Havilah Resources
A New Mining Force in South Australia

31 August 2021

HAVILAH'S SOUTH AUSTRALIAN COPPER PROJECTS

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Havilah Resources Limited (**Havilah**) is pleased to announce a presentation on its South Australian copper projects to be released at the Copper To The World Conference being held in Adelaide today.

Havilah's 1.3 million tonne JORC copper resource is located in low sovereign risk, mining friendly South Australia, where Havilah is busy exploring and developing **Australia's Next Great Copper Province** in the Curnamona Craton.

The presentation highlights the progress that Havilah is making in advancing its West Kalkaroo oxidised ore open pit gold mine as the first step in developing the much larger open pit Kalkaroo copper-gold sulphide mining operation.

Exploration is continuing in the Mutooroo project area with the objective of expanding open pit copper-cobalt-gold resources as part of a pre-feasibility study.

This release has been authorised on behalf of the Havilah Resources Board by Mr Simon Gray.

For further information visit www.havilah-resources.com.au
Contact: Dr Chris Giles, Technical Director, on (08) 7111 3627 or email: info@havilah-resources.com.au

Registered Office: 107 Rundle Street, Kent Town, SA 5067

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Havilah Resources

A New Mining Force in South Australia

DEVELOPING AUSTRALIA'S NEXT GREAT COPPER PROVINCE

HIGHLY LEVERAGED TO COPPER

AN ADVANCED STAGE 1.3 MILLION TONNE COPPER MINERALS PORTFOLIO

Low Sovereign Risk, Mining Friendly South Australia

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HAVILAH TICKS KEY INVESTMENT BOXES FOR A QUALITY COPPER STOCK

1.3 M
Tonnes of Copper

3.2 M
Ounces of Gold

43.4 K
Tonnes of Cobalt

HIGH QUALITY MINERAL PROJECTS

1.3 million tonnes of JORC copper resources, contained in two advanced projects with substantial upside (refer to JORC table at end of presentation).

ASSOCIATED CONFLICT-FREE, STRATEGIC AND CRITICAL MINERALS

Including cobalt, molybdenum and potentially rare earth elements (REE).

EXPERIENCED TECHNICAL TEAM

Havilah's technical team has an exceptional track record of exploration success (including discovery of 8 JORC Mineral Resources) and has developed and operated the Portia gold mine. Havilah operates its own drilling crew, which has been a key to its exploration history success.

LOW SOVEREIGN RISK SOUTH AUSTRALIA

An Ethical, Non-Conflict Source of Copper and Other Metals

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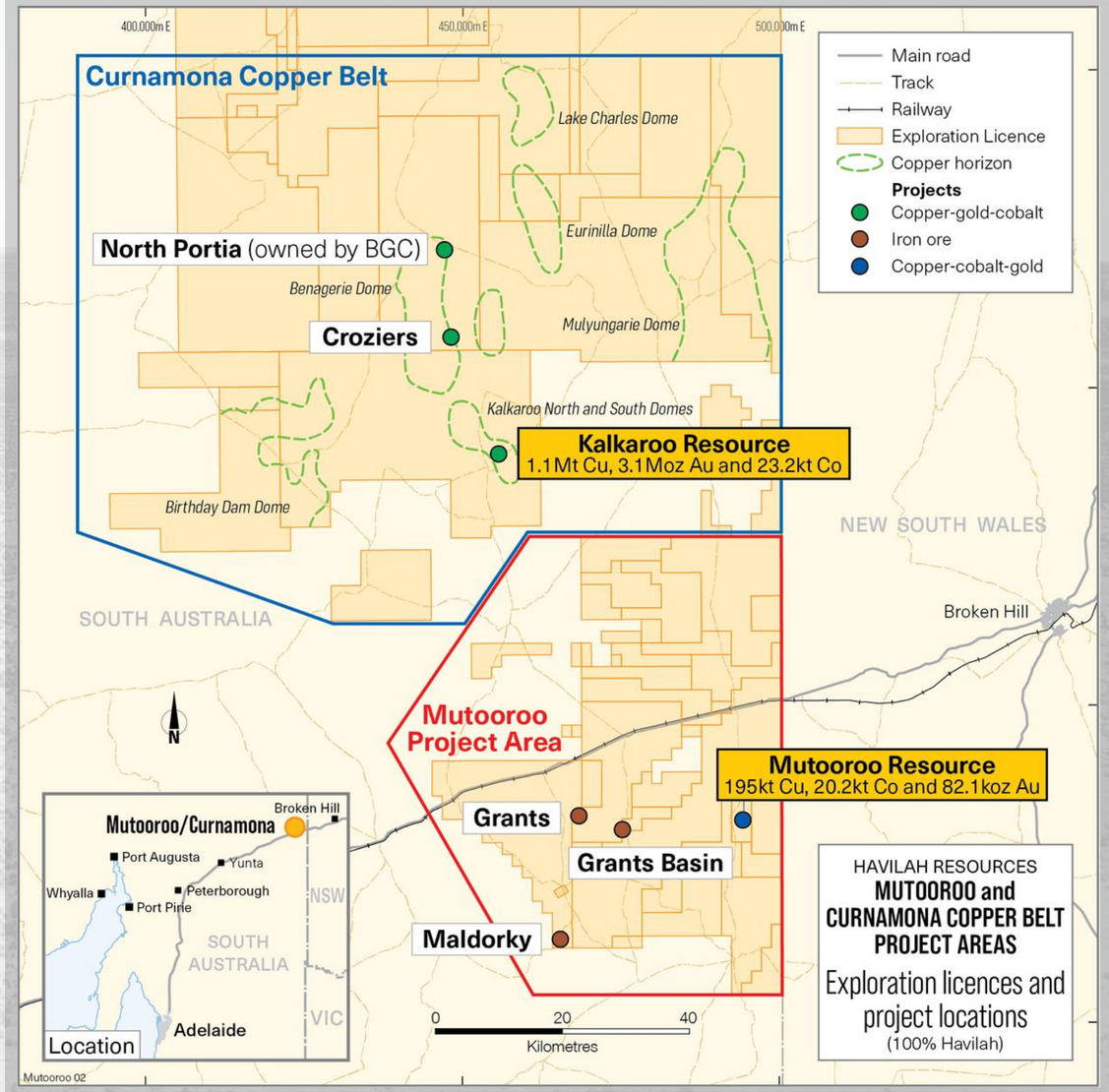
ESG REGULATION

World's best practice mining and ESG regulations are enforced in South Australia*

FAVOURABLE LOGISTICS

Near to Barrier Highway, Transcontinental railway and the regional mining centre of Broken Hill with its skilled workforce

*South Australia was ranked 7th best jurisdiction for global investment attractiveness by the independent Fraser Institute Annual Survey of Mining Companies 2020. South Australia also has a high ESG (environmental, social and governance) ranking.



COPPER MINERAL PROJECTS SUMMARY

A multi-commodity minerals portfolio accumulated over 17 years

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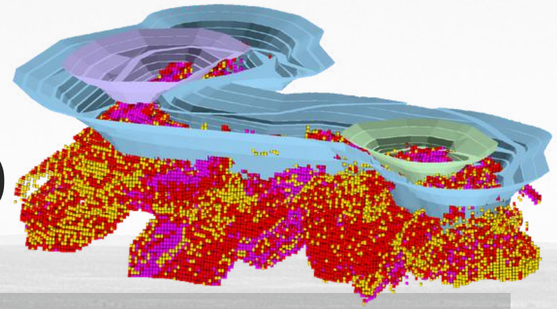
KALKAROO COPPER-GOLD-COBALT PROJECT (REE POTENTIAL)

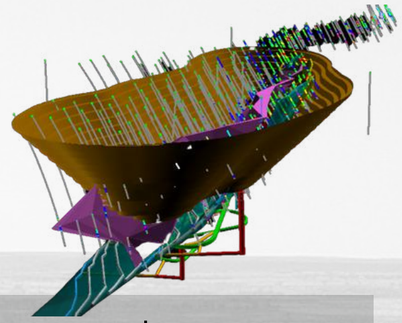


- Positive independent pre-feasibility study (PFS) confirms Kalkaroo as one of the largest undeveloped open pit copper deposits in Australia based on a 100 Mt Ore Reserve (90% Proved) at CuEq 0.89% grade.
- JORC Resources: 1.1 Mt copper, 3.1 Moz gold, 23.2 Kt cobalt.
- Planned average annual production of 30,000 t copper and 72,000 oz gold over a 13 year production period.
- *More Project Information Here (www.havilah-resources-projects.com/kalkaroo).*

JORC Mineral Resources

Copper 1.1 Mt	Gold 3.1 Moz	Cobalt 23.2 Kt

MUTOOROO COPPER-COBALT-GOLD PROJECT



- Comparatively high grade open pit and underground copper deposit (1.53% Cu) with appreciable cobalt.
- One of the largest cobalt sulphide deposits with associated copper in Australia.
- JORC Mineral Resources: 195 Kt copper, 20.2 Kt cobalt and 82.1 Koz gold.
- *More Project Information Here (www.havilah-resources-projects.com/mutooroo).*

JORC Mineral Resources

Copper 195.0 Kt	Cobalt 20.2 Kt	Gold 82.1 Koz

KALKAROO: POSITIVE INDEPENDENT PFS

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100 Mt Ore Reserve at 0.89% CuEq grade# - makes Kalkaroo one of Australia's largest undeveloped open pit copper deposits on CuEq grade basis.

