# **BMO Global Metals and Mining Conference**

February 2020



WE MINE FOR PROGRESS

> MINING WITH PRINCIPLES

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This presentation should be read in conjunction with MMG Limited's interim results announcement for the six months ended 30 June 2019 issued to the Hong Kong Stock Exchange and the Australian Securities Exchange on 21 August 2019 and the 4th Quarter Production Report for the 3 months ended 31 December 2019 and issued to the Hong Kong Stock Exchange and the Australian Securities Exchange and the Australian

## Safety, Environment and Social Performance



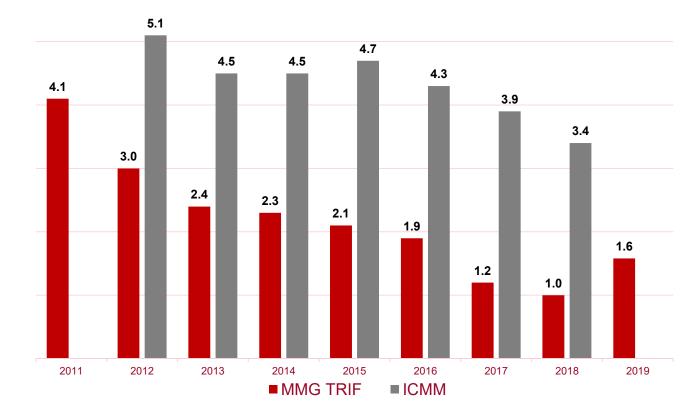
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#### Safety performance

- Safety our first value
- Continued strong Total Recordable Injury Frequency (TRIF<sup>1</sup>) rate compared with other ICMM<sup>2</sup> member companies
- Committed to ICMM's 10 principles of Sustainable Development and Performance Expectations
- We mine for progress. Contributing to the development of our host countries and communities
- Tailings Storage Facilities risk management approach significantly enhanced since 2015 – detailed Tailings Storage Facilities disclosure available at <u>www.mmg.com</u>

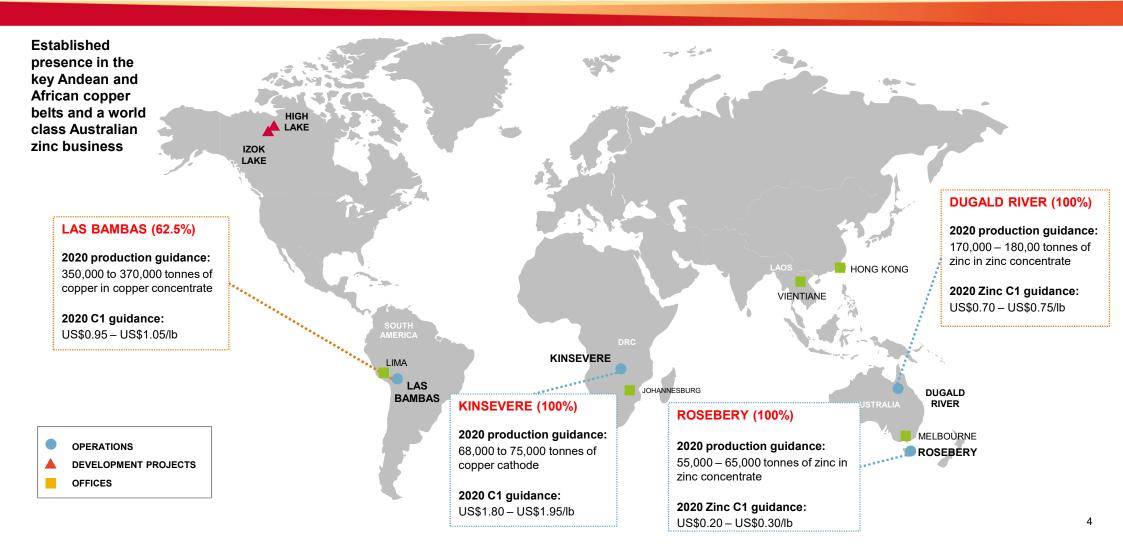
1. Total recordable injury frequency per million hours worked

