

**ASX ANNOUNCEMENT** 25 September 2023

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

### **HIGHLIGHTS**

- **A 27-hole (4,300m) RC and diamond drill program has commenced at Tarraji-Yampi. This program follows on from the Orion Cu-Ag-Au-Co massive sulphide discovery which is ~350m wide and modelled to at least 500m deep and under just 1m of cover. The discovery included (ASX 15 Nov 2021):**  
**KMRC022: 16m @ 2.2% Cu, 38.7g/t Ag, 6.6g/t Au, 0.40% Co from 77m.**
- **Since 2021, a combination of auger geochemical and geophysical surveys has identified 13 Orion look-alikes with similar geochemical and geophysical signatures including 5 with known outcropping mineralisation and 6 with coincident, highly conductive bodies.**
- **The current program aims to achieve two major objectives:**
  - **Prove the scale potential of Cu-Ag-Au-Co mineralisation at Tarraji-Yampi through the discovery of additional massive sulphide deposits.**
  - **Test the depth extents of Orion where geophysical modelling shows mineralisation continues to at least 500m and gets stronger at depth. This testing is co-funded by the highly successful Exploration Incentive Scheme from the Geological Survey of Western Australia (“EIS”).**
- **The program is expected to take 3-4 weeks with updates and results expected throughout October to December 2023.**

**Dreadnought Resources Limited (“Dreadnought”) is pleased to announce that RC and diamond drilling has commenced at the Tarraji-Yampi Project, located in the Kimberley Region of Western Australia.**

Dreadnought’s Managing Director, Dean Tuck, commented: *“The long-anticipated drill program to follow up on the 2021 Orion Cu-Ag-Au-Co massive sulphide discovery is finally here. The intervening period has been used wisely to identify 13 Orion look-alike targets that are equal to or better than Orion at the same stage. These are all attractive drill targets that could lead to discoveries. Any additional discoveries close to Orion would define a camp scale copper opportunity at a time when copper demand is increasing on the back of electrification and decarbonisation. This is a high impact program at the project that Dreadnought was founded upon. We are excited to commence this program and look forward to what the drilling produces.*



Figure 1: Photo of the RC Rig set up to commence drilling at Tarraji.

## 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 that 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 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.
- 13 additional Orion look-alikes defined through geochemical and geophysical surveys including 5 with known outcropping mineralisation, and 6 with coincident highly conductive bodies.
- Lithostructural and geochemical similarities to Cu-Au mineralisation in the Cloncurry IOCG province.

### Significant, Step-Change, Growth Potential

- Dreadnought is the first explorer to deploy modern geochemical and geophysical techniques to explore for mineralisation under shallow cover in the region.

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

- Previous drilling at Orion includes thick high-grade intersections:
  - 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

### 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 by 2035, from 25M tonnes to 50M tonnes. 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).

