

## ANSTO Testwork Doubles Gallium Recovery; First Scandium Co-Recovery

### HIGHLIGHTS:

- ANSTO testwork doubles gallium extraction to ~50%, from ~25% previously, using oxalic acid leaching on 3m composites from DDH-036
- Gallium recovery continued to increase at 72 hours, indicating favourable leach kinetics and further optimisation potential
- Scandium confirmed reporting to solution under the same leach conditions, introducing potential high-value co-product alongside gallium
- Follow-up optimisation and downstream recovery studies underway with Core Resources (Australia)
- Scandium (Sc) is a high-value critical metal used in aerospace, defence, advanced manufacturing and solid oxide fuel cells; 99.99%  $\text{Sc}_2\text{O}_3$  spot price ~US\$3,200/kg (20 January 2026)

Axel REE Limited (ASX: AXL, “Axel” or “the Company”) is pleased to report additional ANSTO metallurgical leach test results on 3m composites from diamond drill hole DDH-036 (refer Figure 1 and Appendix 2) at the Caladão Project – Area A, which demonstrate a ~100% uplift in gallium extraction to 50% and confirm recoverable scandium in solution.

### Non-Executive Chairman, Paul Dickson, said::

*“Doubling gallium extraction from ~25% to ~50% is a meaningful step-change for the Caladão project and materially strengthens the potential economics of a future gallium product stream. Importantly, ANSTO testing has also confirmed scandium co-extraction into solution - an unexpected but strategically significant outcome that could provide valuable co-product credits.*

*These results indicate that gallium and scandium may be suitable for a standalone processing operation over the mineralised shallow oxidized horizons, independent of the economics supporting the underneath rare earth mineralisation planned to be extracted by low-cost magnesium sulphate in the planned in situ recovery trials as proven in Asia.*

*We are now progressing parallel workstreams: advancing the Woolrich REE wellfield toward modular, low CAPEX low OPEX in situ recovery trials, while continuing optimisation and downstream recovery studies to extract a commercial gallium and scandium product.*

*The company is increasingly confident that the defined 572Mt REE resource and 439Mt gallium resource at the Caladão Project, now with additional scandium co product potential, could potentially develop into a globally significant gallium-scandium and rare earths operation outside China.”*

Acid leach tests were conducted on three composite samples under consistent conditions using oxalic acid, hydrochloric acid ( $\text{HCl}$ ) and sulphuric acid ( $\text{H}_2\text{SO}_4$ ) at pH 1 with increasing acidity with time up to 64g/l at 50°C for up to 72 hours (Table 4). Oxalic acid delivered the strongest overall performance, with gallium recoveries increasing progressively over time and continuing to improve at the conclusion of the test period. This represents a substantial

improvement on earlier ANSTO testwork, which achieved approximately 25% gallium extraction after five days using sulphuric acid at ambient temperature (refer ASX release 30 July 2025).

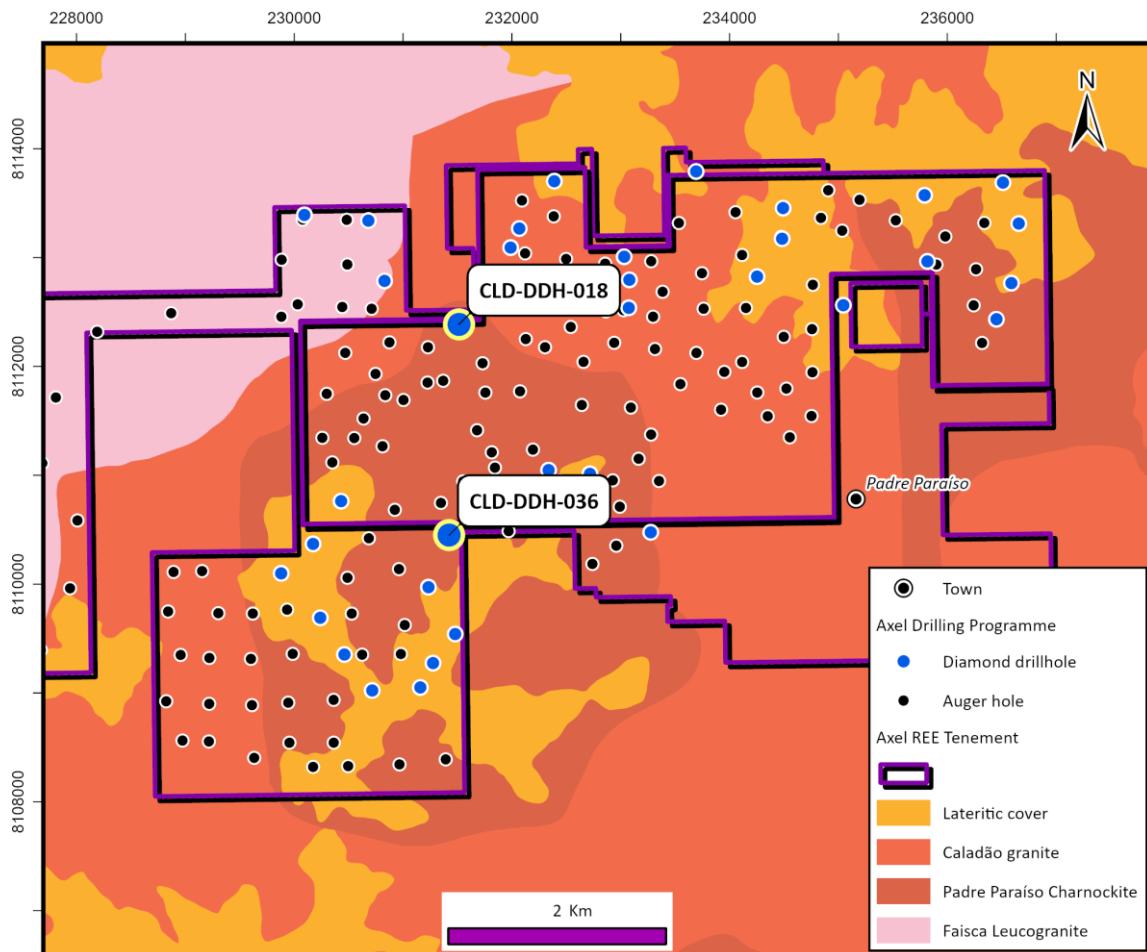
Importantly, leach kinetics using oxalic acid had not reached a plateau after 72 hours across any of the tested material types, indicating that full recovery was not achieved within the test timeframe. This behaviour highlights clear scope to further optimise leach conditions and is encouraging for advancing the flowsheet toward higher recoveries, scale-up evaluation and downstream metal recovery studies.

A key breakthrough from this phase of testwork was the identification of scandium in the leach solutions. Scandium is a high-value, strategically important rare earth element used in advanced aluminium alloys and solid oxide fuel cells, among other applications.

