

#### ASX ANNOUNCEMENT 28 AUGUST 2023

### Initial, Independent REE-Nb-P-Ti-Sc Resource at C3 – Mangaroon

#### HIGHLIGHTS

- In less than 12 months from discovery of the CI-C5 carbonatites, a large, independent JORC Code 2012 Inferred Mineral Resource ("Resource") of 10.84Mt @ 1.00% TREO has been delivered at C3. The Resource contains a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium ("TREO, REE-Nb-P-Ti-Sc").
- These results along with the Yin Ironstone Complex, underscore the global significance of Mangaroon as a large, long life potential source of critical minerals.
- The initial C3 Resource covers an area of only ~600 x 550m. With the C1-C5 carbonatites now expanding to >9kms x 1km under wide-spaced, first-pass drilling, it is expected that the Resource will grow substantially with future drilling.

Cut-Off (%TREO)	Resource (Mt)	TREO (%)	NdPr:TREO (%)	Nb₂O₅ (%)	P₂O₅ (%)	TiO₂ (%)	Sc (ppm)	Contained TREO (t)	Contained Nb <sub>2</sub> O <sub>5</sub> (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

Table I: C3 Inferred Resource as adjusted for different cut-off grades.

- Global REE Resources at Mangaroon now total 30.90Mt @ 1.02% TREO for 314,600t of contained TREOs.
- The Yin ironstone Resource update remains on track for the December 2023 quarter. The update will include the high-grade NdPr discoveries at Y2 and Yin North and an increased Indicated component.

# Dreadnought Resources Limited ("Dreadnought") is pleased to announce an initial, independent REE-Nb-P-Ti-Sc Resource for C3 at Mangaroon (100%), located in the Gascoyne Region of WA.

Dreadnought's Managing Director, Dean Tuck, commented: "Since drilling commenced in June 2022, Dreadnought has delivered its third Resource for the Mangaroon Project bringing the total resources to over 30Mt with further Resource updates underway and significant exploration upside with first pass drilling still ongoing. The delivery of



the first Resource over the CI-5 Carbonatite Complex also marks the first polymetallic critical metal resource with significant Niobium, Phosphate, Titanium and Scandium included within the Resource. Further work will seek to understand the economic potential of the Project as we continue to highlight the critical metal endowment of the Region. We are proud of how much has been achieved in such a short space of time and are looking forward to continuing to build on this later in 2023."

Figure 1: Photo of Dreadnought's Luke Blais, Matt Crowe and Frank Murphy first sampling the C1-5 carbonatites at Mangaroon in 2022.



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#### **SNAPSHOT – MANGAROON RARE EARTHS**

#### Mangaroon is 100% Owned by Dreadnought

#### Genuine Scale Potential Already at Yin REE Ironstone Complex

- Independent Yin Inferred Resource of 20.06Mt @ 1.03% TREO (ASX 4 Jul 2023) covers only ~4km of ~43km of strike with the initial Indicated Resource of 5.52Mt @ 1.23% TREO covering only ~250m of strike.
- Exploration Target\* of 50-100Mt at 0.9-1.3% TREO estimated for the top 150m of the Yin REE Ironstone Complex (ASX 13 Feb 2023).

\*Cautionary Statement: The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code. 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, Critical Minerals Potential at the CI-C7 Carbonatites

- CI-C7 carbonatites are considered to be the regional source of REE.
- In less than 12 months from discovery of C1-C5, a large, independent Resource of 10.84Mt @ 1.00% TREO has been delivered at C3. The Resource contains a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium.
- The initial C3 Resource covers an area of only ~600m x 550m. With the C1-C5 carbonatites now expanding to >9kms 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.
- Partially completed, first pass, wide spaced drilling over the CI-C7 carbonatites has identified significant critical metal potential with REE, P, Nb, Ti and Sc within the CI-C5 carbonatites.

#### **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.

#### **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%  $Nd_2O_3+Pr_6O_{11}$ .
- 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 midstream and downstream industry participants in Mangaroon. While the current focus is on upstream options (mining, milling and concentrating) opportunities to collaborate with midstream and downstream industry participants may represent an opportunity.



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#### Discussion

In only two years, Mangaroon has emerged as a globally significant, potential source of critical minerals. Milestones achieved below demonstrate the large scale and the ability for rapid growth at Mangaroon:

- June 2021 Outcropping REE were first observed at Mangaroon (ASX 11 Jun 2021).
- November 2021 Regional REE source carbonatites were identified at CI-C5 (ASX 29 Nov 2021).
- June 2022 Drilling commenced at Yin and identified 2.5km of REE ironstones (ASX 16 Jun 2022).
- September 2022 Wide-spaced, RC drilling commenced at CI-C5 (ASX 28 Sep 2022).
- December 2022 An initial independent Resource of 14.36Mt @ 1.13% TREO for Yin was estimated (ASX 28 Dec 2022).
- February 2023 An Exploration Target of 50-100Mt at 0.9-1.3% TREO was estimated for the top 150m of the ~43km long Yin REE Ironstone Complex (ASX 13 Feb 2023).
- July 2023 The initial independent Resource for Yin was upgraded to 20.06Mt @ 1.03% TREO over only ~4kms of the Yin REE Ironstone Complex including an Indicated Resource of 5.52Mt @ 1.23% TREO over just 250m strike (ASX 5 Jul 2023).
- Aug 2023 First pass, wide spaced RC drilling extended CI-C5 carbonatites to ~9kms x ~1km (ASX 7 Aug 2023).
- Aug 2023 A large, independent initial Resource of 10.84Mt @ 1.00% TREO was estimated at C3, containing a range of critical minerals including rare earths, niobium, phosphate, titanium and scandium (ASX 28 Aug 2023).

To date, 687 RC holes (77,597m) and 42 diamond holes (4,806.4m) have been drilled at Yin and at CI-C7.

The C3 Inferred Resource is the first within the carbonatites and contains a high-grade, near surface supergene component of 10.84Mt @ 1.00% TREO with significant niobium, titanium, phosphate and scandium mineralisation. Importantly, the C3 Resource is the first from within the recently discovered C1-C5 carbonatites which remains only partially explored.

As further exploration is undertaken and geological understanding of the region evolves, further discoveries and Resources within CI-C5 are expected. Future drilling will also further unlock the critical metal potential beyond rare earths. This work includes targeting of zones with deeper weathering in search of high-grade, supergene mineralisation.

Assays from drilling at Yin and at CI-C5 will be ongoing throughout 2023.



Figure 2: Photo of Dreadnought's Claudia Tomkins and Sam Busetti inspecting pXRF results at C3.





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#### Material Information Summary – Resource Estimation

Pursuant to ASX listing rule 5.8.1 and complementing JORC Table I (attached), Dreadnought advises that the Resource was estimated by an independent consultant from Widenbar and Associates Pty Ltd ("**Widenbar**"). Widenbar worked in conjunction with Dreadnought's geologists. Commentary on the relevant input parameters for the Resource process is contained at the end of this announcement.

#### Location and Region

Mangaroon is located ~250kms south-east of Exmouth, in the Gascoyne Region of Western Australia. The Yangibana Ironstone Project is Dreadnought's immediate neighbour and is located to the north of C3 and the Yin Ironstone Complex on the other side of the Lyons River Fault. Collectively, the Yangibana and Yin Ironstones with the C1-C5 carbonatites are part of the Gifford Creek Carbonatite Complex.

Rare earths within the Gifford Creek Carbonatite Complex were first identified at Yangibana in 1981. However, the location of the source carbonatite intrusions remained unknown and rare earth ironstones were thought to terminate south of the Lyons River Fault.

The C3 REE-Nb-P-Ti-Sc Resource is in addition to the previously reported Yin Ironstone Resource of 20.06Mt @ 1.03% TREO which only covers ~4km of the ~43km long Yin REE Ironstone Complex.

#### **Geological Interpretation and Wireframing**

Mangaroon occurs within the Gascoyne Province of the Capricorn Orogen, situated between the Archean Pilbara and Yilgarn cratons. The Gascoyne Province consists of a basement suite of Neoarchean to Palaeoproterozoic granite gneisses that are overlain by various Proterozoic rocks. These Proterozoic rocks include:

- the 1830–1780 Ma Moorarie Supersuite consisting of granitic rocks;
- the Durlacher Supersuite, a unit comprising granitic and minor gabbroic intrusions that are heavily deformed and believed to be largely synchronous with the 1680-1620 Ma Mangaroon Orogeny; and
- the c. 1680 Ma Pooranoo Metamorphics comprising of pelitic gneiss and metamorphosed feldspathic sandstones.

REE-bearing ironstones and carbonatites form components of the ~1370 Ma Gifford Creek Carbonatite Complex ("**GCCC**"). GCCC is an area surrounding the Lyons River Fault, which is the major crustal structure formed during the suturing of the Neoarchean Glenburgh Terrane with the Archean Pilbara Craton during the 2215-2145 Ma Ophthalmian Orogeny.

The rocks of the GCCC include calcite carbonatite, dolomite carbonatite, ankerite-siderite carbonatite, magnetitebiotite dykes, fenites, glimmerites and REE-bearing ironstones, and recently discovered carbonatite plugs. The previously defined boundary of the GCCC has been significantly expanded due to discoveries by Dreadnought during 2021-2023. The newly defined extent is roughly captured in Figure 3 below. A series of central carbonatite intrusions (C1-C5) form the central carbonatite intrusive bodies of the region, and the highly fractionated ferrocarbonatite dykes form cone sheets, radial dykes and ring dykes that splay off the central intrusion.



