

24 April 2024

2024 HALF-YEAR TECHNICAL UPDATE PRESENTATION

Havilah Resources Limited (**Havilah** or **Company**) is pleased to release the 2024 Half-Year Technical Update presentation that has been prepared by Havilah's technical staff.

The presentation provides a convenient summary of Havilah's technical activities and results as reported to the ASX over the last twelve months, which builds on an extensive legacy of earlier exploration work.

It also highlights the key themes in the Directors' Report, namely Havilah's solid copper and gold resource and exploration base and how management is working to realise tangible returns for shareholders from the Company's multi-commodity minerals portfolio.

The presentation will also be available on the Company's website at www.havilah-resources.com.au.

This release has been authorised on behalf of the Havilah Resources Limited 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, South Australia 5067



Havilah Resources

Strategic Minerals in South Australia



HALF-YEAR TECHNICAL UPDATE

1.3 M Tonnes Copper & 3.2 M Ounces Gold in Two Advanced Stage Projects

Highly Leveraged to Copper and Gold





Corporate Snapshot

Share Price¹	Shares Issued¹	Market Cap¹	Cash²	Options¹
A\$0.19	316.6 Million	A\$60 Million	A\$3.5 Million	14.7 Million

Largest Shareholders¹

BNP Paribas Noms Pty Ltd	44,745,491	14.12%
Trindal Pty Ltd	42,033,909	13.28%
IQEQ (Jersey) Limited	18,014,442	5.69%
Maptek Pty Ltd (and associates)	20,366,552	6.43%
Total Top 20	166,398,349	52.6%

Chart



1. As of 22 April 2024
 2. As of 31 January 2024

Board of Directors



Simon Gray

B.EC.(COM)

Executive Director, Chairman, CFO

A Chartered Accountant with over 35 years' experience in the financial industry including 20 years as a partner with Grant Thornton, 5 years of which he was responsible for the mining and energy group. Simon brings a wealth of practical business knowledge in the junior resources sector.



Victor Previn

B.ENG (ELECTRICAL)

Independent Non-Executive Director

A professional engineer and was responsible for founding, developing and commercialising the ophthalmic technological platform that is the core of Nova Eye Medical Limited's (ASX: EYE) current production. Victor brings broad experience in running public companies and paractical business and entrepreneurial skills.



Dr Chris Giles

BSC(HONS),PHD, MAIG

Executive Technical Director

An internationally experienced exploration geologist involved in discovery of several gold mines. Chris has been responsible for ground selection and exploration oversight that has led to Havilah's present JORC Mineral Resource inventory. He is a founder of Havilah and remains a substantial shareholder.

Management Team



Richard Buckley

B.ENG (MINING)

Chief Operating Officer

A qualified mining engineer, with over 25 years' experience, who specialises in resource evaluation, mine planning and open pit optimisation using state of the art 3D mining software.



Traviss Just

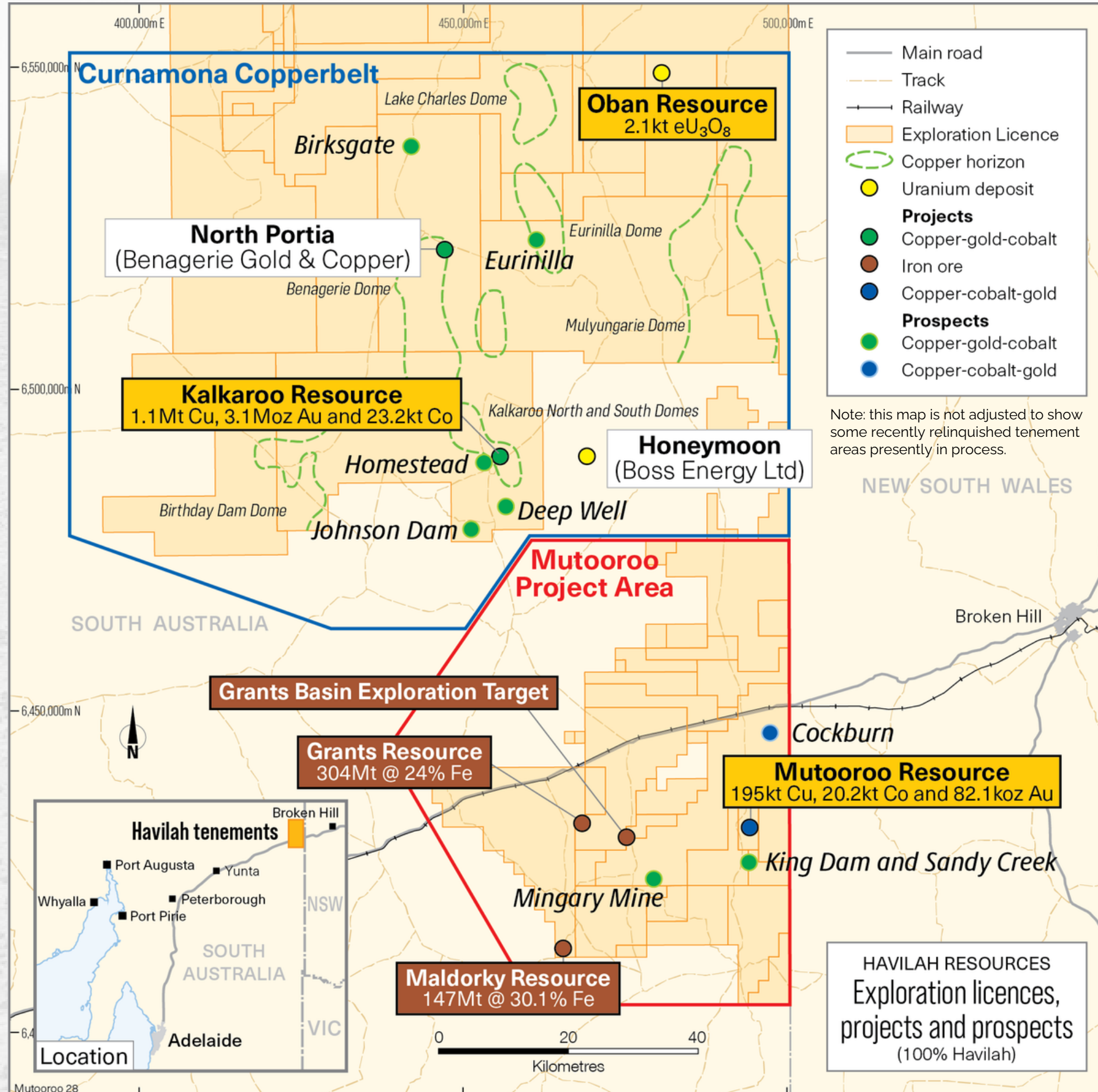
B.APP.SC, MSC IN GEOLOGY

Chief Geologist

Experienced Exploration Geologist with 30 years' of experience. Responsible for exploration strategy and program implementation.



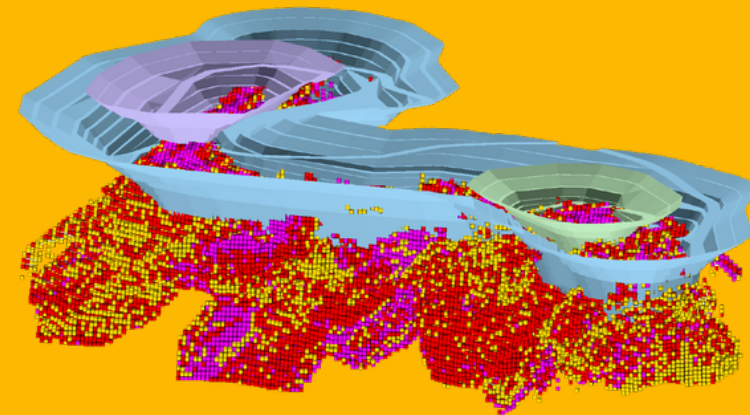
Management team also includes 2 geologists, a mining engineer, an environmental and liaison officer, a financial administrator and a part-time tenements manager supported by a competent and experienced field crew.



- Highly leveraged to copper and gold via the advanced Kalkaroo and Mutooroo projects that contain a combined 1.3 million tonnes of copper and 3.2 million ounces of gold in JORC resources.
- Excellent resource expansion potential at existing deposits and for new discoveries in the surrounding 100% owned tenements.
- Favourable logistics and infrastructure in low sovereign risk northeastern South Australia. Proximity to main highway and transcontinental railway line and Broken Hill with its established mining infrastructure and skilled workforce and potential renewable energy sources (windfarm and solar).
- The under-explored Curnamona Province is highly prospective for Central African Copperbelt structurally controlled stratabound type deposits (eg Kalkaroo) and Broken Hill lode style massive sulphide deposits (eg Mutooroo).
- Outback pastoral country presents no known environmental or cultural impediments to mining. For Kalkaroo, land ownership, granted mining leases and a Native Title Mining Agreement are in place that would expedite mining development.

KALKAROO

Copper-Gold-Cobalt Project



JORC Mineral Resources

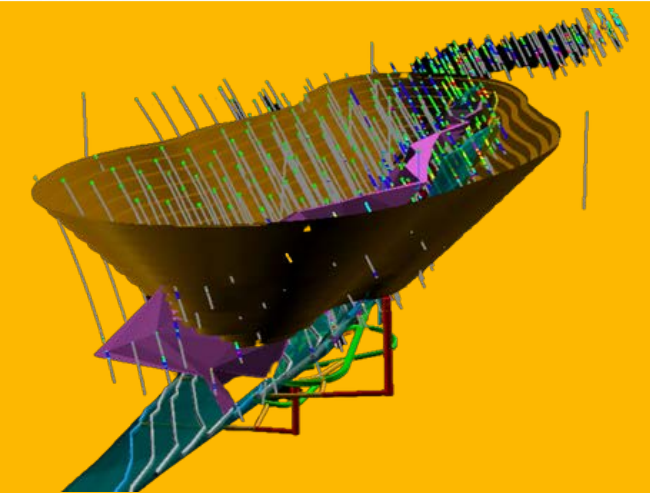
Copper 1.1 Mt

Gold 3.1 Moz

Cobalt 23.2 Kt

MUTOOROO

Copper-Cobalt-Gold Project



JORC Mineral Resources

Copper 195.0 Kt

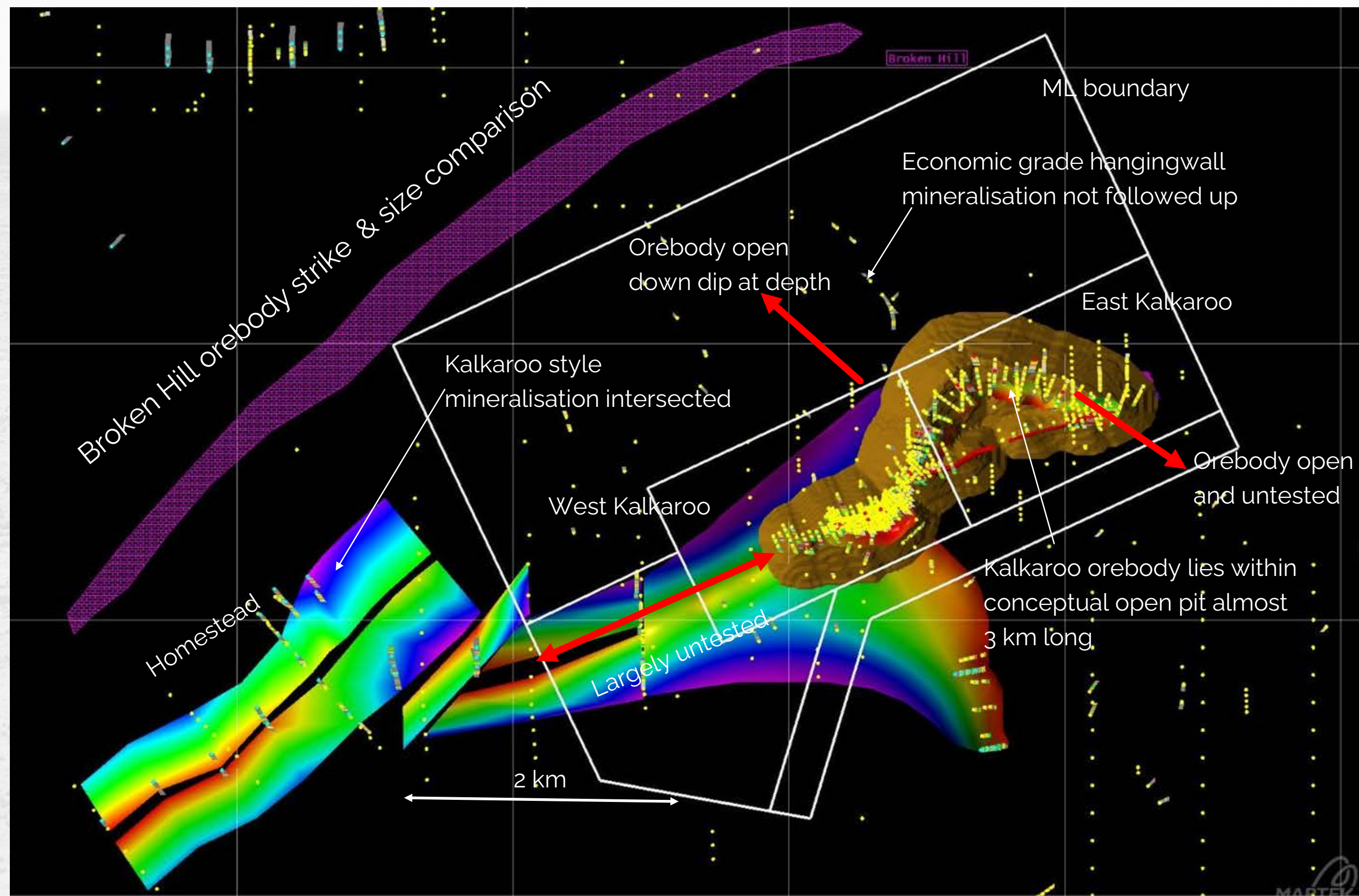
Cobalt 20.2 Kt

Gold 82.1 Koz

- One of the largest undeveloped open pit copper deposits in Australia based on current JORC mineral resources.
- Comprehensive studies by BHP during 2023 demonstrated a robust open pit copper-gold project with no fatal flaws.
- The projected conceptual open pit mine life was increased to more than 20 years driven by a number of enhancements.
- Associated critical minerals cobalt, molybdenum and REE.
- More Kalkaroo project information at www.havilah-resources-projects.com/Kalkaroo.

- Comparatively high grade undeveloped sulphide deposit containing 1.53% copper and 0.16% cobalt.
- Conceptual 5 year open pit start up transitioning to a >10 year underground operation.
- Massive sulphide ore is known to extend to more than 500 metres depth and is not closed off. Over 2 km strike length.
- High density, coarse-grained sulphide ore with >95% copper recovery in a low impurity concentrate.
- More Mutooroo project information at www.havilah-resources-projects.com/Mutooroo.

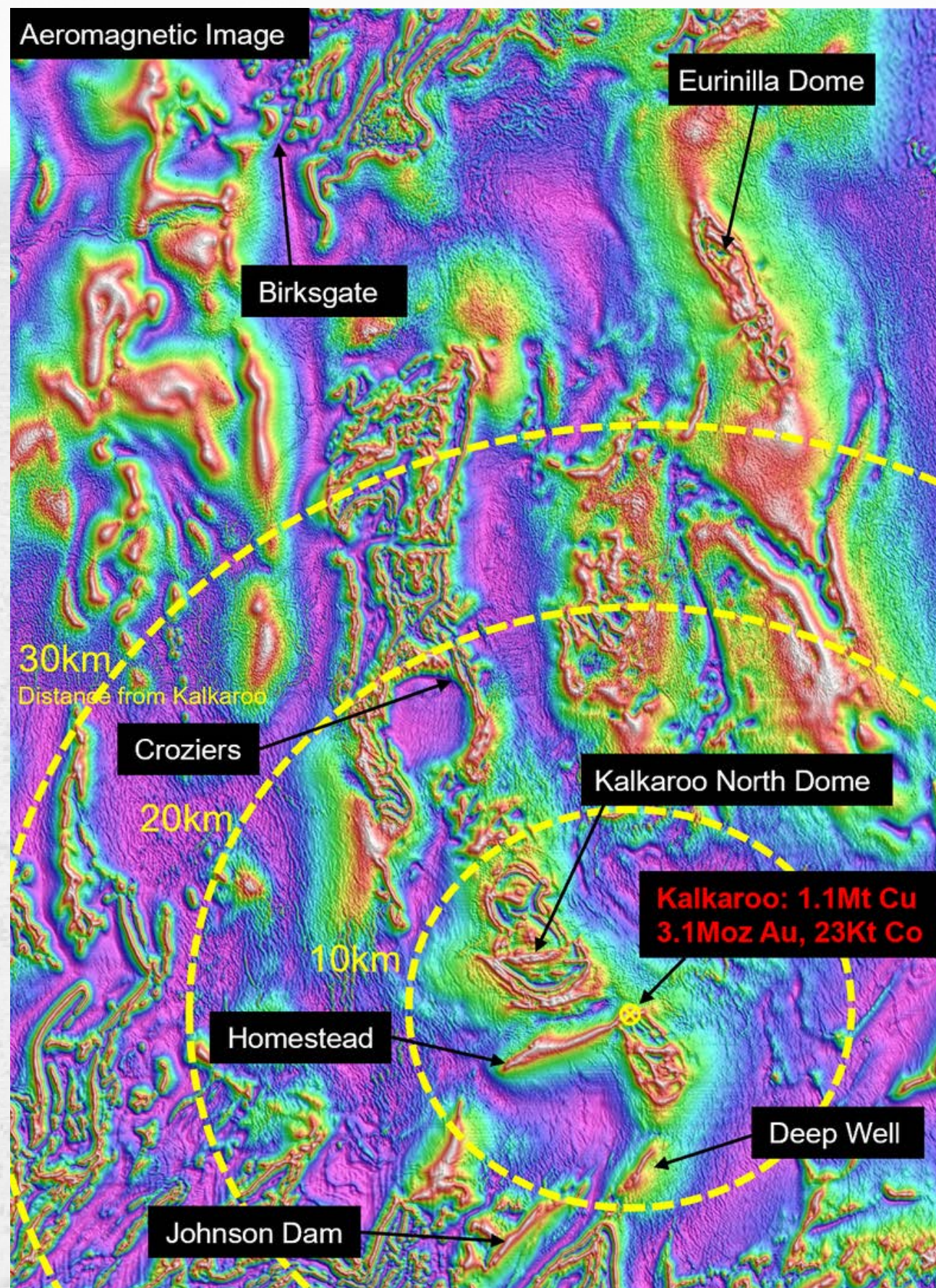
Kalkaroo resource upside: Orebody is not closed off by current drilling



- Space to substantially expand the size of the Kalkaroo orebody within the ML area at the eastern and western ends of the deposit and down dip.
- Economic grade hangingwall mineralisation intersected not yet followed up.
- Nearby Homestead prospect has sufficient strike length of the prospective horizon (K2) to potentially host another Kalkaroo-size deposit ([refer to ASX announcement 29 August 2023](#)).
- Associated strategic minerals – cobalt, REE, molybdenite, tungsten.

The image on the left shows the considerable untested resource expansion potential (indicated by the red arrows) that lies within the existing granted ML area (white boundary).

Multiple copper prospects within potential trucking distance of Kalkaroo



Deep Well prospect ([ASX announcement 9 May 2023](#))

- 19 metres of 0.42% Cu and 206 ppm Co in faulted anticlinal closure.
- > 4 km untested strike of prospective horizon (K2 unit) and fault zone.

Johnson Dam prospect ([ASX announcement 17 May 2023](#))

- 22 metres of 0.27% Cu, 15 metres 405 ppm Co, 22 metres of 3,533 ppm TREEO, 6 metres of 3.3 lbs/tonne U₃O₈ on eastern faulted anticlinal limb.
- > 3 km untested strike of K2 unit.

