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Cobra Resources PLC
11 September 2023

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11 September 2023

Cobra Resources plc
("Cobra" or the "Company")

Positive Metallurgy Confirms Ionic Rare Earth Mineralisation at Boland Prospect, Wudinna
&
New Tenement Applications to Increase Project Size

Cobra's Geological Concept Has Capacity to Change Future Supply of Critical REEs to Drive Decarbonisation

Cobra, a gold, rare earth and IOCG exploration company focused on the Wudinna Project in South Australia, is pleased to advise that metallurgical testwork carried out by the Australian Nuclear Science and Technology Organisation ("ANSTO") confirms Rare Earth Elements ("REE") mineralisation at the Boland palaeo-channel prospect to be cost-efficient, easily recoverable ionic adsorption rare earth clays.

Cobra can now attest to having highly desirable ionic rare earth mineralisation at Wudinna, where extraction is low-cost and yields high recoveries of heavy and magnet rare earths which the Company believes to be regionally scalable.

Accordingly, the Company has made two further applications west of the Wudinna Project to establish itself as the dominant landholder on the Narlaby palaeo-channel.

Highlights

- **Ionic metallurgy**: testing by ANSTO demonstrates rapid recoveries by desorption leaching within 30 minutes using ammonium sulphate in weak acid conditions (pH4), with low acid consumption and low dissolution of gangue elements, where:
    - Further increases in REE recovery are demonstrated through increased leach time (six hours) and a slight increase in acidity (pH3) where maximum extractions of 58% Magnet Rare Earth Oxides ("MREOs") and 65% Heavy Rare Earth Oxides ("HREOs") were achieved

  - Low acid consumption of 6-30 kg/t supports very positive economic metrics for further processing optimisation
  - Low rates of dissolution of gangue elements (aluminium, calcium, iron, thorium and uranium)

- **Preferred mineralogy**: ionic clay REE deposits are a superior source of HREOs and MREOs (neodymium, praseodymium, dysprosium and terbium), owing to their enrichment relative to Light Rare Earth Oxides ("LREOs") and their ability to be desorbed through ion exchange rather than aggressively baked and acid leached which is high cost and increases environmental risk

- **Superior ratios of recovery:** high recoveries of high-value HREOs and lower recoveries of low-value LREOs that enable the cost-effective generation of a superior REE carbonate product

- **New concept for ionic mineralisation**: the Boland prospect presents as a new alternate source of low disturbance, low-cost MREOs and HREOs owing to its amenability to Insitu Recovery Mining ("ISR") and cost-effective metallurgy

- **Significant scalability**: over 430 km^2 of untested palaeo-channel has been defined over the existing Wudinna Project tenements. These results confirm "proof-of-concept" and are game-changing for future REE expansion drilling

- **Expanded footprint**: a further two tenement applications (Figure 1) have been submitted by Lady Alice Mines Pty Ltd (a Cobra subsidiary) to add a further 1,512 km^2 of prospective palaeo-channel geology making Cobra the dominant holder of palaeo-channel ground in the region

- **Forward plan**: to rapidly advance the Boland discovery, the Company plans to:
  - Drill sonic core holes to better understand the nature of mineralisation, define permeability potential, and recover sufficient samples to produce a REE carbonate
  - Install monitoring wells to gather baseline hydrology data to inform pilot ISR extraction tests
  - Resource expansion Aircore ("AC") drilling to define a maiden ionic REE resource
  - Re-analysis of historic drill samples on new tenement applications to define new ionic REE occurrences
  - Regional AC palaeo-channel testing to demonstrate province scale potential

Rupert Verco, CEO of Cobra, commented:

"These metallurgy results place the Company amongst the handful of projects which can attest to having highly desirable ionic rare earth mineralisation.

Low-cost metallurgy, coupled with low-cost insitu recovery mining, are the key ingredients to enable a clean, low-impact sustainable source of rare earth metals.

The REE mineralisation at Boland can be rapidly recovered using a lixiviant comparable to orange juice in acidity, in a mining practice that can be integrated into current agricultural land practices.

It is these attributes that make this discovery significant. The Boland discovery has the right technical components to secure the future supply of critical rare earth metals necessary to decarbonise the western world.

With the further two exploration licence applications, Cobra is now the dominant holder of REE prospective palaeo-channel in the region, a jurisdiction experienced in, and supportive of, insitu recovery mining."

David Clarke, Non-Executive Director of Cobra, commented:

"The proof-of-concept Cobra has delivered at Boland is the result of exceptional geological thinking from Rupert Verco and Robert Blythman whom I congratulate on behalf of the Board. It was a strongly reasoned concept but nothing like this model has previously existed. It may take some time for the full implications of Cobra's model to be apparent - but it is already clear that it is positive for Cobra's shareholders and the western world's ready access to a range of critical rare earth metals required for permanent magnets that are the efficiency enabler for electrification."

Boland Background

AC drilling in April at the Boland prospect was designed for "proof-of-concept" to confirm the mobilisation of REEs from enriched saprolites to the younger clays hosted within the palaeo-channel system.

A total of 17 holes were drilled across a broad area representing ~12 km^2, and drilling produced multiple intersections, where:

- Smectite clays hosted within palaeo-channel sands and basal clays in contact with saprolite are enriched in HREOs
- Intersections extended into underlying saprolite where elevated grades are depleted in heavy rare earths in comparison to overlying smectite clays
- Intersections in palaeo-channel clays up to 3m at 1,004 ppm Total Rare Earth Oxide ("TREO") and up to 42m at 2,189 ppm TREO in underlying saprolite

A total of 17 representative 3m composite samples from the Boland prospect were submitted to ANSTO for desorption metallurgical testing (see Table 1). Samples are characterised by three geological domains:

1. Smectite playa clays (five samples)
2. Contacting palaeo-channel saprolite (five samples)
3. Underlying saprolite (seven samples)

Metallurgical Results

Results show rapid recoveries by desorption of REEs in the first 30 minutes using 0.5 mol ammonium sulphate as a lixiviant, at ambient temperatures and weak acidic conditions (see Table 1).

The highest recoveries are observed from domain 1 (playa clays hosted within the palaeo-channel) and domain 2 (contacting palaeo-channel saprolite), where mineralisation is interpreted to ionically bind to smectite clays at the contact with channel sands, where ionic adsorption is driven by discrete changes in acidity/alkalinity.

An important characteristic of ionic clay hosted rare earths is the low acid consumption (results average 6-30 kg/t) and the low dissolution of gangue minerals including cerium, aluminium, calcium and iron. Additionally, the dissolution of uranium and thorium is low.

