

24 January 2023

CARBONATITE DISCOVERY SHAPING UP AS REGIONAL RARE EARTH SOURCE - MANGAROON (100%)

HIGHLIGHTS

In September 2022, an 82-hole (7,813m) RC drill program commenced on the C1-C5 carbonatites which had minimal outcrop and hence no definitive drill targets. This program involved wide-spaced, mostly vertical holes at an average depth of ~95m. The objective of this "first pass" program was to identify mineralisation to allow future programs to vector in on a potential source of the regional rare earth ironstones. The program is only partially complete with most of C1 covered, about half of C2-C5 and nothing over C6-C7.

The first pass program has already been an outstanding success with assays defining a ~600m x 550m zone of REE- P_2O_5 -Nb₂O₅-TiO₂-Sc mineralisation now confirmed at the C3 discovery. Assays received for 23 (1,911m) holes include:

- CBRC030: 96m @ 0.70% TREO from 3m (ending in mineralisation), including:
 - 31m @ 1.26% TREO (22% NdPr:TREO), 4.4% P2O5, 0.09% Nb2O5 and 73ppm Sc from 4m
- CBRC033: 99m @ 0.64% TREO from 6m (ending in mineralisation), including:
 - 44m @ 1.00% TREO (24% NdPr:TREO), 5.7% P₂O₅, 0.13% Nb₂O₅ and 103ppm Sc from 13m
- CBRC029: 72m @ 0.69% TREO from 3m (ending in mineralisation), including:
 - <u>31m @ 1.12% TREO (22% NdPr:TREO), 3.2% P₂O₅, 0.14% Nb₂O₅, 4.5% TiO₂ and 73ppm Sc from 4m</u>
- CBRC032: 72m @ 0.60% TREO from 9m (ending in mineralisation), including:
 - 12m @ 1.02% TREO (24% NdPr:TREO), 6.0% P2O5, 0.23% Nb2O5, 7.1% TiO2 and 112ppm Sc from 22m
- CBRC027: 42m @ 0.83% TREO from 6m, including:
 - 21m @ 1.25% TREO (23% NdPr:TREO), 2.4% P₂O₅, 0.13% Nb₂O₅ and 110ppm Sc from 9m

RC and diamond drilling will recommence in February/March 2023 including:

<u>C3:</u> Complete first pass drilling, commence JORC Resource infill, extend mineralisation at depth and pursue high grade core as seen at Mt Weld and Mountain Pass;

C2, C4, C5, C7: Complete first pass drilling;

C6: commence a focused drill program on the intense 900m x 600m magnetic feature; and

<u>~30km Long Yin REE Ironstone Complex:</u> Build on the already substantial JORC Inferred Resource that covers only 10% of the strike length of Yin (14.36Mt @ 1.13% TREO, see ASX Release 28 December 2022).

Dreadnought Resources Limited ("**Dreadnought**") is pleased to announce the discovery of large-scale REE-P₂O₅-Nb₂O₅-TiO₂-Sc mineralisation at C3. Mineralisation has been identified at C4 and C5 and requires follow up.

Dreadnought's Managing Director, Dean Tuck, commented: "Our first pass C1-C5 drilling is like throwing darts at a



dartboard while blindfolded. So, the discovery of a large-scale zone of rare earths at C3 is remarkable. C3 is already shaping up as a source of the regional rare earths and maybe C4 and C5 too. C6 and C7 have not even been touched yet. A Resource drill out at C3 will commence in the March 2023 quarter as we actively pursue a Mt Weld/Mountain Pass like high grade core. With the range and scale of minerals we have already seen, this region is emerging as a world class critical metals province. All of this achieved in just six months, is a tremendous effort by our team."

Figure 1: Photo of the Dreadnought team ready to deliver in 2023.

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SNAPSHOT - MANGAROON RARE EARTHS

Mangaroon is 100% Owned by Dreadnought

Genuine Scale Potential Already at Yin Ironstone Complex

- Initial independent Yin Resource of 14.36Mt @ 1.13% TREO covers only 3km of 30km of strike and is based on only 2.5 months of RC drilling (11,907m). Yin remains open over an additional 27km of strike and at depth.
- Over the 3km of the 30km long strike of the Yin Rare Earth Element ("**REE**") Ironstone Complex, the Resource intensity is ~4.8Mt/km.
- First tranche of long-term incentives now triggered with balance on track to be triggered at JORC Resource of at least 30Mt @ >1% TREO by 31 December 2024.

