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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)

SECOND QUARTER PRODUCTION REPORT

FOR THE THREE MONTHS ENDED 30 JUNE 2019

This announcement is made pursuant to Rule 13.09 of the Rules Governing the Listing of Securities of 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 (Board) of MMG Limited (Company or MMG) is pleased to provide the Second Quarter Production Report for the three months ended 30 June 2019.

The report is annexed to this announcement.

By order of the Board
MMG Limited
GAO Xiaoyu
CEO and Executive Director

Hong Kong, 18 July 2019

As at the date of this announcement, the Board comprises nine directors, of which two are executive directors, namely Mr Gao Xiaoyu and Mr Xu Jiqing; three are non-executive directors, namely Mr Guo Wenqing (Chairman), Mr Zhang Shuqiang and Mr Jiao Jian; and four are independent non-executive directors, namely Dr Peter William Cassidy, Mr Leung Cheuk Yan, Ms Jennifer Anne Seabrook and Professor Pei Ker Wei.

SECOND QUARTER PRODUCTION REPORT

FOR THE THREE MONTHS ENDED 30 JUNE 2019					
	2Q19	2Q19 VS 2Q18	2Q19 VS 1Q19	YTD	YTD19 VS YTD18
Copper cathode (tonnes)					
Kinsevere	16,463	-20%	31%	29,002	-28%
Total	16,463	-20%	31%	29,002	-28%
Copper (contained metal in concentrate, tonnes)					
Las Bambas	84,373	-15%	-17%	185,825	0%
Rosebery	322	-10%	-15%	700	-8%
Total	84,695	-15%	-17%	186,525	0%
Zinc (contained metal in concentrate, tonnes)					
Dugald River	35,850	-7%	-7%	74,515	11%
Rosebery	21,079	8%	14%	39,565	4%
Total	56,929	-2%	0%	114,080	8%
Lead (contained metal in concentrate, tonnes)					
Dugald River	5,563	24%	10%	10,639	80%
Rosebery	6,186	-27%	5%	12,096	-26%
Total	11,749	-9%	7%	22,735	2%
Molybdenum (contained metal in concentrate, tonnes)					
Las Bambas	563	32%	10%	1,075	13%
Total	563	32%	10%	1,075	13%

KEY POINTS

- Total recordable injury frequency (TRIF) of 1.66 per million hours worked for the second quarter in 2019.
- Total copper production of 101,158 tonnes in the second quarter, down 16% due to previously disclosed logistics disruptions at MMG Las Bambas. Stable total zinc production of 56,929 tonnes, in line with prior periods as Dugald River ramp up continues to advance well. All operations are on track to meet production guidance.
- More targeted exploration focus around existing operating hubs is demonstrating considerable early success.
- Las Bambas drilling has intersected mineralisation in the Chalcobamba South West area. It is anticipated that further drilling will demonstrate that the new Chalcobamba Southwest Zone, which is within 300 metres of the current Chalcobamba Ore Reserve pit, is continuous with the main Chalcobamba mineralisation and should drive expansion of the Chalcobamba pit design. Highlights include 126.8m @ 1.39% Cu and 7ppm Mo, including 48.8m @ 2.43% Cu, in drillhole CHS19-012, from 107.0m downhole.

- At Nambulwa (~30km north of MMG Kinsevere), preliminary interpretations of drilling intercepts indicate a reasonable probability for economic exploitation of oxide ore feed for the Kinsevere Mine. The best intersections included 14.4m @ 6.96% Cu from 30m (NAMDD042) and 54.0m @ 4.10% Cu from 99m (NAMDD060).

SAFETY, HEALTH, ENVIRONMENT AND COMMUNITY

TRIF for the second quarter 2019 was 1.66 per million hours worked.

The TRIF reported in the first quarter was 1.33 per million hours worked. This has now been revised to 1.53 due to an amendment in the controlled activities working hours reported.

Community roadblocks restricted inbound and outbound logistics to the Las Bambas mine in March and April. Refer to the Las Bambas section of this report for additional detail.

MMG released its 2018 Sustainability Report on 20 June 2019.

COMMODITY PRICES, MARKETING AND SALES

COMMODITY PRICES, MARKETING AND SALES						
	QUARTER-AVERAGE			QUARTER CLOSE		
	2Q19	1Q19	2Q18	2Q19	1Q19	2Q18
Metal Price*						
Copper (US\$/lb)	2.77	2.82	3.12	2.71	2.94	3.01
Gold (US\$/oz)	1310	1304	1307	1411	1293	1251
Lead (US\$/lb)	0.86	0.92	1.08	0.87	0.92	1.10
Molybdenum (US\$/lb)	12.19	11.79	11.65	12.00	12.13	10.60
Silver (US\$/oz)	14.89	15.57	16.53	15.22	15.10	16.03
Zinc (US\$/lb)	1.25	1.23	1.41	1.17	1.36	1.34

Sources: zinc, lead and copper: LME cash settlement price; Molybdenum: Platts; gold and silver: LBMA.

Base metal prices retreated during the second quarter, primarily due to the trade dispute between the USA and China. Market concerns over the wider geopolitical and trade issues therefore overshadowed the continuing positive medium-term fundamentals for metals such as copper. The gold price rally to a multi-year high during June reflected similar investor concerns.

China has continued to build new copper smelting capacity with several operations commissioning during the first half of 2019 in anticipation of the country's continued increase in copper requirements across key sectors of the economy including power transmission, building construction, consumer products and transportation. However, global copper concentrate supply is unlikely to increase this year as new mine capacity is limited while output from some existing operations will decline. This will result in mine production constraining growth in refined metal production. This imbalance has been reflected in a steady decline in treatment and refining charges since the start of 2019, with charges paid by smelters on the spot market recently falling to more than 25% below the benchmark level for the year.

Some Chinese zinc smelting operations that had been forced to curtail output while making investments to improve environmental performance were able to increase output during the second quarter, adding to demand for zinc concentrate. This resulted in a plateauing of zinc concentrate treatment charges which had been rising steadily over

previous quarters. Notwithstanding the rise in Chinese smelter production, metal stocks in China and on the LME remain low, at around five days' global consumption.

PROVISIONAL PRICING

The following table provides a summary of the metal that was sold but which remains provisionally priced at the end of the second quarter 2019 and the month that final average pricing is expected to occur at the time of provisional invoicing.

OPEN PRICING AT 1 JULY 2019					
	JUL-19	AUG-19	SEP-19	OCT-19	TOTAL
Copper (tonnes cathode and copper contained in concentrate)	11,233	7,407	36,356	29,587	84,583
Gold (ounces)	12,310	867	907		14,084
Lead (tonnes)	4,522				4,522
Molybdenum (pounds)	454,766	295,204			749,970
Silver (ounces)	918,755	62,687	49,792		1,031,234
Zinc (tonnes)	19,686	13,035	4,279		37,000

OPERATIONS

LAS BAMBAS

LAS BAMBAS					
	2Q19	2Q19 VS 2Q18	2Q19 VS 1Q19	YTD	YTD19 VS YTD18
Copper (tonnes)	84,373	-15%	-17%	185,825	0%
Molybdenum (tonnes)	563	32%	10%	1,075	13%

Las Bambas produced 84,373 tonnes of copper in copper concentrate in the second quarter of 2019, 17% below the prior period. The lower production was the result of a forced shutdown of the plant in early April 2019, due to the previously announced community road blocks that took place from early February until mid-April and caused critical supplies to be exhausted on site. Planned maintenance activities were brought forward to partly mitigate the impact of these disruptions.

Following these disruptions, unrestricted road access was re-established on 13 April 2019 and operations and concentrate logistics have ramped back up to normal operational levels.

Logistics update

Since logistics restarted on 13 April, Las Bambas has reduced stockpiles on site from a peak of approximately 59,000 tonnes of copper in concentrate to approximately 33,000 tonnes by 30 June 2019. The remainder of these stockpiles are expected to be progressively drawn down and shipped during the second half of 2019.

The community road blocks related to requests for compensation for land traversed by a public road and the release of community leaders and legal advisers arrested in relation to extortion allegations. Agreements to cease all roadblocks were reached following dialogue brokered by the Government of Peru with the participation of the Catholic Church. The company remains committed to working together with the Government of Peru and the Communities to resolve community concerns through dialogue. This dialogue process remains ongoing.

Production update and outlook

Efficiency initiatives continued to deliver benefits during the quarter, with mill throughput in May and June averaging approximately 5% above the prior corresponding period. Mining and development works also continued to increase to open additional operating faces, consistent with the mine plan.

Molybdenum production increased 10% during the quarter (despite lower overall throughput and copper production) to record levels. Engineering works to debottleneck the Molybdenum plant continue and are expected to increase molybdenum concentrate production to the nameplate capacity of 15,000 tonnes per annum by mid-2020.

Consistent with previous guidance, production of copper for 2019 is still expected to be at the lower end of the 385,000-405,000 tonnes range, with C1 costs at the higher end of the US\$1.15-US\$1.25/lb range. As previously advised, when compared to prior years, costs reflect significant increases in both mining and milling volumes, increased mine development investment and longer haul distances as the depth of the Ferrobamba pit increases. These cost pressures will be partially offset by ongoing cost and efficiency programs. These programs seek to ensure that Las Bambas retains its position as one of the lower cost mines of its scale in the world.

Third ball mill installation works commenced in the quarter and drilling, permitting and engineering works continued at the Chalcobamba project. Results of the drilling activities are included in the Geoscience and Discovery section below, where drilling has intersected additional near-surface skarn and porphyry copper mineralisation in the Chalcobamba Southwest Zone. It is anticipated that further drilling will demonstrate that the new Chalcobamba Southwest Zone is continuous with the main Chalcobamba mineralisation and should drive expansion of the Chalcobamba pit design.

DUGALD RIVER

	DUGALD RIVER				
	2Q19	2Q19 VS 2Q18	2Q19 VS 1Q19	YTD	YTD19 VS YTD18
Contained metal in concentrate					
Zinc (tonnes)	35,850	-7%	-7%	74,515	11%
Lead (tonnes)	5,563	24%	10%	10,639	80%

Dugald River continued its strong ramp up, producing 35,850 tonnes of zinc in zinc concentrate for the second quarter of 2019 (7% below the first quarter). Lower production was primarily due to a planned maintenance shutdown, which took place over 11 days during the quarter.

Mine development works continued to open a higher average number of operating stopes, resulting in a 15% uplift in mined ore compared with the first quarter. The improvement in mine production has enabled mill throughput to be sustained above design capacity for the fifth quarter in a row. Mine development works will continue to be a major focus for the remainder of 2019 to ensure stable feed to the mill with all pre-commissioning ore stockpiles now depleted.

Dugald River also produced 5,563 tonnes of lead concentrate, up 10% from the previous quarter.

The rail line from Mount Isa to Townsville, that was impacted during the flood event in February 2019, has been restored and the transport of concentrate is now fully operational.

Consistent with previous guidance, 2019 production for Dugald River expected to be between 165,000-175,000 tonnes of zinc in zinc concentrate, with C1 costs between US\$0.70 and US\$0.75/lb.

KINSEVERE

	KINSEVERE				
	2Q19	2Q19 VS 2Q18	2Q19 VS 1Q19	YTD	YTD19 VS YTD18
Copper Cathode (tonnes)	16,463	-20%	31%	29,002	-28%

Kinsevere produced 16,463 tonnes of copper cathode in the second quarter of 2019, a 31% increase and in-line with the revised plan, following mining and plant stability issues that impacted the first quarter.

Total material movement increased 34% compared with the first quarter, with strong progress made in managing water conditions and the more complex geology encountered in the Mashi pit. Looking forward, the main Central pit will provide the majority of the ore mined, which, along with the reclamation of long term stockpiles and third-party ores, will provide the basis of the feed to the plant for the remainder of the oxide mine life.

Mill throughput also improved 16%, with issues impacting mill availability and process instability in the first quarter successfully rectified.

Consistent with previous guidance, copper cathode production is expected to be between 65,000-70,000 tonnes. C1 costs for 2019 are now expected to be within the range of US\$2.15-US\$2.25/lb due to higher than anticipated mining and contractor costs in the second half.

During the quarter, Kinsevere continued to source ore from the nearby Kalumines and Kimpe deposits, further demonstrating Kinsevere's operating flexibility as a processing hub.

Kinsevere's oxide Ore Reserves (as at 30 June 2018) represent a life of mine for oxide operations ending in approximately 2023. MMG has been working on developing the full potential of the Kinsevere mine through significant investment in resource extension drilling, particularly on tenements held inside a 50-kilometre radius of the Kinsevere mine, as well as evaluating options for mining and processing of sulphide ores present on the Kinsevere lease. Further detail on some of the early success of this exploration program, specifically in relation to the nearby Nambulwa deposit, is provided in the Geoscience and Discovery section below.

In late 2017 MMG commenced the Kinsevere Expansion Project study. This study is currently evaluating the engineering options for the addition of a sulphide ore processing circuit alongside the existing oxide circuit, plus the addition of a cobalt circuit. The brownfield expansion of the Kinsevere mine could have the potential to more than double the remaining production life and create an entry for MMG into the cobalt market.

An update on the status of 2018 Mining Code changes as well as commentary on the recently announced results of the Democratic Republic of the Congo (DRC) election is provided in the Corporate Update section below.

ROSEBERY

	ROSEBERY				
	2Q19	2Q19 VS 2Q18	2Q19 VS 1Q19	YTD	YTD19 VS YTD18
Contained metal in concentrate					
Zinc (tonnes)	21,079	8%	14%	39,565	4%
Lead (tonnes)	6,186	-27%	5%	12,096	-26%
Copper (tonnes)	322	-10%	-15%	700	-8%

Rosebery produced 21,079 tonnes of zinc in zinc concentrate during the second quarter, up 14% on the previous quarter.

The strong and consistent performance in the mine and the mill continued with both mining and milling volumes remaining around one million tonnes on an annualised basis. Operating performance is being supported by the recent

investment in new mobile fleet which is leading to increased productivity and significantly improved equipment availability, which works to offset the impacts of mining at greater depth and smaller average tonnage stopes.

Precious metal production during the quarter totalled 2,166 ounces of gold and 1,296 ounces of silver.

Consistent with previous guidance, production for 2019 is still expected to be between 85,000 and 95,000 tonnes of zinc in zinc concentrate, with C1 costs estimated to be US\$0.25-US\$0.35/lb. The production in the current year of the mine plan largely comes from a mining area that is expected to deliver higher average zinc grades, but this comes with a lower contribution from precious metal by-products. Positive results from recent remnant mining studies has resulted in additional high-grade areas being brought into 2019 and 2020 mine plans. This is expected to result in production remaining at near record levels in zinc equivalent terms.

GEOSCIENCE AND DISCOVERY

Drilling activities were carried out at the Las Bambas operation in Peru, along with the Nambulwa and Mwepu Projects close to the Kinsevere mine and other greenfield copper and cobalt projects in the DRC.

The Company's activities during the quarter have focused on:

- Las Bambas - where hydrogeological, geotechnical and sterilisation drilling for development of the Chalcobamba pit has identified mineralisation adjacent to the Chalcobamba deposit
- DRC - discovery and delineation of satellite copper oxide ore bodies within a 50km radius ("RAD50") that may be suitable for economic exploitation at the Kinsevere mine

The results of activities at Las Bambas and the Nambulwa project in the DRC are presented below.

Las Bambas (Peru)

The Las Bambas drilling program has intersected near-surface skarn and porphyry copper mineralisation in the Chalcobamba Southwest Zone (Figure 1).

The Chalcobamba Southwest Zone mineralisation, lying within 300 metres of the southwest edge of the current Chalcobamba Ore Reserve pit (Figure 2) has now been intersected in multiple drillholes. This skarn and porphyry mineralisation is open to the south, east and west and lies close to an untested Induced Polarisation (IP) geophysical anomaly some 200 metres further to the south of the zone (Figure 8). It is anticipated that further drilling will demonstrate that the new Chalcobamba Southwest Zone is continuous with the main Chalcobamba mineralisation and should drive expansion of the Chalcobamba pit design.

