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Cobra Resources PLC
18 June 2024

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18 June 2024

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

**ISR Bench Scale Study Update**

***Exceptional head grades revealed***

Cobra (LSE: COBR), an exploration company advancing a strategy to lower the cost of critical rare earth production at its Boland project in South Australia, is pleased to announce that ongoing in situ recovery ("ISR") bench scale testing of a core sample from Boland has revealed an exceptionally high head grade, enriched in high value magnet and heavy rare earth metals. A second sample is being prepared for further bench scale ISR studies.

Metallurgical testing by the Australian Nuclear Science and Technology Organisation ("ANSTO") aimed at demonstrating the suitability for ISR mining - a low cost, low-disturbance method - is nearing completion, with full results expected by the end of June 2024. The test is designed to emulate the ISR process at laboratory scale. The permeable geology that hosts ionic rare earth mineralisation at the Boland project is globally unique and is enabling this process to be tested in a first for controlled aquifer ISR mining of rare earth metals.

## Highlights

- **Sample head grade:** 0.5m at **4,506** ppm Total Rare Earth Oxide ("TREO"), from 26.7m where high value magnet rare earths Nd2O3 + Pr6O11 total **892** ppm and Dy2O3 + Tb2O3 total **131** ppm, including 0.2m from 26.7m yields **7,476** ppm TREO, where Nd2O3 + Pr6O11 total **1,515** ppm and Dy2O3 + Tb2O3 total **225** ppm. These grades:
    - exceed the reported grades observed in zone three reported from three other wellfield holes (averaging: 0.6m at 1,538 ppm TREO, where $Nd_2O_3$ + $Pr_6O_{11}$ totals 305 ppm and $Dy_2O_3$ + $Tb_2O_3$ totals 52 ppm from ~26.6m); and

- are favourable in comparison to highly valued South American ionic rare earth projects owing to the high heavy rare earth (HREO) content, equating to ~28% of the TREO.

- **Validation of grade concentration**: This exceptional grade further validates the Company's thesis that ionic mineralisation is concentrated within confined zones of permeable geology - a favourable ore body geometry for ISR recovery

- **Scalable potential:** Re-assay has confirmed rare earth mineralisation across an extensive 139km$^2$

- **Metallurgical progress:** Favourable permeability rates of 0.12 pore volumes per day are being achieved at low pressures. This rate of permeability is comparable to ISR production rates achieved at operating ISR uranium mines. Testing, analysis and results are expected by the end of June 2024

**Rupert Verco, CEO of Cobra, commented**:

*"Ionic rare earth projects are desirable for their low extraction cost which is a function of simple metallurgy. Should we be successful in bypassing the challenges associated with handling and processing clays through ISR, we can confidently deliver a compelling, low-cost, environmentally credentialed source of heavy and magnet rare earths.*

*The head grade of the sample under recovery testing is significant - enriched in heavy and magnet rare earths and present within permeable geology. If we can emulate initial recoveries achieved at pH3 (AMSUL Wash) under ISR conditions, and from a sample with such significant grade, this will be globally significant.*

*ISR brings the rare earths into solution directly from within the orebody, without mining, haulage and traditional processing, materially lowering the costs associated with production. The recovery trials being performed at ANSTO are groundbreaking, and we look forward to bringing the full results to the market in the coming weeks."*

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

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

- Wudinna Project Update: "Re-Assay Results Confirm High Grades Over Exceptional Scale at Boland", dated 26 April 2024
- Wudinna Project Update: "Drilling results from Boland Prospect", dated 25 March 2024
- Wudinna Project Update: "Historical Drillhole Re-Assay Results", dated 27 February 2024
- Wudinna Project Update: "Ionic Rare Earth Mineralisation at Boland Prospect", dated 11 September 2023
- Wudinna Project Update: "Exceptional REE Results Defined at Boland", dated 20 June 2023

**Competent Persons Statement**

Information in this announcement has been assessed by Mr Rupert Verco, a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Verco is an employee of Cobra and has more than 16 years' industry experience which is relevant to the style of mineralisation, deposit type, and 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 of JORC. This includes 11 years of Mining, Resource Estimation and Exploration.

**About Cobra**

In 2023, Cobra discovered a rare earth deposit with the potential to re-define the cost of rare earth production. The highly scalable Boland ionic rare earth discovery at Cobra's Wudinna Project in South Australia's Gawler Craton is Australia's only rare earth project amenable for in situ recovery (ISR) mining - a low cost, low disturbance method. Cobra is focused on de-risking the investment value of the discovery by proving ISR as the preferred mining method which would eliminate challenges associated with processing clays and provide Cobra with the opportunity to define a low-cost pathway to production.