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

- C1-C7 carbonatites are shaping up as the regional source of REE initial drill program expands C1-C5 to ~6.5kms in strike length x 1km wide.
- 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.

<u>High-grade, Multi-Metal Potential Including REE (Neodymium, Praseodymium), Phosphorus, Niobium,</u> <u>Titanium & Scandium (</u>REE-P₂O₅-Nb₂O₅-TiO₂-Sc)

- Yin, like the Yangibana REE project controlled by the ~\$460M Hastings Technology Metals Ltd (ASX.HAS), ("Hastings") is globally unique due to the high proportion of NdPr in the total rare earth oxides ("NdPr:TREO" ratio).
- Six coherent zones of REE-Nb-Ti-P successfully identified within C1-C5 carbonatites with a ~600m x 550m zone of REE-P₂O₅-Nb₂O₅-TiO₂-Sc mineralisation now confirmed at the C3 discovery.

Potentially Attractive Mining Proposition

• Broad zones of shallow dipping mineralisation with parallel lodes and Resource intensity of ~4.8Mt/km 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_2O_3 and an average 40% TREO.
- REE at Yin is predominantly hosted in monazite which is amenable to commercial processing.
- Significant metallurgical study from 16 diamond holes drilled at Yin underway results expected April/May 2023.

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

- Yangibana is located only 25km to the northeast of Yin and currently has a Resource* of 29.93Mt @ 0.93% TREO with 0.32% Nd₂O₃+Pr₆O₁₁ (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%; 15 Dec 2022 Potential identified to significantly expand Yangibana Resource Base





Figure 2: Cross Section through C3 highlighting the recent mineralised intercepts (red) and pending follow up holes.



Figure 3: Plan view of C1-C5 highlighting mineralised intercepts (red) in relation to pending and planned holes.



Technical Discussion on the Carbonatite Drill Program

Carbonatite intrusions are known globally to host several different commodities including rare earths, niobium, titanium, phosphate and scandium often as different mineralised bodies within the same intrusion. Great examples of this include Mt Weld in Australia, Ngualla in Tanzania, Araxa in Brasil and Bayan Obo in China. 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 and C6 carbonatite complex has minimal outcrop, a first pass RC drilling program 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.

This first pass program is only partially complete with 82 RC holes for 7,813m completed over most of C1, about half of C2-C5 and nothing over C6-C7. Despite the first pass program being only partially completed it has already delivered numerous successes including:

- 6 coherent zones of REE-P₂O₅-Nb₂O₅-TiO₂ and/or Sc including at C3 where an extensive 600m x 550m zone has been delineated for JORC Resource infill drilling 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.

Significant drill results from the first batch of assays (23 RC holes) over the 600m x 550m zone at C3 include:

- CBRC030: 96m @ 0.70% TREO from 3m (ending in mineralisation), including:
 - <u>31m @ 1.26% TREO (22% NdPr:TREO), 4.4% P₂O₅, 0.09% Nb₂O₅ and 73ppm Sc from 4m</u>
- CBRC033: 99m @ 0.64% TREO from 6m *(ending in mineralisation)*, including:
 - <u>44m @ 1.00% TREO (24% NdPr:TREO), 5.7% P_2O_5 , 0.13% Nb₂O₅ and 103ppm Sc from 13m</u>
- CBRC029: 72m @ 0.69% TREO from 3m *(ending in mineralisation)*, including:
 - 31m @ 1.12% TREO (22% NdPr:TREO), 3.2% P₂O₅, 0.14% Nb₂O₅, 4.5% TiO₂ and 73ppm Sc from 4m
- CBRC032: 72m @ 0.60% TREO from 9m (ending in mineralisation), including:

12m @ 1.02% TREO (24% NdPr:TREO), 6.0% P2O5, 0.23% Nb2O5, 7.1% TiO2 and 112ppm Sc from 22m

CBRC027: 42m @ 0.83% TREO from 6m, including:

21m @ 1.25% TREO (23% NdPr:TREO), 2.4% P₂O₅, 0.13% Nb₂O₅ and 110ppm Sc from 9m

REE mineralisation has been confirmed in both weathered and fresh carbonatites with petrographic work showing coarse grained (up to 0.25mm) monazite and REE carbonate mineralisation in P-rich ferrocarbonatites and Ba and Fe-rich magnesiocarbonatite. XRD analysis of the weathered carbonatites is pending.

