2023

31 December 2022 Mineral Resources & Ore Reserves Estimates

29Metals Limited ('**29Metals**' or, the '**Company**') today released its 31 December 2022 Mineral Resources and Ore Reserves estimates, reporting an increase in Mineral Resources of 4.5Mt and Ore Reserves of 5.7Mt (each, after depletion for production).

The Mineral Resources and Ore Reserves estimates reported in this release have been prepared and are reported in accordance with the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (2012 Edition) (the '**JORC Code**').

Competent persons statements for estimates are included with the underlying asset estimates and JORC Code *Table 1* disclosures are included in the Appendices to this document.

Summary

Mineral Resources estimates

- **Increase in Mineral Resources tonnes to 127.9Mt** (2021: 123.4Mt) after depletion from production
- **Contained metal** in Mineral Resources estimated at 2,240kt Cu, 2,473kt Zn,1,323koz Au, 78,087koz Ag, 153kt Pb and 22kt Co (2021: 2,109kt Cu, 2,573kt Zn, 1,338koz Au, 75,006koz Ag, 160kt Pb, and 21kt Co[1])
- **Growth in Mineral Resources tonnes and contained metal in key areas,** including:
  - Esperanza South ('**ESS**') at Capricorn Copper – a 23% increase in estimated tonnes (+3.5Mt), a 32% increase in estimated contained Cu (+90kt), a 38% increase in estimated contained Ag (+3,094koz); and
  - Cervantes at Golden Grove – a 13% increase in estimated tonnes (+0.6Mt) and a 34% increase in estimated contained Cu (+21kt)
- **Strong conversion of Mineral Resources** reflecting increased geological confidence, with Measured and Indicated Resources tonnes after depletion from production increasing to 92.7Mt (2021: 86.0 Mt), including:
  - ESS at Capricorn Copper – Measured and Indicated increased 51% year-on-year; and
  - Cervantes at Golden Grove – Measured and Indicated increased 82% year-on-year

Ore Reserves estimates

- **Increase in Ore Reserves tonnes to 31.0Mt** (2021: 25.3Mt) after depletion from production, including:
  - Gossan Valley Ore Reserves estimate of 1.8Mt @ 1.1% Cu, 7.2% Zn, 0.5 g/t Au, 11 g/t Ag and 0.1% Pb, following completion of the Gossan Valley feasibility studies;
  - a 19% increase at Golden Grove (including Gossan Valley) to 15.1Mt (2021: 12.7Mt); and
  - a 27%[2] increase at Capricorn Copper to 16Mt (2021: 13Mt)
- **Contained metal** in Ore Reserves estimated at 540kt Cu, 744kt Zn, 330koz Au, 18,985koz Ag, 37kt Pb (2021: 456kt Cu, 655kt Zn, 334koz Au, 17,409koz Ag, and 44kt Pb).

This announcement was authorised for release by the Board of Directors.

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[1] Capricorn Copper does not currently recover any cobalt from processing operations.

[2] Aggregated Ore Reserves tonnages for Capricorn Copper are rounded to the nearest 1Mt. Percentage change has been calculated using unrounded estimated tonnes.

Competent Persons

The table below sets out information regarding the Competent Persons for 29Metals' 31 December 2022 Mineral Resources and Ore Reserves estimates. Competent persons statements for 29Metals' 31 December 2022 Mineral Resources and Ore Reserves estimates are included with the corresponding estimate.

ESTIMATE / COMPETENT PERSON	QUALIFICATION	MEMBERSHIP	EMPLOYER
Golden Grove			
Mineral Resources Luke Ashford-Hodges	BSc (Hons) – Geology	MAusIMM	Golden Grove Operations Pty Ltd [1]
Ore Reserves Nyasha Gwatimba	BSc (Hons) – Mining Engineering	MAusIMM	Golden Grove Operations Pty Ltd [1]
Capricorn Copper			
Mineral Resources			
Danny Kentwell (*Estimation and Reporting* – Mammoth excl G Lens, Pluto, Esperanza)	BSC Surveying; MSc (Geostatistics)	FAusIMM	SRK Consulting
Oliver Willetts (*Estimation and Reporting* – Esperanza South, Greenstone, Mammoth G Lens)	BSC Geology, MSc (Geophysical Hazards)	MAusIMM	SRK Consulting
Rosemary Gray (*Sampling Techniques and Data, and Reporting of Exploration Results*)	BSc (Geology)	MAIG	Capricorn Copper Pty Ltd [1]
Ore Reserves Christopher Desoe	BE (Mining)	FAusIMM (CP) RPEQ	Australian Mine Design and Development Pty Ltd
Redhill			
Mineral Resources Tim Callaghan	BSc (Hons); M. Econ. Geol	MAusIMM MAIG	Resource and Exploration Geology

1.Wholly owned subsidiary of 29Metals Limited.

Each of the Competent Persons identified in the table above has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person for the purposes of the JORC Code.

Estimate Reporting Dates

The table below sets out the reporting date for the Mineral Resources and Ore Reserves estimated reported in this release, and the previous reporting date for the corresponding estimates.

	LAST REPORTED ESTIMATES DATE[1]	UPDATED ESTIMATE DATE
Golden Grove		
Mineral Resources	31 Dec 2021	31 Dec 2022
Ore Reserves	31 Dec 2021	31 Dec 2022
Capricorn Copper		
Mineral Resources	31 Dec 2021	31 Dec 2022
Ore Reserves	31 Dec 2021	31 Dec 2022
Redhill		
Mineral Resources	16 May 2016[2]	16 May 2016

[1] Reported in 29Metals' Annual Mineral Resources and Ore Reserves Estimates (released to ASX on 11 March 2022).

[2] No material changes to the Mineral Resources estimates for Redhill have occurred since 16 May 2016.

Group Mineral Resources and Ore Reserves Estimates

Mineral Resources

Mineral Resources estimates at the Group level are the aggregation of 31 December 2022 Mineral Resources estimates for **Golden Grove**, **Capricorn Copper** and **Redhill** reported in subsequent sections of this release. Mineral Resources estimates have been depleted for production to 31 December 2022.

		2022									2021								
			Grade				Contained Metal					Grade				Contained Metal			
Category	Asset	Tonnes	Cu	Zn	Au	Ag	Cu	Zn	Au	Ag	Tonnes	Cu	Zn	Au	Ag	Cu	Zn	Au	Ag
		Mt	%	%	g/t	g/t	kt	kt	koz	koz	Mt	%	%	g/t	g/t	kt	kt	koz	koz
Measured	Golden Grove	24.7	1.7	3.2	0.7	29	422	787	563	22,604	21.9	1.7	3.2	0.8	31	374	704	528	21,634
	Capricorn Copper	7.4	1.8	-	-	7	130	-	-	1,682	5.5	1.8	-	-	6	97	-	-	1,061
	Red Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	**32.0**	*Grades not additive*				**552**	**787**	**563**	**24,285**	**27.4**	*Grades not additive*				**471**	**704**	**528**	**22,695**
Indicated	Golden Grove	26.5	1.7	4.7	0.6	28	444	1,244	521	23,824	26.0	1.6	5.3	0.7	29	423	1,386	551	24,386
	Capricorn Copper	34.2	2.0	-	-	9	668	-	-	10,366	32.7	1.9	-	-	8	624	-	-	7,970
	Red Hill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	**60.7**	*Grades not additive*				**1,112**	**1,244**	**521**	**34,190**	**58.7**	*Grades not additive*				**1,047**	**1,386**	**551**	**32,356**
Inferred	Golden Grove	10.3	1.6	4.3	0.6	30	161	442	199	9,785	10.5	1.5	4.6	0.7	30	160	483	220	10,009
	Capricorn Copper	20.6	1.7	-	-	8	343	-	-	5,215	22.6	1.6	-	-	7	360	-	-	5,334
	Red Hill	4.3	1.7	-	0.3	33	71	-	40	4,611	4.3	1.7	-	0.3	33	71	-	40	4,611
	Total	**35.2**	*Grades not additive*				**576**	**442**	**239**	**19,612**	**37.4**	*Grades not additive*				**592**	**483**	**260**	**19,954**
Measured, Indicated & Inferred	Golden Grove	61.4	1.7	4.0	0.7	28	1,027	2,473	1,284	56,213	58.4	1.6	4.4	0.7	30	957	2,573	1,299	56,029
	Capricorn Copper	62.2	1.8	-	-	9	1,141	-	-	17,263	60.8	1.8	-	-	7	1,081	-	-	14,365
	Red Hill	4.3	1.7	-	0.3	33	71	-	40	4,611	4.3	1.7	-	0.3	33	71	-	40	4,611
	Total	**127.9**	*Grades not additive*				**2,240**	**2,473**	**1,323**	**78,087**	**123.4**	*Grades not additive*				**2,109**	**2,573**	**1,338**	**75,006**

Note, estimates reported in the table above are subject to rounding (one significant figure). Additional elements - Pb, Co, As, S and Fe – not shown in the table above are reported in underlying Mineral Resources estimates for assets (where applicable).

Ore Reserves

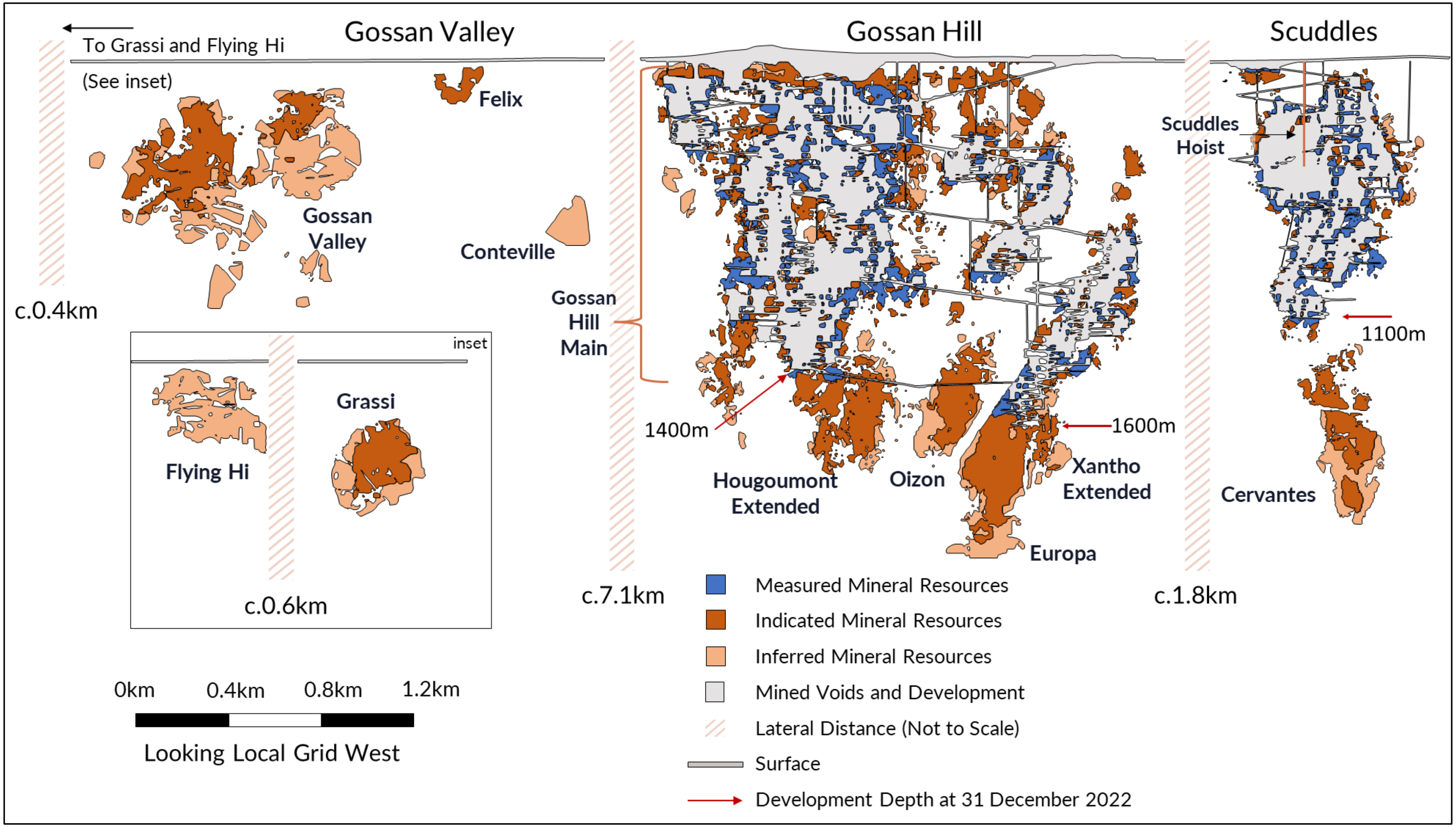
Ore Reserves estimates at the Group level are the aggregation of the 31 December 2022 Ore Reserves estimates for **Golden Grove** and **Capricorn Copper** reported in subsequent sections of this release. Ore Reserves estimates have been depleted for production to 31 December 2022.

		2022									2021								
			Grade				Contained Metal					Grade				Contained Metal			
Category	Asset	Tonnes	Cu	Zn	Au	Ag	Cu	Zn	Au	Ag	Tonnes	Cu	Zn	Au	Ag	Cu	Zn	Au	Ag
		Mt	%	%	g/t	g/t	kt	kt	koz	koz	Mt	%	%	g/t	g/t	kt	kt	koz	koz
Proved	Golden Grove	5.2	1.8	3.2	0.7	23	92	169	109	3,862	3.2	1.7	2.8	0.9	34	54	88	96	3,404
	Capricorn Copper	1	1.7	-	-	10	20	-	-	400	1	1.7	-	-	7	20	-	-	200
	Total	**6.6**	*Grades not additive*				**112**	**169**	**109**	**4,262**	**4.1**	*Grades not additive*				**74**	**88**	**96**	**3,604**
Probable	Golden Grove	9.9	1.7	5.8	0.7	28	168	575	221	8,823	9.6	1.9	5.9	0.8	32	182	567	238	9,905
	Capricorn Copper	14	1.7	-	-	13	250	-	-	5,800	12	1.8	-	-	10	210	-	-	3,800
	Total	**24.4**	*Grades not additive*				**418**	**575**	**221**	**14,623**	**21.2**	*Grades not additive*				**392**	**567**	**238**	**13,705**
Proved & Probable	Golden Grove	15.1	1.7	4.9	0.7	26	260	744	330	12,685	12.7	1.9	5.1	0.8	33	236	655	334	13,309
	Capricorn Copper	16	1.7	-	-	12	280	-	-	6,300	13	1.8	-	-	10	220	-	-	4,100
	Total	**31.0**	*Grades not additive*				**540**	**744**	**330**	**18,985**	**25.3**	*Grades not additive*				**456**	**655**	**334**	**17,409**

Note, Golden Grove estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places. For Capricorn Copper, estimated Proved and Probable Ore Reserves tonnes have been rounded to the nearest 1Mt. For Capricorn Copper, aggregate estimates of contained Cu metal have been rounded to the nearest 10kt, estimates of contained silver have been rounded to the nearest 100koz. Additional metals – Pb and As – are reported in underlying Ore Reserves estimates for assets (where applicable).
The combined total for Golden Grove and Capricorn Copper are rounded to the nearest 0.1Mt.

Golden Grove Mineral Resources and Ore Reserves Estimates

The outline of deposits included in the 31 December 2022 Mineral Resources estimates for Golden Grove is depicted below for illustrative purposes.



Mineral Resources

The 31 December 2022 Mineral Resources estimates for **Golden Grove** are set out in the table below.

The 31 December 2022 Mineral Resources estimates for Golden Grove incorporate the results of extension, resource development and grade control drilling completed since the cut-off for the previous Mineral Resources estimates for Golden Grove (31 March 2021-31 May 2022 or 31 December 2021-31 December 2022 for Cervantes), depletion from production, updated resource modelling and geological interpretation, updates to the metallurgical and economic assumptions, and changes to cut-off values.

JORC Code *Table 1* disclosures for these estimates are set out in Appendix 2.

For presentation purposes, the 31 December 2022 Mineral Resources estimates for Golden Grove are reported by deposit. There has been no change in the underlying estimation methodology (relative to previous estimates). For the purposes of presenting estimates by deposit, primary copper and primary zinc ore types have been aggregated and reported on a weighted average basis. To assist readers, the December 2021 Mineral Resources estimates for Golden Grove have been restated applying the new presentation format for comparison purposes and are included in Appendix 1.

				Grade					Contained Metal				
Project Area	Deposit	Category	Tonnes Mt	Cu %	Zn %	Au g/t	Ag g/t	Pb %	Cu kt	Zn kt	Au koz	Ag koz	Pb kt
Gossan Hill Mine	Gossan Hill Main	Measured	15.3	1.7	2.4	0.7	25	0.2	263	371	359	12,521	33
		Indicated	7.1	1.4	2.5	0.5	26	0.2	99	177	117	5,840	14
		Inferred	1.3	1.4	2.0	0.3	20	0.2	19	27	15	880	2
		Total	**23.8**	**1.6**	**2.4**	**0.6**	**25**	**0.2**	**381**	**575**	**491**	**19,242**	**50**
	Xantho Extended & Europa	Measured	1.7	1.8	7.8	0.7	25	0.3	30	131	37	1,355	4
		Indicated	6.3	2.1	7.4	0.9	35	0.4	132	472	175	7,043	24
		Inferred	1.9	1.8	6.1	0.8	37	0.4	33	114	46	2,192	7
		Total	**9.9**	**2.0**	**7.2**	**0.8**	**33**	**0.4**	**196**	**717**	**257**	**10,590**	**35**
	Hougoumont Extended & Oizon	Measured	0.0	2.1	0.1	0.3	15	0.0	0	0	0	8	0
		Indicated	4.8	2.1	2.3	0.5	21	0.2	99	111	76	3,256	8
		Inferred	1.0	2.3	1.3	0.2	11	0.1	23	13	7	335	1
		Total	**5.8**	**2.1**	**2.1**	**0.4**	**19**	**0.2**	**122**	**123**	**83**	**3,599**	**9**
Scuddles Mine	Scuddles	Measured	7.3	1.7	3.8	0.6	33	0.3	125	277	147	7,738	21
		Indicated	0.9	1.4	3.9	0.3	30	0.3	12	34	9	827	2
		Inferred	0.1	0.9	10.0	0.2	79	0.8	1	10	1	251	1
		Total	**8.3**	**1.7**	**3.9**	**0.6**	**33**	**0.3**	**138**	**321**	**157**	**8,816**	**24**
	Cervantes	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	2.9	1.7	5.9	0.5	35	0.4	48	170	49	3,228	11
		Inferred	2.3	1.6	5.8	0.9	41	0.3	37	134	65	3,042	6
		Total	**5.2**	**1.6**	**5.9**	**0.7**	**37**	**0.3**	**85**	**305**	**114**	**6,271**	**17**
Gossan Valley Deposits	Gossan Valley, Felix & Conteville	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	2.4	1.1	6.9	0.5	14	0.1	26	167	40	1,077	3
		Inferred	2.3	1.2	4.8	0.5	24	0.2	28	112	35	1,818	4
		Total	**4.8**	**1.1**	**5.9**	**0.5**	**19**	**0.2**	**53**	**279**	**75**	**2,895**	**7**
	Grassi	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	1.3	1.1	7.7	0.5	15	0.2	15	100	21	640	3
		Inferred	0.2	1.3	2.7	0.5	19	0.1	3	6	3	129	0
		Total	**1.5**	**1.1**	**7.0**	**0.5**	**16**	**0.2**	**17**	**106**	**24**	**768**	**3**
Other	Oxide	Measured	0.1	1.7	6.0	1.9	128	1.2	1	5	5	327	1
		Indicated	0.8	1.9	1.8	1.4	77	0.5	15	14	34	1,912	4
		Inferred	0.3	0.5	3.2	1.5	79	0.5	1	8	13	684	1
		Total	**1.1**	**1.6**	**2.4**	**1.4**	**81**	**0.5**	**18**	**27**	**52**	**2,922**	**6**
	Flying Hi	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	-	-	-	-	-	-	-	-	-	-	-
		Inferred	0.8	2.0	2.1	0.6	17	0.0	16	18	16	455	0
		Total	**0.8**	**2.0**	**2.1**	**0.6**	**17**	**0.0**	**16**	**18**	**16**	**455**	**0**
	Surface Stockpiles	Measured	0.2	0.6	1.5	2.0	90	0.4	1	3	15	655	1
		Indicated	-	-	-	-	-	-	-	-	-	-	-
		Inferred	-	-	-	-	-	-	-	-	-	-	-
		Total	**0.2**	**0.6**	**1.5**	**2.0**	**90**	**0.4**	**1**	**3**	**15**	**655**	**1**
Total		Measured	24.7	1.7	3.2	0.7	29	0.2	422	787	563	22,604	60
		Indicated	26.5	1.7	4.7	0.6	28	0.3	444	1,244	521	23,824	69
		Inferred	10.3	1.6	4.3	0.6	30	0.2	161	442	199	9,785	23
		Total	**61.4**	**1.7**	**4.0**	**0.7**	**28**	**0.2**	**1,027**	**2,473**	**1,284**	**56,213**	**153**

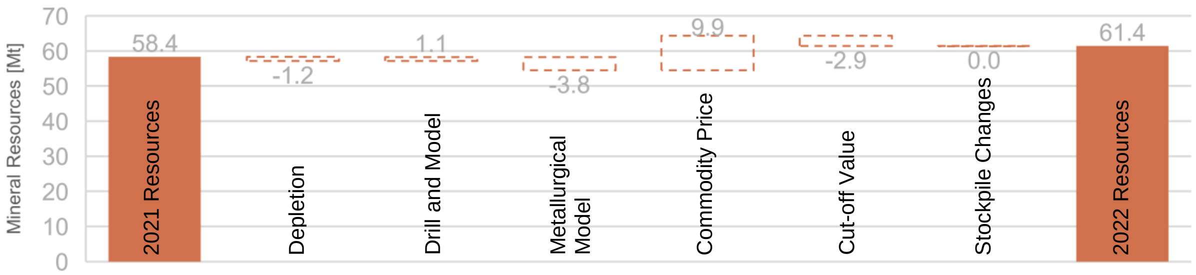
Note, estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places.

Changes in the Mineral Resources estimates

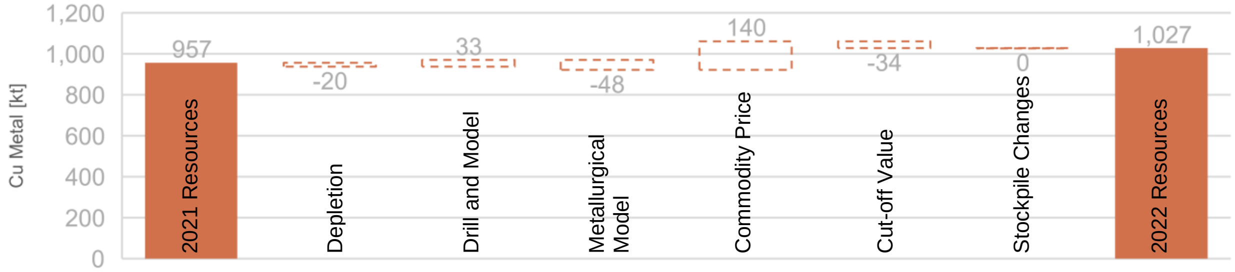
Changes to the Golden Grove Mineral Resources estimates, relative to the last estimates (31 December 2021), are outlined below. Material changes comprise:

- Depletion – 1.2Mt reduction in 2022 due to 12 months of mining and processing operations. Comparatively, total mined tonnes for the same period was 1.5Mt. This difference is typical at Golden Grove with the 0.3Mt difference comprising three primary sources:
  - Barren post mineralisation intrusives within designed mine shapes, and to a lesser extent;
  - Below cut-off material included within designed mine shapes; and
  - External dilution when mining adjacent to filled stopes;
- Drilling results - increase in Mineral Resources estimated tonnes of 1.1Mt, reflecting analysis of data from resource extension, resource development and grade control drilling, and associated geological interpretations;
- Updated metallurgical modelling – 3.8Mt reduction due to annual updates to the site recovery models. Specifically, changes in assumed recoveries in material with relatively low copper or zinc to iron ratios; and
- Economic cut-off assumptions:
  - 9.9Mt increase as a result of increases to the commodity price assumptions applied (see below); and
  - 2.9Mt reduction in Mineral Resources tonnes as a result of increases to the net smelter return (‘**NSR**’) cut-off value.

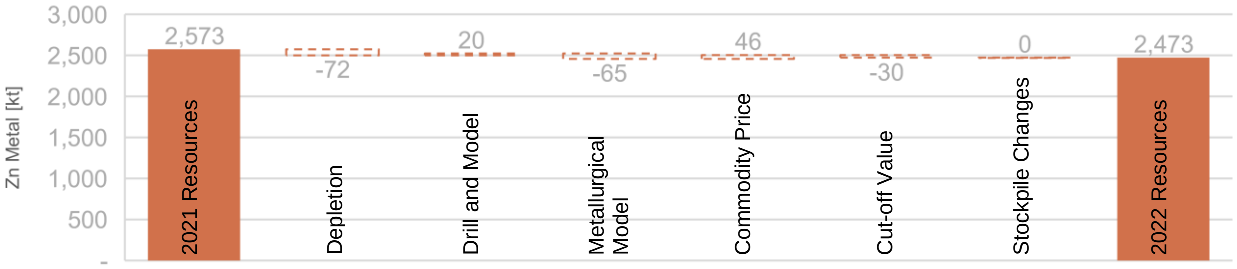
Mineral Resources – December 2021 to December 2022 - Tonnes (Mt)



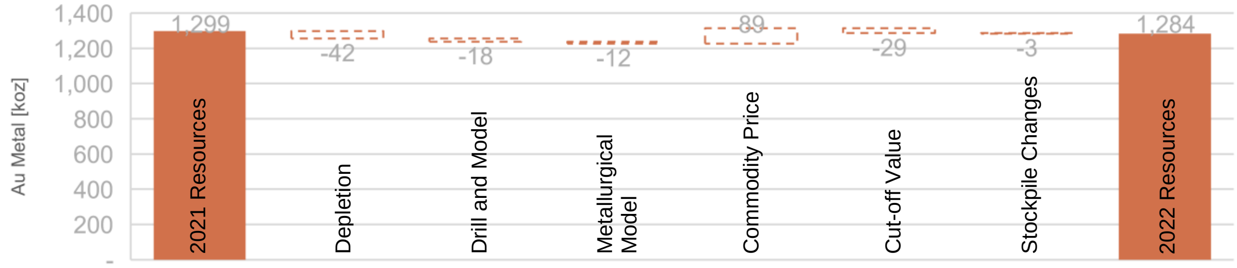
Mineral Resources – December 2021 to December 2022 – Contained Cu Metal (kt)



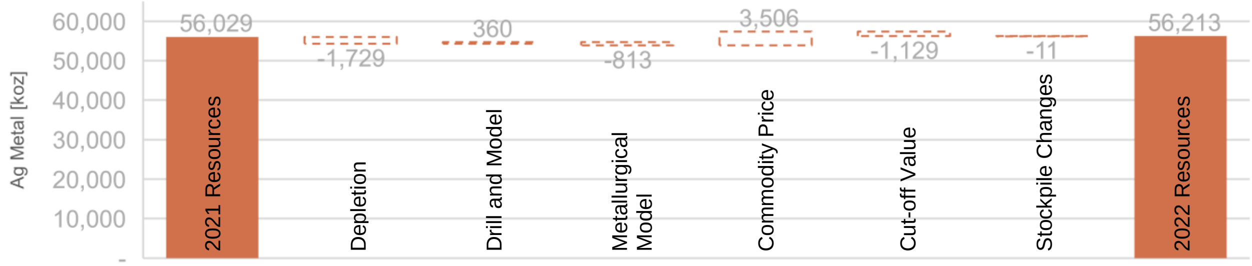
Mineral Resources – December 2021 to December 2022 – Contained Zn Metal (kt)



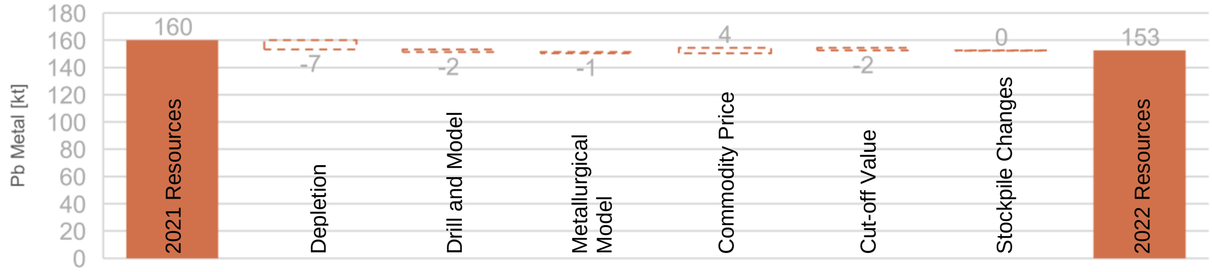
Mineral Resources – December 2021 to December 2022 – Contained Au Metal (koz)



Mineral Resources – December 2021 to December 2022 – Contained Ag Metal (koz)



Mineral Resources – December 2021 to December 2022 – Contained Pb Metal (kt)



Economic cut-off assumptions

The following economic cut-off assumptions were applied for the purposes of the 31 December 2022 Mineral Resources estimates for Golden Grove. Cut-off for the prior estimates (31 December 2021) is also provided for comparison.

Cut-off assumptions (NSR)

	31-Dec-22	31-Dec-21
Orebody	**$A/t**	**$A/t**
ABCD	**132.82**	127.92
ABCD Oxide	**132.82**	127.92
Amity	**140.53**	135.63
Cambewarra	**136.01**	131.10
Catalpa/Ethel	**137.46**	132.56
D-Zinc Extended	**135.67**	130.77
GG4	**135.67**	130.77
Hougoumont Main & Hangingwall	**140.53**	135.63
Hougoumont Extended	**147.86**	142.95
Oizon	**147.24**	142.34
Tryall	**133.94**	129.04
Tryall Cu-Au Oxide	**133.94**	129.04
Xantho	**141.93**	137.03
Xantho Extended & Europa	**148.41**	143.51
Scuddles - Zinc	**137.12**	132.21
Scuddles - Copper	**137.12**	132.21

Cut-off assumptions (NSR)

Orebody	31-Dec-22 $A/t	31-Dec-21 $A/t
Scuddles Oxide	**133.94**	129.04
Cervantes - Zinc	**144.55**	139.65
Cervantes - Copper	**144.55**	139.65
Gossan Valley	**139.90**	135.00
Grassi	**139.90**	135.00
Felix	**139.90**	135.00
Flying Hi	**149.90**	145.00

Commodity Price and Foreign Exchange

Pricing/FX	Unit	31-Dec-22	31-Dec-21
Copper	US$/lb	**4.00**	3.60
Lead	US$/lb	**1.15**	1.10
Zinc	US$/lb	**1.50**	1.50
Gold	US$/oz	**1,850**	1,736
Silver	US$/oz	**25**	23
AUD:USD		**0.73**	0.75

Competent Persons Statement

The information regarding the 31 December 2022 Mineral Resources estimates for Golden Grove set out in this report are based on and fairly represent information and supporting documentation compiled by Luke Ashford-Hodges, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM Membership No. 328075). Mr Ashford-Hodges is a full-time employee of Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited).

Mr Ashford-Hodges has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code.

Mr Ashford-Hodges consents to the inclusion of the information regarding the 31 December 2022 Mineral Resources estimates for Golden Grove in the form and context in which the estimates appear.

