

February 22, 2010

### **The Silver Book**

### **Initiating Coverage:**

FRES.	LSE	Outperform
Price:	£7.86	Target Price: £10.30
HOC.L	.SE	Market Perform
Price:	£2.75	Target Price: £3.30
CDE.NYSE		Outperform
Price:	US\$14.76	Target Price: US\$21.50
PAA.TSX		Outperform
Price:	US\$21.73	Target Price: C\$31.25
HL.NYSE		<b>Market Perform</b>
Price:	US\$5.30	Target Price: US\$6.00
SSO.T	SX	Outperform
Price:	C\$18.36	Target Price: C\$24.25
SVM.TSX		Outperform
Price:	C\$6.80	Target Price: C\$9.00
FR.TSX		<b>Market Perform</b>
Price:	C\$3.57	Target Price: C\$4.50
EDR.T	sx	<b>Market Perform</b>
Price:	C\$3.55	Target Price: C\$3.55

**Existing Coverage:** 

C\$1.71

**BCM.TSXV** 

**OK.TSX** 

**MSV.TSX** 

SBB.TSX

Price:

Price: C\$3.85

Price: C\$1.12

Price: C\$1.17

 SLW.NYSE
 Outperform

 Price:
 US\$15.71
 Target Price: US\$22.50

 MAG.TSX
 Outperform(S)

Outperform(S)
Target Price: C\$5.25

Outperform(S)

Outperform (S)

Target Price: C\$1.60

Target Price: C\$2.50

Target Price: C\$1.40

**Market Perform (S)** 

Price: C\$6.04 Target Price: NA
(S) in rating denotes Speculative, Prices as of

February 18, 2009

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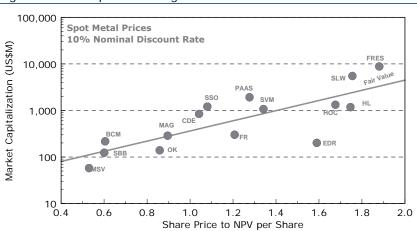
### Finding Value in the Silver Sector

BMO Research expects stronger demand and lacklustre supply growth to constrain the physical market and maintain silver as an outperformer for the next three years.

Capturing a favourable outlook for silver, BMO Research is initiating coverage of 13 silver focused companies to augment existing coverage of Silver Wheaton (SLW.T) and MAG Silver (MAG.T). The expanded universe provides comprehensive coverage of the silver universe and spans across senior, intermediate and junior producers and explorers.

- FRES, SLW, PAAS and CDE are preferred senior silver miners, based on a combination of strong growth and relative valuation.
- BMO Research's expectations for strong base metal prices present attractive valuation prospects SVM. Future growth provides an attractive valuation for SSO.
- BMO Research favours junior producers BCM and MAG, MSV and OK given asset quality and attractive valuation.

Fig 1: P/NPV at Spot and Using 10% Nominal NPV





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### 1. A Sector Launch

BMO Research is initiating coverage of 13 new silver-focused companies to augment existing coverage of Silver Wheaton (SLW.N) and MAG Silver (MAG.T). The expanded coverage provides a comprehensive look at the silver universe spanning across senior, intermediate and junior producers and explorers.

BMO Research forecasts a relatively constrained physical supply/demand environment for silver and maintains the view that silver will outperform relative to other metals in the medium term.

Fig 2: BMO Research Preferred Commodity Ranking

Over the next 12 months BMO Research expects silver to outperform gold (gold forecast to increase 18%, silver 37%).

 BMO Research Silver Forecast

 2009E
 2010E
 2011E
 2012E
 Long Term

 \$14.63
 \$20.00
 \$20.00
 \$15.00
 \$14.00

Copper Iron Ore Platinum
Silver Metallurgical Coal Gold
Thermal Coal Zinc Molybdenum
Nickel Uranium
Aluminum

Source: BMO Capital Markets

## BMO Research's preferred silver stocks:

- Seniors: FRES, PAAS, SLW and CDE.
- Intermediate: SSO, SVM.
- Juniors: BCM, MAG, MSV, OK.

Fig 3: BMO Research Silver Coverage

Company	Ticker	Analyst*		Share Price (19-Feb-10)	Rating	Target Price	Return
Bear Creek Mining	BCM.TSX	AK	CDN	3.75	OP(S)	C\$ 5.25	40%
Coeur D'Alene	CDE.NYSE	AK	USD	14.81	OP	\$21.50	45%
Endeavour Silver	EDR.TSX	AK	CAD	3.47	Mkt	C\$ 3.55	2%
First Majestic	FR.TSX	AK	CAD	3.61	Mkt	C\$ 4.50	25%
Fresnillo	FRES.LSE	AK	GBp	7.74	OP	£10.30	33%
Hochschild Mining	HOC.LSE	AK	GBp	2.70	Mkt	£3.30	22%
Hecla Mining	HL.NYSE	AK	USD	5.27	Mkt	\$6.00	14%
MAG Silver	MAG.TSX	JPH	CAD	6.18	OP(S)	n/a	n/a
Minco Silver	MSV.TSX	AK	CAD	1.64	OP(S)	C\$ 2.50	52%
Orko Silver	OK.TSX	AK	CAD	1.13	OP(S)	C\$ 1.60	42%
Pan American Silver	PAA.TSX	AK	CAD	22.36	OP	C\$ 31.25	40%
Sabina Silver	SBB.TSX	AK	CAD	1.14	Mkt(S)	C\$ 1.40	23%
Silvercorp Metals	SVM.TSX	AK	CAD	6.77	OP	C\$ 9.00	33%
Silver Standard	SSO.TSX	AK	CAD	18.22	OP	C\$ 24.25	33%
Silver Wheaton	SLW.TSX	DH	USD	15.67	OP	C\$ 22.50	44%

<sup>\*</sup> Analyst Legend: AK - Andrew Kaip, JPH - John Hayes, DH - David Haugton

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## 2. Benchmarking the Sector

To compare companies within the silver universe BMO Research analyzes silver stocks using the following metrics:

- P/NPV: Price to Net Present Value plotted against market capitalization. NPV is calculated at a 10% discount rate using spot commodity prices.
- **IRR**: Internal Rate of Return where IRR is calculated as the discount rate required to achieve a P/NPV of 1.0x at spot metal prices.

Using these metrics, BMO Research highlights the following trends:

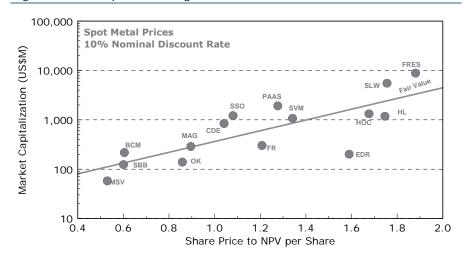
- Senior and intermediate producers trade at a premium to NPV and have a lower IRR. FRES, PAAS, SLW, CDE, and SVM are attractively valued relative to HOC, HL and FR.
- Junior producers and developers trade at a discount to NPV and have a higher IRR, reflecting higher risk profiles. BCM, MAG and SBB present attractive valuation relative to OK, MSV and EDR.

Fig 4: P/NPV at Spot and Using 10% Nominal NPV

FRES, PAAS, SLW and CDE are preferred seniors.

SSO and SVM are preferred intermediate producers.

BCM, MAG, OK and MSV are BMO Research's preferred juniors.





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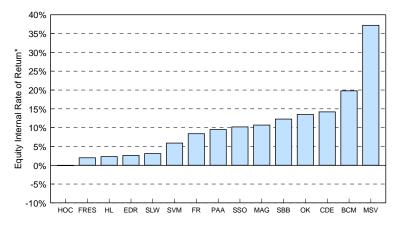
CDE's valuation implies a higher return relative to peers.

HOC's valuation implies a lower return relative to peers.

Intermediate producer SVM is attractively valued.

Junior developers MSV and BCM should provide value accretion as they transition to producers.

Fig 5: Internal Rate of Return (%), Using Spot



\*Defined as the discount rate required for NPV=Market Cap

Source: BMO Capital Markets

### Are Silver Valuations Expensive?

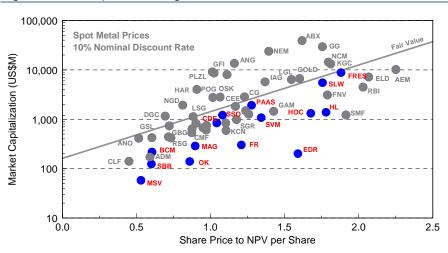
To address the perception that silver companies historically trade at premiums to gold companies, BMO Research compares market capitalization to Price to NPV and calculates IRR.

Using these metrics, silver companies do trade at higher valuations. However, senior and intermediate producers FRES, SLW, PAAS, CDE and SSO do provide comparable investment opportunities to gold companies in the BMO Research coverage universe.

Fig 6: P/NPV at Spot and Using 10% Nominal NPV

Silver companies trade at a premium to gold companies within the BMO coverage universe.

FRES, SLW, PAAS, CDE and SSO screen well against the gold sector, highlighting BMO's preferred rating for these companies.





### **Silver Miners**

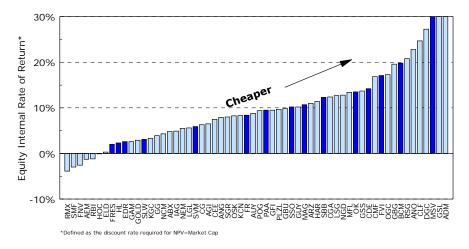
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IRR for silver producers trade in line with expectations.

Junior silver developers trade at a discount to producers.

CDE is the exception, trading at a high IRR.







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### Multiples Favour Growth

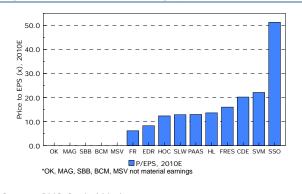
FR, SLW and SVM trade at a significant discount to peers.

A review of share price to 2010E earnings (EPS) and cash flow (CFPS) indicates that FR, EDR and HOC trade at a significant discount to peers. SSO trades at a premium to peers, owing to the market's perception that the company will see EPS and CFPS growth as Pirquitas ramps up to full production.

- A low multiple for EDR and HOC captures market uncertainty owing to their short reserve life.
- A low multiple for FR reflects execution uncertainty as the Encantada mine expansion ramps up to full capacity.

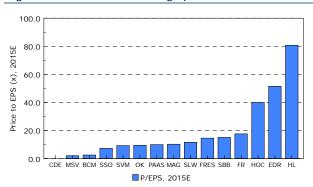
Companies with low multiples to 2015E EPS and CFPS include emerging producers MSV, BCM and SBB, and producers with strong growth profiles.

Fig 8: Price to 2010E Earnings per Share



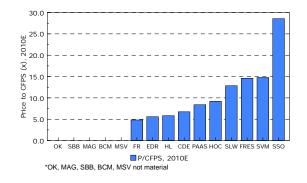
Source: BMO Capital Markets

Fig 9: Price to 2015E Earnings per Share



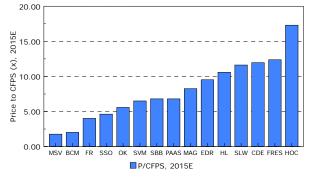
Source: BMO Capital Markets

Fig 10: Price to 2010E Cash Flow per Share



Source: BMO Capital Markets

Fig 11: Price to 2015E Cash Flow per Share





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- HL, HOC, CDE, PAAS and FR trade at low price to free cash flow (FCF) multiples for 2010E.
- Senior producer FRES trades at a high multiple to 2010E FCF, owing to high capital requirements to develop the Saucito mine through 2010E.

Fig 12: Price to 2010E Free Cash Flow per Share

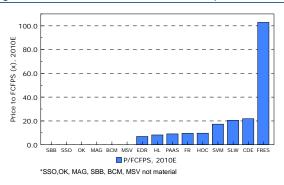
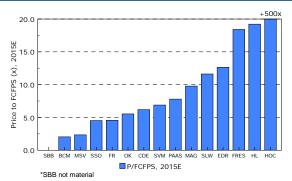


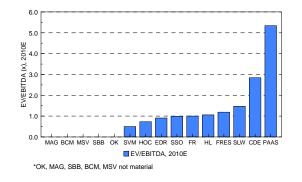
Fig 13: Price to 2015E Free Cash Flow per Share



Source: BMO Capital Markets

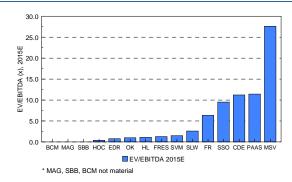
Source: BMO Capital Markets

Fig 14: Enterprise Value to 2010E EBITDA



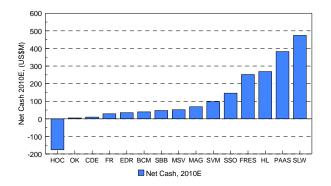
Source: BMO Capital Markets

Fig 15: Enterprise Value to 2015E EBITDA



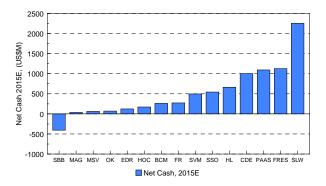
Source: BMO Capital Markets

Fig 16: 2010E Net Cash



Source: BMO Capital Markets

Fig 17: 2015E Net Cash





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### 3. Growth Profiles

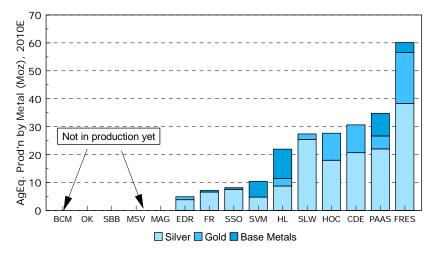
Recognizing a preference for producing companies offering growth and junior developers providing the potential for re-rating through the delivery of projects, BMO Research reviews growth trajectories on a silver-equivalent basis between 2010E and 2015E.

Over this time frame, primary silver production is projected to grow 13% annually as senior and intermediate producers grow through a combination of mine expansion and new projects. Over this time frame, several junior producers are projected to capture impressive growth.

### Between 2010 and 2015:

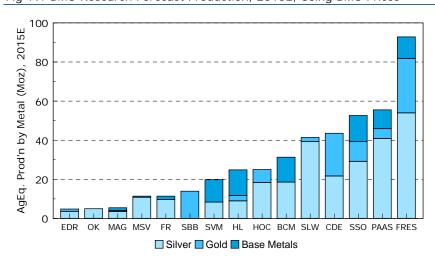
- FRES and PAAS are expected to maintain their status as the #1 and #2 primary silver producers.
- SSO could transition into a significant senior silver producer.
- BCM is the premier junior growth company and could move to intermediate status by 2015E.

Fig 18: BMO Research Forecast Production, 2010E, Using BMO Prices



Source: BMO Capital Markets

Fig 19: BMO Research Forecast Production, 2015E, Using BMO Prices





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Production growth is weighted toward juniors, but at higher execution risk.

Seniors are projected to increase silver equivalent production by +50% by 2015E.

Junior developers provide superior growth and are relatively cheap compared to their intermediate and senior peers.

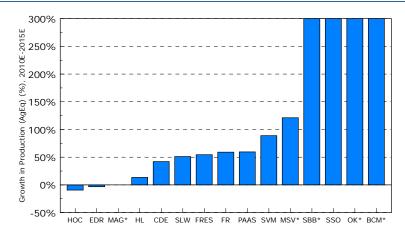
PAAS and SVM provide superior growth and an attractive valuation relative to peers.

CDE and FR are attractively valued but offer low growth relative to peers.

SSO provides strong growth and is relatively cheap.

FRES provides superior growth but is expensive relative to peers.

Fig 20: Forecast Production Growth 2010E to 2015E (%)



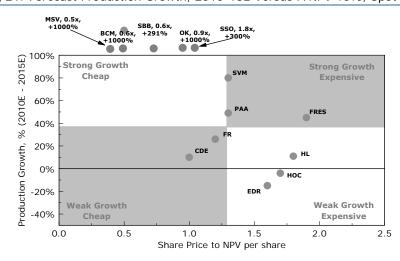
\* Growth since first year of production

Source: BMO Capital Markets

To highlight superior growth and attractive valuation, BMO Research compares company 2010 to 2015 growth trajectories versus price to NPV.

- Junior developers MSV, BCM, OK and SBB provide significant growth potential and low valuation, owing to execution risk.
- HOC, HL and EDR show low growth or declining production profiles and are expensive relative to peers.
- CDE and FR are relatively cheap but offer low growth compared to peers.
- PAAS and SVM show strong growth relative to peers and are attractively valued.

Fig 21: Forecast Production Growth, 2010-15E Versus P/NPV 10%, Spot





### **Silver Miners**

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To differentiate silver companies, BMO Research compares 2010E to 2015E cash flow versus capital cost normalized to market capitalization. A comparison of P/NPV is presented by the circle size of respective companies. The chart is separated into four quadrants based on capital cost and net cash (cash less debt) performance relative to market capitalization.

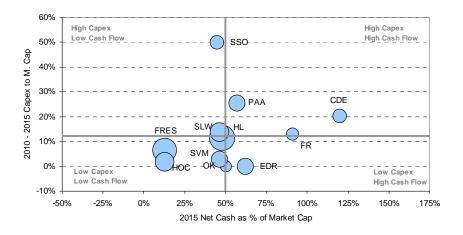
Fig 22: Net Cash to Capex Matrix, 2010E to 2015E

Excluding developers BCM, SBB and MSV.

Low capex/high cash flow companies include FRES, HOC, SVM and OK.

SSO's expansion plans highlight high capex.

PAAS, CDE and FR have above-average capital requirements, but shows strong cash flow.



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## 4. A Global Perspective

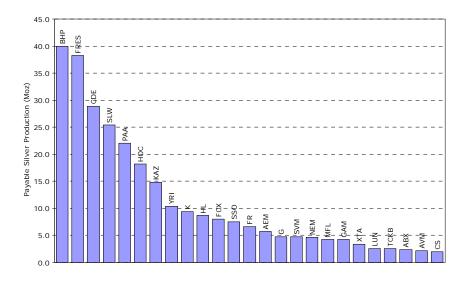
Total primary and secondary silver production is projected to grow ~13% annually through 2015E.

BMO Research compares 2010E and 2015E silver production across the entire coverage universe. Primary silver producers under coverage are projected to produce 133.5Moz of silver, or 63% of 2010E global primary silver production. Secondary production of 149Moz represents 30% of 2010E secondary production. Combined, BMO Research coverage captures ~31% of global identifiable silver production. By 2015E, BMO Research projects primary and secondary silver production will grow ~13% per annum to 243Moz and 245Moz, respectively.

### Based on 2010 estimates:

- BHP is the largest silver producer based on byproduct production.
- FRES is the largest primary silver producer, followed by CDE, PAAS and HOC.
- SLW's silver royalty stream ranks it as the fourthlargest silver company.

Fig 23: Company Ranked by 2010E Payable Silver Production (Moz)



Source: BMO Capital Markets

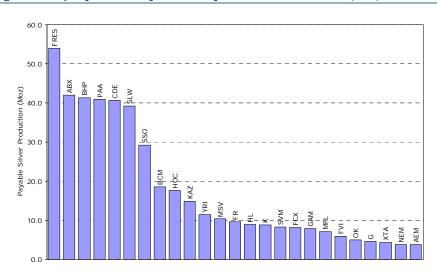
By 2015E FRES is expected to surpass BHP as the largest silver producer.

Significant production growth from new mines is projected to elevate PAAS to the position of second-largest primary producer.

SLW will maintain its position as a significant silver company.

Junior BCM is projected to become a significant intermediate producer.

Fig 24: Company Ranked by 2015E Payable Silver Production (Moz)





### **Silver Miners**

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### Mine Production - Top 25 Mines

BHP's Cannington mine ranks as the largest silver mine in the BMO coverage universe, followed closely by FRES's Fresnillo mine.

There is a large step down in production rates from the remainder of silver-producing mines in the BMO Research coverage universe.

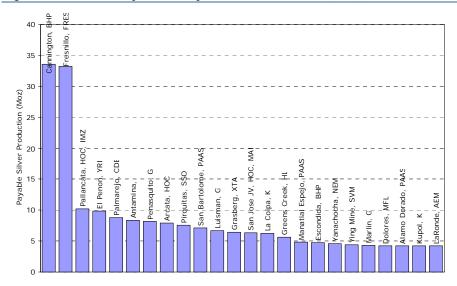
Excluding Cannington and Fresnillo, the average production from the remaining top 25 mines is 6.2Moz of silver annually.

Fig 25: Mine Ranked by 2010E Payable Silver Production (Moz)

Cannington is the largest silver mine.

Fresnillo is a close second.

A large step down in production exists with the remaining top 25 silver mines averaging 6.2Moz of silver per annum.



Source: BMO Capital Markets

BMO Research forecasts the complexion of silver production to change dramatically by 2015 with the addition of Goldcorp's Penasquito (GG.N) and Barrick's Pascua Llama (ABX.N) mines.

Production from the Fresnillo district, including Fresnillo, Saucito and the Juanicipio JV, is poised to dramatically rise by 2015E. Combined, these three mines will produce an estimated 52.7Moz of silver, 50Moz net to FRES.



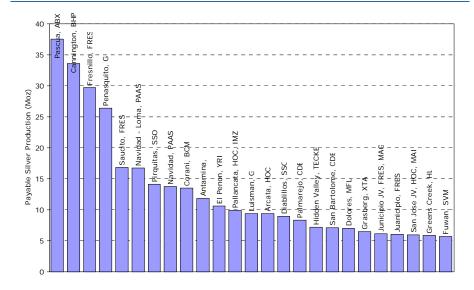
### **Silver Miners**

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### By 2015E:

- Pascua Llama is expected to become the largest silver mine.
- FRES is projected to realize 50Moz of silver from the Fresnillo district by 2015E.
- PAAS's Navidad could achieve 13.8Moz of silver annually.
- BCM's Corani mine could achieve production of 13.5Moz of silver annually.

Fig 26: Mine Ranked by 2015E Payable Silver Production (Moz)





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## 5. Average Cash Costs

On a co-product basis, silver producers have average cash costs relative to the full BMO Research coverage universe that include base and precious metal producers with silver as a by-product.

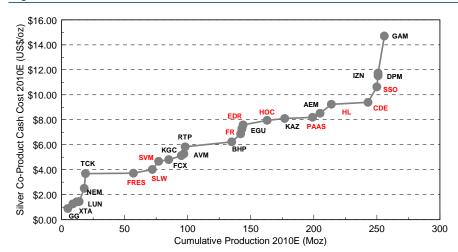
- FRES is the lowest-cost silver producer and in the lower quartile of co-product cash costs.
- FR, EDR and HOC have average cash costs.
- 2010E co-product cash costs are for SSO in 2010 as Pirquitas ramps up to full production.

Fig 27: BMO Forecast Cumulative Co-Product Cash Cost, 2010E

FRES is the lowest-cost primary operator.

FR, EDR and HOC have average costs.

SSO's cash costs are high, owing to Pirquitas ramp-up.

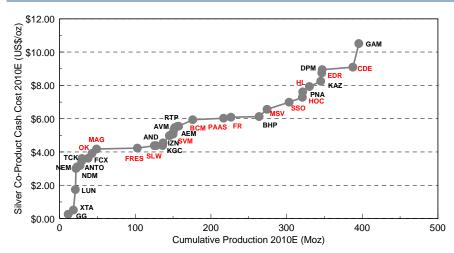


Source: BMO Capital Markets

### By 2015:

- OK, MAG and FRES expected to be the lowest-cost primary silver producers.
- SLW's royalty stream will maintain lowerquartile cash costs.

Fig 28: BMO Forecast Cumulative Co-Product Cash Cost, 2015E





#### **Silver Miners**

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BMO Research compares operating performance on a coproduct basis.

By-product costs capture secondary revenue and not the true cost of producing an ounce of silver.

### **Co-Product Versus By-Product**

BMO Research reports total cash and production costs on a co-product basis. For investors more accustomed to comparing silver producers on a byproduct basis, a comparison of co-product and by-product total cash and production costs are presented below.

By-product costs capture secondary revenue as a credit towards operating costs and do not account for the true cost of producing an ounce of silver.

 Gold and base metal-weighted silver producers have low to negative by-product cash costs.

Fig 29: BMO Forecast Co-Product Cash Cost, 2010E

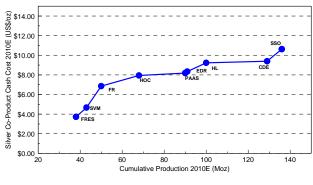
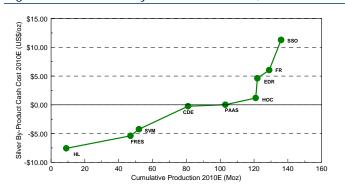


Fig 30: BMO Forecast By-Product Cash Cost, 2010E

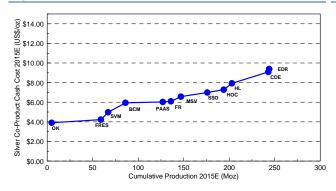


Source: BMO Capital Markets

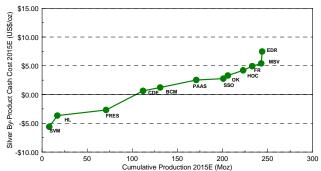
Fig 31: BMO Forecast Co-Product Cash Cost, 2015E

Fig 22: DMO

Fig 32: BMO Forecast By-Product Cash Cost, 2015E



Source: BMO Capital Markets



Source: BMO Capital Markets

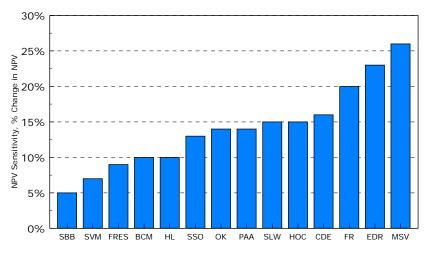


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## 6. NPV Sensitivities

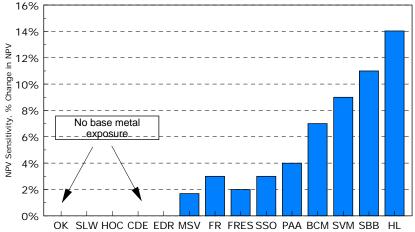
Fig 33: NPV Sensitivity to 10% Change in Spot Silver Price, 10% Discount

Silver-focused companies FR EDR and MSV provide the highest leverage to silver prices.



Source: BMO Capital Markets

Fig 34: NPV Sensitivity to 10% Change in Spot Base Metal Price (Pb, Zn, Cu)



Sensi

HL, SVM and SBB are

leveraged to base metal prices.

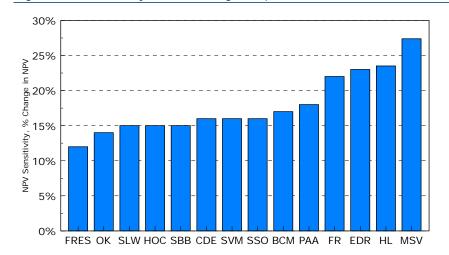


### **Silver Miners**

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MSV, HL and EDR provide the highest sensitivity to a 10% change in metal prices.

Fig 35: NPV Sensitivity to 10% Change in Spot & Silver Base Metal Price





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## 7. Metal Mix

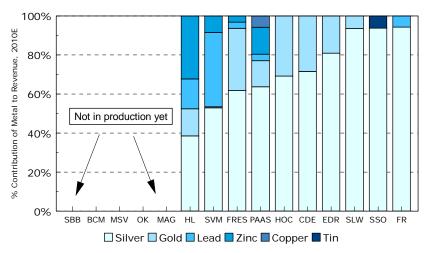
BMO Research analyzes silver companies by examining their relative exposure to precious and base metals.

- Senior producers FRES, CDE, HOC and intermediate producers SSO are heavily precious metal weighted.
- Intermediate producers HL and SVM are base metal weighted.

### Based on 2010 estimates:

- FR's, SSO's and SLW's royalty stream provide near pure silver exposure.
- CDE, HOC and EDR have a strong gold weighting.
- HL and SVM are base metal weighted.
- FRES and PAAS provide leverage to both gold and base metals.

Fig 36: Forecast Revenue by Metal 2010E (%)

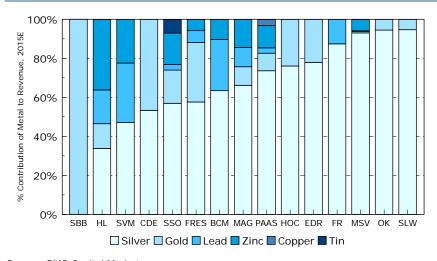


Source: BMO Capital Markets

### By 2015E,

- Based on BMO
   Research estimates,
   CDE should increase its
   gold weighting to ~45%.
- SSO should reduce its silver weighting.
- MSV and OK will provide comparable leverage to silver as SLW.

Fig 37: Forecast Revenue by Metal 2015E (%)



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### 8. Metal Endowment

A proxy to metal weighting is based on reserve/resource metal weighting using BMO Research's long-term metal price forecasts. A comparison of metal endowment indicates silver producer reserves have +50% silver weighting.

- FR, MSV and EDR reserves have the highest silver weightings.
- BCM and HL have significant base metal weightings.
- SLW's silver stream is derived from a very large reserve inventory estimated at 5,600Moz and total resources of 8,756Moz silver equivalent.
- FRES has the largest silver equivalent reserve for primary silver producers, followed by SSO.
- Junior developer BCM has the second-largest silver-equivalent reserve base.

Fig 38: In Situ Reserve Weighting, Silver Equiv. (%)

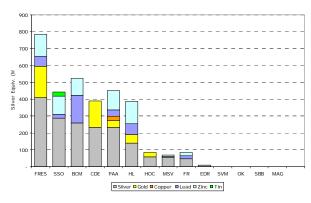
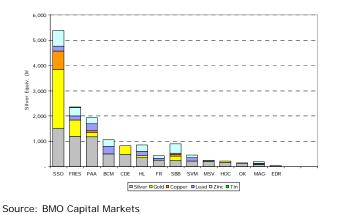


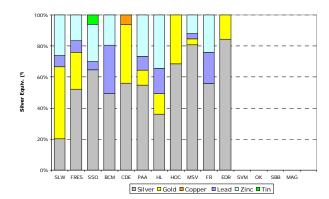
Fig 39: In Situ Reserve Weighting, Silver Equiv. (koz)



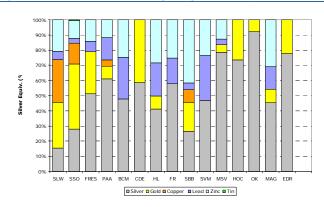
Source: BMO Capital Markets

Fig 40: In Situ Resource Weighting, Silver Equiv. (%)





Source: BMO Capital Markets





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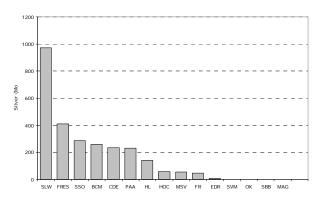
## 9. Size and Grade Matter

### The Size of Silver Endowment

A comparison between silver reserves/resources

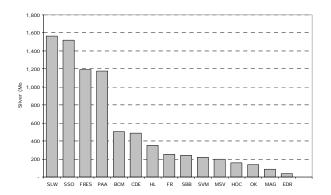
- SLW's silver stream is anchored by the largest silver reserve.
- Primary silver producers FRES and SSO have the next largest silver reserves as of the end of 2008.
- Junior developer BCM has a senior-sized reserve base.
- Incorporating silver resources, SSO has a comparable-sized silver resource base as SLW, followed by FRES and PAAS.

Fig 42: Silver Reserves (Moz)



Source: BMO Capital Markets

Fig 43: Silver Resources (Moz)





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### Grade Is King

To gauge the quality of company projects, BMO Research compares the mines and projects within the silver coverage universe by in situ value and using long-term metal forecasts. Mine and projects are separated into underground and open pit.

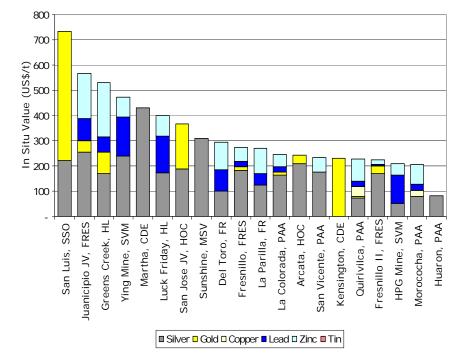
Fig 44: Top 20 Underground Mines/Projects, In Situ Value (US\$/t)

SSO's San Luis project is the highest-grade underground project modeled followed by the Juanicipio JV (FRES and MAG) and Greens Creek (HL).

PAAS has five mines in the top 20.

FRES and has three mines in the top 20.

HOC has four mines in the top 20.





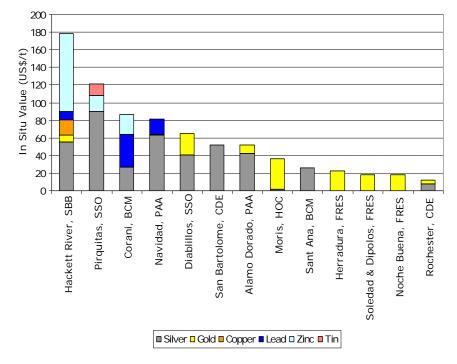
### **Silver Miners**

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Fig 45: Top Open-Pit Mines/Projects, In Situ Value (US\$/t)

SBB's Hackett River project ranks #1.

SSO's Pirquitas mine is the highest-grade open-pit mine in operation.





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### 10. Reserve Life Versus Valuation

Another metric to value companies is to evaluate company reserve and resource levels relative to current or projected production rates and to life-of-mine production forecasts.

Given that most operators are in the process of updating reserves and resources that were last updated in December 2008, BMO Research compares existing production relative to reserves and resources without subtracting 2009 production. This approach assumes that, at a minimum, exploration activities through 2009 were successful in replacing production.

A comparison of reserve and resource life outlines the following trends:

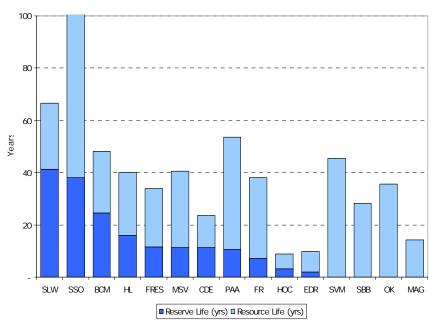
- Underground miners HOC and EDR operate with short reserve and resource lives.
- SLW and SSO have established long reserve and resource lives through asset mix between underground and open-pit mines.
- Based on life-of-mine projections, junior developers BCM and SBB have delineated long-lived asset bases once these projects advance to production.

HOC and EDR have the shortest reserve lives.

SLW and SSO have very large reserve lives, followed by junior developer BCM.

SSO, PAAS and FR and SVM have large silver resources to support future reserve conversion.

Fig 46: Reserve and Resource Lives (years)





A comparison of company reserves and resources versus production forecasts measures BMO Research valuation risk.

### Production Estimates Versus Size

A comparison of the size of company reserve and resource estimates versus BMO Research production forecasts provides a measure of valuation risk and highlights the following trends:

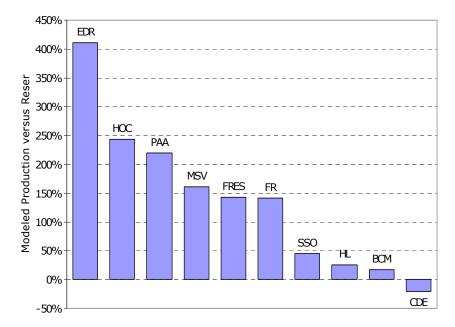
- Reduced valuation risk exists for those companies with large reserve/resource bases to support future growth.
- Elevated valuation risk exists for those companies with small reserve and resource bases that are reliant on exploration success to replace future production.

Fig 47: BMO Research LOM Silver Production Versus 2008 Reserves

LOM production estimates for underground miners EDR, HOC and PAAS factor in a high degree of reserve replacement.

SSO, HL, BCM and CDE reserves support LOM production estimates.

Average reserve growth is assumed for FRES, FR and MSV.





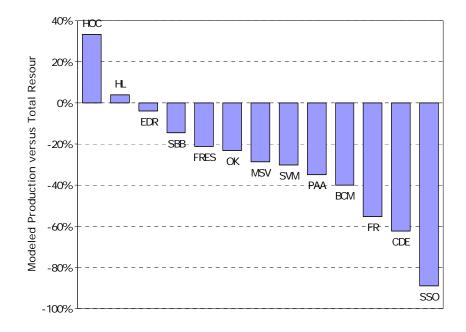
### **Silver Miners**

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Fig 48: BMO Research LOM Silver Production Versus 2008 Resources

LOM production estimates for HOC and HL exceed total resources.

SSO, FR and CDE have large resource bases to back-stop future production.





500

€ 400

EV/Production Ounce () 000 001

100

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A comparison of enterprise value relative to production and reserve/resource ounces highlights the following trends:

- For 2010E, senior producers PAAS and CDE are attractively valued relative to peers.
- Intermediate producer FR is attractively valued on all metrics.
- Junior producers MSV, BCM and BCM are discounted owing to execution risk.

Fig 49: Enterprise Value per 2010E Production Ounce

EV/Production (AgEq), 2010E

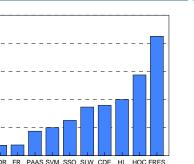
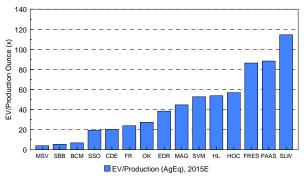


Fig 50: Enterprise Value per 2015E Production Ounce

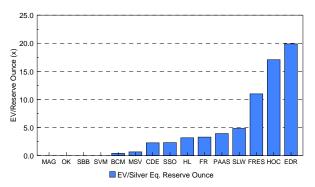


Source: BMO Capital Markets

Not in production yet

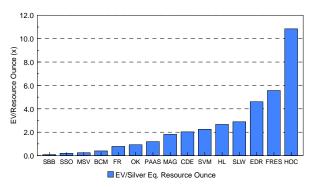
Source: BMO Capital Markets

Fig 51: Enterprise Value per Reserve Ounce



Source: BMO Capital Markets

Fig 52: Enterprise Value per Resource Ounce





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### 11. Consolidation

BMO Research expects consolidation to be active in the silver sector. Central themes that could emerge include:

- Consolidation of mine/project ownership.
- The acquisition of junior silver developers by senior and intermediate producers to maintain existing production rates, or to achieve growth.

Silver companies have been active in M&A over the last two years.

The silver sector has seen a number of transactions since 2007, including:

- CDE's US\$750M takeover of Palmarejo Gold and Silver and Bolnisi in 2007 to acquire the Palmarejo project.
- HL's 2008 US\$750 acquisition of the remaining 70.3% of the Greens Creek mine from Rio Tinto.
- PAAS's farm-in to 55% by advancing OK's La Preciosa project to development.
- PAAS's C\$650M takeover of Aquiline Resources to acquire the Navidad project.
- FR's acquisition of Normabec Mining to acquire the Real de Catorce project.

### 2010 Could Be an Active Year

Future consolidation themes include:

- BMO Research expects that La Preciosa's potential production profile and lower-quartile cash costs could motivate PAAS to consolidate project ownership by acquiring OK.
- While MAG, which holds the remaining 44% interest in the Junicipio JV, remains a potential candidate, FRES has demonstrated the capacity to look outside of current or existing operational centers.
- HOC has invested ~US\$360M over the last two years in two
  additional junior developers that are transitioning to producers in
  2010. HOC has indicated its intentions to increase ownership of
  Canadian-based Lake Shore Gold (LSG.T) to +50% once a Q4/10
  standstill agreement expires. BMO Research expects a comparable
  strategy to evolve with Gold Resource (GRC.OTCB), which is
  developing the El Aquila mine in Mexico.
- A gap in production growth until the Lucky Friday Deeps expansion comes online in 2015 could drive HL toward acquisition.
- Declining production levels by 2014 could motivate CDE towards M&A activity.

Potential targets within BMO Research's coverage universe are sparse. BMO Research considers MAG and BCM to be prime candidates.

BMO Research expects the trend to continue with corporate activity driven by:

- Consolidation of mine/project ownership.
- Acquisitions driven by producers to maintain or capture production growth.



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## 12. Supply Demand Fundamentals

Bart Melek, Global Commodity Strategist

### Silver to Benefit From Its Split Personality

BMO expects silver to outperform gold. Silver up 37% and gold up 18% into 2011.

Following poor performance early last year, silver has outperformed gold and base metals in the last six months. More recently, prices have corrected on Chinese liquidity concerns and a rising U.S. dollar, but BMO continues to expect it to be an outperformer for the next three years.

- Silver should benefit from its gold-like qualities, as investors continue to use physical precious metals to protect against risks associated with future inflation and a weakening U.S. dollar.
- Stronger-than-expected demand and lacklustre supply growth should dramatically tighten the physical market.
- BMO Research forecasts silver to average US\$20.00/oz in 2010/2011E. Long-term prices are projected to be US\$14.00/oz, a level BMO Research calculates is required to sustain the industry. This price also assumes a normal risk environment.

Silver is expected to benefit from investment demand.

Fig 54: Silver Supply-Demand and Price Forecast (Moz)

BMO Research projects stronger demand and relatively lacklustre supply growth to constrain the physical market.



Source: Bloomberg, BMO Capital Markets

2008	2009	2010E	2011E	2012E
	· <del></del>		· <u></u> -	·
191	202	212	218	223
490	491	502	509	522
888	887	889	892	905
101	123	144	161	173
130	147	168	194	215
231	270	312	354	387
447	370	440	484	508
158	160	168	176	185
65	75	80	88	75
162	151	133	126	123
843	770	826	875	891
46	117	63	17	14
\$15.01	\$14.63	\$20.00	\$20.00	\$15.00
-0.3%	-0.2%	0.3%	0.3%	1.5%
-3.0%	-8.7%	7.3%	5.9%	1.9%
\$872.58	\$971.95	\$1,150.00	\$1,150.00	\$950.00
	191 490 888 101 130 231 447 158 65 162 843 46 \$15.01 -0.3% -3.0%	191 202 490 491 888 887 101 123 130 147 231 270 447 370 158 160 65 75 162 151 843 770 46 117 \$15.01 \$14.63 -0.3% -0.2% -3.0% -8.7%	191         202         212           490         491         502           888         887         889           101         123         144           130         147         168           231         270         312           447         370         440           158         160         168           65         75         80           162         151         133           843         770         826           46         117         63           \$15.01         \$14.63         \$20.00           -0.3%         -0.2%         0.3%           -3.0%         -8.7%         7.3%	191         202         212         218           490         491         502         509           888         887         889         892           101         123         144         161           130         147         168         194           231         270         312         354           447         370         440         484           158         160         168         176           65         75         80         88           162         151         133         126           843         770         826         875           46         117         63         17           \$15.01         \$14.63         \$20.00         \$20.00           -0.3%         -0.2%         0.3%         0.3%           -3.0%         -8.7%         7.3%         5.9%

Includes Scrap & Official Sector Sales

Source: Bloomberg, BMO Capital Markets



### **Silver Miners**

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Considerable investor and industrial demand to keep the silver bull running into 2011.

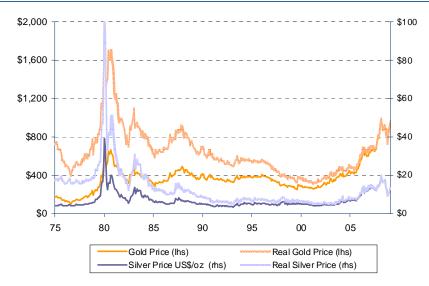
Silver and gold move in tandem.

### Upside Coming, After the Current Correction

With the exception of the second half of 2008, silver has followed gold on its bull market run since 2002. BMO Research expects gold to be a strong performer for at least the next two years, with silver following suit and likely outperforming gold over that period.

Expectations of a better-than-expected physical supply/demand environment and continued investor interest in the metal as a safe haven asset are the key factors driving this view.

Fig 55: Gold & Silver: So Happy Together



Source: Bloomberg, BMO Capital Markets

The gold/silver ratio has improved a great deal since the December 2008 average of 78.5. However, currently standing at 67, it has a long way to go before it reaches the average of 52–58 achieved between 2006 and 2008.



#### **Silver Miners**

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Silver is still cheap relative to gold compared to previous cycles.

Fig 56: Ratio Moving Closer to Historic levels



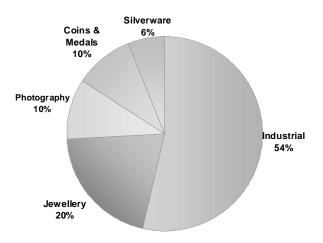
Source: Bloomberg, BMO Capital Markets

Sliding COMEX inventory levels, strong silver demand and lacklustre base metal production expectations all suggest that the silver supply/demand balance should tighten materially in 2010/11—the key reason behind BMO Research's hypothesis that silver is likely to outperform gold.

Similar to gold, silver is considered quasi-money and a store of value. However, it is also very much an industrial metal, with almost 55% used in industrial applications. As such, it has benefited much more than gold from the improvement in the global economic environment over the last 12 months. Conversely, silver is currently being punished as the world worries about lower Chinese liquidity levels and the impact that may have on industrial activity.

Silver's dual nature made silver less precious than gold during recession.

Fig 57: Sources of Silver Demand (2010E)



Source: GFMS, BMO Capital Markets



#### Silver Miners

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Recent correction notwithstanding, the demand side has turned bullish and should be largely supportive of silver prices.

Silver is still relative cheap to gold.

Silver's store of value properties should partially shield it from the current de-risking-inspired correction and it is this characteristic that should make it a strong performer into 2011.

Silver's heavy weighting towards the industrial side has convinced investors that it will significantly benefit from the sharper-than-expected global recovery. Tightening physical fundamentals are projected to play an increasing significant role in setting silver prices. The sector is projected to operate near capacity, which is consistent with US\$18–20/oz marginal cost of production.

Remember, traders were somewhat indifferent to silver when the world economy was moving into a deep trough. Markets were punishing it for being heavily used in manufacturing on the one hand, and rewarded it for being a hedge, monetary asset and a gold-like store of value used in turbulent times on the other hand.

Recent correction notwithstanding, the demand side has turned bullish and should be largely supportive of silver prices, while the impetus to hold physical silver as a hedge against inflation and potential U.S. dollar declines remains largely intact. Massive US deficits raise the spectre of debt monetization, which would likely cause inflation and place downside pressure on the U.S. dollar over the long term.

Silver is still cheap relative to gold, with the gold/silver ratio at around 67. In a bull gold market, this ratio should follow historic trends and narrow. A ratio of 57 is projected for 2010.

A more robust industrial demand side is all that is needed for a tighter ratio. This appears to be materializing with the global economy and industrial activity rebounding sharply. As such, BMO Research expects that higher silver prices are very likely to occur this year.

Fig 58: BMO Research Economic Growth Forecasts

	2008	2009E	2010E	2011E		
GDP Growth						
World	3.0%	-1.1%	3.7%	4.4%		
China	9.1	8.2%	10.3%	10.5%		
U.S.	0.4%	-2.5%	2.6%	3.2%		
Industrial Production						
OECD	-1.8%	-12.5%	3.2%	3.0%		
China	13.0%	8.0%	11.0%	10.0%		
U.S.	-2.2%	-9.8%	3.5%	3.3%		

Source: BMO Capital Markets

### Lacklustre Supply Side Prospects a Positive

Silver the by-product metal.

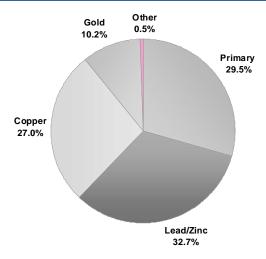
Primary miners key to supply growth.

Most mined silver is a by-product of lead/zinc (33%), copper (27%) and gold (10%) mining. Some 30% of mined silver is derived from primary sources. Supply growth associated with gold, lead/zinc and copper is projected to be quite modest relative to silver demand growth for the next three years. This should translate to much less metal availability. Exchange inventories are already signalling these developments.



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Fig 59: Sources of Mined Silver (2010E)



Source: GFMS, BMO Capital Markets

Supply growth relatively modest to demand increases.

Mine site developments under the current demand scenario strengthen the argument that silver markets will be quite tight moving into 2010.

Zinc, lead and copper project (by far the largest sources of secondary mined silver) cutbacks/suspensions and still hefty inventories likely mean that by-product silver supply growth will be somewhat limited for the next two years.

Silver from gold production will increase some 3%, but since it represents only 10% of total mine supply, the contribution will be only modest.

Fig 60: BMO Research Forecast of Mined Silver by Source (Moz)

Primary Silver Gold	<b>2009</b> 202.0 71.3	<b>2010E</b> 212.1 73.4	<b>2011E</b> 218.5 74.9	<b>2012E</b> 222.8 75.6	
Lead/Zinc	194.0	194.0	203.7	209.8	
Copper	225.8	234.8	230.1	237.0	



### **Silver Miners**

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To a great extent, properties expected to show strong growth are in Mexico.

Silver demand to outpace supply growth.

Analysis of the base metals and gold space reveals that by-product mined silver supply was flat in 2009. BMO Research expects silver from base metals and gold mining operations to increase an average of only 1.8% annually over the next two years.

To a great extent, properties expected to show strong growth are in Mexico. They include Couer d'Alene's Palmarejo, which ramps up production in the coming months; First Majestic's Encantada; Minefinder's Dolores; Goldcorp's Peñasquito; and Agnico-Eagle's Pinos Altos.

Improved recoveries from Polymetal's Khakanja facility, gains from Yamana's El Peñon in Chile and Barrick's Pueblo Viejo Dominican Republic operations will also add significantly to silver output from outside Mexico into 2012.

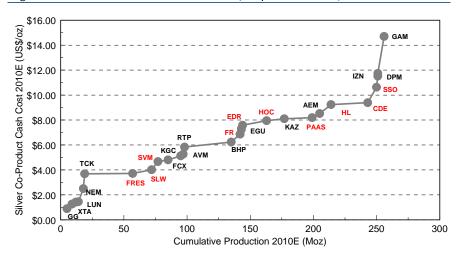
Focusing on primary silver miners in the medium term, the largest portion of production growth is expected to come from the following projects: Silver Standard's Pirquitas and Diablillos mines; Peñoles' expansion at Fresnillo; Bear Creek Mining's Corani and Santa Ana mines; First Majestic's Encantada and Del Toro mines; and Pan American's Navidad and La Preciosa mines.

Supply growth across the BMO universe of coverage is expected to be much quicker than the broader global set of miners. BMO Research expects a primary supply CAGR of 11.9% through 2012 and 11.2% through 2015. In contrast, the overall mine supply of silver, including by-product silver, is set to increase only 2.5% through the 2012 period.

While mine supply is expected to be relatively robust over the next several years, any growth in output is expected to occur at a much slower rate than the jump in consumption. This means that the sector functions at a much higher utilization rate, implying that physical markets will be quite tight and that the highest cost producers will likely set the price.

The BMO Research price forecast also takes into account costs over and above pure operating cash costs and the return on capital. A high reserve price for silver held by investors, which is needed to balance the physical market, has also been factored in.

Fig 61: BMO Universe Cash Cost Curve (Co-product Basis)





### **Silver Miners**

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### Positive Industrial Outlook Helping Silver

Economy and credit woes hit silver hard in late-2008.

The sharp deterioration of consumer demand for durables and electronics products last year, along with the lack of trade finance, precipitated the sharpest and speediest commodity crash since the Great Depression. This environment also precipitated one of the sharpest cyclical corrections in silver as well.

This was driven by an 11.4% decline in demand over the last two years (-3.0% in 2008 and -8.75% in 2009) and the deterioration it brought to the physical market fundamentals.

Fig 62: Sharp Corrections Generate Sharp Recoveries

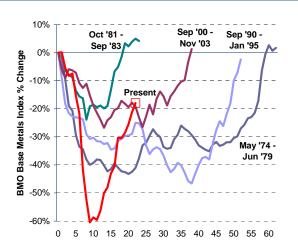
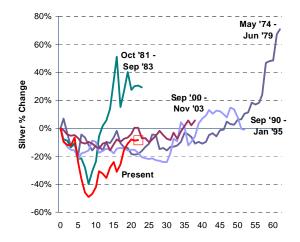


Fig 63: More Upside Coming



Source: BMO Capital Markets

Source: Bloomberg, BMO Capital Markets

Asian manufactured goods inventories suggest expectations of industrial metal and silver demand and robust restocking.

Conversely, the sharp rebound in global and industrial activity in 2010 should spell good news for silver going forward.

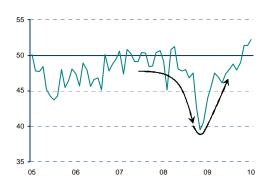
There are strong signs that manufacturing activity and inventories are turning aggressively toward the positive. As monetary policy and government action to recapitalize banks work to unfreeze the credit market, industrial silver demand should bounce materially higher in 2010, bringing demand up 7.3% this year and nearly 6% higher in 2011.



#### **Silver Miners**

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Fig 64: Chinese Mfg. Inventories May Have Peaked

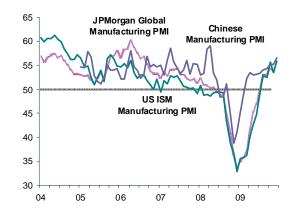


Chinese Inventory PMI Index, Note Inverted Axis

Reading of < 50 = Build, > 50 = Draw

Source: Bloomberg, BMO Capital Markets

Fig 65: Indices Now Showing Growth, Driving Demand



Source: Bloomberg, BMO Capital Markets

Low inventories may prompt considerable restocking in the developed world—a big potential positive for silver prices.

Positive developments on the economic front in the U.S., positive growth in Germany and France, and considerably firmer conditions in China and in other parts of the developing world should all continue to help the silver outlook in 2010 and beyond. U.S. GDP surged 5.7% in Q4/09.

China seems to be firing on all cylinders in 2009; retail sales (+15.3% year over year), industrial production (+10.3% year over year) are all quite strong; and fixed asset investment has soared some 32% above a year ago. India's economy expanded at a fairly decent clip (7.9%) in Q3, led by government spending and construction and should perform even better into 2010. Germany and France are also now on track toward potential growth of around 2%.

Fig 66: Chinese Passenger Vehicle Sales



Source: Bloomberg, BMO Capital Markets

Fig 67: Chinese Fixed Asset Investment Surging

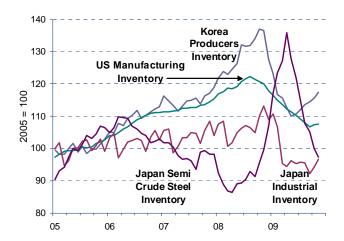


Source: Bloomberg, BMO Capital Markets

Sharp declines that took place earlier in the year in manufactured goods inventories and stocks of raw materials held by manufacturers around the world imply that a considerable level of restocking may occur as demand bounces higher, a similar development to that already occurring in China (albeit less aggressive). Western world restocking should serve as a very material boost to silver demand.

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Fig 68: Inventory Drawdown Leads to Growth in Demand



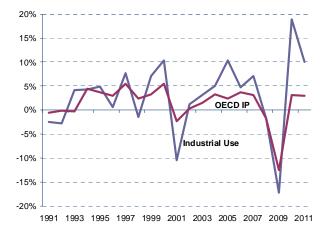
Source: Bloomberg, BMO Capital Markets

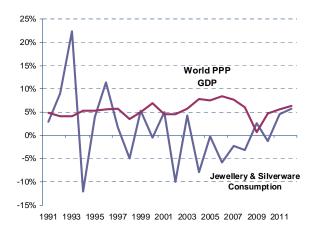
The world economy could perform better than expected into 2010—jewellery and industrial demand to benefit.

As demonstrated by recent Chinese and U.S. leading manufacturing data and more stimulus money being spent in the U.S., the world economy could also perform better than recently expected into 2010.

Greater stability and the prospect of a better economy are also likely to help jewellery markets as well. However, silverware is expected to remain subdued due to relatively high prices.

Fig 69: Industrial Metal Consumption Follows IP (y/y) Fig 70: Precious Metal Consumption Follows GDP (y/y)





Source: GFMS, BMO Capital Markets So

Source: IMF, GFMS, BMO Capital Markets

Stronger demand and moderating manufacturing inventories, along with muted supply-side growth could be catalysts that persuade investors that a large oversupply is not pending. BMO expects considerable restocking as well.

### **COMEX** inventories declining.

This is supported by COMEX inventories, which have been trending lower since August 2008. COMEX stocks have actually dropped some 20% to 112Moz from the most recent September 2008 high.

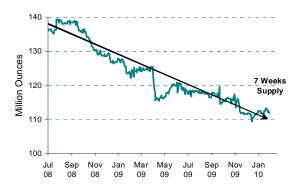


### **Silver Miners**

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COMEX Inventories have been trending down since August 2008.

Fig 71: Inventories Trending Lower Suggest Scarcity



Source: Bloomberg, BMO Capital Markets

With oversupply concerns morphing into tightening supply/demand conditions, silver could continue on its recent upward trajectory and trade in an "auction" territory. Gold's strength in these uncertain times should serve as a base.

### Silver More Bullish Relative to Gold

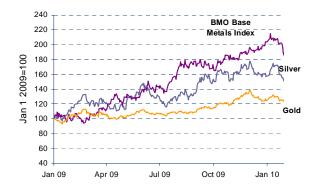
BMO Research is not suggesting that silver will become a full long-term substitute for gold when investors hedge against future inflation and dollar weakness, but merely that it will also be used as a hedge and that its relative price is likely to converge toward historic trends, helped by the tightening physical market.

Silver tends to do well during a bull market for gold. Given the BMO Research view that gold is likely to be in a bullish mode for the next two years (and possibly longer given BMO's bull case scenario assumptions), silver should do well based on its quasi-money credentials alone. This bodes well considering it underperformed significantly due to the economic crises recently and the fact that it has not reached its previous highs.

Recent history was largely characterized by periods where silver outperformed gold. However, the recent trend has been otherwise. From January 2002 to February 2010, silver was up some 280% to US\$16.70/oz while gold was 285% higher to US\$1,115/oz.

Fig 72: While Still Ahead, Silver Has Lagged Gold Recently

Silver outperformed gold in 2009.



Source: Bloomberg, BMO Capital Markets



### **Silver Miners**

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If investors start pricing in the expected industrial-side-driven physical market tightness in the silver market and its safe harbour qualities, one can easily imagine the price moving to BMO Research's US\$20/oz target. This implies that the gold/silver price ratio should also contract materially from its current 67 to about 55.

The amount of silver that is available for investment is quite small—likely 50–100Moz at the most.

Fig 73: Silver ETF Demand Stands at Record Level

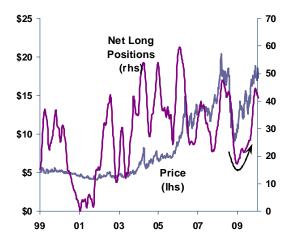
Silver ETF holdings of bullion are at record levels.

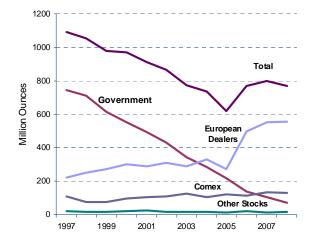


Source: Bloomberg, iShares, BMO Capital Markets

Fig 74: Investors May Be Starting to Go Long Again

Fig 75: Above Ground Stocks Balance the Market





Source: Bloomberg, BMO Capital Markets

Source: GFMS, BMO Capital Markets

Investors likely to set price in troubled times.

One should also remember that mined silver (primary and secondary) is insufficient to balance the market and that it will be the investor (scrap sales) and governments that provide the marginal ounces. If investors choose to buy silver as a hedge in turbulent times and official sources build silver positions as they are doing with gold, the silver market could be very tight indeed.



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### 13. Price Deck

BMO Research forecasts silver to average US\$20.00/oz in 2010/2011 and decline to US\$15.00/oz in 2012. Long-term prices are projected to average US\$14.00/oz.

Fig 76: BMO Research Forecasts

	Annual F	Annual Forecast							
	<u>2007A</u>	2008A	2009 A	2010E	<u>2011E</u>	<u>2012E</u>	<u>Term</u>		
Base Metals									
Aluminum Price (US\$/Ib)	\$1.17	\$1.16	\$0.76	\$0.95	\$1.00	\$1.10	\$1.15		
Copper Price (US\$/Ib)	\$3.23	\$3.16	\$2.34	\$3.30	\$3.70	\$3.50	\$2.50		
Nickel Price (US\$/lb)	\$16.88	\$9.60	\$6.65	\$8.25	\$8.00	\$8.50	\$8.50		
Zinc Price (US\$/Ib)	\$1.48	\$0.85	\$0.75	\$1.10	\$1.20	\$1.00	\$1.00		
Lead Price (US\$/lb)	\$1.17	\$0.95	\$0.78	\$1.00	\$1.00	\$0.80	\$0.80		
Precious Metals									
Gold Price (US\$/oz)	\$696	\$873	\$972	\$1,150	\$1,150	\$950	\$850		
Silver Price (US\$/oz)	\$13.38	\$15.01	\$14.63	\$20.00	\$20.00	\$15.00	\$14.00		

Source: BMO Capital Markets, Bloomberg



#### Silver Miners

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### 14. Company Synopsis

Senior Silver Producers

FRES offers long-lived assets with lower-quartile cash costs.

Fresnillo Plc.: (FRES.LSE) Outperform; Target - £10.30
Already Number One and Getting Bigger

Fresnillo is the largest publicly traded silver producer, with a significant gold weighting. FRES's core mines are long lived, lower-quartile cash cost operations with annual production of 40.7Moz of silver and 272.8koz of gold in 2009. FRES has a number of development projects that are forecast to increase silver production to 52.6Moz and gold production to 481.6koz by 2015E.

Reactivation of Kensington and Rochester further strengthens CDE's portfolio of operating assets.

Coeur D'Alene: (CDE.NYSE) Outperform; Target - \$21.50 Investing in a Strong Asset Base to Maintain Growth

Since 2007, CDE has built two new mines, San Bartolome in Bolivia and Palmarejo in Mexico, which anchor the company's production to long-lived mining operations. Development of the Kensington mine and restart of the Rochester mine further strengthen CDE's operating portfolio. CDE's production is projected to increase from 21Moz of silver and 143koz of gold in 2010E to 26Moz of silver and 323koz of gold by 2013E. BMO Research expects CDE's improving financial position to be deployed toward organic growth and potential acquisitions to maintain growth and replace non-core assets.

Hochschild: (HOC.LSE) Market Perform; Target - £3.30 Growth Through Joint Venture

Sustained production levels for HOC nearing 20Moz of silver annually are contingent on further exploration success.

Hochschild Mining Plc. (HOC) is a Peruvian-domiciled silver miner that operates five mines in the Americas. Sustained production levels of 18.7Moz of silver and 143koz of gold recorded in 2009 are contingent on sustained reserve/resource replacement given the company's short mine life status. BMO Research projects increased exploration spending to materially address the company's reserve/resource status and to translate into organic opportunities to offset production loss from Ares closing. The company has invested US\$360M over the last three years in two additional junior developers that are transitioning to producers in 2010E. Successful execution of growth through partnership, would position HOC as a gold-focused miner by 2015E with ~75% of production derived from partnership mines.

The La Preciosa and Navidad assets could position PAAS as a premier silver growth company through 2015.

Pan American: (PAA.TSX) Outperform; Target - C\$31.25 Looking Forward to the Future

Through 2009, PAAS made two potentially transformative transactions that, once in production, may provide long-lived, low-cost production to secure future growth and offset the company's portfolio of smaller mines. Combined, the La Preciosa project in Mexico and Navidad project in Argentina could position PAAS as the number two primary silver producer by 2015.



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SLW is uniquely positioned as a royalty company with future growth driven by Penasquito and Pascua-Lauma.

HL offers above-average leverage to base metals with production derived from two long-lived assets with +10 years left in their respective reserve lives.

Commercial production at Pirquitas in Q4/09 has launched SSO into the mid-tier producer status.

Ramp-up at Pirquitas remains a risk.

Silvercorp is an emerging midtier silver producer with a focus on assets held in China.

### Silver Wheaton: (SLW.TSX) Outperform; Target – \$22.50 Impressive Low-Cost Growth Profile Ahead

Silver Wheaton is a silver royalty company that has entered into purchase agreements with companies and mines that produce silver as a by-product from their operations. BMO Research estimates attributable silver production of ~25Moz at cash operating costs of US\$4.05/oz in 2010E and growth to ~40Moz of silver by 2013, with growth mostly driven by Penasquito and Barrick (especially Pascua-Lama).

### **Intermediate Producers**

### Hecla Mining: (HL.NYSE) Market Perform; Target - \$6.00 Leverage to Base Metals

HL is the largest intermediate silver producer and unique among peers owing to above-average leverage to base metals. The company is further distinguished in that production is derived from two long-lived, upper tier mines with +10-year reserve lives. Offsetting limited growth prospects, HL's debt-free status, combined with BMO Research forecasts of stronger metal prices, is projected to drive substantial free cash flow that will build a strong war chest for future acquisition capabilities. At the end of 2009, HL's net cash position of US\$100M, if unused, is inspected to grow to US\$540M by the end of 2015.

### Silver Standard: (SSO.TSX) Outperform; Target - C\$24.25 Unlocking the Value of a Rich Asset Base

SSO entered the ranks of intermediate silver producer with commercial production at the Pirquitas mine in northern Argentina in mid-December 2009. For 2010E, production at Pirquitas is estimated at 7.5Moz of silver and 0.7kt of tin at co-product cash costs projected to be in the range of US\$10/oz. In the background, SSO has two key development projects, San Luis in Peru and Pitarrilla in Mexico, that could grow production to 29Moz of silver, 144koz of gold and significant base metals by 2015E. Beyond development projects, the challenge for SSO will be to solidify value of the large mineral inventory at the Snowfield/Brucejack project and other projects within the company's portfolio.

### Silvercorp Metals: (SVM.TSX) Outperform; Target - C\$9.00 High Margin Production - China Focused

SVM is an emerging mid-tier silver producer with a focus on high-grade production in China. Expansion of the Ying mining complex in northwestern China is projected to increase production by 50% to 6.3Moz of silver by 2012E and development of the GC project in southeastern China is projected to increase annual silver production to ~8.5Moz by 2015E. BMO Research believes that SVM could leverage an Asian focus and seek regional acquisitions with operational synergies.



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The expansion at FR's Encantada mine has laid the foundation for the company to transition to an intermediate producer.

### First Majestic: (FR.TSX) Market Perform; Target - C\$4.50 Transitioning to Intermediate Producer

Through 2009, FR completed a major expansion at the Encantada mine that has laid the foundation for the company to transition from a junior to intermediate silver producer. FR-T is expected to increase silver production by 75% above 2009 levels to 6.6Moz of silver in 2010E and to grow to 11Moz level by 2012E once production stabilizes from the advanced stage Del Toro mine. FR has already laid the foundations for future production growth with the 2009 acquisition of the Real de Catorce project (46.8Moz of silver in resource). Near term, FR plans to defer capital projects through H1/10E, leading to an improvement in the company's balance sheet and enabling it to pursue Del Toro development beginning in H2/10E.

### **Junior Producers**

EDR has proven itself skilled at putting new life into historic mines.

### Endeavour: (EDR.TSX) Market Perform; Target - C\$3.55 Track Record of Breathing New Life Into Old Mines

Endeavour Silver (EDR.TSX) is a junior silver producer with two silver mines located in historic silver districts. EDR has demonstrated a track record of discovery at both mines and combined with operational improvements has increased silver production to 2.6Moz in 2009. An Underperform rating underscores the company's short mine life and risks of maintaining ore growing production owing to the company's limited reserve/resource base.

# BCM is the pre-eminent silver company in the junior sector with a reserve base of 258Moz of silver.

### Bear Creek Mining: (BCM.TSX) Outperform(S); Target – C\$5.25 A Junior with a Senior Asset Base

BCM is the preeminent silver company in the junior silver sector, with core projects containing a senior producer-sized silver endowment of 258Moz of silver in reserve and a global resource of 504.5Moz of silver. The Santa Ana and Corani projects are tracking toward a sequential development scenario with peak production of 21.6Moz of silver by 2015E.

The discovery of the Martha vein by OK in 2007 has launched it to the forefront of potential acquisition targets.

### Orko Silver: (OK.TSX) Outperform(S); Target - C\$1.60 La Preciosa Discovery Provides Easy Exit

Discovery of the Martha vein on the La Preciosa project in 2007 has elevated OK to the forefront of potential acquisition targets. Validation of the project potential was highlighted by a deal struck whereby PAAS can earn a 55% interest by advancing the project to production. BMO Research expects an accelerated development path for La Preciosa with annual production of +11Moz of silver by 2014E. BMO Research believes that PAAS could move to consolidate ownership of La Preciosa. OK has already attracted a takeover premium; however, given the accelerated development timeframe for La Preciosa, value accretion is expected to be rapid.

### MAG's exposure to the tier 1 Juanicipio JV provides a clear value creation trajectory for the company.

### MAG Silver: (MAG.TSX) Outperform(S); Target - N/A Low Risk Production; Encouraging Exploration Results

MAG principal asset is its 44%-ownership interest in the Juanicipio JV in the Fresnillo silver district of Mexico, which hosts current resources of 165Moz of silver and 455koz of gold. MAG also has nine 100%-owned exploration properties located in Mexico. MAG's exposure to the tier 1 Juanicipio JV, expected to advance to production by 2016E, provides a clear value creation trajectory for MAG.



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MSV is positioned to become a 5Moz silver producer by 2012.

At an estimated capex of +US\$1B, SBB's Goose Lake and Hackett River assets provide sizeable risk.

### Minco Silver: (MSV.TSX) Outperform(S); Target - C\$2.50 At the Cusp of Development

Minco Silver is a junior silver explorer that is in the final permitting stages to develop the Fuwan project in southern China. Contingent on a Q3/10E construction start-up and execution through the development stage, MSV is positioned to become a ~5Moz silver producer by 2012E. MSV has already identified an avenue for growth, through the pending acquisition of the Sunshine mine, which could vault the company into the ranks of intermediate silver producers by 2013E.

### Sabina Gold and Silver: (SBB.TSX) Market Perform(S); Target - C\$1.40

### **Developing Critical Mass in the North**

Hackett River is a world-class massive sulphide deposit with significant exploration potential. BMO Research estimates Hackett River could produce 9.9Moz of silver, 121kt of zinc, 17kt of lead, 6.8kt of copper and 13koz of gold annually by mid-2016. Goose Lake, located in the same region, could produce ~200koz of gold annually at total cash costs of US\$440/oz by 2015E. Development of both projects could trigger future development of the George Lake (1.5Moz of gold resource) project and future discoveries on the company's large, virtually unexplored land base. The estimated US\$1.1B capital requirement for Goose Lake and Hackett River represents a sizeable risk factor for SBB. Unlocking value through partnership presents a catalyst for potential revaluation.



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# 15. Earnings Estimates

### Senior Silver Producers

Fig 77: FRES Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	152.8	330.2	545.4	612.5
EPS	(US\$ps)	0.21	0.46	0.77	0.86
EPS Growth	(%)	0.0	+>100	66.3	12.2
CFPS	(US\$ps)	0.59	0.64	0.84	0.95
CF Growth	(%)	0.0	8.1	32.3	12.9
EBITDA	(US\$M)	320.9	543.2	829.3	903.2
EBITDA/share	(US\$ps)	0.47	0.76	1.16	1.26
EV/EBITDA	(x)	24.6	14.4	9.5	8.6
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 78: HOC Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(19.0)	41.9	117.4	125.1
EPS	(US\$ps)	0.08	0.12	0.35	0.37
EPS Growth	(%)	0.0	44.7	+>100	6.6
CFPS	(US\$ps)	0.07	0.43	0.47	0.49
CF Growth	(%)	0.0	+>100	7.9	5.4
EBITDA	(US\$M)	50.8	126.4	255.9	271.3
EBITDA/shar	e (US\$ps)	0.17	0.40	0.76	0.80
EV/EBITDA	(x)	28.9	11.9	5.6	4.9
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 79: PAAS Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	24.6	62.0	226.7	254.3
EPS	(US\$ps)	0.38	0.72	2.10	2.32
EPS Growth	(%)	0.0	89.5	+>100	10.3
CFPS	(US\$ps)	1.25	1.69	2.92	3.17
CF Growth	(%)	0.0	35.6	72.8	8.7
EBITDA	(US\$M)	95.4	172.9	412.7	454.0
EBITDA/shar	e (US\$ps)	1.18	1.61	3.83	4.03
EV/EBITDA	(x)	20.6	10.5	4.0	2.8
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 80: CDE Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(0.0)	7.5	107.9	146.9
EPS	(US\$ps)	(0.00)	0.12	1.38	1.87
EPS Growth	(%)	0.0	+>100	+>100	36.1
CFPS	(US\$ps)	0.27	1.27	2.83	3.37
CF Growth	(%)	0.0	+>100	+>100	18.9
EBITDA	(US\$M)	14.8	72.1	270.6	329.3
EBITDA/share	(US\$ps)	0.02	1.16	3.45	4.20
EV/EBITDA	(x)	103.5	17.5	4.1	2.8
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 81: SLW Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	87.8	129.0	320.6	381.0
EPS	(US\$ps)	0.38	0.43	0.92	1.09
EPS Growth	(%)	0.0	11.5	+>100	18.0
CFPS	(US\$ps)	0.46	0.57	1.14	1.33
CF Growth	(%)	0.0	23.6	99.8	17.4
EBITDA	(US\$M)	118.3	179.4	400.0	468.3
EBITDA/share	(US\$ps)	0.47	0.57	1.14	1.34
EV/EBITDA	(x)	31.8	24.4	11.4	9.7
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00



### **Silver Miners**

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### Intermediate Silver Producers

Fig 82: HL Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(66.6)	67.8	121.9	110.7
EPS	(US\$ps)	(0.57)	0.24	0.40	0.48
EPS Growth	(%)	0.0	+>100	67.0	18.5
CFPS	(US\$ps)	0.03	0.55	0.94	0.85
CF Growth	(%)	0.0	+>100	69.3	(10.0)
EBITDA	(US\$M)	17.6	118.0	200.3	210.1
EBITDA/shar	e (US\$ps)	0.08	0.55	0.93	0.98
EV/EBITDA	(x)	79.6	10.0	5.2	4.5
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 83: SSO Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(9.8)	(3.6)	40.2	96.4
EPS	(US\$ps)	(0.18)	(0.08)	0.51	1.22
EPS Growth	(%)	0.0	55.8	+>100	+>100
CFPS	(US\$ps)	0.27	(0.23)	0.53	1.24
CF Growth	(%)	0.0	(185.7)	+>100	+>100
EBITDA	(US\$M)	8.1	(4.4)	60.1	138.1
EBITDA/shar	e (US\$ps)	0.13	(0.06)	0.80	1.76
EV/EBITDA	(x)	152.9	NM	18.0	7.5
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 84: SVM Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	59.9	(16.0)	47.2	77.3
EPS	(US\$ps)	0.41	0.23	0.30	0.48
EPS Growth	(%)	0.0	(43.7)	29.3	60.9
CFPS	(US\$ps)	0.55	0.30	0.44	0.69
CF Growth	(%)	0.0	(45.9)	49.1	55.8
EBITDA	(US\$M)	80.9	(9.4)	75.3	110.7
EBITDA/share	e (US\$ps)	0.55	(0.06)	0.46	0.68
EV/EBITDA	(x)	12.6	NM	13.4	8.8
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 85: FR Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(4.8)	9.5	51.4	66.1
EPS	(US\$ps)	(0.17)	0.10	0.56	0.68
EPS Growth	(%)	0.0	+>100	+>100	23.1
CFPS	(US\$ps)	0.06	0.17	0.71	0.89
CF Growth	(%)	0.0	+>100	+>100	26.1
EBITDA	(US\$M)	0.7	15.0	83.5	108.5
EBITDA/shar	e (US\$ps)	0.01	0.16	0.90	1.11
EV/EBITDA	(x)	462.5	21.3	3.5	2.2
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00



### **Silver Miners**

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### Junior Silver Producers and Developers

Fig 86: BCM Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(18.1)	(9.9)	(11.2)	(7.3)
EPS	(US\$ps)	(0.36)	(0.17)	(0.16)	(0.08)
EPS Growth	(%)	0.0	53.8	5.6	47.3
CFPS	(US\$ps)	(0.36)	(0.13)	(0.14)	(0.07)
CF Growth	(%)	0.0	65.1	(11.1)	51.2
EBITDA	(US\$M)	(18.5)	(10.1)	(11.2)	(9.6)
EBITDA/shar	e (US\$ps)	(0.33)	(0.15)	(0.15)	(0.08)
EV/EBITDA	(x)	NM	NM	NM	NM
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 87: EDR Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(18.0)	(3.4)	24.7	29.0
EPS	(US\$ps)	(0.37)	(0.06)	0.41	0.48
<b>EPS Growth</b>	(%)	0.0	85.1	+>100	15.8
CFPS	(US\$ps)	(0.09)	0.15	0.61	0.70
CF Growth	(%)	0.0	+>100	+>100	14.6
EBITDA	(US\$M)	(8.6)	5.5	44.1	50.2
EBITDA/shar	€ (US\$ps)	(0.18)	0.09	0.74	0.76
EV/EBITDA	(x)	NM	37.3	4.2	3.1
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 88: OK Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(25.4)	(12.9)	(2.5)	(3.0)
EPS	(US\$ps)	(0.25)	(0.12)	(0.02)	(0.02)
EPS Growth	(%)	0.0	52.7	82.2	(18.9)
CFPS	(US\$ps)	(0.20)	(0.09)	(0.02)	(0.02)
CF Growth	(%)	0.0	57.1	79.8	0.9
EBITDA	(US\$M)	(25.5)	(12.9)	(2.5)	(3.1)
EBITDA/shar	€ (US\$ps)	(0.24)	(0.12)	(0.02)	(0.03)
EV/EBITDA	(x)	NM	NM	NM	NM
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 89: SBB Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(2.9)	(2.8)	(3.9)	(1.7)
EPS	(US\$ps)	(0.03)	(0.03)	(0.03)	(0.01)
EPS Growth	(%)	0.0	1.7	(26.9)	67.5
CFPS	(US\$ps)	(0.02)	(0.03)	(0.02)	(0.00)
CF Growth	(%)	0.0	(28.8)	31.5	97.2
EBITDA	(US\$M)	(5.1)	(4.4)	(4.1)	(4.1)
EBITDA/shar	e (US\$ps)	(0.07)	(0.04)	(0.04)	(0.03)
EV/EBITDA	(x)	NM	NM	NM	NM
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 90: MSV Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(2.1)	(4.1)	(5.9)	(5.5)
EPS	(US\$ps)	(0.07)	(0.11)	(0.12)	(0.08)
EPS Growth	(%)	0.0	(56.5)	(9.6)	35.2
CFPS	(US\$ps)	(0.08)	(0.08)	(0.09)	(0.10)
CF Growth	(%)	0.0	0.0	(23.9)	(7.6)
EBITDA	(US\$M)	(2.9)	(4.9)	(6.1)	(7.0)
EBITDA/share	€ (US\$ps)	(0.09)	(0.14)	(0.08)	(0.10)
EV/EBITDA	(x)	NM	NM	NM	NM
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

Source: BMO Capital Markets

Fig 91: MAG Earnings Forecast

Year end Dec		2008A	2009E	2010E	2011E
Net Income	(US\$M)	(3.9)	(7.8)	(6.1)	(5.9)
EPS	(US\$ps)	(0.08)	(0.16)	(0.11)	(0.10)
EPS Growth	(%)	0.0	(98.2)	30.3	8.0
CFPS	(US\$ps)	(0.03)	(0.14)	(0.11)	(0.10)
CF Growth	(%)	0.0	(288.7)	18.4	8.0
EBITDA	(US\$M)	(5.0)	(7.3)	(5.9)	(5.3)
EBITDA/share	(US\$ps)	(0.1)	(0.1)	(0.1)	(0.1)
EV/EBITDA	(x)	N/M	N/M	N/M	N/M
C\$/US\$		0.94	0.88	0.99	0.97
Silver	(US\$/oz)	15.01	14.63	20.00	20.00

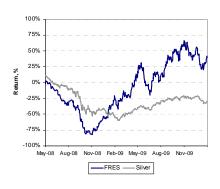


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### 16. Relative Price Performance

### Senior Silver Producers

Fig 92: FRES Relative Share Price Performance



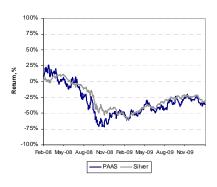
Source: BMO Capital Markets, Bloomberg

Fig 93: HOC Relative Share Price Performance



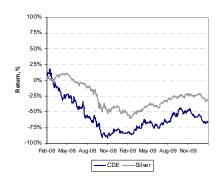
Source: BMO Capital Markets, Bloomberg

Fig 94: PAAS Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 95: CDE Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 96: SLW Relative Share Price Performance



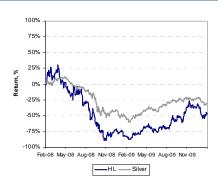
Source: BMO Capital Markets, Bloomberg



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### Intermediate Silver Producers

Fig 97: HL Relative Share Price Performance



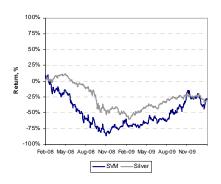
Source: BMO Capital Markets, Bloomberg

Fig 98: SSO Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 99: SVM Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 100: FR Relative Share Price Performance



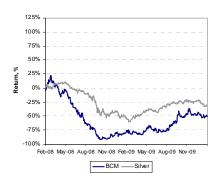
Source: BMO Capital Markets, Bloomberg



February 22, 2010

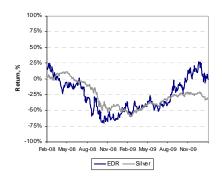
### Junior Silver Producers and Developers

Fig 101: BCM Relative Share Price Performance



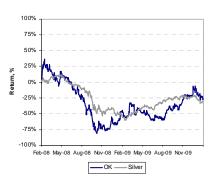
Source: BMO Capital Markets, Bloomberg

Fig 102: EDR Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 103: OK Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 104: SBB Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 105: MSV Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg

Fig 106: MAG Relative Share Price Performance



Source: BMO Capital Markets, Bloomberg



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### 17. Fresnillo PLC (FRES.LSE)

### Already Number One and Getting Bigger

FRES is rated Outperform with a £10.30 target price.

