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MMG LIMITED

五礦資源有限公司

(Incorporated in Hong Kong with limited liability)

(HKEX STOCK CODE: 1208) (ASX STOCK CODE: MMG)

MINERAL RESOURCES AND ORE RESERVES STATEMENT AS AT 30 JUNE 2018

This announcement is made by MMG Limited (Company or MMG and, together with its subsidiaries, the Group) pursuant to rule 13.09(2) of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Listing Rules) and the Inside Information Provisions (as defined in the Listing Rules) under Part XIVA of the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong).

The board of directors of the Company (Board) is pleased to report the Group's updated Mineral Resources and Ore Reserves Statement as at 30 June 2018 (Mineral Resources and Ore Reserves Statement).

The key changes to Mineral Resources and Ore Reserves Statement as at 30 June 2018 are:

- The Group's Mineral Resources (contained metal) have decreased for copper (8%), zinc (8%), lead (19%), silver (8%), gold (5%) and molybdenum (9%).
- The Group's Ore Reserves (contained metal) have decreased for copper (8%), zinc (14%), lead (18%), silver (13%), gold (11%) and molybdenum (9%).

For copper metal, the main reasons for the changes are depletion and cost increases at Las Bambas which were partially offset by increased metal price and for zinc metal the main reasons for the changes are depletion and the re-modelling of some areas of the Dugald River deposit following additional drilling.

All data reported here are on a 100% asset basis, with MMG's attributable interest shown against each asset within the Mineral Resources and Ore Reserves tables (pages 4 to 7). Mineral Resources and Ore Reserves for Sepon are not included in this statement as it is subject of a sale process that completed on 30 November 2018.



MINERAL RESOURCES AND ORE RESERVES STATEMENT

A copy of the executive summary of the Mineral Resources and Ore Reserves Statement is annexed to this announcement.

The information referred to in this announcement has been extracted from the report titled Mineral Resources and Ore Reserves Statement as at 30 June 2018 published on 5 December 2018 and is available to view on <u>www.mmg.com</u>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Mineral Resources and Ore Reserves Statement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the Mineral Resources and Ore Reserves Statement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the Mineral Resources and Ore Reserves Statement.

> By order of the Board MMG Limited Gao Xiaoyu CEO and Executive Director

Hong Kong, 5 December 2018

As at the date of this announcement, the Board comprises nine directors, of which two are executive directors, namely Mr Gao Xiaoyu and Mr Xu Jiqing; three are non-executive directors, namely Mr Guo Wenqing (Chairman), Mr Jiao Jian and Mr Zhang Shuqiang; and four are independent non-executive directors, namely Dr Peter William Cassidy, Mr Leung Cheuk Yan, Ms Jennifer Anne Seabrook and Professor Pei Ker Wei.



EXECUTIVE SUMMARY

Mineral Resources and Ore Reserves for MMG have been estimated as at 30 June 2018, and are reported in accordance with the guidelines in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 JORC Code) and Chapter 18 of the Listing Rules. Mineral Resources and Ore Reserves tables are provided on pages 4 to 7, which include the 30 June 2018 and 30 June 2017 estimates for comparison. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources that convert to Ore Reserves. All supporting data are provided within the Technical Appendix, available on the MMG website.

Mineral Resources and Ore Reserves information in this statement has been compiled by Competent Persons (as defined by the 2012 JORC Code). Each Competent Person consents to the inclusion of the information in this report that they have provided in the form and context in which it appears. Competent Persons are listed on page 8.

MMG has established processes and structures for the governance of Mineral Resources and Ore Reserves estimation and reporting. MMG has a Mineral Resources and Ore Reserves Committee that regularly convenes to assist the MMG Governance and Nomination Committee and the Board of Directors with respect to the reporting practices of the Company in relation to Mineral Resources and Ore Reserves, and the quality and integrity of these reports of the Group.

Key changes to the Mineral Resources (contained metal) since the 30 June 2017 estimate have been mostly related to depletion¹ together with increased costs at Las Bambas. An increase in metal price assumptions has only partially offset these reductions. At Dugald River, results from close spaced drilling have also resulted in a reduction in the estimated thickness of some parts of the orebody.