Ore Reserves

The 31 December 2022 Ore Reserves estimates for **Golden Grove** are set out below.

The 31 December 2022 Ore Reserves estimates for Golden Grove incorporate changes to the Golden Grove Mineral Resources estimates (refer above), the inclusion of Gossan Valley following completion of the Gossan Valley feasibility studies, depletion for production, and changes to cut-off grades and other economic assumptions (including commodity price assumptions).

JORC Code *Table 1* disclosures are set out in Appendix 3.

For presentation purposes, the 31 December 2022 Ore Reserves estimates for Golden Grove are reported by deposit. There has been no change in the underlying estimation (relative to previous estimates. For the purposes of presenting estimates by deposit, primary copper and primary zinc ore types have been aggregated and reported on a weighted average basis. To assist readers, the December 2021 Ore Reserves estimates for Golden Grove have been restated applying this presentation format for comparison purposes and are included in Appendix 1.

				Grade					Contained Metal				
			Tonnes	Cu	Zn	Au	Ag	Pb	Cu Metal	Zn Metal	Au Metal	Ag Metal	Pb Metal
Project Area	Deposit	Asset	Mt	%	%	g/t	g/t	%	kt	kt	koz	koz	kt
Gossan Hill Mine	Gossan Hill Main	Proved	3.2	1.9	1.7	0.6	19	0.2	61	54	61	1,977	5
		Probable	0.6	1.4	2.9	0.5	29	0.2	8	16	9	516	1
		Total	**3.7**	**1.9**	**1.9**	**0.6**	**21**	**0.2**	**69**	**70**	**70**	**2,493**	**6**
	Xantho Extended & Europa	Proved	1.8	1.6	6.2	0.6	21	0.2	29	112	33	1,231	4
		Probable	4.6	1.8	7.7	0.8	34	0.4	85	354	124	5,056	19
		Total	**6.4**	**1.8**	**7.2**	**0.8**	**30**	**0.4**	**114**	**465**	**158**	**6,287**	**23**
	Hougoumont Extended & Oizon	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	1.8	2.2	2.0	0.5	24	0.1	39	36	31	1,404	3
		Total	**1.8**	**2.2**	**2.0**	**0.5**	**24**	**0.1**	**39**	**36**	**31**	**1,404**	**3**
Scuddles Mine	Scuddles	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	1.1	1.4	3.6	0.8	33	0.3	17	42	29	1,201	3
		Total	**1.1**	**1.4**	**3.6**	**0.8**	**33**	**0.3**	**17**	**42**	**29**	**1,201**	**3**
Gossan Valley Deposits	Gossan Valley, Felix & Conteville	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	1.1	1.2	6.8	0.5	11	0.1	12	73	16	369	1
		Total	**1.1**	**1.2**	**6.8**	**0.5**	**11**	**0.1**	**12**	**73**	**16**	**369**	**1**
	Grassi	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	0.7	1.0	7.9	0.5	13	0.2	7	54	11	276	1
		Total	**0.7**	**1.0**	**7.9**	**0.5**	**13**	**0.2**	**7**	**54**	**11**	**276**	**1**
Other	Surface Stockpiles	Proved	0.2	0.6	1.5	2.0	90	0.4	1	3	15	655	1
		Probable	-	-	-	-	-	-	-	-	-	-	-
		Total	**0.2**	**0.6**	**1.5**	**2.0**	**90**	**0.4**	**1**	**3**	**15**	**655**	**1**
Total		Proved	5.2	1.8	3.2	0.7	23	0.2	92	169	109	3,862	9
		Probable	9.9	1.7	5.8	0.7	28	0.3	168	575	221	8,823	28
		Total	**15.1**	**1.7**	**4.9**	**0.7**	**26**	**0.2**	**260**	**744**	**330**	**12,685**	**37**

Note, estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places.

Changes in Ore Reserve estimates

Changes in the 31 December 2022 Ore Reserves estimates for Golden Grove relative to the previous estimates comprise:

- Depletion – 1.1Mt reduction for mining and processing depletion in the period 31 December 2021 to 31 December 2022;[3]
- Economic cut-off assumptions – 0.4Mt reduction as a result of an increase in the cut-off value ('**COV**'), reflecting increases in mining costs assumptions, and the impact of adjusted commodity prices (refer below) in areas without new drilling information;
- Design updates – 2.1Mt increase, reflecting the 31 December 2022 Mineral Resources estimates and the impact of adjusted commodity price assumptions (refer below) in areas with new drilling information; and

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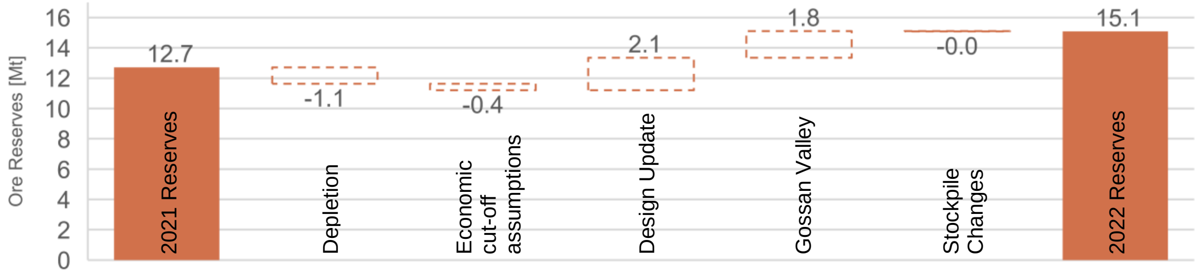
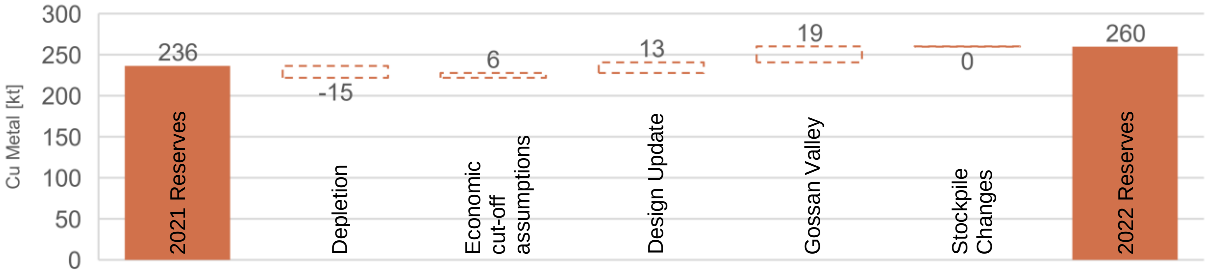
[3] Depletion for mining and processing comprises 1.5 Mt mined of which 1.1 Mt was within existing Ore Reserves estimates at the time of mining. The difference, 0.4 Mt was material that was deemed uneconomic at the applicable Ore Reserves estimate metal prices but was considered economic at the time of extraction by mining (by reference to prevailing metal prices at the time of mining).

- Gossan Valley – 1.8Mt increase attributable to the inclusion of Gossan Valley following completion of the Gossan Valley feasibility studies, the results of which were released to the ASX announcements platform on 22 November 2022. [4]

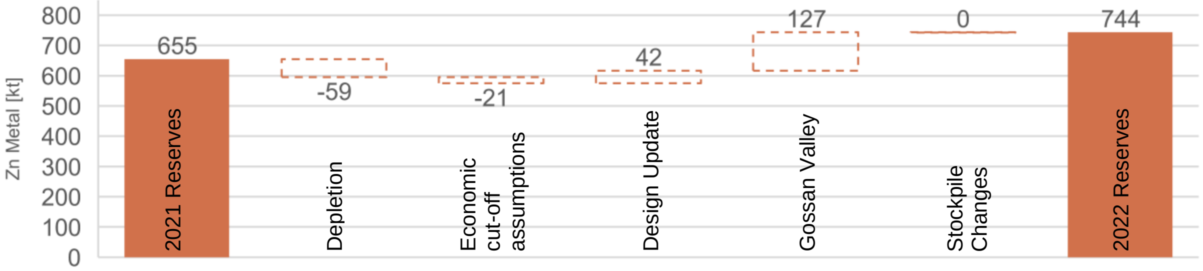
Ore Reserves – December 2021 to December 2022 – Ore Tonnes (Mt)



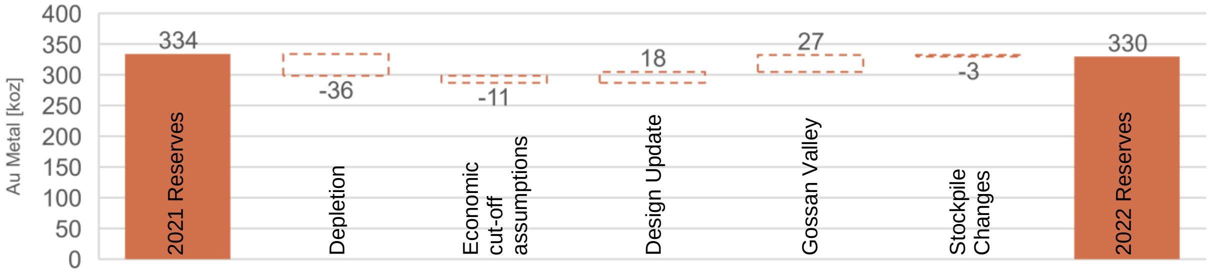
Ore Reserves – December 2021 to December 2022 – Contained Cu Metal (kt)



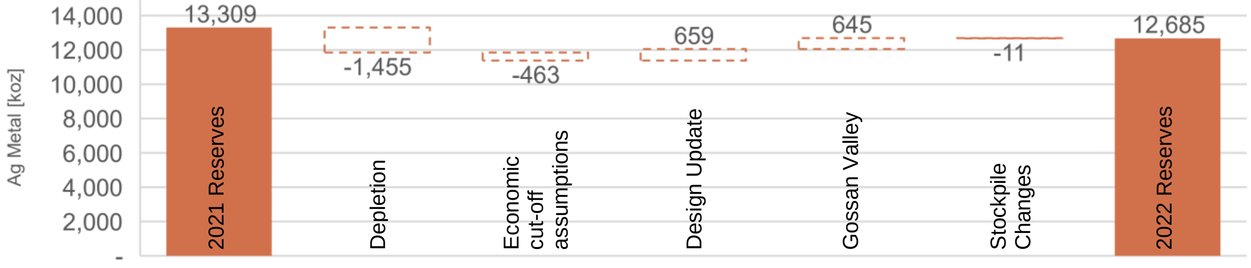
Ore Reserves – December 2021 to December 2022 – Contained Zn Metal (kt)



Ore Reserves – December 2021 to December 2022 – Contained Au Metal (koz)



Ore Reserves – December 2021 to December 2022 – Contained Ag Metal (koz)



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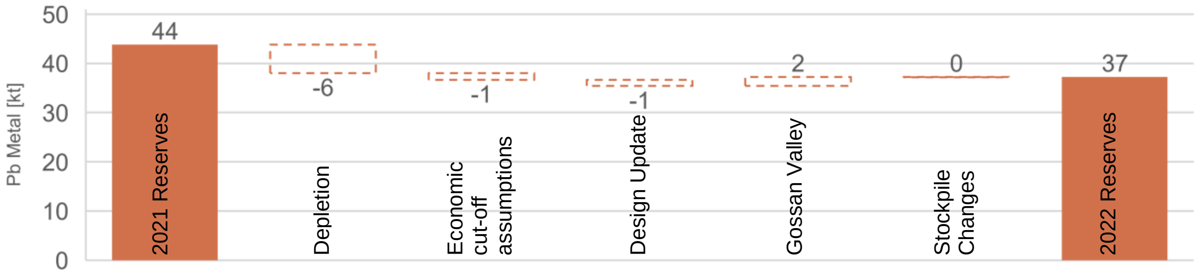
[4] A copy of 29Metals' 22 November 2022 *Golden Grove Studies* release is available on 29Metals' website at: https://www.29metals.com/investors/asx-releases.

Ore Reserves – December 2021 to December 2022 – Contained Pb Metal (kt)



Economic cut-off assumptions

The following assumptions were applied for the purposes of the Golden Grove 31 December 2022 Ore Reserves estimates.

Cut-off assumptions (NSR)

	31-Dec-22	31-Dec-21
Orebody	$A/t	$A/t
ABCD	**132.82**	127.92
Amity	**140.53**	135.63
Cambewarra	**151.78**	146.87
D-Zinc Extended	**151.44**	146.54
Tryall	**149.71**	144.81
Catalpa/Ethel	**137.46**	132.56
Hougoumont Main & Hangingwall Remnant	**146.31**	141.41
Hougoumont Extended	**163.63**	158.72
Xantho	**157.70**	152.80
Xantho Extended	**164.19**	159.28
Oizon	**163.01**	158.11
GG4	**141.45**	136.55
Scuddles	**142.90**	137.99
Cervantes	**160.32**	n/a
Gossan Valley	**155.00**	n/a

Commodity Price and Foreign Exchange

Pricing/FX	Unit	31-Dec-22	31-Dec-21
Copper	US$/lb	**3.60**	3.30
Lead	US$/lb	**1.00**	0.95
Zinc	US$/lb	**1.20**	1.10
Gold	US$/oz	**1,600**	1,446
Silver	US$/oz	**22**	21
AUD:USD		**0.73**	0.73

Competent Persons Statement

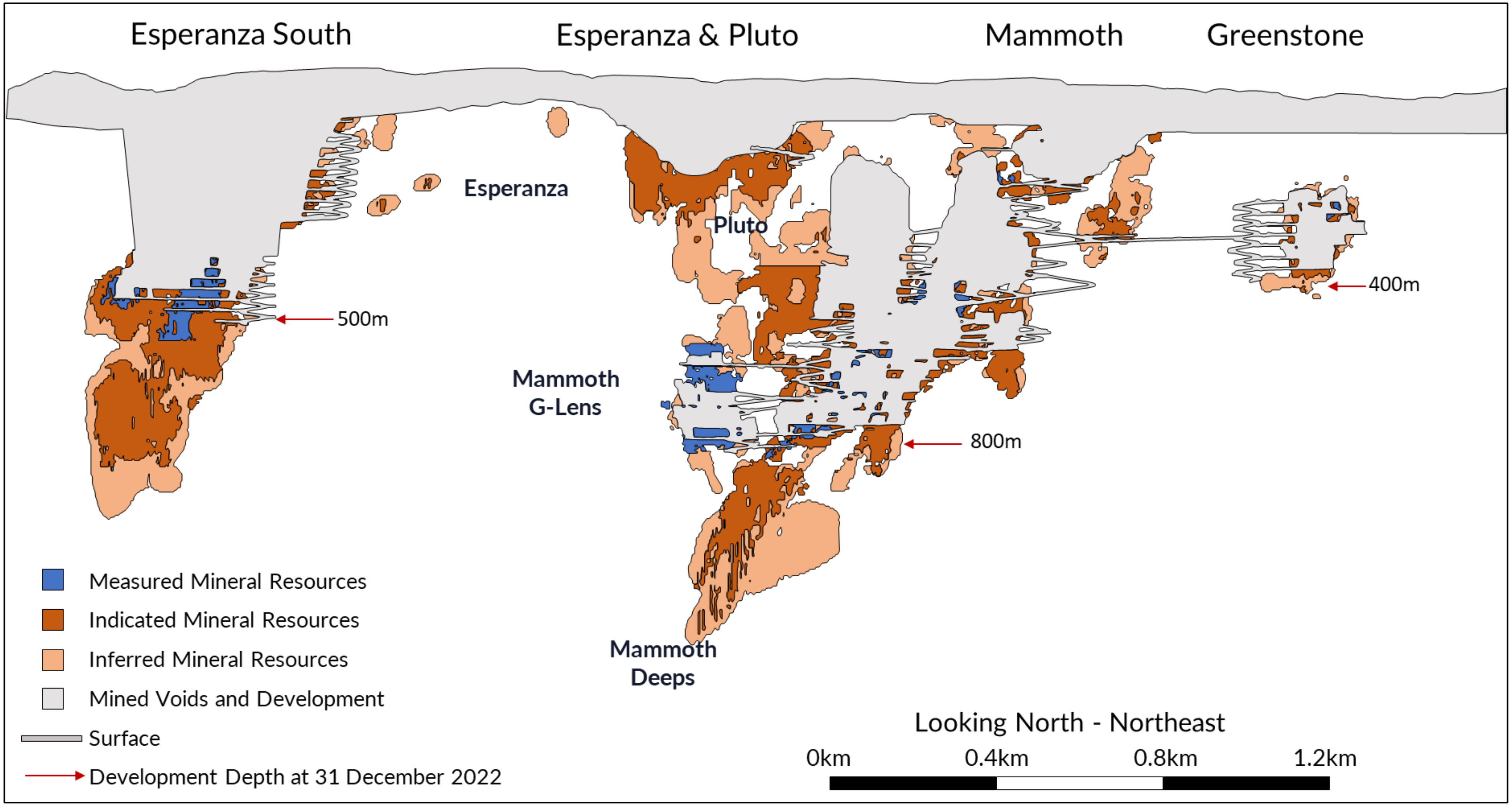
The information regarding the 31 December 2022 Ore Reserves estimates for Golden Grove set out in this report are based on and fairly represent information and supporting documentation compiled by Nyasha Gwatimba, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AUSIMM Membership No. 312232).

Mr Gwatimba is a full-time employee of Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited) and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code.

Mr Gwatimba consents to the inclusion of the information regarding the 31 December 2022 Ore Reserves for Golden Grove in the form and context in which the estimates appear.

Capricorn Copper Mineral Resources and Ore Reserves Estimates

The outline of deposits included in the 31 December 2022 Mineral Resources estimates for Capricorn Copper is depicted below for illustrative purposes.



Mineral Resources

The 31 December 2022 Mineral Resources estimates for **Capricorn Copper** are set out in the table below.

The 31 December 2022 Mineral Resources estimates for Capricorn Copper incorporate the results of additional resource extension, resource development and grade control drilling completed since the cut-off date of the previous Mineral Resources estimates for Capricorn Copper (March-May 2021 to June-July 2022), depletion through mining and processing, and updated resource modelling and geological interpretation.

JORC Code *Table 1* disclosures for these estimates are set out in Appendix 4.

			Grade							Contained Metal					
		Tonnes	Cu	Ag	Co	As	S	Fe	Cu	Ag	Co	As	S	Fe
Orebody	Category	Mt	%	g/t	ppm	ppm	%	%	kt	koz	kt	kt	kt	kt
Esperanza South	Measured	1.7	1.9	18	916	1,259	14.5	13.3	31	941	2	2	240	220
	Indicated	11.0	2.0	20	670	1,122	13.5	14.9	219	7,021	7	12	1,484	1,643
	Inferred	6.2	1.9	16	514	962	9.3	12.6	118	3,227	3	6	575	778
	Total	**18.8**	**2.0**	**19**	**640**	**1,082**	**12.2**	**14.0**	**368**	**11,189**	**12**	**20**	**2,299**	**2,640**
Esperanza	Measured	-	-	-	-	-	-	-	-	-	-	-	-	-
	Indicated	2.7	2.3	11	1,472	2,203	6.0	21.3	62	972	4	6	162	575
	Inferred	1.3	1.7	9	1,103	1,352	7.7	18.5	22	368	1	2	100	241
	Total	**4.0**	**2.1**	**10**	**1,351**	**1,924**	**6.5**	**20.3**	**84**	**1,337**	**5**	**8**	**260**	**812**
Pluto	Measured	-	-	-	-	-	-	-	-	-	-	-	-	-
	Indicated	2.3	2.3	1	239	277	0.9	11.2	53	52	1	1	21	258
	Inferred	0.9	1.6	1	238	259	0.4	13.6	14	26	0	0	4	122
	Total	**3.2**	**2.1**	**1**	**239**	**272**	**0.7**	**11.8**	**67**	**72**	**1**	**1**	**22**	**378**
Greenstone	Measured	0.3	1.7	1	62	115	1.0	2.2	5	12	0	0	3	7
	Indicated	1.0	1.7	1	93	118	0.8	2.6	17	39	0	0	8	26
	Inferred	0.4	1.5	1	70	117	0.9	2.9	6	13	0	0	4	12
	Total	**1.7**	**1.6**	**1**	**82**	**118**	**0.8**	**2.6**	**29**	**67**	**0**	**0**	**15**	**45**
Mammoth	Measured	5.3	1.8	4	88	1,971	6.9	7.6	93	692	0	10	364	402
	Indicated	17.2	1.8	4	113	1,649	5.1	7.8	317	2,282	2	28	873	1,343
	Inferred	11.9	1.5	4	136	1,815	4.8	7.8	183	1,581	2	22	573	928
	Total	**34.4**	**1.7**	**4**	**117**	**1,756**	**5.3**	**7.8**	**592**	**4,556**	**4**	**60**	**1,810**	**2,673**
Stockpile	Measured	0.1	1.1	10	383	689	7.1	8.3	1	37	0	0	8	9
	Indicated	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inferred	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	**0.1**	**1.1**	**10**	**383**	**689**	**7.1**	**8.3**	**1**	**37**	**0**	**0**	**8**	**9**
Total	Measured	7.4	1.8	7	278	1,713	8.4	8.7	130	1,682	2	13	615	638
	Indicated	34.2	2.0	9	407	1,386	7.4	11.2	668	10,366	14	47	2,548	3,844
	Inferred	20.6	1.7	8	313	1,429	6.1	10.1	343	5,215	6	29	1,255	2,081
	Total	**62.2**	**1.8**	**9**	**360**	**1,439**	**7.1**	**10.6**	**1,141**	**17,263**	**22**	**90**	**4,418**	**6,563**

Note, estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places.

Changes in Mineral Resource estimates

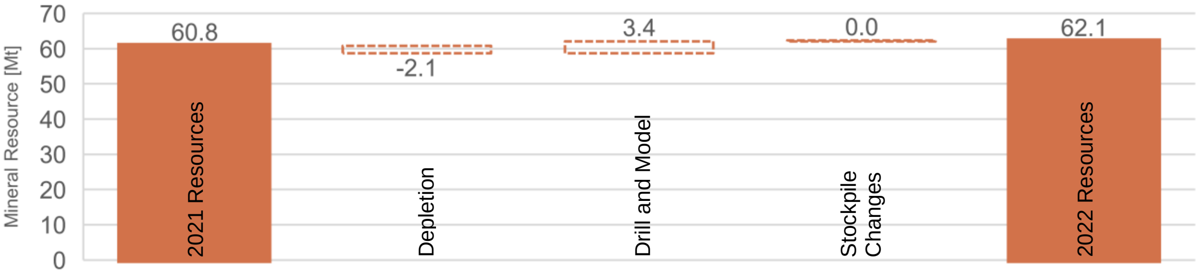
Changes to the Mineral Resources estimates for Capricorn Copper, relative to the last estimates (31 December 2021), are outlined below. Material changes comprise:

- Depletion – 2.1Mt reduction as a result of:
  - mining and processing volumes for the period 31 December 2021 to 31 December 2022; and

  - mineralisation deemed non recoverable at Mammoth based on reviews of historic data; and

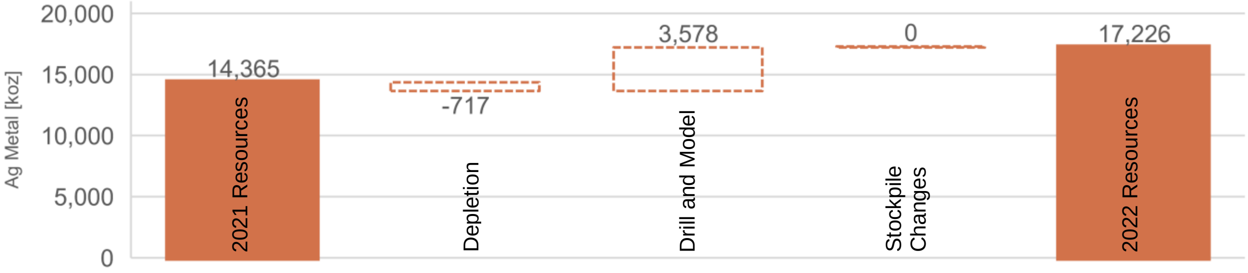
- Drilling and model – increase of 3.4Mt, reflecting analysis of resource extension, resource development and grade control drilling at Esperanza South, Greenstone, and Mammoth G-Lens.

Mineral Resources – December 2021 to December 2022 - Tonnes (Mt)

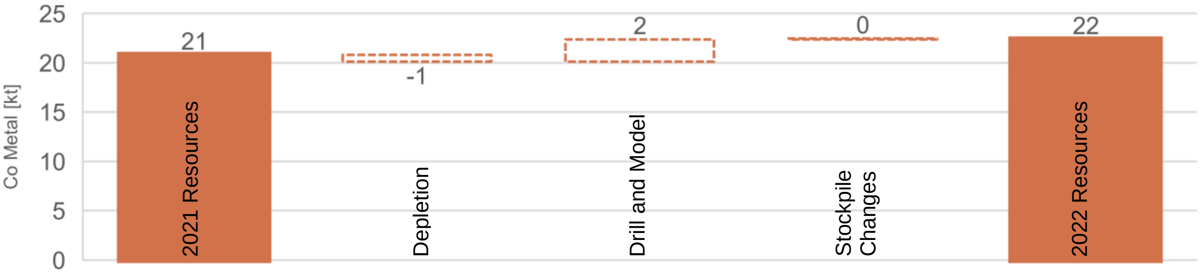


Mineral Resources – December 2021 to December 2022 – Contained Cu Metal (kt)

Mineral Resources – December 2021 to December 2022 – Contained Ag Metal (koz)



Mineral Resources – December 2021 to December 2022 – Contained Co Metal (kt)



Economic cut-off assumptions

The following cut-off assumptions were applied for the purposes of the 31 December 2022 Mineral Resources estimates for Capricorn Copper. Cut-off for the previous estimates (31 December 2021) is provided for reference.

Cut-off assumptions

Orebody	31-Dec-22 Cut-off (%Cu)	31-Dec-21 Cut-off (%Cu)
Esperanza South	**0.8**	0.8
Esperanza	**1.0**	1.0
Pluto	**1.0**	1.0
Greenstone	**1.0**	1.0
Mammoth	**1.0**	1.0

Mineral Resource estimates for Capricorn Copper apply copper grade for cut-off purposes, specific to each deposit / mining method. Esperanza South utilises a cut-off of 0.8% Cu due to sub-level caving mining method, while all other deposits utilise a 1.0% Cu cut-off due to long-hole stoping mining method.

Competent Persons Statement

Information that relates to:

- the sampling techniques, sample and geology data and interpretations (section 1 of the JORC Code *Table 1*); and reporting of these results (section 2 of the JORC Code Table 1), for inclusion in the 31 December 2022 Mineral Resources estimates for Capricorn Copper is based on and fairly represents information and supporting documentation compiled by Rosemary Gray.

  Ms Gray is a full-time employee of Capricorn Copper Pty Ltd (a wholly owned subsidiary of 29Metals Limited), and member of the Australian Institute of Geoscientists (MAIG, Membership No. 8014).
- the estimation and reporting of Mineral Resources for Greenstone, Esperanza South, and Mammoth G Lens (section 3 of the JORC Code Table 1) is based on information compiled by Mr Oliver Willetts.

  Mr Willets is a full-time employee of SRK Consulting, and Member of Australian Institute of Geoscientists (MAusIMM, Member No. 312940).
- the estimation and reporting of Mineral Resources for Esperanza, Pluto and Mammoth excluding G Lens (section 3 of the JORC Code Table 1) is based on information compiled by Mr Danny Kentwell.

  Mr Kentwell is a full-time employee of SRK Consulting, and a Fellow of The Australasian Institute of Mining and Metallurgy (FAusIMM, Member No. 20341).

Ms Gray, Mr Willetts, and Mr Kentwell each has sufficient experience that is relevant to the style of mineralisation, type of deposit and the activity being undertaken to qualify as Competent Persons as defined in the JORC Code.

Ms Gray, Mr Willetts, and Mr Kentwell each consent to the inclusion of the 31 December 2022 Mineral Resources estimates for Capricorn Copper in the form and context in which the estimates appear.

Ore Reserves

The 31 December 2022 Ore Reserves estimates for **Capricorn Copper** are set out below.

The 31 December 2022 Ore Reserves estimates for Capricorn Copper incorporate changes to the Capricorn Copper Mineral Resources estimates (refer above), depletion for mining and processing, changes to cut-off grades and economic parameters, changes to stope and sub-level cave designs, and changes to dilution and recovery assumptions.

JORC Code *Table 1* disclosures are set out in Appendix 5.

			Grade			Contained Metal		
		Tonnes	Cu	Ag	As	Cu	Ag	As
Deposit	Category	Mt	%	g/t	ppm	kt	koz	kt
Esperanza South	Proved	0.6	1.6	15	1,100	10	300	1
	Probable	10.2	1.6	16	1,100	160	5,300	11
	Total	**10.8**	**1.6**	**16**	**1,100**	**169**	**5,600**	**12**
Esperanza	Proved	-	-	-	-	-	-	-
	Probable	0.2	2.0	10	2,000	5	100	0
	Total	**0.2**	**2.0**	**10**	**2,000**	**5**	**100**	**0**
Pluto	Proved	-	-	-	-	-	-	-
	Probable	1.1	2.8	1	300	30	-	0
	Total	**1.1**	**2.8**	**1**	**300**	**30**	**-**	**0**
Greenstone	Proved	-	-	-	-	-	-	-
	Probable	0.1	1.6	1	100	1	-	0
	Total	**0.1**	**1.6**	**1**	**100**	**1**	**-**	**0**
Mammoth Deeps	Proved	0.2	2.1	2	1,200	4	-	0
	Probable	1.9	2.0	5	2,200	38	300	4
	Total	**2.1**	**2.0**	**4**	**2,100**	**43**	**300**	**4**
Mammoth Remnants	Proved	0.5	1.9	5	2,700	9	100	1
	Probable	1.1	1.8	4	1,800	20	200	2
	Total	**1.6**	**1.9**	**5**	**2,100**	**29**	**200**	**3**
Stockpile	Proved	0.1	1.1	10	700	1	-	0
	Probable	-	-	-	-	-	-	-
	Total	**0.1**	**1.1**	**10**	**700**	**1**	**-**	**0**
Total	Proved	1	1.7	10	1,600	20	400	2
	Probable	14	1.7	13	1,300	250	5,800	18
	Total	**16**	**1.7**	**12**	**1,300**	**280**	**6,300**	**21**

Note, estimates of ore tonnes and grade reported in the table above, other than aggregated total tonnes, and silver and arsenic grades, are subject to rounding to one decimal place. Estimates for aggregated total tonnes and silver grade are rounded to zero decimal places and estimates for arsenic are rounded to the nearest 100ppm. Estimates of contained silver and arsenic metal have been further rounded reflecting relative confidence. Aggregate estimates of contained Cu metal have been rounded to the nearest 10kt, estimates of contained silver have been rounded to the nearest 100koz.

