

**JAYDEN RESOURCES INC.**

**SILVER COIN GOLD PROJECT**

**Stewart, British Columbia, Canada**

**FINAL**

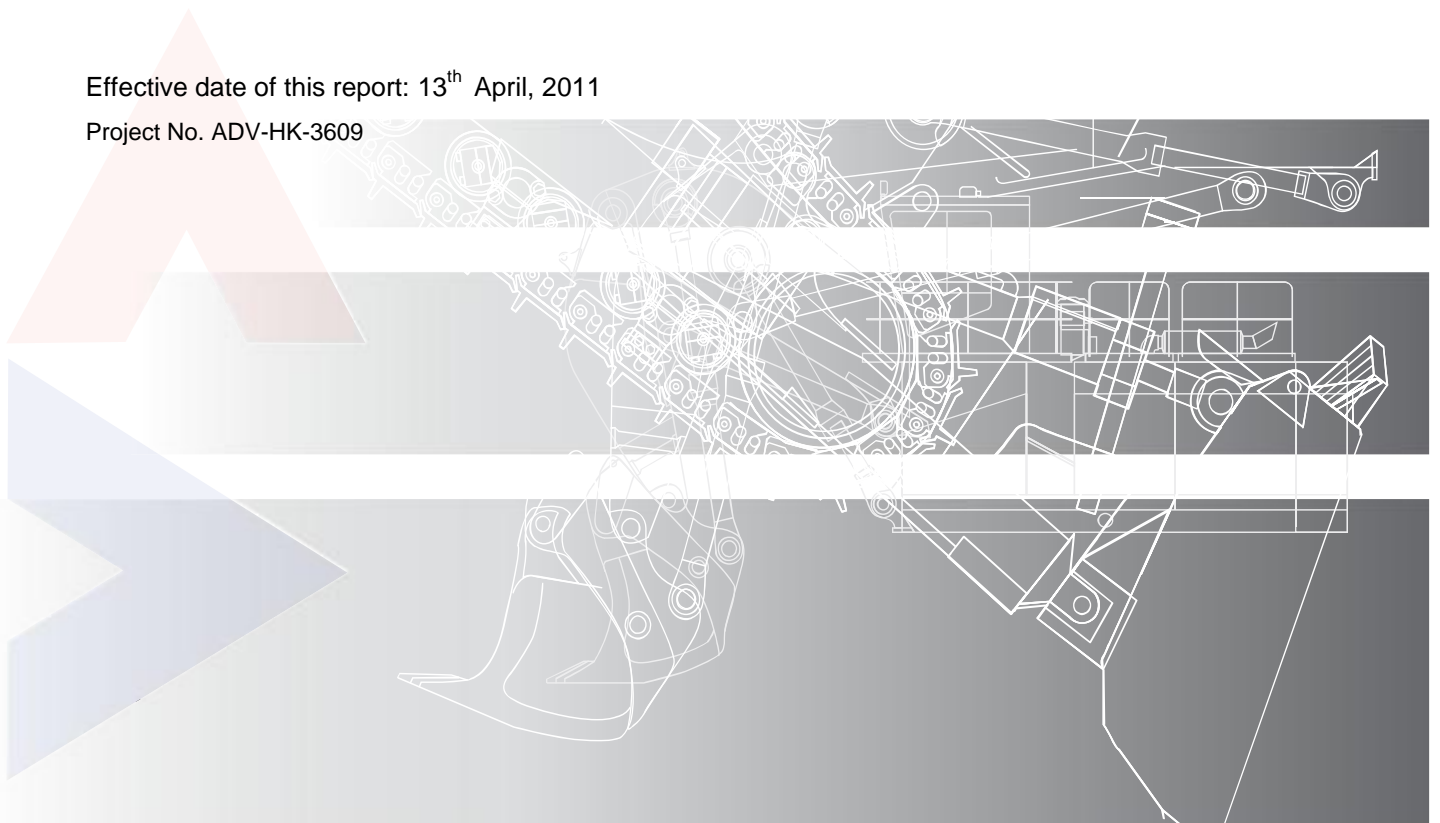
Technical Report

Qualified Person:

Mr. Jeremy Clark, Senior Consulting Geologist (MAIG)

Effective date of this report: 13<sup>th</sup> April, 2011

Project No. ADV-HK-3609



## Competent Person's Report Silver Coin Project British Columbia, Canada

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April 2011

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## EXECUTIVE SUMMARY

### Introduction

Runge Asia Limited ("RAL"), trading as Minarco-MineConsult ("MMC"), was requested by Jayden Resources Inc. ("Jayden") to complete an Independent Technical Review ("ITR") of the Silver Coin Project ("Project" or "Relevant Asset") in northern British Columbia, Canada. The ITR and Competent Person's Report ("CPR") is based on a Technical Report prepared by MMC for the Project, [insert the name of the Preliminary Assessment lodged on Sedar] which meets the requirements of Canadian National Instrument 43-101 ("NI 43-101") of the Canadian Securities Administrators. The Competent Person, as defined by the Stock Exchange of Hong Kong Limited ("HKEx"), responsible for this report is Mr. Jeremy Clark, Senior Consulting Geologist for MMC. Mr Clark completed a site visit the week of June 1, 2010, to review existing geology, core logging and the project setting.

Jayden holds its mineral properties indirectly through its subsidiary, Jayden Resources (Canada) Inc. ("Jayden Canada"). Jayden Canada holds a 70% interest in 22 of the 26 mineral claims that form the Silver Coin Property. Mountain Boy Mining Ltd. ("MBM") holds a 30% interest in those 22 claims. The other four claims, the INDI claims, are peripheral to the majority of the currently delineated mineral resource. The recorded holder is Nanika Resources Inc ("Nanika"). Pursuant to a joint venture agreement with Nanika, MBM currently holds a 55% joint venture interest in the INDI claims. Pursuant to an option agreement with MBM, Jayden acquired a 51% interest in MBM's joint venture interest. Jayden has transferred its mineral resource assets to Jayden Canada, including its rights under the agreement with MBM.

### Scope and Terms of Reference

This CPR includes a Mineral Resource estimate and a Preliminary Economic Assessment ("PEA") for the Project. The PEA includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves. The Project does not contain any Mineral Reserves.

The PEA completed by MMC included a mining, processing, site infrastructure, environmental and project development review, operating and capital cost estimations and a preliminary cash flow analysis. Due to the inclusion of Inferred Resources and PEA level estimates and assumptions, there is no certainty that any economic value will be realised from this project.

The process and conclusions of the ITR are summarised in the CPR which has been prepared for inclusion in the HKEx Prospectus.

MMC's technical team ("the Team") consisted of senior mining engineers, geologists and process engineers. Mr Clark undertook a site visit to the Project to familiarise himself with site conditions. During the site visit, the Mr Clark had open discussions with the Company personnel on technical aspects relating to the Project. MMC found the personnel to be cooperative and open in facilitating MMC's work.

MMC operates as an independent technical consultant providing resource evaluation, mining engineering and mine valuation services to the resources and financial services industries. This Report was prepared on behalf of MMC by technical specialists, details of whose qualifications and experience are set out in **Annexure A**.

MMC has been paid, and has agreed to be paid, professional fees for its preparation of this report. However, none of MMC staff or sub-consultants who contributed to this Report has any interest in:

- the Company, securities of the Company or companies associated with the Company; or
- the Relevant Asset; or
- the outcome of the listing.

Drafts of the Report were provided to the Company, for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in the report. This Report is mainly based on information provided by Jayden, either directly from the project site and other associated offices or from reports by other organisations whose work is the property of the Company. The Report is based on information made available to MMC before September, 2010.

The title of this report does not pass onto the client until all consideration has been paid in full.

In addition to work undertaken to generate estimates of Mineral Resources, this Report relies largely on information provided by the Company, either directly from the site and other offices, or from reports by other organisations whose work is the property of the Company. The data relied upon for the Mineral Resource estimate completed by MMC and

contained in this Report, have been compiled primarily by the Company and validated where possible by MMC. It specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements/contracts that the Company may have entered into.

MMC does not warrant the completeness or accuracy of information provided by Jayden or the Company which has been used in the preparation of this CPR.

In MMC's opinion, the information provided by Jayden was reasonable and nothing discovered during the preparation of the report suggested that there was any significant error or misrepresentation in respect of that information.

MMC has independently assessed the Relevant Asset by reviewing historical technical reports, drill hole databases, original sampling data, sampling methodology, engineering studies, future resource development plans, development potential, potential mining issues and metallurgical test work resulting in a Mineral Resource estimate and a Preliminary Economic Assessment. All opinions, findings and conclusions expressed in the report are those of MMC and its specialist advisors.

## Mineral Resources

**Table 1** shows the Measured, Indicated and Inferred Mineral Resource estimate for the Silver Coin Project. The Mineral Resources are reported at a variety of cutoff grades; however, MMC recommends 0.3 g/t Au as the appropriate applied cutoff. To gain further knowledge of the project and its history, MMC also reviewed other technical reports provided and prepared for Jayden and the predecessor companies at the Silver Coin Project site, as well as a variety of their consultants' reports.

**Table 1 Silver Coin Project – Mineral Resource Estimate**

Cutoff	Classification	Tonnes t	Au g/t	Ag g/t	Zn %	Au Ounces	Ag Ounces	Zn Pounds
0.1	Measured	5,804,370	1.22	5.48	0.21	227,116	1,023,007	26,637,183
0.1	Indicated	31,527,925	0.69	4.56	0.11	695,952	4,624,277	79,375,584
0.1	Inferred	74,844,055	0.44	4.66	0.12	1,062,696	11,203,276	195,063,987
0.3	Measured	4,372,225	1.55	6.53	0.26	218,410	918,417	25,531,741
0.3	Indicated	19,759,025	0.98	5.57	0.15	624,006	3,537,769	65,642,277
0.3	Inferred	32,443,840	0.78	6.41	0.18	813,273	6,691,185	128,006,920
0.5	Measured	3,468,465	1.86	7.43	0.31	206,988	828,504	23,949,503
0.5	Indicated	12,968,670	1.29	6.42	0.18	538,359	2,678,401	52,466,291
0.5	Inferred	17,246,515	1.13	6.9	0.21	625,832	3,824,648	80,820,137
1	Measured	1,982,695	2.71	9.4	0.39	172,517	599,400	16,880,403
1	Indicated	5,514,795	2.08	8.39	0.25	369,545	1,486,878	29,809,170
1	Inferred	6,362,785	1.89	8.57	0.25	386,552	1,753,338	35,349,030
2	Measured	914,485	4.23	13.03	0.53	124,233	383,068	10,772,068
2	Indicated	1,741,740	3.64	11.99	0.32	203,654	671,303	12,252,597
2	Inferred	2,020,590	2.97	11.01	0.32	192,639	715,290	14,238,898

## Pit Quantities

**Table 2** shows the pit quantities within the final pit design based on an equivalent gold cut-off grade of 0.5 g/t derived using an Au price of USD 1,000/oz, Ag of USD 15/oz and Zn of USD 0.9/lb. The final pit design was based on a Whittle pit shell at a revenue factor of 85% (USD 850/oz Au). Features of the final pit design are:

- Single large pit with dimensions of 920 m by 440 m,
- Maximum wall height of 235 m, from pit base at 740 mRL to 975 mRL,
- Minimum wall height 35 m, from 740 mRL to 775 mRL,
- Immediate pit access to the north,
- Overall pit slopes have been designed at 45°; which MMC estimates is appropriate to sustain slope stability requirements.

**Table 2 Silver Coin Project - Pit Quantities within the Final Design**

	Mineralised Material kt	Gold* g/t	Silver* g/t	Zinc* %	Gold* (oz)	Silver* (oz)	Zinc* (t)
Measured	3,703	1.74	7.30	0.31	206,899	868,501	11,356
Indicated	14,723	1.15	6.34	0.18	546,081	2,998,787	26,222
Inferred	10,434	1.00	8.10	0.25	334,823	2,718,506	26,015

\*In-situ grade and quantity, this means that no loss and dilution or recoveries have been applied

The pit quantities include 47,670 kt of waste at a strip ratio of 1.65:1 (waste tonnes to ore tonnes).

### Economic Analysis and Sensitivity

The pre-tax NPV for the project is estimated to be USD 33.6 M at a gold price of USD 1015/oz and a discount rate of 10%.

An economic model sensitivity analysis was completed by MMC on applied metal prices (gold, silver and zinc) as well as capital cost estimates and operating cost estimates. The results indicate that the Project is most sensitive to variations in metal price, operating costs and capital costs in that order, as shown in **Table 1-3**.

**Table 3 Silver Coin Project – Project Sensitivity Price Sensitivity (pre-tax NPV - 10% Discount Factor)**

Applied Variable	Variation Compared to Base Case Estimates		
	-10% (k USD)	0% (k USD)	+10% (k USD)
<b>Metal Prices</b>	305	33,578	66,851
<b>Operating Costs</b>	51,984	33,578	15,171
<b>Capital Costs</b>	45,302	33,578	21,853

### Project Summary

The Silver Coin Project is located in northern British Columbia, Canada, approximately 25 km north-east of the regional town of Stewart and 1,400 km north of Vancouver. Access is primarily by a good gravel road from Stewart, which has an airport and port facility. Stewart has a population of approximately 100 people in the winter months. The area is sparsely populated with farming, logging and mineral exploration as the main industries.

The Silver Coin deposit was first discovered in the early 1900's and exploration work commenced in 1911 with the completion of a series of small exploration cross cuts. A number of companies have subsequently explored the district, with modern exploration drilling first occurring in 1981. During the 1980's Esso Minerals Canada completed numerous soil sampling programs over the area, followed by surface diamond and trenching programs. In the late 1980's Tenajon acquired the property and complete 157 surface drill holes which resulted in the definition of a significant mineralisation.

Modern underground production commenced in 1991 and continued until 1993 with a total of approximately 120 kt at 8 g/t Au mined from two portals, located on the western side of the mineralisation. All activities ceased upon closure of the mine. In 2004, the property was acquired by MBM who entered into an agreement with Pinnacle (Jayden's previous company name). MBM and Pinnacle proceeded to drill 324 surface holes (total of 50,306 m) from 2004 to 2008. Exploration has focused along the defined gold-bearing structures which have a strike of 2 km, a known depth of 400 m and can be traced on surface for over 700 m.

The geology of the property is dominated by Triassic-Jurassic basin filling sediments and volcanic rocks of the Stuhini Group, Hazelton Group and Bowser Lake Group. These rocks have been metamorphosed to greenschist facies and have been intruded by plutons of both Mesozoic and Cenozoic age. North-south faulting controls the distribution of the rocks and certain faults are critical in defining the location of gold mineralisation. In the area of the deposit, alteration is intense and has complicated both surface and underground interpretation of the geology.

Mineralisation on the property occurs above a major north-south west-dipping listric fault and defines a crudely cylindrically shaped body of mineralisation of highly altered and stockwork quartz-sulphide veined, Jurassic aged, andesitic Hazelton Group volcanic rocks. Gold is spatially and temporally associated with early Jurassic quartz-rich alkaline to calc-alkaline intrusions and volcanic centers. Two general styles of mineralisation occur within the deposit, high sulfide (>20% sulfide) base metal-rich silver-gold and low sulfide (<5% sulfide) silver-gold mineralisation.

MMC reviewed documentation for the sampling procedures, preparation, analysis, and security during their site visit in June 2010. From the review of the literature and documentation on the project, MMC finds acceptable results from analytical work completed by previous operators who collected their samples according to standards and accepted practices at the time of the campaigns. Some significant issues were noted by MMC during the data verification and these were subsequently rectified prior to resource estimation.

Data has been reviewed by MMC by visiting a number of sampled locations in the field and evaluating the reported results against the mineralised rock observed in the field. MMC accepts the work carried out by Tetra Tech Inc ("Tetra Tech") for Pinnacle, as meeting acceptable resource evaluation and due diligence standards for international mining ventures under both JORC and NI 43-101 Technical Standards.

As discussed in later sections, and to the extent known, MMC believes that the sampling and analysis programs for the exploration activities were generally conducted using standard industry practices, providing generally reasonable results. MMC believes that the resulting data can effectively be used for a Mineral Resource estimate.

The Silver Coin Project has accumulated an extensive amount of data through exploration, which provide the background for the Mineral Resource estimate and analysis that underpin this CPR. The recommendations for further development of the project are primarily concerned with confirming the existing data and the acquisition of additional data to expand resources and to support pre-feasibility or feasibility studies.

During the preparation of the Report MMC has relied on the report "Silver Coin Gold Project, NI 43-101 Preliminary Economic Assessment Report, Stewart, British Columbia, Canada, March 2010", prepared for Pinnacle Mines Limited, by Tetra Tech, Golden Colorado the Project background information provided in Sections 3, 4, 5, 6, 7 and 8. All other Sections of this report were prepared using information provided by Jayden and verified by MMC were applicable or based on observations made by MMC during the site visit.

The Silver Coin ore body is a vein hosted gold-silver deposit containing moderate quantities of gold (1-2 g/t Au), silver (5-10 g/t) and base metal sulphides (~0.2% Zn and ~0.1% Pb). There are two styles of mineralisation; high sulphur and low sulphur ores, which are both free-milling and moderately fine grained and dominated by silica. Pyrite is the most abundant sulphide, followed by sphalerite and galena. The ores are amenable to conventional processing methods, namely flotation and cyanide leaching, with reasonably high overall metal recoveries. The proposed process flowsheet is the milling-flotation-concentrate leaching route (refer to **Figure 16-1**), where a gold-silver rich concentrate is produced and leached with cyanide to produce gold-silver doré. Conventional equipment and processes would be employed in the size reduction, flotation and leaching circuits.

The flotation flowsheet employs a relatively coarse grind size (P80=149microns) to produce a final flotation concentrate at reasonable grades and high recoveries (90-98% gold recovery). After regrinding, cyanide leaching of this concentrate yielded gold and silver recoveries of 90-96% and 52-89% respectively, while direct leaching of the ore recovered 75-89% of the gold and 62-71% of the silver.

The illustrations supporting the various sections of the report are located within the relevant sections immediately following the references to the illustrations. For ease of reference an index of tables and illustrations is provided at the beginning of the CPR.

The opinions and conclusions presented in this report are based largely on the data provided to MMC during the site visit, during meetings with the client, and in reports supplied by Jayden. It is believed by MMC that the information and estimates contained herein are reliable under the conditions, and subject to the qualifications, set forth.

## Recommendations

The recommendations provided are based on observations in the metallurgical review, Mineral Resource estimate and Preliminary Economic Assessment detailed in **Sections 15, 16 and 17**.

- Additional exploration and in-fill drilling, including:
  - In-fill drilling to increase the Mineral Resource confidence categorisation of areas currently defined as Inferred to Indicated.
  - Additional exploration drilling is recommended in areas to the north and south of the current resource.
  - The recommended drilling is estimated to cost approximately USD 2.5 M
- Sampling all un-sampled core from the 2004-2008 drilling programme to determine mineralised areas.
- Additional metallurgical test work including:
  - Further comminution testing to establish the required comminution parameters. This should be completed on a representative range of composite samples.
  - More quantitative mineralogy is required to better define the mineralogical associations for the various ore types and preparation of testing composites. More testing and analysis, such as modelling, is necessary to better characterise the comminution properties of the various ore types, while more definitive testing is required to optimise both the flotation response and concentrate leaching characteristics. Other process options should be examined such as pre-concentration and the production of a Zn concentrate.
  - Locked cycle testing with the Master Composite sample tested two process conditions: high pH and natural pH. After three stages of roughing, the rougher concentrate was reground (P80 circa 45-55 microns) and floated in four stages of cleaning to produce a relatively high grade concentrate (~110 g/t) with high gold recoveries (90-94%) and low mass recoveries (1.8-3.0%). More testing is required to confirm this finding based on the variable results found in the previous cleaner testing programme.
  - Additional test work is recommended to determine the potential recovery of Zn. Estimations show that the zinc may contribute up to 15 to 20% of the project revenue. This would, however, be need to be tested since the sulphide mineralisation appears to be fine and intimately associated with pyrite and other sulphides.
  - The recommended metallurgical test work is estimated to cost approximately USD 0.3 M

- Completion of further project studies, such as prefeasibility and feasibility studies. These studies will result in a more detailed mine plan with more accurate operating and capital cost estimates, operating parameters and infrastructure requirements and design. MMC estimates these studies will cost approximately USD 500 k and USD 1,000 k respectively. Jayden advise MMC that they plan to complete pre-feasibility level trade off studies prior to completing a feasibility study. This approach may reduce the cost of the pre-feasibility study by approximately USD 100 k to USD 200 k. MMC recommends the following are included in the pre-feasibility and feasibility level studies:
  - Assessment of waste rock to determine any potential acid forming potential. If the presence of potential acid forming (“PAF”) material is confirmed, then the quantity of PAF and non acid forming material (“NAF”) will need to be estimated to assist the management of the PAF material. Any subsequent mine planning would need to take the management of PAF material storage into consideration. This could potentially impact mine development strategies and mine scheduling.
  - The positioning and requirements of the proposed mine infrastructure requires more detailed studies to determine the suitability.
  - Continue baseline environmental investigations as programmed and modify or extend the studies if necessary in order to address any issues arising in a timely manner.



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## **1. INTRODUCTION AND TERMS OF REFERENCE**

### **1.1 BACKGROUND**

Runge Asia Limited ("RAL"), trading as Minarco-MineConsult ("MMC"), was requested by Jayden Resources Inc. ("Jayden") to complete an Independent Technical Review ("ITR") of the Silver Coin Project ("Project" or "Relevant Asset") in northern British Columbia, Canada. The ITR and Competent Person's Report ("CPR") is based on a Technical Report prepared by MMC for the Project, [insert the name of the Preliminary Assessment lodged on Sedar] which meets the requirements of Canadian National Instrument 43-101 ("NI 43-101") of the Canadian Securities Administrators. The Competent Person, as defined by the Stock Exchange of Hong Kong Limited ("HKEx"), responsible for this report is Mr. Jeremy Clark, Senior Consulting Geologist for MMC. Mr. Clark completed a site visit the week of June 1, 2010, to review existing geology, core logging and the project setting.

Jayden holds its mineral properties indirectly through its subsidiary, Jayden Resources (Canada) Inc. ("Jayden Canada"). Jayden Canada holds a 70% interest in 22 of the 26 mineral claims that form the Silver Coin Property. Mountain Boy Mining Ltd. ("MBM") holds a 30% interest in those 22 claims. The other four claims, the INDI claims, are peripheral to the majority of the currently delineated mineral resource. The recorded holder is Nanika Resources Inc ("Nanika"). Pursuant to a joint venture agreement with Nanika, MBM currently holds a 55% joint venture interest in the INDI claims. Pursuant to an option agreement with MBM, Jayden acquired a 51% interest in MBM's joint venture interest. Jayden has transferred its mineral resource assets to Jayden Canada, including its rights under the agreement with MBM.

### **1.2 TERMS OF REFERENCE**

The following terms of reference are used in the Technical Report:

- Jayden refers to Jayden Resources Inc. (formerly called Pinnacle Mines Ltd. ("Pinnacle")),
- MMC refers to Minarco-MineConsult and its representatives.
- Project refers to the Silver Coin deposit located in northern British Columbia, Canada.
- Gold and silver grades are described in terms of grams per dry metric tonne (g/t), zinc grades as percent (%) with tonnage stated in dry metric tonnes.
- Resource and Reserve definitions are as set forth in the "Canadian Institute of Mining, Metallurgy and Petroleum, CIM Standards on Mineral Resource and Mineral Reserves – Definitions and Guidelines" adopted by CIM Counsel on December 11, 2005.

### **1.3 SOURCE OF INFORMATION**

The primary source documents for this report are:

- "Silver Coin Gold Project" NI 43-101 Technical Report, Stewart, British Columbia, September 2010, prepared by MMC.
- "Silver Coin Gold Project, NI 43-101 Preliminary Economic Assessment Report", Stewart, British Columbia, Canada, March 2010, prepared by Tetra Tech, Golden Colorado.
- "Proposal for Baseline Fisheries, Climate, Hydrology and Water Quality Monitoring on the Silver Coin Site", April 2010, AMEC Earth and Environment.
- "Considerations in the Use of Cyanide for Gold Extraction; Exploration Activity Reclamation Liabilities, Silver Coin Project, Stewart, B.C.", 4 December 2009. Prepared by Cambria Gordon
- "Metso Test Report", October 21, 2009.
- "Metallurgical Study on the Silver Coin Project", January 8, 2009. Prepared by F. Wright Consulting Inc.
- "Updated Technical Report and Preliminary Economic Assessment on the Silver Coin Property", Stewart, British Columbia, April 2007. Prepared by Minefill Services Inc.

### **1.4 PARTICIPANTS**

The Silver Coin Project was visited by Mr. Jeremy Clark, Senior Consultant Geologist of MMC, from 4<sup>th</sup> to 7<sup>th</sup> June, 2010. Mr. Clark prepared or supervised the preparation of this Report and is a Qualified Person under National Instrument 43-101 and a Competent Person as defined by Chapter 18 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited. Mr. Clark supervised the work of MMC staff and edited all portions of the final report.

Other project participants included:

- Philippe Baudry, Senior Consultant Geologist, MMC (Beijing),
- Daniel Peel, Senior Mining Consultant, MMC (Beijing),
- Igor Bojanic, Consulting Mining Engineer, MMC (Sydney),
- Andrew Newell, Principal Processing Consultant, Pincock Allan and Holt (Brisbane),
- Peter Smith, Executive Consultant - Environment, MMC (Sydney), and
- Michael Yelf, Mining Engineer, MMC (Sydney).

Details of the participants' relevant experience is outlined in **Annexure A**.

## 1.5 COMPETENT PERSON AND RESPONSIBILITY

Mr. Jeremy Clark also meets the requirements of a Competent Person, as defined by Chapter 18 of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited. These requirements include:

- Greater than five years experience relevant to the type of deposit.
- Member of the Australian Institute of Geoscientist ("AIG").
- Holds a Bachelor Degree of Science (Geology).
- Does not have economic or beneficial interest (present or contingent) in any of the reported assets.
- Has not received a fee dependent on the findings outlined in the Competent Person's Report.
- Is not an officer, employee of proposed officer for the issuer or any group, holding or associated company of the issuer.
- Assumes overall responsibility for this Competent Person's Report.

## 1.6 LIMITATIONS AND EXCLUSIONS

This Technical Report has been produced by MMC using information made available to MMC as at the date of this Technical Report and the findings, information and conclusions therein only apply as at this date. MMC has not been engaged to update its Technical Report in relation to any information that may have been provided or changed subsequent to the date of this Technical Report. MMC only accepts responsibility for the content of this Technical Report in relation to those parts prepared by MMC.

MMC has relied upon other reports, opinions or statements of other qualified persons and other experts, for information concerning relevant issues and factors relevant to this Technical Report. The extent of MMC's reliance and the relevant portions/sections of the Technical Report the subject of this reliance are detailed in **Section 3** below.

The work undertaken for this Technical Report is that required for the preparation of a technical report including reviews of technical information, coupled with such inspections as deemed appropriate by MMC. Inspections were conducted by Mr. Clark on the 1<sup>st</sup> to 4<sup>th</sup> of June 2010.

MMC has also specifically excluded any analysis or opinion of the competitive position of the Project compared with other similar and competing gold producers around the world.

## Responsibility and Context of this Report

The estimation and reporting of Mineral Resources in this Technical Report complies with the requirements of the Canadian NI 43-101 of the Canadian Securities Administrators. Therefore it is suitable for public reporting.

The information in this Technical Report that relates to Mineral Resources is based on information compiled by Mr. Jeremy Clark who is a full time employee of Runge Asia Limited, of which MMC is a trading division, and he is a Member of the Australasian Institute of geoscientists ("AIG"). Mr. Clark has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration, as well as the work he has undertaken, to qualify as a Qualified Person as defined by NI 43-101

## Intellectual Property

All copyright and other intellectual property rights in this report are owned by and are the property of MMC.

## Mining Factors

The ability of the operator, or any other related business unit, to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond the control of MMC and cannot be fully anticipated by MMC.

These factors included site-specific mining and geological conditions, the capabilities of management and employees, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, etc. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining operation.

## 1.7 CAPABILITY AND INDEPENDENCE

MMC provides advisory services to the mining and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering and mine valuation services to the resources and financial services industries.

All opinions, findings and conclusions expressed in this Technical Report are those of MMC and its specialist advisors as outlined in **Section 1.3**.

Drafts of this report were provided to MBM, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this Technical Report.

MMC has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report.

This Technical Report was prepared on behalf of MMC by the signatory to this Technical Report and experiences are set out in **Annexure A** to this Technical Report. The specialists who contributed to the findings within this Report have each consented to the matters based on their information in the form and context in which it appears.

## **2 RELIANCE ON OTHER EXPERTS**

During the preparation of the Report MMC has relied on the report "Silver Coin Gold Project, NI 43-101 Preliminary Economic Assessment Report, Stewart, British Columbia, Canada, March 2010", prepared for Pinnacle Mines Limited, by Tetra Tech, Golden Colorado the Project background information provided in Sections 4, 5, 6, 7 and 8. All other Sections of this report, with the exception of Section 3, were prepared using information provided by Jayden and verified by MMC were applicable or based on observations made by MMC during the site visit.

MMC has not conducted land status evaluations, and has relied upon a letter dated February 16, 2011 provided by Jayden by the legal firm McMillan LLP regarding property status, legal title, and environmental compliance for the Project. MMC has relied on this letter for Section 3 of this report.



### 3 PROPERTY DESCRIPTION AND LOCATION

The Silver Coin Project is located in northern British Columbia in Canada. The UTM coordinates are:

- Easting: 436,000 m, and
- Northing: 6,218,000 m (Zone 9, NAD83).

The general location of the project is shown in **Figure 3-1**.

The Silver Coin Project is located approximately 25 km by road north east of the regional town of Stewart, British Columbia, which is approximately 1,400 km north of Vancouver. Access is primarily by good gravel road from Stewart which generally requires snow removal between the months of November and May. Stewart is a small town with primary industries being farming, some logging and saw mill operations, and mining. The area is sparsely populated.

#### 3.1 PROPERTY OWNERSHIP

MMC has not reviewed any claims record or any agreement regarding mineral claims of the Silver Coin Project and the information here presented is based solely on reports provided by Jayden and is provided for reference only, and should not be relied upon.

Details of the current property holdings are provided in **Table 3-1** and exhibited in **Figure 3-2**. The property consists of 26 contiguous claims, including one Crown Grant Claim which totals 2,244.5 Ha. However, due to overlapping boundaries these claims cover a net area of 1,247 Ha.

The majority of the Mineral Resource at Silver Coin lies almost entirely on two claims; the Kansas claim and the Big Missouri claim. Based on the various agreements governing the asset, Jayden Canada indirectly owns 70% of Kansas and Big Missouri claims with the remaining 30% owned by MBM. Jayden has an option to acquire an additional 10% interest in the Kansas and Big Missouri claims from MBM by increasing its contribution towards exploration and development expenses on the Silver Coin Property by C\$ 4,000,000 on or before 31 July 2014.

The four INDI claims are peripheral to the majority of the currently delineated mineral resource. The recorded holder is Nanika. Pursuant to a joint venture agreement with Nanika, MBM currently holds a 55% joint venture interest in the INDI claims. Pursuant to an option agreement with MBM, Jayden acquired a 51% interest in MBM's joint venture interest. Jayden has transferred its mineral resource assets to Jayden Canada, including its rights under the agreement with MBM.

Table 3-1. Silver Coin Project - Mining Licence Details.

Claim Name	Type	Tenure Number	Units	Area (ha)	Owner	Expiry Data
Kansas	Crown granted	199656	1	19.55	JAYDEN CANADA 70%, MBM 30%	NA
Storm Fraction	Reverted Crown Granted	404871	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Dan Fraction	Reverted Crown Granted	404872	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Storm	Reverted Crown Granted	404867	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Silver Coin	Reverted Crown Granted	404866	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Idaho	Reverted Crown Granted	404865	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Fair	Reverted Crown Granted	404864	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Silver Coin Fraction	Reverted Crown Granted	404868	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Idaho Fraction	Reverted Crown Granted	404869	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Petite Fraction	Reverted Crown Granted	404870	1	25	JAYDEN CANADA 70%, MBM 30%	21/07/2017
Silver Coin2	2-post units	405601	1	25	JAYDEN CANADA 70%, MBM 30%	03/10/2017
Silver Coin3	2-post units	405602	1	25	JAYDEN CANADA 70%, MBM 30%	03/10/2017
Silver Coin4	2-post units	405603	1	25	JAYDEN CANADA 70%, MBM 30%	04/10/2017
Silver Coin5	2-post units	405604	1	25	JAYDEN CANADA 70%, MBM 30%	04/10/2017
Silver Coin6	2-post units	405902	1	25	JAYDEN CANADA 70%, MBM 30%	08/10/2017
Silver Coin7	2-post units	405903	1	25	JAYDEN CANADA 70%, MBM 30%	08/10/2017
Silver Coin8	2-post units	405904	1	25	JAYDEN CANADA 70%, MBM 30%	09/10/2017
Big Missouri	2-post units	405872	1	25	JAYDEN CANADA 70%, MBM 30%	11/10/2017
Winer	2-post units	405873	1	25	JAYDEN CANADA 70%, MBM 30%	10/10/2017
Packers	2-post units	405874	1	25	JAYDEN CANADA 70%, MBM 30%	10/10/2017
Silver Coin 9	4 post claim	406223	20	500	JAYDEN CANADA 70%, MBM 30%	28/10/2017
Silver Coin 10	4 post claim	412700	20	500	JAYDEN CANADA 70%, MBM 30%	29/07/2017
INDI 9	4 post claim	406212	9	225	JAYDEN CANADA.28.05%, MBM.26.95%, Nanika.45%	27/10/2017
INDI 10	4 post claim	406213	9	225	JAYDEN CANADA.28.05%, MBM.26.95%, Nanika.45%	27/10/2017
INDI 11	4 post claim	406214	9	150	JAYDEN CANADA.28.05%, MBM.26.95%, Nanika.45%	27/10/2017
INDI 12	4 post claim	406215	9	150	JAYDEN CANADA.28.05%, MBM.26.95%, Nanika.45%	27/10/2017

Source: Jayden

## Review of Ownership Documents

MMC was provided with the following information which supports Jayden's indirect ownership of the mineral claims for the Silver Coin Project. To the best of our knowledge, the applicable agreements are in good standing, and the representations and warranties given by the parties in each of them remain in effect and are still valid. Jayden has represented to MMC that the Silver Coin Project is not subject to any other royalties, back-in rights, payments, agreements, or encumbrances, aside from those described herein:

- Joint Venture Agreement between MBM and Pinnacle dated December 31, 2005, effective as of June 1 2006. ("MBM-Pinnacle JV").
- Joint Venture Agreement between MBM and New Cantech Ventures, Inc. ("Cantech") dated January 1, 2005. ("MBM-Cantech JV"). New Cantech Ventures, Inc is now Nanika Resources Inc. (NR)
- Option and Joint Venture Agreement between Tenajon Resources Corporation ("Tenajon") and Pinnacle Mines Ltd ("Pinnacle") dated May 12, 2005. ("Tenajon-Pinnacle JV").
- Letter Agreement between Tenajon and Pinnacle dated April 15, 2008 ("Tenajon-Pinnacle LA"); and, the Share Purchase Agreement between Tenajon and Pinnacle dated April 15, 2008 ("Tenajon-Pinnacle SPA").
- Arrangement Agreement between Tenajon and Pinnacle dated September 4, 2008. ("Tenajon-Pinnacle AA").
- Purchase Agreement between Pinnacle and MBM dated July 6, 2009 ("Pinnacle-MBM PA").
- Purchase Agreement between Jayden Resource Inc. and Jayden Resources (Canada) Inc. dated 11 August, 2010 ("Jayden – Jayden (Canada) PA")
- The official claim map from the BC government website for information on the Silver Coin Claims.

## Summary of Relevant Claim Transactions

- Jayden indirectly owns a 70% interest in the Silver Coin Claims, all nine of the Reverted Crown granted claims, all ten of the 2-posted claims, and 40 of the claims in the Silver Coin 9 and Silver Coin 10 modified grid claims. The other 30% interest in these claims are owned by MBM, all in accordance with the MBM-Pinnacle JV.
- Jayden indirectly owns a beneficial interest in 28.05% of the INDI 9 to INDI 12 claims also known as the "Dauntless project". MBM owns a beneficial interest of 26.95% and Nanika (formerly New Cantech Ventures) owns a 45% interest, all in accordance with the MBM-Cantech JV and the MBM-Pinnacle JV. Based on the terms of these two agreements, MBM earned a 55% interest in these claims from Cantech and Cantech kept 45%. Jayden now owns 51% of the 55% that MBM owns, or 28.05%.
- Pinnacle and Tenajon, signed the Tenajon-Pinnacle JV by which Pinnacle could earn up to 60% of the Kansas Claim. Pinnacle fulfilled those conditions and earned such percentage. In June 2006, this claim became part of the MBM-Pinnacle JV, so MBM earned 49% of the 60% owned by Pinnacle, or 29.4%. Later, in 2008, Pinnacle bought out Tenajon's interest in the Tenajon-Pinnacle JV purchasing the balance of 40% with Pinnacle shares (the Tenajon-Pinnacle LA; the Tenajon-Pinnacle SPA and the Tenajon-Pinnacle AA). The result of these transactions was that Pinnacle owned 70.6% of the Kansas claim and MBM owned 29.4%.
- Pinnacle and MBM, signed the Pinnacle-MBM PA by which Pinnacle paid cash for an additional 19% of all the claims (except the INDI and Kansas claims) and transferred 0.6% of the Kansas claim to MBM which resulted in Pinnacle owning 70% and MBM owning 30% of all the Silver Coin Claims (except the INDI claims, which still remains 28.05%; 26.95% and 45% Pinnacle-MBM-Nanika respectively).



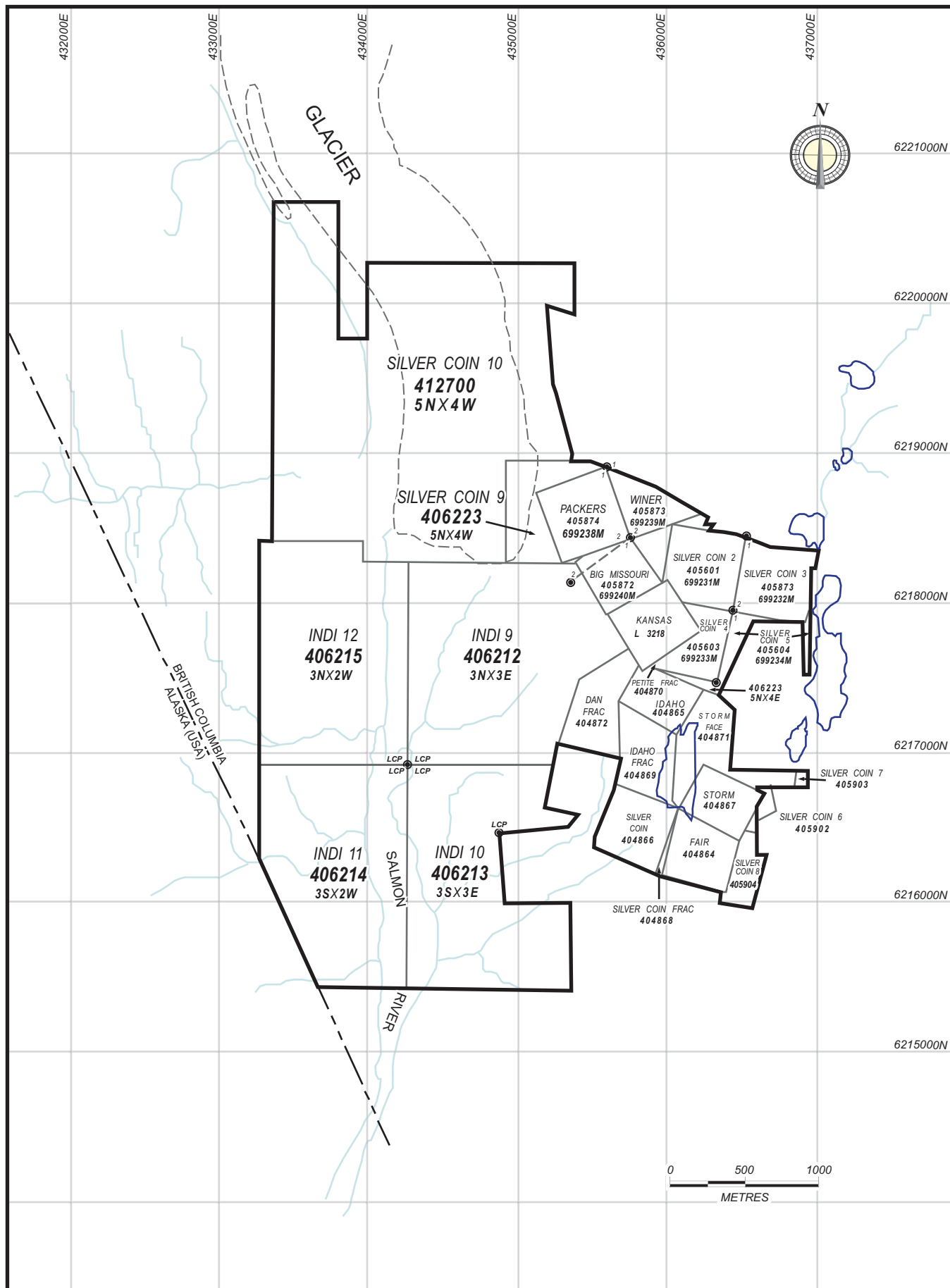
**LEGEND**

- ⊙ National Capital
- Provincial or Territorial Capital
- Other Populated Places
- International Boundary
- - - Provincial or Territorial Boundary
- - - Exclusive 200 Nautical Mile Economic Zone (EEZ)



Project No : ADV-HK-03609

FIGURE 3-1  
 Jayden Resources Inc.  
 Silver Coin Project  
 General Location Plan



### 3.2 ENVIRONMENTAL LIABILITY AND PERMITTING

MMC's consideration of the environmental and permitting aspects of the Silver Coin Project is based on discussions with representatives of Jayden, reports provided by Jayden and observations made during the site visit.

The Silver Coin asset is an advanced stage exploration project which has been disturbed by exploration drilling, trenching and sampling and as a result numerous drill access roads remain that cross the property. Historical underground mining has also been completed on the property, which dates back to the early 1900's.

The Project is located in a scenic area near mountain streams, lakes, and the headwaters of the Salmon River and the Salmon Glacier. It is also located near the international border with the United States. There is precedent for successfully operated modern mines in the area, as Silbak Premier operated an open pit gold mine and mill complex within 5 km of the Project site, with few significant environmental issues.

