MMG LIMITED

五礦資源有限公司

(Incorporated in Hong Kong with limited liability)

(STOCK CODE: 1208)

MINERAL RESOURCES AND ORE RESERVES STATEMENT AS AT 30 JUNE 2020

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 2020 (Mineral Resources and Ore Reserves Statement).

The key changes to Mineral Resources and Ore Reserves Statement as at 30 June 2020 are:

- The Group's Mineral Resources (contained metal) have increased for zinc (5%) and cobalt (35%) and decreased for copper (11%), lead (10%), silver (2%), gold (9%) and molybdenum (13%).
- The Group's Ore Reserves (contained metal) have increased for lead (2%) and have decreased for copper (14%), zinc (2%), silver (0.3%), gold (8%) and molybdenum (13%).

For copper metal, the main reasons for changes are depletion at all sites, negative mine to mill reconciliations, cost increases and refreshed metal price assumptions. Improvements to the geological model at Las Bambas resulting from improved orebody knowledge, have contributed to the model changes. Depletion and other negative impacts were partly offset by Ore Resource increases at Kinsevere and its satellite deposits and the south-west extension of Chalcobamba at Las Bambas. Mining and milling depletion accounts for approximately 44% of the total decrease.

For zinc metal, the main reasons for the changes are depletion at all sites and conversion of Mineral Resources to Ore Reserves at Rosebery. This was a result of focused drilling and detailed studies that seek to extend the life of this operation. Zinc Mineral Resources have increased, primarily as a result of the discovery of thick, high grade zones within the main lens in the southern part of the Dugald River orebody.

Cobalt metal in Mineral Resources has increase by 35% from 2019. The change is due to a new cobalt rich zone discovered at Sokorshe II and the addition of another new satellite deposit, Mwepu, to the mineral inventory.

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 8).

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 2020 published on 2 December 2020 and is available to view on www.mmg.com. 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, 2 December 2020

As at the date of this announcement, the Board comprises eight directors, of which one is an executive director, namely Mr Gao Xiaoyu; four are non-executive directors, namely Mr Guo Wenqing (Chairman), Mr Jiao Jian, Mr Xu Jiqing and Mr Zhang Shuqiang; and three are independent non-executive directors, namely Dr Peter William Cassidy, Mr Leung Cheuk Yan and Mr Chan Ka Keung, Peter.

MMG Limited

MINERAL RESOURCES AND ORE RESERVES STATEMENT

30 June 2020

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 4 to 8, 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 9.

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[1] 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 10 and 11 provide further discussion of the Mineral Resources and Ore Reserves changes.

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[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[1]

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

	2020								2019							
Deposit	**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**	**0.02**	**137**	
Chalcobamba Total	**379**								**332**							
Sulfobamba Primary Copper																
Indicated	87	0.66			4.6	0.02	169		98	0.50			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**							

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[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[1]

	2020								2019							
Deposit	**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**						

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[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[1]

	2020								2019							
Deposit	**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**	**0.0**	**0.0**						**0.00**

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[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[1]

	2020								2019							
Deposit	**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**		

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

ORE RESERVES[1]

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

Ore Reserves

	2020							2019						
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														
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**	

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[1] 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[1]	HonFAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Neil Colbourne[1]	MAusIMM	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore	Amy Lamb[1]	MAusIMM(CP)	MMG
Las Bambas	Mineral Resources	Rex Berthelsen[1]	HonFAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu[1]	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[2]	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.

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[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 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	As per Ore Reserves
AUD:USD	0.75	
USD:PEN	3.18	

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. *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[2] (average)	
	Primary copper Chalcobamba		0.20% Cu[2] (average)	
	Primary copper Sulfobamba		0.20% Cu[2] (average)	
Kinsevere	Oxide copper & stockpiles	OP	0.6% CuAS[3]	*In-situ* 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[2]	
	Primary copper	OP	0.7% Cu[2]	
	Oxide TMO Cobalt	OP	0.2% Co[4]	*In-situ* 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	0.1% Co[4]	
Sokoroshe II	Oxide and TMO Copper	OP	0.9% Cu[2]	*In-situ* 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[2]	
	Oxide TMO cobalt	OP	0.3% Co[4]	*In-situ* 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[4]	
Nambulwa / DZ	Oxide copper	OP	0.9% Cu[2]	*In-situ* 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[4]	*In-situ* 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[2]	*In-situ* 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[4]	*In-situ* 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[5]	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[5]	All areas of the mine are reported using the same NSR cut off value.
	Primary copper	UG	1% Cu[2]	
High Lake	Cu, Zn, Pb, Ag, Au	OP	2.0% 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[7]	ZnEq[7] = Zn + (Cu×3.31) + (Pb×1.09) + (Au×1.87) + (Ag×0.033); prices and metal recoveries as per High Lake.

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[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

[7] 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[1] (average)[2]	Range based on rock type recovery.
	Primary copper Chalcobamba		0.22% Cu[1] (average)[3]	
	Primary copper Sulfobamba		0.23% Cu[1] (average)[4]	
Kinsevere	Copper oxide	OP	1.2% CuAS[5]	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[4]	For existing stockpiles reclaim.
Rosebery	(Zn, Cu, Pb, Au, Ag)	UG	A$172/t NSR[6]	
Dugald River	Primary zinc	UG	A$141/t NSR (average)[21]	

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[1] Cu = Total copper

[2] Range from 0.18 to 0.21% Cu

[3] Range from 0.21 to 0.30% Cu

[4] Range from 0.23 to 0.27% Cu

[5] CuAS = Acid Soluble Copper

[6] 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						Concentrate Moisture Assumptions
		Cu	Zn	Pb	Ag	Au	Mo	
Las Bambas	Copper Concentrate	86%	-	-	75%	71%		10%
	Molybdenum Concentrate						55%	5%
Rosebery	Zinc Concentrate		85%					8%
	Lead Concentrate		7.6%	74%	36%	16%		7%
	Copper Concentrate	64%			42%	40%		8%
	Doré[1] (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[2])	–	–	–	–		–

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

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[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

MMG Mineral Resources and Ore Reserves Statement

as at 30 June 2020

Technical Appendix

2 December 2020

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APPROVALS PAGE

	Rex Berthelsen	Head of Resource Geology	2/12/2020
Signature	**Name**	**Position**	**Date**
	Neil Colbourne	Head of Mining	2/12/2020
Signature	**Name**	**Position**	**Date**
	Sam Rodda	General Manager Operations and Technical Excellence	2/12/2020
Signature	**Name**	**Position**	**Date**

The above signed endorse and approve this Mineral Resources and Ore Reserves Statement Technical Appendix.

1 INTRODUCTION

On 20th December 2012 an updated JORC[1] Code was released – the previous release being the 2004 Edition. The JORC Code 2012 Edition defines the requirements for public reporting of Exploration Results, Mineral Resources and Ore Reserves by mining companies. Reporting according to the JORC Code is a requirement of the MMG listing on The Stock Exchange of Hong Kong[2] as per amendments to Chapter 18 of the Listing Rules that were announced on 3rd June 2010.

The core of the change to JORC Code is enhanced disclosure of the material information prepared by the Competent Person with the requirement for the addition of a publicly released detailed Appendix to the Mineral Resources and Ore Reserves release document, which outlines the supporting details to the Mineral Resources and Ore Reserves numbers.

This Technical Appendix provides these supporting details.

Under the JORC Code, reporting in compliance with the guidelines of JORC Code 2012 Edition became compulsory from 1 Dec 2013.

The principles governing the operation and application of the JORC Code are Transparency, Materiality and Competence:

- Transparency requires that the reader of a Public Report is provided with sufficient information, the presentation of which is clear and unambiguous, to understand the report and not be misled by this information or by omission of material information that is known to the Competent Person.
- Materiality requires that a Public Report contains all the relevant information that investors and their professional advisers would reasonably require, and reasonably expect to find in the report, for the purpose of making a reasoned and balanced judgment regarding the Exploration Results, Mineral Resources or Ore Reserves being reported. Where relevant information is not supplied an explanation must be provided to justify its exclusion.
- Competence requires that the Public Report be based on work that is the responsibility of suitably qualified and experienced persons who are subject to an enforceable professional code of ethics (the Competent Person).

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[1] JORC = Joint Ore Reserves Committee.

[2] Specifically, the Updated Rules of Chapter 18 of the Hong Kong Stock Exchange Listing Rules require a Competent Person's report to comply with standards acceptable to the HKSE including JORC Code (the Australian code), NI 43-101 (the Canadian code) and SAMREC Code (the South African code) for Mineral Resources and Ore Reserves. MMG Limited has chosen to report using the JORC Code.

2 COMMON TO ALL SITES

The economic analysis undertaken for each Ore Reserves described in this document and for the whole Company has resulted in positive net present values (NPVs). MMG uses a discount rate appropriate to the size and nature of the organisation and individual deposits.

2.1 Commodity Price Assumptions

The price and foreign exchange assumptions used for the 2020 Mineral Resources and Ore Reserves estimation at the date at which work commenced on the Mineral Resources and Ore Reserves are as shown in Table 1.

Table 1 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	1392	1736
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	As per Ore Reserves
AUD:USD	0.75	
USD:PEN	3.18	

2.2 Competent Persons

Table 2 – Compenent 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	Neil Colbourne[1]	MAusIMM	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb[1]	MAusIMM	MMG
Las Bambas	Mineral Resources	Rex Berthelsen[1]	HonFAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu[1]	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	MAusIMM(CP)	MMG
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[2]	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 (2012 JORC Code). 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.

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[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

3 LAS BAMBAS OPERATION

3.1 Introduction and Setting

Las Bambas is a world class copper (Cu) mine with molybdenum (Mo), silver (Ag) and gold (Au) by-product credits. It is located in the Andes Mountains of southern Peru approximately 75km south-southwest of Cusco, approximately 300km north-northwest of Arequipa, and approximately 150km northeast of Espinar (also named Yauri). Las Bambas is readily accessible from either Cusco or Arequipa over a combination of sealed and good quality gravel roads. Road travel from Cusco takes approximately 6 hours, while road travel from Arequipa takes approximately 9 hours.

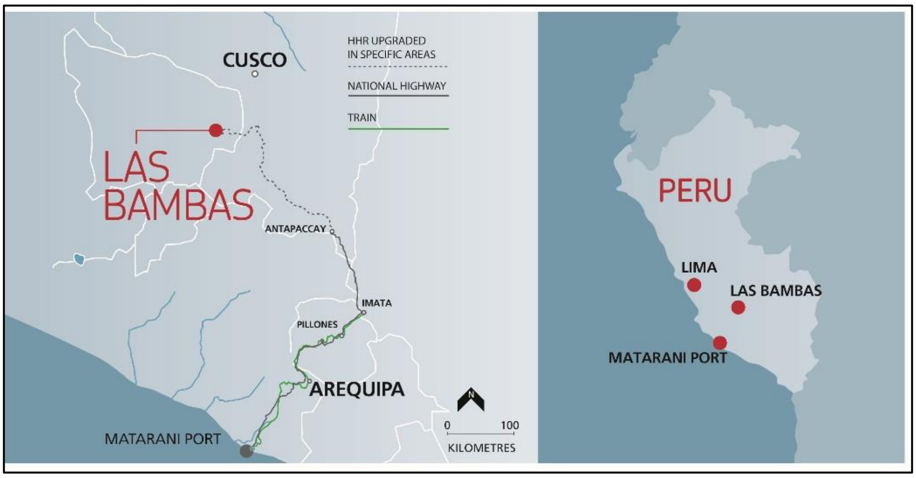


Figure 3-1 Las Bambas Mine location

Las Bambas is a truck and shovel mining operation with a conventional copper concentrator. Copper production commenced in the fourth quarter 2015 with the first concentrate achieved on 26 November. The first shipment of product departed the Port of Matarani for China on 15 January 2016. Las Bambas is now in its fifth year of operation.

Las Bambas is a joint venture project between the operator MMG (62.5%), a wholly owned subsidiary of Guoxin International Investment Co. Ltd (22.5%) and CITIC Metal Co. Ltd (15.0%).

The Mineral Resources and Ore Reserves have been updated with additional drilling completed in 2019 for the June 2020 report. The 2020 Mineral Resources estimation includes updated geological interpretation and estimation parameters.

3.2 Mineral Resources – Las Bambas

3.2.1 Results

The 2020 Las Bambas Mineral Resources is summarised in Table 3. The Las Bambas Mineral Resources is inclusive of the Ore Reserves. All data reported here is on a 100% asset basis. MMG's attributable interest in Las Bambas is 62.5%.

Table 3 2020 Las Bambas Mineral Resources tonnage and grade (as at 30 June 2020)

Las Bambas Mineral Resource									
						Contained Metal			
Ferrobamba Oxide Copper[1]	**Tonnes (Mt)**	**Copper (% Cu)**	**Silver (g/t Ag)**	**Gold (g/t Au)**	**Mo (ppm)**	**Copper (kt)**	**Silver (Moz)**	**Gold (Moz)**	**Mo (kt)**
Indicated	0.8	1.9				15			
Inferred	0.1	1.8				1			
Total	**0.9**	**1.9**				**16**			
Ferrobamba Primary Copper[2]									
Measured	462	0.61	2.6	0.05	229	2,799	38	0.7	106
Indicated	264	0.72	3.2	0.07	201	1,890	27	0.6	53
Inferred	115	0.61	2.1	0.04	97	698	8	0.2	11
Total	**840**	**0.64**	**2.7**	**0.05**	**202**	**5,386**	**73**	**1.4**	**170**
Ferrobamba Total	**841**	**0.64**	**2.71**	**0.05**	**202**	**5,403**	**73**	**1.4**	**170**
Chalcobamba Oxide Copper[1]									
Indicated	5.6	1.42				80			
Inferred	0.5	1.64				8			
Total	**6.1**	**1.44**				**88**			
Chalcobamba Primary Copper[3]									
Measured	128	0.45	1.3	0.02	161	572	5.5	0.07	21
Indicated	206	0.65	2.4	0.03	128	1,339	16	0.21	26
Inferred	39	0.61	2.2	0.03	115	240	2.8	0.04	4.5
Total	**373**	**0.58**	**2.0**	**0.03**	**138**	**2,152**	**24**	**0.32**	**52**
Chalcobamba Total	**379**	**0.59**	**2.0**	**0.03**	**136**	**2,240**	**24**	**0.32**	**52**
Sulfobamba Oxide Copper[1]									
Inferred									
Total									
Sulfobamba Primary Copper[4]									
Indicated	87	0.66	4.6	0.02	169	577	13	0.1	15
Inferred	102	0.58	6.4	0.02	119	588	21	0.1	12
Total	**189**	**0.62**	**5.6**	**0.02**	**142**	**1165**	**34**	**0.1**	**27**
Sulfobamba Total	**189**	**0.62**	**5.6**	**0.02**	**142**	**1,165**	**34**	**0.1**	**27**
Oxide Stockpiles									
Indicated	12.1	1.2				10			
Sulphide Stockpiles									
Measured	8.1	0.40	1.8		135	32.2	0.48		1.10
Total Contained	**1,429**	**0.63**				**8,982**	**132**	**1.9**	**249**

Notes:

1 1% Cu Cut-off grade contained within a US$3.62/lb pit shell for oxide material.

2 Average 0.16% Cu Cut-off grade contained within a US$3.62/lb pit shell for primary material.

3 Average 0.20% Cu Cut-off grade contained within a US$3.62/lb pit shell for primary material.

4 Average 0.20% Cu Cut-off grade contained within a US$3.62/lb pit shell for primary material.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

Contained metal does not imply recoverable metal.

3.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 4 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 4 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Las Bambas Mineral Resources 2020

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sampling techniques	• Diamond drilling (DD) was used to obtain an average 2m sample that is half core split, crushed and pulverised to produce a pulp (95% passing 105µm). Diamond core is selected, marked and numbered for sampling by the logging geologist. Sample details are stored in an Geobank database for correlation with returned geochemical assay results. • Samples for analysis are bagged, shuffled, re-numbered and de-identified prior to dispatch. • Whole core was delivered to the Inspectorate Laboratory in Lima (2005-2010) and Certimin Laboratory in Lima (2014 to 2015) for half core splitting and sample preparation. From mid-2015 core samples were cut and sampled at an ALS sample preparation laboratory on-site. Samples are then sent to ALS Lima for preparation and analysis. • There are no inherent sampling problems recognised. • Measures taken to ensure sample representivity include the collection, and analysis of coarse crush duplicates.
Drilling techniques	• In 2019, three types of drilling were used. The traditional one with wireline diamond core drilling, directional core both and reverse air drilling from surface. Generally, drill core is not oriented, however, holes drilled for geotechnical purposes are oriented. All drillholes used in the Mineral Resource estimates have been drilled using HQ size. • The RC Drilling trial was executed in Ferrobamba Pit to evaluate the viability to use RC drill chip sampling for Resources purposes in operation area.
Drill sample recovery	• Recovery is estimated by measuring the recovered core within a drill run length and recorded in the Geobank database. Run by run recovery has been recorded for 583,764m of the total 626,895m of diamond drilling in the data used for Mineral Resources estimation for the Sulfobamba, Chalcobamba and Ferrobamba deposits. Diamond drill recovery average is about 95% for all deposits (98% for Sulfobamba, 97% for Chalcobamba and 91% for Ferrobamba deposits). • Sample quality is acceptable for dry samples, with practical sample recovery per meter drilled, finding lost of samples during rod changes. The material lost is interpreted as an operational process to be improved. The Coefficient of Variation from field duplicate samples is less than 5% for copper. • The drilling process is controlled by the drill crew and geological supervision provides a means for maximising sample recovery and ensures suitable core presentation. No other measures are taken to maximise core recovery. • There is no detectable correlation between recovery and grade which can be determined from graphical and statistical analysis. Preferential loss/gains of fine or coarse materials are not significant and do not result in sample bias as the nature of

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	mineralisation is stockwork veins and disseminated sulphides. Diamond core sampling is applied, and recovery is considered high.
Logging	• 100% of diamond drill core and reverse circulation percussion drilling used in the Mineral Resource estimates has been geologically and geotechnically logged (DD only) to support Mineral Resources estimation, mining and metallurgy studies. • Geological logging is qualitative and geotechnical logging is quantitative. All drill core is photographed.
Sub-sampling techniques and sample preparation	• All samples included in the Mineral Resource estimates are from diamond drill core and reverse circulation. Drill core is longitudinally sawn to provide half-core samples within intervals directed by the logging geologist. The remaining half-core is kept and stored in the original sample tray. The standard sampling length is 2m for PQ core (minimum 1.2m) and HQ core (minimum 1.2m, maximum 2.2m) while NQ core is sampled at 2.5m (minimum 1.5m). Sample intervals do not cross geological boundaries. • From 2005 until 2010 geological samples have been processed in the following manner: Dried, crushed, pulverised to 95% passing 105µm. Sizing analysis is carried out on 1 in 30 samples. • From 2010 geological samples have been processed in the following manner: Dried, crushed, pulverised to 95% passing 105µm. Sizing analyses are carried out on one in 10-15 samples. • Representivity of samples is checked by duplication at the crush stage one in every 40 samples. No field duplicates are taken. • Twelve month rolling Quality Assurance / Quality Control (QAQC) analysis of sample preparation techniques indicate the process is appropriate for Las Bambas samples. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the style of the Las Bambas mineralisation (porphyry and skarn Cu-Mo mineralisation) by the Competent Person. • RC sampling is done using a cyclone for dry samples on one metre intervals. Samples are collected in buckets, weighted, and split on-site using a riffle splitter, aiming for 2 to 3 kg subsample, weight taken on site with an electronic balance. • As a rule, if a sample from cyclone is: ○ less than 4-6 kg, no split ○ 6- 12 kg, two subsamples ○ 12-24 kg, split as necessary to get 3 kg sample splits. ○ In the case of wet samples, we did not have the proper splitter to process the sample. The one-meter sample is collected in microporous bags. The sample is divided using a wet rotary splitter. Dump samples were let to air dry on the core shack before splitting using conventional riffle splitter.
Quality of assay data and laboratory tests	• From 2005 until 2010 the assay methods undertaken by Inspectorate (Lima) for Las Bambas were as follows: ○ Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS).

Section 1 Sampling Techniques and Data

Criteria	Commentary
	○ Acid soluble - 0.2g sample. Leaching by a 15% solution of H_2SO_4 at 73°C for 5 minutes. Reading by AAS. ○ Acid soluble - 0.2g of sample. Digestion by a citric acid solution at 65°C for 15 minutes. Reading by AAS. ○ Au - Cupellation at 950°C. Reading by AAS. Above detection limit analysis by gravimetry. ○ 35 elements - Digestion by aqua-regia and reading by ICP. • From 2010 to 2015 routine assay methods undertaken by Certimin (Lima) for Las Bambas are as follows: ○ Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS). ○ Acid soluble copper – 0.2g sample. Leaching by a 15% solution of H_2SO_4 at 73°C for 5 minutes. Reading by AAS. ○ Acid Soluble copper - 0.2g of sample. Digestion by a citric acid solution at 65°C for 15 minutes. Reading by AAS. ○ Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. ○ 35 elements - Digestion by aqua-regia and reading by ICP. • From 2015 to present routine assay methods undertaken by ALS (Lima) for Las Bambas are as follows: ○ Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS). ○ Acid soluble copper – 0.5g sample. Leaching by a 5% solution of H_2SO_4 at ambient temperature for 1 hour. Reading by AAS. ○ Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. ○ 35 elements - Digestion by aqua-regia and reading by ICP. • From 2018 to present routine assay methods undertaken by ALS (Lima) for Las Bambas are as follows: ○ Cu, Ag, Mo. Digestion by 4-Acids. Reading by Atomic Absorption ○ Cu. Sequential Cu. Reported as soluble in sulfuric acid, Soluble in cyanide and residual. ○ Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. ○ 60 elements - Digestion by 4-Acids and reading by ICP, includes a packet of rare earth elements. • All the above methods with the exception of the acid soluble copper are considered total digest. • In 2018 and 2019, all unassayed 2m pulps where the original copper grade was >0.1% were anlalised by sequential copper method by ALS Global Laboratory. • No geophysical tools, spectrometers or handheld XRF instruments have been used in the analysis of samples external to the ALS laboratory for the estimation of Mineral Resources. • Assay techniques are considered suitable and representative; independent umpire laboratory checks occurred routinely between 2005-2010 using the ALS Chemex laboratory in Lima. Check samples were inserted at a rate of 1 in every 25 samples

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	(2005-2007), every 50 samples (2008) and every 40 samples (2010). For the 2014 to 2019 programs, duplicated samples were collected at the time of sampling and securely stored. Samples were then sent to the Inspectorate Laboratory, Lima, for third party (umpire) analysis. The samples were selected at a rate of 1:40. Results received indicate a good correlation between datasets and show no significative bias for copper, molybdenum, silver and gold. • ALS release quarterly QAQC data to Las Bambas for analysis of internal laboratory standard performance. The performance of the laboratory internal standards is within acceptable limits. • Las Bambas routinely insert: o Primary coarse duplicates: Inserted at a rate of 1:25 samples (2005-2007), 1:50 samples (2008), and 1:40 samples (2010-2019). o Coarse blank samples: Inserted after a high-grade sample (coarse blank samples currently make up about 4.1% of all samples analysed). o Pulp duplicates samples: Inserted 1:25 samples (2005-2007), 1:50 samples (2008), and 1:40 samples (2010-2019). o Pulp blank samples: Inserted before the coarse blank sample and always after a high grade sample (pulp blank samples currently make up about 4.1% of all samples analysed). o Certified Reference Material (CRM) samples: Inserted at a rate of 1:50 samples (2005-2006), 1:40 samples (2007) and 1:20 samples (2008 to 2019). • QAQC analysis has shown that: o Blanks: no significative evidence of contamination has been identified during the sample preparation and assay. o Duplicates: the analytical precision is within acceptable ranges when compared to the original sample, i.e., more than 90% of the pairs of samples are within the error limits evaluated for a maximum relative error of 10% (R^2>0.90). In 2019, all average CV calculated from coarse and pulp duplicates are acceptable. These results were also repeated in the external ALS check samples. o Certified Reference Material: acceptable levels of accuracy and precision have been established. o Sizing test results were applied to 3% of samples. In 2019, sizing tests results are into acceptable parameters.
Verification of sampling and assaying	• Verification by independent personnel was not undertaken at the time of drilling. However, drilling, core logging and sampling data is entered by geologists; assay results are entered by the geochemistry geologist after data is checked for outliers, sample swaps, performance of duplicates, blanks and standards, and significant intersections are checked against core log entries and core photos. Errors are rectified before data is entered into the database. • In 2019 a program of twinning was completed to test RC drilling against previously completed DD holes. Comparisons with lithology, grade distribution variability and between dry and wet samples were made. Three RC drillholes twinned existing DDH. • All drillholes are logged using laptop computers directly into the drillhole database (Geobank). Prior to November 2014 diamond drillholes were logged on paper and transcribed into the database. Assay results are provided in digital format (both spreadsheet and PDF) by the laboratories and are automatically loaded into the

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	database after validation. All laboratory primary data and certificates are stored on the Las Bambas server. • The database has internal validation processes which prevent invalid or unapproved records from being stored. Additional manual data validation occurs in Vulcan software before data is used for interpretation and Mineral Resources modelling. Unreliable data is flagged and excluded from Mineral Resources estimation work. • No adjustments have been made to assay data – if there is any doubt about the data quality or location, the drillhole is excluded from the estimation process.
Location of data points	• In 2005 collar positions of surface drillholes were picked up by Horizons South America using Trimble 5700 differential GPS equipment. From 2006, the Las Bambas engineering personnel have performed all subsequent surveys using the same equipment. Since 2014, drillholes are set out using UTM co-ordinates with a hand held Differential Global Positioning System (DGPS) and are accurate to within 1m. On completion of drilling, collar locations are picked up by the onsite surveyors using DGPS (Trimble or Topcon). During the 2019 drilling campaign MMG team undertook a survey of drillhole collar locations using Differential GPS. But they also used a TN14 Reflex for alignment of the drilling machine. These collar locations are accurate to within 0.5m. • During the 2014 due diligence process (2014) RPM independently checked five collar locations at Ferrobamba and Chalcobamba with a handheld GPS and noted only small differences and well within the error limit of the GPS used. RPM did not undertake independent checking of any Sulfobamba drillholes. The collar locations are considered accurate for Mineral Resources estimation work. • In 2005 the drilling contractor conducted downhole survey's using the AccuShot method for non-vertical drillholes. Vertical holes were not surveyed. If the AccuShot arrangement was not working, the acid test (inclination only) was used. Since 2006, all drillholes are surveyed using Reflex Maxibor II equipment units which take measurements every 3m. The downhole surveys are considered accurate for Mineral Resources estimation work. • The datum used is WGS 84 with a UTM coordinate system zone 19 South. • In 2006 Horizons South America surveyed the topography at a scale of 1:1000 based on aerophotogrammetric restitution of orthophotos. A digital model of the land was generated every 10m and, using interpolation, contour lines were obtained every metre. The maps delivered were drafted in UTM coordinates and the projections used were WGS 84 and PSAD 56. A triangulated surface model presumably derived from this survey is in current use at site and is considered suitable for Mineral Resources and Ore Reserves estimation purposes. • Downhole surveys are now routinely completed by modern gyroscope techniques. Instruments such as EZ-Gyro and Gyro Sprint-IQ are employed.
Data spacing and distribution	• The Las Bambas mineral deposits are drilled on variable spacing dependent on rock type (porphyry vs. skarn). Drill spacing typically ranges from 100m x 100m to 25m x 25m and is considered sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resources estimation and classifications applied.

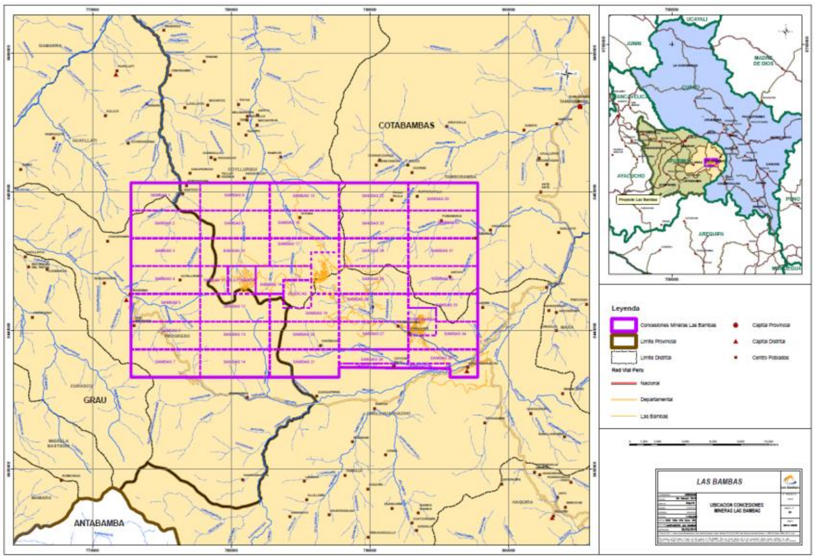
Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	- Drillhole spacing of approximately 25m x 25m within skarn hosted material and 50m x 50m within porphyry hosted is considered sufficient for long term Mineral Resources estimation purposes based on a drillhole spacing study undertaken in 2015. While the 25m spacing is suitable for Mineral Resource estimation, the Las Bambas deposits tend to have short scale 5m - 10m variations within the skarn that are not captured by the infill drilling at this spacing. This localised geological variability is captured by mapping and drillhole logging. - Diamond drillhole samples are not composited prior to routine chemical analysis; however, the nominal sample length is generally 2m. - Currently the pulps are sent for sequential copper analysis in samples that exceed 0.1% Cu.
Orientation of data in relation to geological structure	- Overall drillhole orientation is planned at 90 degrees to the strike of the mineralised zone for each deposit. Drillhole spacing and orientation is planned to provide evenly spaced, high angle intercepts of the mineralised zone where possible, thus minimising sampling bias related to orientation. However, in some areas of Ferrobamba where skarn mineralisation is orientated along strike, holes orientations were not adjusted. - Drilling orientation is not considered to have introduced sampling bias.
Sample security	- Measures to provide sample security include: o Adequately trained and supervised sampling personnel. o Samples are stored in a locked compound with restricted access during preparation. o Dispatch to various laboratories via contract transport provider in sealed containers. o Receipt of samples acknowledged by receiving analytical laboratory by email and checked against expected submission list. o Assay data returned separately in both spreadsheet and PDF formats.
Audit and reviews	- In 2015, an internal audit, checking 5% of the total samples contained in the acQuire database (at that time) was undertaken comparing database entry values to the original laboratory certificates for Cu, Ag, Mo, As and S. No material issues were identified. - Internal audits of the Inspectorate and Certimin laboratories have occurred twice a month by Las Bambas personnel. Historically, any issues identified have been rectified. Currently, there are no outstanding material issues. - An independent third-party audit was completed by AMC Consultants (Brisbane office) on the 2017 Mineral Resource model in February 2018. The audit identified some minor improvements to the estimation process but concluded there were not material issues or risks to long term mine planning. - The Competent Person has visited the both the Certimin and ALS laboratories in Lima. - AMC Consultants were engaged to complete a third party independent audit of both the Ferrobamba and Chalcobamba models in 2020. AMC have reported no material issues from the audit.

Section 2 Reporting of Exploration Results

Criteria	Commentary

Mineral tenement and land tenure status

- The Las Bambas project has tenure over 41 Mineral Concessions. These Mineral Concessions secure the right to the minerals in the area, but do not provide rights to the surface land.
- Property of surface land is acquired through a separate process. The below map outlines the 41 Mineral Concessions and the mine property owned by MMG.



- Tenure over the 41 Concessions is in good standing. There are no known impediments to operating in the area.

Exploration done by other parties

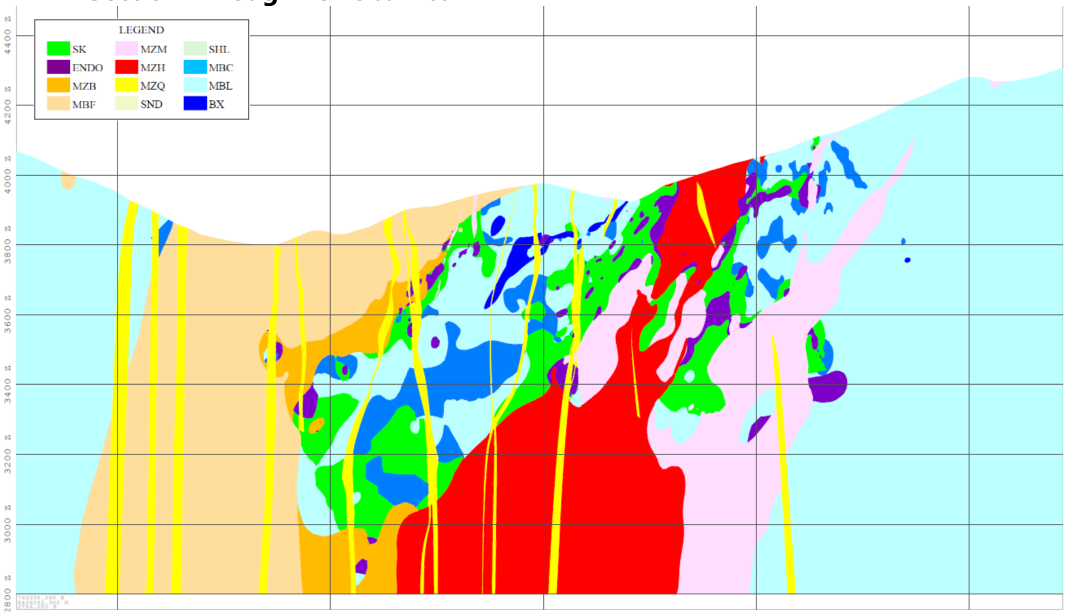
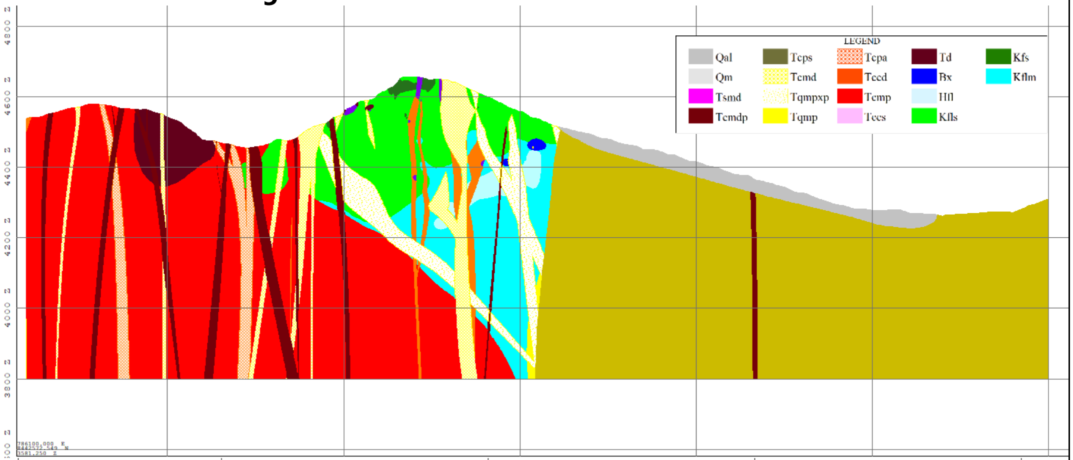
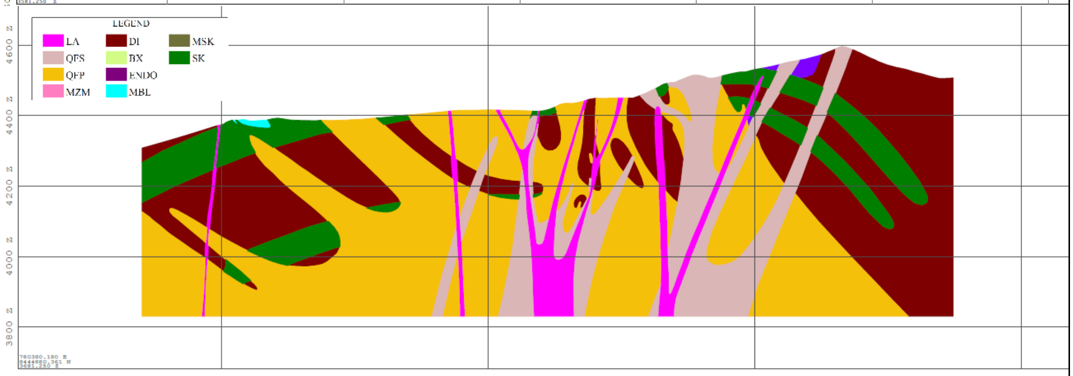
- The Las Bambas project has a long history of exploration by the current and previous owners.
- Exploration commenced in 1966 with around 450km of surface diamond drilling drilled to date.
- Initial exploration was completed by Cerro de Pasco followed by Cyprus, Phelps Dodge, BHP, Tech, and Pro Invest prior to Xstrata Resources definition drilling which commenced in 2005. All historical drilling is outlined in the table below.
  - Glencore and Xstrata merged to form Glencore plc. In 2013, MMG Ltd, Guoxin International Investment Corporation. Limited and CITIC Metal Co., Ltd enter into an agreement to purchase the Las Bambas project from Glencore plc.

Company	Year	Deposit	Purpose	Type	# of DDH	Drill size	Metres Drilled
Cerro de Pasco Cyprus	1996	Chalcobamba	Exploration	DDH	6	Unknown	906
	1996	Chalcobamba	Exploration		9		1,367
Phelps Dodge	1997	Ferrobamba	Exploration	DDH	4	Unknown	738
		Chalcobamba			4		653
BHP	1997	Ferrobamba	Exploration	DDH	3	Unknown	366
		Chalcobamba			4		659
Pro Invest	2003	Ferrobamba	Exploration	DDH	4	HQ	738
		Chalcobamba			7		1,590
Xtrata	2005	Ferrobamba	Resource Evaluation	DDH	109	HQ	26,840
		Chalcobamba			66		14,754
		Sulfobamba			60		13,943
	2006	Ferrobamba	Resource Evaluation	DDH	125	HQ	51,004
		Chalcobamba			95		27,983

Section 2 Reporting of Exploration Results

		Sulfobamba			60		16,972
		Charcas			8		2,614
		Azuljaja			4		1,969
	2007	Ferrobamba	Resource Evaluation	DDH	131	HQ	46,710
		Chalcobamba			134		36,618
		Sulfobamba			22		4,997
	2008	Ferrobamba	Resource Evaluation	DDH	118	HQ	46,774
		Chalcobamba			90		22,097
	2010	Ferrobamba	Resource Evaluation	DDH	91	HQ	28,400
MMG	2014	Ferrobamba	Resource Evaluation	DDH	23	HQ	12,610
	2015	Huancarane	Sterilisation	DDH	5	HQ	773
	2015	Ferrobamba	Resource Evaluation	DDH	154	HQ	53,772
	2016	Ferrobamba	Resource Evaluation	DDH	114	HQ	31,206
		Chalcobamba	Resource Evaluation	DDH	13		1,880
	2017	Ferrobamba	Resource Evaluation	DDH	49	HQ	1,181
	2018	Ferrobamba	Resource Evaluation	DDH	82	HQ	48,022
		Chalcobamba	Resource Evaluation	DDH	48		10,193
	2019	Ferrobamba	Resource Evaluation	DDH	109	HQ	32,784
				RC	52		6,804
		Chalcobamba	Resource Evaluation	DDH	127	HQ	44,870
				RC	3		654
			Total		1933		**593,814**

Criteria	Commentary
Geology	• Las Bambas is located in a belt of Cu (Mo-Au) skarn deposits associated with porphyry type systems situated in south-eastern Peru. This metallogenic belt is controlled by the Andahuaylas-Yauri Batholith of Eocene- Oligocene age, which is emplaced in Mesozoic sedimentary units, with the Ferrobamba Formation (Lower to Upper Cretaceous) being of greatest mineralising importance. • The porphyry style mineralisation occurs in quartz-monzonite to granodiorite rocks. Hypogene copper sulphides are the main copper bearing minerals with minor occurrence of supergene copper oxides and carbonates near surface. The intrusive rocks of the batholith in contact with the Ferrobamba limestones gave rise to contact metamorphism and, in certain locations, skarn bodies with Cu (Mo-Au) mineralisation.
Drillhole information	• Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resource estimates. • Drillhole data is not provided in this report as this report is for the Las Bambas Mineral Resources which use all available data and no single hole is material for the Mineral Resource estimates.
Data aggregation methods	• Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resource estimates. • No metal equivalents were used in the Mineral Resources estimation.
Relationship between mineralisation width and	• No exploration diamond drillholes have been completed in the 2019 reporting period. Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resource estimates.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
intercepts lengths	• Mineralisation true widths are captured by interpreted mineralisation 3D wireframes. Drillholes are drilled to achieve intersections as close to orthogonal as possible.
Diagrams	**Section Through Ferrobamba**  **Section Through Chalcobamba**   **Section Through Sulfobamba**
Balanced reporting	• All drilling completed during the 2019 reporting period completed at Ferrobamba is infill in nature. Historical exploration drillholes (prior to 2005) have been excluded from

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	the Mineral Resource estimates. A small number of holes were drilled at Chalcobamba for the purpose of hydrogeology, geotechnical and infill.
Other substantive exploration data	• No substantive exploration diamond drillholes have been completed in the 2019 reporting period. Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resource estimates. • In previous years, several orebody knowledge studies have been carried out including skarn zonation, vein densities, age dating, deposit paragenesis, clay / talc sampling, and wall rock control of the skarn mineralisation. Recent work has focused on relogging and standardizing the logging database, in order to be able to model the intrusive units and limestone protoliths with greater accuracy and precision, to benefit resource estimation, geotechnical designs and blast hole modelling. Limestone protoliths are important for geotechnical characteristics, as inward dipping slopes on several walls have already caused structural failures.
Further work	• An ongoing program of regional and deposit scale mapping, cross sectional studies, infrared spectral analyses, isotopic and petrographic studies and soil sampling. • A program of exploration assessment and targeting is currently underway to identify exploration options for the Las Bambas leases. • Permitting for regional exploration drilling is underway. • Ongoing infill programs are planned to increase deposit confidence to support the short to medium term mine plan, In addition, the Las Bambas Mineral Resource has potential to grow to extend the life of the mine and/or support expansions and replace the annual mined Ore Reserve depletion.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The following measures are in place to ensure database integrity: ○ All Las Bambas drillhole data is stored in an SQL database (Geobank) on the Las Bambas site server, which is regularly backed-up. ○ Geological logging is entered directly into laptop computers which are uploaded to the database. Prior to November 2014, diamond drillholes were logged on paper logging forms and transcribed into the database. From November 2015 logging was entered directly into a customised interface using portable tablet computers. ○ Assays are loaded directly into the database from digital files provided from the assay laboratory. ○ The measures described above ensure that transcription or data entry errors are minimised. • Data validation procedures include: ○ A database validation project was undertaken in early 2015 checking 5% of the assayed samples in the database against original laboratory certificates. No material issues were identified. ○ The database has internal validation processes which prevent invalid or unapproved records to be stored.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Site visits	• The Competent Person has undertaken numerous site visits to Las Bambas since acquisition. In the view of the Competent Person there are no material risks to the Mineral Resources based on observations of the site's geological practices. • Several site visits to the Ferrobamba area and the Chalcobamba area have been conducted but due to local community restrictions, the Competent Person has been unable to visit Sulfobamba to date. • The site previously employed a practice of 'double blind' sample randomisation at the laboratory. It essentially guarantees the secrecy of the results from the operating laboratory. It does however pose a minor risk of compromising sample provenance, although the risk is probably low. This practice has now ceased.
Geological interpretation	• There is good confidence on the geological continuity and interpretation of the Ferrobamba and Chalcobamba deposits. Confidence in the Sulfobamba deposit is considered moderate due to limited drilling. • The 2019 geological interpretation was undertaken on sections orientated perpendicular to the established structural trend of each deposit. Section spacing for the interpretations varied between deposits from 25m at Ferrobamba and Chalcobamba to 50m at Sulfobamba. The geological logging, assay data, blast hole information and surface mapping were used in the interpretation. The drilling and surface mapping were checked against each other to ensure they were concordant. The updating of the lithological model was carried out with the advice and validation of the Principal Exploration Geologist. • No alternative interpretations have been generated for the Las Bambas mineralisation and geology. • Exploratory data analysis (EDA) indicated that the lithological characterisation used for the 2010 geological interpretation were for the most part valid (with minor changes) and were applied for the 2019 modelling. Each lithological unit was modelled according to age, with the youngest modelled first. Structural considerations such as plunge of the units, folding and faults were taken into consideration (where information existed). Orthogonal sections were also interpreted to ensure lithological continuity. • In 2019, Chalcobamba's geological model and interpretation was changed based on a complete relog of the deposit combined with detailed surface mapping. An additional high-grade skarn domain was added based on 0.5% Cu cut off. • Also in Ferrobamba 2019 model, a grade shell domain was generated in each porphyry and marble based on 0.1% Cu cut off. • Oxidation domains were produced for the Ferrobamba and Chalcobamba models. Oxidation domains were based on logged mineral species, sequential copper and acid soluble copper to total copper assay ratios, each of which had a priority to represent the oxidation field. • Geological interpretations were then modelled as wireframe solids (based on the sections) and were peer reviewed with the Principal Exploration Geologist and by the Competent Person. • Specific grade domains (copper and molybdenum) were not created, except for interpreted, spatially coherent high-grade shoots at Sulfobamba. A domain cut-off of 0.8% Cu was used for the high-grade domain, and by Chalcobamba was used a domain

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	cut-off of 0.5% Cu. The introduction of the high-grade domain was supported by EDA, contact plots, and change of support analysis.
Dimensions	• The Las Bambas Mineral Resources comprise three distinct deposits; each have been defined by drilling and estimated: o Ferrobamba Mineral Resources occupies a footprint which is 2500m N-S and 1800m E-W and over 900m vertically. o Chalcobamba Mineral Resources occupies a footprint of 2300m N-S and 1300m E-W and 800m vertically o Sulfobamba Mineral Resources is 1800m along strike in a NE direction and 850m across strike in a NW direction and 450m deep.
Estimation and modelling techniques	• Mineral Resources estimation for the three deposits has been undertaken in Vulcan (Maptek) mining software with the following key assumptions and parameters: • Ordinary Kriging interpolation has been applied for the estimation of Cu, Mo, Ag, Au, As, Ca, Mg, Fe, S, CuAS (acid soluble copper), CuCN (cyanide soluble copper), CuRE (residual copper) and density. This is considered appropriate for the estimation of Mineral Resources at Las Bambas. • The Ferrobamba, Chalcobamba and Sulfobamba block models utilised sub-blocking. Models were then regularised for use in mine planning purposes. • Extreme grade values were managed by upper grade capping based on statistical assessment evaluated for all variables and domains. Consideration was also given to the metal content above the top cap value. • All elements were estimated into lithology domains. At Ferrobamba five different orientation domains were identified in the skarn and were used in the interpolation. The boundaries between each orientation domain were treated as semi-soft boundaries. Copper gradeshell greater than 0.1% Cu by lithology were made. These were used together with lithology and oxidation domain models as contraints to the block models. • At Sulfobamba high-grade skarn shoots were identified and were used in the interpolation of copper only. The boundaries between the low and the high-grade skarn were treated as hard boundaries. • Data compositing for estimation was set to 4m, which matches two times the majority of drillhole sample lengths (2m), provides good definition across interpreted domains, and adequately accounts for bench height. • Variogram analysis was updated for Ferrobamba and Chalcobamba deposits while the Sulfobamba model was not updated. Variogram analysis was undertaken in Vulcan software. • No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. • Interpolation was undertaken in three to four passes. • Check estimates using Discrete Gaussian change of support modelling have been performed on all models. Block model results are comparable with previous Mineral Resources estimations after changes due to drilling and re-modelling by the site.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	- Assumptions about the recovery of by-products are accounted in the net-smelter return (NSR) calculation which includes the recovery of Mo, Ag and Au along with the standard payable terms. - Arsenic is considered a deleterious element and has been estimated. It is not considered a material risk. Sulphur, calcium and magnesium are also estimated to assist in the determination of NAF (non-acid forming), PAF (potentially acid forming) and acid neutralising material. - Block sizes for all three deposits were selected based on Quantitative Kriging Neighbourhood Analysis (QKNA). The Ferrobamba block size was 20m x 20m x 15m with sub-blocks of 5m x 5m x 5m. Chalcobamba block size was set to 25m x 25m x 15m, with sub-blocks of 5m x 5m x 5m. The block size at Sulfobamba was set to 50m x 50m x 15m (sub-blocked to 25m x 25m x 7.5m) which roughly equates to the drill spacing. The search anisotropy employed was based on both the ranges of the variograms and the drill spacing. All models were regularised to 20m x 20m x 15m for use in Ore Reserve estimates. - The selective mining unit is assumed to be approximately 20m x 20m x 15m (x,y,z) which equates to the Ferrobamba block model block size. - Block model validation was conducted by the following processes – no material issues were identified: - Visual inspections for true fit for all wireframes (to check for correct placement of blocks and sub-blocks). - Visual comparison of block model grades against composite sample grades. - Global statistical comparison of the estimated block model grades against the declustered composite statistics. - Change of support analysis was completed on major lithological domains and compared to the block estimates to measure the smoothing in each estimation domain. - Swath plots and drift plots were generated and checked for skarn and porphyry domains.
Moisture	- All tonnages are stated on a dry basis.
Cut-off parameters	- The Mineral Resources are reported above a range of cut-offs based on material type and ore body. The cut-off grades range from 0.16% Cu cut-off grade for hypogene material to 0.19% Cu for marble/calc-silicate hosted material and 0.17% Cu for breccia at Ferrobamba. Oxide material has been reported above a 1% Cu cut-off grade. The reported Mineral Resources have also been constrained within a US$3.62/lb Cu pit shell with revenue factor=1. - The reporting cut-off grade is in line with MMG's policy on reporting of Mineral Resources which considers current and future mining and processing costs and satisfies the requirement for prospects for future economic extraction.
Mining factors or assumptions	- Mining of the Las Bambas deposits is undertaken by open pit method, which is expected to continue throughout the life of mine. Large scale mining equipment including 300 tonne trucks and 100 tonne electric face shovels are used for material movement.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	• During block regularisation, internal dilution is included to produce full block estimates. • Further information on mining factors is provided in Section 4 of this table. • No other mining factors have been applied to the Mineral Resources.
Metallurgical factors or assumptions.	• Currently the processing of oxide copper mineralisation has not been studied to pre-feasibility or feasibility study level. The inclusion of oxide copper Mineral Resources assumes that processing of very similar ores at Tintaya was completed successfully in the past where a head grade of greater than 1.5% Cu was required for favourable economics. This assumption has been used at this stage for the oxide copper mineralisation. • Sulphide and partially oxidised material is included in the Mineral Resources which is expected to be converted to Ore Reserves and treated in the onsite concentrator facilities. • No other metallurgical factors have been applied to the Mineral Resources.
Environmental factors or assumptions	• Environmental factors are considered in the Las Bambas life of asset work, which is updated annually and includes provision for mine closure. • Geochemical characterisation undertaken in 2007, 2009 and 2017 indicate most of the waste rock from Ferrobamba and Chalcobamba deposits to be Non-Acid Forming (NAF) and that no acid rock drainage from the waste rock dumps from these two pits should be expected. Waste rock samples from Sulfobamba were found to contain higher concentrations of sulphur and that 30% to 40% of waste rock could be Potentially Acid Forming (PAF). Suitable controls will be implemented for all PAF waste rock, including investigating opportunities for backfill into pit voids. Additional geochemical characterisation work is ongoing. • Tailings generated from processing of Ferrobamba and Chalcobamba were determined to be NAF. Geochemical characterisation of tailings generated from processing of Sulfobamba ores is currently under assessment, however for environmental assessment purposes it was assumed to have PAF behaviour. Current Life of Asset schedules have Ferrobamba tailings processing scheduled for several years after Sulfobamba tailings are processed. A closure plan was submitted and approved by the regulator in 2016 and describes the encapsulation method for Sulfobamba tailings. • Further geochemical characterisation studies on waste rock and tailings samples are currently underway to support the Environmental Impact Study Modification. • On 13 July 2020, the environmental technical report was submitted to SENACE that included: Ferrobamba Phase 7A, drilling, processing facilities, truck shop relocation and ancillary components for Ferrobamba and Chalcobamba. This technical report is under evaluation by the authorities. • Las Bambas has started the process for the 4th modification to include: Ferrobamba Pit expansion, Chalcobamba Phase II, TSF 1 expansion, drilling and others • In February 2019 the file for the authorisation to start activities for Chalcobamba was presented to MINEM, the approval of the AIA was planned for 31 July 2020. However, due to the current situation caused by the health crisis (COVID 19), the approval of this permit has been delayed until 30 November 2020. Las Bambas is working in conjunction with the Government to achieve such approval.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	- Waste storage designs and construction are not adequate to contain the waste product for the entire Mineral Resources. Tailings are currently stored in TSF 1 which will have a final capacity of 784 Mt. A second tailings storage facility will then be constructed to contain the tailings from the processing of the remaining Ore Reserves. A prefeasibility study for this second tailings facility was completed by MWH in 2015. Work is also currently in progress to increase the capacity of TSF 1 as far as possible. Construction of TSF 2 will start before completing the construction of stage 6 of TSF 1. However, there are factors that could put the construction of TSF 2 at risk, such as: o Additional tailings storage facility (TSF2) is required towards the later part of mine life according to LoA Low Case, that supports Ore Reserve. o Land acquisition and/permitting delays for additional TSF (TSF2) needs.
Bulk density	- Bulk density is determined using the Archimedes' principle (weight in air and weight in water method). Samples of 20cm in length are measured at a frequency of approximately one per core tray and based on geological domains. The density measurements are considered representative of each lithology domain. - Bulk density measurement occurs at the external, independent assay laboratory. The core is air dried and whole core is wax coated prior to bulk density determination to ensure that void spaces are accounted for. - Density values in the Mineral Resources models are estimated using Ordinary Kriging within the lithology domain shapes. Un-estimated blocks were assigned a density value based on an expected value of un-mineralised rock within each geological domain.
Classification	- Mineral Resource classifications used criteria that required a certain minimum number of drillholes. The requirement of more than one drillhole ensures that any interpolated block was informed by sufficient spatially distributed samples to establish grade continuity. Furthermore, rock type specific hole spacing (skarn vs. porphyry) were used to classify each Mineral Resource category. - Drillhole spacing for classification were based on an internal Ferrobamba drillhole spacing study undertaken in 2015. Results from the study indicate: o Measured Mineral Resources: 25m x 25m drillhole spacing in the skarn, 50m x 50m drillhole spacing for the porphyry. o Indicated Mineral Resources: 50m x 50m drillhole spacing in the skarn, 100m x 100m drillhole spacing for the porphyry. o Inferred Mineral Resources are generally defined as twice the spacing of Indicated Mineral Resources with regard to each rock type. - Only copper estimates were used for classification. Estimation confidence of deleterious elements such as arsenic was not considered for classification purposes. - The Mineral Resource classification applied appropriately reflects the Competent Person’s view of the deposit.
Audits or reviews	- Historical models have all been subject to a series of internal and external reviews during their history of development. The recommendations of each review have been implemented at the next update of the relevant Mineral Resource estimates. - Several extensive reviews were undertaken as part of the MMG due diligence process for the purchase of Las Bambas. These reviews included work done by:

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

Runge Pincock Minarco (RPM), which resulted in the published Competent Person report in 2014.
AMC completed an indepent audit of the 2017 block model during 2018. Minor recommendations were made and used in the subsequent 2018 model update
In addition, significant review work was carried out by AMEC in 2019 on the 2018 model.
No fatal flaws were detected in any of these reviews and all recommendations were considered and addressed in the 2020 Mineral Resources update.

A self-assessment of all 2020 Mineral Resource modelling was completed by the Competent Person using a standardised MMG template. No fatal flaws were detected in the review. Areas previously identified for improvement have been addressed and include:

Mineral Resource classification for the Ferrobamba block model uses a wireframe shape to constrain the final Mineral Resource category.
Sequential copper results are used to model an oxidation type domain. This is in turn used to constrain the sulfuric acid, cyanuric acid and residual estimate.

</td></tr>
<tr><td>Discussion of relative accuracy / confidence</td><td>

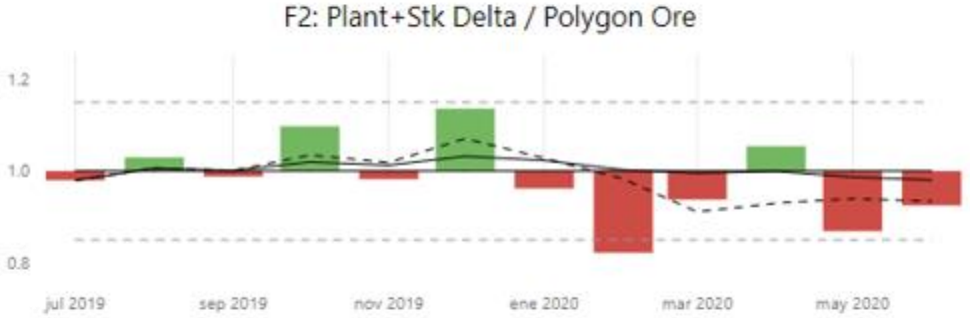
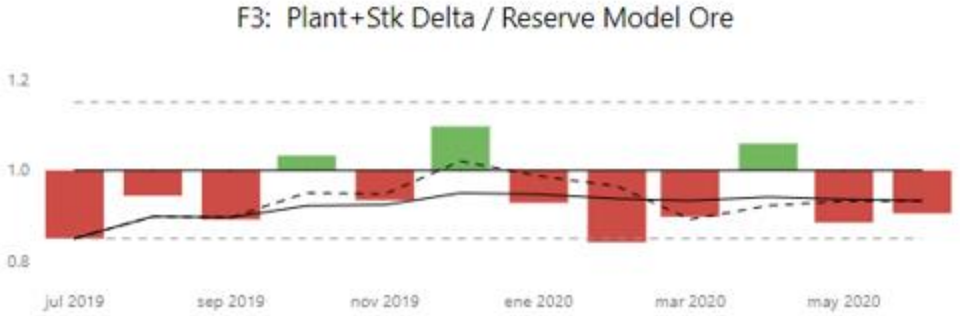
There is high geological confidence of the spatial location, continuity and estimated grades of the modelled lithologies within the Mineral Resources. Minor, local variations are expected to occur on a sub-25m scale that is not detectable by the current drill spacing. Global declustered statistics of the composite databases on a domain basis were compared against the block model. Block model estimates were within 10% of the composite database. Local swath plots were undertaken for each deposit. All plots showed appropriate smoothing of composite samples with respect to estimated block grades.
The Las Bambas Mineral Resource estimates are considered suitable for Ore Reserve estimation and mine design purposes. The Mineral Resources model was evaluated using the discrete Gaussian change of support method for copper in most domains. Based on the grade tonnage curves generated, the Mineral Resources model should be a reasonable predictor of tonnes and grade selected during mining.
Reconciliation of the last 12 months of production indicates that the mine planning block model has over-called the ore control model (F1) by 6% for copper metal. This comprises a 7% over-call of grade and a 12% under-call of tonnage.