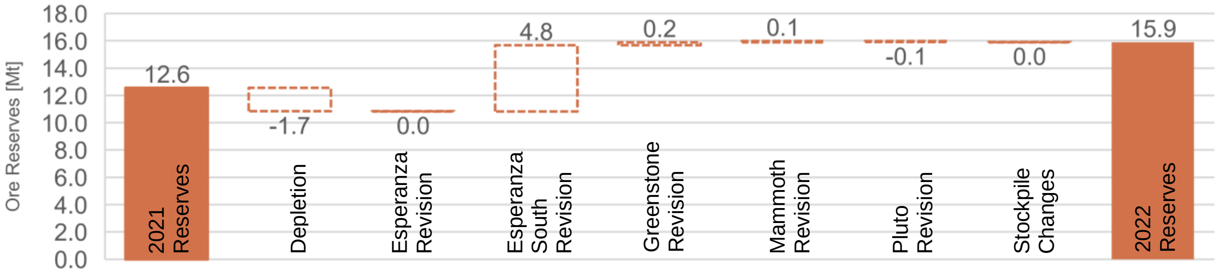
Changes in Ore Reserve Estimates

Changes to Ore Reserves estimates for Capricorn Copper, relative to the last estimates (31 December 2021) are outlined below. Material changes comprise:

- Depletion – 1.7Mt reduction, reflecting mining and processing in the 12-months to 31 December 2022;
- Mineral Resources estimates – increases in Mineral Resources estimates for ESS, Greenstone, and Mammoth G-Lens (refer above);
- Economic cut-off assumptions - changes to cut-off grades for all deposits, reflecting changes in key economic assumptions:
    - increase in long term copper price to US$3.60/lb (31 Dec 2021: US$3.30/lb);

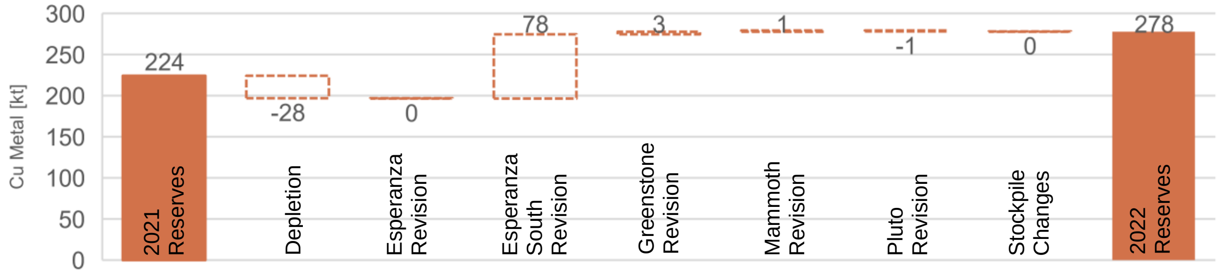
  - decrease in future mining costs assumed for ESS, Mammoth Deeps and Mammoth Remnants, and Esperanza Deeps, and an increase in future mining costs assumed for Greenstone and Pluto;
  - increase in assumed future processing and site services costs; and
  - changes to processing recovery assumptions; and
- Mine design:
  - changes to stope designs for Mammoth Deeps and Mammoth Remnants, Greenstone, Esperanza and Pluto, reflecting 31 December 2022 Mineral Resources estimates for Capricorn Copper (refer above), and revised cut-offs; and
  - an update of the sub-level cave design for ESS, reflecting the 31 December 2022 Mineral Resources estimates for Capricorn Copper (refer above), and revised cut-off and shutoff grades.

Ore Reserves – December 2021 to December 2022 - Tonnes (Mt)



Note, changes cited as *Revisions* comprise changes to Mineral Resources estimates, economic cut-off assumptions, and mine design changes. In order to better present the changes, the values shown in the table above are reported with more significant figures than the aggregated information contained in the 2022 estimates.

Ore Reserves – December 2021 to December 2022 – Contained Cu Metal (kt)



Note, changes cited as *Revisions* comprise changes to Mineral Resources estimates, economic cut-off assumptions, and mine design changes. In order to better present the changes, the values shown in the table above are reported with more significant figures than the aggregated information contained in the 2022 estimates.

Economic cut-off assumptions

The following economic cut-off assumptions were applied for the purposes of the 31 December 2022 Ore Reserves estimates for Capricorn Copper. Cut-off for the prior estimates (31 December 2021) is provided for reference.

For the purposes of Ore Reserves estimate, an initial set of cut-off grades were applied to create stope shapes. These cut-off grades are shown under “Stope optimisation cut-off” in the table below. A final, revised set of cut-off grades, shown under “Head Grade (Diluted)” in the table below, was subsequently applied to exclude any stopes for which the overall stope grade was lower than or equal to the final cut-off.

Cut-off assumptions	31-Dec-22		31-Dec-21	
Orebody	Stope Optimisation Cut-off	Head Grade %Cu (Diluted)	Stope Optimisation Cut-off	Head Grade %Cu (Diluted)
Esperanza South Total	**1.17**	**1.17**	1.19	1.19
Esperanza South Shutoff	**0.99**	**0.99**	0.98	0.98
Esperanza South Development	**0.87**	**0.83**	0.58	0.56
Greenstone	**1.11**	**1.06**	1.05	1.00
Greenstone Development	**0.64**	**0.60**	0.50	0.48
Mammoth (Remnants and Deeps)	**1.44**	**1.36**	1.49	1.41
Mammoth Development	**0.64**	**0.60**	0.51	0.49

Cut-off assumptions	31-Dec-22		31-Dec-21	
Orebody	Stope Optimisation Cut-off	Head Grade %Cu (Diluted)	Stope Optimisation Cut-off	Head Grade %Cu (Diluted)
Pluto	**1.74**	**1.59**	1.65	1.50
Pluto Development	**0.71**	**0.67**	0.58	0.55
Esperanza	**1.71**	**1.55**	1.65	1.50
Esperanza Development	**0.70**	**0.66**	0.57	0.55

Commodity Price and Foreign Exchange

Pricing/FX	Unit	31-Dec-22	31-Dec-21
Copper	US$/lb	3.60	3.30
AUD:USD		0.73	0.73

Competent Persons Statement

The information regarding the 31 December 2022 Ore Reserves estimates for Capricorn Copper set out in this report is based on and fairly represents information and supporting documentation compiled by Christopher Desoe, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM (CP) Membership No. 104206).

Mr Desoe is a full-time employee of Australian Mine Design and Development Pty Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code.

Mr Desoe consents to the inclusion of the information regarding the 31 December 2022 Ore Reserves estimates for Capricorn Copper in the form and context in which the estimates appear.

Redhill Mineral Resources Estimates

The Mineral Resources estimates for **Redhill** are set out in the table below. These Mineral Resources estimates were first reported and effective on 16 May 2016. There have been no material changes to the Mineral Resources estimated for Redhill since 16 May 2016.

JORC Code *Table 1 disclosures* for these estimates are set out in Appendix 6.

Redhill underwent further field work and assessment in 2022 with activities including field sampling and the collection of near surface rock samples using portable small drills. These samples are not sufficient to support an update to the Redhill Mineral Resources estimates.

			Grade			Contained Metal		
Deposit	**Category**	**Tonnes** Mt	**Cu** %	**Au** g/t	**Ag** g/t	**Cu** t	**Au** oz	**Ag** koz
Cristina	Inferred	1.3	2.3	0.3	41	29,601	10,481	1,719
Angelica	Inferred	0.6	1.5	0.4	53	8,840	7,382	978
Gorda	Inferred	0.4	0.6	1.6	56	2,018	18,210	637
Cutters	Inferred	0.3	3.0	0.1	51	9,542	612	520
Franceses	Inferred	1.7	1.2	0.1	14	21,249	3,124	757
Total	**Inferred**	**4.3**	**1.7**	**0.3**	**33**	**71,249**	**39,809**	**4,611**

Note, estimates reported in the table above, other than silver, are subject to rounding to one decimal place. Estimates for silver are rounded to zero decimal places.

Economic cut-off assumptions

The following assumptions were made in estimation of the Redhill Mineral Resources:

Cut-off assumptions

Orebody	Cut-off (% Cu)
Cristina	0.4
Angelica	0.4
Gorda	0.4
Cutters	0.4
Franceses	0.4

Commodity price for estimates

Pricing/FX	Unit	
Copper	US$/lb	3.00
Gold	US$/oz	1,300
Silver	US$/oz	22

Competent Persons Statement

The 16 May 2016 Mineral Resources estimates for Redhill are based on and fairly represents information and supporting documentation compiled by Tim Callaghan, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM Membership No. 222210).

Mr Callaghan is a full-time employee of Resource and Exploration Geology. Mr Callaghan has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the JORC Code.

Mr Callaghan consents to the inclusion of the information regarding the Redhill Mineral Resources estimates in the form and context in which the estimates appear.

Appendix 1

Restated 31 December 2021 Mineral Resources and Ore Reserves estimates for Golden Grove

2021 Golden Grove Mineral Resources estimates[5] - presented in the same reporting format as the 31 December 2022 estimates

				Grade					Contained Metal				
			Tonnes	Cu	Zn	Au	Ag	Pb	Cu	Zn	Au	Ag	Pb
Project Area	Deposit	Category	Mt	%	%	g/t	g/t	%	kt	kt	koz	koz	kt
Gossan Hill Mine	Gossan Hill Main	Measured	14.3	1.7	2.9	0.8	28	0.3	244	409	355	12,823	36
		Indicated	7.1	1.4	2.8	0.5	27	0.2	99	199	121	6,086	16
		Inferred	1.4	1.5	2.6	0.4	21	0.2	20	35	17	924	3
		Total	**22.8**	**1.6**	**2.8**	**0.7**	**27**	**0.2**	**364**	**644**	**494**	**19,833**	**55**
	Xantho Extended & Europa	Measured	0.0	0.6	6.0	1.6	71	1.0	0	1	1	39	0
		Indicated	7.6	2.0	8.1	0.9	35	0.4	154	618	223	8,494	32
		Inferred	1.5	1.5	7.2	1.2	34	0.4	23	109	59	1,681	6
		Total	**9.2**	**1.9**	**7.9**	**1.0**	**35**	**0.4**	**177**	**728**	**283**	**10,214**	**39**
	Hougoumont Extended & Oizon	Measured	0.0	2.1	0.1	0.3	15	0.0	0	0	0	8	0
		Indicated	4.4	2.1	2.4	0.5	23	0.2	92	105	72	3,275	8
		Inferred	1.0	2.3	1.6	0.3	12	0.1	23	16	10	402	1
		Total	**5.4**	**2.1**	**2.2**	**0.5**	**21**	**0.2**	**115**	**121**	**82**	**3,685**	**10**
Scuddles Mine	Scuddles	Measured	7.2	1.8	4.0	0.6	34	0.3	126	285	149	7,778	21
		Indicated	0.8	1.3	4.1	0.3	30	0.3	11	33	9	783	2
		Inferred	0.1	0.6	11.1	0.2	81	0.8	1	10	1	231	1
		Total	**8.1**	**1.7**	**4.1**	**0.6**	**34**	**0.3**	**138**	**329**	**158**	**8,792**	**24**
	Cervantes	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	1.6	0.9	8.7	0.6	44	0.5	15	137	31	2,218	8
		Inferred	3.0	1.6	5.6	0.7	39	0.2	49	169	71	3,776	7
		Total	**4.6**	**1.4**	**6.6**	**0.7**	**40**	**0.3**	**63**	**306**	**101**	**5,994**	**15**
Gossan Valley Deposits	Gossan Valley, Felix & Conteville	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	2.5	1.0	7.1	0.5	13	0.1	24	176	41	1,059	3
		Inferred	2.2	1.2	5.0	0.5	25	0.2	26	111	33	1,791	5
		Total	**4.7**	**1.1**	**6.1**	**0.5**	**19**	**0.2**	**50**	**287**	**74**	**2,850**	**8**
	Grassi	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	1.3	1.1	7.7	0.5	15	0.2	14	104	21	646	3
		Inferred	0.2	1.3	3.0	0.5	19	0.1	3	6	3	123	0
		Total	**1.6**	**1.1**	**7.1**	**0.5**	**15**	**0.2**	**17**	**110**	**24**	**769**	**3**
Other	Oxide	Measured	0.1	1.8	6.2	2.0	133	1.3	1	5	5	321	1
		Indicated	0.7	2.0	2.0	1.5	83	0.5	13	14	33	1,826	3
		Inferred	0.3	0.4	3.4	1.4	77	0.5	1	9	12	655	1
		Total	**1.0**	**1.6**	**2.7**	**1.5**	**85**	**0.6**	**16**	**28**	**50**	**2,803**	**6**
	Flying Hi	Measured	-	-	-	-	-	-	-	-	-	-	-
		Indicated	-	-	-	-	-	-	-	-	-	-	-
		Inferred	0.7	2.0	2.4	0.6	18	0.0	15	18	14	425	0
		Total	**0.7**	**2.0**	**2.4**	**0.6**	**18**	**0.0**	**15**	**18**	**14**	**425**	**0**
	Surface Stockpiles	Measured	0.3	0.7	1.3	2.2	82	0.4	2	3	18	666	1
		Indicated	-	-	-	-	-	-	-	-	-	-	-
		Inferred	-	-	-	-	-	-	-	-	-	-	-
		Total	**0.3**	**0.7**	**1.3**	**2.2**	**82**	**0.4**	**2**	**3**	**18**	**666**	**1**
Total		Measured	21.9	1.7	3.2	0.8	31	0.3	374	704	528	21,634	59
		Indicated	26.0	1.6	5.3	0.7	29	0.3	423	1,386	551	24,386	76
		Inferred	10.5	1.5	4.6	0.7	30	0.2	160	483	220	10,009	24
		Total	**58.4**	**1.6**	**4.4**	**0.7**	**30**	**0.3**	**957**	**2,573**	**1,299**	**56,029**	**160**

Note, estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places.

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[5] 29Metals' 31 December 2021 Mineral Resources estimates for Golden Grove, including JORC Code Table 1 disclosures, are set out in 29Metals' Mineral Resources and Ore Reserves estimates as released to the ASX announcements platform on 11 March 2022 (a copy of which is available on 29Metals' website at https://www.29metals.com/investors/reports-presentations.)

2021 Golden Grove Ore Reserves estimates [6] - presented in the same reporting format as the 31 December 2022 estimates

				Grade					Contained Metal				
			Tonnes	Cu	Zn	Au	Ag	Pb	Cu	Zn	Au	Ag	Pb
Project Area	Deposit	Asset	Mt	%	%	g/t	g/t	%	kt	kt	koz	koz	kt
Gossan Hill Mine	**Gossan Hill Main**	Proved	2.9	1.8	2.9	0.8	29	0.3	53	84	78	2,729	8
		Probable	0.8	1.5	3.3	0.6	31	0.2	11	26	15	768	2
		Total	**3.7**	**1.7**	**3.0**	**0.8**	**30**	**0.3**	**64**	**110**	**93**	**3,497**	**10**
	Xantho Extended & Europa	Proved	0.0	0.8	4.9	0.9	31	0.6	0	0	0	9	0
		Probable	6.1	1.9	7.7	0.9	33	0.4	116	470	169	6,524	26
		Total	**6.1**	**1.9**	**7.7**	**0.9**	**33**	**0.4**	**116**	**471**	**169**	**6,533**	**26**
	Hougoumont Extended & Oizon	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	1.6	2.3	2.0	0.6	30	0.2	37	33	32	1,561	4
		Total	**1.6**	**2.3**	**2.0**	**0.6**	**30**	**0.2**	**37**	**33**	**32**	**1,561**	**4**
Scuddles Mine	**Scuddles**	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	1.1	1.6	3.5	0.6	29	0.3	18	38	22	1,051	3
		Total	**1.1**	**1.6**	**3.5**	**0.6**	**29**	**0.3**	**18**	**38**	**22**	**1,051**	**3**
Gossan Valley Deposits	**Gossan Valley, Felix & Conteville**	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	-	-	-	-	-	-	-	-	-	-	-
		Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Grassi	Proved	-	-	-	-	-	-	-	-	-	-	-
		Probable	-	-	-	-	-	-	-	-	-	-	-
		Total	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Other	**Surface Stockpiles**	Proved	0.3	0.7	1.3	2.2	82	0.4	2	3	18	666	1
		Probable	-	-	-	-	-	-	-	-	-	-	-
		Total	**0.3**	**0.7**	**1.3**	**2.2**	**82**	**0.4**	**2**	**3**	**18**	**666**	**1**
Total		Proved	3.2	1.7	2.8	0.9	34	0.3	54	88	96	3,404	9
		Probable	9.6	1.9	5.9	0.8	32	0.4	182	567	238	9,904	34
		Total	**12.7**	**1.9**	**5.1**	**0.8**	**33**	**0.3**	**236**	**655**	**334**	**13,308**	**44**

Note, estimates reported in the table above, other than silver, are rounded to one decimal place. Estimates for silver are rounded to zero decimal places.

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[6] 29Metals' 31 December 2021 Ore Reserves estimates for Golden Grove, including JORC Code Table 1 disclosures, are set out in 29Metals' Mineral Resources and Ore Reserves estimates as released to the ASX announcements platform on 11 March 2022 (a copy of which is available on 29Metals' website at https://www.29metals.com/investors/reports-presentations.)

Appendix 2

Golden Grove Mineral Resources estimates – JORC Code Table 1 Disclosures

Section 1 Sampling Techniques and Data

CRITERIA	STATUS
Sampling techniques	• Samples have been collected by reverse circulation (RC), Aircore and diamond drilling (DD), both from surface and underground. • Sample length is preferentially set to 1m and ranges from 0.5m to 1.0m of half core. Sample intervals do not cross geological boundaries; this ensures samples were representative of the lithological unit without mixing of grade at lithological boundaries. There is no limit for shortest sample interval in the database controls currently, though Geologists are recommended to not sample intervals shorter than 0.5m. • Entire half core samples are crushed and pulverised to 85% passing 75µm. • Historical underground drill sampling practices are comparable with the current practice, the only difference being primary core diameter for the underground drilling. The current core hole diameter is NQ2 (50.6mm), LTK60 (44.0mm), and in some cases BQTK (40.7mm), whereas historically a diameter of LK48 (35.3mm) was used. • During surface Aircore and RC drilling before 1994, samples were captured in a bag attached to the cyclone. These samples were then split using a 40mm or 50mm PVC pipe spear. • Post 1994 surface RC samples were captured in a bag attached to the cyclone and subsequently split using a triple stage riffle splitter. • Measures taken to ensure sample consistency and representativity include the collection, and analysis of field and coarse crush duplicates.
Drilling techniques	• Diamond Drill core and minor Reverse Circulation data was used in the Mineral Resource estimation for Gossan Hill, Scuddles and Gossan Valley deposits. • Current DD core diameter is NQ2 (50.6mm), LTK60 (44.0mm) or BQTK (40.7mm) • Historic DD core diameter was LK48 (35.3mm) • 9,440 drillholes used in the Gossan Hill Mineral Resource model. • 4,230 drillholes used in the Scuddles Mineral Resource model. • 580 drillholes used in the Gossan Valley Mineral Resource model. • Over 979,238 samples across all deposits. • 1,645 drillholes were used in the Open Pit Mineral Resources (comprised of 77 Aircore, 162 Diamond Core and 1406 RC holes). • The Reflex Act II™ tool is used for core orientation marks on selected DD holes.
Drill sample recovery	• Surface and underground recoveries of DD core are recorded as percentages calculated from measured core versus drilled metres. The intervals are logged and recorded in the database. • The rocks are very competent, and recoveries are very high with average core recovery greater than 99.0% for both mineralised and non-mineralized material. • Drilling process was controlled by the drill crew and geological supervision provides a means for maximising sample recovery and ensures suitable core presentation. Drilled core is reconstructed into a continuous run on an angled iron cradle for orientation marking. Depth is checked against depth provided on core blocks. No other measures are taken to maximise core recovery. • No RC drillholes drilled before 2000 have recovery data recorded except for the 1994 RC program. Recovery data is not used in the Mineral Resource estimation. • Preferential loss/gains of fine or coarse materials are not considered significant. • There is no known relationship bias between recovery and grades.
Logging	• All (100%) drill core and chips are logged geologically using codes set up for direct computer input into the Micromine Geobank™ database software package. • All (100%) DD cores are geotechnically logged to record recovery, RQD, roughness, fill material. Structural logging is recorded for all oriented core. DD cores are photographed wet. • Logging is both qualitative and quantitative (percentage of sulphide minerals present). • All (100%) drillholes are logged in full detail from start to finish using laptop computers directly into the drillhole (Geobank) database.

CRITERIA	STATUS
	• Standard mineralised rock codes used. Standard weathering, alteration and appropriate geological comments entered.
Sub-sampling techniques and sample preparation	• All DD core is half-cut onsite using an automatic core saw with samples always taken from the same side. Half core is used for routine sampling and quarter core for field duplicates. Current sample length ranges between 0.5 and 1m (historically ranges were from 0.2m to 1.5m) and is adjusted to geological boundaries. Historic DD core has been sampled using whole, half, quarter and third core. • RC drilled samples have been cone split and dry sampled. Wet sampling only conducted when drillholes intersected the water table. • All routine and duplicate RC drilled samples were 1m composites. • Historical RAB, AC and RC drilling has been sampled using spear, grab, riffle, and other unknown methods but none of these were used in the Mineral Resource estimation. • The sample preparation of RC chips and DD core adheres to industry best practice. A commercial laboratory is used which involves: o Weighing o Oven drying at 105º C o Coarse crushing using a jaw crusher to 70% passing 6mm o Samples > 3kg crushed to 2mm and split using a rotary splitter (this represents < 0.01% of total sample used for Mineral Resource estimation). o Pulverising in a LM5 to a grind size of 85% passing 75µm. o Collection of 400g pulp from each sample; rejects kept or discarded depending on drilling programme. • It is assumed best practice was also followed at the time of historic sampling. RC field duplicate sampling is carried out at a rate of 1:50 taken directly from the on-board cone splitter at the same time as the routine sample. These are subject to the same assay process as the routine samples and the laboratory is unaware of such submissions. • Duplicate DD core samples are no longer taken. This practiced ceased in July 2014. Historically duplicate DD were taken from core at a rate of 1:50 and the half core was cut into quarter core. Instead, duplicates are taken after coarse crushing and pulverisation at a rate of 1:20 alternating between the two. These are subject to the same assay process as routine samples. • Sampling conducted by previous owners is assumed to be industry standard at the time. • Although field duplicates showed good reproducibility across the grade range for Cu, Zn and Au, their use was ceased in 2014 after consultation with the Principal Resource Geologist and Technical Services Manager regarding their collection method and application as a true duplicate.
Quality of assay data and laboratory tests	• A four acid “near-total” digestion is used to determine concentrations for silver, copper, iron, lead, sulphur and zinc. Following extensive test work this method underwent a change in October 2014 to make it consistent with other projects. Previously it used a 0.4g sample in a HF-HNO3-HClO4 digestion, with HCl leach and finished using ICP-AES. Since October 2014, the sample charge weight is 0.2g in the same acid digestion maintaining the sample/solution ratio as the previous method. This ore grade method is suitable for use in VHMS deposits and the change from 0.4g to 0.2g is not believed to have a material impact to historical, current, or future results. • Prior to October 2014 a 30g fire assay with AAS finish was used to determine the gold concentration for RC chips and DD core samples. This method was considered most suitable for determining gold concentrations in rock with sulphide rich material and is a total digest method. However, the precision of AAS was limited to 20 times detection limit which coincided with the value at which gold was deemed significant. Therefore, while the charge weight remains the same the determination in now by ICP-AES. Grades above 10g/t are then determined using AAS. • Gold and silver assay method: fire assay followed by atomic absorption spectrometry, FA-AAS. • Historic analysis includes fire assay, aqua regia, four acid digest and AAS or ICP. • No geophysical tools, spectrometers or handheld XRF instruments have been used in the analysis of samples external to the laboratory for the estimation of Mineral Resources. • Matrix-matched certified reference materials (sourced from Golden Grove and prepared by Ore Research Pty. Ltd.) with a wide range of values are inserted at a rate of 1:20 into every RC and DD to assess laboratory accuracy, precision, and possible contamination. Certified blank material (prepared by Geostats Pty. Ltd.) is inserted at a rate of 1:50. Five Quartz flushes are inserted at the end of any significant ore horizon. • QAQC data returned are checked against pass/fail limits once the results have been loaded into the database. QAQC data is reported quarterly and demonstrates sufficient levels of accuracy and precision. • Sizing tests ensure the grind size of 85% passing 75µm is achieved. • The laboratory performs internal QC including standards, blanks, repeats and checks. • Oxide grade control analysis: o Standards have been used in most programs.

CRITERIA | **STATUS**

- ○ Base metals assay method: 4 acid digest followed by ICP MA-ICPOES for the first program with XRF applied for subsequent programs. Checks showed no bias between analysis methods.
- ○ Acceptable levels of accuracy and precision have been established.

Verification of sampling and assaying

- Significant intersections are reviewed by a senior geologist and other site geologists. Where there is a significant intersection in the oxide zones holes have either been twinned or scissored.
- A program of twinned holes was drilled for the Gossan Hill Copper Oxide deposit to check correlation with historic data. Good correlation was established. A full report of these twinned holes was written.
- No specific twinned holes have been drilled at the Golden Grove underground sulphide deposits. However nearby and scissor drillholes show compatible geology and results.
- Underground DD logging is recorded directly in a secure Geobank Database which has inbuilt validation functions plus additional triggers to prevent incorrect data capture and importation.
- Selected Exploration and Delineation DD are graphically logged on paper before entry into the database. All paper logs are scanned to pdf and hardcopies kept in labelled folders. Periodic review is undertaken to ensure data has been correctly transcribed.
- Assay data is retained in text files (.SIF) and stored once loaded into the database.
- Samples of RC drillholes are retained in chip trays and the remaining drill core is stored in core trays at the core yard.
- The database has grown as each previous owner added data to it. During the 1990’s the database was in Explorer III, a Microsoft Access™-based application. In 2008 the data was migrated to a Micromine Geobank™ database. Validation of data has been performed during each migration and is periodically reviewed against hardcopy records.
- An additional field in the results table is used to ensure all data is displayed in the appropriate units. This allows comparison of the data in standard units and aids in calculating Mineral Resource models.
- All re-assayed data will replace original results that failed QAQC; both results are retained in the database, with the results that failed QC being excluded from general use and export.
- Use of both DD and RC indicates there is no significant bias between drilling methods.
- All assay data remains in its original state and has not been adjusted.

Location of data points

- All underground drillhole collars are picked up by 29Metals Golden Grove surveyors using a Leica TS-15 (total station) with an expected accuracy of 10mm. Surface exploration drillhole collars are picked up by a company surveyor using a Trimble RTK R8 GPS with an expected accuracy of 40mm.
- Before 2016 all drillholes were down hole surveyed gyroscopically by the drilling companies (currently Boart Longyear) once each drillhole was completed. This was tied into a starting azimuth and dip picked up off the rod string by our onsite survey department while the rig was drilling. Surveys were also carried out every 30m using an Eastman single shot camera while the hole is in progress to track deviation.
- Since 2016 the Champ and Reflex north seeking tools have been utilised for both rig alignment and surveying. Holes outside of 20 degrees dip are surveyed every 12m using the north seeking function while holes inside +/- 20 degrees are surveyed using the gyroscopic components of the tool every 30m while drilling and then at end of hole every 10m.
- The accuracy and quality of historic surveys is generally unknown.
- A local grid system (GGMINE) is used. It is rotated 52.4 degrees west of MGA94 zone 50. The two-point conversion is as follows:

Mine Grid to MGA94 Two-Point Conversion

Point	GGMINE East	GGMINE North	MGA East	MGA North
1	3644.47	10108.13	502093.5	6810260.7
2	9343.2	29162.02	490480.1	6826394.2

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

CRITERIA	STATUS
Data spacing and distribution	• Drill data spacing ranges from less than 10m x 10m in the active mining areas to greater than 80m x 80m in exploration areas. • The table below shows drill spacing classification by ore type Drill spacing classification by ore type (see table below) • Data spacing is sufficient to establish geological and grade continuity for the appropriate classification of the Mineral Resources. • Drillholes greater than 60m x 60m may not necessarily be classified as Mineral Resources. This will be dependent on the geometry of the drillholes and the orebody under study. • DD samples are not composited prior to being sent to the laboratory however the sample lengths taken by Geologists currently range from 0.5m to 1.0m. • Current gold pit RC grade control drilling is sampled on 1m intervals. Past RC sampling (gold and copper) intervals of up to 5m has occurred. • Underground drive mapping below the surface deposits supports understanding of geological structure and strike continuity and this data is incorporated into the wireframes and modelled domains.
Orientation of data in relation to geological structure	• Drilling has mostly been oriented on sections that are orthogonal to the strike of mineralisation. Drillholes frequently overlap and are scissored as drilling is oriented from both footwall and hanging-wall directions. • No significant sampling bias has been recognised due to orientation of the drilling regarding mineralised structures.
Sample security	• Measures to provide sample security included: ○ Adequately trained and supervised sampling personnel. ○ Half-core samples placed in a numbered and tied calico sample bags. ○ Bag and sample numbers are entered into Geobank database. ○ Samples are couriered to assay laboratory via truck in plastic bulker containers. ○ Assay laboratory checks off sample despatch numbers against submission documents and reports any inconsistencies. ○ Remaining DD core is stored within the Golden Grove core yard.
Audits or Reviews	• The most recent laboratory audit was conducted on the 13th of December 2022, while the previous one was conducted on the 23rd of November 2021. No major concerns were raised. • An internal peer review process was carried out on all models by geologists onsite in 2022. An external Competent Person review was carried out in 2020. • An internal review of RC and DD core sampling procedures were completed in 2014. The sampling procedures were found to meet industry standards. • In 2012 Paul Blackney and David Gray of Optiro completed a review of the Gossan Hill Gold Oxide data. The review found there was no historic QAQC data (1990 to 2000) around Gossan Hill. This has now been rectified

Drill spacing classification by ore type

Ore Type	Drill Spacing Classification Criteria		
	Measured	Indicated	Inferred
Primary Sulphide	20	40	60
Partial Oxide Zinc	20	40	60
Oxide Copper	20	40	60

Section 2 Reporting of Exploration Results

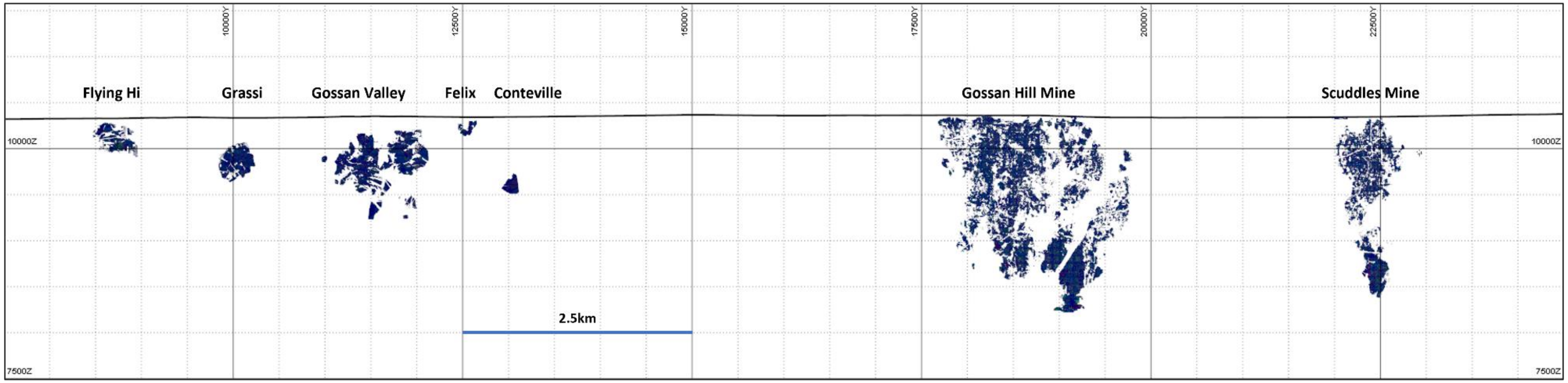
<table>
<tr><th>CRITERIA</th><th>STATUS</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>
<p>The mineral tenement and land tenure status of the Golden Grove operations are listed in the below table.</p>
<p>Mineral tenement and land tenure status for Golden Grove operations</p>
<table>
<tr><th>Tenement No.</th><th>Prospect Name</th><th>Date Expires</th><th>Term Years</th><th>Date Granted</th></tr>
<tr><td>M59/03</td><td>Scuddles</td><td>08/12/2025</td><td>21</td><td>28/01/2005*</td></tr>
<tr><td>M59/88</td><td>Chellews</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/89</td><td>Coorinja</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/90</td><td>Cattle Well</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/91</td><td>Cullens</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/92</td><td>Felix</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/93</td><td>Flying Hi</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/94</td><td>Bassendean</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/95</td><td>Thundelarra</td><td>18/05/2030</td><td>21</td><td>20/04/2009*</td></tr>
<tr><td>M59/143</td><td>Bassendean</td><td>09/05/2031</td><td>21</td><td>21/04/2009*</td></tr>
<tr><td>M59/195</td><td>Gossan Hill</td><td>17/05/2032</td><td>21</td><td>17/06/2011*</td></tr>
<tr><td>M59/227</td><td>Crescent</td><td>07/05/2033</td><td>21</td><td>08/05/2012*</td></tr>
<tr><td>M59/361</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/362</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/363</td><td>Badja</td><td>01/03/2037</td><td>21</td><td>01/03/2016*</td></tr>
<tr><td>M59/543</td><td>Walgardy</td><td>04/02/2023</td><td>21</td><td>05/02/2002</td></tr>
<tr><td>M59/480</td><td>Marloo</td><td>01/07/2029</td><td>21</td><td>02/07/2008</td></tr>
</table>
<p>* Renewal date</p>

There are no known impediments to operating in the area, but the operation is subjected to environmental conditions pertaining to land and water management, as well as adherence to cultural sensitivity pertaining to the local indigenous people.
All tenements are 100% owned by Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited).

