China Gold International Resources Corporation Limited

Jiama Copper-Polymetallic Project

Metrorkongka County, Tibet Autonomous Region People's Republic of China

FINAL

Pre-Feasibility Study Technical Report

Qualified Person:
Mr. Jeremy Clark, Principal Consulting Geologist (MAIG)
Mr. Anthony Cameron (FAUSIMM)
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Effective date of this report: 12th of November 2012
Project No. ADV-HK-03709

DATE AND SIGNATURE

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I, Jeremy Lee Clark, am working as a Geologist for Minarco-MineConsult, of Room 2101, Tower A, Ping An International Financial Centre No. 3 Xinyuan South Road, Chaoyang District Beijing 100027, China. This certificate applies to the Pre-Feasibility Study Technical Report on the Jiama Copper-Polymetallic Project, Metrorkongka County, Tibet Autonomous Region, China, prepared for China Gold International Resources Corporation Limited dated 12th of November 2012 (the "Technical Report"), do hereby certify that:

1. I am a registered member of the Australian Institute of Geoscientists ("AIG").

2. I am a graduate of the Queensland University of Technology and hold a B App Sc in Geology, which was awarded in 2001. In addition, I am a graduate of Edith Cowan University in Australia and hold a Graduate Certificate in Geostatistics, which was awarded in 2006.

3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 2001. During my professional career I have gained a wide range of experience in resource estimation techniques including at least 5 years actively working in metasomatic sedimentary type deposits which have similar styles of mineralisation to the Mineral Resource. This experience includes working and estimating resources both in underground and open pit operations in Western Australia, including the Saint Barbara gold operations at Southern Cross from 2001-2006, the gold Leonora operations in 2006 and the Jaguar mine (Pb-Zn-Ag) during his work with Jabiru mines in 2007. During this time Jeremy completed internal estimations (not public release) for the Marvel Loch, Golden Pig, Blue Haze, Jaccoleti, Nevoria, Jaguar, and Gwalia Deeps deposits, which have similar style of mineralisation to the skarn type mineralisation that host the mineralisation within the Project. As a Runge employee since 2007 to the present, I have worked on numerous epithermal base and precious metals deposit throughout the world including China, Central Asia, Europe, Africa, and North and South America. This work has included resource estimation of deposits which have similar styles of mineralisation to the Jiama deposit. All of these deposits were estimated in accordance with the JORC Code (Australia, Africa, Europe and Asia) or the NI-43.3-101 code (Canada, and South America) and resulted in public releases or Technical Reports, of which Jeremy was a Component or Qualified person and are available on the Australian Stock Exchange (ASX) or the Toronto Stock Exchange (TSX).

4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("Ni 43-101").

5. I inspected the Jiama Copper-Polymetallic Project during the week of 29th April 2012 for 3 days.

6. I am responsible for the preparation and supervision and final editing of all portions of the Technical Report.

7. I have had no prior involvement with the properties that are the subject of the Technical Report.

8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of China Gold International Resources Corporation Limited in accordance with the application of Section 1.4 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Pre-Feasibility Study Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Beijing, China, this 12thof November, 2012

"Jeremy Lee Clark" (QP)

Anthony Robert Cameron

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I, Anthony Robert Cameron, am working as a Mining Engineer sub-contracted to Minarco-MineConsult, of Room 2101, Tower A, Ping An International Financial Centre No. 3 Xinyuan South Road, Chaoyang District Beijing 100027, China. This certificate applies to the Pre-Feasibility Study Technical Report on the Jiama Copper-Polymetallic Project, Metrorkongka County, Tibet Autonomous Region, China, prepared for China Gold International Resources Corporation Limited dated 12th of November 2012 (the "Technical Report"), do hereby certify that:

1. I am a Fellow of The Australian Institute of Mining and Metallurgy ("AUSIMM").

2. I am a graduate of the Queensland University and hold a BE (Mining), which was awarded in 1988. In addition, I have been awarded a Graduate Diploma in Business by Curtin University in Western Australia as well as a Masters in Commercial Law by Melbourne University.

3. I have been continuously and actively engaged in the assessment, development, and operation of mineral projects since my graduation from university in 1988. As an independent mining consultant for the past 8 years, I have completed a range of projects including technical valuations, life-of-mine designs and scheduling, pit optimisation, development of economic models, mine reserves estimation and reporting. Prior to becoming a mining consultant Tony worked with a number of underground and open cut mining companies in coal and metalliferous mines in various roles. My management roles included Area Manager for Macmahon Contractors, Mining Manager for Tiwest, and open cut Mining Superintendent for Sons of Gwalia and St Barbara Mines.

4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("Ni 43-101").

5. I inspected the Jiama Copper-Polymetallic Project during the week of 29th April 2012 for 3 days.

6. I am responsible for the supervision and final review of Chapter 15, 16, 21 and 22 of the Pre-Feasibility Study Technical Report.

7. I have had no prior involvement with the properties that are the subject of the Technical Report.

8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of China Gold International Resources Corporation Limited in accordance with the application of Section 1.4 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Pre-Feasibility Study Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Beijing, China, this 12th of November, 2012

"Anthony Robert Cameron" (QP)

Andrew James Haigh Newell

Level 12, 333 Ann Street
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I, Andrew James Haigh Newell, am working as a Processing Engineer (Executive Consultant) for Pincock, Allen and Holt (fully owned by Runge Ltd), of Level 12, 333 Ann Street, Brisbane, Queensland, Australia, 4000. This certificate applies to the Pre-Feasibility Study Technical Report on the Jiama Copper-Polymetallic Project, Metrorkongka County, Tibet Autonomous Region, China, prepared for China Gold International Resources Corporation Limited dated 12th of November, 2012 (the "Technical Report"), do hereby certify that:

1. I am a Chartered Professional with the Australasian Institute of Mining and Metallurgy ("MAusIMMCP (Met)") and a Chartered Professional of the Institute of Engineers, Australasia ("MIEA CP").

2. I am a graduate of the University of Melbourne (Australia) and hold a B. E. (1st Class Honours) in Metallurgical Engineering, which was awarded in 1976. Additionally, I am a post graduate of the same institution in M.Eng. Sc. (Mineral Processing), which was awarded in 1985 and hold a doctorate (PhD, Mineral Processing) from the University of Cape Town (South Africa), which was awarded in 2008.

3. I have been continuously and actively engaged in the assessment, development, and operation of mineral processing projects since 1978.

4. I have worked on a large number of relevant projects in various technical and review capacities over this period in copper, copper-molybdenum and copper-lead-zinc.

5. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI- 43-101").

6. I am responsible for the preparation and the supervision and final editing of Chapter 13 and 17 of the Pre-Feasibility Study Technical Report.

7. I have had no prior involvement with the properties that are the subject of the Technical Report.

8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of China Gold International Resources Corporation Limited in accordance with the application of Section 1.4 of NI-43-101.

10. I have read NI-43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Pre-Feasibility Study Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Brisbane, Australia, this 12th of November, 2012

A. Newell

"Andrew James Haigh Newell" (QP)

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1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

Runge Asia Limited ("RAL"), trading as Minarco-MineConsult ("MMC"), was requested by China Gold International Resources Corporation Limited ("China Gold", the "Client" or the "Company") to complete a Pre-Feasibility Study Technical Report ("PFS" or the "Report") for the Phase II expansion of the Jiama Copper-Gold Project ("Project" or "Relevant Asset") in the Tibet Autonomous Region, People's Republic of China ("PRC"). The PFS meets the requirements of the Canadian National Instrument 43-101 ("NI 43-101") of the Canadian Securities Administrators.

China Gold is a Canadian mining company whose shares are dual listed on the Toronto Stock Exchange and Hong Kong Stock exchange. At the time of listing 39.95% of shares were publically held with the remainder of the shares held by Rapid Result (BVI) - (21.07%) and China National Gold Hong Kong - (38.95%) which is 100% owned by China National Gold (PRC). The Project is currently owned and operated by Tibet Huatailong Mining Development Company Limited ("Huatailong"), which is wholly owned by China Gold through a number of subsidiary companies.

1.2 SCOPE AND TERMS OF REFERENCE

This PFS includes a Mineral Resource and a Mineral Reserve estimate as defined in the NI 43-101 standards of disclosure for the Project. The level of accuracy of the overall PFS based on the various inputs which constitute the report is considered to be in the order of +/- 25%. Whilst areas of the PFS are at a much higher level of confidence MMC has assumed the lowest confidence when determining the overall PFS's accuracy level.

MMC's technical team ("the Team") consisted of Principal geologists, senior mining engineers, and process engineers. Mr Jeremy Clark (Geologist), Mr Tony Cameron (Mining Engineer), Mr Hongbo Liu (Mining Engineer) and Mr Jim Jiang (Processing Engineer) undertook a site visit to the Project for a period of 3 days beginning on the 29th of April 2012 to familiarise themselves with site conditions. During the site visits, MMC had open discussions with the Company personnel on technical aspects relating to the Project. MMC found the personnel to be cooperative and open in facilitating MMC's work.

In addition to work undertaken to generate an independent estimate of Mineral Resource and Mineral Reserves, this Report relies largely on information provided by the Company, either directly from the site and other offices, or from reports by other organisations whose work is the property of the Company and MMC has found no reasons not to rely on this information. The data relied upon for the Mineral Resource estimate completed by MMC and contained in this Report, have been compiled primarily by the Company and reviewed by MMC and MMC has found no reason not to rely on this information. The Report specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements/contracts that the Company may have entered into.

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

In MMC's opinion, the information provided by the Company was reasonable and nothing discovered during the preparation of the Report suggested that there was any significant error or misrepresentation in respect of that information and hence MMC has found no reason not to rely on this information.

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

1.3 STATEMENT OF MINERAL RESOURCES

MMC independently estimated the Mineral Resources contained within the Project, based on the data collected by the Company as at April, 2012. The Mineral Resource estimate and underlying data complies the guidelines provided in the NI 43-101, Standards of Disclosure for Mineral Projects, dated June 30, 2011. Therefore MMC believes it is suitable for public reporting and meets the reporting standards of Chapter 18 of the HKEx listing rules. The Mineral Resources estimates were completed by Mr. Jeremy Clark of MMC and are reported at a 0.3% Copper equivalent grade ("Cu-eq"), as referred to in **Section 14.11**. The results of the resource estimate for the Project are tabulated in ***Table 1-1*** for Cu, Mo, Pb and Zn.

During the review of the data MMC noted that whilst the mineralisation occurs all within a single mineralised body, Au and Ag mineralisation within the orebody had a significantly higher spatial variability than the other elements. As a result MMC has classified the Au and Ag resource presented in ***Table 1-2*** separately; this classification takes into account the proposed large scale mining techniques where Au and Ag will only be credits to the overall products from the operations. MMC has assumed that Au and Ag will not be used as a single cut-off grade for a selected mining block and will be mined in conjunction with the other elements.

The Mineral Resources are summarized in ***Table 1-1*** and ***Table 1-2***. The Mineral Resources presented in ***Table 1-2*** for Au and Ag are inclusive and not in addition to the Mineral Resources in ***Table 1-1*** and occur within the same mineralised body.

Table 1-1 Jiama Copper-Polymetallic Project - Cu, Mo, Pb and Zn Mineral Resources reported at a 0.3 % Cu-eq* Cut Off Grade as at 28th April 2012

Rock Type	Class	Quantity Mt	Cu %	Mo %	Pb %	Zn %	Cu Metal Kt	Mo Metal Kt	Pb Metal Kt	Zn Metal Kt
Skarn	**Measured**	35.6	0.71	0.048	0.11	0.07	252	17	38	25
	Indicated	293.2	0.73	0.043	0.07	0.06	2,135	127	201	163
	M+I	328.8	0.73	0.044	0.07	0.06	2,388	144	239	187
	Inferred	174	0.6	0.045	0.16	0.08	1,036	79	286	146
Hornfels	**Measured**	38.4	0.28	0.035	0.04	0.01	107	14	14	5
	Indicated	626.1	0.31	0.031	0.01	0.01	1,952	196	66	64
	M+I	664.5	0.31	0.032	0.01	0.01	2,059	210	80	69
	Inferred	219	0.29	0.034	0.03	0.01	633	74	72	32
Porphyr	**Measured**	2.1	0.22	0.056	0.01	0.01	5	1	0	0
	Indicated	57.7	0.33	0.043	0.01	0.01	188	25	4	6
	M+I	59.8	0.32	0.043	0.01	0.01	193	26	4	6
	Inferred	2.9	0.23	0.099	0.02	0.04	7	3	0	1
Total	**Measured**	**76**	**0.48**	**0.042**	**0.07**	**0.04**	364	32	52	30
	Indicated	**977.1**	**0.44**	**0.036**	**0.03**	**0.02**	4,275	348	271	232
	M+I	**1,053.1**	**0.44**	**0.036**	**0.03**	**0.02**	4,640	380	323	262
	Inferred	**395.9**	**0.42**	**0.039**	**0.09**	**0.05**	1,676	156	359	179

Note: Figures reported are rounded which may result in small tabulation errors.

Table 1-2 Jiama Copper-Polymetallic Project – Au and Ag Mineral Resources reported at a 0.3% Cu-eq* Cut Off Grade (>0.02 Au g/t) as at 28th April 2012.

Rock Type	Class	Quantity	Au g/t	Ag g/t	Au M Oz	Ag M Oz
Skarn	**Indicated**	256.5	0.31	17.01	2.537	140.290
	Inferred	117.0	0.39	16.50	1.472	62.077
Hornfels	**Indicated**	178.6	0.06	2.52	0.337	14.486
	Inferred	68.9	0.08	5.06	0.186	11.195
Porphyry	**Indicated**	15.7	0.24	8.22	0.121	4.145
	Inferred	0.4	0.11	10.79	0.001	0.128
Total	**Indicated**	**450.8**	**0.21**	**10.97**	**2.995**	**158.921**
	Inferred	**186.2**	**0.28**	**12.26**	**1.659**	**73.400**

Note: Figures reported are rounded which may result in small tabulation errors.

1.4 STATEMENT OF MINERAL RESERVES

A Mineral Reserve estimate has been independently estimated as at 28th April 2012 by MMC in accordance with the recommended guidelines of the NI 43-101 code. ***Table 1-3*** presents the Mineral Reserve estimate for the Project reported at a 0.35% Cu-eq cut-off grade for the Ore extracted via open cut methods and 0.5 to 0.65% Cu-eq cut-off grade for the Ore extracted via underground methods. Details on the Cu-eq calculations used in the Mineral Reserves are outlined in **Section 15.4**. The Measured and Indicated Mineral Resources reported in the Statement of Mineral Resources were modified to produce the Mineral Reserve estimate. The Mineral Resources are inclusive of, and not additional to the Mineral Reserve.

Table 1-3 Jiama Copper-Polymetallic Project Statement of NI 43-101 Mineral Reserve Estimate as at 28th April 2012

Type		Grade						Metals					
	kt	Cu %	Mo %	Au g/t	Ag g/t	Pb %	Zn %	Cu kt	Mo kt	Au t	Ag t	Pb Kt	Zn kt
Tongqianshan													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	2,632	0.57	0.014	0.15	8.05	-	-	15.0	0.37	0.39	21.2	-	-
Subtotal	**2,632**	**0.57**	**0.014**	**0.15**	**8.05**	**-**	**-**	**15.0**	**0.37**	**0.39**	**21.2**	**-**	**-**
Waste	7,770	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	2.95	-	-	-	-	-	-	-	-	-	-	-	-
Niumatang													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	15,328	1.24	0.044	0.57	25.77	-	-	189.5	6.74	8.78	394.9	-	-
Subtotal	**15,328**	**1.24**	**0.044**	**0.57**	**25.77**	**-**	**-**	**189.5**	**6.74**	**8.78**	**394.9**	**-**	**-**
Waste	141,919	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	9.26	-	-	-	-	-	-	-	-	-	-	-	-
South Pit													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	38,231	0.93	0.021	0.22	20.90	-	-	354.0	8.03	8.53	799.0	-	-
Subtotal	**38,231**	**0.93**	**0.021**	**0.22**	**20.90**	**-**	**-**	**354.0**	**8.03**	**8.53**	**799.0**	**-**	**-**
Waste	233,346	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	6.10	-	-	-	-	-	-	-	-	-	-	-	-
Jiaoyan													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	146,017	0.42	0.016	0.03	1.11	-	-	611.8	23.36	4.53	161.6	-	-
Subtotal	**146,017**	**0.42**	**0.016**	**0.03**	**1.11**	**-**	**-**	**611.8**	**23.36**	**4.53**	**161.6**	**-**	**-**
Waste	224,620	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	1.54	-	-	-	-	-	-	-	-	-	-	-	-
Underground (north)													
Proved	16,241	1.14	0.073	0.38	21.69	0.108	0.058	185.6	11.90	6.15	352.3	17.5	9.5
Probable	113,158	1.10	0.049	0.42	20.61	0.039	0.033	1,241.9	55.30	47.60	2,332.1	44.5	37.0
Subtotal	**129,399**	**1.10**	**0.052**	**0.42**	**20.74**	**0.048**	**0.036**	**1,427.5**	**67.20**	**53.75**	**2,684.4**	**62.0**	**46.5**
Waste	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Underground (south)													
Proved	8,673	0.63	0.014	0.29	0.38	0.116	10.855	54.8	1.26	2.48	3.3	10.1	941.5
Probable	23,190	0.67	0.016	0.09	10.82	0.094	0.125	155.1	3.76	2.05	251.0	21.8	28.9
Subtotal	**31,864**	**0.66**	**0.016**	**0.14**	**7.98**	**0.100**	**3.046**	**209.9**	**5.02**	**4.53**	**254.3**	**31.9**	**970.4**
Waste	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Total Reserves													
Proved	**24,914**	**0.96**	**0.053**	**0.35**	**14.27**	**0.111**	**3.817**	**240.4**	**13.15**	**8.63**	**355.6**	**27.6**	**950.9**
Probable	**338,556**	**0.76**	**0.029**	**0.21**	**11.70**	**0.020**	**0.019**	**2,567.3**	**97.57**	**71.88**	**3,959.8**	**66.4**	**65.9**
Total	**363,470**	**0.77**	**0.030**	**0.22**	**11.87**	**0.026**	**0.280**	**2,807.7**	**110.72**	**80.50**	**4,315.4**	**94.0**	**1,016.9**

Note: Figures reported are rounded which may result in small tabulation errors.
**Strip ratio units are waste tonne: ore tonne*

1.5 PROJECT SUMMARY

- The Project is located in Metrorkongka County, Tibet Autonomous Region, ehe PRC, approximately 68 linear km east-northeast of Lhasa, the capital city of Tibet and 3,600 km south west of Beijing. The Project can be accessed via highway G318 at a distance of 60 km from Lhasa, followed by an 8 km paved road, which connects the site offices, accommodation and Project area with the highway. Lhasa has daily international and domestic flights to a variety of destinations in addition to an operating rail network which connects Tibet to other provinces in China.
- The Project was first discovered in the early 1950’s with artisanal scale lead mining occurring within the area. Surface sampling and mapping was conducted over the area between 1951-1990 with modern exploration, inclusive of drilling completed between 1991 and 1999 by the No. 6 Geological Brigade. This work resulted in the issue of 4 mining licences to individual companies which produced ore at a small scale through both open cut and underground methods until April 2007. In April 2007 in accordance with an agreement between the Tibet government and China National Gold Group Corporation, the 4 mining licences, as well as the exploration licences in the surrounding areas, were consolidated into the reorganized Huatailong in late 2007, with China Gold Group HK as the primary shareholder. Production has been ongoing since re-commencement of mining in 2010 at a rate of 1.8 Mtpa ROM ore via two open cut pits, namely Tongqianshan and Niumatang.
- Huatailong completed four phases of exploration work between 2008 and 2011. In addition to the 145 surface diamond drill holes for a total of 47,443 m completed in 2008, Huatailong established survey control points using differential GPS instruments, based on the 1954 Beijing coordinate system and the 1956 Yellow Sea elevation system. A topographic survey on a 1:2,000 scale (2 m contours) over a total area of 13.8 sq.km was conducted by total stations, and the survey results were tied to the established survey control points. In 2009 a further 47 surface diamond drill holes for a total of 18,746 m were completed. These drill holes were generally infill drill holes, however additional step out drilling was complete to expand the defined resources. In 2010, Huatailong completed 99 surface drill holes for a total of 49,613 m. These holes included both infill drilling and extension holes along strike and down dip. Following a review of these holes Huatailong completed an additional 22 infill drill holes in 2011 within the proposed pit locations to enable detailed mine planning to be undertaken. These 22 surface diamond holes resulted in a total of 10,720 m being drilled and were the basis for updating of the Mineral Resources in 2012 and this PFS. MMC is aware further drilling is currently planned over the proposed South Pit which is aimed at upgrading the resource classification within the pit area.
- Stratigraphy outcropping in the Project area is dominated by clastic-carbonate rocks, including Upper-Jurassic Duodigou Formation limestones and marbles, Lower-Cretaceous Linbuzong Formation sandstones and slates, and Quaternary colluviums and alluviums, Mafic, intermediate to felsic dikes can be observed outcropping within the Project area and within drill holes, but no large intrusive bodies have yet been identified. It is suggested that a large granitic intrusive body exists at depth in the area and it has provided the intense heat source for the metamorphism and also the mineralizing solutions for the copper polymetallic mineralisation. Emplacement of the granitic intrusion would have resulted in metamorphism into marbles of a large portion of the Duodigou limestones, and the metamorphism into hornfels of Linbuzong clastic rocks.
- Three types of copper-polymetallic mineralisation are observed within the Project, these include Skarn, Hornfels and Porphyry hosted mineralisation. All three styles of mineralisation are structurally controlled with polymetallic mineral concentrations occurring along shear/structure zones. The mineralisation is offset by thrust and detachment faults and is associated with anticlines and synclines. Cu Mineralisation is mainly associated with the sulphide minerals chalcopyrite, bornite and chalcocite, which occur hosted by small sulphide veins, as disseminated sulphide crystals or massive sulphide zones. Molybdenum occurs as medium to coarse grained disseminated molybdenite predominantly within the porphyry and hornfels.
- MMC reviewed documentation for the sampling procedures, preparation, analysis, and security during their site visits in April 2012. From the review of the literature and documentation on the Project, MMC finds acceptable results from analytical work completed by previous operators who collected their samples according to standards and accepted practices at the time of the campaigns. Data has been reviewed by MMC by visiting a number of sampled locations in the field and evaluating the reported results against the mineralised rock observed in the field.
- The Company plans to operate four open cut mines, namely Tongqianshan, Niumatang, Jiaoyan and South Pit, and one underground mine, which is split into a north and south area. Phase I saw the development of the Tongqianshan and Niumatang open cut pits which have been in operation since 2010 and currently produce a combined rate of 1.8 Mtpa ROM ore. Under the Phase II expansion an additional 2 pits Jiaoyan and South Pit will be developed along with the underground mine. Until 2015 only open cut mining will be employed, however after 2015 a combination of open cut and underground mining methods will be used.
- The mine life is estimated to be 31 years based on the Mineral Reserve. The Project at full production has a planned average mining production rate of 13.6 Mtpa ROM ore from 2016 to 2039. During the final years of the mine life, production will be ramped down. Although during 2016 and 2019 production is planned exceed 13.6 Mtpa, MMC considers this achievable based on proposed equipment and processing plant capacity.
- Over the life of the mine open cut mining methods will extract 202.2 Mt of ROM ore while the underground mining methods will extract 161.3 Mt of ROM ore. Life of mine average ROM ore annual production rate from 2012 is planned to be 6 Mtpa and 6.3 Mtpa from open cut and underground respectively. During the earlier years of the

mine life, mining will focus on skarn ore, however as the mining progresses more hornfels and porphyry hosted ore will be targeted. The metals that are to be extracted by the Project are copper, molybdenum, gold, silver, lead and zinc. Copper is the primary economic metal.

- Contractors will be used to undertake all mining activities. Open cut mining will use conventional truck and excavator methods to mine the ore, while the underground methods consist of variations of open stoping and sublevel caving.
- Various ore pass systems underground will be used to transport crushed ore from the open pits and underground, via conveyor belt systems, to the ROM stockpiles on surface for use as feed material for the processing plants. The underground mine will be accessed via vertical shafts and a decline ramp for trackless equipment. While the open pit is still in operation a stoping method that employs a cemented fill will be utilised to maintain the stability of the open pit walls and floor. Upon completion of the open pit operations the sublevel caving ("SLC") mining method will be used to mine the material contained in the crown pillar, which is located under the floor of the open pit.
- Although only preliminary geotechnical studies have been completed to date on the Project, observations during the site visit indicate no geotechnical issues have occurred since the re-commencement of mining in 2010. Although geological logging and geological modeling completed indicates that no significant changes occur at depth in regards to structural complexity and potential stability of the rocks, MMC has used conservative geotechnical parameters in the mining studies. MMC believes there will be no material change to the proposed life of mine plan for the Project with additional data, however further studies are recommended to be undertaken to confirm the parameters used. Any refinement of the parameters such as pit slope angles and underground stope sizes will enable mine optimization to be undertaken of both the short and long term plans of the Project. No significant hydrological issues have been identified for the planned open cut or underground operations.
- MMC notes that the mining licence does not cover the entire proposed mining areas, however these areas are covered by an exploration licence. Additionally, based on mine planning studies completed to date, there appears that the proposed dumping areas are insufficient to accommodate all planned life of mine waste material. MMC is however aware that there is sufficient suitable land within the Project area so as to allow the Company to secure sufficient dumping space through the application of a land usage permit, as required by local regulations.
- The current mineral processing plants developed during Phase I includes the operating Huatailong 1.8 Mtpa processing plant (capacity of 6,000 tpd of Cu-Mo-Pb-Zn ores) and a pilot processing plant (capacity of 600 tpd of Cu-Pb-Zn ores). The Huatailong processing plant started operation in 2010, while the pilot plant has been in existence at the site for many years since modification from an old processing plant. The existing Huatailong processing facility was designed for recovery of Cu, Pb, Zn, Au and Ag by bulk flotation, followed by Cu-Pb-Zn flotation circuit and Cu-Mo separation flotation circuit, finally producing separate Cu, Pb, Zn and Mo concentrates. The current operation, however, only treats the Cu-Mo ore which due to the Mo content only produces a Cu concentrate with Au and Ag credits. Mo separation is not economic at this time and therefore Mo is not separated or credited.
- As part of its Phase II expansion plans the Company proposes that a new Huatailong processing plant be constructed to treat the copper-molybdenum sulphide ores from Project. It is forecast that it will have an overall rate of 40 ktpd ROM (i.e. 12 Mtpa ROM of Cu-Mo ores) and commence production in 2014. Once commissioned for operation, the overall processing capacity for the Project will be 13.8 Mtpa for Cu-Mo ores.
- The forecast life-of-mine capital costs for the Project are 705.1 MUSD, which includes 221.3 MUSD for processing and 456.0 MUSD for mine capital. The capital costs for Phase II have been estimated by the Changsha Institute and were presented in its October 2011 draft Chinese Feasibility Study report for the Jiama Project. MMC has reviewed these cost estimates and considers them to be reasonable for the Project. The mining capital costs are estimated to have an accuracy of ± 25%. Greater variations in the estimated capital costs may occur if there are changes to the proposed mine plan.
- The life of mine operating costs for the Project have been estimated by the Changsha Institute and were presented in its October 2011 draft Chinese Feasibility Study report for the Jiama Project. The estimated costs are detailed in ***Table 1-4***. MMC has reviewed these cost estimates and considers them to be reasonable for the Project.
- The life of mine average operating cash costs are USD 1.83/lb Cu or USD 1.62/lb Cu Equivalent taking into account the credits from other metals.

Table 1-4 Jiama Copper-Polymetallic Project – Life of Mine Operating Costs (USD/ t processed)

Cost Centre	USD/t waste	USD/t processed	USD/lb Cu Equivalent
Overburden Removal	2.09	6.30	
Open Cut Ore Mining		2.10	
Underground Mining		15.09	
Support		1.22	
Processing		10.89(Cu/Mo) / 8.85(Cu/Pb/Zn)	
Administration & Other Overheads		4.28	
Total Mine Operating Costs/t processed		39.87 / 37.83	
Metal Selling and Transport		2.21	
Average royalty per ROM tonne		2.38	
VAT		3.65	
Total Project Operating Costs/t processed		48.10 / 46.06	1.58 / 2.26

- Average annual net cash flow of USD 120 M over the life of mine for a total undiscounted cumulative net cash flow of approximately USD 3,634 M.

- NPV (post-tax) analysis has been completed at 7%, 9% and 11% discount rates. The base case reserve economic model results were estimated at a discount rate of 9%. The cumulative discounted cash flow at 9% is equal to USD1,240 M with an internal rate of return (IRR) of 55%. The project has negative cash flows in the first 4 years, which is due to the large initial capital expenditure required to upgrade of processing plant, mining, engineering and other facilities. However, the NPV becomes positive in 2016 and increases in value thereafter. After 25 years cash flows are discounted heavily and there is no great value being added to the NPV. Sunken capital of USD 270k from the original Phase I project development is not included in this NPV analysis but depreciation flowing through from this capital has been allocated for in the NPV Analysis. The pre-tax cumulative discounted cash flow at 9% is equal to USD1,471 M with an internal rate of return (IRR) of 62%.

- Economic model sensitivity analysis was completed on (Cu, Mo, Ag, Au and Pb) metal prices as well as capital cost estimates and operating cost estimates. The results indicate that the Project is sensitive to variations in metal price, operating costs, grades, recoveries and capital costs, in that order. As copper is the majority revenue source for the Project, the Project is most sensitive to the copper price.

1.6 RECOMMENDATIONS

The recommendations are based on observations made by MMC during the completion of this PFS and review of the associated documentation. The key recommendations for the Project are outlined below, and are detailed (including the associated costs in Section 26).

- While the current mining operations are within licenced areas, the Company must obtain an expanded mining licence, both in terms of area and production rate, to ensure all proposed open cut and underground operations are within a mining licence boundary and adhere to licenced production throughput limits. The areas under consideration are currently covered by a valid exploration licence and under Chinese mining regulation there is a well-defined and regulated process by which an exploration licence is converted to a mining licence, with the Company having commenced this process already. The conversion process includes the requirement for the Company to complete a Chinese Feasibility Study before applying for conversion to a mining licence. Additionally, it is MMC's understanding that under local regulations if the Company funds the bulk of the exploration costs, it will receive exclusive rights to convert the exploration licence to a mining licence upon completion of the Chinese Feasibility Study. Due to the above reasons, MMC believes that there is reasonable expectation that this conversion will happen in a timely fashion so as not to impact the Company's plans.

- Complete infill drilling of the South Pit Inferred Resource area to upgrade the resource classification to Indicated. This is likely to facilitate the decreased waste mining of the south pit and allow for further optimisation of the mining schedule.

- Upon completion of current infill drilling underway by the company an update of the resource model should be undertaken to reflect the revised understanding on controls on mineralisation allowing for a further upgrade in resource classification.

- Incorporation of the grade control blast hole data into the resource model is likely to lead to an improved understanding of the short range grade variability of the deposit and associated minerals. MMC recommends that automatic splitting and sampling attachments be added to the current blast hole drill rig fleet to improve sampling quality, and that QAQC practices in line with international standards be introduces to the assaying so as to allow this dataset to be included in future resource estimates.

- Complete sterilisation drilling at the proposed location for Jiaoyan dump to ensure that potentially valuable mineralisation is not present in this area.

- Additional detailed mine planning studies are required to:
  - Confirm, optimize and improve pit designs, scheduling and equipment selection for South Pit and Jiaoyan (this will require further geotechnical work but this work has potential to improve project economics);
  - Confirm final design parameters for South Pit and Jiaoyan, particularly those relating to the overall pit slope angle of 43°, which are considered conservative;
  - Confirm final design parameters used for the underground mine (this will require further geotechnical work);
  - Update the underground design to reflect the direct access of the south underground from the bottom of the South Pit open cut; and
  - Confirm initial conclusions that open-cuts and underground can operate efficiently and safely in tandem.
- Upon completion of further detailed mine planning and processing studies, updates to the schedules as well as operating and capital cost forecasts should be undertaken to assess their impact on the Project value.
- Complete further metallurgical testing of both skarn and hornfels ores to improve the molybdenum and precious metal recoveries especially in lower grade ore. Additional Skarn samples should be collected from the deeper portions of the orebody especially in the underground to confirm recoveries. Testing of the hornfels ore, which are mostly located in the Jiaoyan pit area, will be focused on further refining the Cu-Mo separation.
- Due to molybdenum feed grade variability in the various ores especially above 0.02% Mo, further metallurgical studies are recommended to better optimize the recovery of Mo. Additionally further Cu-Mo separation flotation tests are needed to determine the suitability of reagent and Mo cut-off grades for processing lower grade Mo ores.
- Perform regular metallurgical testwork to optimise process performance, the nature of plant operation and the potential for operational and process improvements.
- Future testwork needs to establish the recoveries and concentrate grades of all metals as a function of feed grade, ore type and mineralogy. MMC understands that the company has established a copper recovery-feed grade relationship for the skarn ore type based on available testing data and historical operational data, however this needs to be undertaken for copper for the other ore types and for molybdenum for all ore types.
- Additional marketing studies are recommended to better understand the metal price forecasts. This will reduce the Project risk and improve revenue predictability.

1.7 OPPORTUNITIES AND RISKS

The key opportunities for the Project include:

- Excellent opportunity to expand the current Mineral Reserves at the Project through completion of infill drilling presently being undertaken in the South Pit area. It is likely that this drilling will result in an upgrade of the inferred resource inside South Pit to at least Indicated status. Reserving of this material is also likely to increase the ore tonnage within the planned pit outline in turn increasing the mine life and reducing the strip ratio further especially in the earlier years of production as most of the inferred resources are located in the upper portions of the planned pit. This is likely to have a positive impact on the South Pit economics.
- Further optimisation of the scheduling for the open cut and underground resources is likely to lead to an increase in NPV through smoothing out of the overall project strip ratio and production profile. Improvement in the sequencing of material and optimizing waste and ore movement will allow for costs to be managed and for higher grade material to be brought forward therefore increasing the value of the deposit. This can be achieved by attaining a greater level of detail by running numerous options on the sequencing and scheduling of the pits as well as the sequence between the timing of when various pits come into production putting focus on high grade pits first to increase the value of the deposit through the time value of money.
- There is an opportunity to decrease underground development access costs through direct access of the underground from the bottom of the South Pit open cut. Detailed design work is required in the next phase of study to quantify this saving.
- There is potential to increase Mo recoveries at a lower cut-off grade as well as lower processing costs through further metallurgical testing focusing on optimising the flowsheet and use of alternative reagents. Pilot plant scale testing should be conducted to assess this opportunity.
- Further infill drilling in the underground portions of the deposit is likely to lead to an increased understanding on the mineralisation controls within the deposit, especially controls on the high grade shoot. Further domaining of these shoots will lead to improved underground scheduling and is likely to improve the overall project economics.
- Targeted exploration drilling from underground in the latter years is likely to increase the skarn portion of the resource at depth to the north east. MMC notes that based on available data the grade and alteration intensity decreases with increasing depth.

The key risks to the Project include:

- The current mining lease does not cover the total proposed mining areas or the proposed production rates. The proposed mining areas under consideration are currently covered by a valid exploration licence and under Chinese mining regulation there is a well-defined and regulated process by which an exploration licence is converted to a mining licence with the Company having commenced this process already. Additionally, it is MMC's understanding that as the Company has funded the bulk of the exploration work, they will receive exclusive rights to convert the exploration licence to a mining licence upon completion of the Feasibility Study. Hence MMC believes that there is reasonable expectation that this conversion will happen in a timely fashion so as not to impact the Company's plans.
- Further geotechnical studies should be undertaken to better understand the rock mechanics related to the Jiaoyan Pit, South Pit and the underground mine, as to date only qualitative descriptions regarding the stress distribution characteristics of rock mass in the rock mechanics and general estimations regarding the ground surface caving have been able to be completed to date. Implementation of ongoing geotechnical monitoring for the open cuts and underground mine when in operation will be crucial to optimising pit and ground control designs.
- Jiaoyan pit poses a great risk to the overall project Net Present Value. Jiaoyan is a low grade hornfels Cu-Mo ore body which at current modifying factors is considered of marginal value. Jiaoyan only contains low grade in-situ copper grades whereby a further decrease in copper prices will see this pit cause serious detriment to the overall open cut viability. To mitigate this risk a detailed mine plan will need to be created as well as delaying the introduction of this pit in relation to the overall timing within the project to maximize high grade deposits first to increase the overall deposit value. Further metallurgical studies focused on increasing recovery of copper and/or molybdenum from the hornfels ore type which dominates Jiaoyan is also likely to improve the pits overall economics.
- Factors that affect the processing extraction efficiency include the following:
    - The ore mineralogy, particularly mineral type, size and association;
    - The ore type;
    - The feed grade;
    - Any oxidation of the ore;
    - Plant availability / continuity or operation.
    - Operational issues such as:
        - Experience of operators;
        - Control systems e.g. level control in flotation cells
        - Grind size not being achieved

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

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

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

Drafts of the Report were provided to the Company, for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in the Report. This Report is mainly based on information provided by China Gold, either directly from the Project site and other associated offices or from reports by other organisations whose work is the property of the Company. The Report is based on information made available to MMC up to July 31, 2012.

2 INTRODUCTION AND TERMS OF REFERENCE

2.1 BACKGROUND

Runge Asia Limited ("RAL"), trading as Minarco-MineConsult ("MMC"), was requested by China Gold International Resources Corporation Limited ("China Gold", the "Client" or the "Company") to complete a Pre-Feasibility Study Technical Report ("PFS" or the "Report") of the Jiama Copper-Gold Project ("Project" or "Relevant Asset") in the Tibet Autonomous Region, People's Republic of China. The PFS meets the requirements of the Canadian National Instrument 43-101 ("NI 43-101") of the Canadian Securities Administrators.

China Gold is a Canadian mining company whose shares are dual listed on the Toronto Stock Exchange and Hong Kong Stock exchange. At the time of listing 39.95% of shares were publically held with the remainder of the shares held by Rapid Result (BVI) - (21.07%) and China National Gold Hong Kong - (38.95%) which is 100% owned by China National Gold (PRC). The Project is currently owned and operated by Tibet Huatailong Mining Development Company Limited ("Huatailong"), which is wholly owned by China Gold through a number of subsidiary companies.

2.2 TERMS OF REFERENCE

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

- China Gold refers to China Gold International Resources Corporation Limited,
- MMC refers to Minarco-MineConsult and its representatives.
- Project refers to the Jiama Copper-Polymetallic deposit located in Metrorkongka County, Tibet Autonomous Region, People's Republic of China.
- Copper (Cu), molybdenum (Mo), lead (Pb) and zinc (Zn) grades are described in terms of a percentage (%) with tonnage stated in dry metric tonnes, gold (Au) and silver (Ag) grades are described in terms of grams per dry metric tonne (g/t)
- Mineral Resources and Mineral Reserves definitions are as set forth in the "Canadian Institute of Mining, Metallurgy and Petroleum, CIM Standards on Mineral Resource and Mineral Reserves – Definitions and Guidelines" adopted by CIM Counsel on December 11, 2005.

2.3 SOURCE OF INFORMATION

The primary document sources for this Report are:

- "Resource Update Report on the Jiama Copper Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, The People's Republic of China". NI 43-101 Technical Report, March 2012, Behre Dolbear Asia Incorporated.
- Draft "Jiama Copper-Polymetallic Project Phase II Feasibility Study Report". October 2011, Changchun Gold Design Institute and Changsha Nonferrous Metals Design & Research Institute.
- "Jiama Copper-Polymetallic Project Phase I Feasibility Study Report". December 2009, Changsha Nonferrous Metals Design & Research Institute.

2.4 COMPETENT PERSON AND RESPONSIBILITY

2.4.1 Mineral Resource

The information in this Report that relates to Mineral Resources is based on information compiled by or under the supervision of Mr Jeremy Clark who is a full time employee of MMC and a Member of the Australian Institute of Geoscientists. Jeremy Clark has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Qualified Person as defined by the National Instrument 43-101 ("NI 43-101").

The Mineral Resource estimate complies with the standards set forth by NI 43-101. Therefore it is suitable for public reporting.

2.4.2 Mineral Reserves

The information in this Report that relates to Mineral Reserves is based on information provided in the draft Chinese Feasibility Study Report prepared by Changchun Gold Design Institute and Changsha Nonferrous Metals Design & Research Institute and was reviewed by Mr Anthony Cameron who was an associate for of MMC at the time of Mineral Reserve estimate and a Fellow of the Australasian Institute of Mining and Metallurgy. Anthony Cameron has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity, which he has undertaken to qualify as a Qualified Person as defined under the NI 43-101 Code.

The Metallurgical and Processing aspects of the project have been reviewed by Mr Andrew Newell a full time employee of MMC at the time of the Mineral Reserve estimate and a Chartered Professional of the AusIMM. Andrew Newell has sufficient experience which is relevant to the style of mineralisation and proposed processing methods under consideration, which he has undertaken to qualify as a Qualified Person as defined under the NI 43-101 Code.

2.4.3 HKEx Requirements

Jeremy Clark meets the requirements of a Competent Person as the term is defined in the Chapter 18 of the Listing Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited, and in that capacity takes overall responsibility for this PFS report for the purposes of Listing Rule 18.21(3).

These requirements include:

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

Jeremy has over 10 years of experience working in the mining industry. During this time he has been responsible for the planning, implementation and supervision of various exploration programs, open pit and underground production duties, detailed structural and geological mapping and logging. He has a wide range of experience in resource estimation techniques. Jeremy's experience has included at least 5 years actively working in metasomatic sedimentary type deposits which have similar styles of mineralisation to the Mineral Resource. His experience includes working and estimating resources both in underground and open pit operations in Western Australia, including the Saint Barbara gold operations at Southern Cross from 2001-2006, the gold Leonora operations in 2006 and the Jaguar mine (Pb-Zn-Ag) during his work with Jabiru mines in 2007. During this time Jeremy completed internal estimations (not public release) for the Marvel Loch, Golden Pig, Blue Haze, Jaccoleti, Nevoria, Jaguar, and Gwalia Deeps deposits, which have similar style of mineralisation to the skarn type mineralisation that host the mineralisation within the Project. He is a member of the Australian Institute of Geoscientists ("MAIG").

During his work with Runge from 2007 to the present, Mr Jeremy Clark has worked on numerous epithermal base and precious metals deposit throughout the world including China, Central Asia, Europe, Africa, and North and South America. This work has included resource estimation of deposits which have similar styles of mineralisation to the deposit. These deposits include but are not limited to the Shisishan Polymetallic Project (China Polymetallic Mining) in China, Central Ashanti Gold Project (Perseus Mining) in Ghana, the Gurupi Au-Ag deposit in Brazil (Jaguar Mines), the Sierra Mojada (Pb-Zn-Ag) deposit in Mexico (Metalline Mining), the Daisy Milano and Murchison Operations (Silver lake Resources) in Western Australia, the Silver Coin Gold deposit (Au-Ag-Zn-Pb) (Jayden Resources Canada) in Canada. All of these deposits were estimated in accordance with the JORC Code (Australia, Africa, Europe and Asia) or the NI-43.3-101 code (Canada, and South America) and resulted in public releases or Technical Reports, of which Jeremy was a Component or Qualified person and are available on the Australian Stock Exchange (ASX) or the Toronto Stock Exchange (TSX).

2.5 LIMITATIONS AND EXCLUSIONS

The review was based on various reports, plans and tabulations provided by the Client either directly from the mine sites and other offices, or from reports by other organisations whose work is the property of the Client. The Client has not advised MMC of any material change, or event likely to cause material change, to the operations or forecasts since the date of asset inspections.

The work undertaken for this Report is that required for a technical review of the information, coupled with such inspections as the Team considered appropriate to prepare this Report. It specifically excludes all aspects of legal issues, commercial and financing matters, land titles and agreements, excepting such aspects as may directly influence technical, operational or cost issues.

MMC has specifically excluded making any comments on the competitive position of the Relevant Asset compared with other similar and competing copper/polymetallic producers around the world. MMC strongly advises that any potential investors make their own comprehensive assessment of both the competitive position of the Relevant Asset in the market, and the fundamentals of the polymetallic market at large.

2.6 RESPONSIBILITY AND CONTEXT OF THIS REPORT

The contents of this Report have been created using data and information provided by or on behalf of the Company. MMC accepts no liability for the accuracy or completeness of data and information provided to it by, or obtained by it from, the Company, the Client or any third parties, even if that data and information has been incorporated into or relied upon in creating this Report. The Report has been produced by MMC using information that is available to MMC as at the date stated on the cover page. This Report cannot be relied upon in any way if the information provided to MMC changes. MMC is under no obligation to update the information contained in the Report at any time.

2.6.1 Indemnification

The Company has indemnified and held harmless MMC and its subcontractors, consultants, agents, officers, directors, and employees from and against any and all claims, liabilities, damages, losses, and expenses (including lawyers' fees and other costs of litigation, arbitration or mediation) arising out of or in any way related to :-

- MMC's reliance on any information provided by the Company; or
- MMC's services or Materials; or
- Any use of or reliance on these services; and

In all cases, save and except in cases of wilful misconduct (including fraud) or gross negligence on the part of MMC and regardless of any breach of contract or strict liability by MMC.

2.7 INTELLECTUAL PROPERTY

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

MMC grants the Client a non-transferable, perpetual and royalty-free Licence to use this Report for its business purposes and to meet its continuous disclosure obligations under applicable securities laws and stock exchange rules, and to make as many copies of this Report as it requires for those purposes.

2.8 MINING FACTORS

The ability of the operator, or any other related business unit, to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond the control of MMC and cannot be fully anticipated by MMC. These factors included site-specific mining and geological conditions, the capabilities of management and employees, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, etc. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining operation.

2.9 CAPABILITY AND INDEPENDENCE

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

MMC has independently assessed the Relevant Assets of the Client by reviewing pertinent data, including resources, reserves, manpower requirements and the life of mine plans relating to productivity, production, operating costs and capital expenditures. All opinions, findings and conclusions expressed in this Report are those of MMC and its specialist advisors.

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

MMC has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report. None of MMC or its directors, staff or specialists who contributed to this Report has any interest or entitlement, direct or indirect, in:

- the Company, securities of the Company or companies associated with the Company; or
- the Client, securities of the Client or companies associated with the Client;
- the right or options in the Relevant Assets; or

- the outcome of the proposed release.

This PFS was prepared on behalf of MMC by the signatories, details of whose qualifications and experience are set out in ***Annexure A*** of this PFS. The Specialists who contributed to the findings within this Report have each consented to the matters based on their information in the form and context in which it appears.

3 RELIANCE ON OTHER EXPERTS

During the preparation of this Report MMC has relied on the background information provided in Sections 4, 5, 6, 7, 8, 20 and 23 of the report entitled “Resource Update Report for the Jiama Copper-Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, People’s Republic of China” compiled by Behre Dolbear Asia Incorporated dated March 2012. None of the technical work presented by Behre Dolbear Asia was relied upon in MMC’s own technical work including the estimate of Mineral Resources and Mineral Reserves.

All other Sections of this Report, with the exception of Section 3, were prepared using information provided by the Company and verified by MMC and were applicable or based on observations made by MMC during the site visit.

The “Jiama Copper-Polymetallic Project Phase II Feasibility Study Report”. - Draft - October 2011 (Chinese Feasibility Study) compiled by the Changchun Gold Design Institute and Changsha Nonferrous Metals Design & Research Institute, details the Project’s proposed Phase II expansion mining operating profile and development schedule. The Institute is an ‘A’ rated design institute in China which is the highest level of accreditation achievable. MMC has completed a review of the Chinese Feasibility Study, including an analysis of the mine design parameters utilised. This review determined that the Chinese Feasibility Study has been completed in line with Chinese Standards and the mine design parameters were appropriate and suitable for the Project and as a result formed the basis for the mine design and planning which MMC completed.

MMC has not conducted land status evaluations, although MMC has sighted the copies of the original certificates regarding property status, legal title, and environmental compliance for the Project. MMC has not completed a legal review of any claims record or any agreement regarding mineral claims of the Project and the information here presented is based solely on reports provided by China Gold and is provided for reference only, and should not be relied upon.

4 PROPERTY DESCRIPTION AND LOCATION

The Project is a large copper-polymetallic deposit with two active open pits and a planned underground mining operation. The Project has been in production since July 2010 with a current mining capacity of 6,000 tonnes per day ("tpd"). The Company plans to operate four open cut mines, namely Tongqianshan, Niumatang, South Pit and Jiaoyan, and one underground mine, which is split into a north and south areas. The Project is planned to be developed in two phases:

- Phase I - This stage commenced in June 2010 with the construction of a 1.8 Mtpa ROM ore floatation processing plant and related tailings storage facilities ("TSF") as well as development of the Tongqianshan and Niumatang open pits. In addition to the processing facility and open pits, Phase I infrastructure, which has been built, includes site offices, accommodation and site road access. At the time of MMC's site visit the plant and open cuts were operational with the Cu concentrate (containing Au and Ag credits) being trucked to Lhasa, where it is loaded onto trains for delivery to costumers located within China.
- Phase II – This stage is forecast to commence in 2015 with a ramp up to a maximum processing production capacity of 13.8 Mtpa ROM ore by the end of 2016. In addition to the Phase I pits, Jiaoyan and South pit will be developed along with the underground operation. Construction of a new processing plant with an annual throughput of 12.0 Mtpa ROM ore is planned to occur which will allow for the production of two products; Cu concentrate, Mo concentrate respectively. The original 1.8 Mtpa floatation plant from Phase I will be upgraded to produce separate Pb and Zn concentrates. Both of these will also include credits of Au and Ag.

4.1 PROJECT LOCATION

The Project is located in Metrorkongka County, Tibet Autonomous Region, The People's Republic of China (***Figure 4-1***), approximately 68 linear km east-northeast of Lhasa, the capital city of Tibet with coordinates of:

- Latitude - 91°43'06" East;
- Longitude - 29°37'49" North.

4.2 PROPERTY OWNERSHIP

MMC has not conducted land status evaluations, although MMC has sighted the copies of the original certificates regarding property status, legal title, and environmental compliance for the Project. MMC has not completed a legal review of any claims record or any agreement regarding mineral claims of the Project and the information here presented is based solely on reports provided by China Gold and is provided for reference only, and should not be relied upon.

The Project is currently owned and operated by Tibet Huatailong Mining Development Company Limited ("Huatailong"), which is wholly owned by China Gold through a number of subsidiary companies. The Project currently comprises two permits for mining rights and two permits for exploration rights, the details of which can be found from ***Table 4-1*** to ***Table 4-4*** and graphically in ***Figure 4-2***.

The currently defined Mineral Resources and Mineral Reserves are hosted within these licences, which have a total combined area of approximately 142.6 sq.km. Some of the Mineral Resources and Mineral Reserves are currently hosted outside of the current mining licence but within the exploration licence. MMC understands that under Chinese mining regulation there is a well-defined and regulated process by which an exploration licence is converted to a mining licence with the Company having commenced this process already. Additionally, it is MMC's understanding that as the Company has funded the bulk of the exploration work, they will receive exclusive rights to convert the exploration licence to a mining licence upon completion of the Chinese Feasibility Study. Hence MMC believes that there is reasonable expectation that this conversion will happen in a timely fashion so as not to impact the Company's plans.

MMC has sighted copies of the mining licences and exploration licences provided by Huatailong and considers that they are typical of mining and exploration licences issued by relevant governmental agencies in China and appear to be current.

Table 4-1 Jiama Copper-Polymetallic Project – Mining Licence C5400002010073210070276.

Mine/Project	Jiama Copper Polymetallic Mine Niumatang Zone
Name of certificate	Mining Licence
Certificate No.	C5400002010073210070276
Owner	Tibet Huangtailong Mining Development Company Ltd.
Address	Lhasa Jinzhu middle road
Mine name	Jiama Copper Polymetallic Mine Niumatang Zone
Company Type	Limited Liability Company
Metal	Copper, Molybdenum, Lead, Zinc
Mining Type	Open Cut
Scale	0.9Mt/year
Area	0.7352 sq.km.
Mining Elevation	From 5,000m to 4,100m
Validation	July 15th, 2010 to July 15th, 2015
Issue Date	July 15th, 2010

Source: MMC sighted licence copies

Table 4-2 Jiama Copper-Polymetallic Project – Mining Licence C5400002011113220119758.

Mine/Project	Jiama Copper Polymetallic Mine 0-16-40-80, 0-15 Zone
Name of certificate	Mining Licence
Certificate No.	C5400002011113220119758
Owner	Tibet Huangtailong Mining Development Company Ltd.
Address	13F, Foreign Economy & Trade Building, Lhasa Jinzhu West road 75
Mine name	Jiama Copper Polymetallic Mine 0-16-40-80, 0-15 Zone
Company Type	Limited Liability Company
Metal	Copper
Mining Type	Underground
Scale	2.00Mt/year
Area	2.1589 sq. km
Mining Elevation	From 4,350m to 4,100m
Validation	November 1st, 2011 to November 1st, 2014
Issue Date	November 1st, 2011

Table 4-3 Jiama Copper-Polymetallic Project – Exploration Licence T54520080702010972.

Mine/Project	Jiama periphery copper lead mine general exploration
Name of certificate	P.R.China Mineral Resource Exploration Permit
Certificate No.	T54520080702010972
Mine right holder	Tibet Huatailong Mining Development Company Ltd.
Location	Metrokongka County, lhasa, Tibet
Name of Project	Jiama mine periphery copper lead mine general exploration, Metrorkongka, Lhasa, Tibet
Exploration Unit	Institute of Mineral Resources Chinese Academy of Geological Sciences
exploration acreage	76.19 sq.km
Validation	March 1st, 2012 to March 1st, 2013
Issue Date	March 1st, 2012

Table 4-4 Jiama Copper-Polymetallic Project – Exploration Licence T54520080702010972.

Mine/Project	Jiama periphery copper lead mine Bayi Ranch exploration
Name of certificate	P.R.China Mineral Resource Exploration Permit
Certificate No.	T54520080702010979
Mine right holder	Tibet Huatailong Mining Development Company Ltd.
Location	Jiama town, Metrokongka County, lhasa, Tibet
Name of Project	Bayi Ranch exploration, Metrorkongka, Lhasa, Tibet
Exploration Unit	Institute of Mineral Resources, Chinese Academy of Geological Sciences
exploration acreage	66.41 sq.km
Validation	March 1st, 2012 to March 1st, 2013
Issue Date	March 1st, 2012

MMC understands that renewal of licences is dependent on all permit fees (mining or exploration) being paid, and the minimum exploration expenditure, resource taxes, and resource compensation levies being paid to the state for the area designated under the permit. The renewal application should be submitted to the relevant state or provincial authorities at least 30 days before the expiration of a permit. Based on MMC's experience, the renewal of a mining licence is a formality, if the company has a history of paying permitting fees when required. MMC is not aware of the Company owing outstanding permitting fees to the government, and thus should have no problems with renewing it licences when required.

MMC provides this information for reference only and recommends that land titles and ownership rights be reviewed by legal experts.

