	Mineral	CLAIM	253.3	100
513683	Mineral	CLAIM	181.0	100
513011	Mineral	CLAIM	362.4	100
513008	Mineral	CLAIM	416.5	100
513020	Mineral	CLAIM	199.3	100
513003	Mineral	CLAIM	434.7	100
513039	Mineral	CLAIM	126.6	100
513128	Mineral	CLAIM	36.2	100
512991	Mineral	CLAIM	416.2	100
513041	Mineral	CLAIM	543.1	100
513042	Mineral	CLAIM	416.2	100
Total Hectares			**17,125.2**	

Source: IDM (2014)

Figure 4.2: Red Mountain Claim Map



Source: IDM (2014)

IDM, under the terms of the Option Agreement, can earn a 100% interest in the Red Mountain gold project, subject to certain underlying royalties and gold streaming arrangements described in Section 4.3.

4.3 ROYALTIES, AGREEMENTS & ENCUMBRANCES

4.3.1 Royalties

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

Production from the Wotan claims, which contain the Red Mountain gold deposit, is subject to two separate royalties aggregating 3.5% of net smelter returns (NSR), comprising a 1.0% NSR payable to Franco Nevada ("Franco") and a 2.5% NSR payable to Wotan.

Initially Barrick Gold Corporation ("Barrick") was granted its 1.0% NSR royalty in 1995 on all of the then existing claims when it sold the property to Royal Oak. On November 1, 2013, Barrick transferred all of their right, title and interest in the 1.0% NSR to Franco. Bond assembled most of the existing Red Mountain property package in 1989 by way of three option agreements (these three options were exercised and the claims purchased by Bond's successor, Lac). The agreements each provide for NSR royalties and one of them, the Wotan agreement, has an area of influence. As a result, the bulk of the property has stacked NSR royalty obligations, ranging from 2.0% up to 6.5%. Certain peripheral, non-core claims that were staked by Bond or LAC carry a 1.0% NSR and three non-core claims staked by Royal Oak are royalty free.

The mineral resources in this report are subject to two royalties: 1.0% NSR payable to Franco and a 2.5% NSR payable to Wotan.

4.3.2 Underlying Agreements

On April 15, 2014, IDM (formerly known as Revolution Resources Corporation) entered into an option agreement ("Option Agreement") for the Red Mountain gold project with Seabridge.

Claim title is currently under Seabridge. IDM has satisfied the option terms, provided Seabridge with its notice to exercise its option to acquire 100% and transfer of title is currently in progress. Seabridge owns 100% of the property claims subject to two royalties. Franco holds a 1% NSR and a 2.5% royalty is payable to Wotan. A $50,000 annual advance royalty is payable to Wotan annually.

Under the terms of the Option Agreement, IDM to earn its 100% interest in the Red Mountain gold project, subject to certain underlying royalties, was required to (1) issue to Seabridge 4,955,500 (post share-consolidation) common shares of IDM, (2) pay to Seabridge $2 million cash, and (3) incur $7.5 million in exploration and development expenditures by June 4, 2017.

Upon the commencement of commercial production, IDM will make an additional one-time $1.5 million cash payment to Seabridge and Seabridge will also retain a gold metal stream on the Red Mountain gold project to acquire 10% of the annual gold production from the Property at a cost of

US$1,000 per ounce up to a maximum of 500,000 ounces produced (50,000 ounces to Seabridge). Alternatively, Seabridge may elect to receive a one-time cash payment of $4 million at the commencement of production in exchange for the buy-back of the gold metal stream.

The principal agreements governing the Red Mountain gold project are listed below, along with a summary of the more salient provisions and identified by claim number in Table 4.2. The mineral resource defined in his report is subject to the Barrick & Wotan Agreements only.

1. Barrick Agreement: Asset Purchase and Royalty Agreement dated August 17, 1995 between 1091064 Ontario Limited ("1091064"), Royal Oak and Barrick., Under the 1995 agreement, Royal Oak purchased its interest in Red Mountain from 1091064 (a wholly owned Barrick subsidiary) and granted 1091064 an uncapped 1.0% NSR royalty on production.1091064 is entitled to receive an additional $10.00 cash production payment per ounce on all ounces of gold produced from the property in excess of 1,850,000 ounces ("Production Payments"). On November 1, 2013, 1091064, Barrick and Franco-Nevada entered into a royalty deed and assignment pursuant to which 1091064 and Barrick transferred to Franco their right to the 1.0% NSR royalty and the Production Payments.
2. Wotan Agreement: Agreement dated July 26, 1989 between Bond, Wotan and Dino Cremonese granting Bond an option to acquire seven mineral claims., Seabridge is obligated to pay Wotan an uncapped 2.5% NSR royalty on production from claim 513005, (which contain the known Red Mountain gold deposits) and from any other properties within a 2 km area of influence extending from the boundaries of the claim. By October 31st of each year, a minimum royalty of $50,000 is payable. All minimum royalties paid from inception are deductible, once production is attained, against the NSR royalty amount otherwise payable.
3. Krohman Sinitsin Agreement: Seabridge is obligated to pay Darcy Krohman and Greg Sinitsin a 1.0% NSR royalty on production from claims 513128 and 513190. Seabridge may buy out the royalty at any time for $500,000.
4. Harkley Fegan Scott Agreement: Option agreement dated September 26, 1989 between Bond, Harkley Silver Mines Ltd., Stephen Fegen and Wesley Scott, as amended by letter agreement dated September 30, 1992 between LAC and Harkley Silver. Seabridge is obligated to pay Harkley Silver an uncapped 3.0% NSR royalty on production from claims 513042 and 513054.

Table 4.2: Underlying Agreements by Claim Number

Claim #	Hectares	Barrick Agreement	Wotan Agreement	Sinitsin Krohman Agreement	Harkley Fegan Scott Agreement
512985	488.797	1			
512991	416.154	1			
512997	452.432	1			
512998	307.647	1			
513000	579.305	1			
513001	525.127	1			
513002	362.257	1			
513003	434.699	1			
513005	670.206	1	2		
513007	452.776	1			
513008	416.515	1			
513009	597.805	1			
513011	362.383	1			
513014	398.677	1			
513017	380.539	1			
513019	380.734	1			
513020	199.338	1			
513021	380.738	1			
513022	308.159	1			
513023	634.389	1			
513024	580.530	1			
513025	435.383	1			
513027	126.577	1			
513028	361.393	1			
513029	289.073	1			
513030	162.691	1			
513031	542.145	1			
513032	542.161	1			
513033	542.426	1			
513035	289.308				
513037	506.513	1			
513038	397.977	1			
513039	126.596	1			
513040	470.395	1			
513041	543.126	1			
513042	416.200	1			4
513045	289.307				
513046	216.972				
513054	180.890	1			4
513056	144.704				
513128	36.173	1		3	
513130	108.522	1		3	
513662	434.001	1			
513663	253.327	1			
513680	181.046	1			
513682	108.596	1			
513683	90.495	1			
Total Hectares	**17125.20**				

(Seabridge, IDM 2014)

4.4 ENVIRONMENTAL LIABILITIES & PERMITTING

4.4.1 Environmental Liabilities

A $1,000.000 cash reclamation bond has been posted with the provincial government against the property and can be recovered pending closure and remediation of certain environmental requirements, including the following:

- reclamation and closure of approximately 50,000 tonnes of development waste rock that may be potentially acid generating
- the closure of the decline portal
- removal of equipment from the site.

In 2004, the reclamation plan was filed with the BC Ministry of Energy and Mines and at that time the bond was sufficient to cover the cost of reclaiming the site, however regulators have expressed interest in updating the plan to more current costs due to general increases in fuel and contractor costs.

Fuel, when used, is stored in containment at site and there is no record of any fuel spills. Water quality samples are collected from Goldslide Creek as part of the baseline program, on a monthly basis. No hydrocarbons have been noted in lab analyses.

4.4.2 Required Permits & Status

Pursuant to section 3(1) of the Reviewable Projects Regulation pursuant to the Canadian Environmental Assessment Act (CEAA, 2012), the proposed production capacity for the project exceeds the criteria of 75,000 tonnes per annum (t/a) of mineral ore for a new mineral mine and will require review pursuant to the BC EAA and the issuance of an Environmental Assessment Certificate (EAC). The BC Environmental Assessment Office (EAO) issued a Section 10 Order to IDM on November 2, 2015 confirming the project will require an EAC. The EAO further issued a Section 11 Order on February 10, 2016 which outlined the requirements for the environmental assessment of the project under the BC EAA. The proposed submission date of an Application for the EAC is late Q2 of 2017. The project will also require a review and decision pursuant to the Canadian Environmental Assessment Act (CEAA) 2012. The BC EAA and CEAA processes are coordinated and only one Application is required addressing both the CEAA Guideline EOA Application Information Requirements.

After receipt of the environmental assessment certificate, IDM will pursue synchronous permitting for provincial permits relating to the development and operation of the Project. Using this approach timelines of review of provincial permit applications will be coordinated and agreed upon with the Major Mine Permitting Office. No decisions on commercial production related to provincial permits is possible until completion of the decision pursuant to the BC EAA.

It is anticipated that the project will require approvals under the *Mines Act* (1996b), *Environmental Management Act* (2003), and *Land Act* (1996a).

IDM will continue to engage the appropriate provincial agencies and their representatives in the Working Group to confirm permitting requirements related to the project.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE & PHYSIOGRAPHY

5.1 ACCESSIBILITY & TRANSPORTATION TO THE PROPERTY

Access to the property is currently by helicopter. Road access up the Bitter Creek valley from Highway 37A was partially developed for 13 km by Lac Minerals Ltd. in 1994 to the Hartley Gulch-Otter Creek area. Currently this road is passable for only a few kilometres from the highway. The remainder is not passable, as sections have been subjected to washout or landslide activity.

5.2 CLIMATE

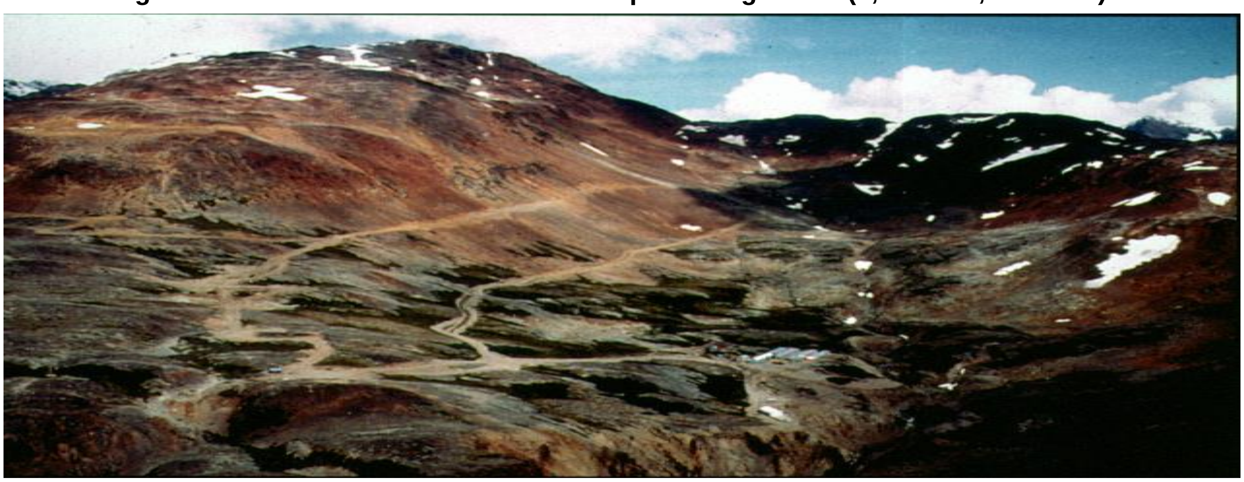
Climatic conditions at Red Mountain are dictated primarily by its altitude (1,742 masl at the centre of the deposit) and proximity to the Pacific Ocean. Temperatures are moderated year-round by the coastal influence. Precipitation is significant in all months, with October being the wettest. Even at sea level, over one-third of the annual precipitation falls as snow. This proportion is greater at higher elevations, where snow may fall at almost any time of year.

The heavy snowfall, steep terrain and frequently windy conditions present a challenging combination. Blizzard conditions are frequent in the immediate vicinity of Red Mountain during winter and avalanches pose a significant threat in the Bitter Creek valley and in the upper Bear River valley through which Highway 37A passes.

5.3 TOPOGRAPHY, ELEVATION & VEGETATION

A view showing the topography of the Red Mountain area is provided in Figure 5.1.

Figure 5.1: View of Red Mountain & Camp Looking South (1,400 to 2,000 masl)



Source: LAC (1993)

From June 1993 to June 1994 and from 2014 to 2016, weather data were collected for the site. Several stations were monitored but the station most relevant to this study is the Upper Tram

Station (Table 5.1). For that one-year period, based on conditions in Stewart, it was noted that December and January were warmer than usual while February was colder than usual.

Table 5.1: Temperature Data – Upper Tram Station

Month	Average (°C)	Max (°C)	Min (°C)
Jan	-3.3	8.1	-13.1
Feb	-9.8	7.3	-24.7
Mar	-3.4	6.8	-12.9
Apr	-0.7	5.7	-8.1
May	1.5	13.0	-4.8
Jun	3.1	7.0	0.0
Jul	5.9	20.5	-4.3
Aug	9.6	20.5	1.1
Sep	3.9	14.4	-3.1
Oct	3.2	13.7	-4.3
Nov	-4.2	2.1	-17.1
Dec	-4.1	1.6	-9.6
Average	**0.1**		

Source: LAC (1994)

5.3.1 Relative Humidity

The relative humidity is generally high year-round due to the proximity to the Pacific Coast. 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.

5.3.2 Wind

Winds at the Upper Tram location are channeled by topography. Windy conditions are frequent. Hourly average wind speeds regularly exceed 10 m/s and instantaneous wind speeds in excess of 30 m/s have been observed. The Upper Tram Station is more sheltered than the top of the ridge near the portal. Wind speeds are expected to be significantly higher at the ridge where most of the projected activity is planned.

5.3.3 Precipitation

Precipitation data were collected for part of 1994 (April to August) at the Upper Tram Station; this data along with data collected at the Lower Tram Station were compared to the 1974 to 1992 Stewart Airport records. While there were insufficient data from the Upper Tram Station for an accurate correlation with the Stewart Airport, precipitation at the Stewart Airport was considered by Lac's consultants, to be representative of precipitation at the Red Mountain Site.

The hypothesis that the precipitation at the project site (1,742 masl) is equivalent to the Stewart Airport (7 masl) may seem surprising given the large increase in precipitation generally associated with increasing elevation in the Coast Mountains. The similarity is explained by the fact that the Red Mountain site is separated from the Portland Canal by a topographic divide with elevations exceeding 2,000 m. Therefore, air masses reaching Red Mountain from the ocean have already lost moisture due to orthographic lifting from sea level.

The Stewart Airport precipitation data for the period 1974 to 1992 is shown in Table 5.2. As described above, the precipitation at the Red Mountain site is assumed to be the same as the Stewart Airport.

Table 5.2: Stewart Airport Precipitation

Month	Stewart Airport Precipitation (mm)
January	229.7
February	151.9
March	109.6
April	84.4
May	76.0
June	66.0
July	66.3
August	97.4
September	201.3
October	301.9
November	242.2
December	250.7
Annual Total	**1,877.4**

Source: LAC (1994)

At the Stewart Airport, an average of 35% of the precipitation falls as snow.

LAC operated two snow survey stations in the project area during the winter of 1993-94 each comprising 10 sampling points. A sampling tube was used to collect a snow core sample at each sampling point on a monthly basis. Snow pack density and water equivalent were calculated on the basis of snow depth and core weight, as an average from the ten sampling points. One of the snow survey stations was located across Goldslide Creek from the exploration camp. This station is most relevant to the project as currently planned.

Snow survey data were compared to the data collected by BC Ministry of Environment, Lands and Parks (MELP) from other stations in the area. Snow pack development at this site was very similar to snow pack development at the Bear Pass site until April when water equivalent peaked at Bear Pass. At Red Mountain, the peak was reached in early May. Snow densities are generally high in coastal British Columbia, reaching 50% by late winter.

Comparing snow pack data for the area, it appears that the Red Mountain site receives considerably less precipitation than other nearby sites. This corroborates the observation that the Cirque receives considerably less precipitation than suggested by its altitude due to its relatively sheltered location. This underscores the importance of aspect and direct exposure to the Portland Canal in determining local precipitation levels in the project area.

The 1994 snow course data for the Red Mountain camp is shown in Table 5.3.

Table 5.3: 1994 Red Mountain Snow Course Data

Date (1994)	Snow Depth (cm)	Water Equiv. (mm)	Density (%)
Jan 1	-	-	-
Feb 1	167.7	584	35
Mar 1	158.7	653	41
Apr 1	187.9	840	44
May 1	201.7	975	49
Jun 1	142.7	740	52

Source: LAC (1994)

5.3.4 Seismic Activity

The National Building Code of Canada seismic source model (Horner 1994) places Stewart in Zone 2 for peak ground acceleration and Zone 4 for peak ground velocity, on a Risk Zone scale of 1 (low risk) to 6 (high risk). A site-specific seismic hazard assessment was carried out using the Cornell method incorporated in the McGuire program "RISKLL," and ground motion attenuation relationships. Annual probabilities of exceeding a range of return periods are shown in Table 5.4 with the corresponding peak ground accelerations and velocities. This analysis indicates that the Red Mountain gold project area is in a region of moderate seismic risk. Seismic events occurring in the earthquake prone zone, which runs along the length of the Coast Mountains (Horner 1994), may cause ground motion at the Red Mountain gold project area.

Table 5.4: Probabilistic Seismic Ground Motion Analysis

Annual Probability of exceeding	Return Period (years)	Peak Ground Acceleration (g)	Peak Ground Velocity (cm/sec)
0.05	20	0.021	4.0
0.01	100	0.046	10.0
0.005	200	0.061	13.2
0.0021	476	0.083	18.2
0.001	1,000	0.104	23.0
0.0005	2,000	0.126	28.0
0.0001	10,000	0.188	41.9

Source: (LAC 2014).

5.3.5 Local Resources

Stewart provides a number of community services including air services, road transportation to the interior of BC, marine transport via the Portland Canal, water supply, sewage and waste management facilities, health services, and policing and emergency services. There is also a range of business services, parks and recreation services, and services and facilities for visiting tourists.

5.3.6 Operating Conditions

Road access in the higher elevation areas can be hampered during the late winter and spring by heavy snowfall and avalanche conditions. Current planning envisions a seasonal mining operation over an approximate 8-month period beginning in late February. Milling is proposed to occur year around with ore obtained from a stockpile during the heavy winter months.

5.3.7 Surface Rights

The project currently resides on Crown land and no private property is within the operating plan area.

5.4 INFRASTRUCTURE

The project is located approximately 32 km from the BC Hydro sub-station north of Stewart, BC.

At the project site, a surface tote road network, basic surface structures (camp buildings, helipads, waste rock storage areas) and used mobile equipment remain from previous exploration activities. Water is readily available from both surface and underground sources. As well, mineralized zones have been bulk sampled in the Marc Zone accessed from 1,700 m of existing underground decline and drift development.

5.5 DEMOGRAPHICS

5.5.1 Population

Prior to 1914, the population of Stewart was in the order of 10,000 people. By 2001, the population declined to approximately 660 people, and then to 496 in 2006 (Government of Canada, 2006). The population of the District of Stewart was 494 in 2011 (Government of Canada, 2011).

At the time of the 2006 census by the Government of Canada, 32.4% of the population held a high school certificate or equivalent and the majority of employment was in the trades and transportation sectors. The unemployment rate was 8.2%.

According to the District of Stewart's Investment-Ready Community Profile, the largest employers in Stewart are in the mining, petroleum resources, highway maintenance, accommodation, education and health care industries.

The Nisga'a Nation has a population of approximately 5,581 (Aboriginal Affairs and Northern Development Canada, 2014). The majority (67%) live off the reserve. The on-reserve population predominantly live in four Nisga'a Nation villages: Gitlaxt'aamiks (New Aiyansh), Gitwinksihllkw, Laxgalts'ap, and Ginglox.

5.5.2 Economic Activity

Major industries operating around the District of Stewart include tourism, mining exploration, mining operations, and logging. The Stewart World Port and Stewart Bulk Terminals operate out of the Port of Stewart, which is North America's most northern ice-free port and a hub for shipping to Alaskan and Asian markets. Roadways and railways connect Stewart to other transportation hubs in British Columbia and North America.

Businesses in Stewart generally rely on resource industry companies and tourism opportunities related to the many hiking trails and outdoor recreation activities in and around Stewart.

6.0 HISTORY

6.1 PRIOR OWNERSHIP, OWNERSHIP CHANGES & EXPLORATION RESULTS

Placer mining commenced in Bitter Creek at the base of Red Mountain at the turn of the century but significant work on the current deposit began in 1988 when Wotan Resources Inc. staked claims in 1988 and optioned the property to Bond Gold Canada Inc. (Bond) in 1989. Pre-1988 exploration history is outlined below:

- **1899/1902** Discovery and small-scale mining of placer gold in Bitter Creek.
- **1912-1919 & 1940** Hartley Gulch Area, three adits developed, grades to 0.79 oz/t Au found.
- **1915** Shipment to Trail of 15 tons of hand sorted ore from the Silver Tunnel. (Roosevelt #1 claim on Roosevelt Creek). Smelter returns averaged 0.26 oz/t Au, 101 oz/t Ag, 34% Pb and 8% Zn.
- **1965** Hartley Flats - 4.8 tons of hand cobbed ore from adits shipped to Trail.
- **1965** Discovery of molybdenite mineralization and visible gold at McAdam Point - rock sampling, geological mapping, hand trenching and diamond drilling (one 70 m AX hole). Rock sampling yielded an average of 0.475% MoS_2 over 137 m. One of the trenches yielded values of up to 64.45 g/t Au over 0.61 m.
- **1966-1973** Rehabilitation and extension of the underground workings at the Silver Tunnel vein on Roosevelt #1 claim; production of about 5,000 tonnes of unknown grade. The ore was processed at the Adam custom mill on lower Bitter Creek.
- **1976** Jack Claims (central and southern portions of Red Mountain) staked by J. Howard and optioned to Zenore Resources Ltd.
- **1977-78** Zenore Resources Ltd.: Logging and re-sampling of the 1967 drill core (samples assayed for molybdenum only); geological mapping, petrographic studies, rock geochemistry (assayed for copper, molybdenum, and gold).
- **1978-80** Falconbridge Nickel Mines Ltd: Reconnaissance program for porphyry copper-molybdenum targets in the Stewart area.
- **1987-88** Chuck Kowall, working with a B.C. Government Prospector Assistance grant, prospected and acquired ground in the Goldslide and Willoughby Creek drainages and brought the area to the attention of Bond Gold.
- **1988-89** Staking of Red Mountain by Wotan Resources Inc. and optioned to Bond Gold Canada Inc.

In 1989, gold mineralization in the Marc and Brad zones was discovered by drilling. Lac Minerals Ltd. acquired Bond in 1991. Surface drilling on the Marc, AV and JW zones continued in 1991, 1992, 1993 and 1994. Underground exploration of the Marc zone was conducted in 1993 and 1994. In 1995, LAC was acquired by Barrick, who subsequently optioned the property to Royal Oak in

1996. NAMC purchased the property from the receivership sale of Royal Oak in 2000. NAMC subsequently sold the property in 2002 to Seabridge, who optioned the property to Banks. Banks terminated the option in 2013 and the property reverted to Seabridge. Seabridge subsequently optioned the property to IDM in 2014. Details of the exploration program carried out by IDM are given in Section 9.7.

Table 6.1 is a recent chronological summary of exploration efforts on Red Mountain from 1988 to 2016:

Table 6.1: Red Mountain 1988-2016 Exploration Summary

1988-89	Staking of Red Mountain by Wotan Resources Inc.
1989	Red Mountain and Wotan properties optioned to Bond. Discovery of gold-silver mineralization by drilling in the Marc zone (3,623 m); airborne EM and magnetic survey.
1990	Exploration of Marc zone and adjacent area (11,615 m of drilling) by Bond.
1991	LAC acquired 100% of Bond. A 2,400 m drill program was completed on the Marc and AV Zones.
1992	Results of a 4,000 m drill program by LAC increased Red Mountain resources and indicated excellent potential for expansion.
1993	28,800 m of surface drilling defined the Marc, AV, and JW Zones and identification of the 141 Zone. An underground exploration adit allowed bulk sampling of the Marc zone. 8,600 m of underground drilling completed in the Marc zone.
1994	LAC completed a 350 m extension of the main decline, 30,000 m of underground drilling and 16,000 meters of surface drilling.
1995	Red Mountain gold project acquired by Barrick following Barrick's take-over of LAC. No exploration work completed by Barrick.
1996	Royal Oak undertakes exploration to explore for additional reserves. Extended underground drift by 304 m and completed 26,966 m of surface and underground drilling.
2000	NAMC purchased the property and project assets from Price Waterhouse Coopers, conducted detailed relogging of existing drill core and constructed a geological model for resource estimation purposes and exploration modelling.
2002-2012	Seabridge purchases property, completes two Preliminary Assessment Studies (PEA)
2012-2013	Banks options property, two surface drill holes completed, completes PEA study.
2014	IDM optioned property, drilled 12 core holes, completed soil, rock and channel sampling and prepared a PEA.
2016	IDM drilled 11 surface holes and 51 underground holes totalling 8,123.44 metres, and completed surface rock and channel sampling.

6.2 STEWART AREA HISTORY

Stewart's history has been largely dictated by the fortunes of the mining industry. The first prospecting in the area, for gold, took place in the late 1890's and the town site was named in 1905. In the early 1900s, an estimated 10,000 people lived in the area attracted by the prospects of gold. Significant mines such as Premier Gold, Big Missouri, and Granduc Copper were later established in the area.

In 1992, the Premier mine suspended operations, thus starting the most recent hiatus in mineral production in the Stewart district.

6.3 HISTORIC MINERAL RESOURCE ESTIMATES

Several resource estimates were completed in the past at a 3 g cut-off. Any mineral resource estimates prepared prior to 2001 do not follow the requirements of NI-43-101. Mineral resources stated in Table 6.2 are only stated for historical completeness and should not be relied upon as they are ass superseded by the mineral resources presented in Section 14 of this report.