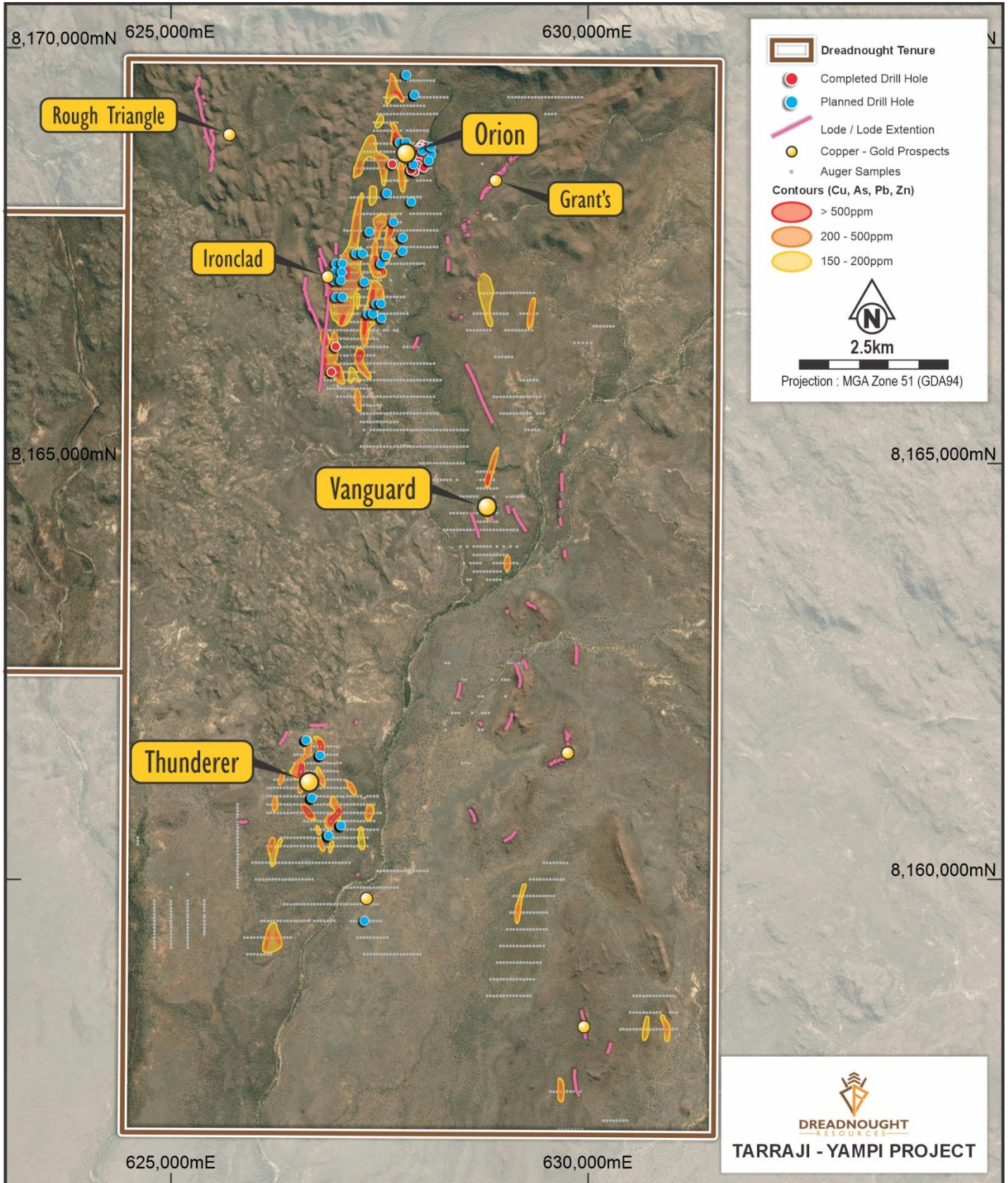


Figure 2: Plan view image showing the location of planned drill holes (blue dots) at Orion and Thunderer in relation to auger geochemistry over an ortho image.

## Background of the 2023 Cu-Au-Ag-Co Drilling Program

The Tarraji-Yampi Project was off limits to exploration from 1978-2013, a period that saw over 50% of Australia's mineral deposits discovered through the application of modern geophysical and geochemical techniques and an evolving understanding of mineral systems.

The region is known to contain outcropping quartz copper-gold lodes that were mined for copper on a small scale in the early 1900s and explored briefly by WMC in 1958 and ACM in 1972. The geological, geochemical and regolith of the project area contains many similarities to the Cloncurry District near Mt Isa and Tennant Creek. Dreadnought, for the first ever time, is applying modern exploration techniques and knowledge to discover mineralisation under the black plain soils.

In 2021, Dreadnought tested one of its first undercover geophysical targets at the Orion target intersecting (ASX 25 Aug 2021):

**KMRC017: 12m @ 1.6% Cu, 31.7g/t Ag, 0.5g/t Au, 0.02% Co** from 45m

This was quickly followed up by additional drilling confirming mineralisation to be ~350m wide x ~150m long, modelled to at least 500m deep and open down dip. Significant intercepts include (ASX 15 Nov 2021):

**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

In addition, it was determined that the black plain soil at Orion was only 1-9m thick instead of the 30-40 originally interpreted. This made for the application of auger sampling to provide a geochemical dataset to the geophysical datasets utilised to date. Since 2021, over 4,000 auger samples have been collected across Tarraji-Yampi.