Key changes to the Ore Reserves (contained metal) since the 30 June 2017 estimate have been mostly related to depletion. Decreases of Indicated Mineral Resources at Dugald River have resulted in a reduction of available material for conversion to Ore Reserves.

Las Bambas has been operating for 24 months since commercial production was declared on 1 July 2016. During this time the mine has experienced both positive and negative reconciliation factors compared to the Ore Reserve. The 2017 Mineral Resources and Ore Reserves were subject to an external audit in 2018 which recognised that mine practices were still stabilising and made recommendations which could reduce the variations. Any residual discrepancies will be considered prior to the preparation of the 2019 Mineral Resource and Ore Reserve and Ore Reserve statement.

Pages 9 and 10 provide further discussion of the Mineral Resources and Ore Reserves changes.

¹ Depletion in this report refers to material processed by the mill and depleted from the Mineral Resources and Ore Reserves through mining.



MINERAL RESOURCES¹

All data reported here is on a 100% asset basis, with MMG's attributable interest shown against each asset within brackets.

			2	2018							2017			
Deposit	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)
Las Bambas														
(62.5%)														
Ferrobamba														
Oxide Copper														
Indicated	3.0	1.7						9.3	2.0					
Inferred	1.1	1.9						0.6	2.5					
Total	4.1	1.7						9.9	2.0					
Ferrobamba														
Primary Copper														
Measured	546	0.60			2.7	0.05	204	542	0.64			3.0	0.06	204
Indicated	426	0.61			3.0	0.05	204	546	0.60			2.8	0.05	211
Inferred	254	0.63			3.0	0.05	169	263	0.60			2.4	0.04	158
Total	1,226	0.61			2.9	0.05	197	1,351	0.62			2.8	0.05	198
Ferrobamba Total	1,230							1,361						
Chalcobamba														
Oxide Copper														
Indicated	6.1	1.5						6.1	1.5					
Inferred	0.7	1.5						0.7	1.5					
Total	6.8	1.5						6.8	1.5					
Chalcobamba														
Primary Copper														
Measured	75	0.44			1.4	0.02	148	85	0.37			1.1	0.01	148
Indicated	179	0.67			2.5	0.03	140	195	0.67			2.5	0.03	141
Inferred	33	0.54			1.9	0.03	142	36	0.52			1.8	0.02	141
Total	287	0.60			2.2	0.03	143	315	0.57			2.0	0.03	143
Chalcobamba	202							222						
Total	295							522						
Sulfobamba														
Primary Copper														
Indicated	89	0.65			4.6	0.02	168	85	0.67			4.7	0.02	170
Inferred	106	0.56			6.3	0.02	118	100	0.58			6.5	0.02	119
Total	194	0.60			5.5	0.02	140	184	0.62			5.7	0.02	142
Sulfobamba Total	194							184						
Oxide Copper														
Stockpile														
Indicated	9.9	1.2						5.5	1.0					
Total	9.9	1.2						5.5	1.0					
Sulphide														
Stockpile														
Measured	2.3	0.41						0.2	0.85			4.5		148
Total	<u>2</u> .3	0.41						0.2	0.85			4.5		148
Las Bambas Total	1,730							1,873						

¹ S.I. units used for metals of value; Cu=copper, Zn=zinc, Pb=lead, Ag=silver, Au=gold, Mo=molybdenum, Ni=nickel.



MINERAL RESOURCES

			:	2018							2017			
Deposit	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)
Kinsevere (100%)														
Oxide Copper														
Measured	2.0	4.3						3.0	4.4					
Indicated	9.7	3.1						13.6	3.0					
Inferred	1.8	2.4						2.8	2.3					
Total	13.6	3.2						19.4	3.1					
Transition Mixed														
Copper Ore														
Measured	1.3	2.9						0.3	2.7					
Indicated	3.4	2.0						1.4	2.3					
Inferred	0.4	1.9						0.1	2.1					
Total	5.2	2.3						1.8	2.4					
Primary Copper														
Measured	6.1	2.7						0.4	2.5					
Indicated	15.8	2.1						23.8	2.2					
Inferred	2.0	1.7						2.2	1.7					
Total	24.0	2.2						26.4	2.2					
Stockpiles														
Measured														
Indicated	10.2	2.2						7.9	2.5					
Total	10.2	2.2						7.9	2.5					
Kinsevere Total	52.9							55.5						



