

**ASX ANNOUNCEMENT** 17 June 2024

## **Cu-Au Drilling Commenced at Tarraji-Yampi (80%, 100%)**

### **HIGHLIGHTS**

- **Diamond drilling has commenced at Tarraji-Yampi to test 6 Cu-Au volcanogenic massive sulphide (“VMS”) targets around the Orion deposit.**
- **The drilling program has commenced at Orion Repeat consisting of 6 holes (~1,640m) into significant geophysical and geochemical anomalies within prospective lithostructural settings for Cu-Au mineralisation over a 4-week period.**
- **Drilling is supported by a drill for equity commitment with Topdrill Pty Ltd (“Topdrill”) for 50% of drilling costs up to \$1M.**

**Dreadnought Resources Limited (“Dreadnought”) is pleased to announce the results of a detailed Cu-Au review and the commencement of drilling at Tarraji-Yampi, located in the Kimberley Region of Western Australia.**

Dreadnought’s Managing Director, Dean Tuck, commented: “We are very pleased to commence drilling at Tarraji-Yampi earlier than anticipated this year, thanks to a drier than normal wet season. With the recent review highlighting the Orion Cu-Au Discovery made in 2021 as a Cu-Au VMS system, we have designed a six-hole drilling program to test 6 high-quality Cu-Au VMS targets. Each of these targets has the potential to discover a new Cu-Au massive sulphide lode to support the Orion discovery as the start of a camp, similar to how the DeGrussa and Monty deposits in the Bryah Basin were comprised of five major lodes. The discovery of additional lodes around Orion would strongly support the economic potential of the project. Drilling commenced over the weekend and should be completed in mid-July 2024.



Figure 1: Photo of the Topdrill diamond rig drilling Orion Repeat.

## **SNAPSHOT – Tarraji-Yampi Cu-Au-Ag-Co**

### **Unexplored since the 1970s**

- Outcropping mineralisation was discovered in 1905 and mined for copper at Grant’s Find, Wilson’s Reward, Monarch, Ironclad and Tarraji from 1907-1920.
- Only historical exploration within the area was by WMC Resources (“WMC”) in the 1950s and Australian Consolidated Minerals (“ACM”) in the 1970s with both parties exploring for copper.
- Contained entirely within the Yampi Sound Training Area (“YSTA”), Commonwealth land was off limits to mineral exploration from 1978 to 2013.

### **Genuine Camp Scale Potential**

- Five clusters of historical mining on outcropping mineralisation.
- Orion discovery (~350m wide x ~150m long x 250m deep and modelled to at least 500m deep), under just 1m of cover, made in 2021. Results include KMRC022: 16m @ 2.2% Cu, 38.7g/t Ag, 6.6g/t Au, 0.40% Co from 77m. (ASX 15 Nov 2021)
- Lithostructural and geochemical similarities to pelitic-mafic or “Besshi-style” VMS systems such as Monty /DeGrussa in Western Australia, Windy Craggy in Canada or the Matchless deposits in Namibia.

### **Significant, Step-Change, Growth Potential**

- Dreadnought is the first to deploy modern geochemical and geophysical techniques to explore for mineralisation under shallow cover in the region.
- 6 priority Orion look-alikes defined through geochemical and geophysical surveys with highly conductive anomalism.

### **High-Grade, Multi-Metal Potential Including Cu-Ag-Au-Co**

- Previous drilling at Orion includes thick high-grade intersections (ASX 15 Nov 2021 and 8 Dec 2021):
  - KMRC017: 12m @ 1.6% Cu, 31.7g/t Ag, 0.5g/t Au, 0.02% Co** from 45m
  - KMRC022: 16m @ 2.2% Cu, 38.7g/t Ag, 6.6g/t Au, 0.40% Co** from 77m, including:
    - 2m @ <0.1% Cu, 4.8 g/t Ag, 27.6g/t Au, 1.50% Co** from 77m, and:
    - 7m @ 4.7% Cu, 83.3g/t Ag, 4.9g/t Au, 0.20% Co** from 82m
  - KMRC039: 20m @ 1.4% Cu, 13.4g/t Ag, 0.5g/t Au, 0.03% Co** from 3m, including:
    - 3m @ 7.6% Cu, 116.2g/t Ag, 2.2 g/t Au, 0.14% Co** from 18m
  - KMRC047: 12m @ 3.0% Cu, 21.4g/t Ag, 1.7g/t Au, 0.02% Co** from 1m, including:
    - 5m @ 5.9% Cu, 44.9 g/t Ag, 3.7g/t Au, 0.01% Co** from 1m