Largest primary silver producer globally.

2010E production of 38.3Moz of silver and 317.4koz of gold.

Lower cost quartile producer.

Development through 2015 will increase silver production by 26% and gold production by 42%.

Production potential of 65Moz of silver by 2018E is contingent on future development.

Potential for acquisition.

An Outperform rating and target price of £10.30 for FRES reflect the company's premier asset base and organic growth prospects. FRES offers appeal in a rising precious metal market.

Fresnillo is the largest publicly traded silver producer with a significant gold weighting. Fresnillo was born out of the listing of Peñoles' Mexican-based precious metal operations in Q2/08. Peñoles' 77% equity interest in Fresnillo presents a challenge for investors seeking to accumulate a meaningful position.

FRES principal assets are the Fresnillo, Cienega and Herradura mines, and a silver stream from the Sabinas mine, operated by Peñoles. FRES 2009 production totalled 40.7Moz of silver and 277koz of gold in 2009. Combined, these mines host reserves of 410Moz of silver and 4.1Moz of gold, which support mine lives in excess of 10 years.

FRES flagship mines and development stage assets boast grade profiles that maintain FRES position as a lower-cost quartile operator. BMO Research forecasts ~US\$4.00/oz co-product cash costs through 2015.

In addition to these long-lived operations, FRES has a number of development projects that include Saucito and the Juanicipio JV in the Fresnillo district, and the Soledad and Dipolos, and Noche Buena assets in the Herradura district. Once integrated, these operations are projected to increase silver production to 54Moz and gold production to 460koz by 2015.

Despite an aggressive growth trajectory, BMO Research estimates that FRES will require ongoing reserve replacement at Fresnillo, combined with the development of exploration-stage projects to meet production objectives of 65Moz of silver by 2018. BMO Research models silver production increasing to 57Moz by 2018.

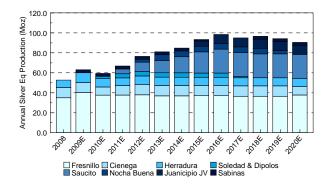
Augmenting organic growth, BMO Research expects FRES to maintain an active acquisition strategy. MAG Silver (MAG.T), which holds the remaining 44% interest in the Juanicipio JV, remains a potential candidate. However, FRES has demonstrated the capacity to look outside of operational centres.

Fig 107: Mine Locations



Source: BMO Capital Markets

Fig 108: FRES Production Profile, 2008-2020E





#### Silver Miners

February 22, 2010

### Valuation

Initiating with an Outperform rating.

FRES trades at a 23% premium to senior silver producers in the BMO Research coverage universe.

BMO Research is initiating coverage of Fresnillo with an Outperform rating and a target price of £10.30, based on 3.2x the 10% nominal corporate NPV of US\$5.60/share using the BMO Research metal price forecast.

FRES trades at 1.88x, or a 23% premium to senior silver producers in the BMO Research coverage universe, which are currently trading at 1.53x their 10% nominal NPV at spot metal prices.

Using BMO Research 2010 estimates, FRES is currently trading at 16x EPS and 14.6x CFPS versus average multiples of 16.3x EPS and 11.1x CFPS for senior to intermediate silver producer peers.

Fig 109: Fresnillo Valuation

2011E 2010E 2012E **BMO Assumptions** Spot 2009A LT 950 Gold 1.108 972 1,150 1 150 850 15.00 14 00 Silver 15.83 14 63 20.00 20.00 Lead 1.04 1.00 0.80 0.80 0.78 1.00 1.04 1.20 1.00 GB£/US\$ exchange rate

NPV<sub>10%</sub>, BMO Price **NET ASSET VALUE** NPV<sub>0%</sub>, BMO Price NPV<sub>10%</sub>, Spot Interest (\$/Share) US\$M (\$/Share) US\$M (\$/Share) 2,373.9 2,281.7 6.03 Fresnillo 3.18 4,325.3 541.9 0.76 1,751.3 0.97 100% 692.2 Saucito 2.44 56% 56% 166.4 550.9 0.23 Junicipio JV 504.2 0.70 431.9 0.60 Herradura 837.4 1.17 Soledad & Dipolos 56% 0.29 169.9 0.24 138.9 0.19 205.0 Noche Buena 56% 40.0 0.06 98.1 0.14 0.10 Cienega 100% 393.5 0.55 837.1 1.17 496.9 0.69 Sabinas Silver Stream 182.6 100% 0.25 240.8 0.34 180.7 **Project NPV** 4,127.9 12.27 4,703.0 6.56 5.76 8,799.1 Net Cash<sup>3</sup> 174.6 0.24 174.6 0.24 174.6 0.24 Investments 49.3 0.07 49.3 0.07 49.3 0.07 I-T-M Options and Warrants Corporate Adjustment<sup>2</sup> (332.7)(417.6) (332.7) (0.46)(0.46)(0.58)NPV of Hedge Book (108.8) (0.15) **Total Corporate Adjustments** (108.8) (0.15) (193.7) (0.27)Corporate NPV US\$ 4,019.1 8,605.4 12.00 4.594.2 6.41 GC£ 2,296.6 7,178.4 10.01 3.20 15,317.6 Multiple to Corporate NPV 3.2x 12-month Target Price US\$ 12,861. GB£ 10.30

A £10.30 target price values FRES at 3.2x NPV.

- 1. Assumes shares outstanding of 717.2M
- 2. Includes general and administrative expenses as well as exploration expenses
- 3. Net cash position includes the recently closed bought deal resulting in gross proceeds of C\$115M All figures in US\$ unless noted otherwise.

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.



### **Silver Miners**

February 22, 2010

Fig 110: FRES Model Parameters

Project		Sauci							Project Cienega	_
Country Interest		Mexic 1009	0						Country Mexico Interest 100%	
% of FRES Project NPV		13%							% of FRES Project NPV 10%	
	Mine Type: Processing:		Mil	Inderground	i nn				Mine Type: Underground Processing: Milling, Flotation	
	Processing Rate:	tpd		tpd expandi		I			Processing Rate: tpd 2,000	
	LOM Production:		Annual	Total					LOM Production: <u>Annual Total</u>	
		Silver Moz Gold koz	17.3 39.8	276.2 637.2					Silver Moz 2.4 42.0 Gold koz 76.2 1,333.5	
		Lead kt Zinc kt	6.4 8.7	102.8 138.7					Lead kt 8.3 145.3 Zinc kt 10.4 181.3	
		ZIIIC Kt								
LOM Total Cash Costs* Modelled Mine Life		yrs	4.i 16.	86 .00					LOM Total Cash Costs** 390.67 Modelled Mine Life yrs 17.50	
Expansion Capex Total Sustaining Capital		US\$M US\$M	393	3.7 8.9					Expansion Capex         US\$M         35.4           Total Sustaining Capital         US\$M         211.8	
			201							
Modeled	Tonnes 000	Silver Go g/t	old Lead 1/t %	Zinc %	Silver	Lead kt	Zinc	Gold koz	Modeled         Tonnes         Silver         Gold         Lead         Zinc         Silver         Lead         Zinc           000         g/t         g/t         %         Moz         kt         kt	Gold koz
Underground	28,886		12 0.40%	0.75%	348	116	217	1,044	Underground 14,788 102.42 3.14 1.01% 1.63% 49 150 242	1,492
Project		Fresni	llo						Project Junicipio JV	
Country		Mexic							Country Mexico	
Interest % of FRES Project NPV		1009 55%							Interest 56% % of FRES Project NPV 3%	
70 01 1 N20 1 10JCCC 111 V	Mine Type:	557	U	Inderground					Mine Type: Underground	
	Processing: Processing Rate:	tpd	Mil	ling, Flotation 8,000	on				Processing: Milling, Flotation Processing Rate: tpd 2,000	
	LOM Production:		Annual	Total					LOM Production: <u>Annual Total</u>	
		Silver Moz	28.9	448.5					Silver Moz 10.6 124.6	
		Gold koz Lead kt	33.2 27.8	514.7 430.2					Gold koz 25.4 297.9 Lead kt 14.9 174.5	
		Zinc kt	37.9	586.8					Zinc kt 18.9 221.6	
LOM Total Cash Costs*			3.	91					LOM Total Cash Costs* 4.18	
Modelled Mine Life		yrs	15.	.50					Modelled Mine Life yrs 11.75	
Expansion Capex Total Sustaining Capital		US\$M US\$M	9. 31						Expansion Capex         US\$M         250.0           Total Sustaining Capital         US\$M         79.9	
Total Sustaining Capital		UJSM	31							
Modeled	Tonnes 000	Silver Go	old Lead 1/t %	Zinc %	Silver Moz	Lead kt	Zinc kt	Gold koz	Modeled         Tonnes         Silver         Gold         Lead         Zinc         Silver         Lead         Zinc           000         g/t         g/t         %         %         Moz         kt         kt	Gold koz
Underground		401.36 0.			496	483	917	735	Underground 7,986 567.73 1.58 2.30% 3.70% 146 184 295	405
Project		Herrad								
									Project Soledad & Dipolos	
Country		Mexic	0						Project Soledad & Dipolos Country Mexico	
Country Interest		Mexic 56%	0						Country Mexico Interest 56%	
Country	Mine Type:	Mexic	0	Open Pit					Country         Mexico           Interest         56%           % of FRES Project NPV         3%           Mine Type:         Open Pit	
Country Interest	Processing:	Mexic 56% 10%	0	Heap Leach					Country         Mexico           1nterest         56%           % of FRES Project NPV         3%           Mine Type:         Open Pit           Processing:         Heap Leach	
Country Interest		Mexic 56% 10% tpd	Annual	Heap Leach 37,000 <u>Total</u>					Country	
Country Interest	Processing: Processing Rate:	Mexic 56% 10% tpd Silver Moz	Annual 0.1	Heap Leach 37,000 Total 1.9					Country Mexico Interest 56% % of FRES Project NPV 3% Mine Type: Open Pit Processing: Heap Leach Processing Rate:18ktpd with expansion to 20ktpd	
Country Interest % of FRES Project NPV	Processing: Processing Rate:	Mexic 56% 10% tpd	Annual 0.1 0.23	Heap Leach 37,000 Total 1.9 3.7					Country         Mexico           Interest         56%           % of FRES Project NPV         3%           Mine Type:         Open Pit           Processing:         Heap Leach           Processing Rate:18ktpd with expansion to 20ktpd           LOM Production:         Annual Total           Gold koz         120.8         875.8	
Country Interest % of FRES Project NPV  LOM Total Cash Costs*	Processing: Processing Rate:	Mexic 56% 10% tpd Silver Moz Gold Moz	Annual 0.1 0.23	Heap Leach 37,000 Total 1.9 3.7					Mexico	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life	Processing: Processing Rate:	Mexic 56% 10% tpd Silver Moz Gold Moz yrs	Annual 0.1 0.23	Heap Leach 37,000 Total 1.9 3.7					Moveloo	
Country Interest % of FRES Project NPV  LOM Total Cash Costs*	Processing: Processing Rate:	Mexic 56% 10% tpd Silver Moz Gold Moz	Annual 0.1 0.23	Heap Leach 37,000 Total 1.9 3.7 85 .00					Mexico	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex	Processing: Processing Rate: LOM Production:	Mexic 56% 10% tpd tpd Silver Moz Gold Moz yrs US\$M US\$M	Annual 0.1 0.23 28 16. 0. 271	Heap Leach 37,000 Total 1.9 3.7 B5 .00 .0 8.2	Gold				Movement   Movement	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modeled Mine Life Expansion Capex Total Sustaining Capital  Modeled	Processing: Processing Rate: LOM Production:	Mexic 56% 10% tpd tpd Silver Moz Gold Moz US\$M US\$M US\$M	Annual 0.1 0.23 28 16. 0.27: er Gold /t g/t	Heap Leach 37,000 Total 1.9 3.7 B5 .00 .0	Moz			_	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capix Total Sustaining Capital  Modeled  Underground	Processing: Processing Rate: LOM Production:	Mexic 56% 10% tpd tpd Silver Moz Gold Moz US\$M US\$M US\$M Tonnes Silve 000 c 0.5 #### 0.5	Annual 0.1 0.23 28 16. 0. 278 er Gold //t g/t 0 0.81	Heap Leach 37,000 Total 1.9 3.7 B5 .00 .0 8.2 Silver Moz				=	Movement   Movement	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project	Processing: Processing Rate: LOM Production:	Mexic   56%   10	Annual 0.1 0.23 28 16. 0. 271 er Gold (/t g/t 0 0.81	Heap Leach 37,000 Total 1.9 3.7 B5 .00 .0 8.2 Silver Moz	Moz			_	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest	Processing: Processing Rate: LOM Production:	Mexic   56%   10	Annual 0.1 0.23 28 166 6 0. 277 Gold //t g/t g/t 0 0 0.81	Heap Leach 37,000 Total 1.9 3.7 B5 .00 .0 8.2 Silver Moz	Moz			_	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capix Total Sustaining Capital  Modeled Underground  Project Country  Country	Processing: Processing Rate: LOM Production:	Mexic 56% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	Annual 0.1 0.23 28 166 6 0. 277 Gold //t g/t g/t 0 0 0.81	Heap Leach 37,000 Total 1.9 3.7 85 .00 0.0 8.2 Silver Moz 3	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest	Processing: Processing Rate: LOM Production:  Mine Type: Processing:	Mexic Mexic 10%  10%  1pd  1pd  Silver Moz Gold Moz  yrs USSM USSM USSM Tonnes Silv 000 c #### 0.5  Noche B Mexic Noche B Mexic Noche B 1%	Annual 0.1 0.23 28 16 0.27 19 0.81 uena 0	Heap Leach 37,000 Total 1.9 3.7 85 .00 .0 8.2 Silver Moz 3	Moz	_		=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing Rate:	Mexic   56%   10	Annual 0.1 0.23 28 166 0. 271 err Gold (/t g/t 0) 0.81 uena 0	Heap Leach 37,000 Total 1.9 3.7 885 85.00 .00 8.2 Silver Moz 3	Moz			=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest	Processing: Processing Rate: LOM Production:  Mine Type: Processing:	Mexic Mexic 10%  10%  1pd  1pd  Silver Moz Gold Moz  yrs USSM USSM USSM Tonnes Silv 000 c #### 0.5  Noche B Mexic Noche B Mexic Noche B 1%	Annual 0.1 0.23 28 16 0.27 19 0.81 uena 0	Heap Leach 37,000 Total 1.9 3.7 85 .00 .0 8.2 Silver Moz 3	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing Rate:	Mexke Selver Moz Silver Moz Gold Moz VSSM USSM USSM USSM Selver Moz Gold Moz VSSM USSM Selver Moz Silver Moz Silver Moz Silver Moz Selver Moz S	Annual  Annual  O.1  O.23  16  O.27  er Gold  v/t g/t g/t  g/t g/t  Annual	Heap Leach 37,000  Total 1.9     3.7     85     .00     .0     8.2  Silver Moz 3  Open Pit Heap Leach 18,000 Total	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs*	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing Rate:	Mexic Mexic 10%  Tpd  Ipd  Silver Moz Gold Moz  yrs USSM USSM USSM Noche B  Noche B  find fpd  Gold koz	Annual 0.1 0.23 22 16. 0. 0. 27! er Gold //t g/t g/t 0. 0.81 ueena 0	Heap Leach 37,000  Total 1.9 3.7 85 .00 .0 8.2  Silver Moz 3  Open Pit Heap Leach 18,000 Total 652.7	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing Rate:	Mexic Sewer Moze Sewer Moze Gold Moz Gold Moz USSM USSM USSM Tonnes Silv Gold Moz Tonnes Silv Gold Moze Sewer Mexic Sewer Sewe	Annual 90.0	Heap Leach 37,000  Total 1.9 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7 3.7	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	_
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs*	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing Rate:	Mexic Mexic 10%  Tpd  Ipd  Silver Moz Gold Moz  yrs USSM USSM USSM Noche B  Noche B  find fpd  Gold koz	Annual 90.0	Heap Leach 37,000  Total 1.9 3.7  85,000  8.2  Silver Moz 3  Open Pit Heap Leach 18,000  Total 652.7	Moz	_	_	=	Mexico   Section   Country   Mexico   Section   Sectio	_
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	Processing: Processing Rate: LOM Production:  Mine Type: Processing Rate: LOM Production:	Mexic	Annual 0.1 0.23 26 16 0.27 Gold VI. g/t 0.7 0.81 Usens 0.1 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.2 0.81 4.1 0.2 0.2 0.81 4.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2	Heap Leach 37,000  Total 1.9 3.7  85,000  8.2  Silver Moz 3  Open Pit Heap Leach 18,000  Total 652.7	Moz 5			_	Mexico   Section   Country   Mexico   Section   Sectio	
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing: Rate: LOM Production:	Mexic 56% for the foliation of the folia	Annual 0.1 0.23 26 16 0.0 0.1 0.27 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.81 16 0.0 0.0 0.81 16 0.0 0.0 0.81 16 0.0 0.0 0.81 16 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Heap Leach 37,000  Total 1.9 3.7  85,000  8.2  Silver Moz 3  Open Pit Heap Leach 18,000  Total 652.7	Moz 5			=	Mexico   Section   Country   Mexico   Section   Sectio	_
Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of FRES Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	Processing: Processing Rate: LOM Production:  Mine Type: Processing: Processing: Rate: LOM Production:	Mexic 56% 10% 10% 10% 10% 10% 10% 10% 10% 10% 10	Annual 0.1 0.23 28 16. 0.271 Gold vit gyft gyft 9,0 0.81 4 0.0 0.81 4 0.0 0.0 0.81 4 0.0 0.0 0.81 4 0.0 0.0 0.81 4 0.0 0.0 0.0 0.81 5 6 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Heap Leach 37,000  Total 1.9 3.7  85,000  8.2  Silver Moz 3  Open Pit Heap Leach 18,000  Total 652.7	Moz 5			_	Mexico   Section   Country   Mexico   Section   Sectio	_



### **Silver Miners**

February 22, 2010

Fig 111: FRES Production Parameters

Production Estimates		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Saucito		2006A	2009E	2010E	20116	2012E	2013E	20146	2015E	2010E	2017E	2010E	2019E	2020E	202 IE	2022E	2023E
Mining rate	tpd	-			1,250	2,375	3,063	4,063	5,313	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Grade	Ag (g/t)	_	-	-	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5	374.5
	Au (g/t)	-	-	-	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
	Lead (%)	_	-	-	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Zinc (%)	-	-	-	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Silver Equiv. Production	Moz	-	-	-	5.2	10.1	13.0	17.3	22.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
Total Cash Costs*	US\$/oz	-	-	-	6.16	5.44	4.99	5.09	4.76	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
Cienega																	
Mining rate	tpd	2,209	2,000	2,000	2,438	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
Grade	Ag (g/t)	46.2	100.5	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4
	Au (g/t)	5.14	4.56	4.00	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	2.19	2.19	2.19	2.19
	Lead (%)	1.46	1.00	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.14	1.14	1.14	1.14
	Zinc (%)	2.32	1.68	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.91	1.91	1.91	1.91
Silver Equiv. Production	Moz	9.8	10.1	8.6	9.9	10.9	10.9	10.9	10.8	10.8	10.8	10.8	10.8	9.1	9.1	9.1	9.1
Total Cash Costs**	US\$/oz	302	266	375	351	355	353	350	344	344	344	344	344	436	436	436	436
Fresnillo	Accord.	7.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.000	0.000	0.000	8.000	0.000
Mining rate	tpd	7,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000		8,000	8,000		8,000
Grade	Ag (g/t)	494.0	500.0	475.0	475.0	475.0	450.0	450.0	425.0	425.0	400.0	400.0	375.0	375.0	350.0	315.2	315.2
	Au (g/t)	0.47 0.42	0.59	0.70	0.59 0.49	0.59 0.45	0.59 0.50	0.59 0.50	0.59 0.75	0.59 0.75	0.59 1.00	0.59 1.00	0.59 1.25	0.59 1.50	0.59 1.75	0.59 2.85	0.59 2.85
	Lead (%) Zinc (%)	0.42	0.40	0.40	0.49	0.45	1.00	1.00	1.50	1.50	1.75	1.75	2.25	2.50	2.75	5.86	5.86
Silver Equiv. Production	Moz	37.8	40.2	40.1	40.3	40.5	39.5	39.5	39.7	39.7	39.2	39.2	39.4	40.7	40.2	48.8	48.8
Total Cash Costs*	US\$/oz	3.70	3.34	3.34	3.41	3.35	3.55	3.55	3.85	3.85	4.13	4.13	4.44	4.53	4.81	5.49	5.49
Junicipio JV	Accord.								1 100	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
Mining rate	tpd	-	-	-	-	-	-	-	1,188	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Grade	Ag (g/t)	-	-	-	-	-	-	-	567.7	567.7	567.7	567.7	567.7	567.7	567.7	567.7	567.7
	Au (g/t)	-	-	-	-	-	-	-	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58	1.58
	Lead (%)	-	-	-	-	-	-	-	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
	Zinc (%)	-	-	-	-	-	-	-	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
Silver Equiv. Production	Moz	-	-	-	-	-	-	-	10.4	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Total Cash Costs*	US\$/oz	-	-	-	-	-	-	-	4.50	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
Herradura																	
Mining rate	tpd	36,649	44,817	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000	37,000
Grade	Ag (g/t)	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Au (g/t)	0.61	0.70	0.87	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Gold Production	koz	222.9	264.5	257.4	238.9	237.3	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4	237.4
Total Cash Costs**	US\$/oz	347	310	238	281	286	289	289	289	290	291	291	292	293	293	294	295
Soledad & Dipolos																	
Mining rate	tpd	-	-	19,500	24,000	24,000	24,000	24,000	24,000	24,000	6,000	-	-	-	-	-	-
Grade	Au (g/t)	-	-	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	-	-	-	-	-	-
Gold Production	koz	-	-	75.0	126.6	126.6	126.6	126.6	126.6	126.6	41.4	-	-	-	-	-	-
Total Cash Costs**	US\$/oz	-	-	445	334	336	302	302	302	302	230	-	-	-	-	-	-
Noche Buena																	
Mining rate	tpd	-	-	-	-	12,000	18,000	18,000	18,000	18,000	18,000	18,000	9,000	-	-	-	-
Grade	Au (g/t)	-	-	-	-	0.67	0.65	0.65	0.65	0.65	0.65	0.65	0.65	-	-	-	-
Gold Production	koz	-	-	-	-	44.4	92.6	92.5	92.5	92.5	92.5	92.5	53.4	-	-	-	-
Total Cash Costs**	US\$/oz	-	-	-	-	365	254	255	255	256	256	257	222	-	-	-	-
Fresnillo Total, Attributa	ble																
Total Silver Production	Moz	32.8	38.0	38.3	42.6	46.2	46.7	49.8	54.0	57.0	55.3	58.3	56.5	56.5	54.8	52.3	52.3
Total Gold Production	koz	236.3	269.4	317.4	321.9	351.3	383.3	390.5	459.5	447.8	400.1	376.9	355.0	325.1	325.1	325.1	325.1
Total Silver Equiv. Producti	on Moz	45.9	60.1	59.4	67.1	77.3	82.0	86.0	97.0	104.0	100.6	99.2	96.9	93.3	92.8	101.4	101.4
Total Cash Costs*	US\$/oz	3.75	2.97	3.72	4.08	4.03	4.06	4.13	4.23	4.36	4.43	4.22	4.32	4.37	4.48	4.76	4.76
Total Production Costs	US\$/oz	4.29	3.66	4.66	5.10	5.08	5.16	5.35	5.45	5.68	5.71	5.45	5.64	5.55	5.76	6.06	6.27

<sup>\*</sup>silver co-product cash costs \*\*gold co-product cash costs



February 22, 2010

### Company Synopsis

2010E production of 38.3Moz of silver.

BMO Research forecasts 2010E production of 38.3Moz of silver and 317.4koz of gold at co-product cash costs of US3.72/oz of silver.

FRES is a gold-weighted silver producer.

FRES derives  $\sim 60\%$  of mine revenue from silver,  $\sim 28\%$  from gold and  $\sim 11\%$  from lead and zinc positioning it as a gold-weighted silver producer.

Fig 112: Production & Cash Cost Profile, 2008-2020E

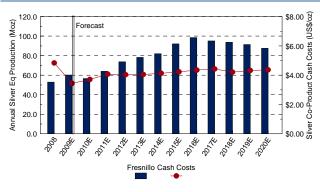
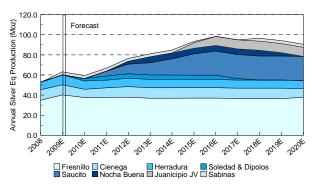


Fig 113: Growth Profile, 2008–2020E

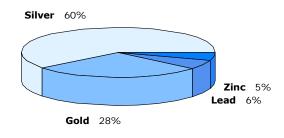


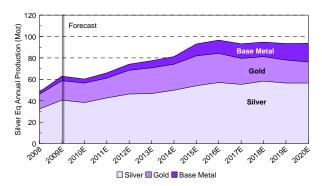
Source: BMO Capital Markets

Fig 114: FRES Revenue by Metal (%), 2008–2020E

Source: BMO Capital Markets

Fig 115: Annual Production by Metal, 2008 – 2020E





Source: BMO Capital Markets

Source: BMO Capital Markets

2010 capital and dividend payment funded through operating cash flow.

Cash reserves to rise beginning in 2011.

Projected strong EPS and CFPS growth through 2012.

FRES is expected to exit 2009 with cash reserves of US\$266.6M, and is projected to maintain current cash levels with 2010 capital requirements of US\$194.2M funded through operating cash flow. Cash flow from operations is also expected to support increased dividend payments of US\$154.4M in 2010.

Beginning in 2011, FRES cash reserves are projected to rise as major capital requirements related to Saucito development begin to decline.

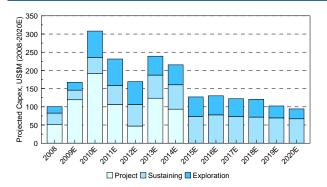
Given BMO Research's projections for high metal prices over the next two years, BMO Research forecasts 2010 EPS of US\$0.77 and CFPS of US\$0.84 and EPS of US\$0.86 and CFPS of US\$0.95 in 2011.



### **Silver Miners**

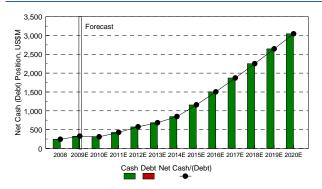
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Fig 116: Projected Capital Expenditures (US\$M)



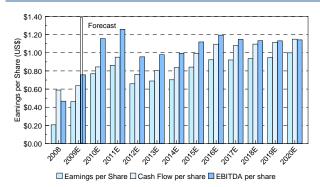
Source: BMO Capital Markets

Fig 117: Net Cash (Debt) Position, 2008-2020E



Source: BMO Capital Markets

Fig 118: Earnings Estimates, 2008–2020E





### **Silver Miners**

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### Reserves/Resources

410Moz of silver in reserve support a +10-year mine life.

FRES's resource base maintains a silver focus.

Resources of 784Moz of silver and 7.6Moz of gold provide both organic and new growth.

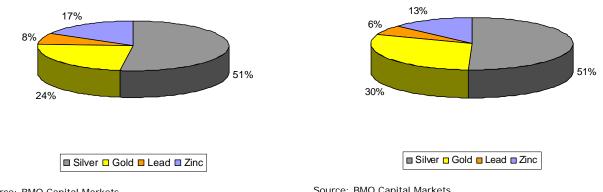
At the end of 2008, FRES's four operating mines host reserves of 410Moz of silver and 4.1Moz of gold (409.5Moz of silver and 3.1Moz of gold net to FRES) with each mine supporting a ~10 year reserve life.

Excluding reserves, FRES's resource base exhibits a higher silver weighting than peers and supports sustained growth in silver production.

Resources contain a further 784Moz of silver and 7.6Moz of gold, with 85% of the silver and 54% of the gold resource base located in proximity to existing operations. FRES's organic pipeline hosts resources of 107Moz of silver and 3.5Moz of gold with San Julian and Orysivo advancing toward development decisions through 2012.

Fig 119: Reserve Metal Distribution

Fig 120: Reserve Metal Distribution





### **Silver Miners**

February 22, 2010

Fig 121: FRES Reserves & Resources (December, 2008)

										Containe	d Metal		
	<b>Tonnes</b>	Silver	Gold	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>	<u>Tin</u>	<u>Silver</u>	Gold	Copper	<u>Lead</u>	<u>Zinc</u>	<u>Tin</u>
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven & Probable													
Fresnillo	28,571	405.0	0.59	-	1.33	2.39	-	372,000	538	-	381	684	-
Cienega	9,758	118.0	3.80	-	0.92	1.44	-	36,900	1,193	-	90	141	-
Herradura (56%)	68,223	0.5	0.90	-	-	-	-	1,100	1,975	-	-	-	-
Soledad & Diplios (56%)	18,816	-	0.67	-	-	-	-	-	408	-	-	-	-
Total Reserves	125,368	101.8	1.02	-	0.37	0.66	-	410,000	4,114	-	471	825	-
Measured & Indicated													
resnillo	26.661	585.0	0.79	_	1.60	2.88	_	570.000	679	_	427	768	_
Cienega	14,308	109.0	3.29	_	0.84	1.36	_	50,000	1,515	_	121	195	_
Herradura (56%)	124,348	0.3	0.60	_	-	-	_	1,000	2,414	_	-	-	_
Soledad & Diplios (56%)	30,135	-	0.50	_	_	_	_	-	487	_	_	-	_
Saucito	1,800	438.0	5.42	_	0.70	0.83	_	25.365	314	_	13	15	_
Jarillas	2,784	469.0	1.31	_	0.87	1.71	_	41,994	117	_	24	48	_
/aldecanas	62	534.0	0.53	_	0.76	1.93	_	1,063	1	_	0	1	_
Juanicipio JV (56%)	2,140	783.0	2.08	-	2.10	3.76	_	53,900	255	-	180	321	_
San Juan	763	144.0	3.92	-		-	_	3.532	96	-	-	-	-
Measured & Indicated	203,001	103.9	0.88	-	0.31	0.55	-	746,854	5,878	-	765	1,347	-
Inferred													
Fresnillo	7,383	369.0	0.62	-	1.63	3.75	-	87,600	148	-	121	277	-
Cienega	10,545	97.0	2.51	-	0.50	0.95	-	33,000	851	-	53	100	-
Herradura (56%)	44,834	0.3	0.48	-	-	-	-	400	696	-	-	-	-
Soledad & Diplios (56%)	23,851	-	0.46	-			-	-	356	-	-	-	-
Saucito	1,500	278.0	4.28	-	0.62	0.65	-	13,407	206	-	9	10	-
Jarillas	5,479	365.0	1.45	-	0.88	1.65	-	64,299	256	-	48	90	-
Valdecanas	2,117	575.0	1.36	-	2.80	3.82	-	39,117	92	-	59	81	-
Santa Natalia	3,877	386.0	0.52	-	0.68	1.42	-	48,111	65	-	26	55	-
Juanicipio JV (56%)	8,240	549.0	1.44	-	1.87	2.94	-	145,000	381	-	339	534	-
Noche Buena	18,555	-	0.61	-	-	-	-	-	364	-	-	-	-
San Julian Veins	4,799	229.0	2.47	-	-	-	-	35,310	381	-	-	-	-
San Julian Disseminated	8,057	239.0	0.10	-	0.64	1.45	-	61,997	26	-	52	3	-
San Juan	1,693	116.0	3.89	-	-	-	-	6,293	211	=	-	=	-
Orisyvo	69,406	-	1.26	-	-	-	-	-	2,804	-	-	-	-
Total Inferred	210,336	79.1	1.01	-	0.25	0.46	-	534,534	6,837	-	707	1,150	-

As of December 31, 2008

Measured and indicated resources are inclusive of reserves.

Reserves and resources are on a project basis.

Reserve and resource parameters are summarized on the company website.

Source: Fresnillo Plc.



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A pre-eminent silver district with historic production of 1.6Boz of silver.

Fresnillo district production to expand to 48Moz of silver by 2015.

### **FRES** operates:

- Fresnillo mine
- Saucito mine
- 56% of Juanicipio JV
- 100kha of exploration licences

### Fresnillo District – A World-Class Silver District

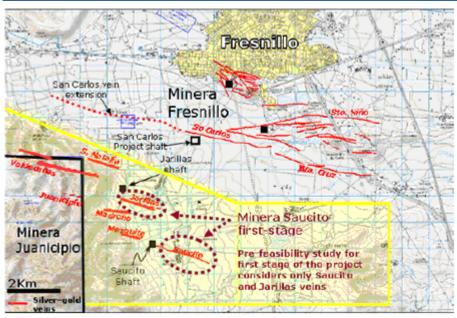
FRES owns the dominant land position within the Fresnillo district in central Mexico. This is a world class silver district with silver production extending back to the mid-16th century. Total historic silver production is estimated at 1.6Boz of silver.

Development under way at the Saucito and the Juanicipio JV are projected to increase annual silver production from the current 33Moz to 52Moz by 2015. These production levels will confirm the district as the premier silver production center globally.

The Fresnillo district includes:

- The 8ktpd Fresnillo mine with annual production of ~33Moz of silver.
- The Saucito project under development that includes the Saucito and Jarillas underground mines, and an initial 3ktpd flotation plant with expansion to 6ktd by H2/14. Silver production is projected to grow to 19.2Moz by 2016from 4Moz in 2011.
- A 56% interest in the Juanicipio joint venture (MAG-T 44%) hosts indicated resources of 53.9Moz of silver and 143koz of gold, and inferred resources of 128Moz of silver and 375Moz of gold. BMO Research targets development of the Juanicipio JV as a stand-alone operation with annual production of 10Moz of silver and 24koz of gold beginning in 2015.
- 100kha of exploration licences cover the core of the Fresnillo district for over 30km along the primary mineralized trend.

Fig 122: Fresnillo District



Source: Fresnillo Plc



### Silver Miners

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With 410Moz of silver in reserve, FRES has already established a +10-year reserve life. Planned expansion at Saucito through 2015 is supported by the growing resource base, which measured 432Moz globally at the end of 2008.

With up to 12 surface and four underground drill rigs active over the last 12 months, FRES is expected to grow reserves above 2009 production and capture a significant increase in the resources.

### Fresnillo ore is processed through an 8ktpd flotation.

### Fresnillo Mine - A Stable Production Platform

The Fresnillo mine is an 8ktpd underground vein mine with ore treated by conventional flotation to produce a silver-rich lead concentrate and zinc concentrate. Concentrates are shipped to the Met-Mex smelter, located ~310km to the north in the city of Torreon.

Underground infrastructure is capable of hoisting +8ktpd of ore.

Underground infrastructure includes the General (4ktpd hoisting capacity), the San Luis (2ktpd) shafts and the San Ricardo and Candalaria ramps on the San Carlos vein. Haulage is co-ordinated on the 695m level, which extends from the San Carlos vein to the General shaft.

The new 8ktpd San Carlos shaft will increase hoisting capacity and improve ore handling.

FRES is currently constructing the first stage of the 8ktpd San Carlos shaft to improve ore handling along the San Carlos vein. Head frame construction is nearing completion and shaft sinking is expected to be completed by 2011. The US\$19M shaft is projected to be operational by H2/11.

Average mining costs of US35/t in H1/09 are based on 40% of ore derived from long hole stoping, 55% cut and fill and 5% sill development. A 20% decline from H2/08 was largely a combination of cost-cutting measures and an  $\sim$ 18.5% decline in the Mexican peso.

60% of ore is sourced from the San Carlos vein.

Mining production is predominately sourced from the San Carlos vein (60% of ore), which has been developed for 5km along strike. The remaining 40% of ore is sourced from the Santa Cruz, San Mateo and San Ricardo veins.

FRES expects to maintain production levels above 30Moz of silver per annum through 2015.

### **Production to Remain Constant Through 2014**

Production levels of +30kMoz of silver are expected to be maintained over the next several years as FRES concentrates production and development activities in the upper part of the mine, where silver grades are higher.

Thereafter, silver grades are projected to decline.

Based on current reserves, production levels are projected to peak in 2012 and gradually decline to below 30Moz annually by 2015. Lower silver production at Fresnillo is a function of declining silver grades as mining becomes increasingly reliant on reserves within the deeper portions of the vein system. Offsetting a decline in silver grades, higher base metal grades at depth are projected to increase lead and zinc production to 21.5kt and 24.4kt, respectively, from 2010 production of 8.7kt of lead and 9.7kt of zinc.

To offset declining grades, FRES has focused exploration and mine development to extend the San Carlos vein to the west. Exploration drilling has extended the San Carlos vein for an additional 3km west of current mining operations.

Saucito Project hosts current indicated resources of 68Moz of silver and 432koz of gold.

### Saucito -Size Potential Just Beginning to Emerge

FRES discovered the Saucito vein, located 4km south of the San Carlos vein in 2004. Since the initial discovery, FRES has discovered the Jarillas and Mezquite vein, and in conjunction with JV partner MAG Silver (MAG-T) the Valdecañas vein.



### **Silver Miners**

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Total indicated resources net to FRES at the end of 2008 were estimated at 68Moz of silver and 432koz of gold. Inferred resources contribute an additional 165Moz of silver and 619koz of gold.

BMO Research expects exploration over the next few years to significantly expand the resource potential.

To date, FRES has spent +US\$100M on infrastructure development, including:

- Completion of the 3ktpd Saucito shaft.
- 95% completion of the Fatima ramp to access the Saucito vein.
- Construction of the 5ktpd Jarillas head frame. Shaft sinking is at ~75m with a target depth of 645m depth.
- 18km of 32km of underground development.

FRES has budgeted a further US\$208M to complete underground development and a 3ktpd flotation plant with commissioning targeted for mid-2011. The Saucito project is expected to ramp up from an initial 1ktpd to 3ktpd over 18 months.

Fig 123: Fresnillo District Reserves/Resources

										Containe	d Metal		
Fresnillo District	Tonnes	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven & Probable													
Fresnillo	28,571	405.0	0.59	-	1.33	2.39	-	372,000	538	-	381	684	-
Saucito													
Saucito	-	-	-	-	-	-	-	-	-	-	-	-	-
Jarillas	-	-	-	-	-	-	-	-	-	-	-	-	-
Valdecanas	-	-	-	-	-	-	-	-	-	-	-	-	-
Juanicipio JV (56%)	-	-	=	=	-	=	-	=	-	-	=	-	-
Total Reserves	28,571	405.0	0.59	-	1.33	2.39	-	372,000	538	-	381	684	-
Measured & Indicated													
Fresnillo	26,661	585.0	0.79	-	1.60	2.88	-	570,000	679	-	427	768	-
Saucito													
Saucito	1,800	438.0	5.42	-	0.70	0.83	-	25,365	314	-	13	15	-
Jarillas	2,784	469.0	1.31	-	0.87	1.71	-	41,994	117	-	24	48	-
Valdecanas	62	534.0	0.53	-	0.76	1.93	-	1,063	1	-	0	1	-
Juanicipio JV (56%)	2,140	783.0	2.08	-	2.10	3.76	-	53,900	255	-	180	321	-
Measured & Indicated	33,447	580.0	1.16	-	1.52	2.73	-	692,322	1,366	-	644	1,153	-
Inferred													
Fresnillo	7,383	369.0	0.62	-	1.63	3.75	-	87,600	148	-	121	277	-
Saucito	1,500	278.0	4.28	-	0.62	0.65	-	13,407	206	-	9	10	-
Jarillas	5,479	365.0	1.45	-	0.88	1.65	-	64,299	256	-	48	90	-
Valdecanas	2,117	575.0	1.36	-	2.80	3.82	-	39,117	92	-	59	81	-
Santa Natalia	3,877	386.0	0.52	-	0.68	1.42	-	48,111	65	-	26	55	-
Juanicipio JV (56%)	8,240	549.0	1.44	-	1.87	2.94	-	145,000	381	-	339	534	-
Total Inferred	28,596	432.9	1.25	-	1.46	2.64	-	397,534	1,148	-	603	1,047	-

As of December 31, 2008

Measured and indicated resources are inclusive of reserves.

Reserves and resources are on a project basis

Reserve and resource parameters are summarized on the company website

Source: Fresnillo Plc.

# Mill construction to begin with site clearing in Q1/10.

Site clearing for the Saucito mill, located adjacent to the Jarillas shaft, is to begin in Q1/10 with mill infrastructure sized to accommodate future expansion. BMO Research models combined mill and underground development capital costs of US\$120M to support expansion to 6ktpd in 2013.



#### **Silver Miners**

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### Juanicipio JV - A Significant Growth Opportunity

The third stage of production growth in the Fresnillo district will be driven by development of the Juanicipio JV with MAG.

The Juanicipio JV could add an additional 5.8Moz of silver and 14Moz of gold net to FRES.

Juanicipio is advancing to pre-feasibility through 2010.

The synergies with the Saucito project development are compelling. In late Q4/09, the JV released a preliminary assessment based on resources within the Valdecañas vein that outlined annual production of 10Moz of silver and 23koz of gold annually over a 12.5-year mine life. Capital to develop a stand-alone 2ktpd mill and for underground development was estimated at US\$217M.

Infill drilling is ongoing with the objective to increase the indicated resource to  $\sim 50\%$  of the total resource. This milestone should be realized in Q1/10, after which BMO Research expects the project to advance to the pre-feasibility with the completion by the end of 2010.

While synergies and potential for capital reduction exist by integrating the Juanicipio JV infrastructure with that currently being developed by FRES at Jarillas, BMO Research models the Juanicipio JV as a stand-alone project.



### **Silver Miners**

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### Herradura District – Expanding

District production to expand to 456koz of gold by 2012.

Through Minera Penmont (JV), FRES and joint-venture partner Newmont Mining (NEM-NYSE) have embarked upon a series of satellite expansions that BMO Research expects will increase production within the Herradura district in northwestern Mexico from the current ~250koz gold per annum to ~456koz gold per annum by 2013.

Emerging underground potential.

Minera Penmont has embarked upon a ~US\$10M exploration program to evaluate the underground potential beneath the Herradura open pit. While at a conceptual stage, the Centauro underground could add a further ~150koz of production by 2015.

FRES holds a 56% interest in the Herradura.

FRES holds a 56% interest and is the operator of the JV, and Newmont Mining (NEM-NYSE) owns the remaining 44%.

### **Minera Penmont operates:**

Minera Penmont operates:

- Herradura mine
- The ~250koz gold per annum Herradura run-of-mine open-pit heap leach mine.
- Soledad mine
- The recently commissioned ~100koz per annum Soledad and Dipolos run-of-mine open-pit heap leach mine located 10 km north of Herradura. The JV is considering an expansion to increase production to ~130koz per annum by 2011.
- 500km<sup>2</sup> of exploration that provides district scale exposure to new discoveries.
- The Noche Buena deposit located 20km to the southeast of Herradura, which is expected to begin production at a rate of ~100koz of gold per annum by 2012.
- Mineral rights, including 500k km<sup>2</sup> of exploration concessions extend for 300km along the prospective trend.

Conventional run-of-mine heap leach operations.

Herradura and Dipolos are conventional open-pit run-of-mine heap leach operations with gold and silver extraction using the Merrill Crowe process. Refining of doré is completed at a central facility located at the Herradura processing plant.



### **Silver Miners**

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Fig 124: Herradura District



Source: Fresnillo Plc.

In 2009, Herradura produced 264.5koz of gold and 307koz of silver at a projected total gold-equivalent cash cost of US\$310/oz.

The district has reserves of 5Moz of gold with 3.8Moz of gold additional resource.

Construction of the Soledad and Dipolos mine was completed in H2/09 at a total capital cost of US\$66M. The first gold pour was achieved in December.

Fig 125: Herradura District Reserves & Resources

										Containe	d Metal		
Herradura District	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	<u>Silver</u> (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	<u>Tin</u> (kt)
Proven & Probable		10 /	.,										
Herradura	68,223	0.5	0.90	-	-	-	-	1,100	1,975	-	-	-	-
Soledad & Diplios	18,816	-	0.67	-	-	-	-	-	408	-	-	-	-
Noche Buena	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Reserves	87,039	0.4	0.85	-	-	-	-	1,100	2,383	-	-	-	-
Measured & Indicated													
Herradura	124,348	0.3	0.60	-	-	-	-	1,000	2,414	-	-	-	-
Soledad & Diplios	30,135	-	0.50	-	-	-	-	-	487	-	-	-	-
Noche Buena	26,590	-	0.74	-	-	-	-	-	633	-	-	-	-
Measured & Indicated	181,073	0.2	0.60	-	-	-	-	1,000	3,534	-	-	-	-
Inferred													
Herradura	44,834	0.3	0.48	-	-	-	-	400	696	-	-	-	-
Soledad & Diplios	23,851	-	0.46	-	-	-	-	-	356	-	-	-	-
Noche Buena	18,555	-	0.61	-	-	-	-	-	364	-	-	-	-
Total Inferred	87,240	0.1	0.50	-	-	-	-	400	1,416	-	-	-	-

As of December 31, 2008

Measured and indicated resources are inclusive of reserves.

Reserves and resources are on a project basis.

Reserve and resource parameters are summarized on the company website.

Source: Fresnillo Plc., Seabridge Gold



### **Silver Miners**

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BMO Research estimates 2010 production of 185koz gold net to FRES.

Higher grades are expected to maintain Herradura production of ~250koz per annum through 2012.

US\$10M underground program in 2010.

For 2010, BMO Research estimates Herradura production of 255koz of gold and 124koz of silver at total cash costs of US\$238/oz of gold. Production at Soledad and Dipolos is estimated at 75koz of gold at cash costs of US445/oz.

### **Herradura Open Pit Expansion**

To maintain steady-state production at Herradura, the JV has initiated a series of laybacks over the next two years to increase the size of the open pit. Pre-stripping to extend the open pit an additional 500m to the north is under way, with a second layback to the east envisaged. Pit expansion is expected to maintain strip ratios above the LOM average of 2.8 through 2012, but maintain production at the ~250koz range.

Based on existing reserves and resources, BMO Research models production of 3.7Moz of gold and 1.9Moz of silver over a 16-year mine life.

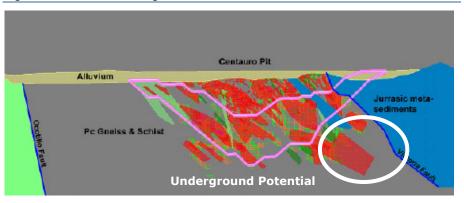
### **Centauro - Underground potential**

The JV has initiated a US\$10M underground development project to develop an exploration platform to evaluate the underground potential beneath the Herradura open pit.

Exploration is targeting a series of northwest striking veins that have been identified over a ~600m long corridor. Drilling has demonstrated vein widths in the range of 2–25m with gold grades averaging 4–5g/t.

The Centauro underground is at an early stage with two years of drilling required to delineate sufficient resources to support a development scenario.

Fig 126: Herradura Underground Potential



Source: Fresnillo Plc.

### Soledad & Dipolos Expansion

BMO Research expects the JV to announce expansion plans at Soledad and Dipolos to increase gold production from the current ~100koz to the 130koz per annum range in 2011. Mine expansion is expected to be supported by resource growth to the 1.3Moz range, based on drilling through 2009.

Mine expansion is projected to cost in the range of US\$35M for heap leach pad expansion and mobile mining equipment. No expansions are required for the  $750\text{m}^3/\text{hr}$  processing facility, which is currently operating at  $\sim\!60\%$  of capacity. Mine expansion is projected to increase stacking rates from the current  $\sim\!6\text{Mtpa}$  to 9Mtpa by the end of 2010.

BMO Research forecasts production of ~127koz at cash costs of US\$334/oz of gold in 2011.

Expansion capex of ~US\$35M.



### **Silver Miners**

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Noche Buena will add another ~93koz of gold at ~US\$255/oz cash costs by 2013.

Development parameters for Noche Buena are comparable to Soledad & Dipolos.

#### Noche Buena - An Additional 100koz of Annual Gold Production

To further expand production, the Minera Penmont JV is contemplating the development of the Noche Buena deposit, 20km southeast of Herradura, as a satellite open-pit run-of-mine heap leach mine. A development decision is expected by mid-2010. Noche Buena was acquired in 2008 for US\$25M in cash, US\$5M upon commencement of commercial production and 1.5% NSR based on 633koz of indicated and 364koz of inferred gold resource.

BMO Research expects Noche Buena development parameters to be comparable to those of Soledad and Dipolos with stacking rates of 18ktpd and production of ~93koz of gold per annum. Total cash costs are estimated at US\$255/oz, owing to a low strip ratio that is expected to average 1:1 over an eight-year mine life.

BMO Research estimates Noche Buena commissioning to begin in Q2/11 at a capital cost of US\$75M.



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### La Cienega

La Cienega is located 325km northwest of Durango, Mexico. The mine has produced a total of 1.6Moz of gold and 103.5Moz of silver since production began in Q4/94.

Cienega is a 755ktpa underground mine with three main mining areas centered on the Bonanza, Carmen and Central zones. Approximately 65% of ore is mined by cut and fill, with the remainder extracted by long hole stoping. Stopes are developed on 30m levels and average 80m long.

Ore is processed through a 2.3ktpd conventional flotation plant to produce lead and zinc concentrates with tails leached with a pregnant solution processed by Merrill Crowe to produce a gold-silver precipitate. The precipitate is shipped to the Met-Mex smelter in Torreon for refining.

In 2009, Cienega payable production was 97koz of gold and 1.5Moz of silver at projected co-product cash costs of US\$334/oz gold. In 2010, BMO Research forecasts production of 79koz of gold and 2Moz of silver at co-product cash costs of ~US\$375/oz.

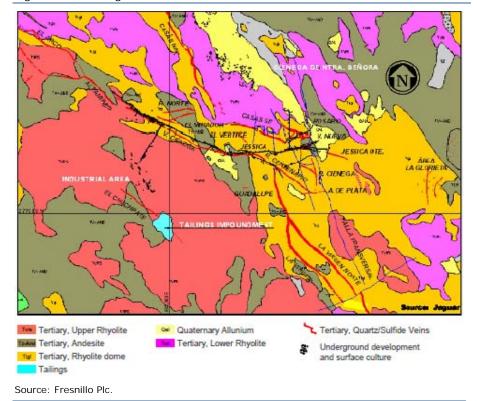
Production to expand to 91.4koz Au and 2.4Moz Ag by 2011.

### 2010 Expansion to 940ktpa

Expansion plans in 2010 will increase milling capacity to 940ktpa and increase gold and silver production by 12% and 18%, respectively, to 88koz of gold and 2.3Moz of silver at co-product cash costs of US\$350/oz in 2011. Capital costs to complete mill expansion and underground expansion are estimated at US\$25M.

Fig 127: La Cienega

The Cienega vein district extends for 8km along strike.





### **Silver Miners**

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The Cienega vein system, which has been traced over a strike of 8k, is typical of low sulphidation epithermal veins within the Sierra Madre gold belt. Veins are northwest trending and moderate to steeply dipping. The principal veins mined in the district include:

- The Cienega vein which has been traced for over 3.6km with vein widths averaging 4m.
- Jessica vein, which is a splay of the Cienega vein with a strike of 300m and average vein widths of 4m.
- Rosario, Las Casa and Arroyo de Plata veins strike sub-parallel to the Cienega vein with widths of 1–3m.

Mineralization is hosted within ore shoots spaced along the strike of veins with reserves and resources developed within seven known zones. The Carmen ore shoot along the Carmen vein hosts the majority of reserves and resources.

### **Exploration**

Exploration at La Cienega is focused on exploring the Casas area and the San Ramon vein. Drilling at Ramon has intersected significant mineralization over a 600m strike.

### **Future Organic Growth**

FRES has a large portfolio of exploration projects with aggregate indicated and inferred resources of 103.6Moz of silver and 3.4Moz of gold.

### San Julian - The Size Is Right

The San Julian project, located in Chihuahua near the boarder with Durango, hosts total resources of 93.7Moz of silver and 407koz of gold contained in two distinct zones of disseminated and vein hosted mineralization.

FRES initiated underground development in 2009 to better delineate zones of vein-hosted mineralization. FRES has allocated a ~US\$5M exploration budget for 2010. Contingent on confirmation, FRES could advance San Julian to the feasibility stage by the end of 2011.

### Orisyvo - 2.8Moz of Gold and Growing

Orisyvo, which hosts an inferred resource of 2.8Moz of gold, is a high sulphidation epithermal deposit located in the central gold belt within the Sierra Madre.

Owing to the remote and challenging terrain, near-term exploration objectives are to grow the resource to the 5Moz range to support preliminary assessment. FRES has allocated a  $\sim$ US\$3.5M exploration budget for 2010.

San Julian hosts resources of 93.7Moz of silver and 407koz of gold.

Underground development under way.

Orisyvo hosts 2.8Moz of gold.

Exploration is focused on increasing resources.



### Silver Miners

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### 18. Silver Wheaton (SLW.NYSE)

### Covered by David Haughton

### Impressive Low-Cost Growth Profile Ahead

**SLW** is rated Outperform.

Silver Wheaton has shown a knack for value-accretive acquisitions and is well funded to consider further opportunities. SLW offers attractive value and lower risk relative to traditional silver producers, and is poised to capitalize on rising silver prices.

Silver Wheaton is a silver royalty company that has entered into purchase agreements with companies and mines that produce silver as a by-product from their operations. The majority of SLW's royalty agreements limit the minimum cost paid for silver streams to US\$3.90/oz plus inflation adjustments in future years. Significant silver streams include Goldcorp's Luismin mine and the Penasquito project in Mexico, Glencore's Yauliyacu mine in Peru and Lundin's Zinkgruvan mine in Sweden. Silver Wheaton has actively pursued acquisition opportunities to bolster its growth profile.

Assets from the Silverstone acquisitions have upside potential.

In April 2009, SLW purchased Silverstone for approximately C\$190M. The Silverstone asset base has the potential to provide additional royalty revenue through the expansion of existing operations (at Minto and Cozamin) and development of new projects (such as Lombador and possibly Navidad).

Pascua-Lama provides another flagship silver stream and further diversifies the company's royalty portfolio. In October 2009, SLW purchased 25% of the life-of-mine silver production from Barrick's Pascua-Lama project, as well as 100% of the silver production from the Lagunas Norte, Pierina and Veladero mines until the end of 2013. Silver Wheaton paid a total of US\$625M in cash as well as ongoing payments of US\$3.90/oz. Lagunas Norte, Pierina and Veladero are forecast to produce 2.4Moz of attributable silver per year from 2009 to 2013. Pascua-Lama is forecast to produce 9Moz of attributable silver per year from 2013 to 2017.

Attributable production potential of 23Moz of silver at US\$4.05/oz in 2010.

BMO Research estimates attributable silver production of 23.3Moz at cash operating costs of US\$4.05/oz in 2010, driven largely by the ramp-up of the Peñasquito mine.

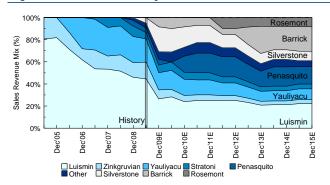
The company expects production of 39Moz of silver and 20,000oz of gold by 2013, with growth mostly driven by Penasquito and Barrick (especially Pascua-Lama).



### **Silver Miners**

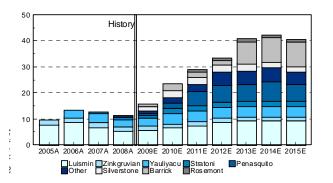
February 22, 2010

Fig 128: Sales Forecast by Silver Stream



Source: BMO Capital Markets

Fig 129: SLW Production Profile, 2009E-2015E





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### 19. Hochschild Mining (HOC.LSE)

### Growth Through Joint Venture

**HOC** is rated Market Perform with a £3.30 target price.

unsustainable based on

existing reserves.

Production of 18.8Moz of option of 18.8koz of gold is

A Market Perform rating for HOC is supported by HOC's existing portfolio of operations and assumed reserve growth to extend mining operations. A £2.90 target price for HOC is based on 2.2x the 10% nominal NPV using BMO Research metal price assumptions.

Hochschild Mining Plc. (HOC.LSE) is a Peruvian-domiciled silver miner that operates five mines in the Americas. Sustained production levels of 18.8Moz of silver and 156.8koz of gold recorded in 2009 are contingent on further exploration success. Even after factoring in above-average reserve growth, BMO Research projects that production from existing operations could begin to decline beginning in 2015.

HOC's flagship mine, Arcata, produced 9.5Moz of silver and 28.6koz of gold in 2009. Arcata is a mature, long-lived mine that is expected to maintain production levels of 8.7Moz of silver and 22.4koz of gold over the next decade. With planned increases in production at Pallancata (60% interest) and San Jose (51% interest), HOC has the ability to maintain current production levels in spite of its plan to retire the Ares mine in 2010 and the Moris mine in 2011.

Future production growth through strategic investments in LSG and GRC.

Seeking opportunities for growth, HOC has invested  $\sim$ US\$360M over the last two years in two additional junior developers that are transitioning to producers in 2010. HOC has indicated intentions to increase ownership of Canadian-based Lake Shore Gold (LSG.T) to +50% once a Q4/10 standstill agreement expires. BMO Research expects a comparable strategy to evolve with Gold Resource (GRC.OTCB), which is developing the EI Aquila mine in Mexico.

HOC would become a gold-focused miner by 2015 with the successful execution of growth through partnership, with  $\sim$ 75% of production derived from partnership mines. While HOC has demonstrated capacity for strong partnerships, this business model does have risks if interests diverge.

Organic growth is essential.

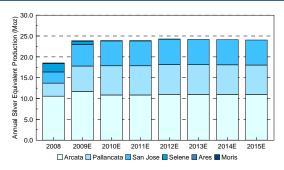
HOC also has attractive growth prospects through consolidation of the Southern Peru silver belt, but sustained exploration will be required to realize development opportunities.

Fig 130: Asset Locations



Source: Hochschild Mining

Fig 131: HOC Production Profile, 2009E-2020E





#### **Silver Miners**

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### Valuation

Initiating with a Market Perform rating.

BMO Research is initiating coverage of HOC with a Market Perform rating and a target price of £\$3.30, based on 2.2x the 10% nominal project NPV of US\$2.45/share using the BMO metal price forecast and adjusted for working capital, and using an FX rate of \$0.57 GBP/US\$.

HOC trades at a 10% premium to senior silver producers in the BMO Research coverage universe.

HOC trades at 1.68x, or a 10% premium to senior producers in the BMO Research coverage universe, which are currently trading at 1.53x their 10% nominal NPV at spot metal prices.

Using BMO Research 2010 estimates, HOC's target price represents 12.4x EPS and 9.2x CFPS versus averages of 16.3x EPS and 11.1x CFPS for its senior producer peers.

Fig 132: HOC Valuation

A £3.30 target price values HOC at 2.2x NPV.

BMO Assumptions	Spot	2009E	2010E	2011E	2012E	LT
Gold	1,108	972	1,150	1,150	950	850
Silver	15.83	14.63	20.00	20.00	15.00	14.00
GB£/US\$ exchange rate	0.64	0.61	0.57	0.56	0.56	0.55

NET ASSET VALUE		NPV <sub>10%</sub> , B	MO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>10</sub>	", Spot
	Interest	US\$M	(\$/Share) <sup>1</sup>	US\$M	(\$/Share) <sup>1</sup>	US\$M	(\$/Share) <sup>1</sup>
Arcata	100%	285.0	0.84	472.6	1.40	301.1	0.89
Ares	100%	4.7	0.01	5.0	0.01	(1.2)	(0.00)
Pallancata	60%	222.7	0.66	342.7	1.01	233.3	0.69
San Jose	51%	184.2	0.54	259.9	0.77	199.3	0.59
Moris	100%	15.0	0.04	17.0	0.05	12.5	0.04
Project NPV		711.7	2.11	1,097.2	3.25	745.0	2.20
Lake Shore Interest		342.9	1.01	342.9	1.01	342.9	1.01
Gold Resource Interest		112.8	0.33	112.8	0.33	112.8	0.33
Net Cash <sup>3</sup>		(104.9)	(0.31)	(104.9)	(0.31)	(104.9)	(0.31)
I-T-M Options and Warrants		-	-	-	-	-	-
Corporate Adjustment <sup>2</sup>		(237.9)	(0.70)	(299.3)	(0.89)	(237.9)	(0.70)
NPV of Hedge Book		-	-	-	-	-	-
<b>Total Corporate Adjustme</b>	nts	112.9	0.33	51.5	0.15	112.9	0.33
Corporate NPV	US\$	824.6	2.44	1,148.7	3.40	857.9	2.54
	GC£	1,349.8	3.99	2,010.2	5.95	1,501.3	4.44
Multiple to Corporate NPV	2.2x						
12-month Target Price	US\$	1,814.1	5.37				
-	Gb£	1.108.2	3.30				

<sup>1.</sup> Assumes shares outstanding of 338.1M

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses

Net cash position includes the recently closed bought deal resulting in gross proceeds of US\$145M
 figures in US\$ unless noted otherwise



### **Silver Miners**

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Fig 133: HOC Model Parameters

Project	Arcata					
Country	Peru					
Interest	100%					
% HOC Project NPV	40%					
Mine Parameters						
Mine Type		Uı	ndergrour	d		
Processing			Milling			
Processing Rate		tpd	1,750			
LOM Production			<u>Annual</u>	Total		
	Silver	Moz	8.6	98.8		
	Gold	koz	21.8	251.0		
LOM Total Cash Costs*		US\$/oz	6.9	95		
Modelled Mine Life		yrs	11.	50		
Initial/Expansion Capital Costs		US\$M	1	9		
Total Sustaining Capital		US\$M	228	3.4		
Modeled	Tonnes	Silver	Gold	Silver	Gold	
	000	g/t	g/t	Moz	koz	
Underground	7,281	466.4	1.20	109	282	
Project	Pallanca	ata				
Country	Peru					
Interest	60%					
% HOC Project NPV	31%					
Mine Parameters						
Mine Type		Uı	ndergrour	d		
Processing			Milling			
Processing Rate		tpd	3,0	00		
LOM Production			Annual	Total		
	Silver	Moz	9.6	101.3		
	Silver Gold	Moz koz	9.6 40.7	101.3 427.2		
LOM Total Cash Costs*				427.2		
LOM Total Cash Costs* Modelled Mine Life		koz US\$/oz	40.7	427.2 50		
		koz	40.7	427.2 50 50		
Modelled Mine Life		koz US\$/oz yrs	40.7 6.! 10.	427.2 50 50 0		
Modelled Mine Life Initial/Expansion Capital Costs		koz US\$/oz yrs US\$M US\$M	40.7 6.! 10. 3 21	427.2 50 50 0	Gold	
Modelled Mine Life Initial/Expansion Capital Costs Total Sustaining Capital	Gold	koz US\$/oz yrs US\$M US\$M	40.7 6.! 10. 3 21	427.2 50 50 0 4	Gold koz	

Project	Moris					
Country	Mexico					
Interest	100%					
% HOC Project NPV	2%					
Mine Parameters						
Mine Type			Open Pit			
Processing			Milling			
Processing Rate		tpd	3,000			
LOM Production			<u>Annual</u>	Total		
	Silver	Moz	0.1	0.1		
	Gold	koz	16.8	42.0		
LOM Total Cash Costs (Gold co-product)		86	0			
Modelled Mine Life	. yr		2.50			
Initial/Expansion Capital Costs	US\$M		0.2			
Total Sustaining Capital		US\$M	1.0	0		
Madalad	T	611	0.11	611	0.11	
Modeled	Tonnes			Silver	Gold	
-	000			Moz	koz	
Open pit	2,093	4.7	1.25	0.3	84	

	000	g/t	g/t	IVIOZ	KOZ	
Underground	11,340	306.9	1.32	112	480	
Project	Moris					
Country	Mexico					
Interest	100%					
% HOC Project NPV	2%					
Mine Parameters						
Mine Type			Open Pit			
Processing			Milling			
Processing Rate		tpd	3,000			
LOM Production			Annual	Total		
	Silver	Moz	0.1	0.1		
	Gold	koz	16.8	42.0		
LOM Total Cash Costs (Gold co-product)			86	0		
Modelled Mine Life	,	yrs	2.5	50		
Initial/Expansion Capital Costs		US\$M	0.			
Total Sustaining Capital		US\$M	1.	_		
Modeled	Tonnes		Gold	Silver	Gold	
	000	n/t	n/t	Moz	koz	

Project		Ares			
Country		Peru			
Interest		100%			
% HOC Project NPV		1%			
Mine Parameters					
Mine Type		U	ndergroun	d	
Processing			Milling		
Processing Rate		tpd	940		
LOM Production			<u>Annual</u>	Total	
	Silver	Moz	0.5	0.6	
	Gold	koz	15.5	19.4	
LOM Total Cash Costs (Gold co-	product)	US\$/oz	31	6	
Modelled Mine Life		yrs	1.	3	
Initial/Expansion Capital Costs		US\$M	1.		
Total Sustaining Capital		US\$M	8.	7	
Modeled	Tonnes	Silver	Gold	Silver	Gold
	000	g/t	g/t	Moz	koz
Underground	254	85.0	2.60	1	21
Project		San Jose			
Country		Argentina			
Interest		51%			
% HOC Project NPV		26%			
Mine Parameters					
Mine Type		Underground			
Processing			Milling		
Processing Rate		tpd	1,500		
LOM Production			<u>Annual</u>	Total	
	Silver	Moz	5.8	57.9	
	Gold	koz	90.4	904.3	
LOM Total Cash Costs*		US\$/oz	9.1	2	
Modelled Mine Life		yrs			
Initial/Expansion Capital Costs		ÚS\$M	24	4	
Total Sustaining Capital		US\$M	16	1	
Modeled	Tonnes	Silver	Gold	Silver	Gold
	000	g/t	g/t	Moz	koz
Underground	5,130	417.6	6.53	69	1,077



### **Silver Miners**

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Fig 134: HOC Production

Production Estimates		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	20
Arcata																
Mining rate	tpd	1,550	1,786	1,800	1,800	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	1,750	875	
Grade	Ag (g/t)	571	503	420	463	486	486	510	510	485	485	460	437	416	416	
	Au (g/t)	1.53	1.56	1.25	1.38	1.31	1.31	1.25	1.25	1.19	1.19	1.13	1.07	1.02	1.02	
Silver Equiv. Production	Moz	10.6	11.5	9.3	10.2	10.4	10.4	10.7	10.7	10.2	10.2	9.7	9.2	8.7	4.4	
Total Cash Costs*	US\$/oz	5.91	6.78	7.63	7.06	6.82	6.83	6.67	6.68	6.95	6.95	7.24	7.54	7.85	7.85	
Ares																
Mining rate	tpd	966	948	705	-	-	-	-	-	-	-	-	-	-	-	
Grade	Ag (g/t)	157	95	85	-	-	-	-	-	-	-	-	-	-	-	
	Au (g/t)	6.06	4.17	2.60	-	-	-	-	-	-	-	-	-	-	-	
Silver Equiv. Production	Moz	5.3	3.7	1.7	-	-	-	-	-	-		-	-	-	-	
Total Cash Costs**	US\$/oz	342	679	947	_	_	_	_	_	_	-	_		_	_	
Pallancata																
Mining rate	tpd	1,300	2,563	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	1,500	-	
Grade	Ag (g/t)	312	327	325	330	350	341	324	316	300	285	271	257	245		
	Au (g/t)	1.49	1.43	1.40	1.42	1.50	1.46	1.39	1.35	1.29	1.22	1.16	1.10	1.05		
Silver Equiv. Production	Moz	5.2	10.5	12.7	12.9	13.9	13.6	12.9	12.5	11.9	11.3	10.7	10.2	4.8		
Total Cash Costs*	US\$/oz	7.38	7.13	6.62	6.54	6.04	6.19	6.49	6.66	6.98	7.31	7.66	8.03	8.41		
San Jose	034/02	7.30	7.13	0.02	0.54	0.04	0.17	0.47	0.00	0.70	7.51	7.00	0.00	0.41	_	
Mining rate	tpd	822	1.376	1,500	1,500	1.500	1,500	1,500	1.500	1.500	1.500	1,500	750	_	_	
Grade	Ag (g/t)	559	398	436	425	425	425	410	410	410	410	410	410	_		
0.440	Au (g/t)	6.69	6.19	6.50	6.75	6.75	6.75	6.41	6.41	6.41	6.41	6.41	6.41	_	_	
Silver Equiv. Production	Moz	7.5	10.1	11.8	11.9	12.4	12.4	11.8	11.7	11.7	11.7	11.7	5.8	_		
Total Cash Costs**	US\$/oz	8.46	9.39	9.50	9.47	8.72	8.74	9.09	9.14	9.15	9.15	9.16	9.16			
Moris	034/02	0.40	7.37	7.50	7.47	0.72	0.74	7.07	7.17	7.13	7.15	7.10	7.10			
Mining rate	tpd	2,427	3,562	3,000	2,813											
Grade	Ag (g/t)	5.7	5.0	4.9	4.6		_	_	_	_		_	_	_	_	
Grade	Au (g/t)	1.57	1.38	1.28	1.22	-			_	_	-			-		
Silver Equiv. Production	Moz	1.6	2.0	1.3	1.2		_	_	_	_		_		_	_	
Total Cash Costs**	US\$/oz	629	718	834	886		_					_		_		
Hochschild Total, Attrib		027	710	054	000											
Total Silver Production	Moz	17.6	17.7	18.0	18.2	18.7	18.5	18.5	18.4	17.6	17.3	16.6	14.4	9.9	3.8	
Total Silver Equiv. Product		25.5	29.7	26.4	25.7	25.9	25.4	25.0	24.6	23.3	22.7	21.5	20.5	14.1	4.4	
Total Cash Costs	US\$/oz	5.93	7.47	7.94	7.14	7.04	7.10	7.21	7.28	7.52	7.63	7.88	7.95	7.99	7.85	
Total Production Costs	US\$/oz	7.02	8.90	9.49	8.77	8.62	8.76	8.98	9.26	9.84	10.46	11.48	12.31	13.59	13.32	
rotal Production Costs	030/02	7.02	0.90	9.49	0.77	0.02	0.70	0.90	9.20	9.04	10.46	11.48	12.31	13.39	13.32	



#### **Silver Miners**

weighting.

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### Company Synopsis

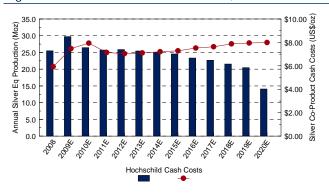
2010E production of 17.9Moz of silver.

HOC has precious metal

BMO Research forecasts 2010E payable production of 17.9Moz of silver and 139koz of gold at co-product cash costs of US\$7.22/oz of silver.

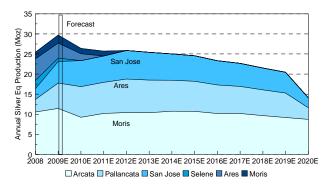
HOC derives  $\sim$ 72% of mine revenue from silver, with the remainder of revenue derived from gold (28%), which positions the company as a precious metal-weighted producer.

Fig 135: Production & Cash Cost Profile, 2008-2020E



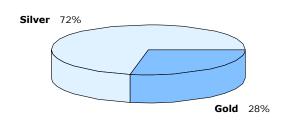
Source: BMO Capital Markets

Fig 136: Growth Profile, 2008-2020E



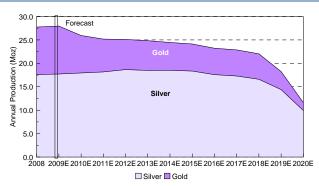
Source: BMO Capital Markets

Fig 137: FRES Revenue by Metal (US\$M)



Source: BMO Capital Markets

Fig 138: Annual Production by Metal, 2008–2020E



Source: BMO Capital Markets

In Q4/09, HOC completed a US\$260M convertible bond and equity issuance and used the proceeds for:

- C\$139.5M investment in Lake Shore Gold.
- US\$16M investment in Gold Resource.
- US\$85M pre-payment of a US\$200M syndicate loan facility.

Subsequent to Q4/09 corporate activity, HOC is expected to have cash a net cash position of ~US\$75M at the end of 2009.

Improving net cash position could drive further investments in LSG.

HOC is well positioned to increase cash reserves through 2010. The company's cash flow from operations through 2010 is estimated at US\$179.3M, which is more than adequate to fund existing capital commitments of ~US\$80M and dividend payments of US\$28.2M.



### **Silver Miners**

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BMO Research expects HOC to invest a portion of 2010 free cash flow in increasing ownership in LSG toward +50% once the existing standstill agreement expires in Q4/10.

### Projected strong EPS and CFPS growth through 2012.

Given BMO Research's projections for strong base metal prices, BMO Research forecasts EPS of US\$0.35 and CFPS of US\$0.47 in 2010, and EPS of US\$0.37 and CFPS of US\$0.49 in 2011.

Fig 139: Projected Capital Expenditures (US\$M)

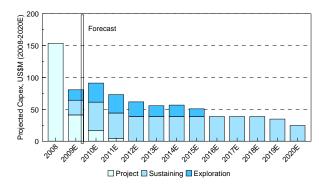
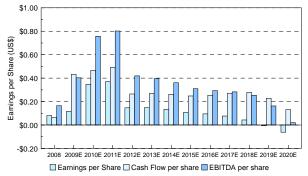


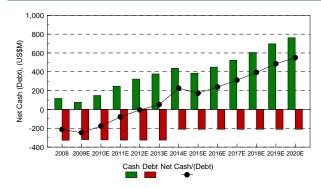
Fig 140: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 141: Net Cash (Debt) Position, 2008-2020E





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### HOC's resource base

maintains a silver focus.

76Moz of silver in reserve supports a ~three-year mine life.

# Focused exploration to expand reserve/resource life and core mines.

Future growth through organic and strategic partnerships.

### Fig 142: Reserve Metal Distribution

■ Silver □ Gold

Source: BMO Capital Markets

### Reserves/Resources

HOC is a precious metal-weighted silver producer, with silver contributing to ~68% of the value of reserves using long-term metal price forecasts.

Combined, HOC's five operating mines host total reserves as of the end of December 2008 of 76Moz of silver and 588Moz of gold (57.1Moz of silver and 434koz of gold net to HOC). At BMO Research production estimates of 18.8Moz of silver and 156.8koz of gold in 2010, total mine reserves support an average reserve life of approximately three years.

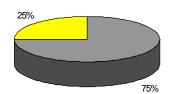
Total resources contain a further 111.5Moz of silver and 619koz (100.6Moz of silver and 507koz of gold net to HOC) of gold with a +60% weighting of resources in the inferred category.

Offsetting short reserve/resource risk, Arcata is a long-lived operation with a history of reserve replacement, despite increasingly difficult exploration. The relatively young age of the Pallancata and San Jose mines should support reserve growth beyond the existing reserves/resources.

To address future reserve and resource growth, HOC has increased exploration budgets to US\$50M in 2010. HOC plans to spend US\$20M on near-mine exploration with a goal of increasing reserves and resources at Arcata, Pallancata and San Jose to support +eight years of mine life.

HOC has committed US\$30M to new project exploration with a focus on the company's dominant land position in the Southern Peru Silver belt and through strategic partnerships with LSG and GRC.

