DREADNOUGHT RESOURCES

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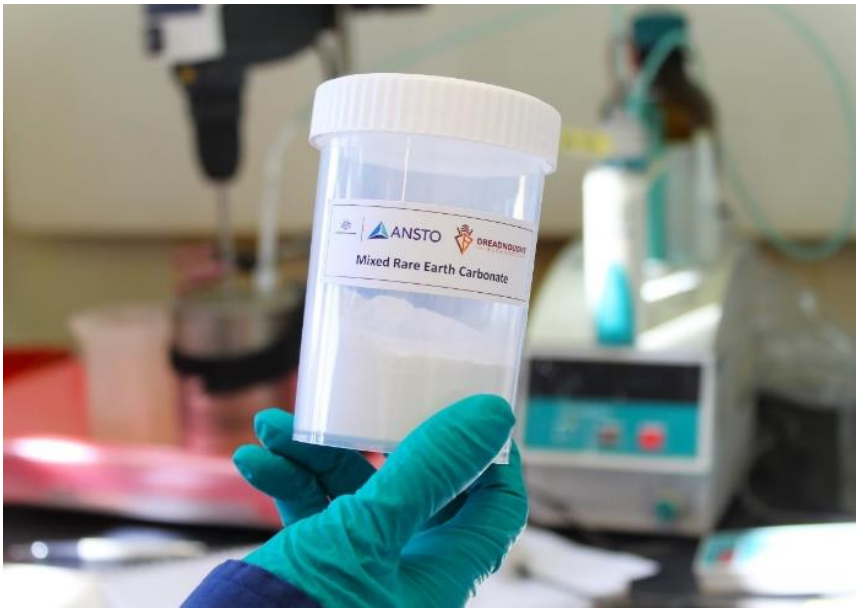
ASX ANNOUNCEMENT 6 May 2024

Major Commercialisation Milestone
High Quality, Mixed Rare Earth Carbonate – Mangaroon (100%)

HIGHLIGHTS

- **In November 2023, monazite concentrate from the Yin REE project was provided to ANSTO for metallurgical testing through a conventional acid bake/leach process to produce a mixed rare earth carbonate ("MREC"). MRECs are used as raw materials for midstream processors to separate individual rare earth oxides, in this case NdPr.**
- **ANSTO has world-leading expertise in the processing of critical and strategic metals such as rare earths and has successfully produced a high quality MREC from Yin concentrate. ANSTO concluded "the DRE concentrate is well suited for processing via a conventional acid bake/leach process in ANSTO's experience".**
- **Applying a conventional low-temperature acid bake/leach process, ANSTO achieved the following key results:**
    - **~94% recovery of Nd and Pr from concentrate through to MREC.**
    - **MREC grade of 60.7% TREO containing 16.3% Nd_2O_3 and 4.4% Pr_6O_{11}**
    - **The NdPr oxide ratio is high at 34% of the total TREO**
- **This is a milestone achievement in commercialisation for Yin and in progressing discussions with rare earth refiners.**
- **ANSTO also observed that ongoing metallurgical optimisation work can be expected to further improve recoveries and MREC quality.**

Dreadnought Resources Limited ("Dreadnought") is pleased to announce that world-leading metallurgical group, ANSTO, has produced a high quality MREC from Yin monazite concentrate using a conventional, low-temperature, acid bake/leach process. Yin is part of the 100% owned Mangaroon REE Project located in the Tier 1 jurisdiction of Western Australia.



Dreadnought's Managing Director, Dean Tuck, commented: "This is a significant milestone for Dreadnought and the Yin REE Project. ANSTO is a world-leader in its field and has demonstrated that the monazite concentrate has excellent metallurgical recoveries using a conventional process that results in a high quality MREC. Ongoing metallurgical optimisation work is expected to further improve these results. With these results in hand, we are well placed to advance discussions with a range of downstream partners."

Figure 1: Photo of the high quality MREC produced by ANSTO using a conventional low-temperature acid bake/leach process.

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SNAPSHOT – MANGAROON CRITICAL MINERALS

Mangaroon is 100% Owned

- 100% owned Mangaroon confirmed as a globally significant critical minerals complex with a combined Resource at Yin and the Gifford Creek Carbonatite of 40.82Mt @ 1.03% TREO.