### **Global Energy Decarbonisation Driving Copper Fundamentals**

- Copper is essential for electricity-related technologies with renewable energy systems requiring up to 12x more copper compared to traditional energy systems.
- S&P Global forecasts that global demand for copper could double from 25mt to 50mt by 2035. Under this scenario, by 2030, supply from both existing and projected copper mines will meet just 80% of demand (S&P Global: *The Future of Copper*, July 2022).

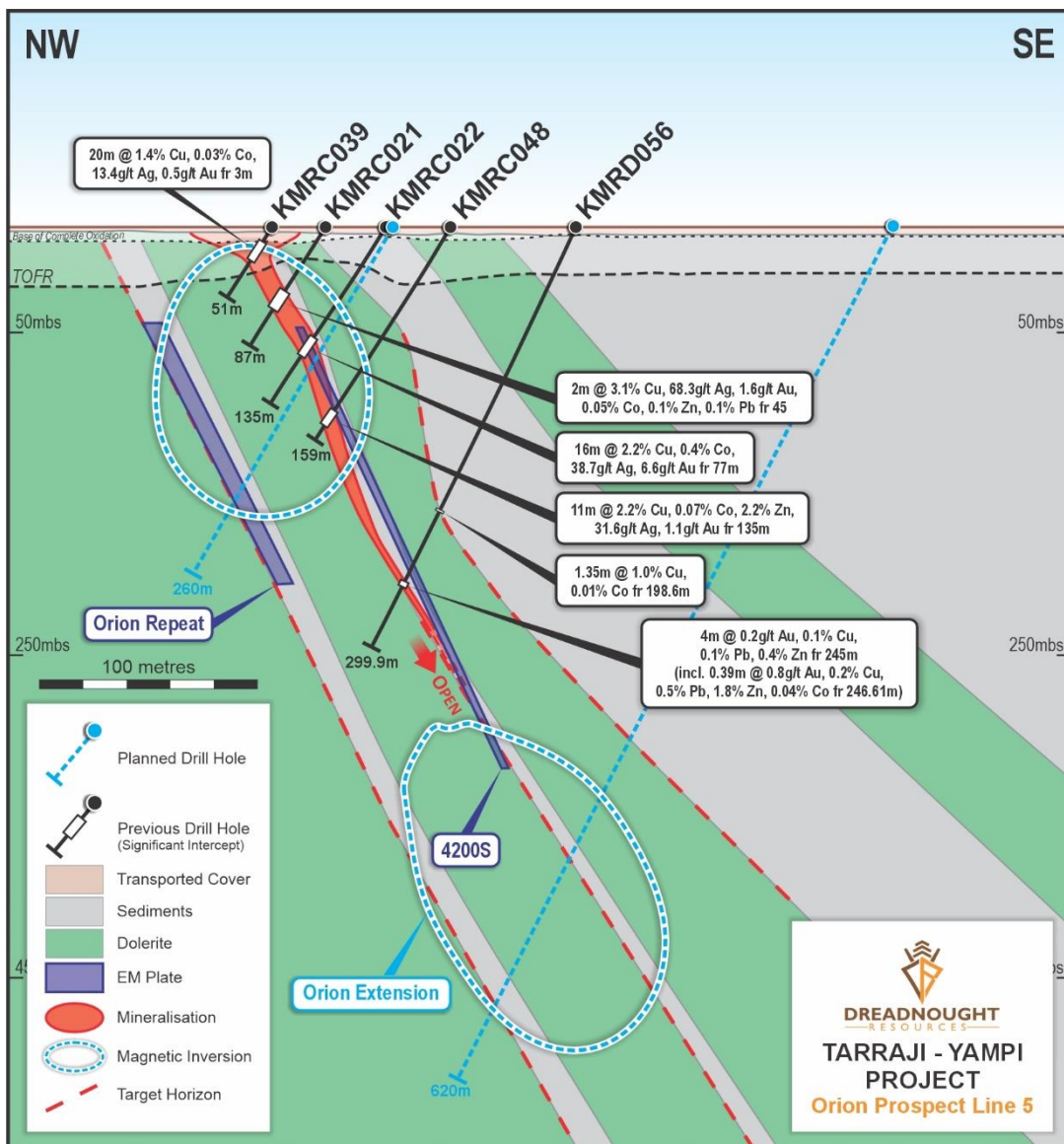


### Overview of Phase I Drill Targets

In the Phase I drill program (6 holes, 1,640m), 5 of the 6 targets are located along the same feeder structure as the Orion deposit and are defined by highly conductive, magnetic anomalies associated with elevated pathfinder geochemistry. These targets include the depth extension of Orion. The thickest and highest-grade intercepts at Orion to date are defined by an intense magnetic anomaly and included:

- KMRC017:** 12m @ 1.6% Cu, 31.7g/t Ag, 0.5g/t Au, 0.02% Co from 45m
- KMRC022:** 16m @ 2.2% Cu, 38.7g/t Ag, 6.6g/t Au, 0.40% Co from 77m, including:
  - 2m @ <0.1% Cu, 4.8 g/t Ag, 27.6g/t Au, 1.50% Co from 77m, and:
  - 7m @ 4.7% Cu, 83.3g/t Ag, 4.9g/t Au, 0.20% Co from 82m
- KMRC039:** 20m @ 1.4% Cu, 13.4g/t Ag, 0.5g/t Au, 0.03% Co from 3m, including:
