

Mineral Resources and Ore Reserve Estimate

Mineral Resource Estimate



The Mineral Resource for Zone 5 was estimated using Datamine RM software whilst the Mineral Resource estimates for the Expansion resources Zeta NE, Zone 5 North and Mango NE were completed using Hexagon Mining's HxGN Mine Plan 3D. Banana Zone and other resources were completed using MineSight software. All the Mineral Resource estimates are reported using UTM coordinates.

A standard Mineral Resource classification system was adopted across all the Mineral Resources. For Measured classification, blocks used at least three drill holes where the average distance to the composites was within 55m. For Indicated classification, blocks used at least three drill holes with the closest composite within 60m or the average distance of the three holes composite was within 95m (Zone 5 is 95m) to 140m, dependant on the deposit. For Inferred classification, at least two drill holes with the closest drill hole less than 150m was required. Where continuity allowed, Inferred classification was allowed to carry along strike where shallow drilling is approximately 400m.

The Resource estimates were prepared in accordance with the guidelines set out in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code) 2012 edition.

The consolidated Khoemaçau/Boseto package provides Khoemaçau a near-term opportunity for low cost copper production from a long-lived operation with substantial exploration and production upside. The following table represents total resources on the mining and prospecting permitted properties:

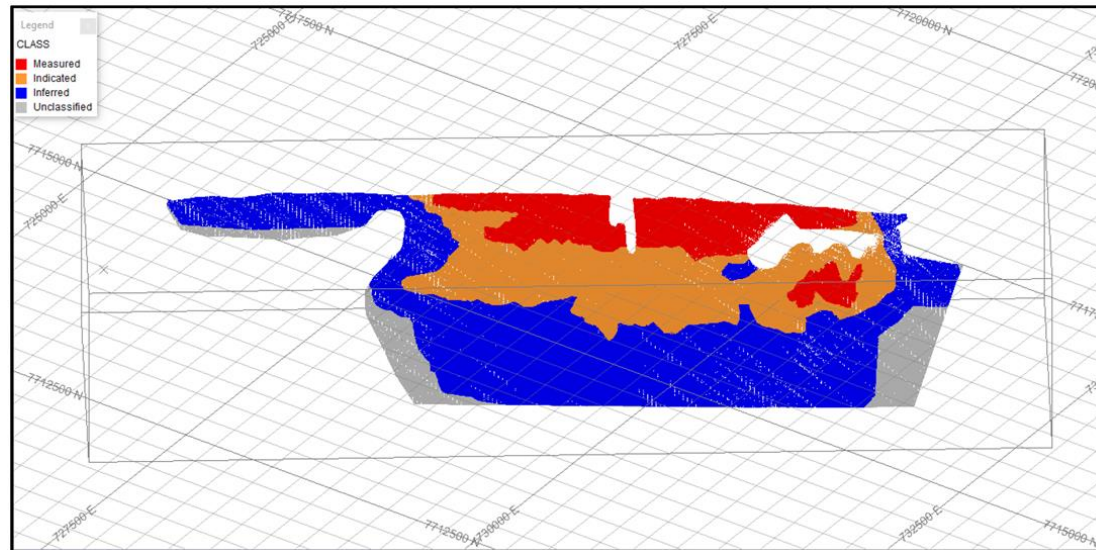
Resource	Measured		Indicated			Inferred			Total (MI&I)			Contained Metal		Reported	Cutoff Copper %	
	Tonnes (Mt)	Cu %	Ag g/t	Tonnes (Mt)	Cu %	Ag g/t	Tonnes (Mt)	Cu %	Ag g/t	Tonnes (Mt)	Cu %	Ag g/t	Cu Tonnes (Mt)			Ag Ounces (Moz)
Zone 5	13.7	2.1	20.1	27.2	1.9	19.2	52	2.1	22.7	92.9	2.0	21.3	1.9	63.5	Dec-2022	Note 1
Zeta NE				8.9	2.6	53.4	20.0	1.8	33.6	29.0	2.0	39.7	0.6	37.0	Nov-2020	1.0
Zone 5 North				4.4	2.6	43.6	19.0	1.8	29.9	23.4	1.9	32.4	0.5	24.3	Apr-2023	1.0
Mango NE				11.4	1.9	22.7	9.6	1.7	19.7	21.1	1.8	21.3	0.4	14.8	Aug-2021	1.0
Banana & Other Resources	5.0	1.3	11	28.1	1.7	26.3	250.2	1.0	12.4	283.3	1.1	13.5	3.1	123.3	Aug-2014	0.5
Total	18.7	1.9	17.7	80.1	2.0	27.3	350.8	1.3	16.3	449.5	1.4	18.2	6.4	263		

