



Initial pit optimisation delivers A\$28m NPV for Big One



Highlights

- The preliminary pit optimisation study – completed by Perth-based Entech Group¹ – for the Big One Deposit, which is part of the NWQ Copper Project, delivered a \$28m Net Present Value (NPV)
- Drilling down, the study focused on the near-surface component of known mineralisation at the Big One Deposit (Mineral Resource Estimate: 2.1Mt @ 1.1% Cu for 21,886t copper metal – inferred)² and provides significant confidence a standalone mining operation can potentially be developed
- Key findings indicate an initially optimised pit shell could potentially deliver up to 6,266t copper (head grade: 1.42% Cu), 4,362oz silver (head grade: 0.31 g/t Ag) and 1,469t cobalt (head grade: 0.33% Co)
- As known mineralisation is open south-west and down dip from the pit shell, there is significant potential to build on the preliminary findings and progress a mining license once a strategic development partner is secured
- Further, there are over 20 incremental copper, gold, lead, and zinc prospects across the NWQ Copper Project that are highly prospective for copper mineralisation which potentially provide the foundations for developing a series of satellite deposits

Castillo Copper's Chairman Ged Hall commented: *“The Board is delighted with the findings from Entech’s preliminary pit optimisation study, as it provides significant confidence a standalone mining operation can potentially be developed at Big One Deposit. More importantly, the Board believes the study’s insights will be key to securing a strategic partner to progress critical development work moving forward.”*

PIT OPTIMISATION: A\$28M NPV

Castillo Copper Limited's ("CCZ") Board has received a preliminary pit optimisation study on Big One Deposit from Entech Group¹ which produced a A\$28m NPV (Figure 1). The focus of the study[^] was on the near-surface component of known mineralisation based on the Inferred MRE at 2.1Mt @ 1.1% Cu for 21,886t² copper metal.

FIGURE 1: OPTIMISATION OUTCOMES – ULTIMATE PIT

Mining Diluted & Recovered Material	Units	Total/Av
Tonnes		
Waste	t	567,427
Ore	t	441,998
Total	t	1,009,425
Strip ratio	1:n	1.3
Grade		
Copper	%	1.42
Silver	g/t	0.31
Cobalt	%	0.33
Metal		
Copper	t	6,266
Silver	oz	4,362
Cobalt	t	1,469
SUMMARY		
Cost		
Mining	\$m	4.3
Processing	\$m	14.1
Rate		
Mining	\$/t ore	9.78
Processing	\$/t ore	31.8
In situ Physicals		
Tonnes	t	441,998
Cu Grade	%	1.42
Ag Grade	g/t	0.31
Co Grade	%	0.33

Source: Entech Group

^ Cautionary Statement:

The study referred to in this ASX announcement is conceptual in nature. It is a preliminary technical study to assess the potential for open pit base and precious metal mining and to assist in determining the likely size and depth of open pit mining. It is based on only JORC 2012 Inferred Resources. The study is preliminary in nature and not intended as a Feasibility Study. It should be understood by the reader that this announcement reports on preliminary outcomes of early-stage open pit optimisation works on the Big One deposit. It does not account for the capital costs of infrastructure such as power stations, access roads, dewatering, processing infrastructure, offices, camps etc, nor considers hydrogeology or geotechnical issues.

KEY FINDINGS

As shown in Figure 1 above, initially the optimised pit shell could potentially deliver up to up to 6,266t copper (head grade: 1.42% Cu), 4,362oz silver (head grade: 0.31 g/t Ag) and 1,469t cobalt (head grade: 0.33% Co). However, this is only a starting point, as with known mineralisation open south-west and down dip it can potentially be built upon with further development work.