  - 3m @ 7.6% Cu, 116g/t Ag, 2.2 g/t Au, 0.14% Co from 18m
- KMRC047:** 12m @ 3.0% Cu, 21.4g/t Ag, 1.7g/t Au, 0.02% Co from 1m, including:
  - 5m @ 5.9% Cu, 44.9 g/t Ag, 3.7g/t Au, 0.01% Co from 1m

The 6 hole Phase I drill program targets are discussed and summarised below:



**Orion Extension** represents a larger and stronger magnetic anomaly at depth. A 620m deep hole will test the center of this magnetic anomaly and a hanging wall lode that was intersected in KMRD056 (1.35m @ 1.0% Cu) (Figure 2).

**Orion Repeat** is defined by a 3,500S FLEM conductor and coincident Ag-As-Bi-Mo-Pb-Sb-Se-Zn auger anomaly that sits beneath previous drilling at Orion (Figure 2).

**Orion Splay** is defined by multiple DHEM conductors up to 28,000S that have an orientation sub-parallel to the interpreted feeder structure that might also be offsetting the main Orion deposit. Adjacent drill holes are elevated in Ag-As-Au-Bi-Co-Cu-Mo-Pb-Sb-Se-Te-W-Zn.

**Orion Offset** is a 3,800S FLEM conductor with coincident Ag-As-Bi-Cd-Mo-Pb-Sb-Se-Zn pathfinder anomalism.

Figure 2: Cross Section view of the Orion Extension and Orion Repeat targets with planned holes (dashed blue lines) in relation to the Orion mineralisation (red), prospective pepelite contacts (dashed red line) and modeled conductive plates and magnetic anomalies.