Homestead prospect ([ASX announcement 29 Aug. 2023](#))

- 27 metres of 0.23% Cu, 3 metres of 5,530 ppm TREEO, 4 metres of 3.3 lbs/tonne U₃O₈ in extension of West Kalkaroo – faulted anticline.
- > 5 km untested strike of K2 unit.

North Dome prospect ([ASX announcement 16 Nov. 2023](#))

- 54 metres of 0.27% Cu; 60 metres 0.56 g/t Au to end of hole in fault/quartz breccia zone.
- > 5 km untested strike of fault zone.

Birksgate prospect ([ASX announcement 15 January 2024](#))

- 10.9 metres of 0.84% Cu, 0.64/g/t Au, 493 ppm Mo plus U and V in MMG JV diamond drilling confirmed by HAV RC drilling more than 1.5 km to the east.
- Mineralised K3 unit target potentially covers an area of >8km² in a synclinal structure.

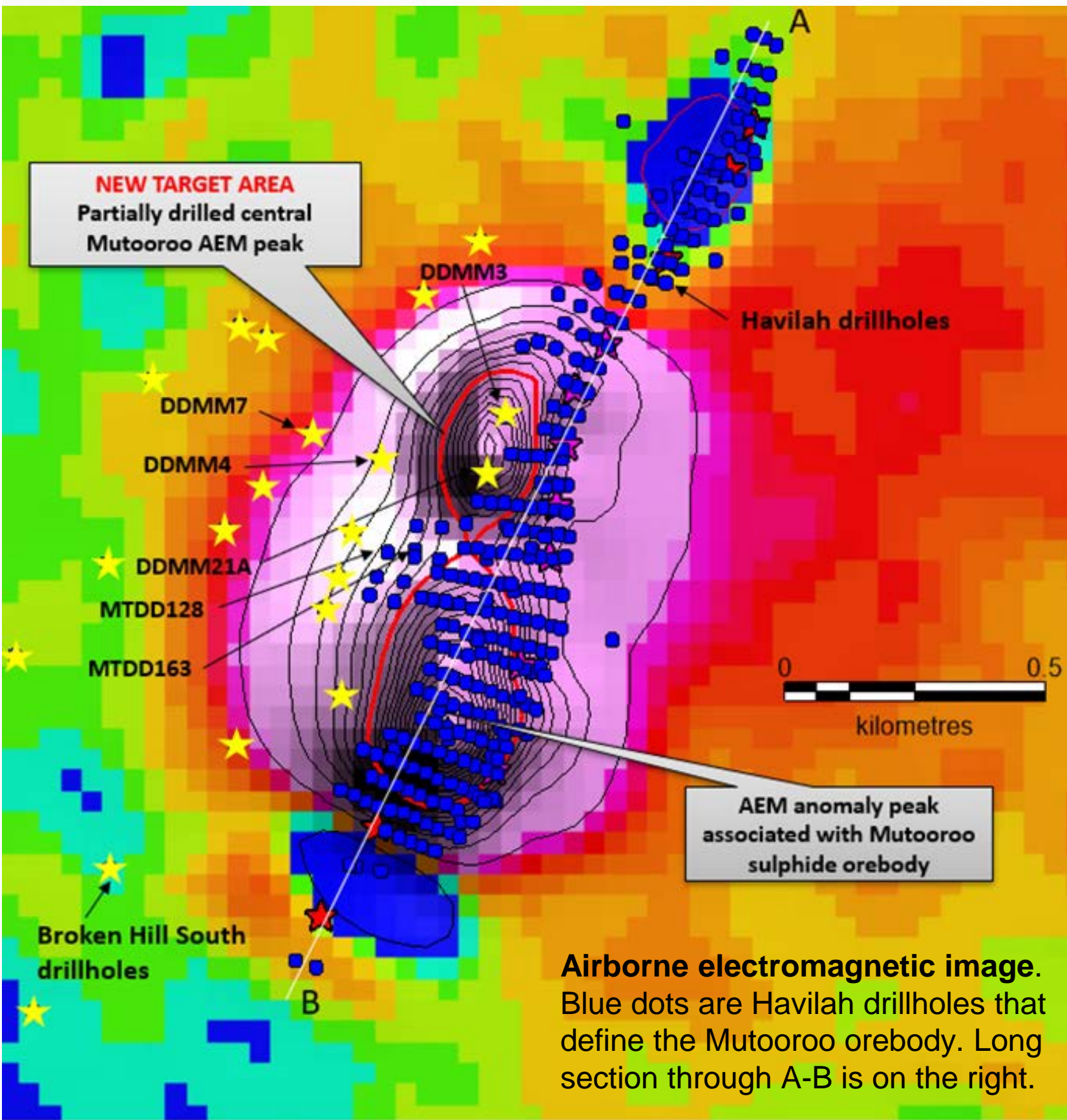
Eurinilla Dome prospect ([ASX announcement 8 March 2024](#))

- 32 metres of 1.96% Cu & 0.84 g/t Au in a supergene enriched zone.
- >20 km prospective strike around the dome.

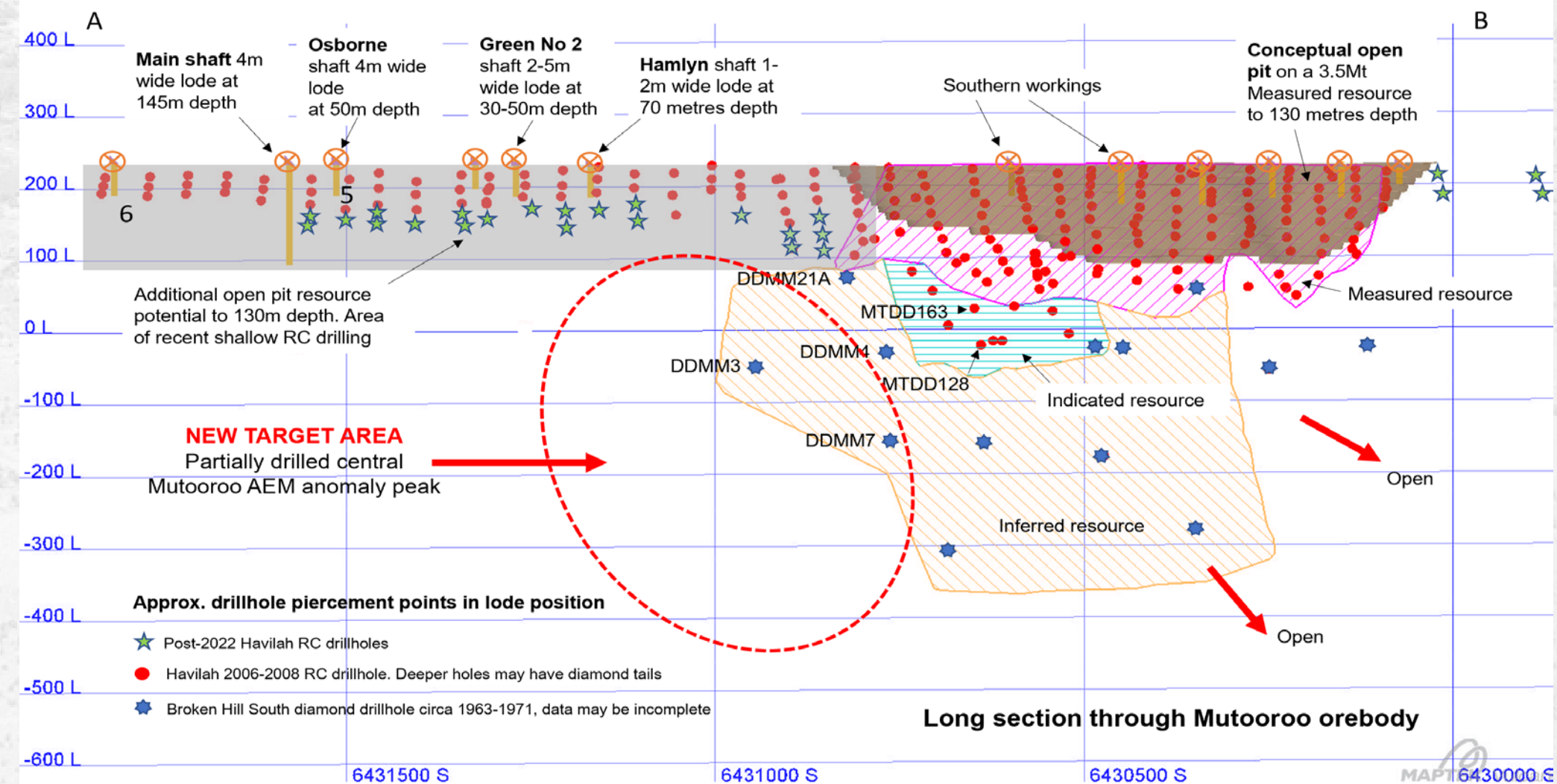
Croziers prospect ([ASX announcement 18 April 2017](#))

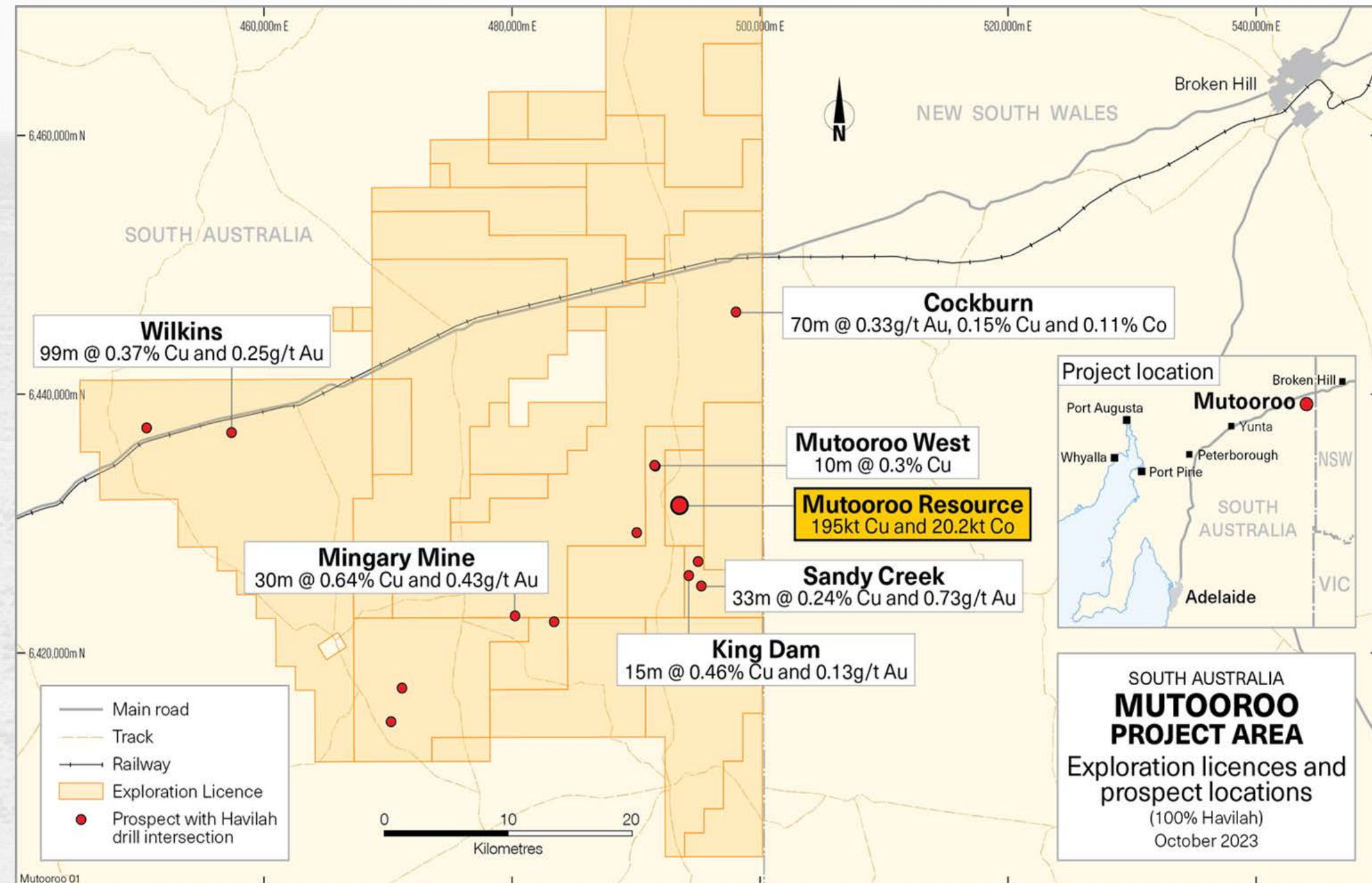
- 20 metres of 0.54% Cu plus associated >1000 ppm Nd and W in skarn horizon.
- Abundant magnet REE and economic grade W. > 4 km strike potential in multiple zones.

The image on the left shows the above 7 prospects plotted on a regional aeromagnetic image, with the distance from Kalkaroo indicated by the yellow circles.



- Airborne electromagnetic (AEM) data clearly identifies the known Mutooroo massive sulphide orebody (12.5Mt of 1.53% copper, 0.16% cobalt and 0.20 g/t gold – [refer to ASX announcement 15 September 2023](#)).
- An AEM peak 500 metres to the north likely indicates another thicker zone of largely undrilled massive sulphide copper-cobalt mineralisation that could potentially add to the Mutooroo sulphide resource.
- Historic diamond drilling results are supportive, including:
 - DDMM21A:** 17.1 metres of 1.66% copper, 0.16% cobalt and 0.18 g/t gold from 162 metres
 - DDMM4:** 12.2 metres of 1.87% copper and 1.1 g/t gold from 337.4 metres (cobalt not assayed)
 - DDMM7:** 9.4 metres of 1.72% copper, 0.19% cobalt and 0.63 g/t gold from 469.4 metres
 - DDMM3:** 15.2 metres of 1.05% copper from 374.9 metres downhole (gold & cobalt not assayed)





- 1,900 km² of under-explored Broken Hill age rocks with mostly very shallow cover. Drill target generation guided by airborne electromagnetics, lag sampling and geological mapping and sampling.
- **Mutooroo West** – massive sulphide lode similar to Mutooroo and hosted by a parallel shear zone. Large EM conductor at depth not adequately tested.
- **Cockburn** – New discovery under a surface ironstone of quartz-pyrite mineralised lode up to 70 metres wide within a shear zone containing appreciable copper-gold-cobalt ([refer to ASX announcement of 17 October 2023](#)).
- **Mingary Mine** – Copper-gold mineralisation hosted by quartz-pyrite within a several kilometre long shear zone. Several potentially economic grade drilling intersections from historic Minotaur and recent Havilah drilling ([refer to ASX announcement 5 July 2023](#)).
- **King Dam – Sandy Creek** – Copper-gold mineralisation related to a late stage major regional faulting event ([refer to ASX announcement 5 July 2023](#)). Many kilometres of strike remain unexplored.
- Surrounding prospects could potentially provide additional ore-feed to a conceptual processing hub at Mutooroo.

Recent Havilah drilling results in the Mutooroo Project Area are shown on the map. Note: this map is not adjusted to show some recently relinquished tenement areas presently in process.

- Seek to monetise the Kalkaroo project via a divestment process which is presently being managed by Deutsche Bank.
- Seek a partner to assist with Mutooroo PFS funding and project development.
- Seek to monetise certain non-core uranium assets via sales, options and/or JV agreements with various suitably qualified explorers (eg Koba Resources agreement, [refer to ASX announcement of 22 January 2024](#)).
- Further exploration drilling of the highest potential, but to date under-explored copper, gold and uranium prospects held by Havilah, including Johnson Dam, Eurinilla Dome and Birskgate prospects.

2024 Activity Timelines	April	May	June	July	August	September	October	November	December	
Kalkaroo Project Area										
Kalkaroo deposit divestment**	—————→				?					
Permitting and access	—————									
Drilling key prospects & other exploration*		—————								
Mutooroo Project Area										
Mutooroo deposit partnership**	—————→				?					
Permitting and access	—————									
Mutooroo resource & prospect drilling*		—————								
Koba Yarramba Uranium Project	(refer to ASX announcement 18 April 2024)									
Permitting and access	—————			—————					—————	
Drilling sand-hosted uranium targets		—————					—————			

*Subject to the normal caveats of timely permitting approvals, suitable drilling rig availability, weather and funding.

** Discussions are on going and in both cases there is no certainty that a successful outcome will be realised.

JORC Mineral Resources as at 31 July 2023

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	
Project	Classification		Tonnes (Mt)		Iron (%)		Fe concentrate (Mt)		Estimated yield	
Maldorky ⁵	Indicated		147		30.1		59		40%	
Grants ⁶	Inferred		304		24		100		33%	
Total all projects	All categories		451				159			

JORC Ore Reserves as at 31 July 2023

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. Ore Reserves are a subset of the Mineral Resources.

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

⁵ Details released to ASX: [10 June 2011](#) applying an 18% Fe cut-off (Maldorky)

⁶ Details released to ASX: [5 December 2012](#) applying an 18% Fe cut-off (Grants)

Cautionary Statement

The information contained in this presentation is not financial product advice and does not constitute an offer. The presentation is for information purposes and is of a general and summary nature only. Neither Havilah Resources Limited (Havilah) nor any member of the Havilah Group of companies, gives no warranties in relation to the statements and information in this presentation. Investors should seek appropriate advice on their own objectives, financial situation and needs.

It is not recommended that any person makes any investment decision in relation to Havilah or the Kalkaroo project based on this presentation. This presentation should be read in conjunction with the latest Annual Report together with any announcements made by Havilah in accordance with its continuous disclosure obligations arising under the Corporations Act 2001.

This presentation contains certain statements which may constitute 'forward-looking statements'. Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements.

Havilah disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. Investors are cautioned that forward-looking statements are not guarantees of future performance and investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

Where discovery upside is identified, this is a collective opinion of Havilah's geologists based on their best interpretations of the available data and their experience in the region. Further work may disprove any or all the interpretations and models put forward in this presentation.

There is no guarantee that the engagement of Deutsche Bank will result in any specific transactional outcome for Kalkaroo.

Competent Person's Statement

The information in this presentation that relates to 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 Ore Reserve & Mineral Resources complies with either the JORC Code 2004 or the JORC Code 2012. 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, which are 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.