MMG reports for the first time the multiple mineralised intervals of minable thicknesses above cut-off grade and within 275 metres of the surface. These intercepts contain intervals of >1.00 % Cu hosted by skarn alteration associated with longer intervals of lower-grade porphyry hosted mineralisation (Figures 2-7). Current drilling is focused on defining the extents of this mineralisation and testing of additional targets within the operational footprint of Chalcobamba and in the larger land position.

Highlights include¹:

- 126.8m @ 1.39% Cu and 7ppm Mo, incl. 48.8m @ 2.43% Cu in drillhole CHS19-012, From 107.0m downhole
- 103.1m @ 0.54% Cu and 299ppm Mo, in drillhole CHS19-011, From 49.9m downhole
- 381.2m @ 0.37% Cu and 263ppm Mo, in drillhole CHS18-049, From 0.90m downhole

These drillholes were drilled as part of an ongoing study at the Chalcobamba Southwest Zone ahead of development of the Chalcobamba pit. A summary of all drilling results to date from this programme is provided in Table 2 and all drillhole collars are shown in Figure 2.

¹ Intersections recorded are downhole widths.

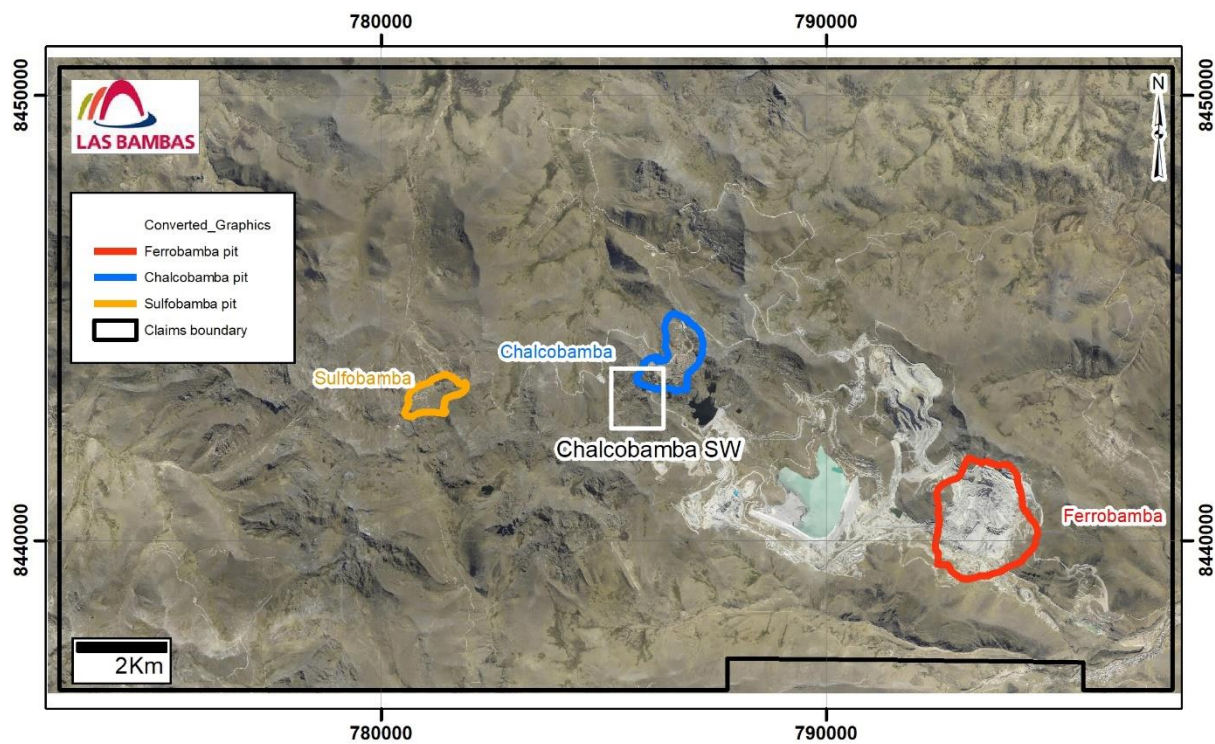


Figure 1. Area of the Las Bambas Claim Block highlighting the location of the individual Reserves and Resources as well as the Chalcobamba Southwest Zone exploration area.

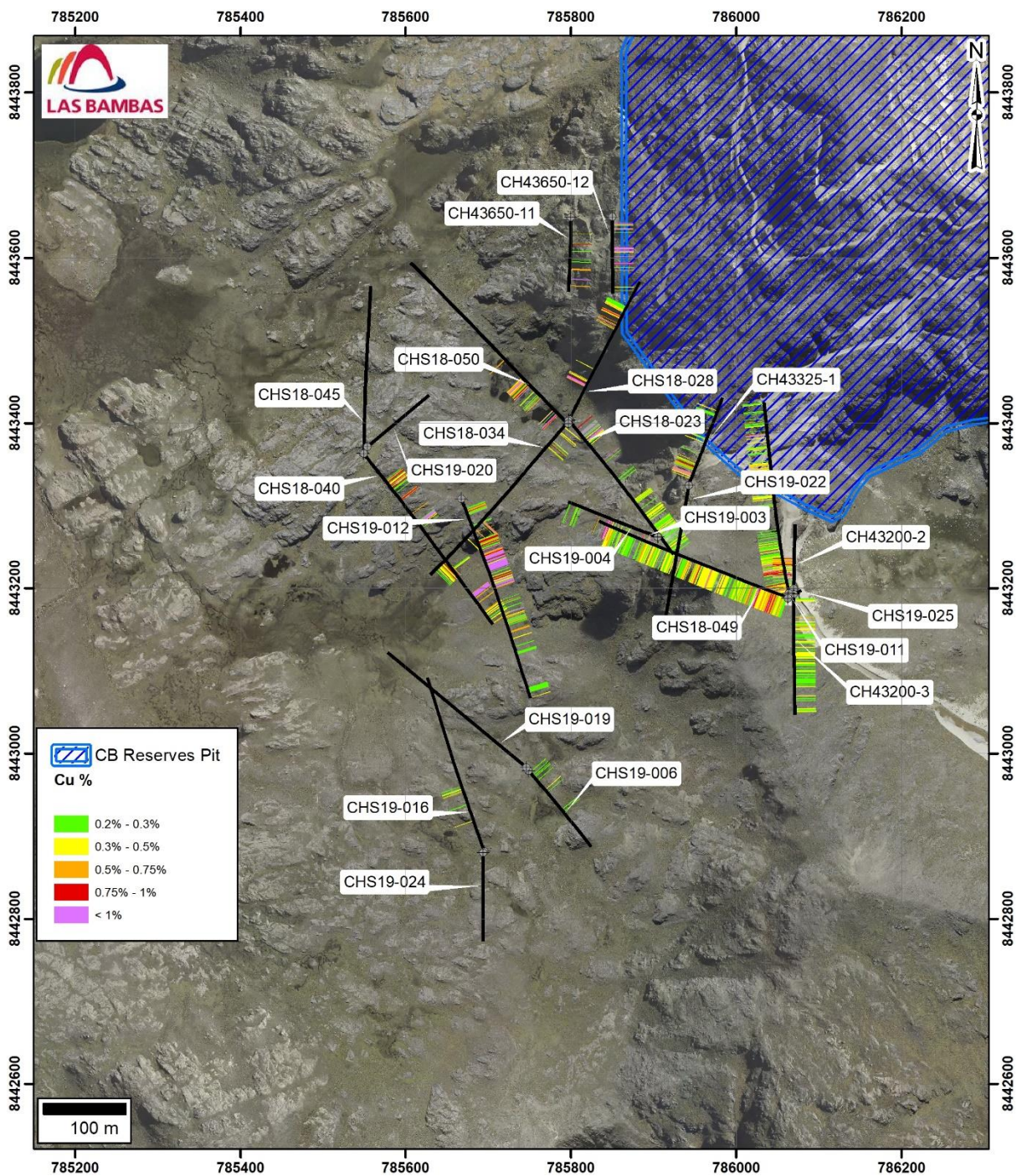


Figure 2. The Chalcobamba Southwest Zone and adjacent Chalcobamba Ore Reserve pit (blue outline) are shown with the traces of all drillholes and the downhole copper grades.

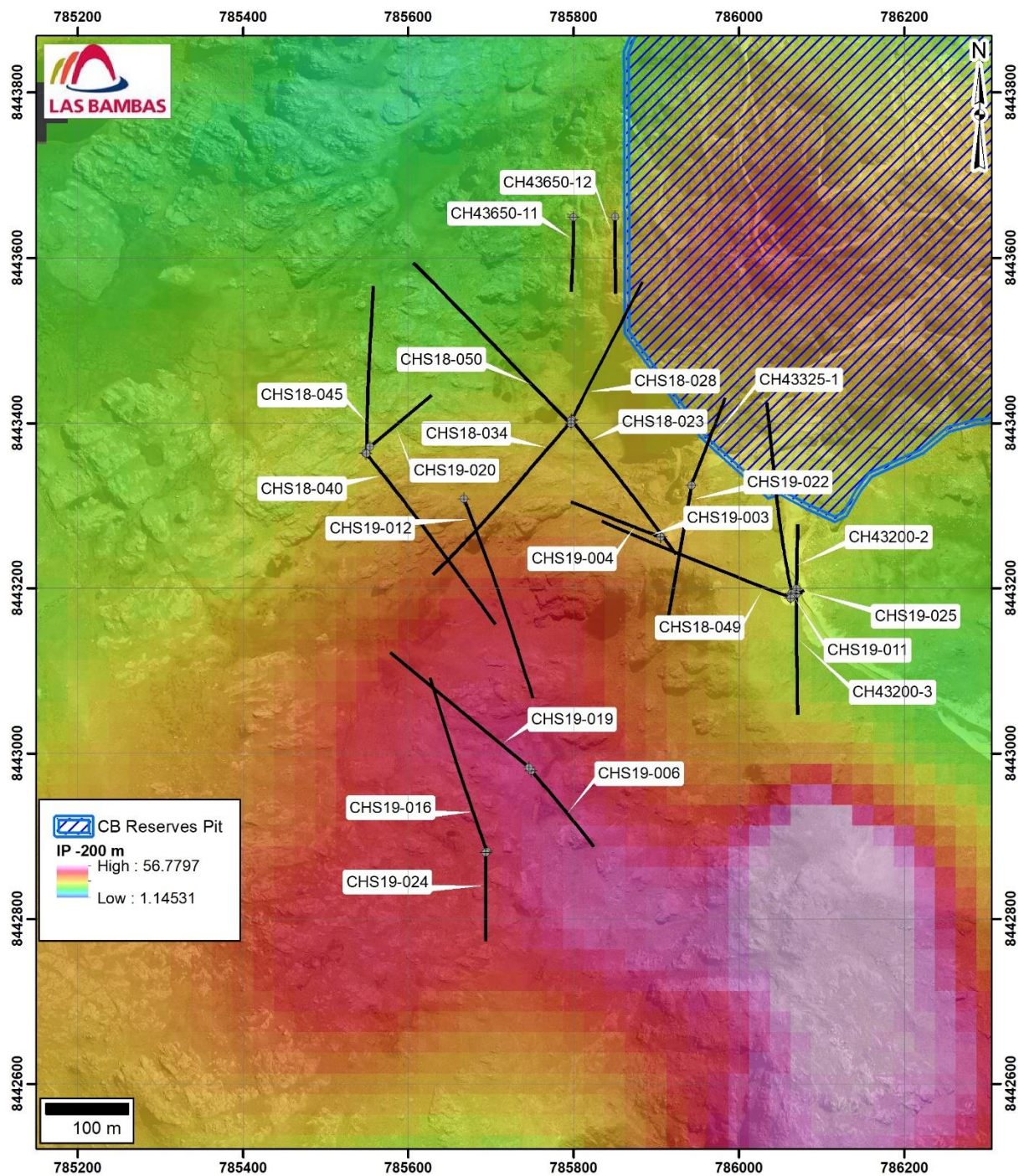


Figure 3. Same area shown in Figure 2 with base map of IP Chargeability depth slice at 200 metres.

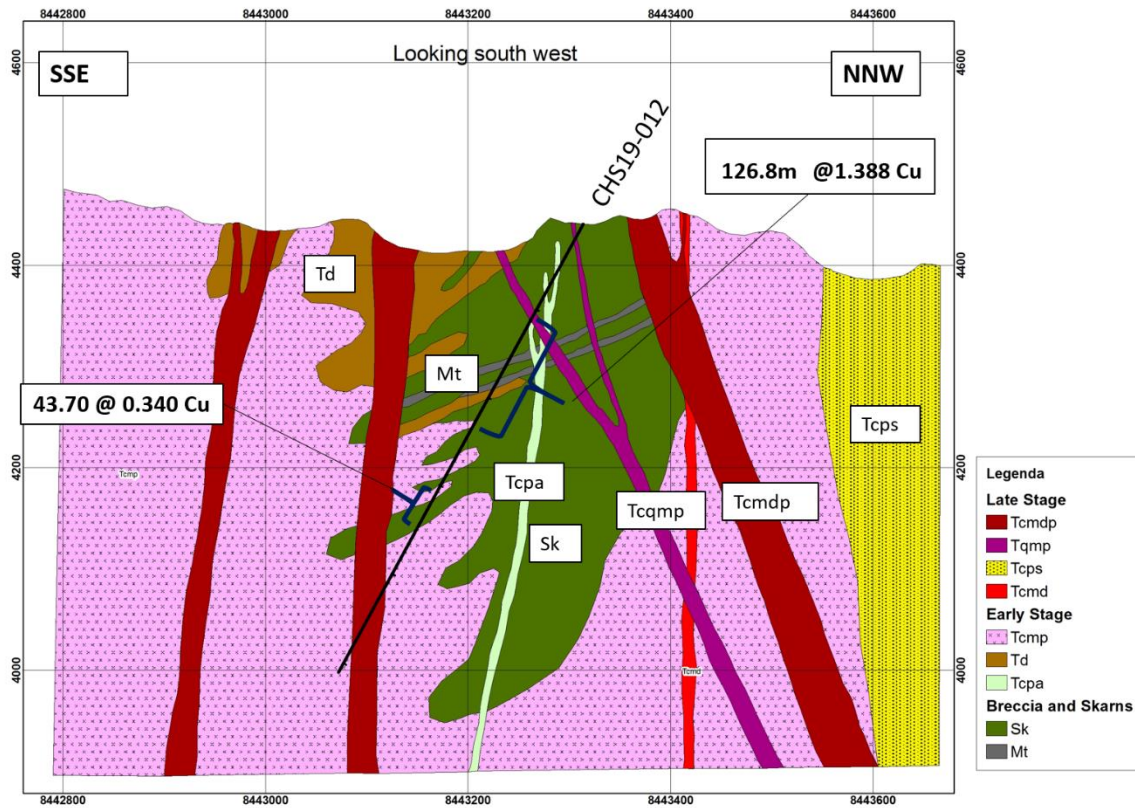


Figure 4. Geologic Cross Section through drill hole CHS19-012. Refer to Figure 2 for drillhole location.

