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# JUPITER CONFIRMED AS AUSTRALIA'S LARGEST MAGNET RARE EARTH CLAY HOSTED RESOURCE

The Board of **Critica Limited (ASX: CRI)** ("Critica" or "the Company") **is pleased to announce** that the latest phase of work at **Jupiter** marks what the Company considers a **step-change in understanding the project's value potential**. The review has defined zones enriched in the key **Magnet Rare Earth Oxides (MREOs)** - the elements that, according to industry commentary, can **contribute the vast majority**, of rare earth project value at prevailing market prices<sup>1</sup>.

Building on the **July 2025 HREO review**, Critica has identified multiple **higher-grade MREO zones** containing **neodymium**, **praseodymium**, **dysprosium and terbium**, the four rare earths essential for high-performance permanent magnets.

#### **MREO-Rich Zones Confirmed**

Reporting the February 2025 resource using MREO cut-offs confirms Jupiter as Australia's largest and highest-grade clay-hosted MREO resource<sup>2</sup>. At a 400 ppm MREO cut-off, Jupiter contains 640 Mt at 490 ppm MREO (refer to Table 1) and 2,100 ppm TREO within the broader 1.8 Bt global resource. This highlights Jupiter's scale and its concentration of high-value magnet REEs that support long-term demand from sectors including EVs, wind turbines, medical and defence.

#### **HIGHLIGHTS**

- MREO resource review complete MREO-focused cut-offs applied to define zones enriched in Nd, Pr, Dy,
   Tb.
- Magnet-rich zones 640 Mt at 490 ppm MREO (400 ppm cut-off) containing ~310,000 t in-situ MREOs within the 1.8 Bt global resource.
- Reported as Australia's largest clay-hosted MREO resource based on publicly available peer data<sup>2</sup>.
- Beneficiation test work upgraded feed to 15,000 ppm TREO with ~95% mass rejection under laboratory
- Low U/Th mineralisation combined with early mass reduction, may support ESG outcomes and streamline permitting processes.
- Tier-1 location Western Australia with established infrastructure and regulatory stability.
- Market reference US\$110/kg NdPr floor price set by the U.S. Department of Defense for MP Materials
   Corp (Reuters, July 2025).

#### **Why MREO Content Matters Most**

MREO content is widely regarded as the single most important value driver in rare earth projects <sup>1</sup>. The four key elements - neodymium (Nd), praseodymium (Pr), dysprosium (Dy) and terbium (Tb) - are critical for high-performance permanent magnets used in EVs, wind turbines, electronics, medical devices and defence systems. Although they account for only a small fraction of total TREO content, industry commentary frequently notes that these magnet rare earths can contribute the vast majority, in the order of 85% or more, of total basket value at prevailing market prices, making them among the most strategically sought-after rare earths globally <sup>1</sup>.

- 1. International Energy Agency, The Role of Critical Minerals in Clean Energy Transitions, 2021; USGS, Mineral Commodity Summaries: Rare Earths, annual
- 2. Based on publicly available peer data see Appendix A.

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# **Next Steps**

This work marks the start of a **focused development approach** built around the rare earths most important to downstream users. The results highlight Jupiter's potential **dual advantage** of **scale and selectivity** - supporting both **long-life production potential** and the possibility of an **early-stage**, **higher-value development core**, subject to further technical and economic studies.

Critica will now incorporate the MREO review results into the next phase of technical and commercial work for the **Jupiter Project**, including:

- MREC production pathway planned metallurgical test work to assess the potential for producing Mixed Rare Earth Carbonate (MREC), subject to future pilot-scale validation.
- Bulk sample collection and resource update to support pilot-scale metallurgical test work.
- Pilot program to validate beneficiation and leach performance under scaled operating conditions.
- Scoping study assessing high-value MREO zones and a streamlined process design.
- Engagement with potential strategic offtake partners seeking secure, ESG-aligned magnet REE supply.

Critica's CEO Jacob Deysel comments: "This is a turning point in the Jupiter story. The size of the resource has always been compelling, but this updated analysis confirms that Jupiter also has quality, with significant quantities of **neodymium**, **praseodymium**, **terbium** and **dysprosium**. This makes Jupiter Australia's largest and highest-grade clay-hosted rare earth deposit by both total tonnage and contained MREOs.

What sets Critica apart is our approach. Rather than rushing toward an end product at all costs, we are systematically and innovatively advancing our metallurgical plan. We are applying a smarter, more targeted strategy, starting with a beneficiation stage that has upgraded high-value REEs into a small-volume stream while rejecting ~95% of the mined mineralised mass.

This approach has the potential to deliver a significant advantage compared to projects requiring full-volume leaching. By removing this stream early, we are improving our pathway to more efficient processing and potential economic benefits, **reducing the volume of material requiring chemical processing**. That, in turn, has the potential to materially lower the scale, complexity and environmental footprint of downstream operations. It's a **foundational advantage** that sets Jupiter apart and supports a more capital-efficient, sustainable development pathway.

This isn't just good for economics – it's the right way to build a modern rare earths business: **scalable, responsible and strategically aligned**. As we move toward **pilot work and scoping**, we are focused on unlocking value with **discipline, pace and technical precision**. Jupiter has the potential to become a cornerstone of **Australia's rare earth supply chain**, and we are shaping it for that role from day one."

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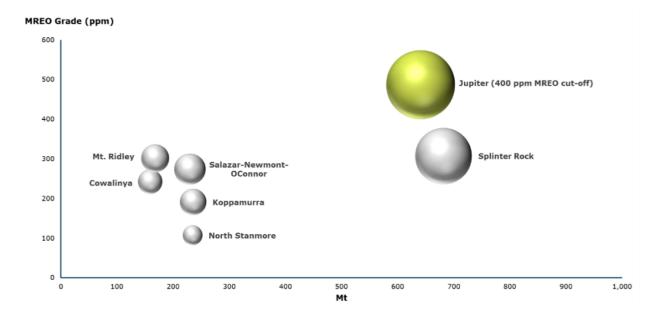
# High-Impact Zones Defined Through Strategic Modelling

Critica has applied targeted **MREO-focused cut-off grades** to the **1.8 Bt Jupiter Inferred Mineral Resource** as published to the ASX on 11 February 2025, identifying zones enriched in **neodymium, praseodymium, terbium and dysprosium** - the four rare earths critical to high-performance permanent magnets for **EVs, wind turbines, medical** and **defence systems**.

- Resource: ~640 Mt at 490 ppm MREO (400 ppm MREO cut-off) (refer to Table 1)
- Contained MREO: 310,000 tonnes in-situ
- Represents a large-scale, high-value zone aligned with market demand for magnet REEs

Figure 1: Jupiter Leads on MREO Scale and Grade Among Australian Clay-Hosted Peers

This "quality within quantity" profile highlights Jupiter's potential to combine **global-scale tonnage** with a **high-value magnet REE core**.



Refer to Appendix A: Source data for Peer Comparisons. (Differences in reporting methodology and cut-off grades may apply.)



Table 1 | Jupiter Inferred Mineral Resource (February 2025) reported by Magnet Rare Earth Oxide (MREO) cut-offs (rounded to 2 significant figures).

| Cut-off  | Tonnage | MREO | TREO | Pr <sub>6</sub> O <sub>11</sub> | Nd <sub>2</sub> O <sub>3</sub> | Tb <sub>4</sub> O <sub>7</sub> | Dy <sub>2</sub> O <sub>3</sub> |
|----------|---------|------|------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|
| MREO ppm | Mt      | ppm  | ppm  | ppm                             | ppm                            | ppm                            | ppm                            |
| 250      | 1,700   | 390  | 1700 | 83                              | 289                            | 3                              | 15                             |
| 300      | 1,400   | 410  | 1800 | 87                              | 305                            | 3                              | 15                             |
| 350      | 1,000   | 450  | 1900 | 94                              | 331                            | 3                              | 16                             |
| 400      | 640     | 490  | 2100 | 103                             | 363                            | 4                              | 18                             |
| 450      | 360     | 540  | 2300 | 114                             | 400                            | 4                              | 19                             |
| 500      | 200     | 590  | 2500 | 125                             | 440                            | 4                              | 20                             |
| 550      | 110     | 640  | 2700 | 136                             | 480                            | 5                              | 22                             |
| 600      | 64      | 700  | 2900 | 148                             | 519                            | 5                              | 24                             |

Table 2 | Jupiter Inferred Mineral Resource (February 2025) Magnet Rare Earth Oxide endowments (rounded to 2 significant figures).

| Cut-off  | MREO    | Pr6O <sub>11</sub> | Nd <sub>2</sub> O <sub>3</sub> | Tb <sub>4</sub> O <sub>7</sub> | Dy <sub>2</sub> O <sub>3</sub> |
|----------|---------|--------------------|--------------------------------|--------------------------------|--------------------------------|
| MREO ppm | tonnes  | tonnes             | tonnes                         | tonnes                         | tonnes                         |
| 250      | 660,000 | 140,000            | 140,000 490,000                |                                | 25,000                         |
| 300      | 590,000 | 120,000            | 440,000                        | 4,500                          | 22,000                         |
| 350      | 450,000 | 96,000             | 340,000                        | 3,500                          | 17,000                         |
| 400      | 310,000 | 66,000             | 230,000                        | 2,300                          | 11,000                         |
| 450      | 200,000 | 41,000             | 150,000                        | 1,400                          | 6,900                          |
| 500      | 120,000 | 25,000             | 87,000                         | 840                            | 4,000                          |
| 550      | 72,000  | 15,000             | 54,000                         | 510                            | 2,400                          |
| 600      | 44,000  | 9,400              | 33,000                         | 310                            | 1,500                          |

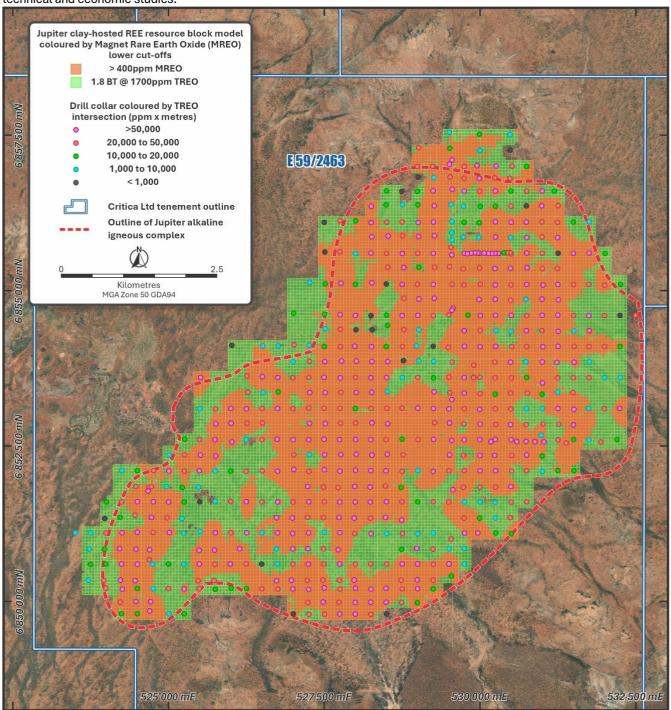
<sup>1.</sup>TREO represents the sum of 14 Rare Earth Elements excluding promethium plus yttrium expressed as oxides

 $<sup>2. \</sup>textit{MREO represents the sum of neodymium, prase odymium, dysprosium and terbium expressed as oxides}\\$ 

<sup>2.</sup>HREO represents the sum of the gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium as oxides



Figure 2: High-Grade MREO Core Defined Within Jupiter's 1.8 Bt Inferred Resource illustrating the potential for selective development scenarios that may target higher-value zones while retaining the scale for long-life supply, subject to further technical and economic studies.