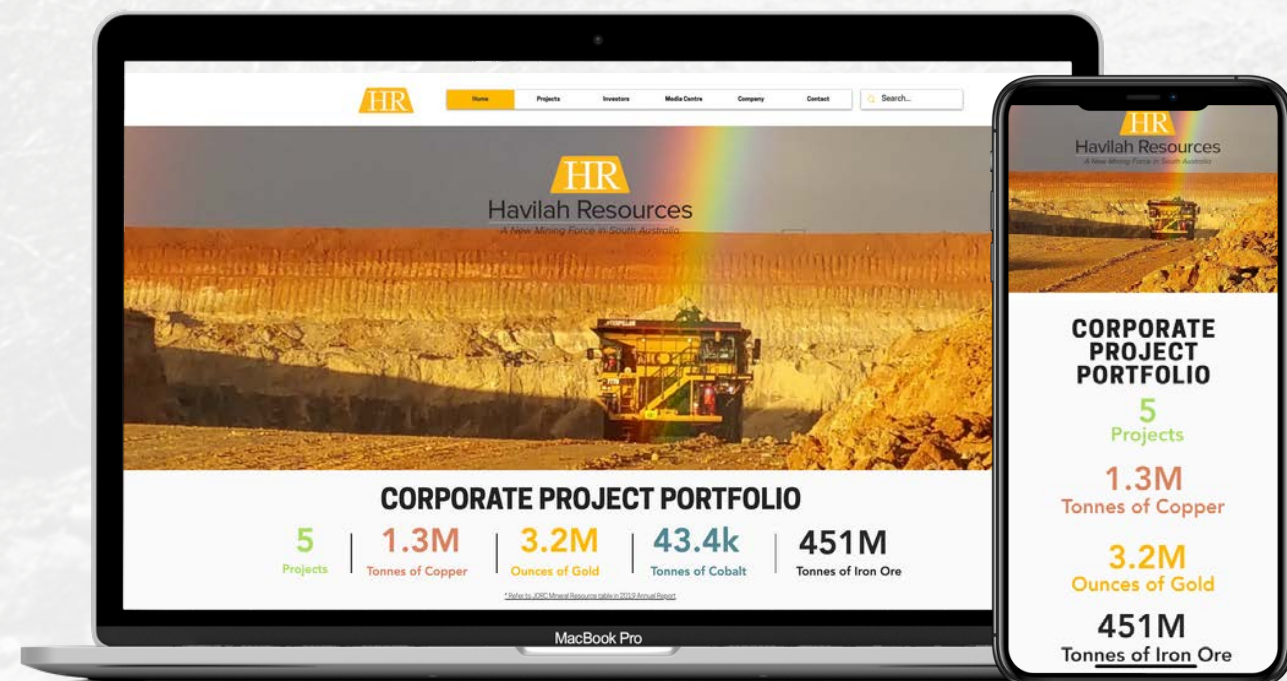
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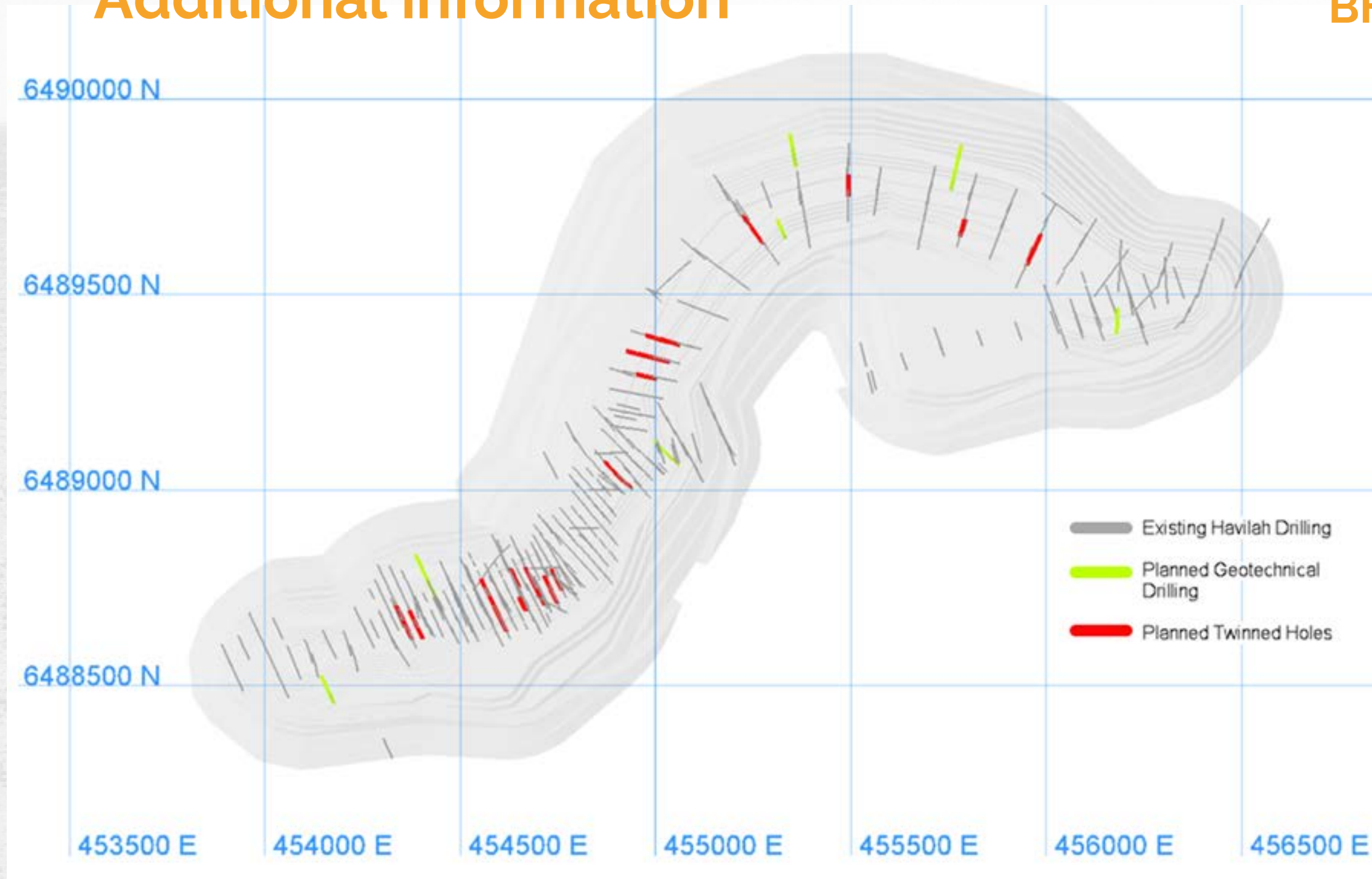
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Additional information

BHP Kalkaroo Study Program 2023 - Summary



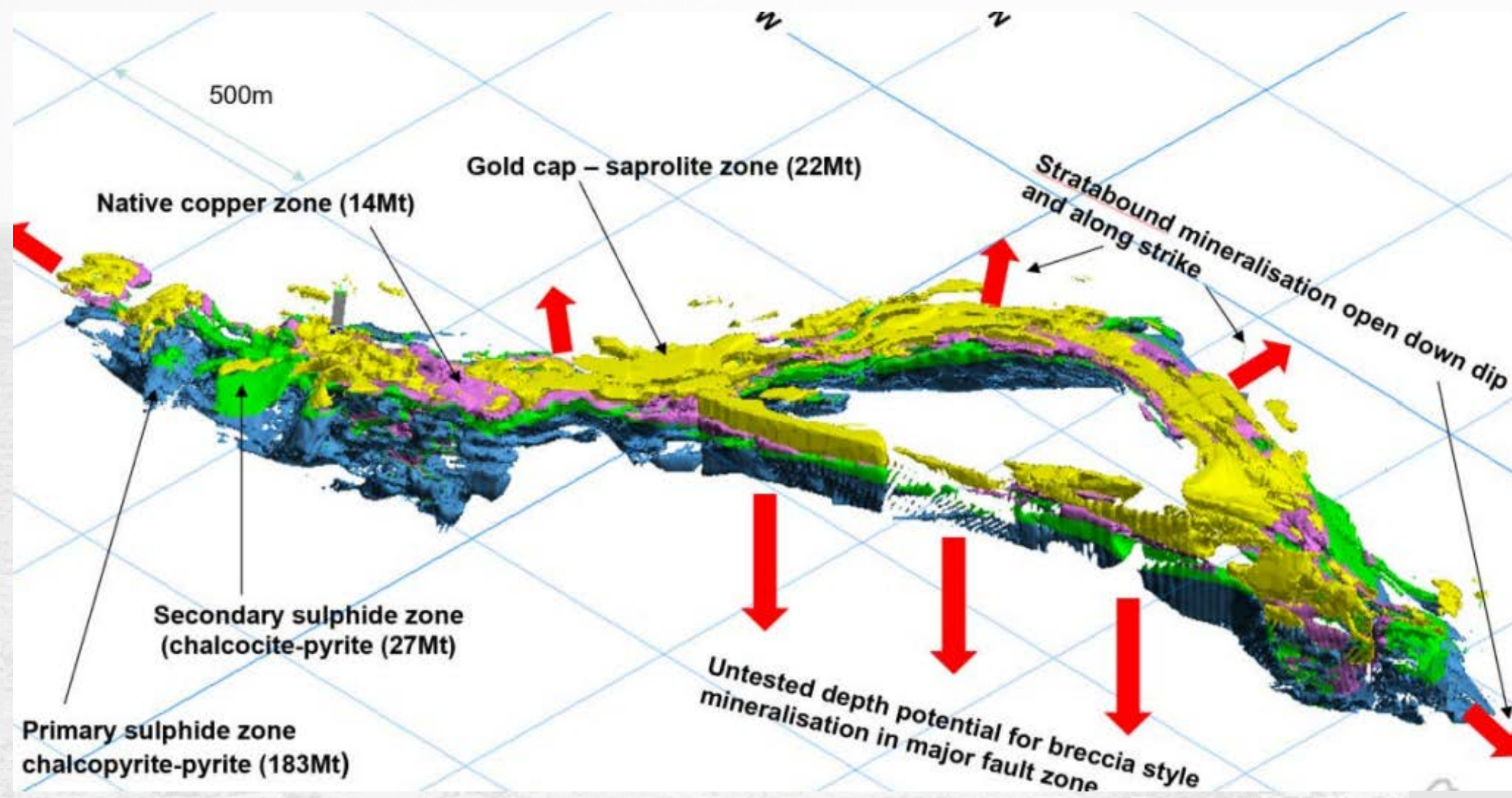
31 diamond drillholes completed on Kalkaroo ML 6498 consisting of metallurgical sample holes, twinned holes to compare previous drilling for bias and geotech holes.

- Twinned holes demonstrated no systematic bias between drilling methods; concluded earlier Havilah aircore and reverse circulation drilling is of comparable reliability to the BHP diamond drillholes.
- Geotech testwork validated Havilah earlier studies (including its field data from Portia gold mine); minor changes to the saprolite, saprock, and fresh rock parameters unlikely to have a material effect on the slope geometry and open pit design parameters.
- Metallurgical testwork results align with Havilah's previous extensive test work; improvements in Cu concentrate grade was achieved using different reagents.
- Geological block model showed close correlation with Havilah's most recent (2020) block model, with non-material variations explainable by software differences.
- New open pit optimisations and mining schedules developed, which potentially extends the conceptual open pit mine life to more than 20 years.
- Financial model confirms a robust long-life project, which is supported by multiple studies on operating, capital, infrastructure, power and access cost inputs.

The image above shows the geotechnical and twinned diamond drillhole locations relative to Havilah's original PFS pit and previous drilling locations. Some metallurgical holes were also drilled to provide representative drillcore samples for BHP's comprehensive metallurgical testwork program.



Improved Kalkaroo ore processing recoveries in BHP study ¹⁴



The image at left shows the distribution and tonnages of the four Kalkaroo ore types as defined in the 2019 [Havilah pre-feasibility study](#). BHP's twinned diamond drillholes confirmed the overall validity of Havilah's early drilling results and interpretations.

The table at right summarises the metallurgical recoveries obtained by the BHP study program based on a new comprehensive metallurgical testwork program using samples derived from BHP's twinned diamond drillholes (see slide 13).

% Cu	Material	LOM tonnes (M)	Cu metal ore (t)	fraction metal	Cu % Rec
0.12	SAP	14	16,800	0.022	54.0
0.59	NC	14	82,600	0.11	54.0
0.7	CC	25	175,000	0.23	82.7
0.38	CP	131	497,800	0.64	92.2
0.42	TOTAL	184	772,200		85.1
g/t Au			Au metal ore (g)		Au % Rec
0.79	SAP	14	11,060,000	0.17	74.0
0.61	NC	14	8,540,000	0.13	74.0
0.4	CC	25	10,000,000	0.15	66.8
0.28	CP	131	36,680,000	0.55	72.0
0.36	TOTAL	184	66,280,000		71.8

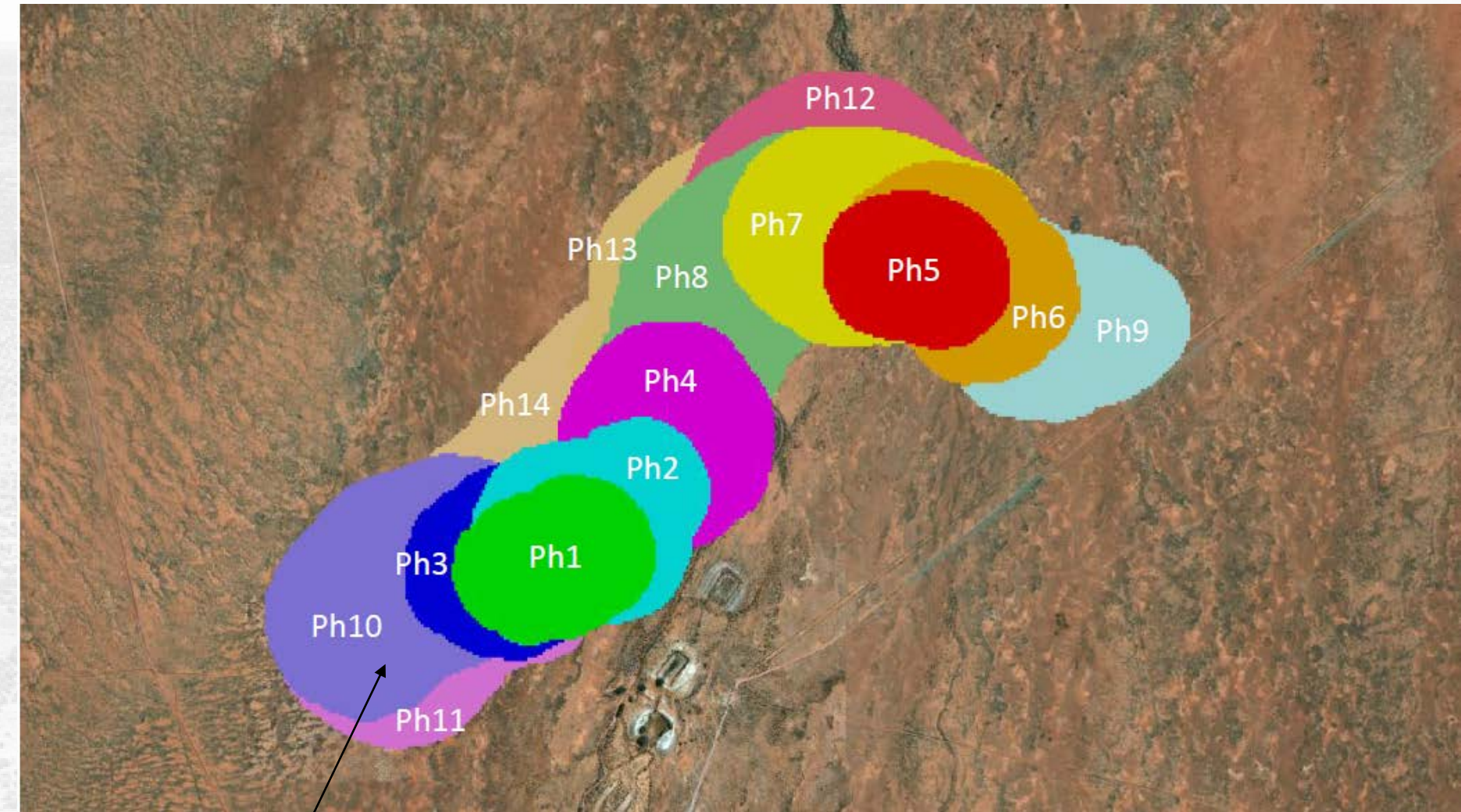


Increased conceptual mine life generated by updated open pit optimisation

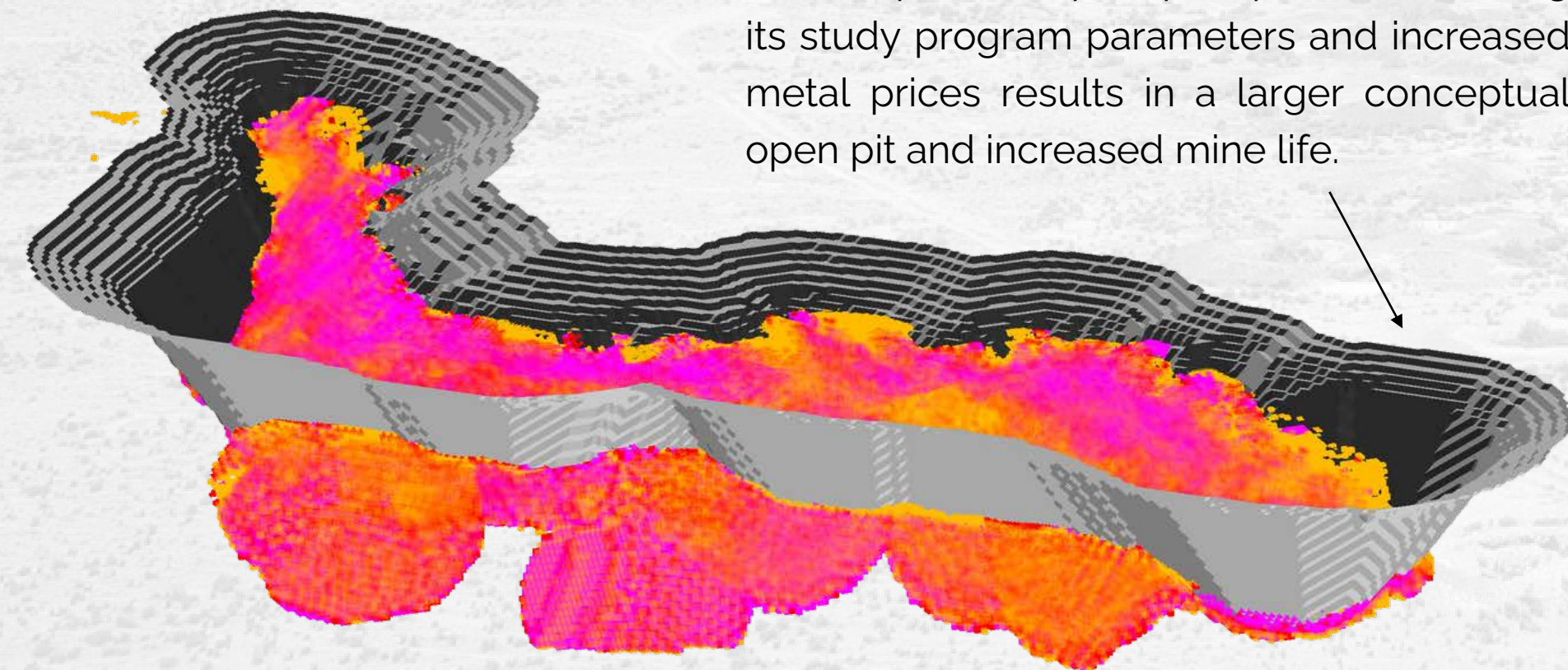
BHP Kalkaroo Study Program 2023 – Mining Phase Design

Key Financial and Production Metrics	Unit	Live
Processing capacity	Mtpa	11.8
Mine Life	Years	23
Mining inventory	Mt	184
	%	0.42%Cu and 0.36 g/t Au

BHP's updated open pit optimisation using its study program parameters and increased metal prices results in a larger conceptual open pit and increased mine life.



14 mining phases were generated within the open pit shell. Phases 1 to 8 are within the Measured and Indicated resources. Phases 9 to 14 within the Inferred resource.



