

MINERAL RESOURCES AND ORE RESERVES

EXECUTIVE SUMMARY

Mineral Resources and Ore Reserves for MMG have been estimated as at 30 June 2022 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 10 to 15, which include the 30 June 2022 and 30 June 2021 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 16.

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 2021 estimate relate to depletion¹ at all sites together with increased costs, changes in metal price assumptions, increases to cut-off grades and updates to the models at all sites. Geological models are continually improved and updated with new drilling information and result in both increases and decreases. Relatively small increases have occurred at Ferrobamba (Las Bambas) while all other copper deposits have increased by less than 1 per cent compared to the global change. There are no material changes at the Kinsevere mine whereas copper and cobalt have increased in the regional DRC satellite copper deposits resulting from new drilling at Sokoroshe 2 and an increase of the copper price assumption. Zinc metal increases are more than twice the depleted metal at Rosebery while at Dugald River, depletion (43 per cent) and model changes (57 per cent), partially driven by narrower intersections in some areas, explains the negative zinc variance at the site. The lead and silver negative variances are partially explained by depletion of those metals, 18 per cent and 27 per cent respectively, with the majority of the negative variance due to adverse model changes.

Key changes to the Ore Reserves (contained metal) since the 30 June 2021 estimate are mostly related to depletion.¹ An increase in contained copper metal at Las Bambas in the Ferrobamba deposit are due to improved grades and changes resulting from the pit design. Other pits show no material change. Milled depletion explains 90 per cent of the negative zinc metal variance at Dugald River, but only 30 per cent and 50 per cent of the lead and silver negative variances respectively.

Pages 17 and 18 provide further discussion of the Mineral Resources and Ore Reserves changes.

On 13 October 2022, MMG made a voluntary announcement regarding an invasion of both Sokoroshe 2 and Nambulwa project sites. Kinsevere Operation intends to mine both of these deposits as part of its Expansion Project and its future operations. MMG maintains that it holds current and valid mining lease agreements with Gécamines over these deposits and has announced it has commenced international arbitration before the International Chamber of Commerce on 21 October 2022.

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

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MINERAL RESOURCES¹

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

Deposit	2022								2021							
	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	0.03	1.7							0.4	1.4						
Inferred									0.01	1.1						
Total	0.03	1.7							0.4	1.4						
Ferrobamba Primary Copper																
Measured	470	0.56			2.3	0.04	210		410	0.59			2.6	0.05	220	
Indicated	270	0.70			3.3	0.06	180		280	0.70			3.2	0.06	200	
Inferred	110	0.84			4.2	0.08	170		72	0.92			3.9	0.08	140	
Total	850	0.64			2.9	0.05	190		770	0.66			3.0	0.06	210	
Ferrobamba Total	850								770							
Chalcobamba Oxide Copper																
Indicated	6.8	1.4							6.5	1.5						
Inferred	0.06	1.5							0.5	1.7						
Total	6.9	1.4							7.0	1.5						
Chalcobamba Primary Copper																
Measured	140	0.54			1.7	0.02	140		120	0.52			1.6	0.02	150	
Indicated	180	0.64			2.5	0.03	110		170	0.70			2.7	0.03	120	
Inferred	29	0.56			2.4	0.03	130		27	0.60			2.5	0.03	140	
Total	340	0.60			2.1	0.03	120		320	0.63			2.3	0.03	130	
Chalcobamba Total	347								327							
Sulfobamba Primary Copper																
Indicated	84	0.67			4.7	0.02	170		80	0.68			4.8	0.02	170	
Inferred	98	0.58			6.5	0.02	120		96	0.58			6.5	0.02	120	
Total	180	0.62			5.7	0.02	140		180	0.63			5.7	0.02	140	
Sulfobamba Total	180	0.62			5.7	0.02	140		180	0.63			5.7	0.02	140	
Oxide Copper Stockpile																
Indicated	14	1.1							13	1.1						
Total	14	1.1							13	1.1						
Sulphide Stockpile																
Measured	30	0.38			2.2		130		26	0.39			1.8		140	
Total	30	0.38			2.2		130		26	0.39			1.8		140	
Las Bambas Total	1,400								1,300							