The auger geochemical dataset has been transformational in understanding the lithostructural setting at Tarraji-Yampi and has resulted in the definition of 13 Orion look-a-likes with strong coincident geochemical and geophysical anomalies, with 5 containing outcropping gossans.

The 2023 RC and diamond drilling program aims to achieve two main objectives:

- Prove the scale potential of Cu-Ag-Au-Co mineralisation at Tarraji-Yampi through the discovery of additional massive sulphide bodies.
- Test the depth extents of Orion where geophysical modelling shows mineralisation continues to at least 500m and gets stronger at depth. This testing is co-funded by the highly successful Exploration Incentive Scheme from the Geological Survey of Western Australia.

Upon positive results, the above samples will be collected for metallurgical test work.

These objectives will be achieved through RC drilling of the Orion look-a-like targets with follow up down hole EM ("DHEM"), and diamond drilling to test Orion at depth and to collect metallurgical samples. This program is expected to run for 3-4 weeks with updates and assays throughout October to December 2023.

### Technical Discussion Orion Deep Diamond Drilling

Orion was discovered in 2021 by testing a coincident magnetic and EM (425m x 315m x 4,150S) anomaly. Drilling confirmed the presence of gossanous, supergene and fresh sulphide mineralisation over 350m wide x ~150m long and modelled to at least 500m deep.

Subsequent auger sampling has defined a nearby ~350m x 150m soil anomaly with a peak value of 1,418ppm Cu+Pb+Zn+As.

A diamond rig has been mobilised with EIS co-funding to test Orion at depth. Additional RC and diamond drilling will test Orion along strike and collect samples for metallurgical testwork.