# INDEPENDENT MINERAL RESOURCE ESTIMATION DETAIL

The following is a material information summary relating to the MRE, consistent with ASX Listing Rule 5.8.1 requirements. Further details are provided in JORC Code Table 1, which is included as Appendix B.

# **Strategic Project Location and Accessible Infrastructure**

Discovered in late 2023, the Jupiter high grade clay-hosted rare earth deposit is part of Critica's wholly owned Brothers project. The Brothers project spans approx. 1,500 km<sup>2</sup> of semi contiguous granted tenure located

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approximately 550 kilometres northeast of Perth and 60 kilometres west of Mount Magnet in Western Australia (Figure 3).

Jupiter benefits from well-established infrastructure, enhancing its development potential. The project is strategically located within the Mt Magnet – Yalgoo area, a premier mining district of Western Australia. It is less than 10 kilometres from the Mount Magnet-Geraldton bitumen highway, providing direct access to local labour centres and the Port of Geraldton. Access to the project area from the bitumen highway is via unsealed tracks through the two crown pastoral lease stations that overlap the Brothers tenements. The terrain at Jupiter is flat, sparsely vegetated and facilitates year-round access.

The mid-west gas pipeline runs parallel to the Mount Magnet-Geraldton highway, past the project site and transmission power lines run within 40 kilometres of the site to the south-west.

A preliminary heritage survey was completed, and no Aboriginal cultural sites or materials were identified with the site deemed a low-risk area.

100 Coastal Hwy Jupiter & Brothers **REE** Project lours drive time to Geraldton Mount Magnet Yalgoo Jupiter Midwest Gas Pipeline Geraldton - Mount Magnet Rd olden Grove Mine Site nas- Mt Weld RE Project 450kms → Natural Geraldton Gas Mingenew Morawa Dongara OCEA Three Springs Port Hedland NDIAN WESTERN AUSTRALIA Eneabba Iluka RE 0 МАР Proposed Refiner Wubin Tenement Kalgoorlie PERTH Main road Power transmission line Gas pipeline Port 116 117°E 118°E

Figure 3| Brothers and Jupiter Project Location Map

# **Project History**

The Jupiter target was originally identified by geophysics with coincident aeromagnetic and gravity anomaly coupled with anomalous rare earth element results from two co-funded EIS drill-holes drawing Critica geologists into the area. First pass Air Core ("AC") drilling of the Jupiter target along existing pastoral tracks was completed in June 2023 with every drill-hole reporting significant rare earth mineralisation within clay and saprolite zones. The grades and thicknesses reported were considered high compared to other known Australian clay-hosted rare earth deposits at the time. The discovery of the Jupiter REE deposit was announced to the market in November 2023. Following the

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Jupiter discovery Critica conducted geophysical surveys (gravity and magnetics) and several RC and AC drilling campaigns which delineated an area of 40 square kilometres of high-grade, clay-hosted rare earth mineralisation. The consistent, broad zones of mineralisation up to 80 metres thick, with grades above 1,000 ppm TREO were identified.

In 2024, two resource definition programs comprising 508 AC holes for 29,772 metres were drilled across the Jupiter project area. The first program defined the Jupiter mineralisation to a  $500 \times 250$  metre line spacing. The second program infilled areas with thick intersections of >2,000 ppm TREO to a  $250 \times 250$  metre drill spacing. The resulting information was utilised by SRK Consulting to produce an independent MRE for Jupiter.

# **Geology and Geological Interpretation**

The Jupiter deposit is located within the Archaean Murchison Domain of the Youanmi Terrane, Yilgarn Craton. The Murchison Domain comprises narrow belts of supracrustal greenstones, the large layered mafic—ultramafic Meeline and Boodanoo suite intrusive complexes in the east, and voluminous granitic rocks emplaced between c. 2.7 Ga and 2.6 Ga. The extensive granitic rocks are divided into the Cullculli Suite (tonalite-trondhjemite-granodiorite), Big Belle Suite (tonalite-monzongranite), Tuckanarra Suite (granodiorite-monzogranite), Jungar (K-feldspar-porphyritic monzogranites) and the Bald Rock Supersuite (monzogranite and fluorite bearing alkaline granite).

The Archaean basement throughout the Jupiter area is generally deeply weathered and extensively covered by Cenozoic alluvial and colluvial sand and gravel, laterite and lateritic gravels on breakaways and uplands. The Jupiter REE deposit and associated intrusion itself is completely concealed by alluvial and colluvial sand and hardpan within an area currently interpreted to be underlain by Big Bell Suite granitoids.

Regolith thickness is up to 100 metres across the entire extent of the Jupiter geophysical anomaly that is extensively mineralised at the >1,000 ppm TREO level. The regolith comprises of three main zones which are described below in Table 3.

Table 3 | Jupiter Regolith Profile description

| Regolith                 | Thickness | Description   |
|--------------------------|-----------|---|
| Cover Zone<br>(SAND)     | 1-35m     | Alluvial and colluvial sand and gravel, extensively cemented and commonly laminated microcrystalline silica and lesser iron oxides. Gravel clasts comprise largely deeply weathered granitoids, and vein or pegmatite quartz, while the sand comprises iron-oxide stained rounded to sub angular quartz. A well washed quartz sand or grit is present in many areas at the base of the transported cover. Clay content typically increases with depth, and in areas without a distinct basal sand unit the boundary with the underlying in situ Clay Zone is difficult to visually distinguish. Hyperspectral logging shows a mixture of montmorillonite and kaolinite clay in the Cover Zone.  |
| Clay Zone<br>(RCLY)      | <60m      | Kaolinitic clay (upper saprolite) with a variable content of sand-sized relict quartz reflecting protolith (which ranges from quartz-free syenite to granite). Colour ranges from white to dark ferruginous red brown, through to white or pink in the middle part of the Clay Zone (bleached) to yellow and brown in the lower part. An element of protolith control is also apparent with white and yellow kaolinite typically better developed over monzonite and granite protoliths with <20% ferromagnesium mineral content, and red brown clays developed over monzonite, syenite and alkali gabbro with >20% ferromagnesium mineral content. Ferricrete and silcrete zones are locally developed. Hyperspectral logging shows kaolinite is the dominant and commonly only volumetrically significant clay mineral. |
| Saprolite Zone<br>(RSAP) | <40m      | Saprolitic clay with feldspar increasing down-hole, and depending on the protolith an increase of magnetite, biotite, amphibole, epidote and chlorite down hole towards fresh basement. Hyperspectral logging shows declining kaolinite and increasing nontronite and relict primary phases towards base of the saprolite. Relict igneous minerals and texture is increasingly evident through the Saprolite Zone. The upper contact between Saprolite and Clay zones is texturally difficult to visually pick in AC and RC cuttings but the transition is usually conspicuous with a sharp increase from <1% K to several % K in the Saprolite Zone reflecting presence of relict potassium feldspar, a major rock former in most Jupiter protoliths.  |

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Bottom of hole (near fresh) and RC hammer drilling shows the basement beneath the Jupiter clay-hosted REE deposit comprises a zoned, heterogeneous medium to coarse grained intrusion that ranges from alkali gabbro and pyroxene syenite through monzodiorite and monzonite to granite. Geological logging and classification is complemented with a full-suite of bottom of hole multi-element geochemical data collected from every drill-hole.

#### Mineralogy

Clay-hosted REE and gangue mineralogy is typically very fine grained and required microanalytic techniques to resolve. Currently, mineralised regolith samples from Jupiter have been analysed by TIMA (Tescan Integrated Mineral Analyzer) to establish mineralogy (via a mineralogical library) and key grain size and liberation characteristics. Selected Jupiter TIMA samples were further analysed by LA-ICPMS (Laser Ablation Inductively Coupled Plasma Mass Spectrometry) and EPMA (Electron Probe Micro Analysis) to verify and determine the compositions of the TIMA identified REE phases and gangue minerals.

This microanalytical work shows the REE-phosphates Florencite-Gorceixite-Goyazite, Rhadophane-Monazite and Xenotime to be the dominant REE phases in the Jupiter regolith. Florencite (REE)Al $_3$ (PO $_4$ ) $_2$ (OH) $_5$ (OH) $_6$  - Gorceixite (Ba,REE)Al $_3$ (PO $_4$ )(PO $_3$ OH)(OH) $_6$  - Goyazite (Sr,REE)Al $_3$ (PO $_4$ ) $_2$ (OH) $_5$ (OH) $_6$  are hydrated phosphates with solid solution between barium, strontium and REE end members. Rhabdophane REE(PO $_4$ ). (H $_2$ O) is a hydrated form of monazite REE(PO $_4$ ), and it is likely that hydrated forms of the identified Xenotime (Y,HREE)PO $_4$  will also be present. Dominant gangue minerals are quartz, magnetite, hematite, feldspar, kaolinite, epidote, biotite, muscovite, illite, chlorite, barite, rutile, titanite, ilmenite, Mn-oxides, zircon and apatite.

# **Drilling Techniques**

Air Core drilling was completed by KTE Drilling using a Challenger RA 150 Air Core rig mounted on a 4 x 4 MAN truck with inbuilt 600 CFM at 250 psi compressor. Drilling was completed using a 3.5" drill bit with blade. All holes were drilled vertically and to blade refusal.

Reverse Circulation drilling was completed by KTE Drilling using a DB450 mounted on an 8 x 8 Scania truck with on board 1150/350 air compressor. All holes were drilled vertically to at least fresh rock with some holes extending up to 20 metres into the fresh rock.

Diamond drilling was completed by DDH1 using a Sandvik DE840 truck mounted drill rig. Holes were drilled at -70°. Down-hole surveys were collected at 30 metre intervals. Results from the diamond drilling are still pending at the time of resource calculation and have not been included in the resource calculation. A summary of the drill-holes completed by Critica are outlined in Table 4.