4.2.1 Permits, taxes and Royalties

MMC is aware that the Company has obtained all current necessary permits and licences to conduct open-pit and underground mining operations and processing within the current mining licence areas for Phase I. However, the area and production rate of the mining licence will need to be increased to be consistent with the planned production rate for Phase II. In order to retain the Jiama property, the Company is obligated to conduct all mining and processing activities at the Project site in accordance with the state and local laws and regulations and to pay any licence fees and taxes to the relevant governmental agencies on a timely basis. MMC is not aware of the Company failing to meet any state or local laws and regulations related to its Project, or failing to pay any requires fees or taxes to the relevant government agencies.

Environmental liabilities at the Project area are mostly related to the mining operation by the four previous operators before the Project consolidation in 2007. The original underground mine workings as well as three smaller processing plants with processing capacities ranging from 300 tpd to 850 tpd that existed before consolidation were abandoned and the processing plants were dismantled and reclaimed by Huatailong. The associated tailings storage facilities ("TSF") will also be reclaimed by Huatailong. MMC is aware this work is currently underway with several of these TSFs being reclaimed already.

The Project is subject to a resource tax of 5 RMB per ROM tonne, a royalty for Cu, Mo, Pb and Zn of 2.0% on revenue, and a royalty for Au and Ag of 2.8% revenue. Copper, molybdenum, lead, zinc, and silver produced from the mine are subject to a value-added-tax ("VAT") of 17% (details of how this tax is applied is provided in ***Section 21***). Gold production is exempted from VAT in China. The Project is also subject to a city-maintenance-and-construction tax of 5% of the VAT and an education tax of 3% of the VAT. The corporate income tax rate is 15%.

The Project is required to post an environmental reclamation bond of approximately RMB 35 million ("M"). A first payment of RMB1.5 M (US$0.22 M) was made in 2009, with the remaining amount paid in five yearly instalments from 2010.

FIGURE 4-1

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

General Location Plan

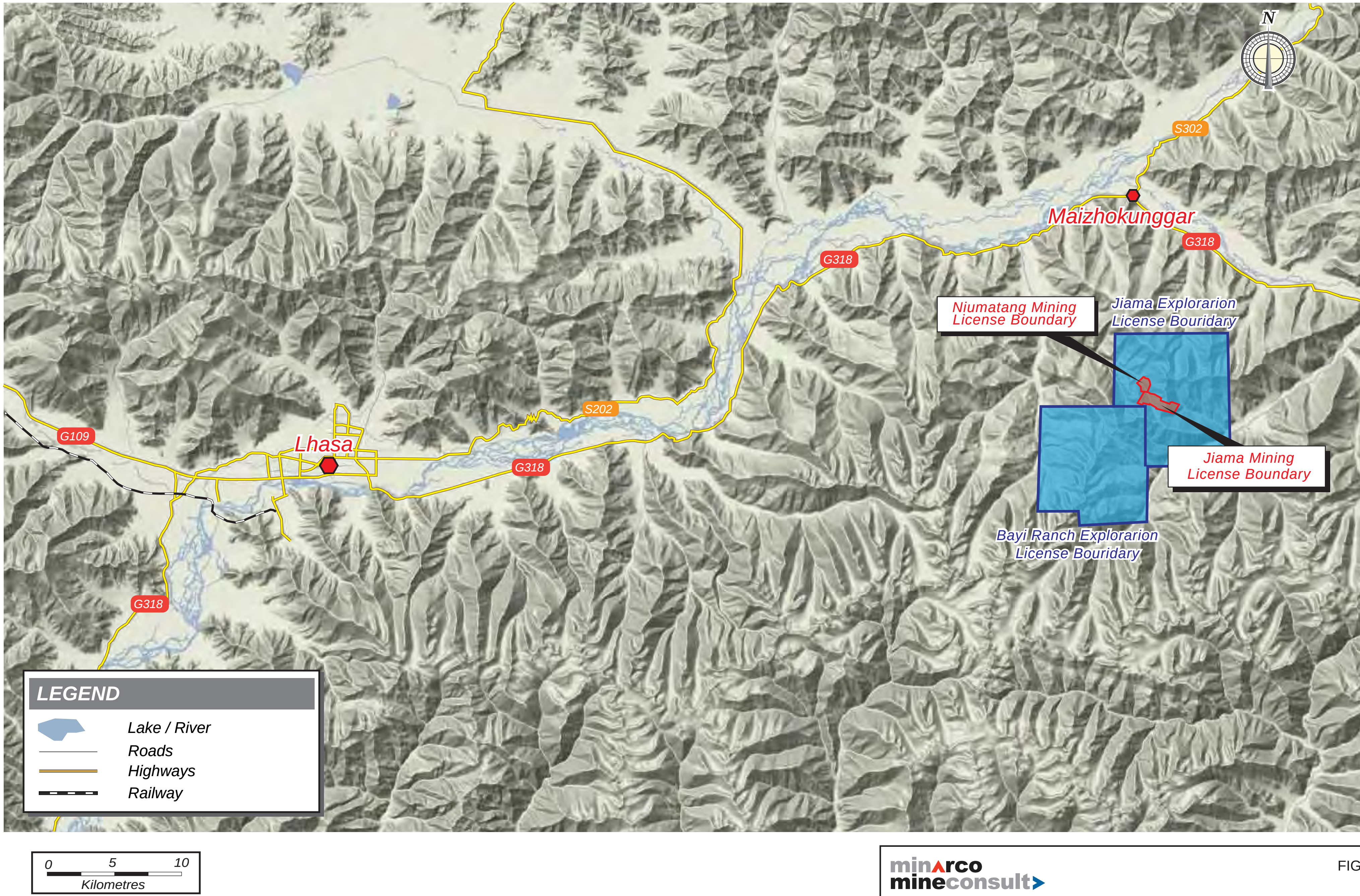

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FIGURE 4-2

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Detailed Location Plan

Project No : ADV-HK-03709

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 PROJECT ACCESS

The Project can be accessed via highway G318 at a distance of 60 km from Lhasa, followed by an 8 km paved road, which connects the site offices, accommodation and Project area with the highway. Lhasa has daily international and domestic flights in addition to an operating rail network which connects Tibet to other provinces in China.

5.2 GEOGRAPHY AND CLIMATE

The Project is located in a mountainous area with elevations ranging from 4,350 m to 5,410 m above sea level (ASL) on the Tibet Plateau. The topography in the area is characterized by steep slopes, high elevations, and large changes in relief. Approximately half of the surface area within the Project is covered by shrub bushes and grasses, while the other half of the surface area is covered by soil and fallen rocks formed from freezing, erosion, and weathering. The soil and fallen rock cover is generally only a few meters thick and has no significant impact on mining or exploration.

The area has a typical continental plateau climate with summers relatively humid and cool, while the winters are dry and extremely cold. There is a large temperature difference between day and night, with an average temperature of 16.0^{0}C in summer and -1.6^{0}C in winter. Winter conditions prevail from October through to March. July and August are the only frost-free months in any year. Average annual precipitation is approximately 500 mm, which occurs mostly as rain from June to September. The climate has no impact on mining or exploration conditions.

Tibetan inhabitants are sparsely populated within the Project area, with most of the land being used for low-intensity yak and sheep grazing, and agriculture, with the primary crop being highland barley.

5.3 LOCAL RESOURCES AND INFRASTRUCTURE

Surface fresh water is sufficient to support the current and planned requirements of the Project and is sourced and pumped 8 km from the nearby Chikang River. Water for the processing facility is recycled from the dewatered tails, which are dry stored as per the permit requirements.

A 110-kV power transmission line has been constructed to connect the Project site to the Metrorkongka substation located approximately 20 km north of the Project area. This power line connects the Project site to the Central Tibet power grid. The Tibet government has been executing a power-supply development plan from 2006, which includes building several new power generation plants with the goal of connecting the Central Tibet power grid to the national power grid in China. The Project has been designated as one of the most important projects in Tibet and has been granted priority in electricity supply by the Tibet government. MMC is aware that the power supply is adequate with no power shortages occurring during Phase I construction and operation to date.

Although water is scarce in the general area, the Project area has obtained sufficient surface water rights to support the planned mining and processing operation. Fresh water for production and the mine camp will be obtained from the river, which is a tributary of the Lhasa River. Water from the flotation tail thickeners and the tailing filtering system will be recycled for use in production.

A significant portion of the skilled mining personnel for the Project have been sourced from other China National Gold Group Corporation and/or non-China National Gold Group Corporation mining operations outside Tibet; however Huatailong has formed a logistics company, which consists entirely of local personnel. This company is 49% owned by local staff and operates mining haul trucks and controls the logistics of the site.

6 HISTORY

The bulk of the history information has been summarised from the Behre Dolbear Asia Incorporated "Resource Update Report for the Jiama Copper-Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, People's Republic of China" report, dated March 2012.

6.1 PRE-2008

Small-scale historic lead mining occurred within the Project area prior to the 1950's before the commencement of modern exploration, which commenced in 1951. Exploration works conducted from 1951 to 1990 delineated a 3,600-m long copper-lead-zinc mineralisation zone at the Project area. Exploration during this period consisted predominately of surface trenching.

Following a review of the surface trenching, the No.6 Geological Brigade ("Brigade 6") of Tibet Geology and Mineral Resource Bureau drilled 31 surface diamond drill holes for a total of 10,091 m on 16 sections, 407.5 m of underground development and 16,474 cu.m of surface trenches between 1991 and 1999. Following completion of this exploration four mining licences and subsequent operations were established within the Project's mining licence including:

- Lines 15-0 Mining License: The licence was issued to the Jiama Township government, which organized the Jiama Township Fupin Development Company Limited. A 300-tpd concentrating plant was built and mining started in 2004. A total of 14 adits were developed, with an estimated 49,000 t of ore mined to the end of June 2006. Mine production after June 2006 is unknown.
- Lines 0-16 Mining License: The licence was issued to Lhasa Mining Company, which conducted open-pit and underground mining. Open-pit mining above the 4,780 m elevation commenced in 1995, while a total of 10 adits with a level height ranging from 16 m to 40 m were completed between the elevations of 4,606 m and 4,780 m prior to 2006. Records indicate that the total mine production to the end of 2005 was 130,000 tonnes. Mine production after January 2006 is unknown.
- Lines 16-40 Mining License: A joint venture company between Brigade 6 and Henan Rongye Trading Company Limited was established to conduct mining operation, which was known as the Tibet Jiama Mining Development Company Limited. Mining commenced in 2003 and consisted of a processing plant with capacity of 850 tpd, which was built in 2006. It has been estimated that the total combined mined and lost mineral resources was 109,000 tonnes to the end of June 2006. Mine production after June 2006 is unknown.
- Lines 40-80 Mining License: The licence was issued to the original Tibet Huatailong Mining Development Company Limited. Mining commenced in 2005 with an estimated total production from three underground adits of 80,000 t to June 20th, 2006, with an estimated mining loss of 8,900 tonnes, however no processing plant was built for this mining licence. The. Mine production since June 2006 is unknown.

As the exact total historical mine production figure is unknown, the Resource Institute conducted a systematic survey of the existing underground adits and mined-out stopes within the above mining licence areas, and the volume calculated from the surveyed stopes has been used to deduct the consumed mineral resources for the Jiama Project.

Mining activities by the previous operators within the four mining licence areas were halted by the Tibet government on April 1, 2007. In accordance with an agreement between the Tibet government and China National Gold Group Corporation, the four mining licences as well as the exploration licences in the surrounding areas were consolidated into the reorganized Huatailong in late 2007, with China Gold Group HK as the primary shareholder.

6.2 2008 - ONWARDS

Following the consolidation of the mining and exploration licences, Huatailong completed four phases of exploration works, these were completed in 2008, 2009, 2010 and 2011. In addition to the 145 surface diamond drill holes for a total of 47,443 m completed in 2008, Huatailong established survey control points using differential GPS instruments, based on the 1954 Beijing coordinate system and the 1956 Yellow Sea elevation system. A topographic survey on a 1:2,000 scale (2 m contours) over a total area of 13.8 sq.km was conducted by total stations, and the survey results were tied to the established survey control points. In 2009 a further 47 surface diamond drill holes for a total of 18,746 m were completed. These drill holes were generally infill drill holes, however additional step out drilling was complete to expand the defined resources. In 2010, Huatailong completed 99 surface drill holes for a total of 49,613 m. These holes included both infill drilling and extension holes along strike and down dip. Following a review of these holes Huatailong completed an additional 22 infill drill holes in 2011 within the proposed pit locations to enable detailed mine planning to be undertaken. These 22 surface diamond holes resulted in a total of 10,720 m being drilled and were the basis for updating of the Mineral Resources.

7 GEOLOGICAL SETTING AND MINERALISATION

The bulk of the regional geology information has been summarised from the Behre Dolbear Asia Incorporated "Resource Update Report for the Jiama Copper-Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, People's Republic of China" report, dated March 2012.

7.1 REGIONAL GEOLOGY

Subduction and collision between the Indian Plate and Eurasian Plate from Late Mesozoic to Cenozoic time, commonly referred to as the Himalayan Orogeny, has created the world's highest mountain range and the Tibetan Plateau. The complicated tectonic evolution during this period of time as well as during the preceding Yanshanian Orogeny has created a series of near east-west-trending structural zones in the plateau, with associated multiplestage magmatism and related mineralisation.

7.2 PROJECT GEOLOGY

The Project is located in the central-south portion of the Gangdise-Nianqing Tanggula Terrane. Stratigraphy outcropping in the Project area is dominated by passive epicontinental clastic-carbonate rocks, including Upper-Jurassic Duodigou Formation limestones and marbles, Lower-Cretaceous Linbuzong Formation sandstones and slates, and Quaternary colluviums and alluviums (***Figure 7-1***). Some mafic, intermediate to felsic dikes can be observed outcropping within the Project area and within drill holes, but no large intrusive bodies have yet been identified. It is suggested that a large granitic intrusive body exists at depth in the area and it has provided the intense heat source for the metamorphism and also the mineralizing solutions for the copper-polymetallic mineralisation. Emplacement of the granitic intrusion would have resulted in a large portion of the Duodigou limestones being metamorphosed to marbles, and the Linbuzong clastic rocks being largely metamorphosed into hornfels.

7.3 MINERALISATION

Three types of copper-polymetallic mineralisation are observed within the Project, these include Skarn, Hornfels and porphyry hosted mineralisation. All three styles of mineralisation are structurally controlled with concentrations occurring along shear/structure zones and mineralisation offset by thrust and detachment faults as well as associated with anticlines and synclines. As shown in ***Figure 7-2***, the three styles of mineralisation geographically occur in three zones, the Skarn occurs as a planar body, while the Hornfels occurs as a massive unit near surface, which overlies the Porphyry hosted mineralisation.

7.3.1 Skarn-Type Copper-Polymetallic Mineralisation

The majority of the high grade Copper-polymetallic mineralisation within the Project is hosted by the Skarn type alteration distributed along an interlayer structural zone between the Duodigou marbles and the Linbuzong hornfels. This structural zone is stratiform, tabular, or lenticular in shape, strikes west-northwest and has a variable dip to the northeast. The upper near surface portion of the mineralised body has a steep dip angle, averaging around 60° which gradually flattens with depth to an average dip of around 10°. The majority of mineralisation is contained within a large body, which is approximately 2,400 m in length and ranges from 150 m to 1,900 m in width down dip. Due to the style of mineralisation, the thickness is highly variable with the thickness ranging from 2 m to 240 m, with an average of 33 m.

Several smaller mineralised bodies have also been defined by the current drilling; however they are generally not continuous beyond 200 m in strike length.

Cu Mineralisation is mainly associated with the sulphide minerals chalcopyrite, bornite and chalcocite, which occur hosted by small sulphide veins, as disseminated sulphide crystals or massive sulphide zones. Observations by MMC during the inspection of the drill core indicated that the massive sulphide zones range up to 5m in length, however the majority of the sulphide mineralisation occurs as disseminated crystals which surround concentrations of veins and range up to 10 cm in width. These veins have relatively high grade, which generally contain massive or very high concentration of Cu sulphides. Importantly these veins are less than 10 cm wide and occur as a series of vein sets, which can range up to 30 m in length. As a result the Cu grade is directly related to the abundance of the vein sets.

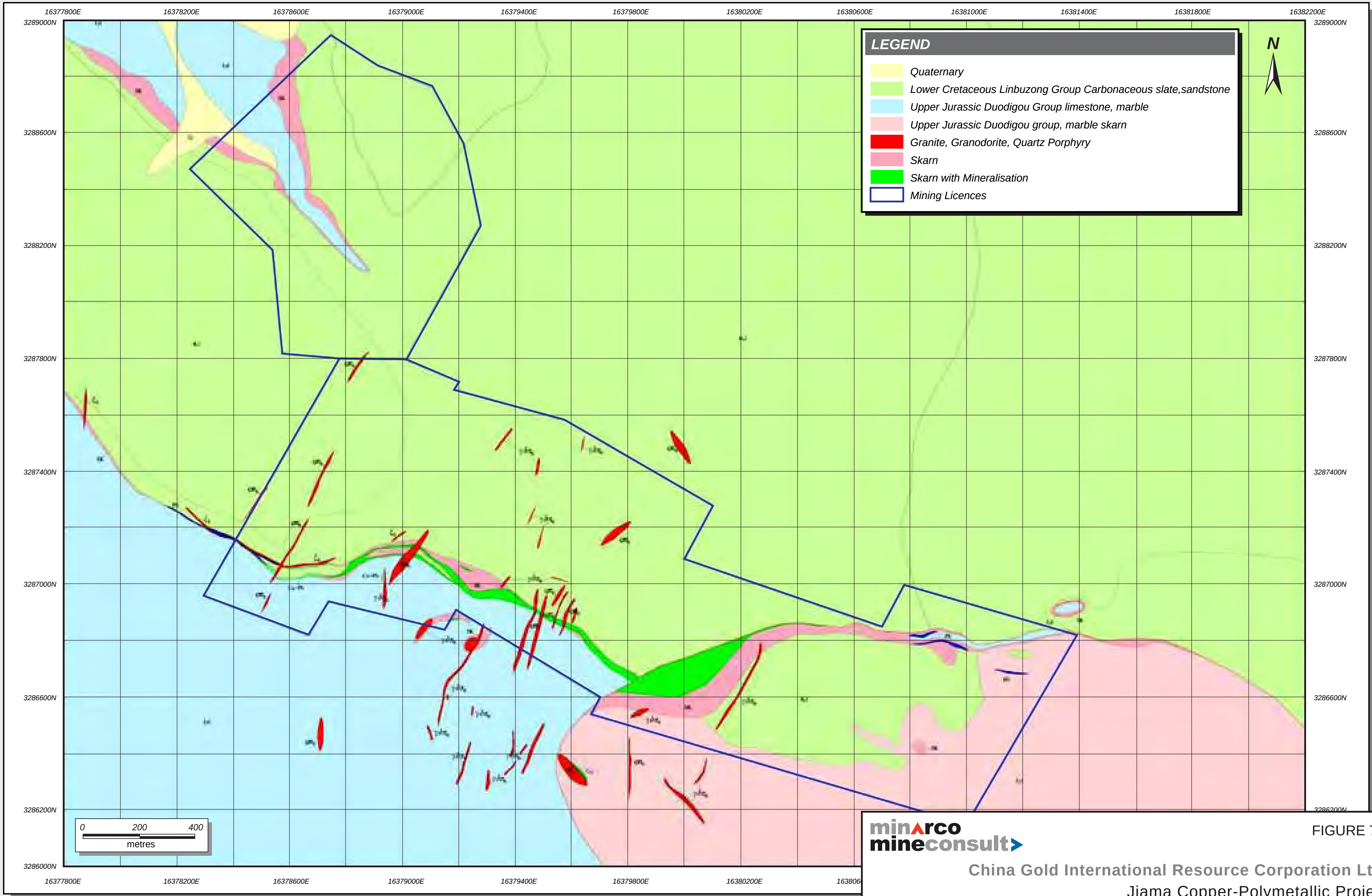

FIGURE 7-1

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China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

Local Geology Map

Other metals of economic interest within the Skarn mineralisation include molybdenum, lead, gold, silver, and zinc. These metals generally appear as disseminated crystals through this zone and have variable correlations to Cu as outlined in Section 17.

7.3.2 Hornfels Hosted Copper-Polymetallic Mineralisation

The Hornfels hosted type copper-polymetallic mineralisation within the Project is generally lower in grade than the Skarn and occurs as a massive unit, however significant amounts of fracturing occur within the body. Unlike the Skarn mineralisation the majority of the Cu and associated mineralisation occurs as disseminated crystals hosted by the Hornfels, with no veining or massive sulphide being observed. Generally, mineralisation occurs in the form of chalcopyrite, bornite, and molybdenite with a fine grain size. During the site visit, MMC noted the presence of some secondary enrichment along fracture zones along with pyrite and pyrrhotite. This secondary enrichment is the likely cause of some higher grades observed in the drill core. Copper is generally enriched in the upper portion of the mineralisation and molybdenum is generally enriched in the lower portion of the mineralisation.

The Hornfels hosted type of mineralisation occurs within a single mass of mineralisation that has dimensions over 1,500 m long, 1,000 m wide and is currently defined up to 820 m deep.

7.3.3 Porphyry-Type Mo-Cu Mineralisation

The Porphyry type mineralisation is dominated by molybdenite with only minor chalcopyrite and bornite observed. The sulphide minerals generally occur as medium to coarse grains within the host rock, which possibly leads to the high nugget observed. This style of mineralisation occurs as a pipe-like shape hosted by granodiorite and monzogranite porphyry and has a maximum mineralisation thickness of 476 m, however it is comonly thinner.

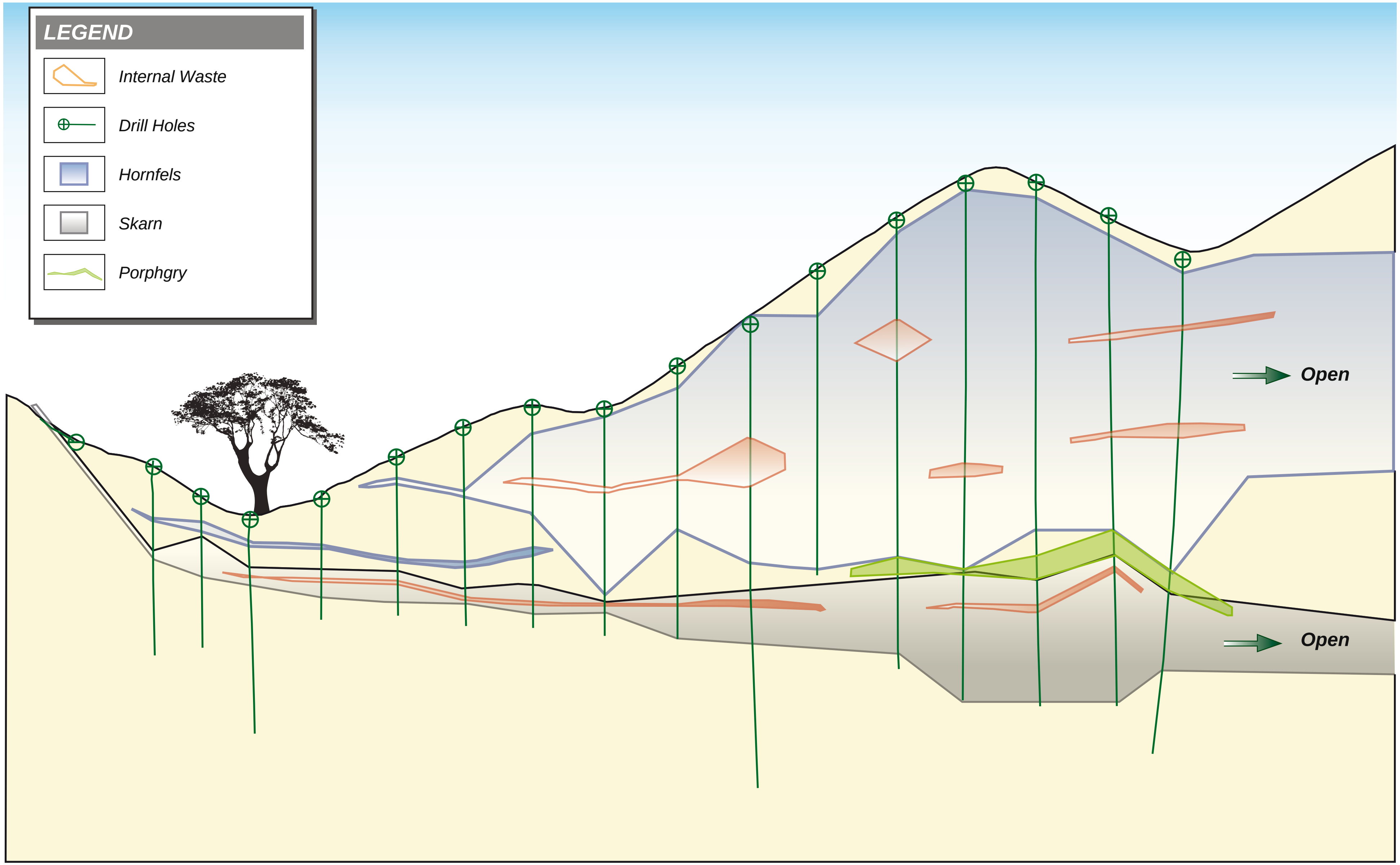

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FIGURE 7-2

China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709 **Generalised Cross Section (Looking NW)**

8 DEPOSIT TYPES

The majority of high grade mineralisation within the Project is the large stratiform skarn-type copper-polymetallic body controlled mostly by an interlayer structural zone between the Duodigou marbles and the Linbuzong hornfels. The mineralized zone measures thousands of meters in both strike and dip directions and is still open in many places.

Some lower-grade copper-polymetallic mineralisation has also been encountered in the overlying Linbuzong hornfels. Hornfels hosted mineralisation is potentially very large and overlies a Porphyry hosted mineralised body. All mineralised types are likely formed by contact metamorphism and hydrothermal mineralisation associated with a granitic intrusion(s). This type of mineralisation is common in China and the surrounding countries, although this deposit is on a much larger scale.

9 EXPLORATION

The bulk of the exploration information has been summarised from the Behre Dolbear Asia Incorporated “Resource Update Report for the Jiama Copper-Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, People’s Republic of China” report, dated March 2012.

Exploration within the Project area can be separated into three phases, as outlined below:

9.1 PRE-1991

Minimal exploration was completed during this period, with only small-scale mining occurring prior to the 1950’s within the Project area prior to the 1950’s. Exploration after the 1950’s consisted predominately of surface trenching with no drilling being undertaken.

9.2 1991-2000

All exploration works between 1991 and 2000 were completed by Brigade 6 and included 1:2,000 and 1:25,000 scale topographic survey, geological mapping, surface trenching, adit development, and surface diamond drilling. A total of 31 surface drill holes for a total drilled length of 10,091 m were completed, along with the development of 407.5 m of adits and 16,474 cu.m of surface trenches. Exploration work was concentrated on the near-surface portion of the mineralized zones and was conducted in accordance with the industry requirements in China.

9.3 2008 -2011

Following the consolidation of the mining licences Huatailong completed four phases of exploration works, these were completed in 2008, 2009, 2010 and 2011. In addition to the 145 surface diamond drill holes for a total of 47,443 m completed in 2008, Huatailong established survey control points using differential GPS instruments, based on the 1954 Beijing coordinate system and the 1956 Yellow Sea elevation system. A topographic survey on a 1:2,000 scale (2 m contours) over a total area of 13.8 sq.km was conducted by total stations, and the survey results were tied to the established survey control points.

In 2009 a further 47 surface diamond drill holes for a total of 18,746 were completed. These drill holes were generally infill drill holes, however additional step out drilling was complete to expand the defined resources.

In 2010, Huatailong completed 99 surface drill holes for a total of 49613 m. These holes included both infill drilling and extension holes along strike and down dip. Following a review of these holes Huatailong completed an additional 22 infill drill holes in 2011 within the proposed pit locations to enable detailed mine planning to be undertaken. These 22 surface diamond holes resulted in a total of 10,720 m being drilled.

10 DRILLING

10.1 BRIGADE 6 DRILLING IN THE 1990'S

Diamond drilling by Brigade 6 in the 1990's was conducted in accordance with the "Core Drilling Regulation" promulgated by the former Ministry of Geology and Mineral Resources of China. Of the 31 holes drilled, only 22, with a total drilled length of 6,518 m met the requirements under the regulation. Core recoveries ranged from 65% to 95%, with an average of 84% for 15 holes. Six other holes were considered as not conforming with the regulations because the core recovery was too low or because the drill hole was terminated prematurely. Only the 22 holes meeting the regulations have been included in the database for the current resource estimation which underpins the Mineral Resource and Mineral Reserves estimates.

10.2 HUATAILONG DRILLING POST 2007

10.2.1 2008 - 2011 Drilling

All Huatailong drill programmes utilised 130 mm or 110 mm diameter drill bits from surface, reducing to 91 mm or 75 mm diameter drill bits after entering into solid rock. During the site visit MMC observed that core recoveries were generally good as is recorded during the geological logging. Core recovery for the skarn mineralized intervals ranged from 60.3% to 100%, averaging 95.3%; core recovery for the hanging walls ranged from 62.7% to 100%, averaging 95.0%; and core recovery for the footwalls ranged from 65.1% to 100%, averaging 95.3%. MMC considers the recoveries sufficient to enable a representative sample to be taken.

Drill hole collar locations were surveyed using differential GPS survey instruments after drilling, and the down-hole deviation was measured using down-hole survey instruments generally at a 100 m interval. Completed drill holes were plugged using cement, with a cement post installed at the centre of the drill hole collar.

Properly labelled and boxed drill cores were transported from the drill site to the core storage warehouse, where core logging, photographing, and sampling took place. All remaining cores are stored in well labelled and well-built structures, which minimize the impact of the extreme weather observed in the area.

Figure 10-1 displays drill hole locations coloured by the date drilled.

10.3 DISCUSSION

All drill holes were drilled vertically within the Project area. MMC considers this suitable given the geometry of the mineralised bodies and the large scale disseminated nature of the majority of the mineralisation. In addition a review of the drilling practices, logging and core labelling indicates that no bias can be observed and the procedures are suitable.

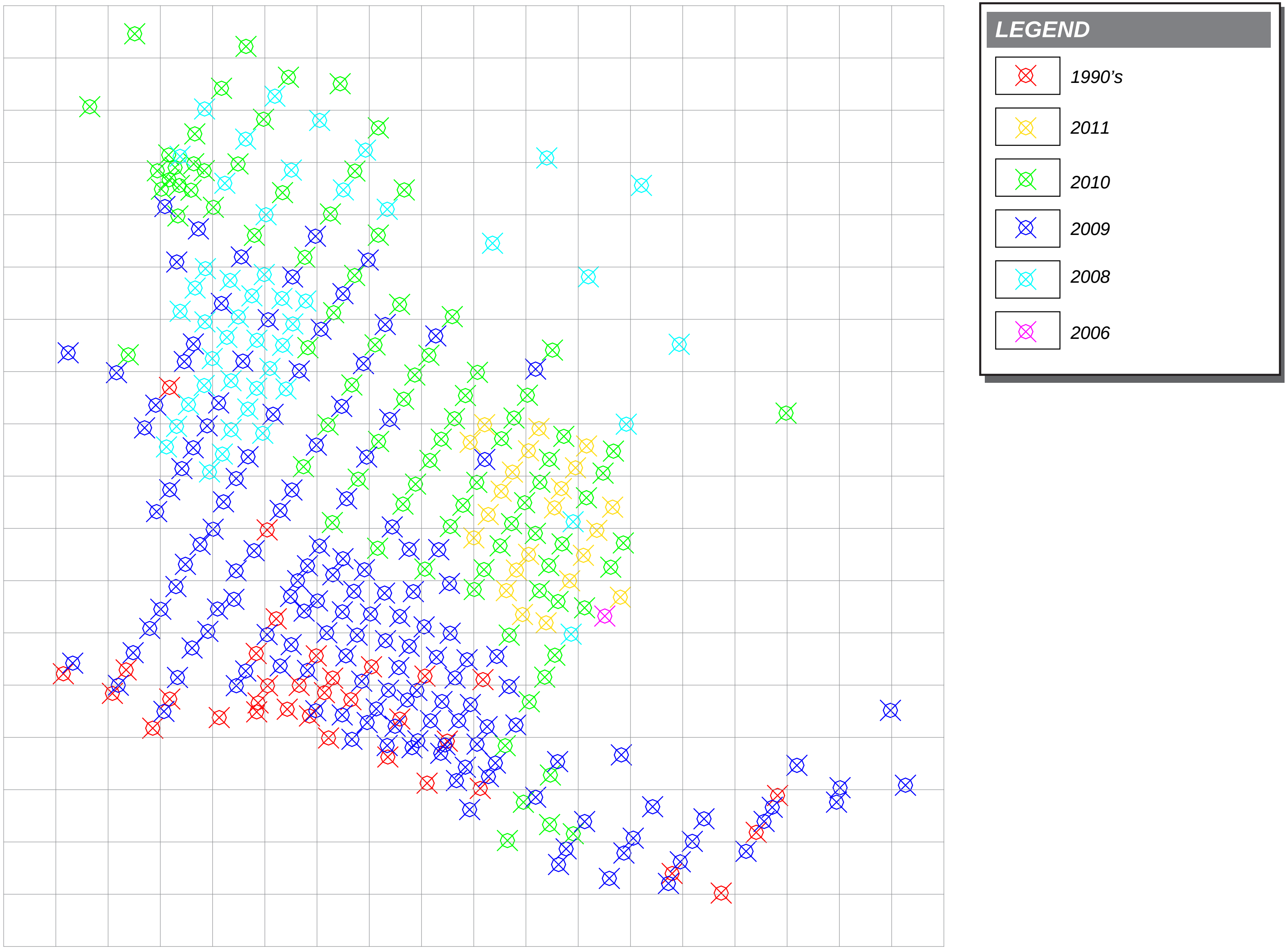

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FIGURE 10-1

China Gold International Resources Corporation Ltd.
Jiama Copper-Polymetallic Project
Drill Collar Location

Project No : ADV-HK-03709

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The bulk of the Sample Preparation, Analysis and Security information has been summarised from the Behre Dolbear Asia Incorporated "Resource Update Report for the Jiama Copper-Polymetallic Project in Metrorkongka County, Tibet Autonomous Region, People's Republic of China" report, dated March 2012.

11.1 SAMPLING METHOD AND APPROACH

11.1.1 Brigade 6 Sampling in the 1990's

Core samples were taken using a mechanical splitter. Half of the core was sent for sample preparation and assay, and the other half was retained for records. Sample intervals were generally 1 to 2 m with surface trenches sampled by channels 5 cm wide and 3 cm deep. Channels were oriented perpendicular to the direction of the mineralized/alteration zone extension as far as was possible.

11.1.2 Huatailong Sampling in 2008 - 2011

After logging of the core, the geologist selected intervals, which were to be sampled and which were all cut using a diamond rock saw. Half of the core was sent for sample preparation and assay, and the other half was retained for records. Sample intervals were generally 1 m for the skarn-type mineralisation and 2 m for the Hornfels hosted mineralisation, however the length occasionally varied based on the geological characteristics of the core. Samples were taken continuously within the mineralized zones as well as every 2 m along the host rocks on each side of a mineralised zone.

11.2 SAMPLE PREPARATION AND ANALYSIS

11.2.1 Brigade 6 Work - 1990s'

Sample preparation and analysis for the Brigade 6 samples were conducted by the Tibet Central Laboratory of the Ministry of Geology and Mineral Resources of China in accordance with relevant regulations during that period. No detailed information was available for the sample preparation procedures and metal grade determination methods. However, MMC believes that the assay results are acceptable based on their similarities with the samples taken during the 2008 to 201 drilling programmes Huatailong. In addition, in MMC's experience laboratories controlled by governmental department strictly follow the guidelines of the time, and therefore MMC considers there to be no reason to suspect any material bias has occurred.

11.2.2 Huatailong Work - 2008 and 2011

Sample preparation and analysis for the Huatailong core samples was undertaken by the Southwestern Metallurgic Geology Analytical Center ("Southwest Center") in Chengdu, Sichuan Province, which is an accredited laboratory by the Chinese National Accreditation Board for Laboratories ("CNAL"). The Southwest Center set up a sample preparation facility in the Huatailong core storage warehouse. Sample preparation was undertaken by the Southwest Center personnel. Samples were prepared by a two-stage crushing and one-stage grinding procedure to reduce the size of sample particles to minus 200 mesh (0.074 mm). Sample splitting was not performed until the particle size was reduced to approximately 1 mm. A ground sample of approximately 400 grams ("g") was sent for analysis in Chengdu; a duplicate ground sample of approximately 500 g as well as the coarse rejects was kept in the core storage warehouse.

Sample analysis was undertaken by the Southwest Center using the standard analytic methods specified in "The Quality Administration Standards for Analysis in Geological and Mineral Resource Laboratories" (DZ0130-94) promulgated by the former Ministry of Geology and Mineral Resources of China. Gold grades were determined by an aqua regia + fluoride digestion, reactivated carbon concentrating, and atomic absorption spectroscopy ("AAS") procedure. Copper, lead, zinc, molybdenum, and silver grades were determined using an aqua regia + hydrofluoric acid + perchloric acid digestion and Inductively Coupled Plasma Atomic Emission Spectrometry ("ICP-AES") or AAS procedure. All samples were analyzed for the above six metals.

Some composite samples were also used to determine the concentration of tungsten, cobalt, nickel, cadmium, tin, gallium, niobium, rhenium, arsenic, antimony, bismuth, mercury, selenium, tellurium, germanium, indium, thallium, and sulfur by ICP-AES and other analytic methods.

None of the Huatailong employees, officers, directors, or associates were involved in the sample preparation. MMC considers the sample preparation procedures, analytic method, and security utilized to be appropriate for this type of copper-polymetallic deposit.

During the site visit on the 29th of April 2012, MMC held numerous discussions with the site personnel and operators. These discussions indicated that appropriate procedures and quality control checks were in place to minimize sample bias.

12 DATA VERIFICATION

In addition to the data verification and Quality Assurance and Quality Control's data reviewed for the drilling prior to 2011, which is outlined in the previous publicly released Technical Reports, MMC conducted a review of the geological digital data supplied by the Company for the Project. This review was to ensure no material issues exist in the data and to confirm that the data is accurate. During a review of the data MMC completed the following checks:

- Inspection of the core storage, core processing and sampling facilities;
- Inspection and review of the procedures of the analytical laboratories responsible for the sample analysis for both the primary and external samples;
- Compared the hardcopy driller's reports, geological logging, geological reports and sampling sheets of 14 holes with the database, which represent 5% of the total holes - no other error was noted except 3 input errors.
- Compared the hardcopy assay results of 28,951 samples with the database, which represent 50% of the total assay results, only 534 results were wrong input into the database (1.84%), discussion with the Client indicate that these inconsistence come from re-drilling of holes, mislabelled samples, and wrong inputs. These errors were corrected accordingly and are not considered to be material.
- Comparison of geological maps, cross sections, long sections, exploration drill plans with the digital datasets;
- Sample interval, drillers marks and holed clearly marks and labelled on the holes and consistent with digital data;
- Observed geology and assays are consistent with core and outcrop geology;
- Inspection of open pits to ensure depleted areas were accurately represented in the digital topography.

12.1 QUALITY CONTROL DATA FOR 2011 DRILLING

Quality Assurance and Quality Control ("QAQC") data collected during the 2011 drilling programme include internal and external duplicates and blanks. All internal duplicate samples were sourced from the homogenised pulverised material at the CNAL, while external duplicates were sourced from the secondary crushed material (coarse reject). Both laboratories utilised the same method of analysis for all elements, which MMC considers appropriate. The number of duplicate samples for each area is shown in ***Table 12-1***, and the comparisons to the original samples are shown graphically in the scatter plots in ***Figure 12-1***.

Table 12-1 Jiama Copper-Polymetallic Project – Internal and External Duplicate Samples for the Project

Total Number of Samples	Internal	External
7,791	91	427

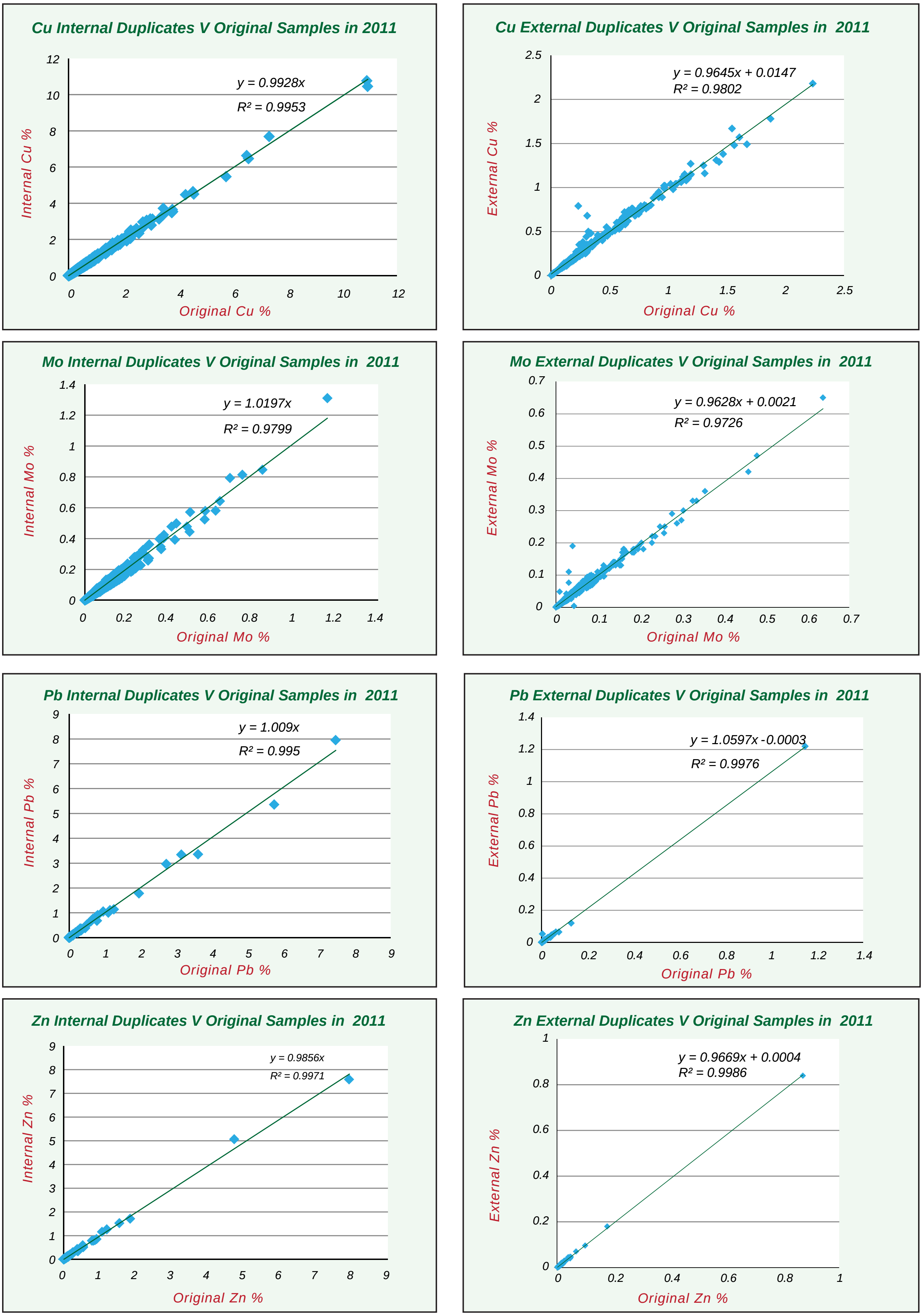
A review of the scatter plots of the data available indicates that strong correlation is generally observed between the original and the duplicate samples for all elements, although some minor variation did occur. As a result, MMC considers this variability to be the result of natural variation in the samples rather than a systematic bias in the sample preparation or analytical technique of the primary laboratory.

12.2 DATA QUALITY REVIEW

The review of the drilling and sampling procedures indicates that international standard practices were generally utilised with only very minor or immaterial issues being noted by MMC. A good to excellent correlation is observed for the majority of internal and external duplicates for all generations of drilling. As a result, MMC considers that the data which underpins the resource has no material sample bias and are representative of the samples taken.

12.3 DATA VERIFICATION STATEMENT

The results of the data verification and data quality review indicate that the digital database used as the basis for the Statement of Mineral Resources and Mineral Reserves is supported by verified certified assay certificates, original drill logs, QAQC, independent external assays and verified survey data. As such, MMC believes there is sufficient data to enable the use of this data in a Mineral Resource estimate and resultant classification following that set by the NI 43-101 rules.



minarco mineconsult

FIGURE 12-1

China Gold International Resources Corporation Limited

Jiama Copper-Polymetallic Project

Internal and External Duplicates 2011

Project No : ADV-HK-03709

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 MINERALOGY

The proposed feed for the processing plant will consist of two main Mo-Cu ore types, namely skarn and hornfels hosted, which exhibit different processing characteristics in terms of grade and hardness. The mineralogy of skarn hosted ore varies greatly in terms of hardness and grade, while the hornfels hosted ore is disseminated with consistently lower Mo and Cu grades. ***Table 13-1*** presents the assay for both ore types. The economic metals are copper, molybdenum, gold and silver. The main impurity is arsenic.

Table 13-1 Jiama Copper-Polymetallic Project - Composite Assaying

	Assay (%)	
Element	**Hornfels Hosted Ore**	**Skarn Ore**
Cu	0.38	1.02
Mo	0.015	0.054
Pb	0.01	0.03
Zn	0.14	0.03
S	1.23	1.01
Fe	2.15	8.06
SiO_2	68.65	44.67
Al_2O_3	13.51	3.66
CaO	0.56	18.1
MgO	1.07	2.86
As	0.05	0.01
P	0.07	-
Au (g/t)	-	1.07
Ag (g/t)	-	16.08

Source: 2009 Metallurgy Testing Report by CGRI and Metallurgy Testing Report for Jiama Lower Grade Cu-Mo Hornfels Ore, compiled by NRIMM in November, 2011

13.1.1 Mineralogy of Skarn Hosted Copper-Molybdenum Ore

There are several copper minerals present, namely chalcopyrite, bornite, chalcocite, bismuth, tetrahedrite and covellite. The molybdenum minerals are mainly molybdenite with rarely oxidised molybdenum. Other metallic minerals include pyrite, galena, sphalerite, pyrrhotite, limonite and scheelite. Gangue minerals include quartz, calcite, dolomite and silicates.

Molybdenite: a major molybdenum-bearing mineral, mainly disseminated between gangue particles (84.5% of total), partly included within the gangue interlocked with the chalcopyrite and secondary copper sulphide minerals, and rarely associating with pyrite and scheelite. It is variable in size and ranges between 0.01 to 0.053 mm (47.6% of total). It can be observed with surface oxidation in the form of molybdite.

Secondary Copper Sulphide Minerals (bornite, chalcocite, covellite, tetrahedrite, etc): the secondary copper minerals contain most of the copper (1.03% Cu). These are embedded within each other, mainly with a metasomatic texture or metasomatic relict texture. They are finer in size than chalcopyrite, which mostly ranges from 0.01 to 0.053 mm (57.7%) in size and is unevenly disseminated.

Chalcopyrite: a major copper mineral (0.91% Cu), mainly subhedral to xenomorphic granular, usually replaced by the secondary copper sulphide minerals and sometimes by pyrite. It is mainly distributed in the gangue and associated with the secondary copper sulphide minerals, pyrite and sphalerite, ranging in size between 0.01 to 0.053 mm (42.2% of total). It is unevenly disseminated and seldom present as a veinlet structure.

Pyrite: it is a major sulphide mineral (0.74 % Fe), mostly ranging in size between 0.01 to 0.053 mm (58.2% of total) and is mainly distributed in the gangue with some replacement by chalcopyrite.

13.1.2 Mineralogy of Hornfels Hosted Copper- Molybdenum Ore

The hornfels hosted Cu-Mo ore has different characteristics with lower copper and molybdenum grades compared to the skarn hosted Cu-Mo ore. The main metallic minerals are chalcopyrite and pyrite, with a small amount of molybdenite, blue chalcocite, covellite and tetrahedrite. The gangue minerals are dominated by quartz and clay minerals, such as sericite.

The chalcopyrite distribution has no close relationship with other metallic sulphides as it is finely distributed in the gangue. It was noted that some of the chalcopyrite was replaced with secondary copper minerals or limonite, which indicates that recovery of the copper would be more difficult.

Molybdenite has a large size range and is low grade, and the distribution has no close relationship with either the chalcopyrite or pyrite, which indicates that recovery would be difficult.

13.1.3 Mineralogy of Copper-Lead Zinc Ore

The data provided to MMC included a limited amount of mineralogical information for copper-lead-zinc ores and was only contained in the Weizuo metallurgy testing report. MMC understands that the main minerals consist of the typical primary sulphides, e.g. galena, sphalerite and chalcopyrite.

Galena is commonly present and relatively enriched. It is associated with sphalerite, chalcopyrite, and bornite as well as occurring in the gangue. The galena is dispersed between sulphide mineral particles as aggregates (0.01-3 mm), occasionally surrounded by covellite.

Sphalerite is mainly associated with galena over a large range of sizes. It is distributed within the gangue as granular and irregular-shaped aggregates with galena, chalcopyrite and pyrite. In skarn blocks, it mainly occurs between mineral particles or in the micro cracks of garnets, sometimes with minute pyroxene crystals of enclosed. Some chalcopyrite is present as emulsion droplets ranging from 0.001-0.01 mm in size within sphalerite.

13.2 METALLURGICAL TESTING

13.2.1 Skarn Hosted Copper – Molybdenum Ore

The proposed feed for the processing plant will consist of two Mo-Cu ore types, namely skarn and hornfels hosted, which exhibit different processing characteristics in terms of grade and hardness. The skarn hosted ore varies greatly in terms of hardness and grade, while the hornfels hosted ore is disseminated with consistently lower Mo and Cu grades. The testing showed different metallurgical responses between the two types of ores.

A significant quantity of metallurgical testing had been conducted in the development of the current operation and subsequent optimisation testing was undertaken both internally and by Testing Institutes. A summary of the testing results is presented in ***Table 13-2***, which showed that the tests have generally yielded a satisfactory result. The testing flowsheets and conditions to produce separate concentrates are presented in the following section.

Table 13-2 Jiama Copper-Polymetallic Project - Cu-Mo Ore Processing Results Summary

Data Sources	Overall Recovery (%)		Feed Grade (%)		Concentrate Grade (%)	
	Cu	Mo	Cu	Mo	Cu	Mo
2009 CGRI Tests	94.26	58.55	1.05	0.0531	31.96	45.66
2011 CGRI Site Validation Tests	94.68	71.54	1.23	0.0320	33.32	49.80
2011 Internal Lab Differential Flotation	94.22	73.20	1.05	0.0542	32.11	47.71
2012 Internal Lab Differential Flotation	95.16	80.74	0.94	0.0360	32.23	43.49
2010 Weizuo Tests	93.12	90.58	0.57	0.1140	25.33	49.15

Source: Summary by MMC based on data provided by the Company
Note: CGRI refers to Changchun Gold Research Institute
Weizuo refers to Lhasa Weizuo Assaying and Testing Co., Ltd

The basis for design of the proposed processing plant focused on two tests results from the 2009 CGRI Benchscale Testing programmes.

While there has not been enough testing undertaken on representative samples of the deeper ore, which has a higher Cu and Mo grade, the current processing plant performance and previous testing results are sufficient to assume metallurgical recovery figures for deeper ores.

13.2.2 2009 CGRI Bench Scale Testing Programme

A comprehensive mineralogical study as well as bench scale testing was conducted by CGRI in September 2009 to provide the basic technical parameters for the development and design of the flotation operation.

Based on observations, the skarn ore varies greatly in terms of hardness and grade. The head grade of testing samples (1.07% Cu, 0.054% Mo, 16.08g/t Ag and 1.05g/t Au) have a higher copper grade than the mine scheduling grades, while the molybdenum grade is similar. The details of the location of the drill core used to prepared samples for testing are not known and the nature of the sample representivity is not fully understood. MMC notes that the head grade of the testing samples are moderately higher than the LOM head grade average and further optimisation sampling may be required to further confirm actual metallurgical performance.

The testing included grinding to P_{70}=74 microns for the Cu-Mo bulk flotation using one stage of roughing, three stages of scavenging and two stages of cleaning, as well as a subsequently regrinding to P_{90}=74 microns, followed by a Cu-Mo concentrate separation flotation using one stage of roughing, two stages of scavenging and eight stages of cleaning.

Various processing conditions, such as grind size, reagent types, addition rates and combinations (collectors and regulator) as well as flotation time were investigated under standard flotation conditions. After standardising the flotation reagent types and dosages, open cycle tests at the selected primary and re-grind sizes were carried out to confirm the flotation performance. Locked cycle tests were then conducted to establish the impact of circulating loads including reagent build-up upon the flotation performance. The locked cycle testing results are summarised in ***Table 13-3***, which showed that a 94.22% copper recovery and a 73.2% molybdenum recovery were achievable at a grind size of P_{70}=74 microns with concentrate grades of 32.11% Cu and 47.71% Mo respectively.

Table 13-3 Jiama Copper-Polymetallic Project - Locked Cycle Testing Results

Products	Mass	Grade (%)				Overall Recovery (%)			
	(%)	Cu	Mo	Au	Ag	Cu	Mo	Au	Ag
Feed	100	1.05	0.054	1.07	16.08	100	100		
Mo Concentrate	0.08	3.02	47.71			0.24	73.2		
Cu Concentrate	3.07	32.11	0.22	16.65	351.7	94.22	12.5	47.88	67.3
Tailings	96.84	0.06	0.008			5.54	14.3		

Source: 2009 Metallurgy Testing Report by CGRI

The occurrence of copper and molybdenum minerals in the concentrates was investigated to understand the reason for loss of value elements in the tailings. It was found that the loss of copper minerals in the tailings was mainly fine grained chalcopyrite that was associated with the gangue. The loss of molybdenum in the tailings mainly occurred due to encapsulation within gangue minerals as well as fine-grained molybdenite with contaminated surfaces.

13.2.3 2011 CGRI Site Validation Testing Programme

A continuous site validation test work programme was conducted to both demonstrate and optimise the flotation circuit performance. The testing programme used a similar flowsheet with similar testing conditions such as the grind size and reagent types and dosages as the 2009 CGRI laboratory testing. The main difference included using six stages of Mo cleaning compared with eight stages of cleaning in 2009 testing. The process plant validation testing results are summarised in ***Table 13-4***, which confirmed that 94.68% Cu recovery and 71.45% Mo recovery were achievable at a grind size of P_{70}=74 microns; however at improved concentrate grades recoveries of 33.32% Cu and 49.8% Mo were achieved respectively.