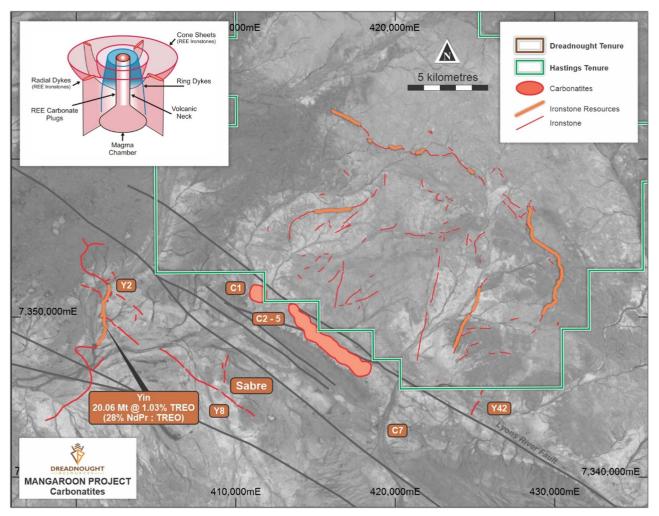


Figure 3: Local geological relationships between central carbonatite plugs CI-C5 and the known ironstones across the Yin and the nearby Yangibana Projects. The ~4km long Yin ironstone Resource is highlighted. The ironstone discoveries at Y2, Yin North and Sabre which are to be included in the December 2023 quarter Resource upgrade are also shown.

C3 has a ferrocarbonatite core bounded by syenite hangingwall and footwall and, more distally, broad dolomitic magnesiocarbonatite. C3 is blanketed by a predominantly thin layer of transported cover and shows a variable karstic weathering surface with clays or clay-dominant saprolite extending from 25m to up to 120m vertical depth. A zone of high-grade REE-P-Nb-Ti-Sc supergene enrichment caps the Fe-Ba rich ferrocarbonatite and extends over the surrounding syenite and magnesiocarbonatite. REE mineralisation is observed in both the weathered and fresh portions of the carbonatites. The weathered zone contains both monazite and crandallite while the fresh carbonatite contains zones of coarse grained (up to 0.25mm) monazite and REE-bearing carbonates. Mineralogy in the magnesiocarbonatite primarily consists of ferroan dolomite, amphibole (arfvedsonite/riebeckite), and biotite, with occasional pyrite, ilmenite/rutile, and graphite. The ferrocarbonatite is predominantly ferroan dolomite and biotite with lesser siderite.

Dreadnought supplied a detailed Digital Elevation Model for the whole of Mangaroon. This was subset into a smaller version to cover C3.

Two surfaces were interpreted on section representing the base of transported material and the base of supergene. Material below the base of supergene was considered to be undifferentiated carbonatite.



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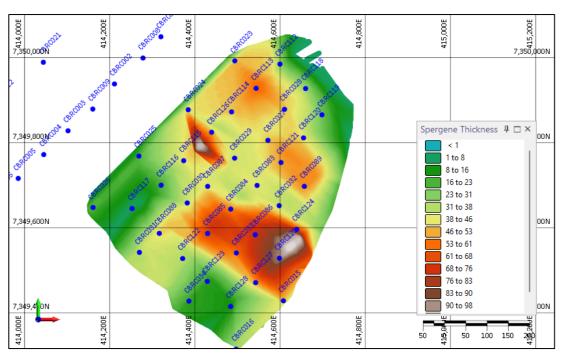


Figure 4: Plan view image showing the supergene domain thickness in relation to drill collars at C3.

#### **Drilling Techniques**

Dreadnought's drilling at C3 was conducted by Ausdrill Limited using reverse circulation ("**RC**") drilling and by Hagstrom Drilling using diamond ("**DD**") drilling. In total, 37 RC holes (4,774m) have been drilled, sampled and assayed to estimate the Resource. In addition, 9 DD holes (1,198.3m) were drilled and sampled to produce samples for density measurements, ongoing metallurgical testing and additional QAQC analysis.

All holes used in the Resource estimation have been previously announced with the necessary additional collar and assay details provided. These holes are also shown in Tables 7 to 12.

RC holes were drilled with a 5<sup>3</sup>/<sub>4</sub>-inch bit and face sampling hammer. RC holes were drilled with some water injection at the bit for dust suppression and using booster/auxiliary air if ground water was encountered.

DD holes were drilled as orientated HQ and NQ size with no RC pre-collars.

The Resource does not include:

- the already defined Resources at Yin and Yin South;
- drilling at the Y2, Yin North, Sabre and Y8 ironstones; and
- drilling outside of C3 within the C1-C5 carbonatites.

Collar positions were 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 each drill hole were recorded after the completion of the hole using a Reflex Sprint IQ Gyro. A reading was undertaken every 30<sup>th</sup> metre with an accuracy of +/- 1° azimuth and +/-0.3° dip.

#### Sampling and Subsampling Techniques

RC samples were collected using two techniques being: Im splits directly from the rig sampling system; and 3m composite sampling from spoil piles.

From every Im drilled, a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter or via a grab sample from the bulk reject in more clay rich material. All remaining spoil from the sampling system was collected in buckets and deposited in rows adjacent to the rig. An aluminium scoop was used to then sub-sample each spoil pile to create a 2-3kg 3m composite sample in a calico bag.





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The rig geologists used preliminary pXRF analysis of pulverised and partially homogenised reject RC sample piles to define mineralised zones which were subsequently sampled in detail (the Im splits). Lower grade and unmineralised zones were sampled by 3m composites.

All samples were then sent for full analysis at ALS laboratories in Perth and Brisbane. Only laboratory assays were used for this Resource and no pXRF results have been used.

Industry standard QAQC measures were employed involving insertion of:

- appropriate CRM standards at regular intervals;
- field duplicates collected for both Im splits and 3m composites at regular intervals; and
- additional field duplicates and blanks collected in mineralised intervals.

All samples were dried and pulverised at the laboratory prior to analysis.

Orientated DD core samples were collected with a diamond drill rig drilling HQ and NQ core. After geological logging and processing, the core was marked up for sampling at a typical minimal interval of 0.2m to ensure adequate sample weight and to a typical maximum interval of 1.0m. The selected sample intervals of drill core were cut in half or quartered along the length of the drill core. Specific gravity, or density measurements, were taken for each geological domain within the Resource by Dreadnought's geologists and the laboratory for QAQC.

Sample sizes for both RC and DD are considered appropriate for the style of mineralisation.

#### Assaying and QAQC

Samples were submitted to the ALS Perth laboratory for preparation and analysis by ME-MS61. Pulverised samples were then transported to the ALS Brisbane laboratory for analysis by Lithium Borate Fusion XRF (ALS Code "ME-XRF30").

The 2-3kg samples were submitted to the ALS Perth laboratory, oven dried to 105°C and pulverised to 85% passing 75µm to produce a 0.25g charge for determination of 48 multi-elements, including scandium, via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61). The pulverised sample was then sent to the ALS Brisbane laboratory where a 0.66g charge was used for the determination of REE, niobium, phosphate and titanium Oxides by ME-XRF30 analysis.

QAQC in the form of duplicates and CRM's (OREAS Standards) were inserted through the mineralised zones at a rate of 1:50 samples. Additionally, within mineralised zones, a duplicate sample was taken and a blank inserted directly after. All QAQC returned satisfactory results.

Standard laboratory QAQC is undertaken and monitored.

Further information regarding exploration results can be found in previous announcements:

- 17 October 2022 Mineralised Carbonatites Discovered at C3 and C4
- 23 November 2022 Multiple, Large Scale, REE-Nb-Ti-P Carbonatites
- 24 January 2023 Carbonatite Discovery Shaping up as Regional Rare Earth Source
- 3 April 2023 Carbonatites Deliver Thick, Near Surface REE Results
- 10 July 2023 High Grade Rare Earth & Niobium Zones at C3 & C5
- I 7 July 2023
- High Grade Rare Earth & Niobium Zones at C3 & C5 7 August 2023 Rare Earth Ironstone and Carbonatite Drilling Update



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#### **Estimation Methodology**

Widenbar was retained to produce a Resource estimate for the C3 carbonatite. Validated drillhole data and geological interpretations were supplied by Dreadnought. Widenbar produced the Resource using standard processes and procedures including data selection, composting, variography and estimation by Ordinary Kriging prior to model validation.

Estimates were made and are reported for various oxides being TREO, Nd, Pr and Nd+Pr, Nb, P, Ti and Sc as well as bulk density.

#### **Statistical Analysis and Variography**

The original RC assays are a mixture of Im and 3m samples, with mineralised intervals identified using preliminary pXRF analysis and re-assayed at 1m intervals by an independent laboratory. Diamond drilling sample intervals are variable, corresponding to breaks in lithology and weathering.

For data analysis and Resource estimation processes, all assay data has been composited to 1m intervals.

The base of transported and the base of supergene surfaces were used to apply lithological codes to the composite data and summary statistics have been calculated for the major elements within each domain. There was a total of 5,689 composites available for use in Resource estimation.

Probability plots and histograms were used to confirm that domaining produced consistent data sets.

There are 266 density measurements from DD core in the final data set. These have been coded with the lithology wireframes and the weathering surfaces and histograms and statistics have been collated.

,		
LITH	DENSITY	r
Clay	2.00	
Supergene	2.00	f k
Carbonatite	3.00	

The mean, median and the histogram distributions for fresh and oxidised versions of each major lithology have been reviewed and a single value determined for each weathering/lithology combination.