2. International Council on Mining and Metals – data is the ICMM average TRIF of 23 companies



#### MMG asset base





## **Copper and zinc market update**



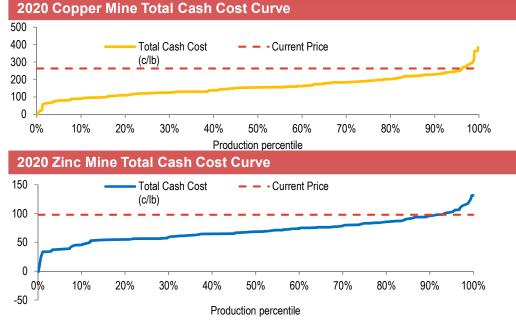


#### Near term impacted by Coronavirus shock...

- **Copper traded as a proxy for global growth.** Investors use it to express a view (liquid, easy to trade).
- Global manufacturing and Chinese copper end use demand indicators had started to improve off multi-year lows before the outbreak of 2019-nCoV. Short term demand impact still being evaluated

#### ...long term unchanged - structural demand tailwinds and limited supply

- Supply challenges: New projects / expansions continue to be delayed or shelved –more complex projects, declining grades, sovereign risk and govt. expectations, environmental, community and employee expectations, cost pressures.
- **Demand growth** EV & renewable energy demand, urbanisation, One Belt One Road.



Copper and zinc spot prices trading well into the cost curve

- Copper spot price currently ~95<sup>th</sup> percentile of cost curve (~5% of mines currently cash negative). Spot price has averaged a >40% premium to marginal cost of production (90<sup>th</sup> percentile of C1 cost curve) since 1990.
- Zinc spot price currently ~90<sup>th</sup> percentile of cash cost curve. Price has traded above marginal cost since 2005. Total zinc consumption expected to be broadly flat again in 2020 and TC's to remain elevated. However, Chinese smelters ramping back up to full capacity and record Zn concentrate imports in 4Q19 points to an improvement in concentrate market dynamics.

#### Las Bambas update



#### 2020 outlook

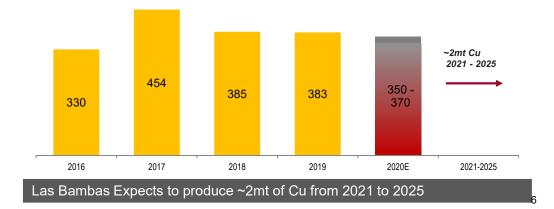
- 2020 represents a year of transition, with the focus on continuing to increase mining volumes to open up additional operating faces, completion of the third ball mill and the development of the Chalcobamba pit.
- Following some initial permitting delays at Chalcobamba, work is now progressing and ore from this pit is expected to come into production in 3Q2020
- Production guidance of 350-370kt of copper; C1 guidance US\$0.95 1.05/lb.

#### Medium term outlook

- Las Bambas is now expected to deliver around two million tonnes of copper production in the five-year period from 2021 to 2025.
- This extends the previous guidance of two million tonnes in the first five years and is significantly above the acquisition mine plan.
- The improved medium-term outlook is a result of development of the Chalcobamba pit and a series of initiatives including revisions to the mine sequence; investment in additional mine fleet to support higher material movement; debottlenecking works; and the installation of a third ball mill.
- Beyond 2025, the Company remains confident that a strong production profile can be maintained. This view is underpinned by the highly prospective nature of the Las Bambas tenement and supported by positive drilling results (see following slide).



Las Bambas has been established as one of the lowest cost copper operations of this scale in the world. 20+ year mine life based on current reserves with significant geological potential to support mine life extension/expansion.