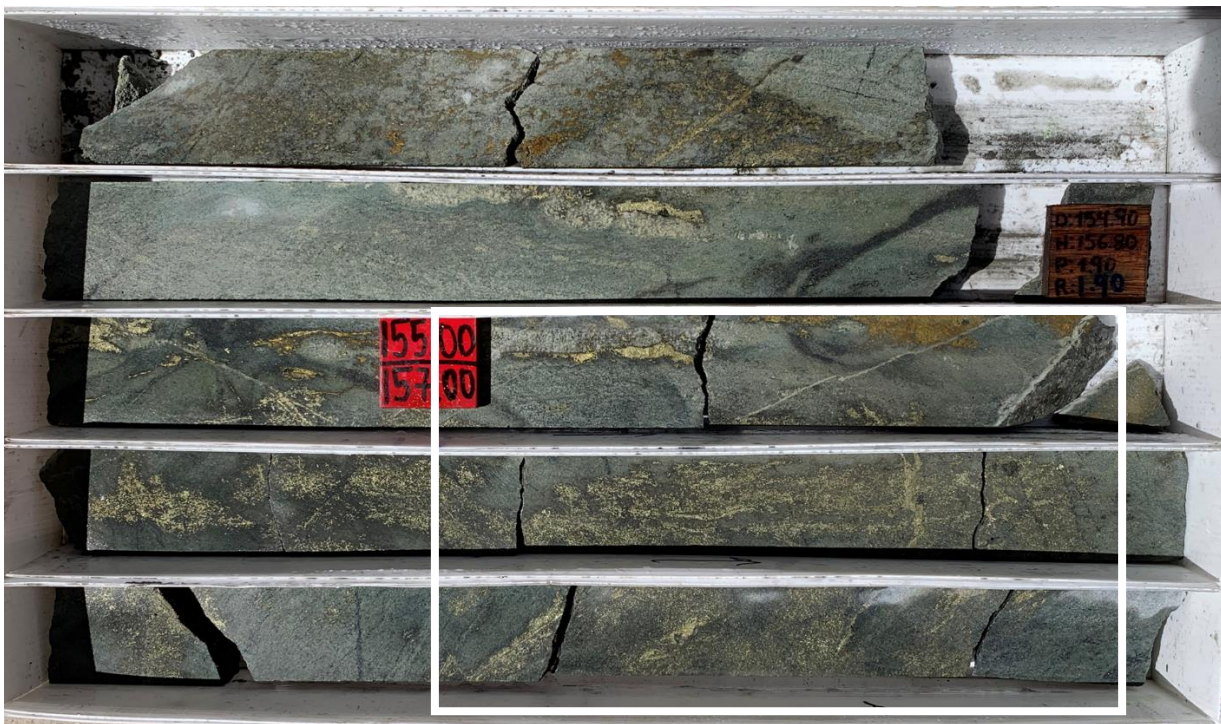


Figure 5. Strongly disseminated chalcopyrite mineralisation hosted by skarn alteration within diamond drillhole CHS19-012. Core box contain half core from 152.75m to 155.70m. Rectangular white outline defines area of close-up photograph shown in Figure 6 below.

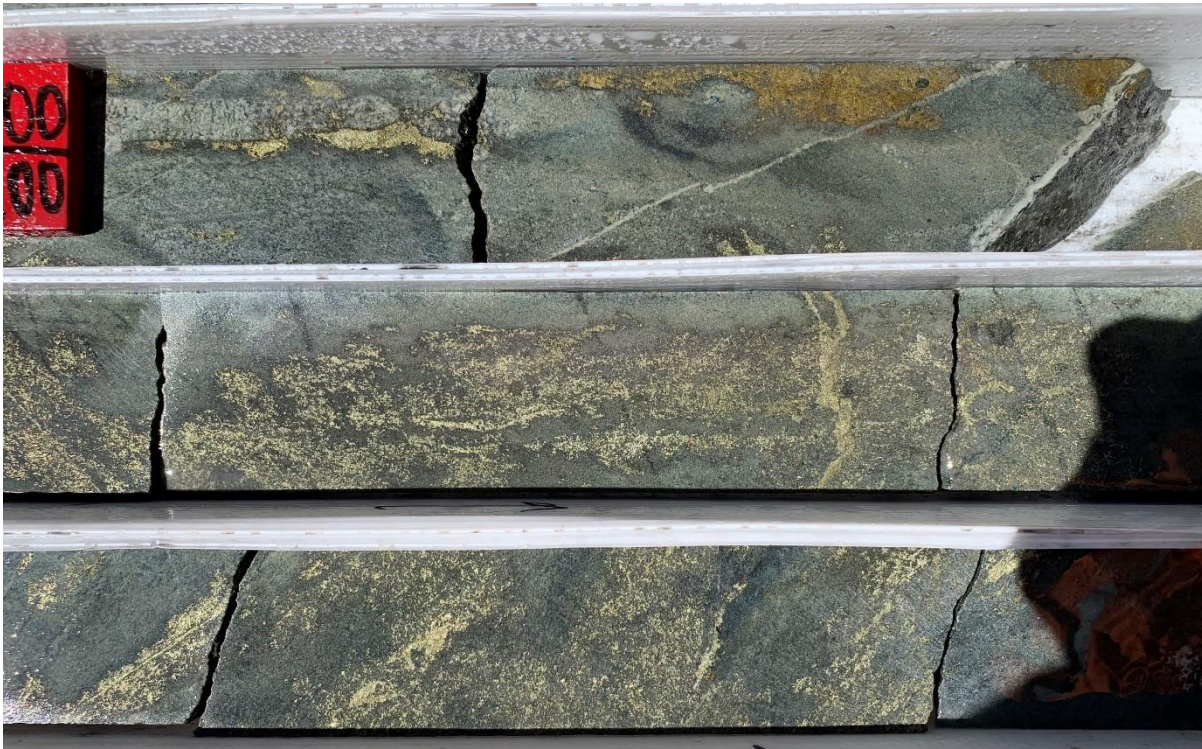


Figure 6. Close-up disseminated chalcopyrite hosted by skarn alteration shown in Figure 5.

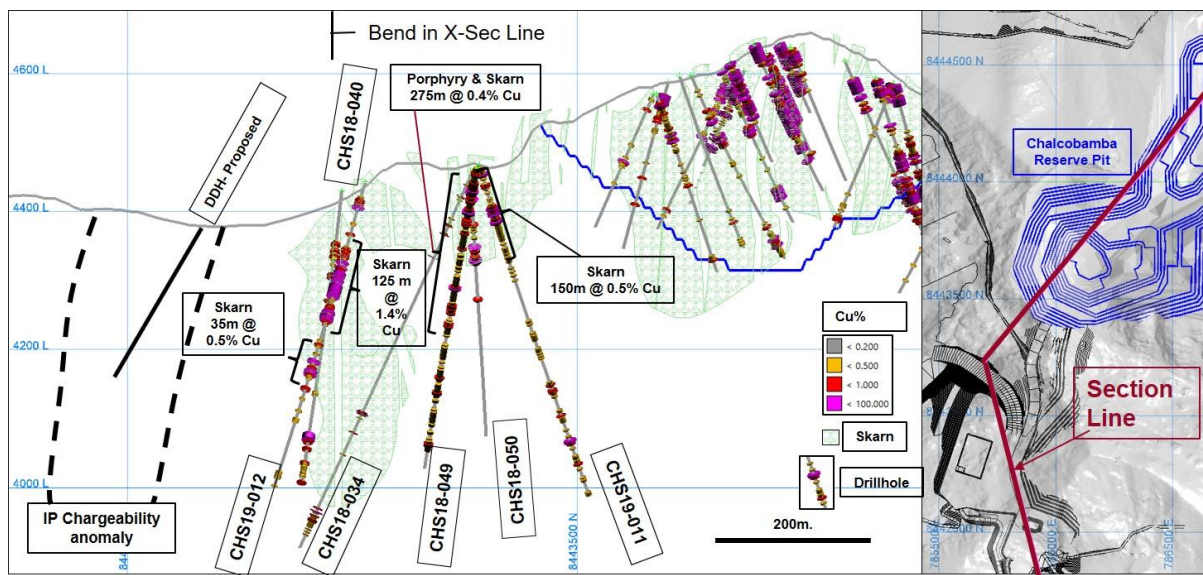


Figure 7. Cross Section drawn through the Chalcobamba Resource/Reserve Pit and the adjacent Chalcobamba Southwest Zone (left) highlighting the individual drillhole traces, downhole copper assays as well as individual mineralized intervals. Skarn polygons are shown as hatched green area.

Nambulwa (DRC)

Extensive drilling campaigns were completed during the 2017-2018 seasons at the Nambulwa Project, leading to the identification of significant copper oxide mineralisation in two areas of the project – Nambulwa Main and DZ.

The Nambulwa Project is located on license PE539, approximately 30km north of the Kinsevere Mine in the DRC (Figure 8). A total of 15,568m of DD and RC drilling was completed on the Nambulwa Main and DZ prospects during the 2017 and 2018 field season. At Nambulwa Main, a 1200m long, up to 40m wide zone of semi-continuous copper oxide mineralisation was delineated (Figures 9 & 10), while at the DZ Prospect, located 1km to the southwest of Nambulwa Main, a ~350m long, up to 50m wide zone of copper oxide was delineated (Figures 11 & 12). The copper oxide mineralisation at both Nambulwa Main and DZ comprises mainly malachite with minor amounts of black copper oxides.

Preliminary interpretations of grade, thickness, and metallurgical characteristics exhibited in drilling intercepts at both Nambulwa Main and DZ indicate a reasonable probability for the economic exploitation of oxide ore feed for the Kinsevere Mine. Further work is planned for the 2019/2020 field season comprising additional drilling to improve model confidence, estimation of a classified mineral resource, metallurgical studies, geotechnical studies, and a preliminary economic assessment of the project as a source of satellite ore feed for the Kinsevere mill.

Highlights include²:

Nambulwa Main

- 13.0m @ 4.19% Cu, in drillhole NAMDD037, from 38.0m downhole
- 29.0m @ 3.67% Cu, in drillhole NAMDD034 from 45.0m downhole
- 25.4m @ 2.22% Cu, in drillhole NAMDD052, from 36.0m downhole
- 14.5m @ 3.24% Cu, in drillhole NAMDD050, from 48.9m downhole
- 26.5m @ 3.41% Cu, in drillhole NAMDD008, from 30.5m downhole
- 10.0m @ 3.68% Cu, in drillhole NAMDD044, from 14.9m downhole
- 14.4m @ 6.96% Cu, in drillhole NAMDD042, from 30.0m downhole

DZ

- 24.2m @ 3.33% Cu, in drillhole NAMDD076, from 24.0m downhole
- 9.0m @ 3.98% Cu, in drillhole NAMDD061, from 13.0m downhole
- 54.0m @ 4.10% Cu, in drillhole NAMDD060, from 99.0m downhole
- 50.5m @ 2.13% Cu, in drillhole NAMDD065, from 105.4m downhole
- 19.0m @ 6.28% Cu, in drillhole NAMAC047, from 12.0m downhole

Further details of drilling results from Nambulwa Main and DZ is shown in the Table 1 below.

² Intersections recorded are downhole widths.

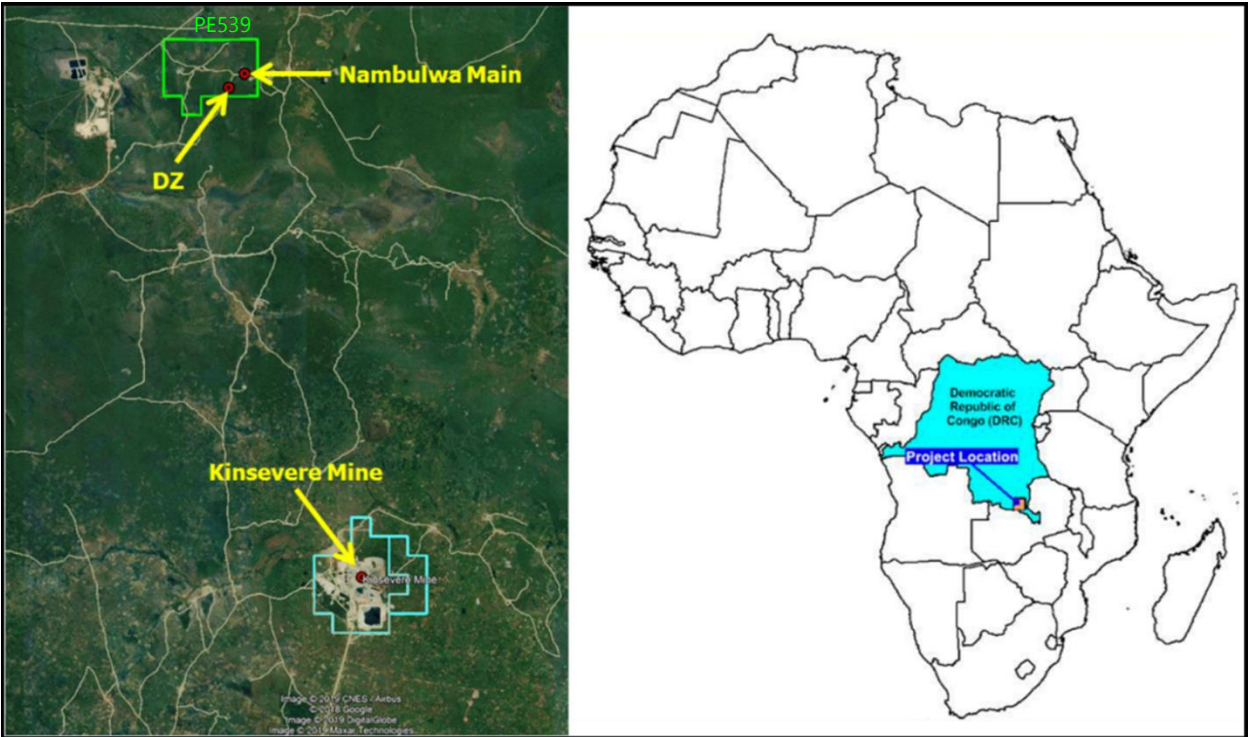


Figure 8: Location of the Nambulwa Project, 30km north of the Kinsevere Mine.

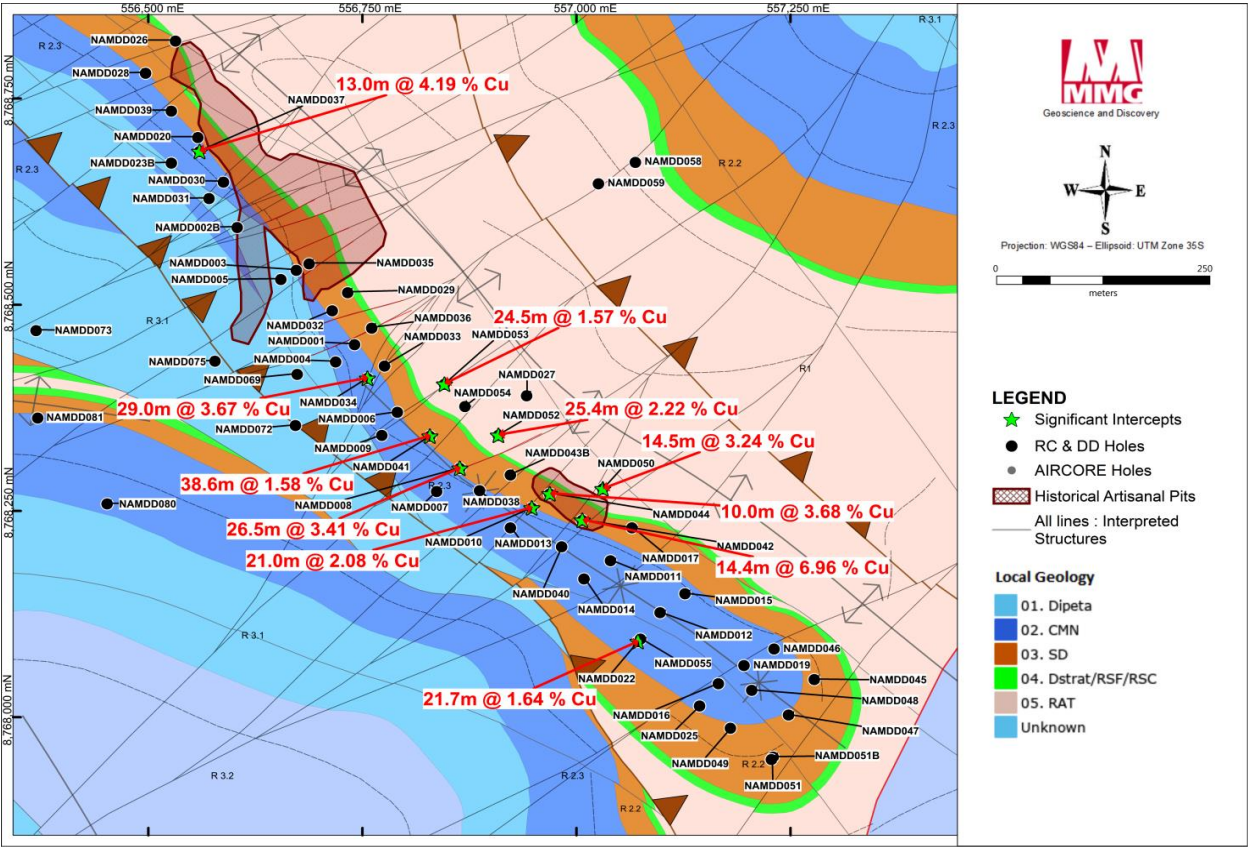


Figure 9: Nambulwa Main prospect showing best drill intercepts from 2017/18 drilling campaigns. A full listing of exploration results in Table 2.