1 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

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MINERAL RESOURCES¹

Deposit	2022								2021							
	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	2.6	2.9						0.08	1.2	3.2						0.11
Indicated	4.4	2.6						0.12	5.5	2.7						0.09
Inferred	2.0	2.0						0.09	2.2	2.1						0.07
Total	9.0	2.6						0.10	8.9	2.7						0.09
Transition Mixed Copper Ore																
Measured	1.0	2.2						0.16	0.8	2.0						0.12
Indicated	2.5	2.0						0.12	2.2	2.1						0.08
Inferred	1.3	1.7						0.08	1.1	1.6						0.12
Total	4.8	1.9						0.12	4.1	1.9						0.25
Primary Copper																
Measured	2.2	2.5						0.23	1.5	2.6						0.25
Indicated	18	2.2						0.10	19	2.3						0.10
Inferred	10	1.6						0.07	9.2	1.7						0.08
Total	31	2.1						0.10	29	2.1						0.10
Oxide-TMO Cobalt																
Measured									0.02	0.46						0.31
Indicated	0.70	0.21						0.32	0.16	0.35						0.33
Inferred	0.73	0.16						0.33	0.99	0.23						0.32
Total	1.4	0.18						0.32	1.2	0.3						0.32
Primary Cobalt																
Measured									0.01	0.54						0.24
Indicated	0.17	0.31						0.20	0.15	0.57						0.20
Inferred	0.24	0.26						0.22	0.17	0.33						0.25
Total	0.41	0.28						0.21	0.34	0.44						0.22
Stockpiles																
Measured																
Indicated	14	1.5							16	1.6						
Total	14	1.5							16	1.6						
Kinsevere Total	61	1.9							59	2.0						

1 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

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MINERAL RESOURCES¹

Deposit	2022								2021							
	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	2.8	2.1						0.39	1.7	2.4						0.35
Inferred	0.16	1.1						0.10	0.02	3.4						0.07
Total	2.9	2.1						0.37	1.7	2.4						0.34
Transition Mixed Copper Ore																
Measured																
Indicated	0.07	1.6						0.23	0.1	0.9						1.50
Inferred									0.2	2.5						0.24
Total	0.07	1.6						0.23	0.3	1.8						0.75
Primary Copper																
Measured																
Indicated	0.62	1.50						0.47								
Inferred									0.67	1.7						0.58
Total	0.62	1.5						0.47	0.67	1.7						0.58
Oxide Cobalt																
Measured																
Indicated	0.63	0.24						0.51	0.47	0.41						0.56
Inferred	0.31	0.35						0.31	0.10	0.25						0.34
Total	0.93	0.27						0.45	0.57	0.4						0.52
Primary Cobalt																
Measured																
Indicated	0.047	0.53						0.64	0.012	0.14						0.34
Inferred									0.004	0.36						0.65
Total	0.047	0.53						0.64	0.016	0.20						0.42
Sokoroshe 2 Total	4.6	1.6						0.40	3.3	1.9						0.46
Nambulwa (100%)																
Oxide Copper																
Measured																
Indicated	1.1	2.2						0.11	1.0	2.2						0.11
Inferred	0.10	1.9						0.07	0.09	1.9						0.07
Total	1.2	2.1						0.11	1.1	2.2						0.11
Transition Mixed Copper Ore																
Measured																
Indicated	0.02	3.3						0.18								
Inferred																
Total	0.02	3.3						0.18								
Oxide Cobalt																
Measured																
Indicated	0.17	0.14						0.27	0.17	0.15						0.27
Inferred																
Total	0.17	0.14						0.27	0.2	0.1						0.27
Nambulwa Total	1.4	1.9						0.13	1.3	2.0						0.13