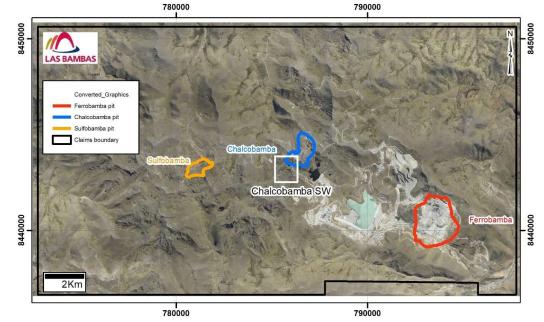
## Las Bambas drilling results



Drilling at Las Bambas is confirming the outstanding quality and continuity of the previously reported high-grade intercepts (>1% Cu) at the Chalcobamba Southwest Zone (within 300 metres to the south-west of the current Chalcobamba Ore Reserve pit). Further works expected to show that the mineralisation is continuous with the main Chalcobamba mineralisation and could drive expansion of the pit design.

#### Drilling highlights include:

- Hole CHS19-089: 82.50m @ 1.68% Cu from 68.5m 17.90m @ 1.35% Cu from 157.0m 49.15m @ 4.84% Cu from 177.8m 16.20m @ 0.32% Cu from 278.0m
- Hole CHS19-058: 40.4m @ 1.53% Cu from 22.0m
   65.6m @ 3.19% Cu from 65.5m
   49.15m @ 4.84% Cu from 177.8m
   39.5m @ 0.99% Cu from 352.0m
- Hole CHS19-081: 8.80m @ 0.73% Cu from 153.2m 37.2m @ 1.34% Cu from 171.0m 45.0m @ 1.28% Cu from 228.0m 16.7m @ 2.09% Cu from 279.0m 12.0m @ 1.01% Cu from 320.0m



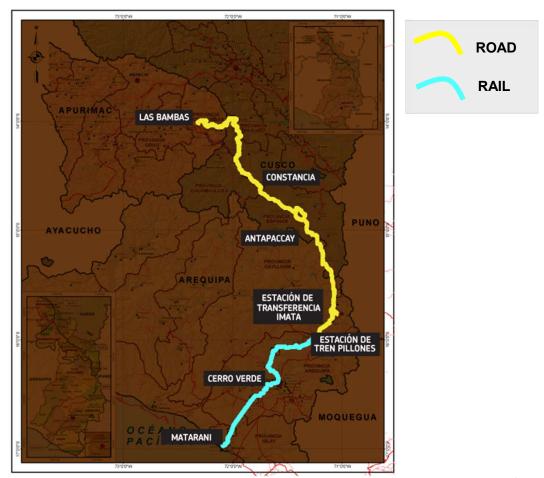
Outline of Las Bambas Mining Concessions highlighting the location of Reserves and Resources as well as the Chalcobamba Southwest Zone exploration area.

The information referred to in this slide has been extracted from MMG's 2019 Fourth Quarter Production Report published on 22 January 2020 and is available to view on www.mmg.com. This report includes JORC compliant Table 1 assessment and reporting criteria for Las Bambas exploration activity.

## **Peru Logistics & Las Bambas Social Challenges**



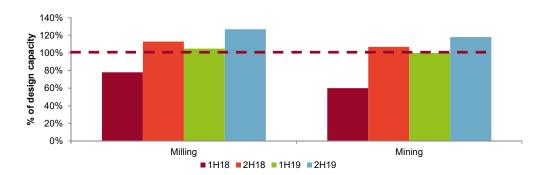
- Las Bambas operations interact with 3 regions, 4 provinces, 14 districts and more than 70 communities (17 with direct area of influence and approx. 53 others along 450km road to rail transfer station).
- Located in Apurimac region, once Peru's least developed and now its fastest growing.
- Peru's southern mining corridor has experienced heightened community unrest in 2019. While Las Bambas maintains a positive relationship with most communities, we continue to face increasing road blocks with demands for the negotiation of benefit agreements, road compensation and inclusion within the statutory area of direct influence. Following extended blocks specific to Las Bambas over the past 12 months, dialogue tables continue to progress with community, government and company.
- Transport continues while demands (compensation, 'framework' agreements and amnesties) are heard. As at 31 December 2019 there was ~50kt of copper stockpiled on site that will be progressively drawn down and shipped over the first half of 2020.
- Las Bambas' approach to social management is based on building strong, trusting, relationships. Since 2010, Las Bambas has invested more than US\$360 million in social development programs. This is in addition to the US\$250 million in royalties and >US\$200 million in improving the national road used for its logistics.



