

MINERAL RESOURCES AND ORE RESERVES

EXECUTIVE SUMMARY

Mineral Resources and Ore Reserves for MMG have been estimated as at 30 June 2020 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 8 to 12, which include the 30 June 2020 and 30 June 2019 estimates for comparison. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources that have been converted 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 have 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 13.

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 2019 estimate relate to depletion at all sites together with increased costs, decrease in copper metal price assumption and changes to the deposit model at Las Bambas. Improvements to the geological model at Las Bambas resulting from improved orebody knowledge, have contributed to the model changes. This has been partially offset by increases at Kinsevere, at satellite deposits to Kinsevere and the south-west extension of Chalcobamba at Las Bambas. In the DRC, Mineral Resources have been declared for copper and cobalt at Mwepu, a new satellite copper deposit. At Dugald River, a net increase has resulted from the discovery of new thick and high-grade zones of zinc mineralisation not previously known within the deposit. This has more than replaced the last 12 months depletion.

Key changes to the Ore Reserves (contained metal) since the 30 June 2019 estimate are mostly related to depletion.¹ A necessary model change combined with increased costs and mine design changes at Las Bambas have also contributed. Increased metal price assumptions and stockpile reclassification have partially offset the depletion at Kinsevere. Rosebery Ore Reserves have materially increased by 50% (tonnage) as a result of mining and future tailings storage studies.

Pages 14 to 15 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 and processing.

MINERAL RESOURCES AND ORE RESERVES CONTINUED

MINERAL RESOURCES²

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

DEPOSIT	2020								2019							
	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)
LAS BAMBAS (62.5%)																
Ferrobamba Oxide Copper																
Indicated	0.8	1.9							2.1	1.7						
Inferred	0.1	1.8							1.3	1.8						
Total	0.9	1.9							3.4	1.7						
Ferrobamba Primary Copper																
Measured	462	0.61			2.6	0.05	229		553	0.56			2.4	0.05	202	
Indicated	264	0.72			3.2	0.07	201		465	0.58			2.5	0.05	166	
Inferred	115	0.61			2.1	0.04	97		239	0.61			1.3	0.03	79	
Total	840	0.64			2.7	0.05	202		1,257	0.57			2.2	0.04	166	
Ferrobamba Total	841								1,261							
Chalcobamba Oxide Copper																
Indicated	5.6	1.4							6.5	1.4						
Inferred	0.5	1.6							0.5	1.5						
Total	6.1	1.4							7.0	1.4						
Chalcobamba Primary Copper																
Measured	128	0.45			1.3	0.02	161		113	0.44			1.4	0.02	153	
Indicated	206	0.65			2.4	0.03	128		174	0.63			2.4	0.03	131	
Inferred	39	0.61			2.2	0.03	115		38	0.51			1.8	0.02	115	
Total	373	0.58			2.0	0.03	138		325	0.55			2	0.02	137	
Chalcobamba Total	379								332							
Sulfobamba Primary Copper																
Indicated	87	0.66			4.6	0.02	169		98	0.5			5.2	0.02	119	
Inferred	102	0.58			6.4	0.02	119		133	0.55			4.8	0.02	138	
Total	189	0.62			5.6	0.02	142		230	0.55			4.8	0.02	138	
Sulfobamba Total	189								230							
Oxide Copper Stockpile																
Indicated	12.1	1.2							11.4	1.2						
Total	12.1	1.2							11.4	1.2						
Sulphide Stockpile																
Measured	8.1	0.40			1.8		135		9.0	0.46			2.3		151	
Total	8.1	0.40			1.8		135		9.0	0.46			2.3		151	
Las Bambas Total	1,429								1,844							