> Variograms have been calculated for the combined supergene and carbonatite domains for the following oxides Nd, Pr and Nd+Pr and TREO and used to control the Ordinary Kriging estimation process, which was carried out in Micromine 2023 software.

Table 2: Final density values used in converting volumes to tonnes.

#### **Block Model and Resource Estimation**

An "empty" rock model was created using the topographic and geology surfaces as constraints.

A process of "unfolding" is applied to the supergene block model and the composite data to avoid issues related to minor changes in dip. This effectively makes a dynamic search ellipse and all searches become oriented in a simple vertical direction.

Interpolation is carried out using the Ordinary Kriging process in Micromine 2023. A three-pass search strategy was used, with the following parameters.

Search	Comp	osites		Holes		Search		
Pass	Min	Max	Min	Min/Hole	Max/Hole	East	North	RL
I	3	12	2	2	4	100	100	30
2	2	12	I	2	4	100	100	30
3	I	12	I	I	4	150	150	40

Table 3: Search parameters used in Ordinary Kriging.

Block model validation has been carried out as shown below and all methods produced good comparisons:

- Drill hole section comparison;
- Comparison of means for model vs data; and •
- Swathe plots of model vs data.



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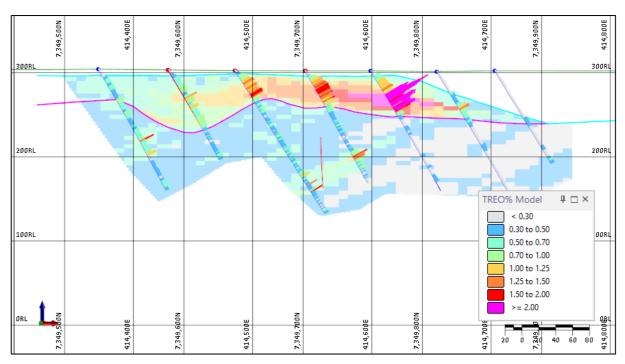


Figure 5: Section 5 showing the grade distribution within the Resource model with mineralisation near surface.

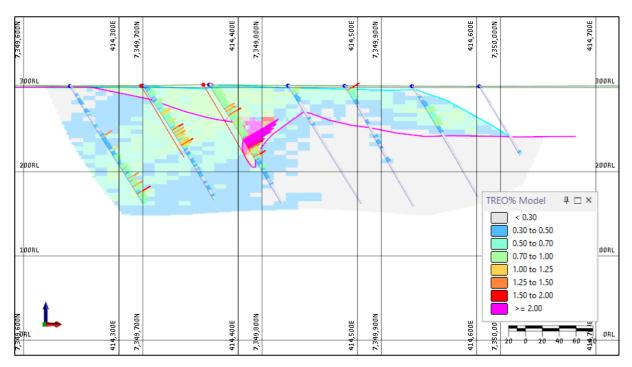


Figure 6: Section 7 showing higher grades hosted within a zone of deeper weathering (karst).

#### Cut-off Grade

A range of cutoffs between 0.3% and 0.9% TREO has been adopted for summary reports as detailed mining and processing costs, recoveries and product prices are not fully known at this stage of the project.



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#### **Resource Classification**

The Resource has been classified in the Inferred category, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (2012 JORC Code). A range of criteria has been considered in determining this classification including:

- Geological continuity; •
- Data quality; •
- Drill hole spacing;
- Modelling technique; and
- Estimation properties including search strategy, number of informing data and average distance of data from blocks.

The Resource classification methodology incorporated a number of parameters derived from the Ordinary Kriging algorithms in combination with drill hole spacing and continuity and size of mineralised domains.

#### Geological Continuity

Geological continuity is understood with reasonable confidence. The classification reflects this level of confidence.

#### Data Quality

Resource classification is based on information and data provided from Dreadnought's database. Descriptions of drilling techniques, survey, sampling/sample preparation, analytical techniques and database management/validation indicate that data collection and management is well within industry standards. Widenbar considers that the database represents an accurate record of the drilling undertaken.

#### Drilling Spacing

Drill hole location plots have been used to ensure that local drill spacing conforms to the minimum expected for Resource classification. Sections are drilled at a nominal 80m by 80m spacing.

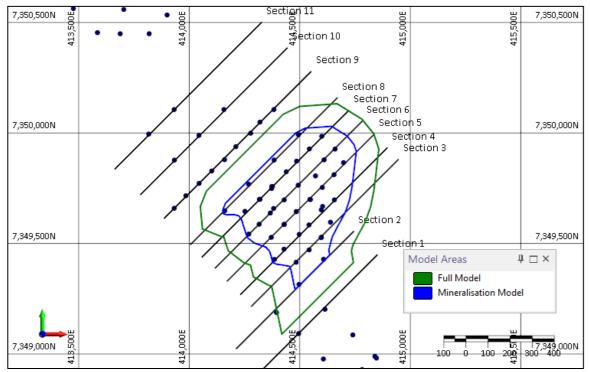


Figure 7: Plan view image showing the drill hole spacings and section locations within the modelling area.



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#### **Resource Estimate**

A summary of the C3 Resource of 10.84Mt @ 1.00% TREO is shown below. A range of cutoffs between 0.3% and 0.9% TREO has been adopted for summary reports as detailed mining and processing costs, recoveries and product prices are not fully known at this stage of the project. Numbers may not add up due to rounding.

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

Table 4: Summary of the C3 Inferred Resource at 0.20% TREO Cut-off

#### Metallurgy

At this stage, no metallurgical testwork has been carried out on samples from C3. However, samples for mineralogical study have confirmed the presence of monazite as a dominant REE bearing mineral in the oxide material, and monazite and REE carbonates in the fresh material.

Samples for metallurgical study have been collected and are being assessed for performance with the existing flowsheet developed for the nearby Yangibana REE project as well as for a deposit specific optimised flowsheet. This work is ongoing.

#### **Reasonable Potential of Eventual Economic Extraction**

Consideration has been given to assess whether the prospects of eventual economic extraction are reasonable for C3. An order of magnitude pit optimisation was carried out using costs and prices similar to those in publicly available documents for the nearby Yangibana REE project.

The optimum pit includes almost all of the Inferred Resource at C3, only leaving a minor amount of low-grade material at the edges and base of the model.

On this basis, the Competent Person considers the prospects for economic extraction to be reasonable and considers that the global Inferred Resource can be reported.

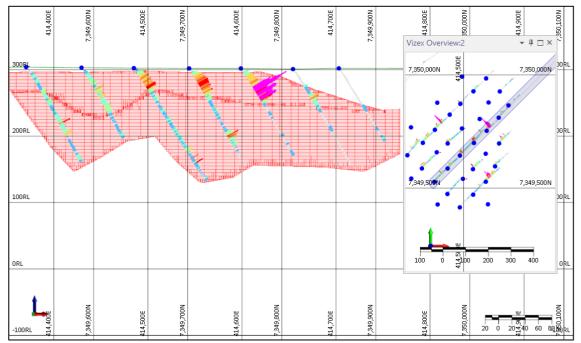


Figure 8: Section 5 showing the conservative boundaries of the Inferred Resource area in relation to drilling.



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#### Impact on Long Term Incentive Plan

The following table outlines the Company's Long-Term Incentive ("LTI") plan with all performance shares now vested due to announcing an Inferred JORC Resource of 30Mt @ >1% TREO by 31 December 2024. Reaching this large scale Resource target over a year ahead of original expectations further demonstrates the ability for rapid growth at Mangaroon. This combined with a suite of critical minerals highlights Mangaroon as a globally significant, potential source of critical minerals.

The capital structure following issue of the LTI performance shares is outlined below.

Table 5: LTI Plan sumn	nary.		
Performance Rights	Quantity	Vesting Condition	Vested
Class A	10,183,335	The Company announcing an Inferred JORC Resource of 10Mt @ >1% TREO by 31 December 2022. All Class A Performance Rights have been exercised.	Yes
Class B	3,800,00	The Company announcing an Inferred JORC Resource of 20Mt @ >1% TREO by 31 December 2023.	Yes
Class C	3,799,996	The Company announcing an Inferred JORC Resource of 30Mt @ >1% TREO by 31 December 2024.	Yes

#### Capital Structure (Upon issue of vested Class A, B and C Performance Rights)

Table 6: Capital structure following issue of Class A, B and C performance shares.

Quoted Securities	
Fully Paid Ordinary Shares	3,359,328,217
Unquoted Securities	
Options @ \$0.005 expiring 09/04/2024	30,000,000
Options @ \$0.005 expiring 30/06/2024	1,500,000
Options @ \$0.04 expiring 02/07/2024	12,100,000
Options @ \$0.06 expiring 11/08/2024	2,000,000
Options @ \$0.06 expiring 26/11/2024	2,000,000
Options @ \$0.065 expiring 14/07/2025	8,500,000
Options @ \$0.1575 expiring 16/12/2025	853,098
Options @ \$0.12 expiring 02/03/2026	1,223,151
Options @ \$0.075 expiring 14/06/2026	2,000,000

Further information regarding the LTI plan can be found in previous announcements:

DRE Announcement 31 October 2022: Annual General Meeting - Notice and Proxy Form

DRE Announcement 17 August 2022: Long-Term Incentives on Delivery of Significant REE Resources



# Background on Mangaroon (E08/3274, E8/3178, E09/2384, E09/2433, E09/2473: FQM Earn-in) (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 covers >5,200sq 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 First Quantum Minerals Ltd ("**FQM**") earning up to 70% (Figure 9). The region is also 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, outcropping high-grade REE ironstones, similar to those under development at Yangibana, REE-Nb-Ti-P Carbonatites and outcropping high tenor Ni-Cu-PGE blebby sulphides in the recently defined Money Intrusion.