Fig 143: Reserve Metal Distribution



Silver ☐ Gold



### **Silver Miners**

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Fig 144: HOC Reserves & Resources (December 2008)

										Containe	d Metal		
	<u>Tonnes</u>	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven & Probable													
Arcata	1,611	541.0	1.62	-	-	-	-	28,020	84	-	-	-	-
Ares	649	120.0	4.86	-	-	-	-	2,506	101	-	-	-	-
Selene	127	268.0	2.00	-	-	-	-	1,097	8	-	-	-	-
Pallancata (60%)	2,581	366.0	1.51	-	-	-	-	30,374	125	-	-	-	-
San Jose (51%)	832	522.0	7.90	-	-	-	-	13,970	211	-	-	-	-
Moris	1,240	4.6	1.44	-	-	-	-	183	57	-	-	-	-
Total Reserves	7,041	336.4	2.60	-	-	-	-	76,151	588	-	-	-	-
Measured & Indicated													
Arcata	2,125	639.0	1.91	-			_	43,661	131	-			-
Ares	719	161.0	6.69			-	-	3,719	155		-	-	-
Selene	290	316.0	1.99			-	-	2,948	19		-	-	-
Pallancata (60%)	2,582	415.0	1.72			-	-	34,457	143		-	-	-
San Jose (51%)	1,143	530.0	8.04			-	-	19,477	295		-	-	-
Moris	1,807	4.5	1.27			-	-	260	74		-	-	-
San Felipe	2,748	76.0	0.04					6,715	4				
Measured & Indicated	11,415	303.1	2.23	-	-	-	-	111,238	819	-	-	-	-
Inferred													
Arcata	1,815	519.0	1.56	-	-	-	-	30,293	91	-	-	-	-
Ares	299	236.0	3.96	-	-	-	-	2,268	38	-	-	-	-
Selene	913	227.0	1.15	-	-	-	-	6,663	34	-	-	-	-
Pallancata (60%)	734	395.0	1.57	_			-	9,326	37	_			-
San Jose (51%)	540	333.0	5.72	_			-	5,785	99	_			-
Moris	294	4.8	1.22	_			-	46	12	_			-
San Felipe	1,258	84.0	0.01					3,397	0				
Azuca	1,776	327.0	1.34					18,672	77				
Total Inferred	7,630	311.6	1.58	_			_	76,449	388	_			

As of December 31, 2008

Measured and indicated resources are inclusive of reserves.

Reserves and resources are on a project basis.

Reserve and resource parameters are summarized on the company website.

Source: Hochschild Mining



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### Controlling interest in the Southern Peru silver belt.

### District Exposure to Southern Peru Silver Belt

Through existing land holdings, the 2009 acquisition of Southwestern Gold, and the JV with International Minerals (IMZ) at the Pallancata mine, HOC has assembled a controlling interest in the Silver Belt of southern Peru.

HOC's infrastructure includes:

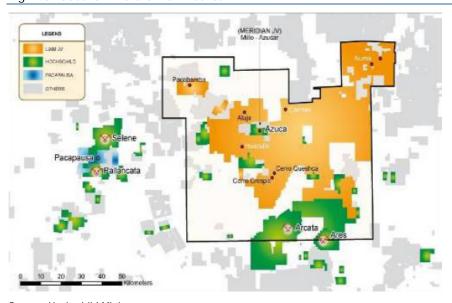
- **Arcata mine** 1.75ktpd underground mine and flotation plant
- Ares 940tpd underground mine and cyanidation/Merrill Crowe plant
- Selene 3ktpd cyanidation plant and 500ktpd underground mine on care and maintenance
- Pallancata 60% interest in the 3ktp underground mine with ore processed at the Selene plant
- 3,700km<sup>2</sup> of exploration licences with key exploration prospects at Azuca, Pacapausa.

Three key geological settings identified by HOC.

HOC has identified three key geological settings that hold vein-hosted silvergold mineralization in the region:

- Caldera Setting vein systems exploiting large-scale extensional fault systems as at Arcata
- Intrusion related veins typically a single vein associated with the emplacement of an intrusive dome as at Ares
- Regional Fault veins hosted along a large-scale regional fault zone as at Pallancata

Fig 145: Southern Peru Silver District



Source: Hochschild Mining



#### **Silver Miners**

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### **Increasing Focus on Exploration**

HOC has increased exploration expenditures to US\$50M in 2010 from US\$30M in 2009, with a focus on near-mine exploration to combat reserve depletion and to identify new opportunities through exploration.

2010 exploration in the Southern Peru Silver Belt is expected to focus on:

- Brownfields exploration at Arcata and the recent discovery of three new veins adjacent to the Mariana workings.
- Pallancata exploration, including the newly discovered eastern extension of the Pallancata vein and the Virgen del Carmen vein.
- Advancement of the Azuca project toward an initial economic assessment. Azuca contains 1.8Mt of 327g/t silver and 1.34g/t gold in resource.
- Drilling at Cerro Crespo to expand resource potential of high-grade gold-silver mineralization.

### Arcata - A Flagship Mine

1.75ktpd underground mine.

The Arcata mine, located 300km north of Arequipa in southern Peru, is HOC's flagship mine with annual production of ~8.7Moz of silver and 22.4koz of gold. Mining operations, which began in 1964, have progressively ramped up to the current rate of 1.75ktpd. Since modernization of the mine began in 1990, Arcata has produced 126Moz of silver and 455koz of gold.

Numerous veins exploited over a large area.

Underground mining at Arcata exploits numerous low sulphidation epithermal veins over a 6.5km by 7.5km area. Mining operations are focused on the Mariana vein in the northeastern part of the vein system. Mining is completed by cut and fill, owing to the narrow width of the veins.

Ore is processed by a 1.75tpd cyanidation/Merrill Crowe plant to produce silver-gold concentrates. Owing to improvements in concentrate terms, HOC recently suspended plans to invest ~US\$25–30M to install refining capacity to produce doré.

### **Lower Production in 2010**

Through 2009, Arcata production declined, owing to lower grades and increased dilution, a pattern that is expected to continue through 2010.

BMO Research forecasts Arcata payable production to decline to 7.9Moz of silver and 23.2koz of gold in 2010 from 8.7Moz of silver and 26koz of gold in 2009. Co-product cash costs are forecast to rise to US\$7.63/oz in 2010 from US\$6.78/oz in 2009.

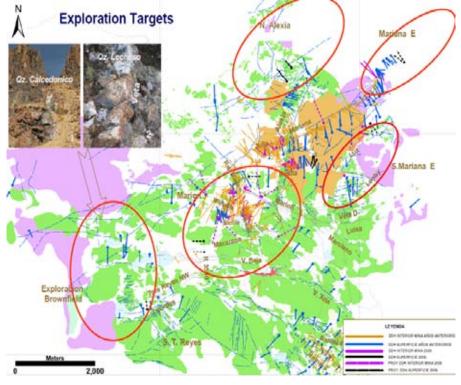


### **Silver Miners**

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The Arcata vein system is exposed over a 6.5km x 7.5km area.

Fig 146: Arcata District Exploration Targets



Source: Hochschild Mining

2008 reserves and resources support a ~ nine-year mine life.

Arcata exploration is slow.

Exploration focused on near mine and new discoveries.

BMO Research models production until 2021.

Ares has produced 1.9Moz of gold and 29Moz of silver since 1998.

Reserves of 28Moz of silver and 84koz of gold at the end of 2008 support a mine life of  $\sim 3.5$  years, with additional resources of 46Moz of silver and 138koz of gold supporting  $\sim 5.5$  years of further production potential.

Exploration at Arcata has entered a mature phase, focused on extending the vein system to the northeast and beneath increasingly thick post-mineral cover. Surface drilling, usually used as a cost-effective means of delineating vein systems, is now limited to identifying the orientation of veins. The delineation of veins is completed by more time-dependent underground exploration.

Ongoing mine exploration at Arcata is likely to lead to incremental reserve growth through the extension of existing veins. The discovery record at Arcata suggests that new discoveries could be achieved as HOC begins testing new targets.

Based on current reserves and resources and projected growth, BMO Research models Arcata production extending until the end of 2021.

### Ares - A Good Life

Since production began in 1998, Ares has produced 1.9Moz of gold and 29Moz of silver. Production peaked in 2005 at 198.6koz of gold and 3Moz of silver, and has been gradually declining thereafter.



### **Silver Miners**

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Reserves of 101koz of gold and 2.5Moz of silver at the end of 2008 support a three-year mine life, with resources of 91koz of gold and 3.5Moz of silver supporting a further 2.5 years.

While reserves and resources have the potential to support several years of additional production at Ares, HOC plans to end mining operations by the end of 2010.

2010 production of 19koz of gold and 0.6Moz of silver.

2010 production is expected to decline from the 42koz of gold and 872koz of silver produced in 2009. BMO Research forecasts 2010 production of 19koz of gold and 0.6Moz of silver at co-product cash costs of US\$947/oz of gold.

Ares is a 1ktpd underground operation with ore processed through a conventional cyanidation plant to produce doré.

Fig 147: Ares Mine

Ares has a 940tpd cyanidation/Merrill Crowe plant that will become idle at the end of 2010.



Source: Hochschild Mining

### Pallancata - An Emerging Production Centre

HOC owns 60% of the Pallancata mine.

Pallancata is the newest mine in the Southern Peru Silver Belt and is operated as a joint venture between HOC (60%) and IMZ (40%). HOC is the operator and over the last two years has increased production rates from an initial rate of 500tpd in Q3/07 to the current rate of 3ktpd.

In 2009, Pallancata produced 8.4Moz of silver and 32koz of gold (5Moz of silver and 19.2koz of gold net to HOC) at estimated co-product cash costs of US\$7.13/oz of silver.

2010 production of 6Moz of silver and 26koz of gold net to HOC.

Production levels are expected to be higher for 2010, and BMO Research forecasts production of 10.2Moz of silver and 43.3koz of gold (6Moz of silver and 26koz of gold net to HOC) at co-product cash costs of US\$6.62/oz.



### **Silver Miners**

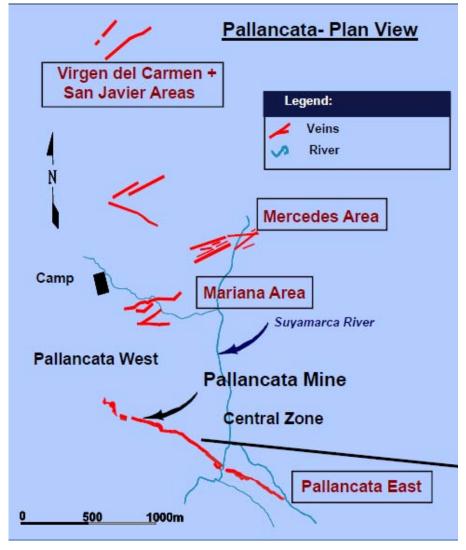
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Fig 148: Pallancata Project Area

Exploration at Pallancata is at an early stage, with numerous drill targets to be tested.

The Pallancata vein has been traced for 5km and is open to the west.

HOC is expected to announce a resource for the Virgen del Carment vein at the end of Q1/10.



Source: International Minerals

Typical of the region, Pallancata is a low sulphidation epithermal vein system. Underground mine development is centred on the Pallancata vein along ~1km of strike. Widths of the vein (locally up to 30m wide) support mining by a combination of long-hole and sub-level caving. Ore is transported to the 3ktpd Selene cyanidation/Merrill Crowe plant to produce a concentrate.

A limited reserve/resource base.

Total reserves at the end of 2008 of 30.4Moz of silver and 125koz of gold support a  $\sim$ 3.5-year mine life. In addition to reserves, resources of 13.4Moz of silver and 55koz of gold support an additional  $\sim$ 1.5 years of production growth.



#### Silver Miners

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Reserves and resources are expected to grow through concerted exploration efforts.

### **Early Days Provide Exploration Upside**

Owing to the nascent stage of exploration, BMO Research expects significant resource upside will drive additional reserve growth. Key areas for reserve/resource growth include:

- East and west extension of the Pallancata vein.
- Virgen del Carmen vein a resource estimate is expected to be released in March.
- San Javier vein.
- Mercedes and Mariana Areas.

BMO Models a 10-year mine

BMO Research models production at Pallancata extending until the end of 2020.

In addition to exploration around Pallancata, IMZ is earning a 70% interest in the Inmaculada gold-silver project from HOC by advancing the project to feasibility. Inmaculada is located 315km to the southeast and hosts an inferred resource of 512koz of gold and 22.1Moz of silver (4.7Mt of 3.4g/t gold and 107g/t silver).

### San Jose - A Core Mine in a Growing Camp

HOC is the operator and owns 51% interest in the San Jose mine.

San Jose is located within the northern part of the Deseado Massif in the northern part of Santa Cruz province in Argentina. HOC is the operator and owns 51% of San Jose, and joint-venture partner Minera Andes Inc. (MAI-T) owning the remaining 49% interest.

San Jose began operations in Q1/07 at 750tpd and was expanded to the current rate of 1.5ktpd in 2008. The mine is accessible via ramp with ore exploited along the Frea, Ayelen and Odin veins. Mining is by cut and fill, and long-hole stoping with ore treated through the 1.5ktpd flotation and cyanidation/Merrill Crowe plant to product concentrate and doré.



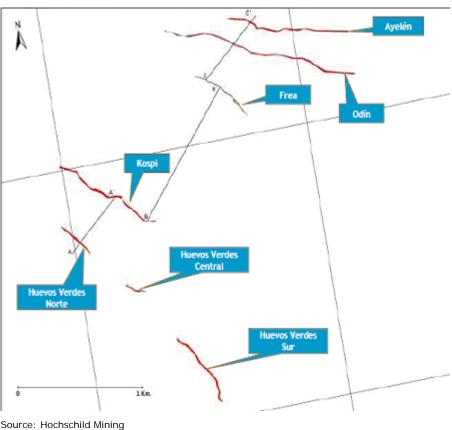
### Silver Miners

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Fig 149: Plan of Veins in the San Jose Mine

Mining at the San Jose mine exploits five principal veins within a 2km by 3km area.

Grades are projected to rise in 2010 and mining begins to exploit the Kospi vein.



San Jose produced 5Moz of silver and 77.1koz of gold (2.6Moz of silver and 39.4koz of gold net to HOC) in 2009 at projected co-product cash costs of US\$9.39/oz.

2010 production of 6.4Moz of silver and 95koz of gold.

Operations ramping up to normal rates after a Q4/09 labour dispute.

Production levels are expected to be slightly higher for 2010. BMO Research forecasts production of 6.4Moz of silver and 95koz of gold (3.2Moz of silver and 48koz of gold net to HOC) at co-product cash costs of US\$9.50/oz.

Q4/09 silver and gold production were 26% and 11% lower, respectively, compared to Q3/09 as a consequence of a two-week labour disruption and lower silver head grades. The labour issues have been settled with operations running near design.

Reserves at the end of 2008 of 13.9Moz of silver and 211koz of gold support a ~ one-year mine life. In addition to reserves, resources of 11.3Moz of silver and 183oz of gold support an additional one year of reserve growth. BMO Research is expecting exploration through 2009 to begin addressing the short-lived reserve/resource base at San Jose.

BMO Research models San Jose production continuing until the end of 2019 contingent on future resource growth and reserve conversion.



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Combating a short reserve/resource life.

### **Exploration Focused on Reserve Growth**

Exploration at San Jose is focused in growing resources to support an eightyear mine life with reserve delineation of four years. Given the early stage of exploration, BMO Research views this goal as attainable contingent on sustained exploration.

### Morris - Winding Down

HOC owns 100% of the Moris open-pit silver gold mine in northern Mexico. The mine produced 26koz of gold and 87koz of silver in 2009. Production through 2010 is forecast in the range of 22koz of gold and 76koz of silver at co-product cash costs of US\$834/oz of gold.

The mine is expected to shut down in 2011 once reserves and resources are depleted.

### Future Growth Through Partnership

In addition to near-mine exploration and numerous exploration-stage projects HOC has made significant investments in two emerging precious metal producers.

### HOC investment in LSG has a market value of US\$345M.

### LSG Could Add +300koz of Gold Production Net to HOC by 2015

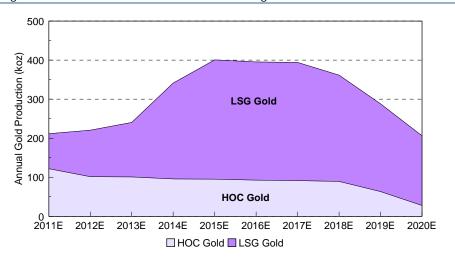
HOC has invested a total of C\$348.3M in Lake Shore Gold (LSG.TSX) to earn a 38% interest. LSG, rated Market Perform (Speculative) with a C\$4.80 target price, is projected to ramp up from an initial ~88koz of gold in 2009 to 611koz of gold by 2015 from the company's Timmins and Bell Creek projects in Timmins, Ontario.

HOC is keen to increase its LSG interest to +50%.

A standstill agreement preventing HOC from increasing its interest in LSG above 40% remains active until Q4/10. HOC has expressed an interest in increasing its interest in LSG to 51% to consolidate future production.

Fig 150: HOC Gold Production Profile Including 50% of LSG Production

Inclusion of 50% of production from LSG would significantly increase the company's gold weighting.



Source: BMO Research



### **Silver Miners**

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If successful, HOC gold production is projected to increase 250% to 340koz by 2014 and +400% by 2016 to  $\sim\!375koz.$  Increased gold production would reposition HOC as a silver-rich gold producer similar to Gammon Gold (GAM.TSX) and Minefinders (MFL.TSX).

HOC's investment in GRC has a market value of US\$54M.

### **Gold Resource – Another Strategic Investment in Future Production**

HOC has invested US\$54M to acquire a 27% interest in Gold Resource Corp. (GRC.OTCB). GRC is developing the El Aquila project in southern Mexico, with anticipated production of 70koz of gold in 2010.



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### 20. Coeur D'Alene (CDE.NYSE)

### Investing in a Strong Asset Base to Maintain Growth

CDE is rated Outperform with a US\$21.50 target price.

Two new mines in the last two years.

Strong near-term production growth.

An increasing gold weighting.

An Outperform rating and target price of US\$21.50 for CDE reflects the company's long-lived asset base and growth trajectory. CDE offers attractive value in a rising precious metal market.

Over the last two years, management has rebuilt Coeur D'Alene Mines Corp. (CDE.NYSE) into a company anchored by long-lived mining operations at Palmarejo in Mexico and San Bartolome in Bolivia. The reactivation of the Kensington mine permit and restart of the Rochester mine further strengthen CDE's operating portfolio.

For 2009, BMO Research estimates CDE production increased 64% year over year to 17.3Moz of silver and increased 62% year over year to 74.6koz of gold at projected co-product cash costs of US\$9.96/oz of silver.

Once production from Kensington in Alaska and the Rochester mine in Nevada comes onstream in 2011, CDE annual production is projected to grow to 21.6Moz of silver and 282koz of gold. Once Kensington is in full production, CDE's gold weighting is projected to rise to ~45% of revenue.

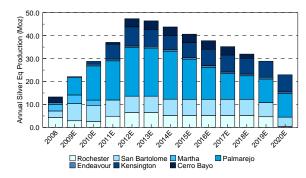
After a capital-intensive 2009 and 2010, BMO Research expects CDE to build cash reserves through 2011. CDE's cash reserves are projected to rise to US\$372M by the end of 2011 and to further increase as CDE completes its current phase of mine expansions.

By 2013, BMO Research forecasts CDE production rates will begin declining as grades begin to decline at Palmarejo. BMO Research expects CDE's improving financial position to be deployed toward organic growth prospects and potential acquisitions to maintain growth and replace non-core assets.

Fig 151: Asset Locations



Fig 152: CDE Production Profile, 2009E-2020E





#### Silver Miners

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### Valuation

Initiating with an Outperform rating.

BMO Research is initiating coverage of Coeur D'Alene Mines with an Outperform rating and a target price of US\$21.50, based on 1.8x the 10% nominal project NPV of US\$11.78/share using the BMO metal price forecast and adjusted for working capital.

CDE trades at, 1.04x, or a 32% discount to senior producers in the BMO Research coverage universe, which are currently trading at 1.53x their 10% nominal NPV at spot metal prices.

CDE trades at a 32% premium to senior silver producers in the BMO Research coverage universe.

Using BMO Research 2010 estimates, CDE's target price represents 20.2x EPS and 6.8x CFPS versus averages of 16.3x EPS and 11.1x CFPS for its senior producer peers.

Fig 153: CDE Valuation

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Gold	1,108	972	1,150	1,150	950	850
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Copper	3.28	2.34	3.30	3.70	3.50	2.50
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

**NET ASSET VALUE** NPV<sub>10%</sub>, BMO Price NPV<sub>0%</sub>, BMO Price NPV<sub>10%</sub>, Spot Interest US\$M (\$/Share) US\$M (\$/Share) US\$M (\$/Share) 675.6 Palmarejo 640.3 1,033.1 San Bartolome 100% 163.9 2.10 205.1 2.63 169.0 2.16 79.4 Rochester 100% 1.02 136.8 1.75 111.5 1.43 Kensington 100% 190.3 2.44 485.0 6.21 276.6 3.54 Mina Martha 100% 15.0 0.19 16.5 0.21 7.4 0.10 Cerro Bayo 100% 42.3 0.54 72 8 0.93 59.6 0.76 Endeavour 100% 63.4 0.81 134.5 1.72 0.82 **Project NPV** 1,194.6 15.29 2,083.8 26.67 1,364.1 17.46 Net Cash (157.5)(2.02)(157.5)(2.02)(157.5)(2.02)I-T-M Options and Warrants Corporate Adjustment (116.7)(1.49)(147.3)(1.89)(116.7)(1.49)NPV of Hedge Book **Total Corporate Adjustments** (274.3)(3.51)(304.8) (3.90)(274.3) (3.51)Corporate NPV US\$ 920.3 11.78 1,778.9 22.77 1,089.8 13.95 Multiple to Corporate NPV 1.8x 12-month Target Price 21.50 US\$ 1,684.1

A US\$21.50 target price values CDE at 1.8x NPV.

All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>1.</sup> Assumes share capital after project financing: current 78.1 million p.d. shares + project equity issue

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses



### **Silver Miners**

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Fig 154: CDE Model Parameters

Project	Palmarejo	Project San Bartolome
Country	Mexico	Country Bolivia
Interest	100%	Interest 100%
% of CDE Project NPV	54%	% of CDE Project NPV 14%
	Mine Type: Open Pit & Underground	Mine Type: Open Pit
	Processing: Milling, Merrill Crowe	Processing: Milling, Merrill Crowe
	Processing Rate: tpd 5,600	Processing Rate: tpd 5,600
	LOM Production: Annual Total	LOM Production: <u>Annual Total</u>
	Silver Moz 7.8 98	Silver Moz 5.6 98.4
	Gold koz 106.3 1.329	Gold koz 0.0 0.0
	GGIG RGZ 100.3 1,327	G0Id K02 0.0 0.0
LOM Total Cash Costs*	6.74	LOM Total Cash Costs* 10.73
Modelled Mine Life		
	yrs 12.50 US\$M 230.0	
Initial/Expansion Capex		
Total Sustaining Capital	US\$M 175.5	Total Sustaining Capital US\$M 31.2
Modeled	Tonnes Silver Gold Silver Gold	Modeled Tonnes Silver Silver
Modeled	000 oz/t oz/t Moz koz	000 oz/t Moz
Underground	17.096 5.02 0.07 86 1.151	Open Pit 34,272 3.73 128
Open Pit	17,070 3.02 0.07 60 1,131	Open 111 54,272 5.75 126
Project	Rochester	Project Kensington
Country	Nevada, USA	Country Alaska, USA
Interest	100%	Interest 100%
% of CDE Project NPV	7%	% of CDE Project NPV 16%
% of CDE Project NPV		
	Mine Type: Open Pit	Mine Type: Underground
	Processing: Heap Leach	Processing: Milling, Flotation
	Processing Rate: tpd 24,500	Processing Rate: tpd 1,250
	LOM Production: Annual Total	LOM Production: Annual Total
	Silver Moz 3.9 33.9	Silver Moz 0.0 0.0
	Gold koz 32.1 280.9	Gold koz 118.3 1,893
LOM Total Cash Costs*	11.21	LOM Total Cash Costs (gold co-product)* 500
Modelled Mine Life	yrs 8.75	Modelled Mine Life yrs 16.00
Initial/Expansion Capex	US\$M 48.3	Expansion Capex US\$M 98.2
Total Sustaining Capital	US\$M 11.3	Total Sustaining Capital US\$M 72.3
Modeled	Tonnes Silver Gold Silver Gold	Modeled Tonnes Gold Gold
	000 oz/t oz/t Moz koz	000 oz/t koz
Open Pit	75,645 0.56 0.005 43 367	Underground 6,108 0.270 1,647
Project	Martha	Project Cerro Bayo
Country	Argentina	Country Chile
Interest	100%	Interest 100%
% of CDE Project NPV	1%	% of CDE Project NPV 4%
	Mine Type: Underground	Mine Type: Underground
	Processing: Milling, Merrill Crowe	Processing: Milling, Merrill Crowe
	Processing Rate: tpd 240	Processing Rate: tpd 750
	LOM Production: <u>Annual</u> <u>Total</u>	LOM Production: <u>Annual</u> <u>Total</u>
	Silver Moz 0.1 2.1	Silver Moz 0.9 15.1
	Gold koz 0.2 2.6	Gold koz 9.9 158.4
LOM Total Cash Costs*	2.55	LOM Total Cash Costs* 9.87
Modelled Mine Life	yrs 2.00	Modelled Mine Life yrs 7.00
Expansion Capex	US\$M 1.1	Expansion Capex US\$M 7.0
Total Sustaining Capital	US\$M 1.5	Total Sustaining Capital US\$M 36.5
Modeled	Tonnes Silver Gold Silver Gold	Modeled Tonnes Silver Gold Silver Gold
	000 oz/t oz/t Moz koz	000 oz/t oz/t Moz koz

\*co-product cash costs.



### **Silver Miners**

February 22, 2010

Fig 155: CDE Production Parameters

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Palmarejo																
Ore Processed	ktpd	-	3,181	5,600	6,050	7,000	7,000	7,000	7,000	7,000	4,900	4,200	4,200	4,200	4,200	-
Grade	Ag (oz/t)	-	4.47	4.97	5.13	5.20	5.20	5.20	3.72	3.02	3.83	4.28	4.28	4.28	4.28	-
	Au (oz/t)	-	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	-
Silver Equiv. Production	Moz	_	7.5	14.9	17.1	21.1	21.0	20.9	17.5	13.9	11.2	10.3	10.3	10.3	10.3	-
Total Cash Costs*	US\$/oz	-	10.74	9.69	7.45	5.85	5.79	5.73	6.47	7.11	6.62	6.53	6.55	6.56	6.58	-
San Bartolome																
Ore Processed	ktpd	1,404	4,251	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600
Grade	Ag (oz/t)	7.46	5.60	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.00	2.61	2.61	2.61
Silver Equiv. Production	Moz	2.9	7.5	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1	6.2	4.1	4.1	4.1
Total Cash Costs*	US\$/oz	7.35	11.70	11.07	11.07	10.57	10.55	10.52	10.47	10.48	10.48	10.49	11.61	16.40	16.41	16.42
Rochester																
Ore Processed	ktpd	-	-	-	20,250	24,500	24,500	24,500	24,500	24,500	24,500	24,500	18,375	-	-	-
Grade	Ag (oz/t)	na	na	na	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	na	na	na
	Au (oz/t)	na	na	na	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	na	na	na
Silver Equiv. Production	Moz	4.3	2.9	2.5	4.8	6.5	6.5	5.2	5.1	5.1	5.1	5.1	4.6	0.4	-	-
Total Cash Costs*	US\$/oz	9.89	7.61	8.68	16.59	11.90	10.36	11.00	11.09	11.09	11.09	11.09	9.20	-	-	-
Kensington																
Ore Processed	ktpd	-	-	375	1,337	1,342	1,419	1,345	1,271	1,266	1,211	1,219	1,167	1,263	1,250	1,250
Grade	Au (oz/t)	-	-	0.27	0.29	0.30	0.25	0.22	0.25	0.28	0.30	0.28	0.30	0.29	0.25	0.25
Gold Production	koz	_	-	22.2	112.7	131.7	117.1	98.4	107.0	117.9	121.6	113.5	115.7	123.5	104.6	104.6
Total Cash Costs*	US\$/oz	-	_	-	540	465	543	618	546	495	465	499	474	473	551	551
Martha																
Ore Processed	ktpd	160	291	240	-	-	-	-	-	-	-	-	-	-	-	-
Grade	Ag (oz/t)	49.98	35.47	30.71	-	-	-	-	-	-	-	-	-	-	-	-
	Au (oz/t)	0.07	0.04	0.04	-	-	-	-	-	-	-	-	-	-	-	-
Silver Equiv. Production	Moz	2.9	3.8	2.3	-	-	-	-	-	-	-	-	-	-	-	-
Total Cash Costs*  Cerro Bayo	US\$/oz	6.50	6.28	10.19	-	-	-	-	-		-	-	-	-	-	-
Ore Processed	ktpd	657	-		188	750	750	750	750	750	750	375				_
Grade	Ag (oz/t)	5.54	_	_	9.80	10.25	9.70	8.69	8.69	8.69	8.69	8.69	_	_	_	_
	Au (oz/t)	0.10	_	_	0.07	0.07	0.09	0.11	0.11	0.11	0.11	0.11	_	_	_	_
Silver Equiv. Production	Moz	2.4	-	-	0.8	3.6	3.8	3.7	3.7	3.7	3.7	1.9	-	-	-	-
Total Cash Costs*	US\$/oz	14.76	-	-	13.13	9.71	9.26	9.31	9.39	9.39	9.39	9.39	-	-	-	-
Endeavour - Silver Stream																
Ore Processed	ktpd	2,862	1,552	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
Grade	Ag (oz/t)	1.41	1.64	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81	1.81
Silver Equiv. Production Total Cash Costs*	Moz US\$/oz	0.82 1.29	0.49 4.11	0.78 2.55												
Coeur D'Alene Total, At		1.27	4.11	2.33	2.33	2.33	2.55	2.33	2.55	2.55	2.33	2.55	2.55	2.55	2.33	2.55
Total Silver Production	Moz	10.7	17.3	20.7	21.6	26.4	26.3	25.0	21.7	20.1	19.4	18.0	15.9	11.0	10.6	4.8
Total Silver Equiv. Product		13.3	22.1	28.9	37.1	47.4	46.5	43.8	40.7	37.8	35.3	32.0	28.9	23.0	21.4	11.2
Total Cash Costs	US\$/oz	8.59	9.96	9.39	10.20	8.43	8.39	8.56	9.09	9.57	9.72	9.99	9.83	10.42	11.15	11.28
Total Production Costs	US\$/oz	10.35	13.73	13.35	13.36	11.61	11.59	11.78	12.36	13.17	13.80	14.40	15.14	15.65	17.93	15.51
*co-product cash costs																



#### **Silver Miners**

weighting.

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### Company Synopsis

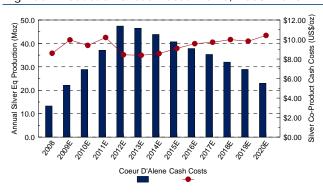
2010E production of 21Moz of silver.

**CDE** has precious metal

CDE derives ~58% of mine revenue from silver, with the remainder of revenue derived from gold, positioning the company as a precious metalweighted producer.

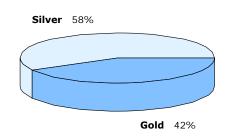
gold at co-product cash costs of US\$9.39/oz of silver.

Fig 156: Production & Cash Cost Profile, 2008-2020E



Source: BMO Capital Markets

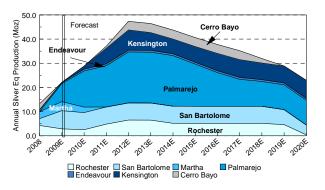
Fig 158: CDE Revenue by Metal (US\$M)



Source: BMO Capital Markets

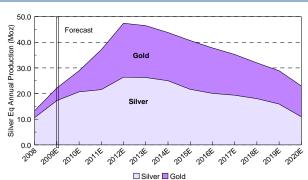
Fig 157: Growth Profile, 2008-2020E

BMO Research forecasts 2010E production of 20.7Moz of silver and 143koz of



Source: BMO Capital Markets

Fig 159: Annual Production by Metal, 2008–2020E



Source: BMO Capital Markets

Proceeds from a royalty stream with Franco Nevada (FNV.TSX) and the sale of the Broken Hill silver stream, combined with increasing cash flow from operations, improved net debt from US\$431M to US\$170M by the end of Q3/09.

CDE's net debt position is estimated at US\$152M.

Completion of a US\$100M unsecured debt facility in early February, and drawdown of the Kensington project facility through H1/10 will increase CDE's net debt to an estimated US\$152M. In conjunction with the sale of the notes, the company also sold shares of its common stock valued at US\$3.7M.

CDE plans to use a portion of the proceeds to fund construction of a final tailings dam and underground development at the Palmarejo silver and gold mine in Mexico.



### **Silver Miners**

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The notes, which bear an annual interest rate of 6.5% plus an escalator based on the company's share price performance, are to be paid in quarterly installments over the next two years.

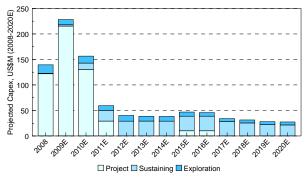
CDE cash reserves are projected to rise as capital requirements decline.

After a capital-intensive 2009 and 2010, BMO Research expects CDE to build cash reserves through 2011. CDE's cash reserves are projected to rise to US\$372M by the end of 2011 and to further increase as CDE completes its current phase of mine expansions.

Projected strong EPS and CFPS growth through 2012.

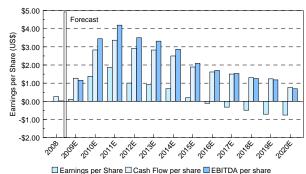
Given BMO Research projections for strong base metal prices, BMO Research forecasts EPS of US\$0.73 and CFPS of US\$1.22 in 2010, and EPS of US\$0.73 and CFPS of US\$2.19 in 2011.

Fig 160: Projected Capital Expenditures (US\$M)



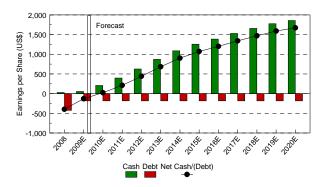
Source: BMO Capital Markets

Fig 161: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

Fig 162: Net Cash (Debt) Position, 2008-2020E





#### **Silver Miners**

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#### 2009 - A Transformational Year

Through 2010, CDE attained a number of key milestones that strengthened the company's net debt position and maintained an aggressive pace of production growth. Key company milestones include:

- Ramp-up to full production at San Bartolome.
- Entered into gold royalty agreement for 50% of the LOM production from the Palmarejo mine with Franco Nevada (FNV.TSX) for net proceeds of US\$80M.
- Q1/09 commissioning of the Palmarejo mine.
- Mid-Q2/09 stock consolidation (1-for-10 conversion).
- Sale of Broken Hill silver stream for US\$55M back to Perilya Ltd.
- Q3/09 reactivation of Kensington mine permit—projected annual production of 120koz of gold at US\$475/oz cash costs beginning in 2011.
- Q4/09 40% increase in Palmarejo silver and gold reserves.
- Q4/09 announcement to reactivate Rochester operations—projected annual production of 2.9Moz of silver and 30koz of gold at cash costs of US\$13/oz silver over 8.75 years.

Year-over-year silver production increased 64%.

Full production at San Bartolome and ramp-up of Palmarejo operations lead to a 64% year-over-year increase in silver production to 17.3Moz of silver in 2009.

### Reserves/Resources

CDE's resource base maintains a silver focus.

232Moz of silver in reserve supports a +10-year mine life.

CDE is a precious metal-weighted silver producer, with silver contributing to 60% of the value of reserves using long term metal price forecasts.

Combined, CDE's seven mines host reserves of 232Moz of silver and 2.6Moz of gold as of 2008. At 2010 production estimates of 20.7Moz of silver and 143koz of gold, total reserves support an average reserve life of +10 years.

Resources contain a further 253Moz of silver and 3Moz of gold. A majority of silver resources in the M&I category come from San Bartolome.



### **Silver Miners**

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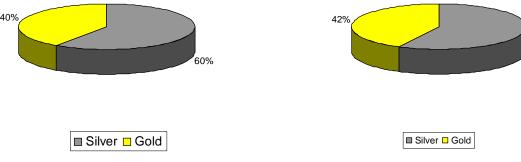
Fig 163: CDE Reserves & Resources

										Contain	ed Metal		
	<b>Tonnes</b>	Silver	Gold	<u>Copper</u>	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven & Probable													
Rochester	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerro Bayo	496	349	2.39	-	-	-	-	5,564	38	-	-	-	-
Martha	69	1,267	1.48	-	-	-	-	2,809	3	-	-	-	-
San Bartolome	32,030	131	-	-	-	-	-	135,030	-	-	-	-	-
Kensington	4,990	-	9.21	-	-	-	-	-	1,478	-	-	-	-
Palmarajo	11,063	179	2.13	-	-	-	-	63,576	756	-	-	-	-
Guadelupe	4,971	162	1.97	-	-	-	-	25,833	315	-	-	-	-
Endeavor	8,400	95	-	=	-	-	-	25,772	-	-	-	-	-
Total Reserves	53,619	135.0	1.50	-	-	-	-	232,812	2,591	-	-	-	-
Measured & Indicat	ad												
Rochester	103.472	19	0					61.810	531				
Cerro Bayo	1,260	376	4	-	_	-	_	15,209	167	_	-	=	_
Martha	99	1,593	2	-	_	-		5.051	5	_	-	=	_
San Bartolome	65.675	95	_	-	_	-		199,875	5	_	-	=	_
Kensington	6,592	-	9					177,073	1.973				
Palmarajo	13.946	119	2	-	_	-		53.323	676	_	-	=	_
Guadelupe	10,329	130	2	_		-		43,287	527	-	-	=	
Endeavor	24,845	54	267	-	_		-	43,174	-	_	_	_	
Total Reserves	201,372	58.5	0.60			<del>-</del> -		378,555	3,879				
									-,				
Inferred													
Rochester	-	-	-	-	-	-	-	-	-	-	-	-	-
Cerro Bayo	1,294	362	4	-	-	-	-	15,050	165	-	-	-	-
Martha	32	1,525	2	-	-	-	-	1,542	2	-	-	-	-
San Bartolome	1,068	47	-	-	-	-	-	1,628	-	-	-	-	-
Kensington	1,198	-	8	-	-	-	-	-	298	-	-	-	-
Palmarajo	21,590	84	1	-	-	-	-	58,508	880	-	-	-	-
Guadelupe	9,292	101	1	-	-	-	-	30,030	423	-	-	-	-
Endeavor	772	88	-	-	-	-	-	2,183	-	-	-	-	=
Total Reserves	4,062	817.5	13.54	-	-	-	-	106,758	1,768	-	-	-	-

Source: BMO Capital Markets

Fig 164: Reserve Metal Distribution

Fig 165: Reserve Metal Distribution



Source: BMO Capital Markets Source: BMO Capital Markets

<sup>17.32 - 17.32</sup> 



#### **Silver Miners**

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### Palmarejo – A Flagship Mine With Upside

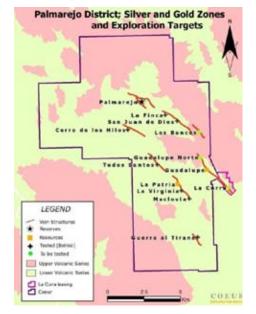
CDE acquired Palmarejo in Q4/07 for ~US\$1.1B.

The Palmarejo project, located in the Sierra Madre of north central Mexico, was acquired by the acquisition of Bolnisi Gold NL and Palmarejo Silver and Gold Corp. in Q4/07 for  $\sim$ US\$1.1B.

At the time of the acquisition, Palmarejo development was under way, with project resources totalling 101.5Moz of silver and 1.1Moz of gold. In addition to the known deposits, the acquisition included 121.5km $^2$  of concessions covering the Palmarejo district with +10 additional high priority targets with resource potential.

Fig 166: Palmarejo District

Numerous targets outside of the Palmarejo and Guadelupe veins.



Source: Coeur d'Alene Mines Corp.

Combined underground and open pit.

Since the acquisition, CDE has accrued capital costs of ~US\$330M to develop the 5.6ktpd underground and open-pit mine centred on the Palmarejo vein system. Commissioning began in Q1/09 with ramp-up through the remainder of 2009.

Production during 2009 totalled 3.8Moz of silver and 59koz of silver at projected co-product cash costs of US\$10.74/oz silver. 2010 production is projected to increase further to 8.8Moz of silver and 107koz of gold at co-product costs of US\$9.69/oz of silver.

The FNV royalty provided necessary project financing without limiting CDE's exposure to the price of gold.

To complete project development, CDE entered into a gold royalty stream with Franco Nevada Corp. (FNV.TSX) for US\$75M plus a US\$5M contingency for 50% of Palmarejo gold production for the life of the mine. CDE retains the upside in the price of gold based on a deliverable price of US\$400/oz of gold produced, increasing by 1% per annum after the fourth anniversary of the transaction.

Open-pit mining is expected to contribute 60% of ore through 2010 as underground operations continue to ramp up to full capacity, at which point open-pit operations will contribute  ${\sim}40\%$  of mill feed.



#### Silver Miners

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Recoveries of 90% for silver and 93% for gold.

But, BMO Research projects lower silver recoveries.

2010E capital budget of ~US\$50M.

Once Guadalupe is developed, BMO Research projects a 33% increase in production to 11.7Moz of silver and 149koz of gold. Ore is processed through a conventional 5.6ktpd cyanidation/Merrill Crowe plant to produce doré. Gold and silver recoveries are projected at 93% and 90%, respectively.

Silver recoveries reached 73.4% in Q3/09, below design rates. BMO Research projects a gradual increase in recoveries to the high 80s through H1/10.

2010 capital requirements are projected to be in the range of US\$50M as CDE completes final tailings dam construction and a cement rock fill plant, and begins underground development at Guadalupe.

#### **Reserves and Resources Expanding**

With exploration expenditures of US\$8.6M in 2009, CDE expanded silver and gold reserves by  $\sim 40\%$  in Q4/09. The inclusion of the Guadalupe vein added 88.6Moz of silver and 11Moz of gold in reserves.

Based on existing reserves, Palmarejo has an estimated mine life of 12.5 years.

Outside of the Palmarejo, Guadalupe and La Patria vein systems, the project area contains 10 additional vein prospects with the capacity to support future reserve and resource growth.

### **Guadalupe Provides Expansion Potential**

CDE plans to begin Guadalupe underground development in 2010, with initial production beginning in 2011. BMO Research models development of Guadalupe as a 2ktpd underground, with a small component of initial open-pit mining with production beginning in Q3/10.

Coincident with Guadalupe development, BMO Research models expansion of the Palmarejo processing plant to 7ktpd. Capital costs to integrate Guadalupe are estimated at US\$65M. Capital requirements for mill expansion are expected to be moderate given that parts of the plant are currently capable of throughput rates of 2.5Mtpa.

Guadalupe is expected to increase Palmarejo production to 11.6Moz of silver and 149koz of gold by 2012.



Silver Miners

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### San Bartolomé

San Bartolome, located outside of Potosí in southern Bolivia began production in Q3/08. Open-pit mining operations are centred on a series of historic tailings, mine dumps and surface gravels on the flanks of the historic Cerro Rico.

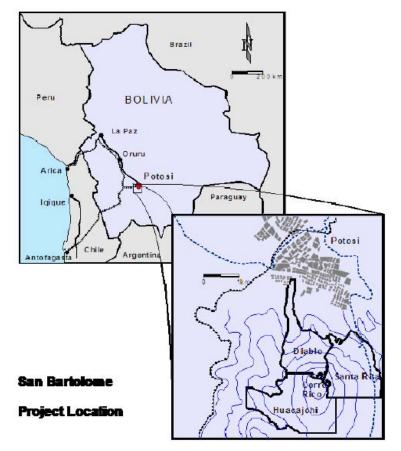
San Bartolomé is a 5.6ktp open-pit operation that produces doré on site.

Ore is processed through a 5.6ktpd conventional cyanidation/Merrill Crowe plant to produce doré. Silver recoveries vary depending on the type of deposit and level of oxidation. Average silver recoveries are projected to be 77% over the life of operations.

Fig 167: San Bartolomé District

The mine exploits surface deposits surrounding the historical mining centre of Potosi in Bolivia.

2009 production is estimated at 7.5Moz of silver at cash costs of US\$11.70/oz.



Source: Coeur d'Alene Mines Corp.

In the first full year of operation, BMO Research estimates San Bartolome produced 7.5Moz of silver at projected cash costs of US\$11.70/oz.

Production is expected to be affected until mining can resume above the 4,200m level.

Production was ~500koz below guidance as a consequence of a decision by the Bolivian court to restrict mining of higher-grade surface deposits above the 4,200m level on Cerro Rico until adequate slope stability engineering is completed. These studies are expected to be completed through H1/10.



#### **Silver Miners**

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2010 production of 7.1Moz of silver at US\$11.07/oz.

2010 production is expected to be in the  $\sim$ 7.1Moz range with cash costs declining to the US\$11.07/oz as CDE implements optimization plans to reduce unit costs.

#### Reserves & Resources Support a 10.5-Year Mine Life

Based on average annual production of 6.7Moz of silver, San Bartolome reserves can currently sustain a 10.5-year mine life.

### **A Complicated Leasing Arrangement**

CDE has established mining through a series of long-term agreements with Comibol and independent cooperatives.

To operate the mine, CDE entered into a series of long-term lease and joint-venture agreements with the Bolivian mining company Corporacion Minera de Bolivia (Comibol), the principal owner of the underlying mineral rights, and several independent mining cooperatives.

Through these agreements, CDE has 25-year lease agreements for 83.6km<sup>2</sup> of ground that expire between 2021 and 2028. Royalties can vary, but are in general subject to a 4% production royalty.

While these agreements are complex, they represent a "made in country" solution for a foreign mining company to operate in the Potosi district. CDE will need to ensure a positive relationship with the underlying owners and the local community to maintain these agreements.



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### Mina Martha - Coming to an End

#### **CDE Looks Abroad to Extend Mina Martha Operations**

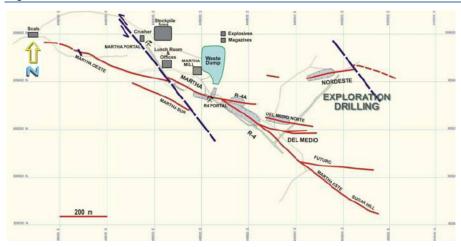
Mina Martha, located in southern Argentina, began operations in 2002 initially as a high grade direct ship underground operation. In 2007, CDE constructed a 240tpd flotation plant at a capital cost of US\$16M.

BMO Research estimates production in 2009 totalled 3.4Moz of silver and 4koz of gold at co-product cash costs of US\$6.86/oz of silver.

2010 production is estimated at 2.1Moz of silver and 3koz of gold at coproduct cast costs of US\$9.50/oz of silver.

Exploration at Mina Martha has extended the life of operations beyond original expectations.

Fig 168: Mina Martha Veins



Source: Coeur d'Alene Mines Corp.

However, depending on exploration, CDE plans to close Mina Martha at the end of 2010.

CDE is looking to other opportunities to extend its presence in the area.

#### Reserve/Resource Base = Short Mine Life

CDE has operated Mina Martha as a short-lived operation with exploration successful in replacing reserves on an annual basis. Depending on the results of exploration, CDE plans to cease mining operations at Mina Martha by the end of 2010.

### **Taking on a Regional Perspective**

CDE has expanded exploration activities in the Mina Martha region through an exploration agreement with Mirasol Resources Ltd. to explore the Joaquin project located 80km north of Mina Martha.

Exploration is at the drill stage, with five of three targets drilled returning favourable results. CDE can earn a 71% interest in the joint venture by advancing the project to development. Intercepts include:

- Marocha: 179.4 g/t silver over 22.5m, 134.6g/t silver over 16.9m and 501.1 g/t silver over 9.4m.
- La Nera: 703.8 g/t silver and 0.13 g/t gold over 7.45m and 200g/t silver and 0.08g/t gold over 16.0m.



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### **Development Projects**

### Kensington - Annual Production of 120koz of Gold Beginning Q4/10

With the reactivation of the 404 permit by the U.S. Army Corps of Engineers in Q4/09, CDE restarted construction activities at the Kensington mine located 65km north of Juneau, Alaska.

Kensington construction was suspended in Q1/07.

Construction activities at Kensington were suspended in Q1/07 after the Ninth Circuit Court reversed a Lower Federal Court decision approving the Kensington tailings facility. At the time of the suspension CDE had completed approximately 80% of construction.

CDE mobilized in Q4/09 to complete construction.

CDE mobilized the construction management team and contractors toward the end of Q3/09 to begin construction on the tailings facility and related infrastructure. The remaining construction and mine-related capital costs estimated to bring the mine into production are projected at ~US\$70M.

Remaining capex of US\$70M.

Development costs are to be largely funded through a US\$45M project facility announced in Q4/09.

Annual production of 128koz of gold at US\$540/oz in 2011.

Commissioning is expected to begin mid-2010 and CDE targets production of 40koz of gold by year-end. 2011 production is projected at 128koz of gold at US\$540/oz gold over a 16-year mine life.

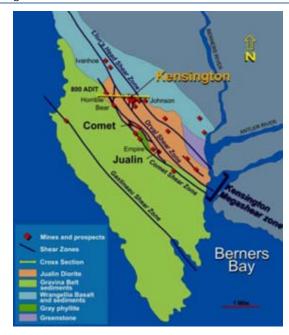
Kensington and the Jualin properties cover 60.9km² of ground covering prospective ground on the east side of the Lynn Canal. Current reserves of 1.5Moz of gold and additional resources of 0.8Moz of gold are contained within vein swarms and discrete, high-grade extension veins.

Fig 169: Kensington Mine Location

Gold mineralization is contained within extensional veins within a regional fault system.

Reserves of 1.5Moz of gold with a further 0.8Moz of gold resource.

The early stage of exploration provides potential for new discoveries.



Source: Coeur d'Alene Mines Corp.



#### **Silver Miners**

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Kensington is an underground mine accessed by a horizontal tunnel with mining completed by a combination of long hole and cut and fill stoping and will utilize conventional and mechanized underground mining methods.

The ore will be processed in a flotation mill that produces a concentrate that will be sold to third-party smelters.

### Renewed exploration is already leading to success.

### **Renewed Exploration Already Showing Success**

Resumption of exploration in Q4/09 has already led to a new discovery. Eight of 14 holes drilled identified the extension of a vein (Kimberly) exposed in the decline from the mill to the Kensington mine. Assay results from this vein ranged from 0.144oz/t to over 1.29oz/t.

BMO Research expects a focus on exploration to lead to future reserve and resource growth as CDE targets extensions of existing structures and known veins in the vicinity of mine infrastructure.

# Residual leaching with annual production of ~1 to 2Moz of silver through to 2013.

### Rochester – Can't Keep a Good Mine Dormant

Early in Q4/09, CDE announced plans to restart the 24.5ktpd open-pit heap leach Rochester mine in central Nevada. The mine was closed in Q3/07 with residual leaching operations production of  $\sim 1-2$ Moz of silver annually through 2013.

Mining operations to restart by 2011 with a six-year mine life. Reactivation of the mine was taken into consideration given prevailing metal prices and the large resource inventory. Capital costs to reactivate the mine are estimated at US\$28M (largely cost to construct a new heap leach pad).

LOM annual production of 3.3Moz of silver and 29koz gold at US\$9.50/oz.

Rochester is expected to ramp up to annual production of  $\sim 3.3 \text{Moz}$  of silver and 29koz at co-product cash costs of US\$9.50/oz of silver through 2017.

Fig 170: Rochester Mine Location

Rochester contains total resources of 61.8Moz of silver and 531koz of gold.



Source: Coeur d'Alene Mines Corp.

A large resource provides for future expansion.

The six-year mine plan is currently constrained by the permitted pad dimensions. BMO Research models a US\$20M pad expansion to extend the life of Rochester operations to 2019.

#### Cerro Bayo - Looking at Options

CDE placed the 1.65ktpd Cerro Bayo mine in southern Chile on care and maintenance in Q4/08 and initiated exploration to grow reserves and resources to a sufficient size to support annual production of 2–3Moz of silver and  $\sim$ 30koz of gold over a +six-year mine life.



### **Silver Miners**

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**CDE** plans to divest Cero Bayo.

In spite of exploration efforts through 2008 growing reserves and resources to 5.6Moz silver and 38koz of gold and 2009 exploration likely to lead to further incremental growth, CDE is seeking opportunities to divest its interest in the mine.

BMO Research estimates a US\$79M 10% nominal NPV.

Despite plans to divest Cerro Bayo, BMO Research models the resumption of mining operations beginning in Q3/11 at annual production of 945koz of silver and 10koz of gold at co-product cash costs of US\$8.24/oz.

Based on these parameters, and US\$7M to restart operations, BMO estimates a 10% nominal NPV of US\$42.3M, which at minimum establishes an implied value for the mine.



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### 21. Pan American Silver (PAA.TSX)

### Looking Forward to the Future

PAA is rated Outperform with a C\$31.25 target price.

An Outperform rating for PAAS is supported by the company's current production profile and future growth trajectory that could position PAAS as the number two primary silver producer by 2015.

Through 2009, Pan American Silver (PAA-TSX) made two potentially transformative transactions that, once in production, will provide long-lived, low-cost production to drive future growth and offset the company's aging portfolio of smaller mines.

BMO Research estimates 2010 production of 22Moz of silver at co-product cash costs of US\$8.19/oz silver from seven mines, the largest of which (Manatial Espejo) is forecast to produce 4.9Moz of silver.

Transformative deals to drive low-cost long-life production.

The signing of a joint-venture agreement with ORKO Silver (OK.TSX) in Q2/09 exposed PAA to a 55% interest in the La Preciosa project with 135Moz of silver in resource. PAAS has fast-tracked the project to a production decision that BMO Research forecasts could lead to annual production of 11.1Moz of silver and 10.3koz of gold (6.1Moz of silver and 5.6koz of gold net to PAAS) at co-product cash costs of US\$3.82/oz by 2014.

BMO Research expects that La Preciosa's potential production profile and lower quartile cash costs could motivate PAA to consolidate ownership.

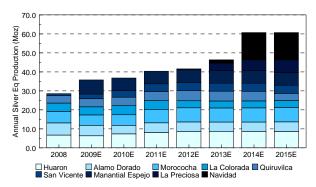
The acquisition of Aquiline Resources at the end of 2009 exposed PAA to a world-class deposit with total resources of 752Moz of silver and 1,611kt of lead. While still at an early stage and permitting hurdles to be resolved, BMO Research expects PAA will be able to advance Navidad to production by 2014. BMO Research conservatively benchmarks Navidad production beginning at 6.9Moz of silver, increasing to ~34Moz of silver by 2018.

Fig 171: Asset Locations



Source: BMO Capital Markets

Fig 172: Pan American Production Profile, 2009E-2020E





#### **Silver Miners**

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### Valuation

**Initiating with an Outperform** rating.

PAAS trades at a 16% discount to senior silver producers in the BMO Research coverage universe. BMO Research is initiating coverage of Pan American Silver with an Outperform rating and a target price of C\$31.25, based on 2.1x the 10% nominal project NPV of US\$14.66/share using the BMO metal price forecast and adjusted for working capital and using an FX rate of \$0.99 C\$/US\$.

PAA trades at 1.28x, or a 16% discount to senior producers in the BMO Research coverage universe, which are currently trading at 1.53x their 10% nominal NPV using spot metal prices.

Using BMO Research 2010 estimates, PAA's target price represents 13x EPS and 8.4x CFPS versus averages of 16.3x EPS and 11.1x CFPS for its senior producer peers.

Fig 173: PAAS Valuation

A C\$31.25 target price values PAAS at 2.1x NPV.

BMO Assumptions	Spot	2009E	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Gold	1,108	972	1,150	1,150	950	850
Copper	3.28	2.34	3.30	3.70	3.50	2.50
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET PRESENT VALUE		NPV <sub>10%</sub> , E	BMO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>10%</sub>	, Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share)1	US\$M	(\$/Share)1
Navidad	100%	317.4	2.93	1,478.3	13.63	479.5	4.42
Manatial Espejo	100%	325.3	3.00	485.7	4.48	186.9	1.72
Huaron	100%	190.4	1.76	347.9	3.21	208.0	1.92
Morococha	92%	215.1	1.98	344.3	3.18	228.4	2.11
Alamo Dorado	100%	193.1	1.78	261.9	2.42	145.8	1.34
San Vicente	95%	118.2	1.09	183.6	1.69	115.5	1.07
La Colorada	100%	76.1	0.70	89.9	0.83	65.0	0.60
La Preciosa	55%	78.7	0.73	128.6	1.19	98.2	0.91
Quiruvilca	100%	43.3	0.40	53.0	0.49	37.6	0.35
Project NPV		1,557.6	14.37	3,373.3	31.11	1,564.9	14.43
Net Cash <sup>3</sup>		149.4	1.38	149.4	1.38	149.4	1.38
I-T-M Options and Warrants		10.7	0.10	10.7	0.10	10.7	0.10
Corporate Adjustment <sup>2</sup>		(128.4)	(1.18)	(159.3)	(1.47)	(128.4)	(1.18)
NPV of Hedge Book		-	` -	-		-	` -
Total Corporate Adjustments		31.7	0.29	0.8	0.01	31.7	0.29
Corporate NPV	US\$	1,589.3	14.66	3,374.1	31.12	1,596.7	14.73
	C\$	1,613.5	14.88	3,425.5	31.59	1,662.4	15.33
Multiple to Corporate NPV	2.1x						
12-month Target Price	US\$	3,337.6	30.78				
	C\$	3,388.4	31.25				

<sup>1.</sup> Assumes shares outstanding of 108.4M

All figures in US\$ unless noted otherwise Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

Includes general and administrative expenses as well as exploration expenses
 Includes marketable securities



### **Silver Miners**

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Fig 174: Pan American Model Parameters

Project	Huard	on				Project Morococcha	
Country	Peru	l				Country Peru	
Interest	1009					Interest 92%	
% of PAA Project NPV	12%					% of PAA Project NPV 14%	
	Mine Type:	Undergrour				Mine Type: Underground	
	Processing:	Milling, Flotat	ion			Processing: Milling, Flotation	
	Processing Rate: tpd	2,000				Processing Rate: tpd 2,000	
	LOM Production:	Annual Total				LOM Production: Annual Total	
	Silver Moz	3.4 51.2				Silver Moz 3.1 30.9	
	Gold koz					Gold koz	
	Copper kt	1.7 26.1				Copper Mlbs 2.5 24.8	
	Lead kt Zinc kt	5.6 84.7 19.4 291.4				Lead Mibs 5.1 51.4 Zinc Mibs 20.3 202.8	
	ZINC KI	19.4 291.4				ZINC MIDS 20.3 202.8	
LOM Total Cash Costs*		8.71				LOM Total Cash Costs* 7.11	
Modelled Mine Life	vrs	15.00				Modelled Mine Life yrs 10.00	
Expansion Capex	USSM	5.5				Expansion Capex US\$M 0.0	
Total Sustaining Capital	US\$M	107.3				Total Sustaining Capital US\$M 66.0	
Modeled	Tonnes Silver Le	ad Zinc Copper	Silver L	ead Zinc	Copper	Modeled Tonnes Silver Lead Zinc Copper Silver Lead Zinc Co	opper
	000 g/t	% % %	Moz	kt kt	kt	000 g/t % % % Moz kt kt	kt
Underground	10,800 184.27 1.	57 3.17 0.30	64	169 343	33	Undergrou 6,777 174.05 0.01 3.56 0.43 38 99 241	29
						-	
Project	Quiruv					Project La Colorada	
Country	Peru					Country Mexico	
Interest	1009	6				Interest 100%	
% of PAA Project NPV	3%					% of PAA Project NPV 5%	
	Mine Type:	Undergroun				Mine Type: Underground	
	Processing:	Milling, Flotat	ion			Processing: Milling, Flotation	
	Processing Rate: tpd	1,150				Processing Rate: tpd 1,000	
	LOM Production:	Annual Total				LOM Production: <u>Annual</u> <u>Total</u>	
	Silver Moz	1.2 4.9				Silver Moz 3.4 33.6	
	Copper kt	5.1 6.4				Gold koz 3.7 36.8	
	Lead kt	3.3 13.1				Copper kt	
	Zinc kt	11.5 46.0				Lead kt 1.6 15.7	
						Zinc kt 2.5 24.6	
LOM Total Cash Costs*		8.40				LOM Total Cash Costs* 9.17	
Modelled Mine Life	yrs	4.00				Modelled Mine Life yrs 10.00	
Expansion Capex	US\$M	0.0				Expansion Capex US\$M 5.3	
Total Sustaining Capital	US\$M	12.1				Total Sustaining Capital US\$M 61.4	
Modeled	Tonnes Silver Le	ad Zinc Copper	Silver L	ead Zinc	Copper	Modeled Tonnes Silver Gold Lead Zinc Silver Lead Zinc	Gold
rioucicu		% % %					koz
				kt kt	kt	000 a/t a/t % % Maz kt kt	
Underground	000 g/t 1,342 159 1.:		Moz 7	kt kt 16 54	<u>kt</u> 9		48.9
Underground	1,342 159 1.	22 4.03 0.68	MOZ 7			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project	1,342 159 1.: San Vio	22 4.03 0.68 ente	7 7			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado	
Project Country	1,342 159 1.: San Vic Bolivi	22 4.03 0.68 ente	7 7			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado Country Mexico	
Project Country Interest	1,342 159 1.: San Vic Bolivi 95%	22 4.03 0.68 ente	7 7			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country	1,342 159 1 San Vic Bolivi 95% 8%	22 4.03 0.68  ente a	7			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado Country Interest 100% % 0PAA Project NPV 12%	
Project Country Interest	1,342 159 1.:  San Vic  Bolivi 95% 8%  Mine Type:	22 4.03 0.68  ente a Undergrour	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado Country Mexico 100% % of PAA Project NPV 12% Mine Type: Open Pit	
Project Country Interest	1,342 159 1  San Vic  Bollivi  95% 8%  Mine Type:  Processing:	22 4.03 0.68  ente a Undergrour Milling, Flotal	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country Interest 100% % of PAA Project NPV Mine Type: Open Pit Processing: Milling, Merrill Crowe	
Project Country Interest	1,342 159 1.  San Vic Bollvi 95% 8% Mine Type: Processing: Processing Rate: tpd	22 4.03 0.68 ente a Undergrour Milling, Flotat	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country Mexico Interest 100% 96 of PAA Project NPV 12% Mine Type: Open Pit Processing: Milling, Merrill Crowe Processing Rate: tpd 4,700	
Project Country Interest	1,342 159 1.:  San Vic  Bollvi  95% 8%  Mine Type:  Processing Rate: tpd LOM Production:	22 4.03 0.68  ente a Undergrour Milling, Flotal 750 Annual Total	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest	1,342 159 1.  San Vic Bolivi Bolivi 95% 8% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz	22 4.03 0.68  ente a Undergrour Milling, Flotat 750 Annual Total 3.0 28.3	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country 100%  Mexico 100%  9 of PAA Project NPV 12%  Mine Type: Open Pit  Processing: Milling, Merrill Crowe  Processing Rate: tpd 4,700  LOM Production: Annual 10tal  Silver Moz 4.4 28.8	
Project Country Interest	1,342 159 1.:  San Vic  Bollvi  95% 8%  Mine Type:  Processing Rate: tpd LOM Production:	22 4.03 0.68  ente a Undergrour Milling, Flotal 750 Annual Total	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV	1,342 159 1.  San Vic Bolivi Bolivi 95% 8% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz	222 4.03 0.68  ente a Undergrour Milling, Flotar 750 Annual Total 3.0 28.3 5.8 54.7	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country 100%  Mexico 100%  9 of PAA Project NPV 12%  Mine Type: Open Pit  Processing Rate: tpd 4,700  LOM Production: Annual 101  Silver Moz 4.4 28.8  Gold koz 16.3 105.7	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs*	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt	22 4.03 0.68  ente a Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt yrs	22 4.03 0.68  ente a  Undergroum Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country Interest 100%  % of PAA Project NPV 12%  Mine Type: Open Pit Processing: Milling, Merrill Crowe Processing Rate: tpd 4,700  LOM Production: Annual Total Silver Moz 4,4 28.8  Gold koz 16.3 105.7  LOM Total Cash Costs* 6.37  Modelled Mine Life yrs 6.50	
Project Country Interest % of PAA Project NPV LOM Total Cash Costs* Modelled Mine Life Expansion Capex	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt  yrs USSM	Undergrour Milling, Flotat 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt yrs	22 4.03 0.68  ente a  Undergroum Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50	7 id			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77  Project Alamo Dorado  Country Interest 100%  % of PAA Project NPV 12%  Mine Type: Open Pit Processing: Milling, Merrill Crowe Processing Rate: tpd 4,700  LOM Production: Annual Total Silver Moz 4,4 28.8  Gold koz 16.3 105.7  LOM Total Cash Costs* 6.37  Modelled Mine Life yrs 6.50	
Project Country Interest % of PAA Project NPV LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt  yrs USSM USSM	222 4.03 0.68 ente a a b Undergroum Milling, Flotat 750 Annual 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4	7 id idon			Project	
Project Country Interest % of PAA Project NPV LOM Total Cash Costs* Modelled Mine Life Expansion Capex	1,342 159 1.  San Vic Bolivi Bolivi 95% 8% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM Tonnes Silv	222 4.03 0.68  ente a  Undergrour Milling Flotal 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4	7 did dion			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM USSM Tonnes Silvi 000 00	222 4.03 0.68  ente a a b  Undergroum Milling, Flotal 750  Annual Total 3.0 28.3 5.8 54.7  4.59 9.50 18.3 5.4 54.4  err Zinc Silver yf % Moz	7  id id ion  Zinc kt			Project	
Project Country Interest % of PAA Project NPV LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM USSM Tonnes Silvi 000 00	222 4.03 0.68  ente a a b  Undergroum Milling, Flotal 750  Annual Total 3.0 28.3 5.8 54.7  4.59 9.50 18.3 5.4 54.4  err Zinc Silver yf % Moz	7 did dion			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground Project	1,342 159 1.    San Vic	222 4.03 0.68  ente a  Undergrour Milling, Flotal 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4  er Zinc Silver vt % Moz. 43 ##### 32  Espejo	7  id id ion  Zinc kt			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground Project Country	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt  USSM USSM Tonnes Silv 000 (2,565 389)	22 4.03 0.68  ente a a b Undergrour Milling, Flotat 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 5.4 54.4  err Zinc Silver 1/1 96 Moz. 43 #### 32  Espejo ina	7  id id ion  Zinc kt			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: tpd LOM Production: LOM Production: Silver Moz Zinc kt  USSM USSM Tonnes Silv 2,565 389.  Manantial Argent	Undergrour Milling, Flotal 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4 er Zinc Silver 1/1 % Moz 43 ##### 32  Espejo ina 6	7  id id ion  Zinc kt			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground Project Country	1,342 159 1.  San Vic Bolivi Bolivi 95% 8% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt USSM USSM USSM Tonnes Silv 0,000 2,565 389.  Manantial Argent 1,009 21%	222 4.03 0.68  ente a a b Undergrour Milling, Flotat 750 Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 5.4 54.4  err Zinc Silver 101 96 Moz. 43 #### 32  Espejo ina 6	7  Zinc kt 68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.    San Vic.	######################################	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing: Processing Rate: LOM Production: Silver Moz Zinc kt  USSM USSM Tonnes Silv 0,000 2,565 389.  Manantial Anantial Mine Type: Processing:	22 4.03 0.68  ente a a a a  Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4  err Zinc Silver 1/1 9.6 Moz. 43 #### 32  Espejo ina 6 Open Pit & Under	7  d d lon  Zinc  kt  68			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.    San Vic.	ente a a  Undergrour Milling, Flotal 750 Annual 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4 er Zinc Vt % Moz 43 #### 32 Espeto Ina 6 Open Pit & Under Milling, Merrill (I	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic. Bolivi Bolivi 95% 8% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM Tonnes Silv 000 sc 2,565 389.  Manantial Argent 1009 21% Mine Type: Processing Rate: tpd	22 4.03 0.68  ente a a a a a  Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4  err Zinc Silver 1/1 96 Moz 43 #### 32  Espejo ina 6 Open Pit & Under Milling, Merrill (2,000) Annual Total	7  d d lon  Zinc  kt  68			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  Tonnes Silv 000 2,565 389- Manantial Argent Mine Type: Processing: tpd 2,1% Silver Moz 2,1% Silver Moz 2,1% Silver Moz 2,1% Silver Moz	ente a a b l l l l l l l l l l l l l l l l l	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic. Bolivi Bolivi 95% 8% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM Tonnes Silv 000 sc 2,565 389.  Manantial Argent 1009 21% Mine Type: Processing Rate: tpd	22 4.03 0.68  ente a a a a a  Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4  err Zinc Silver 1/1 96 Moz 43 #### 32  Espejo ina 6 Open Pit & Under Milling, Merrill (2,000) Annual Total	7  d d lon  Zinc  kt  68			Undergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital Modeled Underground Project Country Interest	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  Tonnes Silv 000 2,565 389- Manantial Argent Mine Type: Processing: tpd 2,1% Silver Moz 2,1% Silver Moz 2,1% Silver Moz 2,1% Silver Moz	ente a a b l l l l l l l l l l l l l l l l l	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life  LOM Total Cash Costs* Modelled Mine Life	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production:  Visual Vis	######################################	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM USSM Tonnes Silv 000 00 2,565 389.  Manantial Argent 1009 21% Mine Type: Processing: Processing Rate: tpd LOM Production: Silver Moz Zinc kt Silver Moz Gold koz	ente a a  Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4 err Zinc Silver 17.7 96 Moz 43 #### 32  Espejo  Open Plt & Under 3.9 50.5 0.4 4.59 9.50 18.3 55.4 4.59 9.50 18.3 55.4 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5 6.5	7  d d lon  Zinc  kt  68			Indergrou 3,600 360 0.46 1.28 2.13 41 46 77	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life  LOM Total Cash Costs* Modelled Mine Life	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production:  Visual Vis	######################################	7  d d lon  Zinc  kt  68			Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	1,342 159 1.  San Vic Bolivi 95% 8% Mine Type: Processing Rate: tpd LOM Production: Silver Moz Zinc kt  yrs USSM Tonnes Silv 2,565 389.  Manantial Argent 1009 21% Mine Type: Processing: Processing Rate: tpd COO Silver Moz Zinc kt  yrs USSM USSM Silver Moz Zinc kt Silver Moz Gold koz Virs USSM USSM USSM	ente a a  Undergrour Milling, Flotat 750  Annual Total 3.0 28.3 5.8 54.7 4.59 9.50 18.3 54.4 err Zinc Silver 74.5 Moz. 43.4 #### 32  Espeto  Open Pit & Under milling, Merrill Communiation of the communication of the communicatio	7 Zinc kt 68 ground	16 54		Indergrou 3,600 360 0.46 1.28 2.13 41 46 77	48.9
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production:  Tonnes Silver Moz 2,565 389.  Manantial Argent 1009 Processing Rate: LOM Production: Silver Moz 2,565 389.  Silver Moz 2,565 389.  Silver Moz 3,565 389.  Silver Moz 3,565 389.  Silver Moz 4,565 389.  Silver Moz 5,565 389.  Silver Moz 5,565 389.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Tonn	ente a a a a a a a a a a a a a a a a a a a	7  Zinc kt 68  ground rowe	16 54		Project	
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	1,342 159 1.  San Vic. Bolivi 95% 8% Mine Type: Processing Rate: LOM Production: Silver Moz Zinc kt USSM USSM Tonnes Silv 0000 2,565 389.  Manantial Argent Processing Rate: LOM Production: Silver Moz Zinc kt USSM USSM Silver Moz Zinc kt USSM USSM USSM Tonnes Silv O000 21% Silver Moz Zinc kt USSM USSM USSM Tonnes Silv USSM USSM USSM USSM	ente a a a a a a a a a a a a a a a a a a a	7 Zinc kt 68 ground Growe	16 54		Project	opper kt
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital	1,342 159 1.  San Vic Bolivi 95% Mine Type: Processing: Processing Rate: LOM Production:  Tonnes Silver Moz 2,565 389.  Manantial Argent 1009 Processing Rate: LOM Production: Silver Moz 2,565 389.  Silver Moz 2,565 389.  Silver Moz 3,565 389.  Silver Moz 3,565 389.  Silver Moz 4,565 389.  Silver Moz 5,565 389.  Silver Moz 5,565 389.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Silver Moz 6,564 802.  Tonn	ente a a a a a a a a a a a a a a a a a a a	7 Zinc kt 68 ground Growe	16 54		Project	48.9
Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled Underground  Project Country Interest % of PAA Project NPV  LOM Total Cash Costs* Modelled Mine Life Expansion Capex Total Sustaining Capital  Modeled  Modeled  Open Pit	1,342 159 1.  San Vic. Bolivi 95% 8% Mine Type: Processing Rate: LOM Production: Silver Moz Zinc kt USSM USSM Tonnes Silv 0000 2,565 389.  Manantial Argent Processing Rate: LOM Production: Silver Moz Zinc kt USSM USSM Silver Moz Zinc kt USSM USSM USSM Tonnes Silv O000 21% Silver Moz Zinc kt USSM USSM USSM Tonnes Silv USSM USSM USSM USSM	ente a a a a a a a a a a a a a a a a a a a	7 Zinc kt 68 Ground Growe	16 54		Project	opper kt



### **Silver Miners**

February 22, 2010

Fig 175: Pan American Production Parameters

Production Estimates Huaron		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023
Tonnes Mined	tpd	2,000	1,943	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,00
Grade	Ag (g/t)	194.0	200.0	189.6	200.0	200.0	181.2	181.2	181.2	181.2	181.2	181.2	181.2	181.2	181.2	181.2	181.
	Au (g/t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Copper (%)	0.31	0.33	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.3
	Lead (%)	1.63	1.59	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.57	1.5
	Zinc (%)	2.46	2.48	2.57	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.22	3.2
Silver Equiv. Production	Moz	6.7	6.1	6.7	7.6	8.2	7.8	7.8	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7
Total Cash Costs*	US\$/oz	9.35	11.53	9.92	8.82	8.27	8.71	8.70	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.6
Morococha	A	2.000	1 700	1.000	1.005	2.000	2.000	2.000	2.000	2.000	2.000	2.000	1.000				
Tonnes Mined	tpd	2,000	1,780	1,900	1,925	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,000	-	-	-	
Grade	Ag (g/t)	153.0	156.0	150.0	162.6	178.6	178.6	178.6	178.6	178.6	178.6	178.6	178.6	-	-	-	
	Au (g/t)	0.24	0.20	0.42	0.42	0.42	0.42	0.42	0.42	0.43	0.42	0.42	0.42	-	-	-	
	Copper (%) Lead (%)	0.36 1.49	0.38 1.45	0.43 1.46	0.43	0.43 1.46	0.43 1.46	0.43 1.46	0.43 1.46	1.46	0.43 1.46	0.43 1.46	0.43 1.46	-	-	-	
	Zinc (%)	3.31	3.24	3.00	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	3.63	-	-	-	
Silver Equiv. Production	Moz	6.4	6.0	6.3	7.4	8.6	8.5	8.5	8.5	8.5	8.5	8.5	4.3	-	-	-	
Total Cash Costs*	US\$/oz	7.64	9.26	8.84	7.66	6.74	6.83	6.84	6.77	6.77	6.77	6.77	6.77	-	-	-	
Quiruvilca	US\$/0Z	7.64	9.26	8.84	7.00	6.74	6.83	6.84	6.77	6.77	6.77	0.77	6.77				
Tonnes Mined	A al	900	917	900	900	900	900										
	tpd							-	-	-	-	-	-	-	-	-	
Grade	Ag (g/t)	145.0 0.66	155.2 0.63	158.6 0.68	158.6 0.68	158.6 0.68	158.6 0.68	-	-	-	-	-	-	-	-	-	
	Copper (%)	1.09	2.27	1.22	1.22	1.22	1.22	-	-	-	-	-	-	-	-	-	
	Lead (%) Zinc (%)	2.89	3.80	4.03	4.03	4.03	4.03	-	-	-	-	-	-	-	-	-	
Cilvor Fauly Braduati	Zinc (%) Moz		3.80	4.03 3.9		4.03		-	-	-	-	-	-	-	-	-	
Silver Equiv. Production		3.9			3.6		3.9	-	-	-	-	-	-	-	-	-	
Total Cash Costs* La Colorada	US\$/oz	7.11	10.71	8.76	8.77	7.96	8.11	-	-	-	-	-			-	-	
	4	1.040	001	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			_	
Tonnes Mined	tpd	1,040	921	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	-	-	-	
Grade	Ag (g/t)	371.0	383.7 0.79	370.0 0.51	423.2	423.2 0.51	423.2 0.51	423.2	423.2	273.8 0.29	273.8	273.8 0.29	273.8 0.29	-	-	-	
	Ag (g/t)	0.43			0.51			0.51	0.51		0.29			-	-	-	
	Lead (%)	1.05	0.94	1.44	1.44	1.44	1.44	1.44	1.44	1.05	1.05	1.05	1.05	-	-	-	
Cilcon Facilio Bandontina	Zinc (%)	1.82	1.60	2.39	2.39	2.39	2.39	2.39	2.39	1.74	1.74	1.74	1.74	-	-	-	
Silver Equiv. Production	Moz	4.5	4.3	4.3	4.8	4.9	4.9	4.9	4.9	3.2	3.2	3.2	3.2	-	-	-	
Total Cash Costs*	US\$/oz	9.23	8.65	10.16	9.39	8.92	8.89	8.87	8.81	12.78	12.79	12.53	12.53	-	-	-	
San Vicente																	
Tonnes Mined	tpd	750	464	750	750	750	750	750	750	750	750	750	375	-	-	-	
Grade	Ag (g/t)	348.0	536.6	391.7	391.7	391.7	391.7	391.7	391.7	391.7	391.7	377.2	377.2	-	-	-	
	Zinc (%)	3.01	2.26	2.15	2.30	2.30	2.30	2.30	2.30	2.30	2.30	4.51	4.51	-	-	-	
Silver Equiv. Production	Moz	1.2	3.1	3.6	3.7	3.7	3.7	3.8	3.8	3.8	3.8	4.4	2.2	-	-	-	
Total Cash Costs*	US\$/oz	6.72	4.73	5.70	5.62	5.50	5.49	5.47	5.42	5.42	5.42	5.50	5.50	-	-	-	
Alamo Dorado																	
Tonnes Mined	tpd	4,700	4,700	4,700	4,700	4,700	4,700	4,700	4,700	1,988	-	-	-	-	-	-	
Grade	Ag (g/t)	149.0	111.0	91.4	95.3	95.3	95.3	95.3	95.3	59.7	-	-	-	-	-	-	
	Au (g/t)	0.31	0.39	0.30	0.33	0.33	0.33	0.33	0.33	0.49	-	-	-	-	-	-	
Silver Equiv. Production Total Cash Costs*	Moz	6.1	5.3	4.2	4.7	4.7	4.7	4.7	4.7	1.2	-	-	-	-	-	-	
Manantial Espejo	US\$/oz	4.64	5.57	6.85	6.50	6.25	6.25	6.25	6.26	6.26		-				-	
Tonnes Mined	tod		1,736	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000					
Grade	tpd	-	203.7	225.0	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5	-	-	-	-	
Grade	Ag (g/t) Au (g/t)		3.56	2.86	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55					
Silver Equiv. Production	Moz	_	8.6	8.5	7.0	7.4	7.3	7.3	7.2	7.2	7.2	7.2	-	_		_	
Total Cash Costs*	US\$/oz	_	3.18	1.87	2.39	2.43	2.46	2.48	2.53	2.53	2.52	2.52	_	_	_	_	
La Preciosa																	
Tonnes Mined	tpd	-	-	-	-	125	1.750	3,625	4.000	4.000	4.000	4.000	4.000	4.000	-	-	
Grade (underground)	Ag (g/t)	_	-	-	-	265.0	265.0	285.0	265.0	260.7	260.7	260.7	260.7	260.7	_	-	
, , , , , , , , , , , , , , , , , , ,	Au (g/t)	-	_			0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	-	-	
Grade (open pit)	Ag (g/t)	_	_	_	_	94.6	94.6	94.6							94.6	94.6	94
(opo p.t.)	Au (g/t)	_	_	_	_	0.17	0.17	0.17	_	_	_	_	_	_	0.17	0.17	0.
Silver Equiv. Production	Moz	_	-	_	-	1.0	7.5	11.8	11.7	11.5	11.5	11.5	11.5	11.5	4.3	4.3	2
Total Cash Costs*	US\$/oz	-	-	-	-	7.71	5.26	3.82	3.91	3.96	3.96	3.96	3.96	3.96		8.16	
Navidad	039/02	-	-	-	-	7.71	3.20	3.02	3.71	3.70	3.70	3.70	3.70	3.70	8.16	0.10	8.1
Navidad Tonnes Mined	tpd							8,125	10,000	11,667	23.889	30.000	30,000	30,000	30.000	30.000	30.0
Grade	Ag (g/t)	-	-	-	-	-	-	156.4	117.3	121.7	118.2	103.7	103.7	103.7	103.7	103.7	103
Grade	Copper (%)							0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.
	Lead (%)							0.03	0.03	0.03	0.03	1.03	1.03	1.03	1.03	1.03	1.
Silver Equiv. Production	Moz							7.1	14.2	16.0	31.8	42.3	42.3	42.3	42.3	42.3	42
Total Cash Costs*	US\$/oz							4.23	3.70	5.44	5.06	42.3	42.3	42.3	42.3	42.3	4.
	osa/02 butable				_			7.23	3.70	J.44	3.00	7.00	7.00	7.00	7.00	7.00	4.
Total Silver Production	Moz	17.4	22.0	22.0	22.2	23.0	26.1	34.1	40.9	37.7	48.2	54.7	48.2	43.0	39.2	39.2	38
Total Silver Equiv. Production		28.9	36.4	36.7	38.0	41.1	44.0	49.5	56.7	53.3	67.8	78.9	65.7	56.4	52.5	52.5	51
Total Cash Costs	US\$/oz	7.82	7.84	8.19	7.96	7.44	7.32	6.42	6.03	6.67	6.24	5.98	5.97	5.42	5.72	5.72	5.
Total Production Costs	US\$/oz	8.99	10.18	10.85	10.34	9.72	9.43	8.38	7.96	8.64	8.22	8.07	7.76	7.10	7.53	7.77	7.
						_	-		-				_	_			



February 22, 2010

### Company Synopsis

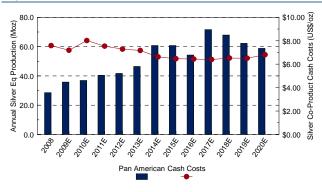
2010E production of 22Moz of silver.