Cobra's Wudinna tenements also contain extensive orogenic gold mineralisation, including a 279,000 Oz gold JORC Mineral Resource Estimate, characterised by potentially open-pitable, high-grade gold intersections.

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**Appendix 1: Head Assay Results of CBSC003 26.7m - 27.2m**

| Depth from (m) | Depth to (m) | $Pr_6O_{11}$ | $Nd_2O_3$ | $Tb_2O_3$ | $Dy_2O_3$ | MREO | HREO | HREO % | TREO |
|---|---|---|---|---|---|---|---|---|---|
| 26.7 | 26.8 | 317 | 1,277 | 35 | 207 | 24% | 2,286 | 29% | 7,764 |
| 26.8 | 26.9 | 290 | 1,144 | 30 | 177 | 23% | 1,990 | 28% | 7,187 |
| 26.9 | 27 | 206 | 710 | 18 | 105 | 21% | 1,129 | 23% | 4,869 |
| 27 | 27.1 | 84 | 328 | 9 | 56 | 22% | 610 | 28% | 2,144 |
| 27.1 | 27.2 | 53 | 211 | 6 | 36 | 22% | 401 | 29% | 1,371 |
| **26.7** | **27.2** | **183** | **708** | **19** | **112** | **23%** | **1,239** | **28%** | **4,506** |

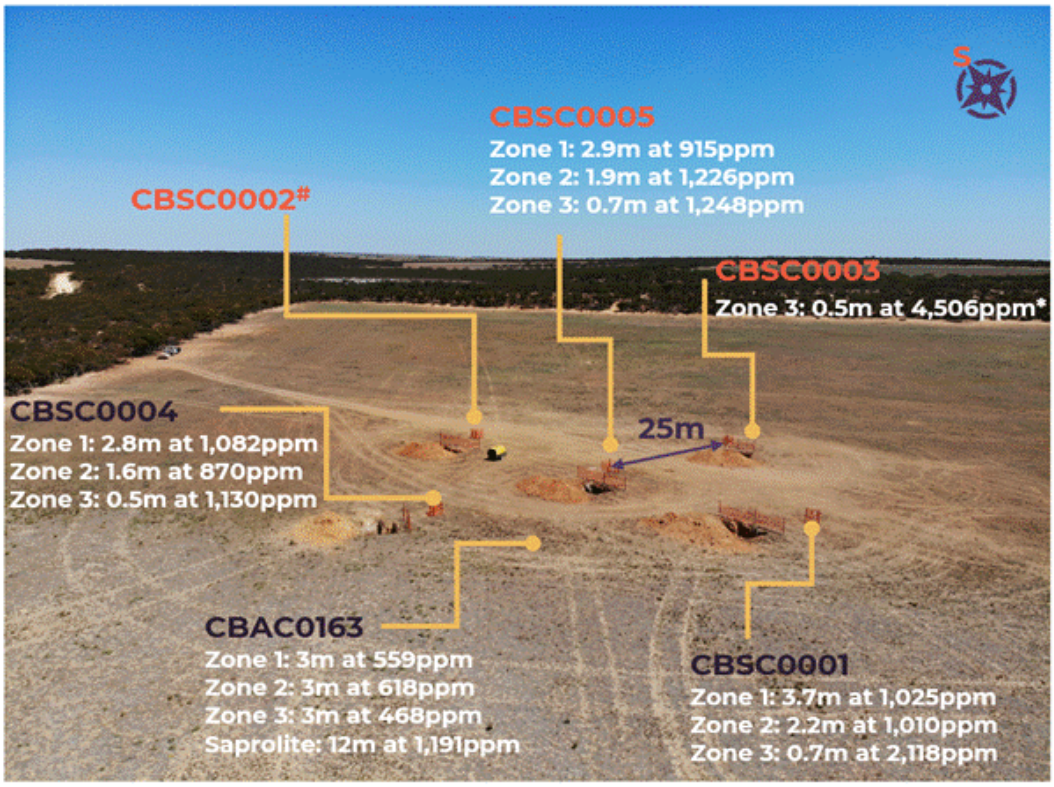
MREO = $Pr_6O_{11}$ + $Nd_2O_3$ + $Tb_2O_3$ + $Dy_2O_3$