In addition to REE mineralisation, other significant critical metal intercepts have been returned including phosphate (peak value $17.6\% P_2O_5$), niobium (peak value $0.43\% Nb_2O_5$), titanium (peak value $9.8\% TiO_2$) and scandium (peak value 216 ppm Sc).



RC and diamond drilling will recommence in February/March 2023 including:

- <u>C3:</u> Complete first pass drilling, commence JORC Resource infill, extend mineralisation at depth and pursue high grade core as seen at Mt Weld and Mountain Pass;
- <u>C2, C4, C5, C7:</u> Complete first pass drilling;
- C6: Commence first pass drilling; and
- <u>~30km Long Yin Ironstone Complex</u>: Build on the already substantial JORC Resource that covers only 10% of the strike length of Yin (14.36Mt @ 1.13% TREO).

The first pass wide spaced drilling program has been designed to drill through cover and into fresh rock 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.

As required, the first pass drilling will be followed up by an 80m x 80m spaced angled framework program to:

- determine the extent of mineralisation along strike and at depth;
- the controls on mineralisation;
- locate potential high-grade zones within the wider mineralised area; and
- produce samples for preliminary metallurgical test work.



Figure 4: Plan view of the wider Gifford Creek Ferrocarbonatite Complex showing the location of ironstones and carbonatites.



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

C6 is another potential carbonatite intrusive complex located between the Minnie Creek and Minga Bar Faults, being structural splays linked with the crustal scale Lyons River Fault which is the interpreted 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 be associated with carbonatite intrusions and this is interpreted to be part of the C6 carbonatite intrusive complex.

Part of the learnings to date at C1-C5 has been the apparent association between magnetic features and rare earths, making C6 a particularly exciting target. C6 will be drilled in the March 2023 quarter to confirm lithology and to test for mineralisation.



Figure 5: 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 ("**FQM**") (earning up to 70%) – Figure 6. 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, REE-Nb-Ti-P Carbonatites and outcropping high tenor Ni-Cu-PGE blebby sulphides in the recently defined Money Intrusion.

In December 2022, Dreadnought delivered an initial independent Yin Resource of 14.36Mt @ 1.13% TREO covering only 3km of the 30km strike Yin REE Ironstone Complex.



Figure 6: 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

January: Results from regional surface sampling of the Yin Ironstone Complex (Mangaroon 100%)

January: Quarterly Activities and Cashflow Report

January/February: Results from reconnaissance surface sampling at Bresnahan (100%)

January/February: Results from Kimberley auger sampling (Tarraji-Yampi 80% and 100%)

February: Initial JORC Resource for Metzke's Find Au (Central Yilgarn 100%)

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

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

February: Results from Wombarella Heli-EM survey (Tarraji-Yampi 100%)

14-16 February: Presenting at the RIU Explorers Conference (Fremantle, WA)

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

March: Financial statements 31 Dec 2022

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

4-6 April: Presenting at Future Facing Commodities (Singapore)

April: Quarterly Activities and Cashflow Report

May: Rare earth Resource upgrades for Mangaroon 100%

~Ends~

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



INVESTMENT HIGHLIGHTS

Kimberley Ni-Cu-Au Projects

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

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

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

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

Mangaroon is a first mover opportunity covering ~5,300 kms located 250kms south-east of Exmouth in the vastly underexplored Gascoyne Region of WA. Part of the project is targeting Ni-Cu-PGE and is subject to a joint venture with First Quantum Minerals (earning up to 70%). The joint venture area



contains outcropping high tenor Ni-Cu-PGE blebby sulphides in the recently defined Money Intrusion. Dreadnought's 100% owned areas contain outcropping high-grade gold bearing quartz veins including the historic Star of Mangaroon and Diamond's gold mines, along the Edmund and Minga Bar Faults and outcropping high-grade REE ironstones, similar to those under development at the Yangibana REE Project and seven carbonatite intrusions which may be the source of the regions rare earth mineralisation.

Dreadnought has delivered an initial JORC Resource over just 3kms Yin REE Ironstone Complex delivering 14.36Mt @ 1.13% TREO (30% NdPr:TREO Ratio) with an additional 27 strike kilometres to be tested in 2023.