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#### Table 4| Jupiter Drill-hole Summary

| Drill Program        | Year | No. Holes | Metres   |  |  |
|----------------------|------|-----------|----------|--|--|
| Brothers AC: Phase 1 |      | 4         | 218      |  |  |
| Jupiter AC: Phase 1  | 2023 | 29        | 1,808    |  |  |
| Jupiter RC: Phase 1  | 2023 | 25        | 1,794    |  |  |
| Jupiter RC: Phase 2  |      | 52        | 3,252    |  |  |
| Jupiter AC: Phase 2  |      | 246       | 14,376   |  |  |
| Jupiter AC: Phase 3  | 2024 | 262       | 15,396   |  |  |
| Jupiter DD: Phase 1  |      | 7         | 819.4    |  |  |
| Total                |      | 625       | 37,663.4 |  |  |

#### Sampling

AC and RC samples were collected directly from the rig cyclone underflow at one metre intervals and stored into plastic bags at the drill site. The sticky nature of the clay materials and variability in fragment size precluded the effective use of cone or riffle splitting for sampling. Spear sampling was used to collect a subsample from each interval and used to prepare field composites that typically comprised of four metres (ranging 2 to 6m) weighing 2kg to 3kg. Duplicate samples were collected in sequence with the primary samples to monitor sampling consistency and ensure that the sampling method was suitable for this ore-type. No issues were identified.

# **Sample Analysis and Methods**

Samples were dispatched to ALS (Canningvale and Wangara, WA) for geochemical testing. Samples weighing 2-3 kg, were processed using conventional sample preparation procedures, comprising oven-drying, crushing and then pulverising to a split of  $P_{95}$  passing 75  $\mu$ m.

For all samples a total of 34 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W and Zn) were analysed using a four-acid digest with an Inductively Coupled Plasma – Atomic Emission Spectroscopy (ICP-AES) finish (ME-ICP61).

For samples exceeding La > 100 ppm and elevated P, a total of 32 elements (Ba, Ce, Cr, Cs, Dy, Er, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb and Zr) were analysed by fusing a 0.1g pulverized sample with a lithium metaborate flux (ME-MS81). The resultant glass was dissolved in nitric, hydrochloric and hydrofluoric acid mixture. The solution was then analysed by Inductively Coupled Plasma – Mass Spectrometry (ICP-MS).

For reporting purposes rare earth elements have been expressed in their oxide form. The factors used to convert the rare earth element grades to their oxide grades are outlined in Appendix B – Section 2.

# **Quality Assurance and Quality Control Procedures**

The data collection programs include a comprehensive set of quality assurance and quality control (QAQC) procedures including twinned hole drilling, independent laboratory checks, and the insertion (by Critica) of standards, field duplicates and blanks into the primary submission batches. Field and laboratory sample weights were recorded and monitored. Periodic grinding checks were also conducted by the laboratory. Descriptions of the QAQC procedures and results are summarised below in Table 5.



# Table 5 | Summary of QAQC procedures and results

| QAQC Procedure                   | Description  |
|----------------------------------|--|
| Drill-hole twinning              | All drilling techniques can be susceptible to grade biases due to preferential material loss. Critica twinned 3 AC holes with RC holes and observed reasonable correlation in grade and in domain definition. The seven diamond core holes described above are proximal to existing RC and AC holes. Critica plans to use the assay data from these holes to assist with the validation of the RC and AC data once the laboratory test work has been completed.  |
|                                  | The field duplicates comprised scoop samples collected from the composites at a nominal frequency of approximately 1 in 20. The duplicate dataset also includes 77 samples that were resubmitted as a separate batch to ALS.   |
| Field Duplicates                 | Critica used scatterplots, QQ plots, and precision plots to assess the duplicate datasets. The QAQC graphs and summaries made available to SRK show acceptable performance. The scatterplots and QQ plots show no evidence of significant bias. The HARD (half average relative difference) plots show acceptable levels of precision have been achieved, with over 90% of the pairs reporting a HARD of less than 10% for most analytes.  |
|                                  | Spearing and scooping are generally not considered to be reliable sampling methods. However, the duplicate datasets do not show that these methods have introduced significant sampling error for the analytes of interest.  |
|                                  | Standards were routinely included in the laboratory submissions at a nominal frequency of 1 in 20. A total of 5 different Standards were used, with 4 purchased from OREAS and 1 purchased from Geostats Pty Ltd.  |
| Standards                        | Summary control charts prepared by Critica show acceptable Standards performance, with relatively low failure rates and appropriate monitoring and response when failures are detected. Some biases are evident with most REE reporting slightly below their Certified values for all Standards. Most of the differences are less than 5%.   |
| Independent<br>Laboratory Checks | Critica submitted batches of pulp samples to independent laboratories for confirmatory testing. A batch of 100 pulp samples was sent to Intertek (Maddington) which assayed for a 45 element suite using lithium borate fusion with a ICP – OES/MS finish. The same batch of 100 pulps was then submitted to Bureau Veritas (South Australia) which completed a 32 element suite using lithium borate fusion with an ICP – MS finish. Analysis of the results showed very good agreement was achieved between the 3 laboratories, with no evidence of significant bias or precision differences.   |
| Blanks                           | Blanks samples were inserted into the laboratory batches by ALS as part of their internal QAQC procedures at a nominal frequency of 1 in 20. The source, form, or certification of the blanks is not described. Several REEs reported at least 1 failure, with the highest rate being Lu (3.8%). Critica considers that the failures are likely due to analytical error and not sample contamination given that the higher failure rates are associated with elements with the lowest concentrations, and the failures for any given sample are generally limited to 1 or 2 analytes.  |
| Surveys                          | All data used for resource estimation are reported using MGA94 Zone 50 coordinate system, with elevations based on the Australian Height Datum. The topographic dataset for the deposit region was acquired from open source 30 m gridded SRTM data. The collar locations were surveyed using handheld GPS to a reported accuracy of +/- 5m. SRK noted that all drillhole collar elevations were within 0.5m of the topographic surface elevations and no adjustments were applied. All of the RC and AC holes were vertical and relatively shallow and downhole surveying was not performed. The diamond core holes, which were all nominally angled at 70°, were downhole surveyed at 30 m intervals using gyro equipment. |

# **Density Determination**

Density data was derived from tests performed on core samples collected from seven diamond core holes drilled in 2024. The holes were drilled using PQ3 coring equipment through the weathered zone, stepping down to HQ3 once fresh rock was intersected. The drill-holes were broadly spaced over the strike extent of the deposit. Density tests were performed using the following techniques:

- 388 Caliper density measurements were performed on competent core pieces ranging in length from 10 cm to 1 m. The dimensions were measured prior to oven drying at 105°C for 24 hours, with density calculated from the dry weights and estimated volume.
- The core samples were processed using a Minanalyzer core scanner. This equipment uses laser scanning to estimate the volume of core samples stored in core trays. The core trays were weighed, oven dried, and then

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reweighed, with the density estimated from the dry core weight and estimated core volume. A total of 258 trays were scanned (equating to 704 metres) of which 131 tray measurements were deemed acceptable.

• A total of 85 water immersion tests were performed. Sample sealing was not performed and the tests were conducted on fresh rock fragments only.

Critica compiled and compared the density test results and noted acceptable agreement between the various test methods. Based on the synthesis of the results, the dry in situ bulk densities shown in Table 6 were chosen by Critica and assigned to the resource model according to lithological flagging.

#### Table 6 | Dry bulk densities

| Lithology              | Dry Bulk Density (g/cm³) |
|------------------------|--------------------------|
| Transported Cover      | 1.90                     |
| Upper Saprolite – Clay | 1.65                     |
| Lower Saprolite        | 2.00                     |
| Fresh Rock             | 2.80                     |

#### RESOURCE ESTIMATION METHODOLOGY

The Jupiter MRE was prepared by SRK and is based on AC and RC drilling. The data cut-off for input into the MRE was 15<sup>th</sup> November 2024, when final assays were returned from the infill resource definition drilling.

#### **Geological Domains**

Critica used a combination of geochemical data, geological logging data and hyperspectral mineralogical data to divide the regolith profile into the following sub-horizontal lithological zones (from surface down):

- Overburden (LCODE = 10)
- Clay Zone (LCODE = 30)
- Saprolite Zone (LCODE = 40)

The lithology domain contacts are reasonably well-defined by either step or transitional changes in multiple major oxide grades. In general, the overburden zone is only weakly mineralised (~150 ppm TREO). The TREO grades are often depleted in the upper parts of the clay zone but increase with depth, with a high-grade core often straddling the Clay and Saprolite Zone contact. The TREO grades then tend to trend lower with depth into the saprolite and fresh rock.

Although there is a broad correlation between the lithological domaining and TREO grade, the lithological domains are not considered adequate for REO estimation control because they show mixed populations. SRK has instead defined estimation domains based on TREO grade. Based on visual and statistical assessments of TREO grade distributions, a nominal threshold of 400 ppm has been used to define a mineralised envelope. Within this, a nominal threshold of 1200 ppm has been used to define a high-grade core. These grade thresholds have not been applied in a prescriptive manner but instead used as a guide only for domain definition. The regolith profile has been divided into the sub-horizontal estimation domains summarised in Table 7.

# **Table 7 | TREO Estimation domains**

| GCode | Description   |
|-------|---|
| 10    | Material above the top of the TREO 400 domain. This is typically weakly mineralised overburden material |
| 20    | Material between the top of the TREO 400 domain and the top of the TREO 1200 domain                     |
| 30    | Material within the TREO 1200 domain  |
| 40    | Material below the TREO 1200 domain   |

Approximately 90% of the holes finish in mineralisation that exceeds 400 ppm TREO and a lower surface for GCode 40 has not been defined using a grade threshold.

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Although the TREO domains (GCode) have been used for estimation control, SRK has also encoded the Lithology domains (LCode) into the model. This was implemented by using the lithology codes that Critica assigned to drill-hole samples to create surfaces representing the lithological contacts. The lithological domain coding has been used to estimate major mineral concentrations into the model, and for density assignment.

A typical cross-section showing the general geometry of the GCode domains is presented in Figures 4 and 5 show a sub-region of the same section with TREO grades and lithological boundaries displayed.

Figure 4 | Example cross-section showing estimation domains (source:SRK)

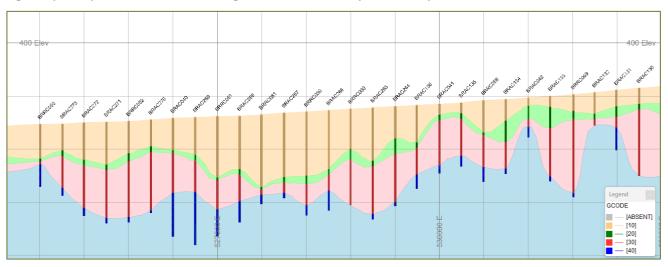


Figure 5 | Example cross-section showing TREO grade and lithological contacts (source:SRK)



# **Estimation Domains**

The geological model was used to assign regolith and estimation domain codes to the samples. Over 70% of the laboratory samples had been collected over 4 m intervals, 20% over 2 m intervals, and the remainder over intervals ranging from 1 to 6 m The flagged samples were composited to 4 m intervals to adjust for these differences.

Statistical and geostatistical assessments of the major analyte grades were conducted to assist with validation of the geology model and the selection of resource estimation parameters. Cumulative frequency distribution plots

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and decay tables were used to check for outlier grades. Based on this assessment, grade cutting was not considered necessary.

