29 May 2023

METALLURGICAL TEST WORK SUPPORTS HIGH-VALUE CONCENTRATE - MANGAROON (100%)

HIGHLIGHTS

- **Independent, metallurgical test work on a composite of drill samples from the JORC 2012 Mineral Resource ("Resource") at the Yin REE Ironstone Complex ("Yin") has produced a concentrate containing 31.22% TREO and 10.76% Nd_2O_3+Pr_6O_{11} (NdPr:TREO ratio of 35%) at an 85.9% TREO recovery. This represents a ~12x increase from the head grade of 2.36% TREO, 0.87% Nd_2O_3+Pr_6O_{11}. Heavy rare earths ("HREE") were also identified in the concentrate at a HREE:TREO ratio of 0.5%.**
- **Two rounds of metallurgical testing have been completed on the Yin ironstones and have resulted in the production of concentrates ranging from 31.22-41.70% TREO and 10.76%-15.31% Nd_2O_3+Pr_6O_{11} with TREO recoveries ranging from 85.9%-92.8% using material with head grades ranging from 1.60% - 2.36% TREO. This work indicates that a high-value monazite concentrate can be produced from the Yin ironstones using a standard flowsheet.**
- **Metallurgical testing is now advancing as follows:**
  - **Increased intensity of testing of all Yin ironstones that are expected to become Resources across a range of head grades.**
  - **Acid bake performance analysis by ANSTO of bulk concentrates for producing a mixed rare earth carbonate to optimise midstream processing options for the concentrate.**
  - **Ongoing concentrate flowsheet optimisation.**
- **There has been considerable interest shown by Australian and overseas midstream processors in the Yin concentrate and samples will be made available to those parties. Concentrates from Tier 1 jurisdictions such as Australia are keenly sought after so as to provide diversity in the rare earth supply chain. The test work being undertaken by Dreadnought will assist in ensuring a competitive process for Dreadnought's potential concentrates.**

Dreadnought Resources Limited ("**Dreadnought**") is pleased to provide an update on metallurgical test work from Yin, part of the 100% owned Mangaroon project, located in the Gascoyne Region of Western Australia.

Metallurgical test work was undertaken independently under Dreadnought supervision. The test work successfully tested the performance of the Yin ironstones using the flowsheet proposed for use at the advanced Yangibana Ironstones Project owned by Hastings Technology Metals Ltd. (ASX:HAS, "**Hastings**"). This flowsheet has seen extensive testing and development across similar ironstones by Hastings and provides a likely short-cut to Dreadnought's own flowsheet.

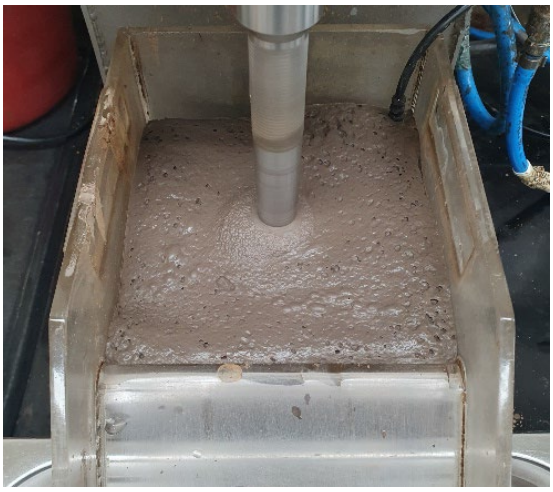

Figure 1: Photo of the third stage floatation which produced a concentrate with 31.22% TREO @ 87.1% TREO recovery and 6.7% mass recovery.

Dreadnought's Managing Director, Dean Tuck, commented: *"As the level of metallurgical work becomes more detailed, the ability to produce a high-value concentrate is maintained. Our metallurgical studies will continue, as too will the level of engagement with parties interested in potential concentrates."*

SNAPSHOT - MANGAROON RARE EARTHS
Mangaroon is 100% Owned by Dreadnought

Genuine Scale Potential Already at Yin Ironstone Complex

- Initial independent Yin Inferred Resource of 14.36Mt @ 1.13% TREO (ASX 28 Dec 2022) covers only 3km of 43km of strike and is based on only 2.5 months of RC drilling (12,255m).
- 40km long Exploration Target of 50-100Mt at 0.9-1.3% TREO estimated for the top 150m of the Yin Ironstone Complex (ASX 13 Feb 2023).
- Resource extension and first pass wide spaced drilling currently underway.

Significant, Step-Change, Growth Potential Beyond Yin Ironstone Complex

- C1-C7 carbonatites are shaping up as the regional source of REE – initial drill program expands C1-C5 to ~6.5kms in strike length x 1km wide.
- C6 located ~25kms south of C1-5 and C7 is situated over a crustal scale structural splay off the Lyons River Fault, is associated with an outcropping pyroxenite intrusion, and has a geophysical similarity to other globally significant carbonatites such as Mt Weld, Araxa, Palabora and Ngualla.
- First pass, wide spaced discovery focused drilling has recommenced at C1-C7.