<table>
<tr><th></th><th>Block Model</th><th>Factor</th><th>Grade</th><th>Tonnes</th><th>Metal</th></tr>
<tr><td>Year to June 2019</td><td>2019</td><td>F1</td><td>0.97</td><td>0.93</td><td>0.90</td></tr>
<tr><td></td><td></td><td>F2</td><td>0.96</td><td>0.95</td><td>0.91</td></tr>
<tr><td></td><td></td><td>F3</td><td>0.94</td><td>0.88</td><td>0.82</td></tr>
<tr><td>1 July 2018 to 30 June 2019</td><td>2020</td><td>F1</td><td>0.99</td><td>0.95</td><td>0.93</td></tr>
<tr><td></td><td></td><td>F2</td><td>0.98</td><td>0.94</td><td>0.92</td></tr>
<tr><td></td><td></td><td>F3</td><td>0.96</td><td>0.89</td><td>0.86</td></tr>
<tr><td>1 July 2019 to 30 June 2020</td><td>2020</td><td>F1</td><td>0.97</td><td>0.95</td><td>0.93</td></tr>
<tr><td></td><td></td><td>F2</td><td>0.98</td><td>0.98</td><td>0.96</td></tr>
<tr><td></td><td></td><td>F3</td><td>0.95</td><td>0.93</td><td>0.89</td></tr>
<tr><td></td><td>2020</td><td>F1</td><td>1.02</td><td>1.00</td><td>1.02</td></tr>
<tr><td></td><td></td><td>F2</td><td>0.96</td><td>0.95</td><td>0.91</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><td>All (since commercial production start)</td><td></td><td>F3</td><td>0.98</td><td>0.95</td><td>0.93</td></tr>
</table>
F1 Ore Control / Ore Reserve
F2 Mill / Ore Control
F3 Mill / Ore Reserve
Note the 3% Assay correction for the Mill (applied in 2019) has been removed
•

The F1 reconciliation indicates that the 2020 model has over-called metal by 7% for the year to June 2020 compared to over-calling by 7% for the year to June 2019.
The F3 (Mill / Reserve) reconciliation indicates that the Reserve model has over-called metal by 11%, and for tonnes by 7% for the year ended June 2020. The project to date reconciliation shows the Reserve has over-called metal production (F3) by 7% while the F1 metal of 2% under-call is consistent with prior years’ models.
Further analysis using the F2 reconciliation factor (Mill / Grade Control) for the year ending June 2020 shows that metal is 4% lower, comprising 2% lower tonnes and 2% lower grade received by the mill than estimated by the mine. The F2 factor result indicates that ore loss and dilution are issues that need to be addressed. Both the F2 and F3 factors are affected by ore loss and dilution.

</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	 F1: Polygon Ore / Reserve Model Ore  F2: Plant+Stk Delta / Polygon Ore  F3: Plant+Stk Delta / Reserve Model Ore • The accuracy and confidence of the 2020 Mineral Resource estimates are considered suitable for use as an input to Ore Reserve estimation and public reporting by the Competent Person.

3.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resources statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

3.2.3.1 Competent Person Statement

I, Rex Berthelsen, confirm that I am the Competent Person for the Las Bambas Mineral Resources section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am an Honorary Fellow of The Australasian Institute of Mining and Metallurgy and hold Chartered Professional accreditation in the field of Geology
- I have reviewed the relevant Las Bambas Mineral Resources section of this Report to which this Consent Statement applies.

I am a full-time employee of MMG Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Las Bambas Mineral Resources section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Las Bambas Mineral Resources.

3.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Las Bambas Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resources and Ore Reserves Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

02/12/2020

Rex Berthelsen HonFAusIMM(CP) (#109561)

Date:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resources and Ore Reserves Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Douglas Corley
Melbourne, VIC

Signature of Witness:

Witness Name and Residence: (e.g. town/suburb)

3.3 Ore Reserves – Las Bambas

3.3.1 Results

The 2020 Las Bambas Ore Reserves are summarised in Table 5. All data reported here is on a 100% asset basis. MMG's attributable interest in Las Bambas is 62.5%.

Table 5 2020 Las Bambas Ore Reserves tonnage and grade (as at 30 June 2020)

Las Bambas Ore Reserves						**Contained Metal**			
Ferrobamba Primary Copper[1]	Tonnes (Mt)	Copper (% Cu)	Silver (g/t Ag)	Gold (g/t Au)	Mo (ppm)	**Copper (kt)**	**Silver (Moz)**	**Gold (Moz)**	**Mo (kt)**
Proved	422	0.61	2.6	0.05	223	2,566	36	0.68	94
Probable	166	0.74	3.4	0.07	189	1,219	18	0.38	31
Total	**587**	**0.64**	**2.8**	**0.06**	**214**	**3,785**	**53**	**1.06**	**126**
Chalcobamba Primary Copper[2]									
Proved	81	0.51	1.6	0.02	156	414	4	0.05	13
Probable	126	0.72	2.8	0.04	123	913	11	0.14	16
Total	**207**	**0.64**	**2.3**	**0.03**	**136**	**1,326**	**15**	**0.20**	**28**
Sulfobamba Primary Copper[3]									
Probable	64	0.76	5.5	0.03	163	487	11	0.05	10
Total	**64**	**0.76**	**5.5**	**0.03**	**163**	**487**	**11**	**0.05**	**10**
Sulphide Stockpiles									
Proved	8.1	0.40	1.8	-	135	32	0.48	-	1.1
Total	**8.1**	**0.40**	**1.8**	**-**	**135**	**32**	**0.48**	**-**	**1.1**
Total Contained Metal						**5,631**	**81**	**1.3**	**165**

1 0.18% to 0.21% Cu cut-off grade based on rock type and recovery

2 0.21% to 0.30% Cu cut-off grade based on rock type and recovery

3 0.23% to 0.27% Cu cut-off grade based on rock type and recovery

Figures are rounded according to JORC Code guidelines and may show apparent addition errors

Contained metal does not imply recoverable metal

3.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 6 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code. Each of the items in this table has been summarised as the basis for the assessment of overall Ore Reserves risk in the table below, with each of the risks related to confidence and/or accuracy of the various inputs into the Ore Reserves qualitatively assessed.

Table 6 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Las Bambas Ore Reserve 2020

<table>
<tr><th colspan="2">Section 4 Estimation and Reporting of Ore Reserves</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Mineral Resource estimates for conversion to Ore Reserves</td><td>

- Mineral Resource block models have been updated by Resource Geology within Strategic Planning and reviewed by the Mineral Resource Competent Person. The block models contain descriptions for lithology, Mineral Resources classification, mineralisation, ore type, and other variables described in model release memorandums. The ore loss modifying factors have been incorporated in the block models via a variable. These block models were used for the pit optimisation purpose using corporately approved assumptions for cost and metal prices, GEOVIA Whittle was the software package used for this purpose.

<table>
<tr><th>MR block models</th><th>Ferrobamba</th><th>Chalcobamba</th><th>Sulfobamba</th></tr>
<tr><td>Previously Completed by</td><td>Helber Holguino/Andrew Fowler</td><td>Helber Holguino/Andrew Fowler</td><td>Helber Holguino/Andrew Fowler</td></tr>
<tr><td>Updated by</td><td>Helber Holguino</td><td>Helber Holguino</td><td>Helber Holguino</td></tr>
<tr><td>Reviewed by</td><td>Rex Berthelsen</td><td>Rex Berthelsen</td><td>Rex Berthelsen</td></tr>
<tr><td>Memorandum date</td><td>11 July 2020</td><td>10 June 2020</td><td>10 June 2020</td></tr>
<tr><td>Block model file</td><td>lb_fe_mor_2007v6.bmf</td><td>lb_ch_mor_2005v2.bmf</td><td>lb_sb_1704_mor_v2.bmf</td></tr>
<tr><td>Block size (m)</td><td>20 x 20 x 15</td><td>20 x 20 x 15</td><td>20 x 20 x 15</td></tr>
<tr><td>Model rotation</td><td>35°</td><td>0°</td><td>0°</td></tr>
</table>

- The Measured and Indicated Mineral Resources quantities are inclusive and not additional to the Ore Reserves reported.

</td></tr>
<tr><td>Site visits</td><td>

- The Competent Person has undertaken numerous site visits to Las Bambas since commercial production commenced. Among other activities, the visits include discussions with relevant people associated with Ore Reserve modifying factors including Geology, Grade Control, Geotechnical, Mine Planning and Mining Operations, Metallurgy, Tailings and Waste Storage, and Environmental Areas. The outcomes from the visits have included reaching a common understanding in those areas, in addition to achieving other specific purposes of each trip. Site visits were also carried out by contributing experts listed in the expert input table at the end of this document.

</td></tr>
<tr><td>Study status</td><td>

- The Las Bambas Ore Reserve estimates were prepared based on Feasibility and Pre-Feasibility level studies that include the following:
  - Bechtel Feasibility Study 2010; and
  - Las Bambas Mine Site 3 TSF Prefeasibility Study, MWH, 2015.
- Additional work/studies include:
  - Glencore Mineral Resources and Ore Reserves Report 2013;
  - Audit of Las Bambas Ore Reserves 2013, by Mintec, Inc in October 2013;
  - MMG Competent Person Report prepared by Runge Pincock Minarco (RPM), June 2014;

</td></tr>
</table>

- MMG Las Bambas cut-Off Grade Report 2020;
    - Rock Mass Model Update by Golder (2017);
    - Structural Geology Mode Update by JFSGC (2017);
    - Hydrogeology Model Update by Itasca (2018);
    - Geotechnical guidance by Piteau (2009-2010);
    - Update and validation of detailed slope engineering for waste dumps 1, Anddes Associates SAC, 2017;
    - Geotechnical work conducted by site personnel and Itasca, 2015 - 2017;
    - 20190711_Memo Ferrobamba Geotechnical Design Guidance for 2019 (Produced by ITASCA 2019 and Las Bambas Geotechnical Personnel)
    - Sulfobamba Metallurgy Testing, 2015;
    - Tailings Storage Facility – Initial review of options to extend filing life, ATCW, 2015;
    - Technical review of future TSF, Khlon Crippen Berger, 2016;
    - Conceptual Development of New Tailings Storage Facility, Ausenco 2017; and
    - TSF2 Conceptual Study, Stantec 2018.
- 2020 Life of Asset (LoA) Reserve Case was produced as part of the MMG planning cycle demonstrates this is technically achievable and economically viable, and that material Modifying Factors have been considered.

Cut-off parameters

- MMG Board approved metal prices for the cut-off calculation have been provided by MMG Group Finance in accordance with the MMG MROR Standard.
- Costs were estimated based on information provided by the Las Bambas Finance Department.
- The breakeven cut-off (BCoG) 2020 has been calculated with updated metal prices and costs and is applied to the copper grade. (Source: 2020 Las Bambas CoG Report).
- Cut-off grade has been determined for each ore-type within each deposit:

Cut-off grades by ore-type for Ferrobamba:

COG Component	**Ferrobamba by Ore Type**					
	FSSL	**FSSM**	**FPSL**	**FPSM**	**FMSL**	**FBRE**
BCOGinpit	0.18%	0.20%	0.18%	0.21%	0.21%	0.18%

Cut-off grades by ore-type for Chalcobamba:

COG Component	**Chalcobamba by Ore Type**						
	CSSL	**CSSM**	**CSML**	**CSMM**	**CPSL**	**CPSM**	**CBRE**
BCOGinpit	0.21%	0.25%	0.21%	0.22%	0.21%	0.25%	0.30%

Cut-off grades by ore-type for Sulfobamba:

COG Component	**Sulfobamba by Ore Type**				
	SSSL	**SSSM**	**SPSL**	**SPSM**	**SBRE**
BCOGinpit	0.23%	0.27%	0.23%	0.26%	0.23%

Mining factors or assumptions

- The method of Ore Reserves estimation included pit optimisation, final pit and phase designs, consideration of mining schedule and all modifying factors. Addition information is provided in this section.
- The mining method selected for the Las Bambas operation is open cut mining, which enables bulk mining of these large low to moderate grade mineral deposits that are outcropping to sub-cropping. Three deposits, Ferrobamba, Chalcobamba and Sulfobamba are each mined in separate open pits. Mining is by way of conventional truck and shovel operation. This method and selected mining equipment are appropriate for these deposits.

- The geotechnical recommendations were provided by the Geotechnical & Hydrogeology team at Las Bambas in coordination with MMG Operational and Technical Excellence (OTE). These recommendations are based on studies performed by site personnel and Itasca (2017 to 2020). The pits are sectored by structural domains and geotechnical sectors.
- Ferrobamba Design sectors NE and E were updated based on new structural model released on Oct. 2019. Sectors W1 & W2 were also updated for Phase 5 base on final bench performance. No major changes where incorporated on Final Phase design parameters.
- Chalcobamba Bench Face Angles for design sectors CH-N, CH-E, CH-SE, CH-S2, CH-S1 and CH-SW on upper level were increase from 65° to 70° as structural and rock mass conditions on the sectors are favourable. Change will allow increase effective catchment berm. No change to IRA was introduced.
- Geotechnical slope design angles for 2020 were reported on the memorandum (20200802_Geotechnical Design Guidance 2020). The summary table for slope design angles, by pit, is presented below:

Geotechnical recommendations for Ferrobamba

Design Parameters							
Design Sector	**Level (masl)**	**Bench height (m)**	**Bench Face Angle (BFA °)**	**Berm Width (m)**	**Interramp angle (IRA °)**	**Interamp height (m)**	**Decoupling Berm width (m)**
SW1 SW2 SO1 (P1)	Below 3720mRL	15	65	9.7	42	120	25
SO2 (P2)	Below 3675mRL	15	70	10.1	44	120	25
	Below 3720mRL	30	70	13.4	51	120	25
NW (P3)	4080-3900	15	80	14	42	150	25
	Below 3900	30	70	13.4	51		30
W1 (P3 / P5)	4140 - 3975	15	80	14	42	150	25
	Below 3975mRL	30	70	13.4	51		30
	Below Ramp, 02 single benches are maintained with IRA: 45°, BFA: 70° and CB:10.0 m						
W2 (P3 / P5)	4140 - 3720	15	70	11.2	42	105-120	25
SE	4095 - 3750	15	70	11.2	42	150	25
	Below 3750	30	70	13.4	51		30
NE (P5 / FP)	*	15	70	11.2	42	120	25
NW (P5)	*	15	70	9	47	150	25
NW (FP)	*	30		12	53		30
W1 (FP)	*	15	70	9	47	150	25
	*	30		12	53		30
W2 (FP)	*	15	70	9	47	105	25
CE (P5)	*	30	70	12	53	150	30
SE (FP)	Surface - 3750	15	70	9	47	150	25

SE (P5/FP)	Below 3750	30		12	53		30
SW (P4 / FP) Use final pit graph	*	30	70	13	51	150	30
	*	15		9	47		25
E (P5)	4155 to 4035	In-pit Waste dump area. Use BFA=37º and Bench Height of 15m					
	4030-3870	15	70	12.4	40	120	25
E (FP)	*	15	70	9	47	105	25

Geotechnical recommendations for Chalcobamba:

Chalcobambas Geotechnical Design Parameters

Zone	Level (masl)	BFA (°)	Bench Height (m)	Berm Width (m)	IRA (°)	Decoupling Height (m)	Ramp Width	Decoupling width (m)
CH-S2	4330 - 4450	70	15	8	48,1	150	35	30
	4450 - 4540	70	15	9.5	45,0			
CH-SE	4255 - 4465	70	15	8	48,1	150	35	30
	4465 - 4555	70	15	9.5	45,0			
CH-E	4165 - 4435	70	15	8	48,1	150	35	30
	4435 - 4540	70	15	9.5	45,0			
CH-N	4165 - 4360	70	15	8	48,1	120	35	30
	4360 - 4465	70	15	9.5	45,0			
CH-NW	4165 - 4285	70	15	8	48,1	120	35	30
	4285 - 4375	65	15	8	45,0			
CH-W	4165 - 4330	70	15	8	48,1	120	35	30
	4330 - 4420	65	15	8	45,0			
CH-SW	4315 - 4435	70	15	8	48,1	150	35	30
	4435 - 4525	70	15	9.5	45,0			
CH-S1	4315 - 4450	70	15	8	48,1	150	35	30
	4450 - 4540	70	15	9.5	45,0			
All	Quaternary (QT) & Overburden	65	10	10.2	34	n/a	n/a	n/a

Geotechnical recommendations for Sulfobamba

Ore reserve sectors	Levels	Bench Height (m)	Bench Face Angle (BFA º)	Berm width (m)	Interamp Angle (IRA º)	Interamp / stack height (m)	Decoupling Berm width (m)
SU-N	4460 – 4310mRL	15	65	8	45	150	30
SU-NE	4420 – 4345mRL	15	65	8	45	150	30
	In fresh rock	15	70	8	48.1		
SU-E	4565 – 4445mRL	15	65	8	45	150	30
	In fresh rock	15	70	8	48.1		
SU-S	4565 - 4475mRL	15	65	8	45	150	30
	In fresh rock	15	70	8	48.1		
SU-W	4565 – 4505mRL	15	65	8	45	150	30
	In fresh rock	15	70	8	48.1		

- A program of additional geotechnical data collection and analysis is currently being implemented for 2020 for Ferrobamba and Chalcobamba. This will improve confidence in the slope design guidance at these deposits. The bulk of the findings from the data collection and analysis will be available for inclusion in the 2021 Ore Reserve slope design guidance.
- The 2020 Mineral Resources models for Ferrobamba and Chalcobamba, which incorporated the additional ore loss variable, have been used for the updated 2020 Ore Reserves. The Mineral Resources model for Sulfobamba remained the same as 2019 except for an update of the ore loss variable. All models were regularised to 20m x 20m x 15m.
- The pit optimisation was developed for the three open pits based on the 2020 Mineral Resource block models. The strategy for the final pit selection was based on the NPV by pit shell at revenue factor (RF) 1. Final pit designs that incorporate more practical mining considerations were carried out using those optimisation shells.
- Dilution has been accounted for in the regularised block model used for the Ore Reserves estimate. In addition, the ore loss variable has been populated with following modifying factors:
  - 3% ore loss for all ore types for all pits.
  - An additional 2% ore loss for Ferrobamba Phase 02, Phase 03 and Phase 04 which are the main ore sources for 2020 and 2021.
- Ore loss factor for Mixed ore type was 10% last year and now is the same as other ore types as a result of improvements made in resource model estimate, mining operation and reconciliation practice. For all the other ore types the ore loss factors remain the same as last year. This is supported by the reconciliation results.
- The reconciliation results summarised in the Mineral Resource section earlier is repeated below:

	Block Model	Factor	Grade	Tonnes	Metal
Year to June 2019	2019	F1	0.97	0.93	0.90
		F2	0.96	0.95	0.91
		F3	0.94	0.88	0.82
1 July 2018 to 30 June 2019	2020	F1	0.99	0.95	0.93
		F2	0.98	0.94	0.92
		F3	0.96	0.89	0.86
1 July 2019 to 30 June 2020	2020	F1	0.97	0.95	0.93
		F2	0.98	0.98	0.96
		F3	0.95	0.93	0.89
All (since commercial production start)	2020	F1	1.02	1.00	1.02
		F2	0.96	0.95	0.91
		F3	0.98	0.95	0.93

F1	Ore Control / Ore Reserve
F2	Mill / Ore Control
F3	Mill / Ore Reserve

Note the 3% Assay correction for the Mill (applied in 2019) has been removed

- Towards the end of 2018 and at the beginning of 2019, it was clear that the reconciliation results were not improving to a satisfactory level, despite various operational initiatives.

	• In April 2019, Wood PLC was engaged to review the reconciliation history. A key member of the review team was Dr Harry Parker. • Given these findings, in early June 2019, Las Bambas convened technical stakeholders to develop and agree to a scheme to apply a modifying mining factor to support construction of mine plans more closely aligned with reconciliation outcomes. These modifying factors were introduced to the Resources Models under the additional ore_loss variable. • A program to address these issues was set and significant progresses have been made in the areas of resource estimation, grade control practices, blasting practices/designs, monitoring blast movement, accurate positioning of shovels, better design of ore polygons and other remediations. The continuous improvement program is still on going. • 2020 reconciliation results have indicated significant issues with the 2019 geological model with regards to ore tonnage estimation, this has been addressed by the new 2020 model. • 2020 reconciliation results support the continuing application of the ore loss factors as outlined in 2019, with some modification for the mixed ore as outlined earlier. The Competent Person considers this to be appropriate for 2020 Ore Reserve estimation based on the current information. • A comprehensive internal review was carried out this year on reconciliation, involving all the key areas including, geological modelling, ore control, operations, mine planning, and operational excellence. • A Midterm model was introduced to inform the ore control process, among other initiatives. • Additional studies for mining dilution and recovery will be undertaken when more reconciliation data is available and the current improvement programs are being implemented in the mining operation. • In the pit, the minimum mining width is 70m; the Selective Mining Unit (SMU) has been set at 20m x 20m x 15m. • Inferred Mineral Resource material has not been included in the pit optimisation or in the Ore Reserves estimates. • The main mining infrastructure includes; crusher, overland conveyor, tailings and waste storage facilities, stockpiles, roadways/ramps, workshops and so forth. • All infrastructure requirements are established for Ferrobamba. Further capital investment is required for infrastructure to support the needs of Chalcobamba and Sulfobamba. • The required infrastructure for Chalcobamba pit has been identified and included in the current approved Environment Impact Assessment (EIA), with 50% of the north waste dump not located within the property boundary. Another location that is fully within the property boundary has been identified and used in the LoA planning; however, it is yet to be evaluated by environmental/legal/exploration teams. In 3rd EIA amendment approval drilling for studies has been included and the 4th EIA amendment will include principal components for Chalcobamba (crushing and conveyor), with waste dump fully within the property boundary.

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The planned Sulfobamba infrastructure has been identified within the Las Bambas mining concession, however the infrastructure and deposit are not located within the area of MMG land ownership.

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<tr>
<td>Metallurgical factors or assumptions</td>
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Metallurgical copper concentration process comprises the following activities; crushing, grinding and flotation, producing copper and molybdenum concentrates. Copper concentrates contain gold and silver as by-products. Las Bambas Project commenced commercial production on 1 July 2016.
Extensive comminution and flotation test work has been conducted and metallurgical recoveries determined for different rock types and different mining areas.
Bulk samples and pilot scale tests have been conducted on representative samples of the deposits. For the Ferrobamba deposit, nearly all of the tests were completed by the G&T laboratory in Canada as part of Feasibility Study, though a small number of additional confirmatory tests were included from more recent testing by ALS in Peru. For Chalcobamba, all of the tests were completed by G&T and reported in the Feasibility Study. For Sulfobamba, the data analysed were those from testing at G&T in 2015.
Arsenic minerals identified in the orebody are being mapped and monitored in the mining process. The level of Arsenic in Las Bambas concentrates remains low by market standards and concentrate quality continues to be very acceptable for processing by smelters internationally.
The recovery equations have been provided by the Metallurgical Group at Las Bambas in coordination with MMG OTE.
The equations were generated based on metallurgical test work, from diamond drilling sample data in each pit. It should be noted that the copper recovery is a function of the ratio of acid soluble copper (CuAS) to total copper (Cu), which is a determining factor for the recovery. The copper recovery is determined by the following equations. All assumptions are validated annually with plant performance data.
<i>Ferrobamba:</i>
For all the materials except marble:
$Cu\ Recovery\ (\%) = (96.0-94.0*(CuAS/Cu\ ) + 1.6$
For marble:
$Cu\ Recovery\ (\%) = (96.0-94.0*(CuAS/Cu\ ) -13 + 1.6$
<i>Chalcobamba:</i>
$Cu\ Recovery\ (\%) = 94.4-90.0*(CuAS/Cu) + 1.6$
<i>Sulfobamba:</i>
$Cu\ Recovery\ (\%) = 89.2 - 80.4*(CuAS/Cu) + 1.6$
An improvement in recovery of 1.6% has been added to account for ongoing metallurgical improvement work since the start of operation.
The recovery of Mo, Ag, Au, has been provided by Metallurgical Group at Las Bambas.
<table>
<tr><th colspan="2">Metal</th><th>Ferrobamba</th><th>Chalcobamba</th><th>Sulfobamba</th></tr>
<tr><td>Mo</td><td>%</td><td>55.5</td><td>55.5</td><td>55.5</td></tr>
<tr><td>Ag</td><td>%</td><td>75.0</td><td>75.0</td><td>75.0</td></tr>
<tr><td>Au</td><td>%</td><td>71.0</td><td>71.0</td><td>71.0</td></tr>
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	• Benchmarking of data from four other mines in South America has been completed and the recovery algorithms that describe performance at these mines compared with those used for the three Las Bambas deposits. The four other mines were Tintaya, Toquepala, Cerro Verde and Antamina.
Environmental and Legal Permits	• The Environmental Impact Study for the Las Bambas Project was approved on 7 March 2011 by the Peruvian Government with directorial resolution Nº073-2011-MEM/AAM. • The construction of the project processing facilities including Tailings Storage Facility at Las Bambas was approved 31 May 2012 by the General Directorate of Mining through Resolution N°178-2012-MEM-DGM/V. • The Mine Closure Plan for the Las Bambas Project was approved 11 June 2013 through Directorial Resolution N°187-2013-MEM-AAM. As per the Peruvian regulatory requirements, an update of the Mine Closure Plan was approved 28 September 2016, through Directorial Resolution N°288-2016-MEM-DGAAM. • A first amendment to the Environmental Impact Study was approved 14 August 2013 through Directorial Resolution N°305-2013-MEM-AAM, whereby amendments to the Capacity of the Chuspiri water reservoir and changes to the environmental monitoring program were approved. • On 26 August 2013 the relocation of the molybdenum circuit (molybdenum plant, filter plant and concentrate storage shed) from the Antapaccay region to the Las Bambas project area was approved by the environmental regulator through Directorial Resolution Nº319-2013-MEM-AAM, after assessment of the technical report showed that the environmental impacts of the proposed changes were not significant. • On 6 November 2013, through Directorial Resolution N°419-2013-MEM-DGM/V, the General Directorate of Mining approved the amendment of the construction permit for the processing facilities to allow the construction of the molybdenum circuit at the Las Bambas project area. • Minor changes to the project layout were approved 13 February 2014 through Directorial Resolution N°078-2014-MEM-DGAAM and 26 February 2015, through Directorial Resolution N°113-2015-MEM-DGAAM. • On 17 November 2014, the second modification of the Study of Environmental Impact was approved with Directorial Resolution Nº 559-2014-EM/DGAAM, whereby changes to the water management infrastructure and changes in the transport system from concentrate slurry pipeline to bimodal transport (by truck and train) were approved. • A second amendment to the construction permit for processing facilities was approved through Directorial Resolution N°419-2015-MEM-DGM/V to allow changes to the design of the tailings storage facility and changes to the water management system and auxiliary infrastructure. • Environmental approval for minor changes to project layout was approved 1 June 2016 through Directorial Resolution N°177-2016-MEM-DGAAM. • On 6 October 2018, the third amendment to the Environmental Impact Study was approved through Directorial Resolution 00016-2018-SENACE-PE-DEAR, to allow changes to the molybdenum plant, included haul road Ferrobamba to Chalcobamba, impacts and measure management in public transport, other ancillary infrastructure and changes to the environmental management plan.

	- Environmental changes to include the third ball mill and drilling at Jatun Charqui and others were approved through Directorial Resolution N°00030-2019-SENACE-PE-DEAR. - The permit to discharge treated water to Ferrobamba River was approved on 16 April 2019 through Directorial Resolution N°057-2019-ANA-DCERH. - On 13 July 2020, the environmental technical report was submitted to SENACE that included: Ferrobamba Phase 7A, drilling, processing facilities, truck shop relocation and ancillary components for Ferrobamba and Chalcobamba. This technical report is under evaluation by the authorities. - Las Bambas has started the process for the 4th modification to include: Ferrobamba Pit expansion, Chalcobamba Phase II, TSF 1 expansion, drilling and others. - In February 2019 the file for the authorization to start activities for the Chalcobamba pit was presented to MINEM, the approval of the AIA was planned for 31 July 2020. However, due to the current situation caused by the health crisis (COVID 19), the approval of this permit has been delayed until 30 November 2020. Las bambas is working in conjunction with the Government to achieve such approval. - Geochemical characterisation studies on waste rock samples were conducted in 2007 and 2009/2010 as part of the Feasibility and Environmental Impact Studies, conclusions from these studies indicate that it should be expected that less than 2% of the waste rock from the Ferrobamba and Chalcobamba pits should be Potentially Acid Forming (PAF). No acid rock drainage from the waste rock dumps from these two pits should be expected. Waste rock samples from Sulfobamba were found to contain higher concentration of sulphur and that 30% to 40% of waste rock could be PAF. - Further geochemical characterisation studies on waste rock and tailings samples are currently underway to support the Environmental Impact Study Modification. - The operation of the Ferrobamba waste rock dump was approved on 29th September 2015 by the General Directorate of Mining through Directorial Resolution N°1780-2015-MEM/DGM. - Currently, Las Bambas has four water use licenses: o License for underground water obtained with Directorial Resolution 0519-2015-ANA / AAA.XI.PA, for a volume up to 9,460.800 m3 / year. o License for non-contact water obtained with Directorial Resolution 0518-2015-ANA / AAA.XI.PA, for a volume up to 933.993 m3 / year. o License for contact water obtained with Directorial Resolution 0520-2015-ANA / AAA.XI.PA, for a volume up to 4,730,400 m3 / year. License for contact water obtained with Directorial Resolution 0957-2016-ANA / AAA.XI.PA, for a volume up to 4,730,400 m3 / year. o License for fresh water obtained with Directorial Resolution 0778-2016-ANA / AAA.XI.PA, for a volume up to 23,501,664 m3 / year.
Infrastructure	Las Bambas has the following infrastructure established on site: - Concentrator currently in operation. - Based on the current TSF design and the design assumptions for dry settled density and beach angle, the TSF currently under construction at Las Bambas has a final capacity of 784Mt of tailings from processing 800Mt. Three studies have been conducted looking at increasing tailings storage capacity at Las Bambas:

	o Tailings characterization test work to assess final settled density and beach slope in current TSF. o Options assessment to increase capacity at TSF currently under construction. o Pre-feasibility study for an additional TSF at Tambo valley. • Camp accommodation for staff • Water supply is sufficient for site and processing, sourced from the following: rainfall and runoff into Chuspiri dam, groundwater wells, contact waters, recirculating water in the process plant. Pump station from Challhuahuacho River off-take structure. • Transport of the copper concentrate is performed by trucks, covering 380km, to the Imata Village, then it is transported by train, covering 330km, up to Matarani Port in Arequipa region. Transport of the molybdenum concentrate is be performed by trucks all the way from Las Bambas site to Matarani Port, covering 710Km. This method is also used temporarily for some of the copper concentrate. • There are principal access roads that connect Las Bambas and national routes, Cotabambas to Cusco and Cotabambas to Arequipa. • High voltage electrical power is sourced from the national grid Cotaruse – Las Bambas, with a capacity of 220kV. • The majority of staff working at the operation are from the region immediately surrounding the project. • Technical personnel are mostly sourced from within Peru. The operation has a limited number of expatriate workers. Additional support is provided by Las Bambas office in Lima and MMG Melbourne Head office personnel. • Chalcobamba pit operation requires additional purchase of land to the North side of the lease (Waste dump 2). However, an alternative location is being evaluated that does not require land purchase; this is what the LoA planning is based on currently. Sulfobamba pit operation requires additional purchase of land for the pit and other infrastructure. • Ferrobamba pit expansion requires additional purchase of land to the North side, because this expansion impacts Antuyo Hamlet.
Costs	• Las Bambas Project commenced commercial production on 1 July 2016; future additional capital costs such as TSF 2 expansion are mainly based on pre-feasibility studies, taking into account of additional information now available during four years of operation. The operating costs used for Ore Reserves estimation are based on the 2020 Budget (2020-2022) and 2019 Life of Asset (LoA) (2023 onwards) as per Corporate (MMG) guidelines and other considerations. Specifically: o Average costs are calculated by using the first 3 years budget plus remaining LoA estimated costs year by year; o Necessary adjustments required for the input prices and consumption rates, updated during the budget process, are made to establish connection between the budget and LoA; and o Approved cost savings from identified initiatives and improvements to be delivered over the life of mine are incorporated. • No deleterious elements are expected in the concentrates that would result in smelter penalties. • Metal prices and exchange rates are the same as those reported in the section for cut-off grade parameters. These Board approved prices and rates are provided by MMG

	Corporate and are based on external company broker consensus and internal MMG strategy. • Transportation charges are based on quotations from local companies. • Treatment and refining charges (TC/RC's) are based on marketing actuals and projections. Royalties payable are based on information provided by the Finance and Commercial Group at Las Bambas. • Sustaining capital costs, together with mining costs and processing costs have been included in the pit optimisation. The sustaining capital costs are principally related to TSF construction and equipment replacement. The inclusion or exclusion of these costs in the Ore Reserves estimation process has been done following MMG guidelines according the objective of each capital expenditure in the operation.
Revenue factors	• All mining input parameters are based on the Ore Reserves estimate LoA Reserve Case production schedule. All cost inputs are based on tenders and estimates from contracts in place as with net smelter returns (NSR) and freight charges. These costs are comparable with the regional averages. • The gold and silver revenue is via a refinery credit. • TC/RC's have been included in the revenue calculation for the project.
Market assessment	• MMG considers that the outlook for the copper price over the medium and longer term is positive, supported by further steady demand growth. • Global copper consumption growth will continue to be underpinned by rising consumption in China and the developing countries in Asia as these nations invest in infrastructure such as power grids, commercial and residential property, motor vehicles and transportation networks and consumer appliances such as air conditioners. • Global copper demand will also rise as efforts are made to reduce greenhouse gas emissions through increased adoption of renewable energy sources for electricity generation and electric vehicles for transportation. • Supply growth is expected to be constrained by a lack of new mine projects ready for development and the requirement for significant investment to maintain existing production levels at some operations. • Las Bambas has life of mine agreements in place with MMG South America and CITIC covering 100% of copper concentrate production which is sold to these parties at arms' length international terms. These agreements ensure ongoing sales of Las Bambas concentrate.
Economic	• The costs are based on the 2020 LoA Reserve Case projections which are based on actual costs and 2020 Budget information. • The financial model of the Ore Reserves mine plan shows that the mine has a substantially positive NPV. The discount rate is in line with MMG's corporate economic assumptions. • Various sensitivity analyses on the key input assumptions were undertaken during mine optimisations and financial modelling. All produce robust positive NPVs.
Social	• Las Bambas project is located in the Apurimac region that has a population of approximately 456,000 inhabitants (Census 2014). The region has a University located in the city of Abancay, with mining programs that provide professionals to the

	operation. The project straddles two provinces of the Apurimac region, Grau and Cotabambas. • Las Bambas Project contributes to a fund - "FOSBAM" - that promotes activities for the sustainable development of the disadvantaged population within the project's area of influence, comprising the provinces Grau and Cotabambas – Apurimac. • Las Bambas Project and the local community entered into an agreement for the resettlement of the rural community of Fuerabamba, Convenio Marco. The construction the township of Nuevo Fuerabamba was completed in 2014 and the resettlement of all community families were completed in 2016. Currently, in joint work with the community, MMG are executing the commitments described in the framework agreement - Convenio Marco. • During the extraordinary general meeting in January 2010, Fuerabamba community approved the agreements contained in the so-called "compendium of negotiating resettlement agreements between the central negotiating committee of the community of the same name and representatives of Las Bambas mining project" that considers 13 thematic areas. • Las Bambas Project provides important support to the community in the areas of agriculture, livestock and health, education, and other social projects, which is well received. • Las Bambas has had periodic social conflict with communities along the public road used for concentrate transport and logistics. In response to these concerns Las Bambas has promoted a dialogue process in which the government, civil society and communities along the road participate. Besides, Las Bambas is also working to systematically improve the road conditions and reduce the impacts, while also maximising the social development opportunities available to these communities. • Las Bambas, for social management, complies with the national regulations of Peru and applies the Corporate standards of MMG and ICMM. • The health emergency generated by COVID-19 has impacted the management of relations with communities, causing difficulties in accessing activities such as meetings, monitoring and compliance with commitments, among others.
Other	• Las Bambas owns 7,718Ha of land within the mining project. • The mining concession totals an area of 35,000 hectares, which includes the area containing the three mineral deposits and their corresponding infrastructures. According to Directorial Resolution N°187-2013-MEM-DGM/V, dated May 2nd, 2013, the Pit Mining Plan and the waste dump was approved for the Las Bambas project. • Approval for the exploitation of the Ferrobamba pit was granted on 30th September 2015 through Directorial Resolution N° 1780-2015-MEM/DGM. • The title for the Beneficiation Concession and approval for the operation of the concentrator plant was granted on November 30th, 2015 through Directorial Resolution N° 2536-2015-MEM/DGM. • It is reasonable to expect that the future land acquisition and community issues will be materially resolved, and government approvals will be granted within the required timeframe.
Classification	• The classification of Ore Reserves is based on the requirements set out in the JORC Code 2012, based on the classification of Mineral Resources and the cut-off grade. The material classified as Measured and Indicated Mineral Resources within the final

	pits and is above the breakeven cut-off (BCoG Cu%) grade is classified as Proved and Probable Ore Reserves respectively. • The Competent Person considers this appropriate for the Las Bambas Ore Reserves estimate. • No Probable Ore Reserves have been derived from Measured Mineral Resources.
Audit or Reviews	• The 2014 Ore Reserves were reviewed by Runge Pinock Minarco for the MMG Competent Person's Report. • The 2020 Ore Reserve estimates have been reviewed and validated by Javier E Ponce, Las Bambas Long Term Planning Superintendent. • An external third-party audit was undertaken in 2018 on the 2017 Ore Reserve by AMC Consultants. The audit concluded that the 30 June 2017 Ore Reserve was prepared to an acceptable standard at the time it was completed. The audit also identified some minor improvements to the estimation process and one potentially material issue in the application of mining ore recovery. It states that: "AMC understands there are several projects presently underway to minimise ore loss and dilution. These should be monitored and any residual discrepancy between the Ore Reserve model and the mill claim should be considered in the Ore Reserve process." • The mining ore recovery was discussed in mining factors and assumptions section of this report.
Discussion of relative accuracy / confidence	• The principal factors that can affect the confidence on the Ore Reserves are: ○ Proved Ore Reserves are considered to have a relative accuracy of +/- 15% within a volume equivalent to 3 months of production while Probable Ore Reserves are considered to have a relative accuracy of +/- 15% within a volume equivalent to 12 months of production. ○ Geotechnical risk related to slope stability (due to uncertainties in the geo-mechanical domains / hydrology models) or excessive rock mass blast damage that could increase the mining rate. ○ Metallurgical recovery model uncertainty due to operational variability. In the best-case scenario, this would represent variability of +/- 2% and in the worst scenario +/- 5% to metal recovery. ○ Increases in rising operating costs for mining and processing. ○ Increase in selling cost due to the transportation (truck and rail) cost increases. ○ Capital costs variation for the new or expansion of current TSF. Also land acquisition and/permitting delays for additional TSF needs.The social-political context impacts the schedule of the approvals of studies and requires good relationship with the communities and an ongoing requirement for investment in delivering on social commitments. ○ Change in environmental legislation, could be more demanding. ○ Current artisanal mining activities at Sulfobamba targeting high -grade mineralisation above the water table and social access may impact the timing of mining this pit due to delay in obtaining permitting and securing surface rights. The ore extracted to date is not expected to be significant in terms of loss to the ore reserve. It is recognised that the cost of accessing this resource will need to account for some form of economic resettlement for those community members engaged in the artisanal mining activities.

3.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 7.

In compiling the Ore Reserves the Competent Person has reviewed the supplied information for reasonableness but has relied on this advice and information to be correct.

Table 7 Contributing experts – Las Bambas Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Rex Berthelsen, Head of Resource Geology, MMG Ltd (Melbourne)	Mineral Resource estimation
Amy Lamb, Head of Metallurgy, MMG Ltd (Melbourne)	Updated processing parameters and production record
Maximiliano Adrove, Principal Geotechnical, MMG Ltd (Lima)	Geotechnical parameters
Jeff Price, Head of Geotech, MMG Ltd (Melbourne)	
Javier E Ponce, Superintendent Long Term Planning/Studies, MMG Ltd (Lima)	Cut-off grade calculations Whittle/MineSight optimisation and pit designs
Jaime Trillo, Technical Services Manager, MMG Ltd (Las Bambas)	Production reconciliation
David Machin, Head of Tailings and Water, MMG Ltd (Melbourne)	Tailings Management
Giovanna Huaney, Environmental Permitting Lead, MMG Ltd (Lima)	Environmental/Social/Permitting
Oscar Zamalloa, Business Evaluation Lead, MMG Ltd (Lima)	Economics Assumptions
Tim Roberts, Head of Marketing, MMG Ltd (Melbourne)	Marketing

3.3.4 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Ore Reserve statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“2012 JORC Code”).

3.3.4.1 Competent Person Statement

I, Yao Wu, confirm that I am the Competent Person for the Las Bambas Ore Reserve section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years’ experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy and hold Chartered Professional accreditation in the field of Mining.
- I have reviewed the relevant Las Bambas Ore Reserve section of this Report to which this Consent Statement applies.

I am a full-time employee of MMG Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Las Bambas Ore Reserve section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Las Bambas Ore Reserves.

3.3.4.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Las Bambas Ore Reserves - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020*– with the author’s approval. Any other use is not authorised.

02/12/2020

Yao Wu MAusIMM(CP)(#108391)

Date:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author’s approval. Any other use is not authorised.

Jorge Valverde
Lima, Peru

Signature of Witness:

Witness Name and Residence: (e.g. town/suburb)

4 KINSEVERE OPERATION

4.1 Introduction and setting

Kinsevere is located in the Katanga Province, in the southeast of the Democratic Republic of Congo (DRC). It is situated approximately 27 kilometres north of the provincial capital, Lubumbashi (Figure 4-1), at latitude S 11° 21′ 30″ and longitude E 27° 34′ 00″.

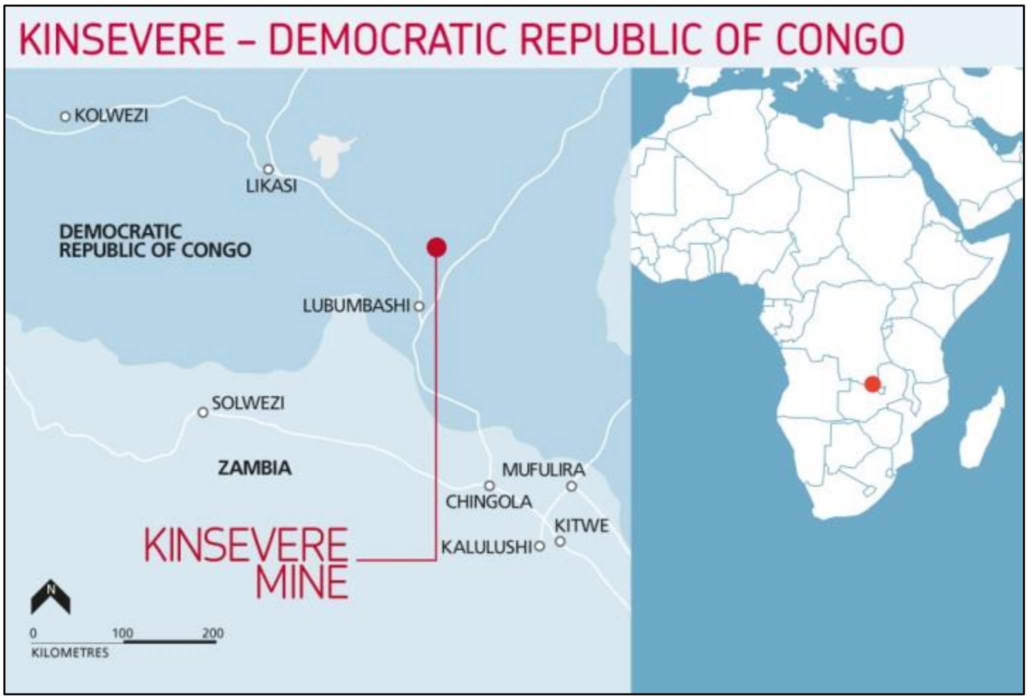


Figure 4-1 Kinsevere Mine location

Kinsevere is a conventional truck and excavator operation with atmospheric leaching of the oxide ore using a solvent extraction electro-winning (SX-EW) plant. The mine was started in 2006 using heavy media separation (HMS) and an electric arc furnace operation. The electric arc furnace was put on care and maintenance in 2008 with HMS then producing a direct shipping ore product grading 25% copper. The HMS was decommissioned in June 2011 when the Stage II SXEW plant was commissioned.

4.1.1 Results

The 2020 Kinsevere Mineral Resource are summarised in Table 8. The Kinsevere oxide Mineral Resource is inclusive of the Ore Reserve.

The reporting cut-off grade applied to the model is 0.6% acid soluble copper (CuAS%) for the oxide Mineral Resource, 0.7% total copper (Cu%) for the transitional mixed (TMO) Mineral Resource and 0.8% total copper (Cu%) for the primary sulphide Mineral Resource. The TMO material is defined as having a Ratio (CuAS%/Cu%) greater than or equal to 0.3 and less than 0.5. The Kinsevere Cobalt (Co%) Mineral Resource is external to the Kinsevere Cu% Mineral Resource.

Table 8 2020 Kinsevere Mineral Resource tonnage and grade (as at 30 June 2020)

Kinsevere Mineral Resource

					Contained Metal		
Oxide Copper[2]	**Tonnes (Mt)**	**Copper (% Cu)**	**Copper (AS % Cu)**	**Cobalt (% Co)**	**Copper ('000)**	**Copper AS ('000)**	**Cobalt ('000)**
Measured	1.5	3.2	2.6	0.10	49	40	1.6
Indicated	6.1	2.8	2.3	0.09	171	141	5.2
Inferred	2.2	2.2	1.8	0.07	48	39	1.6
Total	**9.8**	**2.7**	**2.2**	**0.09**	**267**	**220**	**8.4**
Transition Mixed Ore (TMO) Copper[3]							
Measured	0.9	2.1	0.72	0.17	18	6	1.5
Indicated	2.3	2.1	0.71	0.12	49	16	2.9
Inferred	1.1	1.6	0.53	0.08	17	6	0.9
Total	**4.3**	**2.0**	**0.67**	**0.12**	**84**	**29**	**5.2**
Primary Copper[4]							
Measured	1.5	2.6	0.25	0.25	40	4	3.8
Indicated	18.7	2.3	0.17	0.11	427	31	19.7
Inferred	9.0	1.8	0.13	0.08	158	12	6.9
Total	**29**	**2.1**	**0.16**	**0.10**	**625**	**47**	**30**
Stockpiles							
Indicated	15.5	1.6	1.09		256	169	
Total	**15.5**	**1.6**	**1.09**		**256**	**169**	
Kinsevere Copper Total	**59**	**2.1**	**0.79**	**0.07**	**1,200**	**460**	**44**
Oxide-TMO Cobalt[5]							
Measured	0.03			0.29			0.1
Indicated	0.18			0.32			0.6
Inferred	0.98			0.32			3.2
Total	**1.2**			**0.32**			**3.9**
Primary Cobalt[6]							
Measured	0.02			0.20			0.05
Indicated	0.15			0.20			0.3
Inferred	0.16			0.25			0.4
Total	**0.34**			**0.22**			**0.8**
Kinsevere Cobalt Total	**1.5**			**0.30**			**4.6**

[1] AS stands for Acid Soluble

[2] 0.6% Acid soluble Cu cut-off grade

[3] 0.7% Total Cu cut-off grade

[4] 0.7% Total Cu cut-off grade

[5] 0.2% Co cut-off grade

[6] 0.1% Co cut-off grade

All Mineral Resources are contained within a US$3.62/lb Cu and US$25.79/lb Co pit shell

Contained metal does not imply recoverable metal.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

4.1.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 9 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Kinsevere Mineral Resource 2020 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 9 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Kinsevere Mineral Resource 2020

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sampling techniques	• The Mineral Resource uses a combination of reverse circulation (RC) drilling diamond drilling (DD). The RC drilling is predominately collected for grade control and the DD is used for exploration and resource delineation work. • DD core is sampled mostly as 1m intervals while samples in un-mineralised zones are sampled over 4m lengths. Sampling is predominantly performed by cutting half core, with half retained on site for future reference. For PQ drilling undertaken 2015-2019, quarter core was submitted for sampling. • Grade control drilling (RC) is composited into 2m samples collected after riffle splitting. • Each sample is crushed and pulverised to produce a pulp (>85% passing 75µm) prior to analysis at the site SGS laboratory. • Measures taken to ensure sample representivity include orientation of the drill holes as close as practical to perpendicular to the known mineralised structure. In addition, field duplicates have been taken and analysed. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the style of the Kinsevere mineralisation (sediment hosted base metal) by the Competent Person.
Drilling techniques	• RC drilling was used to obtain 2m composited RC chip samples. 404,503m or 79% of the sample data used in the Mineral Resource were from RC samples (5.5-inch hammer), of that 303,845m (78%) was from Grade Control drilling. • PQ and HQ sized DD core were used to obtain nominal 1m sample lengths. 2015-2019 DD core was not routinely oriented. 97,183m or 21% of the sample data used in the Mineral Resource were from DD samples. • 40,457m of RC Grade Control drilling was completed since the 2019 estimation and utilised in the 2020 estimate. • No exploration DD drilling occurred post the 2019 Mineral Resource estimation. The latest drilling was drilled in 2018/2019 to inform a Scoping and PFS Sulphide Study and testing geological continuity in the south of Kinsevere Hill deposit. • In the view of the Competent Person sampling is of a reasonable quality to estimate the Mineral Resource.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Drill sample recovery	• DD core recovery recorded was typically above 90%, with only minor losses in competent ground (recovery average 97.3% for all drilling, and over 98.7% within ore zones). As expected, the recovery fell in unconsolidated ground such as weathered material close to surface and in vuggy zones of dolomitic rocks (average recovery approximately 85%, in this area). The vuggy zones are generally controlled by major structures. Triple tube core barrels were used to maximize core recovery. DD core recovery and run depth are verified and checked by a geological technician at the drill site. This data is recorded and imported in the Geobank database. • RC drilling has been observed for sample recovery with adequate sample volume being returned. However, no quantitative measurements of recovery have been recorded. • There is no observed relationship between core loss and mineralisation or grade - no preferential bias has occurred due to any core loss.
Logging	• RC chips are logged by geologists directly into an Excel logging template, geological information captured includes lithology, stratigraphy, weathering, oxidation, colour, texture, grain size, mineralogy and alteration. This data is then imported into the database. • DD core samples both geological and geotechnical information is logged. (lithology, stratigraphy, mineralisation, weathering, alteration, geotechnical parameters: strength, RQD, structure measurement, roughness and infill material) • All RC chip and DD core samples (100%) have been geologically logged to a level that can support appropriate Mineral Resource estimation. • Logging captures both qualitative descriptions such as geological details (e.g. rock type, stratigraphy) with some quantitative data (e.g. ore mineral percentages). Core photography is not known to have occurred prior to MMG ownership (2012). Since MMG took control of the site all DD core is photographed. • The total length and percentage of the relevant intersections logged is 100%.
Sub-sampling techniques and sample preparation	• DD core was split in half (NQ) or quartered (PQ) using a diamond saw. Sample lengths were cut as close to 1m as possible while also respecting geological contacts. Samples were generally 2kg to 3kg in weight. • RC samples are collected from a cyclone by a trained driller's assistant. If the sample was dry the sample was passed through a riffle splitter and collected into a pre-numbered calico bag. Residual material was sampled and sieved for collection into chip trays for logging and the remainder returned to the larger poly-weave bag. The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet, then the sample was dried in the laboratory oven before being split according to the procedure above (for dry samples). • Samples from individual drill holes were sent in the same dispatch to the preparation laboratory. • Representivity of samples was checked by sizing analysis and duplication at the crush stage. • Field duplicates were inserted at a rate of approximately 8% to ensure that the sampling was representative of the in-situ material collected. Field duplicates in

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	current RC programs have shown acceptable levels of repeatability across all elements analysed. • These practices are industry standard and are appropriate for the grain size of the material being sampled. • RC Grade Control samples are prepared on-site by the geology department, who provide pulp samples to the SGS analytical facility also on site at Kinsevere. The samples were oven dried at approximately 80°C, crushed to 85% passing -2mm using a jaw crusher and milled to 85% passing 75µm using one of three single sample LM2 vibratory pulverising mills. • Since 2015, Exploration and near-mine DD drilling core and RC chips are processed at the onsite Exploration core yard. Sample preparation was conducted at this facility through an ALS managed Containerised Preparation Laboratory (CPL). Pulp samples where then sent to ALS Johannesburg for analysis. • The sample size for both RC and DD is considered appropriate for the grain size of the material being sampled.
Quality of assay data and laboratory tests	• RC ore control samples are assayed at the onsite SGS Laboratory, ALS laboratory and SSM at Lubumbashi. ○ Following preparation, 50g pulp samples are routinely analysed for total and acid soluble copper, cobalt and manganese. ○ A 3-acid digest with AAS finish was used to analyse for total values. ○ A sulphuric acid digest with AAS finish was used to analyse for acid soluble copper. • All DD core samples prior to 2011 were assayed at: ○ ALS Chemex Laboratory, Johannesburg ○ McPhar Laboratory, Philippines ○ ACTLabs Laboratory, Perth ○ Samples were analysed for total copper and acid soluble copper with some having a full suite of elements analysed with a four-acid digest and ICP-OES analysis. • From 2011 to 2015, prepared samples were submitted to the ISO 17025 accredited SGS Laboratory in Johannesburg with the following assay scheme: ○ ICP-OES method with a 4-acid digest analysing 32 elements including copper from 0.5ppm to 1%. ○ ICP-OES method using alkali fusion is applied to over-range copper results. ○ ICP-AES with a 4-acid digest was used for calcium and sulphur analysis ○ XRF was used for uranium analysis. ○ Acid soluble copper using a sulphuric acid digest and AAS finish. • Since 2015 DD drilling, prepared samples were submitted to the ALS Laboratory in Johannesburg with the following assay scheme: ○ ICP-OES (ME-ICP61) method with a 4-acid digest analysing 33 elements plus OG triggers when Cu greater than 1% (OG62) ○ LECO analysed Total Carbon (C-IR07), Organic Carbon (C-IR17), Total Sulphur (S-IR08) and Sulphide Sulphur (S-IR07) ○ Acid soluble copper using a Sequential Leach (Cu-PKGPH06) finish.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	• No geophysical tools, spectrometers or handheld XRF instruments have been used in the analysis of samples external to the ALS laboratory for the estimation of Mineral Resources. • QAQC employs the insertion of Certified Reference Material (CRM) every 25 samples; blanks, field duplicates, coarse duplicates and pulp duplicates are taken/ inserted within every batch of 50 samples; and umpire laboratory checks are submitted for every batch of 20 samples to check accuracy, precision and repeatability of the assay result. Acceptable levels of accuracy and precision have been established. If control samples do not meet an acceptable level the entire batch is re-analysed. • The analysis methods described above are appropriate for the style and type of mineralisation.
Verification of sampling and assaying	• Significant intersections are verified by alternate company personnel following receipt of assay results and during the geological modelling process. • Twinned pre-collars are present in the database. These were used to confirm and check geological intervals and/or assay intervals. Twin drill holes are not used in the Mineral Resource. • Data is collected in Excel spread sheets and imported into industry standard databases that have built in validation systems and QAQC reporting systems. Raw data is imported in the database as received by the laboratory. • Where data was deemed invalid or unverifiable it was excluded from the Mineral Resource estimation. • There are adjustments to the CuAS assay data whenever greater than the Total Cu assay data.
Location of data points	• Prior to 2011 all drill hole collars were located using a hand-held GPS. Accuracy of GPS is +/- 5m for x and y coordinates and has poor accuracy of the z (elevation) coordinates. Elevations of these holes were later adjusted by using a LIDAR survey method. • RC and DD holes collared post-2011 are surveyed by qualified surveyors. Down hole surveys have been carried out using Eastman single-shot cameras or Reflex EZ tools. Surveys are taken at variable intervals and stored in the database. • Coordinates are in Kinsevere Mine Grid, which is related to WGS84 by the following translation: -8000000 m in northing and -22.3 m in elevation. • A LIDAR survey was used to generate a topographic surface. This surface was also used to better define the elevation of drill hole collars. The LIDAR survey considered to be of high quality and accuracy for topographic control.
Data spacing and distribution	• Majority of the Grade control RC drill pattern spacing is 5m x 15m, however in 2018 Grade control RC drill pattern spacing was 10m x 10m and it has been revised back to spacing 5m x 15m since 2019 which is enough to adequately define lithology and mineralisation domain contacts and transition zones. • The overall DD pattern spacing is between 25m and 75m, which is sufficient to establish the required degree of geological and grade continuity that is appropriate

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	for the Mineral Resource. Between 2015 and 2019, diamond drilling aimed to infill target areas to 40m x 40m spacing and down to 20m x 20m in places. • DD samples are not composited prior to being sent to the laboratory however the nominal sample length is generally 1m. RC samples are 2m intervals but compositing up to 4m has occurred in the past.
Orientation of data in relation to geological structure	• The mineralisation strikes between north and north-west at Mashi / Central pits, and to, the east south east at Kinsevere Hill. All drill holes are oriented such that drill holes have a high angle of intersection with the dominant strike and dip of bedding and structures, with the local scale of mineralisation also considered. All drill holes are either oriented east or west with dips of 60° to sub-vertical. • The combination of both east and west orientations likely minimises sampling bias, which, if present, is not considered material.
Sample security	• Measures to provide sample security include: ○ Adequately trained and supervised sampling personnel. ○ Sea containers used for the storage of samples are kept locked with keys held by the security department. ○ Assay laboratory checks of sample dispatch numbers against submission documents.
Audit and reviews	• An external independent audit has been performed on the grade control sampling techniques in July 2019, by OBK Consultants. Recommendations for improvements were provided, no material issues were identified. • Internal visits by MMG Group Office geologists to the SGS, ALS and SSM Lubumbashi laboratories are audited on an annual basis. From the most recent audit (September 2019) there were no material risks identified. • The 2020 Kinsevere Mineral Resource model review was completed by an internal MMG Group Office geologist in May 2020. The Mineral Resource estimation was also reviewed by the Competent Person; and was found to be a reasonable global model with no material errors found.

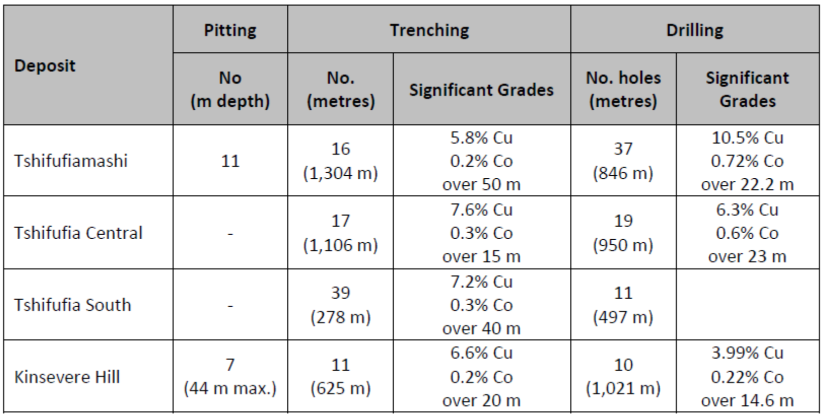
Section 2 Estimation and Reporting of Mineral Resources	
Criteria	**Commentary**
Mineral tenement and land tenure status	• The Kinsevere Mining Licence (PE 528) is located approximately 27 km north of Lubumbashi, the provincial capital of the Katanga Province, in the southeast of the Democratic Republic of the Congo (DRC). The PE 528 permit covers the three major deposits of Tshifufiamashi, Tshifufia and Kinsevere Hill/Kilongo • MMG has a Contrat d'Amodiation (Lease Agreement) with Gécamines to mine and process ore from the Kinsevere Project until 2024. A renewal application process for a15 year extension shall be submitted to DRC regulatory at least 1 year and no more than 5 years before the expiry date. • A Contrat d'Amodiation is provided for under the DRC Mining Code, enacted by law No 007/2002 of July 11, 2002.

<table>
<tr><th colspan="2">Section 2 Estimation and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

- A conversion of the adjacent_PR7274 to an exploitation permit was completed in 2018. Tenement amalgamation (of PE528 and PE7274) was completed in early March 2019, with PE7274 incorporated into PE528.
- There are no known impediments to operating in the area.