Key PFS Outcomes

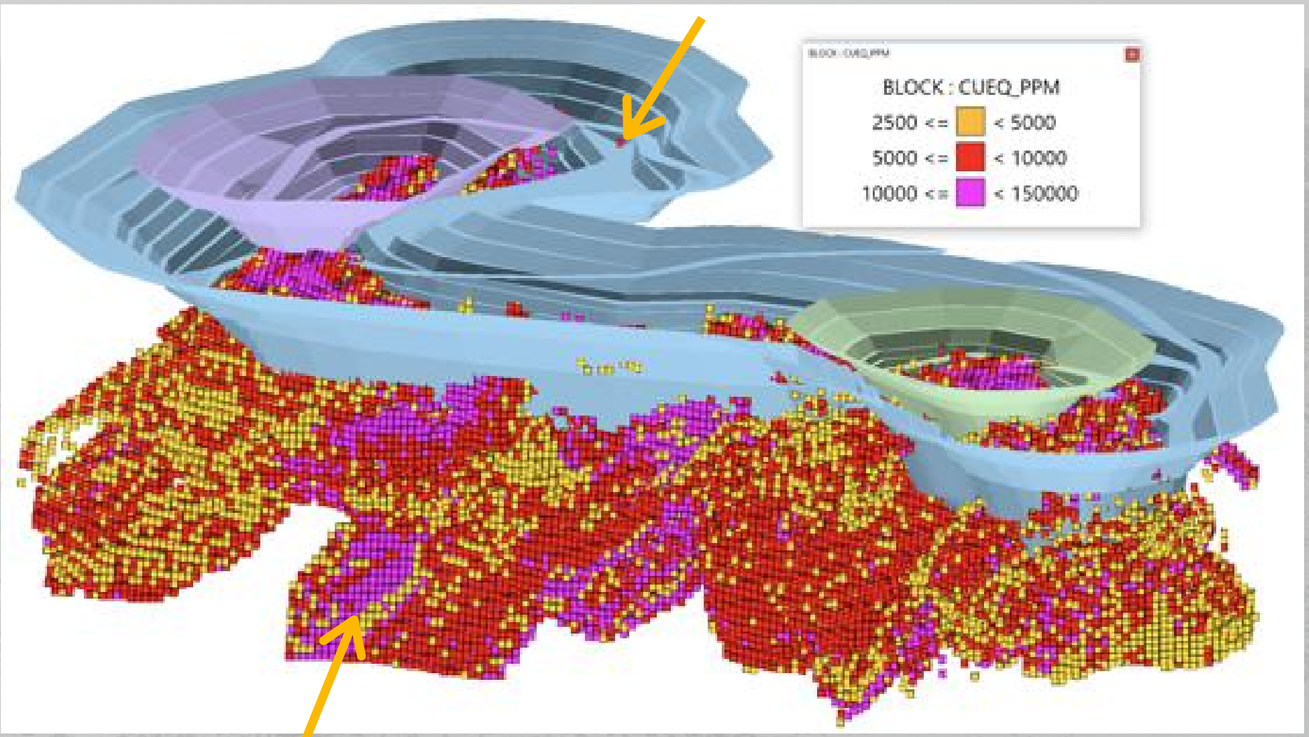
- Pre-tax NPV7.5% of A$564 million*
- IRR of 26%*
- Average annual production:
  - 30,000 t copper
  - 72,000 oz gold
- 13 year production period
- A$332 million pre-production capex
- De-risked project: granted Mining Lease and ownership of surrounding pastoral property.

**based on US$6,380/t copper, US$1,200/oz gold and AUD:USD 0.75 in RPM Global PFS as referred to in ASX release of 18 June 2019.*

JORC Mineral Resources

Copper 1.1 Mt	Gold 3.1 Moz	Cobalt 23.2 Kt

3 km long, >200m deep open pit.



Block model coloured by CuEq grade.

#CuEq calculation is based on the following formula: CuEq = Cu ore reserve grade + (value 1 g/t Au value of 1% Cu x Au ore reserve grade). Assumptions: gold price USD1,900 /oz, copper price USD6,500/tonne, overall metallurgical recoveries for gold and copper are the same based on Kalkaroo PFS, ore metal grades are from published Kalkaroo JORC Ore Reserve table. It is considered that both copper and gold are saleable.

KALKAROO IS A VALUABLE MULTI-METAL MINERAL DEPOSIT

Pre-Tax NPV7.5% Value Matrix A$Millions (August 2021)

Copper price USD/lb & AUD/lb	Gold price USD/oz and AUD/oz (at AUD:USD exchange rate of 0.75)												
	USD		**$1,200**	$1,300	$1,400	**$1,500**	$1,600	$1,700	$1,800	$1,900	$2,000	$2,100	$2,200
		AUD	**$1,600**	**$1,733**	**$1,867**	**$2,000**	**$2,133**	**$2,267**	**$2,400**	**$2,533**	**$2,667**	**$2,800**	**$2,933**
2.89	**3.85**	$564*	$633	$701	$770	$839	$907	$976	$1,044	$1,113	$1,182	$1,250
3.10	**4.13**	$698	$766	$835	$903	$972	$1,040	$1,109	$1,178	$1,246	$1,315	$1,383
3.50	**4.67**	$957	$1,026	$1,094	$1,163*	$1,232	$1,300	$1,369	$1,437	$1,506	$1,575	$1,643
3.90	**5.20**	$1,217	$1,286	$1,354	$1,423	$1,491	$1,560	$1,629	$1,697	$1,766	$1,834	$1,903
4.30	**5.73**	$1,476	$1,545	$1,614	$1,683	$1,751	$1,820	$1,888*	$1,957	$2,026	$2,094	$2,163
4.70	**6.27**	$1,737	$1,805	$1,874	$1,943	$2,011	$2,080	$2,148	$2,217	$2,285	$2,354	$2,423
5.10	**6.80**	$1,996	$2,065	$2,134	$2,202	$2,271	$2,340	$2,408	$2,477	$2,545	$2,614	$2,682
5.50	**7.33**	$2,256	$2,325	$2,394	$2,462	$2,530	$2,599	$2,668	$2,737	$2,805	$2,874	$2,942
5.90	**7.87**	$2,516	$2,585	$2,654	$2,722	$2,790	$2,859	$2,928	$2,997	$3,065	$3,134	$3,202

* Pre-tax NPV7.5% from PFS (green) compared with that at recent long-term forecast (orange) and recent spot gold and copper metal prices (yellow), as calculated by the PFS financial model.

Note that the orange highlighted long-term metal price, pre-tax NPV7.5% (A$1.16 billion) in the table is conservative for Kalkaroo as no account has been taken of:

1. Improved gold recoveries in the oxidised ore types from 50% in the PFS to >90% based on recent metallurgical test work (refer to ASX announcement of 9 May 2019).

2. Potential revenue contribution from other by-product commodities such as cobalt, rare earth elements and molybdenum due to incomplete metallurgical test work.

3. Open pit optimisations have not been re-run for higher long-term forecast gold and copper prices. On the basis that lower grades of ore can be profitably treated if metal prices are higher, it is reasonable to assume (based on constant cost inputs) that re-optimisation would result in a larger open pit and hence improved mining economics and a longer mine life. For the present exercise the published PFS open pit optimisation and RPM financial model have been used.

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PROPOSED WEST KALKAROO GOLD OPEN PIT

Lower capital oxidised ore gold open pit transitioning into underlying sulphide orebody