In 2009, Jayden retained Cambria Gordon Ltd. ("Cambria Gordon") to conduct a preliminary environmental baseline study of the property. The study is quoted below:

- *'To determine the presence/absence of fish in No-Name Lake, two gillnets (floating and sinking) were set overnight for 24 hours and 15 minnow traps were set for a total effort of 340 hours. No fish were caught using both sampling methods. A bathymetric survey was completed (along an E-line transect across the length of No-Name Lake) to determine water depths, which ranged from 12.1 m to 31.1 m. Limnological data collected from No-Name Lake provided dissolved oxygen levels that were on the lower end of the threshold in terms of supporting fish in the water column. The lake appears to be of low productivity, as aquatic invertebrates were not observed along the shorelines or captured in traps and water samples were colourless (an indicator of low productivity).'*
- *'No-Name Lake is a candidate for Non-Fish Bearing Status (NFBS) classification (granted by the BC Ministry of Environment) based on: 1) the sampling effort conducted with no fish captured, 2) barriers present (between No-Name Lake and known fish habitat >5 km downstream) which prevent the upstream migration of fish, 3) the assessed low productivity of the lake and 4) the biophysical setting of the lake - high elevation (820 m) and downstream waters that are steep with numerous cascades and falls (Cascade River).'*
- *'A total of 12 sampling locations were identified as part of the preliminary baseline water quality monitoring program. All 12 sites were located east of the Granduc Road. At each station, water temperature, dissolved oxygen, pH, and conductivity were recorded. Water temperatures ranged from 4.3 to 10.7 °C, dissolved oxygen ranged from 7.1 to 10.0 mg/L, pH ranged from 7.7 to 9.2 and conductivity ranged from 12.0 to 298.3 µs/cm'.*
- *'At the time of the field survey, two surface watercourse locations (Site A, Site C) contained adequate depth/flow to conduct water velocity measurements such as depth, width, velocity and total flow (m<sup>3</sup>/s). Site A was located just downstream from No-Name Lake and had a total flow of 0.08 m<sup>3</sup>/s. Site C was located further downstream and had a total flow of 0.18 m<sup>3</sup>/s. Increased flows at Site C can be explained by additional inflow from a few small tributaries'.*
- *'The desktop review of rare and/or endangered species and key habitats was performed using a list of protected rare and/or endangered species and ecological communities that are potentially present in the Project area. Four mammal species, 2 bird species, 11 plant species, and 4 ecological communities were identified as having distributions that overlap with the Project area. A field program was carried out on September 23rd – 25th, 2009 to collect preliminary baseline information in relation to vegetation, wildlife, and ecological communities. The Project area was broken down into three study areas and aerial photo interpretation was used to identify distinct vegetation and wildlife habitat types. Radius plot and strip transect surveys were utilized to collect information on vegetation and wildlife habitat types and to assess the occurrence of vegetation, wildlife and/or wildlife habitat features. None of the listed plant species and ecological communities were observed in the representative plots sampled. The study identified potential habitat for mammals (carnivores, rodents, ungulates) and birds (passerine, raptors, waterfowl). Mapped mountain goat wintering range habitat is present within the project property boundaries on the west side of Granduc Road. No unique and/or critical habitats associated with rare and/or endangered wildlife species were identified in the representative plots sampled.'*

The Cambria Gordon summary of cyanide issues and reclamation liabilities is included in its report. Cambria Gordon estimates that the current cost to reclaim the site is approximately USD 66,000. In May 2009, the Ministry's Smithers office confirmed that the annual reporting on the property is current and the USD 35,000 reclamation security bond is intact. However, the Chief Inspector of Mines from Smithers, notes that the property is due for an assessment of securities as the site was unable to be inspected in 2008. As a result the reclamation security bond may be required to be increased.



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

### 4.1 ACCESSIBILITY AND INFRASTRUCTURE

Excellent paved roads connect Stewart with Smithers and Terrace, which are major supply centers in the northern part of British Columbia. A 25 km stretch of good gravel road (Granduc Road) links Stewart with the Project, with the section from Stewart to Premier Mine (11 km) maintained year-round. Between November and May road access and snow removal beyond the Premier Mine is required due to heavy snowfall.

Stewart, a community of about 500 people at the head of the Portland Canal, is the most northerly ice free port in Canada and is accessible from Smithers or Terrace via Provincial Highway 16 and then paved highways 37 to Meziadin Junction and highway 37A westerly to Stewart. Stewart has adequate housing and support for exploration personnel and core handling and storage facilities. Stewart has a history of supporting local mining operations.

A short spur road off the Granduc Road, which crosses the property, provides access to all the claims of the asset. An alternative access to the property is via a 4x4 road from the Granduc Road near the Premier Mine. This road continues along Silver Lake eventually connecting with the access road which joins the Granduc Road on the top of the Big Missouri Ridge. Stewart features a year-round seaport with full loading facilities. For many years this port has been used to ship ore and ore concentrates from Red Cliff, Granduc, Snip, Eskay Mines.

### 4.2 CLIMATE AND PHYSIOGRAPHY

The area of the Silver Coin property encompasses steep mountain slopes typical of the Coast Range region of British Columbia. Thick glacial moraine material is restricted mostly to lower elevations and valley floors with good rock exposure along ridge tops and creek beds.

The western part of the asset covers a section of the main Salmon River Valley which includes the lower portion of Salmon Glacier. From the Salmon River Valley the claims extend east over to the Big Missouri Ridge and then to Cascade River and Silver and Hog Lakes. The southeast portion of the asset features gently rolling topography. Elevations within the asset range from 500 m in the Salmon River Valley to 1,000 m on the top of the Big Missouri ridge.

The deep, broad valley of the Salmon River is bordered by steep and extensively bluffed slopes, generally covered by glacial moraine and locally with thick alder and willow underbrush below the Granduc Road. Sparse stands of hemlock and minor spruce are present above the Granduc Road to the top of Big Missouri Ridge. Along the south side of the Big Missouri claim an avalanche chute locally called "Slippery Jim" is covered with talus and landslide rubble and heavy alder brush. Along the ridges, small tarns, less than 100 m in length occur in the depressions, as can be seen in **Figure 4-1**.

Due to its northerly location the climate in the area can be severe. Heavy snowfalls in the winter and rain and fog in the summer are typical of the Stewart area. Snowfall up to 30 m has been experienced at the higher elevations, which can remain in the gullies until July. Because of the mountainous terrain and weather conditions, field work is generally restricted to between May and November. However, once development starts, year-round core drilling and development work can proceed as has been done on many properties in the general area.



**Figure 4-1. Silver Coin Project - Geography of Project Area,**

**Left. Aerial View Looking South.**

**Right. Long Section View Looking West.**



## 5 HISTORY

The present Silver Coin Project includes the historical Silver Butte ("SB"), Terminus and Silver Coin properties. The former Silver Butte property included the present Winer, Big Missouri and Kansas claims. The Terminus property was covered by Silver Coin 3 and 4 mineral claims. The present Silver Coin property includes Silver Coin, Idaho, Idaho Fraction and Dan Fraction mineral claims. The bulk of the Silver Coin historical work was conducted on the former Silver Butte property by Esso Minerals Canada Ltd. ("Esso"), Tenajon Resources Corp. ("Tenajon") and Westmin Resources Ltd. ("Westmin") in the period from 1979 to 1995. During that time, extensive trenching, sampling, and drilling was followed by underground development and mining. Jayden has obtained most, but not all, data from this work.

Due to the Silver Coin asset containing 26 different mineral claims, the history of the asset has been separated into the different claims.

### 5.1 DRILLING AND SAMPLING

#### Terminus Claim

Very little information is available for the early work completed on this claim, however documents from the B.C. Ministry of Mines indicates mineralisation was discovered on the Terminus Claim in 1911. In 1916, a Crown granted claim was established over the known mineralisation. Work on the property continued intermittently from 1911 but with little documentation. During the 1930's a short exploration adit was completed on some massive galena veins.

In the early 1980's, the Terminus claim was purchased by Tournigan Mining, which subsequently sold it to Westmin in 1983-84. Three vertical drill holes, totaling 100 m were completed in the early 1980's. Subsequently, soil sampling and airborne surveys, including K-count radiometric surveys, were completed over the Terminus claim as part of a larger exploration program on the Big Missouri property held by Westmin. The radiometric survey indicated that sericite alteration extended across the Terminus claim, south to No Name Lake. In addition, soil sampling indicated anomalous silver values south of the historical workings. The claim was dropped in 2004 by Westmin and re-staked the same year by MBM. It was subsequently renamed Silver Coin 3 and 4 claims.

#### Silver Coin Claims

The Silver Coin group of claims was located in 1904 along the Big Missouri Ridge. The property was purchased in the early 1930's by the Noble family, who held it until 2003. In the early 1930's a short adit was completed on the Dan showing. A number of pits were excavated on the Silver Coin and Idaho claims prior to the 1940's. In 1967, Granduc Mines cleared the adit on Dan showing and completed sampling and trenching. In 1981, E.W Groves compiled a geological report on the claim based on his site visit in 1967.

#### Silver Butte Claims

- 1904** The Big Missouri claim was staked over a large mineral showing (most likely a present BM showing) on steep bluffs overlooking the Salmon River.
- 1911** An 18.3 m crosscut was driven towards a large surface showing on the Big Missouri claim.
- 1914** A sample taken across a 13.72 m cut returned 3.42 g/t Au and 205.68 g/t Ag.
- 1915** The crosscut tunnel was extended 6.09 m.
- 1916** A composite sample taken from 120 boulders of a large slide located on the Big Missouri claim gave an average grade of 4.45 g/t Au and 16 g/t Ag.
- 1930** Buena Vista Mining completed limited trenching on the Big Missouri claim.
- 1939** Buena Vista Mining conducted a surface sampling program on the Missouri claim. A series of surface samples near the west corner the Big Missouri claim returned values averaging 14.39 g/t Au and 11.65 g/t Ag across a width of 16 m.
- 1969** Lockwood Survey Corporation conducted an airborne EM and magnetometer survey of the Salmon River Valley.
- 1971** El Paso Mining and Milling Company conducted a soil geochemical survey over the Winer claim.
- 1975** Canex Placer Limited prospected the property area.
- 1978** Consolidated Silver Butte Mines Ltd. prospected and trenched the property. Two previously undiscovered mineralised outcrops were found.
- 1979** Consolidated Silver Butte Mines Ltd. conducted a widespread IP geophysical survey over the property.

- 1980** Esso entered into an agreement to explore the Silver Butte property and completed a soil survey in that year over portions of the Big Missouri, Packers Fraction and Winer claims. A 400 m by 500 m soil area was sampled along east-west lines located 100 m apart. The samples were taken at 25 m intervals except in the area overlying the geophysics anomaly where samples were taken at 10 m intervals. The samples returned from 5 to 2,600 ppb Au (287 ppb average), 1.1 to 27.2 ppm Ag (4.6 ppm average), 13 to 4,320 ppm Pb (254 ppm average), and 27 to 2,380 ppm Zn (284 ppm average)
- 1981** Esso continued surface exploration consisting of geological mapping and sampling.
- 1982** Esso drilled 22 diamond drill holes totaling 1,375 m and excavated 17 trenches (the total length of the trenches is unknown). The soil survey area was extended and combined with other Esso soil surveys in the Salmon River valley. The combined survey contained approximately 1,720 samples. Lloyd Wilson, an Esso geophysicist, ran an induced polarisation survey over the Winer claim. A total of 2 km of lines were surveyed. A chargeability anomaly was measured over heavy mineralisation in the Face Cut #2 trench area (Facecut/35 Zone) and near diamond drill holes SB-15 and 16.
- 1983** A total of 1,680 m of diamond drilling in 14 holes and 210 m of trenching in 5 trenches was completed. L. Wilson conducted an induced polarization survey over the Anomaly Creek – North Gully fault block. The anomalies detected in 1982, near the Granduc Road (near drill holes SB-15 and 16) were confirmed in the 1983 survey. However, the anomalies decrease rapidly with depth. Down hole resistivity was tested in several holes from the 1982 drill program; namely holes SB 15,16,20,21 and 22. These drill holes showed a poor resistivity contrast down the hole. The possibility of a successful charged potential survey over the Facecut/35 Zone was considered small. The GENIE system was used to conduct an electromagnetic survey over the grid area. No anomalous responses were found.
- 1985** Esso purchased the Kansas Crown granted claim. Subsequently Tenajon Resources (formerly Tenajon Silver) entered into an option agreement with Esso whereby Tenajon could earn a 50% interest by spending \$1,200,000 over a four-year period.
- 1986** Tenajon drilled 4 surface diamond drill holes totaling 996 m.
- 1987** Tenajon conducted a surface diamond drill program totaling 3,810 m in 23 holes.
- 1988** Underground drifting diamond drilling commenced. Surface works including of road building, diamond drilling, geological mapping and surveying were completed. 36 underground diamond holes were completed for a total of 3,064 m and 23 surface diamond holes for a total of 4,443 m. Road construction included 2.9 km on new roads.
- 1989** Tenajon continued the drilling program and drilled 2,826.5m in 15 surface holes and 1,510.4 m in 17 underground holes.
- 1990** Tenajon completed 2,544.9 m in 16 surface holes and 899.4 m in 16 underground holes. Westmin Resources entered into an option agreement with Tenajon and subsequently completed 1,833.7 m in 13 surface holes and 643.3 m in four underground holes.
- 1991** The Facecut-35 Zone was mined.
- 1993** Work included major underground development followed by a program of underground drilling which totaled 1,967 m of AQ size core in 85 holes.
- 1994** Westmin continued a major program of underground development followed by 3,507 m of drilling in 62 underground holes.
- 1995** Westmin initiated various ore reserve studies on the Kansas and West Kansas ore zones.
- 1996** Due to the closure of the Premier Gold Mine in April 1996, all activity ceased on the Silver Butte property.
- 2003** In October 2003, Uniterre Resources Ltd, which was the registered owner of the Big Missouri, Winer and Packers reverted Crown grants allowed them to expire. Subsequently, Mountain Boy Minerals staked these claims taking control of all 22 claims of the Silver Coin asset.
- 2004-8** A total of 50,305 m of drilling from 324 surface holes was completed by MBM and Jayden to expand and infill the known resources in the main breccias zone.
- 2010** A total of 2,801 m of drilling from 18 surface holes was completed by Jayden to expand and infill the known resources. Drilling targeted along strike and definition of the high grade zones within the deposit.

## 5.2 UNDERGROUND MINING

Between 1987 and 1994, the previous operators of the property completed approximately 1,220 m of underground drifting on three levels, 103.2 m of crosscutting on one level and 130 m of Alimak rising. This included:

- 883 m of drifting and 17 m of sub-drifting on the Facecut Zone on the 810 level.

- 250 m of drifting on the 895 level.
- 70 m of drifting on the 917 level.
- Two crosscuts were completed from the 810 level to the Facecut and 35 Zones.

In 1986, Tenajon collared and drove an adit 20 m in overburden before abandoning it. In 1987, Tenajon collared an adit and completed 90 m of drifting. During 1988 the drift was extended 773 m on the 810 level with 63.5 m of crosscut on the Facecut Zone, 39.7 m of crosscut on the 35 Zone and 17 m of sub-drift on the Facecut Zone.

The 1993 exploration program included a 19 m extension to the 810 level, construction of an Alimak chamber, a 130 m long Alimak raise at 50 degrees, 63 m of sub-level drift and crosscut on the 895 m elevation and 70 m of sub-level drift and crosscut on the 917 m elevation. Development muck from the upper part of the Alimak raise, and initial rounds of the sub-levels taken from the Alimak deck, comprised a first bulk sample of 1,107 dry metric tonnes. A second bulk sample consisted of 1,540 dry metric tonnes of development muck from the combined sub-levels.

In 1994, a major program of underground development, included 168 m of development drifting on the 895 sub-level at the south end of the drift developed in 1993. Development muck totaling 1,481 dry metric tonnes from the sub-level was stockpiled at the portal and then milled at the Premier Gold mill later in the year. Assay grade of this bulk sample is unknown. The location of underground workings are shown in **Figure 5-1**.

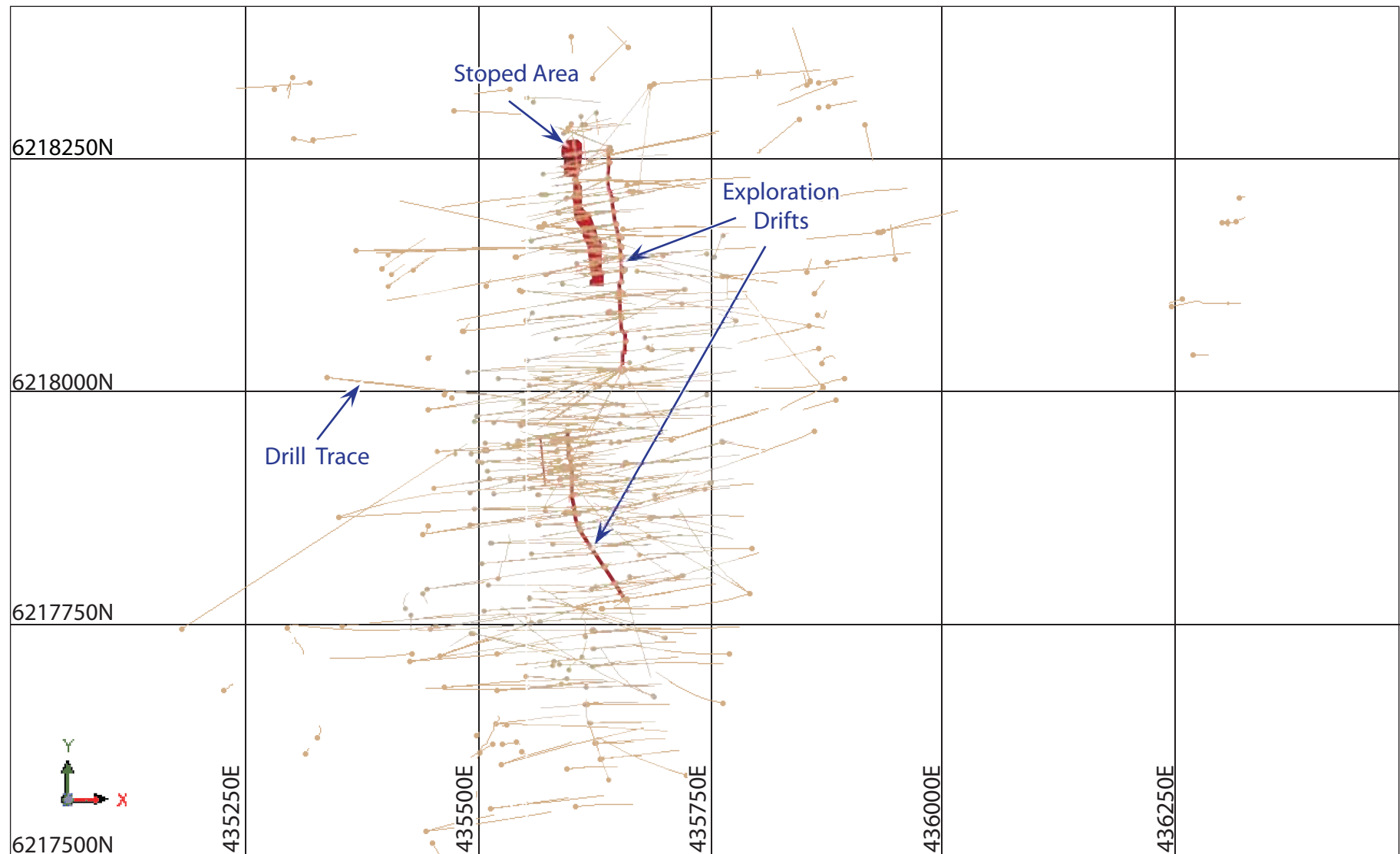
## Historical Production

During the 1930's, a short adit was driven on massive galena veins on the Terminus Zone, in the area of present Silver Coin-2 claim. Work continued intermittently with little documentation. Also in the early 1930's, a short adit was driven on the Dan Zone in the area of the Dan Fraction claim. Several small open pits were excavated on the property, including pits on the Silver Coin and Idaho Zones.

In 1911, a crosscut was driven for 18 m towards a large surface outcrop of mineralisation on the Big Missouri claim (BM Zone) and in 1915 the cross cut was extended a further 6 m.

In 1991, Westmin Resources mined the Facecut-35 Zone producing 102,539 tonnes at an average grade of 8.9 g/t Au and 55.50 g/t Ag. Mining was primarily by sub-level retreat with a minor amount of benching. Base metal rich – low gold sections of the Facecut-35 Zone were not mined. No base metal values were recovered as the ore was processed using a cyanide leach process at the Premier Mine mill 5 km south of Silver Coin. Recoveries reportedly averaged 92.9% for gold and 45.7% for silver.

Westmin estimated (Lhotka P. 1991 – draft report) that 111,000 tonnes of material grading 0.61 g/t Au, 29 g/t Ag and 3.46% Zn were directed to the tailings pond. Sampling in 2004 by MBM and Jayden indicated that the mine tailings from the Facecut-35 Zone averaged 0.72 g/t Au, 31.2 g/t Ag, 0.388% Cu, 0.48% Pb and 3.61% Zn in two samples.





## 6 GEOLOGICAL SETTING

The bulk of the regional geology information has been summarised from the Tetra Tech Preliminary Economic Assessment report dated March 2010.

### 6.1 REGIONAL GEOLOGY

The Silver Coin property is centered on Big Missouri Ridge within the western boundary of the Triassic to Jurassic Bowser Basin about 24 km east of the Coast Crystalline Complex. Much of the property is underlain by Triassic-Jurassic basin-filling sedimentary and volcanic rocks of the Stuhini Group, Hazelton Group and Bowser Lake Group. These rocks have been metamorphosed to greenschist facies and have been intruded by plutons of both Mesozoic and Cenozoic age.

The Stuhini Group rocks either underlie or are in fault contact with the rocks of the Jurassic Hazelton Group. These Triassic rocks consist of dark-grey laminated to thick-bedded silty mudstone and fine- to medium-grained and some coarse-grained sandstone. Locally, the Stuhini Group also includes thick-bedded heterolithic pebble to cobble conglomerate, thick-bedded sedimentary breccia, and massive tuffaceous mudstone. Regionally the Stuhini includes pyroxene basalts, basaltic andesites and feldspar-porphyrific volcanoclastic rocks (Alldrick, 1993). Extensive exposures of Hazelton Group rocks in the western portion of the Bowser Basin have been named the Stewart Complex (Grove, 1986). This complex forms a north-northwesterly trending belt extending from Alice Arm to the Iskut River.

The Unuk River Formation is the lowest member of the Hazelton Group. This unit consists of at least 4,500 m of Lower Jurassic marine and non-marine volcanoclastics. These volcanic rocks consist of monotonous green andesitic rocks including ash and crystal tuff, lapilli tuff, pyroclastic breccias and lava flows. Regionally, feldspar-porphyrific andesite flows and tuffs are recognized at the top of the formation and two siltstones form important stratigraphic markers within the formation. The upper unit of the Unuk River Formation is termed the Premier Porphyry Member and is texturally similar to dikes of Premier Porphyry which cut the underlying strata and the Texas Creek batholith (Alldrick, 1993). The Premier Porphyry Member regionally includes tuffs and flows with variable phenocrysts species, notably hornblende, plagioclase and K-feldspar. Minor sandstone regolith and vent breccias are locally present. Alldrick (1993) states that the Unuk River Formation is the host for all of the major gold deposits of the Stewart mining camp and that the deposits around the Silbak Premier and Big Missouri mines occur stratigraphically below the Premier Porphyry Member. The Unuk River Formation is interpreted to represent a predominantly subaerial composite andesitic stratovolcano. In the area of the Silver Coin property, the Unuk River Formation is overlain at steep discordant angles by the lithologically similar Betty Creek Formation which is middle Lower Jurassic in age. The Betty Creek Formation represents a second cycle of trough filling consisting of a sequence of distinctively colored red to green epiclastic rocks with interbedded tuffs and flows which range in composition from andesite to dacite. The thickness of the Betty Creek is quite variable regionally from 4 to 1,200 m. The Unuk River and Betty Creek Formations are in turn unconformably overlain by a thin felsic tuff horizon of upper Lower Jurassic age (approximately 185-190 Ma) termed the Mt. Dilworth Formation. This formation is a 20 to 120 m thick sequence dominated by variably welded dacite tuffs. Hard, resistant exposures of the Mt. Dilworth Formation are commonly pyritic and form gossanous cliffs. This formation is an important stratigraphic marker in the Stewart area. Alldrick (1993) described five members of the Mount Dilworth Formation including the Lower Dust Tuff Member, the Middle Welded Tuff Member, the Upper Lapilli Tuff Member, the Pyritic Tuff Member, and the Black Tuff Member. The Pyritic Tuff member has been interpreted to represent pyrite impregnation around fumarolic centers and brine pools. The entire sequence just described is unconformably overlain by non-marine sediments and minor volcanics of the Middle Jurassic Salmon River Formation. This formation includes a thick package (at least 300 m) of complexly folded, banded, predominantly dark-colored siltstone, greywacke, sandstone with intercalated calcarenites, minor limestone, argillite, conglomerate, littoral deposits, volcanic sediments and minor flows. The basal unit of the Salmon River Formation is a pyritic limestone.

The Upper Jurassic Bowser Lake Group overlies the Hazelton Group rocks described above. The Bowser Lake Group is exposed in the westernmost portion of the Bowser Basin and is also found as remnants on mountain tops in the Stewart area immediately to the west. These rocks consist of dark grey to black silty mudstone and thick beds of massive, dark-green to dark-grey, fine to medium grained arkosic sandstone. Chert-pebble conglomerates are characteristic of the Bowser Lake Group in the type locality northeast of the Silver Coin area (Alldrick, 1993). D. Alldrick (1988) has interpreted several volcanic centers of Lower Jurassic age in the area north of Stewart, B.C. Volcanic centers within the Unuk River Formation are located in the Big Missouri-Silbak Premier area and in the Brucejack Lake area. Volcanic centers within the Lower Jurassic Betty Creek Formation are present in the Mitchell Glacier and Knipple Glacier areas. Alldrick (1993) also identified a stratovolcano at Mount Dilworth, five kilometers north of the Silver Coin property. Alldrick mapped flows of the Premier Porphyry Member, in the Silver Coin area. This member marks the top of the Unuk River Formation and intrusive phases of the Premier Porphyry include dikes that cut all the underlying rocks including the Early Jurassic-age Texas Creek Batholith. Alldrick's work suggests that all gold deposits in and around the Silbak Premier and Big Missouri mines occur in rocks that are stratigraphically below the Premier Porphyry Member.

Various intrusives occur in areas underlain by Early Jurassic and Tertiary rocks. The granodiorite bodies of the Coast Plutonic Complex largely engulf the Mesozoic volcanic rocks on the west. To the east, there are numerous smaller intrusions which range in composition from monzonite to granite including highly felsic varieties. Some of these likely

represent late phases of the Coast Plutonic Complex of middle Cretaceous age; others are probably genetically related to the Jurassic volcanic rocks that were deposited in the western portions of the Bowser Basin.

The granodioritic Texas Creek Plutonic Suite (TCPS) in the Stewart area is Jurassic in age (Alldrick, 1993) with isotopic dates ranging from 211 to 186 Ma. This suite typically is coarse grained with abundant hornblende and locally very coarse K-feldspar phenocrysts. The TCPS includes the foliated Premier Porphyry dikes which are thought to be the intrusive equivalents of the Premier Porphyry Member of the Unuk Formation. The dikes are closely related to all of the major ore zones at the Silbak Premier mine; are altered to chlorite, sericite and carbonate; are andesitic in composition; and have sericite-chlorite-quartz pressure shadows adjacent to euhedral pyrite indicating post-pyrite deformation under greenschist facies metamorphic conditions.

Other intrusives are Tertiary in age with a spike in activity from 45 to 55 million years (Armstrong, 1988). This Eocene suite, termed the Hyder Granodiorite Suite (HGS), is characterized by lack of alteration, medium grain size, equigranular texture, presence of biotite, and accessory sphene. The Hyder Suite rocks regionally host major molybdenum deposits such as the Quartz Hill deposit in southeast Alaska and minor deposits of silver, lead, gold, zinc, and tungsten. Tertiary HGS dike swarms are common and range in composition from granodiorite and aplite through lamprophyre. Two of these swarms represent approximately 1.5 km of northeast-southwest extension. Alldrick (1993) states that the dikes cut regional folds but are offset by most of the major and minor faults in the Stewart area.

Early deformation in the Silver Coin area is related to Triassic-Jurassic subduction and docking of several terranes. The various terranes comprising the Canadian Cordillera were probably assembled by late Jurassic time.

By the middle Cretaceous an Andean type magmatic arc had developed along the continental margin above an east-dipping subduction zone (Alldrick, 1993). Transpression from 90 to 70 Ma gave rise to right lateral-strike slip faults such as the Tintina Fault with hundreds of kilometers of displacement. An Eocene volcanic arc developed in the Coast Plutonic Complex from 60 to 40 Ma. Localized plutonism and volcanism developed from 40 to 20 Ma with generally small stocks and dikes. This intrusive activity was controlled by north to northeast striking extensional normal faults. East-dipping subduction and sporadic basaltic volcanism resumed from 20 Ma to the present.

Doubly plunging, northwesterly-trending synclinal folds with steep axial surfaces have developed in the Salmon River and underlying Betty Creek Formations in the Silver Coin area. These folds are locally disrupted by small west-directed thrust faults which strike parallel to the major fold axes. Steeply dipping strike-slip faults trend at high angles to the trend of the fold axes. Alldrick (1993) noted the strong regional contrast in fold geometries between the Hazelton Group, which is characterized by open cylindrical folds, and the overlying Salmon River Formation, which occupies synclinal (basinal) cores and shows tight disharmonic folds. Five sets of major faults in the Stewart area were defined by Alldrick (1993). These include: "north striking sub-vertical shears, northerly striking west-dipping shears, southeast to northeast-striking 'cross structures' that cut the northerly structural grain, decollement surfaces or bedding plane slips that are present near the base of the Salmon River Formation, and mylonite zones." He also proposed that the regional faults were originally "ductile contractional reverse faults and were reactivated as brittle fractures during later extensional episodes".

Mylonite zones have developed in the Texas Creek batholith and these parallel similar mylonites in the country rock. Mylonites are present in the banded sulfide zone at the Silbak Premier mine and a southeast-striking set of these deforms Jurassic ore and localizes Tertiary ore at the Riverside mine. Alldrick (1993) describes foliation envelopes that have developed along both ductile and brittle faults with early foliations cut by those related to later faults.

Flattened clasts defining a foliation are common in tuffs indicating ductile deformation along probable east-verging reverse faults (Alldrick, 1993). These early reverse faults were later reactivated during Tertiary intrusive activity: doming and extension resulting in west-dipping normal faults with relict ductile fabrics.

## 6.2 PROJECT GEOLOGY

The geological understanding has been made difficult due to the lack of reliable stratigraphic and structural marker horizons, and subtly different rock types that have been subjected to various and multiple stages of alteration, metamorphism, deformation, and mineralization. Available geologic information was developed by several generations of operators over a period of many years resulting in a lack of continuity between the various geologic data sets. The property was mapped by Britten (1988), Alldrick (1993) and later by Mazur (2006) (**Figure 6-2**). Geological maps and interpretations produced by these authors show significant differences in geological interpretation.

The biggest obstacle in interpreting the geology of the property has been recognition of the primary lithologies in the andesitic rocks. A report on the property by Westmin (Lhotka et al, 1994) states: "Recognition of primary lithologies is difficult in the drift due to alteration and recrystallization. Frequently, the primary geologic unit mapped in the drift does not match that logged at the collar of the drill holes drilled from the drift."

### Lithology and Geologic History

North-south striking faulting has divided the Silver Coin property into three different geologic areas:



- an area to the east of the claim group that is bounded by the Cascade Creek fault zone;
- an area located between the Cascade Creek fault zone and the next north-south oriented fault (located about one km to the west) that is dominated by andesitic volcanic rocks with minor trachyte;
- the central portion of the claim block where northwest-trending faults have created a graben that hosts mineralized zones.

The sequence of predominantly andesitic volcanic and volcanoclastic rocks which constitutes the fault blocks described below was subsequently cut by numerous intrusive bodies of subvolcanic, porphyritic andesite and less numerous bodies of aphanitic dacite. Along with other rocks from the Stewart area, the volcano-sedimentary rocks of the Silver Coin property underwent a period of regional lower greenschist facies metamorphism characterized by the presence of sericite, chlorite, carbonate and pyrite. In surface exposures, rocks that underwent regional metamorphism tend to have green color - in contrast to altered rocks that tend to be light-grey and yellow. Despite this, distinguishing between mineral assemblages formed during regional metamorphism and altered rocks is difficult, not least because the two assemblages often occur together.

To the south of the graben, Texas Creek granodiorite and andesitic pyroclastic rocks crop out on the former Silver Coin Crown Granted claims (Stone and Godden, 2007). Foliated andesite is the most common rock type, with only a few outcrops of sheared limey argillite. The main features in the Silver Coin project area are lineaments striking northwest and northeast, which strongly influence the topography over most parts of the former Silver Coin property. The lineaments are interpreted as zones of intense fracturing, probably with shearing on the N20°W set and possibly on the N25°E set.

The eastern portion of the Silver Coin property, immediately to the west of the Cascade Creek fault, contains a silicified and mineralized cataclasite zone that is up to 75 meters wide, hosted within andesitic volcanic rocks, carrying three to five percent disseminated euhedral pyrite. The mineralized zones occur along a regional deformation zone extending from the former Big Missouri mine through the Silver Coin 3 and 4 claims and south towards No Name Lake.

The last major geologic event in the area of the Silver Coin property was emplacement of the Jurassic granodioritic Texas Creek batholith (Alldrick, 1993) which underlies most of Silver Coin 9 and 10 claims as well as the Indi claims. Apophyses derived from this batholith intruded the metamorphosed Jurassic-Triassic volcano-sedimentary rocks along the Anomaly Creek fault system. One porphyritic phase of this intrusive sequence has been routinely referred to in drill logs by Premier Mines and on the Silver Coin property as the Premier Porphyry. Alldrick (1993) mapped flows in the Salmon River Valley as Premier Porphyry and these are thought to be extrusive equivalents of intrusive phases of the Premier Porphyry. Recognition of Premier Porphyry is important because this rock is interpreted to represent the source rock for mineralization in the nearby Premier Mine and possibly at Silver Coin.

## Structure

Doubly plunging, northwest-trending folds of the Salmon River and Betty Creek Formations dominate the structural setting of the Silver Coin area. The folds are locally disrupted by faults. These later structures include: small thrusts with trends parallel to the major fold axes, cross-axis steep wrench faults which locally drag beds, selective tectonization of tuff units, and major northwest faults. According to Mazur (2006), the dominant structural feature of the Silver Coin property is the Anomaly Creek Fault, which he interpreted to have acted as a master detachment fault. This interpretation is outlined in the Appendices of this report. The Mazur report is relatively comprehensive and detailed and incorporates the work of the earlier authors. The structural interpretations of the earlier workers can be found in the references cited at the end of this report. Strongly deformed, altered and mineralized Jurassic-Triassic rocks between the Anomaly Creek fault and the subsidiary North Gully fault have been termed the "Main Breccia Zone". This zone is at least one kilometre long and 200-300 m wide and hosts the bulk of gold mineralization on the Silver Coin property. This master (detachment) fault and related subsidiary listric faults in the hanging wall have progressively dropped the hanging wall to the southwest.

The mineralised zones of the Kansas and Big Missouri claims are part of a major mineral trend that strikes north-south and hosts the Big Missouri and Indian mines. In the area of the Perseverance, Kansas, Facecut and 35 mineralised zones, the (major) structure is joined by three large, sub-parallel and northwest striking faults that have moderate dips to the west (the Anomaly Creek, Gully and North Gully faults).

The Anomaly Creek fault has been interpreted as a right-lateral, oblique-slip structure of unknown displacement. The Gully fault has been interpreted as a reverse fault, the displacement of which is probably not large (the alteration zones on both sides of the fault do not appear to be significantly offset). The nature of movement on the North Gully fault is not well understood since little work has been done across the areas in which the structure is developed.

There are two prominent sets of foliations at Silver Coin. One set strikes east-southeast to east-north-east and is steeply dipping. A second, more widespread set trends north-south and dips moderately to the west.

## 7 DEPOSIT TYPES

Jayden's current working theory involves two mineralising events with at least two (and probably several) periods of faulting. The initial mineralising event is interpreted to be Jurassic-age Kuroko type base metal mineralisation. Alldrick (1993) cites substantial supporting evidence for this interpretation from lead isotope geochronology on galena samples coming from and near the Silver Coin property. The Facecut-35 mineralisation mined in the late 1980's and early 1990's was essentially a massive sulfide deposit, likely a preserved sulfide body enriched in gold by a later mineralizing event.

A Tertiary mineralising event, also supported by lead age dating, is reported by Alldrick (1993) for some nearby deposits; although there are no samples of this age from Silver Coin. Pinnacle speculates that this later event may have introduced gold and remobilized the earlier mineralization.

The principal faults at Silver Coin are north-striking shallow west-dipping structures that were probably active at least twice.

In a compressional or extensional environment with stacked and upward-curving faults, a north-trending, sub-horizontal dilatational environment may have developed between the faults. This would have provided a favorable environment for bulk disseminated gold mineralisation. Oblique "ladder" type veins, in this case sub-vertical could have provide local higher grade mineralisation as exploited via the historical underground workings. The morphology of the mineralisation at Silver Coin is a north-trending sub-horizontal crudely cylindrical body

## 8 MINERALISATION

In the Stewart district, gold is spatially and temporally associated with early Jurassic quartz-rich alkaline to calc-alkaline intrusions and volcanic centers. Alldrick (1993) and others have described two main styles of mineralisation in the district, these include high sulfide (>20% sulfide) base metal-rich silver-gold and low sulfide (<5% sulfide) silver-gold mineralisation. Alldrick's study suggests, and petrography at Silver Coin reportedly confirms, that the lower sulfide mineralisation is earlier than the higher sulfide type. The style of mineralisation and geochemical fingerprint observed today may reflect either or both geologic time overlap and/or physical zonation.

Mineralisation across the Silver Coin property is contained within 20 different zones. Gold is typically associated with silicification and locally with base metal mineralisation. Sulfides include pyrite, sphalerite, galena, chalcopyrite, and rarely tetrahedrite. The bulk of the gold mineralization present on the Silver Coin property is of low sulfidation epithermal character. This category is strongly indicated by the presence of electrum, crude banding of some sulfide veins, presence of chalcedonic quartz, and very widespread silicification.

The most significant mineralization is the Main Breccia Zone that has been traced over a strike length of 2 km, a vertical distance of 700 m and widths varying from 20 to 100 m. Mineralisation is structurally controlled, generally with strong potassic and phyllic wall rock alteration. Secondary enrichment is not a significant component. The mineralised zone consists of fractured andesite tuff with quartz veinlets containing sphalerite, galena, pyrite, locally chalcopyrite and sporadically distributed fine native gold, and silicified tuff and intensely brecciated and silicified stockwork zones. The Main Breccia zone is defined by gold values greater than 0.2 g/t Au compared to a background value of less than 0.1 g/t Au (Stone and Godden, 2007).

**Figure 8-1. Silver Coin Project - Right, Low Sulphide Mineralisation with Quartz Veining. Left High Sulphide Mineralisation with Silification.**



## 9 EXPLORATION

Although mineralisation was first discovered in the early 1900's, systematic modern exploration methods were only first employed in the late 1970's and early 1980's when Esso entered into an agreement for the property. Initial exploration consisted of soil geochemical sampling programs and induced polarization surveys. The soil sampling and survey programs were limited in their coverage, however the results did delineate some highly anomalous areas within the property.

Esso commenced diamond drilling in the middle 1980's with both surface diamond and underground holes completed in a number of phases in the 1980's and early 1990's. In 1994, all exploration ceased on the property.

In 2003, MBM staked the leases and, in 2005, entered into an agreement with Pinnacle and recommenced exploration works on the property. A total of 324 surface diamond holes (for 50,305 m) were completed between 2004 and 2008.

In 2010, Jayden completed 18 surface holes for 2,801 m. Drilling targeted along strike and definition of the high grade zones within the deposit.

## 10 DRILLING

### 10.1 PRE-2004

A total of 129 surface diamond holes for 19,901 m and 293 underground diamond holes for 17,500 m were completed on the property prior to 2004. This phase of drilling mainly targeted the northern high grade mineralisation, however some drilling targeted extensions to the south. Almost all of the surface drilling was drilled to the east at 60° or steeper on a variety of drill spacings, while the underground drilling used fans on 20 m spacings.

The pre 2004 drilling was completed by Esso, however no documentation or reports were provided to MMC to verify which drilling company completed the drilling. The location of the collars of the drill holes in a blue in **Figure 10-1**.