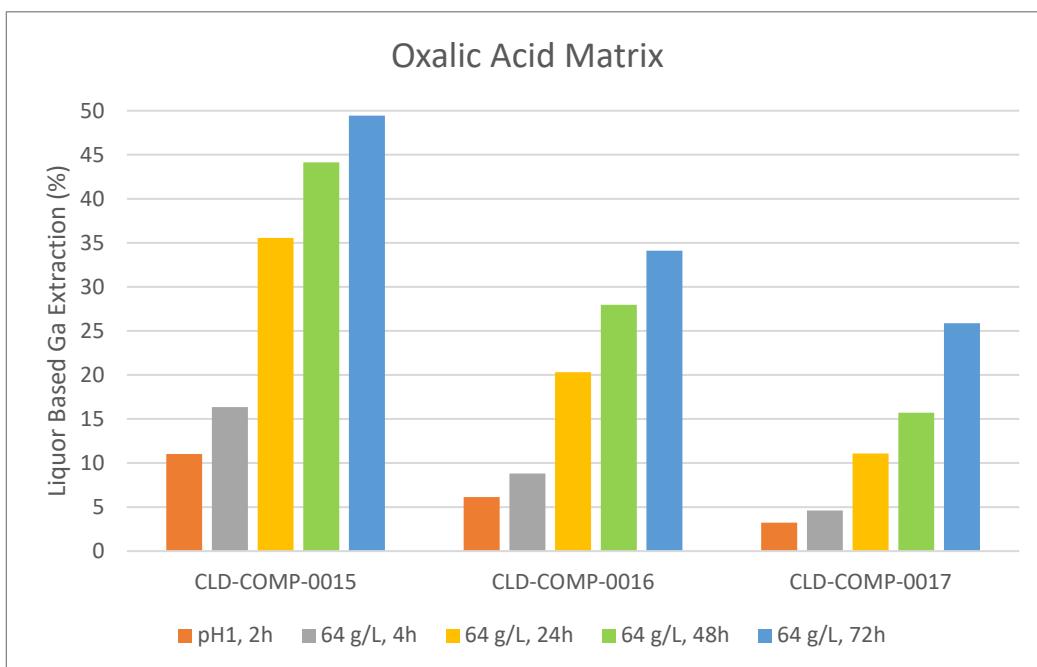
The ability to co-leach scandium and gallium from shallow oxidised horizons could add a meaningful value stream alongside Axel's rare earth development strategy at the Caladão Project.

The results back Axel's multi-product development strategy approach at the Caladão Project comprising:

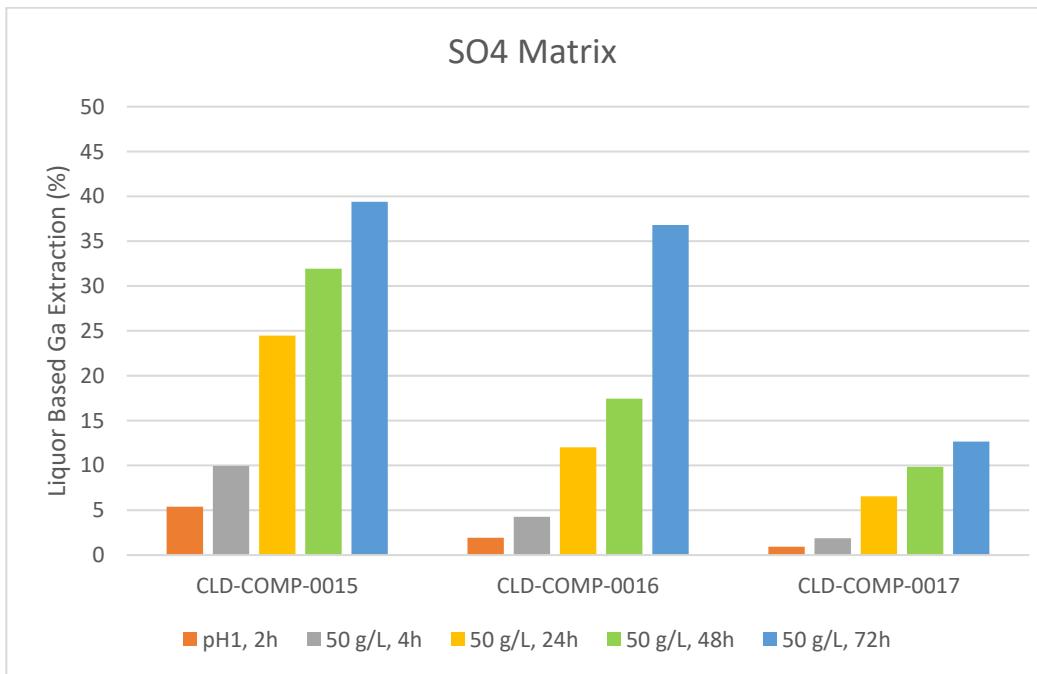
- (a) low-cost modular in situ recovery of ionic rare earths via magnesium sulphate leaching and modular processing, and
- (b) a parallel process for extracting gallium and scandium from shallow oxidised material, where further optimisation continues to enhance recovery and practical downstream extraction methods.



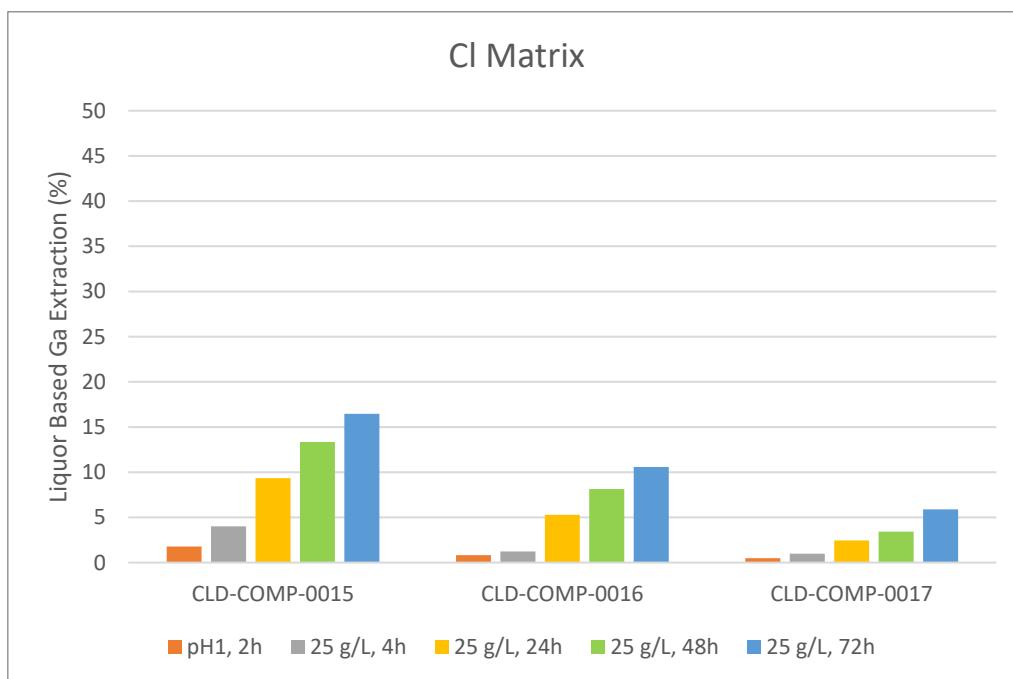
**Figure 1 - Map of central area A with location of DDH-018 and DDH-036.**