Genuine Scale Potential Already at Yin

- Independent Yin Resource of 29.98Mt @ 1.04% TREO (ASX 30 Nov 2023) covers only ~4.6km of ~43km of strike - 87% Measured and Indicated.
- Large JORC Exploration Target for the top 150m of the Yin REE Ironstone Complex (ASX 13 Feb 2023) to be updated in 2024.
  Cautionary Statement: The Exploration Target has been prepared and reported in accordance with the JORC Code 2012. The potential quality and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Resource for all target areas reported. It is uncertain if further exploration will result in the estimation of a Resource.

Significant, Step-Change, Growth Potential at the Gifford Creek Carbonatite

- The Gifford Creek Carbonatite is considered to be the regional source of REE.
- In less than 12 months from discovery of the Gifford Creek Carbonatite, a large, independent Resource of 10.84Mt @ 1.00% TREO was delivered (ASX 28 Aug 2023). The Resource contains a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium.
- The initial Resource covers an area of only ~600m x 550m. With the Gifford Creek Carbonatite now expanding to >17kms x 1km under wide-spaced, first pass drilling, it is expected that the Resource will grow substantially with future drilling.

High-grade, Multi-Metal Potential Including REE (Neodymium, Praseodymium), Phosphate, Niobium, Titanium & Scandium

- The mineralisation at the Yin REE 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.

Potentially Attractive Mining Proposition

- At Yin, 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. This is further demonstrated by an initial Measured Resource of 5.17Mt @ 1.34% TREO over just ~250m of strike at Yin where the thick, high-grade Resource occurs at surface.

Positive Metallurgy Results

- Metallurgical test work from Yin has performed well, achieving recoveries ranging from ore to concentrate of 85.9% to 92.8% at a concentrate grade of 10.5% to 15.3% Nd_2O_3+Pr_6O_{11}.
- REE at Yin is predominantly hosted in monazite which is amenable to commercial processing.
- ANSTO, a world-leader in in the processing of critical and strategic metals, has demonstrated that the Yin monazite concentrate has excellent metallurgical recoveries using a conventional process and produces a high quality MREC. Ongoing metallurgical optimisation work is expected to further improve these results.

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 midstream and downstream industry participants in Mangaroon. While the current focus is on upstream options (mining, milling and concentrating), opportunities to collaborate with midstream parties are advancing.

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Background

To date, Dreadnought has focused on upstream activities (mining, milling and concentrating) at the Mangaroon REE Project. Conclusions to date include:

- At Yin, 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; and
- REE at Yin is predominantly hosted in monazite from which metallurgical test work has performed well, achieving high recoveries (85.9% to 92.8%) and concentrate grades (10.5% to 15.3% Nd2O3+Pr6O11).

The ANSTO results are a significant milestone for the Mangaroon REE Project as they now advance the project from the upstream to the midstream stage.

ANSTO is a world-leader in its field and has demonstrated that the monazite concentrate has excellent metallurgical recoveries using a conventional process producing a high quality MREC. Ongoing metallurgical optimisation work is expected to further improve these results. With these results in hand, we are well placed to advance discussions with a range of downstream partners.