Table 13-4 Jiama Copper-Polymetallic Project - Plant Validation Testing Results

Product	Mass (%)	Grade (%)		Overall Recovery (%)	
		Cu	Mo	Cu	Mo
2011 Validation Testing					
Feed	100	1.23	0.032	100	100
Mo Concentrate	0.047	1.2	49.8	0.05	71.54
Cu Concentrate	3.48	33.32	0.066	94.68	7.08
Tailings	96.47	0.07	0.007	5.27	21.38

Source: 2011 Metallurgy Testing Report by CGRI

The major source of copper concentrate revenue is the copper, with some contribution from gold and silver, while molybdenum is only paid for in the molybdenum concentrate (refer to ***Table 13-5***). The impurity elements in the concentrate, namely arsenic (As 0.26%) exceeded the threshold level (<As 0.25%) for a typical molybdenum concentrate specification, and would attract a discount in the concentrate payment. Thus the product may not meet the quality requirement for smelting unless blended with other concentrates. Other contaminants may be present such as lead and zinc, which can be leached from the concentrate using sulphuric acid if required.

Table 13-5 Jiama Copper-Polymetallic Project - Concentrate Assays

Element	Cu Concentrate (%)	Mo Concentrate (%)
Cu	31.96	3.02
Mo	0.18	45.66
S	23.66	35.43
As	0.07	0.26
Pb	0.44	0.16
Zn	0.64	0.05
Fe	16.64	2.82
CaO	8.23	2.52
MgO	2.87	4.02
SiO_2	12.46	5.59
Al_2O_3	0.98	0.36
Au (g/t)	16.65	
Ag (g/t)	351.70	

Source: 2012 Metallurgy Testing Report by CGRI

Regarding this issue the Design Institute has proposed two solutions, which include further processing testing/studies to lower arsenic in the molybdenum concentrate and negotiating with the smelter to cover the concentrate specification, product quantities, payment, smelting and treatment methods.

13.2.4 2010 Weizuo Testing Programme

A comprehensive mineralogical study as well as detailed variability testing was conducted by Hunan Huazhong Mining Co. Ltd. and Lhasa Weizuo Assaying and Testing Co., Ltd in May 2010 to investigate the metallurgical performance of various ore types and develop the comprehensive recovery of the polymetallics including Cu ,Mo, Pb, Zn, Au and Ag.

The details of samples selected for testing and the associated representativity report were not available for review. The three composite samples, namely Tongshan Cu-Mo ore and Tongshan Cu-Pb-Zn ore as well as Qianshan Cu-Pb-Zn ore appear to be representative of the different ore types that would be mined. Based on observations, the skarn hosted ore varies greatly in terms of hardness and grade. The head grade of testing samples (0.57% Cu, 0.114% Mo, 11.2g/t Ag and 0.09g/t Au) has a lower copper grade but higher molybdenum grade than the scheduled mining grade.

Similar to the 2009 CGRI testwork, this programme included one stage grinding for the Cu-Mo bulk flotation, one stage of roughing, two stages of scavenging and three stages of cleaning as well as the Cu-Mo concentrate separation flotation, using one stage of roughing, two stages of scavenging and five stages of cleaning.

Various processing conditions such as grind size, reagent types, addition rates and various combinations as well as flotation time were investigated under standard flotation conditions.

Locked cycle test work was then conducted and the results are summarised in ***Table 13-6***, which showed that 93.12% copper recovery and 90.58% molybdenum recovery were achievable after one stage of milling at a grind size of P_{80}=74 microns to concentrates with grades of 25.33% Cu and 49% Mo respectively.

Table 13-6 Jiama Copper-Polymetallic Project - Locked Cycle Testing Results

Products	Mass	Grade (%)						Overall Recovery (%)					
	(%)	Cu	Mo	Pb	Zn	Au(g/t)	Ag(g/t)	Cu	Mo	Pb	Zn	Au	Ag
Feed	100	0.57	0.114	0.16	0.11	0.09	11.2	100	100	100	100	100	100
Cu Concentrate	2.11	25.33	0.092	3.28	2.87	1.38	413.5	93.12	1.7	43.99	55.28	33.19	77.88
Mo Concentrate	0.21	0.21	49.155	0.1	0.07	0	12.3	0.08	90.58	0.13	0.13	0	0.23
Tailings	97.68	0.04	0.009	0.09	0.05	0.06	2.51	6.81	7.71	55.88	44.58	66.81	21.89

Source: Metallurgy Testing Report for Jiama Cu-Pb-Zn-Ag-Mo Polymetallic Ore, compiled by Weizuo in May, 2010

A number of verification tests on the ores collected from the mining site were conducted to further investigate the grinding size, reagent type and addition point for optimising production. This included the Cu-Mo bulk flotation, Cu-Mo separation flotation, the regrind circuit and reagent addition methods. It was found the regrinding caused poor Mo flotation performance and has been removed from the flowsheet. MMC noted that an excessive number of sodium sulphide additions were made to several flotation stages, which is unnecessary and could be reduced in practice by employing suitable control systems.

13.2.5 2011 Internal Laboratory Testing Programme

This program aimed to develop the basic technical parameters and appropriate reagent regime. Variability testing was conducted by the company's internal laboratories in 2011 based on Cu-Mo ore samples taken from the mining site. Only the recovery of copper and molybdenum was investigated.

Similar to the 2009 CGRI testwork, this programme included a single stage of grinding to P_{75}=74 microns for the Cu-Mo bulk flotation, with one stage of roughing, two stages of scavenging and one stage of cleaning as well as regrinding to P_{90}=38/48 microns for the Cu-Mo concentrate separation consisting of one stage of roughing, two stages of scavenging and six stages of cleaning.

The locked cycle testing results are summarised in ***Table 13-7***, which showed that a copper recovery of 95.16% and a molybdenum recovery of 80.74% were achievable with one milling stage at a grind of P_{80}=74 microns at concentrate grades of 33.32% Cu and 43.49% Mo respectively.

Table 13-7 Jiama Copper-Polymetallic Project - Differential Flotation Verification Testing Results

Product	Mass (%)	Grade (%)		Overall Recovery (%)	
		Cu	Mo	Cu	Mo
Mo Concentrate	0.07	1.44	43.49	0.1	80.74
Cu Concentrate	2.78	32.23	0.067	95.16	5.12
Tailings	97.15	0.046	0.005	4.74	14.14
Feed	100	0.94	0.036	100	100

Source: Report for Verification Differential Flotation Testing of Jiama Cu-Mo Ores, compiled by Internal Testing Lab of the Laboratory in April, 2011

The study has identified that the Cu-Mo separation flotation would cost reagent 12.81 RMB/t (Na_2S 9 RMB/t and collector ZG-2 3.66 RMB/t) for the Cu-Mo separation circuit.

13.3 HORNFELS HOSTED LOWER MO GRADE ORE

A conventional comprehensive mineralogical study as well as a bench scale testing programme was conducted by NRIMM in November 2011 to establish the process and the basic technical parameters for developing the flotation operation of lower grade hornfels Cu-Mo ore.

The hornfels Cu-Mo ore exhibited different processing characteristics to that of the skarn hosted ores. The skarn hosted ore varies greatly in terms of hardness and grade, while the hornfels hosted ore is disseminated with consistently lower Mo and Cu grades.

The composite samples appear to be representative of this part of the mining area, based on the sample collection statement provided by the Company. The head grade of the testing samples was 0.38% Cu and 0.015% Mo, which is consistent with the forecast mining grades.

The testing programme employed the conventional processing option of a Cu-Mo bulk flotation followed by the separation flotation of the Cu-Mo bulk concentrate. The grinding options and optimised conditions tests such as reagent types (lime, butyl xanthate, aniline aerofloat, turpentine oil and sodium hexametaphosphate), addition rates and combinations as well as products were investigated for the production of a concentrate at reasonable recovery.

The processing circuit only examined a grind size of P_{70}=74 microns for a Cu-Mo bulk flotation using one stage of roughing, three stages of scavenging and two stages of cleaning. The Cu-Mo separation flotation only focused on a preliminary rougher separation flotation.

The locked cycle testing was only conducted for the Cu-Mo separation with the results summarised in ***Table 13-8***, where an overall copper recovery of 82.53% and a molybdenum recovery of 45.73% was achieved to separate concentrates with grades of 21.42% Cu and 12.86% Mo respectively.

Table 13-8 Jiama Copper-Polymetallic Project - Locked Cycle Testing Results for Lower Grade Mo Ore

Product	Mass (%)	Grade (%)		Stage Recovery (%)	
		Cu	Mo	Cu	Mo
Cu-Mo Bulk Concentrate	1.52	20.85	0.52	83.41	54.23
Mo Concentrate	3.50	6.26	12.86	1.048	84.42
Copper Concentrate	96.50	21.42	0.086	98.95	15.58
Tailings	98.48	0.06	0.0068	16.59	45.77
Feed	100	0.38	0.015	100	100

Source: Metallurgy Testing Report for Jiama Lower Grade Cu-Mo Hornfels Ore, compiled by NRIMM in November, 2011

Another testing programme for Mo concentrate separation was undertaken recently by NRIMM, with 200 kg drill core samples using the optimal conditions of the previous testing. The closed cycle flotation employed a bulk flotation followed by Cu-Mo separation flotation using a sample with a head grade of 0.385% Cu and 0.015% Mo, which is similar to the ROM grade. The testwork produced a 47% Mo concentrate with a recovery of 52% and a copper recovery of 84%.

A high level economic analysis based on the incremental costs (mainly reagents, concentrate costs not included) of separating the molybdenum from bulk flotation concentrate compared to the expected molybdenum revenue indicates that a feed grade of 0.015% Mo is the threshold grade for an economic separating.

Although the geological grade of Au and Ag in the hornfels sourced copper concentrate is very low (gold < 0.1 g/t and silver < 1 g/t), modest precious metal recoveries have been found in testwork. Metallurgical testing on hornfels hosted samples with a head grade of 0.046g/t Au and 0.97g/t Ag, has achieved a gold recovery of 36% and a silver recovery of 82.23% with a payable gold (Au 1.14 g/t) and silver (Ag 54 g/t) grades in the copper concentrate.

13.4 COPPER-LEAD-ZINC ORE METALLURGICAL TESTING

The copper-lead-zinc ores represent only 3% of the total ore resource, and should not be blended and treated with the copper-molybdenum ores because it would result in a poorer quality copper concentrate (containing lead and perhaps zinc) that would not attract the best payment. These ore types require a different processing route to maximise revenues (i.e. separate copper, lead and zinc concentrates).

A comprehensive mineralogical study and bench scale testing of copper-lead-zinc ores was incorporated in the 2010 Weizuo testing programme. Subsequently a significant quantity of metallurgical testing has been undertaken internally and by the BRIMM for the development of the current operation and subsequent optimisation tests.

Some modified pilot plant testing for the copper-lead-zinc ores was undertaken by the Company processing engineers as well as the BRIMM. After the differential flotation process option had been identified by laboratory testing, a pilot plant with a capacity of 600 tpd was established, based on modification of the old Huatailong processing plant. Metallurgical testing was focused on processing studies comparing bulk flotation with differential flotation.

The lead recovery under bulk flotation option (Pb 90. 27%) was substantially higher than that for the differential flotation method (Pb 80.54%). The silver assay and recovery in the lead concentrate were also significantly higher (990.0 g/t and 91.51% versus 749.5 g/t and 64.57%) than the differential flotation approach. Therefore, the bulk flotation approach has been selected for the Jiama ores as this method will yield significantly higher net smelter returns.

13.4.1 BRIMM Site Duplication Testing Programme

A site validation testing programme was conducted by the BRIMM in April 2011 based on the previous testing results to confirm the processing options and provide a basis for the plant modification.

The process is copper-lead bulk flotation followed by copper-lead separation flotation and zinc flotation. The testing programme was focused on the validation of the previous processing circuit. The locked cycle testing achieved a copper recovery of 87.81%, a lead recovery of 89.96% and a zinc recovery of 70.02% at a grind size of P_{70}=74 microns to concentrates with grades of 20.4% Cu, 85.59% Pb and 42.4% Zn respectively (refer to ***Table 13-9***).

Table 13-9 Jiama Copper-Polymetallic Project - All Recycle Water Locked Cycle Testing

Products	Mass (%)	Grade (%)					Recovery (%)				
		Cu	Pb	Zn	Au	Ag	Cu	Pb	Zn	Au	Ag
Feed	100	0.46	3.72	0.66	0.26	71.43	100	100	100	100	100
Pb Concentrate	3.91	0.6	85.59	0.34	0.04	1,053.14	5.10	89.96	2.01	0.60	57.65
Cu Concentrate	1.98	20.4	8.46	5.54	1.9	471.17	87.81	4.50	16.62	14.47	13.06
Zn Concentrate	1.09	0.29	0.63	42.40	0.10	24.95	0.69	0.18	70.02	0.42	0.38
Tailings	93.02	0.037	0.21	0.076	0.24	22.2	7.48	5.25	10.71	85.86	28.91

Source: Report for Site Duplicate Testing of Jiama Cu-Pb-Zn Polymetallic Ores, compiled by BRIMM in April, 2011

Based on the results of these studies, a plan for modification of the pilot processing plant was proposed. It was recommended that the tailings of Cu-Pb bulk flotation were not thickened before reporting to the zinc flotation circuit. It was also found that there was no requirement of thickening of Cu-Pb bulk concentrates before the subsequent separation circuit.

13.4.2 Internal Laboratory Testing Programme

Two metallurgical testing programmes examined two process options, namely all differential flotation to produce separate copper, lead and zinc concentrates and a copper-lead bulk flotation-zinc flotation, based on stockpiled Cu-Pb-Zn ore samples. The testing was undertaken internally.

The locked cycle testing results of the two approaches achieved excellent copper recoveries and metallurgical performances (refer to ***Table 13-10*** and ***Table 13-11***). The first process option, using both fresh water and recycled water, has achieved similar recoveries. The second processing circuit resulted in poor zinc recovery performance, with a copper recovery of 83.05%, a lead recovery of 91.52% and a zinc recovery of 50.82%, based on a grind size of P_{74}=74 microns, to concentrates with grades of 29.66% Cu, 67.24% Pb and 40.85% Zn respectively.

Table 13-10 Jiama Copper-Polymetallic Project - Locked Cycle Tests (Differential Flotation)

Product	Mass (%)	Grade (%)			Recovery (%)		
		Cu	Pb	Zn	Cu	Pb	Zn
Fresh Water							
Feed	100	0.50	3.00	1.04	100	100	100
Cu Concentrate	1.84	23.77	5.43	3.10	87.47	3.33	5.48
Pb Concentrate	3.37	0.52	77.18	1.31	3.50	86.70	4.24
Zn Concentrate	1.79	0.3	3.92	48.67	1.07	2.34	83.77
Tailings	93.00	0.04	0.24	0.07	7.44	7.44	6.44
85% Recycle Water							
Feed	100	0.50	3.02	1.18	100	100	100
Cu Concentrate	1.70	24.78	6.96	3.67	84.25	3.92	5.29
Pb Concentrate	3.61	0.75	72.73	2.38	5.42	86.94	7.28
Zn Concentrate	1.98	0.46	5.66	48.31	1.82	3.71	81.06
Tailings	92.67	0.046	0.18	0.08	8.53	5.52	6.28

Source: Report for Preferential Flotation Verification Testing of Jiama Cu-Pb-Zn Polymetallic Ores, compiled by Internal Testing Laboratory in April, 2011

Table 13-11 Jiama Copper-Polymetallic Project – Validation Locked Cycle Tests (Bulk Flotation)

Product	Mass (%)	Grade (%)			Recovery (%)		
		Cu	Pb	Zn	Cu	Pb	Zn
Feed	100	0.50	3.13	1.27	100	100	100
Cu Concentrate	1.40	29.66	8.40	2.61	83.05	3.76	2.88
Pb Concentrate	4.26	0.77	67.24	4.00	6.56	91.52	13.42
Zn Concentrate	1.58	0.63	3.67	40.85	1.99	1.85	50.82
Tailings	92.76	0.04	0.09	0.45	7.42	2.67	32.87

Source: Report for Bulk Flotation Options Testing of Jiama Cu-Pb-Zn Polymetallic Ores, compiled by Internal Testing Laboratory in April, 2011

Further laboratory testing has achieved a copper concentrate with grades of 23.8% Cu, 4.61g/t Au and 473 g/t Ag, a lead concentrate with grades of 77% Pb , 0.32 g/t Au and 836 g/t Ag and a zinc concentrate with grades of 48.7% Zn with recoveries of 88.1% Cu , 77.2% Pb and 83.8% Zn respectively. An overall gold recovery of 42% (36.5% to the copper concentrate) was found, which is expected to be increased to 45% (39.2% to the copper concentrate) with optimisation and an overall silver recovery of 79% (17% to the copper concentrate).

13.4.3 Pilot Plant Testing Programme

Based on the testing results produced by the internal laboratory and the Design Institutes, a pilot plant for the copper-lead-zinc flotation testing was established by modifying the old Huatailong processing plant (capacity of 600 tpd). Four pilot plant runs were undertaken by the company's processing engineers using mined ore samples. It should be noted that the test samples were oxidised which affected the results, particularly for the lead and the zinc.

The testing focused on the differential flotation process to produce three separate concentrates using four different water sources in four tests as follows:

- No.1 Stage - Pilot Testing by 9 Shifts (sample quantity 1,442 t) using fresh water;
- No.2 Stage - Pilot Testing by 28 shifts (sample quantity 4,377t) using thickener water;
- No.3 Stage - Pilot Testing by 13 shifts (sample quantity 2,103 t) using Huatailong 60 m diameter thickener water; and
- No.4 Stage - Pilot Testing by 13 shifts (sample quantity 1,907 t) using Huatailong 30 m diameter thickener water.

The result of the pilot testing is summarised in ***Table 13-12***, which shows that reasonable copper recoveries (73%-88%) were achieved at marketable copper grades (22%-25%). The lead concentrate is also marketable with lower recoveries (57%-63%) while it was not possible to produce a marketable zinc concentrate. These results are not as good as the laboratory testing results and demonstrate the impact of sample oxidisation, which causes difficulties in the flotation of lead and zinc.

Table 13-12 Jiama Copper-Polymetallic Project - Differential Flotation Pilot Testing Results

Products	Mass (%)	Grade (%)					Recovery (%)				
		Cu	Pb	Zn	Au (g/t)	Ag (g/t)	Cu	Pb	Zn	Au	Ag
No.1 Stage											
Feed	100	0.44	1.45	0.36	0.33	31.00	100	100	100	100	100
Cu Concentrate	1.75	22.28	7.67	3.75	4.97	436	88.61	9.26	18.23	26.36	24.87
Pb Concentrate	1.32	0.37	69.21	2.30	1.17	759	1.11	63.00	8.43	4.68	32.63
Pb-Zn Bulk Concentrate	0.21	1.03	13.42	17.15	1.13	263	0.49	1.94	10.00	0.72	1.80
Tailings	96.72	0.049	0.39	0.23	0.24	13.00	10.77	26.01	61.79	70.34	40.60
No.2 Stage											
Feed	100	0.52	1.43	0.37	0.37	33.00	100	100	100	100	100
Cu Concentrate	1.95	22.67	6.76	3.52	4.68	386	85.01	9.22	18.55	24.66	23.09
Pb Concentrate	1.35	0.81	66.61	2.88	0.84	770	2.10	62.88	10.51	3.06	31.90
Pb-Zn Bulk Concentrate	0.59	2.70	16.81	8.48	2.24	360	3.06	6.94	13.52	3.57	6.51
Tailings	96.11	0.055	0.294	0.205	0.243	12.00	10.17	19.76	53.25	63.12	35.34
No.3 Stage											
Feed	100	0.38	1.67	0.48	0.32	34.00	100	100	100	100	100
Cu Concentrate	1.29	23.69	8.35	4.89	5.89	566	80.42	6.45	13.14	23.74	21.24
Pb Concentrate	1.43	0.58	67.63	5.14	0.55	835	2.18	57.91	15.31	2.46	34.73
Pb-Zn Bulk Concentrate	0.61	1.03	15.02	28.16	0.73	291	1.65	5.49	35.79	1.39	5.17
Tailings	96.67	0.062	0.519	0.177	0.238	14.00	15.77	30.04	35.65	71.90	38.85
No.4 Stage											
Feed	100	0.39	1.29	0.38	0.17	16.00	100	100	100	100	100
Cu Concentrate	1.16	24.74	11.27	7.3	2.36	281	73.59	10.13	22.28	16.10	19.87
Pb Concentrate	1.32	1.63	55.89	7.31	0.42	525	5.52	57.19	25.39	3.26	42.20
Pb-Zn Bulk Concentrate	0.12	1.60	13.14	41.65	0.92	514	0.49	1.22	13.15	0.65	3.76
Tailings	97.4	0.08	0.419	0.156	0.145	6.00	19.98	31.64	39.99	83.08	34.16

Source: Stages Report for All Preferential Flotation Pilot Testing of Jiama Cu-Pb-Zn Polymetallic Ores, compiled by Internal Engineers of the Company in Nov, 2011

14 MINERAL RESOURCE ESTIMATES

A Mineral Resource estimate has been independently completed by MMC in accordance with the guidelines provided in the NI 43-101, Standards of Disclosure for Mineral Projects, dated June 30, 2011. Information contained in this Report is based on information provided to MMC by the Company and verified by MMC. All statistical analysis and Mineral Resource estimations were carried out by MMC. MMC developed three dimensional digital resources for the concentration of the Cu, Mo, Pb, Zn, Au, Ag metal and developed the resource estimates based on the statistical analysis of the data provided. MMC believes the Mineral Resource estimate meets general guidelines for NI 43-101 compliant resources for the Measured, Indicated and Inferred confidence levels.

14.1 DATA

14.1.1 Sample Data

All drill hole collar, survey, assay and geology records were supplied to MMC in *Excel* spreadsheet format by the site geologists and engineers. All Mineral Resource work conducted by MMC was based on data received as of April, 2012. An Access database was created, and is managed, by MMC.

The database contains the records from 328 surface diamond drill holes ("DD") for a total of 122,653 m and 10 trenches for a total of 349 m. A summary of the drill hole database is shown in ***Table 14-1***.

Table 14-1 Jiama Copper-Polymetallic Project - Summary of Data Used in Resource Estimate.

Type	In Database	
	Number	Total Length (m)
Trenching	10	349
Pre-2011 drilling	306	122,653
2011 drilling	22	10,720
Total	**338**	**133,721**

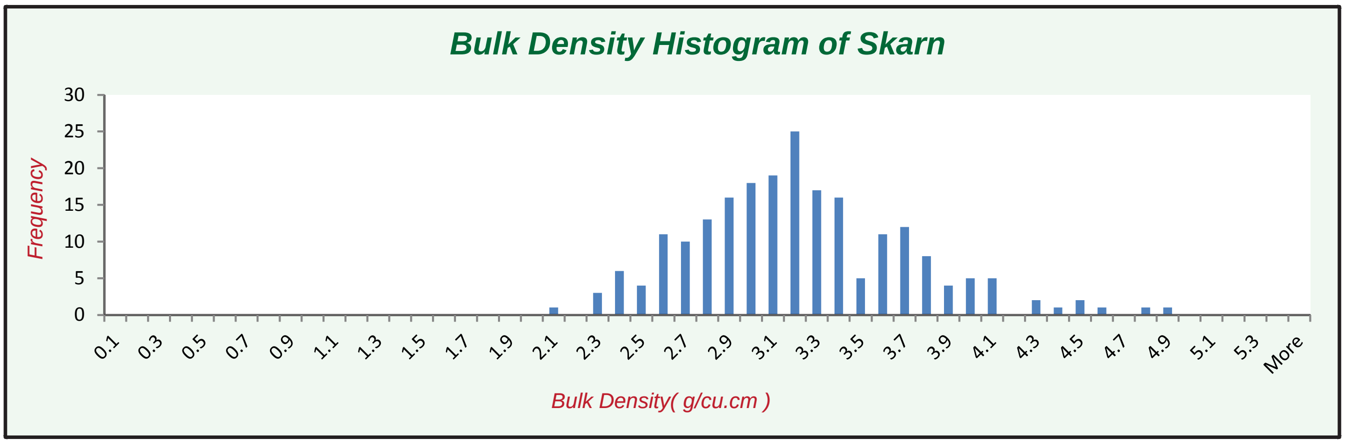
No data was excluded from the model, with the exception of some historical drill holes completed in the 1990's, which were considers to be of sub-standard quality. These holes have been omitted from the ***Table 14-1***.

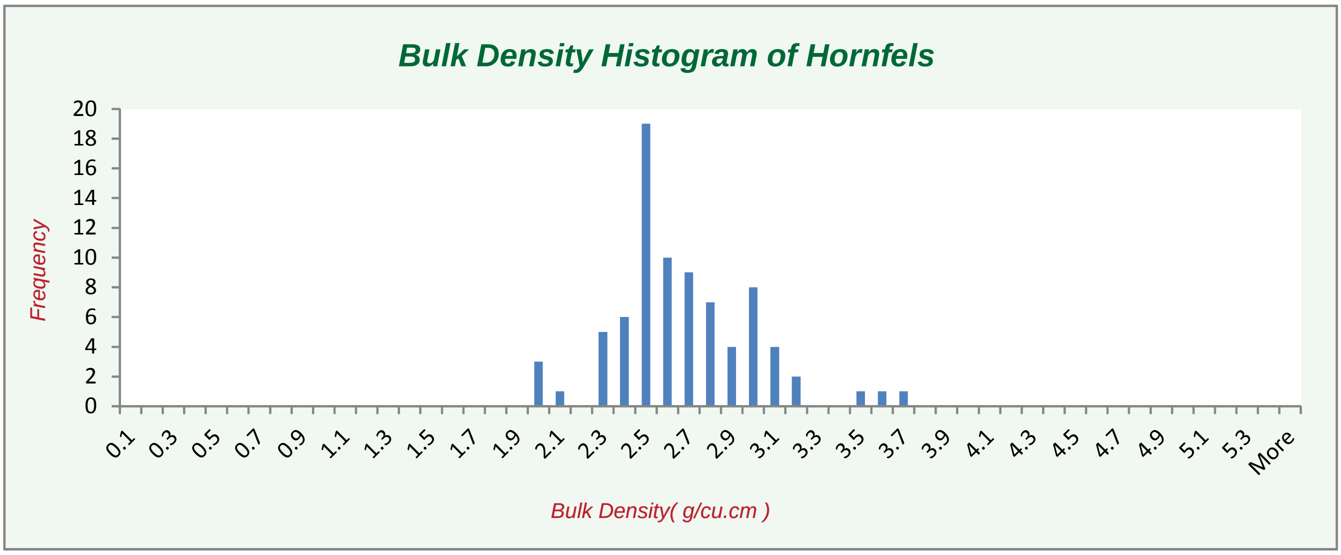
14.1.2 Bulk Density Data

A total of 471 bulk density determinations have been completed with 354 from the Skarn, 82 from the Hornfels Hosted mineralisation and 35 from the Porphyry mineralisation. MMC believes these determinations are representative of the underlying geology and, considering the style of mineralisation, are representative of the deposit and the rock type from which they were sampled. ***Table 14-2*** presents the average bulk density for each rock type and ***Figure 14-1*** displays histograms of the bulk density data.

Table 14-2 Jiama Copper-Polymetallic Project – Bulk Density by Rock Type

Rock type	Number	Average (g/cu.cm)
Skarn	354	3.13
Hornfels	82	2.63
Porphyry	35	2.37





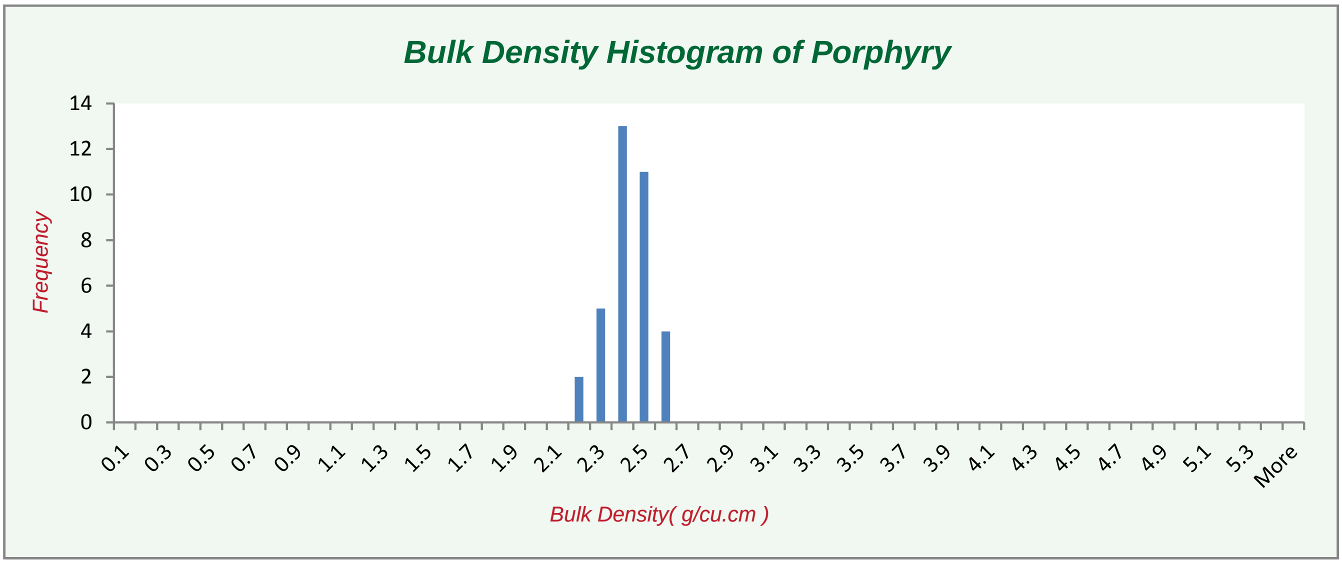


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FIGURE 14-1

China Gold International Resources Corporation Limited

Jiama Copper-Polymetallic Project

Histograms of Bulk Density

Project No : ADV-HK-03709

14.2 GEOLOGY AND RESOURCE INTERPRETATION

Geological wireframes for the Skarn, Hornfels and Porphyry hosted mineralisation were created by MMC using the geological logging of the drill core. These wireframes were used to guide the mineralised envelopes, which were interpreted using a nominal ppm 0.1% Cu grade cut-off selected from log-probability plots to separate background from mineralised population. No independent wireframes were constructed for Mo, Pb, Zn, Au and Ag as all this mineralisation fell within the Cu mineralised envelopes.

Resource outlines were generally extrapolated to a distance half-way between mineralised and un-mineralised holes/sections or 100 meters from the nearest hole on the edges of the mineralisation, where no un-mineralised drill holes were available to limit the interpretation.

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

14.3 PREPARATION OF WIREFRAMES

A drill hole and trench sample layout plan for the Project is displayed in ***Figure 10-1.*** This data formed the basis of sectional interpretations of the mineralisation. The interpreted sectional outlines were manually triangulated to form the wireframes. To form ends to the wireframes, the end section strings were copied to a position midway to the next section or 100 meters from the nearest drill hole and adjusted to match the overall interpretation of the mineralisation.

The wireframed objects were validated using *Surpac* software and set as solids.

14.4 SAMPLE STATISTICS

14.4.1 General

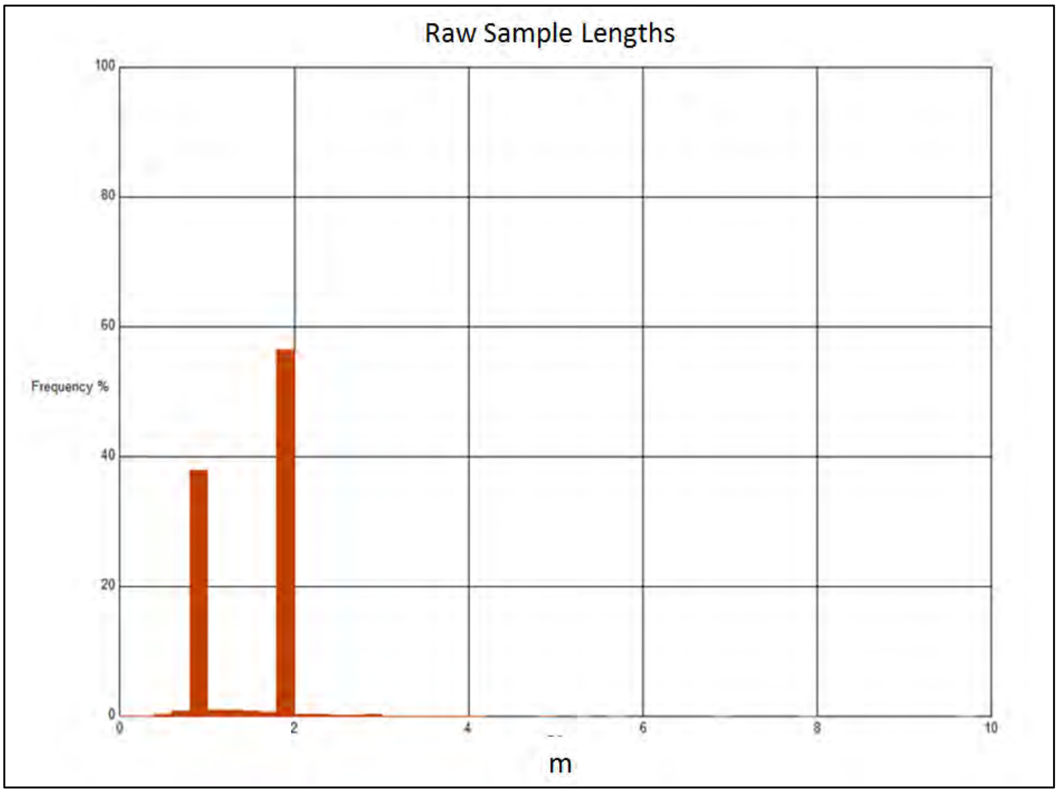
The mineralised envelopes were used to code the drill hole and trench database to allow identification of the resource domains. Separate intersection files were generated for each mineralised envelope. A review of sample length within these files was carried out to determine the optimal composite length. This review determined that a variety of sample lengths were used during the sampling, these lengths ranged from less than 1 m to over 5 m, however the majority were either 1 m or 2 m. In particular, a variety of sample lengths were utilized during the 2008 to 2011 drilling program, the majority of which ranged from 1 to 2 m. Although a significant number of samples have lengths less that 2 m (***Figure 14-2***), MMC believes 2 m to be the optimal composite length due to the weighted sample length and the mining method planned to be employed for the Project, namely large scale open cut and underground mining. *Surpac* software was then used to extract downhole composites within the intervals coded for each domain.

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

14.4.2 Sample Support and Drilling Types and Generations

Due to the low number of trenches, the location and the large number of drill holes, MMC considers the trench data to have minimal influence on the global or local remaining resource. In addition, the vast majority of drilling has been completed following the same drilling, sampling and analytical procedures and completed by the same contractor. As a result MMC regards that no sample support issues are present within the dataset.

Figure 14-2 Jiama Copper-Polymetallic Project – Raw Sample Lengths.



14.5 DEPOSIT STATISTICS

All composite sample data for the deposit was imported into Geo-Access Software for analysis. Statistics were produced for the Cu, Mo, Au, Ag, Pb and Zn composites within each domain, as shown in ***Table 14-3***.

Analysis of the descriptive statistics indicates that the elements within each domain appear to have a log normal distribution with moderate to high variability. A reasonably high range, coefficient of variation and variance is seen in all elements, particularly Pb and Zn. This interpretation is further supported when the log probability plots and histograms are analysed, resulting in the interpretation that all elements have a relatively lognormal distribution and a highly positively skewed distribution. ***Figures 14-3*** and ***Figures 14-4*** display histograms and log probability plots for Cu and Mo for each domain.

MMC interprets these statistics to be representative of the style of mineralisation observed at the Jiama deposit and is consistent with these styles of mineralisation. Of particular note is the high coefficient of variation of observed for Pb and Zn. This indicates that upon receipt of additional drill information further internal mineralisation domaining of these areas may be warranted.

Table 14-3 Jiama Copper-Polymetallic Project - Descriptive Statistics for the Project

Type	Skarn						Hornfels Hosted						Porphyry Mineralisation					
Statistic	**Cu**	**Mo**	**Au**	**Ag**	**Pb**	**Zn**	**Cu**	**Mo**	**Au**	**Ag**	**Pb**	**Zn**	**Cu**	**Mo**	**Au**	**Ag**	**Pb**	**Zn**
Number	6,415	6,415	6,415	6,415	6,415	6,415	21,640	21,640	21,640	21,640	21,640	21,640	3,156	3,156	3,156	3,156	3,156	3,156
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.23	0	0
Maximum	40.04	3.15	50.18	743.5	29.38	19.01	5.27	1.54	6.92	67.8	3.71	6.92	3.03	2.04	5.57	60.4	2.66	5.57
Mean	0.69	0.04	0.25	14.15	0.14	0.08	0.22	0.02	0.02	1.12	0.01	0.02	0.16	0.03	0.02	1.03	0.01	0.02
Median	0.31	0.02	0.08	5.86	0.01	0.01	0.17	0.01	0.01	0.83	0	0.01	0.12	0.01	0.01	0.73	0.01	0.01
Std Dev	1.26	0.1	0.94	26.81	0.97	0.5	0.17	0.04	0.12	1.58	0.04	0.12	0.16	0.06	0.16	2.19	0.06	0.16
Variance	1.59	0.01	0.88	718.67	0.94	0.25	0.03	0	0.01	2.5	0	0.01	0.03	0	0.03	4.79	0	0.03
Std Error	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Coeff Var	1.83	2.25	3.72	1.9	7.08	6.24	0.76	1.75	4.74	1.41	5.93	4.74	1.05	2.16	7.19	2.13	6.24	7.19
Sichel Stats																		
Mean	0.79	0.06	0.28	15.02	0.04	0.03	0.22	0.02	0.03	1.05	0.01	0.03	0.18	0.05	0.03	0.92	0.01	0.03
V	2	2.71	2.13	1.89	2.89	1.76	0.43	1.39	0.71	0.23	0.43	0.71	1.38	3.57	0.92	0.26	0.5	0.92
Gamma	2.72	3.87	2.9	2.57	4.24	2.41	1.24	2	1.42	1.12	1.24	1.42	1.99	5.97	1.59	1.14	1.29	1.59
Percentiles																		
10	0.05	0	0	0.74	0	0	0.08	0	0	0.59	0	0	0.02	0	0	0.49	0	0
20	0.1	0	0.01	1.4	0	0.01	0.11	0.01	0	0.67	0	0	0.03	0	0	0.56	0	0
30	0.15	0.01	0.03	2.52	0	0.01	0.13	0.01	0	0.73	0	0	0.06	0	0	0.61	0	0
40	0.22	0.01	0.05	4.04	0.01	0.01	0.15	0.01	0.01	0.78	0	0.01	0.09	0.01	0	0.67	0	0
50	0.31	0.02	0.08	5.86	0.01	0.01	0.17	0.01	0.01	0.83	0	0.01	0.12	0.01	0.01	0.73	0.01	0.01
60	0.45	0.02	0.12	8.59	0.01	0.01	0.2	0.02	0.02	0.9	0	0.02	0.15	0.02	0.01	0.79	0.01	0.01
70	0.66	0.04	0.2	12.83	0.02	0.02	0.24	0.02	0.02	0.99	0.01	0.02	0.19	0.03	0.02	0.88	0.01	0.02
80	0.99	0.06	0.31	19.42	0.03	0.03	0.3	0.03	0.03	1.24	0.01	0.03	0.24	0.04	0.02	1.02	0.01	0.02
90	1.62	0.11	0.57	34.16	0.1	0.09	0.41	0.05	0.04	1.74	0.01	0.04	0.34	0.07	0.03	1.44	0.01	0.03
95	2.5	0.17	0.91	52.75	0.3	0.23	0.52	0.07	0.06	2.36	0.01	0.06	0.42	0.09	0.05	2.07	0.02	0.05
97.5	3.48	0.27	1.34	78.9	0.9	0.57	0.63	0.11	0.1	3.27	0.02	0.1	0.54	0.14	0.08	3.1	0.04	0.08
99	5.05	0.41	2.28	127.58	2.99	1.59	0.8	0.17	0.22	5.13	0.04	0.22	0.65	0.21	0.17	5.08	0.09	0.17

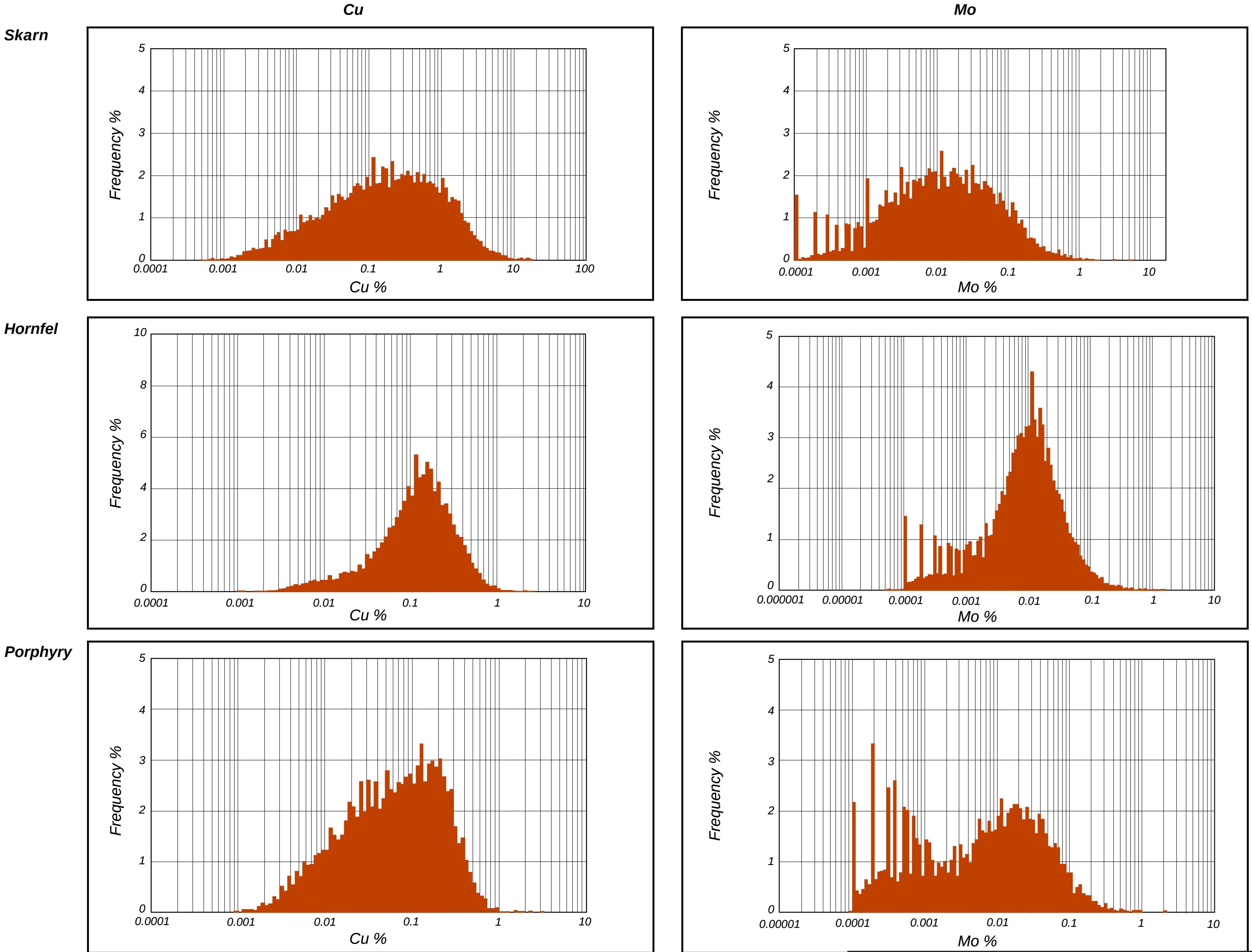


FIGURE 14-3

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Jiama Copper-Polymetallic Project

Histograms of Cu and Mo

Project No : ADV-HK-03709

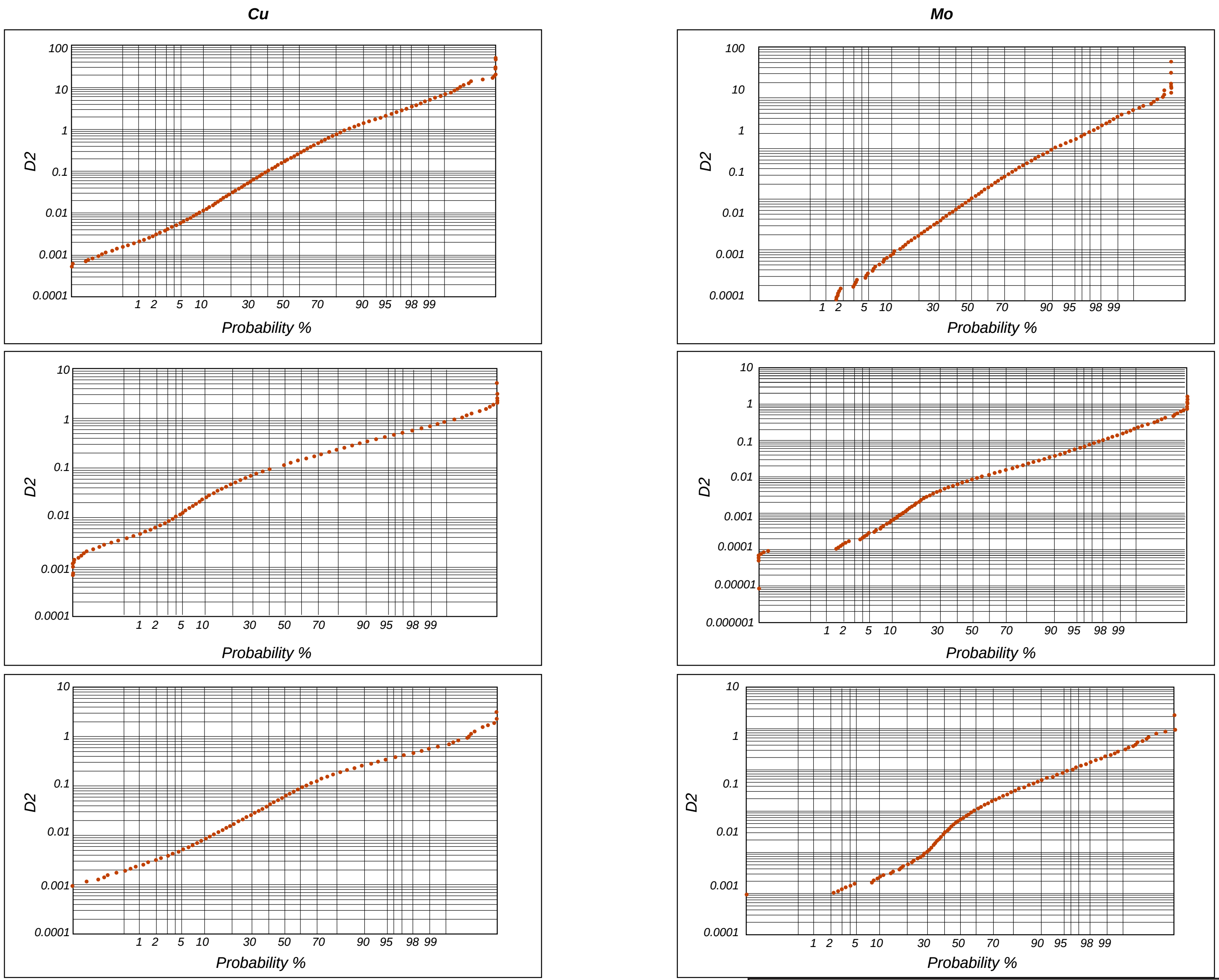

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FIGURE 14-4

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Log Probability Cu and Mo

Project No : ADV-HK-03709

14.6 METALS CORRELATION

There is generally a poor correlation between metals within the Jiama deposit with only Cu and Ag displaying a reasonable correlation (***Table 14-4***). The generally poor correlation is consistent with the observed zonation of mineralisation. It can be observed that there are generally distinct mineralisation zonation's within the domains and this would suggest that the deposit has formed through several different mineralisation events.

Table 14-4 Jiama Copper-Polymetallic Project – Metals Correlation Matrix.

	Cu	Mo	Au	Ag	Pb
Mo	0.03				
Au	0.52	0.01			
Ag	0.81	0.03	0.51		
Pb	0.07	0.01	0.02	0.31	
Zn	0.09	0	0.02	0.29	0.46

14.7 HIGH GRADE CUTS

Visual analysis of the grade distributions within drill holes indicates that the high grade mineralisation outside the skarn zone occurs as less continuous isolated high grade samples surrounded by low grade material for all metals. This is significantly different to continuous higher grades observed within the skarn zone, however these grades have no significant influence of the grade distribution, and as shown in the graphs no distinct breaks can be interpreted. As a result MMC considers there to be no outliers within the distributions for the Hornfels or Porphyry hosted mineralisation for any of the metals.

The high grade cut analysis completed by MMC for the skarn mineralisation included evaluation of histograms, log probability plots and descriptive statistics. Analysis of the distributions for the different mineralisation types indicates a distinctive break in the log probability plot (***Figure 14-4***) of the Cu grade at 25 % for the Skarn type, while analysis of the graphs for Mo, Pb, Zn, Au and Ag (***Figure 14-4***) indicate similar distinct breaks can be interpreted. Visual analysis of the drill holes indicates that the grades above these grades are isolated high grade assays, rather than continuous zones of extreme high grade. As a result, MMC considers the samples above these grades to be outliers to the distributions and appropriate for high grade cuts as shown in ***Table 14-5.***

Table 14-5 Jiama Copper-Polymetallic Project - High Grade Cuts Applied to Skarn Composites

Element	Rock type	High Grade Cut
Cu (%)	Skarn	25
Mo (%)	Skarn	2
Au (g.t)	Skarn	20
Ag (g/t)	Skarn	400
Pb (%)	Skarn	20
Zn (%)	Skarn	10

14.8 GEOSPATIAL ANALYSIS

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

- composites within the Skarn zone,
- composites within the Hornfels hosted zone, and
- composites within the Porphyry zone.

The geospatial analysis of the separate mineralisation styles indicated that reasonable continuity could be interpreted for Cu and Mo in the Skarn and Hornfels hosted mineralisation and no robust variograms could be interpreted for the Porphyry zone. The Porphyry zone was assigned the variogram parameters of the Hornfels hosted zone. Robust variograms could not be generated for Au, Ag, Pb and Zn for any of the three lithological zones.

The interpreted orientation of the majority of the mineralisation was supported when the datasets was analysed. The interpretation of the resultant semi-variograms indicated that the nugget was low at 10% for Cu and Mo, and major and semi-major axis's are in the horizontal plane and have similar ranges. This resulted in a flat lying search ellipse with no anisotropy in the horizontal plane.

The interpreted major and semi major direction is consistent with the interpreted geology of the deposit where the Skarn is relatively flat lying and the Hornfels hosted mineralisation displays internal mineralisation bands that are also relatively horizontal. Interpretation of the minor direction indicated a range that was significantly shorter than that of the major and semi major directions. The interpreted variogram parameters are shown in ***Table 14-6*** and the interpreted model graphically for the Skarn in ***Figure 14-5.***

Table 14-6 Jiama Copper-Polymetallic Project - Interpreted Skarn Variography Parameters

Rock type	Nugget	Sill	Range	Structure 1 major/semi	major/minor	Sill	Range	Structure 2 major/semi	major/minor
Skarn Cu	0.1	0.34	148.5	1	10	0.56	201	1	10
Skarn Mo	0.1	0.41	137.5	1	10	0.49	356.5	1	10

Rock type	Nugget	Sill	Range	Structure 1 major/semi	major/minor	Sill	Range	Structure 2 major/semi	major/minor
Hornfels Cu	0.1	0.48	190	1	10	0.42	290	1	10
Hornfels Mo	0.1	0.44	180	1	10	0.46	390	1	10

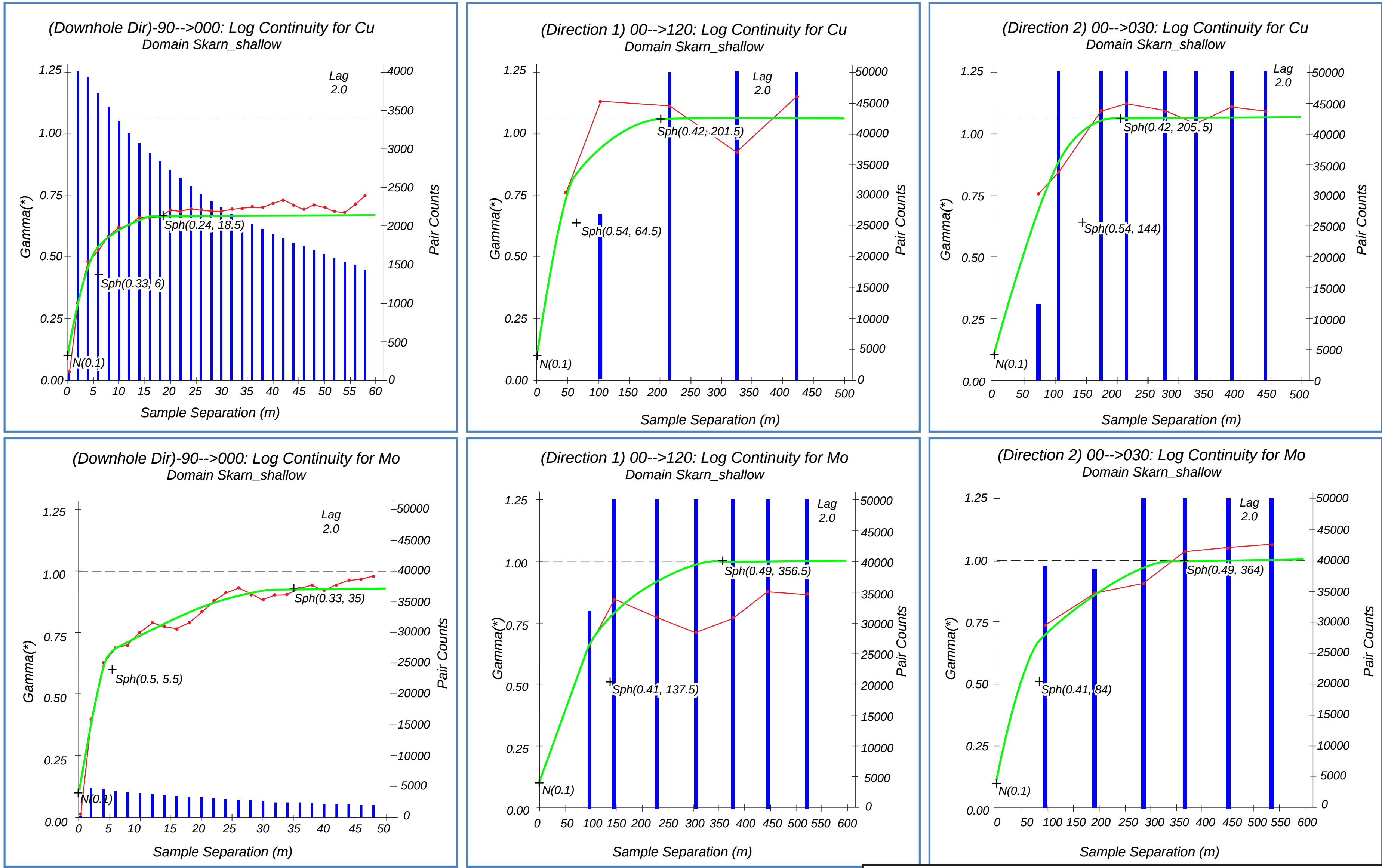

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FIGURE 14-5

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Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

Graphical Represention of Variography Mo

14.9 RESOURCE ESTIMATION

14.9.1 Block Model

One *Surpac* block model was created to encompass the full extent of the mineralisation within the Jiama Project. The block model origin and extents and attributes are listed in ***Table 14-7.***

Table 14-7 Jiama Copper-Polymetallic Project - Block Model Parameters

Model Names	jiama_20120511.mdl		
	Northing	**Easting**	**Elevation**
Minimum Coordinates	3,286,200	16,378,100	4000
Extent (m)	3,600	3,500	1400
Block Size (m) (Sub-blocks)	25 (12.5)	25 (12.5)	5 (2.5)
Rotation (degrees)		0	

Block Attributes:	
cu_cut	Reportable Cu % grade
mo_cut	Reportable Mo % grade
au_cut	Reportable Au g/t grade
ag_cut	Reportable Ag g/t grade
pb_cut	Reportable Zn % grade
zn_cur	Reportable Pb % grade
class	JORC classification code (1 = mea, 2 = ind, 3 = inf)
pod	domain (air, above, below, between)
bd	bulk density (t/cu.m)
type	air, ore, waste
litho	sk, hf, py
mined	y,n
licence	min, exp, n
pass	Estimation pass

14.9.2 Block Size

The parent block size was determined based on the drill spacing and geological variability of the deposit. A significant number of drill holes have a spacing of 50 m or less, the vast majority having been drilled within the area of the pits. Given this and the variability of mineralisation and size of the vein sets, MMC considered a block size of 25m (northing) by 25 m (easting) by 5 m (vertical) to be appropriate.