Variographic studies were conducted on the spatially transformed data for selected analytes within the main mineralised domain (GCODE = 30). Well-structured variograms were obtained for TREO as well as for most of the major analytes. Nugget values were typically low (<10%) and total ranges were in the order of several hundred metres, with 80% of the sill generally reached within 400 m. The variograms exhibit minimal lateral anisotropy, but significant vertical anisotropy. Where possible, it is preferable to use similar variogram parameters for all analytes to ensure that any grade relationships evident in the estimation file are reproduced in the model. The variograms for the individual REO of most importance (either from abundance or potential value, including  $CeO_2$ ,  $La_2O_3$ ,  $Nd_2O_3$ , and  $Pr_6O_{11}$ ) show very similar characteristics to the TREO variograms and the TREO model was used for all REOs.

#### **Volume Modelling**

The Mineral Resource estimates were prepared using conventional block modelling techniques. A single 3D model framework was created to cover the extents of the uniform drill coverage. A parent cell size of 50 m  $\times$  50 m  $\times$  2 m (XYZ) was chosen. This cell size is sufficiently small to enable the wireframe volumes to be adequately reproduced in the block model and sub-celling was not considered necessary. The cell size is adequately matched to the drill spacing, and kriging neighbourhood analyses (KNA) did not indicate a significant reduction in estimation efficiency compared to larger cell sizes.

The grade and lithological domain wireframes were used to assign domain codes to each model cell. Cells located above the topographic surface were removed from the model. The model was extended beyond the outermost drilling by a distance approximately equivalent to half the nominal drill spacing.

The drilling was usually terminated once saprock or fresh rock was encountered and penetration rates slowed. Many holes finished in material with elevated TREO concentrations, and the base of grade domain 40 could not be defined using a grade threshold. Instead, this domain was assigned a nominal thickness of 30 m to enable material immediately below the base of drilling to be included in the grade model. This was implemented to assist with future drill planning and this material is included in the grade model, but not in the Mineral Resource estimation.

In order to improve estimation control, the model cells in each domain were transformed (flattened and dilated) relative to local datum planes such that cells located within similar parts of the profile were assigned similar elevations. Identical transforms were applied to the drill-hole data such that the original geometric relationship between the samples and model cells was retained.

#### **Grade Estimation**

Ordinary kriging was used for grade interpolation and all domain contacts were treated as hard boundary constraints. KNA studies were used to assist with parameter selection. Estimates were made into the discretised parent cells.

A three-pass search strategy was implemented using discoid-shaped search ellipsoids, with the dimensions largely based on the results from variogram studies. Keyfield (drill hole) restrictions were invoked for additional estimation control. Extrapolation was limited to approximately half of the local drill spacing. After estimation, the model cells were back-transformed to their original locations.

Local grades were estimated for the following analytes for all domains:

- TREO, MREO, La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O11, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, and Y<sub>2</sub>O<sub>3</sub>.
- Sc<sub>2</sub>O<sub>3</sub>, P, Ba, Rb, Sr, Th, U, Si, Al, Fe, Mg, Ca, Na, K, Ti, S, Cu, Zn, Cr, Ga, Mn, Nb, V, and Zr.

The TREO and MREO estimates were derived by summing the individual kriged REO grades. These were checked against estimates derived by directly kriging the TREO and MREO values in the estimation dataset, and minimal differences were observed.

The same estimation parameters were used for all analytes in a given domain (with the exception of the slight differences in the variogram models) to ensure that any grade relationships within the dataset were reproduced in the model.

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#### **Model Validation**

Model validation included:

- visual comparisons of the sample and model cell grades
- local and global statistical comparisons of the sample and model cell grades
- assessment of the estimation performance data.

The validation procedures did not highlight any significant issues. The model cell estimates appear to be consistent with the input data. The estimation performance data indicated that most of the model cell estimates were estimated in the first search pass and informed by an adequate number of relevant samples. Acceptable slope of regression and kriging efficiency values were achieved.

#### **Mineral Resource Classification and Reporting**

The Mineral Resource estimates have been classified in accordance with the JORC Code (2012). The classifications have been applied to the Mineral Resource estimates based on consideration of the confidence in the geological interpretation, the quantity and quality of the input data, the confidence in the estimation technique, and the likely economic viability of the material. The information as required under ASX Listing Rule 5.8.1 is summarised below:

- Lithological and grade continuity the lithological units have been largely defined using geochemical and geological logging data. There is reasonable consistency and continuity evident for multiple analytes, with individual zones quite easily traced along and between drill sections. Strong correlations are not evident between the REO grades and the major oxide grades, and the various lithological units show mixed REO grade population. However, quite clearly defined zones of consistent REO grade are evident and also easily traced between drillholes. The TREO variograms indicate total ranges of several hundred metres, with practical ranges (approximately 80% of the sill) of approximately 400 m.
- Geological complexity the regional geology of the project area and the general controls on mineralisation are well understood. The general geometry and orientations of the regolith domains are quite consistent. As expected with this style of mineralisation, localised pinching and swelling is evident. There is some level of unpredictability in the weathering depth with, in places, relatively large changes in adjacent holes. Given that the drilling was usually terminated once penetration rates slowed, it is not clear whether the apparent variability accurately reflects the bedrock interface or possibly just silicified zones within the regolith.
- Data quality almost all of the data used to prepare the Mineral Resource estimates was acquired by Critica
  over two programs that are both supported by an appropriate amount of QAQC data. As outlined above, QAQC
  performance was observed to be very good. There is currently insufficient data to rule out the possibility of bias
  from sample extraction errors. However, the likelihood of significant errors is considered to be low, and the
  diamond core assay data will assist with this assessment.
- **Grade modelling** the model validation checks show a good match between the input data and estimated grades, indicating that the estimation procedures have performed as intended and that the confidence in the estimates is consistent with the Mineral Resource classifications that have been applied.

Based on the above considerations, SRK considers that sample spacing is the primary controlling factor for the classification of the Mineral Resource estimates, given its influence on grade and lithological continuity and estimation quality. SRK considers the classification of resources in Table 8 as Inferred to be appropriate for the model cells located within the defined resource extents.

Most of the resource area is covered by a uniform 250 x 250 m drill spacing. As outlined above, good grade and lithological continuity is evident at the current spacing. Regolith deposits often show relatively good continuity in terms of both grade tenor and thickness at wider spacings, but infill drilling (down to production spacings) often highlights significant short-scale variability. There is currently insufficient data to assess the robustness of estimates derived from the current spacing, or whether the local variability may result in biased estimates.

A conservative approach to the lateral extrapolation of estimates beyond drilling was adopted, using no more than half the local drill spacing as a maximum, as supported by robust variography that demonstrates excellent lateral grade continuity. The grade model has been extended below the base of drilling. However, because of the vertical

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grade trends evident in the profile, the Mineral Resource has been limited to the local drilling depth and not extrapolated beyond that depth.

The Mineral Resource estimate derived from the Jupiter resource model using Magnet Rare Earth Oxide (MREO) cutoffs is presented in Table 8. The estimates were calculated by applying the listed MREO cut-offs to individual model cells. An assessment of the geological data shows the mineralisation to be well defined at these grade thresholds, including the preferred 400 ppm MREO cut-off.

Most of the material above the preferred 400 ppm MREO reporting cut-off occurs in the high-grade core zone near the clay – saprolite contact. Additional material with elevated REO grades that do not meet the cut-off criterion occurs both above and below this zone, however insufficient work has been completed to comment on the possible economic viability of this material. The grade-tonnage tabulation presented in Table 8 shows the quantum of mineralised material at a range of MREO reporting cut-off grades. Full details are included in Appendix B JORC Code Table 1.

SRK understands that while metallurgical and marketing studies are in progress, for the consideration of potential economic viability, the cut-off grade has been benchmarked against those used for what are considered to be peer projects at similar stages of development. Given the relative immaturity of the clay-hosted REE industry in Australia, Critica has elected to use a conservative reporting cut-off grade compared to those used for most peer projects.





Table 8 | Jupiter Inferred Mineral Resource (February 2025) reported by MREO cut-offs (rounded to 2 significant figures).

| Cut-off  | Tonnage | MREO | TREO | La <sub>2</sub> O <sub>3</sub> | CeO <sub>2</sub> | Pr <sub>6</sub> O <sub>11</sub> | Nd <sub>2</sub> O <sub>3</sub> | Sm <sub>2</sub> O <sub>3</sub> | Eu <sub>2</sub> O <sub>3</sub> | Gd <sub>2</sub> O <sub>3</sub> | Tb <sub>4</sub> O <sub>7</sub> | Dy <sub>2</sub> O <sub>3</sub> | Ho <sub>2</sub> O <sub>3</sub> | Er <sub>2</sub> O <sub>3</sub> | Tm <sub>2</sub> O <sub>3</sub> | Yb <sub>2</sub> O <sub>3</sub> | Lu <sub>2</sub> O <sub>3</sub> | Y <sub>2</sub> O <sub>3</sub> |
|----------|---------|------|------|--------------------------------|------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| MREO ppm | Mt      | ppm  | ppm  | ppm                            | ppm              | ppm                             | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                            | ppm                           |
| 250      | 1,700   | 390  | 1700 | 347                            | 771              | 83                              | 289                            | 42                             | 9                              | 26                             | 3                              | 15                             | 3                              | 7                              | 1                              | 5                              | 1                              | 76                            |
| 300      | 1,400   | 410  | 1800 | 363                            | 809              | 87                              | 305                            | 44                             | 9                              | 27                             | 3                              | 15                             | 3                              | 7                              | 1                              | 5                              | 1                              | 79                            |
| 350      | 1,000   | 450  | 1900 | 389                            | 872              | 94                              | 331                            | 48                             | 10                             | 29                             | 3                              | 16                             | 3                              | 7                              | 1                              | 6                              | 1                              | 84                            |
| 400      | 640     | 490  | 2100 | 423                            | 949              | 103                             | 363                            | 52                             | 11                             | 31                             | 4                              | 18                             | 3                              | 8                              | 1                              | 6                              | 1                              | 90                            |
| 450      | 360     | 540  | 2300 | 464                            | 1036             | 114                             | 400                            | 57                             | 12                             | 34                             | 4                              | 19                             | 3                              | 8                              | 1                              | 7                              | 1                              | 97                            |
| 500      | 200     | 590  | 2500 | 508                            | 1126             | 125                             | 440                            | 62                             | 13                             | 37                             | 4                              | 20                             | 3                              | 9                              | 1                              | 7                              | 1                              | 105                           |
| 550      | 110     | 640  | 2700 | 552                            | 1211             | 136                             | 480                            | 68                             | 14                             | 40                             | 5                              | 22                             | 4                              | 10                             | 1                              | 8                              | 1                              | 116                           |
| 600      | 64      | 700  | 2900 | 596                            | 1286             | 148                             | 519                            | 73                             | 15                             | 42                             | 5                              | 24                             | 4                              | 11                             | 1                              | 9                              | 1                              | 130                           |