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

Original definition and exploration drilling were performed by Joshua Pitt, of Aztec Exploration, in 1971.
From 1971 until 1992 multiple joint ventures continued the definition of the Mineral Resource, with highlights being the Scuddles, A Panel Zn, B Panel Zn, C Panel Zn and Cu discoveries. Parties involved include Amax Exploration, Esso Exploration, Australian Consolidated Minerals and Exxon.
Newmont, Normandy, Oxiana, OZ Minerals, MMG, EMR and 29Metals have all been involved with the drilling and exploration of the Golden Grove leases since 1991.
The exploration and resource geology groups remained unchanged throughout the takeovers; hence the exploration management and methods have effectively remained constant since Oxiana acquired the project in 2005.
Exploration on the Northern and Southern Leases around the Golden Grove tenements is ongoing and being conducted by or on behalf of the 29Metals Group.

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

CRITERIA	STATUS
Geology	• The mineralisation style is volcanogenic hosted massive sulphide (VHMS) which occurs as sub-vertical lenses within layered sediments and volcanics. • The Golden Grove deposits are located in the Murchison Province in the North-Western part of the Achaean Yilgarn Craton in Western Australia within the Yalgoo Greenstone Belt. Mineralisation occurs at the base of the Warriedar Fold Belt ("WFB") within a sequence of felsic to intermediate volcaniclastic sediments, lavas and associated autoclastic breccias. • The Golden Grove Domain that hosts the Gossan Hill and Scuddles deposits lies along the northeast flank of the WFB. The Mougooderra Fault (west), recrystallised monzogranite (east) and post folding granites (north and south) bound the domain. The current interpretation of the structure places the Golden Grove Domain on the eastern limb of a syncline. The stratigraphy has a westerly younging direction and dips steeply west.
Drillhole information	• Over 29,672 drillholes and associated data are held in the database. This is a Mineral Resource Statement and is not a report on Exploration Results hence no additional information is provided for this section.
Data aggregation methods	• This is a Mineral Resource Statement and is not a report on Exploration Results hence no additional information is provided for this section. • No metal equivalents were used in the Mineral Resource estimation
Relationship between mineralisation widths and intercept lengths	• Drilling has been targeted to achieve intersections as close to the true thickness as possible, however large differences between intercept and true widths occur. The impact of this is minimised as intercepts are modelled in three-dimensions for Mineral Resource estimation.
Diagrams	 *Long-section of the Golden Grove deposits*
Balanced reporting	• This is a Mineral Resource Statement and is not a report on Exploration Results hence no additional information is provided for this section.
Other substantive exploration data	• This is a Mineral Resource Statement and is not a report on Exploration Results hence no additional information is provided for this section.
Further work	• Exploration and delineation drilling will continue underground, and the results will be modelled and reported in subsequent Mineral Resource estimates. • Surface exploration activities including RC and DD drilling will continue on the mining leases.

Section 3 Estimating and Reporting of Mineral Resources

CRITERIA	STATUS
Database Integrity	• The following measures are in place to ensure database integrity: ○ Golden Grove uses an SQL database system. ○ Data is logged directly into Micromine Geobank™ (front-end software) using wireless transfer protocols on Dell Latitude 5424 Rugged™ portable computers. A limited number of primary tables have read/write privileges to the geologist and geotechnicians. User profiles restrict the data that any individual can access and alter. ○ Data validation in Microsoft Excel to check survey and collar coordinate records, data overlaps, extreme values (outliers), blank or misallocated data and below detection limit assay results – effectively a date stamped audit trail. ○ The database is fully backed up each night with hourly log backups during the day. Data backups from the previous seven days are stored on the database server. Data older than seven days is backed up onto tape and stored securely. ○ Assays are imported electronically from files (.sif) received from the laboratory. ○ Drillholes are checked and locked from users modifying data once assays are received. • The measures described above ensure transcription or data entry errors are minimised. • Data validation procedures include: ○ Data is validated on-entry using library of codes and key fields which ensure intervals cannot duplicate or overlap. ○ Collar co-ordinates and drilling direction (azimuth and dip) are validated via comparison of planned data to surveyed data. ○ Deviations of more than 1 degree over 30m of drillhole depth are flagged and evaluated for redrilling. All data attributed to a given drillhole undergoes final validation and sign-off procedure. Any errors found are rectified prior to releasing the data for Mineral Resource estimation. ○ Data validation in Microsoft Excel to check survey and collar coordinate records, data overlaps, extreme values (outliers), blank or misallocated data and below detection limit assay results – effectively a date stamped audit trail.
Site Visits	• The Competent Person is employed full-time at Golden Grove and is satisfied with the standard of the procedures instituted by the site. • Stuart Masters from CS-2 Pty Ltd, a third-party reviewer, has visited site on several occasions with the most recent in mid-2020. No material issues affecting the resource estimates were identified during those visits.
Geological interpretation	• Confidence in geological interpretation of the mineral deposits and associated lithologies is considered moderate to high. • Data used for the interpretation included geological mapping of development drives, assay results and geological logging of all DD holes. • Alternate structural and geological interpretations are routinely considered and tested with diamond drilling. • Geological interpretation is totally reviewed in every drill hole to get a consistent geological interpretation for the whole area. • Geological interpretations have been modelled as three-dimensional wireframes of mineralisation and other lithologies, which have been used to construct block models and to control grade estimation as hard boundaries. • Primary sulphide interpretation: ○ Zinc-rich mineralisation occurs as massive to semi-massive sulphide lenses. These lenses also contain moderate copper, lead, silver, and gold mineralisation. ○ Copper-rich mineralised lenses are composed of zones of chalcopyrite-rich stringers within quartz-rich domains. These domains can have moderate grades of gold and silver but are weakly mineralised with zinc and lead. ○ Zinc and copper lenses are each surrounded by low-grade mineralisation haloes. Low-grade domains have been constructed for some of the deposits. ○ Intrusive rocks and faults have been interpreted that cut across and displace mineralisation and stratigraphy. ○ These domains were derived from the geology of the area. Lithological codes obtained from the logging of drillholes aids in establishing continuity of geology. ○ Most barren intrusive wireframes have been constructed using Seequent's Leapfrog Geo implicit modelling software. Other barren intrusive triangulations have been constructed from interpreted polygons snapping to drillhole intersections on 10m spaced plan sections, though these sections are shortened or lengthened appropriately with clustering of data. Interpretations account for all available geological information. ○ Primary sulphide domains are estimated using Categorical Indicator Kriging (CIK). Lithological codes are taken from the drilling database and used to populate a matrix of indicators within the database. This provides the indicator data to produce and analyse variograms which supply the input for the CIK estimation.

CRITERIA	STATUS
	• Oxide gold, silver and zinc interpretation: ○ Mineralisation occurs as steep westerly dipping strata bound lenses that have been modelled separately based on the following general grades: ▪ Gold: 0.1g/t Au ▪ Silver: 10g/t Ag ▪ Zinc: 0.2% Zn ○ The basis for each of the above domain boundaries were selected by analysis of probability and histogram distribution plots, observing the distribution of sample data in 3D and consideration of geology. These domains maintain a consistent mineralisation shape after considering the geology and assay data. ○ Wireframes have been constructed from interpreted polygons on 20-metre spaced plan sections. Interpretations account for all available geological information. ○ Confidence in geological interpretation of Inferred mineralisation is at a lower level than Indicated mineralisation due to the limited sampling in these areas, hence implied but not verified geological and grade continuity occurs.
Dimensions	• The primary sulphide mineralisation at Gossan Hill and Scuddles comprises multiple steeply dipping zones. Each zone varies from 200m to 400m along strike, 200m to 700m down-dip and 3m to 40m in thickness. The current Mineral Resource is located from 200m to 2,150m below surface. • Gossan Valley mineralisation is hosted in Golden Grove Member 4 (GG4) of the Golden Grove Formation. The nature of mineralisation is considered to be strata bound. The style of mineralisation at Gossan Valley is similar in nature to that of Gossan Hill and comprises multiple steeply dipping zones. Each zone varies from 50m to 450m along strike, 40m to 400m down-dip and 3m to 10m in thickness. • Oxide Copper is reported above the weathering profile. It is about 300m long, 80m deep and 20m to 30m in thickness. • Partial Oxide Zinc mineralisation is approximately 450m long and was reported above the weathering profile. • Partial Oxide Gold is reported mostly above the weathering profile and just below the surface. It is 120m long, 30m deep and 10m to 20m in thickness.
Estimation and modelling techniques	**Primary Sulphide** • Mineral Resource estimation for the primary sulphide Mineral Resource has been undertaken in Vulcan™ (Maptek) mining software using either Categorical Indicator Kriging (CIK) where data density and geological confidence permits, or conventional interpretation and wireframing where data density is low. ○ For all deposits other than Gossan Valley, Grassi, Felix, Flying Hi, D-Zinc Extended and Europa, Categorical Indicator Kriging (CIK) has been used to estimate lithological domains in the block model. This uses the lithological logging data collected by Geologists to populate indicator fields in the drilling database. Variogram analysis is then performed on the indicators and a lithological domain model is produced. ○ The Gossan Valley, Grassi, Felix, Flying-High, D-Zinc Extended and Europa mineralised domains were modelled using the conventional wireframing approach. The cut-offs for the wireframes were 0.4% for copper and 2% for zinc. ○ Copper, Zinc, Magnetite and barren sediment domains were modelled using the CIK method as described above. ○ Cross-cutting intrusive dykes are barren and have been modelled as such, using 3D wireframes snapped to drilling data. ○ Data compositing for estimation was set to 1m, which matches the majority of drillhole sample lengths underground and provides good definition across interpreted domains. ○ Variogram analysis was reviewed and updated for all areas of the mine. This involved variography for both the Lithological Indicators and the sample grade data. Variogram analysis has been undertaken using Isatis Neo (Geovariances) software, Supervisor (Snowden) software, and Vulcan™ (Maptek) software. ○ Ordinary Kriging interpolation has been applied for the estimation of Cu, Zn, Au, Ag, Pb, Fe and density after lithology-domaining by CIK. ○ The estimation method is considered appropriate for the estimation of Mineral Resources at Golden Grove. ○ Interpolation was undertaken in up to five passes. ○ Discretisation was set to 4 x 4 x 4. • Block model results are comparable with previous Mineral Resource estimations after depletion, additions due to drilling and re-modelling of the site. • Assumptions about the recovery of by-products is accounted in the net-smelter return after royalty (NSRAR) calculation which includes the recovery of Cu, Zn, Au, Ag and Pb along with the standard payable terms. • Iron has been estimated as it is related to the recovery of payable elements. Sulphur is also estimated in the underground Mineral Resources. Underground waste material is used to back fill mined stopes or treated as potential acid forming (PAF) material when moved to the surface

CRITERIA	STATUS
	• For the majority of models, the block size ranges from 20 m (x) x 50 m (y) x 50 m (z) in the waste domains down to 2 m (x) x 10 m (y) x 10 m (z) (with 1 m (x) x 5 m (y) x 5 m (z) sub-cells) in well drilled areas where drilling has been undertaken on a 10 m x 10 m pattern with samples taken on 1 m intervals. The D-Zinc Extended block sizes are 0.75m (x) x 2.5 (y) x 2.5m (z) (with 0.25m (x) x 1.25m (y) x 1.25m (z) sub cells). • No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. • Non-sampled intervals in drillholes have been flagged with values of -99 in the primary database, which are then assigned detection limit values for grade interpolation in waste areas. This is undertaken to ensure that any sampled and mineralised grades in these domains are not over-represented in the estimate. • Extreme grade values were managed by upper grade capping based on statistical assessment evaluated for all variables and domains. Consideration was also given to the metal content above the top cap value. • Mining voids are 'stamped' onto the block model to ensure depleted material is excluded from the Mineral Resource report. As well, mined stope voids are translated 3m east and west to ensure material in the "skins" of stopes (not able to be mined) are also excluded from the Mineral Resource report. • The estimation validation process included the following steps: ○ Visual checking of block model estimated grades against the input drilling data. ○ Comparison of block model and sample statistics. ○ Drift plots comparing block model against input samples by easting, northing and RL. ○ Grade/Tonnes curves as well as comparison of the existing and updated models' tonnes, grade and metal content by elevation. **Oxide and Partial Oxide** • The current block modelling for the oxide Mineral Resource covers the Scuddles Oxide area, the Tryall area and the ABCD Zinc models and includes all the material above the weathering surface. • Block modelling for the copper oxide, oxide gold and partial oxide zinc Mineral Resources is undertaken in Maptek Vulcan software with the following key assumptions and parameters: ○ Ordinary Kriging interpolation has been applied for the estimation of Cu, Zn, Au, Ag and Pb in the ABCD model. Ordinary Kriging interpolation has been applied for the estimation of Cu, Ag and Au in the Scuddles Oxide model. Inverse distance estimation method was applied in the Tryall Copper oxide deposit. ○ Data compositing for estimation was set to match the majority of drillhole sample lengths and provides good definition across interpreted domains. ○ Variogram analysis was reviewed and updated for new interpretations and for existing domains materially affected by new drill data. • There have been no assumptions made regarding the recovery of by-products. • For the gold oxide material, copper has been identified as deleterious for Carbon in Pulp (CIP) gold extraction. Material with more than 0.2% Cu is separately stockpiled. • Iron has been estimated as it is related to the recovery of payable elements. • Sulphur was estimated within Au, Ag and Cu domains for the oxide material for environmental considerations. Sulphur within the Zn domain was estimated in the partial oxide material. No other deleterious or ancillary elements have been modelled. • No assumptions have been made about the correlation between variables. All variables are comparably informed and independently estimated. • Extreme grade values were managed by upper grade capping based on statistical assessment evaluated for all variables and domains. Consideration was also given to the metal content above the top cap value. • The block models and estimate has been validated in the following ways: ○ Visual checking of block model estimated grades against the input drilling data. ○ Comparison of block model statistics against sample statistics. ○ Swath plots comparing average block model estimated grades against input samples by easting, northing and RL.
Moisture	• All tonnages have been estimated on a dry basis.

CRITERIA	STATUS
Cut-off parameters	• Primary sulphide Mineral Resources were reported above a cut-off Net Smelter Return (NSR) dollar value. • Golden Grove Mineral Resources are reported based on specific cut-off values by mine area as the ore transport costs to surface vary within the mine. These are summarised in the table below.

Orebody	31-Dec-22 $A/t	31-Dec-21 $A/t
ABCD	132.82	127.92
ABCD Oxide	132.82	127.92
Amity	140.53	135.63
Cambewarra	136.01	131.10
Catalpa/Ethel	137.46	132.56
D-Zinc Extended	135.67	130.77
GG4	135.67	130.77
Hougoumont Main & Hangingwall	140.53	135.63
Hougoumont Extended	147.86	142.95
Oizon	147.24	142.34
Tryall	133.94	129.04
Tryall Cu-Au Oxide	133.94	129.04
Xantho	141.93	137.03
Xantho Extended & Europa	148.41	143.51
Scuddles - Zinc	137.12	132.21
Scuddles - Copper	137.12	132.21
Scuddles Oxide	133.94	129.04
Cervantes - Zinc	144.55	139.65
Cervantes - Copper	144.55	139.65
Gossan Valley	139.90	135.00
Grassi	139.90	135.00
Felix	139.90	135.00
Flying Hi	149.90	145.00

<table>
<tr><th>CRITERIA</th><th>STATUS</th></tr>
<tr><td></td><td>• Metal Price and exchange rate assumptions as shown in the table below.
<table>
<tr><th>Price/FX</th><th>Unit</th><th>31-Dec-22</th><th>31-Dec-21</th></tr>
<tr><td>Copper</td><td>US$/lb</td><td>4.00</td><td>3.60</td></tr>
<tr><td>Lead</td><td>US$/lb</td><td>1.15</td><td>1.10</td></tr>
<tr><td>Zinc</td><td>US$/lb</td><td>1.50</td><td>1.50</td></tr>
<tr><td>Gold</td><td>US$/oz</td><td>1,850</td><td>1,736</td></tr>
<tr><td>Silver</td><td>US$/oz</td><td>25</td><td>23</td></tr>
<tr><td>AUD:USD</td><td></td><td>0.73</td><td>0.75</td></tr>
</table>
• The reporting cut-off grades are in line with 29Metal’s policy on reporting of Mineral Resources which have reasonable prospects of eventual economic extraction.</td></tr>
<tr><td>Mining factors or assumptions</td><td>• Underground mining at Golden Grove comprises long-hole open stoping and ore is hauled or hoisted to the surface. The minimum mining width is 3m, which is based on the minimum spacing for a dice five production drill-hole pattern. This applies to the copper sulphide, zinc sulphide and partial oxide zinc.
• Any blocks within three metres of the Hangingwall or footwall of a mined void is deemed non-recoverable and is not reported.
• Surface mining is applied to the oxide copper mineralisation and involves the open pit mining method.
○ No mining factors and assumptions have been proposed for the oxide copper</td></tr>
<tr><td>Metallurgical factors or assumptions</td><td>• Metallurgical processing of ore at Golden Grove involves campaigns of exclusively copper ore types or zinc ore types, and comprises crushing, followed by grinding, sequential froth flotation and filtration before being transported to market as concentrates of copper, zinc and lead (including high-precious metals).
• The Golden Grove metallurgical model was updated to a triple sequential flotation processing system in 2021. The upgrade facilitated the ability to produce three separate concentrate products (Cu, Zn, Pb) from a single feed stream.
• Prior to 2021, three distinct campaigns existed: Cu, CuZn and PbZn, where the Cu:Pb ratio within Zn ore dictated the requirement for either a CuZn or PbZn campaign. The triple sequential flotation processing system treats all Zn ores without segregation. Campaign milling still exists at 29 Metals Golden Grove, however it is now processed as exclusively Cu or Zn respectively, ultimately increasing flotation and downstream capacity for the processing facility.
• Primary sulphide material:
○ Metallurgical factors are incorporated into block model values via the calculation of the NSR value.
○ Maximum recoveries of copper within the copper stream are 94%, whereas maximum recoveries of zinc within the zinc stream are 93.5%. Recovery of payable minerals is dependent on iron ratios, with lower iron mineralisation considered beneficial to both copper and zinc recoveries.
○ Precious metal recovery is a function of the Cu:Fe ratio within Zn ore. The precious metals are fast floating and commonly designated to the first stream. High Cu:Fe ratios typically favours Au reporting to the Cu stream, whereas low Cu:Fe ratios typically favours Au reporting to the Zn and Pb streams.
• Au and partial oxide gold material:
○ The gold and silver within the oxide material could theoretically be recovered at approximately 90% through a carbon in pulp (CIP) circuit. In this process, copper would be considered a deleterious element, with gold recoveries dependent on Au-Fe ratios. The current model contains ore grade assays for copper, no acid or cyanide soluble assays have been performed.
○ The partial oxide zinc and oxide copper material can cause issues as it contains a mixture of oxides and primary sulphides. This can be mitigated through a blending strategy with traditional sulphide.</td></tr>
<tr><td>Environmental factors or assumptions</td><td>• Material from underground and the open pit is sent to a designated stockpile based on material classification of either potentially acid forming (PAF) or non-acid forming (NAF) material. Waste material with less than 0.2% sulphur is classified NAF while material with 0.2% sulphur or more is classified PAF. PAF/NAF classification is based on recommendation from Coffey Environment after their test work on-site in 2012.</td></tr>
</table>

CRITERIA **STATUS**

Bulk Density

- All core samples are measured for bulk density in the on-site core processing facility. The bulk density method used is the Archimedes' principle (weight in air and weight in water). The core is air dried and generally has low permeability and so the results are considered suitable for Golden Grove.
- No wax coating or sealing of core is applied. Density values in the Mineral Resource models are estimated using Ordinary Kriging within the mineralised domain shapes.
- Density data for the oxidized areas of the mine (Gossan Hill Cu/Au) is considered sparse. For this reason, bulk density is not estimated for these areas, but a sub-domain mean value is assigned for each of the fresh/transitional/oxide ore/waste domains.

Classification

- Primary Sulphide Mineral Resources:
  - Mineral Resources have been classified primarily on data spacing with consideration for geological risk and uncertainty in some underlying parameters. Measured Mineral Resources was considered appropriate with a drillhole grid spacing of 20m. Indicated Mineral Resources was considered appropriate with a drillhole grid spacing of 40m and Inferred Mineral Resources was considered appropriate with a drillhole grid spacing of 60m. Details are in the table below.

Quantitative Mineral Resource Classification Criteria

Classification	Ellipse Orientation			Ellipse Axes			Samples Per Estimate		Min No. Holes
	Bearing (Z)	Plunge (Y)	Dip (X)	Major	Semi-Major	Minor	Minimum	Maximum	
Measured	0	0	90	20	20	10	10	24	5
Indicated	0	0	90	40	40	20	6	24	3
Inferred	0	0	90	60	60	20	4	24	2

  - A Kriging estimation run was used to record data density metrics including the number of samples and drill holes, and sample distance.
  - Wireframes were then constructed to form classification solid shapes around contiguous blocks of like classification. This method produces continuous volumes of classified mineral resources and avoids patchy classification. The material misallocation and smoothing are negligible (less than 1%).
  - The Resource includes the classifications: Measured, Indicated and Inferred with the remaining material set as unclassified
- Oxide Copper and Partial Oxide Zinc Mineral Resources:
  - Classification of the Mineral Resource was primarily based on confidence in the assayed grade and geological continuity.
  - Geological confidence is supported by nearby underground exposures including geological mapping and drillhole data, which in turn reinforces drillhole sample results and domain volumes. Confidence in the Kriged estimate is associated with drillhole coverage and analytical data integrity.
  - Measured Mineral Resources was considered appropriate with a drillhole grid spacing of 20m.
  - Indicated Mineral Resources was considered appropriate with a drillhole grid spacing of 40m.
  - Inferred Mineral Resource was considered appropriate with a drillhole grid spacing of 60m and within the mineralisation domain.
- The Competent Person is satisfied that the stated Mineral Resource classification reflects the geological domains interpreted and the estimation constraints of the deposits. The Resource classification applied is consistent with the understanding of the geological controls interpreted and the estimation constraints and reflects the Competent Person's view of the deposits.

Audits or reviews

- The Block modelling, estimation, validation, and Mineral Resource tabulations were peer reviewed by 29Metals geologist.
- Peer reviewers noted that the 2022 Golden Grove Mineral Resources are robust and classified appropriately.
- The estimates are supported by:
  - High quality data
  - A good understanding of the local geology gained over the operating history
  - Modelling and estimation methods and parameters that yield results concordant with the Reconciliation data
- All stages of the Resource estimation have undergone an internal peer review process, which has documented all phases of the process.
- No material issues with the Mineral Resource estimates were identified.

CRITERIA

STATUS

Discussion of relative accuracy/ confidence

- The Mineral Resource data collection, data analysis and estimation techniques used for the Golden Grove deposits are consistent with the currently mining areas both underground and open cut and there has not been any known major discrepancies between the mined grades and the milled grades.
- Confidence limits of grade and tonnage have not been calculated as reconciliation data confirm the models are performing is line with expectations as implied by their classification.
- These estimates relate to the lens (deposit) scale i.e. in the order of millions of tonnes.
- Reconciliation of block model against mill production for copper and zinc stoped volumes, tonnes and grade for the period 1st January 2022 to 31st December 2022 is shown in the table below. Reconciled mined copper overperformed by 7.9% for the year, with an average mined grade of 2.3% copper ore versus a modelled grade of 2.1% copper ore for the year. Whilst mined zinc grades underperformed by 9.5%, with an average mined grade of 6.7% zinc ore versus a modelled grade of 7.4% zinc ore.

  Reconciliation of zinc and copper: 1st of January 2022 to 31st of December 2022

  Reconciliation of the mine claimed grade against to milled actual grade occurs monthly and involves a comparison of all measured data available relating to the tonnes and grade at each stage of the mining process.

  The reconciled mined grades are then evaluated against the block model reported grades for the CMS (cavity monitoring system) stope voids, to evaluate block model performance without the influence of mine call factors.

Source	Tonnes (T)	Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)	Pb (%)
Reconciled Mined Grade Cu Ore	554,064	2.3	0.4	0.6	14.9	0.0
Reconciled Mined Grade Zn Ore	967,416	0.7	6.7	0.9	51.5	0.7
Total	**1,521,480**	**1.3**	**4.4**	**0.8**	**38.2**	**0.4**

Source	Tonnes (T)	Cu (%)	Zn (%)	Au (g/t)	Ag (g/t)	Pb (%)
Modelled Grade Cu Ore	554,064	2.1	0.3	0.4	9.1	0.0
Modelled Grade Zn Ore	967,416	0.6	7.4	1.0	50.4	0.7
Total	**1,521,480**	**1.2**	**4.8**	**0.8**	**35.4**	**0.4**

- These differences are commensurate with the accuracy implied by the resource classification.
- The Competent Person is satisfied with the accuracy and the confidence of the Mineral Resource estimates.

Appendix 3

Golden Grove Ore Reserves estimates – JORC Code Table 1 Disclosures

Section 4 Estimation and Reporting of Ore Reserves

CRITERIA	COMMENTARY
Mineral Resources estimates for conversion to Ore Reserves	The Mineral Resource is based on geological block model provided by the Golden Grove Geology department. These models were depleted as of 31 December 2022. The Vulcan block models were converted to Datamine block models to be used for interrogation. This Ore Reserve is reported for the Golden Grove operation, and only includes material with a suitable classification and appropriate modifying factors. The Mineral resources are stated inclusive of this Ore Reserve
Site visits	The Competent Person is a full-time employee of Golden Grove Operations Pty Ltd (a wholly owned subsidiary of 29Metals Limited) on a FIFO roster rotation.
Study status	The Ore Reserves have been designed based on the current operating practices and procedures at the mine. All Ore Reserves were estimated by construction of three-dimensional mine designs using DESWIK software and reported against the updated Mineral Resource block model. After modifying factors are applied, all physicals (tonnes, grade, metal, development, and stoping requirements etc.) were compared back to the area cut-off value, where each stope was economically evaluated, and the total Ore Reserve was evaluated to assess its economic viability Previous mine performance has demonstrated that the current mining methods are technically achievable and economically viable. The modifying factors are based on historical data utilising a similar mining method.
Cut-off parameters	An NSR cut-off was calculated for each orebody, varied by haulage costs which were calculated based on average haul distance. A minimum mining width of 3m was used to identify the mineable envelope that formed the basis of the mine design. A marginal cut-off grade of NSR A$57.30/tonne for development material was used to classify material contained within the mine design as Ore or Waste. The NSR cut-off grades were derived from recent actual costs and budget cost models along with the following metal price and exchange rate assumptions: Copper Price US$ 3.60/lb. Zinc Price US$ 1.20/lb. Silver Price US$ 22/oz. Gold Price US$ 1,600/oz. Lead Price US$ 1.00/lb. AUD/USD 0.73

CRITERIA	COMMENTARY
Mining factors or assumptions	A detailed mine design was carried out in Deswik CAD and based on known information about the orebody's physical characteristics and the geotechnical environment. The designs are consistent with what has been in practice on site. Modifying factors are applied to Measured and Indicated resources such that Measured Resources convert to Proven or Probable Reserves and Indicated Resources convert to Probable reserves. The selected mining methods are determined on an orebody-by-orebody basis. The mining method employed is longitudinal long hole open stoping, which is appropriate for the size and scale of the mineralisation and ground conditions. It is a pillar-less design (other than areas of sub-economic grade), and stopes will be filled with unconsolidated rock fill, Cemented Hydraulic Fill (CHF) or Paste fill. In certain areas of Xantho Extended, transverse long hole open stoping was selected where the width of the deposit and ground conditions were not appropriate for longitudinal long hole open stoping. Paste fill will be used in new areas of the mine – Xantho Extended, Oizon and Hougoumont Hangingwall. Gossan Valley will be predominantly longitudinal long hole open stoping with pillars left in subeconomic grade, with CHF being used in thicker sections of the orebody.

Based on geotechnical parameters including the rock mass rating, tunnelling quality index, unconfined compressive strength, the hydraulic radius (HR) was determined. The HR is used to determine the stope design dimensions and extraction sequence.

Major assumptions for stope design are as follows:

Sub-Level Spacing: Nominally 30 metres and double lifts of 60 metres when allowed. Pre-developed levels dictate level intervals in those areas. Parts of Xantho Extended have level interval spacings of 45m and no double-lifts.