Note:

1. The 2022 Zone 5 mineral resource estimate is reported (with internal dilution included within an NSR mining shell and depleted) as at 31 December 2022. The Z5 mineral resource is constrained by a \$65/t NSR underground mining shell. This is a change from the previously reported Z5 mineral resource, which was based on the mineralisation only, above a 1% Cu cut off. On this basis the 2022 Z5 mineral resource @ 1% cut-off (depleted as at 31 December 2022) would be 86.7Mt at a 2.3% Cu and 24g/t Ag grade and the undepleted 2022 Z5 resource model would be 90.0Mt at a 2.3% Cu and 24g/t Ag grade.

Zone 5

Over 253,000 meters of drilling for exploration and definition drilling from 2013 until March 2020 and a further 33,650 metres of on-ore and off-ore drilling since March 2020 to December 2022 has been completed at Zone 5. The total MI&I sulphide resources as of December 2022, constrained by a \$65/t NSR underground mining shell (including all internal dilution and mineralisation and excluding all depleted areas as of December 2022), are 92.9 million tonnes @ 2.0% Cu and 21.3 g/t Ag (~46% of the tonnes and contained metal are measured & indicated). The mineralization is predominately bornite, chalcocite, and chalcopyrite.



Zone 5 long section Life Of Mine (LOM) mineral resource classification (Note: View is looking from the hanging wall (HW) to the plane of the orezone)
 The following table shows the Zone 5 mineral resource MI&I classification as of December 2022 (constrained by a \$65/t NSR underground mining shell including all internal dilution and mineralisation and excluding all depleted areas as of December 2022):

Classification	Million Tonnes (Mt)	Cu (%)	Ag (g/t)
Measured	13.7	2.1	20.1
Indicated	27.2	1.9	19.2
Inferred	52.0	2.1	22.7
Total	92.9	2.0	21.3

Notes:

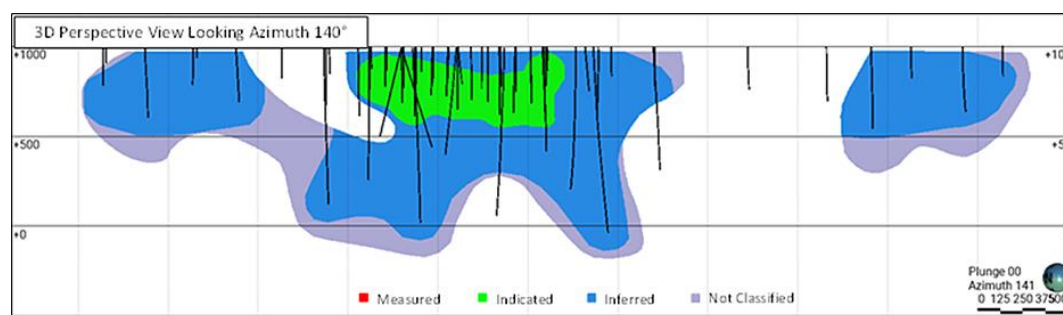
1. Mineral Resource Estimates (MRE) are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).

2. The 2022 Zone 5 MRE is reported (with internal dilution included within an NSR mining shell and depleted) as at 31 December 2022. The Z5 mineral resource is constrained by a \$65/t NSR underground mining shell. This is a change from the previously reported Z5 MRE, which was based on the mineralization only, above a 1% Cu cut off. On this basis the 2022 Z5 MRE @ 1% cut-off (depleted as at 31 December 2022) would be 86.7Mt at a 2.3% Cu and 24g/t Ag grade and the undepleted 2022 Z5 MRE would be 90.0Mt at a 2.3% Cu and 24g/t Ag grade.

Zone 5 North

Total copper, silver, molybdenum, lead, zinc, and arsenic were estimated into blocks using Ordinary Kriging (OK) interpolation with Dynamic Unfolding. Inverse Distance Weighted (IDW) interpolation was used to estimate acid soluble to total copper ratio, cyanide soluble to total copper ratio, and density.

A total of 62 drill holes were included in the Zone 5 North database, of which 49 were used to define the high-grade zone.