Bresnahan HREE and Au Project

Bresnahan is located ~125km southwest of Newmoan in the Ashburton Basin. The project comprises ~3,700 sq kms covering over 200kms strike along the Bresnahan Basin / Wyloo Group unconformity. Bresnahan is prospective for unconformity related heavy rare earth (**"HREE"**) deposits similar to Browns Range HREE deposits and mesothermal lode gold similar to Paulsen's Au-Ag-Sb deposits along strike.

Prior to consolidation by Dreadnought, the Bresnahan Basin had only been explored for unconformity uranium with limited exploration for mesothermal gold. Bresnahan is a first mover opportunity to explore for unconformity HREE.

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

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

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



Cautionary Statement

This announcement and information, opinions or conclusions expressed in the course of this announcement contains forecasts and forward-looking information. Such forecasts, projections and information are not a guarantee of future performance, involve unknown risks and uncertainties. Actual results and developments will almost certainly differ materially from those expressed or implied. There are a number of risks, both specific to Dreadnought, and of a general nature which may affect the future operating and financial performance of Dreadnought, and the value of an investment in Dreadnought including and not limited to title risk, renewal risk, economic conditions, stock market fluctuations, commodity demand and price movements, timing of access to infrastructure, timing of environmental approvals, regulatory risks, operational risks, reliance on key personnel, reserve estimations, native title risks, cultural heritage risks, foreign currency fluctuations, and mining development, construction and commissioning risk.

Competent Person's Statement – 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 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 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.



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

		Tuble 1	. Signijicu	n merset	.110115 >0.5% TRE		NLO IIIg	illignicu.			
	From	T a (ma)	Interval	TREO	Nd ₂ O ₃ +Pr ₆ O ₁₁	NdPr:TREO	P ₂ O ₅	Nb ₂ O ₅	TiO ₂	Sc	Ducoucot
Hole ID	(m)	To (m)	(m)	(%)	(%)	(%)	(%)	(%)	(%)	(ppm)	Prospect
CBRC027	6	48	42	0.83	0.19	23%	1.7	0.10	-	95	
incl	9	30	21	1.25	0.29	23%	2.4	0.13	1.4	110	
CBRC028	15	57	42	0.63	0.14	22%	1.6	0.09	-	101	
incl	24	36	12	1.00	0.23	23%	1.8	0.11	1.5	96	
CBRC029	3	75 (EOH)	72	0.69	0.15	22%	2.6	0.08	-	45	C3
Incl.	6	37	31	1.26	0.28	22%	3.2	0.14	4.5	73	
SBRC030	3	99 (EOH)	96	0.70	0.14	20%	2.8	0.07	-	49	
Incl.	4	37	33	1.12	0.22	20%	4.4	0.09	3.6	73	
CBRC031	12	24	12	0.52	0.12	23%	-	-	-	-	
CBRC032	9	81 (EOH)	72	0.60	0.14	23%	3.5	0.10	-	64	
Incl.	22	34	12	1.02	0.24	24%	6	0.23	7.1	112	
CBRC033	6	105 (EOH)	99	0.64	0.14	22%	4.2	0.13	-	72	
Incl	13	57	44	1.00	0.22	22%	5.7	0.13	2.8	103	
CBRC034	15	33	18	0.33	0.08	24%	0.8	0.08	-	84	
CBRC036	18	57	39	0.30	0.07	23%	1.4	0.09	-	74	
CBRC038	9	15	6	0.36	0.07	19%		-	-	-	C4
CBRC039	39	57	18	0.30	0.07	23%	1.1	0.09	-	73	
CBRC041	30	57	27	0.32	0.07	22%	1.5	0.10	-	81	
CBRC042	21	33	12	0.53	0.13	25%	0.7	0.10	-	79	
CBRC043	39	69	30	0.30	0.07	23%	1.3	0.07	-	78	
CBRC044	27	66	39	0.60	0.14	23%	1.8	0.11	-	86	
incl	40	54	14	0.92	0.22	24%	2.7	0.17	5.1	104	
CBRC045	30	63	33	0.42	0.09	21%	1.6	0.08	-	87	
CBRC046	33	66	33	0.38	0.08	21%	1.6	0.09	-	91	
CBRC047	24	66	42	0.34	0.07	21%	2	0.07	-	85	C5
CBRC048	33	54	21	0.37	0.08	22%	1	0.07	-	86	
CBRC049	36	96	60	0.47	0.10	21%	3.5	0.08	-	47	
		Table	2: Sianific	ant Interse	ctions >3%P2O5,	>5% TiO2. >1	00ppm	Sc hiahlia	hted.		