HREO = $Sm_2O_3$+ $Eu_2O_3$+ $Gd_2O_3$+ $Tb_2O_3$+ $Dy_2O_3$+$Ho_2O_3$+$Er_2O_3$+$Tm_2O_3$+$Tm_2O_3$+$Yb_2O_3$+$Lu_2O_3$+$Y_2O_3$

**Context to results**

- In February 2024, Cobra drilled 5 sonic core holes and installed screened and cased wells to advance ISR mining of ionic rare earths
- On the 25th of March, the company announced the assay results of 3 of the five holes drilled, revealing three consistent zones of mineralisation
- Core from two holes were preserved and transported to ANSTO for metallurgical testing. Samples have been kept air-tight and refrigerated to prevent changes in oxidation and therefore, sampling and assaying can only occur directly before the commencement of metallurgical testing
- Zone three represents the deepest and highest-grade zone of mineralisation. The wellfield has been designed and installed to pilot test ISR from zone three
- Further core from CBSC0003 and CBSC0002 is being prepared for further metallurgical testwork to support flow sheet optimisation
- Drilling results have been reported via a 4-acid digest method, which is a partial digest that represents the ionic/ leachable portion of REE mineralisation. Samples prepared for and subject to metallurgical testing have been assayed via lithium borate fusion; a complete digest of REE bearing minerals. Results from Boland are 10-15% higher when reported via lithium borate fusion.
- All recoveries to date have been reported against head grades calculated via lithium borate fusion assays and are therefore a reflection of the recoverable quantity of the total rare earth oxide grade.

**Figure 1:** Aerial photograph of the Boland wellfield with significant intersections



**Partially assayed*

*#Stored for metallurgical testing, pending assay*

## Appendix 2: Cobra's Boland Rare Earth Discovery

- Ionic clay hosted rare earths present as a low capital, low operating cost source of heavy and magnet rare earth metals
- Processing of clay ores induces several operating challenges, including productivity loss, material handling, dewatering, reagent use and reclamation
- Ionic rare earth mineralisation at Boland exists in permeable geology in an environment that permits ISR, thus bypassing the challenges associated with processing of clay ores
- ISR is the preferred method of recovery used in the uranium industry, where[1]:
    - Global ISR production accounted for ~60% of mined uranium in 2022
    - Capital expenditure for ISR is 1-15% of conventional mines
    - Operating costs of ISR is generally 30-40% lower than traditional mines
    - Environmental impact and rehabilitation cost is significantly lower than traditional mines
- South Australia is home to Australia's only three operating ISR uranium mines and has a regulatory framework that supports ISR mining
- Bench-scale leach studies under ISR conditions are currently underway at ANSTO, a first for ionic REE projects outside of China
- Cobra has installed a wellfield to rapidly advance the project towards an infield pilot study
- Cobra aims to demonstrate that the cost of production at Boland can be materially reduced via ISR, providing operating resilience to volatile rare earth markets which has stalled the commencement of many rare earth projects
- Re-assaying of historic uranium focused drilling is being used to confirm the scale of rare earth mineralisation. These results confirm the presence of rare earth mineralisation over a strike of 12 km, where mineralisation is open in most directions. Follow-up drilling will aim to infill these results to support a maiden Mineral Resource Estimate ("MRE") at Boland

## Appendix 3: Update on Benchscale ISR Tests

- A column leach test is currently underway at the Australian Nuclear Scientific Technology Organisation ("ANSTO") where the progressive recovery of rare earths under ISR conditions is being evaluated. Initial test parameters include:
    - 50cm column of zone 3 Boland core
    - 0.5M ammonium sulphate $(NH_4)_2SO_4$ as lixiviant
    - pH3 maintained by $H_2SO_4$
    - Temperature maintained at 27°C - to reflect aquifer temperature
    - Column pressurised at 6-9 bar to reflect aquifer under injection
    - Current injection rate is achieving 1 pore volume over six days
- Results are expected to be received by the end of June 2024
- Further tests are being prepared to validate repeatability and increase the quantity of pregnant liquor

- The pregnant liquor solution from these tests shall be used to define and optimise a processing pathway to produce a mixed rare earth carbonate ("MREC")

**Figure 2:** A photograph of the bench-scale ISR column leach test underway at ANSTO, testing the progressive recovery of rare earths under ISR conditions



## Appendix 4: 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.* | **2023**<br>RC<br>· 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. |