Increases in REE recovery were achieved by increasing the leach time to six hours (pH4) and lowering the acidity to pH3 over a leach time of up to six hours (see Table 1).

Within the palaeo-channel, maximum recoveries at pH3 (six hours) are 58% for MREOs and 65% for HREOs (see Figure 3). These results are considered highly encouraging with scope for increased recoveries with optimised sample compositing and increased understanding of REE clay adsorption distribution and mineralogy.

Pleasingly, samples of saprolite in contact with the palaeo-channel exhibit low-moderate extractions under desorption conditions (see Figure 4).

In contrast, saprolite samples show low <10% recoveries and higher acid consumptions than palaeo-channel sediments under desorption conditions.

Figure 1: Composite LAM9170 exhibits high recoveries of MREOs and HREOs under desorption conditions

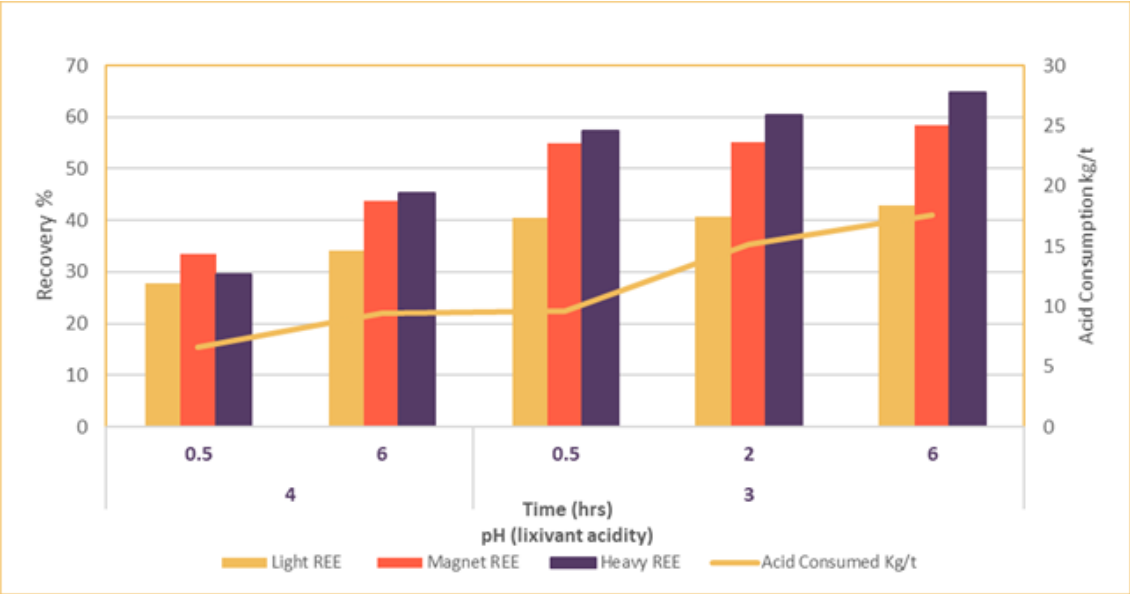


Figure 2: Individual REE recoveries from LAM9170 composite under tested desorption conditions

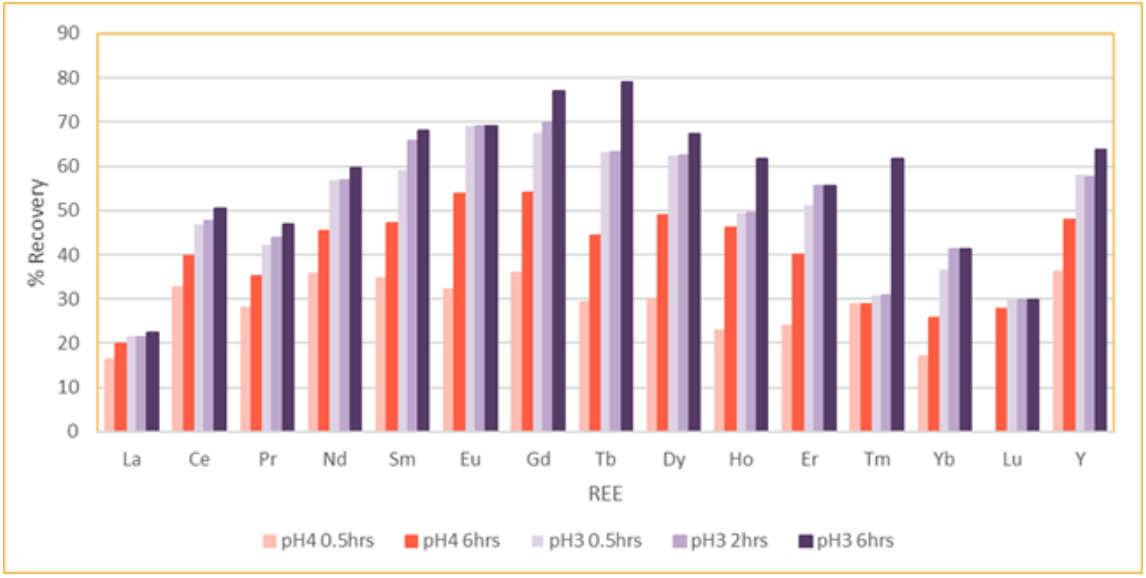


Figure 3: Average recoveries and acid consumption of the five playa clay sample composites