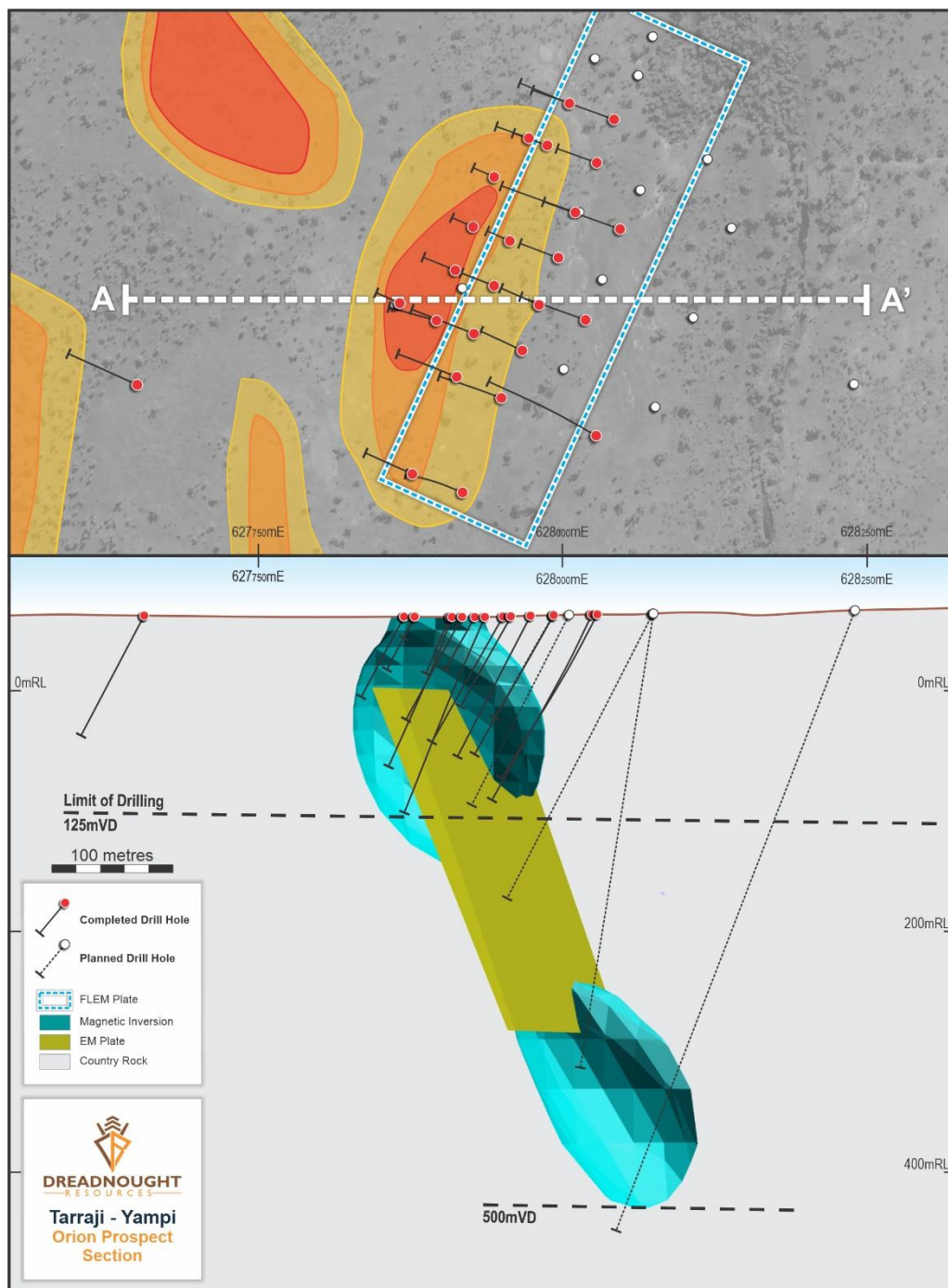


Figure 3: Plan view (above) showing the location of planned drill holes (white dots) in relation to previous drilling (red dots), auger geochemistry and the surface projection of the FLEM plate. And below is a cross section image showing the limit of previous drilling (red dots) in relation to the modelled magnetics and FLEM plate with the planned holes (white dots, some have been adjusted).

### Technical Discussion Orion Trend Drilling

Following the discovery of Orion, the wider Orion trend was highlighted with a favorable lithostructural setting containing the Ruins Dolerite (rheological contrast), reduced shales within the Marboo Formation (geochemically reactive) and complex structures (fluid pathways) proximal to a fertile felsic intrusive. Outcropping hydrothermal mineralisation is known nearby at Ironclad and Grant's with the bulk of the Orion trend occurring under shallow black plains soil. The OR1-8 targets have been identified through a combination of auger geochemical sampling and geophysical surveys with outcropping gossans identified at OR4.

RC drilling has been designed to test geochemical and geophysical anomalism along the Orion trend as well as at Ironclad which sits along a major bounding structure.