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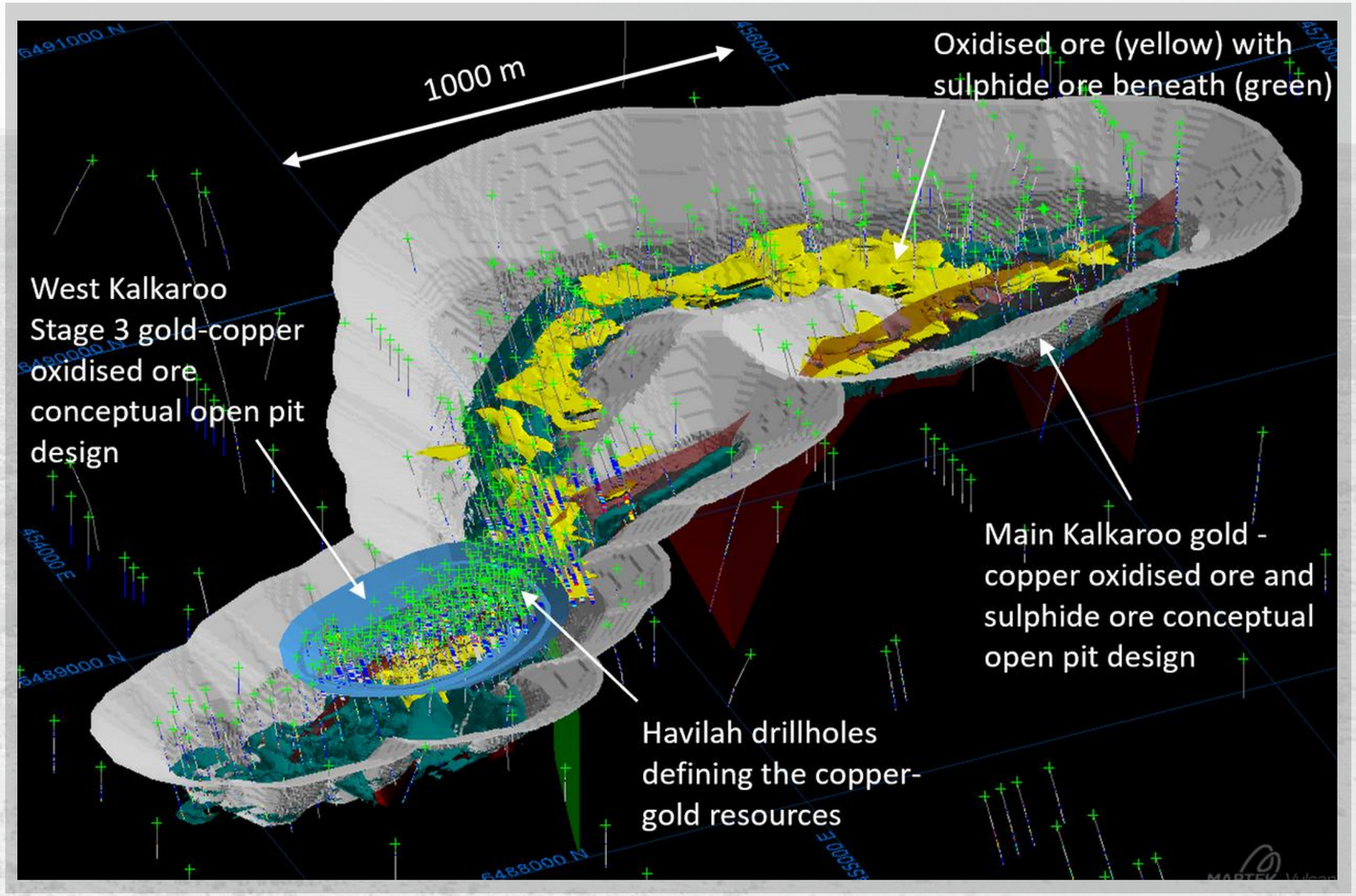
- Planned West Kalkaroo oxidised ore gold open pit mines the shallowest and lowest cost oxidised gold ore with approximately 90,000 ounces of gold and 5,000 tonnes of native copper production over 3-4 years (Stage 3 design), to be recovered in a 1 Mtpa combined gravity and cyanide leach processing plant. (refer to ASX announcement of 15 March 2021)

- Main Kalkaroo copper-gold oxidised ore and sulphide ore open pit will exploit the large sulphide orebody exposed in the West Kalkaroo pit floor to be processed at the expected rate of 6-7 Mtpa in a copper concentrator. The remaining oxidised ore will be processed in the West Kalkaroo oxidised ore plant, that is expanded to 2 Mtpa.

- Havilah's previous experience at the Portia gold mine (which it successfully financed, developed and operated) regarding geotechnical aspects, dewatering, mining methods and oversight, materials handling and processing plant design and operation are directly applicable at Kalkaroo.



WEST KALKAROO PROPOSED MINING SITE LAYOUT

For Stage 3 oxidised ore gold open pit operation and conceptual open pit extensions

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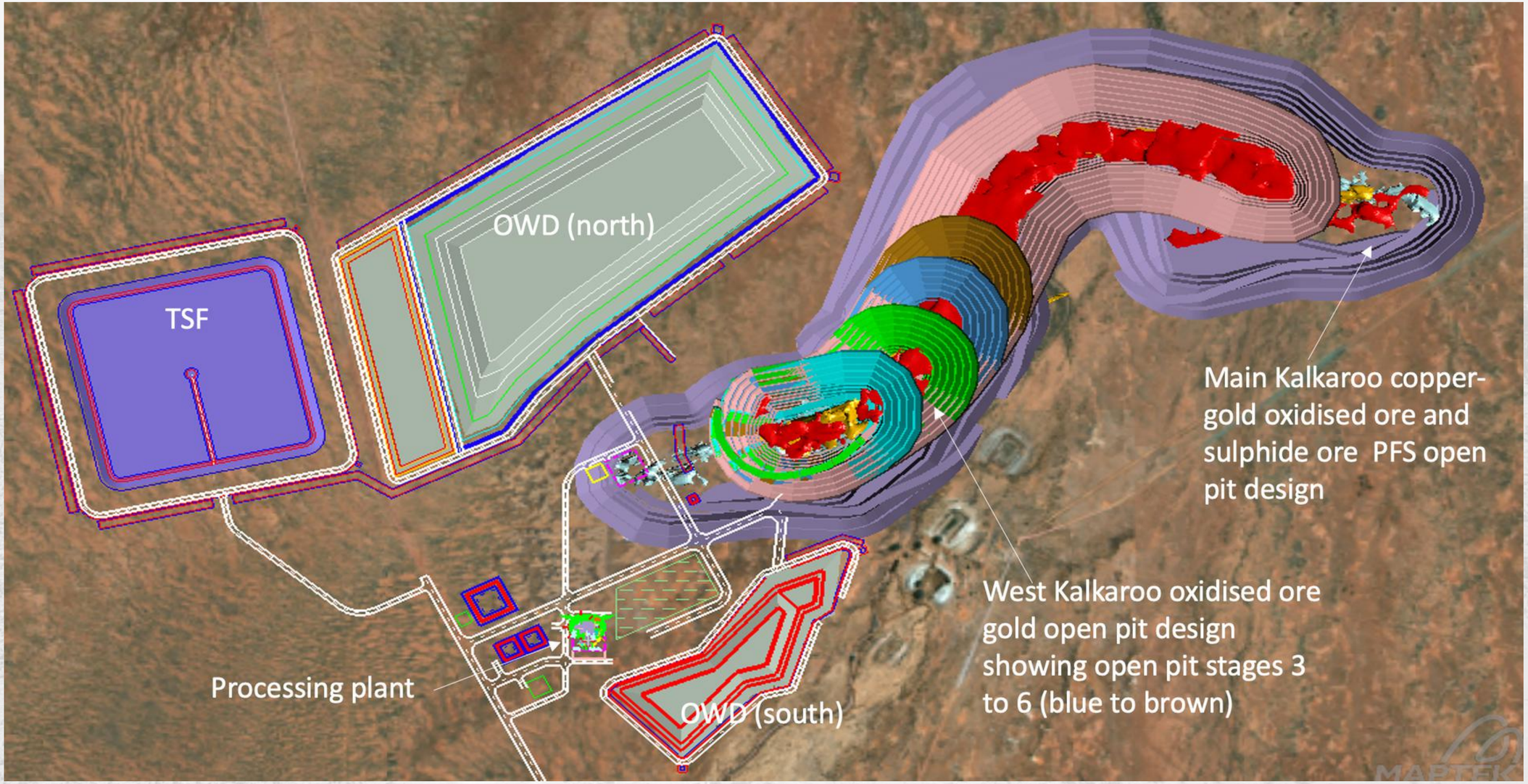