The Board is optimistic these initial findings provide significant confidence a standalone mining operation can eventually be developed once a strategic development partner is secured. Incrementally, there are circa 20 known prospects across the NWQ Copper Project highly prospective for copper, gold, lead, and zinc mineralisation, which potentially provide the foundations for developing a series of satellite deposits. (Note: The NWQ Copper Project has secured “project status” with the Queensland Department of Resources (PROJ-0221) which comprises EPMs 26462, 26513, 26525, 26574, and 27440.)

METHODOLGY

In undertaking the open pit optimisation study, CCZ and Entech agreed the input assumptions summarised in Figures 2, 3 and 4.

FIGURE 2: OPTIMISATION INPUT ASSUMPTIONS

PROCESSING COSTS & ASSUMPTIONS			
Commodity Price:		A\$/t	13,024
Commodity Price:		A\$/g	1.22
Commodity Price:		A\$/t	51,515
Commodity Price - calculated:		A\$/t (including Royalty & Payability)	10,158
Commodity Price - calculated:		A\$/g (including Royalty & Payability)	0.59
Commodity Price - calculated:		A\$/t (including Royalty & Payability)	25,114
State Royalty:			0
Processing Rate:		tpa	500,000
Processing Cost Oxide:		\$/t ore	30
Processing Cost Fresh:		\$/t ore	30
Grade Control Costs:		\$/t ore	30
Concentrate Grade:		Cu	15%
Moisture Content:			8%
Concentrate Costs:		\$/wmt	15
Annual Discounting:			
Payability (Cu)			80%
Payability (Ag)			50%
Payability (Co)			50%
Processing recovery:			
	Cu Oxide		70%
	Cu Fresh		88%
	Ag Oxide		50%
	AG Fresh		50%
	Co Oxide		95%
	Co Fresh		95%

Source: Entech Group

FIGURE 3: LOAD AND HAUL RATES PER BENCH

Unit Load & Haul Rates:		Ore	Waste
Bench 1	\$/bcm	9.23	8.58
Bench 2	\$/bcm	9.40	8.60
Bench 3	\$/bcm	9.57	8.62
Bench 4	\$/bcm	9.75	8.95
Bench 5	\$/bcm	9.92	9.03
Bench 6	\$/bcm	10.10	9.48
Bench 7	\$/bcm	10.27	9.49
Bench 8	\$/bcm	10.45	9.53
Bench 9	\$/bcm	10.62	9.64
Bench 10	\$/bcm	10.80	9.81
Bench 11	\$/bcm	10.97	10.04
Bench 12	\$/bcm	11.15	10.08
Bench 13	\$/bcm	11.32	10.12
Bench 14	\$/bcm	11.40	10.24
Bench 15	\$/bcm	11.44	10.24
Bench 16	\$/bcm	11.45	10.42
Bench 17	\$/bcm	11.47	10.43
Bench 18	\$/bcm	11.86	10.86
Bench 19	\$/bcm	11.92	10.88
Bench 20	\$/bcm	11.95	10.91
Bench 21	\$/bcm	11.89	10.94
Bench 22	\$/bcm	12.06	10.99
Bench 23	\$/bcm	12.05	11.01
Bench 24	\$/bcm	12.05	11.04
Bench 25+	\$/bcm	12.16	11.09

Source: Entech Group

FIGURE 4: DRILL AND BLAST RATES PER MATERIAL TYPE

Unit Drill & Blast Rates:		Ore	Waste
Bench 1 – Oxide	\$/bcm	9.23	8.58
Bench 2 - Fresh	\$/bcm	9.40	8.60

Source: Entech Group

Items considered part of the open pit optimisation include the following:

- Load and haul rates per bench RL (\$/bcm mined).
- Drill and blast rates per material type (\$/bcm mined).
- Processing costs (\$/t ore):
 - ❖ This included coast allocations for grade control.
- Processing (metallurgical) recoveries (%).
- Metal payabilities (%).

Items that were not considered to be a part of the open pit optimisation include the following:

- Upfront Capital:
 - ❖ Power Stations, Access Roads, Dewatering, Processing Infrastructure, Offices/Camps etc.
- Hydrology (No studies available).
- Geotechnical Guidance (No studies available).