## **Dugald River update**



- Record Zn production of 48kt in 4Q19. Processing plant has operated above design capacity in all seven quarters since commercial production (May 2018).
- 2020 guidance 170-180kt pa and C1 cost of US\$0.70-0.75/lb. Impact of higher Zn TCs to be partially offset by higher production volumes.
- A focus on mine development during 2019 will facilitate increased reliance on stope ore to feed the mill in 2020.
- De-bottlenecking and optimisation works anticipated to increase mine capacity from 1.75 million to over 2 million tonnes per annum by 2022. This will pave the way for increased zinc equivalent production, toward 200kt per annum.







Processing plant ramp up at industry leading rates. Mine development continues to be a focus for 2020

## 4Q / 2019 Production summary and highlights



	MONTHS ENDER	4Q19 VS 4Q18	4Q19 VS 3Q19	YTD19	YTD19 VS YTD18
Copper cathode (tonnes)		134010	10 0010	TIDIS	101010
Kinsevere	20,438	11%	11%	67,935	-15%
Total	20,438	11%	11%	67,935	-15%
Copper (contained metal in concentrate, tonnes)					
Las Bambas	99,702	-11%	3%	382,518	-1%
Rosebery	431	5%	14%	1,510	3%
Total	100,133	-11%	3%	384,028	-1%
Zinc (contained metal in concentrate, tonnes)					
Dugald River	48,247	16%	2%	170,057	15%
Rosebery	22,566	22%	6%	83,463	10%
Total	70,813	18%	3%	253,520	14%
Lead (contained metal in concentrate, tonnes)					
Dugald River	6,766	28%	18%	23,154	39%
Rosebery	6,813	12%	21%	24,549	-15%
Total	13,579	19%	19%	47,703	5%
Molybdenum (contained metal in concentrate, tonnes)					
Las Bambas	241	-46%	-48%	1,783	-9%
Total	241	-46%	-48%	1,783	-9%

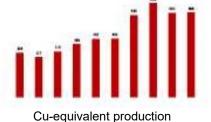
#### Key highlights

- Las Bambas produced 382,518 tonnes of copper in copper concentrate in 2019. This was despite community road blocks impacting logistics for over 100 days during the year. The resulting disruption to mine operations reduced production by approximately 20,000 tonnes of copper in concentrate in 2019.
- Dugald River produced 170,057 tonnes of zinc in zinc concentrate in 2019. Fourth quarter
  production of 48,247 tonnes was a record for the operation supported by record mining
  rates.
- Kinsevere produced 20,438 tonnes of copper cathode during the fourth quarter, an 11% increase on the prior period. Full year copper cathode production was 67,935 tonnes.
- Rosebery produced 22,566 tonnes of zinc in zinc concentrate for the quarter and 83,463 tonnes for the full year. Record mining and milling volumes, in excess of one million tonnes for the second consecutive year were the result of a series of operational improvements.
- In 2020, MMG expects to produce between 418,000 and 445,000 tonnes of copper and between 225,000 and 245,000 tonnes of zinc. This is slightly below 2019 levels, due to lower grades at Las Bambas prior to the commencement of mining at the Chalcobamba pit and lower grades at Rosebery.
- C1 unit costs are expected to be broadly in line with or below 2019 levels, with a significant group wide focus on cost and efficiency initiatives.
- An improved medium-term outlook for Las Bambas and plant throughput increases at Dugald River present a very positive medium-term production outlook.
- A significant and successful drilling program continues around existing operating hubs with drilling at Las Bambas confirming the outstanding quality and continuity of the previously reported high-grade intercepts (>1% Cu) at the Chalcobamba Southwest Zone. Drilling at the Mwepu Project in the DRC led to the identification of significant new copper and cobalt oxide mineralisation.