The Yin REE Ironstone Complex contains an independent total Resource of 20.06Mt @ 1.03% TREO (ASX 5 Jul 2023) over only ~4km of ~43km of ironstones including an initial Indicated Resource of 5.52Mt @ 1.23% TREO over only ~250m of strike (ASX 5 Jul 2023). There is also an Exploration Target of 50-100Mt at 0.9-1.3% TREO (ASX 13 Feb 2023) estimated over 40 kms of strike within the Yin REE Ironstone Complex. The Exploration Target does not include mineralisation within the C1-C5 carbonatites.

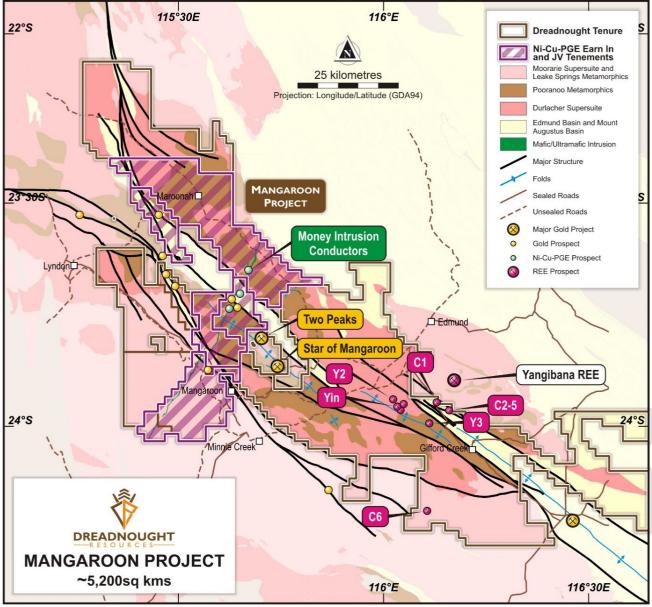


Figure 9: Plan view map of Mangaroon showing the location of the FQM Earn-in and 100% Dreadnought ground in relation to major structures, geology and roads.



Fist Drilling at Yin Intersects High-Grade Rare Earths

Broad, High-Grade Assays at Yin REE Discovery

Broad, High-Grade Assays at Yin REE Discovery

Broad, High-Grade Assays At Yin REE Discovery Multiple, Large Scale, REE-Nb-Ti-P Carbonatites

Mineralised Carbonatites Discovered at C3 and C4

Assays Confirm Yin as a High-Grade Rare Earth Discovery

Initial High-Grade, Independent Resource over 3kms at Yin

Yin Resource to Grow, Carbonatite Drilling Commenced

Metallurgical Test Work Supports High-Value Concentrate

Carbonatites Deliver Thick, Near Surface REE Results

High Grade Rare Earth & Niobium Zones at C3 & C5

High Grade Rare Earth & Niobium Zones at C3 & C5

Rare Earth Ironstone and Carbonatite Drilling Update

40% Increase in Resource Tonnage at Yin

Carbonatite Discovery Shaping up as Regional Rare Earth Source

Yin Extended by 1km & 2.5km of High-Grade NdPr Discoveries

Thick Rare Earth Ironstones Confirmed at Sabre (Y3) Discovery

Further Assays Confirm Yin as Significant REE Discovery

ASX:DRE

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ABN 40 119 031 864

#### For further information please refer to previous ASX announcements:

- 16 June 2022
- 28 July 2022
- 5 September 2022
- 5 September 2022
- 12 October 2022
- 17 October 2022
- 24 October 2022
- 21 November 2022
- 23 November 2022
- 28 December 2022
- 24 January 2023
- 29 March 2023
- 27 Multil 202.
- 3 April 2023
- 29 May 2023
- 13 June 2023
- 5 July 2023
- I 0 July 2023
- 17 July 2023
- 7 August 2023
- 17 August 2023 Thick, High-Grade Rare Earths Continue at Yin

#### **UPCOMING NEWSFLOW**

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

August: Results of gold target generation soil surveys at Mangaroon (100%)

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

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

12 (Melbourne) & 14 (Sydney) September: New World Metals Conference

September: 2023 Annual Report

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

October/November: Commencement of RC drilling at Mangaroon Au (100%)

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

October: Quarterly Activities and Cashflow Report

23 November: Annual General Meeting

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

~Ends~

For further information please contact: **Dean Tuck** Managing Director Dreadnought Resources Limited E: <u>dtuck@dreres.com.au</u>

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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 – Exploration Results**

The information in this announcement that relates to geology, exploration results and planning, and exploration targets was compiled by Mr. Dean Tuck, who is a Member of the AIG, Managing Director, and shareholder of the Company. Mr. Tuck has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Tuck consents to the inclusion in the announcement of the matters based on the information in the form and context in which it appears.

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



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#### **INVESTMENT HIGHLIGHTS**

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

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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-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 highgrade 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 CI-C5 carbonatites totalling ~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 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.



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Hole ID	From (m)	To (m)	Interval (m)	TREO (%)	Nd2O3+Pr6O11 (kg/t)	NdPr:TREO (%)	Prospect
CBRC001	17	94	77	0.35	0.8	23	
CBRC005	21	24	3	0.50	2.0	40	
CBRC005	30	48	18	0.30	0.7	23	C3
CBRC000	15	26	10	0.30	0.7	23	
CBRC010	93	145	52	0.63	1.4	23	
incl	116	145	5	1.01	2.2	22	C4
CBRC011	39	54	15	0.37	0.8	22	
CBRC012	57	66	9	0.31	0.7	23	
CBRC013	165	168	3	0.54	2.0	37	
CBRC014	12	15	3	0.38	0.7	18	
CBRC015	18	27	9	0.31	0.8	26	
CBRC016	9	12	3	0.34	0.9	26	
CBRC017	30	60	30	0.34	0.7	21	
CBRC018	27	36	9	0.34	0.8	24	
CBRC019	18	42	24	0.36	0.8	22	
CBRC023	9	42	33	0.58	1.3	22	
CBRC025	0	45	45	0.34	0.7	21	
CBRC027	6	48	42	0.83	1.9	23	
incl	9	30	21	1.25	2.9	23	
CBRC028	15	57	42	0.63	1.4	22	
incl	24	36	12	1.00	2.3	23	
CBRC029	3	75 (EOH)	72	0.69	1.5	22	C3
incl	6	37	31	1.26	2.8	22	
CBRC030	3	99 (EOH)	96	0.70	1.4	20	
incl	4	37	33	1.12	2.2	20	
CBRC031	12	24	12	0.52	1.2	23	
CBRC032	9	81 (EOH)	72	0.60	1.4	23	
incl	22	34	12	1.02	2.4	24	
CBRC033	6	105 (EOH)	99	0.64	1.4	22	
incl	13	57	44	1.00	2.2	22	
CBRC034	15	33	18	0.33	0.8	24	
CBRC036	18	57	39	0.30	0.7	23	
CBRC038	9	15	6	0.36	0.7	19	
CBRC039	39	57	18	0.30	0.7	23	
CBRC041	30	57	27	0.32	0.7	22	C4
CBRC042	21	33	12	0.53	1.3	25	
CBRC043	39	69	30	0.30	0.7	23	
CBRC044	27	66	39	0.60	1.4	23	
incl	40	54	14	0.92	2.2	24	
CBRC045	30	63	33	0.42	0.9	21	
CBRC046	33	66	33	0.38	0.8	21	
CBRC047	24	66	42	0.34	0.7	21	
CBRC048	33	54	21	0.37	0.8	22	
CBRC049	36	96	60	0.47	1.0	21	C5
CBRC050	27	54	27	0.54	1.1	20	
CBRC051	21	52	31	0.57	1.1	19	
CBRC052	36	93	57	0.63	1.3	21	
CDDCOF3	20	(0	20	0/4	1.4	22	

Table 7: Significant Intersections >0.3% TREO with >1% TREO highlighted.