Mining Dilution: New mining areas (Hougoumont Extended, Oizon, Xantho Extended, Gossan Valley) had dilution skins applied to design shapes, with the associated tonnes and grade reported from the resource model. Remnant stope shapes had dilution applied manually, generally 10% unless otherwise specified by the geotechnical department. Development dilution was per the table below:

Item	Value	Comment
Mine Dilution - Dev Lat Ore	1	Dilution for ore development where in-situ NSR >= CoG NSR - Dev
Mine Dilution - Dev Lat Waste	1.14	Dilution for waste development where in-situ NSR < CoG NSR - Dev (8.5% Strip + 5.5% OB)
Mine Dilution - Dev Vert	1	Dilution for all vertical development
Mine Dilution – CHF Dev	1	Dilution for waste development through existing CHF

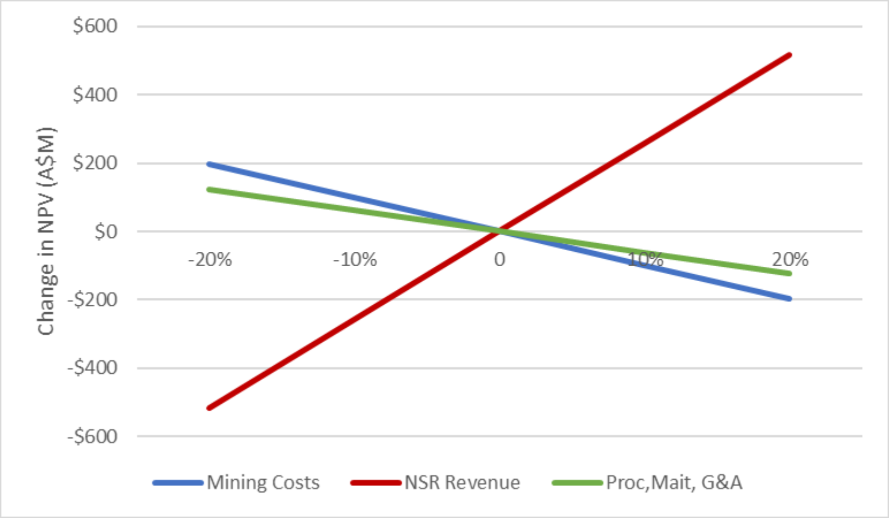
Mining recovery factors for discrete orebodies as per the following table:

Mining Recovery	Orebody
88%	GET
90%	GDZ., GOZ, GTR
93%	GAC
94%	GAM, GH6, GHW
95%	GAB, GCT, GCW, GQC, GXE, GXT, GXU, SCU, VGV, VGR
97%	GCC

Minimum mining width: 3 metres

	This Ore Reserve Estimate is for the underground ore derived from Measured and Indicated Mineral Resources, inclusive of dilution. The dilution was estimated from the Resource Models using either designed skins or a manual dilution factor. As such, some Inferred and Unclassified Resources were included into the Estimate. The total Inferred and Unclassified material included in the Ore Reserve Estimate is approximately 66.9kt (<0.5% of the total Ore Reserve).
	Sufficient infrastructure is already in place to allow for the mine to operate. Additional underground infrastructure includes, but is not limited to, declines, raises, dewatering, cooling, and ventilation infrastructure.
Metallurgical factors orassumptions	Processing of ores is by conventional rougher-cleaner flotation of ore ground to p80 of 106um. Coarse gold is recovered via gravity concentration prior to flotation. Mineralisation is relatively coarse and recoverable without fine grinding.
	Flowsheet at Golden Grove is relatively simple and common throughout the world for coarse grained VMS deposits. The process has been employed for 30 years.
	A four product (3 x concentrates 1 x tail) sequential flowsheet was implemented in April 2021. Commissioning of the sequential flowsheet is complete and capable of performing in line with design performance criteria. This is also able to revert to current flowsheet configuration as required. Golden Grove does not have an active geo-metallurgical program. Ores are characterized based on elemental assays and ratios to infer mineralogy and determine expected metal recoveries and grades. These are used as benchmarks with any future ore test work programs for validation as to whether ore performs differently to historical feed.
	No assumptions or allowances have been made for deleterious elements. Typical deleterious elements (and minerals) for Golden Grove ores are Fluorine and Talc however metallurgical testing has shown that these will be well below concentrate specification limits. Silica levels are managed via froth washing in the zinc flotation circuit.
	Given the mature operating and processing nature of Golden Grove, no bulk sampling or pilot scale test work was completed.
	At Golden Grove there are no minerals that are defined by a specification, hence no need for ore reserves estimation based on mineralogy.
Environmental	Golden Grove is a mature operating mine site and has conducted all environmental studies and have the necessary environmental permits and management plans in place to continue mining. The Gossan Hill and Scuddles underground mines operate under license L8593/2011/2 issued by the Western Australian Department of Water and Environmental Regulation (DWER) as required by the Environmental Protection Act 1986. This licence was issued 11 September 2014 and expires on 15 September 2024. The licence was most recently updated on updated on 5 August 2021 for TSF1 Lift 5 and on 8 November 2021 for the construction of the paste plant facility and reclaimed tailings storage pad. Golden Grove has a working Closure Plan that is reviewed annually. An updated Life of Asset review will be available in January 2023.
Infrastructure	The site is already established, having been continually operated for over 25 years. As such, all necessary infrastructure such as accommodation, communications, tailings storage, access, water supply offices and workshops are already in place.
Costs	The capital costs for the project were derived from recent actual costs, quotes, budget estimates, and current underground contract mining rates. The operating costs for the Reserve were derived from a combination of first principles build up, using the same cost base as the 2021 cost base adjusting for abnormalities and incorporating an overhead adjustment for both 29M and contractor staffing based on known increases during the 2022 period. The presence and impact of any deleterious elements are well understood and incorporated into actual operating costs for the operation. The metal prices used were: Copper Price US$ 3.60/lb. Zinc Price US$ 1.20/lb. Silver Price US$ 22/oz. Gold Price US$ 1,600/oz. Lead Price US$ 1.20/lb. The exchange rate used was A$/US$ 0.73. Transportation charges were based on agreements with transport contractors. Toll treatment charges were based on negotiations with the relevant companies. Allowances for royalties has been accounted for in the NSR calculation as well as site operating budgets and financial models

Revenue factors	The cut-off grade calculation was completed as a Net Smelter Return (NSR), and as such, considered set commodity prices, processing recoveries, transportation charges, treatment and refining charges, penalties, smelter payables and royalties Metal prices and currency exchange rates provided by 29Metals Limited
Market assessment	Golden Grove has been in continuous operation for 30 years. The mine produces three concentrates comprising zinc, copper and HPM. The concentrates produced at Golden Grove are sold either direct to smelters or to trading companies. **Zinc concentrate** is sold under long-term contract. The level of deleterious element in the product is low and thus attractive from a marketing and demand perspective. **Low precious metal copper concentrate** this is a relatively low-grade copper concentrate with gold and silver. The concentrate does not have any deleterious elements at levels that would incur a penalty. **High precious metal concentrate** This is sold on shipment-by-shipment, based on the concentrate specifications and to maximise the value of the contained metals.
	Pricing is based on the value of contained metals and by-product credits. The prices for the metals contained are set based predominantly on LME pricing, which is a mature, well established and publicly traded exchange. Golden Grove produces concentrates that are reasonably clean with limited penalties applied which assists in the marketing and pricing achieved, with the majority of these concentrates sold to traders who then on-sell to various custom smelters, mainly in China, South Korea and Malaysia. Golden Grove relies upon independent expert publications and other sources in forming a view about future demand and supply and the likely effects of these factors on metal prices and treatment charges. The bulk of Zinc and Copper concentrates are sold under contract expiring in 2025. In addition, the long-term offtake provides the buyer with a right of first offer for a portion of HPM production, allowing Golden Grove to market each shipment on an individual basis. 29Metals reviews metal price and exchange rate assumptions for Mineral Resources and Ore Reserves on an annual basis. The review considers; prior year assumptions for Mineral Resources and Ore Reserves; the outlook for the macro-economic environment and for metals prices, informed by broker consensus long term prices or other forecasts by metals research agencies; historical prices, converted into 2022 real term dollars; and metal prices adopted by 29Metals core peers. For 2022, the metal prices used for Mineral Resources and Ore Reserves estimates were increased by between 5 and 10%, partially reflecting inflation adjustments converting from 2021 to 2022 real terms dollars.
Economic	The Ore Reserves underpin site operating budgets and operating schedules which undergo revisions on a monthly basis. Site operating and capital costs are well understood. Pre-tax NPV cashflow analysis indicated that the Ore Reserves are economic at the assumed revenue and cost inputs using an 8% discount rate. Sensitivities to the major costs (mining & processing) and to NSR revenue were tested across a range of ±20%, as shown:

	
Social	The site is already established, having been continually operated for many years. As such, all social licences to operate are already in place.
Other	There are no other material issues that impact the project and/or the estimation and classification of the Ore Reserves. Any naturally occurring risks to the site are considered unlikely. Marketing contracts with smelters are already in place All government approvals are currently in place
Classification	Ore Reserves are based on geological and mining confidence and categorised as either Proved or Probable. Modifying factors are applied to Measured and Indicated Resources such that Measured Resources convert to Proven or Probable Reserves and Indicated Resources convert to Probable reserves This result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources is less than 12% of the total Probable Ore Reserve.
Audits or reviews	The project parameters, Mineral Resources and outcomes have been prepared and reviewed by Golden Grove.
Discussion of relative accuracy/confidence	The modifying factors applied in this study are those that have been in use at Golden Grove for many years. Ongoing reconciliation has demonstrated that they are appropriate and are in line with the relative accuracy expected at a pre-feasibility study level or better. The approach applied has been deemed appropriate by the Competent Person. Confidence in the mine design and schedule are high as mining rates and modifying factors are based on actual site performance. Mine design is consistent with what has been effective previously

Appendix 4

Capricorn Copper Mineral Resources estimates – JORC Code Table 1 Disclosures

Note: *Abbreviations specific to Sections 1-4 of JORC Code Table 1 disclosures:*

ESS	*Esperanza South resource area*
GST	*Greenstone resource area*
PTO	*Pluto resource area*
MAM	*Mammoth Deeps resource area*
ESP	*Esperanza sub-pit resource area*
CC	*Capricorn Copper / Capricorn Copper Pty Ltd*
RC	*Reverse Circulation Drill Hole*
DD	*Diamond Core Drill hole*

Section 1 Sampling Techniques and Data

CRITERIA	COMMENTARY
Sampling techniques	**Pre-2016:** The pre-2016 DD core was of variable diameter (PQ, HQ and NQ for surface holes and NQ for underground holes). The preparation and analysis were undertaken at accredited commercial laboratories and from 2007 at Aditya Birla on-site laboratory. The entire sample was dried and crushed to 2 mm and then split and a portion pulverised to 80% passing 100 µm. The analysis was by routine aqua regia digest with ICPES determination and over range values re-analysed by four-acid digest with AAS finish. Gold was assayed by fire assay with either AAS or gravimetric determination. No information has been provided concerning the RC drill hole analysis. **Post-2016:** The post-2016 DD core was of variable diameter (PQ, HQ and NQ2 for surface holes and NQ2 for underground holes). Sample length is preferentially set to 1m and ranges from 0.3m to 1.5m of half and full core. Sample intervals do not cross geological boundaries; this ensures samples are representative of the lithological unit without mixing of grade at lithological boundaries. For core that was half core sampled, the sample is taken consistently from the right-hand side (RHS) half (looking down-hole) and placed into a calico bag marked with a unique sample ID. Areas of core loss were typically omitted where possible, but in runs of core <0.5m in length with multiple core loss either side, some core loss had to be included in the sample length. These were then noted in the cut sheet and sample register. Core samples are crushed and pulverised to 85% passing 75µm. Measures taken to ensure sample representativity include the collection, and analysis of field duplicates.

CRITERIA	COMMENTARY
Drilling techniques	**Pre 2016:** The deposit has historically been drilled and sampled by previous operator this data has been compiled and validated **Post 2016:** Diamond and RC drilling. DD diameter drilled includes PQ, HQ and NQ2 All holes are surveyed at 15 m, at 30 m and every 30 m thereafter, and at the end of the hole using a REFLEX™ EZ-TRAC single/multishot survey tool or from 2021 by a REFLEX™ EZ-GYRO gyroscopic survey tool. The majority of drill holes were fully grouted upon completion due to mine requirements.

Deposit	Hole Type	Pre-2016		2016-2022	
		Count	Metres	Count	Metres
ESS	RC	10	1,150	3	302
ESS	DD	109	27,466	126	53,319
Esperanza South	**Total**	**119**	**28,616**	**129**	**53,621**
Greenstone	**Total**	**48**	**17,151**	**121**	**21,198**
PTO	RC	1	42	0	0
PTO	DD	31	15,229	21	12,492
Pluto	**Total**	**32**	**15,271**	**21**	**12,492**
MAM	Not Recorded	10	3,407	0	0
MAM	Percussion / RC	63	2,339	0	0
MAM	DD	1,502	251,587	46	17,991
Mammoth	**Total**	**1,575**	**257,333**	**46**	**17,991**
ESP	Not Recorded	44	1,676	0	0
ESP	Percussion / RC	6	235	0	0
ESP	DD	206	38,524	5	2,977
Esperanza	**Total**	**256**	**40,435**	**5**	**2,977**
Total		**2,030**	**358,806**	**322**	**108,279**

CRITERIA	COMMENTARY
Drill sample recovery	**Pre-2016:** Reported historical core recovery averaged 94% in the Aditya Birla 2013 resource estimation. For the historical drilling there is no supporting documentation detailing drilling measures taken to maximise sample recovery. **Post-2016:** Recoveries of DD core are recorded as percentages calculated from measured core versus drilled metres. The final recovery of a particular run is then documented on a Geotechnical log sheet along with a "From and To" of any core loss zones. From 2021 Core loss is recorded in the lithology table as NR At ESS, CC drill core has averaged 97.7% recovery; an average recovery of 96.7% at Greenstone; a 93.7% average recovery at Pluto; a 98.9% average recovery at Mammoth; and an average of 97.1% recovery at Esperanza. Recoveries are slightly lower in the Pluto drilling compared to other deposits for two primary reasons – almost all holes collared within the Esperanza Waste Dump material and as such recoveries were lower in the upper PQ3 part of the hole as it drilled through the loose waste fill, which in some places exceeded 70m in length; and the second reason being the highly oxidised and leached nature of orebody resulting in a softer and looser rock type to drill. Grade is not deemed to have a significant effect on recoveries in MAM, GST or ESP. It can be suggested that the mineralised zones are, at times, more prone to lower recoveries in the ore zones for ESS and PTO due to localised oxidation and leaching. Drilling process was controlled by the drill crew and geological supervision provides a means for maximising sample recovery and ensures suitable core presentation. Depth is checked against depth provided on core blocks.
Logging	The entire length of drill core and RC chips have been logged for lithology, mineralisation, veining, alteration, weathering and structure as is appropriate for this style of deposit. The RC drill holes were also logged from below the casing to the end of hole. **Pre-2016:** logging is both qualitative and quantitative. Lithology, mineralisation type, sulphide content, RQD, core recovery and structure α angles to core axis is recorded. For most DD holes, core has been photographed wet and dry. **Post-2016:** During late 2015 to end 2016, CC undertook a selective re-logging program of the historical drill core to validate the older logging and developed a structural domaining log which was utilised in the initial revision of the geological models and Mineral Resource estimates. Total holes re-logged are: -MAM – 253 holes for 22,979m -ESS – 74 holes for 11,640.2 m -GST – 11 holes for 2,075.5 m -PTO – 9 holes for 1,149.7 m Since CC's drilling commenced in 2016, full qualitative and quantitative geological and geotechnical logging has been undertaken. Geological logging includes detailed lithology, alteration, mineralisation and weathering type, intensity and style mapping, total sulphide content, vein intensity and composition, and structural information including type, width and α and β angles when orientations allow. Geotechnical logging is also undertaken on the majority of core and includes core recovery, including documented core loss areas and RQD, as well as parameters such as UCS, LUP, fracture count, and joint set data. Specific gravity and bulk density measurements are also taken prior to sampling and are documented as part of the logging process. The final stage in the logging procedure is to photograph all drill core in dry and wet modes as standard. The detail and coverage of this logging has provided CC with an appreciable understanding of each orebody to a level which is able to support geological modelling and mineral resource estimation and therefore subsequent mining and metallurgical studies. Further metallurgical test work has been completed on ore types across all of the deposits.
Sub-sampling techniques and sample preparation	**Pre-2016:** Core was sawn by automated core saw for analysis. There is no record of whether the core was consistently sampled on one side or how RC samples and sub- samples were collected. The percussion and RC drill hole data has been used for the resource estimate, however these holes are a relatively small part of the inventory and the areas where they have been drilled are predominantly mined out currently. **Post-2016:** All DD core is either full core or half core sampled, in rare occasions quarter core sampling has occurred. Core is cut onsite using an automatic core saw with samples always taken from the same side. Current sample length ranges between 0.3 and 1.5m adjusted to geological boundaries. No CC RC drill holes were sampled and do not form part of the resource estimates. The sample preparation DD core adheres to industry best practice. A commercial laboratory is used which involves: ○ Weighing ○ Oven dried between 90 and 105°C until an acceptable moisture content of <0.5% is achieved ○ The samples are crushed using a terminator crusher so that 70% passes 2mm and then rotary split to form a nominal 1kg sub-sample and coarse reject

CRITERIA	COMMENTARY
	○ The sub-sample is then pulverised using a ring mill so that 85% passes 75µm.Samples > 3kg crushed to 2mm and split using a rotary splitter ○ A representative 20 – 60g pulp is then shipped to the analysis laboratory in Brisbane. The unused pulps (upon completion of the analysis) are returned to the CC mine site and stored at the core shed facility. Before 2021, CC used coarse crush split duplicates which were collected at the rotary split stage at the laboratory and as such on the empty duplicate bags are added into the original sample bags here. A list of duplicates is provided to the laboratory which is then used when collecting the coarse splits. In 2021, CC has replaced coarse reject duplicates with field duplicates; the complementary half core of an original sample is sampled and placed in a sample bag with a unique sample ID. In case of full core sampled drill holes, the interval where duplicates are taken, both the original and duplicated samples are half core.
Quality of assay data and laboratory tests	**Pre-2016**: Assay was by aqua regia digest and ICP-ES analysis with over-range values determined by four-acid digest and atomic absorption analysis. Down hole EM was occasionally used as a semi-quantitative method to detect sulphide presence with only minor success. A review of the Aditya Birla QAQC by CC concluded that adequate procedures were emplaced and performed to industry standard. Two external laboratories were used since 1997 (Analabs, Townsville, 1998-2005 and SGS, Townsville, 1998-2012). The on-site laboratory at the Mine was used for the preparation of coarse and pulp blank reference material only. Aditya Birla report using random use of standard, blank and duplicate samples. Site specific, matrix matched standard material prepared and certified by Ore Research & Exploration Services Pty Ltd was used. Blank material used was uncertified, sourced locally and prepped in the on-site laboratory. Duplicates are included in the Aditya Birla database but have no supporting documentation on the procedure for sampling. Aditya Birla regularly used ALS in Townsville as an umpire laboratory. The laboratories performed well with no significant bias identified. Pre-2016 drill hole assay data has been compared to more recent data for the same domains in the same deposits. CC concluded that QQ plots show similar distributions which supports combining the old and new data sets. SRK notes some potential conditional bias between the data sets which may be due to sample volumes or spatial occurrence of the two data sets. The two data sets are similar enough that they can be combined into one data set for the purposes of the resource estimate. **Post 2016:** Upon arrival at the analysis laboratory, a 0.5g sample charge undergoes a four-acid near-total digest followed by ICP-AES determination for twelve elements – Cu, As, Ag, Bi, Co, Fe, Mg, Mo, Ni, S, Pb and Zn. Overrange analysis is undertaken on primarily on Cu, As, Ag, Co and S, which exceed initial upper limits (including 1% for Cu, Co and As, 10% for S, and 100g/t for Ag) by using a further four-acid digest and ICP-AES analysis. The assay results are finalised by the laboratory upon completion of the analyses and review of the internal QAQC processes and are delivered to CC in digital spreadsheet and PDF formats. Any abnormalities, such as possible contamination, are flagged by the laboratory prior to delivery of the results and assays are re-run on areas identified to be affected. certified reference material (CRMs), with a range of values are inserted at a rate of 1:30 into every DD hole to assess laboratory accuracy, precision and possible contamination. Blanks is inserted at a rate of 1:30 and field duplicate samples assigned with unique sample numbers and placed into the sample stream at a rate of 1:30. QAQC data returned are checked against pass/fail limits. QAQC data is reported annually and demonstrates sufficient levels of accuracy and precision. The laboratory performs internal QC including standards, blanks, repeats and checks.
Verification of sampling and assaying	Data documentation has been undertaken in the following stages: **Pre-2016:** Aditya Birla and earlier drill hole and assay data was stored in a SQL server database (Datashed) which was validated by a database manager. Hard copies of drill logging data remains for some drill holes. **Post 2016:** Significant intersections are reviewed by site geologists. No specific twinned holes have been drilled as a part of this program. However nearby drill holes show compatible geology and results. Assay data is retained in (CSV) files and stored once loaded into the database. An 80*100m minimum spacing of drill core is stored for posterity at the onsite core farm. In 2022 the data was migrated to a Micromine Geobank™ database. Validation of data was performed during this migration. No adjustments have been made to the received assay data, except for assays below the lower detection limit (for Ag, As, Co, Cu, Fe and S), and assays above the upper detection limit (for S)

CRITERIA	COMMENTARY
Location of data points	**Pre-2016**: Drill holes were either surveyed in or converted to the local grid around the time of drilling. Where older drill collars have been able to be located by CC, they have been resurveyed using DGPS, compared and updated to ensure that the most recent data is that which is used, as positioning accuracies have improved over time. Furthermore, electronic and hard copy data has been reviewed by CC to ensure that the most accurate pickup data has been made available for other historic holes. It is believed by CC that the existing collar positions of historical holes is as accurate in the current database with the data that is available. Downhole surveys recorded in the database have been compared to known hard copy data to ensure the reliability of the data. **Post 2016:** CC drill collar positions were initially placed by handheld GPS if on surface, or by underground surveying for subsurface holes. Surface drill rigs were aligned at the collar prior to drilling using a line of sight Suunto compass and clinometer by the site Geologist. From 2022 holes were aligned using a gyroscopic camera. Underground holes were aligned using a string line connecting foresight and backsight marker placed by the UG Surveyor for azimuth and a clinometer for dip. From 2021 holes were aligned using a gyroscopic camera. Surveys measuring hole azimuth and dip were taken at 15m, 30m, and 30m thereafter through to end of hole. A final survey was taken at end of hole. The surveys were taken using either a REFLEX™ EZ-TRAC single/multishot or REFLEX™ gyroscopic survey tool. Upon completion of surface drill holes, the holes were picked up by DGPS. In rare occasions where multiple holes were drilled at the same location, the hole collar may not have been located upon completion and as such the original collar coordinate is used. This is the case for twelve surface holes and twenty-one underground holes. The surface collar coordinates have also been validated against mine site Lidar data which provides accurate topographic data to an accuracy of roughly +/- 0.2m. The DGPS coordinates are recorded in both Mammoth Mine Grid and MGA 94 (Zone 54). The Mammoth Mine grid is a local grid derived from the AGD84 datum and roughly equates to – MAM_E = (AGD84_E – 300,000); MAM_N = (AGD84 – 7,800,000); and MAM_RL = (AGD84 + 5000). Underground coordinates are recorded solely in Mammoth Mine grid. Underground drillhole collars are picked up by 29Metals surveyors using a Leica TS-16 (total station) with an expected accuracy of 10mm. All new surface holes on the mining lease since 2021 have been surveyed using a Leica RTK GS18 with CS20 controller with an expected accuracy of 40mm.
Data spacing and distribution	Due to the steep terrain and existing infrastructure at surface in many locations, drill hole orientation and spacing is dependent on accessibility of drilling sites. Drill hole spacing varies from 10 m to 35 m centres in more well-defined parts of the orebodies, increasing out and at depth to between 30 m to 90 m spacing. Both historical and CC drilling has occasionally used drill fans with multiple holes collared from a single drill pad with no regular gridding due to collar site limitations. Infill drilling undertaken between 2018 – 2022 has aimed to reduce drill spacing of the ESS, GST and MAM ore bodies to between 20 – 25m for ESS, 10 – 20m for GST, and 20 – 25m for MAM. For the majority of drill holes, the drilling has intersected at least some grade in the targeted locations. This is supportive of a high degree of confidence in the geological continuity and understanding of the orebody. Sampling has been undertaken to reflect the variability in the geological conditions and to meet the precision required for resource models and mine planning. The data spacing, particularly when coupled with grade control data, is sufficient to establish geological domains and is appropriate for the style of mineralisation. For mineral resource estimation, samples were composited to 2 m for all deposits except Pluto where samples were composited to 5 m due to the lower drilling intercept angles
Orientation of data in relation to geological structure	Drilling has been conducted at the most optimal angle for the interpreted orebody orientation as possible with the collar locations available. At ESS, most drill holes intersect the orebody optimal to dip and strike of the orebody, with surface holes drilled from west to east to intersect the westerly dipping orebody as orthogonal possible. A few exceptions are those drilled at steep dips (>80°) from surface prior to 2019. The 2020 to 2022 underground drill holes drill from the eastern (footwall) side back to the west (hangingwall) with the natural dip (roughly 75°W), but all holes are designed to dip much shallower than the orebody and so intersect it at an angle which is appropriate for reliable modelling. At GST, surface holes were highly limited by the availability of drill sites and as such most drill from the northwest to the southeast, which intersected the orebody at a suitable angle. Underground drilling since 2018 has allowed optimal targeting from the sub-surface, which is more suited to the deeper parts of the orebody which appears to have a plunging nature as opposed to the sub-vertical upper section as defined by the surface holes. Drilling at Mammoth has been undertaken at a large variety of orientations and is based on the specific orientation of the local lenses and underground drill sites and are deemed appropriate for the areas in which they were targeting. At Pluto and Esperanza, the drill holes intersect many of the steeply dipping mineralised domains at relatively low angles (less than 30°) which can introduce larger errors in the location of the domain boundaries and samples than for holes that intersect domains at higher angles. Down-hole surveys have been done as carefully as possible to mitigate this risk. Future drilling at Pluto is recommended from underground.

CRITERIA	COMMENTARY
Sample security	**Pre-2016:** Samples were bagged and sent to the laboratory in Townsville or Brisbane via Mt Isa. **Post 2016:** The chain of custody adopted by the company is secured and maintained from site directly to the sample preparation laboratory in Mt Isa. Samples are collected into numbered calico and double bagged at the core shed before dispatch by road either by freight truck or by the site Field Technician. The samples are receipted in upon arrival at the laboratory to ensure all samples are accounted for. Samples are only identifiable by a unique sample ID and QAQC sample details, such as CRM types, are only known by CC. Prepared samples are transported from the preparation laboratory in numbered paper packets packed into numbered boxes which are scanned, logged and tracked in the laboratory system. Transport from the sample preparation laboratory in Mt Isa to the Assay laboratory (Brisbane or Townsville) is by road and is organised by the laboratory. Coarse reject samples are stored at the sample preparation laboratory until final assays have been received.
Audits or reviews	Internal auditing procedures and reviews were regularly undertaken on standard operating procedures and laboratory processes. Data and technical reviews are triggered when QAQC protocols identified imprecise or inaccurate sample assay results. In 2016, new sourcing of blank reference material was implemented due to minor variability identified in historic blank material. New blank reference material has performed well. External reviews/ audits have been conducted by SRK Consulting. Mr Mark Noppé has reviewed logging, QAQC and data management procedures. He also reviewed the ALS Laboratory in Mt Isa in 2017 and again in October 2018 to review sample preparation techniques. The Laboratory procedures for receipt of samples and sample preparation are as per industry best practice. The ALS Laboratory QAQC results and performance such as pulp duplicates, round robin performance and performance against standards are also supplied to CC. Mr Stuart Munroe and Mr Benn Jupp from SRK Consulting have reviewed the sample receipt and assay procedure for fire assay and four-acid digest with ICP-AES determination at the ALS Laboratory in Townsville in January 2019

Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Table A. List of active Mining Leases at the CC Mine

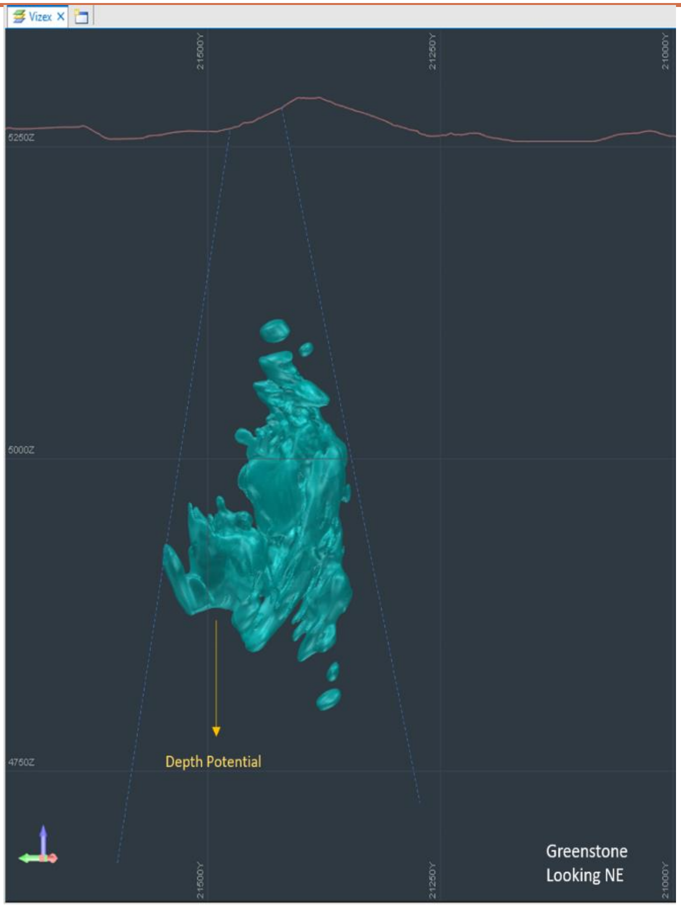
Permit	Status	Grant	Expiry	Authorised Holder	Native Title Status	Minerals / Use	Area (Ha)	Resource
ML 5407	Granted	2/11/1972	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	4.1	
ML 5412	Granted	7/03/1974	31/03/2028	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	2.02	
ML 5413	Granted	7/03/1974	31/03/2027	Capricorn Copper Pty Ltd	Pre 1996 Grant	Cu, U	4.05	MAM
ML 5418	Granted	7/03/1974	31/03/2027	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	8.09	MAM
ML 5419	Granted	7/03/1974	31/03/2027	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	36.03	MAM
ML 5420	Granted	7/03/1974	31/03/2027	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	6.22	MAM
ML 5429	Granted	7/03/1974	31/03/2032	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	5.67	
ML 5430	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	9.17	ESP, PTO
ML 5441	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	32.42	ESS
ML 5442	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	32.39	ESS
ML 5443	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	14.4	ESP
ML 5444	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	20.64	GST
ML 5451	Granted	7/03/1974	31/03/2030	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	15.68	MAM
ML 5454	Granted	7/03/1974	31/03/2028	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	3.97	
ML 5457	Granted	7/03/1974	31/03/2028	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	11.5	
ML 5459	Granted	7/03/1974	31/03/2028	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	8.09	
ML 5467	Granted	7/03/1974	31/03/2028	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	40.45	
ML 5485	Granted	30/5/1974	31/03/2026	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	9.7	
ML 5486	Granted	10/1/1974	31/03/2027	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	76.9	PTO
ML 5500	Granted	17/1/1974	31/03/2026	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	6.1	MAM
ML 5549	Granted	13/02/1975	31/03/2029	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	0.01	
ML 5548	Renewal Lodged	12/06/1975	30/06/2017	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	110.5	GST, MAM
ML 5550	Renewal Lodged	12/02/1976	28/02/2017	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu	108	
ML 5563	Granted	21/01/1982	31/01/2024	Capricorn Copper Pty Ltd	Pre 1996 Grant	Co, Cu, Mo, Pb, Zn, Ag	4.25	PTO
ML 5562	Granted	8/10/1981	31/10/2023	Capricorn Copper Pty Ltd	Pre 1996 Grant	TAILDM	60.5	
ML 5489	Granted	27/09/1973	31/03/2026	Capricorn Copper Pty Ltd	Pre 1996 Grant	LIVQTR, TAILDM, TRANSP	47.7	
ML 90178	Granted	9/08/2007	31/08/2028	CST Minerals Lady Annie Pty	Infrastructure	PIPWAO, POWERL	354	
ML 90180	Granted	5/01/2018	31/01/2033	Capricorn Copper Pty Ltd	RTN	STKPIL, TAILDM	49.92	
ML 90181	Granted	5/01/2018	31/01/2033	Capricorn Copper Pty Ltd	RTN	STKPIL, TAILDM	49.96	
ML 90182	Granted	5/01/2018	31/01/2033	Capricorn Copper Pty Ltd	RTN	STKPIL, TAILDM	49.95	
ML 90184	Granted	17/07/2008	31/07/2029	CST Minerals Lady Annie Pty	Infrastructure	PIPWAO, POWERL	9	