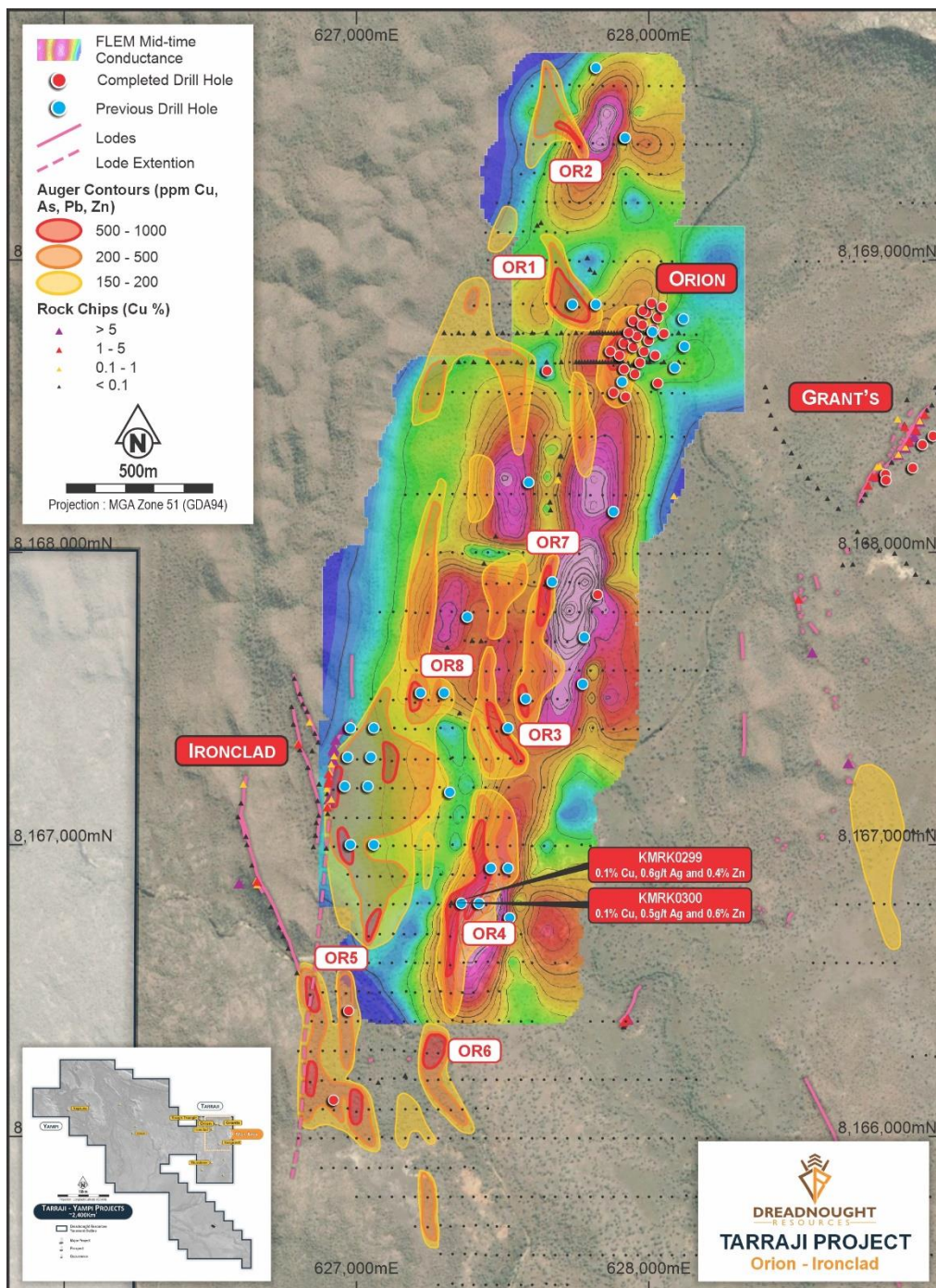


Figure 4: Plan view image showing the location of planned drill holes (blue dots) at Orion in relation to auger geochemistry and outcropping lodes over a merged FLEM mid-time conductance and ortho image.

### Technical Discussion Thunderer Drilling

Thunderer is the southern extension of the Orion trend on the other side of the fertile felsic intrusive which has intruded the prospective lithostructural trend. During auger sampling multiple gossanous outcrops were identified that are now coincident with geochemical and geophysical anomalism. Thunderer contains some of the strongest geochemical and geophysical anomalies defined to date with highly mineralised outcropping gossans.

The 2023 RC program will commence at Thunderer.