1 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

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MINERAL RESOURCES¹

Deposit	2022								2021							
	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 (%)
DZ (100%)																
Oxide Copper																
Measured																
Indicated	0.94	1.8						0.13	0.79	2.0						0.13
Inferred	0.04	2.0						0.12	0.04	2.0						0.13
Total	0.98	1.8						0.13	0.82	2.0						0.13
Oxide Cobalt																
Measured																
Indicated	0.33	0.22						0.27	0.35	0.26						0.27
Inferred	0.01	0.14						0.25	0.01	0.14						0.25
Total	0.33	0.22						0.27	0.35	0.26						0.27
DZ Total	1.3	1.4						0.16	1.2	1.5						0.17
Mwepu (100%)																
Oxide Copper																
Measured																
Indicated	0.75	2.5						0.17	0.86	2.4						0.18
Inferred	0.45	2.7						0.29	0.57	2.4						0.28
Total	1.2	2.6						0.22	1.4	2.4						0.22
TMO Copper																
Measured																
Indicated	0.20	1.3						0.18								
Inferred	0.18	1.4						0.22								
Total	0.38	1.3						0.20								
Oxide Cobalt																
Measured																
Indicated	0.04	0.7						0.45	0.10	0.56						0.32
Inferred	0.05	0.7						0.44	0.12	0.61						0.33
Total	0.09	0.7						0.45	0.22	0.59						0.33
Primary Cobalt																
Measured																
Indicated	0.07	0.25						0.31	0.07	0.25						0.31
Inferred	0.20	0.27						0.42	0.20	0.27						0.41
Total	0.27	0.26						0.39	0.27	0.26						0.39
Mwepu Total	1.9	1.9						0.29	1.9	1.9						0.25

1 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 RESOURCES¹

Deposit	2022								2021							
	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 (%)
Dugald River (100%)																
Primary Zinc																
Measured	12		13.5	2.2	71				13		13.1	2.4	80			
Indicated	15		12.0	0.9	16				17		11.6	1.4	21			
Inferred	33		11.3	0.8	8.1				36		11.2	0.8	9			
Total	61		11.9	1.1	23				66		11.7	1.3	26			
Primary Copper																
Inferred	4.5	1.5				0.1			4.5	1.5				0.1		
Total	4.5	1.5				0.1			4.5	1.5				0.1		
Dugald River Total	65								70							
Rosebery (100%)																
Rosebery																
Measured	7.3	0.20	7.4	2.7	118	1.2			6.5	0.22	7.7	3.0	135	1.4		
Indicated	4.6	0.18	6.9	1.9	75	1.1			3.1	0.17	6.5	2.3	117	1.2		
Inferred	7.9	0.19	7.0	2.1	77	1.1			7.1	0.21	8.6	2.5	91	1.2		
Total	20	0.19	7.1	2.3	92	1.1			17	0.21	7.9	2.6	113	1.3		
Rosebery Total	20								17							
High Lake (100%)																
High Lake																
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	2.5	3.8	0.4	84	1.3			14	2.5	3.8	0.4	84	1.3		
Izok Lake (100%)																
Izok Lake																
Measured																
Indicated	13	2.4	13.3	1.4	73	0.18			13	2.4	13.3	1.4	73	0.18		
Inferred	1.2	1.5	10.5	1.3	73	0.21			1.2	1.5	10.5	1.3	73	0.21		
Total	15	2.3	13.1	1.4	73	0.18			15	2.3	13.1	1.4	73	0.18		