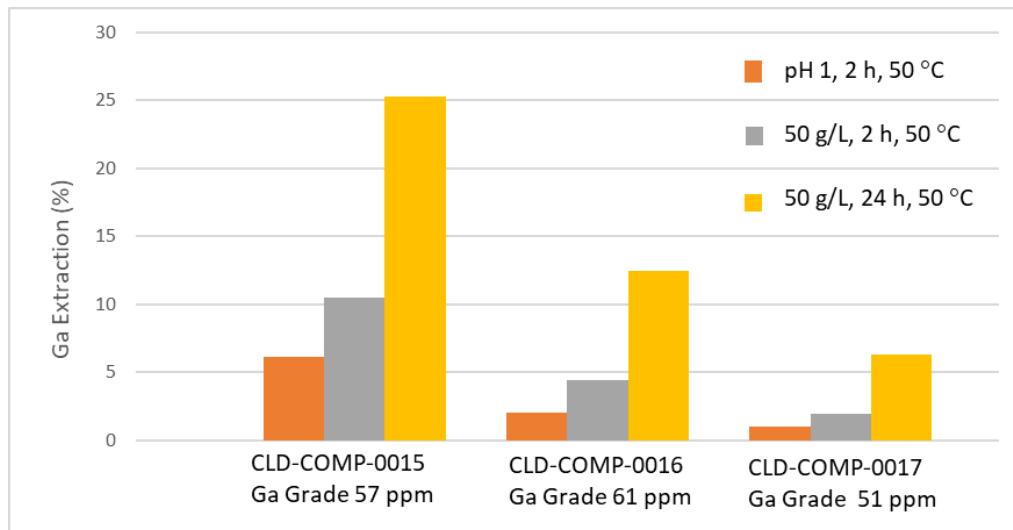
**Figure 2 – Gallium extraction by oxalic acid progressing with time**



**Figure 3 – Gallium extraction by sulphuric acid progressing with time**



**Figure 4 – Gallium extraction by hydrochloric acid progressing with time**



**Figure 5 – First acid leaching procedure at ANSTO by sulphuric acid**

Core Resources has been engaged for follow-up testwork on a new composite from Area B to extract gallium and scandium. Subject to the outcomes, these results will support evaluation of Area B zones with gallium grades reported up to 100 ppm and scandium grades up to 20 ppm as a potential standalone Gallium-Scandium extraction opportunity, and may inform future work toward a specific gallium-scandium Mineral Resource Estimate.

## About Scandium

Scandium is a high-value critical metal used primarily in aluminium-scandium alloys (where small additions can materially improve strength, corrosion/heat resistance and weldability, supporting aerospace/defence and advanced manufacturing applications) and in solid oxide fuel cells (**SOFCs**).

Supply of scandium is typically recovered as a by-product from other metal process streams (including cobalt, nickel, titanium and zirconium), with consumption increasing as these end-uses grow. The Shanghai Metal Market reported scandium metal (≥99.99%, delivered to works China) at approximately **US\$3,234/kg** as at 20 January 2026<sup>1</sup>.

## About Core Resources

Core Resources is a Brisbane-based metallurgical project development firm providing services across metallurgical testing, process engineering and flowsheet development, and site support for the global mining industry. The group reports approximately 40 professional staff spanning chemical and process engineering, metallurgy and chemistry, and positions itself as rigorously independent, with a global client base reflecting its technical capability and laboratory operations.

**This announcement was authorised by the Board of Directors.**

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## About Axel REE

**Axel REE** is a critical minerals exploration company which is primarily focused on developing the Caladão REE-Gallium and Caldas REE Projects in Brazil. Together, the project portfolio covers over 1,000km<sup>2</sup> of exploration tenure in Brazil, the third largest country globally in terms of REE Reserves.

<b>JORC 2012 Mineral Resource Deposit</b>	<b>JORC 2012 Classification</b>	<b>Tonnes and Grade</b>
Caladão Project – Area A	Inferred	<b>233Mt @ 2,133ppm TREO</b>
Marambaia – Area B	Inferred	<b>126Mt @ 1,154ppm TREO</b>
Tiger Creek – Area B	Inferred	<b>85Mt @ 1,050ppm TREO</b>
Woolrich – Area B	Inferred	<b>128Mt @ 1,013ppm TREO</b>

**Table 1. Inferred Rare Earth MRE Area A & Area B for a total MRE tonnage of 572Mt.**

<b>JORC 2012 Mineral Resource Deposit</b>	<b>JORC 2012 Classification</b>	<b>Tonnes and Grade</b>
Caladão Project – Area A	Inferred	<b>100Mt @ 42.0ppm Gallium</b>
Caladão Project – Area B	Inferred	<b>339Mt @ 36.6ppm Gallium</b>

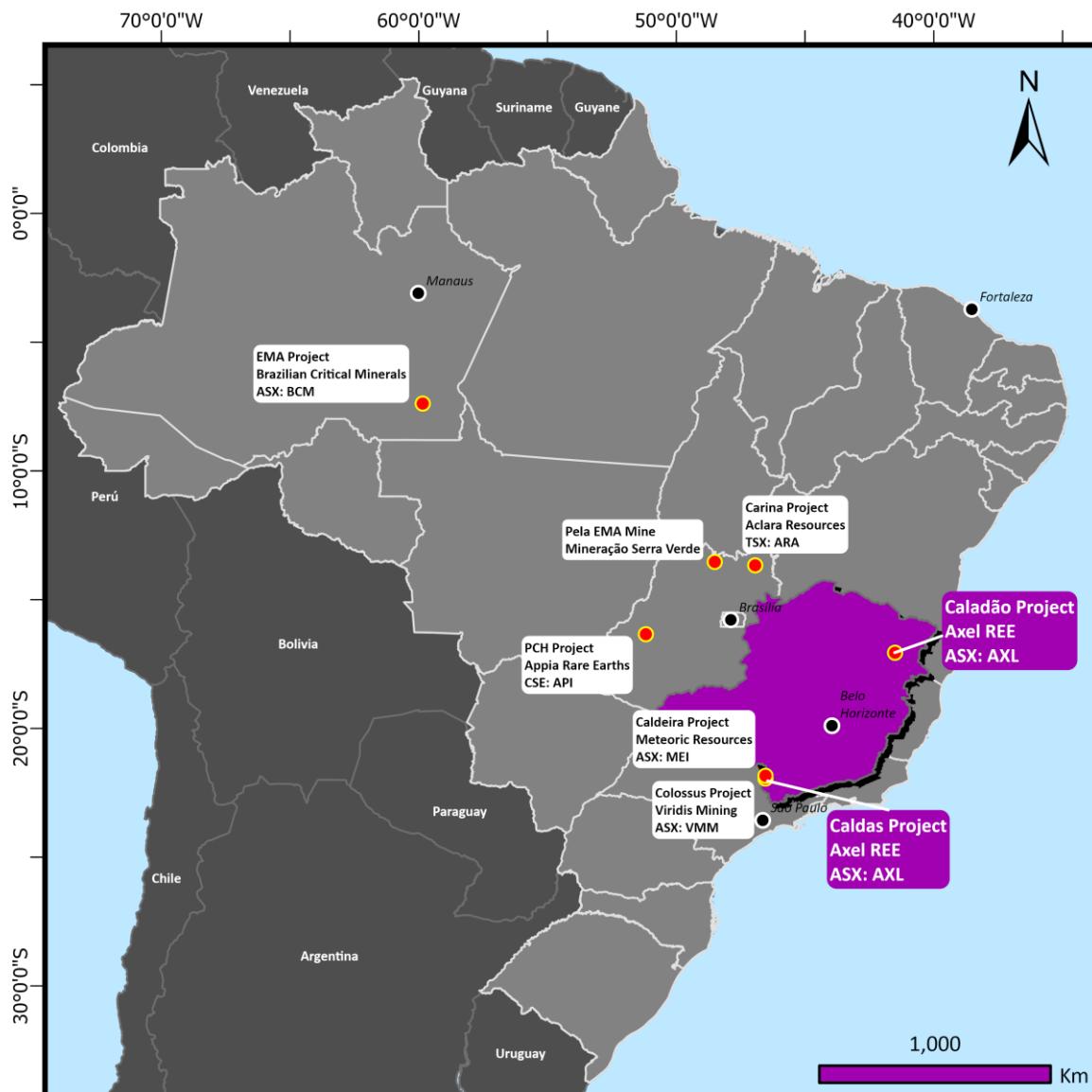
**Table 2. Inferred Gallium MRE Area A & Area B for a total MRE tonnage of 439Mt.**