BMO Research forecasts 2010E attributable production of 22Moz of silver, 81koz of gold, 5kt of copper, 13kt of lead and 40kt of zinc at co-product cash costs of US\$8.19/oz of silver.

PAA has silver weighting.

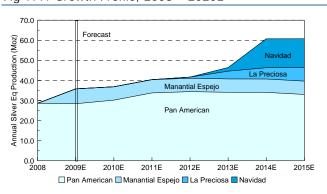
PAA derives  $\sim$ 67% of mine revenue from silver, with the remainder of revenue derived from gold (7%) and base metal ( $\sim$ 26%), positioning the company as a silver weighted producer.

Fig 176: Production & Cash Cost Profile, 2008-2020E



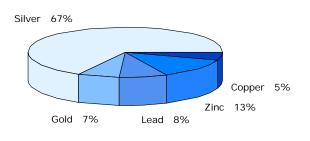
Source: BMO Capital Markets

Fig 177: Growth Profile, 2008 - 2020E



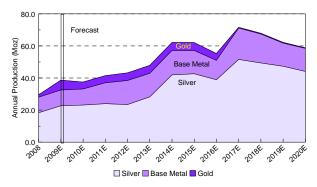
Source: BMO Capital Markets

Fig 178: PAAS Revenue by Metal (US\$M)



Source: BMO Capital Markets

Fig 179: Annual Production by Metal, 2008 – 2020E



Source: BMO Capital Markets

Cash reserves of US\$193M at the end of 2009.

PAA exited 2009 with cash and cash equivalents of US\$193M and no debt. Through to the end of 2011, cash reserves are projected to increase substantially to US\$631M.

US\$620M in capex through 2017.

A strong financial position will be critical as PAA embarks upon sequential development of La Preciosa in 2012/2013 with an estimated capex of ~US\$170M and Navidad in 2016/2017 with an estimated capital cost of US\$450M.

Development largely funded through operations.

BMO Research forecasts indicate that PAA could be able to fund projected capital requirements through existing cash reserves and operating cash flow.



#### **Silver Miners**

February 22, 2010

Projected strong EPS and CFPS growth through 2012.

Given BMO Research projections for high metal prices over the next two years, BMO Research forecasts 2010 EPS of US\$1.68 and CFPS of US\$2.59, and 2011 EPS of US\$1.95 and CFPS of US\$2.80.

Fig 180: Projected Capital Expenditures (US\$M)

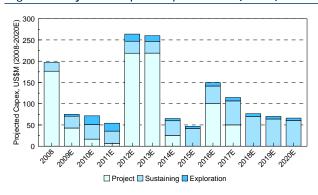
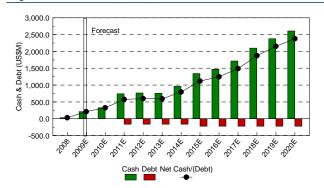


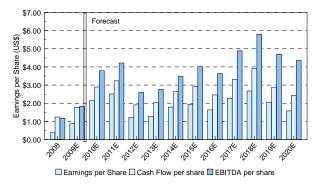
Fig 181: Net Cash (Debt) Position, 2008-2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 182: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

### Reserves/Resources

PAA's resource base levered to base metals.

Pan American has a diversified asset base with many polymetallic mines providing above-average leverage to base metals. On a resource basis, silver makes up 63% of total resources, with the bulk of those resources lying in the Navidad project.

222Moz of silver in reserve supports a 10-year mine life.

Combined, PAA's nine mines host reserves of 232Moz of silver and 670koz of gold. At 2010 production estimates of 22Moz of silver and 81koz of gold, total reserves support an average company reserve life of 10 years.

Resources contain a further 946Moz of silver and 2Moz of gold. Approximately 64% of the silver resources come from Navidad.

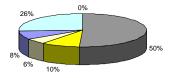


#### **Silver Miners**

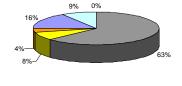
February 22, 2010

Fig 183: Reserve Metal Distribution

Fig 184: Resource Metal Distribution







■ Silver □ Gold ■ Copper ■ Lead □ Zinc ■ Tin

Source: BMO Capital Markets Source: BMO Capital Markets

Fig 185: PAAS Reserves & Resources

										Contain	ed Metal		
	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	<u>Silver</u> (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	<u>Tin</u> (kt)
Proven & Probable	(Kt)	(9/1)	(9/1)	(70)	(70)	(70)	(70)	(KOZ)	(KOZ)	(Kt)	(Kt)	(Kt)	(Kt)
Huaron	10.842	184.6	_	0.30	1.57	3.17	_	64,230	_	33	170	344	_
Morococha	6,786	174.4	_	0.43	1.46	3.56	_	37,976	_	29	99	242	_
La Colorado	2,282	414.9	0.5	-	1.03	2.14	_	30,435	37		24	49	_
Quirivilca	770	158.6	0.7	0.68	1.22	4.03	_	3,926	7	5	9	31	_
Alamo Dorado	10,146	94.9	0.3	0.00	1.22	-	_	30,895	107	-	,	31	
Manatial Espejo	7,341	152.7	2.2				-	36,132	518				
San Vicente	2,254	391.7	2.2	=		2.28		28,388	-	_	-	51	
Total Reserves	40,421	178.6	0.52	0.17	0.75	1.77	<del>-</del> -	231,982	670	67	302	717	
Total Reserves	70,721	170.0	0.52	0.17	0.73	1.77		231,302	070		302	,,,	
Measured & Indicate	ed												
Huaron	12,173	182	-	0	2	4	-	71,047	-	48	224	430	-
Morococha	9,286	177	-	0	1	3	-	52,741	-	39	132	310	-
La Colorado	3,670	340	Ō	-	1	2	-	40,095	46	-	37	72	-
Quirivilca	4.142	110	1	1	1	2	-	14,710	91	44	25	74	-
Alamo Dorado	13,843	87	Ō	-	-	-	-	38,564	161	-	_	=	-
Manatial Espejo	10,310	138	2	-	-	-	-	45,849	612	-	-	-	-
San Vicente	3,871	298	_	-	-	2	-	37,066	-	-	-	96	-
Navidad	155,200	127	_	0	1	-	_	632,408	_	29	1.342	-	-
Calcatreu	7,995	26	3	_	_	-	_	6,606	676	-	-	-	-
Pico Machay	10,600		1	_	_	_	_	-,	265	_	_	_	_
Total Reserves	231,090	40.4	0.12	0.06	0.18	0.42	-	939,086	1,852	160	1,760	982	-
Inferred													
Huaron	5.416	177	_	0	1	3	_	30.754	_	15	78	160	
Morococha	6,260	177	-	Ö	1	4	-	35,621		26	91	222	=
La Colorado	2.750	308	0	U	1	2	-	27,245	31	-	30	49	-
Quirivilca	923	113	0	0	1	2	-	12,951	13	4	10	20	-
Alamo Dorado	1.146	44	1	U	'	2		1,622	22	4	10	20	-
		103	1	-	-	-	-	4,685	49		-		-
Manatial Espejo	1,410			-	-	-	-			-	-	-	-
San Vicente	513	302	-	-	-	4	-	4,977	-	-	-	19	=
Navidad	45,900	81	-	0	1	-	-	119,741	-	1	269	-	=
Calcatreu	3,413	17	2	-	-	-	-	1,822	226	-	-	-	-
Pico Machay  Total Reserves	23,900 <b>91,631</b>	36.8	0.04	0.05	0.23	0.51		239,418	446 <b>787</b>	46	477	470	<del></del>

As of December 31, 2009

Measured and indicated resources are exclusive of reserves.
Reserves and resources are on a project basis.
Reserve and resource parameters are summarized on the company website.



#### **Silver Miners**

February 22, 2010

#### Eight Mines and Four Development Projects

PAA operates eight mines in the Americas and through 2009 made two transactions that, once in production, will provide long-lived, low-cost production to drive future growth and offset the company's aging portfolio of smaller mines.

Fig 186: PAAS Operations



#### Alamo Dorado

Alamo Dorado is PAA's largest producing mine, with 2009 production of 5.3Moz of silver and 18.2koz of gold at co-product cash costs of US\$5.57/oz of silver. The mine began commercial production in Q2/07 and is a 4ktpd open-pit mine with a LOM waste to ore strip ratio of 1.2:1.

Fig 187: Alamo Dorado

Alamo Dorado is PAA's largest producing mine.



Source: Pan American Silver Corp



#### Silver Miners

February 22, 2010

Mining has advanced to the second phase.

Mining has advanced to the second phase of the open pit that will be operational until 2013. Upon completion of open-pit mining, PAAS will begin processing low-grade stockpiles estimated at 1.9Mt of 48.5g/t silver and 0.25g/t gold.

Ore is processed through a conventional mill with cyanidation followed by Merrill Crowe processing to produce doré and a dry, stackable tailings system.

For 2010, BMO forecasts production of 4.2Moz of silver and 14koz of gold at co-product cash costs of US\$6.85/oz of silver.

Current reserves of 34Moz of silver and 108koz of gold support a mine life of 6.5 years.

2010 production of 4.2Moz silver at US\$6.85/oz.

Mine life of 6.5 years.

#### **Exploration**

Alamo Dorado is a well-defined deposit in its current state and while there is potential for exploration upside, it is limited.

#### La Colorada

La Colorada underground mined, located in Zacatecas, Mexico produced 3.5Moz of silver, 1.2kt of lead and 2.3kt of zinc at estimated co-product cash costs of US\$8.65/oz of silver in 2009.

Fig 188: La Colorada

La Colorada is an underground mine located in Zacatecas, Mexico.



Source: Pan American Silver Corp.

Conventional oxide and sulphide 1ktpd plant.

Ore is processed through a 1ktpd parallel oxide and sulphide processing plant. The oxide circuit has a capacity of 650tpd and combines milling, cyanidation and Merrill Crowe circuits to produce doré on site. The sulphide circuit has a 450tpd capacity plant with two-stage flotation to produce a lead and zinc concentrate.

Two underground mines are operated at La Colorada, with approximately 60% of ore extracted from the Candelaria mine and the remaining 40% from the Estrella mine. Mining in both mines is mechanized cut and fill using waste rock as backfill.

For 2010, BMO Research forecasts production of 3.5Moz of silver, 1.7kt of lead and 2.8kt of zinc at co-product cash costs of US\$10.16/oz of silver.



#### Silver Miners

February 22, 2010

NC2 Vein led to a 67% increase in reserves in 2009.

#### **Exploration Drilling Discovers New Sources of Ore**

Extension of the NC2 vein led to a 67% increase in reserves through 2009 to 30.4Moz of silver, 37koz of gold, 24kt of lead and 49kt of zinc, which supports a mine life of ~7.5 years. La Colorada hosts a further 36.9Moz of silver, 40koz of gold, 43kt of lead and 72kt of zinc that provide future reserve growth.

PAA completed 8.9km of drilling through 2009 that led to the extension of the NC2 vein by ~200m below the current level of mining. The NC2 vein has a strike of 770m and is the primary source of sulphide ore. Drill results include 2,021g/t silver, 1.5g/t gold, 6.99% lead and 9.21% zinc. Drilling tested 350m of strike of the NC2 vein with holes spaced 15–20m apart. Based on the results of this program, the NC2 vein averages 4.5m in width.

Drilling also discovered a new vein, the NC3 vein, and several manto zones that returned higher grades, including 4,562g/t silver, 4.5g/t gold , 5.49% lead and 13.34% zinc over 1.5m.

#### **Huaron Property**

PAAS acquired the past producing Huaron project in Q1/06. Prior to the acquisition, approximately 22Mt of silver-rich base metal ore and 220Moz of silver were mined from +70 veins. The capital costs to reconstruct the mine following the closure in 1998 totaled US\$2.35M.

The mine, located 320km from Lima, covers 63.8km² of ground in the Cerro de Pasco district, which accounts for over half of Peru's historic silver production.

Mining is completed by cut and fill and exploits up to 31 different veins and up to 77 stopes at any one time. Stopes are back-filled with consolidated tailings from the mill. Ore is processed through a 2ktpd three-stage crushing, ball mill grinding, selective flotation and filtering circuit.

Lead and zinc concentrates are transported by road to the port of Callao near Lima. Lead and zinc concentrates are primarily committed to Glencore with the balance of zinc concentrate sold to Votorantim.

Prior to being shut down in Q2/09, copper concentrates with high silver grades were transported to the Doe Run, La Oroya, smelter. Since the shutdown, PAAS has been selling copper concentrates to other smelters, but at higher cost.

The NC2 extension hosts significantly higher grades.

Morococha is a 2ktpd underground mine.

Conventional milling and flotation.

Lead and zinc concentrates primarily sent to Glencore.

Copper concentrate was sent to La Oroya prior to shutdown.



#### Silver Miners

February 22, 2010

Fig 189: Huaron Mine

Huaron is located 320km from Lima in the Cerro de Pasco district.



Source: Pan American Silver Corp.

BMO Research estimates a 13year mine life. For 2010, BMO forecasts production of 3.5Moz of silver, 1.7kt of copper, 5.7kt of lead and 15.7kt of zinc at co-product cash costs of US\$9.92/oz of silver. Production levels are expected to sustain 2010 rates for the duration of the mine life, which BMO Research estimates at 13 years.

Current reserves of 65Moz of silver support a mine life of  $\sim$ 18.5 years. Huaron hosts a further 38Moz of silver in resources, underscoring the mines long-lived status.

Polymetallic silver-copper-lead-zinc veins, mantos and replacement ore bodies at Huaron have been identified. Individual zones have been traced over 1.8km and a vertical range of 500m. Ore bearing veins vary from less than 1m to 10m wide.

Exploration at Huaron has historically been successful at replacing reserves using a combination of underground drilling and drifting. Economic drill intersections are followed up by drifting for mineral resource and mineral reserve definition. Recent development work has focused on opening new levels to access high-grade ore in an effort to increase ore grades.

#### Morococha

PAA has a 92.2% interest in Morococha.

PAA acquired a majority interest in the Morococha underground mine in 2004 and has since increased its ownership to 92.2%. The asset is conveniently located ~50km southwest of the Huaron mine about 137km east of Lima, Peru. The area has been historically mined for over 100 years and lies within one of the most prolific polymetallic vein systems in the world.

2009 production of 2.7Moz of silver.

Morococha produced 2.7Moz of silver, 2.0kt of copper, 5.5kt of lead and 16.9kt of zinc through 2009 at projected co-product cash costs of US\$9.26/oz of silver. BMO Research models production at Morococha extending until the end of 2018.



#### **Silver Miners**

February 22, 2010

Underground mine with conventional flotation mill.

Morococha is a 2ktpd track underground mine with access by two shafts. Mining is completed by cut and fill, shrinkage and room and pillar methods using tailings or waste for backfill.

The Amistad mill processes ore by selective flotation methods and consists of three-stage crushing, ball mill grinding, flotation and filtering to produce individual copper, lead and zinc concentrates.

Concentrates are marketed under the same arrangements as those from Huaron and, therefore, have run into the same issues with the La Oroya smelter shutdown.

Fig 190: Morococha Mine

PAA acquired the Morococha underground mine in 2004.



Source: Pan American Silver Corp.

Improving underground infrastructure.

To improve underground access and ore haulage, PAA is constructing the "Manto Italia" decline from the Sierra Nevada portal to the Manto Italia deposit. Decline advancement has been placed on hold to develop a scissor ramp off the decline in order to access the newly discovered high-grade Morro Solar vein on the 400 level. Future advances on the Manto Italia ramp toward Yacumina will be reinitiated after the 400 level developments are well established.

2010E production of 2.8Moz of silver.

For 2010, BMO Research forecasts production of 2.7Moz of silver, 2.5kt of copper, 5.2kt of lead and 17.2kt of zinc at co-product cash costs of US\$8.84/oz of silver.

Current reserves of 35Moz of silver support a mine life of ~14 years. Morococha hosts a further 56Moz of silver in resource that could further extend the life of mining operations.

The Morococha district hosts four types of mineralization. However, two account for the majority of economic ore for the mine: epi-mesothermal Ag-Pb-Cu-Zn veins and bedded silver-base metal mantos. The individual ore shoots can range up to 400m long and 800m down plunge with an average width of 1.2m.



#### **Silver Miners**

February 22, 2010

#### Quiruvilca Mine – Reliant on Base Metal Prices

#### **High metal Prices Keep Quiruvilca Operating**

The Quiruvilca mine is a polymetallic underground mine located in northwest Peru about 76km east of Trujillo. The mine has been in operation for over 80 years (PAAS acquired it in 1995) and over time has become more and more reliant on its base metal production.

Since announcing plans to suspend operations in Q1/09, PAA has continued to operate Quiruvilca.

Pan American made the decision in Q1/09 to suspend operations at Quiruvilca based on the mine's reliance on base metal prices. However, with the recovery of base metal prices through 2009, PAAS has continued to operate with all development costs expensed, owing to the temporary status of the mine.

Quiruvilca produced 2009 production of 1.3Moz of silver, 1.6kt of copper, 3.3kt of lead and 11kt of zinc at co-product cash costs of US\$10.71/oz of silver.

Fig 191: Morococha Mine

PERU

Cajamarca QUIRUVILCA

BRAZIL

Huanaz Huanuco

Abancay

BOLIVIA

Quiruvilca is a 1.1ktpd underground mine located 76km east of Trujillo, Peru.

Source: Pan American Silver Corp.

Current reserves of 3.9Moz of silver support a mine life of three years (based on 2010 production). Quiruvilca hosts a further 23.7Moz of silver that could provide future reserve replacement contingent on base metal prices.

Given the BMO Research base metals forecasts, BMO expects PAAS to continue to operate Quiruvilca through 2010 and forecasts production of 1.3Moz of silver, 1.7kt of copper, 2.2kt of lead and 12.7kt of zinc at coproduct cash costs of US\$8.76/oz of silver.

Given the narrow vein setting, mining is completed by cut and fill. Ore is transported to the process plant, which combines milling and selective floatation to produce copper, lead and zinc concentrates. Concentrates are marketed under the same arrangements as those from Huaron.



#### **Silver Miners**

February 22, 2010

The mineralization is contained in a series of narrow polymetallic veins filling fractures and faults. Over 130 veins have been identified in the mine area and at least three-quarters of these veins have been in production at some point.

#### San Vicente Mine

#### **Expansion Completed in 2009**

The San Vicente silver-zinc mine is located in southern Bolivia about 460km south of Oruro. Pan American holds 95% of the asset through a subsidiary while the remaining 5% is held by Trafigura.

Prior to completion of a new 750tpd flotation plant in Q2/09, mining at San Vicente was conducted on a limited basis (~350tpd), as ore was trucked to a small third-party mill for processing.

The San Vicente mill was built for a cost of US\$72M and uses conventional flotation to produce a zinc-silver and a copper-silver concentrate. Ore passes through a jaw crusher at the plant, which feeds into an SAG mill-ball mill grinding circuit.

Fig 192: San Vicente Mine

The San Vicente mine is located in southwestern Bolivia.

Mining limited prior to

Cost for 750tpd flotation mill

expansion.

was US\$72M.



Source: Pan American Silver Corp.

Production from San Vicente started in April 2009.

2010 production of 2.8Moz of silver.

Production from San Vicente began in April 2009 and produced 2.3Moz of silver and 2.8kt of zinc at co-product costs of US\$4.73/oz of silver to the end of 2009.

BMO forecasts production of 2.8Moz of silver and 4.7kt of zinc at coproduct cash costs of US\$5.70/oz of silver.

Current reserves of 28.4Moz of silver support a mine life of 10 years (based on 2010 production). San Vicente hosts a further 13.7Moz of silver that could extend mining operations an additional three years.



#### **Silver Miners**

February 22, 2010

Mining completed using shrinkage and longhole mining.

The existing mine was designed to extract ore using conventional shrinkage stoping; however, the discovery of a wide and high-grade addition to the resource base warranted the introduction of longhole mining. A combination of both mining methods is now in place.

Zinc concentrates are transported by rail to Antofagasta and the silver concentrates are trucked to Arica, Chile. Contracts are currently in place with Trafigura and its trading company Cormin.

#### **New Discoveries to be Made**

The decision to expand San Vicente operations was predicated on the discovery of the high-grade Litoral vein system in 2007.

#### Manantial Espejo

**PAAS** announced commercial production at Manantial Espejo at the beginning of 2009.

**Development costs totalled** US\$228M.

A Solid First Year

PAAS announced commercial production at Manantial Espejo at the beginning of 2009 and became PAAS's second largest silver mine in 2009.

Total capital costs to develop the 2ktpd open pit / underground mine and cyanidation/Merrill Crowe plant totalled US\$228M.

Fig 193: Manantial Espejo Mine

Manatial Espejo is located in Santa Cruz province in Southern Argentina.



Source: Pan American Silver

Manatial Espejo is PAA's lowest cost mine.

Production from Manantial Espejo began in January 2009. 2009 production totalled 3.8Moz of silver and 71.9koz of gold at projected co-product cash costs of US\$3.18/oz silver. Dore is exported to Switzerland and Germany for processing.

A new 20km power transmission line from the main gridline at Portugalete was completed in 2009 to supply sufficient power for mining operations and the plant.



#### Silver Miners

February 22, 2010

Mining uses a combination of shrinkage stoping and long hole mining.

The existing mine was designed to extract ore using conventional shrinkage stoping, however the discovery of a wide and high grade addition to the resource base warranted the introduction of long hole mining. A combination of both mining methods is now in place.

For 2010, BMO Research forecasts production of 4.9Moz of silver and 62.4koz of gold at co-product cash costs of US\$1.87/oz. of silver.

Current reserves of 36.1Moz of silver and 518koz of gold support a mine life of ~9 years (based on 2010 production). Manantial Espejo hosts a further 14.4Moz of silver and 144koz of gold that could extend mining operations an additional 2 to 3 years.

Mineralization at Manantial Espejo is hosted in four main veins: the Maria, Karina/Union, and Melissa Concepcion Veins.

#### **New Discoveries to Be Made**

Mineralization at Manantial Espejo is hosted in four main veins: the Maria, Karina/Union, and Melissa Concepcion Veins.

To date, the majority of reserves and resources are contained within the Maria Vein, a wide multiphase silica vein exposed on surface for more than 1km. Drilling has intersected the vein to a maximum depth of 275m below surface. The vein averages 7.8m wide and is open laterally and at depth.

Exploration at Manantial Espejo remains at an early stage with potential for additional discoveries in the vicinity of existing infrastructure, but also within the 25,533 hectare land package.

#### Exploration

In Q2/09, PAA signed a JV with OK to earn a 55% interest in the La Preciosa project.

#### La Preciosa – On the Fast-Track to Feasibility

In Q2/09, PAAS signed a joint venture agreement with Orko Silver (OK.T) to earn a 55% interest in the La Preciosa project (Durango, Mexico) by advancing the project to production.

The joint venture includes the Santa Monica and San Juan concessions, which cover 32,422 hectares. OK had advanced the La Preciosa through the exploration and the delineation of indicated resources of 63Moz of silver and 92koz of gold with an additional 72Moz of silver and 97koz of gold inferred resource.

During 2009, PAA drilled 28km in 91 holes to further upgrade existing resources and to test several outlying targets.

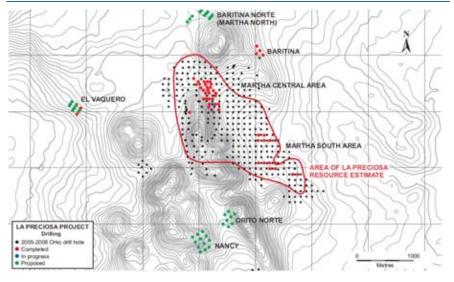
The JV also completed initial metallurgical test work that yielded 91% recoveries for silver with cyanide consumption of 1.6kg/t.



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Fig 194: La Preciosa Project



Source: Orko Silver

PAA has initiated negotiations to acquire surface lands and identify suitable water sources.

A condensed time frame to a production decision.

PAA plans to complete further delineation drilling, engineering and environmental permitting to advance the project to feasibility by the end of 2010.

BMO Research expects La Preciosa to develop as an open-pit/underground operation beginning in Q4/12 with ore processed through a conventional cyanidation/Merrill Crowe plant to produce doré. Capital costs to develop the mine are estimated at US\$170M.

Production potential of 9Moz of silver at US\$5.22/oz.

Based on 4ktpd throughput rate, La Preciosa is projected to produce an average of 11.1Moz of silver and 10.3koz of gold annually at co-product cash costs of US\$3.82/oz of silver over a +10-year mine life.

BMO Research expects that La Preciosa's potential production profile and lower quartile cash costs could motivate PAAS to consolidate ownership.

The acquisition of Aquiline Resources at the end of 2009 exposed PAA to a world-class deposit.

#### Navidad - A Company Maker

The acquisition of Aquiline Resources at the end of 2009 has exposed PAAS to a world class deposit with total resources of 752Moz of silver and 1,611kt of lead. At the time of the announcement the transaction was valued at approximately C\$625M.

Navidad is located in the Patagonia region of southern Argentina, in the province of Chubut. Access to the project is via 320km of gravel highway west of the port city of Puerto Madryn.

Resources contained within eight near-surface deposits.

Resources at Navidad are contained within eight deposits separated into silver (Loma de la Plata, Valle Esperanza and Barite Hill) and silver-base metal (Galena Hill, Connector Zone, Navidad Hill and Calcite Hill and Calcite Northwest).



#### Silver Miners

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Fig 195: Navidad Project



Source: Pan American Silver Corp.

#### **Positive Initial Metallurgical Test Work**

Metallurgical test work completed on the silver-rich zones Loma de La Plata, Barite Hill and Valle Esperanza indicate a silver-rich concentrate can be produced using conventional technology.

Additional metallurgical test work is required to improve mass pull and recoveries to a silver-rich and lead concentrate for mineralization within the Galena Hill deposit.

In Q4/08, AQI prepared a preliminary assessment on the development of the Loma de la Plata zone.

#### **Future Production Potential Is Big**

In Q4/08, AQI prepared a preliminary assessment (PA) on the development of the Loma de la Plata zone. The study outlined development of a 10ktpd open-pit mine and conventional flotation plant to produce a silver-rich concentrate for off site processing. The PA outlined annual production of 15Moz of silver at cash costs of US\$4.47/oz. Total capital to develop the operation was estimated at US\$273M.

The parameters outlined in the PA are reflective of the production potential of Navidad rather than a definitive development scenario. BMO Research expects PAA to build project ownership as it proceeds with environmental impact assessment (EIA) and feasibility work through 2010.

In the absence of concrete design parameters, BMO Research estimates production beginning at 6.9Moz of silver in 2014, increasing to 33Moz of silver by 2018.

Once a production footprint is established, the Navidad resource base provides the potential to increase the scale of operations to a 30ktpd capacity.

# In the absence of concrete design parameters, BMO Research estimates production beginning at 6.9Moz of silver in 2014, increasing to 33Moz of silver by 2018.

Since 2003, the province of Chubut has had a moratorium on the use of cyanide and open-pit mining.

#### **Navidad Not Without Risk**

Since 2003, the province of Chubut has had a moratorium on the use of cyanide and open-pit mining. The moratorium was initiated in response to development plans for the Esquel gold-silver deposit (owned by YRI.TSX), located near the town of Esquel.



#### **Silver Miners**

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Since mid-2008, the Government of Chubut has indicated that portions of Chubut would be opened up to responsible mining. However, no progress has been made toward this goal. Since mid-2008, the Government of Chubut has indicated that portions of Chubut would be opened up to responsible mining. However, no progress has been made toward this goal.

While timing is uncertain, BMO Research believes the Chubut government will begin to move forward on a policy of selective mining as PAA advances Navidad toward feasibility. Downside risk is significant, with Navidad representing 20% of the BMO Research 10% nominal NPV for PAA.

#### **Future Exploration Potential Remains Significant**

Exploration has identified three parallel, northwest trends of silver-base metal mineralization. From east to west, they include the Navidad Trend, the Esperanza and Argenta Trends. Combined, these three trends are hosts to an aggregate +16km of silver-base metal mineralization with significant on-strike upside.

Silver and silver-base metal mineralization at Navidad is related to the northwest-trending Gastre fault zone, a long-lived extensional corridor.

Navidad is interpreted to have formed in a shallow, subaqueous setting associated with the emplacement of trachyandesite subvolcanic intrusions and breccias. Subaqueous silver-lead mineralization is hosted within stratiform and/or replacement zones overlying trachyandesite volcanic and intrusive rocks.

Deeper in the system, multi-stage epithermal veining and brecciation within the trachyandesite host rock dominate.



#### **Silver Miners**

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### 22. Hecla Mining (HL.NYSE)

### A Premier Intermediate Producer With Leverage to Base Metals

HL is rated Market Perform with a US\$6.00 target price.

U.S. focus provides lower jurisdictional risk.

Long-lived mines with annual production of 10Moz of silver.

Limited expansion prospects.

An improving balance sheet could fuel acquisition.

A Market Perform rating and target price of US\$6.00 captures HL's production profile and leverage to rising base metal prices. HL trades at a 32% premium relative to intermediate peer valuations at spot metal prices.

Hecla Mining (HL) is the premier intermediate silver producer and is unique among peers owing to above-average leverage to base metals. The company is further distinguished in that production is derived from two long-lived, upper tier mines with +10-year reserve lives.

HL's flagship mine is Greens Creek, located near Juneau, Alaska. Combined with production from the Lucky Friday mine in the Silver Valley of Idaho, HL-NYSE is projected to maintain steady state payable production of ~9Moz of silver, 48kt gold, 55kt of zinc and 33kt of lead per annum.

Deep mine expansion at Lucky Friday provides growth prospects to 12Moz of silver annually. However, with a long lead time for development, higher production at Lucky Friday is unlikely to materialize until late 2015.

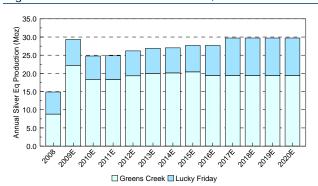
Offsetting limited growth prospects, HL's debt free status, combined with BMO Research forecasts of stronger precious and base metal prices are projected to drive substantial free cash flow that will build a strong war chest for future acquisition capabilities. At the end of 2009, HL's net cash position of US\$100M if unused could grow to ~US\$630M by 2015.

Fig 196: Mine Locations



Source: Source: Hecla Mining Co.

Fig 197: HL-NYSE Production Profile, 2009-2020E





#### **Silver Miners**

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# Initiating with a Market Perform rating.

HL trades at a 28% premium to intermediate silver producers in the BMO Research coverage universe.

A US\$6.00 target price values HL at 2.0x NPV.

#### Valuation

BMO Research is initiating coverage of HL with a Market Perform rating and a target price of US\$6.00, based on 2.0x the 10% nominal corporate NPV of US\$2.90/share using the BMO metal price forecast.

HL trades at a 1.71x, or a 28% premium to intermediate silver producers in the BMO Research coverage universe, which are currently trading at 1.53x their 10% nominal NPV at spot metal prices.

Using BMO Research 2010 estimates, HL is trading at 13.6x EPS and 5.8x CFPS, versus average multiples of 23.9x EPS and 15.7x CFPS for intermediate silver producer peers.

Fig 198: HL Valuation

BMO Assumptions	Spot	2009E	2010E	2011E	2012E	LT
Gold	1,108	972	1,150	1,150	950	850
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET ASSET VALUE		NPV <sub>10%</sub> ,	BMO Price	NPV <sub>0%</sub> ,	BMO Price	NPV <sub>10</sub>	%, Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share) <sup>1</sup>	US\$M	(\$/Share) <sup>1</sup>
Greens Creek	100%	506.6	2.00	827.0	3.26	643.9	2.54
Lucky Friday	100%	131.2	0.52	365.0	1.44	152.2	0.60
Project NPV		637.8	2.51	1,191.9	4.70	796.1	3.14
Net Cash		101.0	0.40	101.0	0.40	101.0	0.40
I-T-M Options and Warrants		111.1	0.44	111.1	0.44	111.1	0.44
Corporate Adjustment <sup>2</sup>		(113.3)	(0.45)	(142.3)	(0.45)	(113.3)	(0.45)
NPV of Hedge Book		-	-	-	-	-	-
Total Corporate Adjustmen	its	98.8	0.39	69.8	0.39	98.8	0.39
Corporate NPV	US\$	736.6	2.90	1,261.8	5.09	894.9	3.53
Multiple to Corporate NPV	2.0x						
12-month Target Price	US\$	1,473.1	6.00				

<sup>1.</sup> Assumes p.d. shares of 253.6M

All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses



#### **Silver Miners**

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Fig 199: HL Model Parameters

Project		GREENS	CREEK						Project			LUCKY FR	IDAY				
Country Interest		USA 100%						:	Country Interest			USA 100%					
% HL Project NPV		79%							% HL Projec			21%					
Mine Parameters									Mine Parame	eters			,				
Mine Type				nderground					Mine Type				nderground				
Processing				ng, Flotati	on				Processing			MIIII	ng, Flotati	on			
Processing Rate			tpd	2,250					Processing Ra		tpd		900.00				
LOM Production		Silver		Annual 5.9	Total 75				LOM Production		C11		Annual 3.7	<u>Total</u>			
			Moz	5.9 49.5	631							Moz kt	24.0	57 366			
		Gold	koz	49.5 19.5	249							κι kt	10.3	158			
		Lead Zinc	kt kt	64.2	249 819						ZINC	Kι	10.3	158			
		Copper	kt	0.0	0 819												
LOM Total Cash Costs*	,	coppei	US\$	9.6	-				LOM Total Cas	h Costs	*		6.7	7			
Modelled Mine Life			yrs	12.					Modelled Mine			1 450	15.				
Initial Capital Costs			US\$M	12.	0				Initial Capital			yrs US\$M	157				
•			US\$M	-									137	.5			
Expansion Capex Total Sustaining Capital			US\$M	278	6				Expansion Car Total Sustainii			US\$M US\$M	289	. 0			
Total Sustaining Capital			OSSIVI	270	.0				rotal Sustairii	ng capi	ıaı	OSSIVI	207	0			
GREENS CREEK									LUCKY FRIDA	AY							
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc	_	Modeled		Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc
	000	g/t	%	%	Moz	kt	kt				000	g/t	%	%	Moz	kt	kt
Underground	9,923	374.68	3.50	9.71	120	347	963	٦	Underground		4,779	384.04	8.23	3.79	59	393	181
Production Estimates		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
GREENS CREEK		2008A	ZUUJE	ZOTOE	201115	20121	20135	20145	20132	20205	7.VI.	20105	LUIJE	2020E	ZUZIE	LUZZE	2023E

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
GREENS CREEK																	
Tons Mined	tpd	2,193	2,161	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	2,250	563	-
Ore Processed	ktpa	801	791	810	810	810	810	810	810	810	810	810	810	810	810	203	-
Grade	Ag (oz/t)	196.4	13.0	12.8	12.3	12.3	13.3	13.3	13.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3	-
	Au (oz/t)	-	0.11	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	-
	Copper (9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lead (%)	-	3.82	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	-
	Zinc (%)	-	10.54	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	-
Payable Silver	Moz	5.1	6.5	5.7	5.4	5.4	5.9	5.9	5.9	5.0	5.0	5.0	5.0	5.0	5.0	1.3	-
Silver Equiv. Production	Moz	8.8	22.2	18.4	18.3	19.3	20.0	20.1	20.4	19.4	19.4	19.4	19.4	19.4	19.4	4.9	-
Total Cash Costs*	US\$/oz	5.97	7.39	10.18	10.20	9.66	9.35	9.29	9.17	9.64	9.64	9.64	9.64	9.64	9.64	9.64	-
Total Production Costs*	US\$/oz	8.81	10.14	14.69	14.34	13.62	13.65	13.73	13.75	13.98	14.23	14.52	14.90	15.45	16.44	12.58	-
LUCKY FRIDAY																	
Tons Mined	tpd	868	922	900	900	900	900	900	900	900	900	900	900	900	900	900	900
Ore Processed	ktpa	801	791	810	810	810	810	810	810	810	810	810	810	810	810	203	-
Grade	Ag (oz/t)	9.70	10.86	10.50	10.25	10.25	10.25	10.00	10.50	11.63	15.00	15.00	15.00	15.00	13.00	13.00	13.00
	Lead (%)	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.83	8.25	9.75	9.75	9.75	9.75	9.00	9.00	9.00
	Zinc (%)	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.38	4.50	4.50	4.50	4.50	4.00	4.00	4.00
Payable Silver	Moz	2.9	3.5	3.3	3.2	3.2	3.2	3.1	3.3	3.6	4.7	4.7	4.7	4.7	4.1	4.1	4.1
Silver Equiv. Production	Moz	6.1	7.1	6.4	6.6	6.9	6.9	6.9	7.3	8.3	10.3	10.3	10.3	10.3	9.2	9.2	9.2
Total Cash Costs*	US\$/oz	7.05	6.40	8.22	8.06	7.67	7.60	7.62	7.28	6.68	5.82	5.82	5.82	5.82	6.28	6.28	6.28
Total Production Costs*	US\$/oz	7.98	7.91	9.84	9.61	9.79	10.22	10.69	10.78	10.19	9.40	9.73	10.11	10.55	11.42	12.18	13.38
Hecla Total, Attributab	-																
Payable Silver	Moz	7.8	9.8	8.7	8.5	8.5	8.9	8.8	9.0	8.4	9.4	9.4	9.4	9.4	8.8	5.1	3.8
Payable Gold	koz	45.0	54.8	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	11.7	-
Total Silver Equiv. Produc	ct Moz	14.9	29.3	24.8	24.9	26.2	26.9	27.0	27.7	27.7	29.8	29.8	29.8	29.8	28.6	14.1	9.2
Total Cash Costs	US\$/oz	7.49	10.96	9.23	8.95	8.37	8.16	8.12	7.93	7.98	7.57	7.57	7.57	7.57	7.79	6.76	5.96
Total Production Costs	US\$/oz	10.10	14.70	13.01	12.35	11.74	11.85	12.01	11.97	11.78	11.52	11.79	12.08	12.54	13.51	11.50	12.70
*Silver co-product cash costs u	nless otherwise	indicated															



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#### Company Synopsis

2010E payable production of 8.7Moz of silver.

BMO Research forecasts 2010E payable production of 8.7Moz of silver and 46.6koz of gold at co-product cash costs of US\$9.23/oz of silver.

### HL has a strong base metal weighting.

HL derives  $\sim\!35\%$  of mine revenue from silver,  $\sim\!11\%$  from gold and +50% from lead and zinc, positioning the company as a base metal weighted silver producer.

Fig 200: Production & Cash Cost Profile, 2008-2020E

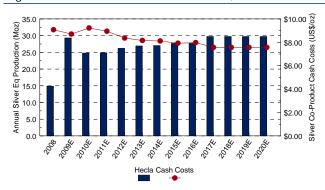
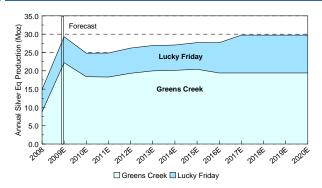


Fig 201: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 203: Annual Production by Metal, 2008–2020E

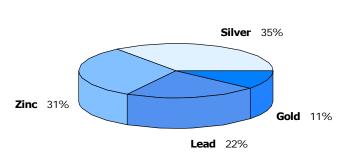
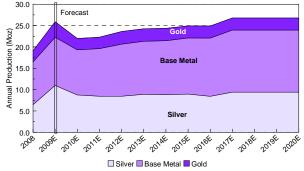


Fig 202: HL Revenue by Metal (%), 2008–2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

#### 2009 - Focused on Balance Sheet

2009 was a turnaround year for HL, entering the year with a net debt position of US\$125M and exiting the year with no debt and +US\$105M in cash reserves. HL improving balance sheet was the result of record operational performance at both Greens Creek and Lucky Friday and US\$135.5M in equity issuance through 2009.

In addition to retiring debt commitments, HL reinstated preferred share dividends with US\$17.3M in current and arrears payments issued at the beginning of 2010.

Despite sustained capital expenditures of close to US\$420M over the next five years as HL initiates deep development plans at the Lucky Friday mine, cash reserves are expected to steadily improve.



#### **Silver Miners**

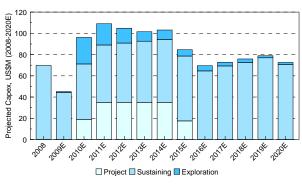
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BMO Research estimates that HL could increase its cash position to US\$540M by the end of 2015.

### Projected strong EPS and CFPS growth through 2012.

With projected high metal prices over the next two years, BMO Research forecasts EPS of US\$0.39 and CFPS of US\$0.91 in 2010 and EPS of US\$0.46 and CFPS of US\$0.82 in 2011.

Fig 204: Projected Capital Expenditures (US\$M)

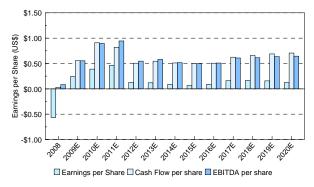


Source: BMO Capital Markets Source: BMO

Fig 205: Net Cash (Debt) Position, 2008–2020E

Source: BMO Capital Markets

Fig 206: Earnings Estimates, 2008–2020E





#### **Silver Miners**

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#### Reserves/Resources

HL has above-average base metal exposure.

HL reserve base is base metal weighted with silver accounting for only 36% of the value of reserves using long-term metal price forecasts. Combined lead and zinc account for  $\sim\!50\%$  of the in situ reserve.

139.5Moz of silver in reserve supports a ~12-year mine life.

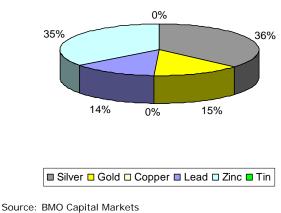
At the end of 2009, Greens Creek and Lucky Friday had reserves of 139.5Moz of silver, supporting a  $\sim$ 13-year reserve life. Combined, the two mines host a further 171.4M in resource that could translate into a further 15 years.

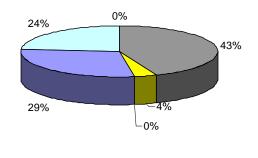
Total resources of 206Moz provide both organic and new growth.

Outside of the company's two mines, HL has two exploration-stage projects that host 35Moz of silver resource. San Sebastian and San Juan are early stage projects with an unclear development timeframe.

Fig 207: Reserve Metal Distribution

Fig 208: Reserve Metal Distribution





☐ Silver ☐ Gold ☐ Copper ☐ Lead ☐ Zinc ☐ Tin



#### **Silver Miners**

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Fig 209: HL Reserves and Resources

										Contain	ed Metal		
Lucky Friday	Tonnes	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven	1,232	420.1	-	-	8.03	2.58	-	16,640	-	-	99	32	-
Probable	1,431	477.2	-	-	8.90	2.92	-	21,948	-	-	127	42	-
Total Reserves	2,663	450.7	-	-	8.50	2.77	-	38,588	-	-	226	74	-
Mineralized Material	11,431	245.4	-	-	4.51	2.31	_	90,187	_	-	515	264	_
Mineralized Material	11,431	245.4	-	•	4.51	2.31	-	90,187	-	-	515	264	-
Other Resources	4,200	371.1	-	-	7.42	3.09	-	50,107	-	-	312	130	-
										Contain	ed Metal		
Greens Creek	Tonnes	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	7,543	416.4	-	=	3.65	10.26	-	100,973	847	-	275	774	-
Total Reserves	7,543	416.4	-	-	3.65	10.26		100,973	847	-	275	774	-
	-	-	-	-	-	-	-	<del>-</del>	-	-	-	-	-
Mineralized Material	716	141.6	-	=	2.03	4.60	-	3,262	49	=	15	33	-
Mineralized Material	716	141.6	-	-	2.03	4.60	-	3,262	49		15	33	-
Other Resources	2,188	395.9	-	-	2.71	6.78	-	27,855	221	-	59	148	-
										Contain	ed Metal		
Other Resources	Tonnes	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
San Sebastian	1,036	275.7	-	-	2.89	4.32	-	9,186	14	-	30	45	-
San Juan	1,964	410.9	-	=	1.67	1.46	-	25,946	-	-	33	29	-
Other Resources	3,001	364.2	-	-	2.09	2.45	-	35,132	14	-	63	73	-

Source: Hecla Mining Co.



#### Silver Miners

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#### Greens Creek - Drives HL Valuation

Greens Creek, located on Admiralty Island west of Juneau in southeast Alaska is unique in the size and precious metal endowment relative to massive sulphide deposits globally.

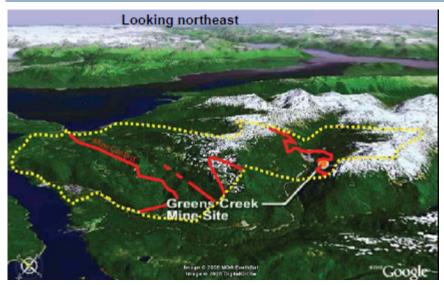
Historic production of 204Moz of silver.

Since beginning production in 2006, Greens Creek has produced 204Moz of silver, 1.7Moz of gold, 102kt of lead, 471kt of zinc from 10.7Mt of ore. Reserves and resources at the end of 2008 total a further 142Moz of silver, 1Moz of gold, 354kt of lead, 953kt of zinc from 10Mt of ore.

**Greens Creek represents** 89% of HL's project NPV.

Greens Creek's stature as a world-class mine is reflected in the mine's 10% nominal NPV of US\$507M using BMO Research metal price forecasts. Based on BMO estimates, Greens Creek represents 79% of HL 10% nominal project NPV of US\$638M.

Fig 210: Greens Creek District



Source: Hecla Mining Co.

HL acquired remaining 70% from RTP in H2/08.

Optimization programs initiated by HL after acquiring the remaining 70.3% interest in Greens Creek from Rio Tinto in H2/08 at a cost of US\$750M, have increased production by  $\sim$ 10% to 2.2ktpd as of the end of 2009.

2009 payable production of 6.5Moz of silver.

For 2009, Greens Creek produced payable metal of 6.5Moz of silver, 54.8koz of gold, 16.8kt of lead and 52.9kt of zinc at projected co-product cash costs of US\$7.39/oz of silver.

Production rates to increase to 2,300tpd by year-end.

Production rates are expected to increase gradually to  $\sim\!2.3$ ktpd by the end of 2010. Increased production rates should offset lower grades attributed to increase log hole versus cut and fill stoping. Greens Creek production is forecast to decline to the 5.5Moz of silver, 47koz of gold, 18kt of lead and 52kt of zinc per annum at co-product cash costs of  $\sim\!$ US\$10.00/oz of silver.



#### Silver Miners

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Lower operating costs should be maintained.

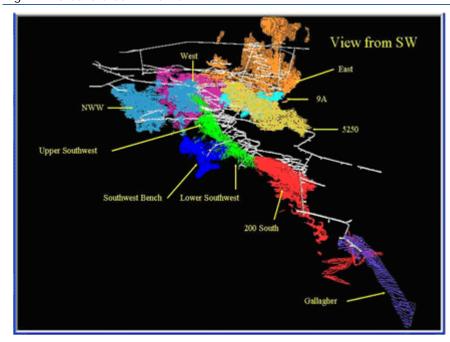
Production rates, combined with more sustained access to power from the grid versus onsite power generation have reduced operating costs by  $\sim\!30\%$  to the US\$60/t range. Following the integration of the 14.3MW Lake Dorothy power generating facility outside of Juneau, HL expects to maintain +90% grid power availability.

Underground mining at Greens Creek is by ramp access with ore extracted using a combination of long hole, cut and fill, and room and pillar mining depending on the orientation and widths of lenses.

Massive sulphide mineralization at Greens Creek has been identified in +10 discrete lenses with mining currently focused on the 5250 zone and the 200 South zones. Future mining will transition into the Deep 200 South and Gallagher south deposits based on existing reserves.

Fig 211: Greens Creek Mine Plan

Mining is focused on the 5250 and Deep 200 South zones.



Source: Hecla Mining Co.

Ore is processed by a conventional 2.4ktpd gravity and flotation plant to produce:

- Gold-rich gravity concentrate
- A high grade silver-lead concentrate
- High-grade zinc concentrate
- Low grade zinc-precious metal concentrate.

Concentrates are shipped from site to a number of smelters depending on contracts.



#### **Silver Miners**

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HL has a large untested land package.

Exploration budgets are expected to increase to ~US\$5 in 2010.

HL has laid out numerous targets to be tested over the next five years.

Sustained exploration over the next few years could lead to new discoveries.

#### **Key regional targets include:**

- NE Contact Zone
- West Gallagher
- Killer Creek
- East Ridge

#### **VMS Deposits Develop in Clusters**

HL holds a controlling interest in geology that hosts the Greens Creek deposit through over 35km² of mineral concessions that include 18 patented lode claims covering the immediate mine area and 33km² of mineral title to Federal Land granted in a land exchange.

Entering into 2010 with a strong financial position, HL has placed an emphasis on exploration to begin a more concerted effort on evaluating priority targets. BMO Research expects HL to increase exploration budgets to ~US\$5M in 2010.

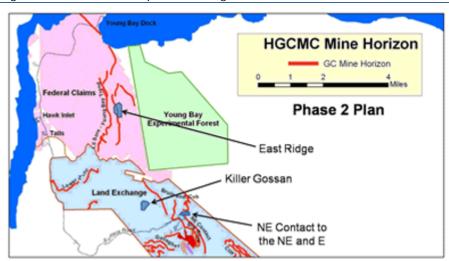
In-mine exploration is expected to focus on extension of existing ore bodies including the 5250 and Deep 200 South extensions. Exploration will also target the faulted offset of the Southwest ore body and the lower limb of the Northwest ore body.

Exploration has identified numerous targets along the trace of the prospective geology. Near-mine exploration is focused on the NE contact target that represents the re-folded extension of the ore bearing horizon northeast of the mine.

Regional exploration will begin a multi-year effort to begin drill testing more than 10 known targets that lie along the extension of the Greens Creek mine horizon within the broader land package. Many of these targets have been identified for a number of years. However, due low metal prices through the late 1990's and early 2000's and a focus on near-mine exploration, many of the targets have never moved beyond the prospect stage.

The early stage of exploration is unlikely to lead to immediate success, but given the propensity for VMS deposits to form in clusters, sustained exploration over the next several years is expected to return positive results.

Fig 212: Greens Creek Exploration Targets



Source: Hecla Mining Co.



#### Silver Miners

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#### Lucky Friday

#### Rebirth of an old mining district

Production from the Coeur d'Alene valley exceeds 1.2Boz of silver.

The Lucky Friday mine, located in the Silver Valley of central Idaho is a world-class silver district with past production of 1.2Boz of silver since the initial discovery in 1885. Silver-base metal mineralization is hosted along the 48km long Rivett structural zone. HL land holdings in the district total 66km² and include the operating Lucky Friday Expansion Area and the past-producing Lucky Friday and Gold Hunter mines.

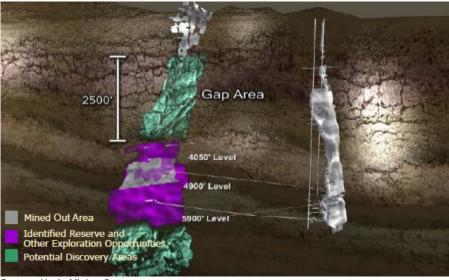
Since 1942 Lucky Friday has produced 144Moz of silver.

The Lucky Friday mine has produced 144Moz of silver since mining operations began in 1942. Typical of the Silver Valley, silver-base metal veins at Lucky Friday have been exploited for 500m to +1km of strike and over a vertical range of +2,300m.

Reserves at the end of 2009 of 38.5Moz of silver support an +10-year mine life. A further 140Moz of silver in resource underscore the potential for future exploration and development to extend the life of operations.

Fig 213: Lucky Friday mine

Through 2009, HL increased reserves by 68% to 38.5Moz of silver.



Source: Hecla Mining Co.

The Lucky Friday mine produced payable metal of 3.3Moz of silver, 2.5kt of lead and 7.8kt of zinc in 2009 at projected co-product cash costs of US\$6.40/oz of silver.

Production levels are expected to decline.

BMO Research expects production levels to decline in 2010 to 3.0Moz of silver, 19.2kt of lead and 7.3kt of zinc at co-product cash costs of US\$8.22/oz of silver.

Ore is mined by cut and fill with stope widths averaging 2.6m and up to 235m long with extraction on sub levels spaced 15m apart. Mining is centred on the Lucky Friday Extension zone and transported via a 1.6km cross cut to the 1.5ktpd Silver shaft and hoisted to surface. Current mining is focused between the 5,900ft and 6,300ft levels.



#### **Silver Miners**

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Unresolved environmental liability is a risk.

High grade silver-rich lead and zinc concentrates are produced using a conventional 875tpd flotation plant. Silver recoveries average 95% with lead and zinc recoveries averaging 94% and 87%, respectively.

Owing to the age of mining operations, the Lucky Friday mine carries an unresolved environmental liability pertaining to a 1996 law suit filed by the U.S Government in the Federal District Court in Idaho asserting damages to the Coeur d'Alene river basin under the Clean Water Act against certain mining companies, including HL. The Environmental Agency has estimated US\$359M in associated remediation costs.

HL has yet to settle and has accrued a US\$65.6M liability as of the end of 2009.

#### **Exploration - Driving Future Growth**

Over the last several years, HL has increased exploration efforts to increase the life of operations. This effort has led to the delineation of significantly higher grade resource potential below the lowest level of the mine's 6300-foot level.

HL has demonstrated higher grade potential at depth.

Mineralization within the Lucky Friday Deep zone has been delineated for over 750m of strike and a vertical depth of 500m below existing workings. Widespaced step out holes indicate the potential for further continuity of mineralization along strike and the zone remains open at depth.

Development is expected to take five years with a capex of US\$176M.

In H1/10, BMO Research expects HL to announce results of a feasibility study to deepen the Lucky Friday mine. The program is expected to involve sinking of a new internal winze to the 7,500 foot level along with related infrastructure that will shift the focus of mining plans to the Lucky Friday Deep zone beginning in 2015.

BMO Research estimates capital costs to develop Lucky Friday Deeps in the range of US\$176M with production beginning Q4/15.

A 50% increase in production.

Higher silver base metal grades within the Lucky Friday Deep zone are projected to increase payable production by ~50% to 4.4Moz of silver, 28kt of lead and 10kt of zinc and reduce co-product cash costs to US\$5.82/oz of silver by 2017.



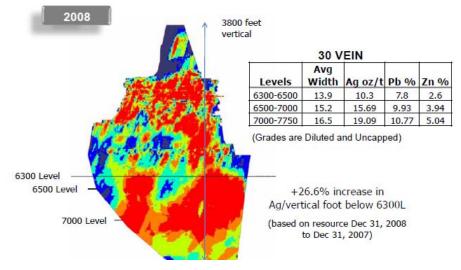
#### Silver Miners

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### Drilling at Lucky Friday Deeps has demonstrated a:

- 26% increase in silver grade
- 100% increase in zinc grade
- 25% increase in lead grade

Fig 214: Lucky Friday Long Section



Source: Hecla Mining Co.

Exploration is taking a longterm view that could lead to new discoveries. HL has also embarked upon a generative program focused on the integration of all geological data into 3D database. Through this program, HL-NYSE knowledge of parameters that control mineralization have increased exponentially and led to the targeting of near surface areas that were previously deemed not prospective.

As a result of this program, HL has initiated a multi-year program to evaluate priority targets including:

- Up dip extensions of known deposits
- Fault offset extensions mineralized zones

#### **Exploration Targets**

#### San Juan - Reviving a Historic District

HL is earning a 70% interest in the San Juan project in Colorado. The district has produced ~84Moz of silver from narrow veins. In 2009, HL increased silver resources to 25.9Moz within the past producing Bullfrog mine.

Exploration is focused on resource growth to the 100Moz silver range to advance the project toward an economic evaluation.

#### San Sebastian Mine - Awaiting Resource Growth

HL holds exploration licences covering 130km² in the past producing San Sebastian district in 65km northwest of Durango. From 2002 to 2006, the San Sebastian mine produced 11.2Moz of silver and 156koz of gold. Project resources total 9.2Moz of silver and 14koz of gold.

The project area includes the past producing 500tpd San Sebastian mine that was placed on care and maintenance in 2005. After a hiatus in exploration through H1/09, HL resumed exploration activities in Q4/09 focused on resource delineation.



#### **Silver Miners**

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### 23. Silver Standard (SSO.TSX)

#### Can SSO Unlock the Full Value of a Rich Asset Base?

SSO is rated Outperform with a C\$24.25 target price.

An Outperform rating captures SSO's production profile and future growth prospects. SSO trades at a 20% discount relative to intermediate peer valuations at BMO Research metal prices.

SSO has entered the ranks of intermediate silver producer.

SSO entered the ranks of intermediate silver producer with the announcement of commercial production at the Pirquitas mine in northern Argentina in mid-December. SSO anticipates 2010 production at Pirquitas of 7Moz of silver and 0.9kt of tin at co-product cash costs projected to be in the range of US\$9/oz. BMO Research expects Pirquitas to produce 7.5Moz of silver and 0.7kt of tin at higher costs versus guidance at co-product costs of US\$10.63/oz (US\$9.94/oz bi-product).

Future expansion at Pirquitas is likely.

Once steady-state production at Pirquitas of 11Moz of silver and 1.5kt of tin is attained in 2011, BMO Research expects SSO to announce a mill expansion to include a zinc circuit. Recovery of an average of 9.4kt of zinc in concentrate is projected to decrease co-product cash costs to the US\$7/oz of silver range by 2014.

SSO has a strong development pipeline.

In the background, SSO has two key development projects, San Luis in Peru and Pitarrilla in Mexico that could grow production to 29Moz of silver, 144koz of gold and significant base metals by 2015.

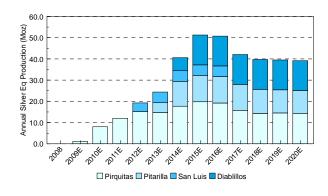
To crystallize further value, SSO will need to outline development possibilities at Snowfields/Brucejack.

SSO has a large portfolio of exploration-stage projects through the Americas with total resources of 566Moz of Silver, 3Moz of gold and 188kt of copper. Over 90% of SSO's gold and copper resources are contained within the Snowfields - Bruce Jack (SBJ) project located in north-western B.C. Combined with the KSM project, operated by Seabridge Gold (SEA-T), SBJ is part of one of the largest gold-copper systems globally. The challenge will be to unlock the value of the district. SSO plans to spend ~US\$20M to delineate additional resource potential and to advance SBJ the completion of a preliminary assessment in H2/10.

Fig 215: SSO Projects



Fig 216: SSO Production, 2009-2020E





#### Silver Miners

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Initiating with an Outperform rating.

SSO trades at a 20% discount to intermediate silver producers in the BMO Research coverage universe.

A C\$24.25 target price values SSO at 1.7x NPV.

#### Valuation

BMO Research is initiating coverage of SSO with Outperform rating and a target price of C\$24.25, based on 1.7x the 10% nominal NPV of US\$14.11/share using the BMO metal price forecast and adjusted for working capital and using an FX rate of \$0.99 C\$/US\$.

SSO trades at 1.08x the 10% nominal NPV at spot metal prices, or at a 20% discount to intermediate producers in the BMO Research coverage universe, which are currently trading at 1.34x their 10% nominal NPV.

Using BMO Research 2010 estimates, SSO is trading at 51.3x EPS and 28.6x CFPS, versus average multiples of 23.9x EPS and 15.7x CFPS for its intermediate producer peers.

Fig 217: SSO Valuation

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Gold	1,108	972	1,150	1,150	950	850
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET ASSET VALUE		NPV <sub>10%</sub> ,	BMO Price	NPV <sub>0%</sub> , BI	MO Price	NPV <sub>10</sub>	, Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share) <sup>1</sup>	US\$M	(\$/Share)1
•							
Pirquitas	100%	670.0	8.90	1,310.9	17.41	637.0	8.46
San Luis	100%	64.2	0.85	131.7	1.75	93.3	1.24
Diablillos	100%	20.8	0.28	203.6	2.70	105.2	1.40
Pitarrilla	100%	54.0	0.72	363.5	4.83	99.8	1.33
Project NPV		808.9	10.74	2,009.7	26.69	935.3	12.42
Exploration Credit (SBJ)		183.8	2.44	183.8	2.44	183.8	2.44
Net Cash <sup>3</sup>		146.5	1.94	146.5	1.94	141.9	1.88
I-T-M Options and Warrants		-	-	-	-	-	-
Corporate Adjustment <sup>2</sup>		(76.4)	(1.01)	(96.7)	(1.28)	(76.4)	(1.01)
NPV of Hedge Book		0.00	0.00	0.0	0.00	(0.0)	(0.00)
Total Corporate Adjustmen	nts	253.9	3.37	233.5	3.10	249.3	3.31
Corporate NPV	US\$	1,062.8	14.11	2,243.2	29.79	1,184.7	15.73
	C\$	1,208.1	16.04	2,265.9	30.09	1,233.5	16.38
Multiple to Corporate NPV	1.7x						
12-month Target Price	US\$	\$ 1,807	\$ 23.99	•	•		
	C\$	\$ 1.825	\$ 24.25				

- 1. Assumes p.d. shares of 75.3M
- 2. Includes general and administrative expenses as well as exploration expenses
- Net cash position includes the recently closed bought deal resulting in gross proceeds of US\$114M All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

Until development parameters are established, BMO Research uses a conservative in situ valuation for SBJ.

Given the significant environmental challenges of the SBJ project area and the impact on access and future environmental permitting, BMO research has valued the project on an in situ basis using peers as a guideline. Peers used to help approximate the value of the SBJ project are those companies with single projects that contain large resources but significant development impediments. The average enterprise value per ounce (EV/oz) ascribed to these projects is US\$10/oz of gold equivalent using BMO Research's long-term metal prices.

Using these parameters, an implied value for the SBJ project is approximated at US\$184M, or US\$2.44 per share.

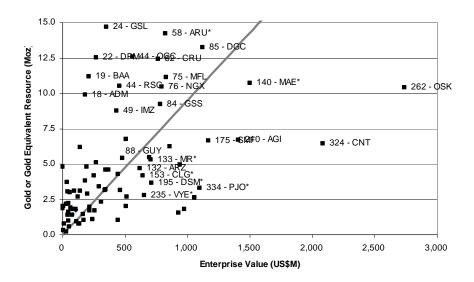


#### **Silver Miners**

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Fig 218: Value Screen

Values ascribed to projects with uncertain development paths are US\$10/oz to US\$25/oz of gold equivalent resource.



Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.



#### **Silver Miners**

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Fig 219: SSO Model Parameters