WEST KALKAROO OXIDISED ORE PROCESSING PLANT LAYOUT

For recovery of gold and native copper

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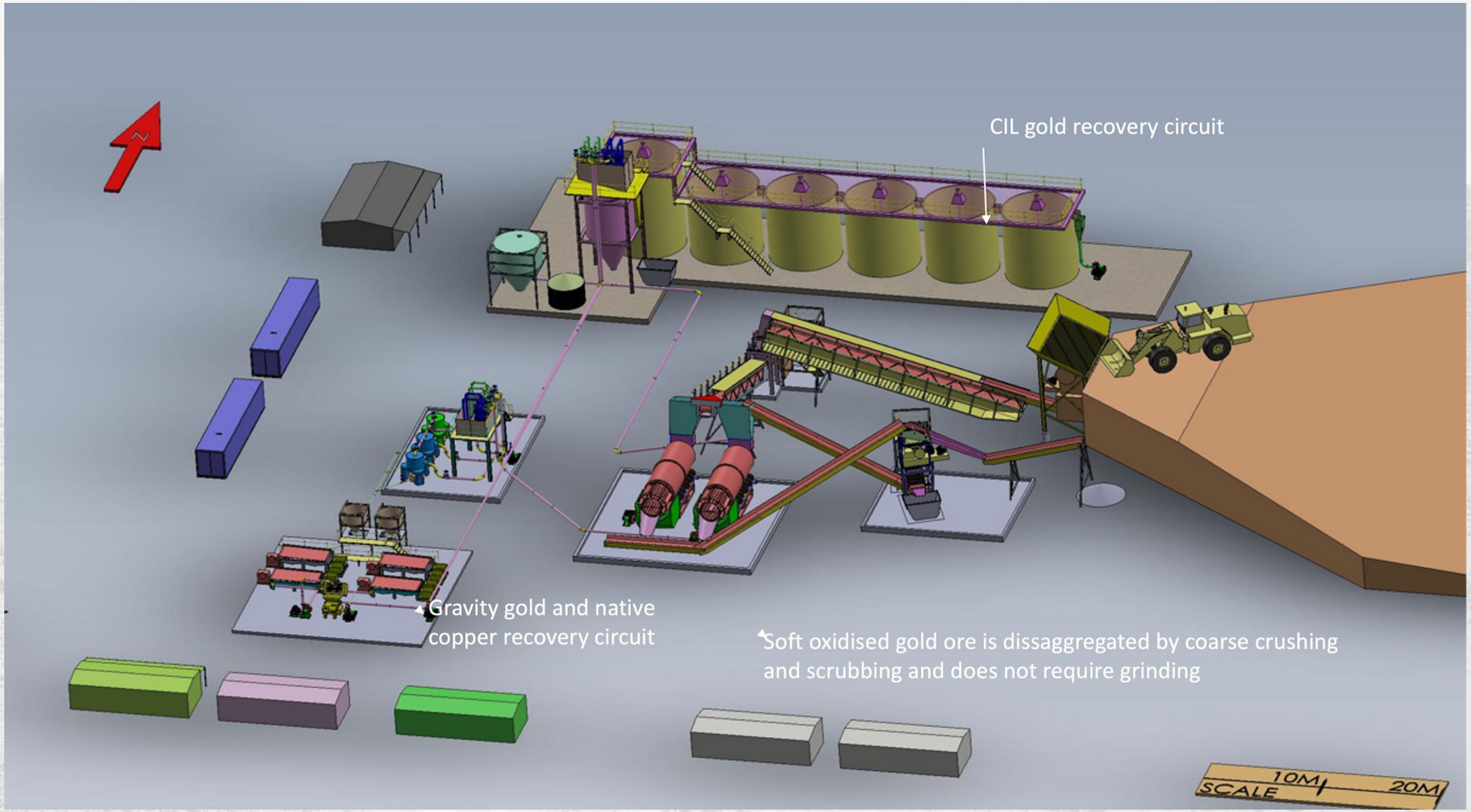

KALKAROO COPPER SULPHIDE PROCESSING

Options for sale of pyrite concentrate or treatment on site

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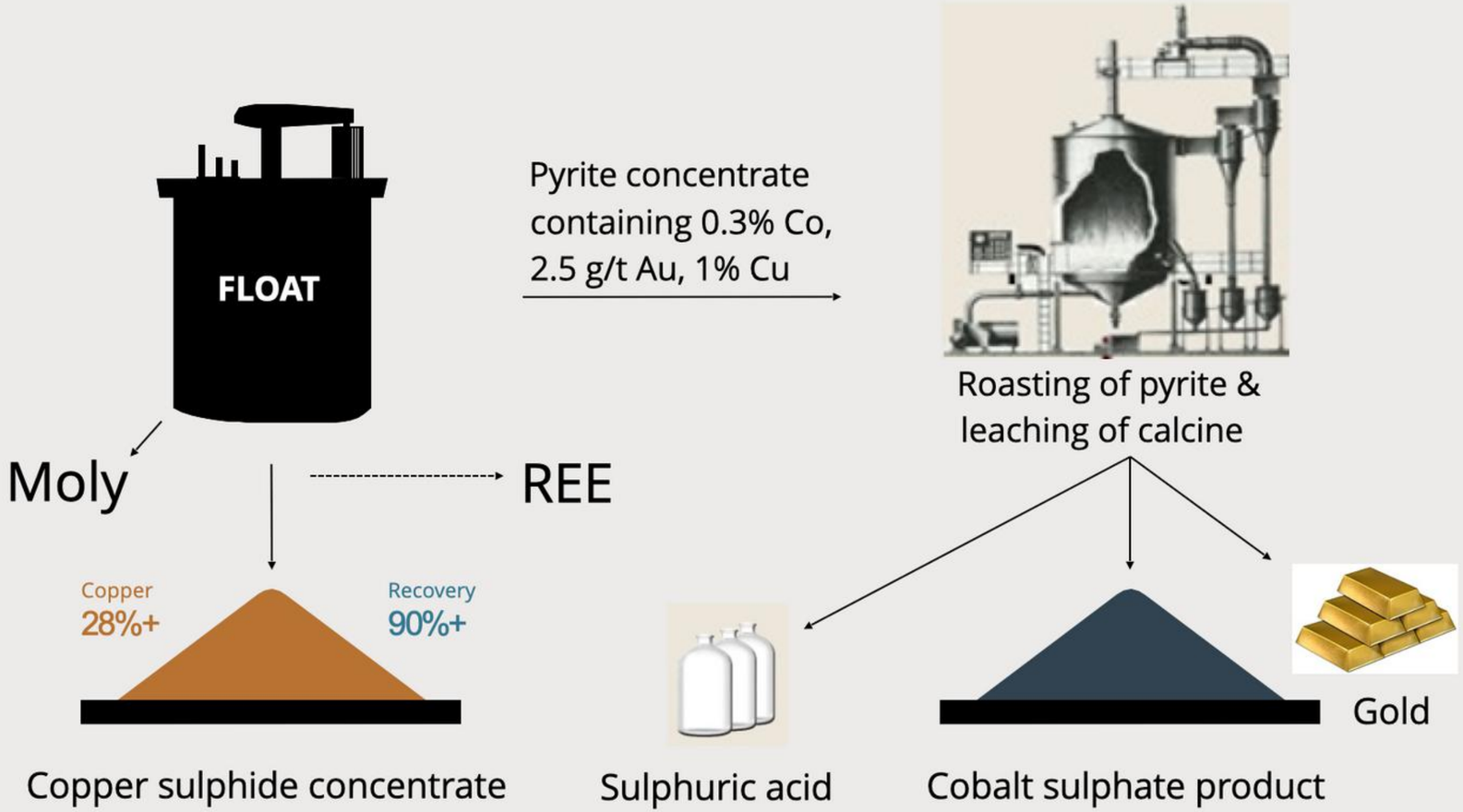
1 Open Pit Mining