# Table 9 | Jupiter Inferred Mineral Resource (February 2025) MREO endowments (rounded to 2 significant figures).

| Cut-<br>off | MREO    | La₂O₃   | CeO <sub>2</sub> | Pr6O <sub>11</sub> | Nd <sub>2</sub> O <sub>3</sub> | Sm <sub>2</sub> O <sub>3</sub> | Eu <sub>2</sub> O <sub>3</sub> | Gd <sub>2</sub> O₃ | Tb <sub>4</sub> O <sub>7</sub> | Dy <sub>2</sub> O <sub>3</sub> | Ho <sub>2</sub> O <sub>3</sub> | Er <sub>2</sub> O <sub>3</sub> | Tm <sub>2</sub> O <sub>3</sub> | Yb <sub>2</sub> O <sub>3</sub> | Lu <sub>2</sub> O <sub>3</sub> | Y <sub>2</sub> O <sub>3</sub> |
|-------------|---------|---------|------------------|--------------------|--------------------------------|--------------------------------|--------------------------------|--------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|
| MREO<br>ppm | tonnes  | tonnes  | tonnes           | tonnes             | tonnes                         | tonnes                         | tonnes                         | tonnes             | tonnes                         | tonnes                         | tonnes                         | tonnes                         | tonnes                         | tonnes                         | tonnes                         | tonnes                        |
| 250         | 660,000 | 590,000 | 1,300,000        | 140,000            | 490,000                        | 71,000                         | 15,000                         | 44,000             | 5,100                          | 25,000                         | 4,300                          | 11,000                         | 1,400                          | 8,800                          | 1,200                          | 130,000                       |
| 300         | 590,000 | 520,000 | 1,200,000        | 120,000            | 440,000                        | 63,000                         | 13,000                         | 39,000             | 4,500                          | 22,000                         | 3,800                          | 9,800                          | 1,300                          | 7,800                          | 1,100                          | 110,000                       |
| 350         | 450,000 | 400,000 | 890,000          | 96,000             | 340,000                        | 49,000                         | 10,000                         | 30,000             | 3,500                          | 17,000                         | 2,900                          | 7,400                          | 1,000                          | 5,800                          | 810                            | 86,000                        |
| 400         | 310,000 | 270,000 | 610,000          | 66,000             | 230,000                        | 33,000                         | 7,000                          | 20,000             | 2,300                          | 11,000                         | 1,900                          | 5,000                          | 640                            | 3,900                          | 540                            | 58,000                        |
| 450         | 200,000 | 170,000 | 380,000          | 41,000             | 150,000                        | 21,000                         | 4,300                          | 12,000             | 1,400                          | 6,900                          | 1,200                          | 3,000                          | 400                            | 2,400                          | 330                            | 35,000                        |
| 500         | 120,000 | 100,000 | 220,000          | 25,000             | 87,000                         | 12,000                         | 2,600                          | 7,300              | 840                            | 4,000                          | 690                            | 1,800                          | 230                            | 1,400                          | 200                            | 21,000                        |
| 550         | 72,000  | 62,000  | 140,000          | 15,000             | 54,000                         | 7,500                          | 1,600                          | 4,400              | 510                            | 2,400                          | 420                            | 1,100                          | 150                            | 900                            | 130                            | 13,000                        |
| 600         | 44,000  | 38,000  | 82,000           | 9,400              | 33,000                         | 4,600                          | 950                            | 2,700              | 310                            | 1,500                          | 260                            | 700                            | 94                             | 590                            | 83                             | 8,300                         |

<sup>1.</sup>TREO represents the sum of 14 Rare Earth Elements excluding promethium plus yttrium expressed as oxides

<sup>2.</sup>MREO represents the sum of neodymium, praseodymium, dysprosium and terbium expressed as oxides

<sup>2.</sup>HREO represents the sum of the gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium as oxides





Authorised by the Board of Critica Limited.

# Jacob Deysel

**CEO** 



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#### **ABOUT CRITICA**

**Critica Limited (ASX: CRI)** is a critical minerals company focused on developing the Jupiter Rare Earths Project in Western Australia's largest and highest-grade clay-hosted REE deposit, rich in high-value magnet elements (Nd, Pr, Dy, Tb) and supported by clean metallurgy and low-impact development potential. With a clear path from resource to revenue, Critica is advancing Jupiter through targeted drilling, beneficiation and strategic alignment. The Company also holds the Mt Lindsay Project in Tasmania, a long-life tin-tungsten asset.

#### **CONTACT US**

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#### **COMPETENT PERSONS STATEMENT**

The information in this report that relates to exploration results including geology interpretation, data preparation and data quality is based on work compiled by Dr. Stuart Owen who is a Member of the Australian Institute of Geoscientists. Dr. Owen is a permanent employee of Critica Limited and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (JORC code). Dr. Owen consents to the inclusion in the report of the matters based on his information in the form and context in which they appear.

The information in this announcement that relates to the Mineral Resource estimates for Jupiter is based on work conducted by Rodney brown of SRK Consulting (Australasia) Pty Ltd. Rodney Brown is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the *JORC code*. Mr. Brown consents to the inclusion in the report of the matters based on his information in the form and context in which they appear.

Review and reporting of the Jupiter resource model of 11 February 2025 using MREO cut-offs was conducted by suitably qualified Critica personnel, and the resource block model as reported to the ASX on 11 February 2025 and described in this report was not adjusted in any way. The Company confirms that all material assumptions and technical parameters underpinning the Mineral Resources Estimates referred to within previous ASX announcements remain current and have not materially changed since last reported. The Company is not aware of any new information or data that materially affects the information included in this announcement.

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# The Information in this announcement that relates to previous exploration results for the Projects is extracted from the following ASX announcements:

- Critica Advances Jupiter Outstanding Magnet and HREO Grades 25 July 2025
- Critica Commences Bulk Metallurgical Testwork 28 May 2025
- First Pass Metallurgical Testwork Delivers 830% REE Upgrade 23 January 2025
- Jupiter Project Update 19 December 2024
- Excellent High-Grade Continuity at Jupiter and Mineral Resource Estimate Underway 27 November 2024
- Best Intersection 67m @ 3,074ppm TREO from Latest Jupiter Drilling 6 November 2024
- Multiple Rare Earth Discoveries Near Jupiter 17 October 2024
- New Rare Earth Discovery Jupiter Satellite 17 September 2024
- Another Record Drilling Result 57m @ 3,430ppm TREO 17 July 2024
- Best Drill Intersection to date 58m @ 2,723ppm TREO 17 June 2024
- 8m @ 5,716ppm TREO- Jupiter Drilling Continues to Outperform 5 June 2024
- Drilling Delivers More Record REE Intersections at Jupiter 23 May 2024
- Jupiter-more outstanding REE hits up to 60 m over 2000 ppm 16 April 2024
- Strategic Acquisition Adjacent to Jupiter REE Discovery 22 March 2024
- 300 Drillhole Program Commences at Jupiter 15 March 2024
- Jupiter Continues to Deliver with Record NdPr over 5,000 ppm 8 March 2024
- Jupiter delivers record drill hit of 48 m @ 3,025 ppm TREO 9 February 2024
- Jupiter Delivers over 7,000 ppm TREO from Maiden RC Drilling 29 November 2023
- Massive new REE Target at Brothers with up to 3,969 ppm TREO 9 November 2023
- VMS makes High Grade clay hosted REE discover at Brothers 1 August 2023
- Venture set to drill at the Iron Duke High Grade REE Project –18 May 2023
- JV into Neighbouring REE project with 49m @ 1313ppm TREO 9 May 2023

# **Glossary**

RE - Rare Earth(s)

**REE** - Rare Earth Elements

TREO - Total Rare Earth Oxides including yttrium

MREO - Magnet Rare Earth Oxides of praesedimium, neodymium, terbium and dysprosium

HREO – Rare Earth Oxides of gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium and yttrium





# APPENDIX A - SOURCE DATA FOR PEER COMPARISONS (FIGURE 1)

| Project                        | Company                | Resource  | Mt  | MREO (ppm) | Stage         | Source   |  |  |  |
|--------------------------------|------------------------|-----------|-----|------------|---------------|--|--|--|--|
| Convelience                    | Heavy Rare Earths      | Inferred  | 159 | 242        | Dua Caaming   | ASX Announcement. Five-Fold Increase in mineral resources to 159 Mt  |  |  |  |
| Cowalinya                      | Limited                | Total     | 159 | 242        | Pre-Scoping   | @ 870 ppm Total Rare Earth Oxides at Cowalinya Project in Western Australia. 3 October 2023. <u>02720133.pdf</u>               |  |  |  |
|                                |                        | Measured  | 0.7 | 202        |               |  |  |  |  |
| Koppamurra                     | Australian Rare Earths | Indicated | 112 | 190        | Cooping Ctudy | ASX Announcement. ASX Release. Significant Resource Expansion at Koppamurra. 30 September 2024. ASX:AR3 - Significant Resource |  |  |  |
| корранина                      | Australian Kare Earths | Inferred  | 123 | 190        | Scoping Study | Expansion at Koppamurra  |  |  |  |
|                                |                        | Total     | 236 | 191        |               |  |  |  |  |
| Mt. Ridley                     | Ma Didlou Minos        | Inferred  | 168 | 301        | Dua Caaming   | ASX Announcement. Significant Resource Expansion at Koppamurra. 30 September 2024. ASX:AR3 - Significant Resource Expansion at |  |  |  |
| Mt. Kidley                     | Mt. Ridley Mines       | Total     | 168 | 301        | Pre-Scoping   | Koppamurra   |  |  |  |
|                                |                        | Indicated | 149 | 109        |               |  |  |  |  |
| North Stanmore                 | Victory Metals         | Inferred  | 86  | 103        | Scoping Study | ASX Release. July 2024 MRE Investor presentation. PowerPoint Presentation  |  |  |  |
|                                |                        | Total     | 235 | 107        |               |  |  |  |  |
|                                |                        | Indicated | 44  | 300        |               |  |  |  |  |
| Salazar-Newmont-<br>West Cobar | West Cobar Metals      | Inferred  | 186 | 268        | Pre-Scoping   | ASX Announcement. Major Resource Expansions at Salazar for REEs,<br>TiO2 and Scandium. 8 October 2024. ea9172ff-a94.pdf        |  |  |  |
|                                |                        | Total     | 230 | 274        |               | ·  |  |  |  |
|                                |                        | Indicated | 119 | 366        |               |  |  |  |  |
| Splinter Rock                  | OD6                    | Inferred  | 563 | 296        | Pre-Scoping   | ASX Release. Rare Earth Industry Association 19 June 2024. PowerPoint Presentation   |  |  |  |
|                                |                        | Total     | 682 | 307        |               |  |  |  |  |