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

MINERAL RESOURCES³

DEPOSIT	2020								2019							
	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)
KINSEVERE (100%)																
Oxide Copper																
Measured	1.5	3.2					0.10	1.4	4.2							0.17
Indicated	6.1	2.8					0.09	7.2	3.3							0.08
Inferred	2.2	2.2					0.07	0.9	2.4							0.09
Total	9.8	2.7					0.09	9.5	3.3							0.10
Transition Mixed Copper Ore																
Measured	0.9	2.1					0.17	0.5	2.5							0.14
Indicated	2.3	2.1					0.12	2.0	2.0							0.09
Inferred	1.1	1.6					0.08	0.3	1.9							0.15
Total	4.3	2.0					0.12	2.8	2.1							0.28
Primary Copper																
Measured	1.5	2.6					0.25	1.2	2.8							0.28
Indicated	18.7	2.3					0.11	19.5	2.3							0.13
Inferred	9.0	1.8					0.08	2.4	1.9							0.12
Total	29.3	2.1					0.10	23.2	2.3							0.14
Oxide-TMO Cobalt																
Measured	0.03	0.49					0.29	0.03	0.38							0.61
Indicated	0.18	0.33					0.32	0.25	0.31							0.59
Inferred	1.0	0.23					0.32	0.13	0.13							0.56
Total	1.2	0.25					0.32	0.40	0.30							0.58
Primary Cobalt																
Measured	0.02	0.55					0.20	0.01	0.48							0.33
Indicated	0.15	0.57					0.20	0.20	0.44							0.31
Inferred	0.16	0.34					0.25	0.11	0.32							0.29
Total	0.34	0.45					0.22	0.32	0.40							0.30
Stockpiles																
Measured																
Indicated	15.5	1.6						12.9	1.8							
Total	15.5	1.6						12.9	1.8							
Kinsevere Total	60.4	2.0						49.2	2.3							

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

MINERAL RESOURCES AND ORE RESERVES CONTINUED

MINERAL RESOURCES⁴

DEPOSIT	2020								2019							
	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)
SOKOROSHE 2 (100%)																
Oxide Copper																
Measured																
Indicated	1.9	2.3					0.33	0.81	3.5							0.28
Inferred								0.11	1.9							0.11
Total	1.9	2.3					0.33	0.93	3.3							0.26
Primary Copper																
Measured																
Indicated																
Inferred	0.83	1.8					0.51									
Total	0.83	1.8					0.51									
Oxide Cobalt																
Measured																
Indicated	0.37	0.56					1.03									
Inferred																
Total	0.37	0.56					1.03									
Primary Cobalt																
Measured																
Indicated																
Inferred	0.10	0.25					0.36									
Total	0.10	0.25					0.36									
Sokoroshe 2 Total	3.2	1.9					0.46	0.93	3.3							0.26
NAMBULWA (100%)																
Oxide Copper																
Measured																
Indicated	1.0	2.3					0.12									
Inferred	0.1	1.9					0.07	0.9	2.3							0.11
Total	1.1	2.3					0.11	0.9	2.3							0.11
Oxide Cobalt																
Measured																
Indicated	0.04	0.08					0.40									
Inferred																
Total	0.04	0.08					0.40									
Nambulwa Total	1.1	2.2					0.12	0.9	2.3							0.11
DZ (100%)																
Oxide Copper																
Measured																
Indicated	0.78	2.0					0.12									
Inferred	0.04	2.0					0.13	0.5	1.9							0.16
Total	0.82	2.0					0.12	0.5	1.9							0.16
Oxide Cobalt																
Measured																
Indicated	0.07	0.34					0.39									
Inferred	0.00	0.63					0.51									
Total	0.07	0.34					0.39									
DZ Total	0.9	1.9					0.15	0.5	1.9							0.16

