

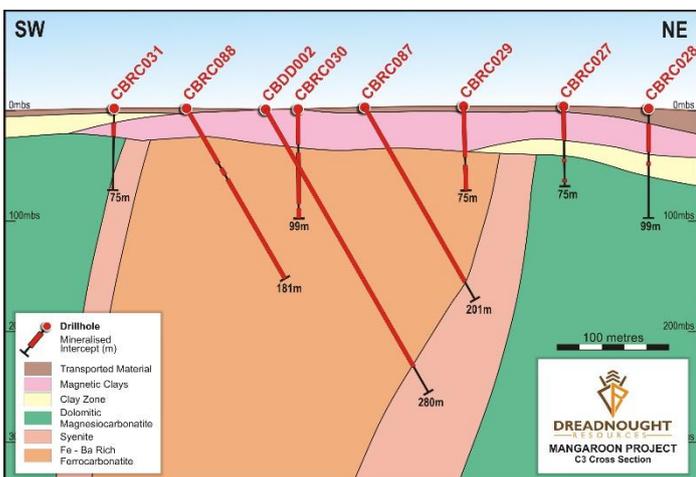
13 December 2022

## THICK MINERALISATION CONTINUES AT C3, DRILLING COMPLETED FOR 2022

### HIGHLIGHTS

- RC and diamond drilling at Mangaroon has been completed for 2022 with 258 RC holes (26,862m) and 21 diamond holes (2,144.96m) completed since June 2022.
- The program has successfully:
  - Discovered the Yin, Sabre and Y8 REE ironstones, part of the ~30km Yin REE ironstone complex and delivered an initial Resource drill out over just 3kms of the ~16km long Yin trend.
  - Discovered six coherent zones of rare earth element (“REE”), niobium (“Nb”), titanium (“Ti”) and/or phosphorus (“P”) mineralisation within the ~9km x 1km C1-C5 carbonatites which remain open along strike and at depth.
  - Delivered 19 diamond holes for additional detailed metallurgical test work across 3kms of the Yin trend with results by April 2023.
  - The initial Yin Resource remains on track for delivery in December 2022.
- Additional drilling undertaken at C3 (7 RC holes for 1,135m and 1 diamond hole for 279.6m) continued to deliver thick REE, Nb and P mineralisation up to and in excess of 200m thickness.
- Nine extensional RC holes (1,365m) all successfully extended the REE ironstone mineralisation at Yin to depth.
- The C1-C5 carbonatite drill program was supported by DMIRS through the Exploration Incentive Scheme (EIS).
- All samples have been dispatched for analysis with assays continuing to be reported from December through February/March 2023.
- RC and diamond drilling is expected to recommence in February/ March 2023.

Dreadnought Resources Limited (“Dreadnought”) is pleased to announce that thick REE-Nb-P mineralisation continues to be intersected at the C3 carbonatite intrusion. The RC and diamond drilling program at Mangaroon is now complete for 2022 and will recommence in February/March 2023. Assay results from Sabre, Y8, C1-C5 and additional drilling at Yin will continue to flow through February/March 2023. In addition to the assays, the initial Yin Resource remains on schedule to be released in December 2022 and detailed metallurgical studies will be released in April 2023.



Dreadnought’s Managing Director, Dean Tuck, commented: *“Drilling of the C1-C5 carbonatites continues to exceed expectations, delivering thick intercepts up to and in excess of 200m consisting of rare earths, niobium, and phosphorus from the ~600m x 550m mineralised zone at C3. Dreadnought would like to thank DMIRS and the EIS grant for supporting the first pass RC drilling at C1-C5. We look forward to a steady stream of assay results and related news flow into 2023 while we prepare for an even bigger year ahead.”*

**Figure 1: Cross section through the C3 carbonatite showing mineralised intercepts from first pass wide spaced vertical RC holes and follow up deep angled RC and diamond holes.**



## SNAPSHOT - MANGAROON RARE EARTHS

### 100% Owned by Dreadnought

- Mangaroon REE-Nb-Ti-P are 100% owned by Dreadnought.
- Readily accessible and located 5-20kms from the Cobra-Gifford Creek Road.

### Genuine Scale Potential Already at Yin Ironstone Complex

- Yin discovery contains 3km of mineralisation and remains open along strike and at depth – JORC Resource in December 2022 quarter, extensional drilling over 13km of untested strike planned.
- Sabre and Y8 discoveries contain a combined ~3km of mineralisation and both remain open along strike – extensional and infill drilling planned for 2023.
- Long term incentives fully triggered at JORC Resource of at least 30Mt @ >1% TREO, 31 December 2024.

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

- C1-C7 carbonatite targets may be the regional source of REE – initial C1-C5 drill program exceeds expectations with C1-C5 carbonatite intrusive complex expanded to ~6.5kms in strike length x 1km wide.
- Confirmed mineralisation at 22 outcropping targets with another 10 prospective targets requiring further work – drilling planned.
- 100 additional targets prospective for REE identified – under assessment.

### High-grade, Multi-Metal Potential Including Neodymium, Praseodymium, Niobium, Titanium & Phosphorus

- Numerous thick, high-grade assays out of 120 RC hole program at Yin.
- Yin, like the Yangibana REE project controlled by the ~\$450M Hastings Technology Metals Ltd (ASX.HAS), (“Hastings”) is globally unique due to the high proportion of neodymium and praseodymium (“Nd” and “Pr”) in the total rare earth oxide (“NdPr:TREO” ratio). NdPr values up to ~46%, nearly double the global average, have been intersected at Yin.
- Six coherent zones of REE-Nb-Ti-P successfully identified within C1-C5 carbonatites.

### Potentially Attractive Mining Proposition

- Broad zones of shallow dipping mineralisation with parallel lodes make for a potentially attractive mining proposition.

