

ASX ANNOUNCEMENT 24 September 2015

#### PRESENTATION - LOS CALATOS HIGH GRADE DEVELOPMENT OPTION

Metminco Ltd (ASX: MNC; AIM: MNC) is pleased to announce that it has today released a presentation in relation to the results of the Strategic Mining Study Report recently completed by RungePincockMinarco ("RPM") and released to the market on 21 September 2015 for its wholly owned Los Calatos copper molybdenum project, located in southern Peru.

A copy of the attached presentation can also be downloaded from the Company's website www.metminco.com.au.

Philip W Killen

Company Secretary

Metminco Limited ABN 43 119 759 349 ASX Code: MNC.AX; AIM Code: MNC.L

#### **Company Background**

Metminco is a dual ASX and AIM listed company with a portfolio of copper, molybdenum and gold projects in Peru and Chile.

#### **Projects and Mineral Resources**

The Los Calatos Project, located in southern Peru, has a total estimated mineral resource of 352 million tonnes at 0.76% Cu and 318 ppm Mo at a cut-off grade of 0.50% Cu, comprising a Measured Mineral Resource of 73 million tonnes at 0.73% Cu and 513 ppm Mo, an Indicated Mineral Resource of 64 million tonnes at 0.73% Cu and 345 ppm Mo, and an Inferred Mineral Resource of 21 million tonnes at 0.78% Cu and 244 ppm Mo.

The Chilean assets include the Mollacas Copper Project with a Mineral Resource of 15.5 million tonnes consisting of a Measured Resource of 11.2 million tonnes at 0.55% Cu and 0.12g/t Au and an Indicated Resource of 4.3 million tonnes at 0.41% Cu and 0.14g/t Au(at a 0.2% copper cut-off); and the Vallecillo Project with a Mineral Resource of 8.9 million tonnes consisting of a Measured Resource of 5.5 million tonnes at 0.84g/t Au, 9.99g/t Ag, 1.12% Zn and 0.32% Pb, an Indicated Resource of 2.6 million tonnes at 0.80g/t Au, 10.23g/t Ag, 0.94% Zn and 0.35% Pb and an Inferred Resource of 0.8 million tonnes at 0.50g/t Au, 8.62g/t Ag, 0.48% Zn and 0.17% Pb (at a cut-off grade of 0.2g/t Au).

The Company also has a number of early stage exploration projects where initial exploration activities have identified anomalous copper, molybdenum and gold values.

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Colin Sinclair, BSc, MSc, who is a Member of the Australasian Institute of Mining and Metallurgy and is currently employed by the Company in Chile.

Colin Sinclair has sufficient experience (over 30 years) which is relevant to the style of mineralisation, type of deposit under consideration, and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results'. Mr Sinclair, as Competent Person for this announcement, has consented to the inclusion of the information in the form and context in which it appears herein.

#### SRK Consulting (Chile) S.A. (SRK)

Metminco supplied SRK with a geological model and supporting drill hole data. Copper and molybdenum grades were estimated into a block model using ordinary kriging with VULCAN software.

The information provided in this ASX Release as it relates to Exploration Results and Mineral Resources of the Los Calatos copper deposit is based on information compiled by Joled Nur, Principal Mining Engineer (Geostatistics and Resources Estimation) SRK. Mr Nur, who is a Member of the Australasian Institute of Mining and Metallurgy, and is a Qualified Person for JORC 2012 compliant statements, performed the resource estimation. Mr Nur has sufficient experience that is relevant to the style of mineralisation and type of mineral deposit under consideration, and to the activity which was undertaken, to make the statements found in this report in the form and context in which they appear. Mr Nur has consented to be named in this announcement and inclusion of information attributed to them in the form and context in which it appears herein.

#### RungePincockMinarco

RungePincockMinarco ("RPM") is the world's largest publicly listed independent group of mining technical experts, with a history going back to 1968.

Listed on the Australian Securities Exchange on 27 May 2008 (ASX: RUL), RPM is a global leader in the provision of advisory consulting, technology and professional development solutions to the mining industry.

The RPM global team of more than 200 specialist advisors and mining consultants is regarded as one of the most experienced and trusted teams in the industry, with wide-ranging operational and technical expertise across commodities, continents and mining methods.

Further, the RPM global team's knowledge base has been gained through the conduct of work in over 118 countries, and their approach to the business of mining is strongly grounded in economic principles.

The company's cutting-edge mining software technology has been at the forefront for more than 30 years and continues to be sought after globally for mine planning including scheduling, simulation and financial analysis solutions. Their software continues to be used by miners, mining contractors, financial institutions and other service providers to the mining sector.

At present, RPM operate offices in 20 locations across 12 countries on five continents.

In accordance with Metminco's requirements, RPM conducted a strategic mining study to evaluate alternative high grade development scenarios for Los Calatos Project based upon the Mineral Resources estimate completed by SRK Consulting (Chile) S.A. in June 2015.

The review was conducted under the direction of Mr David Pires, Bsc,Msc,GCert. Mr Pires is a Chartered Professional Member of the Australasian Institute of Mining and Metallurgy and is a full-time employee of RPM as Regional Consulting Manager – Latin America.

RPM certify that the results reported by Metminco correspond to those obtained by RPM in the conduct of their study on Los Calatos entitled "Strategic Mining Study - Los Calatos" dated 14 September 2015.

The reader is cautioned that the actual operating costs, production and economic returns may differ materially from those anticipated by the Strategic Mining Study, and depend on a variety of factors, some of which are outside the control of RPM.

#### **Forward Looking Statement**

All statements other than statements of historical fact included in this announcement including, without limitation, statements regarding future plans and objectives of Metminco are forward-looking statements. When used in this announcement, forward-looking statements can be identified by words such as "anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will" and other similar words that involve risks and uncertainties.

These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, its directors and management of Metminco that could cause Metminco's actual results to differ materially from the results expressed or anticipated in these statements.

The Company cannot and does not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. Metminco does not undertake to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by applicable law and stock exchange listing requirements.

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### **INVESTOR PRESENTATION**



September 2015

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### **CORPORATE FOCUS – 3 INITIATIVES**

#### 1. DEVELOPMENT OF LOS CALATOS Cu-Mo PROJECT IN PERU

- RungePincockMinarco (RPM) Strategic Mining Study completed in accordance with a defined Scope of Work
- Development of Los Calatos commencing with an underground, sub-level cave, mining operation
- Favourable economics at a production rate of 6.5Mtpa, producing 1.1 million tonnes Cu in concentrate over a LoM of 22 years\*\*
- Engage with financial and strategic partners to fast track development
- Next steps: Test TD2 Target & commencement of Pre-Feasibility Study, Permitting and EIS Study

## 2. DEVELOPMENT OF MOLLACAS SX-EW COPPER PROJECT IN CHILE: SUPREME COURT HEARING LIKELY WITHIN 2 MONTHS

## 3. SECURE NEAR TERM CASH FLOW THROUGH OUTRIGHT PURCHASE OR JOINT VENTURE

<sup>\*\*</sup> Inferred Mineral Resources comprise 62% of the mineable tonnes for the LoM. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.