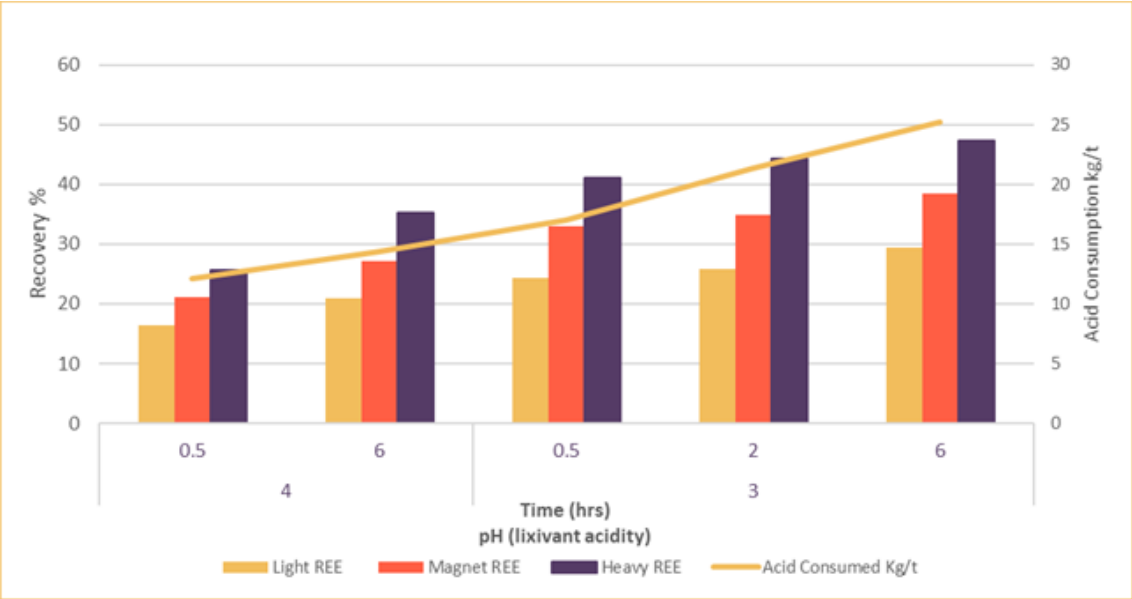


Figure 4: Average recoveries and acid consumption of the five saprolite sample composites in contact with palaeo-channel sediments

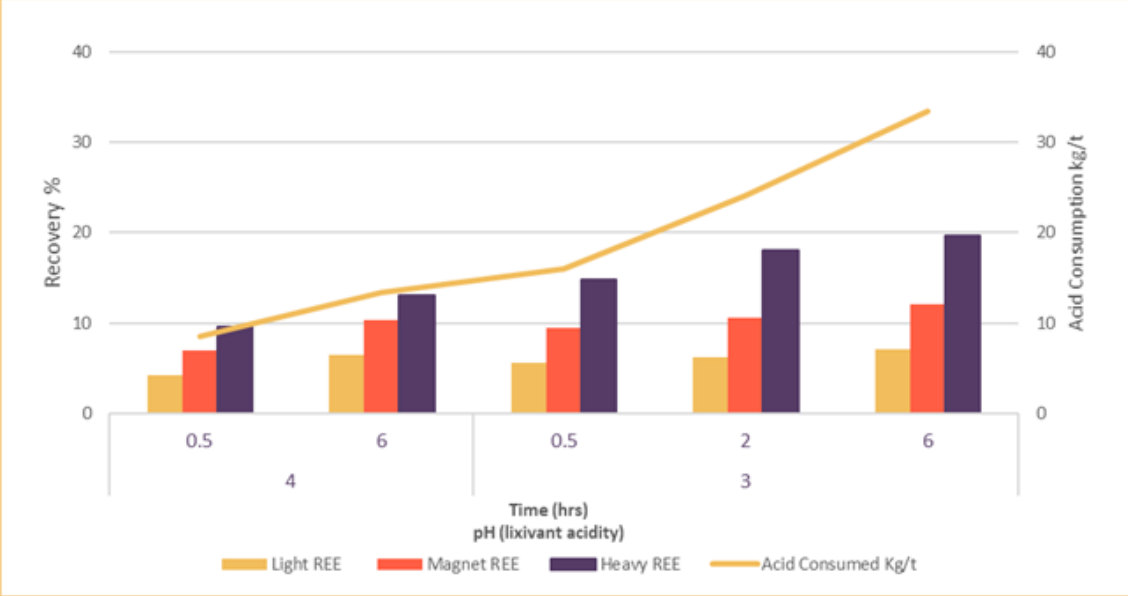
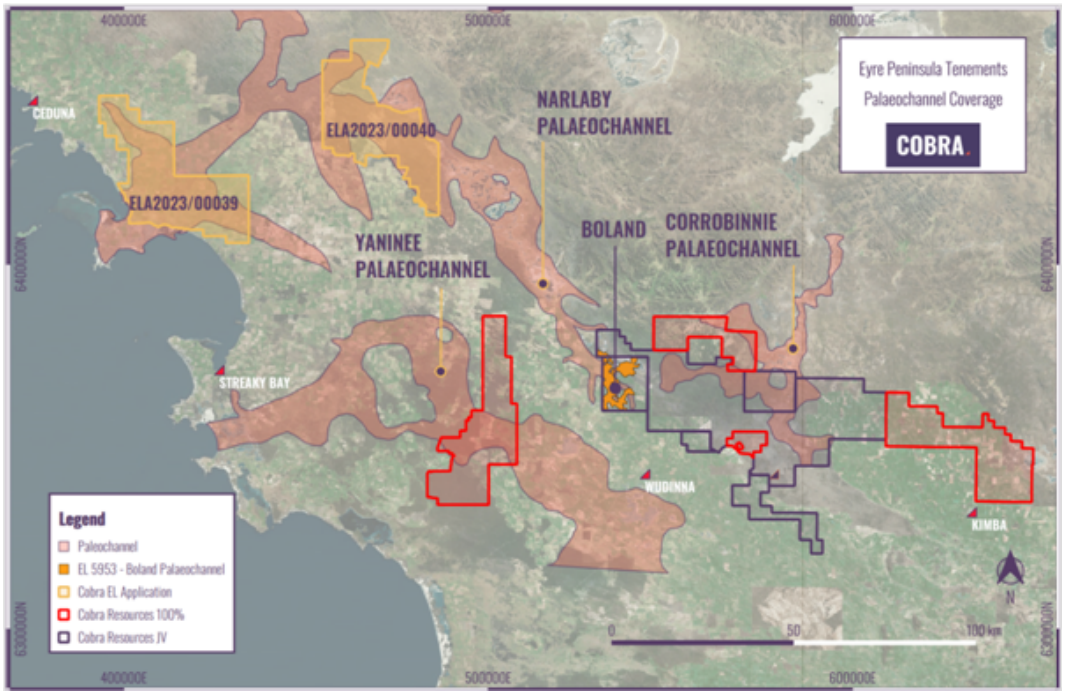


Figure 5: Locality plan highlighting the Company's exploration tenement applications on the Narlaby palaeo-channel