14.9.3 Estimation Parameters

For all mineralisation envelopes interpreted within the Project, the resource objects were used as hard boundaries in the interpolation of the metals. That is, only grades inside each object were used to interpolate the blocks inside the envelopes. The Ordinary Kriging (OK) algorithm was selected for Cu and Mo interpolation due to the number of samples and the adequate interpreted geospatial analysis. The OK algorithm was utilised to minimise over smoothing within the estimate. The inverse distance method with a power of 2 was used to estimate Au, Ag, Pb and Zn as no robust geospatial analysis on these elements was generated. MMC considers the inverse distance method to be suitable for estimation of these secondary elements.

An anisotropic search based on the geospatial analysis was used to estimate a first pass radius of 125 m along the major direction of continuity and drill density through the mineralised zone, with a search radius of 250 m used for the second pass and a final pass of 500 m. The minimum number of samples was 12 for the first 2 passes, with a maximum of 25 samples. For the third pass a minimum of 1 sample was used to fill the remainder of blocks.

The search parameters are shown in ***Table 14-8***.

Table 14-8 Jiama Copper-Polymetallic Project - Block Model Search Parameters

Parameter	All Rock Types Pass 1	Pass 2	Pass 3
Search Type		anisotropic	
Bearing		120	
Dip		0	
Plunge		0	
Major-Semi Major Ratio		1	
Major-Minor Ratio		1	
Search Radius	125	250	500
Minimum Samples	12	12	1
Maximum Samples	24	24	24
maximum Per Hole	999	999	999
Block Discretisation		4 X by 4 Y by 2 Z	

14.9.4 Density

MMC considers that the bulk densities for each rock type as outlined in **Section 14.1.2** are representative as they are appropriate to the style of mineralisation found. As a result MMC utilised the average of the bulk densities from each rock type in the block model.

14.9.5 Resource Classification

A significant number of holes have been completed from surface on the deposit. Drilling was undertaken in a number of phases and on a number of spacings, as a result sample density is variable with some areas having dense coverage while others are quite sparse.

As a result of this sample density variability MMC constrained the geospatial analysis of the grade within the densely populated areas to limit the effect of the variable sample spacing. This detailed statistical analysis in addition to the analysis of the recent production data for Cu, Pb and Zn suggested that sample spacings of less than 60 m, 120 m and 250 m are appropriate for classification of Measured, Indicated and Inferred Mineral Resources respectively, which would be compliant with the recommended guidelines of the NI 43-101 standards. These distances were based on the semi-variogram ranges for the major direction of continuity and the visual inspection of the grade within the drill hole.

During the review of the data MMC noted that the Au and Ag mineralisation had a significantly higher special variability than the other elements. As a result MMC has classified the Au and Ag resource separately this classification takes into account the proposed large scale mining techniques where Au and Ag will only be credits to the overall products from the operations. Sample spacings of less than 120 m and 250 m are appropriate for classification of Indicated and Inferred Mineral Resources respectively for Au and Ag. MMC has assumed that Au and Ag will not be used as a single cut-off grade for a selected mining block.

14.9.6 Model Validation

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

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

Swath Plots

The composites were compared with the block model data by northing and elevation in the swath plots. These plots highlight that the estimates compare relatively well for the majority of composites, however they do highlight the smoothing of the interpolation resulting from the OK estimation technique.

Grade Comparison by Domain

Comparison of the block values and composites results in a relatively good correlation (***Table 14-9***), with block model grades comparing quite well with the composites which MMC considers acceptable for the estimation and style of mineralisation observed. MMC notes that ***Table 14-9*** does not show all objects, only the largest, which contain the majority of the mineralisation.

Table 14-9 Jiama Copper-Polymetallic Project - Comparison of Block Estimates and Composites

Object	Wireframe	Block Model		Composites	
	Pod Volume	Resource Volume	Cu %	Number of Comps	Cu %
1	252,265,768	247,473,047	0.64	5519	0.69
2	770,068,752	768,600,781	0.23	20250	0.25
16	1,752,213	1,755,469	0.15	60	0.16
18	1,881,639	1,877,344	0.14	53	0.14
68	12,151,925	12,164,844	0.13	365	0.12
74	10,332,331	9,690,234	0.11	233	0.11
82	15,221,485	15,113,281	0.05	714	0.05
Total	**1,063,674,113**	**1,056,675,000**	**0.32**	**27,194**	**0.33**

Visual Inspection of the Blocks

A visual inspection of the block estimates and the composites was completed to confirm the mathematical correlation and ensure that no conditional bias had occurred on a local scale.

Overall Validation

The review of the mathematical comparison indicates that a good correlation exists, as shown in ***Table 14-9***. This good correlation of the drill holes and interpolated block model was further supported when a visual inspection was completed.

As a result of the validation completed MMC believes the estimate is representative of the composites, and is indicative of the known controls of mineralisation and the underlying data.

14.10 MINERAL RESOURCE STATEMENT

MMC has independently estimated the Mineral Resources contained within the Project, based on the data collected by the Company as at 28th April, 2012. The Mineral Resource estimate and underlying data complies the guidelines provided in the NI 43-101, Standards of Disclosure for Mineral Projects, dated June 30, 2011. Therefore MMC believes it is suitable for public reporting and meets the reporting standards of Chapter 18 of the HKEx listing rules. The Mineral Resources were completed by Mr. Jeremy Clark of MMC and are reported at a 0.3% Copper equivalent grade. The results of the resource estimate for the Project are tabulated in ***Table 14-10.***

During the review of the data MMC noted that whilst the mineralisation occurs all within a single mineralised body, Au and Ag mineralisation within the orebody had a significantly higher spatial variability than the other elements. As a result MMC has classified the Au and Ag resource presented in ***Table 14-11*** separately; this classification takes into account the proposed large scale mining techniques where Au and Ag will only be credits to the overall products from the operations. MMC has assumed that Au and Ag will not be used as a single cut-off grade for a selected mining block and will be mined in conjunction with the other elements.

The Mineral Resources are summarized in ***14-10*** and ***Table 14-11***. The Mineral Resources presented in ***Table 14-11*** for Au and Ag are inclusive and not in addition to the Mineral Resources in ***14-10*** and occur within the same mineralised body.

Table 14-10 Jiama Copper-Polymetallic Project - Cu, Mo, Pb and Zn Mineral Resources reported at a 0.3 % Cu Equivalent Cut Off Grade as at 28th April 2012

Rock Type	Class	Quantity Mt	Cu %	Mo %	Pb %	Zn %	Cu Metal Kt	Mo Metal Kt	Pb Metal Kt	Zn Metal Kt
Skarn	**Measure**	35.6	0.71	0.048	0.11	0.07	252	17	38	25
	Indicate	293.2	0.73	0.043	0.07	0.06	2,135	127	201	163
	M+I	328.8	0.73	0.044	0.07	0.06	2,388	144	239	187
	Inferred	174	0.6	0.045	0.16	0.08	1,036	79	286	146
Hornfels	**Measure**	38.4	0.28	0.035	0.04	0.01	107	14	14	5
	Indicate	626.1	0.31	0.031	0.01	0.01	1,952	196	66	64
	M+I	664.5	0.31	0.032	0.01	0.01	2,059	210	80	69
	Inferred	219	0.29	0.034	0.03	0.01	633	74	72	32
Porphyry	**Measure**	2.1	0.22	0.056	0.01	0.01	5	1	0	0
	Indicate	57.7	0.33	0.043	0.01	0.01	188	25	4	6
	M+I	59.8	0.32	0.043	0.01	0.01	193	26	4	6
	Inferred	2.9	0.23	0.099	0.02	0.04	7	3	0	1
Total	**Measure**	**76**	**0.48**	**0.042**	**0.07**	**0.04**	364	32	52	30
	Indicate	**977.1**	**0.44**	**0.036**	**0.03**	**0.02**	4,275	348	271	232
	M+I	**1,053.1**	**0.44**	**0.036**	**0.03**	**0.02**	4,640	380	323	262
	Inferred	**395.9**	**0.42**	**0.039**	**0.09**	**0.05**	1,676	156	359	179

Table 14-11 Jiama Copper-Polymetallic Project – Au and Ag Mineral Resources reported at a 0.3% Cu Equivalent Cut Off Grade (>0.02 Au g/t), as at April 2012.

Rock Type	Class	Quantity	Au g/t	Ag g/t	Au Moz	Ag Moz
Skarn	**Indicated**	256.5	0.31	17.01	2.537	140.290
	Inferred	117.0	0.39	16.50	1.472	62.077
Hornfels	**Indicated**	178.6	0.06	2.52	0.337	14.486
	Inferred	68.9	0.08	5.06	0.186	11.195
Porphyry	**Indicated**	15.7	0.24	8.22	0.121	4.145
	Inferred	0.4	0.11	10.79	0.001	0.128
Total	**Indicated**	**450.8**	**0.21**	**10.97**	**2.995**	**158.921**
	Inferred	**186.2**	**0.28**	**12.26**	**1.659**	**73.400**

14.11 COPPER EQUIVALENT CALCULATION RESOURCES

To assist in reporting the Mineral Resources in a transparent manner, MMC has estimated a Cu Equivalent ("CuEq") value for reporting of the block model, based on associated component grades, process recoveries and consensus forecast metal pricing (before tax). Cu contributes the most value to the equivalence calculation and was as a result selected to report on an equivalent basis.

The parameters used to estimate the Copper Equivalence for the Mineral Resources are outlined in ***Table 14-12***.

Table 14-12 Jiama Copper-Polymetallic Project – Copper Equivalence Parameters Mineral Resources

Process Recoveries	
Copper	86.00%
Molybdenum	70.00%
Lead	88.00%
Zinc	30.00%
Product Prices	
Copper RMB per tonne	30,372
Molybdenum RMB per tonne	134,878
Lead RMB per tonne	10,166
Zinc RMB per tonne	8,440
Copper Equivalence Ratio	
Copper	1
Molybdenum	3.6147
Zinc	0.3425
Lead	0.0969

Note: Product pricing assumptions are based on consensus bank forecasts before tax as at May 2012 and details can be found in Section 19 of this report.

14.12 DILUTION AND ORE LOSSES

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

15 MINERAL RESERVE ESTIMATES

A Mineral Reserve estimate has been independently completed by MMC in accordance with the guidelines provided in the NI 43-101, Standards of Disclosure for Mineral Projects, dated June 2011. The National Instrument 43-101 defines Mineral Reserves as the economically mineable portion of a Measured and/or Indicated Mineral Resource, taking into account any diluting materials and allowances for losses, which may occur when the material is mined. To enable the estimation of Mineral Reserves MMC has:

- Characterised mineralisation at the Project;
- Reviewed the applied mining methods and current life of mine designs using optimisation techniques. These were then used as the basis for the Reserve calculation;
- Estimated appropriate rates of mining loss and ore dilutions;
- Verified the cut-off grades as suitable for use in an Mineral Reserve estimate; and
- Completed economic modelling to determine the economic viability of extraction of the Mineral Reserves.

15.1 MINERAL RESERVE ESTIMATION PARAMETERS

MMC has determined suitable technical parameters to apply in the Mineral Reserve estimation process following discussions with site personnel, review of the draft Chinese Feasibility Study, the proposed life of mine plan, mining methods, and processing plant recoveries to the areas of the Project where Measured and Indicated Mineral Resources have been estimated. Inferred Resources have not been utilised in the estimate as required by the NI 43-101 standards.

The following parameters have been used to estimate the Mineral Reserve:

- LOM Cut-off grade:
    - Open cut: 0.35% Cu-eq
    - Underground: varies between 0.5% Cu and 0.6% Cu-eq (refer to ***Section 16-4-2*** for details)
- Mining dilution factor:
    - Open cut: 5%
    - Underground: varies between 8.7% and 15.2% depending on mining method (refer to ***Section 16-4-1*** for details)
    - Dilutant material for both open cut and underground operations are assumed to have a grade of 0%.
- Mining loss factor:
    - Open cut: 5%
    - Underground: varies between 20% and 26% depending on mining method (refer to ***Section 16-4-1*** for details)
- Design parameters:
    - An average overall pit slope of 43 degrees. Refer to ***Table 16-7*** for detailed pit design parameters used.
    - Refer to ***Section 16.5.2*** for the stope parameters and pillar dimensions used for each mining method.
- Processing recoveries as presented in ***Table 16-8***.
- Operating and capital expenditure costs as estimated by MMC and other Relevant Experts;
- Forecast metal prices as presented in ***Section 19***.

15.2 MINERAL RESERVE ESTIMATION PROCEDURE

Mineral Reserves were estimated using *Surpac Mine Planning Software* and *Datamine*. The Mineral Reserve estimation applied the mining modifying factors to the 3-D geological model created by MMC for the Mineral Resource estimate (April 28, 2012). The following steps were completed to accurately estimate Mineral Reserves:

15.2.1 Open Cut Process

- The quantity of open cut economic ore within the Project was determined using *GEMCOM Whittle Four-X Pit Optimisation* software. This package is an industry standard tool for applying mining and processing parameters to a geological block model to determine the value of each block and the largest economic (or optimum) pit for a commodity price. Relevant operating parameters, as described in Section 16, were applied to the pit optimisation.

- To determine the split between ore and waste a cut-off grade was estimated. The cut-off grade was based on analysis of the operating and capital costs, mineral grade, processing recovery, concentrate grade and product revenue.
- A detailed pit design was created using *Surpac Mine Planning Software* from the selected Optimiser shell.
- A mining recovery factor was applied to reflect the undiluted potentially recoverable tonnes;
- A mining dilution factor was then applied. The grade of the applied dilution material was 0% for all metals;
- A mining schedule was generated, which incorporated the estimated life of mine cut-off grade of 0.35% Cu-eq.
- Processing recoveries was applied to the estimated ROM tonnes;
- Product tonnes were estimated and sales prices for the various metals were applied;
- An economic model was generated incorporating operating and capital costs and revenue. MMC reviewed the operating and capital cost estimates prior to applying in the economic model. Additional capital costs were included in the economic model to allow for sustaining capital over the life of mine for the installed equipment and infrastructure.
- Estimated Mineral Reserves were classified as Proven or Probable based on the level of confidence in the estimated parameters and Mineral Resource.

15.2.2 Underground Process

- The quantity of underground economic ore within the deposit was determined using Datamine Mineable Stope Optimiser (“MSO”) software. This package is an industry standard tool for applying mining and processing parameters to a geological block model to determine the value of each block and economic stopes for a commodity price. Relevant operating parameters, as described in Section 16, were applied to the stope optimisation.
- To determine the split between ore and waste a cut-off grade was estimated. The cut-off grade was based on analysis of the operating cost, mineral grade, processing recovery, concentrate grade and product revenue.
- A mining recovery factor was applied to reflect the undiluted potentially recoverable tonnes;
- A mining dilution factor was then applied. The grade of the applied dilution material was 0% for all metals;
- A mining schedule was generated, which incorporated the estimated life of mine cut-off grades varying between 0.5% and 0.6% Cu-eq.
- Processing recoveries were applied to the estimated ROM tonnes;
- Product tonnes were estimated and sales prices for the various metals were applied;
- An economic model was generated incorporating operating and capital costs and revenue. MMC reviewed the operating and capital cost estimates prior to applying in the economic model. Additional capital costs were included in the economic model to allow for sustaining capital over the life of mine for the installed equipment and infrastructure.
- Estimated Mineral Reserves were classified as Probable and or Proven based on the level of confidence in the estimated parameters and Mineral Resource.

15.3 MINERAL RESERVE ESTIMATE

The Proven and Probable Mineral Reserve estimate for the Project reported at a 0.35% Cu-eq cut-off grade for the Ore extracted via open cut methods and 0.5 to 0.65% Cu-eq cut-off grade for the Ore extracted via underground methods has been summarised in ***Table 15-1***. Details on the Cu-eq calculations used in the Mineral Reserves are outlined in **Section 15.4** and further details on the mining cut off grades can be found in **Section 16.4**. The Measured and Indicated

Mineral Resources reported in **Section 14** are inclusive of, and not additional to, the Mineral Resources modified to produce the Mineral Reserve estimate reported below.

Table 15-1 Jiama Copper-Polymetallic Project – Statement of NI 43-101 Mineral Reserve Estimate as at 28th April 2012

Type	Kt	Grade						Metals					
		Cu %	Mo %	Au g/t	Ag g/t	Pb %	Zn %	Cu kt	Mo kt	Au t	Ag t	Pb kt	Zn kt
Tongqianshan													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	2,632	0.57	0.014	0.15	8.05	-	-	15.0	0.37	0.39	21.2	-	-
Subtotal	**2,632**	**0.57**	**0.014**	**0.15**	**8.05**	**-**	**-**	**15.0**	**0.37**	**0.39**	**21.2**	**-**	**-**
Waste	7,770	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	2.95	-	-	-	-	-	-	-	-	-	-	-	-
Niumatang													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	15,328	1.24	0.044	0.57	25.77	-	-	189.5	6.74	8.78	394.9	-	-
Subtotal	**15,328**	**1.24**	**0.044**	**0.57**	**25.77**	**-**	**-**	**189.5**	**6.74**	**8.78**	**394.9**	**-**	**-**
Waste	141,919	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	9.26	-	-	-	-	-	-	-	-	-	-	-	-
South Pit													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	38,231	0.93	0.021	0.22	20.90	-	-	354.0	8.03	8.53	799.0	-	-
Subtotal	**38,231**	**0.93**	**0.021**	**0.22**	**20.90**	**-**	**-**	**354.0**	**8.03**	**8.53**	**799.0**	**-**	**-**
Waste	233,346	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	6.10	-	-	-	-	-	-	-	-	-	-	-	-
Jiaoyan													
Proved	-	-	-	-	-	-	-	-	-	-	-	-	-
Probable	146,017	0.42	0.016	0.03	1.11	-	-	611.8	23.36	4.53	161.6	-	-
Subtotal	**146,017**	**0.42**	**0.016**	**0.03**	**1.11**	**-**	**-**	**611.8**	**23.36**	**4.53**	**161.6**	**-**	**-**
Waste	224,620	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	1.54	-	-	-	-	-	-	-	-	-	-	-	-
Underground (north)													
Proved	16,241	1.14	0.073	0.38	21.69	0.108	0.058	185.6	11.90	6.15	352.3	17.5	9.5
Probable	113,158	1.10	0.049	0.42	20.61	0.039	0.033	1,241.9	55.30	47.60	2,332.1	44.5	37.0
Subtotal	**129,399**	**1.10**	**0.052**	**0.42**	**20.74**	**0.048**	**0.036**	**1,427.5**	**67.20**	**53.75**	**2,684.4**	**62.0**	**46.5**
Waste	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Underground (south)													
Proved	8,673	0.63	0.014	0.29	0.38	0.116	10.855	54.8	1.26	2.48	3.3	10.1	941.5
Probable	23,190	0.67	0.016	0.09	10.82	0.094	0.125	155.1	3.76	2.05	251.0	21.8	28.9
Subtotal	**31,864**	**0.66**	**0.016**	**0.14**	**7.98**	**0.100**	**3.046**	**209.9**	**5.02**	**4.53**	**254.3**	**31.9**	**970.4**
Waste	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Strip Ratio*	n/a	-	-	-	-	-	-	-	-	-	-	-	-
Total Reserves													
Proved	**24,914**	**0.96**	**0.053**	**0.35**	**14.27**	**0.111**	**3.817**	**240.4**	**13.15**	**8.63**	**355.6**	**27.6**	**950.9**
Probable	**338,556**	**0.76**	**0.029**	**0.21**	**11.70**	**0.020**	**0.019**	**2,567.3**	**97.57**	**71.88**	**3,959.8**	**66.4**	**65.9**
Total	**363,470**	**0.77**	**0.030**	**0.22**	**11.87**	**0.026**	**0.280**	**2,807.7**	**110.72**	**80.50**	**4,315.4**	**94.0**	**1,016.9**

Note: Figures reported are rounded which may result in small tabulation errors.
** Strip ratio units are waste tonne: ore tonne*

The Mineral Reserve estimate for the open cut pits have been classified as Probable only. This is due to two main reasons:

1. In areas where the Mineral Resource Estimate has been classified as Indicated, the Mineral Reserve Estimate can only be classified as Probable due to the confidence of the geological data.
2. Due to the current level of confidence in some of the modifying factors for the Project, such as the metallurgical testing for Jiaoyan Pit and geotechnical studies for South Pit, Jiaoyan Pit and the underground mine, the confidence level of the Mineral Reserve classification is limited to Probable. Further optimization studies are planned to occur as part of an ongoing project development plan which is likely to lead to a further increase in the confidence in above modifying factors, which will potentially result in increases in the classification applied.

15.4 COPPER EQUIVALENT CALCULATION RESERVES

To assist in reporting the Mineral Reserves in a transparent manner, MMC has estimated a Cu Equivalent ("CuEq") value for reporting of the Mineral Reserves, based on associated component grades, process recoveries and consensus forecast metal pricing (before tax). Cu contributes the most value to the equivalence calculation and was as a result selected to report on an equivalent basis.

The parameters used to estimate the Copper Equivalence for each Project are outlined in ***Table 15-2***.

Table 15-2 Jiama Copper-Polymetallic Project – Copper Equivalence Parameters Mineral Reserves

Process Recoveries	**Skarn**	**Skarn (Cu/Pb/Zn Ore)**	**Hornfels/Porphyry**
Copper	88.00%	88.00%	84.00%
Molybdenum	70.00%		48.00%
Gold	45.00%	45.00%	
Silver	65.00%	60.00%	
Lead		75.00%	
Zinc		88.00%	
Product Prices			
Copper USD per lb	2.90	2.90	2.90
Molybdenum USD per lb	15.50		15.50
Gold USD per Troy ounce	1,300	1,300	
Silver USD per Troy ounce	20.00	20.00	
Lead USD per tonne		2,150	
Zinc USD per tonne		2,100	
Copper Equivalence Ratio			
Copper	1	1	1
Molybdenum	2.5540		1.7513
Gold	0.2478	0.2478	
Silver	0.0051	0.0051	
Zinc		0.2023	
Lead		0.1884	

Note: Product pricing assumptions are based on consensus bank forecasts before tax as at May 2012 and details can be found in Section 19 of this report.

15.5 COMMENTS

Mining Licence

The current mining licence does not cover all areas of the proposed open pits and underground operations, as shown in ***Figure 16-4***. These areas are however covered by the current exploration licences and under Chinese mining regulation there is a well-defined and regulated process by which an exploration licence is converted to a mining licence with the Company having commenced this process already. Additionally, it is MMC's understanding that as the Company has funded the bulk of the exploration work, they will receive exclusive rights to convert the exploration licence to a mining licence upon completion of the Chinese Feasibility Study. Hence, MMC believes that there is reasonable expectation that this conversion will happen in a timely fashion so as not to impact the Company's plans.

Although MMC does expect these licences to be granted, MMC notes it is not a legal expert and presents this information for reference only.

Legal Approvals

The Mineral Reserve estimate is contingent on relevant mining approvals being granted to enable the construction of on-site infrastructure, such as the Phase II Processing Plant and the expanded production rate. If the construction of infrastructure is not completed as per the schedule, the mining, processing and life of mine schedule will vary. This will likely have a negative impact on the NPV of the Project.

Metal Pricing and Capital Operating Costs

The Mineral Reserve is sensitive to changes in product price, operating or capital expenditure. See ***Section 22*** for further details.

Geotechnical Studies

Detailed geotechnical studies for South Pit and Jiaoyan have not been completed. Based on preliminary observations of the current open cuts, MMC notes that the pit slopes used in the design are likely to be conservative and that further studies may indicate that steeper walls can be achieved to reduce the stripping ratio. Further test work is required to confirm this.

Additionally detailed geotechnical studies for the underground operation are recommended to ensure stability of the mine and minimise dilution of the stopes. These may prove that larger stopes can be successfully extracted, thus lowering the overall mining operating cost. Moreover, prior to extensive development commitment, a geotechnical expert should be consulted to develop a programme of confirmatory and ongoing test-work to be conducted.

Working Room

Due to the number of loaders and trucks required to achieve the open cut 6.0 ROM Mtpa mining production rate, detailed production schedules are recommended to be completed to ensure sufficient working room is maintained throughout the mine life of each open pit. Working room is the area required for all operating equipment to function while maintaining forecast production rates. MMC is aware onsite short term planning currently occurs, however due to short timeframe of the current production, a detailed review was unable to be undertaken.

Reserve Classification and Future Exploration and Infill Drilling

Exploration drilling, which may upgrade the Inferred and Indicated portions present in the South Pit area needs to be completed. MMC notes that currently the Inferred resource that overlies the Indicated resources is regarded as waste in the Mineral Reserve model. Upon re-classification this Inferred material could be upgraded to Reserve status, thereby increasing the mine life and improving the economics of the Project. Specifically, if all inferred material is upgraded to at least Indicated status, this could increase the Ore tonnage in South Pit by 34%, from 38 Mt to approximately 51 Mt.

Additionally, following further drilling to improve the internal mineralisation understanding of the mining areas, particularly in relation to Jiaoyan, South Pit and the underground operation, the confidence in the grade distribution could increase. This is likely to impact the classification of the Mineral Resource. In particular, as mining is currently underway, the level of information and geological understanding of the ore bodies is likely to increase, and this may have a positive impact on understanding of the controls of mineralisation.

16 MINING METHODS

MMC has completed a review of the Chinese Feasibility Study, including an analysis of the mine design parameters utilised. This review determined that the mine design parameters were appropriate and suitable for the Project and as a result formed the basis for the mine design and planning which MMC completed, as outlined below.

The Company plans to operate four open cut mines, namely Tongqianshan, Niumatang, South Pit and Jiaoyan, and one underground mine, which is split into a north and south areas. The operation is planned to be developed in two stages:

- *Phase I* - This stage commenced in June 2010 with the construction of a 1.8Mtpa ROM ore processing plant and the development of the Tongqianshan, Niumatang and South Pit open cuts. In addition to the processing facility and open pits, Phase I infrastructure, which has been built, includes site offices, accommodation and site road access.
- *Phase II* – This stage is forecast to commence in 2015 with a ramp up to a maximum processing production capacity of 13.8 Mtpa ROM ore by the end of 2016. In addition to the Phase I pits, Jiaoyan will be developed along with the underground operation. The open cut operations will account for approximately 7.0 Mtpa of ROM ore production, while the underground mine will account for 6.6 Mtpa of ROM ore production averaging to a total of 13.6 Mtpa ROM Ore production from 2016 to 2039. .

Table 16-1 summarises the mining methods and status of the five proposed mines within the Project.

Table 16-1 Jiama Copper-Polymetallic Project – Mining Summary

Mine	Method	Status	Stage
Tongqianshan	Open cut (truck/shovel)	Operating (June 2010)	Phase I
Niumatang	Open cut (truck/shovel)	Operating (April 2011)	Phase I
South Pit	Open cut (truck/shovel)	Planned production 2013	Phase II
Jiaoyan	Open cut (truck/shovel)	Planned production 2020	Phase II
Underground (North)	Sublevel caving Sublevel open stoping	Planned production 2015	Phase II
Underground (South)	Sublevel open stoping Stope and pillar Sublevel caving Room and pillar Shrinkage	Planned production 2023	Phase II

Source: MMC Scheduling Work

Although Copper is the primary metal, molybdenum, gold, silver, lead and zinc are also planned to be extracted and form part of the saleable concentrate. Based on the Mineral Reserve estimate estimated by MMC, the Project currently has a mine life of 31 years with a planned 202.2 Mt of ROM ore being extracted from the open cut operations and 161.3 Mt of ROM ore from the underground operation.

16.1 MINE PLANNING PROCESS

MMC has used standard industry practices to complete the mine planning for the Project, which are summarised in ***Table 16-2.***

Table 16-2 Jiama Copper-Polymetallic Project – Mine Planning Summary

Step No.	Open Cut	Underground
1	Deposit characterisation and consideration of mining method – the geological model created for the Mineral Resource estimate (as described in ***Section 14***) was assessed for suitability of various mining methods;	
2	Pit limit estimation – *Whittle* pit optimiser software was used to study the value of the deposit and to assist determining a theoretical pit shell;	Stope size, shape and location estimation – *Datamine Mineable Stope Optimiser (MSO)* was used to generate various stopes shapes;
3	Pit limits and mineable quantities – the pit optimisation results from *Whittle* were used to select a practical mining pit shell with mineable quantities calculated based on this pit shell;	Stope limit and mineable quantities – the stope optimisation results from *MSO* were used to select practical stope shapes with mineable quantities calculated;
4	Mine development strategy – various strategies for developing the pit shell were examined and the preferred strategy chosen;	Mine development strategy - establishing an appropriate development schedule to meet the production requirements;
5	Production scheduling – based on the selected mining strategy, the estimated mineable quantities were scheduled with the estimated mineralised grades;	
6	Mine equipment selection – open cut and underground equipment was chosen to match the duty required from the production schedule;	
7	Economic modelling - Combining physical pit quantities with cost estimates reviewed from the Chinese Feasibility Study and independently reviewed revenue assumptions to determine annual economic parameters (costs, margin etc) and project Net Present Value (NPV).	

16.2 MINING METHOD

A review of the mineralisation within the Project area suggests both open cut and underground mining methods are applicable. Only open cut methods will be employed in Phase I, however upon commencement of Phase II in 2015, both open cut and underground methods are planned to be employed.

Figure 16-1 presents the site plan, which highlights the locations of all open cut pits, underground shaft and decline openings, waste dumps, processing plants and other significant infrastructure.

16.2.1 Open Cut

Mining

Conventional selective mining methods are planned to be employed to extract the mineralised material for all four proposed open pits. Mining is planned to occur on shallow benches, typically 4 to 5 m high, which will enable grade control of the mineralised zones to be completed. A typical mining cycle would involve:

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

Four open pits are planned to be developed over the life of the mine, namely the Tongqianshan Pit, the Niumatang Pit, the South Pit and the Jiaoyan Pit. These pits have a variety of sizes, strip ratios and types of mineralisation as shown in ***Table 16-3***.

Table 16-3 Jiama Copper-Polymetallic Project – Open Cut Pit Summary

	Unit	Tongqianshan	Niumatang	South Pit	Jiaoyan	Total
Skarn	kt	2,472	14,334	31,629	0	48,435
Hornfels	kt	160	994	6,602	133,204	140,960
Porphyry	kt	0	0	0	12,812	12,812
Waste	kt	7,770	141,919	233,346	224,620	607,655
Strip Ratio	waste t: ore t	2.95	9.26	6.10	1.54	3.01
Copper	%	0.57	1.24	0.93	0.42	0.58
Molybdenum	%	0.014	0.044	0.021	0.016	0.019
Gold	g/t	0.15	0.57	0.22	0	0.31
Silver	g/t	8.05	25.77	20.90	0	21.62
Cut-off Grade	% Cu	0.3	0.3	0.3	0.3	0.3

Source: MMC Derived. NMT, TSQ and JY are based on FS Pit Designs. MMC independently designed SP.
Note: Mineralised Quantities and grades are Measured and Indicated Mineral Resources within the pit designs reported at a cut-off grade of 0.35% Cu-eq.

Ore Haulage, Crushing, Stockpiling

All ore haulage from the pits is planned to be completed by contractors. As a result of the site topography and to minimise haulage costs, ore is planned to be hauled from the pits to crushing facilities located close to the proposed pit locations. After crushing to 300 mm the ore will go either directly into vertical ore passes or conveyed to passes using belts. The ore passes will feed a conveyor system that will transport ore to stockpiles located adjacent to the processing plants. ***Table 16-4*** describes the ore haulage, crushing and stockpiling plans for the proposed pits.

MMC notes that, until the Phase II Processing Plant has been constructed, the crushed ore of Tongqianshan and Niumatang from ore pass #2 will be transferred to ore pass #1 via tramcar (ore dropped from 4,261 mRL to 4,087 mRL). Following, tramcars in the adit will be used to transport the ore from ore pass #1 2.7 km to the ROM stockpile at Phase I Processing Plant (4,000 mRL).

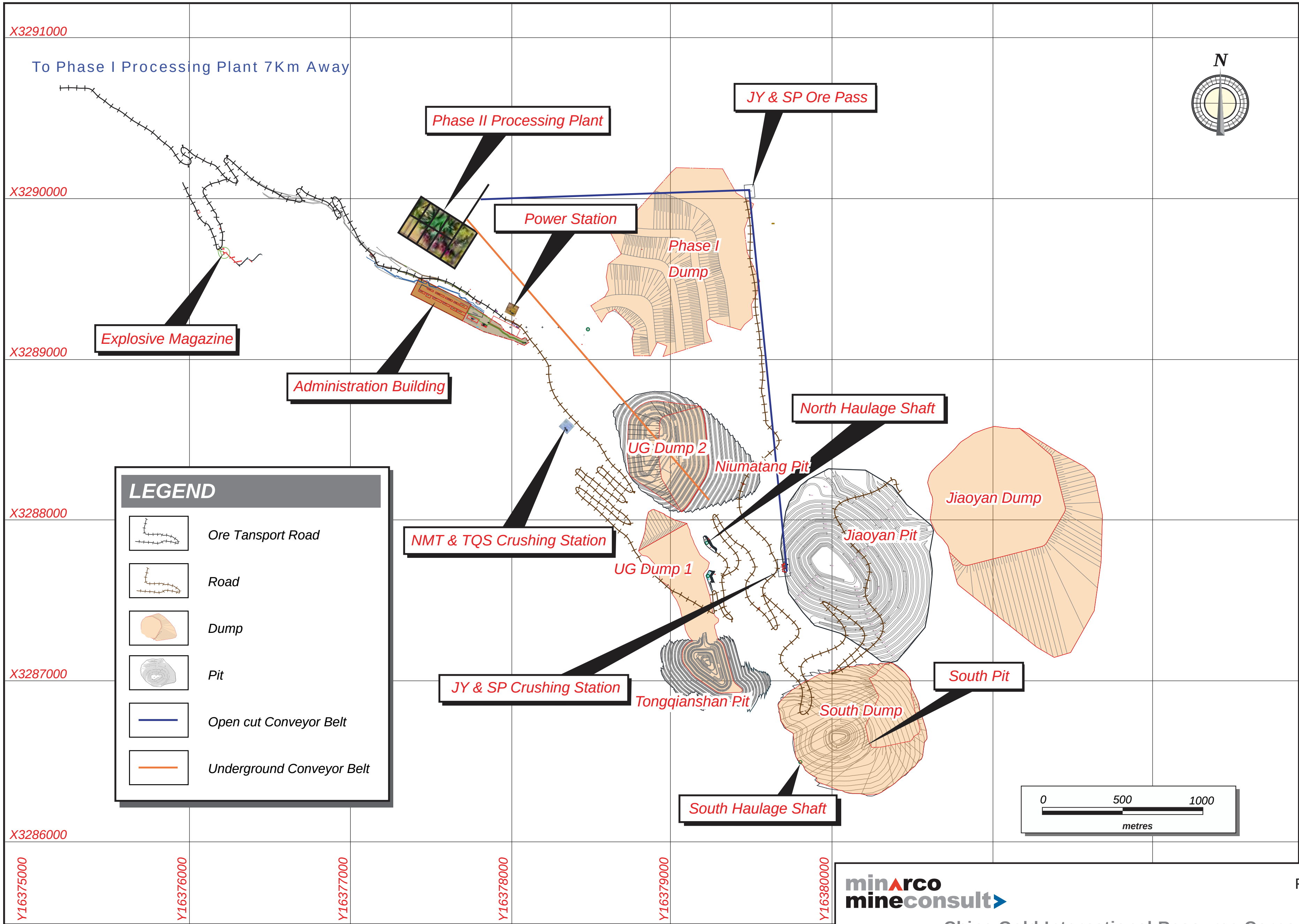

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FIGURE 16-1

China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

Site Plan

Project No : ADV-HK-03709

Table 16-4 Jiama Copper-Polymetallic Project – Ore Haulage, Crushing, Stockpiling Summary for the Open Pit Mines

	Tongqianshan & Niumatang	South Pit & Jiaoyan
Pit to Crusher Ore Haulage	Truck haulage transport ore from the pit to crushing system (4,484 mRL). Distance from pit to crushing station: Tongqianshan = 4km, Niumatang = 1km	Truck haulage transport ore from the pit to the crushing system at the edge of Jiaoyan pit (4,880 mRL). Distance from pit to crushing station: South Pit = 1.1 km, Jiaoyan = 0 km
Crushing	Ore crushed to less than 300 mm	
Crusher to ROM Stockpile Ore Haulage	Crusher is located next to Ore pass # 2, (ore dropped from 4,496 mRL to 4,261 mRL). Tramcars transport the Ore to TNNU ore pass (ore dropped from 4,261 mRL to 4,215 mRL)	Crushed Ore is transported via conveyor system to ore pass located north-east of Phase 1 Dump (ore dropped from 4,880 mRL to 4,780 mRL)
Ore Stockpile	Ore from TNNU ore pass is transported 2.2 km using a conveyor system to the ROM stockpile on surface of Phase 2 Processing Plant (4,500 mRL).	Ore transported 1.8 km using conveyor haulage system in decline to ROM stockpile at Phase 2 Processing Plant (4,500 mRL)

Figure 16-2 shows in cross-section view Tongqianshan, Niumatang and the underground workings, which illustrates the ore passes used for Tongqianshan, Niumatang during Phase I and when Phase II is constructed.

Waste Dumps

Truck haulage will be used to transport waste material to surface dumps. Five dumps are planned to be utilised for the Project. Waste from Tongqianshan and Niumatang is currently dumped to the north of the Project area, while the waste from South Pit and Jiaoyan is planned to be dumped in an area 0.2 km to the east of Jiaoyan. Once this eastern dump area has been exhausted, the remaining waste from Jiaoyan will be dumped into the South Pit void. Two other dumps will be established where the current Tongqianshan and Niumatang pits are located once mining has ceased in these areas – these dumps will service the underground operations. Dumping in previously mined out areas will minimise surface disturbance and reduce rehabilitation requirements. ***Figure 16-1*** shows the location of the five dumps. The waste haulage distance from each pit to their respective dumps is provided below:

- Tonqianshan = 2 km
- Niumatang = 4 km
- South Pit = 3.3km
- Jiaoyan = 1.1 km

Table 16-5 shows the capacity of the individual waste dumps. MMC notes that currently these proposed dumps do not have enough capacity to accommodate the planned waste volumes; however MMC is aware that there is sufficient land within the Project area that the Company could utilise. For these areas to be used the Company will be required to obtain land usage permits in addition to the current exploration licence covering these areas.

Table 16-5 Jiama Copper-Polymetallic Project – Dump Capacities

Dump Name	Unit	Capacity
Tongqianshan and Niumatang Dump	M cu.m	29.4
Jiaoyan Dump	M cu.m	108.0
South Pit Dump	M cu.m	94
UG Dump A (Tongqianshan area)	M cu.m	8.5
UG Dump B (Niumatang area)	M cu.m	9.0

Source: Chinese Feasibility Study, Client Supplied Documents & verified by MMC

16.2.2 Underground

In the underground north section, there is one vertical haulage shaft, one air-intake shaft, two air-return shafts, one conveyor belt drift with a length of 2 km and an incline of approximately 8 degrees, and one air intake ramp with the exit at 4,562 mRL. In the underground south section, there is one vertical haulage shaft, one air-return shaft and one assist ramp with the exit at 4,562 mRL. These are shown in ***Figure 16-3***. Due to the variability of the orebody and location of Niumatang open pit, variations of open stoping and sublevel caving mining methods will be used. Underground mining methods for northern and southern areas are outlined below:

- In the northern areas of the underground mine, where the orebody varies from horizontal to slightly inclined with varying ore thickness and is of medium to high strength, the sublevel caving (“SLC”) method will be employed. In other areas, variations of sub level open stoping will be used to extract the ore.
- In the underground areas immediately adjacent to the Niumatang open pit a suitable method with backfill will be employed to maintain the stability of the open pit walls.
- In the southern areas of the mine, where the orebodies are at variable inclination and thickness, open stoping has been selected. Due to the variability of the orebody a number of different open stoping methods will be employed, these include:
  - Two types of sub-level open stoping when the slope is greater than 30°;
  - Stope and pillar with fill and SLC will be used when the ore is shallow dipping (<30°) and has a thickness greater than 30 m;
  - ‘Small-stage open-stope method of the bottom plate trench’ will be used when the ore is dipping (<30°) and has a thickness between 15 m and 30 m;
  - Room and Pillar with fill will be used when the ore is shallow dipping (<30°) and has a thickness less than 15 m.

Ore from the underground will be tipped into the TNNU ore pass system, the same as that used by Tongqianshan and Niumatang, when the Phase II Processing Plant is in operation (see ***Figure 16-2***).

A summary of the ore tonnages and grades produced from the underground areas is provided in ***Table 16-6***.

Table 16-6 Jiama Copper-Polymetallic Project – Underground Summary

	Unit	UG North	UG South
Ore Quantity	kt	129,399	31,864
Cu	%	1.103	0.651
Mo	%	0.052	0.014
Au	g/t	0.415	0.095
Ag	g/t	20.781	10.338
Pb	%	n/a	0.11
Zn	%	n/a	0.08

Source: MMC calculated based on MMC generated designs.
Note: Mineralised Quantities and grades are Measured and Indicated Mineral Resources reported at cut-off grades varying between 0.5% and 0.6% Cu-eq.
Note: Figures reported are rounded which may result in small tabulation errors.

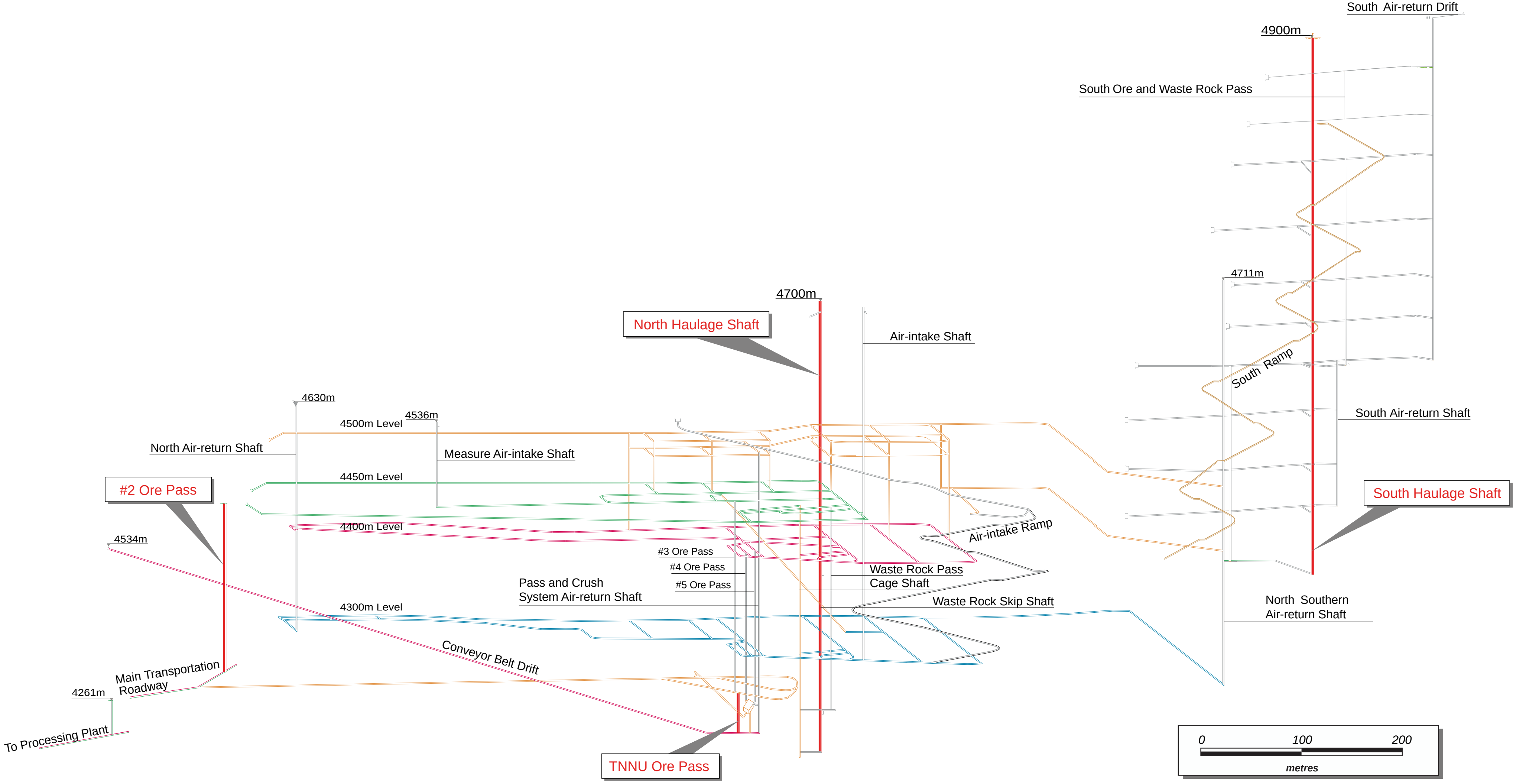


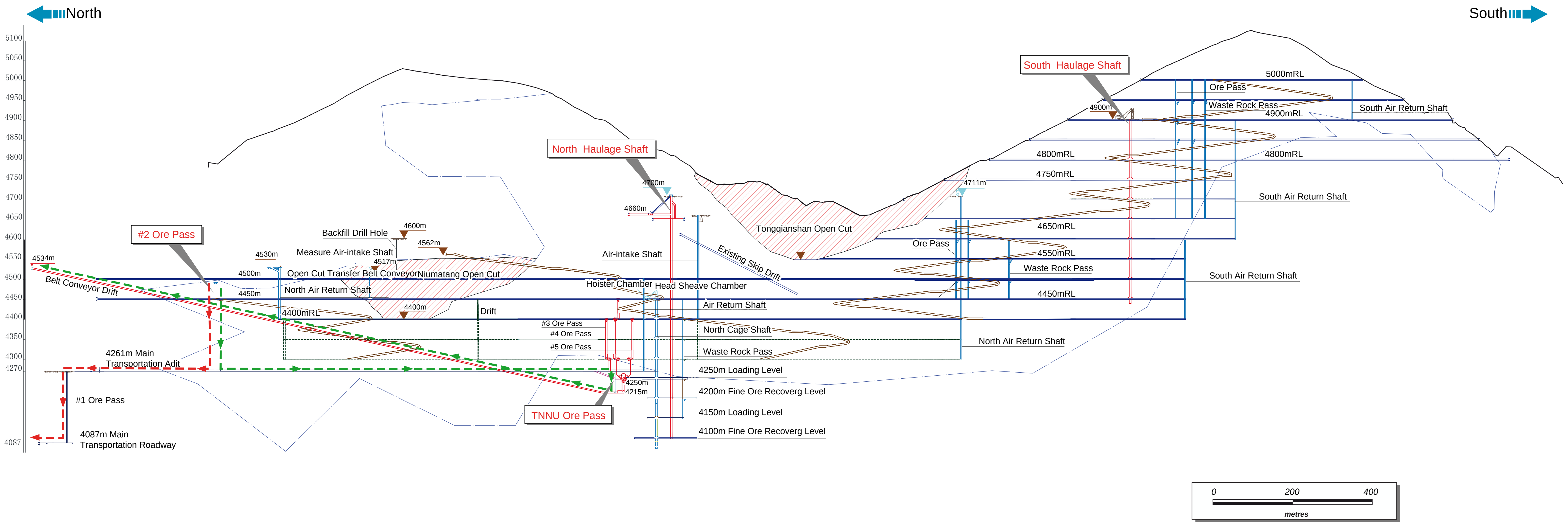
FIGURE 16-2

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Underground Mine Plan Layout

Project No : ADV-HK-03709



Note: the azimuth angle is 120 degree.

LEGEND

- Topographic Line
- Final Open Cut Boundary Line
- Designed Roadway
- Pre-designed Roadway
- Ore Haulage Transport Path before commencement of Phase 2 Processing Plant
- Ore Haulage Transport Path after commencement of Phase 2 Processing Plant

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FIGURE 16-3

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Section View of Tongqianshan & Niumatang Open Cut Operations and Underground Operations

Project No : ADV-HK-03709

16.3 OPTIMISATION – OPEN CUT

Pit limit optimisation was conducted to define the economic pit limits for the deposit. The geology model created for the Mineral Resource estimates was the basis for pit limit optimisation using the *Whittle 4X Optimiser*. The optimisation process involved the following steps:

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

Note that the terminology "pit limit optimisation" refers to a process which generates the best value mining pit shape. It presents theoretical three dimensional boundary between ore and waste that can be mined economically and material that is not economic to mine. It does not imply that mining has been "optimised" in other ways; such as a practical design including access ramps and safety berms, equipment optimisation, labour optimisation, schedule optimisation or cut-off grade optimisation.

16.3.1 Physical Constraints

MMC is not aware of any surface physical constraints to mining, such as roads, rivers or environmental issues that would affect the pit limits in the immediate area of the mineralisation. However MMC is aware the mining licences are restricted in their limit. Please refer to ***Section 15*** for further details.

The mining constraints used for the Project optimisation are provided in ***Table 16-7***.

Table 16-7 Jiama Copper-Polymetallic Project – Open Cut Optimiser Physical Constraints

Item	Units	Value
Max Slope Angle	Degrees	43 (overall)
Mineralised Material Loss	% weight	5
Mineralised Material Dilution	% weight	5
Dilutant Grade	%	0
Material Used	Category	Measured & Indicated

Source: MMC Derived

The waste rock density used was 2.6 t/cu.m.

16.3.2 Metals and Cut-Off Grades

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

16.3.3 Processing Factors

Based on the review of the current processing test work, as described in ***Section 13***, the processing recoveries estimated for the different rock types are shown in ***Table 16-8*** below.

Table 16-8 Jiama Copper-Polymetallic Project – Recovery Factors

Ore (Rock) Type	Product	Element	Recovery (%)
Cu-Mo Ore (Skarn)	Cu Concentrate	Cu	88
		Au	45
		Ag	65
	Mo Concentrate	Mo	70
Cu-Mo Ore (Hornfels & Porphyry)	Cu Concentrate	Cu	84
	Mo Concentrate	Mo	48
Cu-Pb-Zn Ore (Skarn)	Cu Concentrate	Cu	88
		Au	45
		Ag	60
	Pb Concentrate	Pb	88
	Zn Concentrate	Zn	75

Source: MMC Derived

16.3.4 Cost Rates

Operating cost rates were based on those provided in the draft Chinese Feasibility Study and reviewed by MMC. These costs are considered suitable after review by MMC. MMC did, however, add a depth cost to account for the increased haulage with depth of material below the average surface level. The operating costs used for the optimisation process are provided in ***Table 16-9***.

Table 16-9 Jiama Copper-Polymetallic Project – Open Cut Cost Rates used for Optimisation

Parameter	Unit	Cost
Waste Cost	RMB/ROM t	13.82
Ore Cost	RMB/ROM t	14.55
Mining Depth Cost	RMB/m	0.05
Overheads	RMB/ROM t	27.52
Processing Costs	RMB/ROM t	72.00
Transport	RMB/ROM t	5.00
Marketing	RMB/ROM t	9.00
Royalties (Au, Ag)	%	2.8
Royalties (Cu, Mo, Pb, Zn)	%	2
Resource Tax	RMB/ROM t	5
Value Added Tax (“VAT”)	%	17

Source: Chinese Feasibility Study

16.3.5 Metal Prices

For pit optimisation purposes, the prices presented in ***Table 16-10*** were used. The final pit designs were based on the *Whittle* optimiser pit shell at a revenue factor of 100%, which equates to those prices shown below. The Ore mined by open cut mining methods has very low lead and zinc grades, which meant lead and zinc were not recoverable and thus not included in the economic analysis.

Table 16-10 Jiama Copper-Polymetallic Project – Metal Price Assumptions

Metal	Unit	Price
Cu	USD/lb	2.90
Mo	USD/lb	15.50
Au	USD/oz (troy)	1,300
Ag	USD/oz (troy)	20.00

Source: MMC Derived

16.3.6 Results

The *Whittle* optimiser was run a number of times to assess the change in potential in-pit resources based on Mineral Resource classification, metals and prices. The scenario selected for further analysis and mine planning for the Mineral Reserve estimates was based on the metal prices shown in ***Table 16-10*** for the Measured and Indicated Resource categories. This scenario was deemed the most appropriate as only Measured and Indicated resources can be classed as reserves in a Mineral Reserve estimate and prices must be reasonable. The *Whittle* results validated the Tongqianshan and Niumatang pit designs as presented in the Chinese Feasibility Study and also identified the potential economic value of mining the South Pit, which was not presented in the Chinese Feasibility Study.

16.4 OPTIMISATION – UNDERGROUND

16.4.1 Physical Constraints

The mining constraints used for the underground optimisation are provided in ***Table 16-11***.

Table 16-11 Jiama Copper-Polymetallic Project – Underground Optimiser Physical Constraints

Method	Thickness (m)		Dilution (%)	Loss (%)	Prod Rate (t/pd)	Dip (°)		Level Interval (m)
	min	max				min	max	
Stope & pillar with Fill	variable		13.6	20	1,200	shallow angle		50
Open Stoping with Fill	15	30	13.6	20	1000		11	ore width
Sub Level Open Stoping 1	5	20	13.6	20	500	50		50
Sub Level Open Stoping 2	5	30	13.6	20	500	30	50	50
Room & Pillar	5	15	8.7	26	400		30	ore width
Sub Level Caving*		> 30	15.2	25	1500	shallow angle		100m*60m blocks

Source: MMC
**Sub level caving has 20 m sublevel intervals *15m crosscuts*
Ore density = 3.11 t/cu.m

16.4.2 Metals and Cut-Off Grades

Cut off grades for each ore type were estimated using prices, recoveries, and costs extracted from the Chinese Feasibility study and revised by MMC. Three methods of cut-off grade estimation were used as outlined below.