</td></tr>
<tr><td>Exploration done by other parties</td><td>

Summary of Previous Exploration Work by Gecamines and EXACO



<table>
<tr><th rowspan="2">Deposit</th><th>Pitting</th><th colspan="2">Trenching</th><th colspan="2">Drilling</th></tr>
<tr><th>No
(m depth)</th><th>No.
(metres)</th><th>Significant Grades</th><th>No. holes
(metres)</th><th>Significant Grades</th></tr>
<tr><td>Tshifufiamashi</td><td>11</td><td>16
(1,304 m)</td><td>5.8% Cu
0.2% Co
over 50 m</td><td>37
(846 m)</td><td>10.5% Cu
0.72% Co
over 22.2 m</td></tr>
<tr><td>Tshifufia Central</td><td>-</td><td>17
(1,106 m)</td><td>7.6% Cu
0.3% Co
over 15 m</td><td>19
(950 m)</td><td>6.3% Cu
0.6% Co
over 23 m</td></tr>
<tr><td>Tshifufia South</td><td>-</td><td>39
(278 m)</td><td>7.2% Cu
0.3% Co
over 40 m</td><td>11
(497 m)</td><td></td></tr>
<tr><td>Kinsevere Hill</td><td>7
(44 m max.)</td><td>11
(625 m)</td><td>6.6% Cu
0.2% Co
over 20 m</td><td>10
(1,021 m)</td><td>3.99% Cu
0.22% Co
over 14.6 m</td></tr>
</table>

- In 2004 Anvil Mining carried out intensive exploration drilling to define the deposits in Kinsevere.
- In 2012 MMG continued exploration aimed at identifying additional mineralisation beyond the Anvil Mining Mineral Resource.
- In 2013/2014 MMG Exploration have been conducting works around the Mine Lease within a 50 km radius of the known deposit to explore for additional high-grade oxide material.
- In 2015 MMG conducted a Scoping Study on the potential to process the copper sulphide ore at Kinsevere located beneath the current oxide Ore Reserves. As part of this study, 5 DD holes were drilled in early 2015. In August 2015, DD drilling re-commenced as part of a follow up on Pre-Feasibility Study to increase confidence in the copper sulphide Mineral Resource. This drilling was completed at the end of 2016 and included in the 2017 Resource Estimate.
- Drilling commenced in May 2017 to inform the Sulphide Feasibility Study. This drilling was used to update the previous 2018 Mineral Resource model.
- Drilling commenced in Jan 2018 to testing the link of geological continuity between Mashi and Central Pit which is completed in September 2018 then continue latest 2018 drilling in the south of Kinsevere Hill (south of Kinsevere copper deposit), this drilling is testing the copper grade mineralisation at depth. These two drilling programs were used to update the 2020 Mineral Resource model.

</td></tr>
<tr><td>Geology</td><td>

- The Kinsevere deposit is a sediment hosted copper deposit with low- grade cobalt association
- The deposit is comprised of the R1, R2 and R3 subgroups of the Neoproterozoic Roan Group. Copper mineralisation is generally confined to the Mines (R2) subgroup,

</td></tr>
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Section 2 Estimation and Reporting of Mineral Resources	
Criteria	**Commentary**
	however, minor copper-oxide and copper-sulphide development occurs along the R1-R2 contact and the R2-R3 contact. • The deposit is located along a major structural element termed the Kinsevere lineament. Halokenetic and tectonic processes have resulted in the emplacement of discrete lower Roan (R2) stratigraphic blocks onto younger, upper Roan (R3 and above) stratigraphy. • The Kinsevere deposit is comprised of three distinct mineralisation domains: Central, Mashi and Kinsevere Hill. Central and Mashi form a contiguous sequence of mineralised Mine Series correlates that host copper-cobalt oxides and sulphides. Kinsevere Hill represents a structurally isolated occurrence of Mine Series host rocks containing copper-cobalt oxides with minor copper sulphides. • Copper oxide mineralisation is defined as material that has CuAS:CuT ratio between 0.5 to 1. The principle copper oxide mineral is malachite with subordinate chrysocolla, copper clays (Goethite and Mn-WAD), pseudomalachite and rare azurite. Tenorite, native copper and other minor copper oxide phases (Cu-intergrows) are also present in minor quantities (~<5% of total Cu oxide mineralogy). The largest proportion of copper oxide mineralisation is hosted in weathered/oxidised carbonates (CMN) as fracture fill, void fill, mineral replacement and coatings. There is a strong preference for copper oxides to develop in CMN lithologies, especially within strongly weathered, brecciated and karstic zones. • Transitional and Mixed Ores (TMO) are copper ores that have an CuAS:CuT ratio between 0.2 and 0.5. Transitional ore zones are classified as zones that contain dominantly transitional copper species such as chalcocite, covellite, cuprite and native copper and are likely to have formed during progressive supergene weathering. Mixed ore zones are defined as containing both sulphide and oxide copper phases present together - particularly malachite, chalcocite and chalcopyrite • Sulphide mineralisation at Kinsevere is defined by all material that has an CuAS:CuT ratio < 0.2. Sulphide mineralisation at Kinsevere has several different modes of development and styles. The three major types are: 1. Replacement of early diagenetic pyrite and evaporites by chalcopyrite and carrolite. 2. Replacement of carbonate minerals by copper and cobalt sulphides. 3. Sulphide bearing veins and vein replacement.

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<tr><th colspan="2">Section 2 Estimation and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
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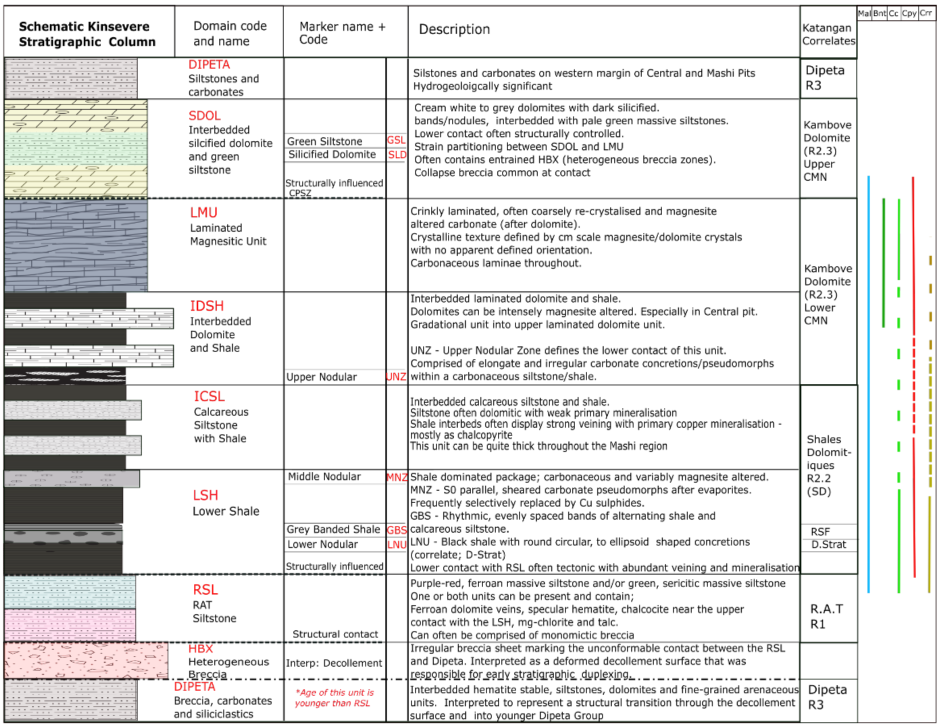

<table>
<tr><th>Domain code and name</th><th>Marker name + Code</th><th></th><th>Description</th><th>Katangan Correlates</th></tr>
<tr><td>DIPETA
Siltstones and carbonates</td><td></td><td></td><td>Silstones and carbonates on western margin of Central and Mashi Pits
Hydrogeoloigcally significant</td><td>Dipeta R3</td></tr>
<tr><td>SDOL
Interbedded silcified dolomite and green siltstone</td><td>Green Siltstone
Silicified Dolomite
Structurally influenced CPSZ</td><td>GSL
SLD</td><td>Cream white to grey dolomites with dark silicified.
bands/nodules, interbedded with pale green massive siltstones.
Lower contact often structurally controlled.
Strain partitioning between SDOL and LMU
Often contains entrained HBX (heterogeneous breccia zones).
Collapse breccia common at contact</td><td>Kambove Dolomite (R2.3) Upper CMN</td></tr>
<tr><td>LMU
Laminated Magnesitic Unit</td><td></td><td></td><td>Crinkly laminated, often coarsely re-crystalised and magnesite altered carbonate (after dolomite).
Crystalline texture defined by cm scale magnesite/dolomite crystals with no apparent defined orientation.
Carbonaceous laminae throughout.</td><td>Kambove Dolomite (R2.3) Lower CMN</td></tr>
<tr><td>IDSH
Interbedded Dolomite and Shale</td><td>Upper Nodular</td><td>UNZ</td><td>Interbedded laminated dolomite and shale.
Dolomites can be intensely magnesite altered. Especially in Central pit.
Gradational unit into upper laminated dolomite unit.
UNZ - Upper Nodular Zone defines the lower contact of this unit.
Comprised of elongate and irregular carbonate concretions/pseudomorphs within a carbonaceous siltstone/shale.</td><td></td></tr>
<tr><td>ICSL
Calcareous Siltstone with Shale</td><td></td><td></td><td>Interbedded calcareous siltstone and shale.
Siltstone often dolomitic with weak primary mineralisation
Shale interbeds often display strong veining with primary copper mineralisation - mostly as chalcopyrite
This unit can be quite thick throughout the Mashi region</td><td>Shales Dolomit-iques R2.2 (SD)</td></tr>
<tr><td>LSH
Lower Shale</td><td>Middle Nodular
Grey Banded Shale
Lower Nodular
Structurally influenced</td><td>MNZ
GBS
LNU</td><td>Shale dominated package; carbonaceous and variably magnesite altered.
MNZ - S0 parallel, sheared carbonate pseudomorphs after evaporites.
Frequently selectively replaced by Cu sulphides.
GBS - Rhythmic, evenly spaced bands of alternating shale and calcareous siltstone.
LNU - Black shale with round circular, to ellipsoid shaped concretions (correlate; D-Strat)
Lower contact with RSL often tectonic with abundant veining and mineralisation</td><td>RSF
D.Strat</td></tr>
<tr><td>RSL
RAT Siltstone</td><td>Structural contact</td><td></td><td>Purple-red, ferroan massive siltstone and/or green, sericitic massive siltstone
One or both units can be present and contain;
Ferroan dolomite veins, specular hematite, chalcocite near the upper contact with the LSH, mg-chlorite and talc.
Can often be comprised of monomictic breccia</td><td>R.A.T R1</td></tr>
<tr><td>HBX
Heterogeneous Breccia</td><td>Interp: Decollement</td><td></td><td>Irregular breccia sheet marking the unconformable contact between the RSL and Dipeta. Interpreted as a deformed decollement surface that was responsible for early stratigraphic duplexing.</td><td></td></tr>
<tr><td>DIPETA
Breccia, carbonates and siliciclastics</td><td>*Age of this unit is younger than RSL</td><td></td><td>Interbedded hematite stable, siltstones, dolomites and fine-grained arenaceous units. Interpreted to represent a structural transition through the decollement surface and into younger Dipeta Group</td><td>Dipeta R3</td></tr>
</table>

Figure 1: Kinsevere Mine Series Stratigraphy
</td></tr>
<tr><td>Drill hole information</td><td>

Within the database used, there are 1,615 Exploration drill holes (467 DD, 32 RC with DD tail and 1,116 RC) and 10,980 grade control drill holes (all RC).
No individual drill hole is material to the Mineral Resource estimate and hence this geological database is not supplied.

</td></tr>
<tr><td>Data aggregation methods</td><td>

This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section.
No metal equivalents were used in the Mineral Resource estimation.

</td></tr>
<tr><td>Relationship between mineralisation width and intercepts lengths</td><td>

Mineralisation true widths are captured by interpreted mineralisation 3D wireframes.
Most drilling was at 50° to 60° angles in order to maximise true width intersections.
Geometry of mineralisation is interpreted as sub- vertical to vertical and as such current drilling allows true width of mineralisation to be determined.

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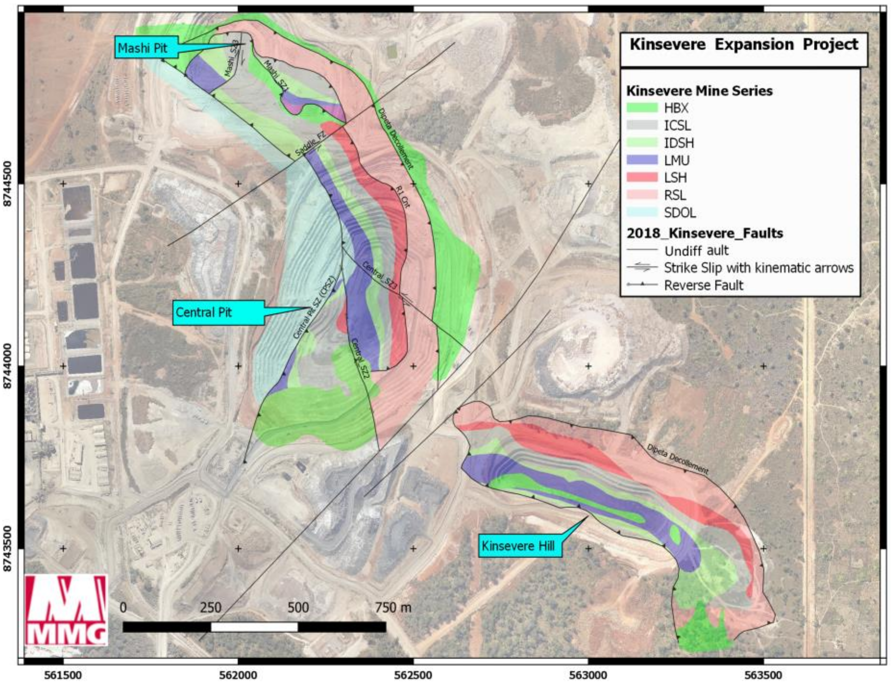
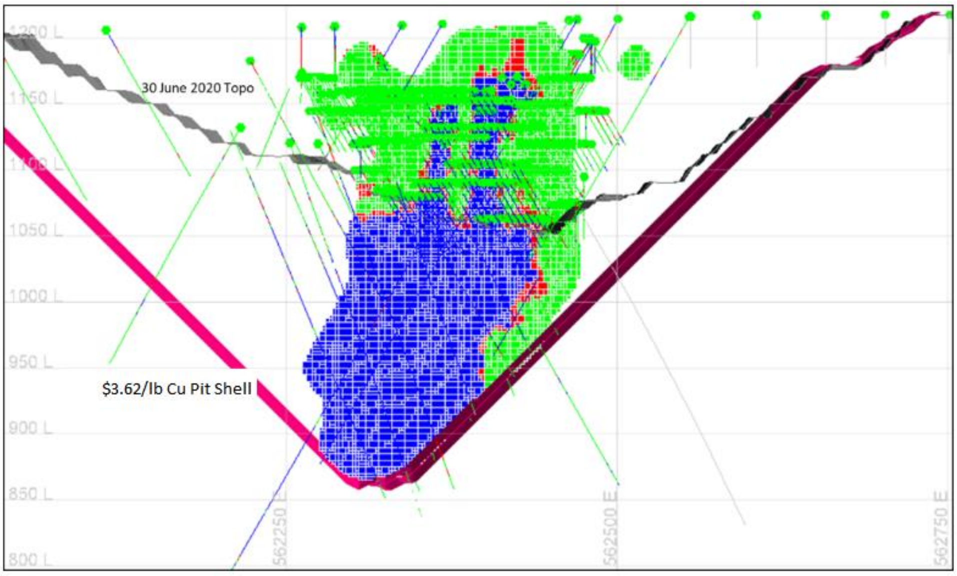
</table>

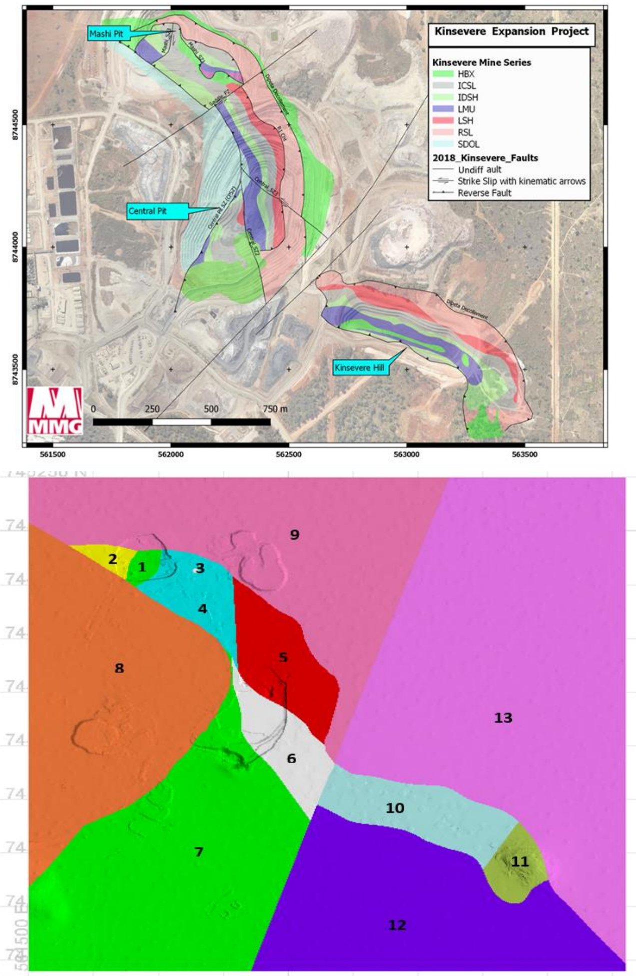
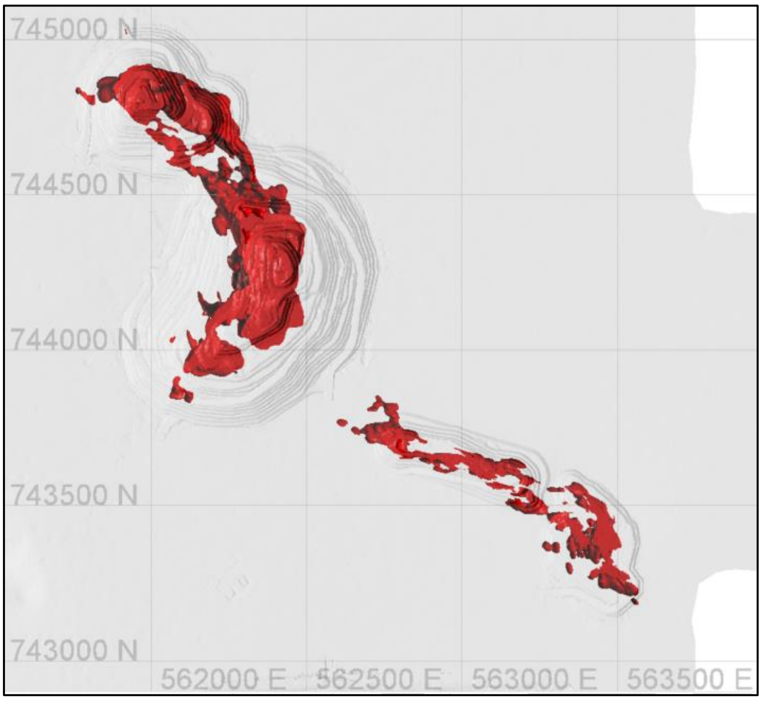
Section 2 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Diagrams	 *Figure 2:* *Plan view geology map of the Kinsevere deposit*  *Figure 3: Cu Shell coded by Oxidation state (Green – Oxide / Red – TMO / Blue – Primary)- 744250N Cross Section*
Balanced reporting	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section.
Other substantive exploration data	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section.

Section 2 Estimation and Reporting of Mineral Resources	
Criteria	**Commentary**
Further work	• The exploration focus will be within the Mine Lease and within a 50 km radius of the known deposit to explore for additional high-grade oxide material. • RC and DD drilling as part of near mine extension is ongoing.

Section 2 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The following measures are in place to ensure database integrity: o Drillhole data (RC and DD) is stored in two SQL databases with front end access provided by Geobank software. o The grade control logging and assay data (RC) is managed by the onsite Geology team with support from the Group Technical Services database team in Melbourne. o The exploration/resource logging data (RC and DD) is managed by the onsite Resource team with assay loading and support provided by the Group Technical Services database team in Melbourne. o Data is entered directly into Geobank or Geobank Mobile using the database validation rules. These check for data consistency, missing intervals, overlaps, invalid codes and invalid values, thus maintaining data integrity. o The databases offer secure storage and consistent data which is exposed to validation processes, standard logging and data recording lookup codes. • The measures described above ensure that transcription or data entry errors are minimised. o Data validation procedures include: o Internal database validation systems and checks. o Visual checks of exported drill holes in section and plan view, checking for accuracy of collar location against topography, and downhole trace de-surveying. o External checks in Vulcan software prior to the data used for Mineral Resources. Checks on statistics, such as negative and unrealistic assay values. • Any data errors were communicated to the Database team to be fixed in Geobank. Data used in the Mineral Resource has passed a number of validation checks both visual and software related prior to use in the Mineral Resource.
Site visits	• The Competent Person have visited on two occasions during 2019 (February and July). No visits occurred during 2020. Site visit work included: o Visits to the ROM stockpiles, open pit mine, core yard, sample preparation and on-site assay laboratory. o Discussions with geologists (mine and exploration), mine planning engineers and metallurgists.

Section 2 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Geological interpretation	• The geological sequences at Kinsevere can be considered correlatives of the Katangan Mines Subgroup units, albeit with unique features (thick shale sequence) and notable absences (no RSC or RSF). These subtle differences have resulted in inconsistent mapping and logging at the deposit-scale. In response to this, a Kinsevere-specific classification was generated with the aim of; assisting geological understanding, facilitating consistent logging and mapping between geologists and improving geological and resource modelling. The local stratigraphy has been termed the Kinsevere Mine Series (KMS). • Detailed 3D geological modelling was completed at Kinsevere between 2018-2020 using the new Kinsevere Mine Series framework. Recent PFS and FS related diamond drilling, mapping/structural observations, photogrammetry and litho-geochemistry were integrated into the model. The model was last updated in Q1 2020. The resulting model is considered robust and reliable for mineralisation modelling and grade/estimation domaining. • Weathering domains were determined by correlating CuAS:CuT ratio data with observed copper mineral types. An Indicator Kriging approach was used to construct weathering domains (within the mineralised zone) based on specific CuAS:CuT ratio cut-offs. • Most of the estimated gangue variables were domained to help constrain each estimation. The following variables were domained using numeric indicator interpolation methods in Leapfrog Geo: Mg (6%), Ca (9%), Al (2.5%), Org_C (0.5% and 1.5%) and S (1.5%). • Cobalt was domained using a numeric indicator interpolant approach. A 0.07% Co cut-off grade was used to guide the interpolation. • Copper was domained using a numeric indicator interpolant approach combined with manually manipulation to align with geological and mineralisation trends and boundaries. Copper volumes were generated within the oxide and primary zones respectively and then unified to form one master copper shell. A 0.4% tCu cut-off grade was used to guide the interpolation in the oxide zone. A 0.3% tCu cut-off grade was used to guide the interpolation in the primary zone. • The magnitude of the acid soluble copper/total copper (CuAS /Cu) ratio has been used as an important criterion for the determination of the oxide, TMO and primary sulphide zones. The following ratios have been used to delineate the respective zones: o Oxide > 0.5 o Transition and mixed (TMO) between 0.2 and 0.5 o Primary < 0.2 • The resulting weathering, lithology, fault, mineralisation domains were combined to code the drill hole data and the block model used for grade estimation. • Structural features (faults / fractures) provide an important control on the mineralisation and grade continuity. This 2020 geology model was used to inform the 2020 Mineral Resource estimate

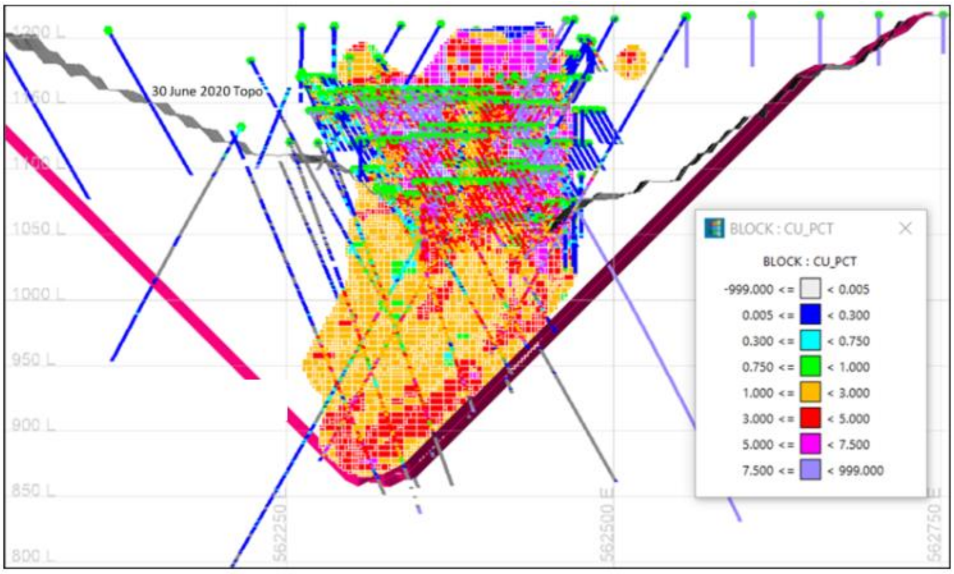
	 *Figure 4: Plan View of Kinsevere Lithology (top) and Fault Domains (bottom)*  *Figure 5: Plan View of Kinsevere Cu domain*
Dimensions	• The mineralisation strike length is approximately 1.3 km for the Tshifufia (Central) and Tshifufiamashi (Mashi) deposits while Kinsevere Hill has a 1km strike length. The

Section 2 Estimating and Reporting of Mineral Resources

Criteria	**Commentary**
	mineralisation dips sub-vertically. Mineralisation extends to 400 m at depth and it can be up to 300m in width. • The mineralisation outcropped at Kinsevere Hill and Mashi deposits.
Estimation and modelling techniques	• Estimation applied mostly kriging interpolation within domains as outlined further in this section and is considered appropriate for this style of mineralisation. • Mineral Resource modelling was conducted using Vulcan software. • Variograms updated for major elements including Cu, CuAS, Ratio, Ca and Mg were based on the combination of weathering, lithology and fault domains. Variograms modelling in 2020 Mineral Resource modelling were reviewed and changed based on new drilling and the new geological domains. • The key estimation assumptions and parameters are as follows: o Cu, CuAS, CuAS/Cu (RATIO), Co, Ca, Fe, Mg, Mn and S were estimated using Ordinary Kriging (OK). Uranium (U) was estimated by using an Inverse Distance to the power of 2 method (ID2). o Local Varying Anisotropy (LVA) grade modelling was applied to capture the local varying grade distribution and geological continuity. o Indicator Kriging (IK) was used to determine oxide, mixed and primary sulphide domains, based on the CuAS/Cu ratio. Leapfrog software was used to construct high grade domains for Cu, Ca, Mg, Al, organic Carbon and Co. o Extreme grade values were managed by grade capping which was performed post compositing. Values greater than the selected cut value were set to the top cut (cap) value and used in the estimation. o Wireframes and surfaces of the topography; mineralised domains, lithology and fault domains, together with IK weathering domain are used to tag the drill holes and are used for statistical analysis and grade estimation. o Grade estimation was completed using a hard boundary for Cu, CuAS/Cu (Ratio), Co, Ca, Fe, S, Mg, Mn and S. o A composite length of 2m was used applied. Any residual intervals less than half the composite interval were appended to the previous sample interval. o No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. o Search parameters for Cu, CuAS, RATIO, Co, Ca, Fe, Mg estimate were derived from mineralisation and waste domain variography and on Quantitative Kriging Neighbourhood Analysis (QKNA). U search parameters were based on a generic search of 400m x 400m x 400m, U grades higher than 250 ppm were distance limited to 20m. o Three pass estimations were used to estimate the block model with the first and second estimation passes search radius uses 100% of the variogram range and the third pass estimation search radius uses 200% of the variogram range. Over 80% of the blocks are informed in the first pass. The second and third pass was set by reducing to the minimum sample estimated to the blocks. o Minimum of 2 to 4 and a maximum of 8 to 10 samples (depending on element and/or domain) for each estimate. o The search neighbourhood was also limited to a maximum of 3 samples per drill hole. o Discretisation was set to 4 x 8 x 2 (X, Y, Z).

Section 2 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	○ Kriging variance (KV), kriging efficiency (KE) and kriging regression slope (RS) of the Cu estimate were calculated during the estimation. • The 2019 and 2020 in-situ Mineral Resource models have been compared and show no major material difference, with metal content within 5%. Differences due to the revision of the Cu and Ratio cut-off grade (COG) for Transition (TMO) and Primary Cu and the subsequent re-interpretation in Transition and Primary Cu areas. • The Comparison between the Mineral Resource and the mill feed grade is complicated by the operational strategy of treating high-grade ore and stockpiling lower-grade ore for later treatment. In late 2017 a stockpile adjustment occurred based on detailed survey pick-ups. Generally, there was a volume and metal reduction. • Kinsevere does not produce any by-products hence no assumptions regarding the recovery of by-products are made in the estimate or cut-off and reporting. • Parent block size of the Kinsevere block model is 10m x 20m x 5m with sub-blocking down to 2.5m. Estimation was into the parent block. The size of the blocks is appropriate to the spacing of drill holes. • No further assumptions have been made regarding modelling of selective mining units. • The block model and estimate has been validated in the following ways: ○ Visual checks in section and plan view against the drill holes. ○ Grade trend plots comparing the model against the drill holes. ○ Summary statistics comparing the model to the sample. ○ Global Change of support between the model to the sample support.
Moisture	• Tonnes in the model have been estimated on a dry basis.

Section 2 Estimating and Reporting of Mineral Resources

Criteria	Commentary
Cut-off parameters	• The Oxide Mineral Resource has been reported above an acid soluble copper cut-off grade of 0.6% and an acid soluble to total copper ratio (Ratio) greater than or equal to 0.5. This is unchanged from the 2019 Mineral Resource. • The transitional and mixed ore (TMO) Mineral Resource has been reported above a total copper cut-off grade of 0.7% and a Ratio (CuAS/Cu) between 0.2 and 0.5. The cut-off grade has dropped from 2019 due to a change in Flow Sheet and respective expected metal recovery. • The sulphide Mineral Resource 2020 has been reported above a total copper cut-off grade of 0.7% and a Ratio less than 0.2. This cut-off has changed from 0.8% in the 2019 Mineral Resource. The cut-off grade changed for Primary is related to a change the updated Process Flow sheet. • The reported Mineral Resources have also been constrained within a US$3.62/lb whittle pit shell. Both the sulphide/Primary and TMO cut offs have reduced in 2020 due to a change in Flow Sheet and change in Primary processing cost. The reported cut-off grade and the pit-shell price assumptions are in line with MMG's policy for reporting of Mineral Resources based on prospective for future economic extraction.  **N744250 Cross-section of Copper Mineral Resource model contained within the US$3.62/lb pit shell**
Mining factors or assumptions	• Mining of the Kinsevere deposits is undertaken by the open pit method, which is expected to continue throughout the life of mine. • Mining selection has been considered in the calculation of cut-off grade parameters and in the constraint of mineral resources within the US$3.62/lb Cu pit shell. • No mining factors have been applied to the Mineral Resource.
Metallurgical factors or assumptions	• The metallurgical process applied at the current Kinsevere Operation includes H2S04 acid leaching followed by solvent extraction and electro-winning (SXEW) to produce copper cathode. This process enables processing of oxide ores only. • TMO and sulphide ores will be processed on the condition the Kinsevere Expansion Project (KEP) is approved. As such, the criteria impacting the global resource cut-off

Section 2 Estimating and Reporting of Mineral Resources

Criteria | **Commentary**

grades and reportable pit shell inputs are based on the proposed KEP flowsheet and infrastructure upgrades. The upgraded flowsheet will consist of the following changes:

- Oxide pre-flotation circuit and leach tank modifications 2.3mtpa

Oxide leach upgrades to convert to reductive leach conditions

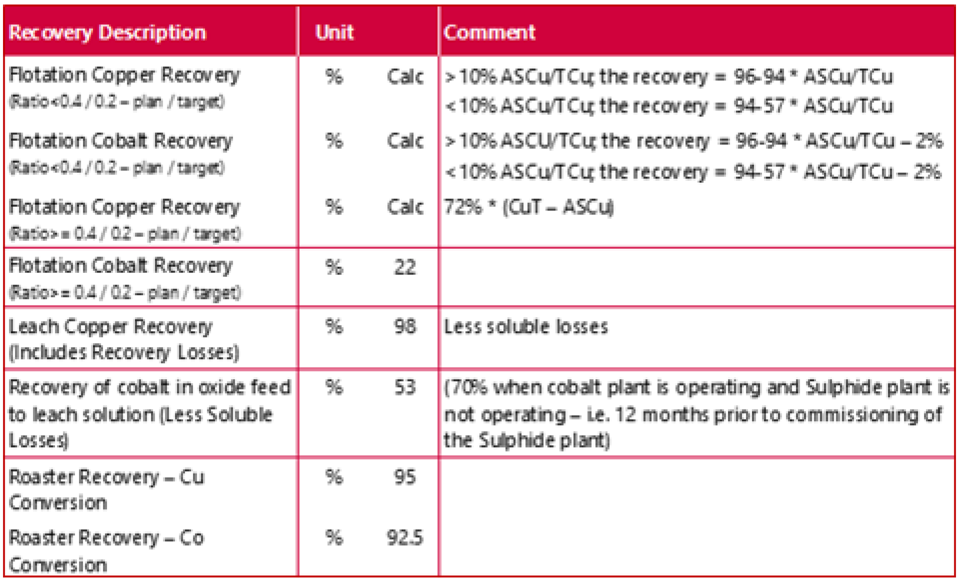
Sulphide Concentrator 2.2mtpa capacity

Roaster circuit including off-gas cleaning, acid plant and concentrate storage

Cobalt Recovery circuit to produce high grade Cobalt hydroxide

SX plant modifications

- Estimated plant recoveries are as follows:



Recovery Description	Unit		Comment
Flotation Copper Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCu/TCu; the recovery = 96-94 * ASCu/TCu < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu
Flotation Cobalt Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCU/TCu; the recovery = 96-94 * ASCu/TCu – 2% < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu – 2%
Flotation Copper Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	Calc	72% * (CuT – ASCu)
Flotation Cobalt Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	22	
Leach Copper Recovery (Includes Recovery Losses)	%	98	Less soluble losses
Recovery of cobalt in oxide feed to leach solution (Less Soluble Losses)	%	53	(70% when cobalt plant is operating and Sulphide plant is not operating – i.e. 12 months prior to commissioning of the Sulphide plant)
Roaster Recovery – Cu Conversion	%	95	
Roaster Recovery – Co Conversion	%	92.5	

- The main deleterious components of the ore are carbonaceous (black) shales which increase solution losses in the washing circuit and dolomite which increases acid consumption in the leaching process.
- Consideration of metallurgy and strike price have been included in the cut-off grade calculation flow sheet material type and in the construction of the US$3.62/lb pit shell.
- No metallurgical factors have been applied to the Mineral Resource.

Environmental factors or assumptions

- Environmental factors are considered in the Kinsevere life of asset work, which is updated annually and includes provision for mine closure.
- PAF and NAF criteria is controlled by the acid neutralising capabilities of the dolomitic CMN unit and the potential acid forming potential of the shale rich SD which is known to contain pyrite where a sulphur cut off is utilised.

Bulk density

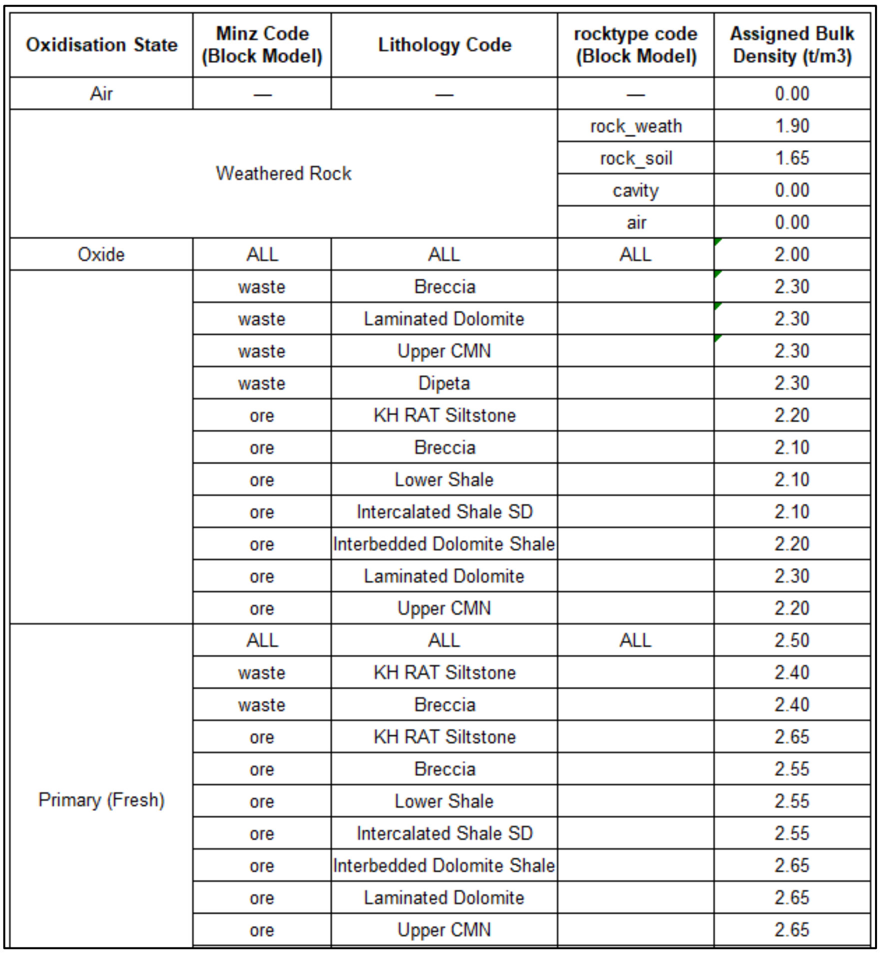
- In-situ dry bulk density values are determined from 6,676 diamond core density measurements, 4 in-pit bulk sample measurements and 12 in-pit measurements from specific lithologies.
- Bulk sample and in-pit measurements account for void spaces.
- Bulk density was calculated using the wet and dry method:

Section 2 Estimating and Reporting of Mineral Resources

Criteria

Commentary

- Bulk Density = Dry Sample Weight/(Dry Sample Weight – Wet Sample Weight)
- Average in-situ bulk density values were assigned to the blocks within each lithology-weathering domain.

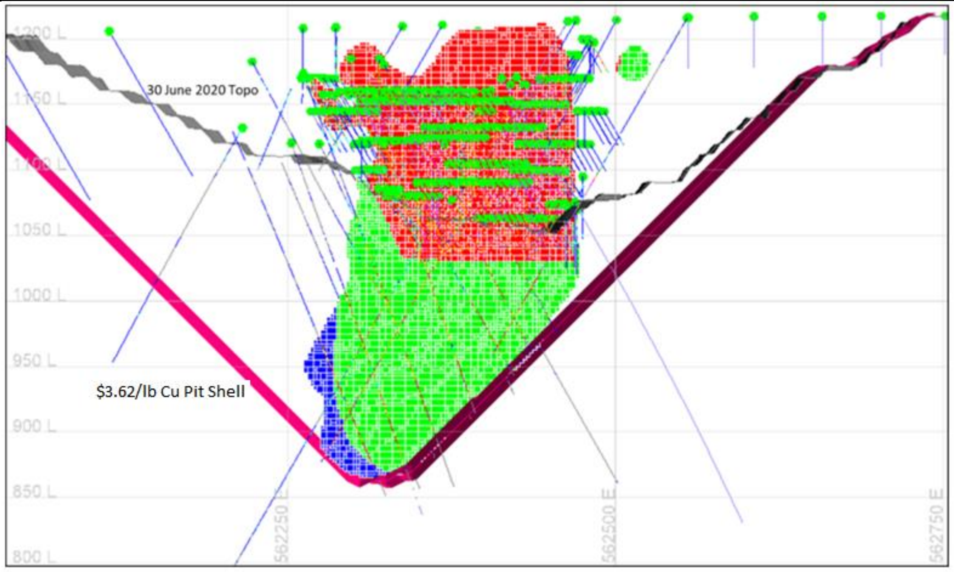


Oxidisation State	Minz Code (Block Model)	Lithology Code	rocktype code (Block Model)	Assigned Bulk Density (t/m3)
Air	—	—	—	0.00
Weathered Rock			rock_weath	1.90
			rock_soil	1.65
			cavity	0.00
			air	0.00
Oxide	ALL	ALL	ALL	2.00
	waste	Breccia		2.30
	waste	Laminated Dolomite		2.30
	waste	Upper CMN		2.30
	waste	Dipeta		2.30
	ore	KH RAT Siltstone		2.20
	ore	Breccia		2.10
	ore	Lower Shale		2.10
	ore	Intercalated Shale SD		2.10
	ore	Interbedded Dolomite Shale		2.20
	ore	Laminated Dolomite		2.30
	ore	Upper CMN		2.20
Primary (Fresh)	ALL	ALL	ALL	2.50
	waste	KH RAT Siltstone		2.40
	waste	Breccia		2.40
	ore	KH RAT Siltstone		2.65
	ore	Breccia		2.55
	ore	Lower Shale		2.55
	ore	Intercalated Shale SD		2.55
	ore	Interbedded Dolomite Shale		2.65
	ore	Laminated Dolomite		2.65
	ore	Upper CMN		2.65

- 2020 Mineral Resource density assignments per lithology and weathering domains

Classification

- Wireframes used for Mineral Resource classification are based on a combination of confidence in assayed grade, geological continuity and Kriging output (Kriging variance, efficiency and slope of regression, and drilling spacing).
- In general, Measured is defined drilling spacing less 20m x 20m with the slope regression of the kriging estimation greater than 0.8. Indicated is 40m x 40m with the slope regression of kriging estimation at 0.65 to 0.8. Inferred has ranges up to 80m x 80m and the slope regression less than 0.65
- The Mineral Resource classification reflects the Competent Persons view on the confidence and uncertainty of the Kinsevere Mineral Resource.

<table>
<tr><th colspan="2">Section 2 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

744,250mN Cross section - showing Kinsevere Mineral Resource classification and drilling density (Red-Measured, Green-Indicated, Blue-Inferred)</td></tr>
<tr><td>Audits or reviews</td><td>• Geological domains and resource estimation parameters were reviewed by internal MMG personnel and endorsed by the Competent Person. The review stated that the 2020 Mineral Resource Estimation parameters had been compiled in accordance with the JORC 2012 guidelines and is fit for the purposes of conducting mining studies and estimating Ore Reserves.
• Recommendations were incorporated into the 2020 Mineral Resource. No significant issues have been identified.</td></tr>
</table>

Section 2 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Discussion of relative accuracy / confidence	• The estimation within lithology and fault domains and the use of local varying anisotropy (LVA) is valid to accommodate changes in local dip through the deposit. • The post June 2019 grade control RC drilling has resulted in some local changes especially in the transition and primary sulphide zone where resulted the geological interpretation is now more continuous compared to the 2019 model interpretation. • A linear regression between Total Cu and CuAS assays has been used to predict missing CuAS grades in intervals where only Total Cu had been analysed. This was done to improve the local robustness of the CuAS grade estimation. • Estimates in the deeper primary copper mineralisation will not be as locally accurate, due to wider spaced drilling however the geological and grade interpretations are robust due to a high understanding of geological controls. The level of uncertainty is captured by the Indicated / Inferred Mineral Resource category. • Close spaced Resource infill drilling in Kinsevere Hill South is required to gain an understanding of the complexity of grade distribution and the local mineralisation controls. • Due to complexity of the weathering profile it was decided to use an Indicator Kriging approach based on the “ratio” of acid soluble copper to total copper. The weathering was defined into three cut-off ratio grades, oxide is defined at above 0.8, primary is defined below 0.2, and TMO is define between 0.2 – 0.8. A wide spread of “ratio” grades distribution in the TMO could potentially over smooth the estimate, more work is needed to control this effect. • The method of assigning bulk density values is similar to the 2019 Mineral Resource and is not considered to have any material impact on the reported tonnages. However, direct estimation of dry bulk density values needs to be evaluated where enough bulk density data is available. • Limited number of samples within some of the lithology and fault subdomains have resulted a poor estimation. Further analysis on the potential combination between lithology and fault domains could improve the estimation.

4.1.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

4.1.3.1 *Competent Person Statement*

I, Douglas Corley, confirm that I am the Competent Person for the Kinsevere Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Kinsevere Mineral Resource section of this Report to which this Consent Statement applies.
- I am a full-time employee of Mining One Pty Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Kinsevere Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Kinsevere Mineral Resources.

4.1.3.2 *Competent Person Consent*

<u>Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)</u>

With respect to the sections of this report for which I am responsible – the Kinsevere Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Douglas Corley MAIG R.P.Geo. (#1505)

Date: 02/12/2020

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Signature of Witness:

Rex Berthelsen
Melbourne

____

Witness Name and Residence: (e.g. town/suburb)

4.2 Ore Reserves - Kinsevere

4.2.1 Results

The 2020 Kinsevere Ore Reserves is based on the 2020 Mineral Resources model.

The 2020 Kinsevere Ore Reserves are summarised in Table 10.

Table 10 2020 Kinsevere Ore Reserves tonnage and grade (as at 30 June 2020)

Kinsevere Ore Reserve

					Contained Metal		
Oxide -TMO Copper	**Tonnes (Mt)**	**Copper (% Cu)**	**Copper (AS % Cu)**	**Cobalt (% Co)**	**Copper ('000) t**	**Copper AS ('000) t**	**Cobalt ('000) t**
Proved	0.8	3.5	2.7	0.00	28	21	-
Probable	1.7	3.2	2.7	0.00	53	44	-
Total	**2.4**	**3.3**	**2.7**	**0.00**	**81**	**65**	**-**
Primary Copper							
Proved	-	-	-	-	-	-	-
Probable	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Stockpiles							
Probable	9.3	2.1	1.4	-	192	131	-
Total	**9.3**	**2.1**	**1.4**	**-**	**192**	**131**	**-**
Kinsevere Copper Total	**11.8**	**2.3**	**1.7**	**-**	**272**	**196**	**-**

* AS - Acid Soluble Copper

Cut-off grades were calculated at a US$3.24/lb copper price. They are based on a Net Value Script considering following:

- Gangue acid consumption
- Oxide Leach Recovery

The cut-off grade approximates 1.2% CuAs for Oxide and Transitional ex-pit material and 0.8% CuAs for Oxide existing stockpile reclaim.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

Contained metal does not imply recoverable metal.

The main differences from the 2019 Ore Reserves are:

(i) Assumed copper price increased to US$3.23/lb in 2020 from US$3.18/lb in 2019
(ii) Mine and stockpile depletion
(iii) Mine to Mill Reconciliation study indicates that mining dilution is between 10 & 15% and ore loss between 10 & 15% (this is an increase in overall modell ore loss of approximately 2% compared with the 2019 Ore Reserve Estimate) :
  - Modelled planned Dilution:
    - Oxide 5%
  - Modelled planned Ore Loss:
    - Oxide 8%
  - Additional unplanned dilution and ore loss has been modelled at 5%.

4.2.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 11 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code. Each of the items in this table has been summarised as the basis for the assessment of overall Ore Reserves risk in the table below, with each of the risks related to confidence and/or accuracy of the various inputs into the Ore Reserves qualitatively assessed.

Table 11 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Kinsevere Ore Reserves 2020

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Mineral Resource estimates for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Ore Reserves. • The Ore Reserves includes Mineral Resources on stockpiles. • The sub-celled Mineral Resources block model named "KIN_GMR_2003_V5_ENG.bmf" and dated 16-06-2020 was used for dilution and ore loss modelling. The pit optimisation and designs were generated from the diluted mining model "kin_gmr_2003_v5_engBM_MSO_Diluted2.dm". • Mineral Resources block model based on Ordinary Kriging interpolation has been applied for the estimation of all elements. It has a parent block size of 10m x 20m x 5m with sub blocking down to 2.5m. The mining model simulates a mining panel of 10m x 15m x 5m introducing localised dilution and ore loss. • All existing stockpiles have been considered for economic inclusion in the Mineral Resources and Reserves.
Site visits	• The Competent Person visited the site in August 2019 and in February 2020. • Each visit consisted of discussions with relevant people associated with Ore Reserves modifying factors including geology, grade control, mine-to-mill reconciliation, mine dilution and mining recovery, geotechnical parameters, mine planning and mining operations, metallurgy, tailings and waste storage, and environmental and social disciplines. The outcomes from the visits have confirmed a common understanding of assumptions, calculation of the cut-off grades and development of the Life-of-Asset mine plan.
Study status	• The current mine and processing plant configuration has been in operation since September 2011. Ore Reserves are based on a combination of actual historical performance and cost data and lab test work. This data has been adapted to projected Life-of-Asset planning. • Life-of-Asset Reserve Estimates were produced as part of the MMG planning cycle. This Estimate informs the Ore Reserves – it demonstrates it is technically achievable and economically viable, while incorporating material Modifying Factors.
Cut-off parameters	• Breakeven cut-off grades (COG) were calculated at a US$3.23/lb copper price. A variable gangue acid consumption is estimated using the equation GAC (kg/t) = 33.823 x %Ca + 2.713 x %Mg + 2.8. The following approximate COG's are applied: ○ 1.2% CuAs for ex-pit Oxide and Trasitional material ○ 0.8% CuAs for existing stockpile reclaim. • The ex-pit COG estimates are based on a Net Value Script (NVS) calculation that incorporates commodity price assumptions, gangue acid consumption and recoveries; and costs associated with current and projected operating conditions.

Section 4 Estimation and Reporting of Ore Reserves

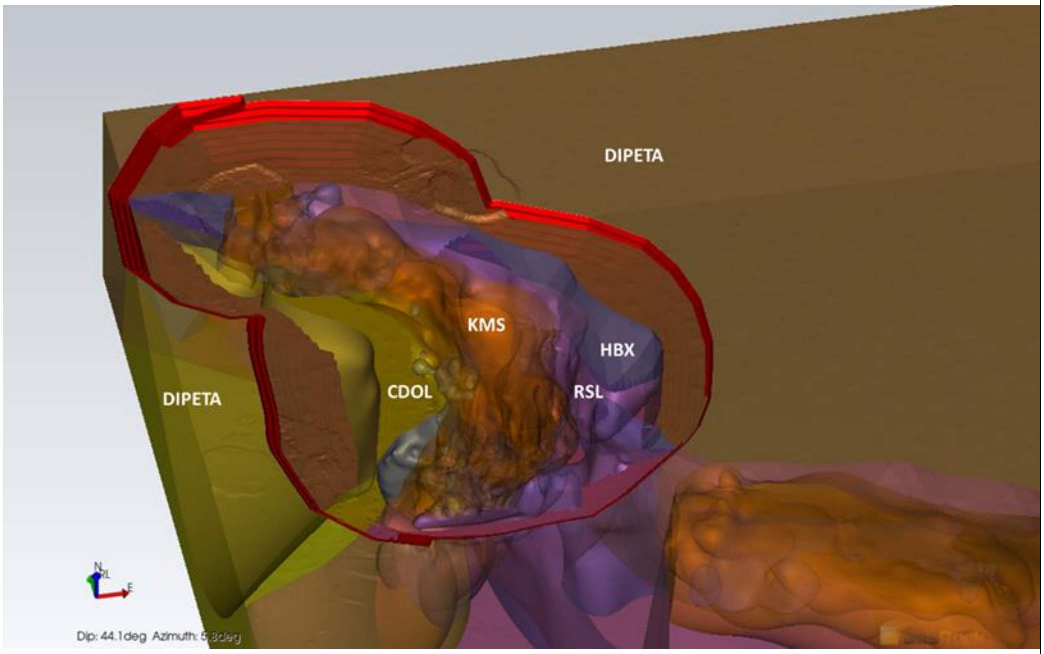
Criteria	Commentary
	• The NVS routine identifies material that is both suitable and potentially economic for processing in the Mineral Resource Model. This material is then considered for inclusion in the Ore Reserves process. • For the cost assumptions please see the “Costs” section. • For the price assumptions please see the “Revenue factors” section.

Mining factors or assumptions

- The method for Ore Reserves estimation included: mine dilution modelling, pit optimisation, final pit and phase designs, consideration of mine and mill schedule, all identified modifying factors and economic valuation.
- Kinsevere mine is an open pit operation that is mining and processing oxide copper ore. The operation uses a contract mining fleet of excavators and both rigid body and articulated dump trucks along with a fleet of ancillary equipment.
- This mining method is appropriate for the style and size of the mineralisation.
- The pit optimisation was based on a mining model based on the 2020 Mineral Resources block model, and the strategy for the final pit selection was based on a revenue factor 1 (RF=0.96). The RF 0.96 pit shell was used to best estimate and “waste strip efficient” final pit shell, considering cutback mining, and appropriate discounting of revenues and costs. Final pit designs incorporating further practical mining considerations, such as minimum mining width, were carried out using these optimisation shells.
- Mining dilution is based on localised mining dilution modelling with an additional unplanned dilution and ore loss of 5% respectively (unplanned dilution and ore loss was 7% and 7% respectively in the 2019 Ore Reserves). The dilution and ore loss modelling were designed to reflect historic reconciliation data (2020 reconciliation study) of areas that are reflective of future mining. The combination of the planned and unplanned dilution and ore loss, effectively result in a reduction in metal of approximately 10% compared with the Resource Model.
- Minimum mining width (bench size) is typically in excess of 45m but is ~35m in some isolated areas during stage development.
- No Inferred Mineral Resources material has been included in optimisation and/or Ore Reserves reporting.
- All required infrastructure is in place. Mining rates are planned to stay relatively constant and is within the capacity of the existing fleet and mining contractor capability.
- The slope guidelines used for the 2020 Kinsevere Ore Reserves are as follows:

Domain	Weathering Code	BFA (Max °)	Bench Height (m)	Berm Width (m)	IRA (°)	Stack He
All	Completely Weathered (W4)	50	10	6	35	-
	Highly Weathered DIP West (W3)	45	10	9.5	27	3
	Highly Weathered Other (W3)	50	10	9	30	3
RAT_HBX	Moderately Weathered (W2)	70	15	7.25	50	9
	Slightly Weathered to Fresh (W1, W0)	80	20	13.25	50	12
RAT_RSL	Moderately Weathered (W2)	70	15	7.25	50	9
	Slightly Weathered to Fresh (W1, W0)	80	20	13.25	50	12
SDOL	Moderately Weathered (W2)	70	15	7.25	50	9
	Slightly Weathered to Fresh (W1, W0)	80	20	13.25	50	12
SD	Moderately Weathered (W2)	70	15	9.5	45	9
	Slightly Weathered to Fresh (W1, W0)	80	20	13.25	50	12
DIP	Moderately Weathered (W2)	70	12	7.25	50	9
	Slightly Weathered to Fresh (W1, W0)	80	20	13.25	50	12

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
	○ These guidelines take into account new mapping information of exposures at Central East, as well as updated logging and domain interpretation in Central Pit. ○ 2020 guidelines remain unchanged for the Kinsevere Hill North and Kinsevere Hill South pits, which take into account observed performance of the current exposures. ○ Inter-ramp and overall slope design criteria have been decreased from 2019 from High to Medium Consequence of Failure while further water and blast control measures are implemented i.e. inter ramp and overall slope factors of safety from limit equilibrium analysis are in excess of 1.2 and 1.3, respectively. This factor of safety has been decreased from 1.3 and 1.2 in 2020, as water and blast control measures continue to be implemented. ○ The design sectors highlighted in the table above can be seen in the figure below:  ○ These guidelines take into account observed performance of the current exposures at Kinsevere and potential failure modes that could occur at bench, inter-ramp and overall slope scale at Kinsevere.
Metallurgical factors or assumptions	• Kinsevere is an operating mine. The existing metallurgical process is a hydrometallurgical process involving grinding, tank leaching, counter-current decantation (CCD) washing, solvent extraction and electrowinning. • The acid leach process has been operating successfully since start-up in September 2011. • Copper recovery is determined by the equation: *Cu recovery (%) = (0.963*CuAS)/CuT* where CuAS refers to the acid soluble copper content of the ore which is determined according to a standard test. The CuAS value has historically been around 80 to 90% of the total copper value though the exact percentage varies with the ore type.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	Much of the non-acid soluble copper is present in sulphides which are not effectively leached in the tank leaching stage. • The reconciliation between expected and actual recovery is checked each month. The following table summarizes the outcomes for the last eight quarters. (see table below) • The main deleterious components of the ore are carbonaceous (black) shales which increase solution losses in the washing circuit and dolomite which increases acid consumption in the leaching process. • The effect of black shale is currently controlled by blending which is used to limit the percentage of this component in the feed to less than 30%, it is planned that this will be increased to 50% over the coming 3 years. • Total gangue acid consumption has been estimated based on the following equation GAC (kg/t) = 33.823 x %Ca + 2.713 x %Mg + 2.8. • To prevent process issues, ore feed to the mill is blended to ensure the gangue acid consumption does not exceed 35kg/t. • For Ore Reserves, a processing capacity of approximately 2.5Mtpa of ore and an electrowinning capacity of 80ktpa of copper cathode has been assumed. Both mill throughput and cathode production rates have been demonstrated as sustainable. • Kinsevere mine does not currently produce any by-products.
Environmental	• Geochemical analysis of mine waste material over a two year period (2017 onwards) has been reviewed to confirm the classification of Potential Acid Forming (PAF) material. The review resulted in a change to the PAF classification. The updated classification has reduced the volume of potentially acid generating material (separating non-acid generating materials from potentially acid generating materials), thus preserving clean waste for construction and rehabilitation requirements. • Surface water management plans for the short and medium term have been completed and are progressively being implemented. Construction and maintenance of infrastructure will be continuing throughout the 2020 and 2021 dry season. • Existing tailings storage facility (TSF 2) has design capacity to meet the 2020 Ore Reserves requirements. The TSF 2 is currently at RL 1290.6 it is planned to be elevated a further 10m.