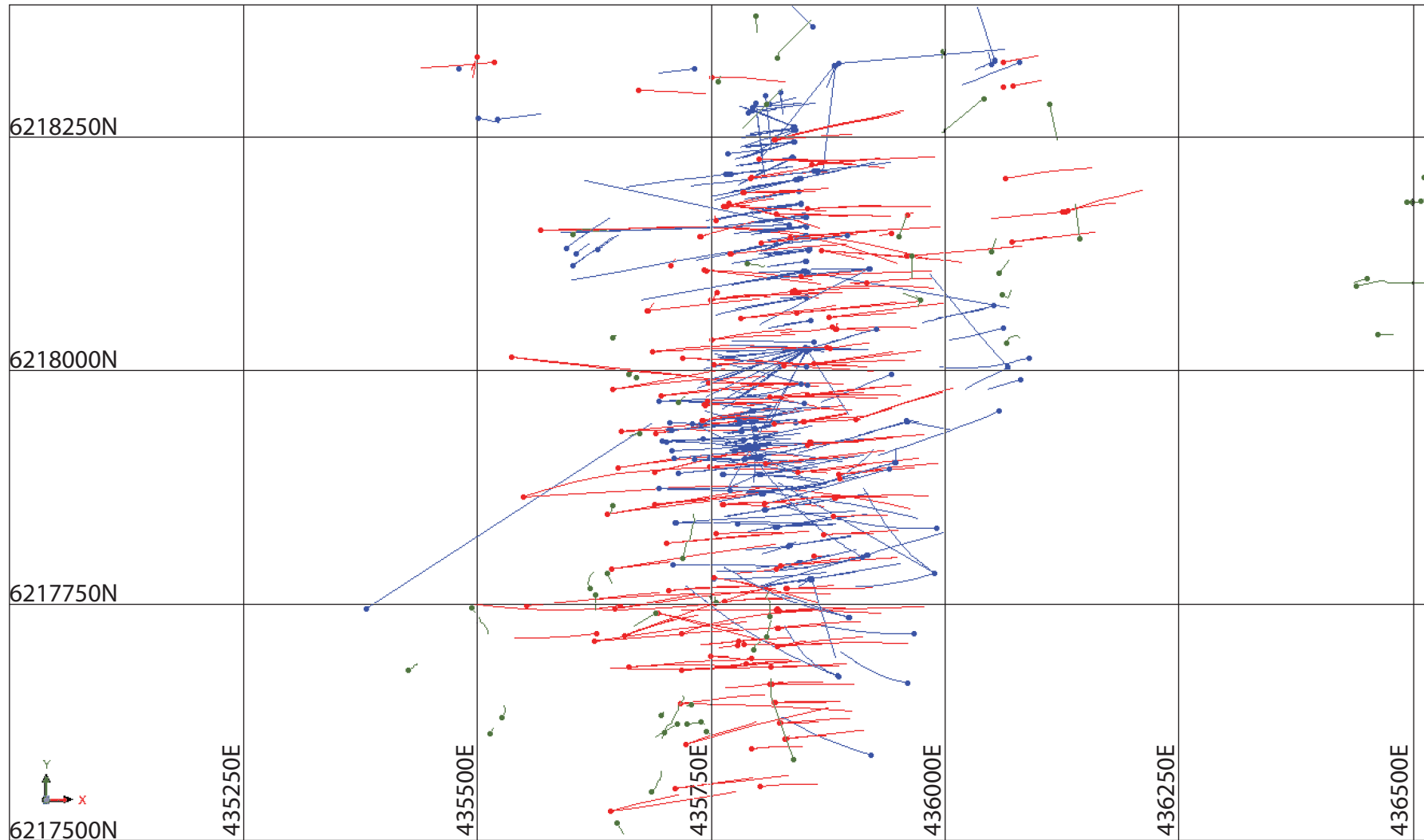
### 10.2 2004 ONWARDS

Drilling in 2004 and 2005 was completed by MBM and mainly targeted extensions to known mineralised areas. After Pinnacle entered into an agreement with MBM in 2006, all drilling was completed by the company (**Table 10-1**). The majority of these holes were infill drill holes in the main breccias zone, with some holes targeting extensions to the north and south of this zone. The location of the post 2003 drill holes are shown as red dots on **Figure 10-1**.

An infill and exploration drilling programme of 2,801 m has recently been completed by Jayden. The programme aimed to increase the confidence categorization of some of the Inferred Mineral Resources, test the un-sampled areas of the previous drilling and to define further areas of mineralisation.

**Table 10-1. Silver Coin Project - Summary of Post 2003 Drilling.**

Year	Number of Holes	Metres	Core Size	Drilled By
2004	38	3,133	BTW	MBM
2005	67	8,041.61	NQ, BQ , AQ	MBM
2006	115	24,151	NQ, BQ	Pinnacle
2007	16	2,764	BQ	Pinnacle
2008	88	12,216	NQ, BQ	Pinnacle
2010	18	2,801	NQ	Jayden



## **11 SAMPLING METHOD AND APPROACH**

### **11.1 PRIOR TO 2003**

#### **Sampling Methodology**

Extensive surface sampling has been conducted by numerous companies on the Silver Coin property. Little is known about the sampling methods employed prior to 1980, however from 1980-1994 companies such as Esso, Tenajon and Westmin worked on the property and while only limited detail is available about their work, some evidence in the form of standard field notes and maps, lends support to the assumption that the work was done to industry standards.

No detailed information, such as procedures of sample books, were supplied to MMC regarding the sample methodology used prior to 2003, however discussion with site personnel suggest that all sample methods were of standard practices. As such, MMC believes that sample methods were of industry standard.

For the period 1982 to 1987, the companies only sampled sections of the core with good visual mineralization. All samples were at intervals of 1 m or 2 m and were split using a core splitter. In 1989, Tenajon sampled and assayed more intervals from some of these earlier holes, and subsequently all core was sampled after 1998. The core from 1993 and 1994 drilling was not split as the entire core was sent to the laboratory for assaying.

### **11.2 FROM 2003**

#### **Soil and Grab Samples**

The majority of the sampling completed by MBM and Pinnacle was supervised by the Pinnacle project geologist Alex Walus. Walus (2009) states the following:

“Soil and rock sampling conducted on the property by Pinnacle Mines and Mountain Boy Minerals was done according to standard, proven methods. Soil samples were collected from the B horizon and placed in Kraft paper bag. Samples were collected every 25 m, distance between the soil lines were either 25 or 50 m. Rock samples from trenches were collected using a rock hammer and chisel to obtain a continuous chip line across the strike of the mineralization. Sample intervals were dependent on intensity of mineralization and/or lithology. Most intervals were 2.0 m in sample length. A large portion of the soil and rock samples from this period were collected.”

#### **Core Drilling Sampling Method**

All drilling on the Silver Coin property has been diamond core drilling. At various times surface holes diameters BTW, NQ and a small amount of AQ core were used, while AQ core was used for all underground drilling.

Core recovery from the great majority of holes drilled on the Main Breccia Zone was very good. Although not all holes from early drilling contained recovery data. Core recovery in several holes drilled to the north-west of the Facecut-35 Zone was very poor, and many holes were lost due to the bad ground in earlier Pinnacle-Mountain Boy drilling.

Geologists logged the core onto paper logs according to standard industry practice. The logs were initially stored at Pinnacle's field office in Stewart and subsequently moved to Pinnacle's Vancouver office where they currently reside. After logging, all paper logs were entered into electronic spreadsheets for permanent storage and to facilitate computerized plotting of the data.

After the core was logged, geologists marked sample intervals with sequentially numbered assay tags and the core was divided in half using either core splitters (some earlier drilling) or sawed (all post-2004 drilling). Half of the split core was sent to the lab for assaying and the other half was kept on site for future reference. Stone and Goddard, (2007) note the following:

“The positions of the markers are visually estimated, not measured. Greater accuracy may be obtained by utilizing a measuring tape to identify intervals, but this would greatly increase the time required to log each run. After each set of six core boxes has been logged, the geologist checks the first and last assay tags and that paper logs are correct, not least to avoid any discrepancies.”

Pinnacle and Mountain Boy Minerals' geologists used 1.5 and 3.0 meters intervals to sample the core and cut the core using a core saw. The rocks on the property are fresh with little or no secondary minerals on the surfaces that would enhance metal values. Pinnacle geologist Alex Walus either personally sampled or supervised sampling of most of the holes drilled between 2004 and 2008. Walus (2009) states, “the samples were representative and of high quality, collected according to standard industry practices.”



### 11.3 SAMPLE QUALITY

MMC believes that the sampling methods and approach are reasonable for this style of mineralisation. The samples are representative and there appears to be no discernible sample biases introduced during sampling.

## 12 SAMPLING PREPARATION, ANALYSES AND SECURITY

### 12.1 CORE SAMPLE PREPARATION AND SECURITY

#### Prior to 2004

All drilling samples prior to 2004 utilised the laboratories Min-En (presently Assayers Canada), ALS Chemex, Vangeochem and the Westmin Lab at the Premier Gold mill for assaying. Although the first three are believed to be reputable commercial laboratories with internal sample preparation standards and independent staff, it is not possible to say with certainty that all aspects of the sample preparation were conducted independent of any employee, officer, director or associate of the operator.

No information was supplied to MMC regarding the sample procedure and assay methodology for this generation of drilling, however discussion with site personnel suggest that all sample analyzing was conducted at the laboratories noted above and, as a result MMC believes that sample preparation and assay determination are of industry standard.

#### From 2004

All drilling and subsequent sampling and assaying during the 2004 to 2008 drilling programs was completed by independent persons and at no time was an officer, director or associate of Jayden involved.

All drilling samples were prepared and analysed by Assayers Canada of Vancouver, British Columbia. This laboratory is ISO accredited (ISO/IEC 17025) and, in addition, has been accredited by Standards Council of Canada as a proficiency testing provider for specific mineral analysis parameters by successful participation in proficiency tests.

All samples were prepared according to the following procedure;

1. The sample was crushed with a jaw crusher and then passed through a secondary crusher so that 60% of the sample passes #10 mesh.
2. The sample was then mixed, and a 250 g sub-sample split was taken using a riffle splitter.
3. The sub-sample was then pulverised in a ring pulveriser until 90% of the sample passed 150 mm mesh.
4. Both the crusher and the pulveriser were cleaned with pressurised air to prevent contamination.

#### Sample Analysis

##### Silver and Base Metals

For silver and base metals, a 1.0 g sample was digested by four acid digestion and analysed by atomic absorption spectrometer. Assays were reported to a detection limit of 0.1 g/t for silver and 0.01% for base metals.

##### Gold Assay Analysis

Gold assays by Assayers Canada were determined by fire assay with atomic absorption finish using 30 g samples. Assays were reported to a detection limit of 0.01 g/t Au.

MMC considers that sample preparation and analysis procedures for all drill hole samples are of industry standard and should minimise sample error and bias.

### 12.2 SAMPLE SECURITY

MMC has been informed all core was packed and stored prior to transportation to the laboratory for processing. As a result MMC considers sample security to be good.

MMC also understands that at no time was an officer, director or associate of Jayden involved in the sample preparation or analytical work post 2004 and prior to this time an independent laboratory was employed for sample preparation and analysis. It is therefore MMC's belief that it is highly unlikely that an officer, director or associate would have had the opportunity to contaminate the sample data.

## 13 DATA VERIFICATION

### 13.1 DATABASE VALIDATION

During a review of the digital database supplied to MMC a number of inconsistencies were noted and conveyed to Jayden. Jayden completed a full review of the drill hole data which included a review of all available assay certificates, drill logs, sample books and historical database. During this review by Jayden, a number of significant issues and observations were noted, these include:

- Sample intervals missing or incorrect assays entered;
- Conversion from ounces per short tonnes to gram per tonnes incorrectly completed;
- Silver and gold values swapped for approximately 30% of the 1989 drill holes;
- The assay certificates were not available for drill holes completed prior to 1988 and during 1990. However drill logs and sample sheets were available for all drill holes;
- Comparison of the results of the hand written drill logs and assay certificates for the 1988-89 drill holes indicates that the assay, sample intervals and sample ID's are consistent. Only minor errors were noted and these were all small typographical errors;
- Only the 2004-2008 has Au, Ag, Zn, Pb and Cu determinations for all sample intervals;
- The 1990 drill holes have only Au values;
- Approximately 16,096 m out of the total 85,762 m of the drilling was not sampled.

During the visit to Jayden's office in Vancouver, MMC conducted an audit of the updated database, the audit included:

- The comparison of assay certificates for 40 holes to the digital data from 1988 to 2008;
- Comparison of 20 assay certificates to the drill log and sample books from 1988 and 1989;
- Overview of the database review process completed by Jayden and inspection of the hard copy file management system.

During this audit MMC noted only one error in the updated database caused by typographical errors, and no issues with the conversion from the empirical system to the metric system.

MMC notes that hardcopy survey certificates are available for the all drill holes, however the original drill logs contain the design angle and inclination and the down hole surveys completed. A review of 30 holes from the 1980's and early 90's indicates that no errors were found in the digital data.

### 13.2 MISSING SAMPLE INTERVALS

The review of the supplied digital data by MMC indicated that a significant number of intervals in the 1980's and 1990 drill holes were not sampled, the missing intervals are outlined in **Table 13-1**. No original documentation was supplied to explain the unsampled intervals and the core from these drill holes has been destroyed. It was reported by previous authors that the sampling geologist visually interpreted the grade and only sampled portions of the hole. No information was supplied to MMC as to the minimum grade of sampling, however a review of the drill logs and assay sheets of the majority of the holes indicates that an approximate minimum sample grade of 0.3-5 g/t Au was used.

Visual inspection by MMC of the remaining 2004-2008 core indicates that the Au mineralisation is associated with the sulphide content within the rock, however there is some variation in the grade of samples with similar sulphide composition. As a result MMC interprets that the majority of un-sampled intervals will be of low grade; however there will be some areas that are of moderate grade (approximately 2-5 g/t), but these will be limited in number.

MMC also notes that assaying has not been completed for the Zn, Pb and Cu values for the majority of samples prior to 2004. The assay certificates were not available for these values, and review of the drill logs for these holes indicates that mineralisation occurs outside the sampled intervals. Given that Zn, Pb and Cu mineralisation within the deposit is associated with visible sulphide minerals, MMC believes that this mineralisation will be of low grade outside the sampled intervals; however there could be some moderate grades.

### 13.3 QUALITY CONTROL DATA

Assayers Canada automatically employed standards and blanks in their normal assay procedure. Starting in 2006, Jayden began introducing duplicate samples and developed a database of 1,258 duplicate results in their overall program of 9,983 samples. Analysis of this data suggests that an excellent correlation exist with a correlation coefficient of 0.9955.

Bitterroot (2009) reviewed the complete drill hole database and associated quality control data available in Pinnacle's possession. In its report, Bitterroot said the following:

*"The largest components of that quality control data are the Pinnacle compilations of analytical control data, replicates, and duplicates. The various worksheets included documentation of an umpire assay program, wherein the company sent selected pulps and duplicate core samples out to an independent lab for comparison and confirmation of the primary lab data. Snowden also conducted a small core re-sampling program in 2008 to verify mineralization and assess total error in the sampling, preparation, and assay process.*

*There is ample evidence in these data of a quality control program in place at the Silver Coin project since at least 2005. The company included analytical control samples at several concentration levels, including analytical blanks. The company also used laboratories that employ internal quality assurance and control programs. In addition, the company documents a program of re-analyses to provide checks on the primary lab. They also went back to systematically re-sample drill core so that total variability of field sampling procedures and lab procedures can be assessed."*

Minefill (Stone and Godden 2007) made an effort to validate and verify preexisting exploration data and any quality control data associated with that. In that report, in addition to the duplicate sample program in 2006, Bitterroot noted that in the current database duplicate assays exist in the data from 2004 through 2008, suggesting that perhaps the 2004 and 2005 duplicates were done retroactively in response to the Minefill recommendations. Starting in 2007, Pinnacle began a program of check assays and has developed a database of comparative assays between Assayers Canada (the primary lab), and ALS Chemex Labs.

Minefill and Snowden (2008) did extensive verification comparing original assay certificates with Pinnacle's computer database. They found robust records with good correlation back to 1993. The 1990 data was substantially not verifiable to their standards and most of it was omitted from the database.

Jayden has documented its duplicate-assay and analytical control program and demonstrated that there is no evidence of major systematic errors or bias in that data.

## **13.4 ASSESSMENT OF PROJECT DATABASE**

The database review and corrections to the original Au and Ag data conducted by Jayden and the subsequent audit by MMC has resulted in a digital database that is largely supported by verified certified assay certificates, original drill logs and sample books. Although some historical data remains unverified by certificates, MMC has high confidence these Au and Ag assays are correct as all holes prior to 1988 were verified using the drill log and sample books. As comparison of the assay certificates and drill hole logs show consistency for the 1988-89 drill holes, and the drill hole logs and sample books have similar values to all holes prior to 1988, MMC believes there is sufficient data to enable their use in a Mineral Resource estimate and resultant classification following NI 43-101.

The un-sampled zones within the deposit appear to be significant to the deposit, as they could potentially contain zones of low grade mineralisation. As a result, MMC believes these zones should be diluted in any resource calculation, and due to the potential mineralisation and resultant low confidence in the grade estimate, should be classified as Inferred Mineral Resource.

The Zn, Pb and Cu values have not been verified by original assay certificates and have significant areas of un-sampled intervals. As a result, MMC believes that in addition to the unsampled intervals being diluted and the unverified and low sample density, the resultant resource estimate will have a low confidence and therefore should be classified as Inferred Mineral Resource.

Based on data supplied, MMC believes that the analytical data has sufficient accuracy to enable a resource estimate for Silver Coin deposit.

Table 13-1. Silver Coin Project - Missing Sample Intervals by Year

Year	Total Length of Drilling Metres	Top of Hole		Within Hole		Bottom of Hole		Total	
		Metres	%	Metres	%	Metres	%	Metres	%
1982	1,374.69	231.30	16.8	107.19	7.8	59.34	4.3	397.83	28.9
1983	1,679.81	37.18	2.2	362.94	21.6	56.41	3.4	456.53	27.2
1986	996.27	56.76	5.7	534.51	53.7	70.54	7.1	661.81	66.4
1987	3,902.33	160.09	4.1	1,757.93	45	148.31	3.8	2,066.33	53
1988	7,593.06	1,453.79	19.1	2,002.81	26.4	590.33	7.8	4,046.93	53.3
1989	4,337.00	282.80	6.5	1,323.90	30.5	381.30	8.8	1,988.00	45.8
1990	11,252.40	1,676.62	14.9	2,244.25	19.9	765.44	6.8	4,686.31	41.6
1993	2,678.90	0.07	0	409.35	15.3	61.30	2.3	470.72	17.6
1994	3,506.67	9.95	0.3			0.70	0	10.65	0.3
2004	1,325.92	28.94	2.2	145.67	11	18.90	1.4	193.51	14.6
2005	7,973.52	283.93	3.6	15.85	0.2	6.48	0.1	306.26	3.8
2006	24,221.41	535.51	2.2	1.77	0	19.42	0.1	556.70	2.3
2007	2,691.50	51.90	1.9	0.00	0	0.30	0	52.20	1.9
2008	12,228.94	186.77	1.5	3.05	0	12.55	0.1	202.37	1.7
2010	2,801	0	0	0	0	0	0	0	0
<b>Total</b>	<b>88,563.42</b>	<b>4,995.61</b>	<b>5.8</b>	<b>8,909.22</b>	<b>10.4</b>	<b>2,191.32</b>	<b>2.6</b>	<b>16,096.15</b>	<b>18.8</b>

## 14 ADJACENT PROPERTIES

The Silver Coin Project is located in an area with several historical mines. Historical production at adjacent properties includes:

- The Big Missouri Mine, north of the Project, produced 770 kt at an average grade of 2.37 g/t Au and 2.13 g/t Ag from 1938 to 1942.
- The Indian Mine, south of the Project, produced 13 kt at an average grade of 3.40 g/t Au, 119.7 g/t Ag, 4.40 % Pb and 5.50 % Zn.
- The Project is contiguous with the large Premier Gold property which, between 1918 and 1979, produced 4.2 million tonnes at an average grade of 13.4 g/t Au, 301 g/t Ag, 2.3% Cu, 0.6% Pb and 0.2% Zn (BCEMPR production statistics). Additionally, a reported 6.5 Mt was produced at 2.16 g/t Au and 80.23 g/t Ag by Westmin in the period 1988 to 1995. Reported remaining reserves are 300,000 t of 8 g/t Au.

## 15 MINERAL PROCESSING AND METALLURGICAL TESTING

### 15.1 OVERVIEW

The Silver Coin deposit is a vein hosted gold-silver deposit containing gold (1-2 g/t Au), silver (5-10 g/t) and base metal sulphides (~0.2% Zn and ~0.1% Pb). There are two styles of mineralisation; high sulphur and low sulphur, which are both free-milling, moderately fine grained and dominated by silica. Pyrite is the most abundant sulphide, followed by sphalerite and galena. The mineralisation types are amenable to conventional processing methods, namely flotation and cyanide leaching, with reasonably high overall metal recoveries, depending upon the head grade. The preferred process flowsheet is the milling-flotation-concentrate leaching route (refer to **Figure 15-1**), where a gold-silver rich concentrate is produced and leached with cyanide to produce gold-silver doré. Conventional equipment and processes would be employed in the size reduction, flotation and leaching circuits.

The proposed flotation flowsheet employs a relatively coarse grind size (P80=149microns) to produce a final flotation concentrate at reasonable grades and high recoveries (90-98% gold recovery). After regrinding, cyanide leaching of this concentrate yielded gold and silver recoveries of 90-96% and 52-89% respectively, while direct leaching recovered 75-89% of the gold and 62-71% of the silver.

More quantitative mineralogy is required to better define the mineralogical associations for the various mineralisation types and preparation of testing composites. More testing and analysis, such as modelling, is necessary to better characterise the comminution properties of the various mineralisation types, while more definitive testing is required to optimise both the flotation response and concentrate leaching characteristics. Other process options should be examined such as pre-concentration and the production of a zinc concentrate.

### 15.2 MINERALISATION TYPES

The deposit is characterised by two stages of alteration-mineralisation where the association of the gold and silver varies between the silica and sulphide minerals, with a preference for the sulphide minerals. The mineralogical study was based on a high sulphide composite (A) and low sulphide composite (B); the detailed nature of these composites was not disclosed.

#### Mineralogy

The gold is mainly present as free gold as well as some electrum, both present as separate grains between either the silica and calcite (Sample A) or the sulphide minerals, as well as some inclusions in the pyrite (Sample B). While the gold and the electrum were reported to be reasonably fine grained (10-50 microns), neither the detailed nature of the sizing nor the mineralogical associations are known (refer to **Table 15-1**). Flotation testing indicated that the mineral associations and sizes are quite fine and that a fine concentrate re-grind (details were not reported) was required to separate the gold from the sulphide minerals.

**Table 15-1. Silver Coin Project – Gold Mineralogy**

Sample	Description	Zn+Pb+Cu (%)	Mineral	Proportion	Gold Mineralogy		
					Size Range (µm)	Association	Location
A	Low Sulphide	<0.3	Native	Majority	10-50	quartz & calcite	in & between grains
			Electrum	Minority	10-50		
B	High Sulphide	0.5-2.0	Native	Majority	10-50	sphalerite & galena	intergrowths some with pyrite
			Electrum	Minority	10-50		

Source : Petrographic Report, 2007

Silver was reported to be mainly present in solid solution in the galena although some was present as electrum and occasional argentite (refer to **Table 15-2**). During testing high silver recoveries were found with cyanide leaching, suggesting that most of the silver is not in solid solution and present as a cyanide soluble mineral.

**Table 15-2. Silver Coin Project – Silver Mineralogy**

Sample	Description	Zn+Pb+Cu (%)	Mineral	Silver Mineralogy		
				Nature	Size Range (µm)	Content
A	Low Sulphide	<0.3	Galena	in & between grains	-	40-50% Pb
			Electrum		10-50	10-25 g/t Ag
B	High Sulphide	0.5-2.0	Galena	intergrowths some with pyrite	-	40-50% Pb
			Electrum		10-50	10-25 g/t Ag

Source : Petrographic Report, 2007

The base metals were reported to be present as primary sulphides, namely pyrite, sphalerite, galena and chalcocopyrite. The presence of deleterious elements, such as arsenic, mercury, antimony and selenium was not significant.

The two stages of mineralisation are distinguished by the silica type, which is grey and rather fine grained (Sample A) compared to the coarser, later stage white quartz (Sample B) (refer to **Table 15-3**). Sericite is associated with the quartz in the earlier alteration-mineralisation stage mineralisation, while calcite and minor sericite and chlorite occur in the later mineralisation types.

**Table 15-3. Silver Coin Project – Gangue Mineralogy**

Sample	Comment	Silica	Size Range (µm)
A	Grey, chalcedonic		50-400
B	White		50-2,000

Source : Petrographic Report, 2007

## 15.3 COMPOSITES

The mineralisation fall into two types, namely high sulphur and low sulphur and two composites (Samples A and B) were studied in the first stage of testing. In the second round of testing, eight mineralised composites were prepared based on geology and mineralogy were prepared as well as a High Sulphur, Low Sulphur and Master Composite (MC1) samples. The representivity of these samples is not known nor are the relative proportions of each composite used to prepare the Master Composite.

The sampled gold values range from 0.4 g/t to 2.88 g/t while silver varies from 2.3 g/t to 22.7 g/t (refer to **Table 15-4**). Zinc is typically above 0.5% while lead is generally less than 0.1%. The pyrite content varies from 4% to 14%. Silica ranges from 60.4% to 70.4%. Of significance, from a processing point of view, is the presence of organic carbon in the later stage ores, which varies from 0.18% to 0.46%.

**Table 15-4. Silver Coin Project – Head Grade of Testing Mineralised Composites**

Element	Sample Number								
	08-1	08-2	08-3	08-4	08-5	08-6	08-7	08-8	MC-1
Au (g/mt)	0.41	1.35	1.45	1.69	2.88	0.38	1.85	1.96	1.85-1.89
Ag (g/mt)	2.30	7.60	8.30	8.90	22.70	5.50	3.50	5.20	6.0-7.9
Zn (%)	0.11	0.57	0.73	1.11	1.40	0.04	0.25	0.03	0.56-0.57
Pb (%)	0.06	0.30	0.11	0.35	0.53	0.016	0.07	0.02	0.07
Cu (%)	0.006	0.02	0.03	0.02	0.015	0.004	0.013	0.002	0.02
<b>Pyrite (%) [calc]</b>	<b>3.98</b>	<b>7.03</b>	<b>7.88</b>	<b>14.62</b>	<b>8.70</b>	<b>4.23</b>	<b>4.31</b>	<b>9.81</b>	<b>7.89</b>
S (%)	2.20	4.11	4.62	8.44	5.44	2.29	2.45	5.27	4.51-4.55
<b>Total Sulphides (%) [calc]</b>	<b>4.05</b>	<b>7.38</b>	<b>8.28</b>	<b>15.24</b>	<b>9.49</b>	<b>4.26</b>	<b>4.45</b>	<b>9.83</b>	<b>8.20</b>
C <sub>org</sub> (%)	0.34	0.18	0.35	0.46	0.20	0.28	0.20	0.41	0.32-0.36
Silica (%)	60.4	64.9	70.4	61.2	67.1	69.6	66.7	67.6	65.5-66.7

Source : Tetra Tech NI-43-101 report, March 2010

There may have been a problem with the preparation of the composites as the measured head assays are different to the calculated head assays, particularly with respect to gold. While the gold would appear to be 'spotty', with difference between duplicate assays, the difference between the other elemental assays suggests that a more rigorous composite blending technique may be required (refer to **Tables 15-5** and **15-6**). This head assay variation was found also during testing, which makes interpretation of the testing results more challenging, since the process response is dependent upon the head assay.

**Table 15-5. Silver Coin Project – Master Composite (MC1) Blend**

Sample	Au (g/mt)	Ag (g/mt)	Zn (%)	S (%)	C <sub>org</sub> (%)	Silica (%)
08-1	4.3	0.41	2.30	0.11	2.20	0.34
08-2	4.0	1.35	7.60	0.57	4.11	0.18
08-3	27.8	1.45	8.30	0.73	4.62	0.35
08-4	10.2	1.69	8.90	1.11	8.44	0.46
08-5	2.3	2.88	22.70	1.40	5.44	0.20
08-6	0.9	0.38	5.50	0.04	2.29	0.28
08-7	40.2	1.85	3.50	0.25	2.45	0.20
08-8	10.2	1.96	5.20	0.03	5.27	0.41
<b>Calculated</b>	1.66	6.13	0.48	4.07	0.30	66.89
<b>Measured</b>	1.85-1.89	6.0-7.9	0.56-0.57	4.51-4.55	0.32-0.36	65.5-66.7

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

The low sulphur and high sulphur composites were prepared from equal amounts of 08-1 and 08-2 samples and 08-5 and 08-6 samples respectively. There may have been a problem with the preparation of the composites; the measured head assays are different to the calculated head assays (refer to **Table 15-6**). As noted above, the gold would appear to be 'spotty', however the difference between the other elemental assays suggests that a more rigorous composite



blending technique may be required. This head assay variation was also found during testing, which makes interpretation of the testing results more challenging, since the process response is dependent upon the assay.

**Table 15-6. Silver Coin Project – Composite Head Assay Variations**

Composite	Source	Au (g/t)		S (%)		Sulphide Content (wt %)	
		Average	Range	Average	Range	Measured	Calculated
08-1+2	Measured	0.72	-	3.35	-	~6.7	6.29
	Calculated	0.88	-	3.16	-		
	Tests F1-F5	0.94	0.75-1.26	2.86	2.64-3.16		
08-5+6	Measured	2.19	-	4.05	-	~8.3	7.93
	Calculated	1.67	-	3.87	-		
	Tests F6-F10	2.02	1.91-2.23	3.93	3.56-4.37		
MC1	Measured	1.87	1.85-1.89	4.53	4.51-4.55	8.92	6.11
	Calculated	1.66	-	4.07	-		
	Tests F25, F26 +F30	1.84	1.77-1.91	4.05	3.89-4.16		

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

Further mineralogical studies, such as quantitative determinations, are required to allow better definition of mineralisation types, mineral sizes and associations as well as preparation of testing composites.

## 15.4 TESTING

A limited quantity of testing of average quality has been conducted over two campaigns; an earlier testing campaign was not captured in the Tetra Tech NI 43-101 Preliminary Economic Assessment (March 2010). The most recent testing explored two flowsheets, namely whole “ore” leaching and flotation-concentrate leaching. While process routes were enhanced by the incorporation of a gravity circuit, there is no reason to consider incorporating a gravity circuit as such, since no coarse free gold was present in the mineralised samples. While these studies are far from optimised, they demonstrated that either process route is a viable option; however a definitive process flowsheet and the best processing conditions for treating the mineralisation types needs to be better established.

### Previous Testing

The earlier testing, conducted on an apparently representative sample, found that the gold was readily leached by cyanide. Additionally, the sample responded well to gravity concentration, with 81% of the gold reporting to a concentrate 7% by mass. Leaching tests found that the organic carbon did absorb gold during leaching; subsequent processing strategies included grinding in cyanide solution and increasing the activated carbon levels during the gold absorption stage.

### Comminution

The most recent testing programme was primarily based on two samples: a high sulphur (08-5+6) and a low sulphur (08-1+2) composite samples. Other testing was conducted with high sulphur and low sulphur samples, reported as Sample A and B; it is assumed that they are the same composites. Comminution testing included the determination of Crushing Work Index (CWI), the Bond Ball Mill Work Index (BWWI) and the Abrasion Index (Ai). The results of these studies indicated that the tested mineralisation types were hard and abrasive as would be expected for high silica mineralisation (refer to **Table 15-7**). During milling for the flotation testing, a significant difference in comminution properties between the two samples was found despite having very similar BWWIs. The low sulphur composites were found to be much softer, requiring 33% less milling time to achieve the same grind size.

**Table 15-7. Silver Coin Project – Comminution Testing (Master Composites)**

Sample	Description	F <sub>80</sub> (mm)	P <sub>80</sub> (µm)	Bond Ball Mill		Crushing Work Index (kW/mt)				Abrasion		Silica (%)
				(kWh)	Class	Max	Avg	S.D	Class	Index	Class	
A 08-1+2	Low Sulph	2.41	74	17.4	Hard	14.66	10.61	2.11	Hard	0.425	Abrasive	60-69
		1.34	83	18.7	Hard	-	-	-	-	-	-	60-65
B 08-5+6	High Sulphide	2.42	74	17.0	Hard	13.09	9.88	1.40	Hard	0.578	Highly	61-70
		1.97	84	18.4	Hard	-	-	-	-	-	-	67-70

Sources : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009 and Metso Test Report, 2009

More comminution testing is required to establish the comminution parameters, particularly on a range of composite samples, to establish the full range of these properties and resolve the differences reported by different comminution testing programmes. With sound comminution data, modelling would enable the correct sizing and selection of equipment.

## Flotation

Initial testing with the low sulphur and the high sulphur composites at natural pH did not vary much as a function of grind size (51-183 microns) nor reagent suite (collector type, activator); although high gold recoveries were achieved (94-98%), they were at the expense of large mass recoveries (27.9 - 29.5% mass recovery). Typical results are summarised in **Table 15-8**.

**Table 15-8 Silver Coin Project – Flotation Testing (averaged results)**

Sample	Sulphides (wt %)	Recovery (%)	Laboratory Flotation Time (min)			
			5	10	15	20
Low Sulphur	6.29	Mass	11.7	18.8	24.2	29.5
		<b>Gold</b>	<b>89.3</b>	<b>92.5</b>	<b>93.6</b>	<b>94.3</b>
		Sulphur	96.0	92.9	97.2	97.8
High Sulphur	7.93	Mass	12.4	16.7	23.4	27.9
		<b>Gold</b>	<b>91.2</b>	<b>97.1</b>	<b>98.2</b>	<b>98.4</b>
		Sulphur	93.8	97.6	98.6	99.0

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

In cleaner testing on individual composites, sodium hydroxide (elevated pH values) was used to depress the pyrite. While the mass recoveries were satisfactorily reduced, gold recoveries were rather low (72 - 82.8%) (refer **Table 15-9**). Another testing programme, with the individual composites, examined the use of a selective gold collector under natural pH conditions; not unsurprisingly, rather poor metallurgy was found. So-called 'selective' collectors are rarely selective and this approach should have been initially tested with the Master Composite sample, rather than with the individual composite samples. The reluctance to use a more selective pyrite depressant (e.g. lime or MBS) necessitated a large number of cleaning stages to achieve an acceptable reduction in the mass recovery.

**Table 15-9 Silver Coin Project – Cleaner Test Results (Individual Composites)**

Sample Details	Grind P <sub>80</sub> (microns)	Head Grade (Au, g/t)		Recovery (%)							
		Measured	Calculated	Rougher		Cleaner 1		Cleaner 2		Cleaner 3	
				Mass	Au	Mass	Au	Mass	Au	Mass	Au
08-4	100	1.69	1.73	20.1	87.3	2.0	73.2	0.9	69.4	-	-
08-7	122	1.85	2.55	17.0	87.8	4.8	85.4	2.7	81.6	-	-
08-1	76	0.41	0.41	24.3	94.4	4.1	89.3	2.6	86.1	1.3	80.1
08-3	77	1.45	1.70	19.9	95.0	4.5	89.3	2.5	85.1	1.3	78.1
08-8	81	1.96	2.27	19.9	85.2	2.5	79.4	1.4	76.7	0.8	72.0
MC1	76	1.87	1.77	20.1	91.3	5.6	87.7	3.7	85.8	2.3	82.8

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

Locked cycle testing with the Master Composite sample tested two process conditions: high pH and natural pH. After three stages of roughing, the rougher concentrate was reground (P80 circa 45 - 55 microns) and floated in four stages of cleaning to produce a relatively high grade concentrate (~110 g/t) with high gold recoveries (90 - 94%) and low mass recoveries (1.8 - 3.0%) (refer **Table 15-10**). More testing is required to confirm this finding based on the variable results found in the previous cleaner testing programme. It should also be noted that locked cycle testing results overestimate the plant recovery by 2 to 3%. Again, a more selective lime depressant would reduce the number of rougher and cleaner flotation stages, which has lower capital and operating costs as well as operating benefits. The trade-off would be a lower gold recovery, which may be minimal until confirmed by testing.

**Table 15-10 Silver Coin Project – Locked Cycle Flotation Test Results (Master Composite)**

Test Number	Grind (P <sub>80</sub> microns)	Process Comments	Rougher Recoveries (%)			Final Cleaner Recoveries (%)		
			Mass	Au	Ag	Mass	Au	Ag
FLC1	70-75	Rougher con. re-ground 4 stages of Cleaning High pH (9.8-11.7)	10.5	95.1	91.5	1.8	94.7	89.4
FLC2	73-75	Rougher con. re-ground 4 stages of Cleaning Natural pH (8.7-9)	21.4	94.5	94.3	3.0	90	82.5

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

With more testing, the flotation flowsheet could be further optimised to reduce the number of flotation stages, by amongst other things, employing a stronger pyrite depressant such as lime. The presence of organic carbon at these levels is not generally a major deterrent in leaching; there is, however, a better method to reduce any impact than was used in the testing. It was found that between 35 and 52% of the gold losses were occurring in the minus 37 micron size fraction, however the mineralogical nature was not determined. This aspect needs to be further investigated in order to evaluate the potential for improving the gold and silver flotation recoveries.

## Leaching

Initial leaching tests conducted on high and low sulphur samples indicated that long leaching times (viz. 96 hours) were required to achieve high gold recoveries (75 - 90%) at relatively high cyanide consumption rates (3 to 5kg/t). Carbon In Leach (CIL) rather than Carbon In Pulp (CIP) was generally effective in offsetting the 'preg robbing' effects of the organic carbon (refer to **Table 15-11**).

**Table 15-11. Silver Coin Project – Whole “Ore” Leaching**

Sample Type	Head Grade (g/t)		Leach Type	Grind (P <sub>80</sub> , microns)	Recovery (%)		Reagents (kg/t)	
	Au	Ag			Au	Ag	Cyanide	Lime
Low Sulphur	1.40	6.78	Normal	70	89.3	68.3	3.69	0.64
Blend	0.84	5.27	CIL	71	86.9	71.6	4.82	0.34
High Sulphur	2.09	17.1	Normal	67	75.2	61.9	3.55	0.55
Blend	1.79	14.1	CIL	67	84.9	62.9	4.42	0.36

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

Leaching of flotation concentrates (19 - 76g/t Au) after regrinding (P80 circa 55 microns) achieved high gold recoveries (92 - 96%) and variable silver recoveries (52 - 88%) (refer **Table 15-12**). Cyanide consumption rates were reasonable for a high sulphide material (3 - 7kg/t), however long leach times (96 hours) were also required to achieve these results.

**Table 15-12. Silver Coin Project – Flotation Concentrate Leaching**

Sample Details	Concentrate Grade		Recovery (%)		Reagents (kg/t)		Tailing P <sub>80</sub> (microns)
	Au (g/t)	Ag (g/t)	Au	Ag	Cyanide	Lime	
08-2	19.47	47.05	92.3	55.9	2.92	0.46	55
08-3	19.67	86.3	90.6	52.4	2.79	0.22	63
08-5	40.12	224.2	93.9	81.5	4.86	0.19	55
08-4	38.95	382.4	96.6	63.8	7.22	0.32	-
08-7	76.99	45.05	93.9	88.6	4.54	0.41	-

Source : Metallurgical Study on the Silver Coin Project, F. Wright Consulting Inc., 2009

Neither the sizing nor mineralogical details of the gold and silver losses in the leached tailings were established and these types of studies are required to determine the potential for higher gold and silver leaching recoveries.

## Dewatering

Preliminary settling tests were conducted on the Master Composite locked cycle flotation testing tailings. The best results were found using lime and a cationic flocculent, indicating a thickening requirement of 0.34m<sup>2</sup>/tpd.

## Gold Recovery

Based on a conservative interpretation of the testing results (4 stages of flotation cleaning and 96 hours of cyanide leaching), the gold recovery would be expected to vary between 72 and 86%, depending upon mineralogy and head grade (refer to **Table 15-13**). For a head grade containing 1 g/t Au, the overall gold recovery would be expected to be around 80%.

**Table 15-13 Silver Coin Project – Flotation Concentrate Leaching**

Case	Flotation Recovery (%)	Leach Recovery (%)	Overall Recovery (%)
Low	85	85	72.3
Base	89	90	80.1
High	92	93	85.6

Source : MMC estimate based on results of metallurgical testing

## Other Metal Recoveries

Overall silver recoveries would vary between 45 to 78%. It is estimated that up to 75% of the zinc could be recovered to a saleable zinc concentrate, depending upon the mineralogy (i.e. fineness and nature of the associations).

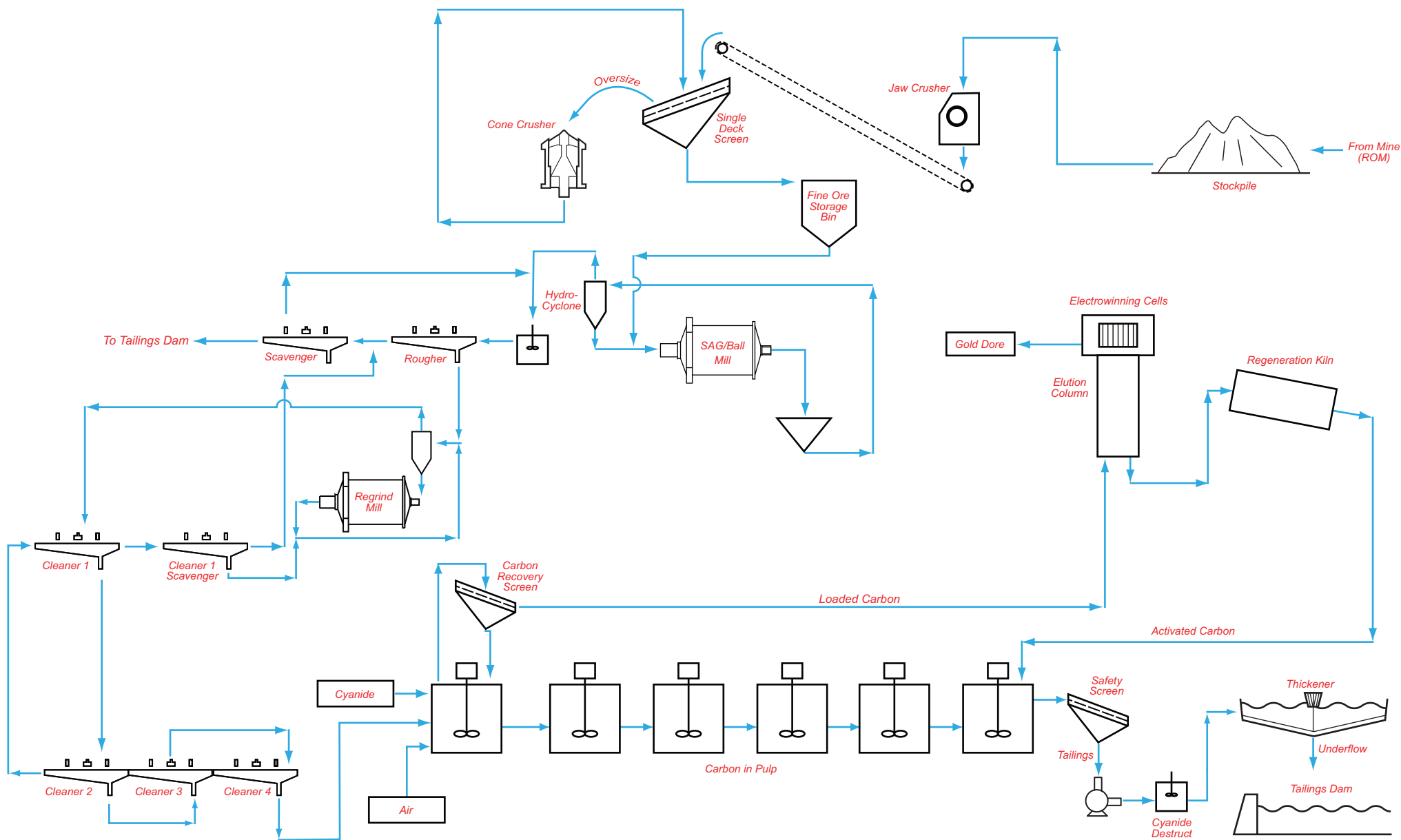
## 15.5 PROCESSING DESCRIPTION

The proposed processing flowsheet, as described in the Tetra Tech NI 43-101 Preliminary Economic Assessment report (March 2010), is based on recovering the bulk of the gold into a flotation concentrate followed by cyanide leaching and production of gold doré on site (refer to **Figure 15-1**). Although rather complex, this flowsheet is conventional and would use conventional equipment. MMC has estimated the equipment sizes and installed power based on similar equipment performing similar duties.