Los Calatos Project

### Priority high grade copper development project



- Estimated mineable quantity of 134.3Mt @ 0.89% Cu & 360ppm Mo (Mill head grade)
- LoM of 22 years with average steady state production rate of 50,000 tpa Cu in concentrate
- Underground sub-level cave operation
- Conventional sulphide flotation

- Excellent regional infrastructure
- Designated "Project of National Interest" by Peruvian Government
- Exploration targets may complement development
- Expansion potential with increasing copper price

## Located in prolific Cu – Mo mining district, Southern Peru

#### Close proximity to substantial open pit mining operations



Unit	Cuajone	Toquepala	Cerro Verde
Started production	1976	1960	1976
Reserves: <sup>1</sup> Cu grade	0.51%	0.55%	0.37%
Mo grade	0.019%	0.032%	0.020%
Cut-off grade (CuEq)	0.19%	0.23%	0.17%
Strip ratio	2.78	4.81	0.76
2014 Cu production (kt)	178	115	423
Open Pit Depth (m)	930	825	
Net Unit Cost (C1) \$/lb <sup>2</sup>	±1.05	±1.05	1.40

<sup>&</sup>lt;sup>1</sup> As at December 2014; <sup>2</sup> After by-product credits

## Project is highly deliverable – development risks low

#### Social Licence

- No exposure to local potable water issues
- No competing land use
- All surface rights covering the project will be acquired directly from the Peruvian government Project of National Interest status

#### Access to Power and Water

- Use of seawater for the operations access via a 75km pipeline
- Located in southern Peru with estimated long term power costs of 6 cents/kWh
- Power to be accessed via a dedicated 32km power line from Moquegua

#### > Regional Infrastructure

- Modest elevation (2,900m amsl) capable of supporting year round operations
- Close proximity to the regional city of Moquegua (65km)
- Large available work force in historical mining district
- Close proximity to port facilities accessible via the Pan American highway (e.g. loading facilities at Matarani)

## Pre-production capital expenditure

#### **Estimated pre-production capital**

Parameter	US\$ (millions)
Flotation plant, Mo plant, indirect costs	233
Underground mine including development, equipment and conveyor	58
Infrastructure including power supply, water pipeline, road access, site facilities, workshop & osmosis plant	216
Owners costs (mining management, technical support & other)	28
Land purchase	8
Contingencies	112
Total	655

Contingencies

• US\$655 million capex including contingencies of US\$112 million

**Sustaining capital** 

• To be funded from cash flow post-commencement of production

**Capex Optimisation** 

Significant opportunity to further optimise capex in PFS and FS

Average contingency of 25% on all capital



## **Key operational parameters**

#### **Life of Mine – Operational Parameters**

Parameter	Amount
Annual tonnes milled (millions)	6.5
Annual copper in concentrate (kt)	50
Annual molybdenum in concentrate (kt)	1.3
Mining costs (US\$/t)	14.27
Processing costs (US\$/t)	6.05
G & A costs (US\$/t)	1.34
By-product credits (US\$/lb copper)	0.40
Cash operating costs net of credits (US\$/lb copper)	1.29
Life of Mine (years)	22

Low cash operating cost

 Competitive C1 cash operating cost of US\$1.29/lb Cu net of by-product credits

**By- product credits** 

• Estimated by-product credit of US\$0.40/lb Cu



## **Key performance indicators**

#### **LoM Performance Indicators**

Parameter	LoM
Total tonnes mined (millions)	134.3
Average milled copper grade (%)	0.89
Average milled molybdenum grade (%)	0.036
Copper in concentrate (kt)	1,101
Molybdenum in concentrate (kt)	32
EBITDA (US\$ millions)	3,820
Unlevered cash flow before tax (US\$ millions)	2,541
NPV @ 8% (ungeared) (US\$ millions)	447

**NPV** 

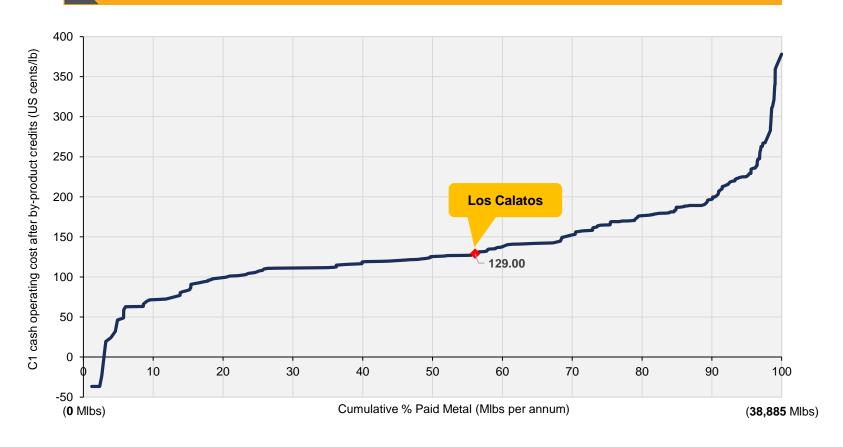
Opportunity to optimise capex and opex in PFS / FS and improve NPV

Long term median consensus metal prices (post 2019) from up to 40 institutions (source BMO) : Cu = US\$3.00/lb; Mo = US\$11.16/lb; Au = US\$1,250/oz; Ag = US\$19/oz. Re price = US\$5,773/kg (MNC)