2 Ore Crushing / Grinding

3 Processing of Kalkaroo sulphide ore



Conventional copper sulphide and pyrite concentrate processing technology

KALKAROO RESOURCE UPSIDE POTENTIAL

Near mine resource expansion potential

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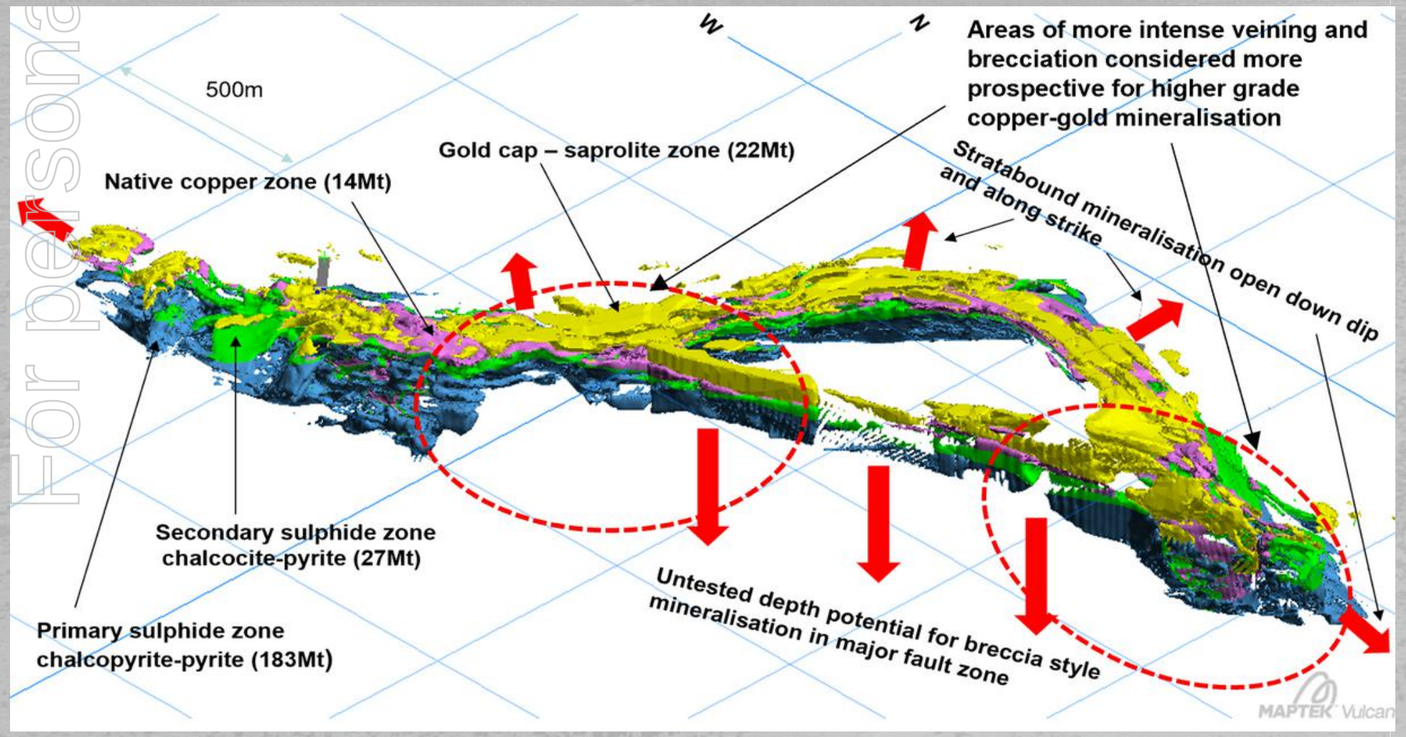
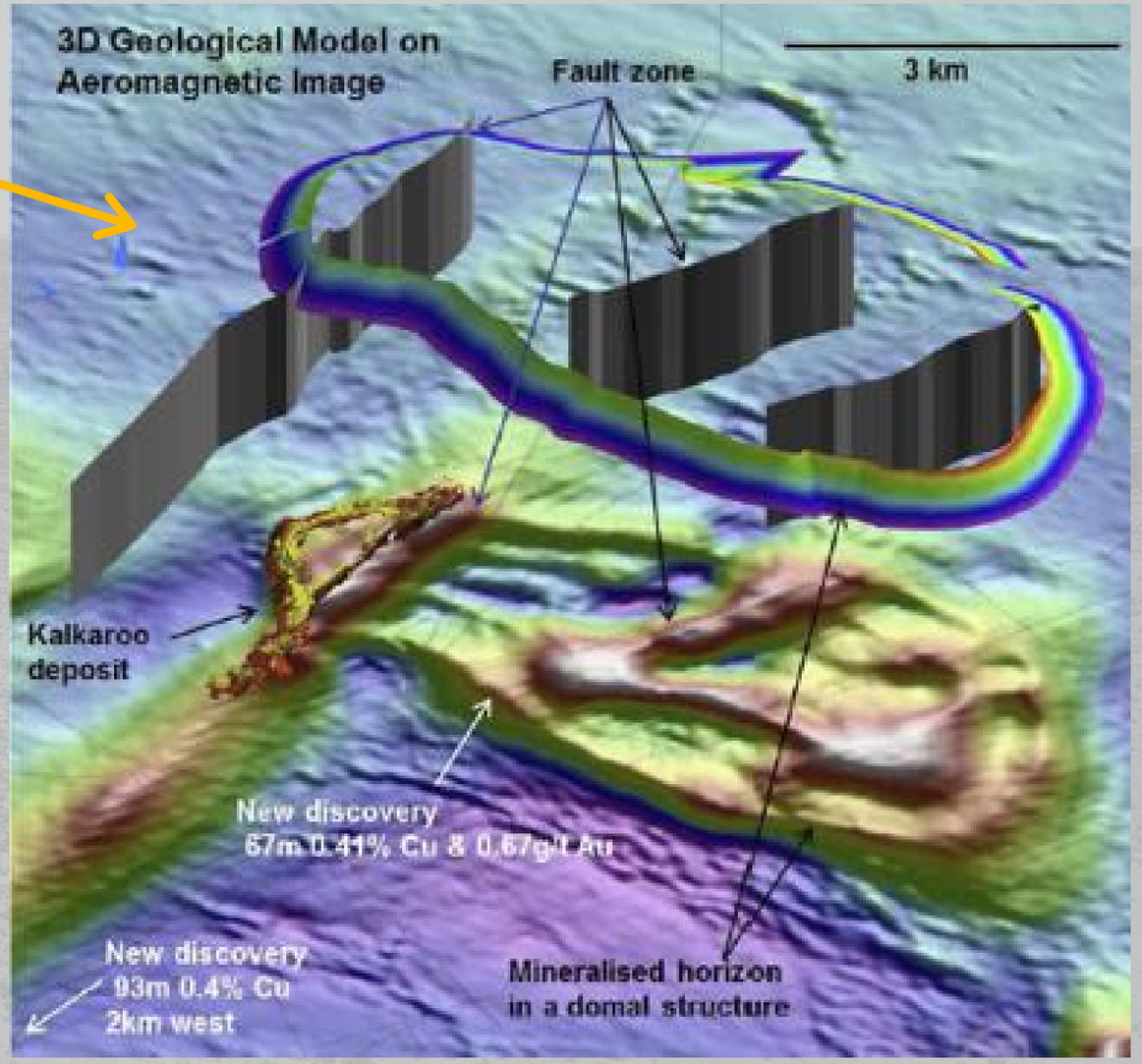
- A large copper mineralised system with multiple new discoveries nearby. Conceptually based exploration drilling returned encouraging intersections at three prospects within 5 km of Kalkaroo.
- Untested resource extensions of Kalkaroo deposit where mineralisation is open down-dip, along strike and in main fault *(ASX release 18 June 2019).*





CURNAMONA COPPER BELT: AUSTRALIA'S NEXT GREAT COPPER PROVINCE

Exploring for Zambian Copper Belt style stratabound replacement copper mineralisation

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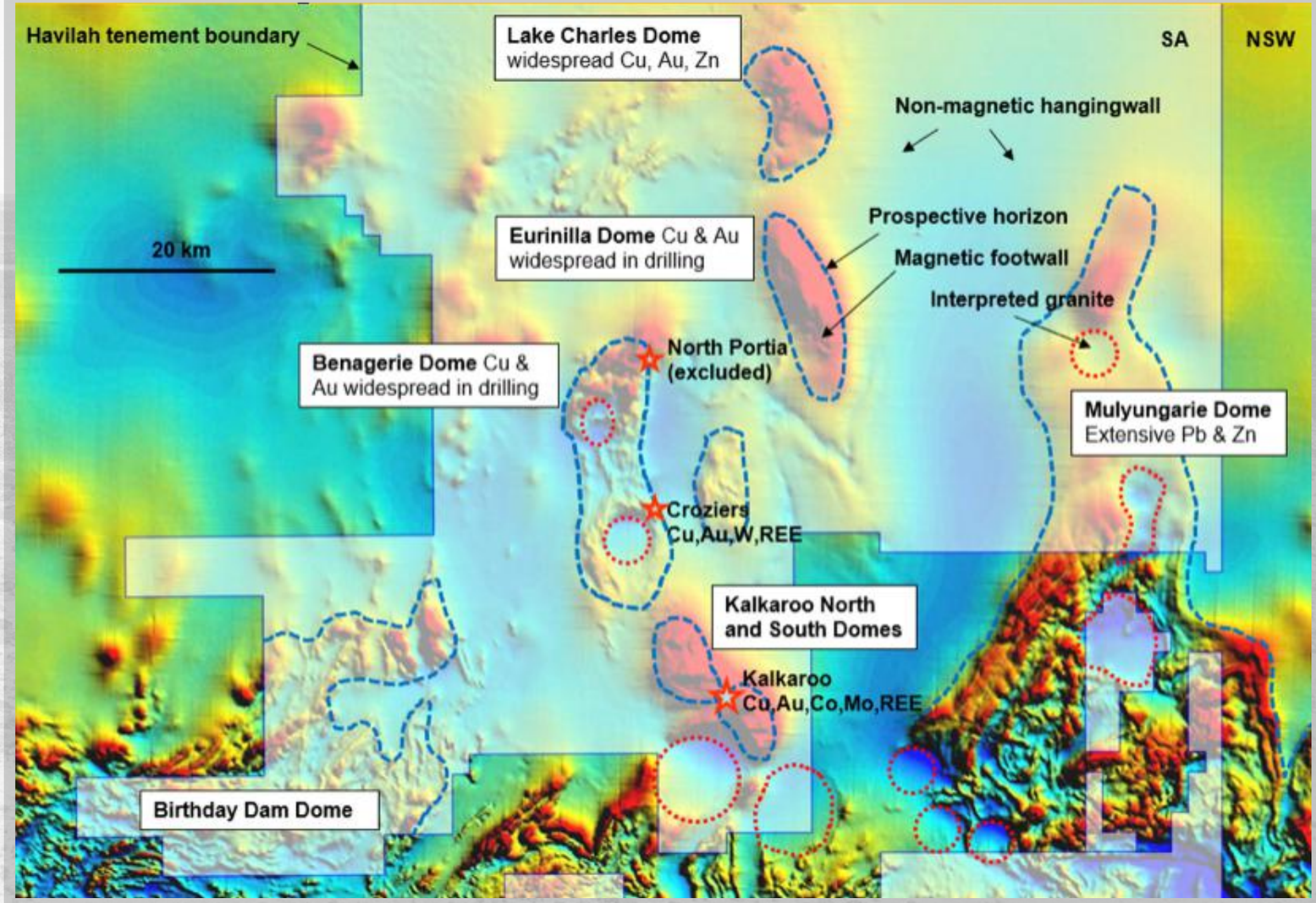
- Curnamona hosts structurally controlled stratabound Kalkaroo style copper-gold mineralisation in a > 200 km long, prospective horizon *(blue dashed line).*
- Several well mineralised major structural domes and associated granites (eg Kalkaroo, Benagerie, Eurinilla, Lake Charles).
- Strong geological analogies to the prolific Zambian Copper Belt and Paterson Province in WA.
- Aeromagnetics clearly identifies the prospective mineralised horizon at a regional redox boundary.
- Shallow drilling has identified widespread copper-gold mineralisation and some outstanding targets for follow up drilling.
- *More Exploration Information Here (http://www.havilah-resources-projects.com/exploration)*