Coarse mineralisation, less than 900 mm in size from the mine, would be crushed to 80% passing 150 mm in a gyratory crusher and stored in a covered coarse mineralised material stockpile with a live capacity of 20,000 t. Mineralised material would be withdrawn from the stockpile and fed to a 6 m diameter SAG mill (3 MW motor) and discharge into a common sump where the slurry would be pumped to nest of hydrocyclones. The underflow would report to a 5 m diameter ball mill (5 MW motor) while the overflow (P80=149microns) would be conditioned prior to three stages of rougher/scavenger flotation. The scavenger concentrate would be recycled back to the ball mill for further size reduction while the scavenger tailings would report to the tailings thickener. The thickener underflow would be stored in the tailings dam.

The rougher concentrate would be reground to 80% passing 35 microns and refloated in three cleaning stages, with the first cleaner tail reporting to the scavenger feed. The third cleaner concentrate would be thickened to around 40% solids, treated to de-activate the organic carbon and fed by gravity to a Carbon in Leach (CIL) circuit located 10 km away on a second site. The gold bearing slurry would be leached with cyanide in six agitated tanks over a period of 96 hours. The solubilised gold would be absorbed onto activated carbon which would be separated from the slurry and eluted to recover the gold in an electrowinning operation. The electrowon gold would be subsequently smelted with fluxes to produce doré gold bars for sale.

The CIL tailings would be detoxified to remove the cyanide and presented to the tailings thickener for dewatering and subsequent storage of the solids in the tailings dam. Water would be recovered for re-use in the process circuits.



## Processing Opportunities

There are a number of processing opportunities that may significantly enhance the economics of this project both in terms of capital and operating costs.

The first opportunity concerns the use of pre-concentration to substantially reduce the volume of material to be processed. The nature of the mineralisation would appear to lend itself to pre-concentration through a number of methods however this would need to be tested. The approach would employ screening possibly in conjunction with optical sorting, which may be able to reduce the volume of the material to be treated by 75 to 85%. This would have a substantial impact on the size and thus the cost of downstream equipment, particularly the mills. It would also decrease the amount of power required on site, since the milling circuit is the largest consumer of power on a mine site. Additionally, the operating cost would be substantially reduced.

The second opportunity concerns the recovery of zinc and lead as a flotation concentrate. Calculations show that the zinc and lead may contribute up to 15% of the project revenue. This would, however, need to be tested since the sulphide mineralisation appears to be fine and intimately associated with pyrite and other sulphides.

Instead of using flotation to concentrate the gold, a gravity circuit (e.g. jigs) could be employed to produce a coarse sized gold-rich sulphide concentrate. This concentrate would be re-ground and leached with cyanide in a conventional CIL operation.

Not rejecting pyrite at this process stage offers three advantages: firstly, the opportunity to maximise gold and silver recovery, secondly, concentrating all the pyrite and sulphides into a small volume (simplifies tailings and environmental issues) and thirdly maximises zinc recovery.

After leaching, the tailings would be partially detoxified and floated to produce a final lead/zinc concentrate – which may be a combined product (ISF concentrate) or two separate concentrates. Additional dewatering and handling facilities would be required. An advantage of this approach is that two tailings streams are produced. The first tailings would be coarse and predominantly quartz, which could be safely stacked as an inert waste product near the mine. The other tailings stream, containing mainly pyrite, would be substantially smaller in quantity and could be separately managed to mitigate any environmental issues.

Finally, a significant opportunity exists to make the process more compact in terms of the number of flotation stages and leaching period. This would have a direct impact upon the capital costs required for both the equipment and the infrastructure.

## Potential Processing Risks

It is relatively early in the project development and more process testing and analysis is required. A better understanding of the mineralogy of the types of mineralisation is necessary, which may reveal additional processing challenges.

The primary processing risk is the mineralogy and how this varies by mineralisation type, since this will affect both the gold and silver recoveries.

A common risk in processing is the comminution circuit, particularly when the mineralised material is reasonably competent; more testing of more diverse mineralisation types, followed by modeling, is required to minimise this risk.

If saleable flotation concentrates are produced, the dewatering requirements need to be established to offset any potential Transportable Moisture Limit (TML) risk.

The gold doré will have a substantial silver content (>50%) as well as potentially other metals (e.g. Cu, Pb, Zn). To minimise the potential risk to projected revenue, the probable marketing terms need to be determined.

## 16 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

The Mineral Resource for the Project was independently estimated by Mr. Jeremy Clark of MMC. Information contained in this report is based on information provided to MMC by Jayden and verified by MMC. All statistical analysis and mineral resource estimations were carried out by MMC. MMC developed three dimensional digital resources for the concentration of the Au, Ag and Zn metal and developed the resource estimates based on the statistical analysis of the data provided. MMC believes the Mineral Resource estimate meets general guidelines for NI 43-101 compliant resources for the Indicated and Inferred confidence levels.

### 16.1 DATA

#### Sample Data

All drill hole collar, survey, assay and geology records were supplied to MMC in Excel spreadsheet format by the site geologists. All Mineral Resource work conducted by MMC was based on data received as at June, 2010. MMC is aware that Jayden is nearing the completion of data verification of the Zn assays, however based on information supplied MMC believes it will make no material difference to the global resource. An Access database was created, and is managed, by MMC.

The database contains the records from 714 diamond drill holes ("DD") for a total of 85,844 m and 76 trenches for a total of 1,447 m. A summary of the drill hole database is shown in **Table 16-1**.

**Table 16-1. Silver Coin Project - Summary of Data Used in Resource Estimate.**

Hole Type	In Database		
	Number	Total Length (m)	Unsampled Intervals (m)
Surface DD Pre-2004	129	19,901	12,768
Underground pre-2004	293	17,500	5,530
Surface 2004-2008	292	48,443	1,475
Surface 2010	18	2,801	0
trench	76	1,447	0
<b>Total</b>	<b>90</b>	<b>87,291</b>	<b>19,773</b>

#### Data Excluded

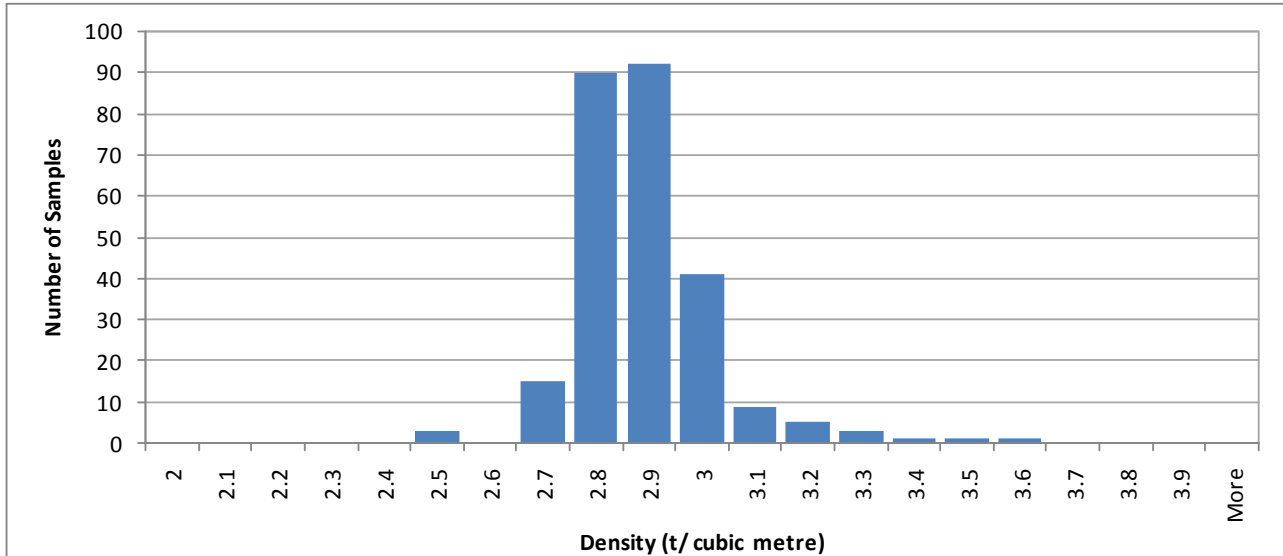
No data was excluded from the model, however a significant number of intervals were un-sampled during sample processing (**Table 13-1**). A review of the remaining drill core indicated these areas had minimal mineralisation and as a result the majority of these un-sampled intervals were all assigned zero. MMC deemed a few samples to be obviously mineralised and left them blank for the estimate.

#### Bulk Density Data

A total of 266 bulk density determinations have been completed with a range of values between 2.5 t/m<sup>3</sup> and 3.54 g t/m<sup>3</sup>. The majority of determination range from 2.7 t/m<sup>3</sup> to 2.9 t/m<sup>3</sup> with a long upper tail (**Figure 16-1**). MMC believes the long upper tail is the result of the isolated semi-massive to massive sulfide veins and as a result is not indicative of the majority of deposit. As a result of the isolated and low number of the bulk density determinations, the average of 2.86 t/m<sup>3</sup> has been used for all fresh material in the estimate.



**Figure 16-1. Silver Coin Project - Histogram of Bulk Density.**



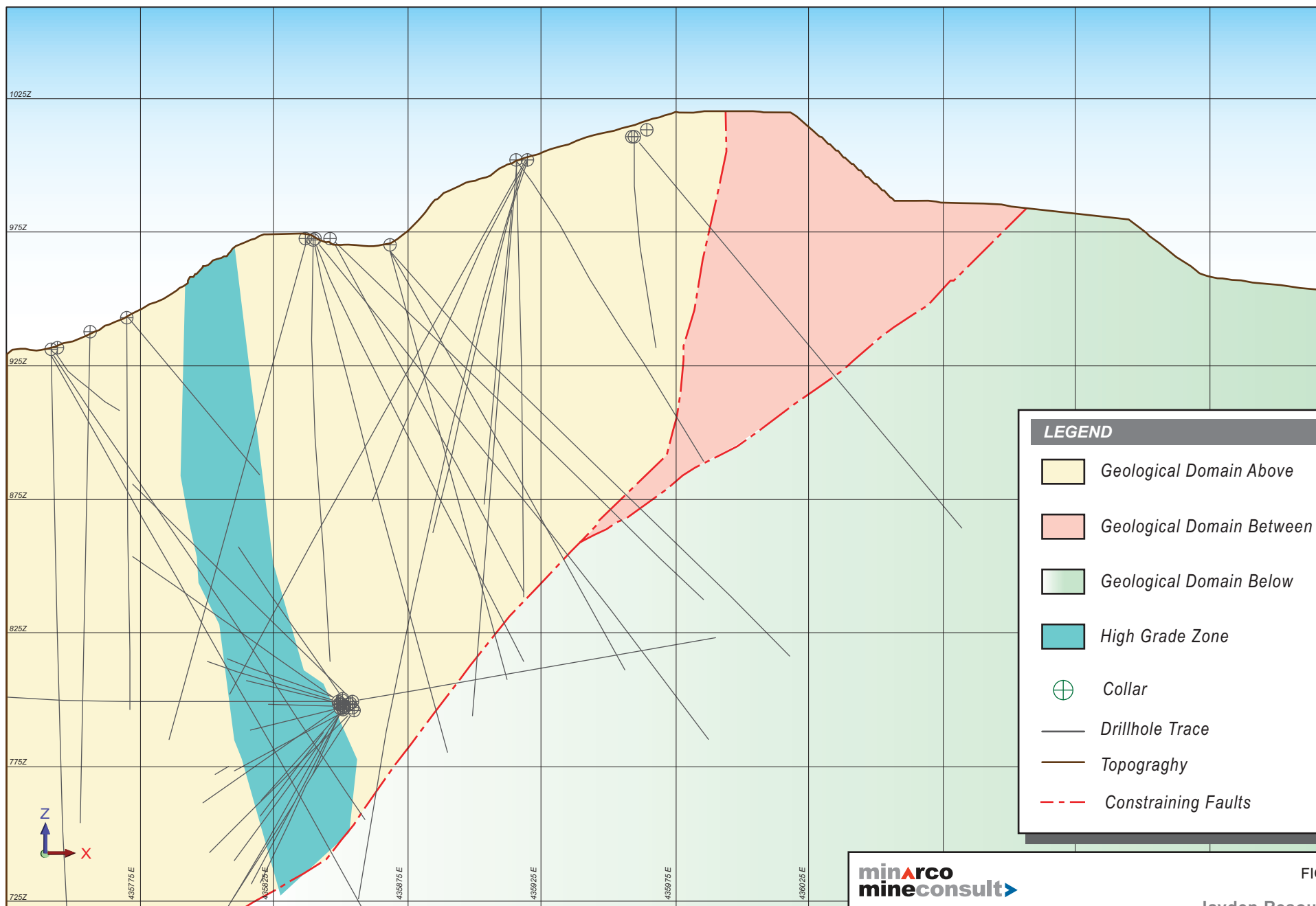
Due to the variable sulphide content within the deposit, MMC recommends further bulk density determinations be undertaken to enable a detailed understanding of the variation within the deposit. MMC believes that with further understanding of the variation of the bulk density a more accurate representation of the tonnage can be established. MMC believes these variations will only be localised and will not result in a material change to be resource.

## 16.2 GEOLOGY AND RESOURCE INTERPRETATION

As noted previously MMC believes the control on mineralisation is largely influenced by major fault structures, as a result no 3 dimensional resource wireframes were constructed to constrain mineralisation. The major basal fault and minor splay faults have been used as constraints to allow the domain within the estimate these domains include the area above the basal fault, the area below the basal fault and the area between the splays, as shown in **Figure 16-2**. The fault surfaces were created using Surpac software and incorporated the detailed geological logging of the underground and surface diamond holes.

MMC believes that a series of east west trending faults have offset both the high sulphide and low sulphide mineralisation. Evidence for these faults was observed during the site visit and in the drill holes. MMC constructed 3D surfaces in Surpac and where used to further domain area above the basal fault.

MMC determined the extent of weathering within the deposit to be minimal and as a result it was not incorporated in the geological interpretation.



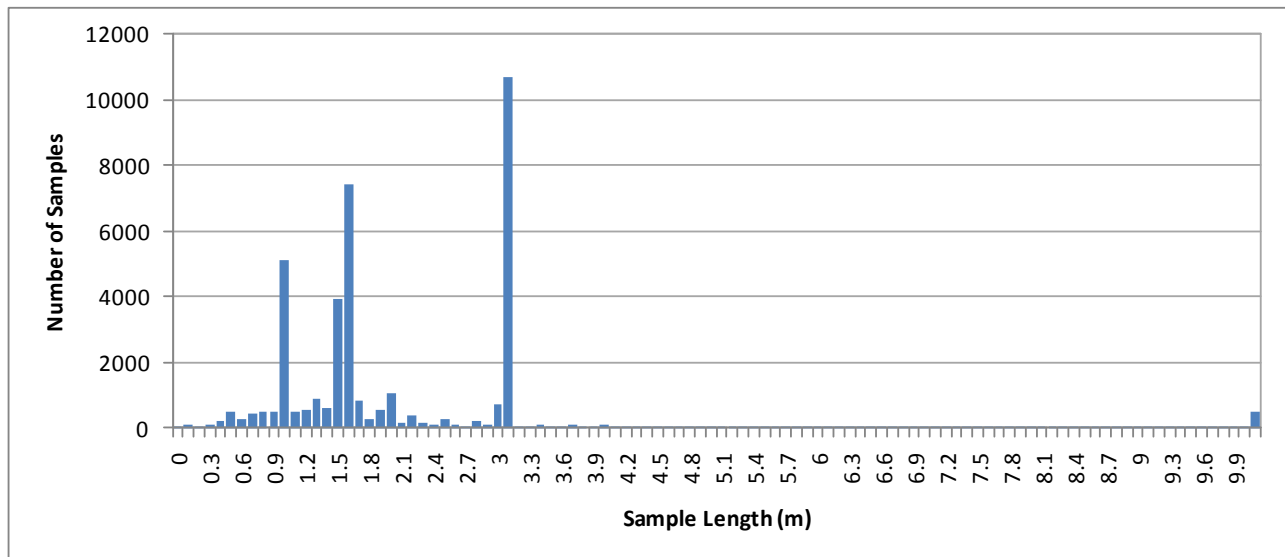
## 16.3 SAMPLE STATISTICS

### General

The fault surfaces were used to code the drill hole and trench database to allow identification of the resource domains. Separate intersection files were generated for each resource domain. A review of sample length within these files was carried out to determine the optimal composite length. This review determined that a variety of sample lengths were used during the sampling, these lengths ranged from less than 1 m to over 5 m. Interpretation of the histogram of the sample lengths (**Figure 16-3**) indicates that the optimum composite length is 3 m. Surpac software was then used to extract downhole composites within the intervals coded for each domain.

The composites were checked for spatial correlation with the surfaces, the location of the rejected composites and zero composite values.

**Figure 16-3. Silver Coin Project - Histogram of Sample Lengths.**



### Sample Support and Drilling Types Analysis

A comparison of the drill holes with the trenches indicates that similar results are found for each of the data sets, as shown in means and median for each data set in **Table 16-2**. Although slightly different means (1.37 versus 0.96 g/t Au), the medians are very similar, particularly given only 519 samples are from the trenches as opposed to 33,113 Au samples for the drill holes.

MMC interpreted this data as indicating that no significant sample support issues exists between the trench and drill hole data and as a result, both datasets can be used in an estimate.

Table 16-2. Silver Coin Project - Descriptive Statistics of Drill Hole and Trench Samples

Statistic	Drill Holes					Trench				
	Au	Ag	Cu %	Pb %	Zn %	Au	Ag uncut	Cu %	Pb %	Zn %
Number	33,113	29,273	23,309	23,488	23,334	519	519	519	519	518
Minimum	0.01	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00
Maximum	7,660.20	2,453.00	66.30	27.50	85.00	46.00	2,923.00	4.76	25.20	19.80
Mean	1.37	7.03	0.02	0.08	0.25	0.96	19.44	0.06	0.25	0.56
Median	0.23	2.80	0.00	0.01	0.03	0.36	5.10	0.01	0.04	0.10
Std Dev	42.93	29.87	0.45	0.43	1.24	2.53	130.42	0.28	1.29	1.57
Variance	1,842.87	892.00	0.20	0.19	1.54	6.41	17,009.70	0.08	1.67	2.47
Std Error	0.00	0.00	0.00	0.00	0.00	0.01	0.25	0.00	0.00	0.00
Coeff Var	31.45	4.25	22.32	5.16	5.00	2.64	6.71	4.57	5.12	2.83
<b>Percentiles</b>										
10	0.02	0.68	0.00	0.01	0.01	0.05	1.19	0.00	0.01	0.01
20	0.05	1.10	0.00	0.01	0.01	0.09	2.10	0.00	0.01	0.02
30	0.09	1.70	0.00	0.01	0.01	0.18	2.90	0.00	0.02	0.03
40	0.15	2.10	0.00	0.01	0.02	0.25	3.80	0.00	0.03	0.06
50	0.23	2.80	0.00	0.01	0.03	0.36	5.10	0.01	0.04	0.10
60	0.34	3.60	0.00	0.02	0.05	0.50	6.58	0.01	0.06	0.15
70	0.52	4.70	0.01	0.03	0.09	0.78	9.43	0.02	0.11	0.28
80	0.89	6.50	0.01	0.06	0.17	1.24	15.52	0.04	0.23	0.59
90	1.87	11.22	0.02	0.14	0.40	2.12	34.08	0.10	0.51	1.40
95	3.63	20.50	0.04	0.30	0.85	3.34	57.00	0.18	0.81	2.43
97.5	7.06	38.00	0.08	0.58	1.74	4.67	103.05	0.51	1.20	3.25
99	14.24	77.60	0.27	1.27	4.05	8.56	161.44	1.30	3.15	6.79

## Deposit Statistics

All composite sample data for the Silver Coin Au deposit were imported into Geoaccess Software for analysis. Statistics were produced for the Au, Ag and Zn within each domain, as shown in **Tables 16-3 to 16-5**.

Analysis of the descriptive statistics indicates that the elements within each domain appear to have a log normal distribution with moderate to high variability. A large range, coefficient of variation and variance is seen in all elements, particularly Au and Ag. This interpretation is further supported when the log probability plots and histograms are analysed (**Figure 16-4**). Resulting in the interpretation that all elements have a relatively lognormal distribution and a highly positively skewed distribution. The distribution for the Zn, Pb and Cu elements appear to have a long upper tail which varies slightly from the Au and Ag datasets.

MMC interprets this statistics to be representative of the style and tenure of mineralisation observed at the Silver Coin deposit. Of particular note is the long upper tails shown in the distribution of the Pb, Zn and Cu elements. As previously noted the base metal mineralisation is commonly observed, but is not always associated with localised semi-massive to massive mineralisation. This is consistent with the long tails (higher grade) and indicates that potential further domaining of these areas could be required, this interpretation is further supported by the metals correlation analysis completed in **Section 17.3.3**.

Table 16-3. Silver Coin Project - Descriptive Statistics for Above Domain

Statistic	Au uncut g/t	Au High Cut g/t	Au Low Cut g/t	Ag uncut g/t	Ag cut g/t	Zn uncut %	Zn Cut %
Number	22,657	22,657	22,657	22,657	22,657	22,657	22,657
Minimum	0	0	0	0	0	0	0
Maximum	216.40	70.00	30.00	1167.65	300.00	30.26	20.00
Mean	0.739	0.724		4.49	4.388	0.128	0.127
Median	0.17	0.17	0.70	2.09	2.09	0.01	0.01
Std Dev	3.22	2.61	0.17	16.31	12.53	0.64	0.61
Variance	10.39	6.79	2.09	265.94	157.04	0.41	0.38
Std Error	0.00	0.00	4.36	0.00	0.00	0.00	0.00
Coeff Var	4.36	3.60	0	3.63	2.86	4.98	4.82
Percentiles			2.998				
10	0.01	0.01	0.01	0.00	0.00	0.00	0.00
20	0.03	0.03	0.03	0.40	0.40	0.00	0.00
30	0.07	0.07	0.07	1.01	1.01	0.00	0.00
40	0.11	0.11	0.11	1.55	1.55	0.01	0.01
50	0.17	0.17	0.17	2.09	2.09	0.01	0.01
60	0.27	0.27	0.27	2.76	2.76	0.02	0.02
70	0.42	0.42	0.42	3.64	3.64	0.05	0.05
80	0.71	0.71	0.71	5.02	5.02	0.10	0.10
90	1.46	1.46	1.46	7.99	7.99	0.22	0.22
95	2.72	2.72	2.72	13.22	13.22	0.46	0.46
97.5	4.78	4.78	4.78	22.29	22.29	0.90	0.90
99	9.20	9.20	9.20	45.40	45.40	2.06	2.06

Analysis of the descriptive statistics indicates that all three domains have similar distributions, when the mineralisation styles are considered. Due of the low number of composites in the "Between Domain" and low grade tenure of mineralisation within the "Below" zone, it was interpreted that the "Above Domain" would be representative of all domains and as a result was used for all further statistical analysis

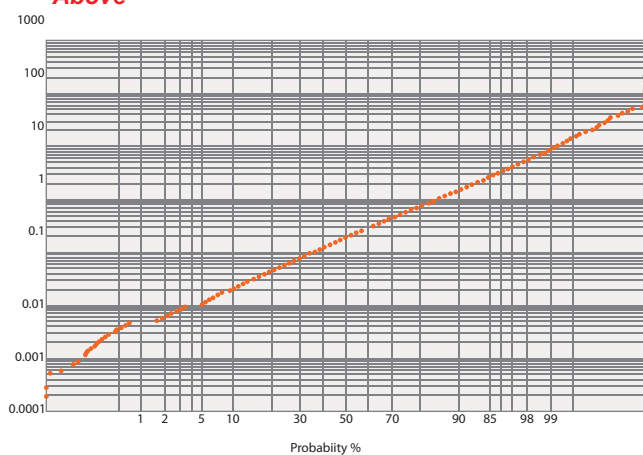
Table 16-4. Silver Coin Project - Descriptive Statistics for Between Domain

Statistic	Au uncut	Au cut	Ag uncut	Ag cut	Zn %
Number	433	433	433	433	433
Minimum	0	0	0	0	0
Maximum	903.43	30.00	118.42	118.42	2.75
Mean	2.36	0.35	2.69	2.69	0.03
Median	0.08	0.08	1.50	1.50	0.00
Std Dev	43.41	1.70	7.46	7.46	0.14
Variance	1,884.66	2.89	55.67	55.67	0.02
Std Error	0.10	0.00	0.02	0.02	0.00
Coeff Var	18.38	4.92	2.77	2.77	5.21
Percentiles					
10	0.00	0.00	0.00	0.00	0.00
20	0.01	0.01	0.27	0.27	0.00
30	0.02	0.02	0.68	0.68	0.00
40	0.04	0.04	1.10	1.10	0.00
50	0.08	0.08	1.50	1.50	0.00
60	0.13	0.13	1.90	1.90	0.01
70	0.18	0.18	2.36	2.36	0.01
80	0.24	0.24	3.12	3.12	0.03
90	0.40	0.40	4.36	4.36	0.07
95	1.18	1.18	6.65	6.65	0.11
97.5	1.94	1.94	11.28	11.28	0.15
99	5.28	5.28	27.27	27.27	0.24

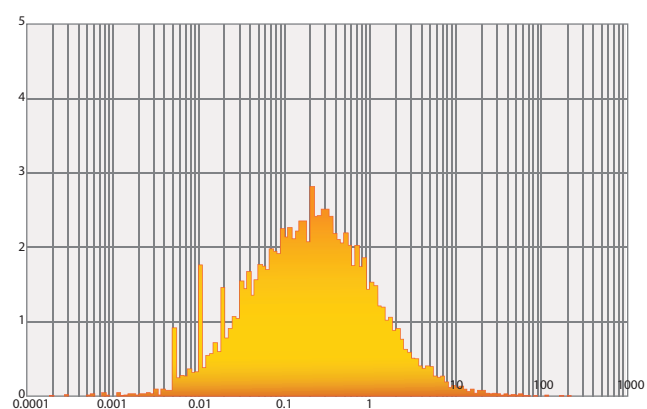
Table 16-5. Silver Coin Project - Descriptive Statistics for Below Domain

Statistic	Au uncut	Au cut	Ag uncut	Ag cut	Zn %
Number	2,444	2,444	2,444	2,444	2,444
Minimum	0	0	0	0	0
Maximum	16.73	16.73	277.79	277.79	16.36
Mean	0.09	0.09	3.07	3.07	0.13
Median	0.02	0.02	1.39	1.39	0.02
Std Dev	0.47	0.47	11.07	11.07	0.82
Variance	0.22	0.22	122.57	122.57	0.68
Std Error	0.00	0.00	0.01	0.01	0.00
Coeff Var	5.42	5.42	3.61	3.61	6.49
Percentiles					
10	0.00	0.00	0.00	0.00	0.00
20	0.01	0.01	0.40	0.40	0.01
30	0.01	0.01	0.71	0.71	0.01
40	0.01	0.01	1.01	1.01	0.01
50	0.02	0.02	1.39	1.39	0.02
60	0.03	0.03	1.80	1.80	0.03
70	0.04	0.04	2.38	2.38	0.05
80	0.07	0.07	3.27	3.27	0.09
90	0.18	0.18	5.10	5.10	0.18
95	0.33	0.33	8.33	8.33	0.31
97.5	0.58	0.58	14.26	14.26	0.60
99	0.92	0.92	25.94	25.94	1.42

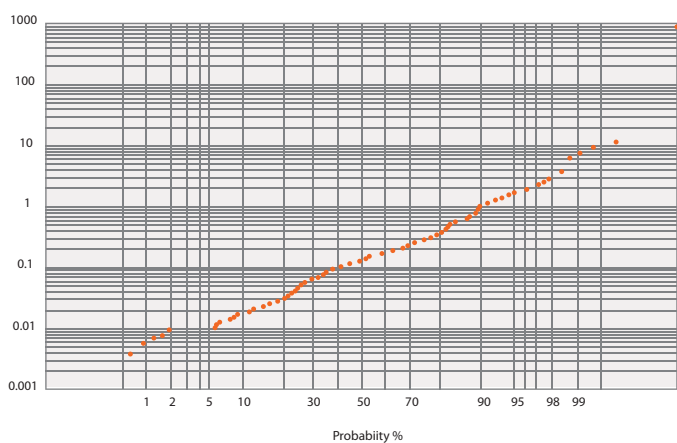
### Above



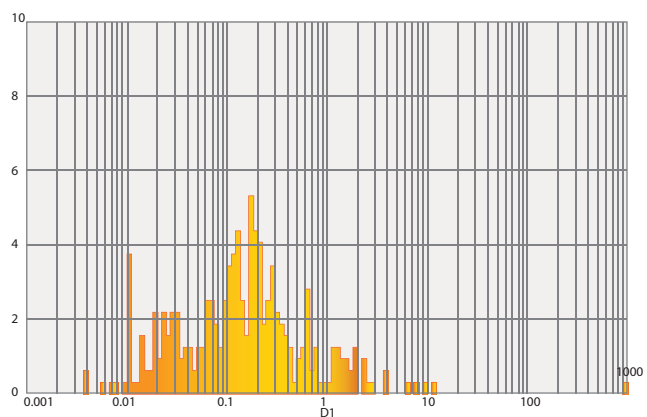
Frequency %



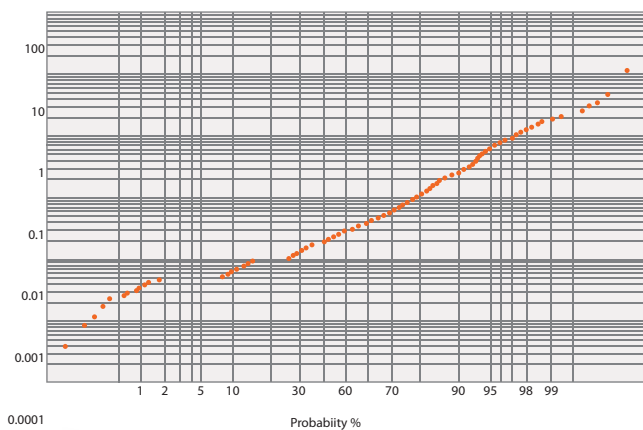
### Between



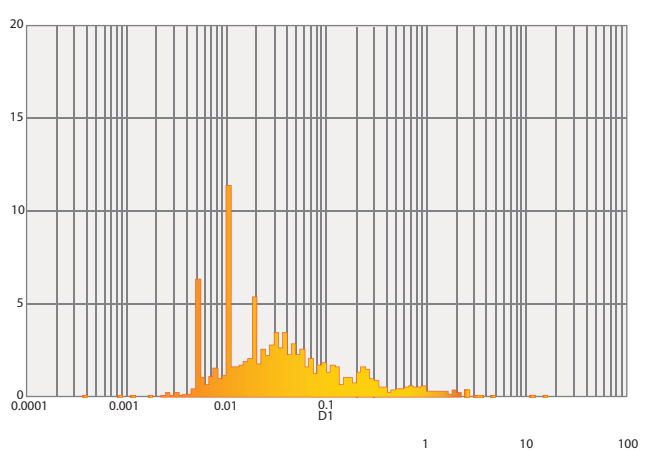
Frequency %



### Below



Frequency %





## Metals Correlation

The correlation of the metals within the Silver Coin deposit are typical of epithermal style systems, with a good correlation between Au and Ag, as shown in the scatter plot in **Figure 16-5**. The interpretation of Au being strongly associated with sulphide is the reasonable association of Au with Zn and Pb. Although slightly scattered the plots in **Figure 16-5** for these metals indicated that with increasing Au both Zn and Pb increase.

Further supporting the association of the mineralisation within the deposit with sulphide minerals is the good correlation of Pb and Zn. The correlation of Zn and Pb is commonly found in sulphide hosted base metals deposits. Unfortunately this interpretation cannot be confirmed as no sulphur determinations were completed.

## High Grade Cuts

Due to the different style of mineralisation observed in the deposit, MMC considered it necessary to use two high grade cuts for the same composites constrained by the fault surfaces, one for the high sulphide high grade zone and one for the low sulphide zone. Analysis of the distributions indicates a distinctive break in the log probability plot (**Figure 16-4**) of the Au grade at 50 g/t for the Above Domain, while analysis of the histogram (**Figure 16-4**) indicates that a slight increase in frequency at 10 g/t occurs. Visual analysis of the drill holes indicates that the grades above 10 g/t, outside the high sulphide zone occur as less continuous isolated high grade samples surrounded by medium to low grade material. These changes in distributions are interpreted to be the result of the differing style of mineralisation and, as a result were used as high grade cuts for the different zones.

Analysis of the histogram and probability plot for the Between and Below Domains supports the 10 g/t cut used for the low sulphide zone (which is the mineralisation style in these domain).

Analysis of the histograms for Ag and Zn indicates that both have similar distributions within the high sulphide and low sulphide mineralisation. As a result the same cut was applied to both styles of mineralisation and all domains, that being 130 g/t for Ag and no cut for Zn, as shown in **Table 16-6**.

**Table 16-6. Silver Coin Project - High Grade Cuts Applied to Composites**

Element	Domain	Mineralisation	High Grade Cut
Au	Above	High Sulphide	70
Au	Above	Low Sulphide	30
Ag	All	Both	300
Zn	All	Both	20

## 16.4 GEOSPATIAL ANALYSIS

Due to the style of mineralisation found within the deposit three geospatial analysis were completed, these were:

- composites within the high sulphide zone,
- composites within the low sulphide zone, and
- all composites combined (within the above domain).

The geospatial analysis of the separate mineralisation styles indicates that no significant continuity could be interpreted with no robust variogram produced. Although no robust variograms could be interpreted, it was interpreted that similar controls of mineralisation are found within the two zones, that being parallel to the constraining fault, i.e. 40° to the west.

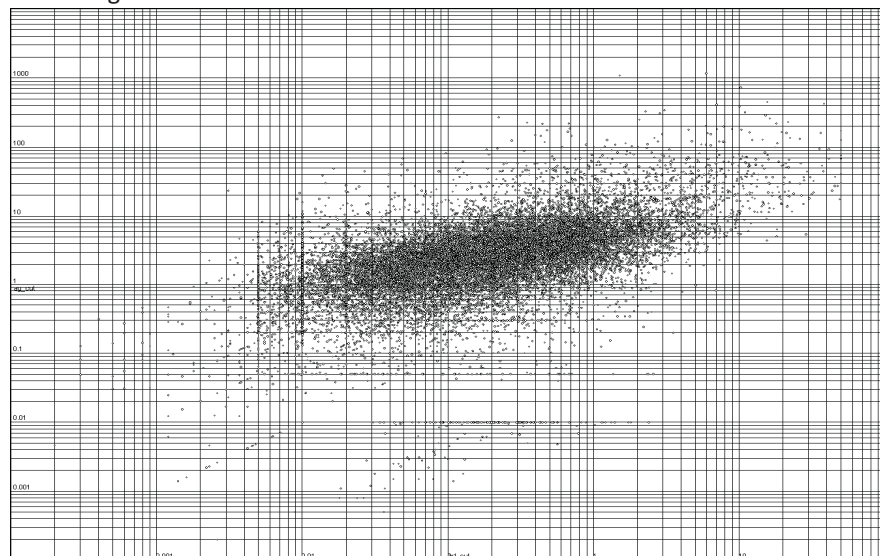
This interpreted orientation was supported when the combined dataset was analysed. Due to the unconstrained estimation technique used to interpret to the grades within each domain, it was decided to use a 1g/t Au lower cut of the data used for geospatial analysis. The interpretation of the resultant variograms indicates that the nugget was low at 7%, and the major direction of continuity has a strike of 350° and a plunge to the north at 10° with a range of 54m.

The interpreted major direction is consistent with the interpreted geology of the deposit with the foliation and vein oriented in this direction. Interpretation of the semi major direction indicates a direction parallel to the basal fault is appropriate, i.e. a dip of 40°, and a range of 30m is appropriate. The interpreted variogram parameters are shown in **Table 16-7** and the interpreted model graphically in **Figure 16-6**.

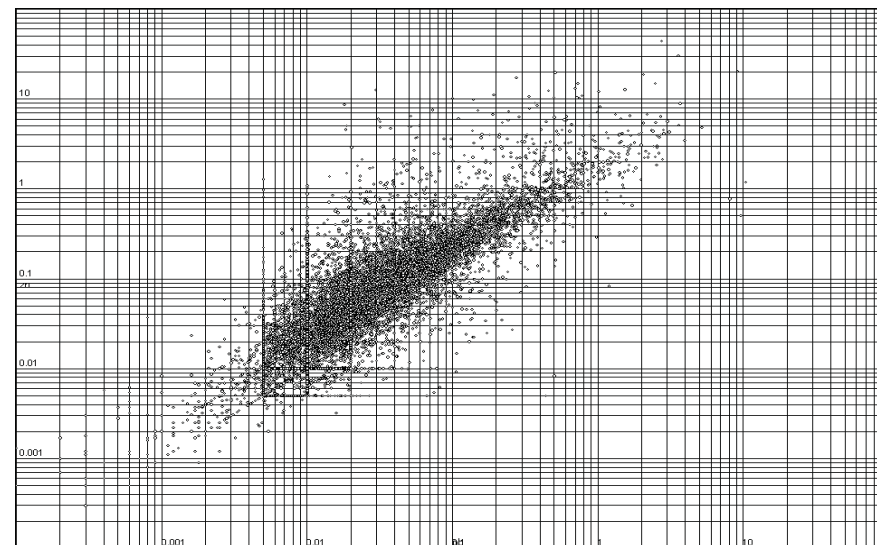
**Table 16-7. Silver Coin Project - Interpreted Variography Parameters**

Domain	Nugget	Structure 1				Structure 2			
		Sill	Range	major/semi	major/minor	Sill	Range	major/semi	major/minor
All Domains	0.07	0.68	30.03	3.00	6.01	0.25	54.02	1.80	2.70

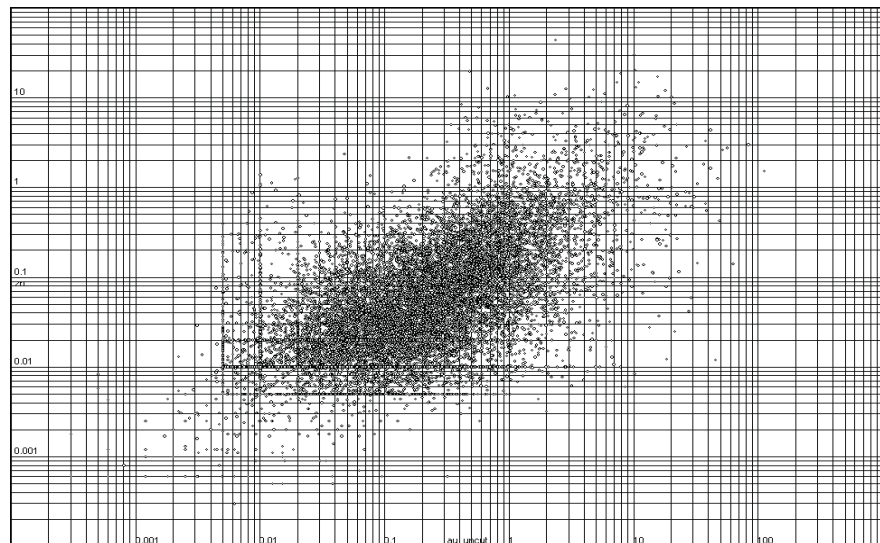
Au Vs Ag



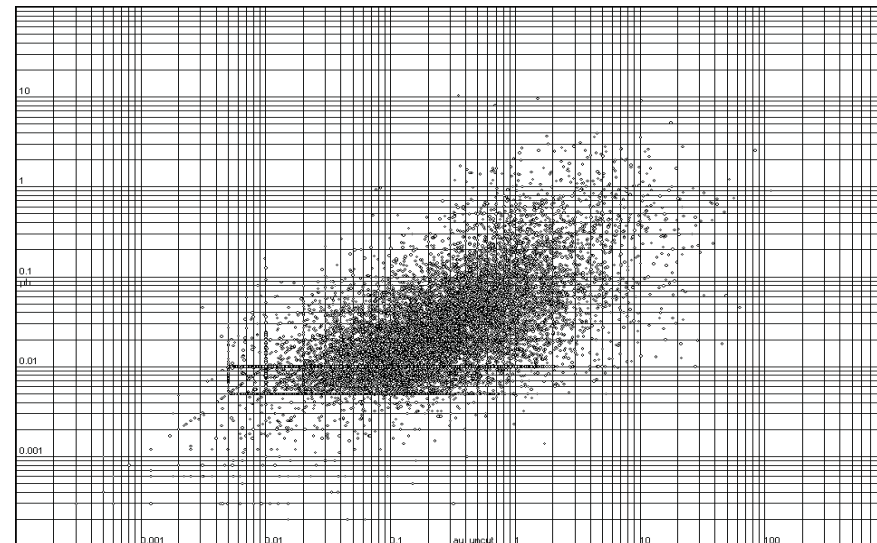
Pb Vs Zn



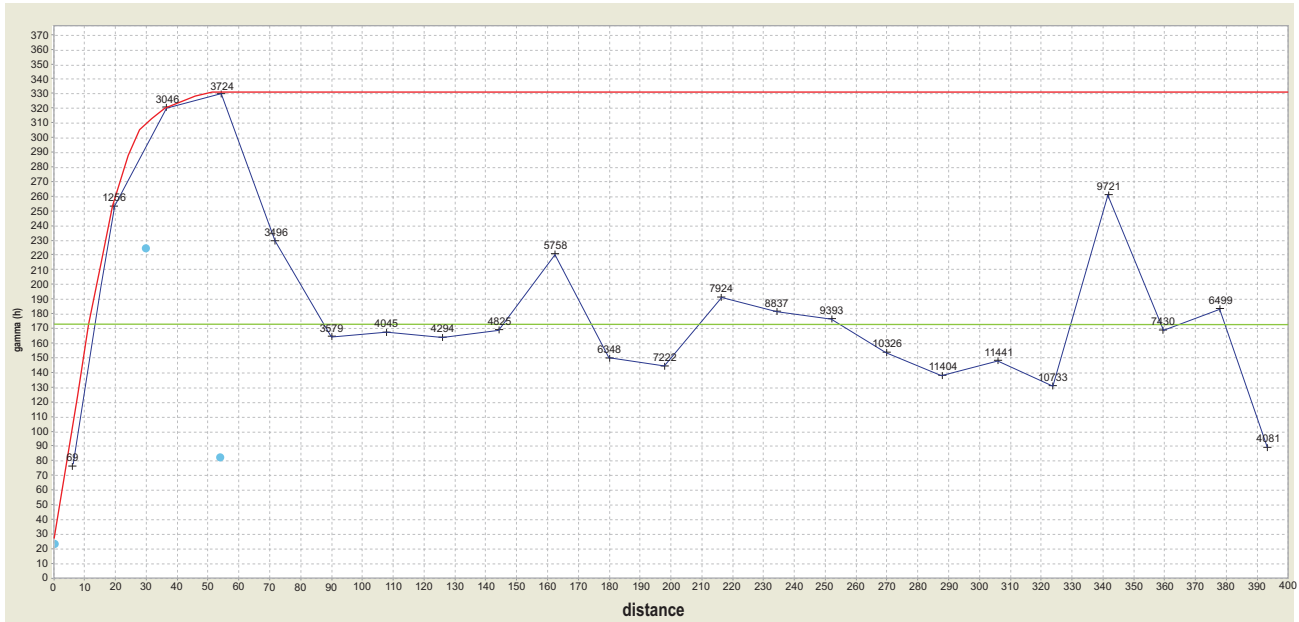
Au Vs Zn







Au Vs Pb



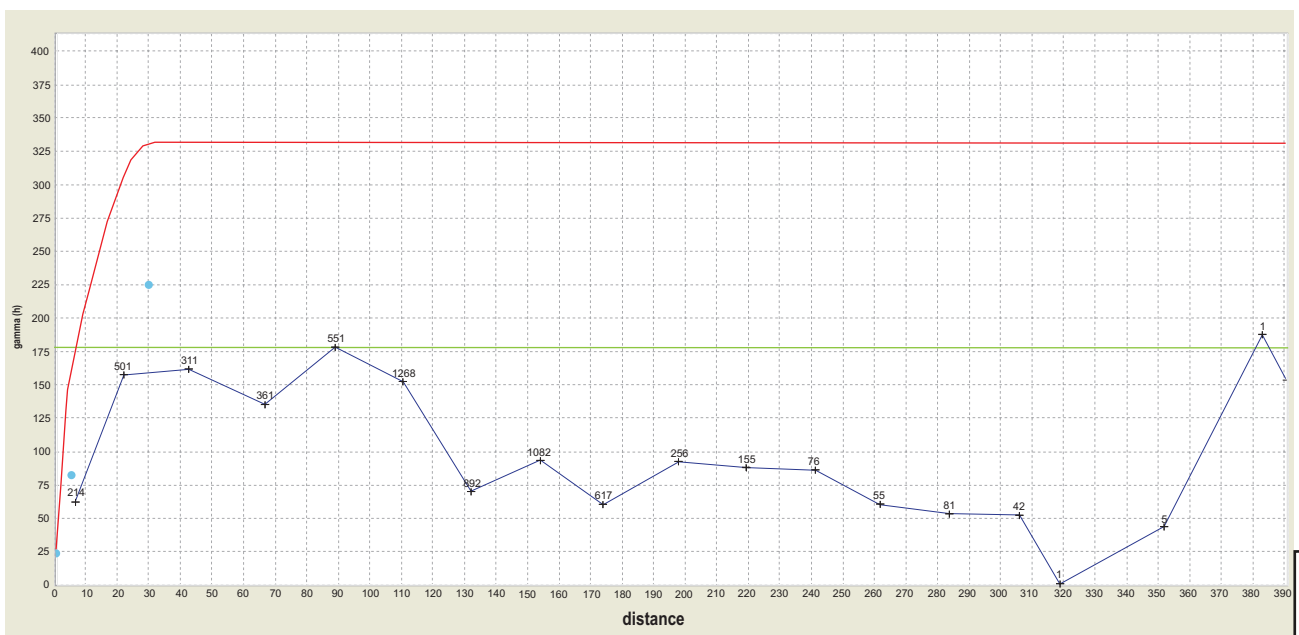
9.84655 -> 171.754 (20)



## LEGEND

-  Normal
-  Variance
-  Variogram
-  Variogram Structures

39.2735 -> 71.7099 (20)



## 16.5 RESOURCE ESTIMATION

### Block Model

One Surpac block model was created to encompass the full extent of the mineralisation within the Silver Coin deposit. The block model origin and extents and attributes are listed in **Table 16-8**.