High-grade, Multi-Metal Potential Including REE (Neodymium, Praseodymium), Phosphorus, Niobium, Titanium & Scandium (REE-P_2O_5-Nb_2O_5-TiO_2-Sc)

- The mineralisation at the Yin Ironstone Complex contains significantly higher NdPr as a fraction of the rare earth oxides ("**NdPr:TREO**" ratio) than most other REE deposits globally, over 50% higher than the global average.
- Partially completed, first pass, wide spaced drilling over the C1-C7 carbonatites has identified significant critical metal potential with REE, P_2O_5, Nb_2O_5, TiO_2 and Sc within the C1-C5 carbonatites.
- A ~600m x 550m zone of REE-P_2O_5-Nb_2O_5-TiO_2-Sc mineralisation now confirmed at the C3 discovery.

Potentially Attractive Mining Proposition

- Broad zones of flat to moderate dipping mineralisation with parallel lodes and Resource intensity of ~4.8Mt/km make for a potentially attractive mining proposition.

Positive Metallurgy Results

- Metallurgical test work from Yin has performed well, achieving recoveries ranging from 85.9% to 92.8% at a concentrate grade of 10.76% to 15.31% Nd_2O_3+P_6O_{11}.
- REE at Yin is predominantly hosted in monazite which is amenable to commercial processing.
- Significant metallurgical studies ongoing – results expected throughout 2023.

Global Strategic Imperative Driving Rare Earth Growth & Prices

- Supply chain security and low carbon transition are imperatives against a backdrop of heightened geopolitical tension.
- Dreadnought is receiving increasing levels of interest from mid/downstream industry participants. While the current focus is on upstream options (mining, milling and concentrating), opportunities for mid/downstream industry participants to add value to Dreadnought shareholders will be assessed.

Rare Earth Supply Chain

Dreadnought's current focus is on upstream development – to mine ore and produce a TREO concentrate.

Concentrates are then provided to midstream processing facilities for cracking and mixed rare earth carbonate production. The rare earths are then seperated as oxides and refined into metals for use in markets such as magnet manufacture.

There has been considerable interest shown by Australian and overseas midstream processors in the Yin concentrate. Concentrate samples will be made available to these interested parties. Furthermore, acid bake performance analysis by ANSTO of bulk concentrates is underway. This analysis will assist in optimising midstream processing options for producing a mixed rare earth carbonate.

Concentrates from Tier 1 jurisdictions such as Australia are keenly sought after so as to provide diversity in the rare earth supply chain. The test work being undertaken by Dreadnought will assist in ensuring a competitive process for Dreadnought's potential concentrates.