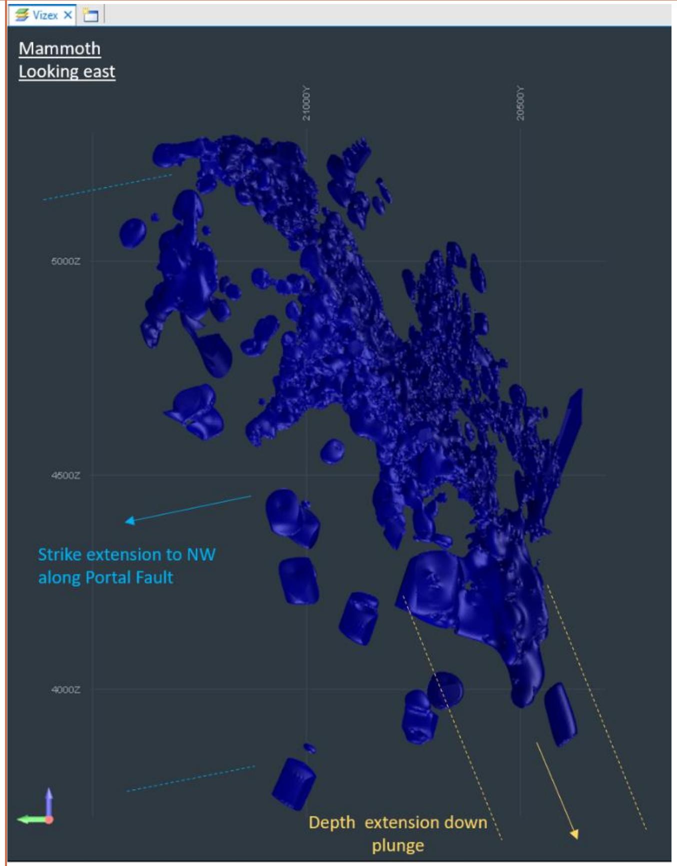
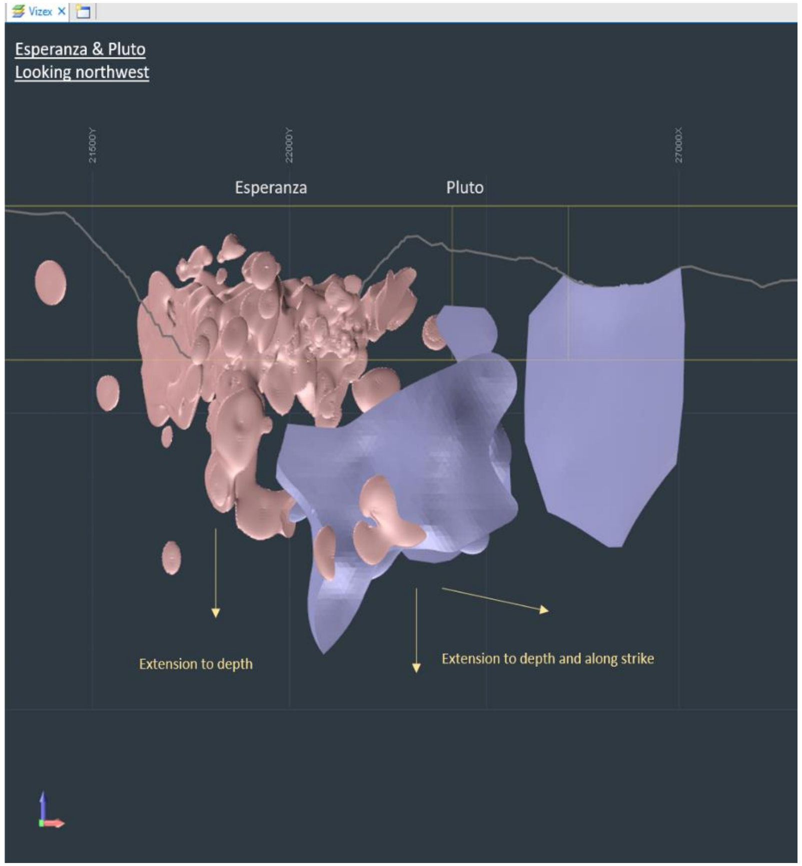
- RTN: Right to negotiate
- Capricorn Copper Pty Ltd (CC) are owned by 29Metals following the ASX listing on 02 July 2021. Table A (above) lists the Mining Leases (ML) at the mining operations which cover a total area of 1,082.5 hectares (10.8 km2). The resources are confined to eight of the MLs as indicated in Table A. The ML's and EPM and are in good standing with appropriate native title and environmental agreements.

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• Capricorn Copper Pty Ltd (CC) is a wholly owned subsidiary of 29Metals Limited. • Table A (above) lists the Mining Leases at the mining operations which cover a total area of 1,082.5 hectares (10.8 km^2). The resources are confined to eight of the MLs as indicated in Table A. The MLs are surrounded by EPM 26421 which was granted to CC on 12 August 2017,renewal is pending. The ML's and EPM and are in good standing with appropriate native title and environmental agreements.
Exploration done by other parties	• Mineralisation was found at Mt Gordon in 1882. The Mammoth deposit was found by the Shah brothers in 1927 and open cut mining soon followed. The deposit was intermittently mined by various small- to large-scale producers until 2013 with companies including Surveys and Mining Ltd (1969–1971), Gunpowder Copper Ltd (JV between Consolidated Gold Fields Australia Ltd and Mitsubishi (1971-1977)), Renison Goldfield Consolidated Ltd (1979-1982), Trammelling Pty Ltd (1988-1989), Adelaide Brighton Cement Holdings Ltd (1989-1996), Aberfoyle Resources Ltd / Western Metals (1996-2003) and Aditya Birla Minerals (2003- 2015). • Exploration activities have been completed by multiple operators since the 1970's. Work completed includes geological mapping, geochemical sampling, geophysical surveys (including magnetics, EM, IP, gravity) and drilling. These activities have been successful in identifying mineralisation, with drilling results providing the most valuable tool for delineating mineralisation.
Geology	The CC deposits are structurally controlled, sediment-hosted copper deposits located within the Western Fold Belt of the Mount Isa Inlier. **ESS**: Hosted by carbonaceous and siliceous siltstone to shale breccia of the Esperanza Formation. This formation is a sequence of well bedded to locally massive, black carbonaceous to locally grey or grey-green, weakly dolomitic siltstones, stromatolitic siltstones and pyritic shale. Carbonaceous, stromatolitic and siliceous rocks are dominant, especially in the vicinity of mineralisation. Esperanza South is a steeply plunging breccia located between the NNE-SSW-striking hangingwall and footwall margins of the Esperanza Fault zone The fault brings Eastern Creek Volcanics rocks into contact with the Esperanza Formation sediments, with this contact marking the hangingwall of the orebody. The footwall is defined by the easternmost shear within the Esperanza Formation. The fault zone envelope is approximately 50 – 70m wide. Mineralisation dips sub-parallel to the hangingwall at around -75° to the west, with a SSW plunge which steepens at depth from around -50° to -75°. The hypogene mineralisation at depth consists of chalcopyrite and pyrite exhibited as fracture fill, breccia matrix and massive forms. Supergene enrichment processes play a significant part of localising mineralisation at ESS, particularly in the upper 500m of the orebody. This weathering profile is represented by a broad weathering cap to the base of oxidation under which structural pathways have promoted downward percolation of meteoric fluids. These pathways have created supergene enrichment pathways which broadly run sub-parallel to the main structural envelope and in the most well developed zones consist of a barren, massive earthy haematite core (the centre of the structural zone), peripheral haematite and chalcocite ("chalcocite group" minerals), grading outwards to chalcocite-pyrite and eventually chalcopyrite-pyrite. Development of these enrichment zones varies on a local scale dependent on the structural permeability, availability of hypogene ore, and intensity of weathering. The effects of these zones lessen with depth but remains present in variable amounts to the deeper portions of the orebody, where the primary chalcopyrite-pyrite assemblage becomes more dominant. **GST:** The orebody is located within a wedge of Whitworth Quartzite constrained by the Mammoth Extended Fault. Here, the fault strikes roughly ENE and dilates sinusoidally in the vicinity of the GST orebody, with apparent dextral movement. This has brought a fault bounded block of Whitworth Quartzite into contact with Surprise Creek Formation sediments in the north (referred to as the hangingwall side), and Bortala Formation and Alsace Quartzite sediments to the south (footwall side). At the eastern and western extremities, the zone is highly fractured likely due to the convergence of the dilatant zone. The orebody sits within the core of this zone yet does not extend to surface due to significant weathering and vertical convergence of this zone. With depth, the hangingwall and footwall diverge and bound the Whitworth Quartzite wedge. Whilst structurally hosted, highly fractured zones do not tend to contain mineralisation. Mineralisation consists as chalcocite, bornite or chalcopyrite mineralisation hosted within fracture to breccia fill and is controlled as irregular, anastomosing fracture packages within the quartzite. **PTO:** Hosted within strongly oxidised siltstones and breccia of the Paradise Creek Formation. The formation is a sequence of light to dark grey rhythmically bedded dolomitic and carbonaceous siltstones and lesser stromatolites. The Pluto deposit is centred around the Mammoth Extended Fault and bounded by the localised Foschi's Fault. Intense leaching and oxidation occur within the structural core, with mineralisation occurring peripheral interpreted at a reaction front with the surrounding Paradise Creek Formation sediments. Bedding dip and strike of favourable stratigraphic units coupled with bedding parallel faulting plays an additional role in localising mineralisation. Copper is typically presented as supergene chalcocite and as cuprite and native copper in the more highly leached and oxidized zones. Gangue minerals included pyrite, hematite and kaolinite. Ore contacts are typically sharp along with the oxidation fronts. Minor cobalt is also noted as a significant mineralisation type at Pluto and is typically seen within cobaltite and/or cobaltiferous pyrite as a halo around the more locally confined Cu mineralisation. The oxidation zone is approximately

CRITERIA	COMMENTARY
	200 m long by 20 – 30 m wide. **MAM:** The Mammoth orebodies occur within the Whitworth Quartzite of the Myally Sub-Group. The sequence strikes North-northeast dipping 65-85°W and is dominated by massive pink to grey felspathic, medium to coarse grained, poorly bedded and homogenous quartzite. Localised siltstones are present within the unit. Three major faults are important in localizing mineralisation at the Mammoth Mine – the Mammoth Fault, the Portal Fault and the Mammoth Extended Fault. The Mammoth Extended Fault bounds the overall zone to the north and west, the Mammoth Fault localises the main strike of mineralisation which can occur either side of the fault, and the Portal Fault acts as a hard boundary on the east and controls the plunge of the mineralisation. The overall Mammoth domain plunges roughly at 65° to the SW. Mineralisation at Mammoth is found in three styles: massive, brecciated and veined; Massive mineralisation occurs adjacent to the Mammoth and Portal Faults and contains minor host rock fragments. Brecciated mineralisation occurs further away from the major faults and consists of angular and sometime fragmented clasts; Veined mineralisation is the most distal mineralising style from the faults. Individual ore lodes (“lenses”) are locally controlled by the interplay between these major faults, minor local faults and shears, structural permeability and bedding. **ESP**: Hosted by the Esperanza Formation at the confluence of the Mammoth, Mammoth Extended and Foschi’s faults. This formation is a sequence of well bedded to locally massive, black carbonaceous to locally grey or grey-green, weakly dolomitic siltstone and pyritic shale. A silica cap (referred to in literature as a “chert” body) historically overlay the deposit, hosting minor supergene mineralisation and is thought to represent a weathering horizon. Primary mineralisation is recorded as chalcopyrite and pyrite veining with locally massive zones. Supergene mineralisation is typically located in the upper and northern parts of the orebody (largely mined) under the silica cap and is characterised as massive, vein and disseminated chalcocite, native copper and reported digenite-djurleite-covellite.
Drill hole Information	● The collar locations, drill hole orientation and significant intercepts for each hole in the resource areas are not included since the drill results are not considered or reported as exploration results, but as resource definition drilling. The resource definition drilling has been included in previously reported resource estimates and well as this resource estimate.
Data aggregation methods	● Assay samples were taken at 1 m to 1.5 m intervals for historical drilling and at 0.3 m to 1.5 m intervals (typically 1 m) for drilling since 2016. ● Significant intersections are not reported publicly. ● No metal equivalent values have been used in developing geological models for the resource estimate.
Relationship between mineralisation widths and intercept lengths	● District drilling confirms mineralisation is hosted within the same stratigraphic sequence as the operating mines and no fundamental change has occurred to the structural framework of the host sequence. ● **ESS**: Esperanza South is a steeply plunging breccia located between the North – South trending footwall and hanging wall margins of the Esperanza Fault zone. This fault zone dips ~75° towards the west, with a mineralisation plunging SSW at 50° to 75°. Surface drilling has typically been undertaken from west to east at inclinations of -50° to -80° to best optimise the angle against mineralisation. Underground drilling has drilled from east to west, but at much shallower angles (+17° to -45°) to ensure the mineralised zone is intersected as orthogonal as possible. Underground intersections in Appendix 1 have been drilled at angles between (0° to -45°). Surface intersections in this appendix 1 have been drilled at angles between (-45° to -75°) ● **GST**: Greenstone consists of irregular breccia and vein zones located within the Mammoth Extended Fault striking to the NE, with the upper core of the orebody oriented sub-vertical and the northern, deeper portion of the orebody dipping roughly -50° toward the south. Surface drill holes which largely targeted the upper core drilled for NW to SE, orthogonal to the strike of the fault zone and were inclined at -50° to -80° to intersect the deposit at the highest possible angle to the mineralisation. Underground drilling from 2018 and 2020 has drilled the orebody from both the northern and southern sides at angles orthogonal to the interpreted mineralisation trends. ● **PTO**: Pluto consists of multiple steeply plunging zones of breccia and veining that strike NE-SW and dip steeply (approximately 80º) to the SE. The mineralisation has an overall plunge to the SW at around 70º. The majority of drilling has been east directed at dips of -50° to -80°. Due to the difficulties in locating drill pads in locally steep terrain and with surface infrastructure, some historic drill holes, and one CC hole, have drilled toward the west at similar inclinations. Many holes have intersected the mineralisation at low angles due to these limitations. It is recommended that future drilling be undertaken from underground. ● **MAM**: Mineralisation is hosted within breccia associated with the Mammoth Fault (dipping 80-85° towards the north-west) and the Portal Fault (dipping 60-65° towards the west), however multiple ore orientations exist due to the interplay between major and minor structures and stratigraphy. Drilling has occurred at a vast number of orientations and inclinations dependent on the interpreted trend of the target mineralisation lode and the availability of underground drill collar locations. Where ore is most developed around the Mammoth Fault, drilling has typically been directed the south at 0 to -50° to achieve intersections at a high angle to the ore zone. Drilling

CRITERIA	COMMENTARY
	of the Mammoth Deeps area is limited by underground drill sites and as such drilling of some of the deeper intersection is slightly down plunge/dip and a lower angle. • **ESP**: Mineralisation is typically sub-vertical with a north-east strike. This strike orientation is determined largely by the bounding Mammoth Extended and Foschi's Fault structures, which in this location dip steeply to the southeast and northwest respectively. Due to the subvertical nature of the orebody and north-east strike, drilling has been completed successfully in both a north-westerly and south-easterly direction.
Diagrams	• Diagrams for each deposit are shown under "further work" within this section.
Balanced reporting	• Mineral Resources are detailed in this report. Specific Exploration Results are not disclosed.
Other substantive exploration data	• Surface and underground geological mapping have been completed at various degrees of detail both historically and during the CC tenure. Mapped underground trends have assisted in determining localised trends, particularly at Greenstone and the G-Lens area of Mammoth. • Since 2016, geotechnical information is taken routinely across every drill hole for fracture sets and joint characterisation. More detailed work has been undertaken on selected holes across all deposits, primarily Point Load Test (PLT) measurements. • Metallurgical test work has been undertaken across all deposits during the CC tenure. Since 2016, bulk metallurgical samples have been taken in twenty-three holes from ESS for over 870m; six holes from GST for over 740m; six holes from MAM for over 440m; four holes from PTO for over 795m; and three holes from ESP for over 250m. • Specific Gravity's are taken routinely across all drill holes and provide a detailed database of density measurements across all orebodies.
Further work	The deposits form the currently operational Capricorn Copper Mine and as such ongoing mining activities will continue to further delineate the in-situ resources. Future work will entail continued diamond drilling across all areas discussed in this report. Grade control processes are undertaken continuously at the mine site and will continue to assist the local definition and interpretation of the orebodies. Further extensional drilling is likely and may extend the current Mineral Resources and provide sample coverage in the deeper and more poorly defined portions of the Resource area. Possible extensions to known mineralisation are shown in the diagrams below:

CRITERIA	COMMENTARY
	 

CRITERIA	COMMENTARY
	 

Section 3. Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

CRITERIA	COMMENTARY
Database integrity	● Data entry spreadsheets are restricted so that only allowable values can be entered into a number of fields. ● Validation at this stage is undertaken visually by the Geologist and is named and dated once complete. ● A number of checks were in place during import into the Geobank database to ensure the data is assigned correctly – for example ensuring drill hole IDs match across the data entry for any specific hole, ensure no intervals were duplicated or overlapping, and that no Sample IDs were duplicated. ● Structural integrity of the database was checked during the export from Access and Import to Leapfrog Geo^{TM} and Micromine software with checks on: • Downhole survey anomalies • Overlapping intervals • Missing intervals • Duplicate intervals • Near duplicate positions • Blank, negative, zero and missing assay values • Wedge holes • Anomalous collar co-ordinates
Site visits	● **MAM, PTO and ESP Competent person** • Danny Kentwell, (SRK Consulting), has not visited site and has relied on Mr Mark Noppé, Mr Stuart Munroe and Ben Jupp, all of SRK Consulting, for site specific information and validation. The PTO and ESP Resource estimates have not changed since 2019, with the exception of depletion. Danny Kentwell assumes reporting responsibility for the MAM model outside of the Glens region, which also has not changed since 2019. • Mr Mark Noppé (SRK Consulting) has visited site in March 2016, May 2016, September 2016, November 2017 and October 2018 to review various aspects of the resource drilling, logging and sampling, data management and geological and grade modelling. Mark Noppé ceased to be an employee of SRK in September 2022. • Mr Stuart Munroe and Mr Ben Jupp (both SRK Consulting) visited site to review core and meet with the exploration and mine geologists in January 2019. Stuart Munroe ceased to be an employee of SRK in October 2019. ● **ESS, GST and MAM (Glens Update) Competent Person** • Oliver Willetts (SRK Consulting) has not visited site and relies on previous site visits conducted by SRK personnel for site-specific information and validation.
Geological interpretation	The local geology of the Capricorn area is well known having been developed over many years of tenure. All deposits modelled here occur within broad structural corridors with the interplay of these major faults with more localised structures being a primary localising factor. Mammoth and Greenstone orebodies are hosted within Whitworth Quartzite, whereas the Esperanza, Pluto and ESS orebodies are hosted within McNamara Group siltstones. These lithological controls are critical in defining mineralisation boundaries. The degree of brecciation and fracturing, as well as oxidation and leaching intensities also play a significant role in determining spatial distribution of grade across all deposits to variable extents. These lithological, structural and weathering parameters all play a vital role in the distribution and continuity of grade across any deposit. Geological information from drill hole logging and structural interpretation has been critical in controlling the Mineral Resource estimations. Estimation domains for each model were generated from grade and geological inputs, using Leapfrog Geo^{TM}. With the exception of Pluto, estimation domain boundary models utilise either solely copper (GST, MAM: GLens) – or a combination of copper and cobalt Indicator grade shells (ESS), locally oriented by structural trend models. Structural trends are defined from local fault wireframes and manually-drafted high-grade Cu trend surfaces (which serve as a proxies for shoot and vein orientations in the absence of oriented structural measurements). Structural trend models have a number of settings the control the “strength” and “range” as well as the interaction when multiple structures are combined. These parameters are optimised by trial and error iteration until suitable volumes are produced.

CRITERIA	COMMENTARY
	Trial domains are checked for statistical distributions of copper, cobalt, silver, iron sulphur and arsenic with the aim of eliminating multi modal populations from the copper and cobalt wherever possible. These domains are further controlled by clipping against hard boundaries, such as faults, lithological markers, weathering surfaces or defined trends, to ensure the domains do not cross these known mineralogical confines.
Dimensions	● **ESS**: strikes approximately 25 degrees NNE, 50 m below surface extending to 1,100 m below surface, 850 m long and up to 70 m wide. Copper mineralisation width within the corridor varies greatly from several metres to full corridor width and is continuous down dip. ● **GST**: strikes approximately 65 degrees NE; The top of the orebody is 150 m below surface extending to date to 400 m below surface, 300 m long and 150 m wide. Copper mineralisation currently presents as an upper, sub-vertical core, and a deeper southerly dipping lode which is offset to the north. ● **MAM:** A very extensive complex multi fault-controlled mineralisation complex with multiple lodes and orientations extending from surface to approximately 1,200 m below surface and open at depth. Mineralisation widths vary from several metres to several hundred metres with mineralisation continuous down dip. Overall strike is approximately 1,400 m. ● **PTO**: strikes approximately 45 degrees NE, 100 m below surface extending to 700 m below surface, 500 m long and 100 m wide, as discrete, thin (5 – 25 m) mineralised lodes. ● **ESP**: strikes approximately between 45 degrees (NE) on the eastern side to 70 degrees (ENE) on the western side. The orebody commences between 20 m to 150 m below natural surface (now mined out) and extending to 400 m below natural surface, 700m along strike and 20 m to 80 m wide tapering at depth.
Estimation and modelling techniques	● Grade interpolation utilises several methods of interpolation, depending on the deposit: • **MAM, PTO and ESP:** co-kriging in two sets (typically Cu with Ag then Co, S, Fe and As together) utilising Isatis^{TM} software. • **ESS, GST and MAM (GLens):** ordinary kriging using Micromine^{TM} software. ● Previous estimates are available for comparison. No check estimates with alternate grade or density interpolators were run. For ESS and GST Mine to mill reconciliation were reported. ● Cu and Ag are recoverable and payable. Co may be payable in the future. ● S, Fe and As are estimated where sufficient assay data is available and regressed or defaulted where data is lacking. • Regression is to populate block grades – most typically using Fe regressions to inform S. • Regression of sample S grades using assayed Fe was employed when S assays exceeded upper limit of detection. ● Block sizes vary between deposits. ● Block models are estimated into parent cells with volumes calculated from sub cells at a scale appropriate to the geological controls of each deposit. For mine planning all models are regularised to 5m by 5m by 5m which incorporates geological dilution at domain boundaries. ● Correlations are accounted for by co-kriging for MAM, PTO and ESP. For ESS, GST and MAM (GLens), correlations are controlled by sharing of common search neighbourhood parameters between estimation variables during ordinary kriging interpolation. ● All Cu domains, except for GST, utilise hard boundaries at the 0.5% Cu threshold or Co 200 ppm threshold. GST considered a 0.25% Cu threshold. Variography and search parameters are typically oriented along the structural control orientations. ● **For MAM, PTO and ESP:** • all variables are assessed for top capping for all domains. • The major variables (Cu and Co) utilise range of influence restrictions with uncapped composite data. • All other variables use capped composite grades for estimation. ● **For ESS, GST and MAM (GLens):** • all grade variables were assessed for top capping for all domains. Grade interpolation used the top capped composites. ● Validation is done via average grade checks at zero cut-off between block grades and de-clustered composite grades for all domains. Any final variation greater than 10% is justified and explained. Swath plots in three directions and along strike are also reviewed. Comparisons to previous resources are also examined with the relative

CRITERIA	COMMENTARY
	strengths and weaknesses of previous estimated kept in mind. Visual examination in 3D, plan, cross section and long section are also completed. Very high-grade areas are examined in detail to ensure block grades are not over or underestimated locally. In limited cases theoretical change of support checks on grade and tonnage curves are also performed.
Moisture	• Dry density is used.
Cut-off parameters	• Cut offs are on Cu only and are applied at a level somewhat lower than the current economic Reserve cut-offs and are specific to each deposit / mining method. Esperanza South utilises a cut-off of 0.8% Cu due to sub-level caving methodology, while all other deposits utilise a 1.0% Cu cut-off due to long-hole stoping methodology.
Mining factors or assumptions	• See above • All deposits were depleted for all open pit, stope and access development material mined to date. • Fired, broken stopes that remain in-situ are considered as void for all depletion calculations. • **For MAM only:** ◦ a 7 m skin around the larger historic caved stopes was also excluded from the resource on that basis that this material does not have reasonable prospects of eventual economic extraction. In addition, material between surface and the uppermost cave stope at Mammoth has also been excluded as unrecoverable. Material around the smaller Mammoth stopes has been included in the resource with the assumption that the stopes will be paste filled and remnants will be 100% recoverable with mining dilution incorporated at the Reserve estimation stage.
Metallurgical factors or assumptions	• Cu and Ag are currently recoverable and payable. • Co may become recoverable and payable in the future but is not currently considered as a revenue element. • Fe, S and As are estimated to assist with metallurgical classification and recovery prediction. • Co occurs coincidentally within the Cu-defined Mineral Resource, similar to Ag. • 29Metals is currently undertaking geometallurgical studies to advance the potential future recovery of cobalt.
Environmental factors or assumptions	• Cu, Ag, Co, Fe, S and As are all estimated in the models to assist with waste management planning. No new environmental impacts have been identified from this estimation process. Mining leases are granted and current over the Mineral Resource estimation areas.
Bulk density	• Bulk density measurements comprise weight in water and weight in air (referred to by CC as specific gravity) techniques for individual core samples (typically 0.1 – 0.5 m in length) considered representative of the overall rock mass drilled. The samples are taken at intervals of a minimum once every twenty metres, closing in to once every five metres in the ore zone. • Bulk density is estimated into the models using the specific gravity data where sufficient sampling exists or defaulted per domain where it does not. No adjustments are made to the sample data for bulk rock mass characteristics since the porosity of the rock is considered very low and the core tray validation work shows no consistent trends to support any such adjustments. Bulk density is estimated via Ordinary Kriging where sufficient samples are available. In some cases where sufficient samples are not available density is assigned by regression from estimated iron, in other cases average density values for a domain are applied to un-estimated density.
Classification	• **MAM, PTO and ESP:** ◦ Classification is initially based on copper grade estimation quality, via the Cu kriging slope of regression. Any adjustments for data quality, drilling orientation (in the case of Pluto), geological uncertainty, historic void uncertainty/access considerations (in the case of Mammoth) or other uncertainties are then considered. The lastly estimation quality, drill spacing, data and geological considerations are examined visually and pragmatic, contiguous volumes are modelled to reflect practical mineable areas by each classification level.

CRITERIA	COMMENTARY
	• Although even drill spacing is difficult to maintain with fan drilling from underground platforms, approximate drill spacing from the applied classification levels for each deposit are given below. Where a measured classification was not allocated to a Resource an estimate of the likely drill spacing required is given. • Esperanza sub-pit: measured 10m, indicated 20m, inferred 50m • Pluto: measured 15m, indicated 40m, inferred 80m • Mammoth: measured 10-15m, indicated 30-40m, inferred 50-100m (Ranges are given due to the extensive nature and different controls within Mammoth. ● **GST and ESS:** • Classification is based on a bivariate matrix of the probability of the Cu domain (indicator estimate) and the kriging variance. This method considers both the quality of the copper grade estimation (kriging variance) and the Cu domain uncertainty (indicator estimate). The raw statistical classification is further smoothed during post-processing to deliver coherent regions. • GST LOM resource classification considers both exploration and grade control drilling to reflect all available information. • ESS classification required additional constraints at depth to reflect decreasing exploration drilling: no Measured Resources were classified below 4700mRL and no Indicated Resources were classified below 4400mRL. Blocks located further than 50m from drilling were not classified. ● **MAM (GLens):** • Classification considers data spacing (from exploration and grade control drilling/sampling) and underground mining activity. Mineralisation geometry favoured classification of regions of Measured and Inferred Mineral Resources only, reflecting high confidence around grade-controlled and depleted regions and lower confidence in peripheral exploration regions, where data density is considerably lower. • Polygons were drafted in long section from different viewpoints to best suit each splay and converted to 3D wireframes, then assigned to the block model. ● Co, Ag, As, Fe and S grades are not necessarily estimated to the same level of confidence as classified for the Cu grade Mineral Resources and are reported within the Mineral Resource estimates for transparency of these attributes. ● The result appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	● The 2022 Resource models for GST, ESS and MAM have been peer reviewed by SRK. ● Models have been reviewed by CC staff on site. ● MAM, PTO and ESP models were subject to external overview and review by EMR appointed external experts in 2020 (Mr Scott Dunham).
Discussion of relative accuracy/ confidence	● Confidence in the estimates has been assessed in accordance with JORC Code guidelines (2012 Edition) in relation to the definition and reporting of Measured, Indicated and Inferred Resources and as outlined in each of the points in this Table. ● No additional quantification of relative uncertainty has been completed. Classifications categories are reduced in circumstances such as, poor drilling orientation (PTO), geological uncertainty (ESS - at depth) , historic void uncertainty/access considerations (MAM). ● For Ordinary Kriging block estimation, there is no single factor that defines the smoothing. Loosely speaking, allowing more samples in the search improves the estimation quality, but also increases smoothing. Where drill spacing is relatively widely spaced at an exploration level, the better the global (i.e. grade-tonnage curve) estimate accuracy is, the worse the local block accuracy is. Conversely, the better the local block accuracy, the worse the global grade-tonnage accuracy is. The other factor is that larger block sizes have greater smoothing, but better local block accuracy, albeit on a larger selectivity volume. The combination of sample numbers used and block size chosen leads to the classic Kriging paradox – a trade-off between local and global accuracy. ● For example, at Esperanza South, where drilling is closer than around 10 m, there is minimal difference in block estimation regardless of sample numbers chosen for the search neighbourhood. However, where spacing is out to say 80 m or more, the difference between estimates with a few or a lot of samples is large. At the resource model scale, it is usually more important to get have the grade-tonnage curve correct than the local block accuracy. Local block accuracy is typically defined at the grade control model stage where close-spaced drilling and or mapping or grade control drilling is also available. The block size used also plays a part; ideally a block size that matches a suitable selective mining unit (SMU) should be used, but for most resource models, drilling is too sparse to accurately estimate SMU sized blocks, hence larger block sizes and increased smoothing. Typically, secondary local grade control models are created for areas of denser drilling and sampling which can the utilise a smaller block size in comparison to the resource model for short term mine and grade control purposes.

CRITERIA	COMMENTARY
	• Resource models and grade control models both have their specific uses and resource model block accuracy may be inappropriate for the use of the resource model as a grade control model. Resource classification exists for a reason; it classifies how good the model is and it is why Inferred material should never play a significant part in any mine plan and areas of Inferred material require further drilling. • So, while the Mineral Resource model classification begins on a block level, the classification volumes are consolidated up into larger volumes and therefore the model is expected to reconcile more effectively on a global basis, i.e. over longer timeframes, larger volumes and tonnages, than at a local, short-scale model level.