Zone 5 North long section Life Of Mine (LOM) mineral resource classification (Note: View is looking from the hanging wall (HW) to the plane of the orezone)

Three-dimensional wireframes based on geology, mineral content and copper grade were used to constrain the interpolation of grades in the block model. The block model used a 10 x 2 x 2m block in the X, Y and Z directions and is sub-blocked along the domain boundaries to a minimum size of 1 x 1 x 1m.

The Zone 5 North Mineral Resource, using a 1% Cu cut-off and constrained within the high-grade wireframe (Grade Zone 30) is presented in the following table:

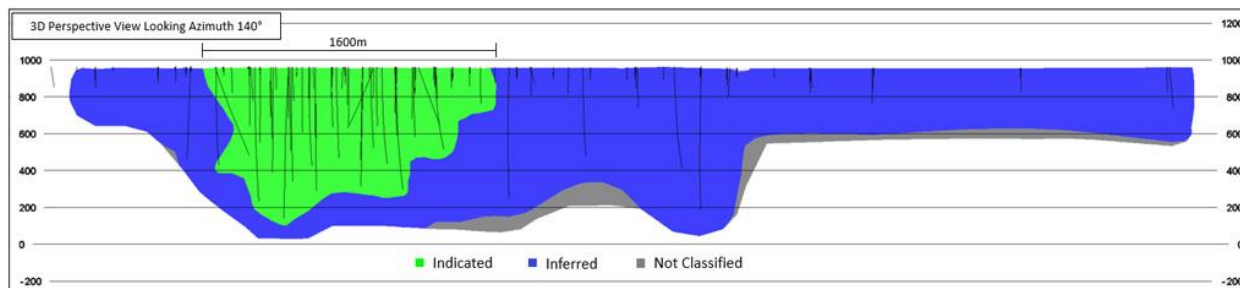
Classification	Million Tonnes (Mt)	Cu (%)	Ag (g/t)
Measured	-	-	-
Indicated	4.4	2.6	43.6
Inferred	19.0	1.8	29.9
Total	23.4	1.9	32.4

Note: Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition)

Zeta NE

Total copper, silver, molybdenum, lead, zinc and arsenic were estimated into blocks using Ordinary Kriging. Acid soluble copper to total copper ratios, cyanide soluble to total copper ratio, and density were estimated using Inverse Distance Weighted (IDW) Squared interpolation.

The drill hole database used for the November 2020 resource model included 171 drill holes, of which 158 were used to define the copper grade domains.



Zeta NE long section Life Of Mine (LOM) mineral resource classification (Note: View is looking from the hanging wall (HW) to the plane of the orezone) Three-dimensional wireframes were created for two high-grade copper domains, a hanging wall (GZ31) and footwall (GZ32). The block model used a 10 x 2 x 2m block in the X, Y and Z directions and is sub-blocked along the domain boundaries to a minimum size of 1 x 1 x 1m.

The Zeta NE Mineral Resource Estimate, using a 1% Cu cut-off and constrained within the high-grade wireframes (Grade Zone 31 and 32) is presented in the following table:

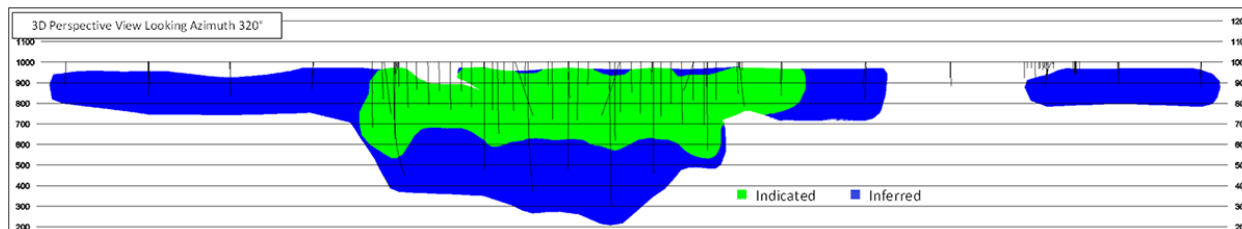
Classification	Million Tonnes (Mt)	Cu (%)	Ag (g/t)
Indicated GZ 31	3.0	2.7	52.0
Indicated GZ 32	5.9	2.5	54.1
Inferred GZ 31	1.3	2.1	33.7
Inferred GZ 32	18.7	1.7	33.6
Total	28.9	2.0	39.7

Note: Mineral Resource Estimates are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition)

Mango NE

Total copper and silver were estimated into blocks using Ordinary Kriging. Molybdenum, lead, zinc, arsenic, soluble copper to total copper ratios, and densities were estimated using Inverse Distance Weighting (IDW) Squared interpolation.