## LoM cash costs – Comparison with global producers

#### Cash Cost Estimates (US cents/lb Cu) - 269 Projects / Mines



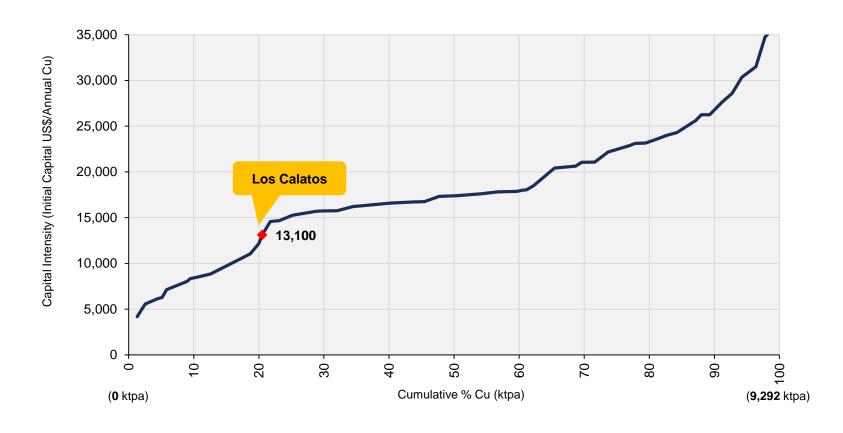
Source: Modified after WoodMackenzie (2015 Q2)

C1 costs defined as the net direct cash cost, representing the cash cost incurred at each processing stage, from mining through to recoverable metal delivered to market, less net by-product credits (if any)



## **Competitive capital intensity**

#### Capital intensity – Initial Capital (US\$) vs. Ave LoM Cu production (ktpa)



Source: Modified after Goldman Sachs – GS Copper 60 Projects (September '12)



## Good regional infrastructure

#### Road and Access

 Close to Pan American highway (50km) and the Port of Ilo (100km SW)

#### Power Supply

- Power will be sourced from the regional city of Moquegua 32km SSE of the project
- Power costs long term price 6c/kWh

#### Services Corridor

 Services corridor to be established to the coast – pumping of sea water to site

#### Water

- Sea water accessed for metallurgical processing
- Positive for securing community support

#### > Freehold - Site Infrastructure

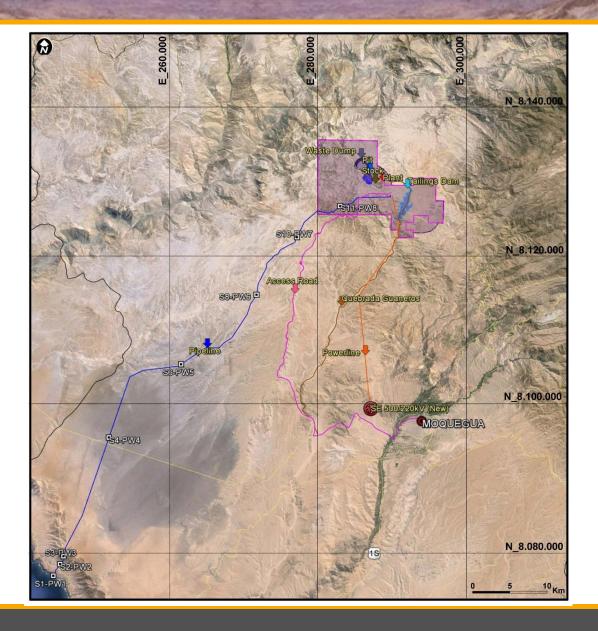
 Project located on State owned land to be purchased from government