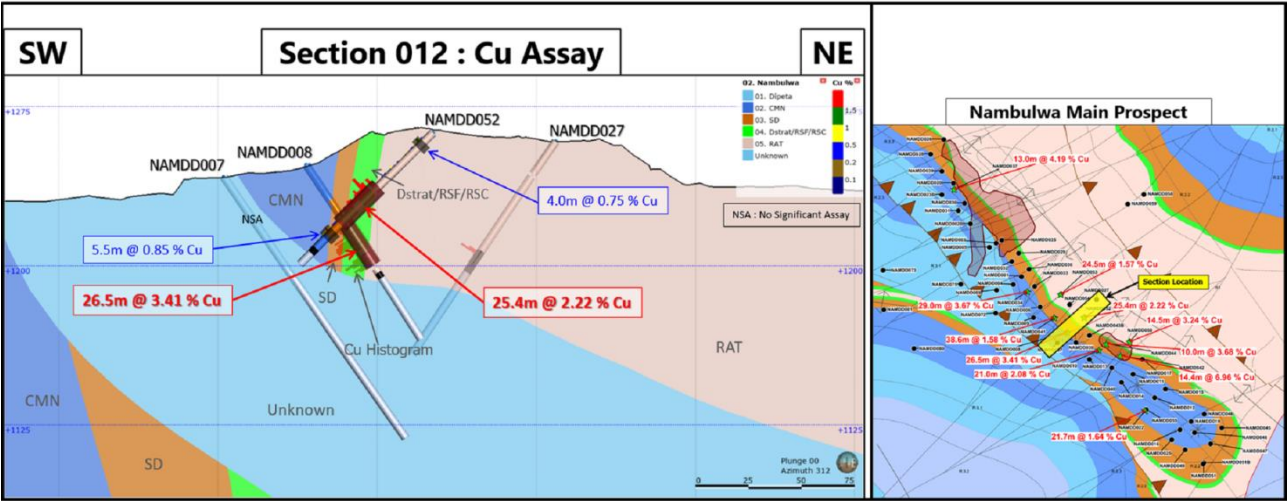


Figure 10: Nambulwa Main representative cross section.

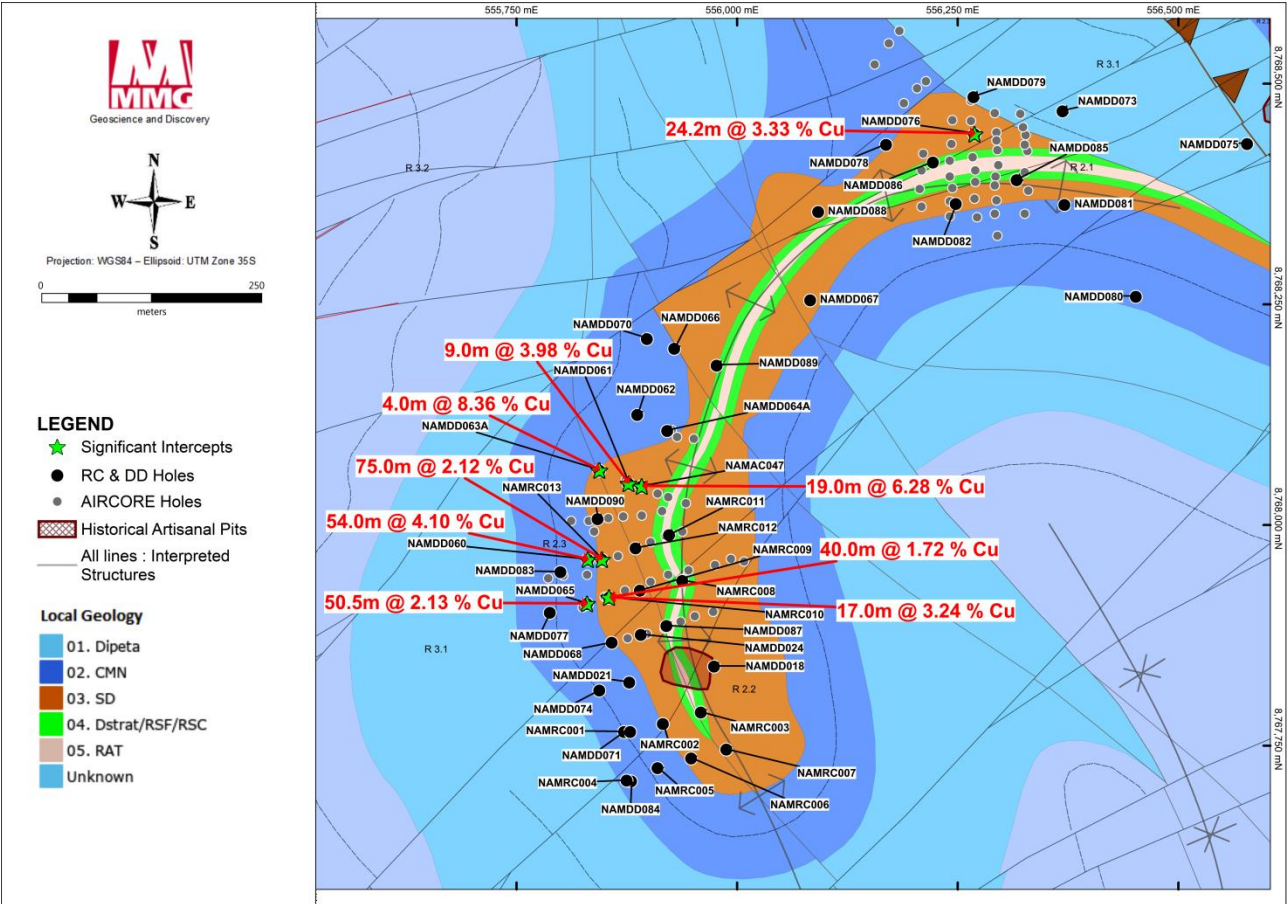


Figure 11: DZ prospect showing best drill intercepts from 2017/18 drilling campaigns. A full listing of exploration results in Table 2.

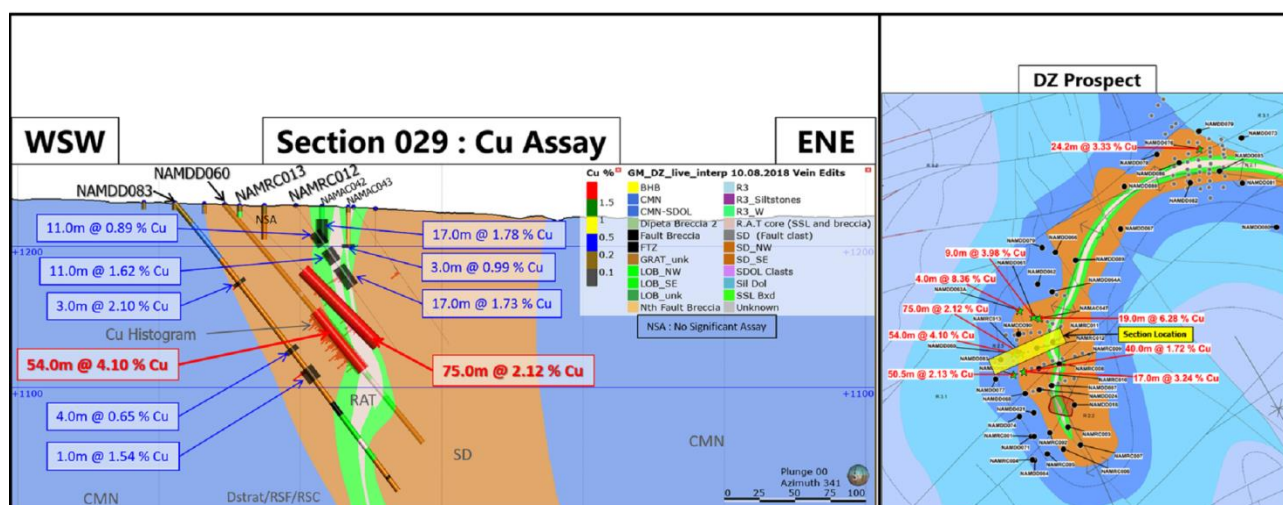


Figure 13: DZ representative cross section.

CORPORATE UPDATE

RETIREMENT AND RESIGNATION OF KEY EXECUTIVES

On 23 May 2019 the Company announced that it had received a notice of retirement of Mr Greg Travers as Executive General Manager – Business Support with effect from 1 July 2019. In the 23 May 2019 announcement, the Company also announced the creation of a new role on the Company Executive Committee, Executive General Manager – Technical and Operations Support, and the appointment of Mr Suresh Vadrnagra (currently Executive General Manager Operations – Americas) to that role.

On 10 July 2019, the Company announced the resignation of Mr Mark Davis, Executive General Manager Operations, Africa, Australia and Asia.

DRC MINING CODE

The DRC Government continued the progressive implementation of the 2018 Mining Code. Whilst MMG supports many aspects of the Code, we remain concerned regarding the implementation of a few of the more complex elements (including the new Special Tax on Excess Profits and Environmental Taxes) which could severely impact the financial viability of existing operations. MMG continues to seek discussion on these matters with the DRC Government pursuant to the Bilateral Investment Treaty between the DRC and the People's Republic of China.

MMG remains committed to a national mining code that supports further growth for the DRC and MMG's investments in this globally significant copper and cobalt province. MMG believes this can be reached via constructive dialogue between the DRC Government, Industry and Civil Society groups. MMG has a proud seven-year operating performance in the DRC contributing significantly to social and employee development.

LAS BAMBAS TAX DISPUTE

MMG Group has been granted indemnities in relation to certain tax matters arising from the previous ownership of the Las Bambas project, that is, up to 31 July 2014.

MMG Group sought to enforce those indemnities by filing two formal claims in the UK High Court of Justice totalling US\$31.5 million. The decision of the High Court which was handed down on 29 June 2018 was appealed by the parties. On 14 June 2019, the English Court of Appeal handed down judgment dismissing both parties' appeals. The judgment upheld the High Court decision and provides that a significant proportion of the amounts claimed are recoverable from Glencore but only upon the conclusion of the Tax Court decision in Peru.

-ENDS-

COMPETENT PERSONS STATEMENT:

The information in this report that relates to exploration results is based on information compiled by Dr Marcus Tomkinson, who is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of MMG Ltd. Dr Tomkinson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Tomkinson consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

CORPORATE DETAILS

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IMPORTANT DATES

21 August 2019 – 2019 Interim Results Announcement
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Throughout this report figures in *italics* indicate that this figure has been adjusted since it was previously reported.

APPENDIX – 2019 GUIDANCE

GUIDANCE SUMMARY		
	2019 GUIDANCE	2018 ACTUAL
Las Bambas		
Copper – production	~385,000 tonnes	385,299 tonnes
Copper – C1 costs	~US\$1.25 / lb	US\$1.18 / lb
Dugald River		
Zinc – production	165,000 – 175,000 tonnes	147,320 tonnes ³
Zinc – C1 costs	US\$0.70 – US\$0.75 / lb	US\$0.58 / lb ⁴
Kinsevere		
Copper – production	65,000 - 70,000 tonnes	79,711 tonnes
Copper – C1 costs	US\$2.15 – US\$2.25 / lb	US\$1.68 / lb
Rosebery		
Zinc – production	85,000 – 95,000 tonnes	75,721 tonnes
Zinc – C1 costs	US\$0.25 – US\$0.35 / lb	US\$(0.04)/ lb

³ Production volumes include 39,717 of pre-commercial production tonnes at Dugald River.

⁴ C1 cost actual shown is for the period post commercial production (from 1 May 2018).

APPENDIX – PRODUCTION RESULTS

LAS BAMBAS								
		QUARTER ENDED					YEAR-TO-DATE	
		JUN 2018	SEP 2018	DEC 2018	MAR 2019	JUN 2019	JUN 2019	JUN 2018
Ore mined - copper	tonnes	13,039,360	15,604,382	17,436,646	15,543,100	11,743,412	27,286,512	24,398,944
Ore milled - copper	tonnes	11,831,470	12,665,001	13,116,453	12,822,132	11,992,161	24,814,293	23,662,414
COPPER								
Ore mined - grade	%	0.9	0.7	0.9	0.8	0.8	0.8	0.9
Ore milled - grade	%	0.9	0.7	1.0	0.9	0.8	0.8	0.9
Recovery	%	88.1	85.5	85.0	88.5	86.6	87.6	87.3
Production								
Copper concentrate	tonnes	264,120	244,971	278,751	265,311	219,423	484,734	494,158
Grade	%	37.7	35.4	40.1	38.2	38.5	38.3	37.8
Containing	tonnes	99,581	86,797	111,865	101,452	84,373	185,825	186,637
Sales								
Total concentrate sold	tonnes	256,954	243,107	303,084	111,515	271,521	383,036	525,515
Payable metal in product sold	tonnes	92,508	83,657	112,774	41,262	99,001	140,264	188,243
GOLD & SILVER								
Payable metal in product sold - gold	oz	25,522	23,691	31,772	10,463	27,248	37,711	52,387
Payable metal in product sold - silver	oz	1,246,656	1,167,006	1,682,874	636,316	1,416,348	2,052,664	2,633,916
MOLYBDENUM								
Production								
Molybdenum concentrate	tonnes	855	1,132	956	1,062	1,189	2,250	1,922
Grade	%	49.9	49.4	47.0	48.2	47.3	47.8	49.6
Contained metal produced	tonnes	426	559	449	512	563	1,075	953
Sales								
Total product sold	tonnes	922	832	1,300	790	1,097	1,887	1,925
Payable metal in product sold	tonnes	458	418	624	377	524	901	947

DUGALD RIVER								
		QUARTER ENDED					YEAR-TO-DATE	
		JUN 2018	SEP 2018	DEC 2018	MAR 2019	JUN 2019	JUN 2019	JUN 2018
Ore mined	tonnes	308,081	425,293	487,498	393,004	453,261	846,264	561,013
Ore milled	tonnes	449,562	475,505	490,264	457,478	428,651	886,128	790,078
ZINC								
Ore mined - grade	%	10.2	10.0	10.0	10.5	10.3	10.4	10.7
Ore milled - grade	%	10.4	9.7	10.2	9.9	9.9	9.9	10.5
Recovery	%	83.0	82.9	83.6	84.7	84.5	84.6	82.8
Production								
Zinc concentrate	tonnes	76,500	77,771	83,719	79,071	73,782	152,852	131,953
Grade	%	50.5	49.3	49.7	48.9	48.6	48.7	50.7
Containing	tonnes	38,648	38,377	41,641	38,665	35,850	74,515	67,302
Sales								
Total product sold	tonnes	68,419	83,316	79,870	55,084	95,148	150,232	128,702
Payable metal in product sold	tonnes	28,737	33,705	32,821	22,676	38,634	61,310	55,022
LEAD								
Ore mined - grade	%	1.5	1.8	1.7	1.7	1.9	1.8	1.8
Ore milled - grade	%	1.7	1.8	1.7	1.6	1.9	1.8	1.8
Recovery	%	59.4	65.2	62.5	67.7	68.3	68.1	57.4
Production								
Lead concentrate	tonnes	8,532	9,118	9,336.0	8,730	9,147	17,876	10,988
Grade	%	52.6	60.3	56.7	58.1	60.8	59.5	53.7
Containing	tonnes	4,489	5,501	5,297	5,076	5,563	10,639	5,895
Sales								
Total product sold	tonnes	9,204	5,013	12,753	4,313	10,727	15,040	9,204
Payable metal in product sold	tonnes	4,533	2,782	7,037	2,299	5,927	8,226	4,533
SILVER								
Ore milled – grade	g/t	47.4	52.1	51.5	47.9	59.3	53.4	49.3
Payable metal in product sold	oz	284,693	315,998	451,712	128,644	368,674	497,319	293,210