Table 6.2: Historical Resource Estimates

Date	Company	Classification	Tonnes	In-situ grade (Au g/t)	In-situ grade (Ag g/t)	In-situ contained (Au oz)	In-situ contained (Ag oz)
1992	LAC	NA	2,500,000	12.8	38.1	1,028,800	3,062,300
1993	LAC	NA	2,511,000	11.3	29.8	912,200	2,405,700
1994	LAC	NA	2,500,000	10.0	-	803,700	-
1994	LAC	NA	2,399,644	9.6	-	740,640	-
1994	LAC	NA	2,401,855	10.5	-	810,820	-
1995	LAC	NA	3,653,854	7.7	-	904,500	-
1995	LAC	NA	1,938,084	9.7	-	604,400	-
1996	ROM	NA	3,143,880	5.69	22.87	575,273	2,094,770
1997	ROM	NA	2,736,000	5.16	20.72	453,573	1,822,357
1998	ROM	NA	2,457,840	6.31	18.06	498,507	1,427,789
2001	NAMC[1]	M&I	1,594,000	7.80	29.27	400,000	1,499,700
2001	NAMC[1]	M&I	346,000	7.45	12.36	82,900	137,700
2002	Seabridge[1]	M&I	1,594,000	7.80	29.27	400,000	1,499,700
2002	Seabridge[1]	Inferred	346,000	7.45	12.36	82,900	137,500
2008	Seabridge[2]	M&I	882,400	10.55	31.85	299,300	903,500
2008	Seabridge[2]	Inferred	191,020	10.25	15.22	62,900	93,500
2013	Banks[3]	M&I	1,612,000	8.4	28.3	432,000	1,440,000
2013	Banks[3]	Inferred	807,000	5.4	10.2	140,000	260,000
2014	JDS[3]	M&I	1,454,300	8.15	29.57	380,900	1,382,800
2014	JDS[3]	Inferred	332,900	7.69	12.72	82,300	136,200
2016	ACS	M&I	1,641,600	8.36	26.00	441,500	1,379,800
2016	ACS	Inferred	548,100	6.10	9.00	107,500	153,700

Source: JDS (2014) with modifications. (1) 0 g/t Au cut-off, (2) 6 g/t Au cut-off, (3) 3 g/t Au cut-off. The 2001 NAMC resource was the base for the 2014 JDS resource.

6.4 HISTORIC PRODUCTION

No historical production has taken place on the property.

7.0 GEOLOGICAL SETTING & MINERALIZATION

7.1 INTRODUCTION

This section discusses the geology of the Red Mountain area. It includes the regional geology, a discussion of the tectonic history, property geology, a description of the mineralized zones, and presents a model for deposit formation based on observed geology and gold distribution.

7.2 REGIONAL GEOLOGY

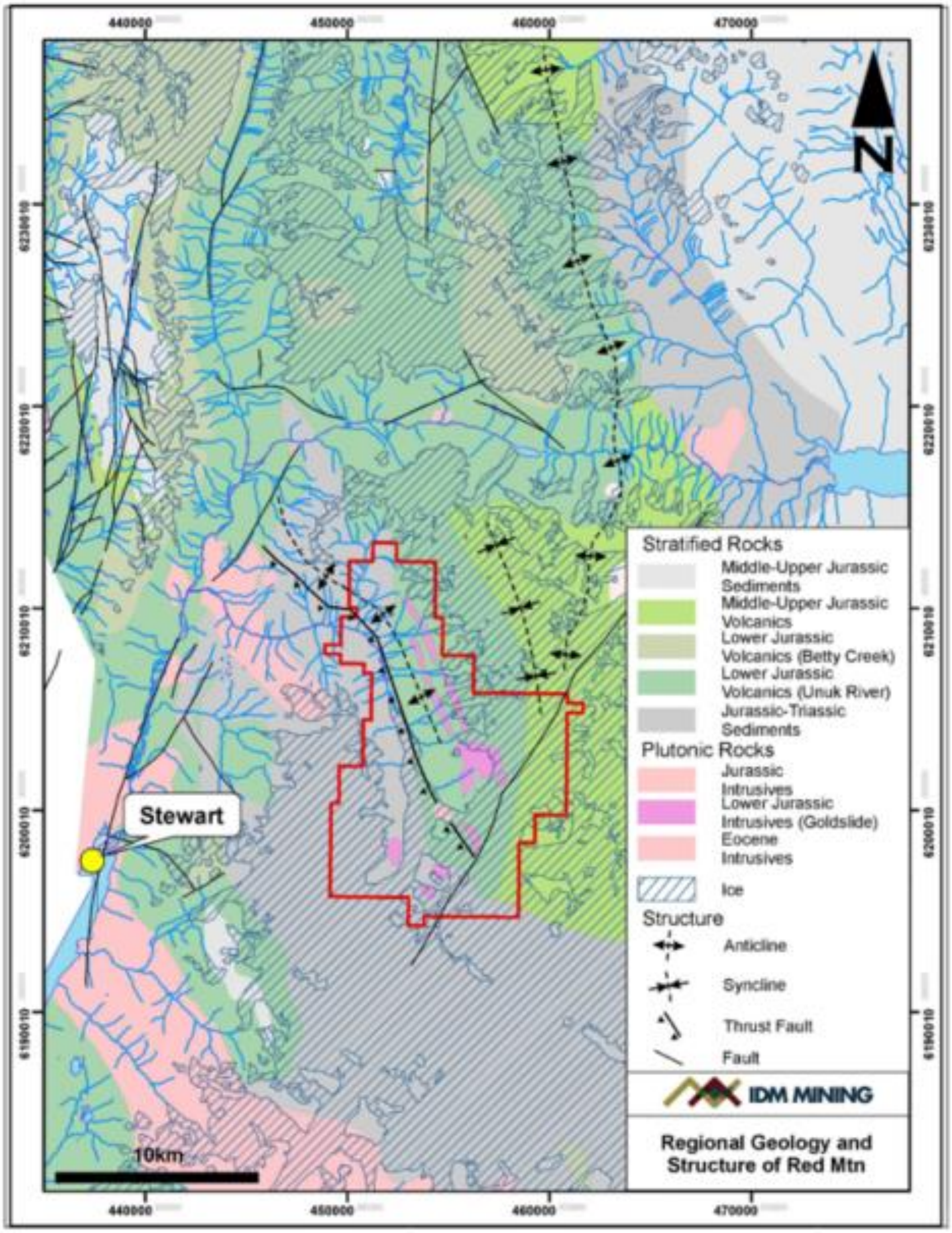
The regional geology of the Red Mountain area has been described by Greig et al (1994), Alldrick (1993) and Rhys et al (1995). The following description is drawn from these sources.

Red Mountain is located near the western margin of the Stikine terrain in the Intermontane Belt (Figure 7.1). There are three primary stratigraphic elements in Stikinia and all are present in the Stewart area: 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. Many primary textures are preserved in rocks from all of these groups, and mineralogy suggests that that the regional metamorphic grade is probably lower greenschist facies.

Intrusive rocks in the Red Mountain region range in age from Late Triassic to Eocene and form several suites. The Stikine plutonic suite is comprised of Late Triassic calc-alkaline intrusions that are coeval with the Stuhini Group rocks. Early to Middle Jurassic plutons are roughly coeval with the Hazelton Group rocks and have important economic implications for gold mineralization in the Stewart area, including the Red Mountain gold deposits. Intrusive rocks of this age are of variable composition (Rhys et al, 1995). 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.

Structurally, Red Mountain lies along the western edge of a complex, northwest-southeast trending, doubly-plunging structural culmination, which was formed during the Cretaceous. At this time rocks of the Stuhini, Hazelton and Bowser Lake groups were folded and/or faulted, with up to 40% shortening in a northeast-southwest direction (Greig, personal communication 2001). The Red Mountain deposits lie at the core of the Bitter Creek antiform, a northwest-southeast trending structure created during this deformation event (Greig, 2000).

Figure 7.1: Regional Geology



Source: IDM (2016)

7.3 LOCAL GEOLOGY

The tectonic history of northwestern British Columbia in the Red Mountain area is described below:

200 Ma (Early Jurassic) – The Quesnelia and Slide Mountain terrains have already docked with ancestral North America. Stikinia is separated from continental North America by Cache Creek oceanic crust, which is being subducted at both under North America and the western edge of Stikinia. Another subduction zone exists on the eastern edge of Stikinia. Above this subduction zone the Red Mountain gold deposits are formed in an oceanic volcanic arc.

170 Ma (Middle Jurassic) – Stikinia has docked with North America. The Bowser Basin is has just formed and is getting initial basin fill from Cache Creek rocks in the east, which were placed on top of the Stikine terrain by back-thrusting during docking, and from Stikinia rocks in the west. A lack of intrusive rocks suggests there is no active subduction west of Stikinia at this time or that if present it is so far to the west that no influence is felt.

145 Ma (Early Cretaceous) – The Alexandria terrain docks and formation of the Skeena fold belt starts. This event folded the rocks of the Stuhini, Hazelton and Bowser Lake groups.

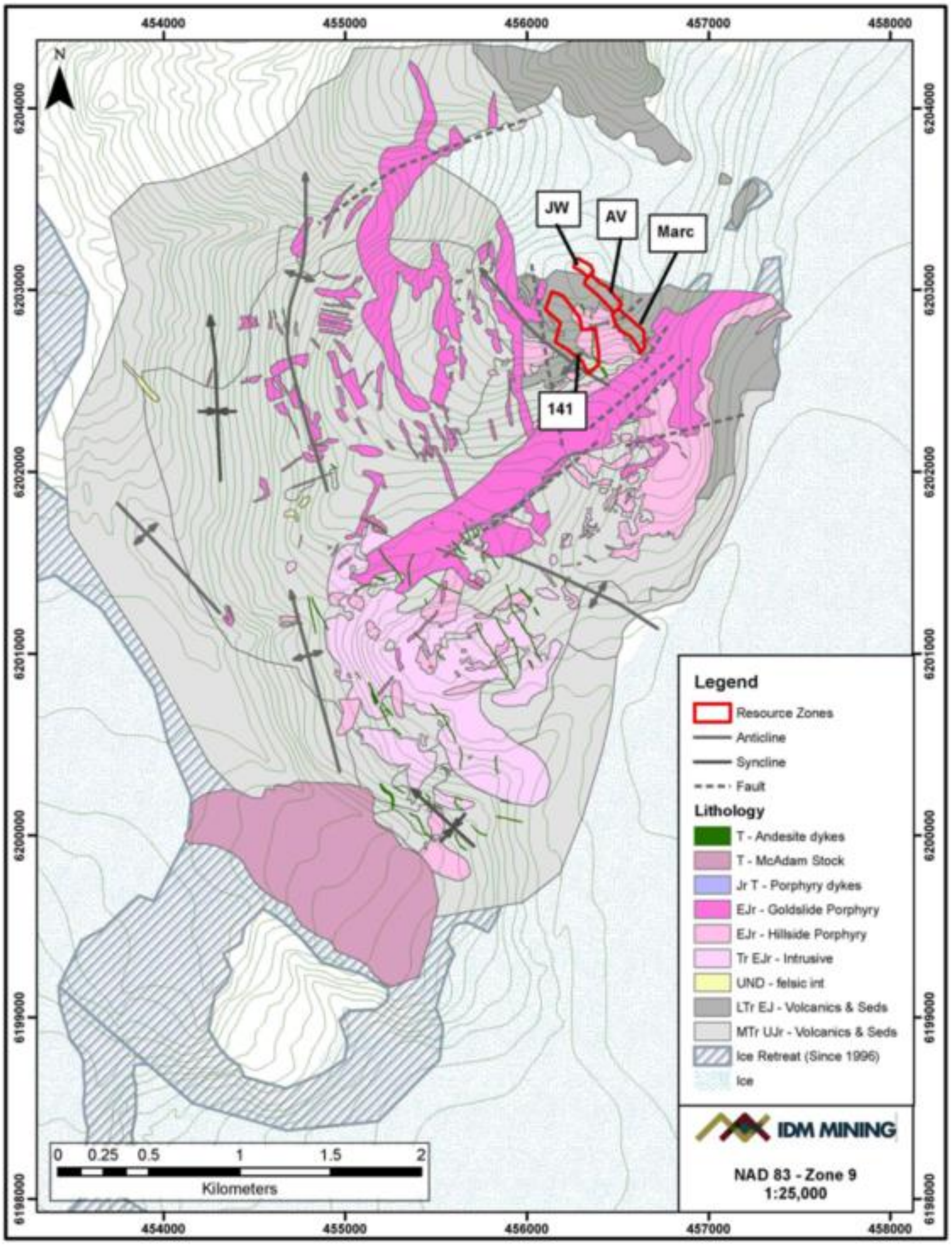
65 Ma (End of Cretaceous) – Deformation of Stikine terrain rocks is complete resulting in folded and doubly plunging structural culminations. The Red Mountain deposits have been rotated from a vertical (?) orientation to a westerly dipping, northerly plunging orientation in the eastern limb of the Bitter Creek antiform. Alexandria has been intruded by plutons of the Coast Plutonic Complex.

20 Ma (Miocene) – Extension along north-northwest and northeast trends forming large- and small-scale structures. Locally at Red Mountain can be equated to formation of the Rick Fault and other property scale faults, offsetting the mineralized zones.

7.4 PROPERTY GEOLOGY

Property geology is shown on Figure 7.2. The oldest rocks, Middle to Upper Triassic mudstone, siltstone and chert of the Stuhini group outcrops over about two thirds of the mapped area. The Triassic 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, which plunge towards 345° and dip steeply to the southwest. An approximate contact between rocks of the two groups also follows this trend and occurs along the projected trace of the Bitter Creek antiform, a structure that has been mapped by Greig et al (1994) to the northwest of the map area. Hazelton Group volcaniclastic rocks on the southwest limb of this structure have been eroded away.

Figure 7.2: Red Mountain Property Geology



Source: IDM (2016)

Three phases of the Early Jurassic Goldslide intrusions are exposed in the map area. The Hillside porphyry, a fine to medium-grained hornblende and plagioclase porphyry, occurs near the summit of Red Mountain and along the ridge to the southeast of the summit. The medium to coarse-grained hornblende, biotite ± quartz Goldslide porphyry, is distinguishable from the Hillside porphyry by mineralogy and phenocryst size. It is exposed along the Goldslide Creek valley, extending from the surface expression of the Marc Zone to the southwest for two kilometres. Finally, sills of the Biotite porphyry intrude Upper Triassic sediments on the west side of Red Mountain. It is distinguished from the Hillside porphyry by the presence of biotite phenocrysts and from the Goldslide porphyry by the small size of hornblende and plagioclase phenocrysts (Rhys et al, 1995). Contact breccias and strongly disrupted bedding are common along the contacts of these intrusions, particularly in association with the Hillside porphyry. In addition, the Hillside porphyry contains rafts of the sedimentary rocks ranging in size from one or two metres to several tens of metres.

Recent work indicates that the three phases of intrusive porphyry have all originated from the same source, and as such represent an evolution in the magma, seen as an enrichment in elements such as sodium and minerals like quartz, which are common markers in the Goldslide phase.

A Tertiary intrusion, the McAdam point stock, is exposed in the Lost Valley area adjacent to the Bromley Glacier. It is a medium to coarse-grained biotite quartz monzonite dated to 45 Ma (Rhys et al, 1995). Rather than being one large intrusion, the Lost Valley stock appears to be a series of nested structures, with sharp contacts between coarse and fine phases of quartz monzonite observed in several locations. Ductile shear structures do indicate that regular emplacement took place in quick succession and that the entire intrusion cooled as a whole sometime in the Eocene or Oligocene. Several dykes of monzonite have been traced further to the south through the 'Lost Mountain' area, and suggest a continuation of the main body at depth, under a mantle of hornfelsed metasedimentary rocks.

Structural deformation at the property scale is consistent with the observations at the regional and tectonic scales. Folds have been mapped in the entire Triassic-Jurassic succession with north to northwest plunging axes and generally steeply dipping limbs. Fold traces can be complicated and difficult to trace, particularly near intrusive contacts (Rhys et al, 1995). The timing suggests that the folds are a manifestation of the Cretaceous Skeena fold belt deformation.

A series of north to south striking strike slip faults have been directly observed in Lost Valley, most notably where they truncate the andesitic / lamprophyre dykes, meaning that this movement is happening after the emplacement of the Lost Valley intrusion. These strike-slip faults can then be traced for several kilometers across the property, and occur as parallel structures spaced around 400m apart. Sympathetic structures, such as riedel shears, normal and reverse faults have been observed propagating from these faults, with some evidence that late stage mineralisation (unrelated to Red Mountain zones) tied these structural features.

Over all this brittle faulting has affected all rock units at Red Mountain. Rhys et al (1995) recognised 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. The latter group are noted by Rhys et al (1995) to have contain more gouge and have broader alteration envelopes than the former.

7.5 SIGNIFICANT MINERALIZED ZONES

7.5.1 Mineralized Zones

The mineralized zones consist of crudely tabular, northwesterly trending and moderately to steeply southwesterly dipping gold bearing iron sulphide stockworks. Pyrite is the predominant sulphide, however locally pyrrhotite is important. The stockworks zones are developed primarily within the Hillside porphyry, and to a lesser extent, in rafts of sedimentary and volcaniclastic rocks. Although locally anomalous gold values are present within the Goldslide porphyry, significant auriferous sulphide stockwork zones have not been located in this rock unit, which generally lies less than 100 m below mineralized zones.

The stockwork zones consist of pyrite microveins, coarse-grained pyrite veins, irregular coarse-grained pyrite masses and breccia matrix pyrite hosted in a pale, strongly sericite altered Hillside porphyry. Vein widths vary from 0.1 cm to approximately 80 cm but widths of 1 to 3 cm are most common. The veins are variably spaced and average 2 to 10 per metre, and generally comprise from 4% to 10% of any drill intersection. The veins are very often heavily fractured or brecciated with infillings of fibrous quartz and calcite. Orientations of veins in the stockworks are variable; however, sets with northwesterly trends and moderate to steep northeasterly and southwesterly dips have been identified in underground workings (Rhys et al, 1995).

The pyrite veins typically carry gold grades ranging from ~3 g/t to greater than 100 g/t. Gold occurs in grains of native gold, electrum, petzite and a variety of gold tellurides and sulphosalts (Barnett, 1991). These mineral grains, which are typically 0.5 to 15 microns in size, occur along cracks in pyrite grains, within quartz and calcite filled fractures in pyrite veins, and to a lesser extent, as inclusions within pyrite grains.

The stockwork zones are surrounded by more widespread zone of disseminated pyrite and pyrrhotite alteration. Each of these sulphides, which also occur as sparsely distributed stringers, comprise about 1.5 to 2.0% of the wall rocks to the stockwork zones. The most striking feature is that while disseminated pyrite occurs within the stockwork zones the disseminated pyrrhotite abruptly disappears, often over distances of less than a metre, at the edges of the bleached pyrite stockwork zones. Locally it does occur within the pyrite stockwork, but generally only in peripheral areas where bleaching and pyrite vein density is weak.

The stockwork zones are also partially surrounded by a halo of light red coloured sphalerite. It comprises 0.5 to 4.0% of the rock and generally is more abundant in the footwall portions of the zones. The relationship between this sphalerite and the gold bearing pyrite stockworks is unclear. Locally the sphalerite halo contains low-grade gold values (0.5 - 2.0 g/t gold); however, these areas also contain sparse pyrite or pyrrhotite veinlets that could easily explain the gold values. The lack of a consistent relationship between the stockwork zones, gold grades and the distribution of sphalerite suggests that it is not necessarily related to the gold bearing system. A cross cutting relationship between pyrite, pyrrhotite and sphalerite mineralization was not observed during core re-logging in 2000.

8.0 DEPOSIT TYPE

Several models have been presented for the formation of the Red Mountain gold deposits. Rhys et al (1995) concluded that the setting and style of mineralization is similar to that of many porphyry systems. This was based on data from deep drilling that indicated mineralization and alteration zoning common to traditional porphyry systems. Lang (2000c) suggested that while the porphyry system zonation was present the alteration and mineralization was more consistent with a later magmatic-hydrothermal system that overprinted the earlier vertical alteration pattern. A third scenario has been presented by Barclay (2000) in which fracture formation was due to extension caused by cooling in a high-level intrusion and sulphide-gold deposition was from a locally derived, volatile-rich exsolving fluid. In this case, both mineral deposition and extension were ongoing and evolving.

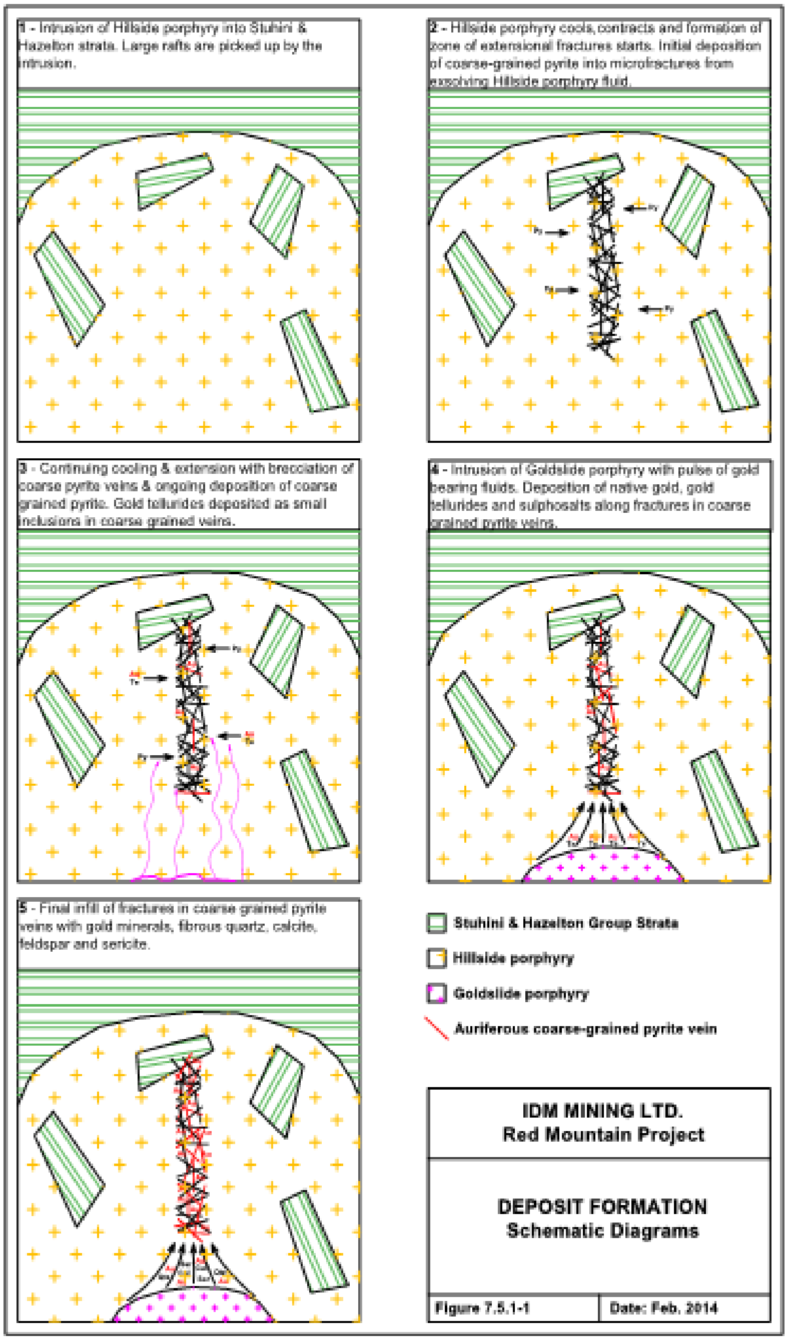
A synthesis of these models, in particular using elements of the models proposed by Lang and Barclay, appears to best fit with geological and mineralogical observations. A series of schematic diagrams illustrating this is shown in Figure 8.1 and a brief description of each frame is as follows:

1. Intrusion of the Hillside porphyry into Stuhini and Hazelton Group strata. Large rafts of the host rocks are picked up by the intrusion.
2. The Hillside porphyry cools and contracts. The contraction causes the initial formation of a zone of extensional fractures. Pyrite deposited into these fractures starts from volatile fluids that are exsolving from the Hillside porphyry as it cools.
3. Ongoing cooling and extension with fracturing and brecciation of coarse-grained pyrite veins. Additional coarse-grained pyrite is deposited into open space. The gold telluride petzite is deposited as small inclusions in pyrite grains.
4. Intrusion of the Goldslide porphyry. The intrusion drives a pulse of hydrothermal fluids containing native gold, gold tellurides and sulphosalts into fractures in the coarse-grained pyrite veins where they are deposited.
5. Final infilling of remaining fractures in the coarse-grained pyrite veins with gold minerals, fibrous quartz, calcite, feldspar and sericite.

A series of detailed diagrams illustrating vein formation and gold deposition are shown in Figure 8.2 (after Lang, 2000c).

The model proposes a plausible origin for the structures that host sulphide and gold mineralization, and puts forth a paragenetic sequence for mineral deposition that fits well with macroscopic and petrographic observations. The model also fits well with the random nature of a stockwork system and the variation in gold grades that are encountered over short distances in the diamond drill core.