30

69

39

0.64

1.4

22

CBRC053



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Table 7(continued): Significant Intersection	s >0.3% TREO with >1% TREO highlighted.
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Hole ID	From (m)	To (m)	Interval (m)	TREO (%)	Nd2O3+Pr6O11 (kg/t)	NdPr:TREO (%)	Prospect
CBRC056	36	90	54	0.32	0.8	23	
CBRC058	48	105	57	0.34	0.7	22	
CBRC060	39	57	18	0.31	0.7	23	C2
CBRC061	18	45	27	0.33	0.7	21	_
CBRC063	18	42	24	0.40	0.8	20	
CBRC068	30	48	18	0.33	0.7	21	
CBRC070	15	24	9	0.36	0.7	19	
CBRC071	30	45	15	0.30	0.6	20	
CBRC075	42	54	12	0.39	0.8	20	
CBRC079	18	27	9	0.33	0.7	21	CI
CBRC080	45	58	13	0.48	1.0	20	
and	84	105	21	0.34	0.7	21	
CBRC081	30	45	15	0.37	0.8	21	
CBRC082	36	54	18	0.33	0.7	20	
CBRC083	8	136	128	0.74	1.6	22	
incl	14	48	34	1.31	2.8	21	
and	111	123	12	1.09	2.2	20	
CBRC084	6	201 (EOH)	195	0.57	1.2	21	
incl	16	40	24	1.26	2.8	22	
CBRC085	9	123 (EOH)	114	0.56	1.3	24	
incl	37	47	10	0.92	2.1	23	
CBRC086	9	I I 7 (EOH	108	0.69	1.5	22	C3
incl	15	21	6	1.76	4.7	27	
CBRC087	6	201 (EOH)	195	0.55	1.1	20	
incl	6	39	33	1.10	2.3	21	
CBRC088	6	181 (EOH)	175	0.54	1.0	19	
incl	14	55	41	0.93	2.0	22	
CBRC089	8	100	92	0.71	1.5	21	
incl	38	69	31	0.95	2.0	21	
CBRC107	51	69	18	0.52	1.1	22	
CBRCIIO	66	105	39	0.28	0.5	17	C5
CBRCIII	54	111	57	0.60	1.3	21	CJ
incl	72	81	9	1.20	3.0	25	
CBRC113	21	66	45	0.58	1.3	22	
CBRC114	6	27	21	0.60	1.2	19	
CBRC115	3	105	102	1.14	2.6	22	
incl	76	104	29	2.05	4.5	22	
incl	77	86	9	3.88	8.6	22	
CBRC116	1	115	114	0.68	1.3	19	
incl	62	87	25	1.03	2.0	20	
CBRC117	68	165	97	0.64	1.1	18	C3
CBRC118	69	81	12	0.38	0.7	18	
and	117	147	30	0.45	0.8	18	
CBRC120	30	78	48	0.56	1.2	21	
incl	50	54	4	1.2	2.8	23	
CBRC121	7	69	62	1.68	3.4	20	
incl	33	58	25	2.86	5.7	20	
incl	34	49	15	3.26	6.5	21	
CBRC122	12	165	153	0.52	1.1	22	



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Hole ID	From (m)	To (m)	Interval (m)	TREO (%)	Nd2O3+Pr6O11 (kg/t)	NdPr:TREO (%)	Prospect
CBRC123	86	158	72	0.41	0.9	21	
CBRC124	9	165 (EOH)	158	0.40	0.8	20	
incl	10	45	35	0.85	1.9	22	
and	15	20	5	1.03	2.4	23	
and	26	35	7	1.04	2.3	22	
CBRC125	7	120	113	1.13	2.6	23	
incl	50	54	4	2.59	5.6	22	C3
and	59	<b>6</b> 8	9	2.03	4.9	24	
CBRC126	6	24	18	0.54	1.1	20	
incl	9		3	1.02	1.9	19	
CBRC127	24	153	129	0.47	1.0	22	
incl	93	102	9	1.06	2.6	25	
CBRC128	99	165	66	0.36	0.8	21	

Table 7(continued): Significant Intersections >0.3% TREO with >1% TREO highlighted.

Table 8: Significant Intersections >0.3%Nb<sub>2</sub>O<sub>5</sub>, >1.0% Nb<sub>2</sub>O<sub>5</sub> highlighted.

Hole ID	From (m)	To (m)	Interval (m)	Nb2O5 (%)	Prospect
CBRC032	20	28	8	0.30	64
CBRC033	75	84	9	0.32	C4
CBRC053	45	54	9	0.33	C5
CBRC080	61	62	I	0.33	CI
CBRC084	21	30	9	0.32	
CBRC085	30	78	48	0.79	
incl	39	75	36	1.03	
CBRC086	16	93	77	0.70	C3
and	39	69	30	0.97	
incl	51	69	18	1.09	
CBRC089	34	46	12	0.30	
CBRC107	54	66	12	0.53	
CBRC109	63	66	3	0.34	
CBRC110	66	105 (EOH)	39	0.63	C5
incl	81	84	3	1.12	03
CBRCIII	63	III (EOH)	48	0.70	
incl	72	81	9	1.40	
CBRC115	45	54	9	0.36	
CBRC124	18	37	17	0.60	
incl	30	33	3	1.01	C3
CBRC125	63	122	59	0.61	
incl	99	118	19	1.01	

Table 9: Significant Intersections >200ppm Sc.

Hole ID	From (m)	To (m)	Interval (m)	Sc (ppm)	Prospect
CBRC027	25	27	2	204	
CBRC086	57	66	9	265	
CBRC113	48	54	6	227	C3
CBRC125	18	28	10	270	
and	40	45	5	215	

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Hole ID	From (m)	To (m)	Interval (m)	P2O5 (%)	Prospect
CBRC006	154	207	53	5.2	
CBRC010	109	113	4	5.1	
and	154	207	53	5.2	C3
incl	172	175	3	15.6	
CBRC011	60	66	6	6.4	
and	162	165 (EOH)	3	5.9	
CBRC012	153	162	9	7.0	C4
CBRC012	57	66	9	6.5	
CBRC019	42	45	3	5.4	
CBRC027	23	25	2	7.0	
and	63	66	3	5.1	C3
CBRC030	17	29	12	6.0	
CBRC030 CBRC032	23	45	22	6.2	-
			5		
incl	31	36		13.0	C1
CBRC033	17	56	39	6.3	C4
incl	18	33	15	8.0	
CBRC042	39	45	6	6.0	
CBRC049	48	69	21	6.2	
CBRC050	45	48	3	5.1	
CBRC051	50	52	2	7.6	C5
and	60	63	3	5.3	
CBRC053	48	63 (EOH)	15	5.9	
CBRC058	42	45	3	6.2	
and	54	57	3	5.2	
and	90	93	3	6.0	
and	99	102	3	5.6	<u> </u>
CBRC060	45	57	12	6.2	C2
CBRC061	45	48	3	5.1	
CBRC062	51	54	3	5.5	
CBRC075	87	93	6	6.0	
CBRC083	39	49	10	7.5	
incl	46	47		10.3	1
CBRC084	26	41	15	5.0	1
and	119	121	3	7.4	1
CBRC085	30	85	55	6.6	1
CBRC086	54	105	51	5.4	
incl	84	87	3	10.6	C3
CBRC087	36	44	8	6.4	1
CBRC087 CBRC088	35	55	20	5.4	1
-					1
incl	35	37	3	10.1	1
and	46	47	I	10.7	1
CBRC089	46	62	16	5.1	
CBRC107	60	69	9	5.5	4
CBRC109	63	66	3	6.0	4
CBRCIIO	69	72	3	5.3	C5
and	102	105 (EOH)	3	7.2	
CBRCIII	69	III(EOH)	42	8.3	
incl	99	III (EOH)	12	14.0	

Table 10: Significant Intersections >5%P2O5, >10% P2O5 highlighted.



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1 4510 10 (	highlighted.							
Hole ID	From (m)	To (m)	Interval (m)	P2O5 (%)	Prospect			
CBRC112	90	95 (EOH)	5	5.4				
CBRC115	22	96	74	6.8				
incl	48	76	28	10.5				
and	89	91	2	12.0				
CBRC118	117	144	27	6.0				
CBRC120	99	111	12	6.4				
CBRC121	45	54	9	5.2				
CBRC122	72	78	6	6.5				
and	135	150	15	5.3				
incl	135	138	3	10.2	<u></u>			
CBRC123	24	30	6	7.8	C3			
and	157	158 (EOH)	I	17.4				
CBRC124	34	43	9	5.0				
CBRC125	17	21	4	7.1				
and	38	45	7	5.6				
and	100	122	22	5.7				
incl	118	120	2	10.3				
CBRC127	97	105	8	6.6				
and	129	153 (EOH)	24	7.8				
incl	150	153 (EOH)	3	10.5				

Table 10 (continued): Significant Intersections >5%P2O5, >10% P2O5

Table 11: Significant Intersections >5% TiO<sub>2</sub>, >10% TiO<sub>2</sub> highlighted.

Hole ID	From (m)	To (m)	Interval (m)	TiO₂ (%)	Prospect
CBRC011	51	54	3	5.3	C4
CBRC028	54	57	3	5.1	
CBRC029	14	30	16	5.7	C3
CBRC030	16	27	11	5.8	
CBRC032	9	32	23	6.7	
CBRC033	13	16	20	5.0	C4
and	42	46	4	6.2	Ci
CBRC044	43	53	10	5.5	
CBRC049	42	51	9	5.2	C5
CBRC053	36	66	30	6.3	03
CBRC058	63	66	3	6.0	C2
CBRC080	57	69	12	6.3	CI
CBRC083	23	42	19	6.7	
CBRC084	9	45	36	7.9	
incl	25	39	14	12.3	
CBRC085	6	85	79	7.4	
incl	45	66	21	11.7	
CBRC086	12	84	72	8.6	
incl	30	36	6	12.3	C3
and	45	63	18	10.0	
CBRC087	10	33	23	6.2	
CBRC089	12	69	57	6.4	
incl	34	42	8	11.3	
and		123	12	7.5	
incl	117	120	3	10.1	





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Table II	(continued):	Significant	Intersections	>5% TiO <sub>2</sub>	>10% TiO	highlighted.
10010111	(concuraca).	0.2			,	