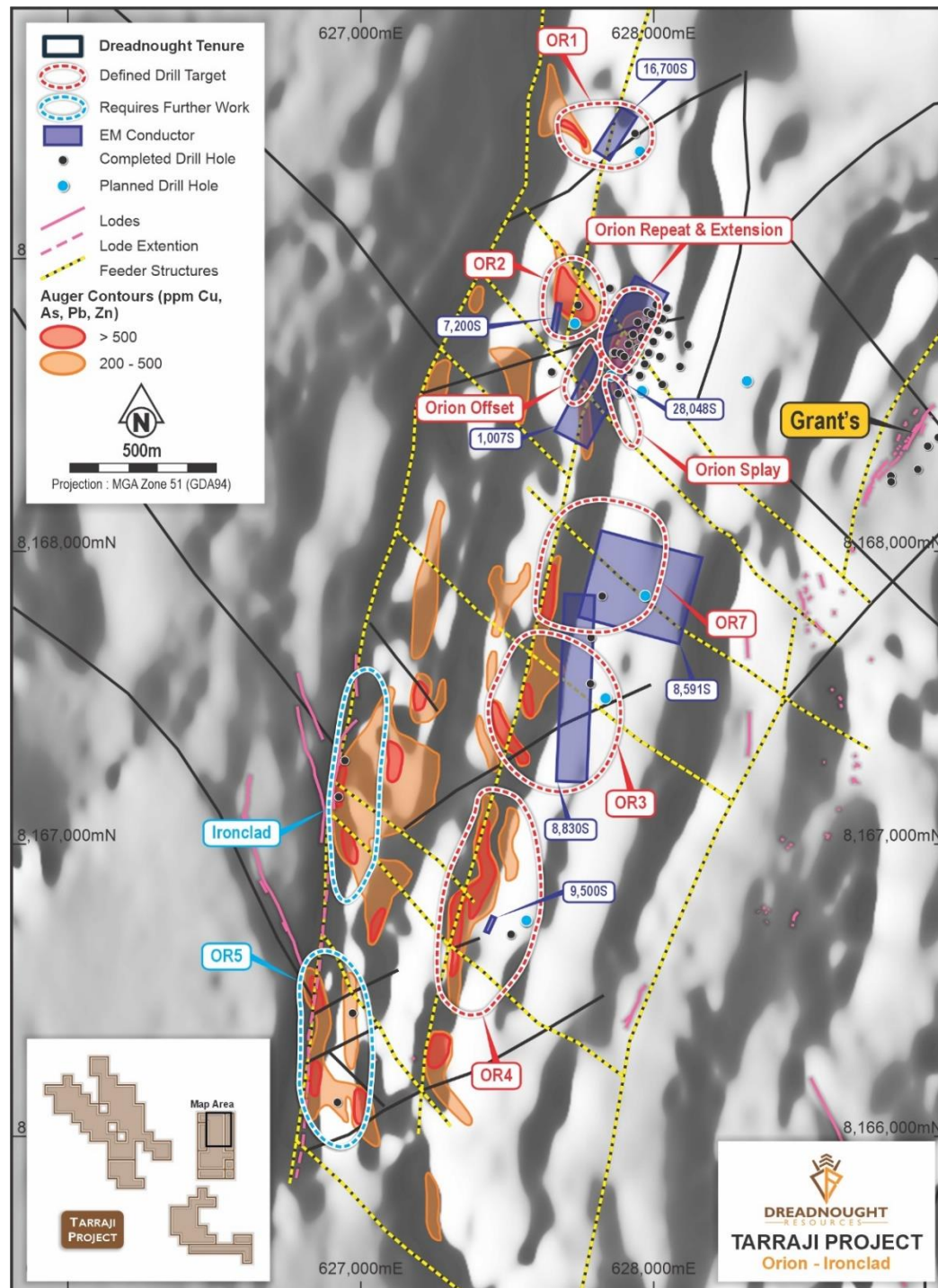


**OR2** is a 7,200S off hole conductor located beneath the strongest Cu auger geochemical anomaly (stronger than Orion) with Ag-As-Bi-Cd-In-Pb-Sb-Se-Zn pathfinders. KMRC062, which is the hole from where the DHEM conductor originated, contained elevated Ag-Bi-Mo-Sb-Se at the prospective peperite contact.

