MMG LIMITED

五礦資源有限公司

(Incorporated in Hong Kong with limited liability)

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

MINERAL RESOURCES AND ORE RESERVES STATEMENT AS AT 30 JUNE 2016

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 2016 (Mineral Resources and Ore Reserves Statement).

The highlights of the Mineral Resources and Ore Reserves Statement as at 30 June 2016 include:

- The Group's Mineral Resources (contained metal) has increased for molybdenum (4%), remains unchanged for gold and nickel, and decreased for copper (1%), zinc (2%), lead (6%) and silver (5%).
- The Group's Ore Reserves (contained metal) has increased for copper (6%), silver (2%) and molybdenum (7%) and decreased for zinc (10%), lead (11%) and gold (5%).
- Mineral Resources and Ore Reserves Tonnes at Las Bambas increased by 117Mt and 7Mt respectively. The Las Bambas project is held by a joint venture company, of which 62.5% is owned by MMG.

All data reported here is 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 9).

MMG Limited

MINERAL RESOURCES AND ORE RESERVES STATEMENT

30 June 2016

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 2016 published on 18 October 2016 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
Andrew Gordon Michelmore
CEO and Executive Director

Hong Kong, 18 October 2016

As at the date of this announcement, the Board comprises eight directors, of which two are executive directors, namely Mr Andrew Gordon Michelmore and Mr Xu Jiqing; two are non-executive directors, namely Mr Jiao Jian (Chairman), and Mr Gao Xiaoyu; and four are independent non-executive directors, namely Dr Peter William Cassidy, Mr Leung Cheuk Yan, Ms Jennifer Anne Seabrook and Prof Pei Ker Wei.

MMG Limited

MINERAL RESOURCES AND ORE RESERVES STATEMENT

30 June 2016

EXECUTIVE SUMMARY

Mineral Resources and Ore Reserves for MMG have been estimated as at 30 June 2016, 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 9, which include the 30 June 2016 and 2015 estimates for comparison. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources that convert to Ore Reserves. All supporting data is provided within the Technical Appendix, available on the MMG website.

Mineral Resources and Ore Reserves information in this statement has been compiled by Competent Persons (as defined by the 2012 JORC Code). Each Competent Person consents to the inclusion of the information in this report that they have provided in the form and context in which it appears. Competent Persons are listed on page 10.

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 2015 estimate include an increase in molybdenum, no change for gold and nickel, and reductions in copper, zinc, lead and silver. Metal reductions are mostly due to depletion[1], cut-off grade changes and drilling results at MMG's operations that have been partly offset by Mineral Resources additions, especially at Las Bambas.

The MMG Ore Reserves (contained metal) have increased since the 30 June 2015 statement for copper, molybdenum and silver principally due to increases at Las Bambas along with additions at Kinsevere. Decreases in Ore Reserves contained metal for lead, zinc and gold are mostly the result of depletion at Century, Golden Grove and Rosebery.

Tonnes of Mineral Resources and Ore Reserves have increased in total, more than replacing depletion. Las Bambas Mineral Resources and Ore Reserves have increased by 117Mt and 7Mt respectively.

Pages 11 and 12 provide further discussion of the Mineral Resources and Ore Reserves changes.

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[1] Depletion in this report refers to material treated by the mill and depleted from the Mineral Resources and Ore Reserves

MINERAL RESOURCES AND ORE RESERVES STATEMENT

30 June 2016

MINERAL RESOURCES[2]

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

	2016							2015						
Deposit	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**
Las Bambas (62.5%)														
Ferrobamba Oxide Copper														
Indicated	16.8	2.0						21.3	1.9					
Inferred	0.7	1.9						5.7	1.7					
Total	**17.4**	**2.0**						**27.0**	**1.8**					
Ferrobamba Primary Copper														
Measured	529	0.68			3.3	0.06	198	388	0.76			3.7	0.07	204
Indicated	527	0.59			2.7	0.05	191	490	0.65			2.9	0.05	209
Inferred	397	0.57			2.1	0.03	146	452	0.56			2.2	0.03	148
Total	**1,453**	**0.62**			**2.7**	**0.05**	**181**	**1,330**	**0.65**			**2.9**	**0.05**	**187**
Ferrobamba Total	**1,471**							**1,357**						
Chalcobamba Oxide Copper														
Indicated	6.5	1.5						5.9	1.4					
Inferred	0.9	1.5						0.5	1.5					
Total	**7.3**	**1.5**						**6.4**	**1.4**					
Chalcobamba Primary Copper														
Measured	94	0.40			1.2	0.01	148	96	0.4			1.3	0.02	151
Indicated	196	0.63			2.4	0.03	145	190	0.6			2.3	0.03	138
Inferred	48	0.47			1.6	0.02	131	41	0.5			1.5	0.02	122
Total	**338**	**0.55**			**1.9**	**0.02**	**144**	**327**	**0.5**			**1.9**	**0.02**	**140**
Chalcobamba Total	**345**							**334**						
Sulfobamba Oxide Copper														
Inferred								0.02	2.8					
Total								0.02	2.8					
Sulfobamba Primary Copper														
Indicated	103	0.60			4.1	0.02	162	102	0.6			4.4	0.02	164
Inferred	201	0.44			4.0	0.02	119	214	0.5			4.2	0.02	117
Total	**304**	**0.50**			**4.0**	**0.02**	**133**	**315**	**0.5**			**4.3**	**0.02**	**132**
Sulfobamba Total	**304**							**315**						
Oxide Copper Stockpile														
Indicated	3.4	0.86												
Total	**3.4**	**0.86**												
Sulphide Stockpile														
Measured	0.37	0.72			3.1		214							
Total	**0.37**	**0.72**			**3.1**		**214**							
Las Bambas Total	**2,124**							**2,007**						

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

MMG Limited

MINERAL RESOURCES AND ORE RESERVES STATEMENT

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MINERAL RESOURCES

	2016							2015						
Deposit	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**
Kinsevere (100%)														
Oxide Copper														
Measured	3.1	4.6						3.7	4.5					
Indicated	13.7	3.1						11.9	3.4					
Inferred	3.5	2.4						4.2	3.3					
Total	**20.3**	**3.2**						**19.8**	**3.6**					
Transition Mixed Copper Ore														
Measured	0.7	3.4												
Indicated	2.0	3.0												
Inferred	0.2	2.2												
Total	**2.9**	**3.0**												
Primary Copper														
Measured	0.4	3.1						1.6	3.2					
Indicated	18.5	2.6						10.9	2.2					
Inferred	2.2	2.0						14.6	2.4					
Total	**21.2**	**2.5**						**27.1**	**2.3**					
Stockpiles														
Measured								6.4	2.3					
Indicated	6.8	2.4												
Total	**6.8**	**2.4**						**6.4**	**2.3**					
Kinsevere Total	**51.2**							**53.3**						
Sepon (90%)														
Oxide Gold														
Indicated	1.6					3.0		1.1					3.0	
Inferred	0.4					2.1		0.2					2.1	
Total	**2.0**					**2.8**		**1.2**					**2.9**	
Partial Oxide Gold														
Indicated	1.3					4.2		0.6					5.4	
Inferred	0.1					2.9		0.01					4.1	
Total	**1.3**					**4.1**		**0.6**					**5.4**	
Primary Gold														
Indicated	7.8					4.0		7.5					3.4	
Inferred	0.1					3.5		0.3					2.5	
Total	**7.9**					**4.0**		**7.8**					**3.4**	
Supergene Copper														
Indicated	12.9	3.5						13.4	3.3					
Inferred	0.3	3.5						1.0	2.5					
Total	**13.3**	**3.5**						**14.4**	**3.2**					
Primary Copper														
Indicated	5.0	1.2						7.6	1.0					
Inferred	3.3	1.1						3.8	1.5					
Total	**8.4**	**1.2**						**11.4**	**1.1**					
Copper Stockpiles														
Measured								5.9	2.1					
Indicated	5.7	1.6												
Total	**5.7**	**1.6**						**5.9**	**2.1**					
Sepon Total	**38.6**							**41.4**						

MINERAL RESOURCES

	2016							2015						
Deposit	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**
Dugald River (100%)														
Primary Zinc														
Measured	5.5		14.2	2.0	64			5.7		14.5	2.0	63		
Indicated	27.1		12.9	2.2	50			25.9		13.3	2.2	51		
Inferred	28.5		12.0	1.7	13			25.7		12.7	1.8	13		
Total	**61.1**		**12.6**	**1.9**	**34**			**57.3**		**13.2**	**2.0**	**35**		
Primary Copper														
Inferred	4.4	1.8				0.2		4.4	1.8				0.2	
Total	**4.4**	**1.8**				**0.2**		**4.4**	**1.8**				**0.2**	
Dugald River Total	**66.0**							**61.7**						
Golden Grove (100%)														
Oxide Gold														
Indicated	0.7				61	3.2		0.6				89	3.2	
Inferred	0.01					1.5		0.04				55	2.8	
Total	**0.7**				**60**	**3.1**		**0.6**				**87**	**3.2**	
Partial Oxide Gold														
Indicated	0.01				115	5.1		0.1				130	2.6	
Inferred								0.01				71	2.0	
Total	**0.01**				**115**	**5.1**		**0.1**				**123**	**2.5**	
Primary Gold														
Indicated								0.1				54	2.2	
Inferred								0.01				49	2.1	
Total								**0.1**				**53**	**2.2**	
Primary Zinc														
Measured	1.8	0.52	14.7	1.8	109	2.8		2.7	0.54	11.3	1.3	89	1.7	
Indicated	1.8	0.57	14.4	1.5	96	1.8		2.0	0.33	11.0	1.5	108	1.5	
Inferred	4.3	0.27	14.7	0.7	50	0.6		3.7	0.45	13.7	0.5	40	0.6	
Total	**7.9**	**0.39**	**14.6**	**1.1**	**74**	**1.4**		**8.4**	**0.45**	**12.3**	**1.0**	**72**	**1.1**	
Partial Oxide Copper														
Indicated								0.3	2.2					
Inferred								0.004	2.1					
Total								**0.3**	**2.2**					
Primary Copper														
Measured	3.1	3.7			22	0.8		6.2	2.9			33	1.3	
Indicated	2.6	4.1			31	1.0		2.0	2.8			29	1.2	
Inferred	3.5	3.7			26	0.5		8.4	3.3			26	0.2	
Total	**9.2**	**3.8**			**26**	**0.8**		**16.7**	**3.1**			**29**	**0.7**	
Golden Grove Total	**17.8**							**26.2**						

MINERAL RESOURCES

	2016							2015						
Deposit	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Ni (%)**	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Ni (%)**
Rosebery (100%)														
Rosebery														
Measured	5.4	0.25	8.1	2.9	107	1.3		9.0	0.25	8.6	2.8	96	1.2	
Indicated	5.7	0.25	7.6	2.6	102	1.2		6.4	0.25	7.3	2.5	103	1.1	
Inferred	11.2	0.26	8.0	2.7	95	1.4		7.0	0.29	7.4	2.8	96	1.4	
Total	**22.3**	**0.26**	**7.9**	**2.7**	**100**	**1.3**		**22.4**	**0.26**	**7.9**	**2.7**	**98**	**1.2**	
South Hercules														
Measured								0.1	0.15	4.6	2.5	151	3.8	
Indicated								0.02	0.13	3.7	1.8	161	4.3	
Total								**0.2**	**0.15**	**4.5**	**2.4**	**152**	**3.9**	
Rosebery Total	**22.3**							**22.6**						
Century (100%)														
Century Pit														
Indicated								0.7		9.7	1.4	36		
Total								**0.7**		**9.7**	**1.4**	**36**		
Stockpiles														
Measured								1.9		6.1	1.7	42		
Total								**1.9**		**6.1**	**1.7**	**42**		
Century Total								**2.6**						
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**	
High Lake Total	**14.0**							**14.0**						
Izok Lake (100%)														
Measured														
Indicated	13.5	2.4	13.3	1.4	73	0.2		13.5	2.4	13.3	1.4	73	0.2	
Inferred	1.2	1.5	10.5	1.3	73	0.2		1.2	1.5	10.5	1.3	73	0.2	
Total	**14.6**	**2.3**	**13.1**	**1.4**	**73**	**0.2**		**14.6**	**2.3**	**13.1**	**1.4**	**73**	**0.2**	
Izok Lake Total	**14.6**							**14.6**						
Avebury (100%)														
Measured	3.8						1.1	3.8						1.1
Indicated	4.9						0.9	4.9						0.9
Inferred	20.7						0.8	20.7						0.8
Total	**29.3**						**0.9**	**29.3**						**0.9**
Avebury Total	**29.3**							**29.3**						

ORE RESERVES[3]

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

	2016							2015						
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	492	0.71			3.4	0.07	201	424	0.71			3.4	0.08	187
Probable	340	0.71			3.5	0.06	202	360	0.64			2.8	0.06	187
Total	**832**	**0.71**			**3.5**	**0.06**	**201**	**784**	**0.68**			**3.2**	**0.07**	**187**
Chalcobamba Primary Copper														
Proved	53	0.51			1.7	0.02	151	77	0.46			1.5	0.02	155
Probable	136	0.75			2.8	0.03	135	150	0.70			2.6	0.03	137
Total	**188**	**0.68**			**2.5**	**0.03**	**140**	**227**	**0.62**			**2.2**	**0.03**	**143**
Sulfobamba Primary Copper														
Probable	66	0.78			5.5	0.03	176	68	0.76			5.5	0.03	176
Total	**66**	0.78			**5.5**	0.03	**176**	**68**	0.76			**5.5**	0.03	**176**
Sulphide Stockpile														
Proved	0.37	0.72			3.1		**214**							
Total	**0.37**	**0.72**			**3.1**		**214**							
Las Bambas Total	**1,086**							**1,079**						
Kinsevere (100%)														
Oxide Copper														
Proved	2.9	4.5						2.9	4.7					
Probable	9.8	3.5						6.6	3.9					
Total	**12.7**	**3.7**						**9.4**	**4.1**					
Oxide Copper Stockpiles														
Proved								1.4	3.7					
Probable	4.9	2.2						3.4	1.4					
Total	**4.9**	**2.2**						**4.8**	**2.1**					
Kinsevere Total	**17.6**							**14.3**						
Sepon (90%)														
Supergene Copper														
Probable	8.0	3.5						8.3	3.6					
Total	**8.0**	**3.5**						**8.3**	**3.6**					
Primary Copper														
Probable	2.3	0.8						2.9	1.1					
Total	**2.3**	**0.8**						**2.9**	**1.1**					
Copper Stockpiles														
Proved								5.7	2.1					
Probable	4.6	1.7												
Total	**4.6**	**1.7**						**5.7**	**2.1**					
Sepon Total	**14.9**							**16.9**						

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

MINERAL RESOURCES AND ORE RESERVES STATEMENT

30 June 2016

ORE RESERVES

	2016							2015						
Deposit	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**	**Tonnes (Mt)**	**Cu (%)**	**Zn (%)**	**Pb (%)**	**Ag (g/t)**	**Au (g/t)**	**Mo (ppm)**
Dugald River (100%)														
Primary Zinc														
Proved	4.6		12.3	1.7	55			0.5		15.5	1.4	38		
Probable	17.8		12.1	2.0	48			22.1		12.3	2.0	50		
Dugald River Total	**22.5**							**22.5**						
Golden Grove (100%)														
Primary Zinc														
Proved	1.0	0.72	12.1	1.7	97	3.4		1.1	0.54	12.0	1.6	103	3.2	
Probable	0.8	0.86	11.6	1.3	98	2.3		0.9	0.26	11.1	1.9	148	1.4	
Total	**1.9**	**0.78**	**11.8**	**1.5**	**98**	**2.9**		**2.0**	**0.41**	**11.6**	**1.7**	**123**	**2.4**	
Partial Oxide Copper														
Proved								0.1	2.8					
Probable								0.2	2.1					
Total								**0.3**	**2.3**					
Primary Copper														
Proved	1.3	3.5			21	1.1		1.8	3.1			24	1.3	
Probable	0.7	3.1			26	1.6		1.0	2.7			31	2.2	
Total	**2.0**	**3.4**			**22**	**1.2**		**2.7**	**2.9**			**27**	**1.6**	
Oxide Gold														
Probable	0.2				56	2.6								
Total	**0.2**				**56**	**2.6**								
Golden Grove Total	**4.1**							**5.1**						
Rosebery (100%)														
Proved	3.2	0.25	8.8	3.1	110	1.3		4.8	0.25	8.3	2.6	85	1.0	
Probable	2.2	0.22	7.5	3.0	118	1.3		2.6	0.18	6.0	2.4	100	1.0	
Rosebery Total	**5.4**							**7.4**						
Century (100%)														
Proved								1.9		6.1	1.7	42		
Probable								0.7		8.7	1.1	34		
Century Total								**2.7**						

COMPETENT PERSONS

Deposit	Accountability	Competent Person	Professional Membership	Employer
MMG Mineral Resources and Ore Reserves Committee	Mineral Resources	Jared Broome[1]	FAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Nan Wang[1]	MAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Reinhardt Viljoen[1]	MAusIMM	MMG
Las Bambas	Mineral Resources	Rex Berthelsen[1]	FAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu[1]	MAusIMM	MMG
Las Bambas	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb	SME	MMG
Sepon	Mineral Resources	Chevaun Gellie	MAusIMM	MMG
Sepon	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Sepon	Metallurgy: Mineral Resources / Ore Reserves	Leonardo Paliza	MAusIMM	MMG
Kinsevere	Mineral Resources	Douglas Corley[1]	MAIG R.P.Geo.	MMG
Kinsevere	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Kinsevere	Metallurgy: Mineral Resources / Ore Reserves	Mark Godfrey[1]	MAusIMM	MMG
Rosebery	Mineral Resources	James Pocoe	MAusIMM	MMG
Rosebery	Ore Reserves	Karel Steyn	MAusIMM	MMG
Rosebery	Metallurgy: Mineral Resources / Ore Reserves	Kevin Rees	MAusIMM(CP)	MMG
Golden Grove (Underground & Open Pit)	Mineral Resources	Paul Boamah	MAusIMM	MMG
Golden Grove - Underground	Ore Reserves	Karel Steyn	MAusIMM	MMG
Golden Grove - Open Pit	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Golden Grove (Underground & Open Pit)	Metallurgy: Mineral Resources / Ore Reserves	Nigel Thiel[1]	MAusIMM(CP)	MMG
Dugald River	Mineral Resources	Douglas Corley[1]	MAIG R.P.Geo.	MMG
Dugald River	Ore Reserves	Karel Steyn	MAusIMM	MMG
Dugald River	Metallurgy: Mineral Resources / Ore Reserves	Shuhua He	MAusIMM	MMG
High Lake, Izok Lake	Mineral Resources	Allan Armitage	MAPEG[2] (P.Geo)	Formerly MMG
Avebury	Mineral Resources	Peter Carolan	MAusIMM	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.

[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 2016 have changed since the 30 June 2015 estimate for a number of reasons with the most significant changes outlined in this section.

Mineral Resources (contained metal) have increased for molybdenum (4%), remain unchanged for gold and nickel, and have decreased for copper (1%), zinc (2%), lead (6%) and silver (5%).

Significant increases and decreases to Mineral Resources (contained metal) on an individual site basis are discussed below:

Increases:

> Increases to the Mineral Resources (contained metal) for copper and molybdenum at Las Bambas are due to positive drilling results and increases in mineralised marble.
>
> Sepon Mineral Resources contained gold increased as a result of pit shell adjustments related to metallurgical recovery.

Decreases:

> Depletion at all MMG Operations has reduced Mineral Resources (contained metal), with the largest impacts on:

- Century (zinc, lead and silver) fully depleted as a result of mine closure;
- Golden Grove (copper, zinc, lead, silver, gold) as a result of depletion, increase in cut-off grade, and drilling reducing sulphide copper mineralisation;
- Sepon (copper) depletion; and
- Kinsevere (copper) depletion.

No changes have been made to the Mineral Resources at High Lake, Izok Lake and Avebury.

ORE RESERVES

Ore Reserves as at 30 June 2016 (contained metal) have increased for copper (6%), silver (2%) and molybdenum (7%) and decreased for zinc (10%), lead (11%) and gold (5%). Ore Reserves tonnes have increased, more than replacing depletion across MMG.

Significant increases and decreases to Ore Reserves (contained metal) on an individual site basis are discussed below:

Increases:

Las Bambas Ore Reserves contained copper, silver and molybdenum metal increased due to the inclusion of mineralised marble following positive metallurgical results and additional drilling converting Mineral Resources to Ore Reserves.

Kinsevere contained copper increased as a result of lower cut-off grade due to changes in mill throughput and lower processing costs.

Decreases:

Depletion at all MMG operations has reduced Ore Reserves (contained metal) for zinc, lead and gold. The largest impacts are:

- Century (zinc, lead and silver) fully depleted as a result of mine closure;
- Rosebery (copper, zinc, lead, silver, gold) as a result of depletion;
- Golden Grove (copper, zinc, lead, silver, gold) as a result of depletion and cut-off grade increase; and
- Sepon (copper) depletion.

KEY ASSUMPTIONS

PRICES AND EXCHANGE RATES

The following price and foreign exchange assumptions, set according to the relevant MMG Standard as at January 2016, have been applied to all Mineral Resources and Ore Reserves estimates. Price assumptions remain unchanged from the 2015 Mineral Resources and Ore Reserves statement except for gold, which was US$1010/oz.

Table 1 : Price (real) and foreign exchange assumptions

	Ore Reserves	Mineral Resources
Cu (US$/lb)	2.95	3.50
Zn (US$/lb)	1.20	1.45
Pb (US$/lb)	1.12	1.35
Au US$/oz	1031	1212
Ag US$/oz	21.10	25.50
Mo (US$/lb)	11.1	15.0
AUD:USD	0.82	As per Ore Reserves
USD:PEN	3.30	

CUT-OFF GRADES

Mineral Resources and Ore Reserves cut-off values are shown in Table 2 and Table 3 respectively.

Table 2 : Mineral Resources cut-off grades

Site	Mineralisation	Likely Mining Method[a]	Cut-Off Value	Comments
Las Bambas	Oxide Copper	OP	1% Cu	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$3.5/lb Cu pit shell.
	Primary Copper	OP	0.17-0.5% Cu	
Sepon	Oxide Gold	OP	1.1 – 1.2 g/t Au	Approximate cut-off grades shown in this table.Variable cut-off grade based on net value script accounting for costs, recoveries and metal prices within US$1,212/oz pit shells.
	Partial Oxide	OP	1.7 – 2.0 g/t Au	
	Primary Gold	OP	1.6 – 1.9 g/t Au	
	Supergene Copper – Carbonate	OP	1.3- 1.5% Cu	Approximate cut-off grades shown in this table. Variable cut-off grade based on net value script accounting for costs, recoveries and metal prices within US$3.5/lb pit shells.
	Supergene Copper - Chalcocite	OP	1.3% Cu	
	Primary Copper	OP	0.5% Cu	
Kinsevere	Oxide Copper & Stockpiles	OP	0.6% ASCu[b]	*In-situ* Copper Mineral Resources constrained within a US$3.5/lb Cu pit shell.
	Transition Mixed Copper	OP	1.5% TCu[c]	
	Primary Copper	OP	1.1% TCu[c]	
Rosebery	Rosebery (Zn, Cu, Pb, Au, Ag)	UG	A$153/t NSR[d]	Remnant upper mine areas A$179/t NSR[d]
Golden Grove	Primary Zinc & Primary Copper (Zn, Cu, Pb, Au, Ag)	UG	A$163/t NSR[d]	
	Oxide Gold - Scuddles	OP	0.5 g/t Au	*In-situ* Gold Mineral Resources constrained within a pit shell based on ore sales contract.
	Oxide & Partial Oxide Gold – Gossan Hill	OP	1.1 g/t Au	*In-situ* Gold Mineral Resources constrained within a US$1212/oz Au pit shell.
Dugald River	Primary Zinc (Zn, Pb, Ag)	UG	A$125/t NSR[d]	
	Primary Copper	UG	1%Cu	
Avebury	Ni	UG	0.4% Ni	
High Lake	Cu, Zn, Pb, Ag, Au	OP	2.0% CuEq[f]	CuEq[f] = 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%
High Lake Izok Lake	Cu, Zn, Pb, Ag, Au Cu, Zn, Pb, Ag, Au	UG	4.0% CuEq[f]	CuEq[f] = 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% ZnEq = Zn + (Cu×3.31) + (Pb×1.09) + (Au×1.87) + (Ag×0.033); prices and metal recoveries as per High Lake
		OP	4.0% ZnEq[e]	

[a] : OP = Open Pit, UG = Underground, ASCu[b] = Acid Soluble Copper, TCu[c] = Total Copper,
NSR[d] = Net Smelter Return After Royalty, ZnEq[e] = Zinc Equivalent, CuEq[f] = Copper Equivalent, AuEq[g] = Gold Equivalent.

Table 3 : Ore Reserves cut-off grades

Site	Mineralisation	Mining Method	Cut-Off Value	Comments
Las Bambas	Primary Copper Ferrobamba	OP	0.20-0.27%Cu, 0.31-0.64% Cu for marble ore	Range based on rock type recovery.
	Primary Copper Chalcobamba		0.21 – 0.31%Cu	
	Primary Copper Sulfobamba		0.23 – 0.27% Cu	
Sepon	Copper - chalcocite Copper - carbonate LAC[a] Copper - carbonate HAC[b] Copper - scubber carbonate HAC[b] Copper - low grade float Copper - Primary	OP	1.2-1.3% Cu 1.5-1.6% Cu 1.5-1.6% Cu 1.4-1.8% Cu 0.6-0.8% Cu 0.5-0.6% Cu	Variable cut-off grade based on net value script. Low grade float refers to stockpile reclaim. Approximate cut-off grades shown in this table.
Kinsevere	Copper Oxide	OP	0.9% ASCu[d]	
		OP	0.8% ASCu	Stockpile reclaim
Rosebery	(Zn, Cu, Pb, Au, Ag)	UG	A$153 NSR[e] /t	
Golden Grove	Primary Zinc and Primary Copper (Zn, Cu, Pb, Au, Ag)	UG	A$163 NSR[e] /t	
	Oxide Gold	OP	0.5g/t Au	
Dugald River	Primary Zinc	UG	A$125 NSR[e] /t	

LAC[a] = Low Acid Consuming; HAC[b] = High Acid Consuming, GAC[c] = Gangue Acid Consuming, ASCu[d] = Acid Soluble Copper, NSR[e] = Net Smelter Return, ZnEq[f] = Zinc Equivalent

PROCESSING RECOVERIES

Output average processing recoveries are shown in Table 4. More detailed processing recovery relationships are provided in the Technical Appendix.

Table 4: Processing Recoveries

Site	**Product**	**Recovery**						**Concentrate Moisture Assumptions**
		Copper	**Zinc**	**Lead**	**Silver**	**Gold**	**Mo**	
Las Bambas	Copper Concentrate	82%	-	-	64%	60%		10%
	Molybdenum Concentrate						55%	5%
Century	Zinc Concentrate	–	79%	–	56%	–		-
	Lead Concentrate	–	–	68%	10%	–		-
Golden Grove - Underground	Zinc Concentrate		88%	–	-	13%		8.5%
	Lead Concentrate	60%	–	70%	74%	66%		8.5%
	Copper Concentrate	87%	–	–	67%	52%		8.5%
Golden Grove – Open Cut	Oxide Copper Concentrate	55%	–	–	–	–		16%
	Transition Copper Concentrate	55%	–	–	51%	64%		16%
Rosebery	Zinc Concentrate		87%		9%	6%		8%
	Lead Concentrate		6%	79%	39%	12%		6%
	Copper Concentrate	66%	1%	3%	42%	37%		9%
	Gold Doré[a]				0.2%	26%		
Dugald River	Zinc Concentrate	–	87%		30%	–		10%
	Lead Concentrate	–		83%	28%	–		12%
Sepon	Copper Cathode	86%	–	–	–	–		–
Kinsevere	Copper Cathode	85% (96% ASCu)	–	–	–	–		–

a: Silver for Rosebery gold doré is calculated as a constituent ratio to gold in the doré. Silver is set to 0.17 against gold being 20.7.

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

MMG Mineral Resources and Ore Reserves Statement

as at 30 June 2016

Technical Appendix

18 October 2016

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APPROVALS PAGE

	Jared Broome	Group Manager Geology	12/10/16
Signature	**Name**	**Position**	**Date**
	Nan Wang	Group Manager Mining	12/10/16
Signature	**Name**	**Position**	**Date**
	Reinhardt Viljoen	Group Manager Metallurgy	12/10/16
Signature	**Name**	**Position**	**Date**

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

1 INTRODUCTION

On 20 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 3 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 2016 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$/lb)	2.95	3.50
Zn (US$/lb)	1.20	1.45
Pb (US$/lb)	1.12	1.35
Au US$/oz	1031	1212
Ag US$/oz	21.10	25.50
Mo (US$/lb)	11.1	15.0
AUD:USD	0.82	As per Ore Reserves
USD:PEN	3.30	

2.2 Metal Market Analysis – Basis for Pricing Assumptions

MMG's corporate economic assumptions for metal prices are derived from a combination of broker consensus and internal strategy evaluations.

2.2.1 Global Demand

The global economy grew at an estimated 2.4% in 2015, and the World Bank is forecasting this level of growth to be maintained in 2016 before rising to 2.8% and 3.0% in 2017 and 2018 respectively. Global growth will continue to be focused on emerging and developing economies with Chinese growth slowing only modestly from an estimated 6.9% in 2015 to 6.1% in 2018 while growth in India remains solid at 7.6-7.7% pa[3].

The positive global growth should translate into a steady rise in metals consumption over the forward period. Industry analyst Wood Mackenzie forecasts global copper consumption to rise by 1.9% pa between 2015 and 2019 [4] and global zinc consumption to increase by 2.8% pa over the same period[5]. This growth will result in an additional 1.9 million tonnes per annum of copper and 1.6 million tonnes per annum of zinc being consumed in 2019 compared to 2015. Consistent with the pattern for economic growth, the increase in demand for metals is anticipated to be centred on the Asian economies as their level of industrialisation increases. China is currently the world's largest consumer of copper and zinc, representing just under 50% of global demand for both metals and this dominance is expected to continue for the foreseeable future.

Copper's high conductivity and corrosion resistance make it suitable for a range of applications. The key sectors driving demand for copper are the power generation and transmission, property and construction, transportation and appliances and machinery.

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[3] World Bank Group. 2016. Global Economic Prospects, June 2016: Divergences and Risks.

[4] Wood Mackenzie; Global Copper Long Term Outlook Q2 2016

[5] Wood Mackenzie; Global Zinc Long Term Outlook Q2 2016

The major use of zinc continues to be in galvanising steel followed by the production of die cast components. As a result, the construction, transportation and consumer durables sectors are the most important drivers of zinc demand.

2.2.2 Copper Supply

MMG has a long-term positive view of copper market fundamentals with future supply likely to be constrained by declining ore grades, increasing costs and inadequate investment in mine capacity. Some of the world's current largest suppliers, for example in Chile, require significant investment over the coming years in order simply to maintain current production levels. Although mine supply has been augmented in recent years by the commissioning of several large projects in Peru and Chile, including MMG's own Las Bambas operation, there is a lack of committed new production scheduled for the remainder of the current decade. The current period of relatively low copper prices is also discouraging new investment in mine production.

Conversely, copper smelting capacity is continuing to rise, especially in China, as the country seeks to satisfy its increasing demand for metal. This increasing smelter capacity further supports the requirement for additional mine capacity going forward.

2.2.3 Copper Supply: Demand Balance

The commissioning of several new mine projects in recent years, coupled with a period of relatively modest demand growth, has resulted in the global market generating a modest surplus in 2015, a situation that is expected to be repeated in 2016. However, the expectation of future steady demand growth, coupled with a lack of new mine investment is expected to result in market deficits in the coming years with consequent upward pressure on metal prices.

2.2.4 Zinc Supply

Zinc mine production is expected to contract in 2016 due to the late 2015 closure of major mines such as Century and Lisheen due to Mineral Resources exhaustion combined with other production curtailments due to adverse economics resulting from low prices. Although the zinc price has improved during the course of 2016, most of the idled production currently remains shut.

The zinc market is also characterised by very few mine developments planned for the coming years while those projects that are being studied tend to have only modest capacity. There is a scarcity of high-grade and large-scale deposits driven by historical under-investment in exploration and the nature of zinc deposits. Future zinc supply will likely come from lower-grade, higher-cost underground mines as current Reserves are depleted.

2.2.5 Zinc Supply: Demand Balance

The mine closures referred to above have resulted in the zinc market showing a significant concentrate shortage in 2016. This shortage of concentrate will constrain refined zinc production, resulting in a deficit in refined zinc leading to a reduction in the refined zinc stocks that overhang the market.

The lack of new mine capacity scheduled for development over the coming years coupled with steady rising demand should keep both the concentrate and refined zinc markets tight and place upward pressure on the zinc price going forward.

2.3 Competent Persons

Deposit	Accountability	Competent Person	Professional Membership	Employer
MMG Mineral Resources and Ore Reserves Committee	Mineral Resources	Jared Broome[1]	FAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Ore Reserves	Nan Wang[1]	MAusIMM(CP)	MMG
MMG Mineral Resources and Ore Reserves Committee	Metallurgy: Mineral Resources / Ore Reserves	Reinhardt Viljoen[1]	MAusIMM	MMG
Las Bambas	Mineral Resources	Rex Berthelsen[1]	FAusIMM(CP)	MMG
Las Bambas	Ore Reserves	Yao Wu[1]	MAusIMM	MMG
Las Bambas	Metallurgy: Mineral Resources / Ore Reserves	Amy Lamb	SME	MMG
Sepon	Mineral Resources	Chevaun Gellie	MAusIMM	MMG
Sepon	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Sepon	Metallurgy: Mineral Resources / Ore Reserves	Leonardo Paliza	MAusIMM	MMG
Kinsevere	Mineral Resources	Douglas Corley[1]	MAIG R.P.Geo.	MMG
Kinsevere	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Kinsevere	Metallurgy: Mineral Resources / Ore Reserves	Mark Godfrey[1]	MAusIMM	MMG
Rosebery	Mineral Resources	James Pocoe	MAusIMM	MMG
Rosebery	Ore Reserves	Karel Steyn	MAusIMM	MMG
Rosebery	Metallurgy: Mineral Resources / Ore Reserves	Kevin Rees	MAusIMM(CP)	MMG
Golden Grove (Underground & Open Pit)	Mineral Resources	Paul Boamah	MAusIMM	MMG
Golden Grove - Underground	Ore Reserves	Karel Steyn	MAusIMM	MMG
Golden Grove - Open Pit	Ore Reserves	Jodi Wright[1]	MAusIMM(CP)	MMG
Golden Grove (Underground & Open Pit)	Metallurgy: Mineral Resources / Ore Reserves	Nigel Thiel[1]	MAusIMM(CP)	MMG
Dugald River	Mineral Resources	Douglas Corley[1]	MAIG R.P.Geo.	MMG
Dugald River	Ore Reserves	Karel Steyn	MAusIMM	MMG
Dugald River	Metallurgy: Mineral Resources / Ore Reserves	Shuhua He	MAusIMM	MMG
High Lake, Izok Lake	Mineral Resources	Allan Armitage	MAPEG[2] (P.Geo)	Formerly MMG
Avebury	Mineral Resources	Peter Carolan	MAusIMM	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.

[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

The Project is a world class copper gold (Cu-Au) mine located in the Andes of southern Peru approximately 75km south-southwest of Cusco, approximately 300km north-northwest of Arequipa, and approximately 150km northeast of Espinar (also named Yauri). The Project is readily accessible from either Cusco or Arequipa over a combination of paved and good quality gravel roads. Road travel from Cusco takes approximately six hours, while road travel from Arequipa takes approximately nine hours.

Figure 3-1 Las Bambas Mine location

Las Bambas is a truck and excavator 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. The mine has achieved full capacity, running at over 400,000 tonnes per day. Both lines of the copper concentrate plant have been commissioned and the plant ramp up commenced. The primary crusher was commissioned during the fourth quarter of 2015 and the overland conveyor has now reached 100% capacity of 8,000 tonnes per hour. The tailings dam reached planned levels with discharge and water recirculation back to plant fully operational. Copper concentrate of production of 31,470 tonnes was achieved in the first quarter 2016. Commercial production was declared on July 1, 2016.

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 2015 for the June 2016 release. The 2016 Mineral Resources estimation includes updated geological interpretation and estimation parameters.

3.2 Mineral Resources – Las Bambas

3.2.1 Results

The 2016 Las Bambas Mineral Resources is summarised in Table 2. The Las Bambas Mineral Resources is inclusive of the Ore Reserves.

Table 2 2016 Las Bambas Mineral Resources tonnage and grade (as at 30 June 2016)

Las Bambas Mineral Resources									
						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	16.8	2.0				329			
Inferred	0.7	1.9				13			
Total	**17.4**	**2.0**				**342**			
Ferrobamba Primary Copper[2]									
Measured	529	0.68	3.3	0.06	198	3,573	55.3	1.04	105
Indicated	527	0.59	2.7	0.05	191	3,116	45.8	0.80	101
Inferred	397	0.57	2.1	0.03	146	2,266	27.1	0.44	58
Total	**1,453**	**0.62**	**2.7**	**0.05**	**181**	**8,955**	**128**	**2.28**	**263**
Ferrobamba Total	**1,471**					**9,297**	**128**	**2.28**	**263**
Chalcobamba Oxide Copper[1]									
Indicated	6.5	1.5				95			
Inferred	0.9	1.5				13			
Total	**7.3**	**1.5**				**107**			
Chalcobamba Primary Copper[2]									
Measured	94	0.40	1.2	0.01	148	381	3.7	0.04	94
Indicated	196	0.63	2.4	0.03	145	1,237	14.9	0.17	196
Inferred	48	0.47	1.6	0.02	131	224	2.5	0.03	48
Total	**338**	**0.55**	**1.9**	**0.02**	**144**	**1,842**	**21**	**0.25**	**338**
Chalcobamba Total	**345**					**1,949**	**21**	**0.25**	**49**
Sulfobamba Oxide Copper[1]									
Inferred									
Total									
Sulfobamba Primary Copper[2]									
Indicated	103	0.60	4.1	0.02	162	618	13.7	0.07	17
Inferred	201	0.44	4.0	0.02	119	891	25.7	0.11	24
Total	**304**	**0.50**	**4.0**	**0.02**	**133**	**1,509**	**39**	**0.18**	**41**
Sulfobamba Total	**304**					**3,000**	**43**	**0.2**	**42**
Oxide Stockpile									
Indicated	3.4	0.86				29			
Total	**3.4**	**0.86**				**29**			
Sulphide Stockpile									
Measured	0.37	0.72	3.1		214	2.7	0.04		0.08
Total	**0.37**	**0.72**	**3.1**		**214**	**2.7**	**0.04**		**0.08**
Total Las Bambas	**2,124**					**12,787**	**189**	**2.7**	**352**

1. 1% Cu Cut-off grade contained within a US$3.5/lb pit shell for oxide material.
2. Variable Cu Cut-off grade (0.17% to 0.5% contained within a US$3.5/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 3 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 3 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Las Bambas Mineral Resources 2016

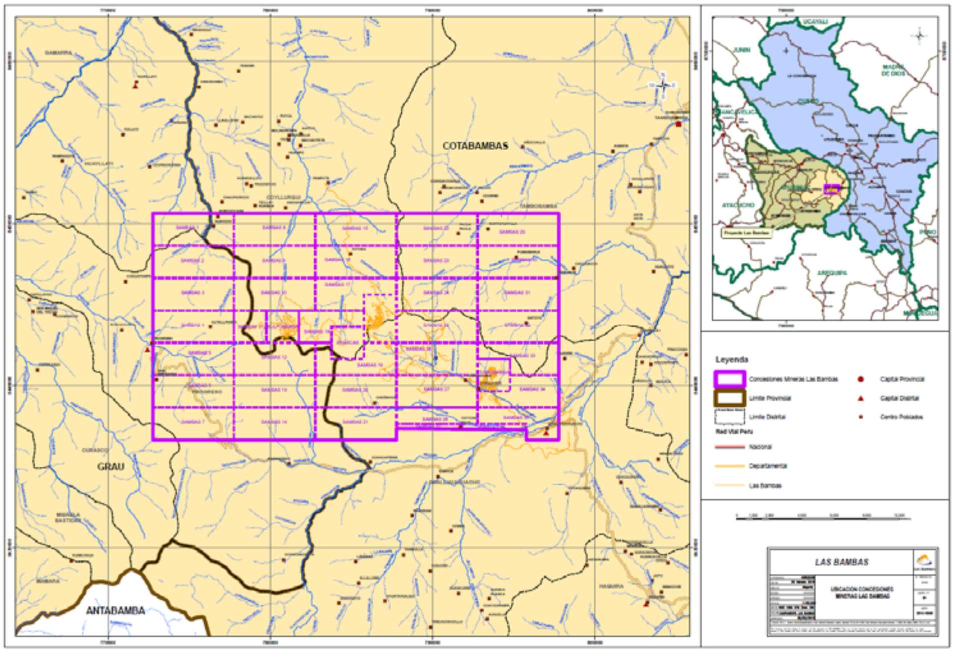
Criteria	Status
Section 1 Sampling Techniques and Data	
Sampling techniques	• Diamond drilling (DD) was used to obtain an average 2m sample that is half core split, crushed and pulverised to produce a pulp (95% passing 105µm). Diamond core is selected, marked and numbered for sampling by the logging geologist. Sample details are stored in an acQuire 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	• The drilling type is wireline diamond core drilling from surface. Drill core is not oriented. All drillholes used in the Mineral Resources estimate have been drilled using HQ size.
Drill sample recovery	• Recovery is estimated by measuring the recovered core within a drill run length and recorded in the acQuire database. Run by run recovery has been recorded for 385,133m of the total 395,140m of diamond drilling in the data used for Mineral Resources estimation for the Sulfobamba, Chalcobamba and Ferrobamba deposits. Diamond drill recovery average is about 97% for all deposits (98% for Sulfobamba, 97% for Chalcobamba and Ferrobamba deposits). • 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 mineralisation is stockwork and disseminated sulphides. Diamond core sampling is applied and recovery is considered high.
Logging	• 100% of diamond drill core used in the Mineral Resources estimate has been geologically and geotechnically logged 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	• All samples included in the Mineral Resources estimate are from diamond drill core. 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.

Criteria	**Status**
Section 1 Sampling Techniques and Data	
preparation	The standard sampling length is 2m for PQ core (minimum 1.2 m) and HQ core (minimum 1.20m, 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 were processed in the following manner: Dried, crushed, pulverised to 95% passing 105 µm. 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 105 µm. 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 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.
Quality of assay data and laboratory tests	• From 2005 until 2010 the assay methods undertaken by Inspectorate (Lima) for Las Bambas were as follows: o Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS). o Acid soluble - 0.2g sample. Leaching by a 15% solution of H_2SO_4 at 73°C for 5 minutes. Reading by AAS. o Acid soluble - 0.2g of sample. Digestion by a citric acid solution at 65°C for 15 minutes. Reading by AAS. o Au - Cupellation at 950°C. Reading by AAS. Above detection limit analysis by gravimetry. o 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: o Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS). o Acid soluble copper – 0.2g sample. Leaching by a 15% solution of H2SO4 at 73°C for 5 minutes. Reading by AAS. o Acid Soluble copper - 0.2g of sample. Digestion by a citric acid solution at 65°C for 15 minutes. Reading by AAS. o Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. o 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: o Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS).