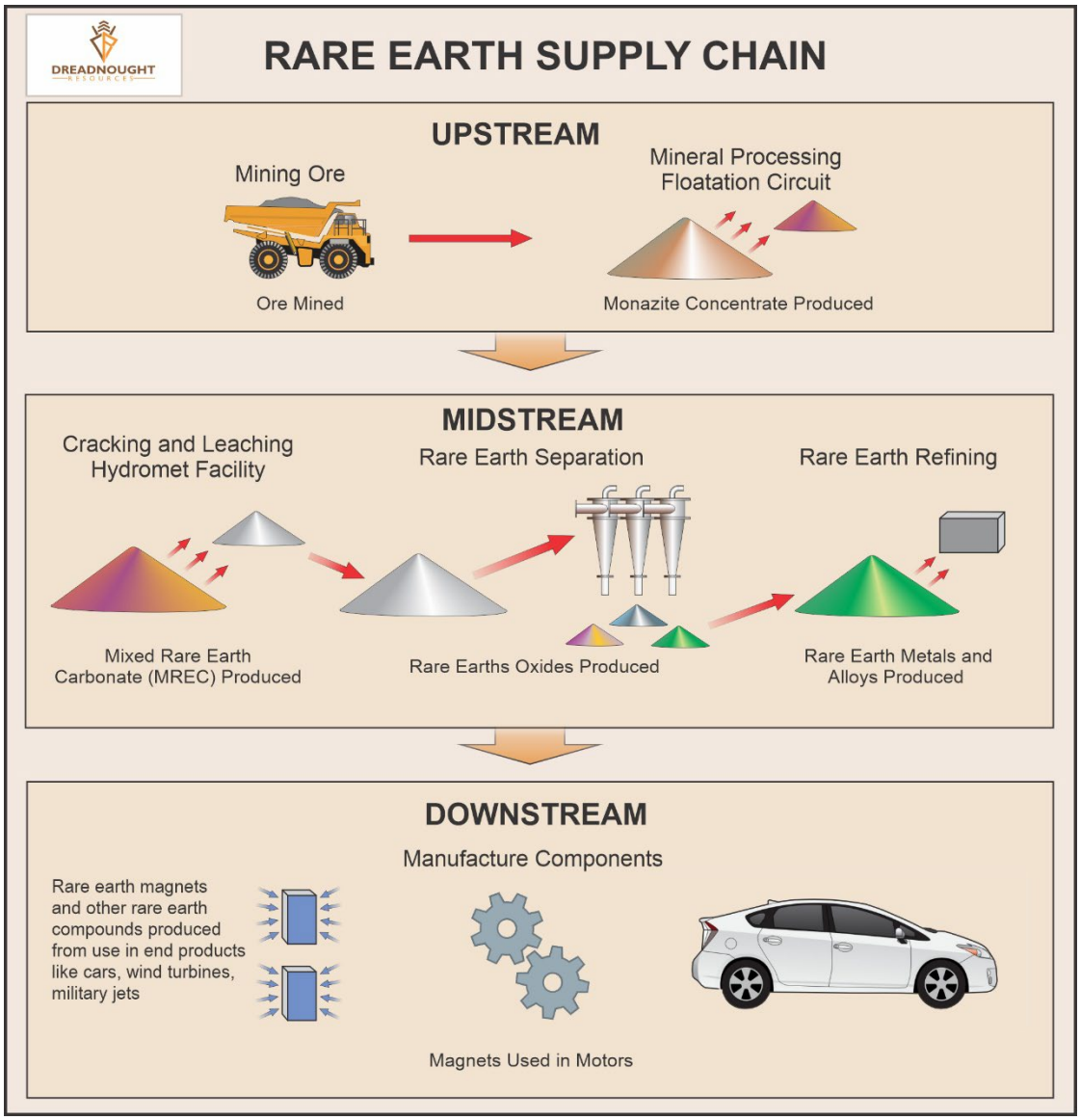

Figure 2: Overview of the rare earth supply chain showing upstream, midstream and downstream activities.

Metallurgical Test Work – Diamond Core

Metallurgical test work was undertaken independently at ALS Metallurgy and IMO Metallurgy. Oversight on the test work was conducted on behalf of Dreadnought by experienced consulting metallurgist, Damien Krebs from Primero Group. A composite sample was created by combining diamond core samples from three holes within the Yin ironstone Resource. The test work successfully tested the performance of the Yin ironstones using the flowsheet proposed for use at the advanced Yangibana Ironstones Project owned by Hastings. This flowsheet has seen extensive testing and development across similar ironstones by Hastings and provides a likely short-cut to Dreadnought's own flowsheet. The flowsheet is outlined in Figure 3 below.

A 2kg charge of composite material (2.36% TREO) was initially ground to 90 microns and put through a rougher circuit which produced a 9.78% TREO rougher concentrate at a 96.6% TREO recovery and 23.9% mass recovery.

The rougher concentrate was then reground to 20 micron and put through four series of froth floatation circuits to find the ideal number of cleaner circuits to produce a high-grade concentrate at high TREO recoveries. Those results included:

First Froth Concentrate:	**24.28% TREO @ 89.3% TREO recovery and 8.9% mass recovery**
Second Froth Concentrate:	**27.73% TREO @ 88.7% TREO recovery and 7.7% mass recovery**
Third Froth Concentrate:	**31.22% TREO @ 87.1% TREO recovery and 6.7% mass recovery**
Fourth Froth Concentrate:	**32.96% TREO @ 80.4% TREO recovery and 5.9% mass recovery**

The third froth concentrate was determined to be the optimal TREO grade and recovery.

In addition, the concentrate and tailings from the fourth froth were recombined and detailed ICP-MS analysis was undertaken for a full chemical suite, including heavy rare earths. The results confirmed 8.54% Nd_2O_3, 2.22% Pr_6O_{11}, 0.94% Sm_2O_3, 350ppm Dy_2O_3 and 155ppm Tb_4O_7. The HREE:TREO ratio of the concentrate was 0.5% and the NdPr:TREO ratio was 35%.

The test work has resulted in a high-value (based on Nd_2O_3+P_6O_{11} grades) concentrate at exceptional TREO recoveries of 80-90%.

Ongoing metallurgical test work will look at further optimising the flowsheet. In addition, there will be an increased intensity of testing of all Yin ironstones that are expected to become Resources across a range of head grades. Additionally, a bulk concentrate is being prepared to send to ANSTO for further analysis as well as leaching and cracking work to produce a mixed rare earth carbonate. This analysis will assist in optimising midstream processing options for producing a mixed rare earth carbonate.

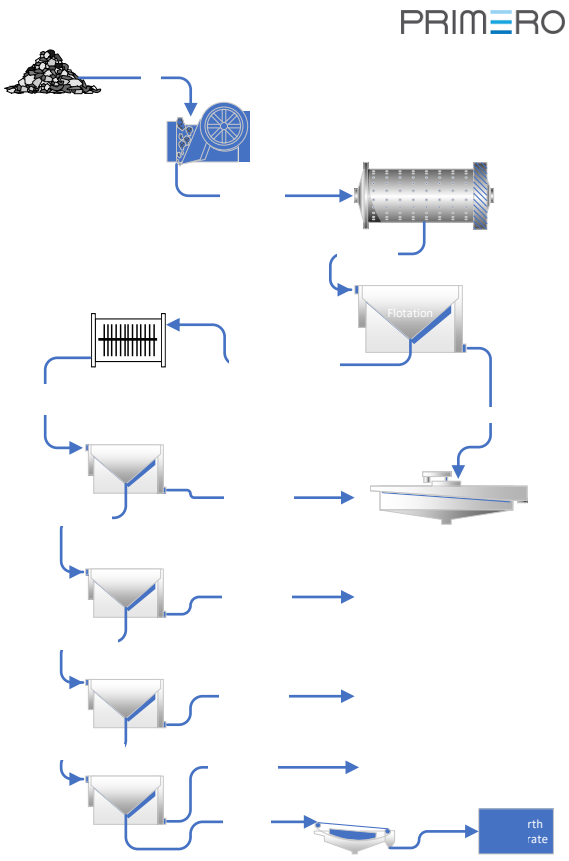

Figure 3: Flowsheet developed by Hastings and ALS Metallurgy as used for this test work program.