**Table 16-8. Silver Coin Project - Block Model Parameters**

Model Names	sc_20101217.mdl		
	Y	X	Z
Minimum Coordinates	6,217,000	435,000	150
Extent (m)	1,900	1,900	900
Block Size (m) (No Sub-blocks)	10	5	5
Rotation (degrees)	0		
Block Attributes:			
au_uncut	Uncut Au g/t grade		
au	Reportable Au g/t grade		
ag_uncut	Uncut Ag g/t grade		
ag	Reportable Ag g/t grade		
zn	Reportable Zn % grade		
class	JORC classification code (1 = mea, 2 = ind, 3 = inf)		
pod	domain (air, above, below, between)		
bd	bulk density (t/m <sup>3</sup> )		
zone	Interpreted zone in above domain		
Inside	High grade cut zone		
pass	Estimation pass		

### Estimation Parameters

For all domains within the deposit, the interpreted fault surfaces were used as hard boundaries, while the high grade zone in the Above Domain was used as a soft boundary. The Ordinary Kriging (OK) algorithm was selected for grade interpolation and utilised the parameters from the geospatial analysis. The OK algorithm was utilised to minimise over smoothing within the estimate which would result due to the clustered nature of the sample density.

An anisotropic search based on the geospatial analysis was used to estimate Au with a first pass radius of 50m was used based on the major direction of continuity and drill density through the mineralised zone, while a search radius of 100m used for the second pass. The minimum number of samples was 6 for both passes and a maximum of 5 samples was used from each hole. ‘

The search parameters are shown in **Table 16-9**.

**Table 16-9. Silver Coin Project - Block Model Search Parameters**

Parameter	High grade zone		All other areas	
	Pass 1	Pass 2	Pass 1	Pass 2
Search Type	anisotropic		anisotropic	
Bearing	350		350	
Dip	0		40	
Plunge	-10		-10	
Major-Semi Major Ratio	1.8		1.8	
Major-Minor Ratio	2.7		2.7	
Search Radius	50	100	70	100
Max Vertical Search	999	999	999	999
Minimum Samples	4	4	6	6
Maximum Samples	12	12	12	12
maximum Per Hole	5	5	5	5
Block Discretisation	2 X by 4 Y by 2 Z		2 X by 4 Y by 2 Z	

### Density

MMC considers that all rock material within the model as fresh and as noted earlier, considers 2.86 g/cm<sup>3</sup> to be a good representation of the bulk density and as a result it was used for all rock material in the block model.

## Resource Classification

A significant number of holes have been completed from both underground workings and from surface on the Silver Coin deposit. Drilling was undertaken in a number of phases, on a number of spacings and a number of orientations, as a result sample density is variable with some areas very dense while other are quite sparse.

As a result of this sample density variability MMC constrained a geospatial analysis of the grade within the density populated areas only to limit the effect of the variable sample spacing. This detailed statistical analysis suggested that a sample spacing of 15 m, 30 m and 50 m were appropriate for classification of Measured, Indicated and Inferred Mineral Resources respectively which would be compliant with the recommended guidelines of the NI 43-101 Code. These distances were based on the variogram ranges for the major direction of continuity and the visual inspection of the grade within the drill hole. These distances represent the maximum distance between two composites from at least two different drill holes.

As noted a significant number of samples were un-sampled and subsequently given a value of 0 for the resource estimate. MMC considers there to be potential for low grade mineralisation to occur in these unsampled intervals, as a result MMC believes the current estimated grade in these areas is of low confidence and therefore is classified as Inferred Mineral Resource.

## Model Validation

To check that the interpolation of the block model correctly honoured the drilling data, validation was carried out using the following steps:

- Swath Plots;
- Grade Comparison by Domain;
- Visual Inspection of the Blocks;

### Swath Plots

The composites were compared with the block model data by northing and elevation in the swath plots, shown in **Figure 17-7**. The swath plots were constrained by domain. These plots highlight that the estimates compare relatively poorly for the majority of domains, with the exception of the Between Domain. The plots however do highlight the smoothing of the interpolation resulting from the unconstrained OK estimation technique.

As a result of the poor comparison of the entire block estimates and sample composites, MMC compared the Measured blocks and Measured and Indicated (combined) Blocks to the composites from the respective areas. The resultant swath plots (**Figure 17-8**) show a good correlation for both Measured and Measured plus Indicated block estimates.

### Grade Comparison by Domain

Comparison of the block values and composites results in a relatively poor comparison (**Table 16-10**), with block model grade being lower for all domains except the Between Domain.

**Table 16-10. Silver Coin Project - Comparison of Block Estimates and Composites.**

Domain	Resource Volume	Block Model			Number of Comps	Composites		
		Au Cut	Ag g/t	Zn ppm		Au Cut	Ag g/t	Zn ppm
below	9,273,500	0.08	1.74	0.03	2,799	0.05	2.01	0.05
above	4,059,500	0.84	4.69	0.15	22,279	0.68	4.06	0.11
between	1,581,750	0.37	2.59	0.17	292	0.37	2.60	0.18
<b>Total</b>	<b>14,914,750</b>	<b>0.32</b>	<b>2.63</b>	<b>0.08</b>	<b>25,370</b>	<b>0.60</b>	<b>3.82</b>	<b>0.11</b>

### Visual Inspection of the Blocks

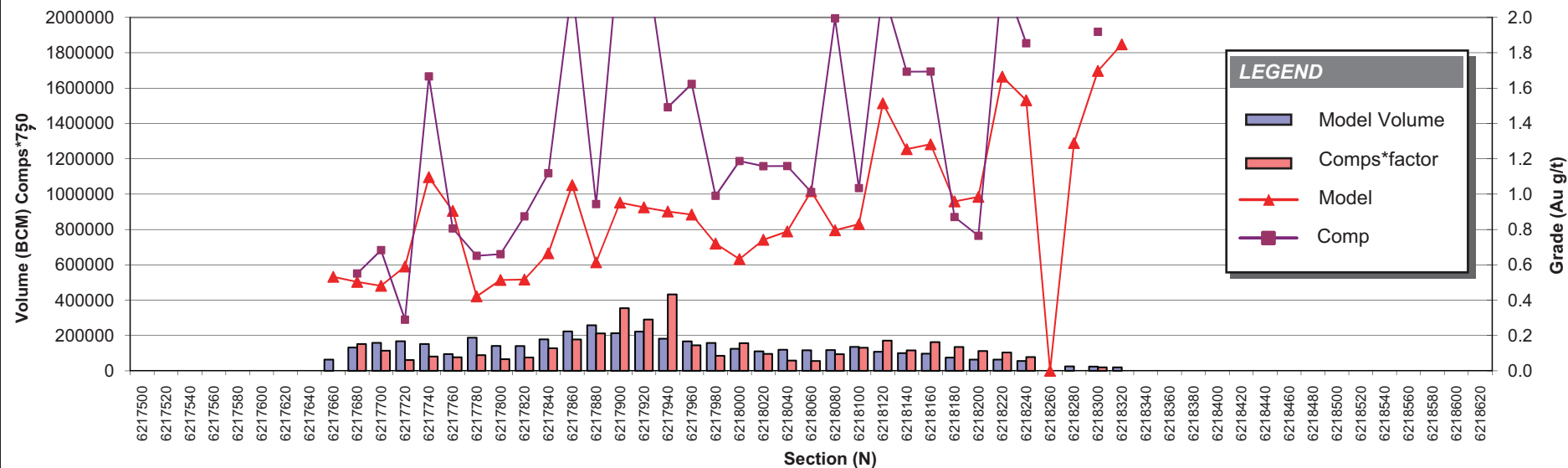
Due to the poor mathematical comparison of the entire block estimates to the composites, a visual inspection of the block estimates and the composites was completed. The visual inspection indicates a good correlation exist at a local scale.

### Overall Validation

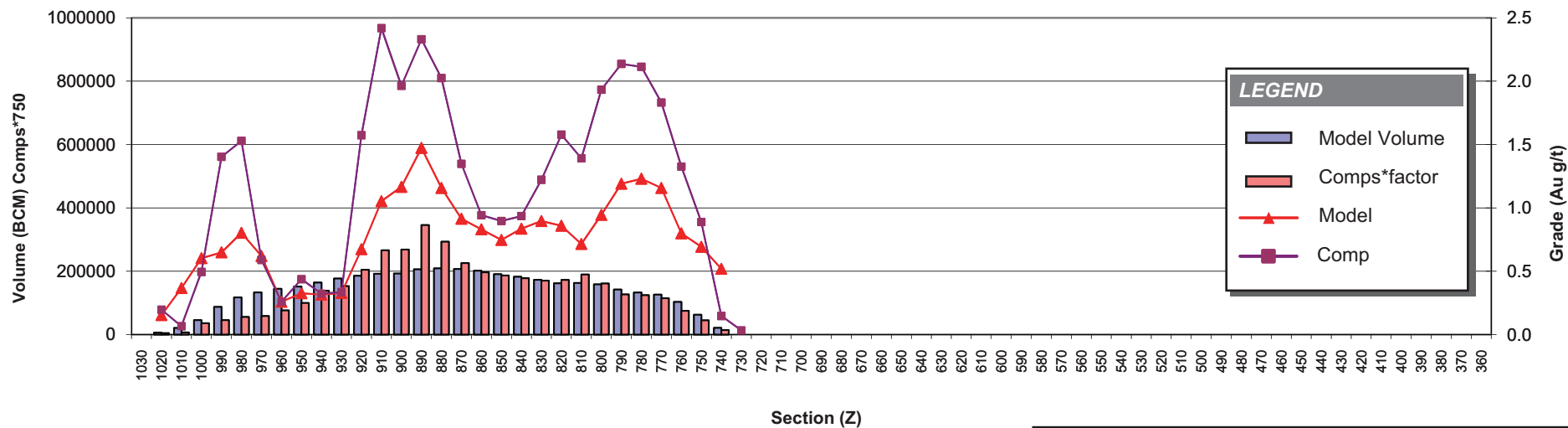
Due to the general unconstrained estimate the overall comparison is poor, as shown in the swath plots in **Figure 16-8**. However when constrained to the measure and indicated blocks the swath plots show an excellent correlation. This interpretation is confirmed when the blocks are visually inspected.

MMC believes the estimate is representative of the composites and is indicative of the known controls of mineralisation and the underlying data.

Comparison of OK and Composite Au Grades by Northing

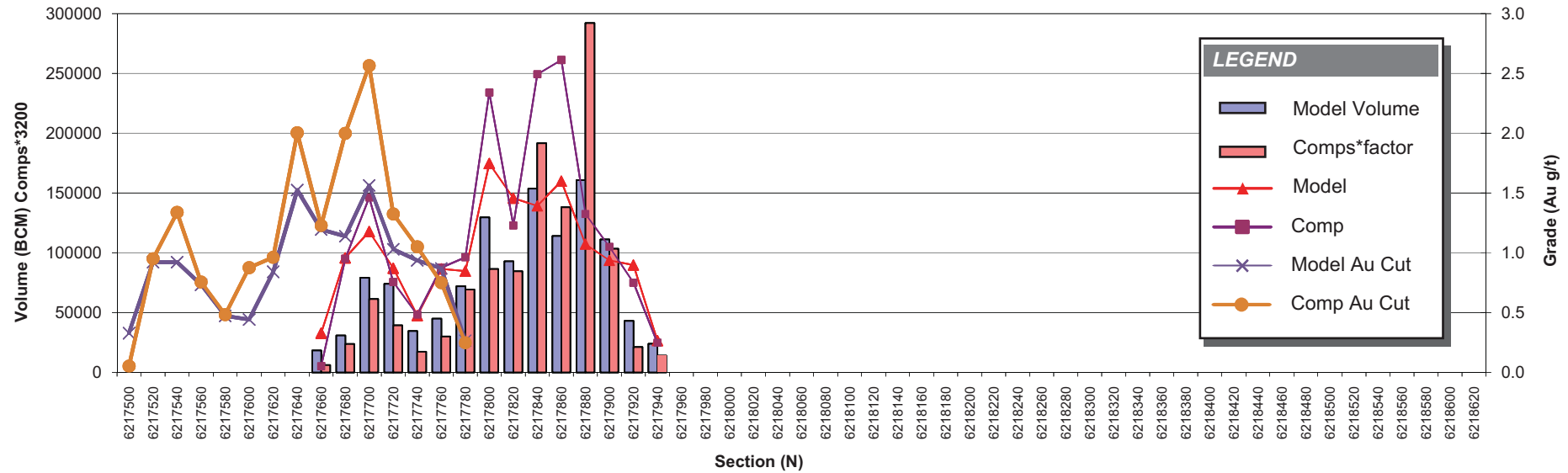


Comparison of OK and Composite Au Grades by Elevation

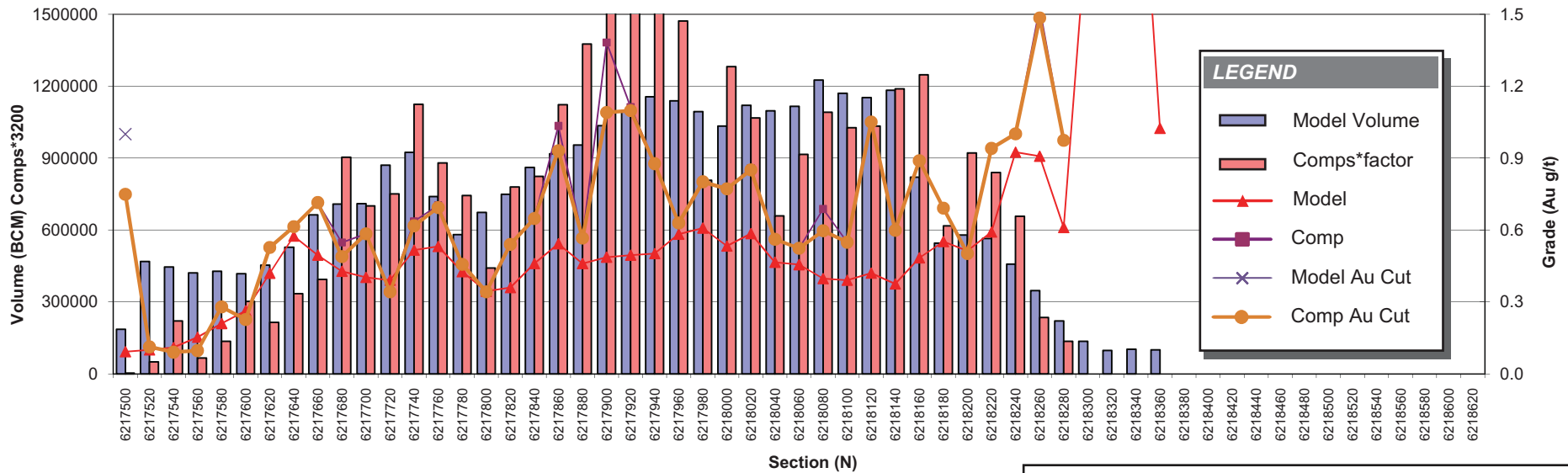




Comparison of Measured OK and Composite Au Grades by Northing



Comparison of Indicated OK and Composite Au Grades by Northing



## Mineral Resource Statement

The Mineral Resources were completed by Mr. Jeremy Clark of MMC in their Beijing Office and are reported at several cutoff values within the deposit. The results of the resource estimate for the Silver Coin deposit are tabulated in **Table 16-11** and **Table 16-14** below.

**Table 16-11. Silver Coin Project - Au, Ag and Zn Measured Resources by Au Cut Off Grade.**

Grade Au g/t	Tonnes T	Au g/t	Ag g/t	Zn %	Au Ounces	Ag Ounces	Zn Pounds
0.10	5,804,370	1.22	5.48	0.21	227,116	1,023,007	26,637,183
<b>0.30</b>	<b>4,372,225</b>	<b>1.55</b>	<b>6.53</b>	<b>0.26</b>	<b>218,410</b>	<b>918,417</b>	<b>25,531,741</b>
0.50	3,468,465	1.86	7.43	0.31	206,988	828,504	23,949,503
1.00	1,982,695	2.71	9.40	0.39	172,517	599,400	16,880,403
1.50	1,315,600	3.46	11.14	0.45	146,405	471,378	13,174,234
2.00	914,485	4.23	13.03	0.53	124,233	383,068	10,772,068

**Table 16-12. Silver Coin Project - Au, Ag and Zn Indicated Resources by Au Cut Off Grade**

Grade Au g/t	Tonnes T	Au g/t	Ag g/t	Zn %	Au Ounces	Ag Ounces	Zn Pounds
0.10	31,527,925	0.69	4.56	0.11	695,952	4,624,277	79,375,584
<b>0.30</b>	<b>19,759,025</b>	<b>0.98</b>	<b>5.57</b>	<b>0.15</b>	<b>624,006</b>	<b>3,537,769</b>	<b>65,642,277</b>
0.50	12,968,670	1.29	6.42	0.18	538,359	2,678,401	52,466,291
1.00	5,514,795	2.08	8.39	0.25	369,545	1,486,878	29,809,170
1.50	2,876,445	2.88	10.14	0.29	266,650	938,127	18,157,877
2.00	1,741,740	3.64	11.99	0.32	203,654	671,303	12,252,597

**Table 16-13. Silver Coin Project – Au, Ag and Zn Combined Measured and Indicated Resources by Au Cut Off Grade**

Grade Au g/t	Tonnes T	Au g/t	Ag g/t	Zn %	Au Ounces	Ag Ounces	Zn Pounds
0.10	37,332,295	0.77	4.70	0.13	923,068	5,647,284	106,012,767
<b>0.30</b>	<b>24,131,250</b>	<b>1.08</b>	<b>5.74</b>	<b>0.17</b>	<b>842,416</b>	<b>4,456,186</b>	<b>91,174,018</b>
0.50	16,437,135	1.41	6.63	0.21	745,347	3,506,905	76,415,794
1.00	7,497,490	2.25	8.66	0.29	542,062	2,086,278	46,689,573
1.50	4,192,045	3.06	10.45	0.34	413,055	1,409,505	31,332,111
2.00	2,656,225	3.84	12.35	0.39	327,887	1,054,371	23,024,665

**Table 16-14. Silver Coin Project – Au, Ag and Zn Inferred Resources by Au Cut Off Grade**

Au Cut Off g/t	Tonnes T	Au g/t	Ag g/t	Zn %	Au Ounces	Ag Ounces	Zn Pounds
0.10	74,844,055	0.44	4.66	0.12	1,062,696	11,203,276	195,063,987
<b>0.30</b>	<b>32,443,840</b>	<b>0.78</b>	<b>6.41</b>	<b>0.18</b>	<b>813,273</b>	<b>6,691,185</b>	<b>128,006,920</b>
0.50	17,246,515	1.13	6.90	0.21	625,832	3,824,648	80,820,137
1.00	6,362,785	1.89	8.57	0.25	386,552	1,753,338	35,349,030
1.50	3,519,945	2.44	9.81	0.29	275,835	1,110,638	22,738,580
2.00	2,020,590	2.97	11.01	0.32	192,639	715,290	14,238,898

## Risks

Several risks are associated with the estimate of the Silver Coin Resource, these include:

- Some discrepancies were found between the drill hole collars and the topography. These discrepancies were corrected as best as practicable to reflect the geography of the area. MMC believes these discrepancies with the topography will not result in any material difference to the resource.
- During the site visit it was noted that the mineralisation is variable on a local scale. Due to the 3 m sample length used for the majority of the sampling these local variations are not noted in the assays. MMC believes that with smaller samples, these variations will be shown in the assays, however given the proposed open pit method of mining, the local variation will not result in any material change.
- A detailed understanding on the mineralisation controls is not available with the present data for the majority of the deposit. MMC believes with future drilling and smaller sample length the local variation will be better understood and will result in a much better understanding of the mineralisation control.
- Only a relatively limited number of bulk density determinations have been completed on the deposit.

## Dilution and Ore Losses

The block model is undiluted with no ore loss factors applied; as a result appropriate dilution and ore loss factors must be applied for any economic reserve calculation.

## Mineral Reserve Estimate

A Mineral Reserve estimate has not been completed for this report.

## 17 OTHER RELEVANT DATA AND INFORMATION

A Preliminary Economic Assessment (“PEA”) has been completed for the Project. The PEA is preliminary in nature, includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves, and there is no certainty that the preliminary economic assessment will be realised. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The Project does not contain any mineral reserves.

The PEA included a mining, processing, site infrastructure, environmental and project development review, operating and capital cost estimations and a preliminary cash flow analysis. Due to the inclusion of Inferred Resources and PEA level estimates and assumptions, there is no certainty that any economic value will be realised from this project.

### 17.1 MINING REVIEW

The planning processes completed for the PEA included:

- Deposit characterisation and consideration of mining method – the geological model created for the Mineral Resource estimate (as described in **Section 16**) was assessed for suitability of various mining methods;
- Pit limit estimation – “Whittle” pit optimiser software was used to study the value of the deposit at different product prices and to assist determining a theoretical pit shell;
- Pit limits and mineable quantities – the results of the optimisers were used to select a practical mining pit shell and mineable quantities were calculated for the chosen pit shell;
- Mine development strategy – various strategies for developing the mining pit shell were examined and a preferred strategy chosen;
- Production scheduling – utilising the chosen mining strategy, the estimated mineable quantities were scheduled, along with estimated mineralised grades. Stage plans were also prepared;
- Mine equipment selection – equipment was chosen to match the duty required from the production schedule;
- Operating cost estimates – cost estimates, both capital and operating, were developed for the life of mine operation; and,
- Project development – project development requirements and timeframes were estimated.

### Mining Method

The deposit is long and thin, with high grade areas surrounded by a larger dispersed low grade halo. The body of mineralisation has a north-south strike. The mineralisation commences near the surface and continues to depth. The geology suggests the following mining method:

- Open cut mining;
- Mineralised mineable quantities to be selectively mined;
- Waste dumping primarily on surface dumps;
- Excavator mining; likely by backhoe; and
- Truck haulage to surface stockpiles and waste disposal dumps.

Mining would occur on low benches (~ 4 to 5 m lifts) to support grade control of the mineralised zones. A typical mining cycle would involve:

- Drilling of a blast pattern;
- Sampling of drill hole cuttings for grade control;
- Blasting to fragment rock;
- Marking out mineralised zones based on grade control results; and
- Digging; loading and hauling of mineralised material and waste rock to the surface.

It may be possible later in the mine life to dump waste rock in-pit to minimise surface disturbance and reduce rehabilitation requirements.

## Pit Limit Optimisation

The terminology “pit limit optimisation” refers to a process which is aimed to generate the best value mining pit shape. It does not imply that mining has been “optimised” in other ways; such as equipment optimisation, labour optimisation, or grade optimisation.

The optimisation process created a series of pit shells based on a range of metal prices ranging from 30% to 200% of a chosen base price, in increments of 5%. The lower the price of metal the smaller the pit and the higher the potential operating margins. For example, a pit shell based on a metal price at 60% of the base price would focus only on the higher margin mineralised material able to be profitably extracted at such low revenue.

Hence this approach not only identifies the high value areas, but also indicates the potential pit extents should future metal prices be higher or lower than the current prices.

The geology model created for the Mineral Resource estimates was the basis for pit limit optimisation using the Whittle 4X Optimiser for polymetallic deposits. The optimisation process involved the following steps:

- Define physical constraints;
- Define metals to be optimised;
- Define quality/recovery inputs;
- Set mine operating cost rates;
- Set non-mine operating cost rates;
- Set product prices; and
- Run Optimiser(s) and report results.

### Physical Constraints

MMC is not aware of any surface physical constraints to mining, such as roads, rivers or environmental issues, in the immediate area of the mineralisation. Though the deposit occurs in an area of relatively high natural significance, the mineralisation is restricted to a small area and does not intersect key physical features such as the glacial valley, waterways or lakes.

The mining constraints used for the Project optimisation were as given in **Table 17-1**.

**Table 17-1. Silver Coin Project - Optimiser Physical Constraints**

Item	Units	Value
Max Slope Angle	Degrees	45° overall
Mineralised Material Loss	% weight	5%
Mineralised Material Dilution	% weight	5%
Dilutant Grade	Au g/t	0
Material Used	Category	Measured & Indicated & Inferred

Source: MMC

The rock density was assumed to be 2.86 t/bcm.

### Metals and Cut-Off Grades

Though historically the primary focus has been on the presence of gold, the mineralisation is polymetallic and includes silver, zinc and other base metals. For the purpose of this optimisation, the contribution to the total pit size by zinc and silver was also considered.

No cut-off grades were applied for the pit optimisation as Whittle 4X software estimates the appropriate cut-off grade based on the metallurgical and economic constraints.

### Metallurgical Factors

Based on interpretation of the current metallurgical testwork, metallurgical recoveries were estimated at 80% for gold, 75% for silver and 70% for zinc. The proposed metallurgical process involves a flotation stage followed by leaching and is described in **Section 15**.

MMC notes that metallurgical recoveries are estimates based on early testwork and additional metallurgical testwork is required to develop an accurate understanding of likely metallurgical recoveries. Variations to the metallurgical recoveries may have a material impact on the estimated mine plan.

### Mine Operating Cost Rates

Rates for mine operating costs were estimated by referencing our in-house cost database. The costs are considered current; however it is noted that costs in the mining industry are changing rapidly. For the optimisation process, the rates

are intended to be a high level estimate only and do not represent results of mine planning and estimating. More accurate operating costs were estimated following the completion of the mine planning.

The mine and mine related operating costs used for the Optimisation process are given in **Table 17-2**.

**Table 17-2. Silver Coin Project - Optimiser Mine Operating Rates**

Item	Units	Value
Mining - win, load, dump	USD/t mined	\$3.03
Grade Control	USD/t processed	\$0.10

Source: MMC estimate

#### Non-Mine Operating Cost Rates

Rates for all the non-mine activities were estimated conceptually. The non-mine operating costs used for the Optimisation process are given in **Table 17-3**.

**Table 17-3. Silver Coin Project - Optimiser Non-Mine Operating Rates**

Item	Units	Value
Material processing	USD/t processed	\$9.36
Transport and Selling Cost	USD/Au oz	\$10.00
Site Support and Off-site overheads	USD/t processed	\$2.00

Source: MMC estimate

#### Metal Prices

As part of the optimisation process various gold prices were used for the optimisation process. For pit optimisation purposes, the base gold price was assumed to be USD 1,000/oz, the silver price was assumed to be USD 15/oz and the Zinc price was USD 0.90/lb.

These were varied over the optimisation process by a revenue factor. The final selected pit shell was based on a revenue factor of 85%, equalling a gold price of **USD 850/oz**. This is discussed in more detail below.

#### Optimiser Runs and Results

The Optimiser was run a number of times to assess the change in potential in-pit resources based on Mineral Resource classification and metals. A summary of the different scenarios is described in **Table 17-4**.

**Table 17-4. Silver Coin Project - Optimiser Runs**

Item	Description
Gold Metal Only	Measured, Indicated and Inferred Measured and Indicated
Gold/ Silver	Measured, Indicated and Inferred Measured and Indicated
Gold/ Silver / Zinc	Measured, Indicated and Inferred Measured and Indicated

For comparison of the various Optimisation runs, the following tables and charts give the results of pit optimisation. **Table 17-5** shows the potential mineralised material quantities for a pit shell estimated at a USD 1,000/oz gold price for the above scenarios.

**Table 17-5. Silver Coin Project - Pit Shell Quantities Per Optimiser Scenarios**

Metal Option	Option Resource Classification	Mineralised Material (Mt)	Gold Grade (g/t)	Silver Grade (g/t)	Zinc Grade (%)	Strip Ratio (t:t)	In situ Gold (k oz)	In situ Silver (k oz)	In situ Zinc (kt)
Gold	Meas.+Ind.	14.9	1.38	6.46	0.21	3.14	657	3,082	30.5
Gold	Meas.+Ind.+Inf.	25.3	1.28	6.92	0.22	1.98	1,045	5,631	54.7
Gold+Silver	Meas.+Ind.	16.8	1.27	6.39	0.20	2.74	690	3,463	33.2
Gold+Silver	Meas.+Ind.+Inf.	30.4	1.15	7.94	0.23	1.65	1,128	7,761	69.6
Gold+Silver+Zinc	Meas.+Ind.	17.9	1.22	6.27	0.19	2.54	704	3,617	34.9
Gold+Silver+Zinc	Meas.+Ind.+Inf.	34.9	1.06	7.70	0.23	1.47	1,191	8,624	80.5

The results confirmed that the contribution of silver and zinc does add value to the Project and as a result this was deemed to be the preferred scenario. The results also indicated that Inferred Resources contributes approximately 95% additional mineralised material.

The scenario selected for further analysis and mine planning involved inclusion of all metals and all Resource categories. This was deemed the most appropriate as it would enable full analysis of the strategic drivers which is appropriate for a preliminary mine plan and assessment.

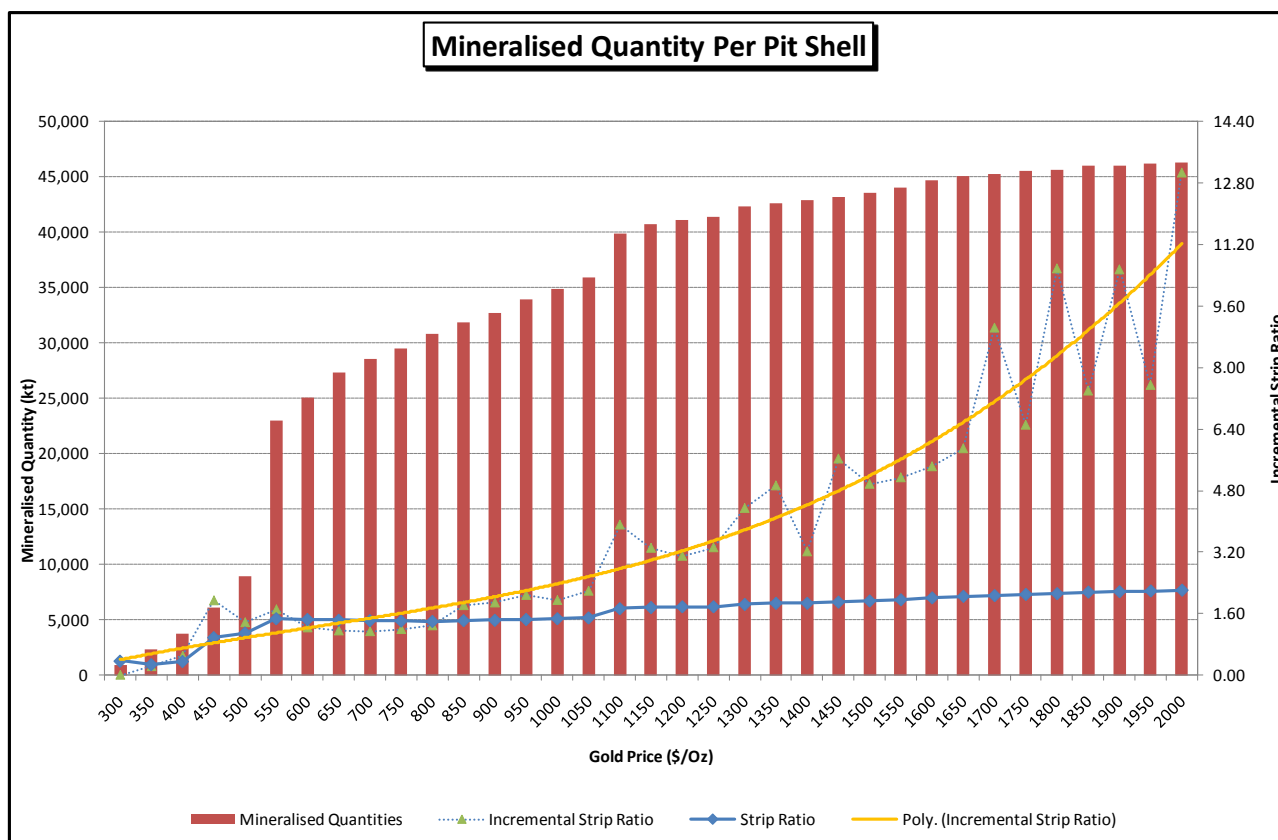
For the preferred scenario, **Table 17-6** and **Figure 17-1** shows the optimiser pit shell quantities for a range of revenue factors from 0.3 to 1.3 and **Figure 17-5** illustrates the results of economic modelling within the Whittle software.

**Table 17-6. Silver Coin Project - Optimiser Pit Shell Quantities**

Pit No.	Pit Shell (USD/oz Au)	Mineralised Material (Mt)	Strip Ratio (t:t)	Inc. Strip Ratio (t:t)	Gold Grade (g/t)	Inc. Gold Grade (g/t)
1	300	0.9	0.37	-	1.91	-
3	400	3.7	0.36	0.49	1.30	1.08
5	500	8.9	1.1	1.37	1.21	0.97
7	600	25.1	1.45	1.23	1.17	1.00
9	700	28.6	1.42	1.13	1.13	0.80
11	800	30.8	1.4	1.29	1.11	0.74
12	850	31.9	1.42	1.81	1.10	0.78
13	900	32.7	1.43	1.88	1.09	0.67
15	1000	34.9	1.47	1.94	1.06	0.66
17	1100	39.9	1.73	3.91	1.03	0.84
19	1200	41.1	1.78	3.10	1.02	0.66
21	1300	42.3	1.84	4.34	1.01	0.71
23	1400	42.9	1.87	3.21	1.00	0.54

Nb. Mineralised Quantities and grades are based on Measured, Indicated and Inferred Mineral Resources

**Figure 17-1. Silver Coin Project - Optimiser Pit Shell Mineralised Quantities by Gold Price**



Nb. Mineralised Quantities shown include Measured, Indicated and Inferred Mineral Resources

The results indicate there is a large jump in potential mineralised mineable quantities within pit shells generated above an Au price of USD 550/oz; increasing from 9 Mt to 23 Mt of mineralised mineable quantities. Thereafter, the increase is relatively steady and is not significantly sensitive to price. It is worth noting that the results are “theoretical” quantities and may reduce by up to 10 to 20% following the detailed pit design process and considerations for practical mining.

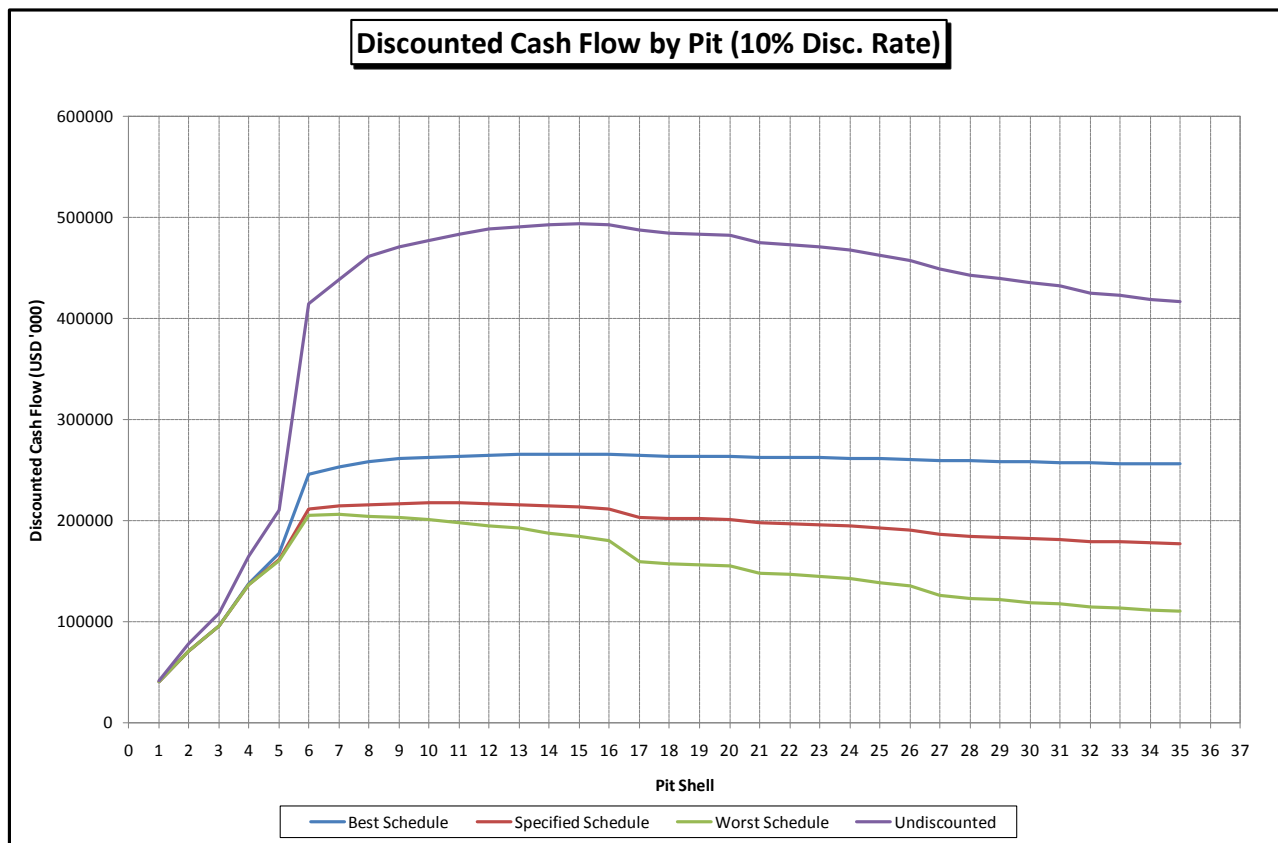
The graph shown in **Figure 17-2** shows a discounted cash flow completed using Whittle software (at a 10% discount rate). This graph is a high-level result and provides an indication of relative value between pit shells only. The results are not an indication of true pit value as:



- the applied operating costs are not based on detailed mine planning,
- the mine plan is based on a Whittle software scheduling estimation, and
- capital expenditure is not included.

The implied value can only be used as a relative indicator of the value between pit shells.

**Figure 17-2. Silver Coin Project - Discounted Cash Flow Per Pit (10% discount rate, excluding capital)**



*Nb. The Whittle analysis was applied to all Mineral Resources (including Inferred)*

The “best” schedule option assumes mining each revenue factor shell as an individual cutback. This is the theoretical optimum mining sequence. Conversely the “worst” schedule assumes mining from top to bottom in horizontal benches and generally reflects the lowest value result. The “specified schedule” option attempts to simulate a more practical sequence to mining and is likely to be closer to actual.

In MMC’s opinion, by examining all curves presented within the chart, the most appropriate pit shell is Pit 12, equivalent to a gold price of USD 850/oz. This presents the lowest risk to the Project as its value is not materially different from the theoretical maximum of Pit 15 while it allows some conservatism should some top to bottom mining be required due to the difficult topography as reflected in the “worst” case schedule.

The theoretical mineralised mineable quantity in Pit 12 is 31.9 Mt @ 1.10 g/t Au.

## Mine Development Strategy

A systematic approach was undertaken to identify a preferred development strategy. The first stage involved visually examining the results from the pit limit optimisation process. The changes in the shape of the optimal pit shell from low to high revenue factors reflect potential development strategies from high value to lower value mining areas. The characteristics of the final pit shell were also examined as the shape, depth and potential mineable quantities all influence the mining rate and development.