ADDITIONAL VALUE DRIVERS FOR KALKAROO PROJECT

(not presently accounted for in economic models)

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1. Other metals

- Pyrite concentrate contains substantial cobalt (0.3%) and gold (slide 10).
- REE occur in the non-radioactive mineral bastnasite, which contains >40% of the high value magnet metals (Nd, Pr, Dy and Tb). Bastnasite can potentially be recovered magnetically for low cost from the tailings stream. (refer to ASX announcement of 3 November 2020)
- Molybdenite could potentially be recovered from the flotation plant as a separate product.
- Copper concentrates are low in uranium, arsenic and cadmium making it environmentally acceptable and avoiding the need for pre-treatment to remove contaminants.

2. Extended mine life

- At current metal prices much of the Inferred Resource outside of the open pit is likely to be converted to Ore Reserves, thus extending the mine life to potentially >20 years.
- Considerable potential for resource expansion with further drilling as mineralisation is open in all directions.

3. Environmental

- Saline process water and renewable energy sources (sun and wind) are available in abundance.
- No known environmental or social impediments to project development due to low regional conservation value.
- Remote and relatively isolated outback location.

MUTOOROO COPPER-COBALT PROJECT

PFS on high grade open pit copper mine potential

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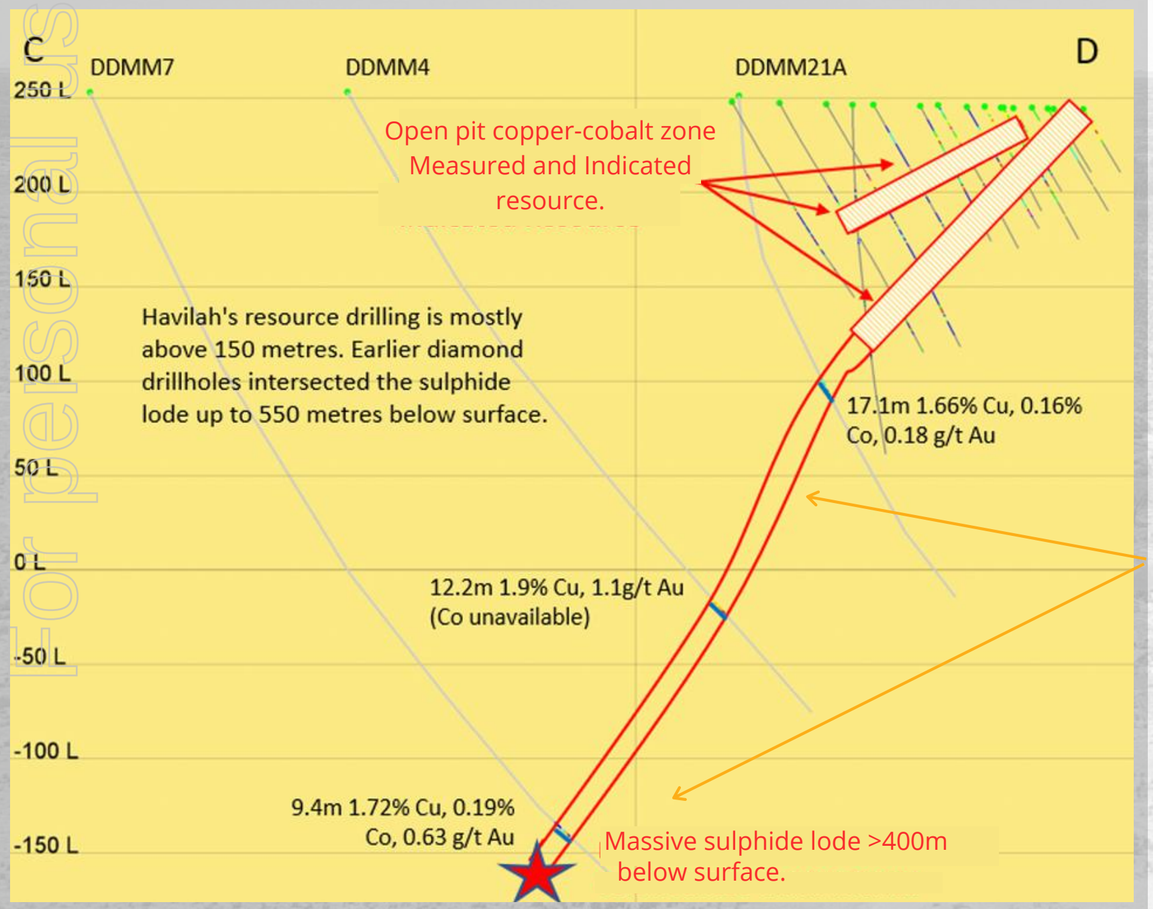
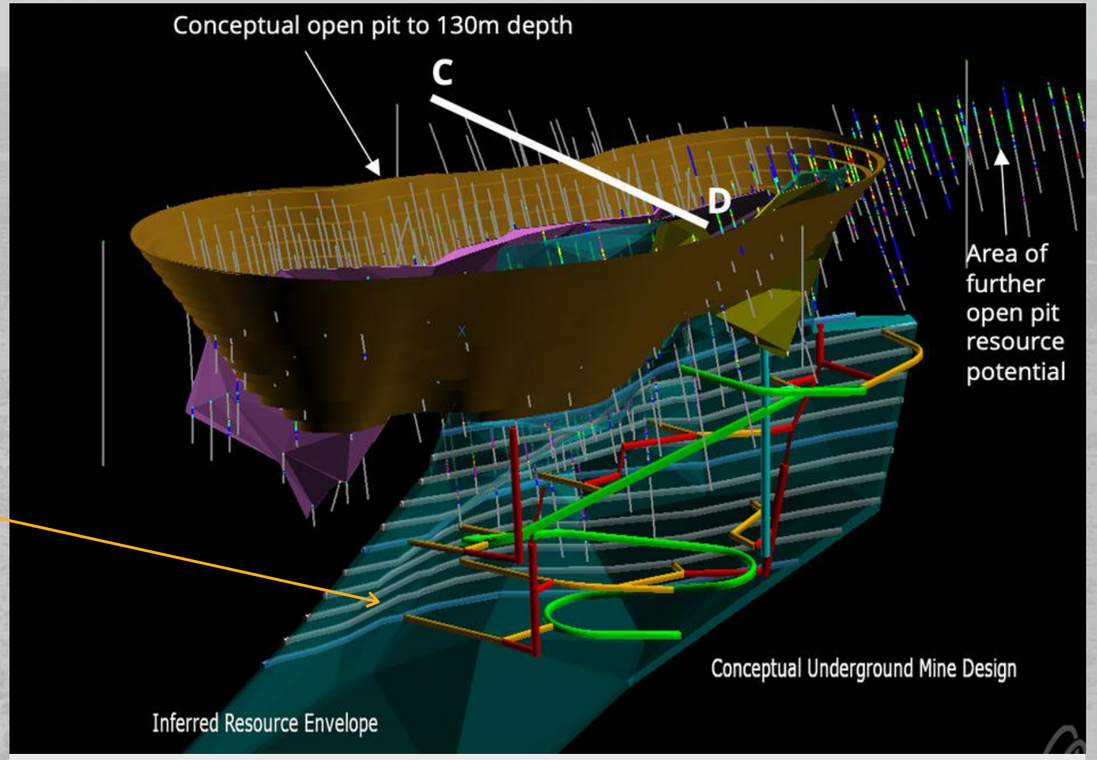
PFS concept is for an initial shallow open pit **exploiting >1.3% Cu and 0.14% Co Measured and Indicated resources** followed by underground mining of **higher grade Inferred resources >1.7% Cu and 0.17% Co** (refer JORC Mineral Resources table at end).