Country		Pirquita	s						Project			:	San Luis				
		Argentin	3						Country				Peru				
Interest % SSO's Project NPV		100% 81%						•	Interest % SSO's Pr				100% 9%				
line Parameters line Type				Open Pit					Mine Param Mine Type	ieters			Uı	ndergroun	d		
rocessing				ing, Flotati	ion				Processing	-4-				Milling			
rocessing Rate OM Production			tpd	6,000 <u>Annual</u>	Total				Processing Ra LOM Producti				tpd	300 <u>Annual</u>	Total		
		Silver Tin	Moz kt	11 3	150 37								Moz koz	1.3 54.0	6.6 283.5		
OM Total Cook Cooks		Zinc	kt	9	113				LOM Tatal Ca	C+- (/				\$14			
OM Total Cash Costs*  Modelled Mine Life			yrs	\$6.9 14.2	25				LOM Total Ca Modelled Min		ola co-p		yrs	5.2			
Initial Capital Costs			US\$M	24					Initial Capita				US\$M US\$M	76.			
Expansion Capex Fotal Sustaining Capital			US\$M US\$M	0.0 23.					Expansion Ca Total Sustain				US\$M	0.0 10.			
Modeled	Tonnes	Silver	Tin	Zinc	Silver	Tin	Zinc	7	Modeled			Tonnes	Silver	Gold	Silver	Gold	
Open Pit	000 30,030	g/t 200	0.23%	0.82%	Moz 193	kt 68	kt 247	_	Underground			000 522	g/t 494	g/t 18.94	Moz 8.3	koz 318	
<u>'</u>				0.62%	193	00	247			·					0.3	310	
Project Country		Diablillo Argentina	S						Project Country				<b>Pitarrilla</b> Mexico				
Interest		100%						1	Interest	ninct Pini			100%				
% SSO's Project NPV Mine Parameters		3%							% SSO's Pr Mine Param	-			7%				
Mine Type				Open Pit				ī	Mine Type					Underg			
Processing Processing Rate			tpd	Milling 10,000					Processing Processing Ra	ate			tpd	Milling, F 4,00	00		
Start-up LOM Production			уr	Q2 2014 Annual	Total				Start-up LOM Producti	ion			yr	Q3 2 Annual	013 <u>Total</u>		
		Silver	Moz	8.6	73.3				LOW F TOUGLE	.011			Moz	5	58		
		Gold	koz	81.5	692.4								koz kt	13 29	144 326		
LOM Total Cash Costs* Modelled Mine Life			yrs	\$9.2 8.5					LOM Total Ca Modelled Min		-		yrs	\$6.0 11.	95		
Initial Capital Costs			US\$M	250	.0				Initial Capita	l Costs			US\$M	27	7		
Expansion Capex Total Sustaining Capital			US\$M US\$M	0.0 36.					Expansion Ca Total Sustain	арех			US\$M US\$M	0 12			
Modeled		Tonnes 000	Silver g/t	Gold q/t	Silver	Gold koz		7	Modeled		Tonnes 000	Silver g/t	Lead %	Zinc %	Silver Moz	Lead kt	Zinc kt
Open Pit		29,475	90	0.89	85.3	845		7	Underground		15,708	171	1.11%	2.60%		385,451	899,165
Production Estimates		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
<b>Pirquitas</b> Milling rate	tpd		2,011	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	4,500
Tonnes Milled Grade	ktpa Silver (g/	-	410 185.0	2,184 186.3	2,184 201.4	2,184 201.4	2,184 176.0	2,184 233.0	2,184 254.0	2,184 247.0	2,184 198.0	2,184 189.0	2,184 189.0	2,184 177.0	2,184 155.0	2,184 198.2	1,638 198.2
orado .																	
	Tin (%)	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Zinc (%)	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Zinc (%) Moz	-	0.0	0.0 7.5	0.0	0.0	0.0 9.8	0.0	0.0	0.0 13.8	0.0	0.0 10.5	0.0 10.5	9.9	0.0 8.6	0.0	0.0
Silver Production Silver Equiv. Production Total Cash Costs*	Zinc (%)	- - - -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 11.1 17.5 3.94	0.0 8.3 13.1 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs*	Zinc (%) Moz Moz	- - - -	0.0 1.1 1.1	0.0 7.5 8.0	0.0 10.8 12.0	0.0 11.2 15.2	9.8 14.7	0.0 13.0 17.7	0.0 14.2 19.8	0.0 13.8 19.2	0.0 11.0 15.7	0.0 10.5 14.3	0.0 10.5 14.5	9.9 14.2	0.0 8.6 13.6	0.0 11.1 17.5	0.0 8.3 13.1
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Milling rate	Zinc (%) Moz Moz US\$/oz US\$/oz	-	0.0 1.1 1.1 18.09	7.5 8.0 10.57	0.0 10.8 12.0 7.02	0.0 11.2 15.2 8.51	9.8 14.7 8.94	0.0 13.0 17.7 7.12	0.0 14.2 19.8 6.65	0.0 13.8 19.2 6.02	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41	0.0 10.5 14.5 6.86	0.0 9.9 14.2 6.57	0.0 8.6 13.6 6.58	0.0 11.1 17.5 3.94	0.0 8.3 13.1 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled	Zinc (%) Moz Moz US\$/oz US\$/oz	- - - - - - na	0.0 1.1 1.1 18.09 18.09	7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02	0.0 11.2 15.2 8.51 8.51	9.8 14.7 8.94 8.94	0.0 13.0 17.7 7.12 7.12	0.0 14.2 19.8 6.65 6.65	0.0 13.8 19.2 6.02 6.02	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41	0.0 10.5 14.5 6.86	0.0 9.9 14.2 6.57	0.0 8.6 13.6 6.58	0.0 11.1 17.5 3.94	0.0 8.3 13.1 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Milling rate Tonnes Milled	Zinc (%) Moz Moz US\$/oz US\$/oz tpd ktpa	-	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02	0.0 11.2 15.2 8.51 8.51 238	0.0 9.8 14.7 8.94 8.94	0.0 13.0 17.7 7.12 7.12	0.0 14.2 19.8 6.65 6.65	0.0 13.8 19.2 6.02 6.02	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade	Zinc (%)  Moz  Moz  US\$/oz  US\$/oz  tpd  ktpa  Silver (g/ Gold (g/t  Moz	- - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 - 493.7	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9	0.0 9.8 14.7 8.94 8.94 300 - 493.7 18.9	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9	0.0 14.2 19.8 6.65 6.65 300 - 493.7 18.9	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade Silver Production Gold Production	Zinc (%)  Moz  Moz  U\$\$/oz  U\$\$/oz  tpd  ktpa  Silver (g/ Gold (g/t	- - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 - 493.7	0.0 11.2 15.2 8.51 8.51 238 - 493.7 18.9	9.8 14.7 8.94 8.94 300 - 493.7 18.9	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9	0.0 14.2 19.8 6.65 6.65 300 - 493.7 18.9	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade Silver Production Gold Production Total Cash Costs* Total Production Costs*	Zinc (%)  Moz  Moz  US\$/oz  US\$/oz  tpd  ktpa  Silver (g/ Gold (g/t  Moz  koz	- - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 - 493.7	0.0 11.2 15.2 8.51 8.51 238 - 493.7 18.9	0.0 9.8 14.7 8.94 8.94 300 - 493.7 18.9	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9 1.4 59	0.0 14.2 19.8 6.65 6.65 300 493.7 18.9	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9 1.4 59	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94
Silver Equiv. Production Total Cash Costs*  San Luis Willing rate Tonnes Milled Grade  Silver Production Gold Production Total Cash Costs* Total Production Costs* Milling rate Milling rate Milling rate Milling rate	Zinc (%)  Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz	- - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 - 493.7	0.0 11.2 15.2 8.51 8.51 238 - 493.7 18.9 1.1 47 149.28	9.8 14.7 8.94 8.94 300 - 493.7 18.9 1.4 59	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9 1.4 59	0.0 14.2 19.8 6.65 6.65 300 - 493.7 18.9 1.4 59 142.30 365.46	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9 1.4 59	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Fonnes Milled Frade Silver Production Fold Production Fold Production Fold Production Fold Production Fold Folds Folds Fold Production Fold Folds	Zinc (%)  Moz Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa tpd ktpa	- na na - - - -	0.0 1.1 1.1 18.09 18.09 - - - na na	0.0 7.5 8.0 10.57 10.57 - na na	0.0 10.8 12.0 7.02 7.02 13 - 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 - 493.7 18.9 1.1 47 149.28 297.82	9.8 14.7 8.94 8.94 300 - 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 7.12 300 - 493.7 18.9 1.4 59 143.17 328.56	0.0 14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600	0.0 13.8 19.2 6.02 6.02 300 493.7 18.9 1.4 59 142.30 446.23	0.0 11.0 15.7 6.55 6.55 na na na 10,000 3,600	0.0 10.5 14.3 7.41 7.41 - na na - - - -	0.0 10.5 14.5 6.86 6.86 - - na na - - -	0.0 9.9 14.2 6.57 6.57 - na na - - - 10,000 3,600	0.0 8.6 13.6 6.58 6.58 - - na na na	0.0 11.1 17.5 3.94 3.94 na na 7,500 2,700	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Tonnes Milled Grade Silver Production Gold Production Total Cash Costs** Total Production Costs* Diabillos Willing rate Tonnes Milled	Zinc (%)  Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa tpd ktpa tpd	- na na - - - -	0.0 1.1 1.1 18.09 18.09 - - na na	0.0 7.5 8.0 10.57 10.57 	0.0 10.8 12.0 7.02 7.02 13 - 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 - 493.7 18.9 1.1 47 149.28	9.8 14.7 8.94 8.94 300 - 493.7 18.9 1.4 59	0.0 13.0 17.7 7.12 7.12 300 - 493.7 18.9 1.4 59 143.17 328.56	0.0 14.2 19.8 6.65 6.65 300 - 493.7 18.9 1.4 59 142.30 365.46	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9 1.4 59 142.30 446.23	0.0 11.0 15.7 6.55 6.55 na na na	0.0 10.5 14.3 7.41 7.41 	0.0 10.5 14.5 6.86 6.86 	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 - - na na - -	0.0 11.1 17.5 3.94 3.94 	0.0 8.3 13.1 3.94 3.94 - - na na - -
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade  Silver Production Gold Production Total Cash Costs** Total Production Costs* Diablillos Willing rate Tonnes Milled Grade	Zinc (%)  Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Silver (g/ Sold (g/t)  for for for for for for for for for fo	- na na - - - - - - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 - na na na	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0	0.0 14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0	0.0 13.8 19.2 6.02 6.02 300 - 493.7 18.9 142.30 446.23	0.0 11.0 15.7 6.55 6.55 	0.0 10.5 14.3 7.41 7.41 	0.0 10.5 14.5 6.86 6.86 - - na na - - - - 10,000 3,600 90.0	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 - - na na - - - - - - - - - - - - - - -	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 - - na na - -
Silver Equiv. Production Total Cash Costs* San Luis Milling rate Tonnes Milled Grade  Silver Production Gold Production Total Cash Costs**  Total Production Total Cash Costs**  Total Production Costs*  Diabilios Milling rate Tonnes Milled Grade	Zinc (%)  Moz Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz Moz  Moz Moz Moz Moz Moz Moz	- na na - - - - - - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 - na na na	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2	0.0 14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 446.23 10,000 3,600 90.0 0.9 9.0	0.0 11.0 15.7 6.55 6.55 - na na na 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 - na na na - - - - - - - - - - - - - -	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 - na na - - - - 10,000 3,600 90.0 0.9 9.9	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 - na na - - - - - - - - -
Silver Equiv. Production Total Cash Costs* San Luis William rate Tonnes Milled Grade Silver Production Gold Production Total Cash Costs* Total Production Gold Production Total Cash Costs* Total Production Silver Brade Silver Production Total Cash Costs* Silver Production Silver Equiv. Production Silver Equiv. Production Total Cash Costs*	Zinc (%)  Moz Moz VS\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t Moz koz US\$/oz  tpd ktpa Moz koz US\$/oz  tpd ktpa Moz koz US\$/oz  tpd ktpa Moz ktpa Silver (g/ Gold (g/t Moz	- na na - - - - - - na	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 - na na na	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 7.12 300 493.7 18.9 143.17 328.56 4,375 1,575 90.0 0.9	0.0  14.2 19.8 6.65 6.65 300 - 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9	0.0 13.8 19.2 6.02 300 - 493.7 18.9 1.4 59 142.30 446.23	0.0 11.0 15.7 6.55 6.55 - na na na 10,000 3,600 90.0 90.0 9.0	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 - na na na 10,000 3,600 90.0 0.9	7,500 2,700 90.9 6.7	0.0 8.3 13.1 3.94 3.94 - na na - - - - - - - - - - - - - - - -
Silver Equiv. Production Total Cash Costs* San Luis William gate Tonnes Milled Grade Silver Production Gold Production Total Cash Costs* Diablillos Willing rate Tonnes Milled Grade Silver Production Total Cash Costs* Diablillos Willing rate Tonnes Milled Grade Silver Production Silver Equiv. Production Total Cash Costs* Total Production Costs* Pitarrilla	Zinc (%)  Moz Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  US\$/oz  US\$/oz  US\$/oz  US\$/oz  US\$/oz	na na na - - - - - na na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82 - na na	0.0 9.8 14.7 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54	0.0 11.0 15.7 6.55 6.55 - ana na na 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 - - - na na - - - - - na na
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Tonnes Milled Grade Silver Production Gold Production Total Production Total Cash Costs** Total Production Costs* Diabilios Willing rate Tonnes Milled Grade Silver Production Costs* Diabilios Silver Production Silver Equiv. Production Total Cash Costs** Total Production Total Cash Costs* Total Production Total Cash Costs* Total Production Costs* Pitarrilla Willing rate Tonnes Milled	Zinc (%)  Moz Moz Moz Silver (g) Gold (g/t)  Moz koz US\$/oz  tpd ktpa Gold (g/t)  Moz koz US\$/oz  tpd ktpa Moz koz US\$/oz US\$/oz  tpd ktpa Moz Moz Moz Moz Moz Hoz Moz Moz Hoz Hoz Hoz Hoz Hoz Hoz Hoz Hoz Hoz H	na na na - - - - - - - - - - - - - - - -	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57 na na na na na	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 477 149.28 297.82	0.0  9.8 14.7 8.94 8.94  300 - 493.7 18.9  1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 6.2 9.15 10.76 4,000 1,408	0.0  14.2 19.8 6.65 6.65  300 - 493.7 18.9  1.4 59 142.30 365.46  10,000 3,600 90.0 9.0 14.1 9.19 11.49	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 10,000 3,600 90.0 0.9 9.0 14.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9	0.0 11.0 15.7 6.55 6.55 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86  10,000 3,600 90.0 0.9 9.0 14.1 9.20 11.76 4,000	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Tonnes Milled Grade Silver Production Gold Production Total Production Total Cash Costs** Total Production Costs* Diabilios Willing rate Tonnes Milled Grade Silver Production Costs* Diabilios Silver Production Silver Equiv. Production Total Cash Costs** Total Production Total Cash Costs* Total Production Total Cash Costs* Total Production Costs* Pitarrilla Willing rate Tonnes Milled	Zinc (%)  Moz Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz ktpa Moz Moz Moz Moz Moz Moz Silver (g/ Sold (g/t  Moz Silver (g/ Sold (g/t  Moz Silver (g/ Sold (g/t  Silver (g/ Sold (g/t  Silver (g/ Sold (g/t  Silver (g/ Silver (g/	na na na - - - - - na na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82 - na na	0.0 9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 597 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15 10.76	0.0 14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54 4,000 1,40	0.0 11.0 15.7 6.55 6.55 6.55 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86 	0.0 9.9 14.2 6.57 6.57 	0.0 8.6 13.6 6.58 6.58 6.58 	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Fonnes Milled Frade  Silver Production Gold Production Fotal Production Fotal Production Fotal Production Costs* Fotal Production Costs* Fotal Production Costs* Fotal Production Fotal Production Fotal Production Fotal Production Fotal Production Fotal Froduction Fotal Cash Costs* Fotal Production Fotal Cash Costs* Fotal Production Costs* Fotal Production Costs* Fitarrilla Willing rate Fonnes Milled	Zinc (%)  Moz Moz Moz Silver (g) Gold (g/t)  Moz koz US\$/oz  tpd ktpa Gold (g/t)  Moz koz US\$/oz  tpd ktpa Moz koz US\$/oz US\$/oz  tpd ktpa Moz Moz Moz Moz Moz Hoz Moz Moz Hoz Hoz Hoz Hoz Hoz Hoz Hoz Hoz Hoz H	- na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 477 149.28 297.82	0.0  9.8 14.7 8.94 8.94  300 - 493.7 18.9  1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 6.2 9.15 10.76 4,000 1,408	0.0  14.2 19.8 6.65 6.65  300 - 493.7 18.9  1.4 59 142.30 365.46  10,000 3,600 90.0 9.0 14.1 9.19 11.49	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 10,000 3,600 90.0 0.9 9.0 14.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9	0.0 11.0 15.7 6.55 6.55 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86  10,000 3,600 90.0 0,9 9.0 14.1 9.20 11.76 4,000	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 - - - - - - - - - - - - - - - - - - -
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs** Total Production Total Cash Costs** Total Production Costs* Diabilios Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs* Total Production Costs* Pitarrilla Willing rate Tonnes Milled Grade	Zinc (%)  Moz Moz Moz LS\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz ktpa Silver (g/ Gold (g/t  Moz Moz Moz Moz Moz Silver (g/ Sold (g/t  Moz Moz Silver (g/ Sold (g/t  Moz Moz Silver (g/ Cold (g/t  Moz Moz Moz Silver (g/ Cold (g/t  Moz Moz Moz US\$/oz US\$/oz US\$/oz US\$/oz  tpd ktpa Silver (g/ Lead (%) Zinc (%)	- na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 477 149.28 297.82	0.0 9.8 14.7 8.94 8.94 300 - 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15 10.76 4,000 1,408 180.4 0.0 0.0	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0	0.0 13.8 19.2 6.02 300 - 493.7 18.9 1.4 59 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54 4,000 1,408 153.6 0.0 0.0	0.0 11.0 15.7 6.55 6.55 6.55	0.0 10.5 14.3 7.41 7.41	10,000 10.5 14.5 6.86 6.86 	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 6.58 6.58 10,000 3,600 90.0 0.9 14.0 92.0 14.0 14.0 14.0 14.0 14.0 14.0 14.0 14	7,500 2,700 90.0 0.9 4,000 1,408 169.1 0.0	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs** Diablillos Willing rate Tonnes Milled Grade  Silver Production Costs* Diablillos Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs** Diablillos Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs* Total Production Costs* Pitarrilla Willing rate Tonnes Milled Grade	Zinc (%)  Moz Moz Moz VS\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz US\$/oz  tpd ktpa Ktpa Moz	- na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 477 149.28 297.82	0.0 9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58 na na 1,625 572 200.1 0.0 0.0 2.5	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 1.7 128.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15 10.76 4,000 1,408 18.9 4,000 1,400 1	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0 4.7 12.5	0.0 13.8 19.2 6.02 300 - 493.7 18.9 1.4 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54 4,000 1,408 153.6 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	0.0 11.0 15.7 6.55 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86 6.86 10 10,000 3,600 90.0 0.9 9.0 14.1 9.20 11.76 4,000 1,408 171.7 0.0 0.0 5.2 10.9	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 6.58 	7,500 2,700 0.9 6.7 10.4 4,000 1,408 169.1 10.7	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Format Form	Zinc (%)  Moz Moz Moz Lys\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz Lys\$/oz  tpd ktpa Moz Moz Moz Lys\$/oz  tpd ktpa Moz Moz Moz Lys\$/oz  tpd ktpa Moz Moz Lys\$/oz  tpd ktpa Moz Moz US\$/oz US\$/oz	- na	0.0 1.1 1.1 18.09 18.09 na na na na na na	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 477 149.28 297.82	0.0  9.8 14.7 8.94 300 - 493.7 18.9  1.4 59 1.43.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 6.2 9.15 10.76 4,000 1,408 180.4 0.0 0.0	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 10,000 3,600 90.0 90.0 14.1 9.19 11.54 4,000 1,408 153.6 0.0 0.0	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 	0.0 11.1 17.5 3.94 3.94	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Willing rate Tonnes Milled Grade  Silver Production Sold Production Total Cash Costs* Total Production Total Cash Costs* Total Production Costs* Silver Production Total Cash Costs* Total Production Total Cash Costs* Silver Production Silver Equiv. Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Cash Costs* Silver Production Total Cash Costs* Silver Standard Attribu	Zinc (%)  Moz Moz Moz LS\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz ks/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz LS\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz US\$/oz  tpd ktpa Silver (g/ Cold (g/t  Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Lead (%) Zinc (%)  Moz Moz US\$/oz US\$/oz US\$/oz US\$/oz		0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	0.0  9.8 14.7 8.94 8.94 300 - 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15 10.76 4,000 1,408 180.4 0.0 0.0 5.4 11.7 6.77 9.17	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0 4.7 12.5 6.90 8.94	0.0  13.8 19.2 6.02 300 - 493.7 18.9  1.4 59 142.30 446.23  10,000 3,600 90.0 0.9  9.0 14.1 9.19 11.54  4,000 1,408 153.6 0.0 0.0 4.6 12.6 6.92 9.01	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41	10,000 1,000	0.0 9.9 14.2 6.57 6.57	0.0  8.6 13.6 6.58 6.58  na na na  10,000 3,600 90.0 0.9 8.9 14.0 9.26 12.11  4,000 1,408 169.9 0.0 0.0 5.1 10.77 7.05 10.79	0.0 11.1 17.5 3.94 7,500 2,700 90.0 0.9 6.7 10.6 9.21 12.49 4,000 1,408 169.11 0.0 0.0 5.1 10.7 7.07	0.0 8.3 13.1 3.94 3.94 
Silver Equiv. Production Total Cash Costs* Total Production Costs* San Luis Milling rate Tonnes Milled Grade  Silver Production Gold Production Total Cash Costs** Total Production Costs* Diabilios Milling rate Tonnes Milled Grade  Silver Production Silver Equiv. Production Total Cash Costs** Total Production Total Cash Costs* Total Production Silver Equiv. Production Total Cash Costs* Pitarrilla Milling rate Tonnes Milled Grade  Silver Production Silver Equiv. Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Silver Faquiv. Production	Zinc (%)  Moz Moz Moz Moz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz ksz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz Moz US\$/oz US\$/oz  tpd ktpa Silver (g/ Cold (g/t  Moz Moz US\$/oz US\$/oz  US\$/oz  US\$/oz  US\$/oz  US\$/oz  US\$/oz  Itd Moz Moz US\$/oz US\$/oz  US\$/oz US\$/oz  Itd Moz	na n	0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	0.0 9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 493.7 18.9 143.17 328.56 4,375 1,575 90.0 0.9 3.9 4,000 1,408 180.4 11.7 6.77 9.17	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0 4.7 12.5 6.90 8.94 29.2 51.3	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54 4,000 1,408 153.6 6.02 9.0 0.0 0.0 28.7 50.8	0.0 11.0 15.7 6.55 6.55 6.55	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86 6.86 6.86 10.00 10.000 3.600 90.0 0.9 9.0 14.1 9.20 11.76 4,000 1,408 171.7 0.0 0.0 5.2 10.98 10.15 24.7 39.5	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 6.58 6.58 10,000 3,600 90.0 0.9 14.0 14.0 14.0 14.0 169.9 0.0 0.0 1.0 10.7 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	0.0 11.1 17.5 3.94 3.94	4,000 1,408 1,408 1,601 1,408 1,601 1,408 1,601 1,000 0,00 5,11 10,7 7,07 11,81
Silver Equiv. Production Total Cash Costs* San Luis Milling rate Tonnes Milled Grade  Silver Production Gold Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Cash Costs* Total Production Silver Equiv. Production Silver Equiv. Production Total Cash Costs* Total Production Silver Equiv. Production Total Cash Costs* Total Production Costs* Silver Equiv. Production Total Cash Costs* Total Production Costs* Total Production Costs* Total Silver Production Total Cash Costs	Zinc (%)  Moz Moz Moz LS\$/oz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz LS\$/oz US\$/oz  tpd ktpa Silver (g/ Silver (g/ Lead (%) Zinc (%)  Moz Moz Moz Moz Moz Moz Moz Moz Moz Mo		0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	0.0  9.8 14.7 8.94 300 - 493.7 18.9  1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 - 493.7 18.9 1.4 59 143.17 328.56 4,375 1,575 90.0 0.9 3.9 6.2 9.15 10.76 4,000 1,408 180.4 0.0 0.0 5.4 11.7 9.17 23.7 40.7	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0 4.7 12.5 6.90 8.94	0.0  13.8 19.2 6.02 300 - 493.7 18.9  1.4 59 12.30 446.23  10,000 3,600 90.0 0.9  9.0 14.1 9.19 11.54  4,000 1,408 153.6 0.0 0.0  4.6 6.92 9.01	0.0 11.0 15.7 6.55 6.55	0.0 10.5 14.3 7.41 7.41 10,000 3,600 90.0 90.0 90.0 14.1 9.20 11.67 4,000 1,408 185.3 0.0 0.0 5.6 11.3 6.72 9.82	10,000 1,000 1,000 1,000 1,000 1,000 1,000 1,100	0.0 9.9 14.2 6.57 6.57	0.0  8.6 13.6 6.58 6.58	0.0 11.1 17.5 3.94 3.94	4,000 1,408 169.1 13.4 23.8 5.31 13.4 23.8 5.31
Silver Equiv. Production Total Cash Costs* San Luis Willing rate Tonnes Milled Grade  Silver Production Total Production Total Cash Costs** Total Production Total Cash Costs** Total Production Total Cash Costs** Total Production Costs* Diabilios Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Cash Costs* Pitarrilla Willing rate Tonnes Milled Grade  Silver Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Cash Costs* Total Production Total Silver Production Total Silver Standard Attribit Total Silver Equiv. Production	Zinc (%)  Moz Moz Moz Moz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz ksy VS\$/oz  tpd ktpa Moz koz US\$/oz  tpd ktpa Silver (g/ Gold (g/t  Moz Moz Moz Moz US\$/oz  tpd ktpa Moz Moz Moz Moz US\$/oz  tpd ktpa Moz Moz Moz US\$/oz  tpd ktpa Moz Moz US\$/oz  tpd ktpa Moz Moz US\$/oz  tpd ktpa Moz Moz US\$/oz US\$/oz		0.0 1.1 1.1 18.09 18.09	0.0 7.5 8.0 10.57 10.57 10.57	0.0 10.8 12.0 7.02 7.02 13 493.7 18.9	0.0 11.2 15.2 8.51 8.51 238 493.7 18.9 1.1 47 149.28 297.82	0.0 9.8 14.7 8.94 8.94 300 493.7 18.9 1.4 59 143.57 305.58	0.0 13.0 17.7 7.12 300 493.7 18.9 1.4 493.7 18.9 143.17 328.56 4,375 1,575 90.0 0.9 3.9 4,000 1,408 180.4 11.7 6.77 9.17	0.0  14.2 19.8 6.65 6.65 300 493.7 18.9 1.4 59 142.30 365.46 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.49 4,000 1,408 155.9 0.0 0.0 4.7 12.5 6.90 8.94 29.2 51.3	0.0 13.8 19.2 6.02 300 - 493.7 18.9 142.30 446.23 10,000 3,600 90.0 0.9 9.0 14.1 9.19 11.54 4,000 1,408 153.6 6.02 9.0 0.0 0.0 28.7 50.8	0.0 11.0 15.7 6.55 6.55 6.55 	0.0 10.5 14.3 7.41 7.41	0.0 10.5 14.5 6.86 6.86 6.86 6.86 6.86 10.00 10.000 3.600 90.0 0.9 9.0 14.1 9.20 11.76 4,000 1,408 171.7 0.0 0.0 5.2 10.98 10.15 24.7 39.5	0.0 9.9 14.2 6.57 6.57	0.0 8.6 13.6 6.58 6.58 6.58 6.58 10,000 3,600 90.0 0.9 14.0 14.0 14.0 14.0 169.9 0.0 0.0 1.0 10.7 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0	0.0 11.1 17.5 3.94 3.94	4,000 1,408 169.1 10.7 7.07 11.81 13.4 23.8



#### **Silver Miners**

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#### Company Synopsis

Short-term risk as SSO seeks a new president.

At the beginning of 2010, SSO signaled a corporate focus to transition from developer to intermediate producer when the long-standing President and CEO Robert Quartermain stepped down. SSO has initiated a search to identify a new president with the capacity to steer the company through an aggressive development path. While uncertainty of the calibre of Mr. Quartermain's replacement represents a near-term risk, BMO Research expects the quality of SSO's portfolio to attract a tier 1 candidate. Mr. Quartermain will remain on the board of directors, thereby providing continuity of vision that has lead to SSO's past success.

2010E production of 7.5Moz of silver.

BMO Research forecasts 2010E production of 7.5Moz of silver and 0.7kt of tin at co-product cash costs of US\$10.63/oz of silver.

SSO is projected to have an increasing base metal weighting through 2020.

Through 2020, sequential development of San Luis and Pitarrilla is projected to increase SSO's metal weighting from the current silver focus, to an average of  $\sim\!62\%$  of mine revenue from silver,  $\sim\!13\%$  from gold and  $\sim\!25\%$  from lead and zinc positioning the company as a base metal weighted silver producer.

Fig 220: Production & Cash Cost Profile, 2008–2020E

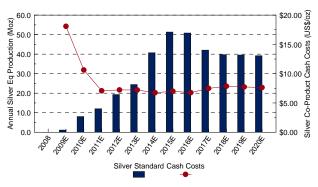
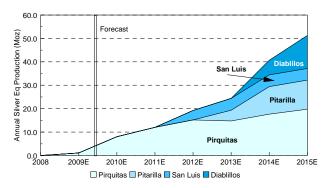


Fig 221: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Fig 222: SSO Revenue by Metal (%), 2008-2020E

Source: BMO Capital Markets

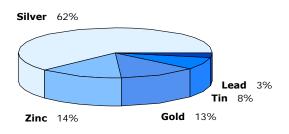
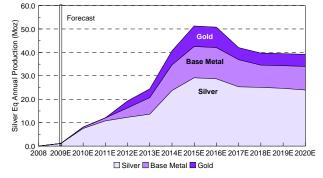


Fig 223: Annual Production by Metal, 2008-2020E



Source: BMO Capital Markets



#### **Silver Miners**

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Post the completion of a US\$114.4M financing (6.8M shares at an issuance price of US\$17.00/share) BMO Research estimates SSO has a net cash position of US\$145M.

SSO plans to spend US\$50M to fund ongoing exploration plans and to advance both San Luis and Pitarrilla through feasibility and predevelopment activities. Plans are to complete a preliminary assessment on the SBJ project in H2/10.

To maintain growth SSO is expected to commit US\$710M in development over the next five years.

Completion of San Luis feasibility in Q1/10 is expected to trigger development of the project with a projected capital cost of US\$76M. Combined with further mill upgrades at Pirquitas, and future development of Pitarrilla, SSO is expected to maintain high capital expenditures through 2014

Based on current projections, SSO will require external sources of capital to maintain this aggressive growth trajectory. BMO Research models additional financing of US\$277M through 2015.

BMO Research models additional equity dilution to fund development.

While BMO Research models a further US\$111M in equity issuance (6.2M shares at an issuance price of C\$18.35/share), the company's producer status provides an opportunity to explore a number of avenues to offset further equity dilution.

Projected strong EPS and CFPS growth through 2012.

BMO forecasts EPS of US\$0.34 and CFPS of US\$0.62 in 2010 and EPS of US\$0.97 and CFPS of US\$1.34 in 2011. EPS and CFPS are projected to rise to US\$2.40 and US\$3.68 by 2015, respectively, once San Luis and Pitarilla are in production.

Fig 224: Projected Capital Expenditures (US\$M)

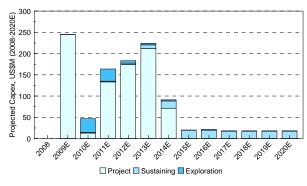
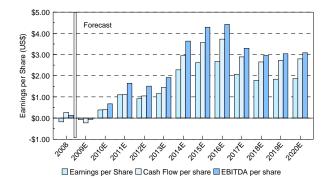


Fig 225: Earnings Estimates, 2008–2020E



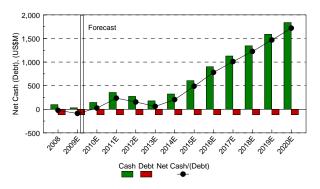
Source: BMO Capital Markets



#### **Silver Miners**

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Fig 226: Net Cash (Debt) Position, 2008-2020E





#### **Silver Miners**

February 22, 2010

#### Reserves/Resources

Silver makes up 65% of SSO's reserves.

Pirquitas and Pitarrilla reserves support a ~16 yr. mine life.

Resources of 0.6Boz provide potential for organic and new growth.

SSO's reserve base is silver weighted with silver accounting for 65% of the value of reserves using long-term metal price forecasts. Zinc makes up 25%, followed by a combined 11% for lead and tin.

At the end of 2008, SSO had reserves of 286Moz of silver (Pirquitas and Pitarrilla only). At full production, Pirquitas and Pitarrilla are forecast to produce around 18Moz of silver annually, supporting a  $\sim$ 16-year reserve life. Combined, the two mines host a further 343.6M in resource that could translate into a further 20 years.

Outside of the company's two mines, SSO has numerous exploration stage projects that host 566Moz of silver resource.

Fig 227: Reserve Metal Distribution

Fig 228: Resource Metal Distribution



Source: BMO Capital Markets Source: BMO Capital Markets

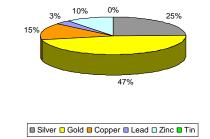


Fig 229: SSO Reserves and Resources

										Containe	ed Metal		
	Tonnes	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven & Probable	` '	15 ,	15 /	` '	` ′	` ′	` ,	` ′	, ,	` '	` '	` '	٠,
Pirquitas	30,400	199.6	-	-	-	0.82	0.22	195,100	-	-	-	248	67
Pitarilla	16,674	171.0	-	-	1.12	2.57	-	91,671	-	-	187	429	-
Total Reserves	47,074	189.5	-	-	0.40	1.44	0.14	286,771	-	•	187	677	67
Measured & Indicate	ed												
Pirquitas	45,200	152.3	-	-	-	0.78	0.22	221,200	-	-	-	351	78
Pitarilla	172,585	73.7	-	-	0.45	1.02	-	409,183	-	-	777	1,755	-
San Luis (55%)	484	578.0	22.40	-	-	-	-	9,003	348	-	-		-
Snowfield (	861,700	1.9	0.71	0.12	-	-	-	51,759	19,751	1,020	-	-	-
Brucejack	120,600	16.9	1.09	-	-	-	-	65,514	4,228	· <u>-</u>	-	-	-
Diablillos	21,600	111.0	0.92	-	-	-	-	77,086	639	-	-	-	-
Other	265,780	41.2	0.19	0.05	0.14	0.38	-	256,570	1,657	144	384	997	-
Total Reserves	1,487,949	24.8	0.56	0.08	0.08	0.21	0.01	1,090,315	26,622	1,164	1,160	3,103	78
Inferred													
Pirquitas	2,400	247.8	-	-	-	0.78	0.07	18.800	-	-	_	19	2
Pitarilla	24,803	56.0	-	-	0.47	1.02	-	44,657	-	-	117	253	-
San Luis (55%)	20	217.1	5.60	-	-	-	-	175	4	-	-	-	-
Snowfield	948,900	1.4	0.33	0.07	-	-	-	43,700	10,050	664	-	-	-
Brucejack	198,000	11.2	0.80	-	-	-	-	4,870	=	-	-	-	-
Diablillos	7,200	27.0	0.81	-	-	-	-	6,250	187	-	-	-	_
Other	249,650	36.9	0.17	0.02	0.07	0.25	-	309,600	1,359	44	178	616	-
Total Reserves	4,062	3,675.9	127.96	17.45	7.24	21.86	0.04	428,052	11,599	709	294	888	2

Measured and indicated resources are inclusive of reserves.

Reserves and resources are on a project basis. Reserve and resource parameters are summarized on the company website.

Source: Silver Standard Resources Inc.



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#### Pirquitas – Ramping Up to Full Production

Commercial production began in Q4/09.

SSO announced commercial production at the Pirquitas mine, located 335km west of the city of Jujuy in northern Argentina, in late December 2009.

2010E production guidance of 7Moz of silver and 0.9kt of

Total capital to construct the 6ktpd open pit mine was ~US\$239M over an ~18 month construction timeframe.

BMO Research projects comparable production, but higher costs.

2010 production guidance, as open pit mining operations ramp up to full production in Q1/10, is projected to be 7Moz of silver and 0.9kt of tin from oxide and transitional ore. SSO estimates by-product cash costs of US\$9.00/oz silver.

BMO Research projects comparable production levels, but expects operating costs to track above company estimates. For 2010, BMO Research projects production of 7.5Moz of silver and 0.7kt of tin at co product cash costs of US\$10.63/oz (by-product costs of US\$9.94/oz).

As operations attain steady state levels, silver production is projected to increase to an average 11Moz of silver and 2.6kt of tin annually at co-product cash costs of US\$6.91/oz silver over a 14 year mine life.

Pirquitas is a conventional 6ktpd open pit operation.

Pirquitas is a conventional 6ktpd open pit mine with ore processed through a gravity and flotation plant to produce tin and silver concentrates.

Concentrates are currently shipped to a trading group in Peru, but once Pirquitas reaches full production the company plans to put long-term contracts in place with smelters and refiners.

Ore is processed by gravity and flotation to produce tin and silver concentrates.

Open pit mining commenced in mid-Q3/08 with stockpiles of oxidized silvertin mineralization reaching  $\sim 500 kt$  prior to mill commissioning in Q3/09. Stockpiles continued to increase through Q4/09 as mill commissioning was achieved using historical jig tailings.

The transition to sulphide ore through H1/10 will improve silver recoveries.

Milling operations transitioned to stockpiled oxide and transitional ore in the first part of Q4/09 with silver recoveries initially reaching  $\sim\!30\%$  and climbing to  $\sim\!50\%$  by the end of 2009. Pirquitas produced 1.1Moz of silver and shipped 800koz in 2009. The tin circuit is commissioned and will be operated when suitable material is available in Q2/10.

The Pirquitas open pit mine operated at the design rate of 43ktpd at a cost of \$2.15/t (material mined) in 2009. Design crushing and pre-concentrator rates of 6ktpd and 2.3ktpd, respectively, were exceeded in both November and December.

The mill is processing transitional ore and is expected to begin processing sulphide ore at full capacity in Q2/10.

Future expansion will include a zinc circuit.

#### **Unlocking the Value of Zinc**

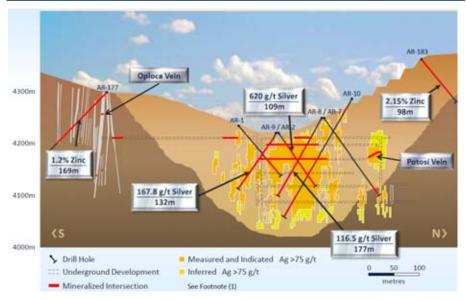
Once steady state operations are attained, SSO is expected to dust off design work to integrate an additional flotation circuit to recover economically significant zinc mineralization.



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Fig 230: Pirquitas Cross-Section



Source: Silver Standard Resources Inc.

Zinc circuit capex of US\$25M.

BMO Research models construction of a zinc circuit with capital costs of US\$25M to begin operation in Q1/12. Once integrated, Pirquitas is expected to produce an average of 9kt of zinc per annum.

The contribution of zinc is expected to increase mine revenues by +US\$21M annually and decrease co-product cash costs to the range of US\$7.00/oz of silver.

#### Development Pipeline

SSO has two advanced-stage projects, the San Luis project in central Peru and Pirquitas in Mexico. San Luis provides SSO exposure to a low risk, high margin operation that is expected to produce 54koz of gold and 1.3Moz of silver annually over a 5.25-year mine life.

San Luis provides a low-risk development scenario with significant upside.

#### San Luis Project - High-Grade Gold/Silver System

San Luis is a high-grade gold-silver epithermal vein system located 25km northwest of the Pierina gold mine, operated by Barrick Gold Corp. SSO can earn an 80% interest in the project from Esperanza Silver Corp. (EPZ.TSXV) by advancing San Luis to production.

SSO is targeting the release of a feasibility study in Q2/10 that is expected to trigger a development timeframe with San Luis production beginning by H1/12.

2010 expenditures of US\$15M.

To complete the San Luis feasibility study and advance the project through permitting, BMO Research projects capital expenditures of US\$15M through 2010.

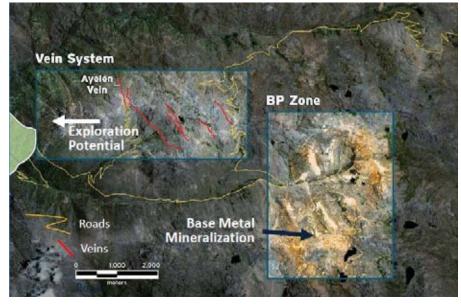


### **Silver Miners**

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Fig 231: San Luis Project

Exploration has been limited to the Ayelen and northern portion of the lnes vein.



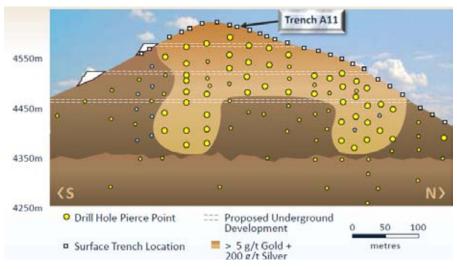
Source: Silver Standard Resources Inc.

San Luis capex is estimated at US\$76M.

BMO Research estimates capital costs of US\$76M to construct the 300tpd underground mine with ore processed through a conventional cyanidation and Merrill Crowe plant to produce doré on site.

Fig 232: Ayelen Cross-Section

**Drilling to increase** resources at Ayelen vein.



Source: Silver Standard Resources Inc.

Underground development is expected to begin upon completion of a feasibility study, EIS permitting and receipt of a mine permit achievable within a 6-to-12 month timeframe.

Resources of 348koz of gold and 9Moz of silver are restricted to the Ayelen and northern portion of the Ines veins. Surface exploration to the east has delineated an additional six veins with an aggregate strike of  $\pm 10$ km.



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## San Luis provided multiple avenues for future discovery.

### **Exploration - Resource Growth Is Compelling**

These veins, which appear to reflect higher levels of the epithermal system on surface, have received limited drill testing. BMO Research expects deeper drilling on the Paula, Regina and Sheyla veins could lead to new discoveries comparable to the Ayelen vein.

In addition to vein hosted gold-silver mineralization, SSO and partner EPZ have identified a large area of silver-base metal porphyry style mineralization in the southeast quadrant of the project area.

An initial discovery drill program focused on defining the extent of the hydrothermal breccia and other nearby mineralization have commenced, and a silver, base metal rich deposit is emerging. Drill results include:

- 127m of 47g/t silver, 2.4% zinc and 2.5% lead
- 72m of 45g/t silver and 0.4% copper
- 83m of 27g/t silver, 5% zinc and 1.6% lead

## Pitarilla is SSO's third development project.

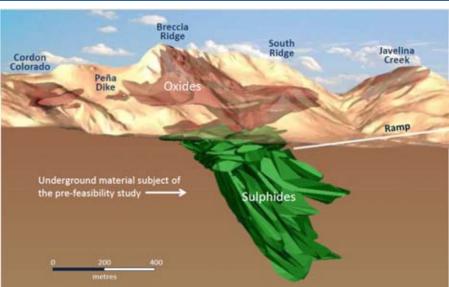
## Pitarrilla Project – SSO Moves to Senior Producer With Pitarrilla Development

SSO has advanced Pitarrilla, located 150km west of Torreon, from initial discovery to 200km of resource drilling and prefeasibility engineering in eight years. A feasibility study is planned for completion in Q4/10.

Measured and indicated resources are estimated at 643.6Moz of silver with a further 82.3Moz of inferred silver resources. Mineralization is contained within five zones with the Breccia Ridge Zone containing  $\sim\!63\%$  of the project resource.

In mid-2009, SSO completed a prefeasibility study on the sulphide portion of the Breccia Ridge deposit. Based on probable reserves of 91.7Moz of silver, the project supports annual production of 5Moz of silver, 13kt of lead and 29kt of zinc over an 11.25-year mine life.

Fig 233: Pitarrilla Deposit



Source: Silver Standard Resources Inc.



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Pitarilla capex of US\$277M.

Capital costs to develop the 4ktpd underground mine and conventional flotation processing plant are estimated at US\$277M. LOM operating costs are US\$33.81/t with average recoveries of 88.4% for silver, 93.2% for zinc and 89.6% for lead.

Operating costs are based on a combination of long hole and cut and fill mining. SSO is examining the economics of mining the Breccia Ridge zone by open pit, or underground bulk mining.

Pitarrilla could begin production by late 2013.

BMO Research models development of Pitarrilla beginning in Q4/10 with a 24-month construction. Commissioning is projected to begin in Q3/13 and ramp up to 5Moz of silver, 13kt of lead and 29kt of zinc annually by 2014.

US\$8M budget for 2010.

SSO is also advancing engineering work on oxide silver mineralization at the four satellite deposits. Plans are to initiate decline development in 2010 to access the Breccia Ridge zone.

Diablillos is well located.

### Could Diablillos Be the Fourth Mine in SSO's Pipeline?

While not a focus, the Diablillos project in northern Argentina has a large silver-gold indicated resource base of 77.1Moz of silver and 639koz of gold with an additional 6.2Moz of silver and 187koz of gold inferred resource.

Diablillos is well situated with respect to existing infrastructure, 160km southwest of Salta and 275km south of the Pirquitas mine.

Prefeasibility under way on Diablillos.

SSO is working on a prefeasibility study that will explore various combinations of milling and heap leaching alternatives. Metallurgical test work indicates recoveries of 86.9% for gold and 87.0% for silver using conventional milling and cyanidation. Column tests using a -3/4 inch crush size indicates recoveries of 65.2% for gold and 43.5% for silver.

Development challenges for Diablillos are based on a large pre-strip required to access ore based on the results of previous engineering studies. SSO is reevaluating the project given current metal prices. If successful, heap leaching of the large volume of low grade mineralization above the current resource could potentially reduce pre-stripping and move the project toward feasibility.

BMO Research models Diablillos production beginning in 2014. BMO Research models a conceptual development scenario for Diablillos with construction of 10ktpd open pit and conventional milling operation with an estimated capital cost of US\$250M.

Annual production of 8.6Moz of silver and 81koz of gold.

As information about the large low-grade halo surrounding the deposit is lacking, after pre-strip, BMO Research models open pit operations based on waste to ore strip ratio of 3 to 1.

LOM Co-product cash costs of US\$9.20/oz.

Based on these parameters, BMO Research estimates annual production of 8.6Moz of silver and 81.5koz of gold at LOM co-product cash costs of US\$9.20/oz of silver beginning in Q2/14.



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## **Exploration Portfolio**

SSO holds an extensive portfolio of exploration projects through the Americas, which are at varying stages of advancement.

SBJ hosts total resources of 34Moz of gold, 165.8Moz of silver and 1.7Mt of copper.

## **Snowfields and Brucejack**

The company's core exploration project, which hosts 90% of exploration stage gold and copper resources are the contiguous Snowfields and Brucejack projects (SBJ) in northwestern British Columbia. Access to the 4,467ha project area is via helicopter from the town of Stewart, 65km to the south.

The adjacent KSM project hosts a further 49.4Moz of gold and 5.75Mt of copper.

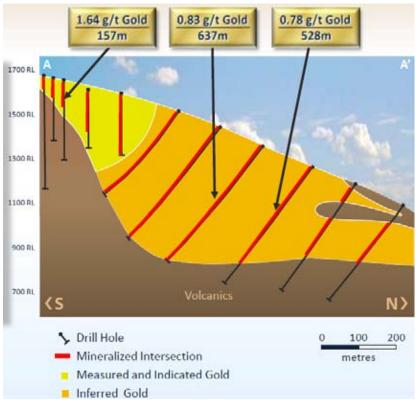
SBJ is located adjacent to the KSM project (49.4Moz of gold and 5.75Mt of copper), operated by Seabridge Gold (SEA-T). Combined, the two projects, which are part of the same hydrothermal system, represent one of the largest delineated gold-copper systems globally.

The project contains the spectrum of intrusion related styles of mineralization from porphyry copper-molybdenum and copper-gold, to peripheral base and precious metal vein hosted mineralization.

Fig 234: Snowfields Cross-Section

The Snowfields zone contains 29.8Moz of gold and 1.7Mt of copper in resource.

rce.



The dimensions of the Snowfields zone have yet to be established.

Source: Silver Standard Resources Inc.

Since 2006, SSO has focused on the Snowfield zone, a near-surface, low-grade, bulk tonnage, porphyry-style, gold deposit that has the additional potential of gold-copper-silver and molybdenum mineralization at depth.



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Over the last three years, SSO has completed 55.5km of drilling and delineated 39Moz of gold resource at Snowfields.

2010 exploration budget of \$20M.

The company is budgeting  $\sim$ US\$20M in exploration for 2010 with a combined focus of further delineating the dimensions of the Snowfield zone and toward the delineation of a higher-grade resource at Brucejack. A PA on the asset is expected to be released in H2/10.

### Setting, Not Size, Is the Challenge

Key development challenges include access, site logistics and multi-jurisdictional permitting.

The challenge will be to unlock the value of the environmentally and grade challenged district. While the closest road access is ~20km to the northwest, a future road corridor would require a major river crossing. Given the challenging topography, the location of the future mine and tailings infrastructure also pose constraints. Future permitting will require multijurisdictional coordination.

Too early to consider development parameters, but a +US\$2B capital cost is likely.

Given the current size and accretive potential of future exploration, the SBJ project has entered the realm of megaproject. Combined with the abovementioned environmental considerations, it is premature to discuss meaningful development parameters. However, infrastructure combined with the size and grade profile of the deposit will necessitate a large milling complex and potential +US\$2B investment.

Future consolidation of the camp is likely.

To improve the odds of future development, BMO Research expects SSO and SEA to consolidate ownership of the camp once the full resource potential of each project is established.



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## 24. Silvercorp Metals Inc. (SVM.TSX)

## High-Margin Production - China Focused

**SVM** is rated Outperform.

An Outperform rating for SVM captures a premium valuation supported by current high-margin production and internal growth prospects. BMO Research derives a C\$9 target price based on 2.0x the 10% nominal NPV of US\$4.11/share using BMO Research metal price assumptions. SVM trades at 1.34x the 10% nominal NPV at spot metal prices versus peers, which trade at a 1.35x.

**SVM** is an emerging mid-tier silver producer.

Silvercorp (SVM.TSX) is an emerging mid-tier silver producer with a focus on high-grade production in China. Expansion of the Ying mining complex in northwestern China is projected to increase production by 50% to 6.3Moz of silver by 2012 and development of the GC project in southeastern China is projected to increase annual silver production to ~8.5Moz by 2014.

Ying mine grades drive highmargin production. Lower quartile cash costs are driven by high silver-base metal grades at the Ying mine. BMO Research projects the Ying mine to maintain head grades in the vicinity of +500g/t silver, +8% lead and +3% zinc.

High base metal leverage.

Using BMO long-term metal prices, SVM is expected to maintain a high base metal weighting with 50% of revenue derived from lead and zinc sales.

Organic growth at Ying could erode SVM's high margin status.

SVM's current growth trajectory includes the development of satellite deposits within the Ying Mining district and the GC project. With the exception of the TLP mine, high costs and mediocre grades at several of the Ying complex satellite mines could erode SVM's high-margin status.

On the hunt for acquisitions.

Despite a failed takeover attempt of Klondex Exploration in Q3/09, SVM has broadcasted a strong message that it has plans to acquire and develop high-grade assets within more politically stable jurisdictions.

Potential targets include Minco Silver.

BMO Research believes that SVM could leverage an Asian focus and seek regional acquisitions with operational synergies. While SVM has steered clear of in-county emerging developer Minco Silver (MSV.TSX), the regional synergies with Fuwan are compelling.

Fig 235: Silvercorp Projects

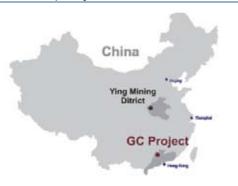
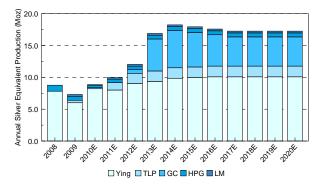


Fig 236: Silvercorp Production, 2009E-2020E



Source: Silvercorp Metals Inc. Source: BMO Capital Markets



#### **Silver Miners**

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### Valuation

Initiating with an Outperform rating.

SVM trades in line with the intermediate silver producer average in the BMO Research coverage universe.

BMO Research is initiating coverage of SVM with an Outperform rating and a target price of C\$9.00, based on 2.0x the 10% nominal corporate NPV of US\$4.11/share using the BMO metal price forecast.

SVM trades in line with intermediate silver producer average in the BMO Research coverage universe, which is currently trading at 1.59x their 10% nominal NPV using the BMO metal price forecast.

At spot metal prices, SVM trades at 1.34x the 10% nominal NPV versus the intermediate peer average of 1.34x.

Using BMO Research 2010 estimates, the SVM target price represents 22.1x EPS and 13.7x CFPS, versus average multiples of 23.9x EPS and 15.7x CFPS for senior to intermediate silver producer peers.

Fig 237: SVM Valuation

A C\$9 target price values SVM at 2.0x NPV.

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Gold	1,108	972	1,150	1,150	950	850
Copper	3.28	2.34	3.30	3.70	3.50	2.50
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET PRESENT VALUE		NPV <sub>10%</sub> , B	MO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>10%</sub> , Spot			
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share) <sup>1</sup>	US\$M	(\$/Share)1		
Ying Mine	78%	520.4	3.15	1,097.2	6.64	577.1	3.49		
HPG Mine	70%	11.9	0.07	27.0	0.16	16.4	0.10		
TLP Mine	78%	10.9	0.07	21.3	0.13	21.8	0.13		
LM Mine	70%	0.4	0.00	1.1	0.01	1.3	0.01		
GC Project	95%	90.5	0.55	235.9	1.43	128.5	0.78		
Project NPV		634.1	3.84	1,382.5	8.36	745.1	4.51		
Net Cash		79.0	0.48	79.0	0.48	79.0	0.48		
I-T-M Options and Warrants		11.7	0.07	11.7	0.07	11.7	0.07		
Corporate Adjustment <sup>2</sup>		(45.9)	(0.28)	(57.2)	(0.35)	(45.9)	(0.28)		
NPV of Hedge Book		-	-	-	-	-	-		
Total Corporate Adjustment	s	44.8	0.27	33.5	0.20	44.8	0.27		
Total NPV	US\$	678.9	4.11	1,416.0	8.57	789.8	4.78		
	C\$	689.2	4.17	1,437.6	8.70	822.4	4.97		
Multiple to Corporate NPV	2.0x								
12-month Target Price	US\$	1,357.7	8.21						
	C\$	1,378.4	9.00						

<sup>1.</sup> Assumes share capital of 165.3 million shares

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses

All figures in US\$ unless noted otherwise



China 70% 2%

Underground Direct ship, Flotation

### **Silver Miners**

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Fig 238: SVM Model Parameters

Project		,	Ying Mine	•				
Country			China					
Interest			77.5%					
% of SVM Project NPV			82%					
70 OI SVIN PTOJECT NPV	Mine Tomas		0270	11-				
	Mine Type:				nderground			
	Processing:			Direct	ship, Flota	ition		
	Processing Rate:		tpd		900			
	LOM Production:			<u>Annual</u>	Total			
		Silver	Moz	5.1	82.6			
		Lead	kt	27.8	451.7			
		Zinc	kt	8.0	129.3			
LOM Total Cash Costs*				2.5	52			
Modelled Mine Life			yrs	16.				
Expansion Capex			US\$M	0.				
			US\$M	138				
Total Sustaining Capital			US\$IVI	130	5.0			
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc	
Houelea	000	q/t		%	Moz	kt	kt	
Underground	5,268	535		3.49%	91	459	184	
onao ground	3,200	555	0.7270	3.77/0	7.1	737	104	
Project			TLP Mine					
Country			China					
Interest			77.5%					
% of SVM Project NPV			2%					
70 OF STATE TOJECT IN T	Mine Tomas		270	11-	nderground			
	Mine Type:				-			
	Processing:			Direct	ship, Flota	ation		
	Processing Rate:		tpd		800			
	LOM Production:			Annual	Total			
		Silver	Moz	0.9	11.4			
		Lead	kt	5.5	72.3			
LOM Total Cash Costs*				9.5	54			
Modelled Mine Life			yrs	13.				
			-					
Expansion Capex			US\$M	2.				
Total Sustaining Capital			US\$M	62	.5			
Modeled		Tonnes	Silver	Lead	Silver	Lead		
···oucicu		000	q/t	%	Moz	kt		
Underground		3,480	140	2.35%	16	82		
g		-,						
Project			<b>GC Mine</b>					
Country			China					
Interest			95%					
% of SVM Project NPV			14%					
	Mine Type:			Ur	nderground	1		
	Processing:			Milli	ng, Flotati	on		
	Processing Rate:		tpd		1,500			
	LOM Production:			Annual	Total			
		Silver	Moz	1.5	22.0			
		Lead		7.5	108.4			
		Zinc	kt	14.3	206.7			
LOM Total Cash Costs*				6.9				
Modelled Mine Life			yrs	14.	50			
Expansion Capex			US\$M	31	.3			
Total Sustaining Capital			US\$M	59	.1			
•								
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc	
	000	a/t		%	Moz	kt	kt	

	Processing	Rate:	tpd	150			
	LOM Produ	ction:		Annual	Total		
		Silver	Moz	0.1	2.4		
		Lead	kt	2.9	48.4		
		Zinc	kt	0.6	10.3		
LOM Total Cash Costs*				6.7	70		
Modelled Mine Life			yrs	16.	75		
Expansion Capex			US\$M	1.	8		
Total Sustaining Capital			US\$M	17	.4		
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc
	000	g/t		%	Moz	kt	kt
Underground	884	113	6.40%	2.02%	3	57	18
Project				LM Mine			
Country				China			
Interest				70%			
% of SVM Project NF				0%			
	Mine Type:		Uı	ndergroun	d		
	Processing	:	Direct	ship, Flot	ation		
	Processing	Rate:	tpd	100			
	LOM Produ	ction:		Annual	Total		
		Silver	Moz	0.2	2.4		
		Lead	kt	0.7	8.6		
LOM Total Cash Costs*				8.0	01		
Modelled Mine Life			yrs	12.	50		
Expansion Capex			US\$M	1.	8		
Total Sustaining Capital			US\$M	10	.5		
Modeled							

Project

Country Interest

Interest
% of SVM Project NPV
Mine Type:
Processing:

Processing Rate: tpd LOM Production:

 ${}^{\star}\text{co-product cash costs}.$ 

Underground



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Fig 239: SVM Production Estimates

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Ying Mine																
Tonnes Mined	tpd	712	796	909	900	900	900	900	900	900	900	900	900	900	900	900
Grade	Ag (g/t)	464	407	482	510	520	530	543	543	543	543	543	543	543	543	543
	Lead (%)	7.40%	7.30%	8.67%	8.40%	8.45%	8.45%	8.79%	8.79%	8.79%	8.79%	8.79%	8.79%	8.79%	8.79%	8.79%
	Zinc (%)	3.10%	2.90%	3.12%	3.00%	3.00%	3.00%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%	3.64%
Silver Equiv. Production	Moz	7.8	6.0	8.2	8.0	9.0	9.3	9.9	10.0	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Total Cash Costs*	US\$/oz	_	3.81	3.81	5.09	4.90	2.21	2.11	2.08	2.06	2.06	2.06	2.06	2.06	2.06	2.06
HPG Mine																
Tonnes Mined	tpd	135	168	97	145	150	150	150	150	150	150	150	150	150	150	150
Grade	Ag (g/t)	207	154	143	111	111	111	111	111	111	111	111	111	111	111	111
	Lead (%)	7.40%	5.80%	6.30%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%	6.41%
	Zinc (%)	1.10%	0.90%	1.17%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%	2.05%
Silver Equiv. Production	Moz	1.0	0.6	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Total Cash Costs*	US\$/oz	5.71	8.11	7.63	10.75	10.72	5.77	5.70	5.61	5.50	5.50	5.50	5.50	5.50	5.50	5.50
TLP Mine	004/02	0.71	0.11	7.00	10.70	10.72	0.77	0.70	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tonnes Mined	tpd	-	195	79	588	800	800	800	800	800	800	800	800	800	800	800
Grade	Ag (g/t)	0	160	111	140	140	140	140	140	140	140	140	140	140	140	140
	Lead (%)	0.00%	2.30%	3.03%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%	2.34%
Silver Equiv. Production	Moz	-	0.4	0.2	1.2	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Total Cash Costs*	US\$/oz	-	10.93	10.58	11.28	11.48	9.32	9.25	9.17	9.06	9.06	9.06	9.06	9.06	9.06	9.06
LM Mine																
Tonnes Mined	tpd	-	96	32	90	100	100	100	100	100	100	100	100	100	100	50
Grade	Ag (g/t)	-	267	281	248	248	248	248	248	248	248	248	248	248	248	248
	Lead (%)	0.00%	1.80%	2.87%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%	2.31%
Silver Equiv. Production	Moz	-	0.3	0.1	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2
Total Cash Costs*	US\$/oz	0.00	9.89	8.30	9.14	9.24	7.79	7.75	7.70	7.64	7.64	7.64	7.64	7.64	7.64	7.64
GC Mine																
Tonnes Mined	tpd	-	-	-	-	188	1,313	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Grade	Ag (g/t)	-	-	-	-	161	210	213	188	162	149	149	149	149	149	149
	Lead (%)	0.00%	0.00%	0.00%	0.00%	1.84%	2.35%	2.38%	2.13%	1.85%	1.71%	1.71%	1.71%	1.71%	1.71%	1.71%
	Zinc (%)	0.00%	0.00%	0.00%	0.00%	3.74%	4.35%	4.38%	4.13%	3.79%	3.58%	3.58%	3.58%	3.58%	3.58%	3.58%
Silver Equiv. Production	Moz	-	-	-	-	0.6	5.0	5.9	5.4	4.9	4.6	4.6	4.6	4.6	4.6	4.6
Total Cash Costs*	US\$/oz	-	-	-	-	11.07	5.68	5.43	5.88	6.48	6.95	6.95	6.95	6.95	6.95	6.95
Silvercorp Total Attribut																
Total Silver Production	Moz	4.0	4.1	4.8	5.5	6.5	8.2	8.6	8.3	8.1	7.9	7.9	7.9	7.9	7.9	7.8
Total Silver Equiv. Product		8.8	7.3	8.9	10.0	12.0	16.9	18.3	18.0	17.6	17.3	17.3	17.3	17.3	17.3	17.1
Total Cash Costs	US\$/oz	2.44	6.28	4.67	6.63	6.86	5.05	4.95	4.98	5.01	5.07	5.08	5.08	5.09	5.09	5.06
Total Production Costs	US\$/oz	2.83	7.33	5.11	7.18	7.58	6.33	6.25	6.23	6.21	6.27	6.32	6.40	6.56	6.79	7.09
*co-product cash costs																



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## Company Synopsis

During the December quarter, SVM achieved record production of 1.2Moz of silver, 8.5kt of lead and 1.7kt of zinc at co-product cash costs of US\$4.49/oz silver (net by-product cash costs of US\$(7.73)/oz of silver). Quarterly EPS of US\$0.08 and CFPS of US\$0.10 increased cash reserves to US\$87.8M with no debt.

2010E production of 4.8Moz of silver.

BMO Research forecasts FY2010E production of 4.8Moz of silver, 29kt of lead and 7kt of zinc gold at co-product cash costs of US\$6.43/oz of silver. FY2011 production is forecast at 5.5Moz of silver, 29kt of lead and 7.1kt of zinc at co-product cash costs of US\$4.67/oz of silver.

## HL has a strong base metal weighting.

SVM derives ~50% of mine revenue from silver and the remainder from lead and zinc, positioning the company as a base metal weighted silver producer.

Fig 240: Production & Cash Cost Profile, 2008-2020E

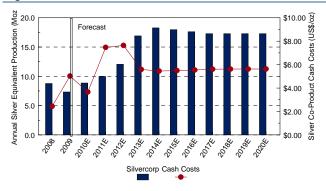
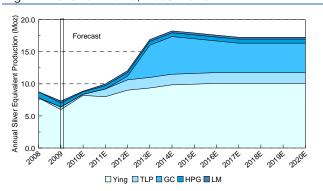


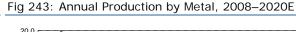
Fig 241: Growth Profile, 2008-2020E

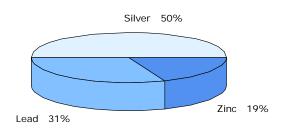


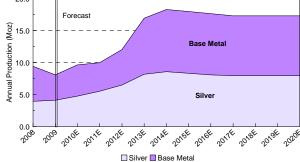
Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 242: SVM Revenue by Metal (%), 2008-2020E







Source: BMO Capital Markets

Source: BMO Capital Markets

## Projected strong EPS and CFPS growth through 2012.

With projected high metal prices over the next two years, BMO Research forecasts EPS of US\$0.48 and CFPS of US\$0.69 in FY2011 and EPS of US\$0.51 and CFPS of US\$0.74 in FY2012.

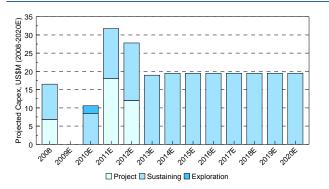
SVM is projected to increase cash reserves over the next several years as the company benefits from high silver and base metal prices, combined with low capital requirements for existing mines and future development plans.



### **Silver Miners**

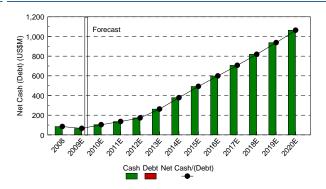
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Fig 244: Projected Capital Expenditures (US\$M)



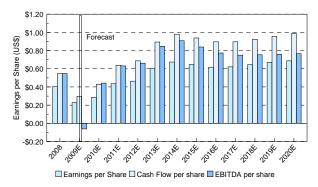
Source: BMO Capital Markets

Fig 245: Net Cash (Debt) Position, 2008–2020E



Source: BMO Capital Markets

Fig 246: Earnings Estimates, 2008-2020E





### **Silver Miners**

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**SVM** resource half base metals, half silver.

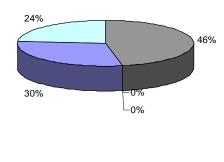
217Moz of silver in reserve supports a ~32-year mine life.

### Reserves/Resources

As of yet, SVM has not delineated a reserve base. Its resource base is quite evenly distributed between combined lead and zinc, and silver, which represent 54% and 46%, respectively.

The five projects that make up SVM's asset base, host 217Moz of silver that could support a  $\sim$ 32-year mine life based on average annual production of 6.8Moz of silver. The Ying Mine makes up 54% of the total resource base.

Fig 247: Resource Metal Distribution



■ Silver □ Gold ■ Copper ■ Lead □ Zinc

Source: BMO Capital Markets

Fig 248: SVM Resources

Silvercorp										Containe	ed Metal	
	Tonnes	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>	Silver	Gold	Copper	Lead	Zinc
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)
Measured & Indicated												
Ying Mine	2,050	763.5	-	-	12.07	5.93	-	50,400	-	-	248	111
HPG Mine	202	75.7	-	-	4.00	0.47	-	491	-	-	8	1
TLP	4,159	139.3	-	-	2.32	-	-	18,616	-	-	96	-
LM Mine	362	255.3	-	-	2.11	-	-	2,977	-	-	8	-
GC Project	6,408	137.9	-	-	1.49	3.34	-	28,487	-	-	96	214
Measured & Indicated	13,181	119.9	-	-	1.94	0.93	-	100,971	-	-	456	326
Inferred												
Ying Mine	1,979	1,128.0	-	-	19.01	7.57	-	66,254	-	-	350	122
HPG Mine	1,513	120.0	-	-	6.68	6.68	-	5,825	-	-	101	33
TLP	2,708	143.0	-	-	2.40	-	-	12,417	-	-	65	-
_M Mine	107	238.0	-	-	2.93	-	-	817	-	-	3	-
GC Project	7,892	121.0	-	-	1.45	2.70	-	30,774	-	-	115	213
Total Inferred	3,492	691.2		-	13.67	7.18	-	116,087	-	-	633	369

Source: Silvercorp Metals Inc.



**Silver Miners** 

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### Valuation Risk

Key valuation risks for SVM are outlined below:

- SVM has not established reserves at either the Ying or GC mine.
   While the nature of the type of deposits precludes the expense to develop a large reserve base, SVM is advancing Ying development to a sufficient stage in advance of mining. BMO Research expects SVM will be in a position to outline a 2- to-3-year reserve by mid-FY2011.
- Production estimates for the Ying mine and GC project are not substantiated by an independently reviewed mine plan.
- GC production estimates are in advance of feasibility work.

## Ying Mine Complex

SVM has built a substantial footprint within the Ying mining district in Henan province of central China. Mining operations are centered on the Ying mine with future production expansion supported by increasing production from the adjacent TLP, HPG and LM mines.

SVM is currently operating a 1ktpd conventional flotation mill that produces a silver-rich lead concentrate and zinc concentrate that are sold to in-country custom smelters located 70 to 190 km from the Ying mine complex.

Through 2008, SVM constructed a new processing plant 4km away from its operating mill. Construction of the mill was temporarily placed on hold through H1/09 owing to the global financial crisis. The first 1ktpd line was completed through H2/09 and is projected to be operational at the end of Q1/10. Once operational, SVM is projected to increase production to 5.5Moz of silver, 33kt (72.5Mlb) of lead and 6.8kt (15Mlb) of zinc in FY2011.

## Ying Mine - A Flagship Project

SVM has a 77% interest in the LM mine.

The company's flagship Ying mine is operated through Henan Found Mining Ltd., a sino-foreign cooperative JV company owned 77.5% by Silvercorp and 22.5% by the Henan Non-Ferrous Geological & Mineral Resources Co. Ltd.

The mine is operated as a track mine with access via portal and internal shafts that provide access to ~2km of the vein system over a vertical range of ~250m. Current development activities are focused on deepening the mine below the 450 and 400 production levels. Development has advanced to provide access to the 350, 300 and 260 levels. To reduce dilution, mining is completed by resue and shrinkage on 50m spaced levels.

BMO models Ying mine production of 5Moz of gold, 27kt of lead and 7kt of zinc.

The Ying mine currently operates at  $\sim\!900\text{tpd}$  and is expected to maintain these levels as production from the HPG, LM and TLP mines ramps up through 2010. BMO Research models annual production of 5Moz of silver, 27kt of lead and 7kt of zinc at co-product cash costs of US\$3.53/oz silver. Ore is sorted at site with  $\sim\!5\%$  to 10% of ore of sufficient grade to be shipped directly to smelters.

The Ying mine accounts for 78% of the 10% nominal NPV.

Based on a 16-year mine life and mineable resources of 82Moz of silver, 451.7kt of lead and 129.3kt of zinc, BMO Research estimates a 10% nominal NPV of US\$520M for Ying using long-term metal price forecasts.



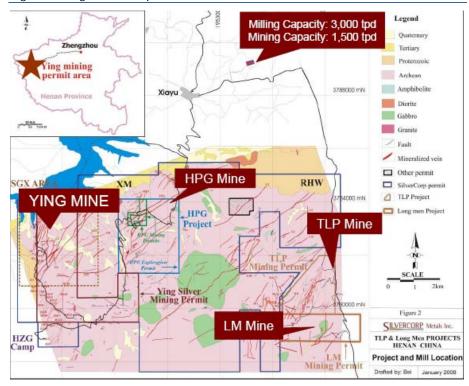
### **Silver Miners**

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Resources at the end of 2008 totalled 117Moz of silver, 598kt of lead and 233kt of zinc.

Veining within the Ying district is typical of other mesothermal silver-lead-zinc deposits with mineralization contained within sub-parallel, steeply dipping quartz-carbonate veins containing silver-rich galena sphalerite. Veins are narrow averaging between 0.4m and 2.5m in width.

Fig 249: Ying Mine Complex



Source: Silvercorp Metals Inc.

### **HPG, LM & TLP Mines = Incremental Production**

Through a series of acquisitions, SVM has acquired a series of satellite operations and consolidated the Ying district. In addition to the Ying mine, SVM is developing the HPG, LM and TLP mines. Terms of SVM's interest in each project are:

- The HPG mine was acquired in Q4/07 for US\$6.9M and is 100% owned by Henan Huawei Mining Co. Ltd., a sino-foreign cooperative JV company owned 70% by Silvercorp and 30% by Luoning Huatai Mining Development Co. Ltd.
- SVM acquired the LM mine in Q4/07 for US\$3.25M and is owned by Henan Huawei Mining Co. Ltd., a sino-foreign cooperative JV company owned 70% by Silvercorp and 30% by Luoning Huatai Mining Development Co. Ltd.
- The TLP mine was acquired in Q4/07 for US\$22M and is owned by Henan Found Mining Ltd., a sino-foreign cooperative JV company owned 77.5% by Silvercorp and 22.5% by the Henan Non-Ferrous Geological & Mineral Resources Co. Ltd.

SVM has a 70% interest in the HPG and LM mines.

SVM has a 77.5% interest in the TLP mine.



### Silver Miners

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Focused on underground development to sustain future production.

Through 2008 and 2009, SVM has focused on underground development to evaluate the  $\pm 25$  veins that have been identified in the HPG and LM mine area. Development activities at the TLP mine through 2009 focused on six of 10 known veins on the mine permit. The veins are developed for up to 600m along strike with mining by shrinkage stoping.

SVM began initial production from the mines in 2008 and was increasing production rates up until Q4/08 when the company suspended capital development owing to market conditions. Underground development activities resumed in H2/09 in parallel with completion of the first 1ktp tpd circuit at the new mill.

SVM has stockpiled  $\sim$ 50kt of ore (50% from the TLP mine and 50% from the Ying mine) in advance of the planned Q2/10 start-up.

SVM plans to ramp up production rates through 2010.

SVM plans to gradually ramp up underground production to sustain rates of 150tpd at the HPG, 100tpd at the LM and 800tpd at the TLP mine. Average LOM forecast production rates are:

- HPG mine production of 140koz of silver, 2.9kt of lead and 0.6kt of zinc at co-product cash costs of US\$6.70/oz silver.
- LM mine production of 200koz of silver and 0.7kt of lead at coproduct cash costs of US\$8.00/oz silver.
- TLP mine production of 0.9Moz of silver and 5.5kt of lead at coproduct cash costs of US\$9.54/oz silver.

Combined, the HPG, LM and TLP mines account for US\$23.2M, or 3% of BMO Research's 10% nominal NPV for SVM.

## GC Project - The Next Mine

Ideal location relative to existing infrastructure.

SVM's future production growth is contingent on development of the GC project located about 200km west of Guangzhou City, Guangdong Province, southern China. The project is ideally located with proximity to industrial fabrication and cement production surrounding the regional centre of Yun'an County. The GC mine is also located a few kilometres away from a major transmission corridor and a new highway that is nearing completion.

**SVM** holds a 95% interest in the GC project.

SVM acquired the project in Q2/08 for  $\sim$ US\$60.3M in shares and cash and is owned by Anhui Yangtze Mining Co. Ltd., a sino-foreign cooperative JV company in which SVM has a 95% interest.

59Moz of silver, 211kt of lead and 432kt of zinc in resource.

SVM has advanced the GC project through the completion of a revised resource estimate that has outlined total resources of 59Moz of silver, 211kt of lead and 432kt of zinc.

Silver-base metal mineralization on the GC project is identified in 13 northwest striking veins over a 3km long by 1.5km wide area. Resources are contained within five veins of which the largest accounts for  $\sim$ 48% of known mineralization. The principal vein has been delineated for 1.3km along strike and over a vertical depth of  $\sim$ 450m with the vein averaging 4m in width. In addition to silver, lead and zinc, veins on the GC project contain appreciable concentrations of tin (up to 0.56%).



### Silver Miners

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GC mine permit approval expected mid-2010.

SVM initiated the permitting process for the GC project in Q1/09 with the submission of an environmental assessment report (EAR) for the project. Final permit approval is awaiting the completion of new environmental legislation that is expected to be completed through H1/10. Key milestones along the development path include:

- Final approval of the EAR by the Environmental Protection Bureau of Guangdong Province.
- Submission and approval of a mining permit by the Ministry of Land and Resources of China in Beijing.
- Completion of a mill and mine design.

SVM has budged approximately US\$4M in Fiscal 2010 (March year-end) for exploration reports, mine and mill designs, and for permitting. SVM has also initiated a number of project optimization studies, including a review of tailings management, which are expected to be included in a Q3/10 feasibility study.

BMO models annual production of 1.5Moz of silver, 7.5kt of lead and 14.3kt of zinc.

BMO Research models production at the GC Project beginning in Q3/11 and ramping up to full production of 1.5ktpd by Q4/12. Annual production is projected to average 1.5Moz of silver, 7.5kt of lead and 14.3kt of zinc at coproduct cash costs of US\$6.93/oz silver.

Capital cost to develop a 1.5ktpd mine and milling operation for the GC project are estimated at US\$31M. The low capital cost projections for development reflect the low cost of engineering, equipment fabrication and construction in China. For comparison, SVM has largely finished constructed the Ying 2ktpd mill for ~US\$11M and Minco Silver has estimated construction of the 3ktpd Fuwan underground mine, also on Guangdong province for US\$73M.

The SVM mine accounts for 14% of SVM's 10% nominal NPV.

Based on a 14.5-year mine life and mineable reserves of 38Moz of silver, 136kt of lead and 276kt of zinc, BMO Research estimates a 10% nominal NPV of US\$90.5M for the GC Project using BMO Research long-term metal price forecasts.



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## 25. First Majestic Silver (FR.TSX)

## Big Steps in 2009 Set Stage for Transition to Intermediate Producer

FR is rated Market Perform with a C\$4.50 target price.

A Market Perform rating and C\$4.50 target price highlights FR's transition towards intermediate producer status. Successful ramp-up of the Encantada expansion and the company's focus on strengthening its balance sheet should provide the catalyst for future production growth. FR trades at an 11% discount relative to peer valuations using BMO Research metal price assumptions.

**Encantada expansion** provides a flagship mine.

Through 2009, First Majestic Silver Corporation (FR) completed a major expansion at the Encantada mine that has laid the foundation for the company to transition from a junior to intermediate silver producer.

The impact of expanded Encantada operations has already been realized, with Q4/09 silver production increasing 19% year over year to 1.1Moz of silver.

**BMO** Research forecasts production of 7Moz of silver.

Combined with production from the company's La Parrilla and San Martin mines, also located in Mexico, BMO Research forecasts FR to exceed guidance of 6Moz and increase silver production by 75% above 2009 levels to ~6.6Moz of silver in 2010.

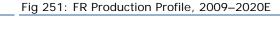
Silver production could increase to 11Moz by 2012.

Production is projected to rise to the 11Moz level by 2012 once production stabilizes from the advanced stage Del Toro mine located 37km south of the company's La Parrilla mine. Incremental capital costs to achieve production growth are expected to be in the range of US\$40M, a level easily funded through existing cash flow.

FR has laid the foundation for future growth through the acquisition of Normabec Mining Inc. which owns Real de Catorce project in Mexico that hosts 47Moz of silver, 18kt of lead and 16kt of zinc.

12.0

Fig 250: Mine Locations





Source: First Majestic



#### **Silver Miners**

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## Valuation

Initiating with a Market Perform rating.

BMO Research is initiating coverage of FR with a Market Perform rating and a target price of C\$4.50, based on 1.6x the 10% nominal project NPV of US\$2.86/share using the BMO metal price forecast and adjusted for working capital and using an FX rate of \$0.99 C\$/US\$.

FR trades at 1.21x, or a 11% discount to junior and intermediate producers in the BMO Research coverage universe, which are currently trading at 1.34x their 10% nominal NPV at spot metal prices.

FR trades at an 11% discount to intermediate silver producers in the BMO Research coverage universe.

Using BMO Research 2010 estimates, FR is trading at 6.2x EPS and 4.8x CFPS versus average multiples of 23.9x EPS and 15.7x CFPS for its intermediate producer peers.

Fig 252: FR Valuation

BMO Assumptions	Spot	2009E	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Gold	1,108	972	1,150	1,150	950	850
Copper	3.28	2.34	3.30	3.70	3.50	2.50
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

A C\$4.50 target price values FR at 1.6x NPV.

NET PRESENT VALUE		NPV <sub>10%</sub> , B	MO Price	NPV <sub>0%</sub> , BI	MO Price	NPV <sub>10%</sub> , Spot Gold			
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share)1	US\$M	(\$/Share)1		
Encantada	100%	139.8	1.43	236.8	2.43	138.5	1.42		
San Martin	100%	41.5	0.43	57.3	0.59	37.5	0.38		
La Parilla	100%	63.0	0.65	91.6	0.94	59.6	0.61		
Del Toro	100%	17.6	0.18	41.2	0.42	22.1	0.23		
Project NPV		261.8	2.68	426.9	4.38	257.7	2.64		
Net Cash		29.8	0.31	29.8	0.31	29.8	0.31		
I-T-M Options and Warrants		15.9	0.16	15.9	0.16	15.9	0.16		
Corporate Adjustment <sup>2</sup>		(28.9)	(0.30)	(36.6)	(0.38)	(28.9)	(0.30)		
NPV of Hedge Book		-	-	-	-	-	-		
Total Corporate Adjustments		16.8	0.17	9.1	0.09	16.8	0.17		
Corporate NPV	US\$	278.6	2.86	436.0	4.47	274.6	2.81		
-	C\$	282.9	2.90	442.6	4.54	285.9	2.93		
Multiple to Corporate NPV	1.6x								
12-month Target Price	US\$	431.9	4.43						
	C\$	438.5	4.50						

<sup>1.</sup> Assumes share capital of 97.5 million shares

All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses



### **Silver Miners**

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Fig 253: FR Model Parameters

Project	San Martin											
Country Interest % FR's Project NPV Mine Parameters		Mexico 100% 16%										
Mine Type			U	ndergroun	d							
Processing				g, Merril C								
Processing Rate			tpd	80								
LOM Production				Annual	Total							
		Silver	Moz	1.7	10.2							
LOM Total Cash Costs*				\$5.								
Modelled Mine Life			yrs	6.0	00							
Initial Capital Costs			US\$M	n/	-							
Expansion Capex Total Sustaining Capital			US\$M US\$M	0. 28	-							
rotal Sustaining Capital			U22INI	28	.0							
Modeled		Tonnes		Silver								
Underground		2,430	g/t 164	Moz 13								
Project		Del Toro										
Country		Mexico	,									
Interest		100%										
% FR's Project NPV		7%										
Mine Parameters												
Mine Type			U	ndergroun	d							
Processing				ing, Flotat								
Processing Rate			tpd	1,0	00							
Start-up			yr	Q3'2	010							
LOM Production				<u>Annual</u>	Total							
		Silver	Moz	1.5	9.1							
		Lead	kt	5.9	36.7							
LOM Total Cash Costs*				6.7	19							
Modelled Mine Life			yrs	6.2	25							
Initial Capital Costs			US\$M	30								
Expansion Capex			US\$M	0.								
Total Sustaining Capital			US\$M	38	.3							
Modeled	Tonnes				Silver	Lead	Zinc					
Underground	1.916	g/t 220.57		4.96	Moz 14	kt 92	kt 95					
onderground	1,710	220.57	4.62	4.90	14	72	45					

Project			La Parilla	a			
Country			Mexico				
Interest			100%				
% FR's Project NPV			24%				
Mine Parameters							
Mine Type			U	Indergroun	ıd		
Processing			illing, Flo	tation & M	errill Crov		
Processing Rate			tpd	84			
LOM Production				Annual	Total		
		Silver	Moz	1.8	12.7		
		Lead	kt	3.2	22.7		
LOM Total Cash Costs*				\$5.	71		
Modelled Mine Life			yrs	7.	0		
Initial Capital Costs			US\$M	n/	'a		
Expansion Capex			US\$M	0	0		
Total Sustaining Capital			US\$M	49	.2		
Modeled	Tonnes	Silve	r Lead	Zinc	Silver	Lead	Zinc
	000	g/i	t %	%	Moz	kt	kt
Underground	2,140	193	2.65	4.57	19	57	98

Project			Encantad	а			
Country			Mexico				
Interest			100%				
% FR's Project NPV			53%				
Mine Parameters							
Mine Type			ndergroun	d, Open Pi	it (Tailing		
Processing			illing, Flot	ation & Me	errill Crov		
Processing Rate	Und	lerground	tpd	84	.0		
	iling Rep	rocessing	tpd	3,5	00		
LOM Production				<u>Annual</u>	Total		
		Silver	Moz	3.1	45.1		
		Lead	kt	0.8	11.2		
LOM Total Cash Costs*				6.4	14		
Modelled Mine Life			yrs	14	.5		
Initial Capital Costs			US\$M	5.	3		
Expansion Capex			US\$M	23	.6		
Total Sustaining Capita	ıl		US\$M	91	.0		
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc
	000	g/t	%	%	Moz	kt	kt
Open Pit	5,331	141.80		n/a	24	n/a	n/a
Underground	6,026	221	1.09	0.98	42	66	59

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
San Martin																	
Milling rate	tpd	706	808	825	1,125	1,200	1,200	1,200	1,200	-	-	-	-	-	-	-	-
Tonnes Milled	ktpa	254	292	297	405	432	432	432	432	-	-	-	-	-	-	-	-
Grade	Silver (g/	141.0	149.0	175.0	170.0	165.0	160.0	155.0	160.0	-	-	-	-	-	-	-	-
Silver Production	Moz	0.9	1.1	1.3	1.8	1.8	1.8	1.7	1.8	-	_	-	_	_	_	_	_
Silver Equiv. Production	Moz	1.0	1.2	1.3	1.8	1.8	1.8	1.7	1.8	_	_	_	_	_	-	_	_
Total Cash Costs*	US\$/oz	8.71	7.20	6.88	5.70	5.55	5.72	5.90	5.72	-	-	-	-	-	-	-	_
Total Production Costs*	US\$/oz	8.87	8.36	8.56	8.02	8.81	10.09	11.51	13.75	_	_	_	_	_	-	_	_
La Parilla																	
Milling rate	tpd	684	840	840	840	840	840	840	840	840	-	-	-	-	-	-	_
Tonnes Milled	ktpa	246	279	306	306	306	306	306	306	306	_	_	_	_	_	_	_
Grade	Silver (q/	141.0	208.5	237.5	258.8	283.0	283.0	283.0	283.0	283.0	_	_	_	_	_	_	_
	Lead (%)	1.17	1.68	2.44	2.69	2.69	2.69	2.69	2.69	2.69	-	-	-	-	-	-	-
Silver Production	Moz	1.3	1.3	1.6	1.7	1.9	1.9	1.9	1.9	1.9	_	_	_	_	_	_	_
Silver Equiv. Production	Moz	1.6	1.6	1.9	2.1	2.3	2.3	2.3	2.3	2.3	-	-	-	-	-	-	-
Total Cash Costs*	US\$/oz	7.46	6.52	6.96	6.37	5.80	5.78	5.76	5.72	3.56	-	-	-	-	-	-	_
Total Production Costs*	US\$/oz	8.87	8.63	9.41	9.26	9.33	10.10	11.07	12.47	12.86	-	-	-	-	-	-	-
Del Toro																	
Milling rate	tpd	-	-	13	313	938	1,000	1,000	1,000	1,000	-	-	-	-	-	-	-
Tonnes Milled	ktpa	-	-	5	114	342	364	364	364	364	-	-	-	-	-	-	-
Grade	Silver (g/	-	-	220.6	220.6	220.6	220.6	220.6	220.6	220.6	-	-	-	-	-	-	-
	Lead (%)	-	-	4.82	4.82	4.82	4.82	4.82	4.82	4.82	-	-	-	-	-	-	-
	Zinc (%)	-	-	4.96	4.96	4.96	4.96	4.96	4.96	4.96	-	-	-	-	-	-	-
Silver Production	Moz	-	-	0.0	0.5	1.6	1.7	1.7	1.7	1.7	-	-	-	-	-	-	-
Silver Equiv. Production	Moz	-	-	0.0	0.8	2.4	2.6	2.6	2.6	2.6	-	-	-	-	-	-	-
Total Cash Costs*	US\$/oz	-	-	10.58	8.86	6.27	6.04	6.00	5.92	3.86	-	-	-	-	-	-	-
Total Production Costs*	US\$/oz	-	-	11.59	10.72	9.79	10.43	11.55	12.95	14.11	-	-	-	-	-	-	-
Encantada																	
Tailing Reprocessed	tpd	-	188	2,433	2,500	2,400	2,300	2,300	2,300	575	-	-	-	-	-	-	-
Tailings Reprocessing	ktpa	-	68	876	900	864	828	828	828	207	-	-	-	-	-	-	-
Grade	Silver (g/	717	141.8 843	141.8 840	141.8 1.000	141.8	141.8	141.8 1.200	141.8 1.200	141.8	1 200	1 200	1 200	1,200	1 200	1 200	1,200
Underground Ore Tonnes Milled	tpd ktpa	258	290	302	360	1,100 396	1,200 432	432	432	1,200 432	1,200 432	1,200 432	1,200 432	432	1,200 432	1,200 432	432
Grade	Silver (g/	283.0	254.4	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8	217.8
orado	Lead (%)	2.42	1.32	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Silver Production	Moz	1.4	1.3	3.6	4.0	4.1	4.2	4.2	4.2	2.8	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Silver Equiv. Production	Moz	1.6	1.5	3.7	4.1	4.2	4.3	4.3	4.3	2.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Total Cash Costs*	US\$/oz	5.30	7.49	6.72	6.37	6.23	6.10	6.09	6.09	6.39	6.58	6.58	6.58	6.58	6.58	6.58	6.58
Total Production Costs*	US\$/oz	6.15	8.08	7.88	7.71	7.80	7.93	8.26	8.58	9.16	9.77	10.17	10.75	11.33	12.25	13.29	15.03
First Majestic Total																	
Total Silver Production	Moz	3.7	3.8	6.6	8.1	9.5	9.6	9.6	9.6	6.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Total Silver Equiv. Produ		4.2	4.3	7.0	8.7	10.7	11.0	10.9	11.0	7.8	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Total Cash Costs	US\$/oz	6.92	7.63	6.86	6.56	6.20	6.13	6.15	6.09	4.89	6.65	6.65	6.65	6.65	6.65	6.65	6.65
Total Production Costs	US\$/oz	7.78	8.98	8.49	8.55	9.00	9.61	10.47	11.64	12.46	9.87	10.27	10.86	11.45	12.37	13.43	15.18
* Silver Co-Product Cash Cost:	S																



### **Silver Miners**

February 22, 2010

## Company Synopsis

BMO forecasts 2009 production of 7Moz of silver, above company guidance (6Moz).