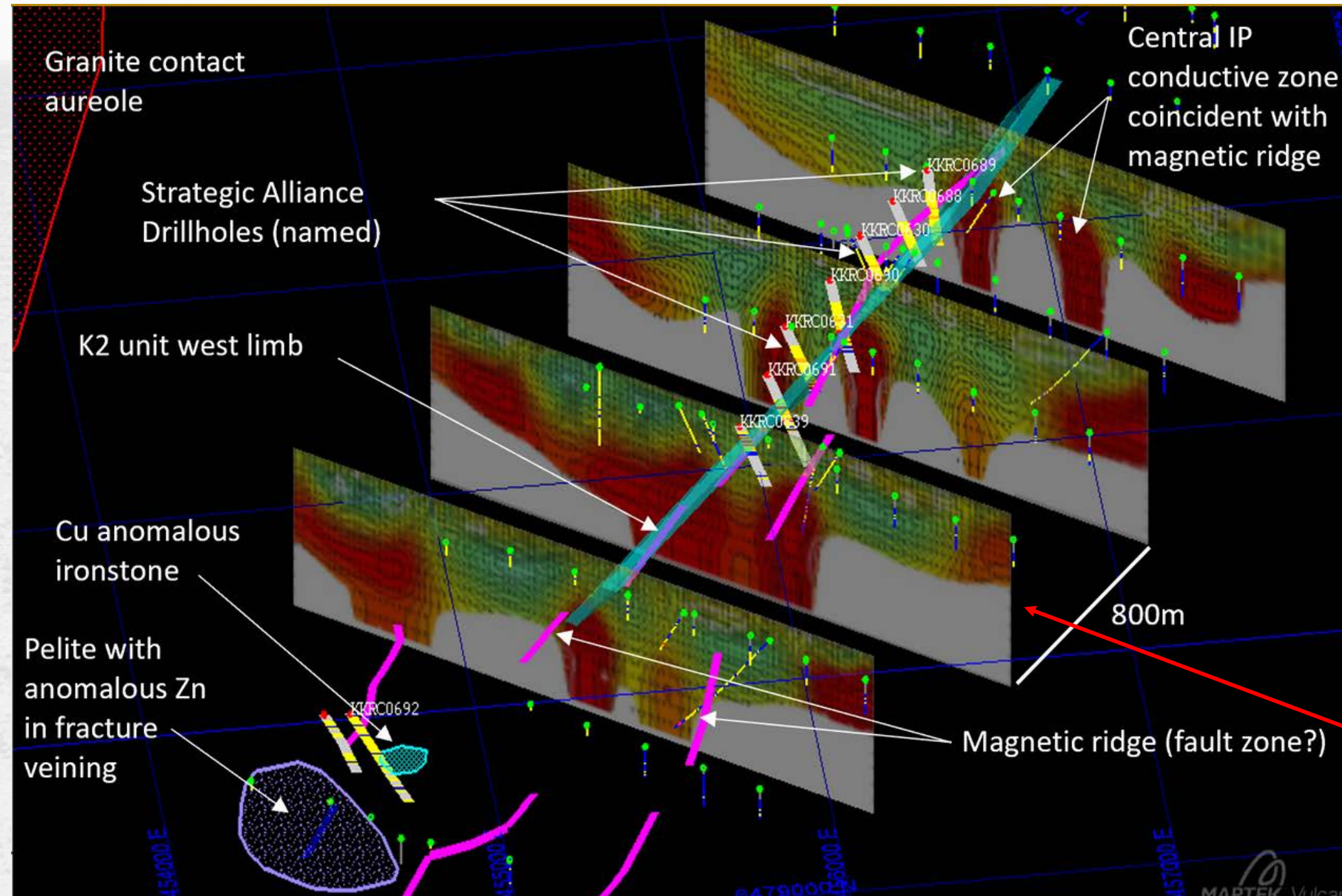
Exploration of the Curnamona Copperbelt

Refer to slides 4 and 7 for locations of the various prospects described in the following slides

Note: in the following project descriptions K2 refers to the extensive Kalkaroo mineralised unit or prospective horizon, K1 refers to the footwall or underlying rock sequence and K3 refers to the hangingwall or overlying rock sequence



Havilah contractor RC drilling at the Homestead prospect during 2023



- 7 Strategic Alliance drillholes intersected copper on the K2 western limb, including a best result of 19 metres of 0.42% Cu and 206 ppm Co from 163 metres ([refer to ASX announcement 9 May 2023](#)).
- Considerable discovery upside:
 - > 4 km strike of aircore Cu anomalies.
 - Eastern limb K2 unit not tested.
 - IP conductor and chargeability anomaly remains largely untested. Hint of feeder zone with Cu, W, fluorite and calc-silicate.
 - Associated Co and Mo critical minerals.
 - Close to Kalkaroo, relatively thin cover.

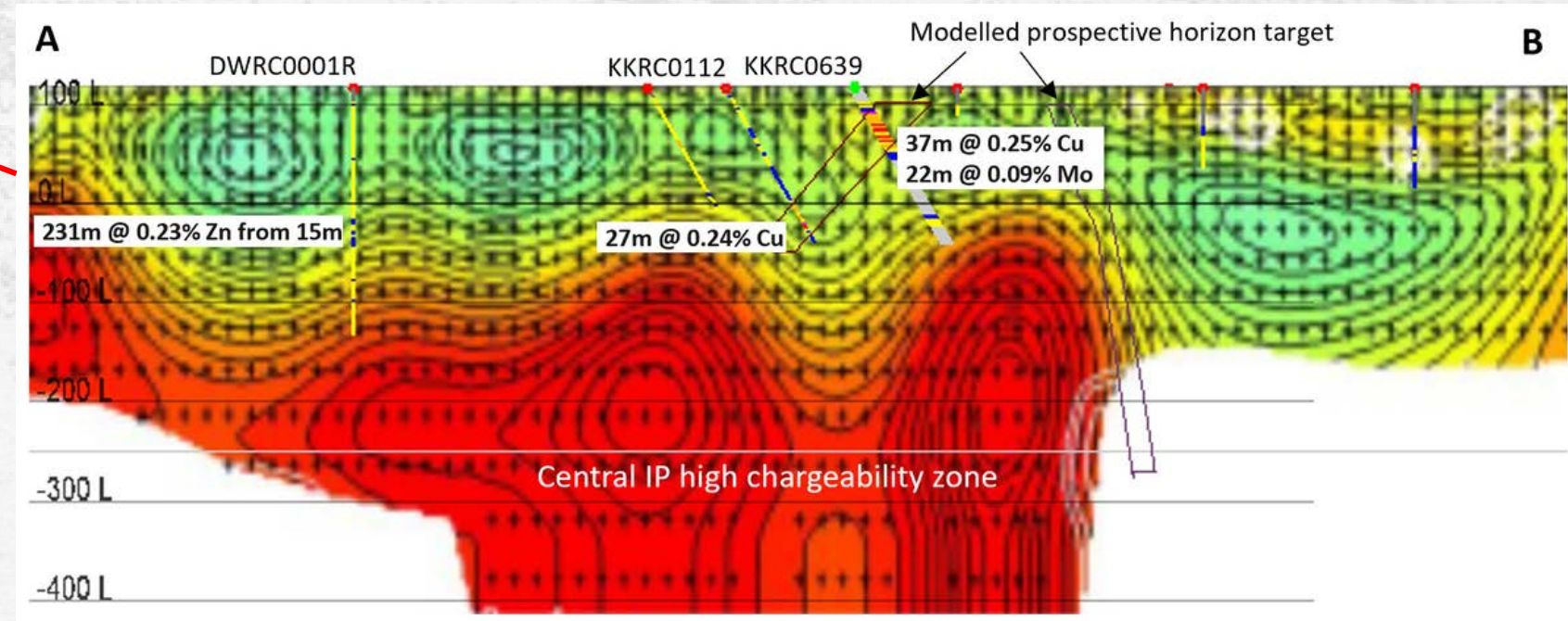
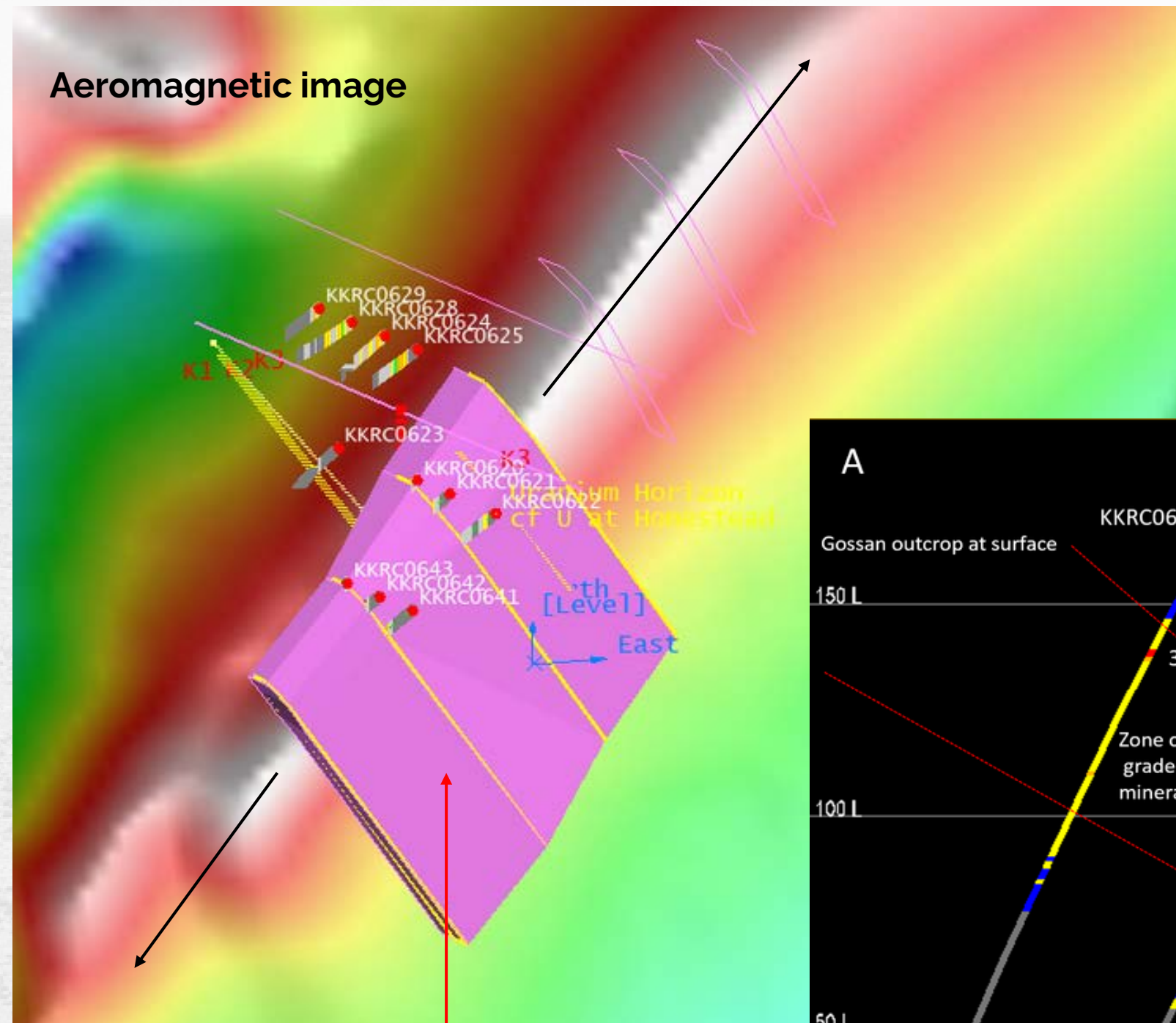


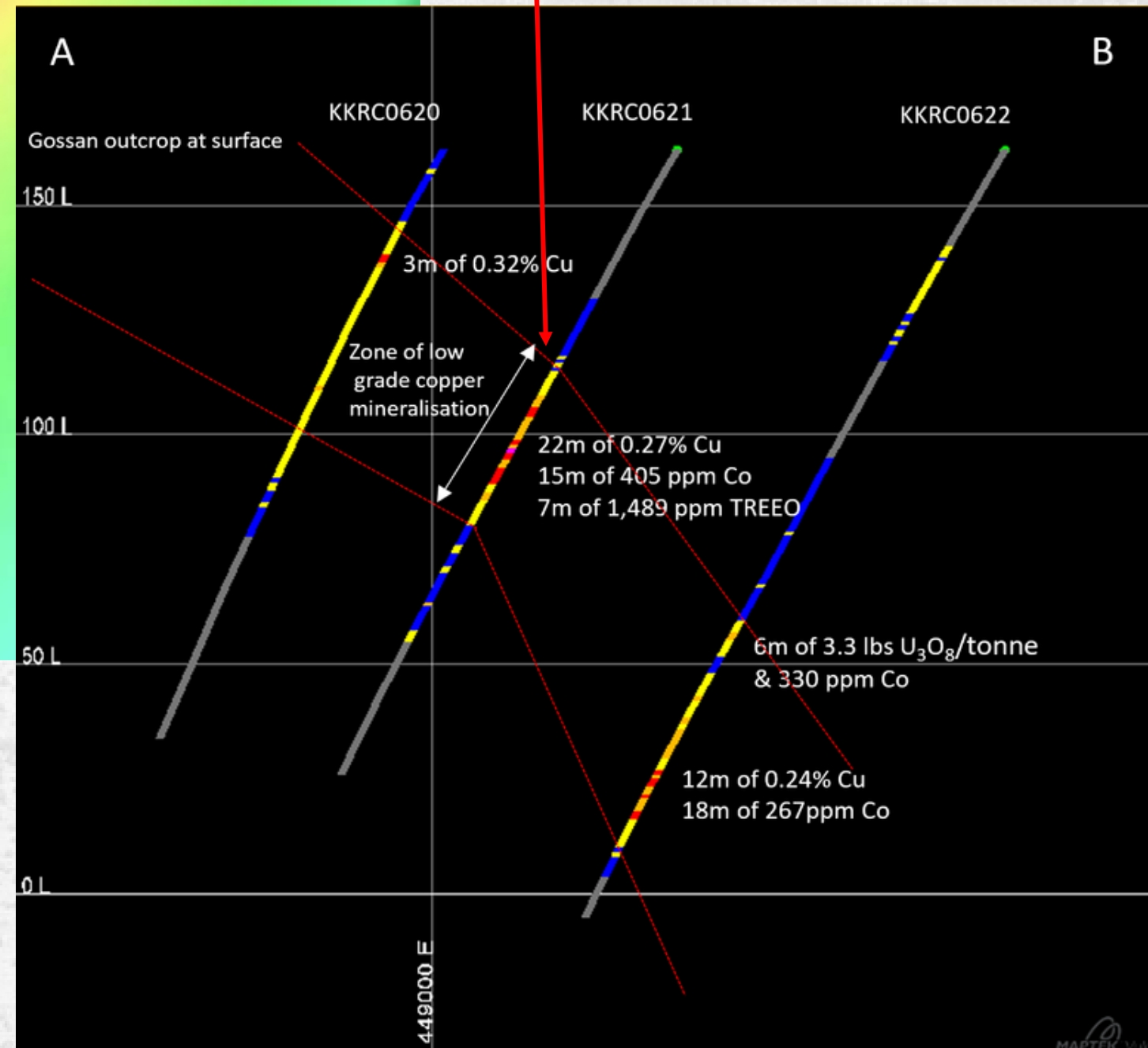
Image above shows the consistent conductive anomalies in 4 historic MIMDAS IP profiles 800 metres apart that correspond closely with a central magnetic ridge (pink lines) and widespread Newcrest aircore drilling copper anomalies traceable for more than 4 km (green dots). Source of the central IP conductive zone is largely untested (see also at right).

Aeromagnetic image

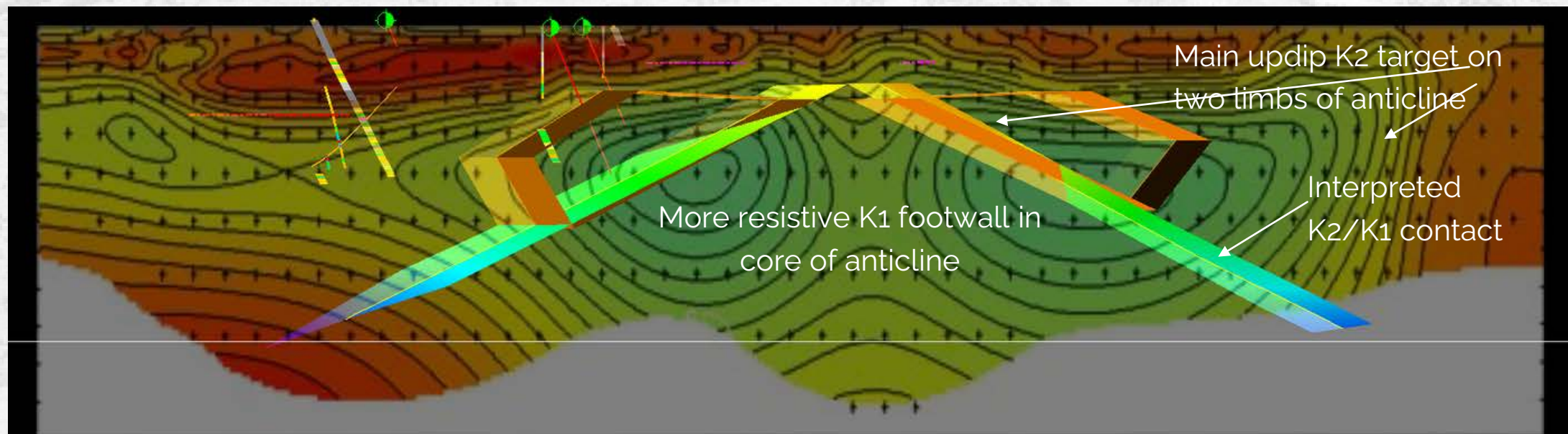
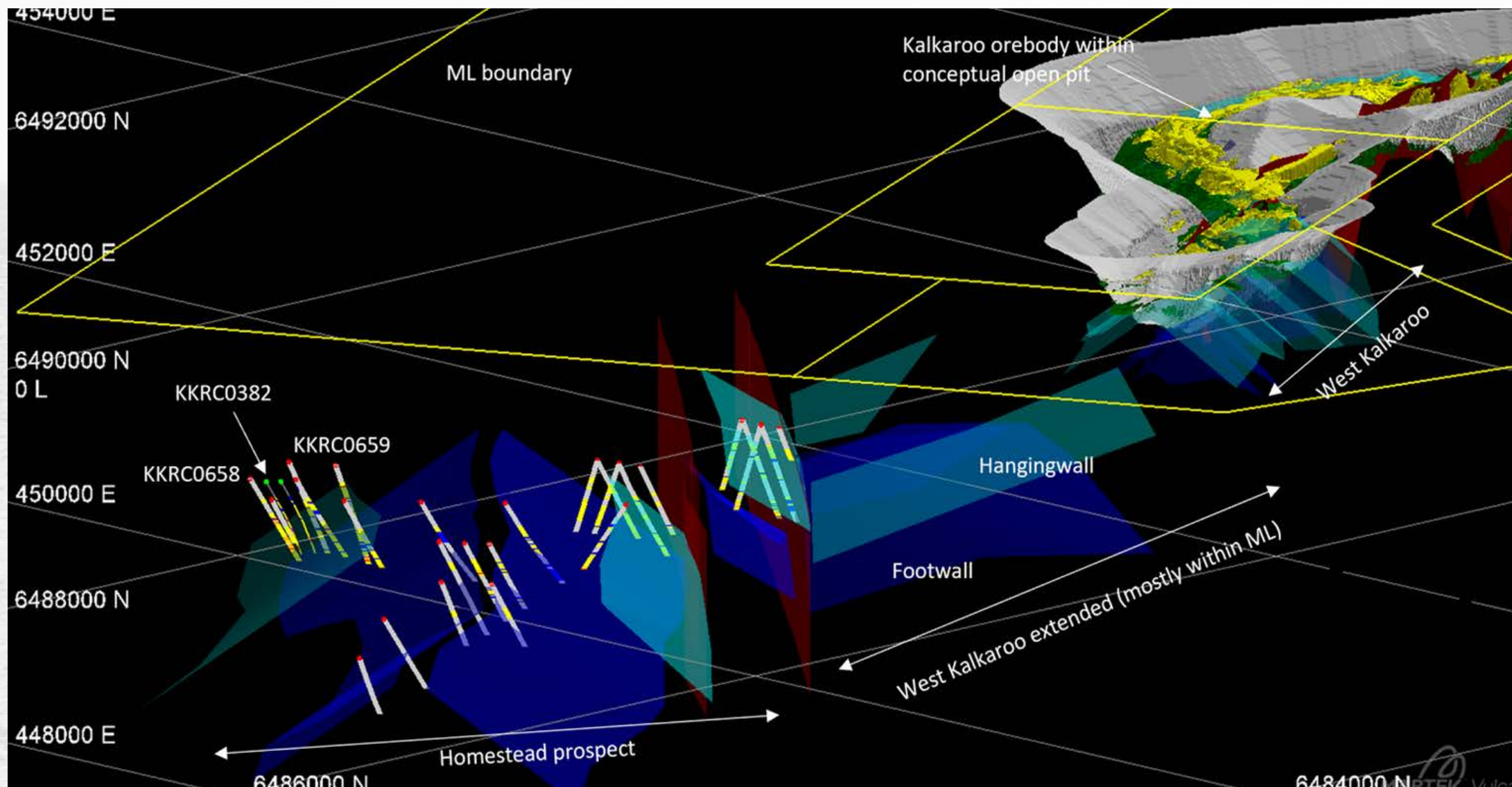