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| | · *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>· *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>· *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.* | · Samples submitted to Bureau Veritas Laboratories, Adelaide, and pulverised to produce the 50 g fire assay charge and 4 acid digest sample.<br><br>AC<br>· 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.<br>· Samples submitted to Bureau Veritas Laboratories, Adelaide, and pulverised to produce the 50 g fire assay charge and 4 acid digest sample.<br>**2024**<br>SONIC<br>· Core was scanned by a SciAps X555 pXRF to determine sample intervals. Intervals through mineralized zones were taken at 10cm. Through waste, sample intervals were lengthened to 50cm. Core was halved by knife cutting. XRF scan locations were taken on an inner surface of the core to ensure readings were taken on fresh sample faces.<br>· Samples were submitted to Bureau Veritas for 4 acid digest ICP analysis. |
| ***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).* | 2023<br>· Drilling completed by Bullion Drilling Pty Ltd using 5 ¾" reverse circulation drilling techniques from a Schramm T685WS rig with an auxiliary compressor.<br>· 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.<br>2024<br>· Sonic Core drilling completed Star Drilling using 4" core with a SDR12 drill rig. Holes were reamed to 6" or 8" to enable casing and screens to be installed |
| ***Drill sample recovery*** | · *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>· *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>· *Whether a relationship exists between sample recovery and grade and whether* | Aircore & RC<br>· Sample recovery was generally good. All samples were recorded for sample type, quality and contamination potential and entered within a sample log.<br>· In general, sample recoveries were good with 10 kg for each 1 m interval being recovered from AC drilling. |

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| | *sample bias may have occurred due to preferential loss/gain of fine/coarse material.* | · No relationships between sample recovery and grade have been identified.<br>· RC drilling completed by Bullion Drilling Pty Ltd using 5 ¾" reverse circulation drilling techniques from a Schramm T685WS rig with an auxiliary compressor<br>· Sample recovery for RC was generally good. All samples were recorded for sample type, quality and contamination potential and entered within a sample log.<br>· In general, RC sample recoveries were good with 35-50 kg for each 1 m interval being recovered.<br>· No relationships between sample recovery and grade have been identified.<br><br>Sonic Core<br>· Sample recovery is considered excellent. |
| ***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.*<br>· *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>· *The total length and percentage of the relevant intersections logged.* | Aircore & RC<br>· All drill samples were logged by an experienced geologist at the time of drilling. Lithology, colour, weathering and moisture were documented.<br>· Logging is generally qualitative in nature.<br>· All drill metres have been geologically logged on sample intervals (1-3 m).<br><br>Sonic Core<br>· Logging was carried out in detail, determining lithology and clay/ sand content. Logging intervals were lithology based with variable interval lengths.<br>· All core drilled has been lithologically logged. |
| ***Sub-sampling techniques and sample preparation*** | · *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>· *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>· *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>· *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | 2021-onward<br>· 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.<br>· Additional sub-sampling was performed through the preparation and processing of samples according to the lab internal protocols. |

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| | · *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.*<br>· *Whether sample sizes are appropriate to the grain size of the material being sampled.* | · Duplicate AC samples were collected from the green bags using an aluminium scoop or PVC spear at a 1 in 25 sample frequency.<br>· Sample sizes were appropriate for the material being sampled.<br>· Assessment of duplicate results indicated this sub-sample method provided good repeatability for rare earth elements.<br>· RC drill samples were sub-sampled using a cyclone rig mounted splitter with recoveries monitored using a field spring scale.<br>· Manual re-splitting of RC samples through a riffle splitter was undertaken where sample sizes exceeded 4 kg.<br>· RC field duplicate samples were taken nominally every 1 in 25 samples. These samples showed good repeatability for REE.<br><br>Sonic Drilling<br><br>· Field duplicate samples were taken nominally every 1 in 25 samples where the sampled interval was quartered.<br>· Blanks and Standards were submitted every 25 samples<br>· Half core samples were taken where lab geochemistry sample were taken.<br>· In holes where column leach test samples have been submitted, full core samples have been submitted over the test areas. |
| ***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.*<br>· *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.*<br>· *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.<br>· 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.<br>· For the sonic samples Ag was removed from the analytical suite and V was included<br>· Field gold blanks and rare earth standards were submitted at a frequency of 1 in 25 samples.<br>· Field duplicate samples were submitted at a frequency of 1 in 25 samples<br>· Reported assays are to acceptable levels of accuracy and precision. |