Figure 8.1: Deposit Formation Models



Source: IDM (2014)

Figure 8.2: Schematic Diagrams Showing Stages of Formation of Pyrite Veins & Timing of Au

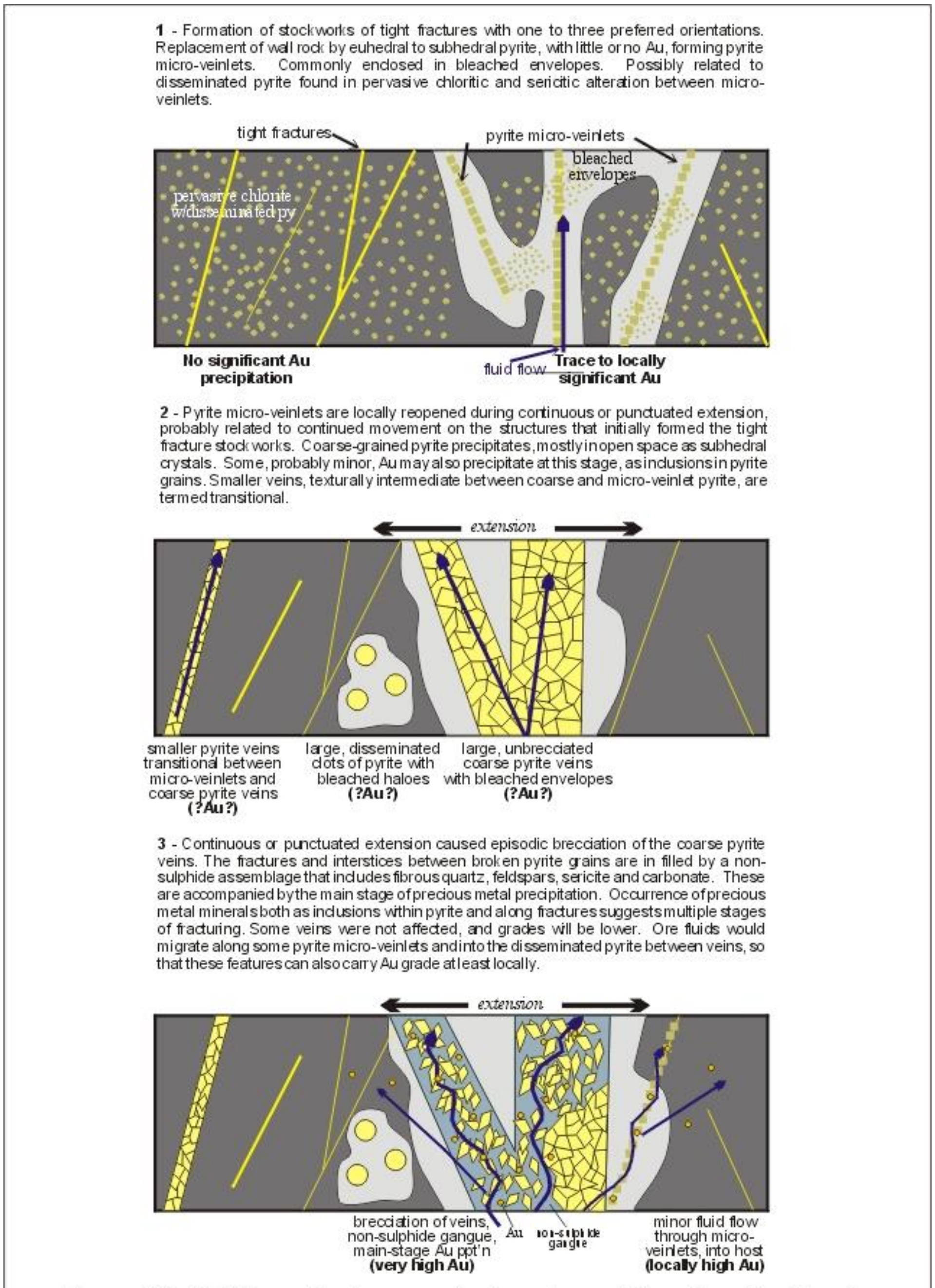


Figure 7.5.1-2: Schematic diagrams showing stages of formation of pyrite veins, and the timing of Au precipitation (from Lang, 2000C).

Source: NAMC (2001)

9.0 EXPLORATION

9.1 INTRODUCTION

The Red Mountain property has been explored by IDM, predecessor companies (e.g. Lac), or by contractors (e.g. geophysical surveys).

Past exploration is summarized in Sections 1, 6, and 10. No exploration was conducted from 2001 to 2012 as the property was on care and maintenance by Seabridge. In 2012, Banks drilled three drill holes is the Marc Zone, two of which intersected the Marc mineralized zone and the third hole was abandoned prior to reaching the Mark Zone.

9.2 PROPERTY GRIDS

All data in the Red Mountain Gemcom database, including the drill hole orientation data, has two sets of coordinates, and if applicable, two different azimuths. One set is comprised of UTM grid coordinates and azimuths, for which the north direction is 0.5° west of true north. The second set of coordinates and azimuth is for a local mine grid where the north direction has been rotated 45° to the west. Mine grid north is therefore parallel to the trend of the stockwork zones, and the vertical section orientation at 090°-270°mine grid is perpendicular to the trend of the stockwork zones.

All work for the current resource estimation has used mine grid coordinates and orientations.

9.3 GEOLOGICAL MAPPING

Geological mapping at a variety of scales from prospect scale to property scale, was carried out by Bond and LAC employees and consultants in order to understand lithological, structural and mineralization relationships. More recently IDM has completed additional mapping of areas exposed due to receding glacial ice.

9.4 GEOCHEMICAL SAMPLING

Soil, grab, and rock sampling has been, and still is, used to evaluate mineralization potential and generate targets for ongoing exploration programs and core drilling. The project database contains approximately: 2,200 soil samples, 5,800 rock samples and 890 whole rock samples.

9.5 GEOPHYSICS

A number of geophysical surveys were completed on the property between 1990 and 1994 for use to vector in on mineralization and generate targets for exploration drilling. Methods have included:

- Surface IP, UTEM, VLF and magnetics.
- Airborne magnetics, EM and radiometrics.
- Downhole IP, magnetics and UTEM.

9.6 PETROLOGY, MINERALOGY, AND RESEARCH STUDIES

A significant number of research studies have been completed on the Red Mountain gold project. These include:

- Structural studies (regional, property and zone scales).
- Petrographic, alteration and mineralogical studies.
- Deposit genesis and metal distribution studies.
- Age dating studies.

9.7 IDM EXPLORATION PROGRAMS

After acquiring an option on Red Mountain in 2014 IDM reinitiated exploration on the property, including soil sampling (546 samples), rock sampling (440 samples), channel sampling (241 samples) and 12 diamond drill holes totalling 2223.0 m (McLeod, 2014). Additionally, historic core was re-logged and 68 infill samples taken in areas of strong alteration and mineralization.

Soil sampling focussed on extending the 1994 grid to the north up the Bitter Creek Valley, while rock samples were collected in all areas there was a rock sampling and channel sampling focus areas that have become exposed by receding glaciers including Lost Valley, Lost Mountain and the Cambria Zone. Mineralized samples requiring additional follow up were collected in many areas and resulted in the identification of several new mineralized showings. Two of these, the Oxlux and Wyy Lo'oop showings in the Cambria zone were assessed by preliminary drilling in 2014.

The 2016 exploration program focussed primarily on underground drilling which consisted of 51 holes totalling 6385.44 m. The drilling program was designed to upgrade the mineral resource classification and to expand the known resources as well as to collect samples for metallurgical, geotechnical and hydrological evaluation. Surface rock sampling, consisting of 509 samples, was focussed on mineralized exposures in Lost Valley which were later tested by a preliminary drilling program consisting of 5 holes. Five additional surface drill holes were also completed to test extensions of the 141 Zone and one hole tested the extension of the Bard Zone. Finally, additional samples were collected historic core in the Marc and 141 Zones.

9.8 EXPLORATION POTENTIAL

Exploration potential for the property is deemed as high. Since 1994, when the surface exploration was terminated, the glaciers surrounding the Red Mountain gold project have significantly receded exposing considerable area that was previously inaccessible. The intrusion system that hosts the current resource has a broad areal extent and surface prospecting, mapping, geochemistry, geophysics and drilling have the potential to discover similar deposits. Additional drilling also has the potential to expand the current resource zones.

9.9 COMMENT ON SECTION 9

The exploration programs completed to date are appropriate for the style of the mineralization and prospects located on the Project. There are a number of targets prospective for further exploration assessment.

10.0 DRILLING

10.1 INTRODUCTION

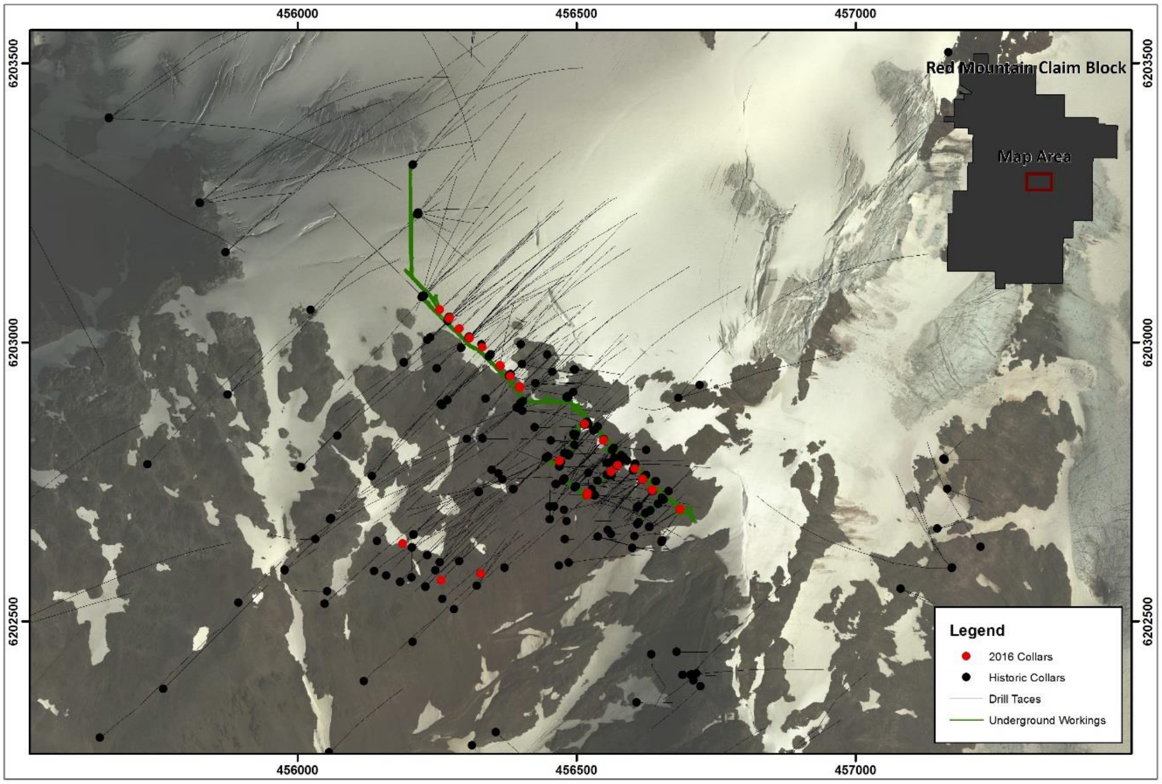
A total of 543 surface and underground diamond drill holes (141,104 m) have tested a variety of targets on the Red Mountain property. Of these, 406 holes totalling 100,298 m were drilled by Bond and LAC between 1989 and 1994, and 60 holes totalling 29,671 m were drilled by Royal Oak in 1996. No drilling was carried out by NAMC. During 2012, Banks completed 3 drill holes for 681 m in the Marc zone.

The majority of the historical drilling has tested the Marc, AV and JW zones. A total of 368 drill holes from the Bond and LAC programs, including 207 surface drill holes and 161 underground drill holes, tested these areas.

The location of a majority of drill holes on the property are shown on Figure 10.1, which is centred on the resource areas and main prospects.

In 2014 IDM Mining completed 12 holes totalling 2223 m, including 2 in the AV zone, 3 in the 141 Zone, 2 in the Marc Extension zone and 5 on exploration targets in the Cambria zone. In 2016 IDM completed a further 62 holes totalling 8123 metres, including 51 underground holes in the MARC, AV and JW Zones, and 11 surface drill holes including 5 Lost Valley, 1 in the Brad zone and 5 in the 141 Zone.

Figure 10.1: Red Mountian Drill Plan Resource Areas & Main Prospects



Source: IDM (2016)

10.2 SURFACE DRILLING CONTRACTORS

The Bond and early LAC surface diamond drilling programs, from 1989 to 1991, were carried out by Falcon Drilling Ltd. of Prince George, BC, and by J.T. Thomas Diamond Drilling Ltd. of Smithers, BC, from 1992 to 1994. Both contractors used equipment suitable for producing BQTK diameter core.

The 1996 Royal Oak surface diamond drilling program was conducted by Britton Brothers Diamond Drilling Ltd. of Smithers, BC, using equipment suitable for production of NQ and BQTK diameter core.

The Banks Island drilling program on 2013 was conducted by Driftwood Diamond drilling of Smithers, BC, using equipment suitable for production of NQ diameter core.

The 2014 and 2016 IDM surface drilling programs were conducted by MoreCore Drilling of Stewart, B.C., using equipment suitable for production of NQ2 and BTW diameter core.

Nearly half of surface drill holes that test the Marc, AV and JW zones. All holes were drilled parallel to the mine grid section lines. About a third of the holes were drilled at either 135° or 315° mine grid (090 or 270 true north), which is parallel to the section orientation. The remaining of the surface holes were drilled at off section orientations. Inclinations for the holes ranged from -45° to -90°.

10.3 UNDERGROUND DRILLING CONTRACTORS

Underground drilling programs in 1993 and 1994 were carried out by J.T. Thomas Diamond Drilling Ltd. of Smithers, B.C. As with the surface drilling, they used equipment suitable for producing BQTW and NQ.

The 1996 Royal Oak underground diamond drilling program was conducted by Britton Brothers Diamond Drilling Ltd. of Smithers, BC, using equipment suitable for production of NQ and BQTK diameter core.

The 2016 IDM underground drilling program was carried out by MoreCore Drilling of Stewart, B.C., using equipment suitable for production of HQ and NQ2 diameter core.

A majority of the underground holes were drilled parallel to the section lines more or less equally at 090° and 270° mine grid. The remaining holes were drilled in off section orientations. Most of the holes were drilled in fans on section with the inclination of the holes varying from +87° to -89°.

10.4 FIELD PROCEDURES

For the bulk of the drilling, which was carried out by Lac, field procedures included having a drill geologist who sited in drill setups, aligned drills and visited each drill one or more times a day. Continuous monitoring of the drills ensured any drilling problems were noted, and helped to ensure that good core handling practices were maintained by all drill crews. Royal Oak field procedures are not known. IDM geologists monitored their drilling operations and visited the drill at least once a day.

10.5 CORE LOGGING

10.5.1 Bond and LAC Logging

All core was flown down to Stewart for logging and sampling. Most core was logged for geotechnical purposes by a geological technician before it was logged geologically. All logging was done onto a series of paper logging forms:

- Geotech log: Recovery, RQD fracture count, hardness and fracture filling. Carried out by a geological technician.

- Geological log: Intervals (primary and nested), geological code and description, alteration intensity and character, graphic log. Carried out by a geologist.
- Sample log: Interval, sample number, sample description and mineralization by percent. Samples were marked and tagged by a geologist.

LAC also employed the use of a quick log, completed by the geologist who was monitoring drilling operations before the core was flown to Stewart. The quick log was used for initial interpretation and ongoing drill program planning.

As there were several different people logging core, considerable time was spent trying to standardise logging procedures and data inputs. However, some variance in logging due to different people logging and changes in understanding of the deposit proved apparent when reviewing the various logs.

10.5.2 Royal Oak Logging

Royal Oak logged and sampled their core at the camp on Goldslide Creek. They also used paper logging forms, one for geotech and the same geological logging form that LAC used, but the alteration codes were not used, only written descriptions. There is no written evidence of the sample intervals and sample numbers in their drill hole log files, only computer print outs with intervals, sample numbers and results. None of the Royal Oak holes are within resource areas.

10.5.3 NAMC Logging

During 2000 and 2001, in preparation for resource estimation, NAMC re-logged all core within the Marc, AV and JW mineralized zones including a 20 m envelope outside of the mineralized zones. The purpose of the re-logging was to establish continuity of logging procedures, verify past logging data entry and to determine continuity between sections. If mineralized continuity was not geologically determined between 25 m sections, the mineralization was removed from the geological solids and excluded from resource interpolation.

10.5.4 Banks Island Logging

It is not known how or where Banks Island carried out their core logging and sampling. Detailed logs are presented in the 2013 assessment report and include a header page with hole information and surveys, and pages with geology, alteration, mineralization, geotechnical and sampling data.

10.5.5 IDM Logging

IDM logged and sampled their core at the camp on Goldslide creek. Logging was carried out by directly entering data directly onto computers using a customized Access drill hole database which includes all standard tables. Samples were laid out by a geologist, respecting geological boundaries.

10.6 RECOVERY

Core recovery has been measured by all operators. A selection of 1993 and 1994 surface and underground drill holes with a total of 47,429 intervals of recovery data averaged 93.46%, indicating that the rocks intersected by drilling are generally solid.

10.7 DRILL COLLAR AND DOWN HOLE SURVEYS

10.7.1 Drill Collar Surveys

The collar coordinates for all Bond and LAC drill holes were surveyed using a total station. For the 1989 Bond holes and most of the 1993 and 1994 underground holes, collar orientations were determined by surveying while the rods were in the hole or by surveying a rod placed in the drill hole after the rig had moved. As rock conditions underground were good, there was typically a snug fit of the rod within the abandoned hole. Underground surveying was done every one to two weeks.

For most Bond and LAC surface drill holes from 1990 to 1993, the collar orientations appear to be ideal set up orientations as shown in Table 10-1. For 1994 surface drill holes the first down hole survey orientation was used for collar orientation.

Most, or all, of the pre-1993 collars were resurveyed with a total station by LAC and the collar locations from the new surveying were used in the database. Pre-1993 survey coordinates were documented. Surveying in 1993 and 1994 was routinely checked.

The Royal Oak collar locations, both underground and surface, were also surveyed using a total station, although for multiple holes drilled from the same set up the same collar coordinates were entered into the database for each hole. About 25% of the underground collars have surveyed collar coordinates with the remainder and all of the surface holes using ideal set up orientations.

All three Banks Island drill hole were completed from a single pad. How the pad was located and surveyed is not known.

For the 2014 IDM program drill holes were initially located by hand held GPS for pad preparation. A second hand held GPS reading was taken later of the actual collar. Ideal collar orientations were entered for holes with no downhole surveys.

Collar locations for all but two of the IDM 2016 underground drill holes were surveyed using a total station. For 26 of the holes the collar orientation was surveyed either while the drill was on the hole or afterwards by placing a rod in the hole after the drill rig had moved. A further 18 drill holes had collar orientations from gyro surveys. A few holes with no surveys of either type had ideal collar orientations entered in the database.

10.7.2 Down Hole Surveys

With the exception of the 1989 drill holes and a few of the 1990 drill holes, which had acid dip tests, most holes drilled on the property until 1996 have Sperry Sun surveys, the predominant down hole survey technique at the time. Banks Island used a Reflex Easy Shot instrument and collected the surveys after the hole was completed. For their 2014 program IDM used a Ranger mutli-shot survey instrument, but no surveys were obtained for six of the twelve holes. The IDM 2016 drilling program used a combination of a Reflex multi-shot surveys and Reflex Gyro surveys. Details of the down hole surveys, and collar surveys, for all programs given in Table 10.1.

During the LAC programs the drill geologist generally aided in the Sperry Sun surveying. Sperry Sun photographs were read by the geologist and then checked in the Stewart office. Survey readings that were suspect were not used. Locally, pyrrhotite content is high enough that it could cause a deflection of the Sperry Sun compass. The Sperry Sun photographs were kept and most from the LAC and Royal Oak programs are available for review.

Table 10.1: Details of collar and downhole surveys

Year	Company	Surface or UG	Collar Location	Collar Orientation	Survey Type	Comments
1989	Bond	S	Y	Y	Acid	Acid dip tests only
1990	Bond	S	Y	N	Sperry	~90 m spacing, ideal collar coords
1991	Lac	S	Y	N	Sperry	~90 m spacing, ideal collar coords
1992	Lac	S	Y	N	Sperry	~90 m spacing, ideal collar coords
1993	Lac	S	Y	N	Sperry	~60 m spacing, ideal collar coords
1993	Lac	UG	Y	Y for most	Sperry	Some holes <80 m in length have no surveys. Holes >100 metres have surveys every 60 m or at the bottom of the hole.
1994	Lac	S	Y	N	Sperry	First at ~15 m then every 60 m, data from first test used for collar.
1994	Lac	UG	Y	Y for most	Sperry	First at ~15 m depth then every 30 m
1996	Royal Oak	S	Y	Y for ~25% of holes	Sperry	Variable spacing, 50 to 100 m or more
1996	Royal Oak	UG	Y	N	Sperry	Variable spacing, 50 to 100 m or more
2013	Banks Island	S	?	N	Reflex	Every 31 metres
2014	IDM	S	Y	Y & N	Ranger MS	Readings taken every 6 m. If surveyed there are collar coords otherwise ideal cords were entered.
2016	IDM	S	N	N	Reflex	Reflex every 6 m
2016	IDM	UG	Y	Y & N	Reflex, Gyro	Reflex or Gyro every 3 m

10.8 DRILL HOLE ADJUSTMENTS

During NAMC's preparation of the 2000 Red Mountain geological model it became apparent that a number of drill holes did not fit well with the majority of drill hole data. After examination of the Gemcom database, diamond drill hole logs, Sperry Sun readings, cross sections and level plans, the following problems were encountered and corrections made. Full details of the drill hole corrections can be found in NAMC's 2001 Red Mountain resource report by Craig (2001).

- The Sperry Sun surveys for a single 1993 underground hole had been misread. Correct readings were taken and the values entered into the database.
- For most of the 1989 drill holes and two 1990 drill holes only acid dip tests were taken, and for two 1990 drill holes no down hole survey information was collected. Average down hole deviations were calculated by using data from the Sperry Sun tests conducted on a majority of 1990 drill holes as these holes were drilled in similar orientations to the holes lacking survey data. An average azimuth deviation of +2.2° per 100 metres and an average dip deviation of +0.4° per 100 metres was calculated. The azimuth deviation was applied to fifteen 1989 holes at depths where the acid tests were taken. Both deviations were applied to one 1989 hole and two 1990 holes that had no downhole survey information, at 100 metre intervals.
- Six holes did not fit with known geological data so the survey data for these holes was adjusted until they corresponded to the known data.

10.9 SAMPLE LENGTH/TRUE THICKNESS

The relationship between sample length, or intersection length, and true width depends upon the angle at which mineralization is intersected. As this varies due to the location from which the drill hole can be completed, on the dip of the drill hole, and on the orientation (strike and dip) of the mineralization, drill intersection lengths at Red Mountain are typically greater than true widths.

10.10 DRILL SPACING

Drill spacing on the Red Mountain gold project is variable depending on the stage of exploration or development of a particular zone.

Sectional spacing for the both underground and surface drilling for the Marc, AV, and JW Zones is 25 m. On section, drill hole spacing is typically less than 25 metres for the Marc zone and 25 to 30 metres for the AV and JW zones.

Other zones with resource potential such as the 141, 132 AV and JW Lower Zones also have variable drill spacing. The core of the 141 Zone has been defined on 25 metre centres with both strike extensions spaced at 50 metres, with sectional spacing at 30 metres or less. The 132, AV and JW Lower Zones have 50 metre sectional spacing and 50 to 100 metre spacing on section.

10.11 DRILL INTERCEPTS

Table 10.2 shows a selection of intersections through the main resource zones to illustrate typical grades and widths the deposit.

Table 10.2: Typical Drill Intersections

Zone	Section	Hole ID	From	To	Length	Au g/t	Ag g/t
Marc	1125N	M93123	143.50	151.50	8.00	12.68	32.16
Marc	1175N	931020	74.70	91.50	16.80	9.06	5.83
Marc	1200N	930176	16.00	24.00	8.00	6.02	40.45
Marc	1250N	931070	49.8	65.8	16.00	26.82	195.42
Marc	1300N	M9164	306.00	312.00	8.00	6.39	1.87
AV	1350N	931074	59.00	76.00	17.00	8.16	20.35
AV	1400N	941116	110.00	129.00	19.00	4.50	35.23
AV	1450N	941106	75.00	104.00	29.00	4.66	8.48
AV	1475N	M9278	388.25	392.90	4.65	5.77	13.11
JW	1525N	941141	125.50	129.5	4.00	6.93	51.60
JW	1575N	M93140	487.00	494.00	7.00	2.02	2.11
JW	1600N	941124	172.7	175.70	3.00	6.64	NA
141	1275N	MC14-003	143.50	152.50	9.00	3.52	6.03
141	1325N	M94186	153.00	189.80	36.80	3.32	NA
141	1350N	M93141	168.61	200.00	31.39	4.12	13.94

10.12 COMMENTS ON SECTION 10

In the opinion of the responsible QP, the quantity and quality of the geological, geotechnical, collar and down-hole survey data collected by the past and present operators on the Red Mountain gold project are sufficient to support mineral resource estimation as follows:

- Drilling procedures and core logging meets industry standards:
- Recovery data from drill core data are acceptable;
- Collar surveys have been performed using industry-standard instrumentation;
- Down-hole surveys were collected at the time of the programs using industry-standard instrumentation.
- Drill orientations are generally appropriate for the mineralization style, and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the resource areas;
- Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths;
- Drill spacing has been adequate to first outline, then infill and define mineralized zones. Drill hole spacing does vary with the stage of exploration and development;

- Drill hole intercepts as summarized in Table 10-2 appropriately reflect the nature of the gold mineralization, and include areas of higher-grade intervals in low-grade drill intercepts;
- No factors were identified with the data collection from the drill programs that could materially affect resource estimation accuracy or reliability.

11.0 SAMPLE PREPARATION, ANALYSES & SECURITY

11.1 SAMPLING METHODS

11.1.1 Soil Sampling

The methods used by Bond and LAC for collecting soil samples is not known. IDM collected their 2014 soil samples from the B horizon or, in steeper areas, talus fines were collected. In both cases samples were placed in paper soil sample bags.

11.1.2 Rock and Channel Sampling

The methods used by Bond and LAC for collecting rock samples is not known however the Access database lists a number of different types including grab, chip, chip-channel, panel and trench. All of these would be considered standard field rock sampling techniques.

IDM collected rock samples using geological rock hammers. Channel samples were collected with the use of a portable rock saw. Channel samples were all approximately 1.0 m in length and 5 cm in width and depth. The samples were chipped out using a chisel after being cut with the rock saw (McLeod, 2014).

11.1.3 Drill Sampling

Bond and LAC 1989 -1992

Drill core samples from 1989 to 1992 were collected over 1.50 m intervals regardless of geology. After geological (and some geotechnical) logging of the core was completed, BQTK-sized core was manually split in half. One-half was submitted to for sample preparation and analysis and the other half was kept for future reference at the core storage facility in Stewart, British Columbia.