¹ 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

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ORE RESERVES¹

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

Deposit	2022								2021							
	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 Primary Copper																
Proved	340	0.65			2.9	0.05	200		360	0.61			2.7	0.05	220	
Probable	130	0.91			4.6	0.08	180		160	0.77			3.5	0.07	190	
Total	470	0.72			3.4	0.06	200		520	0.66			2.9	0.06	210	
Chalcobamba Primary Copper																
Proved	100	0.65			2.1	0.03	130		83	0.60			1.9	0.02	140	
Probable	130	0.71			2.7	0.03	110		140	0.74			2.7	0.03	120	
Total	230	0.68			2.4	0.03	120		220	0.69			2.4	0.03	130	
Sulfobamba Primary Copper																
Proved																
Probable	54	0.80			5.9	0.03	160		56	0.79			5.8	0.03	160	
Total	54	0.80			5.9	0.03	160		56	0.79			5.8	0.03	160	
Primary Copper Stockpiles																
Proved	30	0.38			2.2		130		26	0.39			1.8		140	
Total	30	0.38			2.2		130		26	0.39			1.8		180	
Las Bambas Total	780	0.70			3.2		170		820	0.67			3.0		180	
Kinsevere (100%)																
Oxide/TMO Copper and Cobalt																
Proved	3.0	2.5						0.12	1.0	3.4						0.15
Probable	5.7	2.2						0.12	3.8	2.9						0.11
Total	8.6	2.3						0.12	4.8	3.0						0.12
Primary Copper and Cobalt																
Proved	1.9	2.3						0.21	1.8	2.5						0.24
Probable	16	2.2						0.10	18	2.4						0.11
Total	18	2.2						0.11	19	2.4						0.12
Stockpiles																
Proved																
Probable	14	1.5							16	1.6						
Total	14	1.5							16	1.6						
Kinsevere Total	40	2.0							40	2.1						
Dugald River (100%)																
Primary Zinc																
Proved	12		10.9	1.9	62				12		11.0	2.1	70			
Probable	10		10.1	0.9	14				12		10.1	1.3	18			
Total	22		10.5	1.4	39				24		10.6	1.7	44			
Dugald River Total	22		10.5	1.4	39				24		10.6	1.7	44			
Rosebery (100%)																
Proved	4.8	0.19	6.7	2.7	120	1.2			5.3	0.19	6.4	2.6	120	1.3		
Probable	0.77	0.20	6.1	2.1	79	1.3			0.84	0.18	5.5	2.0	110	1.1		
Total	5.5	0.19	6.6	2.6	110	1.2			6.1	0.19	6.3	2.5	120	1.2		
Rosebery Total	5.5	0.19	6.6	2.6	110	1.2			6.1	0.19	6.3	2.5	120	1.2		

1 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

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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 ¹	HonFAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Cornel Parshotam ¹	MAusIMM	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb ¹	MAusIMM(CP)	MMG
Las Bambas	Mineral Resources	Hugo Rios ¹	MAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Jorge Valverde ¹	MAusIMM(CP)	MMG
Kinsevere	Mineral Resources	Jeremy Witley ²	Pr.Sci.Nat.	The MSA Group (Pty) Ltd
Kinsevere	Ore Reserves	Dean Basile	MAusIMM(CP)	Mining One Pty Ltd
Rosebery	Mineral Resources	Maree Angus	MAusIMM(CP)	AMC Consultants Pty Ltd
Rosebery	Ore Reserves	Andrew Robertson	FAusIMM	Mining Plus Pty Ltd
Dugald River	Mineral Resources	Andrew Fowler	MAusIMM(CP)	Mining Plus Pty Ltd
Dugald River	Ore Reserves	Philip Bremner	FAusIMM	Oreteck Pty Ltd
High Lake, Izok Lake	Mineral Resources	Allan Armitage ³	MAPEG (P.Geo)	Formerly MMG

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

² South African Council for Natural Scientific Professions, Professional Natural Scientist

³ Member of the Association of Professional Engineers and Geoscientists of British Columbia

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.

MINERAL RESOURCES AND ORE RESERVES

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SUMMARY OF SIGNIFICANT CHANGES

MINERAL RESOURCES

Mineral Resources as at 30 June 2022 have changed, since the 30 June 2021 estimate, for several reasons with the most significant changes outlined in this section.

Mineral Resources (contained metal) have increased for copper (5 per cent), cobalt (11 per cent), molybdenum (2 per cent) and gold (2 per cent). Zinc (-3 per cent), lead (-10 per cent) and silver (-1 per cent) have decreased from 2021. 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:

- metal prices, specifically copper, has increased the overall contained copper metal and contributed by association to an increase in cobalt at the Kinsevere and satellite DRC deposits; and
- improvements in orebody knowledge, specifically at Las Bambas and Rosebery. At Rosebery, continued drilling success in the middle and lower mine areas, specifically Z lens, combined with a reduction in cut-off grade, has further delineated a combined 3.1Mt of additional Mineral Resource as extensions to the deposit. An increase in metal of 10 per cent copper, 7 per cent zinc, 3 per cent lead and 6 per cent gold have resulted. At Las Bambas, copper metal has increased by 6 per cent, silver by 7 per cent and molybdenum by 2 per cent.