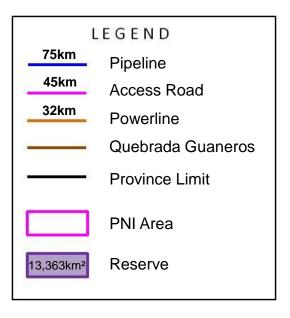
#### **Proposed Services Corridor**



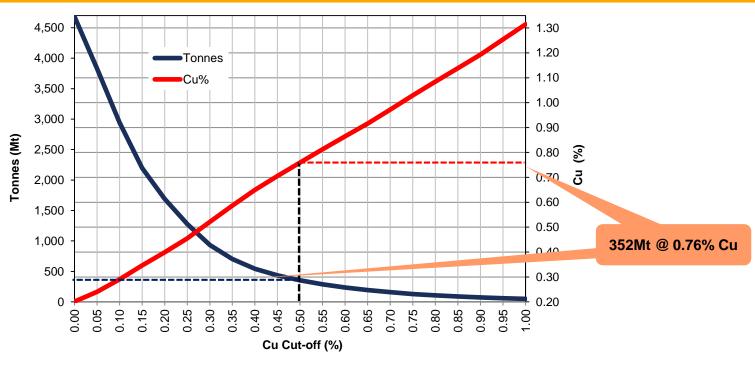
Source: Google Earth

## **Project infrastructure**



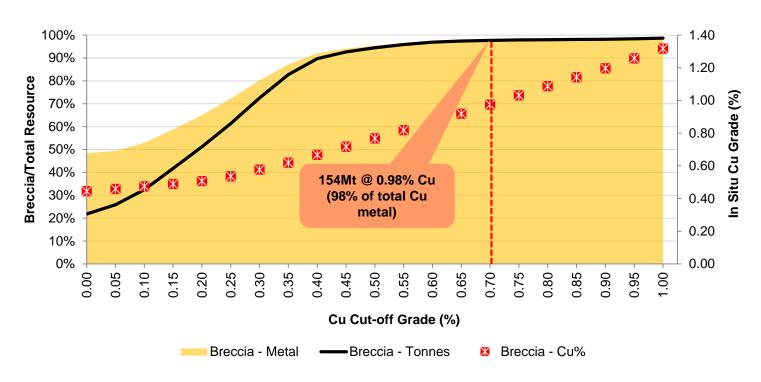


# Mineral Resource Estimate @ 15 June 2015 (JORC 2012)



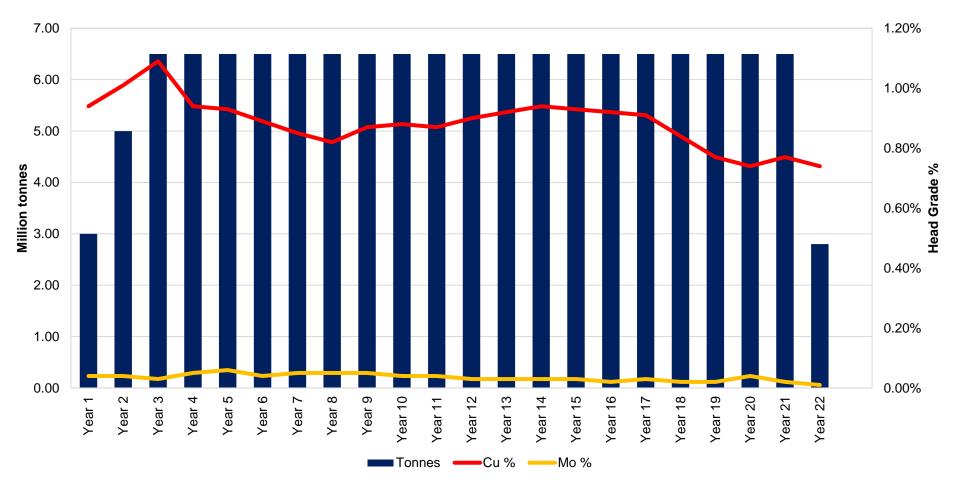
Cut-off		Measured			Indicated			Total M + I			Inferred			Total	
Cu	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо
(%)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)
0.20	285	0.42	323	361	0.38	174	646	0.40	239	1,045	0.40	141	1,691	0.40	179
0.30	183	0.52	387	187	0.50	234	371	0.51	310	564	0.53	190	935	0.52	238
0.40	114	0.63	460	101	0.63	296	215	0.63	382	327	0.66	228	542	0.65	289
0.50	73	0.73	513	64	0.73	345	137	0.73	434	216	0.78	245	352	0.76	318
0.60	47	0.84	545	42	0.83	374	89	0.83	464	147	0.88	258	236	0.86	336
0.70	31	0.94	566	28	0.92	393	59	0.93	483	99	1.00	261	158	0.97	344
0.80	20	1.04	581	19	1.00	412	39	1.02	499	66	1.12	257	106	1.08	347
0.90	13	1.14	603	13	1.08	426	26	1.11	516	47	1.24	243	72	1.19	340
1.00	8	1.26	650	7	1.18	461	16	1.22	561	33	1.36	232	49	1.31	338

## 98% of contained Cu metal in the breccias at a 0.70% Cu cut-off



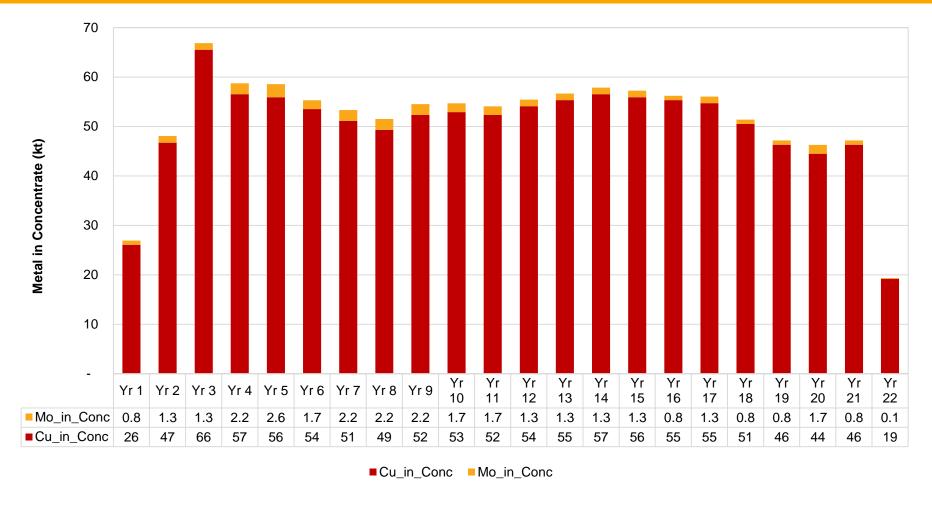
Cut-off	l N	/leasured		I	ndicated		To	otal M +	I		Inferred			Total	
Cu	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо	Tonnes	Cu	Мо
(%)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)	(Mt)	(%)	(ppm)
0.50	70	0.74	527	57	0.74	371	127	0.74	457	205	0.79	252	332	0.77	330
0.60	46	0.84	551	38	0.83	396	84	0.84	481	144	0.89	261	229	0.87	342
0.70	30	0.94	569	26	0.92	418	56	0.93	500	98	1.00	263	154	0.98	350
0.75	25	0.99	574	21	0.97	430	46	0.98	508	80	1.06	261	126	1.03	351
0.80	20	1.04	583	17	1.01	439	37	1.03	515	66	1.12	259	103	1.09	352
0.90	13	1.14	605	12	1.09	453	25	1.12	533	46	1.24	244	71	1.20	345
1.00	8	1.26	651	7	1.19	489	15	1.23	578	33	1.36	233	48	1.32	342

## Life of Mine production – mineable quantity & head grade



- ➤ Average mill head grade Cu = 0.89%
- Average mill head grade Mo = 0.036%

## Life of Mine Production – Cu & Mo concentrate



- > Average Cu-In-Concentrate per annum (steady state operations) = 50,000 tonnes
  - > Average Mo-In-Concentrate per annum = 1,300 tonnes

## Comparison: Los Calatos vs. Ernest Henry

Parameter	Los Calatos (Peru) Planned	Ernest Henry (Australia) Estimated
Mining Operation	Underground	Open Pit & Underground
Underground mining method	Sub-level caving	Sub-level caving
Ore Mined	134.3 Mt @ 0.89% Cu & 0.036% Mo	64.3Mt @ 1.03% Cu & 0.53g/t Au 1
Dip of mineralised zone (s)	Vertical	30° to 50°
Life of Mine	22 years	14 years
Annual Tonnes milled	±6.5Mtpa	±6Mtpa
Head Grade		
Cu (%)	0.89	0.96
Au (g/t)	n/a ³	0.48
Mo (ppb)	360	n/a
Recovery Rate		
Cu	92.5%	94.3%
Au	n/a	74%
Мо	68%	n/a
Annual Cu in concentrate	50,000	53,100
C1 Cash Operating Costs (post-credits)	US\$1.29/lb	US\$1.37/lb <sup>2</sup>

<sup>&</sup>lt;sup>1</sup> As at 31 December 2014

**Los Calatos** 

• Planned higher grade, lower tonnage, operation compares favourably with Ernest Henry mine

<sup>&</sup>lt;sup>2</sup> After Wood McKenzie (estimate for 2015)

<sup>&</sup>lt;sup>3</sup> Copper concentrate contains 1.25g/t Au and 42g/t Ag per tonne conc.