**OR1** is the only target drilled off the primary Orion feeder structure and contains a strong “edge hit” 16,700S DHEM conductor defined from KMRC060 (2m @ 0.4%Pb and 16.6g/t Ag from 106m) along a prospective peperite contact coincident with the DHEM conductor.

### Drill for Equity Agreement with Topdrill

Dreadnought has entered into a drill for equity agreement with Topdrill. The agreement provides an option to satisfy up to 50% of drilling costs by the issue of fully paid ordinary shares up to a maximum value of \$1M.



The issue price will be the volume weighted average price (“VWAP”) for the 5 days prior to the date of invoice, with the exception of the first invoice using the 28-day VWAP prior to the date of this announcement. The shares are subject to a voluntary 6-month escrow period.

Dreadnought intends to split the Topdrill drilling across its Tarraji-Yampi and Mangaroon Projects.

Figure 3: Plan view image showing the location of drilled (black dots) and planned holes (blue dots) at Orion in relation to prospects, geochemical contours, and FLEMIDHEM plates.

## Target Summary

Phase 1 of the 2024 drilling program at Tarraji-Yampi will test and DHEM survey 6 priority targets. Phase 2 drilling is dependent on the results of Phase 1.

Targeting has been prioritised based on a ranking system summarised in Table 1 below.

Additional field activities are planned in relation to other advanced and early-stage targets to determine next steps.

A summary of currently defined Cu-Au VMS targets and their status is below. The summary does not include Cu-Au epithermal targets which will be ranked following the EIS co-funded IP survey due to commence in mid-June 2024.

**Table 1: Description of the current Cu-Au VMS target and camps (GDA94 MGA z51).**

Target	Planned Hole	Planned Depth (m)	Auger Geochemistry	Plate Dimension (m)	Conductance (S)	Magnetic Anomaly	Down hole Geochemistry	Target Status
Orion Extension	Yes	620	-	-	-	Yes	-	Phase I drilling
Orion Repeat	Yes	260	Ag-As-Bi-Mo-Pb-Sb-Se-Zn	200 x 190	3,500	Yes	-	Phase I drilling
Orion Splay	Yes	245	Ag-As-Bi-Mo-Pb-Sb-Se-Zn	90 x 45 90 x 110 600 x 390	28,000 14,300 2,500	No	Ag-As-Au-Bi-Co-Cu-Mo-Pb-Sb-Se-Te-W-Zn	Phase I drilling
Orion Offset	Yes	155	Ag-As-Bi-Cd-Mo-Pb-Sb-Se-Zn	200 x 190	3,800	Yes	Ag-As-Au-Bi-Co-Cu-Mo-Pb-Sb-Se-Te-W-Zn	Phase I drilling
OR2	Yes	160	Ag-As-Bi-Cd-Cu-In-Pb-Sb-Se-Zn	105 x 45	7,200	Yes	Ag-Bi-Mo-Sb-Se	Phase I drilling
OR1	Yes	200	As-Bi-Pb-Sb-Se-Te	70 x 200	16,700	No	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-Zn	Phase I drilling
Ironclad	TBD	-	Ag-As-Au-Bi-Cu-Se-Te-Zn	Not Surveyed		No	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-Zn	Requires EM/IP
OR3	TBD	255	Ag-As-Bi-Cd-Mo-Pb-Sb-Se-Te-Zn	735 x 130 640 x 285	6,100 8,800	Yes	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-W-Zn	Under review
OR4	TBD	250	Ag-As-Bi-Cd-In-Mo-Pb-Se-Sn-Te-Zn	65 x 80 55 x 60 55 x 60	5,100 9,500 9,500	Yes	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-Zn	Under review
OR5	TBD	-	As-Au-Bi-Cu-Se-Te-Zn	Not Surveyed		Yes	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-Zn	Requires magnetic modelling
OR7	TBD	210	Ag-As-Bi-Cd-Mo-Pb-Se	310 x 230 305 x 465 430 x 270	3,200 8,600 5,200	Yes	Ag-As-Au-Ba-Cd-Cu-In-Mo-Sb-Zn	Under review
TH1	TBD	215	As-Bi-Mo-Se-Te	200 x 530	2,000	No	-	Under review
TH2	TBD	290	Ag-As-Bi-Cd-Mo-Pb-Sb-Se-Te-Zn	160 x 260	4,800	Yes	Ag-Bi-Cd-Cu-Mo-Pb-Sb-Se-Te-Zn	Under review
Rufina	TBD	230	-	250 x 210	2,400	No	Ag-As-Bi-Cd-Cu-In-Mo-Pb-Sb-Se-Te-Zn	Under review
Lambrusco	TBD	330	-	220 x 430	1,400 (EOH)	No	-	Under review
Neptune Camp	TBD	-	-	Not Surveyed		-	-	Early stage
Mangrove Camp	TBD	-	-	Not Surveyed		-	-	Early stage