Decreases:

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

- depletion at all producing operations;
- drilling at Dugald River has intersected some narrower zones than expected and has partially contributing to the -6 per cent zinc metal reduction. Changes to the modelling procedures aimed at addressing a negative reconciliation in by-products have contributed to the majority of the lead (-20 per cent) and silver (-19 per cent) variances. This largely impacts the Indicated category; and
- removal of a further 10kt Cu from SulFOBamba deposit at Las Bambas due to illegal mining over the last 12 months taking the total estimated depletion due to illegal mining to 50kt Cu.

MINERAL RESOURCES AND ORE RESERVES

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ORE RESERVES

Ore Reserves as at 30 June (contained metal) have decreased for copper (-1 per cent), zinc (-8 per cent), lead (-19 per cent), silver (-5 per cent), gold (-5 per cent), molybdenum (-13 per cent) and cobalt (-0.2 per cent).

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

Increases:

There are no increases of metal in the 2022 Ore Reserves.

Decreases:

Decreases of Ore Reserves (metal) as stated above are due to:

- depletion at all producing operations;
- changes in modelling practices at Dugald River have had an adverse impact on lead (-23 per cent) and silver (-18 per cent), specifically in the Probable Ore Reserve category. This impact is not material from a value perspective as lead and silver combined represent less than 10 per cent of the total Metal Zn Equivalent (4.5 per cent);
- the reduction of copper metal (-6 per cent) at Kinsevere, and at Rosebery (-6 per cent) are both due to depletion; and
- the reduction of zinc metal (-8 per cent) at Dugald River and (-4 per cent) at Rosebery are due to depletion net of minor model updates.

MINERAL RESOURCES AND ORE RESERVES

CONTINUED

KEY ASSUMPTIONS

PRICES AND EXCHANGE RATES

The following price and foreign exchange assumptions, set according to the relevant MMG Standard as at February 2022, have been applied to all Mineral Resources and Ore Reserves estimates. Price assumptions for all metals have changed from the 2021 Mineral Resources and Ore Reserves statement.

Table 2: 2022 Price (real) and foreign exchange assumptions

	Ore Reserves	Mineral Resources
Cu (US\$/lb)	3.38	4.04
Zn (US\$/lb)	1.17	1.39
Pb (US\$/lb)	0.89	1.06
Au US\$/oz	1,566	1,878
Ag US\$/oz	19.60	23.48
Mo (US\$/lb)	10.48	12.12
Co (US\$/lb)	20.60	30.30
USD:CAD	1.25	As per Ore Reserves
AUD:USD	0.75	
USD:PEN	3.71	