# APPENDIX B-JORC CODE (2012 EDITION) | 'TABLE 1' REPORT

# **Section 1: Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

| Criteria               | JORC Code explanation  | Commentary   |
|------------------------|--|--|
| Sampling<br>techniques | <ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul> | <ul> <li>Assay results from 541 Air Core (AC) and 77 Reverse Circulation (RC) drill holes for 31,798 m and 5,046 m respectively have been used in the reported Mineral Resource estimate. All drill holes have been reported previously to the ASX by Critica Limited (Critica), formerly Venture Minerals.</li> <li>AC and RC drill cuttings were collected from the drill rig cyclone in 1 m intervals in plastic bags and arranged in rows on the drill pad for assay sampling. Composite samples were typically collected at 4 m intervals for AC holes and 2 m intervals for RC holes and up to 6 m intervals through barren overburden. Samples were collected from the 1 m bulk samples using a spear.</li> <li>Drilling and sampling were supervised by suitably qualified Critica geologists.</li> <li>Samples were submitted to the commercial laboratory ALS Geochemistry (ALS) for assay.</li> </ul> |
| 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.).  | <ul> <li>AC and RC drilling presented in this report was completed by KTE Mining Services Pty Ltd.</li> <li>AC drilling was completed using a Challenger RA 150 AC rig mounted on 4 x 4 MAN truck with an onboard 350 psi/750 cfm compressor. Drilling was conducted with a 90 mm diameter blade and all holes were drilled to blade refusal.</li> <li>RC drilling was completed using DB450 and Schramm RC rigs with onboard 350 psi/1,150 cfm compressor and booster as necessary. Holes BRRC001-25 were completed to fresh rock with 5.5" face sampling hammer, BRRC030-81 were completed to blade refusal in saprock with a 4.5" blade.</li> </ul>   |





| Criteria  | JORC Code explanation   | Commentary  |
|---|---|---|
| Drill sample<br>recovery                            | <ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>  | <ul> <li>AC and RC sample return was visually monitored to ensure acceptable drilling recovery.</li> <li>Bulk AC and RC sample weights were recorded on site for quality assurance and quality control (QAQC) purposes.</li> <li>Majority of the holes intersected a shallow water table at or below the base of overburden, which only locally impacts sample recovery.</li> </ul>   |
| Logging   | <ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>   | <ul> <li>All drill holes have been geologically logged by suitably qualified Critica geologists. Geological logging includes regolith, lithology, colour, grain size and visual estimation of mineral abundances.</li> <li>Magnetic susceptibility was routinely conducted on all holes either on 1 m intervals or the assay intervals.</li> <li>Hyperspectral mineralogy was routinely conducted by ALS Geochemistry on all assay samples subsequent to the initial BRAC036-039 discovery drilling program.</li> <li>Geological logging was validated and cross-checked with geochemical and hyperspectral data for geological modelling.</li> <li>The detail of the logging and data validation checks are considered sufficient to support a Mineral Resource estimation.</li> </ul> |
| Subsampling<br>techniques and<br>sample preparation | <ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul> | <ul> <li>Drill hole composites of 2–6 m were collected by spear from the bagged 1 m bulk samples.</li> <li>Median assay sample weights across all AC and RC programs range from 1.7 kg to 2.6 kg with an overall median weight of 2.4 kg. The sample size is considered appropriate for the type of mineralisation and material sampled.</li> <li>Certified reference material (CRM) and blanks were included in all submissions at a rate of 1 in 20.</li> <li>Field duplicate samples were collected at a rate of 1 in 20 with at least one duplicate collected for each drill hole.</li> <li>The average sample length is considered appropriate for clay hosted rare earth mineralisation.</li> </ul>   |





| Criteria                                   | JORC Code explanation  | Commentary  |
|--|--|---|
| Quality of assay data and laboratory tests | The nature, quality and appropriateness of the assaying and laboratory<br>procedures used and whether the technique is considered partial or total.  | ■ All samples were submitted to ALS Geochemistry, Perth (ALS). Samples were oven dried and then pulverised to an 80% passing 75 µm (PUL-25a).   |
|  | <ul> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks,</li> </ul> | ■ Samples were assayed by ALS using Lithium Borate Fusion at 1,025°C followed by combined nitric, hydrochloric, and hydrofluoric acid digestion of the resultant glass bead and an ICP-MS finish for 32 elements including the full REE suite (ME-MS81) and four-acid digest (nitric, perchloric, hydrofluoric and hydrochloric) with ICP-AES finish for 34 elements including La (ME-ICP61). |
|  | duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.   | 99% of client CRM results reported within 3 standard deviations of their certified values for all rare earth<br>elements (REEs) and yttrium.  |
|  |  | ■ Grind size checks averaged 94% passing 75 µm, exceeding the target grind size of 85–90% passing 75 µm.  |
| Verification of                            | ■ The verification of significant intersections by either independent or   | ■ Critica assay data is as reported by ALS and has not been adjusted in any way.  |
| sampling and                               |  | Primary assay data is stored and documented using standard industry practices.  |
| assaying                                   | The use of twinned holes.  | Assay results are compatible with the observed mineralogy.  |
|  | <ul> <li>Documentation of primary data, data entry procedures, data verification,<br/>data storage (physical and electronic) protocols.</li> </ul>   | Remnant assay pulps are held at Critica's leased storage facility.  |
|  |  | <ul> <li>Umpire laboratory checks have been completed by both Intertek Genalysis (Maddington, Western Australia)</li> </ul>   |
|  | <ul> <li>Discuss any adjustment to assay data.</li> </ul>  | and Bureau Veritas (South Australia) on 100 pulp samples. The results showed excellent data correlation for the REEs including yttrium in the target grade ranges.  |
|  |  | ■ Three RC holes were twinned with AC holes (8–23 m each). Downhole grade comparisons show suitably consistent thickness and grade between the twinned drill holes.   |
| Location of data                           | <ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and</li> </ul>   | ■ Drill hole locations were determined by handheld GPS with a nominal accuracy of better than 5 m.  |
| points                                     | downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.  | All coordinates and maps presented in this report are in the Map Grid of Australia (MGA) Zone 50 GDA94 system.  |
|  | Specification of the grid system used.   | ■ Topographic control is derived from the catchment corrected Worldwide 3 arc second Shuttle Radar  |
|  | <ul><li>Quality and adequacy of topographic control.</li></ul>   | Topography Mission (SRTM) spot height data.   |





| Criteria  | JORC Code explanation  | Commentary   |
|---|--|--|
| Data spacing and distribution                           | <ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the</li> </ul>   | ■ This Mineral Resource is based on a 250 m x 500 m drilling grid over the entire Jupiter clay-hosted REE deposit, with 250 m x 250 m drill grid spacing over c. 85% of the deposit.   |
|   | degree of geological and grade continuity appropriate for the Mineral<br>Resource and Ore Reserve estimation procedure(s) and classifications<br>applied.  | ■ Three sites were twinned with RC within 20 m of an AC hole. Approximately 2 km of north and east drill traverses were drilled on c. 100 m AC and RC drill spacings, and one 750 m long east-west drill traverse was drilled on 50 m spacings to evaluate smaller scale continuity. |
|   | Whether sample compositing has been applied.   | ■ Drill spacing is considered appropriate to support an Inferred Resource estimation for a clay-hosted rare earth deposit. Assay results used in the Mineral Resource estimate are predominantly 4 m (ranging 2–6 m) in length composited from 1 m AC or RC sample intervals.        |
| Orientation of data in relation to geological structure | Whether the orientation of sampling achieves unbiased sampling of<br>possible structures and the extent to which this is known, considering the<br>deposit type.   | • All holes were drilled vertical, and mostly drilled to blade refusal in granitoid saprock. Several RC holes were<br>hammered up to c. 50 m into fresh basement to investigate the saprock to fresh basement transition and<br>primary REE mineralisation potential.                |
|   | If the relationship between the drilling orientation and the orientation of key<br>mineralised structures is considered to have introduced a sampling bias,<br>this should be assessed and reported if material. | ■ The dominant 250 m x 250 m regular north-south and east-west drilling grid is considered appropriate for the approximately horizontal clay-hosted REE mineralisation style.  |
|   |  | • Mineralisation is hosted within clay and clay saprolite regolith zones blanketing the deeply weathered Jupiter<br>intrusion. The vertical holes and sub-horizontal geometry of the mineralised zones means that downhole<br>thickness approximates true thickness.                 |
| Sample security   | ■ The measures taken to ensure sample security.  | The chain of custody for all Critica samples from collection through to dispatch was managed by Critica personnel.   |
|   |  | <ul> <li>Sample numbers are unique and do not include any location or interval information useful to non-Critica<br/>personnel.</li> </ul>   |
|   |  | ■ The level of security is considered appropriate for exploration and resource definition drilling.  |





| Criteria          | JORC Code explanation   | Commentary  |
|-------------------|---|---|
| Audits or reviews | ■ The results of any audits or reviews of sampling techniques and data. | QAQC of procedures and data assessment were completed during drilling and at the end each major drilling program. A review of all data used in the Mineral Resource estimation was completed by Critica personnel. This included CRM performance, blank performance, sizing checks, field duplicate performance, umpire laboratory comparisons, drill hole twinning comparisons, and bulk density determination. A report was prepared by Critica and delivered with the data to SRK Consulting (Australasia) Pty Ltd (SRK) for the Mineral Resource estimation.    |
|                   |   | <ul> <li>All CRMs show an overall low bias across majority of REEs.</li> <li>Comparison of 100 samples with umpire laboratory results shows strong correlation.</li> <li>Precision for field duplicate samples was considered good with 95.9% to 99.8% of samples within 20% precision (HARD – Half Absolute Relative Difference).</li> <li>Grind size checks were adequate with 94.2% passing 75 µm.</li> <li>Overall, the sample weights averaged 2.4 kg. All programs except Jupiter RC: Phase 1 were in the target range of 2–3 kg per assay sample.</li> </ul> |
|                   |   | Twinned AC-RC holes displayed good geological and grade continuity.   |