Underground copper-cobalt zone Inferred resource



JORC Mineral Resources

Copper 195.0 Kt	Cobalt 20.2 Kt	Gold 82.1 Koz

MUTOOROO PROJECT AREA PROSPECTIVITY

Resource upside from many untested prospects

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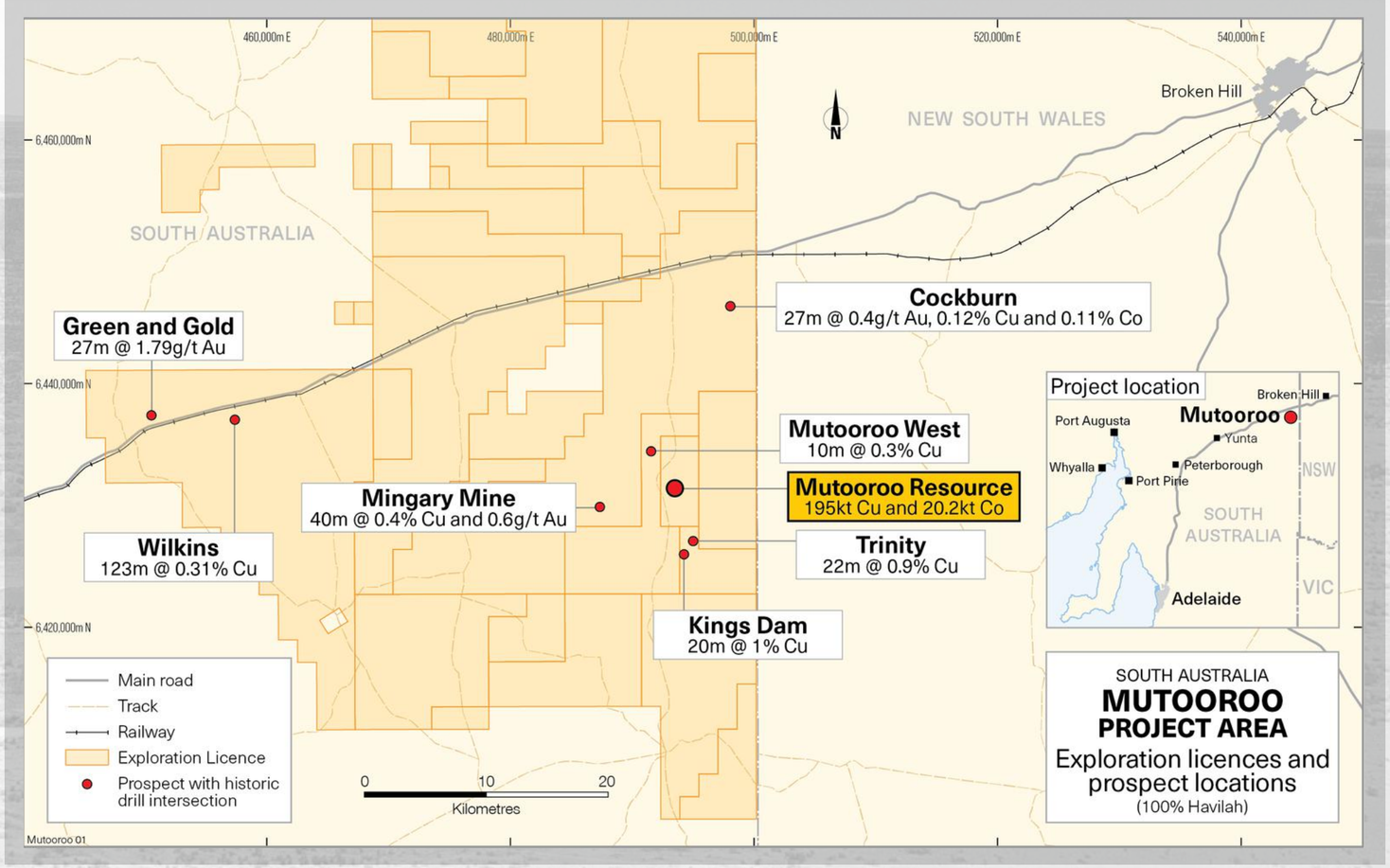
- Mutooroo lies within a very prospective copper-cobalt-gold district that has high discovery potential. It is located within commuting distance of Broken Hill and near to major road and rail infrastructure.

- Within 10 km of the Mutooroo deposit are numerous prospects dating from the 1960's with potentially ore-grade copper drilling intersections, but never assayed for cobalt or gold nor followed up with drilling for almost 40 years (Mutooroo West, King Dam and Trinity).

- Widespread high copper and cobalt results in Havilah's surface geochemical sampling have defined a large target area west of Mutooroo. Peak cobalt grades are at economic levels (eg 0.20%-0.60% cobalt at several prospects). Associated highly anomalous copper.

- Concept is for a central sulphide processing hub at Mutooroo with ore-feed from other satellite resources defined in the near vicinity.



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COPPER EXECUTION STRATEGY OBJECTIVES

OVER THE NEXT 12 MONTHS

West Kalkaroo gold open pit – priority objective

- Completion of all West Kalkaroo gold mine pre-development tasks, including final permitting approvals, engineering design studies for the processing plant, securing financing and all relevant contractors with the view to commencing development of the project during 2022.
- Ongoing resource infill drilling and resource expansion drilling along major mineralised fault zones.
- Continuation of collaborative research with University of South Australia's Future Industries Institute to determine the best recovery options for REE from West Kalkaroo oxidised gold ore.

Mutooroo copper-cobalt-gold project

- Advance PFS work to value add, which will include a major component of additional resource drilling and process plant design and testing.

Exploring Australia's next great copper province

(within >16,000 km² of highly prospective 100% owned tenements in the Curnamona Craton)

- Testing of high conviction regional exploration targets that could lead to new discoveries, building on a track record of exploration success.
- Benagerie Dome copper-gold (plus cobalt, REE, tungsten): Drilling several potential replacement style copper targets.
- Mutooroo copper-cobalt-gold: Follow-up ore-grade copper intersections in 1960's drillholes and very high copper/cobalt surface geochemical anomalies.

COPPER MINING FEASIBILITY STUDY STEPS

Advancing Havilah's copper projects

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	1 - EXPLORATION	2 - METALLURGY	3 - PROCESSING	4 - MINING	5 - PERMITTING / FINANCING	6 - PRODUCTION
	Geophysics, geochemistry, drilling promising targets. Resource delineation drilling.	Determine metallurgical recoveries in representative samples.	Testing processing flow sheet to optimise copper concentrate production.	Open pit optimisation studies and mining economic evaluation.	Securing mining approvals, project financing, and contractors for mining and plant construction.	Ethical supply of copper and other minerals from a low sovereign risk, Tier 1 jurisdiction and ESG location.
KALKAROO	✓	✓	✓	✓	IN PROGRESS	
MUTOOROO	✓	✓	✗	✗	✗	

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PARTING WORDS

“

Large scale open pit copper-gold development opportunities in Australia like Kalkaroo are rare, particularly at a time when renewable energy and EVs are adding to the copper demand and copper is at multi-year highs.

Dr. Chris Giles - Technical Director

HAVILAH HAS HIGH LEVERAGE TO COPPER

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Amongst its ASX peers shown here **Havilah has one of the highest leverages to copper** based on its Enterprise Value / CuEq Resources and Enterprise Value / CuEq Ore Reserves

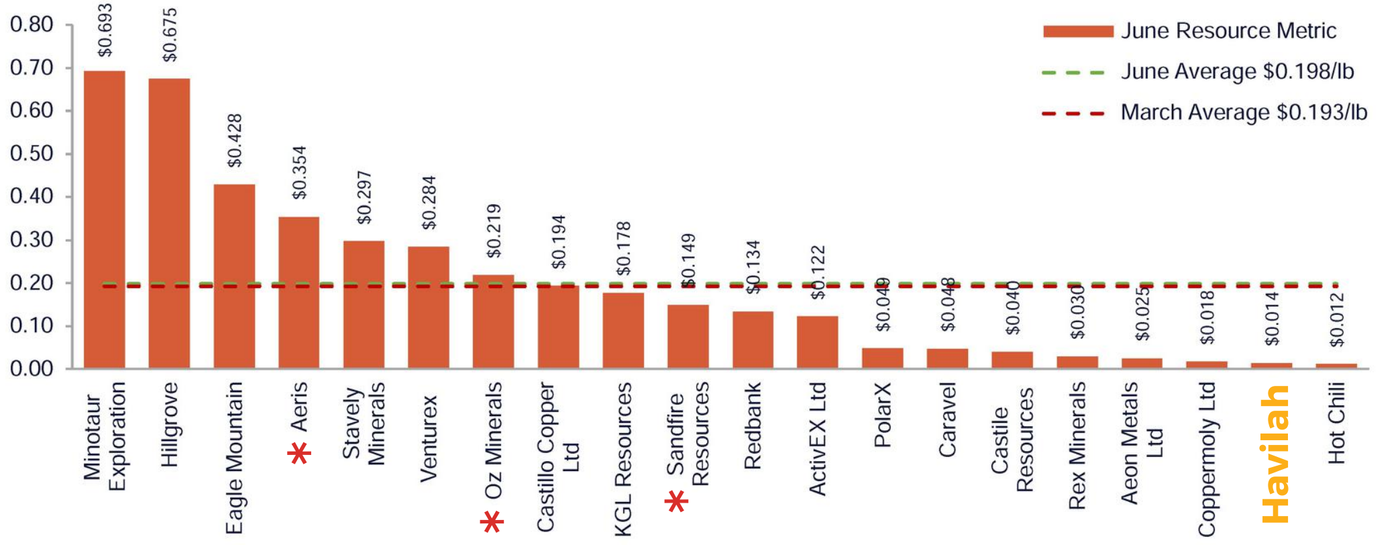
Source: PCF Capital Q2 2021 Resources Thermometer. Reproduced with the kind permission of PCF Capital.