Period	**Recovery of Acid Soluble Copper (%)**	
	Predicted	**Actual**
Q3 2018	96.0	97.2
Q4 2018	96.0	97.3
Q1 2019	96.0	96.4
Q2 2019	96.0	95.7
Q3 2019	96.3	96.4
Q4 2019	96.3	94.7
Q1 2020	96.3	94.0
Q2 2020	96.3	95.5

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Infrastructure	• The Kinsevere mine site is well established with the following infrastructure in place: ○ The plant is operational. ○ Labour is mostly sourced from Lubumbashi and surrounding villages with some expatriate support. There is an existing accommodation facility onsite. ○ There is sufficient water for the processing. ○ Copper cathode is transported off-site by truck. ○ Site has an access road that is partially sealed. ○ There is power supply from the national grid and from onsite generators. ○ The Ore Reserves do not require any additional land for expansion. ○ Tailings Storage Facility in place and future lifts are planned for. • Grid power in country can be intermittent; mitigation management is through diesel-based power generation. Future grid power availability is forecast to improve. • Timely dewatering of the mining areas continues to be an important aspect of mining operations.
Costs	• Kinsevere is an operating mine, historical costs have been used to inform the 2019 Kinsevere Budget (January 2020 to December 2020). • Mining costs are based on contract mining costs, established in 2017. Some opportunities within the mining contract have been identified and have been projected to commence in 2021. • Transportation charges used in the valuation are based on the actual invoice costs that MMG are charged by the commodity trading company per the agreement. • Royalties charges have been considered, approximating 6% of the Copper revenue. • The processing costs include calculated gangue acid consumption. • The final product contains no deleterious elements. • US dollars have been used thus no exchange rates have been applied. • Weathering profiles have been used to model in-pit blasting costs. • Since the final Copper product is copper cathode (Grade A non LME registered) there are no additional treatment, refining or similar charges. • Sustaining capital costs have been included in the pit optimisation. The sustaining capital costs are principally related to the tailings storage facility lift construction and the process plant. The inclusion or exclusion of these costs in the Ore Reserves estimation is based on accepted industry practice. • A cash flow model was produced based on the mine and processing schedule and the aforementioned costs. • The Ore Reserves estimation has been based on the abovementioned costs.
Revenue factors	• The assumed long-term copper price is US$3.24/lb. These prices are used to inform the cut-off parameters (see cut-off section above). This price is provided by MMG corporate,

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	approved by the MMG Board, and are based on external company broker consensus and internal MMG analysis. • The current practise is to process Black Shale material at a maximum blend of 30% of the total feed. Internal studies are are currently in progress, they identify opportunities whereby black shale is proposed to be process up to 50% of the total feed by Q3 2023.
Market assessment	• MMG considers that the outlook for the copper price over the medium and longer term is positive, supported by further steady demand growth. • Global copper consumption growth will continue to be underpinned by rising consumption in China and the developing countries in Asia as these nations invest in infrastructure such as power grids, commercial and residential property, motor vehicles and transportation networks and consumer appliances such as air conditioners. • Global copper demand will also rise as efforts are made to reduce greenhouse gas emissions through increased adoption of renewable energy sources for electricity generation and electric vehicles for transportation. • Supply growth is expected to be constrained by a lack of new mine projects ready for development and the requirement for significant investment to maintain existing production levels at some operations. • There is a life of mine off-take agreement with a trading company in place for all Kinsevere's copper cathode production. The off-take arrangement has been in place since the commencement of cathode production at site and has operated effectively. There is no reason to expect any change to this in future.
Economic	• The costs are based on historic actuals and estimated future operating costs, the 2020 Kinsevere Budget and current contractor mining costs. • Revenues are based on historic, contracted realised costs and the feasibility study estimates for Cobalt. Copper and Cobalt prices are based on MMG's short term pricing forecast (2020 to 2024) with a long-term forecast of $3.24/lb Copper. • The Ore Reserves financial model demonstrates the mine has a positive NPV, assuming existing rehabilitation liabilities are treated as sunk costs. • The discount rate is in line with MMG's corporate economic assumptions and is considered to be appropriate for the location, type and style of operation. • Standard sensitivity analyses were undertaken for the Ore Reserve work and support that the Ore Reserve estimate is robust.
Social	• Social and Security teams are working together to mitigate security threats resulting from theft and other illegal activities by engaging the community to raise awareness of issues and garner support, improving security at the site. • There were some incursions during 2020. Officials continue to be engaged in the management of artisanal miners from the region and site. Improved security management has been implemented in response to incursions. • There was in increase in children entering site. The Social Development team, authorities and community chiefs continue to engage to address this issue and training programs were run through the schools to educate children on the dangers and risks they could be exposed to.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	• The Social Development team continue to engage with Community leaders and government representatives regarding the MMG Social Development Plan and governance and distribution of funds by the Cashier de' Charges to better direct the funds to those in need.
Other	• MMG has a Contrat d'Amodiation (Lease Agreement) with Gécamines to mine and process ore from the Kinsevere Project until 2024. A renewal application process for 15 year extension has been submitted to DRC regulatory at least 1 year and no more than 5 years before the expiry date. • The PE 528 permit covers the three major deposits of Tshifufiamashi, Tshifufia and Kinsevere Hill/Kilongo. • A Contrat d'Amodiation is provided for under the DRC Mining Code, enacted by law No 007/2002 of July 11, 2002. • A conversion of the adjacent_PR7274 to an exploitation permit was completed in 2018. Tenement amalgamation (of PE528 and PE7274)_was completed in early March 2019, with PE7274 incorporated into PE528.
Classification	• The Ore Reserves classification is based on the JORC 2012 Code. The basis for the classification was the Mineral Resources classification and Net Value cut-off grade. The ex-pit material classified as Measured and Indicated Mineral Resources, has a cut-off value calculated using a Net Value Script (NVS). It is demonstrated to be economic to process and is classified as Proved and Probable Ore Reserves respectively. • Existing stockpile material at Kinsevere is classified as Indicated. Indicated Mineral Resources above 1.2% CuAs for TMO/Oxide material, is demonstrated to be economic to process, and is classified as Probable Ore Reserves. • The Ore Reserves do not include any Inferred Mineral Resources (metal).
Audit or Reviews	• An external audit was completed in May 2020 as part of the 2020 feasibility study. The work was carried out by AMC Consultants and subsequently by Nerin Institute of Technical Design. Whilst some minor improvements were suggested, no material issues were identified the Oxide Processing Scenario. • The next external Ore Reserves audit is planned for completion in 2022 on the 2021 Ore Reserves.
Discussion of relative accuracy/ confidence	• The most significant factors affecting confidence in the Ore Reserves are: ○ Mining Dilution and Ore Loss. ○ Existence of Karst features, with respect to perched water and impacts to mining Dilution and Ore Loss. ○ Increase in operating costs for mining and processing. ○ Geotechnical risk related to slope stability. ○ Effective management of both ground and surface water.

4.2.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 12.

In compiling the Ore Reserves the Competent Person has reviewed the supplied information for reasonableness, but has relied on this advice and information to be correct.

Table 12 Contributing experts – Kinsevere Mine Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Doug Corley, Principal Resource Geologist, Mining One Consultants (Melbourne)	Mineral Resources model Stockpile Tonnes and Grade
Nigel Thiel, Metallurgy Manager AAA, MMG Ltd (Melbourne)	Metallurgy
Jeff Price, Principal Geotechnical Engineering, MMG Ltd (Melbourne)	Geotechnical parameters
Dean Basile, Principal Mining Engineer, Mining One Consultants (Melbourne)	Mining costs, pit designs, mine and mill schedules, Ore Reserves estimate
Kinsevere Geology department	Production reconciliation
David Machin, Principal Water and Tailings Engineer, MMG Ltd (Melbourne)	Tailings Capacity
Knight Piésold	Tailings dam design
Ben Qian, Senior Analyst, Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions and evaluation
Hugues Munung, Specialist - Environment MMG Ltd (Kinsevere)	Environment
Michel Santos, Director Social Development MMG Ltd (Kinsevere)	Social
Tim Roberts, Head of Marketing, MMG Ltd (Melbourne)	Marketing

4.2.4 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Ore Reserve statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

4.2.4.1 Competent Person Statement

I, Dean Basile, confirm that I am the Competent Person for the Kinsevere Ore Reserves section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy
- I have reviewed the relevant Kinsevere Ore Reserves section of this Report to which this Consent Statement applies.

I am a full time employee of Mining One Pty Ltd.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Kinsevere Ore Reserves section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Kinsevere Ore Reserves.

4.2.4.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Kinsevere Ore Reserves - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Dean Basile MAusIMM(CP) (#301633)

02/12/2020

Date:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Signature of Witness:

Douglas Corley
Melbourne, VIC

Witness Name and Residence: (e.g. town/suburb)

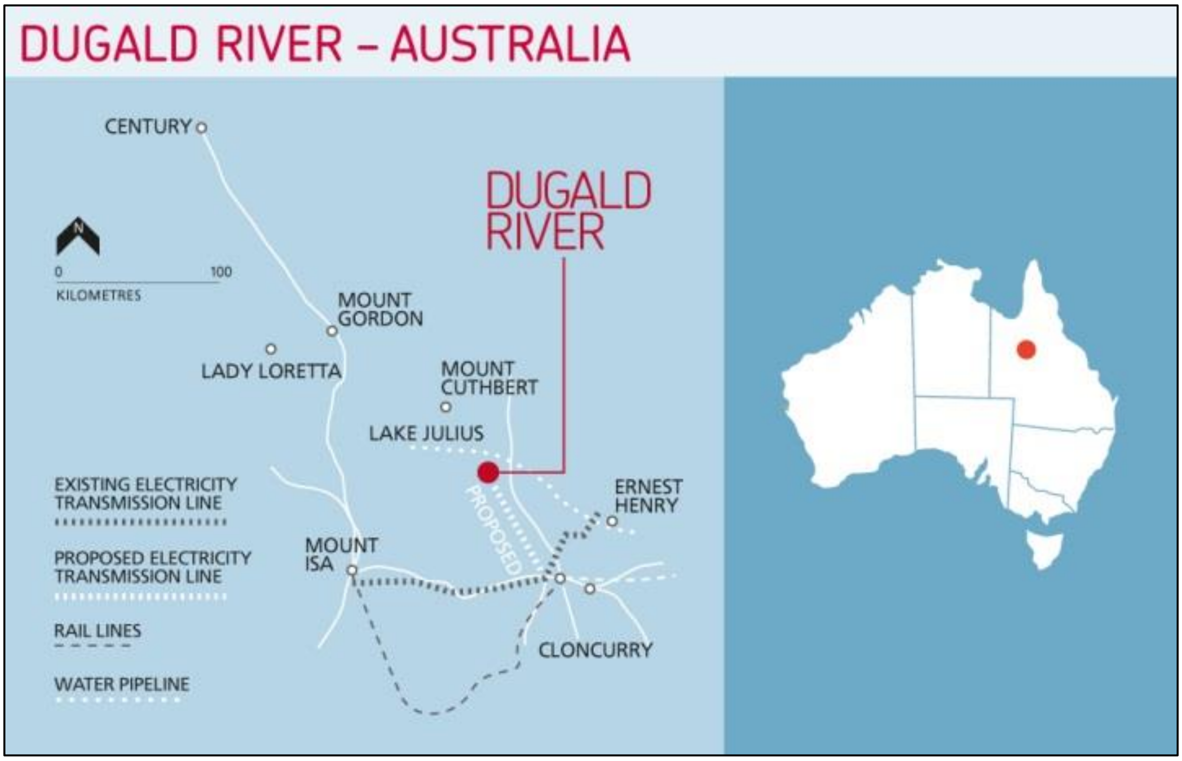
5 DUGALD RIVER MINE

5.1 Introduction and Setting

The Dugald River mine is located in northwest Queensland approximately 65km northwest of Cloncurry and approximately 85km northeast of Mount Isa (Figure 5-1). It is approximately 11km (by the existing access road) from the Burke Developmental Road, which runs from Cloncurry to Normanton.

It is an underground zinc-lead-silver deposit containing 67Mt at 11.6% zinc, 1.2% lead and 25 g/t Ag (as of 30 June 2020 at a $141/t NSR cut-off) and is wholly owned by a subsidiary of MMG Limited.

Figure 5-1 Dugald River project location



5.2 Mineral Resources – Dugald River

5.2.1 Results

The 2020 Dugald River Mineral Resources are summarised in Table 13. The Mineral Resource has been depleted to account for mining of ore by way of underground development of ore drives and stope production. The 2020 Mineral Resource has been reported above an A$141/t NSR *(net smelter return*) cut-off.

Table 13 2020 Dugald River Mineral Resource tonnage and grade (as at 30 June 2020)

Dugald River Mineral Resource											
							Contained Metal				
	Tonnes (Mt)	Copper (% Cu)	Zinc (% Zn)	Lead (% Pb)	Silver (g/t Ag)	Gold (g/t Au)	Copper ('000)	Zinc ('000)	Lead ('000)	Silver (Moz)	Gold (MoZ)
Primary Zinc[1]											
Measured	13.5		13.2	2.3	74			1,776	311	32	
Indicated	20		11.5	1.2	21			2,273	241	14	
Inferred	34		11.0	0.8	9			3,785	266	10	
Total	**68**		**11.6**	**1.2**	**26**			**7,834**	**818**	**55**	
Stockpiles											
Measured	0.02		10.2	2.3	75			2	0.4	0.04	
Total	**0.0**		**10.1**	**2.3**	**79**			**2**	**0.4**	**0.04**	
Total Primary Zinc	**67.6**		**11.6**	**1.2**	**26**			**7,835**	**818**	**55**	
Primary Copper[2]											
Inferred	19.2	1.4				0.1	261				0.04
Total	**19.2**	**1.4**				**0.1**	**261**				**0.04**
Dugald River Total							**261**	**7,835**	**818**	**55**	**0.04**

[1] $141/t NSR Cut-off, in-situ (less depletion and oxide material)

[2] 1% Cu Cut-off, in-situ (less depletion and oxide material)

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

Contained metal does not imply recoverable metal

5.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 14 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 14 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Dugald River Mineral Resource 2020

<table>
<tr><th colspan="2">Section 1 Sampling Techniques and Data</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>

Diamond drilling (DD) was used to obtain an average 1m sample length while still respecting geological contacts. DD core was sampled either whole, ¾, ½, ¼. Once samples are selected by a geologist the samples are marked and the allocated sample ID's stored in the database.
Table below shows samples collected at Dugald River for use in the Mineral Resource model by drill type, hole size and sample type.

<table>
<tr><th>Drill Type</th><th>Hole Size</th><th>Sample Type</th><th>Metres</th><th>% of Total</th></tr>
<tr><td rowspan="28">DD</td><td rowspan="2">PQ</td><td>Whole Core</td><td>254.8</td><td>0.21%</td></tr>
<tr><td>UNK</td><td>230.16</td><td>0.19%</td></tr>
<tr><td rowspan="2">PQ3</td><td>1/2 Core</td><td>11</td><td>0.01%</td></tr>
<tr><td>1/4 Core</td><td>7</td><td>0.01%</td></tr>
<tr><td rowspan="5">HQ</td><td>Whole Core</td><td>2040.83</td><td>1.67%</td></tr>
<tr><td>1/2 Core</td><td>992.34</td><td>0.81%</td></tr>
<tr><td>1/4 Core</td><td>295.63</td><td>0.24%</td></tr>
<tr><td>3/4 Core</td><td>396.28</td><td>0.32%</td></tr>
<tr><td>UNK</td><td>370.5</td><td>0.30%</td></tr>
<tr><td>HQ2</td><td>1/2 Core</td><td>5</td><td>0.00%</td></tr>
<tr><td>HQ3</td><td>1/2 Core</td><td>5800.45</td><td>4.74%</td></tr>
<tr><td rowspan="4">NQ</td><td>Whole Core</td><td>2963.4</td><td>2.42%</td></tr>
<tr><td>1/2 Core</td><td>206.2</td><td>0.17%</td></tr>
<tr><td>1/4 Core</td><td>42</td><td>0.03%</td></tr>
<tr><td>UNK</td><td>315.8</td><td>0.26%</td></tr>
<tr><td rowspan="4">NQ2</td><td>Whole Core</td><td>49703.25</td><td>40.58%</td></tr>
<tr><td>1/2 Core</td><td>37027.87</td><td>30.23%</td></tr>
<tr><td>1/4 Core</td><td>51.19</td><td>0.04%</td></tr>
<tr><td>UNK</td><td>188</td><td>0.15%</td></tr>
<tr><td rowspan="3">NQ3</td><td>Whole Core</td><td>6</td><td>0.00%</td></tr>
<tr><td>1/2 Core</td><td>1203.35</td><td>0.98%</td></tr>
<tr><td>UNK</td><td>157.8</td><td>0.13%</td></tr>
<tr><td rowspan="2">BQ/BQTK</td><td>Whole Core</td><td>216.86</td><td>0.18%</td></tr>
<tr><td>1/2 Core</td><td>113.65</td><td>0.09%</td></tr>
<tr><td rowspan="2">LTK60</td><td>Whole Core</td><td>3783.19</td><td>3.09%</td></tr>
<tr><td>1/2 Core</td><td>2902.67</td><td>2.37%</td></tr>
<tr><td rowspan="2">UNK</td><td>Whole Core</td><td>1553.4</td><td>1.27%</td></tr>
<tr><td>1/2 Core</td><td>457.5</td><td>0.37%</td></tr>
<tr><td colspan="3">Total DD</td><td>111,296.12</td><td>90.86%</td></tr>
<tr><td rowspan="3">RC</td><td>100mm & 150mm</td><td>Chips</td><td>1720</td><td>1.40%</td></tr>
<tr><td>5.75in</td><td>Chips</td><td>1659.6</td><td>1.36%</td></tr>
<tr><td>UNK</td><td>Chips</td><td>7792.3</td><td>6.36%</td></tr>
<tr><td colspan="3">Total RC</td><td>11,171.90</td><td>9.12%</td></tr>
<tr><td colspan="3">Grand Total</td><td>122,468.02</td><td>100%</td></tr>
</table>

Approximately 10% of the dataset was sampled using RC drilling techniques; however, this is confined to pre-collar surface drilling and generally from regions outside of the mineralised zone. Approximately 24% of the total drilled meters were sampled.
Since 2010, samples are bagged, numbered and dispatched to ALS Mt Isa laboratory:

Until 2016, the sample was jaw crushed, 50% split,
Crushed using a Boyd crusher 70% nominal passing 2mm. Since 2018 all core samples are jaw crushed then 100% re-crushed using a Boyd crusher, 70% nominal passing 3.15mm

</td></tr>
</table>

Section 1 Sampling Techniques and Data

Criteria	Commentary

  - The sample is rotary split with 500-800g retained and pulverised to 85% passing 75µm.
  - All rejected material is collected and saved (Coarse – jaw crushed product, collected 2010 to 2016).
  - Pulps are then sent to ALS Brisbane for analysis.
- For the 2007/2008 programme laboratory sample preparations involved drying, crushing (jaw and Boyd), and pulverising the ½ core sample to 85% passing 75µm.
- No detailed information can be found for laboratory preparation prior to 2007, however a similar procedure is assumed.
- Varieties of laboratories have been used over time and have been summarised in the table below (over 89% of all assays have been through the ALS laboratories).

Date Range	Laboratory	Number of samples	% of Total
2019-2020	ALS	16803	13.90%
2010 - 2019	ALS	79828	66.20%
	GENALYS	439	0.40%
2001 - 2009	ALS	13142	10.90%
	UNK	96	0.10%
Prior to 2000	AAL	234	0.20%
	AMDEL	4551	3.70%
	Aminya	224	0.20%
	ANALABS	1887	1.50%
	PILBARA	2175	1.80%
	UNE	7	0.00%
	UNK	1323	1.10%
Grand Total		120,709	100%

- Since 2010 the four acid the digestion process used (ALS Brisbane) is as follows:
  - Approximately 0.25g of sample catch weighed into a Teflon test tube.
  - HNO3 and HClO4 are added and digested at 115°C for 15 minutes.
  - HF is added and digested at 115°C for 5 minutes.
  - The tubes are then digested at 185°C for 145 to 180 minutes. This takes the digest to incipient dryness (digest is not "baked")
  - 50% HCl is added and warmed
  - Made to 12.5ml using 9.5ml 11% HCl.
- The table below summaries the analytical method and digest used for all assays in the Mineral Resource estimate. As can be seen, the majority of assays have been determined by using a four-acid digest with an ICP OES read.

Base Metal Analysis	Analytical Method							Total
	AAS	ICP	ICP AES	ICP MS	ICP AES MS	XRF	Unknown	
Four Acid	2,554	225	107,048	46				109,873
Aqua Regia	5		3982		7			3,994
Aqua Regia Perchloric			4,290					4,290
Mixed Acid			301	165				466
Perchloric	151		88					239
Unknown	231					7	1,609	1,847
Total	2,941	225	115,709	211	7	7	1,609	120,709

- Gold assaying at Dugald River began in 1988 once the discovery of the hanging-wall copper lode was identified. Varieties of different assay methods have been used, and are summarised in the table below. The majority of gold assays were done by ALS (Townsville), by Fire assay with an AAS read, with a 50g charge used since 2008. At

Section 1 Sampling Techniques and Data

Criteria	Commentary

total of 579 gold assays were completed using Aqua Regia with an AAS read (completed between 1990 and 1996).

Gold Analysis		Analytical Method					**Total**
		AR-AAS	FA-AAS 30g	FA-AAS 40g	FA-AAS 50g	Unknown	
Laboratory	AAL	96					96
	ALS		6,093		14,504		20,597
	AMDEL	413	58	406	57	80	1,014
	ANALABS	70	684		158		912
	PILBARA				174		174
	UNK					64	64
Total		579	6,835	406	14,893	144	**22,857**
Percentage of Total (%)		2.53%	29.90%	1.78%	65.16%	0.63%	100.00%

- There are no inherent sampling problems recognised.
- Measures taken to ensure sample representivity include orientation of the drill holes as close as practical to perpendicular to the known mineralised structure, and the collection and analysis of field duplicates.

Drilling techniques

- Drilling used for the Mineral Resource started in 1969 and continued until present. Within the database used there are 3,012 drill holes (591 from surface {combination of RC and DD} and 2,421 DD underground), summarised in the table below.
- Approximately 6% of the surface drilling data does not have drillhole diameters recorded.

Drill Type	**DD Core/ RC**	**Total Metres**	**% of Total**
DD	PQ3	18	0.00%
	HQ	4187.48	0.91%
	HQ2	5	0.00%
	HQ3	5800.45	1.26%
	NQ	3586.1	0.78%
	NQ2	89881.31	19.54%
	NQ3	1375.37	0.30%
	BQ	206.86	0.04%
	BQTK	123.65	0.03%
	LTK60	6684.56	1.45%
DD Sub Total		**111,868.78**	**24.32%**
RC	100&150	1720	0.37%
	5.75in	1659.6	0.36%
	NQ2	7802.3	1.70%
RC Sub Total		**11,181.90**	**2.43%**
No Recovery	HQ	445.7	0.10%
	HQ3	7169.03	1.56%
	NQ2	217478.14	47.28%
	NQ3	736.44	0.16%
	LTK60	1351.94	0.29%
No Recovery Sub Total		**227,181.25**	**49.39%**
No Sampling	5.75in	134.6	0.03%
	PQ3	169	0.04%
	HQ	2311.8	0.50%
	HQ3	1301.56	0.28%
	NQ	746.5	0.16%

<table>
<tr><th colspan="2">Section 1 Sampling Techniques and Data</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><td></td><td>NQ2</td><td>102313.98</td><td>22.25%</td></tr>
<tr><td></td><td>NQ3</td><td>19.75</td><td>0.00%</td></tr>
<tr><td></td><td>BQTK</td><td>575.22</td><td>0.13%</td></tr>
<tr><td></td><td>LTK60</td><td>2126.68</td><td>0.46%</td></tr>
<tr><td colspan="2">No Sampling Sub Total</td><td>109,699.09</td><td>23.85%</td></tr>
<tr><td colspan="2">Grand Total</td><td>459,931.02</td><td>100%</td></tr>
</table>
DD = Surface diamond drilling, RC= Reverse circulation drilling

Some Historical holes (drilled prior to 1969) and other listed drill holes were not used for this estimate due to poor sample quality and reliability.

</td></tr>
<tr><td>Drill sample recovery</td><td>

Recovery recorded during core logging was generally 100%, with minor losses in broken / sheared and faulted ground.
At times, triple tube drilling from surface has been used to maximise core recovery but this is not common.
RQD (rock quality designation) data was logged and recorded in the database to measure the degree of jointing or fractures or core loss in the sample.
Shearing and broken ground zones are located at the edges of the mineralisation zone and are not associated with locations of good grade interceptions. There is no relationship between core loss and mineralisation or grade - no sample bias has occurred due to core loss within broken/sheared ground.

</td></tr>
<tr><td>Logging</td><td>

All core samples including RC pre-collars have been geologically logged (lithology, stratigraphy, weathering, alteration, geotechnical characteristics) to a level that can support the Mineral Resource estimation.
The logging captures both qualitative (e.g. rock type, alteration) and quantitative (e.g. mineral percentages) characteristics. Core photographs are available for most drill holes. All drill holes post-2008 have been photographed (wet and dry).
A representative sample of mineralised core is stored at -4°C in refrigerated containers to minimise oxidation for metallurgical testing. Non-mineralised core is stored on pallets in the yard.
Currently, all drill holes are logged using laptop computers directly into the drillhole database. Logging has occurred in the past onto paper log-sheets and was then transcribed into the database.

</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>

Prior to 2007 various sub-sample techniques and sample preparation techniques were used for DD drilling including whole, ¾ (generally restricted to metallurgical samples) and ½ and ¼ (for general samples) core, where sample length is generally 1 metre. Since 2007 DD core was halved using a circular diamond saw, density tested before being sent to analytical testing. Sample lengths were cut as close to 1m as possible while respecting geological contacts. From 2016 whole core is sent for analysis for any in-fill drilling campaigns.
For DD, the standard sampling length is 1m with a minimum of 0.2m and a maximum 1.5m within the mineralised zone was determined by lithology and visible mineralisation (i.e., samples were taken up to but not across lithological contacts, and obvious high-grade zones were sampled separately from lower grade intervals).
The sample collection protocol for RC grade control drill holes has typically been as follows;

</td></tr>
</table>

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	○ RC samples are collected from a cyclone at 2m intervals from pre–collar surface drilling. ○ If the sample was dry the sample was passed through a riffle splitter and collected into a pre-numbered calico bag. Residual material was sampled and sieved for chip trays and the remainder returned to the larger poly-weave bag. The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet then the sample was dried before being split according to the procedure above (for dry samples). ○ Historical RC programmes were designed to test the 'un-mineralised' hanging wall material in DD pre-collars. 2m bulk composites stored at the drill site were sampled using the spear method. • The vast majority of drillhole intersections are orthogonal to the mineralisation and as such are representative. • The sample preparation of RC chips and DD core adheres to industry good practice. Samples are bagged, numbered and dispatched to the ALS Mount Isa laboratory. At the laboratory, each sample is weighed then crushed using a Boyd crusher to 70% nominal passing 3.15mm. The sample is rotary split (500-800g) and pulverised to in a LM2 to 85% passing 75 µm. All rejected material is collected and saved. Pulps are then sent to ALS Brisbane for analysis. • Prior to 2013, measures taken to ensure sampling is representative of the in-situ material collected included: ○ Field duplicates (quarter core) were sampled at a rate of 1 per 20 samples (approximately 4 per drill hole). • The sample types, nature, quality and sample preparation techniques are considered appropriate for the style of the Dugald River mineralisation (sediment/shear hosted base metal) by the Competent Person.
Quality of assay data and laboratory tests	• The assaying methods currently applied at Dugald River are ICP-MS with a 4-acid digest which is used for the analysis of Zn, Pb, Ag, Fe, S, Mn and Cu which are estimated in the Mineral Resource. Total carbon (TotC) is analysed by Leco furnace. All of these analyses are considered total. • Gold assays are completed by Fire Assay with an AAS read, with a 50g charge used since 2008. • These assaying techniques are considered suitable for the Dugald River Mineral Resource. • No geophysical tools, spectrometers or handheld XRF instruments have been used in the analysis of samples external to the ALS laboratory for the estimation of Mineral Resources. • Certified reference materials (CRM) and blanks (coarse) were each submitted at the rate of 1:20. The selection and location of standards and blanks in the batch sequence is decided by the geologist on the basis of the logged mineralisation. • Batches that fail quality control criteria (such as standards reporting outside set limits) are entirely re-analysed. • Prior to 2015 duplicate sampling was performed by selecting from returned coarse rejects and resubmitted to ALS for analysis.

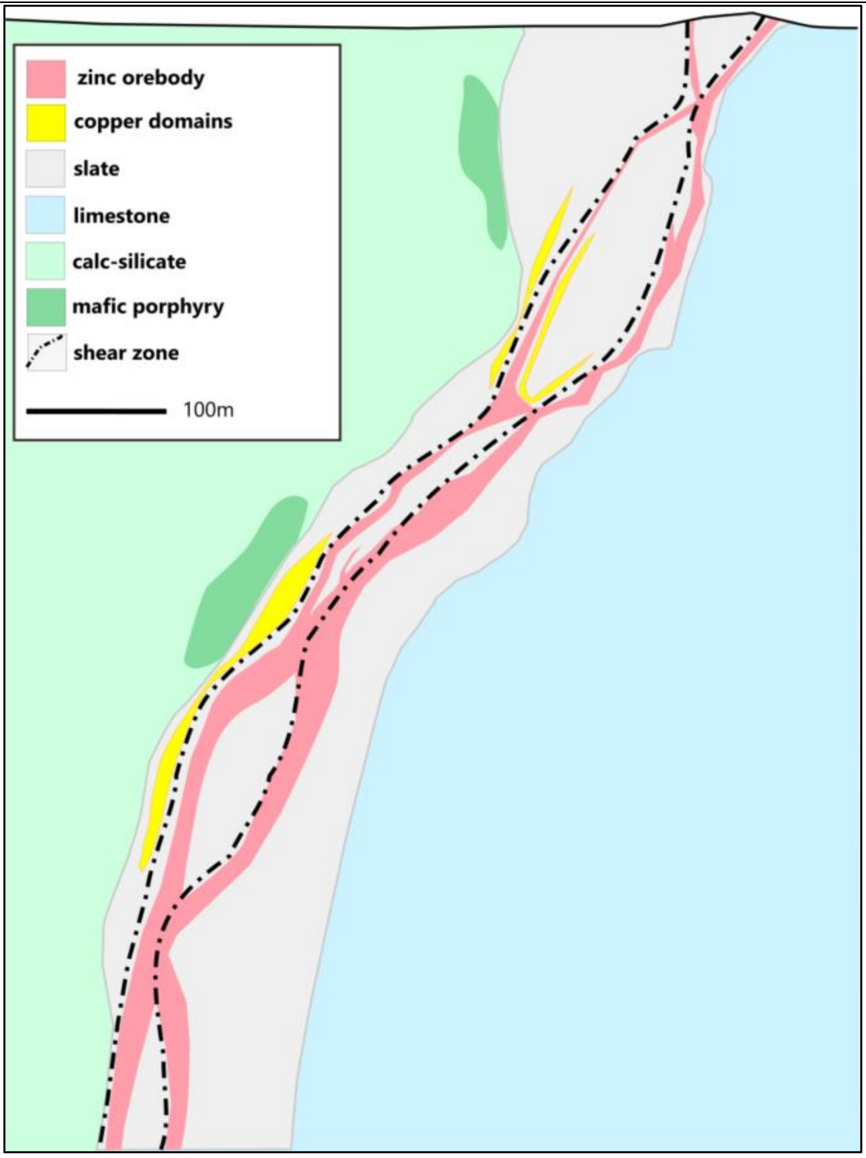
<table>
<tr><th colspan="2">Section 1 Sampling Techniques and Data</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>Since 2015 duplicates are taken by the laboratory every 20th sample alternating between a duplicate taken at the primary crushing stage or the pulverisation stage. Batches that return standard values above three standard deviations (3SD) are failed and all or part of the batch is re-analysed by the Laboratory (ALS).</td></tr>
<tr><td>Verification of sampling and assaying</td><td>Verification of assay results was visually verified against logging and core photos by alternative company personnel.
No twinning of drill holes has occurred at Dugald River. However, close-spaced and crossing holes give comparable grade and width results
Core logging data was recorded directly into a Database (Geobank) by experienced geologists (geological information such as lithology and mineralisation) and field technicians (geotechnical information such as recovery and RQD). Where data was deemed invalid or unverifiable it was excluded from the Mineral Resource estimation.
No adjustments to the assay data has been performed during import into the Geobank Database.</td></tr>
<tr><td>Location of data points</td><td>All drill hole collars have been surveyed by licensed surveyors. Surface collars were surveyed in MGA94 and then converted to local mine grid.
Underground drill holes are marked up by surveying a collar pin at the designed collar point location which is supplied by the Geologists.
Currently the drillers obtain their azimuth for the hole by utilising an azimuth aligner which is calibrated weekly using a test bed that is has a fixed azimuth.
Upon completion of the drill program the collars of each drill hole are surveyed in local grid and saved into the drill hole register spreadsheet for the Geologists.
The equipment used underground to perform drillhole surveys is a Leica TS-15 total station.
For surface holes a collar point is marked out with a survey peg and then two pegs at the extremities of the drill pad are surveyed for the azimuth of the hole.
The drill rig lines up with these two pegs to drill on correct azimuth.
The drillers also use a true north azimuth tool to check the bearing.
The equipment used on surface for drill holes is a Trimble R8 RTK GPS.
Down-hole surveying has been undertaken using various methods including Eastman, Reflex and gyroscopic cameras. In general, a spacing of 30m down hole between survey readings was used. Interference due to magnetite and pyrrhotite has been an issue.
During the 2007/2008 drilling program routine survey checks were undertaken on the reflex survey camera using an aluminium calibration stand positioned in a known orientation.
Since 2008 all drill holes are gyroscopically surveyed.
True North seeking azimuth tool has been used since 2017, to limit the effect of magnetic declination corrections.
The grid system used is MGA94, the conversion to local mine grid is rotated and scaled. The grid transformation is undertaken using a formula provided by the onsite surveyors.</td></tr>
</table>

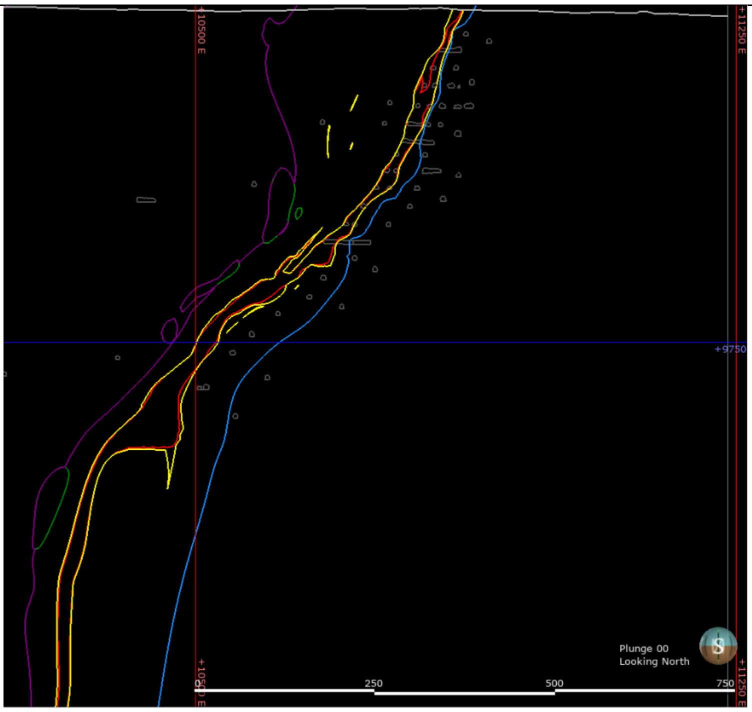
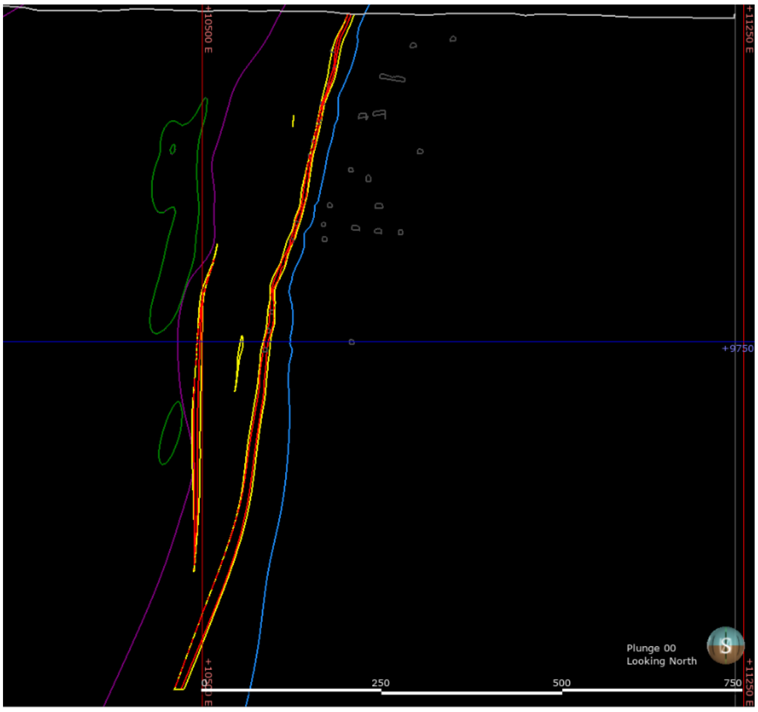
Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	- A LIDAR survey flown in 2010 is used for topographic control on surface drilled drill holes. In the view of the Competent Person the LIDAR survey provides adequate topographic control.
Data spacing and distribution	- Drill spacing varies across the strike and dip of the mineralisation lode. The highest drill density in the ore body is 20m x 10m while the lowest drill density is greater than 100m x 100m spacing. - Locations drilled at 20m x 10m and up to 20m x 15m are adequate to establish both geological and grade continuity. Wider spaced drilling is adequate for definition of broader geological continuity but not sufficient for accurate grade continuity. - Underground mapping of faces is digitised and used in the interpretation and wire-framing process. - Drillhole data is concentrated within the upper 500m of the Mineral Resource with broader-spaced drilling at depth, due to the access restraints, mine schedule requirements and cost involved in drilling deeper sections. - Drill spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedure and classification applied. - Samples are not composited prior to being sent to the laboratory for analysis.
Orientation of data in relation to geological structure	- Geological mapping (both underground and surface) and interpretation show that the mineralisation is striking north-south and dips between 85 and 45 degrees towards the west. Hence drilling is conducted on east-west and west-east directions to intersect mineralisation across-strike. - Drilling orientation is not considered to have introduced sampling bias. Drill holes that have been drilled down dip and sub-parallel to the mineralisation have been excluded from the estimate.
Sample security	- Measures to provide sample security include: o Adequately trained and supervised sampling personnel. o Well maintained and ordered sampling sheds. o Cut core samples stored in numbered and tied calico sample bags. o Calico sample bags transported by courier to assay laboratory. o Assay laboratory checks of sample dispatch numbers against submission documents. o Assay data is returned as a .sif file via email and processed via the MMG assay loading software.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Audit and reviews	• The Dugald River database has been housed in various SQL databases. iOGlobal managed the database until the end of 2009 when the database was transferred and migrated to an MMG database. o Internal audits and checks were performed at this time. Any suspicious data was investigated and rectified or flagged and excluded. • No external independent audits have been performed on the database. • No external independent audits have been performed on the sampling techniques or the database. • Both ALS Mount Isa and Brisbane laboratories are audited on an annual basis by MMG personnel. From the most recent audit there were no material recommendations made.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Mineral tenement and land tenure status	• The Dugald River Mining Leases are wholly owned by a subsidiary of MMG Limited. • MMG holds one exploration lease and one mineral development lease in addition to the mining leases on which the Dugald River Mineral Resource is located. EPM12163 consists of 3 sub-blocks and covers an area of 20 sqkm to the west of the Dugald River deposit. ML2479 overlaps the eastern area of the EPM12163. • There are no known impediments to operating in the area.
Exploration done by other parties	• The History of the Dugald river zinc-lead deposit is summarised as follows: Discovered in 1881, the first drilling programme in 1936 comprised three drill holes. The maiden Mineral Resource was reported in 1953 by Zinc Corporation. Drilling continued from 1970 through 1983 totalling 28 drill holes. CRA then re-estimated the Mineral Resource in 1987. Between 1989 and 1992 a further 200 drill holes were drilled, resulting from the discovery of the high-grade, north plunging shoot. Infrastructure, metallurgical and environmental studies were undertaken during this period. Between 1993 and 1996 irregular drilling was focused on the delineation of copper mineralisation in the hanging wall. In 1997 the project was transferred to Pasminco, which had entered a joint venture with CRA in 1990. Recompilation of the database, further delineation drilling, metallurgical test work, and the check assaying of old pulps was completed. Continued drilling between 2000 and 2009 with subsequent metallurgical studies culminated in a Feasibility Study. Structural analysis and a focused review on the northern copper zone in 2010 were completed. In 2011 the decline commenced which resulted in trial stoping. In 2014 some underground development was completed and drilling focused on confirming and extending continuity of the mineralisation within the Dugald River lode.
Geology	• The Dugald River style of mineralisation is a sedimentary and shear hosted base metal deposit. The main sulphides are sphalerite, pyrite, pyrrhotite and galena with minor arsenopyrite, chalcopyrite, tetrahedrite, pyrargyrite, marcasite and alabandite.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	• The deposit is located within a 3 km-4 km along strike north-south trending high strain domain named the Mount Roseby Corridor and is hosted by steeply dipping mid Proterozoic sediments of the Mary Kathleen Zone in the Eastern Succession of the Mount Isa Inlier. The host sequence is composed of the Knapdale Quartzite and the Mount Roseby Schist Group (which includes the Hanging wall calc-silicate unit, the Dugald River Slate and the Lady Clayre Dolomite). The sequence is an interbedded package of greenschist to amphibolite grade metamorphosed carbonate and siliclastic lithologies. • The main Dugald lode is hosted within a major N-S striking steeply west dipping shear zone which cross cuts the strike of the Dugald River Slate stratigraphy at a low angle. All significant zinc-lead-silver mineralisation is restricted to the main lens with the hanging wall and footwall lenses being predominantly zinc mineralised. Three main mineralisation textures/types are recognised, including banded, slatey breccia, and massive breccia. • The geometry of the deposits consists of the boudinaged main lens, which pinchs and swells in thickness along strike and to depth. It is recognised that the previously modelled hangingwall and footwall domains (1A, 2, 3, 4 and 5) are part of the main lens which anastomoses, splits and merges. All zinc and associated lead-silver mineralisation are governed by this geometry. • The mineralogy of the Dugald lode is typical of a slate-hosted base metal deposit. The gangue within the lode is composed of quartz, muscovite, carbonates, K-Feldspar, clays, graphite, carbonaceous matter and minor amounts of calcite, albite, chlorite, rutile, barite, garnet, and fluorite. • The mineralised zone extends approximately 2.4 km in strike length and up to 1.4 km down dip.
Drill hole information	• 3,012 drill holes and associated data are held in the database (combination of RC and DD). • No individual hole is material to the Mineral Resource estimate and hence this geological database is not supplied.
Data aggregation methods	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section. • No metal equivalents were used in the Mineral Resource estimation. However, the Mineral Resource has been reported above an A$141 NSR calculated cut-off.
Relationship between mineralisation width and intercepts lengths	• Mineralisation true widths are captured by three-dimensionally modelled wireframes with drill hole intercept angles ranging from 90° to 40°. • The true thickness of the majority of the Mineral Resource is between 3m and 30m with the thickest zones occurring to the south.

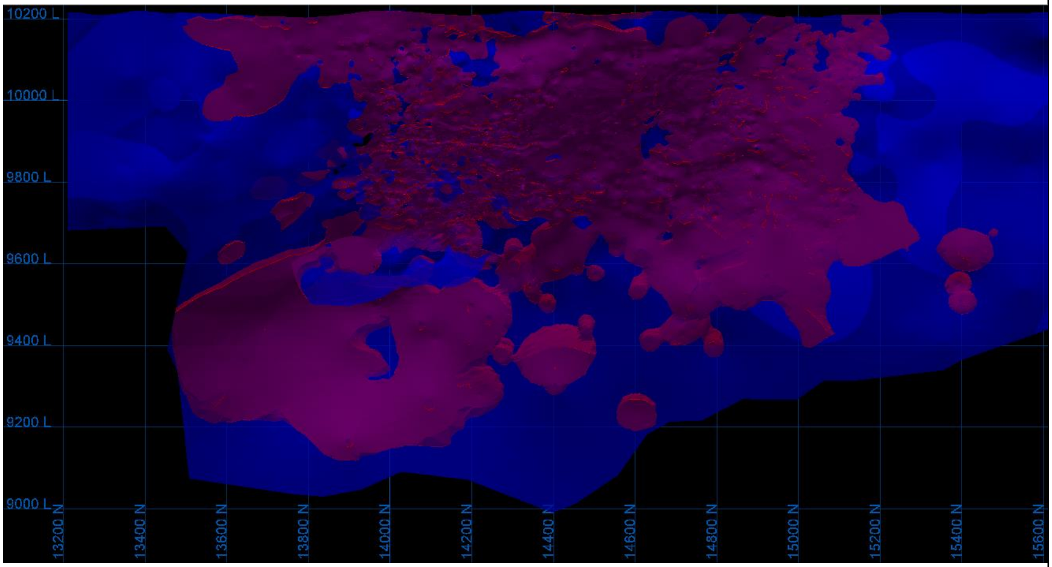
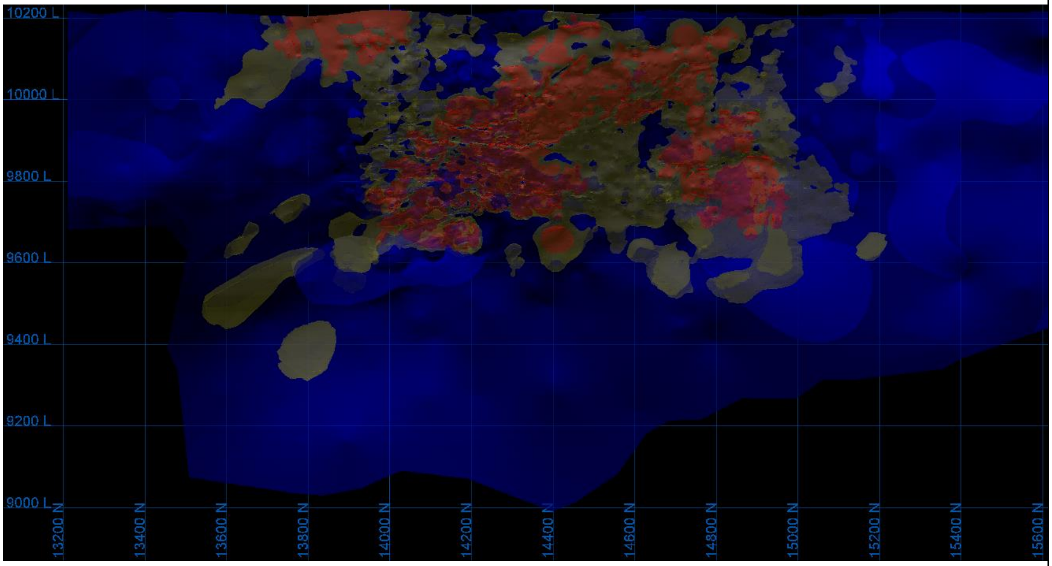
Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Diagrams	 **Schematic cross section looking north – showing thickness variations and distribution**

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	 **Cross section 14110mN of the South Mine looking north – 1% zinc composite wireframes (yellow) with 7% zinc composite wireframes (red), development (grey), limestone contact (blue), calc-silicate contact (purple), mafic porphyry contact (green) with topography (grey).**  **Cross section 14960mN of the North Mine looking north – 1% zinc composite wireframes (yellow) with 7% zinc composite wireframes (red), development (grey), limestone contact (blue), calc-silicate contact (purple), mafic porphyry contact (green) with topography (grey).**

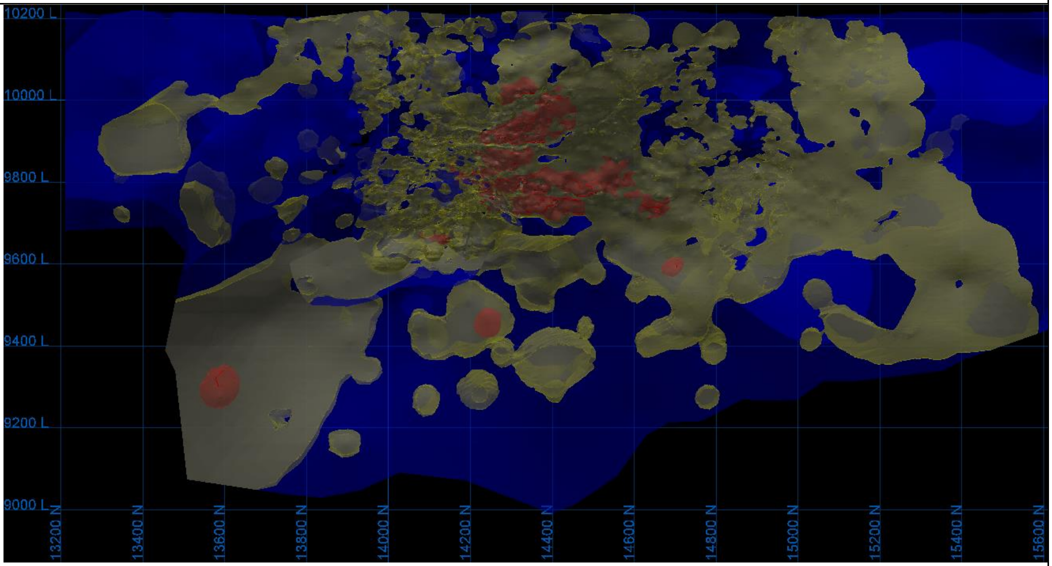
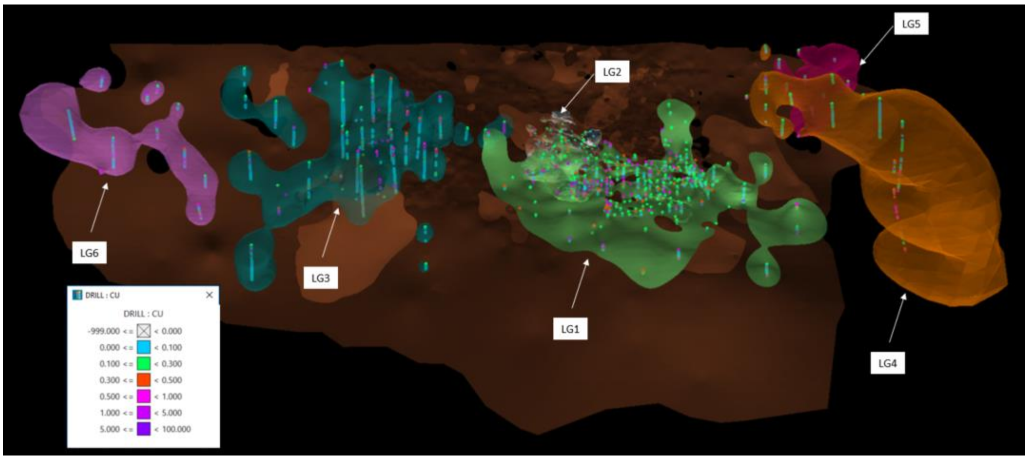
Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Balanced reporting	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section.
Other substantive exploration data	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section.
Further work	• MMG plans to continue to improve geological confidence and Mineral Resource classification through infill drilling programmes ahead of the mining schedule.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The following measures are in place to ensure database integrity: o All data is stored in an SQL database that is routinely backed up. o All logging is digital and directly entered into the onsite Geobank database. Data integrity is managed by internal Geobank validation checks/routines that are administered by the Database Group and/or the site Geology Team. • The measures described above ensure that transcription or data entry errors are minimised. o Data validation procedures include: Database validation procedures are built in the database system to manage accurate data entry during logging and collection of data. o Prior to use in the Mineral Resource the data was checked externally by running Datamine macros on the drill hole file to check for end of hole depths, and sample overlaps. o Manual checks were carried out by reviewing the drill hole data in plan and section views.
Site visits	• The Competent Person visited site on various occasions through 2019, no site visit was conducted in 2020. Site visits included involvement with: o Assist with wireframe interpretation and methodology as applied in the 2020 Mineral Resource work. o Inspection of geological mapping plans. o Inspection of underground workings. o Inspection of drill holes and mineralisation interceptions.
Geological interpretation	• The mineralisation is modelled as a continuous lenses of zinc mineralisation that anastomose, split and merge. The model is based on zinc grade distribution and geological logging of mineralisation style. Composites of 1% zinc for the low-grade wireframe and 7% zinc for the high-grade wireframe form the basis of the model. o The mineralisation zone is divided into a high- and low-grade zinc domains. The high-grade domain is further sub-divided to include an internal waste domain. o The high-grade domain is defined by high zinc grades associated with the massive sulphide assemblages. The high-grade domain boundary was modelled using the 7% zinc composites and geological continuity.

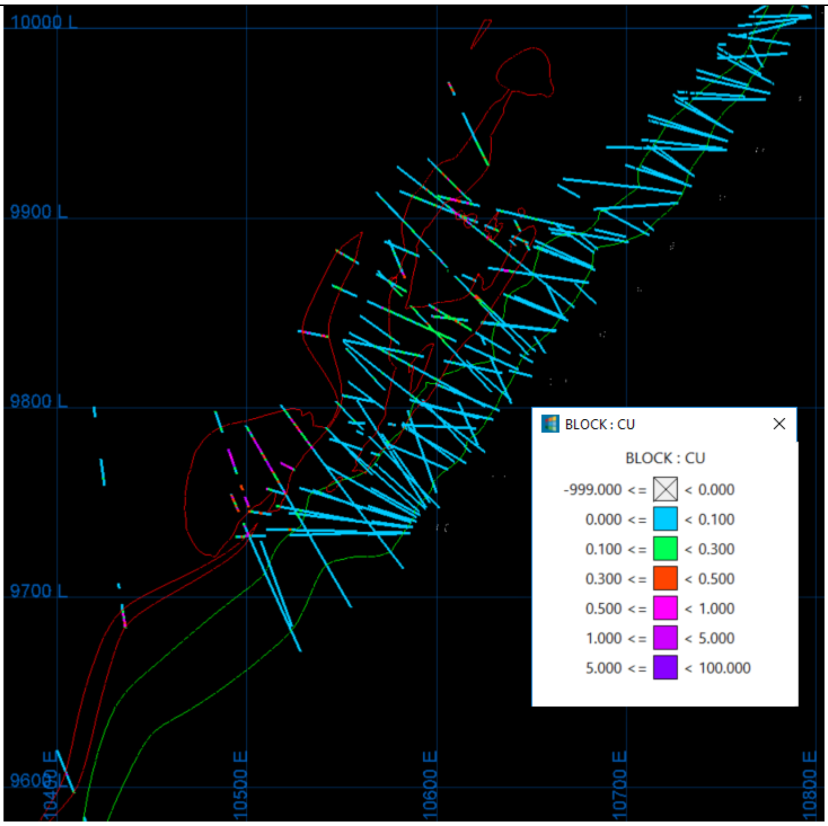
Section 3 Estimating and Reporting of Mineral Resources

Criteria	Commentary
	○ The lower grade mineralisation captures an assemblage of sulphide stringers and shoots of discontinuous massive and breccia sulphide textures. The low grade domain boundary was modelled using the 1% zinc composites and geological continuity. ○ An internal dilution domain was created to capture material below 6% zinc within the high grade domain boundary. • Separate domains were modelled for Pb, Ag and Mn mineralisation, after exploratory data analysis (EDA), have shown these elements are possibly due to a secondary mineralisation event; and are contained throughout the main zinc lens.  **Long section (looking West) of the Pb domains within the Zn orebody with low grade (blue) and high grade (purple)**  **Long section (looking West) of the Ag domains within the Zn orebody with low grade (blue to yellow) and high grade (red)**

Section 3 Estimating and Reporting of Mineral Resources

Criteria	Commentary
	 **Long section (looking West) of the Mn domains within the Zn orebody with low grade (blue to yellow) and high grade (red)** • Six copper domains are present in the Dugald River deposit. Predominantly these sit in a hangingwall position relative to the zinc orebody. The copper domains also contain elevated gold with local high occurrences of cobalt and molybdenum. The domains are wireframed based on a 0.1% copper assay composites. The copper domains in the hangingwall generally run parallel to the main zinc orebody with the domain LG01 being the dominant copper domain. A separate low-grade copper domain (LG02) is recognised between the main and hangingwall zinc lenses and contains local high occurrences of gold and cobalt. The copper mineralisation has a spatial and texturally relationship to that of the zinc mineralisation.  **Longsection (looking East) of the distribution of the six Cu domains compared to the Zn orebody (brown)**

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>



Cross section at 14300mN (looking North) of the hangingwall copper domain LG01/1500 (red) compared to the LG zinc wireframe (green)

- Underground mapping of development drives for both access and ore drives were also used in assisting with the geological interpretation.
- Globally the Dugald River deposit follows a reasonably predictable lens of mineralisation but with short-range (10m to 20m-scale) variations associated with localised structures that are suitably defined by close-spaced drilling within the Measured Mineral Resources.

</td></tr>
<tr><td>Dimensions</td><td>

- The Dugald Rive lode is hosted within a major N-S striking steeply west dipping shear zone which cross cuts the strike of the Dugald River Slate stratigraphy at a low angle.
- The strike length of mineralisation is approximately 2,400 m. Dip varies between 85° and 40° to the west.
- The true thickness of the majority of the Mineral Resource is between 3 m and 30 m with the thickest zones occurring to the south.
- The mineralisation is open at depth. The deepest drill intersection of mineralised material is about 1,140 m below the surface.

</td></tr>
<tr><td>Estimation and modelling techniques</td><td>

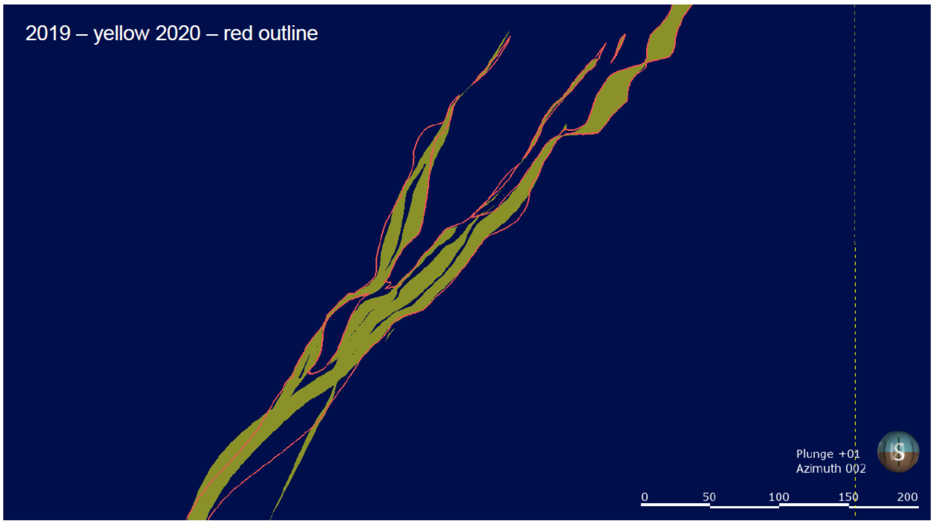
- Mineral Resource modelling was completed using both Isatis and Vulcan software applying the following key assumptions and parameters:
  - Ordinary Kriging interpolation has been applied for the estimation of Zn, Pb, Ag, Mn, Fe, S, total carbon, Cu, Au and Bulk Density. This is considered appropriate for the estimation of Mineral Resources at Dugald River.

</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources

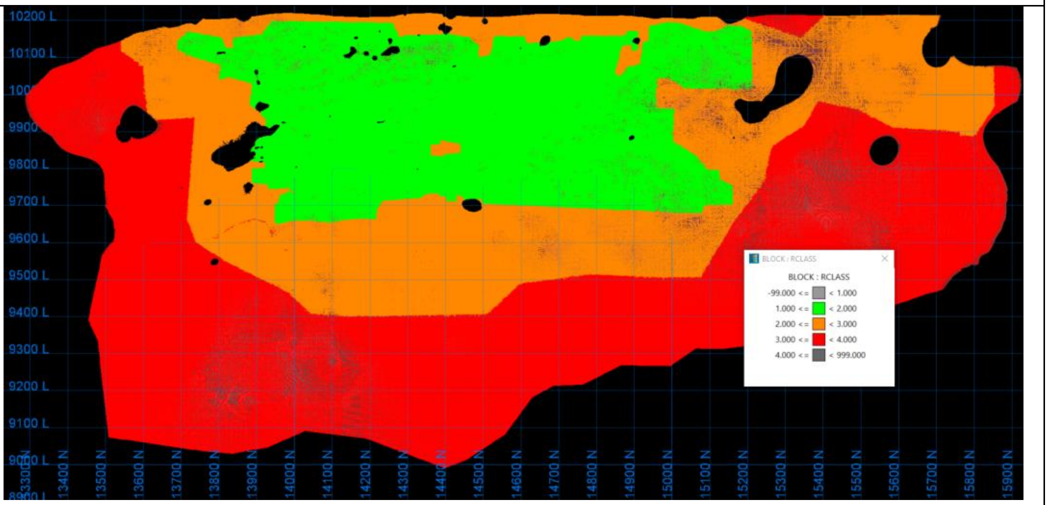
Criteria	Commentary
	o Extreme grades were treated by grade capping and were applied after compositing, with values greater than the selected ‘cut value’ being set to the top cut value and used in the estimation. Grade cap values were selected using a combination of both histogram and cumulative log probability plots. o Grade estimation was performed using a local varying anisotropy (LVA), which aligns and optimises the search direction of the estimate to the mineralised domain trend. o Hard boundary contacts were used to select samples used to estimate blocks in each of the mineralised zinc domains (high-grade and low-grade) as well as into individual domains for Ag, Mn and Pb. Hard boundaries were also used for the copper domain to estimate Cu, Co and Au. o Variogram were modelled within each of the respective domains, these variogram ranges were then applied to the search parameters used in the estimation. o Orientation of the search ellipse was matched to the LVA, that is the dip and dip direction at the local block was used in the estimation of the model. o Drillhole compositing resulted in nominal 1m intervals with residual composite intervals absorbed evenly into the adjacent composites resulting in no loss of sample intervals. o Separate variography and estimation was performed for Zn, Pb, Ag, Mn, Fe, S, bulk density, Cu, Au and total carbon, within each of their respective mineralised domains. o No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. o Interpolation was undertaken in two stages: ▪ Stage1: Ordinary Kriging applying two passes with varying search ellipse dimensions ▪ First pass is equal to 80 - 100% of the variogram range ▪ Second pass is equal to 2 x variogram range ▪ Stage 2: Assign blocks not estimated by the Ordinary Kriging 2 passes, the median grade of the respective domain. o A maximum number of 3 sample per drill holes was used for all estimates. o Generally, the number of composite samples was restricted to a minimum of 6 and a maximum of 20 to 28 based on Kriging Neighbourhood Analysis (KNA); depending of variables o Octant or sector method was generally not applied to the Ordinary Kriging estimate o Block discretisation of 2 x 8 x 8 was applied. • Assumptions have been made regarding the recovery of all by-products in the NSR. • Deleterious elements include manganese and carbon, which have been estimated in the block model. Ancillary elements estimated include Mn, Fe and S. • Parent block size was set at 2.5m x 12.5m x 12.5m (xyz) with sub-cells of x=0.5m, y=1.25m, z=1.25m. Sub-cells were assigned parent block values. The parent block size assumes mining selectivity at the stope level.