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

MINERAL RESOURCES⁵

DEPOSIT	2020								2019							
	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)	TONNES (MT)	CU (%)	ZN (%)	PB (%)	AG (G/T)	AU (G/T)	MO (PPM)	CO (%)
MWEPU (100%)																
Oxide Copper																
Measured																
Indicated	0.95	2.3						0.17								
Inferred	0.63	2.3						0.27								
Total	1.58	2.3						0.21								
Oxide Cobalt																
Measured																
Indicated	0.08	0.61						0.45								
Inferred	0.22	0.44						0.47								
Total	0.30	0.49						0.46								
Mwepu Total	1.9															
DUGALD RIVER (100%)																
Primary Zinc																
Measured	13.5		13.2	2.3	74				12.9		13.1	2.3	69			
Indicated	19.8		11.5	1.2	21				20.9		12.3	1.6	23			
Inferred	34.3		11.0	0.8	9				25.5		11.7	1.2	7			
Total	67.6		11.6	1.2	26				59.3		12.2	1.6	26			
Primary Copper																
Inferred	19.2	1.4					0.1		8.7	1.6					0.2	
Total	19.2	1.4					0.06		8.7	1.6					0.2	
Dugald River Total	86.8								68.0							
ROSEBERY (100%)																
Rosebery																
Measured	6.7	0.19	8.0	3.0	131	1.5			6.1	0.20	8.3	2.9	109	1.3		
Indicated	2.1	0.15	6.6	2.0	98	1.1			3.1	0.18	7.0	2.4	92	1.3		
Inferred	6.7	0.26	9.2	3.0	109	1.5			7.3	0.33	8.9	3.1	100	1.5		
Total	15.5	0.21	8.3	2.9	117	1.4			16.6	0.26	8.3	2.9	102	1.4		
Rosebery Total	15.5								16.6							
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		

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

MINERAL RESOURCES AND ORE RESERVES CONTINUED

ORE RESERVES⁶

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

ORE RESERVES															
DEPOSIT	2020							2019							
	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 Primary Copper															
Proved	422	0.61			2.6	0.05	223	487	0.59			2.5	0.05	205	
Probable	166	0.74			3.4	0.07	189	295	0.65			2.9	0.06	172	
Total	587	0.64			2.8	0.06	214	783	0.61			2.7	0.05	192	
Chalcobamba Primary Copper															
Proved	81	0.51			1.6	0.02	156	73	0.52			1.7	0.02	161	
Probable	126	0.72			2.8	0.04	123	122	0.71			2.7	0.03	128	
Total	207	0.64			2.3	0.03	136	195	0.64			2.4	0.03	141	
Sulfobamba Primary Copper															
Proved															
Probable	64	0.76			5.5	0.03	163	69	0.73			5.2	0.03	164	
Total	64	0.76			5.5	0.03	163	69	0.73			5.2	0.03	164	
Primary Copper Stockpiles															
Proved	8.1	0.40			1.8		135	8.98	0.46			2.3		151	
Total	8.1	0.40			1.8		135	8.98	0.46			2.3		151	
Las Bambas Total	867	0.65			2.9		191	1,056	0.62			2.8		181	
KINSEVERE (100%)															
Oxide Copper															
Proved	0.8	3.5						1.0	4.2						
Probable	1.7	3.2						4.3	3.2						
Total	2.4	3.3						5.3	3.4						
Stockpiles															
Proved															
Probable	9.3	2.1						6.6	1.9						
Total	9.3	2.1						6.6	1.9						
Kinsevere Total	11.8	2.3						11.9	2.6						
DUGALD RIVER (100%)															
Primary Zinc															
Proved	10.9		10.8	2.0	64			11.8		10.9	2.0	57			
Probable	14.5		10.1	1.2	20			14.1		11.1	1.5	18			
Total	25.4		10.4	1.5	39			25.9		11.0	1.7	36			
Dugald River Total	25.4		10.4	1.5	39			25.9		11.0	1.7	36			
ROSEBERY (100%)															
Proved	6.1	0.18	7.0	2.7	121	1.4		3.6	0.20	7.4	2.7	107	1.3		
Probable	1.1	0.18	6.1	2.0	100	1.1		1.1	0.20	6.9	2.5	95	1.3		
Total	7.2	0.18	6.9	2.6	118	1.3		4.7	0.20	7.3	2.7	104	1.3		
Rosebery Total	7.2	0.18	6.9	2.6	118	1.3		4.7	0.20	7.3	2.7	104	1.3		