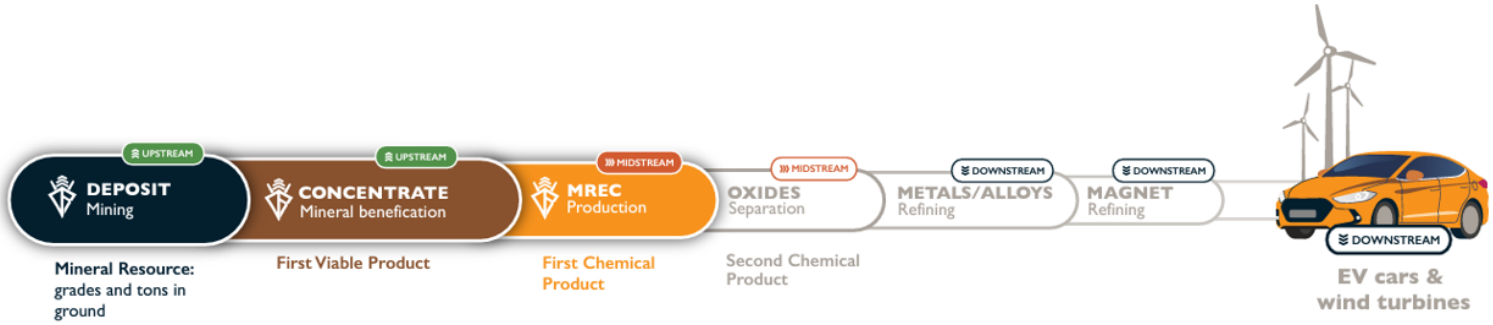

Figure 2: Visualisation of the rare earth supply chain highlighting where MREC sits in the midstream process.

ANSTO Test Work Results

Metallurgical test work was undertaken independently by ANSTO. Oversight on the test work was conducted on behalf of Dreadnought by experienced consulting metallurgist, Damien Krebs from Primero Group. The test work was undertaken with a ~2kg monazite concentrate sample that was created from a composite of diamond core samples from three holes within the Yin ironstone Resource. *(For further information on that initial metallurgical concentrate work see ASX, 29 May 2023, Metallurgical Test Work Supports High-Value Concentrate).* The monazite concentrate had a composition of 30.6% TREO containing 8.3% Nd_2O_5 and 2.2% Pr_6O_{11} (34% NdPr:TREO Ratio) and was comprised predominantly of monazite (50.6%), apatite (32.2%) and iron/manganese oxides (12.0%).

The main objectives of the ANSTO test work were to:

- Assess the amenability of the Yin monazite concentrate to conventional sulfuric acid baking and leaching for extraction of rare earths;
- Carry out limited optimisation of the bake/leach parameters; and
- Undertake further purification of the water leach liquor and produce a MREC market sample with optimal purity.

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A schematic of a conventional, low-temperature, acid bake/leach flowsheet is shown in Figure 3.

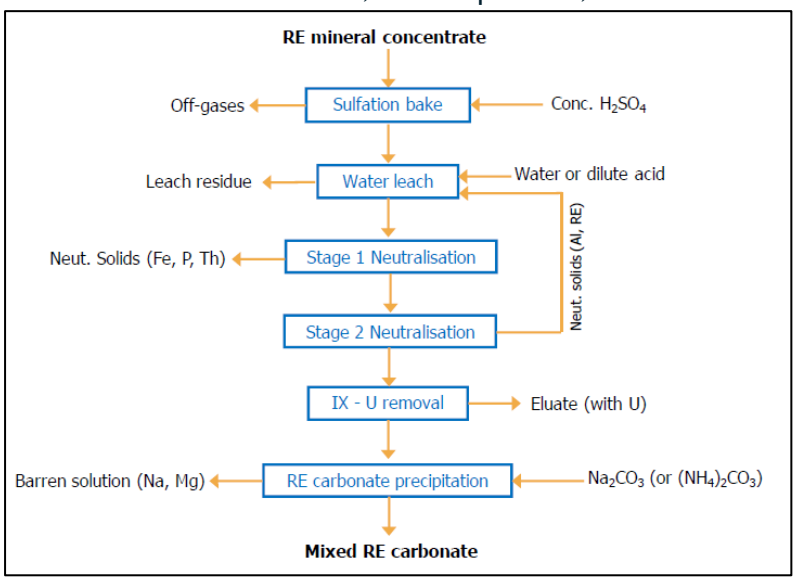


Figure 3: Conventional, low temperature, acid bake/leach flowsheet.