Criteria	Status
Section 1 Sampling Techniques and Data	
	o Acid soluble copper – 0.5g sample. Leaching by a 5% solution of H2SO4 at ambient temperature for 1 hour. Reading by AAS. o Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. o 35 elements - Digestion by aqua regia and reading by ICP. • All of the above methods with the exception of the acid soluble copper are considered total digest. • Since 2013, composited pulps have been submitted to Certimin Laboratory for sequential copper analysis. This method produces results of acid soluble (H2SO4), then cyanide soluble followed by residual copper in sequence. This analysis is used for geometallurgical modelling. • 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 one in every 25 samples (2005-2007), every 50 samples (2008) and every 40 samples (2010). For the 2014 and 2015 programmes duplicated samples were collected at the time of sampling and stored. They were then sent to the Inspectorate Laboratory, Lima, for third party (umpire) analysis during 2016. The samples were inserted at a rate of 1:40. Results indicate a good correlation between datasets and show no bias for copper, however the check assays for molybdenum were considered biased low after reviewing of the standards inserted with the batches. • Inspectorate, Certimin and 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- present). o Coarse blank samples: Inserted after a high-grade sample (coarse blank samples currently make up about 4.2% of all samples analysed). o Pulp duplicates samples: Inserted 1:25 samples (2005-2007), 1:50 samples (2008), and 1:40 samples (2010-present). o Pulp blank samples: Inserted before the coarse blank sample and always after a high grade sample (pulp blank samples currently make up about 4.2% 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 present). • QAQC analysis has shown that: o Blanks: a minimum level of sample contamination by copper was detected during the sample preparation and assay. o Duplicates: the analytical precision is within acceptable ranges when compared to the

Criteria	Status
Section 1 Sampling Techniques and Data	
	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% (R2>0.90). These results were also repeated in the external ALS check samples. o Certified Reference Material: acceptable levels of accuracy and precision have been established. • Sizing test results are not routinely analysed.
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 resource 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. • Apart from 20 metallurgical drillholes drilled in 2007 twinning Mineral Resources Ferrobamba drillholes, no twinned drillholes have been completed. • All drillholes are logged using laptop computers directly into the drillhole database (acQuire). 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 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 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). 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 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.

Criteria	Status
Section 1 Sampling Techniques and Data	
	- 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 modelling purposes. The topography, however will be updated in the near future.
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 processes and Mineral Resources classifications applied. - 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 Resources 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. All sequential copper analysis is undertaken on pulps that are composited most commonly to 8m but sample lengths as small as 1m are contained in the database.
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 locations namely the east and western areas of Ferrobamba containing skarn, due to the orientation of the drilling grid some drillholes are orientated along strike, yet still manage to intersect the ore zones at moderate angles. - 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 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.

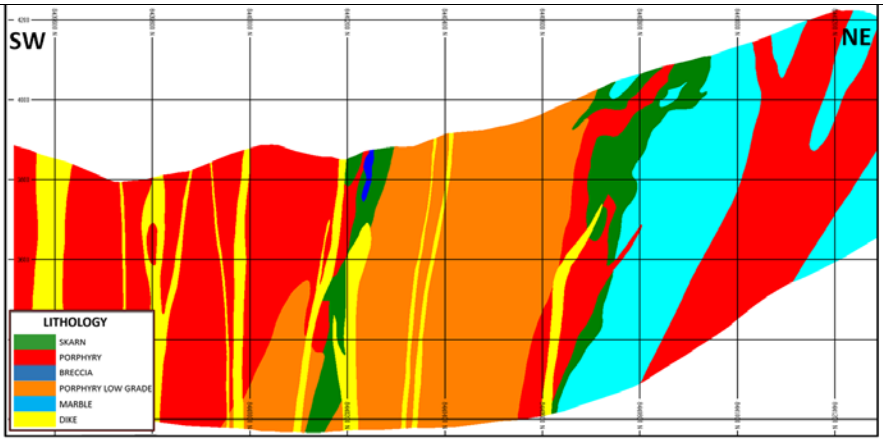
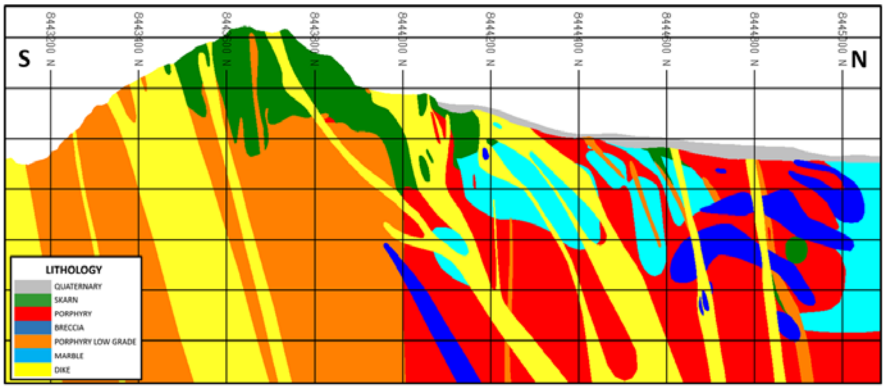
Criteria	**Status**
Section 1 Sampling Techniques and Data	
	Currently, there are no outstanding material issues. • The Competent Person has visited the both the Certimin and ALS laboratories in Lima.
Section 2 Reporting of Exploration Results	
Mineral tenement and land tenure status	• The Las Bambas 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 over 343km 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.

Criteria	**Status**

Section 1 Sampling Techniques and Data

Company	**Year**	**Deposit**	**Purpose**	**Type**	**# of DDH**	**Drill size**	**Metres Drilled**
Cerro de Pasco Cyprus	1996	Chalcobamba	Exploration	DDH	6	Unknown	906.4
	1996	Chalcobamba	Exploration		9		1,367.3
Phelps Dodge	1997	Ferrobamba	Exploration	DDH	4	Unknown	737.8
		Chalcobamba			4		653.4
BHP	1997	Ferrobamba	Exploration	DDH	3	Unknown	365.8
		Chalcobamba			4		658.6
Pro Invest	2003	Ferrobamba	Exploration	DDH	4	HQ	738.0
		Chalcobamba			7		1,590.0
Xstrata	2005	Ferrobamba	Resource Evaluation	DDH	109	HQ	26,839.9
		Chalcobamba			66		14,754.1
		Sulfobamba			60		13,943.0
	2006	Ferrobamba	Resource Evaluation	DDH	125	HQ	51,004.2
		Chalcobamba			95		27,982.9
		Sulfobamba			60		16,971.5
		Charcas			8		2,614.1
		Azuljaja			4		1,968.9
	2007	Ferrobamba	Resource Evaluation	DDH	131	HQ	46,710.4
		Chalcobamba			134		36,617.6
		Sulfobamba			22		4,996.6
	2008	Ferrobamba	Resource Evaluation	DDH	118	HQ	46,773.8
		Chalcobamba			90		22,096.6
	2010	Ferrobamba	Resource Evaluation	DDH	91	HQ	28,399.9
MMG	2014	Ferrobamba	Resource Evaluation	DDH	23	HQ	12,609.7
	2015	Ferrobamba	Resource Evaluation	DDH	141		49,888.9
			Total				**411,189.0**

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 Resources estimate. • 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 the Mineral Resources estimate.
Data aggregation methods	• Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resources estimate. • No metal equivalents were used in the Mineral Resources estimation.
Relationship between mineralisation	• No exploration diamond drillholes have been completed in the 2016 reporting period. Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resources estimate.

Criteria	**Status**
	Section 1 Sampling Techniques and Data
width and 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	 **Schematic Section Through Ferrobamba**  **Schematic Section Through Chalcobamba**
Balanced reporting	• All drilling completed during the 2016 reporting period completed at Ferrobamba is infill in nature. Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resources estimate.
Other substantive exploration data	• No substantive exploration diamond drillholes have been completed in the 2016 reporting period. Historical exploration drillholes (prior to 2005) have been excluded from the Mineral Resources estimate. • In the past year several orebody knowledge studies have been carried out including skarn zonation, vein densities and a large age dating programme. Results from these studies are assisting with improving the understanding of the orebodies. This work will continue.
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.

Criteria	Status
Section 3 Estimating and Reporting of Mineral Resources	

Database integrity	- The following measures are in place to ensure database integrity:
	  o All Las Bambas drillhole data is stored in an SQL database (acQuire) on the Las Bambas site 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 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.
	  o 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:
	  o 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.
	  o The database has internal validation processes which prevent invalid or unapproved records to be stored.

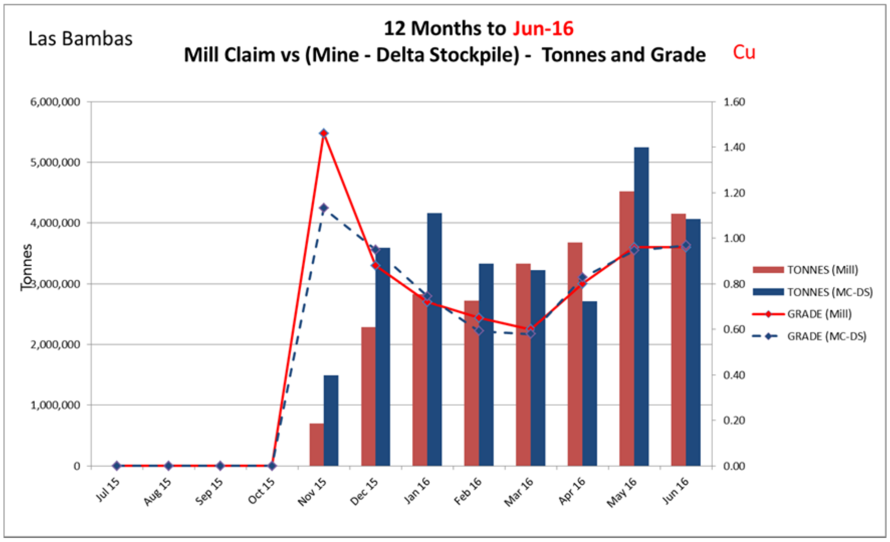
Site visits	- The Competent Person, Rex Berthelsen has undertaken numerous site visits to Las Bambas since acquisition. In the view of the Competent Person there are no material risks to the Mineral Resources based on observations of site practices. - Several site visits to the Ferrobamba area and the Chalcobamba area have been conducted but due to local community restrictions, the Competent Person has been unable to visit Sulfobamba to date. - The site currently employs 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.
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 original geological interpretation as undertaken by site geologists in 2010 was used as the basis for the 2016 geological model. - The 2016 geological interpretation was undertaken on paper sections orientated perpendicular to the established structural trend of each deposit. Section spacing for the interpretations varied between deposits from 25m at Ferrobamba to 50m at Sulfobamba. The geological logging, assay data and surface mapping were used in the interpretation. The drilling and surface mapping were checked against each other to ensure they were concordant. - 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 2016 modelling. Each lithological unit was modelled according

Criteria	Status
Section 1 Sampling Techniques and Data	
	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. • Oxidation domains were produced for the Ferrobamba and Chalcobamba models. Oxidation domains were based on logged mineral species and acid soluble copper to total copper assay ratios. • Geological interpretations were then modelled as wireframe solids (based on the paper sections) and were peer reviewed within the Las Bambas Geology department and by the Competent Person. • Specific grade domains (copper and molybdenum) were not created, with the exception of interpreted, spatially coherent high-grade shoots at Sulfobamba. A domain cut-off of 0.8% Cu was used for the high-grade domain. The introduction of the high-grade domain was supported by EDA, contact plots, and change of support analysis.
Dimensions	• The Las Bambas Mineral Resources refers to 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: o Ordinary Kriging interpolation has been applied for the estimation of Cu, Mo, Ag, Au, As, Ca, Mg, S, CuAS (acid soluble copper), CuCn (cyanide soluble copper) and density. This is considered appropriate for the estimation of Mineral Resources at Las Bambas. o The Ferrobamba, Chalcobamba and Sulfobamba block models utilised sub-blocking. Models were then regularised for use in mine planning purposes. o 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. o 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. At Sulfobamba high-grade skarn shoots were identified and were used in the interpolation of copper only. The boundary between the low and the high-grade skarn were treated as hard boundaries. o 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. CuAs and CuCn was composited to 8m which matches the majority of composite sample lengths. o Variogram analysis was updated for all deposits. Variogram analysis was undertaken in Vulcan software (Ferrobamba, Sulfobamba) and Supervisor (Snowden) software

Criteria	Status
Section 1 Sampling Techniques and Data	
	(Chalcobamba). o No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. o 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. • Reconciliation of 11 months of production indicates that the Mineral Resources block model is under-calling the Ore Control model for grade by 1.2%, for tonnage by 5.7% and for copper metal by 6.9%. These results demonstrate that the Mineral Resources block model is robust and fit for purpose for use in mine planning and Ore Reserves estimation. • Assumptions about the recovery of by-products is 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. 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 30m x 30m x 15m, with sub-blocks of 10m x 10m 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. • 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: o Visual inspections for true fit for all wireframes (to check for correct placement of blocks and sub-blocks). o Visual comparison of block model grades against composite sample grades. o Global statistical comparison of the estimated block model grades against the declustered composite statistics. o Change of support analysis on major lithological domains. o 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 is reported above a range of cut-offs based on material type and ore body. The cut-off ranges from 0.17% Cu cut-off grade for hypogene material at Ferrobamba to 0.5% Cu for marble/calc-silicate hosted material. Oxide material has been reported above a 1% Cu cut-off grade. The reported Mineral Resources have also

Criteria	Status
Section 1 Sampling Techniques and Data	
	been constrained within a US$3.50/lb 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 mining method, which is expected to continue throughout the life of mine. Large scale mining equipment including 300 tonne trucks and 100 tonne face shovels will be used for material movement. • 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 is based on the assumption that processing of very similar ores at Tintaya was completed successfully in the past. 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. • The calc-silicate lithologies (including marble) containing estimated copper above the cut-off grade have been reported in 2016 and have been the subject of metallurgical studies which has found they can be successfully treated in the Las Bambas plant and are now included within the Ore Reserves and have been classified appropriately based on geological continuity. • 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 and 2009 indicate the majority 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 concentration 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. Processing of Sulfobamba ores is expected to be completed after those of Ferrobamba and Chalcobamba which would leave tailings generated from Sulfobamba effectively encapsulated in the Tailings Storage Facility and therefore not requiring any additional mitigation activities.

Criteria	Status
Section 1 Sampling Techniques and Data	
	• Based on the current tailings storage facility (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 784 M t of tailings from processing 800 M t. 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.
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 immersed in wax 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 Resources classifications used criteria that required a certain minimum number of drillholes. The spatial distribution of more than one drillhole ensures that any interpolated block was informed by sufficient samples to establish grade continuity. As well, drillhole spacing specific to rock type (skarn vs. porphyry) were used to classify each Mineral Resources 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 estimated values were used for classification. Estimation confidence of deleterious elements such as arsenic was not considered for classification purposes. • The Mineral Resources 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 Resources 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 Runge Pincock Minarco (RPM), which resulted in the published Competent Person report in 2014. In addition significant review work was carried out by AMEC. No fatal flaws were detected in these reviews and all recommendations were considered and addressed in the 2015

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td colspan="2">Section 1 Sampling Techniques and Data</td></tr>
<tr><td></td><td>Mineral Resources update.
- A self-assessment of all 2016 Mineral Resources 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:
o Mineral Resources classification for the Ferrobamba block model uses a wireframe shape to constrain the final Mineral Resources category.
o Acid soluble copper results are used to model an oxidation type domain. This is in turn used to constrain the estimation of acid soluble copper.</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 Resources estimate is considered suitable for Ore Reserves 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 11 months of production data indicates that the Mineral Resources block model is under-calling the Ore Control model for grade by 1.2%, for tonnage by 5.7% and for copper metal by 6.9%. These results demonstrate that the Mineral Resources block model is robust and fit for purpose for use in mine planning and Ore Reserves estimation.

- The accuracy and confidence of this Mineral Resources estimate is considered suitable for public reporting by the Competent Person.</td></tr>
</table>

3.3 Ore Reserves – Las Bambas

3.3.1 Results

The 2016 Las Bambas Ore Reserve are summarised in Table 4.

Table 4 2016 Las Bambas Ore Reserve tonnage and grade (as at 30 June 2016)

Las Bambas Ore Reserve									
						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[4]	492	0.71	3.4	0.07	201	3,505	54	1	99
Probable	340	0.71	3.5	0.06	202	2,417	38	0.7	69
Total	**832**	**0.71**	**3.5**	**0.06**	**201**	**5,921**	**92**	**1.7**	**167**
Chalcobamba Primary Copper[2]									
Proved	53	0.51	1.7	0.02	151	267.8	3	0.0	8
Probable	136	0.75	2.8	0.03	135	1,010	12	0.1	18
Total	**188**	**0.68**	**2.5**	**0.03**	**140**	**1,278**	**15**	**0.2**	**26**
Sulfobamba Primary Copper[3]									
Probable	66	0.78	5.5	0.03	176	511	12	0.1	12
Total	**66**	**0.78**	**5.5**	**0.03**	**176**	**511**	**12**	**0.1**	**12**
Total Contained Metal						**7,710**	**119**	**2**	**205**

1. 0.20% to 0.27% Cu Cut-off grade based on rock type and recovery, 0.31 to 0.64% Cu Cut-off grade for Marble ore type due to low recovery.
2. 0.21% to 0.31% 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
4. Stockpiles total 0.37Mt @ 0.72%Cu, 3.1g/tAg and 214ppm Mo and have been included in the total Ferrobamba estimate

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 5 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 5 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Las Bambas Ore Reserve 2016

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Mineral Resource estimate for conversion to Ore Reserves</td><td>
Mineral Resource Block Models have been provided by the Ore Control & Modelling group and Corporate Technical Services Group (MMG). The block models contain descriptions for Lithology, Category, mineralization, GMU, and other variables described in model release memorandums. These block models were used for the pit optimization purpose using reasonable 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>Completed by</td><td>Rex Berthelsen & Modelling Team at LB</td><td>Rex Berthelsen & Modelling Team at LB</td><td>Anna Lewin</td></tr>
<tr><td>Memorandum date</td><td>30 May 2016</td><td>1 March 2016</td><td>15 September 2015</td></tr>
<tr><td>ASCII file</td><td>lb_fe_mor_1605.asc</td><td>cha1602_reg.asc</td><td>sulfo_2015_v1.3r_252515_extr3.asc</td></tr>
<tr><td>Block Size</td><td>20 x 20 x 15</td><td>30 x 30 x 15</td><td>25 x 25 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, Yao Wu, has visited the Las Bambas site 4 times in the past year. Each visit consists of discussions with relevant people associated with Ore Reserve modifying factors including Geology, Grade Control, Geotech, Mine Planning and Mining Operations, Metallurgy, Tailings and Waste Storage, and Environmental Area. The Outcomes from the visits have included reaching a common understanding in those areas, and achieving the specific purpose of each trip, such as improving short term mine plan. Site visits were also carried out by Nan Wang, Jared Brome and Rex Berthelsen (Mineral Resource Competent Person) from Group Technical Services (GTS) – MMG.
</td></tr>
<tr><td>Study status</td><td>
The Las Bambas Ore Reserve estimates were prepared on the basis of Feasibility and Pre-Feasibility level studies that include the following:
Bechtel Feasibility Study 2010
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>

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

o MMG Las Bambas Cut-Off Grade Report 2016
o Geotechnical Review, Itasca, 2015
o Sulfobamba Metallurgy Testing, 2015

2016 Life of Asset Plan (LoA) Low Case was produced as part of the MMG planning cycle this is technically achievable and economically viable, and that material Modifying Factors have been considered.

</td></tr>
<tr><td>Cut-off parameters</td><td>

Metal prices for the Cut-Off calculation have been provided by MMG Group Technical Services in accordance with the MMG MROR policy.

<table>
<tr><th></th><th>Units</th><th>2016</th><th>2015</th><th>Comments</th></tr>
<tr><td>ORE RESERVES</td><td></td><td></td><td></td><td rowspan="16">Update as per 2016 Cut-off-Grade Report</td></tr>
<tr><td>Metal Commodity Prices</td><td></td><td></td><td></td></tr>
<tr><td>Copper</td><td>US$/lb</td><td>2.95</td><td>2.95</td></tr>
<tr><td>Molybdenum</td><td>US$/lb</td><td>11.10</td><td>11.10</td></tr>
<tr><td>Silver</td><td>US$/oz</td><td>21.10</td><td>21.10</td></tr>
<tr><td>Gold</td><td>US$/oz</td><td>1031.00</td><td>1010.00</td></tr>
<tr><td>Exchange Rates</td><td></td><td></td><td></td></tr>
<tr><td>Peruvian Sole</td><td>USD/PEN</td><td>3.30</td><td>2.90</td></tr>
<tr><td>MINERAL RESOURCES</td><td></td><td></td><td></td></tr>
<tr><td>Metal Commodity Prices</td><td></td><td></td><td></td></tr>
<tr><td>Copper</td><td>US$/lb</td><td>3.50</td><td>3.50</td></tr>
<tr><td>Molybdenum</td><td>US$/lb</td><td>15.00</td><td>15.00</td></tr>
<tr><td>Silver</td><td>US$/oz</td><td>25.50</td><td>25.50</td></tr>
<tr><td>Gold</td><td>US$/oz</td><td>1212.00</td><td>1212.00</td></tr>
<tr><td>Exchange Rates</td><td></td><td></td><td></td></tr>
<tr><td>Peruvian Sole</td><td>USD/PEN</td><td>3.30</td><td>2.90</td></tr>
</table>

Costs were estimated based on information provided by the Las Bambas Finance group.
The breakeven Cut-off (BCoG) 2016 has been calculated with updated metal prices and costs, and is applied to the CuT%. (Source: 2016 Las Bambas CoG Report).
Cut-off grade has been determined for each ore-type within each deposit:

<p>Cut-Off grades by ore-type for Ferrobamba:</p>
<table>
<tr><th rowspan="2">COG Component</th><th colspan="7">Ferrobamba by GMU</th></tr>
<tr><th>FSSL</th><th>FSSM</th><th>FPSL</th><th>FPSM</th><th>FMSL</th><th>FMSM</th><th>FBRE</th></tr>
<tr><td>BCOGinpit</td><td>0.21%</td><td>0.26%</td><td>0.20%</td><td>0.27%</td><td>0.31%</td><td>0.64%</td><td>0.26%</td></tr>
</table>
<p>Cut-Off grades by ore-type for Chalcobamba:</p>
<table>
<tr><th rowspan="2">COG Component</th><th colspan="7">Chalcobamba by GMU</th></tr>
<tr><th>CSSL</th><th>CSSM</th><th>CSML</th><th>CSMM</th><th>CPSL</th><th>CPSM</th><th>CBRE</th></tr>
<tr><td>BCOGinpit</td><td>0.21%</td><td>0.25%</td><td>0.21%</td><td>0.23%</td><td>0.21%</td><td>0.25%</td><td>0.31%</td></tr>
</table>
<p>Cut-Off grades by ore-type for Sulfobamba:</p>
</td></tr>
</table>

Criteria	Commentary

COG Component	Sulfobamba by GMU				
	SSSL	SSSM	SPSL	SPSM	SBRE
BCOGinpit	**0.23 %**	**0.27 %**	**0.23 %**	**0.25 %**	**0.25 %**

Mining factors or assumptions

- The method of Ore Reserve 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 Geotechnics & Hydrogeology team at Las Bambas in coordination with MMG GTS. These recommendations are based on studies performed by Itasca (2015). The pits are sectored by structural zones, taking into account the last recommendations for BFA which indicates 65° and 70° for upper and lower benches respectively. Mine designs slope angles are shown below in the corresponding tables.
- The geotechnical parameters used for slopes are as follows:

Geotechnical recommendations for Ferrobamba:

Sector	Level (m)	BFA (°)	H (BFA)	Catch Bench	IRA (°)	Height 70°& 65°	Decoupling Height	Decoupling Width	Angle By Zone	OA (°)	Total Height (m)	Bench (number)
N	3465-3975	70	30	15	49.2	510	210	35	**47.6**	46.3	780	26
	3975-4245	65	30	15	46	270	210	35	**43.9**			
NE	3465-3975	70	30	15	49.2	510	210	35	**47.6**	46	795	27
	3975-4260	65	30	15	46	285	210	35	**43.3**			
E	3390-3810	70	30	17.1	47	420	210	35	**46.9**	45.1	630	21
	3810-4020	65	30	17.1	44	210	210	35	**41.7**			
SE	3390-3810	70	30	14	50.3	420	210	35	**49.7**	47.8	570	19
	3810-3960	65	30	14	47	150	120	35	**43.0**			
S	3390-3675	70	15	8.5	47.1	285	120	35	**45.2**	43.1	420	28
	3675-3810	65	15	8.5	44.1	135	120	35	**39.1**			
SW	3525-3720	70	15	9.7	44.7	195	120	35	**42.5**	40.7	315	21
	3720-3840	65	15	9.7	41.9	120	120	30	**38.0**			
NW	3465-3975	70	30	15	49.2	510	210	35	**47.6**	46	795	27
	3975-4260	65	30	15	46	285	210	35	**43.3**			
CE	3390-3660	70	30	11.2	53.6	270	210	35	**52.0**	52	270	9

Geotecnical recommendations for Chalcobamba:

Sector	Level (m)	BFA (°)	H (BFA)	Catch Bench	IRA (°)	Height Zone (m)	Decoupling Height	Decoupling Width	Decoupling Number	Angle By Zone	Angle +decoupling	OA (°)	Total Height (m)	Bench (number)
CH-S2	4330-4450	70	15	8	48.1	120	90	35	1	45.7	**50.3**	44.1	210	8
	4450-4540	65	15	8	45	90				42.1	**47.7**			6
CH-SE	4255-4465	70	15	8	48.1	210	90	35	1	46.7	**49.3**	45.2	300	14
	4465-4555	65	15	8	45	90				42.1	**47.7**			6
CH-E	4165-4435	70	15	8	48.1	270	105	35	2	44.1	**45.9**	43.6	375	18
	4435-4540	65	15	8	45	105				42.5	**47.3**			7
CH-N	4165-4360	70	15	8	48.1	195	105	35	1	46.6	**49.4**	45.1	300	13
	4360-4465	65	15	8	45	105				42.5	**47.3**			7
CH-NW	4165-4285	70	15	8	48.1	120	90	35	1	45.7	**50.3**	44.1	210	8
	4285-4375	65	15	8	45	90				42.1	**47.7**			6
CH-W	4165-4330	70	15	8	48.1	165	90	35	1	46.3	**49.7**	44.8	255	11
	4330-4420	65	15	8	45	90				42.1	**47.7**			6
CH-SW	4315-4435	70	15	8	48.1	120	90	35	1	45.7	**50.3**	44.1	210	8
	4435-4525	65	15	8	45	90				42.1	**47.7**			6
CH-S1	4315-4450	70	15	8	48.1	135	90	35	1	45.9	**50.0**	44.4	225	9
	4450-4540	65	15	8	45	90				42.1	**47.7**			6

Criteria	**Commentary**

Geotechnical recommendations for Sulfobamba:

Sector	Zone	C_Lito	Level (m)	BFA (°)	H (BFA)	Catch bench	IRA (°)	Height Zone (m)	Decoupling Height	Decoupling Width	Decoupling Number	Angle by zone	OA (°)	Total Height (m)	Bench (number)
SU-S	Sup.	71	4565 - 4475	65	15	8	42	90	150	35	1	**38**	41	255	6
	Inf.	40, 47	4475 - 4310	70	15	8	45	165				**42**			11
SU-E	Sup.	71	4565 - 4445	65	15	8	42	120	150	35	1	**38**	42	255	8
	Inf.	40, 47	4445 - 4310	70	15	8	45	135				**42**			9
SU-NE	Sup.	71	4420 - 4345	65	15	8	42	165	150	35	1	**38**	42	255	11
	Inf.	40	4345 - 4165	70	15	8	45	90				**42**			6
SU-N	Sup.	81	4460 - 4310	65	15	8	44	150	150			**45**	45	150	10
SU-W	Sup.	40	4565 - 4505	65	15	8	42	60	150	35	1	**38**	41	195	4
	Inf.	80, 81	4505 - 4370	70	15	8	44	135				**41**			9

- To improve the reliability and safety of the pit design at Ferrobamba, decoupling berms have been included on all sectors.
- The 2016 Mineral Resource models for Ferrobamba and Chalcobamba have been used for the updated 2016 Ore Reserve. The Mineral Resource model for Sulfobamba remained the same as 2015.
- The pit optimisation was developed for the three open pits based on the 2016 Mineral resource block models, the strategy for the final pit selection was based on the NPV by pit shell at revenue factor 1 (RF=1.0). RF 1.0 pit shell is used across all assets across MMG Group. Final pit designs that incorporate more practical mining considerations were carried out using those optimisation shells.
- Dilution and recovery have been accounted for in the regularised block model used for the Ore Reserve estimate. Hence, the Ore Reserve estimate has applied no further factoring. Additional studies for dilution and recovery will be undertaken when more reconciliation data is available.
- In the pit, the minimum mining width is 70m; the minimum SMU has been set at 10m x 10m 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 infrastructures for Chalcobamba pit have been identified and included in the current approved 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 areas and included in the EIA proposal.
- The main Sulfobamba infrastructure has been identified within the Las Bambas mining concession, however they are not located within the property boundary.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr>
<td>Metallurgical factors or assumptions</td>
<td>

The metallurgical process is a conventional froth flotation concentrator and thickener to produce two separate Cu and Mo concentrates and is appropriate for the style of mineralization.
Metallurgical Copper concentration process comprises the following activities; Crushing, Grinding and Flotation, producing copper and molybdenum concentrates. Copper concentrates contain gold and silver as byproducts. Production began in the first quarter of 2016 and reached commercial production by 30 June 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 and for Sulfobamba, the data analyzed were those from testing at G&T in 2015 and documented in the report by He (S. He, 2015).
The ore contains no deleterious elements which impact concentrate quality.
The recovery equations have been provided by Metallurgical Group at Las Bambas in coordination with MMG Group Technical Services.
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 to the ratio of acid soluble copper (CuAS) to total copper (CuT), which is a determining factor for the recovery. The copper recovery is determined by the following equations.

<i>Ferrobamba:</i>
For all the materials except marble:
$Cu\ Recovery\ (\%) = (96.0-94.0*(CuAS/CuT\ )$
For marble:
$Cu\ Recovery\ (\%) = 89.0 – 205.0*(CuAS/CuT)$
<i>Chalcobamba:</i>
$Cu\ Recovery\ (\%) = 94.4-90.0*(CuAS/CuT)$
<i>Sulfobamba:</i>
$Cu\ Recovery\ (\%) = 89.2 - 80.4*(CuAS/CuT)$
The recovery of Mo, Ag, Au, has been provided by Metallurgical Group at Las Bambas.
<table>
<tr><th>Metal</th><th></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>72.7</td><td>54.3</td><td>54.3</td></tr>
<tr><td>Au</td><td>%</td><td>65.0</td><td>56.6</td><td>56.6</td></tr>
</table>

Benchmarking of data from four other mines in South America has also been completed and the recovery algorithms that describe performance at these mines compared with those proposed for the three Las Bambas deposits. The four other mines were Tintaya, Toquepala, Cerro Verde and Antamina.

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

Criteria	Commentary
Environmental	• The Environmental Impact Study for the Las Bambas Project was approved on the 07th of 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 on May 31st, 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 on June 11, 2013 through Directorial Resolution N°187-2013-MEM-AAM. As per the Peruvian regulatory requirements, an update of the Mine Closure Plan has been submitted on June 13th, 2016. In addition, an update of the Environmental Impact Study will be submitted in 2017. • A first amendment to the Environmental Impact Study was approved on the 14th of 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 17th September 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 technical report showed that the environmental impacts of the proposed changes were not significant. • On the 6th of 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 project layout were also approved on February 13th, 2014 through Directorial Resolution N°078-2014-MEM-DGAAM and on 26 February 2015, through Directorial Resolution N°113-2015-MEM-DGAAM • On the 17th November 2014, the second modification of the Study of Environmental Impact was approved with 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 also approved on June 1st, 2016 through Directorial Resolution N°177-2016-MEM-DGAAM. • Geochemical characterization 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 characterization studies on waste rock and tailings samples are currently underway to support the Environmental Impact Study Update.

Criteria	**Commentary**
	• 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 three water use licenses: • License for non-contact water obtained with Directorial Resolution 0518-2015-ANA / AAA.XI.PA, for a volume up to 933.993 m3 / year. • 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 0519-2015-ANA / AAA.XI.PA, for a volume up to 9,460,800 m3 / year. • Currently, Las Bambas is building the fresh water pumping line at Challhuahuacho water intake. For this reason, the application to get the Challhuahuacho River surface water license has not been submitted yet.
Infrastructure	• Las Bambas has the following infrastructure established on site. o Planned Concentrator currently in the operation. o 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 784 Mt of tailings from processing 800 Mt. Three studies have been conducted looking at increasing tailings storage capacity at Las Bambas: – Tailings characterization test work to assess final settled density and beach slope in current TSF. – Options assessment to increase capacity at TSF currently under construction. – Pre-feasibility study for an additional TSF at Tambo valley. o Camp accommodation for staff o 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. Challhuahuacho River is being considered for the future. o Transport of the copper concentrate is performed by trucks, covering a distance of 380km, to the Imata Village, then from that point it is transported by train, covering a distance of 330km, up to Matarani Port in Arequipa region. Transport of the molybdenum concentrate will be performed by trucks all the way from Las Bambas site to Matarani Port, covering a distance of 710Km. This method is also used temporarily for some of the copper concentrate, due to current high concentrate stock. o There are principal access roads that connect Las Bambas and national routes, Cotabambas to Cusco and Cotabambas to Arequipa o High voltage electrical power is sourced from the national grid Cotaruse – Las Bambas, with a capacity of 220Kv o The majority of staff working at the operation are from the region immediately surrounding the project. o Technical personnel are mostly sourced from within Peru. The operation has a limited number of expatriate workers. Additional support is provided by MMG office in Lima and Melbourne Group office personnel.

Criteria	Commentary
	o 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.
Costs	• Las Bambas Project reached commercial operation status in 1 July 2016; future additional capital costs such as TSF 2 expansion are based on pre-feasibility studies. The operating costs used for Ore Reserves estimation are based on the second half (H2) of the 2016 Budget (2016 Budget V2_R2) as per Corporate (MMG) guidelines and other considerations. Specifically: o Mining Costs – Ferrobamba Mining Cost based on second half (H2) of the 2016 Budget V2_R2 – Chalcobamba and Sulfobamba Mining Cost are on the same basis as the 2015 CoG with updated economic assumptions o Process costs – Based on 2016 H2 of the 2016 Budget. o G & A Costs – Based on H2 2016 of the 2016 Budget with the cost improvements defined in the overhead project. • 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 parameters. These 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 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 Corporate (MMG) guidelines according the objective of each capital expenditure in the operation.
Revenue factors	• All mining input parameters are based on the Ore Reserve estimate LoA Low 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. MMG has based its metal prices on long-term bank consensus forecast of Copper Price US$2.95/lb, Molybdenum price: US$11.10/lb; Silver price: US$21.10/oz; Gold price: US$1031/oz • The Gold and Silver revenue is via a credit at the refinery. • Treatment charges and Refining costs have been included in the revenue calculation for the project.

Criteria	Commentary
Market assessment	• MMG has a long-term positive view of copper market fundamentals with future supply likely to be constrained by declining ore grades, increasing costs and inadequate investment in mine capacity. Some of the world's current largest suppliers, for example in Chile, require significant investment over the coming years in order simply to maintain current production levels. • Although mine supply has been augmented in recent years by the commissioning of several large projects in Peru and Chile, including Las Bambas operation, there is a lack of committed new production scheduled for the remainder of the current decade. The current period of relatively low copper prices is also discouraging new investment in mine production. • Las Bambas has life of mine agreements in place with MMG SA 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.
Economics	• The costs are based on the 2016 LoA LoW Case projections based on tendered prices for consumables and estimated quantities of consumables, labour, and services. • The Financial model of the 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 the mine optimisation and financial modelling. All produce robust 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 re-settlement of the rural community of Fuerabamba ("El convenio macro para la implementación y el cumplimiento de los acuerdo para reasentamiento de la comunidad campesina de Fuerabamba"). The township of Nuevo Fuerabamba has been constructed and almost all families re-settled. • 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 the 13 thematic areas. • Las Bambas Project provides important support to the community in the areas of agriculture, livestock and other social projects, which is well received. • Regional unrest near the Las Bambas project in late 2015 was the result of protests brought about by highly organized groups, from outside the project area of influence of Las Bambas. The protestors claimed there was a lack of consultation on modifications to the approved Environmental Impact Assessment. However, these modifications were fully approved by all responsible government departments in November 2014. The situation was also driven by regional politics. The Las Bambas

Criteria	Commentary
	team has maintained positive dialogue with communities in the region of Apurimac for close to ten years of project development and MMG will continue to do so. The situation has currently stabilised. MMG is confident that significant social benefits have been, and will continue to be, provided, while protecting the environment and heritage of the region.
Other	• Las Bambas owns 7,718 Ha of land within the mining project. • The mining concession totals an area of 35,000 hectares, which includes the area containing the 3 mineral deposits and their corresponding infrastructures. • Only 10% of the concession of Las Bambas has been explored year to date. • According to DR N°187-2013-MEM-DGM/V, dated May 02nd, 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 Resource within the final pits and is above the breakeven cut-off (BCoG CuT%) grade is classified as Proved and Probable Ore Reserve respectively. • The Competent Person considers this appropriate for the Las Bambas Ore Reserve estimate. • No Probable Ore Reserves have been derived from Measured Mineral Resources.
Audit or Reviews	• The 2014 Ore Reserve was reviewed by Runge Pinock Minarco for the MMG Competent Person's Report. • No external reviews have been conducted for the 2015 Ore Reserve estimate. • The 2016 Ore Reserves estimates has been reviewed and validated by Edgard Mendosa, Las Bambas Long Term Planning Superintendent; in coordination with Corporate group GTS-MMG.
Discussion of relative accuracy/ confidence	• The principal factors that can affect the confidence on the Ore Reserves are: o 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. o Geotechnical risk related to slope stability. o Metallurgical recovery model uncertainty as they were developed at pilot study level. In the best case scenario, this would represent variability of +/- 2% and in the worst scenario +/- 5% to metal recovery. o Increases in rising operating costs for mining and processing.

Criteria	Commentary
	o Increase in selling cost due to the transportation (truck and rail) cost increases. o Capital costs variation for the new or expansion of current TSF. Also land acquisition delays for TSF needs. o Mining dilution and recovery adjustments as limited ore mining to date at Las Bambas is not sufficient to verify these factors. o Variation in predicted Mine Closure Costs, including addition of potential second TSF.

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 6.

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 6 Contributing experts – Las Bambas Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Rex Berthelsen Anna Lewin Helber Holguino Cicino Sernaque	Mineral Resource model
Dante Garcia Amy Lamb	Updated processing parameters and production record
Luis Tejada Christian Holland	Geotechnical parameters
Edgard Mendoza	Cut-Off Grade calculations Whittle/MineSight optimisation and pit designs
Richard Lizana	Production reconciliation
ATC Williams Alejandro De Bary David Machin	Tailings dam design
Giovanna Huaney Gabriel Castillo Jonathon Crosbie	Environmental/Social/Permitting
Alvaro Ossio Javier Gausachs	Economic Assumptions

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 27km north of the provincial capital, Lubumbashi (Figure 4-1), at latitude S 11° 21′ 30″ and longitude E 27° 34′ 00″.

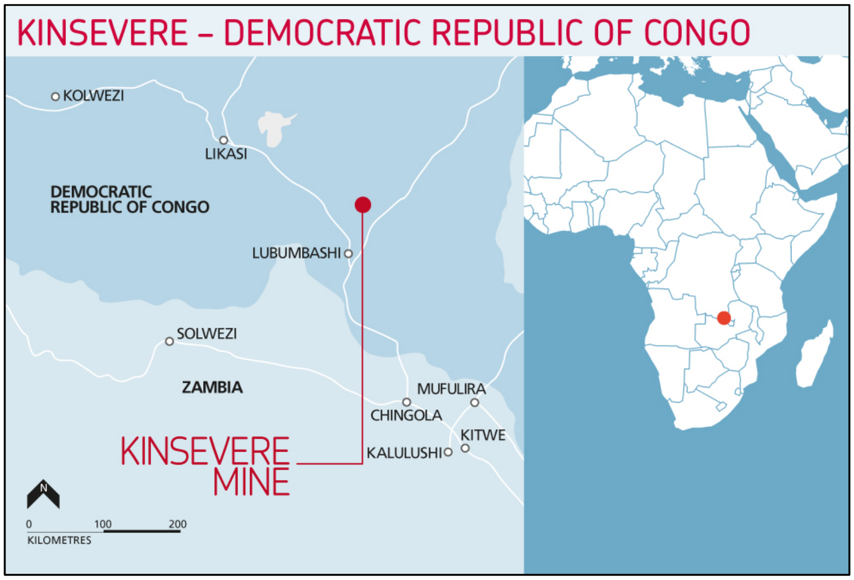


Figure 4-1 Kinsevere Mine location

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.

4.2 Mineral Resources - Kinsevere

4.2.1 Results

The 2016 Kinsevere Mineral Resources are summarised in Table 7. The Kinsevere oxide Mineral Resources is inclusive of the Ore Reserves.

Table 7 2016 Kinsevere Mineral Resources tonnage and grade (as at 30 June 2016)

Kinsevere Mineral Resources					
				Contained Metal	
Oxide Copper[2]	Tonnes (Mt)	Copper (% Cu)	Copper (AS % Cu)	**Copper ('000 t)**	**Copper AS**[1] **('000 t)**
Measured	3.1	4.6	4.0	141	122
Indicated	13.7	3.1	2.7	432	372
Inferred	3.5	2.4	2.1	84	72
Total	**20.3**	**3.2**	**2.8**	**657**	**565**
Transition Mixed Ore (TMO) Copper[3]					
Measured	0.7	3.4	1.2	24	9
Indicated	2.0	3.0	1.1	59	22
Inferred	0.2	2.2	0.9	5	2
Total	**2.9**	**3.0**	**1.1**	**88**	**32**
Primary Copper[4]					
Measured	0.4	3.1	0.4	13	2
Indicated	18.5	2.6	0.2	472	31
Inferred	2.2	2.0	0.1	45	3
Total	**21.2**	**2.5**	**0.2**	**531**	**36**
Stockpiles[2&3]					
Indicated	6.8	2.4	1.6	163	109
Total	**6.8**	**2.4**	**1.6**	**163**	**109**
Kinsevere Total	**51.2**	**2.8**	**1.5**	**1439**	**742**

1. AS stands for Acid Soluble.
2. 0.6% Acid soluble Cu cut-off grade.
3. 1.5% Total Cu cut-off grade.
4. 1.1% Total Cu cut-off grade.

All Mineral Resources except stockpiles are contained within a US$3.50/lb Cu pit shell.
Figures are rounded according to JORC Code guidelines and may show apparent addition errors.
Contained metal does not imply recoverable metal.

4.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 8 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 8 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Kinsevere Mineral Resources 2016

Criteria	Status
Section 1 Sampling Techniques and Data	
Sampling techniques	• The Mineral Resources uses a combination of reverse circulation (RC) and drilling diamond drilling (DD). The RC drilling is predominately collected for grade control and the DD is used for exploration and Mineral Resources 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 2015-2016, 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 drillholes 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. 200,762m or 76% of the sample data used in the Mineral Resources were from RC samples (5.5" hammer), of that 147,494m (56%) was from grade control drilling. • PQ and HQ size DD core was used to obtain nominal 1m sample lengths. DD core was not routinely oriented. 64,784m or 24% of the sample data used in the Mineral Resources were from DD samples. • 9,714m of DD drilling was completed since the 2015 estimation and utilised in the 2016 estimate. This drill program is ongoing and due for completion in August 2016. The drilling is dominantly PQ with minor HQ. • In the view of the Competent Person sampling is of a reasonable quality to estimate the Mineral Resources.
Drill sample recovery	• DD core recovery recorded was typically above 95%, 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). 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 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

Criteria	Status
	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. For 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 Resources 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. 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, the sample was dried in the laboratory oven before being split according to the procedure above (for dry samples). • Samples from individual drillholes 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 7% to ensure that the sampling was representative of the in-situ material collected. Field duplicates in 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 and DD samples were 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. • For 2015/2016 DD drilling, core was 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.