MINERAL RESOURCES

			:	2018						:	2017			
Deposit	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)	Tonnes (Mt)	Cu (%)	Zn (%)	Pb (%)	Ag (g/t)	Au (g/t)	Mo (ppm)
Dugald River														
(100%)														
Primary Zinc														
Measured	8.9		12.9	2.3	72			8.1		13.1	2.4	70		
Indicated	24.3		12.6	2.0	30			28.9		12.3	2.3	40		
Inferred	23.5		12.1	1.5	8			27.8		11.4	1.9	10		
Total	56.7		12.4	1.8	27			64.8		12.0	2.2	31		
Primary Copper														
Inferred	6.6	1.5				0.2		4.4	1.8				0.2	
Total	6.6	1.5				0.2		4.4	1.8				0.2	
Dugald River	63.3							69.4						
Total														
Rosebery														
(100%)														
Rosebery														
Measured	6.4	0.21	8.6	2.9	113	1.3		6.0	0.26	9.3	3.3	118	1.4	
Indicated	5.6	0.23	7.6	2.4	91	1.2		6.2	0.26	7.9	2.6	112	1.3	
Inferred	6.0	0.28	7.4	2.8	89	1.4		6.5	0.30	7.4	2.7	90	1.4	
Total	18.1	0.24	7.9	2.7	98	1.3		18.6	0.27	8.2	2.9	106	1.4	
Rosebery Total	18.1							18.6						
High Lake														
(100%)														
Measured														
Indicated	7.9	3.0	3.5	0.3	83	1.3		7.9	3.0	3.5	0.3	83	1.3	
Inferred	6.0	1.8	4.3	0.4	84	1.3		6.0	1.8	4.3	0.4	84	1.3	
Total	14.0	2.5	3.8	0.4	84	1.3		14.0	2.5	3.8	0.4	84	1.3	
Izok Lake														
(100%)														
Measured														
Indicated	13.5	2.4	13	1.4	73	0.18		13.5	2.4	13.3	1.4	73	0.18	
Inferred	1.2	1.5	11	1.3	73	0.21		1.2	1.5	10.5	1.3	73	0.21	
Total	14.6	2.3	13	1.4	73	0.18		14.6	2.3	13.1	1.4	73	0.18	



ORE RESERVES¹

All data reported here is on a 100% asset basis, with MMG's attributable interest shown against each asset within brackets.