The second stage involved identifying practical development strategies within the guidelines of the pit optimisation results.

As well as generating numerical results, the Whittle 4X Optimiser also produces visual output to illustrate the growth of the pit shell as the revenue factor increases. The key implications for development strategy, as illustrated by the sequence of pit shells, reveals the following:

- USD 550/oz Au pit shell is the first continuous potentially practical pit shell,

- Pit shells for metal prices less than USD 550/oz Au appears to target deeper high grade zones in the northern deposit area,
- Optimisation results do not clearly indicate potential cutbacks, indicating that the expansion is largely spread evenly over the deposit. This is supported by the relatively even strip ratio across the pit shells. However, notwithstanding this outcome,
- The results indicate a trend in the pit development from north to south.

As a result of these outcomes, and to support the preferred pit development, the following were undertaken:

- Pre-stripping in the first year to establish a mineralised material stockpile and develop pit access,
- High grade pit designed to enable a more balanced strip ratio in the first year, if required, and
- Pit sub-divided into five cutback stages from north to south based on the pit shape.

## Pit Limits and Mineable Quantities

A pit shell generated at a revenue factor of 85% (USD 850/oz Au) was selected for the mine planning analysis. An open pit mine was designed based on the selected pit shell. Features of the final pit design are:

- Single large pit with dimensions of 920 m by 440 m,
- Maximum wall height of 235 m, from pit base at 740 mRL to 975 mRL,
- Minimum wall height 35 m, from 740 mRL to 775 mRL,
- Immediate pit access in north,
- Total 28.9 Mt mineralised material from Measured, Indicated and Inferred resources (above the applied cut-off grade of 0.5 g/t Au equivalent),
- Overall pit slopes have been designed at 45°; which MMC estimates is appropriate to sustain slope stability requirements.

As it is intended to produce gold, silver and zinc, it was necessary to estimate the mineralised material cut-off grade based on an “equivalent” gold grade. An equivalent gold grade was calculated by estimating the value of the silver and zinc as if it was a gold grade. The applied Au equivalent cut-off grade was 0.5 g/t Au equivalent. The applied cut off grade was estimated based on an estimate of the lowest economic grade based on the current project assumptions.

**Table 17-7** summarises the pit quantities within the final pit.

**Table 17-7. Silver Coin Project - Pit Quantities within the Final Design**

	Mineralised Material kt	Gold* g/t	Silver* g/t	Zinc* %	Gold* (oz)	Silver* (oz)	Zinc* (t)
Measured	3,703	1.74	7.30	0.31	206,899	868,501	11,356
Indicated	14,723	1.15	6.34	0.18	546,081	2,998,787	26,222
Inferred	10,434	1.00	8.10	0.25	334,823	2,718,506	26,015

\*. In-situ grade and quantity shown, no loss and dilution or recoveries applied

Nb. Mineralised Quantities, grades and metal content are based on Measured, Indicated and Inferred Mineral Resources

The pit quantities include 47,670 kt of waste at a strip ratio of 1.65:1 (waste tonnes to ore tonnes).

The pit optimisation also identified two small satellite pits to the north and below the main pit. These were not scheduled as they are entirely inferred resource category, and as they are located on the side of a steep hill, access is considered difficult and may interfere with the main pit access. The quantities may or may not be confirmed by further drilling. In total there is potential of 4.1 Mt at 0.81 g/t Au. Details are shown in **Table 17-8**

**Table 17-8. Satellite Pit Opportunities – Inferred Mineralised Material**

Pit	Waste (Mt)	Mineralised Material* (Mt)	Strip Ratio (t:t)	Au (g/t)	Ag (g/t)	Zn (%)	Au k oz	Ag k oz	Zn kt
6	2.8	3.2	0.86	0.73	12.9	0.2	76	1,343	6
7	0.5	0.8	0.65	0.45	20.5	1.05	12	559	9
<b>Total</b>	<b>3.3</b>	<b>4.1</b>	<b>0.81</b>	<b>0.67</b>	<b>14.47</b>	<b>0.38</b>	<b>88</b>	<b>1,902</b>	<b>15</b>

Nb: Mineralised material cut-off of 0.5 g/t Au equivalent

## Deposit Characterisation

Deposit characterisation shows the following:

- < 10 Mt mineralised material is greater than 1 g/t,
- 62% of the total gold bearing material quantity is less than the cut-off grade of 0.5 g/t gold equivalent,
- mineralisation occurs from the surface, and
- gold and silver grades generally improve with depth

The outcomes indicate that though mineralised material will be recovered from the initial benches, favourable strip ratios are not likely until mining proceeds below 900 mRL. Hence, a staged approach will be required with cutbacks to balance the strip ratio. Furthermore, the higher gold grades are not accessed until the lower benches again suggesting a staged approach is a preferred option.

The pit development was completed by developing to the final pit design as five distinct cut-backs. This enabled the balancing of mineralised material and waste quantities over the mine life, as well as enabling the deeper and higher grade mineralised material to be mined earlier in the mine life.

## Production Scheduling

The scheduling process involved the following steps:

- The final pit shell was divided into “reserves” blocks;
- Mineralised material quantities and grades were estimated for each block using the Surpac software;
- The resulting data represents a scheduling data base and was imported into MMC proprietary *MiMaSo* scheduling software;
- Blocks were sequenced; i.e. ordered to give a logical sequence which develops the mine according to the adopted mining strategy;
- Mineralised material was scheduled in the logical sequence to ramp up to 1 Mtpa during the 2nd year of operations, followed by 2 Mt in Year 5 of operations;
- Pre-strip of 1.1 Mt in Year 1 with any mineralised material taken to a stockpile;
- Waste quantities required to uncover the necessary mineralised material were smoothed to give a more reasonable mining schedule. This required excavating some waste earlier as “pre-strip”; and,
- The resulting schedules were output for use in other MMC softwares; such as mining fleet estimation and economic modelling software.

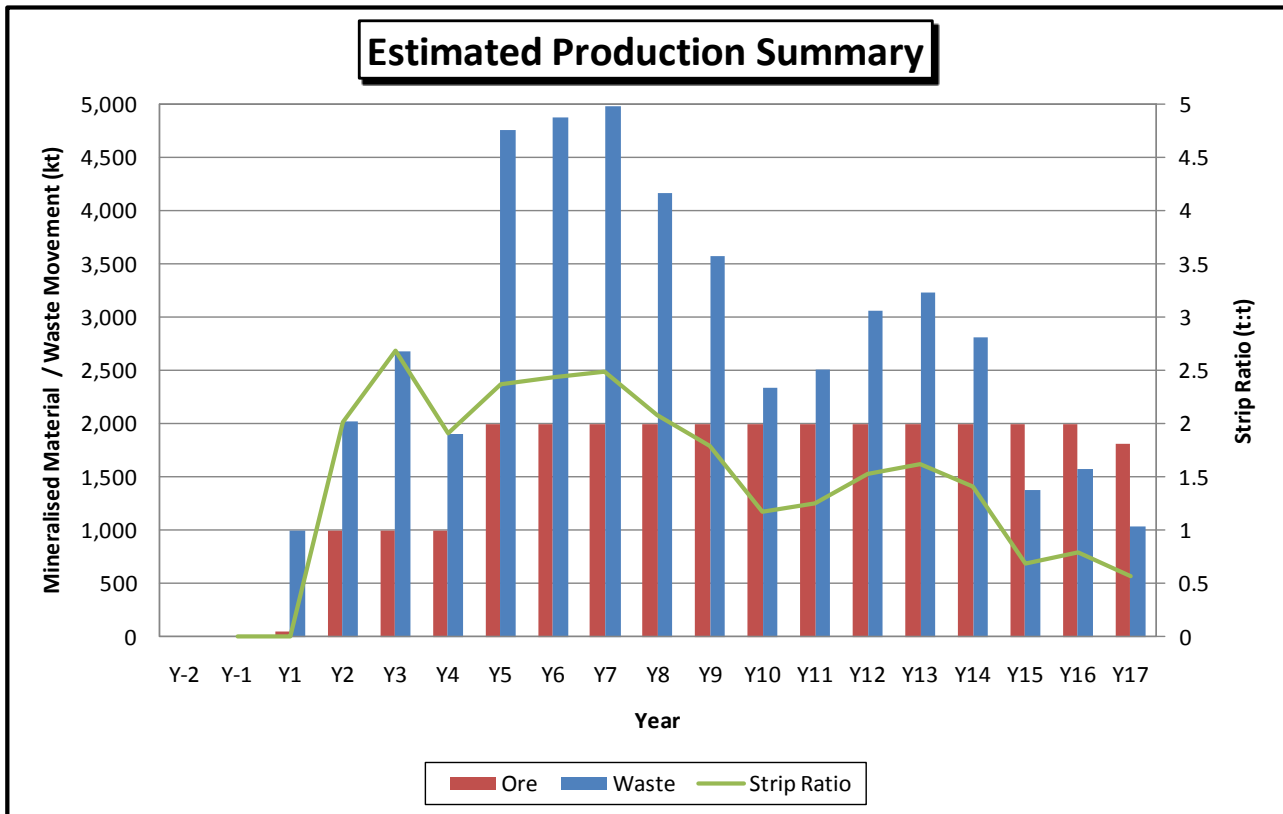
Production schedules are summarised in **Table 17-9** and illustrated in **Figure 17-5 to 17-7**.

Table 17-9. Silver Coin Project - Production Schedule Results

Year	Mineralised Material kt	Waste kt	Strip Ratio t:t	Gold Grade g/t	Silver g/t	Zinc %	Rec. Gold (oz)	Rec. Silver (oz)	Rec. Zinc (t)
1	54	1,000	18.4	0.46	3.77	0.03	0	0	0
2	1,000	2,020	2.0	0.84	5.48	0.21	21,742	132,149	1,498
3	1,000	2,686	2.7	1.03	7.96	0.13	26,643	191,913	887
4	1,000	1,910	1.9	1.20	7.64	0.29	30,859	184,326	2,037
5	2,000	4,755	2.4	0.94	8.63	0.36	48,392	416,135	5,084
6	2,000	4,880	2.4	1.11	9.21	0.49	56,986	444,227	6,801
7	2,000	4,990	2.5	0.74	6.35	0.14	37,915	306,002	1,958
8	2,000	4,164	2.1	0.96	5.56	0.16	49,698	268,343	2,173
9	2,000	3,580	1.8	0.83	5.72	0.19	42,951	275,777	2,725
10	2,000	2,334	1.2	1.16	9.41	0.38	59,670	453,674	5,299
11	2,000	2,514	1.3	1.28	8.84	0.22	66,145	426,243	3,107
12	2,000	3,062	1.5	1.32	7.30	0.13	67,950	352,227	1,768
13	2,000	3,238	1.6	1.33	8.36	0.15	68,586	403,150	2,104
14	2,000	2,818	1.4	1.16	4.89	0.13	59,876	235,834	1,836
15	2,000	1,381	0.7	1.28	5.01	0.15	65,686	241,500	2,058
16	2,000	1,573	0.8	1.39	4.41	0.14	71,566	212,770	2,023
17	1,806	1,033	0.6	1.13	3.29	0.07	54,037	147,480	945
<b>Total</b>	<b>28,860</b>	<b>47,939</b>	<b>1.7</b>	<b>1.11</b>	<b>6.74</b>	<b>0.21</b>	<b>828,702</b>	<b>4,691,749</b>	<b>42,304</b>

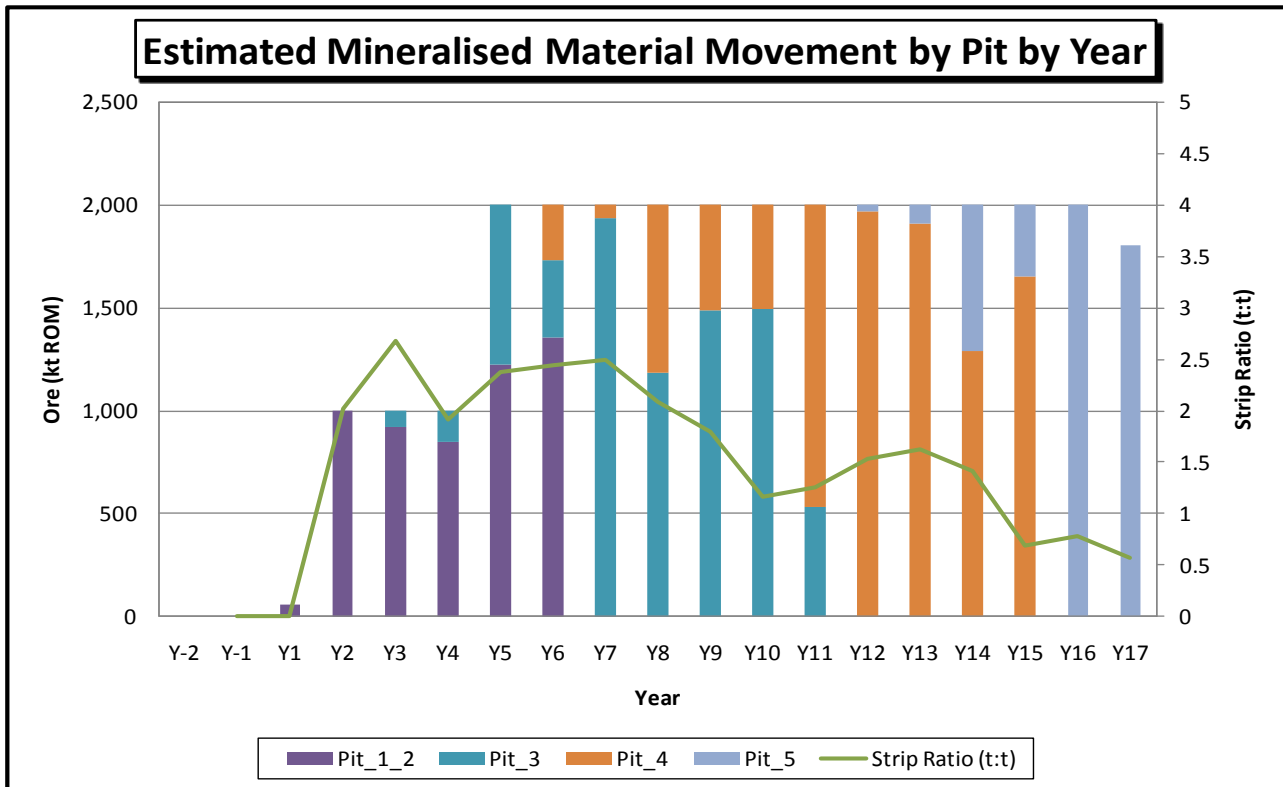
Nb. Mineralised Quantities and Grades shown are based on Measured, Indicated and Inferred Mineral Resources

Figure 17-3. Silver Coin Project – Estimated Production Schedule



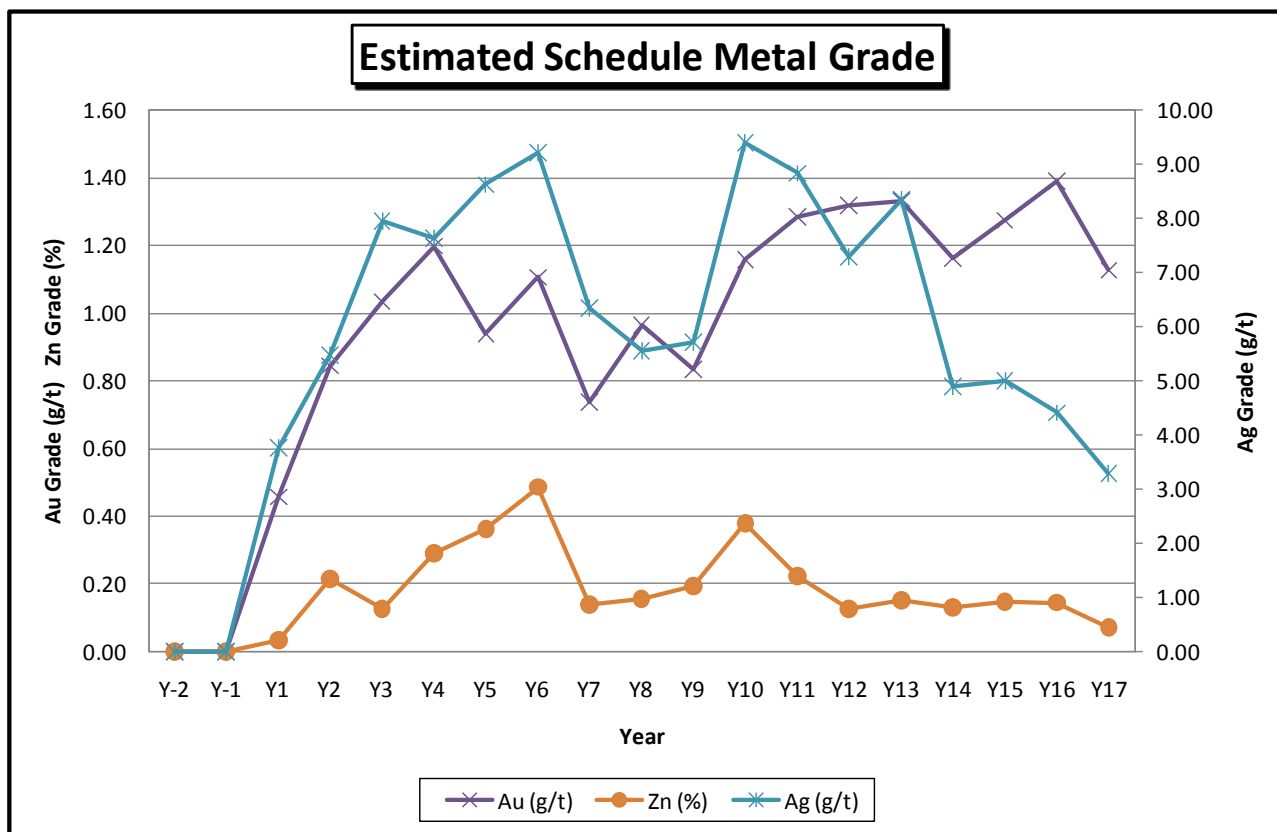
Nb Mineralised Quantities shown include Measured, Indicated and Inferred Mineral Resources

Figure 17-4. Silver Coin Project - Estimated Mineralised Material Production Schedule by Pit by Year



Nb. Mineralised Quantities shown include Measured, Indicated and Inferred Mineral Resources

Figure 17-5. Silver Coin Project – Estimated Schedule Grade



Nb. Grades shown are based on Measured, Indicated and Inferred Mineral Resources

The key outcomes of the production schedule include:

- 17 year mine life;
- Processing production target of 1 Mt per year achieved in Year 2, increasing to 2 Mt in Year 5;
- Total maximum material movement approximately 6.8 Mt per year in Year 8;
- Strip ratio ranges from 1.6 to 2.5 (waste t: mineralised material t), though falls to below 1:1 in the last 6 years;
- Two pits generally mined per period, being primary mineralised material extraction pit and next cutback pit; and
- Gold grade slightly increases over time while silver and zinc grades fall.

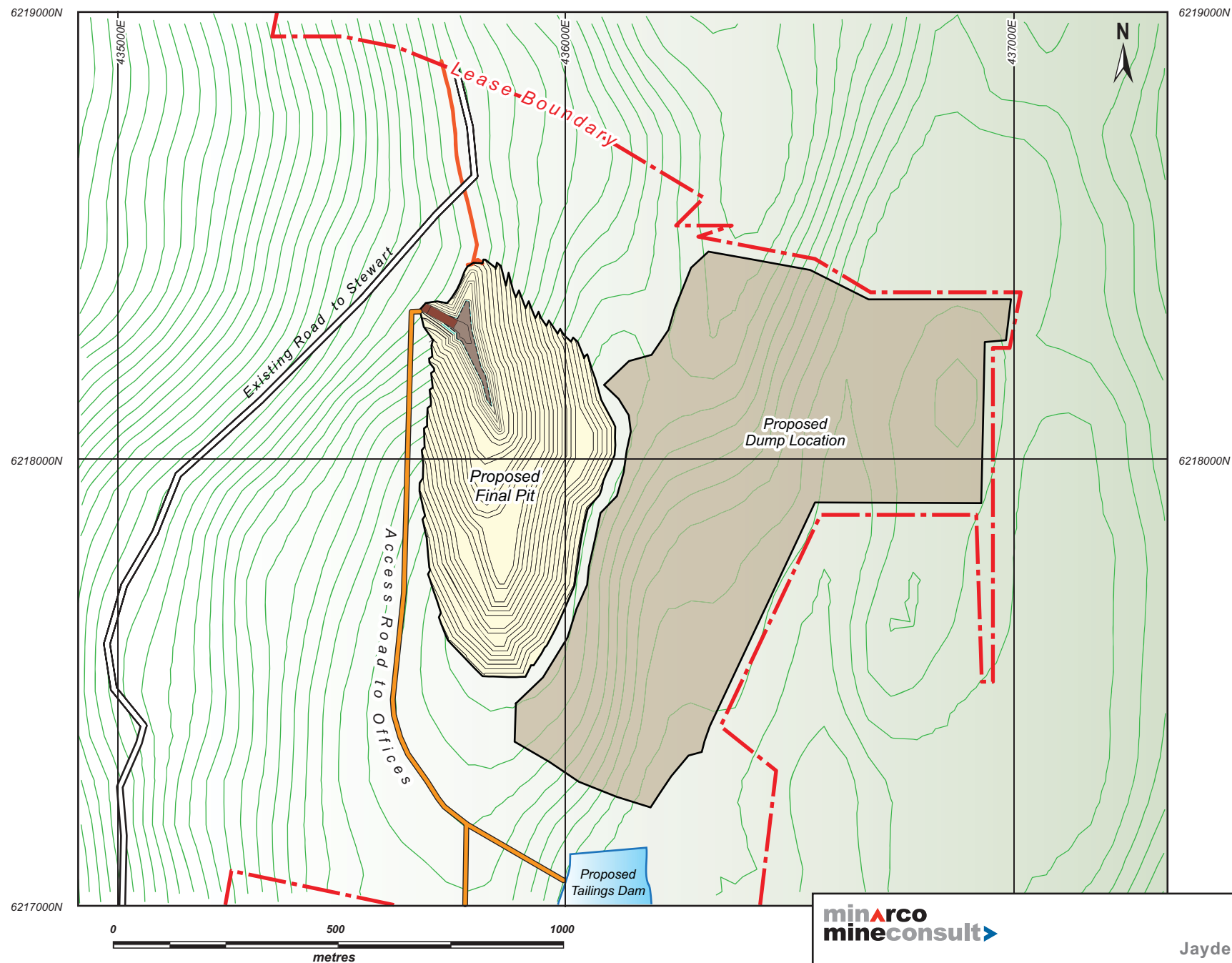
## Waste Dump Schedule

A broad-brush waste schedule was completed to confirm the mass-balance placement of waste rock within in-pit and ex-pit dumps. The results indicate that, based on the current development strategy, the in-pit dumping capacity is limited to approximately 2 Mbcm and as a result approximately 12 Mbcm requires placement in ex-pit locations.

Due to the difficult topography and high-value environmental areas, the areas for placement of surface dumps are limited. The most appropriate location identified was in the adjacent eastern valley up-slope from the proposed location of the tailings dam, as shown in **Figure 17-7**. This restricts the placement of waste products to the eastern valley where it can be managed and away from the environmentally sensitive glacial valley to the west.

Due to the potential for acid-forming waste rock, the dump will need to be constructed in lifts rather than free-dumping from the top of the ridge line. As a result, the haulage to the surface waste dump requires an ascent from the pit base to the ridge line then a descent of up to 135 m to the dump location in the valley.

The characteristics of the waste haul, requiring an ascent both on the forward and return journeys, will increase the truck fleet requirements and may be overcome through the introduction of in-pit crushers and conveyors. It is outside of the scope of this study to examine alternative technologies such as crushing and conveying, however this is recommended for future planning studies. Also, a modified (though higher strip ratio) development strategy is worth examining in greater detail to assess in-pit dumping potential.



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FIGURE 17-6

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Silver Coin Project

**Proposed Pit Shell and Dump**



## Mine Equipment

A conventional truck and loader mining system was selected as it offers the following advantages:

- Cost effective;
- Proven technology;
- Flexible operations;
- Relatively easy to manage and maintain;
- Good access to spare parts;
- Potential to reduce capital outlay through leasing of equipment, and
- Adaptable for contractor mining, if required.

MMC used its in-house, proprietary *MiMaSo* Fleet Calculator to determine equipment requirements for the open cut mine. This required estimating the operating times and productivities for major equipment. The key assumptions made for this process were as follows:

- 3 panel roster;
- 2 x 12 hour shifts per day;
- 7 days per week operation;
- 10 public holidays per year;
- 20 days lost per year due extreme weather conditions;
- mechanical availability 89%; and
- utilisation 77%.

Resulting times and productivities for major excavating equipment options are summarised in **Table 17-10**.

**Table 17-10. Silver Coin Project - 80 t Hydraulic Excavator Productivity**

Excavator	Units	80t
Scheduled hours	hrs/yr	8,159
Available hours	hrs/yr	7,233
Operating hours	hrs/yr	5,540
Effective hours	hrs/yr	4,462
Bucket size	cubic m	3
Material density	t/cm	2.85
Swell factor in bucket	%	130%
Bucket fill factor	%	95%
Bucket load per pass	t	6.25
Truck capacity	t	50
No passes per truck	number	8
Actual truck payload	t	50.9
Excavator hourly productivity	t/op hr	525
Excavator annual productivity	Mt/year	2.85

From the excavator productivity results, the preferred approach, to minimise risk and provide flexibility to the operation, is to have two 80 t hydraulic excavators in a backhoe configuration. These would be matched with 50 tonne rear-dump trucks.

From physical material movement quantities, the maximum mine equipment fleet numbers required for the Project are given in **Table 17-11**.

There is a spike in required waste movement in years four to seven. As the current fleet are well matched, it does not warrant the purchase of additional equipment for the short timeframe. Therefore a contractor has been used for mining material that is over and above the owner mining fleet capacity in these years. There is also a minor requirement for the contractor in years 2, 3 and 9. Owner and contractor material movements are given in **Table 17-12**.

**Table 17-11 Silver Coin Project – Estimated Maximum Equipment Requirements\***

Key Equipment	Maximum Fleet
Excavator 80t	2
Haul truck 50t	8
Drill	2
<b>Support Equipment</b>	
Grader	1
Watercart 40kl	1
Lighting Plant	6
Lube/Fuel truck	1
Service truck	1
Tyre handler	1
Integrated Transport	1
Backhoe	1
Bobcat	1
LV 4WD	8

Nb\*: not including contractor waste fleet

**Table 17-12 Silver Coin Project – Owner and Contractor Waste Movement**

Year	Owner Waste kt	Contractor Waste kt	Total Waste kt
1	1,000	0	1,000
2	1,750	270	2,020
3	1,750	936	2,686
4	1,750	160	1,910
5	3,500	1,255	4,755
6	3,500	1,380	4,880
7	3,500	1,490	4,990
8	3,500	664	4,164
9	3,500	80	3,580
10	2,334	0	2,334
11	2,514	0	2,514
12	3,062	0	3,062
13	3,238	0	3,238
14	2,818	0	2,818
15	1,381	0	1,381
16	1,573	0	1,573
17	1,033	0	1,033
<b>Total</b>	<b>41,704</b>	<b>6,236</b>	<b>47,939</b>

## 17.2 INFRASTRUCTURE AND TRANSPORT

Infrastructure is a major capital cost component for all mining projects. The infrastructure and transport commentary is based on a preliminary review of the site and considering typical site infrastructure requirements for a project of this type and size. MMC considers this infrastructure review suitable for a preliminary level of study however, detailed infrastructure studies are needed to determine the likely requirements for the Project.

The project is located in a region where there have been several mining projects. The region's infrastructure is relatively well developed despite the apparent remoteness and severe climate. The operation would be generally considered an all-year round operation. MMC was informed during the site visit that the mine didn't operate for ten days in January this year (2010) due to the weather conditions.

MMC considers that any lost time could potentially be used for major process maintenance if the mineralised material stockpile was insufficient. Based on a typical availability of 8,000 operating hours per year, there is the equivalent of 33 days available annually where the process is not operating.

### On-Site & Off-Site Infrastructure – General Description

Apart from the process plant, the major on-site infrastructure items comprise the following;

- Fuel storage;
- Water treatment;
- Sewerage treatment;
- Offices;

- Maintenance workshop;
- Stores warehouse;
- Communications;
- Site water management structures (dams; ponds; etc);
- Tailings treatment and disposal;
- Site roads;
- Bore field and aquifer management system;
- Explosives storage; and
- Fire fighting facilities.

The major off-site infrastructure items would likely include the following;

- Road improvements;
- Water pipelines from remote bore fields and gathering stations;
- Land line for communications;
- Power line connection; and
- Environmental management structures.

## Site Access and Services

### Site Access

A major all-weather highway passes near the Project site, offering the potential for reliable access. Excellent paved roads connect Stewart with Smithers and Terrace, two major supply centres in this region of British Columbia.

A 25 km stretch of good gravel road, known as the Granduc Road, links Stewart directly with the property. The section from Stewart to the Premier mine (11 km) is maintained year-round. However, heavy snowfalls between November and May would limit access to the property unless the road was cleared regularly.

### Power

A power grid exists in the area and any subsequent connection would seem relatively straightforward. While the Project power requirements need to be determined, it would appear likely that sufficient power may be available from the local grid.

### Water

There is an abundance of water in the local area from mainly rivers and streams. While the Project water requirements need to be established, it is anticipated that sufficient quantity of high quality water would be available.

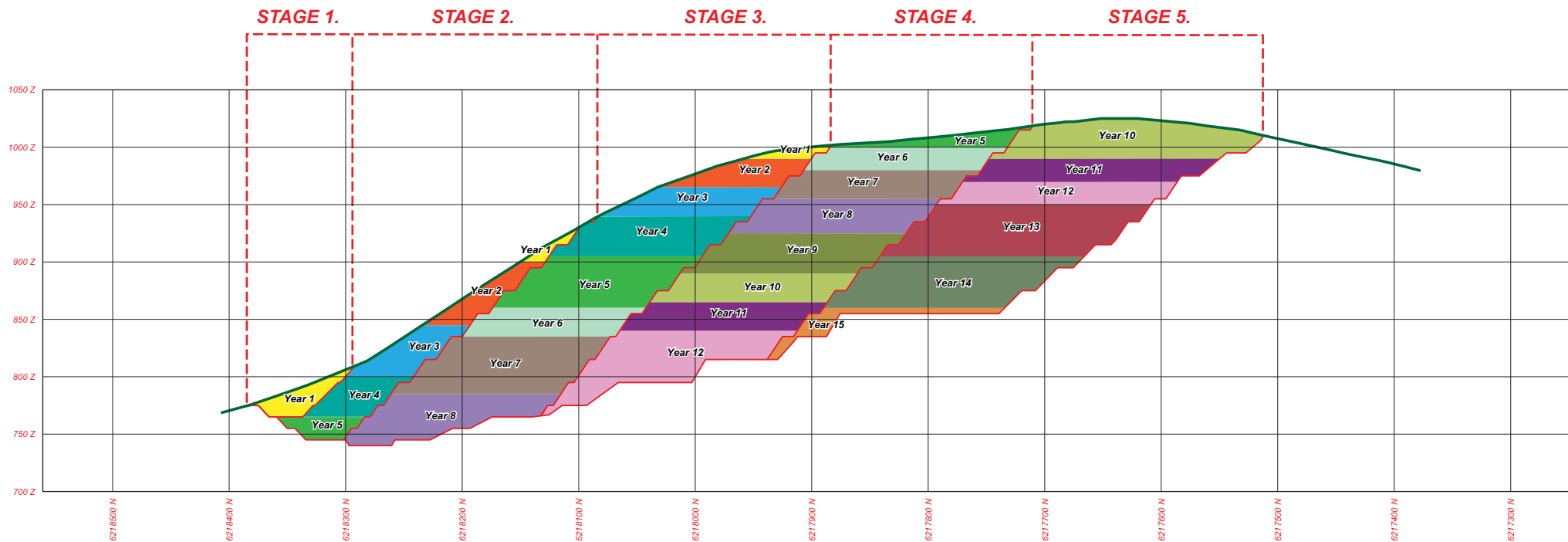
### Port

The Project area is located 25 km to an ice free port (Stewart), the most northern ice free port in Canada. This port has been used to ship concentrate and ore from several mines in the area, including currently the Huckleberry Mine.

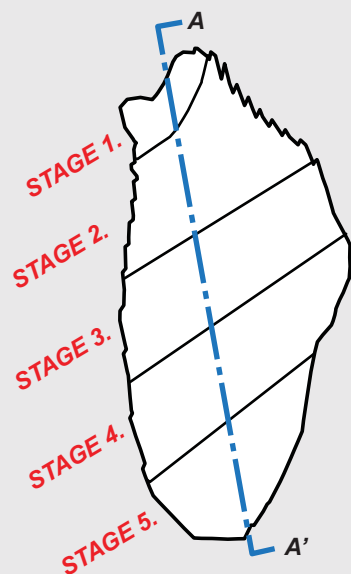
## Infrastructure Positioning

A conceptual site layout has been considered as part of the PEA. The layout is shown in **Figure 17-7**.

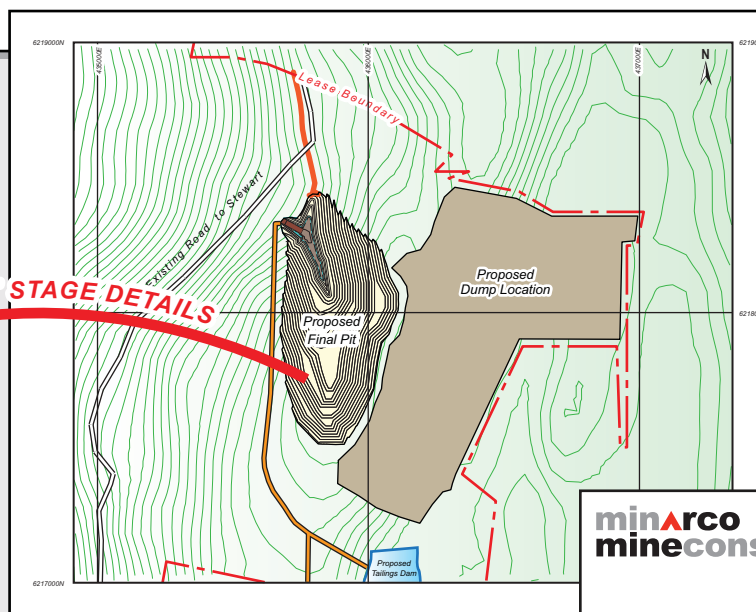
The conceptual mine layout shows the possible locations of the waste dump, tailings dam, process plants, workshops and offices. The suitability of these locations will need to be confirmed through detailed studies which have not been completed for this PEA.



SECTION A-A'



SEE PIT STAGE DETAILS



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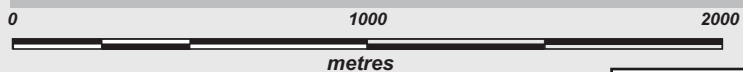
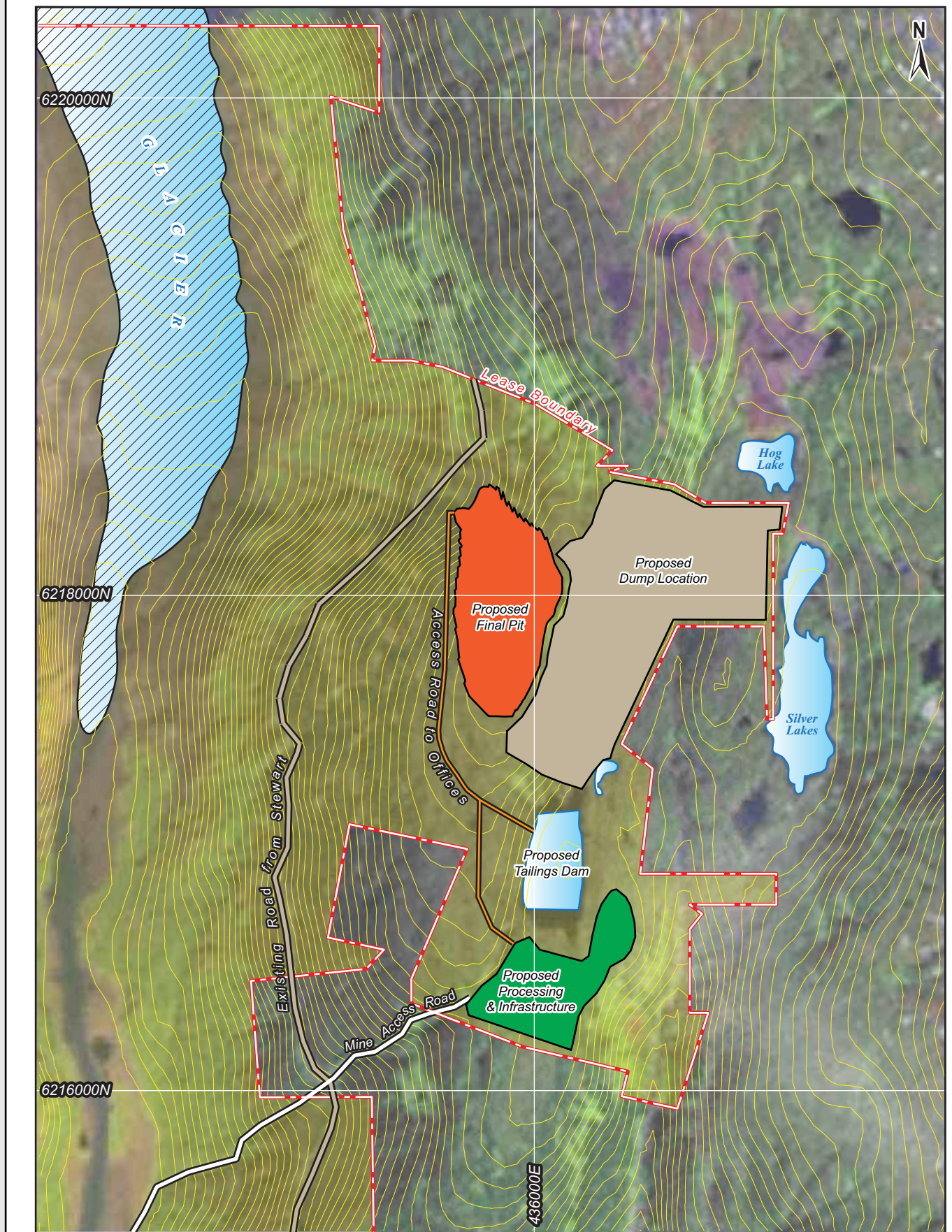
FIGURE 17-7

Jayden Resources Inc.

Silver Coin Project

Section - Mining Sequence





## 17.3 PROJECT DEVELOPMENT

The Project requires further detailed studies, environmental permitting, approvals processes and site construction. MMC has estimated a project development timeframe based on discussions with Jayden as well as reviewing environmental information provided by Jayden.

### Additional Project Studies and Testing

Jayden has advised MMC that it is considering two project development scenarios, these scenarios are:

1. **Normal Project Development.** The normal project development plan will focus on a drilling programme consisting of in-fill and exploration drilling over the next 18 months. Jayden has advised MMC, that the budget for the drilling programme is approximately USD 2.5 M. Further project development studies would be based on the results of the drilling programme.
2. **Fast-Track Project Development.** The fast-tracked project development plan considers the completion of required Project studies in parallel and/or in quick succession. This development plan has been considered as the base case for the PEA and has been reviewed in more detail below.

MMC has been informed that due to the preliminary nature of the Project, to increase the Resource confidence categorisation and further advance the mine planning, additional project studies and testing are planned to be completed during 2011. The planned project development work prior to early 2012 includes:

- Additional exploration drilling. The additional drilling is planned to include in-fill drilling (to increase the overall Mineral Resource estimate confidence categories) as well as additional drilling in areas of potential mineralisation. It is estimated that the Project would require most of the current Inferred Resources to be upgraded to Indicated or Measured Mineral Resources through in-fill drilling prior to progressing to pre-feasibility or feasibility level studies.
- Additional metallurgical testing to further determine the suitability of the proposed processing flow-sheet, as well as assessing the available processing opportunities.
- Following completion of the exploration drilling, if there are sufficient Measured and Indicated Mineral Resources, the project may progress to a pre-feasibility study or, Jayden may decide to progress immediately to a project feasibility study following the completion of some additional pre-feasibility level trade-off studies.
- Ongoing baseline environmental studies.

The results of the planned project studies will have a material impact on the successful project development and the timing of when this will occur.

### Environmental Setting and Background

The Project is located in a moderately active mining district that has featured prospecting and small scale exploration dating back to the early 1900s and larger exploration activity and mining occurring in recent decades in the district. The project property abuts the State of Alaska in the United States of America (USA).

The Project area is located in a steep and scenic mountainous area featuring sparsely vegetated moraine areas, mountain streams and lakes at the headwaters of the Salmon River and Salmon Glacier. At the ridgetop located southeast of the proposed open cut pit, No Name Lake is an upland waterbody among smaller depression tarns (ponds). The southern and eastern sections of the Project property drain to the south to the Salmon River via Silver Creek and Cascade River and other smaller drainage lines. The majority of the area of the proposed open pit area is drained by the northwesterly flowing short drainage lines within an avalanche chute (Slippery Jim Creek) featuring talus and landslide rubble and adjacent steep rocky slope (Anomaly Creek) which flow to the Salmon Glacier.

While the topographic range of the entire Silver Coin property extends from elevations of 500 m in the Salmon River Valley to 1,000 m on the top of the Big Missouri ridge, the proposed open cut pit, waste emplacement and surface facilities areas are likely to be located at elevations above 800 m.

Preliminary environmental baseline studies by Cambria Gordon (2009) in the project area were commissioned in 2009 and included a basic fisheries assessment and limnology review of No Name Lake as well as water quality sampling and streamflow measurement program.

An initial desktop overview was undertaken of rare and/or endangered wildlife and vegetation species and ecological communities whose distribution overlaps with the property footprint. Four mammal species, two bird species, 11 plant species and four ecological communities were identified as having distributions that overlap with the project area. However, initial field surveys of representative vegetation plots did not locate any unique or critical habitats associated with rare or endangered wildlife species.

Additional environmental baseline studies are proposed to occur through to late 2011 as part of project assessment and approvals.