Comparison with 2021 Outcrop Sighter Test Work

In 2021, prior to the 2022 drilling campaign, a composite sample of outcropping ironstones from Yin was submitted for metallurgical testing using the Hastings flowsheet, identical to the process undertaken above. The initial composite sample contained a lower head grade and still produced a high-grade concentrate containing 15.31% Nd_2O_3+Pr_6O_{11} with an NdPr:TREO ratio of 36.7% (41.7% TREO) with a 92.8% mass recovery that represented a ~26x increase in the grade (from a head grade of 1.60% TREO, 0.59% Nd_2O_3+Pr_6O_{11}) with a 3.55% mass recovery.

The difference in performance and outcomes between the two programs is likely due to natural variations in mineralogy within the ironstones. The 2021 rock chip samples had no reported apatite in mineralogical analysis, whereas the drill composite contained some apatite resulting in a lower concentrate grade which is supported by an increase in phosphorous in the concentrate.

The drill core composite tested in this work incorporates samples from 3 drill holes (shown in Table 1) that comprise the oxidised zone of the Yin Ironstone Resource. Additional metallurgical test work will now be undertaken across all newly discovered ironstones with results expected in August 2023. This work will be undertaken in conjunction with ALS, IMO, Primero, ANSTO and ANU as part of a Research and Development Project which will seek to develop an optimised flowsheet for all ironstones within the Yin Ironstone Complex.

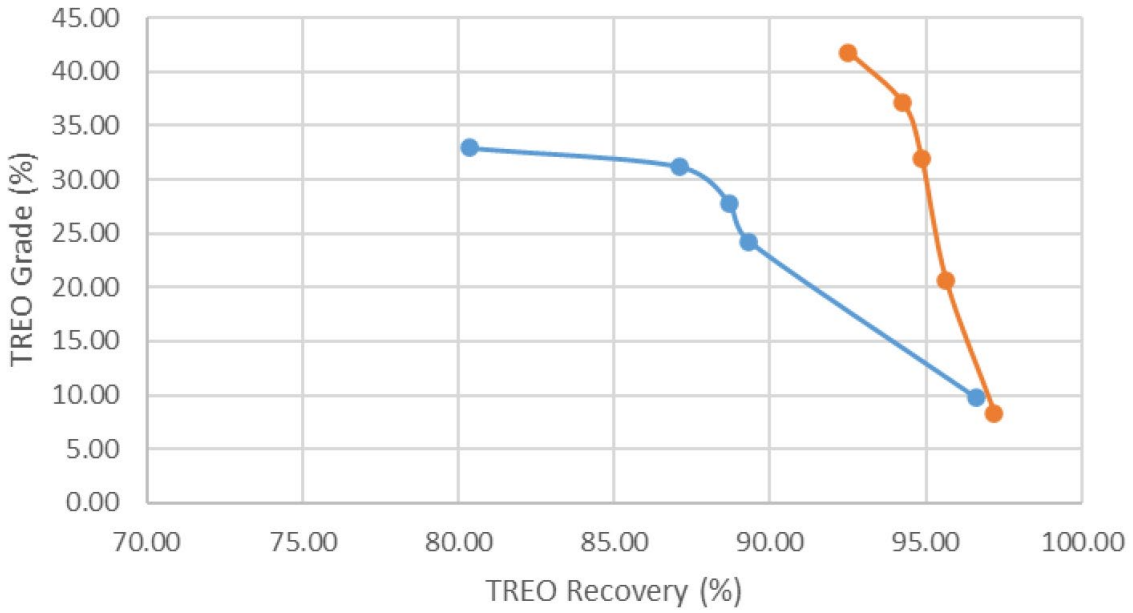

Figure 4: Comparison of the TREO grade and recovery profile for each stage of floatation between the outcrop sample (red line) and composite sample from diamond drilling (blue line). Each dot working from the bottom right represents a stage of floatation results starting with the rougher concentrate and four stages of cleaner concentrate.

Background on Mangaroon (E8/3178, E08/3274, E09/2384, E09/2433, E09/2473: FQM Earn-in) (E08/3275, E08/3439, E09/2290, E09/2359, E09/2405, E09/2370, E09/2448, E09/2449, E09/2450, E09/2467, E09/2478, E09/2531, E09/2535, E09/2616, E09/2620, M09/146, M09/147, M09/174, M09/175: DRE 100%)

Mangaroon covers >5,300sq kms of the Mangaroon Zone in the Gascoyne Region of Western Australia. Part of the project is targeting Ni-Cu-PGE and is subject to an earn in with First Quantum Minerals Ltd (**"FQM"**) (earning up to 70%) – Figure 5. The region is host to high-grade gold mineralisation at the Bangemall/Cobra and Star of Mangaroon gold mining centres and the high NdPr:TREO ratio Yin and Yangibana REE deposits.