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 ¹	Cut-Off Value	Comments
Las Bambas	Oxide copper	OP	1% Cu ²	Cut-off is applied as a range that varies for each deposit and mineralised rock type at Las Bambas. <i>In-situ</i> copper Mineral Resources constrained within US\$4.04/lb Cu and US\$12.12/lb Mo pit shell.
	Primary copper Ferrobamba		0.16% Cu ² (average)	
	Primary copper Chalcobamba		0.18% Cu ² (average)	
	Primary copper Sulfobamba		0.20% Cu ² (average)	
Kinsevere	Oxide copper & stockpiles	OP	0.55% CuAS ³	<i>In-situ</i> copper Mineral Resources constrained within a US\$4.04/lb Cu and US\$30.30/lb Co pit shell.
	Transition mixed ore copper (TMO)	OP	0.6% Cu ²	
	Primary copper	OP	0.6% Cu ²	
	Oxide TMO Cobalt	OP	0.2% Co ⁴	
Sokoroshe II	Primary cobalt	OP	0.1% Co ⁴	<i>In-situ</i> copper Mineral Resources constrained within a US\$4.04/lb Cu and US\$30.30/lb Co pit shell.
	Oxide	OP	0.6% CuAS ³	
	TMO Copper	OP	0.8% Cu ²	
	Primary copper	OP	0.8% Cu ²	
Nambulwa / DZ	Oxide TMO cobalt	OP	0.2% Co ⁴	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$4.04/lb Cu and US\$30.30/lb Co pit shell, but exclusive of copper mineralisation above cut off.
	Primary cobalt	OP	0.2% Co ⁴	
	Oxide copper	OP	0.6% CuAS ³	
	TMO copper	OP	0.8% Cu ²	
Mwepu	Primary copper	OP	0.8% Cu ²	<i>In-situ</i> cobalt Mineral Resources constrained within a US\$4.04/lb Cu and US\$30.30/lb Co pit shell, but exclusive of copper mineralisation.
	Oxide TMO cobalt	OP	0.2% Co ⁴	
	Primary cobalt	OP	0.2% Cu ⁴	
	Oxide copper	OP	0.75% CuAS ³	
Rosebery	TMO copper	OP	1.0% Cu ²	<i>In-situ</i> copper Mineral Resources constrained within a US\$4.04/lb Cu and US\$30.30/lb Co pit shell.
	Primary copper	OP	1.0% Cu ²	
	Oxide TMO cobalt	OP	0.3% Co ⁴	
	Primary cobalt	OP	0.2% Co ⁴	
Rosebery	Rosebery (Zn, Cu, Pb, Au, Ag)	UG	A\$155/t NSR ⁵	All areas of the mine are reported using the same NSR cut-off value.
Dugald River	Primary zinc (Zn, Pb, Ag)	UG	A\$145/t NSR ⁵	All areas of the mine are reported using the same NSR cut-off value.
High Lake	Primary copper	UG	1% Cu ²	All areas of the mine are reported at the same cut-off grade
	Cu, Zn, Pb, Ag, Au	OP	2.0% CuEq ⁶	
High Lake	Cu, Zn, Pb, Ag, Au	UG	4.0% CuEq ⁶	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 ⁶	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 ¹	ZnEq ¹ = Zn + (Cu×3.31) + (Pb×1.09) + (Au×1.87) + (Ag×0.033); prices and metal recoveries as per High Lake.

1 OP = Open Pit, UG = Underground

2 Cu = Total copper

3 CuAS = Acid Soluble copper

4 Co = Total Cobalt

5 NSR = Net Smelter Return

6 CuEq = Copper Equivalent

MINERAL RESOURCES AND ORE RESERVES

CONTINUED

Table 4: Ore Reserves cut-off grades

Site	Mineralisation	Mining Method	Cut-Off Value	Comments
Las Bambas	Primary copper Ferrobamba	OP	0.20% Cu ² (average) ³	Range based on rock type recovery.
	Primary copper Chalcobamba		0.23% Cu ² (average) ⁴	
	Primary copper Sulfobamba		0.25% Cu ² (average) ⁵	
Kinsevere	Copper oxide	OP	0.5% CuAS ⁶	Approximate cut-off grades shown in this table for ex-pit material. Variable cut-off grade based on net value script.
		OP	0.5% CuAS ⁶	
Rosebery	(Zn, Cu, Pb, Au, Ag)	UG	A\$155/t NSR ⁷	
Dugald River	Primary zinc	UG	A\$145/t NSR (average) ⁷	

1 ZnEq = Zinc Equivalent

2 Cu = Total copper

3 Range from 0.20 to 0.24% Cu

4 Range from 0.22 to 0.29% Cu

5 Range from 0.24 to 0.29% Cu

6 CuAS = Acid Soluble Copper

7 NSR = Net Smelter Return

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					Mo	Concentrate Moisture Assumptions
		Cu	Zn	Pb	Ag	Au		
Las Bambas	Copper Concentrate	86%	-	-	75%	71%		10%
	Molybdenum Concentrate						55.5%	5%
Rosebery	Zinc Concentrate		84%					7.8%
	Lead Concentrate		8%	77%	37%	16%		6%
	Copper Concentrate	58%			40%	35%		8.7%
	Doré ¹ (gold and silver)				0.14%	24%		
Dugald River	Zinc Concentrate	-	91%		35%	-		9.7%
	Lead Concentrate	-		66%	36%	-		9.2%
Kinsevere and satellites	Copper Cathode	80%						
		(96% CuAS ²)						
	Cobalt Precipitate	64% Co Recovery						

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

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