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| | | · Internal laboratory blanks, standards and repeats for rare earths indicated acceptable assay accuracy.<br>· Samples retained for metallurgical analysis were immediately vacuum packed and refrigerated.<br>· These samples were refrigerated throughout transport. |
| ***Verification of sampling and assaying*** | · *The verification of significant intersections by either independent or alternative company personnel.*<br>· *The use of twinned holes.*<br>· *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>· *Discuss any adjustment to assay data.* | · Sampling data was recorded in field books, checked upon digitising and transferred to database.<br>· Geological logging was undertaken digitally via the MX Deposit logging interface and synchronised to the database at least daily during the drill programme.<br>· Compositing of assays was undertaken and reviewed by Cobra Resources staff.<br>· Original copies of laboratory assay data are retained digitally on the Cobra Resources server for future reference.<br>· Samples have been spatially verified through the use of Datamine and Leapfrog geological software for pre 2021 and post 2021 samples and assays.<br>· Twinned drillholes from pre 2021 and post 2021 drill programmes showed acceptable spatial and grade repeatability.<br>· Physical copies of field sampling books are retained by Cobra Resources for future reference.<br>· Elevated pXRF grades were checked and re-tested where anomalous. pXRF grades are semi quantitative. |
| ***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.*<br>· *Specification of the grid system used.*<br>· *Quality and adequacy of topographic control.* | Pre 2021<br>· Collar locations were pegged using DGPS to an accuracy of +/-0.5 m.<br>· Downhole surveys have been completed for deeper RC and diamond drillholes<br>· 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.<br>· 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.<br><br>2021-onward<br>· Collar locations were initially surveyed using a mobile phone utilising the |

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| | | Avenza Map app. Collar points recorded with a GPS horizontal accuracy within 5 m.<br>· RC Collar locations were picked up using a Leica CS20 base and Rover with an instrument precision of 0.05 cm accuracy.<br>· Locations are recorded in geodetic datum GDA 94 zone 53.<br>· No downhole surveying was undertaken on AC holes. All holes were set up vertically and are assumed vertical.<br>· RC holes have been down hole surveyed using a Reflex TN-14 true north seeking downhole survey tool or Reflex multishot<br>· Downhole surveys were assessed for quality prior to export of data. Poor quality surveys were downgraded in the database to be excluded from export.<br>· All surveys are corrected to MGA 94 Zone 53 within the MX Deposit database.<br>· Cased collars of sonic drilling shall be surveyed before a mineral resource estimate |
| ***Data spacing and distribution*** | · *Data spacing for reporting of Exploration Results.*<br>· *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.*<br>· *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.<br>· Additional scouting holes were drilled opportunistically on existing tracks at spacings 25-150 m from previous drillholes.<br>· Regional scouting holes are drilled at variable spacings designed to test structural concepts<br>· Data spacing is considered adequate for a saprolite hosted rare earth Mineral Resource estimation.<br>· No sample compositing has been applied<br>· Sonic core holes were drilled at ~20m spacings in a wellfield configuration based on assumed permeability potential of the intersected geology. |
| ***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.*<br>· *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<br>· Aircore and Sonic drill holes are vertical. |
| ***Sample security*** | · *The measures taken to ensure sample security.* | Pre 2021<br>· Company staff collected or supervised the collection of all laboratory samples. Samples were transported by a local freight contractor<br>· No suspicion of historic samples being tampered with at any stage. |

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| | | · Pulp samples were collected from Challenger Geological Services and submitted to Intertek Genalysis by Cobra Resources' employees.<br>2021-onward<br>· 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.<br>· 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.<br>· Genalysis Intertek and BV Laboratories Adelaide are NATA (National Association of Testing Authorities) accredited laboratory, recognition of their analytical competence. |

## Appendix 5: 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.*<br>· *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.<br>· Alcrest Royalties Australia Pty Ltd retains a 1.5% NSR royalty over future mineral production from licenses EL6001, EL5953, EL6131, EL6317 and EL6489.<br>· 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.<br>· Aboriginal heritage surveys have been completed over the Baggy Green Prospect area, with no sites located in the immediate vicinity.<br>· 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.<br>· 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.<br>· Paleochannel uranium exploration was undertaken by various parties in the 1980s and the 2010s around the Boland Prospect. Drilling was primarily rotary mud with |