LAC 1993 - 1994

Drill core samples from the 1993 and 1994 programs were typically collected over 1.0 m intervals and occasionally over 1.50 m intervals. In some cases, effort was made to break sample intervals at lithological or mineralogical boundaries, resulting in sample intervals shorter than 1.0 m. After detailed geotechnical and geological logging was completed, the core was sawn in half. As in previous programs, half of the core was submitted to the lab for sample preparation and analysis. The second half of the core was stored at the core storage facility in Stewart, British Columbia.

During these large programs, up to four diamond blade rock saws were running to cut core. A foreman was hired to oversee core sawing, sample tags and standard insertion to ensure that this process worked efficiently and to ensure good quality control. A sample sheet, with sample numbers and from-to distances filled in by the logging geologist, was used to assure as best as possible that sample numbers corresponded with the right intervals when samples were collected.

Royal Oak 1996

Royal Oak typically collected samples over 1.0 m (underground and surface) and 1.5 m (surface intervals and these lengths comprise over 75% of their samples. Minimum and maximum sample lengths are 0.3 m to 6.0 m respectively. Sampling was carried out at the camp in Goldslide Creek where sample intervals were sawn. Multi-part sample tag portions were inserted into the core boxes between each sample interval, with the other part was placed in the sample bag.

Banks Island 2013

Banks Island sampled over 0.25 to 1.5 metre intervals that honored geological boundaries. It is known that the core was sawn, however no other sampling procedures, or the location where sampling was carried out, were documented.

IDM 2014-2016

Samples from the 2014 IDM drilling program were collected over 1.0 m intervals for a majority of sampling and never less than 0.5 m in length and never crossed lithological boundaries. Sampling took place at the camp in Goldslide Creek. The core was cut and the upper half was placed in a sample bag and sent for assay. Sample tags were placed in the bag and under the second half of the core in the boxes. The core is stored on pallets at the camp on Red Mountain.

Sampling protocols were the same in 2016 with the exception that in longer sections of suspected barren to low grade low rock, particularly in some of the surface drill holes, 1.5 metre samples were taken. Additionally, for 20 HQ diameter underground holes drilled for metallurgical samples, a full half was sent for the test work, ¼ was sent for regular assay and ¼ was retained for future reference.

11.1.4 Whole Rock Samples

For drill holes from most Bond and LAC drilling programs, samples were collected for whole rock analysis. Samples were collected every 20 to 30 m or with major lithological changes. Proximal to or within the mineralized zones samples were taken every 10 metres. Samples were half core and a minimum of 0.5 metres long. For samples already selected for conventional assay a portion of samples pulp was submitted for whole rock analysis.

11.1.5 1993-1994 LAC Underground Chip Samples

During the 1993 and 1994 programs the ramp and crosscut faces were sampled after every round. Chip samples were collected from fresh faces using a grid with 1.5 x 1.5 m panels, with each face being three panels wide by two panels high. Chips were collected evenly from within the panels.

11.1.6 1993-1994 LAC Bulk Samples

A muck sample was collected from every underground round, either from the main decline or from the cross cuts designed to assess the Marc Zone mineralization. From crosscut rounds within potential ore, and for several rounds on either side, the muck was stockpiled on surface. A grid was overlain on the stockpile and 20 samples were taken from each round. If the average grade of the resulting assays was less than 2.0 g/t Au the muck was put onto the waste pile. If the average grade was over 2.0 g/t Au, the stockpiled muck was taken through the bulk sampling process. Twenty-three rounds from the underground were treated in this manner.

11.2 ANALYTICAL LABORATORIES

Several primary laboratories have been used for Red Mountain samples over the history of the project as shown in Table 11.1. For a majority of drill hole samples, Eco-Tech Labs was the primary laboratory.

Table 11.1: Laboratory Summary Table

Operator	Laboratory	Time Period	Sample Type Analysed
Bond Gold/Lac	Min-En Labs, North Vancouver	1989-1991	Surface drill hole samples
Bond Gold/Lac	Bondar-Clegg, North Vancouver	1989-1992	Check assays on drill pulps
Lac	Acme Labs, North Vancouver	1989 -1991	Whole rock samples
Lac	Acme Labs, North Vancouver	1992	Surface drill hole samples
Lac	Eco Tech Labs, Stewart, B.C.	1993-1994	Surface and underground drill hole samples
Lac	Chemex, North Vancouver, B.C.	1993	Overflow drill samples
Lac	X-RAL, Don Mills, Ontario	1993	Whole rock samples
Lac	Chemex, North Vancouver, B.C.	1994	Whole rock samples
Lac	Chemex, North Vancouver, B.C.	1993-1994	Check assays on drill rejects and pulps
Royal Oak	Eco Tech Labs, Kamloops, B.C.	1996	Surface and underground drill hole samples
Royal Oak	Bondar-Clegg, North Vancouver	1996	Check Assays on drill pulps
NAMC	Chemex, North Vancouver, B.C.	2000	Check assays on drill rejects and pulps
Banks Island	AGAT, Mississauga, ONT	2013	Surface drill hole samples
IDM	Acme (BV), Vancouver, B.C.	2014	Surface drill hole samples
IDM	ALS Global, North Vancouver, B.C.	2016	Surface & UG drill samples, rock samples
IDM	ActLabs, Kamloops, B.C.	2016	Check assay on drill pulps

The ISO accreditations of all labs from 2000 and prior is not known. AGAT Labs, Acme (Bureau Veritas), ALS Global and ActLabs are all ISO 9001:2008 accredited laboratories. All laboratories are also ISO/IEC 17025:2005 accredited for some specific tests including fire assays with AA and gravimetric finishes.

11.3 SAMPLE PREPARATION & ANALYSIS

11.3.1 Sample Preparation

Sample preparation for drill samples of drying as required, crushing, and selection of a sub-split which is then pulverized to produce a pulp sample sufficient for analytical purposes. Table 11.2 summarizes the sample preparation procedures used by the primary and, where applicable, by the check assay laboratories. Note that crushing and grinding practices for Acme (Bureau Veritas) have changed between work carried out in 1992 and 2014.

Table 11.2: Sample Preparation Procedures

Laboratory	Procedure
Min-En	Dry, 2 stage crushing to -1/8", 500 g split pulverised to 95% passing -120 mesh.
Bondar-Clegg	Dry, crush and pulverize to -150 mesh (onn rejects only for checks).
Eco-Tech	Dry, crush to -10 mesh, 250-400 g split pulverized to 85% passing -140 mesh.
Acme Labs	Dry, crush to -10 mesh, 250 g split pulverized to 85% passing -150.
Chemex	Dry, crush to -10 mesh, 200-300 g split pulverized to 90% passing -150 mesh.
AGAT	Dry, crush to 75% passing -10 mesh, 250g split pulverized to 85% passing -200 mesh.
Acme (BV)	Dry, crush to 70% passing -10 mesh, 250 gram split pulverized to 85% passing -200 mesh
ALS Global	Dry, crush to 70% passing -10 mesh, 1000 gram split pulverized to 85% passing -200 mesh

For the 1993, 1994 and 1996 programs all sample preparation by Eco-Tech was carried out at their facility in Stewart, B.C. For the 2013 Banks Island program samples were prepared at the AGAT facility in Terrace, BC. For the 2014 IDM program samples were prepared at the Acme facility in Smithers, B.C. before being forwarded to Vancouver, B.C., for analysis. The 2016 samples were prepared at ALS Global in Terrace B.C.

11.3.2 Sample Analysis

The analytical methods used on drill core and check assays from Red Mountain are summarized in Table 11.3.

Table 11.3: Analytical Methods

Laboratory	Procedure
Min-En	Fire assay for gold a 30 g sample with an AA finish. Results over 0.5 oz/T Au (~17 g/t) re-assayed with a gravimetric finish. Multi element ICP package.
Bondar-Clegg	Fire assay for gold and silver on a 30 g sample with an AA finish. Results over 0.2 oz/T Au (~7 g/t) re-assayed with a gravimetric finish.
Acme	Fire Assay for gold on a 30 g sample, Mutli element ICP on a 0.5 g sample. Whole rock by lithium borate fusion with an ICP finish.
Eco-Tech	Fire assay for gold on a 30 g sample with an AA finish. Results >10 g/t Au re-assayed with a gravimetric finish and if >30 g/t Au a metallic assay was performed. Ag assayed using an aqua regia digestion and an AA finish on a 2 g sample. 31 element ICP package.
XRAL	Whole rock analyses by XRF.
Chemex	Fire assay for gold on a 30 g sample with an AA finish. Results >10 g/t Au re-assayed with a gravimetric finish and if >30 g/t Au a metallic assay was performed. Ag assayed using an aqua regia digestion and an AA finish. Also multi element ICP on 1993 over flow samples. Whole rock analyses by XRF.
AGAT	Fire assay for gold on a 30g sample with an ICP-OES finish, results >10 g/t re-assayed using a gravimetric finish. 45 element ICP-OES package with aqua regia digestion.
Acme (BV)	Fire assay for gold on a 30 g sample with AA finish. Results >10 g/t re-assayed using a gravimetric finish. 36 element ICP-ES on a 0.25 g sample.

ALS Global	Fire assay for gold on a 30g sample with AA finish. Results >10 g/t re-assayed using a gravimetric finish. Ag by Acid digestions with AA finish, repeated if >100 g/t Ag, 48 element 4 acid, ICP-MS package.

For the 1993, 1994 and 1996 programs most gold and silver analyses were performed at Eco-Tech's Stewart facility, while the ICP analyses were carried out at Eco-Tech's Kamloops facility. The exception for this is for late 1994, starting in November when the Eco-Tech's Stewart analytical facility closed and both fire assay and ICP work was done at the Kamloops facility. For the 1996 Royal Oak samples, all analytical work was carried out at Kamloops.

11.4 QUALITY ASSURANCE AND QUALITY CONTROL

The Quality Assurance and Quality Control (QAQC) for the Red Mountain drilling programs has previously been presented by Anderson (2000) and reported in Craig (2001) All historic QAQC data was recompiled and assessed in early 2016.

11.4.1 Bond and LAC QAQC 1989-1992

There is little, if any information regarding the insertion of QAQC materials (standards, blanks, duplicates) into the sample stream by Bond or LAC prior to 1993.

A significant amount of check assaying was carried out on samples from the 1989 to 1992 drill holes with 1,243 (1121 pulps and 122 rejects) of 13,256 samples (9.48%) submitted to Bondar Clegg.

The compiled data show small to modest high biases for the Bondar Clegg check assay analyses. For gold, Bondar Clegg results were 2.8% and 4.73% higher than the original Min-En results for pulps and rejects respectively. For silver, Bondar Clegg results were 1.02% and 2.3% higher than Min-En for pulps and rejects respectively. Four samples, two pulp and two reject, were removed from the analysis due to outlier results in the Bondar Clegg dataset.

The results indicate good assay accuracy between the two labs. The higher bias in the rejects results may be due to the preparation of a second pulp from a second split.

11.4.2 Lac QAQC 1993-1994

Standards

LAC initiated the use of standards in 1993 but the number was very limited at only 53 in total. The standards used were Canmet standards as shown in Table 11.4. Note that in 2000, +/-2 standard deviations were used as failure limits for all standards. Current industry standards are to use +/-2 standard deviations as a warning limit and +/-3 standard deviations as failure limits, and this has been followed here.

Table 11.4: Red Mountain Canmet Standards

Standard Name	Value Au g/t	+3SD	-3SD
MA-1b	17.00	16.55	17.45
MA-2b	2.39	2.47	2.31
MA-3	7.49	7.78	7.2

When drilling recommenced in April 1994, a more stringent standard insertion program was instituted with an insertion approximately every 20 samples. While some of the 1993 Canmet standards were used, for this program four site specific standards were created by CDN Resource Laboratories of Delta, BC, using material from the Marc Zone bulk samples (Sanderson, 1994). Material was crushed, pulverised to –200 mesh and then homogenised. Splits were taken for round-robin analysis and sent to six assay laboratories: Bondar-Clegg, Chemex, CDN Resource, Acme Analytical, Min-En and Eco-Tech. Each lab received five splits of each standard, and two assays were performed on each split. Standard values and +/-3SD failure limits, based on the round-robin results and analysis, are presented in Table 11.5.

Table 11.5: Red Mountain LAC Site Specific Standards

Standard Name	Value Au g/t	+3SD	-3SD	%RSD
LAC #1	1.90	2.35	1.45	8.06
LAC #2	3.19	3.70	2.68	5.35
LAC # 3	6.35	7.34	5.36	5.19
LAC #4	14.15	16.07	12.23	4.54

The results of the standard insertions from the 1993 and 194 Lac drilling programs are summarized in Table 11.6.

Table 11.6: Summary of Standard Insertions

Standard	Number of Analyses	Mean of Analyses	Expected Value	Percentage difference	No. High Fails	No. Low Fails
MA-1b	22	17.1	17.00	+0.6	5	3
MA-2b	39	2.11	2.39	-11.7	1	29
MA-3	37	7.26	7.49	-3.1	2	13
LAC 1	235	1.91	1.90	+0.5	6	1
LAC 2	242	3.18	3.19	-0.3	3	2
LAC 3	281	6.57	6.35	+3.5	2	2
LAC 4	124	14.50	14.15	+2.4	0	0

In general, the Canmet standards did not perform well relative to their +/-3 standard deviation failure limits. Many failures may be attributable to quite tight failure limits relative to standards of similar grades from other commercial suppliers, as the ranges for a majority of results for each standard appear to indicate reasonable accuracy. The majority of failure were low relative to the expected values, suggesting that assay data may underestimate gold values.

The LAC standards performed well indicating good assay accuracy. Standards LAC 1 and LAC 2 show no biases relative to the expected values. Standards LAC 3 and LAC 4 do show small positive biases but most values still fall within the +/-3 standard deviation failure limits. Examples timeline plots are shown in Figure 11.1 (LAC 2) and Figure 11.2 (LAC 3). Note that a tightening of results relative to the expected values is evident in both plots at approximately samples 185 and 210 respectively, corresponding to the moving of all analytical work from the Stewart Eco-Tech facility to the Kamloops facility.

During the LAC programs analytical results for standards were tracked and if results were out of acceptable limits, the lab was asked to re-assay all samples that were analyzed in the same batch as the standard.

Figure 11.1: Timeline Plot for Standard LAC 2

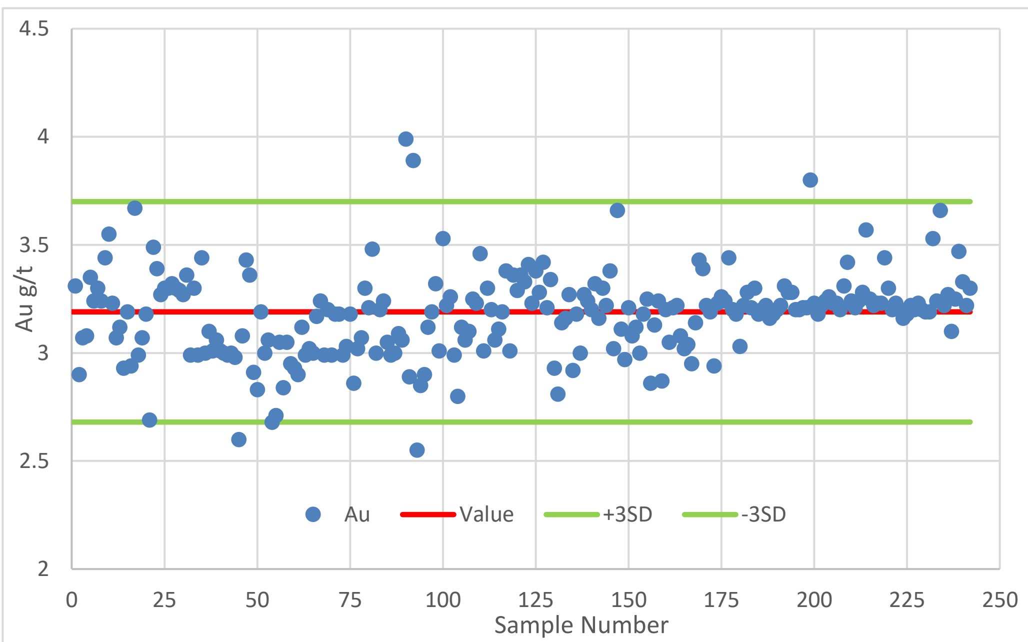
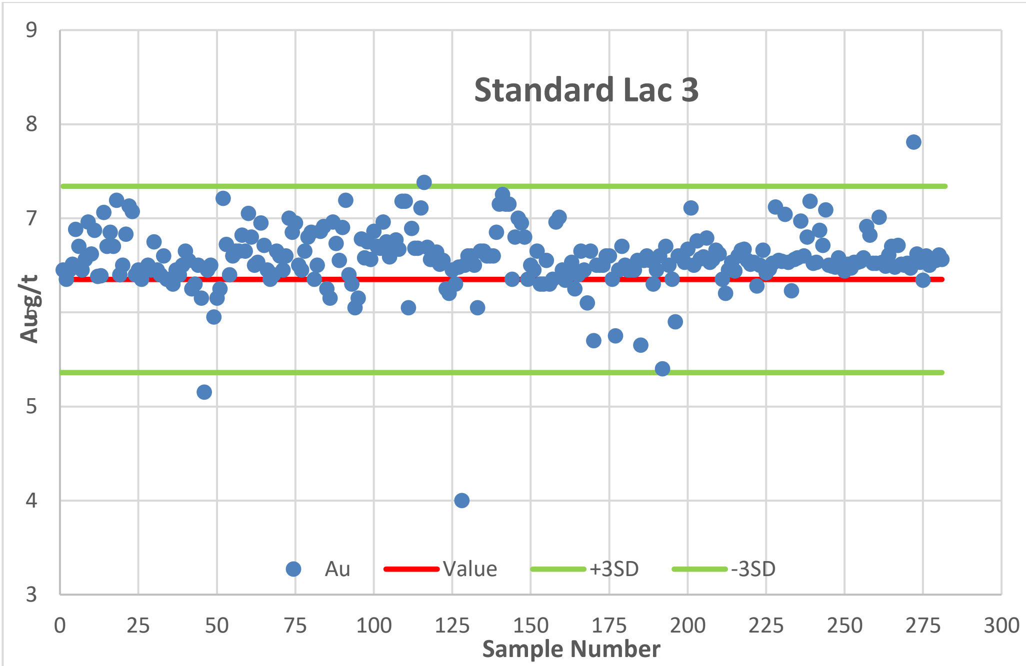


Figure 11.2: Timeline Plot for Standard LAC 3



Check Assays

A rigorous check assay program was implemented by LAC in 1993 with a protocol whereby 1 in every 10 pulps and 1 in every 20 duplicates half were to be submitted to Chemex for check assay. This protocol was not used in 1994 and instead two cross sections, both in the AV zone, were chosen for check assays. From Section 1400N rejects were sent to Chemex and from Section 1500N pulps were sent to Chemex.

In total, check assays were submitted from 168 of 301 surface and underground LAC drill holes totalling 3060 check from 31,064 original samples (9.9%). The samples actually submitted did not end up in the proportions suggested by the protocols with 371 pulp submittals and 2689 reject submittals. Nine hundred and twenty-five check assays in the historic Access database were not included in the compilation as the material, pulp or reject, could not be determined. Results are summarized in Table 11.7.

Table 11.7: Summary of 1993-1994 Check Assays

Material	Number	Eco Tech Au	Chemex Au	% Diff	Eco Tech Ag	Chemex Ag	% Diff
Pulp	371	1.71	1.83	+7.0	7.31	7.37	+0.8%
Reject	2689	3.02	2.84	-6.0	13.44	13.04	-3.0%

The pulp check assays results show a modest to strong high bias by Chemex for gold and a very small high bias for silver. The high bias for gold occurs in samples with values of over 3.0 g/t. There is a consistent low bias by Chemex at all grade levels compared to Eco-Tech with the reject checks. This bias has not been resolved, although it is possible that fine gold could have settled during transport of the rejects resulting in lower values. The influence of a different level of sample support (original pulp versus new pulp from a second split of rejects) is also not known.

No standards or blanks were included with check assay shipments to Chemex.

Duplicates

Anderson (2000) reported a LAC 1993-94 duplicate database consisting of 369 samples. From twenty-one 1994 underground drill holes, a high and low grade sample was collected within the mineralized zones for each hole. The first half of core was assigned a sample number and the resulting pulps were analyzed twice. The second half was assigned a new sample number and also analyzed twice. If needed gravimetric and metallic assays were carried out. Additionally, four holes (U94-1155, (94-1156, U94-1157 and U94-1158) were drilled in the Marc Zone, on Section 1275N, in a 1.0 metre box spacing to test variance. The first three of these and hole U94-1160 were sampled from top to bottom and original and duplicate halves were analyzed (no extra pulp splits).

The comparison of results from the first pulp from both original and duplicate halves of the core (n=369) for the global dataset show extremely good assay precision with the originals having a mean of 8.02 g/t Au and the duplicates having a mean of 8.05 g/t Au. On an individual assay basis, there is some modest variability, probably reflecting differing proportions of the sulphide veins in opposing halves of core.

Duplicate holes

During 1994, four short drill holes were drilled on section 1275 N from collar points 1 m apart in a square pattern. As well as to serve as individual assay duplicates the purpose was to evaluate the variance within the stockwork zone over full intersection distances. Table 11.8 summarises the weighted assay averages for the higher-grade intervals in the four drill holes from 13 to 29 m.

Table 11.8: Weighted Assay Averages

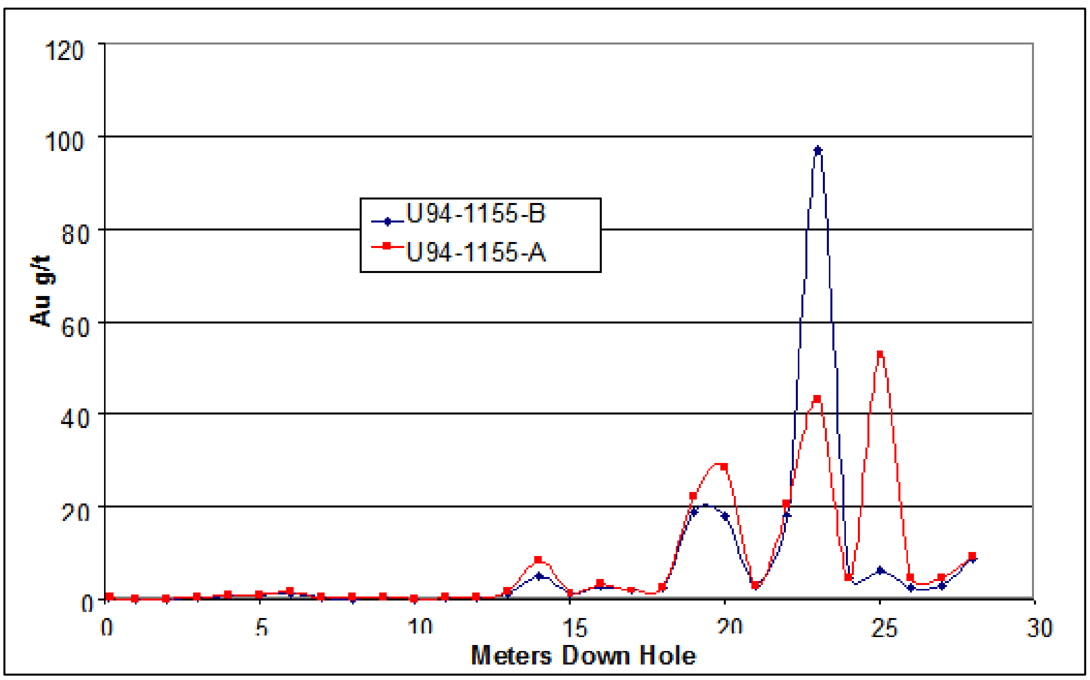
Drill Hole	From 13 to 29 m (Au g/t)
U94-1155	18.21
U94-1155, second half	12.11
U94-1156	16.43
U94-1156, second half	17.48
U94-1157	19.96
U94-1157, second half	18.32
U94-1158	16.31

Figure 11.3 to Figure 11.5 display the down hole assay comparisons for each half of the core for holes U94-1155 to U94-1157. Figure 11.6 displays the variance of holes U94-1155 to U94-1158 for the first ½ split of core in each hole.

Variance on an assay by assay in the two half-split comparison is relatively normal for a gold deposit and affects almost all ranges of assays. This would be expected in the Red Mountain style of stockwork. Stereonet analysis of the stockwork veining show that only 20% of the veins have a consistent trend within the stockwork envelope (Barclay, 2000) with the balance being relatively random. This randomness and rapid thickening and thinning over sub-metre and sub-centimetre distances was observed in both core and cross cuts and is an explanation for variance in grade as gold grade is associated with the percentage of coarse pyrite in a given interval.

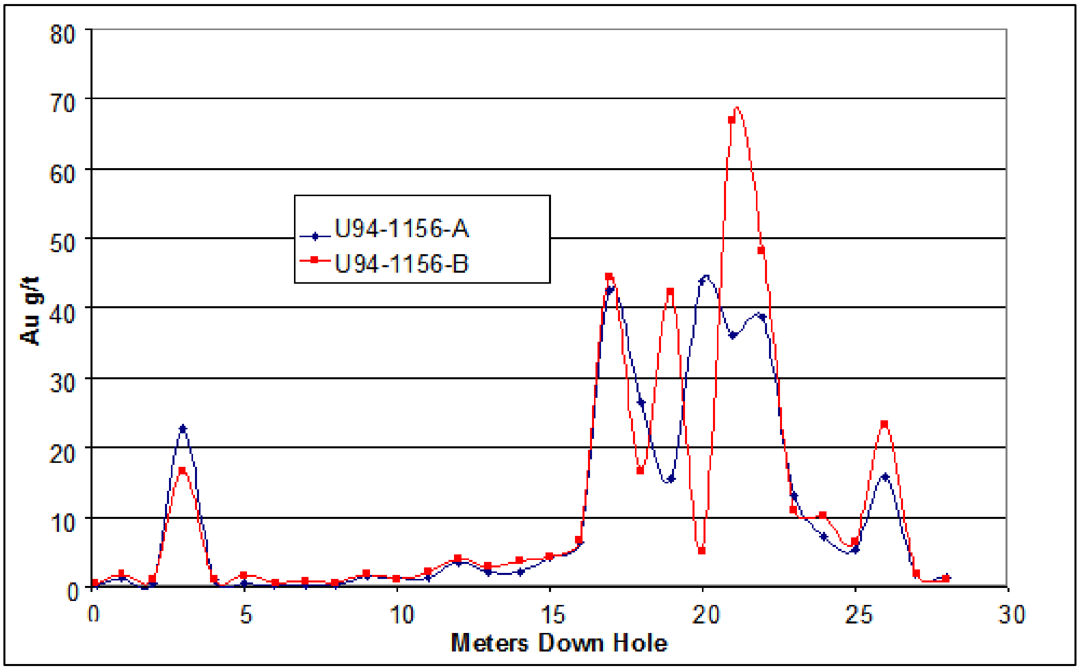
This variance is evident in the four individual drill holes (Figure 11.3 to Figure 11.5). When these plots considered in conjunction with the mean results for the 369 duplicates presented above, which suggest extremely good global precision, it is evident that variability on an individual sample basis can vary considerably, particularly at higher grades, as can be seen in Figure 11.7.