Hole ID	From (m)	To (m)	Interval (m)	TiO₂ (%)	Prospect
CBRC107	51	66	15	7.1	
incl	54	60	6	11.5	C5
CBRCIII	54	84	30	7.9	CS
incl	66	72	6	12.8	
CBRC112	66	75	9	6.1	
and	90	93	3	6.4	
CBRC113	30	108	78	5.7	
incl	48	57	9	11.5	
CBRC114	75	78	3	5.6	
CBRC115	7	96	89	5.8	
incl	47	50	3	10.0	
CBRC117	12	15	3	6.1	
CBRC118	66	147	81	6.0	
incl	69	75	6	11.8	C3
CBRC119	63	129 (EOH)	66	5.9	C3
CBRC120	45	78	33	6.1	
and	105	111	6	5.4	
CBRC121	15	44	33	5.1	
and	117	120	3	5.4	
CBRC122	51	54	3	5.3	
CBRC125	16	123	107	7.7	
incl	57	59	2	11.2	
and	81	98	17	11.1	
CBRC127	135	153	18	5.7	



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#### Table I2: Drill Collar Data (GDA94 MGAz50)

CBRC001 414383 7350106 305 -60 45 105 RC	ospect
CBRC002         414211         7349938         313         -60         43         165         RC           CDD C003         414103         7349938         313         -60         43         165         RC	
CBRC003         414102         7349828         313         -60         49         165         RC           CBRC004         414045         7349772         311         -60         43         165         RC	
	<b>C</b> 2
CBRC005         413985         7349716         306         -60         42         165         RC           CDD C007         413933         7349716         306         -60         42         165         RC	C3
CBRC006 413932 7349659 306 -60 43 165 RC	
CBRC007 414320 7350049 307 -60 52 165 RC	
CBRC008 414278 7349999 307 -60 49 123 RC	
CBRC009 414160 7349879 310 -60 50 165 RC	
CBRC010 414840 7348989 310 -60 45 249 RC	
CBRC011 414673 7348815 310 -60 45 165 RC	
CBRC012 414611 7348750 315 -60 46 165 RC	
CBRC013 414782 7348929 308 -60 45 171 RC	C4
CBRC014 414727 7348875 309 -60 44 165 RC	
CBRC015 414607 7349429 306 -90 0 45 RC	
CBRC016 414499 7349307 308 -90 0 57 RC	
CBRC017 414395 7349187 306 -90 0 87 RC	
CBRC018 413817 7349995 305 -90 0 75 RC	
CBRC019 413932 7350106 306 -90 0 75 RC	
CBRC020 414157 7350106 315 -90 0 57 RC	
CBRC021 414044 7349989 321 -90 0 63 RC	
CBRC022 413933 7349877 312 -90 0 45 RC	
CBRC023 414495 7349989 309 -90 0 93 RC	
CBRC024 414383 7349873 308 -90 0 45 RC	C3
CBRC025 414269 7349765 309 -90 0 45 RC	
CBRC026 414161 7349644 306 -90 0 51 RC	
CBRC027 414615 7349785 319 -90 0 75 RC	
CBRC028 414613 7349875 314 -90 0 99 RC	
CBRC029 414494 7349762 310 -90 0 75 RC	
CBRC030 414388 7349657 314 -90 0 99 RC	
CBRC031 414263 7349550 298 -90 0 75 RC	
CBRC032 414607 7349660 316 -90 0 81 RC	
CBRC033 414498 7349542 310 -90 0 105 RC	
CBRC034 414386 7349428 319 -90 0 81 RC	
CBRC035 414614 7349202 320 -90 0 39 RC	
CBRC036 414495 7349092 318 -90 0 99 RC	C4
CBRC037 414740 7349086 315 -90 0 39 RC	
CBRC038 414607 7348977 312 -90 0 57 RC	
CBRC039 414528 7348879 314 -90 0 99 RC	
CBRC040 414952 7348865 315 -90 0 63 RC	
CBRC041 414834 7348745 315 -90 0 93 RC	C4
CBRC042 415068 7348752 316 -90 0 75 RC	
CBRC043 414940 7348635 315 -90 0 99 RC	C4
CBRC044 415178 7348632 308 -90 0 87 RC	
CBRC045 415330 7348524 315 -90 0 93 RC	
CBRC046 415433 7348425 315 -90 0 87 RC	
CBRC047 415546 7348319 308 -90 0 93 RC	
CBRC048 415656 7348204 309 -90 0 99 RC	
CBRC049 415886 7348204 306 -90 0 99 RC	CF
CBRC050 415771 7348340 306 -90 0 123 RC	C5
CBRC051 415658 7348431 306 -90 0 63 RC	
CBRC052 415545 7348538 308 -90 0 93 RC	
CBRC053 415658 7348657 308 -90 0 93 RC	
CBRC054 415422 7348643 309 -90 0 57 RC	





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Table 12	(continued)	Drill	Collar Data	(GDA94 MGAz50)
I able I Z	(continueu)		Collar Data	(GDA74 MGAZJU)

			DI	D:	A	FOU	<b></b>	
Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Туре	
CBRC055 CBRC056	413819 413900	7350449 7350534	307 304	-90 -90	0	63	RC RC	
-								
CBRC057 CBRC058	413688 413818	7350449	303 300	-90 -90	0	45 147	RC RC	
		7350674						
CBRC059	413704	7350559	300	-90	0	75	RC	6
CBRC060	413588	7350674	307	-90	0	93	RC	C2
CBRC061	413476	7350563	307	-90	0	69	RC	
CBRC062	413585	7350454	305	-90	0	75	RC	
CBRC063	413707	7350785	305	-90	0	111	RC	
CBRC064	413474	7350784	291	-90	0	81	RC	
CBRC065	413403	7350704	294	-90	0	69	RC	
CBRC066	411792	7351282	307	-90	0	57	RC	
CBRC067	411655	7351163	307	-90	0	57	RC	
CBRC068	411506	7351073	307	-90	0	69	RC	
CBRC069	410966	7351418	300	-90	0	69	RC	
CBRC070	411706	7351802	300	-90	0	99	RC	
CBRC071	411703	7351576	300	-90	0	69	RC	
CBRC072	411587	7351689	300	-90	0	81	RC	
CBRC073	411596	7351458	300	-90	0	87	RC	
CBRC074	411489	7351349	300	-90	0	81	RC	CI
CBRC075	411591	7351924	300	-90	0	123	RC	
CBRC076	411478	7351578	300	-90	0	88	RC	
CBRC077	411362	7351915	300	-90	0	93	RC	
CBRC078	411467	7351996	300	-90	0	99	RC	
CBRC079	411475	7351800	300	-90	0	93	RC	
CBRC080	411250	7351799	300	-90	0	165	RC	
CBRC081	411373	7351696	300	-90	0	93	RC	
CBRC082	411283	7351594	300	-90	0	75	RC	
CBRC083	414546	7349700	306	-59	36	153	RC	
CBRC084	414483	7349645	306	-58	45	201	RC	
CBRC085	414431	7349587	307	-59	44	123	RC	
CBRC086	414540	7349584	307	-59	46	117	RC	C3
CBRC087	414431	7349698	306	-58	47	201	RC	
CBRC088	414318	7349587	311	-59	43	181	RC	
CBRC089	414654	7349695	309	-59	45	159	RC	
CBRC090	410043	7325078	358	-90	0	63	RC	
CBRC091	409725	7325084	349	-90	0	57	RC	
CBRC092	409223	7325080	355	-90	0	81	RC	
CBRC093	408919	7325078	355	-90	0	81	RC	
CBRC094	410154	7324593	355	-90	0	81	RC	
CBRC095	409810	7324580	351	-90	0	99	RC	
CBRC096	409491	7324585	350	-90	0	93	RC	
CBRC097	409189	7324587	354	-90	0	87	RC	
CBRC098	408867	7324584	358	-90	0	87	RC	C6
CBRC099	408689	7324570	350	-90	0	87	RC	
CBRC100	409028	7324588	352	-90	0	105	RC	
CBRC101	409344	7324583	361	-90	0	87	RC	
CBRC101	409656	7324586	361	-90	0	105	RC	
CBRC102 CBRC103	409988	7324587	300	-90	0	81	RC	
CBRC103	409079	7325081	300	-90	0	81	RC	
CBRC104 CBRC105	409079	7325081	300	-90	0	87	RC	
					0		RC	
CBRC106	409885	7325080	300	-90	U	57	ΝC	



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Table 12 (	(continued):	Drill	Collar Data	(GDA94 MGAz50)
	(			(