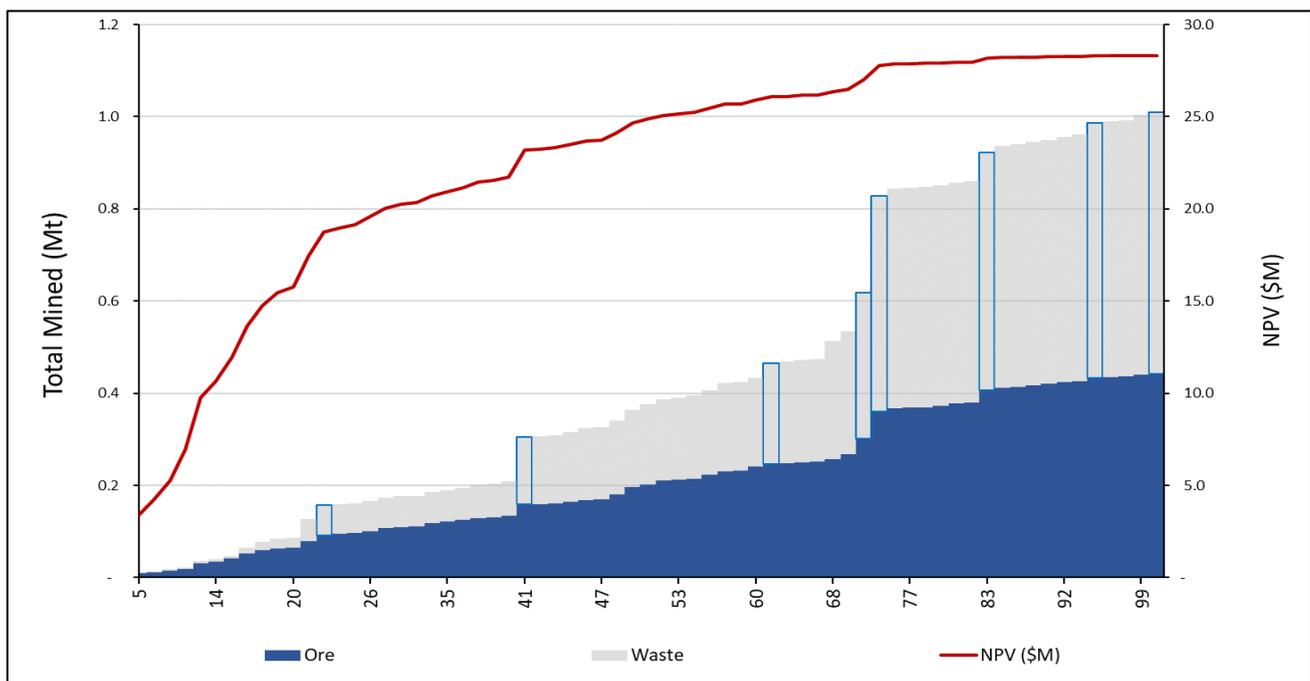
RESULTS

Open pit optimisation is a process of selecting the most profitable open pit shell that matches a group's risk profile. Risk can be managed using a variety of methods, such as using a conservative commodity price, increasing the profit margin or by selecting a smaller pit than the one that generates the maximum value.

Despite optimisation results generating larger NPV pit shells, by applying this selection criterion, so long as a sufficient mill feed can be maintained, then a more generous monthly net cash flow can be maintained.