Figure 11.3: U94-1155 Gold Assay on Both Halves of Core



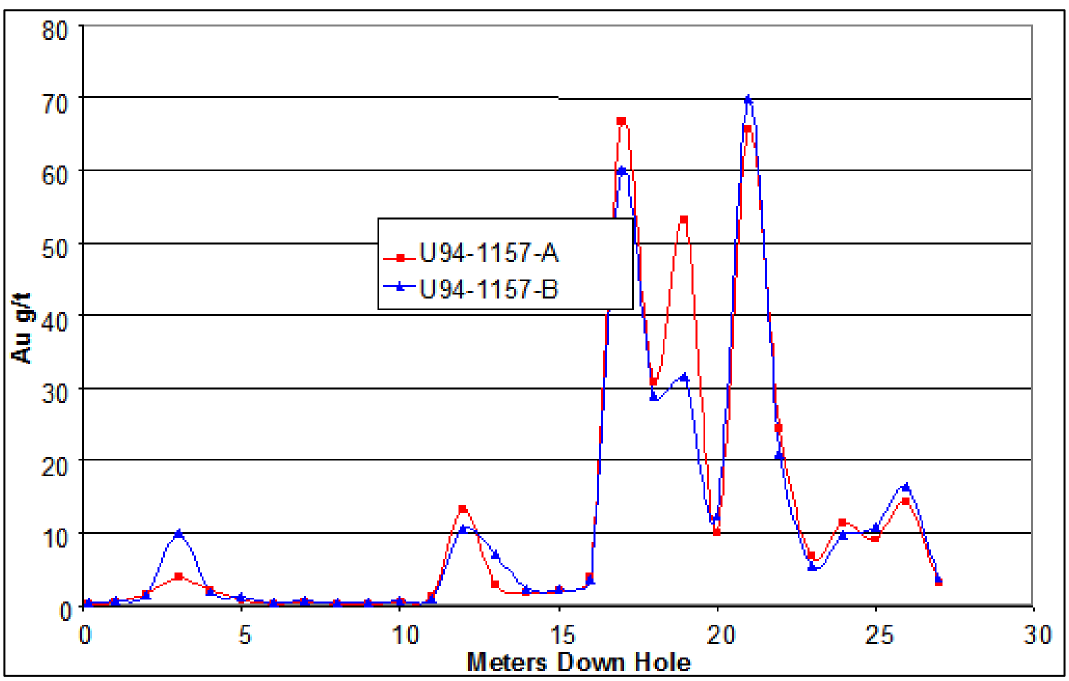
Source: NAMC (2001)

Figure 11.4: U94-1156 Gold Assays on Both Halves of Core



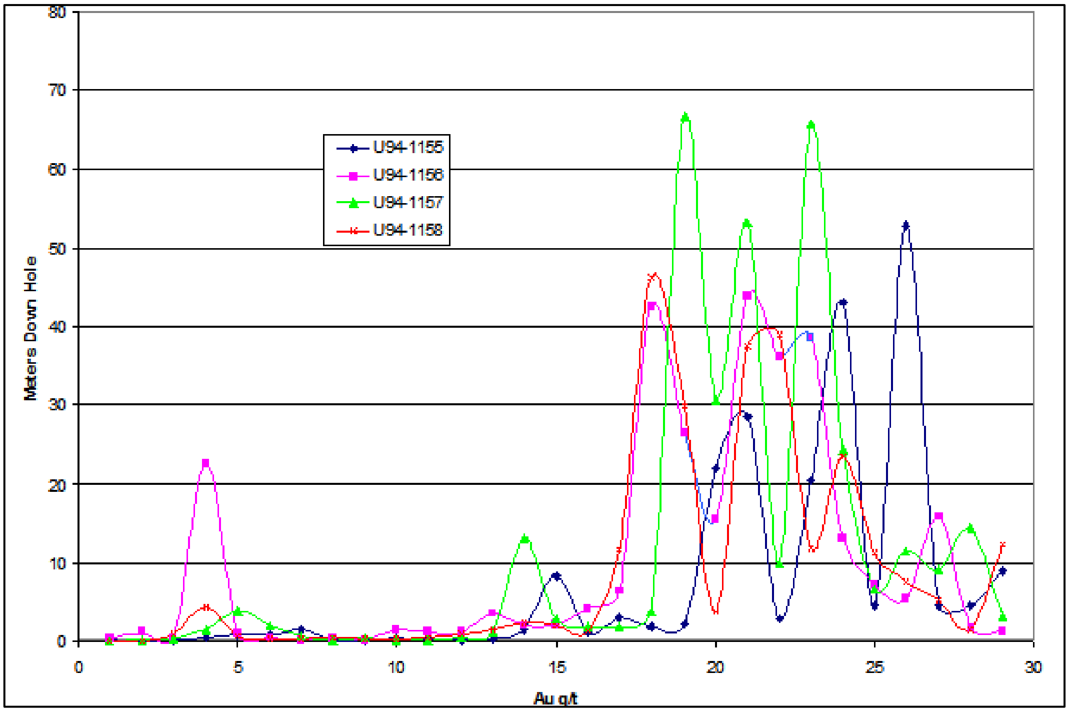
Source: NAMC (2001)

Figure 11.5: U94-1157 Gold Assays on Both Halves of Core



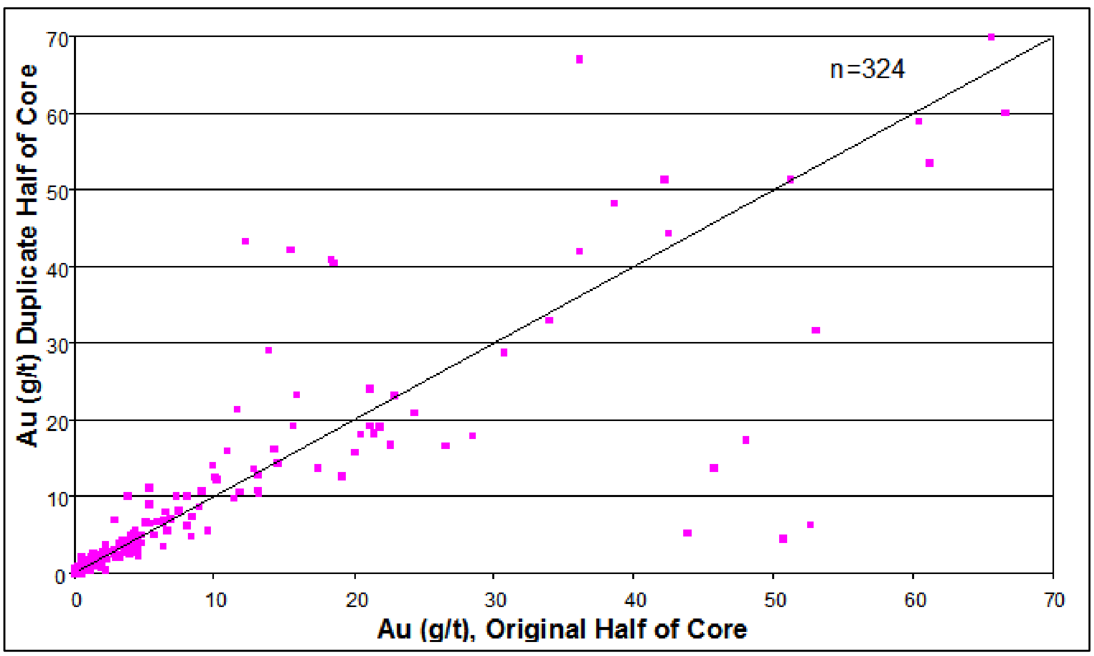
Source: NAMC (2001)

Figure 11.6: Gold Assay Comparison for DDH U94-1155, -1156, -1157 and -1158



Source: NAMC (2001)

Figure 11.7: Comparison of Original Gold Assays vs. Duplicate Halves of Core



Source: NAMC (2001)

Lab Audits/Visits

An important part of LAC's QAQC program were routine visits to the Eco-Tech laboratory facilities in Stewart. This was done on a regular basis during the 1993 and 1994 programs by a LAC geologist.

Early in 1993 Eco-Tech had a small facility in Stewart which could not cope with the large volume of samples and the quality of some results were suspect. In order to resolve this Eco Tech built a separate sample preparation facility in July 1993 which was inspected by a sampling consultant form Vancouver who considered the updated facilities adequate.

In 1994 a second consultant, Jack Stanley (Stanley, 1994a, 1994b, and 1994c) was contracted to visit the Eco-Tech lab and audit sample preparation, assaying procedures and internal lab QAQC. He made two visits and on each occasion noted some issues that were subsequently addressed.

Extra Sample Splits

In 1994 at least 1 in 40 samples had 2 assay splits from the coarse (-10 mesh) sample taken and 1 in 40 samples had a duplicate assay done on the assay pulp. When a duplicate assay was carried out by Eco-Tech on the same pulp, the average was given on the analytical certificate for the sample result, with the two individual results given at the end of the certificate with other QA/QC data. With samples with a second pulp (re-split), the assay from the original pulp was given as the sample result with the re-split result at the end of the certificate. As noted by Smit (2000) the individual assays were never compiled but would be useful if done, as an additional assessment of sample variance.

11.4.3 Royal Oak 1996

Royal Oak did not include QAQC materials in their drill hole sample shipments, but they did submit 221 pulps to Bondar Clegg for check assay. For both gold and silver Bondar Clegg results exhibited small low biases relative to the original Eco-Tech results. None of the Royal Oak holes are currently within resource areas.

11.4.4 NAMC QAQC 2000

NAMC submitted 197 samples, 167 of pulp and 30 of reject from mainly 1993 and 1994 drill holes in the Marc and AV mineralized zones for check assay. The results for this modest program indicated that Chemex was biased low relative to the original results by ~4.5% for gold, for both pulps and rejects.

Results for 9 LAC standards (3 different) included with these check samples indicate good assay accuracy.

11.4.5 Banks Island 2013

Banks Island inserted standards, coarse field blanks and pulp duplicates in their sample stream, at a rate of one for every 20 samples. In addition, they randomly inserted a few pulp blanks.

Details of the standards and pulp blank, purchased form WCM Minerals of Burnaby, BC, are given in Table 11.9. The coarse field blank used came from a local quarry along the highway near the mouth of Bear Creek. The rock was from a barren Bitter Creek pluton of quartz monzonite composition.

Table 11.9 Banks Island Standard Reference Material

Standard	Au g/t	+3SD	-3SD	Ag g/t	+3SD	-3SD
PM929	5.1	5.81	4.39	65.0	72.5	57.5
PM451	1.77	1.95	1.59	NA	NA	NA
BL118	<0.005	NA	NA	<0.3	NA	NA

A total of 6 standard insertions were made, with all returning values within the +/-3SD limits, but both having average values 7% to 8% below the expected values. Two of nine coarse blanks failed, one after a 13.8 g/t Au sample suggesting contamination, the other unexplained. Visual inspection of the pulp duplicate results for gold indicate good assay precision.

11.4.6 IDM QAQC 2014

IDM inserted one standard every 20 samples and one blank every 20 samples into its 2014 drill sample shipments. No duplicate was inserted and no check assays were done.

The standards used were from CDN Labs in Vancouver with values and limits as shown in Table 11.10. Timeline plots show good accuracy for gold. For silver Acme is biased high relative to the expected value by about 6 percent but most results still fall within failure limits. This bias may be related to the relatively high grade of the standard for an ICP analysis.

Table 11.10: 2014 CDN Labs Standards

Standard	Au g/t	+3SD	-3SD	Ag g/t	+3SD	-3SD
GS13A	13.2	14.28	12.12	NA	NA	NA
GS3M	3.10	3.45	2.85	95.4	103.8	87.0

The field blank used came from the same local quarry as used by Banks Island. All results were within the failure limits of 3 times detection limit for gold (DL was 5 ppb so failure limit is 15 ppb).

11.4.7 IDM QAQC 2016

IDM used a stronger QAQC program in 2016 consisting of a QC material once every 10 samples rotating between standards, blanks and field duplicates.

Four new standards, two from CDN Labs and two OREAS standards were used. Expected values and limits are shown in Table 11.11. Timeline plots shows good assay accuracy for both gold and silver.

Table 11.11: 2016 Red Mountain Standards

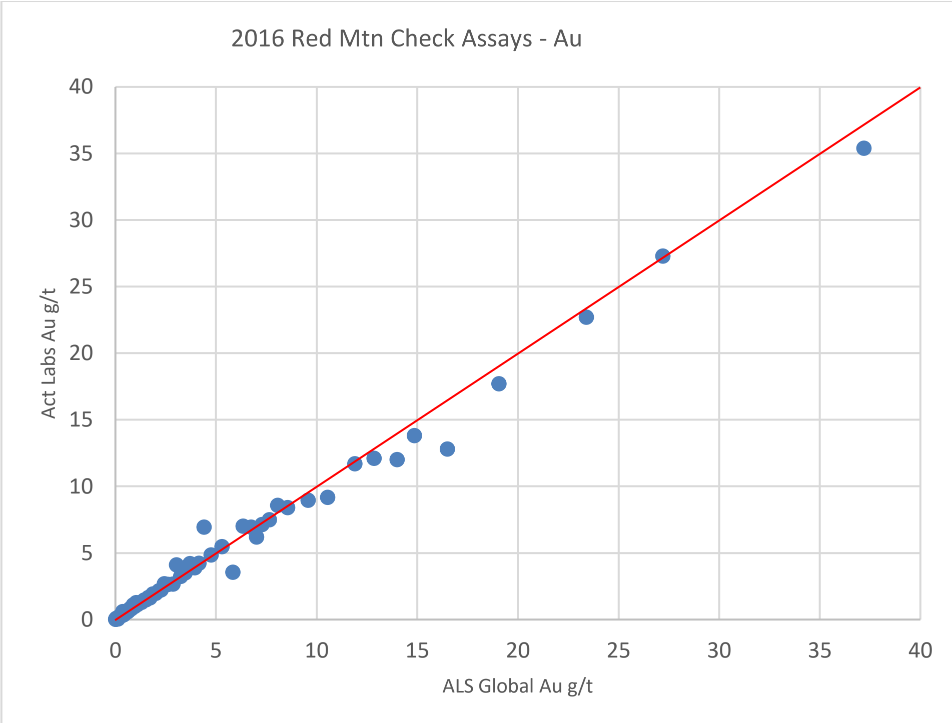
Standard	Au Value	+3SD	-3SD	Ag Value	+3SD	-3SD
CDN-GS-1Q	1.24	1.36	1.12	40.7	44	37.4
CDN-GS-5Q	5.59	6.12	5.06	60.3	66.2	54.4
Oreas 60C	2.47	2.22	2.71	4.87	4.2	5.54
Oreas 62E	9.13	10.36	7.9	9.86	10.88	8.83

The same field blank was used as in 2014. For gold, there were a few mild failures (20 – 30 ppb) and one failure at 0.11 g/t. That latter was found to follow a sample with 63.8 g/t Au and is attributed to mild contamination from the previous sample. One lesser failure of 30 ppb was found to follow a sample grading 18.85 g/t. a single silver failure of 2.3 g/t Ag could not be explained. The number and tenor of failures are not considered serious and will have negligible effect on resource estimation.

For field duplicates, the full second half of NQ core was submitted for the duplicate sample, and in the case of HQ core the last ¼ core was submitted as the duplicate to match the ¼ core submitted as the original. Both gold and silver show moderate variability at all grade ranges reflecting the variable distribution of coarse stockwork pyrite in original and duplicate pairs.

IDM submitted 98 pulps from 2016 drill holes for check assay to ActLabs in Kamloops. The samples were selected mainly from within mineralized intersections but also included a few samples selected from low grade to un-mineralized sample intervals. Correlations for both gold and silver are good indicating good accuracy between laboratories. A plot for gold is shown in Figure 11.8.

Figure 11.8: 2016 Check Assay Comparison



11.5 COMMENTS ON QAQC

The historical QAQC for Red Mountain is not as robust as current QA/QC programs. Standard and duplicate coverage is weak for some programs and no blanks were run to test for contamination issues associated with sample preparation on all but the recent IDM drilling programs. However, considering the dates over which the bulk of the work was carried out, the program was quite strong and extensive for the time. Additionally, strong check assay programs from some of the earlier years mitigate other weaknesses.

Standard results indicate no issues with assay accuracy as do the check assays that compare pulps to pulps as a measure of inter-lab accuracy. Similarly, true duplicate comparisons indicate good assay precision, although the dataset is quite small.

Historic comparisons for some sets of data between original pulp results, and the results of rejects sent as checks or comparisons between differing analyses on the same pulps (e.g. AA vs gravimetric), or a combination of both, are problematic as the sample support and analytical ranges of the different methodologies, respectively, are not the same.

Current QAQC protocols follow standard industry practices and are deemed adequate for inclusion of the assay data in resource estimation.

11.6 DATABASES

Information in Bray (2000) indicates that in 1993 and 1994 all Bond and LAC data were in a series of FoxPro databases. In 2000, these were combined into a smaller number of “master” FoxPro databases and then into a single master Microsoft (MS) Access database. This MS Access database contained much of the project data and was used in 2000 to populate a Gemcom Red Mountain drill database that formed the basis for the current mineral resource estimate.

11.7 SECURITY

11.7.1 Security

For all Red Mountain drilling programs samples were under the control of drill contractors and project staff until they have left the immediate project area as it has helicopter access only.

Bond security measures were not recorded at the time and normal security processes for the period are assumed.

LAC followed a diligent process of flying the core directly to the core storage facility in Stewart where logging and sampling was carried out under LAC supervision. Samples were delivered directly to the Eco-Tech laboratory located in Stewart accompanied by sample submittal forms.

Royal Oak samples were collected in the Goldslide Creek camp and subsequently delivered from the project area to the Eco-Tech sample preparation facility in Stewart.

NAMC samples were collected by a staff professional geologist and delivered to the Chemex laboratory under the direct supervision of the geologist.

In 2014, samples were shipped in rice bags and delivered from the project to a commercial trucking company based in Stewart. The samples were then delivered to Acme lab’s sample preparation facility in Smithers, B.C. The same procedure was used in 2016 except that sample shipments were delivered to the ALS Global sample preparation facility in Terrace, B.C.

11.7.2 Storage

All drill core from 1989 to 1996 (Bond, Lac and Royal Oak) is stored in a fenced compound immediately next to the Stewart airstrip. The bulk samples and rejects are also stored in this location but have deteriorated to a point whereby they are no longer usable.

The Banks Island core was initially stored in the Banks Island warehouse in Smithers, BC. The authors are unaware of the current location of the Banks Island core or if it still exists.

Core from the 2014 and 2016 IDM drilling programs is stacked on pallets at the Goldslide Creek camp. 2016 sample rejects and pulps are currently stored at the ALS Global facility in Terrace but storage in Stewart is being arranged.

11.8 COMMENTS ON SECTION 11

In the opinion of the QP the quality of the analytical data is sufficiently reliable to support mineral resource estimation. Sample collection, preparation, analysis, and security were generally performed in accordance with exploration best practices and industry standards as follows:

- Sample collection and preparation for samples that support mineral resource estimation has been in line with industry-standard methods for the pyritic, stockwork hosted gold mineralization that occurs at Red Mountain;
- Drill core samples were analysed by independent laboratories using industry-standard methods for gold and silver analyses;
- Drill programs have included the insertion of an adequate number of QAQC materials;
- The QA/QC program results do not indicate any problems with the analytical programs, and demonstrate that the results are accurate and precise;
- Sample security has relied upon the fact that the samples were always attended to by drill crews or company staff while at the project site or logging facilities, and delivered to the lab either directly by project staff or commercial trucking companies;
- The data that was collected was entered in databases and validated through visual checks prior to being imported into the master drill database(s).
- Current sample storage procedures and storage areas are consistent with industry standards.

12.0 DATA VERIFICATION

12.1 LAC DATABASE VERIFICATION

Data verification has been carried out by previous operators of the project including Bond, LAC and NAMC. In 2000, NAMC cross-referenced and catalogued all data from previous operators.

For all but the 2014 IDM program data have been transferred from paper format to electronic format. Data were entered into the computer by data entry personnel. All 1993 LAC data were checked in January and February of 1994. In 1994, LAC instituted a system where all drill hole data were entered and checked by different people as soon as possible after logging. The geologist who logged a hole was responsible to ensure all data was entered, checked and that data printouts were with completed logs in the files. Merging new data into the master drill databases was done by the system manager.

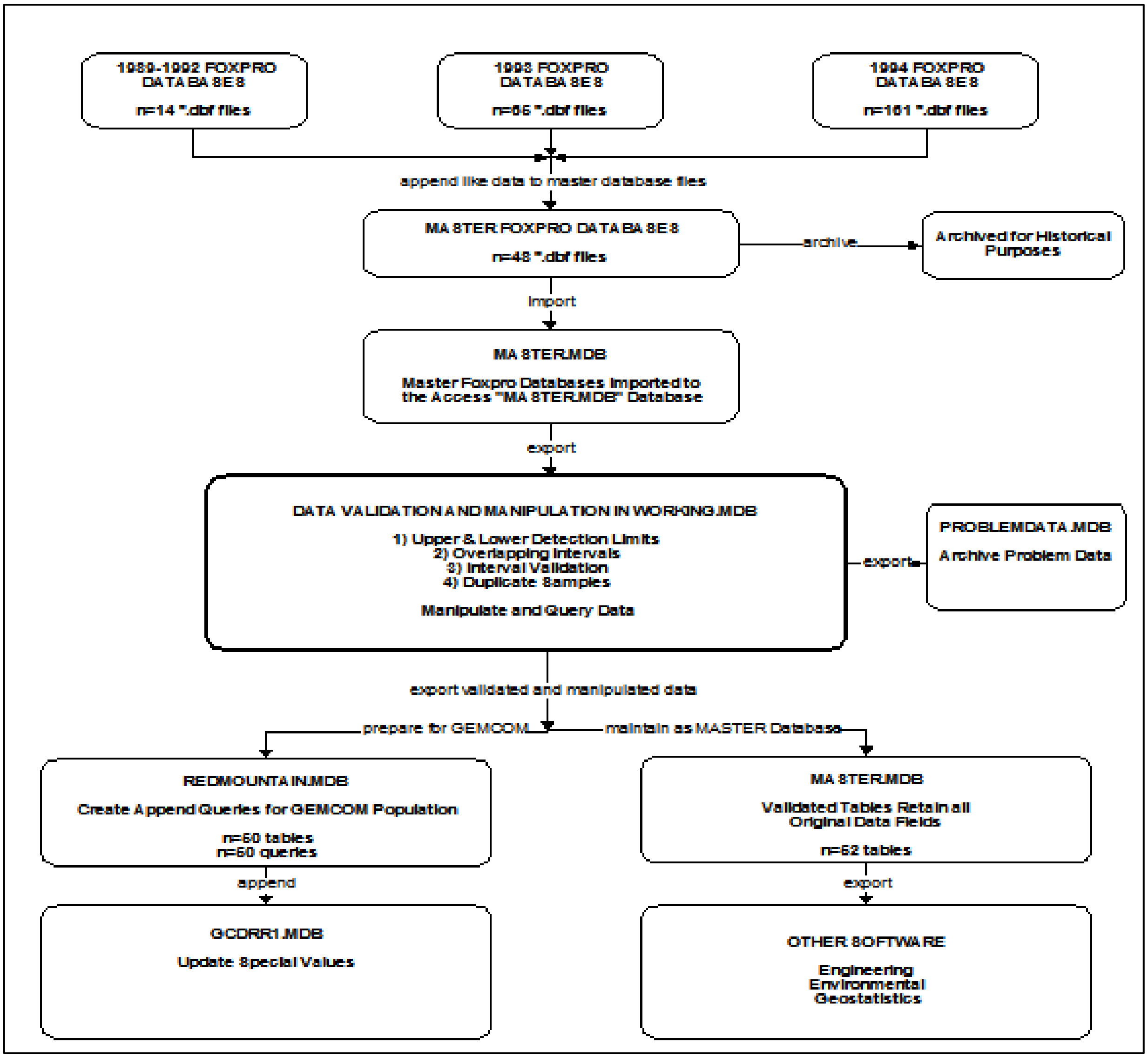
12.2 ELECTRONIC DATA VERIFICATION

LAC collected and organised over one gigabyte of electronic information during their work on the Red Mountain property during 1993 and 1994. As the project was under fast track conditions by LAC management, the programs were never compiled into a cohesive database that was accessible by a single program. NAMC, upon receiving the project data, undertook to create and validate a Microsoft Access database that held all of the site exploration and environmental work.

During 2000, NAMC cross-referenced and catalogued all data from previous operators. Data that could not be verified were removed from the database (Craig et al,2014).