 Table 2: Significant Intersections >3%P2O5, >5% TiO2, >100ppm Sc highlighted.

Hole ID	From (m)	To (m)	Interval (m)	P₂O₅ (%)	TiO₂ (%)	Sc (ppm)	Prospect
CBRC027	20	26	6	4.8			
and	21	36	15			148	
CBRC028	31	54	23			137	
CBRC029	12	37	25	3.5			C3
and	13	32	19		5.5	79	L3
SBRC030	11	62	51	4.0			
Incl.	17	29	12	6.0			
and	17	27	10		5.9	107	
CBRC032	23	45	22	6.2			
Incl.	31	36	5	13.0			
and	12	32	20		7.3	112	
CBRC033	17	56	39	6.3			
Incl.	18	33	15	8.0			C4
and	24	51	27		3.0	120	
CBRC041	60	87	27	3.5			
CBRC042	39	45	6	6.0			
CBRC043	39	57	18		4.8	100	
CBRC047	48	69	21	3.3			
and	39	51	12			133	CE
CBRC048	66	78	12	3.4			C5
CBRC049	48	69	21	6.2			

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Table 3: Drill Collar Data (GDA94 MGAz50)

		- ··			· ·	DA94 MGA	,	_	
	Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Туре	Prospect
	CBRC001	414383	7350106	305	-60	45	105	RC	
_	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	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	C4
	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	C
	CBRC025	414269	7349765	309	-90	0	45	RC	C3
	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	
1	CBRC036	414495	7349092	318	-90	0	99	RC	
	CBRC037	414740	7349086	315	-90	0	39	RC	
	CBRC038	414607	7348977	312	-90	0	57	RC	C4
	CBRC039	414528	7348879	314	-90	0	99	RC	
	CBRC040	414952	7348865	315	-90	0	63	RC	
	CBRC041	414834	7348745	315	-90	0	93	RC	
	CBRC042	415068	7348752	316	-90	0	75	RC	
	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	
	CBRC047	415546	7348319	308	-90	0	93	RC	
	CBRC048	415656	7348204	309	-90	0	99	RC	C5
	CBRC049	415886	7348204	306	-90	0	99	RC	
	CBRC050	415771	7348340	306	-90	0	123	RC	
	CBRC051	415658	7348431	306	-90	0	63	RC	
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_				RESOU	JRC	E S			
	Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Туре	
_	CBRC052	415545	7348538	308	-90	0	93	RC	
	CBRC053	415658	7348657	308	-90	0	93	RC	C5
	CBRC054	415422	7348643	309	-90	0	57	RC	
	CBRC055	413819	7350449	307	-90	0	63	RC	
	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	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	C1
	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	
	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

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	 Reverse Circulation (RC) drilling was undertaken to produce samples for assaying. Laboratory Analysis Two sampling techniques were utilised for this program, 1m 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. 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. 3m Composites 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. 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 Oxides by Lithium Borate Fusion XRF (ALS Method ME-XRF30) and for 48 multi-elements via 4 acid digestion with MS/ICP finish (ALS Code ME-MS61).
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	RC Drilling Ausdrill undertook the program utilising a Drill Rigs Australia truck mounted Schramm T685WS drill rig with additional air from an auxiliary compressor and booster. Bit size was 5 ³ / ₄ ".
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	RC Drilling Drilling was undertaken using a 'best practice' approach to achieve maximum sample recovery and quality through the mineralised zones. Best practice sampling procedure included: suitable usage of dust suppression, suitable shroud, lifting off bottom between each metre, cleaning of sampling equipment, ensuring a dry sample and suitable supervision by the supervising geologist to ensure good sample



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Criteria	JORC Code explanation	Commentary
		At this stage, no known bias occurs between sample recovery and grade.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	RC chips were logged by a qualified geologist with sufficient experience in this geological terrane and relevant styles of mineralisation using an industry standard logging system which could eventually be utilised within a Mineral Resource Estimation. Lithology, mineralisation, alteration, veining, weathering and structure 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, scintillometer and magnetic susceptibility meter to assist with logging and the identification of mineralisation.
		Logging is qualitative, quantitative or semi- quantitative in nature.
Sub-sampling	• If core, whether cut or sawn and whether	RC Drilling
techniques and sample preparation	 quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. 	From every metre drilled, a 2-3kg sample (split) was sub-sampled into a calico bag via a Metzke cone splitter.
	 For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 	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.
	 Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	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.
Quality of assay	• The nature, quality and appropriateness of	Laboratory Analysis
data and laboratory tests	 the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	Lithium borate fusion is considered a total digest and Method ME-XRF30 is appropriate for REE, P ₂ O ₅ , TiO ₂ 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.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. 	Logging and Sampling Logging and sampling were recorded directly into a digital logging system, verified and eventually