The drill hole database used for the August 2021 resource model included 131 drill holes, of which 74 were used to define the copper grade domains.



Mango NE long section Life Of Mine (LOM) mineral resource classification (Note: View is looking from the hanging wall (HW) to the plane of the orezone) Three-dimensional wireframes were created for two high-grade copper domains, a hanging wall (GZ31) and footwall (GZ32). The block model used a 10 x 5 x 5m block in the X, Y and Z directions and is sub-blocked along the domain boundaries to a minimum size of 1 x 1 x 1m.

The Mango Mineral Resource Estimate, using a 1% Cu cut-off and constrained within the high-grade wireframes is presented in the following table:

Classification	Million Tonnes (Mt)	Cu (%)	Ag (g/t)
Indicated GZ 31	4.5	1.6	9.1
Indicated GZ 32	7.0	2.1	31.4

Inferred GZ 31	3.1	1.4	8.4
Inferred GZ 32	6.5	1.9	25.0
Total	21.1	1.8	21.3

Note: Mineral Resource Estimates are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition)

Banana Zone

The Banana Zone Mineral Resource estimate was completed using MineSight software in UTM coordinates. The last resource was reported in June 2022 which included the high grade North East Fold, New Discovery and South Limb Definition at a 1% cut off. The lower grade South Limb, Chalcocite and Other Banana Zone resources were reported in August 2014 at a 0.5% cut off. A resource classification procedure defined by the number of drill holes and average distances to composites used was designed to classify blocks as Measured, Indicated or Inferred. For Measured classification, blocks used at least three drill holes with the average distance of the three holes composite was within 75m. For Indicated classification, blocks used at least three drill holes with the closest composite within 75m or the average distance of the three holes composite was within 150m. For Inferred classification, at least two drill holes with the closest drill hole less than 150m was required.

Three-dimensional wireframes based on geology, mineral continuity, mineralogy, and copper grade were used to constrain the interpolation of grades in the block model. Five resource models were built to cover the Banana Zone. This included four detailed models with smaller blocks and closer spaced drilling (using blocks ranging from 5 x 3 x 4m to 10 x 5 x 5m) and one model for the entire Banana Zone with larger blocks to cover the wider spaced drilling (using blocks 40 x 6 x 4m in the X, Y and Z directions). The detailed models include North East Fold, New Discovery, South Limb and South Limb Definition.

Total copper, silver, molybdenum, lead, zinc, arsenic, acid soluble to total copper ratio, cyanide soluble to total copper ratio, and density were all estimated into blocks using Inverse Distance Weighted interpolation. The North East Fold model used Dynamic Unfolding.

The Banana Zone Total Mineral Resource Estimate, using a combination of 1% and 0.5% Cu cut-off and constrained within the wireframes is presented in the following table:

Resources	Measured			Indicated			Inferred			Total (MI&I)			Contained Metal		
	Grade			Grade			Grade			Grade			Cutoff		
	Tonnes	Copper %	Silver g/t	Tonnes	Copper %	Silver g/t	Tonnes	Copper %	Silver g/t	Tonnes	Copper %	Silver g/t	Copper Tonnes	Silver Ounces	Cutoff Copper %
North East Fold				3,464,841	2.70	45.7	1,333,929	2.05	32.1	4,798,770	2.52	41.9	120,929	6,464,496	1.0
New Discovery				3,348,587	1.90	34.7	4,124,082	1.40	21.2	7,472,669	1.62	27.3	121,057	6,558,872	1.0
South Limb Definition				2,640,000	2.17	33.2	2,940,000	2.39	35.7	5,580,000	2.29	34.5	127,782	6,189,336	1.0

South Limb							8,102,000	0.97	12.0	8,102,000	0.97	12.0	78,589	3,125,822	0.5
Chalcocite							32,650,000	0.64	6.0	32,650,000	0.64	6.0	208,960	6,298,327	0.5
Banana Zone Other							98,769,000	0.71	8.7	98,769,000	0.71	8.7	701,260	27,626,804	0.5
Total				9,453,428	2.27	38.31	147,919,011	0.77	9.36	157,372,439	0.86	11.12	1,358,578	56,263,656	