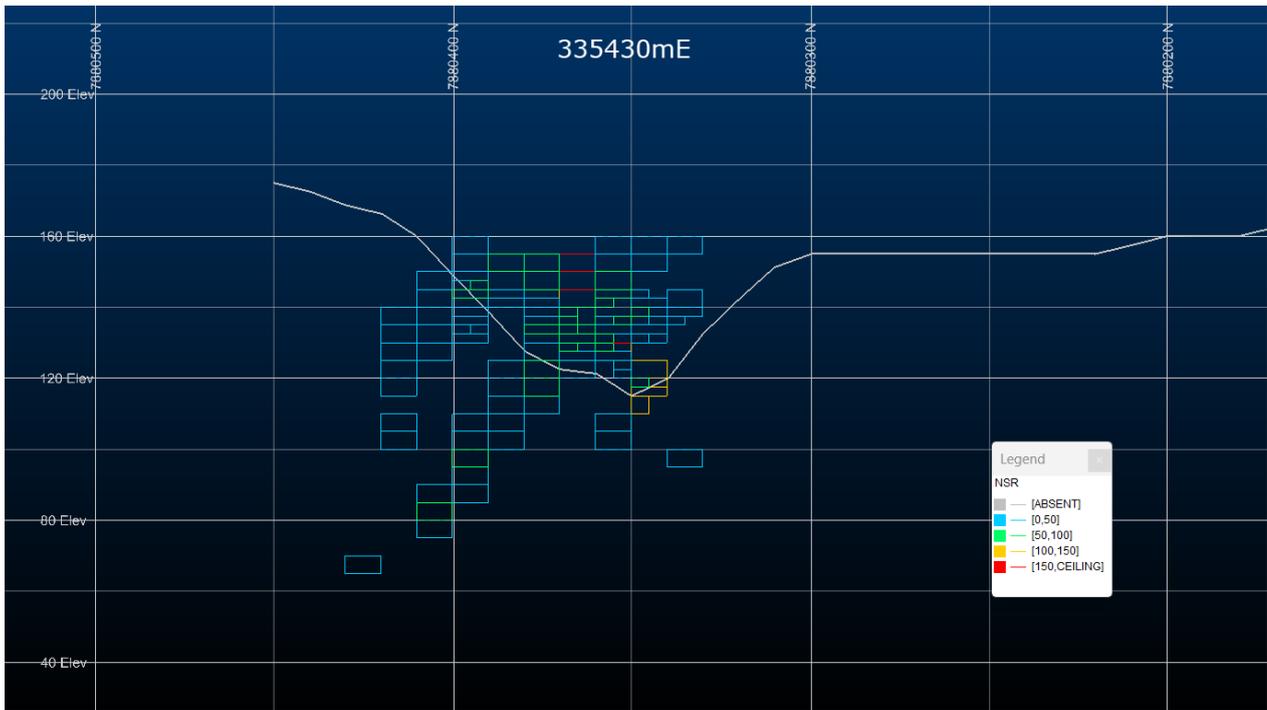
Figure 5 graphically illustrates the outcomes for the nested pit shells resulting from the assessment of the open pit optimisation (see Figures 6 and 7 for a cross-section and plan view). The open pit optimisation was run at an input copper price of A\$13,024/t.