Appendix 5

Capricorn Copper Ore Reserves estimates – JORC Code Table 1 Disclosures

Section 4. Estimation and Reporting of Ore Reserves

CRITERIA	COMMENTARY
Mineral Resource estimate for conversion to Ore Reserves	• The Ore Reserve Estimate uses the 2022 Mineral Resource Estimate (MRE) prepared by SRK Consulting (Australasia) Pty Ltd (SRK). The 2022 MRE builds upon Mineral Resource Estimations conducted in-house by Capricorn Copper Pty Ltd (CC) in 2021, and previously estimated by SRK in 2019. The 2022 MRE is as at 31 December 2022. • CC supplied the resource drill hole database, geological interpretation, domain wireframes and density measurement data for the different material types. SRK undertook all other aspects of the resource modelling work in preparation of the MRE: o Esperanza and Pluto have not been mined and their MREs have not changed from the 2019 MREs. o SRK updated the Esperanza South, Greenstone and Mammoth GLens MRE's with additional sampling and geological information gathered during throughout 2022, as outlined below. o The MRE for Mammoth remains as at 2019 for all areas aside from GLens. o The combined Mammoth model (all domains) was updated for depletion of areas mined up to 31 December 2022. • Esperanza South estimates:- o In 2020 CC completed a grade control diamond drilling program at Esperanza South. This along with an increase in grade control sampling and mapping significantly increased the understanding of the Esperanza South southern cave area. In addition, the classification criteria were modified in order to reflect more appropriately the variability and drilling spacing of the deposit. The Esperanza South model was completed internally in 2020 by CC, and it was peer-reviewed and signed off by SRK and audited by SD2. o In 2021, an updated Mineral Resource estimation was completed internally by CC, which considered additional grade control and drilling data collected up to 19th May 2021. The model was peer-reviewed by SRK. o In 2022, SRK updated the Esperanza South model with additional grade control drilling between levels 4950m and 4850m and deeper exploration drilling down to 4300mRL. The geological model was revised with current interpretations of mineralisation geometry and structure. Mineral Resources were classified and depleted to 31st December 2022. • Greenstone estimates: o The Greenstone mineralisation is difficult to model as it is made up of multiple trends. In 2020 CC completed significant work to better define these mineralisation trends and this work was included in the 2020 resource. CC determined that the 2020 resource came within 6% of the reconciled grade. o In 2021, an updated Mineral Resource estimation was completed internally by CC, which considered additional grade control and drilling data collected up to 4th May 2021. The model was peer-reviewed by SRK. o In 2022, SRK updated the Greenstone model with additional grade control and exploration drilling. The geological model was reviewed, and structural trends reinterpreted where required (mainly between 4880m and 4810mRL). Mineral Resources were classified and depleted to 31st December 2022. • Mammoth GLens estimate: o In 2022, SRK updated Mammoth GLens with additional grade control and exploration drilling, reviewed the geological model and updated the vein wireframe interpretation to improve continuity in regions of new drilling and mining. Mineral Resources were reclassified to better reflect the exploration data distribution. The model was merged into the earlier SRK 2019 Mineral Resource model and depleted to 31st December 2022. • The resource models were created in the Mammoth Mine Grid, an approximately truncated version of the regional UTM datum AMG84 Zone 54 in which 7,800,000 m is subtracted from the Northing and 300,000 m is subtracted from the easting. 5,000 m is also added to the AHD to produce Mine elevations (RL). • For Mammoth, Pluto and Esperanza the MRE grades were interpolated by Co-kriging in two sets; typically, Cu with Ag then Co, S, Fe and As together. Regressions were applied at block scale to inform blocks where the minor elements were not well informed in the assays; typically using Fe regressions to inform S. • Ordinary kriging was used for Esperanza South, Greenstone and Mammoth GLens. • Grades were estimated into parent cells with volumes from sub cells at a scale appropriate to the geological controls of each deposit. For mine planning all models were regularised to 5m by 5m by 5m which incorporates geological dilution at domain boundaries. No additional dilution adjustment was applied to the MRE. • All Cu domains except for Greenstone use hard boundaries at the 0.5% Cu threshold or 200 ppm Co threshold – or a combination of both. Greenstone considered a 0.25% Cu threshold and a 1.7% Cu threshold. Variography and search parameters are typically oriented along the structural control orientations. • Bulk density has been estimated by ordinary kriging using the specific gravity data where sufficient samples exist. Where insufficient samples are available density is assigned by regression from estimated iron or average density values for a domain are applied.

CRITERIA	COMMENTARY
	• The MRE includes Measured, Indicated and Inferred categories. For Mammoth, Pluto and Esperanza the resource classification is initially based on copper grade estimation quality, via the copper kriging slope of regression. Adjustments are then made considering data quality, drilling orientation (in the case of Pluto), geological uncertainty, historic void uncertainty/access considerations (in the case of Mammoth) and other uncertainties. Pragmatic, contiguous volumes are then modelled to reflect practical mineable areas. The classification approach results in the following notional drill spacing: o Esperanza sub-pit: measured 10m, indicated 20m, inferred 50m o Pluto: measured 15m, indicated 40m, inferred 80m o Mammoth: measured 10-15m, indicated 30-40m, inferred 50-100m. • For Greenstone and Esperanza South Mineral Resource are classified using a statistical process that considers quality of copper grade estimation, and copper domain uncertainty, as determined by indicator kriging. • The unmined portion of the Ore Reserve is a subset of the unmined portion of the MRE. Resource cut-offs applied to copper only are somewhat lower than the current economic Reserve cut-offs. A cut-off of 0.8% Cu was applied to the Esperanza South Resource, for extraction by sub level caving. A 1.0% copper Resource cut-off was applied to all other deposits based on long hole open stoping. • The MRE does not include stockpiled ore..
Site visits	Chris Desoe, Competent Person for overall Ore Reserves estimates, undertook a site visit at Capricorn Copper Mine on 12-13 December 2022, including the following inspections: • ROM stockpiles • Low grade stockpile • ESS North and South surface cave crater areas. • Surface Infrastructure - paste plant, shotcrete/batch plant, chiller station under construction (drive-pasts, not inspections) • Underground areas o Greenstone o Mammoth Remnants o Mammoth Deeps – G Lens o Esperanza South Mr Desoe previously conducted a site visit on 20-21 June 2018.
Study status	• The Project is an operating mine with a lengthy operational history. It was placed under care and maintenance by a previous owner in 2013 and was re-started in early 2017 as a joint venture between EMR Capital and Lighthouse Minerals, operated by Lighthouse Minerals. EMR Capital assumed 100% ownership and operations from 2018. In mid-2021 CC, along with certain other copper metal assets, was acquired by 29Metals Limited (29Metals) and listed on the ASX, with 29Metals taking over ownership and operations from EMR Capital. • The overall technical feasibility of the current project is supported by the Capricorn Copper Definitive Feasibility Study, 1 Dec 2016. • Ore reserves have previously been reported for the Capricorn Copper Mine (CCM) including historical estimates under previous ownership. Under recent ownership by CC ore reserves were last reported in early 2022, as at 31 December 2021. The current Ore Reserves Statement is based on o depletion since 31 December 2021 o revised MREs for Esperanza South, Mammoth (G Lens) and Greenstone, and o revisions to the mine plan due to • the above factors, • changes to economic and processing parameters resulting in new cut-off grades • The mine plan is broadly underpinned by the Mining chapter of the December 2016 Feasibility Study report as well as the Nov 2016 Feasibility Study by Mining Plus, *MP-4173-FSDR-Capricorn Copper-r3 161116.pdf*, covering development of and production from the following deposits: - o Esperanza South o Mammoth Deeps[7] o Esperanza Deeps

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[7] Stopes in the Mammoth Remnants area were referred to as part of Mammoth Deeps in the 2016 Feasibility Study

CRITERIA | **COMMENTARY**

    - Pluto
    - Greenstone
- Additional studies have been completed and expert advice provided into various aspects of the operation since the 2017 re-start. Documentation for these studies is referenced below where appropriate, under the items dealing with relevant modifying factors.
- Esperanza South is currently the main production source. Mammoth Deeps, Mammoth Remnants and Greenstone are also in production. Pluto is scheduled to come into production in 2026 followed by Esperanza Deeps in 2027.

Cut-off parameters

Ore is selected by applying a different copper cut-off grade for each mining area as summarised in the table below. The final cut-off grade calculations are contained in the spreadsheet *220720-CC-MOD-COG Update -V1.0.xlsx*. They take into account the following factors:

- Average of life of mine metallurgical recoveries from 1 January 2022, estimated using the updated V5.0 recovery model applied to the 2021-2022 LOM model, as explained in the internal CCM memo Updates to CCM LOM and recovery models *230116-CC-MEM-recovery assumptions used for cut-off-grade modelling-V1.0.pdf*.
- Budgeted operating costs from 1 July 2022 to the end of mine life for
    - Mining
    - Processing and maintenance
    - Site services, HSEC, Corporate and Marketing
- 2022 budget costs for concentrate road and sea [8]transport
- Concentrate treatment and refining costs updated by 29Metals
- Queensland government royalty
- US$3.60/lb copper price
- 0.73 USD/AUD exchange rate

Area	Cut-off grade, %Cu	
	Resource (undiluted)	Head Grade (diluted)
Esperanza South Total	N/A	1.17
Esperanza South Shutoff	N/A	0.99
Esperanza South Development	0.87	0.83
Greenstone	1.11	1.06
Greenstone Development	0.64	0.60
Mammoth (Remnants and Deeps)	1.44	1.36
Mammoth Development	0.64	0.60
Pluto	1.74	1.59
Pluto Development	0.71	0.67
Esperanza Deeps	1.71	1.55
Esperanza Deeps Development	0.70	0.66

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[8] Concentrate treatment and realisation costs are applied in the cut-off grade calculation using concentrate copper grades from different sources. The 28% concentrate grades applied for GST and MAM are from a 2021 Budget model. In its current modelling, CC assumes a 26% concentrate grade for GST and MAM. The 28% applied for the cut-off calculation will slightly underestimate the correct cut-off for GST and MAM.

CRITERIA | **COMMENTARY**

These are simplified cut-offs that ignore contribution of silver and the impact of arsenic[9]. For each deposit the cut-off grades also assume a fixed recovery[10], and they do not consider variable haulage cost with depth[11].

The same processing cost has been applied to all deposits, whereas MAM ore is known to be more abrasive than the other ores. This means that the MAM cut-off grade is underestimated but the cut-offs for the other ores are conservative in relation to processing costs.

The “Resource (undiluted)” cut-off grade was applied for stope optimisation, to maximise the value of each stope. CC then checked that the overall grade of each stope was above the “Head Grade (diluted)” cut-off grade. CC applied the “Head Grade (diluted)” cut-off grade for the Esperanza South sublevel cave design and scheduling.

Mining factors or assumptions

The table below lists the mining methods used for each area. The November 2016 Capricorn Copper Project Feasibility Study by Mining Plus is an overall supporting document for the mining method and general mine plan aspects, along with the Mining chapter of the Capricorn Copper Definitive Feasibility Study 1 Dec 2016.

Area	Mining Method
Esperanza South	Longitudinal Sub-level Caving (SLC) with minor Transverse SLC
Greenstone	Long Hole Open Stoping with waste rockfill
Mammoth (Remnants and Deeps)	Long Hole Open Stoping with paste fill
Pluto	
Esperanza Deeps	

These methods are considered to be appropriate to the orebody geometries, grades and ground conditions. Key mining assumptions for the different areas are outlined below.

Esperanza South (ESS) SLC

Power Geotechnical Pty Ltd prepared the original 2016 ESS plan and 2018 update using its PGCA cave flow modelling software. The ESS SLC plan has subsequently been updated by CC Lead Mine Planning & Scheduling Engineer Alonso Gonzales[12]. The latest update uses the September 2022 ESS resource block model. The current SLC mine plan is supported by Section 5.1 of the CC Cave Management Plan (*CCPL-MINE-MGP-0002_CCM SLC Management Plan_Update.pdf*) and in general by the following documents: -

- Power Geotechnical PGCA documents
    - Esperanza South PGCA Modelling Report, Jan 2017 *Esperanza South PGCA Modelling Report.docx*.
    - Updated Footprint Modelling Report, July 2018 *Updated Footprint Modelling Report.pdf*
- Itasca June 2020 Esperanza South Cavability Assessment draft report
    - *20005_Capricorn_Caveability_Draft02.pdf*
- CCM documents
    - *Analysis-of-Cavability-4990L-Stope-Lower-South-Cave-Case-C2B_rf.pdf*
    - *Stress-Modelling-in-ESS-Lower-Cave_rev1.pdf*

Key SLC parameters include:-

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[9] Estimated life of mine revenue from silver represents only 3.8% of the total revenue. The estimated arsenic penalty charge over the life of mine represents only 2.2% of total treatment charges and is of the order of 0.2% of total revenue. The combined effect of silver and arsenic is such that the copper cut-off grade will result in a slightly conservative ore selection.

[10] The V5.0 recovery model, finalised in 2022, estimates the metallurgical recovery as varying with head grade for all deposits, as well as with iron grade and sulphur grade for ESS, GST and MAM. For all deposits the recovery decreases as head grade decreases. The adoption of a fixed average LOM recovery for calculation of cut-off grades means that the cut-offs will be underestimated and suboptimal with regard to processing recovery. This underestimation of cut-off grade is partly offset by ignoring the silver grades.

[11] The cut-off grade calculation incorporates mining costs specific to each deposit, including haul costs. However, within each deposit, the mining costs are not varied with depth to account for haul distance and times.

[12] Gonzales is now contracting his services to CC.

CRITERIA	COMMENTARY

- 25m level spacing and 15m centre-to-centre spacing of 5.0m x 5.0m ore drives.
- The ESS South Cave is relatively narrow, with a minimum span less than 30m between 4900 level and 4850 level, then increasing to its widest, 90m to 105m, at 4500 level.
- A 70m wide pillar is left between the completed ESS North Cave and the ESS South Cave.
- The ESS South Cave is accessed by a crosscut at approximately 19820mN that divides the cave into northern drives and southern drives. The SLC is retreated from the ends of these drives back to the access crosscut before the cave is retreated transversely from the hangingwall end of the crosscut back to the footwall side.
- To help initiate ESS South caving, the uppermost three levels incorporated waste drives and stub drives into the hangingwall, and firing out wide stopes.
- Foliation in the hangingwall has a strong influence on cave propagation mechanisms.
- The ESS South Cave propagated through to surface in Nov 2021 through the hangingwall material.

Prior to the updated PGCA modelling, Deswik software was used to determine the economic mining footprint shapes for each level, based on the 1.17%Cu cut-off grade. The boundary between Indicated and Inferred Resource was applied to constrain the footprints. The mining footprints were then used to create the SLC designs for the PGCA modelling and mine schedule, for which the 0.99%Cu shutoff grade was applied.

It is important to note the following points in relation to the estimated SLC tonnes and grade:-

- Although the SLC design targets Measured and Indicated Resources some Inferred Resource is included within the SLC envelope and Reserve tonnes as unavoidable dilution. However, the grade of the Inferred component has been derated by 50% to provide the estimated grade of this mineralised dilution.
- Before final adjustments for depletion in November/December 2022, derating of the grade of Inferred component and the 3.8% reconciliation factor, the estimated SLC production tonnes are 18% lower than the insitu tonnes within the extraction shape at very similar grade. After derating the grade of the Inferred component and applying the 3.8% reconciliation grade adjustment, the estimated SLC production grade is 11% lower than the average grade within the production ring shapes. AMDAD considers the production estimate to be atypical of common SLC tonnes-vs-grade-vs-draw relationships. The SLC production modelled using the PGCA program effectively applies a considerable degree of selectivity by application of the 0.99% Cu shutoff grade. This will result in a significant tonnage of blasted material below this shutoff grade being left within the cave. The SLC estimate also suggests a higher than typical draw before dilution entry. In practice, disciplined SLC monitoring, grade control and draw control will be essential in order to achieve the SLC Ore Reserve.
- We note that the head grade of December 2022 year-to-date ESS production was 3% higher than the production grade scheduled with the previous Ore Reserve estimate in December 2021. The production tonnes were 24% lower than scheduled due to delays to ESS activities prior to establishment of the new ESS South ventilation system. Although the ESS tonnes were not achieved, the slightly higher than estimated grade is considered to provide good support for the PGCA modelling and Reserve Estimation approach for ESS.

Greenstone, Mammoth, Pluto and Esperanza Deeps

The longhole open stope designs for Greenstone, Mammoth, Pluto and Esperanza Deeps are generally supported by the following documents, which provide design basis including maximum spans for walls and backs as well as estimated equivalent linear overbreak/sloughing (ELOS)*:-

- Pluto – *2022-005- Pluto Stope Sizes and ELOS Guidelines for MSO 2022.pdf*
- Mammoth - *2022-003- Mammoth Geotechnical Parameters for MSO 2022.pdf*
- Greenstone - *2022-002- Greenstone Geotechnical Parameters for MSO 2022.pdf*
- Esperanza Deeps** – *2022-004- Esperanza LHOS Sizes and ELOS Guidelines for MSO 2022.pdf*
- General - *CCPL-MINE-SUM-0014 Geotechnical_Information_Summary_Update.pdf*

The main set of stope designs was updated by consultant Mining Plus using Datamine Studio Mineable Shape Optimiser (MSO) software, supervised by CC mine planning personnel. MSO was applied to the 2019 resource block models for Esperanza Deeps and Pluto, and the Sep 2022 resource models for Greenstone and Mammoth, to generate optimised stope shapes consistent with the nominated design parameters. The stopes were adjusted for depletion to 31 December 2022 after survey.

Stopes target Measured and Indicated Resources but may include Inferred Resources as internal dilution within the stope shapes. Individual stopes that included more than 30% of Inferred Resources were excluded from the Reserves. Although some stopes may include up to 30% Inferred resources as planned dilution, the grades of the Inferred component have been derated by 50% to provide the estimated grade of this mineralised dilution.

CRITERIA	COMMENTARY

* The CCM geotechnical memoranda explain that stope footwalls are generally stable and CC considers that they do not warrant application of a dilution skin/overbreak allowance in MSO. The geotechnical memoranda provide estimates of expected hangingwall ELOS for each deposit. Accordingly, a hangingwall dilution skin of 0.5m was applied in MSO for Greenstone, Mammoth Deeps and Mammoth Remnants, and a 1.0m skin was applied for Esperanza Deeps and Pluto.

** Esperanza Deeps Stope sizes have been estimated using the data for the Pluto assessment due to proximity of these two orebodies. Parameters from the memo by Richard Fry titled Pluto Geotechnical Assessment have been used to define stope sizes and ELOS for the Esperanza Deeps LHOS.

For the Ore Reserves estimate and life of mine schedule Mining Plus applied the cut-off grades and dilution skins outlined above to generate stope shapes. CC reviewed the MSO stope shapes and adjusted those shapes as appropriate, including:-

- Trimming the bases of MSO shapes to match the floors of the existing or designed development headings,
- Removing Esperanza Deeps MSO shapes lying within the 50m pillar below the Esperanza Open Cut,
- CC prepared manual designs for many of the Greenstone and Mammoth Remnant stopes, and
- CC's final designs, rather than MSO shapes, were included for Greenstone and Mammoth stopes that are in or close to production.

Please also note the following regarding stope design:-

- The limiting stable spans that are defined for stope walls and crowns in the geotechnical memoranda are based on single-lift stopes. However, considering the current available data including RQD and structure models, CC's geotechnical personnel consider that double lift stopes are also feasible. CC advises that if the double lift stopes start to perform poorly, it can change the strike length of the stope to reduce the HR for each wall of the next stope in sequence.
- In the Mammoth Remnants area there will be two broad environments for the LHOS method; stoping adjacent to historical SLC zones and stoping adjacent to historical open stopes that will be filled with cemented paste fill:-
  - The historical SLC zones, nominally above 4680mRL, generally comprise unconsolidated broken rock along with air voids. For stability of stopes adjacent to these zones, a 7m wide pillar will be left between the stope and the SLC extraction boundary.
  - CC has confirmed that the historical open stopes at Mammoth Remnants area can be accessed and will be filled with cemented paste fill. This will allow full extraction of new stopes right up to the walls of the old stopes.
- CC has confirmed that the mine plan on which the Ore Reserves is based is consistent with the advice of specialist geotechnical consultant Cartledge Mining and Geotechnics (CMG) who investigated a ground movement incident on 4630mRL in the Mammoth Remnants area in 2021.
- A small number of stopes are included in the Ore Reserves with head grades slightly below the nominated cut-off grade. These stopes have been included where the stope development has already been completed, effectively removing the development cost from the cut-off grade calculation and reducing the cut-off.

Ground Control Management Plan

CC has prepared a comprehensive Ground Control Management Plan (GCMP), *CCPL_MINE-MCP-001_CCM Ground Control Management Plan.pdf*, which identifies and addresses geotechnical hazards and requirements including identifying the responsibilities, systems, processes and procedures used to manage all aspects of ground control design, implementation and monitoring.

Hydrogeological aspects have been addressed by various studies including a 2011 study by Dempers and Seymour cited in the 2016 FS and DFS reports, and in the CCM Summary of Geotechnical Information, *181123_CCM_Geotechnical_Information_Summary_Update.pdf*, which is also a key reference for the GCMP.

Major geotechnical and hydrogeological risks: -
Major geotechnical and hydrogeological risks identified and addressed in the GCMP are listed below:

- Previous open cut workings - Mammoth open cut, combined with the No1 Orebody underground workings, both now filled with waste and partly leached ore, and Esperanza open cut, currently partially filled with water and tailings; some sections of the walls have failed
- Existing major unfilled/partially filled underground voids with potential to cave through to surface or potential for uncontrolled pillar failure

CRITERIA	COMMENTARY
	○ For Mammoth Remnants, with a considerable proportion of ore reserves in proximity to old workings, CC has a high level of confidence that with current technology and paste fill the ore reserves can be extracted inline with the modifying factors. The cost of filling the remnant voids is allowed for in the schedule and financial model. • Potential for mining induced fault movement/seismicity • Water ingress ○ Inflow of surface water to Mammoth pit and No1 Orebody groundwater, draining to Mammoth Decline ○ Inflows of surface run-off from potential subsidence zones associated with B Stope and 2 Lens SLC ○ Inflows from Esperanza Fault zone to Esperanza South SLC workings ○ Flows from Esperanza Pit along major fault structures to adjacent workings ○ Inflow of surface rainfall and run-off to Esperanza South SLC crater and subsidence zone ○ Inflows of surface runoff and groundwater via HS1 Shaft CC has developed Hazard Management Plans and Trigger Action Response Plans (TARP) to manage these hazards to acceptable levels of risk. <u>Production reconciliation</u> Production since the 2017 restart has been from Esperanza South, Mammoth and Greenstone. The 2021 resource models were reconciled against material fired in 2020. The global reconciliation indicated that the reconciled actual tonnes were 2% higher than the resource model estimates, and the reconciled actual grade was 6% higher than modelled. The higher reconciled actual grade is largely due to mining Inferred Mineral Resource at Mammoth. The reconciliations are summarised per deposit below: • Esperanza South reconciled actual tonnes were 5% higher than modelled and the grade was 4% lower than modelled. • Greenstone reconciled actual tonnes were 5% lower than modelled. The difference in tonnes is due to material left behind as a result of a stope failure (5025 Level). The reconciled actual grade was 1% higher than modelled. • Mammoth reconciled actual tonnes were 1% higher than modelled. The reconciled actual grade was 36% higher than modelled. This is largely due to mining of Inferred Mineral Resource, which was driven by the grade control model, where this higher grade Inferred zone was more accurately modelled. No such resource model reconciliation was completed by CC in 2022. A second reconciliation at CCM provides a comparison of monthly and YTD mine production recorded by the mine against the production tonnes and grade measured by the processing plant. The mine production tonnes are determined using load cells on loaders and weighbridge measurements for trucks. Although the mined tonnes tend to match the mill-reconciled tonnes reasonably well this comparison is not useful for evaluating the production tonnes estimated by the mine plan. However, the mined grades are reported from grade control models or the resource models within the designed final stope shapes. Comparison against mill-reconciled grade can provide a good assessment of the reliability of the production grade estimated by the mine plan. For the 2022 year-to-date from January to November this reconciliation determined an average grade factor of 0.974[13] for Mammoth and Greenstone long hole open stoping, as summarised in the table below. CC has applied this factor to the grades reported for the MSO stope shapes. This is in addition to the dilution skins incorporated in the MSO shapes. CC has also applied a recovery factor of 0.90 to the tonnes reported for the MSO stope shapes. This factor is not based specifically on the stope reconciliations, but is considered reasonable, and possibly conservative, by CC mine planning personnel for the proposed long hole stoping method. For Esperanza South SLC the production grade recorded by the mine is generated by the PGCA cave flow program. The November 2022 year-to-date reconciliation data indicate that the modelled grade is 3.8% higher than the actual grade measured by the processing plant. Accordingly, CC has applied a grade factor of 0.962 to the production grade generated by PGCA.

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[13] The November 2022 reconciliation data on which the grade factors are based included incorrect September 2022 tonnes and grades for GST and MAM. The error is very small and its impact is not material to the estimated Ore Reserve grade.

CRITERIA | **COMMENTARY**

Factor	Value Used	Description
Stope Tonnes factor	0.900	Applied to stopes only
LHOS grade factor	0.974	Based on *Mine Reconciliation November 2022.xlsm* spreadsheet
ESS SLC grade factor	0.962	

Check report

AMDAD has completed check reporting of estimated production tonnes and grades within the resource block models using the design shapes. The check reporting matches the Reserves closely for the longhole open stope production. For Esperanza South the production component of the estimated Ore Reserve is 82% of the insitu tonnes at very similar grade. AMDAD considers this difference to represent an atypical degree of selectivity for SLC. The estimated SLC Reserve would only be achieved by carefully managed draw, including draw of swell-only for sub-economic rings, strict application of the shutoff grade and delay of dilution entry where possible - for instance by firing only two rings at a time. The ESS reserve will not be achieved with a focus on tonnes.

Mine Infrastructure, Other

- Mining operations are undertaken by a major specialist underground contractor, Byrnecut Australia, using industry-standard fleet. The fleet comprises diesel-electric underground drill rigs for development and production and diesel-powered underground loaders and trucks for haulage of ore and waste rock.
- Required mine infrastructure already exists including a pastefill plant and reticulation system, primary ventilation fans, dewatering system, electrical infrastructure and contractor fleet maintenance facilities.
- The ventilation system is in the process of being upgraded with a surface chiller plant to reduce air temperature and maintain acceptable air conditions as depth increases. The ventilation improvements, to which CC is committed, have been adopted from a 2020 CCM Ventilation review by specialist Ozvent.
- CC has taken over the operation of the paste fill plant, which was previously contracted to Outotec. CC has confirmed that the pastefill system is running effectively. A second borehole from surface is being established that will break through to the underground mine at a higher elevation than the existing hole. This will provide more efficient filling of stopes on upper levels.

Metallurgical factors or assumptions

The processing method involves crushing, milling and flotation to produce copper concentrate. The metallurgical process is conventional, well understood and has many years of operational experience to support the flotation response of the CCM ore types.

Under the previous ownership the existing processing plant had a historically demonstrated capacity to treat approximately 1.4 Mtpa of copper sulphide ores from Mammoth and Esperanza. Prior to the 2017 restart of operations the CCM plant was refurbished including minor modifications to the flowsheet. After restart, the existing tertiary milling circuit was replaced with an Outotec HIG Mill to allow for fine grinding of rougher scavenger concentrates to improve copper liberation. Over the five years of operation since the restart the plant has been debottlenecked to such an extent that it has been operating at rates of up to 2.0 Mtpa. 1.81 Mt was milled in 2020, 1.70 Mt in 2022 and 1.73 Mt in 2022.

During the 2016 feasibility study metallurgical test-work was undertaken on drill core samples from all ore sources included in the Ore Reserve estimate and appropriate recoveries and concentrate grades applied. Previous life-of-mine (LOM) and reserve modelling processes relied on a metallurgical domain characterisation and recovery estimation approach, based on this test work. However, recent review work by CC found this approach to have the following shortfalls:

- the metallurgical domain approach does not allow for Esperanza South sub-grade (ESS SG) ore to be accounted for and treated separately, as is actual practice. This resulted in the model always under-estimating the recovery and the amount of ESS ore available.
- previous versions of the LOM had no ability to prioritise feed types based on a given set of criteria, and instead simply used a first in-first out approach through the metallurgical domains. This is not representative of actual practice.
- recovery modelling based on statistical correlations between recovery and feed blend and grades has shown closer alignment with actual plant data than the metallurgical domain recovery modelling approach.

As a result of these opportunities for improvement, CC has made the following changes to the LOM and reserve metallurgical models and recovery models:

- simplification of feed types and redefinition of ore type, as opposed to metallurgical domain, with ESS SG to be treated as a separate ore type to ESS
- implementation of a clearly defined feed prioritisation strategy that considers all available feeds.