The proposed project's key elements include the following potential environmental factors requiring appropriate risk management, mitigation and remediation actions:

- Open cut pit – blasting/noise and dust emissions control, visual and landscape effects, loss of vegetation/habitat, runoff/water diversion and management.
- Out of pit waste emplacement – landscape effects, direct clearing of vegetation/habitat, runoff and soil erosion management, materials handling and dust control, slope stability, shaping and rehabilitation, management/encapsulation of acid-forming materials (if any).
- Tailings storage facility (tailings dam) – aquatic/terrestrial habitat effects, management/encapsulation of acid-forming materials, water and wastewater management.
- Surface infrastructure, processing plant, stockpiles, bathhouse, office - direct clearing of vegetation/habitat, runoff and soil erosion management.
- Water management facilities, dams, potable water supply system, sewage management system – separation and management of various water and wastewater streams, sewage effluent and wastewater treatment and disposal.
- Workshops, fuel and oil storage and handling facilities, hazardous goods storage and handling, waste materials handling and disposal - direct clearing of vegetation/habitat, oil and fuel spill management, waste management strategy.
- Transport facilities, mobile plant, road construction and stream crossings – traffic, public safety, clearing for construction.

Issues relating to cultural heritage and social context including First Nation interests, local employment, economic benefits, local amenity and accessibility are all important matters for consultation and management throughout the assessment process, project development and throughout the project life. Preliminary assessment of local Aboriginal interests reported that the proposed Silver Coin Project area lies outside known First Nation treaty areas, traditional territories and land claims. Nevertheless, appropriate consultation with various neighbouring First Nation groups is expected throughout the project environmental assessment.

The environmental issues that dictate the key focus areas for appropriate design, environmental management and mitigation strategies for the project are:

- Effects on local vegetation and terrestrial and aquatic habitats due to clearing for mining operations, waste emplacements, tailings dam and other surface infrastructure as well as potential local changes to hydrology and water quality.
- Identification and management of any potentially acid-forming materials or other adverse products by weathering or transformation from ores and, particularly, waste rock and overburden.
- The safe and environmentally secure use, storage, handling and disposal of processing materials and reagents, including cyanide, as well as fuels, oils and hazardous goods.

These key focus areas will be the subject of detailed regulatory scrutiny and assessment to ensure that the proposed design, operations and environmental management strategies for the project are appropriate. Due attention in the planning and design process also will be required to be given to the periodic severe climatic conditions at the site, including total seasonal snowfalls up to 30 m deep, some of which can persist in the gullies until July.

While the major environmental baseline studies, environmental planning and engineering investigation work are yet to be completed, the following preliminary conclusions are made from consideration of the abovementioned key risk areas.

The preliminary work on investigations of aquatic habitat in No Name Lake in 2009 (AMEC, April 2010) resulted in no fish being captured in the lake following 24 hours of sampling using two gill nets (floating and sinking) and 340 hours of minnow trap sampling. This indicates that the No Name Lake is likely to be considered to be “non-fish bearing” and thus of low aquatic habitat and fisheries conservation value. The lake is located in an area of relatively subdued topography that is highly suitable for siting key surface facilities for the project. This location also can provide the best geotechnical and geochemical management solution for tailings and other materials management, as discussed below.

Subject to ongoing environmental baseline studies, it is reasonable to expect that the small ephemeral/intermittent streams and drainages in the project area are unlikely to display high or unique aquatic habitat or conservation value. Similarly, initial assessments have reported that no vegetation or fauna species of high conservation significance have been identified on the project property.

Reclamation strategies, although challenging in terms of the project's steep and confined areas of disturbance, will involve routine reclamation to develop stable mined landforms and drainage systems and establishment of suitable vegetation. Given the short haul distances for materials handling, appropriate chemical characterisation of mined materials, and the need to have demonstrated appropriate planning for long term environmental protection, the reclamation component of the project is not expected to present significant technical difficulties or risks provided issues raised below are comprehensively addressed.

The effective planning and management of potentially acid-forming materials is based on early and comprehensive materials testing and the preferential handling and disposal of any identified materials of concern. The project will be



able to implement the demonstrated best practice for disposal of any potentially acid-forming materials, if required, by subaqueous disposal in a tailings dam located at the site of the present No Name Lake. Given the likely limited ecological conservation value of No Name Lake and the possible need for effective local disposal of any potentially problematic materials, the project has the ability to plan and manage this risk appropriately so as to adequately minimise impacts to water quality and aquatic ecosystems in accordance with regulatory requirements and modern risk-based management approaches. Impervious lining of key dams and/or special emplacement/encapsulation strategies may be required depending on results of the geochemical characterisation of mined materials in the pre-application stage and future detailed geotechnical assessment.

The project, like any modern minerals industry operation, will need to demonstrate appropriate controls for management of environmental and safety risks related to oils, fuels, chemicals and other hazardous materials, including cyanide transport, handling, use and storage. The project is expected to follow best practice in this regard and undertake planning and operations involving cyanide in accordance with the voluntary International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (Cyanide Code) administered by the International Cyanide Management Institute. A preferable strategy for the project would be to obtain full certification under the Cyanide Code. As part of the regulatory process of a new project, the project would have to demonstrate that alternative techniques for extraction, as compared to cyanide use, do not provide a reduced risk to the environmental and social components, are not feasible, or are not economically viable.

The conclusions on environmental management issues within this report are consistent with available information from initial site studies and preliminary planning and assessment reporting for the project undertaken to date (Cambria Gordon 2009, AMEC 2009 and Tetra Tech 2010). This review also notes the statement made in the NI 43-101 Preliminary Economic Assessment Report (PEA, Tetra Tech March 2010) that there are no apparent large-scale environmental issues on the property.

### Environmental Permitting and Approvals

The anticipated program for approval and permitting of the preferred mining proposal provides for the key Provincial and Federal approvals by end of June 2012, with follow up detailed permitting by September 2012 but possibly continuing up to November 2013. MMC notes this time frame is based on successful project development activities such as additional in-fill drilling, metallurgical test-work, environmental studies and pre-feasibility and feasibility studies.

The Silver Coin Project proposal will require an approval under the Provincial Government's (British Columbia) Mines Act for a Permit Approving Work System and Reclamation for initial mine site development. This process is administered by the Ministry of Energy, Mines and Petroleum Resources (MEMPR). The project will also need to obtain relevant environmental planning approvals as the project will trigger the need to apply to the BC Environmental Assessment Office (EAO) for an Environmental Assessment Certificate under the BC Environmental Assessment Act. These assessment and approval steps are set out in the flow sheet in **Figure 17-8 and 17-9**.

The Federal and Provincial environmental assessments will be conducted in accordance with the terms of the *Canada-BC Agreement on Environmental Assessment Cooperation (2004)*. Under this Agreement, projects that require an environmental assessment by both the Government of Canada and the Government of British Columbia undergo a single, cooperative assessment, where possible, to meet the environmental assessment requirements of both levels of government. Although the BC Environmental Assessment Office will lead on the review of the environmental impact statement, each government will make project-related decisions on matters within its own legislative authority.

Given the proximity of the proposed project to the US border, it is likely that Federal and/or Provincial regulatory processes may involve consultation with Alaskan/US environmental regulatory authorities such as inviting comments or input into the scoping of proposed environmental studies, possible representation on or liaison with a technical review committee, or review and comment on the publicly exhibited assessment report for the project.

In addition to these primary approvals, the project development will also need to obtain relevant authorisations, licences and permits from various authorities under the British Columbia legislation, including:

- *Mines Act* - permitting requirements for pre-production and production, reclamation bonding, tailings dam construction and operation, processing requirements and gravel/borrow pits associated with the development.
- *Water Act* - water licences for water use as well as storage and diversion of waters.
- *Forest Act* – licences to cut trees, minesite/tailings impoundment, gravel pits and borrow areas, transmission line, access roads, and special use permit for roads.
- *Environmental Management Act* - effluent (tailings and sewage), air emissions from plant, refuse/waste and waste oils, and (with Health Act) camp operation permits for drinking water, sewage disposal, sanitation and food handling.
- *Land Act* – transmission line occupation/right of way, gravel/borrow pits, surface lease for minesite facilities.
- *Pipeline Act* – diesel pipeline permit.

Federal approvals and licences required to develop the project include:

- *Canadian Environmental Assessment Act* - project review and CEAA approval

- *Fisheries Act* – Metal Mining Effluent Regulations (MMER), fish habitat compensation agreement, s35(2) authorisation.
- *Navigable Waters Protection Act* – stream crossings
- *Explosives Act* – explosives licence
- *Canada Transportation Act* – ammonium nitrate storage
- *Radio Communication Act* - radio licences
- *Atomic Energy Control Act* – radioisotope licence.

### **Project Construction**

Jayden has advised MMC, that if construction is well advance prior to winter, then construction activities can be completed throughout the year at the Project. As such, MMC estimates that initial construction activities may be completed in a 12 to 18 month period. MMC assumes that a feasibility study will include detailed designs for the processing plants and site infrastructure such as the tailings dam, offices, workshops, power and water supply etc.

### **Staged Mine Development**

A staged mine development approach has been considered in the PEA. This approach schedules one year of pre-strip (1.1 Mt) followed by three years of 1 Mtpa material processing. This is followed by an annual processing rate of 2 Mtpa.

The staged mine development enables some processing, infrastructure and mining equipment capital costs to be delayed until later in the mine life.

### **Project Development Timing**

MMC has estimated a project development timeline taking into consideration the likely time periods for the environmental permitting and approvals process; these estimates are primarily based on Cambria Gordon's preliminary environmental approvals schedule.

An estimated project development time frame is outlined in **Table 17-13**. The project development schedule is dependent on the successful completion of pre-feasibility and feasibility studies. The successful completion of these studies, in turn, will be dependent on the planned exploration drilling and metallurgical test work. If the results of these studies are not favorable then the overall project development timeframe may be significantly extended or indeed, may not be completed.

Additionally, assumptions made in this PEA may be varied to meet permitting requirements. This may result in significant changes to the planned project development schedule or variations to the mine plan. Any such changes may have a material impact on operating and capital cost estimates.

**Table 17-13 Silver Coin Project – Estimated Project Development Time Frame**

Phase/Task	Duration* (*Phases/tasks can be concurrent or overlap)	Completion Target	Phase Cost (k USD)
<b>Phase 0: Baseline Environmental Studies</b>	<b>18 months</b>	<b>End Sept 2011</b>	<b>900</b>
<b>Phase 1: Pre-Application</b>	<b>18 months</b>	<b>Jun-12</b>	<b>3,800</b>
Project Description		Oct-2011	
Exploration and In-fill Drilling	5 months (from commencement of drilling season)	Sep-2011	
Pre-Feasibility Level Studies* (including metallurgical testing)	4 months	Jan-2012	
Provincial Section 10 Order (reviewable project under BCEAA)		Dec-2011	
	n/a		
Develop Application Information Requirements	4 months	May-2012	
Provincial Section 11 Order (outlining scope, procedures for Pre-application and Application Phase review stages of the assessment)	n/a	May-2012	
Federal Scoping/track decision	n/a	End May 2012	
<b>Phase 2: Application</b>	<b>18 months</b> (Concurrent Provincial & Federal Reviews)	<b>Jul-13</b>	<b>1,750</b>
Develop Application and Submit	3 months	Oct-2012	
Feasibility Study*	9 months	Oct-2012	
Provincial Review	8 months	Jun-2013	
Receive Provincial Approval	n/a	Jun-2013	
Federal Review	8 months	Jul-2013	
Receive Federal Approval	n/a	Jul-2013	
<b>Phase 3: Permitting</b>	<b>18 months*</b>	<b>Jan-15</b>	<b>750</b>
Provincial Permitting	3 months	Oct-2013	
Federal permitting (if Schedule 2 Amendment)	3 months (concurrent with Provincial Permitting)	Oct-2013	
Federal Permitting (if no Schedule 2 Amendment)	18 months	Jan-15	

<b>Phase 4: Construction and Commissioning</b>	<b>12 - 18 months</b>	<b>Dependent on Project Permitting</b>		
<b>Phase/Task</b>	<b>Duration*</b>	<b>Completion Target</b>	<b>Phase Cost (k USD)</b>	
(*Phases/tasks can be concurrent or overlap)				
<b>Phase 0: Baseline Environmental Studies</b>	<b>18 months</b>	<b>End Sept 2011</b>	<b>900</b>	
<b>Phase 1: Pre-Application</b>	<b>18 months</b>	<b>Jun-12</b>	<b>3,800</b>	
Project Description		Oct-11		
Exploration and In-fill Drilling	5 months	Sep-11		
	(from commencement of drilling season)			
Pre-Feasibility Level Studies* (including metallurgical testing)	4 months	Jan-12		
Provincial Section 10 Order (reviewable project under BCEAA)		Dec-11		
	n/a			
Develop Application Information Requirements	4 months	May-12		
Provincial Section 11 Order (outlining scope, procedures for Pre-application and Application)	n/a	May-12		
Phase review stages of the assessment)				
Federal Scoping/track decision	n/a	End May 2012		
<b>Phase 2: Application</b>	<b>18 months</b>	<b>Jul-13</b>	<b>1,750</b>	
	(Concurrent Provincial & Federal Reviews)			
Develop Application and Submit	3 months	Oct-12		
Feasibility Study*	9 months	Oct-12		
Provincial Review	8 months	Jun-13		
Receive Provincial Approval	n/a	Jun-13		
Federal Review	8 months	Jul-13		
Receive Federal Approval	n/a	Jul-13		
<b>Phase 3: Permitting</b>	<b>18 months*</b>	<b>Jan-15</b>	<b>750</b>	
Provincial Permitting	3 months	Oct-13		
Federal permitting (if Schedule 2 Amendment)	3 months (concurrent with Provincial Permitting)	Oct-13		
	18 months			
Federal Permitting (if no Schedule 2 Amendment)		Jan-15		
<b>Phase 4: Construction and Commissioning</b>	<b>12 - 18 months</b>	<b>Dependent on Project Permitting</b>		

\* Commencement of pre-feasibility and feasibility studies is dependent on the results of further drilling campaigns and metallurgical test work.

NB 1 Exploration and In-fill drilling is planned to recommence in April/May 2011. Drilling cannot be completed over the winter months.

NB 2 Jayden has advised MMC that the planned pre-feasibility and feasibility studies may be combined with a feasibility study being completed following completion of some pre-feasibility level trade-off studies. This may result in a reduced project development time frame.

NB 3 The estimated permitting and approvals timeframes are based on no permitting or approval complications or delays, including but not limited to, objections by third parties, including the government permitting authorities.

Completion of construction and commissioning is dependent on the successful completion of further project studies, the permitting approvals process and the time of year construction commences. Pending the successful completion of project studies and granting of required project approvals, MMC estimates that the likely completion date of the construction and commissioning stage may vary from September 2014 to May 2016.

Although the approval and mine development timeframe may be variable and is dependent on the information gained from pre-development studies, the development program provides a forecast of the likely process steps and schedule for establishing an efficiently managed project.

MMC considers that following completion of federal permitting, site construction may commence. There is also an opportunity to commence the 1 Mtpa of pre-strip prior to the completion and commissioning of all site infrastructure.

## 17.4 OPERATING COSTS

Operating costs for the PEA were estimated over the proposed life of mine period. The operating costs have an estimated accuracy of  $\pm 30$  to 50%. Greater variations in the estimated operating costs may occur if there are changes to the proposed mine plan following more detailed project studies.

### Mining

Mining operating costs were estimated based on the proposed mining schedule. The operating costs are based on expected mining productivities, annual haul routes and scheduled mineralised material and waste movements. The mining costs are estimated from first principles and are based on MMC's in house equipment and labour cost database. Mining operating costs include:

- Diesel fuel and lube;
- Tyres for all rubber tyred equipment;
- GET (ground engaging tools; such as drill bits; excavator blades; etc);
- Repair and maintenance (spare parts);
- Operating labour;
- Maintenance labour;
- Miscellaneous labour (blast crews; pump crews; labourers; supervisors; etc);
- Contract drill and blast; and
- Miscellaneous materials and overheads.

Contract mining costs based on an internal MMC contractor mining cost estimate.

### Processing

MMC has estimated processing operating costs on a 1 Mtpa basis for the first three years of processing followed by 2 Mtpa thereafter. With the completion of a pre-feasibility study, which includes more detailed process testing, a better understanding of the operating costs will be possible.

The processing cost estimates are given in **Table 17-14**. These costs are based on a very basic and cost cost-effective operation with a flexible, multi-skilled workforce, which increases from 41 to 63 as the production capacity doubles to 2 million tpa.

**Table 17-14 Silver Coin Project – Processing Cost Estimate**

Cost Centre	1 Mtpa USD/t processed	2 Mtpa USD/ t processed
Power	1.83	1.87
Labour	3.19	1.65
Consumables	6.50	4.10
<b>Total</b>	<b>11.52</b>	<b>7.62</b>

Source: MMC estimate

### Site Overheads, Mine Administration, Selling Costs and Transportation

Other operating costs have been estimated based on MMC experience of mining operations of this style and size.

## Operating Cost Estimate

The life of mine operating cost estimate is shown in **Table 17-15**. MMC note that the operating costs are likely to change as further project studies are completed. The current operating costs are based on operating assumptions which may vary following the completion of more detailed studies.

**Table 17-15 Silver Coin Project – Life of Mine Operating Costs (USD/ t processed)**

Cost Centre	USD/t waste	USD/t processed
Overburden Removal*	2.49	4.14
Mining & Product Haul		2.17
Field Support Cost		0.87
Processing		\$8.03
Admin & Other Overheads		\$1.99
<b>Total Mine Operating Costs/t processed</b>		<b>\$17.19</b>
Metal Selling and Transport		\$0.29
<b>Total Project Operating Costs/t processed</b>		<b>\$17.48</b>

*Nb\*: Including Contractor Waste Removal*

**Table 17-16 Silver Coin Project – Contractor Waste Mining Costs (USD/t)**

Cost Centre	USD/t
Contractor Mining Cost	\$3.10

Estimated operating costs over time are given in **Figures 17-10 and 17-11**.

**Figure 17-9. Silver Coin Project – Operating Cash Cost (USD /t processed)**

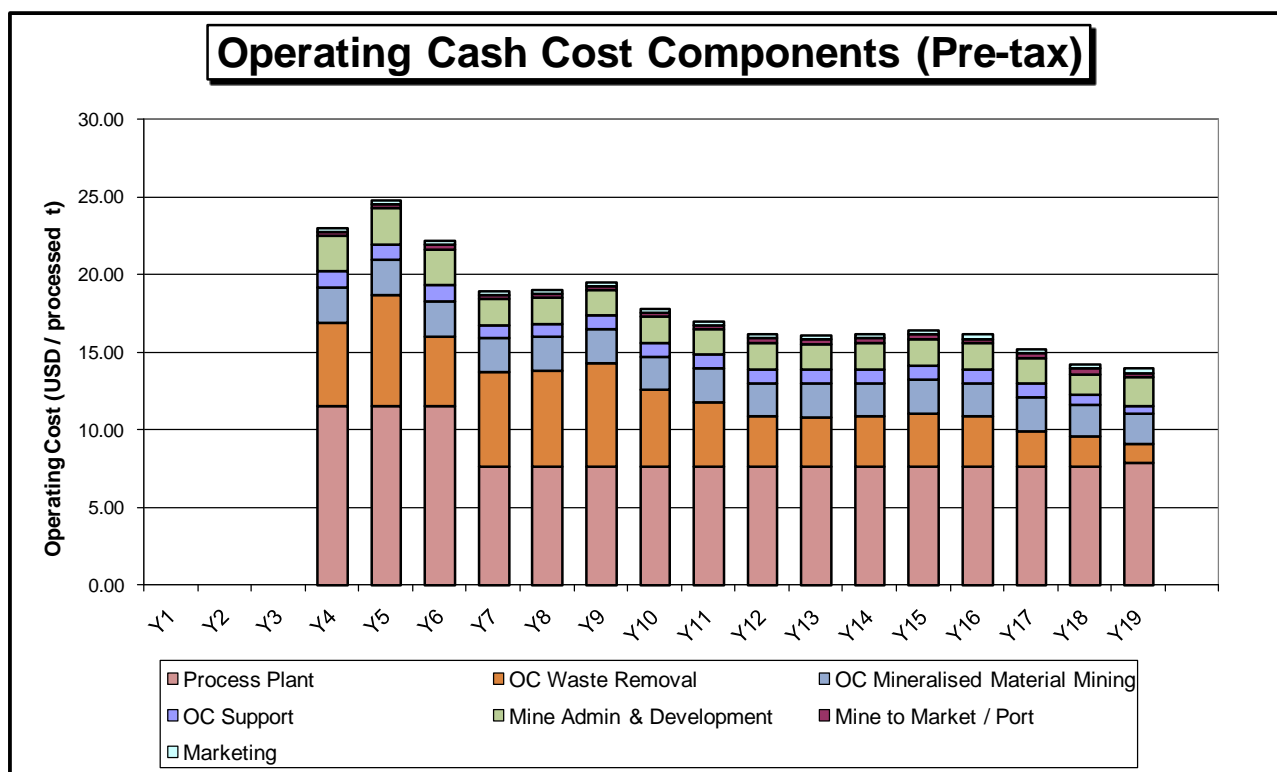
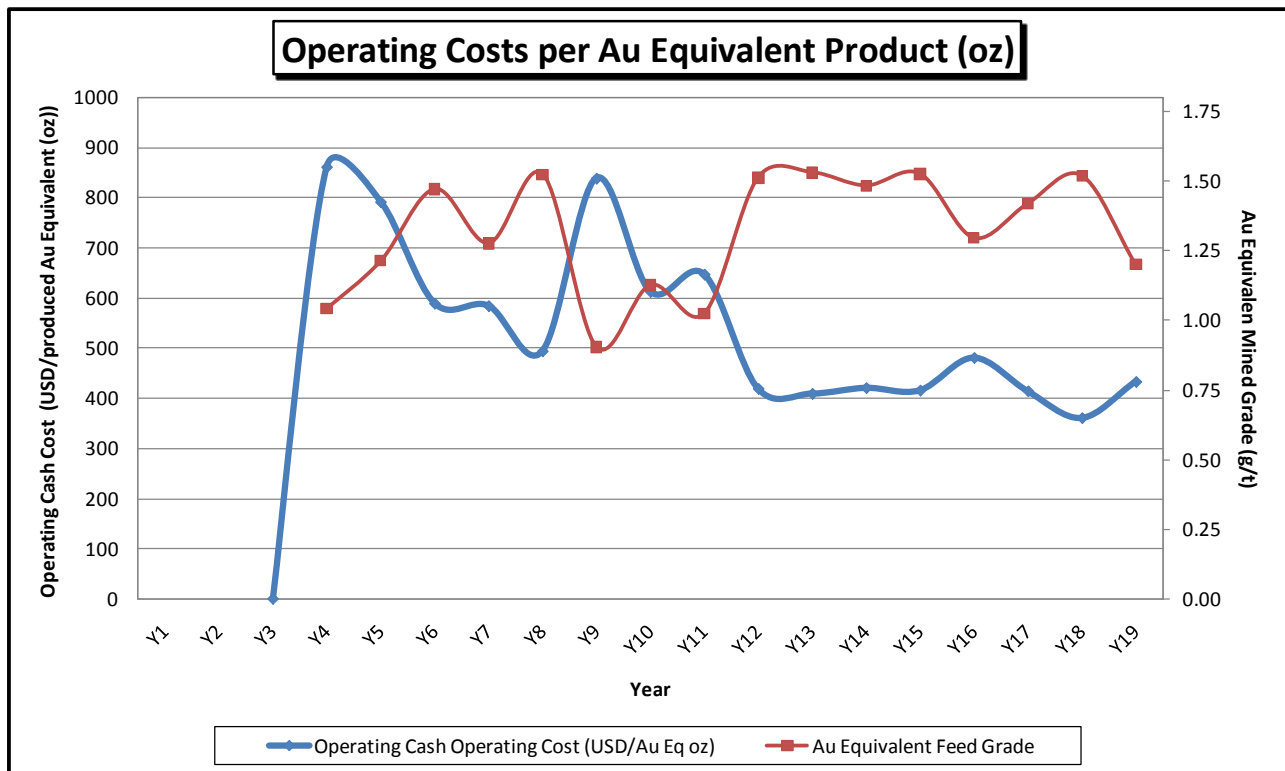


Figure 17-10. Silver Coin Project – Operating Cash Cost (USD/ oz Au equivalent)



Analysis of the operating costs show:

- Average life of mine operating costs are USD 510/oz Au equivalent.
- Operating costs (USD / mineralised t) are higher in the early years of the mine plan due to the lower ore production rate.
- Operating costs (USD / oz Au equivalent) are sensitive to small variations in the average mined grade.
- Operating costs (USD / oz Au equivalent) trend downward towards the end of the mining schedule due to the increase in average mined grade and reduction in strip ratio.

## 17.5 CAPITAL COSTS

Capital costs were estimated over the proposed life of mine period. The capital costs are estimated to have an accuracy of  $\pm 30$  to 50%. Greater variations in the estimated capital costs may occur if there are changes to the proposed mine plan, following more detailed project studies.

## Project Development

MMC have been informed by Jayden that project development studies are planned to be completed to mid 2012. The planned studies and Jayden's estimated budget are:

- Additional in-fill and exploration drilling (USD 2,500 k);
- Metallurgical testing (USD 300k);
- Pre-feasibility studies (USD 500 k);
- Feasibility studies (USD 1,000k);
- Ongoing environmental baseline studies (USD 900 k);
- Other permitting studies and permitting (USD 2,000 k); and
- Allowance for other technical work / project studies (USD 1,000 k).

Jayden has estimated that from 2011 to mid 2012 the total cost for this work will be approximately USD 8.2 M. MMC believes some of these estimates are conservative, such as metallurgical testing estimate (which is higher than MMC's estimate outlined in **Section 19**), however, the overall budget is reasonable for the intended scope of work.



Jayden have advised that a full pre-feasibility study may not be completed, rather pre-feasibility level trade off studies may be completed prior to commencing a feasibility study. This approach will likely reduce the estimated project development costs.

## Mining

Mining capital expenditure consists of mining equipment and support equipment, **Table 17-17**.

**Table 17-17 Silver Coin Project – Mining Fleet Capital Costs**

Key Equipment			Stage 1 (k USD)	Stage 2 (k USD)
Excavator 80t	Caterpillar	375L	1,271	1271
Haul truck 50t	Caterpillar	773D	4,480	2,688
Drill	Atlas Copco	DM45	840	600
Support Equipment				
Grader	Caterpillar	163H	670	-
Dozer	Caterpillar	D9T	2,000	900
Watercart 40kl	Caterpillar	10 kL	650	-
Lighting Plant	-	30 ft	60	60
Lube/Fuel truck	-	-	80	-
Service truck	-	-	70	-
Tyre handler	-	-	160	-
Integrated Transport	Caterpillar	IT38	170	-
Backhoe	Caterpillar	430E	220	-
Bobcat	Caterpillar	246C	40	-
LV 4WD	-	-	120	90
<b>Total</b>			<b>10,831</b>	<b>5,609</b>

Capital allowances for mining workshops and sustaining capital have also been included.

Closure and land remediation of costs have been estimated to be approximately USD 15 M. This will be incurred the year following the completion of mining operations.

## Processing

MMC has completed two processing capital costs estimates. The estimate is based on two phases, where equipment and development requirements suitable for a 1 million tpa operation (Stage 1) and simply duplicated in Stage 2 to bring production capacity up to 2 million tpa. There would be an opportunity to improve the overall capital costs by installing larger equipment in Stage 1; however the approach taken was to minimise the Stage 1 capital. Furthermore, the capital costs reflect a very basic processing plant which will satisfactorily treat mineralised material and produce doré gold bullion.

The first estimate is based on Western processing equipment, with an overall estimated capital cost of USD 86.52 M (refer to **Table 17-18**). The Western capital cost estimate was based on MMC's database and experience for a similar sized open cut gold operation with a similar process complexity; assumptions were required, however, about the infrastructure requirements and a conservative approach has been adopted.

The second estimate is based on Chinese Processing equipment, where capital costs have been estimate based on quotations for a total processing capital cost of USD 55.04 M (refer to **Table 17-18**). A total EPCM cost and contingency of 15% (each) has been allowed.

Stage 1 costs will be incurred prior to the commencement of processing, whilst stage 2 costs are forecast for Year 3 of processing.

The cost estimates are based on a basic process plant which matches the processing flow-sheet described in **Section 15**. As further metallurgical testing is completed, the capital cost can be estimated to a higher level of accuracy.

**Table 17-18 Silver Coin Project – Processing Capital Costs**

	Western		Chinese	
	Stage 1 (k USD)	Stage 2 (k USD)	Stage 1 (k USD)	Stage 2 (k USD)
Comminution	12,850	12,850	7,000	7,000
Flotation	4,000	4,000	580	580
Dewatering	2,750	2,570	1,000	1,000
Leaching Plant	4,250	4,250	2,848	2,850
Gold Recovery	250	0	185	0
Carbon Regeneration System	350	0	95	0
Detoxification System	180	0	150	0
Reagents	520	0	450	0
Installation	5,200	4,300	5,200	4,300
Site Works	5,100	2,900	5,100	3,500
First Fill	500	200	500	200
EPCM	5,500	5,500	5,500	2,000
Contingency	5,000	3,500	2,500	2,500
<b>Sub Total</b>	<b>46,450</b>	<b>40,070</b>	<b>31,107</b>	<b>23,930</b>
<b>Total</b>	<b>86,520</b>		<b>55,037</b>	

Processing sustaining capital has been estimated to be USD 1.5 M per year.

### Site Infrastructure

MMC has estimated site infrastructure costs for the Silver Coin project. The infrastructure operating costs are high level estimates which reflect the preliminary nature of this study.

**Table 17-19 Silver Coin Project – Infrastructure Capital Costs**

Process Area	Initial Costs (k USD)	
	Stage 1	Stage 2
Roadworks	5,000	2,500
Buildings & Facilities	3,000	1,500
Mining Workshop	2,000	
Accommodation village	-	-
Permanent	2,000	1,000
Construction	1,800	1,800
Heating System	1,000	1,000
Connection of Power	4,000	2,000
208V/120V Distribution	1,500	1,500
11kV Reticulation	1,700	1,700
Comms and IT	400	200
Raw water storage & reticulation	950	450
Temporary Construction Power	800	0
Concrete	2,200	2,200
Mechanical/piping	1,400	1,400
Tailings Dam	2,200	0
EPCM	4,300	2,600
Contingency	4,820	3,000
Working Capital	4,500	0
<b>Sub-total</b>	<b>43,570</b>	<b>22,850</b>
<b>Total</b>	<b>66,420</b>	

Infrastructure sustaining capital has been estimated to be USD 1.4 M per year.

### Capital Expenditure Schedule

The project's capital expenditure is shown in **Figure 17-12**. The capital expenditure schedule clearly shows the Stage 1 and Stage 2 expenditure periods. The mine plan was scheduled in this way to delay some of the capital expenditure until processing had commenced.

The remaining capital shows sustaining capital allowances as well as fleet replacement costs over the life of mine. A mine closure cost is incurred the year after processing ceases.

The total estimated capital costs (with Chinese processing equipment capital estimates) are shown in **Table 17-20** and the capital schedule over the mine life are shown in **Figure 17-11**. This use of Chinese processing equipment represents an estimated saving of USD 32 M in the first four years of the mine plan.

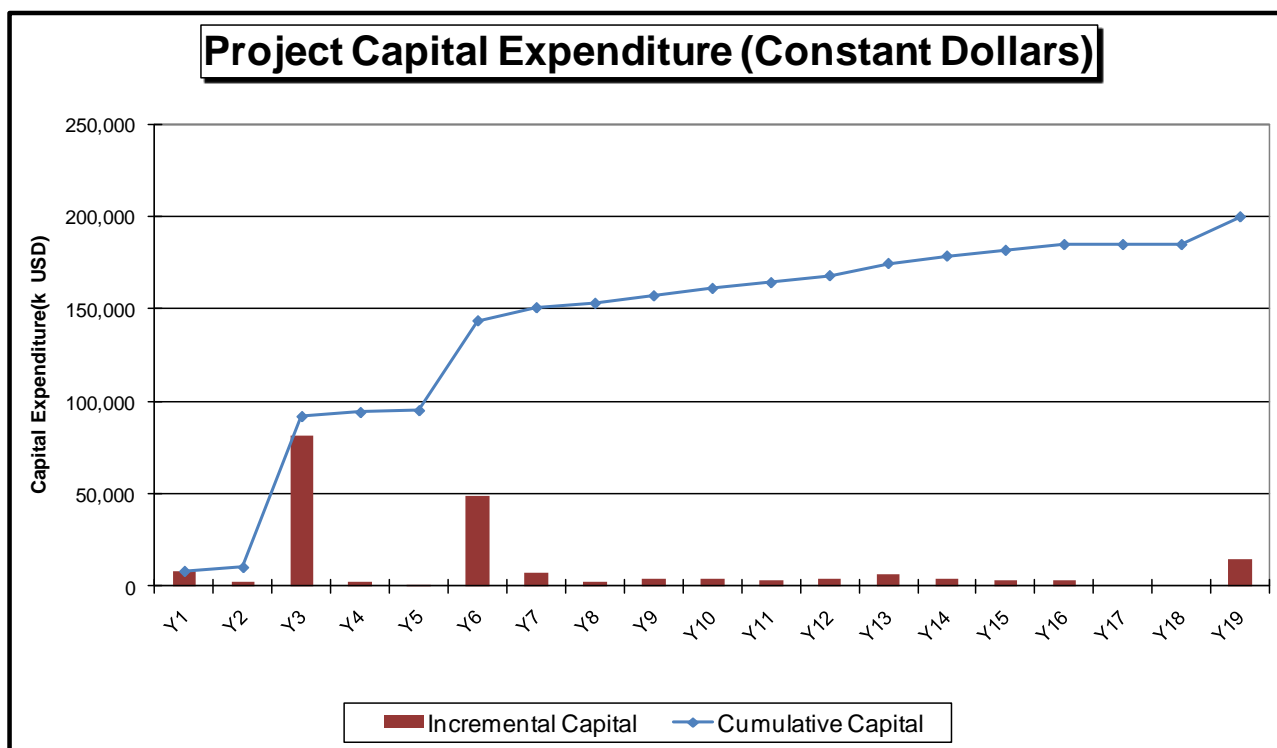
**Table 17-20 Silver Coin Project – Estimated Initial Capital Costs (Chinese Processing Equipment Capital Estimate)**

<b>Cost Area</b>	<b>Stage 1 (k USD)</b>	<b>Stage 2 (k USD)</b>	<b>Total (k USD)</b>
Mining & Support	10,831	5,609	16,440
Processing	31,107	23,930	55,037
Infrastructure	43,570	22,850	66,420
Project Development	8,200		8,200
<b>Initial Capital Costs</b>	<b>93,708</b>	<b>52,389</b>	<b>146,097</b>

**Table 17-21 Silver Coin Project – Replacement, Sustaining and Closure Costs**

	<b>Years -2 to 4 (k USD)</b>	<b>Years 5-10 (k USD)</b>	<b>Years 11-15 (k USD)</b>	<b>Year 16 onwards (k USD)</b>	<b>Total (k USD)</b>
Mining & Support	420	3,430	5,232	15,000	<b>24,082</b>
Processing	1,400	7,450	5,600	-	<b>14,450</b>
Infrastructure	1,400	7,925	6,000	-	<b>15,325</b>
Project Development	-	-	-	-	-
<b>Total Replacement, Sustaining And Closure</b>	<b>3,220</b>	<b>18,805</b>	<b>16,832</b>	<b>15,000</b>	<b>53,857</b>

Figure 17-11. Silver Coin Project – Project Capital Expenditure (Chinese Processing Equipment Capital Estimate)



## 17.6 PROJECT CASH FLOW AND NPV ANALYSIS

The economic modeling described in this section is based on a mining schedule which includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves. MMC also notes that the PEA includes other operating assumptions across most aspects of the mine plan which require more detailed studies to determine more accurate operating parameters and cost estimates. As such, MMC warns that there is no certainty that the results of the PEA and the associated NPV estimate will be realised.

The discounted cash flow is based on the following assumptions and estimates:

- The life of mine plan physicals and metallurgical recoveries are based on the estimates and assumptions outline in **Section 17.1 – Mining Review**.
- Project development timeline and costs are based on the estimates and assumptions outlined in **Section 17.3 – Project Development**.
- The applied operating costs are based on the estimated operating costs outlined in **Section 17.4 - Operating Costs**.
- The applied capital costs and schedule is based on the estimated Chinese capital expenditure schedule outlined in **Section 17.5 - Capital Costs**.
- Total project development costs, as outlined in **Section 17.5 - Capital Costs**, have been applied to Year 1 of the economic model.
- The economic model is a constant dollar model, with no inflation or escalation applied over the mine life.
- The NPV analysis has been completed on a **pre-tax basis**, therefore no tax was applied to the model.

The metal prices applied to the NPV analysis were based on three year historic prices (year end) and the recent spot price (Sept 2010). The historical data is sourced from the *Consensus Economic Forecast* (July 2010). A summary of the historic prices, forecast prices and the applied prices to determine NPV is shown in **Table 17-23**. The “average” metal prices shown in **Table 17-22** were applied to the “Base Case” economic model.

Table 17-22 Silver Coin Project – Applied Metal Prices

Metal	Units	Dec-07	Dec-08	Dec-09	Sept-10	Average
Gold	USD/oz	836.5	869	1104	1250	1,015
Silver	USD/oz	14.76	10.79	16.99	19.84	15.60
Zinc	USD/t	2288	1090	2570	2138.5	1,983

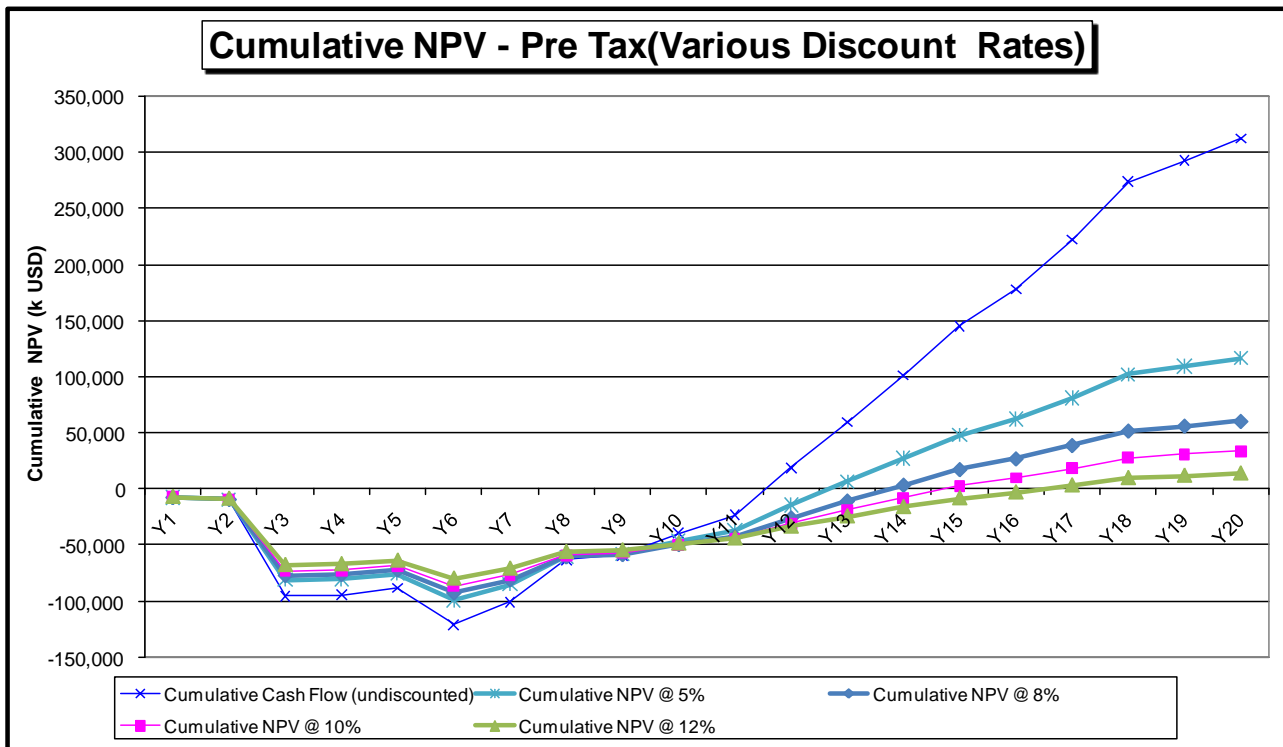
## Results

An NPV (pre-tax) analysis has been completed at a 5%, 8%, 10% and 12% discount rate. Base case economic model results are shown in **Table 17-23** and cumulative NPV over the life of the mine is shown in **Figure 17-13**.