# The first 10 years – building a great company



Group (M including Golden Gi and Sepo the Dugal and Izok (	ld River	includes ti mine and developm	nited which he Kinsevere Mutoshi ent project in cratic Republic	MMG comp secondary I on the Aust Securities I	listing tralian	Sale of Avebury Nickel Mine Tasmania	Sale of Golden Grove to EMR Capital		Sale of Sepon to Chifeng Gold	
JUN 2009	DEC 2010	MAR 2012	AUG 2014	DEC 2015	JUN 2016	JUL 2017	FEB 2017	MAY 2018	NOV 2018	JUN 2019
	on the Ho Securities	Exchange as Resources	MMG Ltd, Internatio CITIC pure Las Bamb from Gler	nal and chase the vas project	Commerci Productio reached a Las Bamb	n t	Sale of Century Mine to create 'New Century Resources'	Commercial Production achieved at Dugald Rive		10 Year Anniversary





International footprint



Mine life



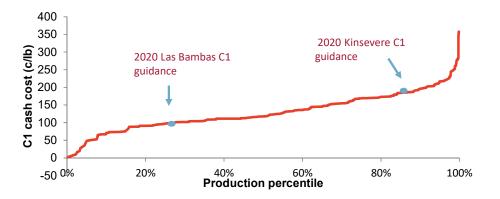
opportunities

Safety & social contribution 11

## World-class assets and strong support from China

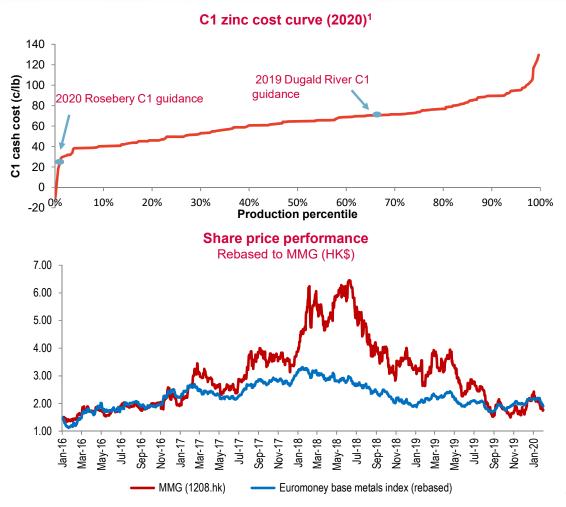


- Free Cash Generation of ~US\$2.6b since Las Bambas commercial production has been used for debt reduction to create value for our shareholders
- Delivered strong growth in Cu equivalent production over 5 past years. Recent asset sales and efficiency initiatives have created a strong platform for further growth
- Significant brownfield project potential at Las Bambas and Kinsevere
- Ongoing support from our Chinese funding partners



C1 copper cost curve (2020)<sup>1</sup>

1. Wood Mackenzie Q4 2019 Composite C1 Cash Cost Curve. MMG consolidated C1 based on Las Bambas and Kinsevere guidance.





*"The right time to conduct a strategic and systemic review of the business to deliver a step change in operational performance and business costs."* 

1. Reduce Overheads and Improve Efficiency	Maximise benefits of a decentralised operating management structure through efficient administration and diligent management of material risks.
2. Optimise the Operating Businesses	Competitiveness improvement focus running through each operating business. Maximise value from assets over the medium term
3. Strong balance sheet, with China support	Evolve toward 'fit for purpose' balance sheet for