Ore Reserve Estimate

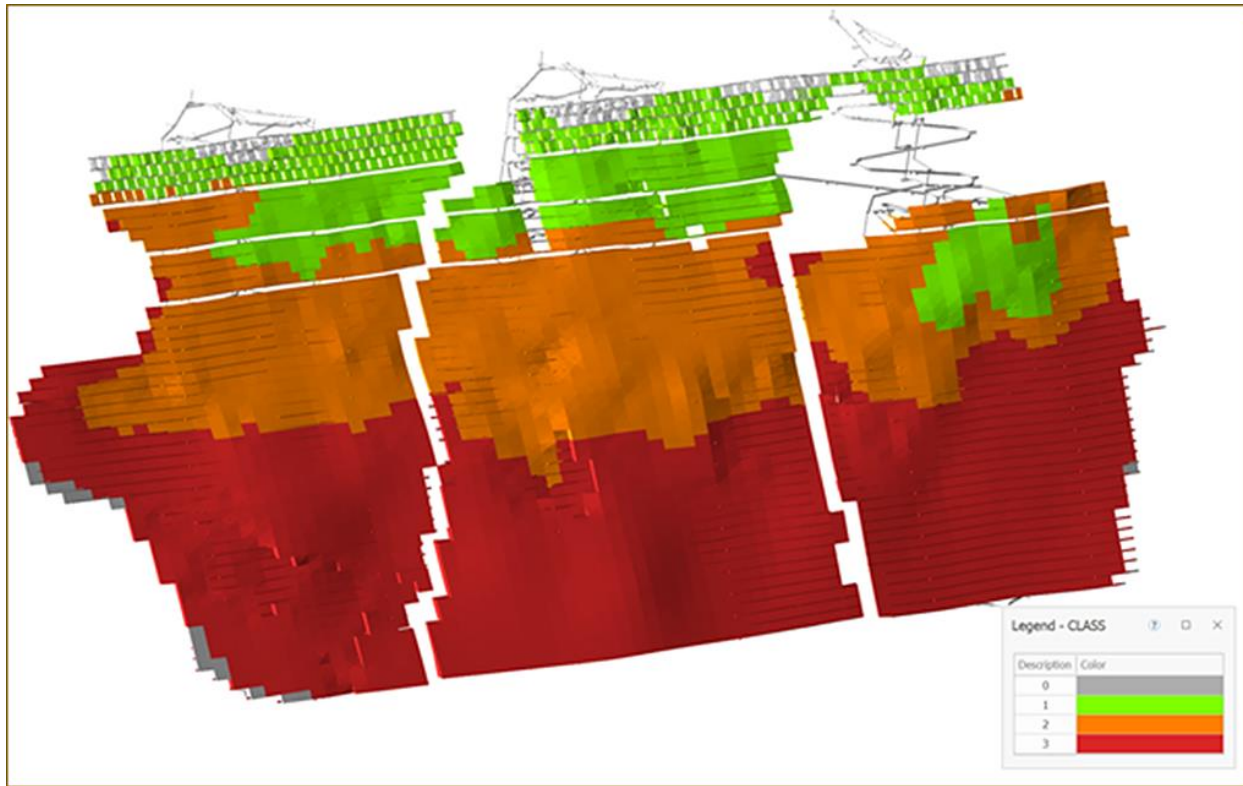
As of 31st December 2022, the ore reserve estimate for the Khoemaçau Zone 5 Current Operations is 31.40 million tonnes at 2.0% Copper and 19.75g/t Silver and is in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC code) 2012 edition. The following table summarises the total reportable Ore Reserve Estimate at the Zone 5 Current Operations as of the 31st December 2022 and at a Cu price of US\$3.54/lb, and an Ag price of US\$21.35/oz.

Category	Ore Tonnes (Mt)	Cu %	Cu (kt)	Ag (g/t)	Ag (Moz)
Proven	8.67	2.15	186.06	20.95	5.84
Probable	22.73	1.94	441.93	19.29	14.10
Total	31.40	2.00	628.0	19.75	19.93

The Zone 5 LOM plan will include additional material from the inferred mineral resource category, to give a better indication of expected mine life. The following table summarises the additional material that will be included in the LOM plans but has not yet been classified with sufficient confidence for reporting purposes:

Category	Ore Tonnes (Mt)	Cu %	Cu (kt)	Ag (g/t)	Ag (Moz)
Unclassified	42.68	2.13	910.92	23.17	31.80
Total	74.07	2.08	1,538.92	21.72	51.73

The following figure is the 2022 LOM schedule coloured by Ore Reserve categories:



Zone 5 Long section Life Of Mine (LOM) Ore Reserve classification (Note: View is looking from the hanging wall (HW) to the plane of the ore zone, Green is proven, Orange is probable and Red is unclassified)