## Next steps .....

> REVIEW ECONOMICS OF RPM MINING STUDY Q3 2015

> ENGAGE WITH SUITABLE STRATEGIC AND FINANCIAL DEVELOPMENT PARTNERS

> DRILL TD2 EXPLORATION TARGET AS A PRIORITY

> PROCEED TO PRE-FEASIBILITY AND FEASIBILITY STAGE



Mollacas Project

### Mollacas in brief

100% owned, small undeveloped Copper Leach project

- Measured and Indicated Mineral Resource of 15.5Mt @ 0.51%CuT
- Project area of 33km² including 20 Exploration Concessions

Located in close proximity to infrastructure

- 55km ESE of Ovalle with road infrastructure and access to power
- Water rights held to  $\pm 175$  litres/sec from two canals

Comprehensive exploration program

Total of 16,280m of drilling completed (119 drill holes)

Comprehensive metallurgical test work completed

 Phase 3 test work results support higher copper recoveries and acid consumption of 10kg/t

**Scoping Study** 

 Scoping Study completed by SRK (2008) updated to include latest metallurgical test work results, and revised Opex and Capex estimates

Robust financials

- Life of Mine of >7 years producing up to 8,000t copper cathode per annum
- After tax NPV @ 8% of US\$75 million (Cathode Cu price = US\$3.10/lb)



## Copper leach project – Mineral Resource Estimate

#### Mineral Resource Estimate - Oxide & Secondary Sulphide Zone (July 2012)

Catagory	Tonnos (Mt)	Gra	ade		
Category	Tonnes (Mt)	CuT (%)	Cu_Sol (%)		
Measured	11.2	0.55	0.44		
Indicated	4.3	0.41	0.29		
Total	15.5	0.51	0.40		

Contained Metal				
CuT (t)	Cu_Sol (t)			
61,424	49,140			
17,687	12,510			
79,111	61,650			

Note: Reported at a 0.20% CuT cut-off grade

Data support:
July 2012 Resource

• 95 diamond drill holes (12,784m) and 24 reverse circulation drill holes (3,496m)

**Mineral Resource** 

Fully converted to Measured and Indicated categories

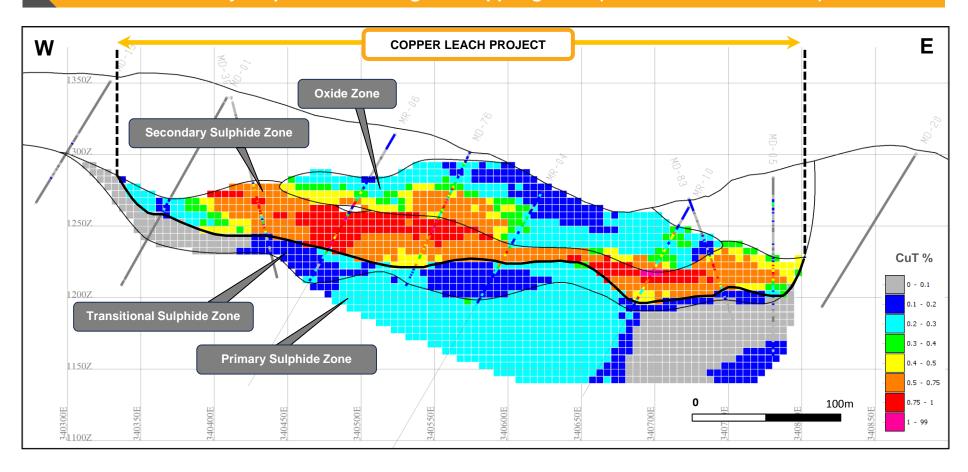
Low grade primary porphyry

• Transitional and primary resource of 18.8Mt at 0.28% CuT and 0.19g/t Au



## Mollacas target – supergene cap of primary porphyry

#### Secondary Sulphide Zone – highest copper grades (50 - 100m below surface)





## Phase 3 metallurgical testwork yields positive results



Checking the flow rates at the top of the 6 metre columns, SGS laboratory, Santiago, Chile.

- Two Stage Leach
  - 90 day Primary Leach at 5L/hm² at 6 g/L H₂SO₄
  - 210 day Secondary Leach at 2.5 L/hm² at 3 g/L H₂SO₄
- > Solution management via a series/parallel SX configuration

#### **Metallurgical testing**

- 16 columns representing 5 geometallurgical units
- Acid consumption in agglomeration stage 10kg/t ore leached
- > 85% soluble copper
- Ore crush size of P80 12mm to 16mm
- Stacked ore depth of 6 metres
- Opportunity to reduce acid consumption in agglomeration stage further



## Mollacas progressing towards development

#### Completed

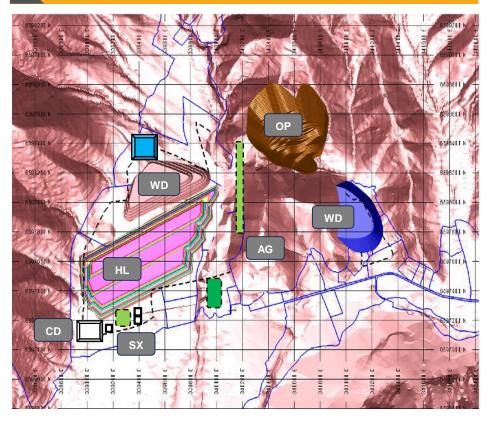
- Updated Scoping study
- Resource definition drilling
- Geotechnical design work for open pit & leach pads
- Phase 3 column leach test work
- Preliminary layout of mining infrastructure
- Environmental baseline study
- Provisional LoM Financial Model

#### **Planned**

(Pending Ruling by Supreme Court)

- Feasibility Study
- Environmental Impact Study

#### Preliminary layout – SX/EW operation



Open Pit

Heap Leach

SX/EW Plant

Crushing/Agglom

Containment dam

Waste Dump



## Life of mine financial model yields robust results

Physicals	Unit	Parameter
Mining rate	tpd	6,108
Crushing rate	ktpa	2,500
Tonnes leached	kt	14,500
Average Cu_Sol	%	0.42%
Payable Cu	tonnes	51,765
LoM	Years	7

Financials	Unit	Parameter
Total Capital Expenditure	US\$000's	52,306
C1 Cash Operating Costs	US\$/lb Cu	1.23

Project Economics	Unit	Parameter
NPV (after tax) @ 8%	US\$000's	74,921
IRR	%	37.2%
Payback	Years	2.44

Note: NPV & IRR ungeared.