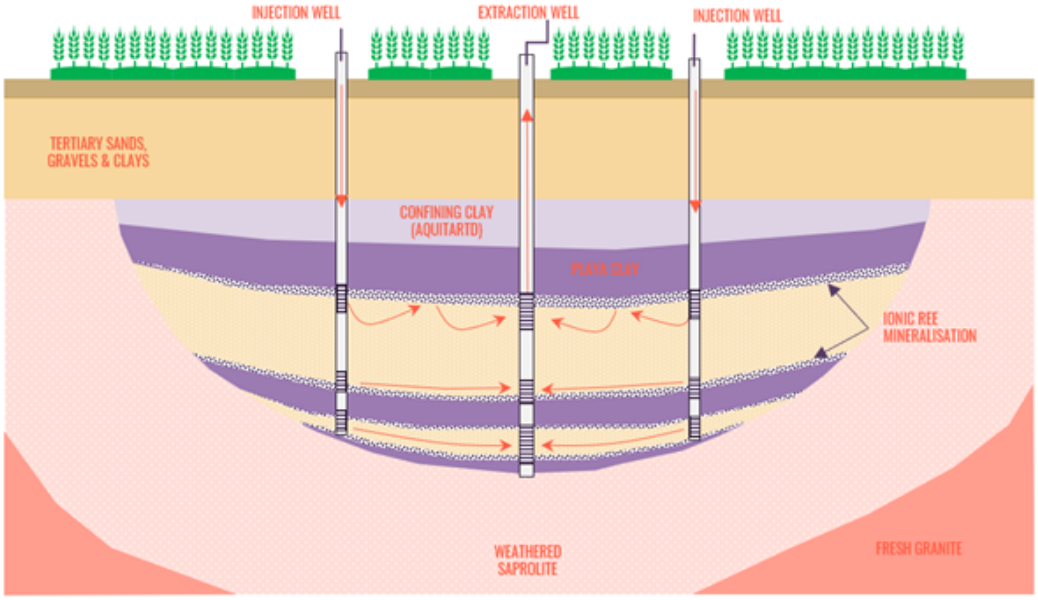
About Insitu Recovery Mining

ISR is a highly cost-effective method of mining that involves recovering the ore where it is in the ground, and recovering minerals from it by dissolving them and pumping pregnant solutions to the surface where the minerals can be recovered. This is achieved owing to aquifer permeability and applied in a manner to ensure that mining solutions do not contaminate groundwater away from the orebody. Once ore extraction is complete, aquifers are returned to their natural chemistry by neutralising mining solutions. This style of mining is cost-effective, low in environmental impact on aquifers and surfaces.

Owing to the interbedded nature of mineralised clay beds and permeable sand layers at Boland, and the fast extractions achieved through REE desorption, it is believed that ISR mining could be integrated with current land-uses considerate and adaptable to farming, conservation and indigenous heritage.

South Australia is the leading state in Australia for insitu recovery mining where it is actively endorsed, actively governed and successfully implemented.

Figure 6: Conceptual ISR process for REE extraction at Boland



Next Steps

Cobra will now aim to capitalise on the significance of these results from the Boland prospect and commence a scope of work that includes:

- Mineralogical and insitu recovery studies - drilling of 3-5 core holes to:
  - Determine the distribution of REEs within clay bands
  - Identify parameters for future insitu recovery testing
  - Define appropriate future composite sample lengths
  - Enable advancement of metallurgical testing to ultimately produce a REE carbonate for commercial marketing
- Monitoring well installation - to enable baseline monitoring and analysis of aquifers
- Resource drilling - AC drilling aimed at expanding the footprint of Ionic REE mineralisation at the Boland prospect
- Maiden Boland Mineral Resource Estimate ("MRE")
- Regional palaeo-channel testing - AC drilling testing the concept within the Corrobinnie palaeo-channel at the Wudinna Project
- Sample re-analysis and maiden AC drilling to test palaeo-channel targets on other 100% owned Cobra tenements
- Further metallurgical testing to optimise recoveries and test further zones of mineralisation

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The person who arranged for the release of this announcement was Rupert Verco, Managing Director of the Company.

About Cobra

Cobra is defining a unique multi-mineral resource at the Wudinna Project in South Australia's Gawler Craton, a tier one mining and exploration jurisdiction which hosts several world-class mines. Cobra's Wudinna tenements totalling 1,832 km^2, and other nearby tenement rights totalling 1,429 km^2, contain highly desirable and ionic rare earth mineralisation, amenable to low-cost, low impact insitu recovery mining, and critical to global decarbonisation.

Cobra's Wudinna tenements also contain extensive orogenic gold mineralisation and are characterised by potentially open-pitable, high-grade gold intersections, with ready access to infrastructure. Cobra has 22 orogenic gold targets outside of the current 279,000 Oz gold JORC Mineral Resource Estimate.

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Competent Persons Statement

Information in this announcement has been assessed by Mr Luke Stannard, a Fellow of the Australasian Institute of Mining and Metallurgy ("FAusIMM"). Mr Stannard is a Consultant to Cobra Resources Plc and has sufficient relevant experience in the type of extraction process which he is undertaking to qualify as a Competent person as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (the "JORC" Code). This includes 7 years of leaching extraction.

Information in this announcement has been assessed by Mr Rupert Verco, a Fellow of the Australasian Institute of Mining and Metallurgy ("FAusIMM"). Mr Verco an employee of Cobra Resources Plc has more than 16 years relevant industry experience, which is relevant to the style of mineralisation, deposit type and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (the "JORC" Code). This includes 11 years of Mining, Resource Estimation and Exploration

Information in this announcement relates to exploration results that have been reported in the following announcements:

- "Maiden Rare Earth Resource Estimate - Unique and Unconstrained" dated 9 January 2023
- "Drilling Defines REE Resource Extension Potential" dated 12 June 2023
- "Exception REE Results at Boland" dated 20 June 2023

Definitions

REO - Rare Earth Oxides
TREO - Total Rare Earth Oxides plus yttrium
MREO - Magnet Rare Earth Oxide (Nd_2O_3 + Pr_6O_{11} + Dy_2O_3 + Tb_2O_3)
HREO - Heavy Rare Earth Oxides
LREO - Light Rare Earth Oxides
MRE - Mineral Resource Estimate

Cobra's REE Strategy

The economic viability of clay hosted REEs is more dependent upon low mining and processing costs, a consequence of mineralogy rather than grade. On this basis, the Company has focused on:

1. REE resource expansion aimed at growing its complementary dual gold and REE resources, where the spatial proximity of REE mineralisation to gold enables cost efficient, value add potential

2. Targeting low cost, easily extractable ionic clay hosted mineralisation by defining and targeting conditions that promote ionic mineralisation. The Boland prospect was defined on the basis of chemical and geological conditions that promote the mobility and adsorption of ionic REEs. These metallurgy results at Boland have provided proof of concept and provide an excellent foundation for positive economics

Further Information Regarding the Boland Metallurgy Results

Ionic clay adsorption REE mineralisation is the industry preferred style of rare earth mineralisation owing to its ability to be desorbed from clay particles under relatively benign acidities, with superior ratios of high-value REEs. In general, weaker acids (higher acidities) are more cost effective to produce, less environmentally harmful and operationally safer to manage. As a consequence of the desorption process, extractions occur quickly (minutes to hours) and at ambient temperatures making REE recovery most economically competitive.