Criteria	JORC Code explanation	Commentary
	 Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	stored in an offsite database. Significant intersections are inspected by senior company personnel. No twinned holes have been drilled at this time. No adjustments to any assay data have been undertaken.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	Collar position was recorded using a Emlid Reach RS2 RTK GPS system (+/- 0.2m x/y, +/-0.5m z). GDA94 Z50s is the grid format for all xyz data reported. Azimuth and dip of the drill hole was recorded after the completion of the hole using a Reflex Sprint IQ Gyro. A reading was undertaken every 30 th metre with an accuracy of +/- 1° azimuth and +/-0.3° dip.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	See table 1 and 2 for hole positions and sampling information.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	Drilling was undertaken at a near perpendicular angle to the interpreted strike and dip of the ironstone outcrops and modelled magnetic data. No sample bias is known at this time.
Sample security	 The measures taken to ensure sample security. 	All geochemical samples were collected, bagged, and sealed by Dreadnought staff and delivered to Exmouth Haulage in Exmouth. Samples were delivered directly to ALS Laboratories Perth by Exmouth Haulage out of Exmouth.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	The program is continuously reviewed by senior company personnel.



SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code explanation	Commentary
Criteria Mineral tenement and land tenure status	 JORC Code explanation Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 Commentary The Mangaroon Project consists of 20 granted Exploration License (E08/3178, E08/3274, E08/3275, E08/3439, E09/2490, E09/2459, E09/2433, E09/2473, E09/2449, E09/2465, E09/2433, E09/2467, E09/2473, E09/2478, E09/2450, E09/2467, E09/2473, E09/2620) and 4 granted Mining Licenses (M09/146, M09/147, M09/174, M09/175). All tenements are 100% owned by Dreadnought Resources. E08/3178, E08/3274, E09/2384, E09/2433, E09/2473 are subject to an option agreement with First Quantum Minerals over the base metal rights. E08/3178, E09/2370, E09/2384 and E09/2433 are subject to a 2% Gross Revenue Royalty held by Beau Resources. E08/3178, E08/3275, E09/2433, E09/2448, E09/2443 are subject to a 1% 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 Prager Pty Ltd. E09/2290, M09/146 and M09/147 are subject to a 1% Gross Revenue Royalty held by Prager Pty Ltd. E09/2290, M09/146 and M09/147 are subject to a 1% Gross Revenue Royalty held by STEHN, Anthony Paterson and BROWN, Michael John Barry. M09/174 is subject to a 0.5% Gross Revenue Royalty held by STEHN, Anthony Paterson and BROWN, Michael John Barry. M09/175 is subject to a 0.5% Gross Revenue Royalty held by STEHN, Anthony Paterson and BROWN, Michael John Barry. The Mangaroon Project covers 4 Native Title Determinations including the Budina (WAD131/2004), Thudgari (WAD6212/1998), Gnulli Gnulli (WAD464/2016). The Mangaroon Project is located over Lyndon, Mangaroon, Gifford Creek, Maroonah, Minnie Creek, and Towera
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Stations. 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 1986-1988: 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



Criteria	RESOURCE JORC Code explanation	Commentary
		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 REE-P- Nb-Ti-Sc mineralisation.
Drill hole information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	An overview of the drilling program is given within the text and tables 1 and 2 within this document.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	All results greater than 0.3% TREO, 3% P ₂ O ₅ , 5% TiO ₂ and 100ppm Sc have been reported. Significant intercepts are length weight averaged for all samples with TREO values >0.2% TREO with up to 3m of internal dilution (<0.2% TREO). No metal equivalents are reported.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	Drilling is undertaken close to perpendicular to the dip and strike of the mineralisation. The true thickness of the mineralisation intersected in drill holes cannot currently be calculated.
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.



	RESOURCE	. 5				
Criteria	JORC Code explanation	Commentary				
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The accompanying document is a balanced report with a suitable cautionary note.				
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Suitable commentary of the geology encountered are given within the text of this document.				
Further work	 The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	Additional RC drilling Diamond Drilling Metallurgical test work Additional Resource Modelling				