Interpreted mineralised envelope within K2 unit with untested strike extents shown by black arrows

Consistently mineralised pyrite-rich K2 unit intersected in 3 drillholes on two section lines



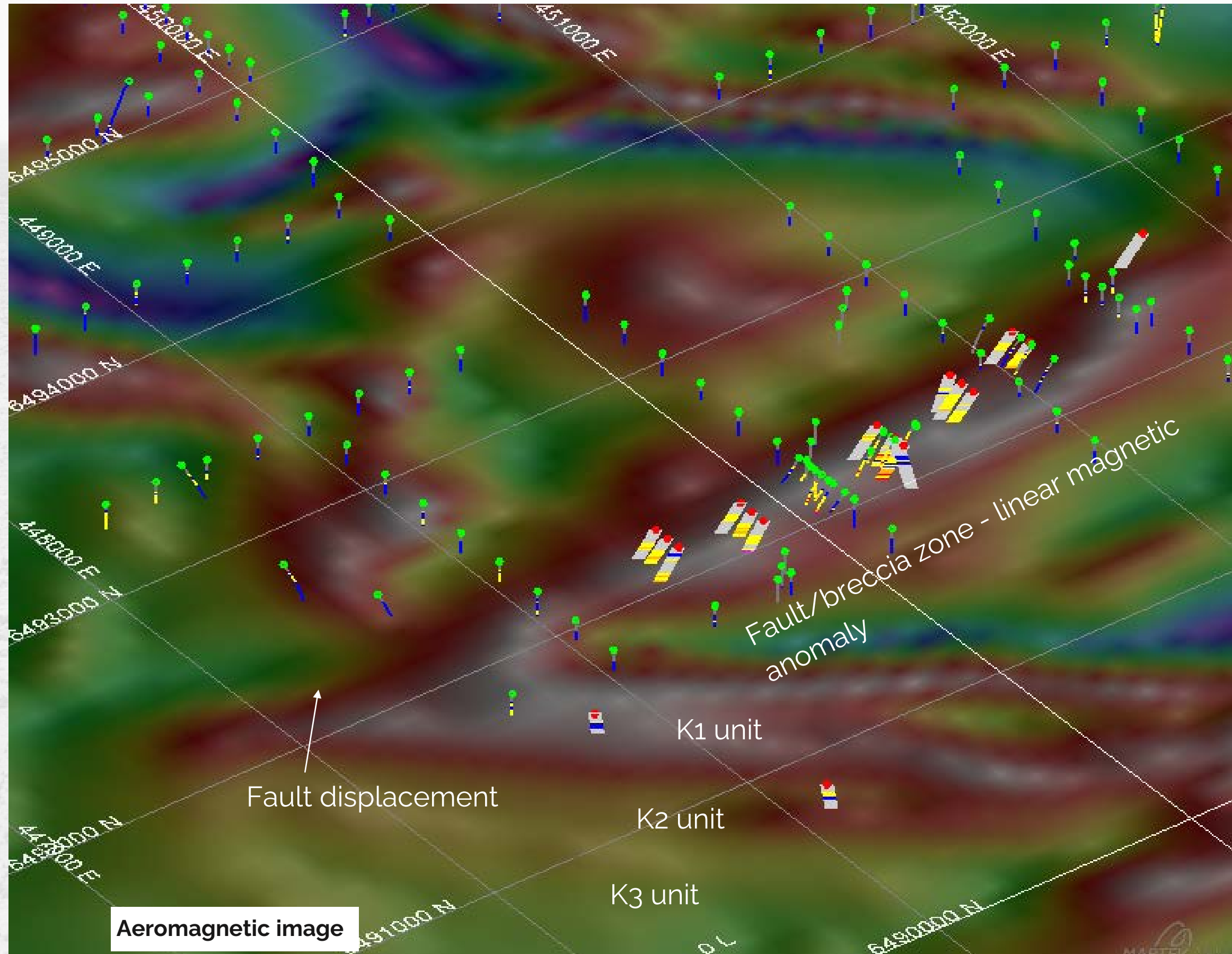
- Targeted a previously undrilled Cu anomalous gossan associated with a linear magnetic feature.
- Interpreted to be a faulted tight anticlinal closure.
- 11 Strategic Alliance drillholes intersected copper in a 30-40 metre thick pyrite-rich unit on the eastern limb. Includes best results of 22 metres of 0.27% Cu, 15 metres 405 ppm Co, 22 metres of 3,533 ppm TREEO, 6 metres of 3.3 lbs/tonne U₃O₈ ([refer to ASX announcement 17 May 2023](#)).
- Considerable discovery upside:
 - > 3 km of unexplored strike of K2 unit and magnetic feature.
 - Multi-commodity mineralisation.
 - Uranium reaches potentially economic grade x thickness levels on a stand-alone basis.
 - TREEO include a high proportion of the valuable magnet MREEO.
 - Close to Kalkaroo and outcrops at surface.



MIMDAS Resistivity Profile 450900E

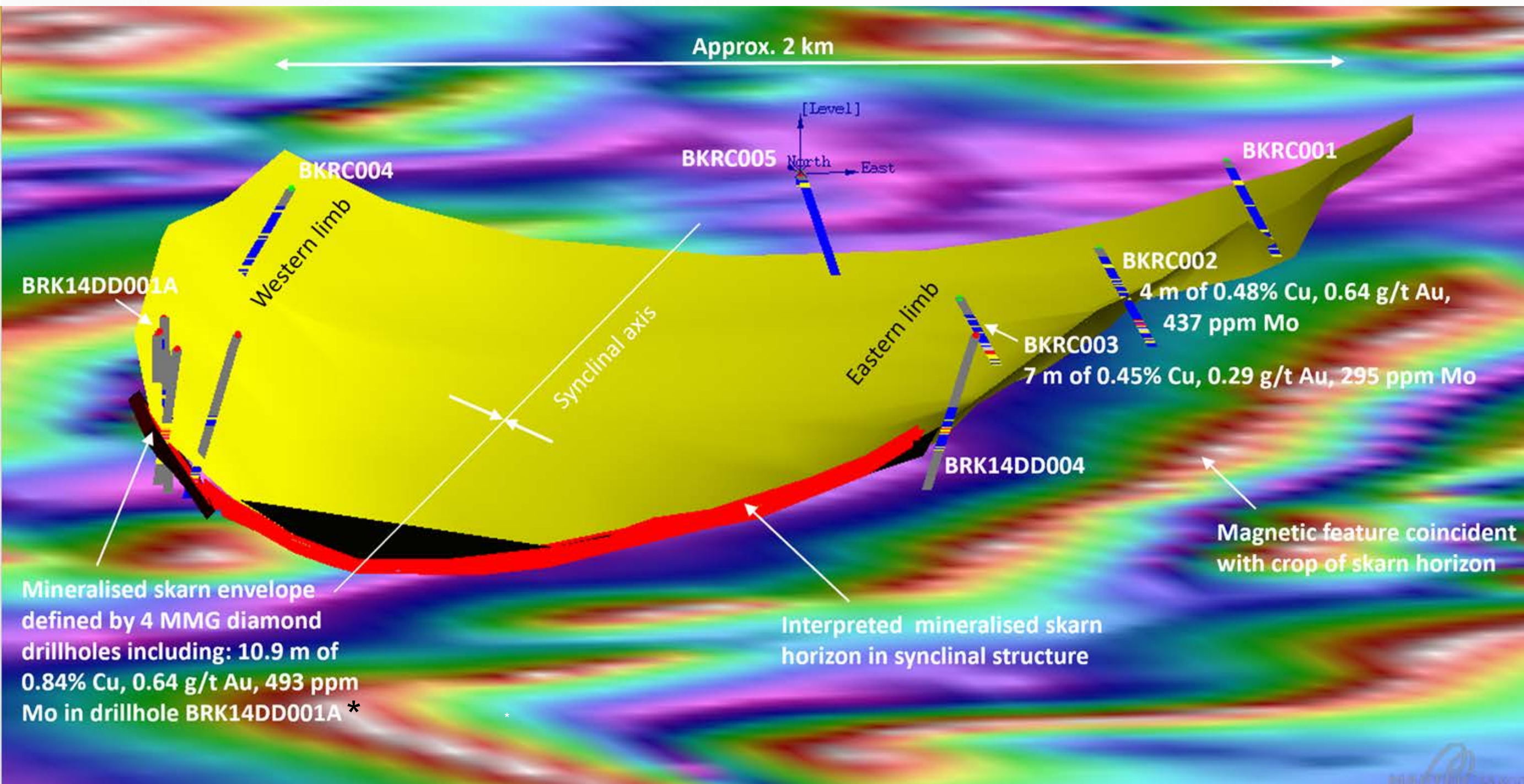
- Within sight of Kalkaroo and interpreted as a fault-displaced segment of the mineralised West Kalkaroo anticlinal closure structure.
- 26 Strategic Alliance drillholes established the spatial relationships between K1, K2 and K3 units and best results of 27 metres of 0.23% Cu, 3 metres of 5,530 ppm TREEO, 4 metres of 3.3 lbs/tonne U₃O₈ ([refer to ASX announcement 29 August 2023](#)).
- Considerable discovery upside:
 - > 5 km of unexplored strike on both limbs of the anticline.
 - Main K2 mineralisation up-dip has not been tested by drilling to date.
 - Multi-commodity mineralisation.
 - Uranium reaches potentially economic grade x thickness levels.
 - TREEO include a high proportion of the valuable magnet MREEO.
 - Adjacent to Kalkaroo.

The upper image on the left is an oblique 3D view showing interpretation of the Homestead prospect as a fault-displaced segment of West Kalkaroo. The mineralised K2 horizon was intersected in several drillholes where expected between the barren footwall (K1 – dark blue) and hangingwall (K3 – light blue). K2 is interpreted to form a faulted anticlinal structure that is favourable for higher grade copper-gold mineralisation by analogy with West Kalkaroo (see also cross-section at lower left).



- Targeting a major east-west fault/breccia zone that transects the Kalkaroo North Dome.
- Marked by a linear magnetic high reflecting magnetite alteration.
- 16 Strategic Alliance drillholes mostly hit mineralised quartz veining and breccia where expected over a strike length of 1.6 km.
- Broken ground resulted in many holes stopping in mineralisation. Includes 54 metres of 0.27% Cu and 60 metres 0.56 g/t Au to end of hole ([refer to ASX announcement 16 November 2023](#)).
- Considerable discovery upside:
 - > 5 km of unexplored strike.
 - Up to 40 metre wide zone.
 - Analogies to mineralised Kalkaroo fault zone at West Kalkaroo.
 - Requires diamond drilling to further test.

The image at left is an oblique 3D view of an aeromagnetic image that shows the location of Havilah RC drillholes on the fault structure (linear red-white feature) that transects and displaces various rock units defining the Kalkaroo North Dome.



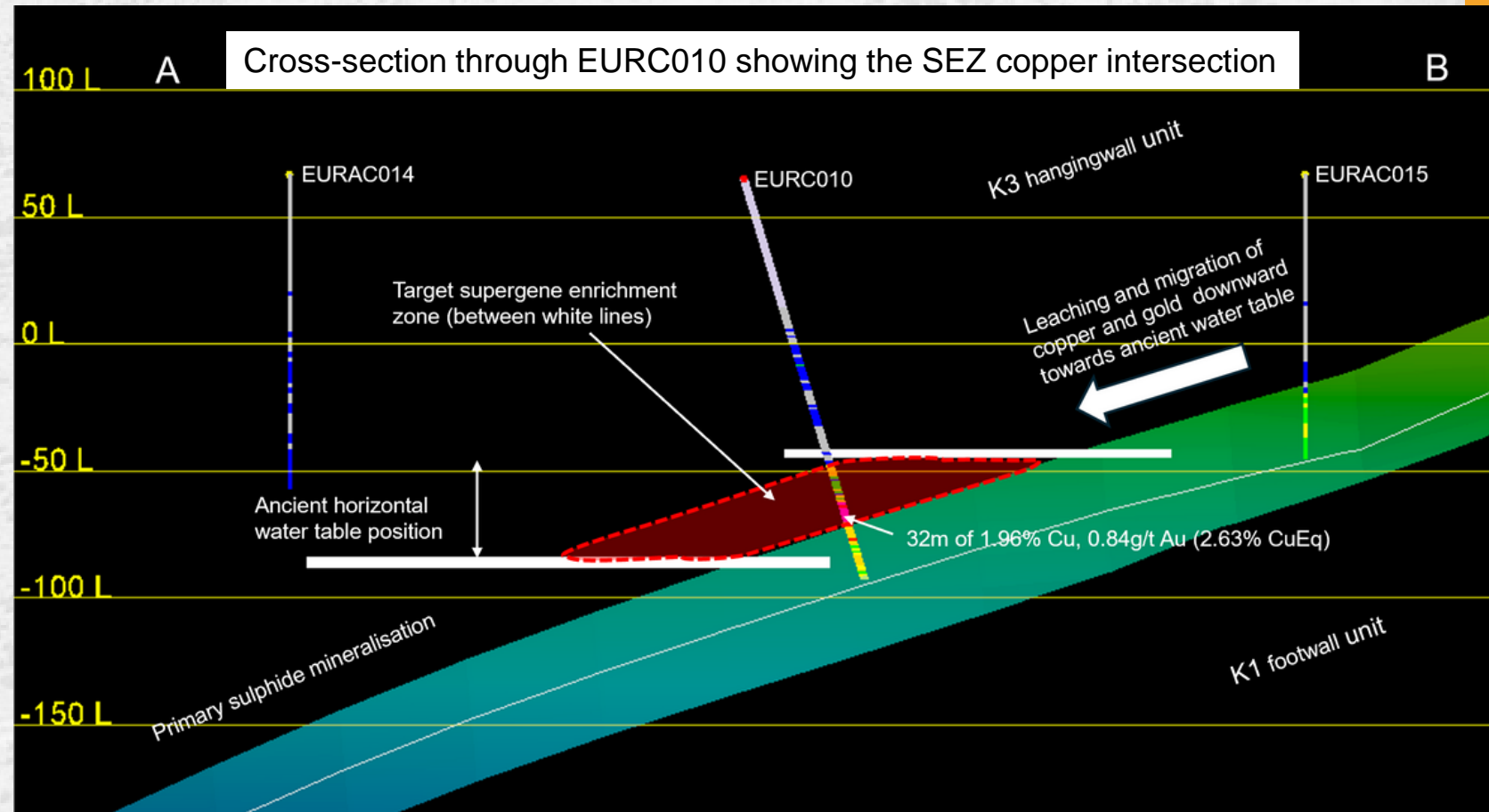
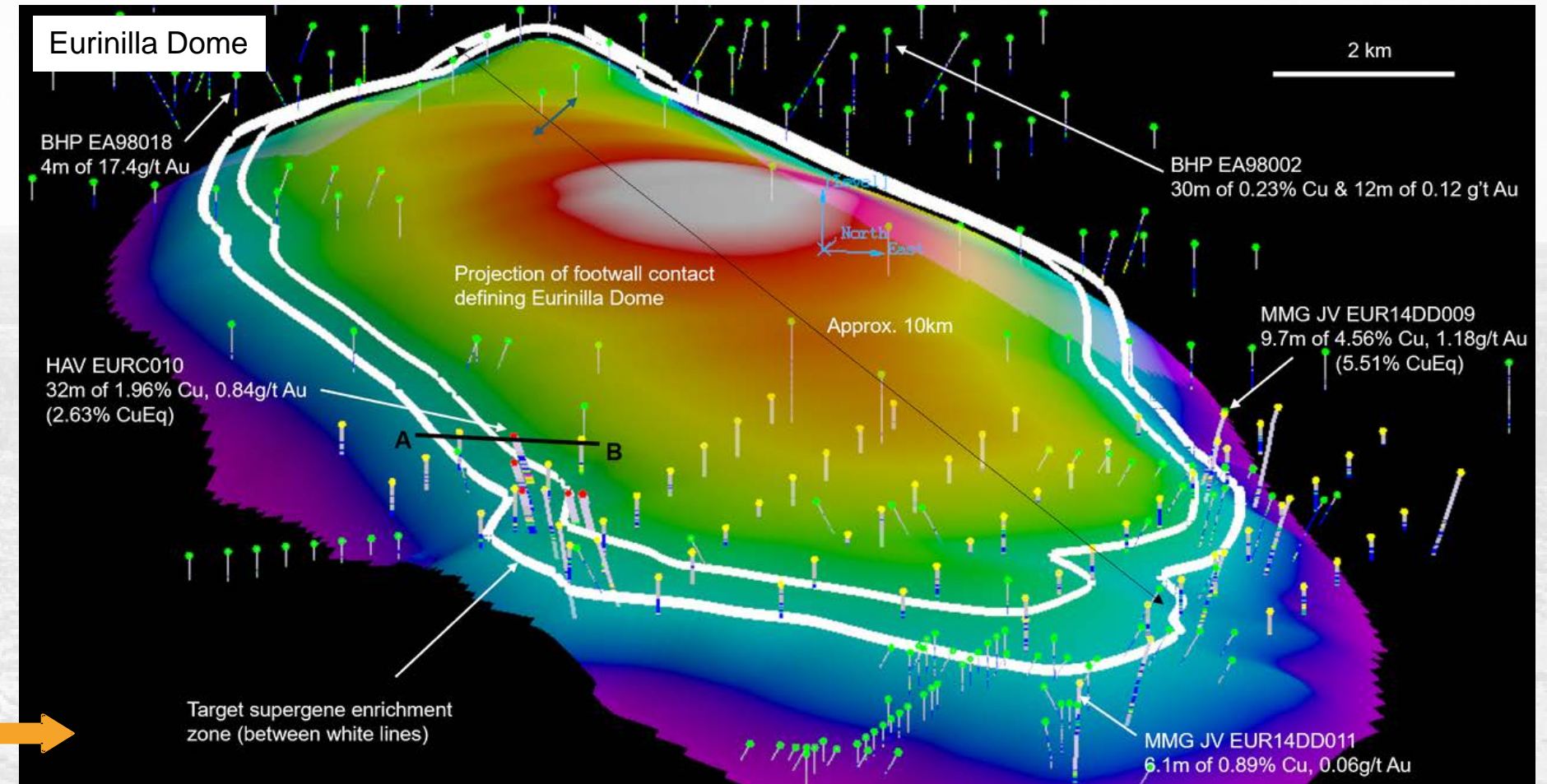
- Recent Havilah drilling confirmed an exploration concept involving mineralised ironstone skarn on both sides of a 2 km wide regional syncline ([refer to ASX announcement 15 January 2024](#)).
- If mineralisation persists over the entire 8 km² area of the synclinal structure there is potential for discovery of a very large tonnage.
- Uranium and vanadium approach levels that may be potentially economic to recover.
- Drillhole BKRC005 intersected 178 metres of 2.5% TGC (total graphitic carbon) including 21 metres of 4.9% TGC in the K4 hangingwall pelite unit ([refer to ASX announcement 5 January 2024](#)).