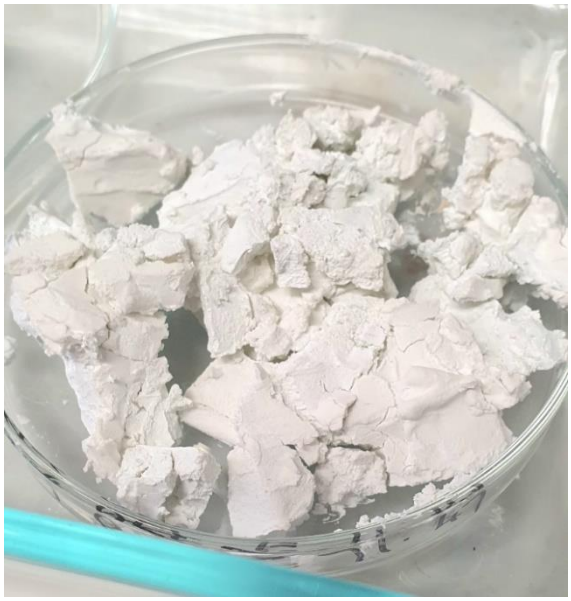
Test work has confirmed that the monazite concentrate is amenable to processing via conventional, low-temperature, acid bake/leach. A series of optimisation bake/leach tests were carried out, examining the preferred processing conditions for temperature, acid dose and residence time. Based on the results, the recommended conditions were a bake temperature of 250–300°C with 1,500–1,700 kg/t of acid for 2–4 hours.

ANSTO considers these conditions to be typical of a conventional low-temperature acid bake process for monazite-hosted rare earths.

Pregnant leach solution from bake/leach at the optimal conditions was processed through conventional downstream process steps, involving two stages of purification, U removal by ion-exchange and precipitation of a MREC. The test conditions were selected based on ANSTO's extensive experience in rare earth processing, with no optimisation of any of the steps carried out.

The performance in each process step was in line with expectation and no major concerns for processibility were encountered. All major impurities were removed from the water leach solution through to the MREC. The MREC contained low impurity levels produced a clean MREC for all elements excluding sulfate. Management of the sulfate content can be readily achieved by optimisation of the MREC precipitation conditions, however, this was outside the scope of this stage of the test work.

Overall recoveries for NdPr from monazite concentrate to MREC were ~94%. ANSTO also observed that ongoing metallurgical optimisation work can be expected to further improve recoveries and MREC quality.



Ironstone to Concentrate to MREC

Metallurgical test work has demonstrated that high recoveries lead to a high quality MREC from the Yin concentrate. Further work can be performed to optimise the concentrate treatment process.

Table 1: Grades and recoveries for each stage of the test work on this composite sample to date.

	TREO (%)	$Nd_2O_3 + Pr_6O_{11}$ (%)	Recovery (%)
Diamond Core Composite	2.4	0.9	
Monazite Concentrate	30.6	10.5	~86
Mixed Rare Earth Carbonate	60.7	20.7	~94

Figure 4: Photo of MREC filter cake.

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Background on Mangaroon (E08/3274, E8/3178, E09/2384, E09/2433, E09/2473, E08/3275, E08/3439, E09/2290, E09/2359, E09/2370, E09/2405, E09/2448, E09/2449, E09/2450, E09/2467, E09/2478, E09/2531, E09/2535, E09/2616, M09/91, M09/146, M09/147, M09/174, M09/175: 100%)

Mangaroon (Figure 5) covers >5,000kms^2 of the Mangaroon Zone in the Gascoyne Region of Western Australia and is comprised of:

- the ~45km long Money Intrusion which contains high tenor magmatic Ni-Cu-PGE mineralisation.
- the >10km long Mangaroon Au Shear Zone (100%) where fractured, small-scale ownership has limited previous gold exploration with only ~200m of the >10km having been drilled notwithstanding the high-grade, camp scale potential.
- the ~43km long Yin REE Ironstone Complex (100%) which already contains: an independent total Resource of 29.98Mt @ 1.04% TREO (87% Measured and Indicated)(ASX 30 Nov 2023) over only ~4.6km of the ~43km of ironstones including an initial Indicated Resource of 5.52Mt @ 1.23% TREO over only ~250m of strike (ASX 5 Jul 2023); and an Exploration Target (ASX 13 Feb 2023) over 40 kms of strike.
- the ~9km long REE-Nb-Ti-P-Sc C1-C5 carbonatites which contain an initial independent Inferred Resource of 10.84Mt @ 1.00% TREO at C3 (ASX 28 Aug 2023).