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

COMPETENT PERSONS

Table 1: Competent Persons for Mineral Resources, Ore Reserves and Corporate

DEPOSIT	ACCOUNTABILITY	COMPETENT PERSON	PROFESSIONAL MEMBERSHIP	EMPLOYER
MMG Mineral Resources and Ore Reserves Committee	Mineral Resources	Rex Berthelsen ⁷	HonFAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Neil Colbourne ⁷	MAusIMM	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb ⁷	MAusIMM(CP)	MMG
Las Bambas	Mineral Resources	Rex Berthelsen ⁷	HonFAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu ⁷	MAusIMM(CP)	MMG
Kinsevere	Mineral Resources	Douglas Corley	MAIG R.P.Geo.	Mining One Pty Ltd
Kinsevere	Ore Reserves	Dean Basile	MAusIMM(CP)	Mining One Pty Ltd
Rosebery	Mineral Resources	Douglas Corley	MAIG R.P.Geo	Mining One Pty Ltd
Rosebery	Ore Reserves	Karel Steyn	MAusIMM	STEKA Mining Consultants Pty Ltd
Dugald River	Mineral Resources	Douglas Corley	MAIG R.P.Geo.	Mining One Pty Ltd
Dugald River	Ore Reserves	Karel Steyn	MAusIMM	STEKA Mining Consultants Pty Ltd
High Lake, Izok Lake	Mineral Resources	Allan Armitage ⁸	MAPEG (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.

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

8. Member of the Association of Professional Engineers and Geoscientists of British Columbia.

MINERAL RESOURCES AND ORE RESERVES CONTINUED

SUMMARY OF SIGNIFICANT CHANGES

MINERAL RESOURCES

Mineral Resources as at 30 June 2020 have changed, since the 30 June 2019 estimate, for several reasons with the most significant changes outlined in this section.

Mineral Resources (contained metal) have increased for zinc (5%) and cobalt (35%); and have decreased for copper (11%), lead (10%), gold (9%), silver (2%) and molybdenum (13%). Variations to Mineral Resources (contained metal) on an individual site basis are discussed below:

Increases:

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

- continued drilling and improvements in geological modelling that have resulted in the discovery of previously unrecognised, thick and high-grade zones within the main Dugald River zinc orebody. Mineral Resources (contained zinc metal) have increased by 600kt (8%) at Dugald River as a result;
- discovery of the Chalcobamba South West zone which has added approximately 350kt copper to the Las Bambas copper Mineral Resource inventory;
- more than doubling (130%) copper Mineral Resources (contained metal) combined at the DRC Satellite deposits being Sokoroshe II, Nambulwa, DZ and Mwepu (maiden Report) for an additional 80kt copper metal;
- Cobalt metal Mineral Resources have increased by a further 18kt contained from the discovery and delineation of a new lens at Sokoroshe and the addition of the Mwepu deposit for the first time; and
- At Kinsevere contained copper Mineral Resource has increased by 100kt resulting from the updating of the geological model resulting in additional mixed and sulphide material.

Decreases:

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

- depletion at all producing operations; and
- factors relevant to Las Bambas which have reduced copper Mineral Resources by 1,583kt (contained metal). The reasons comprise modelling changes (30%) after realised negative mine to mill reconciliation and improved geological model from further developing orebody knowledge, negative economic factors such as decreased metal price assumptions, increased costs and cut off grades (40%) and milled depletion (30%).

Mineral Resources at Rosebery have not materially changed from 2019.

ORE RESERVES

Ore Reserves as at 30 June 2020 (contained metal) have increased for lead (2%); and have decreased for copper (14%), zinc (2%), silver (0.3%), molybdenum (13%) and gold (8%).