Criteria	Status
Quality of assay data and laboratory tests	• RC ore control samples are currently assayed at the onsite SGS Laboratory. o Following preparation, 50g pulp samples are routinely analysed for total and acid soluble copper, cobalt and manganese. o A 3-acid digest with AAS finish was used to analyse for total values. o 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: o ALS Chemex Laboratory, Johannesburg o McPhar Laboratory, Philippines o ACTLabs Laboratory, Perth o 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, prepared samples were submitted to the ISO 17025 accredited SGS Laboratory in Johannesburg with the following assay scheme: o ICP-OES method with a 4-acid digest analysing 32 elements including copper from 0.5ppm to 1%. o ICP-OES method using alkali fusion is applied to over-range copper results. o ICP-AES with a 4-acid digest was used for calcium and sulphur analysis. o XRF was used for uranium analysis. o Acid soluble copper using a sulphuric acid digest and AAS finish. • For 2015/2016 DD drilling, prepared samples were submitted to the ALS Laboratory in Johannesburg with the following assay scheme: o ICP-OES (ME-ICP61) method with a 4-acid digest analysing 33 elements plus OG triggers when Cu greater than 1% (OG62). o LECO analysed Total Carbon (C-IR07), Organic Carbon (C-IR17), Total Sulphur (S-IR08) and Sulphide Sulphur (S-IR07). o Acid soluble copper using a Sequential Leach (Cu-PKGPH06) finish. • 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 drillholes are not used in the Mineral Resources.

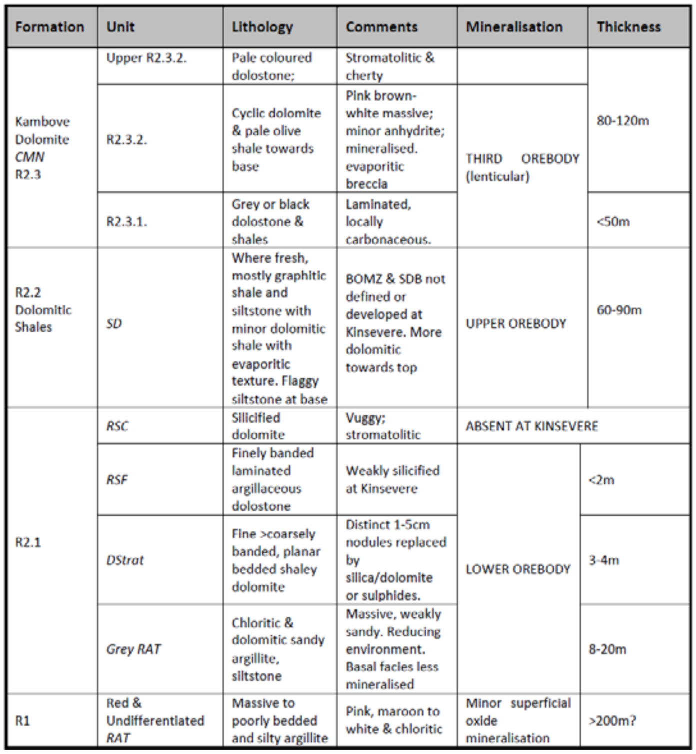
Criteria	Status
	• Data is collected in Excel spread sheets and imported into industry standard databases that have built in validation systems and QAQC reporting systems. Raw data is imported in the database as received by the laboratory. • Where data was deemed invalid or unverifiable it was excluded from the Mineral Resources estimation. • There are no adjustments to the assay data.
Location of data points	• Prior to 2011 all drillhole 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 drillholes were later adjusted by using a LIDAR survey method. • RC and DD holes collared post-2011 are surveyed by qualified surveyors. Downhole 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: -8000000min northing and -22.3min elevation. • A LIDAR survey was used to generate a topographic surface. This surface was also used to better define the elevation of drillhole collars. The LIDAR survey is considered to be of high quality and accuracy for topographic control.
Data spacing and distribution	• Grade control RC drill pattern spacing is 5m x 15m, which is sufficient to adequately define lithology and mineralisation domain contacts and transition zones. • The overall DD pattern spacing is between 25m and 100m, which is sufficient to establish the required degree of geological and grade continuity that is appropriate for the Mineral Resources. 2015/2016 DD drilling aimed to infill target areas to 40m x 40m spacing. • 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 drillholes are oriented such that drillholes 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 drillholes 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: o Adequately trained and supervised sampling personnel. o Sea containers used for the storage of samples are kept locked with keys held by the security department. o Assay laboratory checks of sample dispatch numbers against submission documents.
Audit and reviews	• An independent audit of the Mineral Resources model was completed in June 2014, by the MSA Group Pty Ltd and was commissioned by MMG Limited (J2851 Kinsevere Mineral Resources Audit June 2014). No material errors were found and recommendations and suggestions have been incorporated into the current Mineral

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>Resources Estimate.
• Internal visits by the Competent Person and MMG Group Office geologists to the site laboratory, sample preparation area and drill locations are undertaken at least annually. These inspections have not identified any material risks.</td></tr>
<tr><td colspan="2">Section 2 Reporting of Exploration Results</td></tr>
<tr><td>Mineral tenement and land tenure status</td><td>• The Kinsevere Mining Licence (PE 528) is located approximately 27km north of Lubumbashi, the provincial capital of the Katanga Province, in the southeast of the Democratic Republic of the Congo (DRC).
• The mineral rights of PE 528 is held by La Générale des Carrierés et des Mines (Gécamines), the DRC state-owned copper mining company. Anvil mining, via its subsidiary AMCK Mining s.p.r.l. (AMCK, a joint venture between Anvil (95%) and Mining Company of Katanga s.p.r.l. (5%) has a Contrat d'Amodiation (Lease Agreement) with Gécamines to mine and process ore from PE 528 until 2024, followed by a 15 year extension.
• Anvil Mining sold the Kinsevere project to MMG in 2012.
• A royalty of 2.5% of gross revenue was adopted in January 2009 to reflect revised royalty payments after the Government reviewed all the mining contracts in 2008 where the terms of the Lease Agreement were amended.
• 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 Resources.
• In 2013/2014 MMG Exploration have been conducting works around the Mine Lease within a 50km 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 on Pre-Feasibility Study to increase confidence in the copper sulphide Mineral Resources with completion expected to be in August 2016. Assays from 42 drillholes from this program were returned before the cut-off date and included in the 2016 Mineral Resources Estimate.</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td>Geology</td><td>

The Kinsevere Copper deposit is a sedimentary hosted copper deposit. The deposit is hosted in moderately to steeply dipping Neoproterozoic sedimentary formation of the Roan group of the Katanga stratigraphy in the Mine Series subgroup of Katangan African Copper belt.
On surface, the Kinsevere Copper deposit has been mapped as made of three separate Mine Series fragments (large breccia clasts of the Mine Series) whereby the first two fragments are situated along a major N-S oriented fracture and separated by a sinistral strike-slip fault, while the third fragment, called Kinsevere Hill, is situated along major NW-SE fracture and separated from the other fragments by another sinistral strike-slip fault. All these fragments are affected by fractures and breccias.
The sulphide, transitional and oxide mineralisation in the Kinsevere copper deposit are either disseminated in recrystallised layers or infilling bedding plans, reactivated bedding, fractures and joints. Sulphide mineralisation includes chalcopyrite, bornite, chalcocite and pyrite. Oxide mineralisation is dominated by malachite with lesser chrysocolla. A transitional zone exists between the primary and oxide zones with both a horizontal trend, controlled by ground water movements, and a sub vertical trend controlled by bedding and structures. Transitional copper species include chalcocite, cuprite, covellite and native copper.

Kinsevere Mine Series Stratigraphy



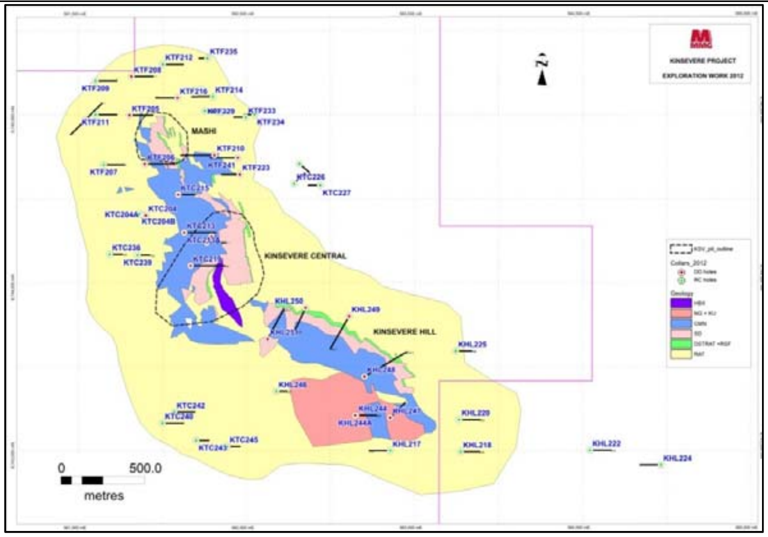
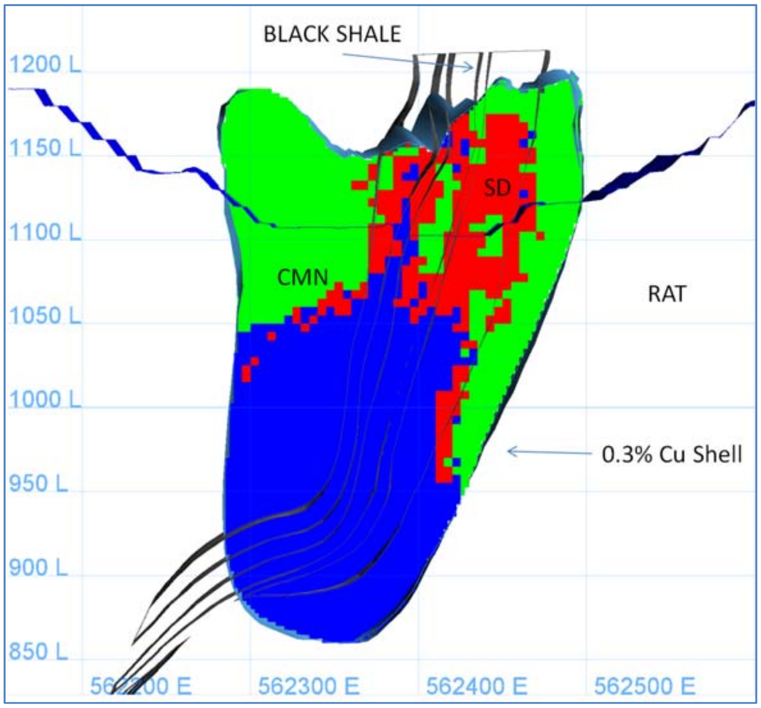
<table>
<tr><th>Formation</th><th>Unit</th><th>Lithology</th><th>Comments</th><th>Mineralisation</th><th>Thickness</th></tr>
<tr><td rowspan="3">Kambove Dolomite
CMN
R2.3</td><td>Upper R2.3.2.</td><td>Pale coloured dolostone;</td><td>Stromatolitic & cherty</td><td></td><td rowspan="2">80-120m</td></tr>
<tr><td>R2.3.2.</td><td>Cyclic dolomite & pale olive shale towards base</td><td>Pink brown-white massive; minor anhydrite; mineralised. evaporitic breccia</td><td rowspan="2">THIRD OREBODY (lenticular)</td></tr>
<tr><td>R2.3.1.</td><td>Grey or black dolostone & shales</td><td>Laminated, locally carbonaceous.</td><td><50m</td></tr>
<tr><td>R2.2 Dolomitic Shales</td><td>*SD*</td><td>Where fresh, mostly graphitic shale and siltstone with minor dolomitic shale with evaporitic texture. Flaggy siltstone at base</td><td>BOMZ & SDB not defined or developed at Kinsevere. More dolomitic towards top</td><td>UPPER OREBODY</td><td>60-90m</td></tr>
<tr><td rowspan="4">R2.1</td><td>*RSC*</td><td>Silicified dolomite</td><td>Vuggy; stromatolitic</td><td colspan="2">ABSENT AT KINSEVERE</td></tr>
<tr><td>*RSF*</td><td>Finely banded laminated argillaceous dolostone</td><td>Weakly silicified at Kinsevere</td><td rowspan="3">LOWER OREBODY</td><td><2m</td></tr>
<tr><td>*DStrat*</td><td>Fine >coarsely banded, planar bedded shaley dolomite</td><td>Distinct 1-5cm nodules replaced by silica/dolomite or sulphides.</td><td>3-4m</td></tr>
<tr><td>*Grey RAT*</td><td>Chloritic & dolomitic sandy argillite, siltstone</td><td>Massive, weakly sandy. Reducing environment. Basal facies less mineralised</td><td>8-20m</td></tr>
<tr><td>R1</td><td>Red & Undifferentiated *RAT*</td><td>Massive to poorly bedded and silty argillite</td><td>Pink, maroon to white & chloritic</td><td>Minor superficial oxide mineralisation</td><td>>200m?</td></tr>
</table>
</td></tr>
<tr><td>Drillhole information</td><td>

Within the database used, there are 820 exploration drillholes (242 DD, 31 RC with DD tail and 547 RC) and 5517 grade control drillholes (all RC).
No individual drillhole is material to the Mineral Resources estimate and hence this geological database is not supplied.

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

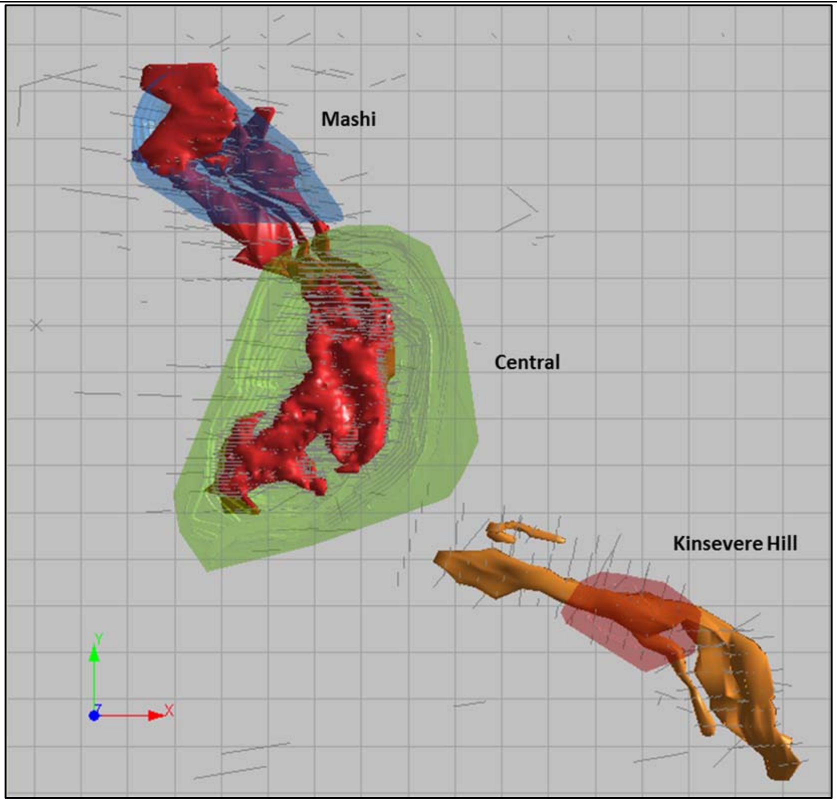
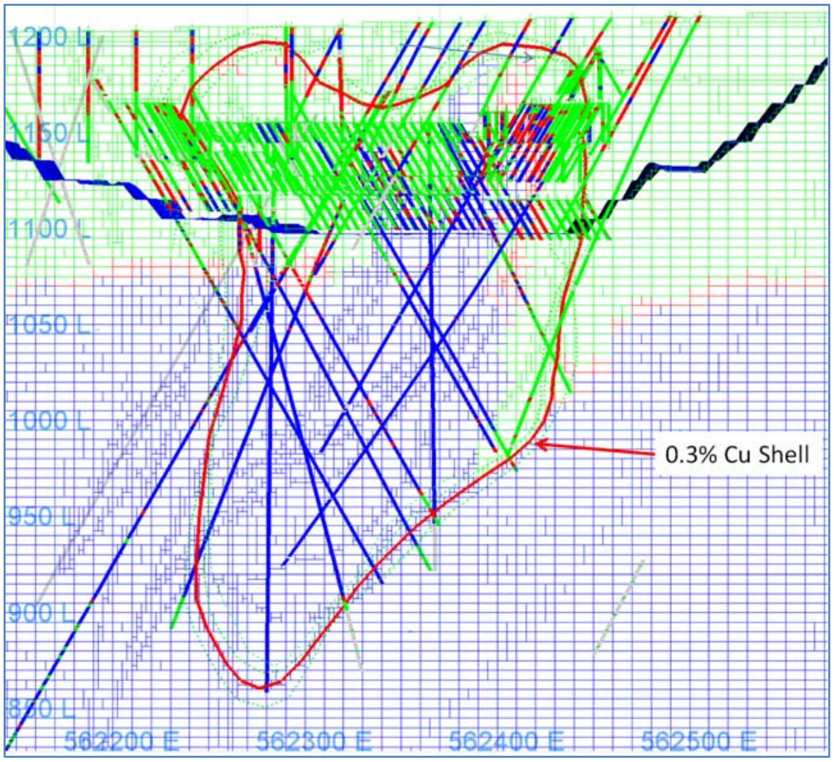
This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section.

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

Criteria	Status
methods	- No metal equivalents were used in the Mineral Resources estimation.
Relationship between mineralisation width and intercepts 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	 **Plan view of the Kinsevere deposit**  0.3% Cu Shell coded by Oxidation state (Green – Oxide / Red – TMO / Blue – Primary) **Typical cross section through Tshifufia (Central) pit showing drilling interceptions (Cu%)**

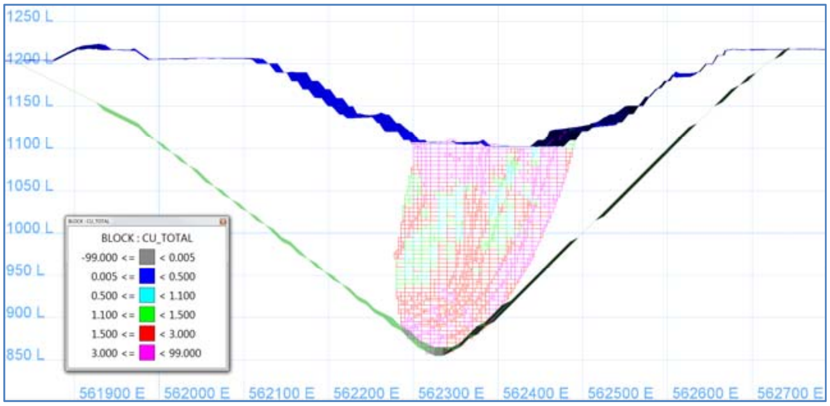
Criteria	Status
Balanced reporting	• This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section.
Other substantive exploration data	• This is a Mineral Resources Statement and is not a report on exploration results hence no additional information is provided for this section.
Further work	• The exploration focus will be within the Mine Lease and within a 50km radius of the known deposit to explore for additional high-grade oxide material. • Drilling as part of a Pre-Feasibility study was ongoing during the completion of the 2016 Mineral Resources Estimate. It is due for completion in late 2016.
Section 3 Estimating and Reporting of Mineral Resources	
Database integrity	• The following measures are in place to ensure database integrity: o The complete drillhole database (RC grade control and DD) data is stored in two SQL databases using the Geobank software front end management systems: o The grade control data (RC) is managed by the onsite geology team. o The exploration/Mineral Resources (DD) data is managed by the Group Technical Services database team in Melbourne. o Data is collected in Excel templates and imported into the database. Import routines check for data consistency and errors before the import is successful, thus maintaining data integrity. o The databases offer secure storage and consistent data which is exposed to validation processes, standard logging and data recording codes. • The measures described above ensure that transcription or data entry errors are minimised. • Data validation procedures include: o Internal database validation systems and checks. o Visual checks of exported drillholes 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 Resources has passed a number of validation checks both visual and software related prior to use in the Mineral Resources.
Site visits	• The Competent Person visited on three occasions during 2015-16 (February, June and October). 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.

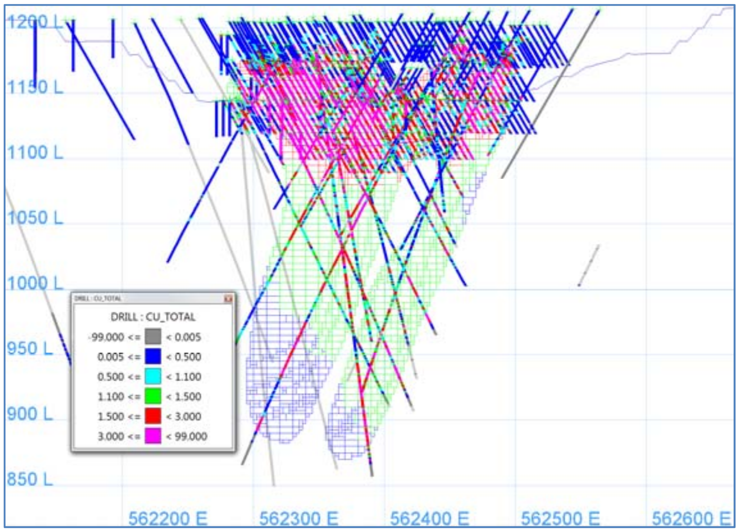
Criteria	**Status**
Geological interpretation	• The geological interpretation is based on a combination of geological logging and assay data (total copper %). There is a high level of confidence in both geological and grade continuity within the upper zone of the deposit that is drilled to grade control density. There is less certainty in the geological interpretation in the lower portions of the Mineral Resources however due to recent infill drilling and pit mapping the interpretation is considered reliable. • Both grade control RC and exploration DD and RC holes were used in the interpretation of the geological domains that are used in the Mineral Resources. • No alternative interpretations of the Mineral Resources have been used. However, an Indicator Kriging approach was used to construct weathering domains (within the mineralised zone), and for Mg high grade domains (using a 6% Mg cut-off) and Ca high grade (using a 9% Ca cut-off) domains. • Wireframe solids were created for the Cu mineralisation (using a 0.3% Cu cut-off). String envelopes were digitised along drill sections were used to generate the wireframe surfaces. • Geological logging was used to determine the lithological domains: o Dolomite Stratifiee (DStrat), the Roche Siliceuse Feuilletee and Roche Argilo-Talqueuse (RAT). o Shale Dolomitiques (SD) and the incorporated Black Shales (BLKSH). o Calcaire a Mineraux Noirs (CMN) and shear zone. • The magnitude of the acid soluble copper/total copper (AsCu/Cu) ratio has been used as an important criterion for the determination of the oxide, mixed 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, mineralisation domains were combined to code the drillhole data and the block model used for estimation. • On a local scale grade continuity is affected by minor stratiform lower grade zones that have been incorporated within the main deposit. This internal waste is better defined during the grade control drilling, and mined accordingly. • Structural features (faults / fractures) provide an important control on the mineralisation and grade continuity.

Criteria	Status
	 **Plan View of Kinsevere Mineralised Domain**  **Cross section view looking north showing the oxide (green), TMO (red) and_primary (blue) sulphide domains with drillholes**

Criteria	Status
Dimensions	• The mineralisation strike length is approximately 1.3km for the Tshifufia and Tshifufiamashi deposits while Kinsevere Hill has a 1km strike length. The mineralisation dips sub-vertically. Mineralisation extends to 400m at depth and it can be up to 300m in width. • The mineralisation outcrops on Kinsevere Hill, and at the Tshifufiamashi deposit.
Estimation and modelling techniques	• Mineral Resources modelling was conducted using Vulcan software. • Variograms were reviewed against those used for the 2015 Mineral Resources estimate with no change required. • The key estimation assumptions and parameters are as follows: o Cu, AsCu, AsCu/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 Indicator Kriging (IK) was used to determine oxide, mixed and primary sulphide, based on the AsCu/Cu ratio, and for determining the high grade Mg and Ca domains. o RATIO was only estimated where the sample had a Cu > 0.2% and both a Cu and AsCu value were present, if no estimation criteria is met, RATIO value was recorded as absent. 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, together with IK domain are used to tag the drillholes and are used for statistical analysis and grade estimation. o Grade estimation was completed using a combination of hard and soft boundaries. A soft boundary is used between the estimation domains used to direct the search anisotropy locally within the mineralised domain. A hard boundary is used for the high grade Ca and Mg domains, and generally between the oxide, mixed and primary domains; however depending on the geostatistical analysis, some domains were combined for the estimation of specific elements. o A series of local estimation domains were generated to honour the mineralisation strike variations thus improving the quality of the local estimate. o A composite length of 2m was 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, AsCu, RATIO, Co, Ca, Fe, Mg estimate were derived from mineralisation and waste domain variography and on Quantitative Kriging Neighbourhood Analysis (QKNA). U search parameters based on a generic search of 400m x 400m x 400m, U grades higher than 250ppm were distance limited to 20m. RATIO within the waste area was calculated post-estimation (AsCu est. / Cu est.). o First estimation pass search radius uses 80% of the variogram range. Over 90% of the blocks are informed in the first pass. The second search was set to 2 times the variogram range.

Criteria	Status
	o Minimum of 5 to 14 and a maximum of 12 to 30 samples (depending on element and/or domain) were used for each estimate. o The search neighbourhood was also limited to a maximum of 4 to 7 samples per drillhole depending on the domain to be estimated. o Octant searches were used in some of the estimations, based on QKNA studies, and is documented in the report (maximum of 2 sectors was used). o Discretisation was set to 4 x 8 x 2 (X, Y, Z). o Kriging variance (KV), kriging efficiency (KE) and kriging regression slope (RS) of the Cu estimate were calculated during the estimation. These are used to assist with classification. • Reconciliation has been conducted between the 2015 Mineral Resources and grade control models. The comparisons are for total copper and acid soluble copper and only for the material constrained within the volume of the grade control model. This comparison showed the 2015 Mineral Resources model to have less tonnes at a higher grade with metal 4% higher than the grade control model. The 2015 and 2016 Mineral Resources models have been compared and show no material difference with metal content 2% lower for the 2016 model. • The Comparison between the Mineral Resources and the mill feed grade is complicated by the operational strategy of treating high-grade ore and stockpiling lower-grade ore for later treatment. • Kinsevere does not produce any by-products. 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 drillholes. • No further assumptions have been made regarding modelling of selective mining units. • The block model and estimate has been validated in the following ways: o Visual checks in section and plan view against the drillholes. o Grade trend plots comparing the model against the drillholes. o Reconciliation with grade control model.
Moisture	• Tonnes in the model have been estimated on a dry basis.
Cut-off parameters	• The oxide Mineral Resources 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 2015 Mineral Resources. • For 2016, a transitional/mixed ore (TMO) type has been added that defines transitional and mixed copper species with a total copper cut-off grade of 1.5% and a RATIO greater than or equal to 0.2 and less than 0.5. This type was not reported in 2015 and would have been considered primary if above the cut-off grade. There are no Ore Reserves for TMO material. • The primary sulphide Mineral Resources has been reported above a total copper cut-off grade of 1.1%. There are no Ore Reserves for the primary copper. • The reported Mineral Resources have also been constrained within a US$3.50/lb pit

Criteria	Status
	shell. 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.  **Cross-section of Copper Mineral Resources model contained within the US$3.50lb 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$3.50/lb pit shell. - No mining factors have been applied to the Mineral Resources.
Metallurgical factors or assumptions	- The metallurgical process applied at the Kinsevere Operation applies acid leaching coupled with solvent extraction electro-winning (SXEW) technology to produce copper cathode plates for sale. - Consideration of metallurgy has been included in the cut-off grade calculation, material type and in the construction of the US$3.50/lb pit shell. - No metallurgical factors have been applied to the Mineral Resources.
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. - The property is not subject to any environmental liabilities. - PAF and NAF classification is based on total sulphur estimates with tin the Mineral Resource block model. NAF is less than 0.5% total sulphur otherwise the rock is classified as PAF. - Further details of Environmental factors or assumptions are addressed in Section 4 of this table.
Bulk density	- In-situ dry bulk density values are determined from 6,214 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 measurements on drill core did not use a sealed method and may be subject to pore-space variations. - Bulk density was calculated using the wet and dry method:

Criteria	**Status**
	Bulk Density = Dry Sample Weight/(Dry Sample Weight – Wet Sample Weight) - Average in-situ bulk density values were assigned to the blocks within each domain.
Classification	- Wireframes used for Mineral Resources classification are based on a combination of confidence in assayed grade, geological continuity and Kriging metrics (Kriging variance, efficiency and slope of regression). - In general, drilling within Measured Mineral Resources regions is spaced 15m x 15m, Indicated is 35m x 35m and Inferred ranges up to 80m x 80m. - The Mineral Resources classification reflects the Competent Persons view on the confidence and uncertainty of the Kinsevere Mineral Resources.  **Cross section showing Kinsevere Mineral Resources classification and drilling density (Red-Measured, Green-Indicated, Blue-Inferred)**
Audits or reviews	- An external Mineral Resources audit was conducted by Jeremy Witley from MSA (The MSA Group) in June 2014. Overall the review stated that the estimate has been conducted in a competent and professional manner. Recommendations were implemented. - MMG conducts annual internal reviews of Mineral Resources estimates. No significant issues remain unresolved.
Discussion of relative accuracy / confidence	- Close-spaced grade control drilling within the Measured Mineral Resources areas provides suitable estimation on a local scale and supports the requirements of mining selectivity for the Kinsevere operation. - Estimates in the deeper primary copper mineralisation will not be as locally accurate, due to wider spaced drilling. This level of uncertainty is captured by the Indicated and Inferred Mineral Resources category. - Estimation of dry bulk density values needs to be evaluated to determine if achievable with the current number of samples. The method of assigning bulk density values is similar to the 2015 Mineral Resources and is not considered to have a material impact on the reported tonnages.

4.3 Ore Reserves - Kinsevere

4.3.1 Results

The 2016 Kinsevere Ore Reserve is based on the 2016 Mineral Resource model.

The 2016 Kinsevere Ore Reserve are summarised in Table 9.

Table 9 2016 Kinsevere Ore Reserve tonnage and grade (as at 30 June 2016)

Kinsevere Ore Reserve					
				Contained Metal	
	Tonnes (Mt)	Copper (% Cu)	Copper (%ASCu)	Copper TCu[1] ('000 t)	Copper ASCu[1] ('000 t)
Central Pit					
Proved	1.5	4.5	3.9	68	58
Probable	2.7	4.8	4.2	133	115
Central Pit Total	4.2	4.7	4.1	201	173
Mashi Pit					
Proved	1.4	4.5	3.9	63	55
Probable	2.8	2.8	2.4	81	68
Mashi Pit Total	4.2	3.4	2.9	143	124
Kinsevere Hill					
Probable	4.3	3.0	2.6	125	109
Kinsevere Hill Total	4.3	3.0	2.6	125	109
Stockpiles					
Probable	4.9	2.2	1.7	107	82
Total	4.9	2.2	1.7	107	82
Kinsevere Total	17.6	3.3	2.8	577	488

[1] TCu stands for Total Copper, ASCu stands for Acid Soluble Copper.

Cut-off grade is 0.9% ASCu under current operating conditions and 0.8% at the cessation of mining activities.

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

Contained metal does not imply recoverable metal.

The main difference from the 2015 Ore Reserves is:

(i) A new Mineral Resource model, including additional drilling, has converted approximately 1Mt of inferred material to indicated;

(ii) Significant improvements in processing capacity (1.8Mtpa to 2.3Mtpa) and cathode production (72ktpa to 78.5ktpa) have resulted in economy of scale improvements and ultimately decreases in unit operating costs;

(iii) Decrease in mining costs as a result of contract negotiations.

4.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 10 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.

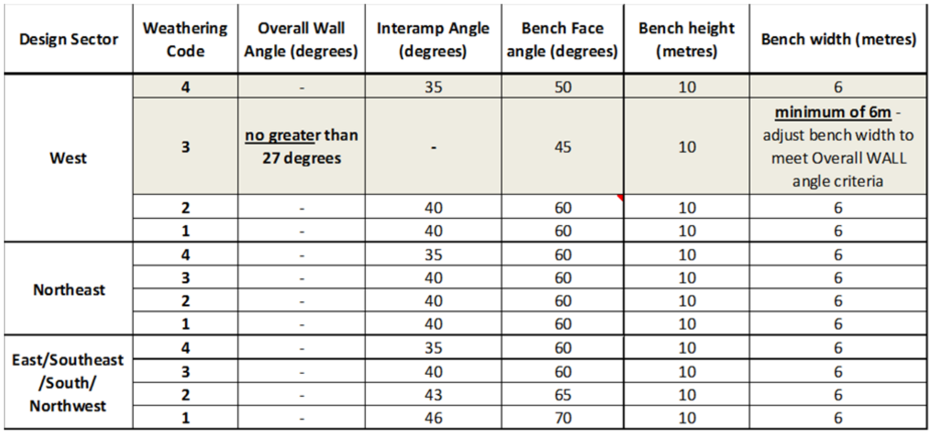
Table 10 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Kinsevere Ore Reserve 2016

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves. • The Ore Reserves includes ore on stockpiles. • The normal sub-celled Mineral Resource block model named "k2016v10m.dm" dated 13-06-2016 was used for optimisation purposes. • Mineral Resource block model has a parent block size of 10 m x 20 m x 5 m with sub blocking down to 2.5 m.
Site visits	• The Competent Person is Jodi Wright AusIMM(CP) who visited the site in March and July, 2016. • Each visit consisted of discussions with relevant people associated with Ore Reserve modifying factors including Geology, Grade Control, Geotechnical Parameters, Mine Planning and Mining Operations, Metallurgy, Tailings and Waste Storage, and Environmental Area. The Outcomes from the visits have included reaching a common understanding in those areas, and achieving the specific purpose of each trip, such as review of assumptions and calculation of cut-off grade and developing the Life-of-Asset (LoA) mine plan. • A site visit was also carried out by Nan Wang from Group Technical Services-MMG in March 2016. • Dean Basile (previous Competent Person) undertook a site visit in June 2016.
Study status	• The current mine and processing plant configuration have been in operation since September 2011. Ore Reserves inputs are based on actual historical performance data and forecasted estimates for cost and performance. • LoA Low Case was produced as part of the MMG planning cycle. This Low Case informs the Ore Reserves and is technically achievable, economically viable, and, material Modifying Factors have been considered.
Cut-off parameters	• Breakeven cut-off grades were calculated at a US$2.95/lb copper price and acid soluble to total copper ratio greater than or equal to 0.5. The following COG's are applied: o 0.9% ASCu under current operating conditions o 0.8% ASCu under post mining conditions. • 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 of Ore Reserve estimation included pit optimisation, final pit and phase designs, consideration of mining schedule and all modifying factors. • Kinsevere mine is an open pit operation that is mining and processing oxide copper ore. The operation uses a fleet of excavators and articulated dump trucks along with a

Criteria | **Commentary**

fleet of ancillary equipment.

- This mining method is appropriate for the style and size of the mineralisation.
- The geotechnical parameters used for slopes are as follows:



Design Sector	Weathering Code	Overall Wall Angle (degrees)	Interamp Angle (degrees)	Bench Face angle (degrees)	Bench height (metres)	Bench width (metres)
West	4	-	35	50	10	6
	3	**no greater than 27 degrees**	-	45	10	**minimum of 6m** - adjust bench width to meet Overall WALL angle criteria
	2	-	40	60	10	6
	1	-	40	60	10	6
Northeast	4	-	35	60	10	6
	3	-	40	60	10	6
	2	-	40	60	10	6
	1	-	40	60	10	6
East/Southeast /South/ Northwest	4	-	35	60	10	6
	3	-	40	60	10	6
	2	-	43	65	10	6
	1	-	46	70	10	6

- The pit optimization was based on the 2016 Mineral Resource block model and the strategy for the final pit selection was based on a revenue factor 1 (RF=1.0). RF 1.0 pit shell is used across all assets in the MMG Group. Final pit designs incorporating further practical mining considerations were carried out using these optimisation shells.
- Assumed mining dilution 5%. Dilution modelling and reconciliation data supports these assumptions.
- The assumed mining recovery 95%. Dilution modelling and reconciliation data supports these assumptions.
- Minimum mining width (bench size) is ~40 m.
- No Inferred material has been included in optimisation and/or Ore Reserves reporting.
- All required infrastructure is in place. There is a planned increase in mining rate in 2017 that is considered to be within the capacity of the site contractor.

Metallurgical factors or assumptions

- The Kinsevere mine is an operating entity. The metallurgical process is a hydrometallurgical process involving grinding, tank leaching, counter-current decantation (CCD) washing, solvent extraction and electrowinning.
- The 2007 Prefeasibility Study (PFS) tested composite and variability samples from Central, Mashi & Kinsevere Hill. The test work found:
  - Sulphuric acid leach tests on the master composites indicated that acid soluble copper recoveries were high (>95 % at pH 1.5 212 µm for 8 hour leach duration);
  - Acid soluble copper leach kinetics were fast with leaching virtually complete after 4 hours;
  - Moderate gangue acid consumption (GAC) with all samples below 21 kg H2SO4/tonne, and;
  - Assay analysis of 12 hour leach solutions did not detect significant levels of any deleterious elements.
- The acid leach process has been operating successfully since start-up in September 2011.

Criteria	Commentary
	• Copper recovery is determined by the equation: *Cu recovery (%) = (0.9513*ASCu)/Cu* where ASCu refers to the acid soluble copper content of the ore which is determined according to a standard test. The ASCu value is typically about 80% of the total copper value though the exact percentage varies with the ore type. Much of the non-acid soluble copper is present in sulphides which are not effectively leached in the tank leaching stage. Hence, the aforementioned ratio (ASCu/Cu) criteria of >=0.5 has been applied, to classify ore. • The reconciliation between expected and actual recovery is checked each month. The following table summarizes the outcomes for Central Pit from the last 4 half yearly periods. In the last two quarters, actual recovery has been below predicted recovery. Disruption from the Pregnant Leach Solution (PLS) ponds is recognised as impacting performance. Reconditioning of the ponds is expected to re-establish recoveries.

Period	Recovery of Acid Soluble Copper (%)	
	Predicted	Actual
Q3 2015	95.1	97.2
Q4 2015	95.1	95.1
Q1 2016	95.1	94.3
Q2 2016	95.1	89.8

Criteria	Commentary
	• The same equation for copper recovery has been applied for 2017 to 2019 for processing Mashi and Kinsevere Hill oxide ores. The recovery assumptions for Mashi and Kinsevere Hill are considered reasonable in that similar leach performance was found in the 2007 PFS test work, and geological drilling and interpretation has not recognised differences in oxide copper mineralization to that in Central. Test work is proposed to verify recoveries. • The main deleterious components of the ore are carbonaceous (black) shale which increases 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 25%. • Total acid consumption has been estimated based on historic consumption rates for Central that average approximately 16.5 kg per tonne of oxide ore. • For Ore Reserves, a processing rate of 2.3 Mtpa of ore and 78.5 ktpa of copper cathode has been assumed. Both production rates have been demonstrated as sustainable over the last 12 months. • Kinsevere mine does not produce any by-products.
Environmental	• The property is not subject to any environmental liabilities, apart from the standard rehabilitation requirements associated with Closure. • Following submission of the EIA (Consultants, July 2007), DRC Government approval of the Kinsevere Copper Project, Stages I and II, was issued by CAMI on 15th October 2007. Approval of a variance to the design and operation of the Stage II tailings storage facility was issued by the DPEM on 28th October 2008 (DPEM, Oct 2008).

Criteria	Commentary
	• An Environmental and Social Impact Assessment (ESIA) was prepared by KP (October, 2009) as a condition of the then proposed Project debt financing. In relation to increased groundwater discharge arising from an expansion to the mine dewatering capacity, a Revision No. 1 to the 2007 EIA was prepared by Knight Piésold (Piésold, Dec 2010) and was submitted to the DPEM in December 2010, and finally approved in March 2011. A further addendum to the EIA was undertaken and submitted March 2015 to address planned project changes on the concession. The next update to the EIA is due in 2017. • Geochemical properties of the waste rock and black shales have been characterised through preliminary studies, with more detailed studies ongoing. Field observations indicate that sulphides present in the black shale stockpiles are oxidising and generate heat. A mineral waste management plan has been developed outlining design and operational controls, considering field observations, and results of studies. A Conceptual Closure Plan has also been developed, with a supporting cost estimate. • To comply with the DRC Mining Regulations, it is necessary to manage surface water runoff in such a way that contaminated runoff is contained and sediment loadings (from disturbed catchments) are maintained at acceptable levels. In order to achieve this, a number of additional strategically placed Sediment Control Ponds (SCPs) and diversion channels are proposed to be implemented and completed during the remaining asset life.
Infrastructure	• The Kinsevere mine site is well established with the following infrastructure in place: o The plant is operational. o There is an existing accommodation camp. o There is sufficient water for the processing. o Ground water from pit dewatering is discharged into the Kifumashi River. o Copper cathode is transported by truck. o Site has an access road that is partially sealed. o There is a power supply from the national grid and from onsite generators. o Labour is mostly sourced from Lubumbashi and surrounding villages with some expatriates on site. o There is no need for additional land for any expansions. o Tailings Storage Facility in place and future lifts are accounted 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 and has historical costs that have been used to inform the 2016 Kinsevere Budget (January 2016 to December 2016). The Ore Reserves estimation has been based on these costs in accordance with MMG's corporate guideline. • The future costs will be lowered in order to process low grade stockpiled material economically towards the end of mine life. • Transportation charges used in evaluation are based on the actual invoice costs that

Criteria	Commentary
	MMG are charged by the commodity trading company per the agreement. • The processing costs include an average gangue acid consumption (GAC). • US dollars have been used thus no exchange rates have been applied. • Weathering profiles have been updated to model in-pit blasting to inform the mining costs. • Since the final product is LME grade A copper cathode there are no applicable treatment or refining or any other 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 process has been done following the guidelines set out by MMG corporate. • Allowances have been made for royalties. • A cash flow model was produced based on the detailed mine and processing schedule. This model includes the aforementioned costs as well as all sustaining capital that is needed to realise the Ore Reserves.
Revenue factors	• For cost assumptions see section above – "Costs" • The assumed copper price is US$2.95/lb which is the same as that reported in the Cut-off parameters section. These prices are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy.
Market assessment	• MMG has a long-term positive view of copper market fundamentals with future supply likely to be constrained by declining ore grades, increasing costs and inadequate investment in mine capacity. Some of the world's current largest suppliers, for example in Chile, require significant investment over the coming years in order simply to maintain current production levels. • Although mine supply has been augmented in recent years by the commissioning of several large projects in Peru and Chile, including MMG's own Las Bambas operation, there is a lack of committed new production scheduled for the remainder of the current decade. The current period of relatively low copper prices is also discouraging new investment in mine production • There is a life of mine off-take agreement with the trading company in place for all of the copper cathodes produced on site from oxide ore. 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. • Price forecast is based on MMG corporate finance assumption.
Economics	• The costs are based on historical actuals and the 2016 Kinsevere Budget. Revenues are based on historical and contracted realised costs and long-term metal price. • The LOM financial model demonstrates the mine has a substantially positive NPV. • The discount rate is in line with MMG's corporate economic assumptions. • In order to economically treat low grade stockpiles at the end of the mine life, operating cost reductions are required; these reductions are not considered to be unrealistic. • Standard sensitivity analyses were undertaken for the Ore Reserves work and support the robustness of the Ore Reserve estimate.