**Background on Tarraji-Yampi (E04/2508, E04/2557, E04/2608, E04/2860, E04/2861, E04/2862, E04/2863: 100%, E04/2315: 80%)**  
Tarraji-Yampi is located entirely within the Yampi Sound Training Area (“YSTA”), a Commonwealth Defence Reserve in the West Kimberley, ~80kms from the port of Derby. The YSTA is the second largest Defence Reserve in Australia after Woomera in South Australia and was off limits to mineral exploration from 1978 to 2013.

The only significant exploration undertaken in the area was by WMC Resources in 1958 and Australian Consolidated Minerals in 1972, with both parties exploring for copper. Since opening for exploration in 2013, Dreadnought has secured the largest ground holding within the YSTA and developed strong working relationships with both the Department of Defence and the Dambimangari People.

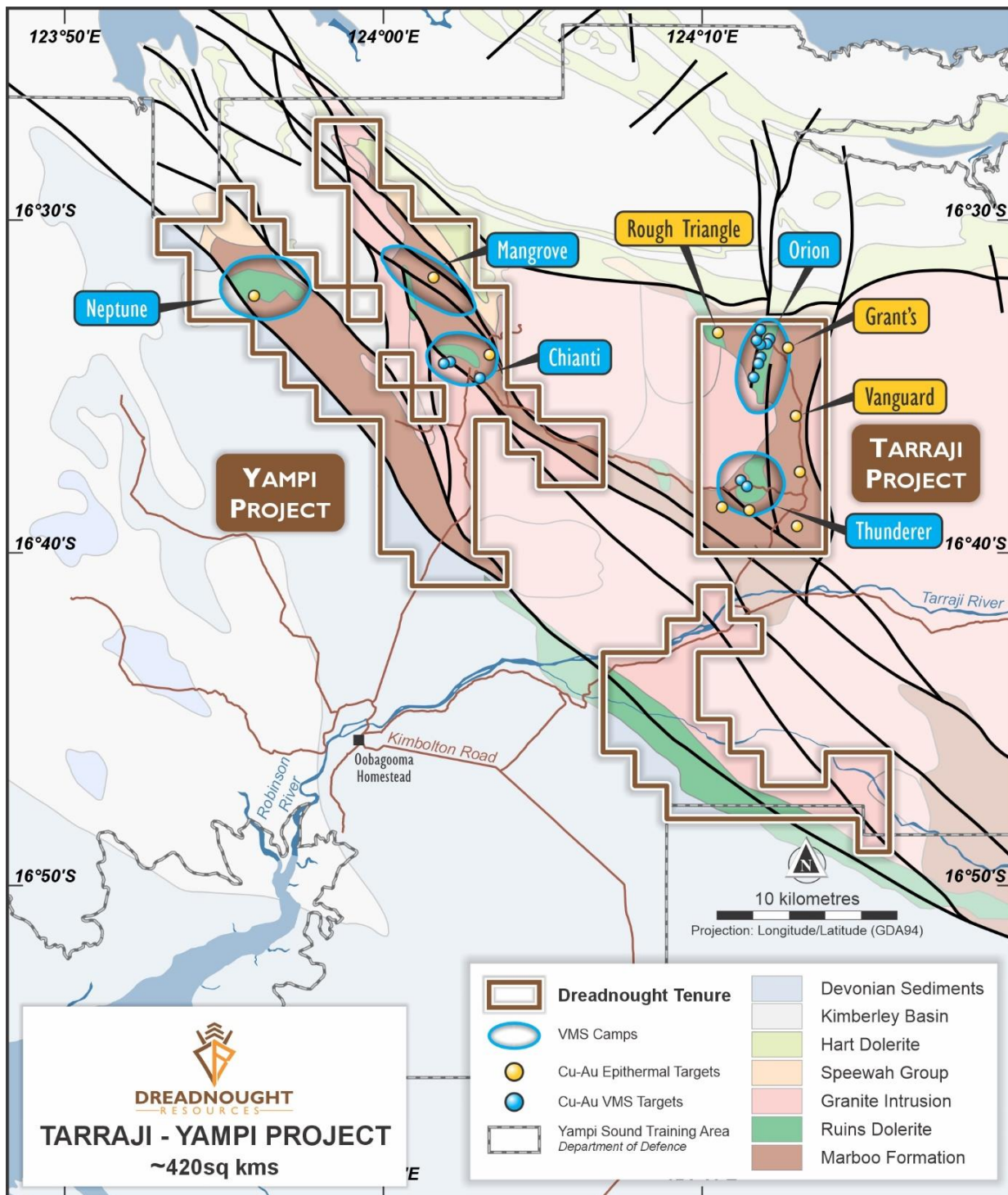


Figure 4: Plan view image showing the location of Cu-Au and VMS prospects over geological interpretation at Tarraji-Yampi.

For further information please refer to previous ASX announcements:

- 25 August 2021 RC Results from Orion, Grant's & Fuso Indicate a large Cu-Au-Ag-Co System
- 11 October 2021 Massive Sulphides Intersected in Multiple Holes at Orion Cu-Au-Ag-Co
- 2 November 2021 Supergene Confirmed and Massive Sulphides Extended at Orion
- 15 November 2021 High-Grade Cu-Ag-Au-Co Discovery at Orion
- 8 December 2021 Further High-Grade Cu-Ag-Au-Co from Orion Discovery