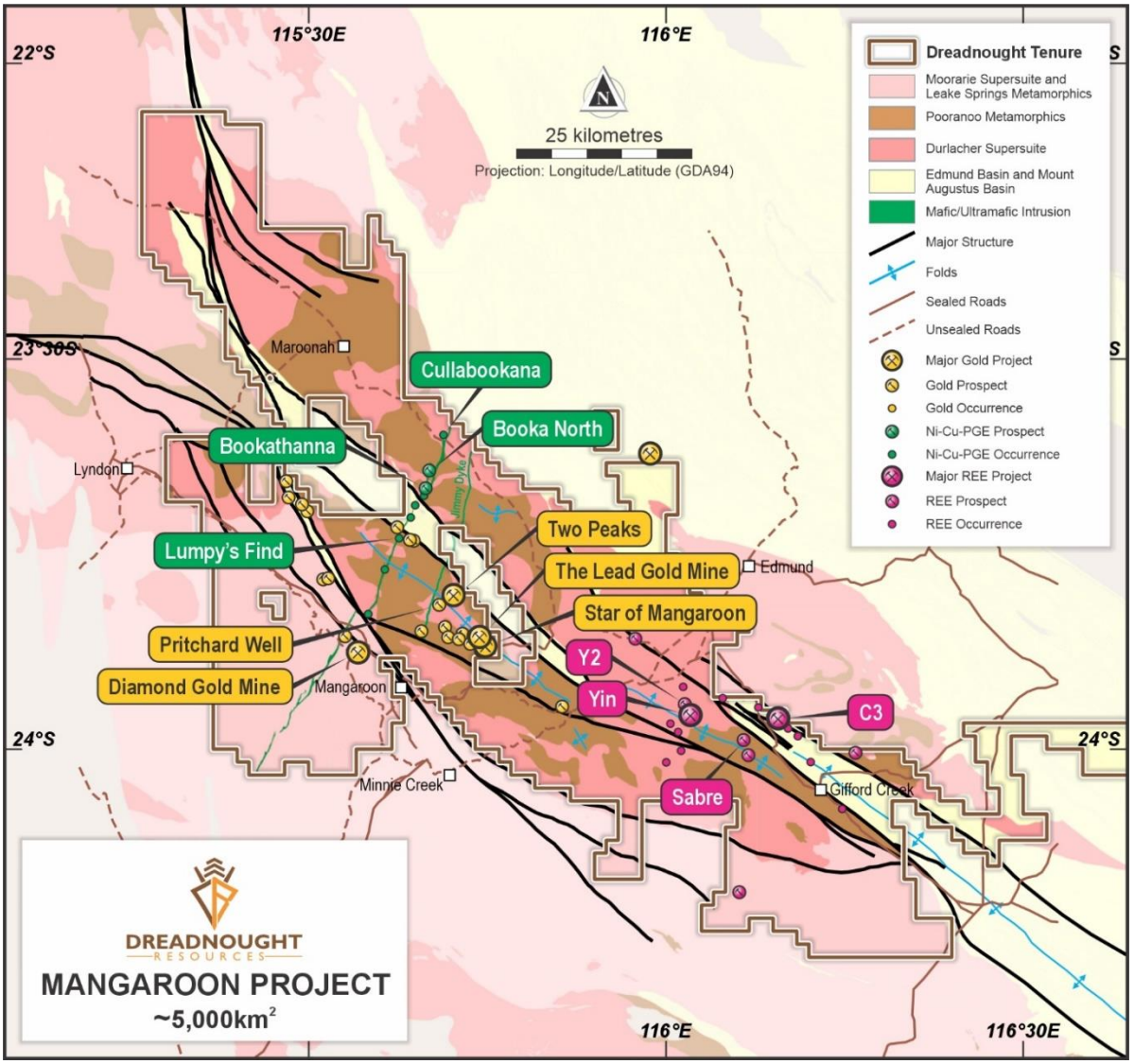

Figure 5: Plan view map of Mangaroon showing the location of the Yin REE Ironstone Complex, REE-Nb-Ti-P-Sc C1-C5 carbonatites, gold and Ni-Cu-PGE targets.

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About ANSTO

ANSTO has world-leading expertise in the processing of critical and strategic metals such as rare earths.