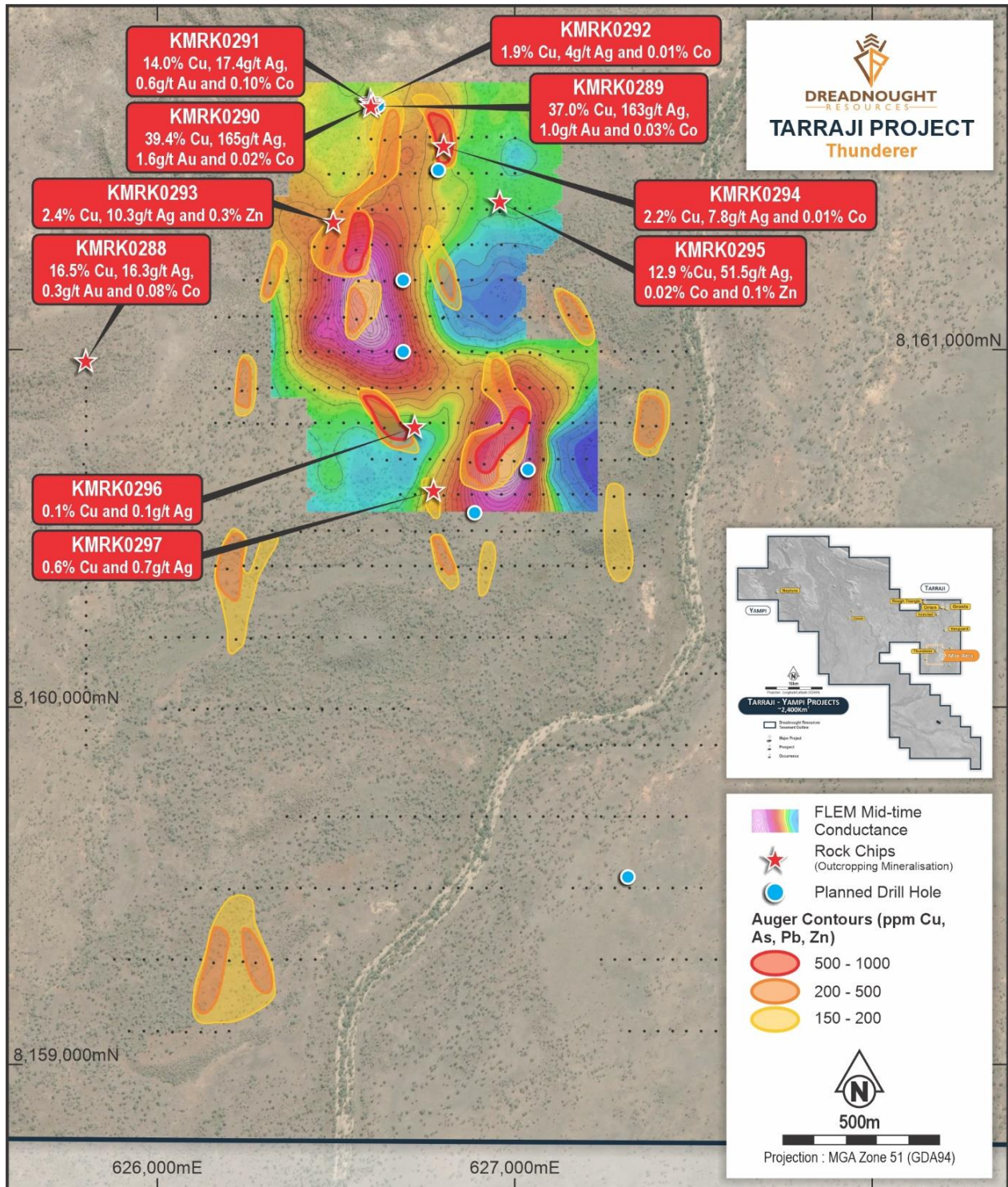


Figure 5: Plan view image showing the location of planned drill holes (blue dots) at Thunderer in relation to auger geochemistry and outcropping lodes over a merged FLEM mid-time conductance and ortho image.