Criteria	Commentary
Social	• Kinsevere site provides significant support to community through a variety of social projects, financed by the site and aligned to the UN Sustainable Development Goals. The site enjoys strong support from the local community. • Lubumbashi is a regional capital of the Katanga region. It has a population of approximately 1.6M people (2012). Lubumbashi has a university that has some mining, geology, mineral processing and environmental programs that prepare professionals. • Personnel are recruited from the local villages. The majority of these people are unskilled and require training. Skilled artisans and professional people are recruited from Lubumbashi. • Several hundred artisanal miners were previously active at Kinsevere before the Project commenced. There is evidence that artisanal miners are active in the area. • MMG have a stakeholder engagement strategy and consultation plan in place, that is regularly reviewed, and covers matters associated with further developing and maintaining a social licence to operate. This encompasses social impacts, community investment, regulatory developments and the political landscape. • A key agreement in place is for the development of a 250 hectare farming enterprise.
Other	• MMG has a Contrat d'Amodiation (Lease Agreement) with Gécamines to mine and process ore from the Kinsevere Project until 2024, followed by an automatic fifteen year extension. • The PE 528 permit covers the three major deposits of Tshifufiamashi, Tshifufia and Kinsevere Hill/Kilongo. • A Contract d'Amodiation is provided for under the DRC Mining Code, enacted by law No 007/2002 of July 11, 2002
Classification	• The Ore Reserves classification is based on the JORC 2012 requirements. The basis for the classification was the Mineral Resource classification and cut-off grade. The ex-pit material classified as Measured and Indicated Mineral Resource and is above 0.9% ASCu with an acid soluble to total copper ratio greater than or equal to 0.5 is classified as Proved and Probable Ore Reserve respectively. • Stockpile material at Kinsevere has been reclassified as Indicated. Indicated Mineral Resource above 0.8% ASCu with an acid soluble to total copper ratio greater than or equal to 0.5 is classified as Probable Ore Reserve.
Audit or Reviews	• An external Ore Reserves audit was completed in 2013. The work was carried out by SRK Consultants African branch. Even though some minor improvements have been suggested, no major issues were identified. The audit continuous to be valid considering no significant changes in Reserve estimation methodology has occurred between the 2014 to 2016 Reserve Estimate.
Discussion of relative accuracy/ confidence	• The most significant factors affecting confidence in the Ore Reserves are: o Reliability of the grid power supply. Although the project NPV might be impacted by ongoing issues of reliable power supply and the costs of that supply, it is not expected to have a significant impact on the Ore Reserves; Risk is low. o The end of mine life cost reduction to enable economic treatment of the low grade stockpiles (however the value associated with these low grade Ore Reserves is low); Risk is medium, the impact might be up to 3Mt reduction in low grade ore. o Further work is proposed to investigate the possible impact of the change in

Criteria	Commentary
	percentage of the processable black shales; Risk is low, impact is low. o It is proposed that future estimates of gangue acid consumption be based on a relationship incorporating Mg, Ca & CO3 grade estimation; Risk is low, impact is low. o Geotechnical risk related to slope stability. o Metallurgical recovery model uncertainty- limited metallurgical sampling for Kinsevere Hill and Mashi pits. o Increase in operating costs for mining and processing.

4.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 11.

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 11 Contributing experts – Kinsevere Mine Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Doug Corley, Principal Resource Geologist MMG Ltd (Melbourne)	Mineral Resource model
Mark Godfrey, Principal Metallurgist, MMG Ltd (Melbourne)	Updated processing parameters and production record
Christian Holland, Geotechnical Engineering Specialist, MMG Ltd (Melbourne)	Geotechnical parameters
Dean Basile, Principal Mining Engineer, Mining One Consultants (Melbourne)	Whittle optimisation, mining costs, pit designs, mine and mill schedules, preparation of Ore Reserve estimate.
Kinsevere Geology department	Production reconciliation
Knight Piésold	Tailings dam design
Claire Beresford, Senior Analyst, Business Evaluation MMG Ltd (Melbourne)	Economic Assumptions
Jonathon Crosbie, Senior Life of Asset and Closure Planner, MMG Ltd (Melbourne)	Closure, Environment and Social
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing

5 SEPON – COPPER AND GOLD OPERATIONS

5.1 Introduction and Setting

The Sepon gold and copper operations are located in south-central Laos. The property is located in the Vilabouly district of Savannakhet province, 235km east of the town of Savannakhet, 40km north of the town of Sepon (Figure 5-1).

Figure 5-1 Sepon Mine location

The main road from Vientiane to Savannakhet is National Route 13, a paved single-carriageway highway. The route is located within the Mekong River basin and crosses many tributaries few of which compromise travel during exceptionally heavy wet season events. The Sepon Operation is located east of Savannakhet via National Route 9 then northward from Ban Nabo along National Route 28A.

MMG Lane Xang Minerals Limited Sepon (LXML) operates the Sepon gold and copper operations and is a subsidiary of MMG Limited. MMG owns 90% of LXML, while the Government of Lao owns the remaining 10% of LXML.

5.2 Mineral Resources - Sepon

5.2.1 Results

The 2016 Sepon Mineral Resource are summarised in Table 12. The Sepon Mineral Resource is inclusive of the Ore Reserve.

Table 12 2016 Sepon Mineral Resource tonnage and grade (as at 30 June 2016)

Sepon Mineral Resources					
				Contained Metal	
Supergene Copper[1]	Tonnes (Mt)	Copper (%)	Gold (g/t)	**Copper ('000 t)**	**Gold (Moz)**
Indicated	12.9	3.5		451	
Inferred	0.3	3.5		12	
Total	**13.3**	**3.5**		**463**	
Copper Stockpiles					
Indicated	5.7	1.6		91	
Total	**5.7**	**1.6**		**91**	
Primary Copper[1]					
Indicated	5.0	1.2		59	
Inferred	3.3	1.1		38	
Total	**8.4**	**1.2**		**97**	
Oxide Gold[2]					
Indicated	1.6		3.0		0.2
Inferred	0.4		2.1		0.0
Total	**2.0**		**2.8**		**0.2**
Partial Oxide Gold[2]					
Indicated	1.3		4.2		0.2
Inferred	0.1		2.9		0.0
Total	**1.3**		**4.1**		**0.2**
Primary Gold[2]					
Indicated	7.8		4.0		1.0
Inferred	0.1		3.5		0.0
Total	**7.9**		**4.0**		**1.0**
Total Contained Metal				**651**	**1.4**

1. Variable cut-off grade based on net value script accounting for costs, recoveries and metal prices within US$3.5/lb pit shells.
2. Variable cut-off grade based on net value script accounting for costs, recoveries and metal prices within US$1,212/oz pit shells.

Contained metal does not imply recoverable metal.

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

5.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 13 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 13 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Sepon Copper and Gold Mineral Resource 2016

Criteria	Status
Section 1 Sampling Techniques and Data	
Sampling techniques	• Reverse Circulation (RC) drilling, mostly used for grade control, was sampled at 1m (3kg-5kg) intervals for analysis. Diamond drilling (DD) was sampled as nominal 1m half-core lengths modified (up to +/-0.5 m) to geological boundaries as appropriate. • Dry RC samples pass through a rotary splitter on the bottom of the cyclone. Wet RC samples are hand-split into quadrants. Sample weights range between 1.75kg and 3.75kg. • Samples are crushed and pulverised to produce a pulp (>85% passing 85 µm). • Measures taken to ensure sample representivity include orientation of the drill holes as close as practical to perpendicular to the known mineralised structure, and collection, and analysis of field duplicates. • In the view of the Competent Person sampling is of a reasonable quality to estimate the Mineral Resource.
Drilling techniques	• RC and DD are used in the Sepon Mineral Resource estimate. There are two types of RC referred to in this document. Prior to 2006 RC drilling was used to provide information for resource estimation, however due to ongoing issues with wet samples a change was made to DD core for resource work. RC has also been used for grade control purposes for the life of mine. • Previously the grade control RC drilling has not been used for resource modelling, an exception has been made this reporting period and grade control data was used in the Khanong Copper Mineral Resource estimate. • All DD drilling used triple tube core barrels, core diameter is largely HQ3 but PQ3 is also common in the clayey near surface zones. • All competent DD core was orientated.
Drill sample recovery	• DD recovery averages 90% (based on length) and RC recovery averages 80% (based on mass). • DD sample recoveries were recorded as the length of core recovered per metre of drilling and are stored in the database. RC sample recoveries are recorded as sample weight in the database and a recovery calculated based on expected weight given a particular volume and density. • 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. • Preferential loss/gains of fine or coarse materials are not considered significant. • Sample recovery is better and generally of lower grade in competent primary rock than in the softer and higher grade transitional and oxide material as expected. • Recovery loss at Sepon is not deemed material in the estimation process in the view of the competent person.

Criteria	Status
	• In places, RC holes have been twinned with DD to determine if any bias is detected regarding recovery between ore and waste, to date it has not been deemed materially biased.
Logging	• All RC and DD core was logged on paper log sheets and entered manually into the Sepon database until 2015. • Post 2015 logging is carried out on tablets and automatically linked to the database. Several quality control (QC) triggers are set in the database to validate data as entered. • All Sepon RC and DD drill core has been geologically and geotechnically logged to support mineral resource estimation, mining and metallurgy studies. • Geological logging is qualitative, using a set of pre-determined Sepon tables for; lithology, structure, mineralisation, geotech, oxidation, alteration and a site developed metcode (metallurgical domain). • Core is photographed and stored digitally. • All drill cores are stored at the Sepon core shed. • A total of 1,304,890.5m of DD and RC drilling data is contained in the resource database, of this 84% is geologically logged, and 98% of sampled intervals contain gold and copper assays (15% of the RC data was assayed but not logged). • Only samples within the mineralisation or geological domains are used in the estimations. There is also some drilling within block model extents not used in estimations as they fall outside of the areas of interest. • A total of 28,417 grade control RC holes (for 454,871m) and 2,730 resource drill holes were used to inform the 2016 Khanong block model. • A total of 8,291 DD and RC drill holes were used to inform the Thengkham region block model.
Sub-sampling techniques and sample preparation	• DD core was orientated along the apical trace of the reference plane. Half-core samples were taken using a diamond core saw for competent core or sampled by hand using a spatula or blade for clay-rich or rubbly material. • RC (pre 2006 resource) samples were collected from a cyclone and, if dry, put through a three stage riffle splitter for a 12.5% sub-sample. A 3-5kg (1 m) sample was collected into pre-numbered sample bags for analysis. Before 2006, if RC samples were wet, then sampling was by quartering. After 2006 wet RC samples were no longer taken. • Grade Control RC drilling is sub-sampled using a cyclone splitter if dry and if wet is split into 4 quadrants and one quadrant is sent for analysis. • The RC and DD sample preparation techniques are considered appropriate as sample preparation techniques. • All samples contain a waterproof sample ID tag in numbered calico bags and are weighed. The samples were stacked and wrapped on a pallet before being transported by truck to the laboratory. • Resource sample processing and gold fire assaying takes place at the ALS laboratory Vientiane. A small proportion of the data has been assayed at the site assay laboratory using similar sample methods as part of a trial to determine if the site assay laboratory can accommodate all resource drilling internally.

Criteria	Status
	• Grade control sample preparation and analysis is carried out by the internal site laboratory. • Upon laboratory receipt of samples they were sorted, barcode tagged for tracking and then weighed. The samples were oven dried at 110°C (for core samples, minimum of 12 hours drying or longer until the sample has completely dried, allowing it to pass through a crusher without pelleting). The entire sample was crushed in a Jaw Crusher with 70% passing 2 mm. The sample was rotary split to 3 kg if required, then pulverised using an LM5 to 85% passing 85 µm. • Representivity of samples was checked by: o sizing analysis. o duplication at the crush stage. • Measures taken to ensure sampling is representative of the insitu material collected include: o Field duplicates were taken as an additional 12.5% split every 15 m for RC drilling. DD field duplicate samples were taken as quarter core every 15m (but at times have been sampled every 20m). Duplicate samples were collected and analysed at both the coarse crush split and the pulverised split stages. o Replication of the duplicates is considered satisfactory. • Sample size is considered appropriate for the disseminated gold and copper grain size for both the RC and DD samples. • The sample types, nature, quality and sample preparation techniques are considered appropriate for the style of the Sepon mineralisation (sediment hosted base metal) by the Competent Person.
Quality of assay data and laboratory tests	• Following sample preparation a 110g pulp aliquot for Au Fire Assay and 20g pulp aliquot for ICP multi element was taken. The 20g pulp aliquots were transported to other ALS laboratories (usually ALS Brisbane) for ICP and Leco furnace analysis. The analytical procedure is as follows: o If Au grade > 10g/t Au, re-assayed by Fire Assay Gravimetric. o If Au grade > 0.4g/t Au, re-assayed using CN Leachwell technique. o Detection limit for Fire Assay is 0.01ppm. • A multi-element suite (varying through time from 30 – 40 elements, but always including Cu, Ag, S, Mo) was analysed by ICP-AES. • The current copper multi-element suite analysed by ICP-AES (ALS laboratory code ME-ICP61) contains Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W and Zn. • Copper samples above 0.2% Cu are sent for sequential copper analysis. • If Cu > 0.5% Cu, the sample was re-assayed using an Ore Grade technique (either AAS or diluted ICP). These methods are considered total methods. • For some samples total sulphur, sulphide sulphur, sulphate sulphur, total carbon, carbonate carbon and organic carbon were analysed by Leco Furnace following appropriate digestion, this sample selection is based on a Cu trigger that has varied overtime.

Criteria	Status
	• 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. • The quality control system adopted for each drill hole includes: o grade and matrix matched certified standard material (CRM) o coarse and pulp blanks o field duplicates (up until 2016) o pulp repeats. o Photographs of all sample bags, in order, is taken prior to shipment to the laboratory. • At a minimum, every drill hole contains at least one coarse blank, pulp blank and CRM standard. At a minimum 1 in 15 samples is a control sample (earlier programmes vary from 1 in 25 to 3 in 25). • Checks of the laboratory results and data import procedures are undertaken to identify any spurious results for verification and re-assay. Acceptable levels of accuracy and precision have been established. Any suspect data is excluded from the Mineral Resource estimate. • Independent / round robin laboratory checks were conducted on a quarterly or half yearly basis until 2010. The results were generally unbiased with respect to each other, for example, Khanong has an overall relative precision of +/- ~6%. Since 2010 no independent laboratory checks have been undertaken, this was re-instated in January 2016. • The use of an external umpire lab commenced in January 2016. To date 1771 samples have been sent for umpire review. • In December 2015 a 3 month trial of the Sepon lab was carried out, the results showed that due to turnaround times, inability to complete all desired analysis and detection limits the ALS lab would continue to be used for Mineral Resource analysis.
Verification of sampling and assaying	• Verification by independent or alternative company personnel was not undertaken at the time of drilling. However, significant assay results are compared to drill hole logging and photos on a random basis. • Monthly internal reviews are carried out for all assay batches returned. Any CRM samples that exceed 3 standard deviations from the expected value will have its batch returned for re-analysis in grade control. A total of 17,539 samples for grade control were sent to the internal lab during the reporting period, a total of 6 blanks and 54 standards failed within this period. This represents a failure rate of approximately 5% for standards and less than 1% for blanks. • QAQC failures for resource drilling during the reporting period totaled 14 pulp blank, 9 coarse blank and 57 standards, all have been ascribed to sample swaps and no batches have been rejected or re-analysed. In the opinion of the Competent Person further work is required to re-instate reanalysis of failed batches in accord with site QAQC protocols.

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>
<table>
<tr><td>Report Period = 1st April 2015 – 31 March 2016</td><td>RESOURCE</td><td>RESOURCE</td></tr>
<tr><td></td><td>SEPON LAB</td><td>ALS LAB</td></tr>
<tr><td>Number of samples sent to Lab for analysis</td><td>12056</td><td>15763</td></tr>
<tr><td>Number of QAQC samples that failed protocols.</td><td>10 pulp blank
5 coarse blank
25 standard</td><td>4 pulp blank
4 coarse blank
32 standard</td></tr>
</table>

Resource drilling within the reporting period accounts for a total of 2% of samples within the database and any issues with the sample QAQC protocols over the past year is not considered significant to the resource estimate.
Sample swaps, mislabeling and incorrect control sample insertion related to human error have been identified by checking procedures and photos and are rectified.
There are no known deficiencies in the assay data quality from ALS and Sepon laboratories that affect the resource confidence. The repeats show a higher variance than would be expected, however the limitations on the sampling make representative samples difficult to achieve within the clay material. The pulp duplicates do not show large variance.
Twinned drilling using DD has been completed for parts of the Mineral Resources to validate RC drilling. These areas are largely mined out and do not represent a large part of the insitu Mineral Resource. In general, twinning found that some RC drilling within wet conditions has resulted in smearing and positive grade bias. Current practice is only to use DD in wet drilling conditions. RC drill holes with suspected smearing have not been used mineral resource estimation.
Laboratory result files are directly uploaded into the database with no manual data entry.
Below detection limit assay results are stored in the database as the detection limit (negative) with appropriate metadata. No other modification of the assay results is undertaken.
Where data was deemed invalid or unverifiable it was excluded from the Mineral Resource estimation.

</td></tr>
<tr><td>Location of data points</td><td>

Drill hole collars locations are located by differential GPS or total station survey instrument. Downhole surveys have been carried out using Eastman single-shot cameras or Reflex EZ tools. Surveys were taken at depths of 12 m, 30 m and then every 30 m to the bottom of hole.
All drill hole collars are converted from UTM / India-Thai 1960 projection to SPG06 local grid coordinate systems.
In 2008 a LIDAR (Light Detection and Ranging) survey was completed providing an accurate topographic surface. Drill hole collar locations have been validated through a process of database and spatial checking for both historical and recent data and by comparing the collar locations to the LIDAR topographic surface. A number of holes were identified as having suspected locations and resolved prior to modelling of the data.
GC drill holes are marked out by the survey department. No further down hole or post drilling surveys are carried out.

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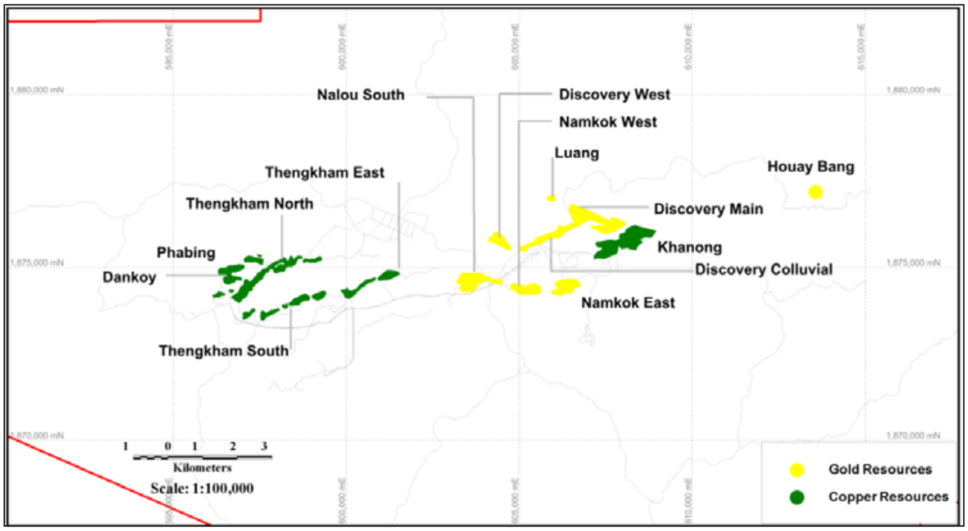
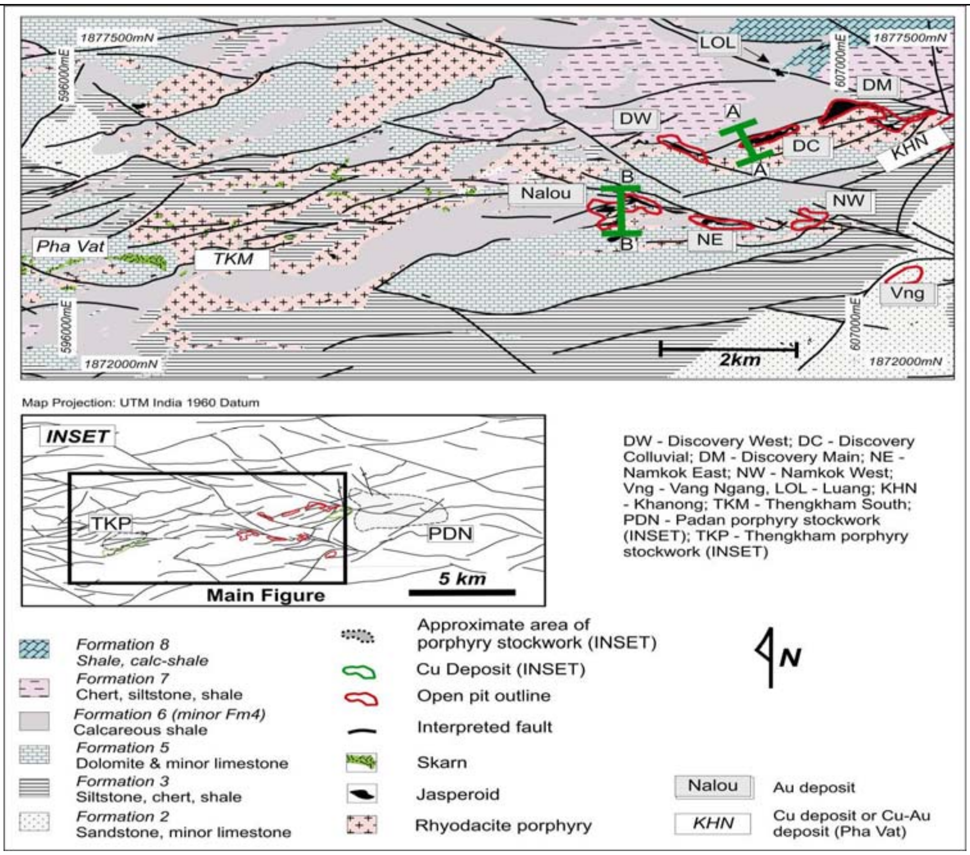
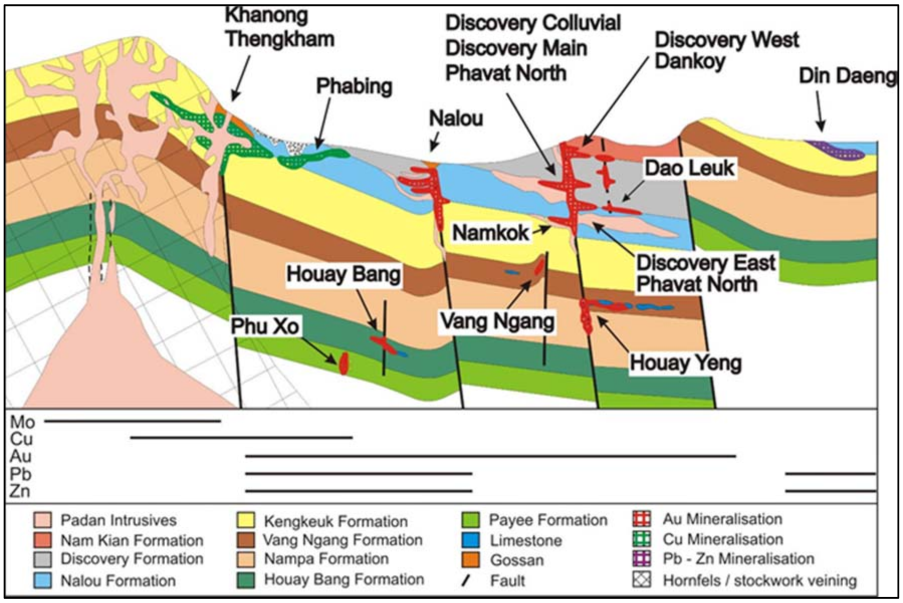
</table>

Criteria	**Status**
Data spacing and distribution	• Drill hole spacing generally ranges from 100m to 25m for resource DD. GC drilling occurs on a 7.5m grid pattern. • The data spacing and distribution is considered sufficient due to reconciliation and variogram analysis to establish the degree of geological and grade continuity appropriate for mineral resource estimation and classification methods used at Sepon. • It is acknowledged that closer space drilling could allow identification of further short range structures, within the 25m and would need to be undertaken if the Mineral Resource was classified to a Measured category. • DD samples are not composited prior to being sent to the laboratory. RC samples are 1m intervals but compositing up to 4m has occurred in the past.
Orientation of data in relation to geological structure	• Geological mapping and interpretation show that mineralisation generally strikes 060^0 - 090^0 (deposit dependent); hence drilling is conducted on north -south sections to intersect the mineralised zone at a high angle. Most drill holes dip -60^0 to -90^0, depending on the expected dip of the target mineralisation and surface site access for drill pads. • In parts of the Thengkham (TKM) and Thengkham North (TKN) model areas, drill holes were drilled at -60^0 along 090^0 or 270^0 from 50m spaced sections in order to reduce the need for vegetation clearance and ground disturbance in areas of steep topography. • Drilling orientation is not considered to have introduced any sampling bias. This has been confirmed through variogram reviews using the varying orientation data.
Sample security	• Measures to provide sample security includes: o Adequately trained and supervised sampling personnel. o Core yard facility with security fence and well maintained sampling sheds. o Cut core is sampled and stored in calico bags tied and clearly numbered in sequence. o Calico sample bags are transported on wrapped pallets to the assay laboratory. o The laboratory checks sample dispatch numbers against submission documents and advises of any discrepancies. o Sample bags are photographed prior to shipment o Assay data returned separately in both spreadsheet and PDF formats.
Audit and reviews	• A trial of the Sepon Laboratory for Resource sample analysis was undertaken in 2015-2016. All samples >=0.2% Cu and QAQC samples were sent to ALS laboratory for comparison during the trial period. The decision was made to remain with ALS laboratory on the basis of available analytical methods, better QA/QC results and turn-around time. • REFLEX Geochemistry completed a QC review on data from 1 January 2011 – 31 May, 2014. The conclusions indicate that the control samples have provided a satisfactory guide to the accuracy and precision of the analyses. • The ALS laboratory in Vientiane has been audited on a quarterly basis by site personnel and Competent Person when possible. No material issues have been identified at the laboratory.

Criteria	Status
	• The ALS laboratory in Brisbane was audited in March 2016 by the Competent Person. No material issues were identified. • In 2008 a QC review of assay data at the Thengkham South deposit and Phabing area was undertaken (Hackman & Associates) and found that there were no obvious grade biases in the dataset, there were however quality discrepancies that required follow up. These have been addressed. • A 2008 external audit (IO Global) of the database found post-2006 analytical data to be of appropriate integrity. • In 2007 a twin drill hole study undertaken by QG comparing RC samples to DD samples, found that the use of all the available RC drilling is likely to be biased and overestimate tonnes above a gold cut-off. This was due to the presence of wet RC samples. Measures have been taken since this report to exclude wet RC samples from the estimate.
Section 2 Reporting of Exploration Results	
Mineral tenement and land tenure status	• These Mineral Resources are located within the bounds of the Mineral Exploration and Production Agreement (MEPA), a direct agreement with the Laos Government. The MEPA provides for exploration, development and extraction of any Mineral Resources discovered. • The MEPA provides for exploration, development and extraction of any Mineral Resources discovered. The Sepon MEPA occupies portions of both Savannakhet Province, and Khammouane Province to the immediate north. • The Sepon MEPA originally occupied 5212 km2. Various relinquishments have occurred since it was granted in 1993, the most recent relinquishment in early 2005 has resulted in the current retained area of 1247 km^2. • A royalty is payable to the Government of Laos, representing 4.5 % of the FOB value of minerals received by LXML. The Lao Government also owns a 10% share in LXML. Tenement rental is payable at US$500 per square kilometre per annum (for operational and mining areas) in accordance with Annex D of the MEPA. Taxes and other obligations are set out in Article 13 of the MEPA. • The operating period in accordance with the MEPA is thirty (30) years, from commencement of operations. As defined in Article 10, Paragraph 2 of the MEPA for Sepon Gold Stage 1, the operating period commenced on 1 March 2003. • The terms of the agreement provides for the right to apply for two extensions of the operating period with each extension for a period of 10 years. • There are no known impediments to operating in the area.
Exploration done by other parties	• CRA Exploration first identified the Sepon Mineral District as an area of interest in 1990 and formed Lane Xang Minerals Limited (LXML) as holder of the MEPA. • Between 1995 and 1999 RTZ (RTZ was formed from the merger of CRA and Rio Tinto in 1997) discovered and defined several gold only Mineral Resources and copper and gold Mineral Resources at the Khanong prospect. • Oxiana became manager of the Sepon Project in 2000 by buying 80% of LXML before later buying the remaining 20% interest from RTZ. The Laos Government exercised its option to acquire a 10% interest in LXML in 2006. • In 2008 Oxiana merged with Zinifex Ltd to form OZ Minerals.

Criteria	Status
	• In 2009 MMG acquired LXML from OZ Minerals. • The Sepon exploration and resource geology groups have been maintained throughout the OZ Minerals and MMG takeovers.
Geology	• The Sepon project area is situated near the eastern margin of the intra-continental Khorat Basin and on the western flank of the Anamite Range fold belt. It lies within the Troungson geological region covering a broad spectrum of rocks ranging in age from Upper Proterozoic to Jurassic. The regional geology is dominated by an Upper Palaeozoic sedimentary belt of arkosic and feldspathic sandstone, variably calcareous and carbonaceous siltstone, shale and limestone which is variably dolomitised and locally marble. There are lesser volcanic rocks, typically comprised of agglomerate, conglomerate, tuffaceous sandstone, and rare coherent volcanics. The belt is cut by plutonic to sub-volcanic bodies of granite, monzodiorite, granodiorite, quartz porphyry, rhyodacite porphyry (RDP) and andesite porphyry. The intrusive rocks are preferentially emplaced along either east or north-west trending well-developed structures. • Several styles of mineralisation have been recognised within the Sepon Mineral District: porphyry-like Cu-Mo-Au mineralisation, skarnoid Cu-Mo-Au mineralisation adjacent to porphyry intrusive, distal skarn related Cu-Au-Ag+/- Pb+/-Zn massive sulphide veins, Carlin type carbonate hosted gold mineralisation and carbonate hosted Mississippi Valley type Pb-Zn-Ag mineralisation. In addition weathering and supergene re-mobilisation has created supergene copper, exotic supergene copper, oxide gold and alluvial gold in karst fill deposits. • All primary deposits are hydrothermal and, at least spatially, related to the RDP intrusive. Supergene copper mineralisation results from the oxidation, dissolution and transport of primary sulphide hosted copper mineralisation to sites where chemical conditions result in copper precipitation (reduced groundwater, replacement of sulphide, reaction with alkali carbonate). Supergene copper mineralisation occurs above and down slope of primary mineralisation. Chalcocite mineralisation replaces massive pyrite immediately above the skarns. Copper carbonate mineralisation occurs where copper rich groundwater reacts with carbonate rocks. The best supergene copper zones occur above higher grade zones of primary mineralisation and have a vertical profile with the best grades immediately above the base of weathering. • Gold mineralisation mostly occurs in the fault zones and adjacent to the fault zones at the contact between the dolomite of the Nalou formation and the overlying shales and nodular carbonate of the Discovery Formation. Mineralisation occurs in association with decalcification and partial silica replacement of calcareous mudstones, and typically is best developed within the Discovery formation. But can also occur as a karst-controlled residual or collapse breccia deposit within the underlying Nalou formation, with mineralised jasperoid boulders occurring within a matrix of decomposed rock and clays. Regional WNW-striking, steeply NNE-dipping normal faults are believed to have been the major pathway for ascending mineralising fluids. • Primary gold mineralisation occurs as Carlin style gold forming distally to the copper skarn systems. Mineralisation occurs in association with decalcification and partial silica replacement of calcareous mudstones ('jasperoid') along steep faults, and is typically best developed at the contact of the Nalou Formation (dolomite) and the overlying Discovery Formation (nodular calc-shale).

Criteria	**Status**
	• Oxide gold mineralisation shows further control by weathering processes with very high grade zones developed as karst fill (mineralised jasperoid boulders occurring within a matrix of decomposed rock and clays) on chemically weathered carbonate rocks.
Drill hole information	• No individual drill 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.
Relationship between mineralisation width and intercept lengths	• Mineralisation true widths are captured by interpreted mineralisation 3D wireframes. • Most drilling was at -60° to -90° dip angles in order to maximise the width of intersections. • Geometry of mineralisation is interpreted as sub-horizontal in the supergene and sub-vertical in the hypogene material and as such current drilling allows true width of mineralisation to be determined.
Diagrams	 **Location of Sepon gold and copper deposits (red line=MEPA)**

Criteria	Status
	 **Summary geological map of the Sepon Mineral District (Smith, S.G. et.al, 2005)**  **A generalised east - west cross section of Sepon deposit is shown above.**
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.

Criteria	Status
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	- Exploration within the 2016/2017 drill season's primary focus is to: o Aid in the increase of the known Mineral Resource base for oxide copper through discovery of new copper deposits and definition of early stage targets to advanced exploration targets.
Section 3 Estimating and Reporting of Mineral Resources	
Database integrity	- The following measures are in place to ensure database integrity: o A digital field logging system (with lookups and referential integrity (RI)) or paper based system for exploration both transferring to a data entry database (DataEntryDB), (with lookups and further RI) then transferring to the master database (LaosDB) where assays are loaded and approved. o The senior geologist reviews all new drill data logged in exploration logging view and sign off after all corrections are made prior to loading into LaoDB which is done via SQL Server stored procedures to detect and hold any errors on import. - Geobank software provides a front end to an SQL database for Mineral Resource and grade control data. Analytical data is uploaded directly from laboratory SIF files. - The measures described above ensure that transcription or data entry errors were minimised. - Data validation procedures include: o Validation routines by database personnel check for overlapping sample depths, lithological and alteration information, as well as reject criteria such as logging information past EOH depth. - 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. - The gold database used in the Mineral Resource is a merger of several databases and represents the best data for the gold mineral resources, which is separate to the master database. A number of major data transfers, with inherent risks, have occurred over the life of the project, several suspect holes (assays) exist within the master drill hole database. Further work is required to verify and update the master database. - There is spatial confidence in the occurrence of gold grades, however the accuracy of those grades is unknown. - The database currently being used in the gold estimates is deemed to be appropriate for an Indicated Mineral Resource.
Site visits	- The Competent Person has undertaken numerous (more than 15) visits to Sepon since 2013 in the course of providing Mineral Resource estimation, project management and mentoring to the site geologists. - All site visits include, core and logging review, drill site inspections, design of drill programs and review of geological modelling. When possible laboratory visits are also undertaken.

Criteria	Status
Geological interpretation	• Prior to Mineral Resource estimation an underlying three dimensional geological model (stratigraphy, structure and intrusives) was made for all deposits. All the domains used for estimation were interpreted using known controls on the domain variable with the geological model as a framework. For example the gold grade domains, whilst interpreted at a nominal gold grade, follow favourable stratigraphic contacts and controlling fault structures. Confidence in the geological (domain) interpretation for all Sepon Mineral Resource estimates is high. • For the copper deposits a surface to demarcate the base of supergene mineralisation (BOSM) is interpreted using logged drill hole data, core photos and assay data. BOSM is important for the carbonate oxide copper mineralisation as high grade copper is known to collect within depressions. • The boundary/gradeshell cut-off for most copper deposits is 0.1% Cu, with a 1% Cu domain also used in the Khanong copper mineralisation as it shows bimodal characteristics. For gold deposits a domain cut-off of 0.2g/t Au – 0.5g/t Au was used. These domain cut-offs were selected by geostatistically identifying population breaks in the sample data. As well, visual investigations ensuring that these cut-offs displayed reasonable continuity in three-dimensional space taking into account the local geology. • In the supergene copper zones the logging of key minerals used to distinguish chalcocite mineralisation from copper carbonate mineralisation is at times incompatible with assay data. In these situations the assay data 'over-rides' the logging data. • Sulphur values are also used in the construction of the chalcocite mineralisation domains as there is an association between chalcocite and sulphur that is not present in the carbonate copper mineralisation. • The underlying geological models were largely interpreted from logged drilling data and deposit scale surface geological mapping. • Where geologically plausible alternative interpretations exist the Mineral Resource category was downgraded. • If new drill programs contradict the geological model, the model is updated to reflect new drill data. • The geological continuity of mineralisation and ore mineralogy is a key input into Mineral Resource classification with supergene copper mineralisation. This largely reflects reduced ore mineralogy continuity rather than ore grade continuity.
Dimensions	• Sepon hosts a number of deposits, the dimension of each deposit included in this Mineral Resource are listed below. Where block model extents overlap, wireframes and if necessary priorities are used to prevent double reporting. o Thengkham Ridge (combined Thengkham North, South and East, TKS, TKE and Songkham West) 15000mE-22900mE, 72800mN-75656mN, 0mRL-600mRL o Phabing: 15950mE-17750mE, 74250mN-75470mN, 0mRL-500mRL o Khanong: 26600mE-29125mE, 74748mN-76524mN, -50mRL-650mRL o Discovery West: 23875mE-25555mE, 75250mN-75970mN, 0mRL-300mRL o Discovery Main: 25500mE-28200mE, 75250mN-77110mN, 150mRL-450mRL o Nalou: 22700mE-24500mE, 73730mN-75350mN, 150mRL-325mRL

Criteria	Status
	o Namkok West: 24500mE-26060mE, 74000mN-75320mN, 0mRL-300mRL o Phavat North - Dankoy: 15300mE-17460mE, 73700mN-75200mN, -0mRL-650mRL o Vang Yang South: 27100mE-27820mE, 72400mN-73300mN, -0mRL-500mRL o Houay Bang: 33200mE-33992mE, 76500mN-77304mN, 50mRL-450mRL o Muang Luang: 25500mE-26250mE, 76700mN-7752mN, -330mRL-350mRL
Estimation and modelling techniques	• Mineral Resource estimation was undertaken in Vulcan (Maptek) mining software with the following key assumptions and parameters: o Ordinary Kriging interpolation has been applied for the estimation of Cu, Au, Ag, Ca, Mg, Mn, Total S, Total C and Fe for the copper models, Sulphide Sulphur and Carbonate Carbon are also estimated in the gold models. Inverse distance to the power of two interpolation has been applied where there was insufficient data to model spatial continuity for kriging weights within the gold block model estimates. This is considered appropriate for the estimation of Mineral Resources at Sepon. o Extreme grade values were managed by upper grade capping. The typical upper-cap used is the 99th percentile to contain outliers however this may vary depending on the results of geostatistical analysis. For some domains however, high-yield restrictions were applied to contain outliers, this assigned high yield grade varies depending on the results of geostatistical analysis. o In the copper block models geostatistical domains comprise various combinations of copper grade (nominal 0.1% Cu grade shell), lithology, oxidation (supergene / hypogene), sulphur grade (0.5% S grade shell in supergene) and orientation wireframes based on the nature of the copper mineralisation deposition. In the gold block models geostatistical domains comprised gold grade domains (0.2g/t Au – 0.5g/t Au), lithology, oxidation (base of complete oxidation, base of partial oxidation and primary domain) and orientation wireframes. o The estimates of copper and gold were predominantly undertaken using hard domain boundaries and a series of elliptical search passes orientated in the plane of mineralisation. These search orientations and sizes were supported by variography analysis. o The carbonate copper estimate at Khanong was estimated using a soft boundary between the 0.1% Cu and 1% Cu domain as they are considered to be associated. The soft boundary limits used: – 1% Cu soft contact (limited to 12.5*12*2.5m along domain boundary) and – 0.1% Cu soft contact (limited to 25*24*5m along domain boundary) o A composite length of 1m downhole was chosen for 2016 copper models, and the compositing process validated. A 2m or 3m composite has been used in the gold models historically based on sample size. o Exploratory data analysis, variography and search neighbourhood optimisation for each domain was performed using Supervisor or Vulcan geostatistical software. o Ca, Mg and Mn within the dolomite unit have all used the same semi-variograms for estimation in the copper models. The dolomite unit has been generated using categorical Indicator Kriging and a probability shell. Dolomite and Manganese content strongly influence gangue acid consumption in the plant.

Criteria	Status
	o Total sulphur and carbon are estimated to assist with gold speciation and in the determination of NAF (non-acid forming), PAF (potentially acid forming) material. o The minimum and maximum number of composites allowable to interpolate a block was typically set at 4-10 and 20-32 based on KNA. o Copper estimates in the copper models have not been restricted by octant searches and use the variogram range to determine the search distance. o Octant searches were used for the first two passes for ancillary elements only. • No assumptions about the recovery of by-products have been made. • In the copper block models parent block sizes are 25m x24 m x 5m (XYZ). The parent block size has considered: data spacing, mining methods and copper variography. Sub-blocks honouring relevant shapes and surfaces were used. The parent block size delineates ore zones without compromising the block variance. Using similar methods, parent blocks of 15m x 6m x 2.5m (XYZ) were used for the gold block models. • Search distances in general for copper estimates are the length of the first variogram structure in pass 1 and doubled in subsequent passes. Larger passes were used to interpolate less well informed blocks. However this varies from deposit to deposit. • Ancillary elements generally follow the rule of 2/3 the range of the variogram for pass 1 and doubled in subsequent passes. • No further assumptions have been made regarding modelling of selective mining units. • Block models are validated by: o Visual inspections for true fit with the high and low grade wireframes (to check for correct placement of blocks and sub-blocks). o Block model to wireframe volume differences are checked. o Visual comparison of block model grades against composite file grades. o Global statistical comparison of the estimated block model grades against the composite statistics and raw data. o Global and local (on key sections) swath plots are used to check for bias. o Validation block models to determine the impact of each variable change. o Reconciliation with grade control block models (where available) were undertaken. Results indicate good global reconciliation, but at times significant monthly variances. This led to the decision to use grade control drill data in the Khanong estimate as the wide spaced Resource drilling was overstating grades and smoothing the estimate in areas that grade control demonstrated high variability within grade.
Moisture	• Tonnes in the model have been estimated on a dry basis.
Cut-off parameters	• In 2016 Sepon moved from a Mineral Resource reported at a cut-off grade to a net value return (NVR) process, or margin calculation. The NVR script takes into account the impact GAC has on the processing route material will take through the plant and the extra cost associated to process those parcels of material and recoveries and metal prices (as per the pit shell generated price assumptions).

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>• Any block that has a margin value greater than 0 has been flagged as a Mineral Resource block. Review of the NVR shows the value is equivalent to the following cut-offs.
o Carbonate copper (Type 2) = 1.3-1.5% Cu
o Chalcocite copper = ~1.3% Cu
o Primary sulphide copper = ~0.5% Cu
o Oxide gold = 1.1-1.2 g/t Au
o Partial oxide gold = 1.7-2.0 g/t Au
o Primary gold = 1.6-1.9 g/t Au
• Copper Mineral Resources have also been reported within a US$3.50 pit shell.
• Gold Mineral Resources have also been reported within a US$1,212 pit shell.
• These Mineral Resource cut-off grade represents material that has reasonable prospects for eventual economic extraction.</td></tr>
<tr><td>Mining factors or assumptions</td><td>• mining factors and assumptions as discussed in section above: Cut-off parameters</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• The Sepon mine is an operating entity. The metallurgical process is a hydrometallurgical process involving grinding, tank leaching, autoclave leaching, solvent extraction and electrowinning. The process has been operating successfully since start up in 2005.
• Additional discussion of metallurgical factors is provided in Section 4 of this table.</td></tr>
<tr><td>Environmental factors or assumptions</td><td>• Environmental permitting in the Lao PDR is completed through environmental and social impact assessments (ESIA), in accordance with the MEPA, and other relevant legislation.
o The ESIA process is similar in nature to the process followed around the world. In February 2010, the Lao PDR issued the decree on Environmental Impact Assessment, revised through regulation 8030/MONRE in December 2013.
o In November 2011, the Environmental Impact Assessment (EIA) guidelines were released. EIA guidelines provide an interpretation of the ESIA decree and outline government expectations for what will be in an ESIA and how ESIA should be conducted.
• These two documents outline the process for environmental assessments in the Lao PDR.
• The acid forming potential characteristics were assigned to a block model variable as per the table below. The values are based on a study by Environmental Geochemistry International.
<table>
<tr><th colspan="4"><i>PAF and NAF values assigned in the modelling process</i></th></tr>
<tr><th>Lithology Domain</th><th>S1/2/3/4</th><th>Code</th><th>Description</th></tr>
<tr><td>All except Dolomite</td><td>>0.3% S</td><td>1</td><td>PAF</td></tr>
<tr><td>Dolomite</td><td>>0.3% S</td><td>2</td><td>NAF</td></tr>
<tr><td>All</td><td><0.3% S</td><td>3</td><td>NAF</td></tr>
</table>
Where PAF = potentially acid forming, NAF = not acid forming</td></tr>
</table>

Criteria	Status
Bulk density	• Samples for bulk density determination are taken from diamond drill core every 5-10 m using the wax coated core immersion method. • The bulk density determinations were estimated into the Thengkham ridge block model by omnidirectional ordinary kriging, estimation was based on supergene vs hypogene division and then further on lithology. • In the other deposits where density data is sparse, density was assigned to the block model SG using average values within ore domains and lithological domains. Reconciled mined tonnes demonstrate these values are robust.
Classification	• Classification is determined by examination of the following criteria: o Geological: mineralisation continuity including spatial configuration and spatial continuity. o Sample quality: areas of wet RC drilling are downgraded. o Statistical: kriging efficiency and kriging slope of regression. o Data: the relative data density, distance of nearest composite and number of composites used. • Classification is applied using classification wireframes constructed around aggregate areas generally conforming to the classification criteria. • In the Competent Person's view the classification is appropriate to the deposits at Sepon given the available data for estimation.
Audits or reviews	• The most recent internal review was carried out on the Khanong and Thengkham ridge models in 2016. All recommendations from this review were taken forward to produce the 2016 Mineral Resource. The changes included: o Removal of octant searches o Search distances to align with the variogram distance o Review of maximum samples used o SG to be estimated using ordinary Kriging where there is enough data. o The use of grade control data within the Khanong model. • In 2014 the TKM and KHN Copper Mineral Resource estimates were audited by H&S Consultants. Numerous recommendations were made and all were addressed in the 2015 Mineral Resource estimate. • Independent technical review on the copper and gold Mineral Resource was undertaken in 2010 by AMC Consultants.
Discussion of relative accuracy/ confidence	• Block model estimation provides a global estimate of tonnes and grade without adjustment for change of support. • Reconciliation for Sepon during the past 12 months shows a total increase of 2.2% in tonnes and 4.0% in metal from the Mineral Resource estimate to the grade control models. Reconciliation shows a greater variation over shorter periods and for individual deposits. Overall differences within the reporting period fall within the acceptable limits for an Indicated Mineral Resource. • Further review into classification of copper species and SG between with the Grade Control and Mineral Resource models is ongoing and potentially one of the main contributing factors to the reconciliation differences.