The Company's mission is to explore and develop REE and other critical minerals in vastly underexplored Brazil. These minerals are crucial for the advancement of modern technology and the transition towards a more sustainable global economy. Axel's strategy includes extensive exploration plans to fully realize the potential of its current projects and seek new opportunities.

Axel is advancing a low-cost, modular development concept at Caladão based on in situ recovery (**ISR**) of ionic clay-hosted rare earth mineralisation using magnesium sulphate leaching. This approach aims to minimise surface

<sup>1</sup> <https://www.metal.com/en/prices/202104090004>

disturbance and capital intensity by deploying modular hydrometallurgical plants within wellfields. In parallel, Axel is progressing metallurgical programs to unlock additional value from gallium and scandium within the near-surface oxidised profile.



**Figure 6. Map of Axel REE key projects in Brazil**

#### Competent Persons Statement

The information in this announcement that relates to Exploration Results is based on and fairly represents information and supporting documentation compiled by Mr Antonio de Castro, BSc (Hons), MAusIMM, CREA who acts as AXEL's Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda. Mr. de Castro has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Mr Castro consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

#### Forward Looking Statement

This announcement contains projections and forward-looking information that involve various risks and uncertainties regarding future events. Such forward-looking information can include without limitation statements based on current expectations involving a number of risks and uncertainties and are not guarantees of future performance of the Company. These risks and uncertainties could cause actual results and the Company's plans and objectives to differ materially from those expressed in the forward-looking information. Actual results and future events could differ materially from anticipated in such information. These and all subsequent written and oral forward-looking information are based on estimates and opinions of management on the dates they are made and expressly qualified in their entirety by this notice. The Company assumes no obligation to update forward-looking information should circumstances or management's estimates or opinions change.

#### Reference to Previous Announcements

In addition to new results reported in this announcement, the information that relates to previous exploration results is extracted from:

- AXL ASX release 23 December 2025 “Axel MRE Delivers 145% REE Growth and 339% Gallium Growth”
- AXL ASX release 30 July 2025 “Ionic Clays Confirmed From Initial Met Tests at Caladao”

The Company confirms that it is not aware of any new information or data that materially affects the information contained in these announcements and, in the case of estimates of mineral resources, that all material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.

## Appendix 1: JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<p><b>Nature and quality of sampling</b></p>	<p>ANSTO, Australian Nuclear Science and Technology Organization were supplied with 39 composites samples numbered CLD-COMP-001 to 039 compiled from the weathered portion of area A in the Caladão project. They consist of disaggregated rejects from ½ core, received back from SGS laboratory derived from the 2024 drill program. Collar locations are presented in appendix 1.</p> <p>ANSTO were tasked to conduct 3 additional leaching acid tests on 3 selected composites with oxalic acid, HCL and H<sub>2</sub>SO<sub>4</sub> at pH 1 then increased to ~57g/l oxalic acid from to to 24 h and then 64 g/l to 72 h with temperature at 50 celsius for the 72 hours (refer to table 3 and 4).</p> <p>Test work results are for 3 individual 3 meter composite samples, from the diamond holes DDH-036, from 2m to end of the saprolite zone.</p> <p>The use of disaggregated rejects and the its composites are considered appropriate for leaching test works and reporting exploration results.</p>
<b>Drilling techniques</b>	<p><b>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</b></p>	<p>The drilling technique is a diamond drill rig Mach 320-03 with HQ diameter using the wireline technique.</p> <p>Each drill site was cleaned and leveled with a backhoe loader.</p> <p>All holes are vertical.</p> <p>Drilling is stopped once the intersection with unweathered basement intrusives is confirmed = +3 to 5m of fresh rock.</p>
<b>Drill sample recovery</b>	<p><b>Method of recording and assessing core and chip sample recoveries and results assessed.</b></p> <p><b>Measures taken to maximise sample recovery and ensure representative nature of the samples.</b></p> <p><b>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.</b></p>	<p>Core recoveries were measured after each drill run, comparing the length of core recovered vs. drill depth. Overall Core recoveries are 92.5%, achieving 95% in the saprolite target horizon, 89% in the transitional rock (fresh fragments in clay), and 92.5% in fresh rock.</p>
<b>Logging</b>	<p><b>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.</b></p> <p><b>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc)</b></p>	<p>The geology was described in a core facility by a geologist - logging focused on the soil (humic) horizon, saprolite, and fresh rock boundaries. The depth of geological boundaries is honored and described with downhole depth – not meter by meter. The total lengths of all holes have been geologically logged.</p> <p>Other important parameters for collecting data</p>