Section 3 Estimating and Reporting of Mineral Resources

Criteria	Commentary
	○ In areas if intense drilling (10 x 20m), the estimate was performed with parent block set to 2.5m x 6.25m x 6.25m (xyz) with sub-cells of x=0.5m, y=1.25m, z=1.25m. Sub-cells were assigned parent block values. This block size is used to better estimate local variance with increased information. ○ Background waste is estimated with parent block size of 10m x 50m x 50m (xyz), this was to reduce the total block model size. • No external dilution has been applied to block grades. However, parent block size has assumed mining selectivity at a stope level. No other selective mining unit size assumptions were made in the estimation process. • Indicator kriging of internal waste was completed based on the principle of unknown geological continuity of internal waste between drillholes within the zinc domains. Implicit modelling of • 2020 block model validation included the following steps: ○ Comparison against the previous 2019 block model including visual comparison of plans and cross-sections, tonnes grade curves, cumulative probability plots and trend plots. ○ Comparison against drillhole data using visual comparison of plans and cross-sections, statistics by domain, cumulative probability plots and swath plots. ○ Numerous changes occurred compared to the previous 2019 Mineral Resource estimate due to an increased understanding in the model boundary extents, improved wireframing of the zinc envelope and additional volume from previously un-modelled hanging wall intercepts. ○ A comparison of the zinc wireframing between 2019 and 2020 is shown below;  **Oblique plan view of the 2019 HGZN wireframe (yellow polygon) with modelled internal waste and the 2020 HGZN wireframe (red polyline) derived from compositing of >7% zinc assays.**
Moisture	• Tonnes in the model have been estimated on a dry basis.
Cut-off parameters	• The Mineral Resource is reported above an A$141/t NSR (net smelter return) cut-off. The selection of the A$141/t NSR cut-off defines mineralisation which is prospective

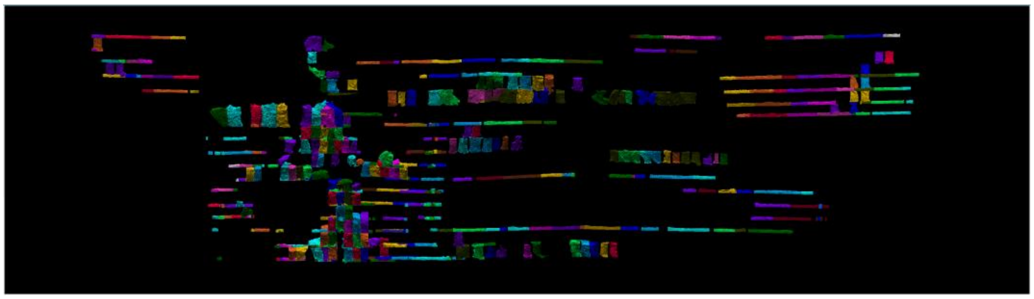
Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	for future economic extraction. The reporting cut-off grade is in line with MMG's policy on reporting of Mineral Resources which is prospective for future economic extraction.
Mining factors or assumptions	• Mining at Dugald River is planned to be underground with the long-hole open stoping method favoured. Currently the deposit is accessed by two declines. • No external dilution has been applied to block grades. However, parent block size has assumed mining selectivity at a stope level. • The Mineral Resource has been depleted to account for mining and any un-minable stope remnants.
Metallurgical factors or assumptions	• The metallurgy process proposed for the Dugald River deposit involves crushing and grinding followed by floatation and filtration to produce separate zinc and lead concentrates for sale. • Deleterious elements include manganese and carbon, which have been estimated in the block model. • Manganese percentage in the zinc concentrate is calculated as a post-processing step to allow the generation of a value that can be used for the Ore Reserve. • Manganese percentage in the zinc concentrate is calculated by way of an algorithm contained within the NSR script.
Environmental factors or assumptions	• Dugald River operates under Environmental Authority EPML00731213 issued by the Department of Environment Heritage Protection on 12 August 2012 and amended on 16 September 2016. • Non-acid forming (NAF) and Potentially Acid Forming (PAF) waste rock are distinguished by a north-south striking Limestone and Undifferentiated Black Slate lithological boundary respectively. Volumes are estimated and managed in accordance with site procedures. Waste rock storage space on surface is limited. The north mine area will allow for the return of waste rock as backfill and the south mine is backfilled with paste fill generated from tailings. • PAF/NAF classification is based on the work by Environmental Geochemistry International (EGI) in 2010. Subsequent follow-up test work onsite confirms EGI's conclusions.
Bulk density	• Bulk density is determined using the weight in air and water method. Frequency of samples is at least 1 determination per core tray and based on geological domains. The current database consists of 17,943 bulk density measurements. • Dugald River rock is generally impermeable, requiring no coatings for reliable measurements. • Bulk density in the model has been estimated using Ordinary Kriging. Density estimation is constrained within the defined mineralisation domains. • Un-estimated blocks were assigned a bulk density value based on a stoichiometric formula (see below). Bulk Density (assigned) = (3.8*A/100) + (7.3*B/100) + (4.6*C/100) + (2.573*D/100) ○ Sphalerite content A = 1.5*Zn%

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	○ Galena content B = 1.15*Pb% ○ Pyrrhotite/Pyrite content C = (Fe%-(0.15*Zn%))*1.5 ○ Gangue D = 100-A-B-C ○ SG of sphalerite = 3.8 ○ SG of Galena = 7.3 ○ SG of Pyrrhotite/pyrite = 4.6 ○ SG of gangue = 2.573 ○ Fe content in Sphalerite = 10% • A bulk density of 2.75 g/cm^3 has been assumed for the waste host domain.
Classification	• 2020 classification incorporates a combination of Kriging variance (KV), Kriging efficiency (KE), Kriging slope of regression (RS), drilling density and location of underground development (presence of underground geological mapping). • Mineral Resource categories are generally based on: ○ Measured: < 20m drill spacing, RS>0.85 plus grade control drilling. ○ Indicated: > 20m to <100m drill spacing, RS<0.6. ○ Inferred: > 100m drill spacing, within mineralised domain • The Competent Person reviewed the distribution of KV, KE and RS in long section view and generated three-dimensional wireframes to select Measured, Indicated and Inferred blocks. These wireframes also take into consideration the location of the underground development and presence of geological mapping and the 20 m x 20 m underground drilling. The use of wireframes ensured that contiguous areas of like classification were generated thus avoiding the "spotted dog" pattern of classified blocks. • The Mineral Resource classification reflects the Competent Persons view on the confidence and uncertainty of the Dugald River Mineral Resource. • Below is a long section looking east of the Dugald River mineralisation lode showing blocks coloured by Kriging variance (KV) and the Measured, Indicated and Inferred wireframes used in selecting the Mineral Resource classification. ○ Measured = green polygon ○ Indicated = orange polygon ○ Inferred = red polygon

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	 **Long section (Looking West) of Resource Classification for the Dugald River zinc wireframe (Measured – green, Indicated – orange, Inferred – red)**
Audits or reviews	• An internal MMG review has been carried on the current 2020 Mineral Resource estimate. This involved personnel from both Corporate and Dugald River sites. No material items to the Mineral Resource have been identified.

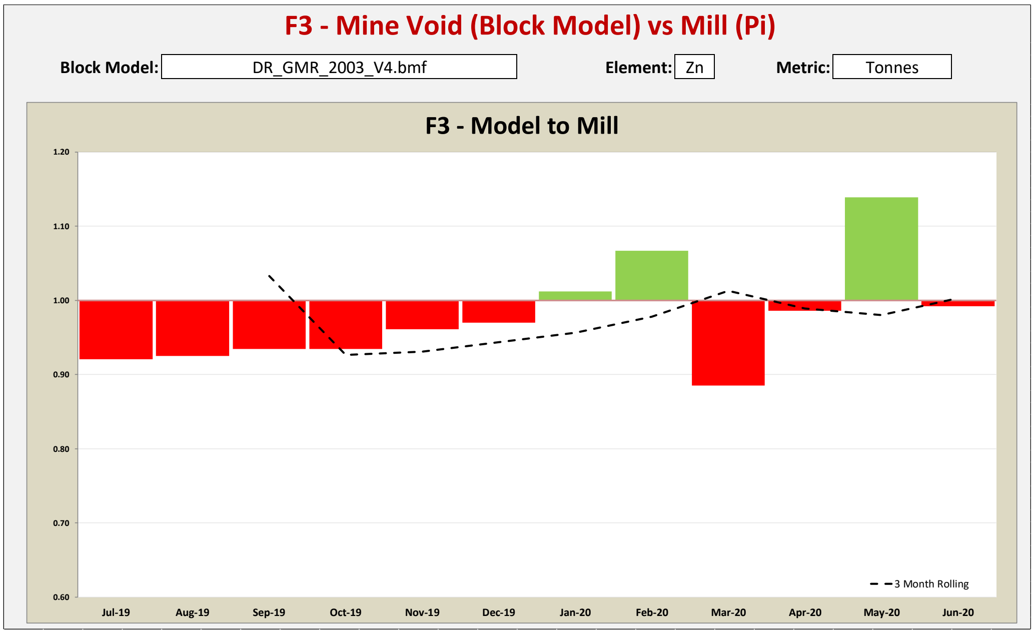
Discussion of relative accuracy / confidence

- The Competent Person is of the opinion that the current block estimate provides a good estimate of tonnes and grades on a global scale. In locations where grade control drilling of approximately 10mN x 20mRL spacing has been completed, the Competent Person has a high level of confidence in the local estimate of both tonnes and grades, which is reflected in the Mineral Resource Classification.
- A total of 12 months of mine voids from July 2019 to June 2020 were used to validate the 2020 Mineral Resource estimate including 598 shapes of ore development and stopes across both the north and south mines.
- Development voids were taken from survey asbuilts and split by locations trucked as ore and waste.
- The stope void was determined by CMS and the tonnes and grade split by the monthly bogging percentages from Pitram.



Long Section view looking west showing the mine voids used to validate the 2020 Mineral Resource estimate.

- F3 factors were produced by dividing the monthly mill tonnes, zinc grade and zinc metal by the monthly mined void tonnes, zinc grade and zinc metal, including the change in stockpile material.
- The F3 factors were calculated monthly and as a 3-month rolling average.



F3 - Mine Void (Block Model) vs Mill (Pi)

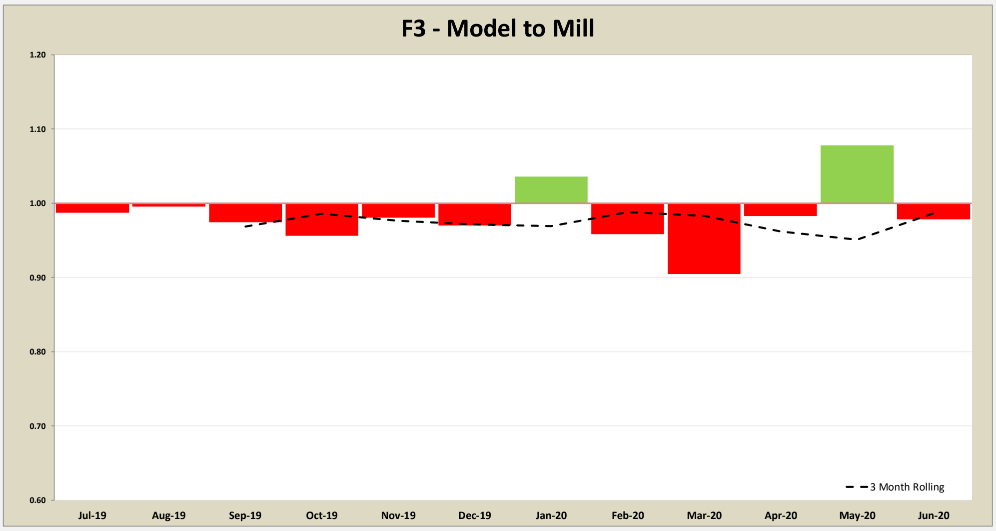
Block Model: DR_GMR_2003_V4.bmf

Element: Zn

Metric: Tonnes

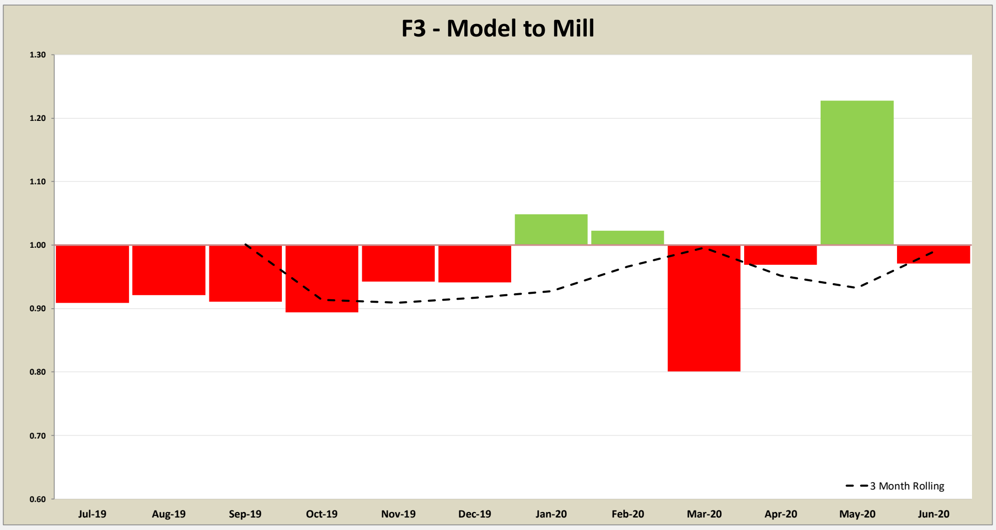
F3 - Mine Void (Block Model) vs Mill (Pi)

Block Model: DR_GMR_2003_V4.bmf **Element:** Zn **Metric:** Grade



F3 - Mine Void (Block Model) vs Mill (Pi)

Block Model: DR_GMR_2003_V4.bmf **Element:** Zn **Metric:** Metal



F3 Factors for tonnes, zinc grade and zinc metal for mined voids from July 2019 to June 2020 using the 2020 Mineral Resource estimate.

- The 3 month rolling data for tonnes, zinc grade and zinc metal show the 2020 Mineral Resource to be within 10% of the mill metal output, including the change in stockpile material.
- The consistent negative tonnage trend from July to December 2019 is due to mining of Avoca style stopes where ore and backfill material become mixed. The stope is bogged until visually uneconomic. In these stopes it is difficult to estimate the amount of backfill and ore extracted from each stope. From January 2020 this miningmethod was no longer used.
- The mined void compilation will be expanded to cover the life of mine as part of ongoing reconciliation efforts.

5.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

5.2.3.1 Competent Person Statement

I, Douglas Corley, confirm that I am the Competent Person for the Dugald River Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Dugald River Mineral Resource section of this Report to which this Consent Statement applies.

I am a full-time employee of Mining One Pty Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Dugald River Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Dugald River Mineral Resources.

5.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Dugald River Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Date: 02/12/2020

Douglas Corley MAIG R.P.Geo. (#1505)

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Rex Berthelsen
Melbourne, VIC

Signature of Witness:

Witness Name and Residence: (e.g. town/suburb)

5.3 Ore Reserves – Dugald River

5.3.1 Results

The 2020 Dugald River Ore Reserve are summarised in Table 15.

Table 15 2020 Dugald River Ore Reserve tonnage and grade (as at 30 June 2020)

Dugald River Ore Reserves					Contained Metal		
	Tonnes (Mt)	Zinc (% Zn)	Lead (% Pb)	Silver (g/t Ag)	**Zinc ('000)**	**Lead ('000)**	**Silver (Moz)**
Primary Zinc[1]							
Proved	10.9	10.8	2.0	64	1,179	222	22
Probable	14.5	10.1	1.2	20	1,457	169	9.5
Total	**25.4**	**10.4**	**1.5**	**39**	**2,633**	**391**	**32**
Stockpiles							
Proved	0.02	10.2	2.3	75	2	0.4	0.04
Total	**0.02**	**10.2**	**2.3**	**75**	**2**	**0.4**	**0.04**
Total	**25.4**	10.4	1.5	39	**2,635**	**391**	**32**

[1] Cut-off grade is based on Net Smelter Return (NSR) after Royalties, expressed as a dollar value ($A) of dependant on the area of the mine as described in Table 16 ranging from $A136/t to $A150/t

Contained metal does not imply recoverable metal.

The figures are rounded according to JORC Code guidelines and may show apparent addition errors.

The modelling approach was change for internal waste due to the complex nature and variation of geology. This has resulted in a redistribution of metal within the HG wireframe impacting both tonnes and grade of the Ore Reserves.

Previously unmodelled hanging wall ore intercepts have now been incorporated into 2020 model, which increased the tonnage but lowered the grade globally.

Silver grades in Panel 4B are higher than previously intersected in the wider spaced drilling.

5.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

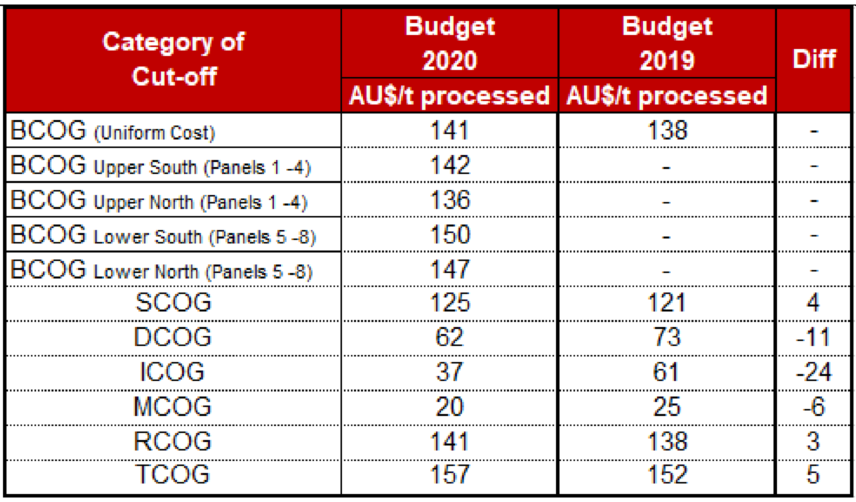
The following information provided in Table 16 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code.

Table 16 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Dugald River Ore Reserve 2019

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Mineral Resources estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves. • The Mineral Resources model used the MMG March 2020 Mineral Resources model. (DR_GMR_2003_V4.dm) • Risks associated with the model are related to orebody complexity seen underground, but not reflected in the Mineral Resources model due to the spacing of the drill holes that inform the model. • The 2020 Geotechnical Equivalent Linear Overbreak Slough (ELOS) model was used to estimate the HW thickness, tonnes and grade of the planned dilution applied to the 2020 stope shapes.
Site visits	• The Competent Person for the Dugald River Ore Reserve visited the site during 2019/2020 reporting period in January 2020, prior to Covid19 interstate travel restrictions. Communication to site has been via video conferencing and email as required.
Study status	• The mine is an operating site with on-going detailed Life of Asset planning.
Cut-off parameters	• The breakeven cut-off grade (BCOG) and Mineral Resources cut-off grade (RCOG) have been calculated using 2020 Budget costs. • The BCOG has been calculated for 4 discrete areas of the mine reflecting differences in backfill methodologies, and increased costs at depth, namely ground support and haulage distances to surface. • The operating costs, both fixed and variable, have been attributed on a per tonne basis using the planned mine production rate of 1.9Mtpa • The Net Smelter Return (NSR) values are based on metal prices, exchange rates, treatment charges and refinery charges (TC's & RC's), government royalties and a metallurgical recovery model. • The NSR value for both BCOG and RCOG is to the mine gate and includes the 2020 sustaining capital for the 2020 Ore Reserves. • Infill diamond drilling has been included as part of the growth capital, not as the sustaining capital. • For 2020 Ore Reserves (OR) and Life of Asset (LoA), the break-even cut-off grade (BCOG) has been used to create stopes and for the level by level evaluation.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
	(cut-off table below)



Category of Cut-off	Budget 2020 AU$/t processed	Budget 2019 AU$/t processed	Diff
BCOG (Uniform Cost)	141	138	-
BCOG Upper South (Panels 1 -4)	142	-	-
BCOG Upper North (Panels 1 -4)	136	-	-
BCOG Lower South (Panels 5 -8)	150	-	-
BCOG Lower North (Panels 5 -8)	147	-	-
SCOG	125	121	4
DCOG	62	73	-11
ICOG	37	61	-24
MCOG	20	25	-6
RCOG	141	138	3
TCOG	157	152	5

Mining factors or assumptions

- A detailed design of the 2020 OR was used to report Mineral Resources conversion to an Ore Reserve.
- The 2020 Geotechnical Equivalent Linear Overbreak Slough (ELOS) model was used to estimate the HW thickness, tonnes and grade of the planned dilution which was applied to the 2020 stope shapes.
- The orebody access is split into a north and south mine, due to its 2 km strike length and a low-grade zone at the extremities of the orebody.
- The north mine is narrow (average ~5 m true width) and sub-vertical. The south mine is wider than the north mine with a flexural zone in the centre. The south mine is narrow and steep in the upper zone (~top 200 m from surface) and lower zone (~below 700 m from surface). The central zone is flatter and thicker than the upper and lower zones.
- Mining methods for the mine are Sub-Level Open Stopes (SLOS) both Longitudinal and Transverse in the South Mine and modified Avoca stoping or Core & Shell stopes with rib pillars in the North Mine. Level intervals occur every 25m and stopes have a variable strike length of 15m to 30m.
- The stopes are broken into the following categories:
    - Longitudinal SLOS, for stopes upto 10-15m wide horizontally. (Where the orebody has thickened adjacent stopes are mined in sequence after paste filling)
    - Transverse SLOS, for stopes where the orebody thickness lends itself to sequential stope extraction retreating along cross-cuts.
    - Crown pillar SLOS, for the top level of each panel where stoping occurs directly below a previously mined area.
    - Modified Avoca stopes/Core & Shell Stopes for the North Mine
- The stopes were created by applying the Mineable Shape Optimiser (MSO) plugin, within Deswik MineCAD, to the 2020 Mineral Resources model (DR_GMR_2003_V4_ENG.bmf) which required conversion into a Datamine format. NSR values were written to each block via a script (validated against an excel spreadsheet). The macro and spreadsheet considered metallurgical recoveries, metal pricing, transport costs, royalties TC/RC's and exchange rate.
- The parameters used to create the stope shapes were:
    - All Mineral Resources categories included

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary
	o 25 m level interval o Variable strike length o Minimum mining width (MMW) of 2.5 m o The minimum dip of 45 degrees for Footwall (FWL) and 37 degrees for Hangingwall (HW) o Minimum waste pillar between parallel stopes of 5m o A BCOG associated with the appropriate mine zone, applied to create initial stope shapes. • Several aspects of dilution were considered, planned dilution, fill dilution and HW dilution. Planned dilution was included in the MSO stope shapes and covers localised variations in dip and strike as well as minimum mining width. No additional FW dilution was applied as the initial stope shapes considered minimum mining widths and dip. • The HW dilution was calculated for each stope based on the Geotechnical conditions and thicknesses of the HW materials. The site has compiled a detailed HW dilution model as dilution varies across the ore-body according to the HW conditions. • Fill Dilution and Stope Recovery Factors: o Floor 0.15 m, Backs 0.5 m and Wall fill ranges from 1 m to 1.5 m dilution. o Recoveries Longitudinal 95%, Modified AVOCA / Core & Shell with rib pillars 75% and Crown stopes 90%, • Development grades were diluted by the application of a grade factor of 95% to the development grade estimated from the block model. • No Inferred Mineral Resources are included in the Ore Reserves. • The underground (UG) mine is accessed via two separate declines and as such the mine is split into two – north and south, although both declines are connected via a link drive approximately every 150m vertically at the base of each production Panel. As at 30 June 2020, 8,388m of decline has been mined, along with a further 54,428 m of lateral development (excluding 366m of paste development). • Currently, six raise-bored ventilation shafts have connection to the surface: o The southern Fresh Air Raise (FAR) – at 3.5 m diameter and 90m depth; o The southern Fresh Air Raise (FAR) – at 5.0 m diameter and 190 m depth; with a120m extension to the 340 level o The southern Return Air Raise (RAR) – at 5.0 m diameter and 154 m depth; with a 375m extension (multiple holes) to the 565 level o The southern Return Air Raise (RAR) – at 5.0 m diameter and 197 m depth; with a 270m extension (multiple holes) to the 490 level o The northern Fresh Air Raise (FAR) at 3.5 m diameter and 165 m depth with a 275m extension (multiple holes) to the 490 level o The northern Return Air Raise (RAR) at 5.0 m diameter and 104 m depth with a 310m extension (multiple holes) to the 490 level o On each return shaft collar there is an exhaust fan drawing approximately 270-300m3/s. • There is also a secondary RAR system in the north and south mines comprising of LHW and 3.0-3.5m raisebored holes that have connections to each production level where there is access. • Secondary egress is provided by link drives between the South & North declines. These link drives are positioned at the base of each production Panel. An internal ladderway

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	also exists in the South mine between the 50 and 200 Levels. In addition, strategically placed refuge chambers are to be found throughout both mines. • The current mining mobile fleet includes 3 twin-boom jumbos, 1 cable bolting rig, 6 loaders, 9 dump trucks, 3 long-hole drill rigs, 2 shotcrete rigs, 2 Transmixers, 2 charge-up vehicles, 3 integrated tool carriers, and a light vehicle fleet.
Metallurgical factors or assumptions	• The metallurgical process for treatment of Dugald River ore involves crushing, grinding followed by sequential carbon/lead/zinc flotation to produce separate lead and zinc concentrates. The carbon concentrate is a waste product and reports to final tailings. This process, and the equipment used, is conventional for this style of mineralisation and used worldwide. • The Dugald River processing facility was commissioned with production commencing in October 2017, with nameplate throughput reached after 7 months of operation (May 2018). Both lead and zinc concentrate produced at Dugald River meet saleable grade and impurity specifications. • Production performance has shown good alignment of concentrate grade and recovery performance to that derived through the project study phases. • Dugald River plant operating data has been analysed to establish the metallurgical factors used for Ore Reserve calculations Zinc concentrate grade is directly affected by the manganese in the ore feed due to it being substituted for zinc within the sphalerite mineral, and as such the final concentrate grade is estimated to account for this. • Zinc recovery to zinc concentrate accounts for the zinc lost in both the carbon and lead concentrates • A full check has been completed for possible deleterious elements, and the only two that are material to economic value are iron and manganese in the zinc concentrate. It is for this reason that the algorithms to predict these components have been developed using Dugald River operating data: • Fluorine has been identified within the orebody and to date has resulted in isolated elevated levels in the lead concentrate however has been successfully controlled through the flotation process.
Geotechnical	• Ground conditions at Dugald River are generally good to fair with isolated areas of poor ground associated with shear zones and faults. • Development ground support at this stage in the mine life of Dugald River focuses on static stability requirements with surface support matched to the ground conditions, e.g. mesh for good ground/ short design life and Fibrecrete for poor ground and long-term design life (e.g. decline, level access and infrastructure). • Stope stability is strongly influenced by the presence and proximity of hangingwall shear zones which are associated with very poor ground conditions. • The trial stoping conducted at Dugald was used to calibrate the geotechnical stope dilution model from which guidance on stope dimensions (strike/ hydraulic radius) and estimates of stope dilution could be made.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	- The life of mine mining sequence is modelled using MAP3D (a linear-elastic method) to provide guidance on favourable sequences that will minimise the adverse effects of induced stress.
Environmental	- Dugald River operates under Environmental Authority EPML00731213 issued by the Department of Environment, Heritage Protection on 12 August 2012 and amended on 7 June 2013. - Non-Acid Forming (NAF) and Potentially Acid Forming (PAF) waste rock are distinguished by a north-south striking Limestone and Undifferentiated Black Slate lithological boundary respectively. Volumes are estimated and managed by site procedures. With limited stockpile space on the surface, all PAF waste rock is stored temporarily on the surface but used as rockfill underground with only NAF waste rock stored on the surface. - The north mine area uses waste rock as backfill, and the south mine backfilled with paste fill generated from tailings.
Infrastructure	- Currently, the DR mine is operating via an electricity grid feed from Mica Creek gas-fired power station on the southern outskirts of Mount Isa. - Gas for the power station is supplied via the Carpentaria pipeline, with a compression station in Bellevue. - Based on the current production schedule, DR site manning numbers are expected to peak at 530 people in 2022. Cloncurry airport is used by commercial and charter airlines flying to and from Townsville, Cairns and Brisbane and operates as both a commercial and fly-in–fly-out (FIFO) airport. - Existing surface infrastructure includes: o An 11 km sealed access road from the Burke Developmental Road, which incorporates an emergency airstrip for medical and emergency evacuation use; o Permanent camp & recreational facilities; o Telstra communication tower; o Ore and waste stockpile pads; o Contaminated run-off water storage dams; o Change house facilities for mine and processing personnel; o Office buildings, including emergency medical facilities; o Core shed; o Fuel farm; o Bore water fields and raw water supply lines; o Processing plant and Assay Laboratory; o Paste plant; o Tailings storage facility; o Mobile equipment workshop and supply warehouse o UG Ventilation Exhaust Fans x 3
Costs	- The estimation of capital cost for the Dugald River project was derived from first principles in the 2020 LoA schedule and is to be refined through operation reviews. - The MMG commercial department estimated the mining operating costs for the OR evaluation using first-principles. Costs were inclusive of Operating and Sustaining Capital. Costs are in Australian dollars and are converted to US dollars at the applicable exchange rate.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	• Deleterious elements Mn (and to a lesser extent Fe) are to be controlled by metallurgical blending. It is expected that the feed for flotation will be blended to maintain Mn (and to a lesser extent Fe) within the contractual range for concentrate sales and thus not expected to attract additional costs and penalties. • The MMG finance department supplies the commodity price assumptions. The Dugald River Ore Reserve applied the January 2020 guidance. • The long-term exchange rate used the January 2020 Long-Term MMG guidance and assumptions supplied by the MMG Business Evaluation department. • The road freight and logistics for domestic and export sales have been updated using the costs from the 2020 budget. The additional costs for storing and ship loading of concentrate in Townsville are included. For the 2020 Ore Reserves, the storage and ship loading cost has been added to the freight and logistics cost for export. The freight and logistics costs for the domestic sale of concentrate includes the sea freight cost based on an agreement with Sun Metals. • Treatment and refining charges are based on MMG's estimate as contracts currently under review. • Queensland State Government royalty's payable are prescribed by the Minerals Resources Regulation 2013 and are based on a variable ad valorem rate between 2.5% to 5.0% depending on metal prices. Freehold leases have been identified and applied to production that falls within them.
Revenue factors	• Realised Revenue Factors (Net Smelter Return after Royalty) • As part of the 2020 Ore Reserves process, the net smelter return (after royalty) (NSR) has been revised with the latest parameters and compared against the previous 2019 NSR calculation that was used for the 2019 Ore Reserve. • The NSR is used to convert the various zinc, lead and silver grades into a single number for cut-off estimation and determining if the rock is ore or waste. • Treatment and refining charges, royalties and transportation costs for different commodities were supplied by MMG Group Finance and have been included in the NSR calculation. • The MMG Group Finance department provides assumptions of commodity prices and exchange rates and are based on external company broker consensus and internal MMG analysis.
Market assessment	• Although the rate of growth of global zinc consumption is slowing, demand is still expected to increase by 1-3%pa over the medium term, with growth mainly coming from China and the world's developing nations. • Stocks of refined zinc are coming off historically low levels after several years where production was constrained by limited mine production and concentrate availability. The low mine production resulted from a period of low metal prices and the closure of several major mines due to resource exhaustion. • Zinc mine production is now recovering as new mines such as Dugald River, Gamsberg and New Century continue to ramp up beyond 2020 as well as the restart of mothballed operations eg Lady Loretta. Beyond these projects, and the global emergence from the COVID 19 pandemic, there is uncertainty surrounding future new

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	supply, while there is also limited growth in new smelting capacity. Increasingly stringent environmental regulations in China also restrict supply growth in that region. • New projects tend to be more economically challenging than existing or recently closed operations due to a range of factors including grade, size and location. • The combination of current low stocks, reasonable demand growth prospects and limitations on future supply should be supportive of the zinc price over the medium term. • Smelters have received and accepted Dugald River zinc concentrate quality in China, Australia, Japan and Korea during 2019. There is substantial demand from smelters and traders for long-term contracts for the supply of the product which underpin sales from 2019 onwards.
Economic	• Economic modelling of the total mining inventory shows positive annual operating cash flows. Applying the revised costs, metal prices and exchange rate (MMG January 2020 Long-Term economic assumptions) returns a positive NPV. MMG uses a discount rate supported by MMG's Weighted Average Cost of Capital (WACC) and adjusted for any country risk premium (as applicable) based on an internal evaluation of the country risk for the location of the deposit. • All evaluations were done in real Australian (AU) dollars.
Social	• The nearest major population centre for the Mine is Cloncurry with a population of approximately 4,000, and the largest employers are mining, mining-related services and grazing. • Regarding Native Title, the Kalkadoon # 4 People filed a claim in December 2005 covering an area which includes the project area, water pipeline corridor and part of the power line corridor. This claim over 40,000 square kilometres of land was granted in 2011. • MMG has concluded a project agreement with the Kalkadoon People dated 6 April 2009. Under this agreement, the claimant group for the Kalkadoon are contractually required to enter into an s31 Native Title Agreement under the Native Title Act 1993. The agreement sets out the compensation payments and MMG's obligations for training, employment and business development opportunities if/when the project is commissioned. MMG has developed an excellent working relationship with the Kalkadoon claimant group. MMG has instituted the MMG/KCPL Liaison Committee, which meets at least twice yearly and addresses the Kalkadoon agreement obligations for both parties. An official 'Welcome to Country' ceremony was held for MMG in late March 2012. • The Mitakoodi and Mayi People filed a claim in October 1996 and covered an area that includes part of the power line corridor. While the Mitakoodi have not yet been granted Native Title, MMG continues to liaise with them as a stakeholder due to the 'last claimant standing' legal tenement. • MMG has registered an Indigenous Cultural Heritage Management Plan (CHMP) which covers the entire project area and has undertaken all necessary surveys and clearances for all disturbed groundwork undertaken on site to date without any issues or complications. The CHMP was developed in consultation with the Kalkadoon # 4 People.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Other	• There is no identified material naturally occurring risks. • The legal agreements are in place. There are no outstanding material legal agreements. • The grade of the zinc concentrate is dependent on the Fe and Mn content of the sphalerite, but this dependence is taken into account by the algorithms presented earlier. • The government agreements and approvals are in place. There are no unresolved material matters on which the extraction of the Ore Reserves is contingent.
Tailings	• The tailings storage facility is constructed within a valley of the Knapdale Range, enclosed by a 37m high embankment dam wall constructed with rock, clay fill and an elastomeric BGM liner on the upstream side. The dam was designed and constructed in accordance with ANCOLD guidelines and the requirements of the site's Environmental Authority. • The dam contains a return water system to enable recycling of the water deposited with the tailings as well as rainfall run-off back to the processing plant. • It proposed that the peak operational throughput of the processing plant now be 2.0 Mtpa, with an average of 40% of the tailings being sent to paste and the remaining 60% thickened to a solids density of 55 % solids. • Based on current production plans the tailings dam capacity will need to be increased in 2030, achievable by raising the embankment wall.
Classification	• Ore Reserves are reported as Proved and Probable. • Only Measured (19.9%) and Indicated (29.7%) material of the Mineral Resources has been used to inform the Proved and Probable Ore Reserves. No Inferred Mineral Resources are included in the Ore Reserves.
Audits or reviews	• No external audits have been undertaken for the 2020 Ore Reserves. MMG personnel have been involved in reviewing the Ore Reserves process. • An External Review and Audit was carried out for the 2018 Ore Reserves.
Discussion of relative accuracy/confidence	• Ore Reserves Risks that may materially change/effect; • The geological understanding of the grade continuity concerning diamond drill spacing. • The geotechnical risk associated with hanging-wall instability and mining dilution. • Mining infrastructure analysis requires further work on underground trucking, ventilation and power constraints. • Metallurgical risks (recovery and concentrate grades) require additional testing to confirm scale up reliability, metallurgical performance and reagent consumption. • Close spaced drilling is applied to a locally defined tonnage and grade before mining selection. Ore Reserves are based on all available relevant information. • Ore Reserves accuracy and confidence that may have a material change in modifying factors are discussed above.

5.3.3 Expert Input Table

In addition to the Competent Persons, the following individuals have contributed vital inputs to the Ore Reserves determination. These are listed below in Table 17.

In compiling the Ore Reserves, the Competent Person has reviewed the supplied information for reasonableness but has relied on this advice and information to be correct.

Table 17 Contributing Experts – Dugald River Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Shaun Neal, Superintendent – Geology MMG Ltd (Dugald River) Corey Jago, Senior Geologist – Resources & Orebody MMG Ltd (Dugald River) Wesly Randa, Senior Resource Geologist MMG Ltd (Melbourne)	Geological Mineral Resources
Claire Beresford Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Evaluations
Simon Ashenbrenner, Manager Zinc/Lead Marketing, MMG Ltd (Melbourne)	Marketing, Sea freight and TC/RC
Iain Goode, Superintendent – Processing Support MMG Ltd (Dugald River)	Metallurgy
Angus J Henderson, Snr Manager Commercial & Business Support, MMG Ltd (Australian Operations)	Mining capital and Operating Costs
Jeff Price, Principal Geotechnical Engineer, MMG Ltd (Melbourne)	Geotechnical
Peter Willcox, Senior Mining Engineer – Long Term Planning, MMG Ltd (Dugald River)	Mining Parameters, Cut-off estimation, Mine Design and Scheduling
Jonathan Crosbie, Group Manager - Closure & Remediation MMG Ltd (Melbourne)	Mine Closure and Remediation

5.3.4 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Ore Reserves statement has been compiled by the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

5.3.4.1 Competent Person Statement

I, Karel Steyn, confirm that I am the Competent Person for the Dugald River Ore Reserves section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having more than five years experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy
- I have reviewed the relevant Dugald River Ore Reserves section of this Report, to which this Consent Statement applies.

I am a full-time employee of STEKA Mining Consultants Pty Ltd at the time of the estimate.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Dugald River Ore Reserves section of this Report is based on and reasonably and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Dugald River Ore Reserves.

5.3.4.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code, 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Dugald River Ore Reserve - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Karel Steyn MAusIMM (#309192)

02/12/2020

Date:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Signature of Witness:

Neil Colbourne
Melbourne, VIC

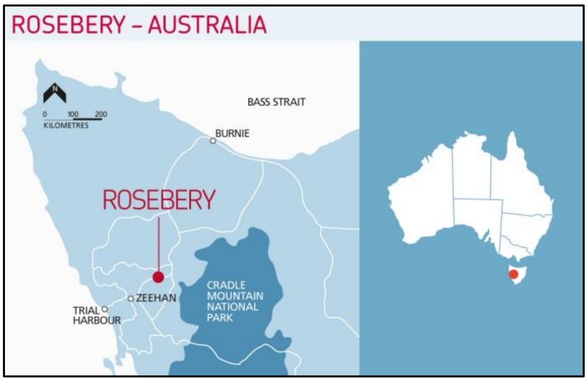
Witness Name and Residence: (e.g. town/suburb)

6 ROSEBERY

6.1 Introduction and Setting

The Rosebery base and precious metals mining operation is held by MMG Limited and is located within Lease ML 28M/1993 (4,906ha), on the West Coast of Tasmania approximately 120km south of the port city of Burnie (Figure 6-1). The main access route to the Rosebery mine from Burnie is via the B18 and the Murchison Highway (A10).

Figure 6-1 Rosebery Mine location



The Rosebery Operation consists of an underground mine and surface mineral processing plant. The mining method uses mechanised long-hole open-stoping with footwall ramp access. Mineral processing applies sequential flotation and filtration to produce separate concentrates for zinc, lead and copper. In addition, the operation produces gold/silver doré bullion. Rosebery milled approximately 1 Mt of ore for the year ending 30 June 2020.

6.2 Mineral Resources – Rosebery

6.2.1 Results

The 2020 Rosebery Mineral Resources are summarised in Table 18. The Rosebery Mineral Resources is inclusive of the Ore Reserves.

Table 18 2020 Rosebery Mineral Resources tonnage and grade (as at 30 June 2020)

Rosebery Mineral Resources											
							Contained Metal				
Rosebery[1]	Tonnes (Mt)	Zinc (% Zn)	Lead (% Pb)	Copper (% Cu)	Silver (g/t Ag)	Gold (g/t Au)	**Zinc ('000 t)**	**Lead ('000 t)**	**Copper ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Measured	6.7	8.0	3.0	0.19	131	1.5	535	199	12	28.2	0.32
Indicated	2.1	6.6	2.0	0.15	98	1.1	137	42	3	6.6	0.08
Inferred	6.7	9.2	3.0	0.26	109	1.5	617	199	17	23.5	0.32
Total	**15.5**	**8.3**	**2.9**	**0.21**	**117**	**1.4**	**1,290**	**441**	**33**	**58.3**	**0.71**
Stockpiles											
Measured	0.01	7.7	3.3	0.23	108	1.5	0.9	0.4	0.03	0.04	0.00
Total	**0.01**	**7.7**	**3.3**	**0.23**	**108**	**1.5**	**0.9**	**0.4**	**0.03**	**0.04**	**0.00**
Total Rosebery	**15.5**	**8.3**	**2.9**	**0.21**	**117**	**1.4**	**1,291**	**441**	**33**	**58.3**	**0.71**

[1] Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value of A$172/t

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

Contained metal does not imply recoverable metal.

6.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 19 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 19 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Rosebery Mineral Resources 2020

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sampling techniques	• Diamond drilling (DD) was used to obtain an average 1m sample that is half core split, crushed and pulverised to produce a pulp (>85% passing 75µm). • DD core is selected, marked and ID tagged for sampling by the logging geologist. Sample details and ID are stored in the SQL database for correlation with returned geochemical assay results. • Prior to May 2016, pulps were delivered to the ALS laboratory in Burnie, Tasmania for XRF analysis. Post May 2016 half core samples are delivered to the ALS laboratory in Burnie for sample preparation and XRF analysis. Analysis moved to the ALS Townsville laboratory in October, 2016. • There are no inherent sampling problems recognised. • Measurements taken to ensure sample representivity include sizing analysis and duplication at the crush stage.
Drilling techniques	• The drilling type is diamond core drilling from underground using single or double tube coring techniques. As of January 2014, drill core is oriented on an ad hoc basis. • Drilling undertaken from 2012 is LTK48, LTK60, NQ, NQ2, NQTK, BQTK and BQ in size. Additional drilling in the reporting period is NQ2. • Historical (pre-2012) drillholes are a mixture of sizes from AQ, LTK (TT), BQ, NQ, HQ and PQ.
Drill sample recovery	• Diamond drill core recoveries average 96%. Drill crews mark and define lost core intervals with blocks. Sample recovery is measured and recorded in the drillhole database. If excess core loss occurs in a mineralised zone the hole is re-drilled. • The drilling process is controlled by the drill crew and geological supervision provides a means for maximising sample recovery and ensures suitable core presentation. No other measures are taken to maximise core recovery. • There is no observable correlation between recovery and grade. • Preferential loss/gains of fine or coarse materials are not significant and do not result in sample bias as the nature of mineralisation is massive to semi-massive sulphide, diamond core sampling is applied, and recovery is very high.
Logging	• 100% of diamond drill core has been geologically and geotechnically logged to support Mineral Resources estimation, mining and metallurgy studies. • Geological and geotechnical logging is mostly qualitative (some variables are quantitative). Logging is undertaken using laptop computers which store data directly to the drillhole database. • All drill core is photographed, with photos labelled and stored on the Rosebery server.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sub-sampling techniques and sample preparation	• All samples included in the Rosebery Mineral Resources estimate are from diamond drill core. Drill core is longitudinally sawn to give half-core samples within intervals directed by the logging geologist. The remaining half-core is kept and stored in the original sample tray. Un-sampled core is now stored; prior to 2014 the un-sampled core was discarded. The standard sampling length is one metre with a minimum length of 40cm and maximum of 1.5m. • From 2005 until 2010 geological samples have been processed in the following manner: Dried, crushed and pulverised to 80% passing 75µm. Sizing analysis is carried out on 1:20 pulps. • From 2010 until 2016 geological samples have been processed in the following manner: Dried, crushed to 2mm; cone split to give primary and duplicate samples with the remainder rejected. Pulverised to 80% passing 75µm. Sizing analysis is carried out on 1:20 pulps. Samples despatched to ALS Burnie. • From 2016 geological samples have been processed in the following manner: Dried, crushed to 25mm, pulverised to 85% passing 75µm. Sizing analysis is carried out on 1:20 pulps. Samples are generally not split prior to pulverisation provided they weigh less than 3.5kg. The resulting pulps are bagged, labelled and boxed for despatch to ALS Brisbane and ALS Townsville. • From late 2018 samples have been processed in the following manner: Dried, primary crushed to 6mm then secondary crushed to 3.15mm, pulverised to 75µm. Sizing analysis is carried out on 1:20 pulps. Samples are generally not split prior to pulverisation provided they weigh less than 3.5kg. The resulting pulps are bagged, labelled and boxed for despatch to ALS Brisbane and ALS Townsville. • From late 2019, after receiving approval from Mineral Resources Tasmania (MRT), whole core sampling within the waste portion was discarded, and was conducted on all drillholes except for exploration and additional resource drilling (60m spacing) to help deal with the lack of storage space available at Rosebery. Grade control (15m spacing) and delineation (30m spacing) drillholes in areas of complex geology are not whole core sampled and continue to be half core sampled. Disposal of core only happens after significant verification of results and after consultation with the Competent Person, Senior Resource Geologist and Senior Mine Geologist. • Sample representivity is checked by sizing analysis and duplication at the crush stage. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the style of the Rosebery mineralisation by the Competent Person.
Quality of assay data and laboratory tests	• From 2005 until 2010 the assay methods undertaken by ALS Burnie for Rosebery were as follows: • 3-Acid Partial Digest (considered suitable for base metal sulphides). • Analysis of Pb, Zn, Cu, Ag, Fe by Atomic Absorption Spectrometry (AAS). • Au values are determined by fire assay. • From 2010 until 2016 the assay methods undertaken by ALS Burnie for Rosebery were as follows:

<table>
<tr><th colspan="2">Section 1 Sampling Techniques and Data</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
Dried, crushed to 2mm; cone split to give primary and duplicate samples with the remainder rejected. Pulverised to 80% passing 75µm.
Despatch to ALS Burnie.
Analysis of Pb, Zn, Cu and Fe by X-Ray Fluorescence (XRF) applying a lithium borate oxidative fusion (0.2g sub-sample charge).
Analysis of Ag by aqua regia digest and Atomic Absorption Spectrometry (AAS) (0.4g sub-sample charge).
Analysis of Au by fire assay, three acid digest and flame assay AAS (30g sub-sample charge).
From 2016 the assay methods undertaken by ALS Brisbane and Townsville were as follows:
Analysis of Ag, Zn, Pb, Cu and Fe by four acid ore grade digest, ICPAES finish with extended upper reporting limits (ALS Brisbane). In addition to these main elements, another 29 elements are reported as a part of this method.
Analysis of Au by fire assay, three acid digest and flame assay AAS (30g sub-sample charge) (ALS Townsville).
All of the above methods are considered effectively total and suitable for Mineral Resources estimation at Rosebery.
The employed assay techniques are considered suitable and representative; a comparison study using the Inductively Coupled Plasma (ICP) technique was completed to check the XRF accuracy in May 2013. Independent umpire laboratory ICP re-assay of 5% pulps took place in June 2015 and May 2016 using the Intertek laboratory in Perth. Pulps for analysis were randomly selected from a list of samples where (Pb + Zn)>5%.
No data from geophysical tools, spectrometers or handheld XRF instruments have been used for the estimation of Mineral Resources.
ALS laboratory Brisbane and Townsville releases its QAQC data to MMG for analysis of internal ALS standard performance. The performance of ALS internal standards appears to be satisfactory, with several standards used within the range of MMG submitted samples.
MMG routinely insert:
Matrix-matched standards, dolerite blanks and duplicates at a ratio of 1:20 to normal assays.
Blanks are inserted to check crush and pulverisation performance.
Duplicates are taken as coarse crush and pulp repeats.
An umpire laboratory (Intertek Perth) is used to re-assay 5% of ore-grade pulps returned from the ALS laboratory. Analysis of routine sample results and control sample performance is reported quarterly.
QA/QC analysis has shown that:
Since allowing sulphur results to be used to help choose the appropriate level of oxidising agent in to each sample when assaying for Au (Dec 2018), LBM-18 Au results significantly improved in December, January and February; dropping to a
</td></tr>
</table>

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	failure rate of ~7%. However, results for LBM-18 in March have reverted to their pre-December failure rate of ~15%. An investigation found this bump in Au standards failure rates occurred due to ALS ceasing to use sulphur results to choose the appropriate level of oxidising agent in to each sample when assaying for Au. ALS were asked to reinstate the use of sulphur results for Au determination and the improvement can be seen in Q2 results with all failure rates for Au dropping below 7% (from 17% in Q1). o Au performance has deteriorated once in Q3 (specifically from August onward). Au failures rates in LBM-18 and MBM-18 have increased to 8% and HBM-18 has increased to 33%. ALS Townsville Geochemistry Manager, confirmed that no changes to Au determination had occurred in Q3, however it was discovered that a low frequency vibration from an imbalanced impeller in an extraction fan located above the instrument room had been affecting the results. The vibration (which only affected one of the three AAS instruments) was disrupting the spectral curve, producing random calibration drifts. The vibration was only slight and not readily detectable by lab staff inside the room, it only became apparent when staff were performing routine maintenance. The ALS Townsville Geochemistry Manager assures that the impeller has been repaired and is no longer posing an issue. MMG had all affected batches (845 samples) successfully reanalysed. o The Au determination issue still continues today but now specifically with the low base metal standard. One cause of this moderate failure rate of Au in LBM-18/LBM-20 is believed to be the precision of the method the Lab is using, compared to the method used to certify the CRM. Our custom CRM results are certified by ICP method and are reported 3 decimal places. However, ALS is requested to analyse by AA method which has precision to only 2 decimal places. This means the QAQC processes which are run after assay import are assessing ALS's results against our CRM's to a degree of precision that the AA method in unable to achieve. This difference in analyse of precision could account for approximately half of the fails of Au in LBM-20 leaving a failure rate of ~6%. o For 2019 all elements in each standard are within +/-5% average bias window as set in the WQR. o A significant amount of blank failures occurred in Q1 of 2019 (12 for Pb and 31 for Zn) indicating that low levels of grade carryover is occurring. Majority of the fails correlated with sample preparation occurring in ALS Adelaide in March 2019 to assist ALS Burnie with the sample preparation backlog. After March blank failures decreased back to acceptable levels for the remainder of the year. o Quartz flushes continue to perform well in all elements in 2019 with 7 results only just over ten times detection limit across all elements. o During Q2 (specifically the 23rd May) ALS Burnie replaced the Boyd Crusher with the new Orbis Crusher. The first batch to go through the Orbis crusher was BU19111639. No QC issues were found to correlate with the introduction of the Boyd Crusher. o Pulp duplicates have performed better than crush duplicates in all elements for the 2019 as expected. Repeatability is consistent for all pulp and crush duplicates with all elements within 5% difference from their original samples. The average CV % of all duplicates for the year are below the reference CVs outline in Coefficient of Variations of MMG Deposit memo. R2 values indicate that Au crush

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	and pulp and Ag crush duplicates show the least amount correlation, which can be contributed to the nuggetty nature of these elements. o In 2020, 5% of all routine samples were sent for umpire analysis at Intertek Laboratory in Perth, WA on a quarterly basis. All umpire duplicates for all elements, except of Zn, had a mean percentage difference within approximately +/-5% of the routine standards, R2 values close to 1 and low average CV% suggesting repeatability is consistent across labs. However, overall standard analyses at Intertek shows poor accuracy for Zn with 50% failures in all standards. This is currently being investigate how we can improve this. Au which normally sees better accuracy at Intertek also began to deteriorate towards the end of 2019 at Intertek. • None of the issues described above degrades the Mineral Resources estimation confidence to any significant extent.
Verification of sampling and assaying	• All mineralised intersections, are viewed and verified by numerous company personnel by comparing assay results to core photos and logging. • Batches of sampling and assay data are entered by geologists; the performance of duplicates, blanks and standards is checked by the Mine Project Geologist after each assay batch is loaded to the database; batches with failed standards are flagged and pertinent samples are sent for re-assay. • Close twinning of mineralised intersections is not an intentional part of the delineation. However, the underground drill pattern often achieves a near-twinning or scissoring and this confirms individual intersections. • Re-assayed data, due to the failure of a standard, is reviewed to determine which batch is to be used for data export and Mineral Resources estimation. Batch status is recorded in the database for audit purposes. • Database validation algorithms are run to check data integrity before data is used for interpretation and Mineral Resources modelling. • Unreliable data is flagged and excluded from Mineral Resources estimation work. Data validation macros are used to identify data errors which are either rectified or excluded from the estimation process. • Since August 2014 all data below detection limit is replaced by half detection limit values. Prior to this date, the full detection limit was used. • No adjustments have been made to assay data – if there is any doubt about the data quality or location, the drillhole is excluded from the estimation process.
Location of data points	• Historically diamond drillholes have been surveyed using magnetic single shot surveys at intervals between 20-30m • A downhole gyro measurement has been recorded from selective drillholes prior to March 2014 as an independent check of downhole survey accuracy. Analysis suggested the single shot surveys are accurate to 100m drillhole depth, and then diverge up to 4m at 400m depth. Given this outcome, gyro downhole surveys are now standard for all diamond holes. • Prior to March 2018, all diamond drillholes were downhole surveyed using a single-shot Reflex Ezi-shot tool at 30m intervals, with a full downhole Reflex gyro survey

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	completed at end of hole by the drilling contractor. Where a gyro downhole survey is not practicable due to equipment limitations, then a multi-shot survey was completed. • Since March 2018, in addition to the Reflex gyro tool, a Champ Gyro north seeking tool was introduced to survey holes. The Champ Gyro uses as a north-seeking function for drillholes outside of the range between -200 and +200. For holes between -200 and +200 drill holes are surveyed in the continuous mode (gyro using design azimuth for collar dip & azimuth). • Selected surface exploration drillholes have been downhole surveyed using a SPT north seeking gyro (parent holes only). • Collar positions of underground drillholes are picked up by Rosebery mine surveyors using a Leica T16, TS15 and MS60 Total stations. Collar positions of surface drillholes are picked up by surveyors using differential GPS. Historically, surface drillhole collar locations were determined using a theodolite or handheld GPS. • Grid system used is the Cartesian Rosebery Mine Grid, offset from Magnetic North by 23°52’47” (as at July 1st, 2020) with mine grid origin at: MGA94 E= 378981.981, N= 5374364.125; mine grid relative level (RL) equals AHD + 1.490m + 3048.000m and is based on the surface datum point Z110 • Topographic data derived from regular LIDAR overflights are carried out and correlated with surface field checks to confirm relativity to MGA and Rosebery Mine Grid.
Data spacing and distribution	• The Rosebery mineral deposit is drilled on variable spacing dependent on lens characteristics and access. Drill spacing ranges from 40m-60m to 10m-25m between sections and vertically. The final drill pattern varies somewhat due mostly to site access difficulties in some areas. Mineralisation has short scale structural variations observable in underground workings. Some of this variation is not discernible from drill data alone. Observations of mineralisation geometry are made by traditional geological mapping and more recently using photogrammetry images of mine development faces and backs. All ore drives and most non-ore development headings are covered. • The combination of drill and other data is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resources and Ore Reserves estimation and the classifications applied. • DD samples are not composited prior to being sent to the laboratory however the nominal sample length is generally 1m. Reverse circulation drill samples are not used for Mineral Resources estimation.
Orientation of data in relation to geological structure	• Drillhole orientation is planned orthogonal to lens strike in vertical, radial fans. Drill fan spacing and orientation is planned to provide evenly spaced, high angle intercepts of the mineralised lenses where possible, thus minimising sampling bias related to orientation. Some drill intersections are at low angle to the dipping mineralisation due to access limitations. • Where drillholes from surface or older holes longer than 400m exist, attempts are made to confirm mineralised intercepts by repeat drilling from newly developed drives. Deep drill intersections are excluded from Mineral Resources modelling where duplicated by shorter underground drillholes. • Drilling orientation is not considered to have introduced sampling bias.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sample security	• Measures to provide sample security include: ○ Samples are stored in a locked compound with restricted access during preparation. ○ Half-core samples for despatch to ALS Burnie are stored in sealed containers with security personnel at the MMG mine front gate for pick-up by ALS courier. ○ Receipt of samples acknowledged by ALS by email and checked against expected submission list. ○ Assay data returned via email as spreadsheet and archived online as a backup.
Audit and reviews	• Internal audit of the ALS Burnie, ALS Brisbane and ALS Townsville facilities were undertaken during 2019 and 2020 by MMG representatives. Au issue at Townsville has been rectified. • Historically, any issues identified have been rectified as soon as possible. Re-assaying of any affected samples, were applicable, has also occurred.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Mineral tenement and land tenure status	• Rosebery Mine Lease ML 28M/1993 includes the Rosebery, Hercules and South Hercules polymetallic mines. It covers an area of 4,906 ha. • ML28M/93 located was granted to Pasminco Australia Limited by the State Government of Tasmania in May 1994. This lease represents the consolidation of 32 individual leases that previously covered the same area. • Tenure is held by MMG Australia Ltd for 30 years from 1st May 1994. • Lease expiry date is 1st May 2024. • The consolidated current mine lease includes two leases; (consolidated mining leases 32M/89 and 33M/89). These were explored in a joint venture with AngloGold Australia under the Rosebery Extension Joint Venture Heads of Agreement. This agreement covered two areas, one at the northern and the other at the southern end of the Rosebery Mine Lease, covering a total of 16.07 km2. • The joint venture agreement was between the EZ Corp of Australia (now MMG Rosebery Mine) and Shell Company of Australia Limited (now AngloGold Australia Metals Pty. Ltd., formerly Acacia Resources (formerly Billiton)). A Heads of Agreement was signed on 16th May 1988 with initial participating interest of 50% for each party. Other partners in the joint venture are Little River Resources Ltd. and Norgold Ltd. They have a combined net smelter return royalty of 2.3695%, payable on production from the Rosebery Extension Joint Venture area. AngloGold withdrew from the joint venture on the 31st December 2001. • There are no known impediments to operating in the area.
Exploration done by other parties	• Tom Macdonald discovered the first indication of mineralisation in 1893 when he traced alluvial gold and zinc-lead sulphide boulders up Rosebery Creek. Twelve months later an expedition lead by Tom McDonald discovered the main lode

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	through trenching operations, on what is now the 4 Level open cut (Easterbrook, 1962; Martin, 2002). • The Rosebery deposit was operated by several different operations until 1921 when the Electrolytic Zinc Company purchased both the Rosebery and Hercules Mines. • Drilling from surface and underground over time by current and previous owners has supported the discovery and delineation of Rosebery's mineralised lenses.
Geology	• The Rosebery volcanogenic massive sulphide (VMS) deposit is hosted within the Mt Read Volcanics, a Cambrian assemblage of lavas, volcaniclastics and sediments deposited in the Dundas Trough between the Proterozoic Rocky Cape Group and the Tyennan Block. • Sulphide mineralisation occurs in stacked strata bound massive to semi-massive base metal sulphide lenses between the Rosebery Thrust Fault and the Mt Black Thrust Fault; the host lithology and the adjoining faults all dip approximately 45 degrees east.
Drillhole information	• The Mineral Resources database consists of 14,563 diamond drillholes providing ~500,000 samples. • No individual drillhole is material to the Mineral Resources estimate, and hence this geological database is not supplied.
Data aggregation methods	• This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section. • No metal equivalents were used in the Mineral Resources estimation.
Relationship between mineralisation width and intercept lengths	• Mineralisation true widths are captured by interpreted mineralisation 3D wireframes. • Most drilling was at 50° to 60° angles in order to maximise true width intersections. • Geometry of mineralisation is interpreted as sub- vertical to vertical and as such current drilling allows true width of mineralisation to be determined.
Diagrams	• No individual drillhole is material to the Mineral Resource estimate, and hence diagrams are not provided.
Balanced reporting	• This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section.
Other substantive exploration data	• This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section.
Further work	• Further underground near mine exploration drilling is being assessed.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The following measures are in place to ensure database integrity: o All Rosebery drillhole data is stored in an SQL database on the Rosebery server, which is backed up at regular intervals. o Geological logging is entered directly into laptop computers which are uploaded to the database. Prior to 1996 DD holes were logged using Lotus spread sheets or on paper. o Assays are loaded into the database from spread sheets provided by the laboratory. o A database upgrade and full data migration was undertaken in November 2014. Several rounds of data migration checks were undertaken before allowing the database to go live. • Data validation procedures include: o Validation routines in the new database check for overlapping sample, lithological and alteration intervals. o Random comparisons of raw data to recorded database data are undertaken prior to reporting for 5% of the additional drillholes added in any one year. No fatal flaws have been observed from this random data review. o Bulk data is imported into buffer tables and must be validated before being uploaded to the master database.
Site visits	• The 2020 Competent Person for Mineral Resources has visited site on a regular basis. The last visit was in 2019, no visits were conducted in 2020.
Geological interpretation	• Economic Zn-Pb-Ag-Au mineralisation occurs as massive, semi massive and disseminated base metal sulphide lenses located within the Rosebery host sequence. Economic and near-economic mineralisation is easily visually identified in drill core and underground mine development. • Drill core is routinely sampled across zones of visible sulphide mineralisation. • The method used for defining mineralisation domains for the 2020 Mineral Resources estimate is described below: o Peer reviewed exploratory data analysis was undertaken for each element of interest. o 3D wireframe models of each mineralisation style were created using an Indicator interpolation similar to kriging, using Leapfrog Geo v5.1 software. Key data inputs included composited drill data converted to Indicators and mineralisation trend information derived from traditional mapping and high-quality photo images of development faces and backs. o The interpolation uses a model representing the spatial variability of each variable and this was chosen on the basis of experimental variograms derived from the data. The variograms used are characterised by low nugget and ranges in the order of 60m-80m at low grade and 25m-30m at high grade. They are strongly anisotropic. o The resultant wireframe models were visually compared to mapped or recorded mineralisation contacts from traditional geological mapping and Adamtech photo images. A close correlation between the models and points of observation is noted in most areas where data are available.