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| | | downhole geophysical logging the primary interpretation method. |
| ***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.<br>· 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.<br>· Rare earth minerals occur within the saprolite horizon. XRD analysis by the CSIRO identifies kaolin and montmorillonite as the primary clay phases.<br>· SEM analysis identified REE bearing mineral phases in hard rock:<br>· Zircon, titanite, apatite, andradite and epidote.<br>· SEM analyses identifies the following secondary mineral phases in saprock:<br>· Monazite, bastanite, allanite and rutile.<br>· Elevated phosphates at the base of saprock do not correlate to rare earth grade peaks.<br>· Upper saprolite zones do not contain identifiable REE mineral phases, supporting that the REEs are adsorbed to clay particles.<br>· Acidity testing by Cobra Resources supports that pH chemistry may act as a catalyst for Ionic and Colloidal adsorption.<br>· REE mineral phase change with varying saprolite acidity and REE abundances support that a component of REE bursary is adsorbed to clays.<br>· Palaeo drainage has been interpreted from historic drilling and re-interpretation of EM data that has generated a top of basement model.<br>· Ionic REE mineralisation is confirmed through metallurgical desorption testing where high recoveries are achieved at benign acidities (pH4-3) at ambient temperature.<br>· Ionic REE mineralisation occurs in reduced clay intervals that contact both saprolite and permeable sand units. Mineralisation contains variable sand quantities that is expected |
| ***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:* | · Exploration results are not being reported as part of the Mineral Resource area. |

| | | |
|---|---|---|
| | o *easting and northing of the drill hole collar*<br>o *elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar*<br>o *dip and azimuth of the hole*<br>o *down hole length and interception depth*<br>o *hole length.*<br>· *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.* | |
| ***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.*<br>· *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.*<br>· *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | · Reported summary intercepts are weighted averages based on length.<br>· No maximum/ minimum grade cuts have been applied.<br>· No metal equivalent values have been calculated.<br>· 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.<br>· 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 = $Nd_2O_3$ + $Eu_2O_3$ + $Tb_4O_7$ + $Dy_2O_3$ + $Y_2O_3$<br>· LREO = $La_2O_3$ + $CeO_2$ + $Pr_6O_{11}$ + $Nd_2O_3$<br>· HREO = $Sm_2O_3$ + $Eu_2O_3$ + $Gd_2O_3$ + $Tb_4O_7$ + $Dy_2O_3$ + $Ho_2O_3$ + $Er_2O_3$ + $Tm_2O_3$ + $Yb_2O_3$ + $Lu_2O_3$ + $Y_2O_3$<br>· NdPr = $Nd_2O_3$ + $Pr_6O_{11}$<br>· TREO-Ce = TREO - $CeO_2$<br>· % Nd = $Nd_2O_3$/ TREO<br>· %Pr = $Pr_6O_{11}$/TREO<br>· %Dy = $Dy_2O_3$/TREO<br>· %HREO = HREO/TREO<br>· %LREO = LREO/TREO<br><br>· XRF results are used as an indication of potential grade only. Due to detection limits only a combined content of Ce, La, Nd, Pr & Y has been used. XRF grades have not been converted to oxide. |
| ***Relationship between mineralisation widths and intercept lengths*** | · *These relationships are particularly important in the reporting of Exploration Results.*<br>· *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>· *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').* | · All reported intercepts at Boland are vertical and reflect true width intercepts.<br>· 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.<br>· 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 misleading reporting of Exploration Results.* | · Not applicable - Mineral Resource and Exploration Target are defined.<br>· 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 characteristics; potential deleterious or contaminating substances.* | · Refer to previous announcements listed in RNS for reporting of REE results and metallurgical testing |
| ***Further work*** | · *The nature and scale of planned further work (eg tests for lateral extensions or* | · The metallurgical testing reported in this announcement represents the first phase of |

| | | |
|---|---|---|
| | *depth extensions or large-scale step-out drilling).*<br>· *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | bench scale studies to test the extraction of ionic REEs via ISR processes.<br>· Hydrology, permeability and mineralogy studies are being performed on core samples.<br>· Installed wells are being used to capture hydrology base line data to support a future infield pilot study.<br>· Trace line tests shall be performed to emulate bench scale pore volumes. |

**Appendix 6**: Drillhole coordinates

| Prospect | Hole number | Grid | Northing | Easting | Elevation |
|---|---|---|---|---|---|
| Boland | CBSC0001 | GDA94 / MGA zone 53 | 6365543 | 534567 | 102.9 |
| Boland | CBSC0002 | GDA94 / MGA zone 53 | 6365510 | 534580 | 104.1 |
| Boland | CBSC0003 | GDA94 / MGA zone 53 | 6365521 | 534554 | 102.7 |
| Boland | CBSC0004 | GDA94 / MGA zone 53 | 6365537 | 534590 | 105 |
| Boland | CBSC0005 | GDA94 / MGA zone 53 | 6365528 | 534573 | 103.2 |

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