CRITERIA	COMMENTARY
	• Implementation of a single copper recovery model that could account for any blend of ore, based on best available data, that could be used for all other metallurgical accounting requirements. • Development and implementation of a recovery model for silver. The result of these changes was the development of a more accurate prediction of feed, head grades and recovery. This V5.0 model has been applied to the LOM production schedule for the financial modelling and confirmation of the economic viability of the Ore Reserves.
Environmental	CCM is an existing fully-permitted mine with established closure costs and Environmental Authority (EA). The main environmental aspects are:- • surface and underground water management, including water courses, dams, drains, sumps and pits, • management of tailings, • rehabilitation of the old heap leach pads, tailings storage facilities and old waste rock dumps, and • management of old open cut voids and new cave voids above Esperanza South. CC has strategies and resources in place to manage the environmental and permitting requirements of the site. As legislative changes occur which influence these matters, CC alters the resourcing, approaches, and systems to enable the continued operation of the mine in accordance with these requirements. Consequently, there are no material environmental or permitting issues or factors that will impact on the ability of the mine to produce the estimated reserve.
Infrastructure	CCM is an existing operation with all necessary major infrastructure in place and operational, including the following: - • road access by sealed Barkly Highway then 85km of unsealed road • processing plant (consisting of a crushing, milling and conventional sulphide flotation circuit) • portal and underground development at the Mammoth deposit and the Esperanza South deposit • paste backfill plant • tailings storage facility • mine ventilation, electrical and dewatering systems • workshops and stores • concentrate storage shed • fuel farm and wash down bay • administration and other offices • power provided by a 220kV high voltage power line with power supplied from the grid • water licences and supply from Lake Waggaboonya and water treatment plant, • accommodation camp, located 5km from the mining operation, • sewerage, water and electricity utilities as well as information and communication systems at the mine and in the camp • sealed, all-weather airstrip, located 8km south of Capricorn Copper Mine. CC has previously confirmed that the existing surface infrastructure in mining and processing is adequate to service the production levels scheduled in the LOM plan. The production levels scheduled in the LOM plan have been demonstrated in past performance through the existing infrastructure over congruent years. Additional tailings capacity, not yet existing, will need to be constructed over the course of the LOM plan, at strategic times, when additional capacity is required. CC has advised that tailings are currently deposited in the Esperanza tailings storage facility (ETSF), with a further lift of the ETSF currently in the approvals stage, it is advancing plans for a new LOM tailings storage facility.
Costs	Costs are contained in the project financial model, which includes forecasts for operating costs and on-going capital expenditure. The latter includes sustaining capital as well as “growth” items. Significant capital cost items include: -

CRITERIA	COMMENTARY
	• Capitalised underground mine development • Ventilation upgrade and extension: - All lateral development for the ventilation upgrade and extension is included in the cost model based on design lengths. Vertical development, primary fans and vent doors are included in Capital, as well as establishment costs for the Cooling Plant. • Other mine infrastructure including ○ ladderway extensions, ○ replacement and extension of the fill reticulation system ○ pump stations ○ workshop upgrades • Light vehicle replacement • Underground mine instrumentation including stress testing, seismic monitoring and survey equipment • Processing plant expenditure including sustaining capital, upgrades, instrumentation, native copper handling, new SAG Mill motor and reline, • Tailings infrastructure including expansion of tailings storage facility capacity over the life of mine. • Water management structures • Rehabilitation costs Mine operating costs are based on: - • unit costs for the current mining contract schedule of rates applied to scheduled mining quantities as well as fixed monthly contract charges, and • paste fill costs for CC fill team and cement supply cost. • Cooling cost based on a leased Cooling Plant. Other site operating costs are based on current budget levels for personnel, consumables consumption, power and fuel consumption, equipment maintenance, repair and hire, travel and accommodation, training, licensing, contract costs, legal and consultant fees. Processing costs for chemicals and grinding media are based on consumption and process performance data to-date, consistent with forecast recoveries. Copper treatment and refining charges have been forecast by 29Metals. Allowances are included for payable percent and arsenic penalty based on current terms. The realisation costs in the CC financial model assume a target concentrate grade of 26% copper to the end of 2026 then 21.5% over the remainder of the life of mine. The USD/AUD exchange rate is based on forecasts by 29Metals of 0.75 in 2023, 0.74 in 2024, then 0.73 for the remaining life of mine. Transport charges are from analysis by 29Metals. The allowances for copper and silver royalty payments to the Queensland government are based on current royalty rates.
Revenue factors	CC assumes the following metal prices for its financial modelling:- • Copper price of US$3.70/lb and exchange rate of 0.75 USD/AUD for 2023, US$3.50/lb copper and 0.74 USD/AUD exchange rate for 2024, US$3.30/lb copper and 0.73 USD/AUD exchange rate for 2025 and onwards. • Silver price of US$23.00/oz for 2023, US$22.00/oz for 2024, and US$21.00/oz for 2025 and onwards. Assumptions for the realisation costs are outlined in the preceding section.
Market assessment	CC has confirmed that its concentrate is readily saleable:- • As the operation has matured, the concentrate copper grade has settled at around 24% to 26%. • The varying arsenic levels in future years do not pose any issue with regard to selling the concentrates. The concentrate market has a standard arsenic penalty structure to impose on concentrates with arsenic contained in them.
Economic	CC has prepared a spreadsheet financial model with cost, revenue and physical inputs as outlined in the Cost and Revenue sections above. It is a real model where it is assumed that the costs are constant, without adjustment for inflation. For internal purposes, in the financial model CC uses a life of mine schedule that includes Inferred Resources. However, a separate version of the financial model was prepared for economic analysis of a mine schedule based only on the estimated Ore Reserves. Any Inferred dilution within the Ore Reserves had its grade derated by 50%. This model, *Reserves Base 3.xlsb*, gives a positive $PV_{8\%}$ of A$48 million for Cash Flow Available for Debt Service, demonstrating the economic viability of the Ore Reserves.

CRITERIA	COMMENTARY
	Sensitivity analysis was run for this financial model, with the grade of the diluting Inferred Resources set to zero. This still gave positive[14] $PV_{8\%}$ of A$4 million for Cash Flow Available for Debt Service.
Social	CC confirms that it has strategies and resources in place to manage the social requirements of the site and that there are no material social issues or factors that will impact on the ability of the mine to produce the estimated reserve.
Other	CC has confirmed that there are no other material issues that impact the project and/or the estimation and classification of the Ore Reserves.
Classification	The Proved Ore Reserve is a sub-set of Measured Mineral Resource. The Probable Ore Reserve is derived from the Indicated Mineral Resource and for some of Esperanza South it is also derived from part of the Measured Mineral Resource. For Esperanza South, only the Measured Resource mined by the ore drives and Primary Draw is classified as Proved Ore Reserve. The remainder of the Esperanza South Ore Reserve is classified as Probable due to the lower level of confidence in ore tonnes and grade associated with cave draw. This downgrading represents 5% of the overall Probable Ore Reserve. The other Modifying Factors are generally considered to be at the high level of confidence commensurate with Proved Reserves. The exceptions are Esperanza Deeps, Pluto and Mammoth E and H Lenses as explained below. However, these areas have no Measured Resources, so there is no downgrading involved:- • At Esperanza Deeps, the stope design is not at the highest level of confidence due to lack of geotechnical data and the requirement for further work to address the risks associated with mining underneath the Esperanza Pit. • The Esperanza, Pluto and Mammoth E and H Lenses stope designs are also not all at a level of confidence commensurate with Proved Reserves. These factors limit the confidence level to a Probable Classification. As noted under Mining factors or assumptions, some Inferred Resource has been included in the estimated Ore Reserves as dilution within the extraction designs that target Measured and Indicated Resources. This diluting Inferred Resource and unclassified material represents 14% of the overall Reserves. Although the grade of the Inferred component has been halved, as part of the economic analysis, the financial model was re-evaluated with the grade of the Inferred component set to zero to approximate the impact should all of the diluting Inferred material carry no grade at all, and the NPV remains positive[8].
Audits or reviews	In April 2021, Behre Dolbear Australia (BDA) conducted an Independent Technical Review of the Capricorn Copper Project in conjunction with the 29Metals Initial Public Offering process. As part of this work, BDA reviewed the Ore Reserve estimate at that time, as at 1 December 2020, prepared by AMDAD in April 2021. BDA considered the Reserve parameters and modifying factors applied to the resource models to be appropriate for the cave and stope designs. Please note that BDA's report was prepared and provided to assist potential financiers or investors in assessment of technical issues and risks of the project and is not to be relied on for any other purpose. BDA's review does not constitute a technical audit.
Discussion of relative accuracy/ confidence	The resource models prepared for the Ore Reserve estimate do not include measures of relative accuracy other than what is implied by the resource classifications. No simulations or probabilistic modelling have been undertaken on the Ore Reserves that would provide a meaningful measure of relative accuracy. Apart from the exceptions described in the Classification section above, the Modifying Factors are generally considered to be at a high level of confidence as most are supported by feasibility level assessments and current operational data. Therefore, it is considered appropriate that the Measured and Indicated Resource classifications translate to Proved and Probable Ore Reserve classifications, apart from Esperanza South. Of the six deposits/areas contributing to the Reserves, the largest contributor is Esperanza South. Due to the nature of cave flow, the estimated production tonnes and grade for Esperanza South are considered to have significant uncertainty. The Ore Reserve estimate for Esperanza South is expected to be consistent with the overall tonnes and grade to be extracted over the life of this deposit, within the notional level of accuracy implied by the reserve categories. However, it is also expected that monthly production tonnes and grade could vary significantly from forecasts.

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[14] This was an assessment of the value of continuing to mine the Ore Reserves compared with not continuing to extract the Reserves. It ignored some closure costs, most of which would be incurred whether or not mining continued.

Appendix 6

Redhill Mineral Resources estimates – JORC Code Table 1 Disclosures

Section 1 Sampling Techniques and Data (Cristina, Cutters and Gorda)

CRITERIA	COMMENTARY
Sampling Techniques	• The Cutters Cove Project has been sampled through 2 recent short diamond drilling campaigns and surface cut channel sampling campaigns in 2013 to 2014. • Total of 17 diamond drill holes for 2,339.45m • Approximately 0.5 - 1m samples of 2-3kg were taken from diamond saw cut drill core whilst respecting geological boundaries • Approximately 2-3kg samples derived from diamond saw cut core trench samples perpendicular to vein strikes and respecting geological boundaries. • 181 Backs channel samples taken during 1970's mining operations. Width and grade recorded on Historic Plans. • Historic backs samples consist of 15cm by 2-3cm deep chipped channel samples traversing the vein suggesting sample weights of approximately 10-12kg.
Drilling Techniques	• 17 diamond HQ, NQ diamond core for 2,339.45m. • Core not oriented.
Sample recovery	• Core reconstituted, marked up and measured in all drilling campaigns. • Generally excellent (95-100%) • No relationship between recovery and grade was observed. Recoveries are not considered to have a material impact on resource estimation.
Logging	• Core geologically logged by experienced geologists over 2 campaigns. • Standard lithology codes used for interpretation. • RQD and recoveries included with lithological logs. • Logs loaded into excel spreadsheets and uploaded into access database. • Logging of the simple geology and vein mineralisation is not considered to have a material impact on resource estimation.
Sub-Sample techniques and sample preparation	• No record of historic (Pre 2010) sample preparation • Half diamond core split by diamond saw on 0.5 – 1.0m samples while respecting geological contacts. • Bagged and ticketed core delivered to ACME Laboratories in Santiago • Whole core crushed to 80% passing 2mm. • Crushed sample quartered to 500g and pulverized to pass 75 micron • Sub sampling is considered to be to industry standard for the recent drilling campaign. .
Quality of assay data and laboratory tests	• No record of laboratory tests for historic (Pre 2020) backs samples. • No record of QAQC procedures were available for historic sampling. • Recent samples Cu, Pb, Zn and Ag analysed by AAS after aqua regia digestion at ACME laboratories Santiago which is considered appropriate for base metal sulphide mineralisation.. • Au analysed by fire assay with AAS finish by ACME laboratories Santiago which is considered appropriate for gold mineralisation. • Some samples analysed by 32 element analysis by ICP_ES after Aqua Regia digestion. • QAQC of laboratories checked with Certified Reference Material inserted every 20th sample.
Verification of sampling and assaying	• No independent laboratory analyses completed. • Some verification of historic samples was completed with twinned recent channel samples. • No twinned holes were completed

CRITERIA	COMMENTARY
	• CRM inserted every 20th sample returned results within acceptable limits.. • Primary assay data was received electronically and stored by consultant geologist. • All electronic data uploaded to access database. • Historic data loaded onto spreadsheets and uploaded to Access database. • Data validation with Surpac software, basic statistical analysis and comparison with historic plans and sections. • Negative results for below detection limit assay data have been entered as detection limit. • Verification of sampling and assaying is not considered to be adequate for historic samples introducing uncertainty into resource estimation. Historic production and twinning of some samples support the inclusion of these samples in modelling and estimation. The relative uncertainty is taken into consideration in resource classification.
Location of data points	• All hole collar surveys by licensed surveyor. • All coordinates in WGS94 • RL's as MSL • Down hole surveys by downhole camera • Underground samples located from registered plans and sections (accuracy to +/-2m) • Topographic dtm created from lands department 10m contour maps adjusted for known survey points (e. g. drill collars).
Data Spacing and distribution	• Sample spacing approximately 5 x 10m around mine openings. • Drill spacing approximately 100 x 100m or worse below mine development. • Sample spacing is clustered around mine levels. • Drill spacing is considered to be appropriate for the estimation of Indicated to Inferred Mineral resources and is reflected in Resource classification. • Samples have been composited on vein intercepts for the resource estimation.
Orientation of data in relation to geological structure	• The majority of DDH have been drilled east-west sub-perpendicular to vein strike. • Channel samples have been taken sub-perpendicular to the vein strike • Drill hole orientation is not considered to have introduced any material sampling bias.
Sample Security	• Samples ticketed and bagged on site. • Bagged and sealed samples delivered by courier to ACME laboratories in Santiago. • All historic data captured and stored in customised access database • Data integrity validated with Surpac Software for EOH depth and sample overlaps. • Manual check by reviewing cross sections with the historic drafted sections and plans. • Basic statistical analysis supports data validation
Audits or Reviews	• No audits or reviews of sampling data and techniques completed.

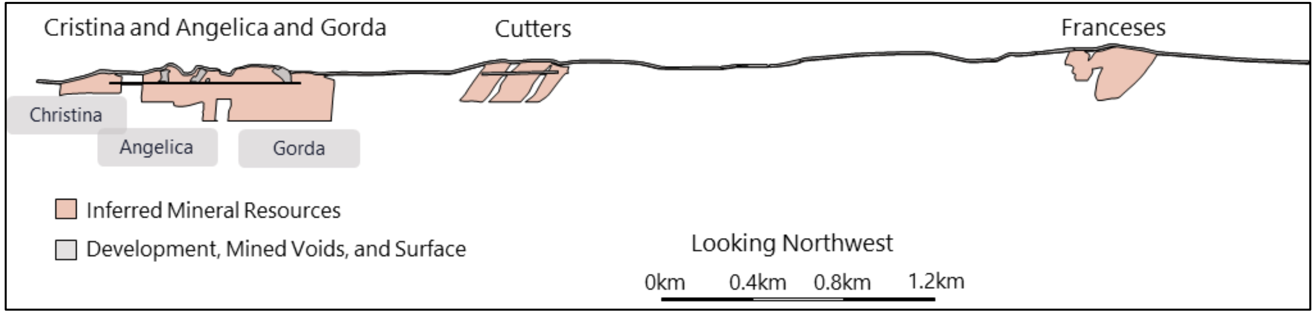
Section 1 Sampling Techniques and Data (Franceses and Angelica)

CRITERIA	COMMENTARY
Sampling Techniques	• The Angelica and Franceses deposits of the Cutters Cove Project have been sampled through a diamond drilling campaign and surface cut channel sampling campaigns in 2015 and 2016. • 9 diamond drill holes for 1,781.75m • 34 diamond saw cut channel samples of 5-10kg • Approximately 0.5 - 1m diamond core samples of 2-3kg were taken from diamond saw cut drill core whilst respecting geological boundaries. • Approximately 2-3kg per 1m sample derived from diamond saw cut core trench samples perpendicular to vein strikes. Samples generally 1m while respecting geological boundaries.
Drilling Techniques	• 9 HQ, NQ diamond core for 1,781.75m. • Core not oriented.
Sample recovery	• Core reconstituted, marked up and measured for recovery in all drilling campaigns • Generally excellent (95-100%) • No relationship between recovery and grade was observed. • Sample recovery is not considered to have a material effect on resource estimation.
Logging	• Core geologically logged on site by experienced geologists. • Standard lithology codes used for interpretation. • RQD and recoveries logged with lithology • Logs loaded into excel spreadsheets and uploaded into access database. • Logging of the simple geology and vein mineralisation is not considered to have a material impact on Resource modelling.
Sub-Sample techniques and sample preparation	• Half core split by diamond saw on 0.5 – 1.0m samples while respecting geological contacts. • Sub samples generally 2-3kg for drill core, 8-10 kg for diamond saw cut channel samples • Bagged core delivered to ALS Laboratories in Coquimbo • Whole core crushed to 70% passing 2mm • Crushed sample riffle split to 1kg and pulverized to 85% passing 75 microns.
Quality of assay data and laboratory tests	• 33 elements including Cu and Ag analysed by ICP-AES after aqua regia digestion at ALS laboratories Coquimbo which is considered appropriate for this style of mineralisation. • Au by 30g fire assay with AAS finish by ALS laboratories Coquimbo which is considered appropriate for this style of mineralisation. • QAQC analysis with Certified Reference Material inserted every 20th sample. • Acceptable levels of accuracy and precision established with the exception of two unexplained anomalies in early trench samples RH-70C and RH-76.
Verification of sampling and assaying	• No verification of results by independent sources completed. • No twinned holes or cut channels were completed • Primary assay data received electronically and stored by consultant geologist. • All electronic data uploaded to access database • Data validation with Surpac software, basic statistical analysis. • Negative results for below detection limit assay data has been entered as detection limit.
Location of data points	• All hole collar surveys by licensed surveyor. • All coordinates in WGS94

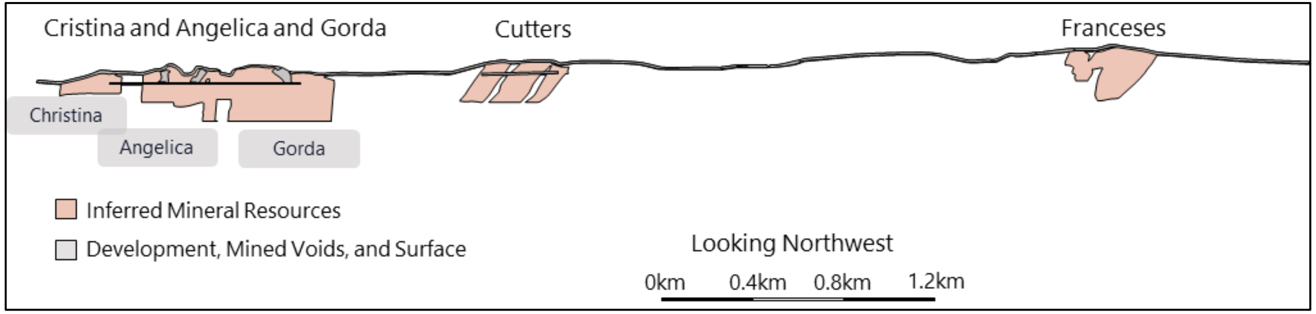
CRITERIA	COMMENTARY
	• RL's as MSL • Down hole surveys by downhole camera • Topographic dtm created by licensed surveyor and adjusted for known survey points (e.g. drill collars)
Data Spacing and distribution	• Data spacing limited by low drill hole intercept numbers generally 100m x 100m or worse. • Surface samples clustered on topographic surface • Drill spacing is considered to be appropriate for the estimation of Inferred Mineral resources only. • Samples have been composited on 1m lengths for the resource estimation.
Orientation of data in relation to geological structure	• The majority of DDH have been drilled east-west sub-perpendicular to vein strike. • Channel samples have been taken sub-perpendicular to the vein strike • Drill hole and channel sample orientation is not considered to have introduced any material sampling bias.
Sample Security	• Samples ticketed and bagged on site. • Delivered by RHM personnel, then courier to ALS laboratories in Coquimbo. • Data integrity validated with Surpac Software for EOH depth and sample overlaps. • Basic statistical analysis supports data validation
Audits or Reviews	• No audits or reviews of sampling data and techniques completed.

Section 2 Reporting of Exploration Results (Cristina, Cutters and Gorda)

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• RHM hold 65 exploration concessions in the Magellanes district of Chile.
Exploration done by other parties	• Cutters Cove is a historic mining centre that operated from the early 1900's to the 1970's. • The majority of the mining occurred on the site in the early 1970's until closure in 1975. • operations consisted of a 50tpa crushing plant supplying two 8tph ball mills and a 400tpd flotation plant. • Over the 2 years of operations, 211,754 tonnes of ore were extracted grading 1.72% Cu from a reserve of 237,654 @ 3.24% Cu. • No previous modern exploration in the district apart from reconnaissance work.
Geology	• Geology dominated by 2 allochthonous thrust slices striking NNW and dipping approximately 45º SSW. • Older Paleozoic sediments thrust over Jurassic rhyolitic volcaniclastics. • Mineralisation consists of late stage mesothermal and epithermal quartz-base metal-precious metal veins with associated sheeted veining and disseminated base metal sulphides.
Drill Hole Information	• Not applicable. This announcement refers to the Resource Estimation is not a report on Exploration Results.
Data aggregation methods	• Diamond drill intercepts were cut on 1m basis while respecting geological contacts with minimum sample widths of 0.5m. • Mineralized domains are delineated from geological logs and assay data with generally hard boundaries.

	• Mineralised zones were reported as length weighted intercepts. • No metal equivalents were used.
Relationship between mineralisation widths and intercept lengths	• Most drill holes have been drilled to intercept the deposit at high angles to best represent true widths of the mineralisation. • Channel samples were taken perpendicular to the strike of the deposit.
Diagrams	 **Redhill Mineral Resources outlines at May 16 2021. No material changes to the Mineral Resources estimates have occurred since 16 May 2021**
Balanced reporting	• Not applicable. This report is a Mineral Resource Estimation and does not contain any exploration Results.
Other substantive exploration data	• No bulk samples or diamond drill core have been selected for metallurgical test work. • Historic mining operation utilised standard sulphide flotation after crushing and grinding to produce copper and precious metal concentrates.
Further work	• Further resource extension and infill drilling is required to improve resource model and classification. • Further local regional exploration is required to increase the resource base.

Section 2 Reporting of Exploration Results (Franceses and Angelica)

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• RHM hold 65 exploration concessions in the Magellanes district of Chile.
Exploration done by other parties	• Cutters Cove is a historic mining centre that operated from the early 1900's to the 1970's. • The majority of the mining occurred on the site in the early 1970's until closure in 1975. • operations consisted of a 50tpa crushing plant supplying two 8tph ball mills and a 400tpd flotation plant. • Over the 2 years of operations, 211,754 tonnes of ore were extracted grading 1.72% Cu from a reserve of 237,654 @ 3.24% Cu. • No previous modern exploration in the district apart from reconnaissance work.
Geology	• Geology dominated by 2 allochthonous thrust slices striking NNW and dipping approximately 45º SSW. • Older Paleozoic sediments thrust over Jurassic rhyolitic volcaniclastics. • Mineralisation consists of late stage mesothermal and epithermal quartz-base metal-precious metal veins with associated sheeted veining and disseminated base metal sulphides.
Drill Hole Information	• Not applicable. This announcement refers to the Resource Estimation is not a report on Exploration Results.
Data aggregation methods	• Diamond drill intercepts were cut on 1m basis while respecting geological contacts. • Mineralized domains are delineated from geological logs and assay data with generally hard boundaries. • Mineralised zones were reported as length weighted intercepts. • No metal equivalents were used.
Relationship between mineralisation widths and intercept lengths	• Most drill holes have been drilled to intercept the deposit at high angles to best represent true widths of the mineralisation. • Channel samples were taken perpendicular to the strike of the deposit. .
Diagrams	 **Redhill Mineral Resources outlines at 16 May 2016. No material changes to the Mineral Resources estimates have occurred since 16 May 2016**
Balanced reporting	• Not applicable. This report is a Mineral Resource Estimation and does not contain any exploration Results.

Other substantive exploration data	• No bulk samples or diamond drill core have been selected for metallurgical test work. • Historic operation utilised standard sulphide flotation.
Further work	• Further resource extension and infill drilling is required to improve resource model and classification. • Further local regional exploration is required to increase the resource base.

Section 3 Estimation and Reporting of Mineral Resources (Cristina, Cutters and Gorda)

CRITERIA	COMMENTARY
Database Integrity	• All data captured and stored in customised Access database by Redhill. • Drop down menu validation in Access. • Digital data uploaded from laboratory reports to Access database. • Data integrity validated with Surpac Software for EOH depth and sample overlaps and transcription errors. • Data validated against historic plans and sections. • Numerous errors in data location, particularly underground plans and samples fixed in data base. • Negatives in database converted to half the detection limit. • The reliance on historic data and poorly located plans has introduced some uncertainty into the estimation and is reflected in the Resource Classification.
Site Visits	• Site visit conducted from 29th January to 5th February 2014 to validate location, collars, drill core, Core processing facilities, historic workings, sampling methods, mineralisation styles and exploration potential.
Geological Interpretation	• High confidence in the simple geological model. Minor disruption by brittle faulting and low grade zones in mineralised structures will be difficult to predict away from detailed maps and sampling. • Historic backs maps and channel samples used for geological domaining. • No alternative geological interpretations were attempted. • Geology model used for mineralised domain modelling. • Brittle faulting and low grade quartz zones effect grade and location of mineralisation.
Dimensions	• Cristina Vein 1.3km by 200m with a NNW strike and steep west dip (80o). Vein width average 2.5m. • Cutter Vein 400m strike by 200m depth with a NNW and 45o west dip. Vein width averages 1.8m. • Gorda Vein 500m NW strike, 80m depth with 5m avg width.
Estimation and Modelling techniques	• Block modelled estimation completed with Surpac^{TM} software licensed to Tim Callaghan. • Wire-framed solid models created from level plans, backs maps and vein width composited sample data • Solid models snapped to drill holes • No Minimum mining width • Internal dilution not restricted • Data composited on vein widths including Cu, Au, and Ag • Top cutting based on CV and grade histograms. Au cut to 1.46g/t for the Cristina Vein and Cu cut to 2.3%, Au cut to 8.3g/t for Gorda vein • Excellent correlation between Cu and Au grades • Cristina Block Model extent of 4085150N to 4086700N, 669900E to 670750E, -100mRL to 100mRL. Block dimensions of 10mN x 10mE x 10mRL block size with sub-celling to 2.5m in the y and z 1.25m in the x directions.

CRITERIA	COMMENTARY
	• Cutter Block Model extents 4084700N to 4085300n, 669900E to 670750E, -100 to 100mRL. Block dimensions of 10mN x 10mE x 10mRL block size with sub-celling to 2.5m in the y and 1.25m in the x and z directions. • Variogram models constructed in y direction only due to sparse and poorly located data. Well constructed models with moderate to low nugget effect and long range of 35 to 60m to sill of the Cristina and Cutters Veins respectively • Search ellipse set at 200m spherical range to ensure all blocks populated with no anisotropy • Inverse distance squared estimated model constrained by geology solid model • Block grades validated visually against input data • Good correlation with previous polygonal estimations • Acceptable correlation of depleted model with historic production
Moisture	• The estimate is based on a dry tonnage basis
Cut-off Parameters	• No cut-off parameters applied for this estimation. Results are reported on the whole vein.
Mining Assumptions	• Underground mining will involve conventional decline accessed 2-300ktpa operation. • Underground long hole stoping, Avoca method, cut and fill or shrink stopes
Metallurgical assumptions	• A standard crushing grinding circuit followed by sulphide floatation is likely given historic processing records. • Historic production suggests an 11 to 1 upgrade to produce a 25% Cu concentrate. • Historic recoveries not cited but typical sulphide float of 80% assumed.
Environmental assumptions	• No formal environmental studies have been conducted at this stage. Historic mining activities have left minor environmental legacies including minor areas of acid rock drainage. Tailings storage facilities, reagent storage and waste rock storage facilities will need to be addressed.
Bulk Density	• 49 Bulk density determinations by ACME laboratories in Phase 1 program by unspecified methods. • Systematic Bulk Density measurements were made on site during the second phase of drilling. A total of 141 samples were measured using the Archimedes method using calibrated digital scales. • Determinations made of un-weathered core with no appreciable voids or porosity. • Mean SG of 2.8 assigned to Cristina from 7 determinations, Mean SG of 2.7 assigned to Cutter Vein from determinations, mean SG of 2.9 assigned to Gorda Vein from 22 determinations, mean SG of 2.7 assigned to waste areas from 113 determinations
Classification	• Confidence in the geological model and data quality is considered to be sufficient for Mineral Resource located within 60m of sample data to be classified as Indicated Resource. • Mineral Resource located further than 60m from sample data or Sill levels is classified as Inferred Resource as there is insufficient data to support the geological model and grade to ensure reserve definition. • The resource estimate appropriately reflects the views of the Competent Person
Audits or Reviews	• No audits or reviews have been completed for this estimation
Discussion of relative accuracy/confidence	• The geological model and data quality within 30-60m of the sill drives is well understood and modelled. The effects of localised brittle faulting and mineralised shoot development is difficult to predict beyond detailed mapped areas but is expected to be similar to that observed in sill drives. • There is reasonable confidence in the global tonnage estimation as the geology is reasonable well constrained and simple. • Although grade estimation is based on a limited number of composites clustered along sill drives, the variogram models suggest mineralisation is relatively continuous providing confidence in the grade interpolation of Cu.

Section 3 Estimation and Reporting of Mineral Resources (Franceses and Angelica)

CRITERIA	COMMENTARY
Database Integrity	• All data captured and stored in customised Access database by Redhill. • Drop down menu validation in Access. • Digital data uploaded from laboratory reports to Access database. • Data integrity validated with Surpac Software for EOH depth and sample overlaps and transcription errors. • Data validated against historic plans and sections. • Numerous errors in data location, particularly underground plans and samples fixed in data base. • Negatives in database converted to half the detection limit.
Site Visits	• Site visit conducted from 29th January to 5th February 2014 to validate location, collars, drill core, Core processing facilities, historic workings, sampling methods, mineralisation styles and exploration potential. A second visit was made in June 2016 to Punta Arenas where drill core was reviewed.
Geological Interpretation	• High confidence in the geological model. Simple geology and mineralisation style • No alternative geological interpretations were attempted. • Geology model used for mineralised domain modelling. • Mineralised trends defined from drilling, trenching and field mapping. • Similar trends and style to known mineralisation
Dimensions	• The Franceses Fault consists of two subparallel tabular fissures of mineralisation extending 240m north south and dipping 50° west to 240m depth. Domain widths varied between 2 and 12 metres. • Franceses sheeted consist of eleven separate veins striking north-south and dip west at 50-60o. Most veins defined by single intercepts. • Angelica Fault consists of two separate tabular sheets of fault bound mineralisation separated by approximately 130m of felsic volcaniclastic sediments. Lower domain extends along a strike of 330o for 250m and dips southwest at -60o to a depth of 150m. The western domain trends 20o for a distance of 130m and dips west at -70o to a depth of 90m. The Angelica domains are poorly defined by two diamond drillholes and five surface trench samples.
Estimation and Modelling techniques	• Rotated block modelled estimation completed with Surpac^{TM} software licensed to Tim Callaghan. • Wire-framed solid models created from drillholes, trench samples and geological sections on sectional interpretation. • Solid models snapped to drill holes • Minimum mining width of 2m @ 0.4% Cu • Internal dilution restricted to 2m with allowances for geological continuity • Data composited on 1m intervals including Cu, Ag and Au • No top cutting applied. • Good correlation between Cu, Ag and Au. • Insufficient data and data distribution for anisotropic variogram modelling. Downhole variogram models well-constructed with low nugget effect (20%) and short range of 5 to 10m to sill for major geological domains. • Search ellipse set at 120m spherical range to ensure all blocks populated • Inverse distance squared model estimated model constrained by geology solid model • Block grades validated visually against input data
Moisture	• The estimate based on a dry tonnage basis

CRITERIA	COMMENTARY
Cut-off Parameters	• Cut off grades have been based on the natural break of mineralised domains.
Mining Assumptions	• Amenable to narrow vein long hole open stoping Avoca method, shrink stoping or cut and fill mining. • Typical ore loss and dilution factors for this type of mining are anticipated.
Metallurgical assumptions	• A standard crushing grinding circuit followed by sulphide flotation is likely given historic processing records. • Historic production suggests an 11 to 1 upgrade to produce a 25% Cu concentrate. • Historic recoveries not cited but typical sulphide float of 80% assumed.
Environmental assumptions	• No formal environmental studies have been conducted at this stage. Historic mining activities have left minor environmental legacies including minor areas of acid rock drainage. Tailings storage facilities, reagent storage and waste rock storage facilities will need to be addressed.
Bulk Density	• Bulk density derived from diamond drill core using the Archimedes method. • Determinations made of un-weathered core with no appreciable voids or porosity. • Grade-density relationship used for bulk density determinations of mineralised zones: SG = (Cu% +8.6648)/3.5485 • Waste rock assigned bulk density of 2.7.
Classification	• Confidence in the geological model, data quality and interpolation is considered to be sufficient for the Mineral Resource to be classified as Inferred Resource only. • Data quality is to industry standards. • Data distribution and density is limited restricting confidence in the estimation. • The resource classification appropriately reflects the views of the Competent Person
Audits or Reviews	• No audits or reviews have been completed for this estimation
Discussion of relative accuracy/confidence	• The geological model is relatively simple and analogous to known mineralisation in the locality. • Data distribution is poor restricting confidence in the estimate. • There is moderate confidence in the global tonnage estimation as the geology is reasonable well constrained and simple. • Grade estimation is based on a limited number of samples and many domains have single intercepts restricting confidence.