* [Refer to ASX announcement 17 October 2014](#)

Oblique view of the Birksgate prospect area showing Havilah RC drillholes (BKRC001-0005) that targeted the interpreted position of the K3 skarn horizon (red band) on the eastern limb of a regional syncline. Earlier 2014 MMG-Havilah joint venture diamond drillholes are also shown.

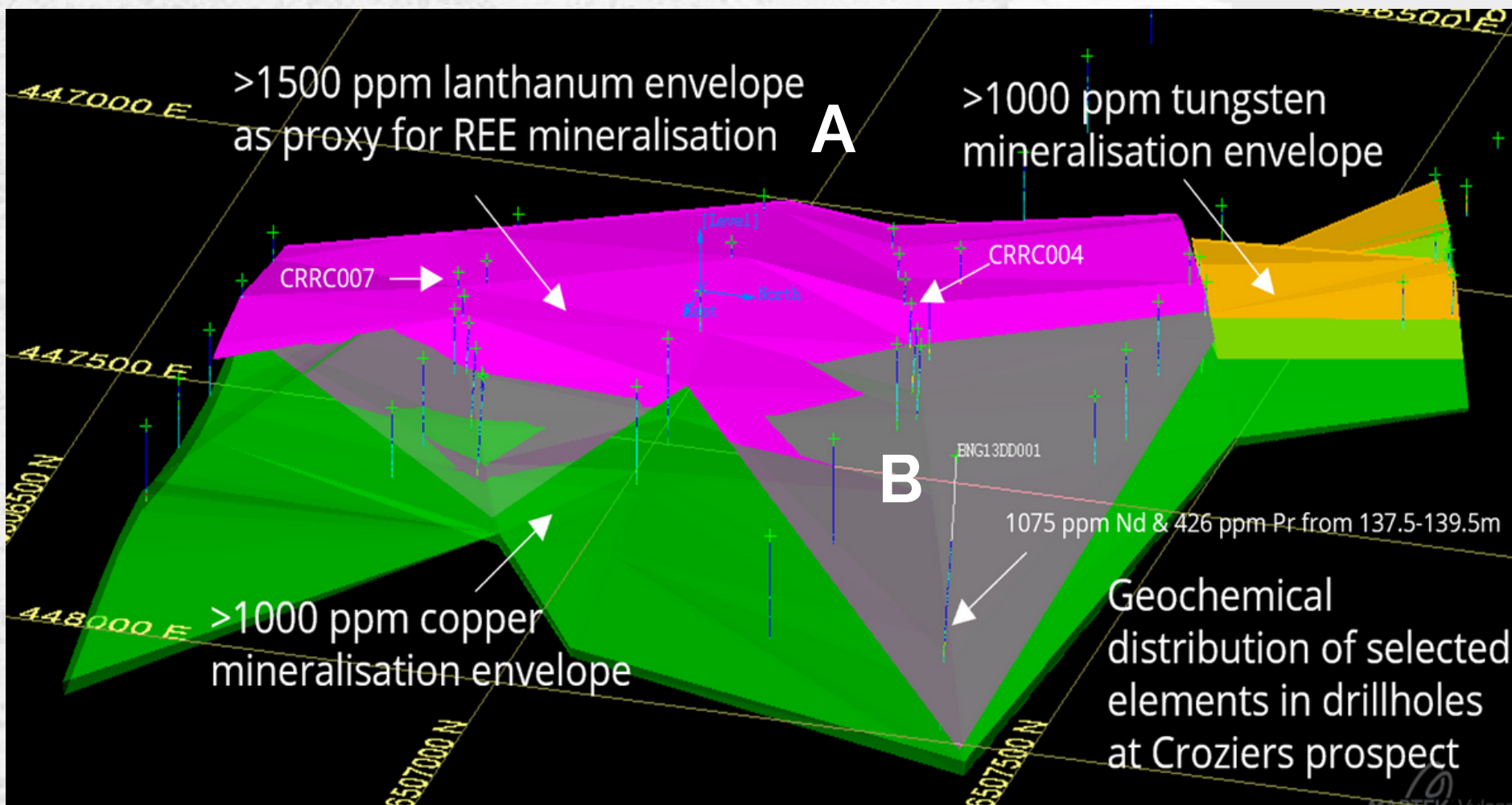
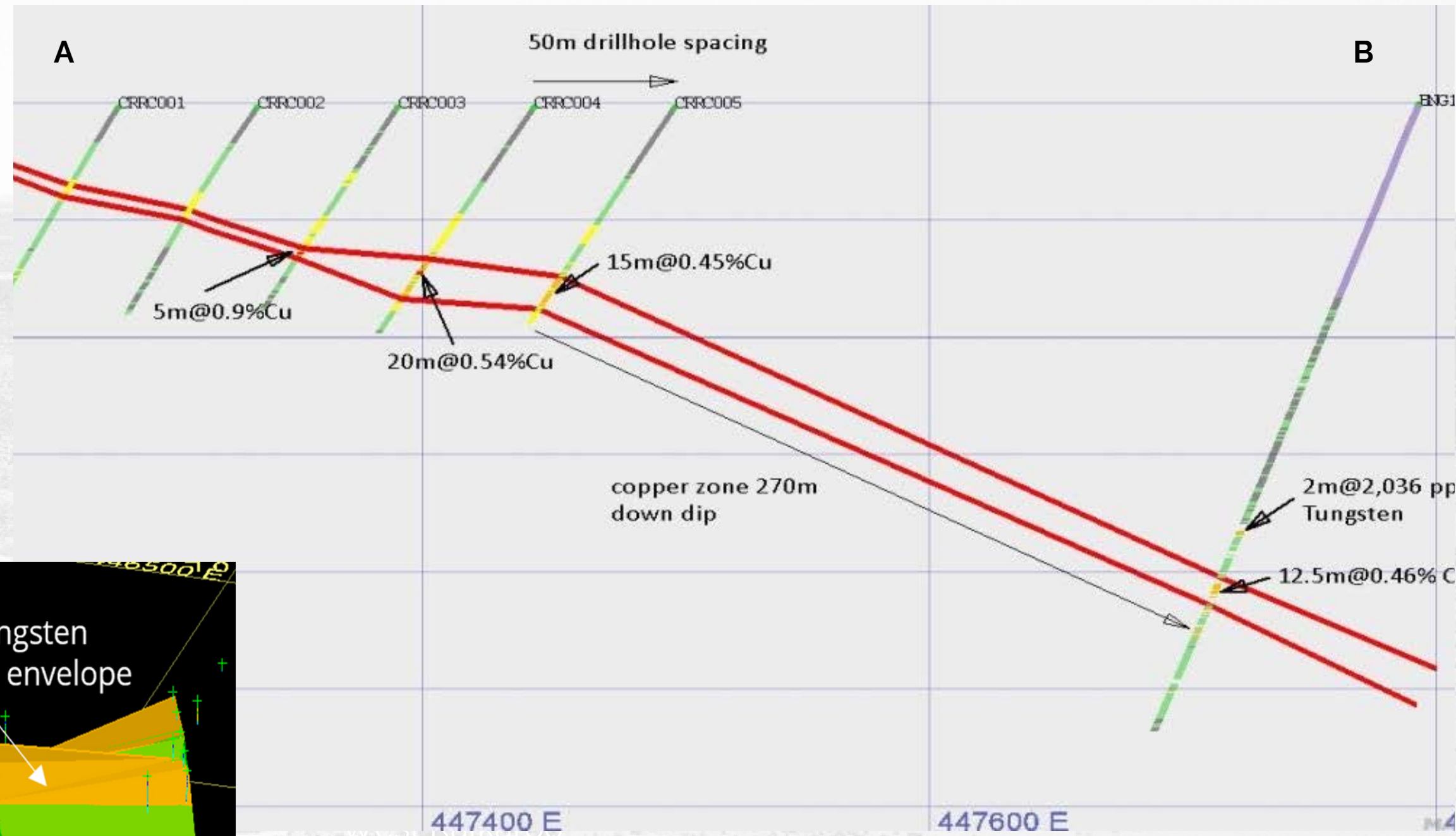
Extensive area of primary and supergene enriched (SEZ) copper mineralisation

- The shallowly dipping (10-20°) primary mineralised unit is deeply weathered across the Eurinilla Dome.
- Several generations of exploration with dozens of aircore, RC and diamond drillholes completed.
- Aircore drillholes were either located in the footwall or were too shallow in the hangingwall to intersect mineralisation. The optimum SEZ target position is less than 200m wide and easily missed.
- Some deeper RC drillholes hit the primary mineralised horizon, which is typically low grade eg MMG drillhole EUR14DD011 – 6.1 metres of 0.89% Cu & 0.06 g/t Au from 286 metres downhole.



- The SEZ was specifically targeted by Havilah with proof of concept provided by drillhole EURC010 with 32 metres of 1.96% Cu & 0.84 g/t Au from 133 metres downhole ([refer to ASX announcement 8 March 2024](#)).
- MMG 2014 drillhole EUR14DD009 had previously intersected a SEZ high-grade chalcocite blanket on the eastern flank of the dome, including 9.7 metres of 4.56% Cu and 1.18 g/t Au from 157 metres.
- Supergene enrichment is interpreted to be largely controlled by the palaeo-water table and is observed to occur at a specific elevation around the entire more than 20 km strike (circumference) of the Eurinilla dome.
- The ubiquitous low grade primary stratabound sulphide mineralisation provides a widespread and consistent Cu and Au source for the SEZ chalcocite mineralisation.

- Well defined mineralised skarn with consistent copper including 20m of 0.54% Cu ([refer to ASX announcement 18 April 2017](#)).
- Associated potentially economic grades of magnet REE and tungsten.
- Established by drilling over 400 metres down dip.
- Strong aeromagnetic feature due to abundant associated magnetite extends for several km along strike.
- Multiple similar magnetic features may indicate fault or fold repetition of the mineralised skarn horizon.



The above image shows Havilah RC drillholes CRR001 to 005 that were sited to intersect the interpreted copper mineralised skarn horizon (defined by the parallel red lines) 250-400 metres up-dip from the earlier MMG-Havilah joint venture diamond drillhole BNG13DD001.

The image at left highlights the overlapping copper, REE and tungsten mineralisation intersected in historic drilling, as shown by the respective mineralisation envelopes.

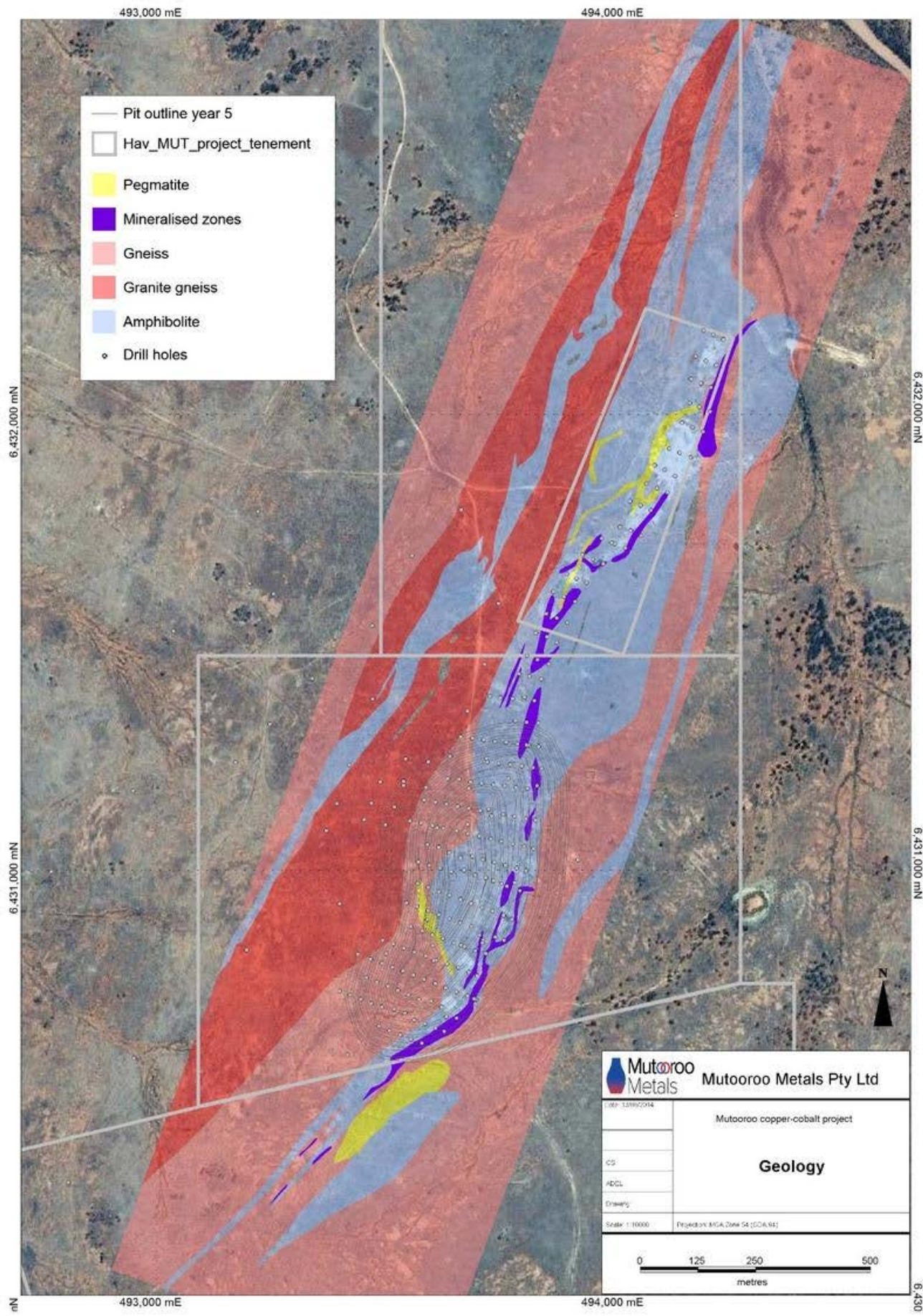
Additional information

Mutooroo was discovered by the early prospectors in 1887 and during the main period of activity between 1887 and 1899 approximately 6,000 tonnes of high grade (>6%) secondary copper ore was produced.

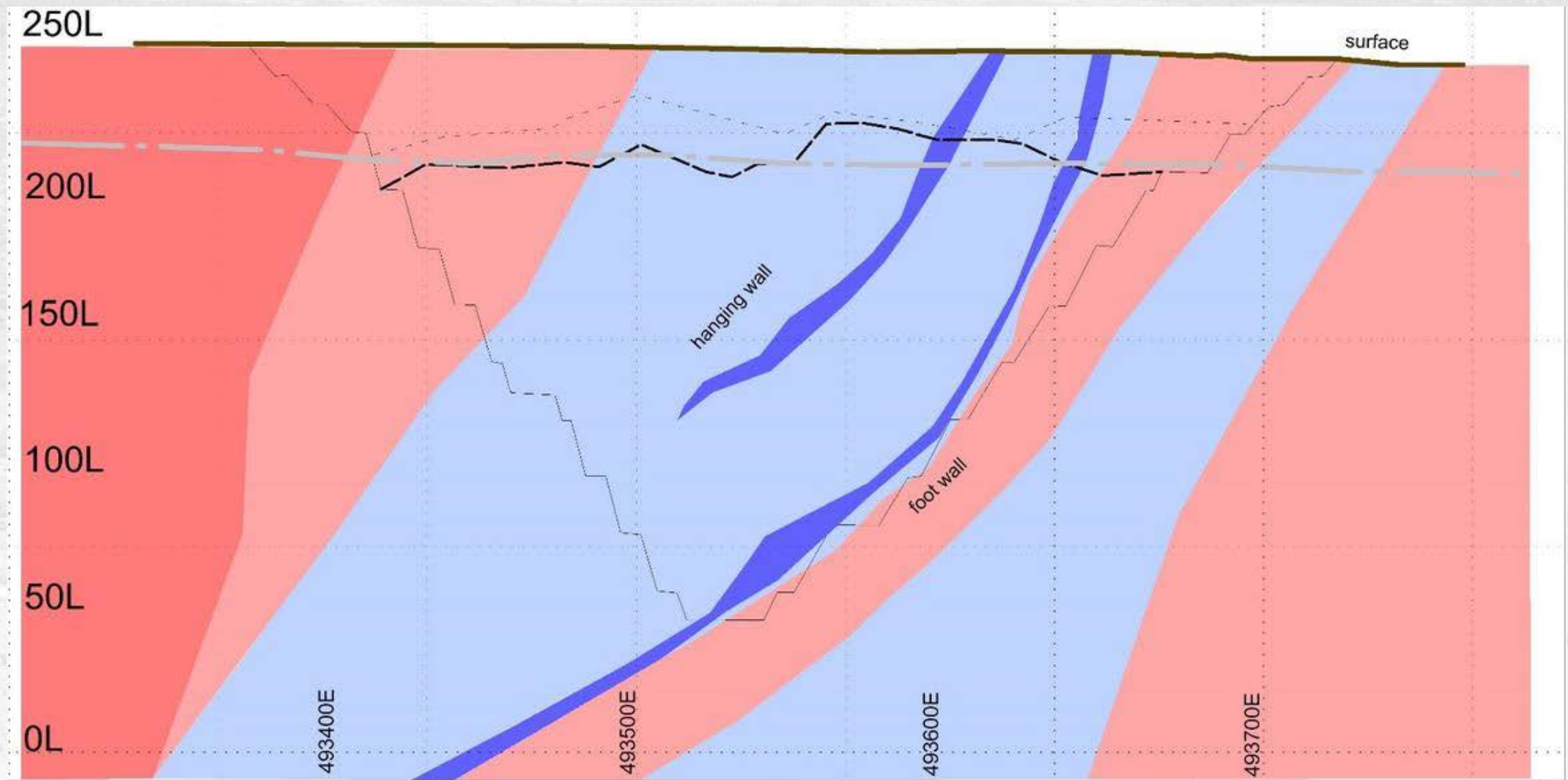


Mutooroo copper mine ca. 1890

Mutooroo copper workings dating from the 1890's – 1900's



- Host rocks are high grade metamorphics comprising gneiss, granite gneiss (metamorphosed granite sill) and amphibolite (metamorphosed dolerite sill).
- Sulphide mineralisation lies in a shear zone both within amphibolite and/or at the amphibolite-gneiss contact.