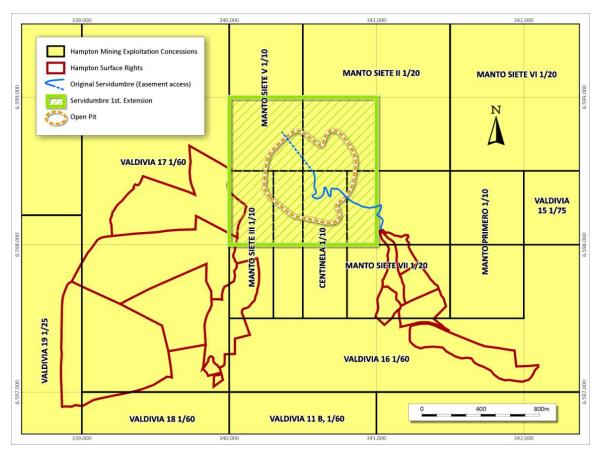
**Robust Financial Results** 

• After tax NPV @ 8% of US\$75 million, IRR =37% and Payback of 2.4 years



### Mollacas – Access Rights

- Metminco holds 21 Exploitation Concessions & surface rights to 179ha
- Private landowner holds surface rights over planned open pit
- First Extension to Initial Servidumbre / Easement declared invalid by the Court of Appeal of the IV Region
- Appeal against ruling lodged with the Supreme Court
- Work programme suspended pending outcome of Appeal to Supreme Court.
- Supreme Court hearing expected within 2 months
- Appeal based on application of Mining Code 15 and alleged "abuse of power" by the landowner



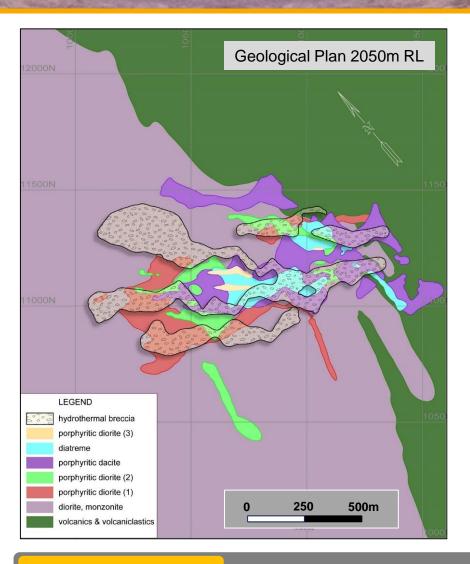


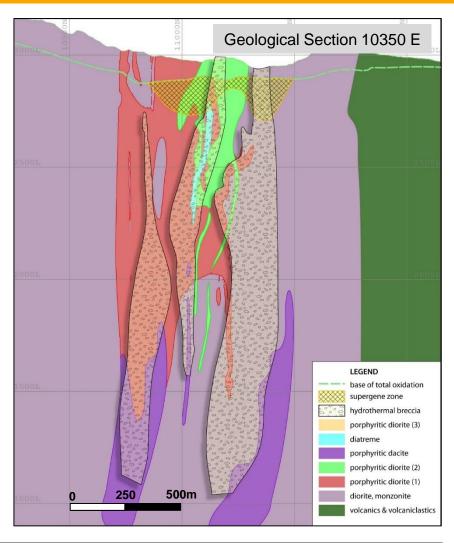


## APPENDIX 1

Los Calatos Geology & Mining

## Geometry of mineralised hydrothermal breccias

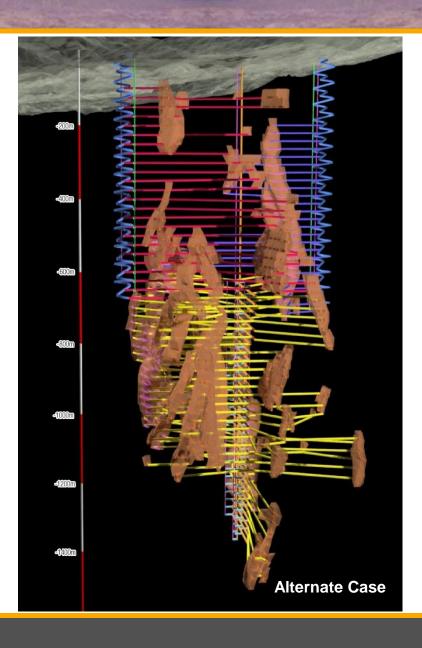




**Hydrothermal breccias** 

Exhibit well defined lateral and vertical continuity

## **Conceptual Mine Design – Looking East**



#### **Alternate Case**

Two Decline Systems and a Central Shaft System

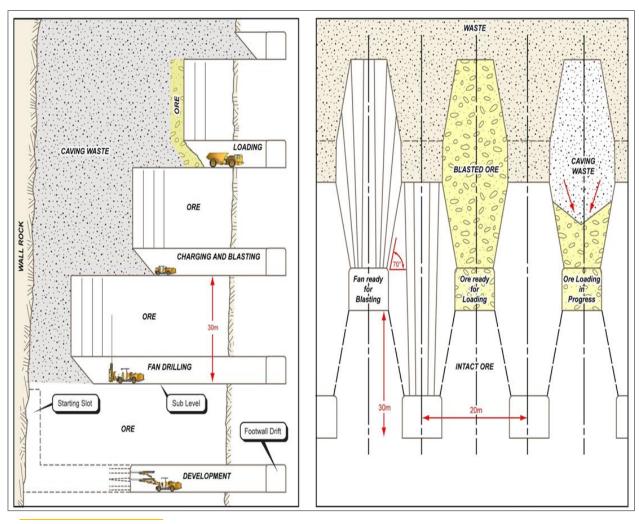
- Eastern Decline down to the 2,175mRL
- Western Decline down to the 2,300mRL
- Vertical Shaft System to extend below to the 1,550mRL

#### **Expansion Case**

Two Decline Systems and a Central Conveyor System

- Eastern Decline down to the 2,450mRL
- Western Decline down to the 2,450mRL
- Central Conveyor System to extend from 2,500m to below the 1,300mRL

## Primary mining method comprises sub-level caving



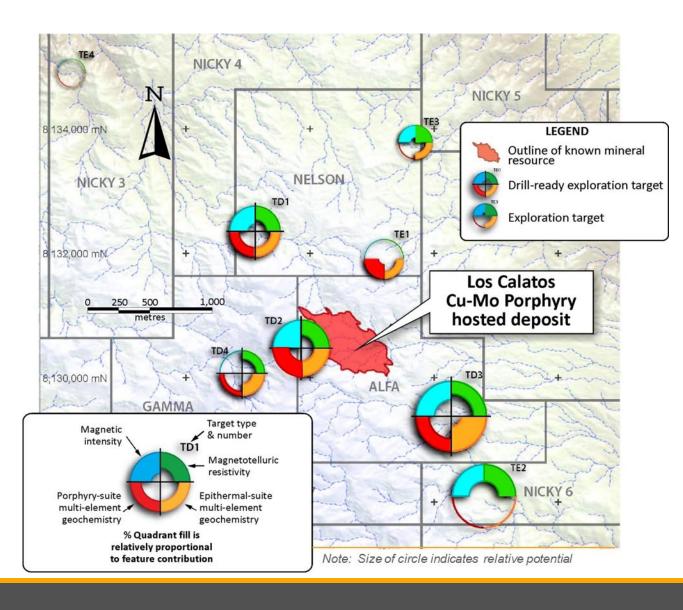
Source: Page & Bull (2001)