Since the prospectivity of REEs at the Wudinna Project was identified in late 2021, the Company has taken a technical approach in understanding the enrichment, mobility, and mineralogy of REE occurrences within clay saprolite and tertiary and quaternary aged clays across the Company's 3,261 km^2 land tenure.

The identification of REE depletion within the saprolite above and proximal to the 104,000 Oz Barns gold resource, led the Company to theorise that the highly acidic conditions (pH<2) contribute to the re-mobilisation of REEs away from the Barns gold resource and the sulphide rich Hiltaba granites. The Boland prospect is considered to host the right conditions to promote ionic adsorption of mobilised REEs and therefore act as a 'trap' for fluid mobile REEs. These metallurgical results are a proof of concept confirming desorption of REEs from palaeo-channel clays.

ANSTO is a world leader in REE metallurgy and the development in REE metallurgical flowsheets. Diagnostic testing parameters included:

- 0.5 M (NH4)2SO4 as lixiviant
- pH 4; pH3
- pH 4: 0.5 h & 6 h, pH3: 0.5 h, 2 h & 6 h
- Ambient temperature (~22 °C)
- 4 wt% solids density
- Acidity maintained through the addition of H2SO4

Metallurgical results demonstrate:

- Desorption is greatest within Eocene age clays
- Recoveries increase with time and increasing acidity
- HREOs are recovered in greater ratios than LREOs
- Moderate desorption times are interpreted to be a consequence of sample composite dilution. Faster desorption rates are likely with refined sample compositing

Table 1: Average recoveries of playa clays (five samples) and contacting saprolite (five samples)

REO	Playa Clays					Contacting Saprolite				
	pH4 0.5hrs	pH4 6hrs	pH3 0.5hrs	pH3 2hrs	pH3 6hrs	pH4 0.5hrs	pH4 6hrs	pH3 0.5hrs	pH3 2hrs	pH3 6hrs

La_2O_3	11	15	17	19	22	3	5	4	5	5
CeO_2	17	22	25	26	30	4	7	6	6	7
Pr_6O_{11}	18	22	27	29	33	5	8	7	8	9
Nd_2O_3	21	27	33	35	38	7	11	10	11	13
Sm_2O_3	25	31	39	43	46	9	13	13	17	18
Eu_2O_3	24	36	44	48	49	16	15	22	25	25
Gd_2O_3	25	37	43	46	49	14	19	22	24	27
Tb_4O_7	26	36	42	44	49	22	21	27	27	27
Dy_2O_3	28	40	45	48	51	14	16	18	22	25
Ho2O3	29	37	39	41	47	25	20	26	27	27
Er_2O_3	26	37	43	45	50	10	14	18	20	22
Tm_2O_3	35	35	40	40	46	-	-	-	-	-
Yb_2O_3	22	32	37	42	44	8	11	14	14	14
Lu_2O_3	29	34	35	35	35	-	-	-	-	-
Y_2O_3	26	34	37	39	43	17	18	24	28	29
LRE	16	21	24	26	29	4	6	6	6	7
HRE	26	35	41	44	47	10	13	15	18	20
MRE	21	27	33	35	38	7	10	9	11	12
TREY-Ce	19	25	29	31	35	6	9	8	9	10
Acid Consumption kg/t	12	14	17	21	25	9	13	16	24	33

Significant intersections from maiden Boland AC drilling include:

- CBAC0164: **3m** at **942 ppm** TREO (22% MREO) from 15m (playa clay), and **3m** at **1,333 ppm** TREO (13% MREO) from 30m (playa clay) and **42m** at **2,189 ppm** TREO (25% MREO) from 36m (saprolite clay)
- CBAC0163: **3m** at **559 ppm** TREO (24% MREO) from 18m (playa clay), and **3m** at **618 ppm** TREO (22% MREO) from 21m (playa clay) and **12m** at **1,191 ppm** TREO (27% MREO) from 36m (saprolite clay)
- CBAC0168: **12m** at **948 ppm** TREO (19% MREO) from 42m (saprolite clay)
- CBAC0176: **3m** at **516 ppm** TREO (23% MREO) from 27m (playa clay) and 3m at 661 ppm TREO (19% MREO) from 48m (contact saprolite clay) and 1,984 ppm TREO (22% MREO) from 54m (saprolite clay)
- CBAC0175: **3m** at **429 ppm** TREO (23% MREO) from 27m (playa clay)
- CBAC0172: **3m** at **685 ppm** TREO (20% MREO) from 54m (saprolite clay)
- CBAC0177: **3m** at **545 ppm** TREO (26% MREO) from 42m (saprolite clay) to EOH
- CBAC0162: **6m** at **437 ppm** TREO (24% MREO) from 42m (playa clay)

Figure 7: Overview of AC drilling results and metallurgical recoveries at the Boland prospect

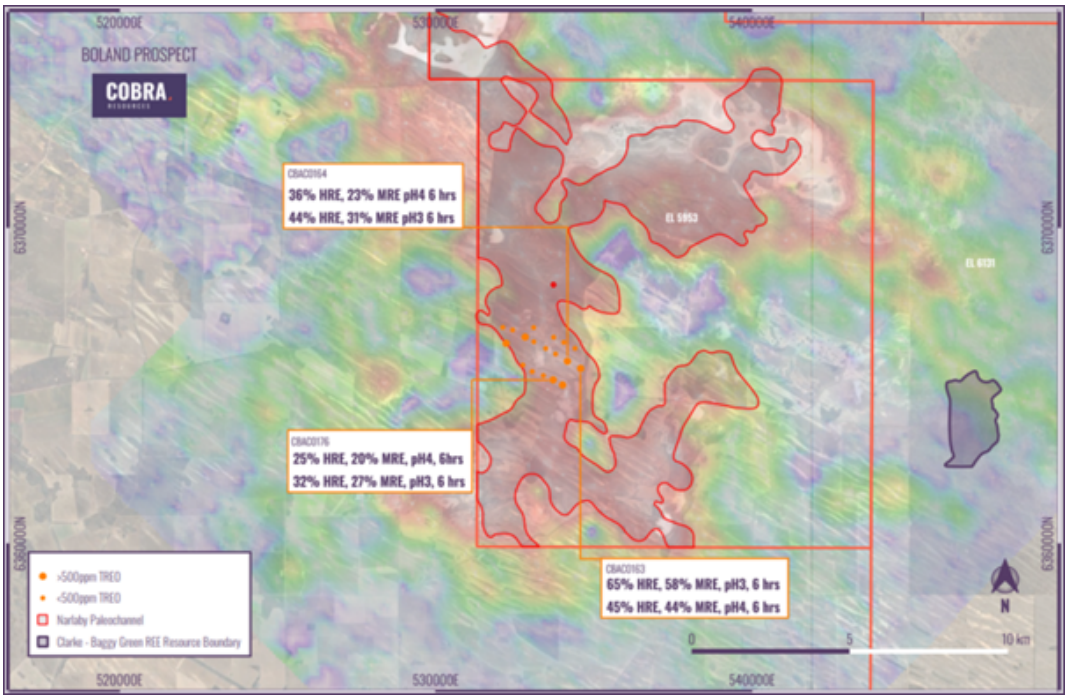


Table 2: Lithium borate fusion assays of composite samples submitted for metallurgical testing