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Туре	
CBRC107	416640	7347831	311	-90	0	105	RC	
CBRC108	416506	7347918	319	-90	0	93	RC	
CBRC109	416381	7348007	317	-90	0	93	RC	C5
CBRCIIO	416245	7348108	312	-90	0	105	RC	65
CBRCIII	416113	7348148	315	-90	0	105	RC	
CBRC112	414598	7349985	306	-59	47	95	RC	
CBRC112	414544	7349929	308	-59	44	153	RC	
CBRC114	414486	7349873	311	-58	43	165	RC	
CBRC115	414374	7349761	311	-57	47	165	RC	
CBRC116	414322	7349702	309	-57	45	160	RC	
CBRC117	414250	7349646	316	-59	40	165	RC	
CBRC118	414661	7349928	307	-58	46	165	RC	
CBRC119	414707	7349883	314	-59	48	129	RC	
CBRC120	414656	7349809	313	-59	44	165	RC	C3
CBRC121	414605	7349754	326	-59	49	165	RC	CJ
CBRC122	414374	7349526	324	-59	44	165	RC	
CBRC122	414429	7349476	323	-58	43	165	RC	
CBRC125	414644	7349596	313	-60	43	165	RC	
CBRC125	414605	7349520	333	-59	46	165	RC	
CBRC125	414438	7349825	317	-59	47	165	RC	
CBRC120	414542	7349472	321	-58	42	153	RC	
CBRC128	414482	7349416	319	-57	42	165	RC	
CBRC129	419046	7343403	319	-61	40	81	RC	
CBRC130	418905	7343266	322	-60	44	93	RC	
CBRC131	419018	7343376	320	-60	47	105	RC	
CBRC132	418877	7343238	322	-60	42	111	RC	
CBRC133	418985	7343348	322	-66	40	129	RC	
CBRC134	418843	7343207	322	-60	40		RC	C7
CBRC135	418957	7343319	324	-60	42	129	RC	
CBRC136	418816	7343178	324	-60	37		RC	
CBRC137	418927	7343290	322	-60	40	123	RC	
CBRC137	418927	7343290	315	-60	41	123	RC	
CBRC138	416916	7347689	324	-90	0	117	RC	
CBRC139	417200	7347518	300	-90	0	81	RC	
CBRC140	417446	7347321	313	-90	0	81	RC	
CBRC141	417710	7347127	318	-90	0	105	RC	
CBRC142	417706	7347145	339	-90	0	141	RC	
CBRC143	418224	7346747	280	-90	0	135	RC	C5
CBRC144	418421	7346507	327	-90	0	111	RC	
CBRC145	415967	7347969	308	-90	0	93	RC	
CBRC146	416195	7347616	309	-90	0	93	RC	
CBRC147	416280	7347802	299	-90	0	93	RC	
CBRC148	416543	7347644	300	-90	0	129	RC	



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### JORC Code, 2012 Edition – Table 1 report template Section 1 Sampling Techniques and Data

	(Criteria in this section apply to a	ll succeeding sections.)
Criteria	JORC Code explanation	Commentary
Sampling	• Nature and quality of sampling (e.g. cut channels,	Reverse Circulation (RC) and Diamond (DD) drilling
techniques	random chips, or specific specialised industry	was undertaken to produce samples for assaying.
	standard measurement tools appropriate to the	Preliminary pXRF analysis Preliminary assays were obtained using an Olympus
	minerals under investigation, such as down hole	Vanta M Series pXRF analyser. The pXRF was placed
	gamma sondes, or handheld XRF instruments,	on the reject sample piles from the rigs Metzke cone
	etc.). These examples should not be taken as	splitter.
	limiting the broad meaning of sampling.	One 3 beam, 35 second measurement was completed for each drill metre sample.
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate</li> </ul>	The pXRF instrument is calibrated and serviced
	calibration of any measurement tools or systems	annually or more frequently as required with daily
	used.	instrument calibration checks completed. Additionally,
	• Aspects of the determination of mineralisation	silica blanks and OREAS standards, appropriate to the style of mineralisation are routinely analysed to confirm
	that are Material to the Public Report.	performance. This procedure is in line with normal
	• In cases where 'industry standard' work has been	industry practice and deemed fit for purpose for
	done this would be relatively simple (e.g. 'reverse	preliminary analysis in first pass exploration drilling.
	circulation drilling was used to obtain 1 m	This report relates to exploration results of a preliminary nature. pXRF analysis is a preliminary technique which
	samples from which 3 kg was pulverised to	will be superseded by laboratory analysis when it
	produce a 30 g charge for fire assay'). In other	becomes available.
	cases more explanation may be required, such as	Laboratory Analysis
	where there is coarse gold that has inherent	Two sampling techniques were utilised for the RC program, 1m metre splits directly from the rig sampling
	sampling problems. Unusual commodities or	system for each metre and 3m composite sampling
	mineralisation types (e.g. submarine nodules)	from spoil piles. Samples submitted to the laboratory
	may warrant disclosure of detailed information.	were determined by the site geologist.
		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 or taken as a grab
		sample from the bulk reject in more clay-rich material.
		3m Composites
		All remaining spoil from the sampling system was collected in buckets or green plastic mining bags if wet
		from the sampling system and neatly deposited in rows
		adjacent to the rig. An aluminium scoop was used to
		then sub-sample each spoil pile to create a 2-3kg 3m composite sample in a calico bag.
		A pXRF is used on site to determine mineralised
		samples. Mineralised intervals have the 1m split
		collected, while unmineralised samples have 3m
		composites collected. All samples are submitted to ALS Laboratories in Perth
		for determination of Rare Earth, niobium, phosphorous,
		and titanium oxides by Lithium Borate Fusion XRF (ALS
		Method ME-XRF30).
		All 1m 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.
		Diamond Core
		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) are 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, niobium, phosphorous,
		and titanium oxides by Lithium Borate Fusion XRF (ALS
		Method MEXRF30). Select samples are also submitted



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Criteria	JORC Code explanation	Commentary
		for 48 elements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61) to assist with lithological interpretation. <b>Rock Chips</b> Rock Chips were collected by Dreadnought staff and submitted for analysis. Rock chips are random, subject to bias and often unrepresentative for the typical widths required for economic consideration. They are by nature difficult to duplicate with any acceptable form of precision or accuracy. Rock chips have been collected by Dreadnought to assist in characterising different lithologies, alterations and expressions of mineralisation. In many instances, several rock chips were collected from a single location to assist with characterising and understanding the different lithologies, alterations and expressions of mineralisation present at the locality. Rock chips were submitted to ALS Laboratories in Perth for determination of Rare Earth, niobium, phosphorous, and titanium oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30).
Drilling techniques	<ul> <li>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.).</li> </ul>	<b>RC Drilling</b> 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 5 <sup>3</sup> / <sub>4</sub> ". <b>Diamond Drilling</b>
		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	Method of recording and assessing core and chip	RC Drilling
recovery	<ul> <li>sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	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 (when possible) and suitable supervision by the supervising geologist to ensure good sample quality.
		Diamond Drilling
		HQ and NQ drilling have 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 predominantly been very high with only minor zones of moderate or low recovery.
		At this stage, no known bias occurs between sample recovery and grade.
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant</li> </ul>	RC Drilling RC chips were logged under supervision of a qualified senior geologist with sufficient experience in this geological terrane and relevant styles of mineralisation using an industry standard logging system suitable to 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



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Criteria	JORC Code explanation	Commentary
	intersections logged.	and the identification of mineralisation.
		Logging is qualitative, quantitative or semi-quantitative
		in nature. 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 suitable to be utilised
		within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering
		and structure are recorded digitally.
		DD Logging is qualitative, quantitative or semi-
<u> </u>		quantitative in nature.
Sub-sampling techniques and	• If core, whether cut or sawn and whether quarter,	Preliminary pXRF analysis pXRF analysis of pulverised and partially homogenised
sample preparation	half or all core taken.	reject RC sample piles is fit for purpose as a preliminary
	If non-core, whether riffled, tube sampled, rotary     and whether sampled wat on day	exploration technique.
	split, etc. and whether sampled wet or dry.	pXRF is a spot reading on raw (unprocessed) RC
	For all sample types, the nature, quality and     any properties	sample piles with variable grain sizes and states of
	appropriateness of the sample preparation	homogenisation. High grade results were repeated at
	technique.	multiple locations to confirm repeatability. The competent person considers this acceptable within the
	<ul> <li>Quality control procedures adopted for all sub- sampling stages to maximise representivity of</li> </ul>	context of reporting preliminary exploration results.
	sampling stages to maximise representivity or samples.	RC Drilling
		From every metre drilled, a 2-3kg sample (split) was
	<ul> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected,</li> </ul>	sub-sampled into a calico bag via a Metzke cone splitter or taken as a grab sample from the bulk reject in
	including for instance results for field	more clay-rich material.
	duplicate/second-half sampling.	QAQC in the form of duplicates, blanks and CRM's
	<ul> <li>Whether sample sizes are appropriate to the</li> </ul>	(OREAS Standards) were inserted through the ore
	grain size of the material being sampled.	zones at a rate of 1:50 samples. Additionally, within
	gram 6.20 of the material being campica.	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.
		<b>Diamond Drilling</b> 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.
		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, niobium, phosphorous, and titanium oxides by Lithium Borate Fusion XRF (ALS Method ME-
		XRF30) and to produce a 0.25g charge for
	1	determination of 48 multi-elements via 4 acid digestion
		with MS/ICP finish (ALS Code ME-MS61).
		with MS/ICP finish (ALS Code ME-MS61). Standard laboratory QAQC is undertaken and
		with MS/ICP finish (ALS Code ME-MS61). Standard laboratory QAQC is undertaken and monitored.
		with MS/ICP finish (ALS Code ME-MS61). Standard laboratory QAQC is undertaken and