Break-Even Cut-Off Grade ("BECOG")

The BECOG is the fully-costed cut-off used to evaluate the economic viability of a discreet region of the mine. . It includes the underground capital costs. As well as determining whether mining the north and south zones was viable, this cut-off grade was used to determine if outlying stopes were able to be included into either the north or south zone. The cut-off grades vary depending on distance from the nearest stopes that would be developed.

Stope Evaluation Cut-Off Grade ("SECOG")

The SECOG is used as the basis for selecting economic stoping areas. The SECOG includes:

- mining costs for ore development and operating waste development;
- direct stoping costs;
- mining overheads (mining contractor and owner fixed mining costs); and
- processing and all non-mining overheads.

The SOCOG determined are as follows:

- Skarn: 0.6% Cu-eq
- Hornfels and Porphyry: 0.55% Cu-eq

Stope Only Cut-Off Grade ("SOCOG")

SOCOG is the SECOG less ore development costs and is used to select incremental stoping areas, where development already exists, but cannot justify development in their own right.

The SECOG determined are as follows:

- All ore types: 0.5% Cu

Notes:

- The SECOG cut-off grade described above was used to initially identify economic stoping limits.

- Incremental (SOCOG) stopes were then added manually in *Datamine*.

16.4.3 Processing Factors

Similar mineralisation is found within the underground, as for the pits, as a result the same processing recoveries were utilized (***Table 16-8***).

16.4.4 Cost Rates

The underground optimisation was completed using the cut-off grades detailed in ***Section 16.5.4***, which were calculated from the costs provided in ***Table 16-12***. These costs were reviewed and verified by MMC.

Table 16-12 Jiama Copper-Polymetallic Project – Underground Cost Rates used for Optimisation

Parameters	Unit	Cost
Stoping	RMB/ROM t	58.18
Development	RMB/ROM t	19.93
Transport	RMB/ROM t	10.71
Hoisting/Power	RMB/ROM t	2.48
Ancillary	RMB/ROM t	8.64

Source: Chinese Feasibility Study

16.4.5 Metal Prices

The underground optimisation was completed using the cut-off grades calculated from the metal prices provided in ***Table 16-13***. These costs were reviewed and verified by MMC.

Table 16-13 Jiama Copper-Polymetallic Project – Underground Cost Rates used for Optimisation

Metal	Unit	Price
Cu	USD/lb	2.90
Mo	USD/lb	15.50
Au	USD/oz	1,300
Ag	USD/oz	20.00
Pb	USD/t	2,150
Zn	USD/t	2,100

Source: MMC Derived based consensus long term bank forecasts, see Section 19.

16.4.6 Results

Datamine's MSO Stope Optimiser was run to determine the stope shapes for each mining method. The parameters and cut-off grades described above were input into the *MSO* stope optimisation software and results were then tabulated and combined. The *MSO* results validated the underground mine as presented in the Chinese Feasibility Study, excluding the areas where Inferred Resources and South Pit are located.

MMC notes:

- Any overlapping stopes between mining methods were removed manually in Datamine prior to reporting tonnages.
- As the MSO software does not make allowance for pillars along strike, an adjustment was made to the results to allow for these pillars.

16.5 MINE DESIGN

16.5.1 Open Cut

MMC utilised *Whittle* to validate the pit designs for Tongqianshan, Niumatang and Jiaoyan, as well as identifying South Pit. The designs formed the basis for the mine planning analysis, which included scheduling and economic modelling.

The open cut mine parameters for each mine are summarised in ***Table 16-14***. MMC considers these parameters to be reasonable, however, further geotechnical work is recommended to support the overall slope angles for the South Pit and Jiaoyan pit design, particularly due to their planned depths (shown in ***Figure 16-4***). MMC notes that significant mining has successfully taken place in the Tongqianshan and Niumatang pits over the past few years with no geotechnical issues.

Table 16-14 Jiama Copper-Polymetallic Project – Open Cut Mine Design Parameters

Item	Unit	Tongqianshan	Niumatang	South Pit	Jiaoyan
Overall Slope Angles	Degrees	45	45	43	43
Bench Height	Metres	10	15	15	15
Bench Slope	Degrees	70	70	65	55-65
Cleaning Berm Width	Metres	10	15	12-16	12-16
Safety Berm Width	Metres	3	4	12-16	11.5-16.5
Road Width	Metres	12	12	11.5-16.5	11.5
Road Slope	%	8	8	5	5
Ore Loss	% weight	5	3	5	2
Ore Dilution	% weight	5	8	5	2
Dilutant Grade	%	0	0	0	0

Source: Chinese Feasibility Study

A cut-off grade of 0.35% copper-equivalence was used when reporting ore tonnages within each of these pits. It was calculated using the mineral grade, processing recovery, concentrate grade, product revenue and operating costs and represents the minimum grade for each mining block that can be economically extracted taking into account these factors.

Table 16-15 shows a breakdown between Measured and Indicated material reported at a cut-off grade of 0.35% Cu-eq when only open cut mining methods are used, in addition to the waste material within the final pit designs.

Table 16-15 Jiama Copper-Polymetallic Project – Breakdown of Measured and Indicated Material within Final Open Pit Designs

	Unit	Tongqianshan	Niumatang	South Pit	Jiaoyan	Total
Measured	Kt	0	0	2,014	4,610	6,624
Indicated	Kt	2,632	15,328	36,217	141,407	195,583
Waste	Kt	7,770	141,919	233,346	224,620	607,655

Source: MMC
Note: Mineralised Quantities are based on Measured and Indicated Mineral Resources only using a cut-off grade of 0.35% Cu-eq.

MMC notes that all inferred material has been treated as waste and the inclusion of inferred material would result in an increase of approximately 7% of mineralized material (and therefore a corresponding decrease in waste).

MMC notes in particular that if the infill drilling presently being undertaken in the South Pit area results in an upgrade of the inferred material inside South Pit to at least Indicated status, then this could increase the ore tonnage from 38 Mt to approximately 51 Mt, an increase of 34%, which would add approximately two years to the Project's mine life. It is expected that the grades would remain reasonably consistent with those reported within the Proven and Probable categories, and thus improving the Project's economics.

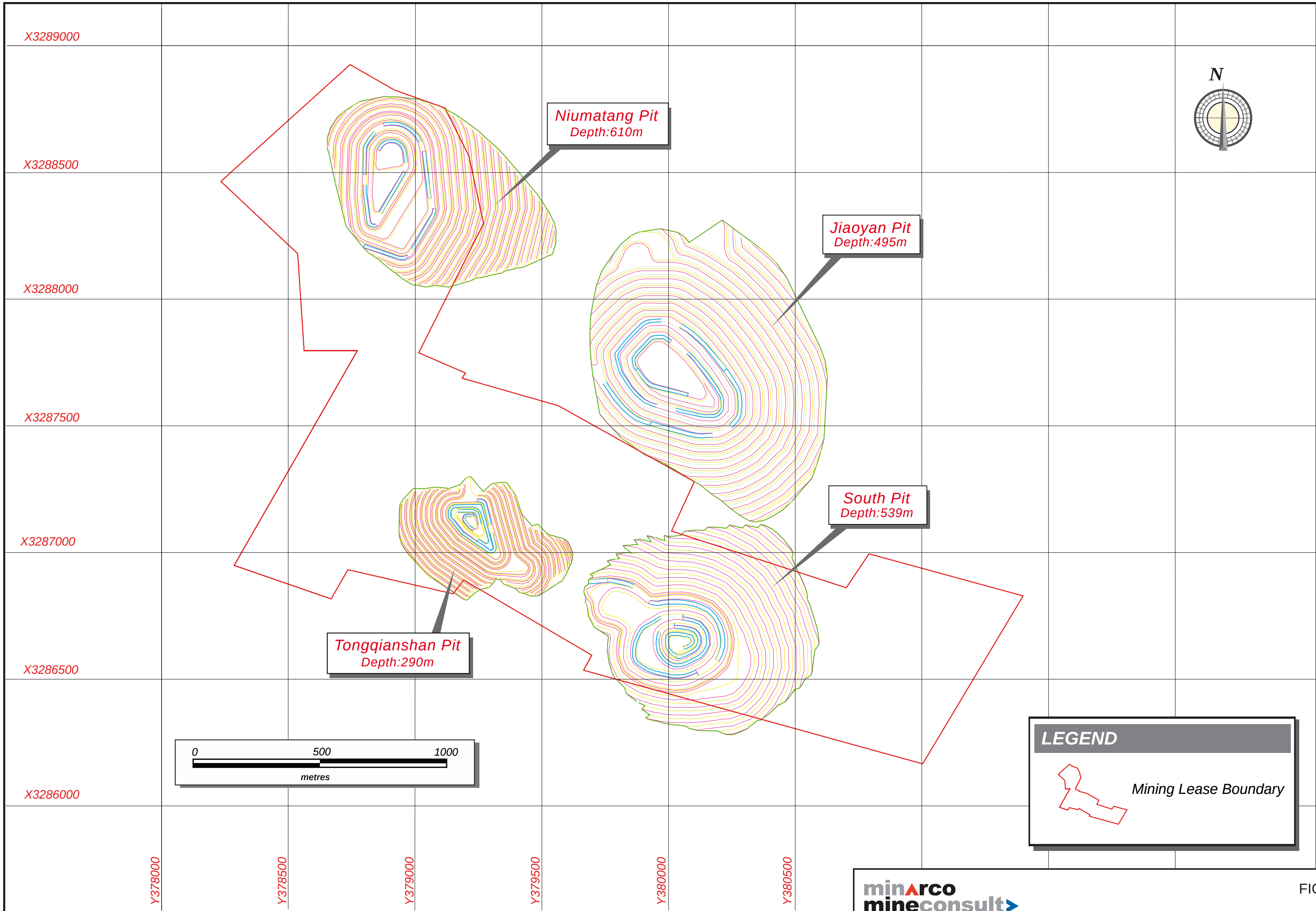

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FIGURE 16-4

China Gold International Resources Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

Open Cut Pit Designs and Location of Mining Lease

16.5.2 Underground

The Chinese Feasibility Study underground designs were used as the basis for the designs completed by MMC. The design parameters vary with the selected underground mining methods. These parameters are summarized in ***Table 16-16*** and are further discussed below with comment on each method.

Table 16-16 Jiama Copper-Polymetallic Project – Underground Mine Design Parameters

Description	Unit	Sublevel Open Stoping	Open Stoping with filling	Sublevel Caving	Room & Pillar	Stope & Pillar
Width	m	5 - 30	15 - 30	>30	5 - 15	15 (Stope) 18 (Pillar)
Dip	°	>30	<30	Low	<30	Low
Panel length	m	60	110	90	60	100
Panel height	m	50	50	60	15-20	50
Sublevel interval	m	15-17.5	15-20	20	15	15
Crosscut spacing	m			15		

Source: Chinese Feasibility Study

Sub-level open stoping (SLOS)

- When the orebody is less than 20 m thick, the stopes are mined in 60 m panel lengths. The stope height is 50 m with sub-levels 15 m to 17.5 m apart vertically;
- When the orebody is greater than 20 m thick, the block is mined with 30 m wide panels, with the panel length being the horizontal thickness of the ore. The 30 m panel width is made up of a 20 m wide stope and a 10 m wide pillar. The sub-levels are 15 m to 20 m apart vertically;
- When the orebody dips at less than 50° the ore will be extracted on each sub-level to minimise ore loss due to material remaining on the footwall of the stope;
- The dilution for this method is estimated to average 15% with ore loss estimated at 18%;
- Production is scheduled at 500 tpd from the sections of the mine using SLOS;

Open stoping with pillar and fill

- This method will be utilised to extract the ore from shallow dipping orebodies with thicknesses greater than 30 m;
- Mining panels 120 m wide and 100 m long will be established. A 10 m wide rib pillar will be left across the middle of the panel, together with a 5 m pillar along each side of the panel, creating a 110 m effective panel width. The length of the mining panel will be divided into 15 m wide primary and 18 m wide secondary stope panels, with 10 m to 15 m wide pillars left at each end of the panel;
- The primary stopes will be backfilled with cemented fill using 75% tailings and an average cement to sand ratio of 1:8. The secondary stopes will be filled with 75% tailings and 1.5% cement;
- Pillar recovery will be undertaken by cut and fill mining;
- Production using this method is scheduled at 1,000 tpd per stope;
- The estimated dilution will be 10% and the ore loss 12%;
- This method is forecast to be used to extract 60% of the production from the mine, with the post-mining backfill providing additional ground stabilisation of the rock mass, while open pit operations continue.

'Small stage open stoping succeeded by filling for the bottom plate trench'

- This method will be utilised to extract the ore from shallow dipping orebodies (<11°) with thicknesses ranging between 15 m to 30 m;
- The panel length is 110 m with 5 m pillars left along each side of the panel reducing the effective panel length to 100 m. This is sub-divided into 15 m wide primary stopes and 18m wide secondary stopes. The panel width is 120 m, with 5 m pillars left at either end of the panel reducing the effective width to 110m;
- This method has a dilution of 10% and an ore loss of 22%;

- Production using this method is scheduled at 1,000 tpd per stope.

Room & Pillar

- This method will be used to extract shallow dipping orebodies (<30°) with thicknesses between 5 m and 15 m.
- Pillars will be approximately 6 m by 6m to 8m, while the mined rooms will be approximately 12 m by 8 m;
- The dilution is estimated to be 8% and ore loss is estimated to be 20%.
- The production rate using this method is 400 tpd per stope.

Sub-level Caving

- This method will be employed where the ore is 'gently inclined' and greater than 30 m thick.
- The sublevel cave crosscut interval is 20 m with a sublevel spacing of 20 m;
- Dilution is estimated at 13.2% and ore loss at 20%;
- Production using this method is forecast at approximately 1,500 tpd per stope.
- This method could be used to break through to the bottom of the open pit;

Table 16-17 presents the percentage breakdown that each underground mining method contributes to the overall tonnage extraction achieved through underground mining methods.

Table 16-17 Jiama Copper-Polymetallic Project – Percentage Breakdown that each Underground Mining Method contributes to Production

Mining Method	Unit	While Niumatang is in production	After completion of Niumatang
SLOS	%	20	20
Open stoping with	%	60	0
small stage	%	15	10
Room & Pillar	%	5	0
SLC	%	0	70

Source: Chinese Feasibility Study

Table 16-18 shows a breakdown between Proven and Probable material reported at cut-off grades varying between 0.5% and 0.6% Cu-eq when only underground mining methods are used. The Proven category equate to those ore tonnes that have been classified in the Mineral Resource estimate as Measured, while the Probable category equates to those ore tonnes that have been classified in the Mineral Resource estimate as Indicated.

Table 16-18 Jiama Copper-Polymetallic Project – Breakdown of Measured and Indicated Material within Underground Designs

Classification	Unit	UG North	UG South
Proven	kt	16,241	8,673
Probable	kt	113,158	23,190

Source: MMC Derived
Note: Mineralised Quantities are based on Measured and Indicated Mineral Resources only using cut-off grades varying between 0.5% and 0.6% Cu-eq.

16.6 MINE DEVELOPMENT STRATEGY

A systematic approach was undertaken to identify a preferred development strategy.

Ore production is initially obtained from the Tongqianshan and Niumatang open pits, which are located in the east of the deposit. South Pit is then forecast to begin waste stripping in 2013. In 2014 when the Phase II Processing Plant is due to start operation, production is forecast to commence from the underground northern areas. Towards the end of the mine life for South Pit, Jiaoyan open pit will begin production in 2020. Underground ore production from the southern orebody is planned to commence in 2023, with the first copper-lead concentrate being produced that same year. Open pit extraction continues until 2044. Production continues in the copper-molybdenum and the copper-lead orebodies from the north and south areas concurrently until the end of the current underground mine life in 2043.

Open cut mining is initially focused on predominately extracting skarn material, which has better copper and molybdenum recoveries than the hornfels and porphyry hosted material. This means it will provide higher revenues during the early stages of the mine life. Niumatang, Tongqianshan and South Pit are predominately comprised of skarn material as presented in ***Table 16-3***.

There is a two year gap between when South Pit finishes mining and underground mining begins in the southern orebody. This two year period allows for the construction and stabilisation of the South Haulage Shaft, located on the rim of South Pit (see ***Figure 16-1***), which is required to access the southern orebody. If the production in South Pit is delayed, this could delay forecast underground operations.

In regards to underground mining, with the orebody in the northern area of the underground mine being more regular in shape and having suitable grades and quantities, it is planned that ore extraction from this area will meet the initial production requirements from the underground operations. In addition, it is envisaged that the processing of the northern area ore will be easier, which is likely to reduce costs, due to the copper-molybdenum ore having lower copper and lead content. The northern area ore will therefore be developed first, with the southern areas of the underground mine only being developed as the production from the open pit reduces – with the development scheduled so as to ensure that the production capability of the southern area being able to meet the requirement. With the southern portion of the copper-molybdenum and copper-lead ores being of relatively low tonnage per vertical metre the annual progression to depth is significantly greater in the southern areas.

16.7 PRODUCTION SCHEDULE

Table 16-19 presents the historical production figures for Tongqianshan and Niumatang. Based on forecast production figures up to and including 2014, copper and gold grades are expected to be higher than those reported historically, while the silver grade is expected to be lower.

Table 16-19 Jiama Copper-Polymetallic Project – Historical Production

	Unit	2010	2011	2012*
Ore	ROM kt	39.78	1,768.89	512.97
Waste	Kt	144.00	3,267.95	584.05
Strip Ratio	waste t: ore t	3.62	1.85	1.14
Cu ROM Grade	%	0.62	0.66	0.56
Mo ROM Grade	%	Data not available	-	-
Au ROM Grade	g/t	Data not available	0.32	0.28
Ag ROM Grade	g/t	Data not available	33.24	23.91
Pb ROM Grade	%	Data not available	1.58	0.64
Zn ROM Grade	%	Data not available	0.44	0.22

Source: Client Supplied
Note: Production for 2012 is up to mid-April 2012

16.7.1 Open Cut

The scheduling process for the open cut mines involved the following steps:

- Dividing the final pit shell into “reserves” blocks;
- Estimating mineralised material quantities and grades for each block using *Surpac* software;
- Importing the resulting data into MMC’s proprietary *MiMaSo* scheduling software;
- Sequencing blocks, that is ordering blocks to give a logical sequence which develops the mine according to the adopted mining strategy;
- Smoothing waste quantities required to uncover necessary mineralised material to provide a more reasonable mining schedule. This required excavating some waste earlier as “pre-strip”; and
- Checking the results and then exporting the schedule for importing into other *MiMaSo* software, such as mining fleet estimation and economic modelling software.

The key outcomes of the open cut production schedules include:

- 29 year mine life;

- The open pit production rate is approximately 7 Mtpa ROM ore over the life of mine.
- From 2015 to 2022 the open pit production rate varies between 7 Mtpa and 9.9 Mtpa to ensure that the processing plants are appropriately utilised while the underground operation production is ramped up;
- The average strip ratio for all four open cut mines over the 29 year mine life is 3.0:1 (waste t: mineralised material t), however it ranges from 0.4:1 to 23.9:1 (waste t: mineralised material t). From 2022, the strip ratio remains below 2.9:1 (waste t: mineralised material t);
- Average Cu, Mo, Au and Ag grades decrease notably in 2019, and then remain relatively constant thereafter; and
- Further detailed optimising of the schedule will be required for South Pit and Jiaoyan to ensure ROM ore mined and strip ratios are kept relatively consistent. Additionally, from 2013 to 2021, additional contractors may be required to handle the forecasted large waste movement, and possibly provide extra equipment. MMC notes, however, that if the infill drilling currently being undertaken by the Company upgrades the Inferred Mineral Resources to at least Indicated status, then this would reduce the amount of waste forecast during these years, which could change the mine plan and have a positive impact on Project economics.

16.7.2 Underground

The scheduling process for the underground operation involved the following steps:

- Estimating mineralised material quantities and grades of each element for each mining method, ore type, level, and stope and using *Surpac* software;
- Reviewing development requirements and removing isolated stopes that do not meet cut-off grade requirements for mining;
- Importing the model reports into *Excel*;
- Defining the scheduling scenario by specifying mining method, location, direction, proposed equipment, production rates, and working calendar assumptions;
- Sequencing the stopes to give a logical sequence which develops the mine according to the adopted mining strategy (the mining sequences used for each mining method were as proposed in the Chinese Feasibility Study, that is mining from the top down in each mining zone and completing each level before continuing down to the next);
- Checking the results and then exporting the schedule for importing into MMC economic modeling software.

The key outcomes of the underground production schedules include:

- 29 year mine life (including 29 years mining north zones and 21 years mining the south zones);
- Total maximum underground material movement of 5.4 Mtpa ROM ore, which is achieved in Year 12; and
- Average Cu, Mo, Au, and Ag grades increase initially and then decrease as mining extends to depth.

16.7.3 Combined

The Project has a planned average mining production rate of 13.6 Mtpa ROM ore from 2016 to 2039 with production ramped down during the remaining years of the mine life. ***Table 16-20*** shows the planned production rates yearly for the next six year, and then summaries the remaining years.

Figure 16-5 shows the yearly production of each mine for the 31 year mine life. MMC notes that mine planning has been completed to 2042, even though it is estimated that the mine could be extended by at least 15 years. At this stage a mine plan with a shorter mine life has been selected as this improves the economics for the Project. A detailed Schedule is also included in **Annexure C, *Table 30-3.***

MMC notes that in 2016 and 2020 when approximately 14.7 Mt and 14.3 Mt of ROM ore is mined respectively, which means the processing plant capacity of 13.8 Mtpa is exceeded, this ore can be stockpiled for processing in the following year.

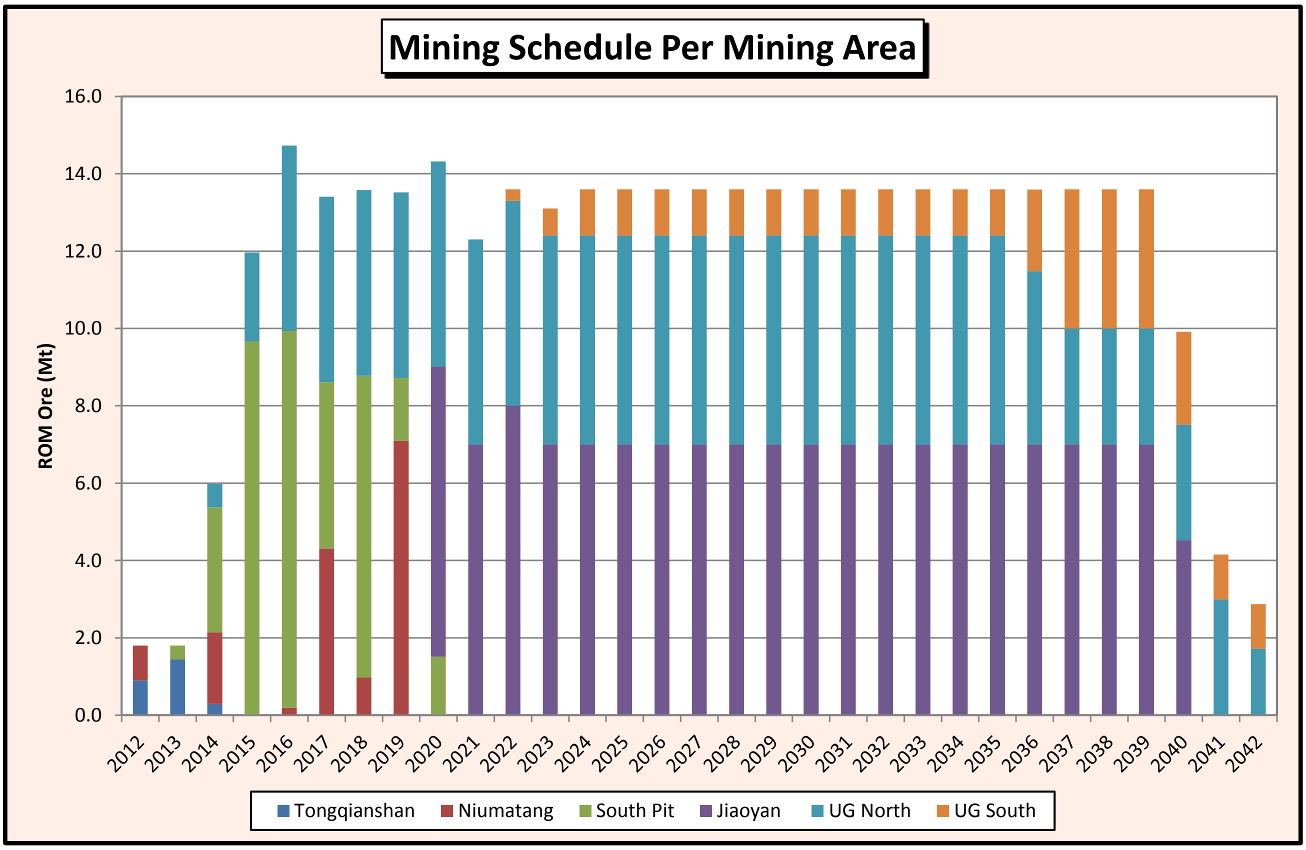
Table 16-20 Jiama Copper-Polymetallic Project – Production Schedule

	Units	2012	2013	2014	2015	2016	2017	2018-19	2020-24	2025-44	Total
Tongqianshan	Mt	0.9	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	2.6
Niumatang	Mt	0.9	0.0	1.9	0.0	0.2	4.3	8.1	0.0	0.0	15.3
South Pit	Mt	0.0	0.4	3.2	9.7	9.7	4.3	9.4	1.5	0.0	38.2
Jiaoyan	Mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.5	109.5	146.0
UG North	Mt	0.0	0.0	0.6	2.3	4.8	4.8	9.6	26.7	80.6	129.4
UG South	Mt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	30.8	33.0
Total	**Mt**	1.8	1.8	6.0	12.0	14.7	13.4	27.1	66.9	220.9	364.6
Waste	Mt	15.3	43.0	56.2	50.0	47.6	55.8	114.3	135.2	91.3	608.8
Strip Ratio	**waste t: ore t**	8.5	23.9	10.4	5.2	4.8	6.5	6.5	3.6	0.8	3.0
Cu	%	0.73	0.53	1.03	0.83	1.36	0.98	1.15	0.73	0.68	0.77*
Mo	%	0.029	0.018	0.013	0.025	0.025	0.050	0.040	0.025	0.031	0.030*
Au	g/t	0.21	0.17	0.39	0.23	0.42	0.37	0.40	0.21	0.17	0.22*
Ag	g/t	13.82	9.63	19.26	19.75	28.81	19.03	23.06	10.03	9.17	12.06*
Pb	%	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015	0.043	0.029*
Zn	%	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.032	0.021*

Source: MMC Derived

**average values over the life of mine*

Figure 16-5 Jiama Copper-Polymetallic Project – Production Schedule Per Mining Area



The Chinese Feasibility Study assumes a 300 day operating calendar (3 shifts per day x 8 hours per shift) for the open cut operations and 330 day operating calendar (3 shifts per day x 8 hours per shift) for the underground operations. MMC notes that there may be a risk that the actual days of operation, particularly in relation to the open cuts, may be less than forecast due to the snowy conditions generally characteristic for the Project area from October through to March. MMC, however, considers this risk to be minimal. As such, the annual production rate achieved will be dependent on weather conditions.

MMC considers the annual production quantities and grades shown in ***Table 16-20*** to be reasonable. However, MMC envisages minor variations in annual tonnages and expects grade fluctuations over the life of mine. These differences would be the result of natural variations in bulk density and grade distribution throughout the resources. MMC considers the ramp up of ore production to 6.7 Mtpa in 2015 to be achievable, however this is dependent on appropriate mining licences being granted and the construction and commissioning of Phase II infrastructure projects, such as the Phase II processing plant and various roads.

16.8 MINE LIFE

Based on the Mineral Reserve estimate provided in ***Table 16-21*** and the project production capacity, the current mine life for the Project is estimated to be 31 years. MMC, however, believes there is potential to define additional resources, which could form part of a Mineral Reserve estimate and therefore potentially increase the mine life. Given the significant mineralisation that exists down dip for the skarn mineralisation and the continuity of mineralisation observed, MMC believes there is significant potential to increase the underground mine life in the medium to long-term.

Table 16-21 Jiama Copper-Polymetallic Project – Mine Life for Individual Mines

Mine	Unit	Mine Life
Tongqianshan	Years	3
Niumatang	Years	8
Jiaoyan	Years	21
South Pit	Years	8
UG North	Years	29
UG South	Years	21

Source: MMC Derived

16.9 MINING EQUIPMENT

Contractors will be used to operate all equipment for both the open cut and underground operations. Currently separate contracting companies are used to operate Tongqianshan and Niumatang.

16.9.1 Open Cut

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

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

Table 16-22 provides the main mining equipment requirements MMC considers appropriate for Tongqianshan and Niumatang mines. This selection has been based on equipment specified in the Chinese Feasibility Study.

Table 16-22 Jiama Copper-Polymetallic Project – Tongqianshan and Niumatang Equipment List

Equipment	Specification	Quantity
Drill	ATLAS D9	4
	Sandvik	3
	Ingersoll	2
Explosive Truck	Dongfeng	2
Excavator	HITACHI 870	4
	HITACHI 450	1
	HITACHI 360	3
	HITACHI 330	3
	HITACHI 210	2
	HYUNDAI 805	1
	HYUNDAI 455	1
	CAT 330	2
Truck	Tonly TL85 (60t)	15
	Bei Ben (40t)	21
	TEREX (50t)	10

Source: Chinese Feasibility Study

Table 16-23 provides the main mining equipment requirements MMC considers appropriate for South Pit and Jiaoyan mine. This selection has been based on the Feasibility Study. MMC considers the equipment selected to be suitable for the proposed mining operation and forecasted production rate. Due to the long mine life, opportunity exists to review and optimise the equipment selection, when equipment is due to be replaced, which MMC envisages will occur twice during the proposed mine life.

Table 16-23 Jiama Copper-Polymetallic Project – Jiaoyan and South Pit Equipment List

Equipment	Specification	Quantity
Rotary Drill	250mm	2
Hydraulic Drill	165mm	2
Hydraulic Rockbreaker		2
Hydraulic Backboe Excavator	5 cu.m	2
Shovel		
Excavator	8 cu.m	4
Truck	54t	25
Bulldozer	320Horse power	3
Water truck	25t	2
Front end Loader	5 cu.m ZL90	2
Grader	120Horse power	1
Roller	180 horse power	1
Charging vehicle	15t	2
Hydraulic Backboe Excavator	1.5 cu.m	1
Refueling truck	8t	1

Source: Chinese Feasibility Study

16.9.2 Underground

Table 16-24 provides the main mining equipment requirements described in the Chinese Feasibility Study for the underground mine. MMC has reviewed and validated this selection.

Table 16-24 Jiama Copper-Polymetallic Project – Underground Mine Equipment List

Equipment	Specification	Quantity
	Stope Drilling	
Hydraulic Jumbo	SimbaH1354	11
Drilling Jumbo	Boomer281	1
	Ore transport Equipment	
Electric LHD	TORO1400E(6 cu.m)	13
Hydraulic LHD	TORO9 (6 cu.m)	3
Hydraulic LHD	ACY-3 (3 cu.m)	4
	Development Equipment	
Hydraulic Jumbo	Boomer281	15
Jumbo	YSP-45	14
Jumbo	YT27	8
Creeping Cage	PG -1	9
	Waste transport Equipment	
Hydraulic LHD	JCY-3 (3 cu.m)	4
Gathering arm Loader	WZG-120	6
Loader	Z-30	4
	Auxiliary Equipment	
Concrete Spray	PZS3000	10
Concrete Spray	PZ—5	7
Mining Charging machine	BCJ-4	8
Development Charging machine	BQF-100	11
Refueling Truck	JY—5	4
Material Truck	EQ-240	10
Service Car	JY—5	4
Pickup Truck	TFR55HDLJX	4
Local Fan	JK58-2No4	29
Local Fan	JK58-2No5	47

Source: Chinese Feasibility Study

For the development phases of the underground mining operation a single boom Atlas Copco Boomer drill jumbo has been selected. Although the penetration rate of the COP1838 drill may be suitable, in order to more fully meet the coverage requirements, a two boom jumbo could be considered. With a 6.3 m x 8.7m coverage the 2 boom Boomer 282 has a 45% greater coverage than the 6.1m x 6.1m coverage of the single boom Boomer 281.

The selected stope drilling rig, the Simba 1354 by Atlas Copco, has a hole length capability of 33 m which is likely to meet the majority of the drilling requirements. In the 'Small Stage Open Stope method of bottom plate trench' when the orebody is 30 m thick, however, the hole length requirement is likely to be greater than 36m.

The Load-Haul-Dump unit nominated is the Toro 1400E (this is now the Sandvik LH514E). The standard bucket size is 5.4 cu.m, with a tramming capacity of 14 t. The nominated bucket size is 6.0 cu.m. At a 90% fill factor the capacity is 5.4 cu.m. At a density of 3.11 t.cu and 40% swell this load is 11.9 t, which is within the tramming capacity of the loader. The standard 1,000 V cable length on this loader is 400 m (380 m usable). At this maximum trailing cable length the productivity is 35% of that at 100 m tramming distance. As they are electric drive loaders, altitude should have no effect.

The diesel powered equipment is likely to achieve 80% efficiency due to the effect of altitude.

The ancillary equipment should be able to satisfactorily meet the mining requirement.

16.10 CROWN PILLAR

While Niumatang and South Pit are still in operation a stoping method that employs a cemented fill will be utilised to maintain the stability of the open pit walls and floor. Once mining has ceased in the open pits, the SLC mining method will be used to mine the material contained in the crown pillar, which is located in the floor of the open pit. With the addition of broken rock into the base of the open pit, on top of the crown pillar material, this ore can be recovered.

16.11 GEOTECHNICAL

Site personal state no geotechnical issues have been encountered during operation of Tongqianshan and Niumatang open pits since commencement in 2010. Nevertheless, as underground mine workings are present in the Tongqianshan pit, MMC recommends the Company ensures these voids are identified within the future mining areas as mining progresses to avoid safety and production risks.

Additionally, stability of the pit walls will be crucial to enable the pits to achieve their design depths of over 300 m. Therefore, monitoring of the pit walls should be routine practice to ensure safety of the workers.

MMC recommends further geotechnical analysis be undertaken for South Pit and Jiaoyan, as only high level mine planning has been completed for these two areas. Specifically, pit slopes for South Pit and Jiaoyan should be better defined with detailed geotechnical studies undertaken. These studies introduce the potential to reduce operating costs for South Pit and Jiaoyan pit if the pit slopes can be steepened without increasing the risk of wall failure.

Additionally, due to the pit boundary of South Pit, the location of the South Haulage Shaft should be further examined to ensure that it will be safe for use.

In the Chinese Feasibility Study the RQD of the skarn material is stated to be 46.85 and poor quality. Therefore MMC recommends that exposures in the underground mining area should be small and that void duration should be minimised.

The recommendations for monitoring work to be conducted during production include:

- Monitoring of rock-mass stress variation;
- Monitoring of rock-mass displacement; and
- Rock-mass sonic wave testing.

Further studies should be undertaken to better understand the rock mechanics specifically related to the underground mine. The Chinese Feasibility Study has only been able to make qualitative descriptions regarding the stress distribution characteristics of rock mass in the rock mechanics and general estimations regarding the ground surface caving. This has been due to the fact that there is a lack of raw data available for review that includes actual measured quantities for parameters such as original rock stress, lateral pressure coefficient, modulus of elasticity and Poisson’s ratio.

MMC recommends the following additional geotechnical work include:

- Rock stress testing;
- Research on rock mass strain properties;
- Numerical analysis model;
- Photo-elastic simulation; and
- Ground pressure observation and analysis.

16.12 WATER/HYDROLOGICAL

Main hydrological issues associated with open cut mines will arise from rain (annual rainfall is 563 mm), which is predominately concentrated between June and September. As the topographical conditions of the open pit mining areas allow for natural drainage of the water, drainage systems are not necessary for the open cut mine sites. Nevertheless, to ensure that flooding does not occur, drainage systems involving water-collecting tanks and water pumps will be installed.

There are no hydrological issues relating to the underground mining operations.

16.13 MINING LEASES

The current mining lease does not cover the entire proposed mining areas for the open pit and underground operation, as illustrated in ***Figure 16-4***. In addition the forecast production rate for Phase II exceeds the current production capacity of the licences. MMC notes that all the production until 2014 is roughly within the current licence and allowable capacity.

The proposed mining areas under consideration are currently covered by a valid exploration licence and under Chinese mining regulation there is a well-defined and regulated process by which an exploration licence is converted to a mining lease with the Company having commenced this process already. Hence MMC believes that there is reasonable expectation that this conversion will happen in a timely fashion so as not to impact the Company’s plans.

17 RECOVERY METHODS

17.1 INTRODUCTION

MMC visited the current processing, the pilot testing and the dry tailings facilities between the 28th and 30th of April 2012. The Huatailong personnel were particularly helpful and co-operative.

The current mineral processing plants include the operating Huatailong 1.8 Mtpa processing plant (capacity of 6,000 tpd of Cu-Mo-Pb-Zn ores) and a pilot processing plant (capacity of 600 tpd of Cu-Pb-Zn ores). The Huatailong processing plant started operation in 2010, while the pilot plant has been in existence at the site for many years since modification from an old processing plant.

It is proposed that a new Huatailong processing plant be constructed to treat the copper-molybdenum sulphide ores from the deposit. It is forecast to have an overall throughput rate of 40 ktpd ROM (i.e. 12 Mtpa ROM of Cu-Mo ores) and commence production in 2014. Once commissioned, the overall processing capacity for the operation will be 13.8 Mtpa for Cu-Mo ores, not including 0.18 Mtpa for the Cu-Pb-Zn ores.

The existing 6,000 tpd plant that was designed for processing both Cu-Mo and Cu-Pb-Zn ores, currently only processes Cu-Mo ores. Nevertheless it is possible to process Cu-Pb-Zn ores if required, depending on the mining schedule of Cu-Pb-Zn ores. The existing 600 tpd plant can support the proposed mining schedule of Cu-Pb-Zn ores.

17.2 EXISTING MINERAL PROCESSING PLANT

A summary of the existing processing plant is presented in ***Table 17-1.***

Table 17-1 Jiama Copper-Polymetallic Project - Processing Plant Overview

Name of Plant	Daily Capacity tpd	Annual Capacity ktpa	Ore Type	Status
Huatailong No.1	6,000	1,800	Cu-Mo	Operating

Note: 300 operating days per year

The main existing processing facility was designed for the recovery of Cu, Pb, Zn, Au and Ag by a bulk flotation, followed by a Cu-Pb-Zn flotation circuit and Cu-Mo separation flotation circuit, finally producing separate Cu, Pb, Zn and Mo concentrates. The current operation, however, only treats the Cu-Mo ore with a low Mo content ore to produce only a Cu concentrate (Au and Ag are credits; Mo separation is not economic) by bulk flotation. The ore sources are equally split between the Tongshan and Niumatang mines.

The processing flowsheet and plant are conventional and suitable for the processing of skarn copper-molybdenum sulphide materials (refer to ***Figure 17-1***). The Cu-Pb-Mo bulk flotation circuit consists of one stage of roughing followed by three stages of scavenging, with the rougher concentrate being upgraded in three stages of cleaning. The Cu-Pb-Mo flotation tailings are fed to a zinc flotation circuit where zinc concentrate is produced with the final tailings reporting to a press filter for dewatering before being stockpiled in a tailings facility.

The Cu-Pb-Mo bulk concentrate will report to the Cu-Pb separation flotation circuit, where a lead concentrate is produced as final concentrate. The tailings flow into a Cu-Mo separation flotation circuit for the production of separate copper and molybdenum concentrates. The final separate concentrates (i.e. Cu, Pb, Zn, and Mo) are dewatered by dedicated thickeners and filters.

Most of the current plant feed is open cut sulphide Cu-Mo ore with a low Mo content, which has not been recovered as a separate Mo concentrate since the cost of the reagents used to separate the Mo exceeds the value of the Mo concentrate produced. With higher Mo head grades, a separate Mo concentrate would be expected to be produced. Consequently, due to the nature of the ore being fed to the operation, neither the Cu-Pb-Zn flotation circuit nor the Cu-Mo separation circuit have been operated.

The internal laboratory has sufficient and competent facilities for the assaying requirements of geology and mining samples as well as plant shift samples.

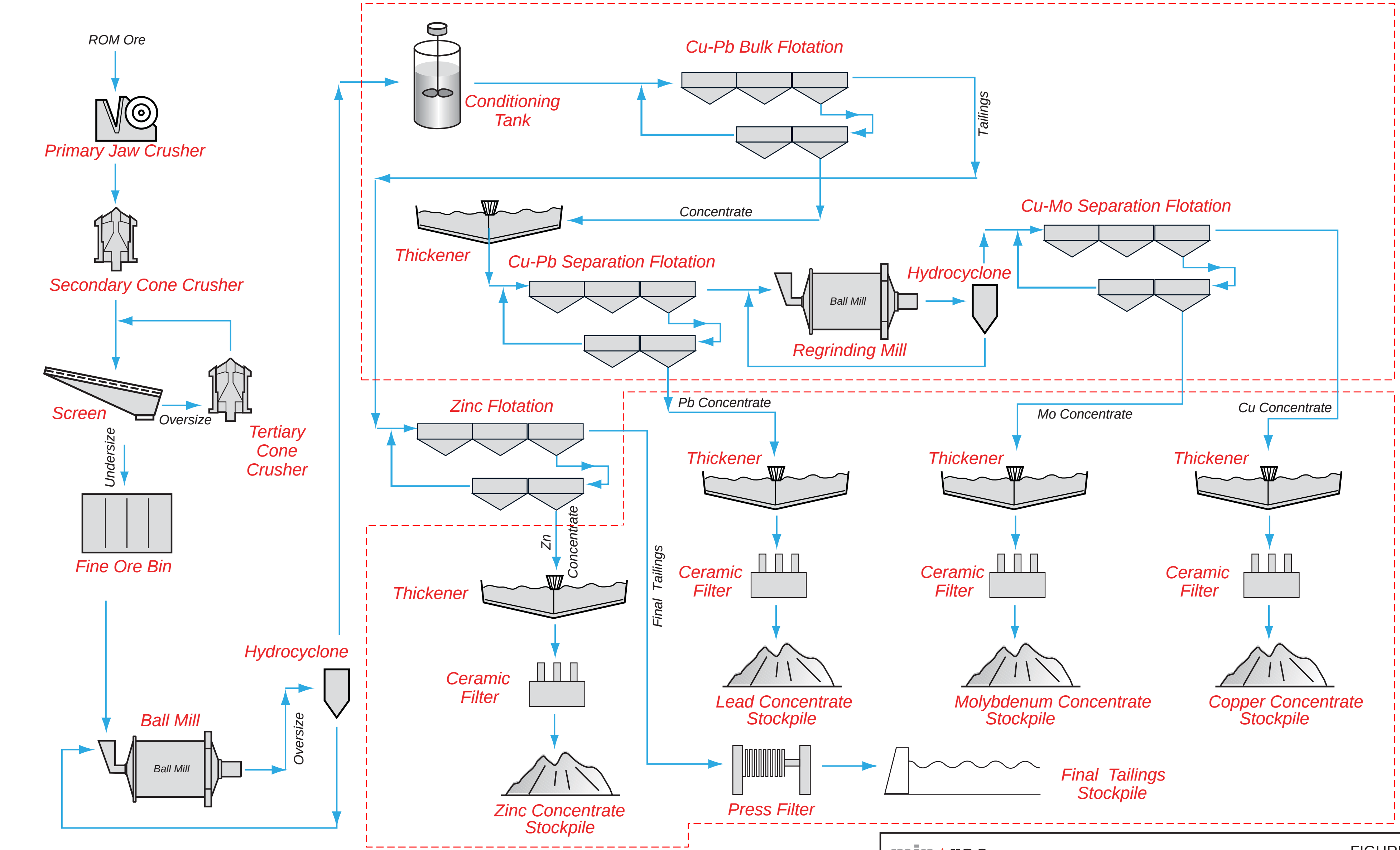


FIGURE 17-1

minarco mineconsult

China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

6000 tpd Mineral Processing Flowsheet

Project No : ADV-HK-03709

Flowsheet Description

Ore from the mines is crushed in the gyratory crusher at the mine site prior to being transported by dedicated train to the stockpile bin located in front of the crushing plant. ROM material (-300 mm) is discharged from the vibrating feeder and feeds a C110 jaw crusher (160 kW). The crushed ore reports to a screen, where the oversize ore feeds the secondary GHP500 cone crusher (400 kW) and the crushed product and screen undersize are stored in a fine ore storage bin.

Ore recovered from the fine ore storage bin is fed to a single stage grinding circuit. The grinding circuit consists of two parallel lines, each with an overflow 4 m diameter by 8 m long ball mill (2000 kW) in closed circuit with a hydrocyclone and the underflow reporting to the ball mill feed. The hydrocyclone overflow (P_{70}=74 microns) reports by gravity to the flotation conditioning tank.

The flotation circuit consists of a Cu-Pb-Mo bulk flotation circuit followed by a lead flotation circuit, a Cu-Mo separation flotation circuit and a zinc flotation circuit. The Cu-Pb-Mo bulk flotation circuit consists of a bank of rougher cells (16 cu.m) followed by a bank with three stages of scavenging cells (16 cu.m) with three stages of cleaning cells (2 cu.m). The third scavenger concentrate reports back to the feed of the previous scavenger stages, while the first scavenger concentrate reports to the rougher feed. The rougher concentrate is upgraded in three stages of cleaning with the first cleaner tailings reporting to the rougher feed.

The cleaner concentrate feeds the lead flotation circuit, consisting of a bank of rougher cells (16 cu.m) followed by a bank with three stages of scavenging cells (16 cu.m) and four stages of cleaning cells (2 cu.m) to produce a final lead concentrate. The tailings flow into a 1.5 m diameter by 3 m long ball mill in closed circuit with a hydrocyclone. The regrind product feeds the Cu-Mo separation flotation circuit for further upgrading.

The Cu-Mo separation flotation circuit consists of a rougher flotation column followed by a bank with two stages of scavenging cells (2 cu.m) and two stages of column cleaning where a final molybdenum concentrate and a final copper concentrate (tailings) are produced.

The final concentrates (Cu, Mo, Pb and Zn) are dewatered by dedicated thickeners and filters equipped for each concentrate and then recovered to a storage stockpile before transportation to the smelters.

The scavenger flotation tailings is dewatered in eight membrane press filters before being stored in the tailings facility with process water recovery from both filtration as well as the tailings dam.

Equipment

The key processing equipment is summarised in ***Table 17-2***. MMC considers that the equipment is typical of the most modern flotation processing equipment available and is suitable for the processing capacity and the production of marketable concentrates.

A comprehensive quality management system was implemented using modern technical standards. MMC was provided with the quality data for procured materials as well as the requirements for operators. The operators appeared to be diligent, with the process visibly operating well, with a high degree of automation and control. Overall, it appears to be a well-run operation.

The Cu-Pb-Zn separation circuit, as well as the Cu-Mo separation flotation circuit, are currently not operated since the current plant feed does not contain sufficient Cu, Pb- or Mo to warrant recovery. The amount of Cu-Pb-Zn ore available for treatment was not known during the plant design. This idle equipment would provide an opportunity for the proposed processing expansion of Cu-Pb-Zn ores.

The high moisture content of the Cu concentrates (13%) would be hard to overcome by using ceramic filters since this equipment is not capable of reaching the desired results at the high altitude (more than 4,500 m). Pressure plate filtration method followed by an air blowing cycle is recommended to significantly lower the moisture content of the concentrate.

Table 17-2 Jiama Copper-Polymetallic Project –Equipment List- Huatailong Flotation Plant

Items	Specification	Number
Crushing		
Vibration Feeder	GZT1560	1
Jaw Crusher	C110	1
Cone Crusher	HP400 (38mm)	1
Cone Crusher	HP500 (18mm)	2
Electromagnetic Separators	PDC-10T2	1
Vibration Feeder	GLJ1230	3
Vibration Screen	2YKAA2460—AT	
Grinding and Flotation		
Disc Feeder	MBR16	14
Wet Overflow Ball Mill	4m Ø ×8m	2
Wet Overflow Ball Mill	1.5m Ø×3m	1
Hydrocyclone	6—3178	2
Hydrocyclone	2—3139	1
Conditioning Tank	3.5m Ø×3.5m	8
Conditioning Tank	2m Ø×2m	5
Conditioning Tank	1m Ø×1m	2
Flotation	KYFⅡ—16	46
Flotation	XCFⅡ—16	22
Flotation	KYFⅡ—2	46
Flotation	XCFⅡ—2	34
Flotation Column	KYZ1810	1
Flotation Column	KYZ0812	1
Flotation Column	KYZ0612	1
Conditioning Tank	1.5mØ×1.5m	1
Chute Feeder	GZC40120	1
Cone Conditioning Tank	3m Ø×3m	1
Concentrate Dewatering		
Ceramic Filter	TC—36	1
Ceramic Filter	TC—21	1
Ceramic Filter	TC—9	1
Ceramic Filter	TT-45B3b	1
Box-type (diaphragm)Press Filter	XMZG20/800-U	1
Paddle Steam Dryer	WH8-A	1
Automatic packaging machine	DCS-BD	1
Thickener	GNZ-30m Ø	2
Thickener	NXZ—18m Ø	1
Thickener	NXZ-12m Ø	1
Thickener	NXZ-9m Ø	1
Tailings Thickener	GZN—60m Ø	4
Diaphragm	DGMB255/11	3
Tailings Dewatering		
Automatic Membrane Filter Press	KZG600/2000-U	8
Air Compressor	SA-375A	3
Conditioning Tank	2m Ø×2m	4

Source: provided by the Company

Mineral Processing Performance

The currently processed Cu-Mo ore is a blended ore sourced mainly from the Tongqianshan mine of variable copper grades but with relatively consistent Au and Ag grades among the different mining areas (refer to ***Table 17-3***).

Table 17-3 Jiama Copper-Polymetallic Project – Processed Ore from Various Mining Sites

Element	Unit	Tongqianshan Mining Site	48Line Open Cut	Niumatang	Wenzhou No.2 Decline	Decline (Jianxi Weile)	4650 Roadway	Total
2011 Actual								
Mined Tonnes	kt	989.97	119.99	317.06	72.28	213.80	10.01	1,723.12
Cu	%	0.62	0.62	0.76	0.91	1.24	0.89	0.74
Au	g/t	0.32	0.32	0.37	0.35	0.35	0.42	0.34
Ag	g/t	22.21	21.62	24.16	20.69	23.00	22.05	22.72
Mo	%	-	-	-	-	-	-	-
Pb	%		0.98					0.98
Zn	%		0.36					0.36
2012 Planned								
Mined Tonnes	kt	656.38		541.36	82.66	106.60		1,400
Cu	%	0.66		0.80	1.39	1.55		0.83
Au	g/t	0.23		0.38	0.43	0.39		0.32
Ag	g/t	21.17		22.96	16.52	25.47		21.96
Mo	%	0.01		0.04	0.02	0.02		0.02

Source: provided by the Company

The production performance is outlined in ***Table 17-4***, which estimates the quantity of marketable copper concentrate containing silver and gold produced, based on recoveries for copper, gold and silver of 88%, 56% and 63%. MMC considers that these recoveries are reasonable. There were no Mo operational data for review.

Table 17-4 Jiama Copper-Polymetallic Project –Current Production Performance

Items	Element	Unit	2011 Actual	2012 Forecast
Processed Ore Tonnes	-	Mtpa	1.66	1.35
Days Per Year	-	d	299	274
Availability	-	%	89	75
Tonnes Per Day	-	d	5,560	4,927
Feed Grade	Cu	%	0.67	0.85
	Au	g/t	0.29	0.33
	Ag	g/t	21.55	25.04
	Mo	%	-	0.02
Concentrate Tonnes		t	47,445	38,740
Metal	Cu	t	9,863	9,616
	Au	kg	267	258
	Ag	t	23	19
	Mo	t	-	143
Recovery	Cu	%	88.24	84.13
	Au	%	55.89	58.11
	Ag	%	63.23	55.96
	Mo	%	0	56

Source: provided by the Company with modification by MMC

17.2.1 COPPER-LEAD-ZINC PILOT PLANT

The existing copper-lead-zinc pilot plant (capacity 600 tpd) was modified from an old processing plant with some refurbished equipment. These facilities provide the opportunity for processing the Cu-Pb-Zn ores at a production rate of 0.2 Mtpa as proposed in the Chinese Feasibility Study. The modification of the pilot processing plant and original pilot testing operation occurred during 2011.

MMC considers that the process flowsheet and equipment are satisfactory for the proposed processing capacity and the production of three marketable concentrates (Cu, Pb and Zn).

The processing circuit is a conventional comminution-flotation operation in which separate copper, lead and zinc concentrates are produced. The flowsheet as presented in ***Figure 17-2*** consists of three stages of crushing, one stage of milling followed by a separate lead flotation, copper flotation circuit and a zinc flotation circuit. The milling circuit employs a conventional ball mill for grinding and a spiral to classify the slurry for flotation. The copper flotation circuit consists of one stage of roughing followed by three stages of scavenging, with the rougher concentrate being upgraded to a final concentrate by two stages of cleaning. Both lead and zinc flotation circuits employ one stage of roughing followed by two stages of scavenging as well as two stages of cleaning. The separate copper, lead and zinc concentrates are initially dewatered in separate thickeners followed by filtration by disc filters.

The plant equipment is listed in ***Table 17-5.*** Some equipment and facilities have been refurbished.

Table 17-5 Jiama Copper-Polymetallic Project – Equipment List- Huatailong Pilot Plant

Items	Specification	Numbers
Screen	YA1536	1
Jaw Crusher	FK05-11-22	2
Crusher	PEF	1
Cone Crusher	GP100M	1
Spiral Classifier	2m Ø	2
Ball Mill	2.1m Ø x 3.6m	2
Flotation		31
Flotation		32
XBT elevated Conditioning Tank	XBT	3
Conditioning Tank	RJ25	4
Vibrating Mill Prototype	RK/ZZM-400	1
Multifunction Vacuum Filter	RK/ZL-260/200	2
Ventilation Centrifuge	4-72N04A	1
Magnetic Separator	RCYB-6.5	1
Thickener	NXZ-9	2
Thickener	NXZ-12	1
Ceramic Filter	TC-12	2

Source: provided by the Company

The flowsheet is relatively standard and employs basic processing principles. Some aspects of the flowsheet upgrade were based on testing undertaken internally and by testing institutes, such as the requirement for fine grinding (currently P_{70}=74 microns), modification of thickening facilities, upgrading of filtration capacity with modern ceramic filters, and relocation of the flotation reagent additions for zinc recovery.