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	<p><b>photography.</b></p> <p><b>The total length and percentage of the relevant intersections logged.</b></p>	<p>include grain size, texture, and color, which can help identify the parent rock before weathering.</p> <p>All drilled holes have a digital photographic record. The log is stored in a Microsoft Excel template with inbuilt validation tables and a pick list to avoid data entry errors.</p>
<b>Sub-sampling techniques and sample preparation</b>	<p><b>If core, whether cut or sawn and whether quarter, half or all core taken.</b></p> <p><b>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</b></p> <p><b>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</b></p> <p><b>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</b></p> <p><b>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</b></p> <p><b>Whether sample sizes are appropriate to the grain size of the material being sampled.</b></p>	<p>The core was cut in half which was taken on a meter basis to SGS for preparation.</p> <p>Sample preparation (drying, crushing, splitting and pulverising) is carried out by SGS laboratory, in Vespasiano MG, using industry-standard protocols:</p> <p>Dried at 100°C, the fresh rock is 75% crushed to sub 3mm, the saprolite is just disaggregated with hammers, riffle split sub-sample, 250 g pulverized to 95% passing 150 mesh, monitored by sieving, aliquot selection from pulp packet.</p> <p>Each disaggregated rejects were riffled split at equal weight to produce the 3 meter composites.</p> <p>No duplicate or repeat composite sampling has been run at this stage.</p> <p>As received disaggregate rejects are considered appropriate to represent the REE mineralization.</p>
<b>Quality of assay data and laboratory tests</b>	<p><b>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</b></p> <p><b>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.</b></p> <p><b>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</b></p>	<p>All head samples were analysed by a combination of XRF at ANSTO and fusion digest/ICP-MS (ALS, Brisbane) for the following elements:</p> <p><b>XRF</b> – Al, As, Ba, Ca, Co, Cr, Cs, Cu, Fe, Hf, K, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, S, Si, Sn, Ta, Ti, V, Zn, Zr</p> <p><b>Lithium Tetraborate Fusion Digest/ICP-MS</b> – Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr</p> <p>A summary of the REE head analysis for each sample is presented in table 3 for hole 18 and for hole 36. Full chemical analysis was provided in the Data Pack.</p> <p>All liquid samples were analysed by ICP-OES at ANSTO for Al, Ca, Fe, K, Mg, Mn, Na, P, S, Si, Sr and Zn, and by ICP-MS at ALS Brisbane for Ce, Dy, Er, Eu, Ga, Gd, Ho, La, Lu, Nd, Pb, Pr, Sc, Sm, Tb, Th, Tm, U, V, Y and Yb.</p> <p>ANSTO and ALS included standards and blank materials to monitor the performance of the laboratory in keeping with NATA accreditation. The standards and blanks used displayed acceptable levels of accuracy and precision.</p>
<b>Verification of sampling and assaying</b>	<p><b>The verification of significant intersections by either independent or alternative company personnel.</b></p> <p><b>The use of twinned holes.</b></p> <p><b>Documentation of primary data, data entry procedures, data verification, data storage</b></p>	<p>Result reviewed by the Company's Consultant Geologist and the Operator Manager, and specialists at ANSTO.</p> <p>Apart from the routine QA/QC procedures by the Company and the laboratory, there was no other</p>

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	<p><b>(physical and electronic) protocols.</b></p> <p><b>Discuss any adjustment to assay data.</b></p>	<p>independent or alternative verification of sampling and assaying procedures.</p> <p>No twinned holes were used.</p> <p>Primary data is stored both in its source electronic form and where applicable, on paper. Assay data is retained in both the original certificate (pdf) form, where available, and the text files received from the laboratory. Primary data collection follows a structured protocol, with standardized data entry procedures ensure that any issues are identified and rectified. All data is stored both in physical forms, such as hard copies and electronically, in secure databases with regular backups.</p> <p>The adjustments to the data were made when required, converting the rare earth element values into the industry standard rare earth format. The conversion factors used are included in the table below. (source: <a href="https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-conversion-factors">https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-conversion-factors</a>)</p> <table border="1"> <thead> <tr> <th>Element ppm</th> <th>Conversion Factor</th> <th>Oxide Form</th> </tr> </thead> <tbody> <tr> <td>La</td> <td>1.1728</td> <td>La<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Ce</td> <td>1.2284</td> <td>CeO<sub>2</sub></td> </tr> <tr> <td>Pr</td> <td>1.2082</td> <td>Pr<sub>6</sub>O<sub>11</sub></td> </tr> <tr> <td>Nd</td> <td>1.1664</td> <td>Nd<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Eu</td> <td>1.1579</td> <td>Eu<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Gd</td> <td>1.1526</td> <td>Gd<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Tb</td> <td>1.1762</td> <td>Tb<sub>4</sub>O<sub>7</sub></td> </tr> <tr> <td>Dy</td> <td>1.1477</td> <td>Dy<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Ho</td> <td>1.1455</td> <td>Ho<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Er</td> <td>1.1435</td> <td>Er<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Tm</td> <td>1.1421</td> <td>Tm<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Yb</td> <td>1.1387</td> <td>Yb<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Lu</td> <td>1.1371</td> <td>Lu<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Y</td> <td>1.2699</td> <td>Y<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Sc</td> <td>1.5337</td> <td>Sc<sub>2</sub>O<sub>3</sub></td> </tr> <tr> <td>Ga</td> <td>1.3442</td> <td>Ga<sub>2</sub>O<sub>3</sub></td> </tr> </tbody> </table> <p>Rare earth abbreviations typically used in industry reporting and throughout this report were in accordance with IUPA guidelines, and were as follows :</p> <p>REE - Rare Earth Elements, value presented as oxide assay.</p> <p>REO – Rare Earths Oxides, value presented as oxide assay.</p> <p>TREE – La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Lu plus Y and Sc.</p> <p>MREE – Pr, Nd, Tb, Dy.</p>	Element ppm	Conversion Factor	Oxide Form	La	1.1728	La <sub>2</sub> O <sub>3</sub>	Ce	1.2284	CeO <sub>2</sub>	Pr	1.2082	Pr <sub>6</sub> O <sub>11</sub>	Nd	1.1664	Nd <sub>2</sub> O <sub>3</sub>	Eu	1.1579	Eu <sub>2</sub> O <sub>3</sub>	Gd	1.1526	Gd <sub>2</sub> O <sub>3</sub>	Tb	1.1762	Tb <sub>4</sub> O <sub>7</sub>	Dy	1.1477	Dy <sub>2</sub> O <sub>3</sub>	Ho	1.1455	Ho <sub>2</sub> O <sub>3</sub>	Er	1.1435	Er <sub>2</sub> O <sub>3</sub>	Tm	1.1421	Tm <sub>2</sub> O <sub>3</sub>	Yb	1.1387	Yb <sub>2</sub> O <sub>3</sub>	Lu	1.1371	Lu <sub>2</sub> O <sub>3</sub>	Y	1.2699	Y <sub>2</sub> O <sub>3</sub>	Sc	1.5337	Sc <sub>2</sub> O <sub>3</sub>	Ga	1.3442	Ga <sub>2</sub> O <sub>3</sub>
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Ga	1.3442	Ga <sub>2</sub> O <sub>3</sub>																																																			