* copper mining producing entities, all others are mining exploration entities

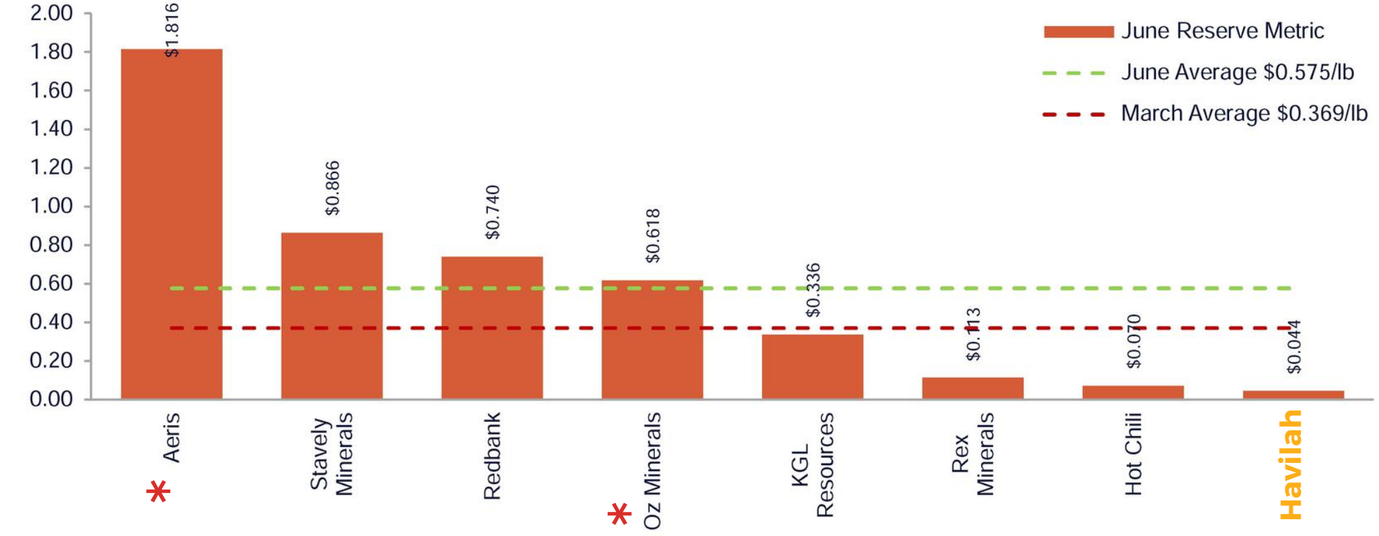
COPPER PEER COMPANY VALUATIONS

PCF CAPITAL GROUP

ASX EV / RESOURCE (A$/lb CuEq)



ASX EV / RESERVE (A$/lb CuEq)



JORC ORE RESERVE AND MINERAL RESOURCES

JORC Ore Reserves

Project	Classification	Tonnes (Mt)	Copper %	Gold g/t	Copper tonnes (Kt)	Gold ounces (Koz)
Kalkaroo[1]	Proved	90.2	0.48	0.44	430	1,282
	Probable	9.9	0.45	0.39	44	125
Total		**100.1**	**0.47**	**0.44**	**474**	**1,407**

Footnotes to the JORC Ore Reserve and Mineral Resource Tables

Numbers in tables are rounded

[1] Details released to ASX: 18 June 2018 (Kalkaroo)

[2] Details released to ASX: 18 October 2010 and 5 June 2020 (Mutooroo)

[3] Details released to ASX 30 January 2018 & 7 March 2018 (Kalkaroo)

[4] Note that the Kalkaroo cobalt Inferred resource is not added to the total tonnage

As at 31 July 2021

JORC Mineral Resources

Project	Classification	Resource Category	Tonnes	Copper %	Cobalt %	Gold g/t	Copper tonnes	Cobalt tonnes	Gold ounces
Mutooroo[2]	Measured	Oxide	598,000	0.56	0.04	0.08			
	Total	**Oxide**	**598,000**	**0.56**	**0.04**	**0.08**	**3,300**	**200**	**1,500**
	Measured	Sulphide Copper-Cobalt-Gold	4,149,000	1.23	0.14	0.18			
	Indicated	Sulphide Copper-Cobalt-Gold	1,697,000	1.52	0.14	0.35			
	Inferred	Sulphide Copper-Cobalt-Gold	6,683,000	1.71	0.17	0.17			
	Total	**Sulphide Copper-Cobalt-Gold**	**12,529,000**	**1.53**	**0.16**	**0.20**	**191,700**	**20,000**	**80,600**
		Total Mutooroo	**13,127,000**				**195,000**	**20,200**	**82,100**
Kalkaroo[3]	Measured	Oxide Gold Cap	12,000,000			0.82			
	Indicated	Oxide Gold Cap	6,970,000			0.62			
	Inferred	Oxide Gold Cap	2,710,000			0.68			
	Total	**Oxide Gold Cap**	**21,680,000**			**0.74**			**514,500**
	Measured	Sulphide Copper-Gold	85,600,000	0.57		0.42			
	Indicated	Sulphide Copper-Gold	27,900,000	0.49		0.36			
	Inferred	Sulphide Copper-Gold	110,300,000	0.43		0.32			
	Total	**Sulphide Copper-Gold**	**223,800,000**	**0.49**		**0.36**	**1,096,600**		**2,590,300**
		Total Kalkaroo	**245,480,000**				**1,096,600**		**3,104,800**
	Inferred	Cobalt Sulphide[4]	193,000,000		0.012			23,200	
Total All Projects		**All Categories (rounded)**	**258,607,000**				**1,291,600**	**43,400**	**3,186,900**

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CAUTIONARY AND COMPETENT PERSON'S STATEMENTS

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CAUTIONARY STATEMENT

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Given the ongoing uncertainty relating to the duration and extent of the global COVID-19 pandemic, and the impact it may have on the demand and price for copper and other metals and on global financial markets, the Company continues to face uncertainties with respect to its projects that may impact its operating activities, financing activities and/or financial results.

COMPETENT PERSON'S STATEMENT

The information in this presentation that relates to Exploration Targets, Exploration Results, Mineral Resources and Ore Reserves is based on data compiled by geologist Dr Chris Giles, a Competent Person who is a member of The Australian Institute of Geoscientists. Dr Giles is Technical Director of the Company, a full-time employee and is a substantial shareholder. Dr Giles has sufficient experience, which is relevant to the style of mineralisation and type of deposit and activities described herein to qualify as a Competent Person as defined in the 2012 Edition of 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Giles consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Information for the Kalkaroo Ore Reserve & Mineral Resource and the Mutooroo Inferred cobalt & gold Mineral Resources complies with the JORC Code 2012. All other information was prepared and first disclosed under the JORC Code 2004 and is presented on the basis that the information has not materially changed since it was last reported. Havilah confirms that all material assumptions and technical parameters underpinning the reserves and resources continue to apply and have not materially changed. Except where explicitly stated, this presentation contains references to prior exploration results and JORC Mineral Resources, all of which have been cross-referenced to previous ASX announcements made by Havilah. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant ASX announcements.

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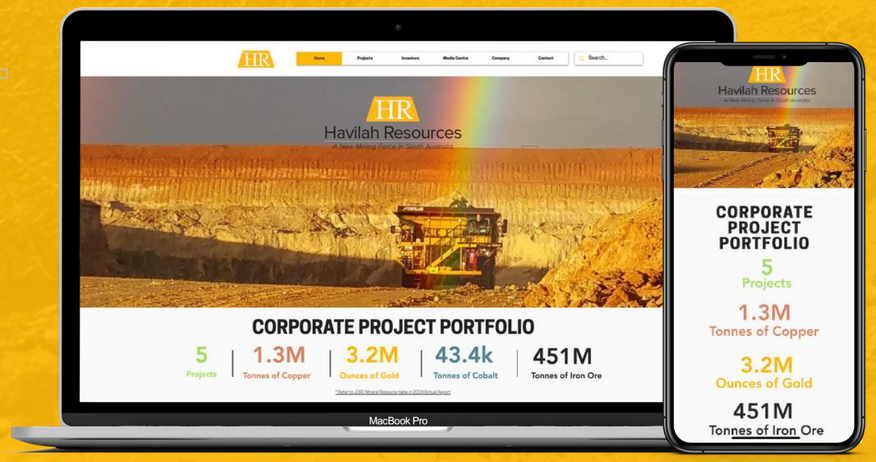

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CORPORATE

Havilah Resources Limited
ABN: 39 077 435 520
ASX Code: HAV

OFFICE

PO BOX 3
Fullarton, 5063
South Australia, Australia

Tel: +61 (08) 7111 3627
Email: info@havilah-resources.com.au