Dreadnought has located outcropping high-grade gold bearing quartz veins along the Edmund and Minga Bar Faults, high-grade REE ironstones, similar to those under development at Yangibana, REE-P_2O_5-Nb_2O_5-TiO_2±Sc mineralised carbonatites and outcropping high tenor Ni-Cu-PGE blebby sulphides at the Money Intrusion.

In December 2022, Dreadnought delivered an initial independent Inferred Resource of 14.36Mt @ 1.13% TREO (ASX 28 Dec 2022) covering only 3kms of the 43kms of strike within the Yin Ironstone Complex.

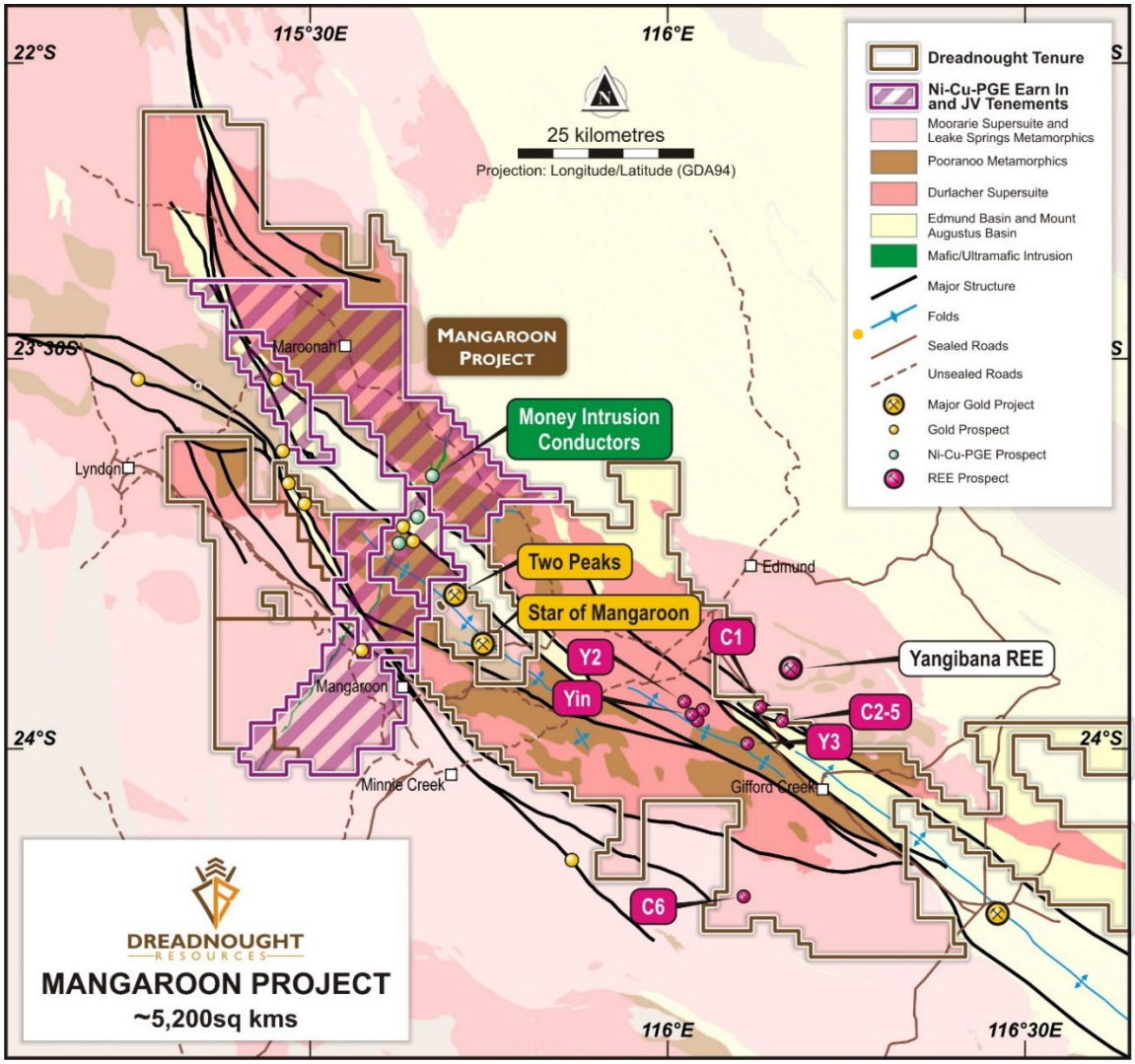

Figure 5: Plan view map of Mangaroon showing the location of the FQM Earn-in and 100% DRE ground in relation to major structures, geology and roads.