It was noted that in the previous pilot testing, the tested ores were considered not to be fresh (i.e. oxidised) which resulted in a poor metallurgical performance (refer to ***Section 13.4.3***). Further investigations with a representative fresh sample would be required to understand the potential for improvement.

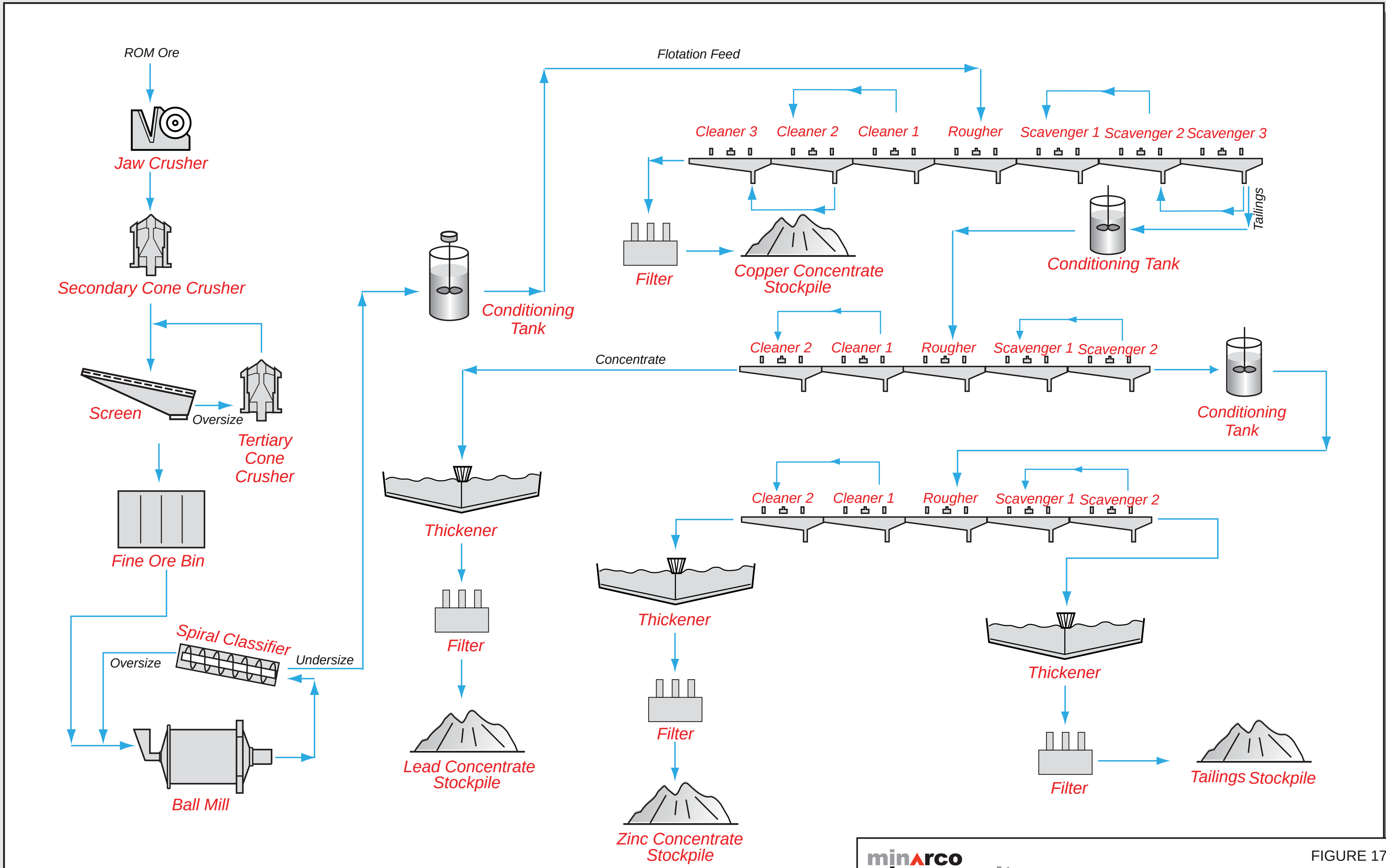


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FIGURE 17-2

China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

Lead - Zinc Pilot Processing Flowsheet

17.3 PROPOSED MINERAL PROCESSING PLANT

It is proposed that another mineral processing plant be designed and constructed to treat the two separate Cu-Mo ore types, namely skarn and hornfels hosted types at a rate of 20,000 tpd for each type of ore. The Chinese Feasibility Study is ongoing. It was planned that the mineral processing plant would commence construction in 2012 and the subsequent production in 2013.

The proposed mineral processing plant is based on the metallurgical testing results by CGRI, as well as that from the existing mineral processing operation. The processing plant would be a conventional flotation plant with a total capacity of 40 ktpd.

A summary of the proposed processing plant is presented in ***Table 17-6.***

Table 17-6 Jiama Copper-Polymetallic Project – Proposed Processing Plant Overview

Name of Plant	Daily Capacity tpd	Annual Capacity Mtpa	Ore Type	Status
Huatailong No.2	40,000	12	Primary Cu-Mo Sulphides	Chinese Feasibility Study

Note: 300 operating days per year

The proposed mineral processing flowsheet and plant employ a SAG milling circuit and conventional flotation circuit (refer to ***Figure 17-3)***. The two processing lines were designed for two types of ore, which have significantly different characteristics in terms of head grades, mineralogy and hardness. The comminution circuit would consist of SAG mill followed by a ball mill with a pebble crusher. The flotation circuit would include a Cu-Mo bulk flotation with a concentrate regrind circuit followed by a Cu-Mo separation flotation circuit. The Chinese Feasibility Study has proposed the tailings will be thicken by deep cone thickener and wet disposal in a tailings dam. While an information provided during site visit has stated that the flotation tailings would be dewatered by filter presses before reporting to a dry tailings facility for storage, while the final copper concentrate is dewatered by thickener sand ceramic filters. The molybdenum concentrate is dewatered by filter presses followed by dryers.

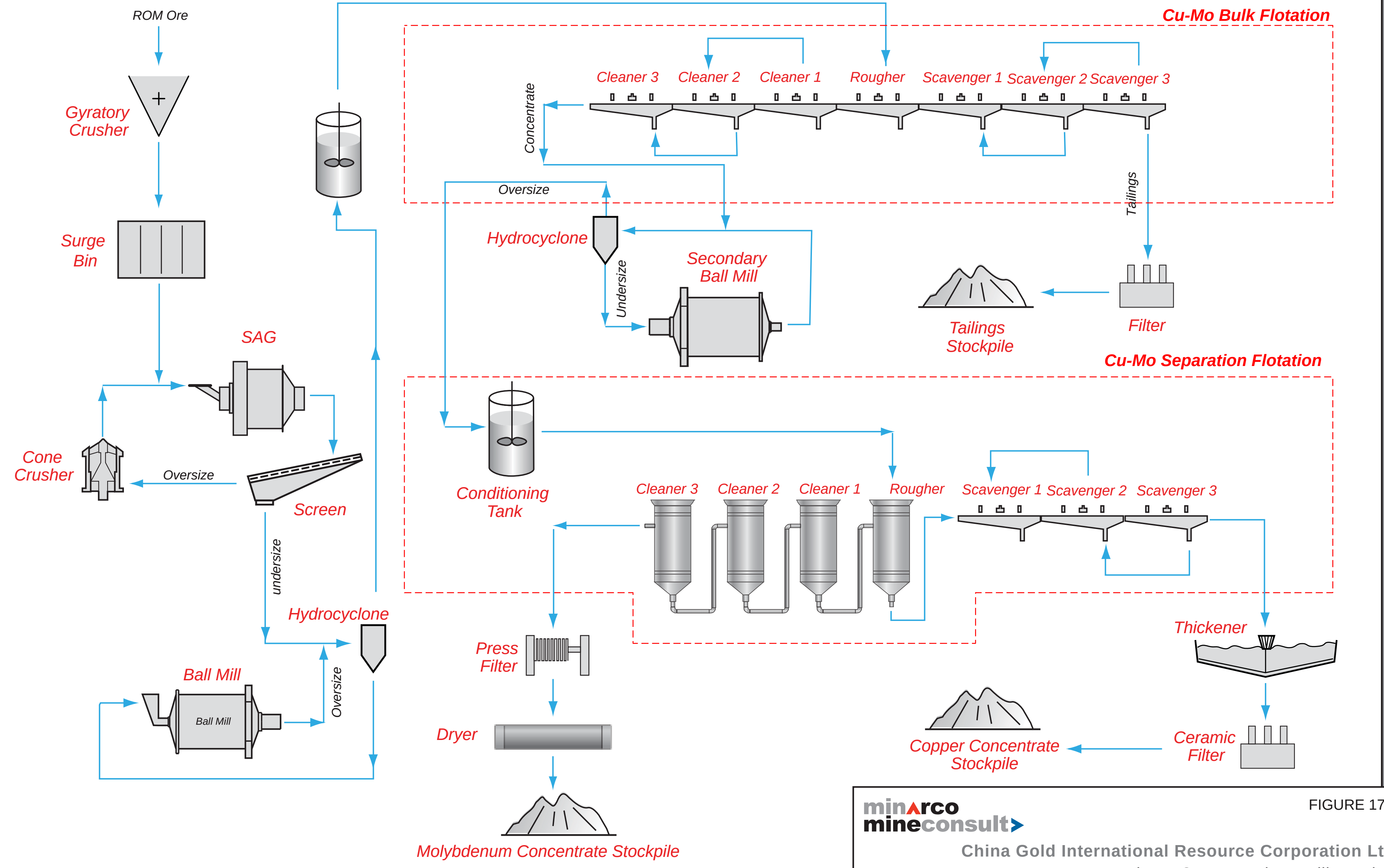

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FIGURE 17-3

China Gold International Resource Corporation Ltd.

Jiama Copper-Polymetallic Project

Project No : ADV-HK-03709

40 ktpd Mineral Processing Flowsheet

Flowsheet Description

The crushed ore (minus 300 mm) from the mining site is conveyed to the stockpile (live capacity of 46,172 t for 28 hours storage) and recovered by a feeder onto a conveyor to feed a 9.8 m diameter by 4.9 m long SAG mill (11.2 MW) with a vibrating screen on the mill discharge. The discharge screen oversize in the form of pebbles reports to a storage bin (115 cu.m), which feeds two parallel crushing circuits that are based on each ore type. Pebbles would be conveyed to two HP 400 cone crushers in closed circuit with the SAG mill for crushing as required.

The screened discharge of the SAG mill in combination with the ball mill discharge is pumped to 660 mm diameter hydrocyclones where the underflow reports to 6.7 m diameter by 11.58 m long overflow ball mill (9.6 MW), and the overflow (P_{70}=74microns) gravitates to the flotation circuit.

The process would be a typical copper-molybdenum separation, which is an appropriate flowsheet for the production of marketable copper and molybdenum concentrates. The first stage consists of bulk flotation, where the sulphide minerals are separated from the gangue and the bulk flotation concentrate treated by differential flotation to produce separate copper and molybdenum concentrates.

The bulk flotation circuit is conventional, consisting of a rougher and three stages of scavengers (in total twenty four 200 cu.m cells) with the rougher concentrate upgraded in three stages of cleaning (eight 70 cu.m cells). The tailings from the scavenger circuit are final tailings and would be directed to a paste thickener where the water is recovered for re-use in the process and the thickened solids pumped to the tailings storage facility.

The cleaned bulk concentrate is subjected to dewatering and reagent removal in a 60m diameter thickener. The thickener underflow reports to an overflow 3.2 m diameter by 4.5 m long ball mill in closed cycle with a nest of ten 300 mm diameter hydrocyclones. The overflow (P_{90}=45 microns) is discharged to the Cu-Mo differential flotation circuit.

In the differential flotation, the copper and iron sulphides are depressed and the molybdenum sulphide floated in a column roughing circuit (4.5m Ø ×10m) followed by three stages of scavenging (ten XCF/KYF40 cu.m cells). Three stages of column cleaning (3.2m Ø ×10m, 2.5m Ø×10, and 1.8m Ø×10m) is employed in both circuits to produce final grade concentrates.

The copper concentrate is then dewatered in dedicated dewatering circuits, consisting of thickeners (15 m diameter). The thickened copper concentrate would be further dewatered by three ceramic disc filters (TC-80 sq.m) to produce final marketable products. The molybdenum concentrate is directly dewatered to less than 6% moisture by press filters followed by an electromagnetic spiral dryer. Water is recovered from de-watering and re-used in the process.

The marketable copper concentrate and molybdenum concentrate is stored in concentrate warehouses (copper 2,880 sq.m. for 30 days storage and molybdenum 720 sq.m for 60 days storage).

Equipment Selection

The key proposed processing equipment is summarised in ***Table 17-7.*** The equipment is suitable for a plant of this capacity and is typical of conventional modern flotation processing plants.

The dewatering, crushing and ball milling equipment has been sized based on trade-off study calculations which were based on current operations and other similar operations. SAG mills of this size have been made and applied in many projects in China and internationally so there is sufficient experience in their operation and maintenance.

MMC notes that the sizing of the comminution equipment is smaller than that indicated by comminution properties testwork by CITIC Heavy Industries Co. Ltd. For instance, the testwork suggests two 10.37 m diameter by 5.19 m long SAG mills (11,172 kW) for both ore types, as well as 7.32 m diameter by 12.5 m long overflow ball mill (13,000 kW) for grinding of skarn types ores and an overflow 6.7 m diameter by 11 m long ball mill (9,000 kW) for hornfels ores.

MMC was provided with the data on the determination of the comminution properties, namely crushing and SAG milling work indices, unconfined compressive strength (UCS) as well as abrasion index (Ai). This has been conducted on the skarn type and hornfels type ore samples using three composites that reflect the variability of the different bodies, although the representativity of the samples requires further investigation.

JK-SimMet modelling has been used to establish the size of the mill and the required power, as well as the necessaries for crushing of the SAG mill discharge oversize (pebble crusher), the transfer size and the size and power requirements of the ball milling circuit. Most importantly, this will confirm the possible mill throughput capacities

Modern control and automatic technology would be applied for stable and optimised operation.

Table 17-7 Jiama Copper-Polymetallic Project – Equipment List- Proposed Flotation Plant

Items	Specification	Numbers	Weight (t)	Power (kW)
Grinding and Flotation				
Heavy Apron Feeders	1.5m×12m	12		900
SAG Mill	9.8m Ø ×4.9m	2	1,664	22,400
Overflow Ball Mill	6.7m Ø ×11.58m	2	1,916	19,200
Screen	GJZKK4273AT	4	101	300
Belt Feeder	B=1，L=7.5	4	24	88
Pebble Cone Crusher	HP400	2	46	630
Hydrocyclone	FX660-GX-II×12	2	69	
Automatic Ball Adding Machine	ECO-Q12-1	4	3	6
Conditioning Tank	8.0m Ø x 8.0m	4		360
Mechanical Flotation Cells	KYF-200 cu.m	24	1,308	5,280
Mechanical Flotation Cells	KYF-70 cu.m	8		600
Liner Mechanical Hand	SAG and Ball Mill	1	6.5	
Reagent Conditioning Tank	CF3.5m Ø x 3.5m	4	32	120
Reagent Conditioning Tank	CF2.5m Øx 2.5m	1	3.5	15
Paste Thickener	42m Ø	2		320
Cu-Mo Separation Flotation				
Overflow Ball Mill	MQY3.2mØx4.5m	1	133.88	640.5
Hydrocyclone	10XCZ300	1		
Flotation Column	CCF4.5m Øx10m	1		
Flotation Column	CCF3.2m Øx10m	1		
Flotation Column	CCF2.5m Øx10m	1		
Flotation Column	CCF1.8m Øx10m	1		
Conventional Flotation Cells	KYF-40 cu.m	10		550
Refrigeration Dryer	HAD-6HTF	1	0.12	1.5
Concentrate Dewatering				
Ceramic Filter	TC-80	3	54	120
High-pressure Membrane Filter Press	XMG80/1000-UB	2	6.7	8
Conditioning Tank	3.5m Ø ×3.5m	2		44
Electromagnetic Spiral Dryer	HD－DLH400	1	12.6	300
Horizontal Screw Mixer	WLDH-10000-02	1		55
Packaging Machine	LCS-1000-ZⅡ	4		12.6
Air Compressor	SA45A	2	1.96	90
Refrigeration Dryer	TSC2A	1		1.5
Lime Preparation				
Ball Mill	1.5m Ø × 3.0m	1	16	90
Sinking Spiral Classifier	FC-15	1	16	15
Hydrocyclone	FX125	2		
Conditioning Tank	5.0m Ø × 5.5m	2	39	44

Source: Feasibility Study, 2011

Forecast Mineral Processing Performance

The Feasibility Study forecasts a production performance based on the CGRI test works and similar operations. A summary combined with MMC's assumptions based on up-to-date test work and studies is outlined in ***Table 17-8***.

The expected production rate of the proposed Processing Plant will commence in 2013. The processing plant will operate for 300 days per year.

The overall production rate is considered to be reasonable. MMC notes that that the achievement of the scheduled production relies on consistently achieving the proposed plant ore grades.

The Feasibility Study only refers to the processing of the dominant Cu-Mo ores at a scheduled 12 Mtpa, based on the mining schedule and does not address the processing of the Cu- Pb-Zn ores which should be processed at 0.2 Mtpa based on the mining schedule. Although the Cu-Pb-Zn ore represents only approximately 3% of total of the total ore resource, these ore types would require a different processing route to maximise revenues (i.e. the ability to make separate copper, lead and zinc concentrates).

Table 17-8 Jiama Copper-Polymetallic Project – Expected Average Production Performance

Products	Elements	Concentrate Quantity (tpa)	Feed Grade (%)	Product Grade (%)	MMC Recovery (%)
Cu-Mo Ore					
	Skarn				
	Cu	147,600	0.615	22	88
Cu Concentrate	Au(g/t)		0.222	4.06	45
	Ag(g/t)		11.781	263.4	65*
Mo Concentrate	Mo	5,100	0.057	47	70
	Hornfels				
Cu Concentrate	Cu	94,800	0.411	22	84
Mo Concentrate	Mo	1,200	0.019	47	48
Cu-Pb-Zn Ore					
	Skarn				
Cu Concentrate	Cu	3,400	0.564	22*	88
Pb Concentrate	Pb	7,220	1.451	70*	88
Zn Concentrate	Zn	3,960	0.807	40*	75
Overall recovery	Au				45*
	Ag				60*

Source: provided by the Company
*Note: * modified by MMC*

MMC considers that a recovery of 88% at a concentrate grade of 22% Cu is achievable for Skarn ores with the proposed feed grades based on the operational record of the existing processing plants as well as the bench scale test results. The metallurgical performance of the molybdenum for the hornfels hosted ore type requires more testing.

Grade and Recovery Variation

MMC notes that the copper feed grade has a significant impact upon both recovery and operating costs. For example, higher copper feed grades mean lower operating costs and higher recoveries. These relationships should be developed for both the copper and molybdenum feed grades based on testwork.

The development of a relationship between feed grade and recovery for both of these metals would allow incorporation of this data into the resource block model, the mine schedule and the metallurgical design. This would allow more accurate estimates of concentrate production schedules (grades, recoveries and volumes), equipment sizes and operating costs.

A relationship of recovery versus feed grade using the plant operating data is proposed by the company as shown in ***Table 17-9***, which suggests a linear relation between copper feed grade and recovery based on a relatively constant tailings copper grade.

Table 17-9 Jiama Copper-Polymetallic Project – Theoretic Cu Recoveries-Feed Grade Relationship

Feed Cu (%)	Tailings Cu (%)	Recovery Cu (%)
0.40	0.066	83.12
0.41	0.070	83.22
0.42	0.069	83.96
0.43	0.070	83.96
0.44	0.062	86.19
0.45	0.061	86.78
0.46	0.061	87.15
0.49	0.059	88.25
0.52	0.060	88.70
0.54	0.062	88.77
0.57	0.064	89.02
0.60	0.066	89.28
0.61	0.067	89.30
0.68	0.060	91.36
0.70	0.062	91.37
0.88	0.062	93.13

Source: provided by the Company

Based on the historical data such as 2011, this relationship between the feed grade and recovery was more variable (refer to ***Table 17-10***), which may be due to the operation not yet reaching the optimum processing conditions.

Table 17-10 Jiama Copper-Polymetallic Project – 2011 Monthly Feed Grade and Recovery Relationship

	Cu		Au		Ag	
Time	**Feed Grade (%)**	**Recovery (%)**	**Feed Grade (g/t)**	**Recovery (%)**	**Feed Grade (g/t)**	**Recovery (%)**
Feb-2011	0.60	86.10	0.25	41.36	21.14	63.44
Mar-2011	0.62	86.53	0.25	40.76	22.50	63.56
Apr-2011	0.64	83.66	0.36	52.63	22.23	54.10
May-2011	0.79	85.03	0.38	29.88	24.03	70.28
Jun-2011	0.81	86.24	0.33	49.64	24.52	63.34
Jul-2011	0.63	86.97	0.31	50.32	21.72	59.28
Aug-2011	0.64	90.45	0.34	53.31	20.92	60.72
Sep-2011	0.64	90.10	0.23	60.36	21.37	52.75
Oct-2011	0.60	88.08	0.31	53.94	21.00	69.77
Nov-2011	0.58	87.53	0.28	57.45	18.64	59.95
Dec-2011	0.91	94.61	0.41	68.42	21.15	78.88
Sep-2010	0.74	73.82	0.27	42.28	23.58	53.01
Oct-2010	0.77	72.81	0.36	39.02	29.58	43.21
Nov-2010	0.68	80.65	0.26	55.68	24.24	54.34
Dec-2010	0.60	76.51	0.21	47.89	25.21	52.25

Source: Summary by MMC from the Data provided by the Company

A molybdenum feed grade-recovery relationship would need to be developed based on the testing of both ore types for a range of molybdenum feed grades.

18 PROJECT INFRASTRUCTURE

Substantial infrastructure has been developed for the Phase I of the Project and includes access roads, power and water for mining and mineral processing as well as a tailings dam. The Company is in the process of upgrading these facilities to ensure that the forecast production expansion to 13.8 Mtpa ROM ore can be achieved during Phase II. As these upgrades are mostly further expansion of already build infrastructure it is unlikely that any material risks will be identified.

The Project assets are generally located at high MSL elevations, ranging from 4,350 m to 5,410 m on the Tibetan Plateau. The site camp and existing processing facilities are located at an elevation of approximately 4,000 m, while the proposed processing plant would be at approximately elevation 4,420 m. The Project area has mountainous topography with steep slopes and large differences in elevation. There are some sparsely-populated Tibetan villages within the Project area.

The winter season occurs from October through to March and the Project experiences frequent snow falls and is extremely cold. Only July and August are frost free months. The weather has a typical continental plateau climate, which introduces difficulties to both construction and operation.

18.1 MINE SERVICES

18.1.1 Roads

The operation and facilities are accessible by a paved access road of approximately 8 km connecting the site office and processing plant to the Sichuan-Tibet Highway (G318) in the north. The mine site is located approximately 60 km west of Lhasa (capital of Tibet) and approximately 9 km east of the town of Metrorkongka. This infrastructure is already in place and sufficient to cater for the needs of the Phase II expansion in respect to supplying the mine site and allowing for the transportation of saleable products.

The railroad, highways and airport are already in place connecting Lhasa city with other locations in China. A rail line connecting Lhasa with Jinchuan in Gansu province is available for concentrates transportation; some other rail lines are available for shipping to other places in China.

18.1.2 Water Supply

The freshwater supply is sourced from the downstream Chikang River, a tributary of the Lhasa River, which has a water flow between 10 to 20 k cu.m/d. A 10 km pipeline is available to supply water from the river pump station to the existing processing plant and the mining site. The future water source would be from the same place on the Chikang River with the fresh water capacity in the existing pipeline sufficient for the Phase II expansion.

Water is currently recycled onsite, from tailings clarification as well as the concentrate filters, thickeners and tailings impoundments and this is factored into the total raw water requirement for the mine and the processing plants. It is estimated that for Phase II a total fresh water requirement of 93.6 k cu.m would be required for mining and processing when the production rate is expanded to 40 ktpd. The supply capacity of the river would be sufficient for the expansion. Some further water facilities, such as A1200 m DN700 water seepage drainage, semi-underground 12.0 m Ø × 13.0 m pumping station at capacity of Q 360 cu.m/ h and six 200LB-23.4 pumps would be required to support the water supply for following production expansion.

18.1.3 Power Supply

Currently power is sourced from a 110 kV electricity transmission line from the Metrorkongka substation located approximately 24 km north of the Project area, which has proven adequate at the current production rate. However, power supply in the central Tibet region has been generally insufficient for mining operations in the past.

A new 750 kV/± 400 kV DC power grid line from Qinghai province to Tibet has been under construction since July 2010 and is expected to be in service by the end of 2012. This will be the main source of power to meet the electricity needs of the Project production expansion during Phase II.

18.2 CONSUMABLES, MATERIALS AND FUEL SUPPLY

The Project is located in an economically underdeveloped area with no local large-scale machine manufacturing or repairing enterprises to supply external contract repair services. Except some sand, cement and building bricks, all mining and beneficiation consumables, raw materials, as well as fuels and oils, will need to be imported into Tibet for a reliable supply. A local dedicated truck transport fleet is currently servicing the Project's needs between external supply sources and the mine site.

18.3 TAILINGS STORAGE FACILITIES

MMC inspected the existing tailings dam and the adjoining tailings filtration plant, which is approximately 2 km from the processing plant. The processing plant tailings (40% solids) are dewatered by membrane press filters (<20% moisture) and the cake flows by gravity into the tailings dam for storage.

During the production expansion period, 6,649 tpd of the tailings would be recovered for backfill in the underground mine. At this stage the ore processing plants would produce of 32,522 tpd (6,504 k cu.m) of tailings. Based on the Chinese Feasibility Study, these tailings (40% solid) would be dewatered by deep cone thickeners to 64-66% solids before being pumped to the tailings dam for storage.

Development of a new tailings dam may be required during the construction of the proposed No.2 processing plant. One potential site has been identified 5.3 km southwest of the processing plant in the Jiama valley (elevation 4,360 m). The tailings dam would have a height of 185.0m, an active capacity of 53.18 million cu.m and provide 8.2 years storage capacity at a processing rate of 40 ktpd.

19 MARKET STUDIES AND CONTRACTS

The processing plant sells a copper concentrate to purchasers in Gansu Province. The Company sells all products on a spot price basis and has no long term contracts with purchasers. The Company has three indoor secure storage areas where it can store concentrates. All products are sold on a Free on Truck basis ("FOT") with buyers responsible for transportation costs ex-mine.

Concentrate products have a discount applied to the benchmark metal spot price as per the purchase contracts reviewed by MMC. From these applied discounts MMC were able to determine the net revenue attributable to the Project. Discounts applied to Molybdenum, Lead and Zinc have been estimated by MMC. The concentrate payment discount percentages are shown in ***Table 19-1***.

Table 19-1 Jiama Copper-Polymetallic Project – Payment discount for contained concentrate metals to benchmark spot metal price

Metal	Payment Discount %
Cu	83.8
Mo	68.1
Au	84.0
Ag	77.5
Pb	80.0
Zn	65.0

Source: MMC

MMC has received the actual revenue for 2011 and the first four months of 2012. This data shows revenue from Cu, Au and Ag. The historical pricing data shows a decrease of the benchmark Cu spot price from 5.64 USD/lb at the beginning of 2011 to 4.10 USD/lb in April 2012. The benchmark Au spot price varies over this period but has a net gain from 1,300 USD/troy Oz. to 1,600 USD/troy Oz. The silver spot price has decreased from 32.09 USD/Troy Oz. at the beginning of 2011 to 29.75 USD/Troy Oz. in April 2012. These trends have been graphed and are shown in ***Figures 19-1, 19-2*** and ***19-3***.

Figure 19-1 Jiama Copper-Polymetallic Project – Historic Benchmark Cu Spot Price

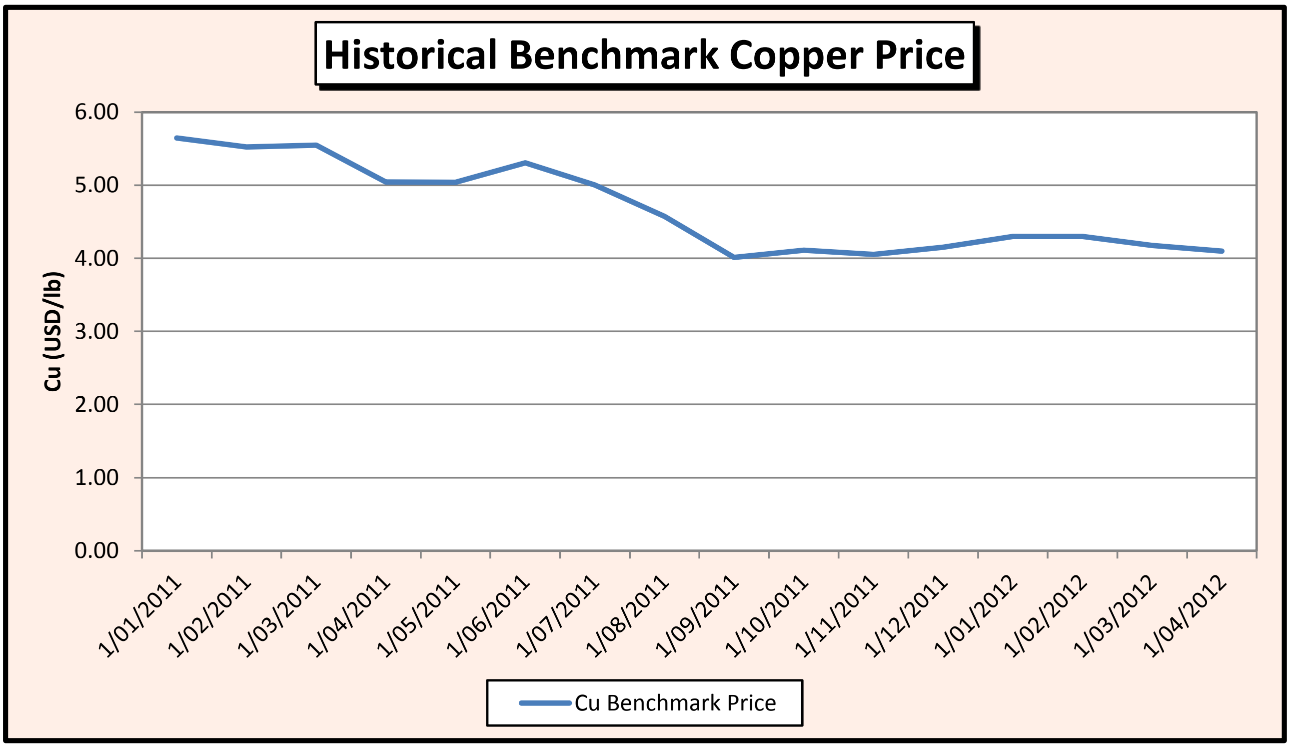


Figure 19-2 Jiama Copper-Polymetallic Project – Historic Benchmark Au Spot Price

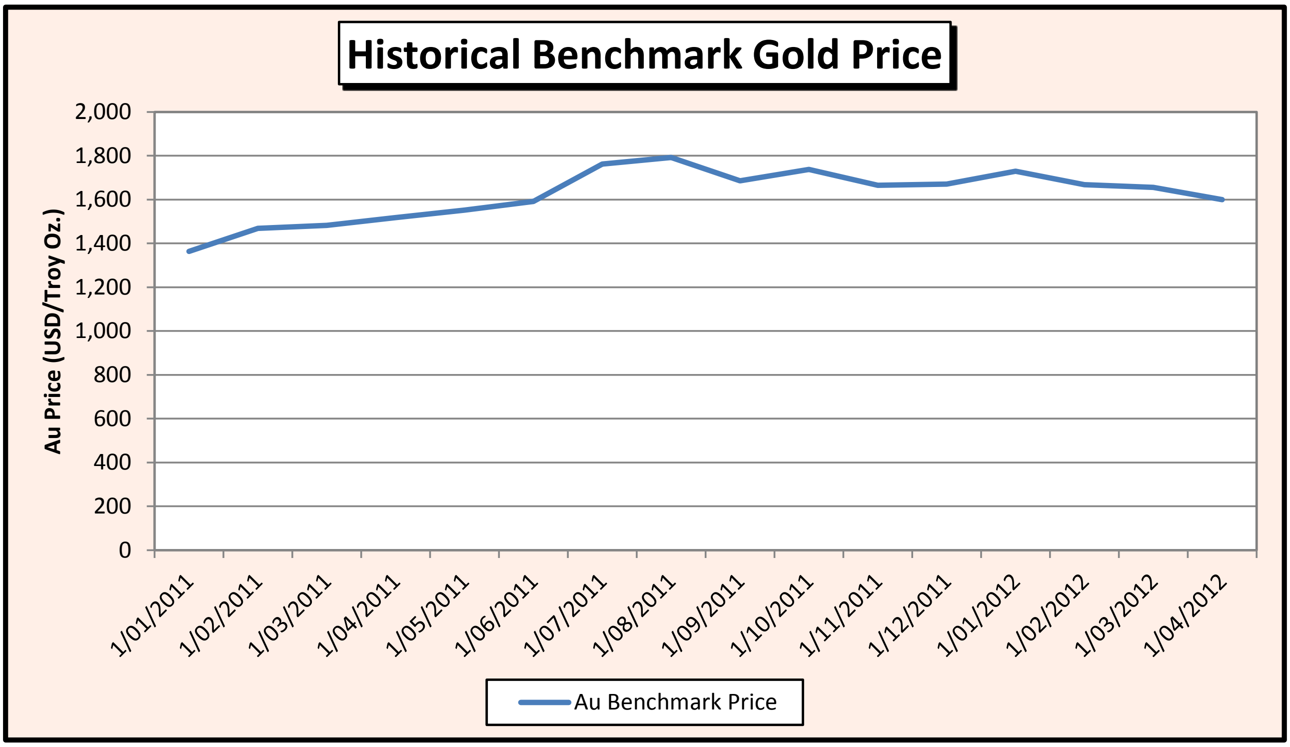
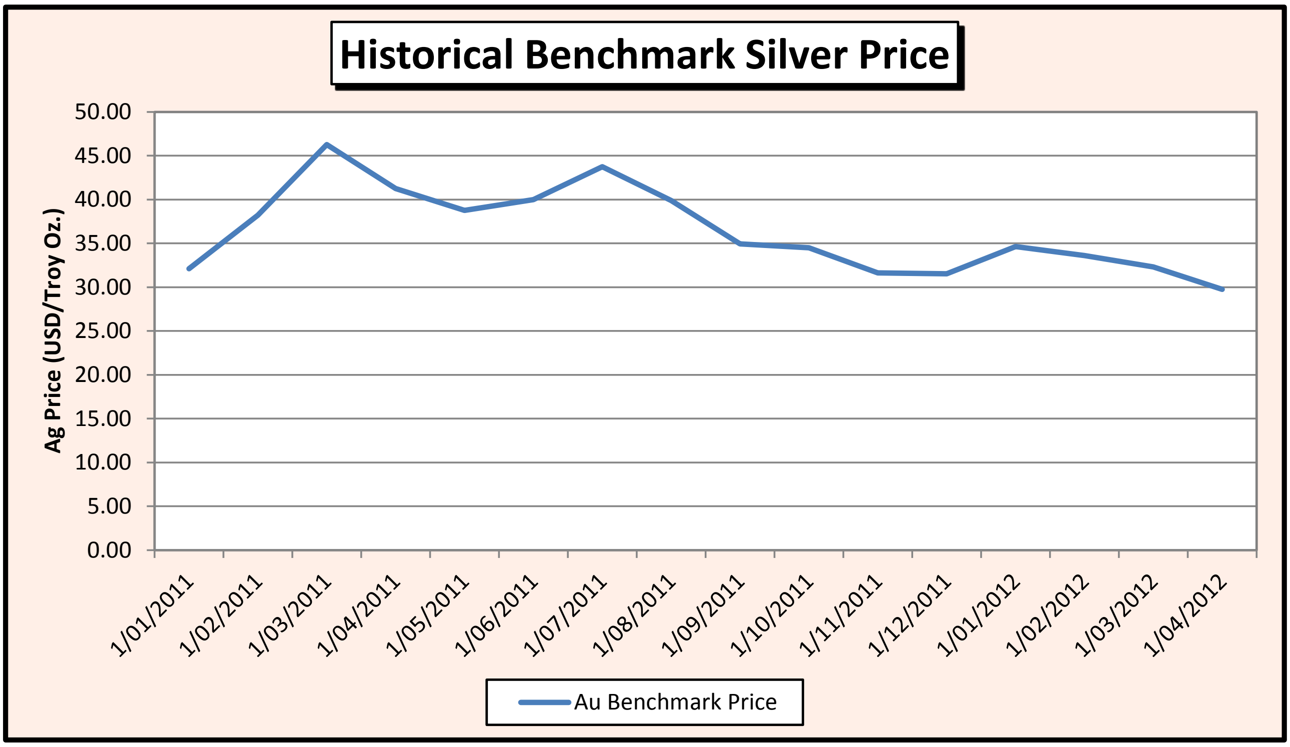


Figure 19-3 Jiama Copper-Polymetallic Project – Historic Benchmark Ag Spot Price



MMC has used benchmark spot metal prices based on various analyst reports and discussions with the Company to understand what the forecasted metal prices will be in future. The forecast spot metal prices used by MMC, which it considers to be reasonable, are shown in **Table 19-2**. All prices are listed in 2012 real term dollars.

Table 19-2 Jiama Copper-Polymetallic Project – MMC Forward Pricing

		2012	2013	2014	2015	2016	2017	2018	2019	LT
Cu	USD/lb	3.70	3.60	3.50	3.50	3.42	3.31	3.22	3.10	2.90
Mo	USD/lb	15.11	16.16	16.33	17.00	18.00	18.00	18.00	18.00	18.00
Zn	USD/Metric t	2,113	2,325	2,442	2,485	2,560	2,281	2,220	2,138	2,000
Pb	USD/Metric t	2,198	2,355	2,432	2,461	2,452	2,281	2,220	2,138	2,000
Au	USD/Troy Oz.	1,749	1,798	1,585	1,539	1,475	1,380	1,380	1,380	1,380
Ag	USD/Troy Oz.	34.05	33.86	27.76	23.78	22.91	18.82	18.31	17.64	16.50

The benchmark metal spot price for both Au and Ag used by MMC in 2012 is comparable to the actual spot prices being paid at the beginning of 2012. The Cu price used in 2012 is marginally lower than the actual spot price as received from China Gold in 2012. The Cu, Au and Ag prices trend down to longer term prices, which MMC believes to be reasonable. These prices have been graphed and are shown in ***Figures 19-4, 19-5, 19-6, 19-7, 19-8*** and ***19-9***.

Figure 19-4 Jiama Copper-Polymetallic Project – Forward benchmark spot Cu price MMC

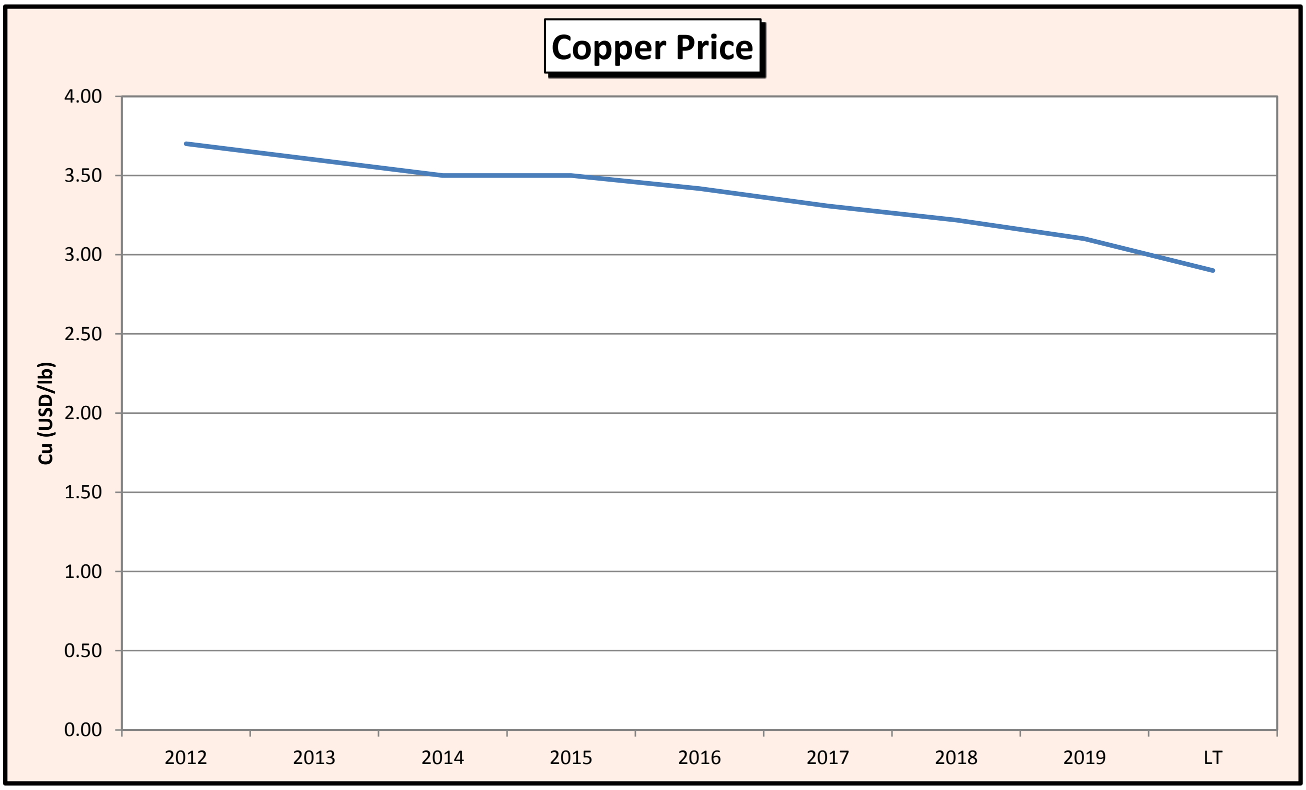


Figure 19-5 Jiama Copper-Polymetallic Project – Forward benchmark spot Mo price MMC

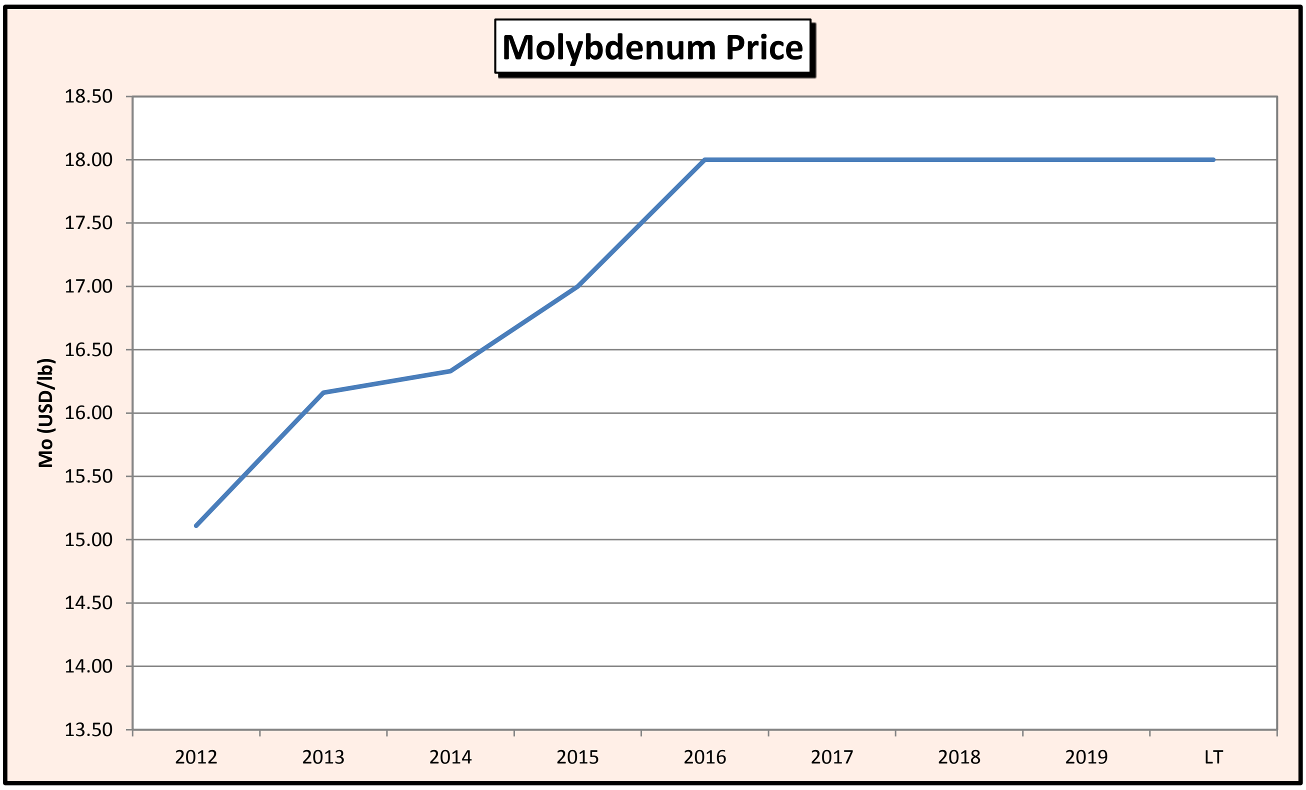


Figure 19-6 Jiama Copper-Polymetallic Project – Forward benchmark spot Zn price MMC

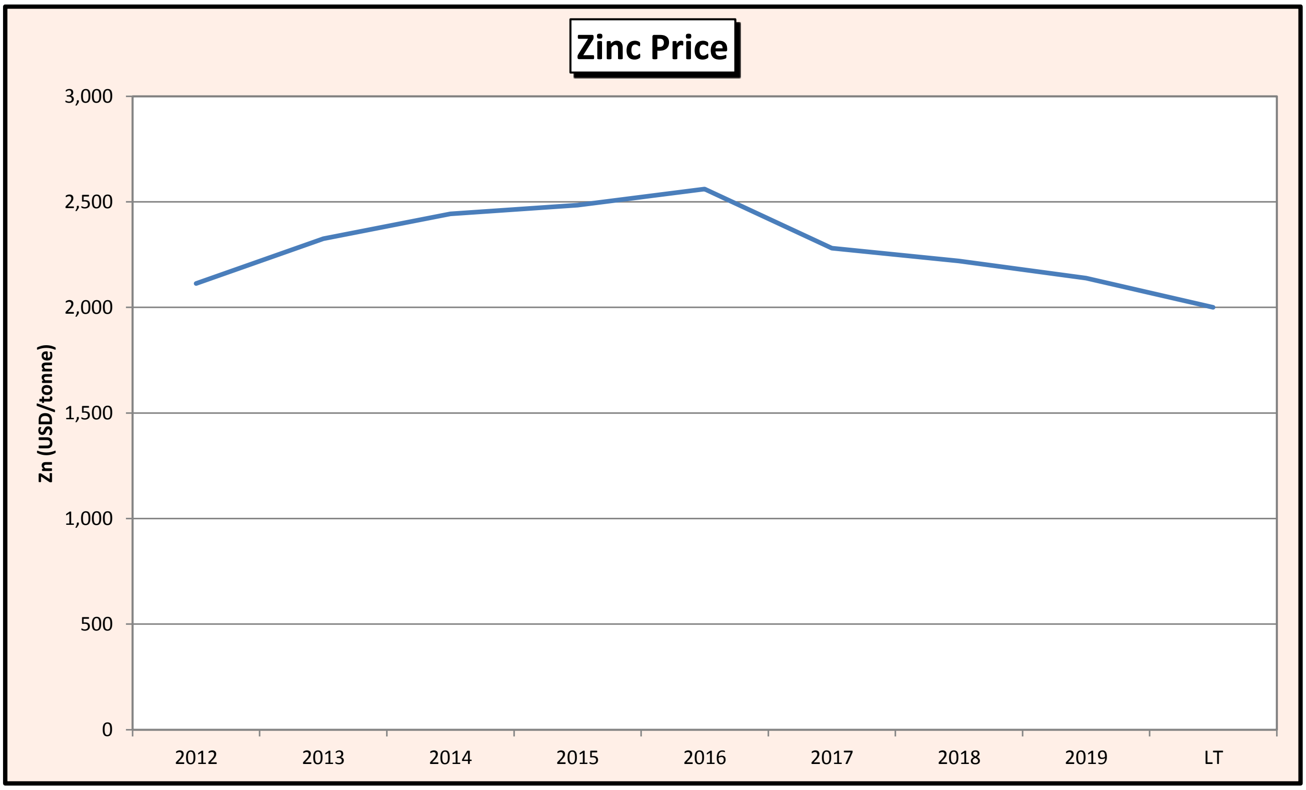


Figure 19-7 Jiama Copper-Polymetallic Project – Forward benchmark spot Pb price MMC

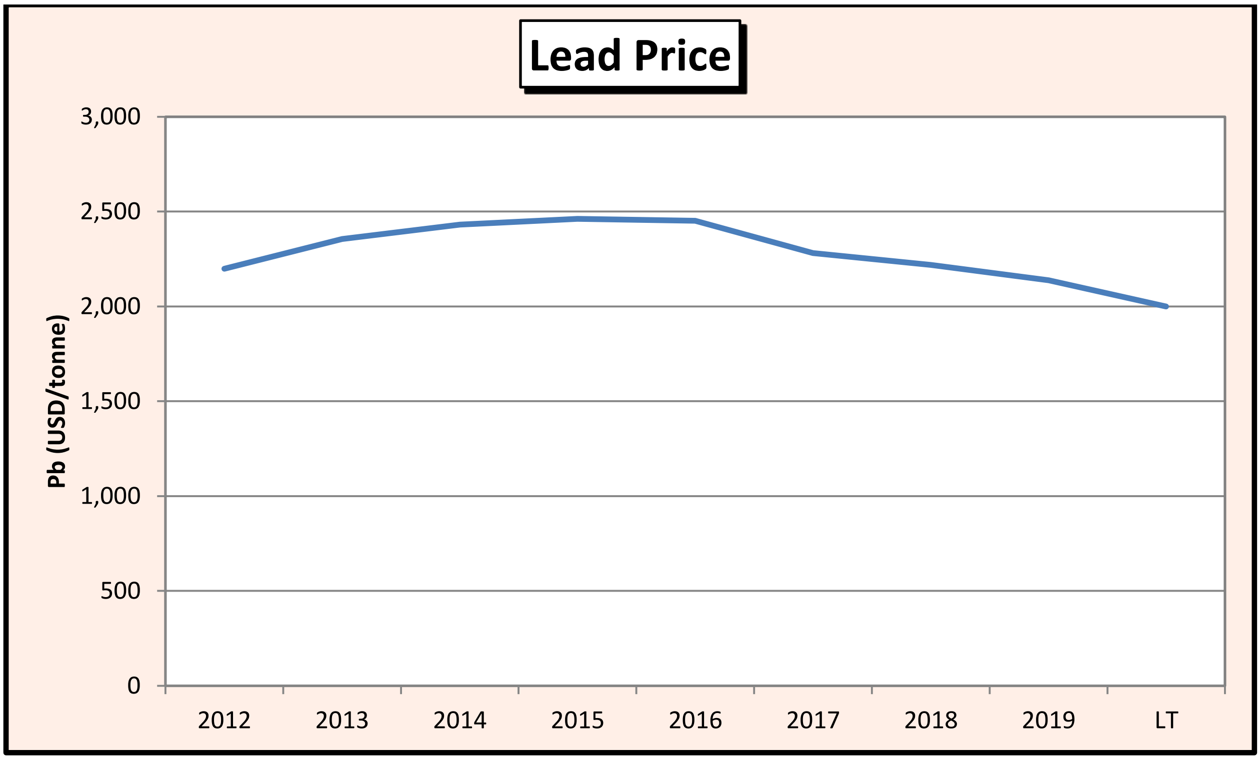


Figure 19-8 Jiama Copper-Polymetallic Project – Forward benchmark spot Au price MMC

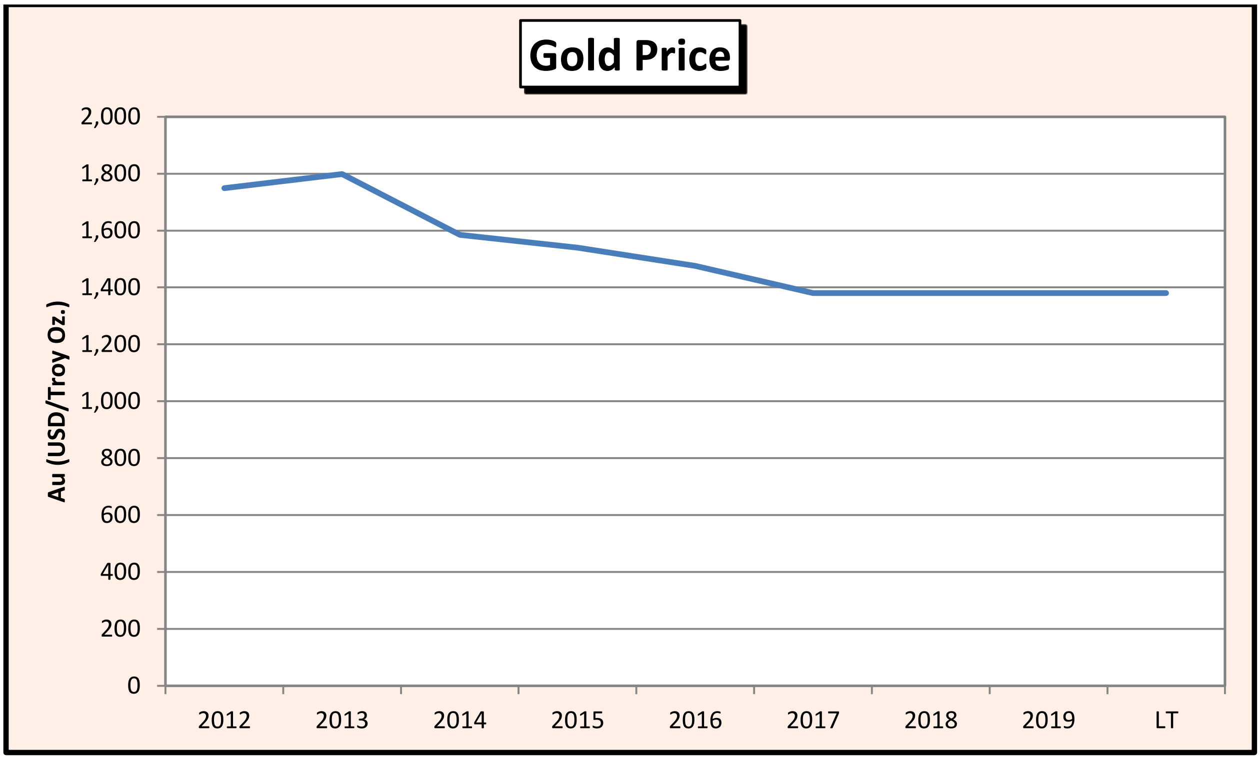
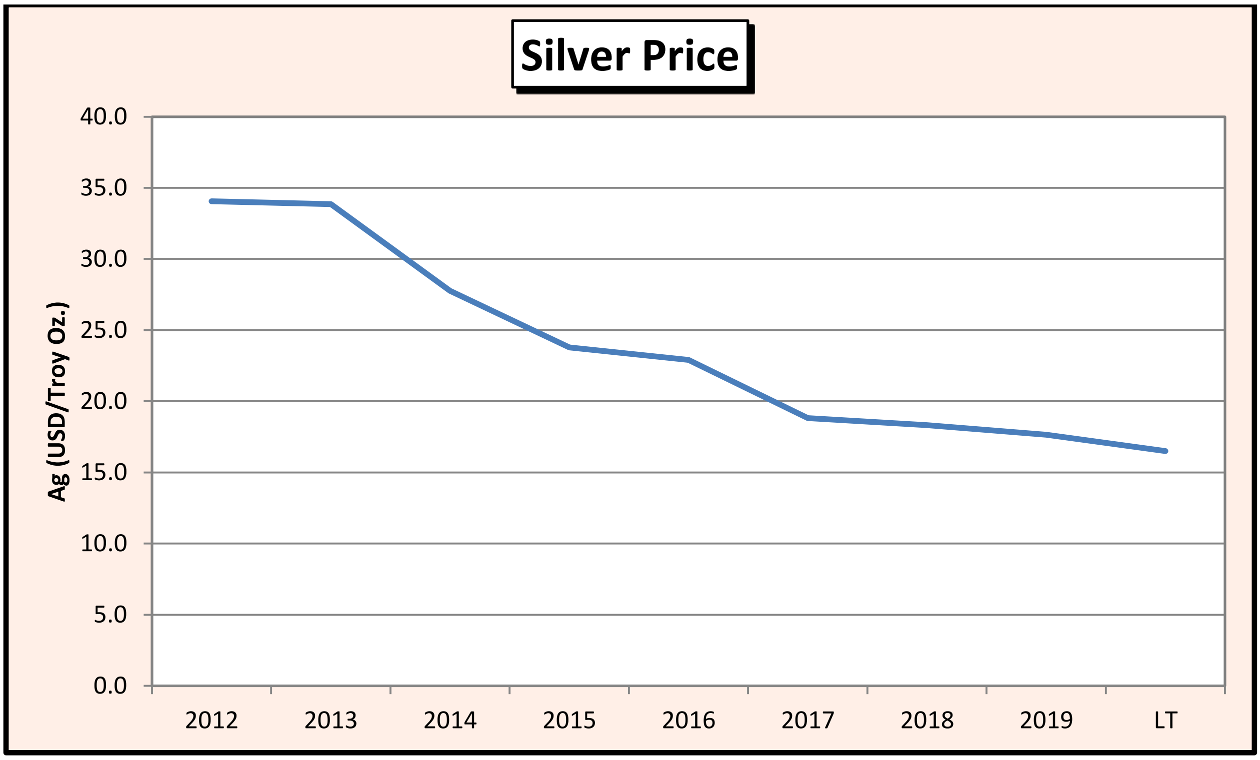


Figure 19-9 Jiama Copper-Polymetallic Project – Forward benchmark spot Ag price MMC



The Cu spot price used by MMC trends down to 2.90 USD/lb, which MMC believes to be reasonable. The Project is most sensitive to the Cu price and therefore MMC has used a conservative long term Cu spot price. Lead and Zinc come only from the Underground (south) operation and are in such low tonnages that the net effect of prices is immaterial to the Project.