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>Difference occur due to the 5m resolution of wireframes and compared to more detailed mapping
○ The domain models are broadly consistent with logged and mapped observations of the main lithology units present at mine scale, namely black shale, porphyry and the hanging wall and footwall contacts with the host sequence.
• The Upper Mine Mineral Resources geological interpretation has been updated to use the above methodology</td></tr>
<tr><td>Dimensions</td><td>• The Rosebery mineral deposit extends from 400mE to 1800mE, 2800mN to -1100mN, 3400mRL-1800mRL (Rosebery Mine grid co-ordinates) and is currently open to the north, south and at depth. Individual lenses vary in size from a few hundred metres up to 1000m along strike and/or down-dip.
• The range of minimum, maximum and average thickness of the mineralised lenses are as follows:
<table>
<tr><th>Minimum (m)</th><th>Maximum (m)</th><th>Mean (m)</th></tr>
<tr><td>0.2-0.3</td><td>12-36</td><td>3-6</td></tr>
</table></td></tr>
<tr><td>Estimation and modelling techniques</td><td>• Lower mine: Grades estimation uses Ordinary Kriging (OK) as implemented in Maptek Vulcan version 11.0.4. The main inputs and parameters are described below:
○ Blocks and 1m composites flagged by domain and estimated individually.
○ Parent block size for estimation of 2mE x 7.5mN x 5mRL.
○ Block size approximates one half of drillhole spacing in northing and RL, and is consistent with the primary sampling interval in easting (1m).
○ Discretisation is 2x4x2 (X, Y, Z) for a total of 16 points per block.
○ Minimum/maximum sample search number depends on domains based on KNA but is generally 8/24 for most domains.
○ Octant search methods were not used.
○ A minimum of 3 drillholes is required for a block to be estimated.
○ Grade capping was applied to the high-grade gold domains in some lenses.
○ A second estimation pass was used to estimate blocks in sparsely sampled areas not estimated in the primary estimation.
• Upper mine: historical models have used either Multiple Indicator Kriging, Ordinary Kriging or the inverse distance method, have now all been updated to match the Lower Mine methodology.
• All recoverable elements of economic interest to the Rosebery Operation (Zn, Pb, Cu, Ag, Au) and Fe have been estimated.
• No other deleterious element or non-grade variables of economic significance have been identified – hence they are not estimated.
• No dilution or recovery factors are taken into account during the estimation of Mineral Resources. These are addressed in the relevant Ore Reserves statement.
• All metals are estimated individually, and no correlation between metals is assumed or used for estimation purposes.
• Block model validation was conducted by:</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	○ Visual inspections for true fit with the high- and low-grade wireframes (to check for correct placement of blocks). ○ Visual comparison of block model grades against composite file grades. ○ Global statistical comparison of the estimated block model grades against the declustered composite statistics and raw length-weighted data. ○ Swath plots were generated and checked for all lenses. The plots confirm overall consistency between data and estimates with a reasonable degree of smoothing. ○ Change of Support analysis was undertaken on all elements on a lens by lens basis.
Moisture	• Tonnes have been calculated on a dry basis, consistent with laboratory grade determinations. • No moisture calculations or assumptions are made in the modelling process.
Cut-off parameters	• Net Smelter Return (NSR) has been calculated for all block model blocks, and accounts for MMG's long-term economic assumptions (metal price, exchange rate), metal grades, metallurgical recoveries, smelter terms and conditions and off-site costs. The NSR calculation was updated in May 2020. • Rosebery Mineral Resources were reported above a $172/t NSR block grade cut-off. An example of minimum grades above $172/t NSR cut-off is as follows: 4.6% Zn, 0.95% Pb, 15 g/t Ag, 0.8 g/t Au, 0.15% Cu.
Mining factors or assumptions	• Mineral Resources block models are used as the basis for detailed mine design and scheduling and to calculate derived NPV for the life of asset (LoA). Full consideration is made of the reasonable prospect of eventual economic extraction in relation to current and future economic parameters. Important assumptions, including minimum mining width and dilution are included in the mine design process. • Mined voids (stope and development drive shapes) are depleted from the final Mineral Resources estimate as at 30 June, 2020. • For Mineral Resources in the Lower Mine, in additional to removing actual mined voids, an additional 5m across strike has been removed from mined stopes as this near near-void skins and pillars as these are considered not to have reasonable prospects for mining. • For Mineral Resources in the Upper Mine, due to lack of confidence in completion in the void model, only resources away from outside edges of known stoping and development have been reported.
Metallurgical factors or assumptions	• Metallurgical processing of ore at Rosebery involves crushing and grinding followed by flotation and filtration to produce saleable concentrates of copper, lead and zinc. Additionally, gold is partly recovered as doré following recovery from a gravity concentrator. • Metallurgical recovery parameters for all payable elements are included in the NSR calculation, which is used as the cut-off grade for the Mineral Resources estimate. The metallurgical recovery function is based on recorded recoveries from the Rosebery concentrator and monitored in monthly reconciliation reports.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Environmental factors or assumptions	• Environmental factors are considered in the Rosebery life of asset work, which is updated annually and includes provision for mine closure. • Potentially acid forming (PAF) studies have been completed for sulphide-rich waste at Rosebery Mine in 2014. Determination of surface treatable and untreatable waste is currently determined by visual assessment guided by geological modelling and is not estimated or included in the 2020 Mineral Resources block models.
Bulk density	• In the lower mine (KNPWXY) Bulk Density is estimated using Ordinary Kriging of a combination of SG measurements and SG predicted values assigned to the drill sample where no SG measurement was taken by a machine learning algorithm. • The machine learning algorithm (CatBoost Regressor) was trained off over 15,000 SG Measurements using their associated multi-element assay results as predictor features. The algorithm consistently gives an average K-folds test r^2 results around 0.77, a significant improvement on the previously used bulk density formula. • Since introducing the SG estimation in the lower mine, reconciliation has improved in tonnes and grade for all elements except for a slight decrease in silver. • SG measurements are continually been collected on all delineation drill sampling are will be added to the training data for the machine learning model in future updates. • In the upper mine where no SG measurements have been collected. An empirical formula is used to determine the dry bulk density (DBD) based on Pb, Zn, Cu and Fe assays and assuming a fixed partition of the Fe species between chalcopyrite and pyrite. This formula is applied to the block model estimations after interpolation has been completed. The formula applied is: DBD =2.65+0.0560 Pb%+0.0181 Zn%+0.0005 Cu%+0.0504 Fe% • The Rosebery mineralisation does not contain significant voids or porosity. The DBD measurement does not attempt to account for any porosity.
Classification	• Mineral Resources classifications used criteria that required a minimum number of three drillholes. The spatial distribution of more than one drillhole ensures that any interpolated block was informed by sufficient samples to establish grade continuity. • Drillhole spacing for classification were based on an internal Rosebery drillhole spacing study undertaken in 2017. Results from the study indicate: ○ Measured Mineral Resources: 15m x 15m drillhole spacing ○ Indicated Mineral Resources: 30m x 30m drillhole spacing ○ Inferred Mineral Resources are generally defined as twice the spacing of Indicated Mineral Resources provided there is reasonable geological continuity. • Zinc estimated values were used for classification.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	• Based on the interpolated block, Resource Category wireframes were then constructed to ensure spatial continuity. • The Mineral Resources classification reflects the Competent Persons view on the confidence and uncertainty of the Rosebery Mineral Resources. The Mineral Resources classification reflects the Competent Persons view on the confidence and uncertainty of the Rosebery Mineral Resources.
Audits or reviews	• A review was undertaken by AMC on the 2018 Rosebery Mineral Resource. AMC considers the Rosebery Mineral Resource estimate has been completed using usual industry practises and in accordance with the requirements and guidelines of the JORC Code 2012. MMG's approach is to include geological and grade components in compiling the resource estimates which AMC considers appropriate. AMC considers that the model forms a suitable basis for Mineral Resource reporting and for use in Ore Reserves and mining studies. No material issues were identified. • The 2020 Mineral Resources estimate was peer reviewed internally with no material issues identified.
Discussion of relative accuracy/ confidence	• There is high geological confidence that the spatial location, continuity and estimated grades of the modelled lenses within the Rosebery • Mineral Resources. The sheet-like, lensoidal nature of mineralisation historically exhibited is expected to be present in the remaining Mineral Resources at least at global scale. • Minor local variations are observed at a sub-20m scale; it is recognised that the short scale variation cannot be accurately captured even at very close drill spacing, and additional mapping data is important. Short scale geometry variation appears to be related to the preferential strain around relatively competent units in the mine sequence; there is little evidence of brittle fault offsets. • Twelve month rolling reconciliation figures for the Mineral Resources model to the mill treatment reports are within 5% for all metals an annual basis, suggesting that the Rosebery Mineral Resources estimation process is sound. • Mining and development images (including traditional mapping and digital photographic images) shows good spatial correlation between modelled mineralised boundaries and actual geology. • The combination of Mineral Resources model, mapping, stope commentaries and face inspections provides reasonably accurate grade estimations for mill feed tracked on a rolling weekly basis, in each end of month report, and on a quarterly and annual basis. • Remnant mineralisation in close proximity to voids in the upper and lower levels has been removed from the reported Mineral Resources. • The accuracy and confidence of this Mineral Resources estimate is considered suitable for public reporting by the Competent Person.

6.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

6.2.3.1 Competent Person Statement

I, Douglas Corley, confirm that I am the Competent Person for the Rosebery Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Rosebery Mineral Resource section of this Report to which this Consent Statement applies.

I am a full-time employee of Mining One Pty Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Rosebery Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Rosebery Mineral Resources.

6.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Rosebery Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised

Date: 02/12/2020

Douglas Corley MAIG R.P.Geo. (#1505)

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Rex Berthelsen
Melbourne, VIC

Signature of Witness:

Witness Name and Residence: (e.g. town/suburb)

6.3 Ore Reserves – Rosebery

6.3.1 Results

The 2020 Rosebery Ore Reserves are summarised in Table 20.

Table 20 2020 Rosebery Ore Reserve tonnage and grade (as at 30 June 2020)

Rosebery Ore Reserves											
							Contained Metal				
Rosebery	Tonnes (Mt)	Zinc (% Zn)	Lead (% Pb)	Copper (% Cu)	Silver (g/t Ag)	Gold (g/t Au)	**Zinc ('000 t)**	**Lead ('000 t)**	**Copper ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Proved	6.1	7.0	2.7	0.18	121	1.4	426	11	164	23.7	0.3
Probable	1.1	6.1	2.0	0.18	100	1.1	69	2	23	3.6	0.0
Total	**7.2**	**6.9**	**2.6**	**0.18**	**118**	**1.3**	**495**	**13**	**187**	**27.3**	**0.3**
Stockpile											
Proved	0.01	8.0	3.4	0.21	108	1.5	1	0.02	0.30	0.03	0.00
Total	7.2	6.9	2.6	0.18	118	1.3	**496**	**13**	**187**	**27.3**	**0.3**

The 2020 Reserves have increased in comparison to 2019 by approximately 3.5Mt.

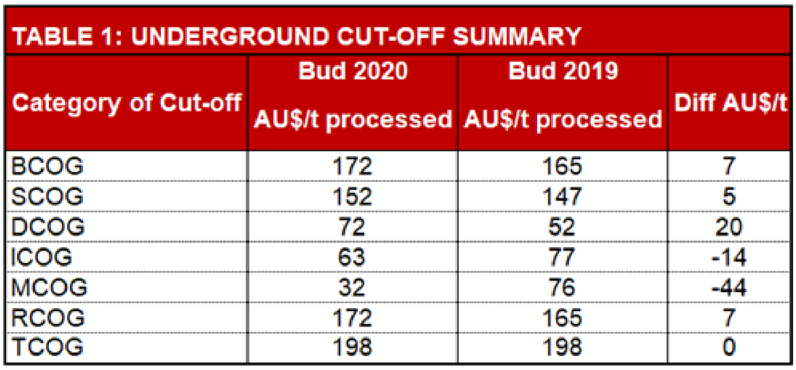
- Diamond drilling and modelling has resulted in extensions to the W, X and Y Lenses (+1.36Mt)
- Mineral Resource to Ore Reserve conversion in combination with diamond drilling in the P Lens has resulted in an increase to the mining inventory (+1.63Mt)
- Tailings studies completed in the last year have resulted in confidence to tailings capacities which have unconstrained the mineable inventory (as compared to 2019)
    - Currently the 2/5 Dam is at a Stage 1 Lift with Stage 2 planned and pre-approved by the EPA.
    - The 2/5 Dam also has a pre-feasibility study completed for Stage 3, which will proceed into a feasibility study in 2022.
    - Bobadil Stage 10 has been approved by the EPA and construction is currently taking place.
    - Bobadil Stage 11 has a feasibility study completed and will rely on positive performance of Stage 10 to fully inform the design.

6.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 21 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code.

Table 21 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Rosebery Ore Reserve 2020

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Mineral Resources estimate for conversion to Ore Reserves	• The Mineral Resources reported are inclusive of the Mineral Resources used to define the Ore Reserves. • The Mineral Resources model used the MMG March 2020 Mineral Resources model. (ros_knpwxy_gmr_2003_v5.dm) • There is high geological confidence in the spatial location, continuity and estimated grades of the modelled lenses within the Rosebery Mineral Resources. The sheet-like, lens nature of mineralisation historically exhibited is expected to be present in the remaining Mineral Resources at least at a global scale.
Site visits	• Karel Steyn is the Competent Person for the Rosebery Ore Reserves based in Perth as contractor through STEKA Mining Consultants PTY LTD. He has frequently visited the site during 2019 however, due to COVID-19, 2020 has not been able to visit the site. All communication has been via video link and/or email correspondence.
Study status	• The mine is an operating site with on-going detailed Life of Asset planning_process. Studies of the Upper Mine are in progress.
Cut-off parameters	• The 2020 Mineral Resources and Ore Reserves have cut-off grades/values calculated, based on corporate guidance on metal prices and exchange rates. The site capital and operating costs, production profile, royalties and selling costs based on the 2020 Budget. Processing recoveries based on historical performance. ○ The Breakeven Cut-off Grade (BCOG) and mineral Resources Cut-off Grade (RCOG) have been calculated using budget 2020 cost. ○ The operating costs, both fixed and variable, have been attributed on a per mined tonne basis using the planned mine production rate of 1.0Mtpa ○ The Net Smelter Return (NSR) values are based on metal prices, exchange rates, treatment charges and refinery charges (TC's & RC's), government royalties and metallurgical recoveries. ○ The NSR value for both BCOG and RCOG is to the mine gate and includes sustaining capital for the 2020 Ore Reserves. ○ RCOG is the same value as the calculated BCOG. The differential is within the sites scripted Geological Block Model where there are Reserve Prices and Resources Prices applied that create two different NSR values. RCOG utilises the MRNSR value which has the Resource Prices associated in its calculation. ○ Exploration drilling has been included as part of the growth capital and not as sustaining capital. ○ Concerning the Ore Reserves (OR) and Life of Asset (LoA), the break-even cut-off grade (BCOG) was used to evaluate the economic profitability (Level by Level). The Stope Cut-off Grade (SCOG) has been used to create stope shapes that includes a planned dilution.. The use of BCOG has also been utilised to determine Stopes and Development to be included in Reserves.

<table>
<tr><th colspan="2">Section 4 Estimation and Reporting of Ore Reserves</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>


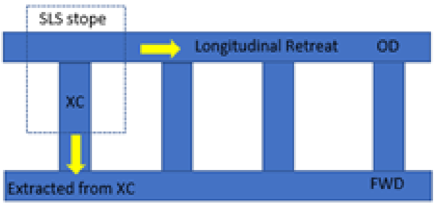
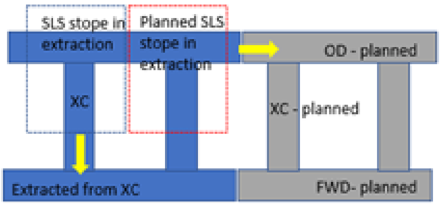
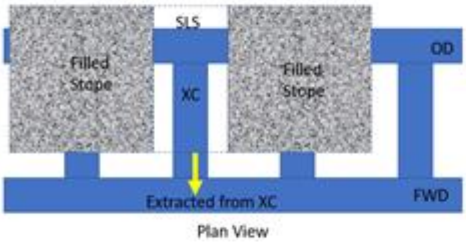
<table>
<tr><th colspan="4">TABLE 1: UNDERGROUND CUT-OFF SUMMARY</th></tr>
<tr><th>Category of Cut-off</th><th>Bud 2020
AU$/t processed</th><th>Bud 2019
AU$/t processed</th><th>Diff AU$/t</th></tr>
<tr><td>BCOG</td><td>172</td><td>165</td><td>7</td></tr>
<tr><td>SCOG</td><td>152</td><td>147</td><td>5</td></tr>
<tr><td>DCOG</td><td>72</td><td>52</td><td>20</td></tr>
<tr><td>ICOG</td><td>63</td><td>77</td><td>-14</td></tr>
<tr><td>MCOG</td><td>32</td><td>76</td><td>-44</td></tr>
<tr><td>RCOG</td><td>172</td><td>165</td><td>7</td></tr>
<tr><td>TCOG</td><td>198</td><td>198</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>Mining factors or assumptions</td><td>

Mining production is carried out by long-hole open stoping with a Decline Access. Stoping is conducted through both longitudinal retreat and transverse methods.
Mining lenses are divided into panels and are mined using a bottom-up sequence in a continuous 45 degree retreating either towards or away from level access drives. The nature of this mining sequence causes fluctuations in the grade profile of the short-term schedules. Each stoping panels contain between 3 and 5 sub-levels with crown pillars left in-situ between the backs of up-hole stopes and the lowest sill drive of the panel above.
Backfilling of stope voids is carried out using two methods; Cemented Rock Fill (CRF) and Rock Fill (RF). Up-hole (Crown) retreat stopes are left as an open void due to lack of access for fill placement.
Long-term stope designs are carried out using the Stope Optimizer (SO) process within the Deswik Software package with the stope cut-off factor of AU$152/t (rounded down from 2020 SCOG). The length of each block used in SO is set at 5m with each Stope is a combination of three or four of these blocks giving a stope strike length of 15m or 20m.
Average stope strike lengths of 15m were used in W and X Lens while the other lenses used 20m. The height set to 20-25m (floor to floor) and the minimum mining width of 4.5m. The horizontal width has been adjusted to 4.65m to allow for the low dip of the ore body and to achieve the 4.5 m true widths.
A Mining Recovery factor of 75%-90%, depending on the area, is applied to Mined Ore Tonnes based on historic reconciliations.
Tonnes and Recovery Factors are applied within the Deswik schedule and are updated frequently based on rolling average historic Stope Reconciliations.
Access to the orebody is through a decline 5.5 mH x 5.5 mW at a 1:7 gradient. The approximate standoff distance between orebody and stoping footwall and major infrastructure; stockpiles, vent rises, escape-ways, declines and ancillary development is 65-70m.
For -Ore Reserve Reporting, only Measured and Idicated material is included.
Production of ore is in Measured and Indicated Mineral Resources only with grade control drilling programs scheduled to convert Indicated Mineral Resources before development or stoping activities. All mine development is strictly under Survey control. Geological development control is currently not implemented at Rosebery

</td></tr>
</table>

<table>
<tr><th colspan="2">Section 4 Estimation and Reporting of Ore Reserves</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>however, geology does play a role should the minerals carrying the ore decrease below DCOG and/or disappears in the advancing face.
• The current primary ventilation system supplies approximately 650m^3/s (Measured at depth) of air to the underground mine, which is designed to allow extraction from the multiple ore lenses.</td></tr>
<tr><td>Geotechnical</td><td>• Rosebery is one of the deepest and oldest mines in Australia with challenging ground conditions that result in the closure (squeezing) of development drives close to stoping areas and mining-induced seismicity.
• The anisotropic nature of the rock mass sees higher capacity support requirements and increased rehabilitation costs for drives that strike North South compared to drives that strike East West.
• Just in time development, preferential drive orientations and high displacement capacity support combined with multiple stages of rehabilitation are used to maintain serviceability of development.
• Seismic monitoring, seismic re-entry exclusion periods and seismic TARPS following stope firings are used to control risk to personnel from seismic hazards.
• High displacement ground support (Dynamic Support) is selected in locations where increased seismic risk has been determined by the geotechnical department during the POI process. Where a large seismic event has occurred (>0.6ML) a review of ground support capacity and requirements is completed.
• Rosebery mine utilises three main extraction methods based on depth, stress and presence of mined voids. The table below can be utilised to select the method of mining best suited for expected conditions.
<table>
<tr><th>Method</th><th>Stress State</th><th>Diagram</th></tr>
<tr><td>Benching - longitudinal retreat along a single OD</td><td>Low Stress, low yielding rock mass, reduced seismic risk</td><td>
</td></tr>
</table>
</td></tr>
</table>

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary		
	Transverse Slashing – longitudinal retreat, extracted from cross cuts with no personnel and equipment access into OD deemed to be of high seismic risk, slashed from FWD. development to be just in time where possible **Transverse Slashing (Just in Time)–** where near field seismic hazard is present, reduced exposure to hazardous conditions is required. Various tiers of just in time mining are available based on the level of hazard that exists	High Stress, high yielding rockmass, increased seismic risk High Stress, generally influenced by high confinement within proximity to persistent seismically active geological zones or unfavourable geometry	 
	Pillar recovery – transverse retreat from xc, slashed from the FWD. Extraction of intermediate pillars, assessment of fill material and open voids required prior to extraction •	Irrelevant, stress and seismic risk do not dictate mining method, presence of previously mined stopes adjacent to remnant pillar/ stope.	

<table>
<tr><th colspan="2">Section 4 Estimation and Reporting of Ore Reserves</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Metallurgical factors or assumptions</td><td>

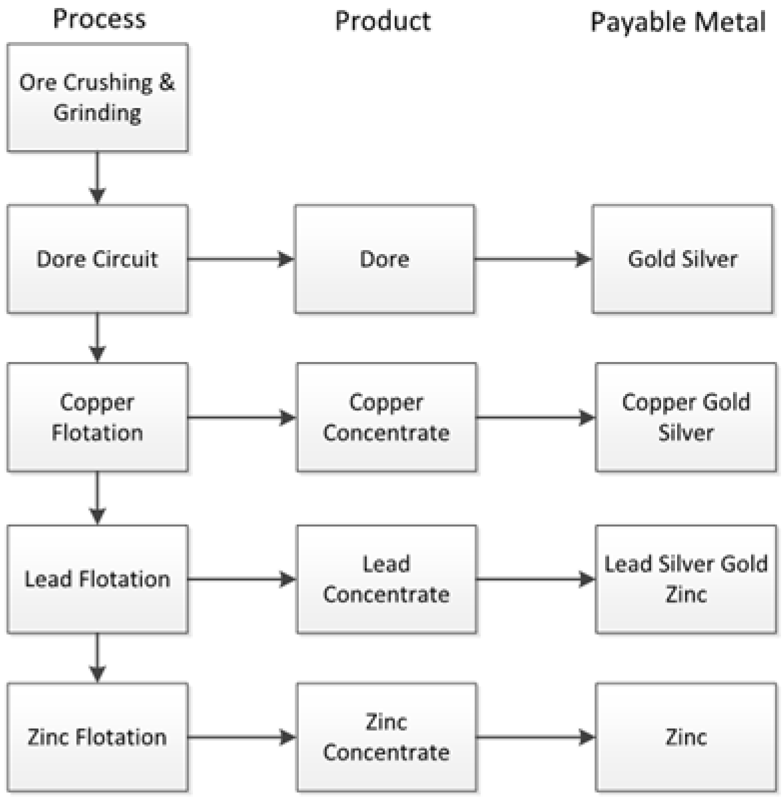
Rosebery is a poly-metallic underground mine with all ore processed through an on-site mill and concentrator. Underground ore production is sourced from multiple ore lenses.
The table below outlines the critical production physicals for 2020. These are based on actual data to June 2020 and forecast for the remainder of the year. The processing plant has a nameplate capacity of 1.0 Mtpa.
The site is currently mine constrained, and mining and processing physicals are the same rates. Minimal stockpiles are maintained for the mill.

<table>
<tr><th>Tonnes (t)</th><th>Zinc (%)</th><th>Lead (%)</th><th>Copper (%)</th><th>Gold (g/t)</th><th>Silver (g/t)</th><th>Fe (%)</th></tr>
<tr><td>968,018</td><td>8.24</td><td>3.21</td><td>0.25</td><td>1.59</td><td>121</td><td>5.74</td></tr>
</table>

There are four saleable products generated:

Doré
Copper Concentrate
Zinc Concentrate
Lead Concentrate

The flow chart below outlines the block flowsheet, products and payable metals



</td></tr>
</table>

Section 4 Estimation and Reporting of Ore Reserves

Criteria	Commentary

- Based on the grades for 2020 (table above), the subsequent recoveries calculated from the regression analysis. These have been determined by inputting the grades into the NSR calculator spreadsheet to determine the relevant recoveries. These summarised in the below table.

Product	Copper (%)	Zinc (%)	Lead (%)	Silver (%)	Gold (%)
Zinc Concentrate		85%			
Lead Concentrate		7.6%	74.3%	35.8%	16%
Copper Concentrate	63.7%			42.1%	39.9%
Gold Dore				0.2%	22.5%

Environmental

- The 2/5 Dam Tailings Storage Facility (TSF) was commissioned in April 2018 for subaqueous tailings deposition. Commissioning included a new pump station, tailings pipeline and seepage collection ponds. The intention for the 2/5 Dam TSF is to convert the facility to subaerial tailing deposition that would allow for additional storage of tailings within the TSF.
- Currently, an interim subaerial tailings deposition at the Stage 1 raise is awaiting approval by the EPA, which includes dust suppression strategies to mitigate any possible dust events to the surrounding community. As an alternative for non-approval, 2/5 Dam TSF does have a Prefeasibility Study conducted on Stage 3 to further progress. (Please Refer to the Tailings section for further information)
- Rosebery has proactively been conducting dust monitoring at the 2/5 Dam TSF since the start of construction
- Waste water - The waste water management at Rosebery involves collecting all potentially contaminated water, including storm water, mine water and mill tailings at the Effluent Treatment Plant (ETP), where lime is added prior to pumping the whole volume of treated water to the Bobadil TSF via the Flume (an open concrete channel flowing under gravity to the TSF). After the final polishing stage, water is subsequently discharged to Lake Pieman.
- The ETP hydraulic capacity is approximately 600 l/sec and the plant is capable to receive 335 l/sec of site mine water with remaining limited spare capacity of approximately 265 l/sec to treat the site surface rain or storm water.
- The historic Hercules area has a large impact on the land area along with major water issues. This area is the most significant “legacy site” for Rosebery management. Smaller historic legacy sites include the Zeehan Smelter site, South Hercules and historic mines numbering at least ten known sites, such as Jupiter’s, along with a number of small historic workings.
- Waste rock - Waste rock is characterised as either NAF, PAF or High PAF. To-date the majority of waste rock produced has been retained underground and used for stope filling, either as RF or CRF. Previously, surplus waste rock was trucked to the surface and unloaded at the waste rock dump and was treated by adding a layer of lime on top and below every layer of waste rock. Recent Life of Asset (LoA) planning suggests there will be no requirement for waste rock to be trucked to surface.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Infrastructure	• MMG Limited holds title to the Rosebery Mine Lease (ML 28M/1993 – 4,906ha) which covers an area that includes the Rosebery, Hercules and South Hercules base and precious metal mines. • Electric power to the site feeds in through No. 1 Substation located adjacent to the Mill Car Park on Arthur Street. There is a contract for the supply to the site with the Electrical Supply Authority for the region. The Commerce Department manages this, and all responsibilities (such as notification, to change in supply by either party) are detailed in this contract. The Electrical Supply Authority's substation currently has an N+1 arrangement which ensures that supply is maintained in the event of a loss of critical equipment (e.g. Transformer). This also provides the Electrical Supply Authority with the ability to manage a potential increase in supply requirement by the site. Further, works are currently underway to provide an upgrade to the substation infrastructure, the result of which will provide a significant increase in the security of the supply to the site. • Freshwater for the site is currently sourced from Lake Pieman, with allotments of 5,500 ML and 1,647 ML respectively. This will leave Lake Pieman as the sole source of fresh water. • In total, the Rosebery Mine operation employs 320 MMG people and a further 151 contractors, covering all aspects of the operation. Within the mining area, there are 203 MMG employees. • Primary communication from the Rosebery Mine site is by phone along with surface mobile phone coverage, provided by Telstra. Phones are available throughout the main office building along with the mill and other surface buildings. There is also an extension of the phone system underground. Along with the phone system, there is also email and internet services associated with the lines. This is available through the office area through a wireless system. The wireless system is also extended throughout part of the underground to assist with the seismic system. • The main system for communication underground is through radio via a leaky feeder and fibre system. The radio system operates on multiple channels with general, extended discussion and emergency channels. • With mining activity taking place underground at Rosebery, access to the operating areas is by the main decline, “The Fletcher Decline”. • While there are multiple paths from the certain points underground, only one main route is used to access the upper mid area of K Lens. From this point, access splits between two declines to the K/N/P Lens area and the W/X/Y Lenses. Other declines are used to direct primary airflow. The ore is hauled out of the mine in a fleet of 55-60 tonne haul trucks. • The Rosebery primary ventilation circuit is essentially a series circuit where airflow accumulates airborne contaminants and heat as it progresses deeper into the mine, at the 46K Level fresh air is introduced into the circuit via the NDC shaft diluting contaminated air, and finally reporting to the return airways and exhausting to surface. The current primary ventilation system supplies approximately 650 m^3/s of air usefully used throughout the mine. The system comprises of three primary fan installations on the surface (PSF1, PSF2 and PSF3) and two booster fan installations underground

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	(19B Booster Fans and 33P Booster Fan). The specifications of these fan installations are detailed below: • PSF1 (New NUC)) are 2 x 1800 kW Howden centrifugal fans. Design Duty is 400 m^3/s. • PSF 2 (Old NUC) is a single 550kW centrifugal fan. The duty is 100 m^3/s. • PSF 3 (SUC) is 2 x 550 kW Korfmann KGL 2600 mm axial fans in parallel. The duty is 161 m^3/s. • The 33P Booster fan is a Flaktwoods 550kW 2600 VP axial fan. • 19B Booster fan is a single Twin 90kW ACC1400 MK4 secondary fan. A fan upgrade is being considered due it being under designed from the original installation (two Twin 110kW ACC1400 MK4 fans). • The main intake airways of the mine are the decline portal, No.2 Shaft and the NDC shaft. However, there is also minimal leakage through historic workings. • There is a crib room and workshop facility at the 46K Level to offer these facilities closer to the current and ongoing working areas. • Concentrate is transported from site using Tasrail, which is the only railway line service that connects the West Coast area to the port in Burnie. • Until April 2018 Tailings from the ore treatment were only placed into a TSF located to the north of Rosebery, the Bobadil TSF. Tailings have subsequently been discharged at 2/5 Dam TSF, and sporadically into Bobadil TSF. The new Stage 10 raise construction at Bobadil TSF is expected to be completed by mid-2021, providing Rosebery Mine with an alternative to tailings deposition. • The 2/5 Dam TSF, located TSF to the south-west of the Rosebery township, was commissioned in April 2018 for subaqueous tailings deposition. Commissioning included a new pump station, tailings pipeline and seepage collection ponds. The intention for the 2/5 Dam TSF Stage 1 is to be temporarily converted to subaerial tailing deposition to allow for additional storage of tailings within the TSF, while the construction of Stage 2 raise takes place. The construction of Stage 2 is expected to start early 2021, with 15 to 18 months of construction time. The tailings capacity expected for this facility is present in the section under tailings. • A prefeasibility study for Stage 3 at the 2/5 Dam TSF raise was completed in early 2020, which will be further progressed.
Costs	• Costs used in determining the cut-off values used for the Ore Reserves estimation were based on the 2019 Budget. Costs were inclusive of Operating Expenses and Sustaining Capital. • Costs are in Australian dollars and are converted to US dollars at the applicable exchange rate. • MMG Group Finance supplies the commodity price and exchange rate assumptions. These price assumptions are then applied to the period in which the ore is scheduled to be produced to determine the extracted NSR. • All applicable inflation rates, exchange rates, transportation charges, smelting & refining costs, penalties for failure to meet specification and royalties are included as

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	part of the NSR calculations evaluated against the annually released geology block model to estimate projected value. • Penalties deducting from revenue may be applied where concentrates contain a higher percentage of unwanted minerals. • A cash flow model was produced based on the detailed mine schedule and the aforementioned costs to determine the NPV. • The Ore Reserves estimation has been based on these costs.
Revenue factors	• Commodity prices and the exchange rate assumptions are the same as reported in the cut-off parameters section. These are provided by MMG Group Finance, approved by the MMG Board, and are based on external company broker consensus and internal MMG analysis. • Treatment and refining charges, royalties and transportation costs for different commodities were supplied by MMG Group Finance and have been included in the NSR calculation. • The formulas, regression values and assumptions used in the NSR calculation are based on the historical data provided by the Rosebery Metallurgy Department. • Economic evaluations are carried out to verify that mining areas are profitable. The cost assumptions were applied to the mining physicals, and the revenue was calculated by multiplying the recovered ore tonnes by the appropriate NSR value. The profitable and marginal stopes were included in the Ore Reserves.
Market assessment	• Although the rate of growth of global zinc consumption is slowing, demand is still expected to increase by 1-3%pa over the medium term, with growth mainly coming from China the world's developing nations. • Stocks of refined zinc are currently at historically low levels after several years where production was constrained by limited mine production and concentrate availability. The low mine production resulted from a period of low metal prices and the closure of several major mines due to resource exhaustion. • Zinc mine production is now recovering as new mine projects and restarted operations such as Dugald River, Lady Loretta, Gamsberg and New Century come to the market during 2018 and 2019. Beyond these projects, there is uncertainty surrounding future new supply, while there is also limited growth in new smelting capacity. Increasingly stringent environmental regulations in China also restrict supply growth in that region. • New projects tend to be more economically challenging than existing or recently closed operations due to a range of factors including grade, size and location. • The combination of current low stocks, reasonable demand growth prospects and limitations on future supply should be supportive of the zinc price over the medium term. • Rosebery has life of mine agreements in place with Nyrstar covering 100% of zinc and lead concentrate production, which is sold to them on international terms. Currently, Rosebery's copper concentrate is sold to China Minmetals for use by Chinese smelters under a two-year sales contract (2020-21). Gold dore is sold to the Perth Mint.

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
Economic	• Rosebery is an established operating mine. Costs used in the NPV calculation are based on historical data. Revenues are calculated based on historical and contracted realisation costs and realistic long-term metal prices. • The mine is profitable, and life-of-asset economic modelling shows that the Ore Reserves are economic. The Life of Asset (LOA) financial model demonstrates the mine has a positive NPV. MMG uses a discount rate appropriate to the size and nature of the organisation and deposit.
Social	• The West Coast area of Tasmania has a strong, long history with mining. There are a large number of people employed by the mine from the town of Rosebery and the local government area. • Community issues and feedback associated with the Rosebery mine are generally received through the MMG Community Liaison Office. All issues are reported on a Communication and Complaints form and forwarded to the Administration and Community Assistant for action, per the Site Complaints Procedure. The Administration and Community Assistant makes direct contact with the complainant to discuss the issue and once details are understood, communicates with the department concerned to resolve the matter through to resolution. • During the 2019/2020 reporting period, a total of five community complaints were received: two linked to noise from the rock breaker; one relating to a rude and ignorant employee; and one linked to water discharge/ seepage. All complaints were investigated and resolved in consultation with the complainant. 2018/2019 reporting period a total of 12 community complaints were received: one linked to noise from the crusher alarm; one relating to train idling; 9 issues relating to dust from Bobadil Tailings dam; the other complaint related to pollution of Rosebery Creek. All complaints were investigated and resolved in consultation with the complainants. • A key social condition linked to the TSF was development of a community walking track and recreation area. Rosebery met this condition in late 2019, with completion of the construction of the track. This work was not able to be part of the project due to budget and was undertaken using funds from the scrap metal community fund. • In 2019, Rosebery undertook a range of social performance activities, including updating the Rosebery social baseline study; Social Impact and Opportunities Assessment; and development of a management plan to support future social performance and impact management activities. The final report has been presented and the SIMP has been developed but a number of the actions have been delayed to limited interaction with the community during the COVID-19 pandemic.
Tailings	• The table below outlines the expected tails storage capacities available at the start of 2020 for Bobadil TSF and 2/5 Dam TSF. The construction of Stage 1 of the 2/5 Dam TSF was completed in April 2018, with the construction of Stage 2 starting in 2021. Bobadil TSF Stage 10 lift construction is expected to be completed mid-2021, with tailings distributed between the two TSFs. The pre-feasibility study of the Stage 3 raise at 2/5 Dam TSF was completed early 2020.

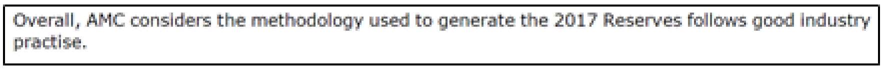
Location	**Closure Estimate** (Tonnes)	**Assume Available*** (Tonnes)
WRD Assay Creek	330,000	330,000
WRD Overflow Car-park	220,000	-

<table>
<tr><th colspan="2">Section 4 Estimation and Reporting of Ore Reserves</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><td>WRD behind 7L workshop</td><td>570,000</td><td>570,000</td></tr>
<tr><td>WRD next to crusher</td><td>540,000</td><td>-</td></tr>
<tr><td>WRD along William Street</td><td>60,000</td><td>60,000</td></tr>
<tr><td>WRD next to Geo Core Shed</td><td>130,000</td><td>130,000</td></tr>
<tr><td>WRD next to Services Workshop (BLDS16)</td><td>60,000</td><td>-</td></tr>
<tr><td>4L Waste</td><td>500,000</td><td>500,000</td></tr>
<tr><td>TOTAL</td><td>2,410,000</td><td>1,590,000</td></tr>
</table>
*Assumes available for backfill activities before closure, WRD location not impacting the required infrastructure.
</td></tr>
<tr><td>Classification</td><td>

Ore Reserves classification follows the Mineral Resources classification where Proved Ore Reserves are only derived from Measured Mineral Resource, and Probable Ore Reserves are only derived from Indicated Mineral Resources. No Inferred Mineral Resources have been included in the Ore Reserves.
The Competent Person deems this approach is aligned with the JORC Code and is appropriate for the classification of the Rosebery Ore Reserves.
Where stopes contain more than one Mineral Resources category, then the individual classification components have been treated and reported as outlined above.

</td></tr>
<tr><td>Audit or Reviews</td><td>

The Processing and Mineral Resources competent person at Rosebery reviewed the NSR script to ensure correct operation for each model. Detail has been added to the script and a background document to track when and who has made changes. 2020 NSR Script was soley processed in the Vulcan Software unlike utilising DataMine Software in previous.
Mineral Resources block models were validated during the design and evaluation process.
There has been an external audit carried out on the Ore Reserves process during 2018 for the 2017 Ore Reserve estimation. (AMC Consultants 20 July 2018). Below overall comment from AMC;


Overall, AMC considers the methodology used to generate the 2017 Reserves follows good industry practise.

In November 2019, AMC carried out a reviewing report for Rosebery's Underground Mine Performance. This utilised data spanning between January 2018 to July 2019. The overall outcome was that the mine was operating satisfactorily along with suggested areas of improvements to which the mine was already addressing.

</td></tr>
<tr><td>Discussion of relative accuracy/confidence</td><td>

The key risks that could materially change or affect the Ore Reserves estimate for Rosebery include:

Seismicity: The Rosebery mine has had several significant seismic events in the past. Potential exists for future seismic events to occur that may potentially impact on the overall recovery of the Ore Reserves.
Induced stress: the depth of mining at Rosebery leads to drive closure and difficult mining conditions. This may impact the ability of Rosebery to extract the ore reserves contained within sill pillars.

</td></tr>
</table>

Section 4 Estimation and Reporting of Ore Reserves	
Criteria	**Commentary**
	○ Ventilation/Heat: as Rosebery continues to mine at depth and in multiple areas, primary ventilation needs to be shared adequately and heat management practices enforced. This may impact the extraction and haulage of ore and advancement of development. • Resource Delineation & Reserve Definition drilling is applied to define tonnage and grade before mining locally. Ore Reserves based on all available relevant information. ○ The Proved Ore Reserves is based on a local scale and is suitable as a local estimate. ○ The Probable Ore Reserves based on local and global scale information. • Ore Reserves accuracy and confidence that may have a material change in modifying factors is as discussed throughout this table. • The Ore Reserve is based on the results of the operating mine. There is confidence in the estimate compared with actual production data.

6.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 22.

In compiling the Ore Reserves, the Competent Person has reviewed the supplied information for reasonableness but has relied on this advice and information to be correct.

Table 22 Contributing Experts – Rosebery Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Lon Garrick, Senior Resources Geologist MMG Ltd (Melbourne)	Geological Mineral Resources
James Earp, Senior Business Analysist, MMG Ltd (Melbourne)	Economic Assumptions, Marketing, Sea Freight and TC/RC
Mark Lollback, Supt.Metallurgist, MMG Ltd (Rosebery)	Metallurgy
Claire Beresford, Senior Business Analysist, MMG Ltd (Melbourne)	Mining capital and Operating Costs
Ben Small, Senior Geotechnical Engineer, MMG Ltd (Rosebery)	Geotechnical
Dean Wall, Senior Life of Asset Planning Engineer, MMG Ltd (Rosebery)	Mining Parameters, Cut-off estimation, Mine Design and Scheduling
Pamela Soto, Principal Tailings & Water Engineer, MMG Ltd (Rosebery)	Tailings Facilities
Adam Pandelis, Senior SHEC Advisor, MMG Ltd (Rosebery)	Environmental
Jon Crosbie, Group Manager - Closure & Remediation MMG Ltd (Melbourne)	Mine Closure

6.3.4 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Ore Reserve statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

6.3.4.1 Competent Person Statement

I, Karel Steyn, confirm that I am the Competent Person for the Rosebery Ore Reserve section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australasian Institute of Mining and Metallurgy
- I have reviewed the relevant Rosebery Ore Reserve section of this Report, to which this Consent Statement applies.

I am a full-time employee of STEKA Mining Consultants Pty Ltd at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Rosebery Ore Reserve section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Rosebery Ore Reserve.

6.3.4.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Rosebery Ore Reserves - I consent to the release of the 2020 Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised

Karel Steyn MAusIMM (#309192)

02/12/2020

Date:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

Signature of Witness:

Neil Colbourne
Melbourne, VIC

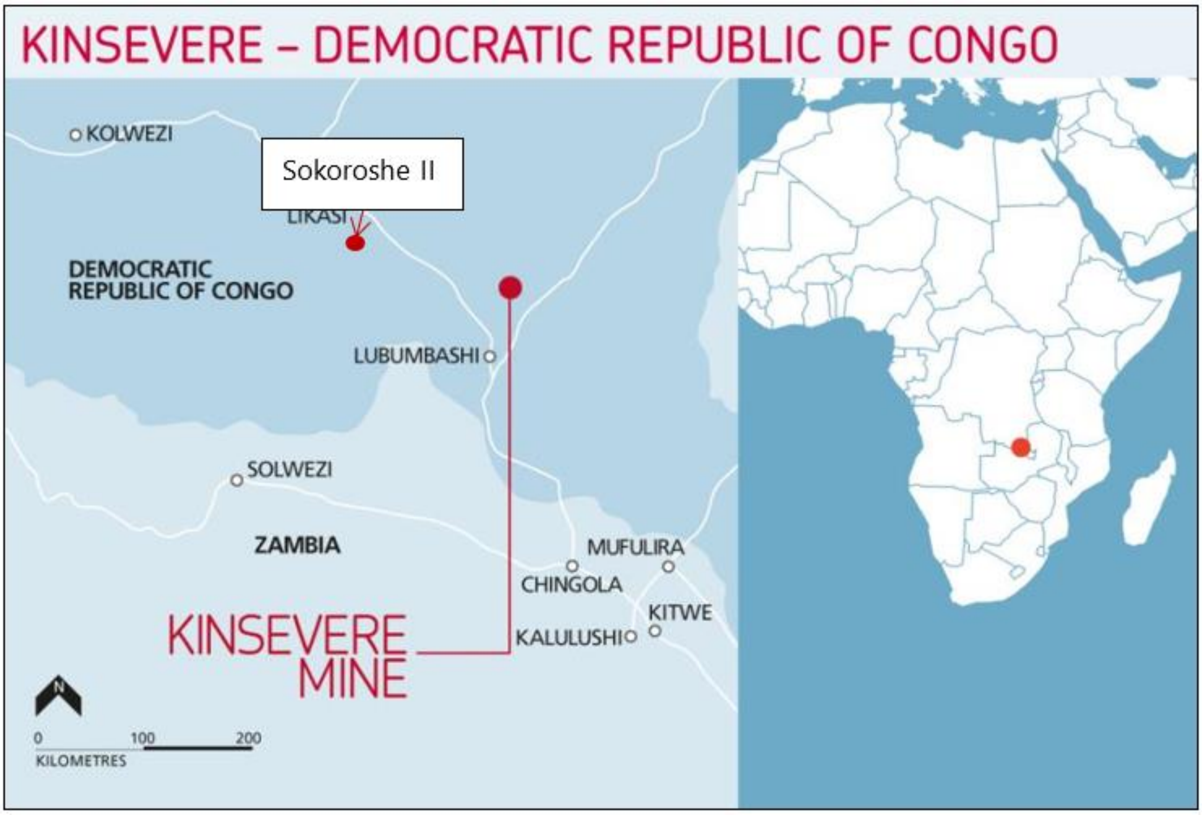
Witness Name and Residence: (e.g. town/suburb)

7 SOKOROSHE II

7.1 Introduction and Setting

The Sokoroshe II Project is located on the license PE538 in Democratic Republic of Congo, DRC. The PE538 tenement belongs to the DRC state owned mining company GECAMINES and is part of a package of 8 tenements granted to MMG under an amodiation agreement which became effective on 13 May 2014. The project is situated in the South East part of the Congolese Copperbelt (CCB), located approximately 43Km northwest of Lubumbashi and is approximately 25Km west of the Kinsevere mine as the crow flies (See Figure 7-1).

Figure 7-1 Sokoroshe II project location



There is currently no mining occurring at the Sokoroshe II mineral deposit, but it was illegally mined from 2010 to 2013 by a small-scale mining cooperative.

7.2 Mineral Resources – Sokoroshe II

7.2.1 Results

The 2020 Sokoroshe II Mineral Resources are summarised in Table 23 2020 Sokoroshe II Mineral Resources tonnage and grade (as at 30 June 2020). Ore Reserves are not reported for Sokoroshe II.

Table 23 2020 Sokoroshe II Mineral Resources tonnage and grade (as at 30 June 2020)

Sokoroshe					Contained Metal		
Oxide Copper[1]	Tonnes (Mt)	Copper (% Cu)	Copper (AS[1] % Cu)	Cobalt (% Co)	Copper ('000)	Copper AS ('000)	Cobalt ('000)
Measured	-	-	-	-	-	-	-
Indicated	1.9	2.3	1.9	0.33	44	36	6
Inferred	-	-	-	-	-	-	-
Total	**1.9**	**2.3**	**1.9**	**0.33**	**44**	**36**	**6**
Primary Copper[2]							
Measured	-	-	-	-	-	-	-
Indicated	-	-	-	-	-	-	-
Inferred	0.83	1.8	0.3	0.51	15	3	4
Total	**0.83**	**1.8**	**0.3**	**0.51**	**15**	**3**	**4**
Oxide Cobalt[3]							
Measured							
Indicated	0.37	0.56	0.28	1.0	2.0	1.0	3.8
Inferred	-	-	-	-	-	-	-
Total	**0.37**	**0.56**	**0.28**	**1.0**	**2.0**	**1.0**	**3.8**
Primary Cobalt[4]							
Measured							
Indicated							
Inferred	0.10	0.25	0.10	0.36	0.3	0.1	0.4
Total	**0.10**	**0.25**	**0.10**	**0.36**	**0.3**	**0.1**	**0.4**
Combined Total	**3.2**				**61**	**40**	**15**

[1] 0.9% Cu cut-off grade

[2] 0.8% Cu cut-off grade

[3] 0.3% Co cut-off grade

[4] 0.2% Co cut-off grade

All Mineral Resources except stockpiles are contained within a US$3.62/lb Cu and US$25.79/lb Co pit shell

Contained metal does not imply recoverable metal.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

7.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 24 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 24 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Sokoroshe II Mineral Resource 2020

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sampling techniques	• A combination of reverse circulation drilling (RC) and diamond drilling (DD) were completed in the Project area. • Mineralised zones within the drill core were identified based on combined parameters, including lithological and alteration logging, mineralogical logging and systematic spot pXRF readings. • DD core was sampled nominally at 1m intervals within mineralised zones while unmineralised zones were sampled at to 2m - 5.3m intervals. Sampling was carried out by longitudinally cutting PQ and HQ drill core using an Almonte automatic diamond saw and sampling half-core, with half-core retained for future reference. PQ drill core was quartered and sampled. Three-quarters of the core was retained for future reference. • RC drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Lithological and mineralogical logging, supported by systematic spot pXRF readings, were used to identify mineralised and unmineralised zones in the RC chips. Samples from mineralized zones were riffle split every 1m to obtain a representative (~2.5kg) sample. Samples from unmineralised zones were riffle split and composited to 2m intervals. Wet samples were sun dried in ambient air before splitting and compositing. Overall, 81% of the samples were less than 2m, with mineralised samples taken at nominal 1m intervals. • Samples were crushed, split and pulverised (>85% passing 75 µm) at an onsite ALS laboratory at the MMG core yard facility in Lubumbashi. 100 grams of pulp material was sent to the SANAS accredited ALS Laboratories in Johannesburg. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the nature of mineralisation within the Project (sediment hosted base metal mineralisation) by the Competent Person.
Drilling techniques	• Diamond drilling: PQ and HQ sizes, with triple tube to maximise recovery. At the end of each drilling run the core was marked with an orientation mark by using a REFLEX ACE tool. An orientation line was then drawn along the axis of the core if two consecutive orientations marks could be aligned by docking core pieces. • Reverse circulation drilling: A hammer bit was used for drilling a 5.25-inch (133mm) diameter hole. The cyclone was manually cleaned at the start of each shift, after any wet samples, and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the RC rods, hoses, and cyclone after each rod.
Drill sample recovery	• DD core recovery was measured using tape measure, measuring actual core recovered between the core block versus drilled interval. Measured accuracy was down to 1cm. Overall DD core recovery averaged 85% across the Project area. • RC chip recovery was measured by weighing each 1m sample bag immediately following collection from the cyclone. Sample returns for RC drilling has been calculated at 72%

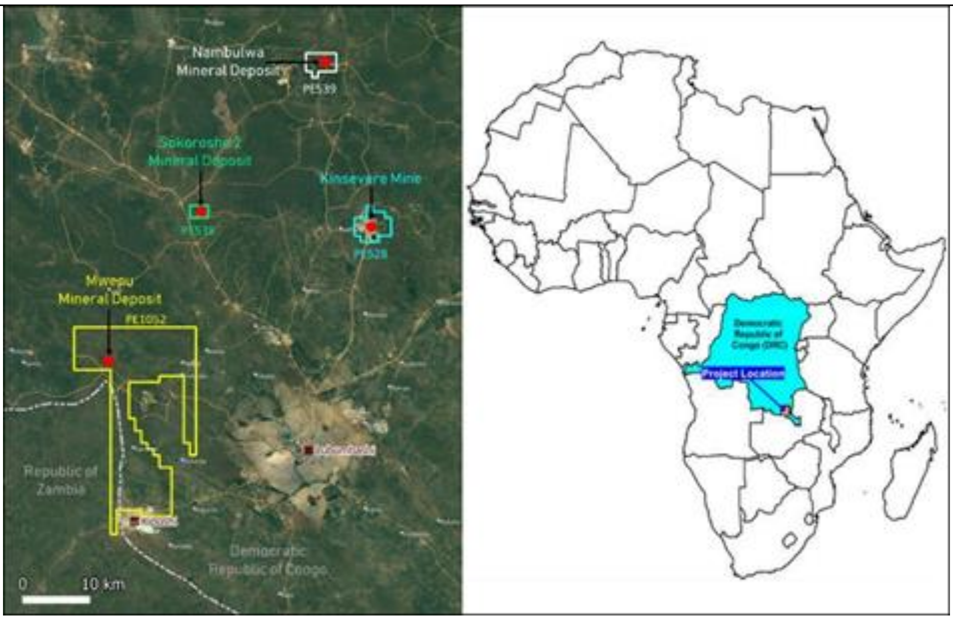
Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	- Sample recovery during diamond drilling was maximised using the following methods: o Short drill runs (~50cm) o Using drilling additives, muds and chemicals to improve broken ground conditions. o Using the triple tube methodology in the core barrel. o Reducing water pressure to prevent washout of friable material. - Sample recovery during RC drilling was maximized using the following methods: o Adjusting air pressures to the prevailing ground condition. o Using new hammer bits and replacing when showing signs of wear. - No relationship between sample recovery and grade was demonstrated in diamond drilling drill results.
Logging	- DD core and RC chips have been geologically logged and entered into the MMG database (Geobank). The level of detail supports the estimation of Mineral Resources. - Qualitative logging includes lithology, mineralisation type, oxidation type, weathering type, colour and alteration types. Quantitative logging includes mineralisation mineral percentage, alteration mineral percentage and in the case of core, RQD and structural data have been recorded. - All core and chip samples have been photographed (wet and dry). - 100% of core and chips have been logged.
Sub-sampling techniques and sample preparation	- DD core was split in half longitudinally (HQ size) or quartered (PQ size) using an Almonte automatic diamond saw. Sample lengths were cut as close to nominal 1m intervals as possible while also respecting geological contacts. Samples were generally ~2.5kg in weight. - RC samples were collected from a cyclone every meter by a trained driller's assistant. If the sample was dry the sample was passed through a riffle splitter and a ~2.5kg split was collected into a pre-numbered clear plastic bag. Residual material was sampled and sieved for collection into chip trays for logging and the remainder returned to the larger poly-weave bag (bulk reject). The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet, the sample was sun and air dried before being split according to the above procedure. Field duplicates were inserted at a rate of approximately 5% to ensure sampling precision was measured. - Samples from individual drillholes were sent in a single dispatch to the onsite ALS laboratory at the MMG core yard facility in Lubumbashi. - The drill core and drill chip samples are received, recorded on the sample sheet, weighed, and dried at average temperature of 105◦C for 8 hours (or more) depending on wetness at the sample preparation laboratory. - Samples were crushed and homogenised in a jaw crusher to >70% passing 2mm. The jaw crusher was cleaned with a barren quartz blank after every crushed sample. The sample size was reduced to 1000g in a riffle splitter and pulverised in an LM2 pulveriser

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	to >85% passing 75 microns. QC grind checks were carried out using wet sieving at 75 microns on 1 in 10 samples. • 100 grams of pulp material were sent to the SANAS accredited ALS Chemex Laboratories in Johannesburg. • Crush and pulp duplicates were submitted for QAQC purposes. Certified reference material (high, medium, and low copper grades) was also inserted and submitted to ALS for analysis at a rate of 3 per 30 samples. • The sample size is appropriate for the grain size and distribution of the minerals of interest.
Quality of assay data and laboratory tests	• ALS Chemex Laboratory follows the preparation protocol PREP-31B for drill core and drill chip samples. • ALS Chemex Laboratory provides 48 Multi-Elements geochemical by HF-HNO3-HClO4 acid digestion, HCl leach followed by ICP-AES and ICP-MS analysis. Four Acid digest is considered a total digestion. Acid soluble copper assays were only performed when the total copper assay was greater than 1,000 ppm. • No geophysical tools, spectrometers (apart from those used in the assay laboratory) or handheld XRF instruments have been used for the estimation of the Sokoroshe II Mineral Resource. • ~15% QAQC samples were incorporated, including blanks, duplicates (field, crush, and pulp) and certified reference material per sample analysis batch. Umpires were selected and analysed at Intertek Genalysis using similar methods as ALS Chemex. Results indicate that assay analysis has been undertaken at an acceptable level of accuracy and precision. • No significant QAQC issues have been found. Standards deliver less than 2% relative bias. Duplicate results show very good correlation against original results.
Verification of sampling and assaying	• Significant intercepts have been verified by comparison against the geological log, which has been checked by several MMG personnel. • Twin holes have been drilled on section 536860mE with comparable results being returned for three closely spaced drill holes. • Primary data is stored in a Geobank database, which is maintained according to MMG database protocols. Data is logged, entered and verified in the process of data management. Database is stored on MMG server and routinely backed up. • No adjustment has been made to assay data.
Location of data points	• Planned collar positions for both diamond drilling and RC drilling were located using handheld GPS devices to ±5m accuracy. • Post drilling, actual collar positions were surveyed using DGPS (Geomax Zenith 25 Pro and Topcon Hiper II) and are considered to be of high accuracy. • Sokoroshe II uses the projected coordinate system: WGS84 Universal Transverse Mercator (UTM), ellipsoid 35 south. • The TN14 GYROCOMPASS™ was used to align the drill rig to the correct azimuth and dip angles.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	• Downhole surveys were done using the REFLEX EZ-TRAC survey instrument. Downhole surveys were not carried out on RC drillholes. Azimuth and dip were extrapolated from measurements taken from the surface using compass and clinometer. • The surface Digital Terrain Model (DTM) for the Project was generated from the Airborne Geophysics XCalibur surveys carried out in 2015. The dataset was found to be adequate with topographic control to ±3m accuracy. High resolution DEM for the Sokoroshe II pit area was surveyed with LiDAR technology in 2017.
Data spacing and distribution	• DD and RC drillholes were predominantly drilled with dips of between 50° and 60° to intersect generally steeply dipping mineralisation. • Drilling azimuths were as close as practical to orthogonal to the mineralised trend. Drill hole data are spaced on approximately 40m (N-S oriented) drill sections with holes on section spaced 40 to 70m. • Additional drilling is required to satisfy local estimate of tonne and grades to a Measured classification. • No additional sample compositing has been applied apart from sample length selection.
Orientation of data in relation to geological structure	• The orientation of sampling is across the mineral deposit and is considered to represent unbiased sampling of the deposit. However, alternate drilling orientations have not been undertaken to confirm this. • No sampling bias is thought to have been introduced due to the relationship of drilling orientation to key mineralised structures.
Sample security	• Samples were transported from the field and delivered to the sample processing facility in Lubumbashi for cutting and preparation. A single cab pick-up was used for the transport. Polyethylene foam, tarpaulins, and cargo nets were used to secure the load and to avoid possible shifting of core during transport. • RC chip sampling was conducted in the field. Chip samples were packed in a labelled plastic bag along with a labelled plastic ID tag. • The plastic bag was tied with cable ties to secure the sample and to prevent contamination. • A set of 15 plastic sample bags were packed into labelled poly-weave bags, ready to be shipped from the field to the sample preparation laboratory in Lubumbashi. • Field packing documents and sample sheets were prepared and sent together with the core trays and poly-weave bags to the sample preparation laboratory in Lubumbashi. • After sample preparation, bar-coded envelopes of 100-200g of pulp for each sample were inserted into boxes of ~35 envelopes each, labelled with dispatch ID and laboratory destination to be sent by DHL courier to ALS Chemex in Johannesburg. • Two sets of duplicate pulps of 100-200g were inserted into labelled boxes of ~35 envelopes each to be stored on site in storage containers. • The shipment of pulps from Lubumbashi to ALS laboratories was done using DHL Courier services with waybill number for tracking.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	• The Lubumbashi sample preparation laboratory utilizes the ALS-Chemex LIM System installed at Kinsevere mine site, generating a unique lab workorder for each batch sample in the analytical chain.
Audit and reviews	• No external audits or reviews of sampling techniques and data have been conducted for the Sokoroshe II mineral deposit. • Data has been reviewed by the Competent Person as part of this Mineral Resource estimate. No significant issues were identified.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Mineral tenement and land tenure status	• The Sokoroshe II project consists of one mining tenement or Permis d'Exploitation, PE538, with an area of 6 cadastral units (about 5.1 Km2). The mineral rights of PE538 are held by La Générale des Carrierés et des Mines (Gécamines), the DRC state-owned mining company. MMG rights to the tenement are granted under the terms of the Mutoshi Swap Framework Agreement. • MMG declared an Inferred Mineral Resource on 17 March 2017 to retain the lease holding and transition it from a status of Exploration Period to Development Period under the terms of the agreement. According to the agreement, the "Development Period" shall start on the date on which the first Development Work Program has been agreed between Gecamines and MMG Kinsevere (the Development Period start date). The Development Period shall have a duration of 5 calendar years (1825 days) from the Development Period start date. MMG Kinsevere must establish Proved Reserves to achieve a viable economic exploitation of the deposits contained in the retained permits viz. PE538 Sokoroshe 2. MMG Kinsevere submitted its first Development Work Program to Gecamines for approval on 4 July 2017. Pursuant to clause 6.2.4(i), Gecamines was provided with 30 days to express its comments or disagreement on the first Development Work Program, which will then be deemed accepted in the absence of receipt of comments or disagreement of Gecamines within this period. MMG Kinsevere did not receive any comments or disagreement from Gecamines within the 30-day period (or any following period). Accordingly, the first Development Work Program was deemed accepted by Gecamines as from 4 August 2017 and the Development Period Start Date was also 4 August 2017.
Exploration done by other parties	• Soil sampling on 120x120m grid and geology mapping were done in 1976 by Gecamines. No data available for this work. • Ruashi Holdings/Metorex carried out unknown exploration work in 2005 at Sokoroshe II. No data available for this work.
Geology	• Sediment-hosted copper deposit, hosted in the lower part of the Neoproterozoic Katanga Supergroup in the Roan stratigraphic group. • Copper mineralisation occurs mainly as oxide fill and replacement , veins and disseminations in variably weathered, laminated dolomites and carbonaceous siltstones.