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		<p>LREE: La+Ce+Pr+Nd and Sm.</p> <p>HREE: Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Lu plus Y.</p> <p>TREO (Total Rare Earth Oxide) = <math>\text{La}_2\text{O}_3 + \text{Ce}_2\text{O}_3 + \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Sm}_2\text{O}_3 + \text{Eu}_2\text{O}_3 + \text{Gd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Ho}_2\text{O}_3 + \text{Er}_2\text{O}_3 + \text{Tm}_2\text{O}_3 + \text{Yb}_2\text{O}_3 + \text{Y}_2\text{O}_3 + \text{Lu}_2\text{O}_3</math> plus <math>\text{Y}_2\text{O}_3</math> and <math>\text{Sc}_2\text{O}_3</math></p> <p>MREO (Magnetic Rare Earth Oxide) = <math>\text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3</math></p> <p>LREO (Light Rare Earth Oxide) = <math>\text{La}_2\text{O}_3 + \text{Ce}_2\text{O}_3 + \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Sm}_2\text{O}_3</math></p> <p>HREO (Heavy Rare Earth Oxide) = <math>\text{Eu}_2\text{O}_3 + \text{Gd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Ho}_2\text{O}_3 + \text{Er}_2\text{O}_3 + \text{Tm}_2\text{O}_3 + \text{Yb}_2\text{O}_3 + \text{Lu}_2\text{O}_3</math> plus <math>\text{Y}_2\text{O}_3</math></p> <p><math>\text{NdPr} = \text{Nd}_2\text{O}_3 + \text{Pr}_6\text{O}_{11}</math></p> <p><math>\text{DyTb} = \text{Dy}_2\text{O}_3 + \text{Tb}_4\text{O}_7</math></p> <p>CREO (Critical Rare Earth Oxide) = <math>\text{Nd}_2\text{O}_3 + \text{Eu}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Y}_2\text{O}_3</math></p> <p>(From U.S. Department of Energy, Critical Material Strategy, December 2011)</p> <p>There are three commonly applied approaches to calculating extraction for leaching :</p> <p><u>Tail over Head</u>, which is calculated as <math>1 - \text{tail grade}/\text{head grade}</math>. Where notable mass loss occurs in leaching, as is common for acid leaching, the tail grade is increased due to the mass loss and would result in an underestimation extraction. In this case, the tail grade is corrected via accounting for the solids mass loss, or via a « tie-in » with a non-soluble element such as Pb.</p> <p><u>Mass Basis</u>, which is calculated as element mass in liquor/(element mass in liquor + element mass in solids) for the discharge liquor and solids. This method ignores the head assay and somewhat eliminates sampling error impacting the head assay. It also accounts for any mass loss within the test.</p> <p><u>Liquor out over solids in</u>, which is calculated as element mass in liquor/element mass in solids in. This method is the most prone to error, as it includes sampling errors on the head assay, error in the liquor assay and error in the liquor SG assay. Small errors in the liquor assay can result in large percentage differences in extraction when the extraction extends its high (&gt;70%) due to the nature of the calculation.</p> <p>The tail over-head extraction method has been used throughout the test work program for rare earth elements. The mass basis extraction method has been used for impurity elements (Al and Fe).</p>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<b>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</b> <b>Specification of the grid system used.</b> <b>Quality and adequacy of topographic control.</b>	Drill hole collar locations were surveyed using a Real Time Kinematic (RTK) GPS unit, ensuring sub-metre accuracy for all recorded positions. All spatial data were captured and reported using the SIRGAS 2000 geodetic datum, projected to UTM Zone 24 South.
<b>Data spacing and distribution</b>	<b>Data spacing for reporting of Exploration Results.</b> <b>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</b> <b>Whether sample compositing has been applied.</b>	39 individual composites were carried out on 2 diamond drillholes from 2m down to the fresh rock, samples numbered CLD-COMP-001 to 039 (table 2) from the DDH-018 and DDH-036 which are 1.94 km apart. Each one represents a different Style of REE mineralization in the area A. No resources are reported. The disaggregated rejects from each 1 metre interval returned from SGS over a 3 metre interval established around 2kg composites for test works at ANSTO.
<b>Orientation of data in relation to geological structure</b>	<b>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</b> <b>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</b>	All drill holes were drilled vertically, which is deemed the most suitable orientation for this type of supergene deposit. These deposits typically have a broad horizontal extent relative to the thickness of the mineralised body, exhibiting horizontal continuity with minimal variation in thickness. Given the extensive lateral spread and uniform thickness of the deposit, vertical drilling is optimal for achieving unbiased sampling. This orientation allows for consistent intersections of the horizontal mineralised zones, providing an accurate depiction of the geological framework and mineralisation. No evidence suggests that the vertical orientation has introduced any sampling bias concerning the key mineralised structures. The alignment of the drilling with the deposit's known geology ensures accurate and representative sampling. Any potential bias from the drilling orientation is considered negligible.
<b>Sample security</b>	<b>The measures taken to ensure sample security.</b>	The composite samples were prepared in the AXEL's core facility in Padre Paraiso-MG, supervised by a geologist. The sealed plastic bags were sent directly to ANSTO by airfreight. The Company has no reason to believe that sample security poses a material risk to the integrity of the assay data. The transport from the Project to the airport was undertaken by a competent, independent contractor.
<b>Audits or reviews</b>	<b>The results of any audits or reviews of sampling techniques and data.</b>	Regular technical meetings were held with ANSTO personnel during the testing period. The ANSTO leaching report was reviewed by AXEL's experienced Consultant

Criteria	JORC Code explanation	Commentary
		Geologist Antonio de Castro and Board members.

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><b>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.</b></p> <p><b>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.</b></p>	<p>The CALADÃO leases are 100% owned by AXEL with no issues in respect to native title interests, historical sites, wilderness or national park and environmental settings.</p> <p>The Company is not aware of any impediment to obtain a licence to operate in the area.</p>
<b>Exploration done by other parties</b>	<b>Acknowledgment and appraisal of exploration by other parties.</b>	In the Caladão Project, we are unaware of previous professional mineral exploration programs in the Region of Padre Paraíso MG. However, there is a history of previous artisanal gemstone mining in that region, particularly aquamarine.
<b>Geology</b>	<b>Deposit type, geological setting and style of mineralisation.</b>	<p>The rare earth mineralization at Caladão is hosted in a pegmatitic (porphyritic) granite, the Caladão Granite, as well as in a granodiorite, charnockite and a leuco granite in area A.</p> <p>Allanite and apatite were recognized in petrography but most of the primary minerals in the fresh rocks and secondary mineral phases in its weathered portion were not yet defined.</p> <p>The Caladão Granite in the Region of Padre Paraíso is in the so-called Lithium Valley in the northeast portion of the Minas Gerais State. Axel was the first exploration company to recognize the REE potential of these Neoproterozoic granites on the eastern flank of the São Francisco Craton. These granites are subalkaline to alkaline and are considered late to post-tectonic relative to the Salinas Formation. Weathering over these granites develops up to 60-meter-thick profiles that often contain abundant kaolinites and high grade rare earths.</p>
<b>Drill hole Information</b>	<b>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:</b>	Key leach test results and implications from this study are summarized in this report and tables presented in appendix 2.
<b>Data aggregation methods</b>	<b>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually</b>	<p>No data aggregation methods have been applied.</p> <p>No metal equivalents are reported.</p>

	<p><b>Material and should be stated.</b></p> <p><b>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</b></p> <p><b>The assumptions used for any reporting of metal equivalent values should be clearly stated.</b></p>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><b>These relationships are particularly important in the reporting of Exploration Results.</b></p> <p><b>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</b></p> <p><b>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</b></p>	At this stage of exploration insufficient data exists to confidently estimate true widths.
<b>Diagrams</b>	<p><b>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</b></p>	Refer to figure 1 and 3, and appendix 2 in this announcement.
<b>Balanced reporting</b>	<p><b>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</b></p>	<p>See text to this announcement with the ANSTO data presented in this report to provide a transparent and comprehensive overview of the leaching tests conducted and its implications.</p> <p>The results obtained are exclusive for the holes tested and can not be extrapolated to any specific area in the project.</p> <p>The use of diagrams, such as geological maps and tables, is intended to enhance understanding of the data.</p> <p>This report accurately reflects the ANSTO test work results and the exploration activities and findings without bias or omission.</p>
<b>Other substantive exploration data</b>	<p><b>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</b></p>	There is no additional substantive exploration data to report currently.