**Background on Tarraji-Yampi (E04/2508, E04/2557, E04/2572, 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.

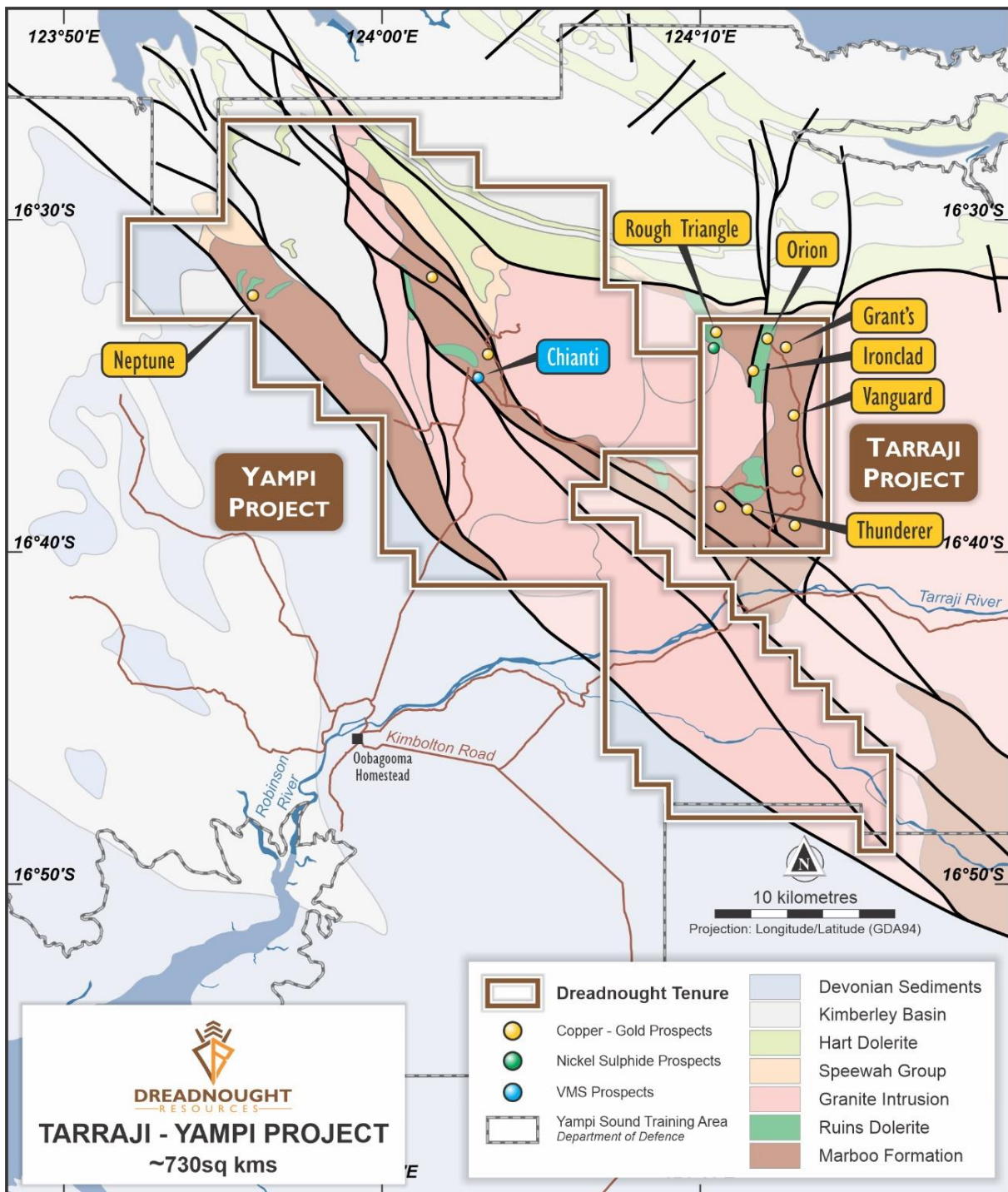


Figure 6: Plan view image showing the location of Cu-Au and VMS prospects over geological interpretation at Tarraji-Yampi.



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

## UPCOMING NEWSFLOW

September: Results of geophysical surveys at Mangaroon (100%)

September/October: Final drilling results from completed drilling at Mangaroon REE (100%)

October: Results of geophysical and geochemical surveys at Central Yilgarn (100%)

October: DHEM and Further Assay Results from the Money Intrusion (Earn-in)

18-19 October: Presenting at the South-West Connect ASX Showcase

October/November: REE Resource upgrade (Mangaroon 100%)

October/November: Further RC drilling at Mangaroon Ni-Cu-PGE (Earn-in) and Au, REEs (100%)

October: Quarterly Activities and Cashflow Report

November: Results from target generation and definition work at Bresnahan (100%)

November: Assays from RC drilling at Tarraji-Yampi (80%, 100%)

23 November: Annual General Meeting

November/December: Assay results from additional Au, Ni-Cu-PGE and REE drilling at Mangaroon.