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	• Primary copper mineralogy comprises chalcopyrite, bornite, and chalcocite in decreasing abundance. Oxide copper mineralogy comprises primarily malachite with trace amounts of chrysocolla.
Drill hole information	• All drillhole information has been considered in estimating the Mineral Resource, and as this is a Mineral Resource report and not a public report of individual exploration results a full listing of results is not provided here.
Data aggregation methods	• Several domains and variables have a restriction on grade for the estimate. Top cut values are based on statistical analysis in effort to reduce the grade variation within the domain and preventing uncontrolled grade smearing. • No reporting of metal equivalent values has been undertaken.
Relationship between mineralisation width and intercept lengths	• This is a Mineral Resource estimate and no down hole length intervals are reported separately. All intervals have been considered within mineralised domains for the estimation of grades within the Mineral Resource. • Drill holes have been drilled on N-S sections at approximately 60° to the north. Mineralisation is oriented with an E-W strike and dipping approximately 60° to the south.
Diagrams	 *Figure 1: Sokoroshe II project location*

<table>
<tr><th colspan="2">Section 2 Reporting of Exploration Results</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

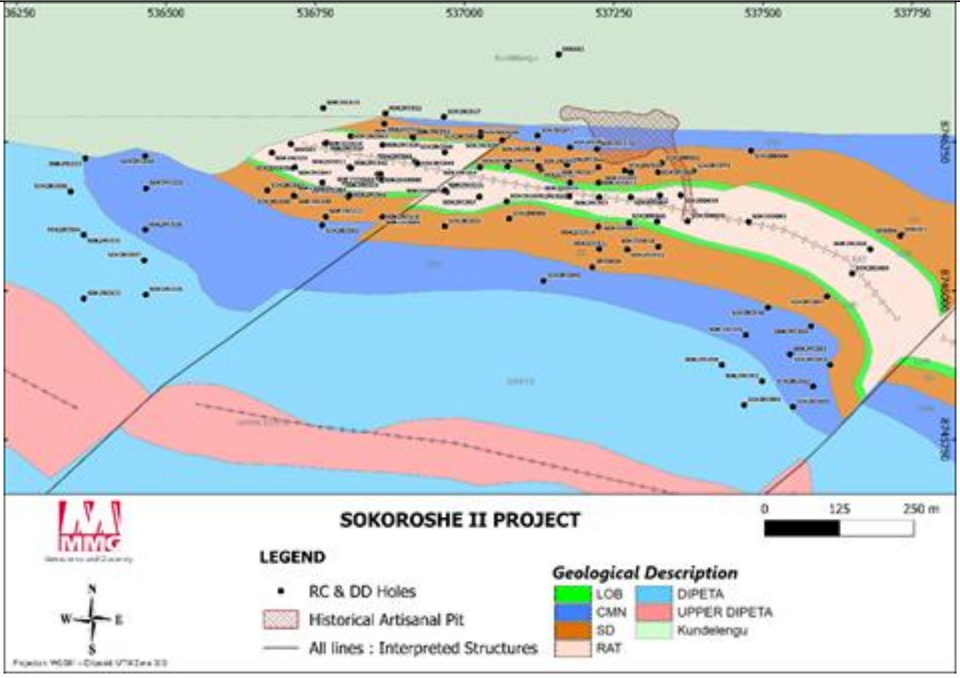


Figure 2: Geology map and drill hole locations for the Sokoroshe II project.

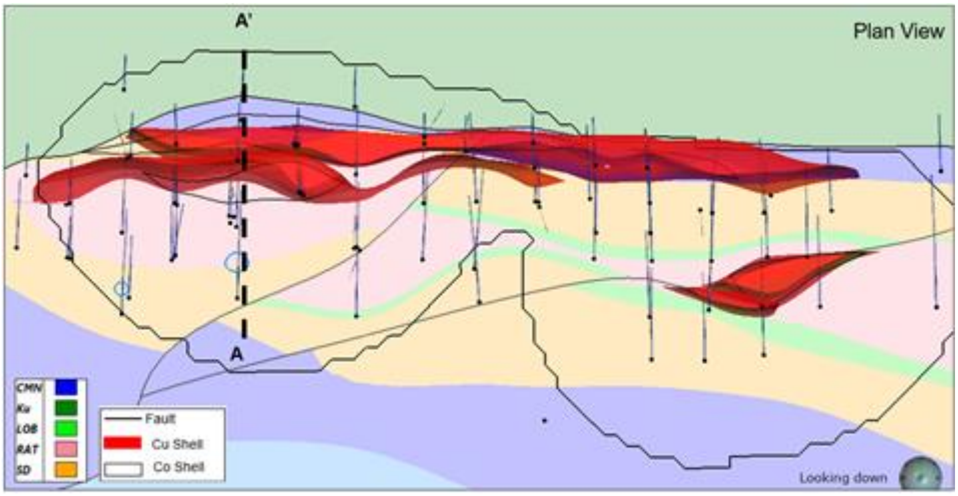


Figure 3: Sokoroshe II geology and copper & cobalt grade shells. The dashed line designated A – A' is the location of the cross section shown in the following figure

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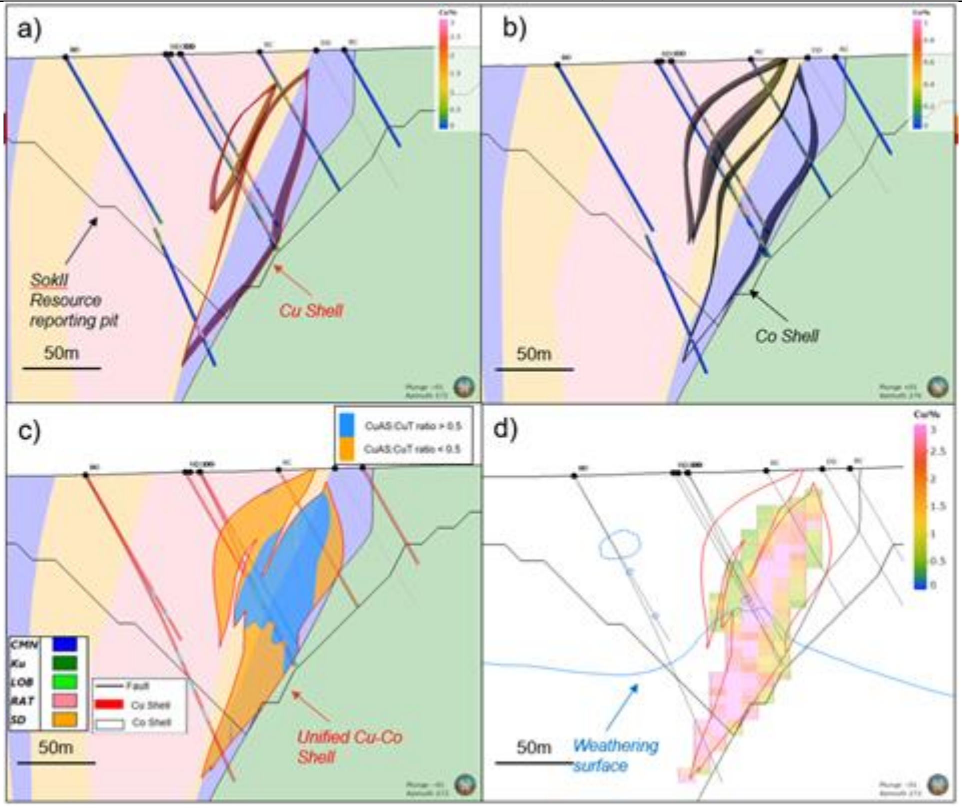
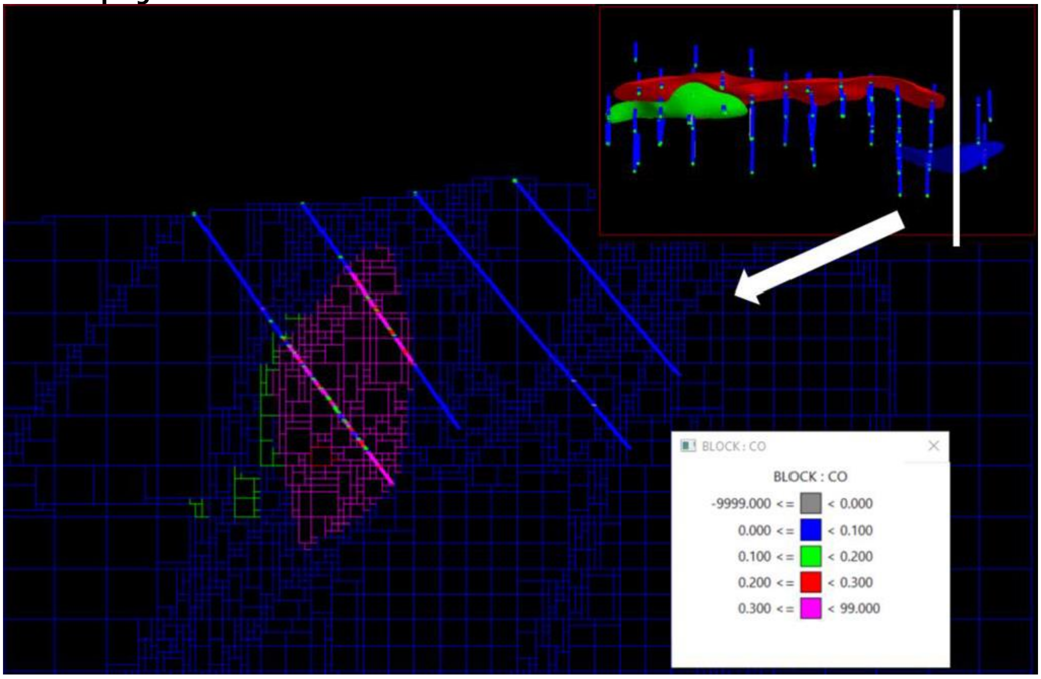
Section 2 Reporting of Exploration Results

Criteria	Commentary
	 *Figure 4: Cross section through Sokoroshe II Cu-Co deposit at 536874mE showing:* *a. Outline of the copper grade shell with downhole copper assays relative to geology and reporting pit.* *b. Outline of the cobalt grade shell with downhole cobalt assays relative to geology and reporting pit.* *c. Unified Cu-Co shell coloured by ore type with downhole CuAS:CuT ratio data relative to geology and reporting pit.* *d. Distribution of copper within the 2020 SokII MRE showing blocks > 0.4% CuT. Note* model has been regularised* **Section view (537325mE) showing drilling and new Cobalt mineralisation based on the 2019 drill campaign**  *Figure 5: Section view (537325mE) showing drilling and new Cobalt mineralisation based on the 2019 drill campaign*

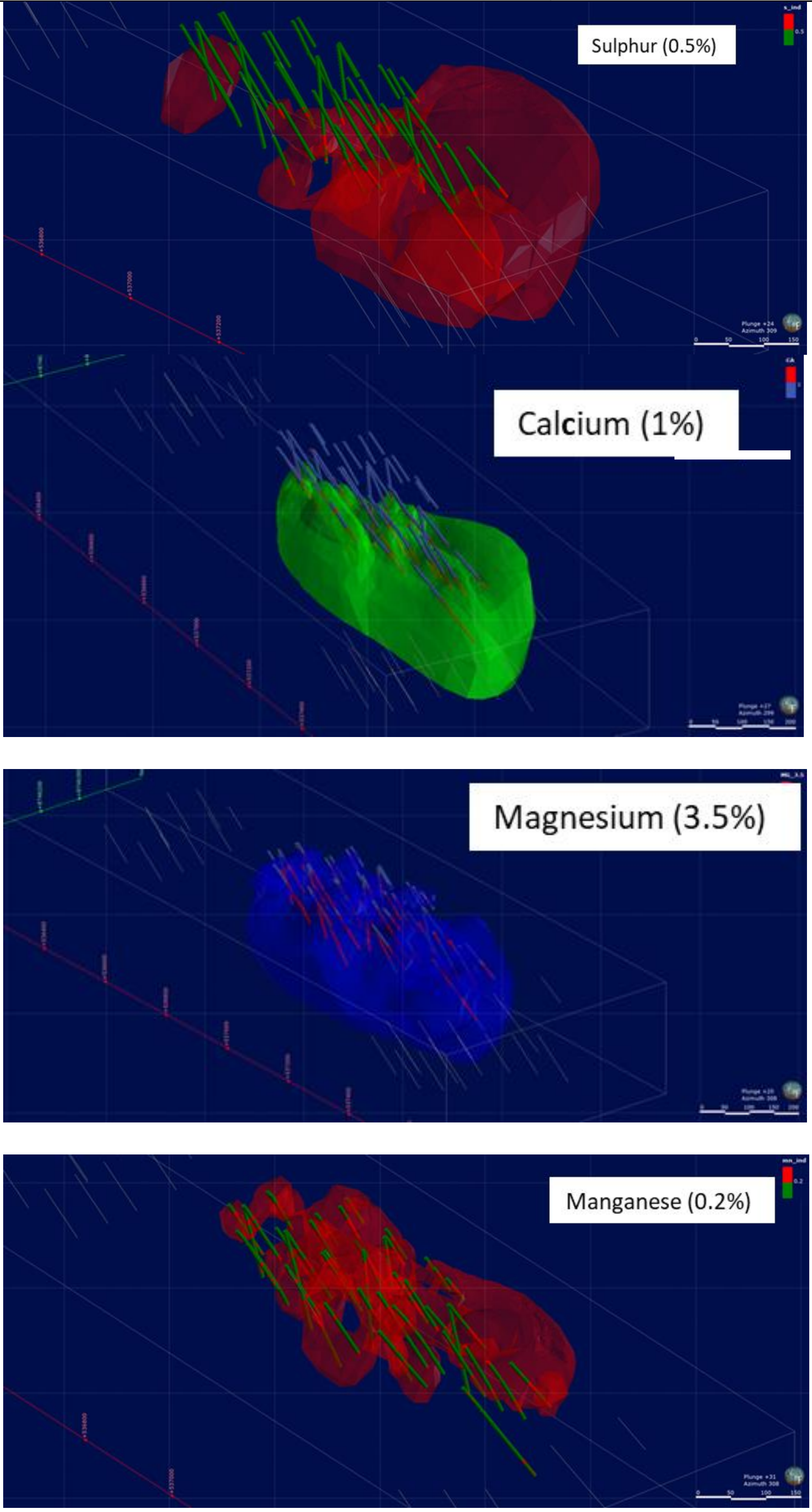
<table>
<tr><th colspan="2">Section 2 Reporting of Exploration Results</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>


Figure 6: Additional Domains in 2020 Resource Estimate – S, Ca, Mg and Mn
</td></tr>
</table>

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Balanced reporting	- This is a Mineral Resource estimate and not a report of exploration results. - All drill holes and assay results have been considered in the construction of low- and high-grade domains for the Sokoroshe II Mineral Resource estimate.

Other substantive exploration data	- Airborne Geophysics - TEMPEST survey
	- Airborne EM, magnetics, and radiometric were flown at the end of 2013. A channel 7 EM conductor was identified to the East of Sokoroshe II occurrence.
	- Geological mapping was conducted in 2014. Mapping results indicated lithologies from the Roan stratigraphic unit, the main host rock to the mineralization. Younger lithologies were also noted from the Nguba and Kundelungu Formations.
	- Surface geochemistry:
	  ○ Termite mound sampling on 100m x 100m grid was completed in 2014, which effectively identified copper anomalous zones within the tenement.
	  ○ Airborne Geophysics - Xcalibur survey, flown in 2015
	  ○ Magnetics – effective at mapping structural and stratigraphic domains
	  ○ Radiometrics - effective at mapping lithological contrasts and regolith domains.

Further work	- Further activities are planned for the 2020 season:
	  ○ Geotechnical and geohydrological drilling
	  ○ Detailed mining and investment studies.
	  ○ Update of the Environmental and Social Impact Statement.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The MMG Exploration database systems are SQL server and GBis/GeoBank management software. All geological and analytical data are managed in MMG's Corporate Geoscience Database. GIS data are stored in secure shared folders on the Lubumbashi server. • All data capture via GM logging profiles having strong internal validation criteria. The technician/geologist conducts first validation steps by checking intervals, description and accuracy of records on their respective tough books. • Validation rules are predefined in each of the database tables. Only valid codes get imported into the database. • The sampling and geochemical data are stored in a local version of SQL database that gets replicated to a similar version on the Head Office server with daily, weekly and monthly backups.
Site visits	• The Competent Person visited the Sokoroshe II site in February 2018 and has visited the Kinsevere deposit and several other oxide copper deposits in the Katanga province, which are also similar in style to the Sokoroshe II mineral deposit.
Geological interpretation	• There is reasonable confidence in the interpretation of geology which forms the domains used in the Mineral Resource estimate. • Geological interpretation of the mineral deposit is based on available drilling and reports of observed geology and structure at surface. Infill drilling has confirmed the previous geological interpretation. • Interpreted geology domains have been used to constrain blocks and grades in the model used for Mineral Resource estimation.
Dimensions	• Mineralisation is interpreted to be up to 650m along strike, 180m down dip and 30m thick. Actual dimensions are expected to vary.
Estimation and modelling techniques	• Estimation method is considered appropriate for oxide and transitional copper mineralisation at Sokoroshe II. The method included ordinary Kriging for the estimation of Cu, CuAS, and Ratio (CuAS/Cu) within hard boundaries for copper domains, where Cu > 0.4%. Maptek Vulcan software was used for estimation. Quantitative Kriging neighbourhood analysis was applied for the selection of estimation parameters. A minimum of 4 and maximum of 16 sample composites of 1m length were used. Search neighbourhood was an ellipse with orientation comparable to geological domains having a major distance of 100 metres, semi major distance of 100 metres and minor distance of 30 metres, for the first pass. Samples were composited to 1m interval which is the same as the nominal sample spacing in mineralised rock. Discretisation was set to 8x4x4 (x, y, z). Fe and U were included within Copper domains. Based on drilling during 2019, separate domains were developed for Cobalt, where Co > 0.1%, and similar estimation parameters, as used for copper, were utilised. • Al, Ca, Mg, Mn and S have also estimated using Ordinary Kriging within individual hard boundary created using Leapfrog software. The variograms were individually calculated and modelled using Isatis software and Estimate parameters set up accordingly. • Check estimates were undertaken as basic dimensions multiplied by the density to give tonnes and grades reported from declustered statistics. In addition, a basic sectional

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	estimate was conducted prior to block modelling. All results were found to be comparable. • No assumed by-product recovery was applied; however, ratio between CuAS and Cu estimated in the block model. • Block model is not rotated with block size was 20mE by 10mN by 10mRL with sub-blocking to 5mE by 2.5mN by 2.5mRL. The block size provides a reasonable representation of the interpreted mineralised domains. Block size is less than the drill hole spacing of approximately 40m sections with holes spaced 40 metres on section. However, samples are spaced at approximately 1 metre intervals down hole. • Selective mining units have not been modelled. • No assumptions have been made about correlation of variables • Geological interpretation is represented by lithological triangulations that have been used for the construction of block model domains and selection of sample composites, and used for coding of Bulk Density values • No grade cutting or capping was applied for mineralised domains Cu and CuAs; although grade distributions for are positively skewed but the coefficient of variation is low (0.86) and arguably no grade restriction is required. However, grade capping was applied to waste domain and several variable such Co Mg and Mn to control the influence of outlier values into block estimates. • Block model domains were compared against domain wireframes and found to be suitably constructed. Estimated block grades were compared against drill hole grades on sections and plans and found to be comparable. Statistics for composite samples and blocks were also compered and found to be comparable.
Moisture	• Estimated tonnes are on a dry basis.
Cut-off parameters	• The Mineral Resource has been reported above a total copper cut-off grade of 0.8%. Additional cobalt Mineral Resource (outside of the copper cut-off of 0.8%), has been reported above a total cobalt cut-off grade of 0.2%. • The reported Mineral Resources have also been constrained within a US$3.62/lb copper and US$25.79/lb cobalt whittle pit shell. The reporting cut-off grade and the pit-shell price assumption are in line with MMG's policy on reporting of Mineral Resources which is prospective for future economic extraction.
Mining factors or assumptions	• The mining method is assumed to be open pit with trucks and excavators.
Metallurgical factors or assumptions	• Sokoroshe II ore is intended to be processed at Kinsevere Mine shortly after the implementation of the Kinsevere Expansion Project (currently pending board approval). • Sokoroshe II ore is relatively simple in composition (malachite with minor chalcocite/bornite) and very similar to the oxides and transitional sulphides present at Kinsevere.

Section 3 Estimating and Reporting of Mineral Resources

Criteria | **Commentary**

- At this stage of project development metallurgical recovery assumptions are based on KEP recoveries.
- As such, the criteria impacting the resource cut-off grades and reportable pit shell inputs are based on the proposed Kinsevere Expansion Project (KEP) flowsheet and infrastructure upgrades. The upgraded flowsheet will consist of the following changes:

- Oxide pre-flotation circuit and leach tank modifications 2.3mtpa

- Oxide leach upgrades to convert to reductive leach conditions

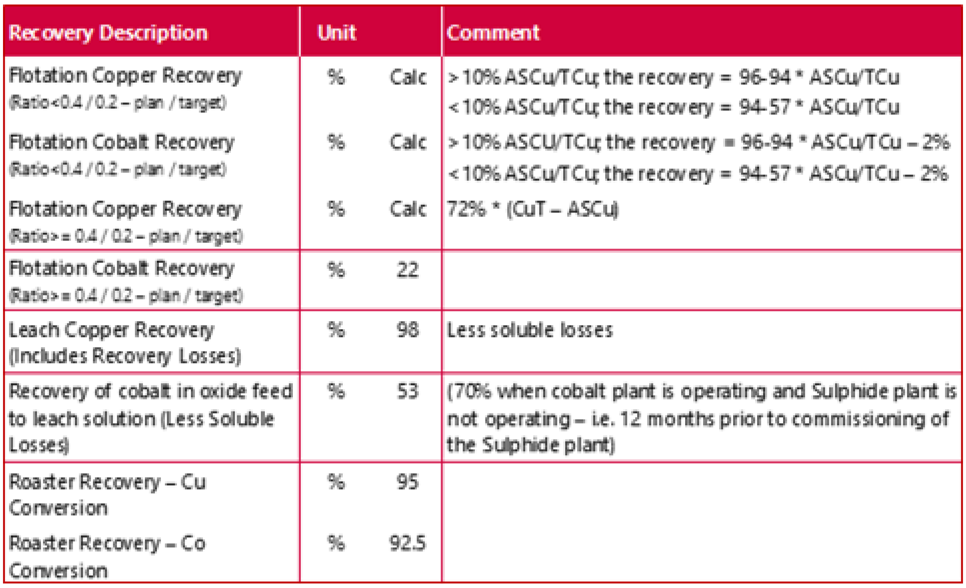
-Sulphide Concentrator 2.2mtpa capacity

-Roaster circuit including off-gas cleaning, acid plant and concentrate storage

-Cobalt Recovery circuit to produce high grade Cobalt hydroxide

-SX plant modifications

  - The estimated plant recoveries are as follows:



Recovery Description	Unit		Comment
Flotation Copper Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCu/TCu; the recovery = 96-94 * ASCu/TCu < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu
Flotation Cobalt Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCU/TCu; the recovery = 96-94 * ASCu/TCu – 2% < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu – 2%
Flotation Copper Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	Calc	72% * (CuT – ASCu)
Flotation Cobalt Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	22	
Leach Copper Recovery (Includes Recovery Losses)	%	98	Less soluble losses
Recovery of cobalt in oxide feed to leach solution (Less Soluble Losses)	%	53	(70% when cobalt plant is operating and Sulphide plant is not operating – i.e. 12 months prior to commissioning of the Sulphide plant)
Roaster Recovery – Cu Conversion	%	95	
Roaster Recovery – Co Conversion	%	92.5	

** ASCu refers to the sulphuric acid soluble portion of copper content within the sample mass**
'Ratio' refers to the ratio of ASCu:TCu

Environmental factors or assumptions

- Environmental factors include increased land surface disturbance and required rehabilitation for this site, including final pit excavation and waste rock storage. All ore piles are expected to be transported to Kinsevere for treatment.

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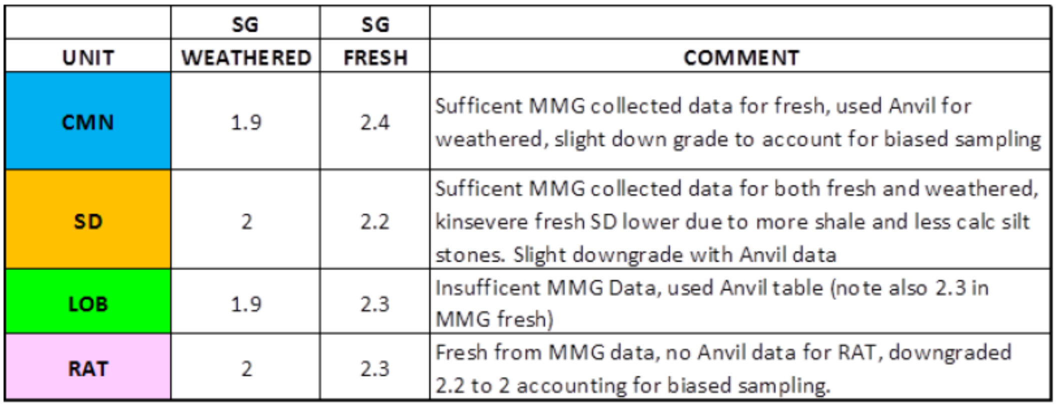
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Bulk density</td><td>

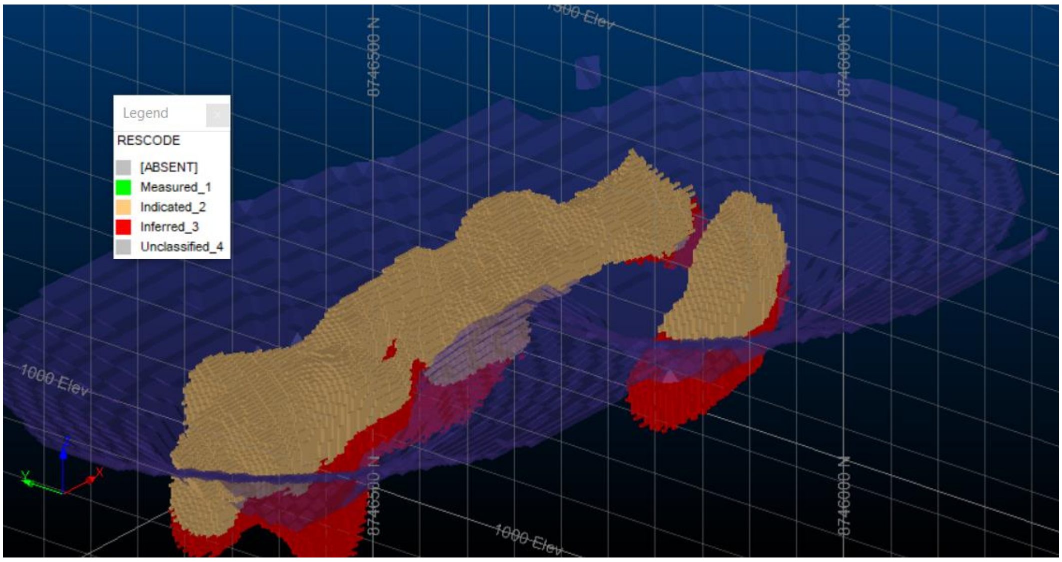
Bulk density measurements have been undertaken using weight in air and weight in water. The samples measured have also included wax immersion to prevent over estimation due to the porous nature of oxide samples. Samples are also oven dried prior to measurement.
However, at this point the number of bulk density data is not sufficient for interpolation. Investigation of results shows that insufficient information was collected for the weathered CMN and LOB stratigraphic units. This was due to the material being too friable for collecting reliable bulk density measurements. As a result, data from correlative stratigraphy in Nambulwa and DZ was considered, as well as information from the Anvil bulk sampling program published in the Anvil NI43-101 report. The Table below shows the bulk densities assigned to each of the weathered and fresh correlatives of the stratigraphic successions hosting Sokoroshe II mineralisation. The block model was flagged by weathering and geology domains with each assigned the relevant bulk density.
Bulk Density Values used for the Sokoroshe II 2020 Mineral Resource Model



UNIT	SG WEATHERED	SG FRESH	COMMENT
CMN	1.9	2.4	Sufficent MMG collected data for fresh, used Anvil for weathered, slight down grade to account for biased sampling
SD	2	2.2	Sufficent MMG collected data for both fresh and weathered, kinsevere fresh SD lower due to more shale and less calc silt stones. Slight downgrade with Anvil data
LOB	1.9	2.3	Insufficent MMG Data, used Anvil table (note also 2.3 in MMG fresh)
RAT	2	2.3	Fresh from MMG data, no Anvil data for RAT, downgraded 2.2 to 2 accounting for biased sampling.

</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources

Criteria	**Commentary**
Classification	- The entire Sokoroshe II Mineral Resource has been classified as Indicated and Inferred and is supported by drill hole spacing and variogram analysis. - The classification also takes into account the spatial distribution of data as well as estimation metrics including kriging variance and kriging slope of regression. - The classification is supported by the Competent Persons view of the deposit and the available data.  *Figure 7: Indicated and Inferred Material – within reporting Mineral Resource Whittle Pit Shell*
Audits or reviews	- No external audits or reviews of this Mineral Resource estimate have been undertaken.
Discussion of relative accuracy/ confidence	- Mineral Resource Classification of Indicated and Inferred material is supported by additional infill drilling and geostatistical analysis including variograms that produce ranges less than the drill spacing and low values for Kriging slope of regression and Kriging efficiency along with high Kriging variance. - The review of tonnage accuracy is required since the bulk density has been assigned from various sources, due to friable nature of the majority of sample collected at site. - The estimate relates to global estimation and is not suitable as a local estimate. Additional drilling is required before a local estimate can be delivered. - No production data is available for comparison.

7.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

7.2.3.1 Competent Person Statement

I, Douglas Corley, confirm that I am the Competent Person for the Sokoroshe II Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Sokoroshe II Mineral Resource section of this Report to which this Consent Statement applies.

I am a full-time employee of Mining One Pty Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Sokoroshe II Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Sokoroshe II Resources.

7.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Sokoroshe II Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Douglas Corley MAIG R.P.Geo. (#1505)

02/12/2020

Date:____

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Signature of Witness:

Rex Berthelsen
Melbourne, VIC

____

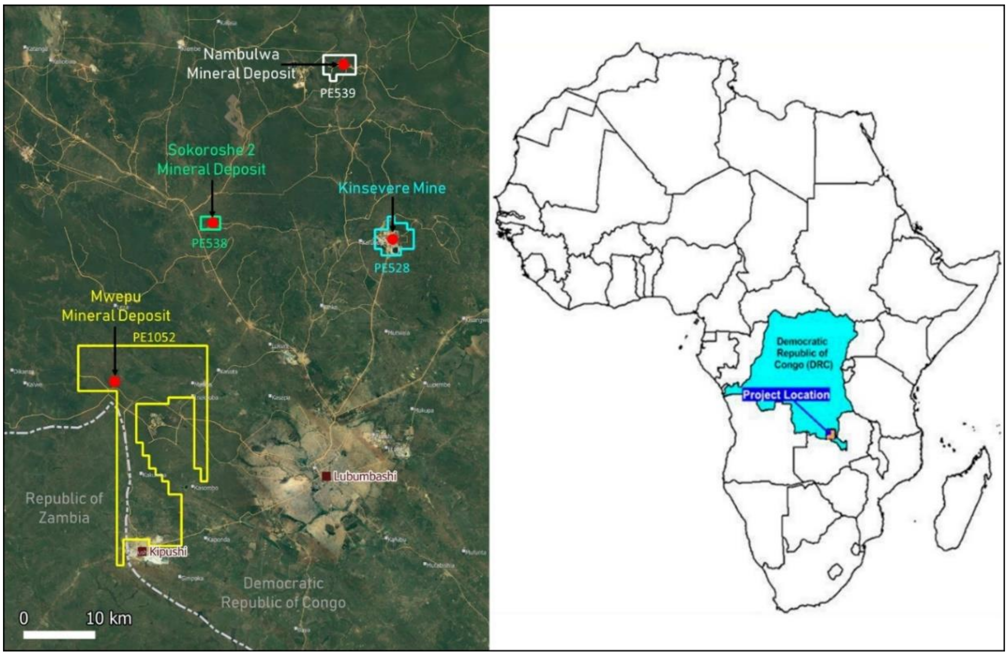
Witness Name and Residence: (e.g. town/suburb)

8 MWEPU

8.1 Introduction and Setting

The Mwepu Project is located within lease PE1052 in Democratic Republic of Congo, DRC. From the Kinsevere copper (Cu) mine, the Project is located some 40km to the SW (Figure 8-1).

Figure 8-1 Mwepu project location



The lease belongs to the DRC state owned mining company GECAMINES and was granted to MMG under a 3-year exploration agreement which became effective in March 2017. A 2-year extension to this agreement was granted by GECAMINES in late 2019, extending the term of the agreement to March 2022.

8.2 Mineral Resources – Mwepu

8.2.1 Results

The 2020 Mwepu Mineral Resource is summarised in Table 25. There are no Ore Reserves for the Mwepu deposit.

Table 25 2020 Mwepu Mineral Resource tonnage and grade (as at 30 June 2020)

Mwepu Mineral Resource

					Contained Metal		
Mwepu Oxide Copper[2]	**Tonnes (Mt)**	**Copper (% Cu)**	**Copper (AS[1] % Cu)**	**Cobalt (% Co)**	**Copper ('000)**	**Copper AS ('000)**	**Cobalt ('000)**
Measured							
Indicated	1.0	2.3	1.7	0.17	22	16	1.7
Inferred	0.6	2.3	1.7	0.27	14	10	1.7
Total	**1.6**	**2.3**	**1.7**	**0.21**	**36**	**27**	**3.3**
Mwepu Oxide Cobalt[3]							
Measured							
Indicated	0.1	0.6	0.2	0.45	0.5	0.2	0.4
Inferred	0.2	0.4	0.1	0.47	1.0	0.3	1.0
Total	**0.3**	**0.5**	**0.2**	**0.46**	**1.4**	**0.5**	**1.4**
Combined Total	**1.9**				**37**	**27**	**4.7**

[1] AS stands for Acid Soluble

[2] 1.1% Cu cut-off grade

[3] 0.3% Co cut-off grade

All Mineral Resources except stockpiles are contained within a US$3.62/lb Cu and US$25.79/lb Co pit shell

Contained metal does not imply recoverable metal.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

8.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 26 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 26 JORC 2012 Code Table 1 Assessment and Reporting Criteria for the Mwepu Mineral Resources 2020

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
Sampling techniques	• A combination of reverse circulation drilling (RC) and diamond drilling (DD) was completed at the Mwepu Project. • Mineralized zones within the drill core were identified based on a combination of lithological, mineralogical, and alteration logging, along with systematic spot pXRF readings. • DD core was sampled nominally at 1m intervals within mineralized zones while unmineralized zones were sampled at up to 2-4m intervals. Sampling was carried out by longitudinally cutting PQ and HQ drill core using an Almonte automatic diamond saw. HQ drill core was cut into halves, with half-core retained for future reference. PQ drill core was quartered and sampled with three-quarters of the core retained for future reference. • RC drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Lithological and mineralogical logging, along with systematic spot pXRF readings, were used to differentiate mineralized and unmineralized zones. Samples from mineralized zones were manually riffle split every 1m to obtain a representative (~2.5kg) sample. Samples from unmineralized zones were riffle split and composited to 2m intervals. Wet samples were dried in ambient air before splitting and compositing. • 70% of the samples were collected as 1m intervals and 30% were collected as 2m intervals. • Samples were crushed, split and pulverized (>85% passing 75 µm) at an ALS laboratory located at the MMG core yard facility in Lubumbashi. 100 grams of pulp material was sent to the SANAS accredited ALS Laboratories in Johannesburg. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the nature of mineralization within the Project (sediment hosted base metal mineralization) by the Competent Person.
Drilling techniques	• Diamond drilling: PQ and HQ core sizes with triple tube to maximize recovery. At the end of each drilling run the core was marked with an orientation mark by using a REFLEX ACE tool. An orientation line was then drawn along the axis of the core if two consecutive orientations marks could be aligned by docking core pieces. • Reverse circulation drilling: A hammer bit was used for drilling a 5.25-inch (133mm) diameter hole. The cyclone was manually cleaned at the start of each shift, after any wet samples, and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the RC rods, hoses, and cyclone after each rod.
Drill sample recovery	• Overall DD core recovery averaged 85% across the Project area. As expected, the recovery dropped in unconsolidated/highly weathered ground. Above 50m, core recovery averaged 77%, and below 50m, core recovery averaged 87%.

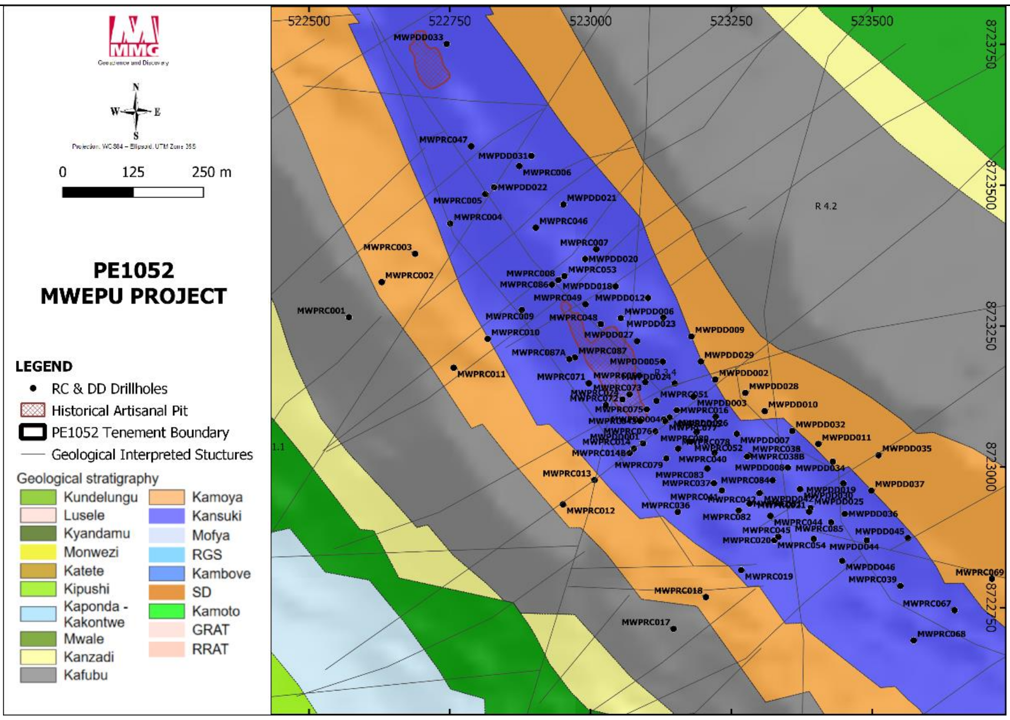
<table>
<tr><th colspan="2">Section 1 Sampling Techniques and Data</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>Actual vs. recovered drilling lengths were captured by the driller and an onsite rig technician using a measuring tape. Measured accuracy was down to 1cm. The core recoveries were calculated in a digital database during export.
Sample recovery during diamond drilling was maximized using the following methods:
Short drill runs (maximum 1.5m)
Using drilling additives, muds and chemicals to improve broken ground conditions.
Using the triple tube methodology in the core barrel.
Reducing water pressure to prevent washout of friable/unconsolidated material
Drilling rates varied depending on the actual and forecast ground conditions
Core loss was recorded at the rig and assigned to intervals where visible loss occurred. Cavities were noted.
Bias due to core loss has not been determined.
RC cuttings recovery was measured by weighing each 1m sample bag immediately following collection from the cyclone.
Sample returns for RC drilling have been calculated at 68% recovery.
Sample recovery during RC drilling was maximized using the following methods:
Adjusting air pressures to the prevailing ground condition.
Using new hammer bits and replacing when showing signs of wear.</td></tr>
<tr><td>Logging</td><td>All drill samples (DD core and RC chips) were geologically logged using a GeoBank® Mobile interface and uploaded to a central Geobank® database.
Qualitative logging includes lithology, mineralization type, oxidation type, weathering type, color and alteration types. Quantitative logging includes mineralization mineral percentage, alteration mineral percentage and in the case of core, RQD and structural data have been recorded.
All the core and chip samples were photographed both wet and dry.
100% of core and chips have been logged with the above information.</td></tr>
<tr><td>Sub-sampling techniques and sample preparation</td><td>DD core was split in half longitudinally (HQ size) or quartered (PQ size) using an Almonte automatic diamond saw.
Sample lengths were cut as close to nominal 1m intervals as possible while also respecting geological contacts. Samples were generally ~2.5kg in weight.
RC samples were collected from a cyclone every meter by a trained driller’s assistant. If the sample was dry the sample was passed through a riffle splitter and a ~2.5kg split was collected into a pre-numbered calico bag. Residual material was sampled and sieved for collection into chip trays for logging and the remainder returned to a larger poly-weave bag (bulk reject). The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet, the sample was air dried before being split according to the above procedure.
For RC drilling, field duplicates were inserted at a rate of approximately 5% to ensure sampling precision was measured.</td></tr>
</table>

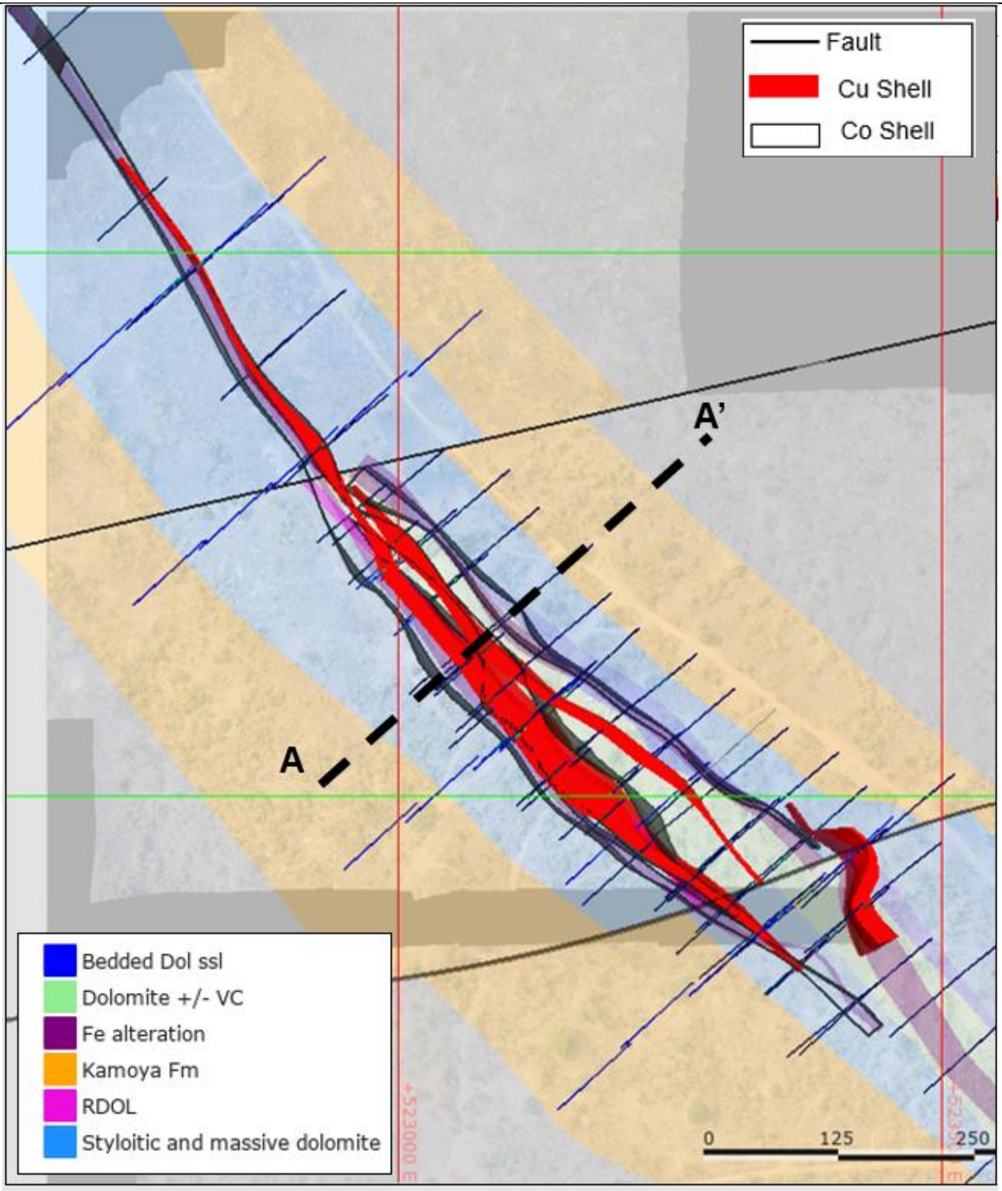
Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	• Samples from individual drillholes were sent in a single dispatch to the onsite ALS laboratory at the MMG core yard facility in Lubumbashi. • Samples were received, recorded on the sample sheet, weighed, and dried at 105°C for 4 to 8 hours (or more), depending on dampness, at the sample preparation laboratory. • Samples were crushed and homogenized in a jaw crusher to >70% passing 2mm. The jaw crusher was cleaned with a barren quartz blank after every crushed sample. • The sample size was reduced to 1kg in a riffle splitter and pulverized in an LM2 pulverize to >85% passing 75 microns. QC grind checks were carried out using wet sieving at 75 microns on 1 in 10 samples. • 100 grams of pulp material were sent to the SANAS accredited ALS Laboratories in Johannesburg. • Crush and pulp duplicates were submitted for QAQC purposes. • Certified reference materials (high, medium, and low copper grades) were also inserted and submitted to ALS for analysis at a rate of 3 per 30 samples. • The sample size is appropriate for the grain size and distribution of the minerals of interest.
Quality of assay data and laboratory tests	• All samples were sent to ALS Chemex Laboratory in Johannesburg • Samples were analyzed using a 4-acid digest with ICP MS finish. 48 elements were analyzed in total. • Acid soluble copper assays were only performed when the total copper assay was greater than 1,000 ppm. • ~15% QAQC samples were incorporated, including blanks, duplicates (field, crush, and pulp) and certified reference material per sample analysis batch. • QAQC data have been interrogated with no significant biases or precision issues. Several acid soluble values of Cu and Co were higher than the Total Copper values. Lab investigations and re-analyses were completed – all issues were addressed and rectified and re-assay results accepted.
Verification of sampling and assaying	• Significant intersections have been reviewed by competent MMG employees. • No twin drilling was completed. • Data are stored in a SQL database with a Geobank® interface. • No adjustments to assay data were made.
Location of data points	• Planned collar positions for both diamond drilling and RC drilling were located using handheld GPS devices to ±5m accuracy. • Post-drilling, actual collar positions were surveyed using DGPS (Geomax Zenith 25 Pro and Topcon Hiper II) and are of high accuracy. • Grid system is in WGS84/UTM35S • The TN14 GYROCOMPASS™ was used to align the drill rig to the correct azimuth and dip angles.

Section 1 Sampling Techniques and Data	
Criteria	**Commentary**
	• Downhole surveys were done using the REFLEX EZ-TRAC survey instrument. Downhole surveys were not carried out on RC drillholes. • All survey data was approved by the site geologist and stored in the IMBEXHUB-IQ cloud.
Data spacing and distribution	• Drilling sections are spaced at nominally ~50m or ~100m. Down dip drill hole spacing is nominally ~50m. • 2m or 4m composites were taken in zones of no visual mineralization. • Nominal 1m samples were taken in zones of mineralization. • No other sample compositing has been undertaken.
Orientation of data in relation to geological structure	• DD and RC drillholes were mainly drilled with dips of between -48° and -55° to intersect generally steeply dipping mineralization. Drilling azimuths were as close as practical to orthogonal to the mineralized trend. • In the view of the Competent Person, no bias has been introduced by the drilling direction.
Sample security	• Samples were transported from the field and delivered to the sample processing facility in Lubumbashi for cutting and preparation. Polyethylene foam, tarpaulins, and cargo nets were used to secure the load and to avoid possible shifting of core during transport. • RC chip sampling was conducted in the field. Chip samples were packed in a labelled plastic bag along with a labelled plastic ID tag. • The plastic bag was tied with cable ties to secure the sample and to prevent contamination. • A set of 15 plastic sample bags were packed into labelled poly-weave bags, ready to be shipped from the field to the sample preparation laboratory in Lubumbashi. • Field packing documents and sample sheets were prepared and sent together with the core trays and poly-weave bags to the sample preparation laboratory in Lubumbashi. • After sample preparation, bar-coded envelopes of 100-200g of pulp for each sample were inserted into boxes of ~40 envelopes each, labelled with dispatch ID and laboratory destination to be sent by DHL courier to ALS Chemex in Johannesburg. • Two sets of duplicate pulps of 100-200g were inserted into labelled boxes of ~40 envelopes each to be stored on site in storage containers. • The shipment of pulps from Lubumbashi to ALS laboratories was done using DHL Courier services with waybill number for tracking. • The Lubumbashi sample preparation laboratory utilizes the ALS-Chemex LIM System installed at Kinsevere mine site, generating a unique lab workorder for each batch sample in the analytical chain.
Audit and reviews	• No external audits or reviews of sampling techniques and data have been conducted.

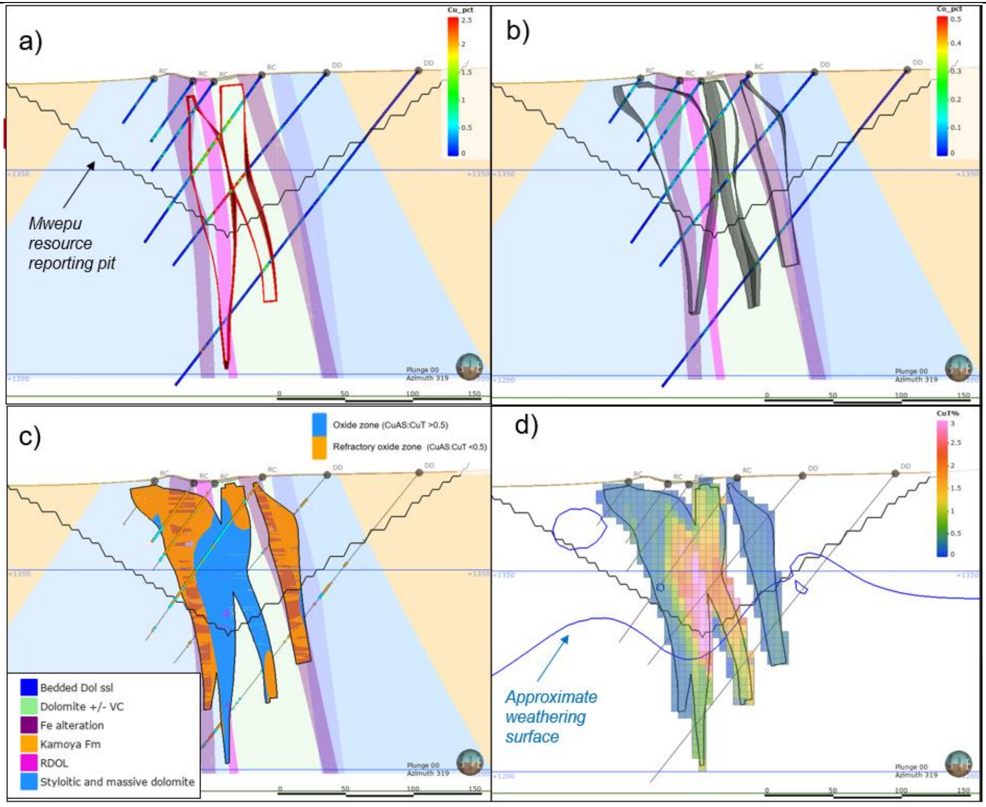
Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
Mineral tenement and land tenure status	• The Mwepu Project is located within lease PE1052 in the DRC. The lease belongs to the DRC state owned mining company GECAMINES and was granted to MMG under a 3-year exploration agreement which became effective in March 2017. A 2-year extension to this agreement was granted by GECAMINES in late 2019, extending the term of the agreement to March 2022.
Exploration done by other parties	• Union Miniere (UMHK) first explored the Mwepu Project in 1925, attempting to define the stratigraphy and the tectonic framework of the area. • In 1966, UMHK produced a sketch geology map at 100,000 scale of a region which included the Mwepu tenement. This survey identified the presence of an NW trending anticline, comprised of Roan stratigraphy.
Geology	• Sedimentary hosted copper and cobalt. • Mineralization is hosted by the Neoproterozoic Katanga Supergroup within the R3 (Kansuki formation) stratigraphy. • Copper mineralization is both lithologically and structurally controlled and occurs predominantly within weathered dolomites and breccia. • Oxide copper mineralogy includes malachite and copper bearing clays. Oxide cobalt is often associated with Mn-Fe rich clays. • Sulphide copper mineralogy includes chalcocite with minor chalcopyrite and bornite. Sulphide mineralisation occurs below the base of oxidation and does not contribute significantly to the copper resource.
Drill hole information	• A complete listing of all drillhole information on the Mwepu Project is provided in Table 2 below.
Data aggregation methods	• Significant copper intersections were reported at a 0.5% total Cu cut-off at a minimum width of 3m, with up to 3m internal dilution permitted. • Significant cobalt intersections were reported at a 0.2% total Co cut-off at a minimum width of 3m, with up to 3m internal dilution permitted.
Relationship between mineralisation width and intercept lengths	• All original exploration results were reported in drilled lengths and should not be considered as true widths of the mineralized zones. This was due to a significant degree of inherent complexity and the low level of understanding of the geological model at the time. However, with recent increases of understanding in the geological model, all future drilling intercepts can be reported as true widths.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Diagrams	 **Collar locations for Mwepu resource delineation drilling.**

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	 **Mwepu geology and copper & cobalt grade shells. The dashed line designated A – A' is the location of the cross section shown in the following figure.**

Section 2 Reporting of Exploration Results

Criteria	Commentary
	 **Cross section through Mwepu Cu-Co deposit at 8723130mN showing:** a) Outline of the copper grade shell with downhole copper assays relative to geology and reporting pit b) Outline of the cobalt grade shell with downhole cobalt assays relative to geology and reporting pit c) Interpreted ore type volumes within downhole CuAS:CuT ratio data relative to geology and reporting pit d) Distribution of copper within the 2020 Mwepu MRE relative to geology and approximate weathering surface.
Balanced reporting	• Complete tables of exploration results have been previously released publicly and can be found in MMG's Q4-2019 Quarterly Business Report on www.mmg.com
Other substantive exploration data	• Airborne Geophysics – Xcalibur high resolution airborne magnetics and radiometrics were flown in 2017. In 2019 some orientation ground geophysical campaigns including IP, Gravity and Passive Seismic were carried out over the Mwepu tenement mainly in the eastern part of the tenement (Karavia East/Niamumenda prospects). 3D inversion EM data were sourced from a neighboring mining company (Kalumines). All these data were integrated and interpreted to provide detailed structural and geological information as well as assisting in the identification of drill targets. • Geological mapping was conducted in 2018 and 2019. Mapping results outlined the presence of the geologically prospective rock units (Kansuki and mines subgroup) that are the main host rock to the Cu-Co mineralization. These units are in the core

Section 2 Reporting of Exploration Results	
Criteria	**Commentary**
	of a steeply dipping anticline striking NW-SE. Younger lithologies were also noted from the Nguba and Kundelungu Formations. • Surface geochemistry (Soil sampling) on 200m x 200m grid and 200X100m was completed in 2018 which identified copper and cobalt anomalous zones within the tenement.
Further work	• Further exploration activities are planned for the 2020 exploration season: ○ Infill drilling to improve confidence levels of resource estimations. ○ Metallurgical test work on drill core and bulk samples to ascertain milling and processing characteristics. ○ Geotechnical drilling to assess pit wall characteristics for mine planning. ○ Preliminary economic assessment to evaluate economic viability.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Database integrity	• The MMG Exploration database systems are SQL server and GeoBank management software. All geological and analytical data are managed in MMG's Corporate Geoscience Database. GIS data are stored in secure shared folders on the Lubumbashi server. • All data capture via GM logging profiles having strong internal validation criteria. The technician/geologist conducts first validation steps by checking intervals, description and accuracy of records on their respective Toughbooks®. • Validation rules are predefined in each of the database tables. Only valid codes get imported into the database. • The sampling and geochemical data are stored in a local version of SQL database that gets replicated to a similar version on the Head Office server with daily, weekly and monthly backups. • Mineral Resource estimation carried out a validation process consisting of: ○ Examining the sample assay, collar survey, downhole survey and geology data to ensure that the data were complete for all of the drillholes. ○ Examining the desurveyed data in three dimensions to check for spatial errors. ○ Examination of the assay data in order to ascertain whether they are within expected ranges, including checks for acid soluble values greater than the corresponding total assay value. ○ Checks for "FROM-TO" errors, to ensure that the sample data did not overlap one another or that there were no unexplained gaps between samples. ○ Checks for excessive mineralised sample lengths. ○ Checks for unsampled drillholes.