Criteria	Status
	• Prior to the oxide gold plant shutting down in late 2013 reconciliations showed some variance on predicted mineral resource tonnage and grade compared to grade control models on a pit by pit basis. The primary gold material has never been mined and as a result, no reconciliation can be undertaken. • Check estimates on the KHN, TKM and NLU models was undertaken by H&SC in 2014 on the models. The copper check estimates were unconstrained and employed independent variography and search strategies. These check models were within 10% of the contained metal of the MMG models.

5.3 Ore Reserves – Sepon

5.3.1 Results

The 2016 Sepon Ore Reserve is based on the 2016 Mineral Resource model.

The 2016 Sepon Ore Reserve are summarised in Table 14.

Table 14 2016 Sepon Ore Reserve tonnage and grade (as at 30 June 2016)

Sepon Ore Reserve			
			Contained Metal
Supergene Copper[1]	**Tonnes (Mt)**	**Copper (% Cu)**	**Copper ('000 t)**
Probable	8.0	3.5	281
Total	**8.0**	**3.5**	**281**
Copper Stockpiles[1]			
Probable	4.6	1.7	79
Total	**4.6**	**1.7**	**79**
Primary Copper[1]			
Probable	2.3	0.8	19
Total	**2.3**	**0.8**	**19**
Total Contained Metal	**14.9**	**2.5**	**379**

1. Cut-off grades were calculated at a US$2.95/lb copper price. The following approximate COG's are applied:
Chalcocite: 1.2-1.3% Cu
Carbonate- Low Acid Consuming (LAC): 1.5-1.6% Cu
Carbonate- High Acid Consuming (HAC): 1.5-1.6% Cu
Carbonate- Scrubber HAC: 1.4-1.8% Cu
Low Grade Float: 0.6-0.8% Cu
Primary: 0.5-0.6% Cu

The COG estimates are based on a Net Value Return (NVR) calculation that takes into account material type, price assumptions, process method, gangue acid consumption (GAC), distance to the crusher, and costs associated with current operating conditions.

Contained metal does not imply recoverable metal.

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

5.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 15 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 15 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Sepon Copper Ore Reserve 2016

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves. • The Ore Reserves includes ore on stockpiles. • Three sub-celled Mineral Resource block models were used for the optimisation purposes: o Khanong (KHN): "SEP_KHN_MROR_2016_20160606.bmf". o Thengkham (TKM): "SEP_TKM_MROR_2016_20160605.bmf". o Phabing (PHB): "PHB_MROR_2015.bmf" dated 10-06-2015. • Mineral Resources are modelled using solid wireframes for geological boundaries and grade boundaries at 0.1% Cu cut-off grade boundaries which approximates the natural break between copper and background grades. A 1% Cu domain is also used in the Khanong copper carbonate material. • Ordinary Kriging interpolation has been applied for the estimation of Cu, Au, Ag, Ca, Mg, Mn, Total S, Total C and Fe for the copper models. This is considered appropriate for the estimation of Mineral Resources at Sepon. • Ca, Mg and Mn form the basis for the gangue acid consumption (GAC) estimate which is a large proportion of the processing costs. Modelling of the dolomoite unit has improved between 2015-2016 and forms the basis for the Ca, Mg and Mn estimation. As a result, the confidence in the GAC equation is greatly improved in 2016 Mineral Resource block models.
Site visits	• The Competent Person is Jodi Wright AusIMM(CP) who visited the site in February and June, 2016. • Each visit consisted of discussions with relevant people associated with Ore Reserve modifying factors including Geology, Grade Control, Geotechnical Parameters, Mine Planning and Mining Operations, Metallurgy, Tailings and Waste Storage, and Environmental Area. The Outcomes from the visits have included reaching a common understanding in those areas, and achieving the specific purpose of each trip, such as review of assumptions and calculation of cut-off grade and developing the Life-of-Asset (LoA) mine plan. • A site visit was also carried out by Nan Wang from Group Technical Services-MMG in February 2016.
Study status	• The mine is an operating entity. The Ore Reserves are based on actual operating data for supergene material. • The Sepon Primary Feasibility Study was concluded in December 2015 and primary ore assumptions for copper cut-off grade have been estimated from this study. Primary ore processing is planned to commence in late 2017.

Criteria	Commentary
	• LoA Low Case was produced as part of the MMG planning cycle. This Low Case informs the Ore Reserves and is technically achievable, economically viable, and, material Modifying Factors have been considered.
Cut-off parameters	• Break even cut-off grades were calculated for both the carbonate and primary ores at a US$2.95/lb copper price. The following approximate COG's are applied o Chalcocite: 1.2-1.3% Cu o Carbonate- Low Acid Consuming (LAC): 1.5-1.6% Cu o Carbonate- High Acid Consuming (HAC): 1.5-1.6% Cu o Carbonate- Scrubber HAC: 1.4-1.8% Cu o Low Grade (LG) Float: 0.6-0.8% Cu o Primary: 0.5-0.6% Cu • The COG estimates are based on a Net Value Return (NVR) calculation that takes into account material type, price assumptions, process method, GAC calculation, distance to the crusher, and costs associated with current operating conditions. • An incremental COG is used to define Primary and LG float material. It does not include G&A and applies reduced sustaining capital costs. As such, primary and LG float material must be co-fed with supergene material to be economic. • The NVR script is run over the Resource Model to identify material that is suitable for processing. This material must be economic during processing to be defined as an Ore Reserve. • 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 of Ore Reserve estimation included pit optimisation, final pit and phase designs, consideration of mining schedule and all modifying factors. • Sepon mine is an open pit operation that is mining and processing supergene copper ore. The operation uses a fleet of excavators and articulated trucks along with a fleet of auxiliary equipment. • This mining method is appropriate for the style and size of the mineralisation. • Pit optimisations and designs adhered to recommended geotechnical parameters. The inter-ramp slopes used range between 18° – 40° for the clay material and 35° – 50° for the more competent material. The direct parameters that influence the inter-ramp slope angle using the current slope design parameters at Sepon are: o Rock type; o Hardness of the material o Geotechnical Sector; and o Groundwater conditions (Wet or Dry). • The pit optimisations were based on the 2016 Mineral Resource block models and the strategy for the final pit selection was based on a revenue factor 1 (RF=1.0). RF 1.0 pit shells are used across all assets in the MMG Group. Final pit designs that incorporate more practical mining considerations were carried out using those optimisation shells.

Criteria	Commentary
	• Mining dilution was estimated to be 7.5% for TKM and PHB and 10.0% for KHN mine areas. Mining recovery was estimated to be 90.0% for TKM and 95.0% for KHN and PHB mine areas. Historical performance and dilution modelling was used to support these assumptions. • Minimum mining width (bench size) is ~20 m. • The minimum mining width used for optimisations and design consideration was 20 m, based on the size of current mining fleet. • No Inferred material has been included in optimisation and/or Ore Reserves reporting. • Current mining infrastructure is sufficient. • The mine is an operating entity. The Ore Reserves are based on actual operating data and projected forecasts based on the 2016 Sepon Budget. Additional pits that are yet to be developed are similar in nature to the current mining environment.
Metallurgical factors or assumptions	• The Sepon mine is an operating entity. The metallurgical process is a hydrometallurgical process involving grinding, tank leaching, autoclave leaching, solvent extraction and electrowinning. The process has been operating successfully since start up in 2005. • Copper recovery is determined by the equation: Cu recovery (%) = (Cu Grade – Tails Grade (0.32%) / Cu Feed Grade) – Soluble Loss (3.50%) • The median fixed tails grade of 0.32% is derived from analysis of historical data as well as from test work of drill core samples. Over the last 5 years actual recovery has averaged over 90%. • The main deleterious component in the ore is dolomite which increases acid consumption in the leaching process. • High gangue acid consumption 'dolomite' ore (GAC >75kt/t, Cu<7.5%), will pass through a scrubber screen to remove oversize material, reducing the average GAC levels through the copper plant. Scrubber parameters comprise 1.1Mtpa throughput rate, mass rejection of 20% and copper losses of 10%. Gangue acid consumption is estimated for direct feed supergene chalcocite ore using the formulas: if Ca/Mg < 2.5 AND Ca>Mg 10.5 + 43.8 x % Ca + 16.5 x % Mn if Ca/Mg > 2.5 10.5 + 43.8 x % Mg x 1.65 + 16.5 x % Mn if Ca/Mg < 2.5 AND Mg>Ca 10.5 + 43.8 x % Mg x 0.1 + 16.5 x % Mn Gangue acid consumption is estimated for direct feed supergene carbonate ore using the formulas: if Ca/Mg < 2.5 AND Ca>Mg 30.5 + 43.8 x % Ca + 16.5 x % Mn if Ca/Mg > 2.5 30.5 + 43.8 x % Mg x 1.65 + 16.5 x % Mn if Ca/Mg < 2.5 AND Mg>Ca 30.5 + 43.8 x % Mg x 0.1 + 16.5 x % Mn

Criteria	Commentary
	Gangue acid consumption is estimated for post scrubber supergene chalcocite ore using the formulas: if Ca/Mg < 2.5 AND Ca>Mg 10.5 + 21.9 x % Ca + 16.5 x % Mn if Ca/Mg > 2.5 10.5 + 43.8 x % Mg x 1.65 + 16.5 x % Mn if Ca/Mg < 2.5 AND Mg>Ca 10.5 + 43.8 x % Mg x 0.1 + 16.5 x % Mn Gangue acid consumption is estimated for post scrubber supergene carbonate ore using the formulas: if Ca/Mg < 2.5 AND Ca>Mg 30.5 + 21.9 x % Ca + 16.5 x % Mn if Ca/Mg > 2.5 30.5 + 43.8 x % Mg x 1.65 + 16.5 x % Mn if Ca/Mg < 2.5 AND Mg>Ca 30.5 + 43.8 x % Mg x 0.1 + 16.5 x % Mn Net acid consumption (NAC) is then calculated using the formula: NAC (kg/t) = GAC (kg/t) - 6.5 • The NAC formula includes consideration for the acid that is lost to tails in addition to the acid that is generated from an autoclave through oxidation of pyrite. • For concentrate produced from low grades ores, a gangue acid consumption of 15 kg/t is assumed which is the historical average. • As required, blending of carbonate and primary ore is used to control the acid requirement based on their respective calculated GAC values. • The inclusion of a term for Mn in the gangue acid equations reflects a small, but significant consumption of acid by manganese wad. • For Ore Reserves, a processing rate of 2.25 Mtpa of supergene ore and 0.6 Mtpa of primary ore to produce a maximum of 78 ktpa of copper cathode has been assumed (average 55ktpa over the Ore Reserves). Production rates for the supergene and the cathode have been demonstrated as sustainable over the last 12 months. Primary production rates have been estimated as part of the Sepon Sustain Expansion study – the technical level of the study related to the engineering portion of the proposed primary processing rate is considered to be at a Prefeasibility level of study confidence.
Environmental	• Operations at Sepon are permitted by the Government of Lao (GoL) under the Decree for Environmental Impact Assessment (2010) and the National Agreement on Environment Standards (2010). An Environmental Monitoring and Management Plan (EMMP) is the guiding environmental document submitted to the Government every three years or when there is a material change to activities on site. • Current management of all mineral wastes at Sepon is governed by the MMG Environment Standard, Waste Rock Management Code of Practice and Acid Waste Dump Encapsulation Standard Operating Procedures. • Potential for waste rock acid generation is currently estimated based on the sulphur grade. Potential acid forming (PAF) material is defined as material with a sulphur grade above 0.3%. Waste is separated based on its potential for acid generation, with PAF material being encapsulated within engineered waste dump. Non-acid forming (NAF) materials are used for encapsulation. • Where practicable, waste rock is backfilled into sterilised pit voids. • With an additional lift, the current tailings storage facility will have capacity to

Criteria	**Commentary**
	contain the Ore Reserve tailings.
Infrastructure	• No significant additional site infrastructure is required to realise the open pit Ore Reserves other than a lift to the tailings storage facility. The Primary processing facilities proposed consist of existing decommissioned gold processing facilities, only minor work is required to tie these facilities into the existing plant.
Costs	• Sepon is an operating mine and has historical costs that have been used to inform the 2016 Sepon Budget (January 2016 to December 2016). The Ore Reserves estimation has been based on these costs in accordance with MMG's corporate guideline. • The processing costs include calculated gangue acid consumption and vary by process stream. • US dollars have been used thus no exchange rates have been applied. • Weathering profiles have been updated to model in-pit blasting. • Since the final product is LME grade A and grade B copper cathode there are no applicable treatment or refining or any other 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 process has been done following the guidelines set out by MMG corporate. • Allowances have been made for royalties. • The impact of any future mining tax is unknown. • A cash flow model was produced based on the detailed schedule. This model includes the aforementioned costs as well as all sustaining capital that is needed to realise the Ore Reserves.
Revenue factors	• For cost assumptions see section– "Costs" • The assumed copper price is US$2.95/lb which is the same as that reported in the Cut-off parameters section. These prices are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy.
Market assessment	• MMG has a long-term positive view of copper market fundamentals with future supply likely to be constrained by declining ore grades, increasing costs and inadequate investment in mine capacity. Some of the world's current largest suppliers, for example in Chile, require significant investment over the coming years in order simply to maintain current production levels. • Although mine supply has been augmented in recent years by the commissioning of several large projects in Peru and Chile, including MMG's own Las Bambas operation, there is a lack of committed new production scheduled for the remainder of the current decade. The current period of relatively low copper prices is also discouraging new investment in mine production. • Sepon is well located within the large and growing copper consuming region of South East Asia with the 250,000tpa Thailand market being only one day trucking from site. Sepon has contracts with a range of customers within Thailand and also exports some cathode to China. Demand for copper is expected to continue to grow in these regions and this should ensure a continuing attractive market for

Criteria	Commentary
	Sepon cathode going forward. • Price forecast is based on MMG corporate finance assumption.
Economic	• The costs are based on historical actuals and the 2016 Sepon Budget. Revenues are based on historical and contracted realised costs and long-term metal price. • The LOM financial model demonstrates the mine has a positive NPV. • The discount rate is in line with MMG's corporate economic assumptions. • Standard sensitivity analyses were undertaken for the Ore Reserves work. Sepon is most sensitive to changes in metal price and flattening of pit slopes. Cost reduction programmes are in place to reduce this risk.
Social	• The Social Management and Monitoring Plan (SMMP) is the guiding document that describes the strategies used by Sepon in cooperation with key stakeholders to manage the social impacts and opportunities for local communities affected by mining operations. The SMMP has been developed in cooperation with external consultations and dialogue with all levels of Government of Lao PDR. The SMMP is designed according to a government approved template. • Sepon provides significant support to local communities through a variety of social projects and partnerships, financed by the site and aligned to the UN Sustainable Development Goals. Sepon works in partnership with a number of organisations, for example Ironbark Laos, to promote sustainable development for local communities beyond the life of the mine. Programmatic areas include rice milling, local business development and mandarin growing. The Government is also a key partner for Sepon in local development initiatives. • Results from the 2015 community household survey suggest that 78% of surveyed participants were "very happy" or "happy" with the mine. This figure was down 3% from the 2012 figure. Cost of living, lack of food, job security and dust were issues highlighted by stakeholders.
Other	• All necessary legal and marketing arrangements are in place to realise the Ore Reserves. • All government agreements and approvals required to realise the Ore Reserves are current and will be in place until the end of mine life.
Classification	• The Ore Reserves classification is based on the JORC 2012 requirements. The basis for the classification was the Mineral Resource classification and cut-off grade. Indicated Mineral Resources above COG is classified as Probable Ore. • The Ore Reserves do not include any Inferred Mineral Resources. • Stockpile material at Sepon has been reclassified as Indicated Mineral Resource. Economic Indicated Mineral Resource above COG is classified as Probable Ore Reserve.
Audit or reviews	• An Ore Reserve Method Audit was completed by Mining One Pty Ltd in April 2014. The 2014 Audit concluded that the operational practices were sound and comparable to industry standards. • Subsequent site visits by The Competent Person supports this. All recommendations from the audit have been addressed in the 2016 Ore Reserves. There have been no significant changes to the Ore Reserve Estimation methodology; hence the 2014 Audit continues to be valid.

Criteria	Commentary
Discussion of relative accuracy/ confidence	• The most significant factors affecting confidence in the Ore Reserves are: o The end of mine life cost reduction to enable economic treatment of the low grade stockpiles (however the value associated with these low grade Ore Reserves is minimal); The risk is medium, the impact might be up to 1Mt reduction in low grade ore. o Geotechnical risk related to slope stability. o Metallurgical recovery model uncertainty for primary ore. o Increase in operating costs for mining and processing.

5.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 16.

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 16 Contributing Experts – Sepon Ore Reserve

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
EXPERT PERSON / COMPANY	**AREA OF EXPERTISE**
Chevaun Gellie, Principal Geologist MMG Ltd (Melbourne)	Geological Mineral Resources
Leonardo Paliza, Principal Metallurgist MMG Ltd (Sepon)	Metallurgy
Christian Holland, Geotechnical Engineering Specialist MMG Ltd (Melbourne)	Geotechnical parameters
Paul Harris, Operation Manager – Sepon MMG Ltd (Sepon)	Infrastructure and Capital Projects Mining
Marc English, Principal Mining Engineer AMC Consultants Pty Ltd.	Whittle optimisation, mining costs, pit designs, mine and mill schedules, preparation of Ore Reserve estimate.
Richard Le, Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions
Donna Noonan, Principal- Closure Planning, MMG Ltd (Melbourne)	Environmental parameters
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing

6 DUGALD RIVER PROJECT

6.1 Introduction and setting

The Dugald River project is located in northwest Queensland approximately 65km northwest of Cloncurry and approximately 85km northeast of Mount Isa (Figure 6-1). It is approximately 11km (by the existing access road) from the Burke Developmental Road, which runs from Cloncurry to Normanton.

It is one of the world's largest undeveloped zinc-lead-silver deposits containing a Mineral Resources of 62M t at 13% Zn, 2% Pb, 35g/t Ag and is wholly owned by a subsidiary of MMG Limited.

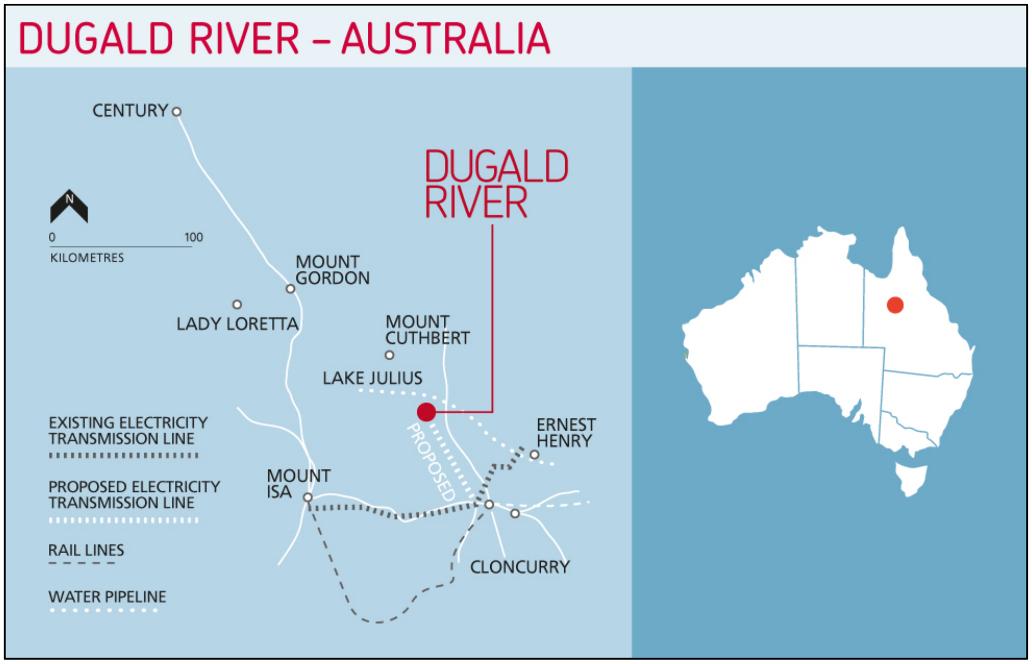


Figure 6-1 Dugald River project location

6.2 Mineral Resources – Dugald River

6.2.1 Results

The 2016 Dugald River Mineral Resources are summarised in Table 17. The Mineral Resources has been depleted to account for mining of ore by way of underground development of ore drives and stope production. The 2016 Mineral Resources has been reported above an A$125/t NSR *(net smelter return)* cut-off.

Table 17 2016 Dugald River Mineral Resources tonnage and grade (as at 30 June 2016)

Dugald River Mineral Resources											
							Contained Metal				
	Tonnes (Mt)	Copper (% Cu)	Zinc (% Zn)	Lead (% Pb)	Silver (g/t Ag)	Gold (g/t Au)	**Copper ('000 t)**	**Zinc ('000 t)**	**Lead ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Primary Zinc[1]											
Measured	5.5		14.2	2.0	64			773	108	11	
Indicated	27.1		12.9	2.2	50			3,510	587	43	
Inferred	28.5		12.0	1.7	13			3,437	483	12	
Total	**61.1**		**12.6**	**1.9**	**34**			**7,719**	**1,178**	**66**	
Primary Copper[2]											
Inferred	4.4	1.8				0.2	79				0.03
Total	**4.4**	**1.8**				**0.2**	**79**				**0.03**
Dugald River Total							**79**	**7,719**	**1,178**	**66**	**0.03**

1. Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value A$125/t.
2. 1% Cu cut-off grade.
   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 18 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 18 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Dugald River Mineral Resources 2016

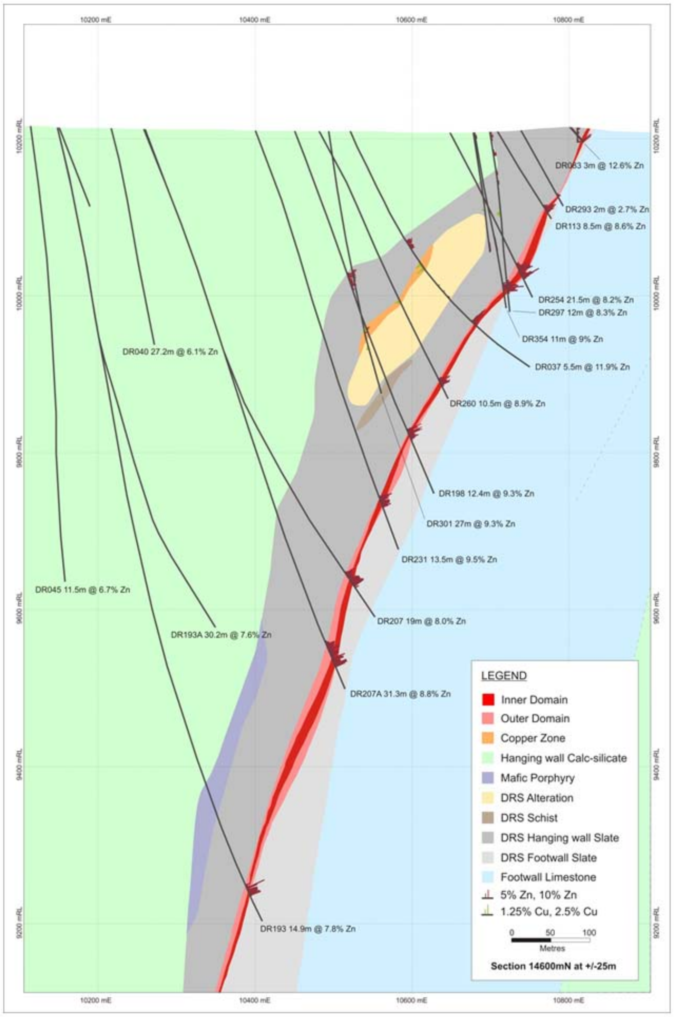
Criteria	Status
Section 1 Sampling Techniques and Data	
Sampling techniques	• Diamond drilling (DD) was used to obtain an average 1m sample length while still respecting geological contacts. DD core was sampled either whole, ¾, ½, ¼, or sliver for the PQ core. Once samples are selected by a geologist the samples are marked and the allocated sample ID's stored in the database. • Samples were transported to ALS Mount Isa laboratory where the sample was crushed and pulverised to produce a pulp (>85% passing 75µm). The pulps were transferred and analysed at ALS Brisbane. • ~3% of the total dataset was sampled using reverse circulation (RC) drilling techniques. • There are no inherent sampling problems recognised. • Measures taken to ensure sample representivity include orientation of the drillholes as close as practical to perpendicular to the known mineralised structure, and the collection and analysis of field duplicates.
Drilling techniques	• A number of drilling techniques were used on the deposit; with 97% of samples used in the Mineral Resources from DD samples (HQ, HQ2, HQ3, NQ2, NQ3, PQ, LTK60 and unknown core size), the remaining 3% of samples used were from RC samples. Pre 2007, 59% of the surface drilling data does not have drillhole diameters recorded. • Core sizes of all drillholes post 2007 have been captured in the database. • Post 2007 data has been correctly captured in the database. • The underground drilling data is predominantly NQ2 with some LTK60.
Drill sample recovery	• 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.
Logging	• 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 Resources estimation. • The logging captures both qualitative (e.g. rock type, alteration) and quantitative (e.g. mineral percentages) characteristics. Core photographs are available for most drillholes. All drillholes post-2008 have been photographed (wet and dry). • A representative sample of mineralised core is stored at -4°C in refrigerated

Criteria	Status
	containers to minimise oxidation for metallurgical testing. Non-mineralised core is stored on pallets in the yard. • Currently, all drillholes 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. • At the time of estimation total of 256,167.1m of drilled data is contained in the database, of this 88% is geologically logged, and 20% has been sampled and contains assays.
Sub-sampling techniques and sample preparation	• Core is cut by diamond saw. Half of the core is retained onsite for future reference, the other half is sampled. • Post 2010 all drilling is DD, this allows for collection of representative samples of the mineralisation 'in situ'. The vast majority of drillhole intersections are orthogonal to the mineralisation and as such are representative. • The standard sampling length is 1m with a minimum of 0.7m and a maximum 1.2m. Sample intervals do not cross geological boundaries. • 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 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 2mm. The sample is rotary split (500g-800g) and pulverised to in a LM2 to 85% passing 75µm. All rejected material is collected and saved. Pulps are then sent to ALS Brisbane for analysis. • Quality control procedures for all sub-sampling stages to maximise representivity include: o sizing analysis o duplication at the crush stage • Until 2013, Measures taken to ensure sampling is representative of the in-situ material collected included: o Field duplicates (quarter core) were sampled at a rate of 1 per 20 samples (approximately 4 per drillhole). Replication of the field duplicates is considered satisfactory. This practise has been replaced by coarse reject sampling. • Repeat analysis is conducted on 1 in 20 coarse reject pulps. • 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, Cu, Ag, Mn and As which are estimated in the Mineral Resources. Total carbon (TotC) is analysed by Leco furnace. All of these analyses are considered total. • These assaying techniques are considered suitable for the Dugald River Mineral Resources. • No geophysical tools, spectrometers or handheld XRF instruments have been used

Criteria	Status
	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. • Pre-2013 umpire samples were selected from returned coarse rejects and submitted to an independent assay laboratory (Genalysis). The performance of the duplicates indicates good repeatability of expected values and no bias. This process will continue now that drilling has restarted. • Repeats of coarse rejects are analysed periodically.
Verification of sampling and assaying	• Verification of assay results was visually verified against logging and core photos by alternative company personnel. • No twinning of drillholes have 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 Resources estimation. • No adjustments to the assay data is performed during import into the Geobank Database. Conversion of negative (below detection limit) data is later performed in Datamine by adjusting negative values to half the detection limit.
Location of data points	• All drillhole collars have been surveyed by licensed surveyors. Surface collars were surveyed in MGA94 and then converted to local mine grid. Underground collars were surveyed in local mine grid using total station. • Strong local magnetic fields associated with pyrrhotite mineralisation within the deposit reduce the effectiveness of conventional downhole survey tools. Hence all underground diamond drillholes and 181 surface drillholes have been gyroscopically surveyed. All other drillholes have been surveyed by downhole single-shot camera surveys. • 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. • A LIDAR survey flown in 2010 is used for topographic control on surface drilled drillholes. 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 orebody is 10m x 10m while the lowest drill density is greater than 100m x 100m spacing. • Locations drilled at 10m x 10m and up to 20m x 20m 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

Criteria	Status
	wireframing process. • Drillhole data is concentrated within the top 300m of the Mineral Resources with broader-spaced drilling at depth, due to the difficulty and cost involved in drilling deeper sections. • DD samples are not composited prior to being sent to the laboratory for analysis however the nominal sample length is generally 1m.
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. Drillholes 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.
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. 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	
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 Resources is located. EPM12163 consists of 6 sub-blocks and covers an area of 20sqkm to the west of the Dugald River deposit. M DL 79 overlaps the north-western 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 drillholes. The maiden Mineral Resources was reported in 1953 by Zinc Corporation. Drilling continued from 1970 through 1983 totalling 28 drillholes. CRA then re-estimated

Criteria	Status
	the Mineral Resources in 1987. Between 1989 and 1992 a further 200 drillholes 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. • The deposit is located within a 3km-4km 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 Hangingwall 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 lode. Lesser-mineralised hanging wall and footwall lenses are present. Three main mineralisation textures/types are recognised, including banded, slatey breccia, and massive breccia. • The mineralogy of the Dugald lode is typical of a shale-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 2.4km in strike length and up to 1.35km down dip.
Drillhole information	• 1,115 DD holes and associated data are held in the database. No individual hole 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. However the Mineral Resources has been reported above an A$125 NSR calculated cut-off.

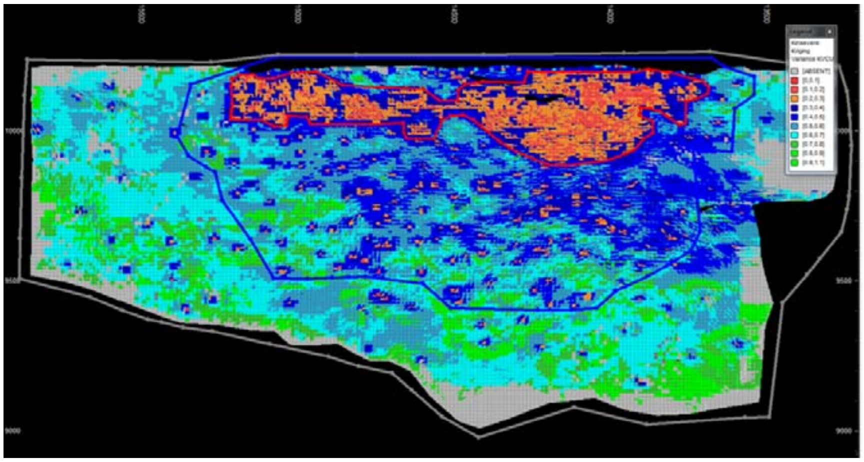
Criteria	**Status**
Relationship between mineralisation width and intercepts lengths	- Mineralisation true widths are captured by three-dimensionally modelled wireframes with drillhole intercept angles ranging from 90° to 45°. - The true thickness of the majority of the Mineral Resources is between 3m and 30m with the thickest zones occurring to the south.
Diagrams	 **Cross section looking north – showing true width of the mineralisation**
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	- MMG plans to continue to improve geological confidence and Mineral Resources classification through infill drilling programmes ahead of the mining schedule.

Criteria	**Status**
Section 3 Estimating and Reporting of Mineral Resources	
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 Resources the data was checked externally by running Datamine macros on the drillhole file to check for end of hole depths, and sample overlaps. o Manual checks were carried out by reviewing the drillhole data in plan and section views.
Site visits	• The Competent Person visited site on various occasions through 2016 and 2015. Site visits included involvement with: o Assist with wireframe interpretation and methodology as applied in the 2016 Mineral Resources work. o Inspection of geological mapping plans. o Inspection of underground workings. o Inspection of drillholes and mineralisation interceptions.
Geological interpretation	• The mineralisation zone is modelled within a continuous corridor of zinc mineralisation. This zone is modelled based on zinc grade distribution and geological logging of mineralisation style. There is no defined zinc cut-off boundary rather the mineralised envelope is determined by natural breaks in the grade distribution. There is good confidence on the geological continuity and interpretation of the deposit. o The mineralisation zone is further sub-divided into a high- and low-grade domain. o The “inner” high-grade domain is the main Dugald River mineralisation lode, defined by high zinc grades associated with the massive sulphide assemblages. The high-grade domain boundary was selected by looking at drillholes grade intercepts in Datamine; plotted as a grade histogram and selecting a boundary which is more representative of geology. o The “outer” zone defines the surrounding lower grade mineralisation with its associated assemblage of sulphide stringers and shoots of discontinuous massive and breccia sulphide textures. o Where possible a low grade (internal dilution) domain has been identified and modelled within the high grade domain. • Alternative geological interpretations were not considered. • Selection of the low/high grade domain was based on geological observations and assay results. Zinc grade histograms in combination with geological logging were

Criteria	Status
	used to assist in selecting this contact. - 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/sheet 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.
Dimensions	- 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. - The strike length of mineralisation is approximately 2,400m. Dip varies between 85° and 45° to the west. - The true thickness of the majority of the Mineral Resources is between 3m and 30m with the thickest zones occurring to the south. - The mineralisation is open at depth. The deepest drill intersection of mineralised material is about 1,140m below the surface.
Estimation and modelling techniques	- Mineral Resources modelling was completed using Datamine software applying the following key assumptions and parameters: o Ordinary Kriging interpolation has been applied for the estimation of Zn, Pb, Ag, Mn, Fe, S and total carbon. This is considered appropriate for the estimation of Mineral Resources at Dugald River. 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. Capping was applied to domains that showed a coefficient of variation (CV) > 1.2. A CV > 3 that indicated a high degree of population mixing and required a revision of domains used in the estimate. Grade cap values were selected using a combination of both histogram and cumulative log probability plots (using cell declustering). o Grade estimation was performed using dynamic anisotropy, which uses the dip and dip direction of the wireframes to align and optimise the search direction of the estimate. o Hard boundary contacts were used to select samples used to estimate blocks in each of the mineralised domains (high-grade and low-grade) as well as into individual lithological domains. o An unfolding process was used on the drilling data prior to variogram analysis being performed. These variogram ranges were then applied to the search parameters used in the estimation. o Orientation of the search ellipse was optimised using the Datamine Dynamic Anisotropy method, that is dip and dip direction of the wireframes was used in the estimation of the model. o Drillhole compositing resulted in nominal 1m intervals with residual composite intervals absorbed evenly into the composites resulting in no loss of sample intervals. o Separate variography and estimation were performed for Zn, Pb, Ag, Mn, Fe, S and total carbon.

Criteria	Status
	o No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. o The mineralisation boundary assumes that the zinc, lead and silver populations are spatially correlated. However, there is evidence to suggest that the lead and silver exhibit population mixing within the zinc domain. o Interpolation was undertaken in two stages: – Stage1: Ordinary Kriging applying three passes with varying search ellipse dimensions – First pass is equal to 80% of the variogram range – Second pass is equal to the variogram range – Third pass is equal to 1.5 x variogram range – Stage 2: Inverse distance squared technique used to estimate blocks not estimated by the Ordinary Kriging stage. o A minimum number of 2 drillholes were used for all estimates. o Number of composite samples was restricted to a minimum of 8 and a maximum of 20. o Octant method was applied to the Ordinary Kriging estimate requiring a minimum of 2 octants to be filled. Minimum and maximum samples per octant are 2 and 6 respectively. o Block discretisation of 2 x 4 x 4 was applied. • At the end of 2015 ~400Kt of Dugald River ore was transported to the Century mine (also controlled by MMG) to be processed via the Century plant. A good correlation was found against the predicted grade control data. • 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, S and total carbon. • Parent block size was set at 2.5m x 12.5m x 12.5m with sub-cells of x=0.5 m, y=0.5 m, z=0.5 m. Sub-cells were assigned parent block values. The parent block size assumes mining selectivity at the stope level. • 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. • 2014 block model validation included the following steps: o Comparison against the 2013 block model including visual comparison of plans and cross-sections, tonnes grade curves, cumulative probability plots and trend plots. o Comparison against drillhole data using visual comparison of plans and cross-sections, statistics by domain, cumulative probability plots and trend plots.
Moisture	• Tonnes in the model have been estimated on a dry basis.
Cut-off parameters	• The Mineral Resources is reported above an A$125/t NSR (net smelter return) cut-off. The selection of the A$125/t NSR cut-off defines mineralisation which is prospective 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

Criteria	Status
	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 and trial stoping is being undertaken to determine the optimal stoping method. • No external dilution has been applied to block grades. However, parent block size has assumed mining selectivity at a stope level. • The Mineral Resources has been depleted to account for trial stope mining.
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 Reserves. • 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 7 June 2013. • Footwall infrastructure development is mostly within non-acid forming (NAF) rock. Minor stockpiles of potentially acid forming (PAF) rock will be appropriately stockpiled at surface before being returned underground to the North Mine as void fill. • 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 approximately 1 determination per core tray and based on geological domains. • Dugald River rock is generally impermeable requiring no coatings for reliable measurements. • Bulk density in the model has been estimated using inverse distance squared. Density estimation is constrained within the defined mineralisation domains. • Un-estimated blocks were assigned a density value based on a stoichiometric formula which was used in the 2015 block model for bulk density calculations. • A density of 2.75 g/cm^3 has been assumed for the waste host domain.
Classification	• 2015 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 Resources categories are generally based on: o Measured: < 20m drill spacing, KV<0.3, KE>40%, RS>0.7 plus presence of underground development, geological mapping and grade control drilling. o Indicated: > 20m to <100m drill spacing, KV>0.3<0.6, KE < 40%, RS<0.4.

Criteria	**Status**
	o Inferred: > 100m drill spacing, KV>0.6, KE<40%, RS < 0.3. • 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 20m x 20m 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 Resources classification reflects the Competent Persons view on the confidence and uncertainty of the Dugald River Mineral Resources. • Below is a long section looking east of the Dugald River mineralisation lode showing blocks coloured by KV and the Measured, Indicated and Inferred wireframes used in selecting the Mineral Resources classification. o Measured = red o Indicated = blue o Inferred = grey  **Long-section of the Dugald River Block Model, blocks coloured by KV**
Audits or reviews	• No external independent audits have been performed in 2016. However, several external audits have been completed in recent years including Pennywise Ltd and Lewis Mineral Resources Consultants Pty Ltd in 2013. • The Lewis Mineral Resources Consultants Pty Ltd report found that the estimation process is sound, however was concerned about the method of selection for the inner domain boundary as it was not considered “natural”. This concern has been addressed in the 2014, and subsequent, Dugald River Mineral Resources with selection of the grade boundary completed by looking at the drillholes grade interceptions in Datamine; plotted as a grade histogram and selecting a boundary which is more representative of geology. • An internal MMG review has been carried on the current 2014 Mineral Resources estimate. This involved personnel from both Corporate and Dugald River sites. No material items to the Mineral Resources have been identified.
Discussion of relative accuracy /	• The Competent Person is of the opinion that the current block estimate provides a good estimate of tonnes and grades at a global scale. In locations where grade control drilling of approximately 10m x 10m spacing has been completed the

Criteria	Status
confidence	Competent Person has a high level of confidence in the local estimate of both tonnes and grades. • No change of support adjustments have been performed to the model. • There is no actual production data to compare Mineral Resources confidence against actual mined tonnes and grades of the deposit. • Tonnes and grade checks comparing the 2013 and 2014 Mineral Resources and grade control models to check for tonnes and grade variability and accuracy as a function of increase drilling density has been undertaken. The following is noted: • Drilling density of <20m spacing is required to estimate tonnes and grade accuracy with an acceptable level of confidence. • Drilling at 20m spacing in locations that also have underground ore drive development and geological mapping of the deposit provides good confidence in the geological continuity and confidence in the tonnes.

6.3 Ore Reserves – Dugald River

6.3.1 Results

The 2016 Dugald River Ore Reserve are summarised in Table 19.

Table 19 2016 Dugald River Ore Reserve tonnage and grade (as at 30 June 2016)

Dugald River Ore Reserve							
					Contained Metal		
	Tonnes (Mt)	Zinc (% Zn)	Lead (% Pb)	Silver (g/t Ag)	**Zinc ('000 t)**	**Lead ('000 t)**	**Silver (Moz)**
Primary Zinc							
Proved	4.6	12.3	1.7	55	568	79	8
Probable	17.8	12.1	2.0	48	2,168	361	28
Total	**22.5**	**12.2**	**2.0**	**50**	**2,736**	**440**	**36**
Primary Zinc Stockpiles							
Proved	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Contained Metal					**2,736**	**440**	**36**

Cut-off grade based on Net Smelter Return (NSR), expressed as a dollar value A$125/t.
Contained metal does not imply recoverable metal.
Figures are rounded according to JORC Code guidelines and may show apparent addition errors.

6.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 20 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code.