	<b>substances.</b>	
<b>Further work</b>	<b>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</b>	R&D to recover gallium and scandium at CORE-Australia.  Search for high grade scandium and gallium areas in the Caladão amenable to support a stand alone operation for gallium and scandium.

## Appendix 2. Tables and Figures.

HoleID	Easting	Northing	RL (m)	Depth (m)	Azimuth	Dip
CLD-DDH-018	231,513.87	8,112,386.14	765.55	48.15	0	-90
CLD-DDH-036	231,424.35	8,110,449.96	842.70	81.45	0	-90

**Table 1- drillhole collar location**

HoleID	CompositeID	From (m)	To (m)	Regolith	Lithology	Dry wt. (g)
CLD-DDH-018	CLD-COMP-001	2.00	5.00	Lateritic soil	Soil	1,995
CLD-DDH-018	CLD-COMP-002	5.00	8.00	Lateritic soil	Soil	2,042
CLD-DDH-018	CLD-COMP-003	8.00	11.00	Upper Saprolite	Porphyritic Granite	2,081
CLD-DDH-018	CLD-COMP-004	11.00	14.00	Upper Saprolite	Porphyritic Granite	2,092
CLD-DDH-018	CLD-COMP-005	14.00	17.00	Upper Saprolite	Porphyritic Granite	2,099
CLD-DDH-018	CLD-COMP-006	17.00	20.00	Upper Saprolite	Granodiorite	2,086
CLD-DDH-018	CLD-COMP-007	20.00	23.00	Upper Saprolite	Granodiorite	2,047
CLD-DDH-018	CLD-COMP-008	23.00	26.00	Upper Saprolite	Granodiorite	2,066
CLD-DDH-018	CLD-COMP-009	26.00	29.00	Upper Saprolite	Granodiorite	2,108
CLD-DDH-018	CLD-COMP-010	29.00	32.00	Upper Saprolite	Granodiorite	2,088
CLD-DDH-018	CLD-COMP-011	32.00	35.00	Upper Saprolite	Granodiorite	2,059
CLD-DDH-018	CLD-COMP-012	35.00	38.00	Lower Saprolite	Granodiorite	2,080
CLD-DDH-018	CLD-COMP-013	38.00	41.00	Lower Saprolite	Granodiorite	2,098
CLD-DDH-018	CLD-COMP-014	41.00	44.37	Lower Saprolite	Granodiorite	2,015
CLD-DDH-036	CLD-COMP-015	2.00	5.00	Lateritic soil	Soil	2,013
CLD-DDH-036	CLD-COMP-016	5.00	8.00	Lateritic soil	Soil	2,018
CLD-DDH-036	CLD-COMP-017	8.00	11.00	Lateritic soil	Soil	2,094
CLD-DDH-036	CLD-COMP-018	11.00	14.00	Lateritic soil	Soil	1,925
CLD-DDH-036	CLD-COMP-019	14.00	17.00	Upper Saprolite	Porphyritic Granite	2,047
CLD-DDH-036	CLD-COMP-020	17.00	20.00	Upper Saprolite	Porphyritic Granite	2,107
CLD-DDH-036	CLD-COMP-021	20.00	23.00	Upper Saprolite	Porphyritic Granite	2,097
CLD-DDH-036	CLD-COMP-022	23.00	26.00	Upper Saprolite	Porphyritic Granite	1,892
CLD-DDH-036	CLD-COMP-023	26.00	29.00	Upper Saprolite	Porphyritic Granite	1,986
CLD-DDH-036	CLD-COMP-024	29.00	32.00	Upper Saprolite	Porphyritic Granite	1,889

HoleID	CompositeID	From (m)	To (m)	Regolith	Lithology	Dry wt. (g)
CLD-DDH-036	CLD-COMP-025	32.00	35.00	Upper Saprolite	Porphyritic Granite	2,062
CLD-DDH-036	CLD-COMP-026	35.00	38.00	Upper Saprolite	Porphyritic Granite	2,016
CLD-DDH-036	CLD-COMP-027	38.00	41.00	Upper Saprolite	Porphyritic Granite	1,987
CLD-DDH-036	CLD-COMP-028	41.00	44.00	Upper Saprolite	Porphyritic Granite	2,090
CLD-DDH-036	CLD-COMP-029	44.00	47.00	Upper Saprolite	Porphyritic Granite	2,027
CLD-DDH-036	CLD-COMP-030	47.00	50.00	Upper Saprolite	Porphyritic Granite	2,042
CLD-DDH-036	CLD-COMP-031	50.00	53.00	Upper Saprolite	Porphyritic Granite	2,015
CLD-DDH-036	CLD-COMP-032	53.00	56.00	Upper Saprolite	Porphyritic Granite	2,030
CLD-DDH-036	CLD-COMP-033	56.00	59.00	Upper Saprolite	Porphyritic Granite	1,998
CLD-DDH-036	CLD-COMP-034	59.00	62.00	Lower Saprolite	Porphyritic Granite	2,023
CLD-DDH-036	CLD-COMP-035	62.00	65.00	Lower Saprolite	Porphyritic Granite	2,038
CLD-DDH-036	CLD-COMP-036	65.00	68.00	Lower Saprolite	Porphyritic Granite	2,043
CLD-DDH-036	CLD-COMP-037	68.00	71.00	Lower Saprolite	Porphyritic Granite	2,113
CLD-DDH-036	CLD-COMP-038	71.00	74.00	Lower Saprolite	Porphyritic Granite	2,060
CLD-DDH-036	CLD-COMP-039	74.00	76.92	Lower Saprolite	Porphyritic Granite	2,010

**Table 2 – Composites sent to ANSTO**

HoleID	CompositeID	Ga (ppm)	Sc (ppm)
CLD-DDH-036	CLD-COMP-015	57	14
CLD-DDH-036	CLD-COMP-016	61	13
CLD-DDH-036	CLD-COMP-017	51	14