Table 17-23 Silver Coin Project – Base Case Economic Modelling Results (Pre-Tax)

SILVER COIN GOLD PROJECT - BASE CASE ECONOMIC MODEL																									
SCHEDULE		RATE	UNITS	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20	Totals/	
		Quantity Schedule																							
	Waste	Total Waste	kt	0	0	1,000	2,020	2,686	1,910	4,755	4,880	4,990	4,164	3,580	2,334	2,514	3,062	3,238	2,818	1,381	1,573	1,033	0	47,939	
	Mineralised Material	Total Ore Mined	kt	0	0	54	1,000	1,000	1,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,806	0	28,860	
MINED GRADE	Au	Gold Grade	Au g/t	0.00	0.00	0.46	0.84	1.03	1.20	0.94	1.11	0.74	0.96	0.83	1.16	1.28	1.32	1.33	1.16	1.28	1.39	1.13	0.00	1.11	
	Ag	Silver Grade	Ag g/t	0.00	0.00	3.77	5.48	7.96	7.64	8.63	9.21	6.35	5.56	5.72	9.41	8.84	7.30	8.36	4.89	5.01	4.41	3.29	0.00	7.02	
	Zn	Zinc Grade	Zn %	0.00%	0.00%	0.03%	0.21%	0.13%	0.29%	0.36%	0.49%	0.14%	0.16%	0.19%	0.38%	0.22%	0.13%	0.15%	0.13%	0.15%	0.14%	0.07%	0.00%	0.21%	
RECOVERED QUANTITY	Au (80 % Recovery)	Gold Metal recovered (kg)	Au (t. oz)	0	0	0	21,742	26,643	30,859	48,392	56,986	37,915	49,698	42,951	59,670	66,145	67,950	68,586	59,876	65,686	71,566	54,037	0	828,702	
	Ag (75 % Recovery)	Silver Metal recovered (kg)	Au (t. oz)	0	0	0	132,149	191,913	184,326	416,135	444,227	306,002	268,343	275,777	453,674	426,243	352,227	403,150	235,834	241,500	212,770	147,480	0	4,691,749	
	Zn (70 % Recovery)	Zinc Metal recovered (t)	Zn (t)	0	0	0	1,498	887	2,037	5,084	6,801	1,958	2,173	2,725	5,299	3,107	1,768	2,104	1,836	2,058	2,023	945	0	42,304	
REVENUE	Au (USD 1015/t. oz)		k USD	0	0	0	22,063	27,037	31,315	49,107	57,828	38,475	50,432	43,585	60,552	67,122	68,954	69,599	60,761	66,657	72,623	54,836	0	840,944	
	Ag (USD 15.60/t. oz)		k USD	0	0	0	2,061	2,993	2,875	6,490	6,928	4,772	4,185	4,301	7,075	6,647	5,493	6,287	3,678	3,766	3,318	2,300	0	73,168	
	Zn (USD 1983/t)		k USD	0	0	0	2,971	1,760	4,038	10,079	13,484	3,882	4,308	5,403	10,506	6,160	3,506	4,171	3,640	4,081	4,010	1,874	0	83,874	
	Total		k USD	0	0	0	27,095	31,789	38,227	65,676	78,239	47,128	58,925	53,289	78,133	79,930	77,953	80,057	68,079	74,504	79,952	59,010	0	997,986	
PROFIT & LOSS	Total Revenue		k USD	0	0	0	27,095	31,789	38,227	65,676	78,239	47,128	58,925	53,289	78,133	79,930	77,953	80,057	68,079	74,504	79,952	59,010	0	997,986	
	less Operating Costs		k USD	0	0	3,588	23,021	24,823	22,217	37,849	38,120	38,987	35,615	34,016	32,298	32,262	32,349	32,828	32,284	30,441	28,447	25,201	0	504,346	
	Profit Before Depreciation		k USD	0	0	-3,588	4,073	6,967	16,010	27,826	40,119	8,141	23,310	19,274	45,835	47,668	45,605	47,229	35,794	44,063	51,505	33,809	0	493,640	
	less Depreciation Allowance		k USD	423	528	8,986	9,270	9,360	14,209	15,083	15,311	15,743	15,183	15,264	15,660	8,921	8,702	8,923	4,253	3,841	3,624	8,238	0	181,520	
	Profit Before Tax		k USD	-423	-528	-12,574	-5,196	-2,394	1,801	12,744	24,809	-7,602	8,127	4,009	30,175	38,747	36,903	38,307	31,542	40,221	47,881	25,571	0	312,120	
	losses carried forward		k USD	0	-423	-950	-13,524	-18,720	-21,114	-19,313	-6,569	0	-7,602	0	0	0	0	0	0	0	0	0	0	0	0
	Tax Rate		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Tax Payable		k USD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Profit After Tax		k USD	-423	-528	-12,574	-5,196	-2,394	1,801	12,744	24,809	-7,602	8,127	4,009	30,175	38,747	36,903	38,307	31,542	40,221	47,881	25,571	0	312,120	
	CASH FLOW	Profit Before Depreciation		k USD	0	0	-3,588	4,073	6,967	16,010	27,826	40,119	8,141	23,310	19,274	45,835	47,668	45,605	47,229	35,794	44,063	51,505	33,809	0	493,640
		less Tax Payable		k USD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
less Working Capital Movement			k USD	0	0	138	747	69	-100	601	10	33	-130	-62	-66	-1	3	18	-21	-71	-77	-125	-969	0	
less Capital			k USD	8,200	2,100	81,629	2,179	1,010	48,590	7,093	2,385	4,036	4,010	3,110	3,780	6,606	4,006	3,110	3,110	0	0	15,000	0	199,954	
plus Salvage Values			k USD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18,684	18,684	
Net Cash Flow			k USD	-8,200	-2,100	-85,355	1,147	5,887	-32,480	20,132	37,724	4,072	19,430	16,225	42,121	41,063	41,595	44,101	32,705	44,134	51,582	18,934	19,653	312,370	
Cumulative Cash Flow			k USD	-8,200	-10,300	-95,655	-94,508	-88,621	-121,101	-100,968	-63,245	-59,173	-39,743	-23,517	18,603	59,667	101,262	145,363	178,068	222,201	273,783	292,717	312,370		
Present Value of Cashflow			k USD	-7,593	-1,852	-71,685	918	4,485	-23,564	13,910	24,824	2,552	11,597	9,223	22,803	21,172	20,425	20,624	14,567	18,720	20,838	7,285	7,201	116,449	
Cumulative NPV @ 5%			k USD	-7,593	-9,444	-81,129	-80,212	-75,727	-99,291	-85,381	-60,557	-58,005	-46,408	-37,185	-14,382	6,790	47,839	62,405	81,126	101,963	109,248	116,449			
Present Value of Cashflow			k USD	-7,593	-1,800	-67,758	843	4,007	-20,468	11,747	20,381	2,037	9,000	6,959	16,727	15,099	14,162	13,902	9,546	11,928	12,908	4,387	4,216	60,231	
Cumulative NPV @ 8%			k USD	-7,593	-9,393	-77,151	-76,307	-72,301	-92,768	-81,022	-60,641	-58,604	-49,604	-42,645	-25,918	-10,819	3,342	17,245	26,791	38,719	51,627	56,014	60,231		
Present Value of Cashflow		k USD	-7,455	-1,736	-64,128	784	3,656	-18,334	10,331	17,598	1,727	7,491	5,687	13,421	11,895	10,953	10,557	7,118	8,732	9,277	3,096	2,921	33,591		
Cumulative NPV @ 10%		k USD	-7,455	-9,190	-73,319	-72,535	-68,879	-87,214	-76,883	-59,284	-57,557	-50,066	-44,379	-30,958	-19,064	-8,110	2,447	9,565	18,296	27,574	30,669	33,591			
Present Value of Cashflow		k USD	-7,130	-1,630	-59,169	710	3,253	-16,026	8,869	14,839	1,430	6,093	4,543	10,529	9,165	8,289	7,847	5,196	6,260	6,533	2,141	1,984	13,725		
Cumulative NPV @ 12%		k USD	-7,130	-8,761	-67,930	-67,220	-63,966	-79,993	-71,123	-56,285	-54,855	-48,762	-44,219	-33,690	-24,525	-16,236	-8,389	-3,193	3,067	9,600	11,741	13,725			
IRR	IRR (Constant)	%		14.0%																					
NPV	NPV (Constant)	k USD		5%	116,449	8%	60,231	10%	33,591	12%	13,725														

**Figure 17-12. Silver Coin Project – Base Case NPV Analysis, Undiscounted, 5%, 8%, 10% and 12% Discount Factors**



A gold price sensitivity analysis was completed. The results are shown in **Table 17-24** (the NPVs are based on a discount factor of 10%). Other metal prices remained constant in this analysis.

**Table 17-24 Silver Coin Project – Gold Price Sensitivity (Pre-Tax NPV)**

Gold Price USD/oz Au	Discount Rate		
	8% (k USD)	10% (k USD)	12% (k USD)
850	5,588	-11,033	-22,109
900	22,159	2,504	-11,234
950	38,730	16,041	-359
1000	55,301	29,578	10,515
1015	<b>60,231</b>	<b>33,591</b>	<b>13,725</b>
1050	71,873	43,115	21,390
1100	88,444	56,652	32,265

Economic model sensitivity analysis was completed on applied metal prices (gold, silver and zinc) as well as capital cost estimates and operating cost estimates. The results are shown in **Table 17-25** (the NPVs are based on a discount factor of 10%). The results indicate that the Project is most sensitive to variations in metal price, operating costs and capital costs in that order.

**Table 17-25 Silver Coin Project – Project Sensitivity Price Sensitivity (Pre-Tax NPV at a 10% Discount Factor)**

Applied Variable	Variation Compared to Base Case Estimates		
	-10% (k USD)	0% (k USD)	10% (k USD)
Metal Prices	305	33,591	66,851
Operating Costs	51,984	33,591	15,171
Capital Costs	45,302	33,591	21,853



## 18 INTERPRETATION AND CONCLUSIONS

The following interpretations and conclusions have been made on the Silver Coin project from the findings of the Technical Report:

- The Project represents a promising polymetallic project, and has resources of sufficient quality that warrant additional investigation. Measured and Indicated Mineral Resources make up 48% of all Mineral Resources (at 0.3 g/t Au cut-off grade).
- A Mineral Resource estimate, using an ordinary kriging interpolation method, was completed by MMC of Beijing, China. The Mineral Resource estimate in this Technical Report is reported using cutoff grades which are deemed appropriate for the style of mineralisation and the current state of the Mineral Resources.
- MMC considers the estimated Mineral Resources to be compliant with NI 43-101 Guidelines for Resource Estimates. Of importance for mine planning, the model accommodates in situ and contact dilution but excludes mining dilution. Block size is similar (10 x 5 x 5 meters) to the expected small-mining units conventionally used in this type of deposit, and appropriate for an open pit mine.
- Potential for increasing of the Mineral Resources are good, with mineralisation open to the north and south and also down dip, which requires further drilling to investigate potential.
- The PEA included Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorised as Mineral Reserves. There is no certainty that the results of the PEA will be realised.
- The PEA estimated a production schedule based on initial production capacity of 1 Mtpa processed material for three years, prior to increasing to 2 Mtpa processed material for the remaining 12 years of mine life.
- The PEA estimated a pre-tax NPV by applying a discount factor of 10% and gold price of USD 1015/oz Au is USD 33.6 M. A sensitivity analysis of the pre-tax NPV indicated the Project is most sensitive to variations in metal prices, operating costs and capital costs in that order.
- The PEA estimated project operating and capital costs to an estimated accuracy of  $\pm 30\%$  to 50%. Further metallurgical test work is required to confirm the process flow sheet and enable estimation of more accurate operating and capital cost estimates and metallurgical recoveries.
- Two satisfactory and conventional processing routes have been demonstrated on the bench-scale. The preferred processing route consisted of the production of a gold-rich flotation concentrate followed by cyanide leaching of the finely ground flotation concentrate to produce gold dore bullion.
- The potential for recovery of a zinc, and possibly lead, concentrates exists.
- While a conservative overall process gold recovery has been interpreted (80%), higher gold recoveries may be possible (>85%).
- No deleterious elements appear to be present (Hg,As,Sb, etc).
- The project requires ongoing environmental baseline testing as well as significant environmental approvals and permitting prior to commencing construction. The estimated construction period for the project is 12 months to 18 months following completion of all relevant project permitting requirements.

## 19 RECOMMENDATIONS

The recommendations provided are based on observations in the metallurgical review, Mineral Resource estimate and Preliminary Economic Assessment detailed in **Sections 15, 16 and 17**.

### Mineral Resource Estimation and Geology

- In-fill drilling is recommended to increase the Mineral Resource confidence categorisation of areas currently defined as Inferred to Indicated. This drilling is estimated to cost approximately USD 2.5M.
- Sample all un-sampled drill core from the 2004-2008 program to determine mineralized areas. This will cost approximately USD 2 k.
- Complete a detailed topography of the resource area and the surrounding geography to enable detailed mine planning construction plans to be undertaken. This will cost approximately USD 5 k.
- Completed further bulk density determination to understand the variation across the deposit. Given the variable sulphide mineralisation, it is recommended that all future drill programs include one bulk density determination every 10 m.

### Metallurgy and Processing

MMC estimates the additional testwork required to meet the metallurgical recommendations listed below can be completed for approximately USD 300 k.

- Complete further comminution testing to establish the required comminution parameters. This should be completed on a representative range of composite samples.
- More quantitative mineralogy is required to better define the mineralogical associations for the various ore types and preparation of testing composites. More testing and analysis, such as modelling, is necessary to better characterise the comminution properties of the various ore types, while more definitive testing is required to optimise both the flotation response and concentrate leaching characteristics. Other process options should be examined such as pre-concentration and the production of a zinc concentrate.
- Locked cycle testing with the Master Composite sample tested two process conditions: high pH and natural pH. After three stages of roughing, the rougher concentrate was reground (P80 circa 45-55 microns) and floated in four stages of cleaning to produce a relatively high grade concentrate (~110 g/t) with high gold recoveries (90-94%) and low mass recoveries (1.8-3.0%). More testing is required to confirm this finding based on the variable results found in the previous cleaner testing programme.
- With more testing, the flotation flowsheet could be further optimised to reduce the number of flotation stages, by amongst other things, employing a stronger pyrite depressant such as lime. The presence of organic carbon at these levels is not generally a major deterrent in leaching; there is, however, a better method to reduce any impact than was used in the testing. It was found that between 35 and 52% of the gold losses were occurring in the minus 37 micron size fraction, however the mineralogical nature was not determined. This aspect needs to be resolved in order to evaluate the potential for improving the gold and silver flotation recoveries.
- Neither the sizing nor mineralogical details of the gold and silver losses in the leached tailings were established and these types of studies are required to determine the potential for higher gold and silver leaching recoveries.
- Additional test work is recommended to determine the suitability of pre-concentration to substantially reduce the volume of material to be processed. The nature of the mineralisation would appear to lend itself to pre-concentration through a number of methods however this would need to be tested. The approach would employ screening possibly in conjunction with optical sorting, which may be able to reduce the volume of the material to be treated by 75 to 85%. This would have a substantial impact on the size and thus the cost of downstream equipment, particularly the mills. It would also decrease the amount of power required on site, since the milling circuit is the largest consumer of power on a mine site. Additionally, the operating cost would be substantially reduced.
- Additional test work is recommended to determine the potential recovery of Zinc. Estimations show that the zinc may contribute up to 15 to 20% of the project revenue. This would, however, be need to be tested since the sulphide mineralisation appears to be fine and intimately associated with pyrite and other sulphides.

### Mining and Project Development

Complete further project studies, such as pre-feasibility and feasibility studies. These studies will result in a more a detailed mine plan with more accurate operating and capital cost estimates and operating parameters and infrastructure requirements and design. MMC estimates these studies will cost approximately USD 500 k and USD 1,000 k respectively. Jayden advise MMC that they plan to complete pre-feasibility level trade off studies prior to completing a feasibility study. This approach may reduce the cost of the pre-feasibility study by USD 100 k to USD 200 k. MMC recommends the following are included in the pre-feasibility and feasibility level studies:

- Assessment of waste rock to determine any potential acid forming potential. If the presence of potential acid forming (“PAF”) material is confirmed, then the quantity of PAF and non acid forming material (“NAF”) will need to be estimated to assist the management of the PAF material. Any subsequent mine planning would need to take the management of PAF material storage into consideration. This could potentially impact mine development strategies and mine scheduling.
- As part of more detailed mining studies. It is recommended that implementation of waste conveyors are assessed. Due to the large vertical haul from the pit to the current proposed waste dump position, a waste conveyor may reduce mining operating costs. This may be completed as part of pre-feasibility studies.
- The positioning of the proposed mine infrastructure requires more detailed studies to determine the suitability.
- As stated above, additional exploration and in-fill drilling is recommended prior to the commencement of pre-feasibility and feasibility studies. MMC estimates that all current Inferred Mineral Resources will be required to be upgraded to at least Indicated Mineral Resources for the successful completion of these studies and the estimation of Mineral Reserves.
- Continue baseline environmental investigations as programmed and modify or extend the studies if necessary in order to address any issues arising in a timely manner.
- Consult with US/Alaskan regulatory authorities as early as practicable in the project planning stage in relation to expected consultation and review requirements, if any, in order to avoid any unforeseen potential delays in the review and permitting phase.
- Infrastructure and Site Support
  - Determine availability, route and connection cost of power.
  - Establish availability, quantity and quality of water.
  - Determine site locations for process plant(s), tailings dam(s), accommodation, etc. (condemnation drilling required)
  - Review site access road needs and development requirements.
  - Ease of access to and from site on a yearly basis.
  - Determine potential power costs.
  - Establish freight costs to site.
  - Review manpower costs, availability of suitably trained people and potential requirements for manning structures (rosters, on-off periods, holidays, etc.)
  - Availability of shipping freight.

## 20 PROJECT RISK SUMMARY

Mining is a relatively high risk business when compared to other industrial and commercial operations. Each deposit has unique quality characteristics and response to mining and processing operations which can never be wholly predicted. MMC's review of the Assets indicate project risk profiles typical of mining projects at similar levels of resource estimation, mine planning and project development. During its review, MMC did not discover any critical or "fatal" project flaws.

MMC has classified Risks for the Silver Coin Project based on the general mining industry definition such as those listed below. MMC notes that in most instances it is likely that through provision of further documentation and additional technical studies these risks may be mitigated.

**Table 20-1 Silver Coin Project - Overall Risk Assessment**

Likelihood of Risk (within 7 years)	Consequence of Risk		
	Minor	Moderate	Major
Likely	Moderate	High	High
Possible	Low	Moderate	High
Unlikely	Low	Low	Moderate

**H – High Risk:** This implies that there are key project parameters as presented in the current documentation, which if uncorrected, will have a material effect (for example >15 % to 20%) on the project cash flow and performance, and could possibly lead to project failure.

**M - Moderate Risk:** This implies that there is a danger of failure of a critical project parameter as presented in the current documentation, which if uncorrected, may have a material effect (for example 10% to 15%) on the project cash flow and performance unless mitigated by some corrective action.

**L - Low Risk:** Implies that if some factors are uncorrected, they will have little or no effect (<10%) on project production rates or project economic performance.

**Table 20-2 – Silver Coin Project - Project Risk Summary**

Risk Ranking	Risk Description and Suggested Further Review	Mitigant	Area of Impact
H	<b>Preliminary Nature of Studies:</b> The current project studies are at a preliminary level. As such, there is potential for significant changes to current project assumptions which may result in a material variations to the current mine plan and estimated project value.	Complete further exploration drilling and metallurgical testing. These results should then be included in subsequent pre-feasibility and/or feasibility studies.	All
H	<b>Project Development Schedule:</b> The current project development schedule is based on the successful completion of project studies as well as limited delays to the granting of project approvals and licences.	Complete ongoing project studies and licencing and project permitting requirements.	All
H	<b>Understanding of Mineralogy:</b> Further process testing and analysis is required. A better understanding of the mineralogy of the types of mineralisation is necessary, which may reveal additional processing challenges.	Further metallurgical testing.	Metallurgical recoveries, operating and capital cost estimates.

M	<b>Comminution Testing:</b> Further testing of the mineralised material is required to better define the required comminution circuit for mineral processing.	More testing of more diverse mineralisation types followed by modeling is required.	Metallurgical recovery, operating and capital cost estimates.
M	<b>Potential Acid Forming Material:</b> The waste material may potentially be acid forming. Acid forming material requires ongoing management and controls.	Complete testing of the waste material to determine the risk of acid formation. If required, include management plans in any subsequent project studies.	Operating costs and capital costs.
M	<b>Marketing of Product:</b> The gold doré will have a substantial silver content (>50%) as well as potentially other metals (e.g. Cu, Pb, Zn).	The probable marketing terms need to be determined.	Project revenue estimates
M	<b>Use of Cyanide:</b> The use of cyanide for processing is dependent on receiving relevant approvals.	Completion of relevant project studies to gain the required approvals to utilise cyanide.	Metallurgical recovery, operating and capital costs.
M	<b>Bulk Density:</b> Limited Bulk Density determinations have been completed with some evidence for grade being proportional to bulk density.	Complete Bulk Density Determinations on future drilling and remaining core.	Resource and Mining Estimation
L	<b>Limited Understand of Mineralisation Controls.</b> A detailed understanding on the mineralisation controls for the vast majority of the deposit is not available with the present data.	Additional drilling and smaller sample lengths	Resource Estimation
L	<b>No Geotechnical Studies.</b> A detailed understanding of the structure is not available	Complete detailed geotechnical logging and studies	Pit Slope Stability and pit design parameters.

## 21 ILLUSTRATIONS

The illustrations supporting the various sections of the report are located within the relevant sections immediately following the references to the illustrations, for ease of reference. An index of tables and figures is provided at the beginning of the report.

## 22 REFERENCES

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## 23 DATE AND SIGNATURE

**Jeremy Lee Clark**

Room 2101, Tower A, Ping An International Financial Centre  
No. 3 Xinyuan South Road, Chaoyang District,  
Beijing 100027, China  
Phone: +86 10 6410 4800  
[jclark@runge.com.au](mailto:jclark@runge.com.au)

I, Jeremy Lee Clark, am working as a Geologist Minarco-Mine Consult, of Room 2101, Tower A, Ping An International Financial Centre No. 3 Xinyuan South Road, Chaoyang District Beijing 100027, China. This certificate applies to the Technical Report on the Preliminary Economic Assessment and Resource Estimate for the Silver Coin Project, British Columbia, Canada, prepared for Jayden Resources Inc, dated April 13th, 2011 (the "Technical Report"), do hereby certify that:

1. I am a registered member of the Australian Institute of Geoscientists ("AIG").
2. I am a graduate of the Queensland University of Technology and hold a B App Sc in Geology, which was awarded in 2001. In addition, I am a graduate of Edith Cowan University in Australia and hold a Graduate Certificate in Geostatistics, which was awarded in 2006.
3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 2001.
4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").
5. I inspected the Silver Coin Project between the dates 4<sup>th</sup> to the 6<sup>th</sup> June 2010.
6. I am responsible for the preparation or the supervision and final editing of all portions of the Technical Report.
7. I have had no prior involvement with the properties that are the subject of the Technical Report.
8. To the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of Jayden Resource Inc. in accordance with the application of Section 1.4 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Beijing, China, this April 13<sup>th</sup>, 2011

"Jeremy L. Clark"



"Jeremy Lee Clark" (QP)

**Daniel Desmond Peel**

Room 2101, Tower A, Ping An International Financial Centre  
No. 3 Xinyuan South Road, Chaoyang District,  
Beijing 100027, China  
Phone: +86 10 6410 4800  
[dpeel@runge.com.au](mailto:dpeel@runge.com.au)

I, Daniel Desmond Peel, am working as a Mining Engineer for Minarco-Mine Consult, of Room 2101, Tower A, Ping An International Financial Centre No. 3 Xinyuan South Road, Chaoyang District Beijing 100027, China. This certificate applies to the Technical Report on the Preliminary Economic Assessment for the Silver Coin Project, British Columbia, Canada, prepared for Jayden Resources Inc, dated April 13<sup>th</sup>, 2011 (the "Technical Report"), do hereby certify that:

1. I am a registered member of the Australasian Institute of Mining and Metallurgy ("AUSIMM").
2. I am a graduate of the University of New South Wales and hold a Bachelor of Engineering, which was awarded in 2002.
3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 2002.
4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").
6. I am responsible for the preparation of Section 17 of the Technical Report.
7. I have had no prior involvement with the properties that are the subject of the Technical Report.
8. To the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of Jayden Resource Inc. in accordance with the application of Section 1.4 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Beijing, China, this April 13<sup>th</sup>, 2011



"Daniel D Peel"

**Andrew Newell**

Level 12, 333 Ann Street,  
Brisbane, QLD, Australia, 4000  
Phone: +61 3100 7200  
[anewell@runge.com.au](mailto:anewell@runge.com.au)

I, Andrew James Haigh Newell, am working as a Processing Engineer for Minarco –Mine Consult., of Level 12, 333 Ann Street Brisbane, QLD, Australia, 4000. . This certificate applies to the Technical Report on the Preliminary Economic Assessment for the Silver Coin Project, British Columbia, Canada, prepared for Jayden Resources Inc, dated April 13<sup>th</sup>, 2011 (the “Technical Report”), do hereby certify that:

1. I am a registered member of the Australasian Institute of Mining and Metallurgy (“AUSIMM”), Canadian Institute of Mining, Metallurgy and Petroleum Engineers (“CIM”), American Institute of Mining, Metallurgy and Petroleum Engineers (“SME”) and Institute of Engineers Australia (“IEA”).
2. I am a Charter Professional Engineer of Australasia (CPEngAust) and Chartered Professional Metallurgist of Australasia (CPMetAust).
2. I am a graduate of the Melbourne University and hold a Bachelor of Engineering which was awarded in 1976 and Masters of Engineering Science which was awarded in 1982. I hold a PhD from the University of Cape Town which was awarded in 2007.
3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 1978.
4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators (“NI 43-101”).
6. I am responsible for the preparation of Section 15 of the Technical Report.
7. I have had no prior involvement with the properties that are the subject of the Technical Report.
8. To the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of Jayden Resource Inc. in accordance with the application of Section 1.4 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Beijing, China, this April 13<sup>th</sup>, 2011



“Andrew Newell”

## 24 ANNEXURE A – RELEVANT EXPERIENCE

### **Jeremy Clark – Senior Consultant Geologist – Beijing, Bsc. with Honours in Applied Geology, Grad Cert Geostatistics, MAIG**

Jeremy has over 10 years of experience working in the mining industry. During this time he has been responsible for the planning, implementation and supervision of various exploration programs, open pit and underground production duties, detailed structural and geological mapping and logging and a wide range of experience in resource estimation techniques. Jeremy's wide range of experience within various mining operations in Australia and recent experience working in South and North America gives him an excellent practical and theoretical basis for resource estimation of various metalliferous deposits including iron ore and extensive experience in reporting resource under the recommendations of the NI-43-101 reporting code.

With relevant experience in a wide range of commodity and deposit types, Jeremy meets the requirements for Qualified Person for 43-101 reporting, and Competent Person ("CP") for JORC reporting for most metalliferous Mineral Resources. Jeremy is a member of the Australian Institute of Geoscientists.

### **Philippe Baudry – General Manager – China and Mongolia, Bsc. Mineral Exploration and Mining Geology, Assoc Dip Geo science, Grad Cert Geostatistics, MAIG**

Philippe is a geologist with over 14 years of experience. He has worked as a consultant geologist for over 6 years first with Resource Evaluations and subsequently with Runge after they acquired the ResEval group in 2008. During this time Philippe has worked extensively in Russia assisting with the development of two large scale copper porphyry projects from exploration to feasibility level, as well as carrying out due diligence studies on metalliferous projects throughout Russia. His work in Australia has included resource estimates for BHPB, St Barbara Mines and many other clients both in Australia and overseas on most styles of mineralisation and metals. Philippe furthered his modelling and geostatistic skills in 2008 by completing a Post Graduate Certificate in Geostatistics at Edith Cowan University. Philippe relocated to China in 2008 and has since project managed numerous Due Diligences and Independent Technical Reviews for private acquisitions and IPO listings purpose mostly in China and Mongolia.

Prior to working as a consultant Philippe spent 7 years working in the Western Australian Goldfields in various positions from mine geologist in a large scale open cut gold mine through to Senior Underground Geologist. Before this time Philippe worked as a contractor on early stage gold and metal exploration projects in central and northern Australia.

With relevant experience in a wide range of commodity and deposit types, Philippe meets the requirements for Qualified Person for 43-101 reporting, and Competent Person ("CP") for JORC reporting for most metalliferous Mineral Resources. Philippe is a member of the Australian Institute of Geoscientists.

### **Dan Peel – Operations Manager – Beijing, Bachelor of Engineering, Mining – University of New South Wales, Unrestricted Quarry Manager (WA), Grad. Cert. Applied Finance - Kaplan, Diploma (Bus), Member of Australasian Institute of Mining and Metallurgy**

Dan has worked as a mining engineering consultant with MMC for three years. Since joining MMC, Dan has completed a range of projects including technical valuations, life-of-mine designs and scheduling, pit optimisation, development of economic models, mine reserves estimation and reporting.

Prior to joining MMC, Dan worked with an open cut mining contracting firm for five years where he gained significant open cut metal mining experience. During this period, Dan developed operational, engineering and project management expertise. Dan's roles included Quarry Manager of the BHPB Jumblebar iron ore mine and Quarry Manager/Mining Superintendent of the Mt Gibson Koolan Island iron ore mine. Dan also worked at the Plutonic and Cuddingwarra gold mines and the Wodgina tantalum mine.

With relevant experience in a wide range of commodity and deposit types, Dan meets the requirements for Qualified Person for 43-101 reporting, and Competent Person ("CP") for JORC reporting for both metalliferous and coal open cut Reserves. Dan is a member of the Australian Institute of Mining and Metallurgy.

### **Andrew Newell - BE, MEngSc, University of Melbourne, PhD, University of Cape Town. Member of the SME, CIMM, AusIMM & IEA Chartered Professional Metallurgist, Australasia as well as a Chartered Professional Engineer, Australasia**

Has more than 33 years of broad experience in the fields of minerals processing, hydrometallurgy, plant design, process engineering (including equipment selection and design) and metallurgical testwork. The experience includes operating experience in base-metal concentrators, precious metal leaching facilities as well as diamond processing, uranium and copper leaching and base-metal smelting. He has also been responsible for the design and commissioning of flotation and leaching equipment, flotation plants as well as precious metals leaching plants. In addition, he has had considerable

experience in process and process plant evaluations, due diligence audits, feasibility studies and metallurgical testwork and program development.

**Igor Bojanic BE (Mining, Hons), Minarco-MineConsult Senior Mining Engineer, M.Appl.Sc. (Env Mgmt), MAusIMM, CPMIn, MMICA .**

Igor is a mining engineer with extensive practical experience in all facets of opencut mining. His strengths lie in project mine planning and scheduling in opencut metalliferous, coal and quarries. Metalliferous projects undertaken include pit optimisations using both Whittle 4D and 4X, pit design, scheduling, equipment selection and mine costing. Igor has also worked on a number of quarry projects, developing quarry plans for both operations and to support environmental documents. He has obtained a Masters in Environmental Management and has a particular interest in incorporating environmental planning into the mine planning process and also has a very good working knowledge of Gemcom, MicroLynx, Datamine, Surpac and Whittle software. Recently Igor has had significant exposure to the development and running of detailed economic models as part of Due Diligence and Detailed Feasibility Studies.

**Peter R Smith – Minarco-Mineconsult – Bachelor of Arts (Environmental Science Geomorphology Land Management) – Master of Environmental Studies – Master of Environmental Law – Member, Environment Institute of Australia & New Zealand – Fellow, Australian Institute of Energy – Member, Clean Air Society of Australia and New Zealand.**

Peter has over 25 years experience in environmental planning and management for mining, industrial, urban and infrastructure projects. Peter is experienced in the corporate sector (mining), industry association (mining, exploration & extractive industries), consultancies and Government sector for investigation, analysis, preparation of environmental reports and audits, and project management of multiple resource and infrastructure development studies. Peter has previously been Director of Environment and Development at NSW Minerals Council, Group Environmental Manager at Cyprus Australia Coal / Oakbridge Ltd, and Corporate Environmental Co-ordinator at Exxon Coal and Minerals Australia Ltd. Peter has been appointed to the Board of the Centre for Mined Land Rehabilitation. Peter is a specialist in mining environmental policy and regulation, and assessment and management of minerals industry operations.

### **Company's Relevant Experience**

Minarco-MineConsult, part of Runge Ltd, is a premier international consulting and engineering firm. It provides a full range of services from pure technical consulting through to strategic corporate advice. And undertake assignments on mining projects covering a range of commodities and countries, serving clients in most of the countries around the West Pacific Rim region.

Minarco-MineConsult maintains a full time staff of qualified specialists in the fields of mining engineering, geology, process and metallurgical engineering, environmental and geotechnical engineering, and environmental economics.

Minarco-MineConsult typically completes over 200 assignments per year and has over 300 professionals (through its parent Runge Group) available in disciplines including:

- Mining Engineering;
- Minerals Processing;
- Coal Handling and Preparation;
- Power Generation;
- Environmental Management;
- Geology;
- Contracts Management;
- Project Management;
- Finance;
- Commercial Negotiations.

The roots of Minarco-MineConsult were established in the Australian mining industry. Minarco-MineConsult is committed to compliance with the codes which regulate Australian corporations and consultants and has established an International business which has continued to give its clients and those that rely on its work the confidence that can be associated by the use of the relevant Australian codes.

These codes include:

- The Australian Corporation Law;
- The Australian Institute of Company Directors Code of Conduct;
- The Securities Institute of Australia Code of Ethics;
- The Australasian Institute of Mining and Metallurgy Code of Ethics;
- The Australasian Code for Reporting of Exploration Results, Mined Resources and Ore Reserves (The JORC Code).

Minarco-MineConsult has conducted numerous mining technical due diligence programs and reporting for IPO's and capital raisings over the past six years, with involvement in projects raising a total of over \$US 10 billion of capital. This and other work is summarised in **Table A1**.

**Table A1 - Mining Related IPO and Capital Raising Due Diligence Experience**

**2011 King Stone Energy Group., Ltd;** Competent Persons Report of Coal Resources and Reserves under JORC and Independent Technical Review for inclusion in a HKSE Circular to support acquisition of 2 underground coal mines in Shanxi Province, China.

**2010 China Precious Metals Holdings Co., Ltd;** Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Circular to support the acquisition of multiple underground gold mining assets in Henan Province, China.

**2010 Century Sunshine Group Holdings Limited;** Competent Persons Report of Mineral Resources and Ore Reserves under JORC and Independent Technical Review for inclusion in a HKSE Circular to support the acquisition of a serpentinite mining asset in Jiangsu Province, China.

**2010 Doxen Energy Group Limited;** Independent Technical Review and estimation of Coal Resources under JORC for inclusion in a HKSE Circular to support the acquisition of a coal mining asset in Xinjiang Autonomous Region, China.

**2010 Kwong Hing International Holdings (Bermuda) Limited;** Independent Technical Review for inclusion in a HKSE Circular to support a Very Substantial Acquisition.

**2009 Metallurgical Corporation Of China Ltd ("MCC");** Independent Technical Review for inclusion in a Prospectus to support a stock exchange listing on the Hong Kong Stock Exchange.

**2009 Nubrand Group Holdings Limited,** Guyi Coal Mine; Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2008 China Blue Chemical Limited,** Wangji and Dayukou Phosphate Mines: Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2008 Kenfair International (Holdings) Limited,** Shengping Coal Mine: Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2007 China Railway Company Limited,** African Copper/Cobalt Assets: Capital raising for mining assets on the Hong Kong Stock Exchange. Preparation of CPR for planned IPO on the HKSE.

**2007 Ko Yo Ecological Agrotech (Group) Limited** Sichuan Phosphate: Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2007 Prosperity International Holdings Limited,** Guilin Granite Project: Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2007 China Primary Resources** - Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by China Primary Resources.

**2008 Kenfair International (Holdings) Limited,** Shengping Coal Mine: Independent Technical Review for inclusion in a Stock Exchange Circular to support a mining asset purchase by a listed Hong Kong Company.

**2007 China Railway Company Limited,** African Copper/Cobalt Assets: Capital raising for mining assets on the Hong Kong Stock Exchange. Preparation of CPR for planned IPO on the HKSE.

**2007 Gloucester Coal Limited** – Independent Technical Review for Australian Stock Exchange Scheme of Arrangement.

**2007 Confidential Hong Kong Private Equity Partners** – Independent Technical Review to support private equity capital raising to purchase lead/zinc mining assets in Tibet.

**2007 Confidential International Investor** – Independent Technical Review to support private equity capital raising to purchase iron ore assets in Hubei. Preparation of ITR.

**2007 Whitehaven Coal Limited** – Independent Technical Review for Australian Stock Exchange IPO.

**2007 Confidential Privately Owned Coke Producer** – Capital raising for purchase of Coal Mines and downstream coal washing, coke production and chemical production facilities. Preparation of CPR for planned IPO on the HKSE.

**2007 China Molybdenum Group**– Capital raising for large scale Molybdenum mine on the Hong Kong Stock Exchange. Preparation of CPR for IPO on the HKSE.

**2007 Confidential International Investor** – Independent Technical Review to support purchase of Gold Mine In Hubei Province.



- 
- 2006 Excel Mining** – Independent Technical Review for Australian Stock Exchange Scheme of Arrangement.
- 2006 Celadon Mining Investment Group (UK)** – Capital raising for coal mine purchase in China and planned subsequent listing on AIM
- 2005 Yanzhou Coal Mining Company Limited** – Independent Technical Review of coal projects to satisfy ongoing listing requirements of the HKSE and NYSE following IPO.
- 2004 Excel Mining** – Independent Technical Review for Australian Stock Exchange IPO (current market capitalisation over \$US 1 billion)
- 2004 Excel Mining** – Independent Market Review for Australian Stock Exchange IPO
- 2003 New Hope** – Independent Market Review for Australian Stock Exchange IPO
- 2003 Confidential** – Independent Market Review on 50 Mtpa operation in Kazakhstan for LSE listing (has not proceeded)
- 2003 Xstrata plc** – Competent Person's Report for London Stock Exchange Chapter 19 Report for Acquisition of MIM Assets including mines, rail and port review (\$US 2.5 billion)
- 2002 Xstrata plc** – Competent Person's Report for London Stock Exchange IPO (\$US 2.3 billion)
- 2002 Kaltim Prima, Indonesia** – Independent Technical Review for advising project financiers to acquisition (\$US 445 million)
- 2001 Enx Resources** - Independent Technical Review for Australian Stock Exchange IPO
-

## 25 ANNEXURE B - GLOSSARY

The key terms used in this report include:

- **Company** means Jayden Resources Inc. “Jayden” or “the Client”.
- **concentrate** a powdery product containing higher concentrations of minerals resulting from initial processing of mined ore to remove some waste materials; a concentrate is a semi-finished product, which would still be subject to further processing, such as smelting, to effect recovery of metal
- **contained metal** refers to the amount of pure metal equivalent estimated to be contained in the material based on the metal grade of the material.
- **element** Chemical symbols used in this report  
Au – Gold; Ag – Silver; As – Arsenic; Cu – Copper; Pb – Lead; Zn – Zinc
- **exploration** activity to identify the location, volume and quality of a mineral occurrence
- **Exploration Target/Results** includes data and information generated by exploration programmes that may be of use to investors. The reporting of such information is common in the **early** stages of exploration and is usually based on limited surface chip sampling, geochemical and geophysical surveys. Discussion of target size and type must be expressed so that it cannot be misrepresented as an estimate of Mineral Resources or Ore Reserves.
- **exploration right** the licensed right to identify the location, volume and quality of a mineral occurrence
- **flotation** is a separation method for to the recovery of minerals using reagents to create a froth that collects target minerals
- **gangue** is a mining term for waste rock
- **grade** any physical or chemical measurement of the concentration of the material of interest in samples or product. The units of measurement should be stated when figures are reported
- **grind** means to crush, pulverize, or reduce to powder by friction, especially by rubbing between two hard surfaces
- **In situ** means rock or mineralisation in place in the ground
- **In Situ Quantities** estimates of total in ground tonnes and grade which meet the requirements of the PRC Code or other international codes for reserves but do not meet either NI 43-101 or Joint Ore Reserves Committee's recommendations
- **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
- **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
- **ITR** stands for Independent Technical Review
- **ITRR** stands for Independent Technical Review Report
- **Km** stands for kilometre
- **Kt** stands for thousand tonnes
- **Lb** stands for pound, a unit of weight equal to 453.592 grams
- **m** stands for metres
- **M** stands for million
- **Measured** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and

<b>Mineral Resource</b>	physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
• <b>metallurgy</b>	Physical and/or chemical separation of constituents of interest from a larger mass of material. Methods employed to prepare a final marketable product from material as mined. Examples include screening, flotation, magnetic separation, leaching, washing, roasting etc.
• <b>mine production</b>	is the total raw production from any particular mine
• <b>Mineable Quantities</b>	Estimates of in ground tonnes and grades which are recoverable by mining
• <b>Mineral Reserves</b>	is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.
• <b>mineral right</b>	for purposes of this Prospectus, mineral right includes exploration right, mining right, and leasehold exploration or mining right
• <b>mineralisation</b>	any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralisation might occur, whether by class of deposit, mode of occurrence, genesis or composition
• <b>mining rights</b>	means the rights to mine mineral resources and obtain mineral products in areas where mining activities are licensed
• <b>MMC</b>	refers to Minarco-MineConsult
• <b>mRL</b>	means meters above sea level
• <b>Mt</b>	stands for million tonnes
• <b>Mtpa</b>	means million tonnes per annum
• <b>NI 43-101</b>	National Instrument 43-101
• <b>OC</b>	open cut mining which is mining from a pit open to surface and usually carried out by stripping of overburden materials
• <b>Ore</b>	is the portion of a reserve from which a metal or valuable mineral can be extracted profitably under current or immediately foreseeable economic conditions
• <b>ore processing</b>	is the process through which physical or chemical properties, such as density, surface reactivity, magnetism and colour, are utilized to separate and capture the useful components of ore, which are then concentrated or purified by means of flotation, magnetic selection, electric selection, physical selection, chemical selection, reselection, and combined methods
• <b>ore selection</b>	the process used during mining to separate valuable ore from waste material or barren rock residue
• <b>ore t</b>	stands for ore tonne
• <b>preliminary feasibility study</b>	is a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as a Mineral Reserve.
• <b>primary mineral deposits</b>	are mineral deposits formed directly from magmas or hydrothermal processes
• <b>Probable</b>	is the economically mineable part of an Indicated and, in some circumstances, a Measured

<b>Mineral Reserve</b>	Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
• <b>project</b>	means a deposit which is in the pre-operating phase of development and, subject to capital investment, feasibility investigations, statutory and management approvals and business considerations, may be commissioned as a mine
• <b>Proven Mineral Reserve</b>	is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.
• <b>raw ore</b>	is ore that has been mined and crushed in an in-pit crusher, but has not been processed further
• <b>recovery</b>	The percentage of material of initial interest that is extracted during mining and/or processing. A measure of mining or processing efficiency
• <b>regolith</b>	is a geological term for a cover of soil and rock fragments overlying bedrock
• <b>reserves</b>	the [economically] mineable part of a Measured and/or Indicated Mineral Resource, including diluting materials and allowances for losses which may occur when the material is mined
• <b>resources</b>	a concentration or occurrence of a material of intrinsic economic interest in or on the earth's crust in such form, quality and quantity such that there are reasonable prospects for eventual economic extraction
• <b>Resources</b>	Resources which have been estimated in accordance with the recommendations of the guidelines provided in the JORC or NI 43-101 Standards of Disclosure for Mineral Projects.
• <b>RL</b>	means Reduced Level, an elevation above sea level
• <b>RMB</b>	stands for Chinese Renminbi Currency Unit;
• <b>RMB/t</b>	stands for Chinese Renminbi per material tonne
• <b>ROM</b>	stands for run-of-mine, being material as mined before beneficiation
• <b>saprolite</b>	is a geological term for weathered bedrock
• <b>secondary mineral deposits</b>	are mineral deposits formed or modified as a result of weathering or erosion of primary mineral deposits
• <b>shaft</b>	a vertical excavation from the surface to provide access to the underground mine workings
• <b>sq.km</b>	square Kilometre
• <b>t</b>	stands for tonne
• <b>t/bcm</b>	stands for tonnes per bank cubic metre (i.e. tonnes in situ) a unit of density
• <b>tonnage</b>	An expression of the amount of material of interest irrespective of the units of measurement (which should be stated when figures are reported)
• <b>tonne</b>	refers to metric tonne
• <b>tpa</b>	stands for tonnes per annum
• <b>tpd</b>	stands for tonnes per day
• <b>UG</b>	underground mining which is an opening in the earth accessed via shafts, declines or adits below the land surface to extract minerals
• <b>upgrade ratio</b>	is a processing factor meaning ROM Grade% / Product Grade %
• <b>USD</b>	stands for United States dollars
• <b>\$</b>	refers to United States dollar currency Unit