For further information please refer to previous ASX announcements:

- *11 June 2021* *High-Grade REE Ironstones Outcropping at Mangaroon*
- *19 July 2021* *High-Grade REE Ironstones Confirmed Over 2.5kms at Mangaroon*
- *24 September 2021* *Airborne Magnetic-Radiometric Survey Commenced at Mangaroon*
- *2 February 2022* *Rare Earths, Phosphate, Niobium & Zirconium Results from Mangaroon*
- *5 September 2022* *Thick Rare Earth Ironstones Confirmed at Sabre (Y3) Discovery*
- *17 October 2022* *Mineralised Carbonatites Discovered at C3 and C4*
- *23 November 2022* *Multiple, Large Scale REE-Nb-Ti-P Carbonatites*
- *13 December 2022* *Thick Mineralisation Continues at C3, 2022 Drilling Complete*
- *28 December 2022* *Initial High-Grade, Independent Resource Over 3kms at Yin*
- *27 January 2023* *Mineralised REE Ironstones increased by 13kms to 43kms*
- *13 February 2023* *REE Ironstone Exploration Target Defined*
- *13 March 2023* *Successful Yin Extensional Drill Results*
- *29 March 2023* *Yin Resource to Grow, Carbonatite Drilling Commenced*
- *3 April 2023* *Carbonatites Deliver Thick, Near Surface REE Results*

UPCOMING NEWSFLOW

June-December: Ongoing drilling results from Mangaroon REE (100%)

June: Results of high-grade gold review (Mangaroon 100%)

21-22 June: Gold Coast Investment Showcase

June/July: REE Resource upgrade (Mangaroon 100%)

June/July: Results of nickel review with Newexco (Central Yilgarn 100%)

July: FLEM Results from Thunderer and Orion (Tarraji 80%, Yampi 100%)

July: Commencement of RC drilling at the Money Intrusion (Mangaroon First Quantum Earn-in)

July: Quarterly Activities and Cashflow Report

19-21 July: Noosa Mining Investor Conference

7-9 August: Diggers and Dealers Conference

September: Commencement of drilling at Tarraji-Yampi (80% and 100%)

December 2023 quarter: REE Resource upgrade (Mangaroon 100%)

~Ends~

For further information please contact:

Dean Tuck
Managing Director
Dreadnought Resources Limited
E:dtuck@dreadnoughtresources.com.au

Jessamyn Lyons
Company Secretary
Dreadnought Resources Limited
E:jlyons@dreadnoughtresources.com.au

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

INVESTMENT HIGHLIGHTS

Kimberley Ni-Cu-Au Projects

Dreadnought controls the second largest land holding in the highly prospective West Kimberley region of WA. The main project area, Tarraji-Yampi, is located only 85kms from Derby and has been locked up as a Defence Reserve since 1978.

Tarraji-Yampi presents a rare first mover opportunity with known outcropping mineralisation and historic workings from the early 1900's 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 in Queensland and Tennant Creek in the Northern Territory.

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

Mangaroon is a first mover opportunity covering ~5,300 kms located 250kms south-east of Exmouth in the vastly underexplored Gascoyne Region of WA. Part of the project is targeting Ni-Cu-PGE and is subject to a joint venture with First Quantum Minerals (earning up to 70%). The joint venture area contains outcropping high tenor Ni-Cu-PGE blebby sulphides at the Money Intrusion. Dreadnought's 100% owned areas contain outcropping high-grade gold bearing quartz veins including the historic Star of Mangaroon and Diamond's gold mines, along the Edmund and Minga Bar Faults and outcropping high-grade REE ironstones and seven carbonatite intrusions which may be the source of the regions rare earth mineralisation.

Dreadnought has delivered an initial JORC Inferred Resource over just 3kms Yin REE Ironstone Complex delivering 14.36Mt @ 1.13% TREO (30% NdPr:TREO Ratio) (ASX 28 Dec 2022) with an additional 40 strike kilometres still to be tested.

Bresnahan HREE and Au Project

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

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 Illaara, 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.

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.

Competent Person's Statement – Exploration Results

The information in this announcement that relates to geology, Exploration Results 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.

Competent Person's Statement – Mineral Resources

The information in this announcement that relates to Mineral Resources is based on information compiled by Mr Lynn Widenbar, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Widenbar is a full-time employee of Widenbar and Associates Pty Ltd. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Widenbar consents to the inclusion in the announcement of the matters based on his information in the form and context that the information appears.

Competent Person's Statement – Metallurgical Results

The information in this document that relates to metallurgical test work is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of Independent Metallurgical Operations Pty Ltd, who has been engaged by Dreadnought Resources Limited to provide metallurgical consulting services. Mr Adamini has approved and consented to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Table 1: Drill Collar and Sample Interval Data for Composite Sample (GDA94 MGAz50)

Hole ID	Easting	Northing	RL	Dip	Azimuth	Type	From	To	Prospect
YINDD003	401993	7351424	299	-60	275	Full Core	13m	17.4m	Yin
YINDD010	401943	7351324	300	-60	283	Half Core	14.8m	20.6m	
YINDD011	401935	7351222	300	-60	286	Full Core	52m	61m	