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

Increases:

Ore Reserves at Rosebery for zinc (44%), lead (48%), silver (72%), gold (52%) and copper (38%) have been realised due to the completion of drilling and mining studies to re-enter previously mined areas including P lens and conversion from Mineral Resources in lower mine lenses such as X, W and Y. These extensions to the Ore Reserve have been enabled by positive study results into additional tailings storage beyond the current built capacity.

Decreases:

Decreases in Ore Reserves (metal) for copper, zinc, lead, silver and gold are due to:

- depletion at all producing operations;
- a further reduction of copper (14%) at Las Bambas due to negative mine to mill reconciliation necessitating estimation model changes and changed economic parameters such as costs and pit design parameters;
- a further reduction of copper (11%) at Kinsevere, due to changes in mining dilution and ore loss assumptions, partially offset by an increase in copper metal price assumption; and
- a further reduction of zinc (8%) and lead (12%) at Dugald River, due to lower modelled grades;

KEY ASSUMPTIONS

PRICES AND EXCHANGE RATES

The following price and foreign exchange assumptions, set according to the relevant MMG Standard as at October 2020, have been applied to all Mineral Resources and Ore Reserves estimates. Price assumptions for all metals have changed from the 2019 Mineral Resources and Ore Reserves statement.

Table 2: 2020 Price (real) and foreign exchange assumptions

	ORE RESERVES	MINERAL RESOURCES
Cu (US\$/lb)	3.24	3.62
Zn (US\$/lb)	1.24	1.39
Pb (US\$/lb)	0.93	1.11
Au US\$/oz	1,392	1,736
Ag US\$/oz	18.13	21.70
Mo (US\$/lb)	10.08	11.90
Co (US\$/lb)	23.70	25.79
USD:CAD	1.29	
AUD:USD	0.75	As per Ore Reserves
USD:PEN	3.18	

MINERAL RESOURCES AND ORE RESERVES CONTINUED

CUT-OFF GRADES

Mineral Resources and Ore Reserves cut-off values are shown in Table 3 and Table 4, respectively.

Table 3: Mineral Resources cut-off grades

SITE	MINERALISATION	LIKELY MINING METHOD ⁹	CUT-OFF VALUE	COMMENTS
Las Bambas	Oxide copper	OP	1% Cu ¹⁰	Cut-off is applied as a range that varies for each deposit and mineralised rock type at Las Bambas. In-situ copper Mineral Resources constrained within US\$3.62/lb Cu and US\$11.90/lb Mo pit shell.
	Primary copper Ferrobamba		0.16% Cu ¹⁰ (average)	
	Primary copper Chalcobamba		0.20% Cu ¹⁰ (average)	
	Primary copper Sulfobamba		0.20% Cu ¹⁰ (average)	
Kinsevere	Oxide copper & stockpiles	OP	0.6% CuAS ¹¹	<i>In-situ</i> copper Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell.
	Transition mixed ore copper (TMO)	OP	0.7% Cu ¹⁰	
	Primary copper	OP	0.7% Cu ¹⁰	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell, but exclusive of copper mineralisation.
	Oxide TMO Cobalt	OP	0.2% Co ¹²	
	Primary cobalt	OP	0.1% Co ¹²	
Sokoroshe II	Oxide and TMO Copper	OP	0.9% Cu ¹⁰	<i>In-situ</i> copper Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell.
	Primary copper	OP	0.8% Cu ¹⁰	
	Oxide TMO cobalt	OP	0.3% Co ¹²	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell, but exclusive of copper mineralisation.
	Primary cobalt	OP	0.2% Co ¹²	
Nambulwa / DZ	Oxide copper	OP	0.9% Cu ¹⁰	<i>In-situ</i> copper Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell.
	Oxide cobalt	OP	0.3% Co ¹²	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell, but exclusive of copper mineralisation.
Mwepu	Oxide and TMO copper	OP	1.1% Cu ¹⁰	<i>In-situ</i> copper Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell.
	Oxide cobalt	OP	0.3% Co ¹²	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$3.62/lb Cu and US\$25.79/lb Co pit shell, but exclusive of copper mineralisation.
Rosebery	Rosebery (Zn, Cu, Pb, Au, Ag)	UG	A\$172/t NSR ¹³	All areas of the mine are reported using the same NSR cut off value.
Dugald River	Primary zinc (Zn, Pb, Ag)	UG	A\$141/t NSR ¹³	All areas of the mine are reported using the same NSR cut off value.
	Primary copper	UG	1% Cu ¹⁰	
High Lake	Cu, Zn, Pb, Ag, Au	OP	2.0% CuEq ¹⁴	CuEq ⁶ = Cu + (Zn×0.30) + (Pb×0.33) + (Au×0.56) + (Ag×0.01): based on Long-Term prices and metal recoveries at Au:75%, Ag:83%, Cu:89%, Pb:81% and Zn:93%.
	Cu, Zn, Pb, Ag, Au	UG	4.0% CuEq ¹⁴	CuEq ⁶ = Cu + (Zn×0.30) + (Pb×0.33) + (Au×0.56) + (Ag×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 ¹⁵	ZnEq ⁷ = Zn + (Cu×3.31) + (Pb×1.09) + (Au×1.87) + (Ag×0.033); prices and metal recoveries as per High Lake.