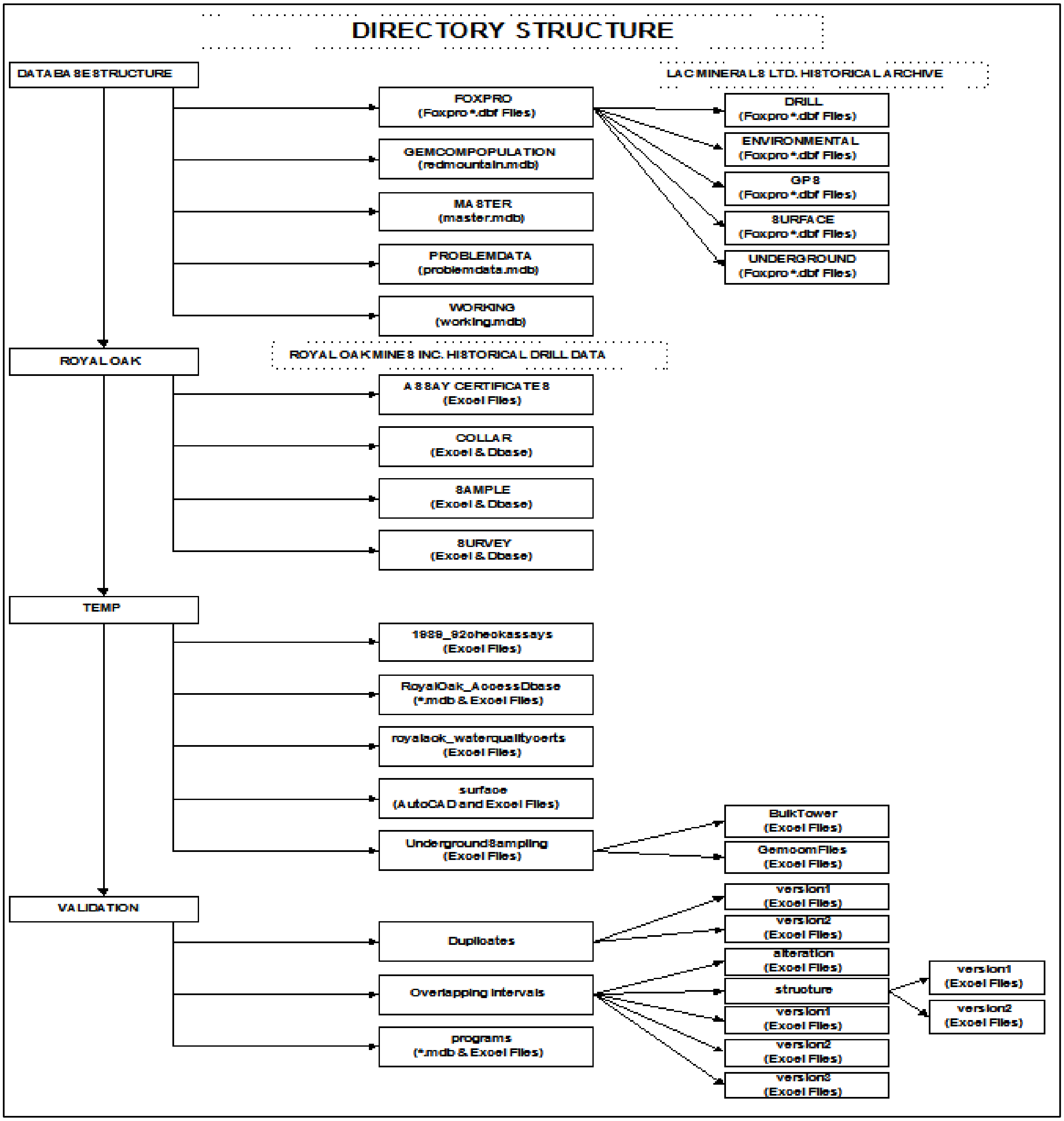
Flow sheets illustrating the database compilation procedures and resulting directory structure as shown in Figure 12.1 and Figure 12.2 respectively.

Figure 12.1: Data Validation Flowchart



Source: NAMC (2001)

Figure 12.2: Directory Structure



Source: NAMC (2001)

12.3 NAMC METALLURGICAL COMPOSITES

NAMC compiled five metallurgical composite suites from drill core. Samples were taken from intervals in the Marc and AV zones and were selected to give an average gold grade and distribution similar to the estimated milled head grade of 5-15 g/t Au. These composites were taken from the remaining half of drill core in the boxes, sawn to a ¼ sample and individually bagged in the original sample interval length. The samples were sent to Process Research Associates Ltd. where they were dried, weighed and pulverised to >90% -150 mesh. The pulps were then sent to IPL Laboratories in Vancouver, B.C. for FA/AAS for Au and FA/Grav in Ag analysis. NAMC standards were included in the assay stream for quality control. These standards remained within acceptable limits.

Table 12.1 augments the quality control discussion. The composite assay comparison acts as an Au and Ag assay verification and as a large-scale quality control device.

Table 12.1: DDH Composite Assays vs. Metallurgical Composites

Metallurgical Composite	DDH Comp Average Au g/t	Met Comp Average Au g/t	DDH Comp Average Ag g/t	Met Comp Average Ag g/t
Composite 1 – Section 1220	9.03	8.60	26.17	28.0
Composite 2 - Section 1200	7.77	8.14	52.8	62.3
Composite 3 - Section 1100	8.99	8.31	44.6	45.7
Stage 2 - Marc Zone	13.51	12.87	24.0	51.4
Stage 2 - AV Zone	16.8	14.84	16.0	22.0

Source: NAMC (2001)

12.4 2016 DATA VERIFICATION

For the resource update, some of the key tables in the GEMs database were audited for holes affecting the resource solids.

12.4.1 Collar Table

Drill collar locations were audited through examination in three dimensional GEMs software to ensure that collars were properly located in underground drill stations and in the case of surface holes coincident, within reasonable limits, with the topographic surface. No anomalies were noted.

12.4.2 Survey Table

The down hole survey table form the GEMs database was checked by examining the changes from one survey to the next in all holes for both azimuth and dip. A total of six holes from the 1993 and 1994 surface drilling programs have anomalous azimuth or dip deviations that should be checked through a combination of re-examining the Sperry Sun photos and looking at the mineralization data for the presence of pyrrhotite. One of these holes, M93157 pierces the 141 Zone solid, while the rest do not intersect resource solids.

12.4.3 Assay Table

Most original assay certificates are available in the Red Mountain files. A check was made between the gold and silver values in the GEMs data base and values on the assay certificates for assays from within the resource solids. A selection of drill holes from all resource zones was made that tried to cover different years of drilling and assayers, as well as being spatially representative. The number of assays checked for each zone is given in Table 12.2.

Table 12.2: Assay Validation Summary

Zone	No. Holes Checked	No. of Assays in Solid	No. of Assays Checked	% Checked
Marc	10	1978	202	10.2
Marc Footwall	3	53	11	20.7
AV	5	442	116	26.2
AV Lower	2	21	5	23.8
JW	3	104	20	19.2
JW Lower	1	36	6	16.7
132 Zone	2	95	11	11.6
141 Zone	7	328	76	23.2
Totals	**33**	**3057**	**447**	**14.6**

Overall the database was found to be very clean. Two instances of errors in the second decimal place for gold were found and are most likely data entry errors. A third discrepancy was found whereby a gold value of 4.33 was entered instead of the 3.98 listed on the certificate. No discrepancies were noted in silver values.

The 2016 assays were validated by comparing the data base values to certificates obtained directly from ALS Global. In total assays from 20 certificates representing 825 of 6022 assays, or 13.6% were evaluated. No discrepancies were found.

12.4.4 Site Visit and check samples

ACS carried out a site visit to the Red Mountain gold project on March 25, 2016 for one day. During the site visit, ACS verified the property access, logistics and surface geology. The underground workings were examined and seven check samples were collected for validation. Three samples were collected from the Marc Zone from the underground cross cuts and four samples were collected from drill core stored in Stewart. Table 12.3 summarizes the results of the re-sampling program carried out by ARSENEAU Consulting Services Inc. (ACS).

Overall the ACS sample results agree well with the previous results. The sampling program was not intended to be a robust validation program, instead the samples were only collected to verify that the Red Mountain gold project did host gold and silver mineralization in the range of grades that have been reported for the Project in the past.

Table 12.3: Results of 2016 re-sampling program

Sample Number	Sample Location	Original Au Value (g/t)	Re-assay Au Value (g/t)	Original Ag Value (g/t)	Re-assay Ag Value (g/t)
I95066	1100 cross cut	4.95	7.43	26	16
I95067	1200 cross cut	1.3	0.1	1.7	<5
I95068	1295 cross cut	6.5	1.25	48	<5
I95069	DH941148	1.26	1.69	0.8	<5
I95070	DHM93154	3.95	6.62	3.8	<5
I90571	DHM9054	4.78	7.03	38	42
I95072	DH941122	5.7	2.35	0.05	<5

12.5 COMMENTS ON SECTION 12

The QP has reviewed the appropriate reports and data, and is of the opinion that the data verification programs undertaken on the data collected adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource estimation.

13.0 MINERAL PROCESSING & METALLURGICAL TESTING

The following Section is taken from JDS (2014) with minor modifications. ACS takes responsibility for this section prepared by Tom Shouldice, P. Eng. on behalf of JDS.

13.1 TESTING & PROCEDURES

Previous metallurgical testing was performed by Lakefield Research (1991), Brenda Process Research (1994) and International Metallurgical and Environmental (1997), a derivative of Brenda Process Research. The majority of the test work conducted between 1991 and 1997 focused on cyanide leaching as the primary process for extracting gold and silver from the deposit.

In the spring of 2000, another test program was conducted at Process Research Associates (PRA) under the direction of Dr. Morris Beattie, P.Eng.

13.1.1 Metallurgical Testing Lakefield 1991

Initial test work by Lakefield Research appears to have been conducted on a composite of material from the Marc Zone. The head assays were as follows:

Au .... 12.8 g/t
Ag .... 46 g/t
Te .... 34 ppm
As .... 450 ppm
Fe 9.72%

Cyanidation testing indicated that the gold and silver recovery were both grind sensitive across the range from 80% passing 93 µm down to 23 µm. Across this range, the gold extraction increased from 76.8% to 87.1% and the silver extraction increased from 74.2% to 90.1%. Extraction was not improved by increasing the cyanide level above 0.5 g/L nor by increasing the pH above 12. At the fine grind, the cyanide consumption was reported to be 2.24 kg/t.

Lakefield performed one flotation test at a relatively coarse grind of 80% passing 140 µm. They recovered 92.3% of the gold and 90.5% pf the silver to a rougher concentrate representing 36.7% of the feed weight and containing 31.8 g/t Au and 112 g/t Ag. Attempts to upgrade the concentrate by cleaning resulted in a dramatic loss in recovery.

13.1.2 Brenda Process Technology 1994 - 1997

A significant program of testing was performed under Brenda Process Technology from 1994-1997. The program focused on cyanide leaching, but flotation and leaching of the flotation concentrates were also examined.

Initially, a series of 12 variability style composites were tested. Most to the variability samples originated from the Marc zone. Several larger composites of the Marc, AV and JW zones were constructed for more detailed flow sheet development work. The majority of the samples tested originated from drill core or drill core rejects. One large bulk sample was also tested. The composites constructed were well documented, identifying drill hole numbers and interval lengths. The grade of the samples tested covered a range from 3.07 g/t Au to 63.3 g/t Au. Table 13.1 displays the composite identification and the head assay data.

Table 13.1: Composites Tested in Brenda Process Technology Test Program

Identification	Zone	Au Grade (g/t)	Ag Grade (g/t)
Avg Grade	Marc	11	43.5
Avg Grade	AV	9.9	29.5
High Grade	Marc	32.2	57
Low Grade	Marc	3.1	19
Telluride Rich	?	57.9	347.5
High Arsenic	Marc	11.6	57.5
Low Arsenic	Marc	8	32
Low Antimony	Marc	10.8	9
High Zinc	Marc	7.9	56
Low Zinc	Marc	16.6	51
Black Bedded	?	8.2	22
Tetrahedrite	Marc	11.8	48
Marc Composite	Marc	12.4	48
AV Composite	AV	7.9	25
JV Composite	JW	10.7	21

Note: Details of the composite construction can be found in the original Brenda Process Technology Report – Appendix 1.

The twelve variability samples were tested using a cyanide bottle roll test (Table 13.2). The conditions for the tests were standardized at 48 hours leaching with 1 g/L NaCN and a pH of 10.5 to 11.0. The nominal primary grind sizes of the tests were 90% passing 200 mesh (75 µm). The tetrahedrite sample achieved the lowest extraction but this may have been due to increased copper dissolution and cyanide consumption by the sample. Of the remaining samples, the extraction ranged from 83% to 94.3%. The telluride rich sample achieved an extraction of 93.5%. Table 13.2 displays the results of the initial tests. Tests 113 to 117 were replicate tests and used finer primary grind and in some cases higher pH. The alteration of conditions in tests 113 to 117 only resulted in minor improvements in metallurgical performance.

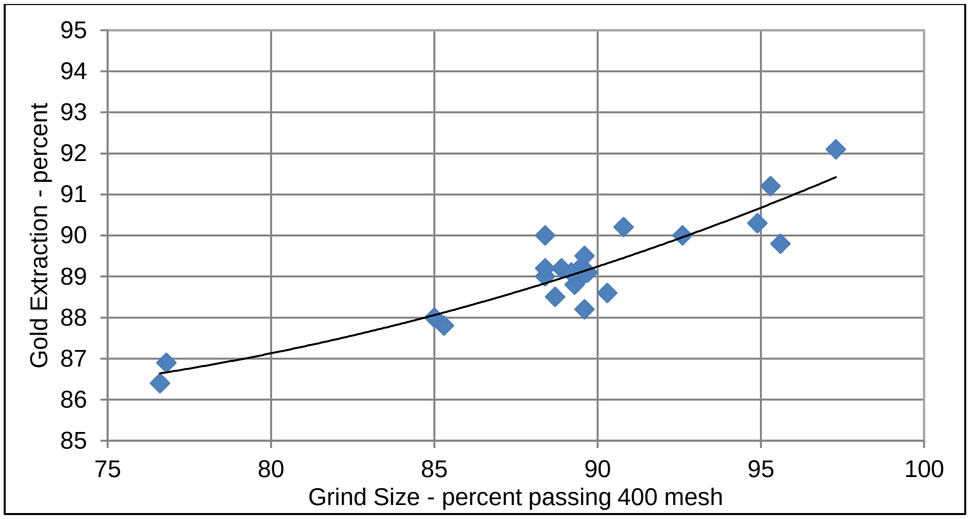
Table 13.2: Variability Cyanide Leach Results

			Feed Grade (g/t)		Extraction (%)	
Test	**Lithology**	**Zone**	**Au**	**Ag**	**Au**	**Ag**
101	Avg Grade	Marc	11.2	43	83.4	74.2
102	Avg Grade	AV	10.6	30	81.1	70.1
103	High Grade	Marc	32.2	57	91.5	86.1
104	Low Grade	Marc	3.1	19	83.7	67.7
105	Telluride Rich		63.3	365	93.5	89.7
106	High Arsenic	Marc	12.4	60	83.1	78.4
107	Low Arsenic	Marc	8	32	94.4	72
108	Low Antimony	Marc	10.8	9	92.6	78.2
109	High Zinc	Marc	7.9	56	94.3	83.8
110	Low Zinc	Marc	16.6	51	89.8	84.2
111	Black Bedded		8.2	22	90.2	81.7
112	Tetrahedrite	Marc	11.7	48	78.6	53.7
113	Avg Grade	Marc	10.8	44	86.1	79.7
114	Avg Grade	AV	9.2	29	82.7	72.6
115	High Arsenic	Marc	10.8	55	84.2	81.8
116	Telluride Rich		52.5	330	93.5	87
117	Tetrahedrite	Marc	11.9	53	77.3	66

There was no noted relationship between leach extraction and feed grade for either gold or silver. The average cyanide and lime consumptions for the tests were 1.3 and 3.0 kg/t of cyanide and lime, respectively.

Detailed test work was conducted on Marc Zone composite sample prepared mostly from drill holes completed during 1993. The composite was shown to be sensitive to grind across the range of 75% to 95% passing 400 mesh (37 µm) with the gold extraction being increased about 6% at the finest grind compared to the coarsest. Figure 13.1 displays the effect of grind size on extraction rate for the Marc Composite. An increase in gold extraction was noted with increased cyanide concentration but this was accompanied by an increase in cyanide consumption. The average cyanide consumption was 1.2 kg/t and the average lime consumption was 1.4 kg/t.

Figure 13.1: Effect of Grind Size on Gold Extraction – Marc Zone

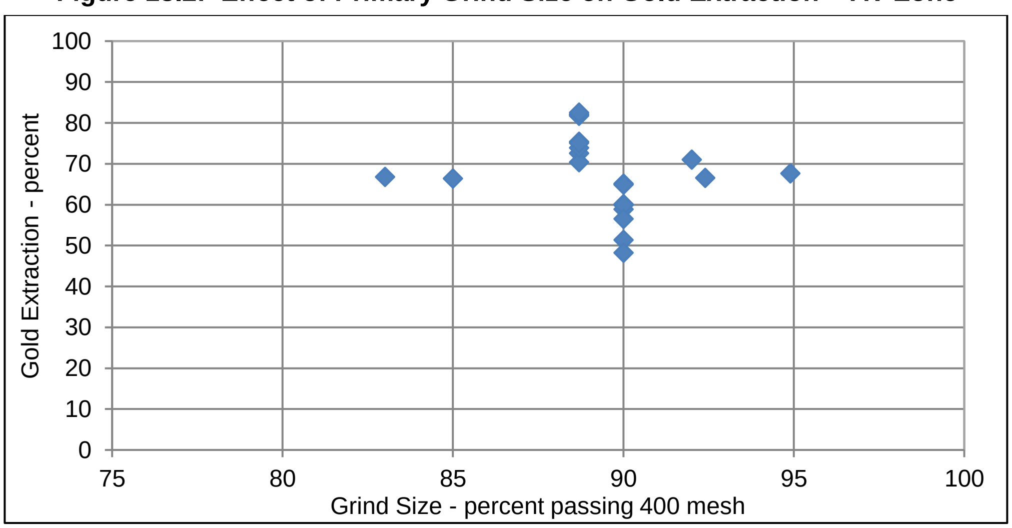


Note: Data taken from Brenda Process Technology Report tests 124-137, 140, 141, 144-157.

The extraction of silver for the Marc composite average 85% and showed little variation to the parameters tested.

Cyanide leach tests were conducted on the composite from the AV Zone. This sample responded very differently from the Marc Zone sample. The sample showed no grind sensitivity and resulted in a gold extraction of 68% under the standard conditions. Figure 13.2 displays the effect of primary grind on gold extraction.

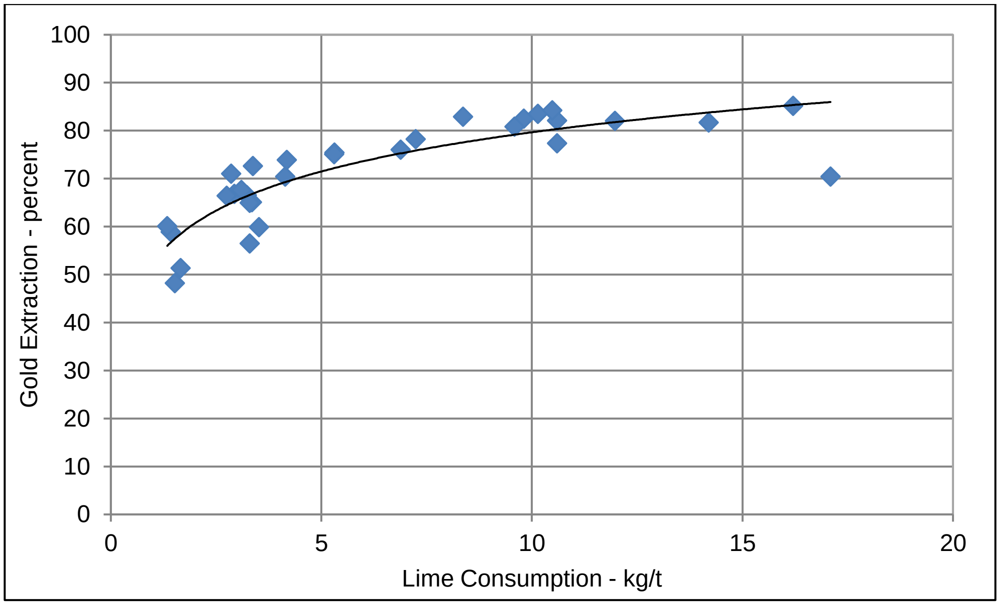
Figure 13.2: Effect of Primary Grind Size on Gold Extraction – AV Zone



Note: Data taken from Brenda Process Technology Report tests 164-187, 196-204.

The use of a higher cyanide concentration, oxygen enrichment, pH greater than 12 and the addition of activated carbon to the leach improved the gold extraction to 82.5%. The more aggressive test conditions resulted in a cyanide consumption of 2.5 kg/t. Figure 13.3 displays the relationship between lime consumption and gold extraction.

Figure 13.3: Relationship Between Lime Consumption & Gold Extraction – AV Composite



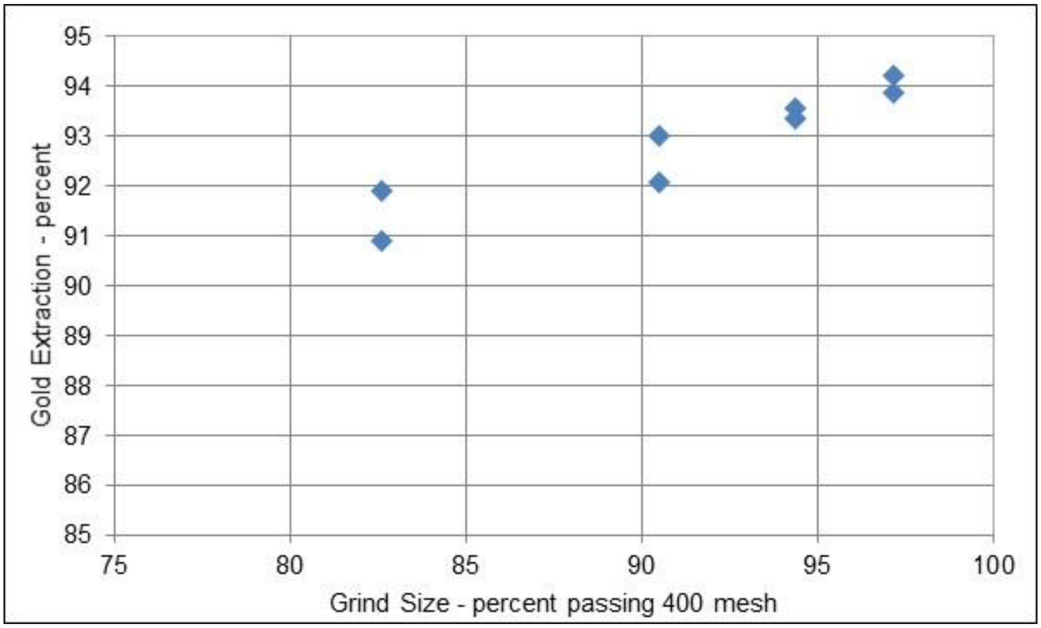
Note: Data taken from Brenda Process Technology Report tests 164-187, 196-204.

Similarly, silver extractions for the AV composite ranged from 56% to 77%. The conditions that improved gold recovery for this sample, also improved the silver extraction rates. The average silver extraction rate at the altered conditions was 71%.

The Brenda Process Report author reached the following conclusion: the reason for the different response was that the Marc Zone and AV samples were differing gold mineralogy. The Marc composite contained a high proportion of native gold while the AV zone contained a greater proportion of gold-tellurides alloys. Further investigation would be confirmed this hypothesis. It would also be prudent to consider other factors like the presence of copper sulphosalts and organic carbon as potential causes of poor performance. Exact sample locations need to be reviewed to establish whether the observed differences in extraction are the result of localized zoning rather than absolute differences between the major zones. It may not be appropriate to apply the characteristics of single composites to entire zones.

The JW zone, which was subjected to a similar set of standard tests, produced the best gold extraction results of all the zone composite samples. Gold in the feed was between 90.9% and 94.2% extracted using the standard conditions. As with the Marc zone, gold extraction increased as the primary grind size became finer. Figure 13.4 displays the relationship between primary grind size and gold extraction.

Figure 13.4: Effect of Primary Grind Size on Gold Extraction – JW Zone



Note: Data taken from Brenda Process Technology Report tests 188-195

Silver extractions for the JW zone averaged 86% and showed practically no variance to the parameters investigated during testing. The average consumption of cyanide and lime was 2.0 and 2.7 kg/t, respectively. The tests were completed at a high cyanide concentration (1,000 ppm).

Testing was conducted on ancillary processes such as thickening of the slurry, and gold adsorption on activated carbon. This test work did not encounter any complications and provided design parameters that would be considered normal. Cyanide destruction test work was also completed for the INCO SO_2/air process.

During 1997, IME conducted additional tests on two composite samples to establish the effectiveness of sulphur reduction of the tailings by flotation of all the contained sulfides. The samples graded 5 g/t Au and 13.6% S and 3.9 g/t Au and 10.6% S. The samples were subjected to cyanidation followed by cyanide destruction and then bulk sulfide flotation. The gold extraction in these samples was in the range of 77% to 79%. The low extraction was attributed to the low head grade.

Flotation of the detoxified tailings was successful in producing a final tailing with a positive NNP and a sulphur content of 0.2% to 0.3% sulphur. The concentrate had a mass representing 30% of the feed weight. The samples tested had a sulphur content somewhat higher than the average sulphur content for the deposit.

13.1.3 Metallurgical Testing PRA 2000

Five composites were tested in the program representing samples from the Marc and AV zones. The majority of the meaningful testing was completed on two global composites representing the Marc and AV zones. The global composites were constructed from quartered drill core and were constructed from seven and five drill holes from the Marc and AV zone, respectively. A summary of the composite head assay data is displayed in Table 13.3.

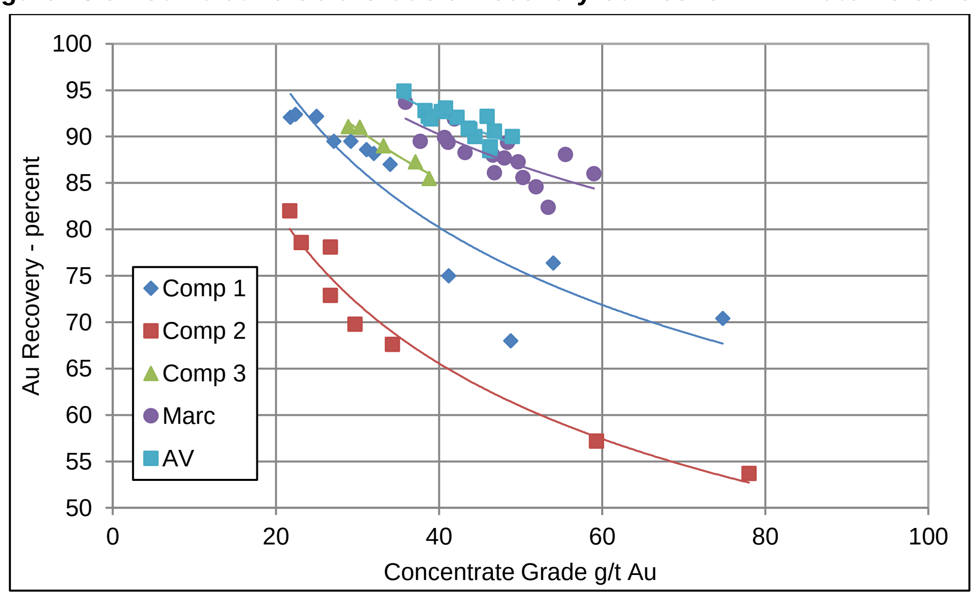
Table 13.3: Head Assay Data for PRA Test Composites

Composite	Assay – % or g/t		
	Au	Ag	S
Composite 1	8.6	28	11.5
Composite 2	8.1	62	7.8
Composite 3	8.3	46	8.8
Marc	**12.9**	**51**	**10.4**
AV	**14.8**	**22**	**13.6**

Note: All assays are in g/tonne except S, which is in percent.