#### **APPENDIX 2**

Los Calatos Exploration Potential

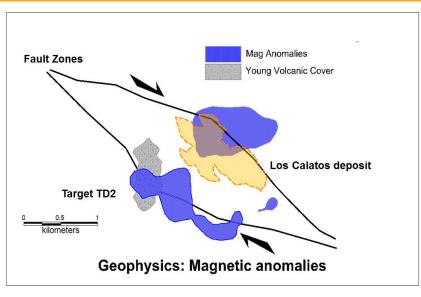
## 8 exploration targets identified in project area

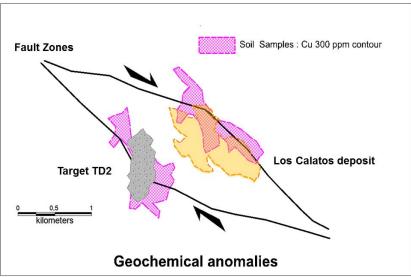


#### **Exploration Targets**

- 8 targets identified
  - 4 drill ready exploration targets (TD1 to TD4)
  - 4 exploration targets (TE1 to TE4)
- Targets defined on basis of geophysics and geochemistry
- Initial work suggests porphyry complex extends to the southeast
- Highest priority targets are TD2 and TD3
  - Located to southwest & southeast of estimated mineral resource
- Systematic exploration to follow

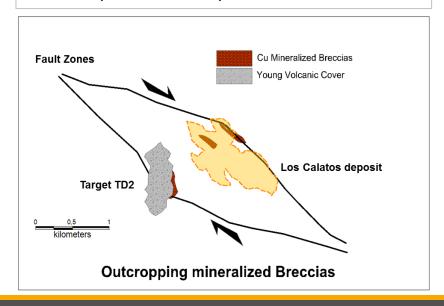
#### Target TD2 – shares a number of similarities with the Los Calatos deposit



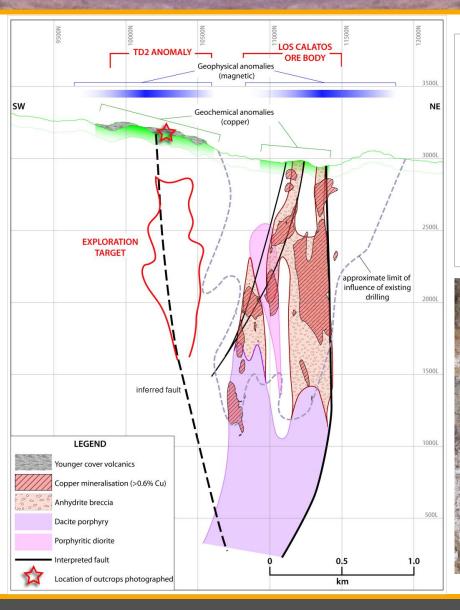


#### **Target TD2 – Drill Ready Target**

- Located in similar structural setting to the main Los Calatos deposit
- Supported by geophysics and geochemistry
- Outcropping, mineralised, breccias similar to those intersected in drill holes completed to-date
- Drill platforms and permits finalised



## Schematic cross section - Los Calatos and Target TD2



#### **Exploration Target TD2**

- Outcropping shallow-level hydrothermal breccia containing chrysocolla (hydrated copper cyclosilicate) mineralisation
- Extends over strike distance of >200 metres
- Presence of cryptocrystalline quartz indicative of the upper levels of a hydrothermal system possibly developed above a porphyry system.
- Similar to hydrothermal breccias that host the high copper and molybdenum grades within the defined Los Calatos deposit





## **APPENDIX 3**

Overview: Copper & Peru

#### Global copper supply – demand dynamics

#### > COPPER WILL REMAIN SUPPLY CONSTRAINED AND A DEFICIT IS EXPECTED IN 2018

- The outlook for copper remains compelling as emerging economies transition to consumption led growth
- Global copper demand is expected to grow at a CAGR of 2.3% to 2030
- In the near term new supply induced by high prices will marginally exceed demand growth
- Beyond 2018 a significant deficit is expected to emerge
- Decline in grade remains an ongoing challenge
- Existing and new greenfield supply will face potential shortages in available power and water supply
- These factors will also significantly impact the cost of global supply
- Estimates are that by 2025 the global deficit likely to be greater than 8Mtpa

Note: Production from current operating mines and committed new projects, copper grade data only available to 2025

Source: BHP Billiton and WoodMacKenzie

## Peru remains an attractive mining jurisdiction

Government type : Constitutional Republic.

Legal system : Based on civil law.

Executive branch: Chief of state and head of government: President Ollanta Humala (since July 2011).

Elections: Every five years by popular vote (non consecutive re-election). Next elections: April 2016.

Cabinet: Council of Ministers is appointed by the president.

Legislative branch: Unicameral congress. 130 seats - Members elected by popular vote.

Judicial branch: Judges are appointed by the National Council of the Judiciary.

Population: 30,475,144: Urban 75.1%; Rural 24.9%.

Standard & Poor's, Fitch and Moody's upgraded Peruvian sovereign debt to investment grade and currently this credit rating isn't at risk (2013).

International relationships: Member of the United Nations since 1945, member of the Security Council between 2006 and 2007; Member of the World Trade Organisation since 1995; In 1998 became a member of the Asia Pacific Economic Cooperation (APEC) forum.

Frazer Institute 2012/2013: Peru ranks 58 out of 96 countries based on Policy Potential Index (Score 42/100)

## **Economic performance 2009 to 2013**

Key Indicator	2009	2010	2011	2012	2013
Annual Percent Change					
Real GDP	0.9	8.8	6.9	6.3	6.3
Inflation (eop) <sup>1</sup>	0.2	2.1	4.7	2.8	2.0
Policy rate (eop %)	1.5	3.0	4.25	4.25	
Real exchange rate <sup>2</sup>	3.4	2.4	-1.0	8.8	
Percent					
Output gap <sup>3</sup>	-2.2	-0.2	0.2	0.0	-0.1
External current account	-0.5	-2.5	-1.9	-3.5	-3.5
Fiscal balance <sup>4</sup>	-1.6	-0.5	1.9	2.1	1.5
Public Debt <sup>4</sup>	28.4	24.6	21.6	19.3	17.2

Sources: Peruvian authorities & IMF staff estimates

- 1 Inflation target 1-3 percent
- 2 Effective Ave. (-) = real depreciation
- 3 Percent of potential GDP
- 4 Non financial public sector

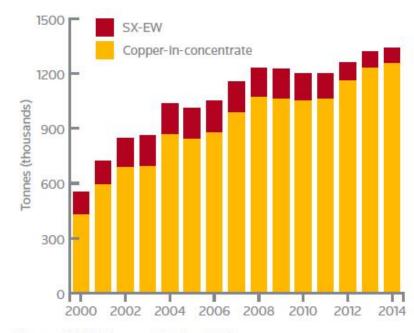
IMF Survey Magazine: Countries & Regions Peru: Latin America's Economic Performer

Following a decade of record-high growth, Peru's economy has remained strong and resilient despite the persistent global uncertainty, thanks to strong fundamentals, supportive terms of trade and sound policy management.