9. OP = Open Pit, UG = Underground

10. Cu = Total copper

11. CuAS = Acid soluble copper

12. Co = Total cobalt

13. NSR = Net Smelter Return

14. CuEq = Copper equivalent

15. ZnEq = Zinc equivalent

Table 4 : Ore Reserves cut-off grades

SITE	MINERALISATION	MINING METHOD	CUT-OFF VALUE	COMMENTS
Las Bambas	Primary copper Ferrobamba	OP	0.18% Cu ¹⁶ (average) ¹⁷	Range based on rock type recovery.
	Primary copper Chalcobamba		0.22% Cu ¹⁶ (average) ¹⁸	
	Primary copper Sulfobamba		0.23% Cu ¹⁶ (average) ¹⁹	
Kinsevere	Copper oxide	OP	1.2% CuAS ²⁰	Approximate cut-off grades shown in this table for ex-pit material. Variable cut-off grade based on net value script.
		OP	0.8% CuAS ¹⁹	For existing stockpiles reclaim.
Rosebery	(Zn, Cu, Pb, Au, Ag)	UG	A\$172/t NSR ²¹	
Dugald River	Primary zinc	UG	A\$141/t NSR (average) ²¹	

PROCESSING RECOVERIES

Average processing recoveries are shown in Table 5. More detailed processing recovery relationships are provided in the Technical Appendix.

Table 5: Processing Recoveries

SITE	PRODUCT	RECOVERY					CONCENTRATE MOISTURE ASSUMPTIONS
		CU	ZN	PB	AG	AU	
Las Bambas	Copper Concentrate	86%	-	-	75%	71%	10%
	Molybdenum Concentrate						55%
Rosebery	Zinc Concentrate		85%				8%
	Lead Concentrate		7.6%	74%	36%	16%	7%
	Copper Concentrate	64%			42%	40%	8%
	Doré ²² (gold and silver)				0.2%	23%	
Dugald River	Zinc Concentrate	-	88%		19%	-	10.5%
	Lead Concentrate	-		67%	38%	-	10.5%
Kinsevere	Copper Cathode	76%					
		(96% CuAS ²³)	-	-	-	-	-

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

16. Cu = Total copper

17. Range from 0.18 to 0.21% Cu

18. Range from 0.21 to 0.30% Cu

19. Range from 0.23 to 0.27% Cu

20. CuAS = Acid Soluble Copper

21. NSR = Net Smelter Return

22. 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

23. CuAS = Acid Soluble Copper