ANSTO has extensive experience in rare earth process development with several rare earth experts in its team having a combined ~30 years' experience dating back to early work on the Mt Weld deposit (monazite mineralogy) in Western Australia in the early 1990s. Over the past 10-15 years, ANSTO has worked on numerous rare earth projects covering process development, piloting (Peak Resources, Arafura Rare Earths, ASM, Northern Minerals, Hastings Technology Metals, Mkango Resources, Iluka Resources) and providing expert advice.

For further information please refer to previous ASX announcements:

- *16 June 2022* — *First Drilling at Yin Intersects High-Grade Rare Earths*
- *28 July 2022* — *Assays Confirm Yin as a High-Grade Rare Earth Discovery*
- *28 December 2022* — *Initial High-Grade, Independent Resource over 3kms at Yin*
- *29 May 2023* — *Metallurgical Test Work Supports High-Value Concentrate*
- *5 July 2023* — *40% Increase in Resource Tonnage at Yin*
- *28 August 2023* — *Initial, Independent REE-Nb-P-Ti-Sc Resource at C3*
- *2 October 2023* — *Mangaroon Carbonatite now >17km – Higher Grade Zones Fingerprinted*
- *30 November 2023* — *Large, High Confidence Yin Ironstone Resource Mangaroon*

UPCOMING NEWSFLOW

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

May: Results of surface sampling programs at Mangaroon Au (100%)

May: Commencement of further target generation and definition work at Mangaroon Au (100%)

May: Commencement of RC drilling at Mangaroon Au (100%)

May/June: Results from target generation and definition work at Central Yilgarn Au (100%)

May/June: Results from RC drilling at Central Yilgarn Au (100%)

~Ends~

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

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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 – 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 announcement which relates to extractive metallurgical testwork was reviewed by Mr. Damien Krebs who is a Member of Australian Institute of Mining and Metallurgy. Mr Krebs has sufficient experience in the relevant ore types and metallurgical processes to qualify as a Competent Person for the reporting of rare earth element metallurgical results and Ore Reserves as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Krebs consents to the inclusion in the announcement of the matters based upon 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.

RESOURCES SUMMARY

Yin Ironstone Complex – Yin, Yin South, Y2, Sabre Measured, Indicated and Inferred Resources

Table 2: Summary of Yin Resources at 0.20% TREO Cut-off.

Resource Classification	Geology	Resource (Mt)	TREO (%)	$Nd_2O_3+Pr_6O_{11}$ (kg/t)	NdPr:TREO Ratio (%)	Contained TREO (t)	Contained $Nd_2O_3+Pr_6O_{11}$ (t)
Measured	Oxide	2.47	1.61	4.6	29	39,700	11,400
Measured	Fresh	2.70	1.09	3.0	27	29,500	8,100
Measured	**Subtotal**	**5.17**	**1.34**	**3.8**	**28**	**69,300**	**19,500**
Indicated	Oxide	13.46	1.06	3.1	29	142,600	41,000
Indicated	Fresh	7.67	0.95	2.8	29	72,800	21,300
Indicated	**Subtotal**	**21.13**	**1.02**	**3.0**	**29**	**215,400**	**62,300**
Inferred	Oxide	1.51	0.75	1.9	25	11,200	2,800
Inferred	Fresh	2.17	0.75	2.1	28	16,300	4,500
Inferred	**Subtotal**	**3.68**	**0.75**	**2.0**	**27**	**27,600**	**7,300**
Total	Oxide	17.44	1.11	3.2	29	193,600	55,300
Total	Fresh	12.54	0.95	2.7	29	118,700	33,900
TOTAL		**29.98**	**1.04**	**2.9**	**29**	**312,300**	**89,300**

Gifford Creek Carbonatite – Inferred Resource

Table 3: Summary of the Gifford Creek Carbonatite Inferred Resource at various % TREO Cut-offs.