HoleID	SampleID	Geological domain	La2O3 ppm	CeO2 ppm	Pr6O11 ppm	Nd2O3 ppm	Sm2O3 ppm	Eu2O3 ppm	Gd2O3 ppm	Tb4O7 ppm	Dy2O3 ppm	Ho2O3 ppm	Er2O3 ppm
CBAC0163	LAM9165	Playa Clay	100	267	27	95	16	3	11	2	9	2	4
CBAC0163	LAM9168	Playa Clay	116	286	30	110	18	3	16	2	14	3	7
CBAC0163	LAM9170	Playa Clay	110	150	20	65	13	2	12	2	11	2	7
CBAC0164	LAM9184	Playa Clay	177	434	45	162	29	5	23	3	19	3	9
CBAC0176	LAM9381	Playa Clay	103	230	24	83	15	3	12	2	10	2	5
CBAC0163	LAM9173	Cont Sap	225	230	39	107	12	2	7	1	5	1	3
CBAC0163	LAM9174	Cont Sap	320	378	60	192	22	3	12	1	8	1	4
CBAC0164	LAM9188	Cont Sap	107	137	11	26	3	1	3	1	4	1	3
CBAC0164	LAM9189	Cont Sap	480	649	51	118	12	1	6	1	3	1	2
CBAC0176	LAM9390	Cont Sap	82	378	24	90	18	2	15	2	11	2	4
CBAC0163	LAM9175	Saprolite	522	694	103	322	40	5	20	2	11	2	5
CBAC0164	LAM9192	Saprolite	557	876	113	363	45	6	24	2	12	2	5
CBAC0164	LAM9193	Saprolite	545	721	112	359	46	6	22	2	11	2	5
CBAC0164	LAM9194	Saprolite	446	437	88	279	36	5	18	2	9	2	4
CBAC0164	LAM9195	Saprolite	589	954	140	486	65	9	33	4	16	3	6
CBAC0163	LAM9176	Saprolite	418	747	83	271	34	5	18	2	10	2	5
CBAC0176	LAM9393	Saprolite	427	927	93	323	42	7	25	3	14	3	7

Appendix 1: JORC Code, 2012 Edition - Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	· *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	Pre 2021 · Historic RC and RAB drilling methods have been employed at Clarke and Baggy Green Prospects since 2000. · Pulp samples from pre-Cobra Resources' drilling were collected with intervals of 1-6 m. Samples were riffle split if dry or sub split using a trowel if wet. · Pulp samples were obtained from Challenger geological services using a combination of logging and geochemical selection criteria. Samples pulled from storage were re-pulverised at the laboratory prior to further analysis. 2021 - 2022 · Sampling during Cobra Resources 2022 aircore ("AC") drilling programme at all Prospects were obtained through AC drilling methods. · 2 m samples were collected in 20l buckets via a rig mounted cyclone. An aluminum scoop was used to collect a 2-4 kg sub sample from each bucket. Samples were taken from the point of collar, but only samples from the commencement of saprolite were selected for analysis. · Samples submitted to the Genalysis Intertek Laboratories, Adelaide and pulverised to produce the 25g fire assay charge and 4 acid digest sample. · A summary of previous RC drilling at the Wudinna Project is outlined in the Cobra Resources' RNS number 7923A from 7 February 2022. **2023** RC · Samples were collected via a Metzke cone splitter mounted to the cyclone. 1m samples were managed through chute and butterfly valve to produce a 2-4 kg sample. Samples were taken from the point of collar, but only samples from the commencement of saprolite were selected for analysis. · Samples submitted to Bureau Veritas Laboratories, Adelaide, and pulverised

		to produce the 50 g fire assay charge and 4 acid digest sample. AC · A combination of 2m and 3 m samples were collected in green bags via a rig mounted cyclone. An PVC spear was used to collect a 2-4 kg sub sample from each green bag. Samples were taken from the point of collar. · Samples submitted to Bureau Veritas Laboratories, Adelaide, and pulverised to produce the 50 g fire assay charge and 4 acid digest sample.
Drilling techniques	· *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	Pre 2021 · Drill methods include AC, RH and RAB in unconsolidated regolith and aircore hammer in hard rock. Some shallow RC holes have been drilled in place of AC and RAB, a single diamond drillhole has been incorporated in the estimate. 2021- 2022 · Drilling completed by McLeod Drilling Pty Ltd using 75.7 mm NQ air core drilling techniques from an ALMET Aircore rig mounted on a Toyota Landcruiser 6x6 and a 200psi, 400cfm Sullair compressor. · Slimline RC drilling was completed by Wuzdrill pty limited and Indicator drilling services Pty Ltd using a 400D and Mantis C60R drill rigs using a 4" hammer and 78mm drill rods. 2023 · Drilling completed by Bullion Drilling Pty Ltd using 5 ¾" reverse circulation drilling techniques from a Schramm T685WS rig with an auxiliary compressor. · Drilling completed by McLeod Drilling Pty Ltd using 75.7 mm NQ air core drilling techniques from an ALMET Aircore rig mounted on a Toyota Landcruiser 6x6 and a 200psi, 400cfm Sullair compressor.
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*	· Sample recovery was generally good.All samples were recorded for sample type, quality and contamination potential and entered within a sample log. · In general, sample recoveries were good with 10 kg for each 1 m interval being recovered from AC drilling. · No relationships between sample recovery and grade have been