## Copper production to increase to 2.8Mtpa by end 2015

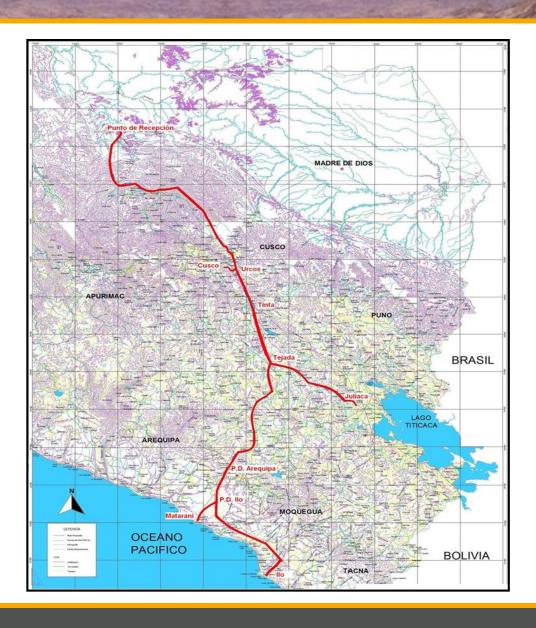
- ➤ Long history of mining, second largest producer of copper after Chile.
- Five major copper mines, with an estimated investment of \$13 billion, are expected to begin production in Peru before 2016, increasing the country's copper output from 1.3 million tonnes last year to 2.8 million tonnes.
  - Hudbay Minerals' \$1.55bn Constancia project.
  - MMG's \$5.2bn Las Bambas project.
  - Freeport McMoran's \$4.4bn expansion of the Cerro Verde mine.
  - Southern Copper's \$900 million expansion of the Toquepala mine.
  - Southern Copper's Tia Maria copper leach mine near Arequipa.
- ➤ Inclusive of Anglo American's Quellaveco project and Metminco's Los Calatos project, a further 300,000tpa of copper output is expected.

#### PERUVIAN MINE PRODUCTION



Source: GFMS, Thomson Reuters; ICSG

## Southern Peru gas pipeline – improved power costs



- Camesia gas pipeline now under construction - due for completion 2016/2017
- Gas to fuel power generation, explosives and agricultural industries and gas sales
- Will deliver long term low cost power to the Region
- Government indication to Minera Hampton Peru for long term power costs of 6c/kWh



## APPENDIX 4

Corporate

# Capital structure, shareholding & volumes traded

Listed ASX : AIM	MNC.AX MNC.L			
Share Price (17 Sept '15)	A\$0.005 [£0.002]			
Share price (52-Weeks)	A\$0.003 - A\$0.019			
Issued Shares	2,656m			
Market Capitalisation	A\$13.3m [£6.1m]			
Total options issued	569m			
Fully Diluted	3,225m			
Free Float	89%			
Debt	Nil			
Cash (30 June '15)	A\$2.0m			

Shareholding (30 June '15)					
Directors & Management	10.8%				
Top 10 Shareholders	31.8%				
Top 25 Shareholders	47.2%				
Daily Volumes Traded (ASX)					
3-months	3.73m				
6-months	4.17m				
12-months	3.20m				
Brokers					
NOMAD (London)	RFC Ambrian				
Joint Brokers (Australia)	RFC Ambrian & Patersons				

#### **Board of Directors**

#### **Executive and Non-Executive Directors**



Timothy (Tim) Read
Chairman

- Tim has over 40 years' experience in the metals and mining sector, firstly as a research analyst and then an investment banker, and most recently a corporate executive and director
- He was Co-Head of Mining Investment Banking at Merrill Lynch and subsequently Chief Executive of Adastra Minerals which was acquired by First Quantum and non-executive director for companies including Cumerio SA, Kopane Diamond Developments and Faroe Petroleum



William Howe Managing Director

- William has over 30 years' experience in the mining industry and has worked in southern and west Africa, Australia, South East Asia and North and South America
- He has been instrumental in the construction, development and operation of a number of new mining operations in Australia and South East Asia including the development of the first copper leach operation in Australia
- William was the founder of Hampton Mining and Straits Resources, Managing Director of Ghana Gold, Hargraves Resources, Selwyn Mines and Hampton Mining



**Dr Roger Higgins** *Non-Executive Director* 

- Roger was appointed to the Board on 8 October 2013.
- He has over 40 years of mining industry experience, which has included environmental, strategy, project development and operational roles.
- He commenced working in the industry as an engineering hydrologist working on pit flooding and tailings disposal issues.
- Subsequent experience included responsibility for projects and operations in arid Australia and the deserts of northern Chile, as well as in eastern and western Canada



**Dr Phillip Wing** *Non-Executive Director* 

- Phillip is a founding investor and founding Chairman of the Company having previously been responsible for capital raising and investor relationships in Australia and Asia
- He is currently Executive Chairman of a special purpose private equity firm and non-executive director of six investee companies ranging from medical devices to mining
- Phillip was most recently a Partner at Technology Venture Partners, a specialist venture capital firm in the technology sector



Steve Tainton Executive Director

- Steve is a geologist by profession and has over 30 years experience in the exploration and mining sector of Africa
- He started his career with Johannesburg Consolidated Investments, having held various positions in management including exploration through to business development
- Steve was Executive Director of Western Areas, prior to the sale to Gold Fields, and subsequently held the position of Senior Consultant Strategy for Gold Fields' SA region and thereafter joined Partners in Performance, a Sydney based consultancy group



Francisco Vergara-Irarrazaval Non-Executive Director

- Francisco has over 30 years' experience in the mining industry in Latin America
- He was Vice President at St. Joe Minerals Corporation, and later established Vergara & Cia, Law Firm, providing legal services to mining companies and engineering firms focused on natural resources, energy, shipping and salmon industry in Chile and agriculture

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