BMO Research forecasts 2010E production of 6.6Moz of silver and 0.36kt of lead at co-product cash costs of US\$6.86/oz of silver. Production forecasts are above FR guidance of 6Moz of silver for 2010 owing to expected operational optimization through H2/10 that will incrementally increase silver production from operating mines.

Silver-weighted producer.

FR derives ~90% of mine revenue from silver, with the remainder from lead and copper positioning the company as a silver-weighted producer.

Fig 254: Production & Cash Cost Profile, 2008-2020E

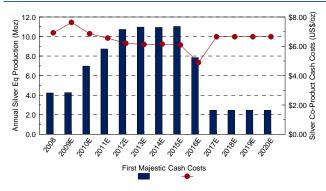
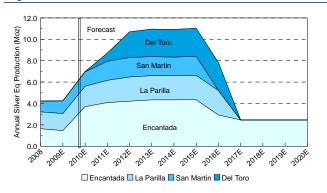


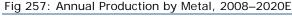
Fig 255: Growth Profile, 2008-2020E

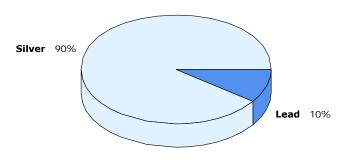


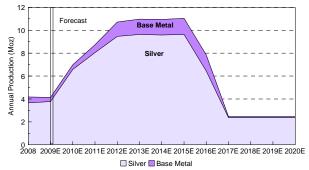
Source: BMO Capital Markets

Fig 256: FR Revenue by Metal (%), 2008–2020E

Source: BMO Capital Markets







Source: BMO Capital Markets

Source: BMO Capital Markets

H1/10 – A focus on building working capital.

FR is projected to exit 2009 with cash of US\$6.4M. To improve the company's working capital position, management reduced new capital expenditure programs through H1/10 that should increase working capital to US\$21M by mid-2010.

FR plans to increase capital spending in underground development and exploration at each of its three operating mines (La Encantada, La Parrilla and San Martin) through H2/10. Capital spending for 2010 is budgeted at US\$15M; US\$6M through H1/10 and US\$9M through H2/10. It is anticipated that this capital will be funded through operating cash flow, with FR exiting 2010 with estimated cash of around US\$31.6M



2016 2018/2

### **Silver Miners**

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**Projected strong EPS and** CFPS growth through 2012. Given projections for high metal prices over the next two years, BMO Research forecasts EPS of US\$0.56 and CFPS of US\$0.71 in 2010 and EPS of US\$0.69 and CFPS of US\$0.90 in 2011.

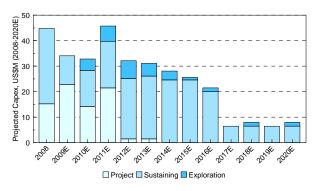
Assuming BMO Research forecasts for exploration and capital spending, FR is projected to grow cash reserves to US\$124.6M by 2012E.

Fig 259: Net Cash (Debt) Position, 2008-2020E

20148

Cash Debt Net Cash/(Debt)

Fig 258: Projected Capital Expenditures (US\$M)



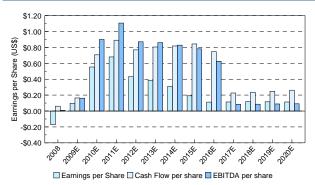
Net Cash (Debt), (US\$M)

300

Source: BMO Capital Markets

Source: BMO Capital Markets







### **Silver Miners**

February 22, 2010

### Reserves/Resources

FR is highly levered to the silver price.

An additional 373Moz of silver in resource could extend operations for +50 years.

FR's reserve base is weighted to the silver price with silver accounting for 56% of the value of reserves using long-term metal price forecasts. Combined lead and zinc account for  $\sim 44\%$  of the in situ reserve.

At the end of 2008, FR had reserves of 46.3Moz of silver supporting a six-year reserve life (based on 2010 production). Combined, FR's mines host a further 373M in resource that could translate into a further +50 years. Resources are still silver weighted but less so, with 26% of resources held in zinc and 16% in lead.

Fig 261: Reserve Metal Distribution

Fig 262: Reserve Metal Distribution



Source: BMO Capital Markets Source: BMO Capital Markets

Fig 263: FR Reserves & Resources

First Majestic										Containe	d Metal	
	<b>Tonnes</b>	Silver	Gold	Copper	Lead	<u>Zinc</u>	<u>Tin</u>	Silver	Gold	Copper	<u>Lead</u>	Zinc
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)
Proven & Probable												
Parilla	506	295.0	-	-	1.40	1.01	-	4,799	-	-	7	5
San Martin	770	274.0	-	-	-	-	-	6,783	-	-	-	-
Encantada	5,196	208.0	-	-	2.42	2.33	-	34,747	-	-	126	121
Del Toro	-	-	-	-	-	-	-	-	-	-	-	-
Total Reserves	6,472	222.7	-	-	2.05	1.95	-	46,329	-	-	133	126
Measured & Indicated												
Parilla	3,100	255.0	-	-	2.84	4.97	-	25,415	-	-	88	154
San Martin	1,503	154.0	-	-	0.91	1.80	-	7,442	-	-	14	27
Encantada	5,377	176.0	-	-	1.40	0.85	-	30,426	-	-	75	46
Del Toro	1,378	269.0	-	-	4.69	4.80	-	11,918	-	-	65	66
Real de Catorce	5,112	205.0	-	-	0.27	0.25	-	33,693	-	-	14	13
Measured & Indicated	16,470	142.0	-	-	1.47	1.78	-	108,894	-	-	255	306
Inferred												
Parilla	8,000	169.0	-	-	0.87	1.49	-	43,468	-	-	70	119
San Martin	8,200	185.0	-	-	1.40	1.60	-	48,773	-	-	115	131
Encantada	2,557	220.0	-	-	1.00	1.00	-	18,086	-	-	26	26
Del Toro	1,832	306.0	-	-	5.77	5.94	-	18,023	-	-	106	109
Real de Catorce	1,855	220.0	-	-	0.22	0.17	-	13,121	-	-	4	3
Total Inferred	22,444	177.9	-	-	1.41	1.71	-	141,471	-	-	320	388

<sup>\*</sup>Measured and indicated resources are inclusive of reserves

<sup>\*</sup>Measured and indicated resources include reserve dilution



### Silver Miners

February 22, 2010

## Rebuilding Capital

Encantada expansion through 2009, in conjunction with minor delays in commissioning and an 11% increase in capital costs, strained FR working capital levels. After a series of equity financings totalling C\$30.4M through 2009 and a \$4.3M loan from a Mexican Development Trust (FIFOMI), FR is projected to exit the year with cash of US\$6.4M.

To combat a constrained working capital position, FR has reduced future development and exploration plans through H1/10 and delayed Del Toro mill construction until Q4/10.

## La Encantada - A Flagship Mine in the Making

Expansion in 2009 with addition of a 3.5ktpd cyanidation plant.

Through 2009, FR completed a major expansion at the Encantada mine that involved the construction of a 3.5ktpd cyanidation processing plant to augment the existing 1ktpd flotation plant. Precipitates from the 3.5ktpd cyanidation plant are currently being shipped to Met-Mex in Torreon awaiting the installation of induction furnaces which will enable the production of doré bars on site. Lead concentrates are purchased FOB Manzanillo from the mine by Trafigura.

Tailings reprocessing.

For the initial years of operation, FR plans to augment underground mine production by reprocessing more that 5Mt of historic tailings grading 143g/t silver through the new cyanidation plant.

Underground flotation tails processed through cyanidation plant.

Underground ore processed through the flotation plant has been optimized to produce a high-grade lead concentrate with the silver rich tails processed through a new 3.5ktpd cyanidation plant.

Incorporating tailings reprocessing, Encantada production is projected to rise 170% from 1.3Moz of silver in 2009 to 3.6Moz of silver in 2010. Production of doré on site and the reduction of concentrate production at Encantada are expected to drive co-product costs to the low US\$6.60/oz of silver range, below the US\$7.50/oz silver estimated for 2009.

Fig 264: La Encantada

Addition of cyanidation plant will improve underground silver recoveries to 76%.



Source: First Majestic Silver



### **Silver Miners**

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The addition of the cyanidation plant is projected to increase silver recoveries in the fresh ore from 50% previously achieved in the flotation plant to 78% in the new cyanidation plant, which will produce doré beginning in Q2/10.

Reserves at the end of 2008 total 35Moz of silver and 12kt of lead and 12mt of zinc supporting a mine life of nine years (based on 2010 production levels).

In addition to reserves, Encantada hosts a further 149Moz of silver resource, most of which resides within the underground deposit.

Incorporating resources, BMO Research models an operational life of 14.5 years for Encantada.

### Tailings Won't Last Forever

Longer term, FR plans to use tailings reprocessing as an intermediate step toward expanding underground production to support sustained production rates of  $\sim 4 \text{Moz}$  of silver.

Over the last three years, FR has implemented an expanded redevelopment and exploration strategy toward sustaining production rates of  $\pm 3.5$ ktpd over the longer term.

A focus on underground development to increase production rates.

Development improvements have included:

- The conversion of underground mining operations to trackless mining.
- Development of a main haulage level connecting the two main shafts.
- Discovery and development of new ore zones within existing infrastructure, including the new Buenos Aires zone.

Improving silver grades.

The impact of these efforts is expected to progressively reduce mine operating costs and increase silver grades from the current  $\sim$ 280g/t level to  $\sim$ 400g/t through 2010.

2010 budget of US\$11M.

2010 capital budgets for Encantada are expected to be in the range of US\$11M and include final cyanidation plant commissioning costs of US\$2.5M, US\$2.5M for mine equipment and US\$6M for underground development and exploration.



### Silver Miners

February 22, 2010

## La Parrilla

Production of 1.8Moz of silver annually.

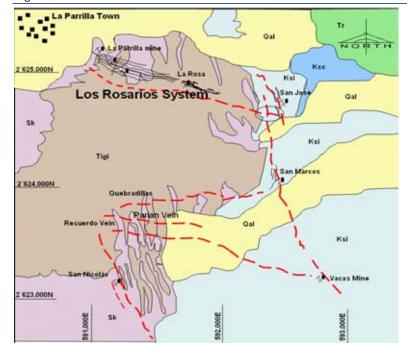
La Parrilla, located in the central part of Mexico, 75Km from the city of Durango is an 850tpd underground mine that is projected to produce an average of 1.9Moz of silver and 3.3kt of lead per annum at co-product cash costs of US\$6.96/oz of silver.

Ore is extracted from four principal deposits that are spread out over 4km² of mine infrastructure. Production consists of a 1-to-1 split between silver oxide and sulphide ore.

Fig 265: La Parrilla Mine

Mining operations are focused on four deposits.

A large land package and numerous exploration targets could lead to new discoveries.



Source: First Majestic Silver

850tpd combined oxide and sulphide plant.

The La Parrilla processing plant combines parallel 420tpd silver oxide and sulphide circuits to produce a silver doré and a silver-rich lead concentrate. Recoveries through the oxide circuit average 70% for silver with sulphide circuit recoveries averaging 75% for silver and 80% for lead.

FR has outlined design changes required to expand oxide mill production from 420tpd to 600tpd. The changes include construction of additional tanks to expand the cyanidation circuit at an estimated cost of US\$1.7M.

A short reserve life but a large resource base.

Reserves at the end of 2008 total 4.8Moz of silver and 7kt of lead with silver reserves split 50% in oxide and 50% in sulphides. Existing reserves support a mine life of two years.

In addition to reserves, La Parrilla hosts a further 64.5Moz of silver resource, split 54:46 between oxide and sulphide.



### **Silver Miners**

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Mining operations are focused on the Los Rosarios, La Rosa, San Jose, and Quebradillas areas. Underground development is underway at areas including: San Marcos, San Nicolas and Vacas. La Parrilla mine is developed on eight levels spaced 40m apart. Mining is via two declines located at either end of the deposit and by a 250ktpd shaft. Mining is completed by cut and fill between sub-levels developed at 40m intervals.

A focus on infrastructure development to reduce costs.

### **Reducing Costs**

Through 2009, FR completed a series of underground initiatives to improve ore handling. Development included the construction of a new ramp at the Blanca zone to connect the 7 and 8 levels of the Rosario mine.

Long hole testing under way.

FR has begun to investigate the potential for longhole stoping in parts of the mine to reduce operational costs.

FR also converted 75% of the total work force from contractor to employees. The move is expected to reduce labour costs by  $\sim 10\%$  through 2010

#### Exploration has been limited to the immediate mine area

The silver-lead-zinc mineralization in the various sectors of the property is hosted in vein-fault zones, breccias and replacement bodies. These occur within the porphyritic diorite intrusive rocks and in the adjacent limestone, skarn, and hornfels rocks.

Mining currently occurs within a small portion of a large, 53km<sup>2</sup> land package and has numerous exploration targets that have received only a cursory evaluation.

## San Martin - 1Moz of Silver and a Large Resource Base

San Martin production of ~1.7Moz of silver annually.

The San Martin mine, located 250km by road north of Guadalajara is a ~950tpd underground vein mine that has been in continuous operation since 1983. Annual production is in the range of 1.7Moz of silver at total co-product cash costs of US\$5.91/oz silver.

In 2008, FR completed a series of operational upgrades that expanded throughput rates from 750tpd to 950tpd and construction of a flotation circuit to recover lead and zinc mineral. The US\$1M to construct the flotation circuit was predicated on sustained high base metal prices and to improve silver recoveries as mining operations gradually shifted from oxide to sulphide dominant ore.

Expect plant expansions in 2010 to increase production rates to 1.2ktpd.

As a consequence of the collapse in base metal prices through H1/09 and increased costs for concentrate smelting, FR placed the flotation circuit on care and maintenance and suspended capital expenditures to increase oxide expansion from 950tpd to 1.2ktpd. Incremental capex to complete the expansion are estimated at US\$1.5M.

Silver-base metal mineralization is vein hosted with three veins, La Mancha, Rosario Condesa and Zuloga.

New discoveries should increase reserves.

Concerted exploration through 2008 is focused on increasing resources along the Zuloaga vein to support both mill expansion and increase reserve life. An emphasis was also placed on delineating oxide resources given the higher depletion rate. The program has yielded several new discoveries including the San Pedro vein located in the footwall of the Zuloaga vein. Near surface, FR has discovered the parallel Esperanza vein that has returned oxide silver grades of 100g/t to 250g/t.



### **Silver Miners**

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San Martin contains reserves of 6.8Moz of silver, which supports a four-year mine life (based on 2010 production levels). Resources of 56Moz of silver support an additional 36 years.

### **Future Growth**

### **Del Toro - The Next Mine**

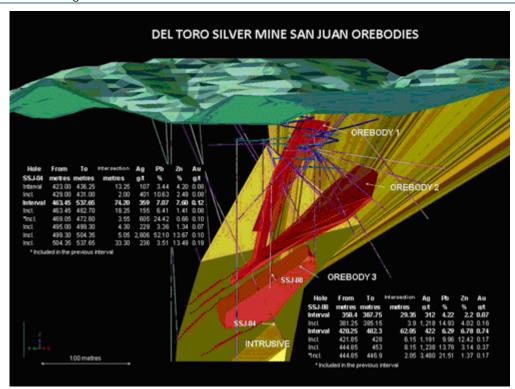
Outside of existing operations, FR has built out a pipeline of development projects that include the development stage Del Toro mine and the recently acquired Real de Catorce project.

Underground access on three levels.

At Del Toro, located 60km southeast of the La Parrilla mine, FR has invested a total US\$7M including the exploration and development of ramp access to the core of the mineralized zone on three levels spaced 30m apart. FR completed trial mining through mid-2008 and suspended development owing to market uncertainty during late 2008.

Del Toro hosts indicated resources of 21Moz of silver, 66kt of zinc and 65kt of lead, with an additional 36Moz of silver, 109kt of zinc and 106kt of lead inferred resource.

Fig 266: Del Toro Underground



Source: First Majestic Silver

Development of a 1ktpd mine to start in H2/10.

Beginning in H2/10, BMO Research expects FR to resume underground development to sustain initial production rates of 1ktpd, with oxide ores trucked to the La Parrilla mine for processing.



### **Silver Miners**

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All permits for the construction of a 1ktpd flotation plant have now been approved by the Mexican government. Capital costs to complete Del Toro development are projected to be US\$40M.

2011 production of 1.7Moz of silver.

BMO forecasts production of 1.6Moz of silver and 0.3kt of lead by 2012.

### Real de Catorce - Exploration Upside Emerging

Real de Catorce provides future growth.

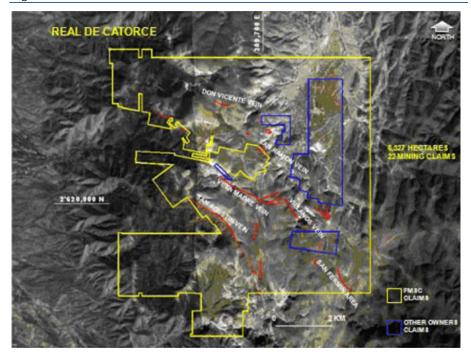
Real de Catorce, located 170km north of San Luis Potosi, was acquired late in 2009 through the takeover of Normabec Mining. Real de Catorce is an old mining district with an estimated historic production of 230Moz of silver between 1773 and 1990.

Vein-hosted oxide silver mineralization was exploited from surface until mining was impeded by a lack of pumping capacity below the water table.

Fig 267: Real de Catorce

Real de Catorce is a historical mine camp with resources of 34Moz of silver.

Exploration will focus on growing resources to support future development.



Source: First Majestic Silver

Based on work completed by Normabec, the project hosts indicated resources of 34Moz of silver, 14kt of lead and 13kt of zinc along the Veta Madre vein, one of more than 18 known veins on the project.

FR plans to evaluate the project through H1/10 prior to resuming exploration activities on the project.



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## 26. Bear Creek (BCM.TSX)

## A Junior With a Senior Asset Base

BCM is rated Outperform (Speculative) with a C\$5.25 target price.

Silver reserves of 258Moz place BCM above senior producers CDA, HOC and PAAS.

Production of 4.6Moz of silver annually from Santa Ana in Q4/11.

An expanded Corani is expected to produce 8.5Moz of silver annually.

Peak production of 18.5Moz of silver in 2015.

BCM's pipeline is positioned to leverage future discovery.

An Outperform (Speculative) rating for BCM is supported by future development of the Santa Ana and Corani projects that provide an unparalleled growth trajectory within the junior silver sector. BCM offers an attractive valuation in a rising precious and base metal market.

Bear Creek Mining (BCM.TSX) is the preeminent silver company in the junior silver sector. In the last five years, the company has advanced two core projects, the Corani silver-base metal project and the Santa Ana silver project, through preliminary engineering studies and the delineation of +258Moz of silver in reserve and a global resource of 504.5Moz of silver.

The timing of feasibility for both projects lends itself to sequential development of Santa Ana as a low-capital cost silver heap leach operation capable of producing ~4.6Moz of silver at co-product cash costs of US\$6.75/oz silver over an 11.5-year mine life beginning in Q4/11.

Corani is a top tier silver-base metal deposit with a Q3/09 prefeasibility study establishing production of 6.5Moz of silver annually over a 27 year mine life and a capital cost of US\$339M.

BMO Research expects the Corani feasibility to increase the size of the operation to optimize production. The projected increase in capital costs to US\$410M is expected to be offset by production growth to 8.5Moz of silver annually over a 17 -year mine life at co-product cash costs of US\$7.43/oz of silver beginning in Q4/13.

At peak production of 18.5Moz of silver, BMO Research estimates BCM will eclipse most of its peers to become the 8th largest primary silver producer by 2015.

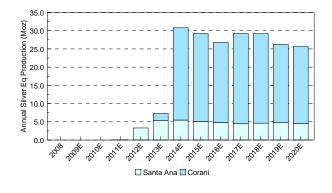
In addition to Corani and Santa Ana, BCM has a pipeline of earlier stage prospects that are showing promise of new discovery. BCM's portfolio has an ideal growth pipeline that underscores a potential takeover scenario.

Fig 268: Asset Locations



Source: Bear Creek

Fig 269: Bear Creek Production Profile, 2012E-2020E





#### Silver Miners

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Initiating with an Outperform (Speculative) rating.

Low-risk entry to production with Santa Ana. Corani capex of US\$410M elevates risk.

BCM trades at a 21% discount to junior silver producers and developers in the BMO Research coverage universe.

A C\$5.25 target price values BCM at 1.1x the 10% nominal NPV.

### Valuation

BMO Research is initiating coverage of BCM with an Outperform (Speculative) rating and a target price of C\$5.25, based on 1.1x the 10% nominal NPV of US\$4.72/sh using BMO Research metal price forecasts.

Relatively low capital costs of US\$56M to develop the Santa Ana project provide BCM with a low risk entry to production. Future capital requirements of US\$410M to develop Corani are sizable and delays to future development related to these capital requirements are a key risk to the BMO Research valuation.

BCM trades at a 21% discount to junior silver producers in the BMO Research coverage universe, which are currently trading at 1.0x their 10% nominal NPV using the BMO Research metal price forecast.

At spot metal prices, BCM trades at an 28% discount to junior silver producers and developers, which are currently trading at 0.84x their 10% nominal NPV.

Fig 270: BCM Valuation

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Zinc	1.04	0.75	1.10	1.20	1.00	1.00
Lead	1.04	0.78	1.00	1.00	0.80	0.80
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET PRESENT VALUE		NPV <sub>10%</sub> , E	BMO Price	NPV <sub>0%</sub> , E	MO Price	NPV <sub>10</sub>	", Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share)1	US\$M	(\$/Share)1
Corani	100%	548.9	3.74	1,455.3	9.92	703.8	4.80
Santa Ana	100%	120.1	0.82	258.4	1.76	144.8	0.99
Project NPV		669.0	4.56	1,713.7	11.69	848.6	5.79
Net Cash		1.7	0.01	1.7	0.01	1.7	0.01
Interim Financing		36.4	0.25	36.4	0.25	36.9	0.25
I-T-M Options and Warrants		6.2	0.04	6.2	0.04	6.2	0.04
Corporate Adjustment <sup>2</sup>		(20.5)	(0.14)	(24.3)	(0.17)	(20.5)	(0.14)
NPV of Hedge Book		-	-	-	-	-	-
Total Corporate Adjustme	nts	23.7	0.16	19.9	0.14	24.3	0.17
Corporate NPV	US\$	692.7	4.72	1,733.6	11.82	872.9	5.95
	C\$	703.3	4.80	1,760.0		908.8	6.20
Multiple to Corporate NPV				,			
12-month Target Price	US\$	762.0	5.20				

		Corani	Santa Ana
Estimated Initial Capex		410.0	56.0
Project Debt	40%	164.0	22.4
Project Equity	60%	246.0	33.6
Equity Issue Price	C\$/share	3	.75
Issued Share <sup>a</sup>	М	75.6	5
Interim Financing	M	11.0	)
Partially diluted shares	M	60.1	<u>l</u>
Total Shares After Dilution	M	146.6	5

<sup>1.</sup> Assumes share capital after project financing: current 60.1M shares + project equity and interim financing 86.6N

incorporating in-the-money options and warrants, and the issuance of shares

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count

for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses All figures in US\$ unless noted otherwise



### **Silver Miners**

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Fig 271: BCM Model Parameters

Project Country		<b>Corani</b> Canada							Project Country			Santa Ana Canada	а			
Interest		100%							Interest			100%				
% BCM Project NPV Mine Parameters		82%							% BCM Pr Mine Para			18%				
Mine Type				Open Pit					Mine Type				Open Pit			
Processing			Milling tpd yr Moz kt kt		Milling, Flotation					Processing			Н	leap Leach		
Processing Rate		1	tpd	20,0	00				Processing	Rate		tpd	10,0	00		
Start-up			yr	Q2'20					Start-up			yr	Q4'2			
LOM Production				<u>Annual</u>	<u>Total</u>				LOM Produc				<u>Annual</u>	<u>Total</u>		
	Silver Lead			8.5 47.1	146 813						Silver	Moz	4.6	53		
	Zinc			22.4	386											
LOM Total Cash Costs (Co-prod			US\$	\$7.4					LOM Total (	Cash Costs (0	Co-produc	t)	\$6.	75		
LOM Strip Ratio		,	w: o	1.5	6				LOM Strip F	Ratio		W: 0	2.0	0		
Modelled Mine Life		2	yrs	17.2	25				Modelled M	ine Life		yrs	11.	50		
Initial Capital Costs			US\$M	\$41					Initial Capit			US\$M	\$5			
Expansion Capex			US\$M	\$0					Expansion (			US\$M	\$0			
Total Sustaining Capital		'	US\$M	\$9	1				Total Susta	ining Capital		US\$M	\$3	3		
Modeled	Tonnes	Silver	Lead	Zinc	Silver	Lead	Zinc		Modeled			Tonnes	Silver	Silver		
	000		%	%	Moz	kt	kt					000	g/t	Moz		
Open Pit	118,125	60.05	0.96%	0.46%	228	1,133	542		Open Pit			40,464	57.97	75		
Production Estimates		2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	
Corani Tonnes Mined	tpd	0.00	0.00	0.00	0	1,250	16,250	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
Open pit Ore	000 t	0.00	0.00	0.00	0	438	5.688	7,000		7,000	7,000	7,000	7,000	7,000	7,000	
Strip Ratio	W: 0	0.00	0.00	0.00	0.00	1.56	1.56	1.56		1.56	1.56	1.56	1.56	1.56	1.56	
Grade	Ag (g/t)	0.00	0.00	0.00	0.00	106.50	97.36	84.63	80.10	82.14	80.75	70.62	61.00	57.80	47.23	
	Lead (%)		0.00	0.00	0.00%	1.16%	1.26%	1.21%		1.12%	1.18%	1.19%	1.23%	0.90%	0.81%	
	Zinc (%)	0.00	0.00	0.00	0.00%	0.90%	1.06%	0.39%	0.37%	0.60%	0.55%	0.35%	0.64%	0.42%	0.41%	
Silver Production	Moz	0.0	0.0	0.0	0.0	1.1	12.6	13.5		13.1	12.9	11.2	8.4	7.5	6.1	
Zinc Production	kt	0.00	0.00	0.00	0.00	2.82	42.80	19.22		29.70	27.33	17.34	31.94	21.09	20.46	
Lead Production Silver Equiv. Production	kt koz	0.00	0.00	0.00	0.00	3.64 1,917	51.19 25,334	60.92 24,181		55.96 24,810	59.10 24,611	59.85 21,520	61.73 21.176	45.17 16.525	40.47 14,459	
Total Cash Costs*	US\$/oz	0.00	0.00	0.00	0.00	5.11	5.25	5.94	6.06	5.81	5.90	6.46	6.96	7.80	8.50	
Total Production Costs*	US\$/oz	0.00	0.00	0.00	0.00	6.04	6.86	7.80	8.03	7.66	7.80	8.45	8.54	9.65	10.19	
Santa Ana																
Tonnes Mined	tpd	0.00	0.00	1,000	9,000	10,000	10,000	10,000		10,000	10,000	10,000	10,000	10,000	10,000	
Open pit Ore Strip Ratio	kt	0.00	0.00	360 2.00	3240 2.00	3600 2.00	3600 2.00	3600 2.00		3600 2.00	3600 2.00	3600 2.00	3600 2.00	3600 2.00	3600 2.00	
Grade	w:o Ag (g/t)	0.00	0.00	46.60	63.40	67.90	67.50	60.30		53.10	58.50	58.70	53.70	53.60	46.10	
Tonnes Leached	kt	0.00	0.00	0	0	0	0	0		0	0	0	0	0	0	
Silver Production	Moz	0.0	0.0	0.1	3.3	5.4	5.5	5.1		4.5	4.6	4.8	4.5	4.3	3.9	
Total Cash Costs	US\$/oz	0.00	0.00	35.31	9.08	5.66	5.56	5.97		6.73	6.53	6.34	6.71	6.89	7.61	
Total Production Costs	US\$/oz	0.00	0.00	35.46	10.39	6.80	6.77	7.26	7.61	8.21	8.14	8.10	8.67	9.15	10.37	
Bear Creek Total Total Silver Production	Moz	0.0	0.0	0.1	3.3	6.4	18.1	18.5	17.6	17.5	17.5	16.0	12.8	11.9	10.1	
Total Silver Equiv. Production	Moz	0.0	0.0	0.1	3.3	7.3	30.8	29.2		29.3	29.2	26.3	25.7	20.9	18.4	
Total Cash Costs*	US\$/oz	0.00	0.00	35.31	8.07	5.54	5.30	5.94		5.95	6.00	6.44	6.92	7.61	8.31	
Total Production Costs*	US\$/oz	0.00	0.00	35.46	9.16	6.64	6.84	7.70		7.74	7.85	8.39	8.56	9.53	10.23	
Source: BMO Capital M	larkets															



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## Company Synopsis

## Production of 18Moz of silver by 2014.

BMO Research forecasts commercial production beginning in H2/12 and ramping up to 4.6Moz of silver annually from Santa Ana. Santa Ana has a resource base of 139Moz of silver.

Commercial production at Corani is forecast to begin in H2/14, ramping up to 8.5Moz of silver annually. Corani hosts a reserve base 258Moz of silver.

Co-product cash costs are projected to decline from US8.09/oz in 2012 to ~US6.00/oz once Corani ramps up to full production.

BCM is projected to derive ~62% of mine revenue from silver and 38% from zinc and lead, ranking it as a base metal-weighted producer.

Fig 272: Production & Cash Cost Profile, 2008-2020E

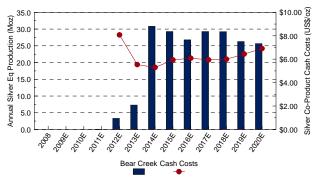
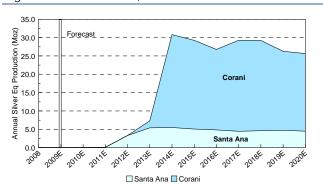


Fig 273: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Fig 274: BCM Revenue by Metal (%), 2008-2020E

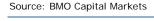
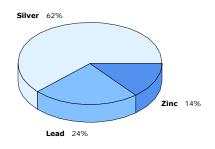
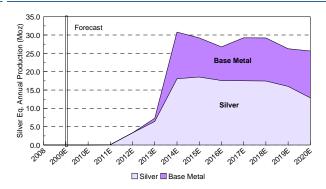


Fig 275: Annual Production by Metal, 2008-2020E





Source: BMO Capital Markets

Source: BMO Capital Markets

Projected US\$90M in capital expenditures to the end of 2011.

Completion of a feasibility study and mine permitting through 2010 will trigger a development decision for Santa Ana. Funding requirements for BCM through to the end of 2011 include:

- Feasibility and exploration commitments of ~US\$14M
- Santa Ana capital cost estimated at US\$56M
- A US\$10M Corani property payment in Q4/10
- A US\$10M Corani property payment in Q3/11



#### **Silver Miners**

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Cash at the end of 2009 of US\$43M.

BCM is estimated to have cash of US\$43M at the end of 2009, putting the company in a position to meet ongoing feasibility and exploration commitments.

**US\$56M** to develop Santa Ana.

Once a production decision for Santa Ana is announced, additional financing will be required to fund the projected US\$56M capital cost. BMO Research models US\$22.4M in debt and US\$33.6M in equity at an issuance price of C\$3.75/sh.

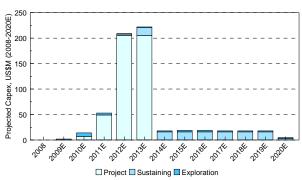
**US\$410M** to develop Corani.

To develop Corani, BMO Research models US\$164M in debt and US\$246M in equity at an issuance price of C\$3.75/sh.

Potential for strong EPS and CFPS growth by 2014.

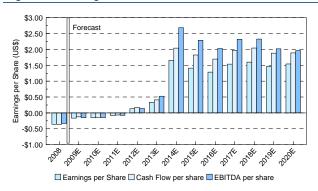
Once in production, BMO forecasts strong EPS and CFPS growth. EPS and CFPS of US\$(0.16) and US\$(0.14) in 2010E are projected to increase to US\$1.66 and US\$2.04, respectively by 2014.

Fig 276: Projected Capital Expenditures (US\$M)



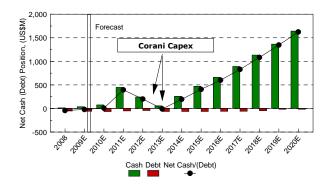
Source: BMO Capital Markets

Fig 277: Earnings Estimates, 2008-2020E



Source: BMO Capital Markets

Fig 278: Net Cash (Debt) Position (US\$M), 2009-2020E





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# 258Moz of silver in reserve places BCM among the seniors.

The high base metal endowment of Corani provides BCM with above-average leverage to base metal prices.

### Reserves/Resources

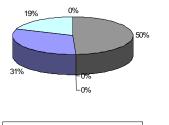
Reserves of 258Moz of silver rank BCM with the third-largest silver reserve ahead of senior producers CDE, HOC and PAAS. Excluding reserves, BCM hosts a further 107Moz of silver, entrenching the company as the premier junior silver developer.

Corani hosts reserves of 1,307kt of lead and 645kt of zinc with additional resources of 679kt of lead and 505kt of zinc.

Using BMO Research's long-term metal prices, BCM has an above-average base metal weighting.

Fig 279: Reserve Metal Distribution

Fig 280: Reserve Metal Distribution



☐ Silver ☐ Gold ☐ Copper ☐ Lead ☐ Zinc ☐ Tin

30% 47% 23% 0%

■ Silver □ Gold ■ Copper ■ Lead □ Zinc ■ Tin

Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 281: BCM Reserves & Resources

										Contain	ed Metal			
Corani	<b>Tonnes</b>	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	Tin	
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)	
Proven	27,957	70.2	-	-	1.08	0.59	-	63,100	-	-	302	165	-	
Probable	111,666	54.3	-	-	0.90	0.43	-	194,900	-	-	1,005	480	-	
Total Reserves	139,623	57.5	-	-	0.94	0.46	-	258,000	-	-	1,307	645	-	
Measured	38,748	55.3	_	_	0.90	0.43	_	68,900	_	_	348	165	_	
Indicated	211.292	38.4	_	_	0.69	0.41	_	260,900	_	_	1,453	869	_	
Measured & Indicated	250,040	41.0	-		0.72	0.41	-	329,800	-	-	1,802	1,034	-	
Total Inferred	34,215	32.4	-	-	0.54	0.34	-	35,600	-	-	185	116	-	
										Contained Metal				
Santa Ana	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	Silver (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	<u>Tin</u> (kt)	
Proven	-	-	-	-	-	-	-	-	-	-	-	-	-	
Probable	-	_	_	_	_	_	_	_	-	-	_	-	_	
Total Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-	
Measured	14,240	48.8	_	_	0.35	0.64	_	22,300	=.	-	50	91	_	
Indicated	52,597	44.6	-	-	0.32	0.55	-	75,400	-	-	168	289	-	
Measured & Indicated		45.5	-	-	0.33	0.57	-	97,700	-	-	218	380	-	
Total Inferred	25,454	50.6			0.36	0.52		41,400		_	92	132		

Source: Bear Creek Mining



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## Corani – A Top-Tier Silver Asset

The Corani project is located approximately 160km southeast of Cusco, Peru in the eastern Andes. The project covers  $50 \text{km}^2$  of land that covers a large intrusive related hydrothermal system with zoning from copper in the south to copper-gold, gold and silver base-metal in the north.

BCM owns 100% of the project subject to payments of US\$10M (Dec 31/10), US\$10M (Sept 30/11) and US\$15M (Jun 30/12) to Rio Tinto.

The initial drill hole discovery was achieved in Q2/05 and since that time BCM has advanced the project through delineation of 258Moz of silver, 1.307kt of lead and 679kt of zinc based on a \$9.10 NSR cut-off.

A prefeasibility study (PFS) completed in Q3/09 outlined development of a 15ktpd open-pit mine with an average waste to ore strip ratio of 1.6 to 1. Ore is processed by milling and conventional 2-stage flotation to produce saleable silver-lead and zinc concentrates.

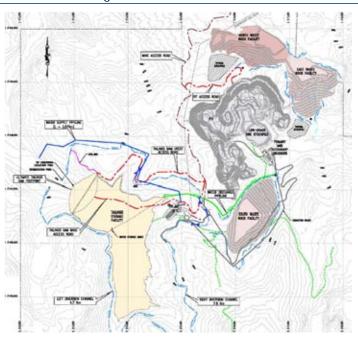
Life-of-mine production in the PFS is estimated at 6.5Moz of silver per annum over a 27-year mine life and bi-product cash costs estimated at US\$2.87/oz. The capital cost to develop Corani is estimated at US\$339M.

Life-of-mine production in the PFS is estimated at 6.5Moz of silver per annum over a 27-year mine life and bi-product cash

costs estimated at US\$2.87/oz.

The capital cost to develop Corani is estimated at US\$339M.

Fig 282: Corani Site Design



Source: Bear Creek Mining.

Access to Corani is via a combination of paved and gravel roads from Cusco, approximately 330km or 6 hours away from the project. An interoceanic highway is currently being completed passing 30km to the east of the project, which will improve access to site. The closest town is Macusani, located approximately 45km by road east of Corani.



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Optimized to 20-22ktpd.

BMO Research expects the project to be optimized to the 20 to 22ktpd range within the existing mill configuration. Increased capital costs projected at US\$410M are offset by a 32% increase in silver production to 8.5Moz of silver annually at co-product cash costs of US\$7.43/oz of silver over a 17.5-year mine life.

Power via the national grid.

Power to site would be via connection to the national grid through the town of Macusani with a 37km power line. Initial water requirements for reagent, potable water, road dust suppression etc. are estimated a 40m<sup>3</sup>/h. Power costs are expected to be \$5.5/mWh.

BMO Research estimates a 10% nominal NPV for Corani of US\$549M, or US\$3.74/share.

Timeline to start-up in Q3/14.

Key milestones and estimated timing along the development path include:

- Feasibility Study Q2/11
- Completion of ESIA and Permitting Q4/11
- Project Financing & Detailed Engineering H2/11
- Construction 24 months ending Q4/13
- Commissioning/Start-Up 9 months ending Q3/14

### Approximately One Year for Mine Permitting

In order to obtain approval for development of Corani, BCM will require approval from MINEM, through the development of an ESIA and complete the process for obtaining a "Certificate of Non-Existence of Archaeological Remains."

Fig 283: Corani Project Map

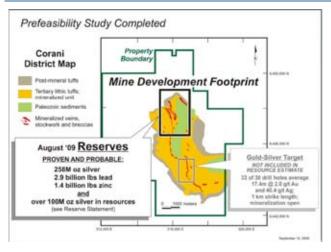
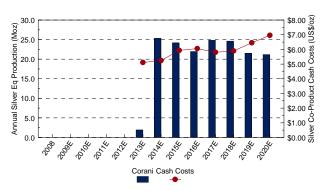


Fig 284: Forecast Corani Production Profile





#### **Silver Miners**

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High-grade silver base metal underground potential.

Gold resource potential to the south of the existing resource footprint.

#### **Exploration Upside Remains**

The Corani silver-base metal system remains open to the north beneath post mineral cover but the limits of open pit mining are constrained.

The northernmost drill intercept hit "camp grades" of 50.4g/t silver, 1.3% lead and 0.5% zinc over 46m. Higher-grade cores have been intersected and highlight the potential to delineate high-grade underground ounces. Some of these intercepts are highlighted below:

- 371g/t silver, 4% lead and 5% zinc over 6m (100m from the northern limits of drilling)
- 849g/t silver, 3.5% lead, 5.8% zinc over 4m (250m from the northern limits)

BCM has outlined gold-silver resource potential ~6km south of the existing resource base. Drilling intersected an average grade of 2.4g/t gold and 44.6g/t silver over a drill indicated width of 15m over 1km of strike. Based on existing drilling, BMO Research estimates potential for 0.5Moz of gold and 9Moz of silver. The zone remains open laterally and at depth.



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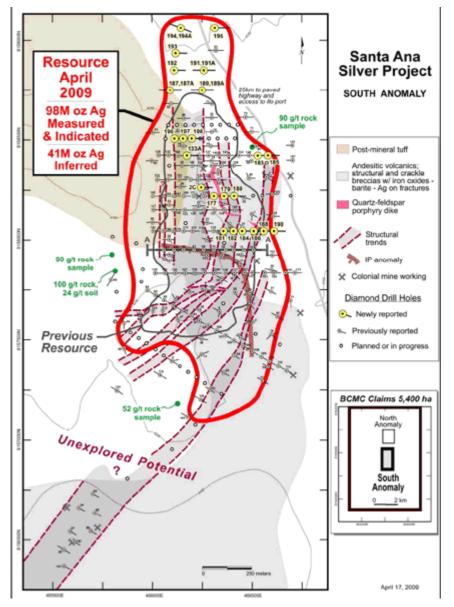
#### Santa Ana

The 100%-owned Santa Ana project is 120km southeast of Puno in southern Peru. The project is located at an elevation of 4,200m asl, with access by 50km of gravel road west of the main highway between Cusco and Puno.

Santa Ana is a grassroots discovery first identified through regional prospecting in 2004. Since 2006, drilling has outlined resources of 139.1Moz of silver within a 1.5km by 1km area to an average depth of ~115m below surface.

Fig 285: Santa Ana Project

PA outlined development of a 10ktpd open pit heap leach operation with annual production of 4.6Moz of silver per annum at cash costs of US\$7.47/oz silver over a 12-year mine life.



Source: Bear Creek Mining.



#### **Silver Miners**

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Initial capex is estimated at **US\$51M** excluding mobile equipment.

BCM plans to complete a along the same parameters outlined in the PA.

feasibility study in mid-2010

**BMO** Research projects annual production of 4.6Moz of silver over an 11.25-year mine life.

A preliminary assessment (PA) completed in Q1/09, outlined development of a 10ktpd open pit heap leach operation with annual production of 4.6Moz of silver per annum at cash costs of US\$7.47/oz silver over a 12-year mine life. Initial capex is estimated at US\$51M excluding mobile equipment.

The development scenario was based on a mineable inventory of 40.5Mt of 58g/t silver for 75.5Moz of silver. While silver grades are low, the project economics are supported by a low waste-to-ore strip ratio (2 to 1) and silver recoveries based on column leach test work of 70%.

#### Feasibility by Mid-2010

BCM plans to complete a feasibility study in mid-2010 along the same parameters outlined in the PA. With in-fill and step out drilling required for the feasibility study, BMO Research anticipates an increase in Santa Ana's mine life.

Environmental baseline studies have been completed and an EIA will be submitted along with a mine development plan for receipt of a mine permit. Peru recently announced plans to streamline mine permitting to a 6-to-12 month approval period.

Water for mining operations can be obtained from a large river located 7.5km north of the project. Power will require construction of a power line connected to the national grid at a sub-station 43km away.

Infill drilling along the periphery is expected to convert additional inferred resources and further reduce the waste-to-ore strip ratio.

BMO Research expects Santa Ana to be developed using contract mining and mobile crushing equipment. Two-stage crushing will be required to produce a nominal 1-inch product that will be delivered to a multi-staged heap leach pad. Pregnant solution from the pad will be processed using Merrill-Crowe recovery to produce a high-grade silver doré product. Capital costs are estimated at US\$56M.

BMO Research projects annual production of 4.6Moz of silver over an 11.25-year mine life. Co-product cash costs are projected at US\$6.75/oz silver.

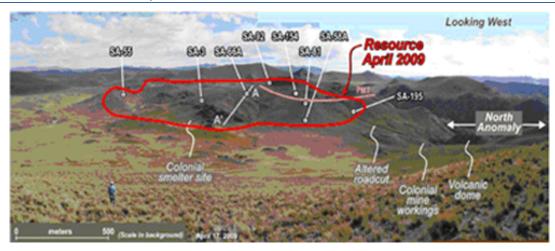
BMO Research estimates a 10% nominal NPV for Corani of US\$120M, or US\$0.82/share.



#### **Silver Miners**

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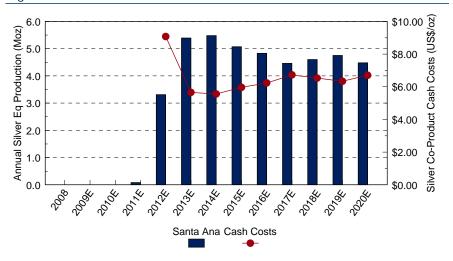
Fig 286: Santa Ana Resource Footprint



Source: Bear Creek Mining

Production expected to grow to +5Moz of silver equivalent annually.

Fig 287: Forecast Santa Ana Production Profile



Source: BMO Capital Markets

### **Resource Potential Remains Open**

Santa Ana is a high-level, low-temperature epithermal system with a polymetallic mineral signature. Silver base metal mineralization is contained within two structural trends containing veins, breccias and stockwork zones.

Silver mineralization at Santa Ana remains open.

Mineralization at Santa Ana has yet to be fully delineated with significant potential for high-grade feeder structures at depth and expansion of resource potential to the north.

#### **Generative Potential**

BCM has an excellent track record of discovery.

BCM is the pre-eminent silver exploration group in the junior silver sector. The company has discovered over 500Moz of resource in two grass roots discoveries since 2005.



#### **Silver Miners**

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BCM's focus on generative work continues with two targets to be drill tested through 2010.

BCM plans to spend ~US\$2M in generative work through 2010 to identify new opportunities. BCM is also planning an initial drill test of two projects through 2010.

- Tassa located southeast of Arequipa, hosts a similar type of mineralization to Santa Ana over a 300m by 1km by 200m vertical area. Eighty-seven rock chip and trench samples have been collected and average 61g/t silver. Continuity of mineralization is demonstrated by sampling at Tassa totalling 466m in three trenches averaging 65.4g/t silver. Tassa locally exhibits gold values up to 0.49g/t with a tendency for higher gold zoning with depth. Bottle role tests performed at ALS Chemex labs indicate recoveries of up to 85% silver and 95% gold. Tassa is adjacent to the Chucapaca project being explored by a joint venture between Goldfields and Buenaventura. Drilling at Chucapaca has intercepted up to 170m of 3.3g/t gold in a similar geological setting to Tassa.
- Campanario an untested, mesothermal gold-silver prospect located within the Alto Chicama/Lagunas Norte region, southeast of Trujillo, Peru.



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### 27. Endeavour Silver (EDR.TSX)

### Track Record of Breathing New Life Into Old Mines

EDR is rated Market Perform with a C\$3.55 target price.

Guanajuato historic production of 1.2Boz.

A growing exploration project pipeline.

Resources need to be delineated to extend mine life at both operations.

36km drill program initiated for 2010 to replace reserves and extend operations.

Endeavour Silver has a successful track record of restarting mines within historic silver districts. However, a Market Perform rating underscores the company's necessity to delineate more reserves.

Endeavour Silver is a junior silver producer with two silver mines located in the historic silver districts of Guanajuato (historical production of 1.2Boz silver) and Guanacevi (historical production of 450Moz silver). EDR has demonstrated a track record of new discoveries at both mines that, combined with operational improvements, has increased silver production over the last five years to 2.6Moz in 2009.

In addition to existing operations, EDR recently acquired the San Sebastian and San Juanico exploration projects, both within other historic mining districts in Mexico. The focus at both projects is to delineate sufficient resources to trigger a development decision.

At existing production rates, the estimated 7.6Moz silver resource at Guanajuato supports a short mine life of just under five years at co-product cash costs of US\$7.10/oz of silver. The 28Moz silver resource at Guanacevi supports a 9-year mine life at co-product cash costs of US\$7.46/oz silver.

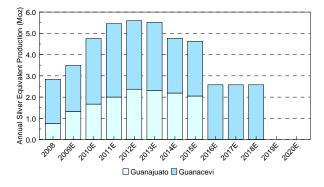
Given the limited mine life at both operations, EDR announced plans to undertake a 36km drill program (US\$6.7M) throughout 2010 to replace reserves, expand resources and extend the lives of these operations. Given EDR's discovery capabilities combined with the production histories of both the Guanajuato and Guanacevi districts, the prospects of resource growth are attractive.

To maintain production growth, EDR is also focused on acquisitions, targeting silver resources that can be developed and silver mines where exploration success can extend operational lives. While EDR has demonstrated the success of this template, acquisition of a long-lived pre-production asset could position the company as a growth stock with the potential for market revaluation.

Fig 288: Asset Locations



Fig 289: Endeavour Production Profile, 2009-2020E



Source: BMO Capital Markets

Source: Endeavour Silver



#### **Silver Miners**

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### Initiating with a Market Perform rating.

EDR trades at a 58% premium to junior silver producers and developers in the BMO Research coverage universe.

A C\$3.55 target price values EDR at 1.6x the 10% nominal NPV.

#### Valuation

BMO Research is initiating coverage of EDR with a Market Perform rating and a target price of C\$3.55, based on 1.6x the 10% nominal NPV of US\$2.16/share using the BMO metal price forecast.

EDR trades at a 58% premium to junior silver producers and developers in the BMO Research coverage universe, which are currently trading at 1.0x their 10% nominal NPV using the BMO metal price forecast.

At spot metal prices, EDR trades at 1.6x the 10% nominal NPV, or a 90% premium to a peer average of 0.84x.

Using BMO Research 2010 estimates, EDR's share price represents 8.3x EPS and 5.6x CFPS, versus average multiples of 8.7x and 13.5x for senior to intermediate silver producers.

Fig 290: Endeavour Valuation

BMO Assumptions	Spot	2009E	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Gold	1,108	972	1,150	1,150	950	850
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET PRESENT VALUE		NPV <sub>10%</sub> , I	BMO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>109</sub>	6, Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share)1	US\$M	(\$/Share)1
Guanajuato	100%	65.8	0.98	89.0	1.33	68.1	1.02
Guanacevi	100%	86.2	1.29	129.9	1.94	82.2	1.23
Project NPV		152.0	2.27	218.9	3.28	150.3	2.25
Net Cash		16.4	0.25	16.4	0.25	15.6	0.23
I-T-M Options and Warrants		14.8	0.22	14.8	0.22	14.8	0.22
Corporate Adjustment <sup>2</sup>		(38.6)	(0.58)	(47.4)	(0.71)	(38.6)	(0.58)
NPV of Hedge Book		-	-	-	-	-	-
Total Corporate Adjustments		(7.3)	(0.11)	(16.1)	(0.24)	(8.2)	(0.12)
Corporate NPV	US\$	144.7	2.16	202.8	3.03	142.1	2.13
	C\$	146.9	2.20	230.6	3.45	148.0	2.21
Multiple to Corporate NPV	1.6x						
12-month Target Price	US\$	231.5	3.46				
	C\$	235.1	3.55				

<sup>1.</sup> Assumes share capital of 66.8 million shares

All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses



#### **Silver Miners**

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Fig 291: Endeavour Model Parameters

Project		Guanajua	ito					Project			Guanace	evi		
Country Interest		Mexico 100%						Country Interest			Mexico 100%			
Mine Parameters								Mine Parame	eters					
Mine Type				Underg				Mine Type				Underg	•	
Processing Processing Rate LOM Production			pd	Milling, Mei 50, expans <u>Annual</u>	sion to 60 <u>Total</u>			Processing Processing Ra LOM Production			tpd	Milling, Me 50 expans <u>Annual</u>	sion to 75 <u>Total</u>	
	Gold Silver		koz Moz	13.1 1.3	79 7.8					Gold Silver	koz Moz	4.7 2.6	42 23.4	
LOM Total Cash Costs Modelled Mine Life			yrs	6.8	33			LOM Total Cas Modelled Mine			yrs	9.º 9.0	12	
Initial Capital Costs Expansion Capex		l	JS\$M JS\$M	n/ 0				Initial Capital Expansion Ca	oex		US\$M US\$M	n/	'a	
Total Sustaining Capital		ι	JS\$M	20	. 4			Total Sustaini	ng Capita	al	US\$M	41	.3	
Guanajuato								Guanacevi						
Modeled		Tonnes 000	Gold g/t	Silver g/t	Gold koz	Silver Moz		Modeled		Tonnes 000		Silver g/t	Gold koz	Silve
Underground		1,503	1.92	190	93	9.2		Underground		3,304	0.45	278	48	29.
Production Estimates		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020
Guanajuato														
Mining rate Ore Processed	tpd ktpa	260 149	436 149	550 198	625 225	750 270	750 270	750 270	750 270	-	-	-	-	-
Grade	Au (g/t)	2.08	2.08	2.00	2.10	2.00	1.95	1.80	1.70	_	_	_	_	-
	Ag (g/t)	195	195	195	205	195	190	185	175	-	-	-	-	-
Gold Production	koz	8.4	8.4	10.8	12.9	14.8	14.4	13.3	12.5	-	-	-	-	-
Silver Production	Moz	0.8	8.0	1.1	1.3	1.4	1.4	1.4	1.3	-	-	-	-	-
Silver Equiv. Production	Moz	1.3	1.3	1.7	2.0	2.4	2.3	2.2	2.1	-	-	-	-	-
Total Cash Costs*	US\$/oz	7.69	7.29	7.04	6.68	6.77	6.97	7.34	7.83	-	-	-	-	-
Total Production Costs*  Guanacevi	US\$/oz	7.78	10.60	9.45	8.82	8.74	8.85	10.08	12.31	-	-	-	-	-
Mining rate	tpd	700	612	975	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	-	-
Ore Processed	ktpa	238	238	352	384	384	384	360	360	360	360	360	-	-
Grade	Au (g/t)	0.57	0.57	0.51	0.55	0.44	0.44	0.43	0.43	0.43	0.43	0.43	-	-
	Ag (g/t)	307	307	313	320	300	300	253	253	253	253	253	-	-
Gold Production	koz	4.9	4.9	5.1	5.9	4.7	4.7	4.3	4.3	4.3	4.3	4.3	-	-
Silver Production	Moz	1.8	1.8	2.8	3.1	2.9	2.9	2.3	2.3	2.3	2.3	2.3	-	-
Silver Equiv. Production	Moz	2.2	2.2	3.1	3.5	3.2	3.2	2.6	2.6	2.6	2.6	2.6	-	-
Total Cash Costs*	US\$/oz	9.05	9.24	9.37	9.14	9.62	9.62	11.17	11.18	6.43	6.43	6.43	-	-
Total Production Costs*	US\$/oz	9.22	9.94	11.00	10.99	11.72	11.67	13.55	13.99	9.80	10.64	11.48	-	-
Endeavour Total	Moz	2.4	2.4	2.0	4.4	4.4	4.3	3.7	2 /	2.2	2.2	2.2		
Total Silver Production	Moz	2.6	2.6	3.9	4.4	4.4	4.3		3.6	2.3	2.3	2.3	-	-
Total Silver Equiv. Producti		3.5	3.5	4.8	5.5	5.6	5.5	4.8	4.6	2.6	2.6	2.6	-	-
Total Cash Costs	US\$/oz	8.51	8.15	8.34	8.03	8.16	8.27	9.12	9.39	6.43	6.43	6.43	-	-
*Silver co-product cash costs	US\$/oz	8.66	9.73	10.24	9.98	10.21	10.25	11.67	12.95	9.80	10.64	11.48	-	-



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### Company Synopsis

BMO Research forecasts 2010E production of 3.9Moz of silver and 16koz of gold at co-product cash costs of US\$8.34/oz of silver.

EDR derives ~81% of mine revenue from silver with the remainder from gold, positioning the company as a precious metal weighted silver producer.

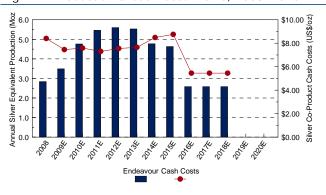
Fig 293: Growth Profile, 2008-2015E

Guanacevi

Guanajuato

Fig 295: Annual Production by Metal, 2008-2020E

Fig 292: Production & Cash Cost Profile, 2008-2020E



☐ Guanajuato ☐ Guanacevi

Source: BMO Capital Markets

5.0 4.0

3.0

1.0

ᇤ 2.0

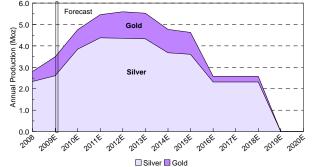
Silver

Source: BMO Capital Markets

Silver 81%

Fig 294: EDR Revenue by Metal (%), 2008-2020E





Source: BMO Capital Markets

Cash requirements for EDR through to the end of 2011E include:

Source: BMO Capital Markets

Company-wide capital expenditures through to 2011 are forecasted at US\$45M.

- Exploration budget of ~US\$18M
- Mine capital ~US\$19M

**Gold** 19%

Plant capital ~US\$8M

**Current net cash position** estimated at ~US\$21M.

Post a financing in Q4/09, BMO Research estimates EDR has a net cash position of US\$21M, placing the company in the position to meet ongoing exploration and capital plans and the potential PEA for La Cometa/San Juanico assuming positive resource growth.

\$2.6M in ABCP and \$14M in

As at the end of Q3/09 EDR held ~C\$2.6M in restructured ABCP. In addition, the company issued C\$14M in convertible debentures maturing in February 2014 (but redeemable in August 2010) at 10% annual interest.

converts.



#### **Silver Miners**

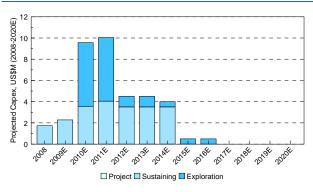
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Projected strong EPS and CFPS growth through 2012.

BMO Research forecasts EPS of US\$0.41 and CFPS of US\$0.61 in 2010E and EPS of US\$0.48 and CFPS of US\$0.70 in 2011E.

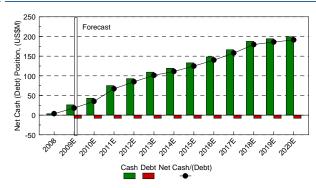
Assuming BMO Research forecasts for exploration and capital spending, EDR is projected to grow cash reserves to US\$93M by 2012E.

Fig 296: Projected Capital Expenditures (US\$M)



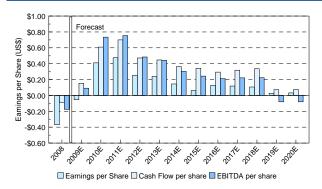
Source: BMO Capital Markets

Fig 297: Net Cash (Debt) Position, 2008-2020E



Source: BMO Capital Markets

Fig 298: Earnings Estimates, 2008-2020E





#### **Silver Miners**

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#### Reserves/Resources

EDR reserve base is primarily precious metals.

As of December 2008, EDR's reserve and resource base hosts primarily precious metals. The two mines that make up EDR's reserves, Guanajuato and Guanacevi, contained 7.8Moz of silver and 24koz of gold. Based on 2010 silver production, this supports a short, ~2-year mine life.

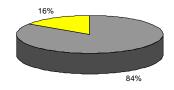
Guanajuato and Guanacevi host resources of 28Moz of silver and 89koz of gold.

Combined, these two projects host an additional resource base of 30.4Moz of silver that could support a mine life of  $\sim$ 7.25 years.

Outside of these two assets, in 2009 EDR exercised its option to acquire a 100% interest in the El Cometa zinc-lead property, which hosts a resource of 2.5Moz of silver and 68koz of gold, and acquired the adjacent San Juanico property with a view to doubling the total resource and completing a PA.

Fig 299: Reserve Metal Distribution

Fig 300: Reserve Metal Distribution





16%

■ Silver ■ Gold

Source: BMO Capital Markets Source: BMO Capital Markets

Fig 301: EDR Reserves & Resources

									Contained Me	etal	
Endeavour Silver	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	Silver (koz)	<u>Gold</u> (koz)	Copper (Mlbs)	<u>Lead</u> (Mlbs)	Zinc (Mlbs)
Guanajuato	214	251.4	2.20	-	-	-	1,728	16	-	-	-
Guanacevi	535	353.0	0.49	-	-	-	6,071	8	-	-	-
Total Reserve	749	323.9	0.98	-	-	-	7,799	24	-	-	-
Guanajuato	288	202.0	1.60	-	-	-	1,873	15	-	-	_
Guanacevi	1,710	290.0	0.53	-	-	-	15,958	29	-	-	-
El Cometa	934	49.0	1.46	-	-	-	1,471	44	-	-	-
Measured & Indicated	2,932	204.6	0.93	-	-	-	19,302	88	-	-	-
Guanajuato	782	229.0	2.00	-	-	-	5,751	50	-	-	-
Guanacevi	1,563	240.0	0.37	-	-	-	12,070	19	-	-	-
El Cometa	528	61.0	1.45	-	-	-	1,036	25	-	-	-
Inferred	2,873	204.1	1.01	-	-	-	18,856	93	-	-	-

Notes:

Mineral Reserves are estimated using a cut-off grade of 230g/t AuEq per ounce, and a US\$12.00 per AgEq oz long term price assumption.

Source: Endeavour Silver



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Guanajuato Mines Project consists of four operating mines; Cebada, San Elias, Lucero and Bolañitos.

Mining in Guanajuato district dates back to the 1500s.

EDR acquired operations in 2007 when it acquired assets from Peñoles.

2010 production estimated at 1Moz of silver and 11koz of gold at US\$7.04/oz.

Three major mineralized vein systems in the area; the La Luz, Veta Madre and Sierra (El Cubo).

### Guanajuato Mine

The Guanajuato Mines project consists of four operating mines in two areas. Mina Cebada and San Elias are located ~3km north of the city of Guanajuato, and the Lucero and Bolañitos mines and processing plant are ~5km west of Cebada. The Bolañitos and Lucero mines are located near the town of La Luz, about 12km to the northeast of Guanajuato; about ~430km northwest of Mexico City.

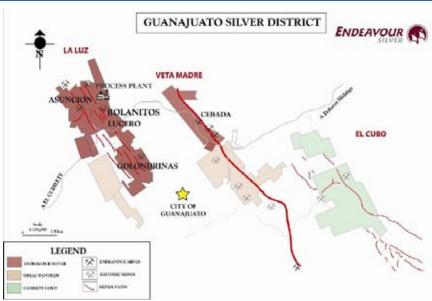
Mining in the area dates back to at least the 1500s when silver veins began to be exploited by the Spanish.

The Mining District of Guanajuato is located on the southern and eastern flank of the Sierra Madre Occidental geological province. There are three major mineralized vein systems within the district; the La Luz, Sierra (El Cubo) and Veta Madre. Mining of the epithermal silver-gold veins has occurred for more than 450 years and is estimated to have produced more than 130t of gold and 30kt of silver.

EDR took over the mining and milling operations at Guanajuato in 2007 when it acquired the assets from Peñoles and Minas de la Luz (operator at the time) at an acquisition cost of \$5.8M. Since that time, the company has mined over 1.4Moz of silver.

In 2009, BMO Research estimates the mine produced 0.7Moz of silver and 8koz of gold at co-product cash costs of US\$7.29/oz. With completion of expansion to 600tpd, BMO Research projects 2010 production of 1Moz of silver and 11koz of gold at co-product cash costs of US\$7.04/oz.

Fig 302: Guanajuato District



Source: Endeavour Silver



#### **Silver Miners**

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Ore processed at Bolañitos, a conventional grinding and flotation plant.

Concentrate trucked to Guanacevi plant for production of doré.

Plant capacity recently increased to 600tpd at a cost of US\$0.9M.

LOM annual production of 1.3Moz of silver.

1.7Moz of silver and 16koz of gold in reserves.

2009 drilling focused on finding extensions to existing veins.

Lucero vein discovered and brought into production within six months.

#### **Conventional Flotation Plant**

Mining is completed via cut and fill methods. Ore from the Guanajuato Mines is processed at the Bolañitos plant, a conventional grinding and flotation plant. A single bulk sulphide flotation concentrate is produced, which is dewatered in a conventional thickener followed by filtration and drying in a gas drier.

The concentrate is then trucked to the company's Guanacevi plant where it is added to the mill stream for production of doré. Previously, the company trucked the concentrate to a smelter (Met-Mex); however, due to increases in smelting costs, the company determined it could materially reduce costs by shipping to the Guanacevi plant.

The company recently completed an expansion of the plant to increase capacity to 600tpd (based on a six-day work week). Upgrades included rehabilitation of conveyors, installation of a larger cone crusher, reconfiguration of the flotation circuit, construction of a new concentrate load-out area and expansion of the tailings pond. Capital costs for the expansion totalled US\$0.9M.

Recovered silver production is projected rise to 1.3Moz/year over a 6-year mine life. LOM recoveries are estimated to average 85% for silver and for gold.

The Veta Madre vein is the main mineralized structure in the Guanajuato mining district. It contains several mines, all of which are in operation or being explored, including EDR's Cebada and San Elias mines.

EDR operates two mines and one currently under rehabilitation on an additional structure, the La Luz System. These mines include the Bolañitos, Lucero and Asuncion. The mineralized zones of the La Luz vein system are spread over an 8km long vein. In contrast to Veta Madre, individual veins and ore-bodies are more numerous but smaller.

Guanajuato contained 1.7Moz of silver and 16koz of gold in reserves and 7.6Moz of silver and 65koz of gold in resources at the end of 2008.

#### **Exploration for Reserve Growth**

Drilling over 2009 focused on extending the Bolañitos, San Jose and newly developed Lucero vein mineralization to the south where it remains open.

Mapping and sampling along the Veta Madre northwest of Endeavour's Cebada mine discovered a new zone of gold and silver anomalies, possibly representing another unexplored ore-shoot on the Veta Madre.

EDR was able to discover the Lucero vein and bring it into production within a six-month time frame, which speaks to management's capabilities for discovering new zones within historical landscapes and turning these into cash flow contributors as quickly as possible.



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### Guanacevi Mines Project

Guanacevi acquired in 2004.

Endeavour acquired the Guanacevi Mines project, including the producing Santa Cruz underground silver-gold mine and the Guanacevi cyanidation mineral processing plant in Q2/04.

Located in Durango, Mexico, on the edge of the Sierra Madre.

The project is located in the State of Durango, Mexico near its northern border with Chihuahua and on the edge of the Sierra Madre. The mining district covers an area measuring ~5km northeast-southwest by 10km northwest-southeast and contains more than 50 historic silver/gold mines (three currently operating).

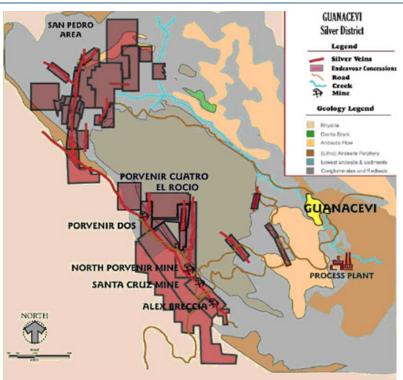
2010 production forecast at 2.8Moz of silver and 5koz of gold.

In 2009, BMO Research estimates the mine produced 1.9Moz of silver and 4.9koz of gold at co-product cash costs of US\$9.24/oz. BMO Research projects 2010 production of 2.8Moz of silver and 5koz of gold at co-product cash costs of US\$9.37/oz with completion of the planned expansion to 1,000tpd.

Water flow in main access ramp affected 2009 production.

Throughout 2009, Guanacevi experienced higher-than-expected water flow in the main access ramp in two of the ore bodies (Santa Cruz and North Porvenir) and several unexpected power outages that affected the dewatering process. EDR resolved these problems with the installation of mine generator and larger pumps.

Fig 303: Guanacevi Silver District



Source: Endeavour Silver



#### **Silver Miners**

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Guanacevi mill originally built in 1970 and expanded thereafter.

Two-stage crushing to grinding circuit with three ball mills.

Ore then sent to cyanidation or flotation circuit.

LOM annual silver production forecast at 2.6Moz/yr.

Guanacevi district comprises classic silver-gold epithermal veins.

Santa Cruz is one of the largest veins in the district.

The 200tpd Guanacevi mill was originally built in 1970 by the Mexican government and designed to custom mill ores from various mines in the district. It was expanded several times and currently mills ore from the Guanacevi projects and concentrates from the company's Guanajuato mines project.

Ore is crushed in two stages then fed into the grinding circuit with three operating ball mills. The ore can then be sent to the cyanidation circuit or a currently dormant flotation circuit for lead and zinc.

Leaching is carried out in 12 agitation tanks. Leach residues are washed in five thickeners and discharged to a lined tailings pond. Pregnant solution is treated in a Merrill Crowe circuit and gold and silver precipitate is smelted into doré bars for shipping and refining.

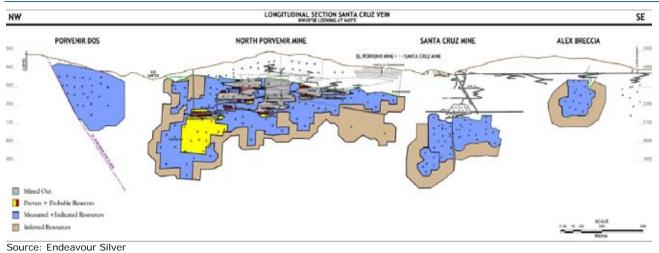
BMO Research projects silver production to average 2.6Moz/year over a 9-year mine life. LOM recoveries are estimated to average 79% for silver and 85% for gold.

The Guanacevi silver-gold district comprises classic silver-gold epithermal quartz-carbonate vein deposits characterized by low sulphidation mineralization and adularia-sercite alteration.

The Santa Cruz vein is one of the largest veins in the district. It is currently being mined in two areas: Porvenir Dos and North Porvenir. The Porvenir Mine currently provides 80% of ore mined from Guanacevi to the plant. Two more mines are currently being developed for production in 2010, the Porvenir Cuatro and Santa Cruz mines.

The Santa Cruz vein is silver-rich with lesser amounts of gold, lead and zinc. Mine production currently averages 320g/t silver and 0.5g/t gold over a 3m width. It is hypothesized that the footwall vein occurrences are splays of the main Santa Cruz structure and are largely sympathetic to it.

Fig 304: Guanacevi Mineralization





#### **Silver Miners**

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2009 drilling focused on expanding resources at Porvenir.

Early stage evaluation of a historic mining camp.

Guanacevi contained 6Moz of silver and 8koz of gold in reserves and 22Moz of silver and 40koz of gold in resource at the end of 2008.

#### **Exploration Potential**

Drilling over 2009 focused on expanding resources at the operating Porvenir mine, exploring the new Porvenir Cuatro property northwest of Porvenir mine and extending zones in San Pedro area north of the Porvenir Mine. Drilling for 2010 will focus on testing areas within the San Pedro zone.

### **Development Pipeline**

#### San Sebastian Acquisition

The announced acquisition of the 3,320ha San Sebatian project, located 40km northeast of Puerto Vallarta, Mexico from Grupo Mexico, adds another historic mining camp to EDR's portfolio.

EDR can acquire a 100% interest in the San Sebastian property for cash payments of US\$2.75M and by spending US\$2M in exploration over three years. Grupo Mexico will retain a 2% NSR.

The San Sebastian district includes four areas of low sulphidation epithermal veining. Vein widths are variable, but previous mining has identified ore shoots with widths up to 15m at the Santa Quiteria mine.

Despite the history of past production extending back to the 1500's with more than 50 small mines developed along 20 separate veins, little modern exploration has been completed in the district.

Underground sampling of the San Quiteria mine indicate average grades of 280g/t silver and 0.5g/t gold over 3 to 4m widths. Mining at San Quiteria exploited a  $\sim$ 250m long by  $\sim$ 250m deep ore shoot.

EDR plans to evaluate the project to identify new ores shoots within the underexplored district.

#### **San Juanico Acquisition**

The announced acquisition of the 17ha San Juanico project, located adjacent to EDR's El Cometa project in Parral, Chihuahua expands another historic mining camp in EDR's portfolio. Endeavour can acquire a 100% interest in the San Juanico properties by making US\$130k in cash payments over 18 months and a final payment in 24 months (min US\$300k to maximum of US\$1.9M) based on the NI 43-101 compliant silverequivalent resources using only gold as an equivalent.

Two small mine shafts, San Juanico and Dolores, had a history of small-scale production down to 100 and 150m depths, respectively. The upper mine levels were until recently producing approximately 25tpd of silver-rich lead-zinc-gold ores for processing at the nearby 500tpd plant owned by the government.

At the end of 2008 resources stood at 2.5Moz of silver, 68koz of gold, 46kt of zinc and 54kt of lead.

The company plans to begin a Phase I exploration program at San Juanico in Q1/10.



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### 28. Minco Silver (MSV.TSX)

### On the Cusp of Development

MSV is rated Outperform (Speculative) with a C\$2.50 target price.

China focused.

Low capex reflects a "made in China" reality and a low barrier to production.

The large resource base supports future production growth and increased mine life.

An Outperform (Speculative) rating for MSV-T is supported by future development of Fuwan and the Sunshine mine, which provide above-average growth and positions MSV in the ranks of intermediate silver producers within a three-year time frame. MSV is attractively valued relative to peers and provides above-average leverage to silver prices.

Minco Silver Corp. is a junior silver explorer that is in the final permitting stages to develop the Fuwan project in southern China. Contingent on a Q3/10 construction start up and execution through the development stage, MSV is positioned to become a  $\sim$ 5Moz silver producer by 2012.

Development costs to construct a 3ktpd underground mine and flotation plant at Fuwan of  $\sim$ US\$73M are low by international standards and represent a low barrier to initial development.

A 55.4Moz reserve at Fuwan supports an 11-year mine life at co-product cash costs of US\$7.83/oz and is based on ~1/3 of the global resource. Contiguous with Fuwan, MSV holds a 51% interest in the Changkeng silver deposit (32Moz of silver resource). MSV's parent company Minco Gold owns a 51% interest in the adjacent 1Moz Changkeng gold deposit. The remaining 49% interest in both projects is owned by in-country partners.

Given the larger footprint of mineralization at Fuwan, BMO Research views the prospects of both an increased mine life and future expansion through consolidation of the Fuwan camp as realistic.

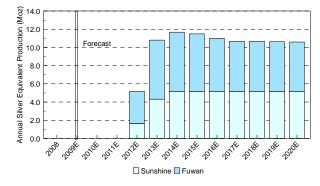
MSV has already identified an avenue for growth that could position the company in the ranks of intermediate silver producers by 2013. Conclusion of foreclosure proceedings and the sale of the Sunshine mine is expected to be completed by the beginning of Q2/10.

Fig 305: Mine Locations



Source: Minco Silver Corp.

Fig 306: MSV Production Profile, 2009E-2020E





#### **Silver Miners**

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Initiating with an Outperform (Speculative) rating.

25% downside risk.

MSV trades at a 27% discount to junior producers in the BMO Research coverage universe.

#### Valuation

BMO Research is initiating coverage of MSV with an Outperform (Speculative) rating and a target price of C\$2.50, based on 1.0x the 10% nominal project NPV of US\$2.25/share using the BMO metal price forecast.

Downside risk in our evaluation is based on MSV's failure to acquire the Sunshine mine, which accounts for 25% of the 10% nominal NPV.

MSV trades at a 27% discount to junior silver and developers in the BMO Research coverage universe, which are currently trading at 1.0x their 10% nominal NPV using the BMO metal price forecast.

At spot metal prices, MSV trades at 0.53x the 10% nominal NPV, or a 37% discount to a peer average of 0.84x.

Fig 307: MSV Valuation

BMO Assumptions		Spot	2009A	2010E	2011E	2012E	LT
Gold	US\$/oz	1,108	972	1,150	1,150	950	850
Silver	US\$/oz	15.83	14.63	20.00	20.00	15.00	14.00
Lead	US\$/lb	1.04	0.78	1.00	1.00	0.80	0.80
Zinc	US\$/lb	1.04	0.75	1.10	1.20	1.00	1.00
C\$/US\$ exchange rate		0.96	0.88	0.99	0.97	0.95	0.90

NET ASSET VALUE		NPV <sub>10%</sub> , B	MO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>109</sub>	, Spot
	Interest		(\$/Share) <sup>1</sup>	US\$M	(\$/Share)1	US\$M	(\$/Share) <sup>1</sup>
Fuwan	100%	123.5	1.68	288.7	3.92	155.6	2.11
Sunshine	100%	40.2	0.55	100.9	1.37	64.4	0.88
Project NPV		163.7	2.22	389.7	5.30	220.0	2.99
Net Cash		12.2	0.17	12.2	0.17	12.2	0.17
I-T-M Options and Warrants		3.4	0.05	3.4	0.05	3.4	0.05
Corporate Adjustment <sup>2</sup>		(13.8)	(0.19)	(16.8)	(0.23)	(13.8)	(0.19)
NPV of Hedge Book			-	-			
Total Corporate Adjustmen	nts	1.8	0.02	(1.3)	(0.02)	1.8	0.02
Corporate NPV	US\$	165.4	2.25	388.4	5.28	221.8	3.01
Corporate NPV			-				
Marking to the Comment of NEW	C\$	167.1	2.27	392.3	5.33	230.9	3.14
Multiple to Corporate NPV	1.1x						
12-month Target Price	US\$	182.0	2.47				
	C\$	183.8	2.50				
Fuwan Initial Capex		80	US\$M				
Project Debt	40%	32	US\$M				
Project Equity	60%	48	US\$M				
Equity Issue Price	0070	1.45	C\$/share				
Equity 135de 11166		1.40	οφ/ Sridi C				
Issued Share		33.1	М				
Interim Financing		0.0	M				
Partially diluted shares		40.5	M				
Total Shares After Dilution		73.6	M				

<sup>1.</sup> Assumes share capital after project financing: current 73.6 million p.d. shares + project equity issue

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses All figures in US\$ unless noted otherwise



#### **Silver Miners**

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Fig 308: MSV Model Parameters

Project	Fuw	an					Project		Sunshine			
Country	Chi						Country		USA			
Interest	100	0%					Interest		100%			
% MSV Project NPV	75	%					% MSV Project	NPV	25%			
Mine Parameters							Mine Paramete	rs				
Mine Type			Jnderground				Mine Type			nderground		
Processing		Mi	lling, Flotati	on			Processing		Mill	ing, Flotati	on	
Processing Rate		tpd	3,000				Processing Rate	tpd		900.00		
LOM Production			<u>Annual</u>	Total			LOM Production			Annual	Total	
	Silve	r Moz	4.9	72				Silver	Moz	4.8	42	
	Gold	koz	1.7	25								
	Lead	kt	0.4	6								
	Zinc	kt	3.7	55								
LOM Total Cash Costs*		US\$	7.8	В			LOM Total Cash	Costs*		8.	3	
Modelled Mine Life		yrs	14.	75			Modelled Mine Li	fe	yrs	8.7	'5	
Initial Capital Costs		US\$M	80.	.0			Initial Capital Co	sts	US\$M	30	.1	
Expansion Capex		US\$M	_				Expansion Capex		US\$M	_		
Total Sustaining Capital		US\$M	84.	9			Total Sustaining		US\$M	49	.9	
Fuwan							Sunshine					
Modeled	Tonnes S	ilver Lead	I Zinc	Silver	Lead	Zinc	Modeled	•	Tonnes	Silver	Silver	
	000	g/t %	%	Moz	kt	kt			000	g/t	Moz	
Underground	15,308 18	4.36 0.21%	0.60%	91	33	92	Underground		2,495	686.86	55	

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Fuwan																
Tonnes Mined	tpd	-	-	-	-	1688	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Underground Ore	000 t	-	-	-	-	608	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
Grade	Ag (g/t)	-	-	-	-	203	216	217	211	194	182	179	174	171	171	171
	Au (g/t)	-	-	-	-	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Lead (%)	-	-	-	-	0.17	0.19	0.17	0.15	0.13	0.16	0.21	0.24	0.25	0.25	0.25
	Zinc (%)	-	-	_	-	0.56	0.60	0.56	0.53	0.51	0.49	0.56	0.63	0.65	0.65	0.65
Silver Production	Moz	-	-	_	-	3.2	5.8	5.8	5.7	5.2	4.9	4.8	4.7	4.6	4.6	4.6
Silver Equiv. Production	Moz	-	-	-	-	3.5	6.5	6.5	6.3	5.8	5.5	5.5	5.5	5.4	5.4	5.4
Total Cash Costs*	US\$/oz	-	-	_	-	7.75	6.90	6.84	6.97	7.48	7.86	7.96	8.14	8.22	8.23	8.23
Total Production Costs*	US\$/oz	-	-	_	-	8.45	7.96	8.02	8.22	8.79	9.29	9.52	9.83	10.13	10.39	10.70
Sunshine																
Tonnes Mined	tpd	-	-	-	-	288	750	900	900	900	900	900	900	900	-	-
Underground Ore	000 t	-	-	-	-	98	255	306	306	306	306	306	306	306	-	-
Grade	Ag (oz/t)	-	-	-	-	687	687	687	687	687	687	687	687	687	-	_
Silver Production	Moz	-	-	-	-	1.7	4.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	-	-
Total Cash Costs*	US\$/oz	-	-	-	-	9.02	8.35	8.10	8.10	8.10	8.10	8.10	8.10	8.10	-	_
Total Production Costs*	US\$/oz	-	-	-	-	9.02	8.35	8.10	8.10	8.10	8.10	8.10	8.10	8.10	-	-
Total, Attributable																
Total Silver Production	Moz	-	-	-	-	4.8	10.1	11.0	10.8	10.4	10.1	10.0	9.8	9.8	4.6	4.6
Total Gold Production	koz	-	-	-	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Silver Equiv. Produc	t Moz	-	-	-	-	5.2	10.8	11.7	11.5	11.0	10.7	10.7	10.6	10.6	5.4	5.4
Total Cash Costs	US\$/oz	-	-	-	-	7.27	6.55	6.48	6.57	6.83	7.02	7.01	7.03	7.06	7.15	7.15
Total Production Costs	US\$/oz	-	-	-	-	7.74	7.18	7.13	7.24	7.52	7.75	7.80	7.89	8.02	9.28	9.59
*Silver co-product cash costs u	nless otherwise	indicated														



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### Company Synopsis

Fuwan development is expected to be completed through a combination of debt and equity.