### Positive Metallurgy Results

- Initial metallurgical test work from Yin performed well, achieving a recovery of 92.8% at a concentrate grade of 12.3% Nd<sub>2</sub>O<sub>3</sub> and an average 40% TREO.
- REE at Yin is predominantly hosted in monazite which is amenable to commercial processing.

### Analogous to a Globally Unique, Commercially Viable Development 25kms Away

- Yangibana is located only 25km to the northeast of Yin and currently has a JORC Resource\* of 29.93Mt @ 0.93% TREO with 0.32% Nd<sub>2</sub>O<sub>3</sub>+Pr<sub>6</sub>O<sub>11</sub> (34% NdPr:TREO).
- Yangibana is under construction and development with first production planned for 2024.

### Global Strategic Imperative Driving Rare Earth Growth & Prices

- Supply chain security and low carbon transition are imperatives against a backdrop of heightened geopolitical tension.

*\*HAS.ASX: 11 Oct 2022 “Drilling along 8km long Bald Hill-Fraser’s trend increases indicated resources by 50%”*

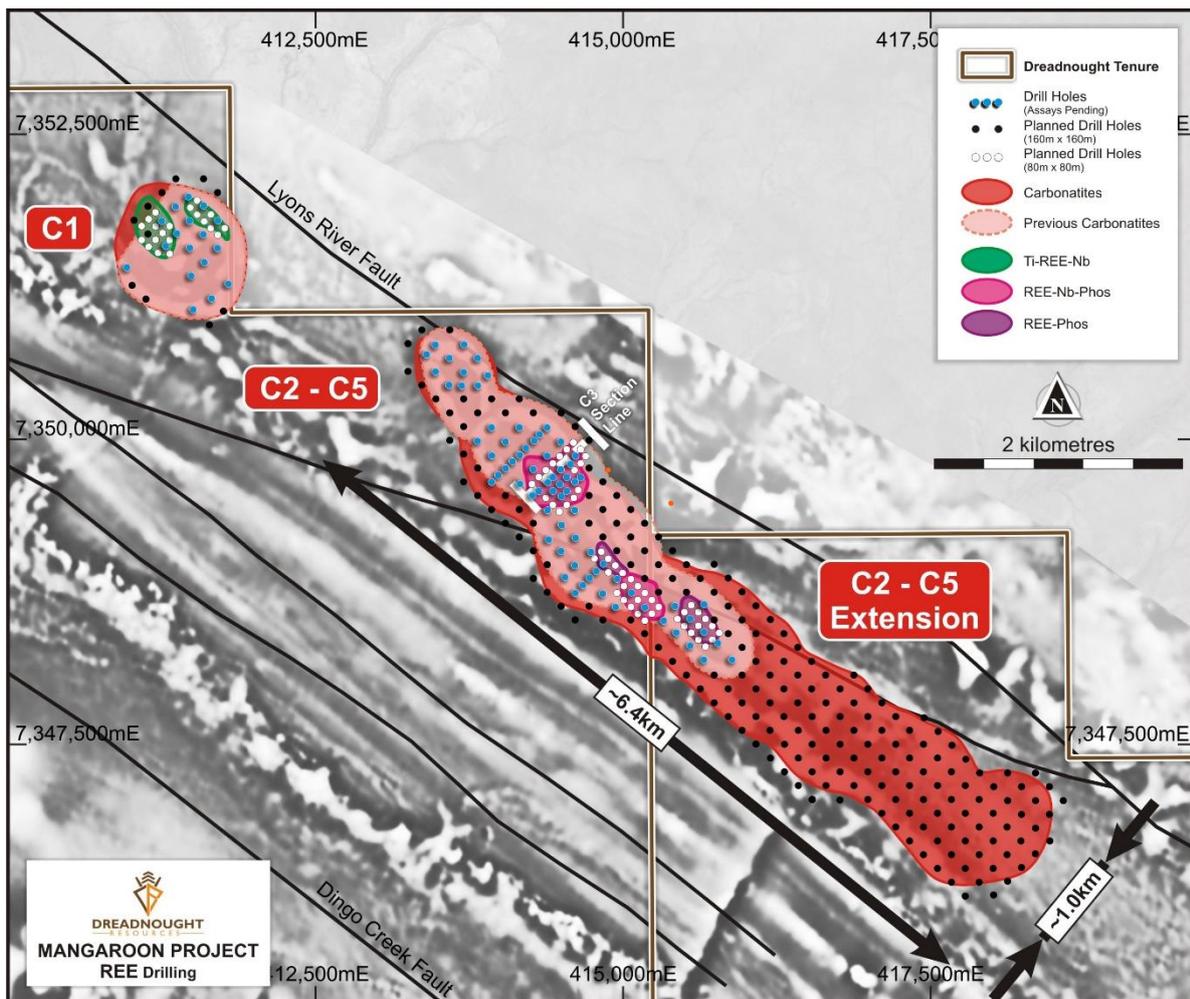
### Technical Discussion on the Carbonatite Drill Program

Carbonatite intrusions are known globally to host several different commodities including rare earths, niobium, titanium and phosphate often as different mineralised bodies within the same intrusion. Great examples of this include Mt Weld in Australia, Ngualla in Tanzania and Araxa in Brasil. We also know that a world class deposit like Mountain Pass in California can fit into a relatively small footprint (700m x 150m).

Since the C1-C5 carbonatite complex has minimal outcrop, a first-pass RC drilling program (82 holes for 7,813m) was designed on a ~160m x 160m grid spaced pattern to drill through cover and into fresh rock. The objective of this program was to confirm the extent and complexity of the interpreted carbonatite intrusions, define zones of mineralisation and to better understand the cover regolith and depth of weathering.