KINSEVERE								
QUARTER ENDED						YEAR-TO-DATE		
		JUN 2018	SEP 2018	DEC 2018	MAR 2019	JUN 2019	JUN 2019	JUN 2018
Ore mined - copper	tonnes	874,335	904,144	730,283	600,765	544,845	1,145,610	1,420,417
Ore milled - copper	tonnes	593,697	617,734	596,227	508,843	590,577	1,099,421	1,193,306
COPPER								
Ore mined - grade	%	2.5	2.5	2.1	2.2	2.0	2.1	2.5
Ore milled - grade	%	3.5	3.4	3.2	2.7	2.9	2.8	3.5
Recovery	%	97.1	97.1	96.8	96.3	95.3	95.8	96.7
Production								
Contained metal produced - cathode	tonnes	20,570	20,691	18,463	12,539	16,463	29,002	40,556
Sales								
Total product sold - cathode	tonnes	20,452	20,525	18,313	11,800	15,639	27,439	40,231
Payable metal in product sold - cathode	tonnes	20,452	20,525	18,313	11,800	15,639	27,439	40,231

ROSEBERY								
		QUARTER ENDED					YEAR-TO-DATE	
		JUN 2018	SEP 2018	DEC 2018	MAR 2019	JUN 2019	JUN 2019	JUN 2018
Ore mined	tonnes	243,354	260,810	264,224	250,004	248,537	498,541	492,056
Ore milled	tonnes	262,496	265,670	259,307	259,833	251,282	511,115	503,258
ZINC								
Ore mined - grade	%	9.1	8.0	9.1	9.0	9.5	9.3	9.2
Ore milled - grade	%	8.9	8.5	8.3	8.4	9.9	9.2	9.0
Recovery	%	83.6	85.3	85.3	84.4	84.7	84.5	84.1
Production								
Zinc concentrate	tonnes	36,161	35,663	33,980	34,132	39,032	73,164	70,260
Grade	%	53.8	53.9	54.3	54.2	54.0	54.1	54.2
Containing	tonnes	19,442	19,218	18,444	18,486	21,079	39,565	38,059
Sales								
Total product sold	tonnes	38,533	38,352	26,959	37,931	37,968	75,899	77,512
Payable metal in product sold	tonnes	18,573	18,143	12,517	17,705	17,750	35,455	36,189
LEAD								
Ore mined - grade	%	3.8	2.9	3.3	3.1	3.0	3.0	3.7
Ore milled - grade	%	3.9	3.2	3.1	3.0	3.1	3.0	3.9
Recovery	%	81.8	73.8	75.7	76.2	79.0	77.6	82.3
Production								
Lead concentrate	tonnes	13,968	10,750	9,906	9,392	10,261	19,653	26,774
Grade	%	60.5	58.8	61.6	62.9	60.3	61.5	60.9
Containing	tonnes	8,453	6,326	6,107	5,910	6,186	12,096	16,312
Sales								
Total product sold	tonnes	14,229	12,363	6,732	7,245	11,925	19,170	28,117
Payable metal in product sold	tonnes	8,246	7,138	3,901	4,198	7,112	11,311	16,342

ROSEBERY (continued)								
		QUARTER ENDED					YEAR-TO-DATE	
		JUN 2018	SEP 2018	DEC 2018	MAR 2019	JUN 2019	JUN 2019	JUN 2018
Ore mined	tonnes	243,354	260,810	264,224	250,004	248,537	498,541	492,056
Ore milled	tonnes	262,496	265,670	259,307	259,833	251,282	511,115	503,258
COPPER								
Ore mined - grade	%	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ore milled - grade	%	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Recovery	%	59.1	50.1	64.6	62.4	57.5	60.0	60.9
Production								
Copper concentrate	tonnes	2,065	1,804	2,356	2,223	1,954	4,177	4,320
Grade	%	17.4	16.1	17.4	17	16.5	16.8	17.7
Containing	tonnes	359	291	409	378	322	700	765
Sales								
Total product sold	tonnes	2,532	1,815	2,089	2,649	1,721	4,369	4,276
Payable metal in product sold	tonnes	433	290	327	430	287	716	734
OTHER METALS								
Ore mined - gold	g/t	1.7	1.3	1.4	1.4	1.2	1.3	1.6
Ore milled - silver	g/t	148.6	130.0	113.1	101.6	104.3	102.9	140.3
Recovery - gold	%	26.7	27.6	20.6	27.2	21.0	24.9	27.9
Production								
Gold doré	oz	6,185	5,047	4,357	5,462	3,702	9,164	12,127
Containing - gold	oz	3,794	3,018	2,559	3,314	2,166	5,480	7,390
Containing - silver	oz	2,082	1,755	1,454	1,842	1,296	3,138	4,034
Sales								
Gold doré sold	oz	5,665	4,758	3,388	5,679	3,023	8,702	13,371
Payable metal in product sold - gold	oz	3,664	3,020	2,163	3,642	1,884	5,526	8,640
Payable metal in product sold - silver	oz	2,001	1,737	1,225	2,037	1,139	3,176	4,731

APPENDIX – DRILLING AND EXPLORATION

JORC 2012 TABLE 1 – LAS BAMBAS EXPLORATION ACTIVITIES

The following information provided in

Table 1 complies with the 2012 JORC Code requirements specified by "Table-1 Section 1-3" of the Code.

Table 1 JORC 2012 Code Table 1 Assessment and Reporting Criteria for Las Bambas Exploration Activity

ASSESSMENT CRITERIA	COMMENTARY
SECTION 1 SAMPLING TECHNIQUES AND DATA	
Sampling techniques	<ul style="list-style-type: none"> – 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 a Geobank database for correlation with returned geochemical assay results. – Samples for analysis are bagged, shuffled, re-numbered and de-identified prior to dispatch. – 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	<ul style="list-style-type: none"> – The drilling type is wireline diamond core drilling from surface. Drill core is not oriented.
Drill sample recovery	<ul style="list-style-type: none"> – Recovery is estimated by measuring the recovered core within a drill run length and recorded in the Geobank database. Run by run recovery has been recorded for all 6,226.20 m drilled to date at Chalcobamba Southwest with a recovery of 98.9%. 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 stock-work veins and disseminated sulphides. Diamond core sampling is applied, and recovery is considered high.
Logging	<ul style="list-style-type: none"> – 100% of diamond drill core has been geologically and geotechnically logged. – Geological logging is qualitative and geotechnical logging is quantitative. All drill core is photographed.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> – All samples 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. The standard sampling length is 2m for PQ core (minimum 1.2m) and HQ core (minimum 1.2m, maximum 2.2m) while NQ core is sampled at 2.5m (minimum 1.5m). Sample intervals do not cross geological boundaries. – Geological samples have been processed in the following manner: Dried, crushed, pulverised to 95% passing 105µm. Sizing analyses are carried out on one in 10-15 samples. – Representivity of samples is checked by duplication at the crush stage in one in every 40 samples. No field duplicates are taken. – Twelve-month rolling Quality Assurance / Quality Control (QAQC) analysis of sample preparation techniques indicate the process is appropriate for Las Bambas samples.

ASSESSMENT
CRITERIA

COMMENTARY

SECTION 1 SAMPLING TECHNIQUES AND DATA

	<ul style="list-style-type: none"> – 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	<ul style="list-style-type: none"> – Routine assay methods undertaken by ALS (Lima) for Las Bambas are as follows: <ul style="list-style-type: none"> ○ Cu, Ag, Pb, Zn, Mo - 0.5g of sample. Digestion by 4-Acids. Reading by Atomic Absorption Spectrometry (AAS). ○ Acid soluble copper – 0.5g sample. Leaching by a 5% solution of H₂SO₄ at ambient temperature for 1 hour. Reading by AAS. ○ Au - Fire assay with AAS Finish. Over-range results are re-assayed by Gravimetric Finish. ○ 35 elements - Digestion by aqua-regia and reading by ICP. – All of the above methods with the exception of the acid soluble copper are considered total digest. – 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. – For the 2018 and 2019 programs, duplicated samples were collected at the time of sampling and securely stored. Samples for the 2018 were then sent to the Inspectorate Laboratory, Lima, for third party (umpire) analysis. The 2019 samples are in process. The samples were selected at a rate of 1:40. Results received indicate a good correlation between datasets and show no bias for copper, molybdenum, silver and gold. – ALS release monthly 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: <ul style="list-style-type: none"> ○ Primary coarse duplicates: Inserted at a rate of 1:40 samples. ○ Coarse blank samples: Inserted after a high-grade sample (coarse blank samples currently make up about 4.2% of all samples analysed). ○ Pulp duplicates samples: Inserted 1:40 samples. ○ Pulp blank samples are 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). – QAQC analysis has shown that for: <ul style="list-style-type: none"> ○ Blanks: a minimum level of sample contamination by copper was detected during the sample preparation and assay. ○ Duplicates: the analytical precision is within acceptable ranges when compared to the original sample, i.e., more than 90% of the pairs of samples are within the error limits evaluated for a maximum relative error of 10% ($R^2 > 0.90$). These results were also repeated in the external ALS check samples. ○ Certified Reference Material: acceptable levels of accuracy and precision have been established. – Sizing test results are not routinely analysed.
Verification of sampling and assaying	<ul style="list-style-type: none"> – 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. – No twinned drillholes have been completed. – All drillholes are logged using laptop computers directly into the drillhole database (Geobank). All laboratory primary data and certificates are stored on the Las Bambas server.

ASSESSMENT CRITERIA	COMMENTARY
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SECTION 1 SAMPLING TECHNIQUES AND DATA

	<ul style="list-style-type: none"> – 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. – No adjustments have been made to assay data.
Location of data points	<ul style="list-style-type: none"> – Drillholes are set out using UTM co-ordinates with a hand held Differential Global Positioning System (DGPS) and are accurate to within 1m. On completion of drilling, collar locations are picked up by the onsite surveyors using DGPS (Trimble or Topcon). These collar locations are accurate to within 0.5m. – All drillholes are surveyed using Reflex Gyro Sprint equipment. Measurements are taken every 25 to 50 metres during drilling itself and the entire hole is surveyed with continuous readings/measurements once the hole has been completed. The downhole surveys are considered accurate for Mineral Resources estimation work. – The datum used is WGS 84 with a UTM coordinate system zone 19 South. – In June 2018, DIMAP Pty. Ltd processed LiDAR for the area covered by Las Bambas mine site and its surroundings. The Lidar component of the flight was required to generate a point cloud with +7 pts/sqm minimum, with the core area covering the exploration site having a density of +12 pts/sqm. The maps delivered were drafted in UTM coordinates and the projections used were WGS 84. The Lidar surface from this survey is in current use at site and is considered suitable for Mineral Resources and Ore Reserves estimation purposes.
Data spacing and distribution	<ul style="list-style-type: none"> – The scope of this report covers exploration stage drilling at Chalcobamba Southwest. Drill platforms are variably spaced though they are generally about 200m apart. Occasionally, platforms are separated by 100m or less. Multiple, angle holes may be drilled from a single platform and result in an average data spacing of less than 200m.
Sample security	<ul style="list-style-type: none"> – Measures to provide sample security include: <ul style="list-style-type: none"> ○ Adequately trained and supervised sampling personnel. ○ Samples are stored in a locked compound with restricted access during preparation. ○ Dispatch to various laboratories via contract transport provider in sealed containers. ○ Receipt of samples acknowledged by receiving analytical laboratory by email and checked against expected submission list. ○ Assay data returned separately in both spreadsheet and PDF formats.
Audit and reviews	<ul style="list-style-type: none"> – No audits on these drilling results have been completed. – Regular laboratory inspections are completed and documented by corporate exploration staff.

ASSESSMENT CRITERIA	COMMENTARY
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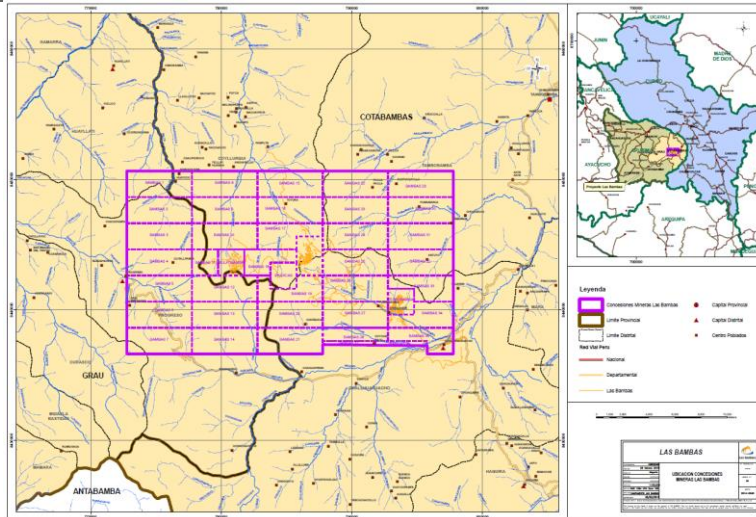
SECTION 2 REPORTING OF EXPLORATION RESULTS⁵

Mineral tenement and land tenure status	<ul style="list-style-type: none"> – 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.
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⁵ Drilling executed as part of a hydrogeological, geotechnical and sterilisation program

ASSESSMENT CRITERIA COMMENTARY

SECTION 2 REPORTING OF EXPLORATION RESULTS⁵



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

Exploration done by other parties	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		1,367.30
	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
			Chalcobamba			7		1,590.00
	Xstrata	2005	Ferrobamba	Resource Evaluation	DDH	109	HQ	26,839.90
			Chalcobamba			66		14,754.10
			Sulfobamba			60		13,943.00
			Ferrobamba			125		51,004.20
		2006	Chalcobamba	Resource Evaluation	DDH	95	HQ	27,982.90
			Sulfobamba			60		16,971.50
			Charcas			8		2,614.10
			Azuljaja			4		1,968.90
		2007	Ferrobamba	Resource Evaluation	DDH	131	HQ	46,710.40
			Chalcobamba			134		36,617.60
			Sulfobamba			22		4,996.60

**ASSESSMENT
CRITERIA**
COMMENTARY
SECTION 2 REPORTING OF EXPLORATION RESULTS⁵

MMG	2008	Ferrobamba	Resource Evaluation	DDH	118	HQ	46,773.80	
		Chalcobamba			90		22,096.60	
	2010	Ferrobamba	Resource Evaluation	DDH	91	HQ	28,399.90	
	2014	Ferrobamba	Resource Evaluation	DDH	23	HQ	12,609.70	
		Huancarane	Sterilisation	DDH	3	HQ	1,265.60	
	2015	Huancarane	Sterilisation	DDH	5	HQ	772.6	
	2015	Ferrobamba	Resource Evaluation	DDH	154	HQ	53,771.7	
	2016	Ferrobamba	Resource Evaluation	DDH	104	HQ	31,206.2	
		Chalcobamba	Resource Evaluation	DDH	13		1,880.3	
	2017	Ferrobamba	Resource Evaluation	DDH	44	HQ	20,211.35	
		Ferrobamba	Resource Evaluation	DDH	83	HQ-NQ-BQ	48,062.70	
	2018	Chalcobamba	Resource Evaluation	DDH	46	HQ	7,278.60	
		Chalcobamba SW	Exploration	DDH	7	HQ	3,459.50	
		Ferrobamba	Resource Evaluation	DDH	48	HQ-NQ-BQ	17,457.70	
	2019	Chalcobamba	Resource Evaluation	DDH	26	HQ	8,764.60	
		Chalcobamba SW	Exploration	DDH	11	HQ	3,554.10	
	Total					1,721		557,187.65

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**

HOLEID	EASTING	NORTHING	ELEV	AZIMUTH	INCLINATION	TD
CH43200-2	786,070	8,443,199	4,464	0.3	-59.3	153.3
CH43200-3	786,070	8,443,193	4,464	180	-53.3	253.5
CH43325-1	785,943	8,443,325	4,502	20	-59.3	211.3

Table 2 – Summary of Significant Downhole Intercepts, Las Bambas, Chalcobamba Southwest Zone.