- 22 June 2022 Orion Auger Program – Tarraji-Yampi Project
- 15 August 2022 Nine Orion Look-alikes from Auger Program, More to Come
- 3 October 2022 Commencement of Regional Auger Program
- 18 May 2023 Additional Orion Look-Alikes from Auger Program
- 24 October 2023 Drilling and Geophysical Surveys Completed at Tarraji-Yampi
- 27 March 2024 Drilling and Geophysical Results from Tarraji-Yampi

#### **UPCOMING NEWSFLOW**

June: Results of Ni-Cu-Co-PGE IP survey at Mangaroon (100%)

June: Commencement of EIS co-funded IP surveys at Tarraji-Yampi (80/100%)

June/July: Results of further target generation and definition work at Mangaroon Au (100%)

July: Commencement of RC drilling at Gifford Creek Carbonatite Nb-REE (Mangaroon 100%)

July: MLEM survey at Tiger Cu-Au, Zn-Ag (Mangaroon 100%)

July: June 2024 Quarterly Activities and Cashflow Reports

July/August: Commencement of EIS co-funded RC drilling at Tiger Cu-Au-Zn-Ag (Mangaroon 100%)

July/August: Commencement of RC drilling at Mangaroon Au (100%)

July/August: Results from drilling at Tarraji-Yampi (80/100%)

August/September: Results from EIS co-funded IP surveys at Tarraji-Yampi (80%/100%)

August/September: Results from Au and Cu-Au-Zn-Ag drilling at Mangaroon (100%)

~Ends~

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*This announcement is authorised for release to the ASX by the Board of Dreadnought.*