The first pass program has delivered numerous successes including:

- 6 coherent zones of REE mineralisation plus Ti, Nb and/or P including at C3 where an extensive 600m x 550m zone has been delineated and remains open;
- thick mineralised intercepts in both weathered and fresh carbonatites;
- multiple carbonatite and syenite intrusions, confirming a carbonatite-alkaline intrusive complex;
- highly weathered carbonatite up to 152m depth which could host residual mineralisation; and
- a more extensive carbonatite intrusive complex than previously interpreted, almost doubling in size to ~6.5kms in strike length x 1km wide.



**Figure 2: Plan view of the C1-C5 carbonatite intrusive complex highlighting the zones of REE-Nb-Ti-P identified to date. Also shown are planned 80m x 80m spaced angled infill holes (white) and 160m x 160m vertical holes over the extended carbonatite zone (black). C6 and C7 are off image – both remain untested.**

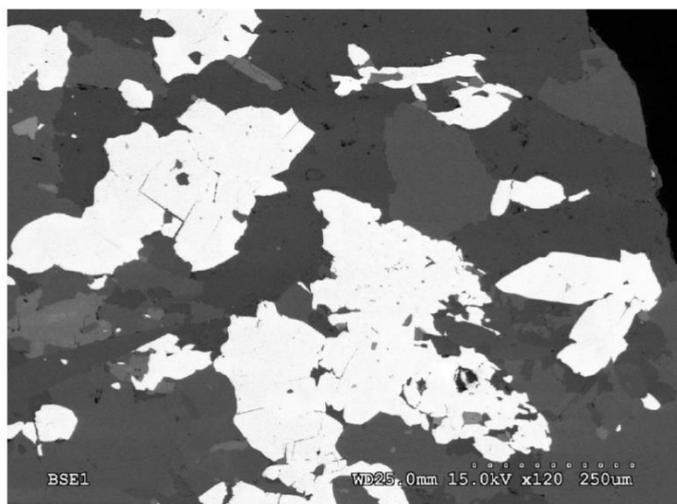
Only two RC holes drilled through the carbonatite complex into country rock, both at C2. The magnetic rings previously interpreted to be fenite alteration forming boundaries to the carbonatites have been shown to be internal to the carbonatite complex. Removal of these boundaries has led to a reinterpretation of the magnetic data resulting in a significant increase in the extents of the C1 and in particular the C2-C5 carbonatite complex.

Follow up drilling (7 RC holes for 1,135 and 1 diamond hole for 279.6m) at the carbonatites commenced on a ~80m x 80m spaced angled hole pattern targeting the ~600m x 550m REE-Nb-P mineralised zone at the C3 carbonatite.

The drilling successfully intersected mineralisation in both the weathered rock and the underlying fresh carbonatite. A highly prospective Ba-Fe rich ferro-magnesiocarbonatite has been consistently intersected in multiple holes, including being mineralised from surface to a 201m end of hole depth in CBRC084 and CBRC087. Mineralisation in the weathered profile was magnetic, and remains open in all directions including the East, where a highly magnetic portion of the C3-C4 carbonatites remains untested that will be drilled in February/March 2023.

Hole ID	From (m)	To (m)	Interval (m)	Lithology	Program
CBRC025	1	45 (EOH)	44	Weathered and fresh carbonatite	C3 First Pass Drilling
CBRC027	7	40	33	Weathered carbonatite	
CBRC028	17	41	24	Weathered carbonatite	
CBRC029	3	75 (EOH)	72	Weathered and fresh carbonatite	
CBRC030	2	99 (EOH)	97	Weathered and fresh carbonatite	
CBRC031	14	27	13	Weathered carbonatite	
CBRC032	7	81 (EOH)	74	Weathered and fresh carbonatite	
CBRC033	7	84	77	Weathered and fresh carbonatite	
CBRC083	7	139	132	Weathered and fresh carbonatite	C3 Follow Up Drilling
CBRC084	5	201 (EOH)	196	Weathered and fresh carbonatite	
CBRC085	37	76	39	Weathered carbonatite	
And	86	120	34	Fresh carbonatite	
CBRC086	14	92	78	Weathered carbonatite	
CBRC087	5	201 (EOH)	196	Weathered and fresh carbonatite	
CBRC088	9	63	54	Weathered carbonatite	
And	68	74	6	Fresh carbonatite	
And	78	181 (EOH)	103	Fresh carbonatite	
CBRC089	8	101	93	Weathered and fresh carbonatite	
CBDD002	6.7	256.2	249.5	Weathered and fresh carbonatite	

**Table 1: Mineralised intervals from C3 as confirmed by infield preliminary pXRF analysis (correlation with laboratory assays currently unknown and should be treated with caution) at least 5m of >0.2% TREO, >0.1% Nb<sub>2</sub>O<sub>5</sub>, >4% TiO<sub>2</sub>, >3% P<sub>2</sub>O<sub>5</sub>.**



Mineralisation is characterised by a biotite-rich ferro-magnesiocarbonatite with petrography indicating rare earth mineralisation at the carbonatites is present in both monazite and rare earth carbonates, bearing geological similarities to the fresh carbonatites at Yin.

This drilling program will recommence in February/March 2023. Assays will be ongoing through to the end of the March 2023 quarter.