MSV had cash of US\$15.8M at the end of 2009. Capital costs of US\$80M to develop Fuwan are expected to be funded through a combination of debt and equity.

MSV is already in advanced negotiations with the Industrial and Commercial Bank of China for a RMB300M (~US\$45M) debt facility. BMO Research models US\$35M in equity at an issuance price of C\$1.45/sh, or 33M in equity dilution.

Production of 10Moz of silver by 2013.

BMO Research forecasts commercial production beginning in H2/12 and ramping up to 10.1Moz of silver from the Fuwan and Sunshine mine in 2013.

MSV is projected to derive +90% of mine revenue from silver ranking it as a silver-focused producer. LOM co-product cash costs are projected to average  $\sim$ US\$7.88/oz silver.

Fig 309: Production & Cash Cost Profile, 2008-2020E

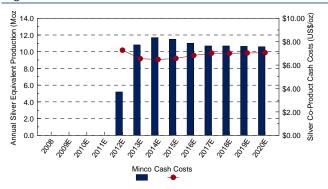
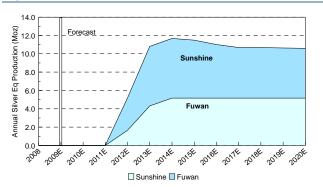


Fig 310: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 311: MSV Revenue by Metal (%), 2008-2020E

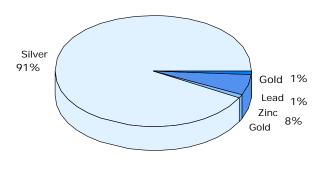
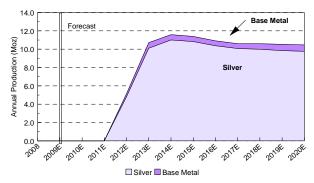


Fig 312: Annual Production by Metal, 2008-2020E



Source: BMO Capital Markets



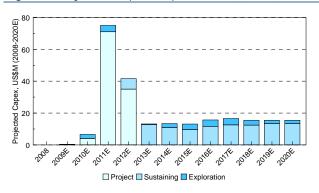
#### **Silver Miners**

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### Potential for strong EPS and CFPS growth by 2013.

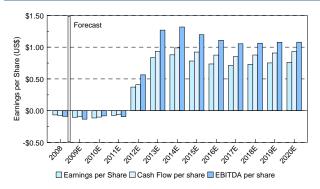
Once in production, BMO forecasts strong EPS and CFPS growth. 2010E EPS and CFPS of US\$(0.12) and US\$(0.10) are projected to increase to US\$0.83 and US\$0.93, respectively in 2013.

Fig 313: Projected Capital Expenditures (US\$M)



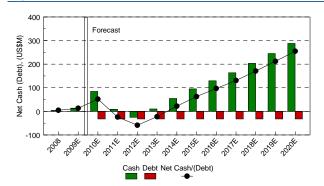
Source: BMO Capital Markets

Fig 314: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

Fig 315: Net Cash (Debt) (US\$M), 2008-2020E





#### **Silver Miners**

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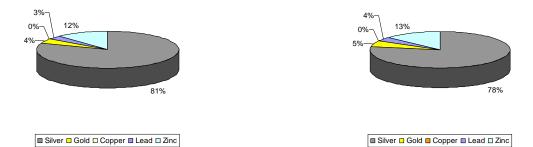
#### Reserves/Resources

### MSV reserves provide aboveaverage exposure to silver.

Reserves of 55Moz of silver, 44koz of gold, 18kt of lead and 52kt of zinc at Fuwan establish a +11-year mine life. Fuwan contains a further 29Moz of indicated silver resource and 56Moz of inferred silver resource, establishing Fuwan as a long-lived silver project.

Fig 316: Reserve Metal Distribution

Fig 317: Resource Metal Distribution



Source: BMO Capital Markets Source: BMO Capital Markets

Fig 318: MSV Reserves & Resources

Fuwan	Tonnes	Silver	Gold	Copper	Lead	Zinc	Iin	Silver	Gold	Contain Copper	ed Metal <u>Lead</u>	Zinc	Iin
luwan	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven	-	-	-	-	-	-	-	-	-	-	-	`-'	-
Probable	9,118	189.0	0.15	-	0.20	0.57	-	55,406	44	-	18	52	_
Total Reserves	9,118	189.0	0.15	-	0.20	0.57	-	55,406	44	-	18	52	-
Measured Indicated	13.948	188.7	0.16	-	0.20	0.57	-		70	-	-	79	-
Measured & Indicated	13,948	188.7	0.16	-	0.20	0.57		84,601 <b>84,601</b>	70 <b>70</b>		28 <b>28</b>	79 <b>79</b>	
Measureu & Illuicateu	13,940	100.7	0.10		0.20	0.57		84,001	//		20	/9	
Total Inferred	10,241	171.0	0.26	-	0.26	0.72	-	56,304	86	-	27	74	-
										Contain	ed Metal		
Changkeng	<b>Tonnes</b>	Silver	Gold	Copper	Lead	Zinc	Tin	Silver	Gold	Copper	Lead	Zinc	<u>Tin</u>
	(kt)	(g/t)	(g/t)	(%)	(%)	(%)	(%)	(koz)	(koz)	(kt)	(kt)	(kt)	(kt)
Proven	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	-	-	-	-	-	-	-	-	-	-	-	-	
Total Reserves	-	-	-	-	-	-		-		-	-	-	-
Measured	-	_	_	_	-	_	-	-	-	_	-	-	-
Indicated	2,027	142.0	0.40	-	0.20	0.56	-	29,195	26	-	10	27	-
Measured & Indicated	2,027	142.0	0.40	-	0.20	0.56	-	29,195	26	-	10	27	-
Total Inferred	1,049	212.0	0.29	-	0.37	0.86	-	29,195	26	-	10	27	-
										Contain	ed Metal		
Minco Silver	Tonnes (kt)	Silver (g/t)	<b>Gold</b> (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	<u>Silver</u> (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	<u>Tin</u> (kt)
Proven	-	(9/1)	(9/1)	-	-	(70)	(70)	(KOZ)	(KOZ)	-	-	-	-
Probable	9.118	189.0	0.2	_	0.20	0.57	-	55,406	44	-	18	52	-
Total Reserves	9,118	189.0	0.2	-	0.20	0.57	-	55,406	44	-	18	52	-
Measured	-	-	_	-	_	-	_	-	-	_	-	-	-
Indicated	15,975	221.6	0.2	-	0.24	0.66	-	113,796	97	-	38	106	
Measured & Indicated	15,975	221.6	0.2	-	0.24	0.66	-	113,796	97	-	38	106	-
Total Inferred	11,290	235.5	0.3		0.32	0.89		85,498	112		36	101	

Source: Minco Silver Corp.



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### Fuwan – ~5Moz Silver Production With Upside

Located adjacent to key infrastructure.

MSV holds a 90% interest in the Fuwan silver deposit, located in the province of Guangdong in southern China. Fuwan's proximity to a key industrial corridor in China has translated into low capital requirements of  $\sim$ US\$73M to develop a 3ktpd underground mine and flotation plant.

Based on the results of a Q4/09 feasibility study managed by Wardrop Engineering, the Fuwan deposit is expected to produce an average of 5.5Moz of silver at cash costs of US\$5.65/oz over a 9.2-year mine life based on a 55.4Moz silver reserve.

BMO Research models production of 4.9Moz of silver annually.

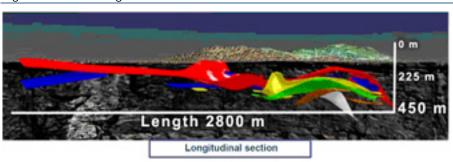
BMO Research models Fuwan development costs of US\$80M with commercial production beginning in H2/12. Incorporating conversion of resource to reserve, BMO Research models annual production of 4.9Moz of silver annually over a ~15-year mine life and co-product cash costs of US\$7.83/oz of silver.

The Fuwan deposit is hosted within eight stacked, flat-to-moderately dipping strata-bound lenses in the core of a northeast trending syncline with resources delineated over a 2.8km strike. The majority of reserves and resources ( $\sim$ 60%) are contained within two zones thereby reducing mine development requirements.

Ore extraction via a combination of mechanized methods.

Based on the shallow dipping morphology of the deposit, mining will be completed by a combination of mechanized room and pillar, cut/drift and fill. Average mining costs are projected to average US\$18/t.

Fig 319: Fuwan Long Section



Source: Minco Silver Corp.

Optimization should improve concentrate terms.

The process flow sheet uses conventional flotation to produce a silver rich (10 to 13kg/t), low grade lead (~21%) concentrate and a zinc (51%) concentrate. Access to smelters in China are expected to provide competitive treatment and refining charges for Fuwan concentrates that should offset penalties identified during feasibility. MSV is planning further optimization test work to improve lead concentrate grades and to reduce the amount of silver that reports to the zinc concentrate.



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Mine permitting should be completed by mid-2010.

#### **Permitting Nearing Completion**

MSV is nearing completion of the permitting process for Fuwan and expects to receive a mining licence by the end of Q2/10. Key permits outstanding include:

- Approval of the Environmental Impact Assessment
- Approval of Geological Hazard Assessment and Safety Assessment
- Submission (Q1/10) and approval of a Mine Development Plan and Project Application.

While in a relatively populated area, the Fuwan deposit is located on a lowlying ridge with no competing commercial value. Current development plans do not require community relocation.

### Fuwan - Part of a Larger Silver-Gold System

Regionally, the Fuwan silver district extends for  $\sim 10 \text{km}$  to the southeast with known zonation from silver to gold rich centers. Contiguous with the Fuwan deposit, MSV and sister company Minco Gold have already delineated several deposits. Reserves and resources delineated within the district total 180Moz of silver and 1Moz of gold.

- Fuwan deposit hosts 150Moz of silver.
- MSV has a 51% interest in the Changkeng silver deposit (32Moz of silver resource).
- Minco Gold owns a 51% interest in the 1Moz Changkeng gold deposit.

The remaining 49% of the Changkeng deposits are owned by the Guangdong Geological Bureau (21%), Zhuhai Zhenjie Development Ltd. (18%) and Foshan Baojiang Nonferrous Metals Corporation (10%).

BMO Research expects future growth in mine life and future expansion through consolidation of the Fuwan camp as realistic.

The size of Fuwan provides growth opportunities.

of priority targets.

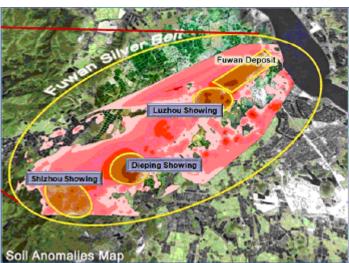
Fuwan district is host to a

1Moz of gold.

larger 180Moz of silver and

Regional exploration has already identified a number

Fig 320: Fuwan Regional Potential



Source: Minco Silver Corp.



#### **Silver Miners**

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#### Sunshine Mine

#### A Binary Outcome - But the Prize Could Be Worth the Wait

In an opportunistic move in Q3/09, MSV announced a business combination with Sterling Mining Company (SMQ.T) in Q3/08, that owned the Sunshine mine in the Silver Valley District in Idaho. In conjunction with the merger, MSV advanced SMQ US\$5M to improve working capital secured against assets, including the Sunshine mine.

While MSV severed merger discussions late in Q3/08, SMQ ran into financial difficulties and entered into bankruptcy in Q4/09. MSV initiated foreclosure proceedings in Q1/09 with the District Court of the First Judicial District of the State of Idaho.

MSV announced a decision in late Q1/09 with the U.S. Bankruptcy Court, District of Idaho to acquire SMQ for US\$12.5M. The offer includes the credit bid for the full amount of MSV's secured claim estimated at US\$9.4M and US\$3.1M in cash.

Timing of the Court decision on a successful bid for SMQ is April 6, 2010. Key dates in advance of a decision include:

- Deadline to become a qualified bidder on February 15, 2010
- Deadline for offers on March 31, 2010

Alberta Star Development Corp. (ASX.TSXV) announced a US\$11.75M offer to acquire SMQ in Q4/09.

As the principal creditor, and with the proposal of a superior offer, MSV is currently in an advantageous position to acquire SMQ and the Sunshine mine. Downside risk is that MSV will be unsuccessful, but recoup the US\$9.4M

On the downside, MSV will recoup US\$9.4M in cash.

On the upside, MSV will

acquire a 900tpd mill and 24Moz silver reserve.

#### Can Life Be Restored to an Old Mine?

secured claim.

The Sunshine mine is a legacy mine that began operation in 1921 and has produced ~350Moz of silver at an average of ~25oz/t. Mine workings including a shaft and two internal winzes are spread out over 12kft of strike and a vertical extent of vertical.

Prior to entering bankruptcy, SMQ invested ~US\$40M in upgrades to the 1ktpd flotation plant and underground development. MSV has been incurring costs of ~US\$100k per month to maintain the water table below the 3,400ft level.

The Sunshine mine has historically produced a silver-copper and lead concentrate. The silver-copper concentrate contains significant antimony that previously treated at site in a processing plant that was removed in 1999. Treatment and refining terms for the silver-copper concentrate are expected to be in the range of 88% payable for silver and ~94% payable for copper.

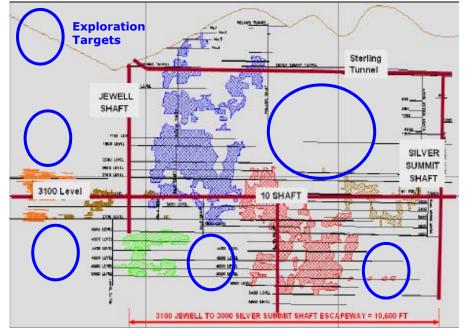


#### **Silver Miners**

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Fig 321: Long Section of the Sunshine Mine

MSV has identified a number of target areas to develop prior to production.



Source: Minco Silver Corp.

Reserves estimated by SMQ in 2007 total 23.5Moz of silver with additional indicated resources of 31.2Moz. The project hosts a sizeable, high grade silver inferred resource of 231.5Moz.

Inferred resource is poorly constrained.

While the tenor of the inferred resource is comparable to some historic grades, the resource is poorly constrained and better approximates geological potential on the property.

#### Two Years of Reserve Development Prior to Restarting Operations

Assuming a successful bid, MSV is planning a  $\sim$ US\$25M reserve delineation and development program over 18 to 24 months prior to restarting operations.

The plan is to develop sufficient reserves in three or four areas to support mining instead of relying on the existing reserve that resembles a patchwork throughout the mine.



#### Silver Miners

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### 29. MAG Silver (MAG.TSX)

Covered by John Hayes, P. Geo.

Relatively Low-Risk Production; Encouraging Exploration Results

MAG is rated Outperform (Speculative).

MAG Silver Corp. is a Canadian junior exploration company. MAG's principal asset is its 44% ownership interest in the Juanicipio silver-gold property in the Fresnillo silver district of Mexico. MAG also has nine 100%-owned exploration properties located in Mexico.

Key asset is 44% interest in Juanicipio JV.

The Juanicipio property is being operated by a joint-venture corporation (MJJV) owned 44% by MAG and 56% by Fresnillo plc. The Juanicipio property contains the high-grade Valdecañas silver-gold deposit and the prospective Juanicipio and Encino veins. Fresnillo has a preliminary mine plan to develop the Valdecañas vein as part of its Saucito project.

In Q3/09, MAG released a scoping study examining potential development of the Valdecañas vein as a standalone underground mine. The study was based on total resources of 9.1Mt grading 567g/t silver (165Moz), 1.56g/t gold (455Koz), 2.04% lead (185Kt) and 3.28% zinc (98Kt). Initial capital costs were estimated at US\$65M, based on a 2,000tpd milling operation producing lead and zinc concentrates. Sustaining capital was estimated at U\$152M. LOM average operating costs were estimated at U\$42.28/t. Recoveries were estimated at approximately 91% for silver, 80% for gold, 96% for lead and 78% for zinc. The study used a silver price of US\$10.59/oz. MJJV is advancing the Valdecañas project toward the pre-feasibility level although plans for such a study have yet to be formally announced.

Exploration success on other properties.

MAG has reported a series of promising assay results from the ongoing exploration program at its 100%-owned Cinco de Mayo property in Northern Mexico. The drilling is largely focused on the early-stage Pozo Seco molybdenum target, where results to date have been encouraging.

Attributable LOM production potential of 66Moz of silver at US\$2.89/oz.

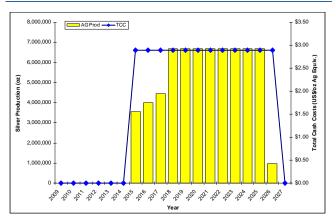
BMO Research estimates MAG's LOM equity production from Valdecañas could be approximately 66Moz of silver, 159koz of gold, 78kt of lead and 102kt of zinc produced at a weighted average total cash cost of about US\$2.89/oz of silver equivalent.



#### **Silver Miners**

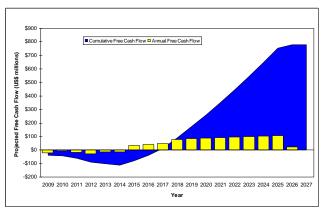
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Fig 322: Production Forecast



Source: BMO Capital Markets

Fig 323: Free Cash Flow Forecast



Source: BMO Capital Markets

#### Valuation

MAG trades at a 5% discount to the BMO Research 10% NAV estimate at spot metal prices.

shares are trading at a 56% discount to the 0% NAV estimate of US\$13.57/sh using the BMO metals price forecast and at a 5% discount to the 10% NAV estimate of US\$6.25/sh using spot silver and gold prices of US\$15.82/oz and US\$1,118/oz, respectively.

Based BMO Research financial, resource and operating assumptions, MAG's

BMO Research has not assigned any value to the exploration and growth potential of the company's other early-stage exploration projects. These represent blue sky to the valuation estimates.

Senior partner comes with good and bad.

MAG Silver is in a bit of a unique situation having a strong project with a strong partner, in a historically mining-friendly jurisdiction, where the adjoining property has recently permitted development works by the partner. The key risks here are delays brought about by MAG's hot-and-cold relationship with Fresnillo, especially in light of Fresnillo's failed takeover bid for MAG Silver.

An arbitration hearing on MAG's dispute with Fresnillo of MAG's rights as a partner in the joint venture is estimated for Q3/10. MAG believes a number of clauses in the joint venture agreement have not been followed.

MAG is rated Outperform (Speculative).

MAG's stock trades as at significant discount to the BMO Research 0% NAV estimate and it appears the market is attributing weak potential for success on the project despite the inherent advantages, and the emerging exploration potential.

Although any production from Valdecañas remains a number of years away, the deposit's current resources and exploration upside at the Juanicipio project together with the company's other 100%-owned district-scale holdings in Mexico comprise an attractive asset for any silver producer, not just Fresnillo.



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### 30. Orko Silver (OK.TSX)

### La Preciosa Discovery Provides Easy Exit

OK is rated Outperform (Speculative) with a C\$1.60 target price.

A junior silver explorer with a large resource base.

PAAS is earning a 55% interest by advancing in La Preciosa production.

A condensed timeframe to a production decision.

Production potential of 8.8Moz of silver at US\$5.17/oz.

PAAS could move to consolidate La Preciosa ownership.

An Outperform (Speculative) rating for Orko Silver is supported by future development of La Preciosa with OK retaining a 45% project interest carried to production. A premium valuation for OK is supported by the company's free carried status, condensed timeframe to production, and low development risk owing to the strength of joint venture partner PAA.

The company's principal project is the La Preciosa project that hosts indicated resources of 63.2Moz of silver with an additional 71.8Moz of inferred silver resource.

Discovery of the Martha vein in 2007 elevated the La Preciosa project to the forefront of potential acquisition targets in the position of a junior. Validation of the project potential was highlighted by a deal struck with Pan American Silver (PAAS.NYSE) in Q2/09 where by PAAS can earn a 55% interest by advancing the project to production.

PAAS has established an aggressive development timeframe with completion of feasibility by the end of 2010. In advance of definitive parameters, BMO Research expects La Preciosa to develop as an open pit/underground operation with ore processed through a conventional silver mill.

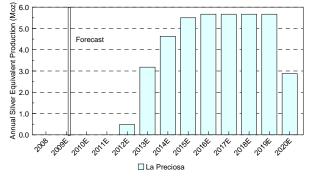
Based on a 4ktpd throughput rate, La Preciosa is expected to produce an average of 8.8Moz of silver and 9koz of gold per annum at co-product cash costs of US\$5.17/oz of silver.

The projected production positions La Preciosa as a flagship asset for PAAS. Combined with significant exploration potential, BMO Research believes that PAAS could move to consolidate ownership of La Preciosa. Market appreciation of this scenario could attract a takeover premium that is not currently factored in the BMO Research valuation.

Fig 324: La Preciosa Location



Fig 325: La Preciosa Production Profile, 2009-2020E





#### Silver Miners

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### Valuation

Initiating with an Outperform (Speculative) rating.

OK trades at in line with junior silver producers and developers in the BMO Research coverage universe.

BMO Research is initiating coverage of OK with an Outperform (Speculative) rating and a target price of C\$1.60, based on 1.5x the 10% nominal NPV of US\$1.04/sh using the BMO metal price forecast.

OK trades in line with junior silver producers in the BMO Research coverage universe, which are currently trading at 1.0x their 10% nominal NPV using the BMO Research metal price forecast and spot metal prices.

A premium valuation for OK is supported by the company's free carried status, condensed timeframe to production, and low development risk owing to the strength of joint venture partner PAAS.

Fig 326: OK Valuation

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Gold	1,108	972	1,150	1,150	950	850
Silver	15.83	14.63	20.00	20.00	15.00	14.00
C\$/US\$ exchange rate	0.96	0.88	0.99	0.97	0.95	0.90

NET ASSET VALUE NPV<sub>10%</sub>, Spot NPV<sub>10%</sub>, BMO Price NPV<sub>0%</sub>, BMO Price US\$M Interest US\$M (\$/Share) (\$/Share) US\$M La Preciosa 45% 134.1 292.7 2.22 148.4 134.1 **Project NPV** 1.02 292.7 2.22 148.4 1.13 3.1 9.2 Net Cash 0.023.1 0.02 0.02 I-T-M Options and Warrants 9.2 0.07 9.2 0.07 0.07 Corporate Adjustment<sup>2</sup> (9.3)(11.8)(0.09)(9.3)(0.07)(0.07)NPV of Hedge Book 3.1 **Total Corporate Adjustments** 0.02 0.6 0.00 Corporate NPV US\$ 137.2 1.04 293.2 2.23 151.5 138.6 1.05 157.8 1.20 Multiple to Corporate NPV 1.5x 12-month Target Price US\$ 199.0 226.2

All figures in US\$ unless noted otherwise

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

A C\$1.60 target price values OK at 1.5x the 10% nominal NPV.

<sup>1.</sup> Assumes p.d. shares of 131.6M

<sup>2.</sup> Includes general and administrative expenses as well as exploration expenses



#### **Silver Miners**

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Fig 327: OK Model Parameters

Project	1	La Precios	sa			
Country Interest**		Mexico 100%				
Mine Type			Open F	Pit & Under	ground	
Processing				Heap Leach		
Processing Rate LOM Production	tpd Gold Silver		koz Moz	4,000 <u>Annual</u> 9.2 8.8	Total 98.5 94.3	
LOM Total Cash Costs* Modelled Mine Life			yrs	5.1 10.		
Initial Catital Costs** Expansion Capex** Total Sustaining Capital**			US\$M US\$M US\$M	16 - 5		
Modeled		Tonnes		Gold g/t	Silver Moz	Gold
Underground		10,620		0.31	90	106
Open Pit		21,465	94.61	0.17	15	26

<b>Production Estimates</b>		2008A	2009E	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
La Preciosa														
Tonnes milled	tpd	-	-	-	-	125	1,750	3,625	4,000	4,000	4,000	4,000	4,000	4,000
Underground ore	000 t	-	-	-	-	45	630	1,305	1,440	1,440	1,440	1,440	1,440	1,440
Grade	Ag (g/t	-	-	-	-	265	265	285	265	261	261	261	261	261
	Au (g/t	-	-	-	-	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Open pit ore	000 t	-	-	-	-	225	810	135	-	-	-	-	-	-
Strip ratio	W: O	-	-	-	-	5	5	5	-	-	-	-	-	-
Grade	Ag (g/t	-	-	-	-	95	95	95	-	-	-	-	-	-
	Au (g/t	-	-	-	-	0.17	0.17	0.17	-	-	-	-	-	-
Silver Production	Moz	-	-	-	-	1.0	7.0	11.1	11.0	10.9	10.9	10.9	10.9	10.9
Gold Production	koz	-	-	-	-	1.2	8.0	10.3	10.7	10.7	10.7	10.7	10.7	10.7
Silver Equiv. Production	000 oz	-	-	-	-	1.0	7.5	11.8	11.7	11.5	11.5	11.5	11.5	11.5
Total Cash Costs*	US\$/oz	-	-	-	-	7.71	5.26	3.82	3.91	3.96	3.96	3.96	3.96	3.96
Total Production Costs*	US\$/oz	-	-	-	-	7.78	6.51	5.61	5.79	5.95	6.09	6.26	6.49	6.84

<sup>\*</sup>silver co-product cash costs

<sup>\*\*</sup>Assumes OK is carried to production and retains a 45% interest in La Preciosa. Numbers above are on a 100% basis.



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### Company Synopsis

### Production of 11Moz of silver by 2014.

BMO Research forecasts commercial production at La Preciosa beginning in H2/12 and ramping up to 11Moz (5Moz of silver net to OK) of silver annually in 2014. LOM co-product cash costs are projected to average ~US\$5.17/oz of silver.

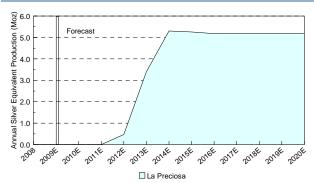
#### Silver-weighted production.

MSV is projected to derive  $\sim$ 94% of mine revenue from silver ranking it as a silver-weighted producer.

Fig 328: Production & Cash Cost Profile, 2008-2020E



Fig 329: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 330: OK Revenue by Metal (%), 2008–2020E

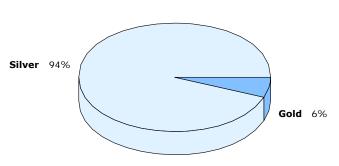
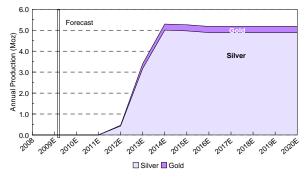


Fig 331: Annual Production by Metal, 2008–2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

#### Current cash of C\$1.3M.

BMO Research forecasts an estimated cash balance of C\$1.3M at the end of 2009. OK expenses are estimated at C\$200k per month.

La Preciosa project and the surrounding exploration ground are the company's principal assets. OK has reduced expenditures significantly through the signing of a joint venture agreement with PAAS in Q2/09 whereby PAAS has agreed to incur all costs associated with advancing the project to completion of feasibility within a 36-month timeframe.

#### Carried to production.

Once a development decision is made, OK is carried to production at which time PAAS will have earned a 55% interest in La Preciosa.

BMO Research estimates OK will require an interim financing for working capital in 2010 and forecasts a C\$5M financing in Q2/10 at an issuance price of C\$1.10/sh, or 4.3M shares of equity dilution.



#### **Silver Miners**

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## Potential for strong EPS and CFPS growth by 2013.

Once in production, BMO forecasts strong EPS and CFPS growth. BMO Research forecasts 2013E EPS and CFPS of US\$0.06 and US\$0.10, increasing to US\$0.12 and US\$0.19, respectively, in 2014E.

Fig 332: Projected Capital Expenditures (US\$M)

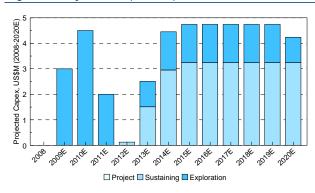
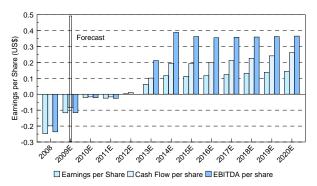


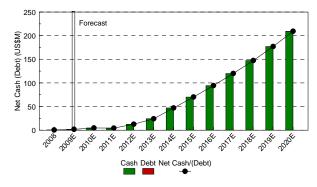
Fig 333: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 334: Net Cash (Debt) (US\$M), 2008-2020E





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#### Reserves/Resources

La Preciosa contains estimated resources of 135Moz of silver.

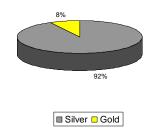
La Preciosa contains indicated resources of 63.2Moz of silver and 94koz of gold with a further 71.8Moz of silver and 97koz of gold in the inferred category. The resource estimate was completed by Mine Development Associates using a 100g/t silver cut off. A total of eight veins were modeled using inverse distance squared estimation.

The addition of 20km of additional infill drilling completed through H2/09 is expected to increase the confidence in the resource in advance of a Preliminary Assessment in Q2/10.

Silver dominant.

Using BMO Research long-term metal prices, silver represents 92% of the in situ value of La Preciosa with gold making up the remaining value.

Fig 335: Resource Metal Distribution



Source: Orko Silver

Fig 336: OK Reserves & Resources

									Contained Metal				
Orko Silver	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	<u>Silver</u> (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	<u>Tin</u> (kt)
Proven	`- ′	-	-	`-´	`- '	`- ´	`- ´	` - '	` - '	` '	` '	` ,	` '
Probable	-	-	-	-	-	-	-	-	-				
Total Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Measured	-	-	-	-	-	-	-	-	-				
Indicated	10,637	184.9	0.27	-	-	-	-	63,230	94				
Measured & Indicated	10,637	184.9	0.27	-	-	-	•	63,230	94	-	-	-	-
	40.007	4047	0.05					74 754	0.7				
Inferred	12,087	184.6	0.25	-	-	-	-	71,754	97	-	-	-	-
Total Inferred	12,087	184.6	0.25	-	-	-	-	71,754	97	-	-	-	-

Source: Orko Silver



#### **Silver Miners**

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#### La Preciosa

Ideal location relative to existing infrastructure.

La Preciosa is ideally located, approximately 50km northeast of the city of Durango and along the Highway 40 corridor.

District-sized land package.

Through 100% ownership of the  $\sim$ 3,300ha La Preciosa project, OK has consolidated a district-sized land position within the world-class Central Mexican Silver Belt.

Since optioning the property in 2003, OK has advanced the La Preciosa project through the resource stage to outline indicated resources of 63.2Moz of silver and 94koz of gold with an additional 71.8Moz of silver and 97koz of inferred gold resource.

To earn a 55% interest, PAAS has agreed to advance La Preciosa to production.

In Q2/09, OK agreed to form a joint venture with PAAS to earn a 55% interest in the project through:

- Aggregate expenditures of US\$16M over 36 months with a commitment to spend US\$5M, including US\$2.5M on regional exploration over the 12 months.
- Advance the project to feasibility within 36 months.
- PAAS will provide all the necessary funding to develop and construct an operating mine.
- Agreed to a standstill agreement while the joint venture remains valid.

The JV has drilled 20km since mid-2009.

Since signing the joint venture agreement PAAS, as the operator of the joint venture, has drilled in excess of 28km of core focused on infill drilling. PAAS expects to advance La Preciosa to the feasibility stage by the end of 2010.

#### **Resources Expected to Grow**

Plans are to advance La Preciosa to feasibility by the end of 2010.

The La Preciosa area occupies a low-lying pediment covered area that obscures the full extent of the Tertiary-age epithermal silver-gold veining. The most comprehensive area of veining lies on a north-south elongate hill that hosts the surface expression of the upper veins such as the Abundancia, La Gloria and subordinate veins that have been the focus of past small-scale mining and exploration.

OK's discovery of the Martha vein was key to elevating the projects status.

The discovery of the shallow west dipping Martha vein in late 2006 was a key advancement of the project. The discovery hole (BP06-77) returned 249g/t silver and 0.34g/t gold over 10m. The grades and attendant widths of the Martha vein have supported a six-fold increase in project resources.

Veining at La Preciosa can be separated into three major orientations:

- 1. Steep to Moderate West Dipping Veins within this group strike north with dips to the west ranging from 40° to 85°. Veins within this group include the Abundancia, La Gloria and Luz Elena.
- 2. Cross Veins Include the north dipping Transversal vein and the eastern vein-breccia system (Zona Oriente) strikes northwest.
- 3. Flat Veins The Martha vein strikes in a northerly direction and dips on average 20° to the west.



#### **Silver Miners**

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Fig 337: La Preciosa Vein System

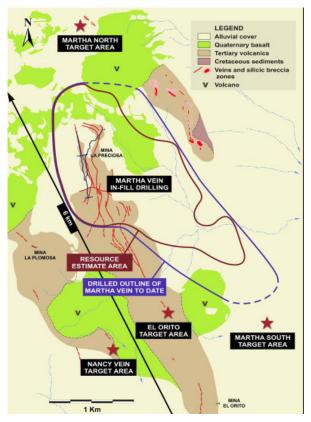
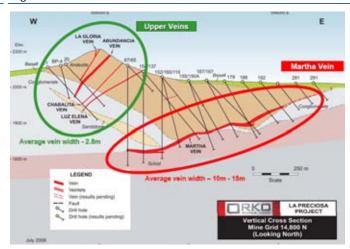


Fig 338: La Preciosa Cross Section



Source: Orko Silver Corp.

Source: Orko Silver Corp.

#### Initial metallurgy is positive.

Initial testwork has achieved recoveries in the range of 91% for silver and ~75% for gold and are achievable by cyanidation at a medium-fine grind (70% passing 200 mesh) and cyanide consumption in the range of 1.6kg/t.

The joint venture has completed a second phase of metallurgical test work and results are expected to be released later in Q1/10.

# Numerous untested targets provide potential for additional discoveries.

#### **Regional Exploration Could Lead to New Discovery**

Exploration at La Preciosa is focused on infill drilling at a nominal 50m spacing to upgrade existing resources. Results from infill drilling on the Martha vein, including 439g/t silver and 0.58g/t gold over 15.7m demonstrate good continuity of mineralization.

In the immediate vicinity of the resource area, the JV has identified a number of high priority targets including the Martha Norte, Nancy vein and the El Orito. Land access negotiations are underway and are expected to conclude in Q1/10, after which the JV will begin an initial test of these targets.

Exploration drilling outside of the resource area has targeted the Baritina and El Vaquero areas. There are over 12 additional targets that have been identified and have yet to be drill tested.



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### 31. Sabina Gold & Silver (SBB.TSX)

#### A World Class Asset in an Expensive Locale

SBB is rated Market Perform (Speculative) with a C\$1.40 target price.

Sabina is exploring ground in Nunavut.

Hackett river is a world class deposit capable of producing 9.9Moz of silver annually.

Goose Lake could produce ~200koz annually.

US\$1.14B in initial capex to develop both projects.

A Market Perform (Speculative) rating for SBB and C\$1.40 target price is derived from the sequential development of Goose Lake and Hackett River and an attractive valuation relative to peers.

Sabina Gold & Silver (SBB.TSX) is a junior precious metal explorer that controls ~3,000km² of ground in the western part of Nunavut that contains the world class silver-base metal Hackett River deposit and gold deposits at Goose and George Lake.

Owing to the sizeable capital constraints of arctic development, SBB has focused on developing sufficient critical mass within the western part of Nunavut to trigger a development opportunity.

Hackett River is a world class massive sulphide deposit with significant exploration potential. BMO Research estimates Hackett River could produce 9.9Moz of silver, 121kt of zinc, 17kt of lead, 6.8kt of copper and 13koz of gold annually by mid-2016. Co-product silver cash costs are projected to average ~US\$6.55/oz over a 14-year mine life.

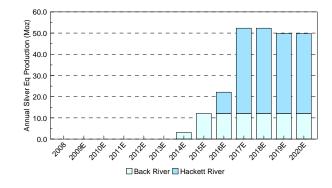
The Goose Lake project (part of the company's Back River assets) is nearing sufficient size to develop into a stand alone operation. Contingent on a ~20% increase in resource, Goose Lake is projected to produce ~200koz of gold annually at total cash costs of US\$440/oz by 2015.

The estimated US\$1.1B capital requirement for Goose Lake and Hackett River represent sizeable risk factors for SBB. To reduce the current risk profile and provide a positive endorsement for the project, BMO Research expects SBB to seek a variety of development partnerships.

Fig 339: Sabina Asset Locations



Fig 340: Sabina Production Profile, 2009E-2020E



Source: Sabina Gold & Silver Source: BMO Capital Markets



#### **Silver Miners**

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#### Valuation

Initiating with a Market Perform (Speculative) rating.

BMO Research is initiating coverage of SBB with a Market Perform (Speculative) rating and a target price of C\$1.40, based on 1.0x the 10% nominal NPV of US\$1.30/sh using the BMO metal price forecast.

SBB trades at a 13% discount to junior silver producers and developers in the BMO Research coverage universe.

SBB trades at a 13% discount to junior silver producers in the BMO Research coverage universe, which are currently trading at 1.0x their 10% nominal NPV using the BMO Research metal price forecast.

At spot metal prices, SBB trades at a 28% discount to junior silver producers and developers, which are currently trading at 0.84x their 10% nominal NPV.

Fig 341: Sabina Valuation

A C\$1.40 target price values SBB at 1.0x the 10% nominal NPV.

BMO Assumptions	Spot	2009A	2010E	2011E	2012E	LT
Silver	15.83	14.63	20.00	20.00	15.00	14.00
Gold	1,108	972	1,150	1,150	1,050	850
Copper	3.28	2.34	3.30	3.70	3.50	-
Zinc	1.04	0.75	1.10	1.20	1.00	0.80
Lead	1.04	0.78	1.00	1.00	0.80	1.00
C\$/US\$ exchange rate	0.96	0.95	0.99	0.97	0.95	0.90

NET PRESENT VALUE		NPV <sub>10%</sub> , B	MO Price	NPV <sub>0%</sub> , B	MO Price	NPV <sub>109</sub>	, Spot
	Interest	US\$M	(\$/Share)1	US\$M	(\$/Share)1	US\$M	(\$/Share)1
Hakett River	100%	504.8	0.96	1,807.6	3.44	594.7	1.12
Back River	100%	140.2	0.27	358.2	0.68	306.7	0.58
Project NPV		645.0	1.23	2,165.8	4.13	901.4	1.70
Net Cash		46.5	0.09	46.5	0.09	46.7	0.09
I-T-M Options and Warrants		2.2	0.00	2.2	0.00	2.2	0.00
Corporate Adjustment <sup>2</sup>		(11.1)	(0.02)	(14.0)	(0.03)	(11.1)	(0.02)
NPV of Hedge Book		-	-	-	-	-	-
Total Corporate Adjustments		37.5	0.07	34.6	0.07	37.8	0.07
Corporate NPV	US\$	682.5	1.30	2,200.4	4.19	939.2	1.77
	C\$	689.4	1.31	2,324.7	4.43	977.8	1.84
Multiple to Corporate NPV	1.0x						
12-month Target Price	US\$	682.5	1.30				
	C\$	689.4	1.40				

<sup>1.</sup> Assumes share capital after project financing: current 109.9 million p.d. shares + project related equity issue 414.8

Hackett Back Estimated Initial Capex 300.0 837.5 Project Debt 60% 502.5 180.0 Project Equity 40% 335.0 120.0 Equity Issue Price C\$/share 1.20

 Issued Share<sup>3</sup>
 M
 379.2

 Interim Financing
 M
 35.6 feasibility financing in Q1/11

 Partially diluted shares
 M
 109.9

 Total Shares After Dilution
 M
 524.7

Source: BMO Capital Markets

BMO Research adjusts NPV for company size and growth trajectory in arriving at target prices. NPV per share is calculated using a diluted share count incorporating in-the-money options and warrants, and the issuance of shares for project financing.

Includes general and administrative expenses as well as exploration expensesAll figures in US\$ unless noted otherwise



#### **Silver Miners**

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Fig 342: Sabina Model Parameters

Project		HACKETT	RIVER						Project			BACK RIV	/ER			
Country Interest % SBB Project NPV Mine Parameters		Canada 100% 78%							Country Interest % SBB Pro Mine Para			Canada 100% 22%				
Mine Type Processing Processing Rate Start-up .OM Production		Silver	-	round & Op ing/Flotatio 12,0 Q4'20 <u>Annual</u> 9.9 13,4	n 00				Mine Type Processing Processing Start-up LOM Produc	ction		Moz koz	Open Pit Milling 3,000 Q1'2013 Annual 0.0 199.2	Total 0 1,594		
	!	Lead Zinc Copper	kt kt kt	17.2 121.0 6.8	245 1,724 97					`	3010	KUZ	199.2	1,394		
LOM Total Cash Costs* LOM Strip Ratio Modelled Mine Life Initial Capital Costs Expansion Capex Total Sustaining Capital			US\$ w:o yrs US\$M US\$M US\$M	6.5: 7.00 14.2 837. - 319.	5 5				LOM Total ( LOM Strip F Modelled M Initial Capit Expansion ( Total Susta	Ratio ine Life tal Costs Capex		w: o yrs US\$M US\$M US\$M	\$37 8.0 8.0 300 - 86.	0 0 .0		
HACKETT RIVER									BACK RIVI	ER						
Modeled	Tonnes 000	Silver q/t	Lead %	Zinc %	Silver Moz	Lead Mlbs	Zinc Mlbs	•	Modeled			Tonnes 000	Gold q/t	Gold koz		
Open Pit Jnderground	31,262 23,779	122 126	0.58% 0.52%	4.33% 3.57%	123 96	180 123	1,354 850	•	Open Pit			8,640	6.17	1,713		
Production Estimates		2009A	2010E	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	202
lackett River																
Tonnes Mined	tpd	-	-	-	-	-	-	-	3,017	12,000	12,000	12,000	12,000	12,000	12,000	12,00
Jnderground Ore	000 t	-	-	-	-	-	-	-	-	-	-	1,750	1,750	1,750	1,750	1,7
Grade	Ag (g/t)	-	-	-	-	-	-	-	-	-	-	126	126	126	126	1:
	Au (g/t)	-	-	-	-	-	-	-	-	-	-	0.25	0.25	0.25	0.25	0.
	Copper (9	-	-	-	-	-	-	0.00%	0.00%	0.00%	0.00%	0.23%	0.23%	0.23%	0.23%	0.2
	Lead (%)	-	-	-	-	-	-	0.00%	0.00%	0.00%	0.00%	0.52%	0.52%	0.52%	0.52%	0.5
	Zinc (%)	-	-	-	-	-	-	0.00%	0.00%	0.00%	0.00%	3.57%	3.57%	3.57%	3.57%	3.5
Open pit Ore	000 t	-	-	-	-	-	-	0	1,056	4,200	4,200	2,450	2,450	2,450	2,450	2,4
Strip Ratio	W:0	-	-	-	-	-	-	0.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7
Grade	Ag (g/t)	-	-	-	-	-	-	0.00	122.28 0.39%	122.28 0.39%	122.28 0.39%	122.28 0.39%	122.28 0.39%	122.28 0.39%	122.28 0.39%	122
	Copper (9 Lead (%)	-	-	-	-	-	-	0.00%	0.39%	0.39%	0.39%	0.39%	0.58%	0.39%	0.39%	0.5
	Zinc (%)	-	-	-	-	-	-	0.00%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.33%	4.3
Silver Production	Moz			_				0.0078	2.7	10.7	10.7	10.8	10.8	10.8	10.8	10
Silver Equiv. Production	Moz		_	_				_	10.0	40.2	40.2	37.7	37.7	37.7	37.7	37
Total Cash Costs*	US\$/oz	_	_	_	_	_	_	_	6.89	6.86	6.86	7.16	7.16	7.16	7.16	7.
Total Production Costs*	US\$/oz	_	_	_	_	_	_	-	7.96	8.45	8.51	9.03	9.11	9.22	9.34	9.
Back River																
Tonnes Mined	tpd	-	-	-	-	-	750	3,000	3,000	3,000	3,000	3,000	3,000	3,000	2,250	
Open pit Ore	000 t	-	-	-	-	-	270	1,080	1,080	1,080	1,080	1,080	1,080	1,080	810	
Strip Ratio	W:O	-	-	-	-	-	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	
Grade	Au (g/t)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gold Production	koz	-	-	-	-	-	50	199	199	199	199	199	199	199	149	
Total Cash Costs*	US\$/oz	-	-	-	-	-	441	441	441	441	441	441	441	441	441	
Total Production Costs*	US\$/oz	-	-	-	-	-	553	652	660	673	688	708	735	778	748	
Sabina Total																
Total Silver Production	Moz	-	-	-	-	-	-	-	2.7	10.7	10.7	10.8	10.8	10.8	10.8	10
	koz	-	-	-	-	-	50	199	203	214	214	214	214	214	164	
Total Gold Production																
Total Gold Production Total Silver Equiv. Product	t Moz	-	-	-	-	-	3.1	12.1	22.1	52.3	52.3	49.8	49.8	49.8	46.8	3/
	t Moz US\$/oz	-	-	-	-	-	3.1	12.1	22.1 7.29 8.95	52.3 7.27	52.3 7.27	49.8 7.49	49.8 7.49	49.8 7.49	46.8 7.51 10.22	37. 7.5



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#### Company Synopsis

### Production of 200koz of gold by 2015.

Based on the development scenario outlined by BMO Research, SBB could begin production from Goose lake by Q4/14 and ramp up to 200koz of gold at total cash costs of US\$440/oz gold in 2015.

BMO Research forecasts production from Hackett River to begin in 2016 ramping up to 10.6Moz of silver and 20kt of lead, 142kt of zinc and 10kt of copper by 2017. Co-product cash costs are projected average US\$6.55/oz of silver over the life of operations.

### Silver is not the principal metal.

SBB is projected to derive +46% of mine revenue from base metals, 35% from gold and 19% from silver through 2020. Based on these projections, SBB is a base metal weighted producer.

Fig 343: Production & Cash Cost Profile, 2008–2020E

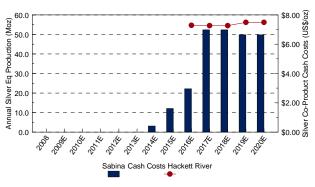
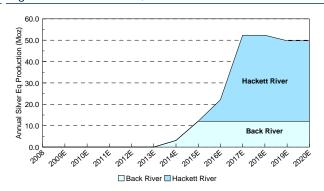


Fig 344: Growth Profile, 2008-2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

Fig 345: SBB Revenue by Metal (%), 2008-2020E

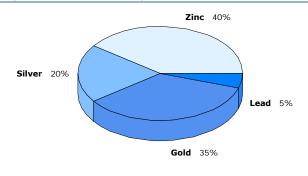
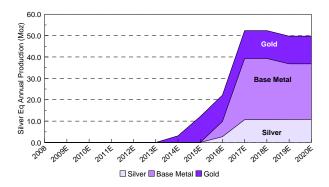


Fig 346: Annual Production by Metal, 2008–2020E



Source: BMO Capital Markets

Source: BMO Capital Markets

#### Current cash of C\$45M.

SBB has a relatively strong balance sheet with ~C\$45M is cash. For 2010, SBB has outlined exploration programs at both Hackett River and Back River with estimated expenditures in the range of C\$20M. Assuming current exploration levels are maintained, SBB is sufficiently funded through 2011.

## Feasibility will require an interim financing.

To advance both projects to completion of feasibility, BMO Research estimates that SBB with be required to spend an additional US\$27M through to the end of 2013. To fund this work, a US\$40M interim financing is modeled in H1/11 at an issuance price of C\$1.20/share for 36M shares.



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US\$1.14B in initial capex to develop both projects.

Capital for the sequential development of both Goose Lake and Hackett River is estimated to be in the range of US\$1.14B between 2013 and 2017. Timing of development includes:

- **Goose Lake** capital costs of US\$300M to develop a 3tpd open pit mine with a conventional milling/CIL plant and related infrastructure. Construction start-up in Q1/13 with commissioning in Q4/14.
- Hackett River capital cost estimate of US\$838M to construct a 12.5ktp open pit mine with a conventional flotation processing plant. Construction start-up in Q1/14 with commissioning in Q4/16.

Feasibility will require interim financing.

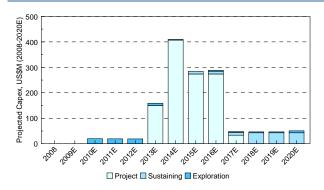
Significant financial risk.

To advance both projects to production, BMO Research models debt of US\$680M and US\$455M in project equity at an issuance price of C\$1.20/sh for 379M shares.

The capital requirements and development of both Goose Lake and Hackett River represent sizeable risk factors for SBB. To reduce the current risk profile and provide a positive endorsement for the project, BMO Research expects SBB to seek a variety of development partnerships that could include:

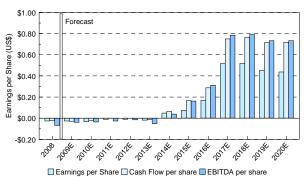
- Development partnership with an intermediate or senior metal miner.
- Development financing through the sale of Hackett River base metal or gold production.

Fig 347: Projected Capital Expenditures (US\$M)



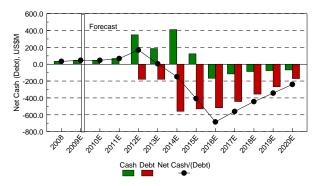
Source: BMO Capital Markets

Fig 348: Earnings Estimates, 2008–2020E



Source: BMO Capital Markets

Fig 349: Net Cash (Debt) (US\$M), 2008-2020E





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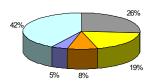
#### Reserves/Resources

SBB has a large silver resource within an even larger base metal inventory at Hackett.

Using BMO Research long-term metal prices, SBB resources are base metal weighted owing to the large inventory of zinc, copper and lead at Hackett River. Total resources at Hackett River are estimated 237.5Moz of silver, 500koz of gold, 2,376kt of zinc, 189kt of copper and 327kt of lead.

Back river contains a further 1.2Moz of indicated and 1.2Moz of inferred gold resources within two deposits.

Fig 350: Resource Metal Distribution



■ Silver □ Gold ■ Copper ■ Lead □ Zinc

Source: BMO Capital Markets

Fig 351: SBB Reserves & Resources

										Contain	ed Metal		
Hackett River	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	<u>Silver</u> (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	Tin (kt)
Open Pit Underground	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Reserves	-	-	-	-	-	-	-	-	-		-	-	-
Open Pit	26,459	126.5	0.29	0.41	0.60	4.43	_	107,638	243	109	159	1,173	
Underground	17,176	132.2	0.23	0.25	0.55	3.72	-	72.982	129	42	94	638	-
Measured & Indicated	43,635	128.7	0.27	0.35	0.58	4.15	-	180,620	372	151	253	1,811	-
Open Pit	5,856	103	0.21	0.31	0.48	3.88		19,404	39	18	28	227	_
Underground	10.128	115	0.27	0.20	0.46	3.33		37,437	88	20	47	338	_
Total Inferred	15,984	110.6	0.25	0.24	0.47	3.53	-	56,841	127	38	75	565	-
										Contain	ed Metal		
Back River	Tonnes (kt)	Silver (g/t)	Gold (g/t)	Copper (%)	<u>Lead</u> (%)	<u>Zinc</u> (%)	<u>Tin</u> (%)	Silver (koz)	Gold (koz)	Copper (kt)	<u>Lead</u> (kt)	Zinc (kt)	Tin (kt)
George Lake	-	-	-	-	-	-	-	-	-	-	-	-	-
Goose Lake	-	-	-	-	=	-	-	-	-	-	-	-	-
Total Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
George Lake	1,577	_	11.90	_	_	_	=	-	603	_	_	_	-
Goose Lake	1,838	-	9.98	-	-	-	-	=	590	=	-	-	-
Measured & Indicated	3,415	-	10.87	-	-	-	-	-	1,193	-	-	-	-
George Lake	992	_	9.20	-	_	_	=	-	295	_	_	_	_
Goose Lake	2,564	-	10.52	-	=	-	-	=	867	=	-	-	-
Total Inferred	3,556	-	10.15	-	-	-	-	-	1,162				

Source: Sabina Gold and Silver



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#### **Building Critical Mass**

Owing to the sizeable capital constraints of arctic development, SBB has focused on developing sufficient critical mass within the western part of Nunavut to trigger a development opportunity.

Through the initial optioning of the Hackett River project from Teck Resources in 2003 and acquisition of the Back River and Wishbone projects from Dundee Precious Metals in 2009, SBB has amassed:

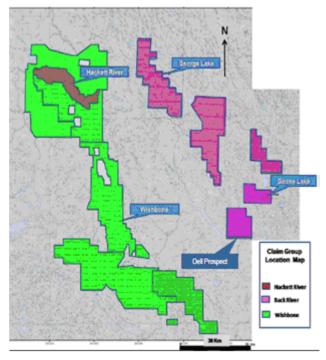
- The Hackett River base metal camp.
- The adjacent Back River project that includes the George and Goose Lake gold deposits.
- +3061km<sup>2</sup> of exploration licences covering extensions of both the Hackett River (Wishbone) base metal and Back River gold belts.

SBB's projects are located along the proposed BPAR route, a road corridor between Bathurst Inlet to the east and Contwoyto Lake to the southwest. The BPAR corridor, including a port facility at Bathurst Inlet has been advanced to the feasibility stage and an EIS has been submitted to NIRB

on the project.

While BMO Research expects SBB will be required to fund infrastructure development, the detailed engineering of the BPAR road could expedite future permitting requirements.

Fig 352: SBB Projects



Source: Sabina Gold and Silver

**Building critical mass.** 

Located adjacent to future access corridor.



#### Silver Miners

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### Hackett River 100% owned by SBB.

#### Hackett River

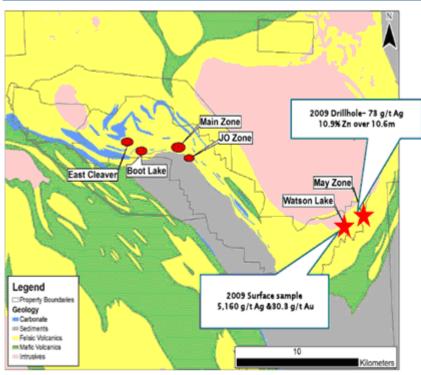
SBB owns a 100% interest in the 106km<sup>2</sup> Hackett River project located in Nunavut, Canada approximately 480km northeast of Yellowknife and 75km southwest to Bathurst Inlet.

Access is by air to an airstrip on the project. Future development will require the construction of a 96km all-season road east to Bathurt Inlet and a port facility.

SBB optioned Hackett River from Teck Resources in 2003 and 100% interest in the project in early 2004. Since optioning the project SBB has

- · completed 64km of diamond drilling,
- increased project resources by 400%,
- completed a preliminary assessment (PA), updated in Q4/09.

Fig 353: Hackett River Deposit



two additional areas with resource potential located at the May and Watson Lake zones.

**Exploration in 2009 identified** 

Source: Sabina Gold & Silver

#### A Future Development Strategy is Emerging

Based on the results of the Q4/09 PA, Hackett River could be developed as an initial 12ktpd open pit for the first 10 years. Beginning in year three, open pit ore would be progressively displaced by higher-grade underground ore. Underground operations would ramp up to a rate of 6.3ktpd.



#### **Silver Miners**

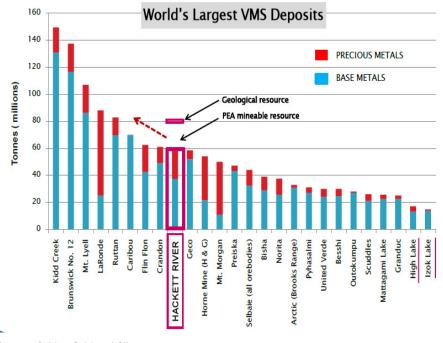
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The size of Hackett River is world class.

The Hackett River deposits are typical of VMS deposits. The four main sulphide occurrences from west to east over 5km of strike are; East Clever, Boot Lake, Main Zone and Jo Zone deposits. The Main, East Cleaver deposits are modeled as open pit zones while Boot Lake and East Clever deposits are to be mined using a combination of open pit and underground methods.

Fig 354: Ranking of Massive Sulphide Deposits

Total Resources of 57Mt have already elevated Hackett River to the eighth-largest massive sulphide deposit globally.



Source: Sabina Gold and Silver

Updated resources in the PA include open pit diluted resources of 32.3Mt containing 122.3g/t silver and 4.3% zinc with an average waste to ore strip ration of 7 to 1. Underground diluted resources total 37.3Mt are located beneath the Boot and East Cleaver open pit deposits.

The PA models a plant design including a conventional crushing, milling and flotation circuit producing copper, lead and zinc concentrates.

The PA incorporated metallurgical test work completed by SGS Lakefield Research Limited (SGS) on mineralogy, grindability studies, and floatation processing that outlined the production of saleable copper, lead and zinc concentrates. Recovery parameters include:

- Silver recoveries of 76.8%, zinc recoveries of 91.7%, lead recoveries of 84.9% and copper recoveries of 74.7%
- Gold recoveries of +60%.

as an open pit/underground mine.

BMO Research models development of Hackett River

**Development parameters are** 

Annual production of 9.9Moz of silver beginning in Q4/16.

Based on these parameters, BMO Research forecasts annual production projected at 9.9Moz of silver, 121kt of zinc, 17kt of lead, 7kt of copper and 14.6koz of gold over a 14-year mine life. Co-product silver cash costs are projected to average ~US\$6.55/oz over the life of operations.

emerging.



#### **Silver Miners**

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SBB has several avenues to improve Hackett economics.

#### **Moving to Optimization**

Results of the January 2010 PA outlined numerous avenues to optimize future design through improved geological modeling of the main deposits. Key avenues to improve deposit parameters include:

- Further infill drilling could convert material currently modeled as waste into resource.
- Detailed modeling of all the deposits to identify metal zoning and the high-grade cores of deposits.
- Extension drilling to delineate the ultimate dimensions of known zones.
- Further delineation of satellite zones, including the Jo zone located east of the Main deposit and the Flying Horse zone located northwest of the Cleaver deposit.
- Delineation of new zones, including the May and Watson Lake zones located 12km to the east.
- Exploration for new discoveries.

SBB has outlined a C\$13M exploration program to better define metal zonation within the existing deposits and to advance the May, Jo and Flying Horse zones to the resource stage.



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#### Back River - The Starter Project

In Q2/09, SBB acquired the Back River and Wishbone projects from DPM for C\$7M in cash, 17M common shares and 15M warrants exercisable upon certain milestones and valid for 35 years (5M share purchase warrants expire in 2014). Combined, the two projects comprise 44 federal mineral leases and 37 federal mining claims covering ~74,028ha.

Back River has a 2.4Moz of gold resource in two deposits.

The two core assets on the Back River project include the Goose and George Lake deposits that combined host 1.2Moz of indicated at a grade of 10.9g/t gold and 1.2Moz of inferred gold resource at an average grade of 10.2g/t gold.

Gold mineralization at Goose and George Lake is hosted within silicified and variably sulphidized iron formation with gold associated with pyrite, arsenopyrite, and pyrrhotite.

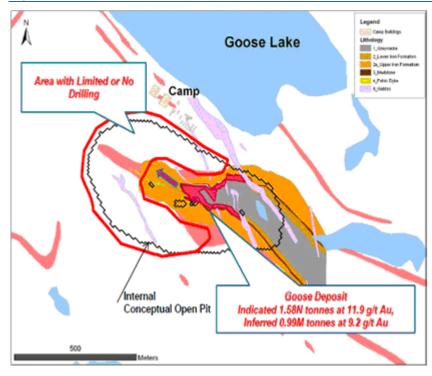
Iron formation hosted gold systems.

Gold within the Goose Lake deposit is hosted within an antiform structure, situated within a 500m wide corridor. Folding of the iron formation host unit has formed a coherent zone with broad intervals of gold mineralization exposed on surface and extending to a depth of 375m where it remains open at depth. The configuration of the Goose Lake deposit lends itself to initial extraction within an open pit.

In contrast, gold mineralization within the George Lake deposit is located within the attenuated limbs of an iron formation. Mineralized intervals, while comparable in grade are narrower than at Goose Lake.

Fig 355: Goose Lake Deposit

Drilling targets areas outside of resource area.



Source: Sabina Gold & Silver.



#### **Silver Miners**

February 22, 2010

#### **Initial Focus on Goose Lake**

Owing to the more favourable morphology, SBB has focused exploration on advancing the Goose Lake deposit toward a development scenario.

For 2010, SBB has outlined a C\$10M exploration program to:

- Complete further drilling at the Goose Lake deposit to identify additional zones of gold mineralization within the dimensions of a conceptual open pit.
- Upgrade the Echo zone, located 1km to the southwest of the Goose deposit to the resource stage.

Contingent on exploration success, SBB is targeting resource growth in the +500koz gold range to support advancement of Goose Lake toward a PA.

US\$300M capex to develop.

BMO Research models development of Goose Lake as a 3ktpd open pit operation with conventional milling and CIL processing with an estimated capital cost of US\$300M.

Goose Lake could develop as a 200koz gold operation by Q4/14.

Based on an open-pit grade of 6.17g/t gold and waste to ore strip ratio of ~8 to 1, Goose Lake is projected to produce ~200koz of gold annually at total cash costs of US\$440/oz.

While not considered in the BMO Research valuation, the start up of operations are likely to trigger a development decision for a satellite mine at George Lake with high grade ore shipped to Goose Lake for processing.

George Lake hosts a further 603koz at 11.9g/t gold and inferred resources of 295koz at 9.2g/t gold.

To provide a realistic return, BMO Research estimates that exploration will need to identify an initial resource in the range of 1.7Moz of gold, or  $\sim$ 20% above the current total resource. The potential to develop resources at the Echo zone, and for incremental production from George lake suggests that the  $\sim$ 1.7Moz threshold is attainable.

### A Large Unexplored Land Base

Building critical mass for future discovery.

The development of production centers at Goose Lake and Hackett River, along with the associated road and port infrastructure would substantially change the economics of discovery within the George and Hackett River belts.

Combined, SBB has exploration licences covering +3,061km<sup>2</sup> of ground over these two geological belts. Reconnaissance exploration has identified numerous metal showings that could lead to future discoveries.



#### **Silver Miners**

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Fig 356: BCM Financial/Operating Summary

Bear Creek Mining	q	As at: 18-Feb-10	BCM
Project(s):	Corani, Santa Ana	Location: Peru	
Recommendation Target Price (C\$)	OP(S) C\$ 5.25	Analyst: And	drew Kaip
Share Price (US\$)	3.70	Share Price (C\$)	3.85
Common Shares O/S (M)	57		
Market Cap (US\$M)	211	Market Cap (C\$M)	220
0% NPV (US\$/share)	11.82	Premium/(Discount)	-69%
3% NPV (US\$/share)	6.71	Premium/(Discount)	-45%
5% NPV (US\$/share)	5.21	Premium/(Discount)	-29%
10% NPV (US\$/share)	4.72	Premium/(Discount)	-22%

(December Year End)		2008A	2009A	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		nap	nap	nap	na	15.8
EPS	(US\$)	(0.36)	(0.17)	(0.16)	(0.08)	0.13
P/E	(x)	nap	nap	nap	nap	27.8
CFPS	(US\$)	(0.36)	(0.13)	(0.14)	(0.07)	0.17
P/CF		nap	nap	nap	nap	21.5
FCFPS	(US\$)	(0.38)	(0.09)	(0.19)	(0.58)	(1.49
P/FCF		nap	nap	nap	nap	na
Common Shares O/S	(M)	55.5	67.7	75.3	124.3	124.
QUARTERLY		•				
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		-0.04	-0.04	-0.04	-0.0
CFPS	(US\$)		-0.04	-0.04	-0.04	-0.0
FCFPS	(US\$)		-0.02	-0.02	-0.02	-0.0

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	0.0	0.0	0.0	1.6	48.2
Production Costs	0.0	0.0	0.0	2.8	25.3
G&A	3.1	2.2	2.2	2.3	2.3
Exploration and Other Expenses	13.4	6.7	9.0	6.0	3.0
Other Income	2.0	1.2	0.0	0.0	0.1
EBITDA	(18.5)	(10.1)	(11.2)	(9.6)	17.5
Depreciation	0.0	0.0	0.0	0.0	3.6
EBIT	(18.5)	(10.1)	(11.2)	(9.6)	13.9
Interest expense	0.5	0.1	(0.0)	2.2	9.2
EBT	(18.1)	(10.1)	(11.2)	(7.3)	23.1
Tax	0.0	0.0	0.0	0.0	0.0
NPAT (pre-Adjustments)	(18.1)	(9.9)	(11.2)	(7.3)	16.
Minority Interest	0.0	0.0	0.0	0.0	0.0
After-Tax Non-Operating Items	0.0	0.0	0.0	0.0	0.0
Net Income (reported)	(18.1)	(9.9)	(11.2)	(7.3)	16.5
Net Income (adjusted)	(18.1)	(9.9)	(11.2)	(7.3)	16.5

CASH FLOW ANALYSIS - US\$M (December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(18.1)	(9.9)	(11.2)	(7.3)	16.5
Non-Cash Items	(0.7)	1.5	3.1	2.8	3.2
Cash Flows from Operating Activities	(19.0)	(5.8)	(6.9)	(3.3)	24.6
Property, Plant and Equip.	(0.0)	(0.0)	(7.0)	(49.0)	(205.0)
Net Investment and Asset Sales	(7.3)	(7.4)	(10.0)	(10.0)	(18.0)
Cash Flows from Investing Activities	(3.0)	(7.4)	(17.0)	(59.0)	(223.0)
Proceeds from Borrowings	0.0	0.0	33.6	264.0	0.0
Repayment of Borrowings	0.0	0.0	0.0	(5.4)	(5.4)
Stock, Warrants, Options	23.9	36.9	27.1	176.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
Cash Flows from Financing Activities	23.9	36.9	60.7	434.6	(5.4)
Net Increase In Cash					
Cash At Beginning of Year	10.8	12.8	36.5	73.3	445.6
Cash At End of Year	12.8	36.5	73.3	445.6	241.8
Free Cash Flow	(19.0)	(5.8)	(13.9)	(57.7)	(185.8)

BALANCE SHEET ANALYSIS - US\$M (December Year End)	2008A	2009A	2010E	2011E	2012E
Cash and Investments	12.8	38.9	75.7	448.0	244.3
Inventories	0.0	0.0	0.0	0.0	0.0
Other	0.6	0.2	0.0	0.3	3.7
Current Assets	13.4	39.1	75.7	448.3	248.0
Fixed Assets	85.4	97.7	124.7	193.7	428.7
Other	0.00	0.00	0.00	0.00	0.00
Total Assets	98.8	136.8	200.3	642.0	676.7
Payables	0.3	0.5	0.5	0.3	1.4
Short Term Debt	5.0	5.0	22.7	17.7	23.8
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	5.4	5.5	23.2	18.0	25.2
LT Debt	32.1	35.0	58.6	307.2	286.8
Other	18.9	21.0	21.0	21.0	21.0
Total Liabilities	56.4	61.5	102.7	346.2	333.0
SHAREHOLDERS EQUITY	42.4	75.3	97.6	295.8	343.6
Net Debt to Equity	57%	1%	6%	-42%	19%

PRODUCTION AND COSTS (December Year End)	1	2008A	2009E	2010E	2011E	2012E
CORANI (Start Total Silver Equivalent Pri Total Cash Costs (U\$/oz)		-	-	-	-	-
SANTA ANA (Start Total Silver Equivalent Pro Total Cash Costs (U\$/oz)		Ī	-	-	0.08 35.31	0.29 15.15
Total Production Total Cash Cost		-	-	-	0.08 35.31	0.29 15.15
LOM ESTIMATES	Silver Eq	uiv. Proc	luction	Total	Cash Co	st**
		(Moz)		(	US\$/oz)	
CORANI SANTA ANA TOTAL ** Co-product cash costs		309 53 <b>362</b>			7.43 6.75 <b>7.44</b>	



#### **Silver Miners**

February 22, 2010

Fig 357: CDE Financial/Operating Summary

COEUR D'ALENE		As at: 18-Feb-10	CDE
Project(s):		Location:	
Recommendation Target Price (US\$)	OP 21.50	Analyst: And	rew Kaip
Share Price (US\$)	14.76	Share Price (C\$)	15.37
Common Shares O/S (M)	78		
Market Cap (US\$M)	1,153	Market Cap (C\$M)	1,201
0% NPV (US\$/share)	22.77	Premium/(Discount)	-35%
3% NPV (US\$/share)	18.61	Premium/(Discount)	-21%
5% NPV (US\$/share)	16.22	Premium/(Discount)	-9%
10% NPV (US\$/share)	11.78	Premium/(Discount)	25%

PRICE ASSUMPTIONS (December Year End)		2008A	2009E	2010E	2011E	2012E
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.95
Gold	US\$/oz	873	972	1150	1150	950
Silver Gold: Silver Ratio	US\$/oz	15.01 58	14.63 66	20.00 58	20.00 58	15.00 63
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.50
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.80
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.00

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		nap	18.7	5.2	3.5	3.
EPS	(US\$)	(0.00)	0.06	0.73	1.23	0.3
P/E	(x)	nap	nap	20.2	12.0	41.
CFPS	(US\$)	0.27	1.22	2.19	2.72	2.2
P/CF		nap	12.1	6.8	5.4	6.
FCFPS	(US\$)	(0.71)	(2.05)	0.68	2.53	3.1
P/FCF		nap	nap	21.9	5.8	4.
Common Shares O/S	(M)	567.8	78.1	78.4	78.4	78.
QUARTERLY						
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		0.14	0.10	0.18	0.3
CFPS	(US\$)		0.51	0.46	0.54	0.6
FCFPS	(US\$)		0.07	0.16	0.12	0.3

(December Year End)	2008A	2009E	2010E	2011E	2012E
Mining Revenue	189.5	314.5	521.8	680.5	658.6
Production Costs	109.3	188.3	214.8	316.7	347.2
G&A	46.0	29.0	27.9	29.1	29.1
Exploration and Other Expenses	20.5		9.5	6.4	8.4
Other Income	1.1	(13.7)	(49.6)	(49.6)	(49.6)
EBITDA	14.8	68.8	220.0	278.7	224.2
Depreciation	27.3	86.7	114.1	117.2	150.4
EBIT	(12.6)	(17.9)	105.9	161.5	73.9
Interest expense	(1.6)	(11.6)	(9.0)	(6.4)	(2.1)
EBT	(14.1)	(29.5)	96.9	155.1	71.8
Tax	13.5	10.5	(39.6)	(59.0)	(43.7)
NPAT (pre-Adjustments)	(0.6)	3.5	57.2	96.1	28.0
Minority Interest	-	-	-	-	
After-Tax Non-Operating Items	-	0.0	-	-	
Net Income (reported)	(0.6)	3.5	57.2	96.1	28.0
Net Income (adjusted)	(0.6)	3.5	57.2	96.1	28.0

REVENUE SPLIT (December Year End)	2008A	2009E	2010E	2011E	2012E
Silver	79%	77%	72%	58%	56%
Gold	21%	23%	28%	42%	44%

CASH FLOW ANALYSIS - US\$M	l				
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(0.0)	3.5	57.2	96.1	28.0
Non-Cash Items	(7.4)	73.8	168.5	171.2	261.9
Cash Flows From Operating Activities	(7.4)	77.3	225.7	267.3	289.9
Property, Plant and Equip.	(365.0)	(215.5)	(130.0)	(29.0)	-
Net Investment and Asset Sales	375.0	54.5	(22.2)	(27.5)	(37.2)
Other	(336.3)	12.9			-
Cash Flows From Investing Activities	(326.2)	(148.1)	(152.2)	(56.5)	(37.2)
Proceeds From Borrowings	297.4	35.9	100.0	-	-
Repayment of Borrowings	(32.3)	(22.1)	(33.3)	(33.3)	(33.3)
Stock, Warrants, Options	(0.4)	(0.1)	3.8	-	-
Other	(9.4)	87.5	-	-	-
Cash Flows From Financing Activities	255.3	101.1	70.4	(33.3)	(33.3)
Net Increase In Cash					
Cash At Beginning of Year	98.7	20.8	51.1	195.0	372.4
Cash At End of Year	20.4	51.1	195.0	372.4	591.8
Free Cash Flow	(404.6)	(160.3)	53.0	198.5	248.2

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	28.6	51.1	195.0	372.4	591.8
Inventories	34.8	71.2	62.7	88.7	92.2
Other	89.0	101.5	123.3	161.2	145.3
Current Assets	152.5	223.8	381.1	622.4	829.3
Fixed Assets	2671.6	2787.3	2834.9	2780.7	2675.9
Other	99.8	89.4	42.5	40.5	38.5
Total Assets	2923.9	3100.5	3258.4	3443.5	3543.7
Payables	66.3	79.4	79.4	79.4	79.4
Short Term Debt	14.6	12.5	12.5	12.5	12.5
Other	13.5	10.5	(39.6)	(59.0)	(43.7)
Current Liabilities	161.0	203.3	209.7	204.1	202.3
Long Term Debt	411.8	172.6	172.6	172.6	172.6
Other	614.4	736.0	793.4	752.8	707.1
Total Liabilities	1187.2	1111.9	1175.7	1129.6	1082.0
SHAREHOLDERS EQUITY	1736.7	1988.6	2082.7	2313.9	2461.7
Net Debt to Equity	23%	7%	0%	-8%	-17%

PRODUCTION AND COSTS (December Year End)	2008A	2009E	2010E	2011E	2012E
Palmareio	2008A	2009E	2010E	2011E	2012E
		3.7	8.8	9.9	11.7
Total Silver Production (Moz)	-				
Total Gold Production (koz)	-	58.5	107.1	124.3	149.2
Total Cash Costs (US\$/oz)*	-	10.74	9.69	7.45	5.85
San Bartolome					
Total Silver Production (Moz)	2.9	7.5	7.1	7.1	7.1
Total Cash Costs (US\$/oz)	7.35	11.70	11.07	11.07	10.57
Rochester					
Total Silver Production (Moz)	3.0	2.1	1.9	3.1	4.3
Total Gold Production (koz)	21.0	12.1	11.0	29.3	34.3
Total Cash Costs (US\$/oz)*	9.89	7.61	8.68	16.59	11.90
Kensington					
Total Gold Production (koz)	-	-	33.3	128.1	131.7
Total Cash Costs (US\$/oz)*	-	-	-	540	465
Mina Martha					
Total Silver Production (Moz)	2.7	3.4	2.1	-	-
Total Gold Production (koz)	3.3	4.0	2.6	-	-
Total Cash Costs (US\$/oz)*	6.50	6.28	10.19	-	-
Cerro Bayo					
Total Silver Production (Moz)	1.2	-	-	0.6	2.5
Total Gold Production (koz)	21.8	-	-	3.8	16.7
Total Cash Costs (US\$/oz)*	14.76	-	-	13.13	9.71
Endeavour					
Total Silver Production (Moz)	0.8	0.5	0.8	0.8	0.8
Total Cash Costs (US\$/oz)*	1.29	4.11	2.55	2.55	2.55
Coeur D'Alene Total					
Silver Production (Moz)	10.7	17.3	20.7	21.6	26.4
Silver Equiv. Production (Moz)	13.3	22.1	28.9	37.1	47.4
Total Cash Costs (U\$/oz)*	8.59	9.96	9.39	10.20	8.43
Total Production Costs (\$/oz)*	10.35	13.73	13.35	13.36	11.61



#### **Silver Miners**

February 22, 2010

Fig 358: EDR Financial/Operating Summary

ENDEAVOUR SILV	/ER	As at: 18-Feb-10	EDR
Project(s):	Guanajuato, Guanacevi	Location:	Mexico
Recommendation Target Price (C\$)	Mkt C\$ 3.55	Analyst:	Andrew Kaip
Share Price (US\$)	3.41	Share Price (C\$)	3.55
Common Shares O/S (M)	59		
Market Cap (US\$M)	200	Market Cap (C\$M)	209
0% NPV (US\$/share)	3.03	Premium/(Discount)	12%
3% NPV (US\$/share)	2.71	Premium/(Discount)	26%
5% NPV (US\$/share)	2.53	Premium/(Discount)	35%
10% NPV (US\$/share)	2.16	Premium/(Discount)	57%