~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 form and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

Table 1: Description of 14 Orion look-alikes (GDA94 MGA z51).

Location			Auger Geochemistry			FLEM Survey			Magnetic Anomaly	Outcropping Mineralisation
Target ID	East	North	Strike (m)	Width (m)	Peak Value** (Cu+Pb+Zn+As)	Strike (m)	Dip (m)	Conductance (S)		
<b>Orion</b>	<b>627920</b>	<b>8168750</b>	<b>350</b>	<b>150</b>	<b>1,418 ppm</b>	<b>425</b>	<b>315</b>	<b>4,146</b>	<b>Yes</b>	<b>No</b>
Ironclad	626960	8167000	1,550	150	2,750 ppm	Not Surveyed			No	Yes
OR1	627720	8168850	300	150	2,566 ppm	Weak or Masked			No	Under Cover
OR2	627760	8169400	300	150	1,170 ppm	220	245	4,590	Yes	Under Cover
OR3	627480	8167400	420	130	1,380 ppm	540	375	3,170	Yes	Under Cover
OR4	627320	8166800	780	200	1,244 ppm	510	370	3,320	Yes	Yes
OR5	626840	8166500	400	200	1,069 ppm	Not Surveyed			Yes	Under Cover
OR6	627280	8166300	350	100	941 ppm	Not Surveyed			Yes	Under Cover
OR7	627640	8167900	580	100	985 ppm	410	290	4,200	Yes	Under Cover
OR8	627200	8167500	1,500	200	953 ppm	300	220	660	No	Under Cover
Thunderer East	626920	8160700	450	150	1,496 ppm	340	215	2,590	No	Yes
Thunderer West	626640	8160800	500	100	1,205 ppm	400	600	2,590	Yes	Yes
Thunderer North	626680	8161600	200	80	520 ppm	300	470	180	Yes	Yes
Vanguard	628800	8164800	500	40	579 ppm	Not Surveyed			Yes	Yes
Neptune*	598160	8171200	N/A*	N/A*	1,221 ppm*	Not Surveyed			Yes	Under Cover

\* Auger program over Neptune <25% complete

\*\*Background value ~80ppm Cu+Pb+Zn+As

## INVESTMENT HIGHLIGHTS

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

The project is located only 80kms 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-Ag-Bi-Sb-Co system at Tarraji-Yampi, similar to Cloncurry/Mt Isa and Tennant Creek.

### Mangaroon Ni-Cu-PGE JV & Au/REE 100% Project

Mangaroon covers ~5,200 kms and is located 250kms south-east of Exmouth in the Gascoyne Region of WA. At the Money Ni-Cu-PGE has been identified and is subject to an earn-in by First Quantum Minerals (up to 70%). Dreadnought also has areas of outcropping high-grade gold including the historic Star of Mangaroon and Diamonds gold mines. In addition, Mangaroon has emerged as a globally significant, rapidly growing, potential source of critical minerals. Highlights include:

- An Exploration Target of 50-100Mt at 0.9-1.3% TREO estimated for the top 150m of the ~43km long Yin REE Ironstone Complex (ASX 13 Feb 2023).
- An independent Resource for Yin Ironstones Complex of 20.06Mt @ 1.03% TREO over only ~4kms – including an Indicated Resource of 5.52Mt @ 1.23% TREO over just 250m strike (ASX 5 Jul 2023).
- Regional source of rare earths at the C1-C5 carbonatites totaling ~9kms x ~1km (ASX 7 Aug 2023).
- A large, independent initial Resource of 10.84Mt @ 1.00% TREO at C3, containing a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium (ASX 28 Aug 2023).

### Bresnahan HREE and Au Project (100%)

Bresnahan is located ~125km southwest of Newman in the Ashburton Basin. The project comprises ~3,700 sq kms 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 and mesothermal lode gold similar to Paulsen’s Au-Ag-Sb deposits along strike.

Prior to consolidation by Dreadnought, the Bresnahan Basin had only been 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 ~1,600 sq kms covering ~150km of strike along the majority of the Illara, Yerilgee 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-Caesium-Tantalum.

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