Note: NSI = no significant intersection.

Hole ID	From (m)	To (m)	Length (m)	Cu (%)	Au (g/t)	Mo ppm	Ag (g/t)
CH43200-2	2.5	72.1	69.6	0.49	0.02	172	1.1
CH43200-3	46	77.5	31.5	0.26	0.03	184	0.8
	83.2	196	112.8	0.24	0.02	136	0.6
CH43325-1	12.4	59.4	47	0.75	0.03	7	3.5
CH43650-11	147.5	167.5	20	0.55	0.02	88	1.7
CH43650-12	11	42.9	31.9	0.46	0.02	5	2
	106.9	141.3	34.4	1.47	0.07	10	6.9
	160.8	181.1	20.4	0.46	0.02	14	2.1
CHS18-023	46.2	90.6	44.4	1.21	0.05	20	3.5
	301	321	20	0.27	0.01	291	0.9
	354.5	382.8	28.3	0.29	0.01	304	0.8
	397.7	435.1	37.4	0.26	0.01	228	0.7
	454.6	492	37.4	0.23	0.01	246	0.6
CHS18-028	99.5	119.7	20.2	0.82	0.04	18	4
	278.2	338.5	60.3	0.31	0.01	89	1.2
CHS18-034	34.7	54.7	20	0.22	0.01	8	0.7
	82.6	102.8	20.2	0.22	0.01	21	0.7
	381.5	401.5	20	0.51	0.01	4	1.2
	535.6	571.3	35.7	0.46	0.01	164	1.9
CHS18-040	83.5	116.7	33.2	0.38	0.02	8	1.4
	133.1	153.1	20	0.25	0.03	127	1.1
	206.9	226.9	20	1.2	0.06	26	4.4
	411.7	439.9	28.3	0.91	0.05	72	3.4
	461.9	497.1	35.2	0.27	0.01	417	1.3
CHS18-045	NSI						
CHS18-049	0.9	382.1	381.2	0.37	0.01	263	1
	397.5	423.9	26.4	0.23	0.01	141	0.6
	426.1	472.3	46.2	0.28	0.01	225	0.7
CHS18-050	30.9	50.9	20	0.47	0.05	6	1.7
	86.4	106.4	20	0.21	0.01	4	1.2
	122.8	156.7	33.9	0.66	0.02	12	2.1
CHS19-003	NSI						
CHS19-004	20	41	21	0.8	0.04	24	3.4
	48	68	20	0.27	0.01	5	1.1
	128	148	20	0.42	0.02	9	1.5
	201	260.5	59.5	1.01	0.06	17	3.9
	278	298	20	0.23	0.01	289	0.8
CHS19-006	NSI						
CHS19-011	0	35.7	35.7	0.44	0.02	125	1.1
	49.9	153	103.1	0.54	0.02	299	1.5
	259	279	20	0.25	0.01	116	0.8
	289.5	309.5	20	0.23	0.01	86	0.7
	333.8	371	37.2	0.25	0.01	77	0.5
	391	411	20	0.26	0.01	78	0.5

JORC 2012 TABLE 1 – NAMBULWA EXPLORATION ACTIVITIES

CRITERIA	COMMENTARY
SECTION 1 SAMPLING TECHNIQUES AND DATA	
Sampling techniques	<ul style="list-style-type: none"> – A combination of reverse circulation drilling (RC), diamond drilling (DD), and air core drilling (AC) were completed in the Project area. – Mineralised zones within the drill core were identified based on combined parameters, including lithological and alteration logging, mineralogical logging and systematic spot pXRF readings. DD core was sampled nominally at 1m intervals within mineralised zones while unmineralised zones were sampled at up to 2-4m intervals. Sampling was carried out by longitudinally cutting PQ and HQ drill core using an Almonte automatic diamond saw and sampling half-core, with half-core retained for future reference. PQ drill core was quartered and sampled. Three-quarters of the core was retained for future reference. – RC drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Lithological and mineralogical logging, supported by systematic spot pXRF readings, were used to identify mineralised and unmineralised zones in the RC chips. Samples from mineralized zones were riffle split every 1m to obtain a representative (~2.5kg) sample. Samples from unmineralised zones were riffle split and composited to 2m intervals. Wet samples were dried in ambient air before splitting and compositing. – AC drill cuttings were collected in 1m bulk samples from a rig mounted cyclone. Samples from zones of mineralisation were riffle split to obtain a representative (~2.5kg sample). Samples from visually unmineralised, lithologically similar zones were riffle split and composited to 3m sample intervals (~2.5kg weight). Wet samples were dried in ambient air before splitting and compositing. – Overall, 54% of the samples were less than 2m, with mineralised samples taken at nominal 1m intervals. – Samples were crushed, split and pulverised (>85% passing 75 µm) at an onsite ALS laboratory at the MMG core yard facility in Lubumbashi. 100 grams of pulp material was sent to the SANAS accredited ALS Laboratories in Johannesburg. – The sample types, nature, quality and sample preparation techniques are considered appropriate for the nature of mineralisation within the Project (sediment hosted base metal mineralisation) by the Competent Person.
Drilling techniques	<ul style="list-style-type: none"> – Diamond drilling: PQ and HQ sizes, with triple tube to maximise recovery. At the end of each drilling run the core was marked with an orientation mark by using a REFLEX ACE tool. An orientation line was then drawn along the axis of the core if two consecutive orientations marks could be aligned by docking core pieces. – Aircore drilling: A blade bit was used for drilling a 3.23-inch (82mm) hole. The cyclone was manually cleaned at the start of each shift, after any wet samples, and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the AC rods, hoses, and cyclone after each rod. – Reverse circulation drilling: A hammer bit was used for drilling a 5.25-inch (133mm) diameter hole. The cyclone was manually cleaned at the start of each shift, after any wet samples, and after each hole. Compressed air from the drilling machine was used to clean/blow out material from the RC rods, hoses, and cyclone after each rod.
Drill sample recovery	<ul style="list-style-type: none"> – Overall DD core recovery averaged 83% across the Project area. As expected, the recovery dropped in unconsolidated/highly weathered ground. Below 50m, core recovery averaged 85%, and below 100m, core recovery averaged 89%. – Actual vs. recovered drilling lengths were captured by the driller and an onsite rig technician using a tape measure. Measured accuracy was down to 1cm. The core recoveries were calculated during the database exports. – Sample recovery during diamond drilling was maximised using the following methods: <ul style="list-style-type: none"> ○ Short drill runs (~50cm) ○ Using drilling additives, muds and chemicals to improve broken ground conditions. ○ Using the triple tube methodology in the core barrel. ○ Reducing water pressure to prevent washout of friable material – Drilling rates varied depending on the actual and forecast ground conditions – Core loss was recorded through the core and assigned to intersections where visible loss occurred. Cavities were noted.

CRITERIA	COMMENTARY
SECTION 1 SAMPLING TECHNIQUES AND DATA	
	<ul style="list-style-type: none"> – Bias due to core loss has not been determined. – RC and AC cuttings recovery was measured by weighing each 1m sample bag immediately following collection from the cyclone. – Sample returns for RC and AC drilling have been calculated at 62% and 63% respectively. – Sample recovery during RC drilling was maximized using the following methods: <ul style="list-style-type: none"> ○ Adjusting air pressures to the prevailing ground condition. ○ Using new hammer bits and replacing when showing signs of wear.
Logging	<ul style="list-style-type: none"> – All drill samples (DD core, RC chips and AC chips) were geologically logged using a GeoBank® Mobile interface and uploaded to a Geobank® database. – Qualitative logging includes lithology, mineralisation type, oxidation type, weathering type, colour and alteration types. Quantitative logging includes mineralisation mineral percentage, alteration mineral percentage and in the case of core, RQD and structural data have been recorded. – All the core and chip samples were photographed both wet and dry. – 100% of core and chips have been logged with the above information.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> – DD core was split in half longitudinally (HQ size) or quartered (PQ size) using an Almonte automatic diamond saw. – Sample lengths were cut as close to nominal 1m intervals as possible while also respecting geological contacts. Samples were generally ~2.5kg in weight. – RC and AC samples were collected from a cyclone every metre by a trained driller's assistant. If the sample was dry the sample was passed through a riffle splitter and a ~2.5kg split was collected into a pre-numbered calico bag. Residual material was sampled and sieved for collection into chip trays for logging and the remainder returned to the larger poly-weave bag (bulk reject). The splitter was cleaned using compressed air or a clean brush and tapped using a rubber mallet. If the sample was wet, the sample was air dried before being split according to the above procedure. – For RC and AC methods, field duplicates were inserted at a rate of approximately 5% to ensure sampling precision was measured. – Samples from individual drillholes were sent in a single dispatch to the onsite ALS laboratory at the MMG core yard facility in Lubumbashi. – Samples were received, recorded on the sample sheet, weighed, and dried at 120°C for 4 to 8 hours (or more) depending on dampness at the sample preparation laboratory. – Samples were crushed and homogenised in a jaw crusher to >70% passing 2mm. The jaw crusher was cleaned with a barren quartz blank after every crushed sample. – The sample size was reduced to 1000g in a riffle splitter and pulverised in an LM2 pulveriser to >85% passing 75 micron. QC grind checks were carried out using wet sieving at 75 micron on 1 in 10 samples. – 100 grams of pulp material were sent to the SANAS accredited ALS Laboratories in Johannesburg. – Crush and pulp duplicates were submitted for QAQC purposes. – Certified reference material (high, medium, and low copper grades) were also inserted and submitted to ALS for analysis at a rate of 3 per 30 samples. – The sample size is appropriate for the grain size and distribution of the minerals of interest.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> – All samples were sent to ALS Chemex Laboratory in Johannesburg – Samples were analysed using a 4-acid digest with ICP MS finish. 48 elements were analysed in total. – Acid soluble copper assays were only performed when the total copper assay was greater than 1,000 ppm. – ~15% QAQC samples were incorporated, including blanks, duplicates (field, crush, and pulp) and certified reference material per sample analysis batch. – QAQC data has been interrogated with no significant biases or precision issues. – No geophysical tools, spectrometers, or portable XRF instruments have been used for estimation purposes.

CRITERIA	COMMENTARY
SECTION 1 SAMPLING TECHNIQUES AND DATA	
Verification of sampling and assaying	<ul style="list-style-type: none"> – Significant intersections have been reviewed by competent MMG employees. – No twin drilling was completed. – Data are stored in a SQL database with a Geobank® interface. – No adjustments to assay data were made.
Location of data points	<ul style="list-style-type: none"> – Planned collar positions for both diamond drilling and RC drilling were located using handheld GPS devices to ±5m accuracy. – Post drilling, actual collar positions were surveyed using DGPS (Geomax Zenith 25 Pro and Topcon Hiper II) and are of high accuracy. – Grid system is in WGS84/UTM35S – Topographic control was by a detailed aerial drone survey. – The TN14 GYROCOMPASS™ was used to align the drill rig to the correct azimuth and dip angles. – Downhole surveys were done using the REFLEX EZ-TRAC survey instrument. Downhole surveys were not carried out on RC & AC drillholes.
Data spacing and distribution	<ul style="list-style-type: none"> – Drill spacing is variable between prospects. Average drillhole data are spaced at ~50 to 100m between drill sections. Holes on sections are spaced at ~25-50m apart. – 2m or 4m composites were taken in zones of no visual mineralisation (3m composites for AC drilling) – Nominal 1m samples were taken in zones of mineralisation. – No other sample compositing has occurred.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> – DD and RC drillholes were predominantly drilled with dips of between 45° and 60° to intersect generally steeply dipping mineralisation. Drilling azimuths were as close as practical to orthogonal to the mineralised trend. The AC drillholes were drilled vertically. – In the view of the Competent Person, no bias has been introduced by the drilling direction.
Sample security	<ul style="list-style-type: none"> – Samples were transported from the field and delivered to the sample processing facility in Lubumbashi for cutting and preparation. A single cab pick-up was used for the transport. Polyethylene foam, tarpaulins, and cargo nets were used to secure the load and to avoid possible shifting of core during transport. – RC chip sampling was conducted in the field. Chip samples were packed in a labelled plastic bag along with a labelled plastic ID tag. – The plastic bag was tied with cable ties to secure the sample and to prevent contamination. – A set of 15 plastic sample bags were packed into labelled poly-weave bags, ready to be shipped from the field to the sample preparation laboratory in Lubumbashi. – Field packing documents and sample sheets were prepared and sent together with the core trays and poly-weave bags to the sample preparation laboratory in Lubumbashi. – After sample preparation, bar-coded envelopes of 100-200g of pulp for each sample were inserted into boxes of ~40 envelopes each, labelled with dispatch ID and laboratory destination to be sent by DHL courier to ALS Chemex in Johannesburg. – Two sets of duplicate pulps of 100-200g were inserted into labelled boxes of ~40 envelopes each to be stored on site in storage containers. – The shipment of pulps from Lubumbashi to ALS laboratories was done using DHL Courier services with waybill number for tracking. – The Lubumbashi sample preparation laboratory utilizes the ALS-Chemex LIM System installed at Kinsevere mine site, generating a unique lab workorder for each batch sample in the analytical chain.
Audit and reviews	<ul style="list-style-type: none"> – No external audits or reviews of sampling techniques and data have been conducted.

CRITERIA	COMMENTARY
SECTION 2 REPORTING OF EXPLORATION RESULTS	
Mineral tenement and land tenure status	– The Nambulwa Project is located within lease PE539 (100% Gecamines) in the DRC. The lease was acquired by MMG as part of the Kinsevere Amodiation agreement with Gecamines. The tenement is valid through to April 3, 2024.
Exploration done by other parties	<ul style="list-style-type: none"> – Union Minière (UMHK) explored the Nambulwa Project during the 1920s. UMHK conducted trenching, pitting and tunnelling, mainly at Nambulwa Main. – Gecamines explored the Nambulwa Project during the 1990s. Work completed included mapping, pitting, and limited drilling at Nambulwa Main. – Anvil Mining explored the Nambulwa Project between September and December 2007 and was the first company to effectively define a resource. Anvil's initial phase of exploration included geological mapping, termite mound sampling, AC drilling (11,830m), RC drilling (6,268m), and DD drilling (668m) focussed on PE539 and the surrounding tenements. An unclassified resource of 1.1Mt of ore @ 3.3% Cu or 35,000 t of copper metal was estimated for Nambulwa Main.
Geology	<ul style="list-style-type: none"> – Stratiform sedimentary hosted copper and cobalt. – Mineralisation is hosted by the Neoproterozoic Katanga Supergroup within the R2 (Mines Series), R3 (Kansuki Fm), and R4 (Mwashya Fm) stratigraphy. – Copper mineralisation is both lithologically and structurally controlled and occurs mainly as veins and disseminations in dolomitic units, carbonaceous shale, and massive to laminated dolomite. – Oxide Cu is hosted mainly in the dolomitic units, whereas sulphides (chalcocite, digenite) are hosted in the black shale unit. Oxide copper mineralogy includes malachite and other black-oxides and they are sometimes associated with elevated Co mineralisation. Sulphide (chalcocite ± chalcopyrite-bornite) mineralisation is found in deeper levels of the deposits.
Drill hole information	– A complete listing of all drillhole information on the Nambulwa Project is provided in this release.
Data aggregation methods	– Significant intersections were reported at 0.5% Cu (total) lower cut-off at a minimum width of 3m with up to 3m internal dilution permitted. Copper equivalents were not used in the reporting of exploration results.
Relationship between mineralisation width and intercept lengths	– All results are reported in drilled lengths and should not be considered as true widths of the mineralised zones.
Diagrams	– Refer to maps and cross sections in the text of this report.
Balanced reporting	– The table below illustrates the top twenty drill intercepts based on copper-grade-times-thickness measurement from the Nambulwa Main (NAM) and DZ prospects. Hole locations are shown on the maps in the preceding section.