FIGURE 5: OPTIMISATION OUTPUTS



Source: Entech Group

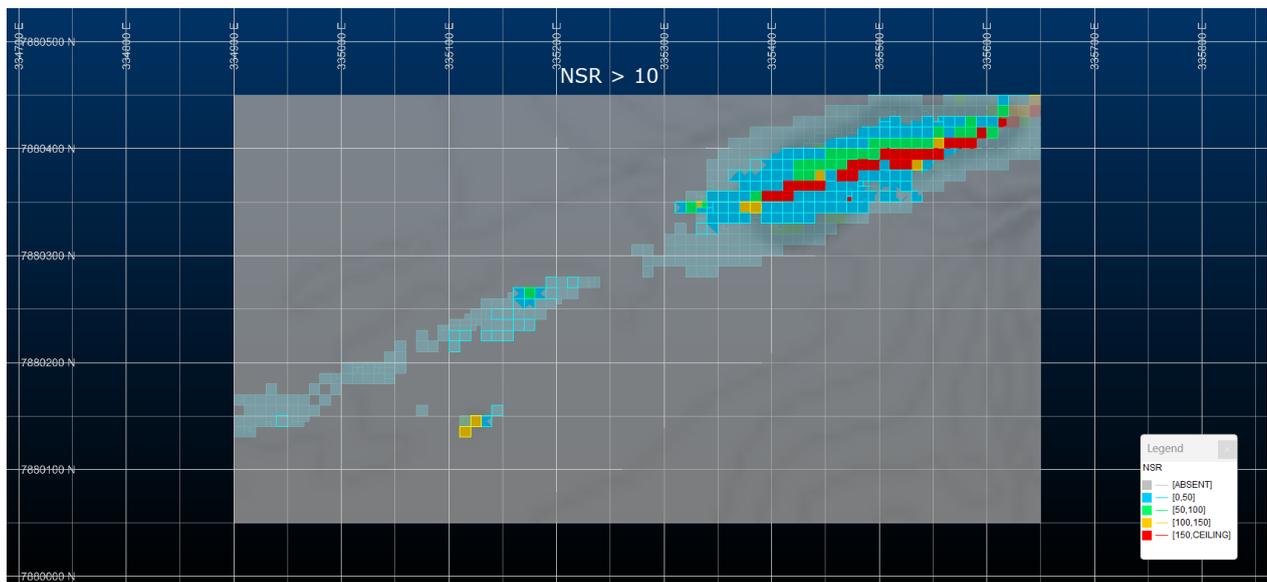
FIGURE 6: SECTION THROUGH RF 1 SHELL FOR THE BIG ONE OPTIMISATION



Note: Resource model filtered to NSR>10

Source: Entech Group

FIGURE 7: PLANVIEW OF RF 1 SHELL FOR THE BIG ONE OPTIMISATION



Note: Resource model filtered to NSR>10

Source: Entech Group

The Board of Castillo Copper Limited authorised the release of this announcement to the ASX.

**Dr Dennis Jensen
Managing Director**

Competent Person's Statement

The information in this report that relates to Exploration Results for "BHA Project, East Zone" is based on information compiled or reviewed by Mr Mark Biggs. Mr Biggs is a director of ROM Resources, a company which is a shareholder of Castillo Copper Limited. ROM Resources provides ad hoc geological consultancy services to Castillo Copper Limited. Mr Biggs is a member of the Australian Institute of Mining and Metallurgy (member #107188) and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, and Mineral Resources. Mr Biggs holds an AusIMM Online Course Certificate in 2012 JORC Code Reporting. Further, Mr Biggs consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

References

- 1) Entech Mining. Available at: <https://entechmining.com.au>
- 2) CCZ ASX Release – 28 February 2022

About Castillo Copper

Castillo Copper Limited is an Australian-based explorer primarily focused on copper across Australia and Zambia. The group is embarking on a strategic transformation to morph into a mid-tier copper group underpinned by its core projects:

A large footprint in the in the Mt Isa copper-belt district, north-west Queensland, which delivers significant exploration upside through having several high-grade targets and a sizeable untested anomaly within its boundaries in a copper rich region.

Four high-quality prospective assets across Zambia's copper-belt which is the second largest copper producer in Africa.

A large tenure footprint proximal to Broken Hill's world-class deposit that is prospective for cobalt-zinc-silver-lead-copper-gold and platinoids.

Cangai Copper Mine in northern New South Wales, which is one of Australia's highest grading historic copper mines.

The group is listed on the LSE and ASX under the ticker "CCZ."