**Table 3. Galium and Sacndium composite head grades for this tests**

Sample ID	Conditions			Elements in 72h Solution																
	Reagent	pH	Ga	Sc	Elements in 48h Solution															
					%	%	Al	Ca	Fe	Ga	K	Mg	Mn	Na	P	Pb	S	Sc	Si	Th
CLD-COMP-0015	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	39,4	52,4	2268	58	1418	0,95	<10	7	<1	6	2	0,12	22512	0,31	248	3	0,04	2
			36,81	0,0	2268	58	1418	0,95	<10	7	<1	6	2	0,12	22512	0,00	248	3	0,19	1
			12,7	28,4	467	11	615	0,27	<10	1	1	2	<1	0,23	18286	0,17	219	3	0,05	2
CLD-COMP-0015	Acid Water	pH 1 (2h), 25 g/L acidity(72h)	16,5	36,3	1048	7	747	0,37	3	2	<1	5	<1	0,15	8	0,20	243	1	0,02	2
			10,6	35,8	461	5	493	0,26	<10	<1	<1	4	<1	0,11	11	0,18	223	2	0,01	0
			5,9	17,5	204	4	301	0,12	<10	<1	<1	3	<1	0,14	14	0,10	132	1	0,01	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	49,4	50,0	2429	5	1971	1,21	3	3	<1	5	2	0,23	144	0,30	180	3	0,02	2
			34,1	48,6	1551	3	1353	0,89	2	1	1	6	<1	0,16	137	0,26	180	3	0,02	3
			25,9	32,9	919	2	1110	0,56	2	<1	3	2	<1	0,29	127	0,20	178	3	0,01	5
CLD-COMP-0015	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	31,9	49,1	Elements in 24h Solution															
			17,4	41,6	1920	24	1155	0,77	<10	3	<1	5	1	0,19	21321	0,29	248	3	0,03	1
			9,8	28,4	875	52	650	0,45	<10	7	<1	4	<1	0,18	18335	0,22	249	3	0,15	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 25 g/L acidity(72h)	13,4	32,7	386	5	455	0,21	<10	<1	<1	2	<1	0,19	17765	0,17	284	2	0,04	2
			8,1	29,8	894	5	596	0,30	2	2	<1	5	<1	0,14	5	0,18	237	1	0,01	1
			3,4	14,0	363	2	372	0,20	<10	<1	<1	3	<1	0,09	<10	166	2	0,01	1	
CLD-COMP-0015	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	44,1	48,3	109	2	190	0,07	<10	<1	<1	2	<1	0,10	11	0,08	82	1	<0,01	2
			28,0	41,1	2067	4	1825	1,08	2	3	<1	5	2	0,22	129	0,29	207	3	0,02	2
			15,7	23,0	1269	3	1141	0,73	1	1	<1	3	<1	0,15	124	0,22	200	3	0,01	3
CLD-COMP-0015	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	27,7	32,4	639	2	772	0,34	<1	<1	2	4	<1	0,24	117	0,14	178	3	0,03	4
			24,5	47,4	Elements in 24h Solution															
			20,0	39,7	1607	12	903	0,59	<10	2	<1	5	<1	0,09	21000	0,28	286	3	0,03	1
CLD-COMP-0016	Acid Water	pH 1 (2h), 25 g/L acidity(72h)	12,0	30,9	678	28	467	0,31	<10	4	<1	3	<1	0,15	17834	0,21	289	2	0,12	1
			6,6	21,7	248	4	269	0,14	<10	<1	<1	2	<1	0,13	17669	0,13	215	2	0,04	1
			9,3	15,9	700	4	416	0,21	2	2	<1	5	<1	0,12	4	0,17	181	1	0,01	1
CLD-COMP-0016	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	5,3	25,8	262	2	248	0,13	<10	<1	<1	3	<1	0,07	<10	0,13	108	1	0,01	1
			2,5	10,5	74	4	115	0,05	<10	<1	<1	2	<1	0,08	13	0,06	46	1	<0,01	2
			1,0	5,2	1721	4	1546	0,87	2	2	<1	4	1	0,20	127	0,25	235	3	0,02	2
CLD-COMP-0016	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	16,3	31,7	890	3	913	0,53	<1	1	<1	3	<1	0,12	119	0,20	211	3	0,01	2
			20,3	37,4	145	1	632	0,24	<1	<1	<1	2	<1	0,08	90	0,07	51	1	0,01	2
			11,1	21,4	Elements in 4h Solution															
CLD-COMP-0015	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	10,0	35,5	838	4	343	0,24	<10	1	<1	4	<1	0,07	17248	0,21	138	2	0,02	1
			4,3	22,7	276	9	138	0,11	<10	1	<1	3	<1	0,12	15724	0,12	85	2	0,06	1
			1,9	8,3	67	1	61	0,04	<10	<1	<1	2	<1	0,07	15734	0,05	34	1	0,02	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 25 g/L acidity(72h)	4,0	21,8	391	3	118	0,09	1	1	<1	8	<1	0,10	4	0,12	77	1	0,01	1
			1,2	15,9	108	3	32	0,03	<10	<1	<1	3	<1	0,04	<10	0,08	45	1	0,01	1
			1,0	5,2	35	1	19	0,02	<10	<1	<1	2	<1	0,06	10	0,03	14	0	<0,01	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	16,3	31,7	933	3	848	0,40	1	1	<1	4	1	0,14	102	0,19	119	3	0,02	1
			20,3	37,4	384	2	502	0,23	<1	<1	<1	3	<1	0,07	105	0,13	95	2	0,01	2
			11,5	21,4	145	1	288	0,10	<1	<1	<1	2	<1	0,08	90	0,07	51	1	0,01	2
CLD-COMP-0015	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	5,4	28,8	Elements in 2h (pH 1) Solution															
			1,9	18,9	565	3	136	0,13	<10	1	<1	4	<1	0,02	4054	0,17	1	0,01	1	
			0,9	6,7	162	6	39	0,05	<10	<1	<1	3	<1	0,11	3749	0,10	49	1	0,03	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 25 g/L acidity(72h)	1,8	12,7	42	2	22	0,02	<10	<1	<1	2	<1	0,06	3596	0,04	16	1	0,01	1
			0,8	11,9	213	4	53	0,04	1	4	<1	4	<1	0,07	4	0,07	48	0	0,01	1
			0,5	3,5	66	2	10	0,02	<10	<1	<1	3	<1	0,03	<10	0,06	33	0	0,01	1
CLD-COMP-0015	Acid Water	pH 1 (2h), 64.2 g/L acidity(72h)	11,0	30,0	24	<1	9	0,01	<10	<1	<1	2	<1	0,05	<10	0,02	10	0	<0,01	1
			6,1	24,3	725	3	629	0,2	1	1	<1	4	<1	0,10	58	0,18	79	2	0,02	1
			3,2	11,5	285	3	375	0,16	2	<1	<1	3	<1	0,05	65	0,13	70	2	0,02	1
CLD-COMP-0016	Acid Water	pH 1 (2 h), 50 g/L acidity (72 h)	11,5	21,4	105	4	185	0,07	<1	<1	<1	2	<1	0,06	68	0,07	31	1	0,01	1

**Table 4 – Percentage of gallium recovered in the acid tests and scandium in solution**