3. Strong balance sheet, with China support remaining a key competitive advantage

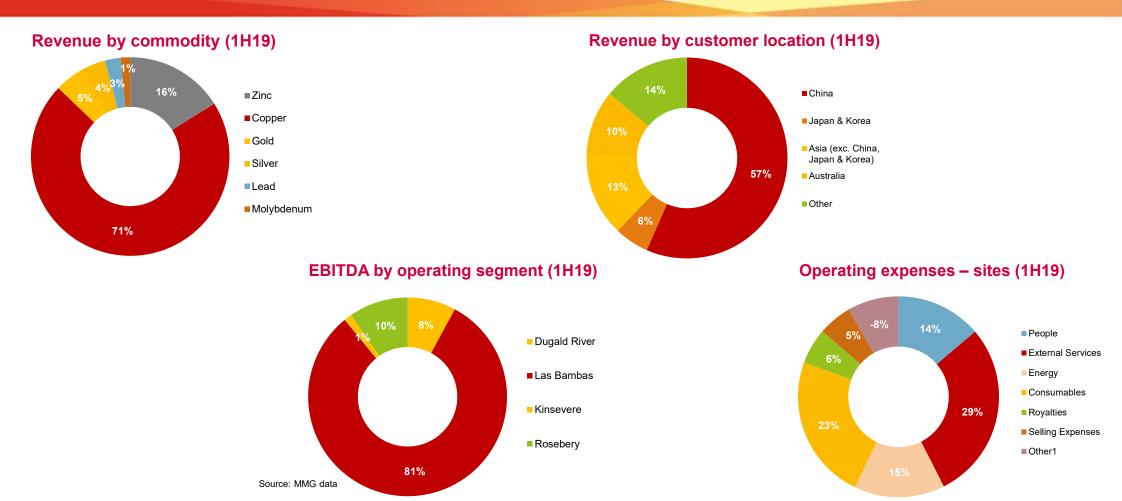
Evolve toward 'fit for purpose' balance sheet for business of today and capacity to fund future growth

# Appendix



## **Financial dashboard**





1. Other mainly includes stock movement, operating lease rental expense and other production expense.

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## **Profit or Loss Statement**



6 months ended 30 June	2019 US\$ million	2018 US\$ million
Revenue	1,387.4	1,898.8
Operating expenses	(726.7)	(901.2)
Exploration expenses	(13.4)	(15.2)
Administration expenses	(11.5)	(22.8)
Other income / (expenses)	10.9	24.6
EBITDA	646.7	984.2
Depreciation and amortisation expenses	(451.3)	(406.8)
EBIT	195.4	577.4
Net finance costs	(266.4)	(250.0)
(Loss)/profit before income tax	(71.0)	327.4
Income tax expense	(2.0)	(138.6)
(Loss)/profit after income tax from continuing operations	(73.0)	188.8
Profit after income tax from discontinued operation	-	4.6
(Loss)/profit for the period	(73.0)	193.4
Attributable to:		
Equity holders of the Company	(81.0)	128.7
- From continuing operations	(81.0)	124.2
- From discontinued operations	-	4.5
Non-controlling interests	8.0	64.7
- From continuing operations	8.0	64.6
- From discontinued operations	-	0.1
	(73.0)	193.4

## **Balance Sheet**



US\$ million	30 June 2019	31 Dec 2018
Non-current assets	11,785.2	11,982.6
Current assets – cash and cash equivalents	242.0	601.9
Current assets – other	876.0	670.9
Total assets	12,903.2	13,255.4
Total equity	2,799.9	2,896.3
Non-current liabilities – other	1,570.5	1,486.8
Non-current liabilities – borrowings	7,149.2	7,446.4
Current liabilities – other	659.2	740.9
Current liabilities – borrowings	724.4	685.0
Total liabilities	10,103.3	10,359.1
Total equity and liabilities	12,903.2	13,255.4
Net current liabilities	(265.6)	(153.1)