Deposit Tonnes (Mt) Cu (Mt) Zn (%) Pb (%) Ag (g/t) Au (g/t) Mo (g/t) Tonnes (g/t) Cu (Mt) Zn (%) Pb (%) Ag (g/t) Au (g/t) Mo (ppm) Las Bambas (62.5%) Image: Comparison of the compariso
Las Bambas (62.5%) Ferrobamba Primary Copper Proved 504 0.62 2.9 0.05 197 497 0.68 3.2 0.06 206 Probable 287 0.68 3.7 0.07 179 326 0.71 3.6 0.06 207 Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Primary Copper Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper Proved 5.9 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161
(62.5%) Ferrobamba Primary Copper 9005 197 497 0.68 3.2 0.06 206 Proved 504 0.62 2.9 0.07 179 326 0.71 3.6 0.06 207 Probable 287 0.68 3.7 0.07 179 326 0.71 3.6 0.06 207 Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba 3.6 0.06 207 Primary Copper 3.6 0.06 207 Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Sulfobamba <
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Primary Copper Proved 504 0.62 2.9 0.05 197 497 0.68 3.2 0.06 206 Probable 287 0.68 3.7 0.07 179 326 0.71 3.6 0.06 207 Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Frimary Copper K <th< td=""></th<>
Proved 504 0.62 2.9 0.05 197 497 0.68 3.2 0.06 206 Probable 287 0.68 3.7 0.07 179 326 0.71 3.6 0.06 207 Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Primary Copper 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Primary Copper
Probable 287 0.68 3.7 0.07 179 326 0.71 3.6 0.06 207 Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Primary Copper Second 191 823 0.69 3.4 0.06 207 Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper Primary Copper Primary Copper Primary Copper Primary Copper 0.03 161 60 0.80 5.9 0.03 161 Primary Copper Sup olive Sup olive Sup olive Sup olive Sup olive<
Total 791 0.64 3.2 0.06 191 823 0.69 3.4 0.06 207 Chalcobamba Primary Copper
Chalcobamba Primary Copper Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper -
Primary Copper Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 135 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper V<
Proved 56 0.54 1.8 0.02 144 59 0.53 1.8 0.02 141 Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper - <
Probable 139 0.72 2.7 0.03 135 143 0.72 2.7 0.03 132 Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper Proved Proved Proved 9 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161 Primary Copper 59 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161 Primary Copper Stockniles Stockniles<
Total 195 0.67 2.5 0.03 137 202 0.66 2.5 0.03 134 Sulfobamba Primary Copper Proved 9 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161 Probable 59 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161 Primary Copper Stockniles Stock
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Total 59 0.81 5.9 0.03 161 60 0.80 5.9 0.03 161 Primary Copper Stockniles Stockniles
Primary Copper Stockniles
Stocknies
Proved 23 041 17 158 017 085 45 148
Total 2.3 0.41 1.7 158 0.17 0.85 4.5 148
Las Bambas Total 1,048 1,085
Kinsevere (100%)
Oxide Copper
Proved 1.9 4.4 2.6 4.5
Probable 6.1 3.7 8.1 3.5
Total 8.0 3.8 10.7 3.7
Stockpiles
Proved
Probable 7.7 2.3 2.5 3.6
Total 7.7 2.3 2.5 3.6
Kinsevere Total 15.7 13.2
Dugald River
(100%)
Primary Zinc
Proved 6.9 11.5 2.1 65 7.9 11.8 2.1 62
Probable 217 117 20 30 249 119 22 39
Total 28.6 11.7 2.0 38 32.8 11.9 2.2 44
Dugald River Total 28.6 32.8
Rosebery (100%)
Proved 37 0.21 83 30 114 1.4 38 0.25 9.0 3.4 119 1.4
Prohable 17 019 73 29 113 14 18 021 76 30 131 13
Total 54 0 21 80 30 114 1 4 56 0 24 86 33 122 1 4
Rosebery Total 54 54 56

¹ S.I. units used for metals of value; Cu=copper, Zn=zinc, Pb=lead, Ag=silver, Au=gold, Mo=molybdenum.



COMPETENT PERSONS

Deposit	Accountability	Competent Person	Professional Membership	Employer
MMG Mineral Resources and Ore Reserves Committee	Mineral Resources	Rex Berthelsen ¹	HonFAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Nan Wang ¹	MAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Geoffrey Senior ¹	MAusIMM	MMG
Las Bambas	Mineral Resources	Rex Berthelsen ¹	HonFAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu ¹	MAusIMM(CP)	MMG
Las Bambas	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb ¹	MAusIMM(CP)	MMG
Kinsevere	Mineral Resources	Douglas Corley ¹	MAIG R.P.Geo.	MMG
Kinsevere	Ore Reserves	Jodi Wright ¹	MAusIMM(CP)	MMG
Kinsevere	Metallurgy: Mineral Resources / Ore Reserves	Nigel Thiel ¹	MAusIMM(CP)	MMG
Rosebery	Mineral Resources	Anna Lewin	MAusIMM(CP)	MMG
Rosebery	Ore Reserves	Karel Steyn ¹	MAusIMM	MMG
Rosebery	Metallurgy: Mineral Resources / Ore Reserves	Kevin Rees	MAusIMM(CP)	MMG
Dugald River	Mineral Resources	Douglas Corley ¹	MAIG R.P.Geo.	MMG
Dugald River	Ore Reserves	Karel Steyn ¹	MAusIMM	MMG
Dugald River	Metallurgy: Mineral Resources / Ore Reserves	Nigel Thiel ¹	MAusIMM(CP)	MMG
High Lake, Izok Lake	Mineral Resources	Allan Armitage	MAPEG ² (P.Geo)	Formerly MMG

The information in this report that relates to Mineral Resources and Ore Reserves is based on information compiled by the listed Competent Persons, who are Members or Fellows of the Australasian Institute of Mining and Metallurgy (AusIMM), the Australian Institute of Geoscientists (AIG) or a Recognised Professional Organisation (RPO) and have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Each of the Competent Persons has given consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

¹ Participants in the MMG Long-Term Incentive Plans which may include Mineral Resources and Ore Reserves growth as a performance condition

² Member of the Association of Professional Engineers and Geoscientists of British Columbia



SUMMARY OF SIGNIFICANT CHANGES

MINERAL RESOURCES

Mineral Resources as at 30 June 2018 have changed since the 30 June 2017 estimate for a number of reasons with the most significant changes outlined in this section.