	preferential loss/gain of fine/coarse material.	identified. · RC drilling completed by Bullion Drilling Pty Ltd using 5 ¾" reverse circulation drilling techniques from a Schramm T685WS rig with an auxiliary compressor · Sample recovery for RC was generally good. All samples were recorded for sample type, quality and contamination potential and entered within a sample log. · In general, RC sample recoveries were good with 35-50 kg for each 1 m interval being recovered. · No relationships between sample recovery and grade have been identified.
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.*	· All drill samples were logged by an experienced geologist at the time of drilling. Lithology, colour, weathering and moisture were documented. · Logging is generally qualitative in nature. · All drill metres have been geologically logged on sample intervals (1-3 m).
Sub-sampling techniques and sample preparation	· *If core, whether cut or sawn and whether quarter, half or all core taken.* · *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* · *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* · *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* · *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* · *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Pre-2021 · Samples from AC, RAB and "bedrock" RC holes have been collected initially as 6 m composites followed by 1 m re-splits. Many of the 1 m re-splits have been collected by riffle splitting. · RC samples have been collected by riffle splitting if dry, or by trowel if wet · Pulverised samples have been routinely checked for size after pulverising · Pulp samples were re- pulverised after storage to re-homogenise samples prior to analysis. 2021-onward · The use of an aluminum scoop or PVC spear to collect the required 2-4 kg of sub-sample from each AC sample length controlled the sample volume submitted to the laboratory. · Additional sub-sampling was performed through the preparation and processing of samples according to the lab internal protocols. · Duplicate AC samples were collected from the green bags using an aluminium scoop or PVC spear at a 1 in 25 sample frequency. · Sample sizes were appropriate for the material being sampled.

		· Assessment of duplicate results indicated this sub-sample method provided good repeatability for rare earth elements. · RC drill samples were sub-sampled using a cyclone rig mounted splitter with recoveries monitored using a field spring scale. · Manual re-splitting of RC samples through a riffle splitter was undertaken where sample sizes exceeded 4 kg. · RC field duplicate samples were taken nominally every 1 in 25 samples. These samples showed good repeatability for REE.
Quality of assay data and laboratory tests	· *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* · *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* · *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	· Samples were submitted to Bureau Veritas Laboratories, Adelaide for preparation and analysis. · Multi element geochemistry were digested by four acid ICP-MS and analysed for Ag, Ce, Cu, Dy, Er, Eu, Gd, Ho, La, Lu, Mg, Na, Nd, P, Pr, Sc, Sm, Tb, Th, Tm, U, Y and Yb. · Field gold blanks and rare earth standards were submitted at a frequency of 1 in 25 samples. · Field duplicate samples were submitted at a frequency of 1 in 25 samples · Reported assays are to acceptable levels of accuracy and precision. · Internal laboratory blanks, standards and repeats for rare earths indicated acceptable assay accuracy. Metallurgical Test Work performed by the Australian Nuclear Science and Technology Organisation (ANSTO). Samples were 40g sourced from retained 1m composite pulp samples. · Standard desorption conditions: · 0.5M (NH4)2SO4 as lixiviant · pH 4 · 30 minutes & 6 hours · Ambient temperature of 22°C; and · 4 wt% solids density · Prior to commencing the test work, a bulk 0.5 M (NH4)2SO4 solution was prepared as the synthetic lixiviant and the pH adjusted to 4 using H2SO4. · Each of the leach tests was conducted on 80 g of dry, pulverised sample and 1920 g of the lixiviant in a 2 L titanium/ stainless steel baffled leach vessel equipped with an overhead stirrer.

		· Addition of solid to the lixiviant at the test pH will start the test. 1 M H2SO4 was utilised to maintain the test pH for the duration of the test, if necessary. The acid addition was measured. • Acidic water as lixiviant (using H2SO4) • pH3 • Duration: 6 hours • Ambient temperature of 22°C • 4 wt% density · At the completion of each test, the final pH was measured, the slurry was vacuum filtered to separate the primary filtrate. · 30 minute and 2 hour hour liquor sample was taken · The primary filtrate was analysed as follows: • ICP-MS for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Mn, Nd, Pb, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb (ALS, Brisbane); • ICP-OES for Al, Ca, Fe, K, Mg, Mn, Na, Si (in-house, ANSTO); · The water wash was stored but not analysed.
Verification of sampling and assaying	· *The verification of significant intersections by either independent or alternative company personnel.* · *The use of twinned holes.* · *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* · *Discuss any adjustment to assay data.*	· Sampling data was recorded in field books, checked upon digitising and transferred to database. · Geological logging was undertaken digitally via the MX Deposit logging interface and synchronised to the database at least daily during the drill programme. · Compositing of assays was undertaken and reviewed by Cobra Resources staff. · Original copies of laboratory assay data are retained digitally on the Cobra Resources server for future reference. · Samples have been spatially verified through the use of Datamine and Leapfrog geological software for pre 2021 and post 2021 samples and assays. · Twinned drillholes from pre 2021 and post 2021 drill programmes showed acceptable spatial and grade repeatability. · Physical copies of field sampling books are retained by Cobra Resources for future reference. · Significant intercepts have been prepared by Mr Rupert Verco and reviewed by Mr Robert Blythman.
Location of data points	· *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and*	Pre 2021

	other locations used in Mineral Resource estimation. · *Specification of the grid system used.* · *Quality and adequacy of topographic control.*	· Collar locations were pegged using DGPS to an accuracy of +/-0.5 m. · Downhole surveys have been completed for deeper RC and diamond drillholes · Collars have been picked up in a variety of coordinate systems but have all been converted to MGA 94 Zone 53. Collars have been spatially verified in the field. · Collar elevations were historically projected to a geophysical survey DTM. This survey has been adjusted to AHD using a Leica CS20 GNSS base and rover survey with a 0.05 cm accuracy. Collar points have been re-projected to the AHD adjusted topographical surface. 2021-onward · Collar locations were initially surveyed using a mobile phone utilising the Avenza Map app. Collar points recorded with a GPS horizontal accuracy within 5 m. · RC Collar locations were picked up using a Leica CS20 base and Rover with an instrument precision of 0.05 cm accuracy. · Locations are recorded in geodetic datum GDA 94 zone 53. · No downhole surveying was undertaken on AC holes. All holes were set up vertically and are assumed vertical. · RC holes have been down hole surveyed using a Reflex TN-14 true north seeking downhole survey tool or Reflex multishot · Downhole surveys were assessed for quality prior to export of data. Poor quality surveys were downgraded in the database to be excluded from export. · All surveys are corrected to MGA 94 Zone 53 within the MX Deposit database. · The quality and accuracy of the topographic control is considered sufficient for the Mineral Resource estimation and classification applied.
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.*	· Drillhole spacing was designed on transects 50-80 m apart. Drillholes generally 50-60 m apart on these transects but up to 70 m apart. · Additional scouting holes were drilled opportunistically on existing tracks at spacings 25-150 m from previous drillholes. · Regional scouting holes are drilled at variable spacings designed to test structural concepts · Data spacing is considered adequate for a saprolite hosted rare earth Mineral Resource estimation. · No sample compositing has been applied