JORC CODE, 2012 EDITION – TABLE 1 REPORT TEMPLATE

SECTION 1 SAMPLING TECHNIQUES AND DATA

(CRITERIA IN THIS SECTION APPLY TO ALL SUCCEEDING SECTIONS.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	**RC Drilling** Reverse Circulation (RC) drilling was undertaken to produce samples for assaying. **Laboratory Analysis** A pXRF is used on site to determine mineralised samples. Mineralised intervals have the 1m split collected, while unmineralised samples are not sampled. Samples submitted to the laboratory were determined by the site geologist with the assistance of the pXRF. **1m Splits** From every metre drilled a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter from each metre of drilling. All samples are submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides and additional elements by Lithium Borate Fusion XRF (ALS Method ME-XRF30). Some samples are also submitted for 48 multi-elements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61) to assist with lithological interpretation and waste rock characterisation. **Diamond Drilling** Core is orientated for structural and geotechnical logging where possible. In orientated core, half core is submitted to the lab for analysis in intervals ranging from 20cm to 1m depending on the geological context. If core is orientated, then the half core is cut so as to preserve the orientation line with the same side of the core submitted down the hole. QAQC samples consisting of duplicates, blanks and CRM's (OREAS Standards) will be inserted through the program at a rate of 1:50 samples. Duplicate samples are submitted as quarter core. All samples are submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method MEXRF30). Select samples are also submitted for 48 multielements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61) to assist with lithological interpretation.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	**RC Drilling** Ausdrill undertook the program utilising a Drill Rigs Australia truck mounted Schramm T685WS drill rig with additional air from an auxiliary compressor and booster. Bit size was 5¾". **Diamond Drilling** Diamond drilling is being undertaken by Hagstrom Drilling with a truck-mounted low impact diamond drill rig. Drilling is either HQ to end of hole or initially HQ and dropping to NQ once the hole is cased off for deeper drill holes. Core is orientated using a Reflex Sprint gyro and True Core Orientation Tool.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	**RC Drilling** Drilling was undertaken using a 'best practice' approach to achieve maximum sample recovery and quality through the mineralised zones. Best practice sampling procedure included: suitable usage of dust suppression, suitable shroud, lifting off bottom between each metre, cleaning of sampling equipment, ensuring a dry sample and suitable supervision by the supervising geologist to ensure good sample quality. At this stage, no known bias occurs between sample recovery and grade. **Diamond Drilling** HQ and NQ drilling has been undertaken. All core recoveries are measured and recorded by the drill crew for each run and remeasured and checked by Dreadnought personnel. Core recovery to date has been very high. At this stage, no known bias occurs between sample recovery and grade.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	**RC chips** were logged by a qualified geologist under supervision of a senior geologist with sufficient experience in this geological terrane and relevant styles of mineralisation using an industry standard logging system which could eventually be utilised within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering and texture were all recorded digitally. Chips were washed each metre and stored in chip trays for preservation and future reference. RC pulp material is also analysed on the rig by pXRF and magnetic susceptibility meter to assist with logging and the identification of mineralisation. Logging is qualitative, quantitative or semi-quantitative in nature. **Diamond core** is logged under supervision of a Senior Geologist with sufficient experience in this geological terrane and relevant styles of mineralisation using an industry standard logging

Criteria	JORC Code explanation	Commentary
		system which could eventually be utilised within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering and structure are recorded digitally. Logging is qualitative, quantitative or semi-quantitative in nature.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	**RC Drilling** From every metre drilled, a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter. QAQC in the form of duplicates and CRM's (OREAS Standards) were inserted through the ore zones at a rate of 1:50 samples. Additionally, within mineralised zones, a duplicate sample was taken and a blank inserted directly after. 2-3kg samples are submitted to ALS laboratories (Perth), oven dried to 105°C and pulverised to 85% passing 75um to produce a 0.66g charge for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30) and to produce a 0.25g charge for determination of 48 multi-elements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61). Standard laboratory QAQC is undertaken and monitored. **Diamond Drilling** 20cm – 1m quarter core samples are sawn and submitted to the lab for analysis. If core is orientated, then the core is cut so as to preserve the orientation line with the same side of the core submitted down the hole. For the purposes of metallurgical testing, half core was submitted where possible to make the required bulk composite mass required for ongoing testwork. In some instances, this required full core to be used. Further details regarding the metallurgical testing is included in the text. QAQC in the form of duplicates, blanks and CRM's (OREAS Standards) are inserted through the mineralised zones at a rate of 1:50 samples. Additionally, within each mineralised zone, a duplicate sample is taken and a blank inserted directly after. Samples are submitted to ALS laboratories (Perth), oven dried to 105°C and pulverised to 85% passing 75um to produce a 0.66g charge for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30) and to produce a 0.25g charge for determination of 48 multi-elements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61). Standard laboratory QAQC is undertaken and monitored.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is*	**Laboratory Analysis** Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE