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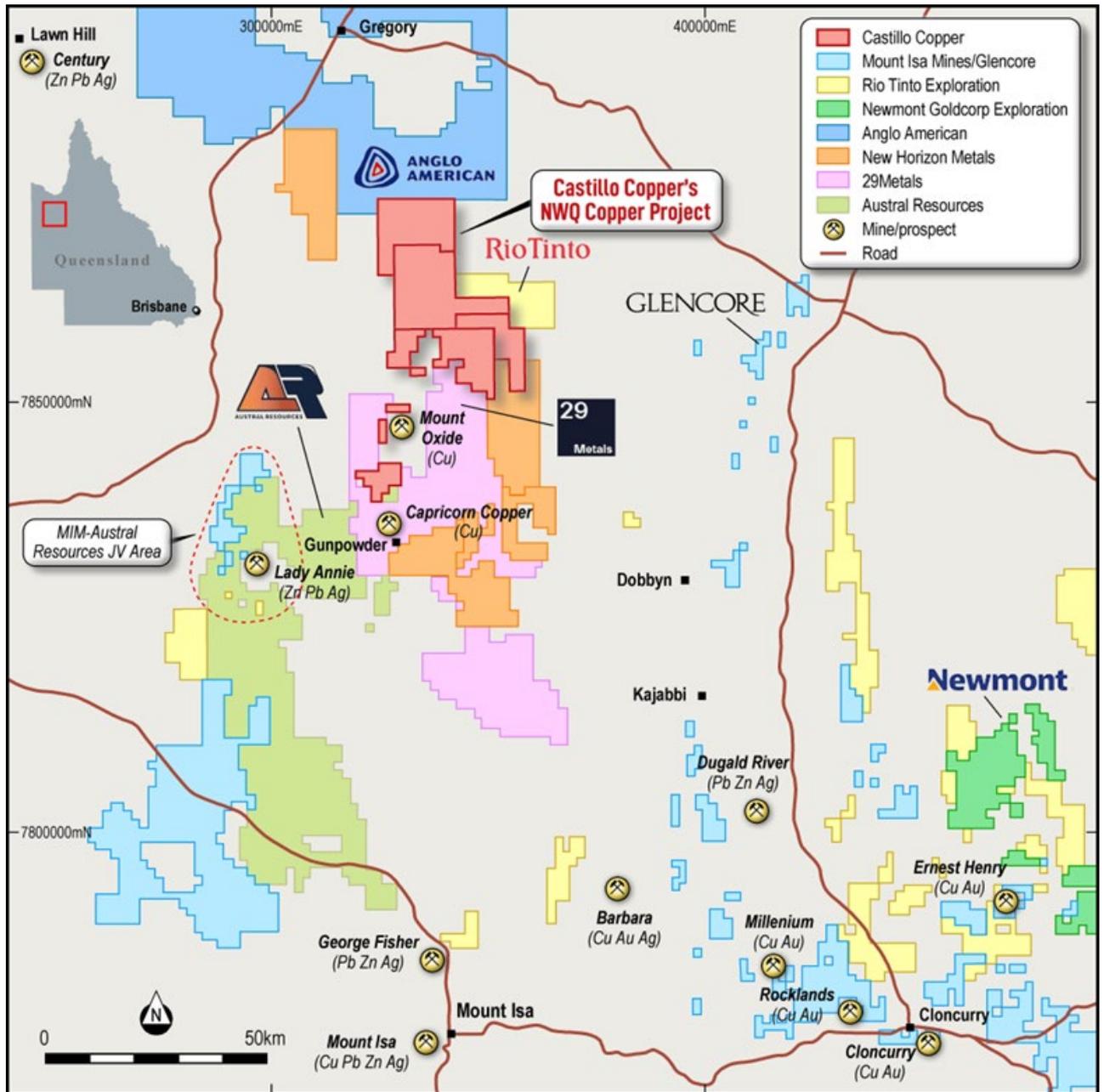
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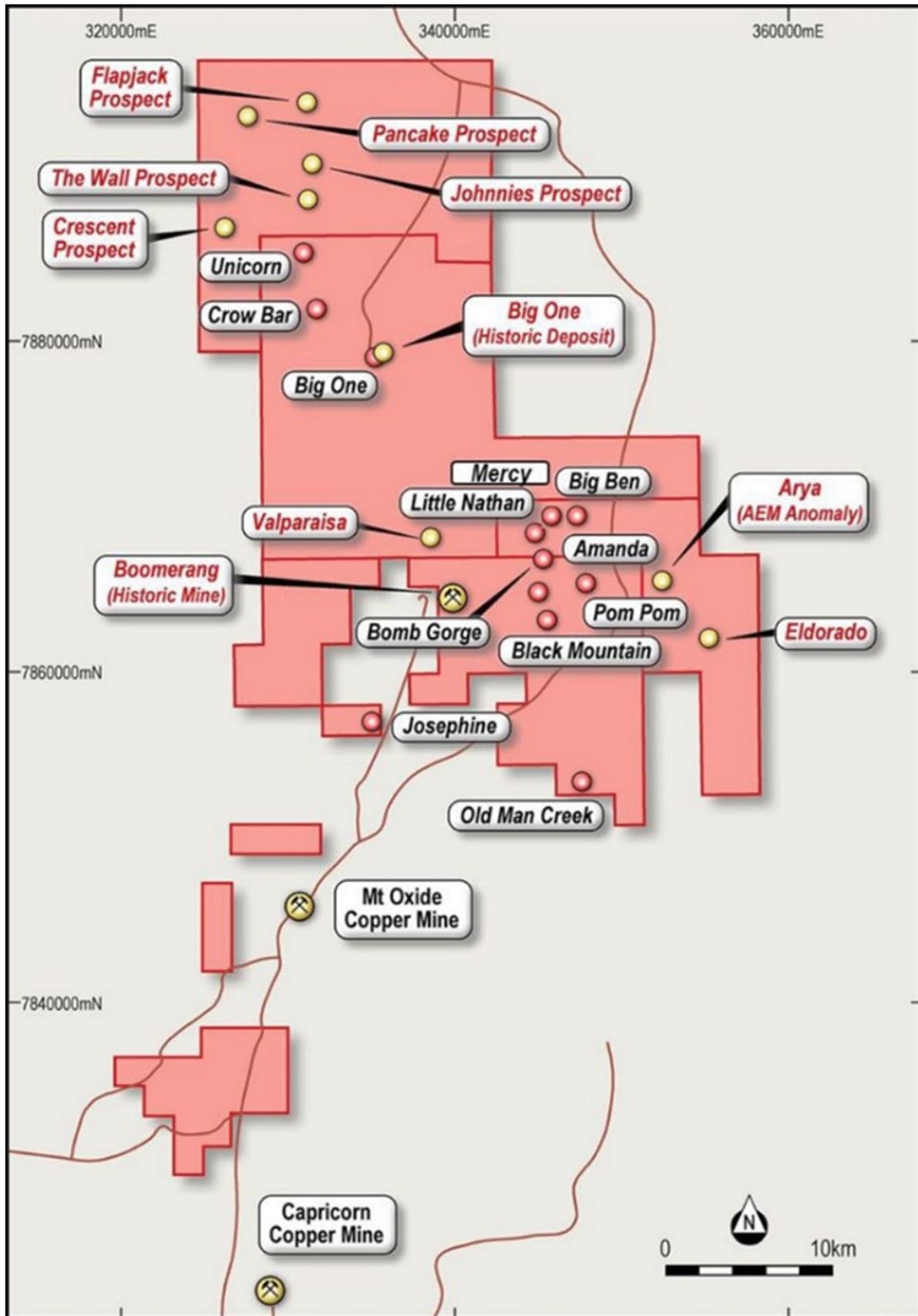
APPENDIX A: NWQ COPPER PROJECT

FIGURE A1 NWQ COPPER PROJECT RELATIVE TO PEERS



Source: CCZ geology team

FIGURE A2: PROSPECTS WITHIN NWQ COPPER PROSPECT



Source: CCZ geology team