		· Drillhole spacing does not introduce any sample bias. · The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for interpretation of the REE mineralised horizon and the classification applied.
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.*	· RC drillholes have been drilled between -60 and -75 degrees at orientations interpreted to appropriately intersect gold mineralisation · Gold results are not presented as true width but are not considered to present any down-dip bias.
Sample security	· *The measures taken to ensure sample security.*	Pre 2021 · Company staff collected or supervised the collection of all laboratory samples. Samples were transported by a local freight contractor · No suspicion of historic samples being tampered with at any stage. · Pulp samples were collected from Challenger Geological Services and submitted to Intertek Genalysis by Cobra Resources' employees. 2021-onward · Transport of samples to Adelaide was undertaken by a competent independent contractor. Samples were packaged in zip tied polyweave bags in bundles of 5 samples at the drill rig and transported in larger bulka bags by batch while being transported. · There is no suspicion of tampering of samples.
Audits or reviews	· *The results of any audits or reviews of sampling techniques and data.*	· No laboratory audit or review has been undertaken. · Genalysis Intertek and BV Laboratories Adelaide are NATA (National Association of Testing Authorities) accredited laboratory, recognition of their analytical competence.

Appendix 2: Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	· *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* · *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	· RC drilling occurred on EL 6131, currently owned 100% by Peninsula Resources limited, a wholly owned subsidiary of Andromeda Metals Limited. · Alcrest Royalties Australia Pty Ltd retains a 1.5% NSR royalty over future mineral production from licenses EL6001, EL5953, EL6131, EL6317 and EL6489. · Baggy Green, Clarke, Laker and the IOCG targets are located within Pinkawillinnie Conservation Park. Native Title Agreement

		has been negotiated with the NT Claimant and has been registered with the SA Government. · Aboriginal heritage surveys have been completed over the Baggy Green Prospect area, with no sites located in the immediate vicinity. · A Native Title Agreement is in place with the relevant Native Title party.
Exploration done by other parties	· *Acknowledgment and appraisal of exploration by other parties.*	· On-ground exploration completed prior to Andromeda Metals' work was limited to 400 m spaced soil geochemistry completed by Newcrest Mining Limited over the Barns prospect. · Other than the flying of regional airborne geophysics and coarse spaced ground gravity, there has been no recorded exploration in the vicinity of the Baggy Green deposit prior to Andromeda Metals' work.

Geology	· *Deposit type, geological setting and style of mineralisation.*	· The gold and REE deposits are considered to be related to the structurally controlled basement weathering of epidote- pyrite alteration related to the 1590 Ma Hiltaba/GRV tectonothermal event.
		· Mineralisation has a spatial association with mafic intrusions/granodiorite alteration and is associated with metasomatic alteration of host rocks. Epidote alteration associated with gold mineralisation is REE enriched and believed to be the primary source.
		· Rare earth minerals occur within the saprolite horizon. XRD analysis by the CSIRO identifies kaolin and montmorillonite as the primary clay phases.
		· SEM analysis identified REE bearing mineral phases in hard rock:
		  · Zircon, titanite, apatite, andradite and epidote.
		· SEM analyses identifies the following secondary mineral phases in saprock:
		  · Monazite, bastanite, allanite and rutile.
		· Elevated phosphates at the base of saprock do not correlate to rare earth grade peaks.
		· Upper saprolite zones do not contain identifiable REE mineral phases, supporting that the REEs are adsorbed to clay particles.
		· Acidity testing by Cobra Resources supports that acidity/alkalinity chemistry may act as a catalyst for Ionic and Colloidal adsorption.
		· REE mineral phase change with varying saprolite acidity and REE abundances support that a component of REE bursary is adsorbed to clays.
		· Palaeo drainage has been interpreted from historic drilling and re-interpretation of EM

		data that has generated a top of basement model. · The conditions within the interpreted palaeo system are considered supportive of ionic REE mineralisation.
Drillhole 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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	· Exploration results are not being reported as part of the Mineral Resource area.
Data aggregation methods	· *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.*	· Reported summary intercepts are weighted averages based on length. · No maximum/ minimum grade cuts have been applied. · No metal equivalent values have been calculated. · Gold results are reported to a 0.3 g/t cut-off with a maximum of 2m internal dilution with a minimum grade of 0.1 g/t Au. · Rare earth element analyses were originally reported in elemental form and have been converted to relevant oxide concentrations in line with industry standards. Conversion factors tabulated below:

Element	**Oxide**	**Factor**
Cerium	CeO_2	1.2284
Dysprosium	Dy_2O_3	1.1477
Erbium	Er_2O_3	1.1435
Europium	Eu_2O_3	1.1579
Gadolinium	Gd_2O_3	1.1526
Holmium	Ho_2O_3	1.1455
Lanthanum	La_2O_3	1.1728
Lutetium	Lu_2O_3	1.1371
Neodymium	Nd_2O_3	1.1664
Praseodymium	Pr_6O_{11}	1.2082
Scandium	Sc_2O_3	1.5338
Samarium	Sm_2O_3	1.1596
Terbium	Tb_4O_7	1.1762
Thulium	Tm_2O_3	1.1421

		Yttrium Y_2O_3 1.2699 Ytterbium Yb_2O_3 1.1387 · The reporting of REE oxides is done so in accordance with industry standards with the following calculations applied: · TREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 · CREO = Nd_2O_3 + Eu_2O_3 + Tb_4O_7 + Dy_2O_3 + Y_2O_3 · LREO = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 · HREO = Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3 · NdPr = Nd_2O_3 + Pr_6O_{11} · TREO-Ce = TREO - CeO_2 · % Nd = Nd_2O_3/ TREO · %Pr = Pr_6O_{11}/TREO · %Dy = Dy_2O_3/TREO · %HREO = HREO/TREO · %LREO = LREO/TREO
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 (eg 'down hole length, true width not known').*	· Preliminary results support unbiased testing of mineralised structures. · Previous holes have been drilled in several orientations due to the unknown nature of mineralisation. · Most intercepts are vertical and reflect true width intercepts. · Exploration results are not being reported for the Mineral Resource area.
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.*	· Relevant diagrams have been included in the announcement. · Exploration results are not being reported for the Mineral Resources area.
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 mISReading reporting of Exploration Results.*	· Not applicable - Mineral Resource and Exploration Target are defined. · Exploration results are not being reported for the Mineral Resource area.
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*	· Refer to previous announcements listed in RNS for reporting of REE results**,** metallurgical testing and detailed gold intersections.

	characteristics; potential deleterious or contaminating substances.	
Further work	· *The nature and scale of planned further work (eg 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.*	· Infill and extensional drilling aimed at growing the Mineral Resource and converting Inferred Resources to Indicated Resources is planned.

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