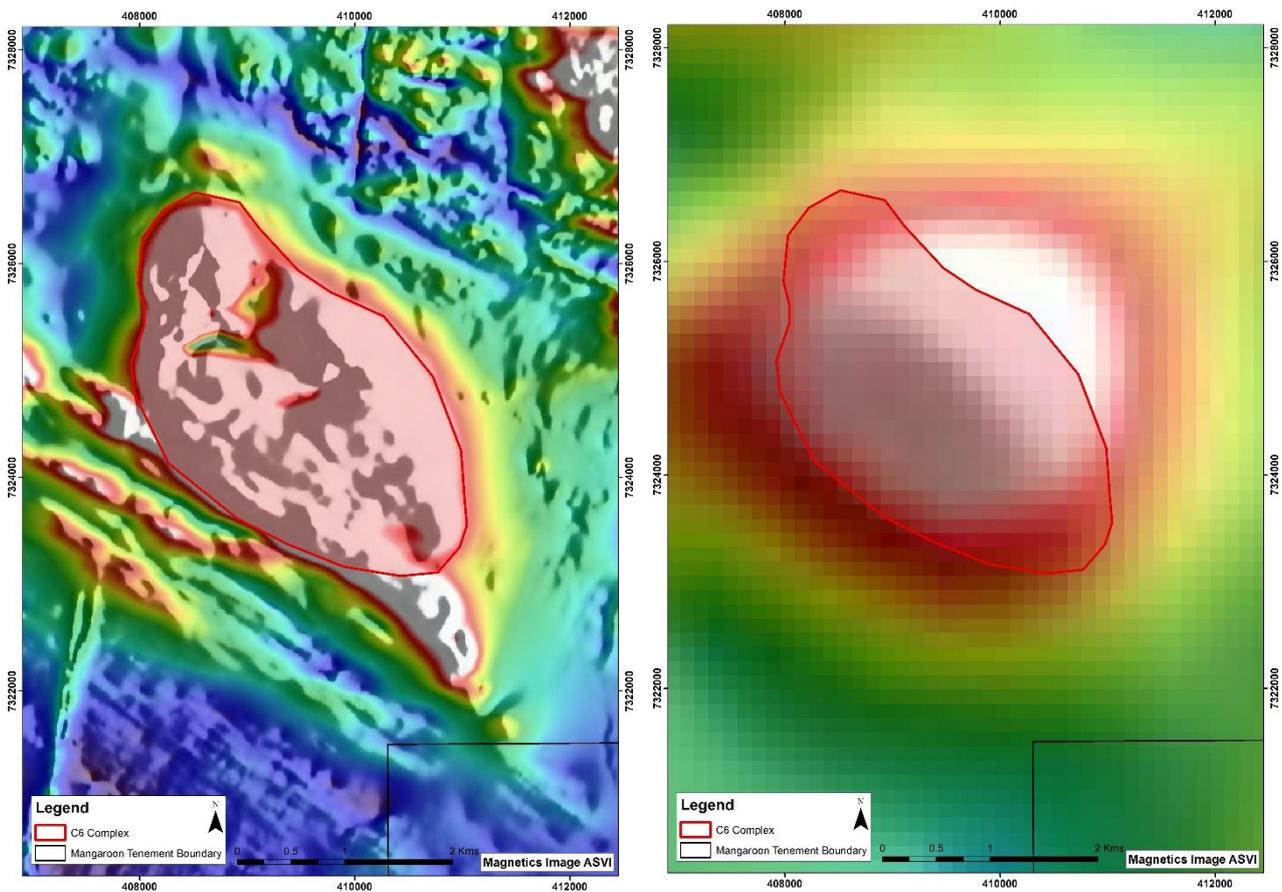
**Figure 3: Backscattered scanning electron microscope image from a mineralised interval of CBRC010 showing large, euhedral monazite grains (bright mineral) in an apatite, ferroan dolomite and magnesium-bearing siderite groundmass (darker minerals).**

**Mangaroon Carbonatite C6 (E09/2448: 100% DRE)**

C6 is another potential carbonatite intrusive complex located between the Minnie Creek and Minga Bar Faults, structural splays linked with the crustal scale Lyons River Fault which is interpreted as the conduit for carbonatite intrusions. C6 occurs ~25kms south of the C1-C5 carbonatites. C6 is defined by a large ~4.2km x 2.4km ovoid magnetic and gravity feature. The majority of C6 is under cover and drilling is required to confirm the lithology and presence of mineralisation.

Part of C6 that outcrops is an intense 900m x 600m magnetic feature which has been confirmed as an outcropping pyroxenite cumulate intrusion. Pyroxenite intrusions are known to occur associated with carbonatite intrusions and this is interpreted to be part of the C6 carbonatite intrusive complex.

C6 will be drilled in the March 2023 quarter to confirm lithology and to test for mineralisation.