CRITERIA	COMMENTARY
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SECTION 2 REPORTING OF EXPLORATION RESULTS

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMDD060	555831	8767962	1229	219.9	DD	-49.7	72	99.0	54.0m @ 4.10 % Cu
DZ	NAMRC013	555847	8767962	1229	140	RC	-45	72.7	64.0	75.0m @ 2.12 % Cu
DZ	NAMAC047	555892	8768045	1226	31	AC	-90	0	12.0	19.0m @ 6.28 % Cu
DZ	NAMDD065	555830	8767912	1230	209.4	DD	-50.4	72.8	105.4	50.5m @ 2.13 % Cu
NAM	NAMDD034	556756	8768412	1239	96.9	DD	-55	40.7	45.0	29.0m @ 3.67 % Cu
NAM	NAMDD042	557007	8768240	1240	89.4	DD	-53.9	42.1	30.0	14.4m @ 6.96 % Cu
NAM	NAMDD008	556864	8768303	1243	98.5	DD	-55.8	45.5	30.5	26.5m @ 3.41 % Cu
DZ	NAMDD076	556269	8768444	1221	163	DD	-50	177.7	24.0	24.2m @ 3.33 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	110.0	40.0m @ 1.72 % Cu
NAM	NAMDD041	556829	8768342	1246	93.1	DD	-49.4	44.5	24.0	38.6m @ 1.58 % Cu
NAM	NAMDD052	556909	8768343	1257	87.9	DD	-45.3	220.7	36.0	25.4m @ 2.22 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	88.0	17.0m @ 3.24 % Cu
NAM	NAMDD037	556560	8768687	1232	69.6	DD	-45	41.2	38.0	13.0m @ 4.19 % Cu
NAM	NAMDD050	557031	8768278	1245	78.4	DD	-60	222.7	48.9	14.5m @ 3.24 % Cu
NAM	NAMDD010	556948	8768255	1239	138.8	DD	-48.3	42.2	36.0	21.0m @ 2.08 % Cu
NAM	NAMDD053	556846	8768405	1268	89.7	DD	-49.6	220.9	29.0	24.5m @ 1.57 % Cu
NAM	NAMDD044	556969	8768272	1238	98.4	DD	-50.9	42.7	14.9	10.0m @ 3.68 % Cu
DZ	NAMDD061	555877	8768048	1226	136.5	DD	-49.7	110	13.0	9.0m @ 3.98 % Cu
NAM	NAMDD022	557072	8768093	1242	168.9	DD	-54.8	37.5	128.3	21.7m @ 1.64 % Cu
DZ	NAMDD063A	555844	8768063	1227	176.5	DD	-50.3	110	28.0	4.0m @ 8.36 % Cu

- The table below illustrates the bottom twenty drill intercepts from the Nambulwa Main (NAM) and DZ prospects. No significant mineralisation (NSA) intersected (all <0.5% Cu or <3.0m). Hole locations are shown on the maps in the following section.

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMDD024	555891	8767877	1231	95.3	DD	-49.8	73.5	-	NSA
NAM	NAMDD027	556942	8768391	1250	120.9	DD	-55	224.2	-	NSA
NAM	NAMDD030	556588	8768650	1233	125.4	DD	-44	41.8	-	NSA
NAM	NAMDD032	556715	8768494	1237	130.1	DD	-53.2	43.6	-	NSA
NAM	NAMDD040	556983	8768208	1240	110.4	DD	-55.2	45.7	-	NSA
NAM	NAMDD045	557278	8768047	1260	89.1	DD	-55.3	130	-	NSA
NAM	NAMDD046	557231	8768084	1252	99.9	DD	-55.4	132.9	-	NSA
NAM	NAMDD055	557075	8768096	1242	121	DD	-75.6	38.5	-	NSA
NAM	NAMDD056	557160	8767607	1251	96.5	DD	-50.3	245.1	-	NSA
NAM	NAMDD057	557274	8767656	1253	158.6	DD	-50.7	248.3	-	NSA
NAM	NAMDD058	557069	8768674	1237	162.6	DD	-51.6	59.8	-	NSA
NAM	NAMDD059	557026	8768648	1237	100	DD	-51.4	60.4	-	NSA
DZ	NAMDD062	555887	8768126	1224	188.95	DD	-49.7	109.6	-	NSA
DZ	NAMDD066	555929	8768201	1223	151.9	DD	-50.1	109.6	-	NSA
DZ	NAMDD067	556083	8768256	1218	154.5	DD	-50.1	289.6	-	NSA
DZ	NAMDD069	556674	8768417	1233	205.5	DD	-50	188.7	-	NSA
DZ	NAMDD071	555872	8767767	1232	257.5	DD	-55	72.1	-	NSA
DZ	NAMDD072	556672	8768355	1233	137	DD	-50	188.7	-	NSA
DZ	NAMDD073	556369	8768470	1223	208.5	DD	-50	177.7	-	NSA
DZ	NAMDD078	556169	8768432	1217	178.9	DD	-50	180	-	NSA

- A complete listing of all drillhole information on the Nambulwa Project is provided in this release.

Other
substantive
exploration data

- Airborne Geophysics: TEMPEST survey, Airborne EM, magnetics, and radiometric were flown at the end of 2013. 3D inversion of the EM data identified a prominent conductor body over the western, central and eastern section of the Project.

CRITERIA	COMMENTARY
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CRITERIA	COMMENTARY
SECTION 2 REPORTING OF EXPLORATION RESULTS	
	<ul style="list-style-type: none"> – Geological mapping was conducted in 2014 and 2017. Mapping results outlined the presence of the geologically prospective rock units that are the main host rock to the mineralisation. Younger lithologies were also noted from the Nguba and Kundelungu Formations. – Surface geochemistry: Termite mound sampling on 100m x 100m grid was completed in 2014, which effectively identified copper anomalous zones within the tenement. Additional geochemical surveys include 50m x 50m soil sampling conducted in 2017. – Airborne Geophysics: Xcalibur survey, flown in 2015. – Magnetism: effective at mapping structural and stratigraphic domains. – Radiometrics: effective at mapping lithological contrasts and regolith domains. – Ground IP and AMT survey: helped in mapping the conductive and resistive bodies at depth.
Further work	<ul style="list-style-type: none"> – Further exploration activities are planned for the 2020 exploration season: <ul style="list-style-type: none"> ○ Infill drilling to improve confidence levels of resource estimations. ○ Metallurgical testwork on drill core and bulk samples to ascertain milling and processing characteristics. ○ Geotechnical drilling to assess pit wall characteristics for mine planning. ○ Preliminary economic assessment to evaluate economic viability.

Table 2: Complete tabulation of all drilling results from the Nambulwa and DZ prospects.

All significant intercepts are reported based on a 0.5% Total Cu lower cut-off at a minimum width of 3m with up to 3m internal dilution permitted.

Copper equivalents were not used in the reporting of exploration results. NSA = No Significant Assays (<0.5% Cu or <3m interval length).

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMDD060	555831	8767962	1229	219.9	DD	-49.7	72	99.0	54.0m @ 4.10 % Cu
DZ	NAMRC013	555847	8767962	1229	140	RC	-45	72.7	64.0	75.0m @ 2.12 % Cu
DZ	NAMAC047	555892	8768045	1226	31	AC	-90	0	12.0	19.0m @ 6.28 % Cu
DZ	NAMDD065	555830	8767912	1230	209.4	DD	-50.4	72.8	105.4	50.5m @ 2.13 % Cu
NAM	NAMDD034	556756	8768412	1239	96.9	DD	-55	40.7	45.0	29.0m @ 3.67 % Cu
NAM	NAMDD042	557007	8768240	1240	89.4	DD	-53.9	42.1	30.0	14.4m @ 6.96 % Cu
NAM	NAMDD008	556864	8768303	1243	98.5	DD	-55.8	45.5	30.5	26.5m @ 3.41 % Cu
DZ	NAMDD076	556269	8768444	1221	163	DD	-50	177.7	24.0	24.2m @ 3.33 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	110.0	40.0m @ 1.72 % Cu
NAM	NAMDD041	556829	8768342	1246	93.1	DD	-49.4	44.5	24.0	38.6m @ 1.58 % Cu
NAM	NAMDD052	556909	8768343	1257	87.9	DD	-45.3	220.7	36.0	25.4m @ 2.22 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	88.0	17.0m @ 3.24 % Cu
NAM	NAMDD037	556560	8768687	1232	69.6	DD	-45	41.2	38.0	13.0m @ 4.19 % Cu
NAM	NAMDD050	557031	8768278	1245	78.4	DD	-60	222.7	48.9	14.5m @ 3.24 % Cu
NAM	NAMDD010	556948	8768255	1239	138.8	DD	-48.3	42.2	36.0	21.0m @ 2.08 % Cu
NAM	NAMDD053	556846	8768405	1268	89.7	DD	-49.6	220.9	29.0	24.5m @ 1.57 % Cu
NAM	NAMDD044	556969	8768272	1238	98.4	DD	-50.9	42.7	14.9	10.0m @ 3.68 % Cu
DZ	NAMDD061	555877	8768048	1226	136.5	DD	-49.7	110	13.0	9.0m @ 3.98 % Cu
NAM	NAMDD022	557072	8768093	1242	168.9	DD	-54.8	37.5	128.3	21.7m @ 1.64 % Cu
DZ	NAMDD063A	555844	8768063	1227	176.5	DD	-50.3	110	28.0	4.0m @ 8.36 % Cu
NAM	NAMDD051B	557230	8767953	1261	36.6	DD	-55.5	125.1	24.6	12.0m @ 2.68 % Cu
NAM	NAMDD006	556791	8768371	1242	178.2	DD	-49.5	43.5	47.2	16.0m @ 1.90 % Cu
DZ	NAMAC042	555902	8767982	1226	26	AC	-90	0	9.0	17.0m @ 1.78 % Cu
DZ	NAMRC012	555885	8767975	1228	130	RC	-55	72.7	53.0	17.0m @ 1.73 % Cu
DZ	NAMRC009	555890	8767927	1229	150	RC	-45	72.7	48.0	32.0m @ 0.87 % Cu
NAM	NAMDD038	556887	8768276	1239	78.9	DD	-55.1	42.4	49.0	5.0m @ 5.37 % Cu
NAM	NAMDD047	557248	8768004	1262	99.9	DD	-55.1	128.7	31.0	21.0m @ 1.22 % Cu
NAM	NAMDD051	557228	8767950	1261	72.6	DD	-55	121.8	32.6	12.4m @ 2.00 % Cu
NAM	NAMDD043B	556923	8768295	1247	75.1	DD	-56.8	43.9	32.0	8.0m @ 2.91 % Cu
DZ	NAMRC002	555916	8767776	1232	90	RC	-55	72.7	48.0	15.0m @ 1.41 % Cu
DZ	NAMAC031	555922	8767945	1228	29	AC	-90	0	4.0	12.0m @ 1.69 % Cu

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
NAM	NAMDD001	556741	8768453	1238	86.5	DD	-54.1	51.6	51.5	9.0m @ 2.20 % Cu
DZ	NAMRC012	555885	8767975	1228	130	RC	-55	72.7	38.0	11.0m @ 1.62 % Cu
DZ	NAMDD083	555800	8767948	1230	257.5	DD	-50	73	149.0	11.0m @ 1.54 % Cu
NAM	NAMDD026	556532	8768821	1236	96.9	DD	-54.5	45.5	27.9	11.0m @ 1.46 % Cu
NAM	NAMDD048	557205	8768034	1252	92.4	DD	-55.5	128.1	50.0	17.0m @ 0.94 % Cu
NAM	NAMDD054	556870	8768378	1266	93.8	DD	-45.2	220.6	30.3	12.5m @ 1.26 % Cu
DZ	NAMDD064A	555921	8768108	1224	106	DD	-49.8	109.6	49.0	8.0m @ 1.78 % Cu
NAM	NAMDD031	556571	8768630	1232	125.4	DD	-45.4	45	73.4	13.0m @ 1.08 % Cu
NAM	NAMDD026	556532	8768821	1236	96.9	DD	-54.5	45.5	9.9	12.0m @ 1.15 % Cu
NAM	NAMDD053	556846	8768405	1268	89.7	DD	-49.6	220.9	63.7	6.3m @ 2.11 % Cu
NAM	NAMDD029	556733	8768516	1239	118	DD	-54.6	41.6	25.0	4.0m @ 3.32 % Cu
NAM	NAMDD049	557180	8767988	1251	80.4	DD	-55.4	118.7	44.4	9.0m @ 1.47 % Cu
NAM	NAMDD033	556776	8768427	1243	81.9	DD	-55.9	39.9	25.9	6.5m @ 1.98 % Cu
NAM	NAMDD025	557144	8768015	1246	150.8	DD	-54.7	44.5	100.0	7.0m @ 1.82 % Cu
DZ	NAMDD076	556269	8768444	1221	163	DD	-50	177.7	7.0	11.0m @ 1.02 % Cu
NAM	NAMDD028	556497	8768782	1230	136	DD	-50	40.4	87.4	7.0m @ 1.52 % Cu
DZ	NAMDD068	555858	8767868	1230	189.6	DD	-50.3	70.8	83.9	16.0m @ 0.66 % Cu
NAM	NAMDD043B	556923	8768295	1247	75.1	DD	-56.8	43.9	17.1	9.9m @ 0.99 % Cu
DZ	NAMRC012	555885	8767975	1228	130	RC	-55	72.7	23.0	11.0m @ 0.89 % Cu
NAM	NAMDD026	556532	8768821	1236	96.9	DD	-54.5	45.5	44.9	5.0m @ 1.91 % Cu
NAM	NAMDD043B	556923	8768295	1247	75.1	DD	-56.8	43.9	46.0	12.0m @ 0.79 % Cu
DZ	NAMDD077	555788	8767902	1230	255	DD	-49.7	72.4	76.0	8.0m @ 1.18 % Cu
DZ	NAMDD087	555920	8767887	1231	155.5	DD	-50	73	23.0	4.0m @ 2.35 % Cu
NAM	NAMDD054	556870	8768378	1266	93.8	DD	-45.2	220.6	46.0	12.0m @ 0.77 % Cu
NAM	NAMDD035	556688	8768551	1235	90.8	DD	-42.8	43.1	55.0	4.0m @ 2.23 % Cu
DZ	NAMDD079	556268	8768486	1221	146.5	DD	-50	180	111.0	5.0m @ 1.69 % Cu
DZ	NAMAC031	555922	8767945	1228	29	AC	-90	0	21.0	8.0m @ 1.01 % Cu
NAM	NAMDD020	556558	8768704	1232	97.9	DD	-55.4	47.3	56.0	5.5m @ 1.42 % Cu
DZ	NAMDD018	555974	8767841	1228	101.5	DD	-55	252.7	52.0	6.0m @ 1.30 % Cu
DZ	NAMDD074	555844	8767814	1231	217	DD	-55	74.7	173.0	10.0m @ 0.73 % Cu
DZ	NAMAC048	555910	8768037	1226	10	AC	-90	0	0.0	3.0m @ 2.41 % Cu
DZ	NAMDD061	555877	8768048	1226	136.5	DD	-49.7	110	73.0	6.0m @ 1.20 % Cu
DZ	NAMDD077	555788	8767902	1230	255	DD	-49.7	72.4	200.0	4.9m @ 1.46 % Cu
NAM	NAMDD038	556887	8768276	1239	78.9	DD	-55.1	42.4	37.0	6.0m @ 1.12 % Cu
NAM	NAMDD011	557040	8768191	1241	122.4	DD	-55.7	45.4	58.0	5.0m @ 1.29 % Cu