Recent

- Skeletal soils

Proterozoic

- Amphibolite
- Granite gneiss
- Gneiss
- Massive sulphide ore lenses

--- Base of complete oxidation
 ... Base of partial oxidation
 — Water table
 - - - Pit_9_outline

Generalised cross section through the sulphide lode

Mutooroo Metals Mutooroo Metals Pty Ltd

Date: _____

Author: CS

Office: ADE1

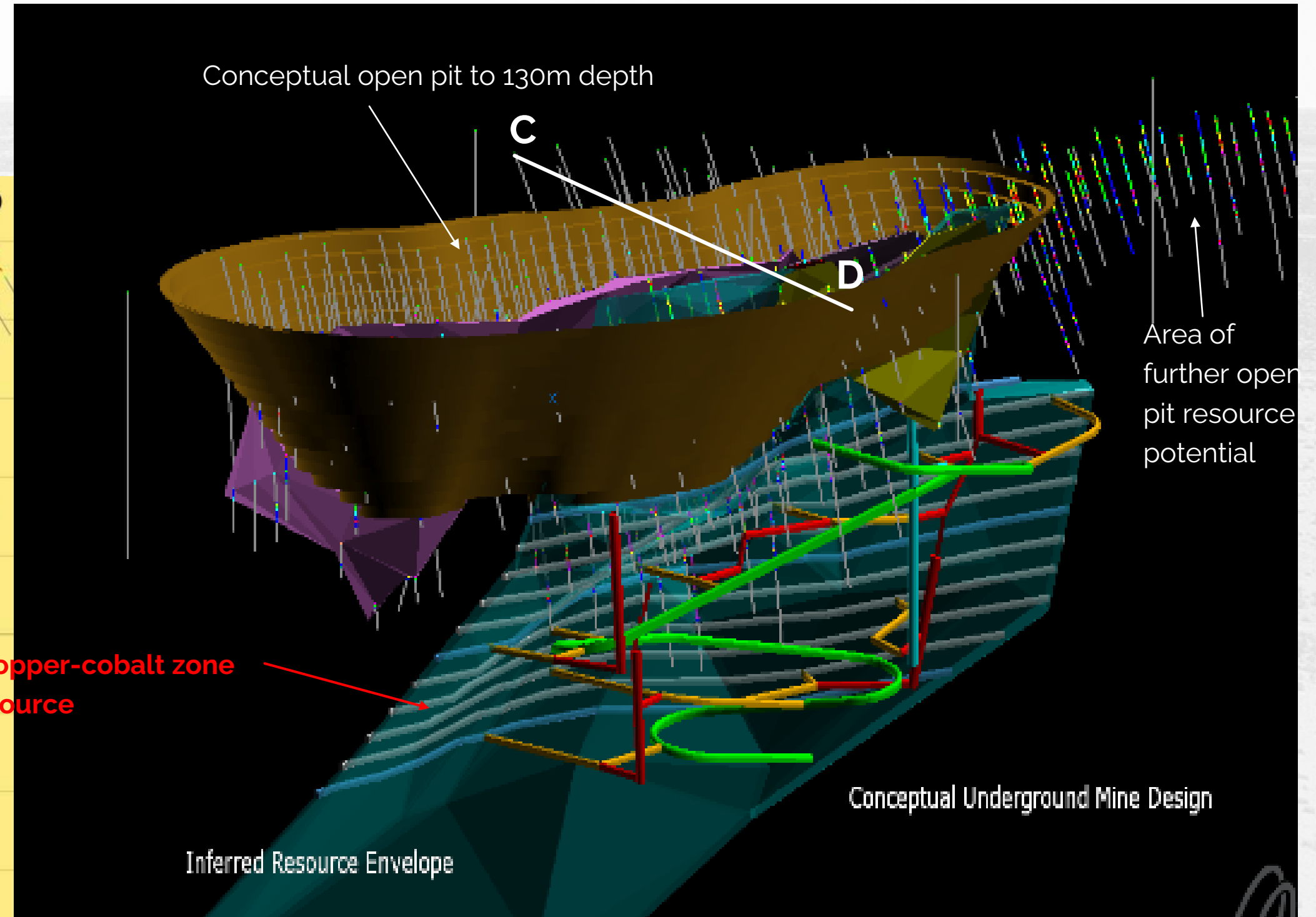
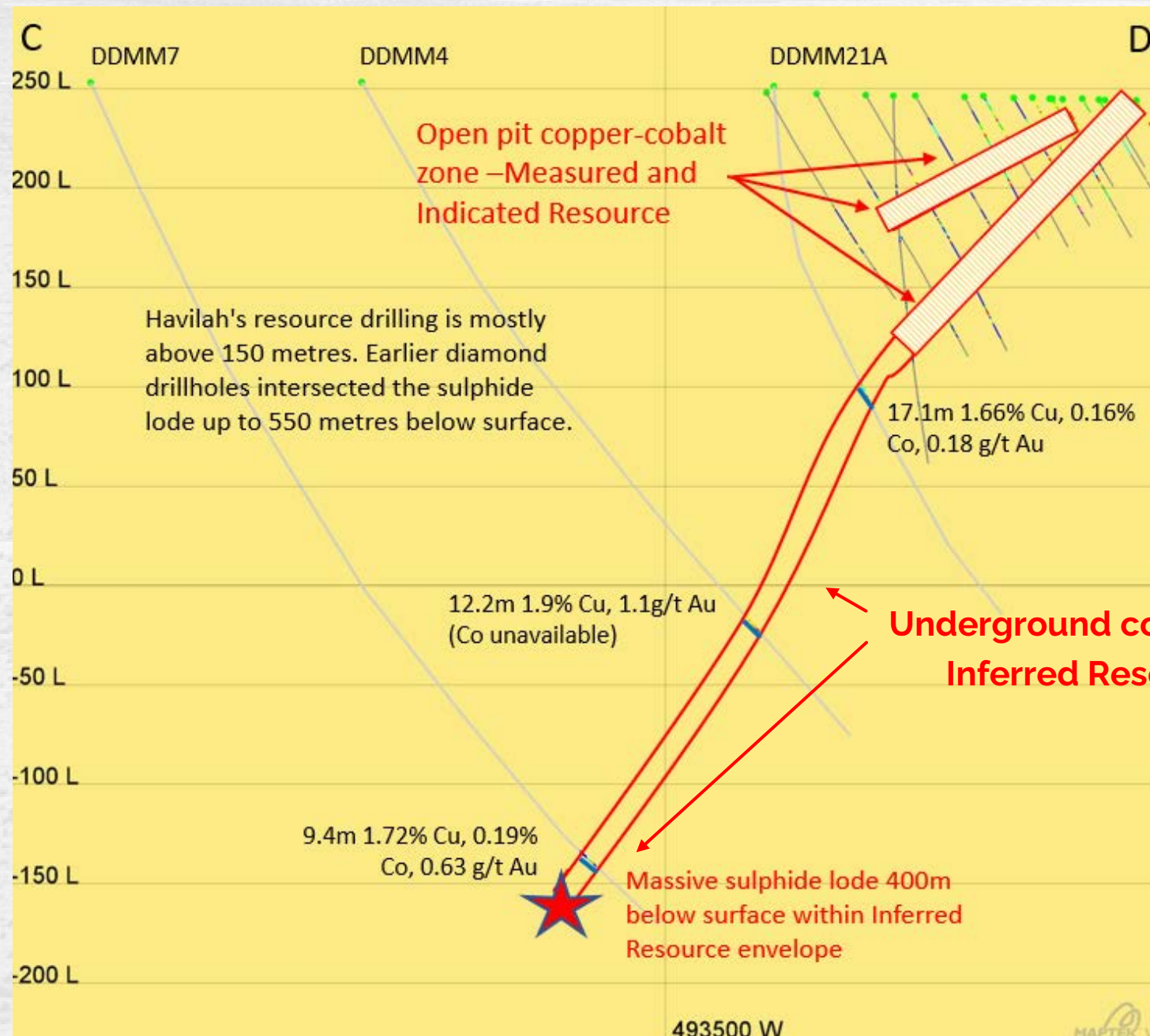
Drawing: _____

Scale: _____ Projection: min 6400

Mutooroo Copper-Cobalt Project

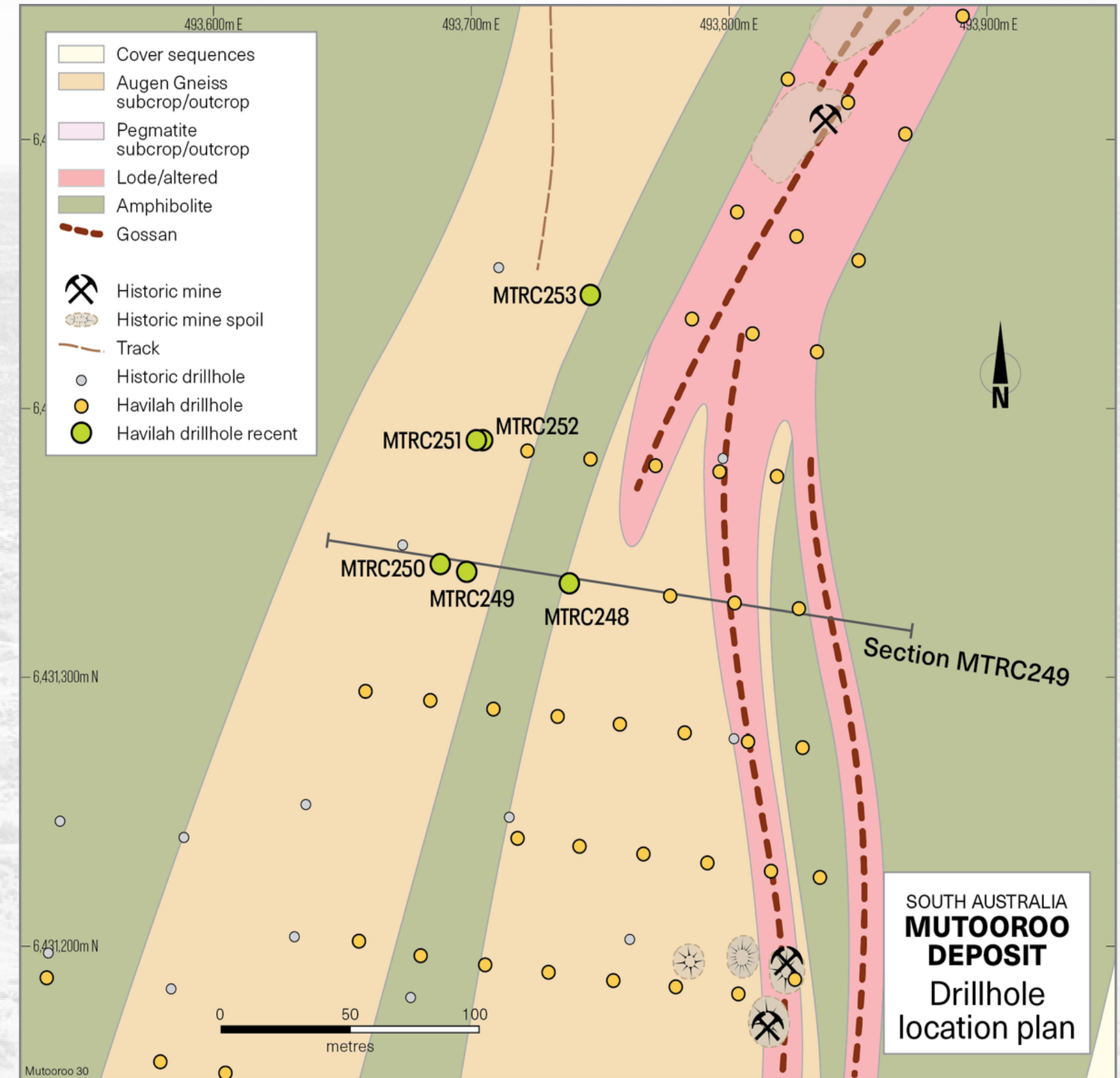
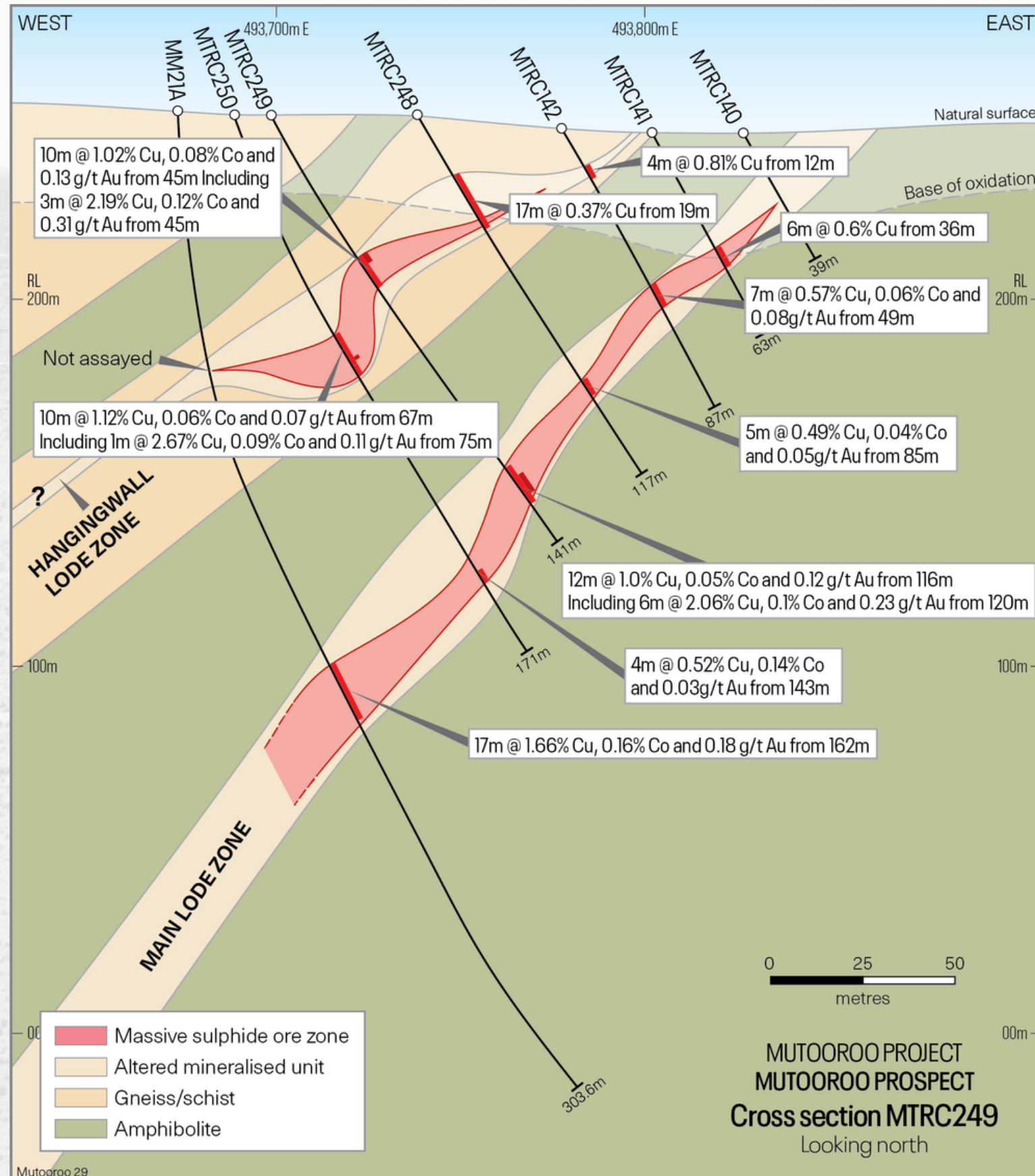
Schematic cross-section

Scoping studies suggests the current Inferred Resource, that contains grades of >1.7% Cu and >0.17% Co, may be of high enough grade to support a conceptual underground mining operation for at least ten years. Access could possibly be afforded via a decline from the open pit floor.



JORC Resources:	Copper 195.0 Kt	Cobalt 20.2 Kt	Gold 82.1 Koz
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Drillhole locations are shown on the long section in slide 7

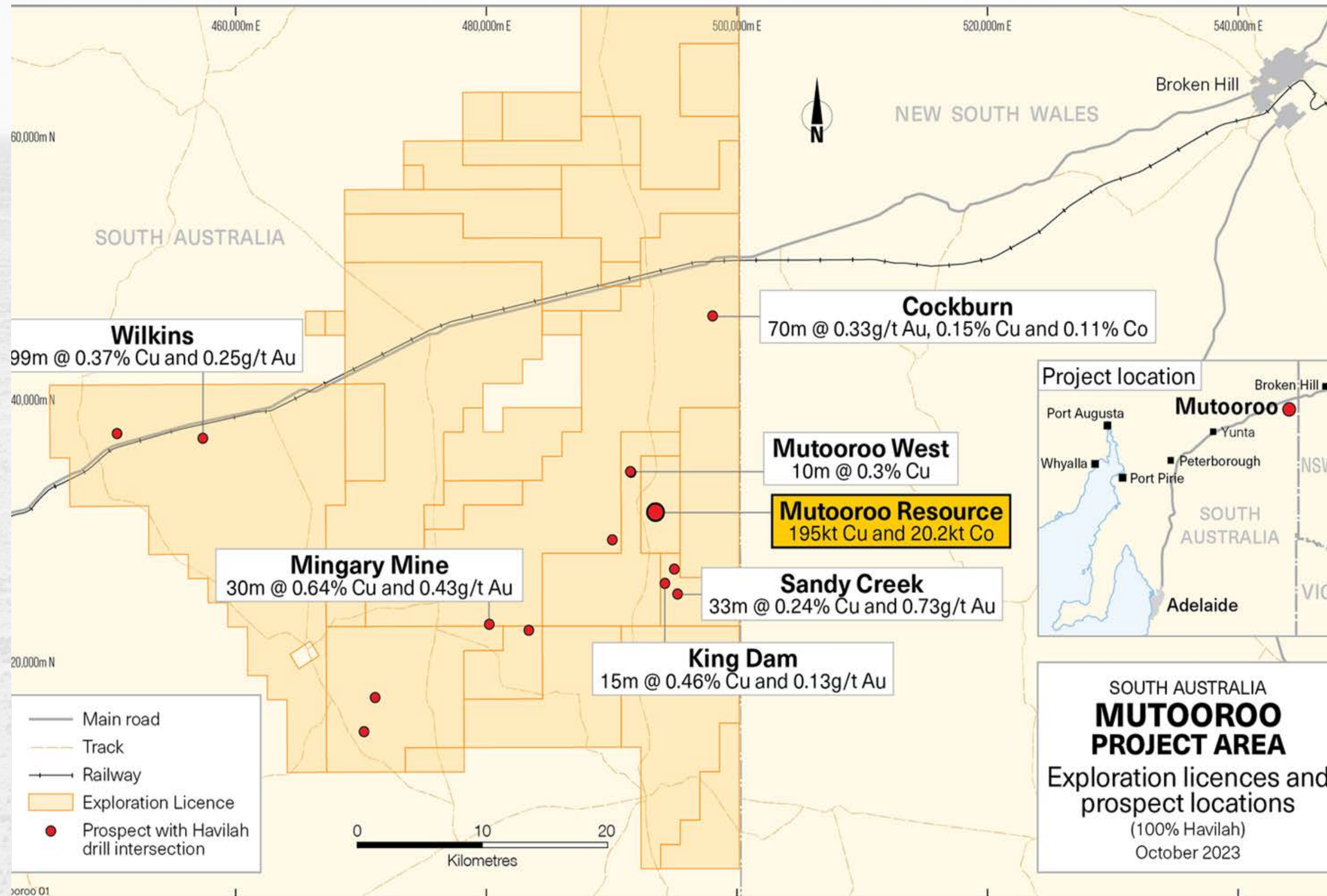


Potentially economic copper grades at shallow open pittable depths intersected in a hangingwall lode position. [Refer to ASX announcement 8 February 2024 for details](#)



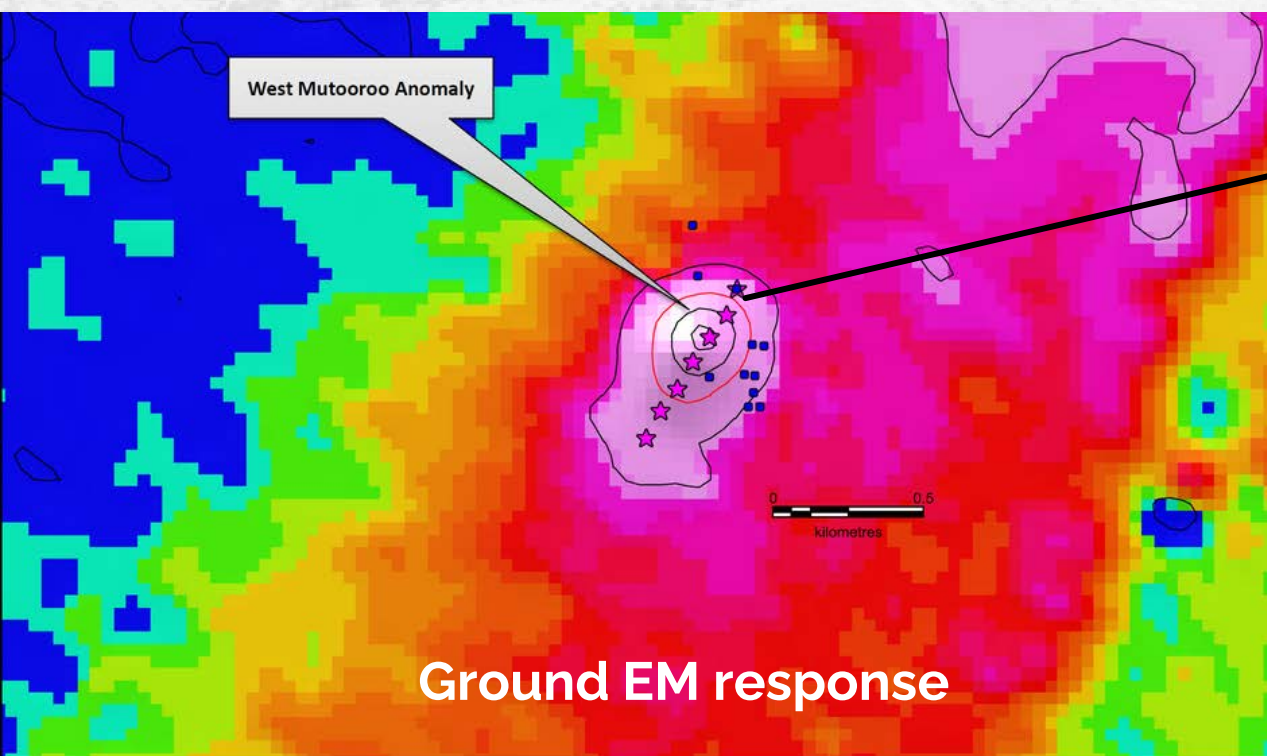
Indicated relatively low treatment costs for the massive sulphide ore

- Mineralogically simple coarse-grained massive sulphide ore that typically contains:
 - 60% pyrrhotite (moderate cobalt),
 - 5% chalcopyrite (high copper),
 - 5% pyrite (high cobalt)
 - 30% barren quartz.
- Ore is brittle and has a low impact work index (6.1-11.1kWh/tonne), a low bond abrasion index (0.263) and a weak unconfined compressive strength (18.4 MPa).
- High density ore (SG 4.5) meaning that the mining volumes are comparatively small resulting in low ore mining costs.
- Drive-in drive-out to Broken Hill with its skilled workforce will considerably reduce administrative and labour costs compared with a remote site.