Criteria	JORC Code explanation	Commentary
	considered partial or total. • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	determination. Standard laboratory QAQC is undertaken and monitored by the laboratory and by the company upon assay result receival. Flotation testwork was conducted at ALS Metallurgy located in Balcatta Western Australia. TREO concentrate grades have been calculated from the CeO_2:TREO ratio generated by an XRF analysis. NdPr:TREO and individual rare earth oxide values have been determined by an ICP analysis from either a flotation feed sub-sample or the proportionally combined flotation products which represent the Cleaner 3 concentrate generated from the said flotation test.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	**Logging and Sampling** Logging and sampling were recorded directly into a digital logging system, verified and eventually stored in an offsite database. Significant intersections are inspected by senior company personnel. Twinned holes have been planned to verify >5% of the RC samples drilled with results to be reported as part of future Mineral Resource Estimations. No adjustments to any assay data have been undertaken.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	Collar position was recorded using a Emlid Reach RS2 RTK GPS system (+/- 0.2m x/y, +/-0.5m z). GDA94 Z50s is the grid format for all xyz data reported. Azimuth and dip of the drill hole was recorded after the completion of the hole using a Reflex Sprint IQ Gyro. A reading was undertaken every 30th metre with an accuracy of +/- 1° azimuth and +/-0.3° dip.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	See tables for hole positions and sampling information. Data spacing and distribution is sufficient to establish the degree of geological and grade continuity for a Mineral Resource estimation procedure at the inferred classification.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	Drilling was undertaken at a near perpendicular angle to the interpreted strike and dip of the ironstone outcrops and modelled magnetic data. No sample bias is known at this time.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	All geochemical samples were collected, bagged, and sealed by Dreadnought staff and delivered to Exmouth Haulage in Exmouth or Jarrahbar Contracting in Carnarvon. Samples were delivered directly to ALS Laboratories Perth by Exmouth Haulage out of Exmouth or Jarrahbar Contracting out of Carnarvon.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The program is continuously reviewed by senior company personnel.

SECTION 2 REPORTING OF EXPLORATION RESULTS

(CRITERIA IN THIS SECTION APPLY TO ALL SUCCEEDING SECTIONS.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Mangaroon Project consists of 20 granted Exploration License (E08/3178, E08/3274, E08/3275, E08/3439, E09/2290, E09/2359, E09/2370, E09/2384, E09/2405, E09/2433, E09/2448, E09/2449, E09/2450, E09/2467, E09/2473, E09/2478, E09/2531, E09/2535, E09/2616, E09/2620) and 4 granted Mining Licenses (M09/146, M09/147, M09/174, M09/175). • All tenements are 100% owned by Dreadnought Resources. • E08/3178, E08/3274, E09/2384, E09/2433, E09/2473 are subject to an option agreement with First Quantum Minerals over the base metal rights. • E08/3178, E09/2370, E09/2384 and E09/2433 are subject to a 2% Gross Revenue Royalty held by Beau Resources. • E08/3274, E08/3275, E09/2433, E09/2448, E09/2449, E09/2450 are subject to a 1% Gross Revenue Royalty held by Beau Resources. • E09/2359 is subject to a 1% Gross Revenue Royalty held by Prager Pty Ltd. • E09/2290, M09/146 and M09/147 are subject to a 1% Gross Revenue Royalty held by STEHN, Anthony Paterson and BROWN, Michael John Barry. • M09/174 is subject to a 0.5% Gross Revenue Royalty held by STEHN, Anthony Paterson. • M09/175 is subject to a 0.5% Gross Revenue Royalty held by STEHN, Anthony Paterson and BROWN, Michael John Barry. • The Mangaroon Project covers 4 Native Title Determinations including the Budina (WAD131/2004), Thudgari (WAD6212/1998), Gnulli Gnulli (WAD22/2019) and the Combined Thiin-Mah, Warriyangka, Tharrkari and Jiwarli (WAD464/2016). • The Mangaroon Project is located over Lyndon, Mangaroon, Gifford Creek, Maroonah, Minnie Creek, Edmund and

Criteria	JORC Code explanation	Commentary
		Towera Stations.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Historical exploration of a sufficiently high standard was carried out by a few parties which have been outlined and detailed in this ASX announcement including: Regional Resources 1986-1988s: WAMEX Reports A23715, 23713 Peter Cullen 1986: WAMEX Report A36494 Carpentaria Exploration Company 1980: WAMEX Report A9332 Newmont 1991: WAMEX Report A32886 Hallmark Gold 1996: WAMEX Report A49576 Rodney Drage 2011: WAMEX Report A94155 Sandfire Resources 2005-2012: WAMEX Report 94826
Geology	• *Deposit type, geological setting and style of mineralisation.*	The Mangaroon Project is located within Mangaroon Zone of the Gascoyne Province. The Mangaroon Project is prospective for orogenic gold, magmatic Ni-Cu-PGE mineralisation and carbonatite hosted REEs.

Drill hole information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		An overview of the drilling program is given within the text and table 1 within this document.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be*	Mineralised intervals as confirmed by an infield preliminary pXRF analysis with >2m @ >0.2% TREO have been reported. Significant intercepts are length weight averaged for all samples with TREO values >0.2% TREO with up to 3m of internal dilution (<0.2% TREO). No metal equivalents are reported.

Criteria	JORC Code explanation	Commentary
	clearly stated.	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Drilling is undertaken close to perpendicular to the dip and strike of the mineralisation.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Refer to figures within this report.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	The accompanying document is a balanced report with a suitable cautionary note.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Suitable commentary of the geology encountered are given within the text of this document.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Additional RC drilling Diamond drilling Metallurgical test work Additional Resource Modelling