Table 20 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Dugald River Ore Reserve 2016

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves. • The Mineral Resource model used was the MMG June 2014 Mineral Resource model. • Risks associated with the model are related to orebody complexity seen underground, but not reflected in the Mineral Resource model due to the spacing of the drill holes that inform the model. • The 2015 Geotechnical model was used to estimate the hanging wall (HW) thickness, tonnes and grade of the unplanned dilution applied to the 2016 stope shapes.
Site visits	• Karel Steyn is the Competent Person for the Dugald River Ore Reserve based in MMG's Melbourne Office and frequently visited the site during 2015/2016.
Study status	• The Dugald River study has progressively been enhanced. o 2008/09 Feasibility Study Report (FS09) o 2010 Feasibility Report Update which incorporated work from both Ausenco and AMC o 2012 Board Submission – basis for conditional project approval o 2013 Mining Method Review – recommendation for alternate mining assumptions o 2013 Business Options Review – reassessment of business case for the revised mining assumptions (2013BOR) o 2014 Dugald River DRAFT Ore Reserve Supporting Document_04 November 14 (2014OR) o 2015 Dugald River Updated Development Plan (2015OR) o 2016 Revise Business Plan in the 1st Quarter of 2016 • The initial mine design was detailed in a Feasibility Study undertaken in 2008 and released in January 2009 (FS09). • There has been a series of reviews completed on operating and capital costs as well as infrastructure optimisation. Trial mining has taken place and metallurgical studies are in progress. • The enhancements and risks to FS09 are stated below: • With physical access into the orebody occurring in 2012 it was recognised that the orebody was more complex than modelled from drilling results and that the Geotechnical conditions of the orebody HW were more challenging for dilution control than assumed in the 2009 Feasibility Study. • In November 2012, a major Geotechnical study commenced involving re-examination and re-logging of all diamond drill core and re-analysis of the Geotechnical parameters of the ore-zone and HW zones. • Detailed design work, including scheduling and cost modelling, was undertaken by

Criteria	Commentary
	AMC Consultants Pty Ltd for a 20m development level spacing x 15 m stope strike length of the 2013 Ore Reserve process. The 2014 trial mining was based on a 25 m level spacing as the upper levels of the mine were already developed. Stopes were initially mined 15 m along strike, with larger stopes mined based on the experience gained. The initial results have indicated that a 25 m level spacing and 20 m strike length are achievable and formed the basis of the 2014 Ore Reserve. • The trial mining campaign, which was completed by the end of 2014, tested various mining parameters. As a result the chosen mining configuration to be applied to the area outside of trial mining has changed. The North Mine is planned to be mined using a benching method together with rock fill. The South Mine will be mined using a Sub-level Open Stope mining method at 25m level spacing but with stope strike lengths varying between 15m and 30m, dictated by hanging wall conditions. This was used as the basis for the 2015 Ore Reserves. • Further studies are underway regarding the treatment of the Dugald River (DR) ore that may modify the results of the Ore Reserve. • 2013 Mining Method Review – recommendation for alternate mining assumptions was done and used for Ore Reserve 30 June 2013 • Business Options Review 2013 (2013BOR). The 2014 Ore Reserve process completed on 4 November 2014 incorporates the knowledge of previous studies and the mining experience gained from the 2014 trial mining campaign. • Business Options Review (2014OR) of 4 November 2014 incorporates these enhancements into earlier studies. 2014OR is the study used for 30 June 2014 Ore Reserve and Mineral Resource. • The 2015 Updated Development Plan (31 March 2015). The processing throughput rate applied in this study is 1.5Mtpa. • The most up-to-date study is the 2016 Revise Business Case plan (31 March 2016). The processing throughput rate applied in this study is 1.7Mtpa. • The main differences between FS09, 2013OR, 2014OR, 2015OR and 2016 RBC are; o Analysis of the trial mining has proved up the detailed Geotechnical and underground design. The results have further enhanced the confidence in the 2016OR schedule. o Testing of bulk samples of ore from trial mining of the deposit is currently in progress to confirm that the design metallurgical performance can be achieved in continuous operation. o A plant trail of ore through the Century concentrator has also been completed, but the duration was too short to assess scale-up reliably. The primary purpose was to produce zinc concentrate for market acceptance evaluation. o In addition to scale-up of metallurgical performance the other risk is higher than expected reagent additions due to a recycling of ultrafine carbon in the return water. A program to mitigate this effect is currently in progress. o The upfront capital required to commence production is high. o The 2016OR has detailed revision of the capital and operating costs. o The 2016OR undertaken shows that the Ore Reserve is technically achievable and economically viable. The material modifying factors have been considered.

Criteria	Commentary
Cut-off parameters	• A$125/t NSR cut-off has been used for the 2016 Ore Reserves. • Commodity prices are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy as stated in Section 2.1. • The Stope NSR cut-off was used in selecting an Ore Reserve shape base on the 2014 Resource model.
Mining factors or assumptions	• A detailed design 2015OR was used to report Mineral Resource conversion to an Ore Reserve. • The Mineral Resource model used was the MMG June 2014 Mineral Resource model (2014 MRM). • Risks associated with the model are related to orebody complexity seen underground but not reflected in the Mineral Resource model due to the spacing of the drill holes that inform the model. • The 2015 geotechnical model was used to estimate the HW thickness, tonnes and grade of the unplanned dilution applied to the 2015 stope shapes. • The orebody is split into a north and south mine, due to its 2 km strike length and a low-grade zone in the centre 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. • DR will be mined using sub-level open stopes (SLOS) in the South Mine and Bench Stoping in the North Mine. Results from the trial mining has indicated the level interval of 25 m and variable stope strike length of 15 m to 30 m is possible, although further work is required to determine if the 25 m level interval is suitable for the flatter dipping areas. • The stopes are broken into the following categories: o Longitudinal SLOS, for any stopes less than 11 m wide horizontally. o Transverse SLOS, made up of 20 m strike SLOS mined full width of the ore-body. o Crown pillar SLOS, for the top level of each panel where stoping occurs directly below a previous mined area. o Bench stopes for the North Mine • The stopes were created by applying the Mineable Shape Optimiser (MSO) software in Deswik CAD to the 2014MRM (drmd0614_min.dm) that was created in Datamine. • The parameters used to create the stope shapes were: o All Mineral Resource categories included o 25 m level interval o Variable strike length o Minimum mining width (MMW) of 2.5 m o Minimum dip of 45 degrees o Minimum waste pillar between parallel stopes of 5m

Criteria	Commentary
	o A$125/t NSR cut-off applied to create initial stope shapes (not final cut-off) • No additional dilution applied (as the unplanned dilution is applied later in the evaluation process). • Completed ore production from DR consists of ore development and nineteen trial stopes. A total of 461 kt of ore has been mined from DR. This consists of 322 kt of stoping and the remainder from ore development. In October 2013, approximately 93 kt ore from the trial mining at DR was batch fed through the Century mill. • Several aspects of dilution were considered, planned dilution, fill dilution, foot wall (FW) 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. FW dilution was included where ore development was wider than the stope width. No additional FW dilution was applied as the initial stope shapes took into account 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. • An allowance was included for fill dilution. The stope recovery allowance covers stope under-break, ore loss into fill at the base of the stope and ore left in the base of the stope. Fill Dilution and Stope Recovery Factors are: o Floor 0.15 m and wall fill ranges from 0.3 m to 0.5 m dilution. o Recoveries Crown stopes 65%, Longitudinal and Transverse 95%. • Development grades were diluted by the application of a grade factor of 90% to all ore development grades estimated from the corresponding stope grades. • No Inferred Mineral Resources are included in the Ore Reserve. A sensitivity was done inclusive of Inferred Mineral Resources increasing the scheduled mine life from 22 years to 24 years. • The underground (UG) mine is accessed via two declines. The mine is split into two parts – north and south and thus it has two separate declines for the UG access. As at 30 June 15 there is 3,475 m of decline in place. In addition there is 14,165 m of lateral development in place. • Currently three raisebored ventilation shafts are in place: o the southern Fresh Air Raise (FAR) – at 3.5 m diameter and 130 m depth; o the southern Return Air Raise (RAR) – at 5.0 m diameter and 198 m depth; o the northern FAR at 3.5 m diameter and 172 m depth (currently being used as RAR). • There is also a RAR longhole winze (LHW) system in the south mine – at 18.9 m square and 116 m long and a RAR longhole winze system in the north mine at 18.9 m square and 129 m long. • Two escape raises are in place: o south mine escape way at 1.8 m diameter and 222 m depth o north mine escape way at 1.8 m diameter and 93 m depth

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>

The expected total underground development for the Ore Reserve only is summarised in the table below:

<table>
<tr><th></th><th colspan="2">Life-of-Mine</th><th colspan="2">Ore Reserve ONLY</th></tr>
<tr><th>Description</th><th>Length</th><th>Tonnes/Material</th><th>Length</th><th>Tonnes/ Material</th></tr>
<tr><td>Decline</td><td>10 km</td><td>0.9 Mt of waste</td><td>7 km</td><td>0.7 Mt of waste</td></tr>
<tr><td>Access horizontal development</td><td>39 km</td><td>3.8 Mt of waste</td><td>25 km</td><td>2.4 Mt of waste</td></tr>
<tr><td>Vertical development</td><td>12 km</td><td>0.5 Mt of waste</td><td>8 km</td><td>0.3 Mt of waste</td></tr>
<tr><td>Footwall drives</td><td>30 km</td><td>2.6 Mt of waste</td><td>17 km</td><td>1.5 Mt of waste</td></tr>
<tr><td>Cross-cuts</td><td>32 km</td><td>1.9 Mt of waste</td><td>25 km</td><td>1.4 Mt of waste</td></tr>
<tr><td>Ore development</td><td>80 km</td><td>5.4 Mt of ore</td><td>45 km</td><td>2.9 Mt of ore</td></tr>
</table>

Mining mobile fleet is planned to include 3 twin-boom jumbos, 3 cable bolting rigs, 6 loaders, 8 dump trucks, 2 long-hole drill rigs, 2 shotcrete rigs, 3 transmixers, 4 charge-up vehicles, 3 raisebore drill rigs, 3 integrated tool carriers, and light vehicle fleet.

</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>

The metallurgical process proposed for treatment of Dugald River ore involves crushing and grinding followed by selective flotation to produce separate lead and zinc concentrates. This process is conventional for this style of mineralisation and is used world-wide. MMG operated the Century Mine in Queensland using an almost identical process.
The flow sheet has been extensively tested at bench scale with over 200 tests being completed on a wide range of samples. The results of these tests have been used to establish the metallurgical factors used for Ore Reserve calculations. Key parameters are:

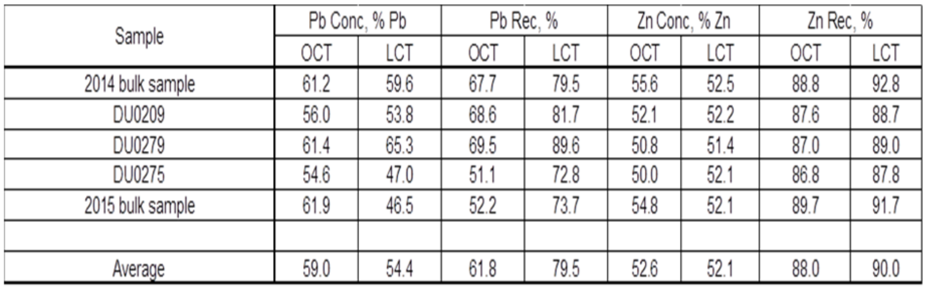
Lead recovery to a lead concentrate according to the equation: $\text{Pb rec (\%)} = \text{MIN}(85, [244.295 – (7.858 \times \text{S\%}) – (5.171 \times \text{Fe\%}) – (13.689 \times \text{Mn\%}) – (1.599 \times \text{SiO2\%}) + (0.395 \times (\text{S\%} \times \text{Fe\%}))] \times 1.298)$, $R2 = 0.39$.
Silver recovery to a lead concentrate according to the equation: $\text{Ag rec (\%)} = 10.2 \times \ln(\text{Ag}) – 11.65$, $R2 = 0.53$.
Zinc recovery to a zinc concentrate according to the equation: $\text{Zn rec (\%)} = 399.85 – 29.75 \times \text{Zn\%} – 10.98 \times \text{Fe\%} – 4.74 \times \text{SiO2\%} + 0.99 \times (\text{Zn\%} \times \text{Fe\%}) + 0.47 \times (\text{Zn\%} \times \text{SiO2\%})$, $R2 = 0.47$.
Iron assay of zinc concentrate according to the equation: $\text{\% Fe in Zn concentrate} = 3.53 + 2.16 \times \text{Pb\%} + 0.23 \times \text{Fe\%} + 0.89 \times \text{Mn\%} + 0.52 \times \text{TOEC\%} – 0.16 \times \text{Zn\%} \times \text{Pb\%}$, $R2 = 0.43$.
Manganese assay of zinc concentrate according to the equation: $\text{\% Mn in Zn concentrate} = -3.36 + 0.36 \times \text{Zn\%} - 0.065 \times \text{Fe\%} + 2.78 \times \text{Mn\%} + 1.39 \times \text{TOEC\%} – 0.116 \times (\text{Zn\%} \times \text{TOEC\%})$, $R2 = 0.85$
Where Zn%, Pb%, Fe%, S%, Mn%, C%, TOEC%, SiO2% and Ag refer to the relevant assays of the ore

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

Criteria | **Commentary**

- A full check has been completed for possible deleterious elements and the only two that are material to economic value are Fe and Mn in the Zn concentrate. It is for this reason that the algorithms to predict these components have been developed.
- As required, 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.
- Locked cycle testing, as a way to assess the continuous run in a laboratory scale, was performed with five different samples. The results were favourable, and are summarized in Table 21 below.

Table 21 Results of locked cycle testing



Sample	Pb Conc, % Pb		Pb Rec, %		Zn Conc, % Zn		Zn Rec, %	
	OCT	LCT	OCT	LCT	OCT	LCT	OCT	LCT
2014 bulk sample	61.2	59.6	67.7	79.5	55.6	52.5	88.8	92.8
DU0209	56.0	53.8	68.6	81.7	52.1	52.2	87.6	88.7
DU0279	61.4	65.3	69.5	89.6	50.8	51.4	87.0	89.0
DU0275	54.6	47.0	51.1	72.8	50.0	52.1	86.8	87.8
2015 bulk sample	61.9	46.5	52.2	73.7	54.8	52.1	89.7	91.7
Average	59.0	54.4	61.8	79.5	52.6	52.1	88.0	90.0

- Two separate plant trials were conducted for processing of Dugald River ore, using the existing facilities at the Century processing plant. The 1st plant trial was too short (run for only 5 days) to assess the scale up reliably. Of significance is the 2nd plant trial, which was carried out from late November 2015 to early January 2016. The samples for the trial, totalling about 458,000 tonnes, were all ore samples stockpiled at the Dugald River site. Metallurgical performance for zinc significantly exceeded plan, with recovery averaging 76.8% to a concentrate assaying 51.5% Zn compared with the plan of 72% recovery. Performance continually improved throughout the trial and averaged 80.3% for the last 17 days. Concentrate quality remained within specification throughout.
- Metallurgical performance for lead was unfavourable due to known differences in ore characteristics between Dugald River and Century, a low lead head grade and equipment issues during the trial. For example, for the treatment of Dugald River ore at Century a number of process line changes were made to allow one of the zinc regrind mills to function as a lead regrind mill. During the trial, these modifications proved problematic and the mill operated with low availability and poor grind size consistency. Issues with the lead regrind mill contributed to the unfavourable performance of the lead circuit.
- A large number of valuable learnings emerged from the 2nd trial and these will assist with rapid ramp-up of the new concentrator. Four minor revisions to the design were identified, but none is expected to materially change the capital cost estimate.
- Reagent costs during the trial were favourable by a significant margin: AU$9.95/tonne compared with a design figure of AU$12.41/tonne.

Environmental

- Dominant vegetation comprises remnant woodlands and there are no major watercourses on the site however there are several minor ephemeral tributaries.

Criteria	Commentary
	• The Environmental Impact Statement (EIS) was submitted to Queensland Environmental Protection Agency (QEPA, now Department of Environment and Heritage Protection) in November 2010 with final Environmental Assessment (EA) approval issued in August 2011. The Plan of Operations is valid until 2019. • Dugald River has both a Construction Environmental Management Plan and an Environmental Management Plan; the former is still being used as the operation is still in a trial mining phase. • Environmental license conditions require DR to deposit all waste rock underground as this reduces waste onsite and decreases impact to the environment. The waste rock will be used as stope backfill.
Infrastructure	• Currently the DR project is operating using diesel generators. Northwest Queensland is not connected to the state electricity grid. Plans are to connect to the Mica Creek gas fired power station on the southern outskirts of Mount Isa. • Gas will be supplied via the Carpentaria pipeline which will require a compression station at Bellevue. Power will be transmitted to Chumvale using Ergon Energy's existing 220 kV line then to DR via an MMG owned 220 kV line. This line will be approximately 62 km long and the route was selected after extensive community consultation. Power for the underground operation will be stepped down to 1000V for fixed plant and mining equipment. • The main source of raw water will be Lake Julius. Raw water will be supplied from the existing Lake Julius to Ernest Henry pipeline owned and operated by Sun Water, a Queensland-government-owned corporation. Two identical water treatment plants at the plant site and accommodation village. • Based on the current production schedule, DR site manning numbers peak at 530 people in 2022. Cloncurry airport is used by commuter aircraft operating to Townsville, Cairns and Brisbane and serves as the fly-in–fly-out (FIFO) airport. • Existing surface infrastructure includes: o A 11 km sealed access road from the Burke Developmental Road, which includes an emergency airstrip for medical and emergency evacuation use; o A construction camp; o A permanent camp; o Telstra communication tower o A temporary contractors mobile equipment facility; o Ore and waste stockpile pads; o Contaminated run-off water storage dams; o Office facilities; o Office buildings, including emergency medical facilities; o A core shed; o A fuel farm and gensets for power generation; o Bore water fields; • Major infrastructure yet to be built includes: a processing plant; a tailings storage facility; a permanent mobile equipment workshop; recreational facilities; power supply lines; and raw water supply pipe line. The land for the infrastructure yet to be built has been identified and is available.

Criteria	**Commentary**
Costs	• The estimation of Capital cost for the Dugald River project was derived from first principles in the Feasibility Study and since been refined through further study work. In Q1 2016 the costs were again estimated from first principles for the 2016 Revised Business Case. • The mining operating costs were again estimated by AMC for the 2016 Revised Business Case using first-principles and include a 2.5% contingency. • 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. • These prices and other economic parameters are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy as stated in Section 2.1. • The road freight and logistics for domestic and export sales have been updated using the costs from the 2013 BOR report with a 3% escalation in costs. The additional costs for storing and ship loading of concentrate in Townsville are included. For the 2014 Ore Reserve the storage and ship loading cost has been added to the freight and logistics cost for export. The freight and logistic costs for the domestic sale of concentrate includes 50% of the sea freight cost based on an agreement with Sun Metals. • Treatment and refining charges are based on MMG's estimate as no contracts are currently in place. • Queensland State Government royalties 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.
Revenue factors	• **Realised Revenue Factors** (Net Smelter Return after Royalty) • As part of the 2016 Ore Reserve process, the net smelter return (after royalty) (NSRAR) has been revised with the latest parameters and compared against the previous 2015 NSRAR calculation that was used for the 2015 Ore Reserve. • The NSRAR 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. • Freight and logistic charges have increased by 42% due to the increase in road and rail freight costs from Dugald to Townsville when compared to the 2015OR. • Assumptions of commodity prices and exchange rates are provided by the MMG Finance department.
Market assessment	• MMG's long-term view on global consumption of metals is that demand will increase as developing economies undertake further industrialisation and economic growth prospects improve in advanced economies. • Global zinc production is expected to contract in 2016 following the 2015 closure of major mines including Century and Lisheen due to resource exhaustion and/or adverse economic conditions driven by low zinc process. Although the zinc price has improved during the course of 2016, most of the idled production currently remains shut. • The zinc market is also characterised by the relatively few new mine developments coming online in the short term, those that are being assessed only have modest

Criteria	Commentary
	capacity. There is a scarcity of high-grade and large-scale deposits driven by historical under-investment in exploration and the nature of zinc deposits. Future zinc supply will likely come from lower-grade, high-cost underground mines as current reserves are depleted. • The mine closures referred to above have resulted in the zinc market showing a significant concentrate shortage in 2016. This shortage of concentrate will constrain refined zinc production, leading to a reduction in the refined zinc stocks that overhang the market. • There is potential for elevated manganese levels to occur in some zinc concentrate batches. The impact of deleterious elements has been taken into account in the project economics and marketing plans.
Economic	• Economic modelling of the total mining inventory shows positive annual operating cash flows. Further cCost analysis was completed in March 2016 on the mining, milling and site infrastructure. Applying the revised costs, metal prices and exchange rate (MMG January 2016 Long Term economic assumptions) return a positive NPV. MMG uses a discount rate appropriate to the size and nature of the organisation and deposit. • The discount rate is in line with MMG’s corporate economic assumptions. • All evaluations were done in real dollars.
Social	• The nearest major population centre to the project is Cloncurry with a population of approximately 4,000 and the largest employers are mining, mining related services and grazing. • In terms of 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 pursuant to 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 have 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 covers an area that includes part of the power line corridor. Whilst the Mitakoodi have not yet been granted Native Title, MMG continue 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 ground disturbing work undertaken on site to date without any issues or complications. The CHMP was developed in consultation with the Kalkadoon # 4 People.

Criteria	**Commentary**
Other	• There are no identified material naturally occurring risks. • The legal agreements are in place. There are no outstanding material legal agreements. • No required mineral specifications have been identified for this deposit. 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. 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. • The government agreements and approvals are in place. There are no material unresolved matters on which the extraction of the Ore Reserve is contingent.
Classification	• Ore Reserves are reported as Proved and Probable. • Only Measured (21%) and Indicated (79%) Mineral Resources have been used to inform the Proved and Probable Ore Reserves. No Inferred Mineral Resources are included in the Ore Reserves.
Audit or reviews	• No external audits have been undertaken for the 2016 Ore Reserve. MMG personnel have been involved in reviewing the Ore Reserve process. • An Independent Peer Review was undertaken by Pennywise on the whole project as part of a mining method review study prior to the 2014 Ore Reserve estimate. • The 2016 Ore Reserves estimates has been reviewed and validated by Mark Slater, Senior Mining Consultant (MEC Mining); in coordination with MMG's corporate GTS group.
Discussion of relative accuracy/ confidence	• Risks that may materially change/affect the Ore Reserve: 1) Geological understanding of the grade continuity with respect to diamond drill spacing. 2) Geotechnical risk associated with hanging-wall instability and mining dilution. 3) Mining infrastructure analysis requires further work on underground trucking, ventilation and power constraints. 4) Metallurgical risks (recovery and concentrate grades) require additional testing to confirm scale up reliability, metallurgical performance and reagent consumption. 5) Economic risks involve the high upfront capital requirement, ongoing detailed revision of the capital and operating costs, and the marginal basis of the current evaluation. • Close spaced drilling is completed prior to final mining selection. Ore Reserves are based on all available relevant information. Ongoing work as well as risk is detailed above. The Probable Ore Reserve is based on local and global scale. • Ore Reserves accuracy and confidence that may have a material change in modifying factors are discussed above. • This Ore Reserve is based on the results of a Feasibility Study and continuous enhancements. The confidence in the estimate is based on all the information available. This data is subject to continual review and update. Data analysis continues to verify or mitigate risks that are detailed above.

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 21.

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 21 Contributing Experts – Dugald River Ore Reserve

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Douglas Corley, Principal Geologist MMG Ltd (Melbourne)	Geological Mineral Resources
Joseph O'Brien, Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing, Sea freight and TC/RC
Shuhua He, Principal Metallurgist, MMG Ltd (Melbourne)	Metallurgy
Mario Car, General Manager Project Delivery, MMG Ltd (Melbourne)	Project costs
George Zacharias, Superintendent Commercial, MMG Ltd (Australian Operations)	Mining capital and operating Costs
Christian Holland, Principal Geotechnical Engineer, MMG Ltd (Melbourne)	Geotechnical
Mark Slater, Senior Mining Consultant (MEC Mining)	Mining Parameters, Cut-off estimation
Donna Noonan, Principal Closure Planning, MMG Ltd (Melbourne)	Environmental
Roddy Ormonde, Senior Engineer, MMG Ltd (Australian Operations)	Mine Design, scheduling

7 GOLDEN GROVE UNDERGROUND OPERATIONS

7.1 Introduction and Setting

The Golden Grove mining operations is 100% owned and operated by MMG Limited through its Australian subsidiary Golden Grove Pty Ltd. The operations are located within the Yalgoo Local Government Area (Shire of Yalgoo) in the Mid-West Region of Western Australia.

Golden Grove is approximately 56km south of the township of Yalgoo, 375km north-northeast of Perth and 225km due east of the coastal port town of Geraldton (Figure 7-1). Access to site is via sealed roads from Perth to Paynes Find and from Geraldton to Yalgoo.

The Golden Grove operation comprises underground and surface operations at Gossan Hill and Scuddles, located 4km apart. Volcanogenic Hosted Massive Sulphide (VHMS) mineralisation was discovered at Gossan Hill in 1971 and at Scuddles in 1979. Scuddles underground operations began in 1990 and Gossan Hill underground operations started producing in 1998. Copper oxide ore was mined from an open pit at Gossan Hill that started in early 2012 and completed in 2015. Gold ore has been mined at in a series of open pits at Gossan Hill from 2013 to 2015 and there is to be future extraction of gold ore at Scuddles via an open pit in late 2016.

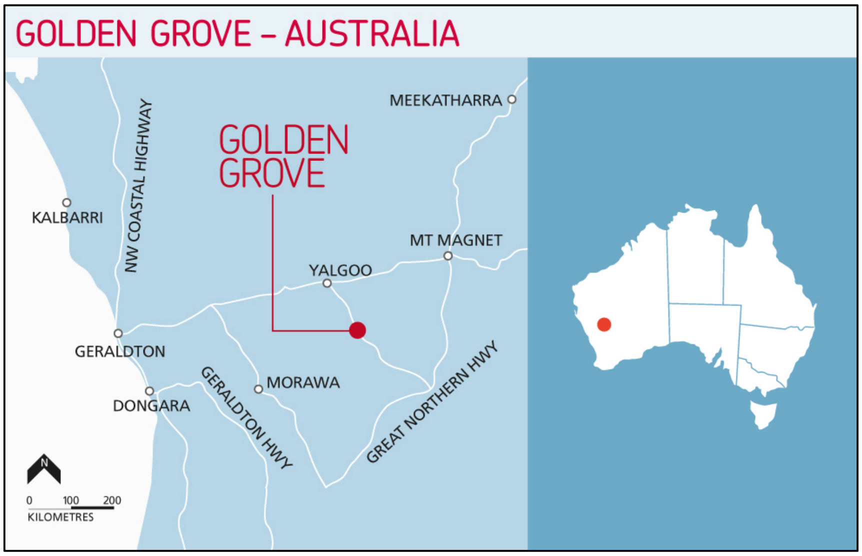


Figure 7-1 Golden Grove Mine location

The underground mines are operated by MMG employees and the open pit is operated by a mining contractor. Gossan Hill ore is trucked to surface and crushed at the Gossan Hill ROM pad, before being transported approximately 3km overland by conveyor to the treatment plant at Scuddles (

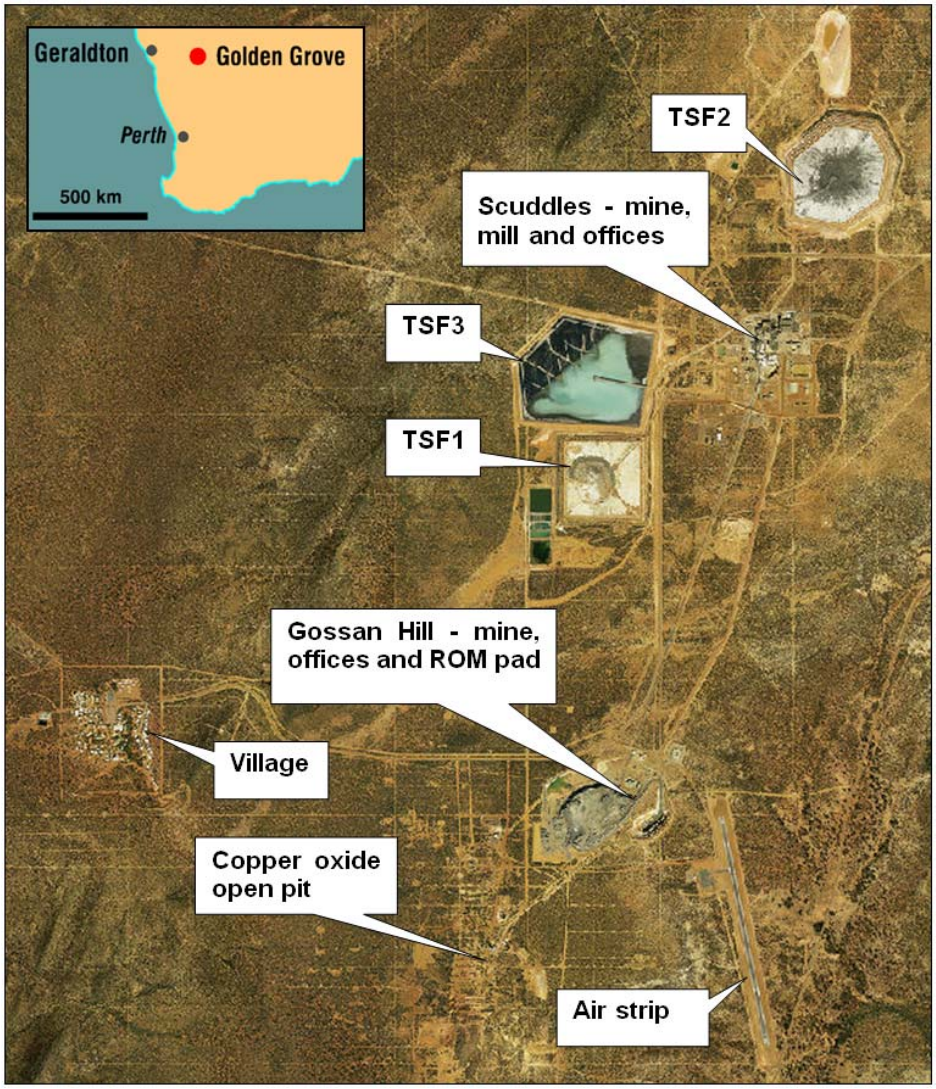


Figure 7-2). Scuddles ore undergoes primary crushing underground before being hoisted to surface.

The open pit operations are an adjunct to the main underground operations of Golden Grove. The open pit operations area is located on the northern flank of Gossan Hill, directly over the current underground mining operations at Gossan Hill.

Gold ores will be mined at Scuddles in the coming year and stockpiled at Gossan Hill before overland transport in road trains to Minjar Gold Mine, where processing takes place on a contract basis.

The treatment plant consists of a two-stage semi-autogenous grinding circuit followed by flotation using air agitation to recover the valuable minerals. Each ore type is treated separately to produce either zinc concentrate, heavy precious metals (HPM) concentrate, copper sulphide concentrate or copper oxide concentrate. These concentrates are transported by road-train to the storage and loading facility at Geraldton for shipment to smelters in Asia and Europe.

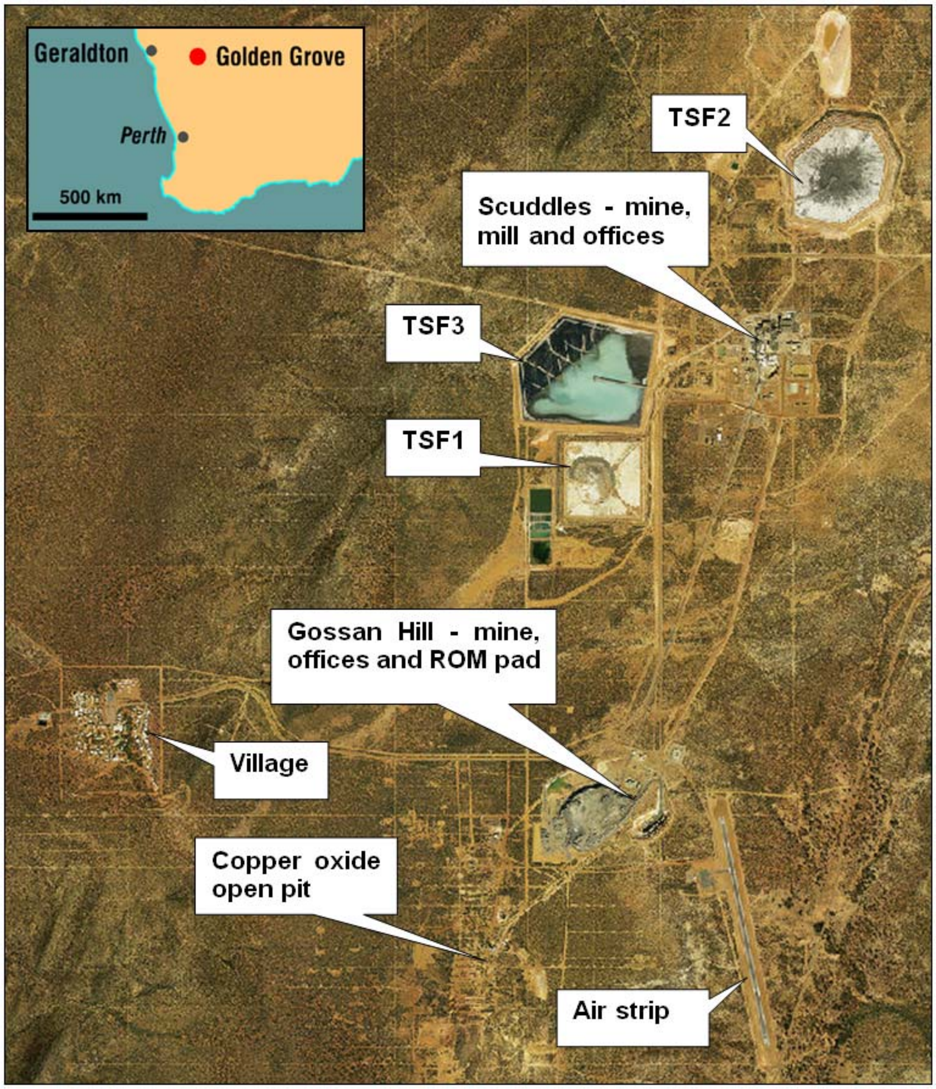


Figure 7-2 Aerial view of Golden Grove Operations showing location of key surface infrastructure

7.2 Mineral Resources – Golden Grove

7.2.1 Results Golden Grove Underground Mineral Resources

The 2016 Golden Grove Mineral Resources are summarised in Table 22. The Golden Grove Mineral Resources is inclusive of the Ore Reserves.

Table 22 2016 Golden Grove Underground Mineral Resources tonnage and grade (as at 30 June 2016)

Golden Grove Underground Mineral Resources											
							Contained Metal				
	Tonnes (Mt)	Copper (%)	Zinc (%)	Lead (%)	Silver (g/t)	Gold (g/t)	**Copper ('000 t)**	**Zinc ('000 t)**	**Lead ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Gossan Hill											
Primary Copper											
Measured	1.10	3.6			32	1.4	40	0	0.0	1.1	0.05
Indicated	2.26	4.2			33	1.1	95	0	0.0	2.4	0.08
Inferred	2.38	3.9			26	0.5	93	0	0.0	2.0	0.04
Total	**5.7**	**4.0**			**30**	**0.9**	**227**	**0**	**0.0**	**5.5**	**0.16**
Primary Zinc											
Measured	1.17	0.61	15.1	2.18	117	3.75	7	177	25.5	4.4	0.14
Indicated	1.73	0.59	14.5	1.49	96	1.87	10	251	25.8	5.3	0.10
Inferred	2.08	0.37	16.1	1.15	85	0.90	8	336	24.0	5.7	0.06
Total	**5.0**	**0.50**	**15.3**	**1.51**	**97**	**1.91**	**25**	**764**	**75.3**	**15.5**	**0.31**
Gossan Hill total	**10.7**	**2.4**	**7.1**	**0.70**	**61**	**1.4**	**252**	**764**	**75.3**	**21.0**	**0.47**
Scuddles											
Primary Copper											
Measured	2.01	3.7			17	0.53	75			1.1	0.03
Indicated	0.29	3.5			14	0.35	10			0.1	0.003
Inferred	0.37	3.0			20	0.35	11			0.2	0.003
Total	**2.67**	**3.6**			**17**	**0.49**	**96**			**1.5**	**0.04**
Primary Zinc											
Measured	0.63	0.34	13.8	1.01	93	0.95	2	87	6.4	1.9	0.02
Indicated	0.10	0.17	12.4	1.09	87	0.78	0	12	1.0	0.3	0.00
Inferred	0.34	0.53	14.7	0.86	63	0.59	2	50	2.9	0.7	0.01
Total	**1.06**	**0.39**	**14.0**	**0.97**	**83**	**0.82**	**4**	**148**	**10.3**	**2.8**	**0.03**
Scuddles Total	**3.73**	**2.7**	**4.0**	**0.28**	**36**	**0.58**	**100**	**148**	**10.3**	**4.3**	**0.07**
Gossan Valley											
Primary Copper											
Measured											
Indicated											
Inferred	0.74	3.4			28	0.72	25			0.7	0.02
Total	**0.74**	**3.4**			**28**	**0.72**	**25**			**0.7**	**0.02**
Primary Zinc											
Measured											
Indicated											
Inferred	1.85	0.1	13.2	0.16	8	0.36	2	244	3.0	0.5	0.02
Total	**1.85**	**0.1**	**13.2**	**0.16**	**8**	**0.36**	**2**	**244**	**3.0**	**0.5**	**0.02**
Gossan Valley Total	**2.59**	**1.0**	**9.4**	**0.11**	**13**	**0.47**	**27**	**244**	**3.0**	**1.1**	**0.04**
Underground Total	**17.04**						**379**	**1,156**	**88.6**	**26.4**	**0.58**
Surface Stockpiles											
Primary Copper											
Measured	0.02	2.4	0.0	0.00	12	0.35	0.42	0.00	0.00	0.01	0.00
Total	**0.02**	**2.4**	**0.0**	**0.00**	**12**	**0.35**	**0.42**	**0.00**	**0.00**	**0.01**	**0.00**
Primary Zinc											
Measured	0.001	0.5	13.0	1.74	135	2.54	0.003	0.075	0.010	0.003	0.000
Total	**0.001**	**0.5**	**13.0**	**1.74**	**135**	**2.54**	**0.003**	**0.075**	**0.010**	**0.003**	**0.000**
Surface Stockpile Total							**2**	**0**	**1.1**	**0.10**	**0.1**
Total Contained Metal							**380**	**1,156**	**88.6**	**26.4**	**0.58**

Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value A$163/t
Figures are rounded according to JORC Code guidelines and may show apparent addition errors.
Contained metal does not imply recoverable metal.

7.2.2 Results – Golden Grove Open Pit Mineral Resources

The 2016 Golden Grove Open Pit Mineral Resources are summarised in Table 23. The Golden Grove Mineral Resources is inclusive of the Ore Reserves.

Table 23 2016 Golden Grove Open Pit Mineral Resources tonnage and grade (as at 30 June 2016) (Gossan Hill)

Golden Grove Open Pit Mineral Resources (Gossan Hill and Scuddles)											
							Contained Metal				
	Tonnes (M t)	Copper (%)	Zinc (%)	Lead (%)	Silver (g/t)	Gold (g/t)	**Copper ('000)**	**Zinc ('000)**	**Lead ('000)**	**Silver (Moz)**	**Gold (Moz)**
Scuddles Gold Pit											
Oxide Gold											
Measured											
Indicated	0.24				58	2.7				0.4	0.02
Inferred											
Total	**0.24**				**58**	**2.7**				**0.4**	**0.02**
Partial Oxide Gold											
Measured											
Indicated	0.004				61	4				0.007	0.0005
Inferred											
Total	**0.004**				**61**	**4**				**0.007**	**0.0005**
Gossan Hill Gold Pit											
Oxide Gold											
Measured											
Indicated	0.44				72	3.4				1	0.05
Inferred	0.01					1.5					0.0005
Total	**0.46**				**70**	**3.3**				**1**	**0.05**
Partial Oxide Gold											
Measured											
Indicated	0.002				240	7.6				0.01	0.0004
Inferred											
Total	**0.002**				**240**	**7.6**				**0.01**	**0.0004**

Scuddles 0.5g/t Au cut-off within a A$1600/oz pit shell.
Gossan Hill 1.1g/t Au cut-off grade within a A$1478/oz pit shell.
Figures are rounded according to JORC Code guidelines and may show apparent addition errors.
Contained metal does not imply recoverable metal.

7.2.3 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 Golden Grove Underground and Open Pit Mineral Resources 2016

Criteria	Status
	Section 1 Sampling Techniques and Data
Sampling techniques	• Samples have been collected by reverse circulation (RC) and diamond drilling (DD), both from surface and underground. • Sample length is preferentially set to 1m and ranges from 0.5m to 1.0m of half core. Sample intervals do not cross geological boundaries; this ensures samples were representative of the lithological unit without mixing of grade at lithological boundaries. • Entire half core samples are crushed and pulverised to 85% passing 75µm. • Historical underground drill sampling practices are comparable with the current practice, the only difference being primary core diameter. • Before 1994, surface Aircore and RC drilling samples were captured in a bag attached to the cyclone, the samples were then split using a 40mm or 50mm PVC pipe spear. Post 1994 surface RC samples were captured in a bag attached to the cyclone and subsequently split using a triple stage riffle splitter. Current grade control RC drilling for the Scuddles Oxide Gold Pit involves taking a 1m sample, captured in the cyclone with subsequent cone splitting. • Measures taken to ensure sample representivity include the collection, and analysis of field and coarse crush duplicates.
Drilling techniques	• DD core and minor RC data was used in the Mineral Resources estimation for Gossan Hill, Scuddles and Gossan Valley. • Current DD diameter drilled is NQ2 or LTK60. • 7,634 drillholes used in the Gossan Hill Mineral Resources model. • 3,741 drillholes used in the Scuddles Mineral Resources model. • 361 drillholes used in the Gossan Valley Mineral Resources model. • 1,645 drillholes were used in the Open Pit Mineral Resources (comprised of 77 Aircore, 162 DD holes and 1,406 RC holes). • The Reflex Act II™ tool is used for core orientation marks on selected DD holes.
Drill sample recovery	• Surface and underground recoveries of DD core are recorded as percentages calculated from measured core versus drilled metres. The intervals are logged and recorded in the database. Average core recovery is greater than 99.5%. • Drilled core is reconstructed into a continuous run on an angled iron cradle for orientation marking. Depth is checked against depth provided on core blocks. • No RC drillholes drilled before 2000 have recovery data recorded except for the 1994 RC program. Recovery data is not used in the Mineral Resources estimation. • Preferential loss/gains of fine or coarse materials are not considered significant. • There is no known relationship bias between recovery and grades.

Criteria	Status
Logging	• 100% of drill core and chips used in the Mineral Resources estimate has been geologically and geotechnically logged to support Mineral Resources estimation, mining and metallurgy studies. Core and chips are logged geologically using codes set up for direct computer input into the Micromine Geobank™ database software package. • All DD cores are geotechnically logged to record recovery, RQD, roughness, fill material. Structural logging is recorded for all oriented core. • Logging is both qualitative and quantitative (percentage of sulphide minerals present). DD cores are photographed dry. • 1,605,681.48m of logged drill core was used in the Mineral Resources, of which 698,099.30m was sampled and assayed.
Sub-sampling techniques and sample preparation	• All DD core is half-cut onsite using an automatic core saw with samples always taken from the same side. Half core is used for routine sampling and quarter core for field duplicates. Current sample length ranges between 0.5 and 1m (there are historical records from 0.2m to 1.5m) and is adjusted to geological boundaries. Historic DD core has been sampled using whole, half, quarter and third core. • RC drilled samples have been cone split and dry sampled. Wet sampling was only conducted when drillholes intersected the water table. • All routine and duplicate RC drilled samples were 1m composites. • Historical RAB, AC and RC drilling has been sampled using spear, grab, riffle and other unknown methods but none of these were used in the Mineral Resources estimation. • The sample preparation of RC chips and DD core adheres to industry best practice. ALS in Perth is used, the process involves: o Weighing, o Oven drying at 90º C, o Coarse crushing to 6mm, o Samples > 3kg crushed to 2mm and split using a rotary splitter (this represents < 0.01% of total sample used for Mineral Resources estimation), o Pulverising in an LM5 to a grind size of 85% passing 75µm, o Collection of 400g pulp from each sample; rejects kept or discarded depending on drilling programme. • RC field duplicate sampling is carried out at a rate of 1:50 taken directly from the on-board cone splitter at the same time as the routine sample. These are subject to the same assay process as the routine samples and the laboratory is unaware of such submissions. • Duplicate DD core samples are no longer taken. This practice ceased in July 2014 after consultation with the Principle Resource Geologist and Technical Services Manager regarding their collection method and application as a true duplicate. Until this time the field duplicates showed good reproducibility. Historically duplicate DD were taken from core at a rate of 1:50 and the half core was cut into quarter core. Instead, duplicates are taken after coarse crushing and pulverisation at a rate of 1:20 alternating between the two. These are subject to the same assay process as routine samples. • Sampling conducted by previous owners is assumed to be industry standard at the time.