Source: Critica

# **Section 2: Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section)

| Criteria                                      | JORC Code explanation  | Commentary   |
|---|--|--|
| Mineral tenement<br>and land tenure<br>status | <ul> <li>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.</li> <li>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.</li> </ul> | <ul> <li>The Jupiter clay-hosted REE deposit is contained entirely within E59/2463, which is owned 100% by Critica (see Critica Limited, Completion of Jupiter Project Acquisition and Cleansing Notice announcement to ASX 29 August 2024).</li> <li>The broader Brothers REE Project including the Jupiter clay-hosted REE deposit consists of granted exploration licences E59/2421, E59/2463, E59/2710, E59/2711, E59/2819, E59/2821, E59/2827, E59/2889, E59/2890, E59/2907, E59/2927, E59/2928, E59/2929, E59/2930, E59/2932 and exploration licence applications E58/629 and E59/2977 all owned 100% by Critica.</li> </ul> |





| Criteria                          | JORC Code explanation   | Commentary  |
|-----------------------------------|---|---|
| Exploration done by other parties | <ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul> | Documented previous explorers within the area now covered by the Brothers Project include North Flinders<br>Mines Ltd, CRA Exploration Pty Ltd, Spark Energy Pty Ltd, Arcadia Minerals Ltd, Babalya Gold Pty Ltd, Burmine<br>Ltd, Equigold NL, Equinox Resources NL, Jervois Mining Ltd, Minjar Gold Pty Ltd, Mount Magnet South NL, Sons<br>of Gwalia Ltd, and David Ross.   |
|                                   |   | <ul> <li>Two RC holes drilled as part of a co-funded drilling program is the only known drilling completed prior to Critica<br/>commencing exploration in the Brothers Project area.</li> </ul>   |
| Geology                           | ■ Deposit type, geological setting and style of mineralisation.                   | ■ The Jupiter deposit is located within the Murchison Domain, which forms part of the Youanmi Terrane within the Yilgarn Craton. The Murchison Domain, which contains a number of greenstone belts and layered maficultramafic intrusive complexes, is dominated by granitic rocks emplaced between 2.7 Ga and 2.6 Ga. Murchison Domain granitoids have been categorised into several suites by the Geological Survey of Western Australia, with the Jupiter deposit mapped as being underlain by granitoids of the Big Bell Suite. The bedrock in the project area is deeply weathered and, in most places including over the Jupiter deposit, covered by Cenozoic alluvial sands and gravels. |
|                                   |   | Jupiter is a clay-hosted REE deposit that has developed over an alkaline intrusion, referred to as the Jupiter intrusion. Mineral microanalysis (Tescan Integrated Mineral Analyser, Laser Ablation Induced Mass Spectrometry and Electron Microprobe Analysis) work shows REE mineralisation is hosted mainly by the REE phosphate minerals florencite, gorceixite, goyazite, monazite-rhabdophane and xenotime within the target clay and clay saprolite zones.   |





| Criteria                    | JORC Code explanation   | Commentary   |
|-----------------------------|---|--|
| Drill hole<br>Information   | <ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul> | <ul> <li>Location and drill hole orientation details are given in the associated appendices.</li> <li>Collar location was determined using a handheld Garmin GPS64 or GPS65 and is considered accurate to ±5 m.</li> <li>All coordinates and maps presented here are in the MGA Zone 50 GDA94 system.</li> <li>Topographic control is provided by Worldwide 3 arc second SRTM spot height data.</li> <li>Refer to ASX announcements for historical AC and RC drill results:         <ul> <li>VMS makes High Grade clay hosted REE discovery at Brothers – 1 August 2023</li> <li>Massive new REE Target at Brother with up to 3,969 ppm TREO – 9 November 2023</li> <li>Jupiter delivers over 7,000 ppm TREO from Maiden RC Drilling – 29 November 2023</li> <li>Jupiter delivers record drill hit of 48 m at 3,025 ppm TREO – 9 February 2024</li> <li>Jupiter Continues to Deliver with Record NdPr over 5,000 ppm – 8 March 2024</li> <li>Jupiter – More outstanding REE hits up to 60 m over 2,000 ppm TREO – 16 April 2024</li> <li>Drilling Delivers More record REE Intersections at Jupiter – 23 May 2024</li> <li>8 m at 5,716 ppm TREO – Jupiter Drilling Continues to outperform – 5 June 2024</li> <li>Best Drill intersection to date – 58 m at 2,723 ppm TREO – 17 June 2024</li> <li>Another Record Drilling Result – 57 m at 3,430 ppm TREO – 17 July 2024</li> <li>Jupiter's best intersection 67 m at 3,074 ppm TREO – 6 November 2024</li> <li>Excellent High Grade Continuity at Jupiter and MRE underway – 27 November 2024.</li> </ul> </li> </ul> |
| Data aggregation<br>methods | In reporting Exploration Results, weighting averaging techniques, maximum<br>and/or minimum grade truncations (e.g. cutting of high grades) and cut-off<br>grades are usually Material and should be stated.  | ■ For the full sets of sample assay interval results/historical drill results used in this Mineral Resource estimate without aggregation methods, refer to previous ASX releases (JORC Table 1, Section 2 – Drill hole information). Metal equivalents have not been applied.  |
|                             | <ul> <li>Where aggregate intercepts incorporate short lengths of high grade results<br/>and longer lengths of low grade results, the procedure used for such</li> </ul>   | <ul> <li>Standard element to oxide conversion factors have been used. Individual REE values are rounded to<br/>appropriately reflect reporting precision. The TREO grade is calculated in an unrounded basis.</li> </ul>   |

| REE oxide                       | Conversion factor | REE oxide                      | Conversion factor |
|---------------------------------|-------------------|--------------------------------|-------------------|
| La <sub>2</sub> O <sub>3</sub>  | 1.173             | Tb <sub>4</sub> O <sub>7</sub> | 1.176             |
| CeO <sub>2</sub>                | 1.228             | Dy <sub>2</sub> O <sub>3</sub> | 1.148             |
| Pr <sub>6</sub> O <sub>11</sub> | 1.208             | Ho <sub>2</sub> O <sub>3</sub> | 1.146             |
| Nd <sub>2</sub> O <sub>3</sub>  | 1.166             | Er <sub>2</sub> O <sub>3</sub> | 1.143             |
| Sm <sub>2</sub> O <sub>3</sub>  | 1.160             | Tm₂O₃                          | 1.142             |
| Eu <sub>2</sub> O <sub>3</sub>  | 1.158             | Yb <sub>2</sub> O <sub>3</sub> | 1.139             |
| Gd <sub>2</sub> O <sub>3</sub>  | 1.153             | Lu <sub>2</sub> O <sub>3</sub> | 1.137             |
|                                 |                   | Y <sub>2</sub> O <sub>3</sub>  | 1.270             |

aggregation should be stated and some typical examples of such

■ The assumptions used for any reporting of metal equivalent values should

aggregations should be shown in detail.

be clearly stated.





| Criteria   | JORC Code explanation   | Commentary   |
|--|---|--|
| Relationship<br>between<br>mineralisation<br>widths and intercept<br>lengths | <ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').</li> </ul> | • Mineralisation is hosted within clay and saprolite which blanket a weathered granitoid basement. The subhorizontal nature of the mineralisation coupled with the vertical holes means that downhole thickness is approximately equivalent to true thickness.   |
| Diagrams   | Appropriate maps and sections (with scales) and tabulations of intercepts<br>should be included for any significant discovery being reported These<br>should include, but not be limited to a plan view of drill hole collar locations<br>and appropriate sectional views.  | Appropriate drill hole, model maps and cross-sections are included in the Jupiter Maiden Resource report to<br>ASX 11 February 2025. An appropriate block model plan using MREO cut-offs is included in this report.   |
| Balanced reporting   | Where comprehensive reporting of all Exploration Results is not practicable,<br>representative reporting of both low and high grades and/or widths should<br>be practiced to avoid misleading reporting of Exploration Results.   | All material results are transparently reported or have been previously transparently reported.  |
| Other substantive exploration data   | <ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>         | ■ There is no other exploration data that is considered material to the results reported in this announcement.   |
| Further work   | <ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>   | <ul> <li>MREC production pathway. Planned metallurgical test work to assess the potential for producing Mixed Rare Earth Carbonate (MREC), subject to future pilot scale validation.</li> <li>Bulk sample collection and resource update to support pilot-scale metallurgical test work.</li> <li>Pilot program to validate beneficiation and leach performance under scaled operating conditions.</li> <li>Scoping Study assessing high-value MREO zones and streamlined process design.</li> </ul> |

Source: Critica



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

(Criteria listed in section 1, and where relevant in section 2, also apply to this section)

| Criteria                     | JORC Code explanation   | Commentary   |
|------------------------------|---|--|
| Database integrity           | <ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>                         | <ul> <li>Drill logging, magnetic susceptibility, collar locations and calliper bulk density data were collected manually (hard copy logs), digitised and validated in a Microsoft Access database, and then validated again using Micromine software. Assay, hyperspectral mineralogy, and MINALYZER bulk density data were supplied in digital format by the service providers, uploaded and validated in Microsoft Access, then validated in Micromine software. Drill collars were re-surveyed and the depths checked on completion of the final drilling campaign relevant to this resource estimation. Geological, magnetic susceptibility, geochemical, and hyperspectral data were reviewed and validated visually in Micromine during the lithological modelling process by Critica geological personnel.</li> <li>The database extracts were provided to SRK in Microsoft Excel format. The datasets were checked for internal consistency and logical data ranges when preparing data extracts for resource estimation.</li> </ul> |
| Site visits                  | <ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>   | <ul> <li>Competent Person sign-off for the Mineral Resource estimates is shared by:</li> <li>Dr Stuart Owen (Critica), who assumes responsibility for the data compilation and data quality, geology interpretation component of the study.</li> <li>Dr Natalee Bonnici (Critica), who supported Dr Owen with data compilation and data quality.</li> <li>Mr Rodney Brown (SRK), who assumes responsibility for the preparation of the resource models and the Mineral Resource estimates.</li> </ul>  |
|                              |   | <ul> <li>Stuart Owen and Natalee Bonnici visited site during and after the drilling campaigns to supervise and validate<br/>data collection and geological interpretation.</li> </ul>  |
|                              |   | ■ A site visit has not been conducted by Rodney Brown. At the time of SRK's engagement, all of the field programs had been completed. Given that the project area is relatively flat lying and shows minimal outcrop exposure, a site visit specifically to inspect the geology was not considered warranted. Rodney Brown has relied upon descriptions of the field activities and geology provided by Critica, which have been supplemented by assessments of the various datasets.  |
| Geological<br>interpretation | <ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul> | ■ The geological interpretation is considered consistent with the datasets. It is also consistent with the broadly accepted understanding within the mining community of the regional geology, and of the genesis and characteristics of this style of mineralisation. Estimation domain definition was primarily based on geochemical data, with boundaries generally defined by distinct changes in REO grades. These zones show some general conformance to the lithological units, which were defined using assay grades for a range of other analytes, as well as geological logging data.  |