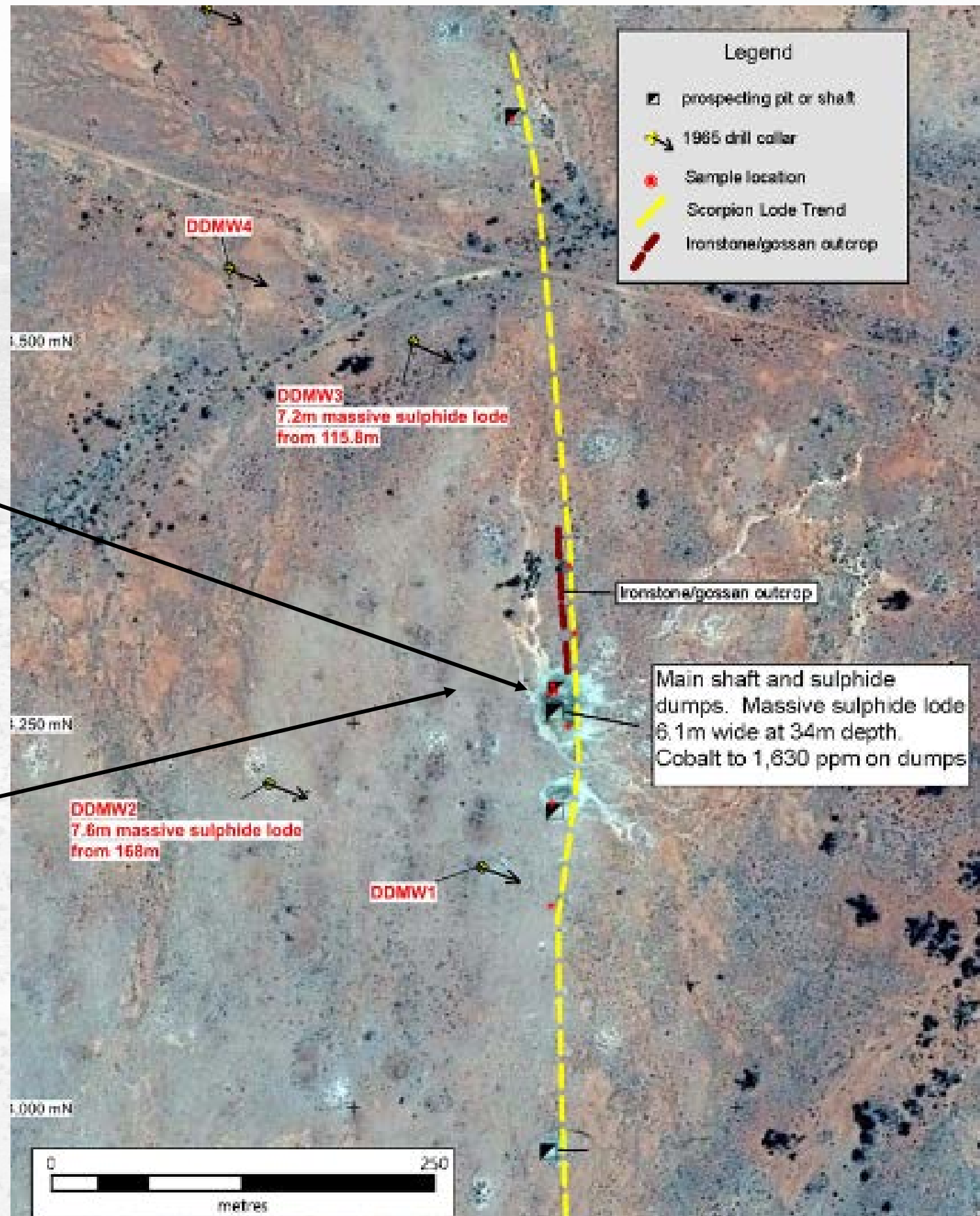


- Several promising prospects within potential trucking distance of Mutooroo.
- **Mutooroo West** – Mutooroo style massive sulphide lode. Large EM conductor at depth not adequately tested.
- **Cockburn** – Quartz-pyrite mineralised lode within a shear zone with appreciable copper-gold-cobalt ([refer to ASX announcement of 17 October 2023](#)).
- **Mingary Mine** – Copper-gold mineralisation hosted by quartz-pyrite within a several kilometre long shear zone. Several potentially economic grade drilling intersections from historic Minotaur and recent Havilah drilling ([refer to ASX announcement 5 July 2023](#)).
- **King Dam – Sandy Creek** – Copper-gold mineralisation related to a late stage major regional faulting event ([refer to ASX announcement 5 July 2023](#)).

Map shows recent Havilah drilling results from several promising prospects in the Mutooroo Project Area



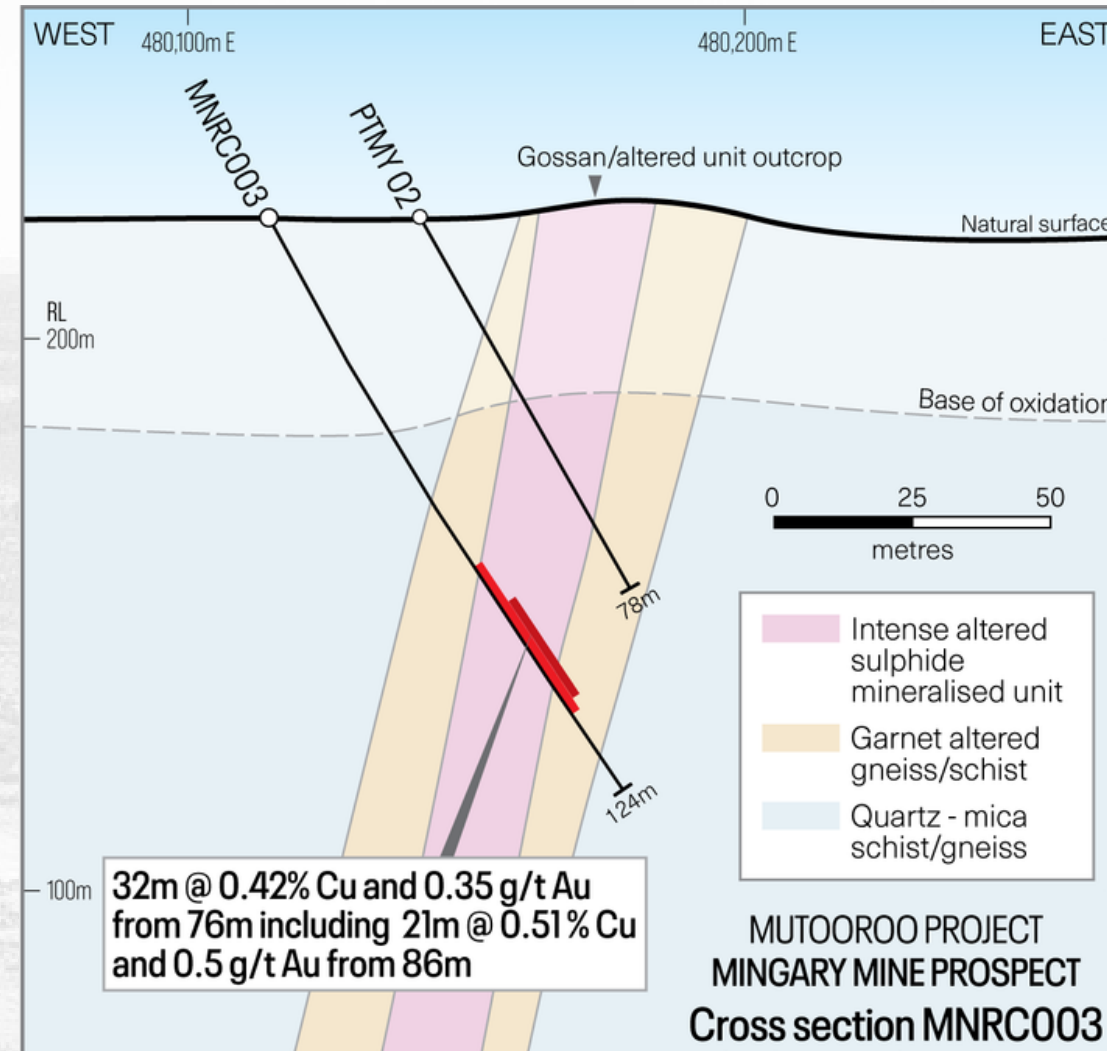
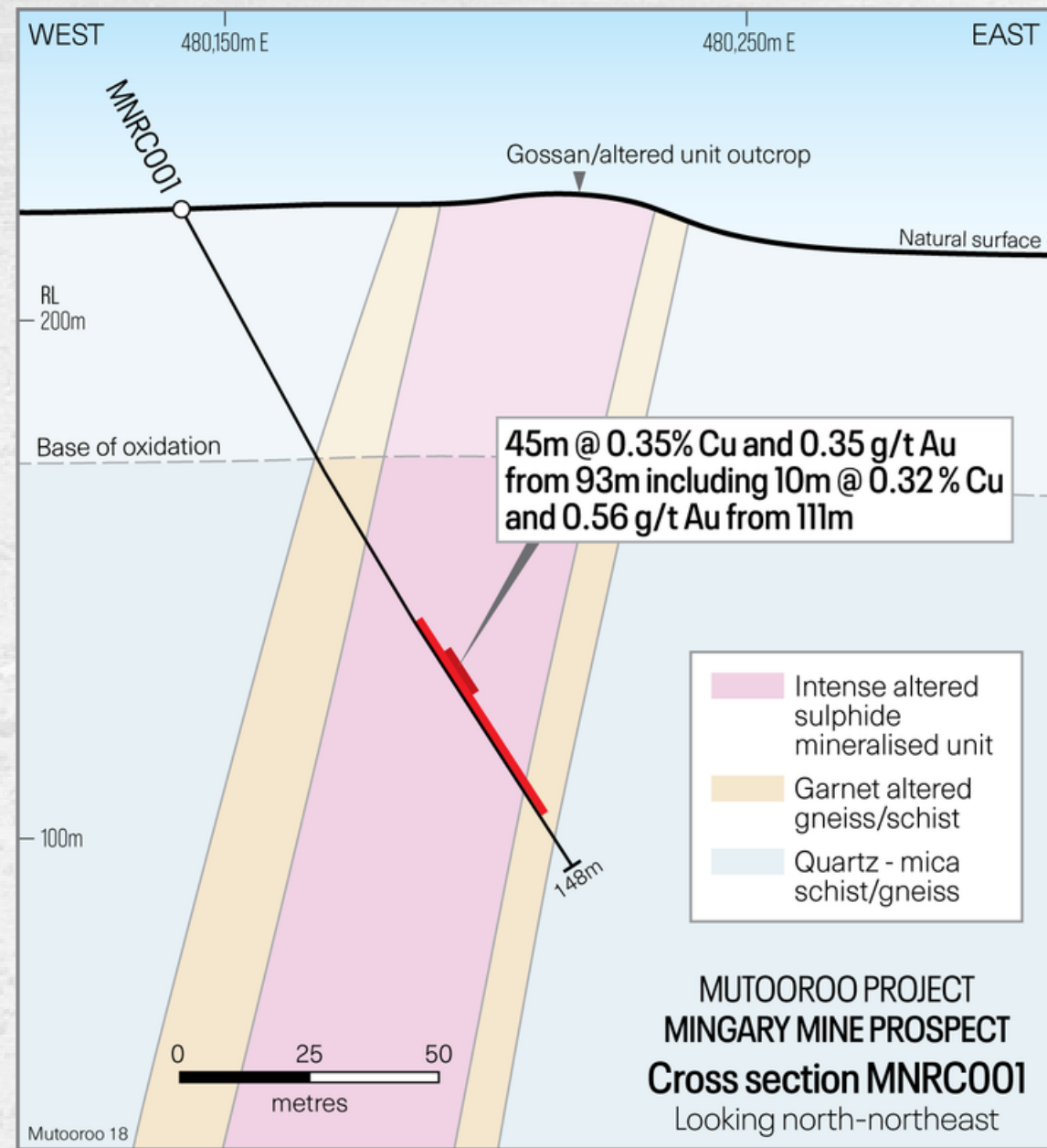
Havilah – MEP merged VTEM (BFz48_35 – late channel). Havilah and historic drillhole collars.



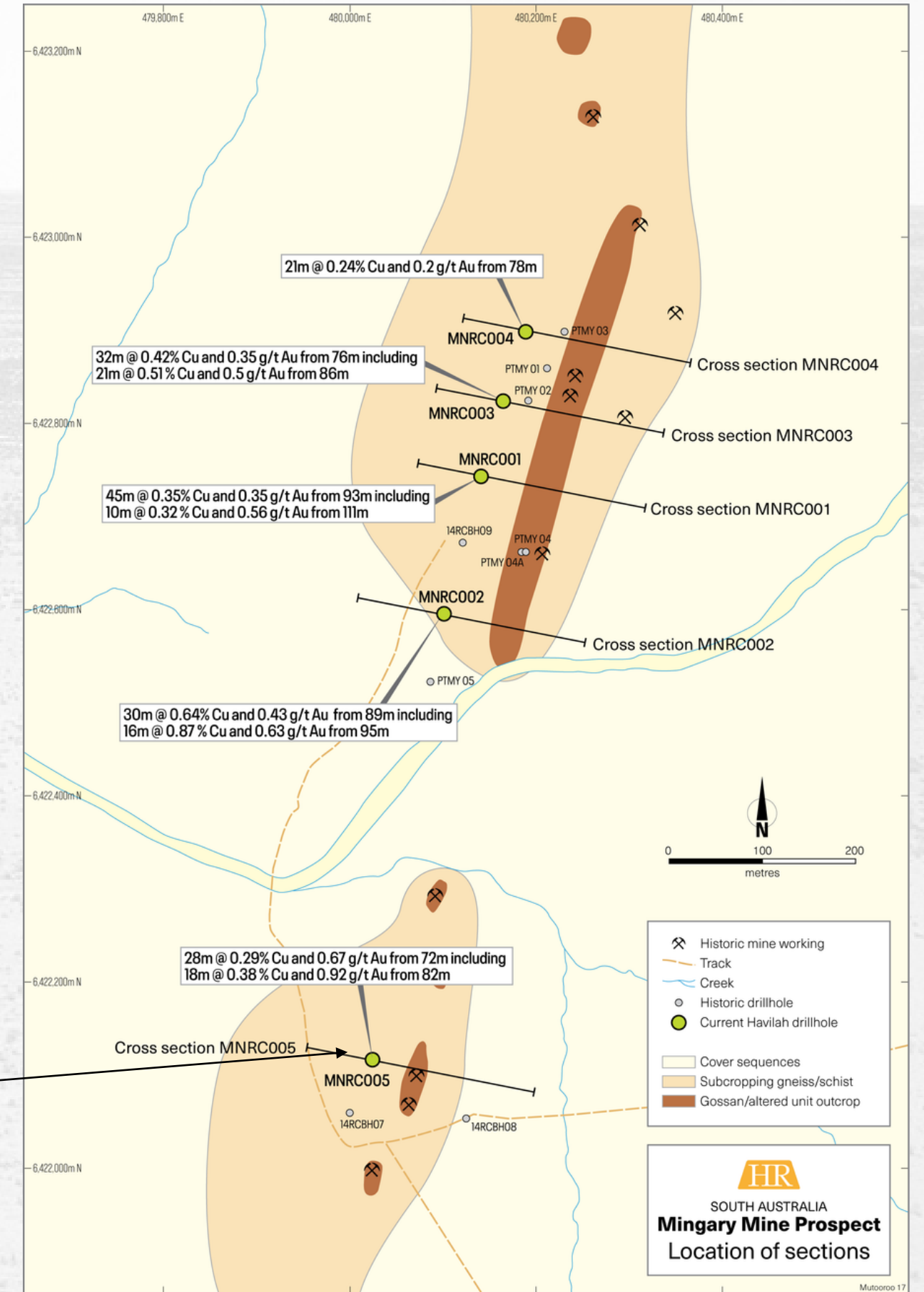
- Gossan outcrop, old workings and shallow RC drilling by Havilah.
- Massive sulphide lode similar to Mutooroo.
- Airborne electromagnetic conductor lies at depth and slightly west of previous Havilah and Broken Hill South drilling.
- Ground electromagnetics (EM) completed to better define the conductor and drilling target.
- Previous drilling may have been too far east and too shallow to hit the main sulphide body at depth.

Recent drilling has confirmed a significant copper-gold mineralised zone that was originally drilled by Minotaur.

(refer to [ASX announcement 5 July 2023](#))



Outcrop of altered shear zone that hosts the Mingary mine copper-gold mineralisation.



- Drilling beneath the gossan intersected up to a 70 metre wide zone of fresh and oxidised sulphides with associated vein quartz with cobalt, gold and copper ([refer to ASX announcement 17 October 2023](#)).
- Fresh sulphides are comprised predominantly of pyrite and minor chalcopyrite.
- Steeply east-dipping mineralisation occurs at the sheared contact of mica schist and gneissic rocks.



Gossan outcrop, Cockburn prospect