The process flow sheet objective was to produce a gold- and silver-bearing sulphide concentrate. The concentrate would be marketed and sold on the basis of the gold and silver value. Rougher and flotation tests were conducted to determine the grade and recovery curves for this process. A summary of the flotation grade and recovery data for the batch cleaner tests is shown in Figure 13.5.

Figure 13.5: Cumulative Gold Grade & Recovery Curves for PRA Batch Cleaner Tests

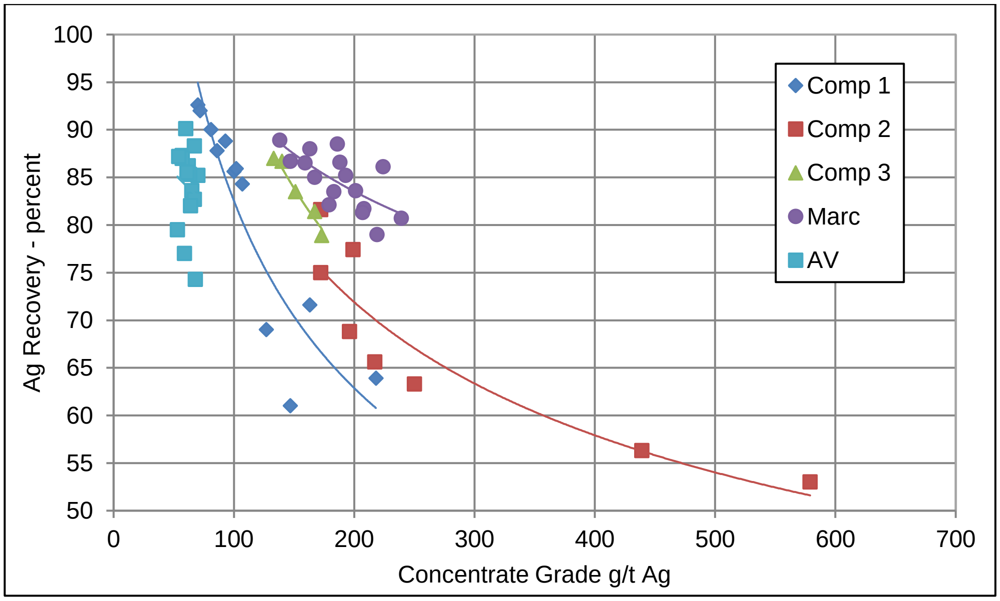


As shown in the graph, the concentrate grades in the samples ranged from about 20 to 80 g/t. Each sample displayed an inversely proportional relationship between gold concentrate grade and recovery. Based on this data set, concentrate gold grade would vary between 25 to 58 g/t at gold recoveries of 90%.

The gold upgrading ratio (the ratio of gold concentrate grade to feed grade) at high gold recovery, ranged between 3.5 and 5 and was a function of the sulphur grades in the feed.

The metallurgical performance of silver was very similar to gold. Figure 13.6 displays the cumulative batch cleaner test results for the composites tested at PRA.

Figure 13.6: Cumulative Silver Grade & Recovery Curves for PRA Batch Cleaner Tests



The data set for silver would indicate that the concentrate silver grade would range between 60 and 200 g/t at a silver recovery of 85%.

Bond Ball mill tests performed on composite samples indicated an average energy consumption of 18.5 kWh/t.

Thickener settling tests were performed on flotation tailings ground to a nominal size of 175 µm K_{80}. The thickener area requirement averaged 0.14 m^2/t/d.

13.1.4 Metallurgical testing IDM Ming 2017

In 2017 IDM submitted 35 composites from 17 drill holes in the Marc, AV and JW zones for additional testing. Work includes floatation with cyanide leach of concentrate, whole ore leach and CIL tests along with grind sensitivity testing. Results of this work are still pending at the time of this report.

14.0 MINERAL RESOURCE ESTIMATE

14.1 INTRODUCTION

The mineral resource model prepared by ACS utilised a total of 538 drill holes, 74 of which were drilled by IDM, 12 in 2014 and 62 in 2016. The resource estimation work was completed by Dr. Gilles Arseneau, P. Geo. (APEGBC) an appropriate independent "qualified person" within the meaning of NI 43-101. The effective date of the Mineral Resource statement is January 23, 2017.

This section describes the resource estimation methodology and summarizes the key assumptions considered by ACS. In the opinion of ACS, the resource evaluation reported herein is a reasonable representation of the gold and silver mineral resources found at the Red Mountain gold project at the current level of sampling. The mineral resources have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines (2003) and are reported in accordance with the Canadian Securities Administrators' NI 43-101. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted into mineral reserve.

The database used to estimate the Red Mountain mineral resources was audited by ACS. ACS is of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries of the gold mineralization and that the assay data are sufficiently reliable to support mineral resource estimation.

14.2 RESOURCE ESTIMATION PROCEDURES

The resource evaluation methodology involved the following procedures:

- Database compilation and verification;
- Validation of wireframe models for the boundaries of the gold mineralization;
- Definition of resource domains;
- Data conditioning (compositing and capping) for geostatistical analysis and variography;
- Block modelling and grade interpolation;
- Resource classification and validation;
- Assessment of "reasonable prospects for economic extraction" and selection of appropriate cut-off grades; and
- Preparation of mineral resource statement.

14.3 DRILL HOLE DATABASE

The drilling database consists of historical drilling most of which has been carried out by LAC in the early 1990s. Between 2000 and 2001, North American Metals Corporation (NAMC) relogged all of the mineralized intervals and carried out an extensive database validation of the drill database. Banks Island Gold drilled two holes in the Marc zone in 2013 and IDM drilled five holes in the deposit in 2014, three holes targeting the 141 zone and two holes targeting the AV zone. IDM drilled an additional 62 holes in 2016 to better defined the mineralization, collect some samples for metallurgical tests and upgrade some of the inferred mineralization to indicated. IDM also drilled seven exploration holes targeting other areas on the Red Mountain gold project in 2014. Table 14.1 summarizes the drill holes used for each mineralized zone estimated.

Table 14.1: Drill Hole Used in Resource Estimate Update

Zone	Number of holes	Metres
Marc	156	21,531
AV	45	14,060
JW	47	14,711
141	25	7,281
132	6	3035

There is a total of 58,057 records in the assay database, of these 3,232 represent samples taken from the mineralized horizons. Table 14.2 summarises the basic statistical data for all the assays in the database. Table 14.6 summarises the gold assays contained within the mineralized zones and Table 14.4 summarises the silver assays.

Table 14.2: Basic Statistical Information for all Assays in Database

Zone	All	All
Assays	Au (g/t)	Ag (g/t)
Valid cases	58057	58057
Mean	0.96	3.45
Variance	63	794
Std. Deviation	7.9	28.2
Variation Coefficient	8.3	8.2
Minimum	0	0
Maximum	1320	2152
1st percentile	0.007	0
5th percentile	0.01	0
10th percentile	0.02	0
25th percentile	0.03	0.1
Median	0.11	0.4

75th percentile	0.4	1.2
90th percentile	1.3	3.3
95th percentile	3.1	10.7
99th percentile	15.72	56.3

Table 14.3: Basic Statistical Information of Gold Assays within the Mineralized Zones

Zone	**Marc**	**AV**	**JW**	**141**	**132**
Assays	**Au (g/t)**	**Au (g/t)**	**Au (g/t)**	**Au (g/t)**	**Au (g/t)**
Valid cases	1963	571	253	350	95
Mean	12	11.15	8.28	3.73	2.50
Variance	573	3474.71	134.27	94.43	9.33
Std. Deviation	23.9	58.95	11.59	9.72	3.05
Variation Coefficient	2.0	5.29	1.40	2.60	1.22
Minimum	0	0.04	0.09	0.09	0.19
Maximum	502	1321	80.60	169.30	15.88
1st percentile	0.08	0.09	0.11	0.18	0.00
5th percentile	0.50	0.65	0.57	0.40	0.24
10th percentile	0.98	1.16	1.15	0.66	0.34
25th percentile	2.58	2.63	2.51	1.16	0.83
Median	5.32	4.38	4.59	1.97	1.53
75th percentile	12.40	7.92	8.99	3.30	2.51
90th percentile	26.59	16.34	16.01	7.64	6.28
95th percentile	43.90	25.68	33.13	12.17	9.48
99th percentile	104.44	118.42	60.72	22.58	12.30

Table 14.4: Basic Statistical Information of Silver Assays within the Mineralized Zones

Zone	Marc	AV	JW	141	132
Assays	Ag (g/t)	Ag (g/t)	Ag (g/t)	Ag (g/t)	Ag (g/t)
Valid cases	1963	571	253	350	95
Mean	47.99	20.72	35.69	7.64	3.76
Variance	14530.05	1469.00	11224.25	361.30	162.61
Std. Deviation	120.54	38.33	105.94	19.01	12.75
Variation Coefficient	2.51	1.85	2.97	2.49	3.40
Minimum	0.00	0.00	0.00	0.05	0.05
Maximum	2152.00	504.20	889.00	203.30	73.20
1st percentile	0.00	0.05	0.00	0.10	0.00
5th percentile	0.90	0.05	0.05	0.15	0.05

10th percentile	2.37	0.80	0.05	0.40	0.08
25th percentile	7.30	4.30	1.10	0.90	0.10
Median	20.10	9.60	8.18	2.20	0.30
75th percentile	42.10	21.70	24.05	5.85	0.70
90th percentile	92.78	50.76	58.62	14.76	3.64
95th percentile	169.20	71.26	169.49	32.02	38.20
99th percentile	551.48	190.69	720.97	112.10	48.30

14.4 DESIGN OF MODELLING CRITERIA

A significant amount of time and effort was invested during the 2000 field season to develop modelling criteria for the mineralization at Red Mountain. Areas of investigation included general lithology, nature of sulphide occurrences, relationship of pyrite to gold grade and structural control on mineralization.

The results of the studies suggested that the following were important modelling criteria:

1. Basic lithology, including major structural features, with appropriate textural modifiers.
2. The limits of pyrite, and more rarely pyrrhotite, stockwork. These limits are often, but not always coincident with a 1 g/t gold assay outline. Inside this outline, sulphide occurs as disseminations, micro-veinlets, planar and irregular veins and irregular masses. Average pyrite content in lower gold grade sections of the stockwork is at least 4%. Outside the stockwork limits, sulphide occurs as disseminations and sparse micro-veinlets with an average pyrite content of 1.5%.
3. The shift from a pyrite-dominated stockwork to a pyrrhotite-dominated alteration halo is sharp and often corresponds to a 1 g/t gold outline, except in rare cases where pyrrhotite abundance, style and gold content mimics the pyrite stockwork.
4. The cumulative thickness of pyrite in a given interval has the best correlation to gold grade regardless of the width or number of veins and represents the most important data that can be collected to constrain gold distribution. The data collected suggest that cumulative pyrite thickness could be used to delineate high and low grade domains.
5. Brecciation of pyrite veins is also related to gold distribution and can be measured by qualitative measurements, although in practical terms such measurements are time-consuming and very subjective.

After the compilation of the 2016 drilling, IDM decided to review and modify the geological wireframes defining the mineralized zones at Red Mountain. While a similar geological approach to the 2000 modelling was followed, a stronger emphasis was placed on including grade that may have been excluded because of strict geological modelling rules. Furthermore, the base cut-off was raised from a nominal 1 g/t to 2.5 g/t. Some of the lesser defined zones remained modelled at a 1 g/t cut-off.

14.5 SOLID MODELLING

New three-dimensional solids were generated for the mineralized zones using the following process:

- Cross-sections were plotted at 25 m intervals showing all surface and underground diamond drill holes. The sections were plotted with one side of the drill hole trace showing the primary lithology and its modifiers, and the other side showing the assay interval and gold grade.

ACS reviewed all of the three-dimensional solids prior to resource estimation and agrees with the general modelling criteria selected. The outlines are generally based on gold cut-off that for the most part coincide with the limits of pyrite and pyrrhotite stockwork. The boundaries of the stockwork are very abrupt in some places and gradational into the wall rock in others. The stockwork outlines often, but not always, corresponded to areas of intense quartz sericite alteration that give the rock a bleached appearance.

The outlines for the Marc, AV and JW zones were derived from vertical sections in Gemcom software. The vertical section outlines were digitized as closed polylines that were snapped to the actual 3D locations of the drill holes. The closed polylines were then "wobbled" (splined) in order to smooth the transition to off-section drill holes while maintaining the integrity of the interpretation.

Wireframes for the 141, 132, Marc Footwall, AV and JW Lower zones were designed from sectional interpretation on 25 m sections. Each wireframe was assigned a unique rock code as outlined in Table 14.5.

Table 14.5: Rock Codes Assigned to Wireframes

Zone	Rock Code
Marc	101
AV	201
JW	301
141	401
132	132
Marc Footwall	102
Marc Hanging wall	103
Marc NK	104
AV Lower	202
JW Lower	302

14.6 BULK DENSITY

The bulk density of the Red Mountain gold deposits has been tested by two sampling programs. During 1993 and 1994, LAC had 4,225 specific gravity determinations made on drill core that was submitted to the Eco-Tech lab in Stewart. In 2000, NAMC collected 58 samples that were subjected to bulk density analysis. Of the 4,283 samples, 1,290 are from sample intervals within the solids used for resource calculation. Average specific gravity values for different subsets of the entire data set are given in Table 14.6.

Table 14.6: 1993-1994 Bulk Density Sample Results

Zone	# Samples	Range of Values	Avg. SG	Pyrite %
All samples	4283	1.44 - 4.12	2.86	N/A
Within mineralized zones	1290	1.85 - 4.04	2.95	6.11
Marc zone	1058	2.03 - 4.04	2.95	6.43
AV zone	194	1.85 - 3.85	2.99	5.83
JW zone	38	2.67 - 3.12	2.90	1.91
Mineralized zones > 5.0 g/t Au	667	2.48 - 4.04	3.01	8.66
Mineralized zones < 5.0 g/t Au	623	1.85 - 3.58	2.89	3.43

Source (NAMC 2001)

In addition to the above data, Banks Island collected 170 density measurements from their drilling in 2013 and IDM collected 120 bulk density samples from the 2016 drill program for a total of 4,573 density readings for the Red Mountain Project. Results of the IDM density program are summarized in Table 14.7.

Table 14.7: 2016 Bulk Density Sample Results

Zone	# Samples	Range of Values	Avg. SG
All samples	120	2.41 – 4.39	2.90
Within mineralized zones	46	2.74 – 4.39	3.06
Marc zone	0	ND	ND
AV zone	26	2.76 – 4.23	3.03
JW zone	20	2.74 – 4.39	3.10
Waste zone	74	2.41 – 3.04	2.81

14.7 COMPOSITE STATISTICS

14.7.1 Composite Statistics

All assay data were composited to a fixed length prior to estimation. ACS evaluated the assay lengths for the various deposits and found that most samples had an average length of less than 1.5 m. ACS therefore decided to composite all assay data to 1.5 metres prior to estimation. Table 14.8 summarizes the basic statistical data for uncapped gold composites used in the resource estimates and Table 14.9 shows the statistics of the silver composited data.

Table 14.8: Descriptive Statistics of 1.5 m Gold Composites

	AUGPT	AUGPT	AUGPT	AUGPT	AUGPT
Zone	**MARC**	**AV**	**JW**	**132**	**141**
Valid cases	1443	404	178	83	273
Mean	11.6	10.8	8.0	2.3	3.6
Variance	364	2241	89.6	4.8	34.0
Std. Deviation	19.1	47.4	9.5	2.2	5.8
Variation Coefficient	1.6	4.4	1.2	1.0	1.6
Minimum	0	0.05	0.3	0.0	0.1
Maximum	282	909	61.0	11.1	60.7
1st percentile	0.1	0.1	0.6	0.0	0.2
5th percentile	0.7	0.9	1.0	0.3	0.6
10th percentile	1.4	1.7	1.2	0.6	0.9
25th percentile	3.0	3.1	3.0	1.2	1.3
Median	6.2	4.8	4.7	1.7	2.1
75th percentile	1.7	7.9	9.3	2.2	3.2
90th percentile	25.0	15.6	14.5	5.5	8.4
95th percentile	39.4	23.4	27.4	7.8	11.5
99th percentile	101.9	110.3	58.1	10.1	31.0

Table 14.9: Descriptive Statitics of 1.5 m Silver Composites

	AGGPT	AGGPT	AGGPT	AGGPT	AGGPT
Zone	**MARC**	**AV**	**JW**	**132**	**141**
Valid cases	1443	404	178	83	273
Mean	46.5	20.5	31.4	2.9	7.6
Variance	9856	1026.8	7077.0	114.5	310.0
Std. Deviation	99.3	32.0	84.1	10.7	17.6

Variation Coefficient	2.1	1.6	2.7	3.6	2.3
Minimum	0	0.0	0.0	0.0	0.1
Maximum	1102	337.0	578.4	72.3	177.3
1st percentile	0.1	0.1	0.0	0.0	0.1
5th percentile	1.3	0.1	0.0	0.1	0.3
10th percentile	2.8	1.3	0.1	0.1	0.4
25th percentile	8.7	4.9	1.1	0.1	1.0
Median	21.5	11.4	9.8	0.3	2.4
75th percentile	44.2	23.3	22.0	0.9	7.0
90th percentile	89.5	46.2	51.3	2.7	16.4
95th percentile	157.9	70.7	134.7	22.0	26.2
99th percentile	531.8	178.1	521.0	63.5	108.9

14.7.2 Top Cut Applied to Composites

Block grade estimates may be unduly affected by high grade outliers. Therefore, assay data were evaluated for high grade outliers. Based on the analysis of the assay distribution, ACS decided that capping of high grade composites was warranted. ACS decided to cap gold composites to 55 g/t Au. This 55 g/t Au top cut was used in the interpolation runs for all of the mineralized zones.

Silver values were top cut to 220 g/t, which is slightly lower than the 97.5% of all combined Ag composite values. A 220 g/t Ag top cut was used in the interpolation runs for all of the mineralized zones.

14.8 SPATIAL ANALYSIS

Spatial continuity of gold and silver was evaluated with correlograms developed using SAGE 2001 version 1.08. The correlogram measures the correlation between data values as a function of their separation distance and direction. The distance at which the correlogram is close to zero is called the “range of correlation” or simply the range. The range of the correlogram corresponds roughly to the more qualitative notion of the “range of influence” of a sample or composite.

Directional correlograms were generated for composited data at 30 degree increments along horizontal azimuths. For each azimuth, correlograms were calculated at dips of 0, 30 and 60 degrees. A vertical correlogram was also calculated, using the information from these 37 correlograms. Sage then determines the best fit model using the least square fit method. The correlogram model is described by the nugget (Co), the variance contribution of the two nested structure (C1, C2) and the range of each of the structures.

Experimental correlograms were obtained for drill hole directions for which sufficient data existed for the Marc zone. The Marc zone is the most densely drilled and provides the greatest opportunity for determining the short-range character of the correlogram. Correlogram derived form the Mac and AV zones were used to interpolate grades into the Marc, AV and JW zone.

Correlograms for the Marc Footwall, 132, 141 AV Lower and JW Lower zones were somewhat inconclusive, and, for this reason, ACS decided to use the correlograms derived form the main Marc, AV and JW data to estimate these zones. ACS recommends that the data for these zones be re-examined after additional drilling is carried out to determine if more robust Variography can be achieved with additional information. Table 14.10 summarises the correlogram parameters used to estimate gold and silver in the block model.

Table 14.10: Correlogram Parameters Used for Grade Estimation

Metal	Model Type	Nugget (C_0)	C_1 & C_2	Rotation			Range		
				(Z)	(Y)	(Z)	Rot X	Rot Y	Rot Z
Au	Exponential	0.1	0.589	-37	8	19	8	8	19
			0.313	-37	8	19	9	170	82
Ag	Exponential	0.1	0.90	21	79	8	21	79	8
			NA				NA	NA	NA

14.9 BLOCK MODEL

A 3D block model was created using Geovia GEMs Version 7.3 to represent the lithological and structural characteristics specific to the Red Mountain deposit. This model was used as a framework for the grade model, which relied on geostatistical analysis of the sample data and a detailed understanding of the geology to produce a robust estimate of the resource.

The parameters for the block model are listed in Table 14.11. Block model coordinates are in local grid coordinates to be consistent with historical data. Block size was set to 4 m x 4 m x 4 m to better define the mineralized zones and to stay consistent with previous resource estimates. The rock type element in the block model was coded for all zones using a 0.001% selection process. The rock and percent models were then updated with specific codes for each of the mineralized zones as outlined in Table 14.5 above. All waste blocks were assigned a default rock code of 99.

Table 14.11: Model Parameters for the Red Mountain Block Model

Coordinates			Origin Coordinates	Block Size (m)	Number of Blocks
Axis Direction	Axis				
Easting	X	Column	4500	4	200
Northing	Y	Row	1000	4	200
Elevation	Z	Level	2000	4	135

Source: ACS (2016)

Gold grades were interpolated within the individual zones using ordinary kriging and multiple passes as outlined in Table 14.12. Grades were only interpolated into blocks if the blocks had not been interpolated by a previous pass.

Table 14.12: Interpolation Parameters Used for Grade Interpolation

Zone		Rotation			Search Ellipse Size			No of composites		Max no per hole
	Pass	Z	Y	Z	X	Y	Z	Min	Max	
Marc	1	0	-75	0	30	30	10	5	15	3
Marc	2	0	-75	0	60	60	15	2	15	1
Marc	3	0	-75	0	20	20	15	2	15	none
AV	1	0	-60	0	30	30	10	5	15	3
AV	2	0	-60	0	60	60	15	2	15	1
AV	3	0	-60	0	20	20	10	2	15	none
JW	1	0	-45	0	30	30	10	5	15	3
JW	2	0	-45	0	60	60	10	2	15	1
JW	3	0	-45	0	20	20	15	2	15	none
141	1	0	-45	0	30	30	10	5	15	3
141	2	0	-45	0	60	60	20	2	15	1
141	3	0	-45	0	20	20	15	2	15	none
Marc FW	1	0	-22	0	30	30	10	5	15	3

Zone	Pass	Rotation			Search Ellipse Size			No of composites		Max no per hole
		Z	Y	Z	X	Y	Z	Min	Max	
Marc FW	2	0	-22	0	60	60	15	2	15	1
Marc FW	3	0	-22	0	20	20	15	2	15	none
Marc Outlier	1	0		0	30	30	10	5	15	3
Marc Outlier	2	0		0	60	60	15	2	15	1
Marc Outlier	3	0		0	20	20	15	2	15	none
Marc NK	1	0	0	0	30	30	10	5	15	3
Marc NK	2	0	0	0	60	60	15	2	15	1
Marc NK	3	0	0	0	20	20	15	2	15	none
AV Lower	1	0	-25	0	30	30	10	5	15	3
AV Lower	2	0	-25	0	60	60	20	2	15	1
AV Lower	3	0	-25	0	20	20	15	2	15	none
JW Lower	1	0	-22	0	30	30	10	5	15	3
JW Lower	2	0	-22	0	60	60	35	2	15	1
JW Lower	3	0	-22	0	20	20	15	2	15	none
132	1	0	-22	0	30	30	10	5	15	3
132	2	0	-22	0	60	60	20	2	15	1
132	3	0	-22	0	20	20	15	2	15	none

Source: ACS (2016)

Bulk density and iron grades were interpolated using Inverse distance weighted to the second power. For those blocks that had insufficient density data to generate a block estimate, the block densities were assigned the average density for the rock type as defined in Table 14.13.

Table 14.13: Block Model Default Densities by Rock Codes

Rock Code	Average Density
99	2.82
101	2.96
102	3.00
103	2.90
104	No data
201	2.99
202	No data
301	2.90
302	2.96
401	2.89

Source: ACS (2016)

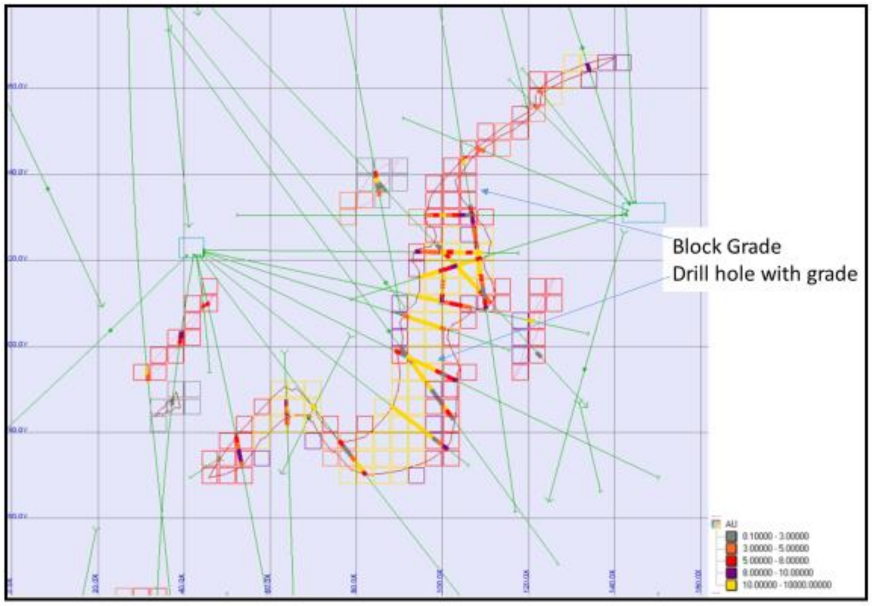
14.10 MODEL VALIDATION

The zones were validated by completing a series of visual inspections and by comparison of average assay grades with average block estimates along different directions - swath plots.