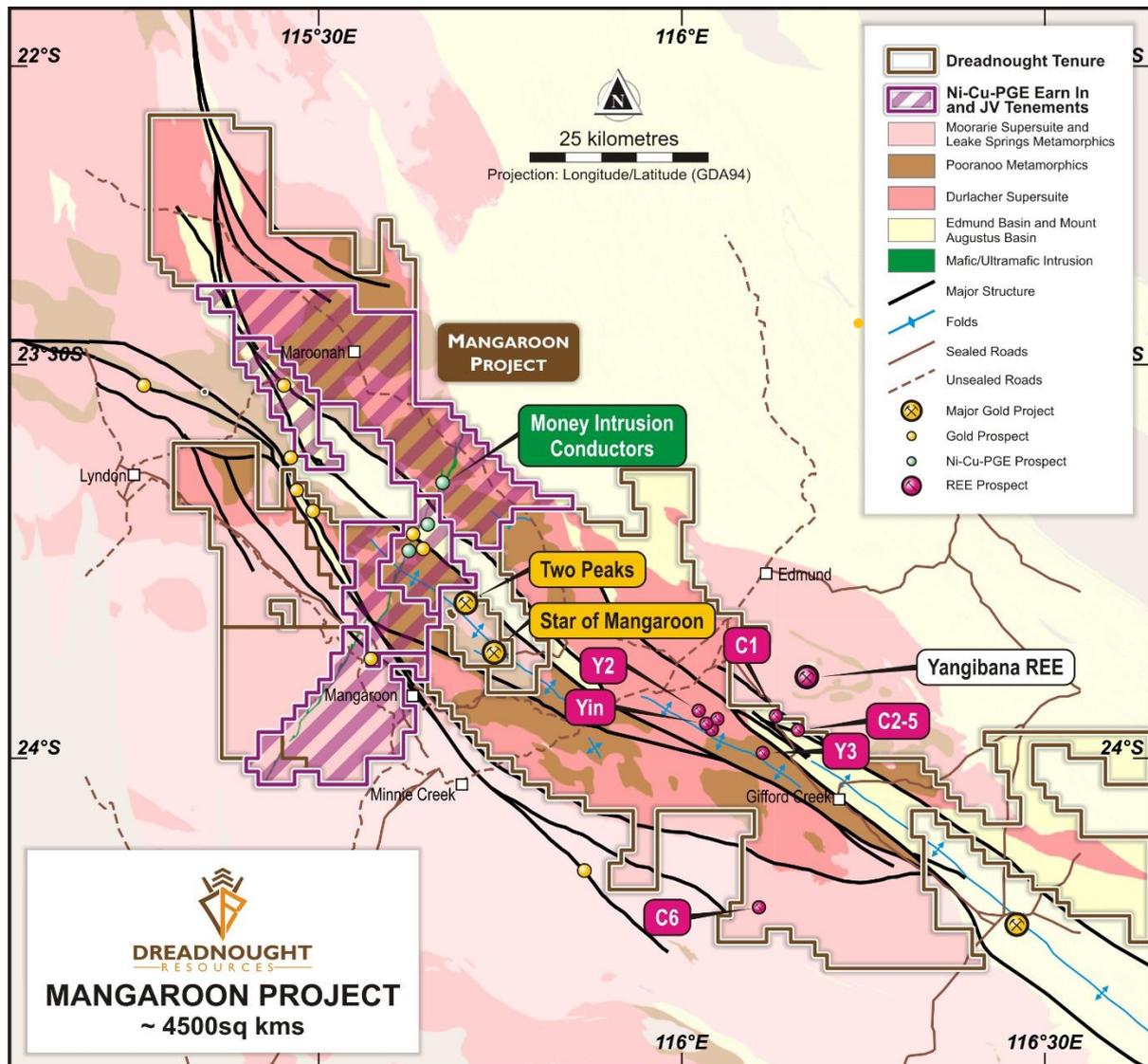


**Figure 4: Magnetic image (L) and gravity image (R) highlighting the ~4.2km x 2.4km coincident geophysical feature that defines the interpreted C6 carbonatite intrusive complex.**

**Background on Mangaroon (E08/3274, E8/3178, E09/2384, E09/2433, E09/2473: FQM Earn-in) (E08/3275, E09/2370, E09/2448, E09/2449, E09/2450, E09/2467, E09/2478: 100%)**

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



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



For further information please refer to previous ASX announcements:

- 24 September 2021 Airborne Magnetic-Radiometric Survey Commenced at Mangaroon
- 29 November 2021 Five Carbonatite Intrusions Identified at Mangaroon
- 2 February 2022 Rare Earths, Phosphate, Niobium & Zirconium Results from Mangaroon
- 28 September 2022 Drilling Commenced C1-C5 Carbonatites & Y8 Discovery
- 17 October 2022 Mineralised Carbonatites Discovered at C3 and C4
- 23 November 2022 Multiple, Large Scale REE-Nb-Ti-P Carbonatites

#### UPCOMING NEWSFLOW

**December-March:** Further updates on and assays from REE drilling at Yin Ironstone Complex (Mangaroon 100%)

**December Quarter:** Initial Yin JORC Resource (Mangaroon 100%)

**December/January:** Initial JORC Resource for Metzke's Find Au (Central Yilgarn 100%)

**December/January:** Results from Kimberley Auger sampling (Tarraji-Yampi 80% and 100%)

**December-March:** Further updates on and assays from REE drilling at C1-C5 Carbonatites (Mangaroon 100%)

**December/January:** Results of FLEM survey at the Money Intrusion (FQM JV/Earn-in)

**December/January:** Results from Wombarella Heli-EM survey (Tarraji-Yampi 100%)

**14-16 February 2023:** Presenting at the RIU Explorers Conference

**February/March:** Recommencement of RC and diamond drilling at Mangaroon (Mangaroon 100%)

**March/April:** Metallurgical results from Yin (Mangaroon 100%)

**June Quarter:** Updated Yin JORC Resources (Mangaroon 100%)

~Ends~

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

#### Competent Person's Statement

*The information in this announcement that relates to geology and exploration results and planning 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 report of the matters based on the information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original reports.*

## INVESTMENT HIGHLIGHTS

### Kimberley Ni-Cu-Au Projects

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

Tarraji-Yampi presents a rare first mover opportunity with known outcropping mineralisation and historic workings from the early 1900's which have seen no modern exploration.

Results to date indicate that there may be a related, large scale, Proterozoic Cu-Au-Ag-Bi-Sb-Co system at Tarraji-Yampi, similar to Cloncurry / Mt Isa in Queensland and Tennant Creek in the Northern Territory.



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

Mangaroon is a first mover opportunity covering ~5,300 kms located 250kms south-east of Exmouth in the vastly underexplored Gascoyne Region of WA. Part of the project is targeting Ni-Cu-PGE and is subject to a joint venture with First Quantum Minerals (earning up to 70%). The joint venture area contains outcropping high tenor Ni-Cu-PGE blebby sulphides in the recently defined Money Intrusion. Dreadnought's 100% owned areas contain outcropping high-grade gold bearing quartz veins along the Edmund and Minga Bar Faults and outcropping high-grade REE ironstones, similar to those under development at the Yangibana REE Project. Recently six potentially REE bearing carbonatite intrusions have been identified which may also be the source of the regional rare earths.

### Central Yilgarn Gold, Base Metals, Critical Minerals & Iron Ore Project

Central Yilgarn is located ~190km northwest of Kalgoorlie in the Yilgarn Craton. The project comprises ~1,600 sq kms covering ~150km of strike along the majority of the Illaara, Yerilgee and Evanston greenstone belts. Central Yilgarn is prospective for typical Archean mesothermal lode gold deposits, VMS base metals, komatiite hosted nickel sulphides and critical metals including Lithium-Caesium-Tantalum.