The Molybdenum benchmark spot price increases from 15.11 USD/lb to a long term price of 18.0 USD/lb.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

20.1 ENVIRONMENT

The company complies with Chinese requirements to achieve a responsible standard of environmental protection. Environment protection measures for the mine site comprise:

- Water management: the site is being developed as a zero discharge operation, with an expectation of recycling all used process and TSF drainage water. A recycling rate of at least 84% is expected. The Company holds a water permit for the extraction of 7,300 cu.m/day for top up and domestic water, which is taken from the nearby Chikang River, which also receives any surplus waste water from the site following treatment in accordance with Chinese national standards. Waste water treatment includes sewage treatment and its reuse in the replanting program.
- Solid waste: waste rock from the open pits will initially be used to construct infrastructure foundations, particularly roads. Surplus waste material will be placed on constructed waste dumps. Underground waste will be mainly left underground or dumped into previously mine out voids. Tailings will be mixed with cement for use as stope fill, while TSFs will be constructed in adjacent valleys to store the remaining tailings material.
- Dust and air quality mitigation: includes the use of dust collectors (cyclones) and baghouses for the boiler houses, incinerator, the crushing and screening plant, and fine ore bin. Treated flue gas from these sources will be vented via stacks ranging in height from 20 m (crushing, screening, and fine bin areas) to 40 m (boilers). Other mitigation measures include the use of water sprays, including water trucks, use of paved or watered roads to reduce dust generated from mining and truck transport activities, and enclosure of dusty activities where possible. Personal protection devices are issued to workers to provide additional personal protection from dust.
- Noise control: includes the use of silencers, noise and vibration dampening on mobile equipment, enclosure of noisy equipment, use of insulation, and regular equipment maintenance. Company policy requires PPE use, such as ear muffs or ear plugs, for noise-affected workers.
- Environmental monitoring: A comprehensive air, water, and climatic monitoring plan. Data is used to build up an environmental baseline database. All analytical results comply with Chinese National Standards.
- Rehabilitation: a mine closure plan has been produced and approved as part of the Soil and Water Conservation Plan. The plan will be updated as the operation progresses and expands.

20.2 COMMUNITY

The Project has a policy of social responsibility towards the local community, with a focus on providing assistance and contributing towards social development. This is achieved through financially supporting local economic development, education, employment, training initiatives, local transport, communications, drinking water supply, and other social initiatives.

Prior to mining operations being established in the area, the mine site was used for low-intensity grazing of yak and sheep with occasional scattered temporary shelters used by members of the nearby Jiama township. Land was acquired for the mine site and associated infrastructure corridors in compliance with PRC laws through both short-term and long-term leasing agreements, signed and approved by local government authorities. Compensation for land and land use rights was paid under these lease agreements in line with standard PRC guidelines. The community has, in general, welcomed the opportunity for employment in the area and has participated in ongoing dialogue with both the Company and the local government through the “Project Coordination and Development Management Committee” concerning the development and operation of the mine, potential environmental impacts and their management, and the scope and nature of community benefits to be generated by the development.

MMC is not aware of any form of native title claim on the area and under PRC law there are no avenues for such claims.

20.3 OCCUPATIONAL HEALTH AND SAFETY

The Project has been under construction since June 2008 and is conducting its operations in accordance with specific national laws and regulations covering occupational health and safety (“OH&S”) in construction, mining, underground mining, production blasting and explosives handling, mineral processing, TSF design, hazardous wastes, environmental noise, fire protection and fire extinguishment, sanitary provisions, power provision, lightning and seismic protection, labour, and supervision.

To manage the health and safety of the workforce, the mine is implementing an OH&S management system in line with national standards, with OH&S training currently in progress and regular medical checks for all employees. A medical clinic is located on site. An environmental emergency response plan is in place for the management of incidents such as chemical spills, floods and fire.

21 CAPITAL AND OPERATING COSTS

The life-of-mine forecast operating costs for the Project are set out in ***Table 21-1***. The operating costs have been estimated by the Changsha Institute and were presented in the Chinese Feasibility Report. MMC has reviewed these cost estimates and considers them to be reasonable. These costs have been used in the economic analysis completed by MMC.

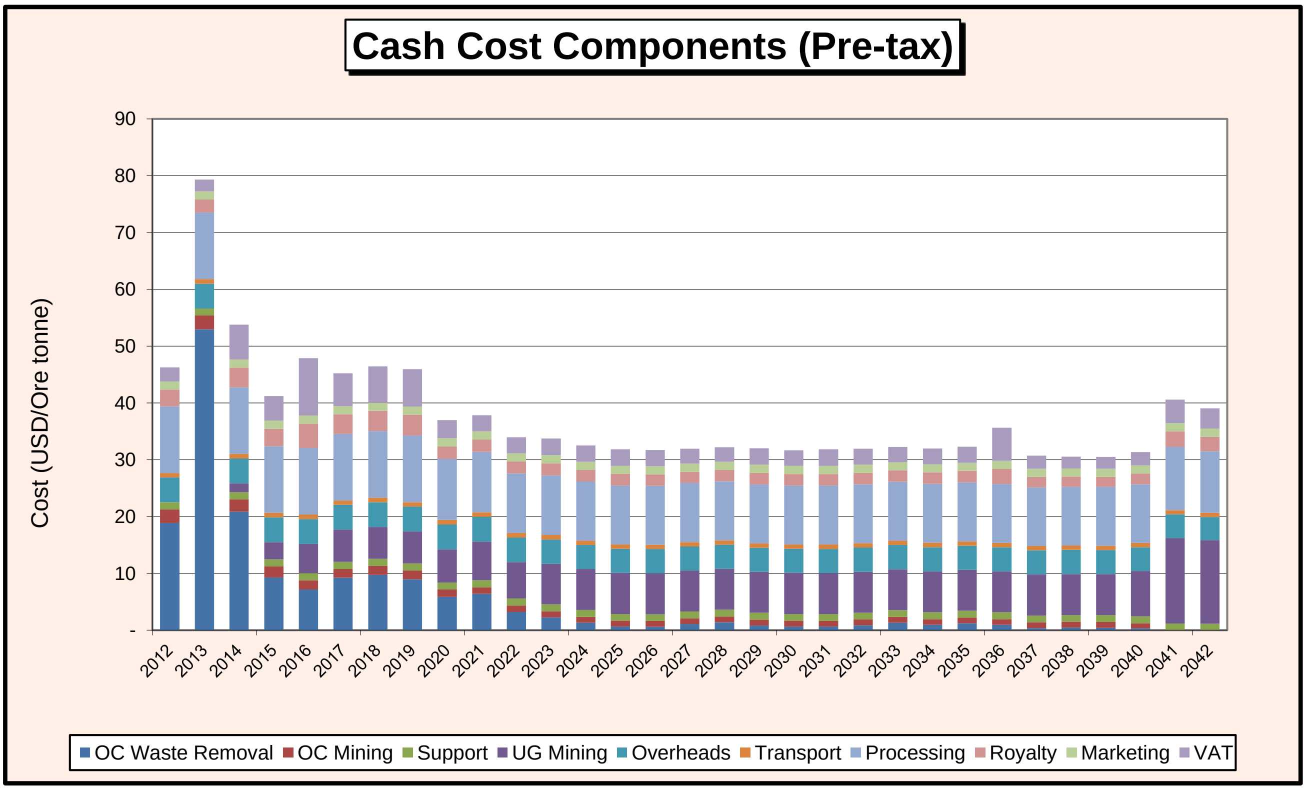
Table 21-1 Jiama Copper-Polymetallic Project – Life of Mine Operating Costs (USD/ t processed)

Cost Centre	USD/t waste	USD/t processed	USD/lb Cu Equivalent
Overburden Removal	2.09	6.30	
Open Cut Ore Mining		2.10	
Underground Mining		15.09	
Support		1.22	
Processing		10.89(Cu/Mo) / 8.85(Cu/Pb/Zn)	
Administration & Other Overheads		4.28	
Total Mine Operating Costs/t processed		39.87 / 37.83	
Metal Selling and Transport		2.21	
Average royalty per ROM tonne		2.38	
VAT		3.65	
Total Project Operating Costs/t processed		48.10 / 46.06	1.58 / 2.26

All operating costs are inclusive of VAT to the associated cost centre. This VAT on operating costs is calculated and deducted from the VAT paid on the concentrate. The total VAT paid in the project is the VAT on the concentrate sales less the deduction of the VAT paid on the operating cost.

The cash costs per tonne of ore processed is shown in the graph below and shows the cost centre breakdown in unit costs. The greatest cash cost for the project is the direct mining costs for both the underground and open cut operations. This includes open cut mining, open cut waste removal, underground mining and development.

Figure 21-1 Operating Cash Cost breakdown per tonne of ore processed



Capital expenditure that has already occurred in the previous years is shown in ***Table 21-2*** below. This capital has been spent over the previous 4 years. The sunken capital expenditure has not been included in the economic valuation however the deprecation associated has been included to accurately reflect China Gold's true tax liability. Depreciation on the Phase I capital expenditure has been received, MMC has calculated the written down value of these assets and then using a straight line depreciation method has depreciated these assets over the asset life going forward.

The life-of-mine capital costs for the Project are set out in ***Table 21-3*** below. The capital costs have been estimated by the Changsha Institute and were presented in the Feasibility Report. MMC has reviewed these cost estimates and considers them to be reasonable. All pre-stripping costs associated with the open cut mining operations have been included in the operating costs, this is in contrast to the Feasibility Study report which capitalises the prestripping cost. MMC has excluded pre-stripping from the capital expenditures as it better reflected in the operating costs as to account for the addition of South Pit.

Table 21-2- Jiama Copper-Polymetallic Project – Sunken Capital Costs (Phase I) (kUSD)

Capital Item	Life of Mine Capital Cost (kUSD)
Buildings	56,220
Mine Infrastructure	146,744
Equipment	61,955
Land Purchases	4,935
Other	41
Total Capital Costs	**269,894**

Table 21-3 Jiama Copper-Polymetallic Project – Life of Mine Capital Costs (Phase II) (kUSD)

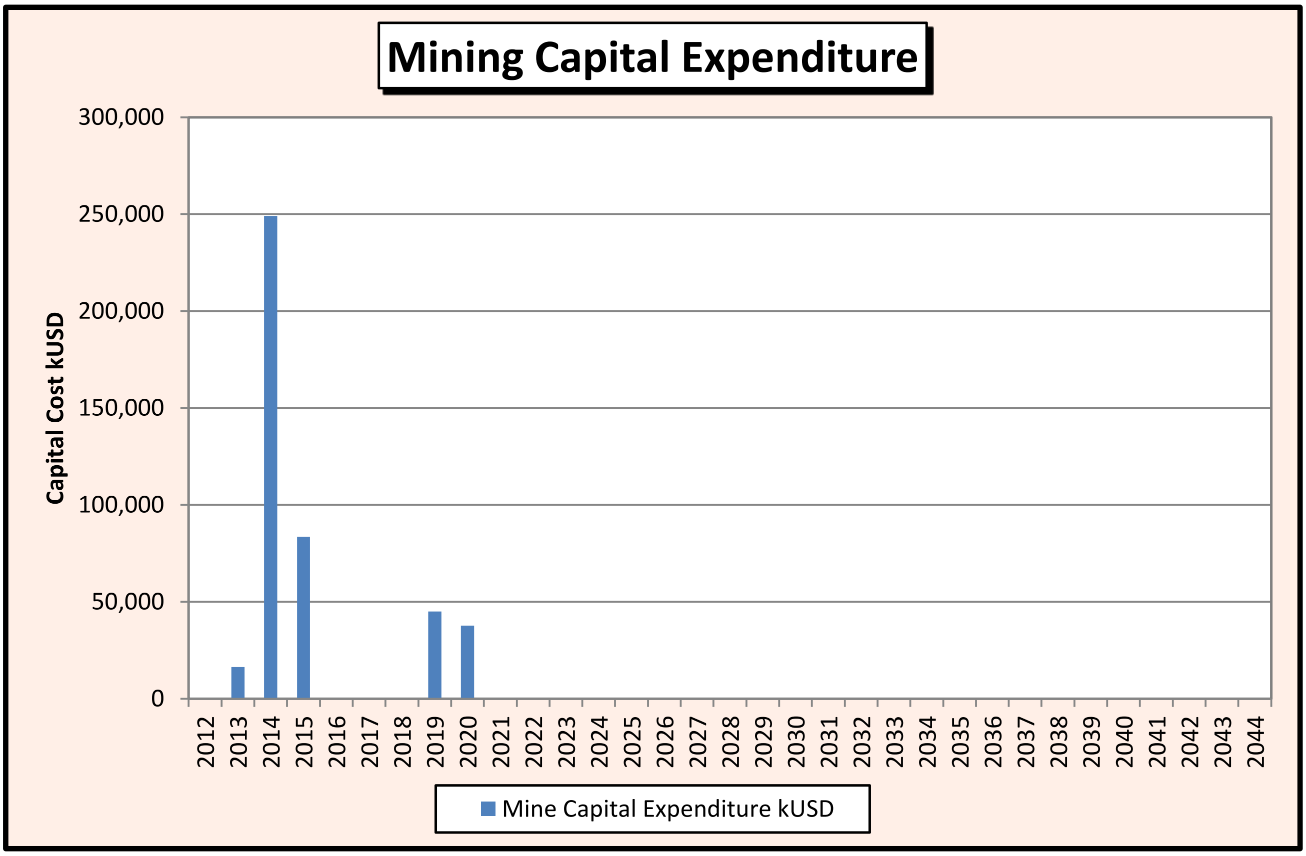
Capital Item	Life of Mine Capital Cost (kUSD)
Processing Plant	221,310
Mining	355,434
Engineering	76,273
Loan Interest	27,769
Mining Camp	24,327
Total Capital Costs	**705,113**

21.1 CAPITAL COSTS – MINING

The Mining capital costs were estimated over the proposed life of mine period. The capital costs are estimated to have an accuracy of ± 25%. Greater variations in the estimated capital costs may occur if there are changes to the proposed mine plan. The mining capital costs included mining equipment and site engineering. A schedule showing the capital expenditure is below in ***Figure 21-2***. As mentioned above all pre-stripping of waste material has been excluded from the capital expenditure and included in the operating costs as to fully reflect the amount of pre-strip need to expose the ore in all pits.

The capital costs include the processing plant, mining, facilities, engineering and other contingency items. The addition of capital expenditure in 2021 is in preparation for the inclusion of the Jiaoyan open pit.

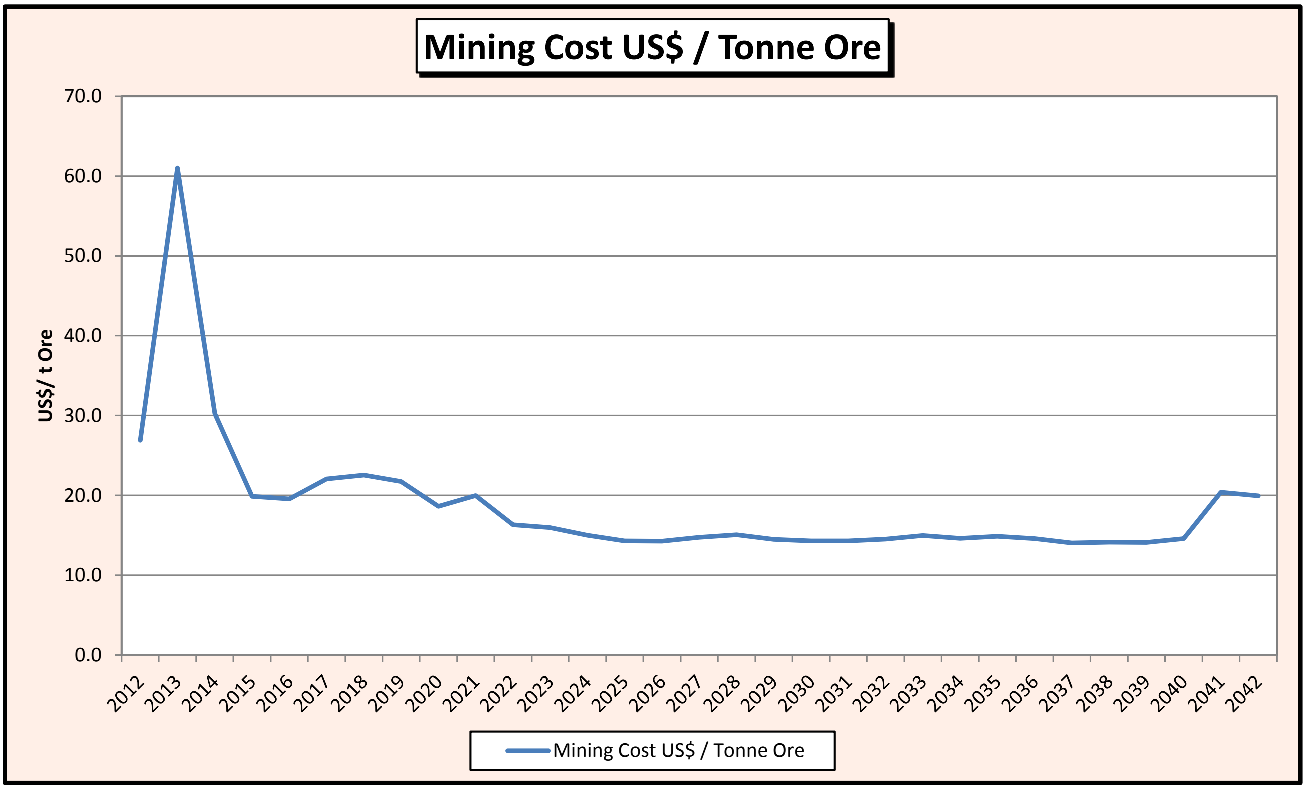
Figure 21-2 Jiama Copper-Polymetallic Project – Mining Capital Costs kUSD



21.2 OPERATING COSTS – MINING

The mining operating costs are detailed in ***Figure 21-3***. Mine operating costs increase from 174.5 RMB/t Ore (27.7 USD /t) in 2012 to 389.3 RMB /t Ore (61.8 USD/t) in 2013 the mining costs then reduce and average out at approximately 190 RMB/t Ore (30.2 USD/t) over the life of the mine. The change in cost is due to the large amount of pre-strip that occurs in 2013 which is then evened out through an increase in ROM ore production in following years. The mine operating costs average out over the life of the project once the pre-stripping costs in 2013 are balanced with increases in ROM ore production, this has been achieved by optimizing and smoothing the schedules of the open cuts to create reasonable and practical mining schedules.

Figure 21-3 Jiama Copper-Polymetallic Project – Mining Cost / Tonne Ore



Note: the mine operating costs above include site administration and overheads and exclude VAT.

21.3 CAPITAL COSTS – PROCESSING

Table 21-3 provides a breakdown capital cost for the proposed Huatailong Processing Plant (40 ktpd). The overall forecast capital cost of 1,394.25 M RMB is relatively high compared to similar Chinese operations. MMC notes that there are significant costs of 506.63 M RMB for the grinding and flotation equipment and 231.63 M RMB for the tailings dam. These higher capital costs may be due to the remote location and the high altitude (4,500m) of the plant, which would impact equipment transportation, construction and installation.

Table 21-4 Jiama Copper-Polymetallic Project – Proposed Processing Plants Capital Expenditure

Items	**Civil**	**Equipment**	**Installation**	**Total**
Main Processing Facilities	414.97	606.74	72.99	1,094.70
Grinding and Flotation	103.72	506.63	49.98	660.33
Copper-molybdenum Flotation	11.81	16.42	6.12	34.35
Concentrate Dewatering	16.89	10.95	4.65	32.49
Lime Preparation	3.20	2.48	0.71	6.38
Raw Ore Stockpile	29.13	0.00	0.06	29.19
Pebble Crushing	10.13	14.96	1.66	26.74
Tailings Dewatering	6.00	37.31	1.81	45.12
Conveying Station	2.47	0.00	0.01	2.48
Tailings Dam	231.63	0.04	0.03	231.70
Auxiliary Electronic Control	0.00	0.80	0.62	1.41
Automation Instrumentation	0.00	17.15	7.35	24.50
Auxiliary Facilities	82.18	69.60	147.68	299.46
General Layout and Transportation	39.20	5.83	0.00	45.03
Processing Industrial Sites	36.53	0.00	0.00	36.53
3968m Level Processing industrial sites	2.67	0.00	0.00	2.67
Transportation Equipment	0.00	5.83	0.00	5.83
Water Supply and Drainage	20.18	27.25	73.42	120.85
4084m Level Pressure Pump for Fresh Water	0.89	2.54	18.25	21.68
4500m Level Pressure Pump for Recycle Water	0.72	0.46	1.30	2.47
Pumping Station	0.28	0.60	1.39	2.27
Pump of Tailings Recycle Water	0.19	0.26	1.10	1.55
Pumping Station for Tailings	1.68	21.53	32.02	55.23
Pressure Pump Station for Fresh Water	1.05	1.88	19.35	22.28
Production Water Pond	0.97	0.00	0.00	0.97
4500 Elevation Production High Water Pond	3.90	0.00	0.00	3.90
Water Pond in Processing Plant	0.89	0.00	0.00	0.89
High Water Pond in Processing Plant	8.18	0.00	0.00	8.18
Suction Sump	0.59	0.00	0.00	0.59
Pond for Tailings Recycle Water	0.84	0.00	0.00	0.84
Power Transmitter and Telecommunications	5.20	21.78	57.88	84.86
110KV Substation for Possessing Plant	5.20	21.78	3.56	30.54
10KV Transmission Line	0.00	0.00	9.32	9.32
110KV Transmission Line	0.00	0.00	45.00	45.00
Pipe Network	0.20	2.70	12.40	15.30
Solar Heating	0.00	8.92	2.21	11.12
Compressed Air Station	0.70	2.24	0.56	3.50
Warehouse	16.69	0.87	1.22	18.78
Steel Warehouse	13.46	0.75	0.97	15.18
Reagent and Materials Warehouse	*3.23*	*0.13*	*0.25*	*3.61*
Administration and Processing	0.08	0.00	0.01	0.09
Total	**497.23**	**676.34**	**220.68**	**1,394.25**

Source: Chinese Feasibility Study 2011

There are no significant capital expenditure costs required for the Cu-Pb-Zn facilities.

21.4 OPERATING COSTS – PROCESSING

21.4.1 Existing Operation

Based on the information provided to MMC, there are several operating costs from different sources, which have been summarised in ***Table 21-4.***

Table 21-5 Jiama Copper-Polymetallic Project – Processing Operating Costs Summary (including Depreciation and Maintenance)

Ore types	Information Sources	RMB/ ROM t
Cu-Mo Ore	FS Design	72
	Actual(2011)provided by the Company	67
	Actual(January + February) summarised by MMC	84
	Data provided by the Company	93
Cu-Pb-Zn Ore	MMC Assumed	84

Source: Summary by MMC based on data provided by the Company

MMC reviewed historical operating cost data for a two month period in 2011 at the current processing plant. The overall processing cost for the 6,000 tpd processing plant is between 79 to 90 RMB per ROM tonne, as shown in ***Table 21-5.*** This was generally consistent with the processing operating costs of 94 RMB/t provided by the company. MMC notes that these costs are higher than similar operations due to a combination of location (higher transport costs) and the high altitude.

Table 21-6 Jiama Copper-Polymetallic Project – Historical Processing Plant Operating Cost

Materials	Price (RMB/kg)	Unit	February		January	
			Unit Consumption (kg/t)	Unit Cost (RMB/ milled t)	Unit Consumption (kg/t)	Unit Cost (RMB/ milled t)
Crushing						
Jaw Crushing	12.37	kg	0.03	0.61	0.05	0.6
Liner (HP400)	21.29	kg	0.03	0.77		0
Liner (HP500)	27.48	kg	0.06	1.62		0
Machine Oil		t		0.01		0.01
Power	0.58	kWh	3.38	1.96		2.12
Other Materials		t		2.63	3.65	1.19
Milling and Flotation						
Ball	5.74	kg	1.47	13.03	0.75	5.21
Liner	7.78	kg	0.34	3.57	0.35	3.62
Z200	22.25	kg		0		0
Butyl Xanthate	10.56	kg	0.35	3.74	0.21	2.17
Turpentine Oil	11.01	kg	0.03	0.31	0.03	0.31
Sodium Sulphide	4.19	kg		0		0
Sodium Sulphite	3.54	kg		0		0
Ammonium Aerofloat	16.74	kg	0.01	0.21	0	0.04
Lime	0.6	kg		0		0
Machine oil		RMB		0.54		0.33
Other Materials		RMB		4.51		15.1
Power	0.58	kWh	41.75	24.21	41.96	24.34
Tailings Dewatering						
Machine Oil		t				
Other Materials		t		10.05		0.89
Power	0.58	kWh	3.95	2.29	3.98	2.31
Concentrate Dewatering						
Machine Oil		t		0.02		0.1
Materials		t		0.9		1.4
Power	0.58	kWh	8.78	5.09	8.7	5.05
Sub-Total				**76.08**		**64.77**
Manufacturing (Depreciation, Maintenance and Other) by MMC				**14**		**14**
Total Operating Cost RMB / t				**90.08**		**78.77**

Source: summary based on the data provided by the Company

The forecast overall processing cost for mineral processing plant in the ramp up years is approximately 72 RMB/ROM t, as shown in ***Table 21-6***. Power and reagent dominate the operating costs, with sodium sulphide constituting the highest reagent cost. This operating cost estimate includes depreciation and maintenance expenses related to the processing plant only. MMC considers that this operating cost is reasonable for a flotation operation of this size using the proposed processing option.

Table 21-7 Jiama Copper-Polymetallic Project – Proposed Processing Plants Operating Cost

Material	Unit	Unit Consumption (kg/ROM t)	Price(RMB/t)	Cost Centre(RMB/t)
Ball	kg	1.50	6.00	9.00
Liner	kg	0.27	12.00	3.24
Belt	sq.m	0.005	500	2.25
Screen	kg	0.02	9.00	0.16
Lime	kg	2.00	0.60	1.20
Sodium Silicate	kg	0.81	2.25	1.82
Butyl Xanthate	kg	0.02	11.00	0.25
Turpentine Oil	kg	0.01	10.30	0.07
Sodium Sulfide	kg	2.59	4.20	10.88
SQ	kg	0.04	15.00	0.53
Kerosene	kg	0.20	10.18	2.04
Engine Oil	kg	0.04	11.00	0.39
Butter	kg	0.05	17.05	0.77
Other				2.00
Tailings Operating Costs				5.00
Power	kWh	22.6	0.65	14.71
Water	cu.m	0.70	2.50	1.75
Manpower	Person	266	84,000	1.77
Sub-total				**57.83**
Depreciation				**7.29**
Maintenance				**6.01**
Others				**0.88**
Total Operating Costs (RMB/t)				**72.00**

Source: Chinese Feasibility Study 2011

The differential flotation testing of Cu-Mo ores has indicated a significant operating cost with regard to the separation of molybdenum from the Cu-Mo bulk concentrate. This cost is 12.81 RMB/t, mainly due to additional required reagents and is shown in ***Table 21-7***.

Table 21-8 Jiama Copper-Polymetallic Project – Proposed Processing Plants Operating Cost

Reagents	Unit Consumption(g/t)	Price (RMB)	Unit Cost(RMB/ROM t)
kerosene	16.4	9,200	0.20
Turpentine Oil	1.5	11,000	0.02
Na_2S	2,150	4,186	9.00
ZG-2	850	4,300	3.655
Total			**12.81**

Source: Report for Differential Flotation Verification Testing of Jiama Cu-Mo ores, compiled by Internal Testing Lab of the Company in April, 2011

21.4.2 Cu-Pb-Zn Ore

The process operating cost for the treatment of Cu-Pb-Zn ores has not been directly estimated, however MMC has estimated that it would be approximately 84 RMB/ROM t, based on the Cu-Mo cost assumption as well as the consumables required based on the Cu-Pb-Zn ore testwork (refer to ***Table 27-8***).

Table 21-9 Jiama Copper-Polymetallic Project – Forecast Cu-Pb-Zn Operating Cost

Reagent	Consumption (g/ROM t)	Price (RMB/t)	Cost (RMB/t)
BRIMM Site Duplicate Testing			**26.13**
Lime	1,800	600	1.08
Na_2S	205	4,186	0.86
$ZnSO_4$	1,800	4,313	7.76
BK908	47.5	24,000	1.13
BK809	85	20,000	1.70
BK204	25.5	10,000	0.26
BK586	386	14,500	5.60
BK8092	73	12,000	0.88
Carbon	160	11,000	1.76
$CuSO_4$	320	15,926	5.10
2011 Internal Laboratory Metallurgy Testing			**29.09**
Lime	980		0.59
ZG-1	2440		8.63
ZG-2	379		1.59
ZG-3	1,530		6.60
$CuSO_4$	200		3.19
HTL-1	52.5		1.17
HTL-2	18		0.22
Butyl Xanthate	33		0.35
Carbon	600		6.60
Na_2S	40		0.17

Source: metallurgy testing reports by the Internal Laboratory and BRIMM
Note: Cu-Pb Bulk Flotation - Differential -Zn Flotation Option

22 ECONOMIC ANALYSIS

An NPV (post-tax) analysis has been completed at a 7%, 9% and 11% discount rate. Base case reserve economic model results at a discount rate of 9% are shown in ***Table 30-2*** in ***Annexure C*** and the cumulative NPV over the life of the mine is shown in ***Figure 22-1***.

The key economic inputs used in this valuation have been described in detail in ***Sections 19 and 21***. These inputs are summarised in ***Table 22-1 and Table 22-2*** below.

The recoveries used in the economic models are shown in table ***Table 30-1*** in ***Annexure C***. The recoveries vary between the different ore types and by metal. The Skarn ore type has a higher recovery of Copper and Molybdenum than the Hornfels ore type. The Cu-Mo concentrate product produced from the Hornfels ore body only recovers Cu and Mo whereas the Cu-Mo concentrate produced by the Skarn ore recovers Cu, Mo, Au and Ag. South pit, Niumantang and Tongqianshan are dominated by the Skarn ore type whereas the Jiaoyan pit is dominated by the Hornfels ore type. All open pit operations produce a Cu-Mo concentrate product regardless of the ore type. The underground operations, broken into North and South, are dominated by Skarn ore where Underground North produces a Cu-Mo concentrate product whilst Underground South produces the Cu-Pb-Zn concentrate product.

All Copper, Molybdenum, Zinc and Lead sold are subject to a royalty of 2% and all Gold and Silver sold are subject to a royalty of 2.8%. A resource tax of 5 RMB / ROM t is applied to Niumatang, Tongqianshan, South Pit and the underground operation. Due to Government incentives, Jiaoyan is subject to 2.5 RMB / ROM t. Copper, molybdenum, lead and zinc produced from the mine are subject to a VAT of 17%. Additionally, this Project is also subject to a construction tax of 7% of VAT and education tax of 3% of VAT.

Depreciation of assets has been undertaken using a straight line method and depreciated over the useful asset life. Additional consideration of the Phase I sunken capital costs has been done by depreciating the written down values of these assets as at 2012, this has been done to effectively model the Clients tax liability. The company tax rate has been assumed to be 15%, as per advice provided by the Client.

Table 22-1 Jiama Copper-Polymetallic Project – Revenue Assumptions exclusive of VAT

		2012	2013	2014	2015	2016	2017	2018	2019	LT
Cu	USD/lb	3.70	3.60	3.50	3.50	3.42	3.31	3.22	3.10	2.90
Mo	USD/lb	15.11	16.16	16.33	17.00	18.00	18.00	18.00	18.00	18.00
Zn	USD/Metric t	2,113	2,325	2,442	2,485	2,560	2,281	2,220	2,138	2,000
Pb	USD/Metric t	2,198	2,355	2,432	2,461	2,452	2,281	2,220	2,138	2,000
Au	USD/Troy Oz.	1,749	1,798	1,585	1,539	1,475	1,380	1,380	1,380	1,380
Ag	USD/Troy Oz.	34.05	33.86	27.76	23.78	22.91	18.82	18.31	17.64	16.50

Table 22-2 Jiama Copper-Polymetallic Project – Capital expenditure over the life of mine

Capital Item	Life of Mine Capital Cost (kUSD)
Processing Plant	221,310
Open Cut Mining	355,434
Engineering	76,273
Loan Interest	27,769
Mining Camp	24,327
Total Capital Costs	**705,113**

A Summary of the economic analysis is shown in ***Table 22-3*** for the pre and post-tax amounts with the base case at a 9% discount rate showing an internal rate of return (IRR) of 55% and a net cumulative cashflow of USD 1,240M.

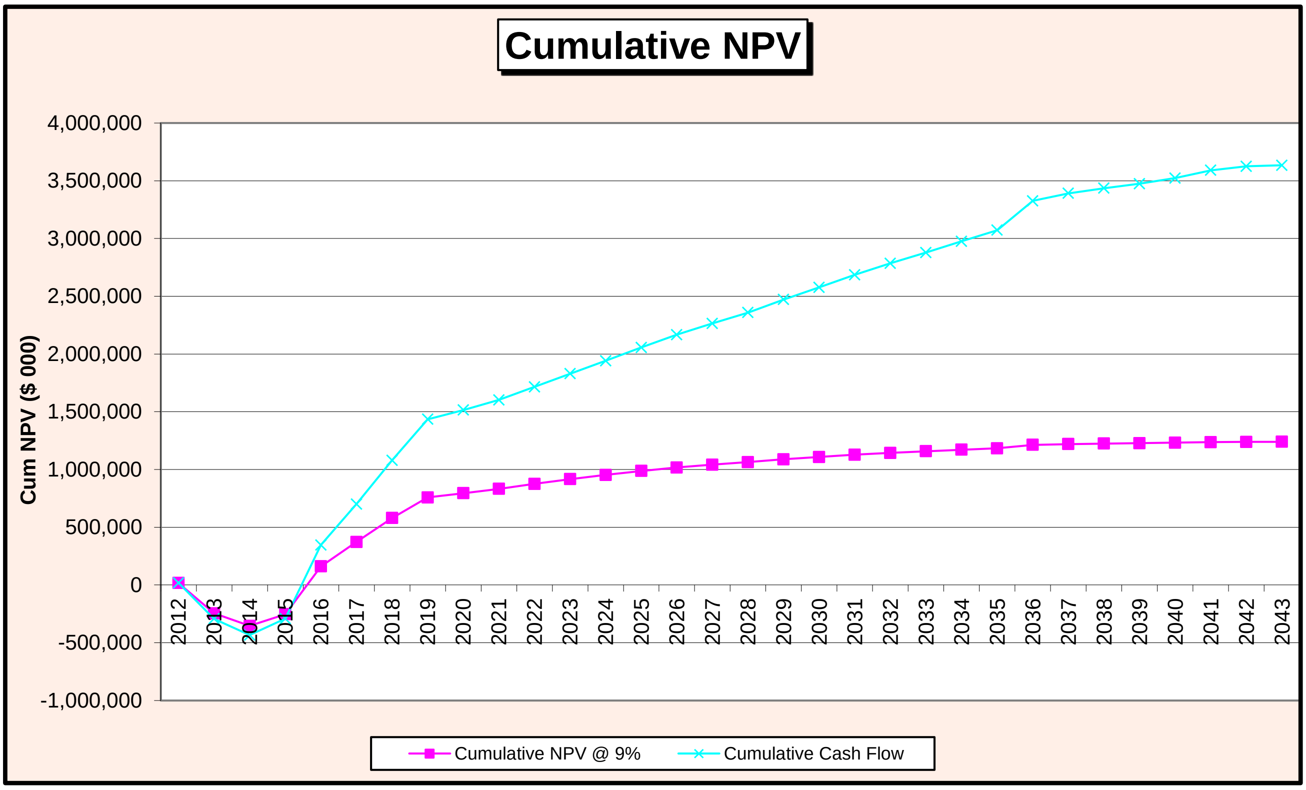
Table 22-3 Jiama Copper-Polymetallic Project – Economic Analysis Results

	NPV ($ billion)				IRR
	@0%	@7%	@9% Base Case	@11%	%
Pre-Tax	4.19	1.80	1.47	1.22	62%
After-Tax	3.59	1.53	**1.24**	1.02	**55%**

Figure 22-1 shows the cumulative discounted cash flow at 9% to be equal to USD1,240 M. The graph shows that the project has negative cash flows in the first 4 years, which is due to the large initial capital expenditure required to upgrade of processing plant, mining (particularly waste stripping of the South Pit), engineering and other facilities. However, the NPV, becomes positive in 2016 and increases in value from there on. As cash flows further out are discounted heavily, there is no great value being added to the NPV as shown by the variations in the pink line plotted in ***Figure 22-1***.

MMC estimates that the payback period of this project is equal to approximately 4.5 years. ***Figure 22-1*** shows the cumulative NPV of the project. This project is valued to 2043 which, is 1 year after mining finishes, this is to take into account any working capital movement adjustments after the project has finished.

Figure 22-1. Jiama Copper-Polymetallic Project – Base Case NPV Analysis, 9% Discount Factor



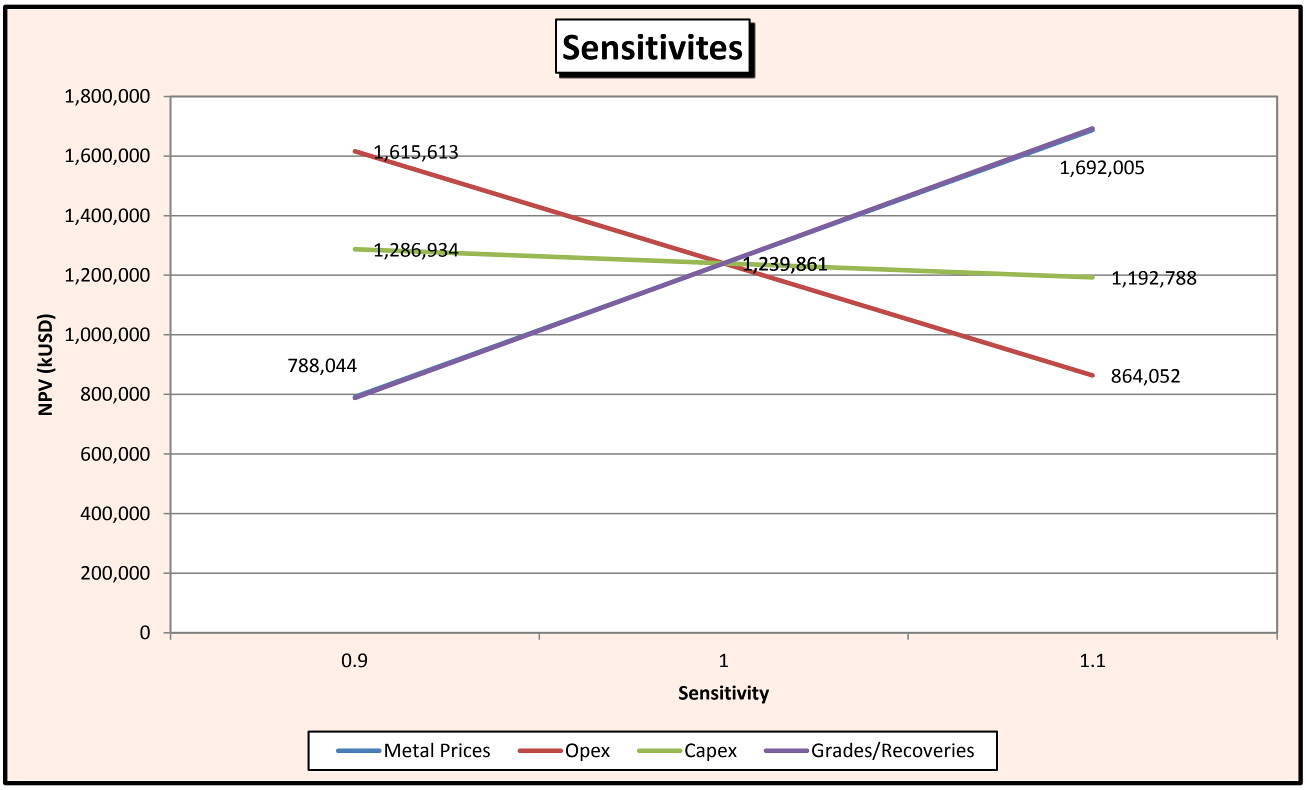
The projects greatest risk/sensitivities are in relation to the revenue generated from the pits. This includes commodity prices, grades and recoveries. Copper is the prime revenue source for the project and therefore profitability relies heavily on the Cu price.

Economic model sensitivity analysis was completed on metal prices for Mo, Cu, Ag, Au and Pb, as well as capital cost estimates and operating cost estimates. The results are shown in ***Table 22-4*** (the NPVs are based on a discount factor of 9%). The results indicate that the Project is most sensitive to variations in metal price, operating costs, grades/recoveries and capital costs in that order. ***Figure 22-2*** presents a graphical representation of these findings.

Table 22-4 Jiama Copper-Polymetallic Project – Project Sensitivity Price Sensitivity (Post-Tax NPV at a 9% Discount Factor)

Applied Variable	Variation Compared to Base Case Estimates		
	-10%	0	10%
	kUSD	kUSD	kUSD
Metal Prices	792,031	1,239,861	1,687,630
Opex	1,615,613	1,239,861	864,052
Capex	1,286,934	1,239,861	1,192,788
Grades/Recoveries	788,044	1,239,861	1,692,005

Figure 22-2 Jiama Copper-Polymetallic Project – Economic Sensitivities



23 ADJACENT PROPERTIES

The Project is not surrounded by any adjacent mining licences. There are, however, mineral occurrences in the surrounding area. The region in which the Project is located contains several major and minor porphyry type deposits. These include the Qulong porphyry copper-molybdenum deposit, around 20 km southwest in the Maizhokunggar County and the Bangpo Molybdenum copper porphyry deposit, located 30 km north east of the deposit.

MMC has been unable to verify the information on adjacent properties, and it is not necessarily indicative of the mineralisation on the property that is the subject of this Pre-Feasibility Study Technical Report.

24 OTHER RELEVANT DATA AND INFORMATION

24.1 PROJECT RISK SUMMARY

Mining is a relatively high risk business when compared to other industrial and commercial operations. Each deposit has unique characteristics and responses during mining and processing, which can never be wholly predicted. MMC's review of the Project indicate risk profiles typical of mining projects at similar levels of Resource estimation, mine planning and project development.

MMC has attempted to classify risks associated with the Project. Risks are ranked as **High**, **Medium** or **Low**, and are determined by assessing the perceived consequence of a risk and its likelihood of occurring using the following definitions:

Consequence of risk:

- **Major**: the factor poses an immediate danger of a failure, which if uncorrected, will have a material effect (>15% to 20%) on the project cash flow and performance and could potentially lead to project failure;
- **Moderate**: the factor, if uncorrected, could have a significant effect (10% to 15% or 20%) on the project cash flow and performance unless mitigated by some corrective action, and
- **Minor**: the factor, if uncorrected, will have little or no effect (<10%) on project cash flow and performance.

Likelihood of risk occurring within a 7 year timeframe:

- **Likely**: will probably occur;
- **Possible**: may occur, and
- **Unlikely**: unlikely to occur.

The consequence of a risk and its likelihood of occurring are then combined into an overall risk assessment as shown in ***Table 24-1*** to determine the overall risk rank.

Table 24-1 Jiama Copper-Polymetallic Project – Risk Assessment Table

Likelihood	Consequence		
	Minor	Moderate	Major
Likely	Medium	High	High
Possible	Low	Medium	High
Unlikely	Low	Low	Medium

MMC notes that in most instances it is likely that through enacting controls identified through detailed review of the Project's operation, existing documentation and additional technical studies, many of the normally encountered project risks may be mitigated.

Table 24-2 presents the Project's Risk Summary as determined by MMC.

Table 24-2 Jiama Copper-Polymetallic Project – Project Risk Summary

Risk Ranking	Risk Description and Suggested Further Review	Mitigation Strategy	Area of Impact
M	**Scheduling** Ramp up in the early years in the open cut is significant with an increase from 15 Mtpa to 43 Mtpa from 2012 to 2013. Failure to achieve this ramp up is likely to lead to a delay in reaching full production as access to ore will be limited during stripping.	Inferred resources in the upper portions of South Pit need to be infilled drilled so that they can be included in future scheduling of reserves. A plan to hire in additional contractor fleets needs to be investigated and costed into future mining studies. Requirements for additional support infrastructure to maintain the increased fleet need to be determined.	Schedule, NPV, Project Mine Life
M	**NPV** The Project is highly sensitive to variations in copper pricing, operating costs, capital expenditure, and any delays or variations to the forecast production schedule	Detailed mine planning to increase the accuracy of the current operating cost estimates. Further detailed capital expenditure studies to increase confidence and optimise the capital cost estimates Further marketing studies should be undertaken to understand the forecast for the metal prices. This will reduce the project risk as greater certainty around revenue will be achieved.	Mineral Reserve estimate Project Mine Life
M	**Mining Lease** The current mining lease does not cover proposed mining areas or the proposed production rates.	Apply for extension of mining licence to cover all proposed mining areas	Overall
M	**Geotechnical Studies – Underground** Further studies should be undertaken to better understand the rock mechanics related to the underground mine because the Chinese Feasibility Study has only been able to make qualitative descriptions regarding the stress distribution characteristics of rock mass in the rock mechanics and general estimations regarding the ground surface caving.	Complete: • Rock stress testing; • Research on rock mass strain properties; • Numerical analysis model; • Photo-elastic simulation; and • Ground pressure observation and analysis.	Mine Plan, Reserves
M	**Mo Separation Flotation of Skarn Ore** Cu-Mo separation flotation for the lower grade Mo ores at Mo grade 0.4% in copper concentrate and a Mo feed grade of minus 0.015% is not economic due to high reagent costs.	Pilot plant test to identify the cut-off grade for producing Mo concentrate	Mo Recoveries and Revenue
M	**Concentrate Impurities - Arsenic Content** No impurity assay data for geological samples were available; Higher arsenic contents in the currently produced copper concentrate (currently As 0.4-0.7%) as well as in possible molybdenum concentrate (As 0.26%) would impact the concentrate payment if marketing conditions become more stringent.	Further benchscale or pilot testing to reduce the impurities in concentrate	Marketing and revenue

L	**Controls on Mineralisation** Detailed understanding of the mineralisation style and controls on mineralisation in these types of deposits often rests with identification of the main controls and high grade domains within the deposit. No close spaced drill holes have been completed to confirm the continuity of high grade lenses, the larger spacing in some portions of the Project results in a lower level of confidence for the estimated grade.	Infill Drilling	Resource and Reserves
L	**Concentrate Moisture** Higher concentrate moisture (13%) than design.	Select proper dewatering facilities to reduce the moisture	Revenue
L	**High Altitude (4,350-5,400m)** Higher construction capital cost and operating cost as well as slower project development would be resulted under such bad weather. Filters do not work well at so high altitude.	Experience in construction and operating at higher altitude	Overall
L	**Insufficient Dump Areas** The proposed dumping areas are not sufficient to accommodate forecast waste volumes.	Company obtain land usage permits for within Project area	Mine Plan, Reserves
L	**Geotechnical Studies – Open Cut** Further geotechnical analysis needs to be undertaken for South Pit and Jiaoyan to confirm the final pit wall angles. This is particularly important because of the proposed depths for these pits, which are 495 m and 539 m respectively.	Undertake detailed mine planning studies	Mine Plan, Reserves
L	**Sterilisation of ore under proposed Jiaoyan Dump Area** Sterilisation drilling needs to occur in the areas where Jiaoyan's dump is proposed to be located. If potentially economic mineralisation is present in this area, then Jiaoyan dump should be relocated.	Sterilisation Drilling	Mine Plan
L	**Bulk Density** Limited Bulk Density determinations have been completed with some evidence of variation with the different litholoigies.	Complete Bulk Density Determinations on future drilling and remaining core.	Resource and Mining Estimation

25 INTERPRETATION AND CONCLUSIONS

25.1 GEOLOGY

- The Project represents an extremely large polymetallic project, and has resources of sufficient quality to make the current studies economically viable. Measured and Indicated Mineral Resources make up 72.7% of all Mineral Resources (at 0.3 g/t Cu eq cut-off grade).
- A Mineral Resource estimate, using an ordinary kriging interpolation method, was completed by MMC of Beijing, China. The Mineral Resource estimate in this Technical Report is reported using cut-off grades which are deemed appropriate for the style of mineralisation and the likely costs of production.
- MMC considers the estimated Mineral Resources to be compliant with NI 43-101 Guidelines for Resource Estimates. Of importance for mine planning, the model accommodates in situ and contact dilution but excludes mining dilution. Block size is similar (25 x 25 x 5 meters) to the expected small-mining units conventionally used in this type of deposit, and appropriate for the current open pit and the planned underground mining methods.
- Potential for increasing of the Mineral Resources is considered good, with mineralisation open down dip and along strike, which requires further drilling to investigate potential.

25.2 MINING

Based on the proposed mining plan, the following comments are made:

- A Mineral Reserve estimate was completed by MMC of Beijing, China. The Mineral Reserve estimate in this Technical Report is reported by applying modifying factors and using cutoff grades which are deemed appropriate for the style of mineralisation, the current state of the Mineral Resources and planned operation.
- MMC considers the estimated Mineral Reserves to be compliant with NI 43-101 Guidelines for Reserve Estimates.
- The review completed by MMC of the draft Chinese Feasibility Study indicated that the mine design parameters were appropriate and suitable for the Project and, as a result, formed the basis for the mine design and planning that MMC completed.
- In addition to the three open cut pits proposed in the draft Chinese Feasibility Study, MMC identified and completed mine planning for a forth open cut pit in the south of the Project area, the South Pit. This pit was identified through *Whittle* optimisation work.
- Open cut and underground mining methods are appropriate for the Project, both in terms of productivity and safety.
- Open cut mining will use conventional trucks and excavator methods to mine the ore, while the underground methods consist of variations of open stoping and sublevel caving. Various ore pass and conveyor systems underground will be used to transport crushed ore from the open pits and underground to the processing plants.
- Open cut mining is already being used to extract ore from the Project at a rate of 1.8 Mtpa. In 2015, underground is forecast to commence.
- MMC considers the planned production rate from the open cut and underground operations of 13.6 Mtpa ROM ore over the majority of the mine life to be achievable. During the years in which production is planned to exceed 13.6 Mtpa, however, MMC considers this achievable based on propose equipment and processing plant capacity.
- Based on the Mineral Reserve estimate, the Project has a mine life of 31 years; however MMC envisages this could be extended with further drilling in the South Pit area and further mine planning studies, particularly those related to the underground operation.
- During the earlier years of the mine life, mining will focus on Skarn material, but as the mining progresses more Hornfels hosted and Porphyry hosted mineralisation will be targeted. The metals that can be extracted from the Project are copper, molybdenum, gold, silver, lead and zinc. Copper is the primary economic metal; however Mo, Au and Ag have a significant impact on revenue.
- It is forecast that 202.2 Mt of ROM ore will be extracted from the four open cut operations and 161.3 Mt of ROM ore from the underground operation for the current LOM.
- The interaction between the open cut and underground operations must be appropriately forecast so as to ensure there are no disruptions to mining activities and, more importantly, there are no safety incidences.

- Currently, the proposed dumping areas are not sufficient to accommodate forecast waste volumes. MMC is, however, aware that there is sufficient land within the Project area that the Company could obtain land usage permits, which would solve this issue.
- Geotechnical issues are always present for any mining operation. While no high risks have been identified to date, ongoing monitoring is required, as well as the completion of additional studies outlined in the Report's Recommendations.