## Cautionary Statement

*This announcement and information, opinions or conclusions expressed in the course of this announcement contains forecasts and forward-looking information. Such forecasts, projections and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. There are a number of risks, both specific to Dreadnought, and of a general nature which may affect the future operating and financial performance of Dreadnought, and the value of an investment in Dreadnought including and not limited to title risk, renewal risk, economic conditions, stock market fluctuations, commodity demand and price movements, timing of access to infrastructure, timing of environmental approvals, regulatory risks, operational risks, reliance on key personnel, reserve estimations, native title risks, cultural heritage risks, foreign currency fluctuations, and mining development, construction and commissioning risk.*

*Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations.*

## Competent Person's Statement – Exploration Results

*The information in this announcement that relates to geology, exploration results and planning, and exploration targets was compiled by Mr. Dean Tuck, who is a Member of the AIG, Managing Director, and shareholder of the Company. Mr. Tuck has sufficient experience which 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Tuck consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.*

*The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the forma and context in which the Competent Person's findings are presented have not been materially modified from the original reports.*



Figure 5: Photo of Dreadnought's Exploration Manager Nick Chapman reviewing diamond core from Orion.



## INVESTMENT HIGHLIGHTS

### Kimberley Ni-Cu-Au Project (80/100%)

The project is located only 85kms from Derby in the West Kimberley region of WA and was locked up as a Defence Reserve since 1978.

The project has outcropping mineralisation and historic workings which have seen no modern exploration.

Results to date indicate that there may be a related, large scale, Proterozoic Cu-Au VMS system at Tarraji-Yampi, similar to DeGrussa and Monty in the Bryah Basin.

### Mangaroon Ni-Cu-Co-3PGE, Au & REE Project (100%)

Mangaroon covers ~5,000kms<sup>2</sup> and is located 250kms south-east of Exmouth in the Gascoyne Region of WA. At the Money Intrusion, Ni-Cu-Co-3PGE has been identified. Dreadnought also has areas of outcropping high-grade gold including the historic Star of Mangaroon and Diamond gold mines. In addition, Mangaroon has emerged as a globally significant, rapidly growing, potential source of critical minerals. Highlights include:

- An Exploration Target estimated for the top 150m of ~40km of the Yin REE Ironstone Complex (ASX 13 Feb 2023).
- An independent Resource for Yin Ironstones Complex of 29.98Mt @ 1.04% TREO over only ~4.6kms – including a Measured and Indicated Resource of 26.3Mt @ 1.04% TREO (ASX 30 Nov 2023).
- Regional source of rare earths at the Gifford Creek Carbonatite totaling ~17kms x ~1km (ASX 7 Aug 2023).
- A large, independent initial Resource of 10.84Mt @ 1.00% TREO at the Gifford Creek Carbonatites, containing a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium (ASX 28 Aug 2023).

### Bresnahan HREE-Au-U Project (100%)

Bresnahan is located ~125km southwest of Newman in the Ashburton Basin. The project comprises ~3,700kms<sup>2</sup> covering over 200kms strike along the Bresnahan Basin / Wyloo Group unconformity. Bresnahan is prospective for unconformity related heavy rare earth (“HREE”) deposits similar to Browns Range HREE deposits, unconformity uranium (“U”) deposits and mesothermal lode gold similar to Paulsens Au-Ag-Sb deposits along strike.

Prior to consolidation by Dreadnought, the Bresnahan Basin had been successfully explored for unconformity uranium with limited exploration for mesothermal gold. Bresnahan is a first mover opportunity to explore for unconformity HREE.

### Central Yilgarn Gold, Base Metals, Critical Minerals & Iron Ore Project (100%)

Central Yilgarn is located ~190km northwest of Kalgoorlie in the Yilgarn Craton. The project comprises ~1,400kms<sup>2</sup> covering ~150km of strike along the majority of the Illaara, Yerilgee, South Elvire and Evanston greenstone belts. Central Yilgarn is prospective for typical Archean mesothermal lode gold deposits, VMS base metals, komatiite-hosted nickel sulphides and critical metals including Lithium-Cesium-Tantalum.

Prior to consolidation by Dreadnought, the Central Yilgarn was predominantly held by iron ore explorers and remains highly prospective for iron ore.