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

**Table 2: Mineralised intervals as confirmed by an infield preliminary pXRF analysis (correlation with laboratory assays currently unknown and should be treated with caution) at least 5m of >0.2% TREO, >0.1% Nb<sub>2</sub>O<sub>5</sub>, >4% TiO<sub>2</sub>, >3% P<sub>2</sub>O<sub>5</sub>.**

Hole ID	From (m)	To (m)	Interval (m)	Lithology	Prospect
CBRC001 And	16	21	5	Weathered carbonatite	C3
	33	95	62	Weathered carbonatite	
CBRC003	72	78	6	Fresh graphitic-pyritic carbonatite	
CBRC004	142	148	6	Fresh graphitic-pyritic carbonatite	
CBRC005	21	29	8	Fresh graphitic-pyritic carbonatite	
CBRC010 And	91	145	54	Fresh ferrocarbonatite	C4
	154	190	36	Fresh magnesiocarbonatite	
CBRC012	151	162	9	Fresh magnesiocarbonatite	C3/4
CBRC016	154	190	36	Weathered carbonatite	
CBRC017	30	60	30	Weathered carbonatite	
CBRC018	19	60	41	Weathered and fresh carbonatite	C3
CBRC023	11	42	31	Weathered carbonatite	
CBRC025	1	45	44	Weathered and fresh carbonatite	
		(EOH)			
CBRC027	7	40	33	Weathered carbonatite	
CBRC028	17	41	24	Weathered carbonatite	
CBRC029	3	75	72	Weathered and fresh carbonatite	
		(EOH)			
CBRC030	2	99	97	Weathered and fresh carbonatite	
		(EOH)			
CBRC031	14	27	13	Weathered carbonatite	
CBRC032	7	81	74	Weathered and fresh carbonatite	
		(EOH)			
CBRC033	7	84	77	Weathered and fresh carbonatite	
CBRC041	36	51	15	Weathered carbonatite	C4
CBRC042	19	33	14	Weathered carbonatite	C4/C5
CBRC044	39	64	25	Weathered carbonatite	
CBRC045	41	54	13	Weathered carbonatite	C5
CBRC046	43	70	27	Weathered carbonatite	
CBRC047	39	50	11	Weathered carbonatite	
CBRC051	27	63	36	Weathered and fresh carbonatite	
		(EOH)			
CBRC052	37	93	56	Weathered and fresh carbonatite	
		(EOH)			
CBRC053	37	54	17	Weathered carbonatite	C2
CBRC058	14	20	6	Weathered carbonatite	
CBRC061	21	28	7	Weathered carbonatite	C1
CBRC068	33	42	9	Weathered carbonatite	
CBRC069	51	57	6	Weathered carbonatite	
CBRC070	18	24	6	Weathered carbonatite	
CBRC080	53	114	61	Weathered carbonatite	
CBRC082	45	54	9	Weathered carbonatite	C3
CBRC083	7	139	132	Weathered and fresh carbonatite	
CBRC084	5	201	196	Weathered and fresh carbonatite	
		(EOH)			
CBRC085 And	37	76	39	Weathered carbonatite	
	86	120	34	Fresh carbonatite	
CBRC086	14	92	78	Weathered carbonatite	C3
CBRC087	5	201	196	Weathered and fresh carbonatite	

Hole ID	From (m)	To (m)	Interval (m)	Lithology	Prospect
CBRC088 And And	9	63	54	Weathered carbonatite	
	68	74	6	Fresh carbonatite	
	78	181 (EOH)	103	Fresh carbonatite	
CBRC089	8	101	93	Weathered and fresh carbonatite	
CBDD001 And	91	145	54	Fresh ferrocarbonatite	C4
	154	190	36	Fresh magnesiocarbonatite	
CBDD002	6.7	256.2	249.5	Weathered and fresh carbonatite	C3

**Table 3: Drill Collar Data (GDA94 MGAz50)**

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Type	Prospect
CBRC001	414383	7350106	305	-60	45	105	RC	C3
CBRC002	414211	7349938	313	-60	43	165	RC	
CBRC003	414102	7349828	313	-60	49	165	RC	
CBRC004	414045	7349772	311	-60	43	165	RC	
CBRC005	413985	7349716	306	-60	42	165	RC	
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	C4
CBRC012	414611	7348750	315	-60	46	165	RC	
CBRC013	414782	7348929	308	-60	45	171	RC	
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	C3
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	
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	C4
CBRC034	414386	7349428	319	-90	0	81	RC	
CBRC035	414614	7349202	320	-90	0	39	RC	
CBRC036	414495	7349092	318	-90	0	99	RC	
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	



**DREADNOUGHT**  
RESOURCES

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Type	
CBRC041	414834	7348745	315	-90	0	93	RC	C4
CBRC042	415068	7348752	316	-90	0	75	RC	C4
CBRC043	414940	7348635	315	-90	0	99	RC	
CBRC044	415178	7348632	308	-90	0	87	RC	
CBRC045	415330	7348524	315	-90	0	93	RC	
CBRC046	415433	7348425	315	-90	0	87	RC	C5
CBRC047	415546	7348319	308	-90	0	93	RC	
CBRC048	415656	7348204	309	-90	0	99	RC	
CBRC049	415886	7348204	306	-90	0	99	RC	
CBRC050	415771	7348340	306	-90	0	123	RC	
CBRC051	415658	7348431	306	-90	0	63	RC	
CBRC052	415545	7348538	308	-90	0	93	RC	C5
CBRC053	415658	7348657	308	-90	0	93	RC	
CBRC054	415422	7348643	309	-90	0	57	RC	
CBRC055	413819	7350449	307	-90	0	63	RC	C2
CBRC056	413900	7350534	304	-90	0	111	RC	
CBRC057	413688	7350449	303	-90	0	45	RC	
CBRC058	413818	7350674	300	-90	0	147	RC	
CBRC059	413704	7350559	300	-90	0	75	RC	
CBRC060	413588	7350674	307	-90	0	93	RC	
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	C1
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	
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	C3
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	
CBRC087	414431	7349698	306	-58	47	201	RC	
CBRC088	414318	7349587	311	-59	43	181	RC	
CBRC089	414654	7349695	309	-59	45	159	RC	
CBDD001	414847	7348981	312	-60	43	249.6	DDH	C4
CBDD002	414367	7349638	307	-60	45	279.6	DDH	C3