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Criteria	JORC Code explanation	Commentary
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.	Preliminary pXRF analysis Olympus Vanta M Series pXRF analyser is used to provide preliminary quantitative measurement of mineralisation. A 3-beam, 35 second reading time was
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations feature emplied and their derivation.	used with a single reading on unprepared raw RC chip sample piles. High grade samples were repeated to confirm repeatability of grade. Calibration checks of the pXRF are undertaken daily, a silica blank and certified REE standard OREAS 461 and 464 is routinely analysed to monitor pXRF
	<ul> <li>factors applied and their derivation, etc.</li> <li>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.</li> </ul>	performance. <b>Laboratory Analysis</b> Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE, Nb <sub>2</sub> O <sub>5</sub> , P <sub>2</sub> O <sub>5</sub> , TiO <sub>2</sub> determination. ME-MS61 is considered a near total digest and is appropriate for Sc
		determination. Standard laboratory QAQC is undertaken and monitored by the laboratory and by the company upon assay result receival. <b>Rock Chips</b> All samples were submitted to ALS Laboratories in
		Perth where 1-3kg rock chips samples were crushed so that >70% of material passes through -6mm, the sample is then pulverised to >85% passing 75 micron. A 66-gram aliquot of pulverised sample is fused with 12:22 lithium borate flux containing an oxidizing agent and poured to form a fused disk. The resultant disk is in then analysed by XRF spectrometry specifically for
		Rare Earths (ALS Method ME-XRF30). Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE, $Nb_2O_5$ , $P_2O_5$ , $TiO_2$ determination. No standards, duplicates or blanks submitted with rock chips.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage</li> </ul>	Preliminary pXRF analysis Analytical data was collected directly by the Olympus Vanta M Series pXRF analyser and downloaded by digital transfer to an excel spreadsheet with inbuilt QAQC. All data was checked by the responsible geologist and filed on the company server.
	<ul> <li>(physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	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.
		A total of 8 twinned hole pairs have been drilled, but no assays are currently available for the diamond holes. No adjustments to any assay data have been undertaken. <b>Rock Chips</b> Rock chip and geological information is written in field books and coordinates and track data saved from hand
		held GPSs used in the field. Dreadnought geologists have inspected and logged all rock chips. Field data is entered into excel spreadsheets to be loaded into a database.
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	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 inclined holes using a Reflex Sprint IQ Gyro. A reading was undertaken every 30 <sup>th</sup> metre with an accuracy of +/- 1° azimuth and +/-0.3° dip.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral</li> </ul>	Infill 80m x 80m drilling is suitable spacing for estimating inferred Mineral Resources.



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Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Drilling was undertaken as both vertical and inclined drill holes to intersect a range of orientations interpreted in the geology. First-pass drilling was predominantly drilled vertical with follow-up/infill drilling inclined to better intersect interpreted geological features/boundaries. However, both vertical and inclined were found to be effective for the geometries encountered. 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 Exmouth Haulage out of Exmouth and 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.)

	on apply to all succeeding sections.	
Criteria	JORC Code explanation	Commentary
Mineral tenement and	• Type, reference name/number, location and	The Mangaroon Project consists of 19 granted
land tenure status	ownership including agreements or material	Exploration License (E08/3178, E08/3274,
	issues with third parties such as joint	E08/3275, E08/3439, E09/2290, E09/2359,
	ventures, partnerships, overriding royalties,	E09/2370, E09/2384, E09/2405, E09/2433,
	native title interests, historical sites,	E09/2448, E09/2449, E09/2450, E09/2467,
	wilderness or national park and environmental	E09/2473, E09/2478, E09/2531, E09/2535,
	settings.	E09/2616) and 5 granted Mining Licenses
	• The security of the tenure held at the time of	(M09/91, M09/146, M09/147, M09/174, M09/175).
	reporting along with any known impediments	All tenements are 100% owned by Dreadnought
	to obtaining a licence to operate in the area.	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.
		<ul> <li>M09/91 91 is subject to a 1% Gross Royalty held</li> </ul>
		by DOREY, Robert Lionel.
		<ul> <li>M09/174 is subject to a 0.5% Gross Revenue</li> </ul>
		Royalty held by STEHN, Anthony Paterson.
		<ul> <li>M09/175 is subject to a 0.5% Gross Revenue</li> </ul>
		Royalty held by STEHN, Anthony Paterson and
		BROWN, Michael John Barry.
		<ul> <li>The Mangaroon Project covers 4 Native Title</li> </ul>
		Determinations including the Budina
		(WAD131/2004), Thudgari (WAD6212/1998),
		Gnulli (WAD22/2019) and the Combined Thiin-
		Mah, Warriyangka, Tharrkari and Jiwarli
		(WAD464/2016).





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Criteria	JORC Code explanation	Commentary
		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.
Drill hole information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	An overview of the drilling program is given within the text and tables within this document.
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Exploration Results are not being reported. No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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</li> </ul>	Drilling is undertaken close to perpendicular to the dip and strike of the mineralisation.



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Criteria	JORC Code explanation	Commentary
	length, true width not known').	
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.	Exploration Results are not being reported.
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	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Preliminary pXRF results to be confirmed by laboratory analysis as soon as possible. Additional RC drilling Additional Diamond Drilling Metallurgical test work Additional Resource Modelling Scoping Study

#### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	Raw data has historically been entered into Microsoft Excel logging sheets and transferred to a Datashed database weekly. More recently due to an ongoing transition between database service providers from MRG to Plexer, logging through Plexer software on tablets began around April 2023. Data exports for the most recent resource model were conducted via the Plexer database. The CSV files were imported into Micromine 2023 for validation and processing. No errors were found.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The Competent Person made a site visit on 12 <sup>th</sup> and 13 <sup>th</sup> September 2022 and viewed RC and DD logging activities and drilling. The CP also reviewed diamond drill core and RC chips on site.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	There is reasonable confidence in the geological logging and interpretation. Three major lithologies (transported, supergene and carbonatite) have been geologically modelled and are used to control the data used in estimation and the orientation of search ellipses. The geological interpretation is consistent. There has been an alternative interpretation generated via automated geological modelling processes in Micromine 2023.5 software. It produced similar shapes to the DRE manual interpretation, but because of wide drill spacing in places did not provide adequate



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Criteria	JORC Code explanation	Commentary
		continuity between sections. It did however provide very similar interpretations directly on drill sections.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The main mineralisation extends approximately 670m SW to NE, 390m NW to SE and extends to approximately 180m below surface.
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>The model has been domained using the interpreted supergene and carbonatite geological surfaces. Only data within each domain are used to estimate blocks in that domain.</li> <li>Statistical analysis of the distribution of key variables has been carried out; no top cuts (capping) have been applied.</li> <li>Variography has been carried out on TREO% to define the parameters required for Ordinary Kriging.</li> <li>Ordinary Kriging using the functions within Micromine 2023.5 have been used to interpolate block values. A parent block size of 20m x 20m x 5m is used with subcells to 1m to follow geological.</li> <li>Search orientations in supergene are dynamically variable using unfolding surfaces to control search ellipses and simplify the major variations in dip.</li> <li>First pass search ellipse in supergene is 100m in easting, 100m northing and 8m vertically.</li> <li>Second pass search ellipse in supergene is 150m in easting, 150m northing and 15m vertically.</li> <li>First pass search ellipse in carbonatite is 100m in easting, 100m northing and 30m vertically.</li> <li>First pass search ellipse in carbonatite is 100m in easting, 100m northing and 30m vertically.</li> <li>Second pass search ellipse in carbonatite is 100m in easting, 100m northing and 30m vertically.</li> <li>Second pass search ellipse in carbonatite is 100m in easting, 100m northing and 30m vertically.</li> <li>Second pass search ellipse in carbonatite is 100m in easting, 100m northing and 40m vertically.</li> <li>No assumptions have been made regarding selective mining units.</li> <li>Validation has been carried out using the following methods:</li> <li>Visual comparison of drill hole and block grades in section, plan and 3D.</li> <li>Comparison of declustered mean drill holes against block model grades.</li> <li>All validation methods produced acceptable results.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	A range of cutoffs between 0.3% and 0.9% TREO has been adopted for summary reports as detailed mining and processing costs, recoveries and product prices are not fully known at this early stage of the project.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	Mining is expected to be by conventional open pit methods. No assumptions have been made at this stage regarding the scale of mining or selective mining unit; no dilution has been applied to the resource model. Conventional ore loss and dilution were taken into account during pit optimisation to assess whether there are "Reasonable prospects of eventual economic extraction" for the Mineral Resource. More rigorous modifying factors for pit optimisation, mine planning work and Reserve estimation will be completed during future studies.
Metallurgical	The basis for assumptions or predictions	At this stage, no metallurgical testwork has been



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factors or	regarding metallurgical amenability. It is always	carried out on samples from the C3 Carbonatite
assumptions	necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Deposit. Samples for mineralogical study have confirmed the presence of monazite as a dominant rare earth bearing mineral in the oxide material, and monazite and rare earth carbonatites in the fresh material. Samples for metallurgical study have been collected and are being assessed for performance with the existing flowsheet developed for Yangibana and as well as for deposit specific optimised flowsheet. This work is ongoing.
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	No assumptions have been made regarding environmental factors. Environmental studies have been carried out on site with Level 1 and Level 2 Flora and Fauna surveys completed. No declared rare species or threatened ecological communities have been identified. Subterranean fauna studies have commenced as part of assessing any impact on the Gifford Creek Calcrete PEC. These and other environmental factors have been considered against the more advanced Yangibana Project next door which has received full state and federal government approvals.
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	There are 226 density measurements taken on DD core from throughout the deposit Density has been assigned on the basis of a combination of weathering and lithology domains, as summarised below.GeologySG TransportedSupergene2.00 SupergeneCarbonatite3.00
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	The C3 Mineral Resource has been classified in the Inferred category. A number of factors have been considered in arriving at this classification, including: Geological continuity; Data quality; Drill hole spacing; Modelling technique; Estimation properties including search strategy, number of informing data and average distance of data from blocks. Inferred material lies in an area of approximately 80m x 80m drill spacing. The classification reflects the CP's view of the deposit.
Audits or reviews	<ul> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	There have been no reviews or audits of the Mineral Resource Estimate.
Discussion of relative accuracy/ confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates</li> </ul>	The relative accuracy is reflected in the JORC resource categories. Inferred resources are considered global in nature. No production data is available as the deposit has not yet been mined.







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Criteria	JORC Code explanation	Commentary
	<ul> <li>to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	