Decreases:

The decreases in Mineral Resources (contained metal) are due to:

- depletion at all producing operations;
- higher cost assumptions at Las Bambas;
- re-modelling at Dugald River following results from closer spaced drilling;
- re-modelling at Rosebery following additional drilling, partially offset by favourable TC/RC's which have improved economics and,
- changes to the pit shell resulting from reduction in minimum mining width at Kinsevere.



ORE RESERVES

Ore Reserves as at 30 June 2018 (contained metal) have decreased for copper (8%), zinc (14%), lead (18%), silver (13%), gold (11%) and molybdenum (9%).

Variations to Ore Reserves (contained metal) on an individual site basis are discussed below:

Decreases:

A net reduction in Ore Reserves (metal) for copper, zinc, lead, silver, gold and molybdenum due to:

- depletion at all producing operations;
- a further reduction at Las Bambas due to an increase in cost and modification of recovery formula for the Chalcobamba ore;
- a further reduction at Kinsevere due to an increase in the mining dilution assumption from 5% in 2017 to 10% in 2018 and a slight drop of copper grade in the Mineral Resources model. Inclusion of additional stockpiles did not offset these reductions;
- a further reduction at Dugald River due to stope width reduction from the Mineral Resources model resulting from additional drilling results and Mineral Resources modelling;
- a positive conversion from Mineral Resources to Ore Reserves at Rosebery, but not sufficient to offset depletion.



KEY ASSUMPTIONS

PRICES AND EXCHANGE RATES

The following price and foreign exchange assumptions, set according to the relevant MMG Standard as at January 2018, have been applied to all Mineral Resources and Ore Reserves estimates. Price assumptions for all metals have changed from the 2017 Mineral Resources and Ore Reserves statement.

	Ore Reserves	Mineral Resources
Cu (US\$/lb)	3.02	3.51
Zn (US\$/lb)	1.23	1.47
Pb (US\$/lb)	0.97	1.16
Au US\$/oz	1236	1442
Ag US\$/oz	17.9	20.3
Mo (US\$/lb)	8.08	9.39
USD:CAD	1.18	
AUD:USD	0.80	As per Ore Reserves
USD:PEN	3.10	

Table 1 : 2018 Price (real) and foreign exchange assumptions

Table 2 : 2017 Price (real) and foreign exchange assumptions

	Ore Reserves	Mineral Resources
Cu (US\$/lb)	2.96	3.40
Zn (US\$/lb)	1.19	1.43
Pb (US\$/lb)	0.95	1.14
Au US\$/oz	1200	1400
Ag US\$/oz	17.5	20.4
Mo (US\$/lb)	8.3	9.5
USD:CAD	1.18	As per Ore Reserves
AUD:USD	0.80	
USD:PEN	3.10	As per Ore Reserves

Table 3 – Differences in Prices (real) and foreign exchange assumptions (2017 – 2018)

	Ore Reserves	Mineral Resources
Cu (US\$/lb)	0.06	0.11
Zn (US\$/lb)	0.04	0.04
Pb (US\$/lb)	0.02	0.02
Au US\$/oz	36	42
Ag US\$/oz	0.4	-0.1
Mo (US\$/lb)	-0.22	-0.11
USD:CAD	0	
AUD:USD	0	
USD:PEN	0	



CUT-OFF GRADES

Mineral Resources and Ore Reserves cut-off values are shown in Table 4 and Table 5 respectively.