## JORC Code, 2012 Edition – Table 1 report template

### Section 1 Sampling Techniques and Data

#### JORC TABLE 1

##### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p>Reverse Circulation (RC) drilling was undertaken to produce samples for assaying.</p> <p><b>Preliminary pXRF analysis</b></p> <p>Preliminary assays were obtained using an Olympus Vanta M Series pXRF analyser. The pXRF was placed on the reject sample piles from the rigs Metzke cone splitter.</p> <p>One 3 beam, 35 second measurement was completed for each drill metre sample.</p> <p>The pXRF instrument is calibrated and serviced annually or more frequently as required with daily instrument calibration checks completed. Additionally, silica blanks and OREAS standards, appropriate to the style of mineralisation are routinely analysed to confirm performance. This procedure is in line with normal industry practice and deemed fit for purpose for preliminary analysis in first pass exploration drilling.</p> <p>This report relates to exploration results of a preliminary nature. pXRF analysis is a preliminary technique which will be superseded by laboratory analysis when it becomes available.</p> <p><b>Laboratory Analysis</b></p> <p>Two sampling techniques were utilised for this program, 1m metre splits directly from the rig sampling system for each metre and 3m composite sampling from spoil piles. Samples submitted to the laboratory were determined by the site geologist.</p> <p><b>1m Splits</b></p> <p>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.</p> <p><b>3m Composites</b></p> <p>All remaining spoil from the sampling system was collected in buckets 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.</p> <p>A pXRF is used on site to determine mineralised samples. Mineralised intervals have the 1m split collected, while unmineralised samples have 3m composites collected.</p> <p>All samples are submitted to ALS Laboratories in</p>



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Criteria	JORC Code explanation	Commentary
		<p>Perth for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30).</p> <p>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.</p> <p><b>Rock Chips</b></p> <p>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.</p> <p>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.</p> <p>Rock chips were submitted to ALS Laboratories in Perth for determination of Rare Earth Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30).</p>
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>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.).</i></li> </ul>	<p><b>RC Drilling</b></p> <p>Ausdrill undertook the program utilising a Drill Rigs Australia truck mounted Schramm T685WS drill rig with additional air from an auxiliary compressor and booster. Bit size was 5¾”.</p>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<p><b>RC Drilling</b></p> <p>Drilling was undertaken using a ‘best practice’ approach to achieve maximum sample recovery and quality through the mineralised zones.</p> <p>Best practice sampling procedure included: suitable usage of dust suppression, suitable shroud, lifting off bottom between each metre, cleaning of sampling equipment, ensuring a dry sample and suitable supervision by the supervising geologist to ensure good sample quality.</p> <p>At this stage, no known bias occurs between sample recovery and grade.</p>
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>RC chips were logged by a qualified geologist with sufficient experience in this geological terrane and relevant styles of mineralisation using an industry standard logging system which could eventually be utilised within a Mineral Resource Estimation.</p> <p>Lithology, mineralisation, alteration, veining, weathering and structure were all recorded digitally.</p> <p>Chips were washed each metre and stored in chip trays for preservation and future reference.</p>



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Criteria	JORC Code explanation	Commentary
		<p>RC pulp material is also analysed on the rig by pXRF, scintillometer and magnetic susceptibility meter to assist with logging and the identification of mineralisation.</p> <p>Logging is qualitative, quantitative or semi-quantitative in nature.</p>
<p>Sub-sampling techniques and sample preparation</p>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p><b>Preliminary pXRF analysis</b></p> <p>pXRF analysis of pulverised and partially homogenised reject RC sample piles is fit for purpose as a preliminary exploration technique.</p> <p>pXRF is a spot reading on raw (unprocessed) RC sample piles with variable grain sizes and states of homogenisation. High grade results were repeated at multiple locations to confirm repeatability. The competent person considers this acceptable within the context of reporting preliminary exploration results.</p> <p><b>RC Drilling</b></p> <p>From every metre drilled, a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter.</p> <p>QAQC in the form of duplicates and CRM's (OREAS Standards) were inserted through the ore zones at a rate of 1:50 samples. Additionally, within mineralised zones, a duplicate sample was taken and a blank inserted directly after.</p> <p>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).</p> <p>Standard laboratory QAQC is undertaken and monitored.</p> <p><b>Rock Chips</b></p> <p>Entire rock chips were submitted to the lab for sample prep and analysis.</p>
<p>Quality of assay data and laboratory tests</p>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</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>	<p><b>Preliminary pXRF analysis</b></p> <p>Olympus Vanta M Series pXRF analyser is used to provide preliminary quantitative measurement of mineralisation. A 3-beam, 35 second reading time was used with a single reading on unprepared raw RC chip sample piles. High grade samples were repeated to confirm repeatability of grade.</p> <p>Calibration checks of the pXRF are undertaken daily, a silica blank and certified REE standard OREAS 461 is routinely analysed to monitor pXRF performance.</p> <p><b>Laboratory Analysis</b></p> <p>Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE</p>