Criteria	Status
Quality of assay data and laboratory tests	• A 4-acid "near-total" digestion is used to determine concentrations for silver, copper, iron, lead, sulphur and zinc. This method underwent a change in October 2014 after extensive test work was conducted. Previously it used a 0.4g sample in a HF-HNO3-HClO4 digestion, with HCl leach and finished using ICP-AES. Since October 2014, the sample charge weight is 0.2g in the same acid digestion maintaining the sample/solution ratio as the previous method. This is an ore grade method suitable for use in VHMS deposits. • Prior to October 2014 a 30g fire assay with AAS finish was used to determine the gold concentration for RC chips and DD core samples. This method was considered suitable for determining gold concentrations in rock with sulphide rich material and is a total digest method. However the precision of AAS was limited to 20 times detection limit which coincided with the value at which gold was deemed significant. Therefore while the charge weight remains the same the determination in now by ICP-AES. Grades above 10g/t are determined using AAS. • Historic analysis includes fire assay, aqua regia, four acid digest and AAS or ICP. • No geophysical tools, spectrometers or handheld XRF instruments have been used in the analysis of samples external to the laboratory for the estimation of Mineral Resources. • Matrix-matched certified reference materials (sourced from Golden Grove and prepared by Ore Research Pty. Ltd.) with a wide range of values are inserted at a rate of 1:20 into every RC and DD to assess laboratory accuracy, precision and possible contamination. A certified blank is inserted at a rate of 1:50. Five quartz flushes are inserted at the end of any significant ore horizon. • QAQC data returned are checked against pass/fail limits once the results have been loaded into the database. If QAQC data fails, any questionable assay results are re-analysed. QAQC data is reported monthly and demonstrates sufficient levels of accuracy and precision. • Sizing tests ensure the grind size of 85% passing 75µm is achieved. • The laboratory performs internal QC including standards, blanks, repeats and checks. • Oxide grade control analysis: o Standards have been used in most programs. o Base metals assay method: 4-acid digest followed by ICP MA-ICPOES for the first program with XRF applied for subsequent programs. Checks showed no bias between analysis methods. o Gold and silver assay method: fire assay, AAS FA-AAS.
Verification of sampling and assaying	• Significant intersections are reviewed by a senior geologist and other site geologists. Where there is a significant intersection in the oxide zones drillholes are either twinned or scissored. • A program of twinned holes was drilled for the Gossan Hill Copper Oxide deposit to check correlation with historic data. Good correlation was established. A full report of these twinned holes was written. • No specific twinned holes have been drilled at the Golden Grove underground sulphide deposits. However nearby and scissor drillholes show compatible geology and results.

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td>Location of data points</td><td>

All underground drillhole collars are picked up by MMG surveyors using a Leica TS-15 (total station) with an expected accuracy of 10mm. Surface exploration drillhole collars are picked up by company surveyor using a Trimble RTK R8 GPS with an expected accuracy of 40mm.
All drillholes are downhole surveyed gyroscopically by the drilling companies (currently DDH1 and Swick Mining Services) once each drillhole is completed. Surveys are also carried out every 30m downhole during diamond drilling using an Eastman single shot camera.
The accuracy and quality of historic surveys is generally unknown.
A local grid system (GGMINE) is used. It is rotated 52.4 degrees west of MGA94 zone 50. The two point conversion is as follows:

Mine Grid to MGA94 Two-Point Convertion
<table>
<tr><th>Point</th><th>GGMINE East</th><th>GGMINE North</th><th>MGA East</th><th>MGA North</th></tr>
<tr><td>1</td><td>3644.47</td><td>10108.13</td><td>502093.5</td><td>6810260.7</td></tr>
<tr><td>2</td><td>9343.2</td><td>29162.02</td><td>490480.1</td><td>6826394.2</td></tr>
</table>

Topographic measurement on most of the Exploration leases is by 1m contour generated from aerial photography, however topographic measurement on mining leases is by GPS with surface control point with an accuracy of 10mm.

</td></tr>
<tr><td>Data spacing and distribution</td><td>

Drill data spacing ranges from less than 10m x 10m in the active mining areas to greater 80m x 80m in exploration areas.
Data spacing is sufficient to establish geological and grade continuity for the appropriate classification of the Mineral Resources.
Drillholes greater than 80m x 80m may not necessarily be classified as Mineral Resources. This will be dependent on the geometry of the drillholes and the ore body under study.
DD samples are not composited prior to being sent to the laboratory however the sample lengths taken by geologists currently range from 0.5m to 1.0m.
Current gold pit RC grade control drilling is sampled on 1m intervals. Past RC samples (gold and copper) up to 5m has occurred.
Underground drive mapping supports understanding of geological structure and strike continuity. This data is incorporated into the domains modelled.

</td></tr>
<tr><td>Orientation of data in relation to geological structure</td><td>

Drilling is mostly oriented on sections orthogonal to the strike of mineralisation. Drillholes frequently overlap and are scissored as drilling is oriented from both footwall and hanging-wall directions.
No significant sampling bias has been recognised due to orientation of the drilling in regards to mineralised structures.

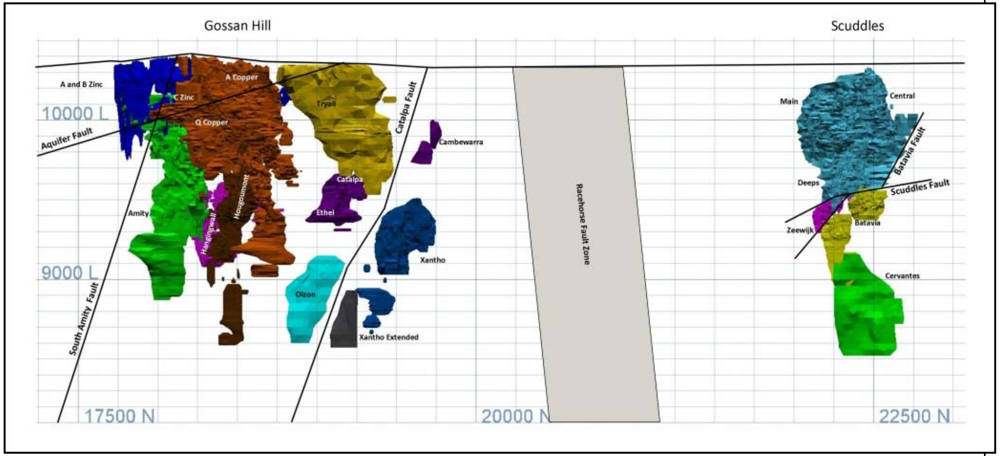
</td></tr>
<tr><td>Sample security</td><td>

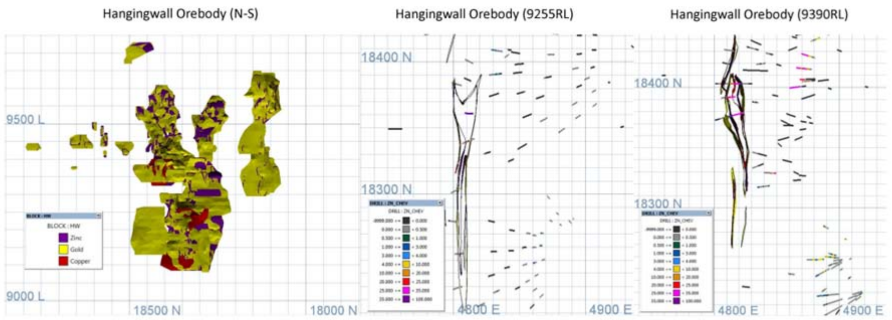
Measures to provide sample security included:

Adequately trained and supervised sampling personnel.
Half-core samples placed in a numbered and tied calico sample bags.
Bag and sample numbers are entered into Geobank database.
Samples are couriered to assay laboratory via truck in plastic bulker containers.
Assay laboratory checks off sample dispatch numbers against submission documents and reports any inconsistencies.
Remaining DD core is stored within the Golden Grove core yard.

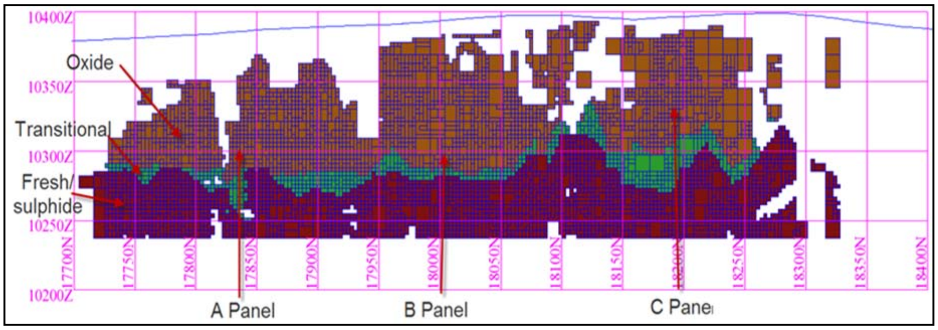
</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td>Audits or Reviews</td><td>• Historically, regular auditing of the external lab has been undertaken by the Geological Database Administrator with support from Resource, Senior Mine, and Mine Geologists. In the previous year no major areas of concern have been raised. The most recent laboratory audit was conducted 1st February, 2016, while the previous one was conducted on 2nd June, 2015.
• An internal review of RC and DD core sampling procedures were completed in 2014. The sampling procedures were found to meet industry standards.
• In 2012 Paul Blackney and David Gray of Optiro completed a review of the Gossan Hill Gold Oxide data. The review found there was no historic QAQC data (1990 to 2000) around Gossan Hill. This has now been rectified.</td></tr>
<tr><td colspan="2">Section 2 Reporting of Exploration Results</td></tr>
<tr><td>Mineral tenement and land tenure status</td><td>The mineral tenement and land tenure status of the Golden Grove operations are listed in the below table.
Mineral tenement and land tenure status for Golden Grove operations
<table>
<tr><th>Tenement No.</th><th>Prospect Name</th><th>Date Expires</th><th>Term Years</th><th>Date Granted</th></tr>
<tr><td>M59/03</td><td>Scuddles</td><td>08/12/2025</td><td>21</td><td>28/01/2005*</td></tr>
<tr><td>M59/88</td><td>Chellews</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/89</td><td>Coorinja</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/90</td><td>Cattle Well</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/91</td><td>Cullens</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/92</td><td>Felix</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/93</td><td>Flying Hi</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/94</td><td>Bassendean</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/95</td><td>Thundelarra</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/143</td><td>Bassendean</td><td>09/05/2031</td><td>21</td><td>21/04/2009*</td></tr>
<tr><td>M59/195</td><td>Gossan Hill</td><td>17/05/2032</td><td>21</td><td>17/06/2011*</td></tr>
<tr><td>M59/227</td><td>Crescent</td><td>07/05/2033</td><td>21</td><td>08/05/2012*</td></tr>
<tr><td>M59/361</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/362</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/363</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/543</td><td>Walgardy</td><td>04/02/2023</td><td>21</td><td>05/02/2002</td></tr>
<tr><td>M59/480</td><td>Marloo</td><td>01/07/2029</td><td>21</td><td>02/07/2008</td></tr>
</table>
* Renewal date
• There are no known impediments to operating in the area. The operation is subject to environmental conditions pertaining to land and water management, and adherence to cultural sensitivity pertaining to the local indigenous people.
• All tenements are 100% owned by MMG-Golden Grove.</td></tr>
<tr><td>Exploration done by other parties</td><td>• Original definition and exploration drilling was performed by Joshua Pitt, of Aztec Exploration, in 1971.
• From 1971 until 1992 multiple joint ventures continued the definition of the Mineral Resources, with highlights being the Scuddles, A Panel Zn, B Panel Zn, C Panel Zn and Cu discoveries. Parties involved include Amax Exploration, Esso Exploration, Australian Consolidated Minerals and Exxon.
• Newmont, Normandy, Oxiana, OZ Minerals and MMG have all been involved with the drilling and exploration of the Golden Grove leases since 1991.
• The exploration and Resource geology groups remained unchanged throughout the OZ Minerals and MMG acquisitions; the exploration management and methods have effectively remained constant since Oxiana acquired the project in 2005.
• Exploration on the Northern and Southern Leases around the Golden Grove Tenements were put on hold in 2016 in order to concentrate on near-mine expansion projects.</td></tr>
</table>

Criteria	**Status**
Geology	• The mineralisation style is volcanogenic hosted massive sulphide (VHMS) which occurs as sub-vertical lenses within layered sediments and volcanics. • The Golden Grove deposits are located in the Murchison Province in the North-Western part of the Achaean Yilgarn Craton in Western Australia within the Yalgoo Greenstone Belt. Mineralisation occurs at the base of the Warriedar Fold Belt ("WFB") within a sequence of felsic to intermediate volcaniclastic sediments, lavas and associated autoclastic breccias. • The Golden Grove Domain that hosts the Gossan Hill and Scuddles deposits lies along the northeast flank of the WFB. The Mougooderra Fault (west), recrystallised monzogranite (east) and post folding granites (north and south) bound the domain. The current interpretation of the structure places the Golden Grove Domain on the eastern limb of a syncline. The stratigraphy has a westerly younging direction and dips steeply west.
Drillhole information	• Over 26,503 drillholes and associated data are held in the database. 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 widths and intercept lengths	• Drilling has been targeted to achieve intersections as close to the true thickness as possible. The intercepts are modelled in three-dimensions for Mineral Resources estimation.
Diagrams	 **Long-projection of the Golden Grove mining area: Gossan Hill and Scuddles**

Criteria	Status
	 **Long-projection and representative cross-sections of Hangingwall orebody**
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	• Exploration and delineation drilling will continue underground and the results will be modelled and reported in subsequent Mineral Resources estimates. • Surface exploration activities including RC and DD drilling will continue on the mining leases.
Section 3 Estimating and Reporting of Mineral Resources	
Database Integrity	• The following measures are in place to ensure database integrity: o Golden Grove uses an SQL database system. o Data are logged directly into Micromine Geobank™ (front-end software) using wireless transfer protocols on Panasonic Toughbook™ portable computers. A limited number of primary tables have read/write privileges to the geologist and geotechnicians. User profiles restrict the data that any individual can access and alter. o The database is backed up each night with hourly log backups during the day. Data backups from the previous seven days are stored on the database server. Data older than seven days is backed up onto tape and stored securely. o Assays are imported electronically from files (.sif) received from the laboratory o Drillholes are checked and locked from users modifying data whenever assays are received. • The measures described above ensure transcription or data entry errors are minimised. • Data validation procedures include: o Data is validated on-entry using library of codes and key fields which ensure intervals cannot duplicate or overlap. o Collar co-ordinates and drilling direction (azimuth and dip) are validated via comparison of planned data to surveyed data. o Deviations of more than 1 degree over 30m of drillhole depth are flagged and evaluated for redrilling. All data attributed to a given drillhole undergoes final validation and sign-off procedure. Any errors found are rectified prior to releasing the data for Mineral Resources estimation.

Criteria	Status
Site visits	• The Competent Person is employed full-time at Golden Grove and is satisfied with the standard of the procedures instituted by the site.
Geological interpretation	• Confidence in geological interpretation of the mineral deposits and associated lithologies is considered to be moderate to high. • Data used for the interpretation included geological mapping of development drives, assay results and geological logging of all DD holes. • Alternate structural and geological interpretations are routinely considered and tested with diamond drilling. • Geological interpretations have been modelled as three-dimensional wireframes of mineralisation and other lithologies, which have been used to construct block models and to control grade estimation as hard boundaries. • Primary sulphide interpretation: o Zinc-rich mineralisation occurs as massive to semi-massive sulphide lenses. These lenses also contain moderate copper, lead, silver and gold mineralisation. o Copper-rich mineralised lenses are composed of zones of chalcopyrite-rich stringers within quartz-rich domains. These domains can have moderate grades of gold and silver but are weakly mineralised with zinc and lead. o Zinc and copper lenses are each surrounded by low-grade mineralisation haloes. Low-grade domains have been constructed for some of the deposits. o Intrusive rocks and faults have been interpreted that cut across and displace mineralisation and stratigraphy. o These domains were derived from the geology of the area. Lithological codes obtained from the logging of drillholes aids in establishing continuity of geology. o Barren intrusive wireframes have been constructed from interpreted polygons snapping to drillhole intersections on 10m spaced plan sections, though these sections are shortened or lengthened appropriately with clustering of data. Interpretations account for all available geological information. o Primary sulphide domains are estimated using Categorical Indicator Kriging (CIK). Lithological codes are taken from the drilling database and used to populate a matrix of indicators in the database. This provides the indicator data to produce and analyse variograms which supply the input for the CIK estimation. • Oxide gold, silver and zinc interpretation: o Mineralisation occurs as steep westerly dipping stratabound lenses that have been modelled separately based on the following general grades: – Gold: 0.1g/t Au – Silver: 10g/t Ag – Zinc: 0.2% Zn o The basis for each of the above domain boundaries were selected by analysis of probability and histogram distribution plots, observing the distribution of sample data in 3D and consideration of geology. These domains maintain a consistent mineralisation shape after considering the geology and assay data. o Wireframes have been constructed from interpreted polygons on 20m spaced plan sections. Interpretations account for all available geological information.

Criteria	**Status**
Dimensions	• The primary sulphide mineralisation at Gossan Hill and Scuddles comprises multiple steeply dipping zones. Each zone varies from 200m to 400m along strike, 200m to 700m down-dip and 3m to 20m in thickness. The current Mineral Resources is located from 200m to 1,600m below surface. • Oxide gold mineralisation is approximately 600m long and was reported above the 10200mRL.  **Gossan Hill Ag, Au, Zn oxide Mineral Resources, elevation looking west**
Estimation and modelling techniques	**Primary Sulphide** • Estimation for the primary sulphide Mineral Resources has been undertaken in Vulcan™ (Maptek) mining software with the following key assumptions and parameters: o Categorical Indicator Kriging (CIK) has been used to estimate lithological domains in the block model. This uses the lithological logging data collected by geologists to populate indicator fields in the drilling database. Variogram analysis is then performed on the indicators and a lithological domain model is produced. o Ordinary Kriging interpolation has been applied for the estimation of Cu, Zn, Pb, Ag, Au, Fe and density after lithology-domaining by CIK. o These estimation methods are considered appropriate for the estimation of Mineral Resources at Golden Grove. o Copper, Zinc, Magnetite and barren sediment domains were modelled using the CIK method. o Cross-cutting intrusive dykes are barren and have been modelled, using 3D wireframes snapped to drilling data. o Data compositing for estimation was set to 1m, which matches the majority of underground drillhole sample lengths and provides good definition across interpreted domains. o Variogram analysis for both the Lithological Indicators and sample grade data was reviewed and updated for all areas of the mine. Variogram analysis was undertaken in Supervisor (Snowden) software and Vulcan™ (Maptek) software. o Interpolation was undertaken in five passes. o Discretisation was set to 4 x 4 x 4.

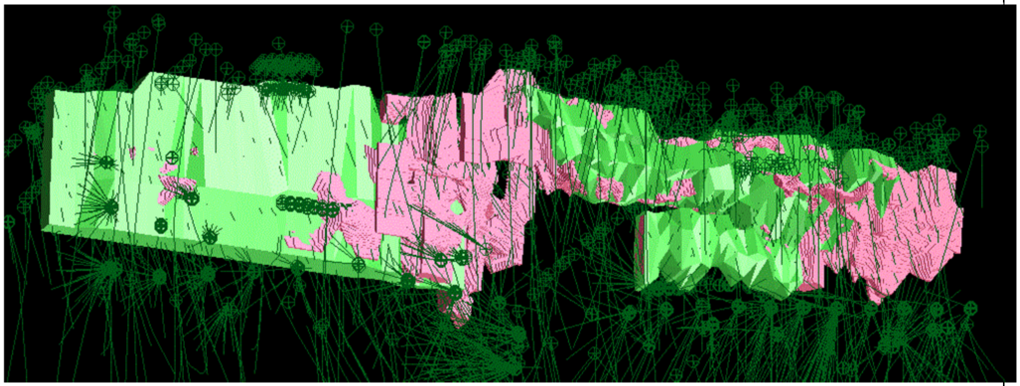
Criteria	**Status**
Estimation and modelling techniques	• The Amity, Cervantes and Hangingwall models were completed using the same wireframe-controlled domaining method as previous year's models • Check estimates using Discrete Gaussian Modelling have been performed on selected models. • Block model results are comparable with previous Mineral Resources estimations after depletion, cut-off changes and additions due to drilling and re-modelling. • Reconciliation of the block model against mill production for stoped volumes in 2015/2016 shows tonnes have been underestimated (19% and 18% for copper and zinc stope blocks respectively) as has zinc grade (7%), while copper grade has been over-estimated by 3% in stoped blocks. Further work is planned to improve reconciliation. • Assumptions about the recovery of by-products is accounted in the net-smelter return after royalty (NSR) calculation which includes the recovery of Cu, Zn, Pb, Ag and Au along with the standard payable terms. • No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. The exception being the Amity model. Fe, S and SG were individually estimated within each mineralisation envelope (Cu, Zn Au) and the secondary grades were selected from each of the separate domain estimates based on the highest correlation. • Non-sampled intervals in drillholes have been flagged with values of -99 in the primary database, which are then assigned detection limit values for grade interpolation in waste areas. This is undertaken to ensure that any sampled and mineralised grades in these domains are not over-represented in the estimate. • 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. • Mining voids are 'stamped' onto the block model to ensure depleted material is excluded from the Mineral Resources report. As well, mined stope voids are translated east and west between 3m to 5m to ensure material in the "skins" of stopes (not able to be mined) are also excluded from the Mineral Resources report. • The estimation validation process included the following steps: o Visual checking of block model estimated grades against the input drilling data. o Comparison of block model and sample statistics. o Drift plots comparing block model against input samples by easting, northing and RL. o Reconciliation data as described. o Benched Grade/Tonnes curves **Supergene Oxide** • Block modelling for the oxide Mineral Resources has been undertaken in Maptek Vulcan software with the following key assumptions and parameters: o Ordinary Kriging interpolation has been applied for the estimation of Cu, Zn, Pb, Ag and Au. o Data compositing for estimation was set to match the majority of drillhole sample lengths and provides good definition across interpreted domains.

Criteria	Status
Estimation and modelling techniques	o Variogram analysis was reviewed and updated for new interpretations and for existing domains materially affected by new drill data. • Check estimates using Discrete Gaussian Modelling have been performed on selected models. • There have been no assumptions made regarding the recovery of by-products. • For the gold oxide material, copper has been identified as deleterious for Carbon in Pulp (CIP) gold extraction. Material with more than 0.2% Cu is separately stockpiled. • The parent block size for the gold oxide model block size is 5m x 10m x 3m with 2.5m x 5m x 1.5m sub-cells. • Iron has been estimated as it is related to the recovery of payable elements. • Sulphur was estimated within Au, Ag and Cu domains for environmental considerations. No other deleterious or ancillary elements have been modelled. • No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. • 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. • The block models and estimate has been validated in the following ways : o Visual checking of block model estimated grades against the input drilling data o Comparison of block model statistics against sample statistics o Swath plots comparing average block model estimated grades against input samples by easting, northing and RL.
Moisture	• All tonnages have been estimated on a dry basis.
Cut-off parameters	• Primary sulphide Mineral Resources were reported above a cut-off Net Smelter Return (NSR) dollar value. • The Golden Grove Mineral Resources were reported above an A$163/t block value at both Gossan Hill Underground and Scuddles Underground. • A minimum width of mineralisation of approximately 3m (dependent upon precious metal content) is applied to ensure narrow mineralised zones with low potential of eventual economic extraction were excluded from the estimation. • Oxide gold Mineral Resources were reported at a cut-off grade of 1.1g/t Au for Gossan Hill gold and 0.5g/t Au for Scuddles gold open pit Mineral Resources. • 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	• Underground mining at Golden Grove comprises long-hole open stoping and ore is hauled or hoisted to the surface. The minimum mining width is 3m, which is based on the minimum spacing for a dice five production drill-hole pattern. • Surface mining is applied to the oxide gold mineralisation and involves the open pit mining method. o Future mining factors and assumptions have been based on past mining practices. • Gold oxide Mineral Resources are reported within the following pit shells: o Scuddles was reported within a $1600AUD/oz pit shell,

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>• Gossan hill was reported within a $1478AUD/oz (equivalent to $1212USD/oz at 0.82 AUD:USD exchange) pit-shell.</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• Metallurgical processing of ore at Golden Grove has been in operation since 1990 and involves crushing, grinding, sequential froth flotation followed by filtration before being transported to market as concentrates of copper, zinc and lead (including high-precious metals).
• Primary sulphide material:
o Metallurgical factors are incorporated into block model values via the calculation of the NSR value.
o Recovery of payable minerals is dependent on iron ratios. Lower iron mineralisation is more amenable to copper and zinc recovery.
o Higher grade zinc mineralisation is amenable to higher precious metal (projected to be about 66%) recoveries.
• Au and Ag oxide material:
o Golden Grove currently is unable to process gold and silver in the oxide material. Previously this material has been sold to third parties through an ore sales contract.</td></tr>
<tr><td>Environmental factors or assumptions</td><td>• Material from underground and the open pit is sent to a designated stockpile based on material classification of either potentially acid forming (PAF) or non-potentially acid forming (NAF) material. Waste material with less than 0.3% sulphur is classified NAF otherwise the rock is classified PAF. PAF/NAF classification is based on recommendation from Coffey Environment after their test work on-site.</td></tr>
<tr><td>Bulk density</td><td>• Bulk density is determined using the Archimedes' principle (weight in air and weight in water method) of all core samples. Bulk density measurement is undertaken at the on-site core processing facility. The core is air dried and generally has low permeability and so the results are considered suitable for Golden Grove. No wax coating or sealing of core is applied.
• Density values in the Mineral Resources models are estimated using Ordinary Kriging within the mineralised domain shapes.
• Density data for the oxidized areas of the mine (Gossan Hill Cu/Au) is considered sparse. For this reason, bulk density is not estimated for these areas, but a sub-domained mean value is assigned for each of the fresh/transitional/oxide ore/waste domains.</td></tr>
<tr><td>Classification</td><td>• Primary Sulphide Mineral Resources:
o A Kriging estimation run was used to record data density metrics including the number of samples, drillholes, and sample distance.
o Wireframes were then constructed to form classification solid shapes around contiguous blocks of like classification. This method produces continuous volumes of classified Mineral Resources and avoids patchy classification.
Quantitative Mineral Resources Classification Criteria
<table>
<tr><th rowspan="2">Classification</th><th colspan="3">Ellipse Orientation</th><th colspan="3">Ellipse Axes</th><th colspan="2">Samples Per Estimate</th><th rowspan="2">Octant Search</th></tr>
<tr><th>Bearing (Z)</th><th>Plunge (Y)</th><th>Dip (X)</th><th>Major</th><th>Semi-Major</th><th>Minor</th><th>Minimum</th><th>Maximum</th></tr>
<tr><td>Measured</td><td>0</td><td>0</td><td>90</td><td>20</td><td>20</td><td>5</td><td>10</td><td>24</td><td>None</td></tr>
<tr><td>Indicated</td><td>0</td><td>0</td><td>90</td><td>40</td><td>40</td><td>10</td><td>6</td><td>24</td><td>None</td></tr>
<tr><td>Inferred</td><td>0</td><td>0</td><td>90</td><td>60</td><td>60</td><td>20</td><td>4</td><td>24</td><td>None</td></tr>
</table></td></tr>
</table>

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>

- The Competent Person is satisfied that the stated Mineral Resources classification reflects the geological domains interpreted and the estimation constraints of the deposits.
- Oxide Mineral Resources:
  - Classification of the Mineral Resources was primarily based on confidence in the assayed grade and geological continuity.
  - Geological confidence is supported by nearby underground exposures including geological mapping and drillhole data. Confidence in the Kriged estimate is associated with drillhole coverage and analytical data integrity.
  - Indicated Mineral Resources was considered appropriate with a drillhole grid spacing of 10m to 40m.
  - Inferred Mineral Resources was considered appropriate with a drillhole grid spacing greater than 40m and within the mineralisation domain.
  - The Gossan Hill oxide gold deposit has good potential for upgrading a large portion of the Indicated Mineral Resources into a Measured Mineral Resources. Requirements for this rely upon improvement/assurance of sample quality (recoveries) and QAQC, together with supporting studies for defining a cut-off grade and the eventual economic extraction of this mineralisation.
  - Long section view (looking east) of the estimated gold deposit block model showing Mineral Resources classification categories (green = Indicated, pink= Inferred).



Long section view (looking west) of the estimated gold deposit block model, with classification categories (green = Indicated, pink= Inferred)
</td></tr>
<tr><td>Audits or reviews</td><td>

- Internal audits were conducted in 2015 and February 2016 which included MMG group office and site personnel. All block models were validated and peer reviewed in June 2016. No material issues with the Mineral Resources estimates were identified.
</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>

- The global copper Mineral Resources between 2015 and 2016 have reduced from 16.7Mt @ 3.1% Cu (0.51M t metal) to 9.2Mt @ 3.8% Cu (0.35Mt metal).
- After depletion of 15kt of metal the two main causes for this reduction are:
  - the cut-off grade was increased from $145 NSR to $163 NSR which accounted for ~47% of the loss, this loss is seen in the Measured material and may affect the Ore Reserves.
  - discrepancies between the mined grades and the milled grades.
</td></tr>
</table>

Criteria	Status
	o Drilling during the previous 12 month period within the Inferred Mineral Resources areas resulted in a lower level of mineralisation continuity. This will not affect the Ore Reserves. The Mineral Resources data collection, data analysis and estimation techniques used for the Golden Grove deposits are consistent with the currently mined areas both underground and open cut and there has not been any known major discrepancies between the mined grades and the milled grades. • The Competent Person is satisfied with the accuracy and the confidence of the Mineral Resources estimates. At this time confidence limits of grade and tonnage have not been calculated.

7.3 Ore Reserves – Golden Grove Underground

7.3.1 Results

The 2016 Golden Grove Underground Ore Reserve are summarised in Table 25.

Table 25 2016 Golden Grove Underground Ore Reserve tonnage and grade (as at 30 June 2016)

Golden Grove Underground Ore Reserve

							Contained Metal				
	Tonnes (Mt)	Copper (% Cu)	Zinc (% Zn)	Lead (% Pb)	Silver (g/t Ag)	Gold (g/t Au)	**Copper ('000 t)**	**Zinc ('000 t)**	**Lead ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Golden Grove Primary Copper											
Proved	1.3	3.6			20	1.1	46			0.9	0.0
Probable	0.7	3.1			26	1.6	21			0.6	0.0
Total	**2.0**	**3.4**			**22**	**1.2**	**67**			**1.4**	**0.1**
Primary Zinc											
Proved	1.0	0.7	12.1	1.7	97	3.4	8	126	18	3.3	0.1
Probable	0.8	0.9	11.6	1.3	98	2.3	7	96	11	2.6	0.1
Total	**1.9**	**0.8**	**11.8**	**1.5**	**98**	**2.9**	**15**	**222**	**29**	**5.9**	**0.2**
Surface Stockpiles Primary Copper											
Proved	0.0	2.39			12	0.35	0	0	0	0.0	0.0
Primary Zinc											
Proved	0.0	0.5	13.0	1.7	135	2.5	0	0	0	0.0	0.0
Stockpile Total							**0**	**0**	**0**	**0.0**	**0.0**
Total Contained Metal							**82**	**222**	**29**	**7.3**	**0.3**

Reserve numbers are inclusive of surface stockpiles.

Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value A$163/t.

Contained metal does not imply recoverable metal.

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

7.3.2 Ore Reserves 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 4" of the Code.

Table 26 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Golden Grove Underground Ore Reserve 2016

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the sub-set of the Mineral Resources used to define the Ore Reserves. The Ore Reserves are derived from current Mineral Estimates derived from the geological database closed off on or before 31 March 2016. The Ore Reserves are based on detailed development and stoping designs and have been economically evaluated according to current metal price forecasts, recent operational costs, and mining and metallurgical recoveries.
Site visits	• The Competent Person (Karel Steyn) is responsible for the long-term planning for the Golden Grove site, regularly visiting the site to undertake his role.
Study status	• Gossan Hill and Scuddles mines are operating mines, Mineral Resources to Ore Reserve conversion was carried out based on the latest Mineral Resource model using the geological databases closed off between 31 January 16 and 31 March 2016 depending on mine area. • Ore Reserves inputs parameters have been estimated based on historical performance data.
Cut-off parameters	• Due to the polymetallic nature of Golden Grove, all the factors relating to the value of the ore (representative of cash costs to mine gate) are combined into a Net Smelter Return (NSR) value. Based on the economic assumptions and cost review, the NSR cut-off is A$163/t for Golden Grove. The NSR calculation includes metallurgical recovery, milling cost, financial assumptions which include metal price and exchange rate, concentrate road and sea transportation costs (both dollar value and concentrate loss), royalties payable, treatment and refining charges. • The NSR cut-off was used as a guide to generate the Ore Reserves shapes; however, each stope is assessed individually for the development, haulage distance, backfilling requirements and any other additional costs to ensure that it is profitable to mine. These costs are considered on an individual stope basis and stopes that make a loss have not been included in the Ore Reserves.
Mining factors or assumptions	• Gossan Hill and Scuddles mine are operating mines, therefore all of the mining factor assumptions are using the historical performance data. • Xantho Extended is yet to be mined. The material is of sufficient geological confidence, however it is not included in the Ore Reserve as it is not supported by a Pre-Feasibility Study. • Geotechnical parameters applied in the design process are based on each stoping areas given an estimate of stable Hydraulic Radius (HR). This is based on Q' values, experience with similar mine areas and numerical modelling. • Mining dilution and recovery factors used are different for each orebody, based on the historical performance data. • Based on historical performance data and current equipment capability, the minimum mining width used for the design is 4 m with level interval generally 30 m. • Inferred Mineral Resources are not included in the Ore Reserve estimate. • The infrastructure requirements have been established for the Golden Grove operation.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Metallurgical factors or assumptions</td><td>

Metallurgy processing of ore at Golden Grove has been in operation since 1990 and involves crushing, grinding, sequential froth flotation and filtration before being transported to market as concentrates of copper, zinc and lead (including high-precious metals).
The current Golden Grove processing operation caters for production of a single Cu concentrate when treating copper sulphide (CuS) or copper oxide (CuO) ore, alternatively a 2-stage sequential process is used to produce a lead (Pb) rich precious metal concentrate and zinc (Zn) concentrate when treating zinc rich material.
Parameters and assumptions for the processing plant are determined annually by reviewing historical data, the Gossan Hill/Scuddles Mining Plan (advising ore types and masses to be made available for processing in the forthcoming year) and anticipated metal prices for Cu, Zn and Pb.
The table below shows the average actual metallurgical recovery between 2013 and 2015.

<table>
<tr><th>Concentrate</th><th>Mineral</th><th>Recovery</th></tr>
<tr><td rowspan="2">Zinc</td><td>Zn</td><td>88%</td></tr>
<tr><td>Ag</td><td>21%</td></tr>
<tr><td rowspan="2">Copper</td><td>Cu</td><td>89%</td></tr>
<tr><td>Ag</td><td>63%</td></tr>
<tr><td rowspan="4">HPM</td><td>Cu</td><td>49%</td></tr>
<tr><td>Pb</td><td>65%</td></tr>
<tr><td>Ag</td><td>59%</td></tr>
<tr><td>Au</td><td>61%</td></tr>
</table>

Deleterious minerals such as a talc can impact recovery. Depending on the severity of the talc, the flotation circuit can be configured to counter the problem. The most common method of reducing the impact of talc is to pre-float a talc-rich concentrate and discard it to tailings. Talc and Magnetite are not estimated or modelled extensively in the mineral resource. High-iron content can also impact the recovery.
The Ore Reserve estimation is based on the appropriate mineralogy.

</td></tr>
<tr><td>Environmental</td><td>

Waste rock from underground shall preferentially remain underground where it is used to as a source of backfill. The waste rock that is transported to surface is either returned to underground as road base, or is encapsulated in the dedicated ROM Pad Potential Acid Forming Encapsulation Facility.
Tailing is directed to a Tailings Storage Facility, some of the mill tailings are returned underground as Cemented Hydraulic Fill (CHF) for backfilling. Water from this facility is decanted after the tailings have settled and is returned to the processing plant for recycling in the process. Golden Grove currently has two tailings storage facilities.

</td></tr>
<tr><td>Infrastructure</td><td>

Being an operating site, the infrastructure required to mine and process ore from both Gossan Hill and Scuddles mines is well established.
The site airstrip was sealed in 2007 and is serviced by flights from Perth and Geraldton. There is a 1 hour flight time from Perth and 45 minutes from Geraldton.
Golden Grove operates with a work force of approximately 650 full time equivalent employees drawing labour from the Perth labour market and from Mid-West country

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

Criteria	Commentary
	centres such as Geraldton and towns close to the mine such as Yalgoo. This includes MMG permanent staff and contractors providing services and/or labour hire. • The accommodation village is located 5 km to the south-southwest of the mine offices and is accessed via a sealed road. • Electricity is supplied from the WA grid through a southern distribution centre at Three Springs. Power consumption is typically around 14 MW. Three 1.15 MW power generators are installed to enable essential services and underground fans to operate in the event of a power outage. Constant power is also necessary ant the plant to prevent bogging of tanks and thickeners. • Water supply for the operations is secure with sufficient groundwater supply, The majority of the groundwater is supplied through dewatering of both the Gossan Hill and Scuddles underground mines. The site is equipped with two backup potable water bores to ensure the sites potable demand can be met. • Transportation of bulk commodities to and from the Golden Grove mine site is via sealed roads from Perth to Paynes Find and from Geraldton to Yalgoo. The Yalgoo to Paynes Find road is sealed between Yalgoo and Golden Grove while the remainder between Golden Grove and Paynes Find is a formed gravel road that can be closed to traffic during periods of wet weather.
Costs	• The operating and capital costs were determined using the historical cost data. • Deleterious element such as high iron was included in the NSR calculation. High-iron content level could impact the copper and zinc recoveries. Talc and magnetite are not estimated in the Mineral Resource or factored into the NSR calculation. • These prices are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy as stated in Section 2.1. • Treatment, refining and transportation costs for different commodities were supplied by the MMG Group office and have been included in the NSR calculation. • The royalty value varies based on commodity type and were supplied by the MMG Group office. A 5% royalty has been applied to base metals, and 2.5% to precious metals. The royalties have been included in the NSRAR calculation
Revenue factors	• The commodity prices and exchange rate assumptions, treatment, refining, royalties and transportation costs for different commodities were supplied by the MMG Group office and have been included in the NSRAR calculation. • The formulas and assumptions used in the NSRAR calculation are based on the historical data provided by the Golden Grove Metallurgy Department. • The economic evaluation was carried out to verify whether the stope designed using the NSR cut-off generate economically viable outcomes. The mining physicals required to access and mine individual stopes were determined during the mine design process. • The cost assumptions were applied to the mining physicals and the revenue was calculated by multiplying the recovered ore tonnes by the applicable NSRAR value. The profitable and marginal stopes were included in the Ore Reserve.
Market assessment	• MMG's long-term view on global consumption of metals is that demand will increase as developing economies undertake further industrialisation and economic growth prospects improve in advanced economies.

Criteria	Commentary
	• Global zinc production is expected to contract in 2016 following the 2015 closure of major mines including Century and Lisheen due to resource exhaustion and/or adverse economic conditions driven by low zinc process. Although the zinc price has improved during the course of 2016, most of the idled production currently remains shut. • The zinc market is also characterised by the relatively few new mine developments coming online in the short term, those that are being assessed only have modest capacity. There is a scarcity of high-grade and large-scale deposits driven by historical under-investment in exploration and the nature of zinc deposits. Future zinc supply will likely come from lower-grade, high-cost underground mines as current reserves are depleted. • The mine closures referred to above have resulted in the zinc market showing a significant concentrate shortage in 2016. This shortage of concentrate will constrain refined zinc production, leading to a reduction in the refined zinc stocks that overhang the market. • There is potential for elevated manganese levels to occur in some zinc concentrate batches. The impact of deleterious elements has been taken into account in the project economics and marketing plans.
Economic	• Golden Grove is an established operating mine. Costs detailed used in the NPV calculation are based on historical data. Revenues are calculated based on historical and contracted realisation costs and realistic medium to long-term metal prices. • The Life-of-Asset (LOA) financial model demonstrates the mine has a positive NPV. The discount rate is in line with MMG's corporate economic assumptions.
Social	• MMG Golden Grove is within the Shire of Yalgoo in the Murchison Region of Western Australia. The nearest community is the Yalgoo Township, 56 km to the north of the site. The key stakeholders include the local government, local community, pastoralists, employees and the Geraldton Port Authority. • Golden Grove owns the Muralgarra Pastoral Station leasehold land which was purchased in 2007. Golden Grove is currently developing a strategic and a diversified management plan with a focus on carbon sequestration and biodiversity offset project opportunities that were implemented from 2012. • Stakeholder consultation was initiated when mining was first proposed for the Golden Grove operations. Consultation has evolved from mining commenced, and occurs during additional approval work and through routine and ad-hoc engagement. • Golden Grove continues to fulfil its statutory heritage responsibilities in line with the Aboriginal Heritage Act (1972) and the Aboriginal and Torres Strait Islander Heritage Protection Act (ATSHIP 1984). • Golden Grove has committed to a range of Indigenous Relations investment initiatives including; the Bayalgu Indigenous Pre-Employment Training program; the Yalgoo Centacare Indigenous Children's Program (ICP); a Cross Cultural Awareness (CCA) program delivered by a local service provider; and an Indigenous Employment Implementation Plan (IEIP).
Other	• Gossan Hill and Scuddles mines tenement and land tenure status are listed in the table below.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><th>Tenement No.</th><th>Prospect Name</th><th>Date Expires</th><th>Term Years</th><th>Date Granted</th></tr>
<tr><td>M59/03</td><td>Scuddles</td><td>08/12/2025</td><td>21</td><td>28/01/2005</td></tr>
<tr><td>M59/195</td><td>Gossan Hill</td><td>17/05/2032</td><td>21</td><td>17/06/2011</td></tr>
</table>
The Gossan Hill and Scuddles mines operate under license L8593/2011/2 issued by the Western Australian Department of Environment and Regulation (DER) as required by the Environmental Protection Act 1986. This license was issued 11 September 2014 and expires on 15 September 2019.
</td></tr>
<tr><td>Classification</td><td>Ore Reserve is classified as Proved and Probable. Proved Ore Reserve category is determined when Mineral Resource confidence level is “Measured” and financially satisfied which is either “Profitable” or “Marginal”. Probable Ore Reserve category is determined when Mineral Resource confidence level is “Indicated” and financial level is either “Profitable” or “Marginal”.</td></tr>
<tr><td>Audit or reviews</td><td>No external audits were undertaken to the Ore Reserve estimate.
The 2016 Ore Reserves estimates has been reviewed and validated by Mark Slater, Senior Mining Consultant from MEC Mining; in coordination with Corporate group GTS-MMG.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>A qualitative risk assessment of each discussed item is included with each individual item in the second column of this table. Details of various risks are discussed in each relevant section.
The Ore Reserve estimate is compared with the production data.</td></tr>
</table>

7.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 27.

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 27 Contributing Experts Golden Grove Underground Ore Reserve

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Goerge Zacharias, Superintendent Commercial, MMG Ltd (Australian Operations)	Mining capital and operating Costs
Mark Slater, Senior Mining Consultant MEC Mining	Mining Parameters, Cut-off estimation
Paul Boamah , Senior Mine Geologist – Resource MMG Ltd (Golden Grove)	Geological Mineral Resources
Christian Holland, Principal Geotechnical Engineer, MMG Ltd (Melbourne)	Geotechnical
Nigel Thiel, Principal Metallurgist MMG Ltd (Melbourne)	Metallurgy
Donna Noonan, Principal Closure Planning, MMG Ltd (Melbourne)	Environmental
Joseph O'Brien, Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing, Sea freight and TC/RC
Mark Dowdell, Senior Engineer, MMG Ltd (Australian Operations)	Mine Design, scheduling

7.4 Ore Reserves – Golden Grove Open Pit

7.4.1 Results

The 2016 Golden Grove Open Pit Ore Reserve is based on the 2016 Scuddles Resource model.

The 2016 Golden Grove Open Pit Ore Reserve is summarised in Table 28.

Table 28 2016 Golden Grove Open Pit Ore Reserve tonnage and grade (as at 30 June 2016)

Golden Grove Open Pit					
				Contained Metal	
Scuddles-Oxide Gold	**Tonnes (Mt)**	**Gold (g/t Au)**	**Silver (g/t Ag)**	**Gold (Moz)**	**Silver (Moz)**
Probable	0.24	2.6	56	0.02	0.43
Total	**0.24**	**2.6**	**56**	**0.02**	**0.43**
Total Contained Metal				**0.02**	**0.43**

0.5 g/t Au cut-off grade based on ore sales contract.

Contained metal does not imply recoverable metal.