PRICE ASSUMPTIONS (December Year End)		2008A	2009E	2010E	2011E	2012
(2						
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/Ib	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		nap	33.3	3.8	2.7	3.6
EPS	(US\$)	(0.37)	(0.07)	0.41	0.48	0.2
P/E	(x)	nap	nap	8.3	7.1	12.8
CFPS	(US\$)	(0.09)	0.15	0.61	0.70	0.49
P/CF		nap	22.3	5.6	4.8	6.9
FCFPS	(US\$)	(0.35)	(0.11)	0.49	0.59	0.4
P/FCF		nap	nap	7.0	5.8	8.3
Common Shares O/S	(M)	49.1	60.0	60.0	63.3	63
QUARTERLY						
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		0.09	0.09	0.12	0.1
	(US\$)		0.14	0.14	0.17	0.1
CFPS						

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	39.3	40.5	95.4	109.3	84.0
Production Costs	27.8	26.0	36.1	39.9	42.3
G&A	7.4	6.6	6.6	6.8	6.8
Exploration and Other Expenses	8.6	1.9	8.0	10.0	1.0
Other Income	0.0	0.0	0.0	0.0	0.0
EBITDA	(8.6)	5.5	44.1	50.2	32.2
Depreciation	8.4	8.7	9.1	10.7	11.5
EBIT	(17.0)	(3.2)	35.1	39.5	20.8
Interest expense	0.0	(0.2)	(0.8)	(0.8)	(0.8
EBT	(17.0)	(3.4)	34.5	40.5	23.7
Tax	(1.0)	0.0	(9.8)	(11.5)	(6.7
NPAT (pre-Adjustments)	(18.0)	(3.4)	24.7	29.0	16.9
Minority Interest	0.0	0.0	0.0	0.0	0.0
After-Tax Non-Operating Items	0.0	0.0	0.0	0.0	0.0
Net Income (reported)	(18.0)	(3.4)	24.7	29.0	16.9
Net Income (adjusted)	(18.0)	(3.4)	24.7	29.0	16.9

CASH FLOW ANALYSIS - US\$N	1				
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(18.0)	(3.4)	24.7	29.0	16.9
Non-Cash Items	13.4	8.5	4.7	7.4	9.0
Cash Flows from Operating Activities	(4.6)	5.1	29.4	36.4	26.0
Property, Plant and Equip.	(12.6)	(11.3)	0.0	0.0	0.0
Net Investment and Asset Sales	2.0	(2.1)	(11.7)	(12.9)	(8.1)
Other	(0.0)	0.0	0.0	0.0	0.0
Cash Flows from Investing Activities	(10.6)	(13.4)	(11.7)	(12.9)	(8.1)
Proceeds from Borrowings	0.0	10.1	0.0	0.0	0.0
Repayment of Borrowings	0.0	0.0	0.0	0.0	0.0
Stock, Warrants, Options	2.3	20.3	0.0	8.5	0.0
Other	0.0	(0.4)	0.0	0.0	0.0
Cash Flows from Financing Activities	2.3	30.0	0.0	8.5	0.0
Net Increase In Cash					
Cash At Beginning of Year	16.6	3.6	25.3	43.0	75.0
Cash At End of Year	3.6	25.3	43.0	75.0	92.9
Free Cash Flow	(17.2)	(6.3)	29.4	36.4	26.0

BALANCE SHEET ANALYSIS - (December Year End)	- US\$M 2008A	2009E	2010E	2011E	2012E
Cash and Investments	3.6	25.3	43.0	75.0	92.9
Inventories	3.2	8.7	8.7	8.7	8.7
Other	6.4	3.6	5.1	5.4	4.1
Current Assets	13.1	37.5	56.8	89.1	105.6
Fixed Assets	51.1			54.9	
Other	3.1				
Total Assets	67.3	92.6	112.7	145.0	161.5
Payables	5.3	3.6	6.6	7.0	5.4
Short Term Debt	0.0	0.5	0.5	0.5	0.5
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	5.3	4.1	7.1	7.5	5.9
LT Debt	0.0	7.9	7.9	7.9	7.9
Other	5.5				5.2
Total Liabilities	10.8	17.5	20.5	20.6	19.0
SHAREHOLDERS EQUITY	56.5	75.1	92.2	124.4	142.6
Net Debt to Equity	-6%	-23%	-38%	-54%	-59%

PRODUCTION AND COSTS (December Year End)	S 2008A	2009E	2010E	2011E	2012E
Guanajuato					
Total Silver Production (Moz)	0.5	0.8	1.1	1.3	1.4
Total Cash Costs (U\$/oz)	7.69	7.29	7.04	6.68	6.77
Guanacevi					
Total Silver Production (Moz)	1.9	1.8	2.8	3.1	2.9
Total Cash Costs (U\$/oz)	9.05	9.24	9.37	9.14	9.62
Total Silver Production (Moz)	2.3	2.6	3.9	4.4	4.4
Attributable production	2.3	2.6	3.9	4.4	4.4
Total Cash Cost	8.51	8.15	8.34	8.03	8.16
LOM ESTIMATES	Silver Produc (Moz)	tion		al Cash C US\$/oz)	
Guanajuato	7.8			6.83	
Guanacevi	23.4			9.12	
TOTAL	31			7.88	



#### **Silver Miners**

February 22, 2010

Fig 359: FR Financial/Operating Summary

FIRST MAJ	ESTIC		As at: 18-	Feb-10 FR
Project(s):	Encantada, Sai	n Martin, La Parilla, D	el Toro <b>Location:</b>	Mexico
Recommendation Target Price (C\$)	•	Mkt C\$ 4.50	Analyst:	Andrew Kaip
Share Price (US\$	)	3.43	Share Price (C	\$) 3.57
Common Shares	O/S (M)	92		
Market Cap (US\$	M)	316	Market Cap (C	\$M) 329
0% NPV (US\$/sh	are)	4.47	Premium/(Disc	count) -23%
3% NPV (US\$/sh	are)	3.84	Premium/(Disc	count) -11%
5% NPV (US\$/sh	are)	3.50	Premium/(Disc	count) -2%
10% NPV (US\$/s	hare)	2.86	Premium/(Disc	count) 20%

(December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/Ib	3.16	2.34	3.30	3.70	3.5
Lead	US\$/Ib	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		nap	20.8	3.4	2.2	2.3
EPS	(US\$)	(0.17)	0.10	0.56	0.69	0.44
P/E	(x)	nap	34.8	6.2	5.0	7.8
CFPS	(US\$)	0.06	0.17	0.71	0.90	0.78
P/CF		nap	20.8	4.8	3.8	4.4
FCFPS	(US\$)	(0.14)	(0.13)	0.36	0.50	0.6
P/FCF		nap	nap	9.5	6.9	5.5
Common Shares O/S	(M)	73.8	92.3	92.5	97.1	97.
QUARTERLY	<del></del>					
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		0.11	0.14	0.15	0.1
CFPS	(US\$)		0.15	0.17	0.19	0.2

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	41.4	55.9	140.0	174.8	161.0
Production Costs	28.4	32.0	48.0	57.3	66.5
G&A	7.1	6.3	6.3	6.7	6.7
Exploration and Other Expenses	0.0	0.0	0.0	0.0	0.0
Other Income	0.0	0.0	0.0	0.0	0.0
EBITDA	0.5	14.6	83.1	108.1	85.1
Depreciation	5.8	5.4	11.3	17.4	30.1
EBIT	(5.3)	9.2	71.8	90.7	55.0
Interest expense	(1.3)	0.3	0.1	1.7	4.4
EBT	(6.6)	9.5	71.8	92.4	59.3
Tax	1.8	(0.0)	(20.5)	(26.3)	(16.9
NPAT (pre-Adjustments)	(4.8)	9.5	51.4	66.1	42.4
Minority Interest	0.0	0.0	0.0	0.0	0.0
After-Tax Non-Operating Items	(7.5)	0.0	0.0	0.0	0.0
Net Income (reported)	(4.8)	9.5	51.4	66.1	42.4
Net Income (adjusted)	(12.3)	9.5	51.4	66.1	42.4

CASH FLOW ANALYSIS - US\$M	1				
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(4.8)	9.5	51.4	66.1	42.4
Non-Cash Items	10.9	(1.5)	5.8	15.1	33.5
Cash Flows From Operating Activities	6.1	7.0	51.9	74.9	68.5
Property, Plant and Equip.	(13.9)	(16.1)	(14.2)	(21.5)	(1.5)
Net Investment and Asset Sales	0.0	0.0	(4.5)	(6.0)	(7.0)
Other	(13.7)	0.5	0.0	0.0	0.0
Cash Flows From Investing Activities	(51.0)	(28.8)	(29.1)	(39.9)	(25.8)
Proceeds From Borrowings	0.0	0.0	1.4	0.0	0.0
Repayment of Borrowings	(2.4)	(1.5)	0.0	0.0	0.0
Stock, Warrants, Options	38.9		1.0		0.0
Other	(0.4)				0.0
Cash Flows From Financing Activities	36.1	10.9	2.4	15.3	0.0
Net Increase In Cash					
Cash At Beginning of Year	12.0	17.2	6.4	31.6	81.9
Cash At End of Year	17.2	6.4	31.6	81.9	124.6
Free Cash Flow	(10.2)	(10.6)	33.2	47.4	60.0

BALANCE SHEET ANALYSIS (December Year End)	- US\$M 2008A	2009E	2010E	2011E	2012E
Cash and Investments	16.3	6.4	31.6	81.9	124.6
Inventories	4.6	3.1	3.1	3.1	3.1
Other	8.8	8.3	15.3	18.8	16.3
Current Assets	31.7	19.8	53.8	108.4	148.1
Fixed Assets	182.5	184.0	213.1	253.0	278.8
Other	1.9	3.7	3.7	3.7	3.7
Total Assets	216.0	207.5	270.5	365.1	430.5
5	44.0			44.7	40.0
Payables Short Term Debt	16.2				
	0.0				
Other Current Liabilities		0.3 9.2			14.3
Current Liabilities	32.6	9.2	13.6	15.8	14.3
LT Debt	0.0	0.0	1.4	1.4	1.4
Other	36.2	28.7	28.7	27.0	27.0
Total Liabilities	68.8	38.0	43.8	44.2	42.7
SHAREHOLDERS EQUITY	147.2	171.3	226.7	320.9	387.8
Net Debt to Equity	-11%	-3%	-13%	-25%	-31%

PRODUCTION AND COSTS					
(December Year End)	2008A	2009E	2010E	2011E	2012E
San Martin (100%)					
Silver Equiv. Production (Moz)	1.0	1.2	1.3	1.8	1.8
Total Cash Costs (U\$/oz)*	8.71	7.20	6.88	5.70	5.55
La Parilla (100%)					
Silver Equiv. Production (Moz)	1.6	1.6	1.9	2.1	2.3
Total Cash Costs (U\$/oz)*	7.46	6.52	6.96	6.37	5.80
Del Toro (100%)					
Silver Equiv. Production (Moz)	0.0	0.0	0.0	0.8	2.4
Total Cash Costs (U\$/oz)*	na	na	10.58	8.86	6.27
Encantada (100%)					
Silver Equiv. Production (Moz)	1.6	1.5	3.7	4.1	4.2
Total Cash Costs (U\$/oz)*	5.30	7.49	6.72	6.37	6.23
Real de Catorce (100%)					
Silver Equiv. Production (koz)	0.0	0.0	0.0	0.0	0.0
Total Cash Costs (U\$/oz)*	na	na	na	na	na
First Majestic Total					
Silver Equiv. Production (Moz)	4.2	4.3	7.0	8.7	10.7
Total Cash Costs (U\$/oz)*	6.92	7.63	6.86	6.56	6.20
Total Production Costs (\$/oz)*	7.78	8.98	8.49	8.55	9.00
*Co-product (silver) cash costs					



#### **Silver Miners**

February 22, 2010

Fig 360: FRES Financial/Operating Summary

FRESNILLO		As at: 18-Feb-10	FRES
Project(s):		Location:	
Recommendation Target Price (C\$)	OP £ 10.30	Analyst: And	rew Kaip
Share Price (US\$)	12.27	Share Price (GBp)	7.86
Common Shares O/S (M) Market Cap (US\$M)	717 8,802	Market Cap (GBp)	5,633
0% NPV (US\$/share)	12.00	Premium/(Discount)	2%
3% NPV (US\$/share)	8.96	Premium/(Discount)	37% 61%
5% NPV (US\$/share) 10% NPV (US\$/share)	7.61 5.60	Premium/(Discount) Premium/(Discount)	119%

(December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	950
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.00
Gold:Silver Ratio		58	66	58	58	63
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.50
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.80
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.00

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		26.8	16.2	10.3	9.4	12.1
EPS	(US\$)	0.21	0.44	0.77	0.86	0.65
P/E	(x)	nap	27.63	16.04	14.31	18.75
CFPS	(US\$)	0.59	0.62	0.84	0.95	0.76
P/CF		20.80	19.79	14.60	12.94	16.18
FCFPS	(US\$)	(1.07)	0.18	0.12	0.33	0.36
P/FCF		nap	66.61	102.87	37.60	34.42
Common Shares O/S	(M)	717.2	717.2	717.2	717.2	717.2
QUARTERLY						
		•	Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		0.18	0.19	0.20	0.2
CFPS	(US\$)		0.20	0.20	0.22	0.2
FCFPS	(US\$)		0.05	0.05	0.04	0.0

PROFIT AND LOSS STATEMENT - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	720.5	842.9	1,143.0	1,258.8	1,065.0
Production Costs	248.0	241.1	230.4	276.0	306.
G&A	81.7	51.9	51.9	54.5	54.
Exploration and Other Expenses	53.5	49.0	59.2	53.2	46.
Other Income	-	-	-	-	
EBITDA	320.9	526.0	827.1	900.6	683.:
Depreciation	51.9	61.3	58.7	69.5	79.
EBIT	269.0	464.6	768.5	831.1	604.
Interest expense	(1.7)	0.7	2.4	11.4	20.
EBT	267.3	465.4	770.8	842.5	624.
Tax	(114.6)	(130.7)	(227.8)	(232.9)	(160.5
NPAT (pre-Adjustments)	127.9	318.6	543.1	609.6	463.
Minority Interest	(24.8)	0.1	(65.8)	(70.9)	(59.1
After-Tax Non-Operating Items	-	-	-	-	
Net Income (reported)	127.9	318.6	543.1	609.6	463.
Net Income (adjusted)	142.5	318.6	548.7	615.2	469.

REVENUE SPLIT (December Year End)	2008A	2009E	2010E	2011E	2012E
Silver	65%	62%	62%	63%	61%
Gold	27%	31%	32%	29%	31%
Lead	4%	3%	3%	4%	4%
Zinc	5%	4%	3%	4%	4%

CASH FLOW ANALYSIS - US\$M 2008A 2009E 2010E 2011E 2012E Net Income Non-Cash Items Cash Flows From Operating Activities (185.0) (150.7) (191.0) (106.1) 16.1 0.6 (12.2) (12.8) 38.3 24.2 9.1 1.7 (130.7) (125.9) (194.2) (117.1) Property, Plant and Equip. Net Investment and Asset Sales Proceeds From Borrowings Repayment of Borrowings Stock, Warrants, Options Other
Cash Flows From Financing Activities (456.1) (127.7) (154.4) (173.4) (132.0) (66.4) (127.7) (154.4) (173.4) (132.0) Net Increase In Cash 212.0 266.6 251.8 266.6 251.8 366.5 Cash At Beginning of Year Cash At End of Year 4.8 212.0 366.5 529.2 Free Cash Flow (767.2) 132.1 85.6 234.1 255.7

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	212.0	266.6	251.8	366.5	529.2
Inventories	38.6	34.0	35.4		43.5
Other	117.1	112.5	113.6	117.6	97.8
Current Assets	367.7	413.1	400.8	525.0	670.5
Fixed Assets	497.8	581.2	770.7	872.3	912.5
Other	(657.5)	(814.1)	(987.3)	(1,205.8)	(1.392.9)
Total Assets	208.0	180.2	184.3	191.5	190.2
Payables	42.7	19.5	20.4	25.6	27.7
Short Term Debt	_	_	_	_	
Other	47.0	15.7	18.9	20.9	17.5
Current Liabilities	89.6	35.2	39.3	46.5	45.2
Long Term Debt	_	_	_	_	_
Other	118.4	145.0	145.0	145.0	145.0
Total Liabilities	208.0	180.2	184.3	191.5	190.2
SHAREHOLDERS EQUITY	903.6	1.117.7	1,236.9	1.401.4	1.549.5
Net Debt to Equity	-23%	-24%	-20%	-26%	-34%

PRODUCTION AND COSTS					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Saucito					
Total Silver Production (Moz)	-	-	-	4.2	8.0
Total Silver Equiv. Production (Moz)	-	-	-	5.2	10.1
Total Cash Costs (US\$/oz)*	-	-	-	6.16	5.44
Junicipio JV					
Total Silver Production (Moz)	-	-	-	-	-
Total Silver Equiv. Production (Moz)	-	-	-	-	-
Total Cash Costs (US\$/oz)*	-	-	-	-	-
Herradura					
Total Silver Production (Moz)	0.2	0.3	0.1	0.1	0.1
Total Gold Production (koz)	219.2	264.5	255.3	236.9	235.5
Total Cash Costs (US\$/oz)**	347	310	238	281	286
Soledad & Dipolos					
Total Gold Production (koz)	-	-	75.0	126.6	126.6
Total Cash Costs (US\$/oz)*	-	-	445	334	336
Noche Buena					
Total Gold Production (koz)	-	-	-	-	44.4
Total Cash Costs (US\$/oz)*	-	-	-	-	365
Cienega					
Total Silver Production (Moz)	1.0	1.6	2.1	2.4	2.5
Total Silver Equiv. Production (Moz)	9.8	10.1	8.6	9.9	10.9
Total Cash Costs (US\$/oz)*	302	266	375	351	355
Fresnillo Total Attributable					
Silver Production (Moz)	32.8	38.0	38.3	42.6	46.2
Gold Production (koz)	236.3	269.4	317.4	321.9	351.3
Silver Equiv. Production (Moz)	45.9	60.1	59.4	67.1	77.3
Total Cash Costs (U\$/oz)*	3.75	2.97	3.72	4.08	4.03
Total Production Costs (\$/oz)*	4.29	3.66	4.66	5.10	5.08



#### **Silver Miners**

February 22, 2010

Fig 361: HOC Financial/Operating Summary

Hochschild Mining		As at: 18-Feb-10	нос
Project(s):		Location:	
Recommendation Target Price	Mkt £3.30	Analyst: Andre	ew Kaip
Share Price (US\$)	4.30	Share Price (GB£)	2.75
Common Shares O/S (M)	307		
Market Cap (US\$M)	1,320	Market Cap (GB£M)	845
0% NPV (US\$/share)	3.40	Premium/(Discount)	26%
3% NPV (US\$/share)	3.14	Premium/(Discount)	37%
5% NPV (US\$/share)	2.90	Premium/(Discount)	48%
10% NPV (US\$/share)	2.44	Premium/(Discount)	76%

PRICE ASSUMPTIONS (December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	GB£/US\$	0.58	0.61	0.57	0.56	0.5
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		30.2	12.4	5.9	5.2	9.4
EPS	(US\$)	0.08	0.12	0.35	0.37	0.1
P/E	(x)	nap	37.0	12.4	11.6	29.
CFPS	(US\$)	0.07	0.43	0.47	0.49	0.2
P/CF		nap	10.0	9.2	8.7	16.
FCFPS	(US\$)	0.07	0.43	0.47	0.49	0.2
P/FCF		66.1	10.0	9.2	8.7	16.
Common Shares O/S	(M)	307.4	338.1	338.1	338.1	338.
QUARTERLY						
		(	21/10E (	<b>22/10E</b> €	Q3/10E (	24/10I
EPS	(US\$)		0.09	0.08	0.08	0.0
CFPS	(US\$)		0.12	0.11	0.12	0.1
FCFPS	(US\$)		0.08	0.12	0.10	0.1

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	427.8	463.5	531.8	516.5	386.
Production Costs	193.4	202.2	193.7	167.2	166.
G&A	69.9	48.5	48.5	51.0	51.
Exploration and Other Expenses	23.9	30.0	30.0	23.4	23.
Other Income	-	1.0	2.0	3.0	4.
EBITDA	50.8	126.4	255.9	271.3	141.
Depreciation	41.4	47.6	40.1	41.0	39.
EBIT	9.4	78.8	215.8	230.3	102.0
Interest expense	-	(1.3)	(4.8)	(3.4)	3.
EBT	9.4	77.5	211.0	226.9	106.0
Tax	(22.9)	(16.5)	(59.1)	(63.5)	(29.7
NPAT (pre-Adjustments)	(19.0)	41.9	117.4	125.1	49.
Minority Interest	(5.5)	(19.2)	(28.2)	(28.4)	(17.0
After-Tax Non-Operating Items					
Net Income (reported)	(19.0)	41.9	117.4	125.1	49.
Net Income (adjusted)	24.6	35.9	117.4	125.1	49.8

REVENUE SPLIT (December Year End)	2008A	2009E	2010E	2011E	2012E
Silver	56%	63%	69%	72%	74%
Gold	36%	37%	31%	28%	26%

CASH FLOW ANALYSIS - US\$M	1				
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(19.0)	41.9	117.4	125.1	49.8
Non-Cash Items	97.6	77.0	61.9	67.5	99.4
Cash Flows From Operating Activities	78.6	118.9	179.3	192.6	149.2
Property, Plant and Equip.	(296.0)	(76.2)	(16.5)	(4.5)	-
Net Investment and Asset Sales	-	1.0	2.0	3.0	4.0
Other	(179.8)	(237.7)	(60.3)	(56.2)	(51.3)
Cash Flows From Investing Activities	(475.8)	(312.9)	(74.8)	(57.7)	(47.3)
Proceeds From Borrowings	484.0	216.8	2.3	2.2	-
Repayment of Borrowings	(257.3)	(216.8)	-	-	-
Stock, Warrants, Options	-	137.8	-	-	-
Other	(14.0)	(8.9)	(34.6)	(38.3)	(26.5)
Cash Flows From Financing Activities	212.7	128.9	(32.2)	(36.1)	(26.5)
Net Increase In Cash					
Cash At Beginning of Year	301.4	116.1	75.4	147.7	246.5
Cash At End of Year	116.1	75.4	147.7	246.5	321.9
Free Cash Flow	(474.7)	(151.2)	149.3	174.6	140.8

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	116.1				
Inventories	49.2	61.5	52.0	53.0	52.7
Other	143.8	121.2	130.0	131.8	100.2
Current Assets	309.1	258.1	329.7	431.3	474.8
Fixed Assets	489.0	547.4	563.9	568.4	568.4
Other	216.4	370.1	370.1	370.1	370.1
Total Assets	1014.5	1175.6		1369.8	1413.2
Total Assets	10	1175.5	1200.7	1307.0	1410.2
Payables	82.3	77.7	77.7	77.7	77.7
Short Term Debt	98.1	85.0	85.0	85.0	85.0
Other	5.3	-	-	-	-
Current Liabilities	185.6	162.7	162.7	162.7	162.7
Long Term Debt	231.7	237.2	239.6	241.8	241.8
Other	54.2	46.2	46.2	46.2	46.2
Total Liabilities	471.5	446.2	448.5	450.7	450.7
SHAREHOLDERS EQUITY	474.2	655.8	773.2	898.3	948.1
Net Debt to Equity	45%	38%	23%	9%	1%
Not Bobt to Equity		02.2			

PRODUCTION AND COSTS (December Year End)	2008A	2009E	2010E	2011E	2012E
Arcata					
Total Silver Production (Moz)	9.0	9.5	7.9	8.7	8.9
Total Gold Production (koz)	24.1	28.6	23.2	25.6	23.7
Total Cash Costs (US\$/oz)*	5.91	6.78	7.63	7.06	6.82
Ares					
Total Silver Production (Moz)	1.5	0.9	0.6	-	-
Total Gold Production (koz)	64.2	42.6	19.4	-	-
Total Cash Costs (US\$/oz)**	342	679	947	-	-
Pallancata					
Total Silver Production (Moz)	4.2	8.4	10.2	10.4	11.0
Total Gold Production (koz)	16.2	32.0	43.3	43.9	46.4
Total Cash Costs (US\$/oz)*	7.38	7.13	6.62	6.54	6.04
San Jose					
Total Silver Production (Moz)	4.4	5.0	6.4	6.2	6.2
Total Gold Production (koz)	54.3	77.1	94.7	98.4	98.4
Total Cash Costs (US\$/oz)**	8.46	9.39	9.50	9.47	8.72
Moris					
Total Silver Production (Moz)	0.1	0.1	0.1	0.1	-
Total Gold Production (koz)	26.9	28.3	22.1	19.9	-
Total Cash Costs (US\$/oz)**	629	718	834	886	-
Hochschild Attributable Total					
Silver Production (Moz)	17.6	17.7	18.0	18.2	18.7
Silver Equiv. Production (Moz)	25.5	29.7	26.4	25.7	25.9
Total Cash Costs (U\$/oz)*	5.93	7.47	7.94	7.14	7.04
Total Production Costs (\$/oz)*	7.02	8.90	9.49	8.77	8.62
*Silver co-product cash costs unless otherwise	indicated				
**Gold co-product cash costs					



#### **Silver Miners**

February 22, 2010

Fig 362: HL Financial/Operating Summary

HECLA MINING		As at: 18-Feb-10	HL				
Project(s):		Location:	Location:				
Recommendation Target Price (US\$)	Mkt 6.00	Analyst: Andr	rew Kaip				
Share Price (US\$)	5.30	Share Price (US\$)	5.30				
Common Shares O/S (M)	240						
Market Cap (US\$M)	1,274	Market Cap (C\$M)	1,326				
0% NPV (US\$/share)	5.09	Premium/(Discount)	4%				
3% NPV (US\$/share)	3.68	Premium/(Discount)	44%				
5% NPV (US\$/share)	3.24	Premium/(Discount)	64%				
10% NPV (US\$/share)	2.90	Premium/(Discount)	83%				

(December Year End)		2008A	2009E	2010E	2011E	2012E
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.95
Gold	US\$/oz	873	972	1150	1150	950
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.00
Gold: Silver Ratio		58	66	58	58	63
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.50
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.80
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.00

(December Year End)		2008A	2009A	2010E	2011E	2012
EV/EBITDA		nap	10.0	5.0	4.2	6.8
EPS	(US\$)	(0.57)	0.24	0.39	0.46	0.13
P/E	(x)	nap	21.90	13.61	11.50	41.68
CFPS	(US\$)	0.03	0.55	0.91	0.82	0.51
P/CF		nap	9.56	5.84	6.47	10.47
FCFPS	(US\$)	(1.28)	(0.49)	0.65	0.50	0.19
P/FCF		nap	nap	8.19	10.65	28.03
Common Shares O/S	(M)	212.8	214.9	227.0	227.0	227.0
QUARTERLY						
		(	Q1/10E (	<b>22/10E</b> €	<b>⊋3/10E</b> €	24/10
EPS	(US\$)		0.05	0.11	0.12	0.1
CFPS	(US\$)		0.23	0.22	0.23	0.2
FCFPS	(US\$)		0.23	0.22	0.23	0.2

(December Year End)	2008A	2009E	2010E	2011E	2012E
(December real End)	2008A	2009E	2010E	2011E	20125
Mining Revenue	192.7	312.5	448.1	462.1	370.6
Production Costs	139.6	148.6	211.9	211.8	211.8
G&A	21.3	31.7	26.3	27.3	27.3
Exploration and Other Expenses	22.5	9.2	18.5	17.5	16.0
Other Income	-	-	-	-	
EBITDA	17.6	118.0	200.3	214.5	124.5
Depreciation	35.2	62.8	79.8	73.6	78.3
EBIT	(17.6)	70.4	120.6	140.8	46.2
Interest expense	(15.7)	(10.2)	1.7	3.1	4.0
EBT	(33.4)	60.1	122.2	144.0	50.1
Tax	(3.8)	7.7	-	(31.6)	(13.6)
NPAT (pre-Adjustments)	(66.6)	67.8	122.2	112.4	36.6
Minority Interest	-	1.0	2.0	3.0	4.0
After-Tax Non-Operating Items	(29.4)	-	-	-	
Net Income (reported)	(66.6)	67.8	122.2	112.4	36.6
Net Income (adjusted)	(80.2)	54.2	87.2	104.7	28.9

REVENUE SPLIT (December Year End)	2008A	2009E	2010E	2011E	2012
Silver	56%	52%	39%	37%	34%
Gold	23%	17%	12%	12%	129
Copper	0%	0%	0%	0%	09
Lead	34%	22%	20%	21%	229
Zinc	43%	36%	29%	31%	329

CASH FLOW ANALYSIS - US\$M	1				
(December Year End)	2008A	2009A	2010E	2011E	2012E
Net Income	(66.6)	67.8	122.2	112.4	36.6
Non-Cash Items	81.3	47.1	79.8	73.6	78.3
Cash Flows From Operating Activities	14.8	115.0	202.0	186.0	114.9
Property, Plant and Equip.	(68.7)	(23.5)	-	(35.0)	(35.0)
Net Investment and Asset Sales	(660.9)	8.0	-	-	-
Other	48.5	7.6	(55.0)	(38.1)	(37.0)
Cash Flows From Investing Activities	(681.1)	(7.9)	(55.0)	(73.1)	(72.0)
Proceeds From Borrowings	380.0	-	-		-
Repayment of Borrowings	(218.3)	(162.7)	-	-	-
Stock, Warrants, Options	183.5	128.3	44.8	-	-
Other	(15.6)	(4.5)	(27.3)	-	-
Cash Flows From Financing Activities	329.6	(38.9)	17.5	-	-
Net Increase In Cash					
Cash At Beginning of Year	373.1	36.5	104.7	269.1	382.1
Cash At End of Year	36.5	104.7	269.1	382.1	425.0
Free Cash Flow	(272.2)	(104.4)	147.0	113.0	42.9

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	36.5	104.7	269.1	382.1	425.0
Inventories	21.3	21.5	29.4	28.9	29.2
Other	16.0	40.3	16.7	16.8	14.6
Current Assets	73.9	166.5	315.2	427.8	468.8
Fixed Assets	852.1	819.5	794.7	794.2	787.8
Other	62.8	60.8	60.8	60.8	60.8
Total Assets	988.8	1,046.8	1,170.8	1,282.8	1,317.4
Payables	21.9	14.0	14.0	14.0	14.0
Short Term Debt	48.0	1.6	1.6	-	-
Other	15.1	26.2	33.0	33.5	40.3
Current Liabilities	85.0	41.7	48.5	47.5	54.3
Long Term Debt	113.6	3.3	-	-	-
Other	140.7	136.3	144.3	152.3	160.3
Total Liabilities	339.3	181.3	192.8	199.8	214.6
SHAREHOLDERS EQUITY	649.5	865.5	978.0	1,083.0	1,102.8
Net Debt to Equity	19%	-12%	-27%	-35%	-39%

PRODUCTION AND COSTS					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Greens Creek					
Lead Production (kt)	16.6	21.2	20.4	20.3	20.3
Zinc Production (kt)	52.1	71.6	66.8	66.8	66.8
Gold Production (koz)	54.7	67.3	51.5	51.5	51.5
Silver Production (Moz)	5.8	7.5	6.5	6.2	6.2
Silver Equiv. Production (Moz)	8.8	22.2	18.4	18.3	19.3
Cash Costs (U\$/oz)*	5.97	7.39	10.18	10.20	9.66
Lucky Friday					
Lead Production (kt)	18.4	22.0	20.2	20.2	20.2
Zinc Production (kt)	9.4	10.6	9.2	9.2	9.2
Silver Production (Moz)	2.9	3.5	3.3	3.2	3.2
Silver Equiv. Production (Moz)	6.1	7.1	6.4	6.6	6.9
Cash Costs (U\$/oz)*	7.0	6.4	8.2	8.1	7.7
Hecla Attributable Total					
Silver Production (Moz)	6.5	11.0	8.7	8.5	8.5
Silver Equiv. Production (Moz)	14.9	29.3	24.8	24.9	26.2
Cash Costs (U\$/oz)*	9.08	8.71	9.23	8.95	8.37
LOM ESTIMATES	Silver Production (Moz)		Silver	Eq. Produ (Moz)	ction
Greens Creek	75.0			237.8	
Lucky Friday	57.1			125.3	
TOTAL	132.1			363.1	



#### **Silver Miners**

February 22, 2010

Fig 363: MSV Financial/Operating Summary

MINCO SILVER		As at: 18-Feb-10	MSV
Project(s):	Fuwan, Sunshine	Location:	China
Recommendation Target Price (C\$)	OP(S) C\$ 2.50	Analyst:	Andrew Kaip
Share Price (US\$)	1.64	Share Price (C\$)	1.71
Common Shares O/S (M)	40		
Market Cap (US\$M)	66	Market Cap (C\$M)	69
0% NPV (US\$/share)	5.28	Premium/(Discount)	-69%
3% NPV (US\$/share)	3.36	Premium/(Discount)	-51%
5% NPV (US\$/share)	2.71	Premium/(Discount)	-39%
10% NPV (US\$/share)	2.25	Premium/(Discount)	-27%

PRICE ASSUMPTIONS (December Year End)		2008A	2009E	2010E	2011E	2012E
(December real End)		2000A	20052	20102	20112	20121
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.95
Gold	US\$/oz	873	972	1150	1150	950
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.00
Gold: Silver Ratio		58	66	58	58	63
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.50
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.80
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.00

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		na	na	na	na	3.0
EPS	(US\$)	(0.07)	(0.11)	(0.12)	(80.0)	0.37
P/E	(x)	nap	nap	nap	nap	4.42
CFPS	(US\$)	(0.08)	(0.09)	(0.10)	(0.06)	0.41
P/CF		nap	nap	nap	nap	4.00
FCFPS	(US\$)	(0.18)	(0.01)	(0.16)	(1.03)	(0.38
P/FCF		nap	nap	nap	nap	na
Common Shares O/S	(M)	32.12	40.47	73.58	73.58	73.58
QUARTERLY						
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		-0.03	-0.03	-0.03	-0.0
CFPS	(US\$)		-0.03	-0.03	-0.03	-0.0
FCFPS	(US\$)		(0.03)	(0.03)	(0.03)	(0.03

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	0.00	0.00	0.00	0.00	80.39
Production Costs	0.00	0.00	0.00	0.00	36.09
G&A	2.58	1.85	2.17	2.28	2.28
Exploration and Other Expenses	1.70	2.52	3.20	4.00	0.00
Other Income	0.00	1.00	2.00	3.00	4.00
EBITDA	(2.9)	(4.9)	(6.1)	(7.0)	41.6
Depreciation	0.05	0.07	0.00	0.00	2.44
EBIT	(3.0)	(5.0)	(6.1)	(7.0)	39.1
Interest expense	0.83	0.67	0.25	1.51	(0.67
EBT	(2.1)	(4.3)	(5.9)	(5.5)	38.5
Tax	0.00	0.00	0.00	0.00	(11.13
NPAT (pre-Adjustments)	(2.1)	(4.1)	(5.9)	(5.5)	27.3
Minority Interest	0.00	1.00	2.00	3.00	4.00
After-Tax Non-Operating Items	0.00	0.00	0.00	0.00	0.00
Net Income (reported)	(2.1)	(4.1)	(5.9)	(5.5)	27.3
Net Income (adjusted)	(2.1)	(3.6)	(5.9)	(5.5)	27.3

REVENUE SPLIT (December Year End)	2008A	2009E	2010E	2011E	2012E
Silver	0%	0%	0%	0%	92%
Gold	0%	0%	0%	0%	1%
Lead	0%	0%	0%	0%	1%
Zinc	0%	0%	0%	0%	6%

CASH FLOW ANALYSIS - US\$M 2008A 2009E 2010E 2011E 2012E Net Income Non-Cash Items Cash Flows From Operating Activities 27.3 (17.3) 10.1 (3.2) 0.4 (5.1) (4.8)0.0 (35.0) (6.6) (41.6) Property, Plant and Equip. Net Investment and Asset Sales (71.0) 0.0 (71.0) (4.0) 0.0 (4.0) Cash Flows From Investing Activities (0.0) Proceeds From Borrowings Repayment of Borrowings Stock, Warrants, Options 32.0 0.0 48.0 0.0 0.0 0.0 Cash Flows From Financing Activities Net Increase In Cash Cash At Beginning of Year Cash At End of Year 8.8 (25.9) Free Cash Flow (5.8)(0.4)(9.1) (75.8) (28.1)

DALANCE CUEET ANALYSIS USAN					
BALANCE SHEET ANALYSIS - US\$M (December Year End)	2008A	2009E	2010E	2011E	2012E
,					
Cash and Investments	4.6	13.7	84.6	8.8	(25.9)
Inventories	0.0	0.0	0.0	0.0	0.0
Other	0.5	0.0	0.0	0.0	18.4
Current Assets	5.0	13.7	84.6	8.8	(7.5)
Fixed Assets	5.2	7.4	11.4	82.4	124.0
Other	6.3	5.3	6.4	6.4	6.4
Total Assets	16.6	26.4	102.4	97.7	122.9
Payables	0.7	0.0	0.0	0.0	9.2
Short Term Debt	1.2	3.1	1.9	1.9	1.9
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	1.8	3.1	1.9	1.9	11.1
Long Term Debt	0.0	0.0	32.0	32.0	32.0
Other	0.0	0.0	0.0	0.0	0.0
Total Liabilities	1.8	3.1	33.9	33.9	43.1
SHAREHOLDERS EQUITY	14.7	23.4	68.5	63.7	79.8
Net Debt to Equity	-23%	-46%	-74%	39%	75%

PRODUCTION AND COSTS					
(December Year End)	2008A	2009E	2010E	2011E	2012E
(					
Fuwan					
Lead Production (kt)	-	-	-	-	0.2
Zinc Production (kt)	-	-	-	-	2.1
Gold Production (koz)	-	-	-	-	0.0
Silver Production (Moz)	-	-	-	-	3.2
Silver Equiv. Production (Moz)	-	-	-	-	3.5
Cash Costs (U\$/oz)*	-	-	-	-	7.75
Sunshine					
Silver Production (Moz)	-	-	-	-	1.7
Cash Costs (U\$/oz)*	-	-	-	-	9.0
Hecla Attributable Total					
Silver Production (Moz)	-	-	-	-	4.8
Silver Equiv. Production (Moz)	_	-	-	-	5.2
Cash Costs (U\$/oz)*	-	-	-	-	7.27
LOM ESTIMATES	Silver Production	Silver	Eq. Produ	ction	
	(Moz)		(koz)		
Fuwan	72.3		83.2		
Sunshine	42.1		42.1		
TOTAL					
* Silver co-product cash costs					



#### **Silver Miners**

February 22, 2010

Fig 364: OK Financial/Operating Summary

ORKO SILVER		As at: 18-Feb-1	o OK
Project(s):	La Preciosa	Location:	Mexico
Recommendation	OP(S)	Analyst:	Andrew Kaip
Target Price (C\$)	C\$ 1.60		
Share Price (US\$)	1.08	Share Price (C\$)	1.12
Common Shares O/S (M)	114		
Market Cap (US\$M)	123	Market Cap (C\$M)	128
0% NPV (US\$/share)	2.23	Premium/(Discount)	-52%
3% NPV (US\$/share)	1.32	Premium/(Discount)	-19%
5% NPV (US\$/share)	1.09	Premium/(Discount)	-2%
10% NPV (US\$/share)	1.04	Premium/(Discount)	3%

(December Year End)		2008A	2009A	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		nap	nap	nap	nap	na
EPS	(US\$)	(0.25)	(0.12)	(0.02)	(0.02)	0.00
P/E	(x)	nap	nap	nap	nap	na
CFPS	(US\$)	(0.20)	(0.09)	(0.02)	(0.02)	0.01
P/CF		nap	nap	nap	nap	na
FCFPS	(US\$)	(0.20)	(0.08)	(0.02)	(0.02)	0.01
P/FCF		nap	nap	nap	nap	183.79
Common Shares O/S	(M)	107.7	114.0	118.8	121.8	136.0
QUARTERLY						
			Q1/10E	Q2/10E	Q3/10E	Q4/10
EPS	(US\$)		-0.01	-0.01	-0.01	-0.0
CFPS	(US\$)		0.00	0.00	0.00	0.0
FCFPS	(US\$)		0.00	-0.01	0.00	0.0

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	0.00	0.00	0.00	0.00	7.02
Production Costs	0.00	0.00	0.00	0.00	3.61
G&A	8.01	9.84	2.47	3.06	3.06
Exploration and Other Expenses	17.25	3.00	0.00	0.00	0.00
Other Income	0.00	0.00	0.00	0.00	0.00
EBITDA	(25.5)	(12.9)	(2.5)	(3.1)	0.3
Depreciation	0.03	0.03	0.00	0.00	0.03
EBIT	(25.6)	(12.9)	(2.5)	(3.1)	0.2
Interest expense	0.20	0.02	0.03	0.10	0.22
EBT	(25.4)	(12.9)	(2.5)	(3.0)	0.5
Tax	0.00	0.00	0.00	0.00	0.00
NPAT (pre-Adjustments)	(25.4)	(12.9)	(2.5)	(3.0)	0.5
Minority Interest	0.00	0.00	0.00	0.00	0.00
After-Tax Non-Operating Items	0.00	0.00	0.00	0.00	0.00
Net Income (reported)	(25.4)	(12.9)	(2.5)	(3.0)	0.5
Net Income (adjusted)	(25.1)	(12.8)	(2.4)	(3.0)	0.5

CASH FLOW ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(25.4)	(12.9)	(2.5)	(3.0)	0.5
Non-Cash Items	4.2	3.7	0.5	1.0	0.3
Cash Flows From Operating Activities	(21.2)	(9.2)	(2.0)	(2.0)	8.0
Property, Plant and Equip.	0.0	0.0	0.0	0.0	0.0
Net Investment and Asset Sales	4.7	3.2	0.0	0.0	(0.1)
Other	0.0	0.0	0.0	0.0	0.0
Cash Flows From Investing Activities	4.7	3.2	0.0	0.0	(0.1)
Proceeds From Borrowings	0.0	0.0	0.0	0.0	0.0
Repayment of Borrowings	0.0	0.0	0.0	0.0	0.0
Stock, Warrants, Options	15.7	7.4	4.9	1.7	7.5
Other	0.0	0.0	0.0	0.0	0.0
Cash Flows From Financing Activities	15.7	7.4	4.9	1.7	7.5
Net Increase In Cash					
Cash At Beginning of Year	1.2	0.5	1.9	4.9	4.5
Cash At End of Year	0.5	1.9	4.9	4.5	12.7
Free Cash Flow	(21.2)	(9.2)	(2.0)	(2.0)	0.8

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	4.0	1.9	4.9	4.5	12.7
Inventories	0.0	0.3	0.2	0.3	1.5
Other	1.5	0.0	0.0	0.0	0.9
Current Assets	5.5	2.3	5.1	4.8	15.2
Fixed Assets	2.0	4.3	4.3	4.3	4.4
Other	0.0	0.1	0.1	0.1	0.1
Total Assets	7.6	6.6	9.4	9.1	19.6
Payables	1.5	0.3	0.1	0.1	0.1
Short Term Debt	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	1.6	0.3	0.1	0.1	0.1
Long Term Debt	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0
Total Liabilities	1.6	0.3	0.1	0.1	0.1
SHAREHOLDERS EQUITY	6.0	6.2	9.4	9.0	19.5
Net Debt to Equity	-67%	-31%	-52%	-50%	-65%

December Year End)	2008A	2009E	2010E	2011E	2012
a Preciosa					
Silver Production (koz)	-	_	-	-	96
Gold Production (koz)	-	_	-	-	1.3
Silver Equivalent Production (koz)	-	-	-	-	1,04
Total Cash Costs (U\$/oz)*	-	-	-	-	7.7
Total Production Costs (U\$/oz)*	-	-	-	-	7.7
otal Attributable Production (55%)					
Silver Production (koz)	-	-	-	-	43
Gold Production (koz)	-	-	-	-	0.
Silver Equivalent Production (koz)	-	-	-	-	46
Total Cash Costs (U\$/oz)*	-	-	-	-	7.7
Total Production Costs (U\$/oz)*	-	-	-	-	7.78
LOM ESTIMATES	Silver Equiv. Prod'n (Moz)		Total Cash Cost (US\$/oz)		st*
_a Preciosa	100.4			5.17	
co-product cash costs					



#### **Silver Miners**

February 22, 2010

Fig 365: PAA Financial/Operating Summary

Pan American Silve	r	As at: 18-Feb	-10 <b>PAA</b>
Recommendation Target Price (C\$)	OP C\$ 31.25	Analyst:	Andrew Kaip
Share Price (US\$)	21.80	Share Price (C\$)	22.70
Common Shares O/S (M) Market Cap (US\$M)	87 1,902	Market Cap (C\$M)	1,980
0% NPV (US\$/share) 3% NPV (US\$/share)	31.12 23.77	Premium/(Discount)	
5% NPV (US\$/share)	20.19	Premium/(Discount)	
10% NPV (US\$/share)	14.66	Premium/(Discount)	

(December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Соррег	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009A	2010E	2011E	2012
EV/EBITDA		19.6	10.0	4.1	3.2	4.8
EPS	(US\$)	0.38	0.72	1.68	1.95	1.03
P/E	(x)	nap	30.2	13.0	11.2	21.2
CFPS	(US\$)	1.25	1.69	2.59	2.80	1.89
P/CF		17.5	12.9	8.4	7.8	11.5
FCFPS	(US\$)	(1.88)	0.72	2.40	2.46	0.67
P/FCF		nap	30.2	9.1	8.9	32.7
Common Shares O/S	(M)	80.8	107.7	107.8	107.8	107.
QUARTERLY		_				
			Q1/10E	Q2/10E	Q3/10E	
EPS	(US\$)		0.38	0.39	0.44	0.4
CFPS	(US\$)		0.61	0.61	0.67	0.7
FCFPS	(US\$)		0.83	0.49	0.53	0.5

(December Year End)	2008A	2009E	2010E	2011E	2012
Mining Revenue	338.6	454.8	676.4	701.2	567.5
Production Costs	199.0	245.6	251.6	253.1	262.1
G&A	13.1	15.8	16.5	16.8	17.2
Exploration and Other Expenses	5.5	9.9	33.2	24.8	18.3
Other Income	19.9	(1.8)	(3.2)	(4.3)	(7.9
EBITDA	95.4	172.9	371.9	402.2	262.1
Depreciation	0.0	0.0	0.0	0.0	0.0
EBIT	49.0	89.8	280.7	317.8	175.0
Interest expense	(24.4)	0.0	0.0	0.0	0.0
EBT	24.6	89.8	282.2	317.8	175.0
Tax	0.0	(27.8)	(101.1)	(107.6)	(64.2
NPAT (pre-Adjustments)	24.6	62.0	181.1	210.2	110.8
Minority Interest	0.0	0.0	0.0	0.0	0.0
After-Tax Non-Operating Items	0.0	0.0	0.0	0.0	0.0
Net Income (reported)	24.6	62.0	181.1	210.2	110.8
Net Income (adjusted)	30.7	62.0	181.1	210.2	110.8

(December Year End)	2009E	2010E	2011E	2012
Silver	63%	64%	62%	609
Gold	19%	13%	12%	139
Copper	5%	6%	6%	79
Lead	3%	3%	3%	39
Zinc	10%	14%	17%	179

CASH FLOW ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	24.6	62.0	181.1	210.2	110.8
Non-Cash Items	68.4	54.0	94.0	54.7	61.1
Cash Flows from Operating Activities	93.0	116.0	275.1	264.9	171.9
Property, Plant and Equip.	0.0	(52.8)	(16.5)	0.0	(100.0)
Net Investment and Asset Sales	(168.8)	(93.6)	(49.2)	(37.1)	(36.2)
Other	0.0	0.0	0.0	0.0	0.0
Cash Flows from Investing Activities	(168.8)	(146.3)	(65.7)	(37.1)	(136.2)
Proceeds from Borrowings	50.8	98.3	0.0	0.0	0.0
Repayment of Borrowings	2.5	0.0	0.0	0.0	0.0
Stock, Warrants, Options	0.0	0.0	0.8	0.0	0.0
Other	(2.6)	5.7	0.0	0.0	0.0
Cash Flows from Financing Activities	50.7	104.1	0.8	0.0	0.0
Net Increase In Cash					
Cash At Beginning of Year	51.9	26.8	100.5	310.7	538.5
Cash At End of Year	26.8	100.5	310.7	538.5	574.2
Free Cash Flow	(150.8)	63.2	258.6	264.9	71.9

BALANCE SHEET ANALYSIS - US\$M (December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	30.1	193.1	403.3	631.1	666.8
Inventories	72.7	93.4	93.4	93.4	93.4
Other	71.6	85.9	54.9	54.3	46.5
Current Assets	174.4	372.5	551.6	778.9	806.7
Fixed Assets	697.1	697.4	683.8	664.3	1457.7
Other	2.0	18.4	18.4	18.4	18.4
Total Assets	873.4	1848.6	2044.3	2271.5	2399.4
Payables	49.2	96.2	62.4	61.7	51.9
Short Term Debt	0.0	0.0	0.0	0.0	0.0
Other	30.1	4.0	4.0	4.0	4.0
Current Liabilities	79.3	100.2	66.4	65.7	55.9
Long Term Debt	0.0	20.8	20.8	20.8	20.8
Other	102.7	368.6	368.6	368.6	368.6
Total Liabilities	182.0	489.6	455.8	455.1	445.3
SHAREHOLDERS EQUITY	685.6	1343.8	1569.6	1792.9	1927.5
Net Debt to Equity	-4%	-13%	-24%	-34%	-34%

PRODUCTION AND COSTS (December Year End)	2008A	2009A	2010E	2011E	2012E
(December real End)	2000A	2009A	20102	20115	20126
San Vicente					
Total Silver Production (Moz)	3.6	3.6	3.5	3.7	3.7
Total Cash Costs (US\$/oz)*	9.35	11.53	9.92	8.82	8.27
Morococha					
Total Silver Production (Moz)	2.5	2.8	2.7	3.0	3.4
Total Cash Costs (US\$/oz)*	7.64	9.26	8.84	7.66	6.74
Huaron					
Total Silver Production (Moz)	1.4	1.4	1.3	1.2	1.2
Total Cash Costs (US\$/oz)*	7.11	10.71	8.76	8.77	7.96
Alamo Dorado					
Total Silver Production (Moz)	0.9	2.6	3.0	3.0	3.0
Total Cash Costs (US\$/oz)*	6.72	4.73	5.70	5.62	5.50
La Colorada					
Total Silver Production (Moz)	6.1	5.3	4.2	4.7	4.7
Total Cash Costs (US\$/oz)*	4.64	5.57	6.85	6.50	6.25
Quiruvilca					
Total Silver Production (Moz)	3.9	3.5	3.5	4.0	4.0
Total Cash Costs (US\$/oz)*	9.23	8.65	10.16	9.39	8.92
Manantial Espejo					
Total Silver Production (Moz)	-	3.8	4.9	3.8	3.8
Total Cash Costs (US\$/oz)*	-	3.18	1.87	2.39	2.43
Navidad					
Total Silver Production (Moz)	-	-	-	-	-
Total Cash Costs (US\$/oz)*	-	-	-	-	-
La Preciosa					
Total Silver Production (Moz)	-	-	-	-	1.0
Total Cash Costs (US\$/oz)*	-	-	-	-	7.71
Total Production, Silver (Moz)	17.4	22.0	22.0	22.2	23.0
Total Production, Gold (koz)	25	99	81	76	77
Total Production, Copper (kt)	5.9	5.8	5.5	5.3	5.4
Total Production, Zinc (klbs)	38.4	31.3	39.4	45.1	45.7
Total Production, Lead (klbs)	15.5	11.3	12.7	12.5	12.6
Cash Costs, Silver Co-Product (US\$/oz)	7.82	7.84	8.19	7.96	7.44
Production Costs, Silver Co-Product (US\$/oz)	8.99	10.18	10.85	10.34	9.72



#### **Silver Miners**

February 22, 2010

Fig 366: SBB Financial/Operating Summary

Sabina Silver		As at: 18-Feb-10	SBB
Project(s):	Hackett River, Back River	Location: Canada	
Recommendation Target Price (C\$)	Mkt(S) C\$ 1.40	Analyst: A	ndrew Kaip
Share Price (US\$)	1.12	Share Price (C\$)	1.17
Common Shares O/S (M) Market Cap (US\$M)	108 121	Market Cap (C\$M)	126
0% NPV (US\$/share) 3% NPV (US\$/share) 5% NPV (US\$/share)	4.19 1.93 1.31	Premium/(Discount) Premium/(Discount) Premium/(Discount)	-73% -42% -15%
10% NPV (US\$/share)	1.30	Premium/(Discount)	-14%

(December Year End)		2008A	2009A	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.9
Gold	US\$/oz	873	972	1150	1150	105
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	7
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		na	na	na	na	19.1
EPS	(US\$)	(0.03)	(0.03)	(0.03)	(0.01)	(0.01
P/E	(x)	nap	nap	nap	nap	na
CFPS	(US\$)	(0.02)	(0.03)	(0.02)	(0.00)	(0.00
P/CF		nap	nap	nap	nap	naj
FCFPS	(US\$)	(0.18)	(0.02)	0.00	(0.15)	(0.09
P/FCF		nap	nap	781.0	nap	na
Common Shares O/S	(M)	73.4	114.3	114.8	150.4	257.
QUARTERLY			01/105	03/105	03/105	04/10
EDC	(UC#)		Q1/10E	• .	Q3/10E (	
EPS	(US\$)		(0.01)	(0.01)	(0.01)	(0.01
CFPS	(US\$)		(0.01)	(0.01)	(0.01)	(0.00

(December Year End)	2008A	2009E	2010E	2011E	2012E
Mining Revenue	0.0	0.0	0.0	0.0	0.0
Production Costs	0.0	0.0	0.0	0.0	0.0
G&A	(3.4)	(3.9)	(3.5)	(3.5)	(3.5)
Exploration and Other Expenses	0.0	0.0	0.0	0.0	0.0
Other Income	(1.6)	(0.6)	(0.6)	(0.6)	(0.6
EBITDA	(5.1)	(4.4)	(4.1)	(4.1)	(4.1
Depreciation	0.0	0.0	0.0	0.0	0.0
EBIT	(5.1)	(4.5)	(4.1)	(4.1)	(4.1
Interest expense	1.0	0.2	0.2	2.4	2.2
EBT	(4.1)	(4.3)	(3.9)	(1.7)	(1.9
Tax	1.1	0.2	0.0	0.0	0.0
NPAT (pre-Adjustments)	(2.9)	(4.1)	(3.9)	(1.7)	(1.9
Minority Interest	0.0	0.0	0.0	0.0	0.0
After-Tax Non-Operating Items	0.0	0.0	0.0	0.0	0.0
Net Income (reported)	(2.9)	(4.1)	(3.9)	(1.7)	(1.9
Net Income (adjusted)	(2.9)	(2.8)	(3.9)	(1.7)	(1.9

CASH FLOW ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(2.9)	(2.8)	(3.9)	(1.7)	(1.9)
Non-Cash Items	2.2	11.5	23.8	1.6	1.6
Cash Flows from Operating Activities	(8.0)	8.7	20.0	(0.1)	(0.3)
Property, Plant and Equip.	(0.0)	(0.2)	0.0	0.0	0.0
Net Investment and Asset Sales	(11.7)	(17.2)	(19.8)	(19.4)	(19.0)
Other	8.2	11.5	22.2	0.0	0.0
Cash Flows from Investing Activities	(3.5)	(5.9)	2.4	(19.4)	(19.0)
Proceeds from Borrowings	0.0	0.0	0.0	0.0	180.0
Repayment of Borrowings	0.0	0.0	0.0	0.0	0.0
Stock, Warrants, Options	4.2	21.5	0.4	40.0	120.0
Other	0.0	0.0	0.0	0.0	0.0
Cash Flows from Financing Activities	4.2	21.5	0.4	40.0	300.0
Net Increase In Cash					
Cash At Beginning of Year	0.2	0.1	24.3	47.1	67.6
Cash At End of Year	0.1	24.3	47.1	67.6	348.3
Free Cash Flow	(12.5)	(2.2)	0.2	(19.5)	(19.3)

BALANCE SHEET ANALYSIS - U	JS\$M				
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	33.9	46.5	47.1	67.6	348.3
Inventories	0.0	0.0	0.0	0.0	0.0
Other	0.8	0.0	0.0	0.0	0.0
Current Assets	34.8	46.5	47.1	67.6	348.3
Fixed Assets	52.1	89.5	109.3	128.7	147.7
Other	4.0	1.1	1.1	1.1	1.1
Total Assets	90.8	137.1	157.5	197.4	497.1
Payables	0.8	0.2	0.3	0.3	0.3
Short Term Debt	0.0	0.2	0.3	0.3	0.0
Other	0.0	0.0	0.0	0.0	0.0
Current Liabilities	0.1	0.0	0.0	0.0	0.0
Current Liabilities	0.9	0.2	0.3	0.3	0.3
LT Debt	0.0	0.0	0.0	0.0	180.0
Other	7.2	9.5	9.5	9.5	369.5
Total Liabilities	8.1	9.7	9.8	9.8	189.8
SHAREHOLDERS EQUITY	82.8	127.4	147.7	187.6	307.3
Net Debt to Equity	-38%	-43%	-53%	-53%	-65%

PRODUCTION AND (December Year End)	ND COSTS	2008A	2009E	2010E	2011E	2012E
Hackett River						
Lead Production (kt)		-	-	-	-	-
Zinc Production (kt)		-	-	-	-	-
Copper Production (kg	t)	-	-	-	-	-
Silver Production (Mo	z)	-	-	-	-	-
Silver Equiv. Producti	on (Moz)	-	-	-	-	-
Cash Costs (U\$/oz)*		-	-	-	-	-
Back River						
Gold Production (koz)		-	-	-	-	-
Cash Costs (U\$/oz)		-	-	-	-	-
SBB Attributable AgEd Total Cash Cost	prod'n	-	-	-	:	-
LOM ESTIMATES	Silver Eq. Prod' (Moz)	n G	Gold Prod'r (koz)		ıl Cash Co (US\$/oz)	st*
Hackett River	493		191		7.09	
Back River	0		1594		441	
TOTAL	493		1,784			
* silver co-product cash	costs					



#### **Silver Miners**

February 22, 2010

Fig 367: SVM Financial/Operating Summary

SILVERCORP		As at: 18-Feb-10	SVM
Project(s):	Ying, GC, HP, LM, TLP	Location:	China
Recommendation Target Price (C\$)	OP C\$ 9.00	Analyst: A	ndrew Kaip
Share Price (US\$)	6.53	Share Price (C\$)	6.80
Common Shares O/S (M) Market Cap (US\$M)	166 1,083	Market Cap (C\$M)	1,128
0% NPV (US\$/share)	8.57	Premium/(Discount)	-24%
3% NPV (US\$/share)	6.12	Premium/(Discount)	7%
5% NPV (US\$/share)	5.17	Premium/(Discount)	26%
10% NPV (US\$/share)	4.11	Premium/(Discount)	59%

(December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.95
Gold	US\$/oz	873	972	1150	1150	950
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.50
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(March Year End)		2008A	2009E	2010E	2011E	2012E
EV/EBITDA		12.3	na	13.1	8.6	7.7
EPS	(US\$)	0.41	0.23	0.30	0.48	0.51
P/E	(x)	16.1	28.6	22.1	13.7	12.8
CFPS	(US\$)	0.55	0.30	0.44	0.69	0.74
P/CF		11.9	22.0	14.8	9.5	8.8
FCFPS	(US\$)	0.48	0.23	0.38	0.49	0.58
P/FCF		13.6	28.7	17.3	13.3	11.3
Common Shares O/S	(M)	149.4	161.6	162.7	162.7	163.0
QUARTERLY						
			Q1/10A	Q2/10A	Q3/10E	Q4/10E
Adjusted EPS	(US\$)		0.05	0.05	0.05	0.05
CFPS	(US\$)		0.07	0.07	0.07	0.07
FCFPS	(US\$)		0.06	0.06	0.06	0.06

(March Year End)	2008A	2009A	2010E	2011E	2012
Mining Revenue	108.4	83.5	122.7	188.9	210.3
Production Costs	20.1	29.3	29.2	62.2	77.6
G&A	9.7	11.4	11.4	12.0	12.0
Exploration and Other Expenses	1.9	2.4	5.3	4.1	4.1
Other Income	4.1	(50.0)	(1.6)	0.0	0.0
EBITDA	80.9	(9.4)	75.3	110.7	116.7
Depreciation	3.7	7.2	4.7	5.1	8.2
EBIT	77.1	(16.7)	70.5	105.4	108.5
Interest expense	2.6	1.3	0.7	1.3	4.5
EBT	79.7	(15.4)	70.1	106.7	113.0
Tax	(0.6)	0.9	(6.4)	0.0	0.0
NPAT (pre-Adjustments)	79.1	(14.5)	63.7	106.7	113.0
Minority Interest	(19.2)	(1.5)	(16.5)	(29.4)	(30.1
After-Tax Non-Operating Items	0.0	0.0	0.0	0.0	0.0
Net Income (reported)	59.9	(16.0)	47.2	77.3	82.9
Net Income (adjusted)	59.9	34.7	47.9	77.3	82.9

REVENUE SPLIT (March Year End)	2009E	2010E	2011E	2012E
Silver	48%	61%	53%	59%
Lead	40%	32%	38%	33%
Zinc	11%	6%	8%	8%

CASH FLOW ANALYSIS - US\$M					
(March Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	59.9	(16.0)		77.3	82.9
Non-Cash Items	19.8	63.4	15.0	20.7	23.7
Cash Flows From Operating Activities	79.8	47.4	62.2	98.0	106.5
Property, Plant and Equip.	(7.5)	(12.7)	(0.8)	(18.0)	(12.0)
Net Investment and Asset Sales	(74.3)	(24.0)	(21.4)	(13.8)	(15.8)
Other	0.0	0.2	0.0	0.0	0.0
Cash Flows From Investing Activities	(81.8)	(36.4)	(22.2)	(31.8)	(27.8)
Proceeds From Borrowings	0.0	0.0	0.0	0.0	0.0
Repayment of Borrowings	0.0		0.0	0.0	0.0
Stock, Warrants, Options	2.3	13.2	0.8	0.1	1.4
Other	(11.7)	(18.0)	(20.5)	(29.4)	(30.1)
Cash Flows From Financing Activities	(9.4)	(4.8)	(19.6)	(29.3)	(28.7)
Net Increase In Cash					
Cash At Beginning of Year	53.3	47.1	41.5	64.1	101.1
Cash At End of Year	47.1	41.5	64.1	101.1	151.1
Free Cash Flow	70.9	34.6	61.3	80.0	94.5

BALANCE SHEET ANALYSIS - US\$M	2008A	2009E	2010E	2011E	2012E
(March Year End)	2008A	2009E	20106	20116	2012E
Cash and Investments	84.2	66.2	98.4	135.4	185.4
Inventories	2.4	1.5	4.3	4.9	4.7
Other	5.3	3.3	4.6	5.2	5.1
Current Assets	91.9	71.0	107.3	145.4	195.2
Fixed Assets	75.3	118.5	141.5	159.5	171.5
Other	23.1	15.7	16.2	16.2	16.2
Total Assets	190.3	205.2	265.0	321.1	382.9
Payables	7.0	8.5	12.8	14.7	14.2
Short Term Debt	0.0	0.0	0.0	0.0	0.0
Other	15.4	14.9			8.1
Current Liabilities	22.4	23.4	25.2	27.7	22.4
LT Debt	0.0	0.0	0.0	0.0	0.0
Other	18.8	29.3		76.0	106.1
Total Liabilities	41.3	52.8	71.8	103.7	128.5
SHAREHOLDERS EQUITY	149.0	152.4	193.2	217.5	254.4
Net Debt to Equity	-57%	-43%	-51%	-62%	-73%

PRODUCTION AND COSTS					
(March Year End)	2008A	2009E	2010E	2011E	2012E
Ying Mine					
Total Silver Eq. Production (Moz)	7.8	6.0	8.2	8.0	9.0
Total Cash Costs (US\$/oz)*	-	3.81	3.81	5.09	4.90
HPG Mine					
Total Silver Eq. Production (Moz)	1.0	0.6	0.4	0.5	0.6
Total Cash Costs (US\$/oz)*	5.71	8.11	7.63	10.75	10.72
TLP Mine					
Total Silver Eq. Production (Moz)	-	0.4	0.2	1.2	1.6
Total Cash Costs (US\$/oz)*	-	10.93	10.58	11.28	11.48
LM Mine					
Total Silver Eq. Production (Moz)	-	0.3	0.1	0.3	0.3
Total Cash Costs (US\$/oz)*	-	9.89	8.30	9.14	9.24
GC Mine					
Total Silver Eq. Production (Moz)	-	-	-	-	0.6
Total Silver Eq. Production (koz)	-	-	-	-	11.07
Total Production, Silver (Moz)	4.0	4.1	4.8	5.5	6.5
Total Production, Zinc (kt)	6.9	5.9	7.1	6.8	9.5
Total Production, Lead (kt)	22.5	24.1	29.0	32.9	37.9
Total Production, Silver Eq. (Moz)	8.8	7.3	8.9	10.0	12.0
Cash Costs, Silver Co-Product (US\$/oz)	\$2.44	\$6.28	\$4.67	\$6.63	\$6.86
Production Costs, Silver Co-Product (US\$/oz)	\$2.83	\$7.33	\$5.11	\$7.18	\$7.58



#### **Silver Miners**

February 22, 2010

Fig 368: SSO Financial/Operating Summary

SILVER STAND	AKD	As at:	B-Feb-10	SSO
Project(s):	Pirquitas, San Luis, Diabillos, Pitarilla	Location:	Argentina,	Peru, Mexico
Recommendation Target Price (C\$)	OP C\$ 24.25	Analyst:	Andr	ew Kaip
Share Price (US\$)	17.63	Share Price (C\$	)	18.36
Common Shares O/S (M)	69			
Market Cap (US\$M)	1,212	Market Cap (C\$	M)	1,261
0% NPV (US\$/share)	29.79	Premium/(Disco	ount)	-41%
3% NPV (US\$/share)	23.37	Premium/(Disco	ount)	-25%
5% NPV (US\$/share)	20.00	Premium/(Disco	ount)	-12%
10% NPV (US\$/share)	14.11	Premium/(Disco	ount)	25%

(December Year End)		2008A	2009E	2010E	2011E	2012
Exchange Rate	C\$/US\$	0.94	0.88	0.99	0.97	0.95
Gold	US\$/oz	873	972	1150	1150	95
Silver	US\$/oz	15.01	14.63	20.00	20.00	15.0
Gold: Silver Ratio		58	66	58	58	6
Copper	US\$/lb	3.16	2.34	3.30	3.70	3.5
Lead	US\$/lb	0.95	0.78	1.00	1.00	0.8
Zinc	US\$/lb	0.86	0.75	1.10	1.20	1.0

(December Year End)		2008A	2009E	2010E	2011E	2012
EV/EBITDA		151.73	(269.49)	17.73	7.32	8.21
EPS	(US\$)	(0.18)	(0.08)	0.34	0.97	0.78
P/E	(x)	nap	nap	51.3	18.2	22.6
CFPS	(US\$)	0.27	(0.23)	0.62	1.34	1.26
P/CF		nap	nap	28.6	13.2	14.0
FCFPS	(US\$)	(2.46)	(1.90)	(0.06)	(0.66)	(0.82
P/FCF		nap	nap	nap	nap	na
Common Shares O/S	(M)	62.76	68.58	75.31	81.59	81.59
QUARTERLY						
			Q1/10E	Q2/10E	Q3/10E (	Q4/10
EPS	(US\$)		(0.04)	(0.04)	(0.04)	(0.04
CFPS	(US\$)		0.03	0.03	0.03	0.0
FCFPS	(US\$)		(0.07)	(0.07)	(0.07)	(0.07

(December Year End)	2008A	2009E	2010E	2011E	2012E
Mining Revenue	-	16.4	161.3	240.5	289.0
Production Costs	-	13.0	84.9	85.0	139.0
G&A	18.3	22.5	22.5	23.7	23.7
Exploration and Other Expenses	0.7	0.5	0.5	0.5	0.5
Other Income	-	-	-	-	
EBITDA	8.1	(4.4)	60.1	138.1	132.6
Depreciation	0.3	0.1	18.9	27.2	38.1
EBIT	7.8	(4.5)	41.2	110.9	94.5
Interest expense	-	0.1	1.2	2.1	3.5
EBT	7.8	(4.4)	42.4	113.0	98.0
Tax	(9.8)	(3.7)	27.6	76.9	65.1
NPAT (pre-Adjustments)	(9.8)	(3.6)	27.6	76.9	65.1
Minority Interest	` .	1.0	2.0	3.0	4.0
After-Tax Non-Operating Items	_	_	_		
Net Income (reported)	(9.8)	(3.6)	27.6	76.9	65.1
Net Income (adjusted)	(11.4)	(5.5)	26.0	75.3	63.6

(December Year End)	2008A	2009E	2010E	2011E	2012
Silver	0%	100%	94%	89%	649
Gold	0%	0%	0%	0%	159
Copper	0%	0%	0%	0%	09
Lead	0%	0%	0%	0%	09
Zinc	0%	0%	0%	0%	99
Tin	0%	0%	6%	11%	129

CASH FLOW ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Net Income	(9.8)	(3.6)	27.6	76.9	65.1
Non-Cash Items	26.6	(8.9)	28.1	39.7	56.5
Cash Flows From Operating Activities	16.8	(12.5)	55.7	116.6	121.6
Property, Plant and Equip.	(126.9)	(109.8)	(12.9)	(133.3)	(174.2)
Net Investment and Asset Sales	16.0	(11.5)	(49.1)	(38.7)	(17.3)
Other	(25.8)	(16.1)	-	-	-
Cash Flows From Investing Activities	(136.7)	(137.4)	(62.1)	(172.0)	(191.6)
Proceeds From Borrowings	126.1	-	-	166.2	-
Repayment of Borrowings	-	-	-	-	-
Stock, Warrants, Options	2.2	120.2	109.8	110.8	-
Other	(1.3)	-	-	-	-
Cash Flows From Financing Activities	126.9	120.2	109.8	277.0	-
Net Increase In Cash					
Cash At Beginning of Year	63.5	70.6	40.7	144.2	365.8
Cash At End of Year	70.6	40.7	144.2	365.8	295.8
Free Cash Flow	(154.4)	(130.0)	(4.7)	(53.6)	(66.6)

BALANCE SHEET ANALYSIS - US\$M					
(December Year End)	2008A	2009E	2010E	2011E	2012E
Cash and Investments	97.0	29.9	145.9	367.5	297.6
Inventories Other	-	5.8	11.2	12.1	17.8
Current Assets	101.4	38.2	163.7	387.4	325.5
Fixed Assets	482.0	527.2	587.8	758.2	946.5
Other	66.5	72.2	72.2	-	72.2
Total Assets	650.0	637.6	823.6	1217.7	1344.2
Payables	35.8	30.8	30.8	30.8	30.8
Short Term Debt	-	-	-	-	8.3
Other	16.0	2.5	2.5	-	2.5
Current Liabilities	51.9	33.4	33.4	33.4	41.7
Long Term Debt	119.1	-	-	166.2	166.2
Other	33.7	34.3	34.3	18.7	34.3
Total Liabilities	204.6	67.7	67.7	233.9	242.2
SHAREHOLDERS EQUITY	445.3	569.9	755.9	983.8	1102.0
Net Debt to Equity	5%	-5%	-19%	-20%	-11%

(December Year End)	2008A	2009E	2010E	2011E	2012E
Pirquitas					
Total Silver Production (Moz)		1.1	7.5	10.8	11.2
Silver Equiv. Production (Moz)		1.1	8.0	12.0	15.2
Total Cash Costs (US\$/oz)*	-	18.09	10.57	7.02	8.51
San Luis					
Total Silver Production (Moz)	-	-	-	-	1.1
Total Gold Production (koz)	-	-	-	-	46.8
Total Cash Costs, Gold co-product (US\$/o	-	-	-	-	149
Diablillos					
Total Silver Production (Moz)	-	-	-	-	
Total Gold Production (koz)	-	-	-	-	
Silver Equiv. Production (Moz)	-	-	-	-	
Total Cash Costs (US\$/oz)*	-	-	-	-	
Pitarrilla					
Total Silver Production (Moz)	-	-	-	-	
Silver Equiv. Production (Moz)	-	-	-	-	
Total Cash Costs (US\$/oz)*	-	-	-	-	
Silver Standard Attributable Total					
Silver Equiv. Production (Moz)		1.1	8.0	12.0	19.3
Total Cash Costs (U\$/oz)*	-	18.09	10.63	7.07	7.23
Total Production Costs (\$/oz)*	-	21.45	13.00	9.33	9.22



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### **Appendix**

Table A1: NPV Summary

Company	Ticker	Analyst *		NAV US\$		Mult	tiple to N	AV
			Spot,	BMO,	BMO,	Spot,	BMO,	BMO,
			10%	0%	10%	10%	0%	10%
Bear Creek Mining	BCM.TSX	AK	5.95	11.82	4.72	0.6x	0.3x	0.8x
Coeur D'Alene	CDE.NYSE	AK	13.95	22.77	11.78	1.1x	0.6x	1.3x
Endeavour Silver	EDR.TSX	AK	2.13	3.03	2.16	1.6x	1.2x	1.6x
First Majestic	FR.TSX	AK	2.81	4.47	2.86	1.2x	0.8x	1.2x
Fresnillo	FRES.LSE	AK	6.41	12.00	5.60	1.9x	1.1x	2.5x
Hochschild Mining	HOC.LSE	AK	2.54	3.40	2.44	1.7x	1.4x	2.0x
Hecla Mining	HL.NYSE	AK	3.53	5.09	2.90	1.5x	1.0x	1.8x
MAG Silver	MAG.TSX	JPH	6.29	13.57	5.62	0.9x	0.4x	1.1x
Minco Silver	MSV.TSX	AK	3.01	5.28	2.25	0.5x	0.3x	0.8x
Orko Silver	OK.TSX	AK	1.15	2.23	1.04	0.9x	0.5x	1.1x
Pan American Silver	PAA.TSX	AK	14.73	31.12	14.66	1.4x	0.7x	1.5x
Sabina Silver	SBB.TSX	AK	1.77	4.19	1.30	0.6x	0.3x	0.9x
Silvercorp Metals	SVM.TSX	AK	4.78	8.57	4.11	1.4x	0.8x	1.6x
Silver Standard	SSO.TSX	AK	15.73	29.79	14.11	1.1x	0.6x	1.3x
Silver Wheaton	SLW.TSX	DH	8.95	17.85	8.07	1.7x	0.9x	1.9x

<sup>\*</sup>Analyst Legend: AK - Andrew Kaip, JPH - John Hayes, DH - David Haughton

Source: BMO Capital Markets

Table A2: EPS, CFPS, EV/EBITDA Summary

Company	Ticker	Analyst *	EPS (US\$)	P/E	<b>2010E</b> CFPS (US\$)	P/CF	EV/ EBITDA	EPS (US\$)	P/E	2011E CFPS (US\$)	P/CF	EV/ EBITDA
Bear Creek												
Mining	BCM.TSX	AK	(0.16)	nap	(0.14)	nap	nap	(0.08)	nap	(0.07)	nap	nap
Coeur D'Alene	CDE.NYSE	AK	0.73	20.2x	2.19	6.8x	5.2x	1.23	12.0x	2.72	5.4x	3.5x
Endeavour Silver	EDR.TSX	AK	0.41	8.5x	0.61	5.8x	3.8x	0.48	7.3x	0.70	5.0x	2.7x
First Majestic	FR.TSX	AK	0.56	6.4x	0.71	5.0x	3.4x	0.69	5.2x	0.90	3.9x	2.2x
Fresnillo	FRES.LSE	AK	0.77	18.0x	0.84	16.4x	10.3x	0.86	16.0x	0.95	14.5x	9.4x
Hochschild Mining	HOC.LSE	AK	0.35	13.9x	0.47	10.3x	5.9x	0.37	13.0x	0.49	9.8x	5.2x
Hecla Mining	HL.NYSE	AK	0.39	13.6x	0.91	5.8x	5.0x	0.46	11.5x	0.82	6.5x	4.2x
MAG Silver	MAG.TSX	JPH	(0.11)	nap	(0.11)	nap	nap	(0.10)	nap	(0.10)	nap	nap
Minco Silver	MSV.TSX	AK	(0.12)	nap	(0.10)	nap	nap	(0.08)	nap	(0.06)	nap	nap
Orko Silver	OK.TSX	AK	(0.02)	nap	(0.02)	nap	nap	(0.02)	nap	(0.02)	nap	nap
Pan American												
Silver	PAA.TSX	AK	1.68	12.8x	2.59	8.3x	4.1x	1.95	11.0x	2.80	7.7x	3.2x
Sabina Silver	SBB.TSX	AK	(0.03)	nap	(0.02)	nap	nap	(0.01)	nap	(0.00)	nap	nap
Silvercorp Metals	SVM.TSX	AK	0.30	22.8x	0.44	15.2x	13.1x	0.48	14.2x	0.69	9.8x	8.6x
Silver Standard	SSO.TSX	AK	0.34	52.8x	0.62	29.4x	17.7x	0.97	18.7x	1.34	13.6x	7.3x
Silver Wheaton	SLW.TSX	DH	0.92	16.9x	1.14	13.7x	11.4x	1.09	14.3x	1.33	11.7x	9.0x

<sup>\*</sup>Analyst Legend: AK - Andrew Kaip, JPH - John Hayes, DH - David Haughton; Priced Feb. 19, 2010



#### Silver Miners

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Bear Creek (BCM-TSX)	18	Hochschild Mining (HOC-LSE)	9, 18
Coeur D'Alene Mines (CDE-NYSE; CDM-TSX)	18	Minco Silver (MSV-TSX)	18
Endeavour Silver (EDR-TSX; EXK-AMEX)	18	Orko Silver (OK-TSX)	18
First Majestic Silver (FR-TSX; FMV-DE)	5, 6, 18	Pan American Silver (PAAS-NASDAQ; PAA-TSX)	9, 18
Fresnillo (FRES-LSE)	9, 18	Sabina Gold & Silver (SBB-TSX)	18
Hecla Mining (HL-NYSE)	18	Silvercorp Metals (SVM-TSX; SVM-NYSE)	2, 4, 6, 18

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#### **Silver Miners**

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