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMRC005	555910	8767726	1232	140	RC	-45	72.7	60.0	8.0m @ 0.79 % Cu
DZ	NAMDD083	555800	8767948	1230	257.5	DD	-50	73	71.0	3.0m @ 2.10 % Cu
DZ	NAMDD070	555898	8768212	1223	187.5	DD	-50.4	112.3	115.0	7.0m @ 0.86 % Cu
DZ	NAMAC033	555975	8767956	1225	42	AC	-90	0	39.0	3.0m @ 2.00 % Cu
DZ	NAMDD084	555880	8767711	1232	261.5	DD	-50	72	39.0	9.0m @ 0.65 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	57.0	8.0m @ 0.71 % Cu
NAM	NAMDD016	557166	8768042	1248	125.5	DD	-54.5	40.5	96.0	6.0m @ 0.94 % Cu
DZ	NAMRC005	555910	8767726	1232	140	RC	-45	72.7	107.0	5.0m @ 1.11 % Cu
NAM	NAMDD039	556527	8768736	1231	102.5	DD	-44.9	44.3	78.0	5.0m @ 1.10 % Cu
NAM	NAMDD006	556791	8768371	1242	178.2	DD	-49.5	43.5	122.2	5.0m @ 1.09 % Cu
DZ	NAMRC009	555890	8767927	1229	150	RC	-45	72.7	36.0	6.0m @ 0.88 % Cu
DZ	NAMDD090	555842	8768008	1228	185.5	DD	-55	82	25.0	4.0m @ 1.29 % Cu
NAM	NAMDD052	556909	8768343	1257	87.9	DD	-45.3	220.7	65.5	5.5m @ 0.85 % Cu
NAM	NAMDD033	556776	8768427	1243	81.9	DD	-55.9	39.9	36.9	5.1m @ 0.90 % Cu
DZ	NAMRC010	555855	8767919	1230	150	RC	-45	72.7	74.0	6.0m @ 0.76 % Cu
DZ	NAMDD076	556269	8768444	1221	163	DD	-50	177.7	57.0	4.0m @ 1.12 % Cu
DZ	NAMDD084	555880	8767711	1232	261.5	DD	-50	72	54.0	6.0m @ 0.71 % Cu
NAM	NAMDD036	556761	8768473	1241	71.4	DD	-54.5	41.8	32.0	4.9m @ 0.83 % Cu
NAM	NAMDD048	557205	8768034	1252	92.4	DD	-55.5	128.1	73.4	3.1m @ 1.23 % Cu
NAM	NAMDD042	557007	8768240	1240	89.4	DD	-53.9	42.1	58.0	6.0m @ 0.62 % Cu
DZ	NAMAC078	555854	8768009	1227	33	AC	-90	0	20.0	5.0m @ 0.70 % Cu
DZ	NAMDD064A	555921	8768108	1224	106	DD	-49.8	109.6	42.0	3.3m @ 1.06 % Cu
DZ	NAMDD079	556268	8768486	1221	146.5	DD	-50	180	99.0	5.0m @ 0.64 % Cu
DZ	NAMAC012	556268	8768442	1221	13	AC	-90	0	9.0	4.0m @ 0.76 % Cu
NAM	NAMDD052	556909	8768343	1257	87.9	DD	-45.3	220.7	6.0	4.0m @ 0.75 % Cu
DZ	NAMAC043	555919	8767989	1227	29	AC	-90	0	26.0	3.0m @ 0.99 % Cu
NAM	NAMDD020	556558	8768704	1232	97.9	DD	-55.4	47.3	47.0	4.0m @ 0.71 % Cu
NAM	NAMDD017	557065	8768231	1243	93.9	DD	-54.6	44.4	67.0	3.0m @ 0.94 % Cu
NAM	NAMDD012	557098	8768128	1243	178	DD	-55.7	46	109.5	4.0m @ 0.70 % Cu
DZ	NAMDD083	555800	8767948	1230	257.5	DD	-50	73	131.0	4.0m @ 0.65 % Cu
DZ	NAMDD065	555830	8767912	1230	209.4	DD	-50.4	72.8	98.9	3.0m @ 0.86 % Cu
DZ	NAMDD075	556578	8768433	1232	182	DD	-50	188.7	0.0	4.0m @ 0.61 % Cu
DZ	NAMDD077	555788	8767902	1230	255	DD	-49.7	72.4	214.0	4.0m @ 0.60 % Cu
DZ	NAMDD021	555878	8767823	1231	150.85	DD	-55	75	107.0	4.0m @ 0.58 % Cu
DZ	NAMAC001	556292	8768468	1222	47	AC	-90	0	-	NSA

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMAC002	556294	8768446	1222	1	AC	-90	0	-	NSA
DZ	NAMAC003	556296	8768409	1222	50	AC	-90	0	-	NSA
DZ	NAMAC004	556295	8768426	1222	38	AC	-90	0	-	NSA
DZ	NAMAC005	556293	8768396	1222	75	AC	-90	0	-	NSA
DZ	NAMAC006	556292	8768386	1222	21	AC	-90	0	-	NSA
DZ	NAMAC007	556294	8768369	1222	31	AC	-90	0	-	NSA
DZ	NAMAC008	556292	8768354	1222	50	AC	-90	0	-	NSA
DZ	NAMAC009	556295	8768329	1221	30	AC	-90	0	-	NSA
DZ	NAMAC010	556265	8768482	1221	50	AC	-90	0	-	NSA
DZ	NAMAC011	556265	8768459	1221	34	AC	-90	0	-	NSA
DZ	NAMAC013	556267	8768418	1221	27	AC	-90	0	-	NSA
DZ	NAMAC014	556270	8768403	1222	39	AC	-90	0	-	NSA
DZ	NAMAC015	556270	8768390	1222	48	AC	-90	0	-	NSA
DZ	NAMAC016	556269	8768371	1222	36	AC	-90	0	-	NSA
DZ	NAMAC017	556272	8768350	1221	50	AC	-90	0	-	NSA
DZ	NAMAC018	556321	8768467	1222	36	AC	-90	0	-	NSA
DZ	NAMAC019	556327	8768443	1222	12	AC	-90	0	-	NSA
DZ	NAMAC020	556244	8768460	1220	15	AC	-90	0	-	NSA
DZ	NAMAC021	556243	8768433	1220	21	AC	-90	0	-	NSA
DZ	NAMAC022	556241	8768414	1220	6	AC	-90	0	-	NSA
DZ	NAMAC023	556241	8768396	1221	12	AC	-90	0	-	NSA
DZ	NAMAC024	556244	8768383	1221	3	AC	-90	0	-	NSA
DZ	NAMAC025	556241	8768368	1221	18	AC	-90	0	-	NSA
DZ	NAMAC026	556241	8768351	1221	14	AC	-90	0	-	NSA
DZ	NAMAC027	555825	8767908	1230	18	AC	-90	0	-	NSA
DZ	NAMAC028	555850	8767920	1229	18	AC	-90	0	-	NSA
DZ	NAMAC029	555873	8767927	1229	12	AC	-90	0	-	NSA
DZ	NAMAC030	555902	8767937	1229	6	AC	-90	0	-	NSA
DZ	NAMAC032	555945	8767950	1227	11	AC	-90	0	-	NSA
DZ	NAMAC034	555993	8767963	1223	30	AC	-90	0	-	NSA
DZ	NAMAC035	556008	8767960	1223	21	AC	-90	0	-	NSA
DZ	NAMAC036	555876	8767873	1231	11	AC	-90	0	-	NSA
DZ	NAMAC037	555898	8767878	1231	9	AC	-90	0	-	NSA
DZ	NAMAC038	555918	8767884	1231	5	AC	-90	0	-	NSA
DZ	NAMAC039	555936	8767892	1230	3	AC	-90	0	-	NSA

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMAC040	555952	8767898	1229	21	AC	-90	0	-	NSA
DZ	NAMAC041	555973	8767903	1227	2	AC	-90	0	-	NSA
DZ	NAMAC044	555871	8768011	1227	50	AC	-90	0	-	NSA
DZ	NAMAC045	555892	8768012	1227	2	AC	-90	0	-	NSA
DZ	NAMAC046	555915	8768017	1226	5	AC	-90	0	-	NSA
DZ	NAMAC049	555922	8768033	1226	4	AC	-90	0	-	NSA
DZ	NAMAC050	555874	8768052	1226	9	AC	-90	0	-	NSA
DZ	NAMAC051	555942	8768026	1225	24	AC	-90	0	-	NSA
DZ	NAMAC052	555926	8768109	1224	8	AC	-90	0	-	NSA
DZ	NAMAC053	555932	8768101	1224	6	AC	-90	0	-	NSA
DZ	NAMAC054	555951	8768099	1223	9	AC	-90	0	-	NSA
DZ	NAMAC055	556214	8768504	1219	6	AC	-90	0	-	NSA
DZ	NAMAC056	556204	8768496	1218	6	AC	-90	0	-	NSA
DZ	NAMAC057	556189	8768479	1218	7	AC	-90	0	-	NSA
DZ	NAMAC058	556184	8768561	1217	7	AC	-90	0	-	NSA
DZ	NAMAC059	556172	8768547	1217	37	AC	-90	0	-	NSA
DZ	NAMAC060	556156	8768523	1216	13	AC	-90	0	-	NSA
DZ	NAMAC061	556324	8768452	1222	50	AC	-90	0	-	NSA
DZ	NAMAC062	556329	8768425	1223	5	AC	-90	0	-	NSA
DZ	NAMAC063	556326	8768401	1223	30	AC	-90	0	-	NSA
DZ	NAMAC064	556330	8768380	1223	11	AC	-90	0	-	NSA
DZ	NAMAC065	556326	8768354	1223	7	AC	-90	0	-	NSA
DZ	NAMAC066	556326	8768432	1222	5	AC	-90	0	-	NSA
DZ	NAMAC067	556294	8768437	1222	1	AC	-90	0	-	NSA
DZ	NAMAC068	556211	8768422	1218	15	AC	-90	0	-	NSA
DZ	NAMAC069	556209	8768403	1219	5	AC	-90	0	-	NSA
DZ	NAMAC070	556207	8768382	1219	15	AC	-90	0	-	NSA
DZ	NAMAC071	556209	8768362	1219	5	AC	-90	0	-	NSA
DZ	NAMAC072	555786	8767941	1230	5	AC	-90	0	-	NSA
DZ	NAMAC073	555803	8767944	1229	5	AC	-90	0	-	NSA
DZ	NAMAC074	555830	8767945	1229	7	AC	-90	0	-	NSA
DZ	NAMAC075	555848	8767959	1229	8	AC	-90	0	-	NSA
DZ	NAMAC076	555812	8768006	1228	8	AC	-90	0	-	NSA
DZ	NAMAC077	555832	8768006	1228	19	AC	-90	0	-	NSA
DZ	NAMAC079	555865	8767966	1228	24	AC	-90	0	-	NSA

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMAC080	555838	8767994	1229	24	AC	-90	0	-	NSA
DZ	NAMAC081	555938	8767994	1229	27	AC	-90	0	-	NSA
NAM	NAMDD002B	556604	8768595	1232	116.9	DD	-49.9	46.7	-	NSA
NAM	NAMDD003	556673	8768543	1235	108.8	DD	-50	45	-	NSA
NAM	NAMDD004	556719	8768432	1236	109	DD	-54.9	45.8	-	NSA
NAM	NAMDD005	556655	8768532	1235	160	DD	-59.5	41.8	-	NSA
NAM	NAMDD007	556837	8768275	1237	149.9	DD	-55.6	44.4	-	NSA
NAM	NAMDD009	556773	8768343	1236	140.3	DD	-50	42.7	-	NSA
NAM	NAMDD013	556923	8768231	1239	134.2	DD	-48.9	43.1	-	NSA
NAM	NAMDD014	557009	8768169	1240	155.4	DD	-55.5	44.1	-	NSA
NAM	NAMDD015	557127	8768151	1245	142	DD	-55.3	41.8	-	NSA
NAM	NAMDD019	557196	8768064	1250	107.3	DD	-54.5	49.2	-	NSA
NAM	NAMDD023B	556527	8768673	1229	151.6	DD	-55.1	44.2	-	NSA
DZ	NAMDD024	555891	8767877	1231	95.3	DD	-49.8	73.5	-	NSA
NAM	NAMDD027	556942	8768391	1250	120.9	DD	-55	224.2	-	NSA
NAM	NAMDD030	556588	8768650	1233	125.4	DD	-44	41.8	-	NSA
NAM	NAMDD032	556715	8768494	1237	130.1	DD	-53.2	43.6	-	NSA
NAM	NAMDD040	556983	8768208	1240	110.4	DD	-55.2	45.7	-	NSA
NAM	NAMDD045	557278	8768047	1260	89.1	DD	-55.3	130	-	NSA
NAM	NAMDD046	557231	8768084	1252	99.9	DD	-55.4	132.9	-	NSA
NAM	NAMDD055	557075	8768096	1242	121	DD	-75.6	38.5	-	NSA
NAM	NAMDD056	557160	8767607	1251	96.5	DD	-50.3	245.1	-	NSA
NAM	NAMDD057	557274	8767656	1253	158.6	DD	-50.7	248.3	-	NSA
NAM	NAMDD058	557069	8768674	1237	162.6	DD	-51.6	59.8	-	NSA
NAM	NAMDD059	557026	8768648	1237	100	DD	-51.4	60.4	-	NSA
DZ	NAMDD062	555887	8768126	1224	188.95	DD	-49.7	109.6	-	NSA
DZ	NAMDD066	555929	8768201	1223	151.9	DD	-50.1	109.6	-	NSA
DZ	NAMDD067	556083	8768256	1218	154.5	DD	-50.1	289.6	-	NSA
DZ	NAMDD069	556674	8768417	1233	205.5	DD	-50	188.7	-	NSA
DZ	NAMDD071	555872	8767767	1232	257.5	DD	-55	72.1	-	NSA
DZ	NAMDD072	556672	8768355	1233	137	DD	-50	188.7	-	NSA
DZ	NAMDD073	556369	8768470	1223	208.5	DD	-50	177.7	-	NSA
DZ	NAMDD078	556169	8768432	1217	178.9	DD	-50	180	-	NSA
DZ	NAMDD080	556452	8768260	1225	188.5	DD	-50.4	13.1	-	NSA
DZ	NAMDD081	556371	8768364	1224	98.5	DD	-60	180	-	NSA

Prospect	Hole ID	E	N	RL	EOH	Type	Dip	Azimuth	Depth From	Cu Intercept
DZ	NAMDD082	556248	8768365	1221	164.1	DD	-50	330	-	NSA
DZ	NAMDD085	556317	8768392	1223	69.8	DD	-52	350	-	NSA
DZ	NAMDD086	556222	8768412	1219	180.3	DD	-50	150	-	NSA
DZ	NAMDD088	556092	8768356	1216	118	DD	-50	150	-	NSA
DZ	NAMDD089	555977	8768182	1222	99.9	DD	-50	112	-	NSA
DZ	NAMRC001	555879	8767767	1232	80	RC	-55	72.7	-	NSA
DZ	NAMRC003	555959	8767789	1232	135	RC	-55	72.7	-	NSA
DZ	NAMRC004	555875	8767712	1232	126	RC	-55	72.7	-	NSA
DZ	NAMRC006	555948	8767737	1232	138	RC	-45	72.7	-	NSA
DZ	NAMRC007	555988	8767747	1231	130	RC	-45	72.7	-	NSA
DZ	NAMRC008	555938	8767938	1228	140	RC	-45	72.7	-	NSA
DZ	NAMRC011	555923	8767990	1227	118	RC	-55	72.7	-	NSA