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Criteria	JORC Code explanation	Commentary
		<p>determination.</p> <p>Standard laboratory QAQC is undertaken and monitored by the laboratory and by the company upon assay result receipt.</p> <p><b>Rock Chips</b></p> <p>All samples were submitted to ALS Laboratories in Perth where 1-3kg rock chips samples were crushed so that &gt;70% of material passes through - 6mm, the sample is then pulverised to &gt;85% passing 75 micron.</p> <p>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 then analysed by XRF spectrometry specifically for Rare Earths (ALS Method ME-XRF30).</p> <p>Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE determination.</p> <p>No standards, duplicates or blanks submitted with rock chips.</p>
Verification of sampling and assaying	<ul style="list-style-type: none"> <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 (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<p><b>Preliminary pXRF analysis</b></p> <p>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.</p> <p><b>Logging and Sampling</b></p> <p>Logging and sampling were recorded directly into a digital logging system, verified and eventually stored in an offsite database.</p> <p>Significant intersections are inspected by senior company personnel.</p> <p>No twinned holes have been drilled at this time.</p> <p>No adjustments to any assay data have been undertaken.</p> <p><b>Rock Chips</b></p> <p>Rock chip and geological information is written in field books and coordinates and track data saved from hand held GPSs used in the field.</p> <p>Dreadnought geologists have inspected and logged all rock chips.</p> <p>Field data is entered into excel spreadsheets to be loaded into a database.</p>
Location of data points	<ul style="list-style-type: none"> <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>	<p>Collar position was recorded using a Emlid Reach RS2 RTK GPS system (+/- 0.2m x/y, +/-0.5m z).</p> <p>GDA94 Z50s is the grid format for all xyz data reported.</p> <p>Azimuth and dip of the drill hole was recorded after the completion of the hole using a Reflex Sprint IQ</p>

Criteria	JORC Code explanation	Commentary
		Gyro. A reading was undertaken every 30 <sup>th</sup> metre with an accuracy of +/- 1° azimuth and +/-0.3° dip.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<p>See drill table for hole positions.</p> <p>Data spacing at this stage is not suitable for Mineral Resource Estimation.</p>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<p>Drilling was undertaken at a near perpendicular angle to the interpreted strike and dip of the ironstone outcrops and modelled magnetic data.</p> <p>No sample bias is known at this time.</p>
<i>Sample security</i>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<p>All geochemical samples were collected, bagged, and sealed by Dreadnought staff and delivered to Exmouth Haulage in Exmouth.</p> <p>Samples were delivered directly to ALS Laboratories Perth by Exmouth Haulage out of Exmouth.</p>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	The program is continuously reviewed by senior company personnel.

## Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>The Mangaroon Project consists of 16 granted Exploration License (E08/3178, E08/3274, E08/3439, E09/2359, E09/2370, E09/2384, E09/2405, E09/2433, E09/2448, E09/2449, E09/2450, E09/2467E09/2473, E09/2478, E09/2531, E09/2535) and 3 pending Exploration Licenses (E08/3275, E09/2616, E09/2620).</li> <li>All tenements are 100% owned by Dreadnought Resources.</li> <li>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.</li> <li>E08/3178, E09/2370, E09/2384 and E09/2433 are subject to a 2% Gross Revenue Royalty held by Beau Resources.</li> <li>E08/3274, E08/3275, E09/2433, E09/2448, E09/2449, E09/2450 are subject to a 1% Gross Revenue Royalty held by Beau</li> </ul>



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Criteria	JORC Code explanation	Commentary
		<p>Resources.</p> <ul style="list-style-type: none"> <li>E09/2359 is subject to a 1% Gross Revenue Royalty held by Prager Pty Ltd.</li> <li>The Mangaroon Project covers 4 Native Title Determinations including the Budina (WAD131/2004), Thudgari (WAD6212/1998), Gnulli Gnulli (WAD22/2019) and the Combined Thiin-Mah, Warriyangka, Tharrkari and Jiwari (WAD464/2016).</li> <li>The Mangaroon Project is located over Lyndon, Mangaroon, Gifford Creek, Maroonah, Minnie Creek, Towera and Uaroo Stations.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>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:</p> <p>Regional Resources 1986-1988s: WAMEX Reports A23715, 23713</p> <p>Peter Cullen 1986: WAMEX Report A36494</p> <p>Carpentaria Exploration Company 1980: WAMEX Report A9332</p> <p>Newmont 1991: WAMEX Report A32886</p> <p>Hallmark Gold 1996: WAMEX Report A49576</p> <p>Rodney Drage 2011: WAMEX Report A94155</p> <p>Sandfire Resources 2005-2012: WAMEX Report 94826</p>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<p>The Mangaroon Project is located within Mangaroon Zone of the Gascoyne Province.</p> <p>The Mangaroon Project is prospective for orogenic gold, magmatic Ni-Cu-PGE mineralisation and carbonatite hosted REEs.</p>
Drill hole information	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<p>An overview of the drilling program is given within the text and tables within this document.</p>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade</li> </ul>	<p>All intervals with a preliminary pXRF value over 0.2% TREO, &gt;0.1% Nb<sub>2</sub>O<sub>5</sub>, &gt;4% TiO<sub>2</sub> and/or &gt;3% P<sub>2</sub>O<sub>5</sub> have been reported.</p>



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Criteria	JORC Code explanation	Commentary
	<p><i>truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p> <ul style="list-style-type: none"> <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>	No metal equivalents are reported.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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 length, true width not known').</li> </ul>	<p>Drilling is undertaken close to perpendicular to the dip and strike of the mineralisation.</p> <p>The true thickness of the mineralisation intersected in drill holes cannot currently be calculated.</p>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	Refer to figures within this report.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	The accompanying document is a balanced report with a suitable cautionary note.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	Suitable commentary of the geology encountered are given within the text of this document.
<i>Further work</i>	<ul style="list-style-type: none"> <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>	<p>Preliminary pXRF results to be confirmed by laboratory analysis as soon as possible.</p> <p>Additional RC drilling</p> <p>Diamond Drilling</p> <p>Metallurgical test work</p> <p>Resource Modelling</p>