25.3 PROCESS

25.3.1 Skarn Cu-Mo Ores

Based on the review of the processing plant operation and relevant data, the following comments are made:

- Cu-Mo separation flotation for the lower grade Mo ores is currently not economic due to high operating costs. The cut-off grade for Cu-Mo separation would be at Mo grade 0.4% in copper concentrate or Mo feed grade of 0.015%.
- Higher arsenic contents in the currently produced copper concentrate (0.4-0.7% As) could impact the concentrate payment; the company clarified that there is currently no penalty because of the concentrate is well accepted but it is near the maximum arsenic content accepted through Chinese sea ports of 0.5% As in concentrate.
- Although the company believes that no significant impurities (apart from arsenic) are present in the deposit, which could impact the marketing of products, MMC was unable to confirm this due to the lack of impurity assay data.
- The high moisture of the Cu concentrates (13%), which are dewatered by ceramic filters would present some issues in terms handling, acceptance by smelters, as well as increasing transport costs.
- The great variation of the mineralogy of the skarn Cu-Mo ores in terms of grade and hardness are a significant potential risk and would result in unstable operational performance, control difficulties and loss in flotation recoveries.
- Since there are no smelting facilities in Tibet region, the Project is fortunate that the concentrate transport costs to key marketing areas (e.g. Jinchuan Company in Gansu province) are borne by the purchasers at the Project gate.
- A single stage grinding is used to achieve a flotation size of 70% passing 74 microns, which is coarser than the testing results (P80= 74 microns).

25.3.2 Hornfels Hosted Cu-Mo Ores

Based on the Chinese Feasibility Study and recent testing the following comments can be made:

- Molybdenite is disseminated in widely variable grain sizes and is not related to copper and pyrite minerals, resulting in poor Mo recoveries. The locked cycle testing conducted for the Cu-Mo separation achieved a marketable copper and Mo concentrate with reasonable recoveries.
- The geological grade of Au and Ag in the hornfels copper concentrate is very low (gold < 0.1 g/t and silver < 1 g/t), while modest precious metal recoveries have been found in testwork. The gold (Au 1.14 g/t) and silver (Ag 54 g/t) grades in the copper concentrate are payable.
- Further pilot plant testing would be required to confirm the proposed Mo separation circuit for design and construction Hornfels hosted Cu-Mo Ores processing facilities.

25.3.3 Cu-Pb-Zn Ores

Based on the Chinese Feasibility Study and testing the following comments can be made:

- Copper-lead-zinc ore contains a variety of divalent sulphide complex and sulphide minerals, which are closely associated. The presence of secondary copper sulphide ore and some oxidised ore would have activated lead-zinc materials thus resulting in poorer recoveries.
- Some bench scale testing of copper-lead-zinc ores has produced separate copper, lead and zinc concentrates with reasonable recoveries, which are considered a reasonable basis for the design of the processing facilities. Although the current pilot plant testing, has not confirmed these results due to non-representative samples, it was noted that in the previous pilot testing, the tested ores were oxidised and a poor metallurgical performance was experienced. Consequently, investigation with a representative fresh sample would be required to understand the potential for improvement.

Further modification of the pilot processing plant is required for it to be operational.

25.4 ECONOMICS

- The operating and capital costs were estimated by the Changsha Institute and were presented in the draft Chinese Feasibility Report. MMC has reviewed these cost estimates and considers them to be reasonable and applicable to the Project. These costs have been used in the economic analysis completed by MMC.
- The cumulative discounted cash flow at 9% is 1,240 MUSD. The Project has negative cash flows in the first 4.5 years, which is due to the large initial capital expenditure required to upgrade of the processing plant, mining, engineering and other facilities. The NPV becomes positive in 2017 and increases in value from there on. As cash flows further out are discounted heavily, there is no great value being added to the NPV.
- Economic model sensitivity analysis was completed including Mo, Cu, Ag, Au and Pb metal prices as well as capital costs and operating costs. The results indicate that the Project is most sensitive to variations in metal price, operating costs, grades/recoveries and capital costs in that order. When considering a 10% variation, the Project has an NPV varying from USD 788 M to USD 1,692 M.

26 RECOMMENDATIONS

26.1 GEOLOGY

Infill Drilling

Complete infill drilling of the South Pit Inferred Resource area to upgrade resource to Indicated. This is likely to facilitate the decreased waste mining of the south pit and allow for further optimisation of the mining schedule.

This drilling as planned by the company is also going to increase the density of data in the underground resource which in turn should allow for the improved domaining of high grade zones within the underground resource model.

It is estimated this work would cost in the order of USD 6-7 M.

Update Model

Upon completion of current infill drilling currently underway by the company an update of the resource model model should be undertaken to reflect the revised understanding of the controls on mineralisation. This is likely to lead to an increase in confidence in the underlying resource classifications.

It is estimated this work would cost in the order of USD 60-80 k.

Grade Control

Incorporation of the grade control blast hole data into the resource model is likely to lead to an improved understanding of the short range grade variability of the deposit and associated minerals. MMC recommends that automatic splitting and sampling attachments be added to the current blast hole drill rig fleet to improve sampling quality, and that QAQC practices in line with international standards be introduces to the assaying so as to allow this dataset to potentially be included in future resource estimates.

26.2 MINING

Mining licences

The Company must obtain relevant mining licences to ensure all proposed open cut and underground operations have sufficient space and are allowed to operate at planned throughput rates.

Detailed Mine Planning Studies

Ongoing optimisation and mine design studies for South Pit and Jiaoyan are required to confirm the further optimise the pit designs and equipment selection. Once additional drilling is completed on the South Pit to bring current Inferred Resource into at least Indicated a detailed production schedule for the open cut mines should be completed to ensure a reasonably constant strip ratio and grade is achieved over mine life thereby ensuring consistent processing plant feed grade and tonnes. The underground mine designs require further work to confirm design parameters utilised as there is an opportunity to access the underground from the bottom of the South Pit effectively reducing the development capital required for the underground.

These studies will result in a more detailed mine plan with more accurate operating and capital cost estimates.

Life of mine business planning should be undertaken to optimise sequencing between the mines and to fix an optimum life of mine extraction rate.

It is expected this work would cost in the order of USD 250k and will result in further refinement of the forecast OPEX and CAPEX.

Open Cut and Underground Interactions

MMC recommends further mine planning studies be undertaken to ensure that the open cut operations and underground operation can efficiently and safely operate in tandem. It is expect this work would costs in the order of USD 50k.

Working Room

Due to numerous loaders being used to mine approximately 6.0 Mt of ROM ore per year from the open pits, detailed production schedules should be conducted to ensure sufficient working room is maintained throughout each pit's mine life. Working room is the area required for all operating equipment to function while maintaining forecast production rates. Detailed scheduling work is on-going at site.

Geotechnical

Stability of the pit walls will be crucial to enable the pits to achieve their design depths of over 300 m. Monitoring of the pit walls should be routine practice to ensure safety of the workers. It is estimated this work would costs in the order of USD 50k to implement the system per pit and USD 10k per annum to review data and report findings for all pits.

MMC recommends further geotechnical analysis be undertaken for South Pit and Jiaoyan, as only high level mine planning has been completed for these two areas. Specifically, pit slopes for South Pit and Jiaoyan should be better defined with detailed geotechnical studies undertaken.

Additionally, due to the proposed operation of South Pit, the location of the South Haulage Shaft should undergo re-examination to ensure it can be safely and productively operated.

Further studies should be undertaken to better understand the rock mechanics related to the underground mine because the Chinese Feasibility Study has only been able to make qualitative descriptions regarding the stress distribution characteristics of rock mass in the rock mechanics and general estimations regarding the ground surface caving. MMC recommends the following additional geotechnical work including:

- Rock stress testing;
- Research on rock mass strain properties;
- Numerical analysis model;
- Photo-elastic simulation; and
- Ground pressure observation and analysis.

It is estimated this work would costs in the order of USD 250-300k excluding drilling if deemed necessary.

Sterilisation Drilling

MMC recommends sterilisation drilling takes place where the proposed Jiaoyan dump is located, as presented in ***Figure 16-1***. This is required to ensure that no valuable mineralisation occurs below this area before dumping on surface takes place. If mineralisation showing economic potential is found, then Jiaoyan dump may need to be relocated.

It is estimated this work would costs in the order of USD 700 - 900k.

26.3 PROCESSING

The main recommendations concern the testing of Skarn ores to determine the molybdenum and precious metal recoveries.

MMC was informed that detailed testing was underway however the details were not available for review. It is assumed that on-going process metallurgy testing would focus on:

- Regular testwork to optimise process performance, the nature of plant operation and the potential for operational and process improvements;
- Further testing especially on the Hornfels hosted Cu-Mo ore as well as samples from the deep ore bodies. A pilot plant testing for Cu-Mo separation has been planned for June, 2012;
- Conduct testwork aimed at lowering the arsenic content of Skarn concentrates as well as confirming the potential to produce marketable molybdenum concentrates;
- Conduct testwork to establish copper and molybdenum feed grade–recovery relationships for hornfels ores and confirm the metallurgy of molybdenum, gold and silver;
- Lowering the moisture content of the concentrates;

- Future studies would be required due to feed variability for the processing of some ores with molybdenum greater than 0.02% Mo. The further Cu-Mo separation flotation test needs to determine the suitability of reagent and Mo cut-off grades for processing lower grade Mo ores; and
- Blending of the two Cu-Mo ore types may be required to maximise the revenue for the operation and this needs to be investigated in terms of the ratio of the ore types as well as the recovery-feed grade relationship.

MMC recommends that the nature and the number of the ore types present in each deposit is established, built into the resource block model and thus populated into the proposed mining schedule. In this way, the nature of the ore types and composites for each deposit can be more accurately determined before more testing is undertaken.

For inclusion into the resource model block, each ore type or lithology will need to have a number of identifying process characteristics which will come from the testwork results, such as feed grades (Cu, Mo, Au, Ag, Pb, Zn), concentrate grades, recoveries (preferably as a function of grade), grind size and hardness (comminution properties).

The testwork needs to establish all the metal recoveries and concentrate grades as a function of feed grade, ore type and mineralogy. MMC understands that the company has established a copper recovery-feed grade relationship for Skarn ore type based on available testing data and historical operational data, however this needs to be undertaken for copper for the other ore types and for molybdenum for all ore types.

It is expected that all this work would cost in the order of USD 100 - 150k.

26.4 COSTS/ECONOMIC ANALSYSIS

Marketing Studies

Further marketing studies should be undertaken to understand the forecast for the metal prices. This will reduce the Project risk as greater certainty around revenue will be achieved. It is expect this work would costs in the order of USD 50 - 80k.

Refinement of Operating and Capital Costs

On completion of further mining and processing studies, update operating and capital cost forecasts, and review its impact on the Project value. It is expect this work would cost USD 40k.

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"Core Drilling Regulation" promulgated by the former Ministry of Geology and Mineral Resources of China

28 ANNEXURE A – QUALIFICATIONS AND EXPERIENCE

Philippe Baudry – Regional General Manager – Asia - Russia, Bsc. Mineral Exploration and Mining Geology, Assoc Dip Geo science, Grad Cert Geostatistics, MAIG

Philippe is a geologist with over 15 years of experience. He has worked as a consultant geologist for over 7 years first with Resource Evaluations and subsequently with Runge after they acquired the ResEval group in 2008. During this time Philippe has worked extensively in Russia assisting with the development of 2 large scale copper porphyry projects from exploration to feasibility level, as well as carrying out due diligence studies on metalliferous projects throughout Russia. His work in Australia has included resource estimates for BHPB, St Barbara Mines and many other clients both in Australia and overseas on most styles of mineralisation and metals. Philippe furthered his modelling and geostatistic skills in 2008 by completing a Post Graduate Certificate in Geostatistics at Edith Cowan University. Philippe relocated to China in 2008 and has since project managed numerous Due Diligences and Independent Technical Reviews for private acquisitions and IPO listings purpose mostly in China and Mongolia.

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

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

Jeremy Clark – Senior Consultant Geologist – China-USA, Bsc. with Honours in Applied Geology, Grad Cert Geostatistics, MAIG

Jeremy has over 9 years of experience working in the mining industry. During this time he has been responsible for the planning, implementation and supervision of various exploration programs, open pit and underground production duties, detailed structural and geological mapping and logging and a wide range of experience in resource estimation techniques. Jeremy’s wide range of experience within various mining operations in Australia and recent experience working in South and North America gives him an excellent practical and theoretical basis for resource estimation of various metalliferous deposits including iron ore and extensive experience in reporting resource under the recommendations of the NI-43-101 reporting code.

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

Mark Burdett – Senior Consultant Geologist (China) - Bachelor of Science (Honours) - Geology, University of Melbourne

Mark is a geologist with over 10 years of experience in the Australian mining industry. After gaining experience in mine geology, Mark entered into various resource geologist roles.

In recent years Mark worked for Oz Minerals as the Senior Resource Geologist and was responsible for updating the Prominent Hill Resource (IOCG) including the management of infill and extensional drilling programs. Prior to this Mark worked as a resource geologist on various deposits including iron, gold and lead/zinc. Mark has also worked as a mine/project geologist for BHP (Pilbara) and Perilya (Broken Hill). Mark is proficient in Vulcan 3D software and is a member of the AUSIMM.

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

Over 30 years of broad experience in the fields of minerals processing, hydrometallurgy, plant design, process engineering (including equipment selection and design) and metallurgical testwork. Andrew has worked on five iron ore projects, one involving flotation, and is knowledgeable about iron ore processing techniques such as magnetic separation. The experience includes operating and management experience in base-metal concentrators, precious metal leaching facilities as well as diamond processing and base-metal smelting in several countries, including Chile, Peru, South Africa, USA and Australia. Responsible for the design of flotation equipment, concentrators and commissioning of flotation and precious metals leach plants. In addition, Andrew has had experience in process and process plant evaluations, due diligence audits, feasibility studies and metallurgical testwork and program development.

Tony Cameron – Independent Consultant, Bachelor of Engineering(Mining) – University of Queensland, First Class Mine Manager (WA), Grad. Diploma. Business - Curtin University, Maters Commercial Law - Melbourne University, Fellow of Australasian Institute of Mining and Metallurgy (FAusIMM)

Tony has worked as a mining engineer for over 20 years and an independent mining engineering consultant for 8 years and has been working as an associate in Beijing with MMC for one year. As an independent mining consultant, Tony has completed a range of projects including technical valuations, life-of-mine designs and scheduling, pit optimisation, development of economic models, mine reserves estimation and reporting.

Prior to becoming a mining consultant Tony worked with a number of underground and open cut mining companies in coal and metalliferous mines in various roles. Tony's management roles included Area Manager for Macmahon Contractors, Mining Manager for Tiwest, and Mining Superintendent for Sons of Gwalia and St Barbara Mines.

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

Jim Jiang- Senior Processing Consultant, Bachelor and Master of Mineral Processing Engineering (Central South University)

Jim has 9 years of experience in mineral processing with laboratory research, metallurgical test work, plant operation, metallurgy and process plant evaluations and pre-feasibility studies on a wide range of commodity types. He has had site experience on a copper-gold mine in China, working as processing engineer with China Gold Group Corporation.

Since joining MMC in 2007, he has been involved on many technical review projects, with his work including pre-feasibility studies and reviewing processing plants (feasibility study, plant design and operational performance) in base-metal concentrators, precious metal leaching facilities as well as iron processing and base-metal smelting in several countries, including China, Mongolia, Malaysia, Russia.

Giacomo Gaetani – Mining Engineer, Runge Ltd, BEng (Mining), Grad Cert Finance, Member of Australian Institute of Mining and Metallurgy

Giacomo has over five years working experience in both the coal and metals mining industry. He has worked on project around the world and has specifically been involved in life-of-mine designs, development of economic models, pre-feasibility and feasibility studies, technical reviews, technical valuations and mine reserves estimation and reporting.

Jade Little – Mining Engineer, Runge Ltd, BEng (Mining), Member of the Australian Institute of Mining and Metallurgy

Jade has been exposed to both coal and metals open cut and underground mining operations in Australia, China, India, Liberia and Madagascar. She has almost 5 years work experience during which time she has undertaken roles ranging from the development of short-term and strategic mine plans, completion of Life of Mine options studies, assisting with the generation of mine planning standards for operating sites, generating of JORC Ore Reserve statements as well as preparing Independent Technical Reviews. She has worked both onsite at various open cut and underground mines as well as assuming consulting roles. Jade has developed skills in the use of Minex, Talpac, Datavis, Split Engineering and Ventsim.

Bob Dennis, Principal Mining Consultant

Mr. Dennis has 30 years involvement in the mining industries of Australia and in Italy. He has worked in operations management, including mining, processing, planning and support services; planned and executed exploration programs from grass roots to feasibility study levels; recruited and developed teams; estimated resources using geostatistical methods and evaluated prospect and mining opportunities.

Specific uranium experience includes ongoing due diligence on a large Siberian uranium resource. Bob has reviewed and made specific recommendations with respect to the geology, geostatistics, hydrology, environmental studies and the interaction between these aspects and the mining and metallurgy.

Sheng Zhan – Consultant Geologist – PhD in Tectonics, Peking University and Universite d'Orleans; BSc in Geology, Peking University

Sheng has 5 years of working experience in the mining industry. His experiences include data collaboration, 3D modeling, block modeling, resource estimation, field technical visits, report drafting and project evaluation of many different mineral projects. His commodity experience includes coal, iron ore, gold, copper, nickel, moly, lead, zinc, titanium, tin, uranium and rare earth elements. His involvement in mineral projects ranged from green field grass roots level, to pre-production level. He has visited more than 30 countries and most provinces in China, stayed in France, Canada, Mongolia, Namibia and the Democratic Republic of the Congo for more than 3 months for different mineral projects.

During his work with Runge from 2010 to the present, Sheng has worked on more than 20 coal, Iron ore, gold, copper, nickel, moly, lead, zinc, titanium and tin projects in China, Mongolia and Africa. This work specifically has included resource estimation and geological reviews of deposits. These deposits include but are not limited to (as they are confidential) one Iron ore project and one Moly project in Mongolia; one Iron ore project in Liberia, west Africa; 5 coal projects in Xinjiang, Inner Mongolia, Henan and Shanxi provinces of China; 4 gold projects in Shandong, Heibei, Xinjiang and Shaanxi provinces of China; 3 copper projects in Tibet, Shaanxi and Hubei provinces of China; 3 Iron ore projects in Shandong, Xinjiang and Sichuan provinces of China; the Shizizan skarn Pb-Zn-Ag deposits in Yunnan province of China (China Polymetalic); the Huangjinmei gold deposit and Huaba cupper-vanadium deposit in Shaanxi province of China (Huili Resources); the Tonglvshan, Fengshan, Chimashan and Tongshankou cupper deposits in Hubei province of China (Daye Non-ferrous) . All of these deposits were estimated in accordance with the JORC Code (Australia, Africa, Europe and Asia) or the NI-43-101 code (Canada and South America) and resulted or will be result in Public releases or Technical reports.

Prior to joining Runge Sheng initially worked as a project manager for China Uranium Corporation Ltd and then as a department manager for Mongolia International Resources Ltd. During this time he reviewed geology at more than 120 uranium, gold, rare earth elements and iron ore projects and successful invested 3 of them. He has good knowledge of the resources estimation and evaluation of mineral projects as well as the project management. He also served as board director of Toronto Stock Exchange listing Western Prospector Group Ltd (WNP.TSX), board secretary of Zhonghe Resources Namibia Ltd and board director of Western Prospector Mongolia Ltd (all these 3 companies were owned by China Uranium Corporation Ltd at that time).

Hongbo Liu, Mining Engineer, National Register of Safety Engineers, China University of Mining & Technology (Beijing)

Hongbo Liu graduated with a bachelor degree in mining engineering from Hebei University of Engineering in 2003, was granted a master's degree from China University of Mining and Technology in 2006 and qualified for the National Register of Safety Engineers in 2009.

From 2006 to late 2011, Hongbo was employed at Gemcom Software International Inc. China. He performed in a project management and technology support engineer capacity on projects using Surpac and MineSched software training.

During his work with Runge from 2011 to the present, he has been actively involved in many technical review projects including iron, gold copper; and lead mine projects in China and Africa. His work includes data reviewing, open pit optimization, open pit and underground mine designing and scheduling. All of his work is in accordance with the JORC Code (Australia, Africa, Europe and Asia) or the NI-43-101 code (Canada and South America) and the Hong Kong Exchange listing rules.

Feng Wu – Consultant Geologist – China, BSc in Geology (The China University of Geosciences, 2004)

Feng is a geologist with 8 years geological experience. He is experienced in field geological work, geological modelling, resource estimation and report drafting. Commodity experience includes iron, copper, gold, lateritic deposits, polymetallic deposits, as well as non-metallic deposits and petroleum. Relevant project experience as a site geologist include drilling, mapping, geochemical and geophysical exploration projects in China, Papua New Ginuea, Zambia, Indonesia and Laos from 2004 to 2010.

Feng has worked in Runge from 2010 to the present, and has had an abundance of work experience in metal and coal geological consulting. Feng's role in projects include data verification and resource review to meet the recommendations of the JORC Code.

Roger Zhi Yao Dong – Graduate Engineer, Bachelor of Engineering (Chemical), Bachelor of Laws - University of Melbourne

Roger graduated from the University of Melbourne in December 2011 with a Bachelor of Engineering (honours) and a Bachelor of Laws (honours). He joined Runge Ltd Beijing in 2012 as part of the Australian Chamber of Commerce Graduate Scholarship program. He has had experience in industrial processing research and has also interned at a number of law firms in Melbourne.

Peilin Guo – Mining Engineer – BM. (Mining Engineering), China University of Mining & Technology (Beijing)

Peilin has 8 years of experience working in the domestic and international mining industry, including in underground coal operations, open pit nickel laterite operations, and as a consultant in a mining software company. As a consultant, he performed geological modelling, resource estimation, mining design and software training for coal, iron, gold, copper, limestone and nickel-cobalt projects. Peilin is an expert user of Autocad and Surpac.

Since joining Runge in 2011, Peilin has worked on more than 10 iron ore, gold, copper, lead, zinc, rare earth and coal projects in China, Mongolia and Africa. He has been actively involved in many technical review projects, with his work including reviewing and designing. All of his work is in accordance with the JORC Code (Australia, Africa, Europe and Asia) or the NI-43-101 code (Canada and South America) and the HKEx (Hong Kong Exchange) Listing Rules.

29 ANNEXURE B- GLOSSARY

The key terms used in this report include:

- **AAS** Atomic Absorption Spectroscopy
- **Ai** Abrasion index
- **AIG** Australian Institute of Geoscientists
- **ASL** Above Sea Level
- **ASX** Australian Stock Exchange
- **BECOG** Break-even cut-off grade
- **Brigade 6** The No. 6 Geological Brigade of Tibet Geology and mineral Resource Bureau
- **BS** Bangong Lake-Nu River Suture Zone
- **BVI** British Virgin Islands
- **CNAL** Chinese National Accreditation Board for Laboratories
- **Company** means China Gold International resources Corporation Limited, “China Gold” or “the Client”.
- **concentrate** a powdery product containing higher concentrations of minerals resulting from initial processing of mined ore to remove some waste materials; a concentrate is a semi-finished product, which would still be subject to further processing, such as smelting, to effect recovery of metal
- **contained metal** refers to the amount of pure metal equivalent estimated to be contained in the material based on the metal grade of the material.
- **CPR** Competent Person’s Report
- **CuEq** Copper Equivalent
- **DD** Surface diamond drill holes
- **element** Chemical symbols used in this Report

  Au – Gold; Ag – Silver; As – Arsenic; Cu – Copper; Mo – Molybdenum; Na – Sodium; Pb – Lead; Zn – Zinc
- **exploration** activity to identify the location, volume and quality of a mineral occurrence
- **Exploration Target/Results** includes data and information generated by exploration programmes that may be of use to investors. The reporting of such information is common in the early stages of exploration and is usually based on limited surface chip sampling, geochemical and geophysical surveys. Discussion of target size and type must be expressed so that it cannot be misrepresented as an estimate of Mineral Resources or Ore Reserves.
- **exploration right** the licensed right to identify the location, volume and quality of a mineral occurrence
- **Feasibility Study** Refers to ‘Jiama Copper-Polymetallic Project Phase 2 Feasibility Study Report’ October 2011, Changchun Gold Design Institute and Changsha Nonferrous Metals Design and Research Institute.
- **flotation** is a separation method for to the recovery of minerals using reagents to create a froth that collects target minerals
- **FOT** Free on Truck basis
- **gangue** is a mining term for waste rock

- **grade** any physical or chemical measurement of the concentration of the material of interest in samples or product. The units of measurement should be stated when figures are reported
- **grind** means to crush, pulverize, or reduce to powder by friction, especially by rubbing between two hard surfaces
- **HKEx** Stock Exchange of Hong Kong
- **Huatailong** Tibet Huatailong Mining Development Company Limited
- **ICP-AES** Inductively Coupled Plasma Atomic Emission Spectrometry
- **In situ** means rock or mineralisation in place in the ground
- **In Situ Quantities** estimates of total in ground tonnes and grade which meet the requirements of the PRC Code or other international codes for reserves but do not meet either NI 43-101 or Joint Ore Reserves Committee's recommendations
- **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
- **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
- **ITR** stands for Independent Technical Review
- **ITRR** stands for Independent Technical Review Report
- **JV** stands for Joint Venture
- **Km** stands for kilometre
- **Kt** stands for thousand tonnes
- **Lb** stands for pound, a unit of weight equal to 453.592 grams
- **m** stands for metres
- **M** stands for million
- **MAIG** Member of the Australian Institute of Geoscientists
- **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
- **metallurgy** Physical and/or chemical separation of constituents of interest from a larger mass of material. Methods employed to prepare a final marketable product from material as mined. Examples include screening, flotation, magnetic separation, leaching, washing, roasting etc.

- **mine production** is the total raw production from any particular mine
- **Mineable Quantities** Estimates of in ground tonnes and grades which are recoverable by mining
- **Mineral Reserves** is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.
- **mineral right** for purposes of this Prospectus, mineral right includes exploration right, mining right, and leasehold exploration or mining right
- **mineralisation** any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralisation might occur, whether by class of deposit, mode of occurrence, genesis or composition
- **mining rights** means the rights to mine mineral resources and obtain mineral products in areas where mining activities are licensed
- **MMC** refers to Minarco-MineConsult
- **mRL** means meters above sea level
- **MSO** Datamine Mineable Stope Optimiser software
- **Mt** stands for million tonnes
- **Mtpa** means million tonnes per annum
- **NI 43-101** National Instrument 43-101
- **NPV** Net Present Value
- **OC** open cut mining which is mining from a pit open to surface and usually carried out by stripping of overburden materials
- **OK** Ordinary Kriging algorithm
- **Ore** is the portion of a reserve from which a metal or valuable mineral can be extracted profitably under current or immediately foreseeable economic conditions
- **ore processing** is the process through which physical or chemical properties, such as density, surface reactivity, magnetism and colour, are utilized to separate and capture the useful components of ore, which are then concentrated or purified by means of flotation, magnetic selection, electric selection, physical selection, chemical selection, reselection, and combined methods
- **ore selection** the process used during mining to separate valuable ore from waste material or barren rock residue
- **ore t** stands for ore tonne
- **Oz** Stands for troy ounces or 31.10348g
- **preliminary feasibility study** is a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as a Mineral Reserve.
- **primary mineral deposits** are mineral deposits formed directly from magmas or hydrothermal processes

- **Probable Mineral Reserve** is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
- **project** means a deposit which is in the pre-operating phase of development and, subject to capital investment, feasibility investigations, statutory and management approvals and business considerations, may be commissioned as a mine
- **Projects** Refers to the Jiama Copper-Gold project
- **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.
- **QAQC** Quality Assurance and Quality Control
- **QP** Qualified Person
- **raw ore** is ore that has been mined and crushed in an in-pit crusher, but has not been processed further
- **RAL** Runge Asia Limited
- **recovery** The percentage of material of initial interest that is extracted during mining and/or processing. A measure of mining or processing efficiency
- **reserves** the [economically] mineable part of a Measured and/or Indicated Mineral Resource, including diluting materials and allowances for losses which may occur when the material is mined
- **resources** a concentration or occurrence of a material of intrinsic economic interest in or on the earth's crust in such form, quality and quantity such that there are reasonable prospects for eventual economic extraction
- **Resources** Resources which have been estimated in accordance with the recommendations of the guidelines provided in the JORC or NI 43-101 Standards of Disclosure for Mineral Projects.
- **RL** means Reduced Level, an elevation above sea level
- **RMB** stands for Chinese Renminbi Currency Unit;
- **RMB/t** stands for Chinese Renminbi per material tonne
- **ROM** stands for run-of-mine, being material as mined before beneficiation
- **SECOG** Stope evaluation cut-off grade
- **secondary mineral deposits** are mineral deposits formed or modified as a result of weathering or erosion of primary mineral deposits
- **shaft** a vertical excavation from the surface to provide access to the underground mine workings
- **SLC** Sublevel caving
- **SLOS** Sub-level open stoping
- **SOCOG** Stope only cut-off grade
- **Southwest Center** Southwestern Metallurgic Geology Analytical Center, Chengdu, Sichuan Province
- **sq.km** square Kilometre
- **t** stands for tonne

- **t/bcm** stands for tonnes per bank cubic metre (i.e. tonnes in situ) a unit of density
- **the Team** MMC's technical team
- **Technical Report** Refers to the Pre-Feasibility Study Technical Report on the Preliminary Economic Assessment and Resource Estimate for the Jiama Project
- **tonnage** An expression of the amount of material of interest irrespective of the units of measurement (which should be stated when figures are reported)
- **tonne** refers to metric tonne
- **tpa** stands for tonnes per annum
- **tpd** stands for tonnes per day
- **TSF** Tailings Storage Facility
- **TSX** Toronto Stock Exchange
- **UG** underground mining which is an opening in the earth accessed via shafts, declines or adits below the land surface to extract minerals
- **upgrade ratio** is a processing factor meaning ROM Grade% / Product Grade %
- **UCS** Unconfined compressive strength
- **USD** stands for United States dollars
- **VAT** Value Added Tax
- **YS** Yalung Tsangpo Suture Zone
- **$** refers to United States dollar currency Unit

30 ANNEXURE C – BASE CASE ECONOMIC MODEL

Table 30-1 Jiama Copper-Polymetallic Project –Economic Modelling Input Recoveries by Ore Type

Product	Ore Types	MMC Recovery (%)
Cu-Mo ore		
	Skarn Type	
Cu Conc	Cu	88
	Au(g/t)	45
	Ag(g/t)	65
Mo Conc	Mo	70
	Hornfels/Porphyry Type	
Cu Conc	Cu	84
Mo Conc	Mo	48
Cu-Pb-Zn Ore		
	Skarn Type	
Cu Conc	Cu	88
	Au(g/t)	45
	Ag(g/t)	60
Pb Conc	Pb	88
Zn Conc	Zn	75

Table 30-2 Jiama Copper-Polymetallic Project –Base Case Economic Modelling Results (Post-Tax)

NET PRESENT VALUE

China Gold Project

Model Type: Combined

ITEM	RATE	UNITS		Y1 Jul 2012	Y2 Jul 2013	Y3 Jul 2014	Y4 Jul 2015	Y5 Jul 2016	Y6 Jul 2017	Y7 Jul 2018	Y8 Jul 2019	Y9 Jul 2020	Y10 Jul 2021	Y11 Jul 2022
QUANTITIES														
Development Metres		m		0	0	0	0	0	0	0	0	0	0	0
ROM Production		ROM t		1,800	1,801	5,980	11,962	14,731	13,409	13,576	13,515	14,317	12,300	13,600
PROFIT & LOSS														
Total Revenue	(real)	**kUSD**		**109,610**	**77,450**	**459,575**	**763,431**	**1,455,008**	**996,692**	**1,068,126**	**1,099,851**	**654,728**	**553,622**	**585,777**
less Operating Costs	(real)	kUSD		83,304	142,842	321,562	492,974	705,181	606,726	630,625	621,141	529,518	465,595	462,084
less Salvage Balancing Adjustment	(real)	kUSD		0	0	0	0	0	0	0	0	0	0	0
Profit Before Depreciation	(real)	**kUSD**		**26,306**	**-65,392**	**138,013**	**270,458**	**749,827**	**389,965**	**437,500**	**478,710**	**125,210**	**88,027**	**123,693**
less Depreciation Allowance (Phase II)	(real)	kUSD		0	17,571	74,132	93,256	93,256	89,979	40,022	34,321	43,755	43,352	37,198
less Depreciation Allowance (Phase I)	(real)	kUSD		15,615	15,615	15,615	15,615	15,615	15,615	15,615	15,615	8,784	8,784	8,784
Profit Before Tax	(real)	**kUSD**		**10,691**	**-98,578**	**48,266**	**161,587**	**640,957**	**284,371**	**381,863**	**428,774**	**72,671**	**35,891**	**77,712**
losses carried forward	(real)	kUSD		0	0	-98,578	-50,312	0	0	0	0	0	0	0
Tax Rate		%		15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Tax Payable	(real)	kUSD		1,604	0	0	16,691	96,143	42,656	57,279	64,316	10,901	5,384	11,657
Profit After Tax	(real)	**kUSD**		**9,087**	**-98,578**	**48,266**	**144,896**	**544,813**	**241,715**	**324,583**	**364,458**	**61,770**	**30,508**	**66,055**
CASH FLOW														
Profit Before Depreciation	(real)	kUSD		26,306	-65,392	138,013	270,458	749,827	389,965	437,500	478,710	125,210	88,027	123,693
less Tax Payable	(real)	kUSD		1,604	0	0	16,691	96,143	42,656	57,279	64,316	10,901	5,384	11,657
less Working Capital Movement	(real)	kUSD		6,408	4,580	13,748	13,186	16,324	-7,573	1,838	-730	-7,048	-4,917	-270
less Capital (Phase 2)	(real)	kUSD		0	241,322	265,177	98,177	0	0	0	59,533	40,903	0	0
plus Salvage Values	(real)	kUSD		0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	(real)	kUSD		18,294	-311,294	-140,912	142,404	637,360	354,883	378,382	355,590	80,454	87,560	112,306
Cumulative Cash Flow	(real)	**kUSD**		**18,294**	**-293,000**	**-433,912**	**-291,508**	**345,852**	**700,736**	**1,079,118**	**1,434,708**	**1,515,163**	**1,602,723**	**1,715,029**
Discount Factor at	7.0%		1.00	0.93	0.87	0.82	0.76	0.71	0.67	0.62	0.58	0.54	0.51	0.48
Present Value of Cashflow				**17,097**	**-271,896**	**-115,027**	**108,640**	**454,429**	**236,474**	**235,638**	**206,957**	**43,762**	**44,511**	**53,356**
Cumulative NPV @ 7%				17,097	-254,799	-369,825	-261,186	193,243	429,717	665,355	872,311	916,073	960,584	1,013,940
Discount Factor at	9.0%		1.00	0.92	0.84	0.77	0.71	0.65	0.60	0.55	0.50	0.46	0.42	0.39
Present Value of Cashflow				**16,784**	**-262,010**	**-108,810**	**100,883**	**414,240**	**211,605**	**206,988**	**178,459**	**37,043**	**36,986**	**43,522**
Cumulative NPV @ 9%				16,784	-245,226	-354,036	-253,154	161,087	372,692	579,680	758,139	795,182	832,169	875,691
Discount Factor at	11.0%		1.00	0.90	0.81	0.73	0.66	0.59	0.53	0.48	0.43	0.39	0.35	0.32
Present Value of Cashflow				**16,481**	**-252,653**	**-103,034**	**93,806**	**378,242**	**189,735**	**182,251**	**154,300**	**31,452**	**30,837**	**35,633**
Cumulative NPV @ 11%				16,481	-236,172	-339,206	-245,400	132,843	322,578	504,829	659,129	690,580	721,418	757,051

ITEM	Y12 Jul 2023	Y13 Jul 2024	Y14 Jul 2025	Y15 Jul 2026	Y16 Jul 2027	Y17 Jul 2028	Y18 Jul 2029	Y19 Jul 2030	Y20 Jul 2031	Y21 Jul 2032	Y22 Jul 2033
QUANTITIES											
Development Metres	0	0	0	0	0	0	0	0	0	0	0
ROM Production	13,100	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600	13,600
PROFIT & LOSS											
Total Revenue	**568,221**	**569,719**	**562,949**	**557,467**	**544,502**	**544,940**	**567,699**	**552,072**	**559,253**	**550,870**	**548,549**
less Operating Costs	441,966	442,315	433,140	431,377	434,150	437,970	435,940	430,786	433,094	434,440	439,036
less Salvage Balancing Adjustment	0	0	0	0	0	0	0	0	0	0	0
Profit Before Depreciation	**126,255**	**127,404**	**129,809**	**126,090**	**110,352**	**106,970**	**131,759**	**121,285**	**126,159**	**116,430**	**109,514**
less Depreciation Allowance (Phase II)	25,699	16,265	16,265	16,265	15,352	15,352	1,461	1,012	708	708	708
less Depreciation Allowance (Phase I)	8,784	8,784	8,784	8,784	8,784	8,784	8,784	8,784	8,784	1,809	1,809
Profit Before Tax	**91,772**	**102,356**	**104,761**	**101,042**	**86,216**	**82,834**	**121,514**	**111,490**	**116,667**	**113,913**	**106,997**
losses carried forward	0	0	0	0	0	0	0	0	0	0	0
Tax Rate	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
Tax Payable	13,766	15,353	15,714	15,156	12,932	12,425	18,227	16,723	17,500	17,087	16,049
Profit After Tax	**78,006**	**87,003**	**89,047**	**85,885**	**73,283**	**70,409**	**103,287**	**94,766**	**99,167**	**96,826**	**90,947**
CASH FLOW											
Profit Before Depreciation	126,255	127,404	129,809	126,090	110,352	106,970	131,759	121,285	126,159	116,430	109,514
less Tax Payable	13,766	15,353	15,714	15,156	12,932	12,425	18,227	16,723	17,500	17,087	16,049
less Working Capital Movement	-1,548	27	-706	-136	213	294	-156	-396	177	104	354
less Capital (Phase 2)	0	0	0	0	0	0	0	0	0	0	0
plus Salvage Values	0	0	0	0	0	0	0	0	0	0	0
Net Cash Flow	114,036	112,024	114,801	111,069	97,206	94,251	113,688	104,958	108,481	99,240	93,111
Cumulative Cash Flow	**1,829,066**	**1,941,090**	**2,055,891**	**2,166,960**	**2,264,166**	**2,358,418**	**2,472,105**	**2,577,064**	**2,685,545**	**2,784,785**	**2,877,895**
Discount Factor at 7.0%	0.44	0.41	0.39	0.36	0.34	0.32	0.30	0.28	0.26	0.24	0.23
Present Value of Cashflow	**50,634**	**46,486**	**44,522**	**40,257**	**32,927**	**29,838**	**33,636**	**29,022**	**28,034**	**23,968**	**21,016**
Cumulative NPV @ 7%	1,064,574	1,111,060	1,155,582	1,195,838	1,228,765	1,258,603	1,292,239	1,321,261	1,349,295	1,373,262	1,394,279
Discount Factor at 9.0%	0.36	0.33	0.30	0.27	0.25	0.23	0.21	0.19	0.18	0.16	0.15
Present Value of Cashflow	**40,544**	**36,540**	**34,354**	**30,493**	**24,483**	**21,779**	**24,101**	**20,413**	**19,356**	**16,245**	**13,984**
Cumulative NPV @ 9%	916,235	952,775	987,129	1,017,622	1,042,105	1,063,884	1,087,985	1,108,398	1,127,755	1,144,000	1,157,984
Discount Factor at 11.0%	0.29	0.26	0.23	0.21	0.19	0.17	0.15	0.14	0.12	0.11	0.10
Present Value of Cashflow	**32,596**	**28,848**	**26,633**	**23,214**	**18,303**	**15,988**	**17,374**	**14,450**	**13,455**	**11,089**	**9,373**
Cumulative NPV @ 11%	789,647	818,495	845,128	868,342	886,645	902,633	920,007	934,458	947,913	959,002	968,376

ITEM	Y23 Jul 2034	Y24 Jul 2035	Y25 Jul 2036	Y26 Jul 2037	Y27 Jul 2038	Y28 Jul 2039	Y29 Jul 2040	Y30 Jul 2041	Y31 Jul 2042	Y32 Jul 2043	Totals/
QUANTITIES											
Development Metres	0	0	0	0	0	0	0	0	0	0	**0**
ROM Production	13,600	13,600	13,591	13,600	13,600	13,600	9,917	4,152	2,871	0	**361,751**
PROFIT & LOSS											
Total Revenue	**549,334**	**552,668**	**786,391**	**488,911**	**466,879**	**460,090**	**359,112**	**234,832**	**147,623**	**0**	**17,995,952**
less Operating Costs	435,071	439,116	484,633	417,681	415,650	415,008	310,968	168,542	112,191	0	**13,054,627**
less Salvage Balancing Adjustment	0	0	0	0	0	0	0	0	0	0	**0**
Profit Before Depreciation	**114,263**	**113,551**	**301,758**	**71,230**	**51,230**	**45,082**	**48,144**	**66,291**	**35,432**	**0**	**4,941,325**
less Depreciation Allowance (Phase II)	708	0	0	0	0	0	0	0	0	0	**677,344**
less Depreciation Allowance (Phase I)	1,809	1,809	1,809	1,809	1,809	1,809	1,809	1,809	0	0	**248,418**
Profit Before Tax	**111,746**	**111,742**	**299,949**	**69,421**	**49,421**	**43,273**	**46,335**	**64,482**	**35,432**	**0**	**4,015,563**
losses carried forward	0	0	0	0	0	0	0	0	0	0	**-148,890**
Tax Rate	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	
Tax Payable	16,762	16,761	44,992	10,413	7,413	6,491	6,950	9,672	5,315	0	**602,334**
Profit After Tax	**94,984**	**94,981**	**254,957**	**59,008**	**42,008**	**36,782**	**39,385**	**54,809**	**30,117**	**0**	**3,413,229**
CASH FLOW											
Profit Before Depreciation	114,263	113,551	301,758	71,230	51,230	45,082	48,144	66,291	35,432	0	**4,941,325**
less Tax Payable	16,762	16,761	44,992	10,413	7,413	6,491	6,950	9,672	5,315	0	**602,334**
less Working Capital Movement	-305	311	3,501	-5,150	-156	-49	-8,003	-10,956	-4,335	-8,630	**0**
less Capital (Phase 2)	0	0	0	0	0	0	0	0	0	0	**705,113**
plus Salvage Values	0	0	0	0	0	0	0	0	0	0	**0**
Net Cash Flow	97,806	96,479	253,264	65,967	43,973	38,640	49,197	67,574	34,452	8,630	**3,633,878**
Cumulative Cash Flow	**2,975,702**	**3,072,181**	**3,325,445**	**3,391,412**	**3,435,384**	**3,474,024**	**3,523,221**	**3,590,796**	**3,625,248**	**3,633,878**	
Discount Factor at 7.0%	0.21	0.20	0.18	0.17	0.16	0.15	0.14	0.13	0.12	0.11	
Present Value of Cashflow	**20,632**	**19,020**	**46,664**	**11,359**	**7,077**	**5,812**	**6,915**	**8,877**	**4,230**	**990**	**1,525,854**
Cumulative NPV @ 7%	1,414,910	1,433,931	1,480,595	1,491,954	1,499,030	1,504,842	1,511,757	1,520,634	1,524,864	1,525,854	
Discount Factor at 9.0%	0.14	0.13	0.12	0.11	0.10	0.09	0.08	0.08	0.07	0.06	
Present Value of Cashflow	**13,476**	**12,195**	**29,371**	**7,018**	**4,292**	**3,460**	**4,042**	**5,093**	**2,382**	**547**	**1,239,861**
Cumulative NPV @ 9%	1,171,459	1,183,655	1,213,025	1,220,044	1,224,336	1,227,796	1,231,838	1,236,931	1,239,313	1,239,861	
Discount Factor at 11.0%	0.09	0.08	0.07	0.07	0.06	0.05	0.05	0.04	0.04	0.04	
Present Value of Cashflow	**8,870**	**7,883**	**18,642**	**4,374**	**2,627**	**2,080**	**2,385**	**2,952**	**1,356**	**306**	**1,019,851**
Cumulative NPV @ 11%	977,246	985,129	1,003,771	1,008,146	1,010,773	1,012,852	1,015,238	1,018,190	1,019,545	1,019,851	

IRR (Real)	%	**55%**				
NPV (Real)	**kUSD**	**7.0%**	1,525,854	**9.0%**	1,239,861	**11.0%**	1,019,851

Table 30-3 Jiama Copper-Polymetallic Project –Base Case Mining Schedule Summary

Schedule Summary

China Gold Project

ITEM	RATE	UNITS	Y1 2012	Y2 2013	Y3 2014	Y4 2015	Y5 2016	Y6 2017	Y7 2018	Y8 2019	Y9 2020	Y10 2021	Y11 2022	Y12 2023	Y13 2024	Y14 2025	Y15 2026	Y16 2027	Y17 2028	Y18 2029	Y19 2030	Y20 2031	Y21 2032	Y22 2033	Y23 2034	Y24 2035	Y25 2036	Y26 2037	Y27 2038	Y28 2039	Y29 2040	Y30 2041	Y31 2042	Totals/ Ave
OC QUANTITY SCHEDULES - Niumantang																																		
Ore Production		ROM kt	900	0	1,850	0	193	4,309	976	7,100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15,328
Waste Removal		kt	9,930	0	724	0	33,000	44,000	1,217	53,099	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149,710
Strip Ratio - Uncovered		kt/ROM t	11.03	0.00	0.39	0.00	170.70	10.21	4.41	6.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.34
Ore Grades																																		
Copper Grade (%)		%	0.90%	0.00%	1.88%	0.00%	0.82%	1.12%	0.80%	1.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Molybdenum Grade (%)		%	0.04%	0.00%	0.01%	0.00%	0.01%	0.07%	0.01%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gold Grade (g/t)		g/t	0.32	0.00	0.80	0.00	0.24	0.55	0.25	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Silver Grade (g/t)		g/t	20.49	0.00	35.03	0.00	16.04	23.42	17.08	26.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.36
OC QUANTITY SCHEDULES - Tongqianshan																																		
Ore Production		ROM kt	900	1,440	292	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	17,961
Waste Removal		kt	5,385	3,031	480	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	149,710
Strip Ratio - Uncovered		kt/ROM t	5.98	2.10	1.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.34
Ore Grades																																		
Copper Grade (%)		%	0.56%	0.55%	0.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Molybdenum Grade (%)		%	0.02%	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gold Grade (g/t)		g/t	0.10	0.17	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Silver Grade (g/t)		g/t	7.15	8.24	9.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.05
OC QUANTITY SCHEDULES - South Pit																																		
Ore Production		ROM kt	0	361	3,238	9,662	9,737	4,300	7,800	1,615	1,517	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38,231
Waste Removal		kt	0	39,979	55,000	50,000	14,600	11,797	58,463	1,537	1,949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	233,346
Strip Ratio - Uncovered		kt/ROM t	0.00	110.73	16.99	5.17	1.50	2.74	7.50	1.27	1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.10
Ore Grades																																		
Copper Grade (%)		%	0.00%	0.43%	0.49%	0.66%	1.43%	0.54%	1.11%	0.57%	0.92%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Molybdenum Grade (%)		%	0.00%	0.03%	0.01%	0.02%	0.01%	0.03%	0.03%	0.05%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gold Grade (g/t)		g/t	0.00	0.17	0.15	0.18	0.39	0.06	0.23	0.08	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Silver Grade (g/t)		g/t	0.00	15.17	9.48	16.88	32.13	10.64	24.75	8.15	19.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20.78
OC QUANTITY SCHEDULES - Jiaoyan																																		
Ore Production		ROM kt	0	0	0	0	0	0	0	0	7,500	7,000	8,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	4,517	0	0	146,017
Waste Removal		kt	0	0	0	0	0	0	0	0	42,472	42,100	23,138	15,840	9,685	4,680	4,318	7,743	10,133	6,006	4,653	4,598	6,274	9,526	6,873	8,751	6,778	2,728	3,314	3,148	1,815	0	0	224,631
Strip Ratio - Uncovered		kt/ROM t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.66	6.01	2.89	2.26	1.38	0.67	0.62	1.11	1.45	0.86	0.66	0.66	0.90	1.36	0.98	1.25	0.97	0.39	0.47	0.45	0.40	0.00	0.00	1.54
Ore Grades																																		
Copper Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.37%	0.41%	0.44%	0.44%	0.41%	0.40%	0.38%	0.39%	0.41%	0.45%	0.42%	0.44%	0.43%	0.42%	0.42%	0.41%	0.47%	0.48%	0.41%	0.41%	0.38%	0.00%	0.00%	
Molybdenum Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.02%	0.02%	0.02%	0.02%	0.01%	0.01%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.01%	0.01%	0.02%	0.02%	0.02%	0.00%	0.00%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gold Grade (g/t)		g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03	0.05	0.06	0.03	0.02	0.02	0.02	0.03	0.04	0.02	0.02	0.02	0.03	0.03	0.02	0.03	0.04	0.02	0.02	0.02	0.00	0.00	
Silver Grade (g/t)		g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	1.24	1.23	1.21	1.08	1.05	1.06	1.09	1.39	1.22	1.06	1.05	1.06	1.04	1.03	1.06	0.95	1.07	0.98	1.09	1.05	0.00	0.00	1.11
OC QUANTITY SCHEDULES - Total																																		
Ore Production		**ROM kt**	**1,800**	**1,801**	**5,380**	**9,662**	**9,931**	**8,609**	**8,776**	**8,715**	**9,017**	**7,000**	**8,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**4,517**	**0**	**0**	**202,208**
Waste Removal		**kt**	**15,315**	**43,010**	**56,204**	**50,000**	**47,600**	**55,797**	**59,680**	**54,636**	**44,421**	**42,100**	**23,138**	**15,840**	**9,685**	**4,680**	**4,318**	**7,743**	**10,133**	**6,006**	**4,653**	**4,598**	**6,274**	**9,526**	**6,873**	**8,751**	**6,778**	**2,728**	**3,314**	**3,148**	**1,815**	**0**	**0**	**607,687**
Strip Ratio - Uncovered		**kt/ROM t**	**8.51**	**23.88**	**10.45**	**5.17**	**4.79**	**6.48**	**6.80**	**6.27**	**4.93**	**6.01**	**2.89**	**2.26**	**1.38**	**0.67**	**0.62**	**1.11**	**1.45**	**0.86**	**0.66**	**0.66**	**0.90**	**1.36**	**0.98**	**1.25**	**0.97**	**0.39**	**0.47**	**0.45**	**0.40**	**0.00**	**0.00**	**3.01**
UG ORE PRODUCTION																																		
Underground North		**ROM kt**	**0**	**0**	**600**	**2,300**	**4,800**	**4,800**	**4,800**	**4,800**	**5,300**	**5,300**	**5,300**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**5,400**	**4,480**	**3,000**	**3,000**	**3,000**	**3,000**	**3,000**	**1,719**	**129,399**
Ore Grades																																		
Copper Grade (%)		%	0.00%	0.00%	1.42%	1.57%	1.26%	1.26%	1.26%	1.26%	1.25%	1.18%	1.15%	1.10%	1.07%	1.04%	1.04%	1.04%	1.04%	1.04%	1.02%	1.04%	1.04%	1.04%	1.04%	1.03%	1.01%	1.03%	1.03%	1.03%	1.03%	1.03%	1.03%	
Molybdenum Grade (%)		%	0.00%	0.00%	0.03%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.05%	0.36%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
Gold Grade (g/t)		g/t	0.00	0.00	0.52	0.46	0.48	0.48	0.48	0.48	0.48	0.47	0.46	0.44	0.43	0.42	0.42	0.42	0.42	0.42	0.42	0.38	0.38	0.38	0.38	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	
Silver Grade (g/t)		g/t	0.00	0.00	28.00	31.78	22.61	22.61	22.61	22.61	21.85	22.12	21.54	21.65	21.69	21.71	21.71	21.71	21.71	21.71	20.86	19.39	19.26	19.26	19.26	17.68	16.79	17.80	17.80	17.80	17.80	17.80	17.80	
Underground South		**ROM kt**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**300**	**700**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**2,111**	**3,600**	**3,600**	**3,600**	**2,400**	**1,152**	**1,152**	**31,864**
Ore Grades																																		
Copper Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.66%	0.83%	0.93%	1.07%	1.13%	0.76%	0.63%	0.65%	0.65%	0.65%	0.54%	0.53%	0.53%	0.58%	0.58%	0.60%	0.62%	0.60%	0.58%	0.58%	0.58%	
Molybdenum Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.01%	0.01%	0.01%	0.03%	0.03%	0.03%	0.04%	0.04%	0.04%	0.01%	0.01%	0.01%	0.01%	0.01%	0.00%	0.00%	0.00%	
Zinc Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.38%	0.30%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.18%	0.09%	0.09%	0.09%	0.15%	0.16%	0.16%	
Lead Grade (%)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.50%	0.40%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.23%	0.13%	0.13%	0.13%	0.20%	0.21%	0.21%	
Gold Grade (g/t)		g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.10	0.15	0.16	0.08	0.05	0.08	0.08	0.08	0.08	0.08	0.08	0.16	0.16	0.16	0.11	0.06	0.00	0.36%	0.36%	
Silver Grade (g/t)		g/t	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.02	6.63	7.69	9.56	10.38	13.04	14.64	20.94	20.94	20.94	10.27	9.93	9.93	17.86	17.95	15.21	7.35	3.86	0.36	36.41%	36.41%	
Total		**ROM kt**	**0**	**0**	**600**	**2,300**	**4,800**	**4,800**	**4,800**	**4,800**	**5,300**	**5,300**	**5,600**	**6,100**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,600**	**6,591**	**6,600**	**6,600**	**6,600**	**5,400**	**4,152**	**2,871**	**161,262**
COMBINED SCHEDULE																																		
OC Waste Removal		**kt**	**15,315**	**43,010**	**56,204**	**50,000**	**47,600**	**55,797**	**59,680**	**54,636**	**44,421**	**42,100**	**23,138**	**15,840**	**9,685**	**4,680**	**4,318**	**7,743**	**10,133**	**6,006**	**4,653**	**4,598**	**6,274**	**9,526**	**6,873**	**8,751**	**6,778**	**2,728**	**3,314**	**3,148**	**1,815**	**0**	**0**	**608,763**
OC Ore Production		ROM kt	1,800	1,801	5,380	9,662	9,931	8,609	8,776	8,715	9,017	7,000	8,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	4,517	0	0	**202,207**
UG Ore production		ROM kt	0	0	600	2,300	4,800	4,800	4,800	4,800	5,300	5,300	5,600	6,100	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,600	6,591	6,600	6,600	6,600	5,400	4,152	2,871	**162,414**
Ore Production		**ROM kt**	**1,800**	**1,801**	**5,980**	**11,962**	**14,731**	**13,409**	**13,576**	**13,515**	**14,317**	**12,300**	**13,600**	**13,100**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,600**	**13,591**	**13,600**	**13,600**	**13,600**	**9,917**	**4,152**	**2,871**	**364,621**

END OF REPORT