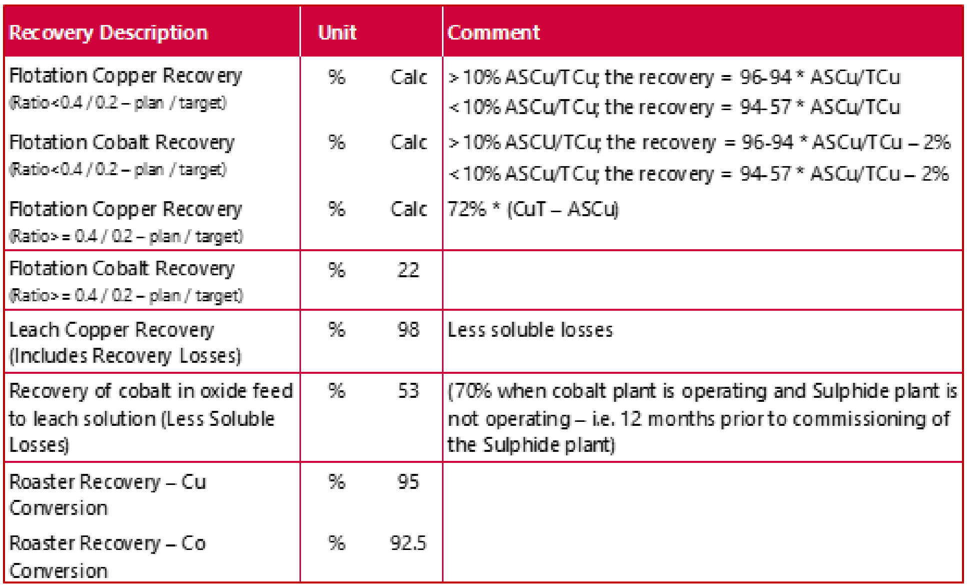
Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Site visits	• The Competent Person has not visited the site but has visited the Kinsevere deposit and several other oxide copper deposits in the Katanga province, which are also similar in style to the Mwepu mineral deposit.
Geological interpretation	• There is a moderate to high degree of confidence in the lithological model and geological setting. • Grade shells have been constructed sub-vertically, in close association with the favourable dolomitic horizons and iron alteration zones. Mineralisation is not strata bound but it is sub-parallel to the stratigraphy. • A 0.4% total copper threshold was used for the copper grade shells and a 0.08% total cobalt threshold was used for the cobalt grade shells. These thresholds allowed for continuity of mineralisation from one drilling section to the next. • An alternative interpretation for the third copper mineralised fracture may exist, however more exploration would need to be carried out to gain better understanding in this area.
Dimensions	• Strike length is approximately 1,055 m. • The modelled copper mineralisation is between approximately 10 m and 70 m wide. • Mineralisation generally occurs 10 m to 40 m below surface along most of the strike length, with it outcropping in some locations. The mineralisation extends from 80 m to 220 m below surface.
Estimation and modelling techniques	• A 0.4% total copper threshold was used for the copper grade shells and a 0.08% total cobalt threshold was used for the cobalt grade shells. • Grade estimation was completed using ordinary kriging for total copper and cobalt and inverse distance weighting for Ca, Mg, Mn, S and acid soluble ratios using Datamine RM software. Data were composited to 1 m. • Top cuts were applied to statistical outliers where necessary. • The wireframe models were filled within a rotated block model (320 degrees), with parent cells of 5 mX by 20 mY by 10 mZ. The parent cells were split to sub-cells to a minimum of 1 mX by 1 mY by 1 mZ. The blocks were rotated to align with the mineralisation trend. The optimum block size was determined using KNA. • A minimum of 10 and a maximum of 20 composites were found to be optimal for estimation through KNA. • Search distances at 90% of the variogram ranges were used for the estimation. • A similar neighbourhood was used in the estimation of grade attributes, except for the estimation of acid soluble to total ratios due to lesser data. • Each lithological and grade shell wireframe was filled and coded for zonal estimation of TCu, TCo, Ca, Mg, Mn and S. • Calcium and magnesium showed a good correlation with each other. Thus, Ca and Mg were estimated using the same domains. Acid soluble copper showed good correlation to the total copper assay. The oxidation of rocks has been observed to be along mineralisation fractures, and hence the spatial overlap between the copper mineralisation wireframe and the leachability wireframe. Total cobalt and cobalt soluble assays also showed good correlation with one another. The acid soluble

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
	copper estimates were controlled by domains based on the leachability and copper domain wireframe. The leachability wireframe correlated fairly well with the weathering wireframe. The acid soluble cobalt estimates were controlled by cobalt domain wireframe. • The rest of the variables did not show good correlation with each other and were estimated independent of each other. • A soft boundary was used in the estimation of the high-grade domain where composites located up to 1 m outside its boundary were used in the estimation. All the other estimates used hard boundaries within relevant wireframe boundaries. • A waste model was created that covered an area to 200 m from the mineralisation to enable pit planning. • No SMU was considered • The block model grade was compared to drillhole data visually, statistically and by comparing average grades of the drillhole data and model in 50 m slices through the deposit. • No reconciliation data were available.
Moisture	• Estimated tonnes are on a dry basis.
Cut-off parameters	• The Mineral Resource has been reported above a total copper cut-off grade of 1.1%. Additional cobalt Mineral Resource (outside of the copper cut-off), has been reported above a total cobalt cut-off grade of 0.3%. • The reported Mineral Resources have also been constrained within a US$3.62/lb copper and US$25.79/lb cobalt whittle pit shell. The reporting cut-off grade and the pit-shell price assumption are in line with MMG's policy on reporting of Mineral Resources which is prospective for future economic extraction.
Mining factors or assumptions	• The mining method is assumed to be open pit with trucks and excavators
Metallurgical factors or assumptions	• Mwepu ore is intended to be processed at Kinsevere Mine shortly after the implementation of the Kinsevere Expansion Project (currently pending board approval). • Preliminary metallurgical tests have been conducted and results indicate similar recoveries to those used in the Kinsevere Expansion Project (KEP) for CuAS and CoT. However, at Mwepu, the non-CuAS component is comprised of copper hosted in clays, Mn-Fe WAD, silicates and sulphides. As such, recovery of the non-CuAS component is complex. Further met test work is currently being undertaken to optimise recovery of the non CuAS. • At this early stage of project development, metallurgical recovery assumptions are based on KEP recoveries. This is subject to change as additional mettalurgical test work is completed and as ore body understanding improves. • KEP recoveries are based on the proposed Kinsevere Expansion Project (KEP) flowsheet and infrastructure upgrades. The upgraded flowsheet will consist of the following changes:

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

Oxide pre-flotation circuit and leach tank modifications 2.3mtpa
Oxide leach upgrades to convert to reductive leach conditions
Sulphide Concentrator 2.2mtpa capacity
Roaster circuit including off-gas cleaning, acid plant and concentrate storage
Cobalt Recovery circuit to produce high grade Cobalt hydroxide
SX plant modifications

Predicted plant recoveries are as follows:


<table>
<tr><th>Recovery Description</th><th colspan="2">Unit</th><th>Comment</th></tr>
<tr><td>Flotation Copper Recovery
(Ratio<0.4 / 0.2 – plan / target)</td><td>%</td><td>Calc</td><td>> 10% ASCu/TCu; the recovery = 96-94 * ASCu/TCu
< 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu</td></tr>
<tr><td>Flotation Cobalt Recovery
(Ratio<0.4 / 0.2 – plan / target)</td><td>%</td><td>Calc</td><td>> 10% ASCU/TCu; the recovery = 96-94 * ASCu/TCu – 2%
< 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu – 2%</td></tr>
<tr><td>Flotation Copper Recovery
(Ratio> = 0.4 / 0.2 – plan / target)</td><td>%</td><td>Calc</td><td>72% * (CuT – ASCu)</td></tr>
<tr><td>Flotation Cobalt Recovery
(Ratio> = 0.4 / 0.2 – plan / target)</td><td>%</td><td>22</td><td></td></tr>
<tr><td>Leach Copper Recovery (Includes Recovery Losses)</td><td>%</td><td>98</td><td>Less soluble losses</td></tr>
<tr><td>Recovery of cobalt in oxide feed to leach solution (Less Soluble Losses)</td><td>%</td><td>53</td><td>(70% when cobalt plant is operating and Sulphide plant is not operating – i.e. 12 months prior to commissioning of the Sulphide plant)</td></tr>
<tr><td>Roaster Recovery – Cu Conversion</td><td>%</td><td>95</td><td></td></tr>
<tr><td>Roaster Recovery – Co Conversion</td><td>%</td><td>92.5</td><td></td></tr>
</table>
<p>* ASCu refers to the sulphuric acid soluble portion of copper content within the sample mass.</p>
<p>* ‘Ratio’ refers to the ratio of ASCu:TCu</p>
</td></tr>
<tr><td>Environmental factors or assumptions</td><td>

Environmental factors include increased land surface disturbance and required rehabilitation for this site, including final pit excavation and waste rock storage. All ore piles are expected to be transported to Kinsevere for treatment.

</td></tr>
<tr><td>Bulk density</td><td>

Bulk density measurements were undertaken on each hole within specific lithological units and on mineralised intersections.
Samples were dipped in molten wax.
In-situ bulk density were assigned to the block model based on stratigraphy and weathering.

</td></tr>
<tr><td>Classification</td><td>

The model was classified as Indicated and Inferred where informed by a grid of mineralised intersections.
Indicated Mineral Resources were within a grid spacing of 40m and extrapolated to a maximum of 20 m from the nearest drillhole.
Inferred Mineral Resources were within a grid spacing of 100m extrapolated and a maximum of 50 m from the nearest drillhole.
Mineralisation outside the modelled grade shells was not classified as Mineral Resource.
No Measured Mineral Resources were reported due to uncertain grade continuity.

</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Commentary**
Audits or reviews	• No external audits or reviews of this Mineral Resource estimate have been undertaken.
Discussion of relative accuracy/ confidence	• The Indicated Mineral Resources are informed by a drill grid of 40 m spacing. The Inferred Mineral Resources are informed by drilling and extrapolation is minimal. Mineral Resources informed by sparse drilling are considered to be low confidence estimates that may change significantly with additional data. It cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated Mineral Resource as a result of continued exploration. • Inferred Mineral Resources are not suitable for detailed technical and economic evaluation. • Although block model estimates have been carried out, local estimates are likely to be inaccurate for Inferred Mineral Resources.

8.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (“2012 JORC Code”).

8.2.3.1 Competent Person Statement

I, Douglas Corley, confirm that I am the Competent Person for the Mwepu Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years’ experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Mwepu Mineral Resource section of this Report to which this Consent Statement applies.

I am a full-time employee of Mining One Pty Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Mwepu Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Mwepu Resources.

8.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Mwepu Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author’s approval. Any other use is not authorised

Douglas Corley MAIG R.P.Geo. (#1505)

Date: 02/12/2020

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author’s approval. Any other use is not authorised.

Signature of Witness:

Rex Berthelsen
Melbourne, VIC

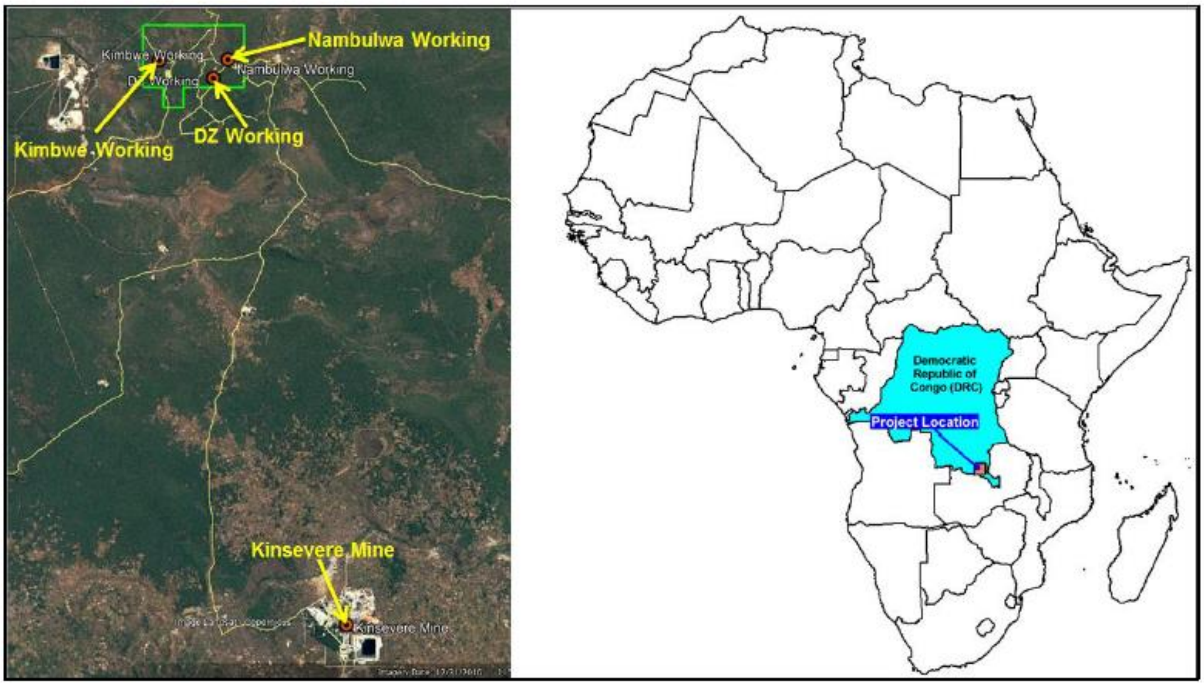
Witness Name and Residence: (e.g. town/suburb)

9 NAMBULWA / DZ

9.1 Introduction and Setting

The Nambulwa and DZ Projects are located on the license PE539 in Democratic Republic of Congo, DRC. The tenement was acquired by MMG as part of the Anvil Mining acquisition in 2012. From the Kinsevere copper (Cu) mine, the Projects are located some 30km to the NNW (Figure 9-1).

Figure 9-1 Nambulwa and DZ project location



MMG begun exploring tenement PE539 in 2014 with regional to semi-regional exploration work including geological mapping, surface geochemistry, airborne geophysical survey (magnetics, radiometrics, and EM). However, MMG was unable to continue exploring the tenement due to security threats by artisanal miners. Following this, MMG negotiated its exploration rights over PE539 with various government agencies and subsequently managed to regain full control over the tenement. As a result, all mining cooperatives and artisanal miners were evicted from the tenement and the area was secured by about 40 Mine Police under contract from MMG.

9.2 Mineral Resources – Nambulwa / DZ

9.2.1 Results

The 2020 Nambulwa/DZ Mineral Resources are summarised in Table 27 2020 Nambulwa/DZ Mineral Resources tonnage and grade (as at 30 June 2020). There are no Ore Reserves for Nambulwa/DZ deposits.

Table 27 2020 Nambulwa/DZ Mineral Resources tonnage and grade (as at 30 June 2020)

Nambulwa and DZ Mineral Resources

					Contained Metal		
Nambulwa Oxide Copper[2]	**Tonnes (Mt)**	**Copper (% Cu)**	**Copper (AS**[1] **% Cu)**	**Cobalt (% Co)**	**Copper ('000)**	**Copper AS ('000)**	**Cobalt ('000)**
Measured	-	-	-	-	-	-	-
Indicated	1.0	2.3	2.1	0.1	23	21	1.2
Inferred	0.1	1.9	1.6	0.1	1.7	1.5	0.1
Total	**1.1**	**2.3**	**2.0**	**0.1**	**25**	**22**	**1.2**
Nambulwa Oxide Cobalt[3]							
Measured							
Indicated	0.04	0.08	0.06	0.40	0.03	0.03	0.17
Inferred	-	-	-	-	-	-	-
Total	**0.04**	**0.08**	**0.06**	**0.40**	**0.03**	**0.03**	**0.17**
DZ Oxide Copper[2]							
Measured	-	-	-	-	-	-	-
Indicated	0.8	2.0	1.8	0.12	16	14	1.0
Inferred	0.04	2.0	1.7	0.13	0.74	0.64	0.05
Total	**0.8**	**2.0**	**1.8**	**0.12**	**16**	**14**	**1.0**
DZ Oxide Cobalt[3]							
Measured	-	-	-	-	-	-	-
Indicated	0.07	0.34	0.26	0.39	0.25	0.19	0.28
Inferred	-	-	-	-	-	-	-
Total	**0.07**	**0.34**	**0.26**	**0.39**	**0.25**	**0.19**	**0.28**
Combined Total	**2.0**				**42**	**37**	**2.7**

[1] AS stands for Acid Soluble

[2] 0.9% Cu cut-off grade

[3] 0.3% Co cut-off grade

All Mineral Resources except stockpiles are contained within a US$3.62/lb Cu and US$25.79/lb Co pit shell

Contained metal does not imply recoverable metal.

Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

9.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 28 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 28 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Nambulwa/DZ Mineral Resources 2019

Section 1 Sampling Techniques and Data	
Criteria	**Explanation**
Sampling techniques	• The Mineral Resources uses a combination of reverse circulation (RC) and drilling diamond drilling (DD) to inform the estimates. • Mineralised zones within the drill core were identified based on combined parameters, including lithological and alteration logging, mineralogical logging and systematic spot pXRF readings. DD core was sampled nominally at 1m intervals within mineralised zones while unmineralised zones were sampled at up to 2-4m intervals. Sampling was carried out by longitudinally cutting PQ and HQ drill core using an Almonte automatic diamond saw and sampling half-core, with half-core retained for future reference. PQ drill core was quartered and sampled. Three-quarters of the core was retained for future reference. • RC drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Lithological and mineralogical logging, supported by systematic spot pXRF readings, were used to identify mineralised and unmineralised zones in the RC chips. Samples from mineralised zones were riffle split every 1m to obtain a representative (~2.5kg) sample. Samples from unmineralised zones were riffle split and composited to 2m intervals. Wet samples were dried in ambient air before splitting and compositing. • Air core (AC) drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Samples from zones of mineralisation were riffle split to obtain a representative (~2.5kg sample). Samples from visually unmineralised, lithologically similar zones were riffle split and composited to 3m sample intervals (~2.5kg weight). Wet samples were dried in ambient air before splitting and compositing. • Overall, 54% of the samples were less than 2m, with mineralised samples taken at nominal 1m intervals. • Samples were crushed, split and pulverised (>85% passing 75 µm) at an onsite ALS laboratory at the MMG core yard facility in Lubumbashi. 100 grams of pulp material was sent to the SANAS accredited ALS Laboratories in Johannesburg. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the nature of mineralisation within the Project (sediment hosted base metal mineralisation) by the Competent Person.
Drilling techniques	• DD: PQ and HQ sizes, with triple tube to maximise recovery. At the end of each drilling run the core was marked with an orientation mark by using a REFLEX ACE tool. An orientation line was then drawn along the axis of the core if two consecutive orientations marks could be aligned by docking core pieces. • AC drilling: A blade bit was used for drilling a 3.23-inch (82mm) hole. The cyclone was manually cleaned at the start of each shift, after any wet samples, and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the AC rods, hoses, and cyclone after each rod. • RC drilling: A hammer bit was used for drilling a 5.25-inch (133mm) diameter hole. The cyclone was manually cleaned at the start of each shift, after any wet samples,

Section 1 Sampling Techniques and Data	
Criteria	**Explanation**
	and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the RC rods, hoses, and cyclone after each rod.
Drill sample recovery	• Overall DD core recovery averaged 83% across the Project area. As expected, the recovery dropped in unconsolidated/highly weathered ground. Below 50m, core recovery averaged 85%, and below 100m, core recovery averaged 89%. • Actual vs. recovered drilling lengths were captured by the driller and an onsite rig technician using a tape measure. Measured accuracy was down to 1cm. The core recoveries were calculated during the database exports. • Sample recovery during diamond drilling was maximised using the following methods: o Short drill runs (~50cm) o Using drilling additives, muds and chemicals to improve broken ground conditions. o Using the triple tube methodology in the core barrel. o Reducing water pressure to prevent washout of friable material • Drilling rates varied depending on the actual and forecast ground conditions • Core loss was recorded through the core and assigned to intersections where visible loss occurred. Cavities were noted. • Bias due to core loss has not been determined. • RC and AC cuttings recovery was measured by weighing each 1m sample bag immediately following collection from the cyclone. • Sample returns for RC and AC drilling have been calculated at 62% and 63% respectively. • Sample recovery during RC drilling was maximized using the following methods: o Adjusting air pressures to the prevailing ground condition. o Using new hammer bits and replacing when showing signs of wear.
Logging	• DD core, RC chips and AC chips have been geologically logged and entered into the MMG database (Geobank). The level of detail supports the estimation of Mineral Resources. Additional geotechnical logging is required for further studies of the deposit. • Qualitative logging includes lithology, mineralisation type, oxidation type, weathering type, colour and alteration types. Quantitative logging includes mineralisation mineral percentage, alteration mineral percentage and in the case of core, RQD and structural data have been recorded. • All the core and chip samples were photographed both wet and dry. • 100% of core and chips have been logged with the above information.
Sub-sampling techniques and sample preparation	• DD core was split in half longitudinally (HQ size) or quartered (PQ size) using an Almonte automatic diamond saw. • Sample lengths were cut as close to nominal 1m intervals as possible while also respecting geological contacts. Samples were generally ~2.5kg in weight.

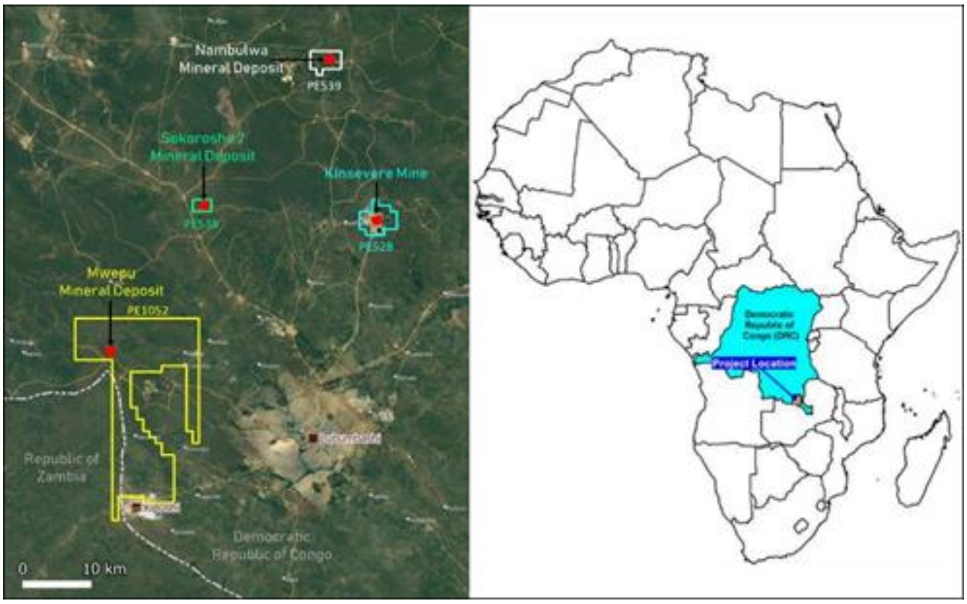
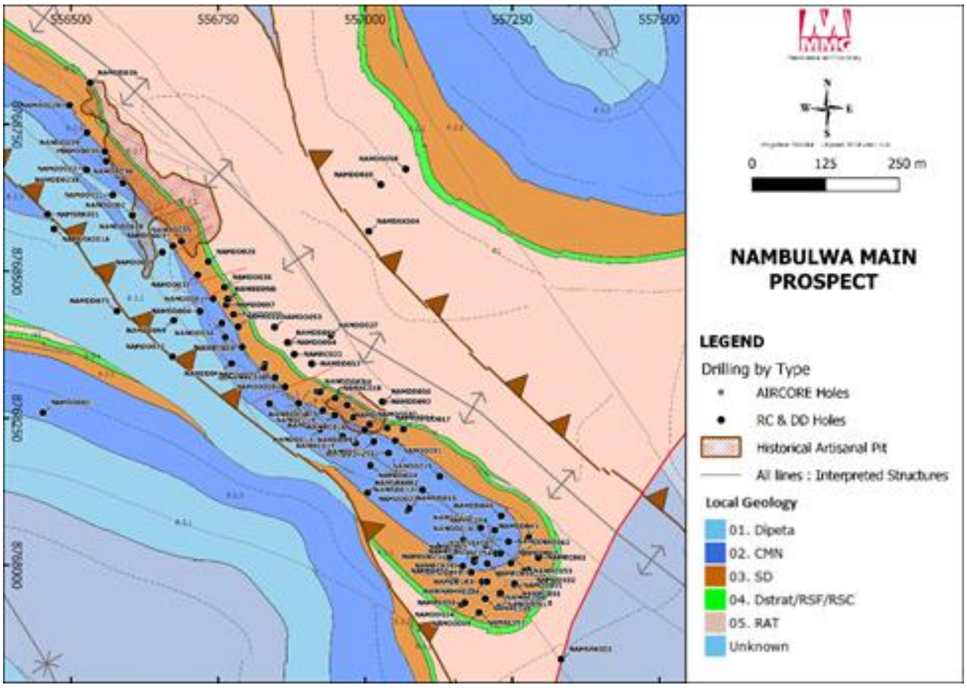
Section 1 Sampling Techniques and Data	
Criteria	**Explanation**
	- RC and AC samples were collected from a cyclone every meter by a trained driller's assistant. If the sample was dry the sample was passed through a riffle splitter and a ~2.5kg split was collected into a pre-numbered calico bag. Residual material was sampled and sieved for collection into chip trays for logging and the remainder returned to the larger poly-weave bag (bulk reject). The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet, the sample was air dried before being split according to the above procedure. - For RC and AC methods, field duplicates were inserted at a rate of approximately 5% to ensure sampling precision was measured. - Samples from individual drillholes were sent in a single dispatch to the onsite ALS laboratory at the MMG core yard facility in Lubumbashi. - Samples were received, recorded on the sample sheet, weighed, and dried at 105°C for 4 to 8 hours (or more) depending on dampness at the sample preparation laboratory. - Samples were crushed and homogenised in a jaw crusher to >70% passing 2mm. The jaw crusher was cleaned with a barren quartz blank after every crushed sample. - The sample size was reduced to 1000g in a riffle splitter and pulverised in an LM2 pulveriser to >85% passing 75 microns. QC grind checks were carried out using wet sieving at 75 microns on 1 in 10 samples. - 100 grams of pulp material were sent to the SANAS accredited ALS Laboratories in Johannesburg. - Crush and pulp duplicates were submitted for QAQC purposes. - Certified reference materials (high, medium, and low copper grades) were also inserted and submitted to ALS for analysis at a rate of 3 per 30 samples. - The sample size is appropriate for the grain size and distribution of the minerals of interest.
Quality of assay data and laboratory tests	- All samples were sent to ALS Chemex Laboratory in Johannesburg - Samples were analysed using a 4-acid digest with ICP MS finish. 48 elements were analysed in total. - Acid soluble copper assays were only performed when the total copper assay was greater than 1,000 ppm. - ~15% QAQC samples were incorporated, including blanks, duplicates (field, crush, and pulp) and certified reference material per sample analysis batch. - QAQC data has been interrogated with no significant biases or precision issues. - No geophysical tools, spectrometers, or portable XRF instruments have been used for estimation purposes.
Verification of sampling and assaying	- Significant intersections have been reviewed by competent MMG employees. - No twin drilling was completed.

Section 1 Sampling Techniques and Data	
Criteria	**Explanation**
	• Primary data is stored in a Geobank database, which is maintained according to MMG database protocols. Data is logged, entered and verified in the process of data management. Database is stored on MMG server and routinely backed up. • No adjustment has been made to assay data.
Location of data points	• Planned collar positions for both diamond drilling and RC drilling were located using handheld GPS devices to ±5m accuracy. • Post drilling, actual collar positions were surveyed using DGPS (Geomax Zenith 25 Pro and Topcon Hiper II) and are of high accuracy. • Grid system is in WGS84/UTM35S • Topographic control was by a detailed aerial drone survey. • The TN14 GYROCOMPASS™ was used to align the drill rig to the correct azimuth and dip angles. • Downhole surveys were done using the REFLEX EZ-TRAC survey instrument. Downhole surveys were not carried out on RC & AC drillholes.
Data spacing and distribution	• Drill spacing is variable between prospects. Average drill hole data are spaced at ~50 to 100m between drill sections. Holes on sections are spaced at ~25-50m apart. • 2m or 4m composites were taken in zones of no visual mineralisation (3m composites for AC drilling) • Nominal 1m samples were taken in zones of mineralisation. • No other sample compositing has occurred.
Orientation of data in relation to geological structure	• DD and RC drillholes were predominantly drilled with dips of between 45° and 60° to intersect generally steeply dipping mineralisation. Drilling azimuths were as close as practical to orthogonal to the mineralised trend. The AC drillholes were drilled vertically. • In the view of the Competent Person, no bias has been introduced by the drilling direction.
Sample security	• Samples were transported from the field and delivered to the sample processing facility in Lubumbashi for cutting and preparation. A single cab pick-up was used for the transport. Polyethylene foam, tarpaulins, and cargo nets were used to secure the load and to avoid possible shifting of core during transport. • RC chip sampling was conducted in the field. Chip samples were packed in a labelled plastic bag along with a labelled plastic ID tag. • The plastic bag was tied with cable ties to secure the sample and to prevent contamination. • A set of 15 plastic sample bags were packed into labelled poly-weave bags, ready to be shipped from the field to the sample preparation laboratory in Lubumbashi. • Field packing documents and sample sheets were prepared and sent together with the core trays and poly-weave bags to the sample preparation laboratory in Lubumbashi.

Section 1 Sampling Techniques and Data	
Criteria	**Explanation**
	• After sample preparation, bar-coded envelopes of 100-200g of pulp for each sample were inserted into boxes of ~40 envelopes each, labelled with dispatch ID and laboratory destination to be sent by DHL courier to ALS Chemex in Johannesburg. • Two sets of duplicate pulps of 100-200g were inserted into labelled boxes of ~40 envelopes each to be stored on site in storage containers. • The shipment of pulps from Lubumbashi to ALS laboratories was done using DHL Courier services with waybill number for tracking. • The Lubumbashi sample preparation laboratory utilizes the ALS-Chemex LIM System installed at Kinsevere mine site, generating a unique lab workorder for each batch sample in the analytical chain.
Audit and reviews	• No external audits or reviews of sampling techniques and data have been conducted. • Data has been reviewed by the Competent Person as part of this Mineral Resource estimate. No significant issues were identified.

Section 2 Reporting of Exploration Results	
Criteria	**Status**
Mineral tenement and land tenure status	• The Nambulwa and DZ Projects are located within lease PE539 (100% Gecamines) in the DRC. The lease was acquired by MMG as part of the Kinsevere Amodiation agreement with Gecamines. The tenement is valid through to April 3, 2024.
Exploration done by other parties	• Union Miniere (UMHK) explored the Nambulwa Project during the 1920s. UMHK conducted trenching, pitting and tunnelling, mainly at Nambulwa Main. • Gecamines explored the Nambulwa Project during the 1990s. Work completed included mapping, pitting, and limited drilling at Nambulwa Main. • Anvil Mining explored the Nambulwa Project between September and December 2007 and was the first company to effectively define a resource. Anvil's initial phase of exploration included geological mapping, termite mound sampling, AC drilling (11,830m), RC drilling (6,268m), and DD drilling (668m) focussed on PE539 and the surrounding tenements. An unclassified resource of 1.1Mt of ore @ 3.3% Cu or 35,000 t of copper metal was estimated for Nambulwa Main.
Geology	• Sedimentary hosted copper and cobalt oxide deposits. • Mineralisation is hosted by the Neoproterozoic Katanga Supergroup within R2 and R1 stratigraphic rock types. • Copper mineralisation mainly occurs in oxide form (malachite) in vugs, fractures and as mineral replacement. Chalcocite and minor bornite are present in veins and as fine-grained disseminations within shaley host rocks. • Cobalt oxides tend to concentrate near surface in Fe-Mn rich clays and within

Section 2 Reporting of Exploration Results	
Criteria	**Status**
Drill hole information	• All drillhole information has been considered in estimating the Mineral Resource, and as this is a Mineral Resource report and not a public report of individual exploration results a full listing of results is not provided here.
Data aggregation methods	• This is a Mineral Resource Statement and is not a report on exploration results hence no additional information is provided for this section. • No metal equivalents were used in the Mineral Resource estimation.
Relationship between mineralisation width and intercept lengths	• This is a Mineral Resource estimate and no down hole length intervals are reported separately. All intervals have been considered within mineralised domains for the estimation of grades within the Mineral Resource. • DD and RC drillholes were predominantly drilled with dips of between 45° and 60° to intersect generally steeply dipping mineralisation. Drilling azimuths were as close as practical to orthogonal to the mineralised trend. The AC drillholes were drilled vertically.

Diagrams	 *Figure 1: Nambulwa project location map.*  *Figure 2: Geology map and drill hole locations on the Nambulwa Main prospect.*

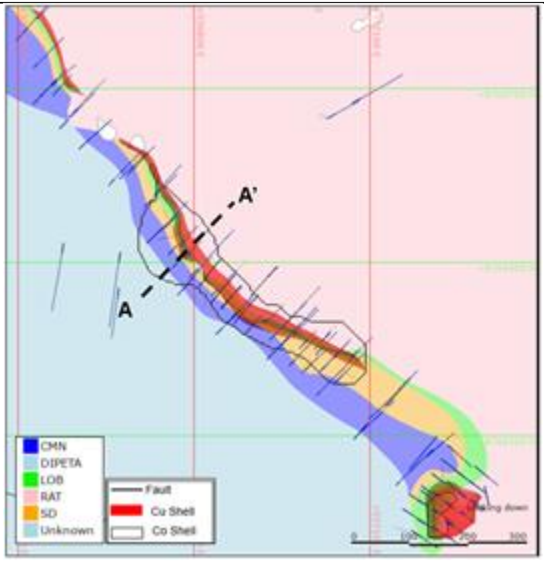


Figure 3: Nambulwa Main geology and copper & cobalt grade shells. The dashed line designated A – A' is the location of the cross section shown in the following figure.

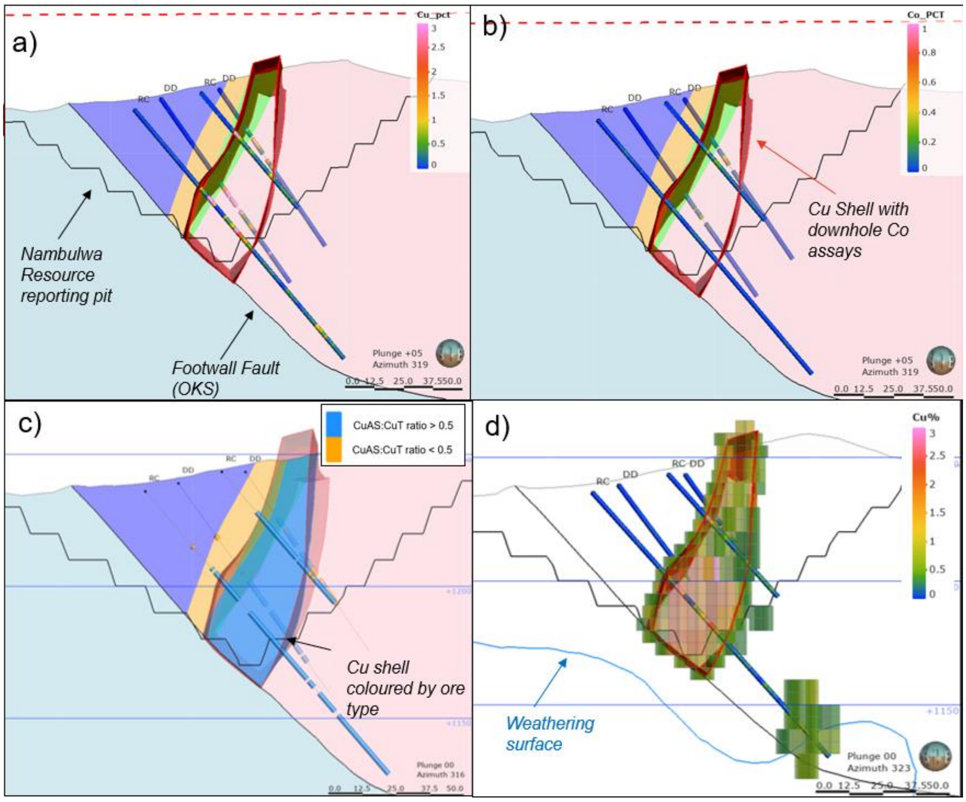


Figure 4: Cross section through Nambulwa Main Cu deposit at 8768415mN (30m slice) showing:

a. *Outline of the copper grade shell with downhole copper assays relative to geology and reporting pit*
b. *Outline of the copper grade shell (no cobalt shell at Nam) with downhole cobalt assays relative to geology and reporting pit*
c. *Copper shell coloured by ore type with downhole CuAS:CuT ratio data relative to geology and reporting pit*
d. *Distribution of copper within the 2020 Nambulwa MRE showing blocks > 0.4% CuT. Note* model has been regularised.*

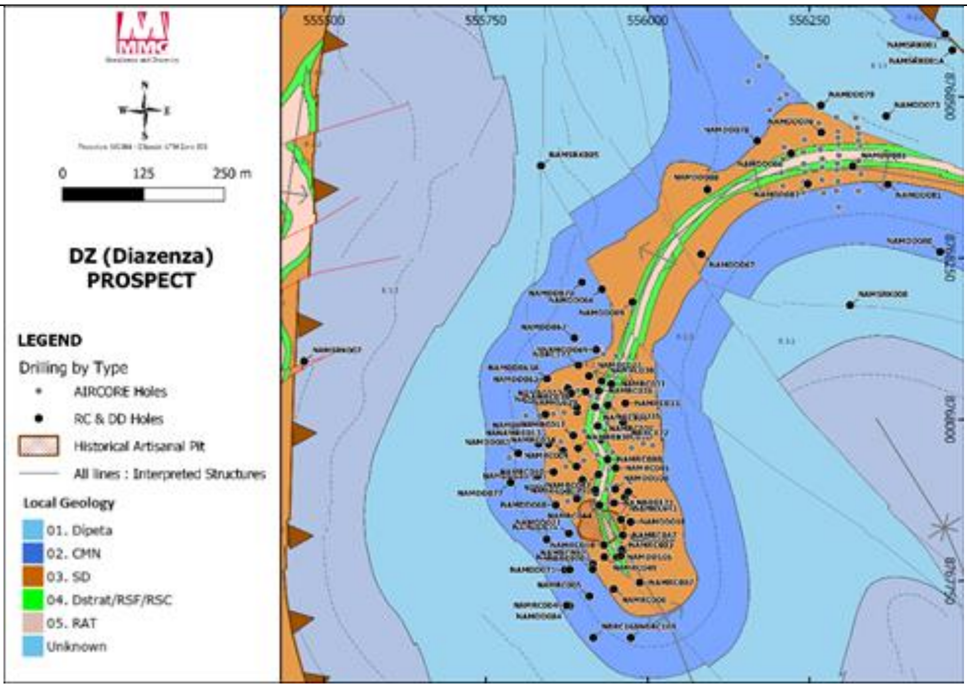


Figure 5: Geology map and drill hole locations on the DZ (Diazenza) prospect.

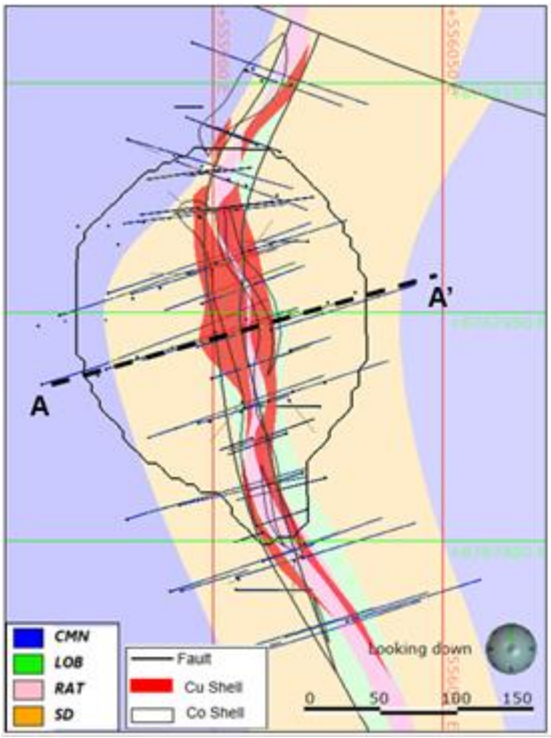
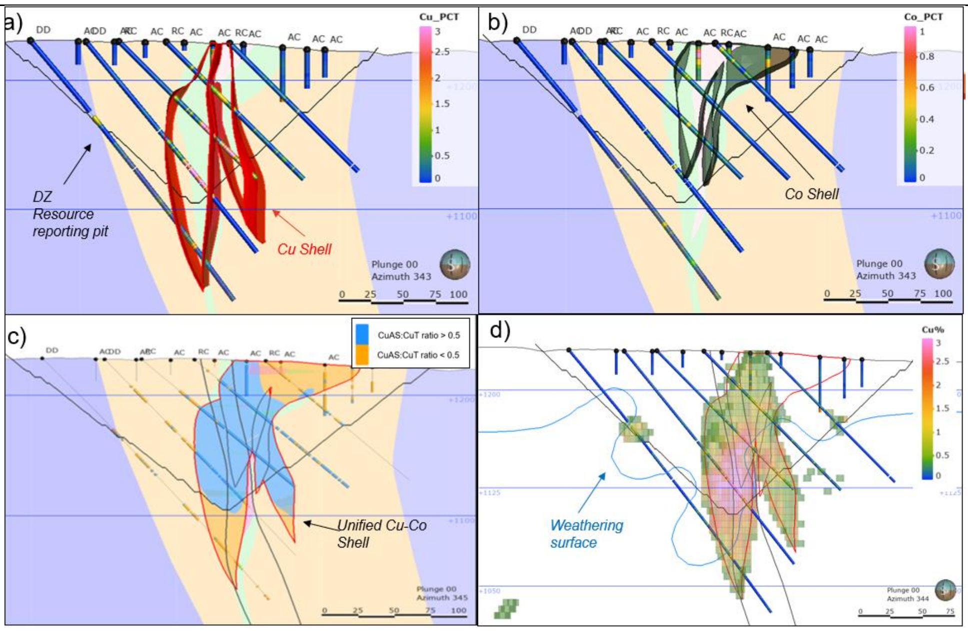


Figure 6: DZ geology and copper & cobalt grade shells. The dashed line designated A – A' is the location of the cross section shown in the following figure.

Section 2 Reporting of Exploration Results

Criteria	Status
	 *Figure 7: Cross section through DZ Cu deposit at 8767930mN, showing:* *a. Outline of the copper grade shell with downhole copper assays relative to geology and reporting pit* *b. Outline of the cobalt grade shell with downhole cobalt assays relative to geology and reporting pit* *c. Unified Cu-Co shell coloured by ore type with downhole CuAS:CuT ratio data relative to geology and reporting pit* *d. Distribution of copper within the 2020 DZ MRE showing blocks > 0.4% CuT. Note* model has been regularised.*
Balanced reporting	• This is a Mineral Resource estimate and not a report of exploration results. • All drill holes and assay results have been considered in the construction of Cu and Co domains for the Nambulwa and DZ Mineral Resource estimates.
Other substantive exploration data	• Airborne Geophysics - TEMPEST survey, Airborne EM, magnetics, and radiometric were flown at the end of 2013. 3D inversion of the EM data identified a prominent conductor body over the western, central and eastern section of the Project. • Geological mapping was conducted in 2014 and 2017. Mapping results outlined the presence of the geologically prospective rock units that are the main host rock to the mineralisation. Younger lithologies were also noted from the Nguba and Kundelungu Formations. • Surface geochemistry: Termite mound sampling on 100m x 100m grid was completed in 2014, which effectively identified copper anomalous zones within the tenement. Additional geochemical surveys include 50m x 50m soil sampling conducted in 2017. • Airborne Geophysics - Xcalibur survey, flown in 2015 • - Magnetics – effective at mapping structural and stratigraphic domains • - Radiometrics - effective at mapping lithological contrasts and regolith domains. • Ground IP and AMT survey – helped in mapping the conductive and resistive bodies at depth.

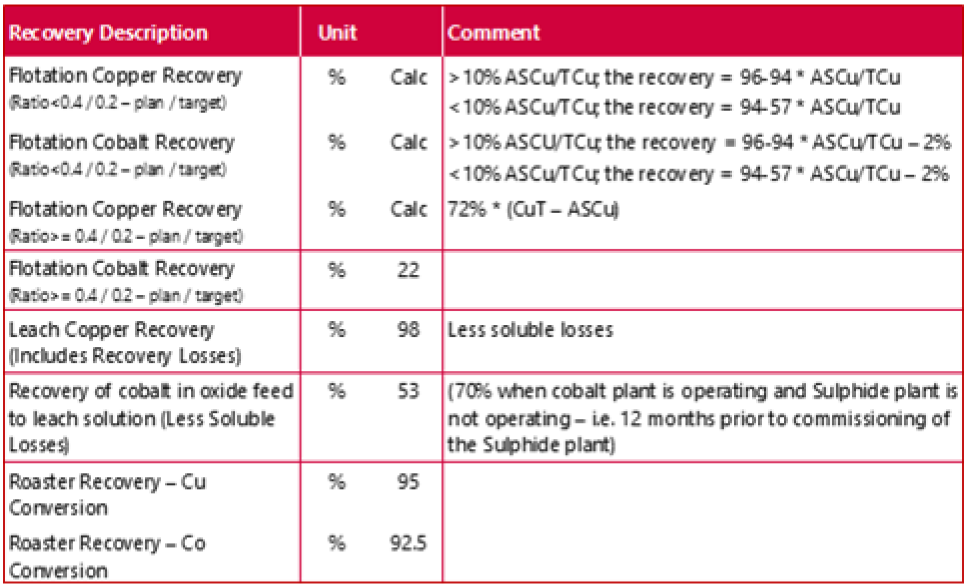
Section 2 Reporting of Exploration Results	
Criteria	**Status**
Further work	- Further work on Nambulwa and DZ will focus on advancing the project to Pre-feasibility level study. This will include drilling to convert Inferred to Indicated and Measured Mineral Resources, mining design and scheduling, metallurgical testing and analysis along with all other Ore Reserve modifying factors.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Status**
Database integrity	- The MMG Exploration database systems are SQL server and Geobank (Micromine) management software. All geological and analytical data are managed in MMG's Corporate Geoscience Database. GIS data are stored in secure shared folders on the Lubumbashi server. - All data capture via Microsoft Excel logging templates. - Multiple data validation steps conducted by the geologist and database team. Validation rules are predefined in each of the database tables. Only valid codes get imported into the database. - The sampling and geochemical data are stored in a local version of SQL database that gets replicated to a similar version on the Head Office server with daily, weekly and monthly backups.
Site visits	- The Competent Person visited the Nambulwa and DZ sites in July 2018 and January 2019 and has visited the Kinsevere deposit and several other oxide copper deposits in the Katanga province, which are also similar in style to the Nambulwa and DZ mineral deposit.
Geological interpretation	- High degree of confidence in the lithological model and geological setting. - Grade shell have been constructed aligned with the stratigraphy although they can cross cut stratigraphic contacts. - A 0.5% total copper threshold was used for copper grade shell and a 0.1% total cobalt threshold was used for the cobalt grade shells. These thresholds allowed for continuity of mineralisation from one drilling section to the next. - Alternative interpretations of the mineralisation controls exist and there may be a structural control in addition to the stratigraphic control. These are unlikely to significantly affect the total quantity of Mineral Resources. - The grade shells appear to have been offset in places by faulting. Structures trending at a close angle to the mineralisation may occur.
Dimensions	**Nambulwa** - Strike length is approximately 1.1 km. - The modelled copper mineralisation is between approximately 2m and 15m wide. Cobalt mineralisation reached 40 m wide.

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Status**
	• Mineralisation occurs from surface along most of the strike length. In some areas drilling did not identify mineralisation near surface, despite artisanal mining, and the mineralisation extends from as deep as 60 m below surface. • The host rocks are terminated by a low angle fault at depths of between 50m and 150m. • The mineralisation is subvertical over most of the area but flattens to the southeast. **DZ** • Strike length is approximately 500m (Adjacent to Nambulwa). • The modelled copper mineralisation is between approximately 5m and 80m wide, reaching a maximum thickness in the centre (bulge area). • Mineralisation occurs from surface along most of the strike length. In some areas drilling did not identify mineralisation near surface. • The mineralisation is subvertical over most of the area, with a bulging shape in the middle of the grade shells.
Estimation and modelling techniques	• A similar estimation strategy was used for both Nambulwa and DZ and is summarised below: • A 0.4% total copper threshold was used for copper grade shell and a 0.1% total cobalt threshold was used for the cobalt grade shells. • Grade estimation was completed using ordinary kriging for total copper and cobalt and inverse distance weighting for density, Ca, Mg and acid soluble ratios using Datamine Studio RM software. Samples were composited to 1 m. • Top cuts were applied to statistical outliers where necessary. • Search distances used based on multiples of the variogram ranges. • The wireframe models were filled with parent cells 5m x 5m x 5m (X,Y,Z). The parent cells were split to sub-cells of a minimum of 1m x 1m x 1m (X,Y,Z). The drillhole spacing is approximately 25m (Nambulwa) and 50m (DZ) strike at by 25 m on dip. The small block size was chosen due to the orientation of the grade shells rather than on a geostatistical basis. • Each lithological and grade shell wireframe was filled and coded for zonal estimation so that the model contains lithological codes and grade shell codes. The coding included a code for the low Ca volume that represents the base of deep weathering. • Caa and Mg were estimated by lithology separately within volumes defining low, moderate and high levels of Ca and Mg. • Insitu bulk dry density was estimated within each lithology and below and above the low Ca volume, which defines the deep weathering. • A waste model was created that covered the area containing any elevated copper and/or cobalt grades. • No SMU was considered

<table>
<tr><th colspan="2">Section 3 Estimating and Reporting of Mineral Resources</th></tr>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>Bivariate analysis was carried out to determine relationships between the attributes of interest. All elements were estimated individually there being no discernible relationship between copper and cobalt and acid soluble values.
Hard boundaries were used so that estimation was within grade shells.
The block model grade was compared to drillhole data visually and statistically.
No reconciliation data were available.
The latest estimate compares well with the first estimate and wherever difference occur, significant deviation are justified.The block model grade was compared to drillhole data visually, statistically and by comparing average grades of the drillhole data and model in 50m slices through the deposit.
No modern mining occurred and therefore no reconciliation data is available.
Previous maiden resource estimate was also completed by MSA of Johnesburg and was compared to the current estimate.</td></tr>
<tr><td>Moisture</td><td>Estimated tonnes are on a dry basis with density measurements being in-situ dry bulk densities.</td></tr>
<tr><td>Cut-off parameters</td><td>The Mineral Resources has been reported above a total copper cut-off grade of 0.8%. Additional cobalt Mineral Resource (outside of the copper cut-off of 0.8%), has been reported above a total cobalt cut-off grade of 0.2%.
The reported Mineral Resources have also been constrained within a US$3.62/lb copper and US$25.79/lb cobalt whittle pit shell. The reporting cut-off grade and the pit-shell price assumption are in line with MMG’s policy on reporting of Mineral Resources which is prospective for future economic extraction.</td></tr>
<tr><td>Mining factors or assumptions</td><td>The mining method is assumed to be open pit with trucks and excavators.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>Nambulwa and DZ ore is intended to be processed at Kinsevere Mine shortly after the implementation of the Kinsevere Expansion Project (currently pending board approval).
Nambulwa and DZ ore is relatively simple in composition (malachite with minor chalcocite/bornite) and very similar to the oxides and transitional sulphides present at Kinsevere.
At this stage of project development metallurgical recovery assumptions are based on KEP recoveries.
As such, the criteria impacting the resource cut-off grades and reportable pit shell inputs are based on the proposed Kinsevere Expansion Project (KEP) flowsheet and infrastructure upgrades. The upgraded flowsheet will consist of the following changes:
Oxide pre-flotation circuit and leach tank modifications 2.3mtpa
Oxide leach upgrades to convert to reductive leach conditions
Sulphide Concentrator 2.2mtpa capacity
Roaster circuit including off-gas cleaning, acid plant and concentrate storage
Cobalt Recovery circuit to produce high grade Cobalt hydroxide</td></tr>
</table>

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Status**
	○ SX plant modifications • The estimated plant recoveries are as follows: (see table below) ** ASCu refers to the sulphuric acid soluble portion of copper content within the sample mass** *'Ratio' refers to the ratio of ASCu:TCu*
Environmental factors or assumptions	• Environmental factors include increased land surface disturbance and required rehabilitation for this site, including final pit excavation and waste rock storage. All ore piles are expected to be transported to Kinsevere for treatment.
Bulk density	• Bulk density measurements have been undertaken using weight in air and weight in water. The samples measured have also included wax immersion to prevent over estimation due to the porous nature of oxide samples. Samples are also oven dried prior to measurement. • Measurements are undertaken on each hole within specific lithological units and on mineralised intersections. • In-situ bulk density estimated into each block using inverse distance squared
Classification	• The model was classified as Indicated and Inferred where informed by a grid of mineralised intersections. • Indicated Mineral Resources were extrapolated a maximum of 25 m from the nearest drillhole. • Inferred Mineral Resources were extrapolated a maximum of 60 m from the nearest drillhole. • Where an unmineralised intersection occurs within the drillhole grid, the Mineral Resource was constrained to a distance half way between the nearest mineralised intersection and the unmineralised intersection. • The Mineral Resource was constrained above the interpreted basal fault.



Recovery Description	Unit		Comment
Flotation Copper Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCu/TCu; the recovery = 96-94 * ASCu/TCu < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu
Flotation Cobalt Recovery (Ratio<0.4 / 0.2 – plan / target)	%	Calc	> 10% ASCU/TCu; the recovery = 96-94 * ASCu/TCu – 2% < 10% ASCu/TCu; the recovery = 94-57 * ASCu/TCu – 2%
Flotation Copper Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	Calc	72% * (CuT – ASCu)
Flotation Cobalt Recovery (Ratio>= 0.4 / 0.2 – plan / target)	%	22	
Leach Copper Recovery (Includes Recovery Losses)	%	98	Less soluble losses
Recovery of cobalt in oxide feed to leach solution (Less Soluble Losses)	%	53	(70% when cobalt plant is operating and Sulphide plant is not operating – i.e. 12 months prior to commissioning of the Sulphide plant)
Roaster Recovery – Cu Conversion	%	95	
Roaster Recovery – Co Conversion	%	92.5	

Section 3 Estimating and Reporting of Mineral Resources	
Criteria	**Status**
	• Mineralisation outside the modelled grade shells was not classified as Mineral Resource. • No Measured Mineral Resources were reported due to uncertain grade continuity.
Audits or reviews	• No external audits or reviews of this Mineral Resource estimate have been undertaken.
Discussion of relative accuracy/ confidence	**For both Nambulwa and DZ** • The Indicated Mineral Resources are informed by drilling spaced 25 m along strike. The Inferred Mineral Resources are informed by drilling and extrapolation is minimal. Mineral Resources informed by sparse drilling are considered to be low confidence estimates that may change significantly with additional data. It cannot be assumed that all or part of an Inferred Mineral Resource will necessarily be upgraded to an Indicated Mineral Resource as a result of continued exploration. • Inferred Mineral Resources are not suitable for detailed technical and economic evaluation. • Although block model estimates have been carried out, local estimates are likely to be inaccurate.

9.2.3 Statement of Compliance with JORC Code Reporting Criteria and Consent to Release

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").

9.2.3.1 Competent Person Statement

I, Douglas Corley, confirm that I am the Competent Person for the Nambulwa and DZ Mineral Resource section of this Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition).
- I am a Competent Person as defined by the JORC Code, 2012 Edition, having five years' experience that is relevant to the style of mineralisation and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of The Australian Institute of Geoscientists and hold Registered Professional Geoscientist (RPGeo) accreditation.
- I have reviewed the relevant Nambulwa and DZ Mineral Resource section of this Report to which this Consent Statement applies.

I am a full-time employee of Mining One Pty. Ltd. at the time of the estimation.

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Nambulwa and DZ Mineral Resource section of this Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to the Nambulwa and DZ Mineral Resources.

9.2.3.2 Competent Person Consent

Pursuant to the requirements Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

With respect to the sections of this report for which I am responsible – the Nambulwa and DZ Mineral Resources - I consent to the release of the 2020 Mineral Resources and Ore Reserves Statement as at 30 June 2020 Executive Summary and Technical Appendix Report and this Consent Statement by the directors of MMG Limited:

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Douglas Corley MAIG R.P.Geo. (#1505)

02/12/2020

Date:______________________________

This signature was scanned for the exclusive use in this document – the *MMG Mineral Resource and Ore Reserve Statement as at 30 June 2020* – with the author's approval. Any other use is not authorised.

____

Signature of Witness:

Rex Berthelsen
Melbourne, VIC

____

Witness Name and Residence: (e.g. town/suburb)

10 HIGH LAKE

This Mineral Resources remains unchanged since reporting in 2013. This information can be found in the 2013 MMG Mineral Resources and Ore Reserves Statement as at 30 June 2013 Technical Appendix.

11 IZOK LAKE

This Mineral Resources remains unchanged since reporting in 2013. This information can be found in the 2013 MMG Mineral Resources and Ore Reserves Statement as at 30 June 2013 Technical Appendix.