| Criteria                            | JORC Code explanation   | Commentary  |
|-------------------------------------|---|---|
|                                     | <ul> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>   | Domain geometry was observed to be relatively consistent and predictable over the extents of the drill<br>coverage, with very good continuity evident between drill holes.  |
| Dimensions                          | The extent and variability of the Mineral Resource expressed as length (along<br>strike or otherwise), plan width, and depth below surface to the upper and<br>lower limits of the Mineral Resource.  | ■ Elevated REO concentrations have developed on a monzogranitic intrusion that is quite clearly defined by geophysical data. The footprint of the intrusion is roughly circular and covers an area of approximately 42 km². Critica has covered most of this area with a regular drilling grid. Most of the holes have been drilled into fresh rock or saprock.   |
|                                     |   | ■ Elevated REO grades have been identified throughout most of the regolith. The higher concentrations (>1,200 ppm TREO) occur as a thick, reasonably continuous, blanket near the clay–saprolite contact. The high-grade core zone is enclosed within a lower-grade mineralised envelope, which has been defined using a nominal 400 ppm TREO threshold. Most of the holes finish in mineralisation exceeding this threshold.   |
|                                     |   | ■ The following four sub-horizontal zones, each covering the extents of the drill coverage, have been defined for estimation control:   |
|                                     |   | <ul> <li>Overburden zone (GCODE 10). This comprises weakly mineralised overburden material. It has been identified in over 95% of the drill holes and averages approximately 20 m thick.</li> <li>Upper mineralised zone (GCODE 20). This represents the portion of the mineralised envelope (&gt;400 ppm TREO) that is located above the high-grade core zone. It averages 10 m thick and was interpreted in approximately 65% of the holes.</li> <li>Core zone (GCODE 30). This represents the high-grade core zone described above. It has been identified in approximately 75% of the drill holes, and ranges in thickness from 2 m to 76 m, with an average thickness of 28 m.</li> <li>Lower mineralised zone (GCODE 40). This effectively represents all material located below the core zone (or the upper mineralised zone). It has been defined in 70% of the holes, of which 95% report an average grade exceeding 400 ppm TREO. Given that most holes finish in mineralisation, a basal contact has not been defined for this zone. The base of drilling has been used as the Mineral Resource base.</li> </ul> |
|                                     |   | In addition to the grade domain model, a lithological model comprising an Overburden Zone, a Clay Zone, a<br>Saprolite Zone, and a Fresh Rock Zone, was prepared using a combination of major analyte grades and<br>geological logging data.  |
| Estimation and modelling techniques | ■ The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. | <ul> <li>The Mineral Resource estimates were prepared using conventional block modelling and geostatistical estimation techniques.</li> <li>A single model was prepared to represent the defined extents of the mineralisation. The resource modelling and estimation study was performed using Datamine Studio RM®, Supervisor®, and Leapfrog software packages.</li> </ul>  |





| Criteria | JORC Code explanation  | Commentary   |
|----------|--|--|
|          | <ul> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul> | <ul> <li>Kriging neighbourhood analysis (KNA) studies were used to assess a range of parent cell dimensions, and a size of 50 m x 50 m x 2 m (XYZ) was considered appropriate, given the drill spacing, grade continuity characteristics, and the expected uses of the model. The parent cell dimensions are considered to be suitable to accurately represent the interpreted domain volumes, and sub-celling was not used. The volume model and estimation datasets were spatially transformed (flattened and dilated) prior to estimation to ensure that the profile grade trends evident in the drill hole data were adequately reproduced in the model.</li> <li>Over 70% of the laboratory samples had been collected over 4 m intervals, with most of the remainder collected over 2 m intervals. Prior to estimation, all samples were composited to 4 m intervals. Probability plots were used to assess for outlier values, and grade cutting was not considered necessary.</li> <li>Ordinary block kriging was used to estimate the various constituent grades into discretised parent cells. The grade domain wireframes were used as hard boundary estimation constraints. Search orientations and weighting factors were derived from variographic studies, which were conducted on the spatially transformed data in each domain.</li> <li>A multiple-pass estimation strategy was used, with KNA used to assist with the selection of search distances and sample number constraints. Extrapolation was limited to approximately half the nominal local drill spacing.</li> <li>The model contains local estimates for all analytes for which sufficient assay data were available in the datasets. The REO grades are the only formally reported estimates, however, the other analyte grades have been included in the model because they may be of interest for other discipline studies (including mining, processing, environmental, and marketing studies).</li> <li>Hyperspectral scanning data have been used to estimate the major mineral concentrations into the model. The</li></ul> |
| Moisture | Whether the tonnages are estimated on a dry basis or with natural moisture,<br>and the method of determination of the moisture content.  | ■ The resource estimates are expressed on a dry tonnage basis. In-situ moisture content has not been estimated. A description of density data is presented below.  |



| Criteria                                | JORC Code explanation  | Commentary  |
|---|--|---|
| Cut-off parameters                      | ■ The basis of the adopted cut-off grade(s) or quality parameters applied.   | Magnet Rare Earth Oxide (MREO) resource reporting cut-offs as per Tables 1 and 8 of this report were used for<br>the mineralisation contained within all estimation domains, with a preferred MREO of 400 ppm. An assessment<br>of the geological data shows the MREO mineralisation to be well defined at the tabulated cut offs including the<br>preferred 400 ppm MREO cut off.  |
|   |  | ■ Critica is currently in the process of undertaking processing studies and, at this stage, detailed metallurgical and marketing studies have not been completed. For the consideration of potential economic viability, the results from preliminary metallurgical test work have been taken into consideration (see below), as well as the shallow and consistent nature of the mineralisation. The cut-off grade has also been benchmarked against those used for what are considered to be peer projects at similar stages of development. Given the relative infancy of the clay-hosted REE industry in Australia, Critica has elected to use a conservative reporting cut-off grade compared to those used for most peer projects.  |
| Mining factors or assumptions           | Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. | ■ Detailed mining studies have not yet been completed. It is expected that ore will be extracted using conventional selective open pit mining methods, which includes hydraulic excavator mining, and dump truck haulage. Mining dilution assumptions have not been factored into the resource estimates.   |
| Metallurgical factors<br>or assumptions | ■ The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.                           | <ul> <li>Initial REE beneficiation test work by GAVAQ metallurgical laboratories of Hanoi, Vietnam on a 51 kg composite of Jupiter clay and saprolite zone material grading 0.14% TREO achieved an open circuit flotation concentrate grade of 1.3% TREO at 51% mass recovery. The GAVAQ process flowsheet comprised grinding to 100% passing 0.2 mm, scrubbing (attrition), then low intensity (800 gauss) magnetic separation to remove the magnetic iron minerals (mainly hematite and magnetite). The non-magnetic fraction was then subject to an open circuit flotation test using combined carboxylate and amine collector, sodium silicate depressant and dextrin dispersant at pH 8.5 and ambient temperatures.</li> <li>X-ray diffraction (XRD) mineralogy studies show that hydrated phosphates, including rhabdophane and gorceixite, to be the main REE phases, and magnetite and hematite the main magnetic iron phases (see</li> </ul> |
|   |  | Critica's ASX announcement dated 23 January 2025).  Critica is currently conducting ongoing mineralogy and metallurgical test work using commercial service providers and a collaborative research program within the Curtin University School of Earth and Planetary   |



| Criteria                                   | JORC Code explanation  | Commentary   |
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|  |  | Science and the Western Australian School of Mines with Federal Government Technology Critical Minerals Trailblazer program co-funding.  |
| Environmental<br>factors or<br>assumptions | • Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. | <ul> <li>It is anticipated that material included in the resource will be mined under the relevant environmental permitting, which will be defined as a part of subsequent studies.</li> <li>The characterisation of acid generating potential will be completed during advanced studies and factored into the waste rock storage design. The likelihood of acid generation is considered low, given the intense weathering of the profile and the geochemical characteristics of the host rocks.</li> </ul>   |
| Bulk density                               | <ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>  | <ul> <li>The dry in-situ bulk density dataset was derived from core samples collected from seven PQ3/HQ3 diamond core holes, with the following procedures used:         <ul> <li>calliper measurement determinations performed on 388 oven-dried core fragments.</li> <li>MINANALYZER volume scanning and oven-drying performed on 131 core trays containing approximately 350 m of core.</li> <li>water immersion tests performed on 85 fresh rock (unsealed) core samples.</li> </ul> </li> <li>Critica used the data from these test programs to determine the following average densities for the main lithological units. These values were assigned to the resource model as default in-situ bulk dry densities according to the lithological coding:         <ul> <li>Transported Cover = 1.90 t/m³</li> <li>Upper Saprolite - Clay = 1.65 t/m³</li> <li>Lower Saprolite = 2.00 t/m³</li> <li>Fresh Rock = 2.80 t/m³.</li> </ul> </li> </ul> |
| Classification                             | <ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> </ul>  | <ul> <li>The resource classifications have been applied based on consideration of the confidence in the geological interpretation, the quality and quantity of the input data, the confidence in the estimation technique, and the likely economic viability of the material.</li> <li>The mineralised zones, which have primarily been defined using geochemical and logging data, show good consistency across the deposit, and good continuity between drill holes. The variographic studies indicate</li> </ul>  |





| Criteria                                   | JORC Code explanation   | Commentary   |
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|  | Whether the result appropriately reflects the Competent Person's view of<br>the deposit.  | grade continuity ranges of up to several hundred metres, which is well in excess of the nominal 250 m drill spacing.   |
|  |   | • Almost all of the data used to prepare the Mineral Resource estimates was acquired by Critica over two<br>programs that are both supported by an appropriate amount of QAQC data. QAQC performance is observed to<br>be very good.   |
|  |   | ■ The model validation checks show an acceptable match between the input data and estimated grades, indicating that the estimation procedures have performed as intended and that the confidence in the estimates is consistent with the Mineral Resource classifications that have been applied.  |
|  |   | Based on the findings summarised above, it was concluded that the controlling factor for classification is sample coverage. Regolith deposits can show relatively good continuity in terms of both grade tenor and thickness, but infill drilling (down to production spacings) often highlights significant short-scale variability. Although good grade and lithological continuity is evident at the current spacing, there is insufficient close-spaced data to quantify short-range variability and determine whether such variability may result in biased estimates when compared to estimated prepared using closer hole spacings. |
| Audits or reviews                          | ■ The results of any audits or reviews of Mineral Resource estimates.   | <ul> <li>The block model has been reviewed by SRK and Critica personnel, and reporting of the block model using MREO cut-offs was conducted by Critica personnel (Stuart Owen) using Micromine software.</li> <li>No independent audits or reviews have been conducted on the latest resource estimates.</li> </ul>  |
| Discussion of relative accuracy/confidence | <ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> </ul> | <ul> <li>The resource quantities should be considered as regional or global estimates only. The accompanying model is<br/>considered suitable to support mine planning studies, but is not considered suitable for production planning, or</li> </ul>  |
|  |   | <ul> <li>studies that place significant reliance upon the local estimates.</li> <li>The estimation domains have been defined using TREO grade thresholds. Good continuity is evident at the current drill spacing, and care has been taken to reduce the likelihood of conditionally biased estimates that can sometimes result from grade-based domaining. It has not been possible to develop strong support for the domaining from other datasets, such as the other analytes data or geological logging. The relationship between lithology and REO grade may become clearer once additional data are available.</li> </ul>            |
|  | These statements of relative accuracy and confidence of the estimate<br>should be compared with production data, where available.   | ■ The Critica data collection programs included a comprehensive set of QAQC procedures, and the derived datasets do not highlight any significant concerns with the reliability of the primary datasets that were used for resource modelling. To date, there are insufficient data to confirm that any sample extraction errors associated  |





| Criteria | JORC Code explanation | Commentary   |
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|          |                       | with AC and RC drilling have not resulted in grade bias. Critica plans to use the results from the recently drilled diamond core holes to validate the AC and RC data.   |
|          |                       | ■ The surface topography model was prepared using open-source SRTM data. This is considered to be of acceptable accuracy for resource delineation given the minimal topographic relief in the project area, the geometry of the mineralised zones, and the elevation adjustments that were applied to ensure consistency between the drill hole collars and the topography model. More accurate survey data will be required to support detailed mine planning and infrastructure studies. |

Source: SRK