Cut-Off (%TREO)	Resource (Mt)	TREO (%)	NdPr:TREO (%)	Nb2O5 (%)	P2O5 (%)	TiO2 (%)	Sc (ppm)	Contained TREO (t)	Contained Nb2O5 (t)
0.90	5.73	1.18	21	0.25	3.8	5.4	92	67,500	14,500
0.70	**10.84**	**1.00**	**21**	**0.22**	**3.5**	**4.9**	**85**	**108,000**	**23,700**
0.50	20.55	0.80	21	0.15	3.0	3.9	68	164,600	31,100
0.30	45.87	0.58	21	0.10	2.7	3.0	52	265,300	44,800

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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-Ag-Bi-Sb-Co system at Tarraji-Yampi, similar to Cloncurry/Mt Isa and Tennant Creek.

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

Mangaroon covers ~5,000kms^2 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 Diamonds 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^2 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^2 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.

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Table 4: 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.*	Diamond (DD) drilling was undertaken to produce composite samples for preparation of a monazite concentrate. ~2kg of monazite concentrate was sent in its entirety to ANSTO. Mineralogy was determined by QEMSCAN particle mineralogical analysis (PMA) using a Quanta 650 electron microscope with dual Bruker 503.0 energy dispersive detectors. The SEM was operated at an accelerating voltage of 15keV with a working distance of 13mm and using a beam current of ~10nA. All solid residues and filtrate samples were analysed by ICP-OES, ICP-MS and / or XRF and an elemental mass balance constructed for each test. Wash filtrates in each test were combined and analysed as a single combined wash sample. The MREC product was analysed for major elemental concentrations by X-ray Fluorescence spectrometry (XRF) and for minor elemental concentrations by inductively coupled plasma mass or optical emission spectrometry (ICP-MS or ICP-OES), as appropriate, according to ANSTO controlled documents G-5915 XRF Procedures Manual and G-5913 Analytical Methods Manual, respectively
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.).*	**Diamond Drilling** Diamond drilling was 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.*	**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.*	**Diamond Drilling** 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 system which could eventually be utilised within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering and structure are recorded digitally. DD 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*	**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.

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Criteria	JORC Code explanation	Commentary
	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.*	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. Samples are submitted to ANSTO for testwork.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is 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.*	**Laboratory Analysis** Mineralogy was determined by QEMSCAN particle mineralogical analysis (PMA) using a Quanta 650 electron microscope with dual Bruker 503.0 energy dispersive detectors. The SEM was operated at an accelerating voltage of 15keV with a working distance of 13mm and using a beam current of ~10nA. All solid residues and filtrate samples were analysed by ICP-OES, ICP-MS and / or XRF and an elemental mass balance constructed for each test. Wash filtrates in each test were combined and analysed as a single combined wash sample. The MREC product was analysed for major elemental concentrations by X-ray Fluorescence spectrometry (XRF) and for minor elemental concentrations by inductively coupled plasma mass or optical emission spectrometry (ICP-MS or ICP-OES), as appropriate, according to ANSTO controlled documents G-5915 XRF Procedures Manual and G-5913 Analytical Methods Manual, respectively. These techniques are considered a total digest and appropriate for REE determination.
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. 19 pairs of twinned RC and DD holes have been drilled at this time and compared to validate the RC drilling. 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.*	Drill hole location plots have been used to ensure that local drill spacing conforms to the minimum expected for the resource classification. At Yin and Y2, most sections are drilled at 50m (North) by 25 to 50m (Down Dip) with an infill drilling area of seven 25m spaced northing sections in the southern, thicker part of the main Yin deposit. The Sabre deposit has drilling on 100m section lines.
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.
Sample security	• *The measures taken to ensure sample security.*	All geochemical samples were collected, bagged, and sealed by Dreadnought staff and delivered directly to ALS Laboratories Perth by Jarrabah Contracting.

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Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The program is continuously reviewed by senior company personnel. Metallurgical work is supervised by Damien Krebs of Primero.

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 19 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) and 5 granted Mining Licenses (M09/91, 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.2 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. M09/91 is subject to a 1% Gross Royalty held by DOREY, Robert Lionel. The Mangaroon Project covers 4 Native Title Determinations including the Budina (WAD131/2004), Thudgari (WAD6212/1998), 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, Williambury and 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.

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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 tables 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 clearly stated.*	Exploration Results have previously been reporting all results greater than 0.2% TREO. 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.
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.*	Refer to figures and tables within this report.
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.*	No other substantive exploration data are being reported.
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.*	Metallurgical test work Scoping Study