Site	Mineralisation	Likely Mining Method ¹	Cut-Off Value	Comments					
	Oxide Copper	OP	1% Cu	Cut-off is applied as a range that varies for each					
Las Bambas	Primary Copper	OP	0.16 – 0.23% Cu	deposit and mineralised rock type at Las Bambas. <i>In-</i> <i>situ</i> copper Mineral Resources constrained within US\$3.51/lb Cu pit shell.					
	Oxide Copper & Stockpiles	OP	0.6% CuAS ²						
Kinsevere	Transition Mixed Copper	OP	0.6-0.7% Cu ³	<i>In-situ</i> copper Mineral Resources constrained within a					
	Primary Copper	OP	0.7% Cu ³						
Rosebery	Rosebery (Zn, Cu, Pb, Au, Ag)	UG	A\$167/t NSR ⁴	Remnant upper mine areas A\$179/t NSR ⁴					
Dugold Diver	Primary Zinc (Zn, Pb, Ag)	UG	A\$146/t NSR ⁴						
Dugaid River	Primary Copper	UG	1% Cu						
High Lake	Cu, Zn, Pb, Ag, Au	OP	2.0% CuEq⁵	$CuEq^5 = Cu + (Zn \times 0.30) + (Pb \times 0.33) + (Au \times 0.56) + (Ag \times 0.01)$: based on Long-Term prices and metal recoveries at Au:75%, Ag:83%, Cu:89%, Pb:81% and Zn:93%.					
High Lake	Cu, Zn, Pb, Ag, Au	UG	4.0% CuEq⁵	$CuEq^5 = Cu + (Zn \times 0.30) + (Pb \times 0.33) + (Au \times 0.56) + (Ag \times 0.01)$: based on Long-Term prices and metal recoveries at Au:75%, Ag:83%, Cu:89%, Pb:81% and Zn:93%.					
Izok Lake	Cu, Zn, Pb, Ag, Au	OP	4.0% ZnEq ⁶	$ZnEq^6 = Zn + (Cu \times 3.31) + (Pb \times 1.09) + (Au \times 1.87) + (Ag \times 0.033)$; prices and metal recoveries as per High Lake.					

Table 4 : Mineral Resources cut-off grades

¹ OP = Open Pit, UG = Underground

 $^{^{2}}$ CuAS = Acid Soluble Copper 3 Cu = Total Copper

⁴ NSR = Net Smelter Return

⁵ CuEq = Copper Equivalent

⁶ ZnEq = Zinc Equivalent



Table 5 : Ore Reserves cut-off grades

Site	Mineralisation	Mining Method	Cut-Off Value	Comments		
	Primary Copper Ferrobamba		0.19 – 0.26 %Cu	Range based on rock type recovery.		
Las Bambas	Primary Copper Chalcobamba	OP	0.21 – 0.28 %Cu]		
	Primary Copper Sulfobamba		0.24 – 0.28 %Cu			
Kinsevere	Copper Oxide	OP	1.4% CuAS ¹	Approximate cut-off grades shown in this table for ex-pit material. Variable cut-off grade based on net value script.		
		OP	1.0% CuAS ¹	For existing stockpiles reclaim.		
Rosebery	(Zn, Cu, Pb, Au, Ag)	UG	A\$167/t NSR ²			
Dugald River	Primary Zinc	UG	A\$146/t NSR ²			

¹ CuAS = Acid Soluble Copper ² NSR = Net Smelter Return



PROCESSING RECOVERIES

Average processing recoveries are shown in Table 6. More detailed processing recovery relationships are provided in the Technical Appendix.

Site	Product		Concentrate Moisture Assumptions					
		Copper	Zinc	Lead	Silver	Gold	Мо	
Las Pambas	Copper Concentrate	86%	-	-	75%	71%		10%
Las Bambas	Molybdenum Concentrate						55%	5%
	Zinc Concentrate		84%		8%	6%		8%
	Lead Concentrate		7%	81%	41%	13%		6%
Rosebery	Copper Concentrate	57%			43%	33%		9%
	Doré ¹ (gold and silver)				0.2%	31%		
Durald Diver	Zinc Concentrate	_	87%		25%	-		10%
Dugaid River	Lead Concentrate	-		70%	40%	-		10%
Kinsevere	Common Cothordo	76%						
	Copper Cathode	(96% CuAS ²)	_	_	-	_		-

 Table 6: Processing Recoveries

The Technical Appendix published on the MMG website contains additional Mineral Resources and Ore Reserves information (including the Table 1 disclosure).

¹ Silver in Rosebery doré is calculated as a constant ratio to gold in the doré. Silver is set to 0.17 against gold being 20.7

² CuAS = Acid Soluble Copper

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