#### **Statement of Cash Flow**



US\$ million - Six months ended	30 June 2019	30 June 2018
Receipts from customers	1,558.6	2,216.8
Payments to suppliers and employees	(1,101.4)	(1,262.6)
Payments for exploration expenditure	(13.4)	(15.2)
Income tax (paid)/ refunded	(153.8)	2.5
Net cash generated from operating activities	290.0	941.5
Purchase of property, plant and equipment	(147.5)	(101.8)
Other investing activities	(1.0)	116.9
Net cash (used in)/generated from investing activities	(148.5)	15.1
Proceeds from borrowings	130.0	150.0
Repayments of borrowings	(391.0)	(872.8)
Payments on redemption of convertible redeemable preference shares	-	(338.0)
Proceeds from shares issued upon exercise of employee share options	0.9	11.2
Lease payments	(20.5)	-
Interest and financing costs paid	(228.9)	(187.2)
Interest received	8.1	5.4
Net cash used in financing activities	(501.4)	(1,231.4)
Net decrease in cash and cash equivalents	(359.9)	(274.8)
Cash and cash equivalents at 1 January	601.9	936.1
Cash and cash equivalents at 30 June	242.0	661.3

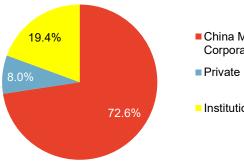
#### **MMG overview**



#### **Overview**

- Founded in 2009, MMG is a diversified base metals company with four operating mines located across four continents
- Headquartered in Melbourne (Australia), with a primary listing on the HKEx (1208 HK)
- Primary exposure to copper and zinc, with smaller exposures to gold, silver, lead and molybdenum
- MMG's flagship asset, Las Bambas, will produce >2mt of copper over its first 5 years. Dugald River reached commercial production in May 2018 and will produce ~170kt of zinc per annum at steady state.

#### Shareholder base



China Minmetals Corporation	
Private investors	

Institutional investors

#### **Broker Coverage**

Broker	Name
Argonaut	Helen Lau
BOCI	Lawrence Lau
CCBI Securities	Felix Lam/Angel Yu
CICC	Yan Chen/Yubo Dong
Citi	Jack Shang
CITIC Securities	AO Chong
Credit Suisse	Yang Luo/Peter Li
DBS Bank	Lee Eun Young
Global Mining Research	David Radclyffe
Goldman Sachs	Trina Chen/Joy Zhang
Huatai Research	Xuan Yang
Jefferies	Chris LaFemina/Tim Ward
J.P. Morgan	Han Fu
Macquarie	Ben Crowley
Sealand Securities	Dai Pengju

#### **Mineral Resources**



#### Copper and zinc Mineral Resources of 12.6Mt and 11.1Mt respectively

Mineral Resources – Contained Metal (100% asset basis) As at 30 June 2019

Project	Copper	Copper (Acid Soluble)	Zinc	Lead	Silver	Gold	Molybdenum	Cobalt
	kt	Kt	kt	kt	moz	moz	kt	kt
Las Bambas	10,613				148	2.2	286	
Kinsevere	1,133	498						44
Dugald River	136		7,238	953	49	0.1		
Rosebery	42		1,377	475	54	0.7		
High Lake	347		536	50	37	0.6		
Izok Lake	342		1,910	209	34	0.1		
Total	12,613	498	11,061	1,687	322	3.7	286	44

The information referred to in this presentation has been extracted from the report titled Mineral Resources and Ore Reserves Statement as at 30 June 2019 published on 22 October 2019 and is available to view on <u>www.mmg.com</u>. MMG 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 modified from the Mineral Resources and Ore Reserves Statement from the Mineral Resources and Ore Reserves Statement on the materially modified from the Mineral Resources and Ore Reserves Statement from the Reserves Statement from the Mineral Resources and Ore Reserves Statement from the Reserves Statement from the Resources an

#### **Ore Reserves**



#### Copper and zinc Ore Reserves of 6.9Mt and 3.2Mt respectively

Ore Reserves – Contained Metal (100% asset basis) As at 30 June 2019

Project	Copper	Copper (Acid Soluble)	Zinc	Lead	Silver	Gold	Molybdenum
	kt	kt	kt	kt	moz	moz	kt
Las Bambas	6,560				94	1.6	191
Kinsevere	307	252					
Dugald River			2,854	443	30		
Rosebery	127		345	9	16	0.2	
Total	6,994	252	3,199	452	140	1.8	191

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