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

7.4.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 29 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 29 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Golden Grove Open Pit Ore Reserve 2015

Criteria	**Commentary**
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources are reported inclusive of the Mineral Resources used to define the Ore Reserves. • The normal sub-celled Mineral Resource block model named "scud201601.bmf" dated February 12 2016 was used for the optimisation purposes. • Mineral Resource block model has a parent block size of 5 m x 10 m x 3 m with sub blocking down to 2.5 m x 5 m x 1.5 m.
Site visits	• The Competent Person is Jodi Wright AusIMM(CP) who visited the site in August, 2016. • The site visit consisted of discussions with relevant people associated with Ore Reserve modifying factors including Geology, Grade Control, Geotechnical Parameters, Mine Planning and Mining Operations, Tailings and Waste Storage, and Environmental Area. The Outcomes from the visit and further discussions with relevant people from MMG Australian Operations have included reaching a common understanding in those areas, reviewing assumptions and calculation of the cut-off grade and developing the Life-of-Asset (LoA) mine plan.
Study status	• The mine is an operating entity. Ore Reserves inputs are based on actual historical performance data. • LoA Low Case was produced as part of the MMG planning cycle. This Low Case informs the Ore Reserves and is technically achievable, economically viable, and material Modifying Factors have been considered.
Cut-off parameters	• A cut-off grade of 0.5 g/t gold at A$1600/oz gold price and A$20/oz silver was applied to the oxide material. • The oxide gold material is subject to an ore sales contract that MMG has in place with an external party. • 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 of Ore Reserve estimation included pit optimisation, final pit design, consideration of mining schedule and all modifying factors. • Scuddles mine is an open pit operation that is mining oxide gold ore. The operation uses a fleet of excavators and fixed bodied trucks along with a fleet of auxiliary equipment. • This mining method is appropriate for the style and size of the mineralisation. • Pit optimisations and designs adhered to recommended geotechnical parameters. The inter-ramp slopes used range between 35° – 42° for oxide material. The direct parameters that influence the inter-ramp slope angle using the current slope design parameters at Scuddles are: o Rock type;

Criteria	Commentary
	o Hardness of the material o Geotechnical Sector; and o Groundwater conditions (Wet or Dry). • The pit optimization was based on the 2016 Mineral resource block models and the strategy for the final pit selection was based on the NPV by pit shell at revenue factor 1 (RF=1.0). RF 1.0 pit shell is used across all assets across MMG Group. Final pit designs that incorporate more practical mining considerations were carried out using those optimisation shells. • Assumed mining dilution 5%. Dilution modelling and reconciliation data supports these assumptions. • The assumed mining recovery 95%. Dilution modelling and reconciliation data supports these assumptions. • Minimum mining width (bench size) is ~25m on average and down to 10m in the final drop cut. • No Inferred material has been included in optimisation and/or Ore Reserves reporting. • All required infrastructure is in place. • Less than 12 months to mine the Scuddles oxide gold pit.
Metallurgical factors or assumptions	• Largely not applicable, as ore not being processed on-site, however the ore sales contract does include penalties for deleterious elements.
Environmental	• The Scuddles Open Pit is within heavily disturbed areas of the existing mine footprint. The Ore Reserve is contained within oxidised material (non-acid forming) and within the dewatering cone of depression from the Scuddles underground mine. • The Scuddles Gold Pit is located within the existing mining tenement and is covered by the Golden Grove environmental operating licence. • Environmental permits were obtained for the development of the Scuddles Pit in 2016 after assessments on groundwater, geochemistry, flora, fauna and heritage. • The overburden from the Scuddles Open Pit is proposed to be used to cover the decommissioned Tailings Storage Facility nearby the Scuddles Pit. A detailed tailings cover design has been prepared by consultants to detail the material placement. • Golden Grove currently have one active tailings storage facility, however the Scuddles Open Pit will not produce any tailings Golden Grove operations as the ore will be sold and transported offsite to a third party. • A Mine Closure Plan (MCP) is in place, and was re-approved in 2016 by the WA Department of Mining and Petroleum (DMP). The MCP covers both land rehabilitation (and related activities) that will occur progressively throughout the mine life and the rehabilitation and decommissioning activities that will occur when mining is complete.
Infrastructure	• The Golden Grove mine site is well established with the infrastructure in place: o There is an existing accommodation camp. o The site airstrip was sealed in 2007 and is serviced by flights from both Perth and Geraldton.

Criteria	Commentary
	o Electricity is supplied from the WA grid through a southern distribution centre at Three Springs. o There is sufficient water for dust suppression for the open pits and for processing of underground ores. o The majority of the groundwater is supplied through dewatering of both the Gossan Hill and Scuddles underground mines. The site is equipped with two backup potable water bores to ensure the sites potable demand can be met. o Site has an access road that is partially sealed. Access to Golden Grove mine site is via sealed roads from Perth to Paynes Find and from Geraldton to Yalgoo. The Yalgoo to Paynes Find road is sealed between Yalgoo and Golden Grove while the remainder between Golden Grove and Paynes Find is a formed gravel road that can be closed to traffic during periods of wet weather. o Labour will be sourced from both the Perth labour market and from Mid-West country centres such as Geraldton and towns close to the mine such as Yalgoo. This includes both people employed directly through MMG and contractors providing both contracting services and/or labour hire. There is no need for additional land for any expansions.
Costs	• Golden Grove is an operating mine and has historical costs that have been used to inform the 2016 Golden Grove Budget (January 2016 to December 2016). The Ore Reserves estimation has been based on these costs in accordance with MMG's corporate guideline. • The open pit is being mined by a contractor using a schedule of rates. For the Ore Reserve a bench by bench financial model has been prepared. • Administration and other costs are based on historical site and budget forecast costs. There are no processing costs as the material is sold as Run-of-Mine (ROM) ore to an external party. • The Ore Reserves used information supplied by MMG Corporate in regards to metal prices and economic assumptions. • No exchange rates were applied. • There are no freight, shipping and insurance charges. • There are no treatment and refining charges. • Allowances have been made for the royalties. The impact of any future mining tax is unknown.
Revenue factors	• For cost assumptions see section above – "Costs" • The assumed gold and silver price, A$1600/oz and A$20/oz respectively, is the same as that reported in the Cut-off parameters section. These prices are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy and reflect the short term nature of the ore sales contract. • In US$, this equates to a gold and silver price, US$1168/oz and US$15/oz respectively, at an exchange rate of $0.73 (A$ to US$).
Market assessment	• MMG has an ore sales contract in place that covers gold Ore production at Golden Grove. • Price forecast is based on MMG corporate finance assumption.

Criteria	Commentary
Economic	• The costs are based on historical actuals and the 2016 Golden Grove Budget and mining contract rates. Revenues are based on the ore sales contract. • The LOM financial model demonstrates the mine has a positive NPV. • The discount rate is in line with MMG's corporate economic assumptions. • Standard sensitivity analyses were undertaken for the Ore Reserves work and support the Ore Reserve estimate.
Social	• The Scuddles Gold Pit is located on the existing Golden Grove tenements within the Shire of Yalgoo in the Murchison Region of Western Australia. The nearest community to Golden Grove is the Yalgoo Township, which is situated approximately 56 km to the north of the site. The key stakeholders include the local government and community, pastoralists, employees and the Geraldton Port Authority. • Golden Grove holds the lease for the Muralgarra Pastoral Station on which the Scuddles Pit is located. The Pastoral Lease was renewed in 2015 for a period of 26 years, 8 months and 10 days. The lease provides resource access security for MMG, and will not be required after mining is completed. • There are no direct impacts to the community from the development of the Scuddles Pit due to the remote setting of the mine. The community is engaged in mine developments through a stakeholder management plan including routine engagement with key stakeholders. • Golden Grove (and Scuddles pit) is located in an area that has had claims by two Indigenous Native Title claimant groups. All Golden Grove tenements that overlay the Native Title Claims were granted prior to the enactment of the Native Title Act (1993). As such, no formal land access agreements are required however, Golden Grove continues to fulfil its statutory heritage responsibilities in line with the Aboriginal Heritage Act (1972) and the Aboriginal and Torres Strait Islander Heritage Protection Act (ATSHIP 1984). • There are a number of Department of Aboriginal Affairs (DAA) registered aboriginal heritage sites located on Golden Grove leases. Heritage Management Plans are in place for all relevant sites in consultation with the local Indigenous Groups. • All existing government approvals are in place for the continued mining of the Ore Reserve. The two key approvals are Operating Licence L8593/2011/2 issued by the WA Department of Environment Regulation (DER) and Mining Proposal ID 55745 approved by the WA DMP. • All mining activities occur on tenement M59/03 expiry date May 2032.
Other	• The Golden Grove Mine has been established since 1980 and there is no known risk that could jeopardise the realisation of the remaining Ore Reserve. • There are no outstanding material legal agreements. • An ore sales contract is in place for the life of the open pit asset. • All mining activities occur on tenement M59/3.
Classification	• The Ore Reserves classification is based on the JORC 2012 requirements. The basis for the classification was the Mineral Resource classification and cut-off grade. The in-pit Ore Reserves are classed as Probable only, in line with Mineral Resources classification of Indicated.

Criteria	Commentary
	• Inferred Mineral Resources are not included in the Ore Reserves.
Audit or reviews	• No external audit has been undertaken on this Ore Reserve.
Discussion of relative accuracy/ confidence	• Relatively small Ore Reserve with an existing ore sales contract in place. The Scuddles open pit has undergone further grade control drilling post Resource Model which supports the Ore Reserve inventory.

7.4.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 30.

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 30 Contributing Experts Golden Grove Open Pit Ore Reserve

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
Angus Henderson, Commercial Manager, MMG Ltd (Australian Operations)	Ore sales contract
Paul Boamah , Senior Mine Geologist – Resource MMG Ltd (Golden Grove)	Geological Mineral Resources
Christian Holland, Principal Geotechnical Engineer, MMG Ltd (Melbourne)	Geotechnical
Iain Goode, Superintendent Metallurgy MMG Ltd (Australian Operations)	Metallurgy
Jodi Wright, Principal Mining Engineer- Open Cut, MMG Ltd (Australian Operations)	Mine Design, scheduling
Jonathon Crosbie, Senior Life of Asset and Closure Planner, MMG Ltd (Melbourne)	Closure, Environment and Social
Joseph O'Brien, Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing

8 ROSEBERY

8.1 Introduction and Setting

3 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 8-1). The main access route to the Rosebery mine from Burnie is via the B18 and the Murchison Highway (A10).

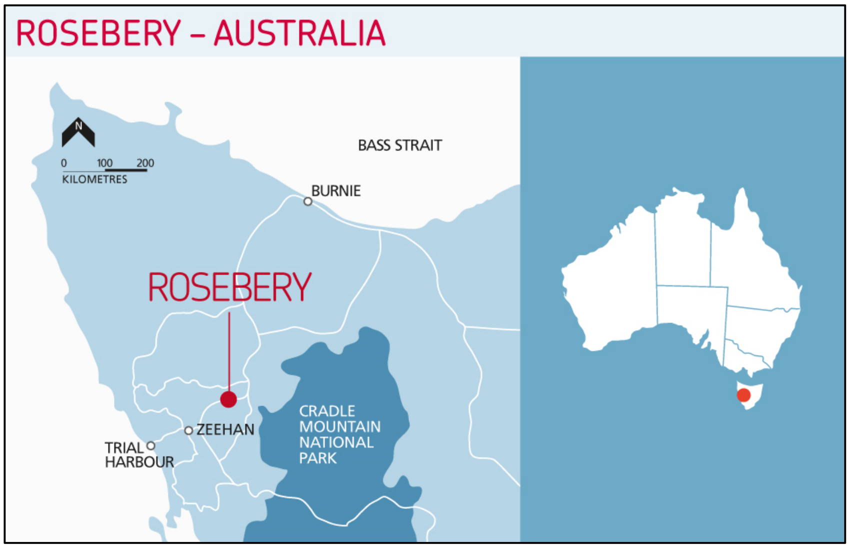


Figure 8-1 Rosebery Mine location

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 mined and processed approximately 950kt of ore for the year ending 30 June 2016.

8.2 Mineral Resources – Rosebery

8.2.1 Results

The 2016 Rosebery Mineral Resources are summarised in Table 31. The Rosebery Mineral Resources is inclusive of the Ore Reserves.

Table 31 2016 Rosebery Mineral Resources tonnage and grade (as at 30 June 2016)

Rosebery Mineral Resources											
							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)**
Measured	5.4	8.1	2.9	0.2	107	1.2	436	156	13	18.6	0.2
Indicated	5.7	7.6	2.6	0.3	102	1.2	436	147	15	18.8	0.2
Inferred	11.2	8.0	2.7	0.3	95	1.4	896	308	31	34.2	0.5
Total	**22.3**	**7.9**	**2.7**	**0.3**	**100**	**1.3**	**1,768**	**611**	**58**	**71.6**	**0.9**

Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value of A$153/t in the Lower Mine and $179 in the Upper Mine.

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

Contained metal does not imply recoverable metal.

8.2.2 Mineral Resources JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 32 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 32 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Rosebery Mineral Resources 2016

Criteria	**Status**
	Section 1 Sampling Techniques and Data
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 (>80% passing 75µm). • DD core is selected, marked and ID tagged for sampling by the logging geologist. Sample details and ID are stored in the database for correlation with returned geochemical assay results. • Pulps are delivered to the ALS laboratory in Burnie, Tasmania for XRF analysis. • There are no inherent sampling problems recognised.
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. • Drilling undertaken from 2012 is LTK48, LTK60, NQ, NQTK, BQTK and BQ in size. • 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 97% based on more than 42,000 measured intervals since 2012. Drill crews mark and define lost core intervals with blocks. Sample recovery is measured and recorded in the drillhole database. • Drilling process control 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, using laptop computers which store data directly to the drillhole database. • All drill core is photographed, labelled and stored on the Rosebery server.
Sub-sampling techniques and sample preparation	• Geological samples are prepared according to the Rosebery Work Instruction - Diamond Drill Core Sample Preparation. • 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.

Criteria	Status
	• All samples included in the Mineral Resources estimate are from diamond drill core. • From 2005 geological samples have been processed in the following manner: o Dried, crushed and pulverised to 80% passing 75µm. o 3-Acid Partial Digest (considered suitable for base metal sulphides). o Analysis of Pb, Zn, Cu, Ag, Fe by Atomic Absorption Spectrometry (AAS). o Au values are determined by fire assay. o Sizing analysis is carried out on 1:20 pulps. • From 2010 geological samples have been processed in the following manner: o Dried, crushed to 2mm; cone split to give primary and duplicate samples with the remainder rejected. Pulverised to 80% passing 75µm. o Despatch to ALS Burnie. o Sizing analysis is carried out on 1:20 pulps. o Analysis of Pb, Zn, Cu and Fe by X-Ray Fluorescence (XRF) applying a lithium borate oxidative fusion (0.2g sub-sample charge). o Analysis of Ag by aqua regia digest and Atomic Absorption Spectrometry (AAS) (0.4g sub-sample charge). o Analysis of Au by fire assay, three acid digest and flame assay AAS (30g sub-sample charge). • Sample representivity is checked by sizing analysis and duplication at the crush stage. • Sample size is considered appropriate for the grain size of the material being sampled.
Quality of assay data and laboratory tests	• The assaying methods include XRF for Pb, Zn and Cu; 3-acid digest with AAS for Ag, and fire assay with AAS finish for Au. These methods are considered effectively total and suitable for Mineral Resources estimation at Rosebery. • Laboratory quoted detection limits are as follows: Pb 0.01% Zn 0.01% Cu 0.01% Ag 1ppm Au 0.01ppm Fe 0.01% • 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 Burnie releases its QAQC data to MMG for analysis of internal ALS

Criteria	Status
	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 1:25 to normal assays. - Blanks are inserted to check crush and pulverisation performance. - Field Duplicates are taken as quarter core, coarse crush and pulp repeats. - Independent audit of the ALS Burnie laboratory and MMG Rosebery sample preparation area was undertaken in April 2013 by Coffey Mining Pty Ltd. Outcomes from the audit included: o The ALS analysis methods are sound. o There is a bias (up to 3% relative below expected) in the zinc, lead and copper assays for the MMG submitted certified reference material (CRM). o Sizing analysis shows that 96% of samples have at least 80% passing 75µm. o All recommendations from the audit have been implemented. - The most recent sizing analysis of pulverised samples since April 2015 shows that 100% have at least 80% passing 75µm. - QA/QC and analysis history: o 1996: Commenced use of three locally-sourced internal reference standards. o 2008: Commenced use of certified matrix-matched reference materials, duplicates and blanks. o 2010: Change to XRF analysis for Zn, Pb and Cu following a review suggesting results would be more accurate (lower bias) than 3-acid digest and AAS method previously applied. o 2013: Commenced internal reviews and reporting of monthly QAQC. Instigation of umpire laboratory pulp re-assays. Installation of Boyd crusher cone splitter. o 2014: Review and upgrading of QAQC and sample preparation procedures. o 2015: Updated database software allowing review of batch QAQC upon import. o 2016: Ongoing database system development focussed on QAQC procedures.
Verification of sampling and assaying	- High grade intersections within low grade areas, or high grade intersections in new areas, are viewed and verified by numerous company personnel. - Batches of sampling and assay data is 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 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.

Criteria	Status
	• 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	• All current diamond drillholes are downhole surveyed using a single-shot Reflex Ezi-shot tool at 30m intervals, with a full downhole Reflex gyro survey 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 will be completed. • Collar positions of underground drillholes are picked up by Rosebery mine surveyors using a Leica TPS 1200. Collar positions of surface drillholes are picked up by contract surveyors using differential GPS. • Selected surface exploration holes have been downhole surveyed using a SPT north seeking gyro (parent holes only). • A downhole gyro measurement has been recorded from selective drillholes since March 2014 as an independent check of downhole survey accuracy. Initial analysis suggests 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. • Grid system used is the Cartesian Rosebery Mine Grid, offset from Magnetic North by 23°75' with mine grid origin at AMG E= 378870.055, N= 5374181.69; mine grid relative level (RL) equals AHD + 1.490m + 3048.000m. • Topographic control updated by five yearly LIDAR overflights carried out and correlated with surface survey datum.
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 is 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 is 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

Criteria	Status
	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.
Sample security	• Measures to provide sample security include: o Samples are stored in a locked compound with restricted access during preparation. o Pulps 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. o Receipt of samples acknowledged by ALS by email and checked against expected submission list. o Assay data returned separately in both spreadsheet and PDF formats.
Audit and reviews	• Coffey Mining Pty Ltd completed an audit of the core sample preparation area in April 2013. Key results are included in the 'Quality of assay data and laboratory tests' section above. • Internal reviews of all aspects of the data acquisition process are conducted annually.
Section 2 Reporting of Exploration Results	
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 through

Criteria	Status
	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 M t. 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 stratabound massive to semi-massive base metal sulphide lenses between the Rosebery Thrust Fault and the M t. Black Thrust Fault; the host lithology and the adjoining faults all dip approximately 45 degrees east.
Drillhole information	• The Mineral Resources database consists of 5,700 diamond drillholes providing 203,000 samples. • No individual drillhole is material to the Mineral Resources estimate and hence this geological database is not supplied. • No exploration drilling took place in the 2015-2016 reporting period.
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 Resources estimate and hence diagrams are not provided. • No exploration drilling took place in the 2015-2016 reporting period.
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	• Surface geochemical sampling has been planned for late 2016 or early 2017. • Further underground near mine exploration drilling is being assessed.

Criteria	**Status**
Section 3 Estimating and Reporting of Mineral Resources	
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 spreadsheets provided by the laboratory. • 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 2016 Competent Person for Mineral Resources visits site on a regular basis.
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 2016 Mineral Resources estimate is described below: o Interpretation of mineralised lenses has been based on a statistical data clustering method (k-means clustering). Assayed Zn-Pb-Ag-Au-Cu-Fe values are used to assign each data point to k=20 groups, with the variance of each group minimised. The K means application of ioGAS statistical software package was used for the analysis. o The initial k=20 groups were further grouped on the basis of similar statistical properties. A final set of 5 domains, namely HIGH, MEDIUM, LOW, WEAK and NON-MINERALISED, was defined using the grouped k-means clusters. Summary statistics show that the 4 mineralised domains are distinct in terms of Zn, Pb, Ag, Au, Cu and Fe grades. o Cross tabulation of the domain groups with logged mineralisation style data confirmed that the statistical clustering method was closely correlated to observed mineralisation style, namely massive, semi massive and disseminated sulphide mineralisation. o 3D wireframe models of each mineralisation style were created using an Indicator

<table>
<tr><th>Criteria</th><th>Status</th></tr>
<tr><td></td><td>
interpolation similar to kriging, using Leapfrog Geo v3.0 software. Key data inputs included non-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 Adam tech photo images. A close correlation between the models and points of observation is noted in most areas where data are available.
o 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.
</td></tr>
<tr><td>Dimensions</td><td>
• The Rosebery mineral deposit extends from 400mE-1800mE, 2500mN to -1100mN, 3400mRL-1900mRL (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 minimum, maximum and average thickness of the lower mine mineralised lenses are as follows:
<table>
<tr><th>Lens</th><th>Minimum (m)</th><th>Maximum (m)</th><th>Mean (m)</th></tr>
<tr><td>K</td><td>0.2</td><td>36</td><td>6</td></tr>
<tr><td>N</td><td>0.3</td><td>16</td><td>4</td></tr>
<tr><td>P</td><td>0.2</td><td>12</td><td>3</td></tr>
<tr><td>WXY (grouped)</td><td>0.3</td><td>21</td><td>3</td></tr>
</table>
</td></tr>
<tr><td>Estimation and modelling techniques</td><td>
• Grades estimation uses Ordinary Kriging (OK) as implemented in Maptek Vulcan version 9. The main inputs and parameters are described below:
o Blocks and 1m composites flagged by domain and estimated individually.
o Parent block size for estimation of 2mE x 10mN x 7.5mRL.
o Block size approximates one half of drillhole spacing in northing and RL, and is consistent with the primary sampling interval in easting (1m).
o Discretisation is 2x3x5 (X, Y, Z) for a total of 30 points per block.
o Minimum sample search number is 6 and maximum number is 24.
o Octant search methods were not used.
o The block model covers the entire Lower Mine area.
o No grade capping or other restrictions to high grade data were applied.
o A second estimation pass was used to estimate blocks in sparsely sampled areas not estimated in the primary estimation.
• 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.
</td></tr>
</table>

Criteria	Status
	• 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: o Visual inspections for true fit with the high and low grade wireframes (to check for correct placement of blocks). o Visual comparison of block model grades against composite file grades. o Global statistical comparison of the estimated block model grades against the declustered composite statistics and raw length-weighted data. o Swath plots were generated and checked for K, N, P, WXY and Y lenses. The plots confirm overall consistency between data and estimates with a reasonable degree of smoothing.
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 June 2016. • Rosebery Lower Mine Mineral Resources were reported above a $153/t NSR block grade cut-off. In the Upper Mine area the cut-off grade remains unchanged from the 2015 estimate and is $179/t NSR. There has been no change to the Mineral Resources model, NSR calculation or NSR cut-off for the upper mine areas.
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. All 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, 2016. • For Mineral Resources in the vicinity of past mining areas, remnant pillars and other unrecovered Mineral Resources was identified after removing actual mined voids with a lateral margin of approximately 3m across strike and along strike. The 3m margin removed near-void skins and pillars as these are considered not to have reasonable prospects for mining. • All remnant Mineral Resources near existing voids is classified Inferred due to the uncertainty attached to the void surveys.
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

Criteria	Status
	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.
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 2016 Mineral Resources block models.
Bulk density	• 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% • A study conducted in August 1999 compared the estimated DBD against values determined using the weight in water, weight in air method and found the formula to be reliable. There has been no change to the formula in 2015-2016. • The Rosebery mineralisation does not contain significant voids or porosity. The DBD measurement does not attempt to account for any porosity.
Classification	• Mineral Resources have been classified according to the level of confidence placed in all aspects of the estimation process, including fundamental data, geological interpretation of grade continuity. • An algorithm-based approach has been used to apply a set of criteria to distinguish between areas of varying confidence. The approach is based on the reliability of the domain geometry model, which is considered most important for successful economic mining of the deposit. • The Mineral Resources classification reflects the Competent Persons view on the confidence and uncertainty of the Rosebery Mineral Resources.
Audits or reviews	• Formal reviews by QG Consulting of the 2015 estimation methodology were conducted in the period August-December 2015 and recommended several changes to modelling methodology, specifically to incorporate additional geological and grade data into 3D models of mineralisation geometry as the basis for grades estimation. • The 2016 Mineral Resources estimate methodology reflects the recommendations of the 2015 reviews.
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.

Criteria	Status
	• Twelve month rolling reconciliation figures for the Mineral Resource model to Metallurgical Balance are within 10% for all metals on 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, and in each end of month report. • 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.

8.3 Ore Reserves – Rosebery

8.3.1 Results

The 2016 Rosebery Ore Reserve are summarised in Table 33.

Table 33 2016 Rosebery Ore Reserve tonnage and grade (as at 30 June 2016)

Rosebery Ore Reserve											
							Contained Metal				
	Tonnes (Mt)	Zinc (%)	Copper (%)	Lead (%)	Silver (g/t)	Gold (g/t)	**Zinc ('000 t)**	**Copper ('000 t)**	**Lead ('000 t)**	**Silver (Moz)**	**Gold (Moz)**
Proved	3.2	8.8	0.2	3.1	110	1.3	282	8	99	11.3	0.1
Probable	2.2	7.5	0.2	3.0	118	1.3	166	5	66	8.3	0.1
Total	**5.4**	**8.3**	**0.2**	**3.0**	**113**	**1.3**	**447**	**13**	**165**	**19.6**	**0.2**
Total Contained Metal							**447**	**13**	**165**	**19.6**	**0.2**

Cut-off grade is based on Net Smelter Return (NSR), expressed as a dollar value of A$153/t where development is required.

Contained metal does not imply recoverable metal.

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

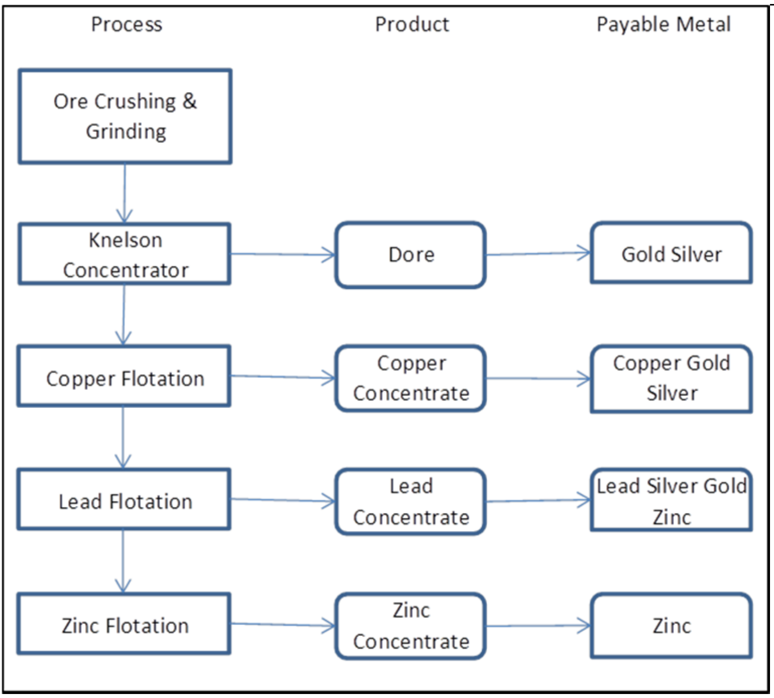
8.3.2 Ore Reserves JORC 2012 Assessment and Reporting Criteria

The following information provided in Table 34 complies with the 2012 JORC Code requirements specified by "Table-1 Section 4" of the Code.

Table 34 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Rosebery Ore Reserve 2016

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The Mineral Resources model are reported inclusive of those Mineral Resources modified to produce the Ore Reserves. • The Ore Reserves estimate has been generated by applying the metallurgical, social, environmental and financial aspects of the operations (the modifying factors) on that portion of the Mineral Resource Estimate, classified as "Measured" and "Indicated".
Site visits	• The Competent Person, Karel Steyn is a full time employee based in Melbourne Group Offices and has visited the site regularly during this year.
Study status	• The mine is an operating site with on-going detailed Life-of-Mine planning.
Cut-off parameters	• The 2016 Mineral Resources and Ore Reserves have cut-off grades calculated, based on corporate guidance on metal prices and exchange rates. The site capital and operating costs, production profile, royalties and selling costs are based on the 2016 Budget. Processing recoveries are based on historical performance. The calculation and application of the NSR cut-off grades and the Net Smelter Return After Royalities (NSRAR) are described in this report. • Costs used in assisting with the setting of the cut-off value used for the Ore Reserve estimation were based on the 2016 guidance from the MMG corporate finance group. This was considered to be a more accurate representation of the costs. • The Break-even Cut-Off grade (BCOG) is used to identify economic stopes. BCOG includes all fixed and variable cost mining, processing, administration (G&A) and sustaining capital. • The NSR cut-off is to the Mine gate. The NSRAR includes the royalty and metallurgical recoveries. • The NSR BCOG is AU$153/t.
Mining factors or assumptions	• Designs are generated around the Mineral Resource and evaluated against cut-off grade to convert the Mineral Resource to an Ore Reserve. The following assumptions are used to generate this design: o Mining production carried out by long-hole open stoping. The majority is a longitudinal retreat while some limited areas are by wider transverse stopes. This method is appropriate for mining the style of mineralisation in the view of the competent person. o The lenses are divided into panels and are mined using a bottom-up sequence in a continuous 45 degree retreating front towards the level access drives. The nature of this mining sequence causes fluctuations in the grade profile of the short term schedules. 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. o Backfilling of stope voids is carried out using two methods; Cemented Rock Fill (CRF) and Rock Fill (RF). Up-hole retreat stopes are left as an open void due to lack of access for fill placement. CRF and RF are filling methods adopted in the K,

Criteria	Commentary
	N, P, WU & X, and already developed WL & Y levels. Within large areas of CRF a local pillar was left every 60 m for stability purposes. o Stope design is carried out using the Mineable Shape Optimiser (MSO) process within the Deswik Software with stope cut-off factor of AU$143/t, allowing for a 1.5m hanging wall dilution within the designed shape. The length of each block used in MSO was set at five metres and each stope is a combination of three or four of these blocks to make a strike length of 15m or 20m. Stope strike lengths of 15 m were used in W and X Lens while the others lenses used 20m. The height was set to 20m (floor to floor) and the minimum mining width to 4.5m. This was adjusted to 4.65m for horisontal width to allow for the low dip of the ore body and to achieve the 4.5m true width. o A Mining Recovery factor of 90% and Unplanned Dilution of 0% was also applied to Ore Tonnes mined. o Access to the orebody is through a decline 5.5m x 5.5m at a 1:7 gradient. The standoff distance from orebody and stoping footwall and major infrastructure; stockpiles, vent rises, escape-ways, declines and ancillary development are 50m. o Inferred material is not included in the mine design process for ore reserve reporting. o Production of ore is in measured mineral resource only with grade control drilling programs scheduled to convert indicated mineral Resource prior to development or stoping activities. Development is strictly under survey control. Geological development control is currently not implemented at Rosebery. o The current primary ventilation system supplies approximately 669m3/s of air to the underground mine, which allow extraction from the multiple ore lenses designed.
Metallurgical factors or assumptions	• 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 key production physicals for 2016. These are based off actual data to August 2016 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 rate. Minimal stockpiles are maintained for the mill. **Tonnes (t)** | **Zinc (%)** | **Lead (%)** | **Copper (%)** | **Gold (g/t)** | **Silver (g/t)** | **Fe (%)** 943,937 | 9.4 | 3.2 | 0.31 | 1.4 | 96.8 | 7.7 • From the mill there are four saleable products generated: o Gold Doré o Copper Concentrate o Zinc Concentrate o Lead Concentrate • The flow chart below outlines the block flowsheet, products and payable metals.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>


In 2014 there was a shift in the recovery estimation away from linear estimation to the use of regression analysis based on production results from 2013 to current.
Based on the budget grades for 2016 (table above), the following recoveries are calculated from the regression analysis. These have been determined by inputting the grades into the NSR calculator spreadsheet to determine the relevant recoveries. These are summarised in the below table.

<table>
<tr><th>Product</th><th>Copper (%)</th><th>Zinc (%)</th><th>Lead (%)</th><th>Silver (g/t)</th><th>Gold (g/t)</th></tr>
<tr><td>Zinc Concentrate</td><td></td><td>87%</td><td></td><td>9%</td><td>6%</td></tr>
<tr><td>Lead Concentrate</td><td></td><td>6%</td><td>79%</td><td>39%</td><td>12%</td></tr>
<tr><td>Copper Concentrate</td><td>66%</td><td>1%</td><td>3%</td><td>42%</td><td>37%</td></tr>
<tr><td>Gold Dore</td><td></td><td></td><td></td><td>0.2%</td><td>26%</td></tr>
</table>
</td></tr>
<tr><td>Environmental</td><td>

Environmental compliance at Rosebery are regulated under Enviornmental Protection Notice (EPN) 7153/3.
Waste water – water is a key environmental risk for the site. Waste water management involves collecting and treating all potentially contaminated water (including storm water, mine water and process water) through lime dosing and sludge settlement. Treated water is discharged to Lake Pieman via a licensed and monitored discharge point. Waste rock - Waste rock is characterised for disposal as either non-acid forming (NAF), potentially acid forming (PAF) or High PAFl. Most waste rock produced is retained underground and used for stope filling, either as RF or as CRF. Any surplus NAF or PAF waste rock is trucked to the surface and deposited in the current operational waste rock dump (WRD), referred to as the 3 Level WRD. Lime is added to the WRD to improve acid neutralisation. High PAF material is disposed of underground.

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

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. This is managed by the Commercial Department 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 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 to the security of the supply to the site. • Fresh water for the site is currently sourced from Lake Pieman and the Stitt River, with allotments of 5,500 ML and 1,647 ML respectively. As part of the asset hand back to Cradle Mountain Water, the Stitt River allocation is due to be handed back 2015. This will leave Lake Pieman as the sole source of fresh water. • With mining activity taking place underground at Rosebery, access to the operating areas is by the main decline, "The Fletcher Decline". Prior to the decline connecting through to surface to becoming the Haulage route, ore was hoisted up the No. 2 shaft, extending from 17L through to discharge on 7 Level. • While there are multiple paths from the certain points underground, only one main route is used to access to 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 return air. Ore is hauled out of the mine in a fleet of 55-60 tonne 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 540 m3/s of air usefully used in the lower part of the underground mine. The system comprises of three primary fan installations on the surface and two booster fan installations underground. The specifications of these fan installations are detailed below: o PSF1 (New NUC)) are 2 x 1800 kW Howden centrifugal fans. Duty is 400 m3/s. o PSF 2 (Old NUC) is a single centrifugal fan. Duty is 98 m3/s. o PSF 3 (SUC) are 2 x 500 kW Korfmann KGL 2600 mm axial fans in parallel. Duty is 161 m3/s. o The 33P Booster fan is a Flaktwoods 550kW 2600 VP axial fan. o 19B Booster fans are 1 x Twin 90 kw & 1 x Twin 110 kW CC1454 secondary fans mounted in parallel. • The main intake airways of the mine are the decline portal, No.2 Shaft and the NDC shaft. • Concentrate is transported using the Emu Bay Railway, which is a freight only line that connects the West Coast area to the port in Burnie.

Criteria	**Commentary**
	• The current operational tailings storage facility (TSF) is scheduled to reach capacity towards the end of 2017. A second TSF has been approved by the regulator and is currently under construction. The second TSF will provide sufficient tailings storage capacity for the Ore Reserve. Other Rosebery site infrastructure includes mineral processing facilities (mill, concentrator, filtration and rail load-out), and buildings (offices, workshops, change-house).
Costs	• Costs used in assisting with the setting of the cut-off value used for the Ore Reserves estimation were based on the 2016 Rosebery Budget. Costs include operating and sustaining capital. • All applicable inflation rates, exchange rates, transportation charges, smelting & refining costs, penalties for failure to meet specification and royalties are included as part of the NSRAR calculations evaluated against the block model to estimate projected value. • No deleterious elements of economic significance occur in the concentrates.
Revenue factors	• Commodity prices and other economic parameters are provided by MMG corporate and are based on external company broker consensus and internal MMG strategy as stated in Section 2.1. • The formulas and assumptions used in the NSRAR calculation are based on the historical data provided by the Rosebery Metallurgy Department. • The economic evaluation was carried out to verify whether the stope designed using the NSR cut-off generate economic revenue. The mining physicals required to access and mine individual stopes were determined during the mine design process. The cost assumptions were applied to the mining physicals and the revenue was calculated by multiplying the recovered ore tonnes by the applicable NSRAR value. The profitable and marginal stopes were included in the Ore Reserve.
Market assessment	• MMG's long-term view on global consumption of metals is that demand will increase as developing economies undertake further industrialisation and economic growth prospects improve in advanced economies. • Global zinc production is expected to contract in 2016 following the 2015 closure of major mines including Century and Lisheen due to resource exhaustion and/or adverse economic conditions driven by low zinc prices. Although the zinc price has improved during the course of 2016, most of the idled production currently remains shut. • The zinc market is also characterised by the relatively few new mine developments coming online in the short term, those that are being assessed only have modest capacity. There is a scarcity of high-grade and large-scale deposits driven by historical under-investment in exploration and the nature of zinc deposits. Future zinc supply will likely come from lower-grade, high-cost underground mines as current reserves are depleted. • The mine closures referred to above have resulted in the zinc market showing a significant concentrate shortage in 2016. This shortage of concentrate will constrain refined zinc production, leading to a reduction in the refined zinc stocks that overhang the market. • There is potential for elevated manganese levels to occur in some zinc concentrate batches. The impact of deleterious elements has been taken into account in the project economics and marketing plans.

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Economic</td><td>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 Mine (LOM) financial model demonstrates the mine has a positive NPV calculated. The discount rate is in line with MMG's corporate economic assumptions.</td></tr>
<tr><td>Social</td><td>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 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 Stakeholder Relations Officer for action. The Stakeholder Relations Officer makes direct contact with the complainant to understand the issue. Once details are understood the Stakeholder Relations Officer then communicates with the department concerned to resolve the matter. All complaints are registered within StakeTracker (the community engagement tool), where corrective actions are initiated and monitored.
During the 2015/2016 reporting period, a total of fourteen complaints was received. Only five complaints pertained to noise or vibration. Two of the noise complaints were attributed to train loading activities, while three were attributed to construction activities at a tailings storage facility. All complaints were investigated and resolved in consultation with the complainant.</td></tr>
<tr><td>Other</td><td>Rosebery is currently going through an approval process for an expansion of the Ttails storage facility Stage 1 (Dam 2/5) has been approved and constructed. The permit is being sought for stages 1 and 2, however, there is potential for a stage 3, should the Rosebery Mineral Resources be further expanded. The table below outlines the expected tails storage capacities at the start of 2016 for Bobadil and at the completion of the stage lifts for Dam 2/5.
<table>
<tr><th>Location</th><th>Tailings Capacity (Tonnes)</th><th>Comment</th></tr>
<tr><td>Bobadil</td><td>1,000,000</td><td>Forecast 2017 Q1 completion</td></tr>
<tr><td>Bobadil</td><td>TBD</td><td>Expect additional 1 Mt from tails plan refinement</td></tr>
<tr><td>Dam 2/5 – Stage 1</td><td>2,000,000</td><td></td></tr>
<tr><td>Dam 2/5 – Stage 2</td><td>3,000,000</td><td></td></tr>
<tr><td>Dam 2/5 – Stage 3</td><td>TBD</td><td></td></tr>
<tr><td>Bobadil Future</td><td>TBD</td><td></td></tr>
</table>
The status of approvals and communication with the government is provided in the table below. All projects have been approved in a timely manner with close communication maintained by the Environmental Protection Agency (EPA).</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td></td><td>
<table>
<tr><th>Nature of change</th><th>Status</th><th>Details</th></tr>
<tr><td>Stage 9b embankment lift</td><td>Planned</td><td>Has been approved by the EPA and Assessment Committee for Dams Construction (ACDC) through Environmental Protection Notice 9139/1 and is scheduled to commence in October 2015.,</td></tr>
<tr><td>New tailings storage facility to replace Bobadil</td><td>Planned</td><td>MMG is currently preparing a Development Proposal and Environmental Management Plan (DPEMP) which will be submitted to the EPA for approval prior to construction of the facility.</td></tr>
</table>
The table below details the current surface waste stockpiles, and lists those that could be used for backfill activities prior to closure. Some waste rock dumps are located under existing infrastructure, and could not be recovered prior to closure on the mine.
<table>
<tr><th>Location</th><th>Closure Estimate
(Tonnes)</th><th>Assume Available*
(Tonnes)</th></tr>
<tr><td>WRD Assay Creek</td><td>330,000</td><td>330,000</td></tr>
<tr><td>WRD Overflow Car-</td><td>220,000</td><td>-</td></tr>
<tr><td>WRD behind 7L</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</td><td>60,000</td><td>60,000</td></tr>
<tr><td>WRD next to Geo</td><td>130,000</td><td>130,000</td></tr>
<tr><td>WRD next to Services</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>
<i>* Assumes available for backfill activities prior to closure, WRD location not impacting the required infrastructure</i>
</td></tr>
<tr><td>Classification</td><td>
Ore Reserve classification follows the Mineral Resource classification where Proved Ore Reserves are only derived from Measured Mineral Resources 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 as being in accordance with the JORC code and is appropriate for the classification of the Rosebery Ore Reserve.
Where stopes contain more than one Mineral Resource category, then the individual classification components have been reported as outlined above.
</td></tr>
<tr><td>Audit or reviews</td><td>
The Geology Department 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.
Mineral Resource block models were validated during the design and evaluation process.
The 2016 Ore Reserves estimates has been reviewed and validated by Mark Slater, Senior Mining Consultant from MEC Mining; in coordination with Corporate group GTS-MMG.
</td></tr>
</table>

Criteria	Commentary
Discussion of relative accuracy/ confidence	• The key risks that could materially change or affect the Ore Reserve estimate for Rosebery include: o Tailing storage plans to be finalised to support tailings storage beyond 2017. Studies are well advanced on this project. o Potentially acid forming (PAF) waste rock characterisation to support a proposed waste rock dump. o Seismicity: The Rosebery mine has had several 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. • Close-spaced drilling is applied to locally define tonnage and grade before mining. Ore Reserves are based on all available relevant information. o The Proved Ore Reserve is based on a local scale and is suitable as a local estimate. o The Probable Ore Reserve is based on local and global scale information. • This Ore Reserve is based on the results of an operating mine. The confidence in the estimate is compared with actual production data.

8.3.3 Expert Input Table

A number of persons have contributed key inputs to the Ore Reserves determination. These are listed below in Table 35.

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 35 Contributing Experts – Rosebery Ore Reserves

EXPERT PERSON / COMPANY	AREA OF EXPERTISE
James Pocoe, Principal Geologist MMG Ltd (Melbourne)	Geological Mineral Resources
Joseph O'Brien, Senior Analyst Business Evaluation, MMG Ltd (Melbourne)	Economic Assumptions
Steve Whitehead, General Manager Marketing, MMG Ltd (Melbourne)	Marketing, Sea freight and TC/RC
Kevin Rees, Principal Metallurgist, MMG Ltd (Melbourne)	Metallurgy
Goerge Zacharias, Superintendent Commercial, MMG Ltd (Australian Operations)	Mining capital and operating Costs
Christian Holland, Principal Geotechnical Engineer, MMG Ltd (Melbourne)	Geotechnical
Mark Slater, Senior Mining Consultant, MEC Mining	Mining Parameters, Cut-off estimation
Donna Noonan, Principal Closure Planning, MMG Ltd (Melbourne)	Environmental
Stephen , Senior Engineer, MMG Ltd (Australian Operations)	Mine Design, Scheduling

9 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.

10 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.

11 AVEBURY

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.

12 EXTERNAL REFERENCES

Easterbrook, B. E., 1962. History and development of the Read-Rosebery mining district: *Mining and Chemical Engineering Review, v. 54, pp. 36-40*.

Martin, N., 2004. Genesis of the Rosebery Massive Sulphide Deposit, Western Tasmania, Australia. *PhD. University of Tasmania*.

Smith, S. G., Olberg, D., and Manini, A. J., 2005, The Sepon gold deposits, Laos: exploration, geology and comparison to Carlin-type gold deposits in the Great Basin: Geological Society of Nevada Symposium, Reno, Nevada, 2005.