1.1.1 Visual Comparison

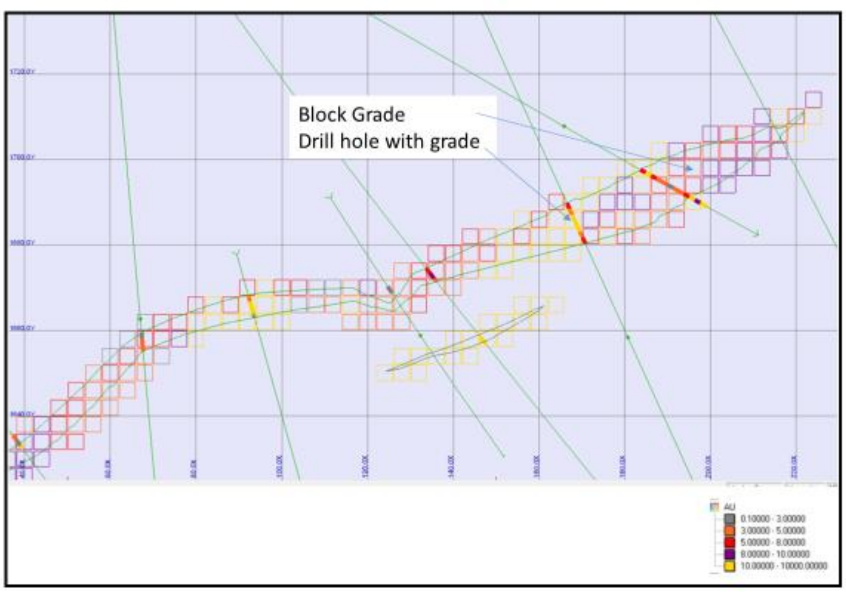
The model was checked for proper coding of drill hole intervals and block model cells. Coding was found to be properly done. Grade interpolation was examined relative to drill hole composite values by inspecting sections and plans. The checks showed good agreement between drill hole composite values and model cell values (Figure 14.1 and Figure 14.2).

Figure 14.1: Section 1250N Showing Block Drill Hole Composites and Estimated Gold Grades



Note: Grid lines are 20 m apart and blocks are 4 m by 4 m
Source: ACS (2016)

Figure 14.2: Section 1525N Showing Drill hole Composite and Estimated Gold Grades



Note: Grid lines are 50 m apart and blocks are 4 m by 4 m

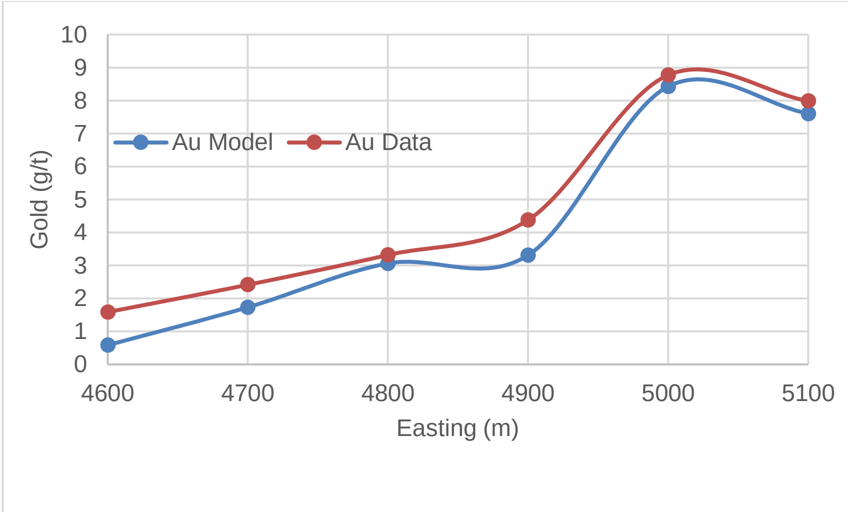
Source: ACS (2016)

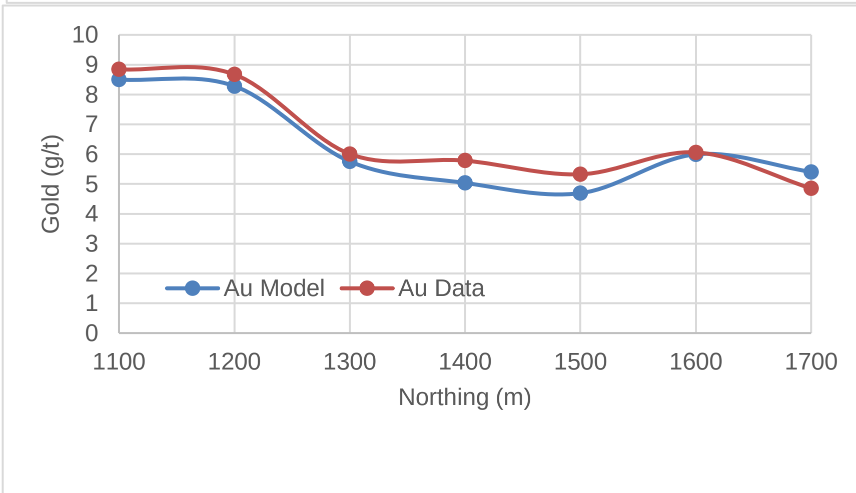
1.1.2 Swath Plots

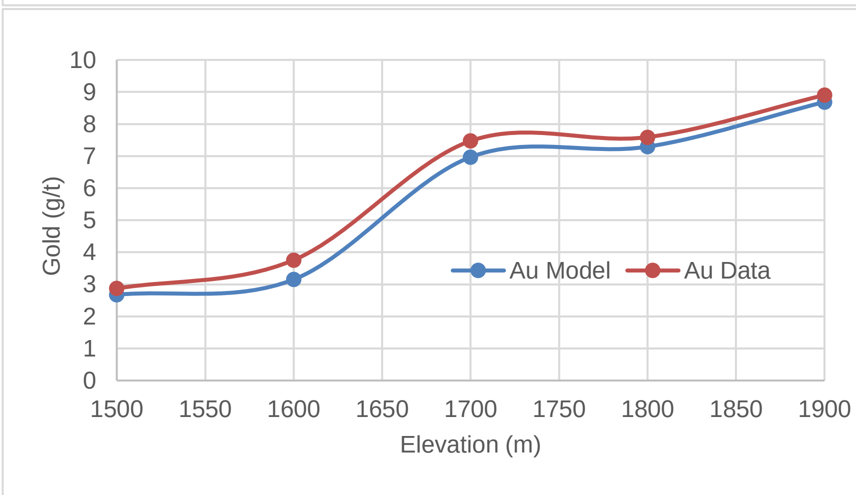
Average composite grades and average block estimates were compared along different directions. This involved calculating de-clustered average composite grades and comparing them with average block estimates along east-west, north-south and horizontal (by elevation) swaths.

Figure 14.3 shows the swath Plot for gold. On average, the estimated data agree well with the composited data with the estimated values being slightly more smoothed than the composite data.

Figure 14.3: Swath Plot for Gold Values







14.11 RESOURCE CLASSIFICATION

Block model quantities and grade estimates for the Red Mountain gold project were classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (the CIM Definition Standards, May 2014) by Dr. Gilles Arseneau, P. Geo. (APEGBC), an independent "qualified person" for the purpose of NI 43-101.

Mineral resource classification is typically a subjective concept; however, industry best practices suggest that resource classification should consider the confidence in the geological continuity of the mineralized structures, the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating these concepts to delineate regular areas at similar resource classification.

ACS is satisfied that the geological modelling reflects the current geological information and knowledge. The location of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired primarily by core drill holes. Drilling samples were from sections spaced between 20 to 60 metres.

ACS considers that blocks in the Marc, AV and JW zones estimated during pass one and from at least 4 drill holes could be assigned to the Measured category. Blocks interpolated during pass one with at least 3 drill holes in all zones could be assigned to the Indicated category. Blocks that had not been interpolated during pass one were assigned to the Inferred category within the meaning of the CIM Definition Standards.

14.12 MINERAL RESOURCE STATEMENT

CIM Definition Standards defines a Mineral Resource as:

"a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling".

The "reasonable prospects for eventual economic extraction" requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, ACS considers that major portions of the Red Mountain deposits are amenable for underground extraction by long hole stoping method.

In order to determine the quantities of material satisfying “reasonable prospects for economic extraction”, ACS assumed a minimum mining cut off of 3 g/t gold representing an approximate mining cost of $160 Canadian and a minimum mining width of 2 m. The reader is cautioned that there are no mineral reserves at the Red Mountain gold project.

ACS is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political issues that may adversely affect the Mineral Resources presented in this Report.

ACS considers that the blocks with grades above the cut-off grade satisfy the criteria for “reasonable prospects for economic extraction” and can be reported as a Mineral Resource. Mineral resources for each deposit at the Red Mountain gold project are summarized in Table 14.14.

Table 14.14: Red Mountain Mineral Resource Statement at a 3 g/t Gold Cut-off Effective January 23, 2017

Zone	Tonnage (tonnes)	In-situ Gold Grade (g/t)	In-situ Silver Grade (g/t)	Contained Gold (troy ounces)	Contained Silver (troy ounces)
Marc Zone					
Measured	682,000	10.62	38.3	232,800	840,500
Indicated	32,300	9.69	32.6	10,100	33,800
Inferred	4,500	10.43	43,4	1,500	6,200
AV Zone					
Measured	519,400	7.73	20.0	129,100	334,500
Indicated	236,300	9.07	19.2	60,700	146,300
Inferred	43,300	8.13	15.4	20,400	21,400
JW Zone					
Measured	44,600	10.11	13.2	14,500	18,900
Indicated	314,200	8.54	18.0	86,300	181,600
Inferred	111,700	6.78	7.4	24,400	26,500
141 Zone					
Indicated	188,600	4.91	11.1	29,700	67,300
Inferred	15,100	4.67	4.7	2,300	2,300
Marc Footwall					
Indicated	18,100	6.15	12.1	3,600	7,000
Inferred	12,600	5.12	6.4	2,100	2,600
Marc Outlier Zone					
Indicated	4,200	3.43	16.8	500	2,300
Inferred	7,300	6.54	27.4	1,500	6,400
Marc NK Zone					
Indicated	10,700	5.58	7.6	1,900	2,600
Inferred	7,300	5.98	9.0	1,400	2,100
JW Lower Zone					
Indicated	24,300	8.15	26.6	6,400	20,800
Inferred	2,000	13.94	9.3	900	600
AV Lower Zone					
Inferred	42,500	5.55	6.6	7,600	8,300
132 Zone					
Inferred	78,700	4.73	11.5	12,000	29,100
Total Measured & Indicated	**2,074,700**	**8.75**	**24.8**	**583,700**	**1,655,700**
Total Inferred	**324,700**	**6.21**	**10.1**	**64,800**	**105,500**

Mineral resources were estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserve Best Practices" Guidelines. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The Mineral Resources may be affected by subsequent assessment of mining, environmental, processing, permitting, taxation, socio-economic and other factors.

Mineral reserves can only be estimated based on the results of an economic evaluation as part of a preliminary feasibility study or feasibility study. As such, no Mineral Reserves have been estimated by ACS. There is no certainty that all or any part of the mineral resources will be converted into a mineral reserve.

Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined, however, ACS is of the opinion that it is reasonable to expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. Mineral resources that are not mineral reserves have no demonstrated economic viability.

14.13 GRADE SENSITIVITY ANALYSIS

The mineral resources at the Red Mountain are sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, the global model quantities and grade estimates of the measured and indicated resource are presented in Figure 14.4 and the inferred resources are presented in Figure 14.5. The reader is cautioned that the grade and tonnages presented in these figures should not be misconstrued as a mineral resource statement. The figures are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade.

Figure 14.4: Grade Tonnage Curve for Measured and Indicated Mineral Resource at Red Mountain

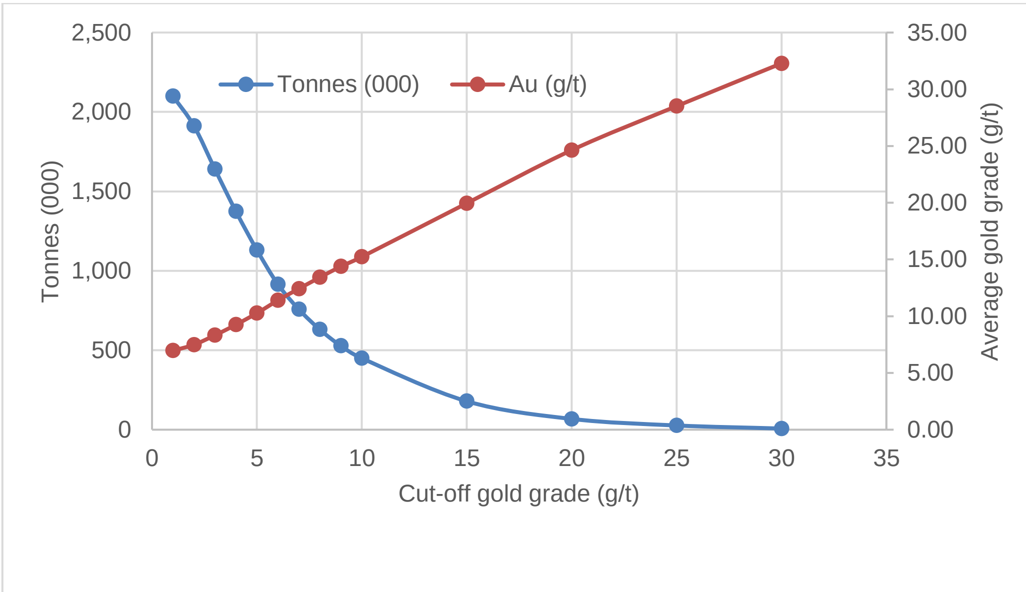
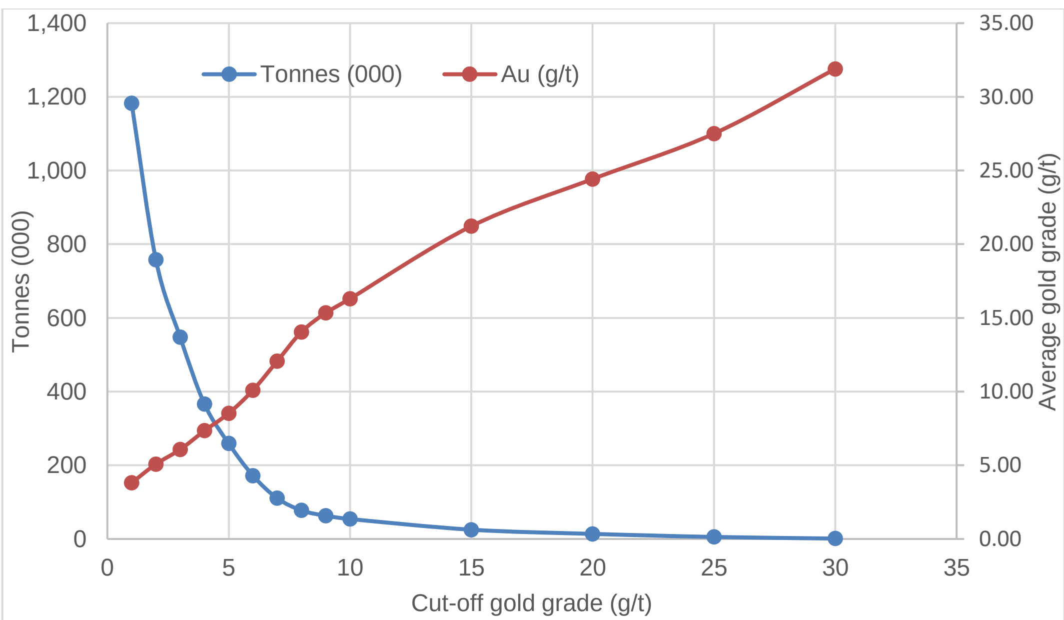


Figure 14.5: Grade Tonnage Curve for Inferred Mineral Resource at Red Mountain



14.14 PREVIOUS MINERAL RESOURCE ESTIMATES

Mineral resources have been estimated for the Red Mountain gold project in the past. IDM reported mineral resources in a technical report dated May 6, 2016. The Mineral resources were included in a Preliminary Economic Assessment (PEA) report published by IDM in July of 2016. The 2016 mineral resources are summarized in Table 14.15.

Table 14.15: Prevoius Mineral Resource Statement for Red Mountain

Class	Tonnes	gold (g/t)	Ag (g/t)	Au Oz	Ag Oz
Measured and Indicated	1,641,900	8.36	26	441,500	1,379,800
Inferred	548,100	6.1	9	107,500	153,700

The previous mineral resources are presented here only as a means of comparing the previous estimate with the current estimate present in Table 14.14 above. As can be seen, the tonnage of the mineral resource has increased in all categories as a result of the 2016 drilling and the grade of the mineral resource has remained relatively consistent.

15.0 ENVIRONMENTAL STUDIES, PERMITTING & SOCIAL OR COMMUNITY IMPACT

The following Section is taken from JDS (2014) with minor modifications. ACS takes responsibility for this section prepared by Dunham Craig P. Geo. on behalf of JDS.

15.1 ENVIRONMENTAL STUDIES

Environmental studies at the Red Mountain Gold Property were completed at various times by different operators. In general, data collection occurred between 1990 and 1992 by Hallam Knight and Piesold for Bond Gold, in 1993 and 1994 by Rescan for Lac, and in 1996 and 1997 by Royal Oak. Subsequently, many engineering and environmental studies have utilised this data. The historic environmental database was utilised for initiating an Environmental Assessment in 1996 by Royal Oak. The environmental studies included sampling and assessment of water quality, climate, hydrology, hydrogeology, wildlife and vegetation, fisheries, ARD/ML, terrain stability, socioeconomics, and culture and heritage. The available information indicates that the effects of the project on the environment can be mitigated to meet regulatory requirements.

IDM completed a gap analysis of all previously available baseline studies and identified the need for the additional studies which are summarised in Table 15.1. These additional studies have allowed for the updating of baseline information to current environmental conditions, to address refinement of the project design and meet current regulatory requirements. Studies undertaken over the past two years that will be augmented by further work in 2016 include atmosphere/climate, surface hydrology, aquatics, water and sediment, terrestrial wildlife and fish habitat. IDM is also in the process of completing comprehensive baseline studies of rock geochemistry, archaeology and heritage resources, land use, cultural, and socioeconomic baseline studies to characterise the regional human environment. Further, IDM Mining is working closely with the Nisga'a on all aspects of the assessment, design and development of the project. Mitigation measures, as necessary, are being developed in consultation with the Nisga'a through the Environmental Assessment process and direct consultation.

Table 15.1: Environmental Baseline Studies at Red Mountain

Baseline Component	Additional Information
Terrain and Physiography	New mapping completed to reflect changes as the glaciers of the Cambria Icefield have retreated. Updates completed to a natural hazards assessment in the Bitter Creek Valley proximal to the proposed mine, mill, waste storage facilities and access route.
Water Quality	Collected and updated water quality data to address gaps and project design refinements.
Climate	Meteorological station installed on site to extend historical data.
Hydrology	Extensive monitoring of local and regional stream flow to support project design, fisheries and water quality assessments.
Hydrogeology	Extensive monitoring of groundwater to support project design, fisheries and water quality assessments.
Wildlife and Vegetation	Detailed baseline studies of wildlife and vegetation for the Bitter Creek Valley to support the assessment of project effects.
Fisheries	Detailed baseline studies of fish and fish habitat for the Bitter Creek, Bear River and local creeks to support the assessment of project effects.
ARD/ML	Further testing of tailings sample to assess the effects of possible ARD/ML and mitigate the effects to be conducted in the summer/fall of 2016. This work will also support wastewater quality assessment and water quality predictions associated with various disposal options.
Terrain Stability Assessment	Detailed terrain stability assessments along road corridor and in the vicinity of project facilities have been completed.
Socioeconomics	Baseline information for the socio-community and economic characteristics of the area to support an assessment of project effects is being collected and assessed.
Culture and Heritage	An archaeological assessment was required pursuant to the *BC Heritage Act*, and was completed in 2015.
First Nations Interests	IDM has a comprehensive engagement and consultation program in place for First Nations in the project area. The primary work in this regard is with the Nisga'a and this began back in the spring of 2014 and is ongoing.

16.0 ADJACENT PROPERTIES

There are no adjacent properties relevant to the scope of this report.

17.0 OTHER RELEVANT DATA & INFORMATION

There is no other relevant data or information relative to the scope of this report.

18.0 INTERPRETATIONS & CONCLUSIONS

A high degree of drilling and quality control work has been performed on the project by previous operators. Re-logging the core to create a geological model has created confidence in the understanding of mineralized zone controls.

The Marc Zone which forms the main portion of the mineralized deposit requires no further test work.

The AV and JW Zones are drilled at nearly a 25 x 25 m grid spacing and shows good geological and grade continuity yielding a large portion of the deposit in the measured category. It does require infill drilling in the AV and JW Lower zones and in the 132 Zone. The infill drilling carried out in 2016 confirmed the geological and grade continuity of the AV and JW Zones and was successful in upgrading the inferred mineral resources in these zones to indicated classification.

The AV and JW Lower zones are currently classified as inferred due to wider spaced drill density. The existing drill holes display good geological continuity. The stockwork seems consistent in virtually every hole and matches well with the reconstruction of the other zones.

Exploration potential on the property has been greatly enhanced since 1994 by glacial recession surrounding the deposit. A considerable area that was previously under ice is now exposed for the first time and available for exploration proximal to the Red Mountain gold/silver-bearing sulphidation system.

19.0 RECOMMENDATIONS

Further work is recommended for the Red Mountain gold project. ACS recommends that a feasibility study be prepared to evaluate the potential economic nature of the Red Mountain deposit. Contingent on positive results of the feasibility study, ACS recommends that IDM carry out a 7,500 m underground definition drilling program to help convert additional inferred mineral resource to indicated and measured and to expand the mineral resources down dip on the AV and JW zones.

The total estimated cost of combined phased program is as outlined in Table 19.1.

Table 19.1: Recommended Work Program

Item	Cost
Phase 1 Program	
Feasibility Study	**$1,800,000**
Phase 2 Program	
7,500 m drill program	
Assay	$80,000
Labour	$560,000
Underground	$1,100,000
Drilling	$1,700,000
Camp and support	$900,000
Helicopter	$660,000
Total Phase 2	**$5,000,000**
Total Phase 1 and 2	**$6,800,000**

20.0 UNITS OF MEASURE, ABBREVIATIONS AND ACRONYMS

Table 20.1: Units of Measure

'	Foot
"	Inch
µm	Micron (micrometre)
AT	Assay ton
C$	Canadian dollars
CAD	Canadian dollars
cfm	Cubic feet per minute
cm	Centimetre
dpa	Days per annum
dmt	Dry metric tonne
ft	Foot
ft^3	Cubic foot
g	Gram
hr	Hour
ha	Hectare
kg	Kilogram
km	Kilometre
km^2	Square kilometre
kt	Kilotonnes
kW	Kilowatt
KWh	Kilowatt-hour
L	Litre
lb or lbs	Pound(s)
m	Metre
M	Million
m^2	Square metre
m^3	Cubic metre
min	Minute
mm	Millimetre
Mtpa	Million tonnes per annum
Mt	Million tonnes
MW	Mega watt
ºC	Degree Celsius
oz	Troy ounce
ppb	Parts per billion
ppm	Parts per million
s	Second
t	Metric tonne
t/a	Tonnes per annum
tpd	Tonnes per day
tph	Tonnes per hour
US$	US dollars
wmt	Wet metric tonne

20.1 ABBREVIATIONS AND ACRONYMS

Table 20.2: Abbreviations & Acronyms

% or pct	Percent
AA	Atomic absorption
AAS	Atomic absorption spectrometer
ABA	Acid base accounting
Ag	Silver
ARD/ML	Acid rock drainage/metal leaching
Au	Gold
ANFO	Ammonium Nitrate/Fuel Oil
ARD	Acid rock drainage
Banks	Banks Island Gold Inc.
Barrick	Barrick Gold Corporation
BC	British Columbia
BC EAA	British Columbia Environmental Assessment Act
Bond	Bond Gold Canada Inc.
CAPEX	Capital costs
CEAA	Canadian Environmental Assessment Act
CIM	Canadian Institute of Mining
CIP	Carbon-in-Pulp
CRF	Cemented rock fill
COG	Cut-off grade
Cu	Copper
D&F	Drift and Fill
EAC	Environmental Assessment Certificate
EAO	British Columbia Environmental Assessment Office
Eco-Tech	Eco-Tech Laboratories located in Stewart, BC
G&A	General & Administrative
Ha	Hectare
HDPE	High density polyethylene
ICP	Inductively coupled plasma
ID^2	Inverse distance squared
IDM	IDM Mining Ltd.
IRA	Inter-ramp angles
IRR	Internal rate of return
JDS	JDS Energy & Mining Inc.
LAC	Lac Minerals Ltd.
LH	Longhole stoping
LHD	Load haul dump machines
LOM	Life of mine
masl	Metres above sea level
MELP	BC Ministry of Environment, Lands and Parks
MIK	Multi-indicator kriging
Min-En	Mineral Environments Laboratories of North Vancouver, BC
N, S, E, W	North, South, East, West
NAD	North American Datum
NAMC	North American Metals Corp.
NFA	Nisga'a Final Agreement

NI 43-101	National Instrument 43-101
NN	Nearest neighbour
NPV	Net present value
NSR	Net Smelter Return
NTS	National Topographic System
OPEX	Operating costs
PEA	Preliminary economic assessment
PFS	Preliminary feasibility study
PH	potential of hydrogen; a measure of acidity or alkalinity of a solution
PPM	Parts per million
Project	Red Mountain Project
QA/QC	Quality assurance/quality control
QP	Qualified Person
ROM	Royal Oak Mines Inc.
Seabridge	Seabridge Gold Inc.
SG	Specific gravity
TMF	Tailings management facility
UTM	Universal Transverse Mercator
Wotan	Wotan Resources Corp.
X, Y, Z	Cartesian coordinates, also Easting, Northing and Elevation

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